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VOL. 174 - 175

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OF THE

UNITED STATES PATENT OFFICE.

VOLUME CLXXIV.

JANUARY,

1912.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1912.

ERRATA.

1,013,722, page 218, first claim, line 2, for the word "and" read *end*.

1,013,936, page 323, first claim, line 1, for the word "distributing" read *distilling*.

1,013,938, page 324, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,014,836, page 661, first claim, line 5, for the word "axle" read *axis*.

1,015,002, page 949, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

13,551, (Reissue,) page 560, in heading, number of original patent, for "894,966" read *894,996*.

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, January 2, 9, 16, 23, 30	3, 295, 591, 837, 1033
TRADE-MARKS PUBLISHED AND REGISTERED, January 2, 9, 16, 23, 30	271, 573, 815, 1011, 1197
LABELS AND PRINTS REGISTERED, January 2, 9, 16, 23, 30	286, 827, 1024, 1216
DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS, January 2, 9, 16, 23, 30	287, 563, 839, 1025, 1217
INDEX TO DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS	1223
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	i

ANNOUNCEMENTS.

		Page.
APPLICATIONS—		
	Access to pending	835
	Condition of pending	2, 294, 590, 836, 1032
CLASSIFICATION—		
	Bulletin No. 27, publication of	1031
	German patents	1
DISCLAIMER—		
	Herman, Reinhold	588
INTERFERENCE NOTICES—		
	A. J. Chapman & Co	292, 588
	Bellaire Stamping Co., The	292, 588, 834
	Bloomer, William J	588, 834, 1030, 1222
	Casade, Crooks & Reynaud	292, 588, 834
	Dempsey Candy Works Co., The	292, 588, 834
	Hoopes & Townsend	1030, 1222
	Illinois Shoe Co	292
	Keystone Nail Co., Inc	1030, 1222
	Kisyou Company, The	292
	Peninsular Trading and Fishing Co	588, 834, 1030, 1222
	Spencer, Shepherd	1030, 1222
OFFICIAL GAZETTE—		
	Heading of patent, number of class and subclass inserted, notice of	589
	Subscription price of	293
PATENTS—		
	Delivery of—Rule 169	1, 1031
	List of adjudicated	292, 1221
PUBLICATIONS OF U. S. PATENT OFFICE—		
	Sale of by Government Printing Office	1, 293, 589, 835, 1031
REMITTANCES TO THE PATENT OFFICE		589, 835

Patents Nos. 1,013,095 to 1,013,854.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JANUARY 2, 1912	1
PATENT OFFICE PUBLICATIONS	1
CLASSIFICATION OF GERMAN PATENTS	1
DELIVERY OF PATENT	1
APPLICATIONS UNDER EXAMINATION	2
PATENTS GRANTED	3
REISSUES	267
DESIGNS	270
TRADE-MARKS—REGISTRATION APPLIED FOR	271
TRADE-MARKS—REGISTERED	283
LABELS AND PRINTS	286
COMMISSIONER'S DECISIONS—	
Ex parte Taylor	287
Ex parte Warren Webster & Company	287
DECISIONS OF THE U. S. COURTS—	
United States of America v. Patterson	287
ADJUDICATED PATENTS	292
INTERFERENCE NOTICES	292

ISSUE OF JANUARY 2, 1912.

Patents	760—	No. 1,013,095 to No.	1,013,854, inclusive.
Designs	4—	No. 42,073 to No.	42,076, inclusive.
Trade-Marks	35—	No. 84,711 to No.	84,795, inclusive.
Labels	2—	No. 16,103 to No.	16,104, inclusive.
Prints	1—	No. 2,925.	
Reissues	5—	No. 13,246 to No.	13,250, inclusive.
Total	857		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	Ohio	62	3
Arkansas	1	.....	Oklahoma	6	1
California	37	2	Oregon	3	.....
Colorado	7	1	Pennsylvania	79	5
Connecticut	12	2	Rhode Island	6	.....
Delaware	.....	.....	South Carolina	1	.....
Florida	5	1	South Dakota	3	.....
Georgia	4	1	Tennessee	5	1
Idaho	1	.....	Texas	5	.....
Illinois	64	7	Utah	5	.....
Indiana	9	1	Vermont	2	.....
Iowa	18	.....	Virginia	4	1
Kansas	10	2	Washington	8	.....
Kentucky	10	.....	West Virginia	2	.....
Louisiana	9	1	Wisconsin	11	4
Maine	3	.....	Wyoming	1	.....
Maryland	5	1			
Massachusetts	38	11	Alaska, District of	.....	.....
Michigan	14	2	Arizona Territory	.....	.....
Minnesota	9	1	District of Columbia	2	.....
Mississippi	3	.....	Hawaii Territory	1	.....
Missouri	34	3	New Mexico Ter'y	1	.....
Montana	1	.....	Philippine Islands	.....	.....
Nebraska	11	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	45	1			
New York	107	31	Total to citizens of the United States	678	85
North Carolina	4	.....			
North Dakota	6	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	5	.....	Newfoundland	.....	.....
Belgium	1	1	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	12	.....	Queensland	.....	.....
Chile	.....	.....	Russia	.....	.....
China	.....	.....	Scotland	3	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	1	.....	Spain	.....	1
Ecuador	.....	.....	Sweden	.....	.....
Egypt	.....	.....	Switzerland	5	.....
England	17	.....	Tasmania	1	.....
France	7	.....	Transvaal, South Africa	.....	.....
Germany	28	1	Victoria	1	.....
Guatemala	1	.....	Western Australia	.....	.....
India	.....	.....			
Ireland	1	.....	Total to citizens of foreign countries	85	3
Italy	.....	.....			
Japan	.....	.....			
Mexico	2	.....			

Patent Office Publications.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1911.

The stock of publications, exclusive of printed copies of patents, formerly held for sale by the Patent Office, has been transferred to the Superintendent of Documents, Government Printing Office. Orders for Patent Office publications should NOT be sent to the Patent Office, but to the "Superintendent of Documents," to whom all remittances for such publications should be made payable.

Printed copies of specifications and drawings of patents will be furnished by the Patent Office, as heretofore.

EDWARD B. MOORE,
Commissioner.

Classification of German Patents.

Printed copies of a translation of the Manual of Classification of the German Patent Office may be had upon application to the Commissioner of Patents at $1.00 per copy.

With the aid of this translation and the numerical list of German patents, classified according to classes, subclasses, and groups, which is accessible in the Scientific Library, it will be possible to make complete searches in the German patents.

Delivery of Patent.

RULE 169. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 30, 1911.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 15	Nov. 13	430
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 1	Dec. 1	403
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 1	Dec. 18	218
222	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Nov. 18	Nov. 27	380
167	5. Bookbinding; Harvesters; Jewelry; Music.	Nov. 20	Nov. 13	425
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 1	Dec. 1	266
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 11	Nov. 18	527
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Stove Furniture; Supports.	Dec. 1	Dec. 1	350
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 1	Dec. 1	329
235	10. Carriages and Wagons.....	Nov. 2	Nov. 15	612
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 1	Nov. 16	369
234	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 1	Dec. 1	509
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Oct. 11	Nov. 22	477
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 3	Dec. 1	392
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Nov. 9	Nov. 4	748
109	16. Telegraphy; Telephony.....	Nov. 10	Nov. 6	200
203	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Nov. 23	Dec. 1	267
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 1	Dec. 1	242
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Dec. 1	Dec. 1	428
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 24	Nov. 2	240
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 17	Dec. 1	382

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 4	Nov. 27	424
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 1	Dec. 1	386
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 1	Dec. 1	401
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 1	Dec. 1	266
106	26. Electricity, Generation; Motive Power.	Sept. 5	Sept. 26	474
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 24	Dec. 1	413
65	28. Internal-Combustion Engines..	Nov. 4	Nov. 2	775
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Oct. 2	Nov. 16	500
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 2	Dec. 4	296
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Dec. 1	Dec. 1	187
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 1	Dec. 1	264
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 1	Dec. 1	363
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 1	Dec. 1	483
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Nov. 24	Nov. 25	740
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Nov. 7	Nov. 8	627
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Sept. 1	Dec. 1	490
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Nov. 7	Nov. 14	589
321	39. Water Distribution.....	Dec. 1	Nov. 1	452
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 1	Dec. 15	321
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 14	Nov. 23	596
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 1	Nov. 1	672
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 1	Dec. 1	362

Oldest new case, Sept. 1; oldest amended, Sept. 26.

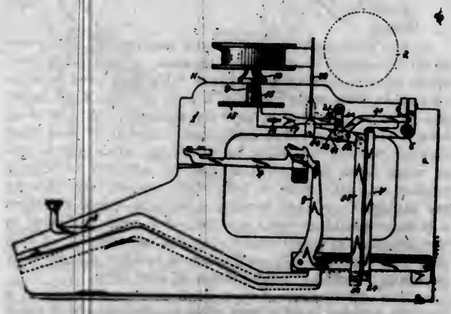
Total number of applications awaiting action 18,344

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Nov. 7	Nov. 3	1635
	Designs.....	Oct. 26	Nov. 20	390
	Labels and Prints.....	Dec. 6	Dec. 4	71

PATENTS

GRANTED JANUARY 2, 1912.

1,013,095. TYPE-WRITER RIBBON MECHANISM. JESSE ALEXANDER, Brooklyn, N. Y., assignor of one-half to D. N. Thayer, New York, N. Y. Filed Nov. 17, 1908, Serial No. 462,989. Renewed Oct. 19, 1911. Serial No. 655,636.



1. A ribbon mechanism for typewriting machines comprising a pair of ribbon spools, a carriage feed dog rocker, a rock shaft, a separate actuating finger for actuating each of said ribbon spools respectively connected with said shaft to cause the ribbon to travel across the printing point and operative connections between said rock shaft and said feed dog rocker to cause the actuation of said spools.

2. A ribbon mechanism for typewriting machines comprising a pair of ribbon spools, a feed dog rocker, a ratchet wheel connected with each spool, an actuating finger adapted to engage each ratchet wheel, a rock shaft connected with said fingers, manually operable means for disengaging one of said fingers from its wheel and simultaneously engaging the other finger with its wheel and operative connections between said rock shaft and said feed dog rocker for actuating said fingers.

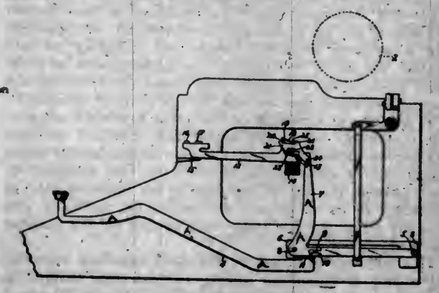
3. A ribbon mechanism for typewriting machines comprising a pair of ribbon spools, a support for said ribbon located opposite the printing point, a ratchet wheel connected with each of said spools, a spool actuating finger adapted to engage each of said wheels, a pawl also adapted to engage each wheel and means for causing a simultaneous disengagement of one finger and pawl from its wheel and engagement of the other finger and pawl with its wheel.

4. A ribbon mechanism for typewriting machines comprising a pair of ribbon spools, a support for said ribbon located opposite the printing point, a feed dog rocker, a ratchet wheel connected with each of said spools, actuating fingers adapted to engage each of said ratchet wheels respectively, operating connections between said fingers and said feed dog rocker to cause the actuation of said spools, and means for simultaneously disengaging one of said fingers and the corresponding pawl from one spool, and engaging the other finger and pawl with the other spool.

5. A ribbon mechanism for typewriting machines comprising a ribbon spool, a support for said ribbon located opposite the printing point, a ratchet wheel connected with said spool, an actuating finger adapted to engage said ratchet wheel, a stop pawl also adapted to engage said ratchet wheel, means to disengage said finger from its ratchet wheel, said finger and said pawl being so relatively arranged that said disengaging movement will also cause the disengagement of said pawl from said ratchet wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,013,096. TYPE-WRITER KEY AND TYPE-BAR MECHANISM. JESSE ALEXANDER, Brooklyn, N. Y., assignor of one-half to D. N. Thayer, New York, N. Y. Filed Nov. 17, 1908, Serial No. 462,990. Renewed Oct. 19, 1911. Serial No. 655,637.



1. A key and type-bar mechanism, comprising a key lever, a type-bar, an intermediate actuating lever for said bar, a link connecting said actuating lever and said bar, a connection between said link and bar remote from the pivot of the latter to impart easy initial movement thereto and a lost motion connection between said link and bar adjacent to the pivot point of the bar to impart a strong printing impulse to the latter.

2. A key and type-bar mechanism, comprising a key lever, a type-bar, an intermediate actuating lever for said bar, a link connecting said actuating lever and bar, said link having a slidable connection with said bar remote from the pivot point thereof, and having a lost motion connection with said bar adjacent to said pivot point, said second connection arranged to continue the printing stroke of the bar after initial movement from said first connection.

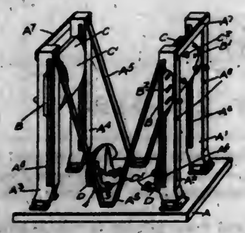
3. A key and type-bar mechanism, comprising a type-bar, a bar actuating lever, a link connecting said parts, a slidable connection between said link and bar at a point remote from the pivot point of the latter to impart easy initial movement to said bar, and a pin and slot connection between said link and bar adjacent to the pivot point of the bar to continue said movement and to impart a strong printing impulse to the bar.

4. A key and type-bar mechanism, comprising a type-bar, an actuating lever therefor, a link connecting said parts, said link having means to free the type-bar from the platen at the completion of the printing stroke.

5. A key and type-bar mechanism, comprising a type-bar, an actuating lever therefor, a link connecting said parts and a slidable connection between said link and bar to impart initial movement to the latter and to free the type-bar from the platen at the completion of the printing stroke.

[Claims 6 and 7 not printed in the Gazette.]

1,013,097. PHYSICAL EXERCISER, STRAIGHTENER, AND HEIGHTENER. THOMAS MARTIN ALLAN, Toronto, Ontario, Canada. Filed June 8, 1911. Serial No. 632,080.



1. A physical exerciser of the class described comprising a suitably supported upper rest designed to bear against one side of the leg of the user intermediately of its height and a suitably supported lower rest designed to bear against the leg of the user at its opposite side in proximity to its lower extremity, as and for the purpose specified.

2. A physical exerciser of the class described comprising a suitably supported upper rest designed to bear against one side of the leg of the user intermediately of its height and a suitably supported lower rest designed to bear against the leg of the user at its opposite side in proximity to its lower extremity, and means for vertically adjusting the upper rest, as and for the purpose specified.

3. A physical exerciser of the class described comprising a suitably supported upper rest designed to bear against one side of the leg of the user intermediately of its height, and a suitably supported lower rest designed to bear against the leg of the user at its opposite side in proximity to its lower end, and means for vertically and laterally adjusting the upper rest, as and for the purpose specified.

4. A physical exerciser of the class described comprising a pair of standards having vertical slots therein, a spring piece extending through the slot of each standard at the ends, means for adjustably securing the spring piece within the slot, a rest piece adjustably secured to the spring piece and designed to bear against one side of the leg of the user at any point in its height and a suitably supported foot rest designed to bear against the opposite side of the leg of the user in proximity to its lower end, as and for the purpose specified.

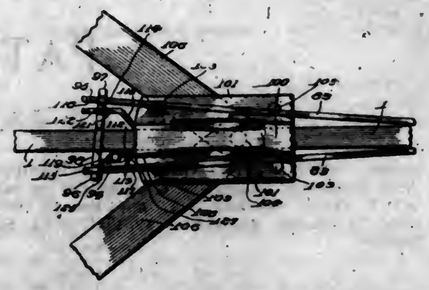
5. A physical exerciser of the class described comprising a pair of standards having vertical slots, and a vertical series of holes extending through the standard into the slots, a spring piece provided at one end with a vertical series of holes designed to register with the holes of one standard and at the other end with a vertical series of slots designed to register with the holes of the other standard and pins extending through the holes of the standards into the slots and holes of the spring pieces, pads secured to the spring pieces designed to bear against the leg of the user at one side, and a lower rest designed to bear against the opposite side of the leg of the user in proximity to its lower end, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,013,098. SELF-LOCKING MECHANISM. SAMUEL L. ALLEN, Moorestown, N. J. Filed Feb. 13, 1909. Serial No. 477,506.

1. The combination of a fixed member, with a movable member, a cant plate, said cant plate being connected to said second-named member, and surrounding said first-named member and engaging opposite sides thereof, for holding said second-named member against movement in either direction.

2. The combination with a fixed member, of a movable member, a cant plate for locking said movable member, normally held in locked engagement with said fixed member, and an actuating lever carried by said fixed member for unlocking said cant plate and acting through said cant plate to move said movable member in one direction or in the opposite direction.



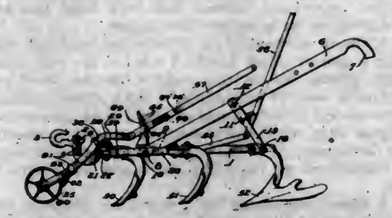
3. The combination with a fixed member, of a movable member carried by said fixed member, a cant plate, normally held in locking engagement with said fixed member to lock said movable member, a pair of links upon opposite sides respectively of said fixed member, an actuating lever to reciprocate said links longitudinally of said fixed member to cant said plate to unlock the same, and a pair of stops upon said movable member adapted to engage against opposite sides of said plate respectively whereby the movement of said actuating lever in either direction will unlock said movable member, and move the same in a corresponding direction through the intervention of said cant plate and whereby said movable member will be automatically locked upon the release of said lever.

4. The combination with a fixed elongated beam, of a movable member, and a cant plate surrounding said beam and means coöperating therewith for automatically locking said movable member against movement in either direction longitudinally of said beam.

5. The combination with a fixed substantially straight elongated beam, of a movable member, and a cant plate surrounding said beam and means coöperating therewith for automatically locking said movable member against movement in either direction longitudinally of said beam.

[Claims 6 to 10 not printed in the Gazette.]

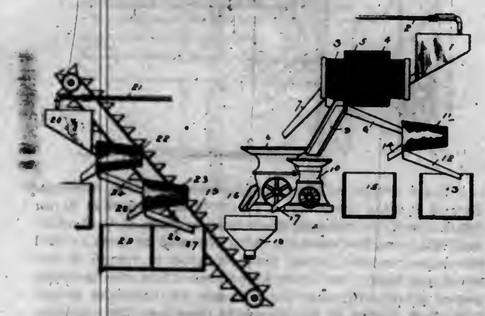
1,013,099. SELF-LOCKING LEVER. SAMUEL L. ALLEN, Moorestown, N. J. Filed Oct. 15, 1909. Serial No. 522,863.



1. The combination of supporting means with a bar pivoted thereto, a second bar bifurcated, slidably secured to and inseparable from the end of said first-named bar, a rack secured to said support and extending through adjacent ends of said bars, and a spring-pressed detent carried by said second-named bar and arranged to engage the apertures of said rack, said second named bar forming a lever in alinement with said first-named bar and operative to actuate said detent to release it from said rack to alter the position of said first-named bar by a longitudinal movement of said lever.

2. The combination of supporting means with a bar pivoted thereto, a second bar slidably secured to and inseparable from the end portion of said first-named bar, a rack secured to said support and extending through the adjacent ends of said bars, and a spring-pressed detent carried by said second-named bar and arranged to engage the apertures of said rack, said second-named bar forming a lever in alinement with the first-named bar and operative to alter the position of said first-named bar through the agency of said detent.

1,013,100. PROCESS OF PREPARING CRUSHED STONE. HARVEY S. ANDERSON, Dayton, Ohio. Filed Apr. 3, 1911. Serial No. 618,688.



1. A process of treating stone comprising, washing the mass to remove the soluble material, loam and vegetable matter, separating the natural sand from the washed material, separating from the remaining material the gravel and small pebbles, crushing the large pebbles and stones, rewashing the crushed material to remove the dried deposit left by the first wash water, and the scab and scale and stony adhering material loosened in the crushing operation, and finally separating from the crushed material the sharp grit resulting from the crushing operation in the form of a usable product free from natural sand, substantially as specified.

2. A process of treating stones, comprising washing the mass of crude material, sorting the washed material according to size and removing the natural fine material, separately crushing the lots of different sized stones, to pieces of substantially equal size, rewashing the crushed material subsequent to the crushing operation, separating from the rewashed crushed material the grit resulting from the crushing operation in the form of a usable product free from natural sand or other material.

1,013,101. BRAKE-HEAD. EUGENE MORGAN APPLEBAUGH, Danville, Pa. Filed Apr. 8, 1911. Serial No. 619,707.

1. In combination, a brake head having a hanger receiving recess therein, an opening in one wall of said recess and a socket in the other wall of said recess, a locking pin positioned in said opening and socket, and across the recess, a lug on the head over the opening and a key on the pin constructed to be moved under the lug, substantially as described.

2. In combination, a brake head having a hanger receiving recess therein, a locking pin, an opening in one wall of said recess, and a socket in the other wall of said recess to receive said pin and position the same across the open end of said recess, said head having an inclined upper surface, a lug on said head projecting over said inclined surface, and a key on said pin adapted to move down said inclined surface and under said lug, substantially as described.

1,013,102. BRAKE-BEAM. EUGENE M. APPLEBAUGH, Danville, Pa. Filed June 8, 1911. Serial No. 631,914.

1. A trussed brake beam comprising a compression member, a tension member connected at its ends to the compression member, and a strut between said compression and tension member, said strut comprising three sections, one section inclosing the compression member at its center and having a screw-threaded lug, another section bearing against the tension member and having a screw-threaded lug, and the third or intermediate section having screw-threaded ends receiving said lugs.

2. A trussed brake beam comprising a compression member, a tension member connected at its ends to the compression member, and a strut between said compression and tension member, said strut comprising three sections, one section inclosing the compression member at its center and having a screw-threaded lug, another section bearing against the tension member and having a screw-threaded lug, and the third or intermediate section having screw-threaded ends receiving said lugs, said compression member comprising an I-beam, said tension member comprising a rod having screw-threaded ends, castings on the ends of said compression member having openings through which the ends of said tension member project, and nuts screwed onto the ends of said tension member against the castings.

1,013,103. BRAKE-HEAD. EUGENE M. APPLEBAUGH, Danville, Pa. Filed July 11, 1911. Serial No. 637,867.

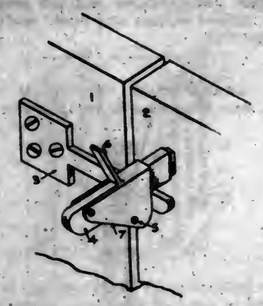
1. A brake head having a brake beam receiving recess, and lugs on the inner face of said recess adapted to be sheared by the beam when the head is forced thereon, substantially as described.

2. A brake head having a brake beam receiving recess, and integral parallel ears on said head, having a plurality of rivet receiving elongated slots therein, and lugs on the inner faces of said ears and in said recess adapted to be sheared by the brake beam when forced thereon, substantially as described.

1,013,104. LATCH. CHRISTOPHER ATKINSON, Columbia, S. C. Filed Oct. 31, 1910. Serial No. 589,886.

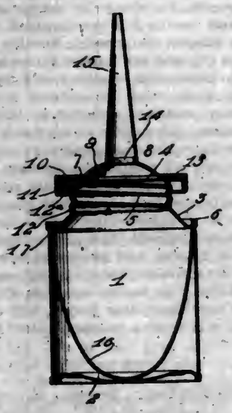
The herein described gate latch comprising a striker bar carried by the gate, a supporting bar attached to the gate

frame, a latch member having two sides and inclosing the supporting bar, a rivet through the latter member and sup-



porting bar, a pin connecting the two sides of the latch member, and a spring between the supporting bar and pin.

1,013,105. OIL-CAN. MABEL T. AXELTON and WILLIAM C. AXELTON, Graettinger, Iowa. Filed Nov. 21, 1910. Serial No. 593,421.

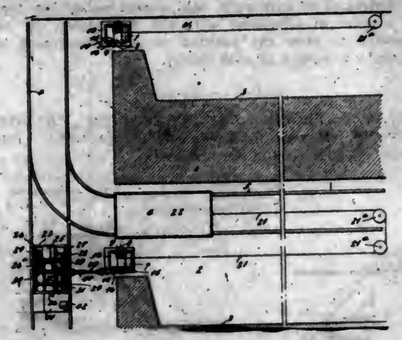


1. An oil can comprising a body portion having a spring bottom, a neck arranged on the upper portion of the can, a substantially U-shaped spring arranged in the bottom of the can and having its looped portion engaging the bottom of the can, curved holding arms formed on the upper ends of the spring, said arms projecting in opposite directions and engaging the inner side of the neck where the same joins the side of the can thereby holding said spring in operative position.

2. An oil can comprising a body portion having a spring bottom, a neck forming a part of the can, a spring having its medial portion engaging the bottom of the can, holding arms forming the ends of the spring, said arms projecting in opposite directions and engaging with the inner side of the neck where the same joins the can thereby holding said spring in operative position.

1,013,106. CAR-TRANSFERRING MEANS. CHARLES A. BARCHTOLD, Mountainside, N. J., assignor to Lidgerwood Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 3, 1911. Serial No. 652,482.

1. In a system of the character described, the combination of a main trackway, a trackway at an angle thereto, a winding drum fixed at said angularly disposed trackway, a cable operated by said drum, a portable power plant adapted to travel on the main trackway, and means for connecting the portable power plant to the said fixed drum to drive the latter.



2. In a system of the character described, the combination of a main trackway, a plurality of trackways at an angle thereto, a winding drum fixed at each of said angularly disposed trackways, a cable operated by each of said drums, a portable power plant adapted to travel on the main trackway, and means for connecting the portable power plant with said fixed drums to drive the latter.

3. In a system of the character described, the combination of a main trackway, a plurality of branch trackways connected to the main trackway at an angle thereto, a winding drum fixed at each of said angularly disposed trackways, a cable operated by each of said drums, a portable power plant adapted to travel on the main trackway, and means for connecting the portable power plant with said fixed drums to drive the latter.

4. In a system of the character described, the combination of a main trackway, a plurality of trackways at an angle thereto, a winding drum fixed at each of said angularly disposed trackways, a cable operated by each of said drums, a portable power plant adapted to travel on the main trackway, a shaft connected to the power plant by a universal joint, and means for connecting the shaft to the fixed drums.

5. In a system of the character described, the combination of a main trackway, a plurality of trackways at an angle thereto, a winding drum fixed at each of said angularly disposed trackways, a cable operated by each of said drums, a portable power plant adapted to travel on the main trackway, a shaft connected to the power plant by a universal joint, and a detachable universal joint for connecting said shaft with said fixed drums.

[Claims 6 to 8 not printed in the Gazette.]

1,013,107. TURPENTINE-GATHERER. LEWIS T. BAKER, Pensacola, Fla. Filed June 23, 1910. Serial No. 568,568.

1. A turpentine gatherer including coacting sections for attachment to a tree and having their inner ends provided with interengaging flanges, the lower ends of said sections being bent to form inclined gutters, the inner end of one of which is extended longitudinally beyond and disposed in a plane below the inner end of the mating gutter.

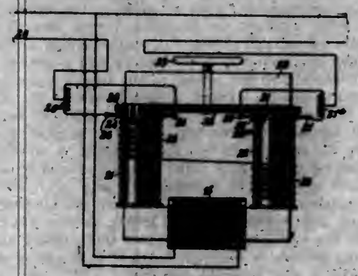
2. A turpentine gatherer including coacting plates for attachment to a tree and having their inner ends provided with interengaging flanges and their lower longitudinal edges bent outwardly and thence upwardly to produce gutters, the inner end of the gutter of one plate terminating short of the adjacent flange, and the inner end of the gutter of the mating plate extending longitudinally beyond the flange of said mating plate and disposed in a plane below the gutter of the first mentioned plate.

3. A turpentine gatherer including coacting plates for attachment to a tree and having their inner ends provided with interengaging flanges, and gutters of different

lengths carried by said plates, the inner end of the long gutter being extended longitudinally beyond the inner end of the short gutter so as to catch the sap from said short gutter and disposed in a plane below the latter.

4. A turpentine gatherer including coacting plates for attachment to a tree and having their inner ends provided with vertically disposed interengaging flanges, the lower longitudinal edge of each plate being bent outwardly at an angle to the tree and thence upwardly to form a gutter, the inner end of the gutter of one of the plates terminating short of the adjacent flange and the inner end of the gutter of the mating plate being extended beyond the flange of said mating plate.

1,013,108. ELECTRICAL APPARATUS. JOHN M. BARR, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 17, 1905. Serial No. 270,090.



1. The combination with a magnetizable core and a flexible winding therefor, of means for transferring a part or all of the turns of the winding from one portion of said core to another in such a manner as to wholly or partially neutralize its effect or to make it maximum in either direction.

2. The combination with a magnetizable core and a flexible winding therefor, of means for transferring a part or all of the turns of the winding from one portion to another portion of said core.

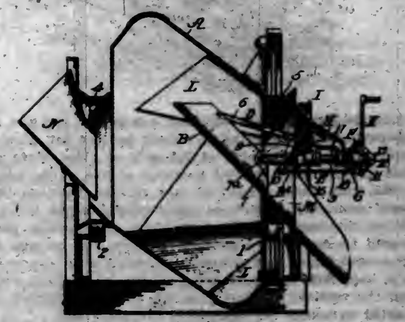
3. The combination with a magnetizable core and a flexible winding therefor that is permanently connected in an electric supply circuit, of means for transferring a part or all of the turns of the winding from one portion to another portion of said core.

4. The combination with a magnetizable core, a magnetising winding and a flexible regulating winding therefor, of means for transferring the turns of said regulating winding from one portion to another portion of said core without disconnecting the regulating winding.

5. The combination with an electric circuit and a voltage regulator therefor comprising a magnetizable core and a plurality of magnetising windings therefor, one of which is flexible and is connected in series relation to said circuit, of means for transferring a part or all of the turns of the flexible winding from one portion to another portion of the core without interrupting the connections of the windings.

[Claims 6 to 31 not printed in the Gazette.]

1,013,109. MACHINE FOR MIXING CONCRETE AND THE LIKE. CHARLES E. BATHRICK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed May 20, 1909. Serial No. 497,149.



1. A rotary mixing drum provided with an end discharge opening; a chute for receiving material within the mixing drum and for discharging such material therefrom by way of the end discharge opening or passage; means for elevating material within the mixing drum and discharging the same into the chute; a rotary device for laterally turning the chute into and out of receiving position, the chute being hinged to said turning device for end tilt in direction and to an extent to incline the chute downwardly and outwardly when it is turned into receiving position, and conversely to swing the chute toward a position parallel with its axis coincident with the axis of the turning device when the chute is turned by said turning device into an inactive position.

2. The combination with a rotary mixing drum, having an axial opening in one end, a discharge chute extending within said opening, a rotary member whereon said chute is pivoted and means for tilting said chute into and out of operative position as said member and chute are rotated, substantially as described.

3. A rotary mixing drum; a discharging chute extending within the rotary mixing drum; a rotary member to which the chute is hinged for end tilt, said member being rotative about an axis which is longitudinal as to the rotary drum; means for tilting the chute synchronously with its rotary action effected by rotation of the said rotary member to which it is hinged for end tilt; and means for raising material within the rotary drum and discharging the same into the chute when the latter is in active position.

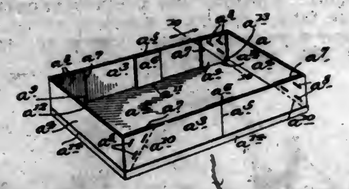
4. A rotary mixing drum; a discharging chute extending within the rotary mixing drum; a rotary member for laterally turning the chute, the latter being hinged to said rotary member for independent end tilt; and power transmitting connection between the chute and said rotary member for tilting the chute synchronously with its lateral rotative action caused by rotative action on the part of its said turning member, and means for successively raising and downwardly discharging material within the rotary mixing drum.

5. A rotary mixing drum; a laterally rotative chute capable of end tilt and extending within the mixing drum; a rotary forked member to which the chute is hinged for end tilt; a pitman for tilting the chute, and a vibratory member pivoted to the pitman and also pivotally supported upon the forked member to which the chute is pivoted; means for vibrating the said member which is pivoted upon

the forked member and attached to the pitman, and means for elevating and discharging material within the mixing drum.

[Claims 6 to 8 not printed in the Gazette.]

1,013,110. FOLDING BOX. ALEXANDER W. BEERS, Bayonne, N. J. Filed Mar. 3, 1911. Serial No. 611,995.



1. A folding or collapsible box, comprising top and bottom parts, each consisting of a main body of flat material, having its edges recessed at its ends or sides, strip portions forming the vertical portions of the parts, hinged to the main body, a part of said vertical portions being scored from the corners of their hinged edges inclining toward the center of the free edges and locking pieces secured to said scored portions between the corners and the scored lines, and extending inward over the scored lines, said locking pieces being of greater vertical extent than the vertical portions to which they are attached and adapted to engage the recesses of the main body.

2. A folding or collapsible box, comprising top and bottom parts each consisting of a main body of flat material, the top body having each of its side edges recessed near its ends, and the bottom body having its end edges recessed in like manner, strip portions hinged to the main body and forming the sides and ends of the said parts, the sides of the top being scored from the corners of their hinged edges toward their free edges in a direction inclining toward the center, and the ends of the bottom part being scored in a like manner, and locking pieces secured to the scored portions between the score lines and the corner and extending inward over the score lines, said locking pieces being of greater vertical extent than the portions to which they are attached and adapted to engage the recesses of the main body.

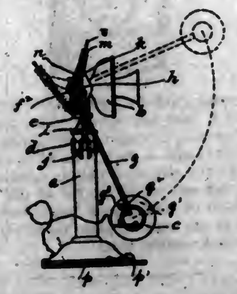
1,013,111. ARTIFICIAL DENTURE. ERNEST CLIFFORD BENNETT, New York, N. Y. Filed May 17, 1911. Serial No. 627,671.

1. A removable artificial bridge comprising a saddle portion arranged to rest upon the natural gum, an artificial tooth carried thereby, fastening means for securing said bridge to a permanent abutment tooth comprising a flat strap secured to one side of the tooth and forming a flat eye passage, said eye being open at the top and bottom only, a spring hook carried by the saddle and comprising a substantially flat bill portion arranged to fit into said flat eye and two curved spring clips horizontally arranged and adapted to yieldingly embrace the sides of said permanent abutment tooth, said spring clips being also carried by said saddle.

2. A removable artificial bridge comprising a saddle portion arranged to rest upon the natural gum, an artificial tooth carried thereby, fastening means for securing said bridge to a permanent abutment tooth and forming an eye or passage open at the top and bottom only, a spring hook carried by the saddle and arranged to fit into said eye, and means carried by said saddle projecting forwardly therefrom and arranged to embrace the sides of said abutment tooth.

3. A removable artificial bridge comprising a saddle portion arranged to rest upon the natural gum, an artificial tooth carried thereby, fastening means for securing said bridge to a permanent abutment tooth, said fastening means comprising a pair of interlocking devices, one of said pair of devices being arranged at the end of said saddle portion, the other of said pair of devices being arranged on the side of said abutment tooth adjacent thereto, in combination with a pair of clips carried by said saddle portion and arranged to embrace said abutment tooth on opposite sides, said first mentioned connecting means and said clips coacting to hold said bridge in operative position relatively to said abutment tooth.

1,013,112. TELEPHONE ATTACHMENT. GEORGE L. BENNETT, New York, N. Y. Filed Mar. 2, 1909. Serial No. 480,950.



1. In a telephone, a pivotal support adapted to carry the receiver whereby it may be temporarily positioned adjacent to the ear of a person talking into the transmitter, means whereby said support is mounted relative to a telephone instrument, means actuated by the movement of said support whereby the telephone circuit may be automatically opened and closed, and means having a variable resistance automatically controlled by and acting on said support whereby it will remain in any adjusted position.

2. In a telephone, a frame, a bearing carried thereby adjacent to the transmitter head, a shaft rotatably mounted in said bearing, a forwardly projected support adapted to carry the receiver carried by said shaft, a plurality of arms carried by the said shaft, means actuated by one of said arms whereby the movement of said shaft in opposite directions will control the circuit to the telephone instrument, and resistance means acting on said other arm whereby the overbalancing weight of said support and its contained receiver is counteracted, and said arm is caused to remain in any adjusted position.

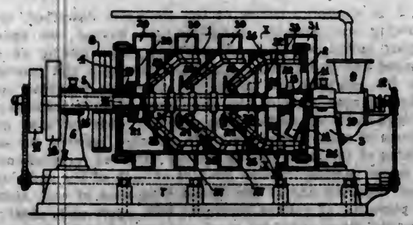
3. In a telephone, the combination with a desk instrument having a vertical standard and an extended base therefor, of a frame, a clamping member whereby said frame may be attached to said instrument, a bearing projecting laterally of the transmitter, a shaft pivotally mounted in said bearing, a forwardly projected arm, means carried by said arm adapted to receive and retain the telephone receiver, a detachable extension base projecting forwardly and laterally of the said standard whereby the overbalancing of the instrument is prevented, means carried by said shaft and actuated by the movement thereof, whereby the telephone circuit is automatically controlled, and resistance means acting on said shaft, whereby said support and its contained receiver will remain in any adjusted position.

4. In a telephone, the combination with a desk instrument, having a vertical standard and an extended base therefor, of a frame, clamping means whereby said frame may be attached to said standard, a bearing extending laterally of the transmitter, a shaft mounted in said bearing, a forwardly projected support, means thereon adapted to receive and retain a telephone receiver, a crank arm carried by said shaft, a stem pivotally mounted on said arm, the lower end of said stem being forked whereby it is adapted to straddle the hook of the telephone instrument, and resistance means acting on said shaft whereby the overbalancing weight of said arm and its contained receiver will be counteracted, and said arm will be caused to remain in any adjusted position.

5. In a telephone, a frame, a laterally extended bearing carried thereby adjacent to the transmitter head, a shaft rotatably mounted in said bearing, a forwardly projected support carried by said shaft and adapted to receive and retain the telephone receiver, means actuated by said shaft whereby the circuits are automatically controlled through the rotation of said shaft, a crank arm, and a spring one end of which is secured to said frame, the other end of which acts upon said crank arm, whereby the overbalancing weight of said support and its contained receiver is counteracted, and said arm is caused to remain in any adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

1,013,113. CENTRIFUGAL SEPARATOR. JOHN J. BERRIGAN, Orange, N. J., assignor to Francis J. Arend, New York, N. Y., and John Bernstrom, Stockholm, Sweden. Filed Mar. 6, 1908, Serial No. 419,485. Renewed May 17, 1911. Serial No. 627,857.



1. A centrifugal separator comprising a rotary separating chamber provided with means for supplying thereto a mixture of liquid and solid materials, and with means for moving solid material axially and then toward the axis comprising separate conveyers operating at different speeds relative to the speed of the chamber.

2. A centrifugal separator comprising a rotary separating chamber provided with means for forming annuli of materials of different specific gravity, and with means for moving one of such materials axially and then toward the axis comprising separate conveyers operating at different speeds relative to the speed of said chamber.

3. A centrifugal separator comprising a rotary separating chamber and a plurality of separate conveyers therein arranged to be driven at different speeds.

4. A centrifugal separator comprising a rotary separating chamber and a plurality of separate conveyers and concentric shafts therefor.

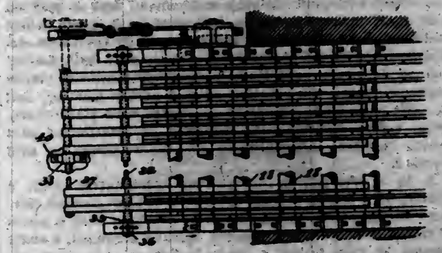
5. A centrifugal separator comprising a rotary separating chamber and a plurality of separate conveyers therein arranged to be driven at different speeds, one of said conveyers having blades lapping the blades of the adjacent conveyer.

[Claims 6 to 9 not printed in the Gazette.]

1,013,114. FIRE-BOX GRATE. FRANK B. BIGELOW, Chicago, Ill. Filed Feb. 2, 1910. Serial No. 541,564.

1. In a furnace grate, the combination of a plurality of fuel supporting members spaced apart to permit the passage of air therebetween to the fuel supported thereby, and means cooperating with said members throughout a portion of the length of the grate to prevent the dropping of fine fuel particles through the grate and permit a reduced flow of air between said members.

2. A furnace grate composed of fuel-supporting members spaced apart, and longitudinal adjustable intermediate members between said fuel-supporting members where the coking of the coal takes place acting to prevent the fine uncoked coal from falling through the grate, whereby a greater quantity of air may pass through that portion of the grate where the coke is consumed than at that portion where the coking of the coal occurs, substantially as described.



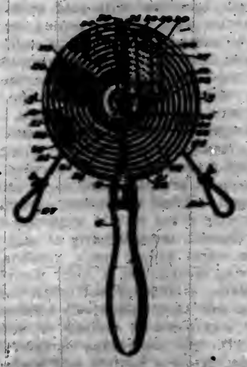
3. A furnace grate composed of traveling fuel-supporting and conveying members spaced apart, and relatively stationary intermediate members adjustable longitudinally of said fuel-supporting members and disposed between the same where the coking of the coal takes place, said intermediate members acting to prevent the fine uncoked coal from falling through the grate, whereby a greater quantity of air may pass through that portion of the grate where the coke is consumed than at that portion where the coking of the coal occurs, substantially as described.

4. A furnace grate composed of a plurality of traveling fuel-supporting chains spaced apart, a plurality of intermediate bars between said fuel supporting chains where the coking of the coal takes place acting to prevent the fine uncoked coal from falling through the grate, and means to simultaneously adjust said bars longitudinally of said chains, whereby a greater quantity of air may pass through that portion of the grate where the coke is consumed than at that portion where the coking of the coal occurs, substantially as described.

5. In a furnace grate, the combination of fuel-supporting members spaced apart, movable intermediate means between said fuel-supporting members where the coking of the coal takes place acting to prevent the fine uncoked coal from falling through the grate, whereby a greater quantity of air may pass through that portion of the grate where the coke is consumed than at that portion where the coking of the coal occurs, and means to move said intermediate means to prevent the formation of comparatively large masses of coke, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,013,115. SHARPENING DEVICE. PETER E. BIRD, Jenkintown, Pa. Filed Oct. 31, 1910. Serial No. 590,074.



1. In a sharpening device, the combination with a handle, of a frame, a rotary member carried by said

frame and having a facing of sharpening material, a shaft mounted in said frame, a blade or tool holder carried by said shaft, driving mechanism operative to rotate said rotary member, and arranged for a limited movement independent of said rotary member, a crown wheel frictionally connected with said driving mechanism, and a gear on said shaft operatively connected with said crown wheel and arranged to be rotated thereby, to shift the blade carried by said blade holder into contact with said facing, and to maintain said blade in contact therewith under pressure during the rotation of said rotary member, and to shift said blade holder to disengage said blade therefrom, before reversing the direction of rotation of said rotary member, independently of the movement of said member.

2. In a sharpening device, the combination with a handle, of a frame carried thereby, a rotary member having a facing of sharpening material provided with a series of ridges and interposed grooves, spirally arranged, a shaft carried by said frame, a blade holder on said shaft arranged to carry a blade or tool, driving mechanism operatively connected with said rotary member, and arranged for a limited rotation with respect thereto, a friction wheel having teeth, a gear on said shaft arranged to engage said teeth, to rotate said shaft, and to hold said blade in contact with said facing, and to remove said blade from said facing upon the reversal of the direction of rotation of said driving mechanism independently of the movement of said rotary member.

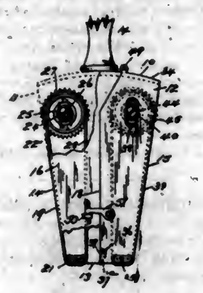
3. In a sharpening device, the combination with a handle, of a spring frame carried thereby, a rotary member mounted in said frame, and having apertures, a facing of sharpening material carried by said member and provided with a plurality of ridges, spirally arranged, driving mechanism having lugs loosely fitted in said apertures, and arranged for a limited rotation independently of said rotary member, a friction wheel having teeth yieldingly connected with said driving mechanism, a shaft mounted for rotation in said frame, a blade or tool holder carried by said shaft, and a gear on said shaft operatively connected with said friction wheel, to shift said blade into contact with the sharpening surface, and arranged to shift said blade from said surface, independently of the movement of said rotary member, upon the reversal of direction of said driving mechanism.

4. In a sharpening device, the combination with a handle, of a spring frame carried thereby, a rotary member mounted in said frame and having apertures, a facing of sharpening material provided with a plurality of ridges, spirally arranged, driving mechanism, having lugs loosely fitted in said apertures, and arranged for a limited rotation independently of said rotary member, a friction wheel having teeth, yieldingly connected with said driving mechanism, a shaft mounted for rotation in said frame, and removable therefrom by springing said frame, a blade or tool holder carried by said shaft, a gear on said shaft operatively connected with said teeth to shift said blade into contact with the sharpening surface, and to hold said blade under pressure against said surface, and shift said blade from said surface independently of the movement of said rotary member upon the reversal of direction of rotation of said driving mechanism, and means to actuate said driving mechanism.

5. In a sharpening device, the combination with a handle, of a frame carried thereby, a rotary member mounted in said frame and having apertures, a facing of sharpening material provided with a plurality of ridges, spirally arranged, driving mechanism comprising a pulley having lugs loosely fitted in said apertures and arranged for a limited rotation independently of said rotary member, a friction wheel having teeth, yieldingly connected with said driving mechanism, a shaft mounted for rotation in said frame, a blade or tool holder carried by said shaft, a gear on said shaft operatively connected with said friction wheel, and actuated thereby to shift said blade into contact with the sharpening surface, and to hold said blade under pressure against said surface, and shift said blade from said surface independently of the movement of said rotary member upon the reversal of direction of said driving mechanism, and a cord in looped engagement with said pulley, operative to actuate said driving mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,013,116. STAMPING DEVICE. AUGUST C. BLUM, South Amboy, N. J. Filed Mar. 1, 1911. Serial No. 611,697.



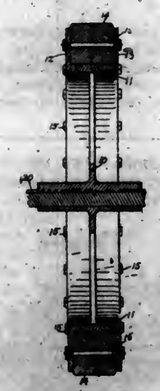
1. A stamping device of the character described, comprising two movable members, both having two spaced apart end-plates, each of said end-plates having an enlarged end and a reduced end and having a slot provided in the enlarged end thereof; a top-plate provided upon the enlarged ends of the end-plates of each member; a bridge-plate connecting the reduced ends of said end-plates of each member; a shaft arranged between the end-plates of the members and having threaded recessed ends; a screw passing through the slot of each of the end-plates and engaging one of the threaded recesses of each shaft; a plurality of collars rotatably held upon each shaft; a toothed wheel provided upon one edge of each of the collars and adapted when moved to rotate the collars; a plurality of endless bands each guided over one of the collars and trained over the bridge-plate of the members; a cross-bar connecting one of the edges of the end-plates of one of the members adjacent to the bridge-plate at the reduced end thereof; a tapered strip of material provided upon the cross-bar; means provided upon the top-plates of both of the members and adapted to pivotally connect said members; and a lock provided upon one of the end-plates of the members and adapted to hold said members in locked engagement.

2. A stamping device of the character described, comprising two movable members, both having two spaced apart end-plates, each of said end-plates having an enlarged end and a reduced end and having a slot provided in the enlarged end thereof; a top-plate provided upon the enlarged ends of the end-plates of both members; a bridge-plate connecting the reduced ends of said end-plates of each member; a shaft arranged between the end-plates of both members and having threaded recessed ends; a screw passing through the slot of each of the end-plates and engaging one of the threaded recesses of each shaft; a plurality of collars rotatably held upon each shaft; a toothed wheel provided upon one edge of each of the collars and adapted when moved to rotate the collar; a plurality of endless bands each guided over one of the collars and trained over the bridge-plate of the members; a cross-bar connecting one of the edges of the end-plates of one of the members adjacent to the bridge-plate at the reduced end thereof; a tapered strip or material provided upon the cross-bar; means provided upon the top-plate of both of the members and adapted to pivotally connect said members; and a catch provided upon each end-plate of the members and adapted to hold said members in locked engagement.

3. A stamping device of the character described, comprising two movable members, both having two spaced apart end-plates, each of said end-plates having an enlarged end, a reduced end, a straight edge and a tapered

edge and each having a slot provided in the enlarged end thereof; a top-plate provided upon the enlarged ends of the end-plates of both members; a bridge-plate connecting the reduced ends of said end-plates of each member; a shaft arranged between the end-plates of both of the members and having threaded recessed ends; a screw passing through the slot of each of the end-plates and engaging one of the threaded recesses of each shaft; a plurality of collars rotatably held upon each shaft; a toothed wheel provided upon one edge of each of the collars and adapted when moved to rotate the collar; a plurality of endless bands each guided over one of the collars and trained over the bridge-plate of the members; a cross-bar connecting the straight edge of the end-plates of one of the members adjacent to the bridge-plate of the reduced end thereof; a wedge-shaped strip of elastic material provided upon the cross-bar; a hinge provided upon the top-plates of the members whereby said members may be swung apart; and a catch provided upon the end-plates of the members and adapted to hold said members in locked engagement.

1,013,117. FRICTION-WHEEL. JOSEPH BORN, Indianapolis, Ind., assignor to Rockwood Manufacturing Company, Indianapolis, Ind., a Corporation. Filed Apr. 1, 1911. Serial No. 618,445.



1. A fiber filler for friction wheels consisting of two substantially semi-circular sections with overlapping ends, the overlapping ends being substantially half the thickness of the filler and having transverse holes therethrough, and tapering dowel-pins insertible through the overlapping ends for securing them together.

2. A fiber filler for friction wheels consisting of two substantially semi-circular sections with overlapping ends, the overlapping ends being substantially half the thickness of the filler and beveled at their extreme ends so as to form an acute angle, and each end of each section being correspondingly recessed to receive such beveled overlapping ends and having holes extending through said overlapping ends, and tapering dowel-pins extending through said holes.

1,013,118. SCREEN. NOAH BRANDT, New York, N. Y. Filed Feb. 8, 1911. Serial No. 607,294.

1. In a screen, the combination of two screen members connected at their end portions to be slidable one upon the other, a resilient device carried by one of the members and connected to the other member to force the members apart when one is advanced upon the other member, a guide on one of the members, and a flexible member passing through the guide and secured to the other member to cause the members to slide on each other in the opposite direction to which advanced by the resilient member.

2. In a screen, the combination of a pair of members connected to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when free to move, a flexible member secured to one of said spring supporting members and engaging a guide portion of the other spring supporting member and arranged to slide the members together when pulled to tension the spring, and permit the spring to return the members upon its release.

3. In a screen, the combination of a pair of members connected to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when released, a flexible member secured to one of said spring supporting members and engaging a guide portion of the other spring supporting member and arranged to slide the members together to tension the spring, and permit the spring to return the members upon release of the flexible member, a flexible member secured to one of the screen members, the other screen member being provided with a guide portion engaged by the flexible member to cause the screen members to open when the flexible member is pulled, and upon release of the flexible member the spring will expand the members of the screen.

4. In a screen, the combination of a pair of members each having bent lugs engaging the other member to cause the members to slide one upon the other, a bracket carried by one of the members, a bow spring secured to the bracket, an arm secured to the other member of the screen and engaged by the said spring whereby the spring is tensioned when the members are slid together and the spring will expand the members when free to move, a flexible member secured to the bracket and engaging a guide portion of the arm to slide the members together when pulled to tension the spring, and permit the spring to return the members upon release of the flexible member.

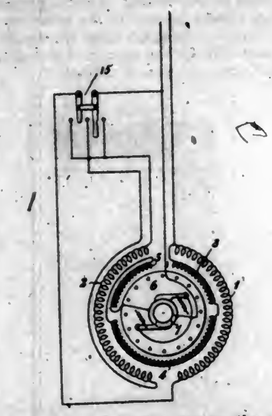
5. In a screen, the combination of a pair of members comprising a frame containing a screen, each member having at one end of the frame member an extension arranged to lap the said extension of the other member, each member also having a lug bent around the said extension of the other member to guide the members to slide together and apart, said extensions having their extremities offset to engage the lug and limit the expanding movement of the members.

[Claims 6 to 8 not printed in the Gazette.]

1,013,119. SINGLE-PHASE MOTOR. WALTER J. BRANSON, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1908. Serial No. 452,090.

1. In a single-phase induction motor, the combination with a main primary winding adapted for circuit connec-

tions to produce a plurality of numbers of magnetic poles, of an auxiliary winding adapted to coöperate with the main winding in starting the motor and without change in its circuit connections for different numbers of poles of the main winding.



2. In a single-phase induction motor, the combination with a main primary winding adapted for circuit connections to produce two numbers of magnetic poles, one of which is double the other, of an auxiliary winding adapted to coöperate with the main winding in starting the motor and without change in its circuit connections for different numbers of poles of the main winding.

3. In a single-phase induction motor, the combination with a main primary winding adapted for circuit connections to produce a plurality of numbers of magnetic poles, of an auxiliary winding, one-half of which is effective to coöperate with the main winding in starting and without change in its circuit connections for different numbers of poles of the main winding.

4. In a single-phase induction motor, the combination with a main primary winding adapted for circuit connections to produce a plurality of numbers of magnetic poles, of an auxiliary winding adapted to coöperate with the main winding in starting the motor and three-fourths of which is adapted to produce a flux of one polarity.

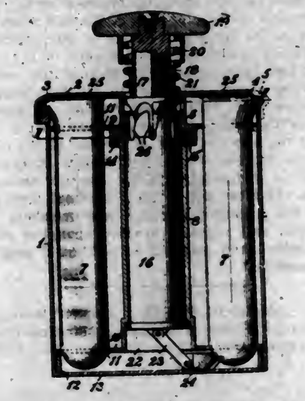
5. In a single-phase induction motor, the combination with a main distributed primary winding comprising two polar sections and adapted for circuit connections to produce either two or four poles, of an auxiliary distributed winding comprising three sections one of which is of approximately double the polar pitch of the other two and the center of the pole produced by which is disposed between extremities of the sections of the main winding, and the centers of the poles produced by the other two sections of the auxiliary winding being disposed approximately 135 electrical degrees therefrom.

1,013,120. CONTAINER AND DISPENSING DEVICE. ALEXANDER B. BRODIE, Pittsburgh, Pa. Filed Aug. 17, 1910. Serial No. 577,714.

1. In a container and dispensing device the combination with a casing having a delivery outlet, of a plurality of receptacles each having a discharge opening, means for causing the opening of each receptacle to successively register with the delivery outlet of the casing, and means for successively destroying each receptacle.

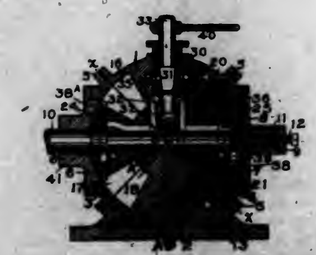
2. In a container and dispensing device the combination with a casing having a delivery outlet, of a plurality of receptacles adapted to contain a liquid, a movable frame on which the receptacles are mounted, means for moving the frame, and means for destroying the receptacles.

3. In a container and dispensing device the combination with a casing having a delivery outlet, of a rotatable carrier, a plurality of receptacles each having a discharge opening carried on the carrier, means for rotating the carrier to successively bring the opening of each receptacle into register with the delivery outlet of the casing, and means for destroying each receptacle after its contents have been removed.



4. In a container and dispensing device, the combination with a casing having a delivery outlet, of a plurality of receptacles each having an opening, means for causing the opening of each receptacle to register with the delivery outlet of the casing, and means for successively destroying the receptacles.

1,013,121. FLUID-OPERATING MECHANISM. ARTHUR AUGUSTUS BROOKS, Ashton-upon-Mersey, England. Filed Mar. 15, 1911. Serial No. 614,640.



1. A fluid operating mechanism comprising in combination, a casing having circular chambers angularly disposed with respect to each other and intersecting at a plurality of points, said chambers having cross-sections of trapezoidal formations, a sliding piston in each chamber adapted to be operated by a suitable fluid, and means controlling the movement of said pistons to cause one to act as a fluid abutment to effect fluid propulsion of the other.

2. An engine having two piston chambers intersecting at diametrically opposite points, a sliding piston in each chamber of a length approximately one hundred and eighty degrees, and having a beveled rack along two opposite sides, a power shaft with its axis intersecting the axis of the two annular chambers and having a bevel wheel fixed near to each end so as to gear with the racks of the pistons and be revolved thereby, each piston being always in gear with one of the bevel wheels and being relatively positioned so that both pistons can act simultaneously as abutments, each for the other at the points of intersection of the chambers.

3. In engines having piston chambers intersecting at diametrically opposite points at a relative angle of ninety degrees and sliding pistons each of which can act simultaneously as a moving abutment for another, a toothed rack on opposite sides of each piston and two bevel toothed wheels fixed to the power shaft so as to engage with the pistons substantially as described.

4. A fluid operating mechanism comprising in combination, a casing having chambers angularly disposed with respect to each other and intersecting each other, a sliding piston in each chamber adapted to be operated a fluid pressure, means controlling the movement of said piston to cause one to act as a fluid abutment to effect fluid propulsion of the other, and a shaft extending through said mechanism and connected with said means.

5. A fluid operating mechanism comprising in combination, a casing having a plurality of circular chambers intersecting each other, a bodily slidable piston in each chamber disposed radially outwardly with respect to its axis of rotation and each piston being driven by fluid pressure, and means engaging the pistons at points remote from their axes of bodily rotation to cause one to act as a fluid abutment to effect fluid propulsion of the other, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,013,122. TONGS. ARNOLD J. BROUYETTE, Shadyside, Ohio. Filed May 10, 1911. Serial No. 626,231.

A device of the character described comprising a shovel, a handle having its rear end slotted, a hollow gripping arm arranged over said handle and having its forward end toothed and its bottom slotted, a coupling member pivotally mounted in the rear end of the handle, extending up through said slot of the handle into said gripping arm and having its upper portion conforming in contour to the shape of said gripping arm, said arm capable of being shifted longitudinally upon said handle, a spring fixed at one end to the handle and adapted to engage said coupling member for maintaining the forward end of the arm elevated with respect to said shovel, and means carried by the handle and adapted to engage the forward end of said arm and further adapted to extend into said arm for maintaining the arm in abutting engagement with the handle against the action of said spring.

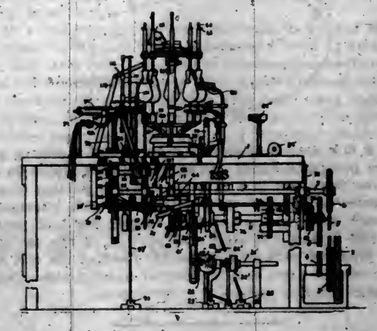
1,013,123. ELECTRIC MEASURING INSTRUMENT. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 21, 1909. Serial No. 473,561.

1. A measuring instrument comprising two circuits having a common terminal, a low resistance movable coil, a pair of equal resistances of high ohmic value, a pair of equal resistances of low ohmic value, the terminals of said coil being connected to the two circuit terminals of one polarity through the resistances of high ohmic value and to the common terminal of opposite polarity through the resistances of low ohmic value.

2. A differential voltmeter comprising a stationary dial, a movable coil, a pointer secured thereto, and two sets of similar resistances each comprising a resistance of high ohmic value and a resistance of relatively low ohmic value, said sets of resistances being severally connected in series with a pair of circuits having a common terminal, and said coil is serving to interconnect the circuits between the resistances, the resistances of low ohmic value being adjacent to the common terminal.

3. A differential voltmeter comprising two circuits having independent positive terminals and a common negative terminal, a resistance of high ohmic value and a resistance of low ohmic value in each circuit, the resistance of low ohmic value being adjacent to the common terminal, a coil serving to interconnect the circuits between the resistances, a stationary dial and a pointer actuated by the coil and coöperating with the dial to indicate either a true voltage value for a single circuit or a true differential voltage value for two interconnected circuits.

1,013,124. MACHINE FOR MAKING INCANDESCENT LAMPS. WILLIAM R. BURROWS, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed May 23, 1906. Serial No. 318,307.



1. In a lamp making machine, a support for a bulb, a pump, automatic means for connecting the pump with a bulb in said support, a heater mounted in position to coöperate with the tubulature of the bulb in the support, and means for at will moving said heater to direct the flame thereof against any desired part of the tubulature.

2. In a lamp making machine, a rotatable frame, a plurality of supports for bulbs carried thereby, a pump, means for connecting the pump to the bulbs in said supports, a heater, means for rotating the frame to bring the tubulatures of the bulbs in the supports thereon before the heater, and means for at will moving said heater to direct the flame thereof against any desired part of the tubulatures.

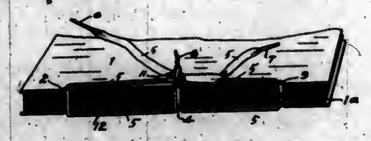
3. A machine for making incandescent lamps comprising a movable frame, a support for a bulb carried thereby, a current carrying member mounted on said frame to move into and out of engagement with the leading in wires of a bulb in said support, and means whereby said member is automatically moved away from the bulb at a predetermined point in the movement of said support.

4. A machine for making incandescent lamps comprising a movable frame, a support for a bulb carried thereby, a rod having contacts thereon and mounted on said frame to move in alinement with said support to carry the contacts into and out of engagement with the leading in wires of the bulb in said support, and a stationary cam for lifting said rod away from a bulb in the support at a predetermined point in the travel of said frame.

5. In an exhausting machine, a support for a bulb, contacts for making electrical connection to the leading-in wires of a bulb in said support, and means for giving an indication when said electrical connection is improperly made.

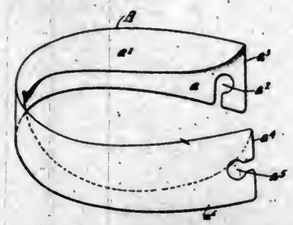
[Claims 6 to 25 not printed in the Gazette.]

1,013,125. PAPER-TYING APPARATUS OR LOOSE-LEAF BINDER. THOMAS F. CAMPBELL, Indianapolis, Ind. Filed Apr. 8, 1911. Serial No. 619,782.



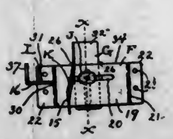
A lace or cord binder provided with a central clip or tip and with end clips or tips, for insertion through perforations and use, substantially as described.

1,013,126. CUFF-PROTECTOR. NICOLA CERRI, Cleveland, Ohio. Filed Mar. 28, 1910. Serial No. 551,832.



As a new article of manufacture, a cuff protector comprising connected inside and outside flaps adapted to slip over the front end of a cuff, the one end portion only of the protector being provided with an incision intersecting its inner edge, and adapted to engage the link portion of a cuff button, the other end portion of the protector being provided with an incision intersecting the end edge of one of said flaps, said last-named incision also adapted to engage the link portion of a cuff botton.

1,013,127. SHADE-ROLLER AND CURTAIN HOLDER. STANLEY CHALKO, New Britain, Conn. Filed May 18, 1911. Serial No. 627,934.



1. A shade roller comprising a body strap having a supporting plate provided with a slot, a shade roller having a body plate in abutment with the said supporting plate and an arm at right angles thereto, the said body plate also provided with a slot, a carriage plate, exterior to the said body plate and provided with a hole, a screw passing through the said hole and slots, and the said carriage plate provided with a pair of guide lugs in engagement with the said supporting plate and with the said body plate.

2. A curtain roller comprising a body strap having a supporting plate, and an end bent at right angles thereto and the said end provided with a hole, a moving element comprising a carriage plate having means for being secured to the said supporting plate at different positions laterally, a curtain holder in the form of a wire having an arm passing through the said hole, one end secured to the said moving element, and the other end provided with means for holding a curtain rod or pole.

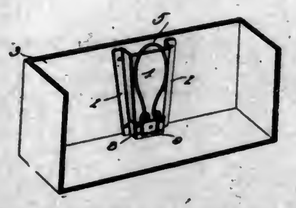
3. A curtain holder comprising a body strap having a supporting plate, and an end bent at right angles thereto and the said end provided with a hole, a moving element comprising a carriage plate having means for being secured to the said supporting plate at different positions laterally, a curtain holder in the form of a wire having an arm passing through the said hole, one end secured to the said moving element, and the other end provided with means for holding a curtain rod or pole, and a shade roller holder constituting part of the said moving element, having means for holding a shade roller, and means permitting of adjustment of position at right angles to the line of travel of the said curtain holder.

4. A shade roller and curtain holder having a body strap and a moving member comprising a carriage mounted thereon having means for adjustment of the lateral position and comprising a curtain holder and a shade roller holder, and the said shade roller holder having means for vertical adjustment, and a carriage plate having means for guiding the said carriage and the said shade roller holder relatively to the said body strap in changing the position of adjustments thereof, comprising a pair of lugs and a hole for a clamping screw.

5. In a shade roller and curtain holder having a body strap and a moving member comprising a carriage provided with separate means of holding a shade roller and curtain rod and pole and a carriage plate serving as co-operative holding and guiding means, the said curtain rod and pole holding means attached directly to the said carriage plate, the said shade roller holder having means for being adjustably supported between the said carriage plate and body strap.

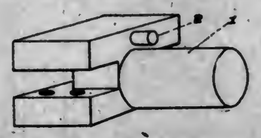
[Claim 6 not printed in the Gazette.]

1,013,128. ATTACHMENT FOR MAIL-BOXES. ELMER H. CLARK, Sheldon, Iowa. Filed Apr. 13, 1911. Serial No. 620,919.



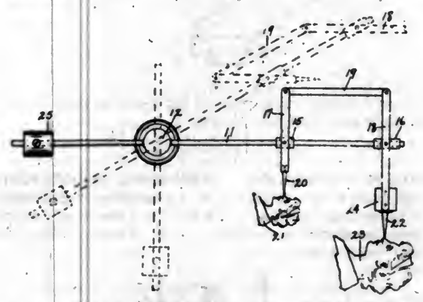
A mail holding attachment for mail boxes adapted to separately hold letters and papers and located within the box and secured to the rear wall thereof, said holding attachment comprising a pocket open at its upper end, and an elongated clamping loop yieldingly secured to the front wall of the pocket adjacent to the bottom thereof, the medial upper portion of the clamping loop extending above the upper edge of the pocket, whereby the projecting looped portion of the clip is in convenient position to be operated.

1,013,129. TOOL-HOLDER AND SECURING DEVICE FOR SAME. FREDERICK F. CLARKE, Franklin, Pa. Filed Aug. 1, 1910. Serial No. 574,901.



In a tool-holder and securing device for same, the combination with a body having a primary socket and a secondary socket, of a tool-holder, a primary shank and a secondary shank upon said holder, arranged to removably occupy said sockets respectively, a binder plug socket intersecting one of said sockets, a binder plug occupying said plug socket and arranged to bear upon one of said shanks for the purpose of preventing the longitudinal movement thereof.

1,013,130. PATTERN-MACHINE. CHARLES W. CONGER, Indianapolis, Ind. Filed Jan. 30, 1911. Serial No. 605,404.



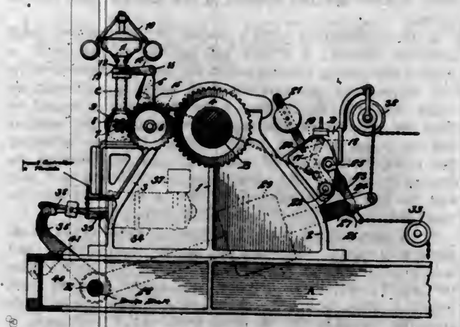
1. An apparatus for reproducing surfaces including a shaft, means for mounting said shaft so that it can be rotated and moved to variable positions, levers pivotally mounted in bearings adjustable on said shaft, a connection between said levers, and tracing and reproducing points mounted in connection with the two levers respectively.

2. An apparatus for reproducing surfaces including tracing and reproducing points, levers in which said points are mounted, bearings on which said levers are pivotally mounted, a shaft on which said bearings are adjustable, pivotal connection between said levers, and a universal bearing in which said shaft is rotatably mounted between its ends, whereby the shaft may have rotary as well as other movement.

3. An apparatus for reproducing surfaces including tracing and reproducing points, parallel levers in which said points are mounted, bearings on which said levers are pivotally mounted, a shaft on which said bearings are adjustable, a pivotal connection between said levers, a support with a socket in the upper end thereof, and a ball bearing in said socket to which said shaft is secured between its ends.

4. An apparatus for reproducing surfaces including a shaft, a universal bearing for mounting the shaft between its ends, a pair of levers pivotally mounted on bearings adjustably mounted on one end of said shaft, a pivotal connection between said levers, tracing and reproducing points on said levers respectively, and an adjustable weight on the other end of the shaft for balancing the same.

1,013,131. EMERGENCY-BRAKE FOR HOIST-ENGINES. HARRY N. COVELL, New York, N. Y., assignor to Lidgerwood Manufacturing Company, a Corporation of New York. Filed Nov. 30, 1907. Serial No. 404,480.



1. In a brake-setting device, in combination, a drive shaft, a brake shaft, means for operating the brake shaft, said means comprising a weighted arm member, a governor member adapted to operate to release said arm member, a hook, and a second arm in engagement with said hook adapted to be released upon the release of said first arm, and means for controlling the fall of said second arm when released, said control means comprising a third arm adapted to be elevated upon the fall of said second arm.

2. In a brake-setting device, a drive shaft, a brake shaft, a governor mechanism, a gravity lever, a latch to hold the same, said latch being operated by the governor mechanism, a cam operated by the gravity lever, a gravity brake lever, and a latch for holding said brake lever, said latch being operable by the cam.

3. In a brake-setting device, a drive shaft, a brake shaft, a governor mechanism, a gravity lever, a latch to hold the same, said latch being operated by the governor mechanism, a cam operated by the gravity lever, a gravity brake lever, a latch for holding said brake lever, said latch being operable by the cam, and controlling means operated by the brake lever.

4. In a brake-setting device, a drive shaft, a brake shaft, a governor mechanism, a gravity lever, a latch to hold the same, said latch being operated by the governor mechanism, a cam operated by the gravity lever, a gravity brake lever, a latch for holding said brake lever, said latch being operable by the cam, and means for regulating the fall of the gravity brake lever.

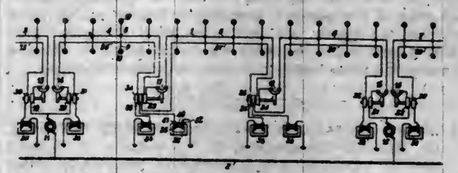
5. In a brake-setting device, a drive shaft, a brake shaft, a governor mechanism, a gravity lever, a latch to hold the same, said latch being operated by the governor mechanism, a cam operated by the gravity lever, a gravity brake lever, a latch for holding said brake lever, said latch being operable by the cam, means for regulating the fall of the gravity brake lever, said means comprising a retarding device acted upon by an arm on the gravity brake lever.

[Claims 6 and 7 not printed in the Gazette.]

1,013,132. FOLDING SLED. OLIVER CRUTCHFIELD, Ottumwa, Iowa. Filed Aug. 16, 1911. Serial No. 644,339.

A folding sled comprising a platform, runners hinged to the platform, braces beneath the platform and comprising horizontal portions pivoted to the platform, diagonal portions extending toward the runners, vertical portions engaging with the runners, said vertical portions having open ended slots and recesses on opposite sides of the slots, bolts extending transversely through the runners and engaged in the open ended slots clamping nuts on the bolts, and lugs on said bolts for engagement in said recesses, whereby when the nuts are tightened the braces are held in position and prevented from movement with relation to the bolts.

1,013,133. SYSTEM OF ELECTRICAL DISTRIBUTION. FREDERICK DARLINGTON, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 25, 1906. Serial No. 323,365.



1. In a system of distribution, the combination with a conductor comprising a plurality of sections, supports

therefor, and insulators for connecting the conductors to the supports, of a circuit-breaker for connecting each pair of adjacent sections of the conductor together, auxiliary conductors electrically connected to the supports for the respective sections of the main conductor, and a plurality of tripping magnet windings for each circuit-breaker, said windings being in circuit, respectively, with the auxiliary conductors of adjacent sections.

2. In a system of distribution, the combination with a conductor comprising a plurality of sections, supports therefor, and insulators for connecting the conductors to the supports, of a circuit-breaker for connecting each pair of adjacent sections of the conductor together, auxiliary conductors electrically connected to the supports for the respective sections of the main conductor, and a plurality of tripping magnet windings for each circuit-breaker, said windings being connected in circuit, respectively, with the main conductor and with the auxiliary conductors of adjacent sections.

3. In a system of distribution, the combination with a conductor comprising a plurality of sections, supports therefor, and insulators for connecting the conductors to the supports, of a circuit-breaker for connecting each pair of adjacent sections of the conductor together, auxiliary conductors electrically connected to the supports for the respective sections of the main conductor, and a plurality of tripping magnet windings for each circuit-breaker, said windings being connected in circuit, respectively, with the main conductor and with the auxiliary conductors.

4. In a system of distribution, the combination with a conductor comprising a plurality of sections, supports therefor, and insulators for connecting the conductors to the supports, of a circuit-breaker for connecting each pair of adjacent sections of the conductor together, auxiliary conductors electrically connected to the supports for the respective sections of the main conductor and the terminals of which are permanently grounded, and a plurality of tripping magnet windings for the circuit-breakers, said windings being connected in circuit, respectively, with the auxiliary conductors of adjacent sections.

5. In a system of distribution, the combination with a conductor comprising a plurality of sections, supports therefor, and insulators for connecting the conductors to the supports, of a circuit-breaker for connecting each pair of adjacent sections of the conductor together, auxiliary conductors electrically connected to the supports for the respective sections of the main conductor and having grounded terminals, circuit-breaker tripping magnet windings connected in circuit, respectively, with the auxiliary conductors of adjacent sections, and impedance devices also connected in circuit with the auxiliary conductors.

[Claims 6 and 7 not printed in the Gazette.]

1,013,134. PROCESS FOR WELDING COPPER. ROY C. DAVIDSON, Fort Blackmore, Va. Filed Nov. 19, 1910. Serial No. 593,249.

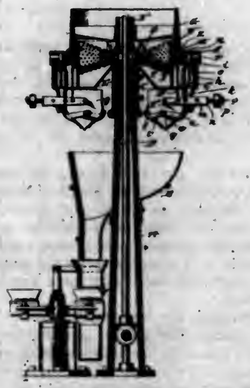
The herein described process for welding copper which consists in first placing the pieces to be welded together and inserting the same into a fire, then withdrawing the same after they have been heated and placing thereon at their meeting surfaces a quantity of borax, then again inserting the pieces into the fire to be heated and once more removing the same and hammering them together, then returning the pieces to be welded to the fire to be again heated, then removing them and placing upon the connected ends of the pieces a quantity of ferrous sulfate, then placing the pieces back in the fire until they are highly heated, and lastly removing the pieces from the fire and hammering them together to form the completed weld.

1,013,135. INCANDESCENT-LAMP SOCKET. FRANK C. DE REAMER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 14, 1907. Serial No. 357,240.

The combination with the metal shell and cap parts, of bayonet slots formed in one part and holding lugs formed on the other part, and locking means comprising an aperture formed in one part and a coöperating catch on the

other part formed by depressing the metal between two oppositely-bowed longitudinal slits.

1,013,136. AUTOMATIC WEIGHING MECHANISM. WILLIAM DEATS, Yonkers, N. Y., assignor to Automatic Packing and Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed June 30, 1909. Serial No. 505,201.



1. In combination with a hopper or chamber; a constantly-driven dribble roll; a larger feed roll; yielding driving connections between said dribble roll and the larger feed roll; a scale-pan located beneath the hopper; and connections between said hopper and the larger feed roll for arresting the rotation of said roll when the scale-pan has received its proximate charge.

2. In combination with a hopper or chamber; a constantly-driven dribble roll mounted therein; a larger feed roll also mounted in said chamber; frictional driving connections between said rolls; a scale-pan located beneath said hopper; a gate for closing the lower end of the hopper; and connections intermediate said scale-pan and friction-driven roll, and between the pan and the gate, whereby when the pan has received its proximate charge the larger feed roll will be brought to a standstill and upon further and full descent of the pan the gate will be closed.

3. In combination with a hopper or chamber; a shaft mounted therein; a dribble roll secured to the shaft; a second roll loosely mounted upon the shaft; frictional driving connections intermediate said rolls; a scale-pan located beneath the hopper; a pivoted gate arranged to close the lower end of the hopper; connections intermediate the scale-pan and the friction-driven roll for arresting the rotation of said roll when the pan has received its proximate charge; and connections intermediate said gate and the pan for swinging said gate to its closed position when the pan has received its full charge.

4. In combination with a hopper or chamber; a shaft mounted therein; a dribble roll secured to the shaft and rotating therewith; a second roll loosely mounted upon the shaft; frictional driving connections between said rolls; a gate mounted beneath the hopper; said gate standing normally in an open position; a scale-pan; a locking device for preventing the rotation of the second roll; said device being normally held out of operation when the scale-pan is elevated; an actuating device for closing and opening the gate, said device being controlled by the descent of the pan; means for discharging the material from the pan; and means for releasing the locking device and the gate-actuating device, said means coming into operation after the pan has been discharged.

5. In combination with a feed hopper or chamber; a shaft mounted therein, a dribble roll secured to and rotatable with the shaft; a large feed roll loosely mounted on the shaft; frictional driving connections between said rolls; a ratchet secured to and rotatable with said larger feed roll; a pawl-carrier; a pawl pivoted upon said carrier and coöperating with the ratchet; a second ratchet secured upon the shaft; an elbow-lever loosely fulcrumed upon the shaft; a pawl fulcrumed upon said elbow-lever and normally standing in line with the ratchet secured upon the shaft; a gate pivotally mounted beneath the hopper; a scale-beam also fulcrumed beneath the hopper; means interposed between said beam and the first-mentioned pawl for normally holding the same out of action so long as the beam remains in its elevated position; connections between said beam and the second pawl for throwing the pawl into engagement with its ratchet when the beam approaches the limit of its downward movement; and means for releasing said pawls and returning the parts to their normal positions when the contents of the pan carried by the beam has been discharged.

[Claims 6 to 10 not printed in the Gazette.]

1,013,137. PROCESS OF TIGHTENING CASKS, BARRELS, OR THE LIKE. BERNARD DIAMAND, Idaweiche, Oberschlesien, Germany. Filed Mar. 8, 1909. Serial No. 482,002.

1. The process of tightening or luting casks, barrels or the like, which consists in coating the interior surface with water-glass and waste cellulose lye.

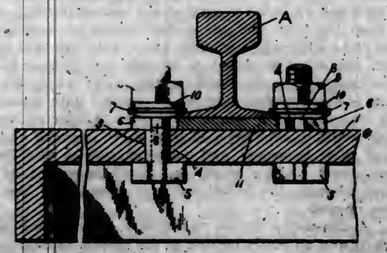
2. The process of tightening or luting casks or barrels or the like, consisting in coating the interior surface of the said casks with water-glass and then coating the surface thus treated with cellulose lye.

3. The process of tightening or luting casks or barrels or the like, which consists in neutralizing the waste liquor resulting from the manufacture of sulfite-cellulose, adding water-glass thereto, and coating the interior surface of the said casks with the resulting compound, substantially as described.

4. The process of tightening or luting casks or barrels or the like, which consists in coating the interior surface of the said casks with water-glass and the waste liquor resulting from the manufacture of cellulose from wood, substantially as described.

5. The process of tightening or luting casks or barrels or the like, which consists in neutralizing the waste liquor resulting from the manufacture of sulfite-cellulose, adding water-glass and glue thereto, and coating the interior surface of the said casks with the resulting compound, substantially as described.

1,013,138. RAILWAY-TIE AND FASTENER. WILLIAM DILLINGER, Wessington Springs, S. D. Filed July 15, 1911. Serial No. 638,790.



1. The combination with a metallic railway tie having spaced transverse slots in the top thereof, of rail fastening bolts having elongated heads insertible into the slots, a radial lug extending from each bolt, each bolt being revoluble within the slot to shift the end portions of its head under the side walls of the slot and to bring the lug into position over one wall of the slot, a rail engaging element extending around the bolt and above the lug, means extending from said element and into the slot at opposite sides of the lug to prevent rotation of the bolt, and means for securing said rail engaging means upon the bolt.

2. The combination with a metallic railway tie having spaced slots therein, of a bolt having an elongated head insertible into each slot, a lug extending radially from the bolt, said bolt being revoluble within the slot to bring the head and lug into engagement with the lower and upper faces respectively of the top of the tie, a rail engaging element extending around and removably mounted on the bolt above the lug, means extending therefrom and into the slot for preventing rotation of the bolt, and means engaging the bolt for securing said rail engaging means to the bolt.

3. The combination with a metallic railway tie having spaced slots extending transversely of the top thereof, of rail fastening means including a bolt having an elongated head insertible downwardly through the slot, a lug extending radially from the bolt, said bolt being revoluble to bring the head and lug into engagement with the lower and upper faces respectively of the top of the tie, a rail engaging element insertible onto the bolt, arms depending therefrom and insertible into the slot at opposite sides of the lug to hold the bolt against rotation, and means for binding said element upon a rail.

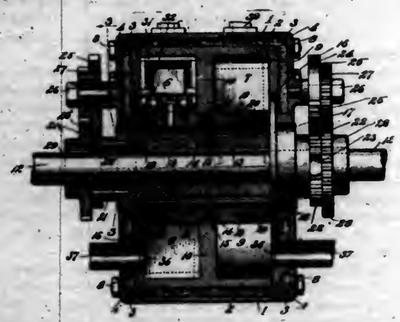
4. The combination with a metallic railway tie open at the bottom and closed at its sides and ends, said tie having spaced slots extending transversely of the top thereof, of a bolt having an elongated head, a lug extending radially from the bolt and parallel with the head, each slot being adapted to receive a bolt, and said bolt being revoluble to bring its head and lug into engagement with the lower and upper faces respectively of the top of the tie, a conical rail engaging element detachably and adjustably mounted on the bolt, arms depending therefrom and insertible into the slot at opposite sides of the lug to hold the bolt against rotation, and means for securing said element upon the bolt and in engagement with a base flange of a rail.

5. The combination with a metallic railway tie open at the bottom and closed at its sides and ends, said tie having spaced slots extending transversely of the top thereof, of a bolt having an elongated head, a lug extending radially from the bolt and parallel with the head, each slot being adapted to receive a bolt, and said bolt being revoluble to bring its head and lug into engagement with the lower and upper faces respectively of the top of the tie, a conical rail engaging element detachably and adjustably mounted on the bolt, arms depending therefrom and insertible into the slot at opposite sides of the lug to hold the bolt against rotation, means for securing said element upon the bolt and in engagement with a base flange of a rail, and a cushioning block interposed between the rail and the top of the tie and between the slots, the lugs being extended away from said block.

1,013,139. ROTARY GASOLENE-ENGINE. ALPHONS N. DITTLINGER, St. Louis, Mo. Filed Apr. 3, 1911. Serial No. 618,597.

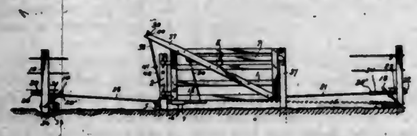
1. A rotary gasolene engine, comprising a suitable casing having a cylindrical bore; a straight main-shaft within said casing; a hub mounted on said shaft within said casing to form a concentric chamber in the space between the interior of said casing and the periphery of said hub; continuously-rotatable pistons fixed diametrically opposite each other on the periphery of said hub within said concentric chamber; intermittently-rotatable pistons also mounted in said concentric chamber to follow the path of said first mentioned pistons and compress the charge in the rear thereof; means for intermittently moving said intermittently-rotatable pistons; means for

locking the latter while the charge is to be fired and expanded; means for moving forward at double the speed of the said first-mentioned pistons, the said intermittently-rotatable pistons; and suitable inlet and exhaust connections for the said concentric chamber.



2. The improved rotary gasolene engine, comprising, a cylindrical casing, pistons 6 and 7 arranged to rotate within said casing, opposite heads for said casing, a straight main-shaft passing axially through said casing, a hub fixed upon said main-shaft within said casing, a revoluble disk mounted loosely on the said main shaft at one end of said casing and having a recessed bearing 16 in one of said heads, means for intermittently revolving said revoluble disk, a key 35 connecting the pistons 7 to the said revoluble disk, so that said pistons will move intermittently with said disk, the said pistons 6 being fixed upon the periphery of said hub to rotate continuously therewith, and suitable inlet and exhaust connections for said cylindrical casing.

1,013,140. FARM-GATE. HERMAN H. DEUTSCHER, Carrollton, Mo. Filed Feb. 6, 1911. Serial No. 606,788.



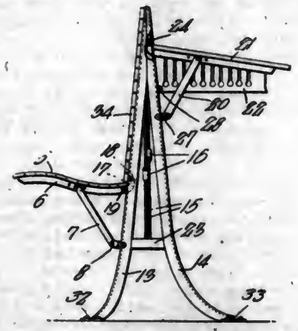
1. The combination with a gate post, of a gate hinged to the post, a diagonal brace extending from the lower part of the free end of the gate to the upper part of the hinged end of the gate and having its upper end extending across the axis of the gate, and a stay secured to the post and to the upper end of the brace.

2. The combination with a gate post, of a gate hinged thereto, a diagonal brace extending from the lower part of the free end of the gate to the upper part of the hinged end of the gate and having its upper end extending across the axis of the gate, and a stay secured to said upper end of the brace and circumferentially adjustably secured to the post.

3. The combination with a gate post, of a gate hinged thereto, a diagonal brace extending from the lower part of the free end to the upper part of the hinged end of the gate and having its upper end extending across the axis of the gate, and a stay secured at its upper end to the upper end of the brace and having a flexible lower end secured to the gate post.

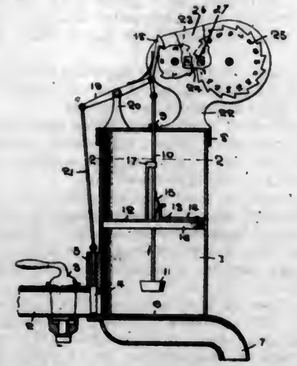
1,013,141. COMBINATION SCHOOL DESK AND SEAT. FRANK W. ELSE, Oskaloosa, Iowa. Filed Aug. 28, 1911. Serial No. 646,369.

In a device of the character described, the combination with a pair of standards having elongated slots therein and a series of notches along the said slots, of a seat having means at the rear portion thereof for slidably engaging the standards and when raised to bind against the standards, a pair of blocks, a bolt carried by each of the said blocks and passing through the said slots of the



standards and provided with lugs adapted to engage in the said slots, and link braces pivoted to the said seat and to the said blocks.

1,013,142. FAUCET. OTTO ENGBERG, Detroit, Minn. Filed Aug. 16, 1910. Serial No. 577,508.



1. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float in said barrel adapted to be raised by the liquid when the valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened, and means to release said plunger.

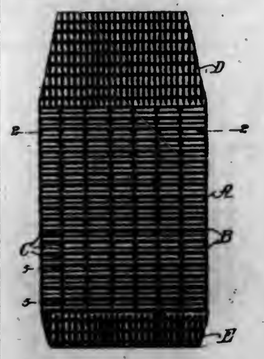
2. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float in said barrel adapted to be raised by the liquid when the inlet valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened, and means carried by said float to release said plunger when the liquid flows out of said barrel whereby the outlet valve is closed, and the inlet valve opened.

3. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float

in said barrel adapted to be raised by the liquid when the inlet valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened and said plunger is held in its upper position, and means carried by said float to release said plunger when the liquid flows out of said barrel whereby the outlet valve is closed, and the inlet valve opened, means to indicate the amount of liquid dispensed, and means carried by said inlet and outlet valve-operating means for operating said indicating means.

4. A dispensing faucet comprising a measuring barrel, an inlet and an outlet therefor, valves to close the inlet and the outlet, means connecting said inlet and outlet valves, a plunger and a float in said barrel, means adapted to hold said plunger in its uppermost position, and means controlled by the movement of said float when it approaches its lower limit of travel to release said plunger.

1,013,143. PAPER WRAPPER. WALTER H. FAIRCHILD, Chicago, Ill., assignor to The Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed July 18, 1908. Serial No. 444,266.



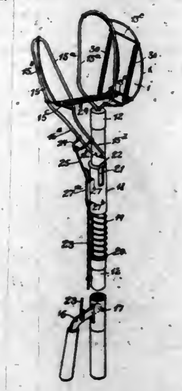
1. A paper wrapper comprising a tube scored longitudinally and corrugated transversely as to its body portion and corrugated longitudinally as to an end thereof; substantially as described.

2. A paper wrapper comprising a tube scored longitudinally and corrugated transversely as to its body portion and corrugated longitudinally as to both ends thereof; substantially as described.

1,013,144. FRUIT-PICKER. CHARLES F. FELLOWS, West Chelmsford, Mass., assignor of one-half to Perlie A. Dyar, Boston, Mass. Filed Jan. 24, 1911. Serial No. 604,397.

1. A fruit picker comprising an elongated rod or handle, a pair of jaws mounted on the outer end portion thereof and formed to bear on opposite sides of a fruit and hold the same while removing it from the tree, the jaws being relatively movable to grasp and release the fruit, jaw-operating mechanism having automatic means for positively preventing the separation of the jaws and the release of the fruit, and manually operated means for successively making said automatic means inoperative and separating the jaws to cause the release of the fruit, said means being operable from the inner end portion of the rod.

2. A fruit picker comprising an elongated rod or handle, a pair of jaws mounted on the outer end portions thereof and formed to bear on opposite sides of a fruit and hold the same when removing it from the tree, one of said jaws being affixed to the handle and the other hinged thereto, and mechanism for moving the hinged jaw toward and from the fixed jaw, to cause the jaws to alternately grasp and release a fruit, said mechanism having automatic means for positively preventing an outward or releasing movement of said hinged jaw, and manually operated means for successively making said automatic means inoperative and causing an outward movement of the hinged jaw, said means being operable from the inner end portion of the rod.



3. A fruit picker comprising an elongated rod or handle, a pair of fruit-grasping jaws mounted thereon, one of said jaws being affixed to the handle and the other hinged thereto, a spring-pressed sleeve movable on the handle and provided with stops which engage the hinged jaw to prevent outward movement thereof when the sleeve is projected, and manually operated means for successively retracting the sleeve and the hinged jaw to first remove the stops from engagement with the hinged jaw and then separate the latter from the fixed jaw.

4. A fruit picker comprising an elongated rod or handle, a pair of fruit-grasping jaws mounted thereon, one of said jaws being affixed to the handle and the other hinged thereto, a spring-pressed sleeve movable on the handle and provided with stops which engage the hinged jaw to prevent outward movement thereof when the sleeve is projected, an operating lever hinged to the handle, and connections between said lever, the sleeve and the hinged jaw, having provisions for retracting said sleeve and jaw successively to first remove the stops from the hinged jaw and then separate the latter from the fixed jaw.

5. A fruit picker comprising an elongated rod or handle, a pair of fruit-grasping jaws mounted thereon, one of said jaws being affixed to the handle and the other hinged thereto, a spring-pressed sleeve movable on the handle and provided with stops which engage the hinged jaw to prevent outward movement thereof when the sleeve is projected, an operating lever hinged to the handle, a rod connecting the lever with the sleeve, said lever and rod being adapted to retract the sleeve to remove the stops from the hinged jaw, an arm attached to said jaw, and a loose connection between the sleeve and the jaw arm, whereby the jaw is retracted after the retraction of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

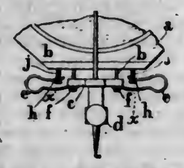
1,013,145. SOUND-BOX FOR TALKING-MACHINES. ALEX FISCHER, Kensington, London, England. Filed Oct. 18, 1909. Serial No. 523,243.

1. In a sound box for talking machines, the combination with a casing and its diaphragm of a stylus bar attached to the diaphragm, a spindle carried by the stylus bar, and a pair of convex guide bearings for the spindle on the casing each having a bearing surface curved in the arc of a circle whose radius is approximately equal to the distance between the point of connection of the stylus bar with the diaphragm and the surface of the spindle nearest thereto, whereby the spindle has both a rocking movement on said bearings and also a pendulous swinging movement thereon.

2. In a sound box for talking machines, the combination with a casing and its diaphragm of a stylus bar attached to the diaphragm, a spindle carried by the stylus bar, a pair of convex guide bearings for the spindle on the casing each having a bearing surface curved in the arc of a circle whose radius is approximately equal to the distance between the point of connection of the stylus bar with the diaphragm and the surface of the spindle nearest thereto, and adjustable yielding devices pressing said spindle against its bearings.

3. In a sound box for talking machines, the combination with a casing and its diaphragm of a stylus bar attached to the diaphragm, a spindle carried by the stylus bar, a pair of convex guide bearings for the spindle on the casing each having a bearing surface curved in the arc of a circle whose radius is approximately equal to the distance between the point of connection of the stylus bar with the diaphragm and the surface of the spindle nearest thereto, an arm projecting inwardly from the spindle toward the casing, and yielding devices carried by the casing pressing on opposite sides of said arm.

1,013,146. TALKING-MACHINE SOUND-BOX. ALEX FISCHER, West Kensington, London, England. Filed Jan. 17, 1910. Serial No. 538,496.



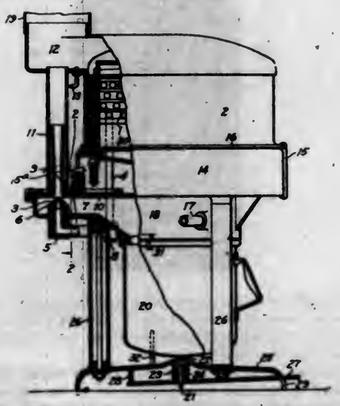
1. In a sound box for talking machines the combination with a casing and its diaphragm of a stylus bar connected with the diaphragm, a spindle carried by the stylus bar and arranged transversely thereto, bearing surfaces on the casing on which the spindle rocks, and a spring consisting of a flat piece of metal bent upon itself and having two substantially parallel arms parallel with the spindle and one of which is rigidly secured to the spindle and the other adjustably secured to the casing but held approximately in line with the spindle.

2. In a sound box for talking machines, the combination with a casing and its diaphragm of a stylus bar connected with the diaphragm, a spindle carried by the stylus bar and arranged transversely thereto, bearing surfaces on the casing on which the spindle rocks, a spring made of a metal strip bent upon itself and having one end attached to one end of the spindle and the other end connected with the casing by adjustable devices which hold it approximately in line with the axis of rotation of the spindle, and means for yieldingly supporting the opposite end of the spindle.

3. In a sound box for talking machines the combination with a casing and its diaphragm, of a stylus bar connected with the diaphragm, a spindle carried by the stylus bar and arranged transversely thereto, bearing surfaces on the casing on which the spindle rocks, and a spring at each end of the spindle made of a metal strip bent upon itself and having one end attached to one end of the spindle and the other end connected with the casing by adjustable devices which hold it approximately in line with the axis of rotation of the spindle.

4. In a sound box for talking machines the combination with a casing and its diaphragm of a stylus bar connected with the diaphragm, a spindle carried by the stylus bar and arranged transversely thereto, bearing surfaces on the casing on which the spindle rocks, and a spring projecting from each end of the spindle and each made of a metal strip bent upon itself and having one end attached to one end of the spindle and the other end arranged approximately in line with the axis of rotation of the spindle, and adjustable screws engaging the free ends of the springs and attaching them to the casing, said springs being formed with openings opposite the heads of the screws to facilitate the screw adjustment, substantially as described.

1,013,147. VACUUM CLEANING APPARATUS. LOUIS W. G. FLYNT, Rochester, N. Y., assignor to Domestic Appliances Company, Rochester, N. Y., a Corporation of New York. Original application filed Apr. 10, 1911, Serial No. 620,113. Divided and this application filed Oct. 18, 1911. Serial No. 655,400.



1. In a dust-separator, the combination of a dust-separating compartment open at the bottom, a base upon which said compartment is supported, a removable vessel adapted to close the bottom of said compartment, a spring-controlled device on said base for holding said vessel yieldingly in contact with said compartment, and a lever adapted to withdraw said device from said vessel.

2. In a dust-separator, the combination of a dust-separating compartment open at the bottom, a base upon which said compartment is supported, a removable vessel adapted to close the bottom of said compartment, and a spring-controlled device on said base, provided with a roller for engaging said vessel, and adapted to hold said vessel yieldingly in contact with the compartment.

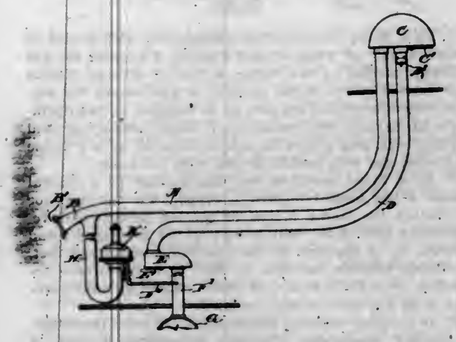
3. In an apparatus comprising a steam-generator and dust-separator, the combination of a steam-nozzle having a connection with the generator and discharging from the separator, a removable lid above the nozzle giving access to the nozzle end and to the interior of the separator, and a draft-pipe into which the nozzle discharges and which is supported above the nozzle by said lid.

4. In an apparatus comprising a steam-generator and dust-separator, the combination of a steam-nozzle having a connection with the generator and discharging from the separator, a removable lid above the nozzle giving access to the nozzle end and to the interior of the separator, a draft-pipe into which the nozzle discharges and which is supported above the nozzle by said lid, and a removable pipe adapted to rest upon the lid, surrounding the draft-pipe, and adapted to receive and conduct away the discharge therefrom.

5. In combination, a dust-separating and incinerating receptacle comprising a separating compartment having an inlet, an incinerating compartment having an outlet, and a generator compartment provided with a boiler and with a burner for heating the boiler, the generator compartment being arranged to discharge into the incinerating compartment; a flue exterior to said receptacle leading from the separating compartment into the incinerating compartment at a point above the boiler and burner; and steam-driven means for inducing dust laden air into said separating compartment and for conveying particles of dust from said separating compartment through said passage and thence into said incinerating compartment.

[Claims 6 and 7 not printed in the Gazette.]

1,013,148. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Jan. 21, 1907. Serial No. 353,235.

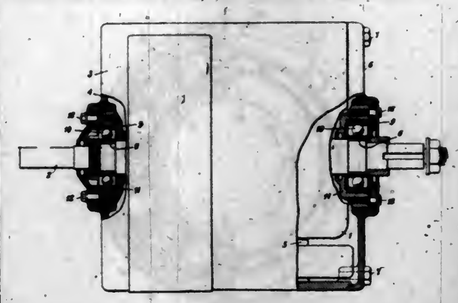


A pneumatic despatch tube apparatus, having, in combination, a transit tube through which carriers are transmitted and normally closed, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, an air inlet adapted to admit air to said tube for driving carriers, a valve normally closing said air inlet, a piston adapted to open said valve upon a fluctuation of the pressure within said tube, means normally actuating the return movement of said piston for closing said valve, means for permitting a limited movement of the valve opening mechanism without opening said valve, and means for retaining said valve in open position during said non-operating return movement of said piston, substantially as described.

1,013,149. ELECTRIC MOTOR. JOSEPH D. FORRER, Pittsburgh, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1908. Serial No. 410,243.

1. In an electric motor, the combination with an axle, an armature carried thereby, a casing having an open end and comprising a field magnet core, and a bracket or cover for the open end of the casing, of bearings for the axle comprising concentric sleeves and interposed balls, and collars having sockets for the bearings, said collars being detachably secured to the respective interior faces of the casing and its bracket or cover.

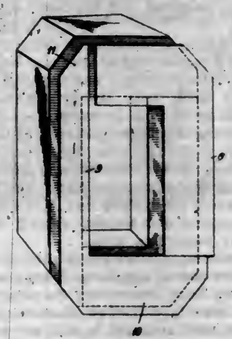
2. The combination with a shaft, a member carried thereby, and a relatively stationary casing for the member, of bearings for the shaft comprising concentric sleeves and interposed balls, the inner sleeves being secured to the shaft, collars having sockets for the bearings and means for detachably securing said collars to the inner faces of the ends of the casing.



3. The combination with a shaft, a member carried thereby, and a relatively stationary casing for the member having internal recesses in its ends, of bearings for the shaft comprising concentric sleeves and interposed balls located in said recesses, collars having bearing sockets also seated in said recesses, and means for detachably securing said collars in the recesses.

4. The combination with a shaft, a member carried thereby, and a relatively stationary casing for the member, of bearings for the shaft comprising concentric sleeves and interposed balls, collars having sockets for the bearings and means for detachably securing said collars to the interior faces of the casing.

1,013,150. TRANSFORMER. CHARLES LE G. FORTESCUE, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 19, 1908, Serial No. 463,486. Renewed June 15, 1911. Serial No. 633,348.

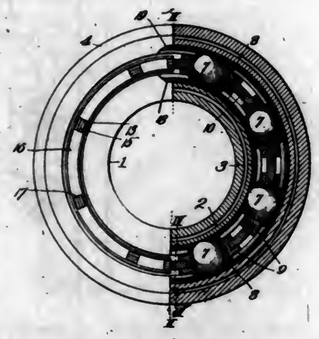


1. A magnetizable core having an eccentric coil-receiving opening and composed of layers each comprising a plurality of sections one of which has a relatively narrow side limb that extends the full length of the core.

2. A magnetizable core having an eccentric coil-receiving opening and composed of layers each of which comprises two unlike sections that make substantially equi-length butt joints with each other, one of said sections having a relatively narrow limb that extends the full length of the core.

3. A magnetizable core composed of multi-section layers and having an eccentric coil-receiving opening, one section of each layer having a relatively narrow limb against the inner edge of which abuts the relatively side end of an adjacent section.

1,013,151. BALL-BEARING. JOHN F. FOSTER, Kansas City, Kans. Filed May 5, 1910, Serial No. 559,502. Renewed May 22, 1911. Serial No. 628,890.



1. A ball bearing, comprising a pair of concentrically arranged collars spaced apart, the inner one having a circular channel in its periphery, and the outer one a circular channel in its inner face, the two channels conjointly forming a ball-race, balls arranged in said ball-race, a spacing bar arranged between adjacent balls, and cups arranged between each bar and pair of balls and engaging the latter and provided with transversely bifurcated stems receiving the ends of said bar, the ends of said bars being swaged in said stems.

2. A ball bearing, comprising a pair of concentrically arranged collars spaced apart, the inner one having a circular channel in its periphery, and the outer one a circular channel in its inner face, the two channels conjointly forming a ball-race, balls arranged in said ball-race, a spacing bar arranged between adjacent balls, cups mounted upon opposite ends of said bars and interposed between the same and said balls and engaging the latter, and a pair of rings arranged between the collars at opposite sides of the balls and connected and bearing a fixed relation to said bars.

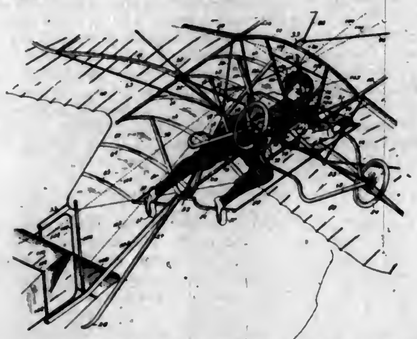
3. A ball-bearing, comprising a pair of concentrically arranged collars spaced apart, the inner one having a circular channel in its periphery, and the outer one a circular channel in its inner face, the two channels conjointly forming a ball-race, balls arranged in said ball-race, a spacing-bar arranged between adjacent balls, and provided with oppositely projecting arms, cups mounted upon opposite ends of said bars and interposed between the same and said balls and engaging the latter, and a pair of rings arranged between the collars and opposite sides of the balls, and engaging and bearing a rigid relation to the said oppositely projecting arms.

4. A ball bearing, comprising a pair of concentrically arranged collars spaced apart, the inner one having a circular channel in its periphery, and the outer one a circular channel in its inner face, the two channels conjointly forming a ball-race, balls arranged in said ball-race, a spacing-bar arranged between adjacent balls and provided with oppositely projecting arms, cups mounted upon opposite ends of said bars and interposed between the same and said balls and engaging the latter, and a pair of rings mounted upon the opposite ends of the arms of said bars, said arms being swaged in said rings.

5. A ball bearing comprising a pair of concentrically arranged collars spaced apart, the inner one having a circular channel in its periphery, and the outer one a circular channel in its inner face, the two channels conjointly forming a ball-race, balls arranged in said ball-race, a spacing-bar arranged between adjacent balls, and provided with oppositely projecting arms, reduced at their ends to form shoulders and tongues, cups mounted upon opposite ends of said bars and interposed between the same and said balls and engaging the latter, and a pair of rings arranged between the collars and opposite sides of the balls and fitting upon said tongues and against said shoulders, said tongues being swaged on the ring.

[Claims 6 to 9 not printed in the Gazette.]

1,013,152. FLYING-MACHINE. HARRY C. GAMMETER, Bratenahl, Ohio. Filed Feb. 11, 1910. Serial No. 543,291.



1. In a flying machine, the combination with a central frame, a pair of wings hinged thereto, a support for the operator carried by the frame, a pair of pivoted driving bars carried by the frame in front of and behind the support respectively and adapted to be engaged by the operator's hands and feet respectively, links connecting said driving bars, and a rocking member carried by the frame and connected with said links and with the wings.

2. In a flying machine, the combination of a central frame, wings hinged thereto, a support for the operator carried by the frame, a pair of pivoted driving bars respectively located in front of and behind the support and adapted to be engaged by the operator's hands and feet, a rocking member operated by said bars, brace bars depending from the wings, and links connecting said brace bars with the said rocking member.

3. In a flying machine, the combination with the wings, of driving mechanism therefor, comprising a pair of pivoted members connected with the wings and having on opposite sides of their pivots hand holds and foot holds, whereby the operator may exert simultaneously the power of both arms and both legs.

4. In a flying machine, the combination with a central frame and wings hinged thereto, of driving mechanism for the wings mounted on the central frame and comprising connected levers mounted on substantially vertical pivots and adapted to be engaged and operated simultaneously by both feet and both hands of the operator.

5. In a flying machine, the combination with the supporting parts, of a support for the operator's chest, and driving mechanism in front of and behind said support and comprising pivoted levers adapted to be engaged by the operator's hands and feet.

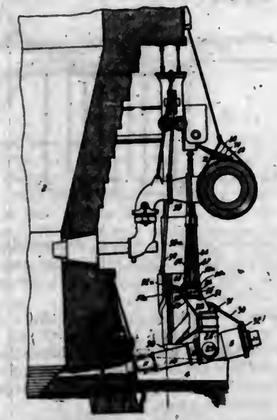
[Claims 6 to 26 not printed in the Gazette.]

1,013,153. CLAY-GUN. FREDERICK H. N. GERWIG, Pittsburgh, Pa. Filed Sept. 8, 1911. Serial No. 648,273.

1. Apparatus for stopping furnace tap-holes comprising a clay gun, a vertically movable supporting arm to which the clay gun is secured, a stationary support on which the supporting arm is movably mounted and means on the supporting arm and stationary support co-acting to swing the supporting arm and clay gun axially on the stationary support when the supporting arm is moved vertically.

2. Apparatus for stopping furnace tap-holes comprising a clay gun, a movable supporting arm to which the clay gun is secured, a stationary support on which the supporting arm is movably mounted, means for moving the supporting arm vertically on the stationary support and means on the supporting arm and stationary support co-acting to swing the supporting arm and clay gun axially on the stationary support when the supporting arm is moved vertically.

3. Apparatus for stopping furnace tap-holes comprising a clay gun, a movable supporting arm to which the clay gun is secured, a stationary support on which the supporting arm is movably mounted, means for moving the supporting arm vertically on the stationary support and means on the stationary support engaging the supporting arm whereby the supporting arm is swung axially around the axis of the stationary support when the supporting arm is lowered on the stationary support to thereby move the clay gun into operative position in front of the furnace tap-hole.



4. Apparatus for stopping furnace tap-holes comprising a clay gun, a movable supporting arm to which the clay gun is secured, a stationary support on which the supporting arm is movably mounted, means for moving the supporting arm vertically on the stationary support and means on the stationary support engaging the supporting arm to swing the clay gun axially about the axis of the stationary support when the support is lifted to thereby move the clay gun out of operative position in front of the furnace tap-hole.

5. Apparatus for stopping furnace tap-holes comprising a clay gun, a movable supporting arm to which the clay gun is secured, a stationary support on which the supporting arm is movably mounted, means for moving the supporting arm vertically on the stationary support, means on the supporting arm and stationary support co-acting to swing the supporting arm and clay gun axially on the stationary support when the supporting arm is moved vertically and means on the stationary arm support and supporting arm co-acting to automatically lock the clay gun against backward movement when in position in front of the furnace tap-hole.

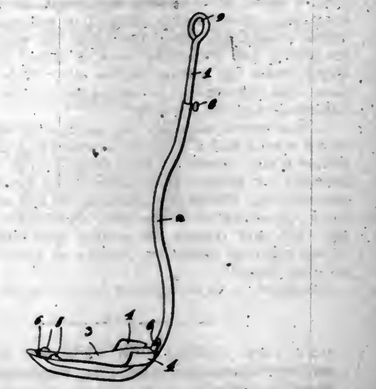
[Claims 6 to 17 not printed in the Gazette.]

1,013,154. ADJUSTABLE SKEE. LOUIS W. GREENIG and JUDSON O. FOWLER, Salt Lake City, Utah. Filed Nov. 26, 1910. Serial No. 594,395.

1. In a device of the class described the combination of a runner having its front end curved upwardly, a set screw threadably secured through said curved end, a foot piece on said runner, upturned flanges on said foot piece, with a rod a portion of which is adapted to telescope within the upwardly curved portion of said runner, and a hand grip on the other portion of said rod.

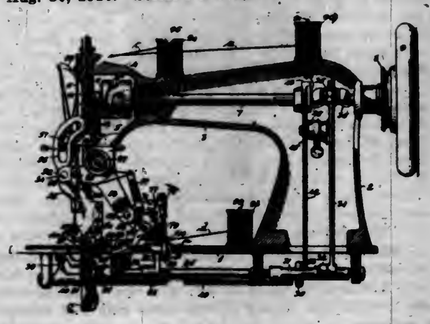
2. A skee with its ends curved upwardly, a set screw threadably secured through one of said ends, a rod adapted to be held within said end of said runner by said set screw, a hand grip on one end of said rod, a foot piece on said skee with upturned flanges thereon.

3. A skee consisting or a runner having both ends curved upwardly one of said ends extended more than the other, a set screw in said end, a rod held by said set screw, a hand grip on one end of said rod, and a foot piece secured on said runner having upturned flanges thereon.



4. A skee consisting of a runner with one end curved and extended upwardly, a set screw threadably secured through said end, a rod held by said set screw, a hand grip on one end of said rod, a foot piece secured on said runner, and upturned flanges on said foot piece.

1,013,155. STITCH-FORMING MECHANISM. ALFRED GRIEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 30, 1910. Serial No. 579,728.



1. In a sewing machine, the combination with stitch-forming mechanism comprising a reciprocating needle and a loop-taker coöperating therewith to form a seam, of a plurality of loopers also coöperating with said needle respectively above and below the work, one of which loopers is eye-pointed to carry and present to the needle loops of a covering thread, and means independent of said loopers whereby loops of thread carried thereby are enchained with each other.

2. In a sewing-machine, the combination with stitch-forming mechanism comprising a reciprocating needle and a loop-taker coöperating therewith to form a seam, of a plurality of eye-pointed loopers coöperating with said needle respectively above and below the work, and means independent of said loopers whereby loops of thread carried thereby may be enchained with each other.

3. In a sewing machine, the combination with stitch-forming mechanism comprising a reciprocating needle and a loop-taker coöperating therewith to form a seam, of a plurality of loopers mounted upon a common carrier and adapted to coöperate with said needle respectively above

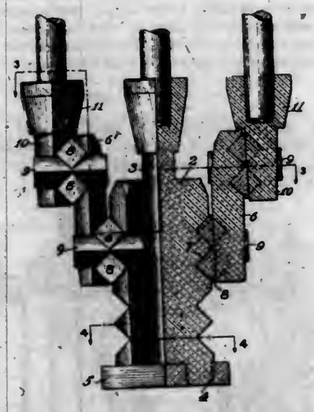
and below the work, and means independent of said loopers whereby loops of thread carried thereby may be enchained with each other.

4. In a sewing machine, the combination with a reciprocating needle and a loop-taker coöperating therewith to form a seam, of a looping implement formed with two eye-pointed looper-blades adapted to coöperate with said needle respectively above and below the work, a spreader for seizing and distending loops of thread of one of said looper-blades for passage of the other blade through the same, and independent actuating means for said looping implement and the spreader.

5. In a sewing machine, the combination with a reciprocating needle and a loop-taker coöperating therewith and complemental thereto in the production of stitches, of a plurality of loopers each adapted to present loops of edge-covering thread for passage of the needle respectively above and below the work, and a spreader coöperating with said loopers for seizing and distending loops of one covering thread for passage of loops of the other covering thread.

[Claims 6 to 15 not printed in the Gazette.]

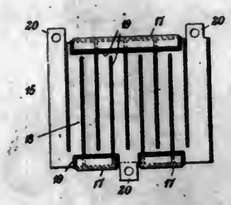
1,013,156. INTERLOCKING-BLOCK STRUCTURE. AUGUST HAAS, Grapeville, Pa. Filed July 17, 1911. Serial No. 639,023.



1. The combination of a base supported upright having two notches in one side thereof—one above the other, four blocks arranged in pairs of two with the blocks of each pair crossing the blocks of the other pair and notched to embrace the same, the blocks of one pair notched to embrace the notched upright and the blocks of both pairs notched to embrace a second upright, an unnotched second upright inserted in the notches of the cross pairs of blocks and supported thereby on the base-supported upright, and an object holder sustained by the second upright.

2. The combination of a central base-supported upright, two supplemental uprights—one at either side of the central upright with each supplemental upright formed with two notches on its outer side—one above the other, two duplicate sets of blocks—one set coöperating with each supplemental upright, each set consisting of four blocks arranged in pairs of two with the blocks of each pair crossing the blocks of the other pair and notched to embrace the same, the blocks of each pair notched to embrace the appropriate notched supplemental upright and also notched to embrace a second upright, two unnotched uprights—one for each set of blocks, each unnotched upright inserted in the notches of the appropriate crossed blocks and supported thereby on the supplemental uprights, and object holders sustained by the said second uprights.

1,013,157. RESISTANCE OR HEATING ELEMENT. WILLIAM S. HADAWAY, Jr., East Orange, N. J., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1909. Serial No. 493,403.



1. A resistance strip or ribbon comprising sections of different widths folded upon each other and having the edges of the wider sections bent over the edges of the contiguous narrower sections.

2. A resistance or heater unit comprising a single folded resistance strip or ribbon, having relatively wide short sections at convenient intervals, and insulating strips between which the resistance ribbon is assembled, the edges of said wide sections being bent over the edges of the intermediate folded sections.

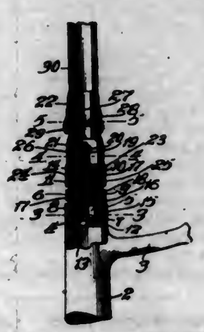
3. A resistance or heater unit comprising a single folded resistance strip or ribbon having short sections of relatively great rigidity which are secured to the adjacent folded portions.

4. A resistance or heater unit comprising a continuous resistance strip or ribbon having a series of slotted sections separated by sections of greater rigidity, said slotted sections being folded back upon and secured to the sections of greater rigidity.

5. A resistance unit comprising a punched or stamped grid and a relatively rigid extension of approximately the same length that are folded together, and an interposed insulating sheet or strip.

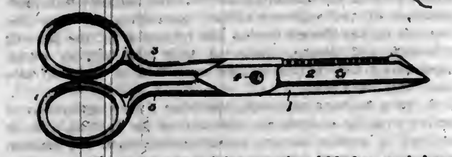
[Claims 6 to 8 not printed in the Gazette.]

1,013,158. AIR-INLET FOR BEER-KEGS. AUGUST HAHN, St. Louis, Mo. Filed Oct. 13, 1910. Serial No. 586,830.



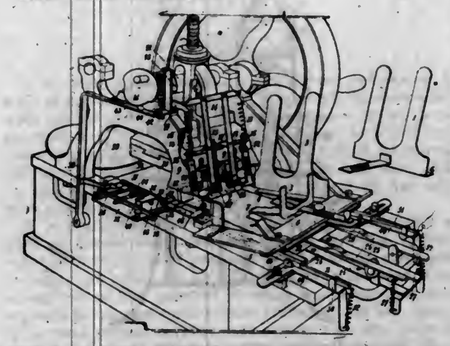
The combination with a connector and a hose nipple provided with an enlarged socket, of a coupling co-axial with and having its ends connected respectively with said nipple and connector, said coupling having a nipple projecting into said socket and provided with a central valve stem aperture, a valve seat at the other end of said coupling, said coupling being provided with a central aperture and a chamber adjacent said valve seat, ports arranged circularly around said aperture and extending through said coupling, a valve provided with a stem reciprocable through said aperture and projecting into the socket of said nipple, and a spring on the projecting end of said valve stem, said spring being secured to the end of said stem and having its other end abutting against the coupling nipple.

1,013,159. COMBINED RAZOR AND SCISSORS. KÁLMÁN HAJDU, Youngstown, Ohio. Filed June 23, 1911. Serial No. 634,901.



A pair of scissors comprising a pair of blades, each having a cutting edge, said cutting edges co-acting with each other, beveled teeth formed along the opposite edge of one of said blades, that blade having the teeth being further provided in one face with a recess extending to the free ends of the teeth, the back wall of said recess having an opening which extends through the blade, a razor blade mounted in said recess, and means extending through the razor blade and into said opening for securing the razor blade in position.

1,013,160. BAG AND ENVELOP PRINTING MACHINERY. JULES HARIEL, Paris, France. Filed Mar. 5, 1909. Serial No. 481,250.



1. In combination with a printing machine, mechanism for removing the undermost of a pile of paper blanks having folded flaps, forwarding it to the printing position and liberating it after printing, comprising a movable carriage, means for imparting reciprocatory motion to said carriage, the plate 24 attached to said carriage, the frame 25 fixed on said plate 24, the spring controlled delivery blades 26 resting on the frame 25, humps 29 on said delivery blades 26, a roller 28, springs 27 adapted to press the said delivery blades up against the under side of the roller in such a manner that upon the advance of the carriage the ends of the blades 26 are depressed when the humps come in contact with the roller, pass beneath the pile of blanks and engage in the angle of the flap of the undermost blank and carry it forward, a rising and falling presser 22 adapted to descend upon the forwarded blank and hold it during the return motion of the blades 26, cam-controlled spurs 12, the jaws 53 operated by said spurs during the rise of the presser 22, and the blades 54 adapted to coöperate with the jaws 53 and to seize the blank at its edge to carry it to the printing position, the blades 34 holding the blank during the impression.

2. In combination with a printing machine, mechanism for forwarding the undermost of a pile of blanks to the position for printing, mechanism for temporarily holding it in place during the return stroke of the forwarding mechanism, the adjustable plates 32, flexible blades 33 fixed on the plates 32, a cross blade 34 uniting the blades 33, arms 37 pivotally supported on the plates 32, means for periodically depressing the said arms, the lever 48 under the control of the cross blade 34, a prolongation 51 on said lever, jaws 53 attached to the under part of the end of said lever 48 and a flexible plate 54 on said lever, the whole so coöperating that the jaws 53 and the flexible plate 54 engage the sides of the paper blank, bring it beneath the printing surface and finally release it at the moment of the impression.

1,013,161. GAME. GEORGE H. HEWITT, Jr., Jersey City, N. J. Filed Nov. 30, 1910. Serial No. 594,827.

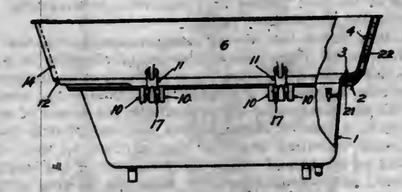
1. A game apparatus comprising a series of boards for displaying a series of names, a pack of numbered cards provided for each board, and a tally sheet provided with the same series of names displayed on said boards, and accounting means on said sheet.

2. A game apparatus comprising a series of boards for displaying a series of names, a pack of numbered cards provided for each board, means on said boards for holding said numbered cards opposite the names on said boards, and a tally sheet provided with the same series of names displayed on said boards, and provided also with a set of figures for accounting.

3. A game apparatus comprising a series of boards for displaying a series of names, a series of cards with names printed thereon, a pack of numbered cards provided for each board, a tally sheet provided with the same series of names displayed on said cards, said tally sheet being provided with two columns having means for facilitating the recording of transactions made by the player.

4. A game apparatus consisting of a plurality of boards provided with receptacles for the insertion of name and number cards, a series of name cards provided for each board, each series consisting of the same number of cards having different names but all series being alike, a pack of number cards with numbers ranging from a small amount to a multiple thereof for insertion in the number receptacles provided on said boards, and a tally sheet divided into blocks, each block containing a list of names corresponding to the names in a series of name cards, and also having accounting means in said blocks suitably arranged to afford means for recording the transactions of the players of the game.

1,013,162. BATH-TUB EXTENSION. HARVEY B. HITSHEW, Pittsburgh, Pa. Filed June 24, 1910. Serial No. 568,726.



1. An extension attachment for bath tubs and the like, comprising a horizontal open rectangular frame adapted to be secured to the top of the tub and having upwardly extending water-tight metal walls, and a door in one of said walls.

2. A bath tub comprising a tub provided with an unobstructed interior, with an outlet in its bottom and with faucets through its walls near the upper edge, and rigid water-tight walls extending upwardly therefrom, one of said extension walls being movable to form a door.

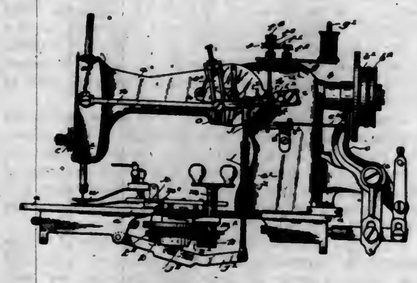
3. A bath tub comprising a tub provided with an unobstructed interior, with an outlet in its bottom and with faucets through its walls near the upper edge, rigid water-tight metal walls extending upwardly therefrom, a downwardly swinging door in one of said extension walls, and means for locking said door in raised position.

4. An extension attachment for bath tubs and the like, comprising a horizontal open rectangular frame adapted to be secured to the top of the tub and having upwardly extending water-tight metal walls, a downwardly swinging door in one of said walls, and means for locking said door in raised position.

5. An extension attachment for bath tubs and the like, comprising a horizontal open rectangular frame adapted to be secured to the top of the tub and having upwardly extending walls, one of said walls being movable to form a door, the base or frame being provided with a groove to receive the lower edge of said door.

[Claims 6 to 12 not printed in the Gazette.]

1,013,163. TENSION DEVICE FOR SEWING-MACHINES. JAMES T. HOGAN, Jersey City, N. J., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 19, 1903. Serial No. 181,778.



1. In a buttonhole sewing machine, the combination of stitch forming mechanism, mechanism for feeding a work carrier, a tension device, means operating upon the tension device to automatically vary the tension at a predetermined moment during the operation of sewing, said means actuated directly from the main shaft and independently of the mechanism for feeding the work carrier, and means controlling the operation of the said tension varying means.

2. In a button-hole sewing machine, the combination of stitch forming mechanism, a tension device, mechanism for feeding a work carrier, means located wholly adjacent the operating shaft and operatively actuated from the operating shaft to automatically vary the tension during the operation of sewing, and means controlling the operation of the said tension varying means, substantially as and for the purposes set forth.

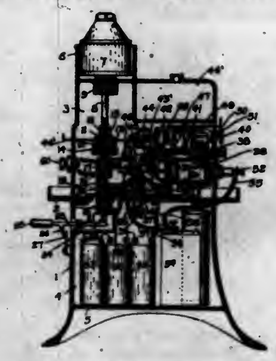
3. In a button-hole sewing machine, the combination of mechanism for imparting movements of vibration to produce side stitches and vibrating movements of an increased amplitude to produce barring stitches, controlling means for the said mechanism for determining the extent of said vibration, a tension device, means operated directly from the main operating shaft of the machine to vary the tension on the thread during the formation of the barring stitches, and means connected with the barring stitch mechanism for controlling the operation of the said tension varying means.

4. In a button-hole sewing machine, the combination of mechanism for imparting movements of vibration to produce side stitches and vibrating movements of an increased amplitude to produce barring stitches, controlling means for the said mechanism for determining the extent of said vibration, work feed mechanism, means operated directly from the operating shaft of the machine and independent of the said work feed mechanism to vary the tension on the thread during the formation of the barring stitches, and means connected with the barring stitch mechanism for controlling the operation of the said tension varying means.

5. In a buttonhole sewing machine, the combination of stitch forming mechanism, mechanism for feeding a work carrier, a tension device, means acting upon the tension device to remove tension, means operating thereon at a predetermined moment during the operation of sewing, said means actuated directly from the main shaft and independently of the mechanism for feeding the work carrier, and means independent of the main shaft actuated means for controlling the operation of the said tension varying means.

[Claims 6 to 17 not printed in the Gazette.]

1,013,164. CREAM-SEPARATOR. JOHN W. HUDLOW, Minneapolis, and JOHN M. CHAPMAN, Garden City, Minn. Filed Nov. 4, 1910. Serial No. 590,735.



1. The combination with a suitable casing, of a drive spindle mounted therein, a suitable engine arranged within said casing, a combined fly wheel and gear connected with said engine and driven thereby, a driving shaft engaged and operated by said gear, and means for coupling said shaft with said drive spindle; substantially as described.

2. The combination, with a suitable casing, of a separator bowl mounted thereon and having a stem projecting vertically into said casing, a vertically adjustable driving shaft arranged within said casing and in alinement with said bowl stem, a hand-operated mechanism for vertically moving said shaft, means for coupling said shaft and stem together, and means located within said casing for rotating said driving shaft, substantially as described.

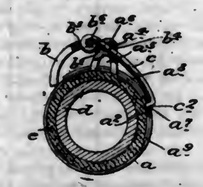
3. The combination with a suitable casing, of a drive spindle mounted therein, a vertically adjustable driving shaft arranged within said casing and in alinement with said spindle, means for vertically adjusting said driving shaft, means for coupling said shaft and spindle together, a pinion upon said driving shaft, a combined fly wheel and gear arranged within said casing and engaging the pinion upon said driving shaft, and a motor arranged within said casing and operatively connected with said gear; substantially as described.

4. The combination with a suitable casing, of a drive spindle mounted therein, a vertically adjustable driving shaft arranged within said casing and in alinement with said spindle, means for vertically adjusting said driving shaft, means for coupling said shaft and spindle together, a pinion upon said driving shaft, a combined fly wheel and gear arranged within said casing and engaging the pinion upon said driving shaft, and an internal combustion engine arranged within said casing and operatively connected with said gear; substantially as described.

5. The combination with a suitable casing, provided with a horizontal plate dividing the interior of said casing into an upper and lower compartment, of a drive spindle mounted in said casing and projecting vertically into the upper compartment of said casing, a vertically adjustable driving shaft arranged within said casing and in alinement with said spindle, and means for coupling said shaft and spindle together, a combined fly wheel and driving gear in engagement with said driving shaft, and an internal combustion engine supported upon said plate within the upper compartment of said casing, and arranged to rotate said combined fly wheel and gear; substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,165. PIPE-CLAMP. GEORGE W. HUNT, New York, N. Y. Filed Mar. 24, 1911. Serial No. 616,607.



1. A clamp device of the class described comprising a strip of flexible metal, one end portion of which is provided with perforations and the other end portion of which is provided with a longitudinal slot adjacent to which are projecting parallel ears having apertures formed therein at the base thereof, a lever pivoted between said ears, and an arm pivoted to said lever and provided at its free end with a hook adapted to enter said perforations.

2. A clamp device of the class described comprising a strip of flexible metal, one end portion of which is provided with two rows of perforations arranged in staggered position, the other end of said strip being provided with a longitudinal slot adjacent to which are parallel projecting ears having apertures formed therein at the base thereof, a lever pivoted between said ears and an arm pivoted to said lever and provided at its free end with a hook adapted to be passed through said perforations.

3. A clamp device of the class described involving a strip of flexible metal having staggered perforations in one end portion thereof, and parallel projecting ears adjacent to the other end portion thereof, said ears being provided at the base thereof with apertures which facilitate the folding of said strip of metal into the form of a circle.

4. A clamp device of the class described involving a strip of flexible metal, one end portion of which is provided with longitudinally arranged rows of perforations in staggered relation, the opposite end portion of said strip being provided with a longitudinal slot and adjacent thereto with projecting wings adapted to be folded to form parallel ears, said wings being provided at the base thereof with apertures which facilitate the folding of said strip of metal in the form of a circle.

5. A clamp device of the class described comprising a strip of flexible metal, one end portion of which is provided with two rows of perforations arranged in staggered position and the other end portion of which is provided with a longitudinal slot adjacent to which are projecting ears, a lever pivoted between said ears and an arm pivoted to said lever and provided at its free end with a hook adapted to enter said perforations.

1,013,166. LIGHTNING-ARRESTER. RALPH B. INGRAM, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 25, 1906. Serial No. 323,361.

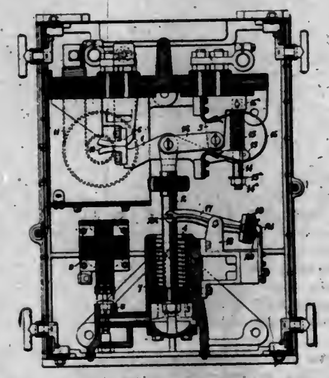
1. In a lightning arrester, the combination with a series of blocks of conducting material which are separated by relatively short air-gaps, of means for maintaining a substantially constant ratio between the length of the aggregate air-gap and the voltage at which an arc will be established across the gaps.

2. In a lightning arrester, the combination with a series of blocks of conducting material which are separated by relatively short air gaps, of a conductor which is connected to an end block of the series and extends close to such a predetermined number of the blocks as to maintain a substantially constant ratio between the length of the aggregate air-gap and the critical voltage of the arrester.

3. In a lightning arrester, the combination with an electric line conductor, and conducting members which form a series of air-gaps between the line and the ground, of a conducting shield disposed adjacent to a predetermined portion of the series of air-gaps whereby the critical voltage of the arrester is maximum.

4. The combination with a series of blocks of conducting material which are separated by relatively short air-gaps, of a conductor which is connected to an end block of the series and extends close to a predetermined number, less than half of the series, of the blocks adjacent to said end block.

1,013,167. ELECTRIC-CIRCUIT INTERRUPTER. RAY P. JACKSON, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906, Serial No. 304,022. Renewed June 15, 1911. Serial No. 633,350.



1. In an electric circuit interrupter, the combination with an actuating rod, a movable bridging contact member pivotally mounted near its central point upon the said

rod, a pair of stationary contact members to be engaged by said movable member, a link and a flexible shunt between one of the stationary members and the movable member, of means for effecting final engagement of the movable member with one of said stationary members as the switch is closed and for effecting initial separation of said members as the switch is opened, said means comprising a spring and a stationary guide rod therefor having a stop at its free end.

2. The combination with an actuating rod, a movable bridging contact member pivotally mounted thereon, and a pair of stationary contact members to be engaged by said movable member, of a link and a flexible shunt between one of the stationary members and the movable member, and means for effecting final engagement of the movable member with said stationary member as the switch is closed.

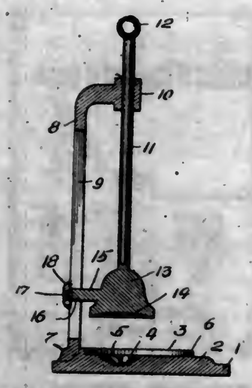
3. The combination with an actuating rod, and a movable bridging contact member pivotally mounted near its central point upon said rod, of a pair of stationary contact members to be engaged by said movable member, a link and a flexible shunt between one of the stationary members and the movable member, and means for effecting final engagement and initial separation of the movable member and said stationary member, said means comprising a spring which tends to separate the movable member from the shunted stationary member.

4. In an electric circuit interrupter, the combination with an actuating rod, a movable bridging contact member pivotally mounted thereon, a pair of stationary contact members engaged by said movable member and a link and a flexible shunt between one of the stationary members and the movable member, of means for effecting final engagement and initial separation of the movable member and said stationary member, said means comprising a spring which tends to separate the movable member from the shunted stationary member and a stationary guide rod having means for limiting the motion of one extremity of the movable member.

5. The combination with a movable bridging contact member, an actuating device upon which said member is pivotally supported at a point between its contact portions and a pair of stationary contact terminals, of a spring acting against one end only of the movable member to turn it upon its pivot away from the corresponding stationary contact terminal in order to insure final engagement and initial separation of said parts.

[Claims 6 to 13 not printed in the Gazette.]

1,013,168. NUT-CRACKING DEVICE. THOMAS JANKOSKY, Philadelphia, Pa., assignor of one-fourth to Michael Swiecicki, Philadelphia, Pa. Filed June 30, 1911. Serial No. 636,163.



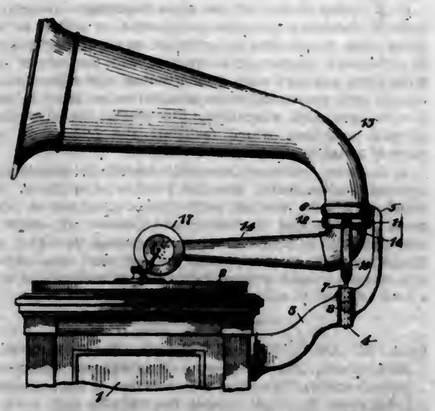
A nut-cracking device comprising a base plate having a pocket formed in the upper face thereof, converging ribs formed on the wall of said pocket, a vertically disposed rim integral with the upper face of said base plate spaced from said pocket and having its forward portion cut away to provide an entrance for a nut, a vertically movable crushing head arranged over said pocket, and means for supporting said head.

1,013,169. CURTAIN-POLE. THOMAS JANKOWSKI, Philadelphia, Pa., assignor of one-fourth to Michael Swiecicki, Philadelphia, Pa. Filed Aug. 18, 1911. Serial No. 644,743.

1. A curtain pole comprising a semi-cylindrical section having a cylindrical portion at one end thereof provided with a beveled shoulder having a groove formed therein, a longitudinal tongue carried by the opposite end of said section, said section having a longitudinal groove formed therein, a detachable semi-cylindrical section having the ends thereof provided with tongues with one of said tongues fitting in the groove of said shoulder, said detachable section having a longitudinal groove formed thereon confronting the groove of the first mentioned section, a semi-cylindrical slide slidably mounted upon the tongue of the first mentioned section and having the inner end thereof provided with a groove to receive the other tongue of said detachable section, and a rod arranged in the longitudinal grooves of said sections and adapted to support the upper edges of a curtain.

2. A curtain pole comprising a semi-cylindrical section having a cylindrical portion at one end thereof, and a longitudinal tongue at the opposite end thereof, said section having a longitudinal groove formed therein, a semi-cylindrical guide slidably mounted upon said longitudinal tongue, a detachable section adapted to be retained in engagement with the first mentioned section by one end thereof engaging the cylindrical portion of said section and the opposite end thereof engaging said slide, said detachable section having a longitudinal groove formed therein confronting the groove of the first mentioned section, and a rod arranged in the grooves of said sections and adapted to hold the upper edges of curtains.

1,013,170. TALKING-MACHINE. JULIUS JETTER, Camden, N. J., assignor to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Apr. 28, 1904, Serial No. 205,277. Renewed May 11, 1910. Serial No. 560,731.



1. In a talking machine, the combination with a sound conveying tube, of a substantially cylindrical member with

which said tube telescopes, a support carrying said member, said support and member being movable about the axis of the latter and of said tube, and pivots for said tube extending diametrically from said cylindrical member.

2. In a talking machine, the combination with a hollow sound conveying tube, of a collar within which said tube fits, a yoke supporting said collar and tube, said yoke, collar, and tube having devices which connect them together, so that said tube is pivotally retained in position, and a support having an opening therein within which a portion of said collar is retained.

3. In a talking machine, the combination with a hollow sound conveying tube, having a flange at one end thereof, of a collar having a cylindrical opening therein, within which said flange fits loosely, a yoke pivoted to turn on a vertical axis, said yoke having pivot screws which pass therethrough, and through said collar, and engage said flange pivoting said tube upon a horizontal axis, and a fixed support having an opening within which a portion of said collar fits.

4. In a talking machine, the combination with a hollow sound conveying tube, of a collar which telescopes with one end of said tube, a yoke, pivot devices carried by said yoke, and engaging both said tube and said collar, forming a bearing to permit said tube to turn on a horizontal axis, a fixed support having an opening therein with which said collar telescopes, and a vertical pivot for said yoke.

5. In a talking machine, the combination with a hollow sound conveying tube having a spherical flange at one end thereof, a collar within which said flange fits loosely, a yoke pivoted to turn on a vertical axis, set screws passing through the ends of said yoke and through said collar and engaging said flange, pivoting the same upon a horizontal axis, and a fixed support telescoping with said collar.

[Claims 6 to 12 not printed in the Gazette.]

1,013,171. ASSEMBLING-TOOL. BENJAMIN H. JONES, St. Louis, Mo. Filed Sept. 14, 1911. Serial No. 649,311.

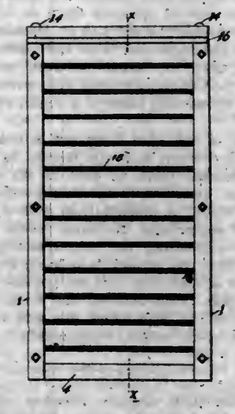
1. In a tool for making up blind joints in tubular frames, a body portion provided with a handle at one extremity, a socket member adjacent the other extremity arranged to rotate on an axis transverse to the longitudinal axis of the tool, a spring arranged to bear against the inner wall of the frame members opposite said socket member, and means for rotating the socket member from adjacent said handle.

2. In a tool for making up blind joints in tubular frames, a body portion provided with a handle at one extremity, a socket member adjacent the other extremity arranged to rotate on an axis transverse to the longitudinal axis of the tool, a spring arranged to bear against the inner wall of the frame members opposite said socket member, and means for rotating the socket member from adjacent said handle, said means comprising a longitudinal shaft rotatably mounted in said body portion and provided with a handle on its outer end and a bevel gear on its inner end, and said socket member comprising a bevel gear adapted to mesh with said first named bevel gear.

3. In a tool for making up blind joints in tubular frames, a body portion provided with a handle at one extremity, a socket member adjacent the other extremity arranged to rotate on an axis transverse to the longitudinal axis of the tool, said socket member being located substantially within said body portion and having a convex face projecting without said body portion, said projecting face comprising an axial recess, adapted to receive a nut and reinforce for positioning the same in said tubular frame, and means for rotating the socket member from adjacent said handle, said tool being adapted to enter a tube too small to admit the hand.

4. In a tool for making up blind joints in tubular frames, a body portion substantially uniform in size throughout its length and provided with a handle at one extremity, a socket member located substantially within said body portion adjacent the other extremity and arranged to rotate on an axis transverse to the longitudinal axis of the tool, and means for rotating the socket member from adjacent said handle, said tool being adapted to enter a tube too small to admit the hand.

1,013,172. METALLIC SHELVING. BENJAMIN L. JONES, Steubenville, Ohio. Filed June 3, 1911. Serial No. 631,024.



1. Shelving comprising vertical angle bars, longitudinal bottom rails connecting said angle bars, vertical shelf supports having the lower ends thereof connected to said bottom rails, tie rods connecting said bars and said shelf supports, shelves detachably supported by said shelf supports, and a top plate carried by the upper ends of said supports.

2. Shelving comprising vertical angle bars, longitudinal bottom rails connecting said angle bars, vertical shelf supports having the lower ends thereof connected to said bottom rails, tie rods connecting said bars and said shelf supports, shelves detachably supported by said shelf supports, a top plate carried by the upper ends of said supports, and end walls secured to said shelf supports.

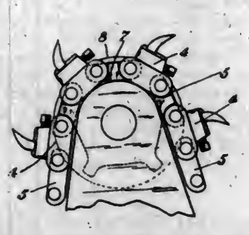
3. Metallic shelving comprising vertical angle bars, longitudinal bottom rails connecting said bars, shelf supports having the lower ends thereof connected to said rails, said supports having slots formed therein, shelves slidably mounted in the slots of said supports and means including tie rods and spacing sleeves adapted to hold said shelf supports relatively to said angle bars.

4. Metallic shelving comprising vertical angle bars, longitudinal bottom rails connecting said bars, shelf supports having the lower ends thereof connected to said rails, said supports having slots formed therein, shelves slidably mounted in the slots of said supports, means including tie rods and spacing sleeves adapted to hold said shelf supports relatively to said angle bars, and a top plate carried by the upper ends of said shelf supports and having the forward ends thereof bent to provide a molding.

5. A metallic shelving comprising vertical angle bars, vertical shelf supports, tie rods holding said supports relatively to said angle bars, and shelves slidably mounted in said supports.

[Claim 6 not printed in the Gazette.]

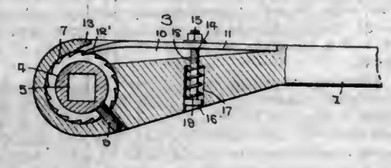
1,013,173. SPROCKET-WHEEL FOR CUTTING-CHAINS. EBENEZER JONES, Martins Ferry, Ohio, and JOHN HALL, Ingram, Pa. Filed Oct. 30, 1909. Serial No. 525,508.



1. In means of the kind described a sprocket wheel having an annular row of sprocket teeth on its rim at each of the opposite sides thereof and an annularly projecting portion on its rim separated from and between said teeth, there being a space or channel between each row of the teeth and the said annularly projecting portion for the reception of the connecting links of a chain, substantially as described.

2. In means of the kind described, a chain supporting frame, a sprocket wheel mounted therein having an annular row of sprocket teeth at each of the opposite sides thereof and an annularly projecting portion on its rim between said teeth, in combination with a chain driven by said wheel comprising U-shaped blocks and separate parallel links connecting the corresponding legs of adjacent blocks, the ends of said links being located adjacent the inner sides of said legs and the bodies or middle portions of the links lying between the teeth at the corresponding side of the wheel and the said annularly projecting portion of the wheel, substantially as described.

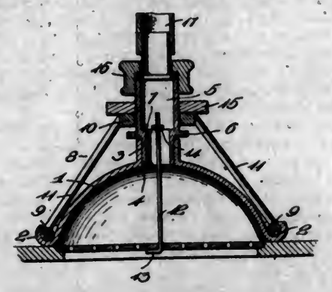
1,013,174. WRENCH. JAMES THOMAS JONES, Brookwood, Ala. Filed Apr. 28, 1911. Serial No. 623,824.



1. A tool comprising a head provided with a circular transverse opening, a ratchet wrench rotatably mounted in said opening, said head being provided upon one surface thereof with a longitudinally extending inclined channel, said channel being deeper adjacent to said transverse opening than at its other extremity, said channel merging into said transverse opening, said head also being provided on the opposite side from the channel with a transverse slot, said slot being at right angles to said channel, a locking bar in said channel, and means in said slot and secured to said bar for normally retaining said bar in engagement with said ratchet wrench.

2. A tool comprising a head, a ratchet wrench rotatably mounted therein, a locking bar extending longitudinally of said head and engaging said wrench, said head being provided with a transversely extending large slot and a small opening communicating therewith, a bolt in said slot and extending through said opening and having one end secured to said locking bar, a guiding head at the other end of said bolt for engaging the wall of said slot, and a spring engaging said bolt between said head and the inner end of said slot for normally retaining said bar in engagement with said wrench.

1,013,175. FLUSHING DEVICE FOR WASTE-PIPES. LEMUEL I. JONES, Youngstown, Ohio, assignor to Excello Products Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 30, 1909, Serial No. 520,262. Renewed May 4, 1911. Serial No. 625,087.



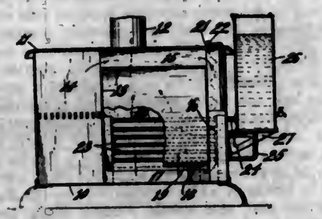
1. In a flushing device for waste pipes, a flexible cup having an upwardly turned annular flange formed on its lower edge, a hose pipe coupling secured on the upper side of the cup, a cup holding frame arranged on said connection and engaged with the annular flange of the cup, a nut arranged on said hose connection to clamp the frame and cup in operative engagement with the waste pipe, a clamping rod adapted to be engaged with the strainer of the waste pipe, a clamping nut arranged on said rod and engaged with the hose connection, and a water conducting hose adapted to connect the cup with a faucet.

2. A flushing device for waste pipes comprising a flexible cup having at its lower edge a projecting marginal flange, a coupling for a water pipe connected with said cup, a movable cup-holding frame mounted on said coupling and engaging the marginal flange of said cup, an adjustable clamping rod adapted to connect said coupling with the strainer of a waste pipe, and means for actuating said frame to clamp the margin of said cup around the waste pipe opening.

3. A flushing device for waste pipes comprising a flexible cup, a coupling for a water pipe connected with said cup, a cup-holding frame movably mounted on said coupling and engaging the lower edge of said cup, means for detachably connecting said cup with a waste pipe, and means for actuating said frame to clamp the edge of said cup operatively around the waste pipe opening.

4. A flushing device for waste pipes comprising a flexible cup, a coupling for a water pipe connected with said cup, a holding frame movably mounted on said coupling and engaging the lower edge of said cup, means for detachably connecting said coupling with a waste pipe, and a nut threaded on said coupling and engaging said frame, whereby through a manipulation of said nut said frame may be actuated to clamp the edge of said cup operatively around the waste pipe opening.

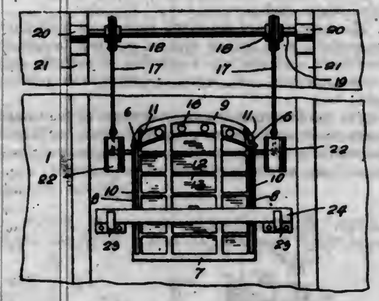
1,013,176. HEATER. JOHN JUNGERS, Cedar Grove, Wis. Filed Feb. 4, 1911. Serial No. 606,547.



1. In a range or the like; a casing; a fire box therein; an oven spaced from the casing at the top, end, bottom and back, forming a top flue space leading from the fire box over the top of the oven, an end flue space leading from the top flue space around the end of the oven, a bottom flue space leading from the end flue space beneath the oven with an opening leading therefrom; and a back flue space leading from said opening to the top of the range for substantially the full width of the oven; a deflecting partition extending across the bottom flue space; a smoke pipe connected with the back flue space; a water coil contained within the back flue space; and a water reservoir connected with the water coil.

2. In a range or the like; a casing; a fire box therein; an oven spaced from the casing at the top, end, bottom and back and forming a top flue space leading from the fire box over the top of the oven, an end flue space leading from the top flue space around the end of the oven, a bottom flue space leading from the end flue space beneath the oven with an opening leading therefrom substantially the width of the oven, and a back flue space leading from said opening to the top of the range of substantially the width of the oven; a diagonal deflecting partition extending part-way across the bottom flue space; a smoke pipe-connected with the back flue space, there being an opening directly connecting the end flue space with the back flue space; means for closing the opening which directly connects the end flue space with the back flue space; a water coil contained within the back flue space; and a water reservoir connected with the water coil.

1,013,177. COKE-OVEN DOOR. RICHARD KEARNS, Mammoth, Pa. Filed July 27, 1911. Serial No. 640,866.

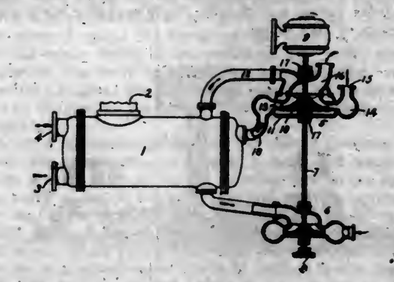


1. The combination with an oven having a doorway provided with a face plate and outwardly projecting pins, of a door including a frame having longitudinal slotted side rails for the reception of said pins, hooks carried by said door frame and adapted to engage said pins to retain said door in a lowered position, a non-fusible material carried by the inner side of said door frame, and counter balance means connected with the door.

2. The combination with an oven having a doorway provided with a face plate and outwardly projecting pins, of a door including a frame having longitudinally slotted side rails for the reception of said pins, hooks carried by said door frame and adapted to engage said pins to retain said door in a lowered position, a non-fusible material carried by the inner side of said door frame, counter balance means connected to the door, and means including a transverse bar adapted to lock said door in a closed lowered position.

3. In an oven door, a face plate provided with outwardly projecting pins, a door including a frame having longitudinally slotted rails for the reception of said pins, ribs carried by said door frame non-fusible material supported by said ribs upon the inner side of said door, counter balance weights for said door, and means including a bar for locking said door in a closed lowered position.

1,013,178. CONDENSER SYSTEM. HULDREICH KELLER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 25, 1906. Serial No. 318,676.



1. The combination of a surface condenser, means for circulating cooling water through the condenser, a centrifugal pump having a casing and an impeller which discharges water outwardly through suitable means within the casing to entrain air, vapor, etc., a conduit connecting the steam space of the condenser with the pump casing so that pump will draw air, vapor, etc., from the condenser, a discharge outlet on the pump casing, and a pump connected to the lower portion of the condenser for removing the water of condensation.

2. The combination of a surface condenser, means including a pump and conduits for circulating cooling water through the condenser, a centrifugal air pump located above the condenser, said pump having a casing and an impeller which discharges water outwardly through suitable means within the casing to entrain air, vapor, etc., a conduit connecting the upper portion of the condenser with the pump casing so that the pump will draw air, vapor, etc., from the coolest region of said condenser, a conduit connecting the lower portion of the pump casing with the circulating water system of the condenser, and a centrifugal pump connected to the lower portion of the condenser for removing the water of condensation.

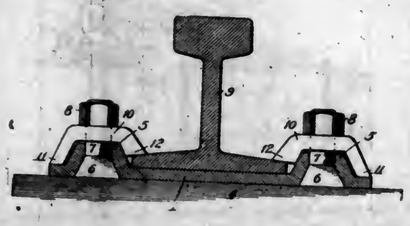
3. The combination of a surface condenser, means including a pump and conduits for circulating cooling water through the condenser, a centrifugal air pump having a casing and an impeller which discharges water outwardly through suitable means within the casing to entrain air, vapor, etc., a conduit connecting the upper portion of the steam space of condenser with the pump casing so that the pump will draw air, vapor, etc., from said condenser, a discharge outlet on the pump casing, a centrifugal pump connected to the lower portion of the condenser for removing the water of condensation, a shaft that is common to the impellers of the air and water of condensation pumps, and a motor for driving the shaft.

4. The combination of a surface condenser, a pump and conduits for circulating cooling water through, the condenser, a centrifugal air pump, a casing for the pump, a conduit supplying cold water to the pump impeller to be discharged from the periphery thereof, a conduit extending between the steam space of the condenser and the casing of the pump so that as the water is discharged from the impeller through suitable means within the pump casing into the outer portion of said casing it will entrain and cool air and vapor from said steam space, a port on the upper portion of the casing through which air can escape, an outlet on the lower portion of the casing for the water from the impeller, a centrifugal pump connected with the lower portion of the steam space of the condenser for removing the water of condensation therefrom, and a motor that is common to and drives the pumps.

1,013,179. TIE-PLATE. JOHN W. KENDRICK, Chicago, Ill. Filed May 2, 1910. Serial No. 558,815.

1. In a device of the class described, a tie plate, means for securing said tie plate to a tie, a boss extending up-

wardly from the base of said tie plate at each end thereof, each of said bosses being spaced inwardly from the end of said tie plate and having a bolt hole in its upper wall, the interiors of said bosses being non-circular in form, and bolts passing through the apertures in said bosses, said bolts having non-circular heads engaging non-circular interiors of said bosses.



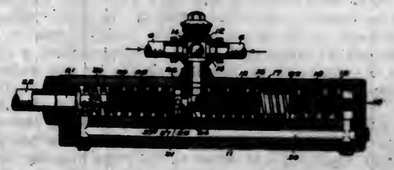
2. In a device of the class described, a tie plate, means for securing said tie plate to a tie, and an upwardly extending pyramidal boss spaced inwardly from the end of said tie plate, the upper wall of said boss being provided with a bolt hole, the bolt having a pyramidal head, said bolt passing through said aperture and having its head seated inside of said boss.

3. An article of manufacture comprising a tie, tie plates secured thereto, each of said tie plates having two upwardly extending bosses, the bosses upon each tie plate being spaced apart to receive the base of a rail between them, and bolts secured to and extending upwardly from each of said bosses.

4. An article of manufacture comprising a tie, tie plates secured to the ends thereof, perforated bosses struck up in said tie plates, and threaded bolts having their heads within said bosses and extending upwardly therefrom through the perforations therein.

5. In a device of the class described, a tie plate, a perforated boss struck up therein, a bolt having its head within the boss and projecting up through the perforation, and a member overlying the boss and resting upon the rail base at one side and upon the tie plate at the other side.

1,013,180. SYSTEM OF FORCED LUBRICATION. JAMES F. KEY, San Francisco, Cal., assignor to General Electric Company, a Corporation of New York. Filed Nov. 12, 1907. Serial No. 401,792.



1. In a system of forced lubrication, the combination of a device for imparting service pressure to the lubricant, and a conduit conveying lubricant to the part to be lubricated, comprising a service baffler and an emergency baffler which is brought into operation when the flow through the service baffler is obstructed.

2. In a system of forced lubrication, the combination of a device for imparting service pressure to the lubricant, a conduit conveying lubricant to the part to be lubricated, a service baffler, an emergency baffler, and means for automatically bringing the emergency baffler into operation when the flow through the service baffler is obstructed.

3. In a system of forced lubrication, the combination of a device for imparting service pressure to the lubricant, a conduit for conveying lubricant to the part to be lubricated, comprising a service baffler having a tortuous passage, an emergency baffler having a tortuous passage, and a valve controlling the flow through the emergency baffler which is normally closed but which is opened automatically when the flow through the service baffler is obstructed.

4. In a system of forced lubrication, the combination of a device for imparting service pressure to the lubricant, a conduit for conveying lubricant to the part to be lubricated, comprising a movable service baffler having a helical passage for the lubricant, an emergency baffler having a helical passage for the lubricant, and a valve controlled by the movement of the service baffler which is normally closed but is opened automatically to bring the emergency baffler into operation when the passage in the service baffler is obstructed.

5. In a system of forced lubrication, the combination of a device for imparting service pressure to the lubricant, conduits for conveying lubricant to the different parts of the system including an automatic baffling device comprising a casing, a service baffler having a helical passage for the lubricant and slidably mounted in the casing, an emergency baffler, a valve controlling the flow through the emergency baffler, and a spring tending to move the service baffler in one direction to close the valve but which permits the pressure in the system to open the valve to bring the emergency baffler into operation when the passage in the service baffler is obstructed.

[Claims 6 to 11 not printed in the Gazette.]

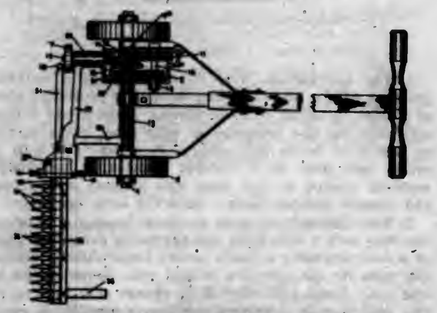
1,013,181. PROCESS OF MAKING CHLOROSULFONIC ACID. AUGUST KLAGES and HERMANN VOLLBERG, Saibke, Germany. Filed July 25, 1910. Serial No. 573,641.

1. The hereinbefore described process of manufacturing chlorosulfonic acid, which process consists in introducing hydrochloric acid gas and sulfuric anhydrid into chlorosulfonic acid.

2. The hereinbefore described process of manufacturing chlorosulfonic acid, which process consists in introducing hydrochloric acid gas into a solution of sulfuric anhydrid in chlorosulfonic acid while avoiding the presence of sulfuric acid.

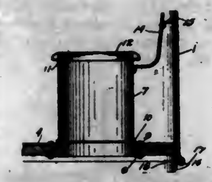
3. The hereinbefore described process of manufacturing chlorosulfonic acid, which process consists in introducing hydrochloric acid gas and gaseous sulfuric anhydrid into chlorosulfonic acid at a moderate temperature.

1,013,182. LAWN-MOWER. GEORGE W. KLOCK, Chillicothe, Tex. Filed Jan. 21, 1910. Serial No. 539,263.



A lawn-mower comprising the combination with a frame, of an axle carried by the frame, wheels on the axle, a bearing sleeve extending forwardly from the frame, a shaft rotatably mounted in the bearing sleeve, and operatively driven from the axle, a crank disk secured to the forward end of the shaft, a lateral arm extending from the bearing sleeve, a brace between the arm and the frame, said arm having down turned side portions at its extremity forming an inverted U-shaped member, set screws engaged through said down-turned portions in opposed directions, a U-shaped casting having recesses in its sides engaged by the set screws, a plate secured to said casting and extending outwardly therefrom for pivotal movement upon said set screws, said plate having a longitudinal groove in its upper surface, guard fingers carried by the plate, a sickle bar slidable in the groove and having cutting edges coacting with the guard fingers, a pitman connecting the crank disk to the sickle bar, a casing secured to the plate and extending over the bar and means for inclining the bar and frame in different adjusted positions at their inner ends.

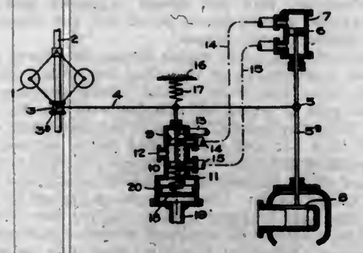
1,013,183. OUTDOOR TOILET. ANDREW A. KRAMER, Kansas City, Kans. Filed Oct. 4, 1910. Serial No. 585,271.



1. A toilet structure comprising a housing, having a suitable floor, a sheet metal stool extending through said floor, said stool having a flange on its lower end extending beneath the floor and riveted thereto, a bead extended over and seated on said floor to support the stool, a flange on the upper edge of the stool, and a seat secured to said flange, substantially as set forth.

2. A toilet structure comprising a housing, having a suitable floor, a stool, a seat on said stool, a back rest rigidly secured to said stool below the seat and extended thereabove, and a bracket connecting the back rest with the housing and spacing same therefrom, for the purpose set forth.

1,013,184. GOVERNING MECHANISM FOR MIXED-PRESSURE TURBINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 11, 1911. Serial No. 620,469.



1. In a governing mechanism for mixed pressure turbines, the combination of a speed governor, a regulating valve controlled by the governor, means which normally exert opposed balanced forces on the governor, and a pressure sensitive device which adjusts one of said means thereby disturbing the balance of the forces exerted by said means.

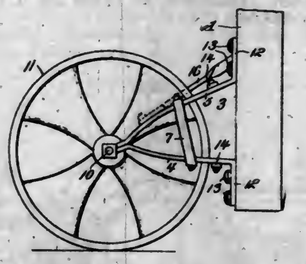
2. In a governing mechanism for mixed pressure turbines, the combination of a governor, a regulating valve controlled by the governor, springs which normally exert opposed and balanced forces on the governor, and a means responsive to a decrease in pressure of the low pressure source of supply of the turbine for changing the force exerted by one of said springs.

3. In a governing mechanism for mixed pressure turbines, the combination of a speed governor, a governor lever, an admission valve, a motor for actuating the valve, a pilot valve for the motor, means exerting opposed and balanced forces on the governor, and a means sensitive to pressure for disturbing the balance of the forces exerted on the governor.

4. In a governing mechanism for mixed pressure turbines, the combination of a speed governor, a regulating valve, a lever attached to the governor and to the rod of the valve, a motor for actuating the valve, a controller for the motor which is connected to the lever, springs acting on the lever in opposition to each other, and a movable abutment for one of the springs which is sensitive to changes in pressure of the low pressure source of supply.

5. In a governing mechanism for mixed pressure turbines, the combination of a speed governor, a regulating valve, a lever attached to the governor and to the rod of the valve, a motor for actuating the valve, a controller for the motor which it attached to the lever, a spring which exerts a force on the lever in one direction, a second spring which exerts a force on the controller in a direction to counterbalance the force exerted by the first on the lever, and an abutment for the second spring which changes its position in response to changes in pressure of the low pressure source.

1,013,185. DEVICE FOR OPENING GATES. JOSEPH KRAMER, Eldora, Iowa. Filed Jan. 20, 1911. Serial No. 603,671.



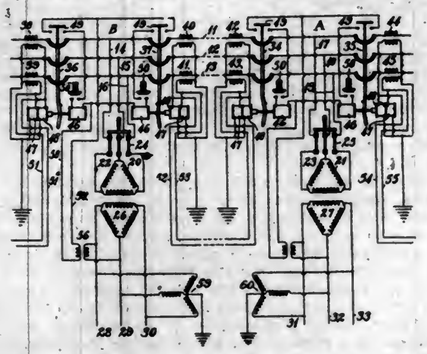
A support for swinging gates comprising a bracket composed of a pair of counterpart side members, each consisting of a single length of material bent into V-form and providing upper and lower arms, bent at their free ends to provide upwardly and downwardly extending attaching feet, said members being further bent at their vertices to form eyes integrally connecting said arms and offset to provide lapping portions closing said eyes, a vertical brace connecting the arms of each member at a point about midway of the length thereof to hold said arms relatively rigid and prevent separation of said lapped portions, transverse braces extending across the bracket and connecting the upper and lower arms of the respective side members at points between the attaching feet and vertical braces, a transverse axle pin fitted in said eyes, and a ground wheel carried by said axle pin.

1,013,186. SYSTEM OF ELECTRICAL DISTRIBUTION. PAUL M. LINCOLN, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 30, 1909. Serial No. 475,225.

1. In a system of distribution, the combination with a source of energy, a high-voltage distributing circuit, a low-voltage receiving circuit and a transformer interposed between the two circuits and having a delta-connected secondary winding, of a star-connected auxiliary transformer connected to the receiving circuit and a ground connection to the neutral point of the auxiliary transformer.

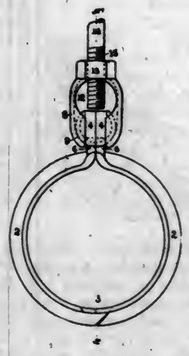
2. In a system of distribution, the combination with a source of energy, a distributing circuit, a receiving circuit and a transformer interposed between the two circuits

and having its neutral point outside of its windings, of an auxiliary transformer connected to the receiving cir-



cuit and having a neutral point in its winding and a ground connection to said neutral point.

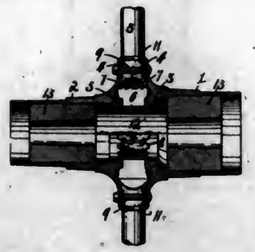
1,013,187. PIPE-HANGER. HERBERT M. LOFTON and EDWARD E. BUTLER, Chattanooga, Tenn., and RUDOLPH M. HUNTER, Philadelphia, Pa. Filed Apr. 9, 1909. Serial No. 488,987.



1. A pipe hanger composed of a ring frame having a ball shaped head at its top and a short interposed neck portion of smaller cross section than the ball shaped part, combined with a suspension screw, and a socket portion secured to the screw and having an interior chamber of a cross section to freely receive the ball shaped head of the ring frame and a height greatly in excess of the height of the ball shaped head and said socket portion having an upper side opening of an area equal to the transverse sectional area of the ball shaped head and further having a vertical slotted portion opening from the said side opening and extending down to the bottom for receiving the neck portion of the hanger, the height of the interior chamber portion from the bottom to the large opening in the side thereof being greater than the length of the neck portion below the ball shaped head, the combination being such that the ball shaped head must be inserted through the large opening of the socket with the ring frame in a position substantially at right angles to the length of the socket and screw, then shifted downward within the socket away from the screw and with the neck portion received within the slotted part and then the ring frame and ball shaped upper part thereof rotated into a vertical position and so that the shortness of the neck portion prevents the upward rising of the ring part to permit accidental disengagement of the ball shaped part from the socket.

2. In a pipe hanger, a ring shaped support for the pipe having at its upper part a hollow ball shaped portion open at the top, combined with a socket portion in which the ball shaped portion is adjustably journaled, and a suspension screw having its lower part screw threaded and adjustably engaging the upper portion of the socket portion out of contact with the ball shaped portion and in which the area of the screw is smaller than the area of the open end of the hollow ball shaped portion to permit extended adjustment of the socket portion upon the screw without causing engagement of the ball shaped portion with the screw or interference with the free adjustment of said ball shaped portion in the socket.

1,013,188. WHEEL-HUB. MATTHEW T. LONG, Helena, Okla., assignor to The Standard Steel Tube Company, Toledo, Ohio, a Corporation of Ohio. Filed May 17, 1911. Serial No. 627,876.

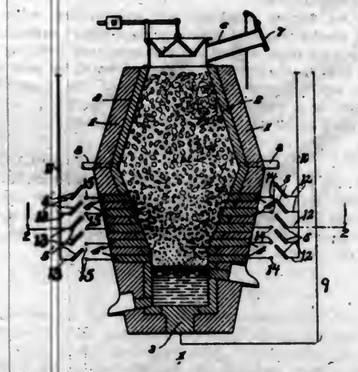


1. In a wheel, a set of spokes having their inner ends flattened longitudinally of the wheel hub, a hub having separate inner and outer metallic sections the adjacent ends of which are provided with annular outwardly projecting flanges having plain inner sides which embrace the inner ends of the spokes adjacent to the flattened portions thereof and have their free edges turned inward in substantially abutting relation and notched to fit around the spokes, said adjacent section ends also being provided with annular notched surfaces for coacting with the opposite side edges of the flattened portions of the spokes and coöperating with said flanges to rigidly hold the spokes against relative lateral movements, and means for rigidly uniting the hub flanges.

2. In a wheel, a set of spokes having their inner ends flattened longitudinally of the wheel hub, a hub having separate inner and outer metallic tubular sections the adjacent ends of which are provided with annular outwardly projecting flanges to embrace the inner spoke ends without their flattened portions and having notched annular surfaces interiorly of said flanges for coacting with the edges of the flattened spoke ends to rigidly hold said spokes against relative lateral movements, means for rigidly uniting said flanges, a metallic bushing internally of the hub for receiving the inner end thrusts of said spokes, and bushing members of fibrous material, such as wood, mounted within the hub sections at the ends of said bushing to form bearings for an axle-box.

3. In a wheel, a set of tubular spokes having their inner end portions flattened to form broadened tongues and to provide shoulders, a hub having inner and outer metallic sections the inner ends of which are provided with annular radially projecting flanges for bearing against the opposite spoke sides without the broadened portions thereof, the outer ends of said flanges being turned inward and notched to coöperate to embrace the spokes, said flanges having their inner end portions flaring outwardly to shoulder over the spoke shoulders and form annular recesses in the inner sides of their base portions, the base portions of the flanges thence extending toward each other and being notched to substantially the depth of said recesses to receive the associated edges of the flattened spoke ends, means for clamping the sections together, and means receiving the inner end thrust of the spoke.

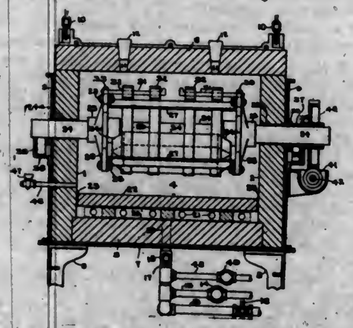
1,013,189. ELECTRIC FURNACE. FRANÇOIS LOUVRIER, Mexico, Mexico. Filed Sept. 22, 1910. Serial No. 583,315.



1. An electric furnace having an electrode in its base and two series of electrodes arranged in its opposite sides, in combination with contacts having electric connections with the electrodes of said series respectively, circuit wires 9, 10 and 11, the former being connected to said electrode in the base, and circuit closers 5, 5' individually connected to wires 10 and 11 respectively and arranged to make circuit through any one or more of said contacts and electrodes as shown.

2. An electric furnace having an electrically conducting floor and two series of electrodes arranged in its opposite sides, in combination with contacts having electric connections with the electrodes of said series respectively, circuit wires 9, 10 and 11, the former being connected to said floor and circuit closers 5; and 5' individually connected to wires 10 and 11, and arranged to make circuit through any one or more of said contacts and electrodes as shown.

1,013,190. CASE-HARDENING APPARATUS. ADOLPH W. MACHLET, Elizabeth, N. J. Filed May 17, 1906. Serial No. 317,315.



1. The combination of a closed heating receptacle, a barrel in said receptacle, and means at the exterior of the receptacle and connected to said barrel for revolving the same; said barrel comprising a pair of heads, a series of hoops between said heads, and bars connecting said heads and supporting said hoops, and canisters confined in said barrel to be tumbled thereby for the purpose specified.

2. The combination of a closed heating receptacle, a barrel contained in said receptacle, and means at the exterior of the receptacle and connected to said barrel for revolving the same; said barrel comprising a pair of heads, a series of hoops between said heads, and bars connecting said heads and supporting said hoops; each hoop having a section which is hinged to give access to the interior of the barrel.

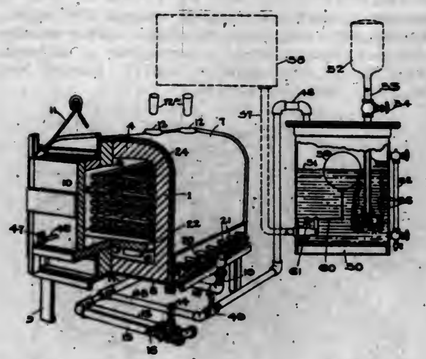
3. The combination of a closed heating receptacle, a barrel contained in said receptacle, means at the exterior of the receptacle and connected to said barrel for revolving the same; said barrel comprising a pair of heads, a series of hoops between said heads, and bars connecting said heads and supporting said hoops; each hoop having a section which is hinged to give access to the interior of the barrel; and releasable means for locking the hoops in closed relation.

4. The combination with a closed heating receptacle, of a barrel contained in said receptacle, a shaft extending through the wall of said receptacle, and having supporting means exterior to said receptacle, and means for rotating the shaft; said barrel comprising a pair of heads secured to the shaft, hoops between said heads, and bars connecting said heads and supporting said hoops; a segment of each hoop extending between adjacent bars being hinged, the segment having eyes, and locking bolts passing through the eyes and releasably engaging eyes which are provided upon said heads.

5. The combination of a closed metal-heating receptacle, a barrel mounted therein for rotation, and a shell to contain the articles to be heated, said shell lying within said barrel and constructed to roll upon the interior of the barrel when the latter is turned.

[Claims 6 to 31 not printed in the Gazette.]

1,013,191. CASE-HARDENING APPARATUS. ADOLPH W. MACHLET, Elizabeth, N. J. Filed May 25, 1906. Serial No. 318,679.



1. In combination, a closed oven having walls of refractory material, a series of burners opening within said oven; the latter provided with a capacious vent for products of combustion, and with means for closing said vent, and means for supplying to said burners either carburizing gas alone or mixed air and fuel at will constructed means being provided for slowly venting carburizing gas from the oven; said walls being sufficiently thick in proportion to the capacity of the oven, to maintain iron or steel articles therein at carburizing heat for a substantial length of time after the extinction of flames at the burners, to enable cementation of the articles to proceed to a substantial depth before they cool.

2. In combination, a closed oven having greatly thickened walls of refractory material and provided with a capacious vent for products of combustion and with means for closing said vent, a series of burners in said oven, means for permitting extinction of flames at the burners, and means for supplying mixed air and fuel to said burners and for supplying the oven with carburizing gas after extinction of flames at the burners, regulatable means being provided for slowly venting the carburizing gas from the oven.

3. A case-hardening apparatus comprising a closed oven having walls of refractory material which are greatly

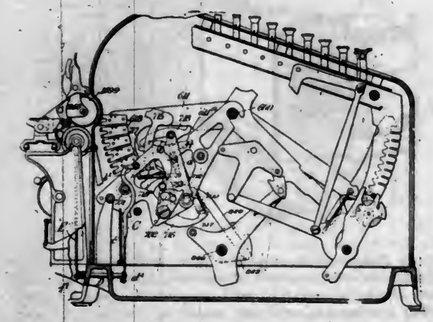
thickened in proportion to the capacity of the oven, a series of burners in said oven, means for permitting extinction of flames at the burners, means for supplying mixed air and fuel to said burners, and means for supplying and passing a current of mixed ammonia and carburizing gas through the oven after extinction of the flames at the burners; said oven having a capacious vent for products of combustion, and a closure for said vent.

4. The combination with a closed oven whose walls are formed of refractory material, of burners for mixed air and fuel in said oven, and means for filling the oven, after extinction of the flames at the burners, with a different gas capable of chemically acting upon the articles contained in the oven while they remain heated; the walls of the oven being greatly thickened so as to retain sufficient heat to maintain the articles in the oven at the required heat during such chemical action; said oven provided with a vent for the products of combustion and a closure for said vent.

5. The combination of a closed oven having walls thickened to retain heat, a series of burners for mixed air and fuel opening into said oven at the base thereof, a thick heat-retaining bed slab between said burners and the body of the oven, flame passages being left between the edges of the bed and the walls of the oven, and means for supplying carburizing gas to said oven after extinction of flames at said burners; the oven being provided with a capacious vent for the products of combustion and with a closure for said vent, and also having a regulatable constricted vent for the carburizing gas.

[Claims 6 to 14 not printed in the Gazette.]

1,013,192. ADDING-MACHINE. CLARENCE O. MAPEL, Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 23, 1905; Serial No. 288,714. Renewed Nov. 15, 1909. Serial No. 528,146.



1. In an adding machine, the combination, with the printing mechanism and with a paper support movable to and from a position for receiving printing impact of said mechanism, of means for preventing printing action when the paper support is out of position for receiving the impression impact.

2. In an adding machine, the combination, with the printing mechanism and with a paper support movable to and from a position for receiving printing impact of said mechanism, of means under the control of the paper support for preventing printing action when the paper support is out of position to receive an impression from the printing mechanism.

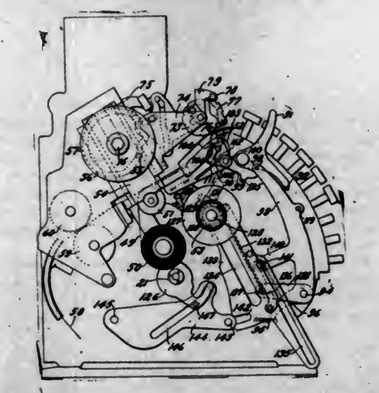
3. In an adding machine, the combination, with the printing mechanism and with a movable paper support, of means tending to prevent printing action but rendered inoperative when the paper support is in position to receive an impression from the printing mechanism.

4. In an adding machine, the combination, with the printing mechanism and with a movable paper support, of means spring pressed to an operative position to prevent printing action but rendered inoperative when the paper support is in position to receive an impression from the printing mechanism.

5. In an adding machine, the combination with the printing mechanism and with a paper support arranged to swing to and from a position for receiving printing impact of said mechanism, of means governed by such support to prevent printing action when the support is swung out of printing position.

[Claims 6 to 29 not printed in the Gazette.]

1,013,193. TOTAL-PRINTING CASH-REGISTER. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Apr. 9, 1910. Serial No. 554,399.



1. In a feeding mechanism, the combination with a couple for feeding a record strip, of means for moving one member of said couple to feed the strip a certain extent and for moving the other member of the couple to feed the strip a greater extent than that fed by the movement of the first member.

2. In a feeding mechanism, the combination with a couple comprising a pinion and a rack bar for feeding a record strip, of means for moving the pinion over the rack bar to feed the record strip a certain extent and for moving the rack bar to rotate the pinion to feed the strip a greater extent than that fed by the movement of the pinion over the rack bar.

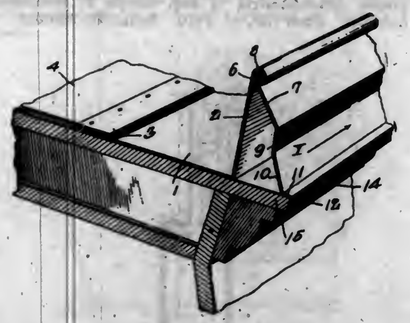
3. In a machine of the class described, the combination with means for recording upon a record strip items and the total thereof, of a couple for feeding the record strip, and means for moving one member of the couple to feed the strip when items are recorded and moving the other member of said couple to feed the strip when the total is recorded.

4. In a machine of the class described, the combination with means for recording upon a record strip items and the total thereof, of a couple comprising a pinion and a rack bar for feeding the record strip, and means for moving the pinion over the rack bar to feed the strip when items are recorded and moving the rack bar over the pinion to feed the strip when the total is recorded.

5. In a machine of the class described, the combination with means for recording upon a record strip items and the total thereof, of a frame carrying the record strip, a pinion mounted on the frame, a rack bar meshing with the pinion, and means for moving the frame and thereby rotating the pinion as it travels over the rack to feed the strip when items are recorded and moving the rack to rotate the pinion to feed the strip when the total is recorded.

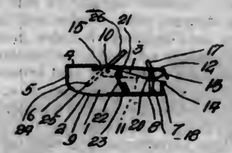
[Claims 6 to 22 not printed in the Gazette.]

1,013,194. GUTTER. GEORGE MATHES, Bedford, Ind. Filed May 29, 1911. Serial No. 630,270.



A device of the class described comprising an apron provided with an angularly disposed flange having at its upper edge, a circular, open bead, terminating in an upstanding lip unencumbered at its free edge; and an auxiliary member having a rectangularly disposed flange resting upon the upper edge of the lip and extended across the bead, to reinforce the same in its interior, said flange being insertible, transversely, into the bead, and having free pivotal movement upon the upper edge of the lip, whereby the auxiliary member may be assembled with the apron after the apron has been secured to the roof board, the auxiliary member being movable into engagement with the roof board, without altering the contour of the bead.

1,013,195. CRUMB-COLLECTOR. WALTER H. MCCONNAUGHY, Pittsburgh, Pa. Filed Oct. 30, 1911. Serial No. 657,490.

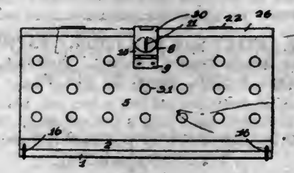


1. A crumb collecting device comprising end walls, a rear wall, a front wall, a top plate, a bottom plate cooperating with said front wall in providing an opening, a lid pivotally connected to said end wall, a catch carried by said lid and engaging said rear wall for retaining said lid normally closed, a lid opening device carried by the inner side of said lid and adapted to engage said bottom plate to open said lid, a trap door arranged within said device and normally engaging said bottom plate, and a bail pivotally connected to the end walls of said device.

2. A crumb collecting device comprising a casing having the bottom thereof provided with an opening at the forward end thereof, a lid pivotally supported by the top of said casing, a trap door arranged in said casing and normally engaging the bottom of said casing, a bail pivotally connected to said casing, means adapted to retain said lid normally closed, and shiftable means connected to said lid and adapted when actuated to open said lid.

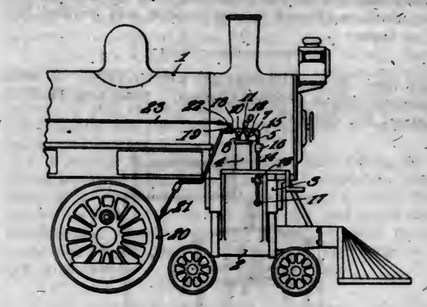
3. A crumb collecting device comprising a casing having the rear of its top open and the forward end of its bottom open, a lid for closing the open portion of the top, means carried by the lid and engaging with the rear of the casing for normally maintaining the lid closed, a bail pivotally connected to said casing, shiftable means connected to said lid and adapted when actuated to open the same, and a trap door pivotally mounted in said casing and provided with means to prevent the discharge of the collected crumbs until the lid is opened.

1,013,196. FOLDING SHIPPING CRATE OR BOX. FRANCIS S. MCKEEVER and HENRY C. SCHUCK, Pittsburgh, Pa. Filed Nov. 3, 1910. Serial No. 590,431.



A foldable box comprising top, bottom, front, rear and end members secured together to permit folding, the rear member being in two parts hinged together, one of said parts being rigidly secured to the bottom, the other of said parts being hinged to the top with the connected edges complementally formed to permit adjacent edge faces of said part and top to contact when the box is expanded with the hinged members of said part and top on the outer sides when in such position, the hinge members for the top being movable relatively thereto laterally of the top to permit relative shifting of said complemental edges to cause the top complemental edge to overhang the part complemental edge with the hinge members therebetween, whereby the free edge of the top may be positioned to aline with the outer face of the fixed part when the box is folded.

1,013,197. LUBRICATOR FOR LOCOMOTIVE-DRIVER FLANGES. GEORGE MCQUADE and NOAH S. AIRHART, Trenton, Mo. Filed Dec. 2, 1910. Serial No. 595,821.



1. The combination with the steam chest of a locomotive engine, of a pipe entering the chest and discharging against a wheel of the locomotive; an oil receptacle; spaced pipes branching from the first named pipe, and entering the receptacle; a valve in the first named pipe; and means for connecting the valve operatively with the throttle of the locomotive.

2. In a device of the class described, a pipe adapted at one end for connection with the steam chest of a locomotive, and at the other end discharging against the wheel of the locomotive; an oil receptacle; spaced pipes connecting the first named pipe with the interior of the receptacle, one of the last named pipes terminating adjacent the top of the receptacle, the other of said pipes being extended downwardly to a point between the top and the bottom of the receptacle; a valve in the first named pipe between the receptacle and the discharge end of said pipe; means for operatively connecting the valve with the throttle of the locomotive; and a check valve and a cut-off cock in the first named pipe between the receptacle and the steam chest.

3. The combination with the steam chest of a locomotive engine, of a pipe entering the chest and discharging against a wheel of the locomotive; a valve in the pipe; means for

connecting the valve operatively with the throttle of the engine; and an oil receptacle operatively connected with the pipe, whereby the steam, passing through the pipe, will carry with it, the oil contained within the receptacle.

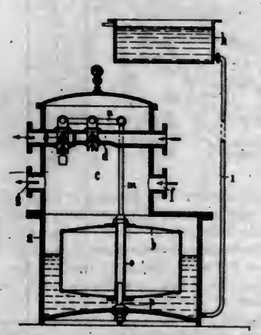
1,013,198. STYLE-BAR FOR PHONOGRAPHS. EDWARD ERNEST MEADOWCROFT, Hobart, Tasmania, Australia. Filed Sept. 3, 1909. Serial No. 516,108.

1. In a talking machine of the class indicated, in combination, a main style bar, a style thereon, an additional bar carrying a second style and hinged to the main bar and capable of being closed in upon said main part to constitute one bar and means for locking said additional bar to said main bar, for the purpose explained.

2. In a talking machine of the class indicated, in combination, a main style bar in which is a deep longitudinal groove, an additional style bar hinged to the main bar and capable of reposing in said groove, and a flat steel spring secured to and overlapping the main bar transversely and extending over the edge of the additional bar when the latter is housed in the groove, as described.

3. In a talking machine of the class indicated, in combination, a main style bar that has a deep longitudinal groove in one of its sides, a style on the main bar, an additional bar carrying an extra style and hinged to the first and adapted to come into the groove, a projecting member on said additional bar the face of which inclines from the upper edge of said bar and a flat spring transversely disposed on and projecting from the principal bar and which is adapted to engage upon said inclined face, as set forth.

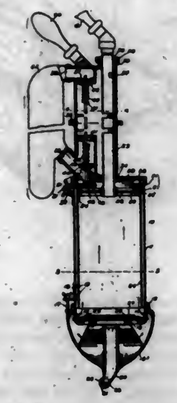
1,013,199. STEAM-PRESSURE REGULATOR. WERNER MEMMERSHEIM, Neheim, Germany. Filed Aug. 14, 1911. Serial No. 644,010.



1. In a steam-pressure regulator for exhaust and live steam, a valve provided in the discharge pipe for the surplus steam, a valve provided in the feed-pipe for the necessary live-steam, a floater being pivotally connected to said valves by means of a rod and a counter pressure receptacle connected with the floater casing by means of a tube.

2. In a steam pressure regulator for exhaust and live steam, a valve provided in the discharge pipe for the surplus steam, a valve provided in the feed pipe for the necessary live steam and a floater arranged in a casing and being pivotally connected to the operating lever of said valves by means of a rod, the arrangement being such that the fulcrum of said lever lies always on that valve, which is in inoperative position.

1,013,200. VACUUM-PRODUCING APPARATUS. JOSEPH F. MENNINGEN, West Allis, Wis.; Katherine Menningen administratrix of said Joseph F. Menningen, deceased. Filed Dec. 31, 1910. Serial No. 600,239.



1. In vacuum-producing apparatus, the combination of a shell, a cylinder movable in said shell, a member connected to said cylinder, a plurality of valves mounted on said member, and a plunger adapted to be actuated in said cylinder for producing a vacuum in said cylinder.

2. In vacuum-producing apparatus, the combination of a shell, a cylinder movable in said shell, a member movable with said cylinder, a valve mounted on said member, and a plunger adapted to be actuated in said cylinder for producing a vacuum in said cylinder, said cylinder being movable with said plunger at definite stages.

3. In vacuum-producing apparatus, the combination of an outer shell, a cylinder movable in said shell with an air-passageway between said cylinder and shell, a member reciprocated by said cylinder, a valve mounted on said member, and a plunger adapted to be actuated in said cylinder for producing a vacuum in said cylinder, said cylinder being movable with said plunger at a definite stage and also movable relatively to said plunger.

4. In vacuum-producing apparatus, the combination of a shell, a cylinder movable in said shell, a stem movable with said cylinder, spring-pressed valves mounted on said stem, and a plunger slidably mounted in said cylinder to produce a vacuum in said cylinder.

5. In vacuum-producing apparatus, the combination of a cylinder movable in a plurality of directions, a member rigidly secured to said cylinder, a valve slidably mounted on said member and adapted to be opened when said cylinder is moved in one direction and closed when moved in another direction, and a plunger slidably mounted in said cylinder to produce a vacuum in said cylinder.

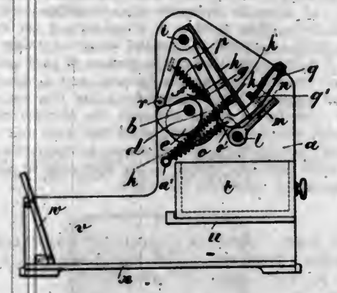
[Claims 6 to 10 not printed in the Gazette.]

1,013,201. MACHINE FOR OPENING ENVELOPS. ISAC MICHEL, Frankfort-on-the-Main, Germany, assignor to Michelius G. M. B. H., Frankfort-on-the-Main, Germany. Filed Mar. 17, 1911. Serial No. 615,043.

1. In a machine for opening envelops, the combination of a supporting table, a crank shaft, a cam disk mounted on the shaft and adapted to actuate said table, a hinged knife plate, and a spring for pressing said plate against said table.

2. In a machine for opening envelops, the combination of an envelop supporting table, a shaft carrying the table pivotally, a knife plate, means for holding the envelop upon said table, and bell-crank levers mounted on said shaft and carrying said holding means.

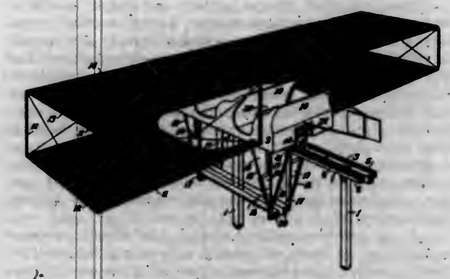
3. In a machine for opening envelops, the combination of an envelop supporting table, a knife plate, a flange on the same, pressing means for holding the envelop on said table, levers carrying said pressing means, a crank shaft, a cam disk on the same adapted to actuate the supporting plate, and cams on said shaft adapted to actuate said levers.



4. In a machine for opening envelops, the combination with a pivotally mounted supporting table, a hinged knife plate engaging one portion of the table, means pressing the envelop against the table during the cutting or opening of the envelop, and means causing relative movement of the table with respect to the knife plate to open and then cause discharge of the opened envelop.

5. In a machine for opening envelops, the combination with a downwardly inclined pivotally mounted supporting table, an upwardly inclined knife plate engaging the lower portion of said table, means for pressing the envelop against the table during the cutting or opening of the envelop, and means for causing relative movement of the table with respect to the knife plate to open and then cause discharge of the envelop.

1,013,202. AMUSEMENT APPARATUS. WILLIAM ED. MILLER, Revere, Mass. Filed Sept. 22, 1911. Serial No. 650,859.

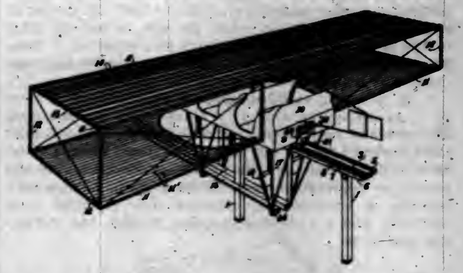


1. An amusement apparatus comprising a gravity monorail trackway, means for supporting said trackway, said trackway including a descending track section and an ascending inclined section connecting the end of said decending section to the starting point thereof, a pair of lateral rails having overhanging flanges mounted on said supports below said trackway, a car approximating the appearance of an aeroplane, vertical grooved wheels under the car for engagement with the trackway, depending brackets on each side of said car having a tapering opening therein, a horizontally disposed guide wheel on each of said brackets and engaging said guide rail below the lateral flange thereof, weights located in the openings of said brackets, means for drawing said car up the said inclined section and means for automatically engaging said drawing means with said car.

2. An amusement apparatus comprising a gravity monorail trackway, means for supporting said trackway, said trackway including a descending track section and an ascending inclined section connecting the end of said descending section to the starting point thereof, a car, a pair of planes carried by said car, the lower of said planes being cut away adjacent to said car to permit access thereto, vertical grooved wheels under the car for engagement with the trackway, means for drawing said car up the said inclined section and means for automatically engaging said drawing means with said car.

3. A car for a gravity amusement ride having an inclined trackway, comprising a car body, supporting wheels under said body to run on said trackway, a plane frame carried by said car, and a netting stretched to said frame to afford the appearance of a true plane but being substantially nonresistant to the air in the descent of the car.

1,013,203. AMUSEMENT APPARATUS. WILLIAM E. MILLER, Revere, Mass. Filed Nov. 7, 1911. Serial No. 659,005.

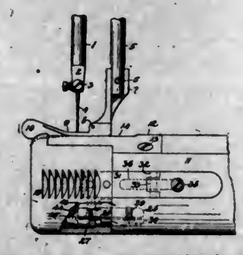


1. A car for a gravity amusement ride having an inclined trackway comprising a car body, supporting wheels under said body to run on said trackway, a plane frame carried by said car and a substantially non-resisting but apparently continuous filling for said plane frame.

2. A car for a gravity amusement ride having an inclined trackway comprising a car body, supporting wheels under said body to run on said trackway, a plane frame carried by said car, a gridded filling for said plane frame substantially non-resisting to the air and of apparently continuous surface to the eye.

3. A car for a gravity amusement ride having an inclined trackway comprising a car body, supporting wheels under said body to run on said trackway, a plane frame carried by said car, a slatted filling for said plane frame comprising a plurality of slats pivoted on their forward edges and free to trail in the path of the breeze as the car is in motion.

1,013,204. SEWING-MACHINE. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 25, 1910. Serial No. 545,825.



1. In a sewing machine, the combination with a tubular work-supporting arm, of a longitudinally movable slide mounted thereon, an end-cap fitted to the outer extremity of the arm and affording a housing for a loop-taker mounted in said arm, and a pivotal connection between said cap and the slide.

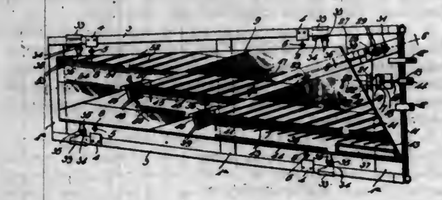
2. In a sewing machine, the combination with a tubular work-supporting arm, of a longitudinally movable slide mounted thereon, an end-cap fitted to the outer extremity of the arm and affording a housing for a loop-taker mounted in said arm, a pivotal connection between said cap and the slide, and a stop for determining the range of longitudinal movement of said cap.

3. In a sewing machine, the combination with a tubular work-supporting arm, of a longitudinally movable slide mounted thereon, an end-cap fitted to the outer extremity of the arm and affording a housing for a loop-taker mounted in said arm, a pivotal connection between said cap and the slide, and a stop for preventing the turning of said cap upon its supporting slide while in position to embrace the loop-taker.

4. In a sewing machine, the combination with a tubular work-supporting arm provided with a lateral slideway and an adjacent stop-shoulder, a slide-bar fitted to said slideway and provided with a transverse stop-pin adapted to engage said stop-shoulder to limit the motion of said slide-bar toward the end of the arm, an end-cap fitted to the outer extremity of the arm and affording a housing for a loop-taker mounted upon said arm and a pivotal connection between said cap and the slide-bar.

5. In a sewing machine, the combination with a tubular work-supporting arm, of a throat-plate secured upon said arm and overhanging its forward extremity, a stop-pin upon and adjacent one edge of the throat-plate, a cylindrical end-cap fitted to the extremity of said arm and having a longitudinal shoulder adapted to engage said stop-pin, a longitudinally movable slide mounted upon said arm, and a pivotal connection between the end-cap and said slide.

1,013,205. ORE-CONCENTRATOR. IRA F. MONELL, Boulder, Colo. Filed June 20, 1910, Serial No. 567,900. Renewed June 22, 1911. Serial No. 634,790.

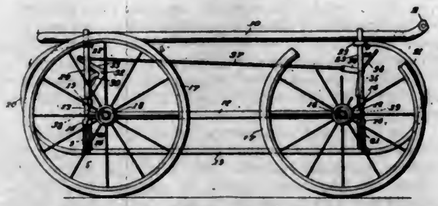


1. In an ore concentrator, the combination of a table provided in its upper side with a series of longitudinally disposed troughs, the bottoms of which incline downwardly and inwardly from the opposite edges thereof, said troughs being offset from each other toward the rear side of the table, a series of parallel channels being formed in the bottom of the troughs arranged in line with the movement of the table, and a series of mineral discharging grooves and a mineral discharging opening being provided at the rear end of each longitudinal trough, a series of open riffles arranged on the table at the rear ends of the parallel channels, and means for vibrating the table diagonally.

2. In an ore concentrator, the combination of a table provided in its upper side with a series of longitudinally disposed troughs, the bottoms of which incline downwardly and inwardly from the opposite edges thereof, said troughs being offset from each other toward the rear side of the table, a series of parallel channels being formed in the rear sides of the bottoms of the troughs arranged in line with the movement of the table, and a series of mineral discharging grooves and a mineral discharging opening being provided at the rear end of each trough, a series of short riffles arranged on the tables at the rear ends of said parallel channels, a water discharging pipe arranged parallel with said series of riffles, a feed box arranged near the forward end and side of the table, a series of dewatering or pulp retaining riffles arranged on the table adjacent to said feed box, and means for vibrating the table diagonally.

3. In an ore concentrator, the combination of a table provided on its upper side with a series of longitudinally disposed troughs, the bottoms of which incline downwardly and inwardly from the opposite edges thereof, said troughs being offset from each other toward the rear side of the table, a series of parallel channels being formed in the rear inclined sides of the bottom of said troughs, a series of mineral discharging grooves, and a mineral discharging opening being provided at the rear end of the trough, a series of riffles adjacent the parallel channels, adjustable stop fingers arranged at the inner end of each series of mineral discharging grooves, whereby the passage of the sand from one trough to the next may be regulated, and means for vibrating the table.

1,013,206. CHILD'S COMBINED CARRIAGE AND SLEIGH. J WALTER MOORE, Fort Edward, N. Y. Filed Mar. 9, 1911. Serial No. 613,456.



1. In a combined child's carriage and sleigh, runners, each of said runners having vertical guide members near the ends, side bars in slidable engagement with said vertical guide members, ground wheels carried by said side bars springs operating to maintain said runners yieldably in their elevated position relative to said side bars, means for elevating said side bars and the ground wheels carried thereby against the force of the springs, and locking means operating to hold said runners in their lowered position.

2. In a combined child's carriage and sleigh, a vehicle frame including side rails, runners having vertical guide members, each guide member having a bracket arm spaced therefrom, means for coupling said guide members to said side rails, side bars in slidable engagement with said vertical guide members, ground wheels carried by said side bars, springs operating to maintain said runners yieldingly in their elevated position relative to said side bars, a lever carried by each of said bracket arms and operating to elevate said side bars against the resistance of said springs, coupling means between said levers and said side bars, coupling means between said levers, and a locking device connected to one of said levers.

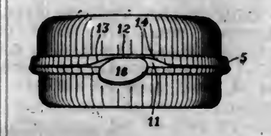
3. In a combined child's carriage and sleigh, runners, each of said runners comprising a body portion and inwardly curving end portions, a vertical guide member extending between each of the terminals of the runners and the body portion thereof and spaced apart, side bars having bearings at the ends for slidable engagement with the guide members, springs connected to said runners and to said side bar bearings, an operating lever connected to each of said guide members, coupling means between said operating levers and said side bars, and a coupling device between said operating levers.

4. In a combined child's carriage and sleigh, runners having vertical guide members, side bars slidably engaging the guide members, a bracket arm extending from each of said guide members, an elbow lever pivoted upon each of said brackets, coupling means between one arm of each of said elbow levers and the side bars, a connecting rod between the other arms of the elbow levers, and a lever arm connected to one of said elbow levers.

5. In a combined child's carriage and sleigh, runners having vertical guide members, side bars slidably engaging the guide members, a bracket arm extending from each of said guide members, an elbow lever pivoted upon each of said brackets, coupling means between one arm of each of said elbow levers and the side bars, a connecting rod between the other arms of the elbow levers, a stop in the path of one of said elbow levers and located beyond the vertical plane of the adjacent guide member, whereby when the elbow levers are moved into one position one of the pivots of the connecting rod will be disposed below the line of the elbow lever to which it is attached and held by the stop from further downward movement and the runners locked from return movement.

[Claims 6 and 7 not printed in the Gazette.]

1,013,207. BOX. FRANK H. G. MORSE, Cambridge, Mass. Filed Nov. 23, 1909. Serial No. 529,592.



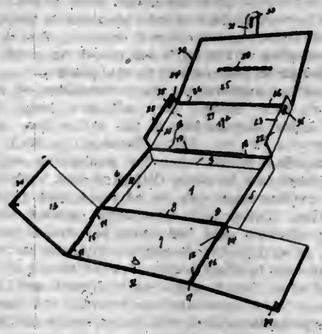
1. In a box and a cover, the combination of a flange located on the cover, having a flaring portion, the said flange also having a downwardly extending portion, the said flaring portion having an opening formed by pressing a part of the downwardly extending portion against the flaring portion, the said opening having rounded ends formed by portions of the metal extending inward at the ends and facing the interior of the opening and sloping from the flaring portion to the edge of the flange and forming opposing surfaces to the bead which are adapted to easily direct an instrument inserted in the opening and drawn between the two opposing surfaces to a point underneath the edge of the flange and along the rounded surface of the ends, a bead located on the top of the box and having a portion opposed to the edge of the said flange and to the rounded surface of the ends of the opening whereby the box may be opened by inserting an instrument in the opening and drawing it around the box.

2. In a box and cover the combination of a flange located on the cover having a right angular flaring portion, a part of the said flaring portion extending substantially at right angles to the said flange and a second part of the said flaring portion extending substantially parallel to the said flange, the body of the box having a bead, the said bead having a portion extending under and opposed to the edge of the said right angular flaring portion, the said part of the flaring portion extending substantially parallel to the said flange having an opening, the said opening being bounded on its upper side by a return portion of the flange and at its ends by a sloping portion, the said ends having inwardly extending portions which slope from the return portion to the edge of the said flaring portion forming opposing surfaces to the said bead at the ends of the said opening whereby an instrument may be inserted and easily started around the box and between the edge of the cover and the bead of the box.

1,013,208. LUNCH-BOX. GEORGE F. MURDOCK, Wellsville, Ohio. Filed Nov. 11, 1909. Serial No. 527,493.

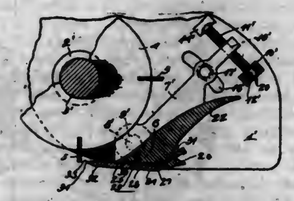
1. A folding box comprising a bottom, a front wall, a rear wall, and end walls, said walls being formed integrally with said bottom, a front hinged to said front wall, ends hinged to the ends of said front and adapted when in operative position to rest on said ends walls, a rear member hinged to said rear wall, a cover hinged to said rear member, and plates rigidly secured to said ends for reinforcing them and constructed to extend below said end walls in operative position.

2. A folding box comprising a bottom, a front wall, a rear wall, and end walls, said walls being formed integrally with said bottom, a front hinged to said front wall, ends hinged to the ends of said front and adapted to rest on said end walls when in operative position, a rear member hinged to said rear wall, integral flanges formed on said rear member and capable of extending below said end walls when in operative position, a cover hinged to



said rear member, and means for connecting said flanges to said ends.

1,013,209. GRASS-CUTTING MACHINE. HERBERT S. MUSTIN, Chicago, Ill., assignor to The Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1909. Serial No. 532,201.



1. In cutting mechanism, the combination of rotary blades, a bed knife bar, a bed knife supported on said bar, said bar having pivotal support to be swung to change the distance between the cutting edge of said bed knife and the axis of rotation of said rotary blades, and means for tilting said bed knife on said bar to further adjust the cutting edge of said bed knife with respect to said blades.

2. In cutting mechanism, the combination of rotating spiral blades, a bed knife bar pivoted adjacent said blades, a bed knife tiltably suspended from said bar, means for bodily swinging said pivoted bar to adjust the distance between the cutting edge of said bed knife and the axis of rotation of said blades, and set screws passing through said bar to engage with said bed knife to cause tilting thereof and further adjustment of the cutting edge of said bed knife with respect to said blades.

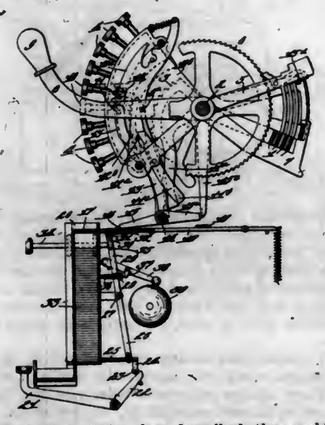
3. In cutting mechanism, the combination of side frames, a blade frame journaled in said side frames, spiral blades supported on said blade frame, a bed knife bar pivoted at its ends in said side frames, a bed knife tiltably supported from the base of said bar, extensions from the ends of said bar having threaded openings, screws threading through said openings and journaled on said side frames, turning of said screws causing swing of said bar about its pivots to adjust the outer cutting edge of the bed knife with respect to said blades, and set screws passing through said bar for engaging with said bed knife to cause further adjustment of the cutting edge of the bed knife with respect to said blades.

4. In cutting mechanism of the class described, the combination of side frames, a blade frame journaled in said side frames, spiral blades supported on said blade frame, a bed knife bar pivoted at its ends in said side frames, a bed knife supported by said bar to coöperate with said blades, extensions on said knife bar having threaded openings, screws threading through said openings and

journaled on said side frames, heads for said screws having openings, springs secured at one end to the side frames, and pins extending from the other ends of said springs to be held by said springs in said openings to thereby lock the screws after turning thereof, turning of said screws causing swinging of the knife bar about its pivots to adjust the bed knife with respect to said blades.

5. In cutting mechanism, the combination of rotating blades, a bed knife bar adjacent said blades, said bed knife bar having in its lower face a longitudinal groove, a bed knife disposed in said groove, screws engaging in said bar for suspending said knife in said groove and to allow tilting of said knife so that its outer cutting edge may be adjusted with relation to the rotating blades, and adjustment screws extending diagonally through said bed knife bar and through the rear wall of said groove to engage with the knife at its rear upper edge to effect bodily forward thrust of the bed knife and also tilting adjustment thereof and to then rigidly hold said knife against vertical and horizontal displacement to thereby rigidly maintain the cutting edge of the knife in adjusted position with relation to the rotating blades.

1,013,210. CASH-REGISTER. WILLIAM H. MUZZY, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Sept. 29, 1904. Serial No. 226,499.



1. In a machine of the class described, the combination with clerks' selective devices, of independent series of coin handling devices for the respective clerks, means for controlling the different series by the clerks' selective devices, a main operating mechanism, and means, controlled by said main operating mechanism, normally locking said coin handling devices.

2. In a machine of the class described, the combination with clerks' selective devices, of independent series of coin handling devices having coin ejectors, means for controlling the ejectors from the clerks' selective devices, a main operating mechanism, and means, controlled by said main operating mechanism for normally locking said ejector.

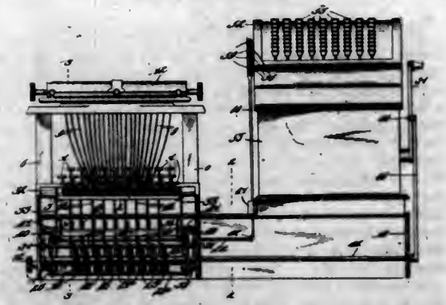
3. In a machine of the class described, the combination with a series of independent accounting devices, of independent series of coin handling devices having ejectors, a common controlling means for the accounting devices and the respective coin handling devices, a main operating mechanism, and means, controlled by said main operating mechanism for normally locking said ejectors against operation.

4. In a machine of the class described, the combination with a plurality of counters, of independent series of coin delivering devices, a common controlling means for the corresponding counters and their respective series of coin handling devices, a main operating mechanism and means controlled by said main operating mechanism, normally locking said counters and said coin handling devices against operation.

5. In a machine of the class described, the combination with independent series of coin tubes, of ejector keys for each series of tubes, means for separately normally locking the keys for each series of tubes, selective devices having connections for separately releasing the separate key locking means, a main operating mechanism, and means, controlled by said main operating mechanism for normally locking all said ejector keys.

[Claims 6 to 37 not printed in the Gazette.]

1,013,211. COMBINATION TYPE-WRITING AND ADDING MACHINE. WILLIAM H. MUZZY, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Mar. 19, 1908. Serial No. 422,081.



1. In a machine of the class described, the combination with a typewriting mechanism including numeral keys, of an adding mechanism including numeral keys manually operable independently of the numeral keys of the typewriting mechanism, and means for compelling corresponding manual operations of the keys of the two mechanisms.

2. In a machine of the class described, the combination with a typewriter mechanism including numeral keys, on an independently operated adding mechanism, a lock for the numeral keys of the typewriter, and means for operating the lock by an element of the adding mechanism.

3. In a machine of the class described, the combination with a typewriter having operating keys, of an adding mechanism having keys operable manually independently of the keys of the typewriter, and connecting devices compelling the manual operation of corresponding keys of the typewriter and the adding mechanism.

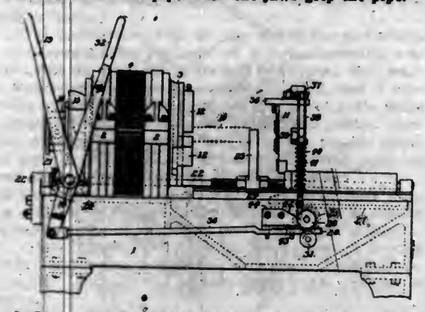
4. In a combined typewriting and adding machine, the combination with the digit keys of the typewriter, of a lock for said keys, an adding mechanism, connecting means compelling an operation of the adding mechanism for unlocking said keys, and devices for disabling said connecting means.

5. In a combined typewriting and adding machine, the combination with the digit keys of the typewriter, of a space bar, a lock for said keys controlled by the space bar, an adding mechanism, and means requiring an operation of the adding mechanism for unlocking said keys.

[Claims 6 to 24 not printed in the Gazette.]

1,013,212. PIPE-THREADING MACHINE. WILLIAM M. NECKERMAN, Youngstown, Ohio. Filed Jan. 12, 1911. Serial No. 602,321.

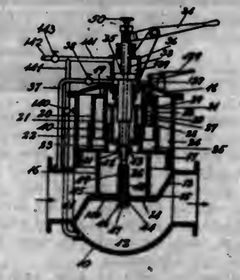
1. In a pipe threading machine, a head having an axial opening therein, gripping-jaws on the head arranged to connect the pipe to the head, means for actuating the jaws, a die-head, a stop arranged to be moved into the path of the pipe when moving through the gripping head toward the die-head, and means connecting the stop to the jaw actuating means so that the stop will be moved out of line with the pipe when the jaws grip the pipe.



2. In a pipe-threading machine, a pipe-gripping head having an axial opening for the pipe, pipe-gripping jaws on the said head, a die-head in line with the said axial opening, a rotary shaft, connections between the die-head and the shaft to cause the die-head to move toward the gripping-head on the rotation of the shaft in one direction, a driving pinion on the shaft, a reciprocating bar having thereon a rack in mesh with the pinion, and two levers having their operating ends near together at the feeding in end of the gripping head within the reach of an attendant without requiring his change of position, connections from one lever to operate the pipe-gripping jaws, and a connection from the other lever to the said bar.

3. In a head having an opening therein for pipe, pipe-gripping jaws in the head, a rock-shaft and connections for actuating the gripping jaws, a die-head in line with the said opening, a stop arranged to be moved into the path of pipe when moved through the opening toward the die-head, and means connecting the stop to the rock-shaft so that the stop is moved away from the end of the pipe as the jaws move toward the pipe.

1,013,213. FLUID-PRESSURE VALVE. EDWARD P. NOYES, Winchester, Mass., assignor, by mesne assignments, to C. P. Power Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 26, 1910. Serial No. 546,138.



1. In valve apparatus, the combination of a casing having anterior and posterior chambers connected by a port, and a movable member having a main valve controlling said port and a non-seating motor piston subject on one side to the anterior pressure, said member and the casing forming an intermediate-pressure chamber and a balancing chamber of which the former has an inlet from the anterior chamber and an outlet to the balancing chamber and the latter has an outlet to the posterior chamber, together with pilot valves for controlling said outlets.

2. In valve apparatus, the combination of a casing having anterior and posterior chambers connected by a port, a movable member forming with said casing an intermediate chamber having an inlet from the anterior chamber and a balancing chamber having an inlet from the intermediate chamber, said member having a main valve controlling said port and a non-seating motor piston interposed between the anterior and intermediate chambers, said member being also formed with an outlet from the balancing chamber to the posterior chamber, a pilot valve controlling said outlet, and means for controlling the relation between the size of said inlets to the intermediate and balancing chambers.

3. In valve apparatus, the combination of a casing having anterior and posterior chambers connected by a port, a movable member telescopically connected with the casing and forming therewith intermediate and balancing chambers serially related with each other and in shunt between said anterior and posterior chambers, said member having a main valve controlling said port and a motor piston subject on opposite sides to the pressures in said anterior and intermediate chambers, a pilot valve controlling the passage between said intermediate and balancing chambers, a second pilot valve coaxial with the first, controlling the passage from the balancing chamber to the posterior chamber and adapted to seat on said movable member, and means extending through a single aperture in the wall of said casing for operating both pilot valves.

4. In valve apparatus, the combination of a casing having anterior and posterior chambers connected by a port, a movable member having a telescopic connection with said casing and forming with the casing an intermediate chamber which surrounds the telescopic connection and has an inlet from the anterior chamber, and a balancing chamber having an inlet from the intermediate chamber, and an outlet to the posterior chamber through the web of the movable member, said member having a main valve controlling said port and a motor piston interposed between the anterior and intermediate chambers, and a pilot stem formed with two valves, one of which seats on the movable member to seal said outlet, and the other of which controls the inlet to the balancing chamber, and a piston portion formed on said stem adjacent to the second-said pilot valve for permitting the latter to remain closed while the first-said pilot valve is operated.

5. In valve apparatus, the combination of a casing having anterior and posterior chambers connected by a port, a movable member forming with said casing an intermediate chamber in shunt between said anterior and posterior chambers, and having a main valve controlling said port and a piston interposed between the anterior and intermediate chambers, said casing being formed with an outlet from the intermediate chamber, and a controlling stem adapted to positively actuate said member and having a lost-motion connection therewith and also provided with a pilot valve controlling said outlet.

[Claims 6 to 19 not printed in the Gazette.]

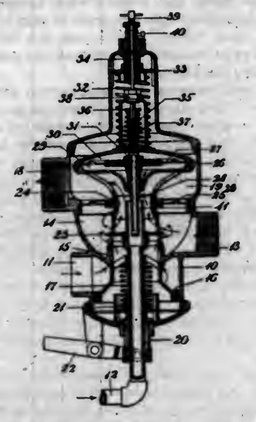
1,013,214. FLUID-REGULATOR. EDWARD P. NOYES, Winchester, Mass. Filed Feb. 1, 1911. Serial No. 605,896.

1. A regulator comprising a mixing-chamber having inlets for two different fluids, and a mixture-outlet, a valve controlling one of said inlets, and means for so applying the pressure of the fluid anterior to said valve as to close the latter, and for so applying the pressure of the other fluid anterior to its inlet as to open said valve.

2. A fluid-regulator comprising a mixing-chamber having restricted air and fuel inlets, a valve controlling the fuel inlet, and a septum structure controlling said valve and subject differentially to the air and fuel pressures anterior to said inlets, the former pressure tending to open said valve and the latter pressure tending to close it.

3. A regulator comprising a mixing-chamber having inlets for two different fluids and a mixture-outlet, a valve controlling one of said inlets, a multiple-septum structure controlling said valve, and means for so applying the anterior pressures of the respective fluids and the mixing-chamber pressure to said septum structure that said

valve varies the area of its inlet inversely as a function of the difference between the anterior pressure of the fluid controlled by the valve and the mixing-chamber pressure, and directly as the corresponding function of the difference between the anterior pressure of the other fluid and the mixing-chamber pressure.



4. A fluid-regulator comprising a mixing-chamber having inlets for two different fluids and a mixture-outlet, a valve controlling one of said inlets, and two septums differentially connected with said valve, one of said septums being subject in opposite directions to the anterior air pressure and the mixing-chamber pressure tending respectively to open said valve, and the other being subject in opposite directions to the anterior gas pressure and the mixing-chamber pressure tending respectively to close and open said valve.

5. A fluid-regulator comprising a mixing-chamber having restricted air and gas inlets and a mixture-outlet, a valve controlling said gas-inlet, a septum attached to said valve and subject differentially to the anterior gas pressure and the mixing-chamber pressure tending respectively to close and open said valve, and a second septum carrying the first said septum and subject differentially to the anterior air pressure and the mixing-chamber pressure tending respectively to open and close said valve.

[Claim 6 not printed in the Gazette.]

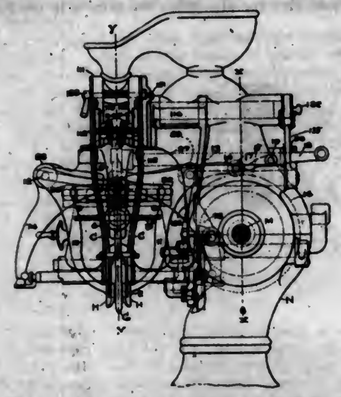
1,013,215. EYELETING-MACHINE. MARSHALL HENRY PEARSON, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 18, 1903. Serial No. 157,555.

1. An eyeleting machine, having, in combination, a pair of oppositely disposed setting dies, and a guide plate for supporting on its opposite sides the two sides of the upper as it is fed to the setting dies, said guide plate being constructed and arranged to extend beyond the dies so as to guide the upper when its end is being operated on, substantially as described.

2. An eyeleting machine, having, in combination, a pair of oppositely disposed punches, a pair of oppositely disposed setting dies, and a guide plate alongside the punches and dies for engaging the inner surfaces of the sides of the upper and extending beyond said parts and in the direction of feed to guide the upper when it is fed to a position where its end is being operated on, substantially as described.

3. An eyeleting machine, having, in combination, eyeleting means, a guide plate, an edge guide secured to said guide plate, and means for adjusting the position of the guide plate and edge guide to vary the distance of the eyelets from the edge of the material substantially as described.

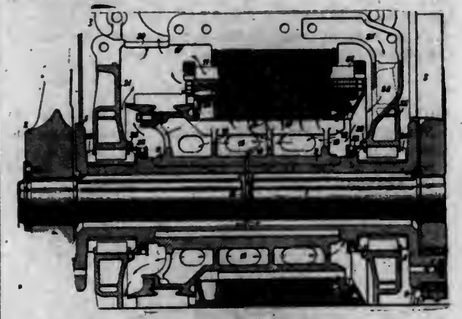
4. An eyeleting machine, having, in combination, oppositely disposed sets, a guide plate provided with oppositely projected edge guides, and means for adjusting the guide plate to vary the position of the edge guide with relation to the setting means, substantially as described.



5. An eyeleting machine, having, in combination, two oppositely disposed punches, an anvil between them and positively acting means for actuating the punches in both directions, substantially as described.

[Claims 6 to 42 not printed in the Gazette.]

1,013,216. DYNAMO-ELECTRIC MACHINE. CHARLES A. PSILANDER, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 16, 1906. Serial No. 296,330.



1. In a dynamo-electric machine comprising field magnet and armature cores, the combination with an inclosing casing that supports the field magnet core and is provided with an inlet port and with a plurality of peripheral exhaust ports, of end brackets for the field magnet casing that serve to support the field magnet bearings and are provided with exhaust ports and one of which is provided with a passage that communicates with the inlet port and discharges into the casing.

2. The combination with an axle, and a surrounding sleeve or quill having an internal diameter that is materially greater than the external diameter of the axle, of a dynamo-electric machine mounted upon the sleeve or quill and comprising field magnet and armature cores and coils, an inclosing casing having an inlet port at one end and a plurality of peripheral exhaust ports, and an armature core support having exhaust ports opening into the sleeve or quill.

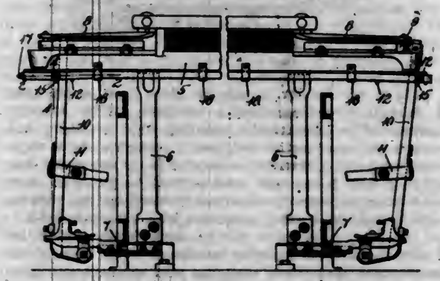
3. The combination with an axle, and a surrounding sleeve or quill having an internal diameter that is materially greater than the external diameter of the axle, of a dynamo-electric machine mounted upon the sleeve or quill and comprising field magnet and armature cores and coils, an inclosing casing having an inlet port at one end and peripheral exhaust ports, and an armature support having additional exhaust ports that open into the sleeve or quill.

4. The combination with an axle and a two-part sleeve or quill surrounding the axle, of a dynamo-electric machine mounted upon the sleeve and comprising field magnet and armature cores, an inclosing casing, and a supporting structure for the armature core, inlet ports being provided through the inclosing casing and outlet ports being provided in the supporting structure for the armature core to discharge into the interior of the quill between the ends of the two parts thereof.

5. The combination with truck wheels and their axle, of a quill loosely surrounding the axle, a field magnet structure having an inlet port and a plurality of peripheral exhaust ports and an armature structure having ventilating passages and ports opening into the space between the quill and the axle through which exhaust is effected.

[Claim 6 not printed in the Gazette.]

1,013,217. SHUTTLE-CHECKING DEVICE FOR LOOMS. ANKER PETERSEN, Winthrop, Mass., assignor to Boston Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 5, 1909. Serial No. 511,380.



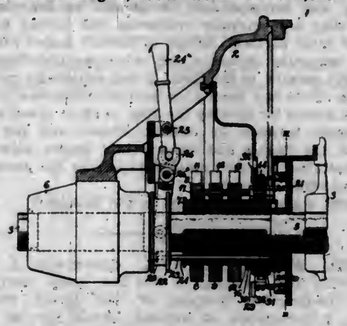
1. The combination, in a loom, of a flexible member fixed at two points, two devices secured to said member intermediate said points, means to guide said devices, a picker mechanism including two picker-sticks engaging and moving said devices, respectively, each in a direction contrary to that of the other, and a shuttle propelled by said picker-sticks alternately in opposite directions and arranged to travel between and engage and move said picker-sticks alternately.

2. The combination, in a loom, of a flexible member fixed at two points, two devices secured to said member intermediate said points, means to guide said devices, a picker mechanism including two picker-sticks engaging and moving said devices, respectively, each in a direction contrary to that of the other, means located between said picker-sticks to support and guide said member, and a shuttle propelled by said picker-sticks alternately in opposite directions and arranged to travel between and engage and move said picker-sticks alternately.

3. The combination, in a loom, of flexible member fixed at two points, two cushions secured to said member intermediate said points, means to guide said cushions, a picker mechanism including two picker-sticks engaging and moving said cushions, respectively, each in a direction contrary to that of the other, and a shuttle propelled by said picker-sticks alternately in opposite directions and arranged to travel between and engage and move said picker-sticks alternately.

4. The combination in a loom of a shuttle, a picker mechanism including two picker sticks to propel said shuttle alternately in opposite directions and arranged to be alternately moved by said shuttle near the end of its travel alternately in opposite directions, two slides, guides upon which said slides are mounted to slide, two cushions connected to said slides, respectively, and a flexible member fixed at two points and connected to said cushions intermediate said points, said cushions being adapted to be engaged by said picker sticks, respectively, when moved by said shuttle, whereby said member is moved alternately in opposite directions, and the speed of said shuttle in opposite directions is gradually checked.

1,013,218. INDUCTION-MOTOR. WILLIAM EDGAR REED, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1906. Serial No. 328,885.



1. In an electric motor, the combination with a stationary member having a primary winding, a rotatable member having a secondary winding and collector rings connected thereto, stationary brushes for the rings and an external resistance connected to the brushes, of contact fingers having supporting members that are electrically connected to the several rings and are provided with longitudinally spaced notches, of inter-connecting means for the fingers comprising an adjustable short-circuiting ring having an internal cylindrical contact surface, non-rotatable means for adjusting the ring to make and break engagement between its contact surface and the outer faces of the fingers and accentuating fingers secured to the short circuiting ring to engage either the inner or the outer notches in the supporting members for the contact fingers.

2. In a dynamo-electric machine, the combination with a plurality of collector rings, and stationary engaging contact brushes therefor, of a short-circuiting means for said rings comprising a plurality of groups of resilient contact fingers having supporting members that are severally connected to the collector rings and are provided with longitudinally spaced notches, a short-circuiting ring having an internal cylindrical contact surface, means for moving said ring to make and break engagement between its contact surface and the outer faces of said contact fingers and accentuating fingers carried by said short-circulating ring to engage said notches.

3. In an electric motor, the combination with a rotatable member, a plurality of collector rings which are stationary relative thereto and are insulated therefrom and from each other, groups of flexible contact fingers having supporting members that are severally connected to the collector rings and are severally provided with two longitudinally spaced notches, and a short-circuiting ring having a cylindrical contact surface, of means for moving said short-circuiting ring to make and break engagement between its contact surface and the faces of the contact fingers, independently of the operation of the machine and fingers carried by the short-circuiting ring to engage said notches for accentuating the adjustment positions thereof.

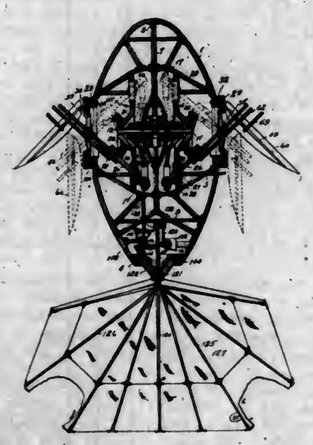
4. In a dynamo-electric machine, the combination with a rotatable core member having a cylindrical shaft, a bushing or sleeve fixed to the shaft and collector rings mounted on said bushing, of a plurality of conducting segments disposed about the bushing and having longitudi-

nally spaced notches in their outer surfaces, groups of resilient contact fingers attached to the respective segments and projecting therefrom substantially parallel to the shaft, adjustable interconnecting means for engaging the outer surfaces of the fingers and accentuating fingers secured to the adjustable interconnecting means and adapted to engage the notches in the conducting segments.

5. A dynamo-electric machine comprising a stationary member, a rotatable core member having a cylindrical shaft, a bushing or sleeve fixed to the shaft, collector rings mounted on said bushing and insulated therefrom, a plurality of conducting segments equally disposed about the bushing and corresponding in number to the rings to which they are severally connected and having notches in their outer surfaces, groups of contact fingers attached to the respective segments and projecting therefrom substantially parallel to the shaft, a ring adjustably mounted upon the shaft and having an internal cylindrical contact surface, means for moving the ring to effect simultaneous engagement between its contact surface and the outer faces of the fingers and accentuating fingers secured to the adjustable ring and adapted to engage the notches in the conducting segments.

[Claims 6 and 7 not printed in the Gazette.]

1,013,219. AERIAL VEHICLE. CLEVELAND A. REX, Amarillo, Tex., assignor to The Rex Aerial Navigating and Construction Company of New Jersey, Phoenix, Ariz., a Corporation of Arizona. Filed Apr. 26, 1910. Serial No. 557,653.



1. In an aerial vehicle, a body, wings pivotally supported by the body and having projections, an operating device having connection with the projections of the wings and supported by the body, and a member supported by the body having a guide-way in which the projection of each wing is received, the guide-way of the member having a portion in the form of an arc of a circle, and another portion contiguous thereto having an angular shape.

2. In a wing adjusting device for aerial vehicles, the combination with a body and a wing and its shaft, of a support pivotally mounted at one of its ends on the body and having pivotal connection with the wing shaft at a point distant from its point of pivotal connection to the body, and an adjusting device having connection with the free end of the support.

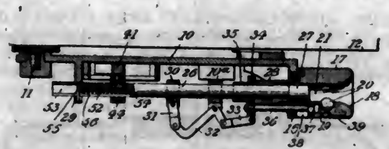
3. In a wing adjusting device for aerial vehicles, the combination with a body and a wing and its shaft, of a support pivoted on the body and having its pivot point at one side, a member pivoted in the support, the said member receiving the wing shaft and an adjusting device having connection with the free end of the support.

4. An aerial vehicle wing comprising, a main shaft, shaft sections hinged together, a connection secured at one end to the main shaft and attached at its outer end to one of the shaft sections, there being an intermediate shaft section between the first named section and the main shaft free from the said connection, and an operating member having connection at its outer end to the intermediate shaft section.

5. An aerial vehicle wing comprising, a main shaft, an intermediate shaft section hinged to the main shaft, an outer shaft section hinged to the intermediate shaft section, a connection attached to the outer section and the main shaft and spanning the intermediate shaft section, a plurality of spars pivotally mounted on the shaft sections and extending laterally therefrom, and connections between some of the spars.

[Claims 6 to 26 not printed in the Gazette.]

1,013,220. CAR-COUPLING. LUCIUS RIEGLER, West Hoboken, N. J. Filed Feb. 4, 1911. Serial No. 606,496.



1. In a car coupler, a tubular draw head, a plurality of radially movable grasping members carried thereby, recessed slides operatively engaging said members and movable out of operative position, a plunger slidable within the head and operatively connected to the recessed slides, and a bolt with enlarged head pivoted to the draw head and having an inwardly deflected forward section adapted to be brought into axial alinement with the draw head.

2. In a car coupler, a tubular draw head, a plurality of radially movable grasping members carried thereby, recessed slides operatively engaging said members and movable out of operative position, a plunger movable within the head, a collar mounted upon the plunger, elbow levers connected to said collar, a sliding collar connected to the elbow levers, and means for connecting said sliding collar with the recessed slides.

3. In a car coupler, a tubular draw head, a plurality of radially movable grasping members carried thereby, recessed slides operatively engaging said members and movable out of operative position, a plunger movable within the head, a collar mounted upon the plunger, a first set of links pivoted to the collar, elbow levers fulcrumed on a stationary part of the draw bar and having arms of different lengths, said elbow levers being pivoted with their longer arms to said links, a second set of links pivoted to the shorter lever arms, a sliding collar connected to the second set of links, and means for connecting said sliding collar with the recessed slides.

4. In a car coupler, a tubular draw head having a plurality of flaring sockets, radially displaceable balls within the sockets, a headed plunger movable within the draw head, a sliding collar operatively connected to the plunger, a plurality of recessed slides connected to the sliding collar and adapted to engage the balls, and a coöperating headed coupling bolt adapted to engage the plunger-head and to become interlocked with the balls.

1,013,221. NURSING-BOTTLE HOLDER. FRANKLIN W. ROUSH, Dayton, Ohio. Filed May 12, 1911. Serial No. 626,654.

1. In a holding device of the character described, two parallel elastic engagers adapted to simultaneously engage the opposite sides of the article to be supported, non-elastic lateral extensions extending from said elastic engagers, and separated attachment devices to be engaged by the lateral extensions spaced farther apart than the normal length of the engagers and extensions whereby the bands will be maintained under tension.

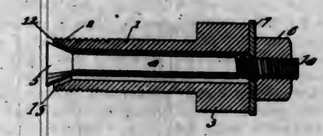
2. In a holding device of the character described, an elastic holding member of variable tension adapted to simultaneously engage opposite sides of the article to be supported, non-elastic flexible extensions extending in opposite directions from the elastic members, and means for attaching the extensions at such widely separated points as to maintain the elastic members under tension.

3. In a holding device of the character described, an elastic holding member, opposing tenacious engaging surfaces within said member between which the article to be held is inserted and oppositely extending attachment members adapted to maintain the holding member under tension thereby causing the tenacious surfaces to engage the article, substantially as specified.

4. In a holding device of the character described, a holding member of tenacious material, within which the article to be held is to be engaged, laterally extending non-elastic straps on opposite sides of the said holding member, detachable connections between the straps and holding member, eye members carried at the extremities of said straps and adapted to engage separated supporting devices.

5. In a holding device of the character described, a holding member of tenacious material, within which the article to be held is to be engaged, laterally extending non-elastic straps on opposite sides of said member, and detachable strap extensions attached to the extremities of the said lateral straps and adapted to engage widely separated supporting means whereby the holding member will be maintained under tension.

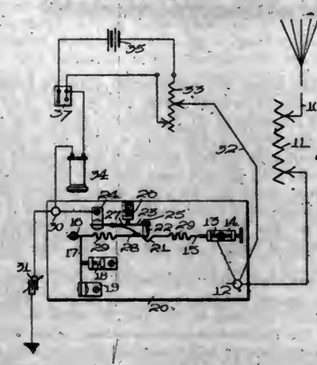
1,013,222. EXPANSION-BOLT. FREDERICK H. RUSCKING, St. Louis, Mo. Filed Aug. Aug. 3, 1911. Serial No. 642,197.



1. An expansion bolt of the type set forth, consisting of a sleeve of uniform diameter throughout formed with exterior threads at one end and with an integral wrench-engaging head at its opposite end, said sleeve being formed at its threaded end with an interior outwardly flaring conical seat the wall of which is thinned at its free end and is continuous and unbroken throughout, a bolt proper having a conical head at one end which engages said conical seat of the sleeve, said bolt proper being arranged in said sleeve and having its other end threaded and projecting beyond said head of the sleeve, and a nut on said threaded end of the bolt proper to bear against the head of the sleeve and to draw said head into wedging engagement with said wall to move the latter outwardly.

2. An expansion bolt of the type set forth, including a sleeve having a conical interior seat at one end forming a thin continuous unbroken wall that surrounds the seat, said wall being exteriorly threaded and adapted to be received in a threaded opening of an article, and a bolt proper in the sleeve having a head at one end to engage in said seat of the sleeve and means at its opposite end to wedge said bolt head into engagement with said seat to thereby expand said thin continuous wall which surrounds the seat to cause the threads of said wall to become wedged into engagement with the threads of said threaded opening of the article.

1,013,223. DETECTOR. FREDERICK G. SARGENT, Westford, Mass. Filed Jan. 28, 1910. Serial No. 540,512.



1. A detector for the purpose described, comprising a conductor having an off-set therein and supported so as to vibrate when affected by Hertzian waves, means for connecting the conductor with a receiving aerial, and a vibratory contacting point adapted to engage the off-set portion thereof and connected with the ground.

2. A detector for the purpose described, comprising a metallic resilient conductor having a portion located at an angle to the general length of the conductor, a resiliently mounted contact point adapted to engage the conductor near said inclined portion, and means for effecting a relative adjustment between the contact point and conductor longitudinally of the latter to vary the contact between them.

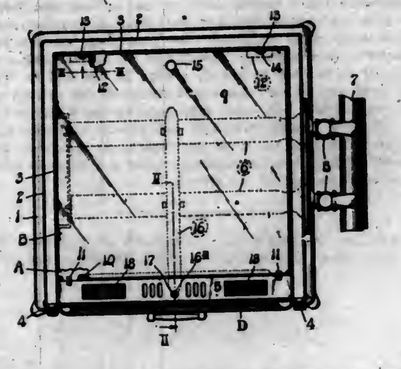
3. A detector for the purpose described, comprising a conductor of iron or steel, longitudinal adjusting means for supporting one end of the conductor, and longitudinal adjusting means for the opposite end of the conductor, whereby the longitudinal position of the conductor can be varied and whereby it can be tuned and a contact point in position to engage the conductor, with a variable pressure whereby the pressure of the contact may be varied by said adjustments.

4. A detector for the purpose described, comprising a conductor, means for supporting one end thereof, a resilient support at right angles to the conductor near its opposite end to which said conductor is secured, means for transversely adjusting the tension of said resilient support and a contact point in position to engage the conductor.

5. A detector comprising a wire supported near its ends, independent means for longitudinally moving and adjusting both ends thereof and a contact point in position to engage the conductor with a contact variable by said adjustments.

[Claims 6 to 8 not printed in the Gazette.]

1,013,224. GAS-STOVE. FREDERICK SATTLER, Belleville, Ill. Filed Nov. 25, 1910. Serial No. 594,008.



1. In a gas stove, the combination with an inner shell comprising spaced lateral walls and a rear wall, of a threshold plate secured to the lateral walls and extending across the front of the stove, a floor plate supported along its front edge by said threshold plate, means mounted on the rear wall of said inner shell for releasably locking said floor plate to the rear wall, burners disposed within the inner shell below said floor plate, and a lighter for conveying gas from said burners, said lighter being provided with a nipple opening through said threshold plate.

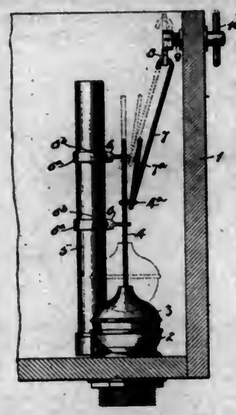
2. In a gas stove, the combination with an inner shell comprising spaced lateral walls and a rear wall, of a threshold plate secured to the lateral walls and extending across the front of the stove, a floor plate supported along its front edge by said threshold plate, means mounted on the rear wall of said inner shell for releasably locking said floor plate to the rear wall, burners disposed within the inner shell below said floor plate, and a lighter for conveying gas from said burners, said lighter being provided with a nipple opening through said threshold plate, said threshold plate being provided with sight openings therethrough on either side of said nipple.

3. In a gas stove, the combination with an inner shell comprising spaced lateral walls and a rear wall, of a threshold plate secured to the lateral walls and extending across the front of the stove, a floor plate supported along its front edge by said threshold plate, burners disposed within the inner shell below said floor plate, and a lighter for conveying gas from said burners, said lighter being provided with a nipple opening through said threshold plate.

4. In a gas stove, the combination with an inner shell comprising spaced lateral walls and a rear wall, of a partition extending across between said lateral walls and comprising a threshold plate at the front of the stove and a floor plate supported by said threshold plate, burners disposed within the inner shell below said floor plate, and a lighter for conveying gas from said burners, said lighter being provided with a nipple, and said threshold plate being provided with a central opening through which said nipple extends and sight openings on either side of said nipple.

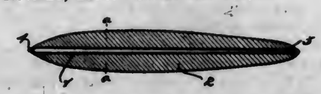
1,013,225. VALVE CONTROL FOR FLUSH-TANKS. WILLIAM H. SCHULTE, Trenton, N. J. Filed Jan. 6, 1911. Serial No. 601,107.

In an apparatus of the character described, a tank, an outlet, a float valve therefor, a guide stem, two guides for said stem, an eye on the stem between the guides, an operating device mounted on one wall of the tank, and a wire link connecting said operating device and said stem and supported wholly by said operating device, said link having an upturned straight part at its lower end passing up through said eye and extending approximately parallel with said guide stem, the upper end of said upturned part



extending above the highest point reached by said eye in the operation of the valve.

1,013,226. CIGAR. HARRY SCHWARTZ, New York, N. Y. Filed Nov. 18, 1910. Serial No. 593,007.



The method of manufacturing cigars consisting of the following steps; first, wrapping a cured tobacco leaf flexible and adhesive by reason of its natural juices around a tapered mandrel and twisting it beyond the small end thereof; secondly wrapping a filler, binder and wrapper successively around the same while still damp, the wrapper being permitted to overlap both ends of the cigar; thirdly slitting the wrapper at the head end and shaping the body and tuck by manipulation and finally withdrawing the mandrel so as to leave a central longitudinal draft tube from end to end of the cigar.

1,013,227. MOUNTING TUNGSTEN FILAMENTS. CHARLES F. SCOTT, Pittsburgh, Pa., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed Dec. 22, 1908. Serial No. 468,706.

1. The method of constructing incandescent electric lamps, which consists in mounting the filaments loosely upon their supporting wires, placing the filaments parallel with supporting arbor, bending the supports together, inserting the structure within the globe, and thereafter bending outward the supporting wires and spreading the filaments.

2. In an incandescent electric lamp, a filament having hooked ends, supporting wires for the filament, and helical coils carried by the supporting wires and engaging the hooked ends of the filament.

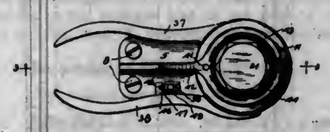
3. An incandescent lamp comprising a filament having hooked ends, supporting wires for the filament, and helical coils loosely carried by the supporting wires and engaging the hooked ends of the filament.

4. An incandescent lamp comprising a filament, supporting wires therefor, and helical coils loosely carried by the supporting wires and loosely surrounding but engaging the ends of the filament.

5. An incandescent lamp comprising a plurality of reversely bent filaments, the legs of different filaments crossing but not engaging each other.

[Claims 6 and 7 not printed in the Gazette.]

1,013,228. SEAL-PRESS. MORRIS SHERAS, Chicago, Ill. Filed Mar. 9, 1911. Serial No. 613,423.



1. In a seal press, the combination of a supporting frame comprising upper and lower body parts each having a circular extension at its front end, said extensions being concentric and opposite each other but separated a distance, a matrix secured to the lower extension, a cylinder carried by the upper extension and concentric therewith, a die plate between the lower end of said cylinder and said matrix and having a stem extending into said cylinder, spring means within the cylinder tending to force said die plate upwardly away from the matrix, said die plate having an annular bearing shoulder, a cam plate encircling said shoulder and seating on said die plate, bearing pockets rigid with reference to the top extension and accommodating bearing balls, said cam plate having cam extensions for coöperating with said balls upon rotation of the cam plate to cause said die plate to be forced downwardly toward said matrix, a grip arm parallel with said press frame and secured to one side thereof, and a lever arm extending from said cam plate for causing rotation of said cam plate.

2. In a seal press, the combination of a supporting frame comprising upper and lower body parts detachably secured together and each having a front circular extension, said circular extensions being concentric and opposite each other but separated a distance, a matrix on the lower extension, said upper extension having a central opening, a cylinder concentric with said matrix and having its upper end extending through said opening, bearing pockets extending from said cylinder to engage with the lower face of said upper extension, the outer end of said cylinder being threaded, a cap engaging said threaded end and the outer face of said upper extension for locking the cylinder securely to said extension, bearing balls in said bearing pockets, a die plate between said matrix and the lower end of said cylinder and having a stem extending through the base of said cylinder and into said cylinder, an abutment on said stem and within said cylinder, a compression spring between said abutment and cylinder base tending to hold said die plate in upper position away from the matrix, a cam plate encircling the die plate stem and having cam ridges for coöperating with said bearing balls upon rotation of the cam plate to cause said die plate to be forced downwardly toward the matrix, a grip arm at one side of the seal frame, and a grip lever extending from said cam plate for causing rotation of said cam plate.

1,013,229. DUMPING-TRESTLE. JOHN M. SNEAD and CASEIUS BRADY, Chicago, Ill., assignors to Gravity Coal Bin Company, a Corporation of Maine. Filed Nov. 27, 1908, Serial No. 464,752. Renewed Nov. 11, 1911. Serial No. 659,842.

1. In a device of the class described, an elevated movably mounted platform, and a deflector extending transversely of said platform and sloping downwardly and outwardly therefrom.

2. In a device of the class described, an elevated movably mounted platform having an inclined approach, and a deflector extending transversely of said platform, said deflector sloping downwardly and outwardly therefrom.

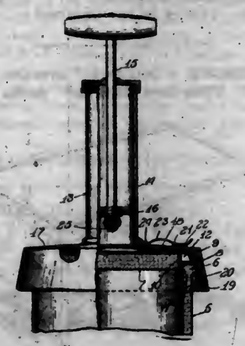
3. In a device of the class described, an elevated movably mounted platform having an inclined approach, said platform and approach being divided into separable sections, and a deflector extending transversely of said platform and sloping downwardly and outwardly therefrom.

4. In a device of the class described, a stationary track, an elevated platform and inclined approach thereon, said platform and approach being mounted on wheels, and a deflector extending transversely of said platform and sloping downwardly and outwardly therefrom.

5. In a device of the class described, a stationary track, a dumping trestle mounted on wheels and comprising an elevated platform and inclined approach, a track on said platform and approach, and an inclined deflector sloping downwardly and outwardly from a point beneath said platform.

[Claims 6 to 18 not printed in the Gazette.]

1,013,230. VACUUM PACKING APPARATUS. GRAY STAUNTON, Evanston, Ill. Filed June 20, 1908. Serial No. 439,496.



1. In a vacuum packing apparatus, the combination with a receptacle having therein a single aperture surrounded by an annular wall having a rounded exterior edge, of a cover adapted and arranged to overlie and effect a sealing contact with the inner edge of said wall under the influence of prepondering exterior pressure, and an air exhausting pump providing an open-end outwardly flared connection base secured to the pump and arranged to make sealing contact directly with the outer edge of said annular rounded surface beyond the cover, said base fitting closely around and extending above the cover but leaving the latter free for movement in response to the exhausting means.

2. In a vacuum packing apparatus, the combination with an open-mouthed jar, having a rounded exterior edge,

of a wide, solid cover therefor, mechanically free from the jar, a packing ring carried by the cover, arranged to make sealing contact with the mouth of the jar wholly within the confines of the outer edge, and an air-exhausting pump having secured thereto an open-end outwardly flared base carrying a flaring, yielding packing ring arranged to make angular sealing contact with the outer rounded edge of the jar mouth wholly beyond the cover, to permit the cover to act as a valve during sealing operations.

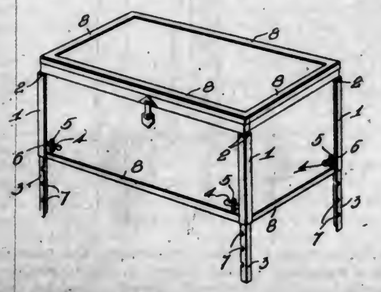
3. In a vacuum packing apparatus, the combination with a receptacle having a single aperture surrounded by an annular wall having a rounded exterior edge, of a cover adapted and arranged to effect a sealing contact with the inner edge of said wall, and to lie wholly within the outer edge thereof, and an air-exhausting pump carrying an open-mouth outwardly flaring connection base arranged to make direct sealing contact with the outer rounded edge of the said wall beyond the cover, to include within the receptacle an area in which the atmosphere may be attenuated by the exhausting means, and completely inclosing the cover, said connection base being provided radially beyond the pump-barrel, with a normally closed pressure-relief valve.

4. The combination with an open-mouthed jar, having a vertical cylindrical side wall, reinforced with a rounded bead at the upper, outer edge thereof, of a solid cover providing a central boss to fit within the mouth of the jar, a laterally projecting flange to overlie the rim of the jar within the outer edge thereof, and a sealing rim of triangular cross section carried by the boss having a surface inclined from the plane of the jar mouth for contact with the inner portion of the jar mouth, and an air pump carrying an open outwardly flaring mouthed connection base arranged for directly sealing contact with the bead of the jar beyond the cover, leaving the cover free for limited movement within the base.

5. In an exhausting apparatus for sealing vacuum packages, a pump, a cover body, a wide solid base for said pump provided with a sealing part for coaction with the receptacle, and resilient fingers on the underside of said base to position the cover on said receptacle by contact with the upper surface thereof and yieldable to permit vertical movement of said cover for passage of air from the receptacle beyond the cover.

[Claim 6 not printed in the Gazette.]

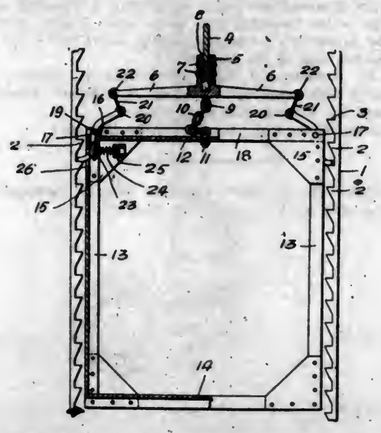
1,013,231. TRUNK. SARAH R. STEARNS, Huntington Beach, Cal. Filed June 13, 1910. Serial No. 566,632.



1. In combination with the corners of a trunk, of right angular braces provided with inwardly turned edges, secured to the trunk and forming engaging channels, supporting legs freely received by said braces and having their opposite edges slidably located in the channels, whereby said legs are held out of contact with the trunk, and means for holding said legs in an adjusted position.

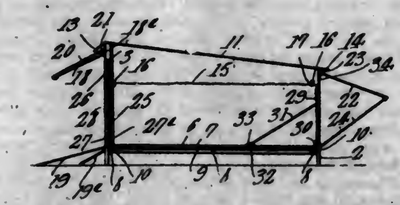
2. In combination with the corners of a trunk, of right angular braces provided with inwardly turned edges secured to the trunk forming engaging channels, supporting legs freely received by said braces and having their opposite edges slidably located in the channels, whereby said legs are held out of contact with the trunk, said legs having one of their edges provided with notches and bolts secured to the sides of the trunk and adapted to interlockingly engage with said notches of the legs.

1,013,232. SAFETY ELEVATOR DEVICE. PETER STINE, Congo, Ohio. Filed July 8, 1911. Serial No. 637,570.



In a safety elevator device, the combination with a pair of oppositely disposed vertical racks having teeth, and a hoisting cable, of a central cage frame including channel bars connected together by corner pieces, a crosshead secured to the lower end of said hoisting cable, a slack chain attached at its upper end to the center of said crosshead and its lower end connected to the upper channel bar of said frame centrally thereof, pivot pins mounted in the ends of the upper of said channel bars, curved arms loosely mounted upon said pins having their lower ends extending into the side channel bars of said frame, said arms extending over the upper channel bar to a position below the crosshead, links for loosely connecting the upper ends of said arms to the ends of the crosshead, said arms further having their lower ends extending out through the side channel bars of the frames and capable of engaging the teeth of the racks to arrest the descent of said frame, sockets provided on the inner side of the lower portion of each of said arms, sockets interposed between the corner-pieces at the upper ends of said frames, said arms being normally maintained in an inoperative position when the hoisting cable is taut, and coiled springs interposed between the sockets of the arms and the sockets of the corner pieces for forcing said arms to engage the teeth of the racks when the crosshead is released, due to a slacking or breaking of said hoisting cable.

1,013,233. CHICKEN-COOP. EDWARD STOUT and JESSE M. KNOWLES, Stockport, Iowa. Filed May 18, 1911. Serial No. 627,909.



1. A device of the character described, including lateral members provided with end-grooves and an end-closure whose frame is provided with doubled groove-extensions at its lateral edges, the exterior of opposed groove extensions being received by the end-grooves of said lateral members.

2. A device of the character described, including lateral members having groove-forming end extensions, an end closure frame having double-groove forming extensions, and closure-members accommodated by said groove-forming extensions, opposed groove-forming extensions being received by said end groove-forming extensions.

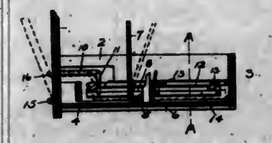
3. A device of the character described, including lateral members having bottom-edge upwardly extending portions terminating in horizontal flanges, a bottom-member, and securing rod-members extending below said bottom member and engaging said lateral members, said bottom-member being received slidably upon said flanges.

4. A device of the character described, including lateral members having bottom-edge horizontal flanges, hod-members engaging said lateral members and a bottom-member resting upon said flanges said rod-member extending below said bottom member.

5. A coop of the type described, including lateral members, a bottom having a reticulated upright member forming a rear-end closure for the coop, inner reticulated closure-members at the forward end of the coop, a slidable imperforate roof, and a supplemental reticulated top-member.

[Claim 6 not printed in the Gazette.]

1,013,234. VERTICAL-FILING DRAWER. FREDERICK L. G. STRAUBEL, Green Bay, Wis. Filed Aug. 29, 1910. Serial No. 579,532.



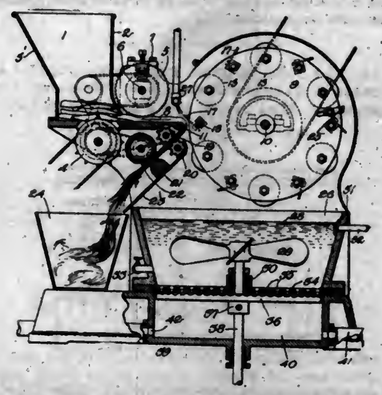
The combination of a vertical filing drawer having a hinged front, a parallel bar mounted at the side of the drawer for upward and downward movement, and provided with a dovetail groove, operating connections between said bar and the front of the drawer, a follower base adapted to slide longitudinally of the drawer, a tilting wing pivotally mounted thereon, said mounting including a lever having a flanged roller adapted to engage said dovetail groove for tilting the follower wing, and a spring in connection with said wing and adapted to hold the same normally in an upright position, substantially as described.

1,013,235. APPARATUS FOR DISSECTING PULPY AND FIBROUS PLANTS. FREDERICK F. STRONG, St. Petersburg, Fla. Filed June 10, 1910. Serial No. 566,221.

1. An apparatus of the kind described, comprising means to feed the plant-material endwise to a dissecting mechanism, combined with said dissecting mechanism, including means to cut the plant-material at its end lengthwise of the fibers with a series of cuts close to each other, said cutting means being arranged to separate the individual fibers from each other and pass between said fibers with a pushing action against the intervening pulp tissue, said cutting means comprising a plurality of successive series of cutting blades, each occupying a vertical cutting plane by itself.

2. An apparatus of the kind described, comprising means to feed the plant-material endwise to a dissecting mechanism, combined with said dissecting mechanism, including a plurality of sets of knives, the knives of each set being parallel to each other and arranged to cut the end of the plant-material lengthwise of its fibers, and the knives of each succeeding set being out of alinement with the knives of all the preceding sets.

3. An apparatus of the kind described, comprising means to feed the plant-material endwise to a dissecting mechanism, combined with said dissecting mechanism, including a plurality of sets of knives, the knives of each set being parallel to each other and arranged to cut the end of the plant-material lengthwise of its fibers and the knives of each succeeding set being out of alinement with the knives of all the preceding sets, and combing mechanism operating on the cut ends during the cutting action to comb the parenchyma from the fibers.

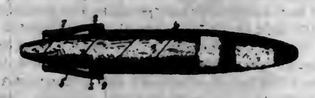


4. An apparatus of the kind described, comprising means to hold the plant material endwise to be operated upon, a rotary reel-like member having a series of dissector rolls mounted adjacent the periphery thereof, each roll having a series of metal disks separated by thin spacing washers, the disks of the successive rolls being mounted to travel in vertical planes out of alinement with all the disks of all the other rolls, and a plurality of whipping means mounted at intervals on said reel-like member between said rolls in position to whip the ends of the plant material with a rapid series of whipping movements interspersed with the cutting movements of the rolls.

5. An apparatus of the kind described, comprising feeding means to feed the plant material into position to be operated upon, and a reel-like member provided with a plurality of series of cutting knives arranged parallel to each other and each knife standing in a different vertical plane from all the other knives throughout the plurality of series of knives, and intervening combs mounted for angular adjustment between certain of said series of knives.

[Claims 6 to 8 not printed in the Gazette.]

1,013,236. CIGAR-HOLDER. EDWARD E. TALIAFERRO, and ERNEST J. GOLDSWORTHY, Colorado Springs, Colo. Filed Nov. 28, 1910. Serial No. 594,454.



1. A cigar holder, comprising a tubular finger piece having spring fingers secured to its inner face for engaging and holding a cigar, a foraminous ash holder, and coacting means on the finger piece and holder for detachably connecting the latter directly with the former.

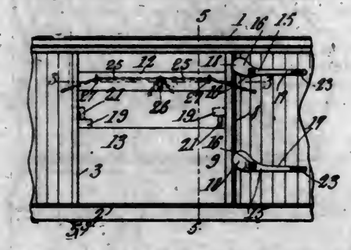
2. The combination of a tubular finger piece having integral spring fingers ranging lengthwise within the finger piece for engaging and holding a cigar, a gause ash holder, and co-acting means on the said finger piece and ash holder for detachably connecting the ash holder directly with the finger piece.

3. The combination of a tubular finger piece having integral spring fingers ranging lengthwise within the finger piece for engaging and holding a cigar, the said finger piece having integral locking and holding means, and a

gauze ash holder provided with a binding with which the said holding and locking means engages for supporting the ash holder directly from the said finger piece.

4. The combination of a tubular finger piece having directly on its inner face spring fingers ranging lengthwise within the same for engaging and holding a cigar, the said finger piece also having inwardly-extending projections in the rear of the said spring fingers, and a gauze ash holder having a binding provided with an annular groove engaged by the said projections.

1,013,237. SECTIONAL DOOR FOR GRAIN-CARS. RICHARD S. TAYLOR and GEORGE W. WOODRUFF, Gracemont, Okla. Filed Nov. 9, 1910. Serial No. 591,472.



1. In a device of the class described, a supporting structure having a doorway; a fixed guide secured to the supporting structure along one edge of the doorway; a guide hinged to the supporting structure along the other edge of the doorway; a door adapted to be received within the guide members; a spring upon the hingedly mounted guide, adapted to bear against the door; a lever pivoted upon the supporting structure, and having a cam head adapted to bear against the hingedly mounted guide; and a locking device in the lever, adapted to engage the supporting structure, to hold the lever in adjusted positions.

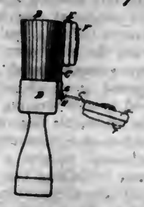
2. In a device of the class described, a supporting structure provided with a doorway; a guide member hinged to the supporting structure along one edge of the doorway; a door adapted to be engaged by the guide member; a spring upon the guide member, adapted to bear against the door; a securing device movably mounted upon the supporting structure, and adapted to bear against the hingedly mounted guide member, to maintain the spring in engagement with the door; and means located upon the supporting structure, for engaging the other edge of the door.

3. In a device of the class described, a supporting structure provided with a doorway; a guide hinged to the supporting structure along one edge of the doorway; a door adapted to be engaged along one edge by the guide; a spring upon the guide, adapted to bear against the door; a securing device movably mounted upon the supporting structure and adapted to bear against the hingedly mounted guide, to hold the spring thereof in engagement with the door; a locking member upon the securing device, adapted to engage the supporting structure, to hold the securing device in adjusted positions; and means upon the supporting structure, for engaging the opposite edge of the door.

4. A grain car having a door opening, a door therefor, a channel shaped guiding strip arranged upon one side of said opening, an L-shaped supporting strip secured upon the opposite side of the door opening, an L-shaped guiding strip hinged to said L-shaped supporting strip, a pivoted lever having a cam portion to engage said hinged strip to hold the same in its proper place, and means for holding the said lever in its adjusted position.

5. A grain car having an opening, a door therefor, a channel-shaped guiding member secured to one side of the door opening, an L-shaped guiding strip hinged to the opposite side of the door opening, said L-shaped guiding strip having spring devices to frictionally engage the door, and a lever having a cam portion to engage the L-shaped hinged strip for holding the same in place.

1,013,238. LATHER-BRUSH. CHARLES E. THOMPSON, Troy, N. Y. Filed May 16, 1911. Serial No. 627,889.



1. In combination with a lather brush, a holder,; an arm therefor; a means for adjustably connecting said arm to said lather brush in such a manner that the holder may be held rigidly in alinement with and adjacent to the bristles of the brush, and also held rigidly in position when moved from the bristles.

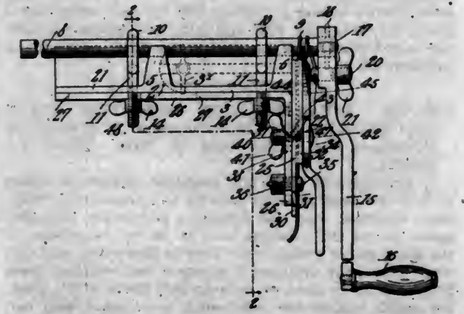
2. In combination with a lather brush, a holder; an adjustable arm attached thereto; a plate or boss attached to the side of said lather brush; said arm adjustably secured to said plate or boss, substantially as described.

3. The combination of a lather brush provided with bristles; a handle; a holder; a wire bent at about midway between its ends and secured to said holder; a boss or plate secured to the sides of the lather brush; the ends of said wire bent substantially at right angles to the main portion of the wire and projected through the introverted edges of said plate secured to the side of the ferrule of the lather brush; the introverted edges of said plate curved toward the medial line of said plate, substantially as described.

4. The combination of a lather brush with a holder; an adjustable arm therefor attached thereto; a means on said lather brush for adjustably securing said arm in connection therewith.

5. A lather brush comprising a brush head or ferrule; a knot of bristles or hair projecting from one end of said brush head and a handle projecting from the opposite end thereof, provided with an arm adjustably attached to its side; said arm having at its outer end a holder adapted to receive soap in any of its forms.

1,013,239. SPRING-WINDER. RICHARD TITUS, Bowling Green, Ohio. Filed Apr. 2, 1910. Serial No. 552,981.



1. A spring winding machine including a mandrel, means for rotating the same, means for supplying wire to the mandrel, an adjustable spacing means coöperating with the mandrel and having an arcuate spacing edge of variable width, and means for adjusting said spacing means during the winding operation.

2. A spring winding machine including a mandrel, means for rotating the same, means for feeding wire to the mandrel, adjustable means coöperating with the mandrel and including an arcuate spacing edge of gradually varying thickness, and means for adjusting said adjustable means during the winding operation.

3. A spring winding machine including a mandrel, means for rotating the same, means for supplying wire to the mandrel, and an adjustable device coöperating with the mandrel and having an arcuate spacing edge and a recess, said edge gradually diminishing in thickness toward the recess.

4. A spring winding machine including a mandrel, means for securing a wire thereto, means for feeding wire to the mandrel, and an adjustably supported device having an arcuate spacing edge coöperating with the mandrel, there being a recess in said edge for the reception of the mandrel and convolutions of wire thereon, the said edge being of variable thickness.

5. A machine of the class described including winding mechanism, wire feeding mechanism, a spacing device having an arcuate edge of variable thickness coöperating with the mandrel, and means for adjusting said spacing device during the winding operation.

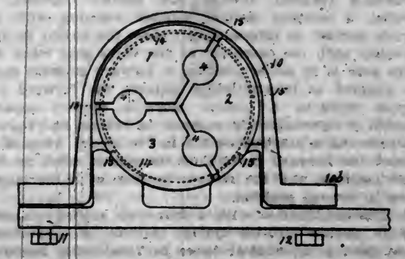
[Claims 6 to 12 not printed in the Gazette.]

1,013,240. CARRIAGE-WHIP. WYLYS G. TOWNSEY, Alamogordo, N. Mex. Filed Feb. 14, 1911. Serial No. 608,497.

1. A whip of the class described comprising a tubular handle member having a radial opening near its outer end, a radially movable locking pin in the said opening, the said locking pin and tubular member having co-acting devices to limit the radial movement of the locking pin, an outer member telescopically fitted in the tubular handle member and provided with a radial locking opening near its inner end, and a cap to fit in the handle member when the outer member is in retracted position and having a slot, the said locking pin having a common locking element for the outer member and for the cap, to lock either of them at the outer end of the tubular handle member.

2. A whip of the class described comprising a tubular handle member having a radial opening near its outer end and a bore on its inner side corresponding with the radial opening, an outer member telescopically fitted in the tubular handle member provided with a radial locking opening to aline with said opening of the tubular handle member when the outer member is in extended position, a cap to fit on the handle member when the outer member is in retracted position and having a slot, and a radially movable locking pin extending through the opening of the tubular handle member and having a head at its inner end to engage the locking opening of the outer member and a head at its outer end to engage the slot of the cap to lock the latter in place on the outer end of the handle member when the outer member is in retracted position in the handle member.

1,013,241. INSULATOR. FRANK C. VAN ETTEN, Davenport, Iowa. Filed Oct. 16, 1911. Serial No. 654,849.



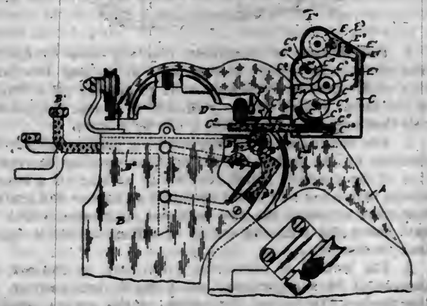
In a support, the combination of three equal sectors of an insulating plate having recesses on the radial sides of said sectors, a clamp for the sectors, and in which said sectors may be rotated to any angle, and the wires in said recesses are located at the vertices of a triangle.

1,013,242. THROTTLE-VALVE. EUGENE VALLOFFI, Scranton, Pa. Filed Nov. 18, 1910. Serial No. 593,117.

1. The herein described valve, the same comprising a T-shaped casing whose stem is adapted for connection with a boiler a valve seat in the cross passage within the head of the T in line with its stem, a tubular valve movable in the stem of the T and across its head against said seat, and means for moving said valve.

2. The herein described valve, the same comprising a T-shaped casing, a valve seat in the head of the T in line with its stem, a tubular valve movable in the stem of the T and across its head against said seat to close communication between said head and stem, the casing having swells at the sides of its head forming by-pass passages uninterrupted by the valve in its closed position, and means for moving said valve.

1,013,243. CALCULATOR. EDWARD C. WALTER, New York, N. Y., assignor to Harry T. Ambrose, Orange, N. J. Filed June 8, 1908. Serial No. 437,355.



1. In a typewriting-machine, the combination with a calculating-attachment, of a letter-space carriage, printing keys carried thereby, toothed arms connected to said printing keys, a rock-shaft carrying a master-wheel coöperating with the aforesaid calculating-attachment, a plurality of pinions carried by the rock-shaft and arranged to be engaged by the aforesaid arms and a plurality of oscillating members supported by, and operable in, said calculating-attachment and with which said master-wheel coöperates successively.

2. In a typewriting-machine, the combination with a calculating-attachment, of a letter-space carriage, printing keys carried thereby, toothed arms connected to said

printing keys, a rock-shaft carrying a master-wheel cooperating with the aforesaid calculating-attachment, means for turning said rock-shaft from the aforementioned arms, means for returning the rock-shaft to normal position and a plurality of oscillating members supported by, and operable in, said calculating-attachment and with which said master-wheel coöperates successively.

3. In a typewriting-machine, the combination with a calculating-attachment, of a letter-space carriage, printing keys carried thereby, a rock-shaft, a master-wheel upon said rock-shaft and coöperating with the calculating-attachment, toothed arms connected to said printing keys and effecting movement of the rock-shaft, means for returning said rock-shaft to normal position, means for limiting such return movement and a plurality of oscillating members supported by, and operable in, said calculating-attachment and with which said master-wheel cooperates successively.

4. In a typewriting-machine, the combination with an adjustable calculating-attachment, of a letter-space carriage, printing keys carried thereby, a rock-shaft carrying a master-wheel adapted to coöperate with the calculating-attachment, toothed arms connected to the printing keys and operable upon the rock-shaft and a plurality of oscillating members supported by, and operable in, said calculating-attachment and with which said master-wheel coöperates successively.

5. In a typewriting-machine, the combination with a letter-space carriage, of a calculating-attachment adjustably mounted on the rear rail thereof, printing keys supported on the letter-space carriage, a rock-shaft carrying a master-wheel coöperating with the calculating-attachment, toothed arms connected to the printing keys and serving to operate said rock-shaft and a plurality of oscillating members supported by, and operable in, said calculating-attachment and with which said master-wheel cooperates successively.

[Claims 6 to 39 not printed in the Gazette.]

1,013,244. METHOD OF PRESERVING GREEN CORN ON THE COB. CLEM L. WATSON, McAlester, Okla. Filed Sept. 16, 1911. Serial No. 649,767.

1. The method of preparing roasting ears to permit inspection of the grains thereof without causing deterioration of the product, which consists in cutting off a length of the tassel end of the ear sufficient to expose the grains, and then inclosing the end in a cap or closure.

2. The method of preparing roasting ears to permit inspection of the grains thereof without causing deterioration of the product, which consists in cutting off a length of the tassel end of the ear sufficient to expose the grains, and then inclosing the end in a cap or closure which is held assembled with the ear by an adhesive that is repellent to insects.

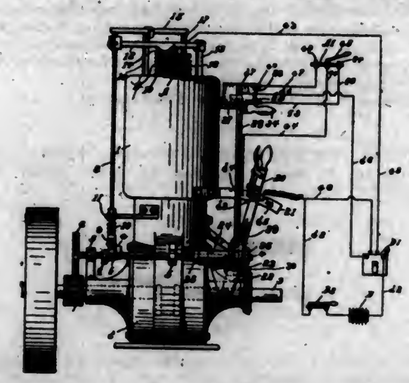
3. The method of preserving green corn on the ear, to present it in such manner as, without deterioration of the product, to permit inspection of the grains, and to standardise the length of the ears, which consists in cutting off a length of the tassel end sufficient to expose the grains, severing the stalk close to the butt end of the ear, and then sealing the tassel end.

4. The method of preserving green corn on the ear, to present it in such manner as, without deterioration of the product, to permit inspection of the grains, and to standardise the length of the ears, which consists in cutting off a length of the tassel end sufficient to expose the grains, severing the stalk close to the butt end of the ear, and then inclosing the ends in caps which are held assembled with the ear by an adhesive repellent to the insects.

5. As a new article of commerce, an ear of green corn having a length of its tassel end removed and the exposed part inclosed in a cap.

[Claims 6 and 7 not printed in the Gazette.]

1,013,245. CONTROLLING DEVICE FOR EXPLOSIVE-ENGINES. GEORGE H. WATT, Detroit, Mich., assignor to Watt Motor Company, Detroit, Mich., a Corporation of Michigan. Filed May 15, 1908. Serial No. 432,960.



1. The combination with a four-cycle explosive engine and an electric ignition system therefor, of a reversible valve gear, a starting switch in the system having a forward and a reverse position of closure, a mechanical timer in the system circuit having a three-step stationary contact, and forward and reverse stationary contacts secured in insulated relation, and movable members adapted to operatively connect said contacts in synchronism with the operation of the valves, the starting switch being adapted to ground either the forward or reverse insulated contact with the engine.

2. The combination with a four-cycle explosive engine and an electric ignition system therefor of a reversible valve gear, a mechanical timer in the circuit provided with an insulated stationary contact having a forward step, a reverse step, and an intermediate regular step, a forward insulated stationary contact, a movable contact member adapted to intermittently connect the forward step and insulated contact, a reverse insulated stationary contact, a reverse movable member adapted to intermittently connect the reverse step and second insulated contact, a regular movable contact member adapted to intermittently close the circuit through the regular step in synchronism with the operation of the valve gear, and a starting switch adapted to ground either the forward or reverse stationary insulated contact on the engine.

3. The combination with a four-cycle explosive engine and an electric ignition system therefor of a reversible valve gear, a mechanical timer provided with insulated stationary forward, reverse and regular contacts, in parallel, a movable contact member coacting with the regular contact to intermittently close the circuit in synchronism with the operation of the valve gear when the valve gear is in either position, a forward movable member adapted to intermittently connect the forward and regular contacts, a reverse movable contact member adapted to intermittently connect the reverse and regular contacts and a starting switch in the circuit adapted to ground the forward contact on the engine when in forward position, and the reverse contact with the engine when in reverse position.

4. The combination with a four-cycle explosive engine and an electric ignition system therefor of a reversible valve gear, a mechanical timer provided with insulated stationary forward, reverse and regular contacts, a movable contact member coacting with the regular contact to intermittently close the circuit in synchronism with the operation of the valve gear when the valve gear is in either position, a forward movable member adapted to intermittently connect the forward and regular contacts, a reverse contact member adapted to intermittently connect the reverse and regular contacts, and a starting switch in the circuit adapted to ground the forward contact on the engine when in forward position, and the reverse contact with the engine when in reverse position, the regular contact having elongated forward and reverse steps swept by the forward and reverse movable members adapted to close the circuit in any position of the engine crank shaft when the engine is stationary.

5. In a four-cycle explosive engine having an electric ignition system, a tappet rod on each motor cylinder adapted to operate the intake and exhaust valves thereof, a longitudinally reciprocable cam-shaft, a cam on the shaft for each tappet having a forward and reverse eccentric and an intermediate neutral collar, means for shifting the cam shaft adapted to bring either set of eccentrics or collar in operative relation to the tappets, a mechanical timer having a stationary contact with forward, reverse and regular steps electrically connected to the sparking terminal of each cylinder, a moving contact member adapted to intermittently engage the regular step of the stationary contact in synchronism with the operation of the valves when they are operated by the eccentrics, forward and reverse stationary insulated contacts, a forward moving contact member adapted to intermittently connect the forward step and forward insulated contact electrically, a reverse moving contact member adapted to intermittently connect the reverse step and reverse stationary insulated contact electrically, said forward and reverse steps presenting elongated contact faces whereby the timer may close the circuit when the motor is stationary at any point in the engine cycle, and a switch in the circuit adapted to cut either one or the other of the insulated contacts into the circuit.

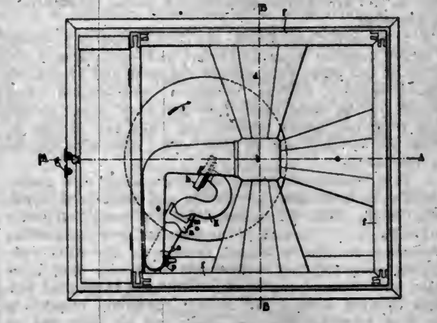
[Claim 6 not printed in the Gazette.]

1,013,246. OIL-WELL PUMP. EARL A. WHEELER, Bakersfield, Cal. Filed Oct. 19, 1911. Serial No. 655,534.

1. In an oil well pump, a cage comprising two side bars connected by upper and lower spiders pierced with holes whereof that in the lower spider is larger than the other, said side bars being reduced and made triangular beneath the lower spider, and a seat carried by the cage; in combination with a valve consisting of a conical head adapted to fit said seat, a stem rising therefrom having a threaded portion and above that a smooth portion passing through the hole in the upper spider, a cup nut mounted on said threads and larger than the hole through the lower spider, and an expansive spring surrounding the rod between said nut and the upper spider and passing through the hole in the lower spider.

2. In an oil well pump, the combination with a valve cage including a seat, two side bars rising therefrom, and two spiders connecting said side bars and pierced with holes whereof that in the lower spider is larger than that in the upper; of a valve stem sliding through the smaller hole and passing loosely through the larger and threaded near its lower end, its lower extremity having an enlargement, a valve head adapted externally to said seat and containing an internal chamber of a size to loosely receive said enlargement and threaded at its upper portion, a threaded plug engaging the threads in the head above the enlargement of the stem and loosely receiving the threaded portion of the stem, a nut adjustably engaging the threaded stem above said plug, and an expansive spring coiled around the stem between said nut and the upper spider and passing loosely through the hole in the lower spider.

1,013,247. SOUND REPRODUCING AND RECORDING INSTRUMENT. HENRY GEORGE WEBBER, London, England. Filed Aug. 21, 1909. Serial No. 513,963.



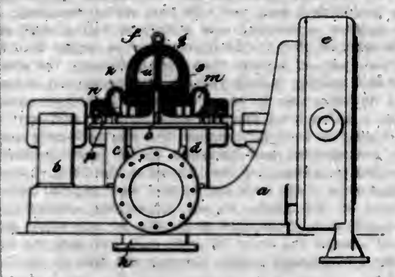
In a sound reproducing or recording apparatus, the combination of a casing; said casing having inner and outer walls spaced apart to provide sounding boxes; a needle carrier; a diaphragm; a sound pipe connected at one end with the needle carrier; a boxing disposed centrally of the casing and connected with the other end of said sound pipe; said boxing comprising a plurality of substantially rectangular walls; and a plurality of trumpets of equal length connected with said boxing; said trumpets extending through the inner walls of said sounding boxes and having their outer edges meeting flush with the inner surfaces of the outer walls of said sounding boxes, substantially as described.

1,013,248. CENTRIFUGAL PUMP. JAMES WILKINSON, Providence, R. I., assignor to General Electric Company, a Corporation of New York. Filed May 29, 1908, Serial No 435,714. Renewed Sept. 15, 1911. Serial No. 649,532.

1. In a centrifugal pump, the combination of a pump casing, a rotatable shaft mounted therein, a series of friction or impeller disks carried by said shaft, curved vanes secured between said impeller disks near the periphery thereof, said vanes overlapping each other but leaving a gradually narrowing space from the center outwardly, said impeller disks having interior rounded edges, and means for fastening the impeller structure together, substantially as described.

2. In a centrifugal pump, an impeller therefor composed of a rotatable shaft, two plates carried thereby, and a series of annular disks supported by said plates, said disks being provided with curved grooves near their peripheries and extending to said peripheries, a series of curved vanes secured to said disks near the peripheries

thereof, said vanes leaving between them passages, said passages bbing located immediately over the grooved portions of the disks, substantially as described.



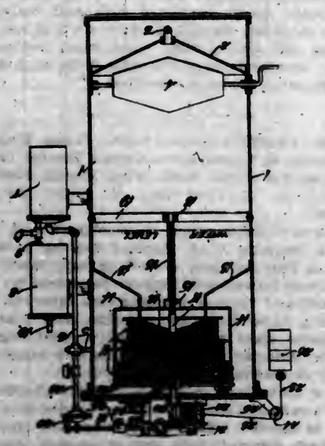
3. In a centrifugal pump, the combination of a casing, a shaft in said casing, a series of friction disks provided with grooves carried by said shaft, means for securing said disks together at definite distances from each other, and a series of curved vanes located partly over said grooves and attached to said friction plates, substantially as described.

4. In a centrifugal pump, the combination of a casing, a rotary impeller mounted therein and comprising a plurality of flat disks that receive the fluid and by friction impart velocity thereto, tangential over-lapping vanes carried by the disks near their periphery which receive fluid from the spaces between the disks and further increase its velocity, and an inlet and a discharge opening for the casing.

5. In a centrifugal pump, the combination of a casing, a rotary impeller mounted therein and comprising a plurality of flat disks closely associated and occupying planes perpendicular to the axis of the impeller, said disks acting by surface friction to impart velocity to the fluid, overlapping vanes situated between the disks near their outer edges, said vanes being arranged to form tangential passages between them which impart additional velocity to the fluid received from the disks, and an inlet and an outlet for the casing.

[Claim 6 not printed in the Gazette.]

1,013,249. ACETYLENE-GAS GENERATOR. PRIOR F. WILLIS, St. Louis, Mo. Filed Aug. 7, 1911. Serial No. 642,811.



1. In an acetylene-gas generator, a progressively collapsible carbid receptacle and means operating continuously at the top of the receptacle for feeding the carbid therefrom.

2. In an acetylene-gas generator, a collapsible carbid receptacle having a stationary bottom and a vertically movable wall or walls, and mechanical means operating continuously adjacent to the top of said wall or walls for feeding the carbid thereover.

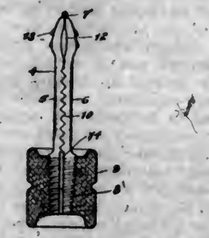
3. In an acetylene-gas generator, a collapsible carbid receptacle and means for feeding the carbid from the top thereof, said means comprising a rotatable sweeper adapted to follow said receptacle downward.

4. In an acetylene-gas generator, a collapsible carbid receptacle comprising a stationary bottom member and telescopic side members, and means for supporting and progressively telescoping said side members.

5. In an acetylene-gas generator, a collapsible carbid receptacle comprising a bottom, telescopic side walls, and a feeding device in coöperative relation to the top of said receptacle and adapted to follow it downward.

[Claims 6 to 12 not printed in the Gazette.]

1,013,250. INSULATOR-PIN. WALTER J. WILSON, Pittsburgh, Pa. Filed Oct. 19, 1910. Serial No. 587,811.



1. An insulator pin formed from sheet metal, said pin being made of two substantially similar half portions, each of said portions being provided at one end with means for engaging with an insulator and having their opposite ends formed to make a driving point, the arrangement being such that when the two halves are placed together, they will form a substantially tubular pin with a driving point at one end and insulator engaging means at the opposite end, the tubular pin portion being sufficiently yielding so that it will conform to, and engage closely with the walls of the hole in which it is driven.

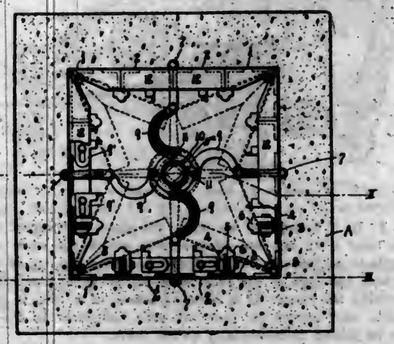
2. As a new article of manufacture, an insulator pin comprising a stem with a head for engagement with an insulator made in two connected halves from a single piece of ductile material, the connecting portion being bent so as to bring the two halves together to form the completed pin.

3. A device of the character set forth, comprising two substantially similar halves formed from a single piece of sheet metal and connected together, half threads pressed into each of said pieces, and means for alining said threads when the parts are placed together, the arrangement being such that when the two halves are folded together, a completed pin of substantially tubular form will be made, having threads at one end and a driving point at the opposite end.

4. The combination with an insulator, of a hollow pin formed of sheet metal, said pin having an enlargement adjacent to its driving point and also having projections adapted to hold the pin securely in driven position.

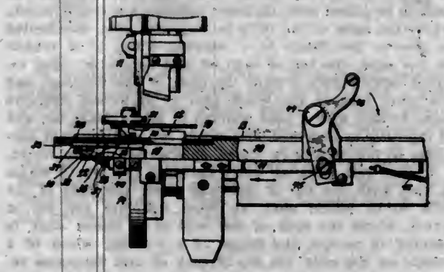
1,013,251. MOLD FOR MAKING HOLLOW CONCRETE COLUMNS. CHARLES H. WITTHOEFT, St. Louis, Mo., assignor to Witthoeft Collapsible Concrete Forms Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 17, 1910. Serial No. 592,790.

In a mold of the character described, mold plates hinged to each other at the corners of the mold, intermediate hinges connecting the mold plates at points between the corners of the mold, said intermediate hinges being provided with pintles, operating arms pivoted to the pintles of said intermediate hinges, and means for actuating said arms to simultaneously pull all of said pintles toward the



center of the mold, thereby causing all of the mold plates to swing on their hinges toward the center of the mold and simultaneously shifting the corner hinges toward the center of the mold.

1,013,252. THREAD-TRIMMING MECHANISM FOR SEWING-MACHINES. ALFRED R. WOOD, Troy, N. Y., assignor, by mesne assignments, to The Singer Manufacturing Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Feb. 6, 1911. Serial No. 606,692.



1. An under-thread trimming device comprising an oscillatory element provided with a cutting blade and a looper arranged angularly in advance of the cutting blade and in the same horizontal plane, a relatively stationary cutter blade arranged in the path of the looper and movable cutting blade, means for oscillating the said element, and means for deflecting the relatively stationary blade as the looper passes thereover.

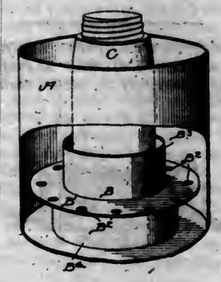
2. An under-thread trimming device comprising an oscillatory element provided with a cutting blade and a looper arranged angularly in advance of the cutting blade and in the same horizontal plane, a relatively stationary blade in the path of movement of the looper and movable blade, and means for oscillating the said element, the said relatively stationary blade having a projection which is adapted to be engaged by the looper in the rotative movement thereof, whereby the relatively stationary blade will be deflected by the looper as the said looper passes thereover.

3. An under-thread trimming device comprising an oscillatory element provided with a cutting blade and a looper arranged angularly in advance of the cutting blade and in the same horizontal plane, a relatively stationary blade formed of resilient material, the said blade being secured fast at one end and having a cutting edge for coaction with the movable cutting blade at its other and free end, and means for oscillating the said element, the said relatively stationary blade having a projection arranged for coaction with the looper in its movement, whereby as the looper passes over the stationary blade the portion thereof having the cutting edge will be deflected out of the path of the looper and will spring back by its own resilience after the looper has passed away therefrom, to a position ready for engagement with the movable cutting blade.

4. In a sewing machine, the combination of a throat plate having a recess in the under side thereof, a flat oscillating element pivotally mounted in the said recess, the underside whereof is substantially flush with the under side of the said throat plate, the said element having a cutting blade and a looper arranged angularly in advance of the cutting blade and in the same horizontal plane, a relatively stationary cutting blade also arranged in the said recess in the throat plate and in the path of movement of both the looper and the movable cutting blade, means for oscillating the said element, and means for deflecting the said stationary blade as the looper passes thereover.

5. In a sewing machine, the combination with a throat plate having a recess in the under side thereof, a flat oscillatory element pivotally mounted in such recess and having a cutting blade and a looper arranged angularly in advance of the cutting blade and in the same horizontal plane, a relatively stationary blade also arranged in the said recess and in the path of movement of both the looper and the movable cutting blade, and means for deflecting the said stationary blade as the looper passes thereover, of a reciprocating slide plate mounted immediately beneath the throat plate and operatively connected to the said oscillatory element, guides for the said slide plate, and operating means for reciprocating the said slide plate.

1,013,253. COOKING UTENSIL. MARGARET J. WOODWORTH, Elba, Nebr. Filed May 20, 1911. Serial No. 628,534.



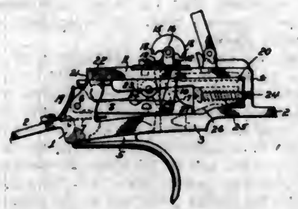
A device for holding jars or cans comprising a flat perforated plate, an outwardly open ring carried by one side of said plate, and an outwardly open ring carried by the opposite side of the plate, said last mentioned ring being of greater diameter than the first mentioned ring, either ring being adapted to receive a jar or can or to serve as a base for supporting said plate.

1,013,254. SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS. ALFRED H. WORREST, Lancaster, Pa. Filed July 23, 1910. Serial No. 573,458.

1. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding bolt for locking the firing means after the latter has been actuated by the trigger to discharge one barrel, the said locking bolt being disconnected from the trigger and free to move independently of the trigger, the said bolt being positively moved to its locking position when the trigger is pulled.

2. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a bolt for locking the firing means after the latter has been actuated by the trigger to discharge one barrel, the

said bolt being free of the trigger and having movement independently of the trigger, and means whereby the bolt will be positively moved to its locking position by the trigger.



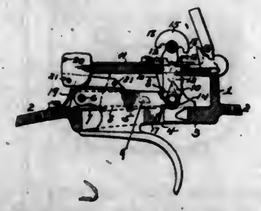
3. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a locking bolt having a sliding connection with the trigger, but free to move independently of said trigger, the said sliding connection being such that the bolt will be moved only by the trigger, into position to lock the firing means during recoil.

4. In a double barrel single trigger gun, the combination with a trigger, and a sliding locking bolt, one of said parts having an inclined surface and the other a roller moving in contact with said inclined surface whereby when the trigger is pulled, the bolt will be moved to a position to prevent the return of the trigger until the latter has been released.

5. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, the said trigger having a shoulder, of a sliding locking bolt having a shoulder engaged by the shoulder on the trigger, whereby the said bolt will be moved into position to block the return of the firing means to normal position until the trigger has been released.

[Claims 6 and 7 not printed in the Gazette.]

1,013,255. COUNTERWEIGHTED SINGLE TRIGGER FOR DOUBLE-BARREL GUNS. ALFRED H. WORRSET, Lancaster, Pa. Filed July 23, 1910. Serial No. 573,459.

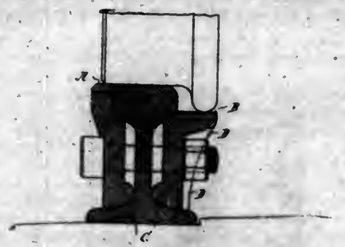


1. In a double barrel single trigger gun, the combination with a trigger pivoted adjacent its front end, and a vertically movable plunger having a loose connection with the rear end of said trigger, of a counterweight carried by said trigger adjacent to the pivot of the latter and so placed with relation to said pivot, that when the trigger is operated to elevate the plunger, the counterweight will be shifted to a plane in front of the pivot and operate to hold the plunger elevated during the recoil.

2. In a double barrel single trigger gun, the combination with a two part trigger, the two parts being located one above the other and in contact and each having an independent pivot near its front end, of a vertically movable plunger for actuating the firing means, the said plunger having a loose connection with the rear end of the upper part of said trigger.

3. In a double barrel single trigger gun, the combination with a two part trigger, each part having an independent pivot, the two parts being located one above the other and in contact, and the upper part counterweighted adjacent its pivot, of firing means connected to and actuated by the upper part of said trigger.

1,013,256. RAIL-JOINT. HANS WORUDA, Vienna, Austria-Hungary. Filed June 14, 1911. Serial No. 633,142.



1. In a rail joint, an outer fishplate the top of which is level with the top of the rails where the ends of the rails to be joined abut, an inner fishplate the top of which where the ends of the rails to be joined abut, is adapted to receive the flange of a running wheel of a vehicle on the rails, and means for securing said fishplates to the rails to be joined, substantially as set forth.

2. In a rail joint, an outer fishplate the top of which is level with the top of the rails where the ends of the rails to be joined abut, an inner fishplate the top of which, where the ends of the rails to be joined abut, is adapted to receive the flange of a running wheel of a vehicle on the rails, the top of each said fishplate being inclined downwardly toward the ends of the fishplate, and means for securing said fishplate to the rails to be joined, substantially as set forth.

3. In a rail joint, an outer fishplate the top of which is level with the top of the rails where the ends of the rails to be joined abut, an inner fishplate the top of which, where the ends of the rails to be joined abut, is adapted to receive the flange of a running wheel of a vehicle on the rails, the top of each of said fishplates being inclined downwardly toward the ends of the fishplate and the inner face of the lower part of each said fishplate being formed with a bead adapted to bear against the web of the rails to be joined, and means for securing said fishplates to the rails to be joined, substantially as set forth.

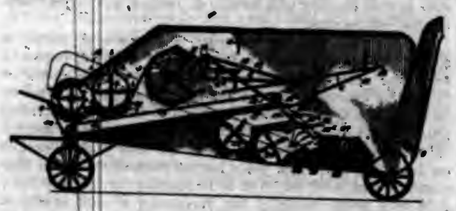
4. In a rail joint, an outer fishplate the top of which is level with the top of the rails where the ends of the rails to be joined abut, an inner fishplate the top of which, where the ends of the rails to be joined abut, is adapted to receive the flange of a running wheel of a vehicle on the rails, the top of each of said fishplates being inclined downwardly toward the ends of the fishplate, the inner face of each said fishplate being recessed at its upper part to receive the head of the rails to be joined and the inner face of the lower part of each said fishplate being formed with a bead adapted to bear against the web of the rails to be joined and means for securing said fishplates to the rails to be joined, substantially as set forth.

5. In a rail joint, an inner fishplate adapted to rest on the foot of the rails to be joined and the top of which, where the rails to be joined abut, is adapted to receive the flange of a running wheel of a vehicle on the rails, the top of the said fishplate being inclined downwardly toward the ends and the inner face of the said fishplate being recessed at its upper part to receive the rail head, an inwardly extending bead on the lower part of the inner face of said fishplate, and means for securing said fishplate to the rails to be joined.

[Claims 6 and 7 not printed in the Gazette.]

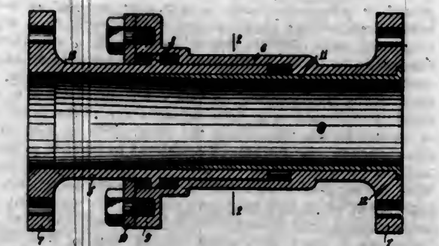
1,013,257. GRAIN-SEPARATOR. CHESTER L. WYLIE, Valley City, N. D. Filed May 6, 1909. Serial No. 494,295.

In a threshing machine and grain separator, the combination with threshing means a wind conduit along which the straw is blown and means for blowing the straw therealong, of rocking separating fingers disposed so that they will receive the straw from the wind conduit, a fan adapted to direct a blast through the said fingers, means for separating the grain from the chaff, rocking comb boards



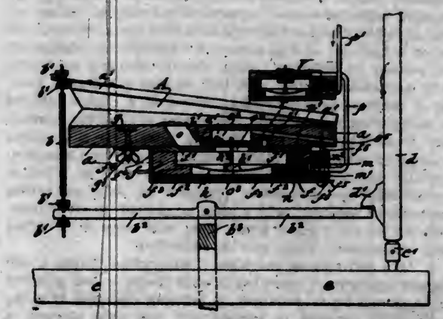
disposed so as to receive the chaff after passing from the fingers, and another fan adapted to deliver a blast between the comb boards.

1,013,258. EXPANSION PIPE-JOINT. JAMES W. WYTON, New York, N. Y. Filed July 6, 1910. Serial No. 570,545.



In an expansion pipe joint, a joint section having a double counterbore extending from its inner end, a second joint section slidably fitting within the inner counterbored portion of the first and having an external guide flange bearing within the outer counterbored portion of the first joint section, a guide ring secured to the inner end of the first joint section and bearing on the second joint section, and a tubular sealing member fitting within the two sections of the joint.

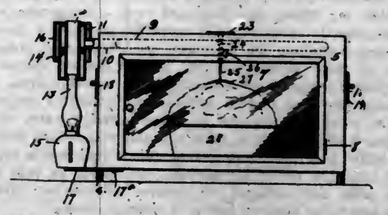
1,013,259. PNEUMATIC VALVE-ACTION. FRANK L. YEITS, New York, N. Y. Filed July 11, 1910. Serial No. 571,838.



1. The combination, with a suction-chest, of a diaphragm arranged in the same, a top-plate for the suction-chest provided with an opening above the diaphragm, a stem on the diaphragm, a valve connected to said stem and resting on the top-plate of the suction-chest, a pneumatic the stationary member of which is supported on the suction-chest and provided with a duct for establishing communication with the suction-chest and with a second duct for establishing communication with the atmosphere, a metallic strap extending around the suction-chest, and fastening screws for connecting said strap with the stationary member of the pneumatic.

2. The combination, with a suction-chest, of a diaphragm arranged in the same, a top-plate for the suction-chest provided with an opening above the diaphragm, a stem on the diaphragm, a valve connected to said stem and resting on the top-plate of the suction-chest, a pneumatic the stationary member of which is supported on the suction-chest and provided with a duct for establishing communication with the suction-chest and with a second duct for establishing communication with the atmosphere, said valve controlling said ducts, a metallic strap extending around the suction-chest, and fastening screws for connecting said strap with the stationary member of the pneumatic, the plane of parting between said stationary member and said top-plate being coincident with the lower face of the valve when the valve is in its lowest position.

1,013,260. DOUGH-RAISING DEVICE. MAIMIE I. YOUNG, Kearney, Nebr. Filed Feb. 28, 1911. Serial No. 611,362.



1. The combination with a casing having openings in the top thereof, of a hot water heating coil located therein adjacent the top thereof, said coil lying in a horizontal position, a dough container located within said casing, a member adapted to close the openings, and means connected to said member and projecting into the path of the rising dough, whereby said dough as it rises uncovers said openings to permit the escape of surplus heat.

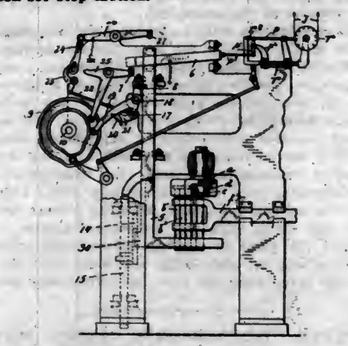
2. The combination with a casing having openings formed in the top thereof, of a disk normally covering said openings, a tubular member connected to said disk and projecting within said casing, a rod slidably disposed within said tubular member, means for binding said rod within said tubular member, a disk carried by the lower end of said rod, a heating element within said casing and a dough container located beneath said disk.

1,013,261. JACQUARD MECHANISM FOR EMBROIDERING-MACHINES. ROBERT ZAHN, Plauen, Germany. Filed Mar. 18, 1910. Serial No. 550,188.

1. In jacquard mechanisms for embroidering machines, the combination with jacquard lifting bars of means for lifting said jacquard bars, an automatic device for positively returning said bars to their initial position, a stop motion device for stopping the jacquard mechanism, coupling locks between the jacquard bars connected to said stop motion device to cause stopping of the jacquard mechanism when more than one jacquard bar should have been lifted, and controlling means for said returning device, dependent on the operation of said coupling locks and adapted to set in action the jacquard bar returning device when said coupling locks have been operated.

2. In jacquard mechanisms for embroidering machines, the combination with jacquard lifting bars of automatic means for lifting said jacquard bars, an automatic device for positively returning said bars to their initial position, a stop motion device for stopping the jacquard mechanism, a movable member controlling said stop motion device, locks connected to said movable member and arranged between the jacquard lifting bars to form movable connectors

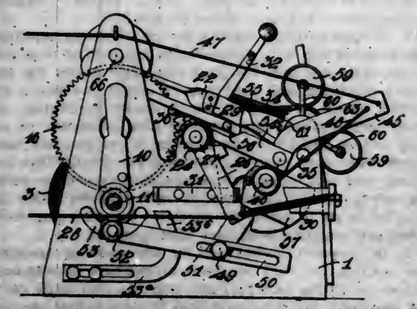
between the latter and said movable member, and controlling means for said returning device, dependent on said movable member so as to be operated when the latter is in position for stop motion.



3. In jacquard mechanisms for embroidering machines, the combination with jacquard lifting bars of an operating member for lifting said jacquard bars, driving means for intermittently actuating this operating member, a movable operating member for positively returning said jacquard bars to their initial position, a stop motion device for stopping the jacquard mechanism, a movable slide controlling said stop motion device, locks pivotally connected to the movable slide and arranged between parts of the jacquard lifting bars to form movable connectors between the latter and the movable slide, controlling means for the said jacquard returning member, controlled by said movable slide and capable of forming connection between said returning member and said driving means.

4. In jacquard mechanisms for embroidering machines, the combination with jacquard lifting bars of an operating member for lifting said jacquard bars, driving means for intermittently actuating this operating member, a movable operating member for positively returning said jacquard bars to their initial position, a stop motion device for stopping the jacquard mechanism, a movable slide controlling said stop motion device, anchor like locks pivotally connected to the movable slide and arranged between projections of the jacquard lifting bars to form movable connectors between the latter and the movable slide, controlling means for the said jacquard returning member, controlled by said movable slide and capable of forming connection between said returning member and said driving means.

1,013,262. BELL-RINGING MACHINE. GEORGE ZINT, Wapakoneta, Ohio. Filed July 18, 1910. Serial No. 572,573.



1. In a bell ringing machine, a supporting frame, a power shaft mounted therein, a clapper adapted to be actuated by said power shaft, bells adapted to be sounded by said clapper, a stop mechanism adapted to control the movement of said power shaft, means to control said stop mechanism whereby the clapper is caused to strike the bells a different number of times at each successive operation of the clapper and means to retract, said strike controlling mechanism.

2. In a bell ringing machine, a supporting frame, a spring operated power shaft arranged in said frame, a trip gear operatively mounted on said shaft, a series of trip studs arranged on said gear, a bell clapper adapted to be engaged and tripped by said studs, a power transmitting shaft geared to said power shaft, a stop gear fixedly mounted on said power transmitting shaft, a stop plate arranged on said stop gear, said plate having formed therein a stop notch, a stop lever adapted to be operatively engaged with said stop notch whereby the movement of said shafts is controlled, a strike controlling mechanism operated by said stop gear, means to start said power shaft, and means to retract said strike controlling mechanism whereby the striking operation may be repeated.

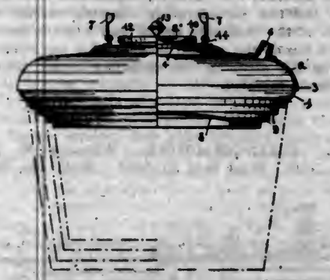
3. In a bell ringing machine, a supporting frame, a spring actuated shaft arranged therein, a clapper tripping mechanism operated by said power shaft, a clapper adapted to be operated by said tripping mechanism, a bell adapted to be struck by said clapper, a power transmitting shaft geared to said power shaft, a stop gear mounted on said power transmitting shaft, a stop plate arranged on said stop gear, said plate having a stop notch, a stop lever adapted to be engaged with said notch whereby said power shaft is stopped, a rock shaft mounted in said frame, a lever lifting gear mounted on said shaft and adapted to be engaged with said stop lever whereby the latter is lifted to disengage the same from the stop notch in said stop plate whereby the machine is permitted to start, a ratchet starting lever arranged on said rock shaft whereby said lever lifting gear is operated, a strike controlling mechanism actuated by said stop gear whereby the movement of said stopping lever is controlled to permit said stop gear to make one or more revolutions thereby causing said clapper tripping mechanism to trip the clapper a different number of times at each successive operation of said mechanism and means to retract said strike controlling mechanism whereby the operation of the machine may be repeated.

4. In a bell ringing machine, a supporting frame, a bell clapper operatively mounted in said frame, a bell adapted to be struck by said clapper, a suitably operated tripping mechanism adapted to successively trip said clapper, a stop mechanism geared to said tripping mechanism, said stop mechanism comprising a stop lever, a starting mechanism adapted to disengage said stop lever from said stop mechanism, whereby the tripping mechanism is started, a strike controlling gear operated by said stop mechanism, said gear having teeth between which are formed spaces of different depth, a strike controlling lever adapted to be engaged with the spaces between said teeth, said lever being operatively connected with said stop lever whereby the latter is held out of engagement with said stop mechanism for periods of different length thereby causing said tripping mechanism to trip said bell clapper a different number of times at each successive operation, a clutch adapted to operatively connect and disconnect said strike controlling lever with said stop lever, a retracting mechanism adapted to return said strike controlling gear to its normal position whereby the striking operation may be lifted, a clutch shifting mechanism operated by said retracting mechanism whereby said clutch is shifted to disconnect said strike controlling lever from said stop lever when said strike controlling gear is retracted.

5. In a bell ringing machine, a supporting frame, a bell clapper operatively mounted in said frame, a bell adapted to be struck by said clapper, a suitably operated tripping mechanism adapted to successively trip said clapper, a stop mechanism geared to said tripping mechanism, said stop mechanism comprising a stop lever, a starting mechanism adapted to disengage said stop lever from said stop mechanism whereby the tripping mechanism is started, a strike controlling gear operated by said stop mechanism, a strike controlling lever adapted to be engaged with said gear, a clutch adapted to operatively connect and disconnect said strike controlling lever with said stop lever, a retracting bar pivotally connected with said strike controlling gear, a retracting lever having a pin and slot connection with said retracting bar whereby the latter is actuated to retract or turn said strike controlling gear back to its normal position, a clutch shifting cam carried by said retracting lever and adapted to operate said clutch whereby said strike controlling lever is disengaged from said stop lever, and means operated by said retracting lever to lift said strike controlling lever out of engagement with said strike controlling gear whereby the latter may be retracted.

[Claims 6 and 7 not printed in the Gazette.]

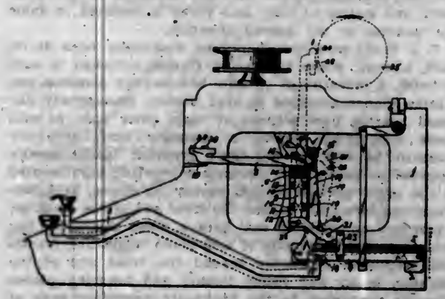
1,013,263. CULINARY-UTENSIL COVER. ERNST ZYSSET, Wädenswil, Switzerland. Filed Apr. 12, 1911. Serial No. 620,693.



1. A hollow cover for utensils, comprising a sheet metal upper member and a sheet metal lower member, having a soldered joint between them, said upper member provided with a handle, an opening between the ends of the handle, a removable dished cover for said opening having a perforation within the dished portion, and a spout on said upper member.

2. A hollow cover for utensils, comprising a circular sheet metal upper member, and a circular sheet metal lower member, having a water-tight joint between them, said upper member provided with a central opening, a removable dished cover for said opening having a perforation within the dished portion, a handle extending over the opening, a spout in the top of the upper member, said lower member having an arched bottom and conical stepped sides.

1,013,264. TYPE-WRITER CASE-SHIFT MECHANISM. JESSE ALEXANDER, Brooklyn, N. Y., assignor of one-half to D. N. Thayer, New York, N. Y. Filed Nov. 17, 1908. Serial No. 462,991.

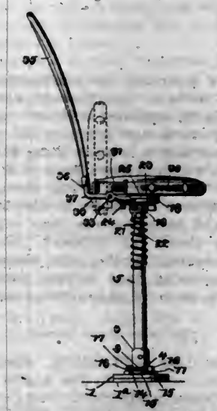


1. A printing and type shift mechanism for typewriting machines, comprising a movable type bar support, type bars carried thereby, actuating levers for said type bars extending parallel with said support, sliding connections between said type bars and actuating levers, a shift key and connections between said shift key and said type bar support for moving said support to bring said type bars to upper case position.

2. A type shift mechanism for typewriting machines comprising a frame having vertical runways therein, a type-bar support having guiding arms located in said runways, said arms having antifriction rolls to engage said runways, a shift key, and operating connections between said key and support arranged to permit rectilineal movement of the latter to and from upper case position.

3. A type shift mechanism for typewriting machines comprising a frame having straight run-ways therein, a type bar support having depending guiding arms located adjacent said run-ways and having anti-friction rolls to engage said run-ways, a shift key, and lost motion connections between said key and support to permit rectilinear movement of the latter to and from upper case position.

1,013,265. AUXILIARY VEHICLE-SEAT. CLARENCE S. APPLAS, Moline, Ill. Filed Oct. 26, 1910. Serial No. 589,170.

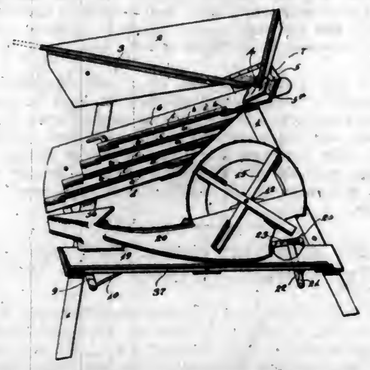


The combination of a standard, a bracket mounted on the upper end of the standard for revolution thereon, a seat having rearwardly extending hinge members on its underside pivotally connected to said bracket, the pivotal axis of the seat being at right angles to that of the bracket so that the seat may be upturned from or turned down upon the bracket, and a back having a portion near its lower end bent at substantially right angles thereto, the bent portion of the back extending under the seat and being provided with arms which are pivotally connected to the hinge members of the seat so that the back may be turned upwardly or downwardly, the said arms projecting forwardly beyond the pivotal axis of the back to bear against the under side of the bracket and support the back in upturned position.

1,013,266. GRAIN-SEPARATOR. CHARLES F. ASPLUND, Minneapolis, Minn., assignor of one-half to Robert J. Owens, Minneapolis, Minn. Filed June 26, 1909. Serial No. 504,528.

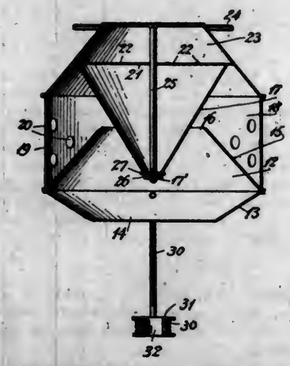
1. In a grain separator, the combination with a shaking shoe, of a series of superimposed sieves therein, and a series of rigidly secured dividers for each of said sieves, separated from each other at their edges and spaced entirely above the underlying sieves, in substantially a common plane parallel with the said underlying sieves and the said sieves being continuous under the overlying dividers, and with a continuous passage between the upper surface of each of said sieves and the overlying dividers, and the said dividers and sieves coöperating to distribute

the wheat, small grain and seeds between the adjacent edges of said dividers to the underlying sieves, at different points lengthwise thereof, while supporting the oats and delivering the same across the intervening gaps between successive dividers and skidding the same off as overtail, substantially as described.



2. In a grain separator, the combination with a shaking shoe, of a series of superimposed sieves therein and a series of slightly separated dividers rigidly secured in respect to said sieves and spanning the respective sieve faces, in substantially a common plane substantially parallel therewith, which dividers have their delivery edges slightly higher than their receiving edges, and coöperate with each other and the sieves to distribute the wheat, smaller grain and seeds, between their adjacent edges, to the underlying sieves, at different points lengthwise thereof, while supporting the oats, delivering the same across the intervening gaps between successive dividers and skidding the same off as overtail, substantially as described.

1,013,267. HEATING APPLIANCE. ROBERT M. AUSTIN, Hartford, Conn., assignor to The Austin Manufacturing and Supply Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 4, 1909. Serial No. 531,304.



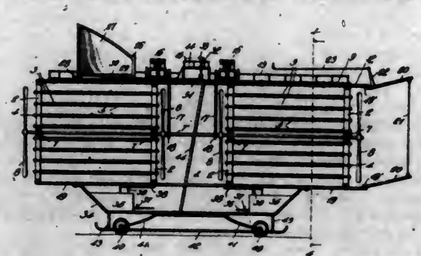
1. A heating appliance comprising a concentrating chamber open at its top and bottom, a heating drum provided with a top plate projecting into the top of said concentrating chamber, and so as to leave an annular space between the walls of said concentrating chamber and the heating drum to permit the escape of hot air, and a radiating drum surrounding said concentrating chamber and the heating drum, and having perforations to permit the escape of hot air therefrom.

2. The combination with a radiating drum, of a heating drum, and means for securing the same together, a concentrating chamber partially surrounding said heating drum and also carried by said radiating drum, and means carried by said concentrating chamber for supporting the latter on a gas bracket, said means comprising a series of rods extending downwardly from said concentrating chamber, and a thimble adapted to fit on the gas bracket and in engagement with the lower ends of said rod.

3. The combination with a radiating drum, having a conical top, a plate disposed within said conical top, a heating drum in engagement with and closed by said plate, means for securing the radiating drum and heating drum together, and the concentrating chamber carried on the lower end of the radiating drum.

4. The combination with a radiating drum, having a conical top, a plate disposed within said conical top, a heating drum in engagement with and closed by said plate, means for securing the radiating drum and heating drum together, and the concentrating chamber carried on the lower end of the radiating drum, and a plate carried by and at the top of the conical portion of a radiating drum, and means for securing the radiating drum, plate and heating drum together.

1,013,268. FLYING-MACHINE. WILLIAM H. BEERY, Celina, Ohio. Filed May 25, 1911. Serial No. 629,396.



1. An air ship comprising a cylinder open at its front and rear ends, plane supporting frames arranged in the front and rear ends of the cylinder, series of parallel horizontally disposed sustaining planes arranged in said frames, a propeller shaft revolubly mounted in and extending through the center of said cylinder, a series of propelling blades fixedly mounted on said shaft, means whereby the latter is driven to operate said propellers in the desired direction, raising and lowering planes hingedly supported at the front end of the machine, means to adjust said planes whereby the machine is raised and lowered, a platform arranged on the upper side of the cylinder, a steering plane pivotally mounted on said platform, and means whereby said plane is operated to guide the machine in the desired direction.

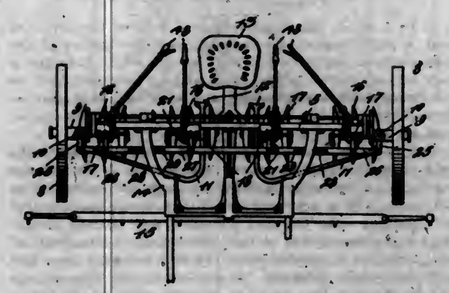
2. A flying machine comprising a cylinder open at its ends, annular plane supporting frames arranged in said cylinder, a plurality of parallel horizontally disposed sustaining planes arranged in said frames, transversely disposed bearing bars secured at their outer ends to said plane supporting frames, a propeller shaft revolubly mounted in said bearing bars, propeller blades fixedly mounted on said shaft, platform supporting bars secured to the upper portion of said supporting frame, said bars projecting forwardly beyond the front end of the machine, a platform arranged on said bars, a lower supporting bar secured to the lower side of said plane supporting frames and projecting forwardly beyond the front end of the machine, upper and lower raising and lowering planes hingedly connected to the forwardly extending ends of said upper and lower bars, a rod connecting said planes whereby the latter are moved in unison, an operating arm arranged on the upper raising and lowering plane, a plane operating lever, an operating rod to connect said lever with said arm, whereby said planes are adjusted, a steering plane pivotally mounted on the rear end of said platform, a plane operating shaft, a cable winding drum fixed thereon, plane adjusting cables connected at one end to said plane and adapted to be wound on and off said drum in opposite directions whereby said plane is adjusted to guide the machine, and means whereby the propellers are driven.

3. A flying machine comprising a cylinder, horizontally disposed supporting planes arranged in the opposite ends of said cylinder, a revolubly mounted propeller operating shaft arranged through the cylinder, propellers fixed on said shaft, a platform arranged on the upper side of said cylinder, motors arranged on said platform, means to connect said motors with said propeller shaft whereby the latter is driven to propel the machine in the desired direction, a car arranged on the lower side of the cylinder, fuel supply tanks arranged in said car, spring wheel supporting members connected to the bottom of the car, supporting wheels revolubly mounted in said members, skids secured to the bottom of the car, means whereby the machine is raised and lowered, and means whereby the same is guided.

4. An air ship comprising a cylinder, annular plane supporting frames arranged in said cylinder, a plurality of parallel horizontally disposed sustaining planes arranged in said frames, said planes comprising open rectangular frames having their side members engaged with said annular supporting frames, a fabric covering arranged over said plane frames, bearing bars arranged across and connected with the opposite sides of said annular supporting frames, a propeller shaft revolubly mounted in said bearing bars, a plurality of propellers fixedly mounted on said shaft, means whereby said shaft and propellers are driven, means to raise and lower the machine, and means whereby the same is guided.

5. An air ship comprising a plurality of cylinders open at their front and rear ends, plane supporting frames arranged in the front and rear ends of the cylinders, series of parallel horizontally disposed sustaining planes arranged in said frames, propeller shafts revolubly mounted in and extending through the center of each of said cylinders, a series of propelling blades fixedly mounted on said shafts, means whereby the latter are driven to operate said propellers in the desired direction, raising and lowering planes hingedly connected to the front ends of the cylinders, means to connect the planes of said cylinders together whereby the same are operated in unison, means to operate said planes, platforms arranged on the upper sides of the cylinders, a bridge to connect said platforms between the cylinders, steering planes pivotally mounted on said platforms, means to operatively connect said planes together whereby the same are adjusted in unison and means to operate said planes.

1,013,269. CULTIVATOR. JOHN E. BINNS, Jr., Nashville, Tenn. Filed Apr. 10, 1911. Serial No. 620,065.



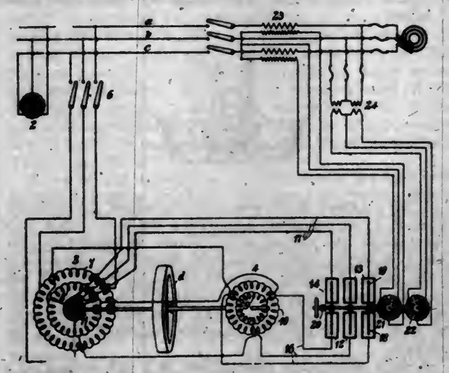
1. In a disk cultivator, a wheel supported frame, spindles of the wheel axles being vertically disposed, a plurality of disk gangs mounted upon said frame, each of said gangs comprising a disk carrying rod rotatably mounted upon the frame, a laterally extending arm on said rod, an arm secured to the upper end of each of the axle spindles, and a bar consisting of a plurality of relatively movable sections pivotally connecting the arms on the axle spindles and the disk carrying rods to angularly dispose the disk gangs in the turning movement of the wheels.

2. In a disk cultivator, a wheel supported frame, a plurality of disk gangs each consisting of a disk carrying rod, a bearing plate for said rod adjustable on the frame, said rod having rotative and vertical movement in the bearing plate, a sectional bar connecting the wheel axles, and means connecting said bar and the disk carrying rods, said rods being vertically movable with respect thereto, said connecting means being adapted to rotate the disk carrying rods to simultaneously dispose the disk gangs at an angle when the wheels are turned.

3. In a disk cultivator, a wheel supported frame, a plurality of disk gangs each consisting of a disk carrying rod, a bearing plate for said rod adjustable on the frame, said rod being rotatably mounted in the bearing plate, an arm mounted on said rod, said rod being movable through the same and having a longitudinal key slot, a key formed on the arm extending into said slot, and means connecting the arm on each of the disk carrying rods with the wheel axles to simultaneously dispose the disk gangs at an angle when the wheels are turned.

4. In a disk cultivator, a wheel supported frame, a plurality of disk gangs each consisting of a vertically disposed rod mounted upon said frame, a disk carrying yoke on the lower end of the rod, a sectional bar connecting the wheel axles and said disk carrying rods to simultaneously position the disk gangs in parallel relation with the line of movement of the machine when said machine is turned, and reversible scraper blades mounted in said yoke and yieldingly held in engagement with the disks.

1,013,270. SYSTEM OF ELECTRICAL DISTRIBUTION. RUDOLF BRAUN, Manchester, England, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 21, 1906, Serial No. 318,006. Renewed June 15, 1911. Serial No. 633,349.



1. An apparatus for equalising the load on an alternating current supply circuit comprising two asynchronous machines the rotors of which are mechanically coupled together and provided with a fly-wheel, the secondary winding of the first machine being electrically connected to the primary winding of the second machine, automatic means being provided whereby the one or the other of the secondary windings is short-circuited or closed on itself, through a resistance, to vary the speed of the apparatus according to the amount or character of the load on the supply circuit.

2. In an equaliser of the kind described, the combination with two asynchronous machines, of a resistance con-

nected to the secondary winding of either of said machines and comprising a plurality of vanes, a rock-shaft on which said vanes are mounted, and two sets of insulated tanks containing water or other suitable liquid to receive said vanes, one of the said sets of tanks being connected to the secondary winding of the first asynchronous machine and the other set to the secondary winding of the second asynchronous machine, substantially as described.

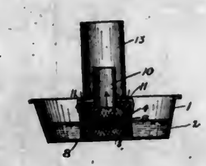
3. The combination with a supply circuit and two asynchronous machines, of a regulating rheostat of the kind described, and means for automatically varying the resistance connected to either of the secondary windings of the two asynchronous machines, said means comprising two induction motors with opposing torques the rotors of which are connected to the shaft of the rheostat, one of the primary windings having a series connection with the supply circuit and the other primary winding having a shunt connection therewith.

4. The combination with two asynchronous dynamo-electric machines, one of which has its primary member electrically connected to a work circuit between the generator and the load and its secondary member provided with a fly-wheel and mechanically and electrically connected to the primary member of the other, of a set of resistance members and means for connecting them in circuit with the secondary winding of either machine.

5. The combination with a polyphase alternating current circuit and two asynchronous dynamo-electric machines, the primary member of one of which is adapted for connection to said circuit between the generator and the load and the secondary of which is mechanically and electrically connected to the primary member of the other machine and is provided with a fly-wheel, of a set of variable resistance members, an adjustable device for connecting more or less of the resistance in circuit with the secondary winding of either asynchronous machine and two opposing motors for said adjustable device one of which is connected in series and the other in shunt relation to the main circuit.

[Claims 6 to 8 not printed in the Gazette.]

1,013,271. HEATER. CHARLES S. BROWN and JOHN C. HOXIE, Utica, N. Y. Filed Aug. 9, 1909. Serial No. 511,911.



1. In a heater of the character described, the combination of a wick-member comprising an outer wall with openings for the passage of liquid fuel, an inner wall composed of netting and a cross-plate comprising two parallel walls made of netting disposed above the bottom of said wick-member, a wick for conducting the liquid fuel to the zone of vaporization, with a draft tube held concentrically in said wick-member by brackets, substantially as described.

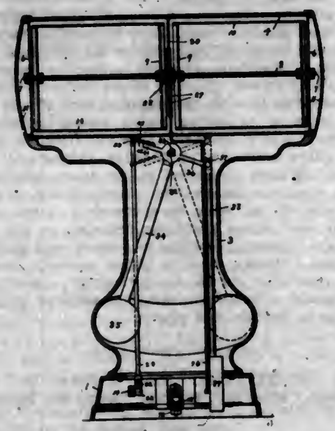
2. In a heater, the combination of a pan containing a wick-member comprising an outer wall with openings for the passage of fuel, an inner wall pervious to fuel, a cross-plate disposed transverse to said inner wall and in elevation from its bottom, a wick for conducting the liquid fuel to the zone of vaporization, with a draft member comprising a tube held in a concentric manner within said wick-member by brackets, and a tube disposed outside of and concentric with said draft tube, substantially as described.

3. In a heater of the character described, the combination of a pan containing a wick-member comprising an outer wall with openings for the passage of fuel, an inner wall and a cross-plate adapted for the passage of fuel, and supported in elevated position with reference to a draft-member, a wick for conducting the liquid fuel to the zone of vaporization, and a draft tube disposed in a depending manner concentrically in said wick-member and surrounded by an outer tube adapted to form a flue whereby to radiate the heat, substantially as described.

4. In a heater, the combination of a pan containing a wick-member comprising an outer wall with openings, an inner pervious wall, a cross-plate supported in central elevated position with reference to said inner wall, a wick for conducting the liquid fuel to the zone of vaporization, a draft tube suspended by brackets concentrically within said wick-member, a tube of greater diameter than said draft tube disposed concentrically of said draft-tube, and having openings adjacent its lower end for the passage of air.

5. In a heater of the character described, the combination of a pan for holding liquid fuel, a wick member disposed within said pan and comprising an outer wall impervious to said liquid fuel, said wall having openings adjacent its bottom for the passage of said fuel, an inner wall pervious to said fuel, a wall arranged transversely to said inner wall, a wick for conducting the liquid fuel to the zone of vaporization, a draft tube suspended in a concentric manner within said wick-member by brackets, a larger tube adapted to surround said inner tube whereby to radiate the heat, and said larger tube having openings for the passage of air, substantially as described.

1,013,272. SCALE. FREMONT H. BUCKINGHAM, Detroit, Mich., assignor to Standard Computing Scale Company, Limited, Detroit, Mich., a Limited Partnership. Filed May 8, 1911. Serial No. 625,757.



1. In a scale, the combination of a lever to carry the load, a pendulum, connections between the lever and the pendulum, an indicating drum and the shaft therefor, a rack bar connected to the lever, and an eccentric gear on the drum shaft and engaging the rack bar, said gear so formed that the two parts on opposite sides of the major axis are equal.

2. In a scale, the combination of a lever to carry the load, a pendulum, connections between the lever and the pendulum, a revoluble indicator, a rack bar connected to the lever, and a gear secured to the revoluble indicator and meshing with the rack bar, said gear formed irregularly and proportioned so that the radius of that point of the pitch line in contact with the rack bar vary inversely with the angle between the pendulum and the vertical and so that the two parts on opposite sides of the major axis are equal.

3. In a scale, the combination of a lever and a pendulum connected thereto, a weight indicator, a rack bar connected to the lever, and an irregular gear connected to the weight indicator and in mesh with the rack bar, said gear so proportioned that the radius of the pitch line of the teeth so in mesh vary inversely with the angle of the pendulum with the vertical and are of equal length at equal angles on both sides of the major axis.

4. In a scale, the combination of a lever, a pendulum normally held in elevated position, connections between the lever and pendulum whereby loads on the scale will cause the pendulum to swing down and then up through a vertical arc, a weight indicator, a rack bar connected to the lever, and an irregular gear connected to said indicator and meshing with the rack bar, the radius of the pitch line of the gear in contact with the rack bar decreasing as the pendulum swings either way from the vertical.

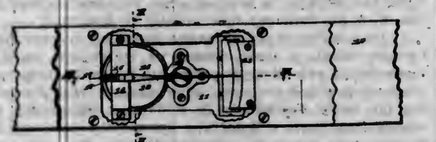
5. In a scale, the combination of a lever, a pedestal, a pendulum pivoted thereon, arms connected to said pendulum at right angles thereto, a link connecting the lever to one arm of said pendulum, a counter-weight suspended from the other arm to hold the pendulum normally elevated, a weight indicator, a rack-bar connected to said lever, an irregular gear connected to said indicator, the radius of the pitch line of the gear in contact with the rack bar varying inversely with the angle between the counter-weight carrying-arm and the horizontal.

[Claims 6 and 7 not printed in the Gazette.]

1,013,273. WHEEL. WILLIAM W. BYAM, Chicago, Ill. Filed May 24, 1910. Serial No. 563,132.

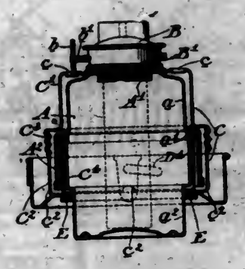
In a device of the class described, a rim composed of two circumferentially continuous annular sections having inwardly extending projections thereon, a transversely split channel lock ring having outwardly projecting side flanges, said rim sections resting upon the outer edges of said side flanges and being separated from the central part of said lock ring by a clearance space, said projections being received between said side flanges, and means for expanding said lock ring.

1,013,274. COMBINATION LEVEL AND PLUMB. JOHN F. CARLSON, Des Moines, Iowa. Filed Feb. 17, 1911. Serial No. 609,162.



A combination level and plumb comprising a block of material provided with a pocket; a weight suspended, for oscillation, in said pocket; a post centrally located on the base of said weight; a cross-bar extending across said pocket near the base of the weight; a needle mounted, for oscillation, on the central portion of said cross-bar, its lower end being slotted to receive the post on the weight, its upper extremity projecting upwardly above the weight; transparent material covering apertures which are provided in the block, and designed to reveal the upper portion of the needle; and a scale bar to indicate the degree of oscillation of the needle all arranged and combined substantially as shown and described.

1,013,275. LAMP OR LANTERN. JOHN T. CASEY, Philadelphia, Pa., assignor to Keystone Lantern Company, a Corporation of New Jersey. Filed Jan. 7, 1911. Serial No. 601,488.



1. An oil receptacle adapted to receive a burner, in combination with a casing of larger diameter inclosing the oil receptacle, leaving an intervening channel or passageway for the draining of oil, said casing being provided with openings on its top surface for the admission of oil and at its lower end with an opening for its escape and a receptacle for trapping and retaining the oil which passes downward through the channel or passageway.

2. An oil pot, comprising an oil reservoir provided with a threaded opening to receive a burner, together with a downwardly projecting flange, a casing surrounding the oil reservoir and furnishing a support therefor, the casing being provided on its uppermost surface with a circular series of openings for the admission of oil and at its lowermost portion with an opening for its escape, a flange projecting upwardly from the casing and combining with the downwardly projecting flange of the oil receptacle to form a trap, and an outer receptacle for retaining oil which passes between the casing and the oil reservoir.

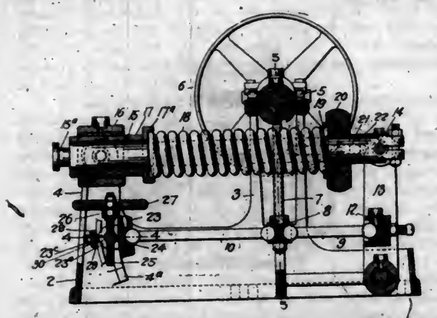
3. An oil pot, comprising an oil reservoir provided with a burner together with a downwardly projecting flange, a casing surrounding the oil receptacle and inclosing its neck thereby forming a journal in which the oil receptacle may be rotated, the casing being provided with a circular series of openings for the admission of oil, as also to receive the teeth of a pinion mounted upon the stem of the burner, the lowermost portion of the casing being provided with an annular receptacle for retaining oil which passes between the casing and the oil reservoir and thence through an opening in the lower extremity of the casing, and a flange extending upwardly from the casing between the oil reservoir and its flange to trap the oil and turn it away from the oil reservoir.

4. An oil pot, comprising an oil reservoir provided with a burner together with a downwardly projecting flange, a casing composed of upper and lower members threaded together, and thereby inclosing the oil reservoir above and below, but leaving an intervening space for the draining of oil, the upper member of the casing being provided on its uppermost surface with openings for the admission of oil and the lower member being provided with an opening for its escape, a flange projecting upwardly from the lower member of the casing between the oil reservoir and its flange to turn the oil away from the surface of the oil reservoir and an outer receptacle for retaining oil which passes between the casing and the oil reservoir.

5. An oil pot comprising a rotatable oil reservoir provided with a burner together with a downwardly extending flange, a casing forming a support for the oil reservoir and provided with a circular series of teeth to engage the teeth of a pinion on a wick raising device of the burner, a flange secured to the casing and arranged between the oil reservoir and its flange and a support connected to the casing and arranged to form a receptacle to contain oil which may pass downward between the oil reservoir and its casing.

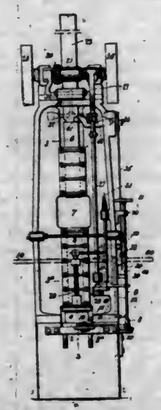
[Claim 6 not printed in the Gazette.]

1,013,276. MECHANICAL MOVEMENT. MICHAEL CHRISTMANN, Leadville, Colo. Filed July 6, 1910. Serial No. 570,576.



The combination of a supporting frame; an eccentric shaft mounted therein; a pitman connected with the eccentric portion of said shaft; a rocker lever fulcrumed at its lower end and provided intermediate its ends with a seat; a bearing on said frame; a sleeve slidable in said bearing; a thrust-bar slidable in said sleeve and having one end thereof connected with the upper end of said lever, and its other end arranged for connection with a reciprocatory element engaged by an end of said sleeve; an abutment adjustable on said frame in the direction of the axis of the thrust-bar; a spring coiled around the latter between said abutment and said sleeve; a toggle abutment on the frame; and a pair of toggle members having their inner ends engaging said pitman at opposite sides, the outer end of one of said members engaging said toggle abutment, and the outer end of the other engaging said seat.

1,013,277. APPARATUS FOR PACKING LOOSE MATERIAL. WILLIAM A. CORNBROOKS, Moline, Ill., assignor to Williams, White & Company, a Corporation of Illinois. Filed Mar. 9, 1911. Serial No. 613,473.



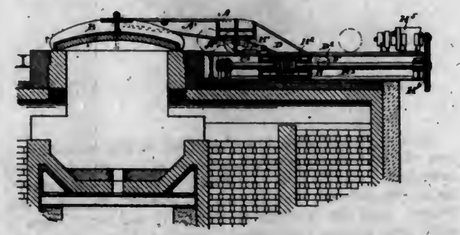
1. In a machine of the type described, the combination of the framework, a reciprocating plunger mounted therein, a stationary anvil situated beneath the plunger, a fixed feeding trunk for guiding the plunger in its movements, a packing box supported by the anvil and provided with a plurality of compartments, and means for moving the box relatively to the anvil and trunk for bringing any selected one of its compartments into operative relation to the trunk.

2. In a machine of the type described, the combination of an abutment, a feeding trunk arranged thereover, a reciprocating plunger movable in the trunk, a packing box provided with two compartments, said box being reciprocable back and forth along the abutment to bring one or the other of the compartments into registry with the trunk, the abutment being so related to the box that when one compartment is in registry with the trunk, the other compartment will be disposed beyond the effective portion of the abutment and may have its contents discharged therefrom, and when the latter compartment is in registry with the trunk, the other compartment will be disposed to the oposite side of the abutment beyond its effective portion and may have its contents discharged therefrom.

3. In a machine of the type described, the combination of an abutment, a feeding trunk, a packing box between the feeding trunk and abutment provided with a compartment adapted to register with the trunk, a packing plunger movable in the trunk, means for determining the registering position of the compartment with the trunk, means for controlling the action of the plunger, and a stop device controlled by the registry-determining means and coöperating with the plunger-controlling means.

4. In a machine of the type described, the combination of an anvil or abutment, a packing box mounted thereon and provided with an open-ended compartment to receive the material to be packed, a packing plunger movable in the trunk, and releasable means for holding the packing box firmly down on the anvil.

1,013,278. COVER FOR PITS. JOHN C. CROMWELL, Cleveland, Ohio, assignor to The Garrett-Cromwell Engineering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 10, 1908. Serial No. 426,212.



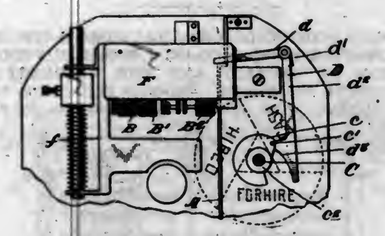
1. In a device of the character described, a cover for a furnace mouth, a truck, supporting wheels for said truck, guide rollers on said truck, tracks for the supporting wheels and guide rollers arranged to cause the truck to move in a substantially straight line, arms projecting forwardly from the truck upon which the cover is mounted, means for reciprocating the truck, said tracks having detents arranged to permit the truck wheels to drop to cause the truck to be lowered when the cover is over the mouth of the furnace; substantially as described.

2. In a device of the character described, a cover for a furnace mouth, a truck, wheels on which said truck is supported, a pair of arms projecting forwardly from said truck upon which the cover is mounted, a track for guiding the truck, depressions in said track into which the wheels may pass, and thereby deposit the cover on the furance top, means for counterbalancing the cover, and means for reciprocating the truck.

3. In a device of the character described, a cover for a furnace mouth, a truck, wheels on which said truck is supported, a pair of arms projecting forwardly from said truck upon which the cover is mounted, a track for guiding the truck, depressions in said tracks into which the wheels may pass and thereby deposit the cover on the furnace top, a weight carried by said truck in position to counterbalance the furnace cover and arms, and means for reciprocating the truck.

4. In a device of the character described, a cover for a furnace mouth, a truck having forwardly projecting arms upon which the cover is mounted, a shaft, a screw slidably mounted on the shaft and arranged to be rotated thereby, a connection between said screw and the truck, and a stationary rack arranged to be engaged by the teeth to move the screw and truck when the shaft is rotated; substantially as described.

1,013,279. FARE-INDICATOR. ALONZO G. DECKER, Orangeville, Md., assignor to International Taxameter Company of America, New York, N. Y., a Corporation of New York. Filed Jan. 14, 1911. Serial No. 602,723.



1. In a fare indicator, fare indicating wheels, an operating ratchet associated therewith, an actuator for said wheels comprising a longitudinally sliding rod, a pawl carried thereby and adapted to engage said ratchet, and to be disengaged therefrom by an abnormal depression of said sliding rod, means for restoring said wheels, means for holding said wheels against accidental movement, a revolving shaft, and means directly operated thereby for releasing said holding means to permit the operation of the restoring means comprising a cam carried by said shaft, and a bell crank lever having one end within the ambit of said cam and one end adapted to release said holding means, upon the operation of which said ratchet is released from said pawl and said holding means, and said indicator wheels are free to be operated by said restoring means.

2. In a fare indicator, fare indicating wheels, at ratchet associated therewith, an actuator for said wheels, comprising a longitudinally sliding spring retracted rod, a pawl thereon adapted to engage said ratchet and to be disengaged therefrom by an abnormal depression of said rod against its spring, means for restoring said wheels, means for holding said wheels against accidental movement comprising a detent normally engaging said ratchet and holding said wheels against accidental movement, a revolving shaft and a cam on said shaft, and a bell crank having one arm within the ambit of said cam and the other arm adapted to release said detent.

3. In a fare indicator, fare indicating wheels, an associated ratchet, restoring means for said indicating wheels, reciprocating actuating means for said indicating wheels adapted to be disconnected from said indicating wheels by an abnormal movement of said actuating means, a holding detent adapted to engage said ratchet, a revolving shaft and means for releasing said holding means and permitting said restoring means to operate comprising a cam on said shaft, a lever adapted to engage said holding detent, and having a portion within the ambit of said cam and adapted to be engaged thereby and to release said detent.

1,013,280. PARING-MACHINE. HERBERT T. DONOVAN, West Webster, N. Y. Filed Dec. 22, 1910. Serial No. 598,878.

1. An end-trimmer for paring machines comprising a blade and a guard, the guard extending in advance of the blade but lying outside the path of operation thereof so as to limit the depth of cut without confining the paring produced by the blade.

2. An end-trimmer for paring machines comprising a blade, and a guard projecting from the plane of the blade and extending backwardly in advance of the blade, the guard lying outside of the path of operation of the blade so as not to confine the paring produced by the blade.

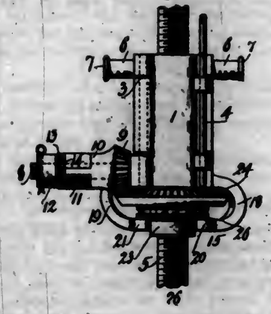
3. An end-trimmer for paring machines having, in combination, a trimming-cutter adapted to engage and trim a fruit adjacent the end of its core, a blunt core-gage adapted to abut against the end of the fruit and limit the depth of the cut, and means for connecting and yieldingly supporting the trimming-cutter and the core-gage.

4. An end-trimmer for paring machines having, in combination, a trimming-cutter adapted to engage and trim a fruit adjacent the end of its core, a rotatably-mounted blunt core-gage adapted to abut against the end of the fruit and limit the depth of the cut, and means for connecting and yieldingly supporting the trimming-cutter and the core-gage.

5. An end-trimmer for paring machines having, in combination, a trimming-cutter adapted to engage and trim a fruit adjacent the end of its core, a serrated, rotatively-mounted blunt core-gage adapted to abut against the end of the fruit and limit the depth of the cut, and means for connecting and yieldingly supporting the trimming-cutter and the core-gage.

[Claims 6 to 21 not printed in the Gazette.]

1,013,281. DRILL. SYLVESTER DOUBET, Peoria, Ill., assignor to Wantling Mfg. Co., Peoria, Ill., a Corporation of Illinois. Filed Nov. 1, 1906. Serial No. 341,630.



1. In a device of the character described, the combination of a boxing composed of hinged sections, the lower section at one end provided with a gear-nest, formed integrally with said section and composed of a forward portion spaced a suitable distance from said boxing and having a slotted face at its upper end adapted to serve as a bearing for an extended hub portion of a gear to be retained within said nest, and laterally extending webs connected with the body of said nest and united with said lower section for bracing said nest.

2. In a device of the character described, the combination of a boxing composed of hinged sections, the lower section at one end provided with a gear-nest formed integrally with said section and composed of a forward portion spaced a suitable distance from said boxing and having a slotted face formed between bifurcated ears adapted to serve as a bearing for an extended hub portion of a gear to be retained within said nest, and substantially U shaped portions connecting the opposite sides of the body of said nest with said lower section for bracing said nest.

3. In a device of the character described, the combination of a boxing composed of upper and lower hinged sections, a gear-nest formed integrally with and disposed at one end of said lower section of said boxing, the same consisting of a vertical wall spaced a suitable distance from said boxing and having a slotted bearing at its upper end adapted to receive and serve as a bearing for an extended hub portion of a gear, a web extending downwardly and forwardly from said lower section and merging into the said wall, and webs extending in opposite directions from said front wall and at their opposite ends merging into said lower section, said webs forming a closure for the gear aforesaid.

4. In a drill, the combination of a boxing, a thread-bar operating through said boxing, a gear on said thread bar, means for operating said gear, a gear-nest for said gear, to retain the gear in operative relation with its operating means and said thread-bar, said nest composed of a front wall connected to the end of the boxing by a lower axially alined web, laterally extending U shaped webs connecting the opposite sides of said wall with the opposite sides of said boxing, and said front wall of said nest provided with upwardly extending bifurcated ears which extend up above the axial center of said thread-bar.

5. In a drill, the combination of a boxing composed of two hinged sections, a thread-bar operating through said sections, a gear carried on said thread-bar, a spindle projecting radially from the lower section, a pinion on said spindle in mesh with said gear, a gear-nest for said gear consisting of a vertically disposed portion connected with said lower section by a web, laterally disposed braces for said vertical portion connected with said lower section, one of said laterally disposed braces being curved downwardly and upwardly so as not to interfere with said pinion, and said vertically disposed portion provided with bifurcated ears extending up above the axial center of said thread-bar.

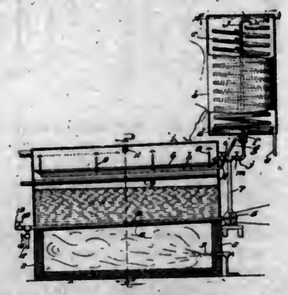
1,013,282. VEHICLE-WHEEL. HUGH DUNCAN, Langside, Glasgow, Scotland. Filed June 26, 1911. Serial No. 635,281.

1. In a vehicle wheel, in combination, a rim, a tread consisting of a series of resilient sections supported on said rim, said sections each comprising a body portion and a base extending beyond said body portion, and flange members detachably securing said tread sections to said rim, said members having ribs, extending between the bases of said tread sections, and inturned lips engaging said bases and clamping the same immovably to said rim and extending part way between the body portions of said sections, said lips being recessed to receive said body portions.

2. In a vehicle wheel, in combination, a rim, a tread consisting of a series of resilient sections supported on said rim, said sections each comprising a substantially cylindrical body portion and a substantially rectangular base having corners extending beyond said body portion, and flange members detachably securing said tread sections to said rim, said members having outwardly turned portions supporting the outer edges of the bases of said sections, inturned lips extending part way between the body portions of said sections and recessed to receive the said body portions, and ribs connecting said outwardly turned portions and lips and extending between said bases, said outwardly turned portions, lips, and ribs forming pockets in which the corners of said bases are received.

3. In a vehicle wheel, in combination, a rim, flange members detachably secured to said rim, said flange members having formed integral therewith spaced, oppositely-disposed, inwardly-extending lips or projections and inwardly extending ribs beneath said lips or projections, the ribs affording, in conjunction with the rim and the bodies of the flange members, pockets of approximately rectangular shape, and resilient tread sections having correspondingly shaped bases fitted in said pockets, said tread sections being held between the said flange members and engaged by said projections, the meeting edges of said tread sections being in engagement with one another in line with oppositely disposed ribs.

1,013,283. METHOD OF AND APPARATUS FOR TREATING ASPHALTIC OILS FOR THE PRODUCTION OF ASPHALT AND THE RECOVERY OF LIGHTER PRODUCTS. FRANKLIN H. DUNHAM, Santa Paula, Cal. Filed Apr. 26, 1910. Serial No. 557,817.



1. The method of obtaining asphalt cement from asphaltic oils, which consists in heating a charge of the oil to a temperature between 400 and 600 degrees Fahrenheit within a shell by heat applied to the bottom of the shell; removing asphaltic solution from the bottom of the charge in the shell and condensing outside said shell vapors arising from said solution; returning the unvaporized portion of said solution to the top of the asphaltic charge in the shell and removing vapors from the shell.

2. The method of obtaining asphalt cement from asphaltic oils, which consists in heating the oil to a temperature between 400 and 600 degrees Fahrenheit within a shell by heat applied to the bottom of the shell; removing asphaltic solution from the bottom of the shell; condensing outside said shell vapors arising from said solution and returning the unvaporized solution to the top of the asphaltic charge in the shell; collecting and condensing vapors arising inside the shell, discharging said vapors and condensation from the shell, and finally withdrawing the asphaltic cement from the shell.

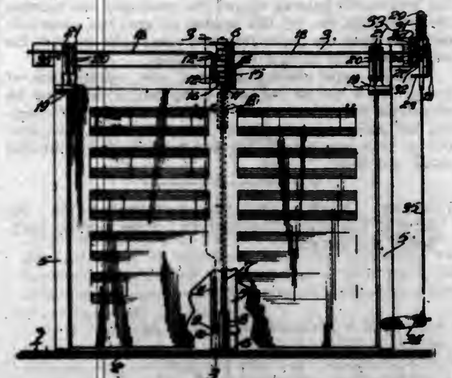
3. The method of obtaining asphalt cement from asphaltic oils, which consists in heating a charge of oil to a temperature between 400 and 600 degrees Fahrenheit within a shell by heat applied to the bottom of the shell; removing asphaltic solution from the bottom of the charge in the shell, condensing outside said shell vapors arising from said solution; returning the unvaporized portion of said solution from the condenser to the top of the asphaltic charge in the shell; removing asphaltic solution from the bottom of the charge in the shell, conducting the same directly to the upper portion of the shell and removing from the shell vapors arising in the shell, and finally removing the unvaporized asphaltic product from the shell.

4. The combination with an extractor shell, of means to heat the bottom of the shell, a condenser shell outside the extractor shell, a spiral pan inside the condenser shell, means to draw liquid from the bottom of the extractor shell and deliver it to the top of the pan, means to discharge the products of condensation from the condenser shell, means to conduct the uncondensed products from the condenser shell and return it to the extractor shell, and means to discharge vaporized products from the condenser shell.

5. Apparatus for obtaining asphaltic cement and lighter products from asphaltic solution, comprising a shell, a condenser outside the shell, means to heat the bottom of the shell, means to discharge from the shell the vapors arising in the shell, means to draw off asphaltic solution from the bottom of the shell and deliver it to the condenser, means to discharge condensed vapors from the condenser, and means to return the unvaporized asphaltic product to the shell.

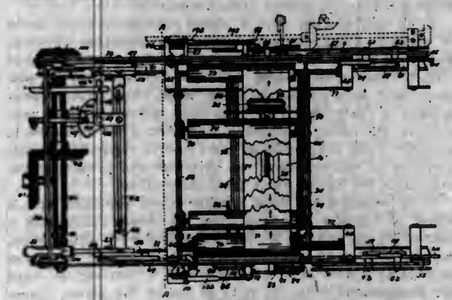
[Claims 6 to 8 not printed in the Gazette.]

1,013,284. MUSIC-LEAF TURNER. BERNARD C. ELLERSICK, St. Louis, Mo. Filed Sept. 16, 1909. Serial No. 517,977.



In a music leaf turner, the combination with a frame, a plurality of arms, which are spring actuated for movement in one direction, of devices at each end of the frame for supporting said arms, a spring actuated, pivoted hook arranged adjacent the right hand frame supporting device, a rod being spring actuated in one direction, a pair of projections carried by the rod, one projection being constructed and arranged to move said hook to release one of said arms at a time and the other projection constructed to pass in front of the remaining arms to prevent their turning, substantially as shown and for the purposes stated.

1,013,285. PHOTOGRAPHIC APPARATUS. HERMAN FAULKNER, Salt Lake City, Utah. Filed Apr. 16, 1909. Serial No. 490,879.



1. In a machine of the character described, the combination of two magazines, raceways connecting both ends of said magazines, each of said magazines having greater width at their receiving than at their discharge ends, and means for passing work from the narrower end of one magazine through the raceways to the wider end of the other.

2. In a machine of the character described, the combination of two trapezoidal magazines, and raceways connecting the wider end of each magazine with the smaller end of the other.

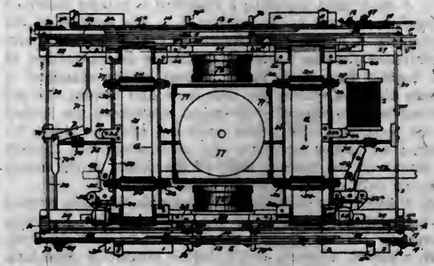
3. In a machine of the character described, the combination of two magazines, and a raceway, one of said magazines having a wider receiving opening at one end than the delivery opening of the other magazine, said delivery and receiving ends of the two magazines communicating with the same raceway, and means for passing plates through the raceway from the smaller delivery outlet of one magazine to the larger receiving inlet of the other magazine.

4. In a machine of the character described the combination with a raceway, of a longitudinally adjustable magazine communicating therewith.

5. In a machine of the character described, the combination with two raceways having windows, of two longitudinally adjustable magazines at respective sides of said windows and communicating at each end with said raceways.

[Claims 6 to 52 not printed in the Gazette.]

1,013,286. PHOTOGRAPHIC APPARATUS. HERMAN FAULKNER, Salt Lake City, Utah. Filed Nov. 17, 1909. Serial No. 528,538.



1. In a machine of the character described, the combination of means for moving and exposing plates successively, and means for reversing the direction of movement of the plates.

2. In a machine of the character described, the combination with means for moving plates successively and stopping them temporarily, of means for reversing the direction of travel of the plates.

3. In a machine of the character described, the combination of means for moving plates in a continuous circuit, and means for reversing the direction of travel of said plates.

4. In a machine of the character described, the combination of means for moving plates successively and temporarily stopping them between the ends of their travel, and means operating automatically to reverse the direction of travel of said plates.

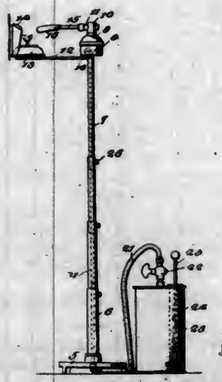
5. In a machine of the character described, the combination with two magazines and a raceway connecting them, of means for feeding plates through the raceway from one magazine to the other, and means for reversing the direction of travel of the plates.

[Claims 6 to 38 not printed in the Gazette.]

1,013,287. FLASH-LIGHT. LIBERTY K. FLANAGAN and CHARLES A. MILLER, Moberly, Mo. Filed Apr. 29, 1910. Serial No. 558,352. Renewed May 23, 1911. Serial No. 629,062.

1. A flash light including an extensible standard formed of a plurality of telescopic sections, a powder receiving receptacle carried by one of the standard sections and provided with an overhanging nozzle, a torch supported by the standard, a nipple disposed within the receptacle, and a conductor extending through all of the standard sections and having one end thereof connected with said nipple and its other end projecting through the bottom standard section and communicating with a source of

compressed air for forcing air within the receptacle, thereby to direct the powder into the path of the flame from the torch.



2. A flash light including a standard, a powder receiving receptacle carried by the standard, a cap secured to the receptacle, a nozzle engaging the cap and provided with a flattened portion having a discharge orifice formed in the bottom thereof, a torch secured to the standard, a nipple disposed within the receptacle and having one end thereof bent downwardly in spaced relation to the bottom of the receptacle, and means connected with the nipple for forcing air under pressure into said receptacle, thereby to discharge the powder through the orifice in the nozzle into the path of the flame from the torch.

3. A flash light including an extensible standard formed of a plurality of telescopic sections, a powder receiving receptacle carried by one of the sections and provided with a nozzle, a torch, and a flexible conductor extending through the telescopic sections and having one end thereof communicating with the interior of the powder receptacle and its other end connected with a source of compressed air for forcing the powder through the discharge nozzle into the path of the flame from the torch.

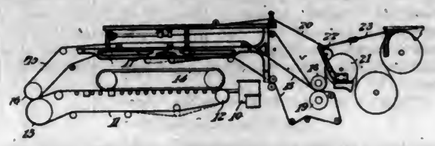
4. A flash light including an extensible standard formed of a plurality of telescopic sections, a powder receiving receptacle carried by one of the sections and provided with an overhanging nozzle, a torch, a nipple disposed within the receptacle and having one end thereof bent downwardly and spaced from the bottom of the receptacle, a flexible conductor extending through the several sections of the standard and having one end thereof connected with the nipple and its other end operatively connected with a source of compressed air, and means for securing the telescopic sections in adjusted position.

5. A flash light including a supporting base having a tubular member secured thereto, a plurality of telescopic sections carried by the tubular member, a powder receiving receptacle carried by one of said sections and provided with an overhanging nozzle, a supporting arm secured to one of the sections beneath the powder receiving receptacle, a torch carried by said supporting arm, a shield secured to the torch, and a flexible conductor extending through all of said sections and having one end thereof communicating with the interior of the receptacle and its other end connected with a source of compressed air for forcing the powder through the nozzle into the path of the flame from the torch.

[Claims 6 and 7 not printed in the Gazette.]

1,013,288. PAPER-MAKING MACHINE. FREDERICK H. FULLER, Camas, Wash., assignor of forty-nine one-hundredths to W. P. Hawley, Oregon City, Oreg. Filed May 16, 1910. Serial No. 561,561.

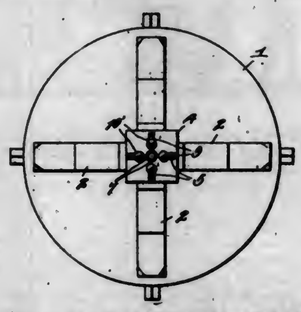
1. In a paper-making machine, the combination of couch-rolls, press-rolls, a drier, and a pair of felts, one felt passing around a couch-roll and between the press-rolls and conveying the paper from the couch-roll to the press-rolls, the other felt also passing between the press-rolls and conveying the paper from the press-rolls or from the first felt into contact with the drier.



2. In a paper-making machine, the combination of couch-rolls, press-rolls, drier, a bottom felt and a top felt, the bottom felt passing around the couch-roll and between the press-rolls, the top felt passing between the press-rolls and conveying the paper from the press rolls or from the bottom felt into contact with the drier.

3. In a paper-making machine, the combination of press-rolls, a bottom felt and a top felt, a drier and an adjustable roller bearing on the drier, the top felt carrying the paper immediately to the drier from the press-roll or from the bottom felt and between the adjustable roller and drier.

1,013,289. INSERT-JAWS FOR LATHE-CHUCKS. JOSEPH E. GEARHART, Clearfield, Pa. Filed Aug. 30, 1911. Serial No. 646,820.

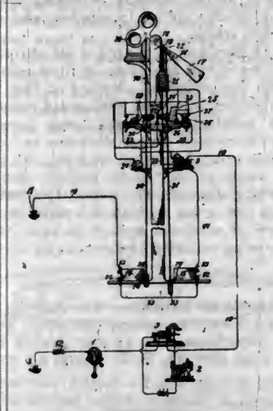


1. In combination with a chuck provided with a series of radially arranged jaws, an insert consisting of inner and outer plates, supplemental jaws slidably mounted between said plates whereby, when the radially arranged jaws of the chuck are operated, the supplemental jaws will be forced toward each other to grip the work, and means for sliding the supplemental jaws outwardly.

2. In combination with a chuck provided with a series of radially arranged jaws, an insert consisting of inner and outer plates, each of which is provided with a series of alined slots, supplemental jaws slidably mounted in said slots, said jaws having gripping faces, transverse grooves formed in the gripping faces, a band spring seated in said grooves and being adapted to contract when pressure is applied to the supplemental jaws and to expand when the pressure is relieved upon the supplemental jaws whereby said jaws are forced away from each other.

3. In combination with a lathe chuck provided with a series of radially arranged jaws, an insert comprising a pair of plates, said plates being provided with alined slots, supplemental jaws arranged between said plates, one of the ends of the jaws being provided with a rectangular head for engagement with the slots of one of the plates, transverse grooves formed in the gripping face of the supplemental jaws, a band spring seated in said grooves and adapted to contract upon operation of the jaws of the chuck in one direction to clamp the work, said spring being adapted to expand to cause the supplemental jaws to move away from each other when the radially arranged jaws of the chuck are operated in an opposite direction.

1,013,290. ELECTRICALLY-CONTROLLED SEMAPHORE. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed July 27, 1907. Serial No. 385,845.



1. In apparatus of the kind described, a line, a pair of selectors connected to the line respectively answering to different series of impulses, means for impressing such impulses upon the line, a motive engine connected to both selectors and controlled thereby respectively, and a semaphore controlled by the engine.

2. In apparatus of the kind described, a line, a pair of selectors connected to the line respectively answering to different series of impulses, means for impressing such impulses upon the line, a motive engine connected to both selectors and controlled thereby respectively, a semaphore controlled by the engine, and an answer back device connected to the line for each selector, said answer back devices corresponding distinctively with said selectors, and their operation being determined respectively by that of the semaphore.

3. In apparatus of the kind described, a line, a pair of selectors connected to the line respectively answering to different series of impulses, means for impressing such impulses upon the line, an electro-mechanical engine connected to both selectors and controlled thereby respectively, and a semaphore controlled by the engine.

4. In apparatus of the kind described, a line, a pair of selectors connected to the line respectively answering to different series of impulses, means for impressing such impulses upon the line, an electro-mechanical engine connected to both selectors and controlled thereby respectively, a semaphore controlled by the engine, and an answer back device connected to the line for each selector, said answer back devices corresponding distinctively with said selectors, and their operation being determined respectively by that of the semaphore.

5. In apparatus of the kind described, a line, a local circuit, an electro-magnetic engine in said local circuit, a movable contact in said local circuit for opening and closing the circuit, a pair of selectors connected to the main line and adapted respectively to actuate said movable contact to open and close said local circuit, said selectors answering respectively to different series of impulses, means for impressing such impulses upon the line, and a semaphore controlled by said engine.

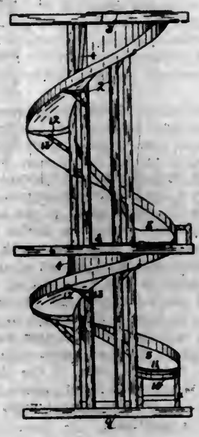
[Claim 6 not printed in the Gazette.]

1,013,291. METHOD OF APPLYING PIPE-COVERING. FRANK MATHANUEL GILMORE, Chicago, Ill., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Aug. 13, 1909. Serial No. 512,651.

The method of protecting underground metallic pipes from the chemical action of the surrounding earth which comprises the following steps: first, coating the pipes with hot asphaltum; second, saturating a strip of thick asbestos paper with hot asphaltum and applying same while

the asphaltum is still soft to the pipe so as to completely envelop it; third, applying an outer coating of hot asphaltum.

1,013,292. MERCHANDISE-CHUTE. LOUIS GOEHR, San Francisco, Cal. Filed July 12, 1909. Serial No. 507,250.



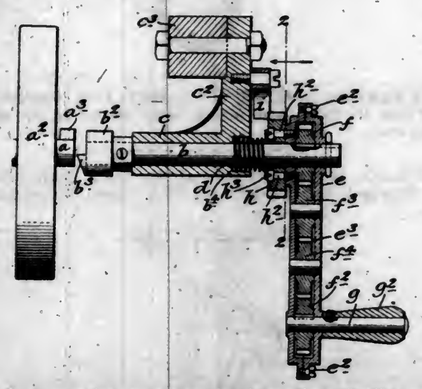
1. A merchandise chute whose pitch is differing in different parts thereof, said chute having its bottom constructed with different transverse inclinations according to the different pitch of the chute; whereby objects passing down the chute will travel in contact herewith a greater distance, for each passage around the chute, when a high pitch is used and a less distance when a low pitch is used, substantially as described.

2. A spiral merchandise chute the pitch of which is different in different parts thereof having an inner and an outer curbing, a series of supports which said chute passes, a series of brackets supporting said chute, the bottom of said chute being inclined outwardly and upwardly where a relative low pitch is used, and transversely inclined downwardly and outwardly where a relatively high pitch is used the transverse inclination of said chute being a like function of the pitch of said chute at intermediate pitches, substantially as described.

1,013,293. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ANTHONY P. HINSKY, Brooklyn, N. Y. Filed May 2, 1911. Serial No. 624,618.

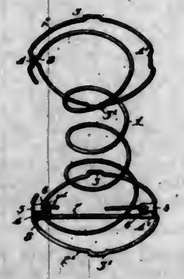
1. A cranking apparatus for internal combustion engines consisting of a supplemental shaft mounted in axial line with the crank shaft of the engine and movable toward and from the same and adapted to engage the same, a spring normally holding said supplemental shaft out of engagement with the crank shaft, a crank arm mounted on the outer end of the supplemental shaft and provided with an internal chamber, a gear mounted on said shaft within said chamber and keyed to said shaft, a handle spindle mounted in the outer end of said crank arm, a gear mounted on said spindle within said arm and keyed to said spindle, intermediate gears mounted in said arm

and meshing with said first named gears and with each other, a ratchet wheel secured to the inner side of the said arm where the supplemental shaft passes therethrough and through which said supplemental shaft passes, and a plurality of suitably supported pawls adapted to engage said ratchet wheel.



2. A cranking apparatus for internal combustion engines comprising a longitudinally movable shaft mounted in axial line with the crank shaft of the engine and adapted to engage the same, a tension device for holding said shaft out of engagement with the crank shaft, a hollow crank arm mounted on the outer end of said shaft, a handle spindle mounted in the free end of said arm, gears mounted on said shaft and on said handle spindle within said arm and keyed to said shaft and to said spindle, intermediate gears mounted in said arm and meshing with said shaft and spindle gears and with each other, a ratchet wheel secured to the inner side of the inner end of said arm and through which said shaft passes, and spring operated pawls normally in engagement with said ratchet in different operative positions.

1,013,294. MATTRESS AND BED SPRING. OZELLO R. HUNT, Chicago, Ill., assignor to The Simmons Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed July 26, 1910. Serial No. 573,905.

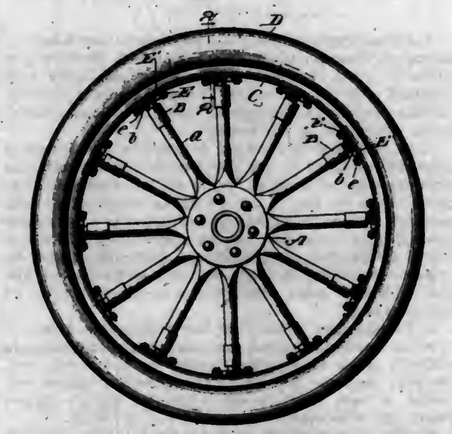


1. In a furniture spring structure, a series of coiled springs arranged side by side with their terminal large coils in juxtaposition, the peripheral portions of said terminal large coils being provided with interfitting abrupt radial deflections or bends, whereby they are locked against circumferential movement relatively to each other, and tying devices embracing said interfitting portions, holding them in the same plane and holding them against radial separating movement.

2. In a furniture spring structure, a row of coiled springs arranged with their terminal large coils in juxtaposition, the peripheral juxtaposed portions of said terminal large coils being provided with closely fitting interlocking bends lying in the plane of the surface of the spring structure, whereby said springs are locked against circumferential movement out of alinement with each other in the row, clips embracing said interlocked peripheral portions and holding them in the same plane with each other, and bridge members extending diametrically across every alternate spring in the row and connecting the clips of that spring.

3. In a furniture spring structure, a set of coiled springs arranged in rows in two directions at right angles to each other and with the peripheral portions of their large terminal coils in juxtaposition, the juxtaposed peripheral portions of said terminal large coils being provided with closely fitting interlocked abrupt shoulders or bends, hinging devices embracing and tying together the juxtaposed shoulders or bends of contiguous springs, and a bridge member extending diametrically across the terminal coil of each spring and tying its opposed sides together, the bridge members of alternate springs in each row and in each direction being arranged at right angles to each other.

1,013,295. VEHICLE-WHEEL. THOMAS B. JEFFERY, Kenosha, Wis.; Kate E. Jeffery, Charles T. Jeffery, and Harold W. Jeffery, executors of said Thomas B. Jeffery, deceased. Filed Sept. 17, 1906. Serial No. 335,022.



1. The combination of a self sustaining wheel body consisting of a hub having radially projecting spokes thereon, heads on the ends of said spokes, a rim having an inflated pneumatic tire thereon, and radially adjusted clamps on the inner surface of said rim in position to engage and clamp the heads on the spokes against the inner surface of the rim, each of said clamps being provided with an open-ended slot and with a shoulder on one side of the slot on the face adjacent to the rim for the purpose of engaging the side of the head opposite the slot.

2. The combination with a wheel body comprising a hub having spokes radiating therefrom, of heads on the ends of said spokes, a rim surrounding said spokes adjacent to said heads, and a series of clamping plates carried by said rim for engaging with the inner sides of said heads, each of said clamping plates having an open-ended slot for the reception of the spoke and a shoulder extending transversely to the length of said slot on the side of the plate adjacent to the rim for engaging with the corresponding head when the plate is secured to the rim.

3. The combination with a wheel body comprising a hub having spokes radiating therefrom; of a rim surrounding said body, and detachable clamping jaws arranged upon the inner side of the rim for locking the rim to the ends of the spoke, said clamping jaws being arranged to permit the spokes to be entered and removed by rotating the spokes about the axis of the wheel, and means for securing said jaws to the rim and simultaneously clamping the spokes between the jaws and the rim.

4. The combination of a wheel body comprising a hub and spokes, of a rim arranged about the outer ends of the spokes, a series of open jaws arranged upon the inner side of the rim for receiving the ends of the spokes, said spokes having upon the ends shoulders extending transversely to the plane of the wheel and said jaws having on the sides thereof toward the rim shoulders for coöperating with the aforesaid shoulders upon the spokes so as to prevent the displacement of the spokes from the jaws, and means for forcing said jaws toward the rim so as to bring the shoulders thereon in operative relation to the shoulders on the spokes.

1,013,296. SMOKE-RING BLOWER. EDWARD F. KELLY, Cairo, Ill. Filed Jan. 24, 1911. Serial No. 604,351.

1. In a smoke ring blower, a barrel formed from a thin metal tube and having a bore of some considerable size open at both ends; combined with an outer shell consisting of a body of substantially the same length as said barrel, and inturned extensions at its extremities each having a bore of a size to fit closely but slidably upon the exterior of said barrel and a diffuser for diffusing the smoke passing through the barrel.

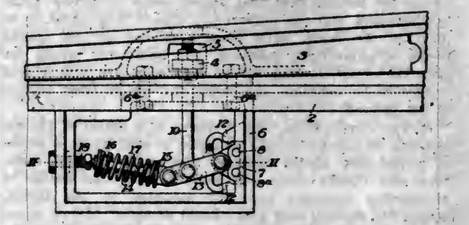
2. In a smoke ring blower, a barrel formed from a thin metal tube and having a cylindrical bore of some considerable size open at both ends, the outlet end of the tube having means for retarding the exit of the smoke near the walls of the tube; combined with an outer shell surrounding said barrel telescopically, a mouth piece having a nipple fitting frictionally into the inlet end of said barrel and a diffuser for diffusing the smoke passing through the barrel.

3. In a smoke ring blower, a barrel formed from a thin metal tube and having a cylindrical bore of some considerable size open at both ends; combined with a shell consisting of a tubular body of substantially the same length as said barrel and cut off flat at its inner end and inturned extensions at its extremities fitting slidably around the exterior of the barrel, and a mouth piece including a body complementing the body of said shell, its outer end being cut off flat to fit against the flat end thereof, a tubular nipple at the axis of said outer end fitting frictionally within the inlet end of said barrel and a diffuser for diffusing the smoke passing through the said barrel.

4. In a smoke ring blower, a barrel formed from a thin metal tube and having a bore of some considerable size open at both ends; combined with a shell consisting of a tubular body of substantially the same length as said barrel and cut off flat at its inner end and inturned extensions at its extremities fitting slidably around the exterior of the barrel, a mouth piece including a body complementing the body of said shell, its outer end being cut off flat to fit against the flat end thereof, and a tubular nipple at the axis of said outer end fitting frictionally within the inlet end of said barrel, and a diffuser consisting of a foraminous sheet standing across the interior of the barrel and the inner end of the nipple with its edges clamped between the adjacent walls of these elements.

1,013,297. SPRING-SWITCH. CLARENCE C. KORNS, Covington, Va. Filed Mar. 14, 1911. Serial No. 614,473.

1. A switch tongue retaining device comprising a spring actuated toggle member, a shiftable fulcrum block to which the toggle member is pivoted, said block being arranged to remain stationary in its shifted position and actuating connections between the toggle and the switch tongue; substantially as described.



2. A switch tongue retaining device comprising a spring actuated toggle member, a fulcrum block for the toggle member arranged to assume any one of three positions, said block being arranged to remain stationary in its shifted position and actuating connections between the toggle member and the switch tongue; substantially as described.

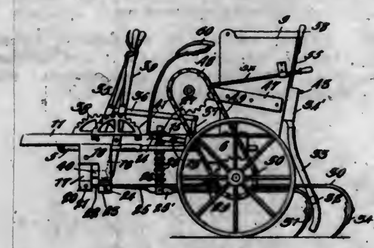
3. A switch tongue retaining device comprising a spring actuating toggle member, a movable fulcrum block to which the toggle member is pivoted, said block being arranged to remain stationary in its shifted position, actuating connections between the toggle member and the switch tongue, and means for adjusting the tension of the spring for actuating the toggle member; substantially as described.

4. A switch tongue retaining device comprising a spring actuated toggle member, a normally stationary fulcrum block to which the toggle member is pivoted, said block having a plurality of fulcrums, about which the block is arranged to be swung to change the pivotal points of the toggle member and actuating connections between the toggle member and the switch tongue; substantially as described.

5. A switch tongue retaining device comprising a toggle member having two elements, a block to which one of the elements is pivoted, the other element comprising two members telescopically engaging each other, a spring interposed between said elements, a plurality of fulcrums for the block, and actuating connections between the first element of the toggle member and switch tongue; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,013,298. COMBINED FERTILIZER-DISTRIBUTER AND PULVERIZER. WILLIAM HENRY KUHNS, Miamisburg, Ohio. Filed June 3, 1911. Serial No. 631,106.



1. The combination with a wheel supported frame, of a series of longitudinal bars pivotally supported from said frame at their forward ends, a second series of bars extending rearwardly of said first named series and rigidly connected thereto, furrow opening shovels carried by the bars of the first named series, pulverising blades carried by the second named series of bars, and means for raising and lowering said series of bars to position the same with relation to the ground.

2. The combination with a frame, of a series of furrow opening members pivotally mounted in said frame, a series

of pulverizing blades disposed rearwardly of said members and rigidly connected thereto, a second series of pulverizing members pivotally mounted in the frame, means for moving said first named series of furrow opening members and the pulverizing blades longitudinally to position the same with respect to the second named series of pulverizing members, and additional means for simultaneously moving all of said members and blades vertically to regulate the depth to which they engage in the ground.

3. The combination with a frame, of a series of furrow opening members pivotally mounted in said frame, a series of pulverizing blades disposed rearwardly of said members and rigidly connected thereto, a second series of pulverizing members pivotally mounted in the frame, means for moving said first named series of furrow opening members and the pulverizing blades longitudinally to position the same with respect to the second named series of members, a rock shaft mounted in the frame, and means yieldingly connecting the members of each of said series of furrow opening members to said rock shaft to yieldingly hold said members and the pulverizing blades in position with relation to the ground.

4. The combination with a frame, of a transverse bar pivotally mounted at its ends upon said frame, a series of longitudinally disposed furrow opening members pivotally mounted at their forward ends upon said bar, a second series of furrow opening members arranged intermediate of the members of said first named series, means mounted in the frame for raising and lowering said members to regulate the depth to which they engage in the ground, and additional means for moving said transverse bar to move said first named series of furrow opening members and position the same with relation to the second named series.

5. The combination with a wheel supported frame, of a transverse bar pivotally secured at its ends to said frame, a series of furrow opening members pivotally mounted upon said bar for vertical movement, a second transverse bar rigidly fixed to the frame, a second series of furrow opening members disposed intermediate of the members of the first named series and pivotally mounted on the second named bar, a series of pulverising blades disposed rearwardly of the furrow opening members and intermediate of adjacent members of the two series, means for moving said pivotally mounted transverse bar to dispose the first named series of furrow opening members with relation to the second named series, and additional means mounted in the frame and connected to said series of furrow opening members to raise and lower the same, said means including coiled springs to yieldingly hold the furrow opening members in their adjusted positions.

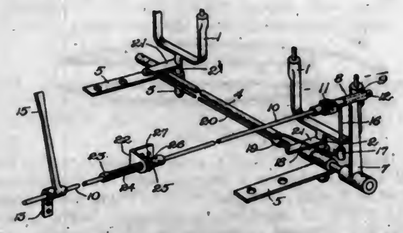
[Claim 6 not printed in the Gazette.]

1,013,299. LABEL. WILSON P. MACDONALD, Toronto, Ontario, Canada, assignor to George G. Fox Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 8, 1908. Serial No. 456,690.

1. A label comprising a rear card bearing a series of inscriptions and made from stiff sheet material so as to hold its shape unassisted; an index card in front of the rear card formed so as to partially expose the series of inscriptions, and a rigid attaching spike adapted to be driven into a pie or the like, the two cards having registering perforations which are angular in shape and the spike being made with a shank angular in cross section and removably mounted in the perforations so as to separably connect the two cards and lock them against relative rotative displacement.

2. A label comprising a rear card bearing a series of inscriptions and made with a star shaped aperture; an index card in front of the rear card cut away in part to expose one of said inscriptions and cover the rest, and a rigid attaching spike adapted to be driven into a pie or the like, said spike being made triangular in cross-section and extending through the index card and the aperture of the rear card so as to lock the two cards against relative rotative displacement.

1,013,300. HEADLIGHT FOR VEHICLES. JOHN O. MCKEAN, Westfield, Mass. Filed Sept. 15, 1909. Serial No. 517,813.



1. A headlight apparatus for automobiles and the like comprising a lamp; means for supporting said lamp with provision for swinging movement vertically and horizontally; a single control member connected with said lamp for swinging the latter vertically and horizontally, and means for automatically holding the lamp against swinging movement in any direction while the apparatus is out of the control, of the operator.

2. A headlight apparatus for vehicles comprising a bracket; a bracket support with which the bracket is connected so as to swing vertically on a horizontal pivot; a lamp pivotally mounted on the bracket so as to swing sidewise; a rotatable and endwise movable control rod, and means connecting the control rod with the bracket and lamp, respectively, through which said rod acts to swing the lamp sidewise and vertically.

3. A headlight apparatus for vehicles comprising a bracket; a bracket support with which the bracket is connected so as to swing vertically on a horizontal pivot; a lamp pivotally mounted on the bracket so as to swing sidewise; a rotatable and endwise movable control rod; means connecting the control rod with the bracket and lamp, respectively, through which said rod acts to swing the lamp sidewise and vertically, and automatically acting means to catch and hold the rod in its different adjusted positions both when rotated and when moved endwise.

4. The combination with an automobile of a transverse shaft journaled upon the front end of the vehicle; a bracket fixed to said shaft; a lamp pivotally mounted on said bracket so as to swing sidewise on a perpendicular pivot; a rotatable and endwise movable control rod mounted on the vehicle and extending rearward from the front end thereof; means connecting the forward end of the rod with the shaft through which endwise movement of said rod rocks the shaft, and means connecting the forward end of the rod with the lamp through which rotation of the rod acts to swing the lamp sidewise on its perpendicular pivot.

5. The combination with an automobile of a transverse shaft journaled upon the front end of the vehicle; a bracket fixed to the shaft; a lamp pivotally mounted on said bracket so as to swing sidewise on a perpendicular pivot; a rotatable and endwise movable control rod mounted on the vehicle and extending rearward from the front end thereof; means connecting the forward end of the rod with the shaft through which endwise movement of said rod rocks the shaft; means connecting the forward end of the rod with the lamp through which rotation of the rod acts to swing the lamp sidewise on its perpendicular pivot, and means on the vehicle coöperating with the control rod to lock the latter in its different adjusted positions.

[Claims 6 to 8 not printed in the Gazette.]

1,013,301. ADJUSTABLE TRACKER. PHILIP JACOB MEAHL, Bayonne, N. J. Filed Dec. 17, 1910. Serial No. 597,941.

1. A tracker, for musical instrument playing attachments, having a longitudinal slot in its top, duct tubes mounted loosely in said slot, and movable in alinement, toward and from each other, and means for so moving them, substantially as set forth.

2. A tracker, for musical instrument playing attachments, having a longitudinal slot in its top, duct tubes mounted loosely in said slot, and movable in alinement, toward and from each other, and means for so moving them simultaneously, substantially as set forth.

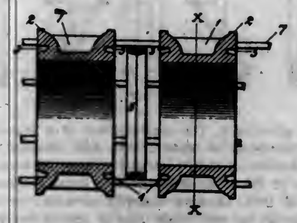
3. A tracker, for musical instrument playing attachments, having a longitudinal slot in its top, duct tubes loosely mounted in said slot, with their upper ends substantially flush with the top of the tracker, and movable, in alinement, toward and from each other, and means for so moving them, substantially as set forth.

4. The combination with a tracker for a playing attachment for musical instruments, having a longitudinal slot in its top, of a series of duct tubes movable, in alinement, toward and from each other in said slot, means for so moving them and covers at the end parts of the top of the tracker, substantially as set forth.

5. The combination with a tracker for a playing attachment for musical instruments, of a series of duct tubes movable in alinement toward and from each other, and a lazy tongs device for moving them, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,013,302. REINFORCED-CONCRETE PIPE. VLADIMIR V. MESSER, Los Angeles, Cal. Filed Aug. 10, 1910. Serial No. 576,607.



1. A reinforced concrete pipe comprising a plurality of solid cylindrical sections provided with annular grooves in their ends, a reinforcing ring lying in the grooves between two sections, said ring having inner beveled faces and the inner walls of the grooves being correspondingly beveled, and means for drawing the sections toward each other to cause the beveled faces of the ring and grooves to coact to compress the ends of the sections, the inner walls of the cylindrical sections at their ends being internally unconfined to permit said compression of the ends.

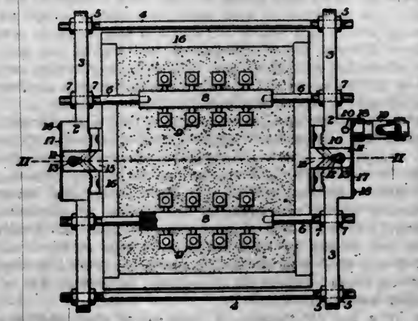
2. A reinforced concrete pipe comprising a plurality of solid cylindrical sections provided with annular grooves in their ends, a reinforcing ring lying in the grooves between two sections, said ring having inner beveled faces and the inner walls of the grooves being correspondingly beveled, and tension rods for drawing the sections toward each other to cause the beveled faces of the ring and grooves to coact to compress the ends of the sections, the inner walls of the cylindrical sections at their ends being internally unconfined to permit said compression of the ends.

3. A reinforced concrete pipe comprising a plurality of solid cylindrical sections provided with annular grooves in their ends, a reinforcing ring lying in the grooves between two sections, said ring having inner beveled faces and the inner walls of the grooves being correspondingly beveled, and tension rods for drawing the sections toward each other to cause the beveled faces of the ring and grooves to coact to compress the ends of the sections, the said sections having flanges at their ends in which said annular grooves are formed, and each section having external longitudinal ribs extending between said flanges, the said tension rods extending through the said flanges and ribs, the inner walls of the cylindrical sections at their ends being internally unconfined to permit said compression of the ends.

4. A reinforced concrete pipe comprising a plurality of solid cylindrical sections provided with annular grooves in their ends, a reinforcing ring lying in the grooves between two sections, said ring having inner beveled faces and the inner walls of the grooves being correspondingly beveled, means for drawing the sections toward each other to cause the beveled faces of the ring and grooves to coact to compress the ends of the sections, and cement in the joint between the ends of the sections embedding the said ring, the inner walls of the cylindrical sections at their ends being internally unconfined to permit said compression of the ends.

5. A reinforced concrete pipe comprising a plurality of sections, the end of each section having a portion formed with an annular conical face, a reinforcing ring encircling the two adjoining conical faces of adjacent sections, and means forcing said sections toward each other to cause the ring to compress the ends, the inner walls of the sections at their ends being internally unconfined to permit said compression of the ends.

1,013,303. MOLDING APPARATUS. WILLIAM G. MOORE, Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 8, 1911. Serial No. 625,832.



1. In molding apparatus, a pattern carrier having a yielding guide arranged to be pressed inwardly against a relatively fixed guide pin on the mold; substantially as described.

2. In molding apparatus, a pattern carrier having a yielding guide with an elongated inner face, and a spring arranged to press the guide inwardly against a relatively fixed guide pin of the mold; substantially as described.

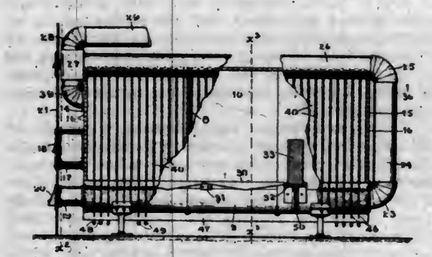
3. In molding apparatus, a pattern carrier having slots or recesses arranged to allow adjustment of the gate supports laterally in the mold and lengthwise of the carrier; substantially as described.

4. In molding apparatus, a pattern carrier having gate supports adjustable longitudinally thereof, said carrier having a guide to engage a dowel or pin on the mold; substantially as described.

5. In molding apparatus, a pattern carrier consisting of end bars and adjustable side connecting rods outside the mold; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,013,304. HOT-AIR FURNACE. WILLIAM C. H. NOBLE, Los Angeles, Cal. Filed May 4, 1910. Serial No. 559,391.



1. In a hot air furnace, a shell formed of a plurality of sections of substantially oval shape having their edges secured together, each section consisting of a lower member bent in approximately semi-circular shape and two side members connected respectively to the ends of the said lower member, said side members and lower member having outwardly extending flanges for connecting them together, and said side members extending upwardly from the ends of said lower member and meeting at an acute angle at the top and being extended at the top to form a joint, means securing said joint portions together, and substantially oval end plates closing the ends of the shell.

2. In a hot air furnace, the combination with the shell forming the combustion chamber, of radiator means therefor comprising hollow rib members resting against the sides of said shell, said hollow rib members being open at the side toward the shell and having flanges resting against the shell, and means for detachably securing said hollow rib members to said shell, comprising straps extending within said hollow rib members and engaging said flanges thereon, means resting on the top of the shell and connected to said straps, means for supporting said straps at the upper end of said shell and means for tensioning said straps at the lower end of said shell.

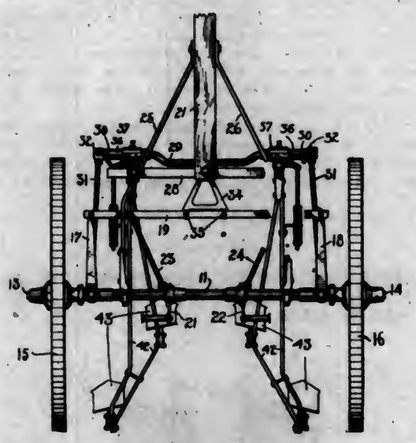
3. In a hot air furnace, the combination with the shell forming the combustion chamber of radiator means therefor, comprising hollow rib members resting against the sides of said shell, and means for detachably securing said hollow rib members to said shell, comprising straps extending within and engaging said hollow rib members, means for supporting said straps at the upper end of said shell, and means for tensioning said straps at the lower end of said shell, said tensioning means comprising springs exerting elastic tension on said straps to provide for expansion and contraction.

4. In a hot air furnace, a sheet metal shell having a rounded contour, rib members resting on said shell and having flanged portions rounded longitudinally to conform to the shell, and straps engaging said flanged portions to hold said rib members in contact with the shell.

1,013,305. GROUNDING DEVICE FOR ELECTRICAL CONDUCTORS. FRANK W. PARDEE, Evanston, Ill., assignor to Paragon Sellers Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1910. Serial No. 538,177.

A grounding device of the character set forth, comprising a perforated sheet-metal receptacle having the material from the perforations turned outwardly to provide numerous pointed outwardly-projecting dischargers, and moisture-collecting material within the receptacle.

1,013,306. CULTIVATOR. WILLIAM H. PARLIN, Canton, Ill., assignor to Parlin and Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed Jan. 12, 1910. Serial No. 537,710.



1. In a cultivator, the combination of a frame, a beam pivotally mounted on said frame and adapted to swing laterally thereon, a link pivotally connected to said frame at one side of the pivot point of said beam thereon, a bearing on said link, another bearing on said beam in rear of the bearing on said link, and a spring interposed between said two bearings and tending to hold said beam against swinging toward the side at which the link is mounted.

2. In a cultivator, the combination of a frame, a beam pivotally mounted on said frame and adapted to swing laterally thereon, a link pivotally connected to said frame at one side of the pivot point of said beam thereon, a bearing on said beam, another bearing on said link in rear of said bearing on said beam, and a spring interposed between said two bearings and tending to hold said beam against swinging toward the opposite side from that at which the link is mounted.

3. In a cultivator, the combination of a frame, a beam pivotally mounted on said frame and adapted to swing laterally thereon, a link pivotally connected to said frame at one side of the pivot point of said beam thereon, a bearing on said beam, two bearings on said link, a spring interposed between one of the bearings on said link and the bearing on said beam, and a second spring interposed between the other of said bearings on said link and said bearing on said beam, said springs tending to hold said beam against swinging laterally.

4. In a cultivator, the combination of a frame, a beam pivotally mounted on said frame and adapted to swing laterally thereon, a link pivotally connected to said frame at one side of the pivot point of said beam thereon, extending backward therefrom and passing through a bearing carried by said beam, means for simultaneously adjusting the forward ends of said beam and said link laterally relative to said frame, and yielding means bearing on said link and on said beam tending to hold said beam against swinging laterally.

5. In a cultivator, the combination of a frame, a sleeve rotatably mounted on a horizontal portion of said frame, a second sleeve mounted on said first sleeve, means for securing said second sleeve at any adjusted position on said first sleeve, a beam pivotally mounted on said second sleeve and adapted to swing laterally relative to said frame, a link mounted on said second sleeve at one side of the pivot point of said beam thereon and adapted to swing laterally thereon, and yielding means bearing on said link and on said beam tending to hold said beam against swinging laterally.

[Claims 6 and 7 not printed in the Gazette.]

1,013,307. SPRAYER. JOHN FRANKLIN PATTERSON, Warren, Ohio, assignor of one-eighth to Daniel Joseph O'Rourke, Warren, Ohio. Filed Mar. 6, 1911. Serial No. 612,606.

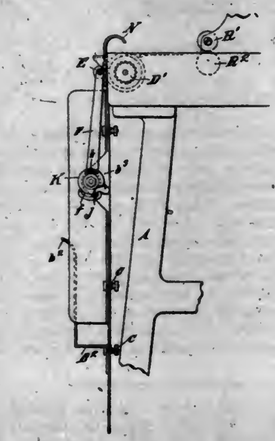
1. In a sprayer, the combination with an upright font having an outlet opening in its side wall near its bottom, a handle rising from said font, a pump barrel depending from said font, a rod sliding therein, a valve at the upper end of the rod, and a stirrup at its lower end; of a collar projecting from said font and inclosing said outlet opening, a nozzle axially adjustable around said collar and having a jet tube, an air tube extending across said jet tube and having a perforation directed across the outer end thereof, and a flexible connection between the interior of the pump barrel and the said air tube.

2. In a sprayer, the combination with an upright font having an outlet opening in its side wall near its bottom, and an air pump; of a collar surrounding said opening, a nozzle axially adjustable upon said collar and having a jet tube whose axis lies in a plane at right angles to the axis of said nozzle, an air tube having a perforation directed across the outer end of said jet tube, and a flexible connection between said pump and air tube.

3. In a sprayer, the combination with an upright font having an outlet opening in its side wall near its bottom, and an air pump; of a bolt projecting through the wall of said font adjacent its outlet opening, a nozzle whose cylindrical body surrounds said bolt and opening, a nut on the outer end of the bolt beyond the closed outer end of the nozzle, a jet tube within the nozzle and projecting laterally through its wall, an air tube having a perforation directed across the outer end of the jet tube, and a flexible connection between the air tube and the interior of the pump.

4. The herein described insecticide distributer, the same consisting of a font having two outlet openings near its lower end, collars fixed around said openings, nozzles rotatably mounted upon said collars, a series of jet tubes within each nozzle whose axes lie in a plane at right angles to the axis of said nozzle, and whose outer ends extend through the wall of the nozzle, air tubes secured along the outer walls of the nozzles in proximity to said jets and having fine perforations directed across the outer ends of the jet tubes, and means for directing a blast of air into said air tubes.

1,013,308. PAPER-FEEDING DEVICE. ALBERT D. PEJEAU, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 13, 1908. Serial No. 410,495.



1. In a paper feeding mechanism, the combination of a feed roller, means for holding a block of paper against the same, a stop extending across the end of the bulk of the block, a deflector adjacent to said stop on the feed roll side thereof, said deflector being adapted to receive one or more sheets fed by the roller past the stop and to retard all but one sheet and deflect that sheet.

2. In a paper feeding mechanism, the combination of a paper feed roller, means for holding a block of paper in substantially upright position against the same, a stop extending across the upper end of such block and preventing its being fed, said stop allowing one or more sheets adjacent to the feed roller to be fed, and a deflector adjacent to said stop and having a downwardly facing recess adapted to receive one or more sheets and retard all but one sheet.

3. In a paper feeding mechanism, the combination of a feeding roller, a pressure roller, spring pressed arms carrying the same for pressing the block of paper against the feed roller, means for stopping the bulk of the paper, and

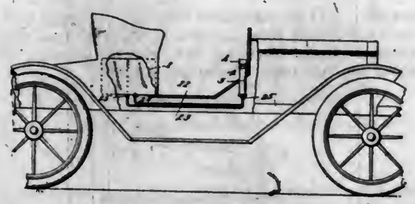
a curved shield into which a plurality of sheets of paper may be fed by the feed roller, the shield having its concavity toward the block of paper and having an edge retarding all of the sheets but the one nearest the roller.

4. In a paper feeding mechanism, the combination of a feed roller, means for supporting a block of paper on edge with the foremost sheet in engagement with the roller near one end of the sheet, a roller bearing against the rear side of the block of paper opposite the feed roller, spring-pressed arms carrying such pressing roller, and a curved shield adjacent to the feed roller and having a concavity into which sheets of paper nearest the roller may be fed by rotation of the roller, and having an edge for retarding all the sheets but the foremost one.

5. In a paper feeding mechanism, the combination of a roller, means for rotating it, means for supporting paper in engagement with the roller near one end of the paper, a spring-pressed roller bearing against the other side of the paper opposite the roller, and a shield against which the sheets of paper nearest the roller may be fed by rotation of the roller and means adjoining the shield for stopping the sheets back of the first few.

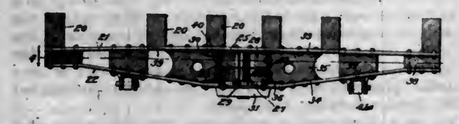
[Claims 6 to 35 not printed in the Gazette.]

1,013,309. INDICATOR FOR LIQUID-CONTAINERS. FREDERICK L. PFAHL, Akron, Ohio. Filed Feb. 6, 1911. Serial No. 606,947.



In an indicator of the character described, the construction of a cylinder, a dial supporting plate closing the upper end of the latter, a tube secured to and depending from said plate, a float slidably located in the tube, means for preventing rotation of the float, a shaft journaled in the supporting plate and lower end of the tube and passing through the float and coöperating therewith, whereby the shaft is rotated during the vertical travel of the float, a pointer carried by the upper projecting end of the shaft, a transparent cover for said cylinder, a liquid fluid tank, a pipe connecting the bottom of the latter with the bottom of the cylinder, and an air pipe leading from the top of the tank and communicating with the top of the cylinder.

1,013,310. RAILWAY-CAR. EDWARD POSSON, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,461.



1. In a car, a center sill comprising channel beams extending continuously throughout the length of the car, a body bolster comprising top and bottom members extending continuously from one side of the car to the other, and passing respectively above and below the center sill, cast metal spacing blocks adjacent to the center sill channel beams between the bolster members, and double channel beam sections acting as spacing blocks between the extreme ends of the bolster members.

2. In a car, the combination of a body bolster and longitudinal floor beams, the top of the body bolster sloping downward toward each end and the intermediate floor beams being notched on their under sides to conform to the varying height of the top surface of the bolster.

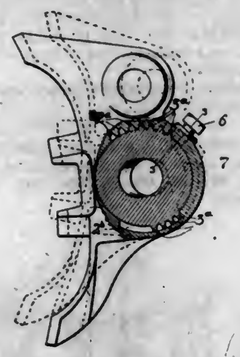
3. In a car, a center sill comprising two parallel channel beams, a body bolster comprising members extending transversely above and below the channel beams, a cast iron filler lying between and adjacent to both the said bolster members and both the said channel beams and riveted to all of them, short filler blocks of channel shape but having the flanges convergent toward the outer end, said blocks lying intermediate the center sill and bolster ends, short channel beam sections acting as spacers between the extreme ends of the said bolster members, said filler having a king bolt socket, and the bolster members having holes registering with said socket.

4. In a car, a channel needle beam having an angle iron riveted to its upper edge with one flange thereof opposite a flange of the needle beam, and a floor beam resting on the opposed flanges.

5. In a car, a channel needle beam, a strut depending therefrom and adapted to be riveted to the web and one of the flanges of the needle beam, and a truss rod passing under the strut.

[Claim 6 not printed in the Gazette.]

1,013,311. ADJUSTABLE BRAKE-HEAD. EDWARD D. PUGH, Cleveland, Ohio, assignor to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. Filed May 28, 1910. Serial No. 564,012.



1. A railway brake head and a member upon which it is mounted, having an adjusting bearing which permits of relative axial movement and relative rotary adjustment between them, and an interlocking bearing by which the parts are brought into angularly fixed engagement by said axial movement.

2. A railway brake head and a member upon which it is mounted, having both adjusting and interlocking bearings, the adjusting bearing being established by a partial relative axial movement between the parts and the interlocking bearing being established by a further axial movement between the parts.

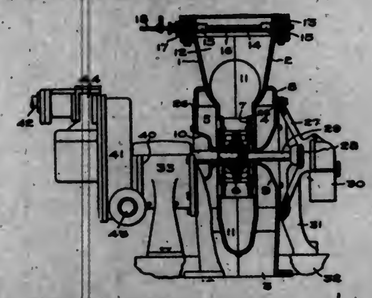
3. A railway brake head, and a part upon which it is mounted, constructed with a rotary bearing and a bearing interlocking against rotary movement, said parts being assembled by successive axial movements; the rotary bearing being located to bring the brake shoe opposite the periphery of the wheel without engagement of the interlocking bearing, and said interlocking bearing being beyond the rotary bearing in the direction of assembling and being constructed to permit of assembling.

4. In a railway brake, the combination of the beam member having a cylindrical portion formed with a plurality of segmental interlocking elements, and a brake head having a cylindrical bearing surface and interlocking elements complementary to said elements on the beam member, said cylindrical bearing surfaces and interlocking elements having dimensions permitting of substantially slight relative axial movement between the parts to effect adjustment and locking engagement thereof.

5. In a railway brake, the combination of the brake-beam member having the cylindrical portion and a segmental series of teeth and a brake head having a cylindrical bearing adapted to receive the cylindrical portion of the brake-beam member and having teeth adapted to engage the teeth thereon; the teeth on the respective members being located to come into engagement only when the brake head is seated upon the brake beam member.

[Claim 6 not printed in the Gazette.]

1,013,312. CENTRIFUGAL COMPRESSOR AND PUMP. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 22, 1908. Serial No. 434,241.



1. In combination, a motor and its casing, an impeller ands its casing, a member located between and uniting the casings, a two-point support for the member, and a second member attached to the impeller casing which rests on the foundation at one point only.

2. In an apparatus of the character described, the combination of a motor, a rotor driven thereby, a casing for the rotor, a shaft common to the motor and rotor, a support which is located between and unites the motor and casing and which rests on the foundation at two points, a bearing for the shaft carried by the support, a second bearing for the shaft secured to the casing, and a support for the second bearing and casing that rests on the foundation at one point only.

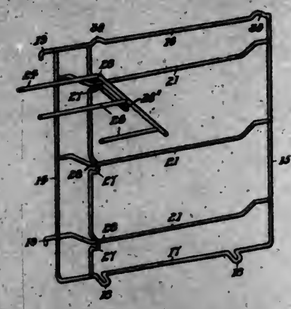
3. In an apparatus of the character described, the combination of a rotating element, a casing therefor, a spider attached to one side of the casing and provided with a single foot adapted to rest on a foundation at one point only, a supporting member attached to the other side of the casing and having feet adapted to rest on a foundation at two points only, a driving motor which is supported solely by said member, a shaft common to said element and motor, and a bearing for the shaft carried by said member.

4. In an apparatus of the character described, the combination of a rotating element, a casing therefor, a spider attached to one side of the casing and provided with a single foot adapted to rest on a foundation at one point only, a supporting member attached to the other side of the casing and having feet adapted to rest on a foundation at two points only, and a motor for driving the element which is attached to the other side of and which is supported solely by said member.

5. In an apparatus of the character described, the combination of an impellet, a casing therefor, having an inlet and an outlet, supports located on opposite sides of the casing and secured thereto, a single foot for one of the supports located in line with the axis of the impeller, a pair of feet for the other support which are situated on opposite sides of the said axis and at equal distances therefrom, and an overhung motor comprising a casing and a rotor, said casing being attached to the second support and said rotor being arranged to partly balance the weight of the impeller.

[Claims 6 to 12 not printed in the Gazette.]

1,013,313. OVEN, REFRIGERATOR, AND SIMILAR RECEPTACLE. ERNEST RICHARDSON, Beaver Falls, Pa. Filed July 20, 1911. Serial No. 639,637.



1. In an oven, refrigerator, or the like, a receptacle, a pair of opposing vertical wire frames, each frame having opposing horizontal shelf-supporting wires connected thereto and projecting into the receptacle, a shelf slidable on the opposing wires and having at its rear portion an outwardly projecting finger adapted to extend below the adjacent shelf-supporting wire, a vertical support for the forward end of the shelf-supporting wires having a stop in the path of the shelf when drawn outwardly with the finger beneath the said wire, and means for securing the frames to the interior walls of the receptacle.

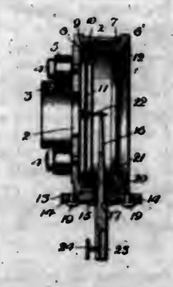
2. In an oven, refrigerator, or the like, a receptacle, a pair of opposing vertical wire frames, each frame having opposing horizontal shelf-supporting wires connected thereto and projecting into the receptacle, a shelf slidable on the opposing wires and having at its rear portion an outwardly projecting finger adapted to extend below the adjacent shelf-supporting wire, a vertical support for the forward end of the shelf-supporting wires having a stop in the path of the shelf when drawn outwardly with the finger beneath the said wire, hinge-eyes secured to opposing interior walls of the receptacle, and wire hinge-extensions on the frames coöperating with the hinge-eyes.

3. In an oven, refrigerator, or like receptacle, a shelf-support composed of a wire frame, having vertical side and horizontal top and bottom members, horizontal shelf-supporting wires having their ends attached to the said vertical members and their intermediate portions extending inwardly parallel with the said top and bottom members, means supporting the said inwardly extending portions of the shelf-supporting wires, and shelves slidable on the said wires and having fingers lying normally back of the said intermediate portions of the wires and adapted to ride beneath the said wires when the shelves are drawn forwardly.

4. In an oven, refrigerator, or like receptacle, a shelf-support composed of a wire frame, having vertical side and horizontal top and bottom members, horizontal shelf-supporting wires having their ends attached to the said vertical members and their intermediate portions extending inwardly parallel with the said top and bottom members, means supporting the said inwardly extending portions of the shelf-supporting wires, and shelves slidable on the said wires and having fingers adapted to ride beneath the said wires when the shelves are drawn forwardly.

5. In an oven, refrigerator, or like receptacle, a shelf-support composed of a wire frame, having vertical side and horizontal top and bottom members, horizontal shelf-supporting wires having their ends attached to the said vertical members and their intermediate portions extending inwardly parallel with the said top and bottom members, means supporting the said inwardly extending portions of the shelf-supporting wires, shelves slidable on the said wires and having fingers adapted to ride beneath the said wires when the shelves are drawn forwardly, and stops on the forward portion of the frame located so as to be in the path of the said fingers when the frame is moved forwardly.

1,013,314. SOUND-BOX FOR TALKING-MACHINES. BENTLEY L. RINEHART, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Dec. 22, 1905. Serial No. 292,918.



1. In a sound box for talking machines, the combination of a stylus bar, a spring support therefor and a spring supporting plate, said spring and said plate having holes near the ends thereof, the distance between the holes in the spring being normally greater than that between the holes in the plate, and means for securing said spring and said plate with the holes in the spring registering with the holes in the plate.

2. In a sound box for talking machines, the combination with a stylus bar, of a spring supporting plate extending parallel with the axis of said sound box, and a recurved spring secured at its ends to said supporting plate and capable of being variably buckled centrally away from its line of support and having its longitudinal axis perpendicular to the plane of the diaphragm for supporting said stylus bar.

3. In a sound box for talking machines, the combination with a diaphragm, of a stylus bar, a buckled spring upon which said bar is mounted, the longitudinal axis of the said spring being perpendicular to the plane of the diaphragm, and a support for said spring, said spring being buckled centrally away from said support and adjustable to vary its tensibility.

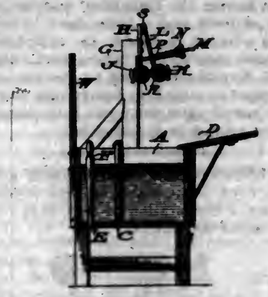
4. In a sound box for talking machines the combination with a stylus bar, of a spring supporting plate extending parallel to the axis of the sound box, and a recurved spring secured at its ends to said supporting plate and capable of being variably buckled centrally away from its line of support, and having its longitudinal axis perpendicular to the plane of the diaphragm, for supporting the stylus bar.

5. In a sound box for talking machines, the combination of a stylus bar, a spring support therefor, a spring supporting plate, said spring being longer than said plate, and means for securing the spring to the plate with their ends in alinement, the said spring being buckled centrally away from the line between the points at which it is secured to said plate, said securing means being adjustable to vary the tensibility of said spring.

[Claims 6 to 9 not printed in the Gazette.]

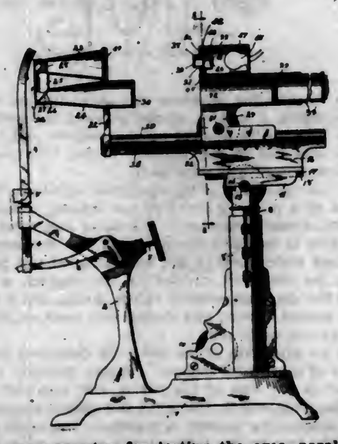
1,013,315. MACHINE FOR CLEARING HAT-BODIES. ARTHUR ROELOFS, Philadelphia, Pa. Filed Apr. 23, 1910. Serial No. 557,204.

In a machine for clearing hats, a vat, standards rising therefrom, a pair of hangers for each standard one of each pair of hangers being stationarily secured to its standard and the other hanger being loosely connected with its mate, means passed through said hangers intermediate their ends and on which the loose hangers are suspended, elastic buffers interposed between the upper ends of the pairs of hangers, the lower ends of said hangers having segmental recesses, rollers having their journals removably mounted in said recesses, a spring tending to hold the lower ends of said hangers pressed toward each other, intermeshing gears on the outer ends of the journals of said



rollers, and means for imparting motion to one of said rollers.

1,013,316. MACHINE FOR EXAMINING AND TESTING THE EYES. GEORGE A. ROGERS, Chicago, Ill., assignor to F. A. Hardy & Company, a Corporation of Illinois. Filed Feb. 20, 1911. Serial No. 609,656.



1. In an apparatus for testing the eyes, parallel lens systems comprising lenses of equal focal length, reflectors for reflecting the rays of one system into coincidence with the axis of the other, said systems being arranged to have a common point of principal focus, an aperture in one of said reflectors which lies in the axis of both of said systems, a single carriage disposed in the separate portions of the axes of said systems, means disposed upon said carriage for illuminating one of said systems, and other means also carried by said carriage for observing the image formed by the other of said systems.

2. In an apparatus for testing the eyes, two lens systems having a common point of principal focus, a mirror disposed at a point of coincidence in said systems, an aperture in said mirror for permitting rays from the point of common focus to pass into one of said systems, means for illuminating one of said systems, means for observing the image projected in the other of said systems, and a single carriage for supporting said two last mentioned means.

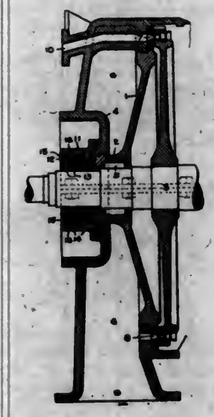
3. An optical instrument comprising two lens systems having a common point of principal focus, a carriage, means carried thereby for projecting light from a target through one of said systems to said common focus, and means also disposed upon said carriage for observing the image formed by the other of said systems.

4. An optical instrument comprising two lens systems of equal focal length having a common point of principal focus, means for projecting light from an object through one of said systems to said point of common focus, and means for observing the image formed by the other of said systems from the rays proceeding from said point of common focus.

5. An optical instrument comprising two lens systems of equal focal length having a common point of principal focus, means for projecting light from an object through one of said systems to said point of common focus, means for observing the image formed by the other of said systems from the rays proceeding from said point of common focus, and a single means for adjusting said projecting and observing means.

[Claims 6 to 13 not printed in the Gazette.]

1,013,317. ELASTIC-FLUID TURBINE. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Apr. 1, 1911. Serial No. 618,262.



1. In an elastic-fluid turbine, the combination of a casing, a rotor, and a diaphragm located between a wall of the casing and the rotor, said diaphragm making a fluid tight joint with the casing and coöperating therewith to form a steam chest.

2. In an elastic-fluid turbine, the combination of a divided casing, a rotor, a diaphragm located between a wall of the casing and the rotor, a hub-like member carried by the diaphragm that is seated fluid tight between the parts of the casing, the wall of the casing and the diaphragm forming a steam chest.

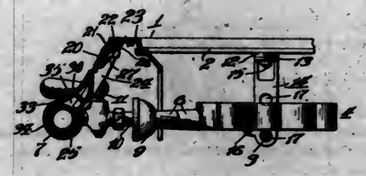
3. In an elastic-fluid turbine, the combination of a divided casing, a rotor, a diaphragm located between a wall of the casing and the rotor, a hub-like member carried by the diaphragm that is seated fluid tight between the parts of the casing, the wall of the casing and the diaphragm forming a steam chest, and a packing carried by the casing for preventing the admission of air to the chamber in the casing containing the rotor or the escape of steam.

4. In a mixed-pressure turbine, the combination of a casing, one or more high pressure fluid discharging devices, one or more low pressure fluid discharging devices, a rotor arranged to receive fluid from both sources, and a partition located between a wall of the casing and the rotor, said partition and wall coöperating to form a low pressure steam chest with the central portion of the partition being connected fluid tight with the casing.

5. In a mixed-pressure turbine, the combination of a casing, one or more high pressure fluid discharging devices, one or more low pressure fluid discharging devices, a rotor arranged to receive fluid from both sources, a partition located between a wall of the casing and the rotor, said partition and wall coöperating to form a low pressure steam chest with the central portion of the partition being connected fluid tight with the casing, and an external packing carried by the casing which prevents the entrance of air to or the escape of steam from the rotor chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,013,318. GAS-STOVE. FREDERICK SATTLER, Belleville, Ill. Filed Feb. 17, 1911. Serial No. 609,093.



1. The combination with a stove, of a burner, a manifold connected up with said burner, means for supporting said burner, and separate means for supporting said manifold, each of said means being adjustable independently of the other to vary the relative elevation of the burner and manifold in said stove.

2. In a gas stove, the combination with the stove, of a burner, a rod supporting said burner, and brackets on opposite walls of said stove, said brackets being provided with sockets at different elevations for the reception of said rod.

3. The combination with a stove provided with a top flange, of a burner, a rod supporting said burner, brackets on opposite walls of said stove, said brackets being provided with vertically spaced sockets for releasably supporting said rod at different elevations, a manifold, and an adjustable bracket support for said manifold, depending from said top flange.

4. The combination with a stove, of a manifold support, a removable cover cap adapted to clamp a manifold to said support, and means for adjustably securing said support to a rigid portion of the stove whereby the position of the manifold can be changed without loosening said cover cap.

5. In a gas stove, the combination with a top frame provided with a flange, of a gas manifold, a pair of clamping members engaging said manifold, and means adjustably supporting one of said members from said flange, whereby the height of said manifold can be changed without loosening the clamping engagement of said members on the manifold.

[Claims 6 to 8 not printed in the Gazette.]

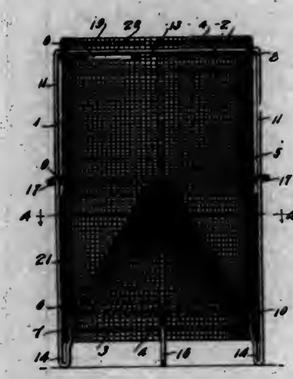
1,018,319. MITER-BOX. EDMUND A. SCHADE and CHRISTIAN BODMER, New Britain, Conn., assignors to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 18, 1911. Serial No. 644,875.

An adjusting device for miter box saw guides and carriers comprising a foot piece having a transverse slot in the upper side thereof forming two clamping walls, a block arranged in said slot and bearing against said clamping walls, said block being spaced apart from the bottom of said slot, a combined clamping and pivot screw passing freely through one of said clamping walls and through said block and screwing into the other clamping wall, an

adjusting screw on each side of said combined pivot and clamping screw, said adjusting screws operating to tilt

said block in said foot piece to the desired degree, and saw carrier and guide mechanism carried by said block.

1,013,320. FLY-TRAP. DAVID H. SCHMIDT, Stewartsville, Mo. Filed Aug. 14, 1911. Serial No. 643,871.

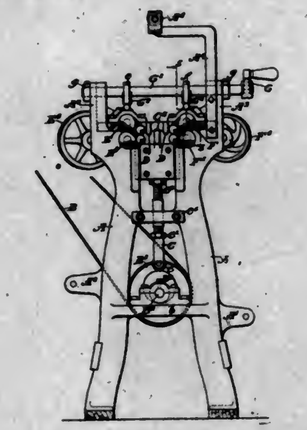


1. In a fly trap, a body portion having a bottom extending upwardly thereinto to form an entrance cone and its top provided with an opening having a closure, said bottom having an inlet opening in its apex, a series of bands arranged around the body of the trap, a series of supporting standards secured to the sides of the trap and to said bands, supporting feet formed on the lower ends of said standards, a cross bar formed integral with the upper ends of two of said standards and extending across the top of the trap in engagement with said closure to hold the closure in operative position.

2. In a fly trap, a body portion comprising wire netting sides, a wire netting top secured to the upper edges of said sides, a conically shaped bottom arranged in and secured to the lower edges of the sides, said bottom having in its apex an inlet opening and said top having therein a discharge opening, a door to normally close said discharge opening, a supporting frame comprising a series of bands arranged around the body of the trap, a series of supporting standards secured to the sides of the trap and to said bands, supporting feet formed on the lower ends of said standards, a cross bar formed integral with the upper ends of two of said standards and extending across the top of the trap, said bar forming means for holding the door of the discharge opening in place.

3. In a fly-trap, a body portion comprising wire netting sides, top and conically shaped bottom, said sides, top and bottom having their edges formed to provide an interlocking engagement, means to secure the interlocked edges of said parts together, a wire supporting frame, said frame comprising upper and intermediate rings arranged around the outer side of the trap and a lower ring arranged within the body of the trap between the lower edge thereof and the adjacent side of the conically shaped bottom thereby forming a filling for the space between said side and cone shaped bottom of the trap, a series of standards secured to said rings and the adjacent sides of the trap, said standards having their lower ends bent upwardly and into engagement with the joined edges of the bottom and side of the trap, said bent lower ends of the standards forming supporting feet, and a band adapted to be engaged with the lower portion of the body of the trap beneath the standard, whereby said lower portion of the trap is darkened.

1,013,321. HAT-BRIM-STRETCHING MACHINE. GEORGE SCHOFIELD, Brooklyn, N. Y. Filed June 17, 1909. Serial No. 502,653.



1. In a machine for stretching felt the combination, with means for applying tension to the felt, such means intermittently actuated to feed the felt, of means for stretching the felt, such means acting during the intermissions of the feed.

2. In a machine for stretching felt the combination, with means for applying tension to the felt, of a plunger for stretching the felt, and means for actuating the plunger while the felt is held taut.

3. In a machine for stretching felt the combination, with means for applying tension to the felt, such means intermittently actuated to feed the felt, of a plunger for stretching the felt, and means for actuating the plunger; such means operating the plunger to stretch the felt during the intermissions of the feed.

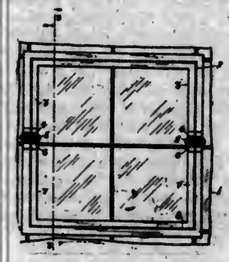
4. In a machine for stretching felt the combination of sets of rolls and a stretching device interposed between them, with means for actuating the rolls and the stretching device.

5. In a machine for stretching felt the combination of two sets of rolls, one set rotating faster than the other, a stretching device between the sets, and means for actuating the rolls and the stretching device.

[Claims 6 to 21 not printed in the Gazette.]

1,013,322. VENTILATOR. FREDERICK J. SCHUMACHER, San Francisco, Cal. Filed Mar. 2, 1911. Serial No. 611,933.

In combination with a ventilator sash, a ventilator frame, the outer surfaces of the upper halves of the vertical sides of which are extended inwardly or over the corresponding marginal portions of the ventilator sash, the outer surfaces of the lower halves of the vertical sides of the ventilator sash being extended outwardly or over



the corresponding portions of the ventilator frame, eyes or bearings secured respectively to the outer surfaces of said frame and sash at respectively the lowermost and uppermost portions of said extensions therefrom, and link-shaped loops in said eyes or bearings.

1,013,323. WATER-TOWER. FREDERIC SCOTT SEAGRAVE, Detroit, Mich. Filed July 7, 1904. Serial No. 215,664.

1. The combination with a wheeled fire apparatus having an elongated horizontal carrying portion, of a base adjustably connected to said elongated carrier, a branch coupler secured upon said base, a standpipe secured to said branch coupler and projecting vertically therefrom, a nozzle secured to the upper end of said standpipe, and means for securing said base in any position to which it may be moved along the said elongated carrier.

2. In a turret having a standpipe, and a nozzle movably connected to the upper end thereof, of a turnbuckle, and an operative connection between said turnbuckle and standpipe and nozzle, for the purpose of adjusting said nozzle to different angular positions.

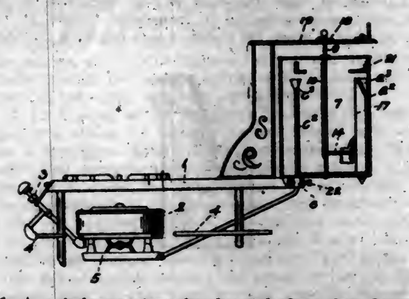
3. In a turret having a standpipe and a nozzle movably connected to the upper end thereof, of a turnbuckle, a pair of screws pivotally connected at one end to the standpipe and nozzle respectively, and having their opposite ends inserted into and operatively connected to the turnbuckle, said screws being oppositely threaded.

4. A water tower comprising a truck, a table upon the truck, an angle iron structural member of triangular cross-section tapering to its lower end, a diagonally downwardly extending integral portion of the structural member pivoted to the table in close proximity thereto; a water conductor carried by the structural member; and means for raising and lowering the tower on its pivot.

5. The combination with a base and a member of a water tower pivotally mounted thereon, of a cylinder carried by the member, a piston in the cylinder, a spring also in the cylinder such spring being located between the piston and the outer end of the cylinder, a piston rod connected to the piston at one end and to the base at its opposite end, the said spring being under compression when the tower is down and adapted to exert a raising force upon the said tower by its expansion.

[Claims 6 to 15 not printed in the Gazette.]

1,013,324. PRIMING-FLUID TANK. LOUIS A. SHERMAN, Detroit, Mich. Filed Sept. 11, 1911. Serial No. 648,791.



1. A priming system for heavy-hydrocarbon burners, having in combination an auxiliary burner, a supply pipe therefor, a tank having a conduit adapted to fit in the supply pipe and removable from such connection by merely lifting, and means for feeding the contents of the tank to the conduit in measured quantities only, substantially as described.

2. A priming system for heavy-hydrocarbon burners, having in combination, an auxiliary burner, a supply pipe therefor, a tank, a conduit leading therefrom, adapted to set within the supply-pipe and opening into the interior of the tank near the top thereof, and means for elevating a measured quantity of the liquid to the conduit opening and draining it therein, substantially as described.

3. A priming system for heavy-hydrocarbon burners, having in combination, a plurality of supply pipes, a tank, conduits leading therefrom adapted to set within the supply pipes and opening into the interior of the tank near the top thereof, and means for elevating a measured quantity of the liquid to any one of the conduits and draining it into such one, substantially as described.

4. In a priming system for heavy-hydrocarbon burners, the combination of a removable tank, a conduit leading thereinto and terminating near the top, a guide rod, a tubular shaft vertically slidable thereon, a pivotally mounted bucket supported on the shaft, a tripper to tip the bucket, when elevated, over the upper end of the conduit, and means to prevent such tipping until the upper end is reached, substantially as described.

5. In a priming system for heavy-hydrocarbon burners, the combination of a removable tank, a conduit leading thereinto and terminating near the top, a guide rod, a tubular shaft vertically slidable thereon, a pivotally mounted bucket supported on a shaft, a tripper to tip the bucket, when elevated, over the upper end of the conduit, means to prevent such tipping until the upper end is reached, a guiding fin on said shaft and a strip across said tank provided with guide slots through which the guiding fin is adapted to slide, thereby guiding the bucket to the desired conduit by sliding the fin through the slot corresponding to the conduit that is desired to be used substantially as described.

1,013,325. POWDER-RECEPTACLE. FLOYD W. SMITH, Englewood, Ohio. Filed Apr. 3, 1911. Serial No. 618,518.

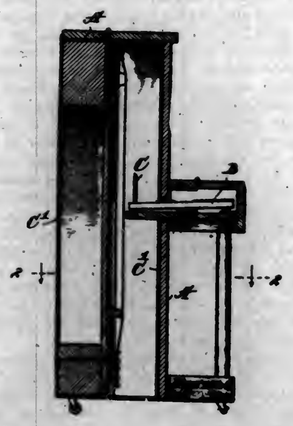
1. A powder receptacle having a compartment inclosed at its top by an inner inclined wall extending from the back to the front thereof, the forward portion of said wall having a cavity or trough extending transversely of the receptacle, and an aperture in the upper rearward portion of said wall, an upper stationary wall extending from the top of the receptacle to said trough and providing a powder delivery compartment, and a chute for directing the powder to said trough from said compartment, and a cover conforming to the inclination and form of said upper stationary wall and said trough, substantially as specified.

2. A powder receptacle provided with separate com-

partments adapted to contain tooth powder and a tooth brush respectively, the top of one of said compartments being extended from the back of the receptacle to the front, and terminating in a transverse trough at the front at a point below the union of said top with the back,

said top being provided with an aperture at its highest point, a delivery chamber above said top communicating with the trough, and a cover closing the upper portion of the receptacle including the trough, substantially as specified.

1,013,326. PIANO-CASE. J CLYDE SMITH, Chicago, Ill. Filed Aug. 3, 1908. Serial No. 446,605.



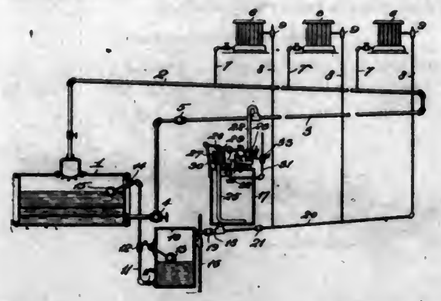
An upright piano casing having an air tight and moisture proof fabric lining secured to the inside of the front and top thereof and covering the back and bottom of the casing, said lining being secured to the casing whereby the humidity therein is permanently maintained at practically the same degree, substantially as described.

1,013,327. ELECTRIC HEATER. ROSE SMITH, Cleveland, Ohio. Filed Sept. 13, 1911. Serial No. 649,043.

1. An electric heater, comprising a suitable casing having a closed end with a light passage therein and an arcuate slot concentric thereof, a removable cap plug of insulating material mounted in the open end of said casing, a shutter carried by the closed end of the casing and provided with a passage movable into and out of matching relation with the passage of the closed end of the casing, a lamp socket for an incandescent lamp carried upon the inner face of the removable plug, a switch operating means for the lamp disposed upon the outer face of said cap plug.

2. An electric heater, comprising a suitable casing having a closed end with a light passage therein and an arcuate slot concentric thereof, a removable cap plug of insulating material mounted in the open end of said casing, a shutter carried by the closed end of the casing and provided with a passage movable into and out of matching relation with the passage of the closed end of the casing, a lamp socket for an incandescent lamp carried upon the inner face of the removable plug, a switch operating means for the lamp disposed upon the outer face of said cap plug, and a button carried by the shutter and disposed through the arcuate slot in the closed end of the casing to permit of the oscillation of the shutter within the casing.

1,013,328. STEAM-HEATING SYSTEM. JAMES L. SPARKS and EDWARD R. EDDINS, St. Louis, Mo., assignors to Automatic Vacuum Pump Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 14, 1908. Serial No. 427,056.



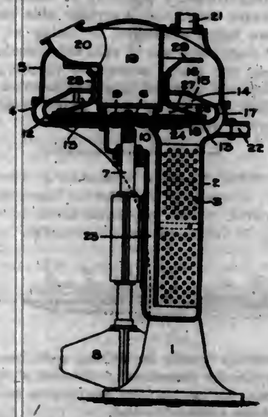
1. In a heating system employing a heat generator and radiators, the combination with the supply and return pipes connecting the generator and the radiators, of air pipes leading from the radiators, check valves in said pipes, a vacuum tank to which the air pipes are connected, a tubular connection between the return pipe and the vacuum tank, a valve located in said tubular connection, a thermostat located in the path of travel of the heating medium discharging from the said tubular connection and in the path of travel of the air discharging from the air pipe and alternately actuated by said heating medium and air for intermittently actuating the valve, an open water tank, a connection from the vacuum tank to the water tank, a check valve located in said connection, a tubular connection from the water tank to the heating medium generator and a non-return valve in said last mentioned connection.

2. In a heating system employing a heat generator and radiators the combination with the supply and return pipes connecting the generator and the radiators, of air pipes leading from the radiators, check valves in said pipes, a vacuum tank to which the air pipes are connected, a tubular connection between the return pipe and the vacuum tank, a valve located in said tubular connection, a thermostat located in the path of travel of the heating medium discharging from the said tubular connection and in the path of travel of the air discharging from the air pipe and alternately actuated by said heating medium and air, for intermittently actuating the valve, an open water tank, a connection from the vacuum tank to the water tank, a check valve located in said connection, a tubular connection from the water tank to the heating medium generator, and valves located in the last mentioned tubular connection for controlling the passage of water from the water tank into the heating medium generator.

3. In a heating system employing a heat generator and radiators, the combination with the supply and return pipes connecting the generator and the radiators, of air pipes leading from the radiators, check valves in said pipes, a vacuum tank to which the air pipes are connected, a tubular connection between the return pipe and the vacuum tank, a valve located in said tubular connection, a thermostat located in the path of travel of the heating medium discharging from the said tubular connection and in the path of travel of the air discharging from the air pipe and alternately actuated by the heating medium and air for intermittently actuating the valve, a water tank, a connection from the vacuum tank to the water tank, a check valve located in said connection from the water tank to the heating medium generator, and a pipe forming connection between said water tank and atmosphere.

4. In a heating system employing a heat generator and radiators, the combination with the supply and return pipes connecting the generator and the radiators, of air pipes leading from the radiators, check valves in said pipes, a vacuum tank to which the air pipes are connected, a tubular connection between the return pipe and the vacuum tank, a valve located in said tubular connection, a thermostat located in the path of travel of the heating medium discharging from said tubular connection and in the path of travel of the air discharging from the air pipe and alternately actuated by the heating medium and air for intermittently actuating the valve, a water tank, a connection from the vacuum tank to the water tank, a check valve located in said connection, a tubular connection from the water tank to the heating medium generator, valves located in the last mentioned tubular connection for controlling the passage of water from the water tank into the heating medium generator and an open ended air pipe forming communication between the water tank and atmosphere.

1,013,329. CENTRIFUGAL PUMP OR COMPRESSOR. FRITZ STROHBACH, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 19, 1911. Serial No. 634,066.



1. In a pump of the character described, the combination of a casing, an impeller located therein, an annulus surrounding the impeller and receiving the fluid discharged thereby, a chamber communicating with the inlet side of the annulus, a separating chamber in which the gas is separated from the mixture discharged by the annulus, a cooler that receives liquid mixed with some gas from said chamber and after cooling the liquid delivers it to the suction side of the impeller, and conduit means which receive gas from the liquid after it enters the cooler and conveys it to said separating chamber.

2. In a pump of the character described, the combination of a casing, an impeller located therein, an annulus surrounding the impeller and receiving the fluid discharged thereby, a chamber communicating with inlet side of the annulus, a separating chamber in which gas is separated from the mixture discharged by the annulus, a cooler that receives liquid mixed with some gas from the chamber and after cooling the liquid delivers it to the suction side of the impeller, and a conduit which extends through the annulus and establishes communication between the cooler and said separating chamber.

3. In a pump of the character described, the combination of a casing, an impeller located therein and occupying a horizontal plane, an annulus surrounding the impeller and receiving the fluid discharged thereby, a chamber located above the impeller and communicating with the inlet side of the annulus, a separating chamber located above the annulus in which gas separates from the mixture discharged by the annulus, a cooler located below the impeller and annulus which receives the liquid mixed with some gas and after cooling the liquid delivers it to the suction side of the impeller, and conduit means that extend through the annulus and establish communication between a chamber in the upper end of the said cooler and said separating chamber.

4. In a pump of the character described, the combination of an upright column, a cooler therein, an impeller that is horizontally disposed above the cooler and receives liquid therefrom, a casing for the impeller supported by the column, an annulus that surrounds the impeller and receives a mixture of liquid and gas therefrom, a gas containing chamber which communicates with the inlet side of the annulus, a separating chamber that receives the fluid mixture from the annulus, a conduit conveying liquid from the chamber to the cooler, a passage extending through the annulus from the cooler for conveying gas, and a shield located above the annulus and extending above the level of the fluid mixture in the separating chamber for preventing gas from the cooler mixing with the liquid in the separating chamber.

5. In a pump of the character described, the combination of an upright column, a cooler therein, an impeller that is horizontally disposed above the cooler and receives liquid therefrom, a casing for the impeller supported by the column, an annulus that surrounds the impeller and receives a mixture of liquid and gas therefrom, an annular gas containing chamber which communicates with the inlet side of the annulus, a separating chamber that receives a fluid mixture from the annulus, a conduit conveying liquid from the chamber to the cooler, a passage that extends through the annulus for establishing communication between a chamber at the top of the cooler and the separating chamber, and an annular shield mounted above the annulus and surrounding the gas chamber for conveying air from said passage to a point above the level of the liquid in the separating chamber.

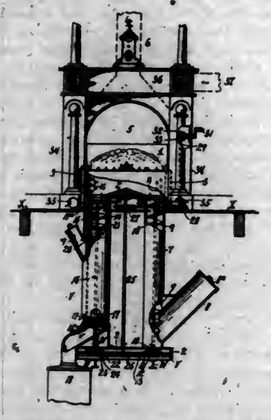
1,013,330. OPEN GRATE. WALTER THOMAS, Vancouver, British Columbia, Canada. Filed Jan. 28, 1910. Serial No. 540,561.

1. An open grate or fire basket for a chimney opening, having connecting with its bottom a fuel supply tube and mechanical means for feeding fuel therethrough, and an ash discharge tube connecting with the bottom and having independent means for controlling the discharge of ashes in the desired relation to the feed of coal in the fuel supply tube, substantially as described.

2. An open grate or fire basket for a chimney opening, having a bottom fuel feed tube and a screw conveyer therein, and an ash discharge tube opening into the bottom and having a screw conveyer, operating mechanism for the conveyers, the conveyer in the ash tube having separate operating mechanism to control the discharge of ashes and thus regulate the combustion of fuel in the grate, substantially as described.

3. The combination with a fire box or basket, of a depending fuel supply tube opening into the bottom at one side or end, a conveyer for feeding or forcing fuel up through the tube, an ash discharge tube connecting with the bottom at the opposite side or end and a screw con-

veyer for discharging ashes down through said tube, and separately operative mechanism for said screw conveyers for controlling the feed of coal and independently the discharge of ash and thereby regulating the combustion in the grate, substantially as described.

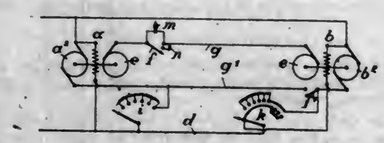


4. The combination with a fire box or basket for a chimney opening, of a depending fuel supply tube connecting with the bottom and having a fuel feed hopper, a depending ash discharge tube also connecting with the bottom of the basket, screw conveyers in said fuel and ash tubes, and gear wheels at their lower ends, and operating gearing and a shaft connecting with said wheels, and independent means connecting the gear wheels with the conveyer shafts for controlling the feed of fuel and discharge of ashes and thereby regulating the fire.

5. The combination with a fire box or basket, of means for mechanically feeding it with fuel from below upward, a depending ash discharge tube connecting with its bottom, a heating jacket surrounding the ash tube and fire box and having air openings communicating with the box for supplying hot air to the fuel.

[Claim 6 not printed in the Gazette.]

1,013,331. DEVICE FOR CONTROLLING THE SYNCHRONISM OF TWO MOTORS. FRANZ EWALD THORMEYER, Hamburg, Germany. Filed Apr. 12, 1911. Serial No. 620,678.



1. In a device of the character described, the combination with the main conductors, and a plurality of motors in parallel connection therewith, of a connecting conductor between the armature of the motors, means to control the conductivity of said connecting conductor and a resistance between the motors and one of the main conductors adapted to control the speed of one motor independent of the other.

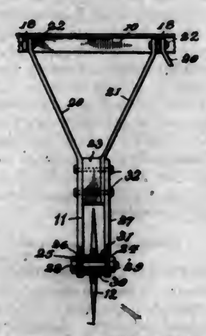
2. In a device of the character described, the combination with the main conductors, and a plurality of motors in parallel connection therewith, of a connecting conductor between the armature of the motors, and means to indicate the number of revolutions which one motor makes more than the other in a certain period of time.

3. In a device of the character described, the combination with the main conductors, and a plurality of motors in parallel connection therewith, of a connecting conductor between the armature of the motors, a contact breaker in the connecting conductor, a signal in the latter adapted to indicate differences of tension and to be short circuited by the contact breaker.

4. In a device of the character described, the combination with the main conductors, and a plurality of motors in parallel connection therewith, of a connecting conductor between the armature of the motors, and a contact breaker in the connection conductor, comprising a circular scale and hand to indicate the number of revolutions which one motor makes more than the other in a certain period of time.

5. In a device of the character described, the combination with the main conductors, and a plurality of motors in parallel connection therewith, of a connecting conductor between the armature of the motors, a contact breaker in the connecting conductor, and a resistance in the latter adapted to be switched in or out.

1,013,332. SOD-CUTTER. WILLIAM TORRANCE, Abbnott, Saskatchewan, Canada. Filed May 7, 1910. Serial No. 560,087.



A supporting frame, a plurality of brackets each comprising a center block and diverging side members, said side members being connected to swing at their upper ends to said frame and one of said side members being extended beyond the block, means for coupling a colter to said extended side member, a guard member, and means for detachably connecting said guard member to said bracket members and block.

1,013,333. FISHING-ROD. CHARLES A. TREDWELL, Bristol, Conn., assignor to The Horton Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Aug. 24, 1911. Serial No. 645,715.

1. A reversible handle for fishing rods, having a socket at each end for the reception of the end of the rod and a sliding closure for each socket adapted to be displaced by the entry of the end of the rod.

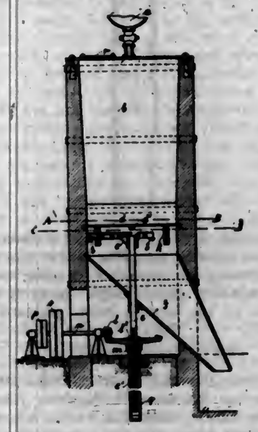
2. A reversible handle for fishing rods having a socket at each end for the reception of the end of the rod, a sliding closure in each socket, and an operating connection between the closures whereby the displacement of one closure by the entry of the rod moves the other closure into position to close its socket.

3. A reversible handle for fishing rods having a socket at each end for the reception of the end of the rod, a closed end ferrule slidably mounted in each socket to form a closure, and a push connection intermediate said ferrules whereby the entry of the rod in one socket moves the ferrule in the other socket out into position to close the socket.

4. A reversible handle for fishing rods having an open ferrule at each end forming rod sockets, a closed ferrule in each open ferrule, each movable into position to close its ferrule, and a push rod mounted within the handle and extending into the ferrules, whereby the displacement of one closed ferrule by the entry of the fishing rod will displace the other closed ferrule to close the socket at that end of the handle.

5. A reversible handle for fishing rods having a socket at each end for the end of the fishing rod, a closure movable longitudinally in each socket, a connection intermediate the closures whereby when one is pushed inwardly the other will be pushed outwardly and frictional means for holding the closures against movement in the sockets.

1,013,334. SUPERPHOSPHATE-CHAMBER AND MEANS FOR EMPTYING SAME. JOHANN FRIEDRICH CARL MARTIN TRÖBS, Harburg-on-the-Elbe, Germany, assignor to Heinrich Freudenthal, Hamburg, Germany. Filed Aug. 11, 1910. Serial No. 576,752.



1. In a superphosphate chamber, a removable bottom to support an unsolidified charge in the chamber, means to subsequently remove the bottom, the interior wall of said chamber tapering toward said bottom, whereby when said mass solidifies the latter is sustained by said wall.

2. In a superphosphate chamber, a removable bottom therein to support an unsolidified charge in the chamber, said chamber comprising means independent of the bottom to support the mass when the latter solidifies.

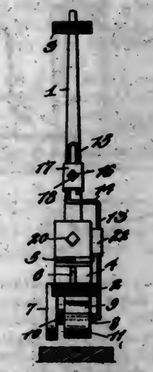
3. In a superphosphate chamber, a removable bottom to support an unsolidified charge in the chamber, said chamber comprising means independent of the bottom to support the mass when the latter solidifies and means to lower the bottom from its normal position to free it from the charge when the latter solidifies.

4. In a superphosphate chamber, a removable bottom to support an unsolidified charge in the chamber, said chamber comprising means independent of the bottom to support the mass when the latter solidifies, means to lower the bottom from its normal position to free it from the charge when the latter solidifies and means to remove the bottom after lowering the latter.

5. In a superphosphate chamber, a removable bottom to support an unsolidified charge in the chamber, said chamber comprising means independent of the bottom to support the mass when the latter solidifies, means to lower the bottom from its normal position to free it from the charge when the latter solidifies, means to remove the bottom after lowering the latter, and means beneath said bottom adapted to cut the solidified material when the bottom is removed.

[Claims 6 to 12 not printed in the Gazette.]

1,013,335. PICKER-CHECK. CHARLES N. TUCKER, Pawtucket, R. I., assignor of one-third to James A. Tucker, Walpole, Mass., and one-third to Everett E. Salisbury, Providence, R. I. Filed Mar. 4, 1911. Serial No. 612,265.



1. In mechanism of the class described, the combination of a step, a picker staff mounted thereon, a spring actuated roller, and a rod attached to the staff, and having an arm extending transversely under the step, and a heel strap attached to the roller and also attached to said arm.

2. A picker staff having an adjustable rod on one side thereof, and provided with an arm to extend transversely under the step, and serve for the attachment of a heel strap.

3. A picker staff having an adjustable rod on one side thereof, and provided with an arm to extend transversely under the step, and serve for the attachment of a heel strap, said arm of the rod forming a hook to prevent the picker staff from becoming unseated on the step in the event of the breaking of the heel strap.

4. A picker staff having a hook rod provided at its lower end with an arm to extend transversely under a step, and provided at its upper end with an off-set vertically slotted arm to bear against one side of the staff, in combination with a bolt extending through the staff and the slot of said arm, a clip on the said bolt and bearing against said arm, and a nut on the bolt and bearing against the outer side of the clip.

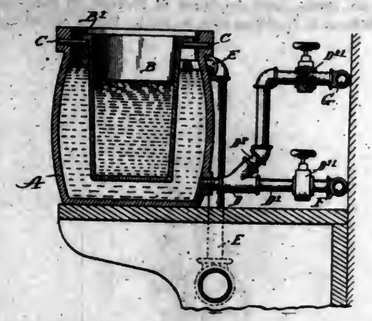
5. A picker staff having a hook rod provided at its lower end with an arm to extend transversely under a step, and provided at its upper end with an off-set vertically slotted arm to bear against one side of the staff, in combination with a bolt extending through the staff and the slot of said arm, a clip on said bolt and bearing against said arm, and a nut on the bolt bearing against the outer side of the clip, the staff being further provided with a guide clip attached thereto and provided with an outstanding wing disposed at one side of the said rod.

1,013,336. GLUE-HEATER. EMIL TYDEN, Hastings, Mich. Filed Dec. 1, 1910. Serial No. 595,071.

1. In combination with a glue heater comprising a glue cup and a water jacket therefor, said water jacket having a free overflow; pipes connected for supplying, respectively, steam and water to the interior of the jacket; valves positioned for controlling the quantities of steam and water, respectively, admitted into the jacket, and means for maintaining the supplies of steam and water each at a constant pressure.

2. In combination with a glue heater comprising a glue cup and a water jacket therefor, said water jacket having a free overflow; pipes connected for supplying, respectively, steam and water to the interior of the jacket; valves positioned for controlling the quantities of steam and water, respectively, admitted into the jacket, and

automatic pressure-regulating valves positioned to control the steam and water supplies respectively.



3. In a glue heater, the combination of a glue pot comprising a glue cup and a water jacket, said water jacket having a free overflow and valve-controlled pipes adapted to supply to said water jacket a regulable quantity of intermingled steam and water in variable proportions whereby the glue may be maintained at the desired temperature.

4. In a glue heater, the combination of a glue pot comprising a glue cup and a water jacket, said water jacket having a free overflow; an inlet pipe for the jacket having two branches outside the jacket, a valve in each branch, means for supplying steam and water to said branches and means for maintaining the supplies of steam and water each at a constant pressure.

5. In a glue heater, the combination of a glue pot comprising a glue cup and a water jacket, said water jacket having a free overflow; a Y-shaped pipe having its stem communicating with the interior of the jacket and having its branches disposed one above the other, a steam supply pipe connected to the lower branch, and a water supply pipe connected to the upper branch; means for independently varying the quantities of steam and water admitted into said branches respectively, and means for maintaining the supplies of steam and water, each at a constant pressure.

1,013,337. APPARATUS FOR REMOVING SURPLUS STARCH FROM STARCHED ARTICLES. CHARLES A. TYLER, Wilkes-Barre, Pa., assignor of one-half to Frank C. Kuschel, Wilkes-Barre, Pa. Filed Apr. 24, 1911. Serial No. 623,116.

1. In an apparatus for removing surplus starch from starched articles, the combination with a pan or receptacle for surplus starch; of a cover therefor including a perforated concavo-convex plate provided with depending flanges, and means coöperating with the pan or receptacle for preventing lateral movement of the cover thereon, and a porous fabric over said plate, whereby the surplus starch may be pressed from an article through the fabric and plate into the receptacle.

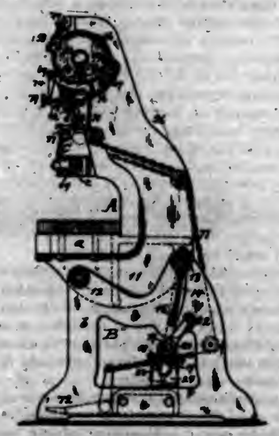
2. In an apparatus for removing surplus starch from starched articles, the combination with a receptacle for the surplus starch, of a rigidly supported cover therefor comprising a perforated plate having its upper surface of double convex curvature, and a porous fabric arranged thereover, whereby the surplus starch may be pressed through the fabric and plate into the receptacle.

3. In an apparatus for removing surplus starch from starched articles, the combination with a pan or receptacle for receiving the surplus starch; of a cover therefor comprising a perforated plate having reinforcing means on its under side, means adapted to prevent lateral movement of the cover with respect to the pan or receptacle, and a porous fabric arranged on the upper surface of the cover and secured at its edges, whereby the starched articles may be laid on the fabric and the starch pressed from the article through the fabric and plate into the pan or receptacle.

1,013,338. GRAIN-TUBE FOR SEEDING-MACHINES. WILLARD A. VAN BRUNT, Horicon, Wis. Filed Aug. 10, 1910. Serial No. 576,500.

In a grain tube, a flexible tube and a lower rigid tapering tube which receives the lower end of the flexible tube, means for fastening the two parts together, such fastening means being retained against displacement by the torsional spring action of the flexible tube, substantially as set forth.

1,013,339. INCLINABLE PUNCHING-PRESS. ALOIS N. VERDIN and WILLIAM H. KAPPES, Glendale, Ohio, assignors to Verdin, Kappes & Verdin, Cincinnati, Ohio, a Firm. Filed Sept. 30, 1910. Serial No. 584,618.



1. In an inclinable punching press, the combination of a base-frame, a press-frame provided with the press-operating parts pivotally connected near the front of its lower part to said base-frame, a screw hingedly connected to this lower part of the press-frame and depending therefrom rearwardly of the pivotal connection of said frame, a nut mounted on said screw, a tiltable support on which this nut is supported for rotation and means to rotate this nut to adjust the position of the press-frame on its hinged connection by means of said screw, after which the press-frame, when adjusted, rests on its hinged connection and on said screw.

2. In an inclinable punching-press, the combination of a press-frame, a ram and its operating mechanism mounted on it, a base-frame to which the press-frame is pivotally connected, a screw hingedly connected to the press-frame, a nut mounted on it, a frame-member having gudgeon-journals and on which this nut is seated for rotation, supports for the journals of this frame-member, a gear-wheel provided on the nut, another gear-wheel intermeshing therewith and means to rotate this latter gear-wheel.

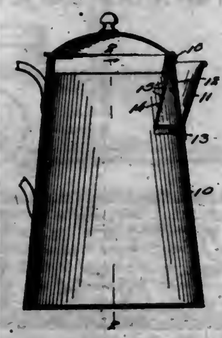
3. In a punching-press, the combination of a die-supporting press-bed, spaced upright frame-parts above this press-bed and disposed with their front sides at right angles thereto, ram-guide ways provided on these frame-parts and recesses formed in their front-sides with a projecting shoulder above and below each recess, boxes forming shaft-bearings fitted to these recesses, a ram-operating shaft mounted in these boxes, a ram operatively connected to this shaft and fitted to the guide-ways mentioned and caps secured against the front-sides of the upright frame-parts to close the recesses therein and to hold the boxes in position and having hooks formed on them adapted to engage the shoulders above and below the recesses to tie the upright frame-parts above and below the boxes in the direction of the thrust of the ram.

4. In a punching-press, the combination of a die-supporting press-bed, spaced upright-members thereon each provided with a recess in its front-side, the lower and upper sides of one recess being alined with the corresponding sides of the other recess and all being planed parallel to the press-bed, boxes divided parallel to this latter and forming shaft-bearings occupying these recesses and fitted to their alined sides, a ram-operating shaft mounted in these boxes and caps to hold these boxes in these recesses.

5. In combination with the frame of a press, a ram-operating shaft supported thereon, a driving-wheel loosely mounted on this shaft, a clutch-ring rigidly mounted on said shaft and adjacent to the wheel, a friction brake fitted around the clutch-ring to regulate rotation of the ram-operating shaft, complementary clutch-pins carried on this latter and on the driving wheel, the pin on the clutch-ring being adjustable and spring-actuated, a clutch-dog which controls the action of the adjustable clutch-pin and a bracket secured to the press-frame on which the clutch-dog is supported and which also confines the friction-brake in position.

[Claims 6 and 7 not printed in the Gazette.]

1,013,340. COFFEE-POT. THOMAS J. VOYLES, Poolville, Tex. Filed Sept. 5, 1911. Serial No. 647,537.



1. An attachment for a coffee pot comprising a discal segment secured within the coffee pot and near the lower end of the spout thereof, said segmental disk projecting horizontally within the pot, a strainer plate hinged to the free end of the said disk, said strainer plate extending upwardly through an open end of the pot, a latch member formed on free end of said strainer plate for engagement with edge of the pot, whereby when the pot is tilted in the act of pouring, the grounds will be stopped by the disk, and the liquid run over and through the strainer plate to the spout.

2. An attachment for a coffee pot comprising a coffee grounds checking member secured within the pot, a strainer member movably mounted thereon, and means on said strainer member for engagement with the edge of the pot, whereby said strainer member may be moved to permit the parts to be cleaned.

1,013,341. DUMPING-CAR. SAMUEL WALLWORK, Summerville, Pa. Filed July 20, 1911. Serial No. 639,692.

In a side dumping car, the combination with a low-hung truck whose wheels rise above the top of its frame, a pair of rails across the latter, and hooks rising from the opposite extremities of each rail; of the body, a pair of rails across its bottom, hooks at the opposite extremities of each rail, rods connecting the tips of the hooks in pairs so as to produce loops, and a rolling support comprising parallel rollers spaced apart a distance less than the length of said loops and each roller having grooves around its ends certain of which engage said rails, and links having eyes at their extremities engaging other grooves and connecting the rollers, all for the purpose described.

1,013,342. MEANS FOR SIGNALING FROM AIRSHIPS AND THE LIKE. ROMEO WANKMÜLLER, Berlin, Germany, assignor to Luft-Verkehrs-Gesellschaft M. B. H., Berlin, Germany. Filed May 11, 1910. Serial No. 560,737.

1. In combination with a dirigible balloon having a gas bag and a car suspended below the same, means on the car for projecting signals and advertisements, and a screen arranged in an inclined plane on the gas bag below the same, the said screen to receive the signals and advertisements and serving as a stabilisator, substantially as described.

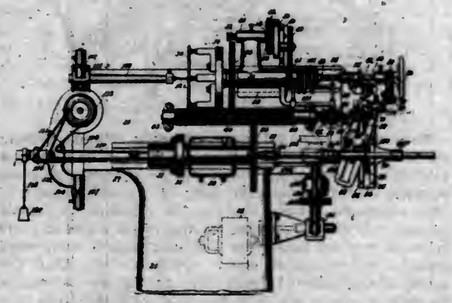
2. In combination with a dirigible balloon having a gas bag and a car suspended below the same, means on the car for projecting signals and advertisements, and a plurality of screens arranged symmetrically in an inclined

plane on and immediately below the gas bag, the said screens to receive the signals and advertisements and serving as stabilisators, substantially as described.

3. In combination with a dirigible balloon, having a gas bag and a car, suspended below the same, a casing on the car, a light source therein, a projecting lens outside of the said casing, a mirror, obliquely arranged externally of the said casing and revoluble around the axis of the light rays emanating from the said light source to reflect the light rays upon the said projecting lens and screens below the gas bag, substantially as described.

4. In combination with a dirigible balloon having a gas bag and a car suspended below the same, a stationary casing, a light source and a condenser, both arranged in the said stationary casing, another casing revolubly attached to the said stationary casing and rotatable around the axis of the light rays emanating from the said light source, a mirror arranged in the said movable casing, a projecting lens in the said movable casing and screens below the gas bag, substantially as described.

1,013,343. ENGRAVING-MACHINE. WILLIAM A. WARMAN, New York, N. Y., assignor to Keller Mechanical Engraving Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 16, 1911. Serial No. 602,939.



1. In a machine of the class described, a templet in the form of a thin plate; means for simultaneously rotating said templet and for moving the same along its axis of rotation; a tracer in engagement with the edge of said templet, and the length of which is greater than the thickness of said templet, the same being fixed with reference to the longitudinal movement of said templet so that said templet contacts with said tracer throughout its entire length; a work support; means for simultaneously rotating said work support and for moving the same along its axis of rotation; a rotary cutter adapted to operate upon work carried by said work support; and means whereby motion imparted to said tracer, due to the contact of said templet therewith, is transmitted to said rotary cutter.

2. In a machine of the class described, a templet in the form of a thin plate; means for simultaneously rotating said templet and for moving the same along its axis of rotation; an oscillatory yoke; an arm carried by said yoke; a tracer at the free end of said arm and in engagement with the edge of said templet, and the length of which is greater than the thickness of said templet, said tracer being fixed with reference to the longitudinal movement of said templet so that said templet contacts with said tracer throughout its entire length; a work support; means for simultaneously rotating said work support and for moving the same along its axis of rotation; a second arm carried by said yoke; and a rotary cutter at the free end of said second arm and adapted to operate upon work carried by said work support.

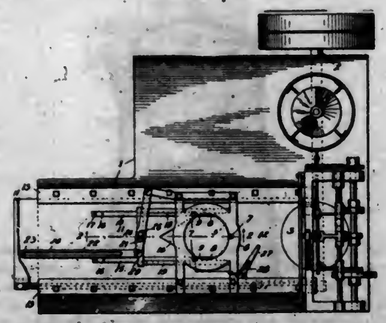
3. In a machine of the class described, a templet in the form of a thin plate, the edge of which is irregular and constitutes a pattern to be transferred; means for simultaneously rotating said templet and for moving the same along its axis of rotation; a tracer in engagement with the edge of said templet, and the length of which is greater than the thickness of said templet, the same being fixed with reference to the longitudinal movement of said templet so that the said templet contacts with said tracer throughout its entire length; a work support; means for simultaneously rotating said work support and for moving the same along its axis of rotation; a rotary cutter adapted to operate upon work carried by said work support; and means whereby motion imparted to said tracer, due to variations in the form of the edge of said templet, is transmitted to said rotary cutter.

4. In a machine of the class described, a templet in the form of a thin plate, the edge of which is irregular, and constitutes a pattern to be transferred; means for simultaneously rotating said templet and for moving the same along its axis of rotation; an oscillating yoke; an arm carried by said yoke; a tracer at the free end of said arm and in engagement with the edge of said templet, and the length of which is greater than the thickness of said templet, said tracer being fixed with reference to the longitudinal movement of said templet so that said templet contacts with said tracer throughout its entire length; a work support; means for simultaneously rotating said work support and for moving the same along its axis of rotation; a second arm carried by said yoke; and a rotary cutter at the free end of said second arm and adapted to operate upon work carried by said work support.

5. In a machine of the class described, a rotary support adapted to carry a templet in the form of a thin plate; means for moving said support along its axis of rotation; a tracer in engagement with the edge of said templet, and the length of which is greater than the thickness of said templet, the same being fixed with reference to the longitudinal movement of said templet so that said templet contacts with said tracer throughout its entire length; a rotary work support; means for moving said work support longitudinally of its axis of rotation; means for simultaneously rotating said model support and said work support in definite relation with one another; mechanism whereby said model support moving means and said work support moving means are simultaneously operated, said mechanism including means for varying the longitudinal movement imparted to one of said supports relative to the corresponding movement imparted to the other; a rotary cutter adapted to operate upon work carried by said work support; and means whereby motion imparted to said tracer, due to the contact of said templet therewith, is transmitted to said rotary cutter.

[Claims 6 to 36 not printed in the Gazette.]

1,013,344. AUTOMATIC FEED DEVICE FOR CAN-HEADS OR OTHER ARTICLES. FRED WEGNER and JOHN PETERS, Fairport, N. Y., assignors to Sanitary Can Company, Fairport, N. Y., a Corporation of New York. Filed May 24, 1910. Serial No. 563,183.



1. In a feed device for feeding can heads or other articles one by one from a pile or stack, the combination with a holder for the articles to be fed, of a reciprocating feed slide and reciprocating separators, said feed slide and separators moving in the same direction alternately supporting the pile of articles in the holder, substantially as specified.

2. In a feed device for feeding can heads or other articles one by one from a pile or stack, the combination with a holder for the articles to be fed, of a reciprocating feed slide and reciprocating separators, said feed slide and separators alternately supporting the pile of articles in the holder, said feed slide having yielding supporting fingers for engagement with the can heads, substantially as specified.

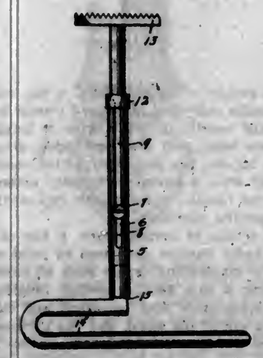
3. In a feed mechanism for can heads or other articles, the combination with a holder for containing the articles to be fed in a pile or stack, of a reciprocating feed slide having spring supported fingers and movable separators, said separators and fingers moving in the same direction alternately supporting the stack or pile of articles in the holder and connecting means between said separator and said feed slide for actuating the separators from the feed slide, substantially as specified.

4. In a feed mechanism for can heads or other articles, the combination with a holder for containing the articles to be fed in a pile or stack, of a reciprocating feed slide having spring supported fingers and movable separators, said separators and fingers alternately supporting the stack or pile of articles in the holder and connecting means between said separator and said feed slide for actuating the separators from the feed slide, said connecting mechanism comprising a lever and a slotted link, substantially as specified.

5. In a feed device for feeding can heads or other articles one by one from a pile or stack, the combination with a holder for the articles to be fed, of a reciprocating feed slide and reciprocating separators, said feed slide and separators moving in the same direction alternately supporting the pile of articles in the holder, said separators having beveled ends to facilitate their entrance between the cans heads, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,013,345. STAIR-CARPET FASTENER. JOHN G. WELSH, San Diego, Cal. Filed May 5, 1911. Serial No. 625,257.

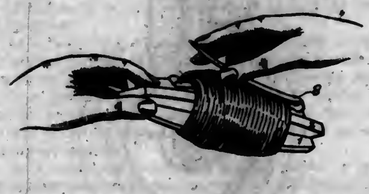


1. In a device of the character described, the combination with a tubular member, of a carpet engaging foot carried by the lower end of said tubular member, a shank, a toothed member carried by said shank, means for connecting said shank to said tubular member at various positions of vertical adjustment, said means comprising a block slidably mounted in said tubular member and a binding screw engaging said block and projecting through a slot in said tubular member, and means for locking said shank into longitudinal alinement with said tubular member.

2. In a device of the character described, the combination with a tubular member, of a carpet engaging foot carried by the lower end of said tubular member, a shank, a toothed member carried by said shank, means for connecting said shank to said tubular member at various positions of vertical adjustment, said means comprising a block slidably mounted in said tubular member and a binding screw engaging said block and projecting through a slot in said tubular member, and means for locking said shank into longitudinal alinement with said tubular member, said means comprising a collar adapted to embrace both the shank and the tubular member.

3. In a device of the character described, the combination with a tubular body member, of a carpet engaging foot of substantially J-shape lying at right angles to said tubular member and having an extension projecting into said tubular member, there being slots formed in said tubular member, a block mounted to slide in said tubular member, a shank pivotally connected to said block and adapted to swing out through one of said slots, a binding screw passing through the other of said slots and adapted to bind said block in varying positions of vertical adjustment, a collar adapted to embrace both the shank and the tubular member to lock said shank into longitudinal alinement with said tubular member, and a toothed plate upon the upper end of said shank.

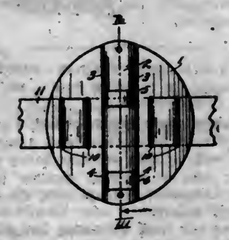
1,013,346. HAIR-PUFFER. AUGUSTUS ALBERT WEST, New York, N. Y., and WILLIAM HALSEY BENJAMIN, Newark, N. J. Filed Mar. 7, 1911. Serial No. 612,861.



1. In a new article of manufacture, a hair puffer composed of a plurality of flat members, each member being provided with a central longitudinal slot arranged to slide axially upon another member in a manner to bisect each said member and produce a plurality of hollows adapted to receive one link of a hair clamp, as specified.

2. A hair puffer composed of a plurality of independent flat parts, the edges of each said part being curved in such a manner as to produce a wider portion at mid-length the part, each said member being provided with a central longitudinal slot and arranged to slide axially upon another member in a manner to bisect each said member and produce a plurality of deep hollows adapted to receive one link of a hair clamp as specified.

1,013,347. REEL-SUPPORT. WILBUR H. WETZEL, Kansas City, Mo. Filed Aug. 3, 1910. Serial No. 575,205.



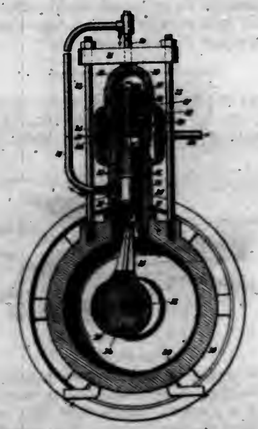
1. The combination of a supporting plate having means for securing it to the body of the user and means for se-

curing a fishing reel holder thereto, and a fishing reel holder having means for connecting it with the holder securing means upon the supporting plate.

2. The combination of a convex plate having a central rib projecting from the convex face of said plate and provided with registering slots on its opposite sides, bands mounted in said slots and passing over the face of said rib, said plate having a pair of parallel slots on each side of said rib, a belt passing through said slots and behind the rib, and a fishing reel holder having a seat provided with terminal ears adapted for attachment to said rib by means of said bands, substantially as set forth.

3. The combination of a belt, a supporting plate formed with a rib having paired lower and upper slots, and a pair of slots on each side of the rib, clamping bands anchored in the paired slots and spaced from the front of the rib, and a reel seat having ears received by the clamping bands.

1,013,348. GAS-PUMP. RICHARD WHITAKER, New Brunswick, N. J., assignor to The Brunswick Refrigerating Company, New Brunswick, N. J., a Corporation of New Jersey. Filed July 1, 1907. Serial No. 381,639.

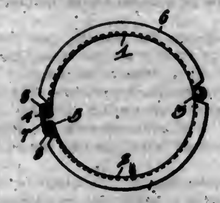


In a gas-compression pump, a base-casing, a cylinder thereon, a valve-guide on the upper end of said cylinder, a cap forming a gas-inlet chamber on said guide, and an inlet-pipe leading into said chamber, combined with an elongated piston in said cylinder having a gas-collecting chamber closed from the discharge for compressed gas between its ends and packing at opposite ends of said chamber, a pipe leading from said collecting-chamber, a duplex gas-pressure and inlet-valve partly within said guide and extending across said cylinder and facing said piston, and a driving eccentric and rod in said base-casing, said base-casing comprising a main frame 39 in one integral piece and a closing cap 40 occupying the central portion of one side thereof, said cap having a solid outer face and said frame and cap on their inner facing sides being formed with bearings for the shaft of said eccentric; substantially as set forth.

1,013,349. COLLAR FOR PISTON-RINGS. JOHN J. WHITTY, Newport, R. I. Filed July 8, 1911. Serial No. 637,437.

1. In a device of the class described, the combination with a collar formed in sections and hinged one to the other, the free ends of said sections being provided with locking flanges, and a gripping member provided with similar flanges adapted to engage said other flanges and lock the sections together.

2. A device of the class described, comprising a collar formed in sections and hinged one to the other, said sections being provided on their edges with laterally extending flanges and having their free ends provided with locking flanges, and a gripping member provided with similar flanges adapted to interlock said other flanges and secure said sections together.



3. A device of the class described, comprising a collar formed in sections and hinged one to the other, the free ends of said sections having oppositely bent flanges thereon, a gripping member having flanges thereon adapted to engage the flanges of said collar, and laterally extending flanges formed on the peripheral edges of the sections of said collar, said last referred to flanges terminating at points adjacent the flanges at the free ends of said sections to allow for the longitudinal movement of said gripping member.

1,013,350. TOY. ANDREW J. WILSON, Cleveland, Ohio, assignor of one-half to Valentine Stephan, Cleveland, Ohio. Filed Jan. 27, 1911. Serial No. 605,021.

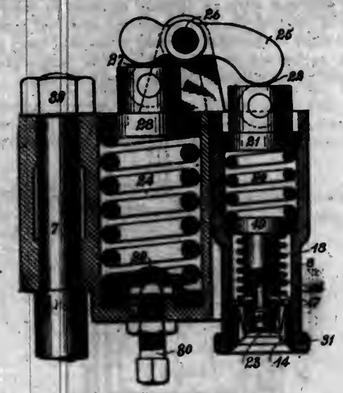
1. As an article of manufacture, a toy catapult, comprising a handle composed of a hard elastic material such as wood, said handle provided with a longitudinal saw kerf near one edge, said saw kerf being diagonal to the side of said handle, the detached portion slanting upward and provided with a narrow extremity extending beyond the body of the handle, and a missile cup centrally secured to said projecting portion.

2. As an article of manufacture, a toy catapult, comprising, a handle portion composed of hard elastic material having a longitudinal grain such as hard wood, said handle having a saw kerf extending longitudinally and partially therethrough near one edge, and cut diagonally to the said grain of the wood, and the thinnest portion of the detached portion extending above the body of the handle.

1,013,351. MACHINE FOR APPLYING BOTTLE-SEALS. CHARLES WINTER, Woodbury, N. J., assignor to Star Seal Company, a Corporation of New York. Filed Dec. 30, 1908. Serial No. 469,963.

1. In a machine for applying seals to bottles, a sealing head, comprising a seating plunger and a bending plunger, a spring, and a lever interposed between said sealing head and said spring adapted to transmit excess pressure from said sealing head to said spring.

2. In a machine for applying seals to bottles, a sealing head, comprising a seating plunger and a bending plunger, a spring, means for adjusting the strength of said spring,



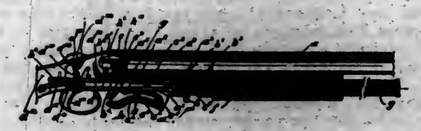
and means interposed between said sealing head and said spring adapted to transmit excess pressure from said sealing head to said spring.

1,013,352. ARC-LAMP CONSTRUCTION. MAURICE J. WOHL, New York, and HARRY HERTZBERG, Brooklyn, N. Y., assignors to Abbot A. Lowe, Horseshoe, N. Y., Maurice J. Wohl, New York, N. Y., and Harry Hertzberg, Brooklyn, N. Y., trustees. Filed May 29, 1908. Serial No. 435,681.

In combination with an arc lamp, a globe inclosing the arc, a spring support for said globe removably suspended and provided with an enlarged portion at either end thereof, and a pair of clips attached to the frame of said arc lamp each having a larger opening through which said enlarged portions of said support may be passed and a contracted opening in which the body portion of said support is suspended, the part of said clips having the contracted opening being offset from the part having the larger opening, said spring support being held in said offset portion of said clips by reason of its resiliency.

1,013,353. REPEATING FIREARM. CHARLES A. YOUNG, Enon, Ohio. Filed Feb. 1, 1907. Serial No. 355,301.

1. In a gun, a firing mechanism comprising a pivoted operating lever, a pivoted locking lever having a laterally-projecting pin extending over said operating lever, a depression in said operating lever to receive said pin, and means controlled entirely by the operator for throwing said pin to one side of said depression to lock said operating lever, and means controlled by the operator or by the firing mechanism for throwing said pin to the opposite side of said depression, substantially as specified.



2. In a firing mechanism for a gun, a pivoted operating lever, a depression in said lever, a pivoted locking lever having a laterally-projecting pin adapted to normally stand over said depression when the gun is in closed position, and means operated by the firing mechanism to throw said pin to one side of said depression to lock said mechanism, substantially as specified.

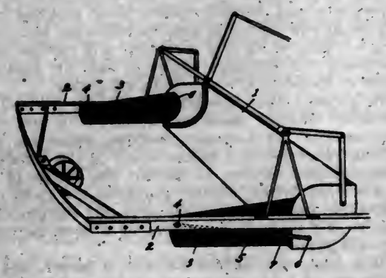
3. In a gun, a firing mechanism, a movable part with a shoulder thereon having a main spring connected thereto, a rotatable sear supported at each side of said movable part and adapted to engage said shoulder, a trigger having a connection with said sear to rotate the same to disengage it from said shoulder, the connection between said trigger and sear having a limited movement in one direction to form a stop or lock for said sear against the tension of the main spring, substantially as and for the purpose specified.

4. In a repeating firearm, a sliding barrel a movable shell carrier located at the rear end of said barrel, means operated by the closing of the barrel for moving said carrier to a position to feed a shell to said barrel, and a latch for positively retaining the carrier in this position until the barrel is again opened, substantially as and for the purpose specified.

5. In a repeating firearm, a sliding barrel, a movable shell-carrier located at the rear end of said barrel, devices operated by the closing of the barrel for moving said carrier to a position to feed a shell to said barrel, a spring-latch on said carrier adapted to secure the carrier in this position, and means for tripping said latch upon the opening of the barrel, substantially as and for the purpose specified.

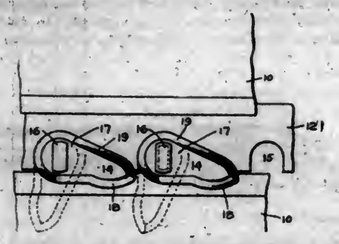
[Claims 6 to 8 not printed in the Gazette.]

1,013,354. LAND-GRADER. ADOLPH P. D'ARTENAY, Dixon, Cal. Filed Apr. 20, 1911. Serial No. 622,379.



A scraper comprising pull rods, a bowl transversely mounted on said pull rods, fenders flexibly connected with said pull rods and projecting into the inside of the ends of said bowl, rods flexibly connected with said pull rods and the outside ends of said bowl and means flexibly connecting said rods to said fenders as described.

1,013,355. VOTING-MACHINE KEY. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed July 22, 1911. Serial No. 640,012.



1. A key for voting machines comprising an inwardly beveled base provided with a finger piece having inclined sides, said base and finger piece being constructed to prevent connection with contiguous keys by means of loops of any character and irrespective of the position of the key.

2. A key for voting machines comprising an inwardly beveled base provided with a finger piece having inclined sides, said base and finger piece being constructed to prevent connection with contiguous keys by means of loops of any character and irrespective of the position of the key, said finger piece being arranged at an angle with relation to said base.

3. A key for voting machines comprising an inwardly beveled base provided with a finger piece rounded at the top and having inclined sides, said base and finger piece being constructed to prevent connection with contiguous keys by means of loops of any character and irrespective of the position of the key.

4. A key for voting machines comprising an inwardly beveled base provided with a finger piece having inclined sides, said base and finger piece being constructed to prevent connection with contiguous keys by means of loops of any character and irrespective of the position of the key, said finger piece extending from one edge of said base and being arranged at an angle with relation to the latter.

5. A key for voting machines comprising an inwardly beveled base provided with a rounded finger piece the sides of which taper from base to tip, said base and finger piece being constructed to prevent connection with contiguous keys by means of loops of any character and irrespective of the position of the key.

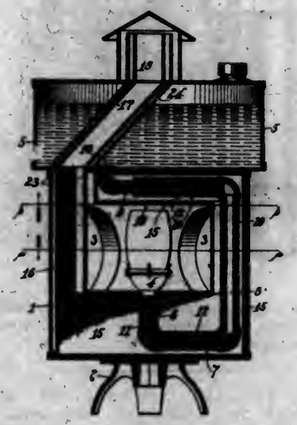
1,013,356. LAMP. WILLIAM AGNEW, Dayton, Ohio. Filed Nov. 21, 1910. Serial No. 593,349.

1. In a lamp, the combination with a burner, and a reservoir, of a tubular member connecting said burner and reservoir, said tubular member being provided with means permitting the oil to pass therethrough and maintaining a volume of air in a portion of said tubular member, whereby the resistance offered by said air regulates the feed of oil from the reservoir to the burner.

2. In a lamp, the combination with a burner, and an oil reservoir mounted above said burner, of a tube comprising vertical and horizontal sections, connecting said burner and reservoir, and means in one of the horisontal tubular members adapted to prevent the escape of air from a vertical tubular member and allow the oil to pass therethrough, whereby the resistance in said vertical member due to said air regulates the flow of oil from the reservoir to the burner.

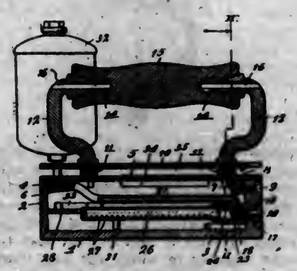
3. In a lamp, the combination with a burner, and an oil reservoir, of a tube comprising vertical and horisontal sections connecting said burner and reservoir, one of said horisontal sections being provided with a trap through which the oil may pass, and which maintains a volume of air within one of the vertical sections, whereby the resistance offered by said air serves to regulate the flow of oil from the reservoir to the burner.

4. In a lamp, the combination with a burner and a fuel reservoir, of a tubular connection between said burner and said reservoir, a conduit surrounding said tubular connection and provided with an opening adapted to receive the products of combustion, and insulating material surrounding the tubular connection, whereby when said lamp is subjected to variations in temperature, the temperature of the oil will be maintained within operative limits.



5. In a lamp, the combination with a lamp burner and a reservoir thereabove, of a feed tube extending from said reservoir to said burner consisting of horizontal and perpendicular sections, one of said perpendicular sections being connected to one of said horizontal sections and another perpendicular section connecting said last named horizontal section with the burner, the length of the last named perpendicular section being equal to the effective depth of the reservoir, and means for trapping air in the tubes between the reservoir and the burner, whereby, as the oil is consumed at the burner, the resistance of the air in the first named perpendicular section is lessened in proportion as the oil is consumed, thus allowing the oil to feed from the reservoir to the burner according to the demands of the burner.

1,013,357. SELF-HEATING SAD-IRON. HARVEY ANDERSON and FREDERICK E. KIRBY, Kansas City, Kans.; said Kirby assignor to said Anderson. Filed Mar. 7, 1910. Serial No. 547,890.



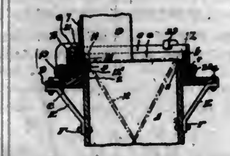
1. In a sad-iron provided with a removable cover, a fuel reservoir supported above the body of the iron and independently of said cover, and a cup located within the body, adjacent the reservoir, substantially as described.

2. In a sad-iron provided with a removable cover, a fuel reservoir supported adjacent the body of the iron independently of the cover, a burner communicating with said reservoir, a deflector at substantially the same level as the burner and adapted to deflect the heat from the said burner, and a cup supported by said deflector adjacent the fuel reservoir.

3. In a sad-iron a tubular burner, a transverse air tube communicating with said burner, and a deflector-plate fitting within the body of the iron at approximately the level of the burner, and partly supported by said air-tube, substantially as described.

4. In a sad-iron, a body having a plug opening, a plug therein, a valve casing connected to said plug, a valve stem passing through the plug, an air inlet tube, a fuel feed tube, and a burner, all three having suitable connections with said valve-casing, substantially as described.

1,013,358. ADJUSTABLE COWL FOR SMOKE-STACKS. FRANK JAY ANDREWS, Holden, Alberta, Canada. Filed Apr. 11, 1911. Serial No. 620,467.



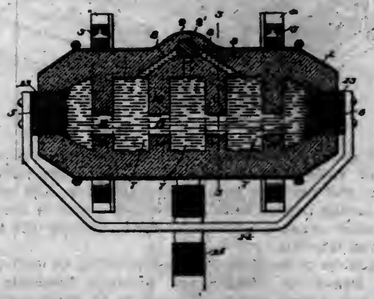
1. The combination with a smoke-stack, of an outside placed supporting member supported by the stack near the top thereof; means securing said supporting member to the stack; a toothed ring-plate carried by said supporting member and surrounding the stack; a cowl substantially semi-circular in horizontal cross section detachably carried by said toothed ring-plate; means for detachably securing said cowl in place, and supporting the cowl outside of the internal horizontal diameter of said smoke stack; a toothed member co-acting with said toothed ring-plate in order to move same to shift the position of said cowl; bearing members supported by said supporting member in which said toothed member has bearing; means for operating said toothed-member, and means carried by said supporting member and engaging said toothed ring-plate in order to hold the same in proper relationship to said supporting member, as and for the purpose specified.

2. The combination with a smoke stack, of an outside-placed supporting member supported by the stack near the top thereof; means securing said supporting member to the stack; a toothed ring-plate carried by said supporting member surrounding the stack the said toothed ring-plate being integrally provided with an annular flange at its upper portion, and being further integrally provided with a supporting plate spaced apart from said annular flange; a cowl formed substantially semi-circular in horisontal cross section positioned against said supporting-plate, means carried by said toothed ring-plate for holding said cowl in position against said supporting plate and outside the internal horisontal diameter of said smoke stack, a toothed member co-acting with said toothed ring-plate in order to move same to shift the position of said cowl; bearing members supported by said supporting member in which said toothed member has bearing; said bearing member provided with lips overhanging the annular flange of said toothed ring-plate, and means carried by said supporting member and constructed to overhang the annular flange of said toothed ring-plate, as and for the purpose specified.

3. The combination with a smoke-stack; a ring-plate integrally provided with a horisontal flange and further integrally provided with an annular step and an annular collar projecting above and positioned within said step, the said ring-plate designed to be placed around a smoke stack with its annular collar fitting thereagainst; means detachably secured to said horizontal flange for securing said ring-plate to said smoke stack; a toothed ring-plate resting upon said annular step and surrounding said annular collar and integrally provided at its upper portion with an annular flange; a cowl substantially semi-circular in horizontal cross section carried by said toothed ring-plate outside the horizontal diameter of said smoke stack; a supporting plate carried by said annular flange for supporting said cowl; detachable means carried by said annular flange for the purpose of securing said cowl in place; two standards carried by the flange of said ring-plate, and each provided at its upper end with a lip which overhangs the annular flange of said ring-plate; a worm-shaft having bearing in said standards; a worm mounted on said shaft and positioned between said standards and above said horizontal flange and in engagement with the teeth of said ring-plate; means for operating said worm-shaft, and means carried by said horizontal flange and overhanging the annular flange of said ring-plate, as and for the purpose specified.

4. The combination of a toothed-ring-plate integrally provided with a vertical annular flange, and further integrally provided with a vertically-disposed supporting plate spaced apart from said annular flange, a cowl substantially semicircular in horizontal cross section positioned against said supporting plate, and detachable means carried by said annular flange for detachably securing said cowl in place.

1,013,359. ELECTRIC FURNACE. MOSES APPEL, Baltimore, Md. Filed Sept. 9, 1911. Serial No. 648,426.



1. An electric resistance furnace mounted for oscillation and comprising a plurality of metal baths electrically interconnected at their surfaces, in combination with metallic electrodes in conductive relation with said baths.

2. An electric resistance furnace mounted for oscillation, said furnace comprising a plurality of metal baths electrically interconnected by relatively contracted channels, said channels so arranged that the cross-sectional area of conductor therein may be varied by tilting the furnace.

3. An electric resistance furnace mounted for oscillation and comprising oppositely disposed electrodes and a plurality of intermediate metal baths, said baths electrically interconnected at their surfaces by channels of relatively small cross-sectional area.

4. An electric resistance furnace mounted for oscillation and comprising oppositely disposed electrodes and a plurality of intermediate metal baths, said baths electrically interconnected by channels of relatively small cross-sectional area and so disposed that the cross-sectional area of the conductors therein may be varied by tilting the furnace.

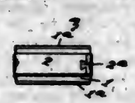
5. An electric resistance furnace mounted for oscillation and comprising electrically interconnected metal baths, and electrodes in conductive contact therewith, a conductor connecting said electrodes to form a closed secondary circuit, and a primary winding supported by the furnace in inductive relation to said secondary circuit.

[Claim 6 not printed in the Gazette.]

1,013,360. SAFETY-RAZOR. WILLIAM V. BAKER, Richmond Hill, N. Y. Filed Aug. 20, 1910. Serial No. 578,163.

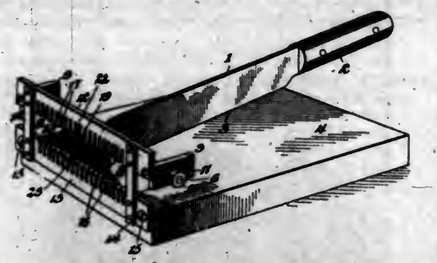
1. A safety razor blade consisting of a thin sharp-edged sheet-steel member, and a stiffening strip wrapped

lengthwise around said member, said strip having interlocking means at its ends for securing said ends together, and being thereby rigidly secured to said member.



2. A safety razor blade, comprising a thin sharp-edged member and a stiffening strip wrapped lengthwise around said member, one end of the strip having a substantially dovetailed socket and the other end having substantially a dovetail that engages in the socket to secure the ends together.

1,013,361. FOOD-SLICER. HENRY BARRY, Chicago, Ill. Filed Oct. 6, 1910. Serial No. 585,698.



1. A slicer of the class described including a pivot, a straight knife mounted to oscillate and slide laterally thereon and provided with a projecting arm, and spaced racks having beveled teeth located in the path of the said arm, which engages between the teeth, whereby the knife is moved laterally.

2. A slicer of the class described including an oscillatory knife, means for slidably and pivotally mounting the knife, and spaced means arranged to be alternately engaged by the knife in the oscillation thereof for imparting automatic lateral movement to the knife, the space between the engaging means being of sufficient width to permit a direct sliding movement of the knife when the latter is brought to a position intermediate of the ends of its stroke.

3. A slicer of the class described including a pivot, an oscillatory knife slidably mounted on the pivot and having a projecting arm, and spaced engaging means located in the path of the arm and arranged to be alternately engaged by the same to impart an automatic lateral movement to the knife, the space between the engaging means being of a width slightly in excess of that of the arm to permit a direct sliding movement of the knife.

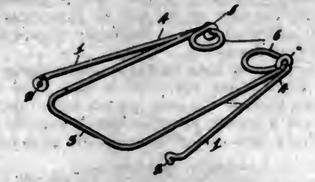
4. A slicer of the class described including an oscillatory knife, means for pivotally and slidably mounting the same, and spaced racks having beveled teeth arranged in staggered relation to automatically impart lateral movement to the knife during the oscillation thereof.

5. A slicer of the class described including a pivot, an oscillatory knife slidably mounted on the pivot and having a projecting portion extending beyond the pivot, spaced racks located in the path of the projecting portion of the knife and having beveled teeth arranged in staggered relation to automatically impart a lateral movement to the knife during the oscillation thereof.

[Claims 6 to 9 not printed in the Gazette.]

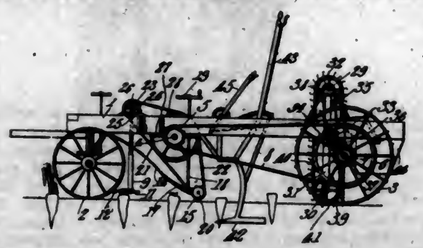
1,013,362. COW-TAIL HOLDER. ARTHUR L. BARTLETT, Unadilla, N. Y. Filed May 15, 1911. Serial No. 627,279.

A holder of the class described comprising a single piece of wire having its central portion bent U-shaped, the wire at the end of said U-shaped portion being bent to form inwardly disposed rings, the wire at the ends of said rings being bent around the same adjacent to said U-shaped portion, and the end portions of the wire being extended backwardly and outwardly from said U-shaped portion



and arranged to form means for opening said holder, said arms having hooks formed on their end portions and arranged to lock with the sides of said U-shaped portion.

1,013,363. BEET-HARVESTER. WILLIAM BATES, Santa Barbara, Cal. Filed July 12, 1910. Serial No. 571,626.



1. In a beet harvester, a foliage cutter comprising a shaft mounted for rotation, a support for the shaft, a cutting disk fixed to one end of said shaft, and gathering arms secured to the supporting structure and extending along the upper surface of the disk, said arms diverging forwardly and having cutting edges coöperating with the disk, the free end portions of the arms being inclined downwardly and forwardly to points below the disk.

2. A beet harvester including a yoke, a shaft journaled therein, a cutting disk secured to the lower end of the shaft and revoluble therewith, forwardly diverging gathering arms secured to the lower end of the yoke and supported close to the upper surface of the disk, said arms having cutting edges coöperating with the disk to remove foliage from the beets, the free end portions of the arms being inclined downwardly and forwardly to points below the disk.

1,013,364. NOZZLE FOR VACUUM-CLEANERS. WALTHER BEHM, New York, N. Y. Filed Feb. 15, 1911. Serial No. 608,831.

1. A suction nozzle for a vacuum apparatus comprising a cylindrical solid core provided with a longitudinal groove open along its under side and with a transverse opening at its center connecting with said groove and a cylindrical sheet metal casing inclosing said core and provided with a longitudinal slot on its lower side registering with said groove and with a central tube on its upper side opposite said opening for connection with the vacuum apparatus.

2. A suction nozzle for a vacuum apparatus comprising a cylindrical solid core provided with a longitudinal groove open along its under side and tapered in depth toward the outer ends and with a transverse opening at its center connecting with said groove and a cylindrical sheet metal casing inclosing said core and provided with a longitudinal slot on its lower side registering with said groove and with a central tube on its upper side opposite said opening for connection with the vacuum apparatus.

1,013,365. BATTEN STRUCTURE FOR NARROW-WARE LOOMS. FREDERICK BENZ, Jr., Haledon, N. J., assignor to Joseph Frank, New York, N. Y. Filed June 28, 1911. Serial No. 635,780.

A batten structure for narrow-ware looms comprising a plurality of upright spaced shuttle-supporting and guiding portions each having two curved races intersecting each other and a plurality of shuttles arranged to move in said races and alined with each other, the adjoining ends of said shuttles being reversely beveled in plan and overlapping each other, substantially as described.

1,013,366. METHOD OF MAKING CANS. CHARLES E. BERTELS, Wilkes-Barre, Pa. Filed Sept. 6, 1910. Serial No. 580,536.

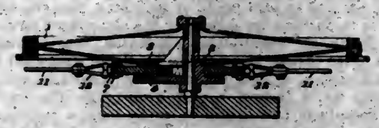
1. The method of manufacturing cans which consists in suitably producing the can body, forming the proposed bottom of the can with a flange thereon, severing the flange and bottom from each other; securing the bottom to the lower end of the can body, forming one edge of the flange with an outturned bead and securing the flange to the upper end of the can body to serve as a seamless rim therefor.

2. The method of manufacturing cans which consists in suitably producing the can body, forming the proposed bottom of the can with a flange having annular portions of different sizes, severing the flange and the bottom from each other, securing the bottom to the lower end of the can body, forming one edge of the flange with an outturned bead and securing the other end of the flange to the upper end of the can body to serve as a seamless rim therefor.

3. The method of manufacturing cans which consists in suitably producing the can body, stamping the proposed bottom of the can with a flange having an annularly enlarged upper end, severing the flange and the bottom from each other, securing the bottom to the can body and rolling said can body inward above and below the bottom to hold it in place, inverting the flange so as to fit the annularly enlarged upper end thereof over the upper end of the can body, forming one end of the flange with an outturned bead and securing the other end of the flange to the can body, so as to cause the same to serve as a seamless rim therefor.

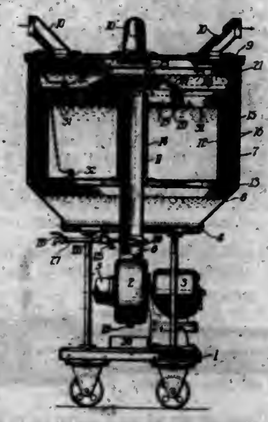
1,013,367. ECCENTRIC RING. HENRY W. BLAKESLEE, Nowata, Okla., and DANIEL R. BLAKESLEE, Van Buren, Ind., assignors to Marion Machine Foundry & Supply Co., Marion, Ind., a Corporation of Indiana. Filed Sept. 19, 1910. Serial No. 582,749.

The combination with a flanged eccentric ring having studs projecting from both sides of its periphery, of a clevis formed by a plurality of sections and provided with apertures in its inner ends to connect with said studs, a plurality of projecting pins for each section secured thereto adjacent the apertures, bolts inserted through the sections and between the pins so as to permit the free ends of the pins to contact with each other and space the



inner ends of the sections apart, said sections having their outer ends clamped together by a bolt so as to provide a recess therebetween, a pull rod inserted through the outer end of the clevis and having a head thereon which projects into the recess, said rod being swiveled to the recessed end of the clevis.

1,013,368. AIR-CONDITIONING DEVICE. ALLEN A. BLOMFELDT, Chicago, Ill. Filed Mar. 6, 1911. Serial No. 612,695.



1. In an air conditioning apparatus, the combination of liquid receptacles mounted one within the other in spaced relation, a baffle wall interposed between the adjacent walls of said receptacles and adapted to form a tortuous air passage between them, air deflecting means above the open part of one of said receptacles and with said baffle wall forming a closure for the space above said receptacle, each of said receptacles being adapted to hold liquid at such level that the surface thereof will deflect the air current, an air pipe terminating above and adjacent to the surface of the liquid in the inner said receptacle, a second air pipe communicating with the other said receptacle above the surface of the liquid therein, and means for causing a current of air to flow through said passage from one to the other of said pipes.

2. In an air conditioning apparatus, the combination of an outer casing, a receptacle supported therein, a hood covering said receptacle and having the walls thereof spaced away from the walls of said casing and said receptacle so as to form a tortuous air passage between them, an air pipe extending into said casing and terminating within said receptacle below said hood, a second air pipe connected to said casing, means for causing a current of air to flow through said passage from one to the other of said pipes, and said receptacle being adapted to hold liquid at such level that the surface will be in position for deflecting the air current upwardly.

3. In an air conditioning apparatus, the combination of an outer casing, a receptacle supported therein, a hood covering said receptacle and having the walls thereof spaced away from the walls of said casing and said re-

ceptacle so as to form a tortuous air passage between them, an air pipe extending upwardly through said casing and receptacle and terminating below said hood, a second air pipe connected to said casing, means for causing a current of air to flow through said passage from one to the other of said pipes, and said casing and receptacle being adapted to hold liquid at such level that the surface will be in position for deflecting the air current upwardly.

4. In an air conditioning apparatus, the combination of an outer casing, a receptacle for liquid supported within said casing, a hood covering said receptacle and having the walls thereof spaced away from the walls of said receptacle and casing so as to form a tortuous air passage between them, a second receptacle for liquid above said hood, an air inlet pipe extending into said casing and terminating below the horisontal wall of said hood, an air outlet pipe communicating with said casing above said hood inwardly of the sides of said second receptacle, and means for causing a current of air to flow through said passage from one to the other of said receptacles.

5. In an air conditioning apparatus, the combination of an outer casing, a receptacle for liquid supported within said casing, a hood covering said receptacle and having the walls thereof spaced away from the walls of said receptacle and casing so as to form a tortuous air passage between them, said hood having its vertical wall extending above the horizontal wall spanning said receptacle so as to form another receptacle for liquid, an air inlet pipe extending into said casing and terminating below the horizontal wall of said hood, an air outlet pipe communicating with said casing above said hood inwardly of the vertical walls thereof, and means for causing a current of air to flow through said passage from one to the other of said pipes.

[Claims 6 to 18 not printed in the Gazette.]

1,013,369. MAGAZINE-BRUSH. MARTIN BOHLIG, St. Paul, Minn. Filed Feb. 4, 1911. Serial No. 606,528.

1. In a magazine brush, the combination of a body portion having bristles and a handle adapted to contain paste or the like revolubly mounted within said body portion, detachably connected therewith and adapted to deliver its contents to the bristles, said handle comprising a closed tubular shell having an outlet at its base, a rod within the shell, and a disk within the shell movable upon said rod.

2. In a magazine brush, the combination of a body portion having bristles and a handle adapted to deliver its contents to the bristles, said handle comprising a tubular shell, an annular flange at the base of the shell, a threaded rod in the shell detachably connected to said body portion, a disk having an outlet for the contents of the brush, said disk being mounted on the threaded rod for closing the base of the shell and engaging said flange, a threaded disk on said rod, and a passageway leading from the outlet in the disk to the bristles.

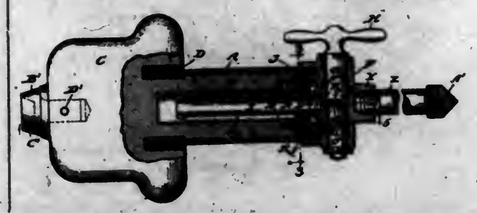
3. In a device of the class described, the combination of a body portion, bristles in said body portion, a passageway in the body portion leading to the bristles and a handle revoluble in and detachably connected with said body portion, said handle comprising a tubular shell, an inwardly extended annular flange at the base of the shell, a threaded rod within the shell, a disk mounted on said rod in engagement with said flange, said disk being provided with an opening in communication with said passageway, a sealed cap for closing the outer end of the shell and preventing lateral movement of the rod and a threaded disk movable on said rod adapted to force the contents of the handle to the bristles.

4. In a device of the class described, a tubular handle provided with a sealed cap, a brush, means adapted to detachably interlock the handle and brush, communicating passageways leading from the handle to the bristles of the brush, a rod in the handle and a disk movable upon said rod, adapted to force the contents from the handle into the brush.

5. In a device of the class described the combination of a body portion, bristles in said body portion, a passageway in the body portion leading to the bristles and a handle revoluble in and detachably connected with said body portion, said handle comprising a tubular shell, an inwardly extended annular flange at the base of the shell, a threaded rod within the shell, a disk mounted on said rod in engagement with said flange, said disk being provided with an opening in communication with said passageway, a cap at the outer end of the shell in engagement with the rod, a threaded disk movable upon the rod and instruck grooves in the shell in sliding engagement with said disk, said disk being adapted to force the contents of the handle to the bristles in the body portion.

[Claim 6 not printed in the Gazette.]

1,013,370. FLUID-PRESSURE COMPRESSION OR HOLDING DEVICE. JOSEPH BOYER, St. Louis, Mo., assignor to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Jan. 4, 1897. Serial No. 617,980.



1. The combination of a cylinder, a piston fitting therein and provided with a plurality of rearwardly facing pressure areas, said pressure areas being of different sizes, a valve casing secured to and closing one end of the cylinder, and a single valve therein for controlling the admission of motive fluid first to a small pressure area to move the piston forward with a slight and yielding pressure and then to a larger pressure area as well as to the said small aera, to press the piston forward with a maximum force; substantially as described.

2. The combination of a cylinder; a piston fitting therein and provided with a plurality of rearwardly facing pressure areas, said pressure areas being of different sizes, a valve casing secured to and closing one end of the cylinder, and a single valve therein for controlling the admission of motive fluid first to a small pressure area to move the piston forward with a slight and yielding pressure and then to a larger pressure area as well as to the said small area, to press the piston forward with a maximum force, and also for exhausting such fluid from said pressure areas in succession; substantially as described.

3. The combination of a cylinder, a piston fitting therein and provided with a plurality of rearwardly facing pressure areas, said pressure areas being of different sizes, a valve casing secured to and closing one end of the cylinder, and a single valve therein for controlling the admission of motive fluid first to a small pressure area to move the piston forward with a slight and yielding pressure and then to a larger pressure area as well as to the said small area, to press the piston forward with a maximum force, and also for exhausting such fluid from said presure areas in succession, exhausting it from the larger area without exhausting it from the smaller area; substantially as described.

4. The combination of a cylinder, a piston fitting therein and provided with a plurality of rearwardly facing pressure areas, said pressure areas being of different sizes, a valve casing secured to and closing one end of the cylinder, and a single valve therein for controlling the admission of motive fluid first to a small pressure area to move the piston forward with a slight and yielding pressure and then to a larger pressure area as well as to the said small area, to press the piston forward with a maximum force, and also for exhausting such fluid from the larger area while the fluid is still being admitted to the smaller area; substantially as described.

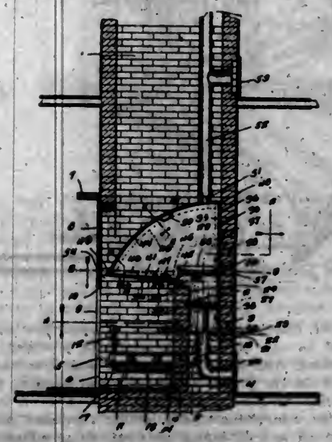
5. The combination of a cylinder, a piston fitting therein and provided with a central bore closed at its front end and opening through the rear end of the piston, a valve casing secured to the rear end of the cylinder, a tube secured to the forward side of said valve casing and extending into the central bore of the piston, a packing ring secured to the rear end of the piston and serving to pack the exterior of said tube and the interior of the cylinder, and a valve in the valve casing controlling the inlet of the motive fluid and operable to admit said fluid in succession to the tube within the central bore of the piston and to the annular rear end of the piston surrounding said tube, and thereafter simultaneously, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,013,371. PNEUMATIC RIVET-HOLDER. JOSEPH BOYER, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Original application filed Jan. 4, 1897, Serial No. 617,980. Divided and this application filed Mar. 30, 1905. Serial No. 252,992.

A pneumatic rivet-holder, comprising the cylinder A, the piston B, the enlarged weighted head C formed integral with the piston B and provided with the annular groove or recess D adapted to pass over the front end of the cylinder A, and a valve for controlling the admission of the motive fluid to the cylinder A behind the piston B.

1,013,372. FIREPLACE-HEATER. HERMAN H. BRANDES, Corydon, Ky., assignor of one-fourth to E. T. Lawrence, Corydon, Ky. Filed June 16, 1910. Serial No. 567,243.



1. A fire-place heater comprising a grate, a heating chamber back of and overhanging the grate, heating flues extending through the grate and entering and extending into the heating chamber in an upward direction, and a cold air flue also entering the heating chamber in the same direction as the heating flues, the terminal portions of the heating flues being at a higher point in the heating chamber than the terminal portion of the cold air flue.

2. In a fire-place heater, a grate, a heating chamber back of and in overhanging relation to the grate, a cold air flue entering the bottom of the heating chamber in an upward direction, and terminating at said bottom portion of the heating chamber, and hot air flues traversing the grate and also entering and extending into the heating chamber in an upward direction through the bottom thereof, and continued into the latter to a higher point than the discharge end of the cold air flue within the heating chamber.

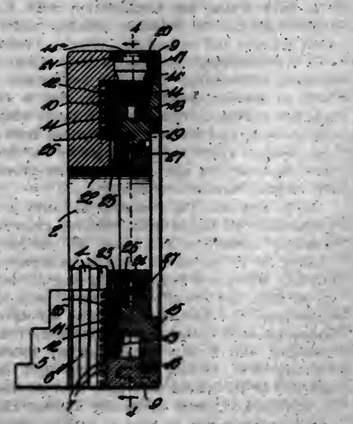
3. In a fireplace heater, the combination of a grate provided in its front side with rings and in its rear side with pendant enlargements in alinement with the said rings, a heating chamber arranged above the grate, and open-ended flues having their front ends supported by and within the rings on the grate and their intermediate portions resting upon the rear of the grate immediately over the enlargements thereof and their inner ends turned upward and entering the heating chamber through the bottom of the same.

4. The combination with a chimney, of a bridge wall located therein and spaced from the rear side of the chimney, a grate supported in front of the bridge wall, a heating chamber supported by the bridge wall and extending over and in advance of the same and having a depending portion fitting between the bridge wall and the rear side of the chimney, a cold air flue entering the bottom of the said depending portion, and flues passing through the grate and having rear upturned ends entering the bottom of the said depending portion of the heating chamber

5. In a fire-place heater, a grate, a heating chamber in operative relation to the grate, a cold air flue entering the heating chamber at the lower end thereof and discharging upwardly into said heating chamber, and hot air flues traversing the grate and entering the heating chamber through the bottom thereof on each side of the cold air flue and continued into the heating chamber in the same direction as the direction of entrance of the cold air flue and terminating at a higher point within the heating chamber than the discharge end of the cold air flue.

[Claims 6 to 12 not printed in the Gazette.]

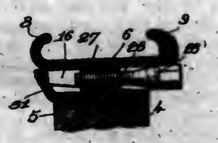
1,013,373. MACHINE-CHUCK. ALBERT E. CHURCH, New Britain, Conn. Filed Oct. 24, 1910. Serial No. 588,744.



A chuck consisting of a front section and a rear section secured together and having registering annular concen-

tric recesses in their opposed faces, a scroll ring fitted in the outer registering recesses and having a beveled inner edge, a plurality of radial slidable jaws fitted in one body ring and engaged by one face of said scroll ring, means for actuating the scroll ring mounted in the other body ring, a wear ring mounted in the inner registering annular recesses and having a beveled outer edge engaging the beveled inner edge of the scroll ring, means for holding said beveled edges unyieldingly in contact, the rear section having a flange thereon, and a scroll plate held in position by said flange.

1,013,374. DETACHABLE RIM FOR PNEUMATIC TIRES. WALTER E. COPITHORN, Natick, Mass. Filed June 20, 1910. Serial No. 567,779.



1. In a wheel, the combination with a wheel body, of a detachable tire-receiving rim, a circular expansible locking member for locking the detachable rim to the wheel body, and a single tapered screw screw-threaded into and extending transversely of the wheel body and co-acting with the locking member to expand it and thereby lock the rim in place.

2. In a wheel, the combination with a wheel body having associated therewith fixed inclined surfaces and a wall or lip adjacent each surface, of a detachable rim, an expansible locking member situated on the interior of the detachable rim and provided with inclined surfaces to engage those associated with the wheel body, and means to expand the locking member, said lips overlying the front face of the locking member and holding it in position.

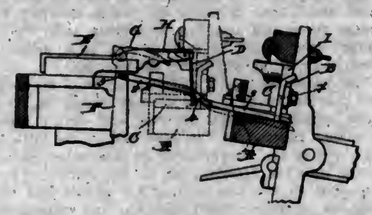
3. In a wheel, the combination with a wheel body having associated therewith locking projections provided with grooves, of a detachable rim having a projection on its inner face, and a locking member situated inside of said rim and engaging said projection thereon and also having projections with inclined faces that occupy said grooves, and a screw secured to the wheel body and acting to expand the locking member.

4. In a wheel, the combination with a wheel body of projections on its exterior, locking projections provided with grooves and extending laterally therefrom, a detachable tire-receiving rim having projections on its interior surface coöperating with the projections on the wheel body to prevent creeping of the rim, a two-part locking member provided with inclined faces adapted to occupy the grooves, and a screw to force the sections of the locking member apart thereby to cause the inclined surfaces thereon to act on the bottoms of the grooves and expand the locking member outwardly.

5. In a wheel, the combination with a wheel body, of projections on its exterior, locking projections extending laterally therefrom and each having an outwardly-projecting lip at its end, a detachable tire-receiving rim encircling the wheel body and having an interior diameter larger than the exterior diameter of said wheel body, said detachable rim having projections on its interior face to coöperate with those on the wheel body thereby to prevent creeping, and a detachable annular locking member encircling said locking projections and having portions adapted to lie behind said lips, said member being shaped to engage and press outwardly against the inner face of the detachable rim to hold the latter centered relative to the wheel body.

[Claims 6 and 7 not printed in the Gazette.]

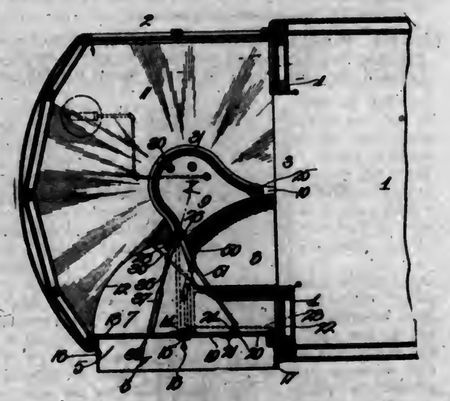
1,013,375. FILLING-FORK MECHANISM FOR LOOMS. EDWARD A. CUNNIFF, New Bedford, Mass., assignor to Draper Company, a Corporation of Maine. Filed Feb. 27, 1911. Serial No. 611,014.



1. In a loom, a weft-hammer, a filling-fork having depending tines, a lay transversely recessed for the passage of the lower ends of the tines, a grid at the rear end of the recess, and a filling sustainer pivotally connected at its front end with the weft-hammer and at its rear end slidably supported on the bottom of the recess, said sustainer having a cam portion engaged by the bottom of the recess when the lay beats up to raise and operatively position said sustainer above the lay raceway and cause it to maintain the filing elevated above the lower ends of the fork-tines and in front of the grid.

2. In a loom, a filling-fork having depending tines, a transversely recessed lay, a grid at the rear end of the recess, having an upright guideway, a weft-hammer, a filling sustainer pivotally connected therewith and rearwardly extended in the recess and through the guideway, the rear end of the sustainer sliding upon the bottom of the recess, and a cam portion on said sustainer to coöperate with the bottom of the recess and operatively position said sustainer above the lay raceway on the detecting pick to hold the filling in front of the grid and above the lower ends of the fork-tines to insure engagement of the latter and the filling, the forward stroke of the weft-hammer moving said sustainer out of the shuttle path when the shuttle is picked from the detaching s... of the loom.

1,013,376. STREET-CAR. CHARLES C. CREWSON, Kansas City, Mo. Filed May 15, 1911. Serial No. 627,363.



1. A car, comprising a body having a substantially level floor and an end extension or vestibule provided with a side opening, and an inclined or sloping floor extending upward from the plane of the bottom of the side opening to the plane of the car floor.

2. A car, comprising a body having a substantially level floor and an end extension or vestibule provided with a side opening, an inclined or sloping floor extending upward from the plane of the bottom of the side opening to the plane of the car floor, and a bulk-head projecting inwardly from the left side of the car at the rear end of the body thereof.

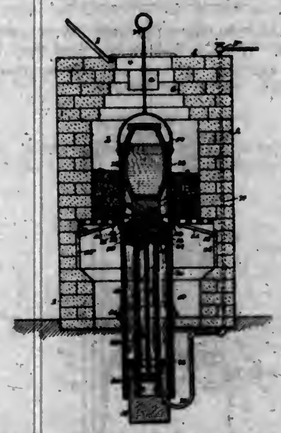
3. A car, comprising a body having a substantially level floor and an end extension or vestibule provided with a side opening, a conductor's stand in the end extension or vestibule, and an inclined or sloping floor extending upward from the plane of the bottom of the side opening to the plane of the car floor, said inclined or sloping floor being bowed with the hollow side of the bow disposed forwardly and to the right.

4. A car, comprising a body having a substantially level floor and an end extension or vestibule provided with a side opening, a conductor's stand in the end extension or vestibule, an inclined or sloping floor extending upward from the plane of the bottom of the side opening to the plane of the car floor, said inclined or sloping floor being bowed with the hollow side of the bow disposed forwardly and to the right, and a bulk-head projecting inwardly from the left side of the car at the rear end of the body thereof.

5. A car, comprising a body having a substantially level floor and an end extension or vestibule provided with a side opening, a conductor's stand in the extension or vestibule adjacent to the rear end and in line with the center of the said body, and an inclined or sloping floor extending upward from the plane of the bottom of the side opening to the plane of the car floor, and curving around the conductor's stand from a point rearward to a point to the left thereof.

[Claims 6 to 18 not printed in the Gazette.]

1,013,377. HOIST FOR CRUCIBLE-FURNACES. LOUIS HUBERT JOHN DE BATS, Zellenople, Pa., assignor of one-fourth to Alfred G. Zehner, one-fourth to F. Edwin Zehner, and one-fourth to Jacob C. Milleman, Zellenople, Pa. Filed Mar. 20, 1911. Serial No. 615,745.



1. A hoist for a crucible furnace comprising means for supporting the crucible within the furnace and for raising the same from such furnace, and a protective casing around said means and crucible.

2. A hoist for a crucible furnace comprising a block for fitting under the crucible to support the same, means connected to said block for raising the crucible from the furnace, and a protective casing around said block, means and crucible.

3. A hoist for a crucible furnace comprising a block for fitting under the crucible to support the same, means connected to said block for raising the crucible from the furnace, and a protective casing around said block, means and crucible and supported by said block and crucible.

4. A hoist for a crucible furnace comprising a block for fitting under the crucible to support the same, means connected to said block for raising the crucible from the furnace, a protective casing around said means and hung from said block, and a protective casing around said crucible and supported by the same.

5. A hoist for a crucible furnace comprising a block for fitting under the crucible to support the same, means connected to said block for raising the crucible from the furnace, a protective casing around said means and hung from said block, and a protective casing around said crucible and supported by the same, said last named casing having a handle extending up from the same.

[Claim 6 not printed in the Gazette.]

1,013,378. COMPUTING-MACHINE. GUSTAVE O. DEGENER, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 8, 1910. Serial No. 591,269.

1. In a computing machine, the combination with main computing wheels of high and low denominations, of a tens-carrying device extending from one of said wheels to the other, and a power-driven auxiliary pinion element; said tens-carrying device provided with an auxiliary element having drive teeth normally out of mesh with said auxiliary pinion element, and movable by said computing wheel of low denomination into mesh with said auxiliary pinion element, to enable the latter to assist in the tens-carrying operation; a shaft or axle; one of said auxiliary elements mounted upon said shaft or axle; and a yielding bearing for said shaft or axle.

2. In a computing machine, the combination with main computing wheels of high and low denominations, of a tens-carrying device extending from one of said wheels to the other, and a power-driven auxiliary pinion element; said tens-carrying device provided with an auxiliary element having drive teeth normally out of mesh with said auxiliary pinion element, and movable by said computing wheel of low denomination into mesh with said auxiliary pinion element, to enable the latter to assist in the tens-carrying operation; a shaft or axle having bearings constructed to permit yielding movement thereof, and means to restore said shaft or axle to normal position; one of said auxiliary elements mounted upon said shaft or axle.

3. In a computing machine, the combination with a gang of main computing wheels, of tens-carrying devices extending from wheels of lower denominations to wheels of higher denominations in said gang, and a series of power driven auxiliary pinions mounted upon a yielding shaft; said tens-carrying devices provided with drive teeth normally out of mesh with said pinions, and including devices for moving said drive teeth into mesh with said pinions, to assist in the tens-carrying operations.

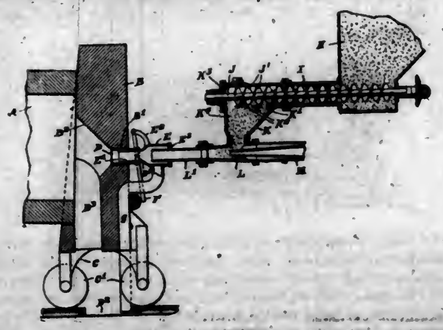
4. In a computing machine, the combination with a gang of main computing wheels, of tens-carrying devices extending from wheels of lower denominations to wheels of higher denominations in said gang, and a series of power-driven auxiliary pinions mounted upon a shaft; said tens-carrying devices provided with drive teeth normally out of mesh with said pinions, and including devices for moving said drive teeth into mesh with said pinions to assist in the tens-carrying operations; bearings being provided for said shaft to permit a yielding movement thereof, and a spring device being provided to return the shaft to normal position.

5. In a computing machine, the combination with a gang of main computing wheels, of tens-carrying devices extend-

ing from wheels of lower denominations to wheels of higher denominations in said gang, and a series of power-driven auxiliary pinions; said tens-carrying devices provided with drive teeth normally out of mesh with said pinions, and including devices for moving said drive teeth into mesh with said yielding pinions, to assist in the tens-carrying operations; a shaft on which said pinions are mounted, independently movable journal boxes for the ends of said shaft, to permit the shaft to yield and springs to restore said journal boxes to normal positions.

[Claims 6 to 18 not printed in the Gazette.]

1,013,379. APPARATUS FOR HEATING FURNACES OR KILNS. WILLIAM R. DUNN, Easton, Pa. Filed Aug. 25, 1909. Serial No. 514,498.



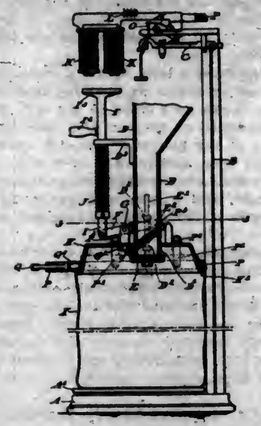
1. The combination with the wall of a kiln having a perforation through it, comprising a cylindrical outer portion and a conical inner portion, of means for blowing powdered fuel and air into the kiln through said perforation, including a pipe section or burner nozzle extending into said perforation and adjustable in the direction of its length to vary the relation between the inner end of the section and the inner surface of the kiln wall, said burner nozzle having its outer surface separated from the inner wall of said perforation by a space through which air may pass into said kiln.

2. In a cement kiln, the combination with the kiln proper and the clinker pit, of means for blowing powdered coal into the kiln, comprising in combination a blast nozzle through which air under pressure admixed with the powdered coal issues, a chamber surrounding said nozzle, a burner nozzle extending into the kiln through which the fuel may be blown from said chamber into said kiln, means for adjusting said nozzle in the direction of its length, and a conduit external to the kiln leading directly from the clinker pit to said chamber.

1,013,380. ELECTRICALLY-CONTROLLED BAG FILLING AND WEIGHING DEVICE. WILLIAM R. DUNN, Easton, Pa. Filed Feb. 14, 1910. Serial No. 543,711.

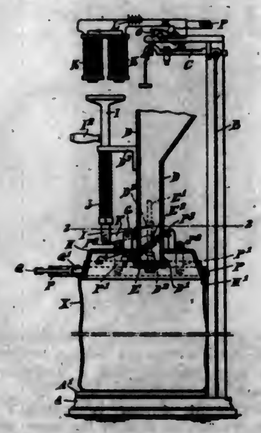
1. In a receptacle filling and weighing device, the combination of a scale for supporting and weighing a receptacle to be filled, a delivery chute adapted to discharge into a receptacle supported by said scale, a movable loaded valve mechanism controlling, and tending to close, said chute, said mechanism including a valve, a lever for moving said valve, a sliding rod connected to said lever, a stationary electromagnet, an armature connected to said rod and moved thereby when the valve is open into, and when the valve is closed out of, a position in which the magnetic attraction between the electromagnet and the armature is sufficient to hold the valve open, and means controlled by the weighing scale for deënergizing the electromagnet when the weight on the scale reaches a predetermined amount.

2. In a receptacle filling and weighing device, the combination of a platform scale for supporting and weighing a receptacle to be filled, a delivery chute having a depending discharge nozzle located above the platform of said scale, a valve for opening and closing the lower end of said nozzle, a lever for moving said valve, a sliding rod pivotally connected to said lever, a spring acting on the rod in a direction to close the valve, a stationary electromagnet, an armature connected to said rod and movable



when the valve is open into, and when the valve is closed out of, a position in which the magnetic attraction between said electromagnet and said armature is sufficient to hold the valve open, and means controlled by the weighing scale for deënergizing the electromagnet when the weight on the scale platform reaches a predetermined amount.

1,013,381. BAG-HOLDING DEVICE. WILLIAM R. DUNN, Easton, Pa. Original application filed Feb. 14, 1910, Serial No. 543,711. Divided and this application filed May 25, 1910. Serial No. 563,390.



1. In a bag holding device, the combination of an internal bag support, a clamping member adapted to engage said support at one side, and a lever pivotally connected to said clamping member at the opposite side of said support, and having an arm adapted to be forced against said opposite side of said support to thereby move the pivotal connection between said lever and said member away from said opposite side of said support and draw said clamping member toward said one side of said support, whereby said clamping member may be caused to hold a portion of a bag against one side of said support while said lever arm holds another bag portion against said opposite side of said support.

2. In a bag holding device, the combination of an internal bag support, a clamping member adapted to engage said support at one side, a lever pivotally connected to said clamping member at the opposite side of said support, and having an arm adapted to be forced against said opposite side of said support to thereby move the pivotal connection between said lever and said member away from said opposite side of said support and draw said clamping member toward said one side of said support, whereby said clamping member may be caused to hold a portion of a bag against one side of said support while said lever arm holds another bag portion against said opposite side of said support, and means tending to hold said clamping member away from said one side of said support.

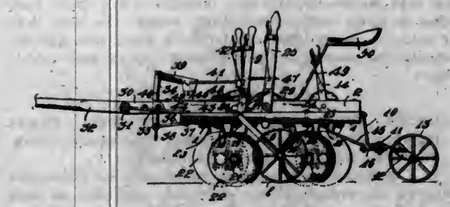
3. In a bag holding device, the combination of an annular internal bag support, a stiff elongated ring surrounding said support, and a lever pivoted to said ring at one end and adapted to engage the adjacent side of said support and thereby draw the opposite end of the ring into engagement with the corresponding side of said support, to simultaneously move the pivotal connection between said lever and ring away from the adjacent side of said support.

4. In a bag holding device, the combination of an annular internal bag support, a stiff elongated ring surrounding said support, and a lever pivoted to said ring at one end and adapted to engage the adjacent side of said support and thereby draw the opposite end of the ring into engagement with the corresponding side of said support, and means tending to hold the said opposite end of said ring away from said support.

5. In a bag holding device, the combination of an annular internal bag support, an elongated ring surrounding said support, a lever pivoted to said ring at one end and adapted to engage the adjacent side of said support and thereby draw the opposite end of the ring into engagement with the corresponding side of said support, and swinging links by which said ring is supported from said support.

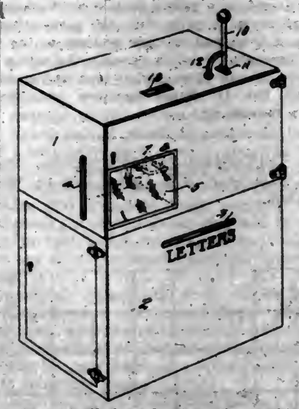
[Claim 6 not printed in the Gazette.]

1,013,382. DISK HARROW. JOSEPH EAST, Colfax, Wash. Filed June 1, 1911. Serial No. 630,565.



In a harrow of the character described, the combination with a main supporting frame including a central longitudinal reach bar, a base plate beneath said bar, and longitudinal bearing plates at either side of and parallel with said base plate; of four H-shaped harrow-frames, each comprising longitudinal parallel bars and a transverse connecting plate, bearing brackets depending from the frame, disks whose axles are mounted in said brackets, the connecting plate of each frame being pivoted beneath the side bar of the main supporting frame and its parallel bars extending at their inner portions slidably under said bearing plate and then slidably over said base plate; and levers, and link mechanisms connecting them with the four harrow-frames for adjusting the position of the latter beneath the main frame.

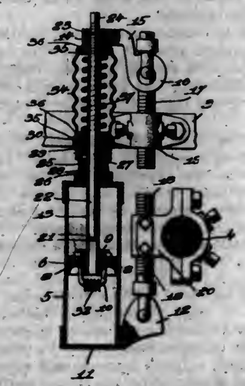
1,013,383. LETTER-STAMPING MACHINE. JACOB W. FANNEL, Newburgh, N. Y. Filed July 24, 1911. Serial No. 640,304.



1. In a coin controlled mechanism, the combination with the coin chute, a fixed upright track beneath the same, a main lever pivoted at its upper end opposite said track, and a spring pressing its lower end toward the track so as to make a V-shaped space whose upper end communicates with the lower end of said chute; of a plunger mounted in guides and standing normally above said V-shaped space, a handle connected with said plunger, a casing surrounding the mechanism and beyond which said handle projects, and other mechanisms controlled by the movement of said main lever.

2. In a coin controlled mechanism, the combination with the coin chute, a fixed upright track, a main lever pivoted opposite said track, and a spring pressing it toward the track so as to make a V-shaped space whose upper end communicates with the lower end of said chute; of a plunger standing normally above said space, a power lever connected with said plunger, a spring holding the plunger normally raised, a handle, a link connecting it with said power lever, a surrounding casing beyond which said handle projects, and other mechanisms controlled by the movement of said main lever.

1,013,384. SHOCK-ABSORBER. ERNST FLENTJE, Cambridge, Mass. Filed Oct. 29, 1909. Serial No. 525,285.

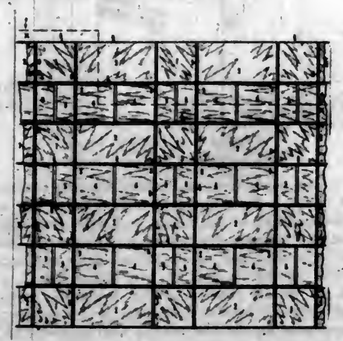


1. In a shock absorber, the combination with a cylinder to contain liquid, of a piston therein, said piston having a plurality of ports, a valve for said ports situated above the piston, a U-shaped member secured to the valve and extending through the ports beneath the piston for limit-

ing the upward movement of the valve, and a cushioning device on the U-shaped member.

2. In a shock absorber, the combination with a cylinder to contain liquid, of a piston therein, said piston having a plurality of ports, a valve for said ports situated above the piston, a U-shaped member secured to the valve and extending through the ports beneath the piston for limiting the upward movement of the valve, and a coiled spring surrounding the U-shaped member and operating to cushion its movement.

1,013,385. BUILDING CONSTRUCTION. THOMAS J. GEORGE, Englewood, N. J. Filed July 14, 1910. Serial No. 571,965.



1. In building construction, in combination, a plurality of blocks arranged adjacent one another to form an upright structure, and tension members respectively extending about and binding into groups a plurality of blocks, each of a plurality of blocks of one group being included in a plurality of other groups.

2. In building construction, in combination, a plurality of blocks arranged adjacent one another to form an upright structure, and tension members respectively extending about and binding into groups a plurality of blocks, alternate blocks in one group being included in a plurality of other groups.

3. In building construction, in combination, a plurality of blocks arranged adjacent one another to form an upright structure, and tension members respectively extending about and binding into groups a plurality of blocks, the extreme blocks of one group being included in a plurality of other groups.

4. In building construction, in combination, a plurality of blocks arranged adjacent one another to form an upright structure, and tension members respectively extending about and binding into groups a plurality of blocks, a block of one group being included in a plurality of other groups.

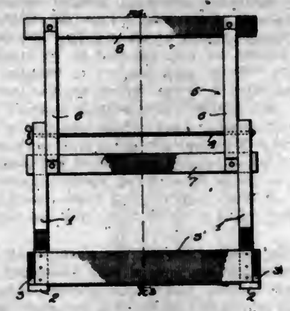
5. In building construction, in combination, a plurality of blocks arranged adjacent one another to form an upright structure, and tension members respectively extending about and binding into groups a plurality of blocks, each of a plurality of blocks of each group being included in a plurality of other groups.

[Claims 6 to 10 not printed in the Gazette.]

1,013,386. HURDLE. VERN GILKEY, Los Angeles, Cal. Filed Feb. 6, 1911. Serial No. 606,997.

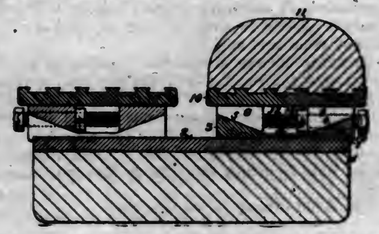
1. A hurdle comprising a plurality of vertical standards provided with recesses, base boards to which said standards are secured, a frame between said standards consisting of vertical studs and horizontal connecting strips, said strips extending beyond said studs and being arranged to engage the recesses in said standards to hold said frame in position of adjustment, and a pivot rod extending through said standards and through one end of said frame studs, whereby to afford a high or a low hurdle.

2. A hurdle comprising a plurality of vertical standards provided on both sides with recesses, and a frame pivoted eccentrically between said standards, and consisting of vertical and horizontal strips, said horizontal



strips extending beyond said vertical strips, and being arranged to engage the recesses in said standards, whereby the frame may be normally held in position of adjustment.

1,013,387. VEHICLE-RIM. JAMES E. HALE, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Sept. 11, 1911. Serial No. 648,725.



The combination with a vehicle wheel of a contractible ring mounted thereon, the outer face of said band provided with a shallow groove having inclined sides, a pair of wedge-shaped rings mounted in said groove, a rim mounted on said wedge-shaped rings, and means for forcing said wedge-shaped rings laterally away from each other to cause them to detachably engage the inner face of said rim for holding the latter in place and simultaneously compressing the said grooved ring on said vehicle wheel.

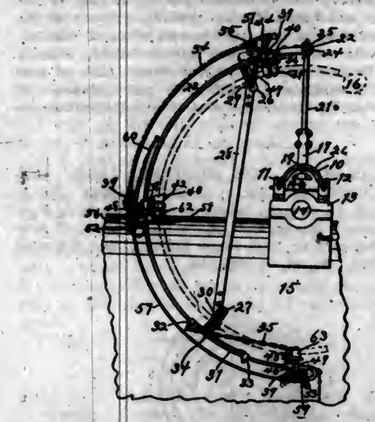
1,013,388. BELT-HOLDER FOR ENGINES. ELMER HICKS and CLARENCE E. HICKS, Montezuma, Iowa. Filed Feb. 27, 1911. Serial No. 611,272.

1. A belt-holder for engines, comprising an adjustable support, an arcuate frame adjustably mounted on said support, inner guides fixed to said frame, outer guides hinged to said frame, and means for moving said outer guides through arcs relative to the arcuate frame.

2. A belt-holder for engines, comprising an adjustable support, an arcuate frame adjustably mounted on said support, inner guides fixed to said frame, outer guides hinged to said frame, rods connecting said outer guides, a spring acting on said outer guides in one direction, and manually operated devices acting on said outer guides in opposition to said spring.

3. A belt-holder for engines, comprising an adjustable support, an arcuate frame adjustably mounted on said support, inner guides fixed to said frame, outer guides hinged to said frame, arcuate rods connecting said outer guides, a spring acting on said outer guides in one direction, and manually operated devices acting on said outer guides in opposition to said spring.

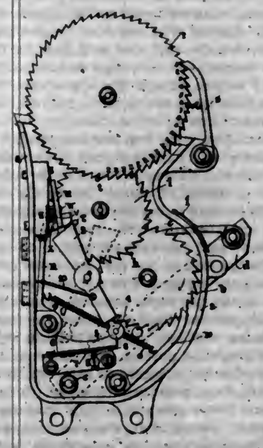
4. In a belt-holder for engines, a support comprising base members of angular form, a base plate adjustably mounted thereon, an adjusting bar mounted on and adapted to be moved through an arc relative to said base plate, a supporting arm mounted on and adjustable longitudinally of said adjusting bar, an arcuate frame carried by said supporting arm, guides carried by said frame, and means for adjusting said guides relative to said frame.



5. A belt-holder for engines, comprising a suitable support, an arcuate frame adjustably mounted on said support, brackets on said frame, a rod adjustably secured to said brackets and extending across said frame, and holding devices mounted on said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,013,389. MACHINE-OUTPUT-INDICATING DEVICE. CHARLES HICKTON, Long Eaton, England, assignor of one-half to William Parnham Smith and one-half to John Patrick Newton, Long Eaton, England. Filed Jan. 20, 1910. Serial No. 538,129.



1. In combination with a lace making or other textile machine an apparatus consisting in a clock-driven recording drum, a lever switch adapted to be closed when the machine is running and to be open when the machine is stopped, a clock controlled make-and-break device in circuit with said switch, an output recording instrument whereby the amount of work completed by, and the idle and running time of one or more machines are simultaneously recorded.

2. In a machine-output indicating device, a record-receiving element; a record-maker co-acting therewith; electrically operated means for actuating said record-maker and in circuit with said actuating means a clock-controlled make-and-break and a switch controlling said circuit, said switch being adapted to be closed when the machine is running and vice versa.

3. In a machine output indicating device, a train of measuring wheels one of which is graduated to indicate output and positionable to a given graduation independently of the other wheels; a casing inclosing certain of said wheels, said casing having a close-fitting opening through which said graduated wheel projects; a record-receiving element; a record-maker disposed in operative relationship to said record-receiving element and means actuated by one of said inclosed wheels for operating said record-maker.

4. In a machine output indicating device, a record-receiving element, time and output record makers co-acting therewith, electro-magnetic means for actuating said record makers and a combined starting lever and switch for starting the machine and rendering operative both of said actuating means.

5. In a machine-output indicating device, a train of measuring wheels; time and output record-makers; means for operating said output record-maker from one of said measuring wheels; and electrically operated means for actuating said time record-maker and in circuit therewith a clock-controlled make-and-break.

[Claims 6 to 26 not printed in the Gazette.]

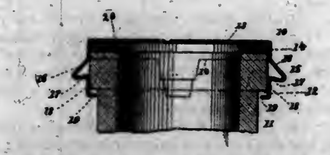
1,013,390. OVEN-DOOR. WALTER B. HUSNEFELD, Cincinnati, Ohio, assignor to The Husnefeld Company, Cincinnati, Ohio. Filed Jan. 23, 1911. Serial No. 604,284.

1. In an oven door, the combination with a frame sheet and a lining sheet having alined openings and each having a bulged portion, said frame sheet having inwardly projecting flanges off-set from said bulged portion, and a glass panel seated against said off-set inwardly projecting flanges, the lining sheet having at one side of the opening, a seat for the glass panel opposite the adjacent off-set flange of the frame sheet, of a retaining strip at the opposite side edge of the opening in the door, said retaining strip having a part entering between the bulged portions of the frame sheet and lining sheet and also having a portion projecting beyond the free edge of the lining sheet and bearing against the inner face of the glass panel opposite the bearing of the adjacent off-set flange of the frame sheet against the outer face of said glass panel.

2. In an oven door, the combination of a frame sheet having an opening, a lining sheet having an opening, said frame and lining sheets being bulged outwardly and having straight walls forming said bulged portion, said frame sheet provided at the free edges with outwardly projecting flanges and with off-set flanges projecting inwardly from said outwardly projecting flanges, a glass panel seated against said inwardly projecting off-set flanges, the lining sheet having a member at one side

of the opening in the door constituting a seat for the glass panel, and a removable retaining strip at the opposite side of the opening in the door and comprising a member inserted between the parallel walls of the bulged portions of the frame and lining sheets and said retaining strip having a member projecting at an angle from the free edge of the adjacent lining sheet and bearing against the inner face of the glass panel opposite the adjacent off-set flange of the frame sheet.

1,013,391. CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. JOSEPH V. HULL, Brooklyn, N. Y., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y., a Corporation of New York. Filed July 3, 1908, Serial No. 441,743. Renewed May 16, 1911. Serial No. 627,512.



1. In combination with a receptacle having an exterior shoulder about its neck, a closure comprising a cap and a compressible gasket therein engaging the upper edges of said receptacle, said cap having an annular depending flange and arms extending downwardly therefrom and each comprising, folded together, a downwardly extending member, an upwardly extending member and a downwardly extending member having an inwardly bent lip on its lower end engaging said shoulder with binding force; substantially as set forth.

2. For use on a receptacle having an exterior shoulder about its neck, a closure comprising a cap and a compressible gasket therein to engage the upper edge of said receptacle, said cap having downwardly extending arms each comprising in succesion an outwardly and downwardly extending member, an inwardly extending member and a downwardly extending member having an inwardly bent lip on its lower end to pass below said shoulder, said members when folded together against the receptacle, with said gasket compressed, being adapted to draw said lip upwardly against said shoulder with binding force; substantially as set forth.

1,013,392. CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. JOSEPH VARLEY HULL, Brooklyn, N. Y., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y., a Corporation of New York. Filed Apr. 10, 1908, Serial No. 426,331. Renewed June 3, 1911. Serial No. 631,088.

In combination with a bottle or other receptacle, a closure therefor comprising a cap having side walls whose lower edges are flanged outwardly and downwardly forming a recess, a packing-ring in said recess and initially extending downwardly below the same, and a split locking-ring applied upon the flanged portion of said cap and engaging the upper surface thereof and the lower surface of said packing-ring, said locking-ring being reduced in vertical diameter against the flanged portion of said cap and said packing ring and with said flanged portion holding a peripheral portion of said packing-ring squeesed from said recess against said receptacle, said locking-ring having overlapping end portions, one of which in its upper edge is formed inwardly from its end with a recess (28), and the other of which is formed in its upper edge with a tongue (29) adapted to said recess and a recess (30) adapted to receive that portion of the upper edge of the ring between said recess 28 and the adjacent end of the ring, and said tongue and said recesses being of substantial length, with the recess 28 extending outwardly slightly beyond the line on which the upper flange (25) of said ring is bent inwardly and downwardly and the recess 30 extended outwardly to said bending line; substantially as set forth.

1,013,393. CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. JOSEPH VARLEY HULL, Brooklyn, N. Y., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y., a Corporation of New York. Filed Apr. 10, 1908, Serial No. 426,329. Renewed June 3, 1911. Serial No. 631,183.

1. In combination with a receptacle having an annular exterior shoulder about its mouth, a closure therefor comprising a metal cap having in its top an opening and at its side edge a vertical depending flange outwardly recessed and holding a packing ring in proximity to said shoulder, a metal disk between the upper edge of said receptacle and the inner upper surface of said cap and extending at its outer edge to the said vertical flange and said disk being adapted to be cut out along the line of the opening in the cap, and a lid pivoted to the cap for closing the opening therein, said recessed portion of the flange of the cap being adapted to permit said packing ring to be pressed firmly against said shoulder for sealing the receptacle and securing the cap, and said disk having a beaded edge portion whose sides converge downwardly and along their line of juncture engage the upper edge of the receptacle with a binding force holding the edge of the disk pressed against the said vertical flange.

2. In combination with a receptacle having an annular exterior shoulder about its mouth, a closure therefor comprising a metal cap having in its top an opening and at its side edge a depending flange outwardly recessed and holding a packing-ring in proximity to said shoulder, a disk between the upper edges of the receptacle and the inner upper surface of said cap and adapted to be cut out along the line of the opening in the cap, and a lid pivoted to the cap for closing the opening therein, said recessed portion of the flange of the cap being adapted to permit said packing-ring to be pressed firmly against the receptacle for sealing the same, and said disk having an upwardly and outwardly flaring edge portion held in close binding contact with the adjacent surfaces of said cap by the interior portions of said disk; substantially as set forth.

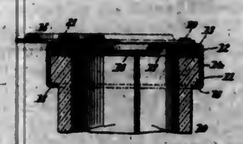
3. A closure for a receptacle, said closure comprising a cap having an opening in its top and a depending flange to pass downwardly over the receptacle, a packing for sealing the cap, a lid pivoted on the cap adjacent to the opening therein and a disk between the upper edges of the receptacle and the inner upper surface of said cap and adapted to have its central portion removed along the line of the opening in the cap, said cap having a lip slit and turned upwardly therefrom at one edge of said opening, and said lid having a flat outer edge formed with a raised shoulder adapted when said flat edge, on the closing of the lid, passes under said lip to engage the edge of the lip and arrest the lid; substantially as set forth.

4. A closure for a receptacle, said closure comprising a metal cap having in its top an opening and at its side edge a vertical depending flange to pass downwardly over the receptacle, a packing for sealing the cap, a metal disk between the upper edge of said receptacle and the inner upper surface of said cap and extending at its outer edge to the said vertical flange and said disk being adapted to be cut out along the line of the opening in the cap, and a lid pivoted to the cap for closing the opening therein, said disk having a beaded edge portion whose sides converge downwardly and along their line of juncture engage the upper edge of the receptacle with a binding force holding the edge of the disk pressed against the said vertical flange; substantially as set forth.

5. A closure for a receptacle, said closure comprising a cap having an opening in its top and a depending flange to pass downwardly over the receptacle, and a lid pivoted on the cap adjacent to the opening therein, said cap having a lip slit and turned upwardly therefrom at one edge of said opening, and said lid having a flat outer edge formed with a raised shoulder adapted when said flat edge, on the closing of the lid, passes under said lip to engage the edge of the lip and arrest the lid; substantially as set forth.

[Claim 6 not printed in the Gazette.]

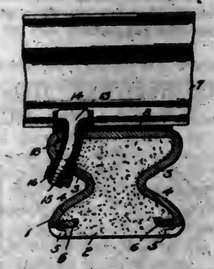
1,013,394. CLOSURE FOR BOTTLES, JARS, AND OTHER RECEPTACLES. JOSEPH VARLEY HULL, Brooklyn, N. Y., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y., a Corporation of New York. Filed Apr. 10, 1908, Serial No. 426,330. Renewed June 3, 1911. Serial No. 631,184.



1. In combination with a receptacle having an exterior annular shoulder about its mouth, a closure therefor comprising an integral metal cap having at its edge a depending flange engaged with said shoulder for securing the cap and at its top a depressed section whose bottom is defined by a weakened line and to be removed when desired, a packing for sealing the cap, and a lid pivoted on the cap, said packing being compressed between the upper edge of the receptacle and said cap and the lower edge of said flange being projected inwardly and in firm engagement with said shoulder; substantially as set forth.

2. In combination with a receptacle having an exterior annular shoulder about its mouth, a closure therefor comprising an integral metal cap having at its edge a depending flange engaged with said shoulder for securing the cap and at its top a section defined by a weakened line and to be removed when desired, a packing for sealing the cap, and a lid pivoted on the cap, said removable section having a substantially circular edge outline at one side and a straight edge outline at the other side and when removed leaving in the cap an opening having a substantially circular edge at one side and a straight edge 20 at the other side, and said lid being pivoted to the cap adjacent to the straight edge 20 of said opening thus to be formed and having at one side edge a circular outline 24 and at its other side edge a concave recess 25 and tongue portion 26 having convex edges, said tongue being adjacent to the pivoted portion of the lid for coöperation with the straight edge 20 of said opening for moving the handle of a spoon left standing against said edge to one end thereof, and said recess 25 being adapted to engage such handle should it be left against the circular edge of said opening and move it to said end of said straight edge; substantially as set forth.

1,013,395. RAILWAY-TIE AND RAIL-FASTENING. JACOB ALVIN HYLE and JOSEPH ALEXIS PEMENT, Chicago, Ill. Filed Aug. 10, 1911. Serial No. 643,439.



1. A metallic railway tie, a solid filling therein, said tie having a series of cut-out portions and upturned lips intermediate its length, and a plurality of headed rivets, each rivet head having a vertical face portion at the upper and lower portion thereof for the purpose set forth.

2. A metallic railway tie, a solid filling therein, and fastening means consisting of a spike having a flattened upper portion, a lower cylindrical portion, and an annular nut fitted on the lower end of said spike and provided with a V-shaped recess.

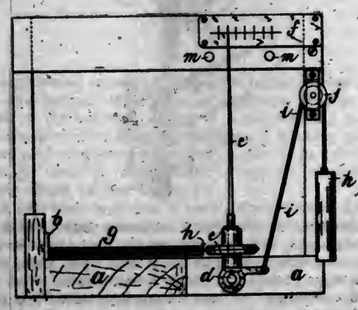
3. A metallic railway tie, a solid filling therein, and fastening means comprising a spike having a flattened upper portion, a cylindrical lower and threaded portion, an insulated sleeve surrounding said spike, and an annular nut provided with a recess in the exterior surface.

4. A metallic railway tie, a solid filling therein, and fastening means comprising a spike having a flattened upper portion, a cylindrical lower and threaded portion, an insulated sleeve surrounding said spike, said sleeve having an upwardly extended portion projecting from the body thereof.

5. A metallic railway tie, a solid filling therein, and fastening means comprising a spike having a flattened upper portion, a cylindrical lower and threaded portion, an insulated sleeve surrounding said spike, said sleeve having an upwardly extended portion projecting from the body thereof, the upper portion being flattened and the lower portion annular and surrounding said spike substantially throughout its length.

[Claim 6 not printed in the Gazette.]

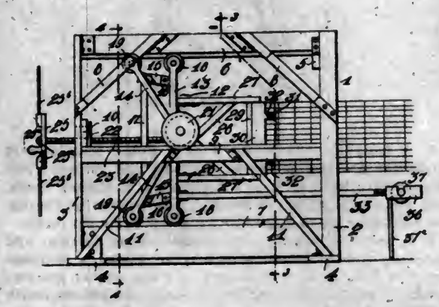
1,013,396. MEANS FOR GAGING OR MEASURING TILES. HARRY JOHNSON, Newcastle-under-Lyme, England. Filed Apr. 29, 1911. Serial No. 624,096.



A gaging machine for tiles, comprising a frame having at its lower part a support for the tiles to rest on, a stationary gage member projecting above the said support at one side thereof, a pointer pivoted to the lower part of the frame on the other side of the said support and projecting upwardly and adapted to be grasped by the hand, a gage member carried by the said pointer, a scale on the

upper part of the frame adjacent to the free end of the pointer, and means for moving the pointer automatically toward the edge of a tile placed on the support between the gage members, said pointer being adapted to be retracted by hand while the tile is being placed in position or being removed from the said support.

1,013,397. WIRE-STRETCHER. JAMES H. W. JONES, Corydon, Ky. Filed June 1, 1911. Serial No. 630,564.



A stretching device of the character described comprising a frame, upper and lower centrally disposed guiding and supporting tracks, intermediate laterally disposed guiding and supporting tracks, a stretching carriage, guiding and supporting rolls revolubly mounted on said carriage and adapted to be engaged with said tracks, a carriage operating screw arranged in said frame and having an operative connection with said carriage, and a wire clamp detachably connected to said carriage whereby the latter is connected to the object to be stretched.

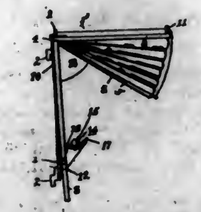
1,013,398. STAPLE-ANCHOR. WILLIAM L. KELLER, Kearney, Nebr. Original application filed Nov. 3, 1909, Serial No. 526,019. Divided and this application filed Aug. 2, 1910. Serial No. 575,157.

1. The combination with a concrete body portion, of a staple anchoring member embedded in the body portion and formed of a single piece of metal bent upon itself to produce mating plates, the metal forming said plates being pressed outwardly to form diverging grooves adapted to receive a wire engaging staple, and the metal constituting the plates being pressed laterally between the diverging ends of the guiding grooves to form angular projections defining substantially triangular cement receiving pockets.

2. A staple anchoring member formed of a single piece of metal bent upon itself to form mating plates, the metal at the corners of the plates being bent inwardly and laterally, and the metal constituting the abutting faces of the plates being pressed laterally to form grooves having their outer ends opening through one end of the anchoring member and adapted to receive a staple and their inner ends spaced apart and deflected laterally in opposite directions, and a fastening device piercing the plates between the diverging ends of the grooves.

3. A staple anchoring member formed of a single piece of metal bent upon itself to produce mating plates, the longitudinal edges of the plates at the upper and lower corners thereof being pressed laterally and inwardly, there being guiding grooves formed in said plates and having their outer ends opening through one end of said anchoring member and their inner ends spaced apart and deflected laterally on diverging lines, the metal constituting the plates being pressed laterally between the diverging ends of the grooves to form angular projections defining a substantially triangular shaped cement receiving pocket, and a single fastening device piercing both plates at a point between said grooves.

1,013,399. FLASH-LIGHT DEVICE. MATTHEW HOWARD KENNEDY, New Brighton borough, Pa. Filed Mar. 29, 1911. Serial No. 617,683.



1. A device for catching the products of the combustion of flash light powder composed of a back board forming one side of an inclosure, a bonnet adapted to be folded up away from said board, means for holding said bonnet in its folded position, and means whereby said holding means are released and said bonnet is permitted to unfold down against said board by the ignition of the powder.

2. A device for catching the products of the combustion of flash light powder composed of a back board forming a downwardly and forwardly inclined side of an inclosure, a bonnet adapted to be folded up away from said board, means for holding said bonnet in its folded position, and means whereby said holding means are released and said bonnet is permitted to unfold down against said board by the ignition of the powder.

3. A device for catching the products of the combustion of flash light powder composed of a pivoted bonnet adapted to drop down over the flash, means for holding said bonnet in its elevated position, means whereby said holding means are released by the ignition of the powder, and side curtains depending in such a manner as to prevent the lateral escape of the products during the descent of the bonnet.

4. A device for catching the products of the combustion of flash light powder composed of a folding pivoted bonnet adapted to drop down over the flash, means for holding said bonnet in its folded position, means whereby said holding means are released by the ignition of the powder, and side curtains depending in such a manner as to prevent the lateral escape of the products during the descent of the bonnet.

5. A device for catching the products of the combustion of flash light powder composed of a back board and a top board forming two sides of the inclosure, a bonnet adapted to be folded up against said top board, means for holding said bonnet in its folded position, and means whereby said holding means are released and said bonnet is permitted to drop down against said back board by the ignition of the powder.

[Claim 6 not printed in the Gazette.]

1,013,400. MEASURING-TAPE-HOLDING DEVICE. CHARLES W. KERR, Park City, Mont. Filed Dec. 31, 1910. Serial No. 600,219.

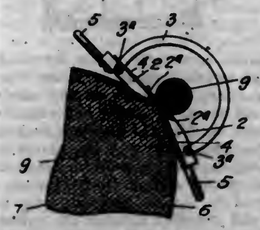
1. A measuring device comprising in combination, a clinometer gage, a tape having proper scale measurements thereon, means carried by the gage for clamping the tape thereto, a tape reel secured to the other end of the tape and a plumb bob suspended therefrom.

2. A measuring device comprising the combination with a tape having proper scale measurements; of a clinometer gage to which the tape is secured, said gage having a vertical sight tube for locating the proper point from which a measurement is taken, a tape reel secured to the other end of the tape and having a tension device and means for locating a point depended vertically from the other limit of measurement.

3. A device for ascertaining the angle of a slope over uneven ground, comprising a frame, a tape reel carrying a tape and rotatably mounted upon the frame, a guide for said tape, a clinometer secured to the opposite end of the tape for ascertaining the angle of inclination, and a plumb bob carried by the frame, whereby a line may be dropped from a point of measurement of the slope which equals the horizontal measurement divided by the cosine of the angle.

4. A device for measuring over uneven ground, comprising means for ascertaining the slope of the ground, a tape having one end secured to said means, divided to give the proper slope length, and means secured to the other end of the tape for locating a point below the other end of the tape.

1,013,401. APPARATUS FOR FORMING ROLL EDGES ON MATTRESSES. ARTHUR W. KINDEL, Denver, Colo. Filed Feb. 1, 1911. Serial No. 605,994.



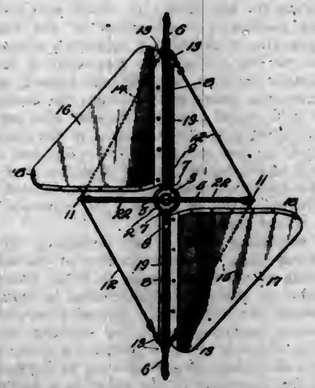
1. An apparatus for forming roll-edges on mattresses comprising in combination, two coöperative, rotary members having parallel edges constructed to draw and clamp the cover of a mattress together along lines at opposite sides of an edge thereof, and means carried by said members and projecting beyond the edges thereof to compress the stuffing of the mattress within the portion of its cover between said lines and said edge during and by the rotary movement of said members.

2. An apparatus for forming roll-edges on mattresses comprising a pair of coöperative levers mounted to rotate about parallel axes, and each having a straight edge parallel to its axis of rotation, and series of slender pointed instruments carried by and projecting transversely beyond the respective straight edges, the said levers being so disposed and proportioned that by engagement of their straight edges with the cover of a mattress at opposite sides of an edge thereof, they will when simultaneously rotated draw the said engaged portions together to a distance suitable for the sewing required in the production of a roll edge.

3. An apparatus for forming roll edges on mattresses comprising two yokes, coöperative members rotatable about parallel axes between said yokes, and each having a straight edge parallel to its axis of rotation, and series of slender pointed instruments carried by and projecting transversely beyond the respective straight edges, the said levers being so disposed and proportioned that by engagement of their straight edges with the cover of a mattress at opposite sides of an edge thereof they will when simultaneously rotated draw the said engaged portions together to a distance suitable for the sewing required in the production of a roll edge.

4. An apparatus for forming roll-edges on mattresses, comprising two yokes, coöperative members rotatable about parallel axes between said yokes, and each having a straight edge parallel to its axis of rotation, and series of slender instruments, pointed extremities of which project transversely beyond the respective straight edges, the said levers being so disposed and proportioned that by engagement of their straight edges with the cover of a mattress at opposite sides of an edge thereof they will when simultaneously rotated draw the said engaged portions together to a distance suitable for sewing, and the said yokes being curved to admit the roll edge formed by the contraction of said cover substantially as described.

1,013,402. PROPELLER. GEORGE W. KOSSBURY, New York, N. Y. Filed Oct. 28, 1910. Serial No. 589,536.



1. A propeller including a shaft, a frame carried by the shaft and having resilient blade supports, flexible blades pivoted to the frame to swing to a non-working position when the propeller is at rest and to a working position against said supports when the propeller is in action, and means for bending said resilient supports to vary the working angle of the blades.

2. A propeller including a shaft, diametrically disposed rigid radial arms extending therefrom, diametrically disposed resilient arms arranged at right angles to said radial arms, connections between the arms forming a frame having diagonally opposite supports, blades pivoted to the rigid arms and adapted to bear against said supports, and means for bending said resilient arms to adjust the supports to different angular positions.

3. A propeller including a shaft, diametrically disposed rigid radial arms extending therefrom, diametrically disposed resilient arms arranged at right angles to said radial arms, connections between the arms forming a frame having diagonally opposite supports, braces for staying said

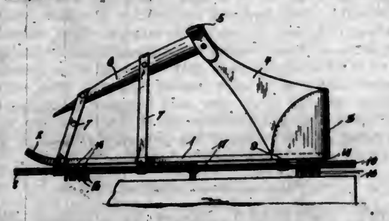
rigid arms, blades pivoted to the rigid arms and adapted to bear against said supports, and means for bending said resilient arms to adjust the supports to different angular positions.

4. A propeller including a shaft, a hollow hub connected therewith, a guide tube connected with the hub, a frame carried by the hub and having resilient blade supporting portions, blades pivoted to the frame to swing to a working position against said supporting portions, and means extending in part through the hub and tube for adjusting said supporting portions to different angles of inclination.

5. A propeller comprising a shaft, a frame upon the shaft provided with sets of arms, blades pivoted to one set of arms and adapted to bear in working position against the other set of arms, and means for adjusting the latter named arms to support the blades at different working angles.

[Claims 6 to 11 not printed in the Gazette.]

1,013,403. SWIMMING-SHOE. PAUL W. KLAPRECKE, Ellicott City, Md. Filed Mar. 30, 1911. Serial No. 617,924.



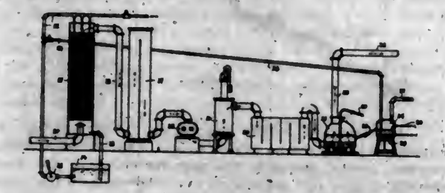
1. A swimming shoe comprising a sandal member having a sole, a rod pivotally secured beneath the sole, attaching means for the sandal to secure said rod to the sole, wings, perforated ears carried by the wings and pivotally engaging with the rod, oppositely disposed projections on the rod to limit the movement of the wings in an extended position, similar lugs formed upon the rod and extending downwardly to limit the movement of the wings in a folded position, a collar also carried by the rod, apertured projections secured to the upper faces of the wings, springs secured to the collar and engaged through said apertures, set screws to adjust said springs through the apertures, and a projection carried by the collar to further assist in limiting the movement of the wings to a folded position.

2. In a swimming shoe, a sole, attaching straps for the sole, a rod upon the under-surface of the sole, said straps serving as attaching means therefor, wings pivotally connected to the rod and extending in opposite directions, means for limiting the movement of the wings to an extended position, means for limiting the movements of the wings to a folded position, a collar secured to the rod and having an integral lug to further assist in limiting the movement of the wings to a folding position, apertured lugs secured to the upper faces of the wings and adapted to engage the sole to space said wings therefrom, and resilient means secured to the apertured lugs and collar to hold said wings extended.

1,013,404. PROCESS OF RECOVERING AMMONIA FROM GASES. HEINRICH KOPPERS, Essen, Germany. Filed July 22, 1910. Serial No. 573,166.

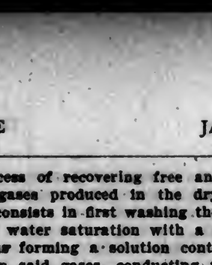
1. The process of recovering free and combined ammonia from gases produced in the dry distillation of fuels, which consists in first washing the gases near the dew point of water saturation with a circulating body of water, thus forming a solution containing the fixed ammonia from said gases, conducting the said washed gases to a saturation bath containing sulfuric acid, treating the solution of the fixed ammonia with sulfuric acid at a temperature sufficient to drive off other acids contained therein, and conveying the solution of ammonium sulfate thus obtained, into said saturation bath.

2. The process of recovering free and combined ammonia from gases produced in the dry distillation of fuels, which consists in first washing the gases near the dew point of water saturation with a circulating body of water, thus forming a solution containing the fixed ammonia from said gases, conducting the said washed gases to a saturation bath containing sulfuric acid, treating the solution of the fixed ammonia with sulfuric acid at a temperature sufficient to drive off other acids contained therein, and conveying the ammonium sulfate thus obtained into said saturation bath.



3. The process of recovering free and combined ammonia from gases produced in the dry distillation of fuels, which consists in first washing the gases near the dew point of water saturation with a circulating body of water, thus forming a solution containing the fixed ammonia from said gases, conducting the said washed gases to a saturation bath containing sulfuric acid, treating the solution of the fixed ammonia with sulfuric acid at a temperature sufficient to drive off other acids contained therein, and conveying the ammonium sulfate thus produced and which still contains acid into said saturation bath.

1,013,405. ANTIFRAUD TOBACCO-TIN. CHARLES L. KRISTOFFERSON, Spearfish, S. D. Filed Jan. 27, 1911. Serial No. 605,038.



1. A package comprising a tin having an open bottom with an inturned flange, a jacket fitted in the tin and resting upon the flange, a seal carried about the jacket to hold the same closed and engaging across the opening in the bottom, and an outer seal carried by the tin and being looped through the opening and through the jacket seal to hold the jacket against the flange.

2. In combination with a tin having an open bottom, a jacket fitted in the tin, and fastening means carried by the tin and engaging through the bottom for attachment to the jacket to hold the same in the tin.

3. In combination with a tin having a bottom, a jacket fitted in the tin, a jacket seal closing the jacket, and an outer seal carried by the tin across its open bottom and extending up for interlocking engagement with the jacket seal to hold the jacket in the tin.

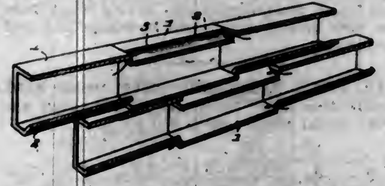
1,013,406. BOTTLE-CARRYING HANDLE. EZRA LAWRENCE, Oakville, Conn., assignor to The Baird Machine Company, Oakville, Conn., a Corporation of Connecticut. Filed Apr. 4, 1911. Serial No. 618,966.

1. A bottle carrier comprising a clip formed of resilient material adapted to embrace a bottle neck, said clip having one free end provided with an eye and another free end provided with a loop for overlapping said eye to permit the eye to be passed therethrough, said clip being provided with a second eye, diametrically opposite the first eye, and a bail adapted to engage said eyes to retain the clip about the neck of a bottle.

2. A bottle carrier comprising a resilient clip formed of two sections, each section having an end eye and an end loop, the loops and eyes being arranged at right angles so that the eye of one section can be passed through the loop of the other section and to permit said section to be separated by moving the end of one section relative to the other section, and a bail having end hooks for engaging the eyes to retain the sections about a bottle neck.

3. A bottle carrying handle comprising a two-part attaching clip each part adapted to partly inclose a bottle neck and having at one end an eye open at the bottom and having an outwardly turned end, for the purpose set forth, and at the other end a loop at right angles to the eye through which the eye on the other part passes and a bail having hooks adapted to engage the eyes and retain the parts in place.

1,013,407. CONCRETE BLOCK AND WALL. LYMAN G. LEASE, Howland, Ohio. Filed Oct. 11, 1909. Serial No. 522,067.

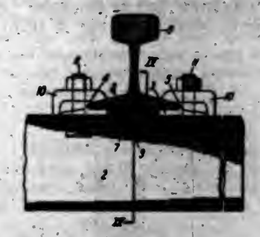


A wall constructed of a plurality of courses of hollow blocks, the blocks being open from end to end and those of each course being laid end to end whereby to afford an uninterrupted air passage extending the entire length of each course, each of the blocks being formed in one wall with a depression extending the entire length thereof, that portion of the wall of each block opposite the depression being plane, the blocks of each course being arranged alternately with the depressed wall of each block presented in the same direction as the plane wall of the adjacent blocks of the same course, the depression of each block registering throughout a portion of its length with the depression of a related block of an adjacent course whereby to establish communication at intervals between the air passages of the adjacent courses.

1,013,408. RAIL-FASTENING. JOHN F. LEWIS, Braddock, Pa. Filed Apr. 26, 1911. Serial No. 623,390.

1. In a railway track construction having a metal tie, a rail fastening comprising a tie plate on the tie having a projecting rib engaging the side edge of the rail flange, registering openings in the tie plate and tie and a plug seated in said openings whereby relative movement of the tie plate and tie is prevented and means including a rail clip and clip bolt for securing the rail and tie plate in position on the tie.

2. In a railway track construction having a metal tie, a rail fastening comprising a tie plate on the tie having a projecting rib engaging the side edge of the rail flange, registering openings in the tie plate and tie, a plug loosely seated in said registering openings, registering bolt holes in the tie plate and tie and rail fastening means including rail clips and clip bolts extending through the bolt holes in the ties and rail clips for securing the rails in position on the ties.



3. In a railway track construction having a metal tie, a rail fastening comprising a tie plate on the tie having a projecting rib engaging the side edge of the rail flange, registering openings in the tie plate and tie, a plug loosely seated in said registering openings, registering bolt holes in the tie plate and tie and rail fastening means including rail clips and clip bolts extending through the bolt holes in the ties and rail clips for securing the rails in position on the ties, said plugs being located beneath and held in place in the tie plate and tie by the base flanges of the track rails.

1,013,409. TRIMMER AND GAGE FOR ARC-LAMPS. ABBOT A. LOW, Horseshoe, and HARRY HERTZBERG and MAURICE J. WOHL, New York, N. Y., assignors to themselves, trustees. Filed Dec. 24, 1909. Serial No. 534,854.

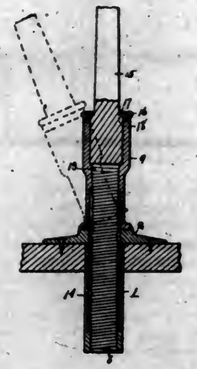
1. A device for replacing carbons in an arc lamp, comprising a handle having a cup shaped portion at one end, and a rod mounted in said handle and projecting centrally outward from the bottom of said cup shaped portion to a predetermined length beyond the outer edge thereof, the outer end of said rod being recessed to receive the end of the carbon.

2. A device for replacing carbons in an arc lamp, comprising a handle having a cup shaped portion at one end, a stop positioned adjacent said cup shaped portion of said handle and projecting beyond the outer edge thereof, and a rod mounted in said handle and projecting centrally outward from the bottom of said cup shaped portion to a predetermined length beyond said stop, the outer end of said rod being recessed to receive the end of the carbon.

3. A device for replacing carbons in an arc lamp, comprising a handle having a cup shaped portion at one end, a cylindrical stop positioned in said cup shaped portion of said handle and projecting beyond the outer edge thereof, and a rod mounted in said handle and projecting

centrally outward from the bottom of said cup shaped portion to a predetermined length beyond said stop, the outer end of said rod being recessed to receive the end of the carbon.

1,013,410. FLEXIBLE STAFF-HOLDER. CHARLES D. LYNCH, Detroit, Mich. Filed Dec. 2, 1910. Serial No. 595,246.



1. A staff holder comprising a stationary base member, an oscillatory socket member mounted thereon, to tilt a flexible and elastic element connecting said members to effect a universal joint between them, the axis of oscillation of said socket member being at one side of the longitudinal axis of said elastic element to effect a longitudinal stress thereon when the socket member is tilted and means for varying the tension of said flexible member.

2. A staff holder comprising a base member having a flat top, a movable socket member having a flat bottom portion adapted to rest upon the top of the base member, and a flexible element connecting said members to effect a universal joint between them.

3. A staff holder comprising a base member having a flat top, a movable socket member having a flat bottom portion adapted to rest upon the top of the base member, a flexible spring connecting said members to effect a universally flexible joint between them, and means for varying the tension on said spring.

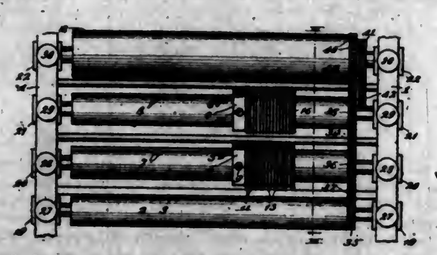
4. A staff holder comprising a base member, a socket member mounted on the base member in axial alinement therewith, a flexible spring crossing the joint between said members to normally retain the socket member in position, the terminals of said spring being threaded in the base and socket members, respectively.

5. A staff holder comprising a base member having an aperture therethrough, a movable socket member mounted on the base member and having a longitudinally extending aperture which normally alines with the aperture through the base member, each of said members having a thread in the wall thereof at one end of the aperture therethrough, and a coiled spring lying within said members and crossing the joint therebetween, the terminals of said spring being screwed into the threaded portions of the openings through said members, respectively.

[Claim 6 not printed in the Gazette.]

1,013,411. PAPER-CREASING MACHINE. GUY H. MALLAM, Kansas City, Mo. Filed Mar. 28, 1910. Serial No. 552,113.

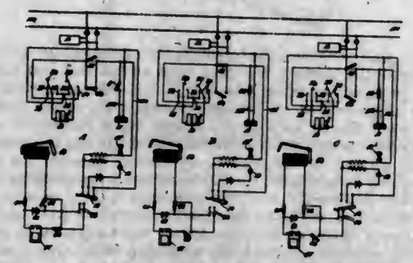
1. In a machine of the character described, a set of creasing rolls having intermeshing peripheral grooves and ridges for creasing paper in one direction, one of said creasing-rolls being set slightly in advance of the other, a second set of creasing-rolls having intermeshing grooves and ridges, the ridges of said second set being in line with the grooves of the first set to engage and reverse the creases in the paper, and one of the rolls of said second set being placed slightly in advance of the other, a pair of feed-rolls in advance of the creasing-rolls to carry the paper thereto, one of said feed-rolls being set slightly in advance of its companion, and means for adjusting one roll of each pair and set in proper relation to its companion.



2. In a machine of the character described, a set of creasing-rolls having intermeshing peripheral grooves and ridges for creasing paper in one direction, a second set of creasing-rolls having intermeshing grooves and ridges, the ridges of said second set being in line with the grooves of the first set to engage and reverse the creases in the paper, a pair of ironing-rolls to flatten out the creases, and gearing for driving said ironing-rolls faster than the creasing rolls.

3. In a machine of the character described, a set of creasing-rolls having intermeshing peripheral grooves and ridges for creasing paper in one direction, said rolls having comparatively broad faces between the grooves and ridges to engage and feed the paper forward, and a second set of creasing-rolls having intermeshing grooves and ridges, the latter being in line with the grooves of the first set to engage and reverse the creases in the paper, said second set of creasing-rolls also having broad faces between their grooves and ridges to engage and feed the paper forward.

1,013,412. PARTY-LINE TELEPHONE SYSTEM. ALEXIS MARCHAND, Bridgeport, Wash. Filed Mar. 3, 1909. Serial No. 481,086.



1. In a telephone system: a plurality of stations, and the usual connecting circuit across which the said stations are bridged, the talking circuits of said stations being normally disconected from said connecting circuit; a selecting device bridged across said connecting circuit at each station and continually connected thereto; and a calling device to automatically connect any two of said stations, bridged across said connecting circuit at each station but normally disconnected therefrom.

2. In a telephone system: a plurality of stations, and the usual connecting circuit across which the said stations are bridged, the talking circuits of said stations being normally disconnected from said connecting circuit; a selecting device bridged across said connecting circuit at each station and continually connected thereto; a calling device to automatically connect any two of said stations, bridged across said connecting circuit at each station but normally disconnected therefrom; and means to automatically lock out the remaining stations.

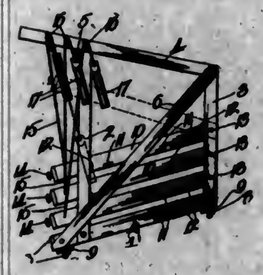
3. In a telephone system: a plurality of stations, and the usual connecting circuit across which the said stations are bridged, the talking circuits of said stations being normally disconnected from said connecting circuit, a selecting device bridged across said connecting circuit at each station and continually connected thereto; a calling device to automatically connect any two of said stations, bridged across said connecting circuit at each station but normally disconnected therefrom; means to automatically lock out the remaining stations; and means to automatically indicate at each station the condition of said station.

4. In a telephone system: a plurality of stations, and the usual connecting circuit across which the said stations are bridged, the talking circuits of said stations being normally disconnected from said connecting circuit; a selecting device bridged across said connecting circuit at each station and continually connected thereto; a calling device to automatically connect any two of said stations bridged across said connecting circuit at each station but normally disconnected therefrom; and means to automatically restore all of the stations to normal condition.

5. In a telephone system: a plurality of stations, and the usual connecting circuit across which the said stations are bridged, the talking circuits of said stations being normally disconnected from said connecting circuit; a selecting device bridged across said connecting circuit at each station and continually connected thereto; a calling device to automatically connect any two of said stations, bridged across said connecting circuit at each station but normally disconnected therefrom; means to automatically lock out the remaining stations; and means to automatically restore all of the stations to normal condition.

[Claims 6 to 28 not printed in the Gazette.]

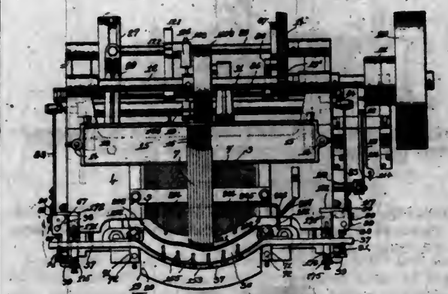
1,013,413. MATTRESS-RACK. JACOB A. MARKS, Nevada, Mo. Filed July 3, 1911. Serial No. 636,739.



1. A mattress storing and display rack, comprising a skeleton frame, having a base and sides projecting upward from the base and each side consisting of upwardly and rearwardly inclined bars and bars extending upwardly and forwardly, and bars bracing the first-named sets of bars in rigid relation to each other and the base, sheaves carried by the upwardly and forwardly extending bars, tills arranged one above the other and all but the undermost one pivoted at their rear ends to and between the upwardly and rearwardly inclined bars, the pivotal point of each till occupying a plane rearward of the pivotal point of the till next below it, so that the front end of each till shall project slightly forward of the front end of the next till above it, a series of flexible devices extending over said sheaves and attached to the pivoted tills, and counter balance weights also attached to said flexible devices.

2. A mattress storing and display rack, comprising a frame embodying a substantially horizontal base, standards extending upwardly and rearwardly from the sides of said frame at each side and near the front and rear ends thereof, the front standards projecting to a higher plane than the rear ones, bars secured to the upper ends of said inclined standards and projecting forwardly beyond the front ones and in conjunction with said standards constituting upwardly projecting sides for the base frame, a brace to stiffen each of said sides, a cross bar connecting said frames near the upper ends of the front inclined standards, sheaves arranged at each side of and carried by the said frame, a series of tills arranged one above the other between the sides of said frame and pivoted at their rear ends to the rear inclined standards, flexible devices engaging said sheaves and attached to said tills, and counter balance weights attached to the opposite ends of said connections.

1,013,414. FOLDING-MACHINE. CHARLES S. MARSHALL, Brockton, Mass., assignor to Boston Machine Works Company, Lynn, Mass., a Corporation of Massachusetts. Filed Dec. 17, 1906. Serial No. 348,094.



1. In a folder, the combination of a work-supporting table, a folder, and means for moving one of said elements vertically up and down and horisontally to fold the edge of the work and press the fold, the means for effecting the vertical part of the movement comprising a lever, a cam for oscillating the same, and means for shifting the fulcrum of the lever.

2. A folding machine, comprising a folder, a work-supporting table, means for effecting relative movements between the folder and table to fold the edge of the work and press the fold, and means for projecting a supporting surface relatively to the work beyond the fold to support the same during the pressing operation.

3. A folding machine, comprising a folder, a work-supporting table having a face plate, means for effecting relative movements between the folder and table to fold the edge of the work and press the fold, and means for projecting the face plate relatively to the work and beyond the fold to support the same during the pressing operation.

4. A folding machine, comprising a folder, a work supporting table having a face plate, means for effecting relative movements between the folder and table to fold the edge of the work and press the fold, means for projecting the face plate relatively to the work under the fold to support the same during the pressing operation, and means for holding the work against movement during the movement of the face plate.

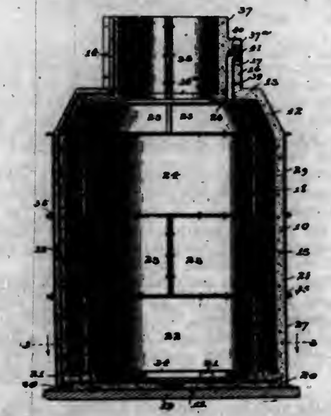
1,013,415. PUMP. EUGENE MARTIN, Soldiers Grove, Wis. Filed Feb. 28, 1908. Serial No. 418,308.

A pump comprising a barrel having an outlet and a pipe connecting with and extending downwardly from said barrel, a cylinder at the lower end of said pipe, a suction cylinder below and spaced from the first mentioned cylinder and having a valve at its lower end, a flow pipe establishing connection between the said cylinders and discharging into the first named pipe at a point above the first named cylinder, said flow pipe having a downwardly closing check valve, a pump rod and solid piston thereon operating in the first named cylinder and a valved piston on said pump rod operating in said suction cylinder,

said first named cylinder and the piston therein coöperating to form a trap for water from the flow pipe and to

utilize the same when the pump is started in operation to prime the valve plunger in the suction cylinder.

1,013,416. METHOD OF MOLDING BATTERY-WELLS. CHARLES FRANCIS MASSEY, Chicago, Ill. Filed Sept. 27, 1909. Serial No. 519,738.



1. The process of constructing the bottom and side walls of a vessel of the character described, which consists in supporting a wire cage on and spaced from a suitable surface, surrounding said cage by an external mold-member, supporting an internal bottomless mold member upon and suitably spaced from the bottom and sides of said wire cage, introducing through said internal mold-member a body of plastic cement and distributing and shaping the same to embed therein the bottom of said cage and form the bottom wall of the vessel, and introducing between the side walls of said inner and outer core members a body of cement in a sufficiently liquid state to distribute itself by gravity throughout the annular space and embed therein the side walls of said cage, substantially as described.

2. The process of constructing the bottom and side walls of a vessel of the character described, which consists in supporting a wire cage on and spaced from a suitable surface, surrounding the bottom of said cage by the lower section of a sectional external mold-member, supporting an internal bottomless mold-member upon and suitably spaced from the bottom and sides of said wire cage, introducing through said internal mold-member a body of plastic cement and distributing and shaping the same to embed therein the bottom of said cage and form the bottom wall of the vessel, introducing between said internal mold-member and said lower section of the external mold-member a body of cement in a sufficiently liquid state to distribute itself therebetween, and building up the balance of the side wall of the vessel by superimposing successive external mold-sections, and successively filling the spaces between each such section and the internal mold-member with liquid cement, substantially as described.

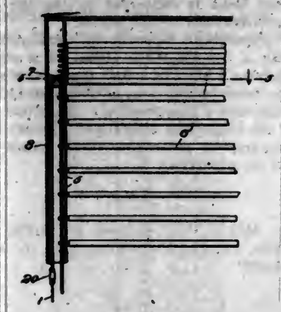
3. The process of constructing the bottom, side, and shouldered walls of a vessel of the character described, which consists in supporting a wire cage having the general contour of said walls on and spaced from a suitable surface, surrounding said cage by an external mold-member, supporting an internal bottomless mold-member having a shouldered upper end upon and suitably spaced from the bottom, sides and shoulder of said wire cage, introducing through said internal mold-member a body of plastic cement and distributing and shaping the same to embed therein the bottom of said cage and form the bottom wall of the vessel, introducing between the side walls of said inner and outer core members a body of cement in a sufficiently liquid state to distribute itself by gravity throughout the annular space and embed therein the side walls of said cage, and applying to and over the shouldered portions of said internal mold-member and wire cage a body of plastic cement and distributing and externally shaping the same to embed therein the shouldered portion of said wire cage and form the shouldered wall of said vessel, substantially as described.

4. The process of constructing a vessel of the form and character described, which consists in supporting a wire cage having the general contour of the bottom, side and upper shouldered walls of the vessel on and spaced from a suitable surface, surrounding said cage by an external mold-member, supporting an internal bottomless mold-member having a shouldered upper end upon and suitably spaced from the bottom, sides and shoulder of said wire cage, introducing through said internal mold-member a body of plastic cement and distributing and shaping the same to embed therein the bottom of said cage and form the bottom wall of the vessel, introducing between the side walls of said inner and outer core members a body of cement in a sufficiently liquid state to distribute itself by gravity throughout the annular space and embed therein the side walls of said cage, applying to and over the shouldered portions of said internal mold-member and wire cage a body of plastic cement and distributing and externally shaping the same to embed therein the shouldered portion of said wire cage and form the shouldered wall of said vessel, attaching to said shouldered portion of the cage a contracted neck portion, suitably positioning inner and outer mold members relative to said neck portion of the cage, and introducing between the latter a body of cement in a sufficiently liquid state to distribute itself by gravity throughout the annular space and embed therein the neck portion of said cage and form the neck of the vessel, substantially as described.

1,013,417. WINDOW-BLIND. THOMAS MCINTOSH, Jenkintown, Pa. Filed Sept. 27, 1910. Serial No. 584,089.

1. A blind comprising two tapes, each having a longitudinal series of openings therein, slats, trunnions on the ends of the slats located in the openings in the tapes, pulleys supporting said tapes whereby when said tapes are moved over the pulleys, they disengage themselves from the trunnions of the slats, the lowermost slat of the pile thus disengaged supporting the others, substantially as described.

2. In a blind, the combination with a frame, the upper portion of said frame constituting a housing, of pulleys supported in the side members of the frame at the base of the housing, tapes passed over said pulleys and having in each a longitudinal series of openings, slats, trunnions on the ends of the slats, located in the openings in the tapes and adapted to be released from engagement with the tapes when the latter pass over the pulleys piling the slats in the housing, and means for moving said tapes simultaneously, substantially as described.



3. In a blind, the combination with a frame, the upper portion of said frame constituting a housing, of pulleys supported in the side members of the frame, at the base of the housing, tapes passed over said pulleys and having in each a longitudinal series of openings, slats, trunnions on the ends of the slats, located in the openings in the tapes and adapted to be released from engagement with the tapes when the latter pass over the pulleys piling the slats in the housing, and crossed flexible connecting devices connecting the opposite ends of the respective tapes, substantially as described.

4. In a blind, the combination with a frame, the upper portion of said frame constituting a housing, of pulleys supported in the side members of the frame, at the base of the housing, tapes passed over said pulleys and having in each a longitudinal series of openings, slats, trunnions on the ends of the slats, located in the openings in the tapes and adapted to be released from engagement with the tapes when the latter pass over the pulleys piling the slats in the housing, crossed flexible connecting devices connecting the opposite ends of the respective tapes, pulleys over which said flexible connecting devices are passed, and a roller located between the connecting devices at the point of crossing, substantially as described.

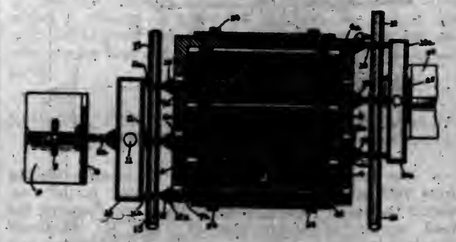
5. In a blind, the combination with a frame, the upper portion of said frame constituting a housing, of pulleys supported in the side members of the frame, at the base of the housing, tapes passed over said pulleys and having in each a longitudinal series of openings, slats, trunnions on the ends of the slats, located in the openings in the tapes and adapted to be released from engagement with the tapes when the latter pass over the pulleys piling the slats in the housing, crossed flexible connecting devices connecting the opposite ends of the respective tapes, and flexible stripe connecting all of said slats, substantially as described.

1,013,418. COMBINED TRAIN-PIPE COUPLING AND VALVE. JAMES MCKENZIE MICHAELSON, Geneva, N. Y., assignor of one-fourth to J. R. Wertman and three-fourths to Adam McK. Michaelson, Geneva, N. Y. Filed Apr. 23, 1909. Serial No. 491,717.

1. A train pipe coupling head having a side port and a valve seat, a removable valve within the coupling adapted to coöperate with the seat, a valve stem on which the valve is mounted, a removable cap threaded into the head opposite the seat, and of a diameter to permit the removal of the valve when the cap is removed, a stem support and guide adjacent the cap secured in position thereby and having an elongated bearing for the stem, and a spring surrounding the guide and abutting the valve, substantially as described.

2. A train pipe coupling head having a side port and a valve seat, a removable valve and an opening opposite the seat of a diameter to permit the removal of the valve therethrough, a cap for closing said opening, a valve stem on which the valve is adjustably mounted, a valve stem support and guide adjacent the cap and held in place thereby, and a spring on the guide abutting the valve.

1,013,419. FILTER SYSTEM. HENRY G. MILLER, Cleveland, Ohio, assignor of one-half to S. S. Newman, Pittsburgh, Pa. Filed May 4, 1911. Serial No. 625,028.



1. A filter comprising a plurality of cells, inlet and outlet boxes detachably connected to opposite sides of said cells respectively, and inlet and outlet mains connected to said boxes.

2. A filter comprising a plurality of cells, and inlet and outlet boxes respectively communicating with said cells, the cells and boxes being movable relatively to each other, to connect or disconnect the same.

3. A filter comprising a cell with inlet and outlet passages, and inlet and outlet pipes having slip joints with said passages, the pipes and cell being movable toward and from each other, to make or break the joints.

4. A filter comprising a cell with inlet and outlet passages terminating in nipples, and inlet and outlet pipes having slip joints with said nipples, the cell and pipes being relatively movable, to make or break the joints.

5. A filter comprising a plurality of cells standing side by side, said cells having inlet and outlet passages, and inlet and outlet boxes located at opposite sides of said cells, said boxes being provided with pipe sections having slip joints with said passages, the boxes and cells being relatively movable to make or break said joints.

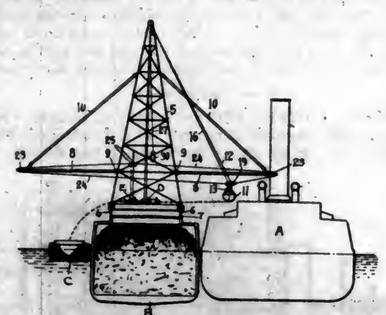
[Claims 6 to 14 not printed in the Gazette.]

1,013,420. APPARATUS FOR TRANSFERRING MATERIALS. THOMAS SPENCER MILLER, South Orange, N. J. Filed June 25, 1908. Serial No. 440,242.

1. The combination of a supply station, an elevated support thereon, a hoisting-rope sheave connected to the support, a hoisting drum adajacent to the support, a hoisting rope leading from said drum over said hoisting rope sheave and thence downward, a floating trolley or swinger block, a pendulum rope from which said block is suspended, a take-up for said pendulum rope, two booms extending in opposite directions from the support, a rope sheave at the end of each boom, two swinger ropes leading from winding mechanism over said sheaves at the boom ends and secured to said swinger block or floating trolley, whereby said hoisting rope may be swung across the supply station.

2. The combination of a support, a load carrier, a hoisting rope therefor, a hoisting rope actuator, an elevated hoisting rope sheave, an elevated hoisting rope swinger frame, a pendulum rope for supporting said swinger frame, a weight constituting a take-up for said pendulum rope, and swinger ropes connected with said swinger frame and extending in opposite directions from said hoisting rope.

3. The combination of an elevated support, a load carrier, a hoisting rope for said load carrier, means other than the hoisting rope for swinging said carrier in opposite directions in an approximately horizontal path, means whereby the hoisting rope is freely movable at all times longitudinally of itself relative to the swinging means, a pendulum rope connected to the means for swinging the carrier, and a take-up for the pendulum rope.

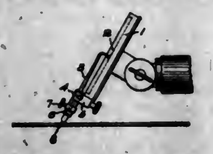


4. The combination of a support, two booms extending from said support, a hoisting rope, a load carrier connected thereto, a floating swinger frame for swinging the load carrier, oppositely directed ropes for positively swinging the swinger frame in opposite directions and counterbalancing means for controlling said swinger frame to cause the load to travel in an approximately straight path between the ends of the booms.

5. In combination, a supply station, a movable support thereon, a load carrier, means for hoisting the load carrier, a swinger frame, a pendulum rope therefor, a take-up device for the pendulum rope, and means for limiting the movement of the take-up device.

[Claims 6 to 20 not printed in the Gazette.]

1,013,421. PHONOGRAPH. JOSIAH B. MILLET, Boston, Mass. Filed Mar. 29, 1911. Serial No. 617,561.



1. In a phonograph reproducing mechanism, the combination with a non-absorbent stylus, of a stylus-carrying head comprising a block of sound-absorbent material and of relatively large transmitting mass as compared with said stylus, and a non-absorbent stylus bar, said head being seated against said bar to transmit thereto substantially all the unabsorbed record-producing sound-reproducing movements of said stylus.

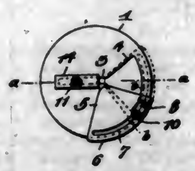
2. In a phonograph reproducing mechanism, the combination with a non-absorbent stylus of a stylus-carrying head comprising a block of fibrous material of relatively large transmitting mass as compared with the stylus, and a metallic stylus bar, said head being seated against the stylus bar to transmit thereto the vibrations of the stylus.

3. In a phonograph reproducing mechanism, the combination with a non-absorbent stylus of a stylus-carrying head comprising a block of sound absorbent material of relatively large transmitting mass as compared with the stylus, said head having a tapered end in which the stylus is seated, and a non-absorbent stylus bar, there being provided a shouldered connection between the head and the bar whereby said head is seated against said bar to transmit thereto vibrations of the stylus.

4. In a phonograph reproducing mechanism, the combination with a non-absorbent stylus, of a stylus-carrying head comprising a block of sound-absorbent material of relatively large transmitting mass as compared with the stylus, said head having a tapered end in which the stylus is seated and a non-absorbent stylus bar, said head having a shank and said bar having a socket to receive the shank whereby the head is connected to the bar to transmit thereto the vibrations of the stylus.

5. In a phonograph reproducing mechanism the combination with a non-absorbent stylus of a stylus-carrying head comprising a block of sound absorbent material of relatively large transmitting mass as compared with said stylus, a diaphragm, and a non-absorbent connection between the block and the diaphragm to transmit thereto substantially all the unabsorbed record-produced sound-reproducing movements of said stylus.

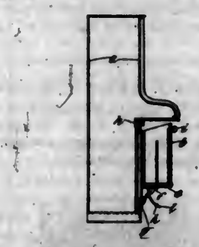
1,013,422. MUCILAGE-BRUSH HOLDER. FREDERICK B. MILTON, Pittston, Pa. Filed May 20, 1911. Serial No. 628,599.



1. A brush holder of the class described having a disk provided with means to engage a bottle mouth and also provided with a slot, for the purpose set forth, with an opening at one end of the slot and a closure for said opening, the said closure comprising a slide mounted for movement on the disk across the said opening, the said slide being provided with a slot concentric with the disk and the disk having a headed stud operating in said slot.

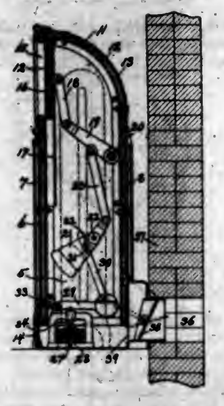
2. A brush holder of the class described having a disk provided with means to engage a bottle mouth and also provided with a slot, for the purpose set forth, with an opening at one end of the slot and a closure for said opening, the said closure comprising a slide mounted for movement on the disk across the said opening, the said slide being provided with a slot concentric with the disk and the disk having a headed stud operating in said slot, the said slide being also provided with a spring catch to engage the said headed stud and hold the slide in opened position.

1,013,423. MUSICAL-INSTRUMENT CASE. JOHN MOSSOP, Altrincham, England. Filed July 9, 1910. Serial No. 571,141.



A musical instrument case having a projecting key board in combination with a frame detachably secured to the front of said case beneath said key board, a shelf on said frame, a music receptacle hinged to the front edge of said shelf and provided with an open top, said receptacle being adapted to normally rest upon said shelf and under said key board, a handle for swinging said receptacle outwardly, a curved bar secured to said receptacle and extending through a perforation in said shelf and a stop adjustably mounted on said bar beneath said shelf to limit the forward movement of said receptacle, substantially as described.

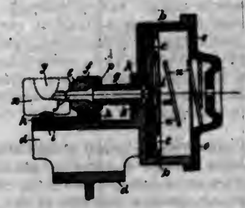
1,013,424. HEAT-REGULATOR. EDWARD H. MURPHY, Chicago, Ill. Filed Oct. 29, 1908. Serial No. 460,176.



1. In a device of the class described, a heating radiator, a jacket inclosing said radiator provided with an opening at the top and an opening at the bottom, a vertically sliding door to close the said opening at the top counterweighted to normally be in a closed position, thermostatic means to automatically operate said door and lost motion between the door and the thermostatic means so that the door may be moved independently of said means.

2. In a device of the class described, a heating radiator, a jacket inclosing said radiator provided with an opening at the top and an opening at the bottom, a door to close said opening at the top pivotally mounted on the free ends, a pair of pivoted arms and counter-weighted to normally be in a closed position, a rock shaft to which said two arms are rigidly secured extending outside the jacket, a handle secured to said shaft on the exterior of said jacket, thermostatic means connected to said shaft to automatically operate said door and lost motion between said shaft and said thermostatic means whereby the door can be moved independently of said means by manipulating said handle.

1,013,425. SHUTTLE-THREADING DEVICE. HARRY ALBERT MURPHY and JOSEPH FITZALAN SIMPSON, Fulwood, Preston, England. Filed Apr. 21, 1911. Serial No. 622,460.

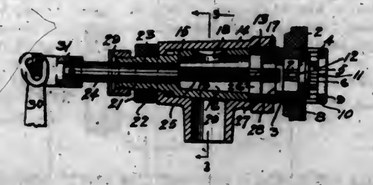


1. In a shuttle threading apparatus, the combination of a cylinder *b* having its axis horizontal; the piston *c* working in said cylinder, the hollow piston rod *g* on the piston; a flexible joint making mouth piece *e* disposed at one end of said hollow piston rod and having projecting ridges which take into the groove in the side of the shuttle; and a spring pressed valve *l* at the other end, normally pressed on the opening in said rod end, substantially as set forth.

2. In a shuttle threading apparatus, the combination of a cylinder *b* having its axis horizontal; the piston *c* working in said cylinder; the hollow piston rod *g*; a flexible joint making mouth piece *e* at one end of said hollow piston rod; a spring pressed valve *l* at the other end, normally pressed on to the opening of said rod end; a slide *h* connected with the mouth *e* and adapted to serve as a rest to the shuttle, and move with the mouth; and a platform or bed *d* on which the slide *h* moves; substantially as set forth.

3. In a shuttle threading apparatus the combination of a cylinder *b* having its axis horizontal; the piston *c* working in said cylinder; the hollow piston rod *g*; the flexible joint making mouth piece *e* at one end of said hollow piston rod, having a ridge at each side of the aperture in the mouthpiece; a valve *l* at the other end, normally pressed on the opening of said rod end; holes *k* on the opposite side of the piston to the valve *l*; a spring *n* adapted to press the piston to the end of the cylinder, and the piston rod out; and a platform for the slide having a flexible ridge thereon; substantially as set forth.

1,013,426. BLOW-OFF VALVE. PETER H. MURPHY, Pittsburgh, Pa. Filed June 4, 1910. Serial No. 564,973.



1. In a blow-off valve, the combination of a valve casing adapted for connection with a boiler and having a chamber communicating therewith provided with a discharge port, a valve normally seated therein to close the chamber and so disposed as to lie wholly out of the zone of fracture of the casing and to operate substantially within the waterline of the boiler, a second valve controlling the discharge port, a rod reciprocally carried by the second valve for shifting the first-named valve from its said seat to open position, and means for limiting the forward operative stroke of the rod; said limiting means being associated with the inner terminal portion of the rod.

2. In a blow-off valve, the combination of a valve casing adapted for connection with a boiler and having a chamber communicating therewith provided with a discharge port, a valve normally seated therein to close the chamber and so disposed as to lie wholly out of the zone of fracture of the casing and to operate substantially within the water-line of the boiler, a plug-cock casing associated with the first named casing, a plug in the second mentioned casing and terminally bearing against the first named casing, a reciprocable rod carried by the plug, and means associated with the first named casing and the end of the plug for limiting reciprocatory movement of the rod.

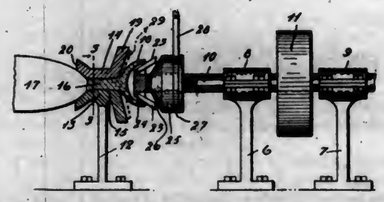
3. In a blow-off valve, the combination of a check valve, a casing therefor adapted for connection with a boiler, the valve thereof being so disposed as to lie wholly out of the zone of fracture of the casing and to operate substantially within the water-line of the boiler, a plug-cock casing attached to the casing of the check-valve, a conical plug in the second casing having a central bore, a reciprocable rod fitting the bore of the plug and adapted to shift the check-valve from its seat, and guide-arms carried by the rod and lying within the check-valve casing and adapted to abut, with outward movement of the rod, against the end of the plug.

4. In a blow-off valve, the combination of a check-valve, a casing therefor adapted for connection with a boiler, the valve thereof being so disposed as to lie wholly out of the zone of fracture of the casing and to operate substantially within the water-line of the boiler, a plug-cock casing at-

tached to the casing of the check-valve, a conical plug in the second casing having a center bore, a reciprocable rod fitting the bore of the plug and adapted to shift the check-valve from its seat, guide-arms carried by the rod and lying within the check-valve casing and adapted to abut, with the outward movement of the rod, against the end of the plug, and a stuffing-box for the rod carried by the plug.

5. In a blow-off valve, the combination of a check-valve, a casing therefor adapted for connection with a boiler, the valve thereof being so disposed as to lie wholly out of the zone of fracture of the casing and to operate substantially within the water-line of the boiler, a plug-cock casing attached to the check-valve casing, a plug in the second mentioned casing abutting against the check-valve casing and having an axial bore communicating with the check-valve casing, a reciprocable rod carried by the plug and adapted to shift the check-valve from its seat, and guide-arms for centering the rod and lying within the check-valve casing and adapted to abut with outward movement of the rod against the end of the plug.

1,013,427. MACHINE TO OPEN THE FOOT OF A GOBLET. JAMES R. MYERS, Fairmont, W. Va. Filed Apr. 29, 1911. Serial No. 624,004.

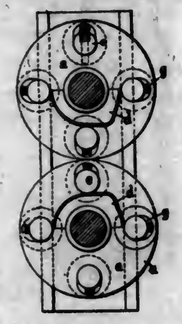


In a machine of the character described, an upright, a socket mounted thereon for holding the shank of a goblet, said socket comprising horizontally disposed separable sections having hinged connection, said sections carrying at corresponding ends flanges to limit the spreading of the foot of the goblet, a horizontal rotatable shaft disposed near and in end to end relation with said socket, stationary bearings for holding the rotatable shaft in its requisite position, means to rotate said shaft, said shaft being provided at its end adjacent said socket with an annular flange having spaced recesses formed therein, spreading fingers disposed within the recesses and pivoted to the flange, and a head splined upon the rotatable shaft and having a frusto-conical face to engage the spreading fingers for oscillating the same outwardly.

1,013,428. ASTIGMATIC CHART. GEORGE OSWALD NICHOLSON, Longbeach, Cal. Filed May 19, 1910. Serial No. 562,315.

An astigmatic chart, comprising a stationary dial having at its sides rearwardly extending side flanges bent outwardly and provided with openings for receiving supports in order to sustain said dial in a vertical plane, a brace extending across from one of said flanges to the other, said brace being spaced form said dial and parallel to the same, said dial being provided on its face with an annular scale, an astigmatic disk disposed in front of said dial and provided with meridian lines for registering with said scale, said meridian lines being few in number and extending in two directions relatively to said disk, a shaft carrying said disk and journaled at one of its ends in said dial and at its other end in said brace, a pulley mounted upon said shaft and provided with a plurality of grooves lying in parallel planes, said pulley being disposed between said dial and said brace, cords engaging said pulley and disposed within said grooves, said cords extending in opposite directions from said pulley, counterbalancing weights located upon the ends of said cords, and guides for one of said cords to support the same to a place remote from said dial and said disk.

1,013,429. ROLLING-MILL. ADOLF ALEXANDER KARL NOWAK, Bous-on-the-Saar, Germany. Filed Mar. 26, 1910. Serial No. 551,714.



1. A rolling mill having a group of displaceable shaping rolls and a rotary carrier having bearings therefor, in combination with a common roll guide carried directly by the frame and arranged between the axis of said carrier and the roll bearings so as to come into effective engagement with said rolls consecutively during the working travel of each roll and force it outward, substantially as described.

2. A rolling mill having a group of displaceable shaping rolls and a rotary carrier having bearings therefor, in combination with a common adjustable roll guide carried directly by the frame and arranged between the axis of said carrier and the roll bearings so as to come into effective engagement with said rolls consecutively during the working travel of each roll and force it outward, substantially as described.

3. A rolling mill having a group of displaceable shaping rolls and a rotary carrier having bearings therefor, in combination with a common adjustable roll guide carried directly by the frame and arranged between the axis of said carrier and the roll bearings so as to come into effective engagement with said rolls consecutively during the working travel of each roll and force it outward, a lever connected to the guide, a nut on the end of the lever and a screw, which passes through the nut, substantially as described.

4. A rolling mill having a group of displaceable shaping rolls and a rotary carrier having bearings therefor, in combination with a common roll guide carried directly by the frame and arranged between the axis of said carrier and the roll bearings so as to come into effective engagement with said rolls consecutively during the working travel of each roll and force it outward and means in connection with said guide for altering the working travel of said rolls.

5. A rolling mill having a group of displaceable shaping rolls and a rotary carrier therefor in combination with a common roll guide mounted directly on the frame between the roll bearings and the axis of the carrier, and bearings on said rolls adapted to engage said guide during their working travel, substantially as described.

[Claim 6 not printed in the Gazette.]

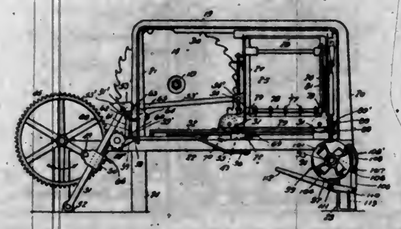
1,013,430. SAFE. THEODORE W. NIGREEN, Bellingham, Wash. Filed Mar. 25, 1911. Serial No. 616,880.

1. A safe having a threaded opening in the wall thereof, a threaded door adapted to occupy the opening, said door having a bearing lug on the inner face thereof, a guide rod arranged transversely of the safe, and a hanger slidably mounted on the guide rod and connected with the said bearing lug of the door to support the door inward of the safe in open position, said door being revoluble relative to the hanger.

2. A safe having a threaded opening in the front wall thereof, a threaded door adapted to occupy the said opening, a handle connected to the outer face of the door, said door having a bearing lug on the inner face thereof, a pair of spaced horizontally extending guide rods arranged in the safe above the opening, and a V shaped hanger slidably mounted upon the said guide rods and connected to a lug on the inner face of the door to support the door for rotation inward of the safe in open position.

3. A safe having an opening in the front wall thereof and provided with threads intermediate its ends, the inner and outer ends of the opening being enlarged and contracted respectively, to provide bearing shoulders, each having an annular recess formed in the vertical wall thereof, a door threaded intermediate its ends, the inner and outer ends thereof being enlarged and contracted respectively, to provide bearing shoulders, each having a circular projecting flange adapted to seat and bind within the respective recesses when the door is revolved to closed locked position, and means to support the door inward of the safe in open position.

1,013,431. COMBINED SHINGLE SAWING AND JOINTING MACHINE. PATRICK O'CONNOR, Aberdeen, Wash. Filed June 29, 1910. Serial No. 569,569.



1. The combination with the carriage, the two sets of block feeding rolls thereof, a ratchet wheel for each set of rolls, and a pawl for the respective rolls, of two vertically movable bars operatively connected with the respective pawls, and a cam-wheel which is actuated alternately by the respective bars for elevating both of said bars to effect the unequal movements of the two sets of feeding rolls.

2. The combination of a reciprocatory carriage, feed devices for the carriage, and set-works for actuating the feed devices, said set-works being provided with two movable bars, a cam-wheel adapted normally to be alternately engaged by said bars to afford partial rotation to the cam-wheel whereby the bar which effects such movement to the wheel is elevated in unison with the other bar but to a lesser extent.

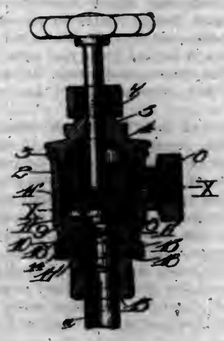
3. The combination with the carriage provided with upper and lower feeding rolls, and a cam-wheel, of vertically movable bars, operative connection between the bars and the respective rolls, said bars being arranged for engagement by said cam-wheel in the successive forward movements of the carriage whereby both of said bars are elevated to cause the feed rolls to be unequally actuated, and the cam-wheel being itself rotated to alternate the amount of feed applied through the bars to said rolls.

4. The combination of a reciprocatory carriage, feed devices for the carriage, set-works for actuating the feed devices, said set-works being provided with two movable bars, a cam-wheel adapted normally to be alternately engaged by said bars to afford partial rotation to the cam-wheel whereby the bar which effects such movement to the wheel is elevated in unison with the other bar but to a lesser extent, and means whereby the cam-wheel can be predeterminately influenced to cause one of the bars to successively engage the cam-wheel instead of alternating, as aforesaid, with the other bar.

5. In a shingle-machine, the combination with the machine-frame, a carriage mounted for reciprocation in the frame, and a jaw hingedly connected to the carriage by pivoted arms, of a rod connected from its upper end to said jaw, a wheel carried by the lower end of said rod, a plate hingedly connected to the frame and means for swinging said plate upwardly whereby it will be presented to the wheel for causing the raising of the jaw during the travel of the carriage toward the head end of the machine.

[Claims 6 to 8 not printed in the Gazette.]

1,013,432. VALVE. HUMPHREY O'LEARY, San Francisco, Cal. Filed Apr. 6, 1911. Serial No. 619,266.



1. A swivel valve, comprising a fixed body portion having a lower induction port and an upper eduction port, and provided on its exterior surface with an upwardly extending conical seat, a swivel union with a conical seat surrounding and bearing upwardly against the body seat, a bonnet and valve carried by the swivel union, and a nut on the body and engageable upwardly against the swivel union.

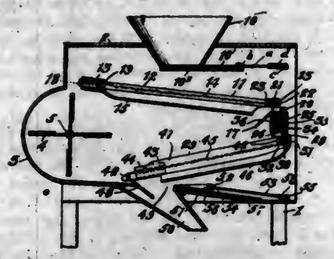
2. A valve comprising a union having an internal conical shoulder, a separable chambered valve body having an external conical shoulder to seat downwardly upon the aforesaid shoulder in the union, a nut adjustable upon the valve body below the union, a closure for the union, and a valve disk and stem adapted to seat upon said body and guided in said closure.

3. A valve comprising a chambered valve body adapted to be secured to a fluid conductor having an external shoulder, a union swivelly mounted upon said body, a closure for said union, and means for sustaining the turnable union upon the valve body, said means com-

prising a reversible nut adapted to seat against the said shoulder and allow motion of the union relatively to the seat.

4. A valve comprising a chambered valve body adapted to be fixedly mounted, a union and its bonnet turnable about the fixed body, a valve disk and stem movable within the union, and means whereby the union may be immovably seated against the valve body, said means including a reversible nut having a counter-sunk face adapted to be screwed over the exterior of the fixed valve body and engage the end of the union to seat the union firmly upon the valve body.

1,013,433. GRAIN-SEPARATOR. FREDERICK PAUKERT, Regent, N. D. Filed May 3, 1911. Serial No. 624,744.



1. In a device of the character described, the combination of a casing supported by a suitable frame, a drum formed at one end of said casing in which is disposed a blower fan, oppositely inclined frames carrying chaffing screens mounted in said casing for longitudinal and transverse movement, a cross beam mounted in the front end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said cross beam, cam wheels keyed to each end of said shaft, said cams being connected to said frames, by means of pins disposed through rollers mounted in the end of said frames and having their free ends secured in said cams at one side thereof, and means for imparting motion to said vertically disposed shaft and operating said screens.

2. In a device of the character described, the combination of a casing, oppositely inclined screens mounted in said casing for longitudinal and transverse movement, the inner ends of said screens having lugs upon each side thereof adapted to slide in grooved strips secured to the sides of the casing, a cross beam secured in the outer end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to each end of said shaft, means for connecting said cam wheels to the outer ends of said screens, and means for imparting motion to said vertically disposed shaft and operating said screens.

3. In a device of the character described, the combination of a casing, oppositely inclined screens mounted in said casing for longitudinal and transverse movement, a cross beam secured in the outer end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to each end of said shaft, means for connecting said cam wheels to the outer ends of said screens, a beveled gear keyed on said shaft and disposed in a housing, formed in said cross beam, a second bevel gear keyed to a horizontally disposed shaft and adapted to mesh with the first mentioned gear, said horizontal shaft being disposed in said cross beam and having its outer end mounted in a suitable bearing, and means for imparting motion to said horizontal shaft and operating said screens.

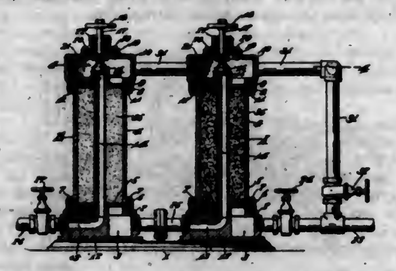
4. In a device of the character described, the combination of a casing, a hopper mounted in the upper side thereof, means for regulating the flow of grain from the hopper into the casing, oppositely inclined frames mounted in said casing for longitudinal and transverse movement, chaffing screens secured to said frames, a bottom secured to the upper end of said frames, having a concave surface near its outer end, a return board secured to the outer end of said frame and projecting downwardly, the lower of said frames being provided with an inwardly inclined bottom having a central concave surface leading to a discharge opening in the bottom of the casing, a cross beam secured in the outer end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to each end of said shaft, means for connecting said cam wheels to the outer ends of said screens and means for imparting motion to said vertically disposed shaft and operating said screens.

1,013,434. ELECTRIC-LAMP SOCKET. MAX PRAUCEL-LIER, Paris, France. Filed Oct. 17, 1910. Serial No. 587,418.

1. In combination, a sign body of plastic insulating material provided with a plurality of socket cavities arranged at intervals in its length, lamp sockets mounted in said cavities, contacts seated in the bottoms of said cavities, strengthening wires embedded in said sign body, and branch wires leading from said strengthening wires to said sockets and said contacts respectively.

2. In combination, a sign body of plastic insulating material provided with a plurality of socket cavities arranged at intervals in its length, lamp sockets mounted in said cavities, contacts seated in the bottoms of said cavities, conducting wires leading through said body and connected, respectively, to said sockets and said contacts, and binding posts embedded in said sign body and in contact with said wires.

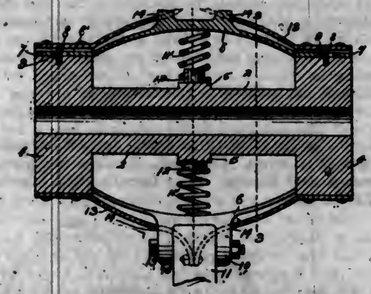
1,013,435. WATER-FILTER. DANIEL M. PFAUTZ, Philadelphia, Pa., assignor to William H. Tigerman, Philadelphia, Pa. Filed June 17, 1909. Serial No. 502,770.



1. In a water filter, an inlet chamber, a filtering chamber and an outlet chamber, each formed of a separate casting and arranged one above the other, a perforated plate arranged between the inlet chamber and the filtering chamber, and a similar plate arranged between the filtering chamber and the outlet chamber, said inlet chamber comprising the base of the filter and consisting of a hollow casting having a block formed integrally therewith within the chamber and provided with an L-shaped passageway, the inner end of said passage way opening through the top of said block at substantially the center of the device and the other end opening through the side wall of said inlet chamber, said ends being threaded, a pipe extending vertically through said perforated plates and the filtering chamber, and having its lower end threaded into said block in communication with the inner end of said passage way, an outlet pipe extending from the outer end of said passage way, and an inlet pipe communicating with said inlet chamber, a valve adapted to close the end of said tube in the outlet chamber, said outlet chamber having an opening in its top of a diameter greater than the diameter of the valve, a cap plate removably secured over said opening and a stem on said valve threaded through said cap plate, substantially as described.

2. A water filter comprising a base plate, a plurality of filtering tanks secured on said base plate, each filtering tank comprising a lower or base member having an inlet chamber and an outlet passage way therethrough, an upper outlet chamber, and a filtering chamber betwen the inlet and outlet chambers, a vertical tube connecting the outlet chamber of each tank with the said passage way in its respective base member, said tube extending through the filtering chamber, a valve adapted to close the end of said tube in the outlet chamber, said outlet chamber having an opening in its top of a diameter greater than the diameter of the valve, a cap plate removably secured over said opening and a stem on said valve threaded through said cap plate, a main communicating with the inlet chamber of one tank, a valve in said main, a pipe connecting the passage way in the base member of one tank with the inlet chamber of the next, an outlet pipe communicating with the passage way in the last tank, a valve in said outlet pipe, a washout pipe extending from said main, a valve in said washout pipe, branch pipes connecting the washout pipe with the outlet chambers of the respective tanks, valves in said branch pipes, a drain pipe, branch pipes connecting said drain pipe with each of said inlet chambers, and valves in said branch pipes, whereby either or all of said chambers may be flushed out when desired, substantially as described.

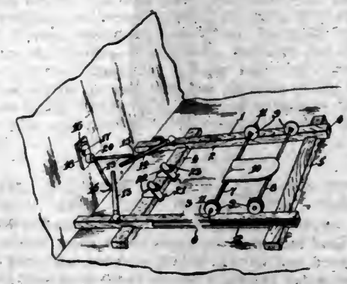
1,013,436. SPRING-HUB. DAVIS A. PICKENS, Mendenhall, Miss., assignor of one-half to James L. Barefoot, Mendenhall, Miss. Filed May 5, 1911. Serial No. 625,169.



1. In a device of the class described, consisting of an axle skein having enlarged end portions and a central enlarged portion, leaf springs secured to said enlarged end portions, coil springs between the said enlarged central portion and the said leaf springs, a two-part casing, the outer ends of which are secured to the said enlarged end portions, and their inner ends secured together, spokes secured to said leaf springs and extending through recesses formed in the inner ends of said casings, substantially as described.

2. In a spring hub, the combination, of an axle skein having enlarged end portions and a central enlarged portion, the said enlarged end portions having recesses mounted therein, leaf springs, the ends of which adapted to slide in said recesses, the central portion of said leaf springs being enlarged and having lugs extending therefrom, spokes secured between said lugs, coil springs mounted between said leaf springs and said central enlarged portion, lugs extending radially from said enlarged central portion for holding said coil springs in place and a casing secured to said enlarged end portions for covering said hub, substantially as and for the purpose set forth.

1,013,437. ROWING-MACHINE. ARTHUR AUBRIOT PONS, New York, N. Y. Filed Feb. 8, 1911. Serial No. 607,336.



1. In a rowing machine, a frame comprising longitudinal and transverse bars, a carriage slidable on said longitudinal bars, means for resiliently resisting the sliding of said carriage in a forward direction, a pair of rowing levers mounted at the front of said longitudinal bars and means for resiliently resisting the rearward movement of said levers.

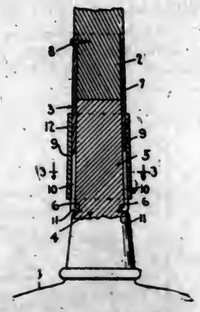
2. In a rowing machine, a frame, a seat slidable on the rear end of said frame and spring held rearwardly, and a pair of rowing levers movably mounted on the forward end of said frame.

3. In a rowing machine, a frame comprising detachable longitudinal and transverse bars, a pair of parallelly arranged axles, wheels rotatably mounted on the ends of said axles and adapted to roll on said longitudinal bars, a seat mounted on said axles, means resiliently connecting one of said axles with the rear end of the frame, a pair of rowing levers pivotally mounted on the front end of said frame, an indicating device rigidly secured to a stationary structure in front of the machine and springs connecting said indicating device with said rowing levers.

4. In a rowing machine, a frame comprising longitudinal and transverse bars detachably united, a pair of parallelly arranged axles, flanged wheels rotatably mounted at the ends of said axles and adapted to roll on said longitudinal bars, a seat mounted across said axles, curved arms rigidly secured to the ends of one of said axles, springs having their one ends secured to the curved arms aforesaid, and their other ends to the rear ends of said longitudinal bars, a pair of rowing levers mounted with ball and socket joints upon the front ends of said longitudinal bars respectively, an indicating device rigidly secured to a stationary structure in front of the machine and springs resiliently connecting said rowing levers with said indicating device.

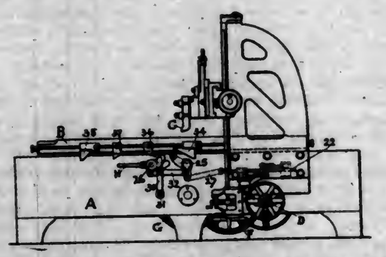
5. In a rowing machine, a frame comprising longitudinal and transverse bars, said longitudinal bars having grooves in their outer side faces extending from the rear end toward the front thereof, a pair of parallelly arranged axles, flanged wheels rotatably mounted at the ends of said axles and adapted to roll on said longitudinal bars, a seat mounted upon said axles, curved arms extending downwardly from the ends of one of said axles, springs lying in said grooves and having their one ends secured to the curved arms aforesaid, and their other ends secured to the rear ends of the longitudinal bars, a pair of rowing levers mounted with ball and socket joints upon the front ends of the longitudinal bars respectively, an indicating device rigidly secured to a stationary structure in front of the machine, springs resiliently connecting said rowing levers with said indicating device, and foot rests mounted upon one of the transverse bars aforesaid toward the front of the machine.

1,013,438. HANDLE-ATTACHING DEVICE. HENRY S. POST, Escanaba, Mich. Filed June 5, 1911. Serial No. 631,243.



In a handle attaching device, the combination with the broom head including the brush and a short handle tapering upward and having locking notches near said brush; of an operating handle, a ferrule flared downward throughout its length and slitted at its lower end into gripping tongues, the extremities of the latter being turned inward into hooks adapted to engage said notches, the upper end of said ferrule surrounding the handle, a screw securing it thereon, and a downwardly-flaring sleeve slidably mounted upon the ferrule and inclosing its tongues, the smaller end of the sleeve being of a size to pass over the smaller end of the ferrule and the head of said screw.

1,013,439. METAL-PLANING MACHINE. ALBERT M. POWELL, Worcester, Mass. Filed Nov. 10, 1910. Serial No. 591,597.



1. In a metal planing machine, in combination, with the reciprocating platen, and planer-operating shaft; a low-speed driving means, a high-speed driving means, devices severally connecting the respective driving means with said shaft, a power-shifting mechanism having action stages that correspond to the several driving speeds and throw-off position, a set of three shifting-rockers with connections for operating said power-shifting mechanism therefrom, and a series of rocker-actuating dogs secured to the platen and including the initial-cut dog, the backing-dog, an acceleration-dog and a retardation-dog, said dogs adapted for severally contacting with the respective rockers for controlling the change of cutting-speed, in the order and for the purpose substantially as set forth.

2. In a metal-planing machine, a system of control for the cutting speed of the platen, comprising a low-speed driving means, a high-speed driving means operatively connected with the planer shaft, a power-shifter mechanism therefor, a series of dogs attached to the platen and comprising a plurality of accelerating-dogs, and a plurality of retarding-dogs located between the starting or initial-cut dog and backing-dog, and a plurality of shifter operating rockers that are successively actuated by said accelerating and retarding dogs for putting the high-speed drive into action after the tool has entered the work, and for shifting the low-speed drive into action before the cutting tool has completed its cut in the work, and preceding the reversing of the platen.

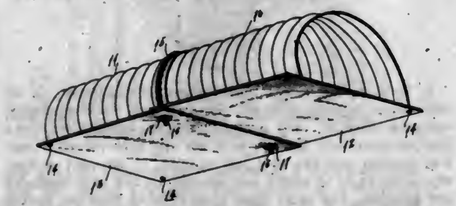
3. The combination, with the planer-operating shaft, the normal low-speed driving means, a high-speed driving means, and a quick-return driving means; of mechanism for shifting the several driving-means into and out of effective action, and devices for controlling said shifting mechanism comprising a compound rocker mechanism including a single armed rocker, a dual armed rocker and a swing-bar rocker coupled therewith, and a series of platen-carried dogs including, in addition to the usual starting and reversing dogs, the acceleration and retardation dogs, each adjustably secured to the platen and co-operating with said rockers and shifting mechanism for effecting acceleration and retardation of cutting-speed while the tool is cutting in the work.

4. In a metal planing machine, the combination with the platen, platen-moving gears, its operating shaft, and a belt-actuating means; of a high-speed drive-belt and a low-speed drive-belt; pulleys for said drive-belts mounted upon said shaft, one of said pulleys having a one-way clutch connection therewith, a shipper for said belts, a means for shifting said shipper consisting of a slotted cam-plate and rocker-connecting members, an acceleration-dog and rocker that controls the shipper mechanism to bring the high-speed drive into action, and a retardation-dog and rocker that controls the shipper mechanism to reinstate the low-speed drive into action, said dogs carried on the platen and acting at intermediate positions in respect to the dogs that control the shipper mechanism at the respective limits of the platen movement.

5. In a metal-planing machine, the combination, with the platen, the operating-shaft, and means for transmitting motion from said shaft to the platen; of a group of driving pulleys mounted upon said shaft and comprising a first pair including a loose pulley and a tight pulley, a second pair including a loose pulley and a one-way releasable clutch pulley, a power-driven counter shaft carrying drive-pulleys of larger and smaller diameters; a high-speed drive-belt from the larger counter pulley to the first pair of pulleys, a low-speed drive-belt from the smaller counter pulley to said second pair of pulleys, a belt-shifting mechanism including inclines and stages adapted for giving extreme and intermediate shift-positions, and means carried upon the platen, for controlling the belt-shifting mechanism to give successive accelerated movement and retardation of forward or cutting speed between the starting and the reversing positions of the platen, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,013,440. METALLIC CULVERT. JOHN R. RANKIN and JAMES H. LARRICK, La Junta, Colo.; said Larrick assignor to said Rankin. Filed Dec. 15, 1910. Serial No. 597,500.



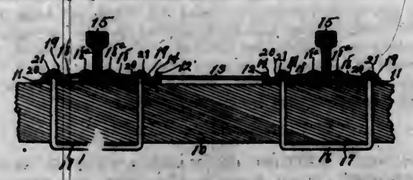
1. A metallic culvert formed of a plurality of transversely corrugated arched body sections, and a plurality of flat bottom sections upon which the ends of the body sections rest, the adjacent body sections and the adjacent bottom sections having their ends overlapped respectively, and a tie rod embracing the overlapped ends of the adjacent body sections and extending through the overlapped ends of adjacent bottom sections, whereby the arched body sections are secured together and the bottom sections bound to said arched body sections.

2. A metallic culvert formed of a plurality of transversely corrugated arched body sections, and a plurality of flat bottom sections upon which the ends of the body sections rest at a point inward of the sides of said bottom sections, an arched tie rod embracing the overlapped ends of adjacent body sections and having its terminals threaded and extending through alining openings in the overlapped ends of the bottom sections, and a nut mounted on each threaded end of said tie rod for forcing the bottom sections into engagement with the body sections and securing the latter together.

3. A metallic culvert formed of a plurality of transversely corrugated arched body sections, and a plurality of flat bottom sections upon which the ends of the body sections rest, the adjacent body sections and the adjacent bottom sections having their ends overlapped respectively, an angle-iron secured longitudinally to one of the adjacent bottom sections near each side thereof, said angle-irons engaging the inner face of one of the bottom sections at each side of the latter, and a tie rod embracing the overlapped ends of adjacent body sections and extending through the overlapped ends of adjacent bottom sections, whereby the arched body sections are secured together and the bottom sections bound to said arched body sections.

4. A metallic culvert formed of a plurality of transversely corrugated arched body sections, and a plurality of transversely corrugated flat bottom sections upon which the ends of the body sections rest, the adjacent body sections and the adjacent bottom sections having their ends overlapped respectively, and a tie rod embracing the overlapped ends of adjacent body sections and extending through the overlapped ends of adjacent bottom sections, whereby the arched sections are secured together and the bottom sections bound to said body sections.

1,013,441. RAILWAY. JAMES REAGIN, Bloomfield, Iowa. Filed May 1, 1911. Serial No. 624,483.



1. An improvement in railways, comprising a bed, U-bolts mounted in said bed, end portions of said U-bolts extending above said bed, bed plates on said bed, rails on said bed plates, clamping plates engaging said bed plates and overlying the base flanges of the rails, said clamping plates formed with concavo-convex marginal portions fitted to base flanges of the rails, threaded end portions of the U-bolts extending through said bed plates and clamping plates, and nuts on said end portions of the U-bolts.

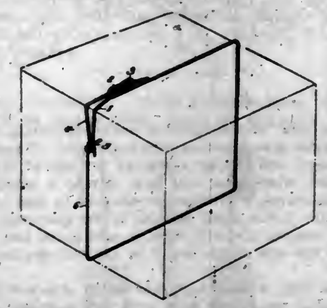
2. An improvement in railways, comprising a bed, U-bolts mounted in said bed, end portions of said U-bolts extending above said bed, bed plates on said bed, rails on said bed plates, clamping plates engaging said bed plates and overlying the base flanges of the rails, said clamping plates formed with concavo-convex marginal portions fitted to the base flanges of the rails, said clamping plates arranged in inclined positions relative to the bed plates, threaded end portions of the U-bolts extending through said bed plates and clamping plates, and nuts on said end portions of the U-bolts.

3. An improvement in railways, comprising a rail having its base flanges formed with convex upper surfaces, clamping plates formed with concavo-convex marginal portions adapted to engage and fit to said convex surfaces of the base flanges, and means for binding said clamping plates to a bed.

4. An improvement in railways, comprising a bed, U-bolts mounted in said bed, end portions of said U-bolts extending above said bed, bed plates on said bed, rails on said bed plates, clamping plates engaging said bed plates and overlying the base flanges of the rails, said clamping plates formed with concavo-convex marginal portions fitted to base flanges of the rails, threaded end portions of the U-bolts extending through said bed plates and clamping plates, nuts on said end portions of the U-bolts, and a straining bolt connecting said bed plates.

5. An improvement in railways, comprising a bed, U-bolts mounted in said bed, end portions of said U-bolts extending above said bed, bed plates on said bed, rails on said bed plates, clamping plates engaging said bed plates and overlying the base flanges of the rails, said clamping plates formed with concavo-convex marginal portions fitted to base flanges of the rails, threaded end portions of the U-bolts extending through said bed plates and clamping plates, nuts on said end portions of the U-bolts, said bed plates formed with upturned flanges at their adjacent ends, and a straining bolt connecting said upturned flanges.

1,013,442. BALE-TIE BUCKLE. FREDERICK REGENOLD, Memphis, Tenn. Filed May 12, 1911. Serial No. 626,796.



A tie buckle comprising a single section of wire bent upon itself at a point midway between its ends with its opposite side portions twisted upon each other forming an eye, the said portions gradually diverging from each other from said eye to form gripping portions and merging into hooks which stand up approximately at right angles to the plane of the eye and which are provided with extremities disposed toward the side portions of the buckle, but located beyond the outer surfaces of the said side portions, the hoop portions adapted to be drawn together to grip a tie between the gripping portions.

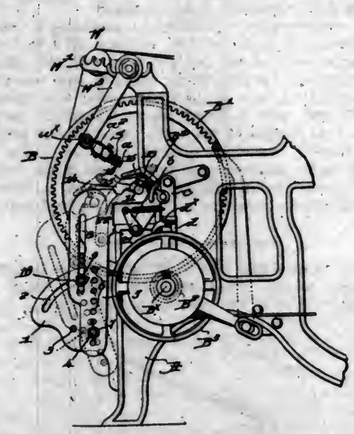
1,013,443. SUPPORTING MEANS FOR LOOM-BEAMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 16, 1911. Serial No. 614,756.

1. In a loom, beam-supporting means comprising a segmentally slotted fulcrum-stand on each loom side, an upturned, longitudinally slotted arm fulcrumed on each stand and provided with a bearing for one of the journals of the warp-beam, the slots of a stand and the arm adjacent thereto crossing each other, a clamping bolt extended through the slots, to clamp the arm in angularly adjusted position on its stand, and a fulcrum-pin adapted to co-operate with the bearing arm at different points in the direction of its length.

2. In a loom, beam-supporting means comprising a stand on each loom side, an upturned arm adjacent each stand and provided with a bearing for one of the journals of the warp-beam, a pivot-connection between a stand and its arm, adapted to coöperate with said members at any one of several points on each, and means to clamp a bearing arm in desired angular position on its stand irrespective of the location of the pivot-connection.

3. In a loom, a warp-beam having an attached gear, a let-off pinion adapted to mesh with said gear and govern rotation of the beam, a swinging arm at each side of the loom, provided with a bearing for one of the journals of

the beam, a fulcrum-member adapted to coöperate with each bearing arm at any one of a plurality of joints, and means to clamp the arm in adjusted angular position with relation to its fulcrum-member, to provide for beams of different diameters.



4. In a loom, beam-supporting means comprising a stand on each loom side provided with a plurality of apertures, an upturned arm having a bearing for one of the journals of the warp-beam, said arm having a longitudinal row of apertures, a fulcrum-pin adapted to pass through an aperture in the stand and one of the apertures in the adjacent arm, to pivotally connect said parts, and means to clamp the arm on the stand in adjusted angular position.

5. In a loom, a warp-beam having an attached gear, a let-off pinion adapted to mesh with said gear and govern rotation of the beam, a swinging arm at each side of the loom, provided with a bearing for one of the journals of the beam, a fulcrum-member pivotally connecting a bearing arm and its stand, said member being adjustable fore and aft on the stand and longitudinally of the arm, and means to clamp the arm on its stand in adjusted angular position irrespective of the adjusted position of the fulcrum-member.

[Claim 6 not printed in the Gazette.]

1,013,444. MULTICOMPARTMENT CABINET. GEORGE ROBBINS, Minneapolis, Minn. Filed Oct. 7, 1911. Serial No. 653,358.

1. In a multi-compartment cabinet, the combination with a multiplicity of compartments and movable closures therefor, of individual locks for the several closures, and a common releaser for the several locks, movable from one position to another to release said locks, one at a time.

2. In a multi-compartment cabinet, the combination with a multiplicity of compartments and movable closures therefor, of individual locks for the several closures, and a pivoted laterally movable releaser common to all of said locks and operative, to release said closures, one at a time.

3. In a multi-compartment cabinet, the combination with a multiplicity of compartments and movable closures therefor, of individual locks for the several closures, and a pivoted laterally movable releaser common to all of said locks and operative to release said closures, one at a time, the said locks serving to hold said releaser in an operative position while the corresponding closure is moved in an open position, and the said closure when returned to closed position serving to move said closure toward its normal position, and which closure when in normal position is movable laterally for alinement with any of said locks.

4. In a multi-compartment cabinet, the combination with a multiplicity of compartments and a multiplicity of pivoted retaining strips for closing the same, said retaining strips having lock projections at their free ends, spring-pressed lock hooks in the said compartments coöperating with the lock projections on said closures, and a common lock releaser mounted for sliding movements into alinement with any of said lock hooks, and mounted for pivotal movements to release the alined lock hook.

5. In a multi-compartment cabinet, the combination with a multiplicity of compartments and a multiplicity of pivoted retaining strips for closing the same, said retaining strips having lock projections at their free ends, spring-pressed lock hooks in the said compartments coöperating with the lock projection on said closures, and a common lock releaser mounted for sliding movements into alinement with any of said lock hooks, and mounted for pivotal movements to release the alined lock hook, the said spring-pressed lock hooks serving to hold the engaged releaser in its operative position while the corresponding closure is moved into an open position, and the said closure when moved into its closed position serving to move said releaser toward its normal position.

1,013,445. METHOD OF MANUFACTURING ELECTRODES. HUGH RODMAN, Pittsburgh, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 8, 1907. Serial No. 367,054.

1. The method of manufacturing storage battery electrodes, which consists in forming an electrode of a barium lead alloy, converting a portion of the lead of the electrode into active material and a portion of the barium into an insoluble substance incorporated within the active material.

2. The method of manufacturing storage battery electrodes, which consist in forming an electrode of an alloy of lead and a second metal, converting a portion of the lead into active material and a portion of the second material to an inert substance incorporated within the material.

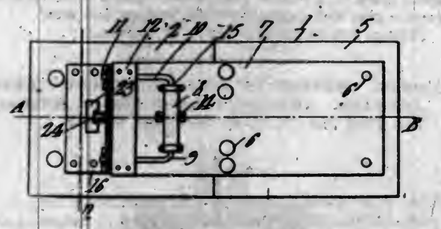
3. The method of forming Planté pole plates containing inert insoluble material which consists in making a barium lead alloy, pressing or molding the alloy into suitable shapes, converting a portion of the lead into active material and reducing a portion of the barium to an inert salt.

4. The method of manufacturing storage battery electrodes containing inert material which consists of forming an electrode of a metallic alloy, converting a portion of one of the metals of said alloy into active material, and a portion of another metal of the alloy into an inert salt.

5. The method of manufacturing storage battery electrodes containing insoluble inert material, which consists in forming an electrode of a metallic alloy, converting a portion of one metal of the alloy into active material, and a portion of another metal of the alloy into an inert substance.

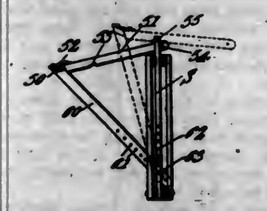
[Claims 6 to 12 not printed in the Gazette.]

1,013,446. END-GATE. WILLIAM A. ROGERS, Boicourt, Kans. Filed Apr. 8, 1911. Serial No. 619,795.



In a device of the class described, hingedly connected primary and secondary parts, the primary part overlapping the secondary part; an arched member applied to the primary part, and terminally extended beyond the overlapped end of said primary part; means for holding the arched member upon the primary part; a base plate secured to the secondary part; a latch hinged to the base plate; a spring carried by the base plate and bearing against the latch to hold the same in outstanding position with respect to said secondary part, there being a lug upon the base plate, adapted to engage the latch, to limit the movement of the latch under the actuation of the spring, the lug constituting a means for positioning the latch for engagement with the arched member, when the primary and secondary parts are swung into alinement.

1,013,447. STALL. WAYLAND L. ROOT, Spokane, Wash. Filed Jan. 28, 1911. Serial No. 605,294.



1. The herein described attachment for stalls, the same comprising a beam extending transversely across the stall above its floor and remote from its stanchion, the latter having an upright series of holes, a pair of bars supporting said beam and also having an upright series of holes, a pin engaging one of the holes in each series, and a strip leading from the beam and detachably engaging the stanchion.

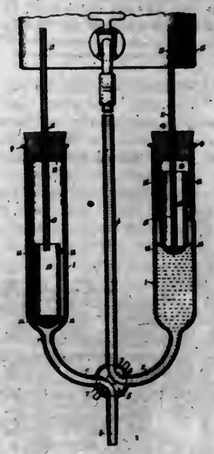
2. The herein described attachment for stalls, the same comprising a beam extending transversely across the stall above its floor and remote from its stanchion, the latter having an upright series of holes, a pair of bars supporting said beam and also having an upright series of holes, a pin engaging one of the holes in each series, a strip hinged at one end to the beam and passing loosely at the other end through the stanchion, and a stop pin removably inserted through said last-named end behind the stanchion.

3. The herein described attachment for stalls, the same comprising a beam extending transversely across the stall above its floor and remote from its stanchion, the latter having an upright series of holes, a pair of bars supporting said beam and also having an upright series of holes, a pin engaging one of the holes in each series, a strip flexibly connected at one end with the beam, having a notch in its under side near said connection, and having a transverse hole through it near its other end, the latter passing loosely through the stanchion, a stop pin removably inserted in said hole behind the stanchion, and a catch pin across the stanchion with which said notch is detachably engaged.

4. The herein described attachment for stalls, the same comprising a beam extending transversely across the stall above its floor and remote from its stanchion, a plurality of bars whose upper ends support said beam, pivotal connections between their lower ends and said stanchion, a strip hinged at one end to the beam and passing loosely at the other end through the stanchion, and a stop pin removably inserted through said last-named end behind the stanchion.

5. The herein described attachment for stalls, the same comprising a beam extending transversely across the stall above its floor and remote from its stanchion, a plurality of bars whose upper ends support said beam, pivotal connections between their lower ends and said stanchion, a strip flexibly connected at one end with the beam, having a notch in its under side near said connection, and having a transverse hole through it near its other end, the latter passing loosely through the stanchion, a stop pin removably inserted in said hole behind the stanchion, and a catch pin across the stanchion with which said notch is detachably engaged.

1,013,448. BURETTE. JOHN DE CEW ROSE, Berkeley, Cal. Filed June 9, 1910. Serial No. 565,919.

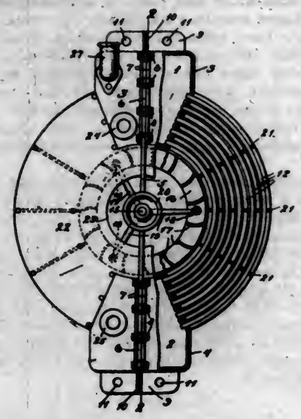


A burette comprising a pair of measuring vessels, a stop cock connecting the same and adapted for filling the vessels and discharging therefrom, a hollow float valve in each of the said vessels and adapted to rise with the level of the fluid received in the vessels, a stopper in each of the vessels, a vent mounted in each stopper and extending into the vessel, suitable material carried in each valve and into which the end of the vent is adapted to extend whereby the vent may be sealed, each of the said vents being vertically adjustable whereby the amount of fluid received in the vessel may be varied before the end of the vent is sealed.

1,013,449. APPARATUS FOR COOLING FLUIDS. LOUIS RUTHENBURG, Louisville, Ky. Filed Feb. 20, 1911. Serial No. 609,786.

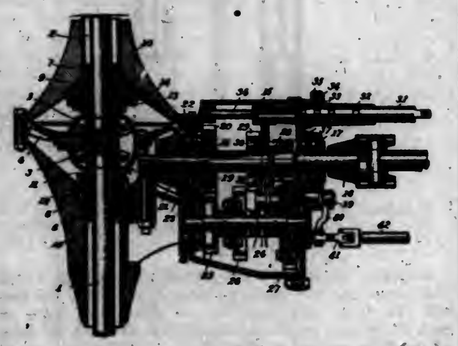
In apparatus of the character described, a diametrically arranged support adapted to be attached near its opposite ends to an automobile or the like, said support comprising an intermediate body portion carrying at its end open frames, pairs of tank sections having their inner sides formed open and placed upon opposite sides of and in en-

gagement with the open frames, bolts for detachably securing the tank sections to the open frames, a shaft journaled through said intermediate body portion, a fan car-



ried by said shaft, and conduits disposed upon opposite sides of the fan and having their ends extending through openings formed in the walls of the tank sections.

1,013,450. TRANSMISSION-GEARING FOR MOTOR-VEHICLES. CHARLES SCHMIDT, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 28, 1904. Serial No. 205,325.



1. In a motor vehicle, the combination of a shaft, a driving gear wheel thereon, a driven shaft, differential gearing thereon, a driven gear wheel connected to the differential gearing, a casing containing said gear wheels, a ring having screw thread connection with said casing and in which the said shaft is revolubly held, means for adjusting said ring in said casing and means for adjusting the driven gear on the driven shaft.

2. In a motor vehicle, the combination with two series of relatively movable gears, and a reverse gear adapted to connect a gear of one series with a gear of the other, of means movable with the reverse gear to prevent it from reaching operative position when any of the forward speed gears are operative.

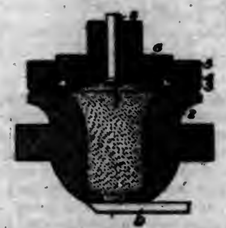
3. In a motor vehicle, the combination of a sliding gear, a non-sliding gear and a reverse gear, of a shoe movable with the reverse gear and adapted to contact with one of said other gears to prevent the reverse gear from reaching operative position, except when said sliding gear is in proper relation to the reverse gear.

4. In a motor vehicle, the combination with a pair of sliding gears having an intermediate annular groove, of a reverse gear and a shoe movable with said gear and adapted to enter said groove when the sliding gears are in position for reversing, and to contact with said gears when they are out of position for reversing.

5. In a motor vehicle, the combination with variable speed gears, of a reverse gear, a rocking arm carrying said reverse gear and toggle levers for rocking said arm.

[Claims 6 to 11 not printed in the Gazette.]

1,013,451. METHOD OF FORMING HOLLOW GLASS ARTICLES. ALEXANDER LUMSDEN SCHRAM, Hillsboro, Ill. Filed Jan. 17, 1911. Serial No. 603,183.



1. The method of forming hollow glass articles, consisting in sucking the glass into a blank mold, thereafter pressing the end portion of the blank to the finished shape of the mouth or neck portion, and then expanding the body of the blank into final form.

2. The method of forming hollow glass articles, consisting in sucking the glass into a blank mold, pushing one end portion of the blank back into the body of the blank, pressing the other end portion of the blank to the finished shape of the neck, and then expanding the body of the blank into final form.

3. The method of forming hollow glass articles, consisting in sucking glass into a blank mold having a closed-off shaping portion at one end, then uncovering the shaping portion and pressing the glass into final form at such end, and then expanding the remainder of the blank to final form.

4. The method of forming hollow glass articles, consisting in sucking glass into a blank mold having a closed-off shaping mold ring, uncovering the mold ring and pressing the glass thereinto to give it the final form at the open end of the article, and then expanding the remainder of the blank into final form.

5. The method of forming hollow glass articles, consisting in sucking the glass into a blank mold by inducing suction through a cap covering the mold ring, removing the cap, pressing the glass to final form within the mold ring, and then expanding the remainder of the blank.

[Claim 6 not printed in the Gazette.]

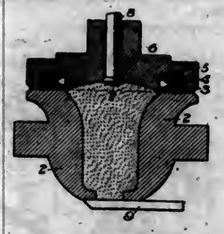
1,013,452. APPARATUS FOR FORMING HOLLOW GLASS ARTICLES. ALEXANDER LUMSDEN SCHRAM, Hillsboro, Ill. Filed July 6, 1911. Serial No. 637,196.

1. A sucking mold having a mold ring with an inner shaping surface, and means for covering said inner shaping surface of the mold ring during sucking of glass into the mold, substantially as described.

2. A sucking mold having a mold ring provided with an inner shaping surface, in combination with a removable sucking cap arranged to cover the shaping surface of the mold ring during sucking of glass into the mold, substantially as described.

3. A sucking mold having a mold ring adapted to coact therewith, the sucking mold cavity having no final shaping portion, and means for pressing a portion of the sucked blank into the coacting mold ring, substantially as described.

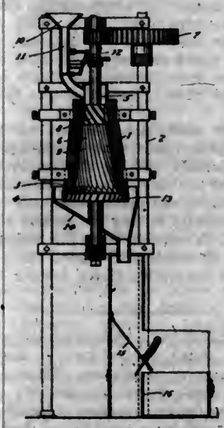
4. A sucking mold having an open end, a mold ring adapted to coact with said end, means for sucking the glass into the mold out of contact with the shaping mold ring, and means for pressing the glass in the sucking mold into the shaping mold ring at one end thereof, substantially as described.



5. The combination with a sucking mold, of a mold ring adapted to coact therewith, means for sucking glass into the mold out of contact with the mold ring, means for pressing the sucked glass into the mold ring, and a blow mold arranged to receive the mold ring and blank with its pressed end, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,013,453. WHEAT FOOD AND PROCESS OF PREPARING THE SAME. WILLIAM T. SHEPARD, Le Mars, Iowa. Filed June 16, 1911. Serial No. 633,629.



1. An article of food consisting of meal composed of granular fragments of wheat, said fragments being irregularly cut and torn and having portions of the wheat hulls or bran, including the inner membrane, adhering thereto, said portions of bran being larger in area than the glutinous and starchy parts of the fragments so that the edges of the bran portions extend beyond said starchy and glutinous parts.

2. An article of food consisting of meal composed of granular fragments of artificially hardened white wheat, said fragments being irregularly cut and torn and having portions of the wheat hulls or bran adhering thereto, said portions of bran being larger in area than the glutinous and starchy parts of the fragments so that the edges of the bran portions extend beyond said starchy and glutinous parts.

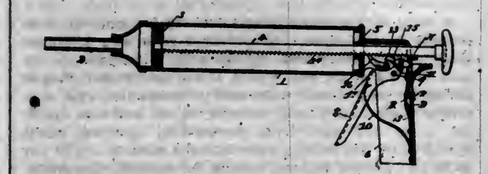
3. The method of preparing white wheat meal which consists in treating the wheat with water and dry heat to harden the same and cause the hull to adhere to the body of the grain, cutting the wheat berries into fragments in such manner that the hull or bran will continue to adhere to the body portions of said fragments, and tearing said fragments to render the same irregular and cause the bran portions to extend beyond the edges of the body portions.

4. The method of preparing white wheat meal which consists in treating the wheat with water and dry heat to harden the same and cause the hull to adhere to the body of the grain, cutting the wheat berries into fragments in such manner that the hull or bran will continue to adhere to the body portions of said fragments, tearing and rubbing said fragments to render the same irregular and at the same time form a small amount of roughly pulverized flour, and sifting out the finest flour and ciliary hair dust formed during the last step of the process.

5. The step in the process of preparing white wheat meal which consists in cutting the wheat into fragments having the hulls or bran adhering to the body portion of said fragments, and rubbing and tearing said fragments to render the same irregular and cause the particles of bran to extend beyond the margins of the body portions of the fragments.

[Claim 6 not printed in the Gazette.]

1,013,454. GREASE-GUN. WILLIAM E. SHERBONDY, Cleveland, Ohio. Filed July 22, 1910. Serial No. 573,244.



1. In a grease gun, in combination, a cylinder, a piston rod therein, a rack on the piston rod, a rigid handle for the gun arranged at right angles thereto, a lever pivoted thereon, an operating pawl for said rack pivoted on said lever, a locking pawl for said rack pivoted on the handle, and a sliding device for releasing said pawls.

2. In a grease gun, in combination, a cylinder, a piston and piston rod, a rack on the piston rod, a cylinder head and a handle secured at an angle thereto, and a lever pivoted on the hondle, an operating pawl pivoted on said lever and engaging said rack, a locking pawl pivoted on the handle, a sliding releasing device for both said pawls, said releasing means serving also to lock said lever, a return spring for said lever, and a return spring for said operating pawl on said lever, and a return spring for said locking pawl on said handle.

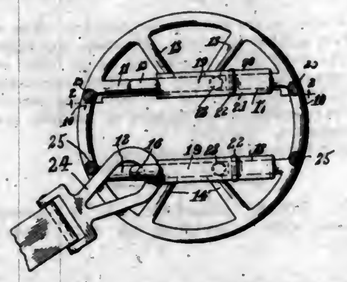
3. In a grease gun, in combination, a cylinder, a piston and piston rod therefor, a handle, an operating pawl, and a rack for operating the piston in one direction, a pivoted lever to which the operating pawl is pivoted, a locking pawl pivoted to said handle, both said pawls spring actuated to retain them in engagement with said rack, said operating pawl provided with a rearward projection and shoulder thereon, and a strip slidingly mounted in said handle and adapted to engage said shoulder to remove said operating pawl from contact with the said rack, the said operating pawl being adapted to strike and also release said locking pawl.

4. In a grease gun, in combination, a cylinder, a piston and piston rod therefor, a cylinder head and a handle secured to said cylinder, said piston rod having a rack on one side, a lever pivoted on said handle, a spring actuated to retain them in engagement with said rack, said normally to engage said rack, a spring actuated locking pawl pivoted on said handle, means for releasing said operating pawl from said rack, and for locking the same to prevent contact with said rack, said operating pawl adapted to strike against and release said locking pawl, and to hold the same ont of contact with said rack.

5. In a grease gun, in combination, a cylinder, a piston and piston rod therefor, said piston rod having a rack

on one side, a cylinder head and handle for said cylinder, a lever pivoted on said handle, a spring actuated operating pawl pivoted on said lever, a spring operated locking pawl pivoted on said handle, a releasing member movable on said handle and adapted to engage and release said operating pawl and simultaneously through the instrumentality of the operating pawl to release the locking pawl, and means for securing the releasing member from movement.

1,013,455. TRACE-CARRIER. WARREN SISTY, Surprise, Nebr. Filed May 31, 1910. Serial No. 564,313.



A trace carrier comprising a base frame adapted to be coupled in a harness and provided with two L-shaped studs spaced apart and an upwardly directed web for each of said studs and spaced therefrom, a stop tongue device for each of said webs, and its companion stud each tongue comprising a body engaging at one end with one of the studs and each with downwardly directed wings spaced apart and bearing upon opposite sides of one of the webs and pivoted thereto, springs for normally maintaining said tongues in engagement with their corresponding studs, and guards carried by said base frame and spaced therefrom.

1,013,456. TURN-TABLE. ALBERTUS O. SLENTZ, Canton, Ohio, assignor to The Canton Foundry and Machine Company, Canton, Ohio, a Corporation of Ohio. Filed Sept. 16, 1910. Serial No. 582,339.

1. A turn table of the character described provided with a circular channel located around its periphery.

2. A turn table of the character described provided with a circular channel located around its periphery, and means for draining said channel.

3. A turn table comprising a rotatable platform, a circular channel located around the periphery of said platform and an outlet pipe located in said channel, said channel inclined toward said outlet pipe.

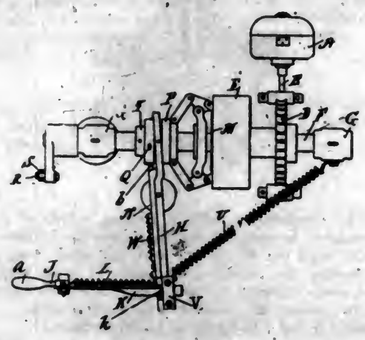
4. A turn table comprising a rotatable platform and an inclined circular channel located around the periphery of said platform.

5. A turn table comprising a rotatable platform, an inclined circular channel located around the periphery of said platform and a drain pipe located at the lowest point of said channel.

[Claims 6 to 13 not printed in the Gazette.]

1,013,457. CLUTCH MECHANISM. CHARLES E. SMITH, Oak Lawn, R. I. Filed Aug. 22, 1910. Serial No. 578,467.

1. In a clutch mechanism the combination of the stationary clutch member and the sliding clutch member, with a spring actuated shipper lever, a latch engaging with the shipper lever to carry the sliding clutch member into engagement, a tripper slide carried by the shipper lever, a projecting stud moving with the rotation of the shaft of the clutch, and engaging with the tripper slide for automatically releasing the shipper lever from the latch and a spring for causing the automatic disengagement of the clutch members upon the disengagement of the latch.



2. In a clutch mechanism, adapted for both optional and automatic disengagement, the combination of the stationary clutch member, and the sliding clutch member, with a spring-actuated shipper lever, a latch engaging with the shipper lever and serving to hold the clutch members in engagement, means for automatically disengaging the latch to cause the separation of the clutch members, and means under the control of the operator, so connected with the sliding clutch member, as to cause the disengagement of the same from the opposite clutch member, without requiring the disengagement of the latch from the shipper lever.

3. In a clutch mechanism adapted for both optional and automatic disengagement, the combination of the stationary clutch member, and the sliding clutch member, a spring for forcibly withdrawing the sliding clutch member from its engagement, and means under the control of the operator for optionally forcing the sliding clutch member into engagement, in opposition to the disengaging action of the spring, and means for causing the predetermined disengagement of the sliding clutch member independently of the operator.

1,013,458. BLEACH-OUT PROCESS OF COLOR PHOTOGRAPHY. JOHN HENRY SMITH, Zurich, Switzerland, and WALDEMAR MERCKENS, Mülhausen, Germany. Filed Jan. 26, 1907. Serial No. 354,237.

1. A process for the manufacture of bleach out surfaces, consisting in emulsifying a plurality of dyes in a vehicle for which they have relatively low affinity, and coating the emulsion upon a prepared layer for which the dyes have relatively high affinity, to allow the dyes to pass into said layer.

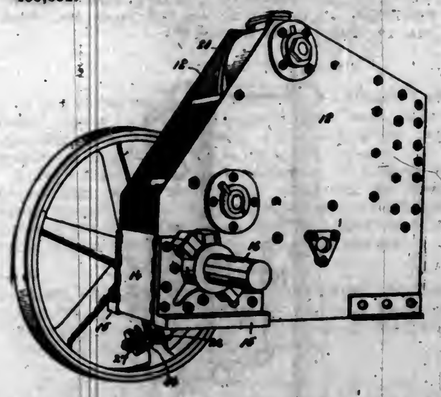
2. A process for the manufacture of bleach out surfaces, consisting in emulsifying a plurality of basic dyes in a vehicle for which they have relatively low affinity, and coating the emulsion upon a prepared layer for which the dyes have relatively high affinity, to allow the dyes to pass into said layer.

3. A process for the manufacture of bleach out surfaces, consisting in emulsifying a plurality of dyes in a gelatinous vehicle for which they have relatively low affinity, and coating the emulsion upon a prepared layer for which the dyes have relatively high affinity, to allow the dyes to pass into said layer.

4. A process for the manufacturing of bleach out surfaces, consisting in emulsifying a plurality of dyes in a vehicle for which they have relatively low affinity, and coating the emulsion upon a prepared nitro-cellulose layer for which the dyes have relatively high affinity, to allow the dyes to pass into said layer.

5. A process for the manufacture of bleach out surfaces, consisting in emulsifying a plurality of dyes in a vehicle for which they have relatively low affinity, and coating the emulsion upon a prepared layer of nitrocellulose mounted upon paper and for which prepared layer the dyes have relatively high affinity, to allow the dyes to pass into said prepared layer.

1,013,459. CRUSHER. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed Oct. 27, 1908. Serial No. 459,691.



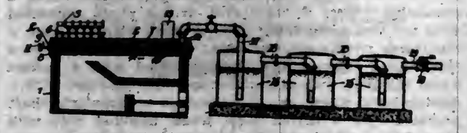
1. A crusher comprising in its frame construction side plates, a rear, angle cross-beam having vertical and horizontal arms or flanges extending upwardly and inwardly, respectively, from the rear lower corner of the frame, and bearing-blocks having flanged portions registering with said angle cross-beam, the said bearing blocks being secured to said side plates and angle beam by a series of bolts passing through the said flanged portions of said blocks and also through said side plates and the vertical and horizontal arms or flanges of said angle cross-beam.

2. A crusher comprising in its frame construction side plates having openings, a rear, angle cross-beam having vertical and horizontal arms or flanges extending upwardly and inwardly, respectively, from the rear lower corner of the frame, and bearing-blocks having flanged portions registering with said angle cross-beam, the said bearing blocks being secured to said side plates and angle cross-beam by a series of bolts passing through the flanged portions of said bearing blocks and also through said side plates and the vertical and horizontal arms or flanges of said angle cross-beam, said bearing-blocks having projections extending inward through said openings in said side-plates and shouldering against the walls of said openings.

3. In a crusher, the combination with side plates, a head block, and a rear, angle cross-beam comprising vertical and horizontal arms or flanges, and provided with an abutment projection, of bearing blocks having flanged portions registering with said angle cross-beam, bolts passing through the said flanged portions of said bearing blocks and also through the said side plates and rear angle cross-beam, and serving to secure these parts rigidly together, a driving shaft journaled in said bearing blocks and provided with a cam or eccentric, a rocking jaw operated from said cam or eccentric, a pull-back spring engaging said abutment projection, and a pull-back rod connected with said rocking jaw and which is encircled by said spring.

4. In a crusher, the combination with side plates, a head block, and a rear, angle cross-beam comprising vertical and horizontal arms or flanges and provided with an abutment projection, of bearing blocks having flanged portions registering with said angle cross-beam, bolts passing through the said flanged portions of said bearing blocks and also through the said side plates and said angle cross-beam so as to secure said parts rigidly together, a driving shaft journaled in said bearing blocks and provided with a cam or eccentric, a rocking jaw operated from said cam or eccentric, a pull-back spring engaging said abutment projection, and a pull-back rod connected with said rocking jaw and which is encircled by said spring, said bearing-blocks having projections extending inward through openings in said side-plates and shouldering against the walls of said openings.

1,013,460. PROCESS OF PREPARING NITROGENOUS COMPOUNDS. LELAND L. SUMMERS, Chicago, Ill. Filed Feb. 29, 1908. Serial No. 418,505.



1. The process of preparing notrogenous compounds which consists in introducing into heated carbonaceous material liquefied gas containing nitrogen.

2. The process of preparing nitrogenous compounds which consists in introducing into heated hydrocarbons liquefied nitrogen.

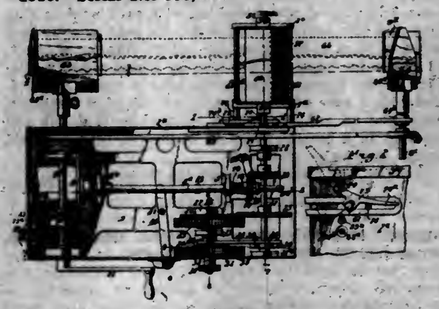
3. The process of preparing nitrogenous compounds which consists in introducing into heated carbonaceous material refrigerated gas containing nitrogen.

4. The process of preparing nitrogenous compounds which consists in introducing into heated hydrocarbons refrigerated nitrogen.

5. The process of preparing nitrogenous compounds which consists in introducing into heated carbonaceous material, mixed with an alkali, a liquefied nitrogenous gas.

[Claims 6 to 16 not printed in the Gazette.]

1,013,461. WINDING AND MEASURING MACHINE. FRANK L. TAYLOR, Rushford, N. Y. Filed Dec. 19, 1910. Serial No. 598,203.



1. A machine of the character described comprising two rotary bolt holders from one of which the material is unwound and upon the other of which the material is wound, a measuring roller which is engaged by the material passing from the delivery to the receiving holder, a driving mechanism, a register operatively connected with the measuring roller and means for rotating the measuring roller comprising a shaft composed of front and rear sections which are detachably connected, the rear section being connected with the measuring roller and the front section being connected with the driving mechanism, and a frame having a fixed section on which the front shaft section is journaled and a detachable section on which the rear shaft section is journaled.

2. A machine of the character described comprising two rotary bolt holders from one of which the material is unwound and upon the other of which the material is wound, a measuring roller which is engaged by the material passing from the delivery to the receiving holder, a driving mechanism, a register operatively connected with the measuring roller and means for rotating the measuring roller comprising a shaft composed of front and rear sections which are detachably connected, the rear section being connected with the measuring roller and the front section being connected with the driving mechanism, a frame having a fixed section on which the front shaft section is journaled and a detachable section on which the rear shaft section is journaled, and means for detachably connecting said frame sections comprising a shouldered shank arranged on the detachable frame section and a catch arranged on the fixed frame section and engaging with said shoulder shank.

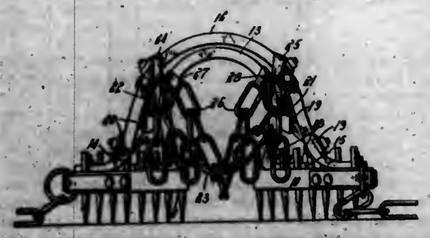
3. A machine of the character described comprising a measuring roller, a transverse driven shaft connected with the measuring roller and provided with a pinion, a transverse driving shaft provided with a friction pinion, a longitudinal intermediate shaft provided with a friction wheel engaging with said pinion and also provided with a driving bevel wheel, and a transverse intermediate shaft provided with a driven bevel wheel meshing with said bevel driving wheel and also provided with a driving gear wheel which meshes with said pinion on the driven transverse shaft.

4. A machine of the character described comprising a measuring roller, a transverse driven shaft connected with the measuring roller and provided with a pinion, a transverse driving shaft provided with a friction pinion, a longitudinal intermediate shaft provided with a friction wheel engaging with said pinion and also provided with a driving bevel wheel, a transverse intermediate shaft provided with a driven bevel wheel meshing with said bevel driving wheel and also provided with a driving gear wheel which meshes with said pinion on the driven transverse shaft, and means for adjusting the friction pinion radially relatively to the friction wheel.

5. A machine of the character described comprising a measuring roller, a transverse driven shaft connected with the measuring roller and provided with a pinion, a transverse driving shaft provided with a friction pinion, a longitudinal intermediate shaft provided with a friction wheel engaging with said pinion and also provided with a driving bevel wheel, a transverse intermediate shaft provided with a driven bevel wheel meshing with said bevel driving wheel and also provided with a driving gear wheel which meshes with said pinion on the driven transverse shaft, and means for adjusting the friction pinion radially relatively to the friction wheel comprising a screw nut provided with a yoke which embraces the hub of said friction pinion, and an adjusting screw working in said nut and journaled in a bearing so as to be free to turn but held against lengthwise movement.

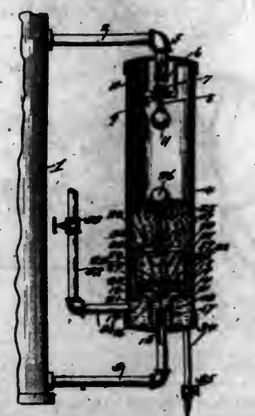
[Claims 6 to 12 not printed in the Gazette.]

1,013,462. HARROW. WILLIAM THORN, Arnaudville, La. Filed July 23, 1910. Serial No. 573,450.



A harrow comprising a pair of spaced toothed beams, arched members connecting said beams at spaced points, bars connecting said arched members at spaced points and disposed respectively on opposite sides of the longitudinal axis of the harrow, handles secured to one of said arched members and to said bars respectively, a pair of straps encircling one of said arched members, each having portions thereof disposed on opposite sides of respective connections between said bars and arched member whereby said straps are held against longitudinal movement with respect to the arched member, a pair of straps encircling the other arched member and the handles secured thereto respectively, and chains hung at spaced points in their length from the straps carried by each arched member respectively and disposed between the beams.

1,013,463. AUTOMATIC CUT-OFF FOR BOILER-FEEDERS. CHARLES C. TOZIER, Skowhegan, Me. Filed Jan. 10, 1911. Serial No. 601,814.



1. In an automatic boiler feeder cut-off, a receptacle having connections at its opposite ends with a boiler, a source of supply to said receptacle, a vertically floatable valve controlling the outflow from said receptacle and a float and connections within said receptacle for controlling said valve.

2. In an automatic boiler feeder cut-off, a receptacle having connections at its opposite ends with a boiler, a source of supply to said receptacle, a valve controlling the outflow from said receptacle, a float and connections within said receptacle for controlling said valve, and a supplemental float actuated valve and loose pivotal connections between the same and the float for controlling the connection at the upper end of the receptacle.

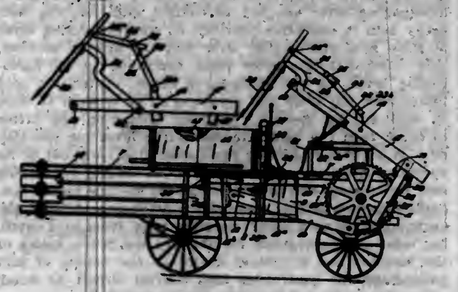
3. In an automatic boiler feeder cut-off, a receptacle having connections at the top and bottom of the boiler, a supply pipe for said receptacle, a vertically floatable valve controlling the outflow from the receptacle, a stem for said valve, a float, a member carrying the float and pivoted loosely connected vertically floatable link and lever connections between the same and the said stem.

4. In an automatic boiler feeder cut-off, a receptacle having connections at the top and bottom with a boiler, a supply pipe to said receptacle, a valve controlling the outflow from the receptacle, a guide for the valve stem, a float, a member by which the same is carried, links pivoted to said member, pivotally mounted levers connected with said links, and connections between said levers and the valve stem.

5. In an automatic boiler feeder cut-off, a receptacle having connections at the top and bottom with a boiler, a supply pipe to said receptacle, a valve controlling the outflow from the receptacle, a guide for the valve stem, a float, a member by which the same is carried, links pivoted to said member, pivotally mounted levers connected with said links, and connections between said levers and the valve stem, said last-named connections being slidable.

[Claims 6 and 7 not printed in the Gazette.]

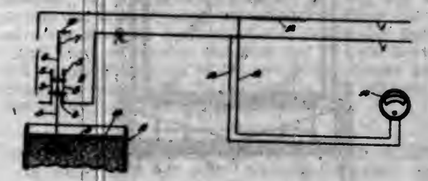
1,013,464. HAY-PRESS. LUTHER TRABUE and HORACE F. OWEN, Delaware, Ohio. Filed July 23, 1908. Serial No. 444,981.



1. In a baling press, the combination of a division block holder, means for slidingly supporting the same, means operating with the plunger to carry said holder into position to drop the block into the baling chamber.

2. In a baling press, the combination of a division-block holder, means for slidingly supporting the same, means operating with the plunger to carry said holder into position to drop the block into the baling chamber, and means to restore the holder to normal position.

1,013,465. BATTERY-CHARGE INDICATOR. EDWARD VAN WAGENEN, New York, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Oct. 22, 1908. Serial No. 458,973.



1. In an arrangement of the class described, the combination of a storage battery or cell, an electrical circuit, a recording meter connected across said circuit, two resistances connected in said circuit, means arranged to bridge said resistances means for supporting said bridging means and a displacer movable with said bridging means, said displacer operating responsive to variations in the specific gravity of the battery.

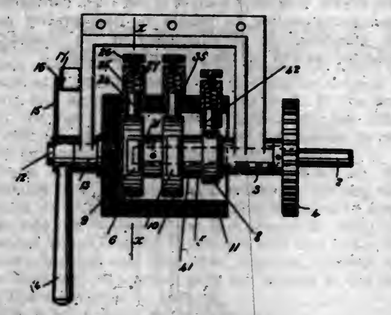
2. In a device of the class described, the combination of an indicator, an electrical circuit, including a variable resistance arrangement, said arrangement consisting of two resistance wires connected in series in said circuit, and spring supported means for bridging said wires, and a displacer operating said means.

3. In an arrangement of the class described, the combination of a storage battery, an indicator, an electrical circuit, including a variable resistance arrangement, said arrangement embracing two resistance wires connected to said circuit, a member for bridging said wires electrically, and means for adjusting said member, and means for operating said member responsive to changes of battery condition.

4. In an arrangement of the class described, the combination of a storage battery, an indicator, an electrical circuit, including a variable resistance arrangement, said arrangement embracing a plurality of resistance wires, means for holding said wires taut, and a spring supported member for electrically bridging said wires, and a displacer for operating said member responsive to changes of battery condition.

5. The combination of a storage battery, a substantially constant potential electrical circuit, a resistance in said circuit, a variable resistance arrangement in said circuit, an indicating meter connected across said circuit between said resistances, said variable resistance arrangement embracing two resistance wires held taut by resilient means, a spring supported member for electrically bridging said wires, and means for adjusting said member, and a displacer supported by said member for moving the same responsive to changes in the condition of the battery.

1,013,466. SPARKING APPARATUS. HILARY F. WHALTON, Key West, Fla. Filed June 12, 1911. Serial No. 632,654.



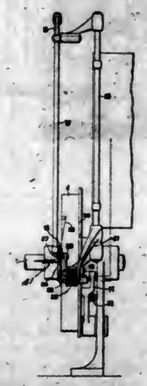
1. In a sparking apparatus, the combination, with a cylinder of insulating material, of a sleeve of insulating material provided with means for revolving it and journaled inside and concentric with the said cylinder, a contract ring secured on the said sleeve, a timer disk and a distributer disk secured side by side on the said sleeve and each provided with a contact plate at its periphery, the timer contact plate being arranged constantly in circuit with the said ring and the distributer contact plate having an earth connection, a spark coil, a brush carried by the said cylinder in contact with the said ring and connected to the secondary winding of the spark coil, a series of brushes for connection with the spark-plugs, said brushes being carried by the cylinder and engaged one after the other by the timer contact plate, and a second series of brushes carried by the cylinder and engaged one after another by the distributer contact plate and connected with the primary winding of the spark coil.

2. In a sparking apparatus, the combination, with a support having two bearings arranged axially in line with each other, of an adjustable cylinder of insulating material provided at one end with a shaft which is journaled in one of the bearings, means for securing the cylinder in position, a driving shaft journaled in the other bearing, a sleeve of insulating material secured to the said driving shaft and arranged inside the said cylinder, a contact ring secured on the said sleeve, a timer disk and a distributer disk secured side by side on the said sleeve and each provided with a contact plate at its periphery, the timer contact plate being arranged constantly in circuit with the said ring and the distributer contact plate having an earth connection, a spark coil, a brush carried by the said cylinder in contact with the said ring and connected to the secondary winding of the spark coil, a series of brushes for connection with the spark-plugs, said brushes being carried by the cylinder and engaged one after the other by the timer contact plate, and a second series of brushes carried by the cylinder and engaged one after another by the distributer contact plate and connected with the primary winding of the spark coil.

1,013,467. PANTOGRAPH EMBROIDERING-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Feb. 21, 1911. Serial No. 609,012.

1. In embroidering machines, the combination of a driving member, a main shaft in the machine to be driven by said driving member, a coupling between said driving member and the main shaft, a movable disengaging member to control said coupling, an interconnecting mechanism between said disengaging member and said driving member

for periodically connecting said driving member to said disengaging member to cause said disengaging member to be shifted out of its operative position, an electromagnetic device controlling said interconnecting mechanism, an electric control circuit containing said electromagnetic device, a pantograph for shifting the fabric frame of the machine, a contact device on the handle of said pantograph for controlling said control circuit by hand and automatic circuit controlling means for periodically opening said circuit so as to allow of periodic disconnection between said disengaging and driving members, said contact device, when said contact is left open, permitting said disengaging-member to remain in its operative position for producing the disengagement of the coupling, substantially as and for the purpose described.

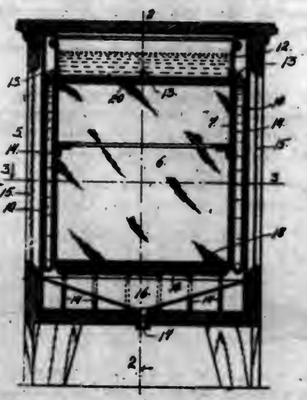


2. In embroidering machines, the combination of a driving member, a main shaft in the machine to be driven by said driving member, a coupling between said driving member and the main shaft, a movable disengaging member to control said coupling, an interconnecting mechanism between said disengaging and driving members, an electromagnetic device controlling said interconnecting mechanism, a hand controlled rod connected to said interconnecting mechanism, an electric control circuit containing said electromagnetic device, a pantograph for shifting the fabric frame of the machine and a contact device on the handle of said pantograph for controlling said control circuit by hand, whereby the said interconnecting mechanism and consequently the said disengaging member for the coupling may be controlled either electromagnetically or by hand, substantially as and for the purpose described.

3. In embroidering machines, the combination of a driving member, a main shaft in the machine to be driven by said driving member, a spring controlled coupling slide connecting in its coupling position said driving member with said main shaft, a spring actuated disengaging lever, a cam face carried by said lever to engage with said coupling slide when said lever is in operative position, for the purpose of moving said slide out of its coupling position, an interconnecting mechanism between said disengaging lever and said driving member for periodically connecting said driving member to said disengaging member to cause said disengaging member to be shifted out of its operative position, an electromagnetic device controlling said interconnecting mechanism, an electric control circuit containing said electromagnetic device, a pantograph for shifting the fabric frame of the machine, a contact device on the handle of said pantograph for controlling said control circuit by hand and automatic circuit controlling means for periodically opening said circuit so as to allow of periodic disconnection between said disengaging and driving members, said contact device, when said contact is left open, permitting said disengaging-member to remain in its operative position for producing the disengagement of the coupling, substantially as and for the purpose described.

4. In embroidering machines, the combination of a rotary driving member, a main shaft in the machine to be driven by said driving member, a coupling between said driving member and said main shaft, a spring actuated disengaging lever adapted to control said coupling normally held in operative position, an interconnecting lever between said disengaging lever and the driving member, said interconnecting lever being connected to the disengaging lever, an electromagnetic device controlling said interconnecting lever and arranged so as to shift it close to said driving member, catching means on the latter to catch then the said interconnecting lever for the purpose of positively shifting the disengaging lever out of its operative position, an electric control circuit containing said electromagnetic device, automatic electric means controlled by said driving member for producing periodic disengagement of said interconnecting lever from said catching means, a pantograph for shifting the fabric frame of the machine and a contact device on the handle of said pantograph for controlling said control circuit by hand, substantially as and for the purpose described.

1,013,468. REFRIGERATOR. WILLIAM N. AMSBARY, Los Angeles, Cal. Filed Dec. 10, 1910. Serial No. 596,703.



1. A refrigerator whose provision casing is equipped on the outside with a number of removable water bags, the said bags being exposed to the atmosphere, the outer framework adjacent the bags being open for the purpose, and a water-containing receptacle mounted on top of the provision casing and with which each of the bags separately communicates, the bags being supported in suitable proximity to the walls of the provision chamber, substantially as described.

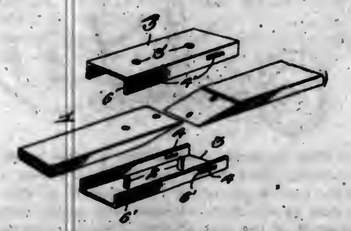
2. A refrigerator whose provision casing is equipped on the outside with water bags, the outer framework being open adjacent the bags to bring the atmosphere in contact with the latter to facilitate evaporation, rods whose extremities are secured to the framework of the structure, the said rods being located outside of the bags and in engagement therewith, whereby they are maintained in proper relation with the walls of the provision chamber, the open space in the outer framework where the bags are located being equipped with a screen of suitable mesh, substantially as described.

3. A refrigerator whose provision casing is equipped on the outside with water bags exposed to the atmosphere to facilitate evaporation for cooling purposes, the top of the provision casing being provided with a layer of absorbent material whose edges engage the adjacent upper extremities of the water bags, a water receptacle mounted on top of the provision casing, and the bags being equipped with tubes extending into the receptacle, the said tubes forming a support for the said bags, substantially as described.

4. A refrigerator whose provision casing is equipped on the outside with a number of removable water bags, said bags being exposed to the atmosphere, the outer framework adjacent the bags being open for the purpose, and a water-containing receptacle with which each of the bags is separately connected, the bags being supported against the walls of the provision casing.

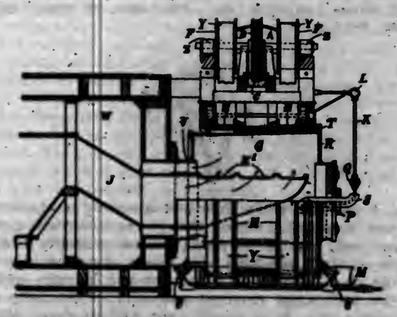
5. A refrigerator whose provision casing is equipped on the outside with water bags exposed to the atmosphere to facilitate evaporation for cooling purposes, a water receptacle mounted on top of the provision casing, and the bags being provided with tubes extending into the receptacle for supplying the bags with water, the said tubes being constructed to also form a support for the bags, substantially as described.

1,013,469. FASTENER. KNUT AUFINSON, Pelly, Saskatchewan, Canada. Filed Apr. 18, 1911. Serial No. 621,910.



A fastener for belts comprising in combination a plurality of pieces of material having side flanges having depressions therein and slots at the bottom of said depressions and the portions surrounding said slots struck up inwardly, the flanges being arranged so that they will overlap one another and so that those overlapped will receive the struck-up portions of the overlapping flanges within their depressions and slots and be held thereby, said struck-up portions of the overlapped flanges being adapted to engage with the belt held by said fastener, so that the belt will be held together thereby.

1,013,470. APPARATUS FOR PRODUCING BLOCKS OR COATINGS OF ICE. MAUNSEL CASWELL JOHN BANNISTER, Dublin, Ireland. Filed Aug. 22, 1910. Serial No. 578,445.



1. In a refrigerating apparatus, the combination of a bait drum formed with a plurality of pulleys on its outside, belts surrounding said pulleys, and belt pulleys with means for supporting them above the bait drum for the purpose of carrying the belts and the bait drum, means for driving the belt pulleys for the purpose of turning the bait drum, means for supplying a stream of refrigerated air to the interior of the bait drum and means for supplying water to the interior of the bait drum.

2. In a refrigerating apparatus, the combination of a bait drum and means for turning the same, means for supplying refrigerated air and a duct terminating inside the bait drum adapted to discharge the refrigerated air therein, a hollow end piece on the bait drum through which the said duct passes, the said end piece being larger than the duct whereby an outflow passage is provided for the air, and means for supplying cold water to the interior of the bait drum.

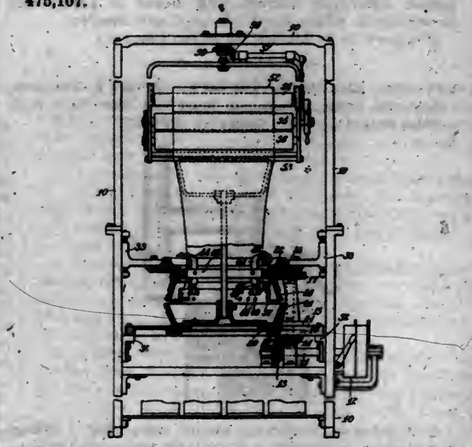
3. In a refrigerating apparatus, the combination of a bait drum and means for turning same, means for supplying refrigerated air to the interior of the bait drum, a pipe for supplying cold water to the interior of the bait drum, an end piece on said pipe passing through an opening in the end of the bait drum, and means for controlling the rate of flow of the water to the interior of the bait drum.

4. In a refrigerating apparatus for making ice, the combination of a hollow round bait, means for turning said bait about its horizontal axis, means for supplying a stream of artificially cooled air through the interior of the bait, and means for supplying the water to the interior of the bait; whereby as the bait turns, the water flows over the surface and every part successively is submerged and exposed to the refrigerating current.

5. In a refrigerating apparatus for making ice, the combination of a cylindrical bait, means for turning said bait upon its axis, means for supplying a stream of freezing air into the interior of the bait, means for supplying cold water to the interior of the bait only and means for externally heating said bait when required, whereby the frozen block may be released from the interior of the bait to facilitate the removal thereof.

[Claim 6 not printed in the Gazette.]

1,013,471. CIRCULAR-KNITTING MACHINE. WILLIAM T. BARRATT, Bennington, Vt., assignor to Alexander J. Cooper, Annie Cooper, and Charles S. Kehoe, Bennington, Vt., executors of Charles Cooper, deceased, Bennington, Vt. Filed Jan. 30, 1909. Serial No. 475,107.



1. A knitting machine having, in combination, an annular primary cylinder and an annular secondary cylinder, a series of spring needles mounted on each of said cylinders, respectively, a presser for each of said series of needles, means to feed the knitted fabric through one of said annular cylinders, means adapted to bear against the backs of the needles of said secondary cylinder, and a support for said last-named means extending through said secondary cylinder adjacent to the inner surface thereof.

2. A knitting machine having, in combination, an annular primary cylinder and an annular secondary cylinder, a series of spring needles mounted on each of said cylinders, respectively, a presser for each of said series of needles, means to feed the knitted fabric through one of said annular cylinders, means adapted to bear against

the backs of the needles of said secondary cylinder, and a support for said last named means extending through said secondary cylinder and separated therefrom by a substantial space extending entirely through said secondary cylinder between said support and the innermost surface of said cylinder.

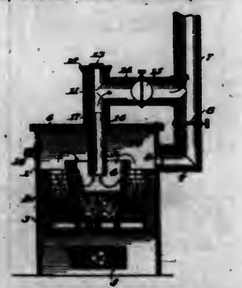
3. A knitting machine, having in combination a primary needle cylinder, a secondary needle cylinder having an opening extending entirely through said secondary cylinder adapted to allow the passage of the fabric therethrough, a series of spring needles mounted on each of said cylinders respectively, a presser for said secondary set of needles, means to feed the knitted fabric through said secondary cylinder and means adapted to move the needles of said secondary cylinder outwardly therefrom against said presser, and a support for said means extending through said secondary cylinder outside said fabric.

4. A knitting machine having, in combination, an annular primary cylinder and an annular secondary cylinder, a series of spring needles mounted on each of said cylinders, respectively, a presser for each of said series of needles, means to feed the knitted fabric through one of said annular cylinders, means adapted to bear against the backs of the needles of said secondary cylinder, and a support for said last named means extending through said secondary cylinder at a substantial distance from the median axial line thereof.

5. A knitting machine having, in combination, an annular primary cylinder and an annular secondary cylinder, a series of spring needles mounted on each of said cylinders, respectively, a presser for each of said series of needles, means to feed the knitted fabric through one of said annular cylinders, means adapted to bear against the backs of the needles of said secondary cylinder, a support for said last named means extending through said secondary cylinder at a substantial distance from the median axial line thereof, and means to adjust said second-named means transversely of said needles.

[Claims 6 to 27 not printed in the Gazette.]

1,013,472. CRUCIBLE-FURNACE. GEORGE E. BEHRENS, Ivoryton, Conn., assignor to Josef Veit, New York, N. Y. Filed May 11, 1911. Serial No. 626,522.



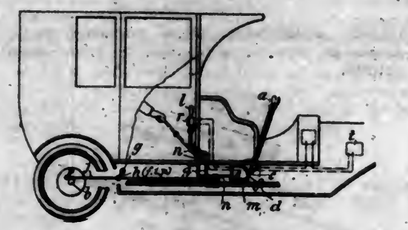
1. A furnace for melting metals, comprising a casing, a fuel-grate, a crucible, a draft-inlet beneath said grate, a draft-pipe connected to the furnace-chamber above said grate, and a tube depending into said crucible and connected to said draft-pipe.

2. A furnace for melting metals, comprising a casing, a fuel-grate, a crucible, a draft-inlet beneath said grate, a draft-pipe connected to the furnace-chamber above said grate, a tube depending into said crucible, a cross-connection between said tube and draft-pipe, and dampers in said cross-connection and draft-pipe.

3. A furnace for melting metals, comprising a casing having a removable apertured top, a fuel-grate, a crucible, a draft-inlet beneath said grate, a draft-pipe connected to the furnace-chamber above said grate, a removable tube extending through said top and into said crucible, a cross connection between said tube and draft-pipe, and dampers in said cross-connection and draft-pipe.

4. A furnace for melting metals, comprising a casing having a removable apertured top, a fuel-grate, a crucible, a draft-inlet beneath said grate, a draft-pipe connected to the furnace-chamber above said grate, a removable tube extending through said top and into said crucible, a cross-connection between said tube and draft-pipe, dampers in said cross-connection and draft-pipe, and a gas-inlet to the furnace-chamber.

1,013,473. VEHICLE-BRAKE. HARALD EDUARD FREDERIK RUDE BLOCK, Copenhagen, Denmark. Filed Feb. 27, 1911. Serial No. 611,276.



1. In a motor-car in combination, a wheel-brake, means for operating same from the chauffeur's seat only, a releasable handle placed in the tonneau, a wire affixed to the said handle, with a round turn wound around the driving-shaft of the motor and thereupon connected with the wheel-brake, guide-pulleys for the said wire and means for breaking of the ignition of the motor, said latter means to be manipulated from the passengers' seats.

2. In a motor-car in combination, a wheel-brake, means for operating same from the chauffeur's seat only, a releasable handle placed in the tonneau and provided with an electric conducting contact-ring, said handle in its position of rest resting with the contact-ring between contact-springs, said contact-springs being each in connection with its part of the motor's current of ignition, a wire affixed to the said handle with a round turn wound around the driving-shaft of the motor and thereupon connected with the wheel-brake, and guide pulleys for the said wire.

1,013,474. GARMENT SUPPORT OR HOLDER. BYRON H. BOYD, Louisville, Ky. Filed Oct. 28, 1910. Serial No. 589,535.

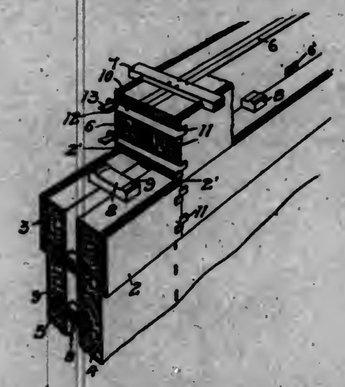
1. A garment holder free and operating independently of any suspending means therefor and consisting of a looped body having a lower reduced extremity and an upper enlarged extremity, and means operative as a fastening for a portion of a garment and movably applied to the said upper enlarged extremity of the body and consisting of a front closed plate with an inner tongue projecting away therefrom, the plate and tongue being formed with a knuckle closely embracing the said upper extremity of the body and providing with said extremity a lock for said means.

2. A garment holder free and operating independently of any suspending means therefor and comprising an open body applicable over a projection and having a lower reduced extremity and a cross-bar at its upper enlarged extremity angular in cross-section, the body being longitudinally bent into concavo-convex form, and a fastening means movably applied to the upper angular cross-bar of the body and constructed to provide with said cross-bar a yielding lock to hold the said fastening means against

loose movement when closed, the fastening means being provided with an inner tongue having a notch in its free edge to engage the projection, the garment holder being longitudinally movable in one direction when applied to effect a close engagement of the tongue with the projection and similarly movable in a reverse direction to release the tongue from said projection.

3. A garment holder or support free and operating independently of any suspending means therefor and comprising an open body with a lower reduced extremity and an upper enlarged extremity, and a fastening means directly applied to the upper enlarged extremity of the body and movable downwardly over the outer side of said body, the fastening means consisting of an outer plate and an inner tongue projecting away from and having a fixed position relatively to the plate.

1,013,475. APPARATUS FOR MOLDING CONCRETE WALLS. THEODORE H. BROWN, Minneapolis, Minn., assignor to Nels J. Blomgren, Minneapolis, Minn. Filed Feb. 13, 1908. Serial No. 415,646.

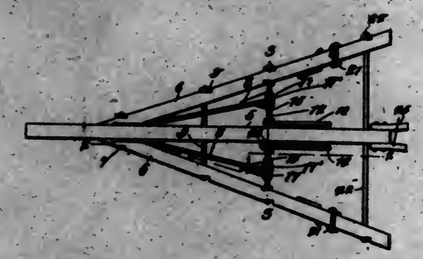


1. An apparatus for molding a monolithic wall, comprising side plates arranged with a space between them, the plates on the same side of the wall having their ends abutting one another, tie-plates bridging the wall and having their ends extending through the joints of adjoining side plates, said tie-plates having oppositely turned lugs at one end to engage said side plates, and slots and tapered keys therefor at the other end, whereby said plates will be locked in parallel relation with one another, and core plates tapered from their upper toward their lower edges and suspended between said side plates, whereby an air space will be formed between the opposite faces of the wall, when molded, and cross bars interlocking with the upper edges of said side plates and supporting said core plates substantially as described.

2. An apparatus for molding a monolithic wall, comprising side plates arranged in parallel relation with one another, tie-bars connecting said plates, core plates arranged to be suspended between said side plates and spaced therefrom, said side plates and said core plates being moved vertically as the sections of wall are molded, and tie-blocks arranged to rest upon the wall sections and bridge the space formed by said core plates, and the lower edges of said core plates having recesses therein to receive said tie-blocks, and each tie-block being embedded in the wall sections as the successive sections are formed, substantially as described.

1,013,476. CULTIVATOR. WILLIAM J. BURROWS, De Lay, Miss., assignor of one-half to Walter G. Davis, De Lay, Miss. Filed May 20, 1911. Serial No. 628,426.

In a cultivator, the combination with a frame, of longitudinally disposed plow beams reduced in thickness at one of their ends and fixed to said frame, said plow beams being resiliently movable transversely of the frame and having plows arranged upon their rear ends, a transverse rod mounted in the frame and having spaced cylindrical enlargements, the rear ends of said plow beams being loosely disposed on said enlargements, said enlargements of the



rod being reversely screw threaded upon opposite sides of the beams, and nuts adjustable upon said threaded enlargements of the rod to bear against the opposite faces of the plow beams and move the same transversely with relation to each other and to securely clamp said beams in their adjusted positions.

1,013,477. COMPOSING DEVICE. GEORGE R. CORNWALL, Rye, N. Y., assignor to American Pianograph Company, a Corporation of West Virginia. Filed Mar. 6, 1906, Serial No. 304,457. Renewed Apr. 30, 1910. Serial No. 558,655.

1. A composition unit including in combination, a flexible line strip having a line of characters, the characters and the surrounding surfaces possessing opposite properties with respect to the transmission of light, and means for holding said strip in extended position.

2. A composition unit including in combination a flexible line strip having a line of characters, the characters and the surrounding surfaces possessing opposite properties with respect to the transmission of light, and a support for the said strip.

3. A composition unit including in combination a flexible line strip having a line of characters, the characters and the surrounding surfaces possessing opposite properties with respect to the transmission of light, and a support for the said strip in the form of a line bar.

4. A composition unit including in combination a flexible line strip having a line of characters, the characters and the surrounding surfaces possessing opposite properties with respect to the transmission of light, a line bar support therefor, and means for holding the said strip in position upon the said line bar support.

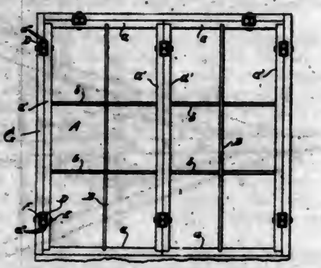
5. A composition unit including in combination a flexible line strip having a line of characters, the characters and the surrounding surfaces possessing opposite properties with respect to the transmission of light, a line bar support therefor, said line bar support being shaped to permit access of light to both sides of said strip throughout the length of the line of characters.

[Claims 6 to 11 not printed in the Gazette.]

1,013,478. REFRIGERATOR. JOSEPH EGLER, Chicago, Ill. Filed May 29, 1911. Serial No. 630,205.

1. In a refrigerator, a plurality of frames which are respectively constructed of side and end pieces joined together and provided with recesses, in combination with

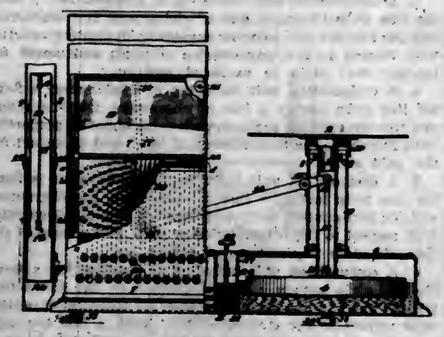
additional frames, said recesses positioned so that when the frames provided therewith are joined together apertures are provided thereby for the additional frames and means to rigidly attach adjacent recessed frames to the frames in said recesses.



2. In a refrigerator, frames consisting of side and end pieces respectively provided with recesses on the outer faces thereof, additional frames fitting in said recesses, said recesses positioned so that when said frames are assembled together the additional frames will fit into two of said recesses, and bolts extending respectively through a recessed frame and through a side of the additional frames, and nuts engageable with said bolts to hold said frames rigidly together.

3. A refrigerator comprising a plurality of frames, each of said frames having ends and side pieces respectively provided with recesses on the outer faces, additional frames fitting into oppositely placed recesses, and means to attach said additional frames to both the frames in the recesses whereof said additional frames are contained, and sheathing attached to the sides of the recessed frames.

1,013,479. WEIGHING-SCALE. RALPH W. ELLIOTT and JOHN JORGENSON, Fruitvale, Cal. Filed Feb. 2, 1911. Serial No. 606,206.



1. A computing scale comprising a receiving pan, a float, a standard connecting said members, a suitably shaped casing, a fluid within said casing and supporting the float, means for adjusting the level of the fluid, and an indicating device comprising movable indexed cards and connections between said device and said float whereby the former is actuated when an article is placed upon the receiving member of the scale.

2. A computing scale comprising a receiving pan, a float, a standard connecting said members, a suitably shaped casing, a fluid within said casing and supporting the float, means for adjusting the level of the fluid, and an indicating device comprising movable indexed cards and connections between said device and said float whereby the former is actuated when an article is placed upon the receiving member of the scale, said indexed cards being divided into a plurality of vertical columns, some of which represent measures of weight and others indicating price values.

3. A computing scale comprising a receiving pan, a float, a standard connecting said members, a suitably shaped casing, a fluid within said casing and supporting the float, means for adjusting the level of the fluid, an indicating device comprising movable indexed cards and connections between said device and said float whereby the former is actuated when an article is placed upon the receiving member of the scale, said indexed cards being divided into a plurality of vertical columns, some of which represent measures of weight and others indicating price values, and reading glasses mounted in the casing through which portions of the indexed cards may be exposed.

4. A computing scale, comprising movable indexed cards having columns of characters, some of which represent measures of weight and others price values, a casing within which said cards are movable, reading glasses mounted in the sides of the casing through which the indexed card may be exposed, a hydro-static device whereby said cards may be actuated when a weight is placed on said device, and a plurality of independent shutters covering the several price columns of the indicating cards, said shutters being adapted for movement to disclose a portion of one of the price columns.

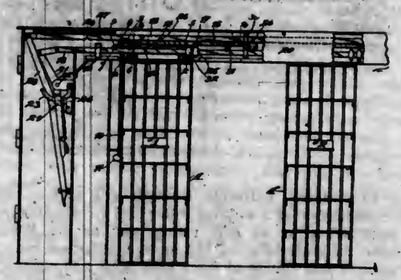
1,013,480. CONCRETE CONSTRUCTION. THOMAS FELLOWS, Los Angeles, Cal. Filed Jan. 3, 1911. Serial No. 600,645.

A building construction consisting of preformed concrete pilasters, walls and partitions, each pilaster abutting against the ends of two oppositely disposed walls, the ends of such walls being separated from each other, and the partitions extending approximately to the edges of the walls whereby to form between the pilasters, walls and partition ends a space forming a mold, said walls and partitions having each in their respective ends vertical recesses metallic threaded shanks embedded in said walls and partitions and centrally of the recesses thereof, said shanks having eyelets and being adjustable relatively to said walls and partitions whereby to effect an alinement of all of said eyelets, and a rod extending through but free of all of said eyelets, such space between the pilasters, walls and partitions being filled in with grout to form a single reinforcing column for holding together said pilasters, walls and partitions.

1,013,481. JAIL-DOOR-OPERATING DEVICE. CHARLES M. FINCH, San Francisco, Cal., assignor to Finch Jail Building & Metal Co., San Francisco, Cal., a Corporation of California. Filed June 13, 1910. Serial No. 566,518.

1. A sliding door actuating mechanism, including a guided, notched controller bar slidable in line parallel with the travel of the door, a bolt lifting bar guided and slidable upon the door and having a lever pivoted upon the top with an arm extending into the path of travel of the notched bar, and an independently controlled tiltable arm parallel with the notched bar and movable to engage and disengage the lever arm with the notch.

2. A sliding door controlling mechanism, including a vertically slidable bolt and a latch upon the edge of the door with which it is engageable, a bar horizontally slidable on the door and having a cam adapted to disengage the bolt, said bar being slotted, with connecting pins whereby the door is only movable after the bolt is disengaged, a guided notched controller bar slidable parallel with the door, a lever arm fulcrumed to the door and projecting into the path of the controller bar, and a tiltable coupler movable to engage or disengage the lever arm with the notched bar.



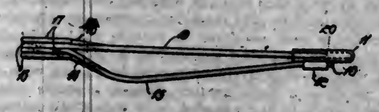
3. In a sliding door operating device, a vertically slidable bolt and a latch upon the edge of the door with which the bolt may engage, a horizontally guided and slotted bar movable upon the top of the door and having an inclined lug to engage and lift the bolt, and pins to subsequently engage the end of the slots, a notched bar slidable parallel with the door, a lever arm carried by the door, and engageable with the notched bar, said bar being movable to successively unlock and open the door, and to close and lock it.

4. A horizontally slidable door with a catch, a vertically movable locking bolt engageable therewith, a horizontally slidable bar having a limited independent movement upon the top of the door, and carrying inclined bolt actuating lugs, a horizontally slidable notched controller bar, a lever arm, fulcrumed to the door and projecting into the path of the notched bar, lugs upon said bar, and a coupler with coacting lugs to tilt the coupler and engage the door carried lever with the notched controller.

5. A horizontally slidable door with a catch, a vertically movable locking bolt engageable therewith, a horizontally slidable bar having a limited independent movement upon the top of the door, and carrying inclined bolt actuating lugs, a horizontally slidable notched controller bar, a lever arm, fulcrumed to the door and projecting into the path of the notched bar, a transversely fulcrumed coupler bar corresponding in length with the door travel, and extending beneath the lever, an independently slidable bar parallel with the coupler, and lugs upon said bar and the coupler engageable to lift the coupler and engage the lever arm with the controller bar notch.

[Claims 6 to 8 not printed in the Gazette.]

1,013,482. FLAT SAFETY-PIN. ZELTA J. FREDERICK, Casper, Wyo. Filed July 7, 1909. Serial No. 506,878.



1. In a safety pin, a receiving keeper, and a resilient wire attached thereto between its ends, the ends of the wire extending away from the keeper to form spaced parallel arms, each of said arms being bent intermediate its ends to form a coil and each coil thus formed being interlocked with the other coil to form a single coil, the axis of the single coil being disposed at right angles to the plane of the arms, and the free ends of said arms constituting pins which project toward the keeper for engagement therewith and disposed in the same plane and in spaced relation to said arms, said arms being outwardly bowed intermediate the keeper and the second coil in a direction opposite to the pins.

2. In a safety pin, a receiving keeper comprising a base portion having an inwardly turned lip projecting over one face thereof, and a pair of wire receiving eyes projecting from the opposite face of said base portion and extending longitudinally thereof, and a resilient wire bent at its middle to form spaced arms disposed within said eyes, each of said arms being bent intermediate its end to form a coil and each coil thus formed being interlocked with the other coil to form a single coil, and the free end of said arms constituting pins which project toward the keeper for engagement with the lip thereof and disposed in the same plane and in spaced relation to said arms.

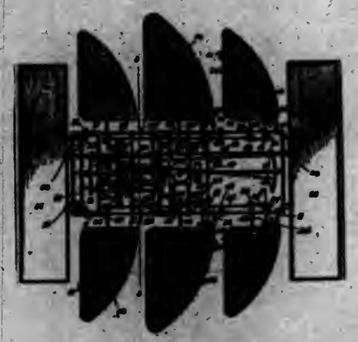
1,013,483. POP-VALVE. CHRISTIAN P. GAA, Bucyrus, Ohio. Filed June 21, 1911. Serial No. 634,634.

1. A pop safety valve having in combination a transversely divided casing provided with a steam inlet at one end and perforations at the outer end for the escape of the exhaust, a muffler within one portion of the casing and separated from the inner wall thereof, said muffler having double perforated walls and having an internal cylindrical portion whose walls are parallel for a portion of their length and thence converge outwardly, a valve within one part of the casing, said casing having a beveled seat for the valve, said valve having a second beveled seating-portion around its circumference, and an adjustable collar surrounding the valve having a seat for the edge seating portion thereof, said valve having a guide projecting from the center of one face and having a tubular portion of substantial length projecting from the opposite face and being of piston-form and slidably engaging the cylindrical chamber of the muffler, a spring within the muffler having one portion entering the space formed by said converging walls and having the other portion seating in the chamber formed by the tubular portion of the valve, said tubular portion serving to prevent the admission of fluid to said spring, an adjusting screw bearing on top of the spring, and a lock nut for holding the screw in its adjustment.

2. A pop safety valve and muffler having in combination; a two-part casing having a steam inlet with a beveled seat surrounding the same, both parts of the casing having adjacent ends internally threaded; a muffler within the casing separated from the wall thereof and provided with double perforated walls, the inner wall of the muffler being formed as a cylinder; and the outer wall having a threaded portion of sufficient length to engage the threaded

end of both parts of the casing and to bridge the joint therebetween; a disk valve having a beveled seating portion on the inner face around the edge thereof, and having a second seating portion conforming to the seat around the steam inlet, the portion of the valve between said seating portions being straight, said valve having a guided stem projecting from one side and having a tubular guide of piston-form and substantial length projecting from the other side and operating in said cylinder; a spring within the cylinder and tubular guide, and supported at one end by the valve; an adjusting screw engaging the other end of the spring; said casing inclosing the muffler and receiving said screw, and having perforations for the escape of steam to the atmosphere; and an adjustable collar surrounding the valve having a seat for the edge seating portion of the valve, and having a straight portion within said seating portion conforming to the corresponding portion of the valve.

1,013,484. FLYING-MACHINE. JAMES E. GASTON, St. Louis, Mo. Filed Jan. 29, 1910. Serial No. 540,791.



1. In a machine of the class described, a wing provided with a series of flexible ribs, the front ends of which are curved downward, a series of flexible vanes depending from said ribs, and means whereby said wing is vibrated vertically.

2. In a flying machine of the class described, the combination with a frame, of propelling means thereon, and an equilibrium maintaining device mounted on said frame, and which equilibrium maintaining device includes a transversely disposed tube pivotally mounted at its center, and a pendulum, the upper end of which coöperates with said mercury containing tube.

3. In a flying machine of the class described, the combination with a frame, of propelling means thereon and an equilibrium maintaining device comprising a transversely disposed tube adapted to contain mercury, a pendulum pivotally mounted on the frame at a point below the central portion of the tube, and a connection between the upper end of the pendulum and the mercury tube whereby swinging movement of the pendulum imparts tilting movement to the mercury containing tube.

4. In a machine of the class described, a frame, a series of flexible wings arranged in pairs on the sides of the frame, flexible vanes depending from the under sides of the wings, means for simultaneously vibrating and partially rotating the wings, and means for imparting the vibrating movement alternately to the pairs of wings.

5. In a flying machine of the class described, the combination with a frame, of propelling wings thereon, and an equilibrium maintaining device comprising a transversely disposed tube adapted to contain mercury, and means whereby said tube is tilted in opposite direction to the direction in which the machine tilts, and which tube bears on the frame of the machine when tilted to restore said frame to its normal position.

[Claims 6 to 13 not printed in the Gazette.]

1,013,485. STATION-INDICATOR. MARK GODFREY, ROBERT EKRON, and HENRY M. SVEBILIUS, Chicago, Ill.; said Godfrey and Svebilius assignors to said Ekron. Filed Sept. 9, 1910. Serial No. 581,308.

1. In a station indicator, transportable with a vehicle, the combination of a winding roller and a rewinding roller, a sheet traveling on said rollers and having indicated thereon the stations along the route, mechanism connected to operate said rollers to move said sheet and successively display said station indications, reversing mechanism adapted to cause said driving mechanism to operate said rollers in different directions, controlling means comprising parts located respectively on said vehicle and at points along said route adapted to coact to actuate said operating and reversing mechanisms, further controlling means for said reversing mechanism, comprising means mounted on said rewinding roller and adapted to automatically actuate said reversing mechanism when said sheet reaches the limit of its movement and thereby cause said operating mechanism to rewind said sheet on to said rewinding roller.

2. In a station indicator, transportable with a vehicle, the combination of a winding roller and a rewinding roller, a sheet traveling on said rollers and having indicated thereon the stations along the route, mechanism connected to operate said rollers to move said sheet and successively display said station indications, reversing mechanism adapted to cause said driving mechanism to operate said rollers in different directions, controlling means comprising parts located respectively on said vehicle and at points along said route adapted to coact to actuate said operating and reversing mechanisms, further controlling means for said reversing mechanism, comprising means mounted on said rewinding roller and adapted to automatically actuate said reversing mechanism when said sheet reaches the limit of its movement and thereby cause said operating mechanism to rewind said sheet on to said rewinding roller, and other controlling means on said winding roller adapted to automatically stop said operating mechanism when said sheet approaches the opposite limit of its travel.

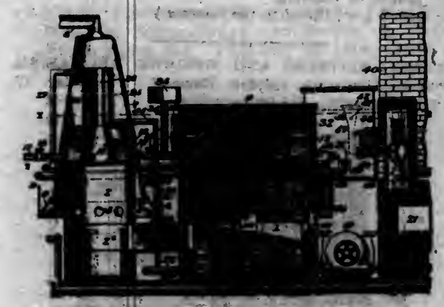
3. In a station indicator, transportable with a vehicle, the combination of a pair of rollers, a sheet traveling on said rollers and having indications thereon to represent the stations along the route of travel of the vehicle, mechanism connected to operate said rollers for moving said sheet to successively display said station indications, reversing mechanism controlling said operating mechanism and adapted to be shifted to cause said operating mechanism to move said sheet in different directions, an armature connected to said reversing mechanism, opposed electro-magnets each arranged to actuate said armature for shifting said reversing mechanism, a pair of contacts on said vehicle respectively connected in circuit with different magnets, a third contact member movable relatively to said contacts and adapted to be oppositely shiftable to engage either of said contacts to complete a circuit through the respective magnet, and means stationed along said route and adapted to shift said third member as the vehicle passes.

4. In a station indicator, transportable with a vehicle, the combination of a pair of rollers, a sheet traveling on said rollers and having indicated thereon the stations along the route of the vehicle, a pair of friction disks, a friction wheel mounted between said disks and shiftable into engagement with either, driving mechanism connecting said disks with said rollers, a motor connected to drive said friction wheel, an armature controlling the position of said friction wheel, electro-magnets arranged at opposite sides of said armature and connected in separate circuits, controlling means comprising parts located respectively on said vehicle and at points along said route, and adapted to coact to close the circuit through either of said magnets, according to the direction of travel of the vehicle, and a motor circuit adapted to be closed by the coaction of said parts.

5. In a station indicator, transportable with a vehicle, the combination of a pair of rollers, a sheet traveling on said rollers and having indicated thereon the stations along the route of said vehicle, mechanism connected to operate said rollers for moving said sheet to successively display said station indications, reversing mechanism adapted to cause said operating mechanism to move said sheet in different directions, an armature connected to actuate said reversing mechanism, a drum, shoulders on said drum and armature adapted to coact to hold said operating mechanism inactive, a pair of electro-magnets arranged at opposite sides of said armature, and connected in relatively different circuits, and each adapted to shift said armature to disengage said shoulders, and controlling means comprising parts respectively located on said vehicle and at points along said route and adapted to coact to close the circuit through either of said magnets according to the direction of travel, and thereby shift said armature to actuate said reversing mechanism, and a motor controlled by said armature for actuating said operating mechanism.

[Claims 6 to 13 not printed in the Gazette.]

1,013,486. GLASS-FURNACE. SAMUEL B. GOFF, Camden, N. J. Filed July 2, 1910. Serial No. 570,105.



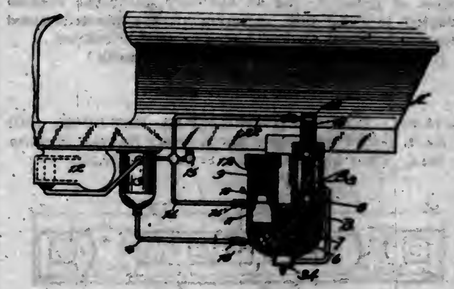
1. In an apparatus of the character stated, a melting furnace, a casing surrounding the same and forming a hot air space provided with an air inlet, burners in the furnace, a fuel supply pipe encircling the furnace within the heating zone of the same and connected to the burners, a fuel tank communicating into said supply pipe and having means for heating it and an air pipe communicating with the hot air space and connected to supply the burners.

2. In an apparatus of the character stated, a melting furnace, a casing surrounding the same and forming a hot air space, a blower connected to discharge into said space, burners in the furnace, a fuel supply pipe encircling the furnace and connected to said burners, a fuel tank communicating into said supply pipe and having means for heating it and an air pipe communicating with the hot air space, encircling the furnace within the heating zone of the same and connected to supply the burners.

3. In an apparatus of the character stated, a melting furnace, a cupola-shaped furnace forming a glass pot in its lower portion and provided with glory-holes above said pot, a duct connecting the melting furnace and the glass-pot, a conical hood around and above the upper part of said cupola shaped furnace, and having an outlet at its upper end, and shields hinged at the edge of such hood and extending over the glory-holes.

4. In an apparatus of the character stated, a cupola-shaped furnace forming a glass pot in its lower portion and having glory-holes, a conical hood around and above the upper portion of said furnace, an annular water-chamber on the top of said furnace and having a central duct communicating with the furnace and having water inlet and outlet, and an annular air chamber on the top of said water chamber and having a central duct communicating with said former duct and having air inlet and outlet, and spiral vanes between the sides of said air chamber and the hood to form spiral passages around such chamber.

1,013,487. PNEUMATIC SPRING FOR VEHICLES. LUCIEN R. GRUSS, Chico, Cal., assignor to The Pneumatic Cushion Company, Inc., Phoenix, Ariz., a Corporation of Arizona. Filed Aug. 24, 1910. Serial No. 578,741.



1. The combination in a vehicle, of the body and an axle thereof, an air cylinder supported on one of said parts and a piston connected to the other of said parts and working in the cylinder, an air compressor on the vehicle connected with the cylinder to maintain an air pressure therein and provide an air cushion for the piston, and means whereby the air pressure within the air cushion is automatically recharged during the running of the vehicle, said means including auxiliary air compressors within the cylinder operable by the piston independently of the engine.

2. The combination in a vehicle, of the body and an axle thereof, an air cylinder supported on one of said parts and a piston connected to the other of said parts and working in the cylinder, an air compressor on the vehicle connected with the cylinder to maintain an air pressure therein and provide an air cushion for the piston, and means whereby the air pressure within the air cushion is automatically recharged during the running of the vehicle, said means including air compressing plungers mounted in the cylinder and actuated by the reciprocation of the piston.

3. The combination in a vehicle, of the body and an axle thereof, an air cylinder supported on one of said parts and a piston connected to the other of said parts and working in the cylinder, an air compressor on the vehicle connected with the cylinder to maintain an air pressure therein and provide an air cushion for the piston, and an air reservoir and connections between said reservoir and the cylinder whereby an even pressure is maintained, and means for automatically recharging the air pressure as the latter is reduced by leakage, said means

including compressing plungers in the cylinder and actuated by the piston.

4. The combination in a vehicle, of the body and an axle thereof, an air cylinder supported on one of said parts and a piston connected to the other of said parts and working in the cylinder, an air compressor on the vehicle connected with the cylinder to maintain an air pressure therein and provide an air cushion for the piston, an air reservoir and connections between said reservoir and the cylinder whereby an even pressure is maintained, means for automatically recharging the air pressure as the latter is reduced by leakage, said means including compressing plungers in the cylinder and actuated by the piston, and a safety valve connected to said pressure reservoir and adapted to automatically relieve any excess of pressure.

5. The combination in a vehicle, of the body and an axle thereof, an air cylinder supported in one of said parts and a piston connected to the other of said parts and working in the cylinder, an air compressor on the vehicle connected with the cylinder to maintain an air pressure therein and provide an air cushion for the piston, an air reservoir and connections between said reservoir and the cylinder whereby an even pressure is maintained, means for automatically recharging the air pressure as the latter is reduced by leakage, said means including compressing plungers in the cylinder and actuated by the piston, a safety valve connected to said pressure reservoir and adapted to automatically relieve any excess of pressure, and an auxiliary pneumatic cushion adapted to come into operation after a pre-determined pressure has been reached in the pneumatic cushion.

[Claims 6 to 17 not printed in the Gazette.]

1,013,488. COMBINED ANGLE-BAR, NUT-LOCK, AND RAIL JOINT AND BRACE. LINDSEY HARVEY, Prentiss, Miss. Filed Apr. 10, 1911. Serial No. 620,212.

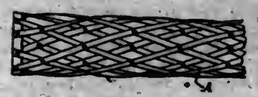
1. In a device of the kind described, a plate adapted to fit against the web of a rail, outwardly and downwardly extending braces carried by said plate, and a locking bar adapted to fit against said plate and upon the base of the rail and provided with extending flange portions adapted to rest beneath the lower ends of the braces.

2. A combined tie plate and nut lock, comprising a plate adapted to fit against a rail web and perforated to receive bolts, retaining bolts passing through said perforations, nuts upon said bolts, outwardly extending braces carried by the plate, and a locking bar fitting beneath and in engagement with said nuts and having its end portions secured under said braces.

3. The combination with the meeting end portions of railroad rails, of a flanged plate arranged upon the inner faces of the rails, a plate arranged upon the outer faces, said last mentioned plate having a boss midway its ends and having braces formed integral therewith adjacent its ends, bolts passing through said plates, nuts working upon said bolts and bearing against the second mentioned plate, and a bar resting beneath said nuts and upon the rail bases, said braces being provided with a curved flange extending beyond the brace proper, the end portions of said flange resting beneath the braces, the said bar forming a detachable flange for the second mentioned plate and also a lock for said nuts.

4. In a device of the kind described, a combination with a perforated plate, integral laterally extending braces projecting from the outer side of said plate, said plate having a boss formed thereon between said braces, and a bar adapted to bear against said plate, said bar having a flange of greater width than the body portion of the bar, the said bar resting beneath the boss and the flange extending beneath said braces, as and for the purpose set forth.

1,013,489. METHOD FOR MAKING SPIRAL LATTICED POLES OR THE LIKE. BRODERICK HASKELL, Franklin, Pa. Filed Dec. 1, 1909. Serial No. 530,753.



1. A method of forming latticed poles which comprises holding a series of bars in spaced relation, twisting an end of certain of said bars in one direction, and twisting an end of other of said bars in the opposite direction.

2. A method of forming latticed poles which comprises holding a series of bars in spaced relation, twisting an end of certain of said bars in one direction, twisting an end of other of said bars in the opposite direction, and securing said bars together at their points of crossing.

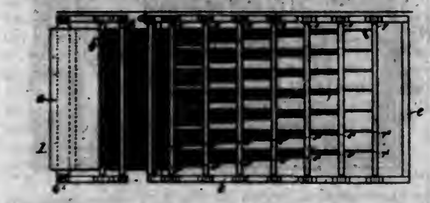
3. A method of forming latticed poles which comprises holding a series of bars in spaced relation, twisting an end of certain of said bars in one direction, twisting an end of other of said bars in the opposite direction, then rotating the structure as a whole about its longitudinal axis and securing the bars together at their crossing points.

4. A method of forming latticed poles which comprises yieldingly holding the ends of a series of bars in spaced relation, to permit the ends of the bars to approach each other, twisting an end of certain of said bars in one direction, and twisting an end of other of said bars in the opposite direction.

5. A method of forming latticed poles which comprises yieldingly holding the ends of a series of bars in spaced relation, to permit the ends of the bars to approach each other, twisting an end of certain of said bars in one direction, twisting an end of other of said bars in the opposite direction, and securing said bars together at their points of crossing.

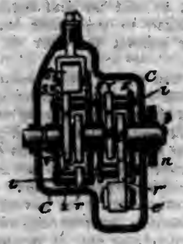
[Claim 6 not printed in the Gazette.]

1,013,490. SLITTING AND WINDING MECHANISM. PONTUS HELLBERG, London, England. Filed Mar. 17, 1911. Serial No. 615,097.



The combination, with a support for a roll of paper, and cutting mechanism for serving the paper longitudinally into a series of strips as it leaves the roll; of a series of pairs of guide rollers arranged one behind another in the same plane, the said strips being divided into similar groups and each group having strips corresponding in number to the number of pairs of guide rollers, one corresponding strip of each group being passed between all the pairs of guide rollers, two corresponding strips of each group being passed between all the pairs of guide rollers except the last pair of the series, and so forth, and all the strips being passed between the first pair of guide rollers, and a separate winding device arranged under each pair of guide rollers and operating to wind the corresponding strips of each group of strips which pass to it from the pair of guide rollers pertaining to it.

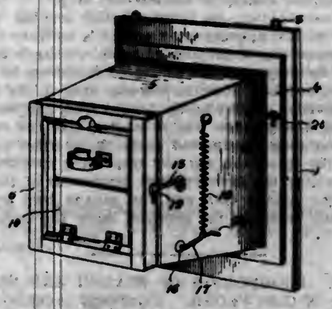
1,013,491. REVERSING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FRIEDRICH HENNINGER, Deutz, near Cologne, Germany. Filed Aug. 2, 1907. Serial No. 386,715.



1. The combination with an engine and a controlling valve therefor, of a valve actuating mechanism comprising a cam shaft, disk like supports having radial slots therein loosely mounted on said cam shaft, a roller mounted in said slots and adapted to be moved radially therein by the cam shaft, and means for shifting said supports about the cam shaft to bring the roller into and out of operative relation with the cam shaft and the valve.

2. The combination with an engine having inlet and exhaust valves, of actuating mechanism for said valves comprising a cam shaft, a revoluble frame or support loosely mounted on said cam shaft and provided with slots substantially radial to said cam shaft, rollers slidably mounted in said radial slots and coöperating with cams on said cam shaft, and means for adjusting the frame or support about the cam shaft to bring appropriate rollers into and out of coöperative relation with the respective valves and the actuating cams therefor; whereby the engine may be started, regulated, reversed or stopped according to the relation of the several rollers and the corresponding valves.

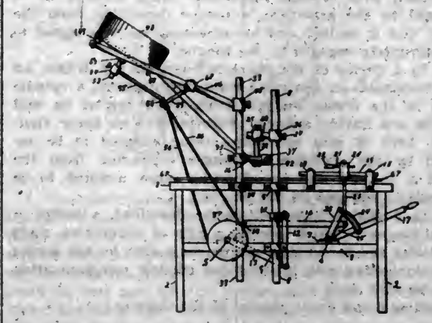
1,013,492. PHOTOGRAPHIC-PRINTING MACHINE. TOLIVER S. HIGGINBOTHAM and EZEKIEL H. HIGGINBOTHAM, Anson, Tex. Filed July 23, 1910. Serial No. 573,390.



1. A printing machine comprising a receptacle having an opening therein at its outer end, a negative support closing the inner end of the receptacle, a shutter located in the receptacle at the rear of the negative support, trunnions formed on the shutter and pivoted in the walls of the receptacle, one of the trunnions being formed to provide a crank portion, a spring having one end attached to the receptacle and having its opposite end attached to the crank portion of the trunnion to hold the shutter normally in a closed position, a slidable keeper normally disposed in the path of movement of the shutter, said keeper adapted to be engaged by the shutter in its path of movement whereby to hold the shutter open against the tension of the spring, and means for moving the keeper laterally relatively to the shutter so as to release the same.

2. A printing machine comprising a receptacle having an opening therein at its outer end, a negative support closing the inner end of the receptacle, a shutter located in the receptacle at the rear of the negative support, trunnions formed on the shutter and pivoted in the walls of the receptacle, one of the trunnions being formed to provide a crank portion, a spring having one end attached to the receptacle and having its opposite end attached to the crank portion of the trunnion to hold the shutter normally in a closed position, a slidable keeper normally disposed in the path of movement of the shutter, a lever secured to the side of the receptacle, the lower end of said lever being rigidly secured to said keeper, a spring interposed between said lever and the receptacle and normally holding said keeper in the path of movement of the shutter, and said lever being manually operable to withdraw said keeper from the path of movement of the shutter.

1,013,493. MACHINE FOR INSERTING CORKS IN BOTTLES. ELI HORN and ELMORE SHERMAN, Louisville, Ky. Filed June 24, 1911. Serial No. 635,092.



1. In a machine of the character described, a circular hopper, a disk therein, a stem attached to said disk and extending through the bottom of the hopper, connections from said stem to a moving part of the machine, exits near the lower edge of the hopper and a segmental guard above the exits.

2. In a machine of character described, a hopper mounted at an angle, a disk therein, means attached to the disk and extending through the bottom of the magazine for oscillating said disk, exist near the lower edge of the hopper, a guard above the exits, and a guide on each side of the exits.

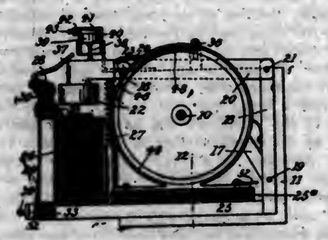
3. In a machine of character described, a hopper, a disk therein, means for oscillating said disk, exits from the hopper, a segmental guard above the exits, and a guide on each side of the exits leading to the space under the guard.

4. In a machine of character described, a stand, movable standards thereon, a plurality of plungers carried thereby, stationary standards, cork holding means carried thereby, a hopper supported by said stationary standards, a disk in the hopper, means for oscillating the disk, exits from the hopper, chutes leading from the exits to the cork holding means, and means for reciprocating the movable standards.

1,013,494. ELECTROMOTOR. BENJAMIN F. HUTCHES, Jr., Allendale, N. J. Filed May 19, 1910. Serial No. 562,128.

1. In a device of the character described, an electromagnet, an armature controlled thereby, a movable contact, an upper abutment and a lower abutment secured

thereto, both of said abutments being adapted to be engaged by the armature, and a fixed contact adapted to be engaged by the movable contact.



2. In a device of the character described, an electromagnet, a spring-influenced armature controlled thereby, an oscillative contact-spring, an upper abutment and a lower abutment secured thereto, both of said abutments being adapted to be engaged by the armature, and a fixed contact adapted to be engaged by the contact-spring.

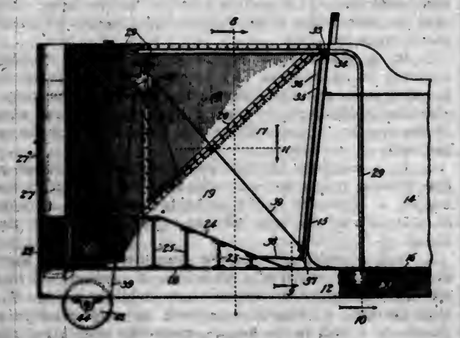
3. In a device of the character described, an electromagnet, an armature controlled thereby, a pivoted insulating block having a lower abutment and an upper abutment, both of said abutments being adapted to be engaged by the armature, a tongue depending from the block, and a contact and an adjusting screw adapted to be alternately engaged by the tongue.

4. In a device of the character described, a frame, an electromagnet, an armature controlled thereby, a spindle hung in the frame, an insulating block carried by said spindle and having a lower abutment and an upper abutment, both of said abutments being adapted to be engaged by the armature, a tongue depending from the block, a contact and an adjusting screw adapted to be alternately engaged by the tongue.

5. In a device of the character described, a barrel, a coiled spring inclosed therein, a pair of conductive rings encircling the barrel, and means controlled by the spring for establishing and interrupting electric communication between said rings.

[Claims 6 and 7 not printed in the Gazette.]

1,013,495. LOCOMOTIVE-TENDER. OSCAR JOHNSON, Chicago, Ill. Filed Apr. 1, 1911. Serial No. 618,274.



1. The combination with a bin, of means for moving the material in the bin toward its outlet-end, comprising a hingedly-supported depending plate in the bin, and an apron hinged to the lower end-portion of said plate and bearing against the floor of the bin, for the purpose set forth.

2. The combination with a bin, of means for moving the material in the bin toward its outlet-end, comprising a hingedly-supported depending plate in the bin, and an apron hinged to the lower end-portion of said plate and bearing against the floor of the bin and extending normally in angular relation to said plate for the purpose set forth.

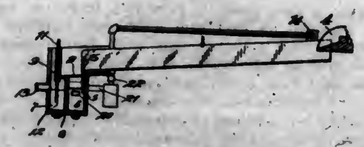
3. The combination with a bin, of means for moving the material in the bin toward its outlet-end, comprising a bar supported on the bin and extending transversely thereof, a plate hinged to said bar and depending in the bin, and an apron hinged to the lower end-portion of said plate and bearing against the floor of the bin, for the purpose set forth.

4. The combination with a bin, of means for moving the material in the bin toward its outlet-end, comprising a hingedly-supported depending plate in the bin, an apron hinged to the lower end-portion of said plate and bearing against the floor of the bin, and means for swinging said plate and apron toward the bin-outlet against the material in the bin, for the purpose set forth.

5. The combination with a bin having its floor formed with a section inclining downwardly and rearwardly toward the rear wall of the bin, of means for moving the material in the bin toward its outlet-end, comprising a movably-supported depending plate in the bin, and an apron hinged to the lower end-portion of said plate and bearing against the inclined floor-section of the bin, for the purpose set forth.

[Claims 6 to 19 not printed in the Gazette.]

1,013,496. AMALGAMATING SYSTEM. LEVI J. KENDRICK and JESSE G. TUNNICLIFFE, Berkeley, Cal. Filed Nov. 23, 1910. Serial No. 593,808.



1. In combination, an amalgamated plate, means for flowing pulp and liquid mercury thereover, a mercury trap below and in proximity to said plate, said trap having an overflow discharge conduit connected with the trap below the mercury level therein, said plate having a depending extension reversely inclined with respect to the flow of pulp and terminating in the mercury trap below the mercury level therein, and means for intercepting the gangue and water at the discharge end of the plate, and conducting the same past the mercury trap.

2. In combination, an amalgamator adapted to discharge a stream of pulp and mercury, a mercury trap at the discharge end of the amalgamator, a gangue trap beyond the mercury trap and separated therefrom by means having an overflow from the mercury trap to the gangue trap, a division plate slightly spaced from the discharge end of the amalgamator and extending over the mercury trap to the gangue trap, and above the overflow passage, between the traps, the mercury trap being provided with means limiting the mercury level below that of the overflow to the gangue trap and the gangue trap provided with means to deflect the material below the liquid level therein.

1,013,497. PRODUCTION OF STARCH AND GLUTEN FROM WHEAT-FLOUR. FRIEDRICH AUGUST VOLKMAR KLOPFER, Leubnitz, near Dresden, Germany. Filed Sept. 24, 1908. Serial No. 454,622.

1. The process for the production of starch and protein from wheat flour, which consists, first, in subjecting the wheat flour to the action of proteolytic ferments at ordinary temperatures for loosening the gluten cells of the wheat, and, secondly, in separating the large grain starch from the other components of the flour by centrifugal action in a closed separator.

2. The process for the production of large grain starch and protein from wheat flour, which consists in subjecting the wheat flour to the action of a proteolytic enzym and water at ordinary temperatures and then separating the large grain starch by centrifugal action.

1,013,498. PROCESS FOR THE REDUCTION OF ORES. WILLIAM KOEHLER, Cleveland, Ohio. Filed Sept. 7, 1907. Serial No. 391,833.

1. The process of treating ores which consists in subjecting them to the action of a halogen acid in the presence of a reducing agent and moisture.

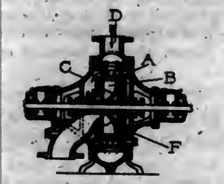
2. The process of treating ores which consists in subjecting them to the action of hydrochloric acid in the presence of a reducing agent and moisture.

3. The process of treating ores which consists in subjecting them to the action of a halogen acid gas in the presence of a reducing agent and moisture.

4. The process of treating ores which consists in subjecting them to the action of gaseous hydrochloric acid in the presence of a reducing agent and moisture.

5. The process of treating ores which consists in subjecting them to the action of a halogen acid in the presence of a reducing agent and moisture at a sufficient temperature to produce the liberation of the metalloids either in their elemental condition or as volatile compounds.

1,013,499. CONDENSER OR PUMP. ARTHUR KÜNZLI, Leipzig, Germany. Filed July 7, 1911. Serial No. 637,314.



1. A centrifugal condenser or vacuum pump, comprising a condenser or vacuum chamber, a casing of the centrifugal pump within said condenser or vacuum chamber, a second casing around the first so arranged as to leave space for the passage of the fluid for cooling same before it comes in contact with the water jet.

2. A centrifugal condenser or vacuum pump, comprising a condenser or vacuum chamber, a casing with centrifugal pump mounted within said condenser or vacuum chamber, a second casing around the first so arranged as to leave space for the passage of the fluid for cooling same by surface cooling and the water supplied by the pump before it comes in contact with the water jet.

3. A centrifugal condenser or vacuum pump, comprising a condenser or vacuum chamber, a casing with centrifugal pump and cooling surfaces outside mounted within said condenser or vacuum chamber, a second casing around the first so arranged as to leave space for the passage of the fluid for cooling same by surface cooling and the water supplied by the pump before it comes in contact with the water jet.

1,013,500. SCREW INSERTER AND REMOVER. JOSEPH LEE, Brooklyn, N. Y. Filed Dec. 10, 1910. Serial No. 596,616.

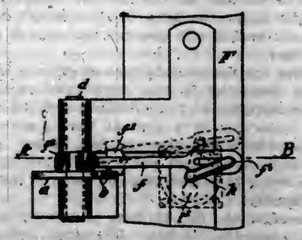
1. A screw inserter and remover comprising a tubular body portion, two bow springs integral with said body portion and extending from an end thereof and meeting at their free ends, and diverging flat nibs integral with said springs and extending from the free ends thereof and adapted to engage a screw slot, substantially as described.

2. A screw inserter and remover composed of metal tubing having an end flattened and slit along the edges of the flattened portion, and having the leaves thus formed spread near their inner ends into bow springs having longitudinal depressions therein, and at their outer ends spread to form nibs for engaging a screw slot, substantially as described.

3. A screw inserter and remover comprising a body portion of metal tubing, two bow springs extending from one end thereof and having longitudinal depressions therein, and diverging flat nibs extending from said springs, for engaging a screw slot, substantially as described.

4. A screw inserter and remover comprising a body portion of metal tubing, two bow springs having longitudinal depressions therein integral with said tubing and extending from one end thereof, and diverging flat nibs integral with said springs and extending outwardly for engaging a screw slot, substantially as described.

1,013,501. FASTENING DEVICE FOR CASEMENTS AND OTHER HINGED SHUTTERS. PAUL LEIST-WETTLER, Schönenwerd, Switzerland. Filed May 26, 1911. Serial No. 629,751.



1. The combination, with a shutter and a hinge supporting said shutter, of a fixed plate having recesses arranged in an arc of a circle centered at the axis of the hinge pin, a catch-lever provided with a dog, said lever being mounted on the hinge pin between the knuckle of the hinge and the plate, so that said knuckle presses said lever against said plate, and said lever having rocking movement in planes perpendicular to the plate, and means actuatable from the inside of the shutter for rocking said lever for engagement and disengagement of said dog.

2. The combination with a shutter and a hinge supporting said shutter of a fixed plate having recesses in an arc of a circle centered at the axis of the hinge pin, a catch-lever provided with a dog, said lever being rotatable about said axis and also having rocking movement enabling said dog to be moved into and out of engagement with said recesses, a rotatable pin traversing said shutter and having an arm which engages said catch-lever for the purpose of rocking same, said pin being screw-threaded at a part on the inside of the shutter, a nut on the screw-threaded part of said pin, and a cam plate slidable but not rotatable on said pin between said nut and the shutter, said nut and cam plate coacting so that on rotation of the nut in one direction the pin is rotated to move the catch-lever into engagement, and is at the same time drawn inward to clamp said lever by means of said arm, whereas on rotation of the nut in the other direction the pin rocks the lever out of engagement with the fixed plate.

3. In combination with a shutter, a hinge comprising a fixed plate, said fixed plate having recesses in the edge thereof, a pin fixed to said plate, a catch-lever, lugs provided on said catch-lever, said lugs adapted to engage in the recesses provided in the said fixed plate, said lever having an eye in one end thereof, the walls of said eye being angularly disposed, said eye adapted to loosely embrace the pin, an elongated eye in the opposite end of said catch-lever, an operating pin, said pin having a screw-threaded portion and a right-angled portion, the right-angled portion adapted to engage in the elongated eye provided in the catch-lever, and means fixed to the shutter for operating said hinge.

1,013,502. PROCESS FOR THE MANUFACTURE OF GLYCOLIC ACID. OTTO LIEBKNECHT, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Mar. 1, 1911. Serial No. 611,586.

1. A process for the manufacture of glycolic acid from oxalic acid, consisting in the electrolytic reduction of oxalic acid in solution in the cathode compartment of an electrolytic apparatus in the presence of electrodes having a cathodic overvoltage, while maintaining the quantity of oxalic acid in the solution at such a point that it is always present for reduction by the hydrogen developed at the cathode.

2. A process for the manufacture of glycolic acid from oxalic acid, consisting in the electrolytic reduction of oxalic acid in a solution of a suitable inorganic acid in the cathode compartment of an electrolytic apparatus in the presence of electrodes having a cathodic overvoltage, while maintaining the quantity of oxalic acid in the solution at such a point that it is always present for reduction by the hydrogen developed at the cathode.

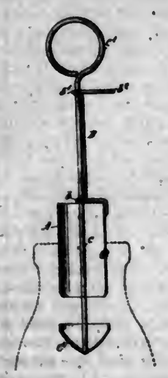
3. A process for the manufacture of glycolic acid from oxalic acid, consisting in the electrolytic reduction of oxalic acid in solution in the cathode compartment of an electrolytic apparatus by a current having a density of over approximately 250 amperes per square meter of cathode surface.

4. A process for the manufacture of glycolic acid from oxalic acid, consisting in the electrolytic reduction of oxalic acid in solution in the cathode compartment of an electrolytic apparatus by a current having a density of over approximately 250 amperes per square meter of cathode surface, the initial concentration of the oxalic acid solution being increased proportionally to the increase of current density.

5. A process for the manufacture of glycolic acid from oxalic acid, consisting in the electrolytic reduction of oxalic acid dissolved in a suitable dilute inorganic acid of less than 10% concentration in the cathode compartment of an electrolytic apparatus, by a current having a density of over approximately 250 amperes per square meter of cathode surface, the initial concentration of the oxalic acid solution being increased proportionally to the increase of current density.

[Claims 6 to 8 not printed in the Gazette.]

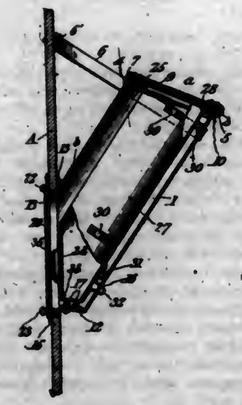
1,013,503. CREAM-DIPPER. LOTT MANSFIELD, Hingham, Mass., assignor, by mesne assignments, of one-half to Kate L. Mansfield, Hingham, Mass., and one-half to Winthrop N. Trowbridge, Brookline, Mass. Filed Nov. 3, 1910. Serial No. 590,437.



1. The herein described cream dipper comprising a cylindrical body portion open at its top and bottom and so that the contents thereof may be freely poured from the top thereof, said cylindrical body portion having an entirely unobstructed interior, so that it may be readily cleansed, a removable tapering or conical cupped bottom part tightly fitting the lower end of said cylindrical body portion but being separable therefrom, thus forming a valve which may be opened and closed, an operating rod to which said bottom part or valve is attached and which passes upward through said cylindrical body portion, and a rod-guiding device and handle mounted on said cylindrical body portion but being outside thereof, and serving to centrally hold said rod in the chamber of said body portion, and to serve as a handle for the dipper.

2. The herein described cream dipper comprising a cylindrical body portion open at its top and bottom and so that the contents thereof may be freely poured from the top thereof, said cylindrical body portion having an entirely unobstructed interior, so that it may be readily cleansed, a removable tapering or conical cupped bottom part tightly fitting the lower end of said cylindrical body portion but being separable therefrom, thus forming a valve which may be opened and closed, an operating rod to which said bottom part or valve is attached and which passes upward through said cylindrical body portion, and a rod-guiding device and handle mounted on said cylindrical body portion but being outside thereof, and serving to centrally hold said rod in the chamber of said body portion, and to serve as a handle for the dipper, said rod-guiding and centralizing device and handle consisting of the part B attached to said cylindrical body portion and having the eyes or parts b and b', through which the said rod freely passes, and the laterally extending handle part b^2.

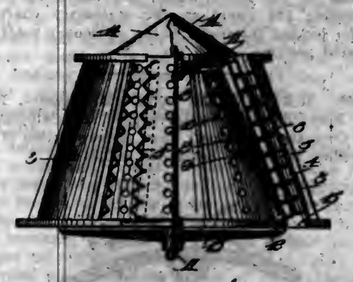
1,013,504. GARBAGE-CAN. JAMES J. MCNAMARA, Baltimore, Md. Filed Jan. 13, 1911. Serial No. 602,447.



1. In a device of the character described, the combination with an open ended container arranged to be obliquely secured, the lower end of which extends oblique to the axis of said container which has an inwardly directed supporting ledge and an outwardly directed securing flange at its lower end, of a supporting bracket secured near the upper end of the container, a lid hingedly connected to the upper end of said container, a lid to close the lower end of said container, and a garbage receptacle held within said container of a diameter less than said container having a stub bottom portion oblique to the axis of said receptacle arranged for co-action with said ledge, said receptacle being removable through the bottom of said container.

2. In a device of the character described, the combination with an open ended container arranged to be obliquely secured the lower end of which extends oblique to the axis of said container which has an inwardly directed supporting ledge and an outwardly directed securing flange at its lower end, of a supporting bracket secured near the upper end of the container, a lid hingedly connected to the upper end of said container, a lid to close the lower end of said container, a garbage receptacle held within said container of a diameter less than said container having a stub bottom portion oblique to the axis of said receptacle arranged for co-action with said ledge, said receptacle being removable through the bottom of said housing, and spacing members secured to said receptacle to hold said receptacle in spaced relation to said container.

1,013,505. HOP-CLUSTER STEMMER. GEORGE E. MILLER, Sacramento, Cal., assignor to E. Clemens Horst Company, San Francisco, Cal., a Corporation of New Jersey. Filed May 5, 1910. Serial No. 559,621.



1. A cluster-stemming machine comprising two coacting conodial drum members, one inside the other, and arranged with their axes vertical, and inclosing between them an annular space to receive the clusters, means for revolving the inner drum member, and oppositely disposed V-shaped pickers on the adjacent faces of the two drum members.

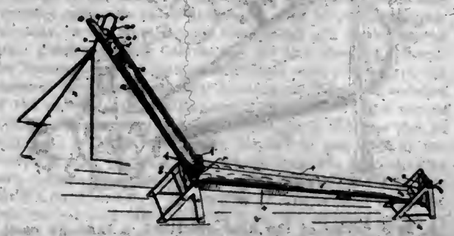
2. In a cluster-stemming machine, the combination of two vertically arranged drum members, one inside the other, each in the form of a truncated cone, and inclosing an annular cluster-stemming space between them, means for revolving one of the drums, and cluster-rending means in said annular cluster-stemming space, said last-named means including longitudinal series of inclined V-shaped pickers carried by the outer drum member, said pickers projecting into said annular space, and another longitudinal series of V-shaped pickers on the inner drum member projecting into said annular space.

3. In a cluster-stemming machine, the combination of two vertically arranged drum members, one inside the other, each in the form of a truncated cone, and inclosing an annular cluster-stemming space between them, means for revolving one of the drums, and cluster-rending means in said annular cluster-stemming space, said last-named means including longitudinal series of inclined V-shaped pickers carried by the outer drum member, said pickers projecting into said annular space, and another longitudinal series of V-shaped pickers on the inner drum member projecting into said annular space, the apexes of said outer and inner series of pickers pointed in opposite directions and arranged in planes parallel to tangent to the conoidal surfaces of the drums.

1,013,506. PEACH-BRUSHING APPARATUS. THOMAS J. MILLER and GEORGE ALLSUP, Biggs, Oreg. Filed Oct. 2, 1911. Serial No. 652,451.

1. An apparatus for the purpose mentioned comprising supporting means; a dust-removing tube made of open mesh flexible fabric; means for maintaining said tube longitudinally extended; a receiver, of substantially inflexible material, secured in the receiving end of said tube for holding said end open, said receiver made with a yielding interior surface for the purpose specified; means for holding the discharge-end of said tube open; and a trough made with an interior padding adapted for receiving the discharge end of said tube.

2. An apparatus for the purpose mentioned comprising adjustable supporting means; a dust-removing tube made of open mesh flexible fabric; means for maintaining said tube longitudinally extended; a receiver, of substantially inflexible material, secured in the receiving end of said tube for holding said end open, said receiver made with a yielding interior surface for the purpose specified; means for holding the discharge-end of said tube open; and a trough made with an interior padding adapted for receiving the discharge end of said tube.



3. An apparatus for the purpose mentioned comprising supporting means; a dust-removing tube made of flexible netting; means for maintaining said tube longitudinally extended; a receiver, of substantially inflexible material, secured in the receiving end of said tube for holding said end open, said receiver made with a yielding interior surface for the purpose specified; means for holding the discharge-end of said tube open; and a trough made with an interior padding adapted for receiving the discharge end of said tube.

4. An apparatus for the purpose mentioned comprising a dust-removing tube made of open mesh flexible fabric; means for maintaining said tube longitudinally extended; a receiver, of substantially inflexible material, secured in the receiving end of said tube for holding said end open, said receiver made with a yielding interior surface for the purpose specified; an adjustable stand and means for removably supporting the receiving end of said tube on such stand; means for holding the discharge-end of said tube open; a trough made with an interior padding adapted for receiving the discharge of said tube; means for supporting the discharge end of said tube over said trough; and a stand including means for supporting the outer end of said trough vertically adjustable.

5. An apparatus for the purpose mentioned comprising a dust-removing tube made of open mesh flexible fabric; means for maintaining said tube longitudinally extended; a receiver, of substantially inflexible material, secured in the receiving end of said tube for holding said end open, said receiver made with a yielding interior surface for the purpose specified; an adjustable stand and means for removably supporting the receiving end of said tube on such stand; means for holding the discharge-end of said tube open; a trough made with an interior padding adapted for receiving the discharge of said tube; means for supporting the discharge end of said tube over said trough; and a stand including a windlass element for supporting the outer end of said trough vertically adjustable.

[Claim 6 not printed in the Gazette.]

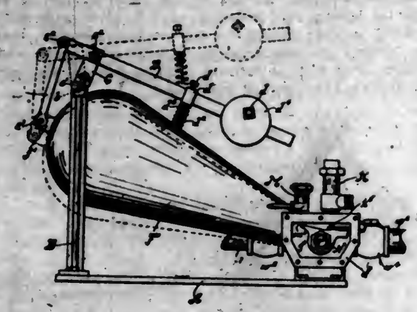
1,013,507. STEAM-TRAP. WILLIAM MOLL and THEODORE W. MOLL, Cleveland, Ohio. Filed Mar. 12, 1909. Serial No. 483,031.

1. In a device of the kind described, a steam inlet valve, a cam for controlling the same and having a finger, a bulge on said cam between the finger and the axis of the cam, and a pressure member extending between said cam and the valve adapted to be moved first by contact with said bulge and then by contact with said finger.

2. In a device of the kind described, a valve having a stem, a cam having a finger and a bulge intermediate the finger and the axis of the cam, a member extending between the cam and the stem, said member being pivotally mounted, and adapted to be moved by contact with the bulge and then by contact with the finger of the cam.

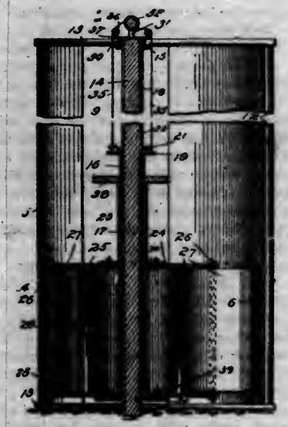
3. In a device of the kind described, a base, an oscillatory receiver, a yoke standard, a lever, a link connecting

said lever with said receiver, and an adjustable fulcrum for said lever upon said standard.



4. In a device of the kind described, a base, an oscillatory receiver, a yoke standard, a lever connected with said receiver, an adjustable weight upon said lever, and a coil spring interposed between said lever and said receiver, said spring being adjustable longitudinally of said lever.

1,013,508. SUBMERGED WATER-WHEEL. OSCAR L. MORGENSTERN, Philadelphia, Pa. Filed Aug. 26, 1911. Serial No. 646,098.



1. In an apparatus of the class described, a casing having inlet and outlet passages at opposite points thereof, a stationary shaft mounted eccentrically within said casing and having diametrically opposed guide grooves throughout the length thereof, a sleeve slidably fitted on the shaft and having keys slidably engaging in the grooves in the shaft to prevent rotation of the sleeve thereon, a water wheel journaled upon said sleeve and having hinged blades for opening and closing movements, and abutments on the water wheel engageable by the blades when in open position, and mechanism for raising and lowering the sleeve on the shaft.

2. In an apparatus of the class described, a vertically disposed casing having outwardly arched side walls, and hopper-shaped inlet and outlet passages at opposite points of the casing, said passages being coextensive with the casing, a stationary shaft mounted eccentrically within the casing, a non-rotatable sleeve slidably mounted upon the shaft, a rotatable hub supported upon the sleeve, a water wheel carried by the hub and having hinged blades adapted for opening and closing movements within the casing, a skeleton frame supporting said casing within a body of water, the said inlet passage being disposed to direct the water toward the outer edges of the blades of the water wheel, and mechanism for raising and lowering the sleeve on the stationary shaft.

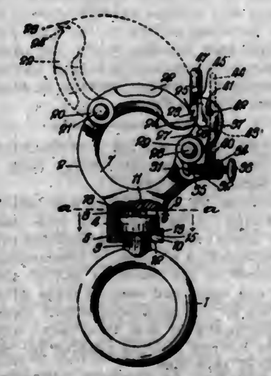
3. In an apparatus of the class described, a vertically disposed casing having outwardly arched side walls, and hopper-shaped inlet and outlet passages at opposite points of the casing, said passages being coextensive with the casing, a stationary shaft mounted eccentrically within the casing, a non-rotatable sleeve slidably mounted upon the shaft, a rotatable hub supported upon the sleeve, a water wheel carried by the hub and having hinged blades adapted for opening and closing movements within the casing, a skeleton frame supporting said casing within a body of water, the said inlet passage being disposed to direct the water toward the outer edges of the blades of the water wheel, mechanism for raising and lowering the sleeve on the stationary shaft, and means for locking the sleeve to the stationary shaft when in adjusted position.

1,013,509. ICE-CRUSHER. JOHN M. NELSON, Davenport, Iowa, assignor to Davenport Ice Chipping Machine Company, Davenport, Iowa, a Corporation of Iowa. Filed Mar. 15, 1909. Serial No. 483,516.

1. An ice-breaker comprising a plate, and a rib arising at right-angles therefrom having a vertical cutting edge, and having a portion projecting beyond the vertical plane of said cutting-edge that is provided with a horizontal cutting-edge at substantially right angles to first-mentioned cutting-edge.

2. An ice-breaking machcine comprising a suitable casing, a rotatable drum mounted within the same, and a plurality of ice-breakers carried by said drum each consisting of a plate secured to said drum, and a rib arising therefrom having a vertical cutting-edge that is radial from said drum and having a portion projecting beyond the vertical plane of said cutting-edge that is provided with a horizontal cutting-edge disposed in a plane parallel to the plane of the axis of said drum.

1,013,510. AUTOMATIC RELEASING-GEAR. DANIEL D. O'CONNELL, New York, N. Y. Filed July 13, 1910. Serial No. 571,706.



1. A releasing gear of the character described, comprising a ring adapted to be fastened to a line or cable and

having a neck formed on the outer peripheral edge thereof, and provided with a head of larger diameter than the neck so as to form a shoulder; a casing having an annular wall and a substantially rectangular opening formed therein; a cap formed upon one end of the annular wall to provide a chamber within the casing and having an opening communicating with the rectangular opening, said openings being of a size to receive the neck and head of the ring; oppositely arranged apertures formed in the annular wall; a pin guided through one of the apertures and directed over the upper surface of said head and through the second aperture; a substantially semi-circular body provided upon the casing opposite to said cap; a curved retaining arm hinged to one end of said body and having a plurality of fingers disposed oppositely to the curvature of the arm; a curved locking arm hinged to the opposite end of the body and provided with a plurality of catches disposed in an opposite direction to said fingers whereby the catches and fingers may lock in hook-like engagement; and means adapted to automatically release the curved retaining arm from the curved locking arm.

2. A releasing gear of the character described, comprising a ring and a semi-circular body; means for detachably connecting the ring and said semi-circular body so as to revolve in relative relation; two lugs carrying a pintle formed upon one end of the semi-circular body; a curved retaining arm having one end thereof pivotally held upon the pintle between said lugs; a plurality of fingers formed upon the opposite end of the retaining arm and disposed in an opposite direction to the curvature of said retaining arm; two lugs carrying a bolt formed upon the opposite end of the semi-circular body; a locking arm pivotally held upon the bolt between said lugs; a plurality of catches formed upon the locking arm and disposed in an opposite direction to the fingers of the retaining arm whereby the catches and fingers may lock in hook-like engagement; a weight formed upon the free end of the locking arm to unlock the locking arm and retaining arm from locked engagement.

3. In a releasing gear the combination of a semi-circular body; a retaining arm pivotally held to one end of the semi-circular body and having curved fingers formed upon the opposite end thereof; a locking arm pivotally held to the opposite end of the semi-circular body and also having curved fingers formed upon the opposite end thereof, said curved fingers being disposed so as to grip the curved fingers of the retaining arm in hook-like engagement; a lug formed upon the hinged end of the locking arm; a rod pivotally held to the lug; a spring encircling said rod and normally serving to force the catches of the locking arm and fingers of the retaining arm out of locked engagement; a knob formed upon the free end of said rod to manually move the rod for unlocking the locking arm from the retaining arm; and means formed upon the semi-circular body by which the gear may be connected to a block and tackle or a boat.

4. In a releasing gear the combination of a semi-circular body having two lugs formed upon one end thereof and carrying a pintle therethrough; a curved latch having one end pivotally held upon the pintle between said lugs; a plurality of fingers formed upon the opposite end of the latch and disposed in an opposite direction to the curvature of said latch; two lugs formed upon the opposite end of the semi-circular body and carrying a bolt therethrough; a curved locking arm having one end pivotally held upon the bolt between said lugs; a plurality of catches formed upon the opposite end of the curved locking arm and disposed in an opposite direction to the fingers of the latch so as to grip said fingers in a hook-like manner; a transverse groove formed in one edge of the curved locking arm; a curved casing hinged upon the semi-circular body adjacent to the hinged end of the curved locking arm and having a plurality of openings for passage therethrough of a pin to engage the transverse groove of the curved locking member; and means formed upon the semi-circular body by which the gear may be connected to a tackle.

5. In a releasing gear the combination of a semi-circular body; a curved latch having one end pivoted to one end of the semi-circular body; a plurality of fingers formed upon the opposite end of the latch and disposed in an opposite direction to the curvature of said latch; a curved arm having one end pivoted to the opposite end of the semi-circular body; a plurality of catches formed upon the opposite end of the curved arm and disposed in an opposite direction to the fingers of the curved latch; a recessed boss provided upon the outer peripheral edge of the semi-circular body; a lug formed upon the hinged end of the curved arm; a rod pivotally held to the lug and directed through the recessed boss; a spring encircling said rod within the recessed boss and normally tending to force the catches of the curved arm and fingers of the curved latch out of locking engagement; a knob formed upon the free end of said rod; a transverse groove formed in one edge of the curved arm; a curved casing hinged upon the semi-circular body adjacent to the pivoted end of the curved arm and having an opening; a pin having an eye formed upon one end thereof and removably held in the opening so as to engage the transverse groove in the curved arm; a slot formed in the upper free end of the curved casing; a stud having one end connected upon the free end of the curved arm and provided with a weighted ring to automatically unlock the curved latch from the curved arm when the force of the pull upon said curved latch is slackened; and means formed upon the semi-circular body by which the gear may be connected to a line or cable.

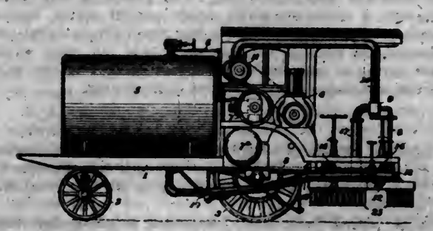
[Claim 6 not printed in the Gazette.]

1,013,511. PROCESS OF PRODUCING PURE ZINC SULFID AND THIOSULFATES. PIERRE PIPEREAUT and ANTONY VILA, Paris, France. Filed Sept. 15, 1908. Serial No. 453,179.

1. The process for treating zinc sulfid ore to recover zinc sulfid in a granular form, which consists in lixiviating the ore with caustic alkali solution thereby forming alkali zincate, heating to boiling, adding sufficient free sulfur to precipitate the metals other than zinc, in the form of sulfids, and separating the same from the solution prior to the precipitation of the zinc sulfid and then adding, in small amounts, sufficient free sulfur to precipitate the zinc present, while keeping the liquid hot.

2. The process for treating zinc sulfid ore to recover zinc sulfid in a granular form, which consists in lixiviating the ore with caustic alkali solution thereby forming alkali zincate, heating to boiling, adding sufficient free sulfur to precipitate the metals other than zinc, in the form of sulfids, separating the same from the solution prior to the precipitation of the zinc sulfid and then adding, in small amounts, sufficient free sulfur to precipitate the zinc present, while keeping the liquid hot, and filtering to remove the zinc sulfid.

1,013,512. ROAD-MAKING MACHINE. MICHAEL A. POPKESS, Kansas City, Mo. Filed Jan. 31, 1910. Serial No. 540,993.



1. A machine for the purpose described, comprising a header adapted to be moved along in contact with the surface, a plurality of hollow teeth depending below said header and means to eject a liquid binder from the rear side of said teeth.

2. A machine for the purpose described, comprising

a header adapted to be moved along in contact with the surface, a plurality of hollow teeth depending below said header and means to inject a flame into the earth from the rear side of certain of said teeth and means to inject a binder into the earth from the rear side of the other teeth.

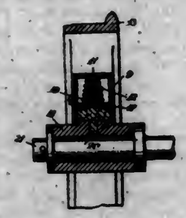
3. A machine for the purpose described, comprising a hollow header provided with means whereby it may be moved along in contact with the surface, a plurality of staggered rows of hollow teeth depending from and communicating with the interior of said header, said teeth being wedge-shaped in front and provided with openings in the rear, and means to force a liquid binder into said header and teeth.

4. A machine for the purpose described, comprising a hollow header provided with means whereby it may be moved along in contact with the surface, a plurality of staggered rows of hollow teeth depending from and communicating with the interior of said header, the latter comprising two compartments, one in front of the other, certain of said rows of teeth opening into one of said compartments and other of said rows into the other compartment, means to supply a combustible mixture into the front one of said compartments, and means to supply a liquid binder into the other of said compartments.

5. In a machine of the class described, a harrow-tooth for injecting a binder below the surface, the same being substantially U-shaped in cross-section, a closing-plate mounted between the side walls of said tooth and means to secure said plate to the tooth, openings being provided between said plate and said side walls for the passage of the binder.

[Claims 6 to 9 not printed in the Gazette.]

1,013,513. CAR-WHEEL. CARL B. PRITCHARD, Everson, and GEORGE T. POTTER, Connellsville, Pa., assignors of one-third to Oscar L. Marquet, Wellsburg, W. Va. Filed Mar. 10, 1911. Serial No. 613,604.



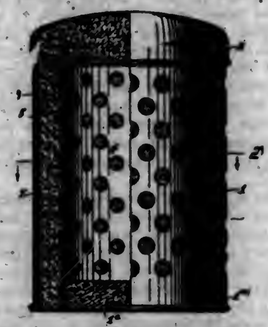
A car wheel having a box upon and integral with the hub of said wheel and having a passage in open communication with said box and bearing opening of said hub, said box having a full side lateral opening; a cover for said lateral opening; a loose removable plunger adapted for insertion within said box to be guided by the walls thereof; a loose removable frusto-conical spiral spring adapted to be compressed to a flat plane, the convolutions whereof are adapted to pass one within the other when said spring is compressed; and seating devices for said spring mounted on said box and said plunger.

1,013,514. POISON-RECEPTACLE. FRANK P. RAND, Spokane, Wash., assignor of one-half to Charles F. Penn, Spokane, Wash. Filed July 8, 1911. Serial No. 636,687.

1. A poison receptacle, comprising a perforated container provided with an imperforate bottom and cover, a lining of absorbent material forming a fluid receptacle, and a perforated open ended metallic lining therein.

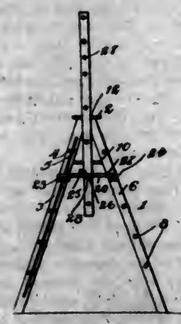
2. A poison receptacle, comprising a perforated cylindrical container, a removable cover, a lining of absorbent material forming a fluid receptacle, a perforated split cylinder, and a locking member for removably retaining said split cylinder within said receptacle.

3. A poison receptacle, comprising a perforated cylindrical container provided with an imperforate bottom and a removable cover, a lining of poison impregnated material forming a fluid receptacle, an open ended perforated lining within said receptacle and having overlapping free vertical edges, and a vertical locking strip mounted in said receptacle and interposed between the walls of said perforated lining whereby the latter is retained in position.



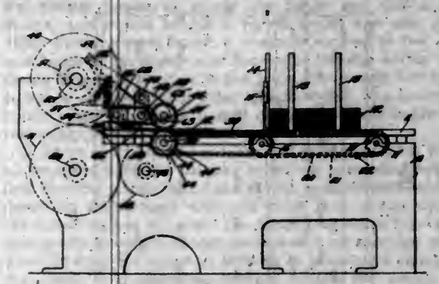
4. A poison receptacle, comprising a perforated cylindrical container having an imperforate bottom and cover, a layer of fly paper within the perforated cylindrical portion of said container, a wall of absorbent material covering said fly paper and arranged above and below said bottom and cover forming a liquid receptacle, a perforated metallic strip bent into cylindrical form within said receptacle and forming a retaining lining for said absorbent material, and a vertical locking strip mounted within and extending between the walls of said cylindrical lining and the bottom and cover portions of said container.

1,013,515. COMBINATION-LADDER. HOMER C. REED, Greenfield, Ohio, assignor of one-half to F. D. Patterson and Clay Gordon, Greenfield, Ohio. Filed Oct. 4, 1910. Serial No. 585,321.



In a device for the purpose set forth, a step ladder comprising a pair of pivoted sections and having a top therefor, an extension member for one of the sections, a platform having catches connected with the rounds of each of the sections, said platform comprising a pair of side members having catches, a transverse member connected with the side members, a hook pivotally connected with the transverse member, the top of the ladder being provided with an opening, a straight ladder adapted to be inserted within the said opening, and the rounds of the straight ladder adapted to be engaged by the hook of the platform.

1,013,516. ROTARY CARDBOARD AND PAPER PRINTING PRESS. CLARK REYNOLDS, Boston, Mass., assignor of one-fourth to Amos J. Dawley, Wyoming, R. I. Filed Nov. 4, 1910. Serial No. 590,609.



1. In a rotary printing press, a rotary type cylinder, a rotary impression cylinder coöperating therewith, feed rings on said type cylinder, guides carried by one of said cylinders projecting at an angle to the periphery of the cylinder in a backward direction from the direction of rotation of the cylinder on which they are mounted, means for feeding a sheet into engagement with said guides, said feeding means being regulated to feed the sheet at a greater rate of speed than the speed of the guides and feeding and holding the sheet in such running engagement with the guides until the sheet is gripped by the coöperating feed rings and impression cylinder which carry the sheet away from the said first feed mechanism, the rotation of the cylinder on which the guides are mounted carrying the guides out of engagement with the sheet while the sheet continues to be gripped and fed by the feed rings and impression cylinder.

2. In a rotary printing press, a rotary type cylinder, a rotary impression cylinder of the same diameter as the type cylinder and coöperating therewith, feed rings on said type cylinder, guides carried by one of said cylinders projecting at an angle to the periphery of the cylinder in a backward direction from the direction of rotation of the cylinder on which they are mounted, means for feeding a sheet into engagement with said guides, said feeding means being regulated to feed the sheet at a greater rate of speed than the speed of the guides and feeding and holding the sheet in such running engagement with the guides until the sheet is gripped by the coöperating feed rings and impression cylinder which carry the sheet away from the said first feed mechanism, the rotation of the cylinder on which the guides are mounted carrying the guides out of engagement with the sheet while the sheet continues to be gripped and fed by the feed rings and impression cylinder.

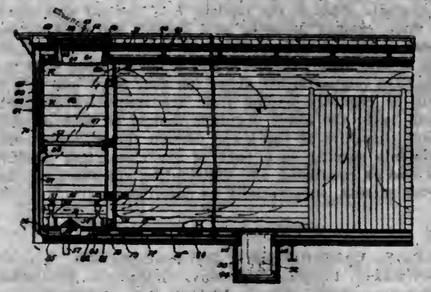
3. In a rotary printing press, a rotary type cylinder, a rotary impression cylinder coöperating with the said type cylinder, a guide carried by one of said cylinders for registering the sheet to be printed with the type plate on the type cylinder, feed mechanism which feeds the sheet into engagement with said guide and into feeding engagement with said cylinders, a stop located above the path of the sheet to said guide with a clearance space for the travel of the sheet beneath the stop, means for causing the advance end of the sheet to rise into engagement with said stop and means controlled by the rotation of one of said cylinders to depress the sheet out of engagement with said stop.

4. In a rotary printing press, a rotary type cylinder, a rotary impression cylinder coöperating with the said type cylinder, a guide carried by one of said cylinders for registering the sheet to be printed with the type plate on the type cylinder, feed mechanism which feeds the sheet into engagement with said guide and into feeding engagement with said cylinders, a stop located above the path of the sheet to said guide with a clearance space for the travel of the sheet beneath the stop, means for causing the advance end of the sheet to rise into engagement with said stop and means controlled by the rotation of one of said cylinders to depress the sheet out of engagement with said stop, the means for controlling the release of the stop and the actuating of the feed being so timed with relation to each other that the sheet will be released from the stop before said feed mechanism begins to feed the sheet.

5. In a rotary printing press, a rotary type cylinder, a rotary impression cylinder coöperating with the said type cylinder, a guide carried by one of said cylinders for registering the sheet to be printed with the type plate on the type cylinder, feed mechanism which feeds the sheet to be printed, a stop located just over the path of the sheet to said cylinders with a clearance space for the travel of the sheet under the stop, means for turning up the advance end of the sheet to engage with said stop and means controlled by the rotation of one of said cylinders to depress the advance end of the sheet out of engagement with said stop.

[Claims 6 to 13 not printed in the Gazette.]

1,013,517. COMBINATION REFRIGERATOR, HEATER, AND VENTILATOR CAR. GEORGE B. ROBBINS and WILLIAM E. SHARP, Chicago, Ill. Filed July 31, 1909. Serial No. 510,570.



1. A refrigerator car having the usual ice bunker or refrigerant compartment across the end thereof, said compartment having at its upper and lower portions respectively openings communicating with the load space, a heater located below the body of the car, a casing inclosing the heater and constituting a heater chamber, a conduit located below the level of the ice compartment leading from said heater chamber and communicating with said ice compartment between the openings thereof, and a return conduit located below the floor of the car and communicating with said compartment near the floor level and below the said openings and with the lower portion of the heater chamber, whereby a refrigerating medium may be circulated through the ice compartment and load space, or a heating agent may be generated and circulated through said heater chamber, conduits, compartment and load space, substantially as described.

2. A car having insulated walls and the usual ice bunkers or refrigerant compartments across the ends thereof, said compartments having openings in the bulk heads or partition walls thereof above and below the ice space and communicating with the load space, a heater located below the body of the car and adapted to burn alcohol, a casing inclosing the heater and constituting a substantially-closed heater chamber, a conduit leading from the heater chamber to one of said compartments and communicating therewith between the openings thereof which lead into the load space, and a return conduit leading from said compartment below the lower opening

thereof back to the lower portion of the heater chamber, whereby a refrigerating current may be circulated through the ice compartments and the load space, and a closed heating circuit is provided through the heater chamber, conduits, one of the compartments, and the load space, substantially as described.

3. A convertible car adapted for use either as a refrigerator car or a heated car, comprising in its construction the combination of a car-body with insulated walls, and an ice bunker or refrigerant compartment in each end of the car-body having ice supports and openings in the upper and lower portions of the bulk head or partition wall thereof communicating with the load space, a heater chamber beneath the car body, a heater in said chamber, ducts or conduits leading from the heater chamber below the floor of the car and communicating with each of said compartments between the openings thereof, and return ducts or conduits leading from said compartments below the lower openings thereof to the lower portion of the heater chamber, whereby a current of cold air may be caused to circulate through the compartments and load space when the car is used as a refrigerator, and a heating current composed of the products of combustion and the air withdrawn from the car may be caused to circulate through the heater chamber, conduits, compartments and load space when the car is used as a heated car, substantially as described.

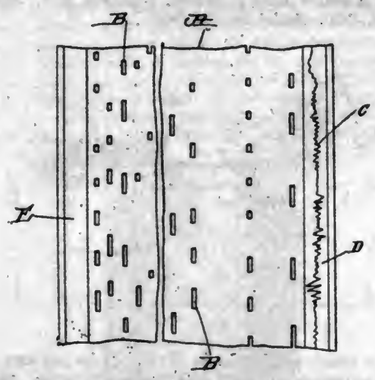
4. A car having a compartment extending across each end thereof, the bulk-heads or partitions of said compartments having upper and lower openings communicating with the load space, heaters located respectively on opposite sides of the midlength of the car and below the floor, casings inclosing said heaters and constituting heater chambers, supply ducts or conduits leading from each of said heater chambers and communicating with the respective compartments above the floor level, and return ducts or conduits leading from the respective compartments below the lower openings thereof to each of said heater chambers at the lower portion thereof, said compartments serving as a part of the circulating conduit and also as equalizing and distributing chambers for the heated current, substantially as described.

1,013,518. CAGE-RING FOR BALL-BEARINGS. AUGUST SCHILLING, Bielefeld, Germany, assignor to Bielefelder Maschinenfabrik vormals Dürkopp & Co., Bielefeld, Germany. Filed Aug. 1, 1911. Serial No. 641,732.

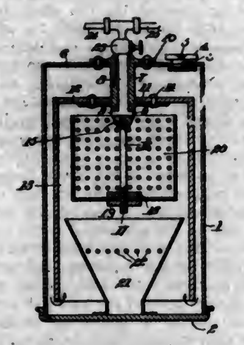
A one sided cage ring for ball bearings comprising a circular member having a plurality of ball receiving cavities, and fixed axially disposed partitions between said cavities, said partitions having their outer and inner portions respectively of different elevation, the elevated portions overhanging the depressed portions and forming laterally opening undercut recesses, and an elastic ring inserted in said recesses by distortion from its normal position.

1,013,519. MUSICAL RECORD. JOHN C. SHERMAN, Brookline, Mass. Filed Jan. 18, 1909. Serial No. 473,017.

A mechanical musical record having on one portion thereof a record comprising note holes at varying spaces and of varying lengths to produce predetermined variations in tempo when the record is run at constant speed, and on another portion thereof a phonographic record, said records being so arranged with relation to each other that the music produced by the operation of the mechanical player and that produced by the phonograph will be in proper musical relation the one to the other.



1,013,520. ACETYLENE-GAS GENERATOR. JAMES W. SILVER, Salt Lake City, Utah. Filed Feb. 21, 1910. Serial No. 545,156.



1. In an acetylene generator, a casing provided with a removable bottom and a water inlet, a nozzle depending within the casing and provided with oppositely disposed inlets and a socket and a valved outlet, a reservoir secured to the nozzle and suspended thereby within the casing in spaced relation to the latter, a rod removably fitted in the socket of the nozzle, and a carbid holder secured upon said rod.

2. In an acetylene generator, a casing provided with a removable bottom and a water inlet, a nozzle depending within the casing and provided with oppositely disposed inlets and a socket and a valved outlet, a reservoir secured to the nozzle and suspended thereby within the casing in spaced relation to the latter, a rod removably fitted in the socket of the nozzle, a carbid holder secured upon said rod, and a receiver disposed upon the bottom of the casing and projecting upwardly into the reservoir.

3. In an acetylene generator, a casing provided with a removable bottom and a water inlet, a nozzle depending within the casing and provided with oppositely disposed inlets and a socket and a valved outlet, a reservoir secured to the nozzle and suspended thereby within the casing in spaced relation to the latter, a rod removably fitted in the socket of the nozzle, a carbid holder secured upon said rod, and a conical shaped receiver disposed upon the bottom of the casing and projecting into the reservoir to receive the slaked carbid from the carbid holder, said receiver having apertures to permit of the escape of water therefrom.

4. In an acetylene gas generator, a casing provided with an inlet and a central opening in its top, a nozzle fitted in said opening in the top of the casing and provided with a flange for engagement with the outer face of the top of the casing, means to secure the flange and casing together, said nozzle having a valved outlet and also provided with a second flange, a reservoir secured to the second flange of the nozzle and suspended thereby within the casing in spaced relation to the latter, the nozzle having a socket, a rod removably fitted in said socket, and a carbid holder removably fitted to said rod whereby the holder is removably suspended within the reservoir.

5. In an acetylene gas generator, a casing provided with an inlet and a central opening in its top, a nozzle fitted in said opening in the top of the casing and provided with a flange for engagement with the outer face of the top of the casing, means to secure the flange and casing together, said nozzle having a valved outlet and also provided with a second flange, a reservoir secured to the second flange of the nozzle and suspended thereby within the casing in spaced relation to the latter, the nozzle having a socket, a rod removably fitted in said socket, a carbid holder removably fitted to said rod whereby the holder is removably suspended within the reservoir, and a receiver constructed and arranged to receive the slaked carbid falling from the carbid holder.

1,013,521. NUT-LOCK. LUTHER L. SWENSON, Ottumwa, Iowa. Filed Feb. 13, 1911. Serial No. 608,300.

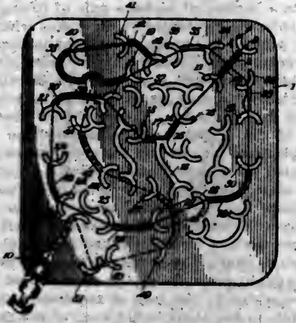
The combination with a threaded bolt and a nut engaged thereon, of a polygonal-shaped split locking nut of spiral form, the opposed end portions of said nut being normally disposed in different planes, the opposed faces of said separated end portions of the nut being radially disposed with respect to the bolt, said nut having interior screw threads for engagement with the threads of said bolt, the threads of said locking nut at one of the separated ends thereof engaging threads on the bolt adjacent to those engaged by the other end of the locking nut, said locking nut being adapted to be threaded upon the bolt into binding engagement with the face of the bolt nut, the binding action upon one of the separated ends of the locking nut tending to force said separated ends of the locking nut into alinement and binding the threads of said locking nut at their opposed end portions upon the bolt threads, substantially as and for the purpose specified.

1,013,522. STEEPLECHASE-PUZZLE. HENRY VAN HOEVENBERG, Lake Placid, N. Y. Filed Apr. 19, 1911. Serial No. 622,106.

1. In a puzzle, the combination with an apertured plate, of a detachable member adapted to be passed along said plate by inserting a portion thereof through the apertures in said plate, and manipulating said member from point to point, said member having a plurality of enlargements of different sizes, and said plate having a plurality of its apertures of different sizes to correspond with the size of said enlargements on said member.

2. In a puzzle, the combination with a plate, having a plurality of slots connected to other slots, and a member, having a plurality of enlargements adapted to be inserted in said last-mentioned slots, said enlargements corresponding in form to said last-mentioned slots, and some of said last-mentioned slots being of different magnitude from others of said last-mentioned slots, and said enlargements being of different magnitudes, to correspond to said last-mentioned slots.

3. In a puzzle, the combination with an apertured plate, of a horseshoe-shaped member adapted to be passed through the apertures in said plate along a predetermined path, said member having ends spaced apart to form a gap, with enlargements formed on said ends, said enlargements conforming in contour to some of the apertures in said plate.

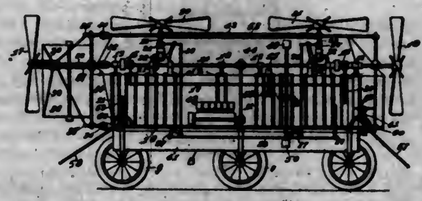


4. In a puzzle, the combination with an apertured plate, of a horseshoe-shaped member adapted to be passed through the apertures in said plate along a predetermined path, said member having ends spaced apart to form a gap, with enlargements formed on said ends, said enlargements conforming in contour to some of the apertures in said plate, some of said apertures being of different magnitudes, and said enlargements being of different magnitudes to correspond to the magnitudes of said apertures.

5. In a puzzle, the combination with a plate having a plurality of slots therein, said slots being spaced apart from each other and terminating in other slots, and a member adapted to be inserted through said slots and having enlargements thereon corresponding in form to said second-mentioned slots, said member being adapted to traverse said slots and bridge the break between opposed pairs of second-mentioned slots.

[Claims 6 to 12 not printed in the Gazette.]

1,013,523. AIRSHIP. FRANK G. VOHS, St. Louis, Mo. Filed Jan. 3, 1911. Serial No. 600,586.



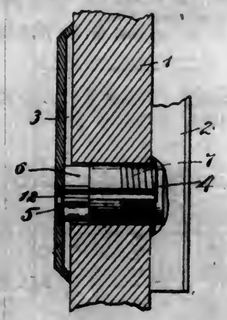
1. An air-ship comprising a body, compartments located in the same, wheels supporting the body, a frame work mounted on the body, a shaft supported in the frame work and operated by a motor, a propeller located on the front end of the shaft and in advance of the frame work, a rudder located at the rear of the frame work, a propeller located at the rear of the rudder and connected to the shaft by a knuckle joint, a pair of horizontal propellers located above the frame work, means for placing the propellers in and out of operation, a horizontal plane located on the frame work beneath the horizontal propellers, a pair of tilting planes supported to the frame work and means for operating the same, a pair of elevating planes located in advance and at the rear of the body and means for operating the same, substantially as specified.

2. An air ship comprising a plurality of wheels, a body composed of compartments mounted on the axles thereof, a frame work mounted on the body, a pair of hingedly mounted planes located on each side of the frame work,

a horizontal plane mounted above the frame work, a shaft journaled in the frame work, a motor on the body for operating said shaft, a propeller mounted on the shaft and in advance of the frame work, a rudder located in the rear of said frame work, a propeller located in the rear of the rudder, means whereby the rudder and the propeller can be swung in a horizontal plane, a pair of lifting propellers mounted above the horizontal plane, means whereby either one of the propellers may be put out of action independently, elevating planes located at the front and rear of the body and means for operating the elevating planes and the hingedly mounted planes, substantially as specified.

3. An air ship comprising a plurality of wheels, a body composed of two compartments mounted on the axles thereof, a platform mounted on the compartments, a frame work mounted on said platform, hingedly mounted planes located on each side of the frame work, a horizontal plane mounted above the frame work, balancing tips located on the side edges of the horizontal plane, a shaft journaled in the frame work, a motor mounted on the platform for operating said shaft, the vertical propeller mounted on the shaft and in advance of the frame work, a rudder hingedly connected to the rear of the frame work, a propeller located on the shaft in the rear of the frame work, the universal joint located on said shaft and in alinement with the pivots of the hinged connection, means whereby the rudder and the propeller can be swung in a horizontal plane, a pair of horizontal lifting propellers mounted above the horizontal plane, elevating planes attached to the front and rear of the platform, means for placing the propellers in and out of action independent of each other, and means for operating the elevating planes, the hingedly mounted planes, and the balancing tips, substantially as specified.

1,013,524. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 25, 1911. Serial No. 651,070.



1. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case.

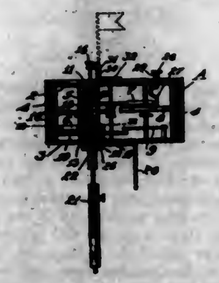
2. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, the outer end of said key plug projecting beyond the outer end of the outer section.

3. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, in combination with a lock case secured to the inner section of said cylinder lock.

4. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, a roll-back carried by the inner section, a key plug carried by the outer section, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation at the outer end of said cylinder lock, and an external thread on the inner section for securing the same to a lock case, in combination with a lock case secured to the inner section of said cylinder lock, and an escutcheon plate arranged to cover all of the outer end of said cylinder lock excepting the outer end of said plug.

5. In a cylinder lock, two sections connected together for longitudinal adjustment relatively to each other, an operating device carried by the inner section, a rotatable key plug carried by the outer section and adjustably connected with said operating device, an adjusting device operatively connected with both sections, said adjusting device being accessible for operation from the outer end of the cylinder lock whereby said two sections may be adjusted relatively to each other.

1,013,525. TIMING ATTACHMENT FOR CAMERA-SHUTTERS. EDGAR D. WATSON, San Francisco, Cal., assignor of one-half to Sydney Watson, San Francisco, Cal. Filed Oct. 21, 1909. Serial No. 523,752.



1. In a time releasing device, the combination of a rotatable member, a presser member turnable and longitudinally reciprocable, clock mechanism for rotating the first-named member, and means normally restraining and periodically permitting the presser member to move relatively to the rotatable member at the expiration of a predetermined period.

2. In a time releasing device, the combination of a rotatable member, a normally retracted presser member rotatable with the first-named member, and having an independent longitudinal movement, and a stop plate through which the presser member operates, said stop plate and presser member having a co-acting notch and lug-holding the presser member under retraction at one period and releasing it when the rotatable member is operated to bring said lug and notch into register.

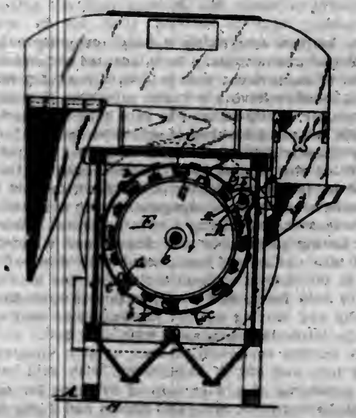
3. The combination with a rotatable barrel member, of a clock mechanism for turning the same, a presser member housed in the barrel, said presser member having means for holding it in the barrel, and means normally restraining and periodically permitting the pressure member to be released through the medium of the clock mechanism.

4. The combination with a barrel, of clock mechanism for rotating the same, a spring-actuated presser member longitudinally reciprocable in the barrel, and co-acting stop means for holding the presser member under retraction in the barrel, said barrel being rotatable by the clock mechanism to release the presser member at the expiration of a predetermined period.

5. The combination of a rotatable barrel clock mechanism for operating the same, a spring-actuated presser member in the barrel, a stop-plate over the end of the barrel and having a perforation to pass the presser member, said member having a rib operating in conjunction with said plate to maintain the presser member in the barrel.

[Claims 6 to 10 not printed in the Gazette.]

1,013,526. SCOURING-MACHINE. MALCOLM L. BARBEAU, Silver Creek, N. Y., assignor to The S. Howes Company, Silver Creek, N. Y., a Corporation of New York. Filed Oct. 11, 1910. Serial No. 586,495.



1. A scouring machine comprising a scouring chamber provided with a lateral enlargement or tumbling space, a rotatable drum arranged in the chamber and having teeth on its periphery, and a retarding device arranged in said space and comprising a baffle adapted to be moved into and out of the space between the teeth of the drum.

2. A scouring machine comprising a scouring chamber provided with a lateral enlargement or tumbling space, and a retarding device arranged in said space and comprising a rotatable cam shaped baffle adapted to move its salient part toward and from said drum.

3. A scouring machine comprising a cylindrical scouring chamber provided with a longitudinal enlargement forming a tumbling space, a cylindrical drum rotatable in said chamber and provided on its periphery with beaters, and a plurality of cam-shaped baffles arranged in said space and adapted to move their salient parts toward and from the periphery of the drum.

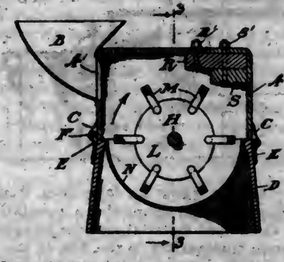
4. A scouring machine comprising a cylindrical scouring chamber provided with a longitudinal enlargement forming a tumbling space, a cylindrical drum rotatable in said chamber and provided on its periphery with beaters, a rotatable shaft arranged lengthwise in said space, and a plurality of cam shaped baffles arranged on said shaft.

5. A scouring machine comprising a cylindrical scouring chamber provided with a longitudinal enlargement forming a tumbling space, a cylindrical drum rotatable in said chamber and provided on its periphery with beaters, a rotatable shaft arranged lengthwise in said space, a plurality of cam-shaped baffles arranged on said shaft, and means for adjusting said shaft circumferentially.

[Claims 6 and 7, not printed in the Gazette.]

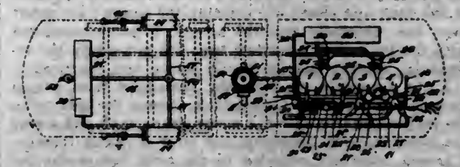
1,013,527. DISINTEGRATOR. JOSEPH BONSO, Paris, France, assignor to Gardner Crusher Company, a Corporation of New York. Filed Oct. 3, 1910. Serial No. 585,096.

A disintegrating apparatus comprising a casing having an inlet opening in one end, a shaft journaled in the casing, beaters mounted on said shaft, a plate secured to the top of the casing and projecting from the end opposite to and projecting toward the opening to a point very near the vertical plane of the shaft, and a second shorter plate directly below the first ending at a point farther away



from said vertical plane, and presenting sharp angular corners with which material thrown by the beaters will contact, the angular corner of the upper plate being located at a greater distance beyond the path of movement than that of the lower plate.

1,013,528. COMBINED INTERNAL-COMBUSTION AND COMPRESSED-AIR ENGINE. JOHN K. BRODERICK, St. Louis, Mo. Filed Oct. 15, 1909. Serial No. 522,797.



1. The combination with an engine utilized for driving the trucks of a vehicle, of a compressed air tank on the vehicle, means whereby certain of the engine cylinders in which the combustion of gas takes place are utilized as air compressors to force compressed air into the tank, while the remaining engine cylinders operate in the usual manner by the ignition of combustible gases, and means whereby the energy of the compressed air is applied direct to one of the trucks for driving the vehicle.

2. The combination with an engine utilized for driving the trucks of a vehicle, of a compressed air tank on the vehicle, means whereby certain of the engine cylinders in which the combustion of gas takes place are utilized as air compressors to force compressed air into the tank, and means whereby the energy of the compressed air is applied directly to one of the trucks for assisting the engine in driving the vehicle.

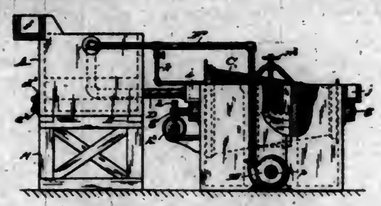
3. The combination with a vehicle mounted upon trucks, of an engine mounted thereon and adapted to drive said vehicle, a tank located on the vehicle and adapted to contain compressed air, and means whereby the power of the compressed air from the tank is applied direct to one of the trucks of the vehicle and utilized for assisting the engine in driving the vehicle.

4. The combination with a vehicle mounted upon trucks, of an engine mounted upon and adapted to drive said vehicle, a storage tank on the vehicle, means whereby air is compressed by the engine and delivered to the storage tank, and means whereby the power of the compressed air from the storage tank is applied direct to one of the trucks of the vehicle and utilized for assisting the engine in driving the vehicle.

5. The combination with a vehicle, having two sets of trucks of an engine mounted on the vehicle, and having a driving connection with one of the trucks, a compressed air tank on the vehicle, and means whereby the compressed air from the tank is utilized for driving the opposite one of the trucks.

[Claims 6 and 7 not printed in the Gazette.]

1,013,529. APPARATUS FOR REMOVING IMPURITIES FROM PULPED WASTE PAPERS. JOHN M. BURBY, Astoria, N. Y. Filed Apr. 28, 1911. Serial No. 623,819.



1. An apparatus for removing impurities from pulped papers and similar material comprising a receptacle, means for conveying the pulped material into the receptacle, partitions set therein transversely to the flow of the material therethrough; a tank; a screen rotatably mounted therein, and means for rotating the screen; a conduit from the receptacle into the screen; a pump connected with the tank; and a conduit from the pump into the receptacle; substantially as herein shown and described.

2. An apparatus for removing impurities from pulped papers and similar material comprising a receptacle, means for conveying the pulped material into the receptacle, partitions set therein transversely to the flow of the material therethrough; a tank and means for regulating the level of water therein; a screen rotatably mounted in the tank and means for rotating the screen; a conduit from the receptacle into the screen; a pump connected with the tank; and a conduit from the pump into the receptacle; substantially as herein shown and described.

3. An apparatus for removing impurities from pulped materials, comprising a receptacle, means for delivering the pulped material into the receptacle; a tank and means for maintaining a predetermined level of water therein; a screen, rotatably mounted in the tank and means for rotating the screen; a conduit connecting the discharge end of the receptacle with the intake end of the screen, and means for drawing the water from the tank and for delivering the same into the receptacle, substantially as herein shown and described.

4. An apparatus for removing impurities from pulped materials, comprising a receptacle; a series of partitions set therein transversely to a line from its inlet to its outlet; means for delivering the pulped material into the receptacle; a tank and means for maintaining a predetermined level of water therein; a screen, rotatably mounted in the tank and means for rotating the screen; a conduit connecting the outlet of the receptacle with the intake end of the screen, and means for drawing water from the tank and delivering the same into the inlet of the receptacle; substantially as herein shown and described.

5. An apparatus for removing impurities from pulped materials, comprising a receptacle; a series of partitions set therein transversely to a line from its inlet to its outlet; means for delivering the pulped material into the receptacle; a tank and means for maintaining a predetermined level of water therein; a screen, rotatably mounted in the tank and means for rotating the screen; a sprinkler set along the screen and connected to a supply of water under pressure; a conduit connecting the outlet of the receptacle with the intake end of the screen, and means for drawing water from the tank and delivering the same into the inlet of the receptacle; substantially as herein shown and described.

[Claim 6 not printed in the Gazette.]

1,013,530. BAIL-HOLDER FOR LANTERNS. ROBERT L. CAIRNCROSS, Chicago, Ill., assignor to A. H. Handlan, Jr., St. Louis, Mo. Filed June 24, 1911. Serial No. 635,058.

1. A lantern comprising a body, a bail pivoted to said body, a bail latch pivoted to said body and having a finger carried by and extending laterally from its pivot member, and a spring tongue carried by said body engaging said finger to hold the latch from movement when the latter is in engagement with said bail.

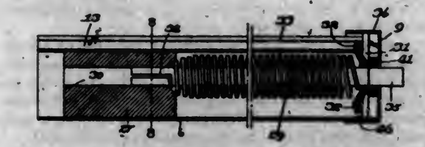
2. A lantern comprising a body including a hood, a bail pivoted to said body, a latch adapted to be moved into and out of engagement with said bail, the latch including a pivot member having a finger extending laterally from said member, a clip secured to said hood and having legs in which the pivot member of said latch is operable, and a spring tongue associated with said clip located intermediate of the legs of the clip and engaging the finger carried by the pivot member of the latch to hold it from movement when it is in engagement with said bail.

3. A lantern comprising a bail, a pivoted latch of W-shape having pivot arms and fingers and adapted to be moved into and out of engagement with said bail, a clip fitted to the lantern to form a pivot bearing for the pivot arms of said latch, and a spring tongue extending from said clip and bearing against the fingers of said latch to hold the latter in engagement with said bail.

4. A lantern comprising a bail, a latch adapted to be moved into and out of engagement with said bail, said latch consisting of a wire loop of W-shape for engaging the bail having pivot arms and fingers and a clip fitted to the lantern to form a pivot bearing for the pivot arms of said wire loop, and having a spring tongue bearing on the fingers of said loop to hold the latter in engagement with said bail.

5. A lantern comprising a bail, a latch adapted to be moved into and out of engagement with said bail, said latch consisting of a wire loop of W-shape bent to form pivot arms and fingers extending from said pivot arms, and a clip fitted to said pivot arms, said clip having a spring tongue bearing against said fingers to hold said latch in engagement with or disengaged from said bail.

1,013,531. CURTAIN-ROLLER. CHARLES AUGUSTUS CARMANY, Coatesville, Pa. Filed Apr. 7, 1909. Serial No. 488,504.



1. The combination with a roller comprising a body portion formed of sheet metal bent into substantially tubular form having a bent portion forming a longitudinal slot therein, said bent portion terminating inwardly of one end of said body portion and an end head having an inner face engaged with said bent portion, said body portion having a bent part holding said end head in place, of a curtain having a portion extending into said slot, and means for holding said curtain in engagement with said roller.

2. The combination with a roller comprising a body portion having end heads secured thereto, said body portion being formed of sheet metal bent into substantially tubular form bringing its longitudinal edge portions adjacent each other, said edge portions being first bent and extended inwardly and in directions away from each other and then bent and extended toward each other forming an undercut groove in the roller, of a curtain having a portion extending into said groove, and a Z-shaped spring extending into the undercut portions of the groove and holding the curtain in engagement with the roller.

3. In a curtain roller, a body portion, and an end head having an inwardly extending flange which also extends part way around the edge of the end head and terminates in end portions having a space therebetween, said body portion being formed of sheet metal bent into substantially tubular form around said end head and then bent inwardly, between and into engagement with the end portions of the flange.

4. In a curtain roller, a body portion formed of sheet metal bent into substantially tubular form, a spring for rotating the body portion, and means to prevent the actuation of the body portion of said spring, said means including an element within and fixed to one end of the body portion, said body portion having parts bent into engagement with said element, and an end head surrounding said element, said body portion having parts bent into engagement with the end head.

5. In a curtain roller, a body portion formed of sheet metal bent into substantially tubular form, a spring for rotating the body portion, and means to prevent the actuation of the body portion by said spring, said means including an element within and fixed to one end of the body portion, said body portion having parts bent into engagement with said element, and an end head surrounding said element, said end head having a slot formed therein and said body portion being provided with a projection extending through said slot and bent into engagement with the end head.

[Claims 6 to 8 not printed in the Gazette.]

1,013,532. CURTAIN-ROLLER. CHARLES A. CARMANY, Coatesville, Pa. Filed Mar. 21, 1910. Serial No. 550,583.

1. In a curtain roller and in combination, a body section, an end section formed of sheet metal and surrounding one end of the body section, an end section formed of sheet metal and surrounding the other end of the body section, and end heads for the outer ends of said end sections, said end sections being of substantially equal diameter and having parts engaging the inner faces of said end heads, and parts bent into engagement with the outer faces of said end heads and retaining them in place.

2. In a curtain roller and in combination, a body including a section formed of sheet metal and having a longitudinal groove therein; and an end head for said section having an opening therein extending to the outer wall of the end head and in registry with said groove and permitting one end of a curtain to be passed longitudinally of the roller through said groove and said opening; said section having a part preventing inward movement of said end head, and a part bent into engagement with said end head and preventing outward movement thereof.

3. The combination of a curtain roller provided with a longitudinal groove having two parallel undercut sides open at one end of the roller, and a curtain having a strip of metal folded upon one end thereof and arranged within said groove and having its sides extending into the undercut sides of the groove, said strip being movable into and from said groove through the end thereof and being prevented from being removed from the roller laterally thereof by the two undercut sides of the groove.

4. The combination of a curtain roller provided with a longitudinal groove having two parallel undercut sides open at one end of the roller, and a curtain having a strip of metal folded upon one end thereof and arranged within said groove and having its sides extending into the undercut sides of the groove, said strip having its longitudinal edge portions bent toward each other, one edge portion being inclosed between the other edge portion and the body of the strip and the outer edge portion being narrower than the body of the strip, said curtain having a folded end embracing the inner edge portion of the strip, said strip being movable into and from said groove through the end thereof and being prevented from being removed from the roller laterally thereof by the two undercut sides of the groove.

5. In a curtain roller and in combination two telescopic sections formed of sheet metal one section extending into the other, said sections having grooved portions fitted to each other, the outer section being formed of single piece of metal having its longitudinal edges bent into engagement with each other forming a seam, and the inner section having a second groove formed therein into which said seam extends.

[Claims 6 to 8 not printed in the Gazette.]

1,013,533. WALKING-BEAM. ARTHUR L. CHAMBERS and NATHAN BANE, Smithfield, W. Va. Filed July 31, 1909. Serial No. 510,673.

1. A walking-beam comprising a metal tube with metal fittings on each end adapted to receive and furnish bearings for the connecting rods which fittings are secured in position on said tube by means of flanges formed on said fittings and engaging the ends of said tube and bolts passing through said tube and said fittings, said bolts, a central block, or casting, formed with gudgeons and mounted midway on the under side of said tube, a second casting, or block, on the top of said tube above said central block to which it is connected, said top block being formed with an elevated truss-support, and truss-rods passing over said support and connected with the fittings on the under side and at each end of said tube, substantially as set forth.

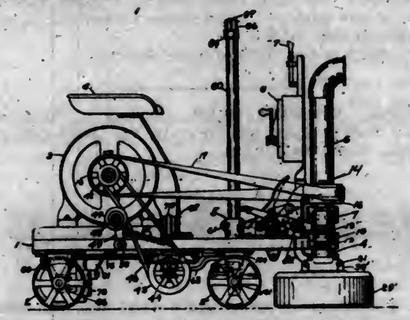
2. A walking-beam comprising a tubular casing of appropriate length and diameter, a casting mounted centrally on its under side carrying gudgeons on which the walking-beam may be mounted, a block mounted on top of said tubular casing above said block carrying the gudgeons and connected therewith and having an elevated truss-support formed thereon, fittings mounted on the under side of said tubular casing at each end and connected therewith by engaging flanges and having diagonally projecting side wings with longitudinal perforations, truss-rods mounted on said truss-support in the center of said tubular casing and with their ends extending through said perforations and said end fittings and provided with tightening means, saddle blocks on the top of each end of said casing connected with the fittings on the under side and containing bearing recesses to receive the ends of the connecting-rods for connecting the walking-beam with the power and the work, substantially as set forth.

3. A walking-beam comprising a tubular casing, a center block having gudgeons on which said walking-beam may be mounted, a truss-support connected therewith at a central point, fittings at the ends adapted to receive and support the ends of the rods connecting the walking-beam with the work and the power, one end of said walking-beam being formed with a vertical slot extending longitudinally thereinto for a distance, and a connecting-rod with its upper end formed T-shaped and mounted in said slot with its cross-bar in a recess in the tube fitting, substantially as set forth.

4. A walking-beam comprising a tubular casing, fittings at each end and in the center, the central fittings carrying the gudgeons on which the walking-beam is mounted to

rock and an upwardly projecting truss-support, the end fittings on the lower side being formed to engage with the outer ends of the truss-rods, said truss-rods extending over said truss-supports and engaging with said lower end fittings, the upper end fittings formed to receive the ends of the connecting-rods, a plate mounted thereon and formed recessed to engage and hold said connecting-rods in place and bolts passing through said plate, said upper fittings and the top side of the tubular casing on a central line and radially to said tube, whereby said connecting-rods are securely but loosely held to their seats, substantially as set forth.

1,013,534. FLOOR-SURFACING MACHINE. HERBERT W. CHENEY, Norwood, Ohio. Filed July 26, 1906. Serial No. 327,934.



1. In a floor surfacing machine, the combination of a carriage, a rotatable member supported thereon, said member being provided with an abrasive surface, a motor mounted on said carriage to rotate the abrasive surface and to propel the carriage, and means under the control of a single operating handle for controlling the speed of said carriage and for reversing its direction of movement without affecting the speed of rotation of said abrasive surface.

2. In a floor surfacing machine, the combination of a truck having a driving member, a rotatable abrasive disk, an electric motor for rotating the disk and for propelling the truck, means for connecting the motor to said disk, independent means for connecting the motor to the driving member, and for varying the speed of said driving member, a single handle for operating said last mentioned means, and means for adjusting the abrasive disk vertically in relation to the truck for varying the contact pressure between the disk and the floor surface and for lifting the disk away from the floor surface.

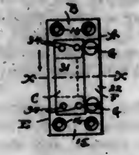
3. In a floor surfacing machine, the combination of a rotatable abrasive disk, a motor to rotate the disk and to feed it over the floor surface, connections whereby the motor may drive the disk at a constant speed, independent means for varying the speed at which the disk is fed over the floor surface, and means for adjusting the disk while rotating to increase or diminish the contact pressure of said disk upon the floor surface.

4. In a floor surfacing machine, the combination of a carriage, a rotatable abrasive surface resiliently supported on the carriage, a motor to rotate the abrasive surface at a constant speed and propel the carriage, friction means controlled by a single handle to change the speed and reverse the direction of movement of the carriage without affecting the speed of rotation of the abrasive surface, and means for guiding the movements of the carriage over the floor surface.

5. In a floor surfacing machine, the combination of a carriage, a shaft mounted thereon, an abrasive rotating disk flexibly mounted on the shaft, a fan rigidly mounted on the shaft, and a single housing inclosing the abrasive rotating disk and the fan, said housing being divided in a plane parallel or coinciding with the center of the shaft.

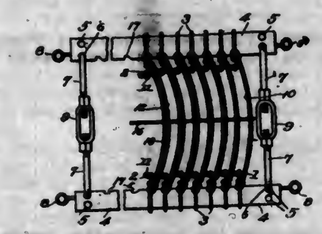
[Claims 6 to 15 not printed in the Gazette.]

1,013,535. HINGE FOR COACH AND AUTOMOBILE BODIES. FRANKLIN CRAWFORD and WILLIAM WHITELEY, New Britain, Conn., assignors to North & Judd Manufacturing Company, New Britain, Conn., a Corporation. Filed Sept. 18, 1911. Serial No. 649,951.



A hinge comprising a post member and a door member pivotally united, the said post member comprising a plate member and a knuckle member secured thereto by screws, the said plate member comprising a leaf having an open slot extending from the front lateral edge rearward, and means for receiving the said screws at the corners on each side of the said slot and adjacent the front edge, and the said corners suitably reinforced by bosses, whereby the said knuckle member serves to bridge the front end of the said slot, and to support the said door member from adjacent the front edge of the said post leaf.

1,013,536. CONCRETE-BLOCK MACHINE. CHARLES E. DE FORREST, Lima, Ohio. Filed Dec. 20, 1910. Serial No. 598,366.



1. A mold of the character described, comprising face plates, means for holding said face plates in spaced relation to each other, and means for exerting an endwise compression on said plates whereby to flex the same, said plates being pliable, as specified.

2. A mold embodying side bars, plates engaging the side bars and held in spaced relation to each other, and means connecting said side bars together and arranged to draw the same inwardly to effect an endwise compression on said plates to flex the latter, said plates being pliable, as specified.

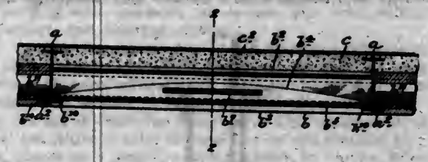
3. A mold embodying side bars, face plates extending from one side bar to the other and having their ends engaging the side bars, turnbuckle stubs connected to the respective side bars, and turnbuckles connecting said stubs together, the face plates being pliable, as specified.

4. A mold embodying side bars formed in one edge with ratchet shaped notches, plates having their ends engaged in said notches and extending from one bar to the other, the plates being held in spaced relation to each other and being pliable, and means for drawing said side bars toward each other to flex the plates by endwise compression on the latter.

5. A mold embodying side bars, links adapted to be slipped over said side bars, face plates pivotally connected at their ends to said links, the face plates being pliable, and means connected to said side bars for drawing the same toward each other so as to press endwise upon the face plates.

[Claims 6 and 7 not printed in the Gazette.]

1,013,537. FIREPROOF FLOOR AND CEILING CONSTRUCTION. JOHAN G. EIFLER, New York, N. Y., assignor of one-third to Ernst Ebbinghaus, New York, N. Y. Filed June 9, 1911. Serial No. 632,113.



An arch beam for use in concrete floor and ceiling constructions, comprising a base portion and a top portion, the side parts of the base portion being arch-shaped in form and of the same thickness throughout and the top portion being in the form of a central raised longitudinal web which extends above the arch-shaped side portions and the top of which is parallel with the bottom surface of the beam, the opposite sides of the arch-shaped side portions being also provided, one with longitudinal grooves and the other with corresponding longitudinal ribs, and the ends of the beam being provided with recesses adapted to receive the base flanges of I-beams.

1,013,538. FLOOR-OIL. CARLETON ELLIS, Larchmont, N. Y., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Sept. 16, 1908. Serial No. 453,841.

1. A floor oil consisting of a solution of approximately 3% of copper oleate in light petroleum oil, wax and a volatile hydrocarbon solvent.

2. A floor oil consisting of a very dilute solution of copper oleate and wax spindle oil and turpentine.

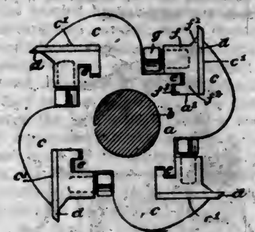
3. A floor oil, consisting of a non-volatile mineral oil, copper oleate, wax and a volatile thinner.

4. A floor oil, consisting of a non-volatile mineral oil, an oil soluble metallo organic compound of copper, wax, and a volatile thinner.

1,013,539. DISPLAY-STAND. WILLIAM FAERBER, Chicago, Ill. Filed Nov. 20, 1911. Serial No. 661,210.

A display and work fixture, comprising, in combination, a pedestal, a tubular standard supported by said pedestal, a rod constructed to telescope in said standard, securing means at the upper end of said standard, a step-bearing at the upper end of said rod, a carrier plate, a pivot on said carrier plate constructed to rotatably engage said step-bearing, and a form removably supported upon said carrier plate, said form being a shell of cast material having the contour of the upper portion of a human skull, and a lining of a textile fabric in said shell constructed to reinforce said shell.

1,013,540. CUTTER-HEAD. KARL SCHURZ FAUCETTE, Portland, Oreg. Filed Dec. 14, 1905. Serial No. 291,690.



1. The combination of a cutter head having a longitudinal channel, a clamping bar adjustable in the channel, interlocking means between the bar and the bottom of the channel, a cutter between the bar, and one wall of the channel, and screws in the bar with their heads engaging the outer wall of the channel.

2. A cutter head having a longitudinal channel, a longitudinal rib at the bottom of said channel, a clamping plate adjustable laterally in said channel and provided on its lower portion with a rib extending laterally therefrom in line with the bottom of said clamping plate and adapted to interlock with said rib of the head, a cutter between said bar and one wall of the channel, and screws in the bar with their heads engaging the outer wall of the channel.

3. A cutter head comprising longitudinal retaining members and longitudinal channels intermediate thereof, clamping bars laterally adjustable in said channels, interlocking means between said bars and the bottoms of the channels, cutters between the bars and one wall of the channels, and screws in the bars with their heads engaging the opposite walls of the channels.

4. The combination of a cutter head having a longitudinal channel, a clamping bar adjustable laterally in said channel and provided with an outwardly extending flange interlocking means between the bar and the bottom of the channel, a cutter between the bar and one wall of the channel, and screws in the bar with their heads engaging the other wall of the channel.

5. A cutter head having a longitudinal channel, provided with oppositely disposed walls and a projecting rib formed in the cutter head and spaced from the bottom of said channel, a clamping bar provided on its lower portion with a projecting rib, and a recess above said rib corresponding with said rib of the cutter head, a cutter between the bar and one wall of said channel, and screws in the bar with their heads engaging the other wall of the channel.

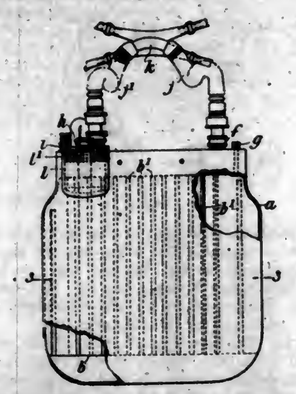
[Claims 6 to 11 not printed in the Gazette.]

1,013,541. BREATHING APPLIANCE. HENRY ALBERT FLEUSS, Thatcham, and ROBERT HENRY DAVIS, London, England. Filed Sept. 29, 1910. Serial No. 584,510.

1. A breathing appliance comprising a bag having a longitudinal partition dividing the bag into two compartments in communication with one another, one of said compartments being provided with a valve and connection through which oxygen is supplied to the user, a cooling trap through which said oxygen passes and a valve and connection through which oxygen is supplied to the apparatus, and the other of said compartments being fitted with a valve and connection for the passage of exhaled air, a moisture trap through which said exhaled air passes and a relief valve provided for the escape of a portion of the exhaled air from the apparatus.

2. A breathing appliance comprising a bag having a longitudinal partition perforated at its lower extremity and dividing the bag into two compartments, one of said compartments being fitted with an inhaling valve and connection, an oxygen cooling trap and an oxygen supply

connection, and the other of said compartments provided with a connection for the passage of exhaled air, a moisture trap through which the said exhaled air passes and a relief valve provided for the escape of a portion of the exhaled air from the apparatus.



3. A breathing appliance comprising a bag having a longitudinal partition provided with ribs on either side thereof and dividing the bag into two compartments in communication with one another, one of said compartments being provided with a valve and a connection through which oxygen is supplied to the user and also a connection through which oxygen is supplied to the apparatus, and the other of said compartments being fitted with a valve and connection for the passage of exhaled air and a relief valve provided for the escape of a portion of the exhaled air from the apparatus.

4. In a breathing appliance, the combination with a bag, of a longitudinal partition formed with ribs on either side thereof and dividing the bag into two compartments in communication with one another, of an inhaling valve and connection, and an oxygen supply connection fitted to one of said compartments, and an exhaling valve and connection, a moisture trap and a relief valve fitted to the other of said compartments.

5. In a breathing appliance, the combination with a bag, of a longitudinal partition perforated near its lower extremity and dividing the bag into two compartments, said partition being formed with ribs on either side thereof, an inhaling valve and connection, a cooling trap, an oxygen supply connection fitted to one of said compartments, and an exhaling valve and connection, a moisture trap and a relief valve fitted to the other of said compartments.

[Claims 6 and 7 not printed in the Gazette.]

1,013,542. LAMP. EDWIN H. FORD, Hartford City, Ind. Filed July 9, 1909. Serial No. 506,796.

1. A lamp of the above specified class including a handle composed of a plurality of hollow members telescoped together, a metallic rod rigidly arranged within and extending the length of the outer member of the handle, said rod being insulated from said handle, means arranged within the second member of the handle to take over and insulate said rod from the said last mentioned member, insulated wires extending through said second member of the handle and connecting with the lamp socket, an electric bulb, a flexible means adapted to permit of a sliding contact between said metallic rod and said wires, a battery, and means adapted to open and close the electric circuit between said battery and electric bulb.

2. A lamp of the above specified class including a handle composed of a plurality of hollow members telescoped together, a metallic rod rigidly arranged within and extending the length of the outer member of the handle, said rod being insulated from said handle, means arranged within the second member of the handle to take over and insulate said rod from the said last mentioned member, means on said rod to prevent accidental separation between the handle members, insulated wires extending through said second handle member and connecting with

the lamp socket, an electric bulb, a flexible means adapted to permit of a sliding contact with said metallic rod and said wires, a battery, and means adapted to open and close the electric circuit between said battery and electric bulb.

1,013,543. LOOM-TEMPLE. GEORGE M. FOSTER, Manchester, N. H. Filed June 12, 1911. Serial No. 632,567.

1. In a temple, the combination with a pod or shell having a bur-receiving chamber which is open at one end of the pod to form a throat to receive the cloth, said pod having an opening or bore 7 at the opposite end of said chamber and a recess at the other end of said chamber, of a spindle for the bur provided with an integral head portion adapted to fit said bore, the end of the spindle being arranged to be received in said recess, and a bur loosely mounted on said spindle and having a diameter less than the bore.

2. In a temple, the combination with a pod or shell made of one piece and provided with a bur-receiving chamber and a throat at one end of the pod leading to the chamber, said pod having an opening through the other end leading to said chamber, of a bur-supporting spindle having integral therewith a head portion which is received in and fits said opening, and a bur mounted on said spindle, said bur being of less diameter than the opening whereby the bur and spindle may be removed through said opening.

3. In a temple, the combination with a pod or shell divided through one end to form separate upper and lower halves, with a cloth-receiving throat between said halves at said end, said pod being provided with a bur-receiving chamber and having a bore or opening 7 leading from said chamber through the end thereof opposite the throated end, and a recess at the upper half of the throated end, of a bur-receiving spindle having one end received in said recess and having at the other end a head portion adapted to fit said bore, and a bur loosely mounted in said recess and having a diameter less than the bore or opening.

1,013,544. INK. WILLIAM G. FURRER, Newark, N. J., assignor to Equilibrator Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 30, 1910. Serial No. 579,943.

1. An ink for stencil duplicating purposes, comprising acetated glycerin, rapeseed oil, dextrin, zinc oxid, sulfate of barium, and coloring matter.

2. An ink for stencil duplicating purposes comprising 40 parts by weight of acetated glycerin, 40 parts of rapeseed oil, 10 parts of dextrin, 2 parts of zinc oxid, 8 parts of sulfate of barium, to which is added coloring matter.

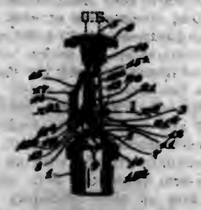
3. An ink of which the major portion is formed of about equal quantities of fatty or vegetable oil and acetated glycerin, united by a binder, coloring matter, an earthy, filler, and a drier.

4. An ink comprising a blown oil, acetated glycerin, an emulsifying agent, a filler, and zinc oxid.

5. An ink comprising a blown oil, acetated glycerin, an emulsifying agent, a drier, a filler, and a coloring agent.

[Claims 6 to 8 not printed in the Gazette.]

1,013,545. AUTOMATIC SPRINKLER-HEAD. CHARLES B. GARRETT, Minneapolis, Minn. Filed Feb. 17, 1909. Serial No. 478,452.



1. In an automatic sprinkler, a strut structure having a member formed with flexible and reinforced inflexible portions.

2. In an automatic sprinkler, a strut structure having a lever formed with flexible and reinforced inflexible portions, and with a releasing member soldered to said inflexible portion.

3. In an automatic sprinkler, a toggle acting strut comprising a compression member, a lever having flexible and reinforced inflexible portions, and a strut locking means including a section secured by solder to the inflexible portion of said lever.

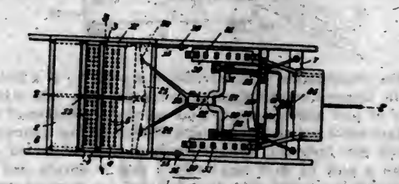
4. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof, of an abutment overlying said cap, a lever seated against said abutment, a compression strut seated against said cap and said lever, fusible locking means connecting said lever and compression strut, and a screw applied to said compression strut, engaging said lever, and solidifying the strut structure.

5. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof, an abutment overlying said cap, and a toggle acting strut comprising a longitudinally corrugated compression member seated on said cap, a lever intermediately seated on said compression member and reacting against said abutment, said lever having a corrugated inflexible lower end section, a plate or lever section secured to the inflexible portion of said lever by fusible solder, and a locking device connecting said plate or lever section to said compression member.

[Claims 6 to 9 not printed in the Gazette.]

1,013,546. DEVICE FOR SPREADING MATERIAL. ALBANI BENJAMIN GIREAU and HENRY HADLEY, Jr., Verdun, Quebec, Canada, assignors of one-third to Charles Alfred Lamothe, Verdun, Canada. Filed Feb. 27, 1911. Serial No. 611,124.

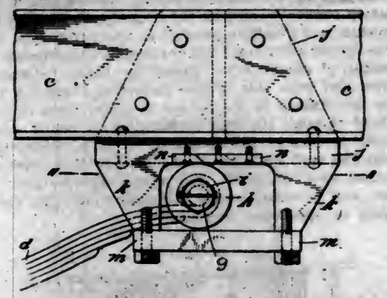
1. A device for spreading cinders upon a snow or ice covered surface, comprising a carrier adapted to be moved along the said surface and to be supported at opposite sides thereon, a hopper for containing the cinders mounted upon the carrier and having its bottom extending between the opposite sides of the carrier and formed throughout its width with vertically extending perforations, a reciprocatory shaker carried by the hopper and adapted to reciprocate in a direction parallel to the direction of travel of the carrier and having a bar extending transversely to its direction of reciprocation within the hopper adjacent its bottom and from side to side thereof and adapted to act upon the cinders in the hopper to cause them to be discharged through the said perforations, a bodily movable cranked shaft mounted upon the carrier, a connecting rod connecting such shaft to the shaker, a toothed drive wheel mounted upon the shaft, and means whereby such drive wheel may be either locked in position engaging the said surface or suspended thereabove.



2. A device for spreading cinders upon a snow or ice covered surface, comprising a carrier adapted to be moved along the said surface and to be supported at opposite sides thereon, a hopper for containing the cinders mounted upon the carrier and having its bottom extending between the opposite sides of the carrier and formed throughout its width with vertically extending perforations, a reciprocatory shaker carried by the hopper and having a bar extending transversely to its direction of reciprocation within the hopper adjacent its bottom and from side to side thereof and adapted to act upon the cinders in the hopper to cause them to be discharged through the said perforations, a bodily movable drive shaft extending between opposite sides of the carrier and having its central portion cranked, a pair of toothed drive wheels mounted one on each end of the said cranked shaft, and a branched connecting rod operatively connecting the cranked shaft and shaker, the branches of the connecting rod diverging laterally and connecting at their separated ends to the shaker to cause operating power to be applied thereto near opposite sides thereof, and means for positively retaining the said shaft in position with the drive wheels in or out of engagement with the said surface.

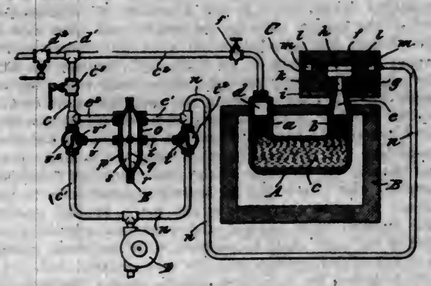
3. A device for spreading cinders upon a snow or ice covered surface, comprising a sled having a pair of runners spaced laterally from one another and connected by cross braces, a hopper supported upon the sled and extending between the runners, such hopper having an oblong perforated bottom with its greatest dimension transverse to the sled and equal to the space between the runners, the said bottom being formed to present perforations disposed throughout the transverse length thereof, a reciprocatory shaker carried by the hopper within the latter above and adjacent the said bottom and having bars extending longitudinally and transversely to its direction of reciprocation, the said transverse bars extending from side to side of the hopper, guiding rods projecting from the shaker longitudinally of the sled on opposite sides thereof, guiding members carried by the runners and encircling the said rods, a drive shaft extending between opposite sides of the sled and having the central portion thereof cranked, a connecting rod connected at one end to the said crank the opposite end being forked with laterally extending branches connecting to the said shaker, means supporting such shaft whereby it may be raised or lowered, a pair of toothed drive wheels mounted one on each end of the shaft and adapted when the shaft is lowered to engage with the said surface, ratchet and pawl connections between the shafts and wheels whereby operative engagement will be effected between such shaft and wheels upon rotation of the wheels in one direction only, and means for positively retaining the said shaft in raised or lowered position.

1,013,547. END MOUNTING FOR VEHICLE-SPRINGS. BENJAMIN A. GRAMM, Bowling Green, Ohio. Filed Mar. 15, 1910. Serial No. 549,412.



The combination with a frame of a vehicle; of a hanger-plate fastened thereto and formed at each side with a pair of legs which project from below the bottom of said hanger-plate; a pair of lengthwise-extending guard-bars which are fastened to said legs and each of which connects a pair of said legs; and a vehicle spring one end of which lies below said hanger plate and passes between two of said legs at the inner end of said hanger plate and which is provided with laterally-extending projections that lie between said guard-bars and hanger-plate.

1,013,548. ART OF MAKING CASTINGS. CHARLES M. GREY, East Orange, N. J. Filed Sept. 25, 1911. Serial No. 651,047.



1. In the art of making castings, the process which consists in confining fluid material in two chambers having communication beneath the surface of said material, and producing a partial vacuum in the said two chambers above the metal therein by exhausting air from both of said chambers.

2. In the art of making castings, the process which consists in confining fluid material in two chambers having communication beneath the surface of said material, producing a partial vacuum in the said two chambers above the metal therein by exhausting air from both of said chambers, and then introducing the material into a mold.

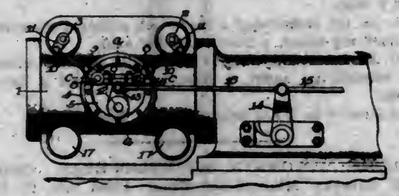
3. In the art of making castings, the process which consists in confining fluid material in two chambers having communication beneath the surface of said material, producing a partial vacuum in the said two chambers above the metal therein by exhausting air from both of said chambers, and then introducing the material into a mold by changing the relative pressures in the two chambers.

4. In the art of making castings, the process which consists in confining fluid material in two chambers having communication beneath the surface of said material, producing a partial vacuum in the said two chambers above the metal therein, and then introducing the material into a mold by applying pressure interiorly of one of the chambers.

5. In the art of making castings, the process which consists in confining fluid material in two chambers having communication beneath the surface of said material, producing a partial vacuum in the said two chambers above the metal therein, and then introducing the material into a mold by applying pressure interiorly of one of the chambers while continuing suction on the other.

[Claims 6 to 17 not printed in the Gazette.]

1,013,549. VALVE-GEAR. THOMAS HALL, Ridgway, Pa., assignor to Ridgway Dynamo & Engine Company, Ridgway, Pa. Filed Apr. 26, 1911. Serial No. 623,343.



1. An engine valve-gear comprising, an engine cylinder, an oscillating steam-valve at each end of the cylinder, a main rock-shaft mounted on the cylinder below and between the steam-valves, a rocker on the main rock-shaft to serve as means whereby the main rockshaft may be oscillated, a two-armed main rocker fast on the main rockshaft, a secondary rockshaft disposed between the main rockshaft and each of the steam-valves, a secondary rocker on each secondary rockshaft, a link connecting each of the secondary rockers with an arm of the main rocker, a valve-arm connected with each steam-valve, a valve driving arm on each secondary rockshaft, and a link connecting each valve-driving arm positively with a valve-arm, combined substantially as set forth.

2. An engine valve-gear comprising, an engine cylinder, an oscillating steam-valve at each end of the cylinder, a main rockshaft mounted on the cylinder below and between the steam-valves, a rocker on the main rockshaft to serve as means whereby the main rockshaft may be oscillated, a two-armed main rocker fast on the main rockshaft, a secondary rockshaft disposed between the main rockshaft and each of the steam-valves, a secondary rocker on each secondary rockshaft, a link connecting each of the secondary rockers with an arm of the main rocker, a valve-arm connected with each steam-valve, a valve-driving arm on each secondary rockshaft, a link connecting each valve-driving arm with a valve-arm, and a rocker-box supported by the cylinder and inclosing the main and secondary rockers and having in its walls bearings for the rockshafts, combined substantially as set forth.

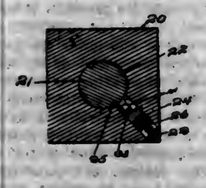
3. An engine valve-gear comprising, an engine cylinder, an oscillating steam-valve at each end of the cylinder, a main rockshaft mounted on the cylinder below and between the steam-valves, a rocker on the main rockshaft to serve as means whereby the main rockshaft may be oscillated, a two-armed main rocker fast on the main rockshaft, a secondary rockshaft disposed between the main rockshaft and each of the steam-valves, a secondary rocker on each secondary rockshaft, a link connecting each of the secondary rockers with an arm of the main rocker, a valve-arm connected with each steam-valve, a valve-driving arm on each secondary rockshaft, a link connecting each valve-driving arm with a valve-arm, an open-faced rocker-box supported by the cylinder and inclosing the main and secondary rockers and having in its rear wall bearings for the rock-shafts, and a removable faceplate secured to the front of the rocker-box and having outer bearings for the rockshafts, combined substantially as set forth.

4. An engine valve-gear comprising, an engine-cylinder, an oscillating steam-valve at each end of the cylinder, a main rockshaft mounted on the cylinder below and between the steam-valves, a rocker on the main rockshaft to serve as means whereby the main rockshaft may be oscillated, a two-armed main rocker fast on the main rockshaft, a secondary rockshaft disposed between the main rockshaft and each of the steam-valves, a secondary rocker on each secondary rockshaft, a link connecting each of the secondary rockers with an arm of the main rocker, a valve-arm connected with each steam-valve, a valve-driving arm on each secondary rockshaft, a link connecting each valve-driving arm with a valve-arm, an open-faced rocker-box supported by the cylinder and inclosing the main and secondary rockers and having in its rear wall bearings for the rock-shafts, a removable faceplate closing the face of the rocker-box and having outer bearings for the rock-shafts, the face-plate being formed in two parts separated in a plane passing through the outer bearings of the secondary rock-shafts, combined substantially as set forth.

5. The combination of an engine cylinder, valve rock shafts, one near each end of said cylinder, an arm depending from each shaft, quick-acting valve-operating mechanism adjacent to the cylinder near the center thereof and equidistant from the valve rock shafts, positive link connections between said operating mechanism and each of said depending arms, a rock shaft for the movement of said valve-operating mechanism, an arm on said shaft, and a connection from said arm to a revolving part of the engine for moving the arm.

[Claim 6 not printed in the Gazette.]

1,013,550. NUT-LOCK. JOSIAH H. HARVEY, Scranton, Pa. Filed May 25, 1910. Serial No. 563,311.



1. In a device of the character described, the combination with a bolt having notches therein, of a nut therefor having a central opening for receiving said bolt, and a bore extending from said central opening, a reciprocating pawl slidably mounted in said bore and arranged to engage said bolt in said notches when in an outer position, such pawl comprising a member provided with a plurality of slots forming fingers projecting from the end thereof, one of such fingers being elongated and constituting the tooth of the pawl, a spindle mounted in the nut at substantially right angles to the direction of movement of the pawl and extending through one of the slots aforesaid, a cam carried by the spindle and located in the other slot, for engaging and operating the pawl.

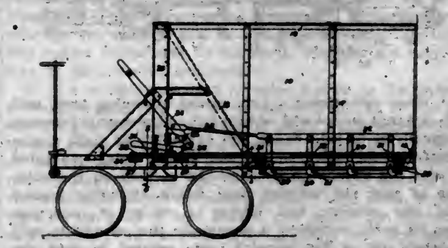
2. In a device of the character described, the combination with a bolt having notches therein, of a nut therefor having a central opening for receiving the bolt and a bore extending from said central opening, a reciprocating pawl slidably mounted in said bore and arranged to engage the bolt in said notches when in an outer position, such pawl comprising a member provided with a plurality of slots intersecting along the central longitudinal axis of the pawl forming fingers projecting from the end thereof, one of such fingers being elongated and constituting the tooth of the pawl, an operating device interlocking with the pawl within the body of the latter and comprising a spindle mounted in the nut at substantially right angles to the direction of movement of the pawl and extending through one of the slots aforesaid, and a cam carried by the spindle and located in the other slot, for engaging and operating the pawl.

3. A nut provided with a central opening and a radial bore, a pawl slidably mounted in the bore, itself being provided with a bore throughout its length, a plug for the outer end of the bore of the nut, a spring disposed between the plug and the pawl, and adapted to hold the pawl normally extended, a spindle passing through the pawl, an eccentric carried by the spindle and adapted when rotated to move the pawl, and means connecting the plug to the spindle and passing through the bore of the pawl.

1,013,551. BACKBOARD. JONATHAN BLAIR HORTON, Elkin, N. C. Filed Oct. 8, 1910. Serial No. 586,114.

In a telephone support, the combination with a telephone back board, of a plate secured over a recess in the board and formed with a number of slots each including a vertically extending portion and a laterally extending portion, and a plurality of hooks adapted for attachment to a support and to enter the first mentioned portions of the slots and engage at their shanks in the lateral portions of the slots, the material of the plate being struck up to form the vertically extending portions of the slots, the struck up portions projecting rearwardly and into the recess.

1,013,552. DUMP-CAR. FRANK S. INGOLDSBY, St. Louis, Mo., assignor to The Ingoldsby Automatic Car Company, St. Louis, Mo., a Corporation of West Virginia. Filed Aug. 24, 1907. Serial No. 389,939.



1. In a dump car, the combination of a dumping door, mechanism for releasing the door, and mechanism for raising the door operated by successive movements of part of the releasing mechanism.

2. In a dump car, the combination of a dumping door, a pivoted lever for releasing the door, and mechanism for raising the door operated by successive oscillations of said lever.

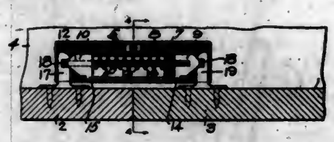
3. In a dump car, the combination of a dumping door, hooks on the car side adapted to support the door, a member connected with said hooks and adapted to move them to release the door, and raising mechanism for the door operated by movement of said member.

4. In a dump car, the combination of a dumping door, hooks on the car side adapted to support the door, a lever connected with said hooks and adapted to move them to release the door, and raising mechanism for the door operated by oscillations of said lever.

5. In a dump car, the combination of a central longitudinal member and dumping doors hinged thereto and adapted to extend outwardly to the car sides, hooks pivoted on the car sides for supporting said doors, levers for operating said hooks, and raising mechanism operated also by said levers.

[Claims 6 to 46 not printed in the Gazette.]

1,013,553. LATCHES FOR DOUBLE DOORS. BENJAMIN W. JOHNSON, Crafton, Pa. Filed Jan. 13, 1911. Serial No. 602,492.



1. In a fastener for double doors, the combination with a suitable casing adapted to be located in the door frame, of a pair of latches therein movable longitudinally in opposite directions to latch and unlatch, a catch adapted to be applied to each door section to engage one of said latches, and means coöperating with said latches and catches whereby the door last closed will cause the door first closed to be positively locked.

2. In a fastening for double doors, the combination with a suitable casing adapted to be located in the door frame, of a pair of latches therein, a catch adapted to be applied to each door section to engage one of said latches, a bolt rod secured to one of said latches, said latch being movable by the catch of the door last closed to cause the bolt rod to engage the catch of the door first closed to positively lock the latter door.

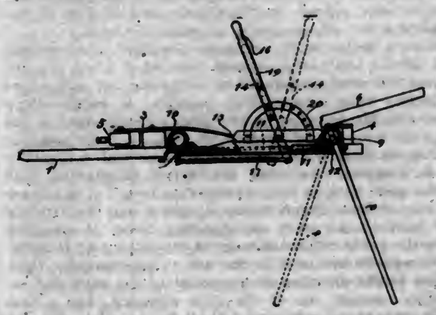
1,013,554. PNEUMATIC WHEEL. JOHN W. LIVINGSTON, Livingston, Wis., assignor of one-half to John Noble, Livingston, Wis. Filed Nov. 7, 1908. Serial No. 461,514.

A wheel comprising a hub, spokes extending from said hub, a flange on one end of said hub, a rim member formed integrally with said flange and extending at right angles therefrom, the outer end of said spokes being connected to said rim member, a clencher rim secured on the outer face of said rim member, said flange extending beyond said rim member and having a series of openings near its outer periphery a pneumatic tire secured to said clencher rim, a flat annular plate secured to said rim member, said plate having a series of openings near its outer periphery in register with the openings of the extension of said flange, a concavo-convex ring having threaded studs extending from opposite sides thereof through the openings in said flange and plate, said ring having a plurality of sockets, spokes disposed in said sockets, a supplemental rim secured to the outer ends of the last named spokes, and non-abrasive material secured to the convex face of said concavo-convex ring, said ring and non-abrasive material engaging the outer face of said pneumatic tire, said studs playing in said openings whereby said concavo-convex ring will move yieldingly against said pneumatic tire.

1,013,555. FOLDABLE UMBRELLA. STEPHEN MCCLELLAN, Brooklyn, N. Y. Filed Mar. 15, 1911. Serial No. 614,697.

A foldable umbrella provided with a plurality of ribs, a plurality of corresponding braces and the usual stick, said ribs pivotally held adjacent the upper end of the stick at their upper ends, a runner provided upon the stick, the inner ends of the braces pivoted to the runner, each of said ribs provided with an upper rib section and a lower rib section, a pair of resilient elongated plates secured to the lower end of each upper rib section in parallel relation to each other, each of said plates being bent outward similarly terminating in prongs, one of said plates of each pair provided at its outer end with an inwardly bent tongue, locking members pivotally interposed between each pair of resilient plates, one of which members is secured to the inner end of the lower rib section while the other is secured to the outer end of its respective brace, said locking members coöperating to secure and lock the lower rib sections in alinement with their respective upper rib sections when the umbrella is in open position, said tongue of one of the said resilient plates of each pair binding against the adjacent face of the adjacent locking member thereby aiding each pair of said locking members in preventing the movement of the respective lower rib section in either direction when the umbrella is in open position and securing the lower rib section against outward movement when the umbrella is in closed position and means to diminish the space between the plates of each pair of resilient plates should they become spreaded or lose their resiliency to a certain extent.

1,013,556. RAKE. ANTONIO B. MEZZA, Pleasanton, Cal. Filed Sept. 10, 1908. Serial No. 452,507.



In a rake, the combination with a rotatable cylinder, and teeth rigidly fixed thereto, of a second rotatable cylinder,

a reversing lever, a link between said second cylinder and said lever, and a link between said first cylinder and said second cylinder.

1,013,557. SAFETY-ENVELOP. ADAM MIEDEN, Deadwood, Cal. Filed Nov. 19, 1910. Serial No. 593,221.

1. A safety envelop including a body portion, a side flap, end flaps provided with interiorly arranged tongues projecting at the top of the side flap and arranged to fold outwardly over the same to form interior loops for indicating whether the flap has been surreptitiously opened, and a top or sealing flap arranged to overlie and engage the said tongues, the line of fold of the tongues being carried below the line of fold of the top or sealing flap to enable the latter to be severed without cutting or tearing the tongues.

2. A safety envelop including a body portion, a side flap provided in its upper edge with a recess, end flaps having interiorly arranged tongues located at the recess of the side flap and foldable outwardly over the side flap at the recess to provide interior projecting loops, and a top or sealing flap arranged to fold over and engage the tongues, the line of fold of the tongues being carried below the line of fold of the top or sealing flap to permit the latter to be severed without cutting or tearing the loops formed by the tongues.

3. A safety envelop including a body portion, a side flap, end flaps provided with interior tongues projecting at the top of the side flap and arranged to fold outwardly on the same to form interior loops for indicating whether the envelop has been surreptitiously opened, and a top or sealing flap arranged to overlie and engage the said tongues, the outer ends of the tongues being extended beyond the edge of the sealing flap to permit a stamp to seal the tongues, the top or sealing flap and the side flaps, and the line of fold of the tongues being carried below the line of fold of the top or sealing flap to permit the latter to be severed without cutting or tearing the loops formed by the tongues.

1,013,558. BRUSH. ROBERT J. MONTGOMERY and WEBSTER H. HILL, Chicago, Ill., assignors to Sanitax Brush Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 20, 1911. Serial No. 609,602.

1. In a brush, the combination with a chambered back and a bristle-holding frame, of movable clamping means located in said back above said frame and adapted to engage said frame.

2. In a brush, the combination with a back comprising an upper and a lower plate connected together and forming a chamber between them, of a bristle-holding frame adapted to be secured to said lower plate member of the frame, and movable clamping means located in said chamber and carried by said lower plate member, said clamping means being adapted to engage said frame.

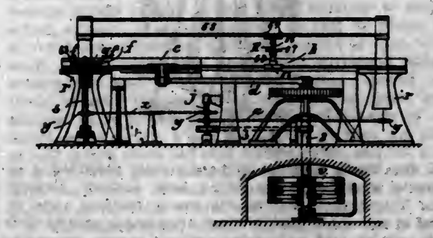
3. In a brush, the combination with a chambered back and a bristle-holding frame, of movable arms located in said chambered back, the ends of said arms projecting from said back at opposite sides thereof and adapted to engage the edge of said frame, and means for simultaneously moving said arms.

4. In a brush, the combination with a chambered back and a bristle-holding frame, of means at the forward part of the said back for engaging and holding said frame, movable arms located in said chambered back, the ends of said arms projecting from said back at opposite sides thereof and adapted to engage the edge of said frame, and means for simultaneously moving said arms.

5. In a brush, the combination with a chambered back and a bristle-holding frame, of movable arms located in said chambered back, the ends of said arms projecting from said back at opposite sides thereof and adapted to engage the edge of said frame, and an operating lever pivoted to said back and loosely connected at opposite sides of the pivot to said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,013,559. MACHINE FOR POLISHING FACETS AND SURFACES. EMIL OFFENBACHER, Nuremberg, Germany. Filed Jan. 2, 1908. Serial No. 409,098.



1. In a polishing machine the combination with the frame work of a beam shaped tool carrier, of polishing tools and means for connecting these tools with the said tool carrier, a crank mechanism for causing the said tool carrier to be bodily reciprocated longitudinally, a longitudinal slot in each of the ends of the said tool carrier, an eccentric adapted to work in each of the said slots, two vertical shafts carrying the said eccentric under the same angle and means for causing the said vertical shafts to rotate at the same speed and in the same direction, substantially as and for the purpose set forth.

2. In a polishing machine, a frame, a table on the frame, a tool carrier extending the entire length of said table, a shaft, a wheel on said shaft, a crank connected to said wheel and said tool carrier by means of a connecting rod whereby the carrier may be reciprocated longitudinally, and means comprising an eccentric whereby the carrier may be reciprocated transversely.

3. In a polishing machine, a frame, a table on the frame, a trough shaped tool carrier extending from end to end of said table, a shaft, a wheel on said shaft, a crank connected to said wheel and to said tool carrier through the medium of the connecting rod whereby the carrier may be reciprocated longitudinally, said tool carrier having slots in its opposite ends, shafts extending through said slots, eccentrics on the ends of said shafts, and means for rotating said eccentrics in the same direction from said first mentioned shaft whereby said tool carrier is reciprocated transversely of the frame.

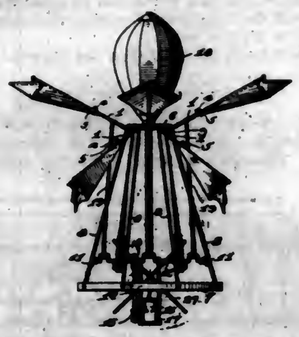
4. In a polishing machine, a frame, a table on the frame, a tool carrier, means for reciprocating said tool carrier longitudinally of the table, means for reciprocating said tool carrier transversely of the table, beams supported above the table on each side thereof, clamps adjustable on said beams and means for raising and lowering said clamps with relation to the table.

5. In a polishing machine, a frame, a table on the frame, beams horizontally disposed above the table, clamps disposed between said beams and said table for the purpose specified, and an elongated tool carriage horizontally disposed and having flanges, said carriage being above said table and having apertures through its end portions, ver-

tically disposed and rotatable shafts through said apertures, eccentric disks carried by said shafts, guides oppositely disposed and secured to the inside surfaces of said flanges, a cross head having slidable engagement with said guides and coacting with said eccentric for imparting lateral reciprocating motion to said carriage, and means for imparting longitudinal reciprocating motion to the said tool carriage.

[Claim 6 not printed in the Gazette.]

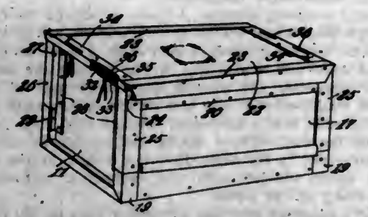
1,013,560. WING FOR FLYING-MACHINES. ANDREW S. OUTCALT, Rockbridge, Wis. Filed Nov. 18, 1909. Serial No. 527,947.



1. In a flying machine of the character described, a vibratable wing consisting of an arm, foldable diagonal arms hinged to said arm, transverse foldable arms secured at one end to said diagonal arms and hinged at their other end to said main arm, resilient means connecting said main arm with said diagonal arms and serving to open them to expanded position, and flexible material covering the space between said main arm and said hinged arms.

2. In a flying machine of the character described, a vibratable wing consisting of an arm, foldable diagonal arms hinged to said arm, transverse foldable arms secured at one end to said diagonal arms and hinged at their other end to said main arm, resilient means connecting said main arm with said diagonal arms and serving to open them to expanded position, flexible material covering the space between said main arm and said hinged arms, and a pitman hinged to said main arm.

1,013,561. FOLDING BOX. HENRY PAUL, Forreston, Ill. Filed June 7, 1911. Serial No. 631,777.



In a folding box, a bottom, sides and ends foldably connected with the bottom, longitudinally extending guides carried by and extending beyond the outer faces of the sides, longitudinally extending guides at the sides of the bottom and extending beyond the outer faces thereof, and a cover having flanges at its sides slidable longitudinally into engagement with the guides upon the sides whereby to be held in position to close the box when set up and slidable longitudinally into engagement with the guides at the sides of the bottom whereby to be held assembled with the box when folded.

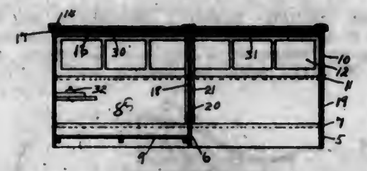
1,013,562. FIRELESS BROODER. EDGAR W. PHILO, Elmira, N. Y. Filed Nov. 19, 1910. Serial No. 593,273.

1. In a fireless brooder, a rectangular receptacle having a bottom and an open top, transverse partitions therein adjacent each end arranged in the upper portion of the receptacle and of materially less width than the depth of the receptacle, depending flexible curtains secured to said partitions, said partitions and curtains separating the receptacle into end compartments and a central compartment, supports secured to the partitions, a mattress carrying-frame mounted on said supports and of less width than the width of the receptacle, thereby forming spaces between the carrying frame and the inner faces of the receptacle, frames fixed in said spaces, and a fabric covering for said frames whereby ventilation around the mattress is provided.

2. In a fireless brooder, a rectangular receptacle having side openings near each end, transverse partitions in the receptacle of less width than the depth of said receptacle, flexible curtains depending from the partitions, said partitions and curtains dividing the receptacle into two end compartments and a central compartment, a mattress carrying-frame adjustably-supported within the central compartment and of less width than the width of the receptacle thereby providing spaces at each side of the carrying frame, and ventilating means disposed in said spaces, said ventilating means providing for the passage of air around the mattress.

3. In a fireless brooder, a receptacle divided into communicating compartments, partitions forming said compartments and each comprising a stationary section and a curtain section, a mattress carrying-frame adjustably-mounted in one of said compartments and of materially less width than the width of the receptacle forming spaces between the frame and the sides of the receptacle, and ventilating means mounted in said spaces, whereby passage for air around the mattress is provided.

1,013,563. SECTIONAL COOP. EDGAR W. PHILO, Elmira, N. Y. Filed Dec. 5, 1910. Serial No. 595,635.



1. In a sectional coop, a rectangular base section having a rabbeted upper edge, a transverse partition dividing said section into two compartments, a removable floor for one of said compartments located intermediate the top and bottom edges of said base section, a top section having a rabbeted lower edge to fit with the rabbeted edge of the base section, a slidable screen in said top section, a depending flexible swinging partition carried by said screen in line with and of a height sufficient to have its lower edge meet with the partition in said base section, and a cover hinged to said top section.

2. In a sectional coop, a base section having a central transverse partition dividing the section into compartments, a removable floor for one of said compartments supported intermediate the upper and lower edges of said base section, an intermediate section having rabbeted upper and lower edges, the latter of which fits with a rabbeted upper edge on the base section, a top section having a rabbeted lower edge to fit with either the rabbeted upper edge of the intermediate section or the rabbeted edge of the base section, a hinged cover carried by said top section, a removable partition carried by said intermediate section and of less height than the walls of the section, a slidable screen carried by the top section, and a swinging flexible partition carried by the screen, said partitions of the base section, the intermediate section and the top section being disposed in vertical alinement to form a continuous partition from the base to the top of said coop.

1,013,564. COMBINED TIRE-HOLDER AND TRUNK. JULES V. PRATENER, New Haven, Conn. Filed Sept. 12, 1911. Serial No. 648,950.

1. A tire holder and trunk consisting of a casing having a concentric band within the same, combined with a cover adapted to fit telescopically over the casing and having a concentric band to fit over the band in the casing, an opening in the cover, and a lid to close the same.

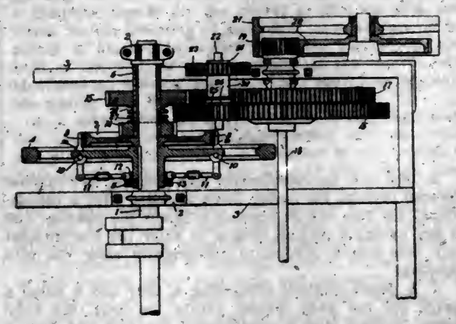
2. A tire holder and trunk consisting of a casing having a concentric band within the same, a plate extending over the lower portion of the band forming a receptacle combined with a cover adapted to fit telescopically over the casing, said cover formed with an opening in its upper portion, and a lid hinged to the cover and adapted to close said opening.

3. A tire holder and trunk consisting of a casing having a concentric band within the same, a plate extending over the lower portion of the band forming a receptacle, combined with a cover adapted to fit telescopically over the casing, said cover formed with a concentric band adapted to fit telescopically over the band in the casing, said cover also formed with a segmental opening within the circumference of the band, and a lid hinged to the cover and adapted to close said opening.

1,013,565. TRANSMISSION-GEARING. EDWIN F. PRICE, Upper Sandusky, Ohio, assignor to The Ohio Manufacturing Company, Upper Sandusky, Ohio, a Corporation of Ohio. Filed Feb. 2, 1911. Serial No. 606,110.

1. The combination, with a driving shaft and a driven shaft, of a fly wheel mounted on said driving shaft, a clutch member loosely mounted on said driving shaft, cooperating clutch members carried by said fly wheel, a shifting device for said last-mentioned clutch members, a driven gear mounted on said driven shaft, a driving gear operatively connected with said first-mentioned clutch member, movable toward and away from the same and having a neutral position between said first-mentioned clutch member and said driven gear.

2. The combination, with a driving shaft and a driven shaft, of a fly wheel rigidly secured to said driving shaft, a sleeve rotatably mounted on said driving shaft, a clutch member rigidly secured to said sleeve adjacent to said fly wheel, cooperating clutch members carried by said fly wheel and adapted to engage said first-mentioned clutch member, a shifting device for said last-mentioned clutch members, a driven gear mounted on said driven shaft and spaced away from said first-mentioned clutch member, and a driving gear slidably mounted on said sleeve, held against rotation relatively thereto and adapted to be moved into mesh with said driven gear or into a neutral position between said driven gear and said friction drum.



3. The combination, with a driving shaft and a driven shaft, of a fly wheel rigidly secured to said driving shaft, a sleeve rotatably mounted on said driving shaft, a clutch member rigidly secured to said sleeve adjacent to said fly wheel, cooperating clutch members on said fly wheel, two driven gears of different diameters carried by said driven shaft, two driving gears of different diameters slidably mounted on said sleeve and held against rotation relatively thereto, the smaller of said driving gears being adapted to be moved into mesh with the larger of said driven gears or into a neutral position between the larger of said driven gears and said friction drum, and the larger of said driving gears being adapted to be moved into mesh with the smaller of said driven gears or into a neutral position on the outer side of said driven gear.

4. The combination, with a driving shaft and a driven shaft, of a sleeve loosely mounted on said driving shaft, means for connecting and disconnecting said sleeve with said driving shaft, two driven gears carried by said driven shaft, two driving gears slidably mounted on said sleeve, held against rotation relatively thereto and adapted to be moved into and out of mesh with the respective driven gears, a countershaft supported adjacent to said driving shaft, a sleeve mounted on said countershaft, a pinion secured to said sleeve and adapted to be engaged by one of said driving gears when the latter is moved to its outermost position, a second pinion slidably mounted on the last-mentioned sleeve, held against rotation relatively thereto and adapted to be moved into and out of mesh with one of said driven gears, said driven gears being spaced away from said clutch member and the first-mentioned pinion being spaced away from said driven gears, whereby one of said driving gears may be moved into a neutral position between its driven gear and its clutch member and the other of said driving gears may be moved into a neutral position between its driven gear and said first-mentioned pinion.

5. The combination, with a driving shaft and a driven shaft, of a sleeve loosely mounted on said driving shaft, means for connecting and disconnecting said sleeve with said driving shaft, two driven gears carried by said driven shaft, two driving gears slidably mounted on said sleeve, held against rotation relatively thereto and adapted to be moved into and out of mesh with the respective driven gears, a countershaft supported adjacent to said driving shaft, and two pinions mounted on said countershaft, one of which is adapted to engage one of said driven gears and the other of which is adapted to be engaged by one of said driving gears.

1,013,566. PUZZLE-PADLOCK. WINFIELD S. ROGERS, Bantam, Conn. Filed Apr. 28, 1911. Serial No. 623,835.

1. In a lock, the combination with a casing, of a tumbler located therein, the casing being provided with a conventional key hole and an opening adjacent the tumbler, and

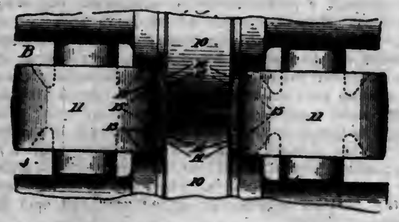
a supposititious key for entering the conventional key hole and an actual key for entering the said opening.

2. In a lock, the combination with a casing, of a tumbler located therein, the casing being provided with a conventional key hole and an opening adjacent the tumbler, and a key having a portion formed to enter the conventional key hole and a portion to concurrently enter the said opening.

3. A puzzle padlock comprising a body and a hasp, a catch for the hasp carried within the body, the body being provided with a conventional key hole and with a plurality of symmetrical openings promiscuously disposed, one of such symmetrical openings being located adjacent the said catch, and a key embodying a supposititious key formed to enter the keyhole and having a portion conforming in contour to the symmetrical openings and constructed and adapted to engage and actuate the catch when inserted in the said adjacent opening.

4. A puzzle lock comprising a body portion having a key hole of conventional form and a plurality of promiscuously disposed openings, a catch mounted within the body and located adjacent one of said promiscuously disposed openings, and a key embodying a portion formed for entering the said conventional key hole, and a portion formed for entering one of said promiscuously disposed openings and constructed and adapted to engage and actuate the catch when inserted in said adjacent opening and a flexible connection between said key portions.

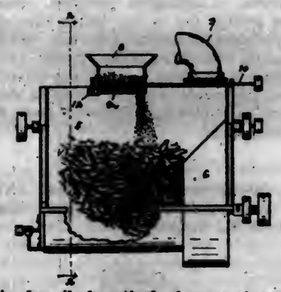
1,013,567. METHOD OF PRODUCING I-BEAMS. HUGO SACK, Dusseldorf, Germany; Adelheid Sack widow and heir of said Hugo Sack, deceased. Filed Nov. 30, 1908, Serial No. 465,410. Renewed Oct. 4, 1909. Serial No. 520,829.



1. The method of producing I-beams, which consists in first rolling an I-bar having a web and non-parallel nontapering flanges of substantially the desired width and thickness, then passing said bar through a universal mill having its roll-axes in one plane and thereby forcing the flanges into approximate parallelism, and finally bending each pair of adjacent flanges into one plane by supporting the blank substantially at the junction of its web and flanges and applying pressure to the outer sides of the flanges in lines substantially parallel to the web.

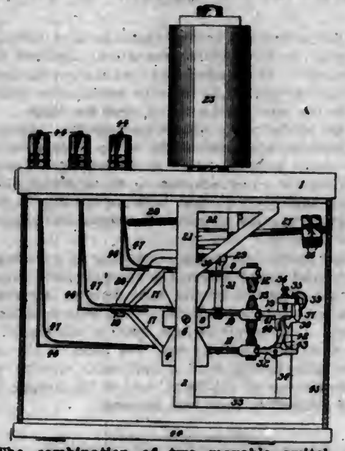
2. The method of producing I-beams, which consists in first rolling an I-bar having a web and non-parallel flanges of substantially the desired width and uniform thickness, then passing said bar through a universal mill having its roll-axes in one plane and thereby forcing the flanges into approximate parallelism, and finally bending each pair of adjacent flanges into one plane by supporting the blank substantially at the junction of its web and flanges and applying pressure to the outer sides of the flanges in line substantially parallel to the web.

1,013,568. PROCESS OF PRESERVING FODDER. JOSEPH K. SHARPE, Jr., Indianapolis, Ind. Filed Dec. 28, 1908. Serial No. 468,622.



The herein described method of preserving comminuted fodder, which consists in introducing a preservative material into and mixing it with the stream of fodder after the same has been shredded by and is being discharged from a shredding machine and while being conveyed therefrom and loosely stored.

1,013,569. ELECTRIC SWITCH. PERCY L. SIBOLS, Swissvale, Pa. Filed Dec. 20, 1910. Serial No. 598,409.



1. The combination of two movable switch elements adapted to mutually engage, an actuating element, connections between the switch elements and the actuating element to move the switch elements toward each other, one of the said connections being yielding, and means arranged to prevent the movement of one of the switch elements while the switch elements are engaged.

2. The combination of two movable switch elements adapted to mutually engage, an actuating element, connections between the switch elements and the actuating element to move the switch elements toward each other, one of the said connections being yielding, a stop so arranged that on the actuation of the actuating element a part of the movement of one of said switch elements toward the other may be arrested, a releasable stop to prevent backward movement of said arrested switch element, and means for releasing the said arrested switch element upon the movement of the switch elements toward their normal positions.

3. In the combination of two switch elements, operating means for moving the said switch elements toward and from each other, and means for preventing movement of one of the said switch elements in either direction after engagement of the said switch elements, and means for returning the switch elements to their open position on the release and reverse movement of said operating means.

4. The combination of three movable switch elements, one being between the other two and arranged to engage either of the same, an actuating element, connections between the switch elements and the actuating element arranged to move either of the said two switch elements and the intermediate switch element toward each other and into mutual engagement, and the other one of the said two switch elements away from the said intermediate switch element, one of the said connections being yielding, and stop devices arranged to prevent movement of the intermediate switch element while engaged with one of the other switch elements.

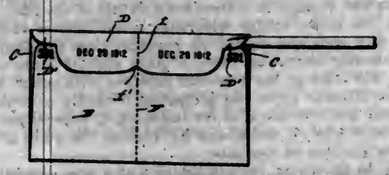
5. The combination of three movable switch elements, one being between the other two and arranged to engage either of the same, an actuating element, connections between the switch elements and the actuating element arranged to move either of the said two switch elements and the intermediate switch element toward each other and into mutual engagement, and the other one of the said two switch elements away from the said intermediate switch element, one of the said connections being yielding, and a stop arranged to prevent the yielding connection from yielding except in one direction.

[Claims 6 and 7 not printed in the Gazette.]

1,013,570. METAL PIPE-FOOT WITH WOODEN JACKET FOR ORGAN-PIPES. WILLIAM A. SOMMERHOF, Erie, Pa. Filed Feb. 16, 1911. Serial No. 608,943.

A pipe foot comprising a hollow wooden body with a metallic toe applied to one end thereof and a metallic lining integral with the said toe and extending throughout the length of the wooden body.

1,013,571. ENVELOP. WILLIS F. STEVENS, Richmond, Va., assignor to Duplex Envelope & Printing Company, Richmond, Va., a Corporation of Virginia. Filed July 11, 1911. Serial No. 637,916.



1. A contribution envelop formed of a body and main flap connected at the sides and bottom to form a pocket, and a sealing flap gummed for a portion of its length only connected at one edge to the body and cut away beyond the gummed portion in proximity to the ends of the envelop for a portion only of the width of the sealing flap, thereby forming ungummed extensions, whereby a complete closure for the pocket is afforded with provision for the insertion of an opener, and the face of the pocket is exposed below the extension and beyond the body of the flap for the impression of the contributor's identification number directly on the pocket in line with the sealing flap.

2. A contribution envelop formed of a body and main flap connected together at the bottom and side edges and along a central line perpendicular to the bottom to form plural pockets arranged edge to edge, there being a line of weakness between the pockets, whereby they may be torn apart without being opened, a gummed sealing flap connected at one edge to the edge of the body adjacent the pocket openings, said sealing flap having its ends ungummed and of reduced width to expose the wall of the pockets below said ends and beyond the body of the flap and in line with the flap for the impression of an identification number and to form an opening for the insertion of an opener, an identification number on the wall of the pockets in line with the sealing flap, and contribution classification data on the main flap below the sealing flap, whereby the openings to the pockets and classification data are sumultaneously exposed to view.

1,013,572. METHOD OF SHAPING FILAMENTS. RUPPERT W. SUMAN, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed May 31, 1911. Serial No. 630,432.

1. The method of shaping filaments which consists in winding and forming the wire or filamentary thread in a coil comprising a suitable number of convolutions and separating the convolutions in a direction perpendicular to the axis of the coil so as to cause the convolutions to lie side by side.

2. The method of producing a shaped filament comprising a plurality of portions of the same recurring shape which consists in winding and forming the wire in a coil comprising a plurality of similar convolutions, the wire being carried through successive bends in opposite directions, and separating the convolutions of wire in a direction transverse thereto.

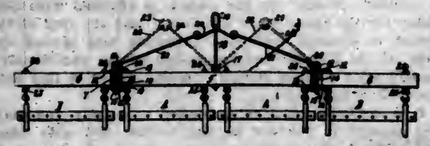
3. The method of producing a zig-zag or sinuous filament which consists in winding and forming the wire from which the filament is to be produced in a coil comprising a plurality of superposed convolutions resembling a figure eight and separating the convolutions in a direction transverse thereto.

4. The method of producing a shaped filament comprising a plurality of portions of the same recurring shape which consists in winding and forming the wire from which the filament is to be produced in a plurality of convolutions on a shaping device so that the homologous recurring portions shall be shaped upon the same part of the device and removing the wire therefrom and separating its convolutions in a direction substantially in the plane in which a convolution is wound, so as to cause the convolutions to lie side by side.

5. The method of producing a sinuous zigzag filament of tungsten wire which consists in winding and forming the wire in a plurality of convolutions on a shaping device so that analogous recurring portions shall be shaped on the same part of the device, heating the wire while on the device to a sufficient temperature to set its bends, and then removing the wire from the device and separating the convolutions in such manner as to cause them to lie side by side.

[Claim 6 not printed in the Gazette.]

1,013,578. DRAFT-BAR ATTACHMENT FOR HARROWS. HENRY WALDSCHMIDT, Benson, Ill. Filed Mar. 15, 1910. Serial No. 549,553.



1. A draft-bar for a harrow, consisting of a plurality of hinged sections, the inner ends of certain of said sections being beveled on the upper side and extending to a point below the center of said sections, from which point the ends are squared, the matching ends of the other section being beveled and squared in a manner similar to the ends of the adjacent sections, the squared ends of the sections abutting when the sections are open or in a flat position, and the bevel ends of the sections abutting when said first mentioned sections are raised, a hinge connecting said sections, and a draft appliance also connected with said sections.

2. A draft-bar for harrows, consisting of a plurality of sections, hinge plates attached to the matching ends of each of said sections and arranged to overlap, spacing collars between said plates, a pintle for connecting said plates, said pintle carried through said collars, and a draft appliance connected with said pintles.

3. A draft-bar for a harrow, consisting of a plurality of hinged sections, the inner ends of the outside sections having portions beveled oppositely to each other, the opposite ends of the intermediate section being also beveled and adapted to engage with the bevel portions of the outside sections when raised to limit the movement of said outside sections, plates attached to both the outside and intermediate sections, spacing collars between said plates, a pintle passing through said plates and collars and forming a hinge connection between said plates, and a draft appliance connected with said pintles.

4. A draft-bar for a harrow, consisting of a plurality of hinged sections, the inner ends of certain of said sections being beveled on the upper side, said bevel portion extending to a point below the center of said sections, from which point the ends are squared, the matching ends of the other section being beveled and squared in a corresponding manner to the ends of the adjacent sections, the squared ends of the sections abutting when the sections are open or in a flat position, and the bevel ends of the sections abutting when the said first mentioned sections are raised, hinge plates connecting said sections, a pintle passing through said plates having an eye for the attachment of draft appliances, and a pin passing through said hinge plates and one of said sections for locking the sections in an open position.

5. A draft-bar for harrows, consisting of a plurality of sections, the ends of certain of said sections being beveled, the matching ends of the other section being beveled to correspond thereto, hinge plates attached to the ends of each of said sections and arranged to overlap and a pintle for connecting said plates.

[Claim 6 not printed in the Gazette.]

1,013,574. MAGNETIC CHUCK. OAKLEY S. WALKER, Worcester, Mass. Filed Aug. 18, 1909. Serial No. 513,524.

1. In a magnetic chuck, a case or shell, magnetizing coils contained therein, and a circular face plate for holding the work, consisting of a skeleton plate comprising an annular rim, a center piece, radiating bars, connecting said center and said rim, with reëntrant triangular projections between said bars, and V-shaped pieces inclosing said triangular projections, with said V-shaped pieces and said skeleton plate of opposite polarities.

2. In a magnetic chuck, a circular work holding face plate comprising two sections of opposite polarity, one section consisting of an integral skeleton plate having a center piece and an annular rim connected with the center piece by radiating bars, and having triangular projections extending from the rim into each space between the radiating bars, and a second section comprising a center piece, an annular plate, and V-shaped sections integral with said center piece, and said plate, and inclosing said triangular projections with nonmagnetic gaps between the sections of opposite polarity.

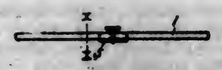
3. In a magnetic chuck, a shell or case having a central core, a series of outer concentric cores, magnetizing coils surrounding said cores, a skeleton plate forming part of a work holding face plate having radiating openings, and a second section inclosed in said openings and in contact with said central core, and with said outer series of concentric cores with nonmagnetic gaps between the sections of opposite polarity.

4. In a magnetic chuck, a work holding face plate comprising two sections of opposite polarity, one of said sections consisting of a skeleton plate having a rim, a center piece, radiating connecting bars, a reëntrant projection between said bars, the other of said sections consisting of a center piece, a concentric annular plate and V-shaped pieces integral at their apices with said center piece, and connected near their outer ends with said annular plate.

5. In a magnetic chuck, a work holding face plate comprising two sections, one of said sections consisting of a skeleton plate having a center piece, an outer rim, connecting radiating bars, reëntrant projections from said rim between said radiating bars, the second section consisting of a center piece, a series of V-shaped pieces connected at their apices with said center piece, an annular plate connecting said V-shaped pieces, and magnetizing coils with inclosed magnetic cores with said second section.

[Claims 6 to 13 not printed in the Gazette.]

1,013,575. ERASER. JAMES V. WASHBURNE, Fulton, N. Y. Filed Dec. 8, 1910. Serial No. 596,266.



1. An eraser holder comprising a tubular case having opposite sides provided with coinciding lengthwise slots, a plate slidable along one side of the tube and provided with a central threaded aperture and studs at opposite sides of the aperture, said studs projecting through the adjacent slot and into the tube to guide the plate in its longitudinal movement, and a clamping screw passed through both slots and engaged in a threaded aperture in the plate.

2. An eraser holder comprising a flat tubular case open at both ends and having its opposite sides provided with coinciding lengthwise slots, a plate slidable along one of the flat sides of the tube and provided with studs spaced some distance apart and projecting inwardly from the adjacent slot into the tube for interlocking engagement with suitable erasers, and means for holding the plate in operative position on the tube.

3. In an eraser, the combination of a case consisting of a flattened tube and provided in its opposite sides with coinciding longitudinal slots, two flat rubber strips fitted in said case and adapted to be shifted longitudinally therein, the adjacent end portions of said strips being provided with apertures coinciding with the slots of the case, a plate bearing against one side of the case and formed with two parallel studs passing through one of the slots and entering the respective apertures and provided with a central screw-threaded aperture, and a screw extending through the slots and engaging the aperture of the plate and passing between the adjacent ends of the rubber strips, said screw being formed with a head bearing on the opposite side of the case and serving as a thumb-piece for shifting the rubber strips as set forth.

1,013,576. SAMPLE-CASE. ANTHONY W. WERMERSKIRCHEN, Chicago, Ill. Filed Aug. 11, 1911. Serial No. 643,588.

1. A sample case, comprising, in combination, a base, side members projecting from said base, there being in the opposing flanks of said side members upwardly and rearwardly extending grooves, pivot-retaining members removably secured in said grooves, said pivot-retaining members having a plurality of spaced bearings, and a multiplicity of superposed panels, each panel having at its end laterally projecting journals constructed to engage the respective pair of bearings in said pivot-retaining members.

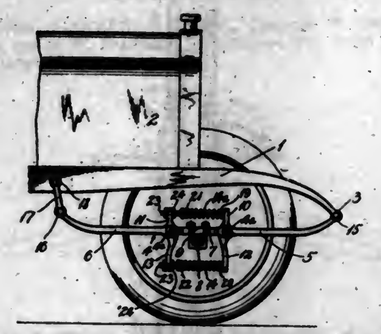
2. A sample case, comprising, in combination, a base, side members at one end of, and projecting upwardly from said base, there being in the opposing flanks of said side members rearwardly inclined grooves, pivot-retaining members removably secured in said grooves, said pivot retaining members having a multiplicity of stepped apertures constructed to afford bearings, a series of panels, said panels having each at one end laterally projecting pivots constructed to engage the proper bearings in said pivot-retaining members, said panels, when in horizontal position, being stepped, as described.

3. A sample case, comprising, in combination, a base, side members at one end of, and projecting upwardly from said base, there being in the opposing flanks of said side members rearwardly inclined grooves, pivot-retaining members in said grooves, said pivot-retaining members having a series of stepped apertures affording bearings, a series of panels upon said base between said side members, said panels having at one end laterally projecting pivots constructed to engage the proper apertures in said pivot-retaining members, and a cover pivotally connected at one end to said side members and constructed to fold over and cover said panels, as described.

4. A sample case, including, in combination, a base, side members at one end and projecting upwardly from said base, pivot-retaining members in said side members, said pivot-retaining members having a series of bearings, a series of panels pivoted at one end in said pivot-retaining members, and a cover pivoted at one end to said side members, one of said panels being in book form, there being on each of the other panels identification marks, as set forth.

1,013,577. VEHICLE-SPRING. FRANK WHEELER, Orange, Cal. Filed July 5, 1910. Serial No. 570,493.

A vehicle spring structure comprising an axle engaging member, bell-crank levers pivoted to the opposite ends of said axle member, and each formed with long and short arms, their shorter arms extending below the axle, a load supporting compression spring set between the ends of the depending shorter arms, the said bell-crank levers also having abutment arms extending above the axle, a compression rebound spring set between said abutment arms,



one bell-crank lever having integral spring seats upon its depending short arm and its abutment arm, while the other bell-crank lever carries adjustable spring seats upon its arms adapted to be tightened against said springs sufficiently to prevent their displacement.

1,013,578. FENCE-POST. HARRY F. ABBOTT, Jackson, Mich. Filed Dec. 15, 1910. Serial No. 597,432.

1. A reinforced post comprising a tapering concrete body and an enlarged base, and a central longitudinally-extending reinforcing member having a cross-shaped cross section and having its ends split and the parts bent outward to form centering arms, the upper arms extending to the surface of the upper end of the post and the lower arms extending into the enlarged base.

2. A reinforced post having a concrete body, and a self-centering reinforcement embedded therein, comprising a plurality of narrow plates joining at a common line throughout their length, both ends of each plate bent outward so as to contact with the surface of the mold, and thereby center the reinforcement when the post is molded.

1,013,579. OIL-WELL PUMP. BENJAMIN ANDREWS, Los Angeles, Cal. Filed Sept. 19, 1910. Serial No. 582,667.

1. A pump of the class described having a vertical traveling member, means for reciprocating said member, a valve in connection with said member through which

the oil may pass upwardly, and means for conducting oil under pressure to said valve to flush the same.

2. In a pump of the class described, in combination, a tubular sucker rod having a plunger formed at the lower end thereof, a barrel surrounding said plunger, said plunger and said barrel having valves in the lower ends thereof respectively, means for reciprocating said sucker rod, a tubing connecting with said valve, means for reciprocating said tubing to reciprocate said barrel, and means for admitting oil under pressure through said tubing and down said plunger to the valve carried by said plunger to flush the same.

3. In a pump of the class described, in combination, a tubular member, a valve mounted therein, a wash pipe extending longitudinally with said tubular member and coöperating therewith to form an annular duct, means for conducting oil under pressure to said duct, said wash pipe having vents for projecting said oil under pressure to said valve to flush the same.

4. In a pump of the class described, in combination, a casing, a sucker rod extending downwardly into said casing, means for temporarily supporting said sucker rod in a fixed position, a tubing surrounding said sucker rod, a barrel connected with said tubing, said sucker rod having a plunger extending into said barrel, a valve in the lower end of said plunger, a second valve in the lower end of said barrel, said tubing being of larger diameter than said sucker rod and forming a receiving space thereabout, means for introducing oil under pressure into said receiving space, and means for conducting oil from said receiving space to one of said valves.

5. A pump of the class described, comprising a reciprocating barrel and a plunger capable of reciprocation therein, the barrel having a space between it and the plunger near its upper end for forming an oil chamber while the plunger is formed with a concentric chamber within its lower end forming an oil chamber, the said plunger having openings for establishing communication between the two oil chambers and means for forcing oil into the outer chamber whereby it will lubricate and prevent the rising of sand between the barrel and the plunger and will find an outlet within the said plunger.

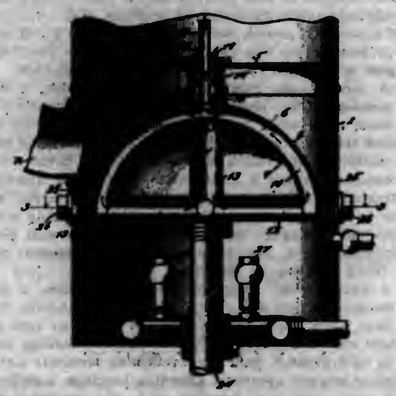
[Claims 6 to 8 not printed in the Gazette.]

1,013,580. HOLDER FOR POCKET-BOOKS AND THE LIKE. JOSEPH BABST, Hoboken, N. J., assignor to William Schimper & Company, Hoboken, N. J., a Corporation of New Jersey. Filed May 5, 1909. Serial No. 494,015.

1. An article of the character described comprising two hinge members composed of sheet metal and adapted to receive a separate pintle for holding them together, and a pair of shackles provided with transverse holes for receiving the pintle, the said hinge members being cut away for receiving the perforated ends of the shackles whereby the article may be assembled by passing the pintle through the hinge members and the shackles.

2. An article of the character described comprising two hinge members composed of sheet metal and adapted to receive a separate pintle for holding them together, a pair of shackles provided with transverse holes for receiving the pintle, the said hinge members being cut away for receiving the perforated ends of the shackles whereby the article may be assembled by passing the pintle through the hinge members and the shackles, one knuckle on opposite ends of each hinge member being provided with a slot, and the said pintle being composed of springy material and having its ends bent into engagement with the said slots for also yieldingly holding the assembled hinge members in their closed position.

1,013,581. GAS WATER-HEATER. WILLIAM B. BASTIAN, Chicago, Ill., assignor to W. B. Bastian Mfg. Co., Pierre, S. D., a Corporation of South Dakota. Filed Jan. 28, 1911. Serial No. 605,225.



1. A water heater having, in combination, a boiler, a heater, proper, having a shell having double parallel walls providing between them a water-circulating space, hollow, intersecting branches communicating at their outer ends with said water-circulating space at different distant points, a water-circulating pipe communicating with the boiler and with said water-circulating space and a second water-circulating pipe communicating with the boiler and with said hollow branches at their point of intersection.

2. A water-heater having, in combination, a boiler, a heater, proper, having a dome-shaped shell having double parallel walls providing between them a water-circulating space whose course is continuously upward, hollow, intersecting branches communicating at different, distant points, a water-circulating pipe communicating with the boiler and with said hollow branches at their point of intersection, and a second water-circulating pipe communicating with said water-circulating space.

3. A water-heater having, in combination, a boiler, a heater, proper, having a dome-shaped shell having double parallel walls providing between them a water-circulating space whose course is continuously upward, hollow, intersecting branches communicating with the lower portion of said water-circulating space at different, distant points, a water-circulating pipe communicating at its upper end with the lower portion of the boiler and at its lower end with said hollow branches at their point of intersection, and a second water-circulating pipe communicating at its upper end with the upper portion of the boiler and its lower end with the upper portion of said water-circulating space.

4. A water-heater having, in combination, a boiler, a heater, proper, having a dome-shaped shell having double parallel walls providing between them a water-circulating space whose course is continuously upward, hollow, intersecting branches communicating at their outer ends with the lower portion of the water-circulating space at different, distant points, a circulating passage for the comparatively cold water communicating with said branches at their point of intersection and with the lower portion of the boiler, and a second circulating passage for the comparatively hot water communicating with the upper portion of said circulating space and with the upper portion of the boiler.

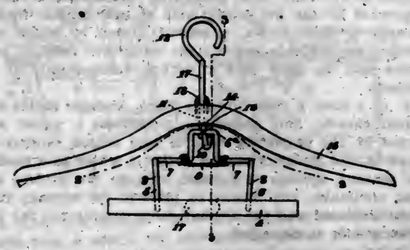
5. A water-heater having, in combination, a boiler, a heater, proper, having a dome-shaped shell having double parallel walls providing a water-circulating space through which the water flows in a continuously upward direction, hollow, intersecting branches, on the under side of the shell, communicating with the lower portion of the water-circulating space at different, distant points so as to permit the heat from the burner to pass upward between them and to come into contact with the inner wall of the shell, a water-circulating passage communicating with the lower portion of the water-circulating space aforesaid and with the lower portion of the boiler, and a second water-circulating passage communicating with the upper portion of said water-circulating space and with the upper portion of the boiler.

[Claims 6 to 11 not printed in the Gazette.]

1,013,582. RESTAURANT SIGNALING DEVICE. JEAN BEDINI, New York, N. Y., assignor of one-half to Frederick F. Proctor, Jr., New York, N. Y. Filed Mar. 28, 1911. Serial No. 617,353.

A signaling device for use in restaurants and the like comprising, in combination, a hollow standard adapted to be supported in an upright position on a table, a rod slidable vertically in said standard and provided with a longitudinal slot, a vertical signal plate secured in the upper part of said slot, a projection carried by the standard and entering the slot below said plate to prevent the rod from turning, a shield in which said plate is normally concealed, a spring for elevating the rod and plate, and a catch for holding them depressed.

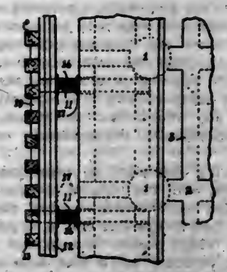
1,013,583. GARMENT-HANGER. CHARLES W. BROWN and ORSON W. BRENIZER, Philadelphia, Pa. Filed May 8, 1909. Serial No. 494,816.



1. In a garment hanger, the combination of a pair of members each of which is formed of wire bent to form parallel pivot portions, a central loop and downwardly extending leg portions, means for pivotally holding the pivot portions of said members adjacent each other, a pair of garment clamping bars carried by the leg portions of said members, and a wire bent to form an eye surrounding and pivoted on a part of the loop of one of said members, one end of said wire extending upwardly from said eye and forming a suspension arm, and the other end of said wire extending from said eye and forming a cam movably positioned to engage the loop of the other member and force said loops apart and thereby force said bars toward each other.

2. In a garment hanger, the combination of a pair of members each of which is formed of wire bent to form parallel pivot portions, a central loop and downwardly extending leg portions, means for pivotally holding the pivot portions of said members adjacent each other, a pair of garment clamping bars carried by the leg portions of said members, and a wire bent to form an eye surrounding and pivoted on a part of the loop of one of said members, one end of said wire extending upwardly from said eye and forming a suspension arm and the other end of said wire extending from said eye and forming a cam and a hook on its free end, said cam being positioned to engage the loop of the other member and force said loops apart and thereby force said bars toward each other, and said hook being positioned to engage the loop acted upon by the cam and limit the movement of said wire.

1,013,584. SPRING-FENDER FOR DOCKS. HENRY J. BRUNNIER, Oakland, Cal. Filed Mar. 15, 1911. Serial No. 614,584.



1. In a dock, a fixed dock structure, slidable beams supported transversely of the dock and projecting therefrom, a girder supported on the projecting ends of said beams, fenders supported by said girder, and springs interposed

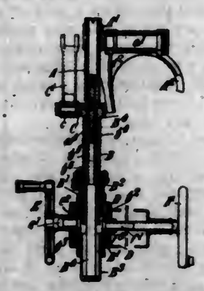
between the girder and fixed dock structure to give the fenders a resilient action, substantially as described.

2. In a dock, a fixed dock structure, slidable beams supported thereby and projecting therefrom, a girder supported by the projecting ends of said beams, fenders secured to said girder, a second girder to which said fenders are secured, and means to give the fenders a resilient effect, substantially as described.

3. In a dock, a fixed dock structure, slidable beams supported thereby and projecting therefrom, a girder supported by the projecting ends of said beams, fenders secured to said girder, a second girder to which said fenders are secured, and springs interposed between each girder and the fixed dock structure, substantially as described.

4. In a dock, a fixed dock structure, slidable beams supported thereby and projecting therefrom, a girder supported by the projecting ends of said beams, fenders secured to said girder, a second girder to which said fenders are secured, springs interposed between the girders and fixed structure, and means to prevent the springs from being displaced and the fenders from moving too far out, substantially as described.

1,013,585. ELEVATING AND SIGHTING APPARATUS OF FIELD-GUNS. GEORGE THOMAS BUCKHAM, Westminster, London, England, assignor to Vickers Sons & Maxim, Limited, London, England. Filed Aug. 20, 1909. Serial No. 513,769.



1. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a pointing screw, a ranging screw which abuts thereon and does not pass through said pointing screw, and means for connecting the said screws together located entirely at their abutting parts so that the ranging screw can be rotated independently of the pointing screw without receiving any longitudinal movement, but cannot be displaced longitudinally independently of the pointing screw.

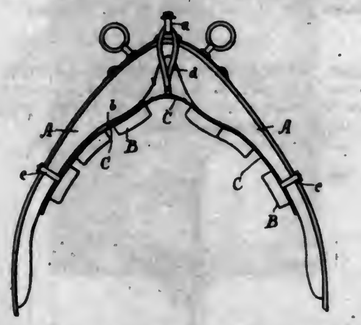
2. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a nut pivotally attached to the gun cradle, a pointing screw, a ranging screw which passes through said nut and which abuts on said pointing screw and does not pass therethrough, and means for connecting the said screws together located entirely at their abutting parts so that the ranging screw can be rotated independently of the pointing screw without receiving any longitudinal movement, but cannot be displaced longitudinally independently of the pointing screw.

3. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a nut pivotally attached to the gun cradle, a pointing screw, a ranging screw which passes through said nut and which abuts on said pointing screw and does not pass therethrough, a rotary sleeve connected with the ranging screw and actuated by said ranging hand wheel, and means for connecting the said screws together located entirely at their abutting parts so that the ranging screw can be rotated independently of the pointing screw without receiving any longitudinal movement, but cannot be displaced longitudinally independently of the pointing screw.

4. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a nut pivotally attached to the gun cradle, a pointing screw, a ranging screw which passes through said nut and which abuts on said pointing screw and does not pass therethrough, a rotary sleeve connected with the ranging screw, a spindle connecting said rotary sleeve with the ranging screw, a rotary nut engaging with the pointing screw and actuated by the pointing hand wheel, and means for connecting the said screws together located entirely at their abutting parts so that the ranging screw can be rotated independently of the pointing screw without receiving any longitudinal movement, but cannot be displaced longitudinally independently of the pointing screw.

[Claims 6 to 8 not printed in the Gazette.]

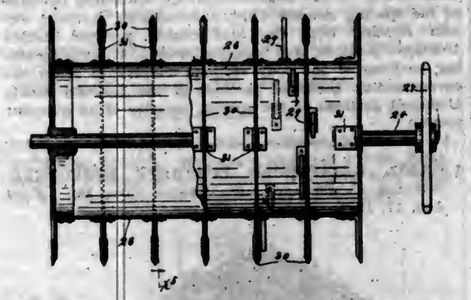
1,013,586. HARNESS-PAD. DANIEL H. CARRIGAN, Portland, Me. Filed June 11, 1910. Serial No. 566,843.



The combination of a piece of harness, with a detachable pad device therefor comprising a base member, a plurality of pads individually mounted thereon and separately detachable and attachable so as to be shiftable while the harness piece and pad device are in position on an animal, rows of fastening elements on the base member, the space between adjacent fastening elements in each row being less than the width of the pads, and fastening elements on the pads for detachably engaging appropriate fastening elements on the base member, there being a greater number of fastening elements on the base member than on the pads.

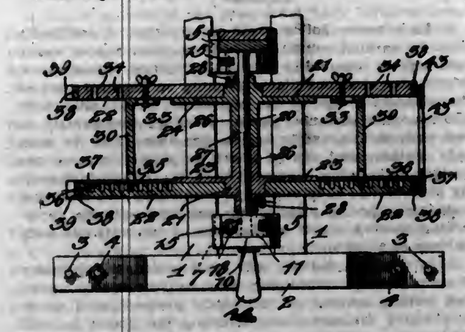
1,013,587. ROTARY PLOW. WILLIAM B. COOKE, Harvey, N. D. Filed Sept. 22, 1910. Serial No. 583,157.

1. In a machine of the kind described, a rotary member provided with a multiplicity of laterally spaced circumferentially extended guard flanges and a multiplicity of sets of circumferentially spaced teeth located between the said flanges with their outer ends terminating radially inward of the outer edges of the said flanges, and the said flanges serving to protect the said teeth, substantially as described.



2. In a machine of the kind described, a rotary member provided with a multiplicity of laterally spaced circumferentially extended guard flanges and a multiplicity of sets of circumferentially spaced teeth located between the said flanges with their outer ends terminating radially inward of the outer edges of the said flanges, and the said flanges serving to protect the said teeth, and means for rotating the said rotary member at a high speed, substantially as described.

1,013,588. REEL. GUY H. COWGILL, Hermitage, Tenn. Filed Sept. 1, 1910. Serial No. 580,069.

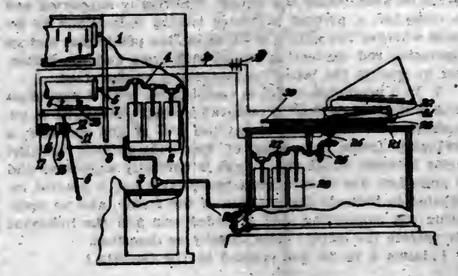


The herein described reel comprising a pair of spiders each having radial arms provided with longitudinal channels on their inner sides, the said spiders being further provided with sleeve hub members detachably connected together, a common axle shaft extending through said sleeve hub members, means securing the sleeve hub members to the shaft, reel arms having their inner ends secured in the channels of the spider arms, the reel arms of one of the heads having a series of openings, and cross bars each having one end disposed in one of said openings, and provided at the opposite end with a right angled arm detachably and adjustably connected to one of the reel arms of the other head.

1,013,589. COMBINED PIANO-PLAYER AND TALKING-MACHINE. WALTER M. DAVIS, New York, N. Y. Filed May 9, 1910. Serial No. 560,250. Renewed June 10, 1911. Serial No. 632,478.

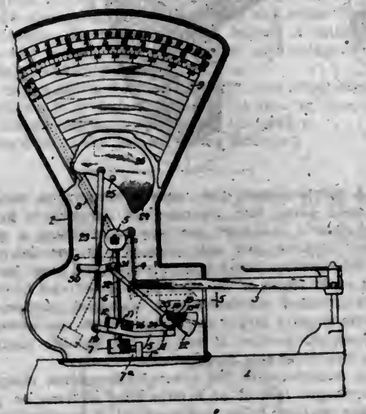
1. The combination of a piano player mechanism, including a perforated note sheet and a motor means for moving the same, a talking machine, a device for varying and controlling the speed of the said paper moving motor means, means for shifting the motor speed controlling device automatically and means on the talking machine for inaugurating the shifting of the motor speed controlling means, substantially as set forth.

2. The combination of a piano player mechanism, a music roll, a motor for moving the music roll, a device for controlling the speed of this motor, a talking machine and means controlled by the talking machine for shifting the motor speed controlling device, substantially as set forth.



3. The combination of a piano player mechanism, a music roll, a motor for moving the music roll, a motor starting device, a talking machine and means controlled by the talking machine for shifting the motor starting device, substantially as set forth.

1,013,590. SCALE. ALLEN DE VILBISS, Jr., Toledo, Ohio, assignor to Toledo Computing Scale Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 26, 1908. Serial No. 468,686.



1. In a pendulum scale, in combination with a pendulum and indicating devices, a removable weight arranged to cooperate with the pendulum at the will of the operator, a swinging frame having arms between which the weight is supported and arranged to deposit such weight on the pendulum and remove it therefrom, and means for swinging the frame; substantially as described.

2. In a pendulum scale, in combination with a pendulum and indicating devices, a removable weight arranged to cooperate with the pendulum at the will of the operator, a swinging frame consisting of two substantially parallel arms between which the weight is supported and arranged to deposit such weight on the pendulum and remove it therefrom and a cross bar, and means acting on the cross-bar to swing the frame; substantially as described.

3. In a pendulum scale, in combination with a pendulum and indicating devices, a removable weight arranged to cooperate with the pendulum at the will of the operator, a swinging frame consisting of two substantially parallel arms between which the weight is supported and arranged to deposit such weight on the pendulum and remove it therefrom and a cross-bar, and a rock shaft having a cam

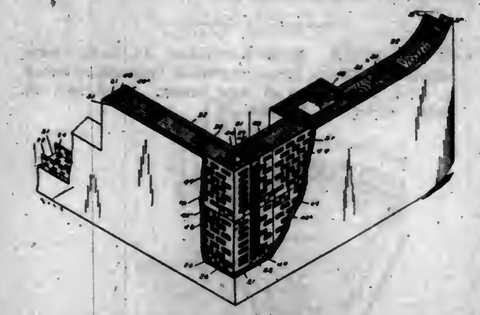
acting on the cross-bar to swing the frame; substantially as described.

4. In a pendulum scale, in combination with a pendulum and indicating devices, a removable weight arranged to cooperate with the pendulum at the will of the operator, a swinging frame consisting of two substantially parallel arms between which the weight is normally supported and a cross-bar, a pivoted indicator having indications to denote whether the weight is on or off the pendulum, and an operating rod connecting one of said arms and the indicator to operate the latter; substantially as described.

5. In a pendulum scale, in combination with a pendulum and indicating devices, a removable weight arranged to cooperate with the pendulum at the will of the operator, a swinging frame consisting of two substantially parallel arms between which the weight is normally supported and a cross-bar, one of said arms being extended, a pivoted indicator to indicate the position of the frame, and an operating rod connecting said extended arm and the indicator to operate the latter; substantially as described.

[Claims 6 to 36 not printed in the Gazette.]

1,013,591. MEANS AND APPARATUS FOR CONCRETE CONSTRUCTION. WILLIAM C. EDWARDS, Jr., Kansas City, Mo. Filed June 7, 1910. Serial No. 565,649.

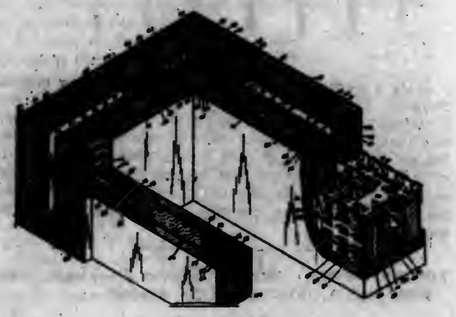


1. A reinforcement for concrete structures, consisting of a body plate, bent intermediate its ends to form reversed double U-shaped portions constituting a spacing member between two side members in parallel planes, each side member being integral with and bent from one of the outer edges of the spacing member and having inwardly-extended outwardly-bent U-shaped portions with its parts slightly larger and parallel with the corresponding U-shaped portion of the spacing member contiguous to the respective side member.

2. A reinforcement for concrete structures comprising compartments formed of interlocking sections or plates, a single section being composed of a continuous body plate whose intermediate portion is bent transversely to the body plate from two points distanced from the respective ends of the plate to form a spacing member between two side members in parallel planes, each spacing member being composed of a short intermediate portion extending transversely to the body portion, from which extend in opposite directions short portions or offsets, and from which offsets are extended in opposite directions and transversely to the body section the remaining portions of the spacing member which connect with the outer edges of the side members, the latter portions and offsets forming reversed double U-shaped portions of the spacing member, the ends of the side members being provided with inwardly-extended outwardly-bent portions adapted to inclose telescopically with one of the U-shaped portions of the spacing member of an adjacent section.

3. In concrete walls and similar structures, a reinforcement formed of body sections or plates in parallel planes, transverse spacing members or plates integral with the body sections, and studs integral with the spacing members or plates, bi-secting the longitudinal axis of the structure, each spacing member and said studs being composed of a short intermediate portion extending transversely to the body section, from which extend in opposite directions short portions or offsets, and from which offsets are extended in opposite directions and transversely to the body section the remaining portions of the spacing member which connect with the body section forming with the said offsets reversed double U-shaped portions, and separate external U-shaped grasping portions of the body sections adapted to grasp the corresponding U-shaped portions of the reversed double U-shaped portions of the spacing member of an adjacent section.

1,013,592. REINFORCED CONCRETE STRUCTURE. WILLIAM C. EDWARDS, Jr., Kansas City, Mo. Filed Jan. 17, 1911. Serial No. 603,172.



1. In concrete hollow wall construction, a continuity of main parallel reinforcing body sections spaced apart, each section comprising longitudinal plates spaced apart, interlocking distance plates forming an integral part of the adjacent plates of the oppositely alined main body sections, said distance plates extending transversely to each body section and in reverse directions from the main body sections and spaced apart in parallel planes, one spacing plate being connected with the interlocking spacing plate of one body section in parallelism and the other companion spacing plate being connected with the interlocking spacing plates or members of the adjacent body sections in parallelism.

2. In concrete hollow wall construction, a continuity of main parallel reinforcing body sections spaced apart, each section comprising longitudinal plates, spaced apart, interlocking distance plates dividing the plates in each body section, and forming an integral part thereof, said distance plates being extended laterally and in reverse directions from each body section and spaced apart in parallel planes, said spacing plates being integrally connected with the interlocking plates of adjacent body sections, in parallelism.

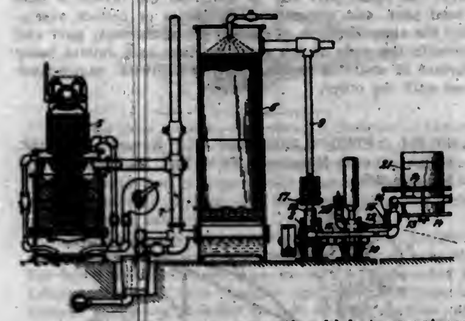
3. In concrete hollow wall construction, wall reinforcing plates spaced apart in parallel planes, and transverse interlocking distance members separating the plates into compartments or sections; and a corresponding section or sections of like reinforcement in alinement therewith; portions of opposite inner wall reinforcing plates being bent laterally in parallel planes constituting spacing members between the alined compartments and engaging with the interlocking distance members of the respective opposite alined sections and forming between their inner face surfaces a passage connecting opposite compartments or sections of the alined reinforcement.

4. A reinforcement for concrete structures comprising oppositely positioned studs and an integrally connected distance plate, the ends of which distance plate are bent to form grooves adjacent thereto thence bent outwardly to form recessed studs opening in opposite directions, the outer face portions of each stud terminating in an inward depression or groove.

5. A reinforcement for concrete structures comprising oppositely positioned studs and an integrally connected distance plate, the ends of which distance plate are bent to form grooves adjacent thereto thence bent outwardly to form recessed studs opening in opposite directions, the outer face portions of each stud terminating in an inward depression or groove, and a reinforcement whose grasping end is composed of bent portions extended telescopically upon the outer surfaces of said stud or studs and engaging with the sides of the respective grooves.

[Claims 6 to 9 not printed in the Gazette.]

1,013,593. APPARATUS FOR GENERATING HIGH TEMPERATURES. WILLIAM CHRISTIAN FINCK, Elizabeth, N. J., assignor to George H. Benjamin, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,604.



1. In an apparatus for generating high temperatures, the combination of a gas producer, a combustion chamber, means for delivering gas and air into said chamber under pressure for effecting instantaneous combustion therein.

2. In an apparatus for generating high temperatures, the combination of a gas producer a combustion chamber, means for delivering gas and air into said chamber at definite pressures substantially in the ratio of one to one and one-quarter for effecting instantaneous combustion therein.

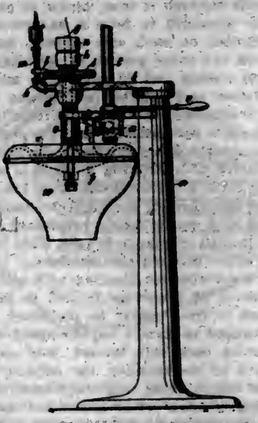
3. In an apparatus for generating high temperatures, the combination of a gas producer adapted to generate a gas containing free hydrogen and carbon monoxid, a combustion chamber, means for delivering the produced gas and air into said chamber at definite pressures substantially in the ratio of one to one and one-quarter for effecting instantaneous combustion therein.

4. In an apparatus for generating high temperatures, the combination of a gas producer producing semi-water gas, a combustion chamber, means for transmitting said water-gas to a burner under a definite pressure, means for supplying air to said burner under definite pressure, the pressures of gas and air being substantially in the ratio of one to one and one-quarter for effecting instantaneous combustion at such burner orifice.

5. In an apparatus for generating high temperatures, the combination of a gas producer, a combustion chamber, a gas pump, an air pump, a burner, interposed piping between the gas producer, the gas pump, the air pump and the burner whereby the gas and air are delivered to the burner in a mixed state, the pressure of gas and air being substantially in the ratio of one to one and one-quarter, whereby instantaneous combustion will take place at the burner orifice.

1,013,594. APPARATUS FOR TREATING MILK AND OTHER LIQUIDS. ALFRED FORNANDER, New York, N. Y., assignor to Dairy Oils Extracting Company, New York, N. Y., a Corporation of New York. Filed Mar. 10, 1910. Serial No. 548,445.

1. In an apparatus for treating milk and other liquids, the combination of two disks mounted face to face, at least one of said disks having a groove in its face and at least one of the disks having roughened portions upon its face.



2. In an apparatus for treating milk and other liquids, the combination of two disks mounted face to face, one of said disks having a concentric groove and roughened portions in its face.

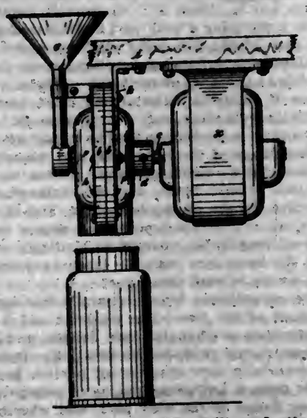
3. In an apparatus for treating milk and other liquids, the combination of two disks mounted face to face, and adapted to have movement relative to each other, one of said disks having a circular groove in its face.

4. In an apparatus for treating milk and other liquids, the combination of two disks each having a roughened face opposed to the other and one of said disks having a circular groove in its face.

5. In an apparatus for treating milk and other liquids, the combination of two disks mounted face to face, one of said disks being hollowed out at the center.

[Claims 6 to 13 not printed in the Gazette.]

1,013,595. APPARATUS FOR TREATING MILK AND OTHER LIQUIDS. ALFRED FORNANDER, New York, N. Y., assignor to Dairy Oils Extracting Company, New York, N. Y., a Corporation of New York. Filed Mar. 10, 1910. Serial No. 548,446.



1. In an apparatus for treating milk and other liquids, the combination of a rotating member, and a casing therefor arranged to form a narrow space with the rotating member on each side thereof, said casing having an opening through its central portion adjacent to the rotating member to provide an exit for the treated substance.

2. In an apparatus for treating milk and other liquids, the combination of a rotating member formed to permit liquid to pass through it from center to periphery, a casing therefor arranged to form a narrow space with the rotating member on each side thereof, means to supply milk between the outer portion of the space between the member and casing and to cause the milk to pass inwardly between said member and casing and means to permit the treated substance to pass from the central portion of the space between said member and casing.

3. In an apparatus for treating milk and other liquids, the combination of a rotating member, a casing therefor arranged to form a narrow space with the rotating member on each side thereof, the adjacent faces of the rotating member and casing being roughened and means to permit the treated substance to pass from the central portion of the space between the members.

4. In an apparatus for treating milk and other liquids, the combination of a member formed to permit liquid to pass through it from center to periphery, and a casing therefor arranged to form a narrow space with the rotating member on each side thereof, said casing inclosing the periphery of the member, the adjacent faces of the member and casing being roughened and the member and casing having relative rotary movement therebetween.

5. In an apparatus for treating milk and other liquids the combination of a rotating member, a casing therefor containing two rings forming a narrow space with the rotating member on each side thereof and leaving the center of said member exposed.

[Claims 6 to 11 not printed in the Gazette.]

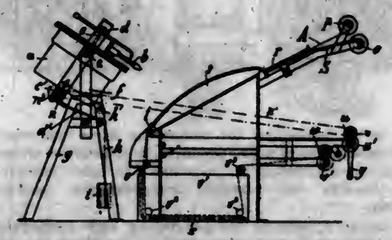
1,013,596. TIRE. ALFRED FRESCHL, Chicago, Ill. Filed July 8, 1908. Serial No. 442,522.

1. A tire comprising a body part and a detachable tread, the body part of the tire being yieldable and having upwardly extending overhanging side flanges, the tread member comprising a plurality of vertically extending relatively thin layers of yieldable material, the tread having a circumferentially extending cut out portion in each side whereby to form a projecting tongue to engage under the overhanging flange of the body part, and whereby to pro- a circumferentially extending cutout portion in each side upper surface of said flange, and rods extending through the respective flanges of the body part, and through the various layers of the tread part, and means for adjusting said rods lengthwise whereby to bindingly engage the flanges of the body part with the tread part and to compress the layers of said tread part.

2. A tire comprising a body part and a detachable tread, the body part of the tire being yieldable and having upwardly extending overhanging side flanges, and the tread member comprising yieldable material, the tread having a circumferentially extending cutout portion in each side whereby to form a projecting tongue to engage under the overhanging flange of the body part, and whereby to provide an oppositely extending tongue which overlies the upper surface of said flange, rods extending through the respective flanges of the body part, and through the tread part, the projecting flanges of the body part having at spaced points thereabout integral inwardly projecting parts, and the yieldable tread having coöperating recessed parts to be engaged by said integral projections on the flanges of the body part, substantially as shown and described.

3. A tire comprising a body part and a detachable tread the body part of the tire being yieldable and having upwardly extending overhanging side flanges, the tread member comprising a plurality of relatively thin vertically extending layers of yieldable material, the tread having a circumferentially extending cutout portion in each side whereby to form a projecting tongue to engage under the overhanging flange of the body part, and whereby to provide an oppositely extending tongue which overlies the upper surface of said flange, rods extending through the respective flanges of the body part, and through the tread part, means for adjusting said rods lengthwise whereby to bindingly engage the flanges of the body part with the tread part and to compress the layers of said tread part, and circumferential plates or collars overlying the outer surfaces of the flanges of the body part and beneath the ends of the securing rods, said collars being formed of abutting sections having a pivotal engagement one with the other.

1,013,597. STENCILING DEVICE. RUDOLF GOTTLIEB, Brünn, Austria-Hungary. Filed Dec. 23, 1909. Serial No. 534,699.



1. In an apparatus for ornamenting fabrics, a stencil, rollers from which the stencil and a fabric are respectively unrolled simultaneously and uniformly, a surface over which the stencil and fabric pass in intimate contact with each other, in combination with a color reservoir provided with a row of jets, said row extending in a direction at an angle to the direction of motion of the stencil and fabric, and means for reciprocating said reservoir to cause said jets to move in said direction.

2. In an apparatus for ornamenting fabrics, a stencil, rollers from which the stencil and a fabric are respectively unrolled simultaneously and uniformly, a stationary table over which the stencil and fabric pass in intimate contact with each other, in combination with a color reservoir adapted to move cross-wise to the direction of motion of the stencil and fabric, and automatic means for causing said movement.

3. In a device for ornamenting fabrics and the like, a color reservoir, a frame in which the reservoir is mounted to be rotatable about its vertical axis, a weight maintaining the reservoir in equilibrium, a pin attached to said reservoir, in combination with a toothed wheel adapted to engage the pin and cause the reservoir to oscillate about its vertical axis.

4. In an apparatus for ornamenting fabrics, a stencil formed of lace, rollers from which the stencil lace and a fabric to be ornamented are respectively unrolled simultaneously and uniformly, a surface over which the stencil and fabric pass in intimate contact with each other, in combination with a color reservoir mounted on vertical and horizontal axes and provided with a row of jets extending in a direction at substantially right angles to the direction of motion of the stencil and fabric, and means for reciprocating said reservoir on the vertical axis.

5. In an apparatus for ornamenting fabrics by means of a sprinkling operation, the combination of a drum-shaped table, a stencil, rollers, from which said stencil and a fabric are simultaneously and uniformly unwound, means for unwinding said stencil and fabric and placing the same together and passing the same over said table, a dye-reservoir adapted to be rotated about its horizontal and vertical axes, a row of nozzles on the reservoir and extending in a direction transverse to the path of movement of the stencil, so that the color sprays strike substantially perpendicularly thereto, and means for rotating said reservoir and nozzles relative to the stencil.

[Claims 6 to 9 not printed in the Gazette.]

1,013,598. COUPLING. CHARLES B. GRACEY, Coraopolis, Pa. Filed Feb. 11, 1911. Serial No. 608,140.

1. A one-piece coupling comprising a chamber, a tapered portion projecting into the chamber and adapted to receive the flared end of a pliable pipe, and an exteriorly threaded extension outside of said chamber and continued from the tapered portion, said tapered portion and extension having a uniform bore.

2. A one-piece coupling comprising a chamber, a tapered portion projecting into the chamber and adapted to receive the flared end of a pliable pipe, an exteriorly threaded extension outside of said chamber and continued from the tapered portion, a shoulder formed by said chamber, and the threads on said extension extending to the shoulder for the pipe to abut against, said tapered portion and extension having a uniform bore.

3. In a hose coupling, the combination with the end of a pliable pipe, of a sleeve fitting over and around said end to form a projecting portion by such end, an outwardly extending flange on said sleeve having slots therein and inclined faces thereon, a collar fitting over said flange and having an integral tapered face fitting in said end, and lugs on said collar for engaging with said flange by being passed through said slots to confine said end between said tapered face and said sleeve.

1,013,599. INCANDESCENT FILAMENT. DANIEL HAND, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1908. Serial No. 416,708.

1. The method of preparing a carbon filament which consists in impregnating a filamentary body of carbonaceous material with fluxing material and subjecting it to treatment including heating to a high temperature whereby it is converted into a carbon filament and such fluxing material eliminated.

2. The method of preparing a carbon filament which consists in subjecting a filamentary body impregnated with metallic chlorid to treatment including heating at a high temperature by which the chlorid is volatilised and a carbon filament of high purity and density produced.

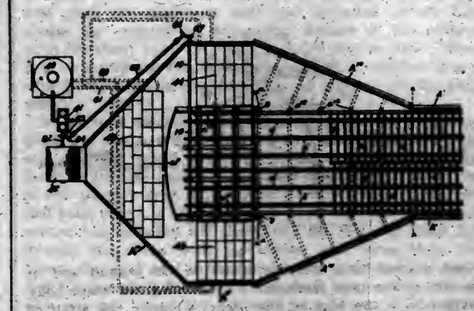
3. In the manufacture of metallised carbon filaments, the step which consists in firing a carbon filament impregnated with sodium chlorid to a high temperature to expel the chlorid and prepare it for coating with metallizable carbon.

4. In the manufacture of metallised carbon filaments, the method of preparing a carbon base which consists in treating uncarbonising filament with an inorganic compound adapted to be eliminated by heat, carbonising it, and firing it to a very high temperature.

5. The method which consists in soaking uncarbonised filament in a salt solution, carbonising it, and firing it at a temperature sufficient to cause elimination of the substance absorbed from said solution.

[Claims 6 and 7 not printed in the Gazette.]

1,013,600. CURING APPARATUS. JOE FREEMAN JACK, Los Angeles, Cal. Filed Apr. 17, 1909. Serial No. 490,581.



1. An apparatus for curing vegetable substance such as grass, alfalfa, etc., comprising an inclosed conduit containing a carrier for conveying the substance therethrough, a feeding and spreading mechanism arranged to supply the substance to said carrier at the inlet end of the apparatus, and heating apparatus communicating with said conduit at the discharge end, a casing inclosing said heating apparatus and the discharge end of said conduit, means for forcing air through the heating chamber and into said conduit, and a vent for the discharge of the moisture-ladened air, substantially as set forth.

2. An apparatus for curing vegetable substance, comprising an inclosed conduit, a conveyer within said conduit, means for feeding the substance onto said conveyer at one end of said conduit, means for spreading said substance over said conveyer, a heating apparatus at the opposite end of said conduit, a casing inclosing said heating apparatus and the discharge end of the conduit, and means for forcing the air through the heating chamber thus formed into the discharge end of said conduit and through to its opposite end, substantially as set forth.

3. A curing apparatus comprising a conduit, a traveling carrier therein, a heating apparatus arranged to discharge heated air into the conduit at its discharge end, a feeding mechanism arranged to feed the substance to be cured to said carrier at the receiving end, said feeding mechanism comprising reciprocating spreaders arranged to distribuate the substance throughout the width of the carrier, substantially as set forth.

4. A curing apparatus comprising an inclosed conduit, a traveling carrier therein, means for producing a current of hot air in said conduit, feeding mechanism for feeding the substance to be cured to said traveling carrier comprising a hopper, a feeding apron running from said hopper to above the receiving end of said carrier, and a spreader arranged above said feeding apron and adapted to spread the substance over the surface thereof from side to side, substantially as set forth.

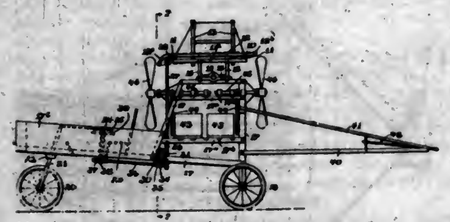
5. A curing apparatus comprising a conduit, a heating apparatus communicating therewith, a traveling carrier in said conduit, a receiving hopper, a feeding apron running from said hopper to above the receiving end of the traveling carrier, and a spreader above said feeding apron comprising reciprocating frames carrying spreading teeth arranged to move back and forth transversely of said apron and distribute the substance evenly thereon, and means for operating the reciprocating frames, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,013,601. AEROPLANE. MICHAEL JOVANOVICH, New York, N. Y. Filed Apr. 7, 1911. Serial No. 619,523.

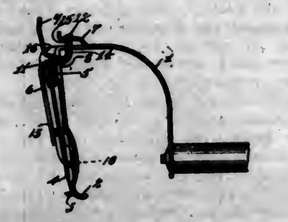
A flying machine comprising a plane, a main body portion suspended solely from a transverse pivot on the un-

der side of the frame, said body portion carrying propelling mechanism and having a forwardly projecting wedge shaped portion with covered sides, a rearwardly extending horizontal tail piece, wheels on the rear sides, and a front



wheel serving as a steering wheel on the ground and in the air, and a gear mechanism connecting the main body portion with the edge of the plane, whereby the pitch of the latter can be regulated.

1,013,602. SAFETY-RAZOR FRAME. RICHARD KAMPFE, New York, N. Y. Filed Nov. 28, 1910. Serial No. 594,443.



1. A safety razor comprising a frame, a cutting blade carried by said frame, a clamping plate pivotally mounted on said frame, and contacting with said blade intermediate the top and bottom thereof, a resilient finger carried by said clamping plate overlapping the heel of said blade, said finger being provided with a concavity, said concavity receiving a portion of the outer surface of the heel of the blade, and locking means carried by said frame in engagement with said overlapping finger.

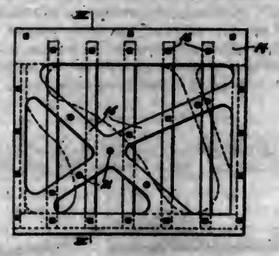
2. A safety razor comprising a frame, a cutting blade carried by said frame, a clamping plate pivotally mounted on said frame and contacting with said blade intermediate the top and bottom thereof, a resilient finger carried by said clamping plate overlapping the heel of said blade, said finger being provided with a concavity, said concavity receiving a portion of the outer surface of the heel of the said blade, and a resilient catch carried by said frame, in engagement with said finger.

1,013,603. PROCESS OF TREATING CLAY, KAOLIN, AND CERAMIC MASSES. GUSTAV KEPPELER, Darmstadt, and ALBERT SPANGENBERG, Mersig-on-the-Saar, Germany; said Spangenberg assignor to said Keppeler. Filed July 27, 1907. Serial No. 385,882.

1. The process of increasing the plasticity and binding power of clay, kaolin and ceramic masses, which process consists in intimately mixing the mass with a substance containing humic acid and storing it substantially as and for the purpose described.

2. The process of increasing the plasticity and binding power of clay, kaolin and ceramic masses, which process consists in intimately mixing the mass with a proportion not exceeding 5 per cent. of a substance containing humus and storing it substantially as and for the purpose described.

1,013,604. PIANOFORTE. ARTHUR O. LECHNER, Pittsburgh, Pa., assignor to Lechner & Schoenberger Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 6, 1909. Serial No. 526,523.



1. In combination in a piano forte, a wooden frame comprising a top rail, a bottom rail, end rails connecting the top and bottom rails, and upright posts spaced between the end rails and extending between the top and bottom rails; a metal string plate rigidly secured to the front face of the frame; and a metal stiffening plate rigidly secured to the rear sides of the said rails.

2. In combination in a piano forte, a wooden frame comprising a top rail, a bottom rail, end rails connecting the top and bottom rails, and upright posts spaced between the end rails and extending between the top and bottom rails, and a wrest plate secured to the front side of the top rail; a metal string plate rigidly secured to the front faces of the wrest plate and the side and bottom rails; a metal stiffening plate mounted upon the rear sides of the said rails, and securing bolts extending through the wooden frame and through the string plate and the stiffening plate.

3. In combination in a piano forte, a wooden frame comprising a top rail, a botom rail, end rails connecting the top and bottom rails, and upright posts spaced between the end rails and extending between the top and bottom rails; a metal string plate rigidly secured to the front face of the frame; a metal stiffening plate of skeleton form rigidly secured to the rear sides of the said rails; and transverse supporting members extending from the string plate inside the frame to the stiffening plate, and serving to hold the string and stiffening plates against relative movement.

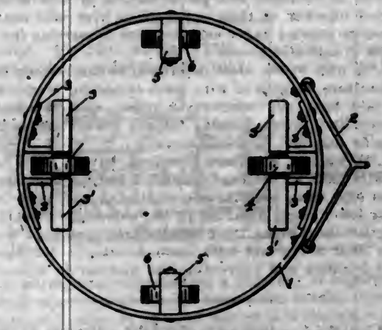
4. In combination, a wooden piano frame comprising top, bottom and side rails and upright posts intermediate the side rails; a metal string plate secured to the front face of the frame; a metal skelton stiffening plate secured to the rear face of the frame, and comprising an edge portion bearing against the said rails and brace portions, means for securing the edge portion of the stiffening plate to the said rails, and means for securing the said brace portions of the stiffening plate to the said upright posts.

5. In combination, a wooden piano frame comprising top, bottom and side rails; a metal string plate secured to the front face of the frame; a metal skeleton stiffening plate secured to the rear face of the frame and comprising an edge portion bearing against the said rails and diagonal brace portions, and transverse supporting members lying inside the edge portion of the stiffening plate and connecting the said brace portions and the string plate.

1,013,605. TRUCK FOR GARBAGE-CANS. MATTHEW T. LYON, Salt Lake City, Utah. Filed Nov. 22, 1909. Serial No. 529,477.

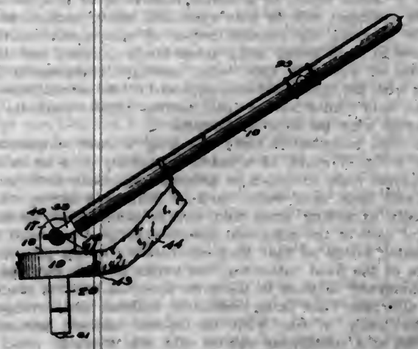
1. In a truck for garbage cans the combination of a band, individual bearing members for front and rear wheels attached within said band, one portion of each of said bearing members being extended above the wheel as a can support, and wheels mounted in said members with the tread of the two side wheels placed lower than the tread of the front and rear wheels.

2. In a garbage can truck the combination of a band, two double-bracket shaped bearings secured within and to said band and having a portion thereof laterally extended as a can support, two inverted U-shaped bearings also secured within said band with the upper portion of each of said U-shaped bearings in a plane of the laterally extended portions of the said bracket shaped bearings adapted to support a can to be placed within said band, and a wheel mounted in each of said bearings with the axles thereof parallel and with the tread of the two side wheels on a lower plane than the front and rear wheels.



3. In a truck for a garbage can the combination of a band, a bracket shaped bearing member for a front wheel and one for a rear wheel diametrically secured within said band having two portions of each of said bearing members laterally extended as a can support, a wheel mounted in each of said bearing members having the treads thereof below the laterally extended portions of said members, two U-shaped bearing members secured within and to said band and having portions thereof placed in the same plane as the laterally extended portions of said bracket shaped bearing members, and a wheel mounted in each of said U-shaped bearings with the tread of each wheel lower than the tread of the first mentioned wheels.

1,013,606. VACUUM-CREATING MECHANISM FOR DUST-COLLECTORS. JOHN MACLEAN, Toledo, Ohio. Filed Aug. 4, 1910. Serial No. 575,423.



1. Suction creating mechanism for vacuum cleaners comprising a fan casing, a tubular casing pivotally secured to the fan casing and having a slot formed in one side thereof, a fan bearing shaft journaled in the fan casing, a plurality of pinions mounted upon the shaft, a spindle carried by the casing and having a combined gear and sprocket wheel mounted thereon, the gear being in mesh with the various pinions, a sprocket chain passing around the sprocket and into the tubular casing, a sleeve slidably mounted on the tubular casing and having a lug projecting inward through the slot of said casing and secured to the sprocket chain, whereby the movement of the sleeve along the tubular casing will shift the chain and thus the combined gear and sprocket wheel, and means for operatively connecting certain of the pinions with the shaft upon the turning of the gear in either direction, whereby the fan shaft is rotated in a constant direction irrespective of the direction of rotation of the gear wheel.

2. Vacuum creating mechanism for dust collectors, comprising a shaft, a fan mounted thereon, a combined gear and sprocket wheel rotatably mounted adjacent the fan shaft, a tubular casing, a sprocket chain supported therein and passing over the sprocket of the combined sprocket and gear wheel, a sleeve slidable upon the tubular casing, connections between the sleeve and the sprocket chain for moving the chain with the sleeve, and connections between the gear of the combined gear and sprocket wheel and the fan shaft for driving the shaft in a constant direction irrespective of the direction of rotation of the gear.

3. Vacuum creating mechanism for dust collectors comprising a tubular member, a chain arranged within said member, means for imparting movement to said chain, said member being connected to a casing, a shaft arranged horizontally within said casing, a sprocket wheel mounted upon said shaft, a gear wheel carried by the end portion of said shaft, a shaft arranged vertically within said casing, pinions mounted upon said shaft, a sleeve formed integral with each of said pinions, a spring-pressed pin carried by said sleeve, said shaft being provided with a projection adapted to contact with said pin, and a fan mounted upon the end portion of said shaft.

1,013,607. MESSAGE-CARRIER FOR VESSELS. FREDERICK J. MENO, Detroit, Mich. Filed Jan. 27, 1911. Serial No. 604,981.

1. A message carrier comprising a cylindrical casing closed at one end, a hollow cap adapted to be detachably secured on the open end, handles secured across the casing and cap ends, with their ends extending beyond the peripheres of the casing and cap, a fin disposed longitudinally along the casing, and a segmental flange on the casing diametrically opposite to the line of attachment of the fin.

2. A message carrier comprising a cylindrical casing closed at one end, a hollow cap adapted to be detachably secured on the open end, handles secured across the casing and cap ends, with their arms extending beyond the peripheries of the casing and cap, a fin disposed longitudinally along the casing, a segmental flange on the casing diametrically opposite to the line of attachment of the fin and a shell within the casing adapted to float the carrier when the casing is punctured.

3. A message carrier comprising a cylindrical casing closed at one end, a hollow cap adapted to be detachably secured on the open end, handles secured across the casing and cap ends, with their arms extending beyond the peripheries of the casing and cap, a fin disposed longitudinally along the casing, a segmental flange on the casing diametrically opposite to the line of attachment of the fin and a shell of buoyant material within the casing.

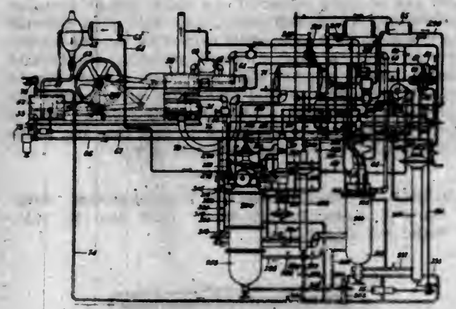
1,013,608. FLOOD-GATE. HENRY D. MERRILL, Clinton, Mo. Filed Apr. 19, 1911. Serial No. 622,147.

1. A device of the class described comprising wing walls; posts pivotally supported at their lower ends adjacent the wing walls; means for securing the posts to

the wing walls; and a panel pivoted to the posts between the wing walls.

2. A device of the class described comprising wing walls having recesses in their adjacent faces; posts pivotally supported at their lower ends; means for securing the posts to the wing walls, to close the down-stream ends of the recesses; a panel having its ends disposed in the recesses; and means for pivotally connecting the panel with the posts.

1,013,609. CONSTANT-PRESSURE INTERNAL-COMBUSTION APPARATUS. EDWARD P. NOYES, Winchester, Mass. Original application filed Aug. 26, 1905, Serial No. 275,861. Divided and this application filed Mar. 20, 1911. Serial No. 615,591.



1. In constant-pressure power apparatus, the combination of an internal-combustion generator, a water-supply conduit therefor, a pump to force water into the generator, and a valve controlling the suction of the pump and differentially controlled by the pressure in the generator and in the supply-pipe anterior to the pump.

2. In constant-pressure power apparatus, the combination of a compressed-air line, a fuel-burner in said line, a steam boiler heated by the pressure combustion, and means to employ the steam from said boiler separately from the products of combustion.

3. In constant-pressure power apparatus, the combination of a compressed-air line, a fuel-burner in said line, a steam boiler heated by the pressure combustion, and separate engines using the products of combustion and steam respectively.

4. In constant-pressure power apparatus, the combination of a compressed-air line, a fuel-burner in said line, a steam boiler heated by the pressure combustion, and separate engines using the products of combustion and steam respectively and operating the same shaft.

5. In constant-pressure power apparatus, the combination of a compressed-air line, an internal-combustion fuel-burner in said line, a combustion-tube for the burner, and means for water-jacketing the intermediate portion of said tube.

[Claims 6 to 35 not printed in the Gazette.]

1,013,610. WALL CONSTRUCTION FOR DAMS OR DIKES. WILLIAM E. PEDLEY, Riverside, Cal. Filed Apr. 30, 1910, Serial No. 558,663. Renewed July 24, 1911. Serial No. 640,356.

1. A wall formed of loose boulders, a retaining envelop formed of mesh holding said boulders in position, and transverse members attached at one end to the envelop on one side of said wall and at the other end of the said envelop to the other side of said wall to prevent said lower edges from separating outwardly.

2. A structure of the class described, having a body formed of boulders, side pieces formed of wire mesh connected together at their upper edges over said body, and members passing under said boulders connecting the lower edges of said side pieces.

3. A wall of the class described, having a body formed of boulders, lengths of wire mesh extending longitudinally of said body and adapted to retain said boulders, and longitudinal wires forming lacings connecting said wire lengths together.

4. A wall of the class described, having main lengths of wire mesh at the base thereof, a body of boulders piled upon said main lengths, side lengths of wire mesh having their lower edges attached to the side edges of said main lengths and having their other edges connected together over said body, said wire mesh forming a container for said boulders and preventing the dislocation thereof.

1,013,611. ROTARY CUTTER. MILTON C. PETERS, Omaha, Nebr. Filed Nov. 10, 1910. Serial No. 591,567.

1. The combination with a casing, a fixed cutter bar, and a radial shaft, of a cutter having a plurality of series of blades arranged side by side upon said shaft, the blades of each series being transversely inclined and the blades of alternate series being inclined oppositely to those of the series upon each side thereof, each of said blades having a cutting edge substantially parallel with said axis.

2. The combination with a casing, a fixed cutter-bar, and a radial shaft, of a cutter consisting of a series of hubs arranged side by side upon said shaft, each of said hubs carrying an annular series of spaced blades, the blades of each series being transversely inclined and the blades of alternate hubs being arranged transversely in line with the spaces between adjacent blades of continuous hubs, said blades having their cutting edges substantially parallel with the axis of the hubs.

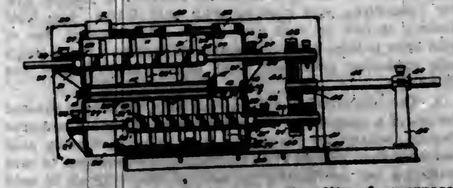
3. The combination with a casing, a fixed cutter-bar, and a rotary shaft, of a cutter consisting of a series of rotatable hubs arranged in substantially close order side by side upon said shaft, each of said hubs having outwardly extending arms, and cutting blades fixed to the outer ends of the arms and spaced apart and arranged in annular series so that they successively sweep past the edge of the fixed cutter-bar, the blades of each hub being transversely inclined in the same direction and the blades of alternate hubs being oppositely inclined and arranged transversely in line with the spaces between adjacent blades of a contiguous hub on each side thereof.

4. A rotary cutter having a plurality of series of blades fashioned in the form of a parallelogram and turnable about a common axis, the blades of each series being transversely inclined and the blades of alternate series being inclined oppositely to those of the series upon each side thereof, each of said blades having front and rear edges inclined from one side to the other and being beveled to form a plurality of cutting edges, and means whereby the blades are reversibly secured.

5. The combination with a casing and a fixed cutter-bar, of a shaft extending transversely across the casing, a series of hubs arranged in substantially close order side by side on said shaft, each of said hubs having a plurality of outwardly extending arms spaced apart at their outer ends, and having said ends formed with widened transversely inclined portions, blades fixed to said transversely inclined portions of the arms and so arranged that the blades carried by one hub stand transversely in line with the spaces between adjacent blades of contiguous hubs, the blades of alternate hubs being transversely inclined in an opposite direction to the blades of intermediate hubs.

[Claims 6 and 7 not printed in the Gazette.]

1,013,612. MIXING APPARATUS. MILTON C. PETERS, Omaha, Nebr. Filed Feb. 25, 1911. Serial No. 610,734.



1. A mixing apparatus having a plurality of superposed chambers of greater horizontal width than height, connecting with each other at one end, one of said chambers having an inlet for the material to be mixed, and the other chamber having an outlet for said material, means for advancing the material through said chambers, said means including opposed co-acting mixing and conveying elements in said chambers, and means whereby the material may be heated during its passage through the chambers.

2. A mixing apparatus comprising superposed chambers having a substantially oblong form in cross section, one of said chambers having an inlet opening and the other having an outlet opening, said chambers communicating with each other at a point between said inlet and outlet, and said chambers having inwardly inclining walls forming contracted throats located in advance of the outlets from the chambers, through which throats the material is delivered to the outlets to be discharged from one chamber to the other and from the final chamber.

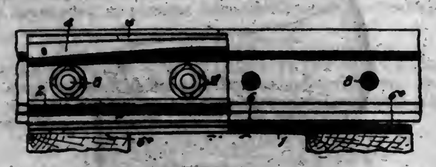
3. In a mixing apparatus, a horizontally disposed mixing chamber having an inlet at one end and a discharge opening at the other end, said chamber having inwardly extending walls at a point proximate the inlet end of the discharge opening forming a contracted throat, through which the material is delivered substantially under restraint into the inlet end of the discharge opening, and feeding devices within the chamber for advancing the material from the inlet to and through the contracted throat.

4. In a mixing apparatus, a casing having an inlet at one end and a discharge at the opposite portion, said casing having inwardly projecting flanges at a point near the discharge end, said flanges having curved walls over which the material is advanced, a shaft extending through the chamber, and blades on said shaft and adapted to advance the material through the chamber and through the contracted throat thereof, the curved walls of said flanges serving substantially to retard the travel of the material through the throat.

5. A mixing apparatus comprising a casing having an inlet at one portion and outlet at another portion, said casing having inwardly extending flanges reducing the inner diameter of the casing adjoining the discharge opening and forming a contracted throat through which the material is discharged substantially under restraint, said casing being of substantially oblong form in cross section and having curved side walls, horizontal, parallel shafts within the casing each having angularly arranged blades for engaging and advancing the material through the cylinder, said blades acting to stir and intermingle said material, and means for operating the shafts.

[Claims 6 to 12 not printed in the Gazette.]

1,013,613. RAIL-JOINT. HARRY F. ROACH, St. Louis, Mo. Filed May 5, 1911. Serial No. 625,175.



1. A rail-joint provided with a rigid rail-supporting member having a flat rail-bearing surface at approximately the center thereof, and two angularly disposed flat rail-bearing surfaces which incline downwardly in opposite directions from said central flat surface.

2. A rail-joint consisting of a member of girder construction having a horizontally disposed rigid rail-supporting portion whose top face is flat at approximately the center and inclined downwardly toward the ends of said portion.

3. A rail-joint comprising a rigid horizontally disposed rail-supporting member whose top face is flat at the center and inclined downwardly toward the ends of said member, and means which bears upon the base flanges of the rails and holds them down upon the flat surface at the center of said member.

4. A rail-joint consisting of a girder having an upper member which extends alongside of the heads of the rails, and a rigid horizontally disposed rail-supporting portion whose top face is flat at approximately the center and inclined downwardly slightly toward the ends.

5. A rail-joint consisting of a girder having an upper member which extends alongside of the heads of the rails, and a horizontally disposed rail-supporting portion whose top face is flat at approximately the center and inclined downwardly slightly toward the ends of said portion, said upper member being provided with a wheel-tread surface which comes into service after the treads of the rails have worn down.

[Claims 6 to 24 not printed in the Gazette.]

1,013,614. PYRITES BRIQUET AND PROCESS OF MAKING SAME. JACOB S. ROBESON, Camden, N. J. Filed Dec. 7, 1905. Serial No. 290,798.

1. The process herein described of preparing "pyrites smalls" for desulfurization, said process consisting in moistening the "smalls" with the liquor resulting from the manufacture of sulfite cellulose pulp, and then forming the moistened mass into briquets.

2. The process herein described of preparing "pyrites smalls" for desulfurization, said process consisting in mixing the "smalls" with a quantity of concentrated liquor resulting from the manufacture of sulfite cellulose pulp, and then forming the mass into briquets.

3. As a new article of manufacture, a non-hydroscopic briquet of sulfur-bearing material, bonded by sulfite liquor.

4. As a new article of manufacture, a non-hygroscopic briquet of "pyrites smalls," bounded by sulfite liquor.

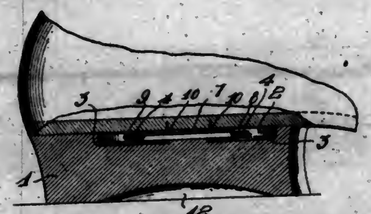
5. The briquets herein described, containing pyrites, calcium sulfate and calcium sulfite.

[Claim 6 not printed in the Gazette.]

1,013,615. DETACHABLE HEEL FOR SHOES. FRANK L. ROUSE, Somerville, Mass., assignor to Frank L. Rouse Company, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1911. Serial No. 614,860.

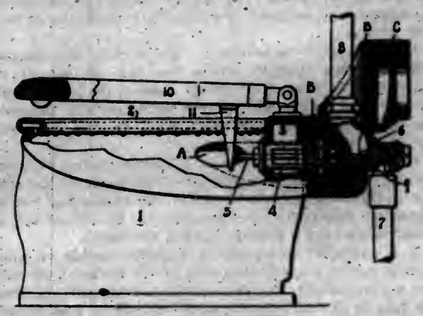
A heel attaching device for shoes comprising a plurality of metal plates having loops upstruck therefrom and adapted to be secured to one of the elements to be united, and a plate adapted to be secured to the other element, said plate having right angular tongues extending laterally from one edge thereof and oppositely disposed curved

tongues extending from its other edge, said plates being arranged to position the loops thereof at right angles to



said tongues, said tongues being engaged with said loops to reliably connect the elements to be united.

1,013,616. WATER-CLOSET. HORACE S. RUMSEY, St. Louis, Mo. Filed Nov. 25, 1910. Serial No. 594,007.



1. In a device of the character described, a bowl provided with a pair of rearwardly projecting bowl branches with an open space therebetween for forming a frame open above and below for the reception of a valve housing, said branches being connected up with said bowl to provide ventilating channels therefor.

2. In a device of the character described, a bowl provided with a pair of rearwardly projecting hollow branches forming an open framework for the reception of a valve housing, and with ventilating vents opening into said branches, said branches being united in a common neck in the rear.

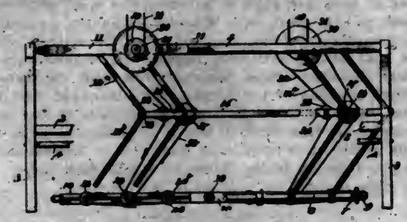
3. In a device of the character described, a bowl provided with a pair of rearwardly projecting hollow branches forming an open framework for the reception of a valve housing, and with ventilating vents opening into said branches, said branches being united in a common neck in the rear, and said neck being elevated above said branches to permit the valve housing to project rearwardly thereunderneath.

1,013,617. BELT-GEARING FOR CARVING-MACHINES. DAVID B. SALSTROM, Chicago, Ill., assignor of one-half to Emanuel Kopriwa, Chicago, Ill. Filed July 19, 1906. Serial No. 326,833.

1. The combination, with a relatively stationary drive pulley, of a plurality of operating spindles supported to move toward and away from said drive pulley; and a single belt extending from said drive pulley to all of said spindles.

2. The combination, with a relatively stationary drive pulley, of three operating spindles supported to move toward and away from said drive pulley; and a single belt extending from said drive pulley to all of said spindles.

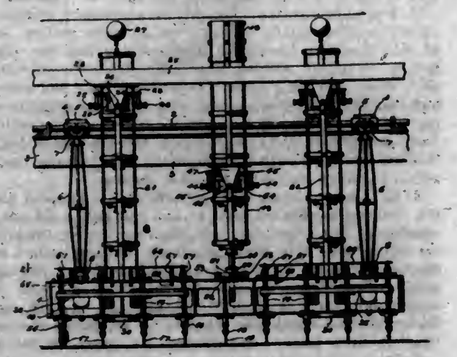
3. The combination, with three movably-supported spindles, of a relatively stationary drive pulley; a double pulley on the middle spindle; a pulley on each of the other spindles; and a belt extending around said drive pulley to said double pulley, thence to one of said other spindle pulleys, thence to the third spindle pulley, thence to said double pulley and to said drive pulley.



4. The combination, with a relatively-stationary frame, of a drive pulley mounted in said frame; a member having a plurality of spindles mounted therein; a jointed arm for connecting said member with said frame; two idler pulleys carried by said arm at the joint thereof, one of said idler pulleys being adjustable in position; and a single belt extending over said drive pulley, idler pulleys and spindles.

5. The combination, with a relatively stationary pivoted frame, of a member having six spindles rotatably mounted therein; means for supporting and counterbalancing said member; four jointed arms connecting said member to said frame; a bar connecting the pivotal joints of all of said arms; two drive pulleys mounted in said frame; and a single belt running over each of said drive pulleys and three of said spindles.

1,013,618. CARVING-MACHINE. DAVID B. SALSTROM, Chicago, Ill., assignor of one-half to Emanuel Kopriwa, Chicago, Ill. Filed Apr. 28, 1910. Serial No. 558,215.



1. In a carving machine, a movably supported head, spindles in said head, a driver located outside of said head and having driving connection with said spindles, and a yielding connection between the driver and the head to cause the former to follow the head in its movements.

2. In a carving machine, a movably supported head, spindles in said head, a movably supported drive pulley located outside of said head, belt connection between the drive pulley and the spindles, said connection causing said pulley to follow the head when the latter moves in one direction, and yielding means for causing said pulley to follow the head when the latter moves in another direction.

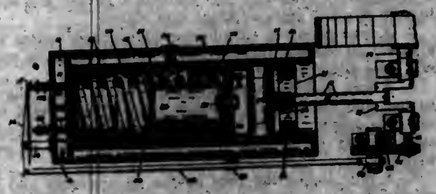
3. In a carving machine, a movably supported head, spindles in said head, a movably supported drive pulley, belt connection between the drive pulley and the spindles, said connection causing said pulley to follow the head when the latter moves in one direction, and means for causing the pulley to follow the head when the latter moves in the opposite direction, said means including a spring tending to move the pulley away from the head and taking up slack in said belt connection.

4. In a carving machine, a head supported for lateral and forward and backward movement, spindles in said head, a movably supported drive pulley, belt connection between the pulley and the spindles, said connection causing said pulley to follow the head when the latter moves forwardly, means including a spring for causing the pulley to follow the head when the later moves rearwardly, and means for causing the pulley to follow the head when the later moves laterally.

5. In a carving machine, a head supported for forward and backward movement, spindles in said head, a drive pulley having belt connection with the spindles, said belt connection causing the pulley to follow the head when the latter moves forwardly, and means for causing the pulley to follow the head when the later moves rearwardly, said means including a spring tending to move the pulley away from the spindles and serving to take up slack in the belt connection.

[Claims 6 to 20 not printed in the Gazette.]

1,013,619. GAS-ENGINE. CHARLES H. SAUVAN, Newark, N. J. Filed Jan. 26, 1909. Serial No. 474,207.



1. In a gas engine, the combination of a cylinder, a hollow piston section in said cylinder, a second piston section in said hollow section having a transverse partition forming with the closed end of the hollow section a closed air chamber, said partition providing at its side next said chamber a filling-piece seat, a separable filling piece mounted on said seat and adapted to reduce the capacity of the cylinder, means detachably connecting said filling piece to its said seat, a single helical spring inclosing and fitting around said filler and supported thereby with its convolutions lying loosely between the filling piece and piston sections, whereby a single pressure distributed over the area of each piston end is secured and the spring held against lateral displacement with economy of space, and inlet and exhaust ports for said cylinder.

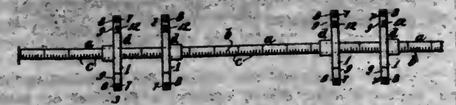
2. In a gas engine, the combination of a cylinder, an outer cylindrical piston section, an inner piston section in said outer section, means tending to hold said piston sections resiliently apart, a ring at the outer end of the outer piston section projecting thereinto and forming therewith an inwardly-facing annular recess or chamber, said ring having slits in its inner edge, an annular plunger on the inner piston section adapted to enter said recess or chamber and fit the same, and inlet and exhaust means for said cylinder.

3. In a gas engine, the combination of a cylinder, an outer cylindrical piston section, an inner piston section in said outer section, a ring in the projecting end of the outer piston section forming therewith an annular recess or chamber and having tapering longitudinal slits in its edge, an annular plunger on the inner piston section adapted to enter said recess or chamber, and inlet and exhaust means for said cylinder.

1,013,620. METHOD OF WELDING COPPER OR NICKEL AND COPPER OR NICKEL ALLOY. WILHELM SCHIERER, Vienna, Austria-Hungary, assignor to The Firm of Bernderfer Metallwaaren-Fabrik Arthur Krupp, Berndorf, Austria-Hungary. Filed Mar. 21, 1911. Serial No. 615,869.

Method of welding copper, or nickel and copper, or nickel alloys, consisting in first heating the parts to be welded to welding temperature by a flame consisting of hydrogen and oxygen in such proportions that the hydrogen exceeds the ratio $H_2:O$, and then uniting the parts by hammering or pressing immediately after the heating.

1,013,621. GAGE FOR ALINING PRINTING-PLATES. KARL M. SCHLUETER and FERDINAND SCHLUETER, Jr., New York, N. Y. Filed May 3, 1911. Serial No. 624,861.



1. A gage for alining printing plates on base blocks, said gage comprising a horizontal rod having a scale thereon, and a plurality of sliding standards supporting said rod and arranged at right angles thereto, each of said standards having an overhanging straight-edged part for engaging the edges of type-faced parts of printing plates, and a parallel base part beneath said overhanging part, for engaging the surface of the base block, substantially as shown and described.

2. A gage for alining printing plates on base blocks, said gage comprising a horizontal rod having a scale thereon, and notches registering with the graduations of said scale, and a plurality of sliding standards supporting said rod and arranged at right angles thereto, each standard having a lower base part and an overhanging straight-edged part parallel therewith, and means for locking said standards on said rod, in combination with a tilted straightedge having an overhanging upper edge part for engaging the edges of type-faced parts of printing plates, substantially as shown and described.

3. In a gage for alining, registering and spacing printing plates on base blocks, the combination, with a horizontal rod having a scale thereon; of a plurality of standards arranged at right angles across and in slidable engagement therewith, each standard having an overhanging vertically adjustable straight-edged guide plate for engaging the vertical edges of the type-faced parts of printing plates, and means for adjusting said guide plates, substantially as shown and described.

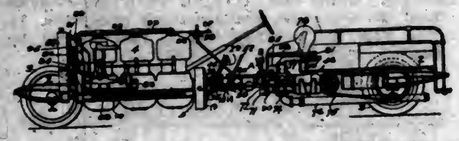
4. As a means for alining, registering and spacing printing plates on base blocks, the combination, with a gage having a scale thereon and notches registering with the graduations of said scale, and a plurality of sliding standards on said rod, each standard having an overhanging straight-edged part, for engaging the edges of the type-faced parts of printing plates, and also a spring pressed bolt having a key for engaging said notches, of a tilted straight-edge having an overhanging upper edge part for engaging the edges of type-faced parts of printing plates and a parallel lower edge part for registering with guide line of base blocks, and set-screws for maintaining the straight-edge in desired tilted position, substantially as shown and described.

5. In a gage for alining printing plates at their type-faced parts, the combination, with a metal rod having a scored scale and notches registering with the graduations of said scale; of a plurality of sliding standards each having a spring-pressed bolt, for engaging said notches, and an adjustable guide plate having an overhanging straight-edged part, for engaging the edges of type-faced parts of printing plates, and screws for adjusting said guide plates, substantially as shown and described.

1,013,622. MOTOR FIRE-ENGINE. JAMES M. SCHOONMAKER, Jr., Pittsburgh, Pa. Filed Feb. 24, 1909. Serial No. 479,764.

1. In an automobile fire engine, the combination of an engine, a shaft driven thereby, a fly-wheel on said shaft, a second shaft, a clutch member on said second shaft adapted to engage said fly-wheel, a slidable gear wheel on said shaft, a pump, a pump shaft, a gear on said pump

shaft with which said first named gear is adapted to engage, slides, rock shafts, connections between said rock shafts and said clutch member and sliding gear, a lever, and connections between said lever and said slides, whereby the clutch member and sliding gear may be operated independently of each other.



2. In an automobile fire engine, the combination of an engine, a shaft driven thereby, a fly-wheel on said shaft, a second shaft, a sliding clutch member on said second shaft adapted to engage said fly-wheel, a sliding gear on said second shaft, a pump, a pump shaft, a gear on said pump shaft with which said sliding gear is adapted to engage, slides, connections between said slides and said sliding gear and said clutch member, a lever, and means operating said slides independently of each other by said lever.

3. In an automobile fire engine, the combination of an engine, a shaft driven thereby, a fly-wheel on said shaft, a second shaft, a slidable clutch member on said second shaft adapted to engage said fly-wheel, a sliding gear on said second shaft, a pump, a pump shaft, a gear on said pump shaft with which said sliding gear is adapted to engage, slides, connections between said slides and said clutch member and slidable gear, a rotary longitudinally movable shaft, a lever connected thereto, an arm carried by said last named shaft, and adapted to be thrown into engagement with one of said slides at a time.

4. In an automobile fire engine, the combination of an engine, a shaft driven thereby, a fly-wheel on said shaft, a second shaft, a slidable clutch member on said second shaft adapted to engage said fly-wheel, a slidable gear on said second shaft, a pump, a pump shaft, a gear on said pump shaft with which said slidable gear is adapted to engage, slides, connections between said slides and said clutch member and sliding gear, a longitudinally movable and rotary shaft, a lever connected thereto, a U-shaped guide for said lever, an arm on said last named shaft adapted to be brought into engagement with one of said slides at a time.

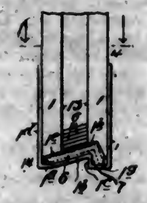
5. In an automobile fire engine, the combination of an engine, a shaft driven thereby, a fly-wheel on said shaft, a second shaft, a slidable clutch member on said second shaft adapted to engage said fly-wheel, a sliding gear on said second shaft, a pump, a pump shaft, a gear on said pump shaft with which said sliding gear is adapted to engage, slides having grooves therein, connections between said slides and said clutch member and said sliding gear, a rotary and longitudinally movable shaft, a lever connected thereto, and an arm on said last named shaft adapted to enter the grooves in said slides.

[Claim 6 not printed in the Gazette.]

1,013,623. SHOE-HEEL. FRANK L. SMITH, Dayton, Ohio. Filed Sept. 27, 1910. Serial No. 584,002.

In a device of the type specified, a resilient portion, a non-resilient portion attached thereto, a stud freely mounted in said non-resilient portion and extending therethrough, and united to said resilient portion, said stud adapted to engage the ground to prevent slipping, and to recede thereby preventing the surface with which it comes in contact being marred.

1,013,624. TYPE-SETTING MACHINE. JAMES STEEL, Little Falls, N. J. Filed May 2, 1908. Serial No. 430,431.



1. A type receiving tube having an inclined bottom and a downwardly extending part forming a pocket, and openings in opposite sides adjacent said bottom.

2. A type receiving tube having an inclined bottom and a pocket on one side thereof, and having openings on opposite sides adjacent said bottom and pocket.

3. A type receiving tube having a substantially L-shaped bottom and openings on opposite sides adjacent said bottom, the opening on the type delivery side having an edge substantially corresponding in angular position to said bottom.

4. A type supporting tube having an upwardly and inwardly inclined bottom, a pocket adjacent one end of said bottom, and openings on opposite sides adjacent said bottom, the opening in the delivery side substantially corresponding in shape to said bottom and pocket.

5. A type receiving tube having a bottom wall provided with two substantially horizontal portions and an intermediate upwardly inclined portion, and a downwardly extending part providing a pocket, said tube having openings in opposite sides adjacent said bottom wall, the delivery opening corresponding substantially along its upper edge to the inclination of said upwardly inclined portion.

[Claims 6 to 10 not printed in the Gazette.]

1,013,625. RIVET. EDWIN BALL STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Oct. 23, 1906. Serial No. 340,179.

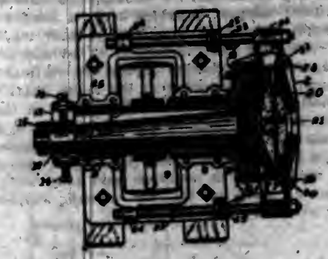
1. A rivet having a plurality of clenching prongs disposed abreast and edge to edge, the entering extremities of which are beveled by oblique cuts across non-adjacent corners of the combined cross-section of all the prongs.

2. A rivet having a plurality of clenching prongs disposed abreast and edge to edge, the entering extremities of which are beveled by oblique cuts across non-adjacent corners of the combined cross-section of all the prongs, said cuts extending across all of the prongs.

1,013,626. CRUSHING-MACHINE. EDGAR B. SYMONS, Milwaukee, Wis. Filed Dec. 19, 1908. Serial No. 468,306.

1. The combination of two opposed crushing members, oblique to each other, and rotating in the same direction with means for varying their angle of obliquity, independent of the distance between them, said crushing members

mounted each upon the end of a shaft, one of said shafts located within the other.



2. The combination of two opposed rotating crushing members oblique to each other, and rotating in the same direction with means for varying the distance between them independent of their angle of obliquity, said crushing members mounted each upon the end of a shaft, one of said shafts located within the other.

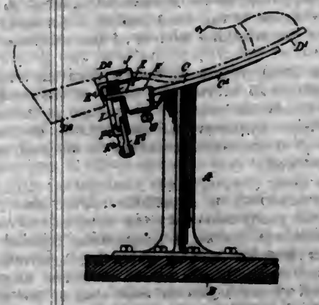
3. The combination of two opposed crushing members, oblique to each other, and rotating in the same direction with means for varying their angle of obliquity and the distance between them independent of each other, said crushing members mounted each upon the end of a shaft, one of said shafts located within the other.

4. The combination of two opposed rotating crushing members oblique to each other and rotating in the same direction with means for varying their angle of obliquity and separate means for varying the distance between them, said crushing members mounted each upon the end of a shaft, one of said shafts located within the other.

5. The combination of two opposed rotating crushing members rotating in the same direction and mounted oblique to each other, each upon the end of a shaft, one of said shafts mounted within the other and means for varying their angle of obliquity.

[Claims 6 to 51 not printed in the Gazette.]

1,013,627. BOOT AND SHOE CLAMPING DEVICE. WILLIAM WARREN TOWNSEND and WILLIAM LOUIS GOSSLIN, Rutland, Vt., assignors to Carl G. Koppitz, Youngstown, Ohio. Filed Sept. 16, 1909. Serial No. 518,024.



1. In a clamping device for boots and shoes, a vertically movable rest plate, clamping members for engaging the arch portion of the sole of boot or shoe, and means whereby the clamping members are moved into clamping engagement with the sole of a boot or shoe by the depression of the rest plate by the pressure of the foot on the rest plate.

2. In a clamping device for boots and shoes, a vertically movable rest plate, clamping members, connections between the clamping members and the rest plate for operating the latter from the former, and means whereby the clamping members are caused to move toward and from each other when operated by the rest plate.

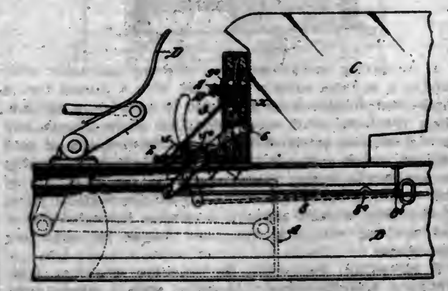
3. In a clamping device for boots and shoes, a vertically movable and spring pressed rest-plate, jaw carrying levers pivotally connected with the rest-plate, and means whereby the levers are caused to swing inward toward each other when the rest-plate is depressed.

4. A clamping device for boots and shoes, comprising a fixed rest plate for the front end of the sole of the shoe or boot to rest on, a movable rest plate adapted to be engaged by the arch portion of the sole and mounted to slide up and down, levers connected with the said movable rest plate, and jaws on the said levers for clamping opposite sides of the sole of the shoe or boot on depressing the said movable member.

5. A clamping device for boots and shoes, comprising a fixed rest plate for the front portion of the sole to rest on, a spring-pressed movable rest plate mounted to slide up and down at the rear end of the said fixed rest plate, the said movable rest plate being adapted to be engaged and pressed downward by the arch portion of the sole, the said movable rest plate having an angular offset for engagement by the heel of the shoe or boot, and levers controlled by the said movable rest plate and carrying jaws engaging opposite sides of the sole at the arch portion on pressing the said movable rest plate downward.

[Claims 6 to 10 not printed in the Gazette.]

1,013,628. BLOCK-DROPPING MECHANISM FOR BALING-PRESSES. LUTHER TRABUE, Girard, Ill. Filed June 24, 1911. Serial No. 635,059.



1. In a baling press, a reciprocating block-holder arranged in a vertical position and forming one wall of the hopper of the press, a reciprocating plunger or compressing member, a movable device carried by said block-holder which is adapted to be engaged on the forward stroke of the plunger so as to move said block-holder into delivering position, and means adapted to be actuated manually by the operator for moving said device into operative position with relation to the plunger and also into an inoperative position with relation to said plunger.

2. In a baling press, a reciprocating plunger or compressing member, a reciprocating block-holder arranged adjacent said plunger and forming one of the vertical walls of the hopper of the press, a pivotally mounted device on said block-holder which is adapted to be engaged by a projection on said plunger and moved into delivering position, and means adapted to be moved manually in both directions for moving said device into and out of the path of said projection.

3. In a baling press, a block-holder, a reciprocating member, a device on said block-holder which is adapted to be engaged by said reciprocating member so as to move the block-holder into delivering position, and means for preventing a block from being inserted in said holder when said device is set in operative position.

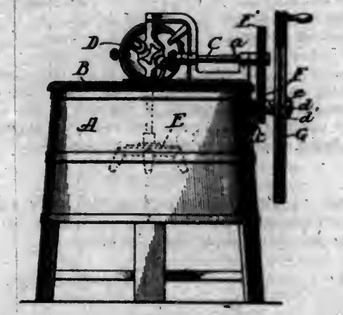
4. In a baling press, a reciprocating member, a block-holder, a movable device on said holder which is adapted to be engaged by said reciprocating member, a lever operatively connected to said device for moving it into and out of operative position, a rod connected to said lever and adapted to be moved manually by the operator in both

directions, and means for locking said rod so as to hold said device in either an operative or inoperative position.

5. In a baling press, a reciprocating member, a block-holder, a movable device on said holder which is adapted to be engaged by said reciprocating member, a lever operatively connected to said device for moving it into and out of operative position, and means for actuating said lever, said lever having a portion which prevents a block from being inserted in the holder when said device is in an operative position.

[Claims 6 to 13 not printed in the Gazette.]

1,013,629. MECHANICAL MOVEMENT. WILLIAM H. VOSS, Davenport, Iowa. Filed Dec. 3, 1908. Serial No. 465,844.



1. Actuating mechanism for washing machines comprising a suitable support provided with a hinged top, a rotary reciprocable shaft journaled in said top, a continuously revoluble shaft arranged at an angle thereto and having one end extended beyond the vertical side of said support, means actuated by the latter shaft for imparting motion to the former shaft, a gear on the outer end of said revoluble shaft in a plane beyond the vertical plane of the side of said support, a pinion journaled below and meshing with said gear, and means for actuating said pinion.

2. Actuating mechanism for washing machines comprising a suitable support provided with a hinged top, a rotary reciprocable shaft journaled in said top, a continuously revoluble shaft arranged at an angle thereto and having one end extended beyond the vertical side of said support, means actuated by the latter shaft for imparting motion to the former shaft, a gear on the outer end of said revoluble shaft in a plane beyond the vertical plane of the side of said support, a pinion journaled below and meshing with said gear, a balance wheel operatively connected and actuating said pinion.

3. Actuating mechanism for washing machines comprising a suitable support provided with a hinged top, a rotary reciprocable shaft journaled in said top, a continuously revoluble shaft arranged at an angle thereto and having one end extended beyond the vertical side of said support, means actuated by the latter shaft for imparting motion to the former shaft, a gear on the outer end of said revoluble shaft in a plane beyond the vertical plane of the side of said support, a pinion meshing with said gear, a stud projecting from the side of said support on which said pinion is mounted, and means for actuating said pinion.

4. Actuating mechanism for washing machines comprising a suitable support provided with a hinged top, a rotary reciprocable shaft journaled in said top, a continuously revoluble shaft arranged at an angle thereto and having one end extended beyond the vertical side of said support, means actuated by the latter shaft for imparting motion to the former shaft, a gear on the outer end of said revoluble shaft in a plane beyond the vertical plane of the side of said support, a pinion journaled below the horizontal plane of the top of said support and meshing with said gear, and means for actuating said pinion.

5. Actuating mechanism for washing machines comprising a suitable support provided with a hinged top, a rotary reciprocable shaft journaled in said top, a continuously revoluble shaft arranged at an angle thereto and having one end extended beyond the vertical side of said support, means actuated by the latter shaft for imparting motion to the former shaft, a gear on the outer end of said revoluble shaft in a plane beyond the vertical plane of the side of said support, a pinion meshing with said gear, a stud projecting from the side of said support on which said pinion is mounted, said stud being below the horizontal plane of the top of said support, and means for actuating said pinion.

1,013,630. FILING-RECEPTACLE. MORITZ WIESNER, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 5, 1911. Serial No. 619,144.

1. In a filing receptacle, the combination with two side walls, one of which is adjustable toward and from the other to two positions to vary the width of the receptacle, of a bottom wall having a longitudinal channel therein, a laterally movable member extending longitudinally of the channel and shiftable across the same according to the position of the adjustable side wall of the receptacle, to form, in conjunction with either wall of the channel, a guideway adapted to receive the retaining devices of the partition or index cards.

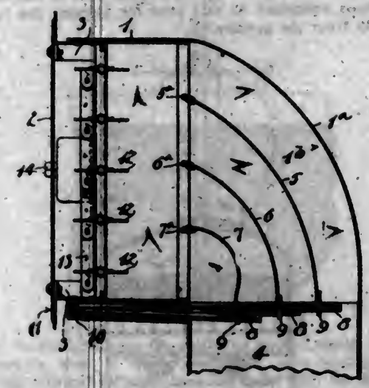
2. In a filing receptacle, the combination with two side walls, one of which is adjustable toward and from the other to two positions to vary the width of the receptacle, of a bottom composed of two fixed pannels spaced apart to form a longitudinal slot or channel and an intermediate movable panel narrower than the slot and shiftable laterally across the same according to the position of the adjustable side wall of the receptacle to form, in conjunction with either of the fixed panels, a guideway adapted to receive the retaining devices of the partition or index cards.

3. In a filing receptacle, the combination with an adjustable side wall varying the width of the receptacle, of laterally adjustable means at the bottom of the receptacle for forming a guideway for the securing devices of the partition or index cards according to the position of the adjustable wall.

4. In a filing receptacle, the combination with two side walls one of which is adjustable toward and from the other to two positions to vary the width of the receptacle, of a bottom wall having a longitudinal channel therein, a laterally movable member extending longitudinally of the channel and shiftable across the same according to the position of the adjustable side wall of the receptacle to form, in conjunction with either wall of the channel, a guideway adapted to receive the retaining devices of the partition or index cards, a pair of sockets at each end of the channel, one or the other of each pair having an alined position with reference to the guideway whatever the position of the shiftable member and a removable rod adapted for insertion in the guideway and in the sockets alined therewith.

5. The combination with a desk or similar drawer, of a transverse partition therein dividing the drawer into front and rear receptacles, said partition constituting a side wall common to both and being adjustable to two positions longitudinally of the drawer and transversely of the receptacles to vary the widths of the latter, of a bottom wall for each receptacle having a longitudinal channel therein and a laterally movable member extending longitudinally of each channel and shiftable across the same according to the position of the adjustable side wall to form, in conjunction with either wall of the channel a guideway adapted to receive the retaining devices of the partition or index cards.

1,013,631. REGISTER AND VENTILATOR. FREDERICK A. WILSON, Brooklyn, N. Y. Filed July 7, 1909, Serial No. 506,261. Renewed Nov. 9, 1911. Serial No. 659,426.



1. In a side wall register, a face plate, a box extending rearwardly therefrom and opening at the rear, an extension at the rear of said box, said extension being closed at its sides and rear and opening downwardly only, deflectors within said extension and arranged between the side walls thereof and means to independently move said deflectors with respect to each other, to shift the position of the same relatively to the rear wall of the downward extension and a plurality of shutters in advance of said deflectors with means for operating the same.

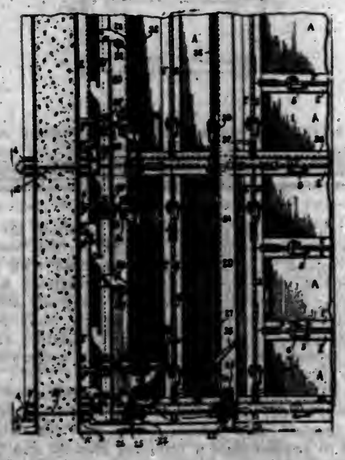
2. In a side wall register, a face plate, a box extending rearwardly therefrom and opening at the rear, an extension at the rear of said box, said extension being closed at its sides and rear and opening downwardly only, a deflector within said extension and arranged between the side walls thereof and an adjusting device operatively connected with said deflector to shift the position of the same relatively to the rear wall of the downward extension, said adjusting means terminating at the rear of the edge of the face plate, a slidable connection between said face plate and the rearward extension for adjusting the apparatus to walls of different thicknesses, said face plate having passages to afford access to said deflector adjusting device.

3. In a side wall register, a box having an integral rearward extension opening downwardly, a plurality of curved deflectors therein, said deflectors inclining forwardly toward the front of the box and being pivoted to said box, an adjustable device for one of said deflectors, said adjusting device being operable from the front of the register and a threaded connection between said adjusting device and said deflector.

4. In a side wall register, a box having a rearward extension opening downwardly, a plurality of curved deflectors therein, said deflectors inclining forwardly toward the front of the box and being secured thereto at their upper outer ends, the lower ends of said deflectors being free to be adjusted, and independent adjusting devices for the lower ends of said deflectors, said adjusting devices being operable from the front of the register.

5. In a side wall register, a box having a rearward extension opening downwardly, a plurality of curved deflectors therein, said deflectors inclining forwardly toward the front of the box and being secured thereto at their upper outer ends, the lower ends of said deflectors being free to be adjusted, and adjusting means for the lower ends of said deflectors, said adjusting means being operable from the front of the register.

1,013,632. FORM AND MOLD FOR MAKING CONCRETE BUILDINGS. CHARLES H. WITTHOEFFT, St. Louis, Mo., assignor to Witthoefft Collapsible Concrete Forms Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 17, 1910. Serial No. 592,788.



1. An apparatus of the character described, comprising a mold member, a stationary beam, a brace member movably mounted on said beam, means for moving said brace member toward the mold member, and reinforcing bars interlocked with said brace member and mold member.

2. An apparatus of the character described, comprising a mold member, a stationary beam, a brace member movably mounted on said beam, adjusting screws for operating said brace member, means for causing all of said adjusting screws to operate in unison, and reinforcing bars each having flanges which interlock with said mold and brace members.

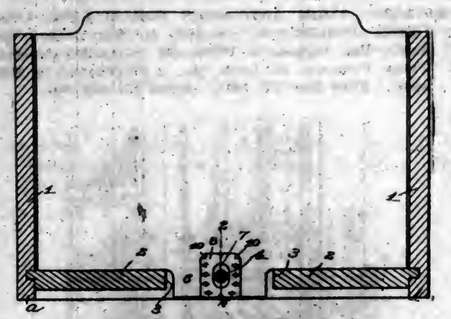
3. An apparatus of the character described, comprising a mold member provided with projections, a stationary brace member, a movable brace member secured to the stationary member, said movable member having projections, and flanged reinforcing bars interposed between the mold member and said movable member, the flanges of said reinforcing bars being interlocked with the projections on said mold member and movable member.

4. An apparatus of the character described, comprising a mold member provided with fingers, a stationary beam, a brace member movably mounted on said beam, said brace member being provided with recesses, means for moving said brace member toward the mold, and reinforcing bars connecting said brace member to the mold member, each of said reinforcing bars having flanges, one of which is interlocked with fingers on the mold member, the other flange being arranged in a recess in said movable brace member.

5. In a mold of the character described, mold plates provided with flanges, the flanges of adjoining mold plates being arranged together in pairs, and means for connecting said flanges comprising bifurcated clips, each clip being provided with an arm having slot and pin connection with one of a pair of said flanges and another arm provided with a hook, one flange of each pair of flanges mating with that with which the mating clip has slot and pin connection being provided with a pin to which the hook of the clip is interlocked when the flanges are held in assemblage by the clip.

[Claims 6 to 9 not printed in the Gazette.]

1,013,633. PARTITION OR GUIDE FOR FILES. PHILIP H. YAWMAN, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,191.



1. As an article of manufacture, a partition for paper filing receptacles comprising a body portion having a tongue thereon, said tongue being provided with a cutaway portion for coöperation with a retaining member and having a reinforcing member of relatively stiff material distinct from the material of the body portion arranged thereon adjacent the cutaway portion and extending beyond the base of the tongue to coöperate with both the latter and the body portion.

2. As an article of manufacture, a partition for paper filing receptacles comprising a body portion having a tongue thereon, said tongue being provided with an aperture to accommodate a retaining member and having a reinforcing member of relatively stiff material distinct from the material of the body portion wholly superposed thereon to surround the aperture and extending beyond the base of the tongue to coöperate with both the latter and the body portion.

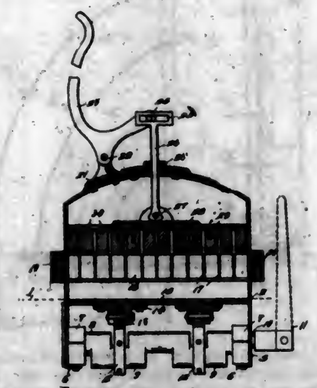
3. As an article of manufacture, a partition for paper filing receptacles composed of relatively thin material embodying a body portion having a tongue thereon, said tongue being provided with a cutaway portion for cooperation, with a retaining member and having a reinforcing member arranged thereon adjacent the cutaway portion and comprising a sheet metal plate extending beyond the base of the tongue to coöperate with both the latter and the body portion and secured thereto by a portion bent to extend through the material of the card at the upper edge of the plate.

4. As an article of manufacture, a partition for paper filing receptacles comprising a body portion having a tongue thereon, said tongue being provided with a cutaway portion for coöperation with a card-retaining member and having a reinforcing member wholly superposed thereon to surround the cutaway portion composed of a pliable metal strip extending beyond the base of the tongue to coöperate with both the latter and the body portion.

5. The combination with a paper filing receptacle having a slot in the bottom thereof and a retaining member located in the slot, of a partition arranged in the receptacle having a tongue projecting within the slot, said tongue being provided with a cutaway portion for cooperation with the retaining member, and a reinforcing member of relatively stiff material distinct from the material of the body portion on the tongue adjacent the cutaway portion and projecting beyond the base of the tongue to coöperate with both the latter and the body portion.

1,013,634. CANDY-CUTTING MACHINE. MARCELLUS ARMSTRONG, Corvallis, Oreg. Filed Sept. 15, 1911. Serial No. 649,542.

1. In a machine of the class described, the combination with a support, of a candy cutting machine fitting in and secured thereto, said machine comprising a rectangular flanged casing, two-part bearing boxes upon the flanges of the casing, a cranked shaft journaled in the bearing boxes and having an extended end, an operating lever connected to the extended end, arms secured to the cranks of the shaft, a plunger mounted in the casing, brackets depending therefrom, transverse pins fitting in said brackets to secure the arms to the plunger, a knife frame arranged in the casing above the plunger and having a plurality of substantially rectangular pockets, means carried by the frame for securing the frame to the casing, a bracket formed upon the dome of the casing, a lever fulcrumed therein, a stud at one end of the lever, and means connected to said stud for ejecting the batch of candy from the pockets.

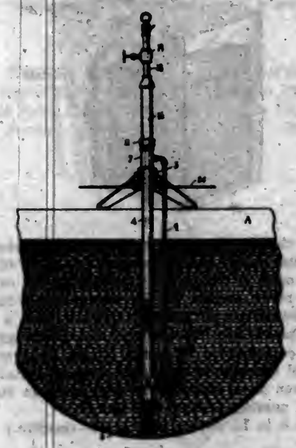


2. In a machine of the class described, the combination with a support, of a candy cutting machine fitting in and secured thereto, said machine comprising a rectangular flanged casing, two-part bearing boxes upon the flanges of the casing, a cranked shaft journaled in the bearing boxes and having an extended end, an operating lever connected to the extended end, arms secured to the cranks of the shaft, a plunger mounted in the casing, brackets depending therefrom, transverse pins fitting in said brackets to secure the arms to the plunger, a knife frame arranged in said casing above the plunger and having a plurality of substantially rectangular pockets, means carried by the frame for securing the frame in position within the casing, a bracket formed upon the dome of the casing, a vertical rod passing therethrough, a slotted head formed on the upper end of the rod in which said stud fits, an ejector plate arranged within the casing provided with a bracket to which is secured the lower end of the rod, and a series of blocks carried by the ejector plate adapted to enter the pockets of the plunger upon the lowering of said plate.

1,013,635. APPARATUS FOR SEPARATING DROSS FROM MOLTEN LEAD. JOHN O. BARDILL, Herculaneum, Mo. Filed June 3, 1911. Serial No. 631,108.

1. In an apparatus for agitating molten metal, a steam generator shell, a steam conducting pipe having communication with the upper portion of said generator shell and having an open discharge end located exterior of the generator shell, the generator shell and the open end of the steam pipe being adapted to be submerged into the molten metal, and means for conducting water into said generator shell and discharging it therefrom at a point beneath the point of communication between the generator shell and the steam conducting pipe.

2. In an apparatus for agitating molten metal, a steam generator shell, a water conducting pipe leading downwardly in said generator shell from its upper end to a point adjacent to its lower end, means through which a restricted quantity of water is admitted to said pipe to pass therethrough to the lower end of the generator shell, and a steam pipe having communication with the upper portion of said generator shell and having an open discharge end located exterior of the generator shell, the generator shell and the open end of the steam pipe being adapted to be submerged in the molten metal.



3. In an apparatus for agitating molten metal, a steam generator shell, a water conducting pipe leading downwardly within said shell from its upper end, the said pipe being open to communication with the interior of the generator shell at its lower end, a heat transmitting material in said shell around said water conducting pipe through which the water is adapted to percolate, and a steam pipe having communication with the upper portion of said generator shell and having an open discharge end located exterior of the shell, the generator shell and the open end of the steam pipe being adapted to be submerged in the molten metal.

4. In an apparatus for agitating molten metal, a steam generator shell, a water conducting pipe leading downwardly from the upper end of said generator shell and having open communication with the lower portion of said shell, a jet device through which water is delivered in a restricted quantity to said water conducting pipe, and a steam pipe leading from the upper portion of said generator shell, having an open end located exterior of the shell, the generator shell and the open end of the steam pipe being adapted to be submerged in the molten metal.

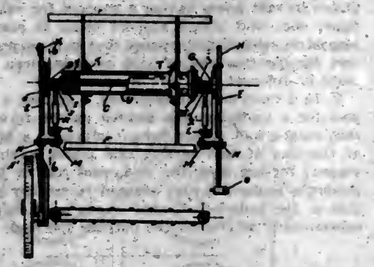
5. In an apparatus for agitating molten metal, a steam generator shell, a water conducting pipe leading downwardly with said shell from its upper end and having communication with the lower portion of the shell, a jet plate through which a restricted quantity of water is admitted to said water conducting pipe, and a steam conducting pipe having communication with the upper portion of said generator shell and having an open discharge end located exterior of the shell, the generator shell and the open end of the steam pipe being adapted to be submerged in the molten metal.

[Claims 6 to 8 not printed in the Gazette.]

1,013,636. HARVESTER-REEL AND SUPPORT THEREFOR. WILLIAM E. BENNETT, Grand Island, Nebr. Filed May 16, 1910. Serial No. 561,775.

1. In a harvester, a reel, supporting means therefor, vertical standards on which said supporting means are slidably mounted, said standards having screw-threaded portions, nuts carried by the supporting means and mounted for travel on said screw-threaded portions of the standards, and means for operating the nuts.

2. In a harvester, a reel, vertical standards, yokes slidably mounted on the standards, means for adjusting the yokes on the standards, bearings for the reel, a shaft passing through the bearings, and supports for said shaft carried by the yokes and adjustable horizontally thereon.



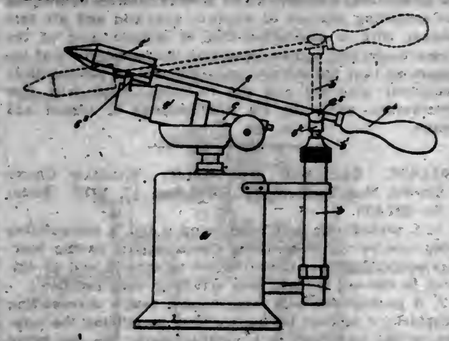
3. In a harvester, vertical standards having screw-threaded portions, yokes slidably mounted on the standards, nuts carried by the yokes and mounted for travel on said screw-threaded portions of the standards, said nuts having gear teeth, a shaft supported by the yokes, a reel, bearings for the reel through which the shaft loosely passes, gearing between the aforesaid nuts and the shaft, and means for operating the shaft to actuate the gearing.

4. In a harvester, vertical standards having screw-threaded portions, yokes slidably mounted on the standards, nuts carried by the yokes and mounted for travel on said screw-threaded portions of the standards, said nuts having gear teeth, a shaft supported by the yokes and adjustable horizontally thereon, a reel, bearings for the reel through which the shaft loosely passes, gearing between the aforesaid nuts and the shaft, and means for operating the shaft to actuate the gearing.

5. In a harvester, vertical standards having screw-threaded portions, yokes slidably mounted on the standards, nuts carried by the yokes and mounted for travel on said screw-threaded portions of the standards, said nuts having gear teeth, a shaft supported by the yokes, a reel, bearings for the reel through which the shaft loosely passes, gears on the shaft, shafts having telescoping sections, gears on one of the shaft sections and in mesh with the first-mentioned gears, gears meshing with the aforesaid nuts, shafts for the last-mentioned gears carried by the yokes, and a universal joint between the last-mentioned shafts and the other sections of the sectional shafts.

[Claim 6 not printed in the Gazette.]

1,013,637. BLOW-TORCH. JOHN G. BRECKENRIDGE, Springfield, Ohio, assignor to The Ridgely Trimmer Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 10, 1909. Serial No. 532,488.



1. In a torch such as described, a forward support for a soldering iron, an air pump, and a piston in said air pump, said piston being so positioned with respect to said support that the upper end of said piston also forms a support for said soldering iron to hold the same in different positions of adjustment.

2. In a torch such as described, a burner, a support for a soldering iron located on the forward part of said burner, an air pump located at the rear of said burner, a piston in said pump having a support for said iron at its upper end, said piston support being so positioned with respect to said burner support that it is adapted to form a rest for the rear end of said soldering iron to hold the same in different positions of adjustment.

3. In a torch such as described, a burner, a rest or support for a soldering iron located on the forward part of said burner, and an air pump comprising a piston located at the rear of said burner, said piston having a rest or support for the soldering iron, said rest or support comprising a projecting part adapted to receive the soldering iron on the underside thereof in one position of said iron, substantially as and for the purpose specified.

1,013,638. PROCESS OF MAKING OLEUM. THOMAS LYNTON BRIGGS, Flushing, N. Y., and HENRY F. MERRIAM, Summit, N. J., assignors to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Aug. 11, 1910. Serial No. 576,714.

1. The process of completely absorbing sulfuric anhydrid, carried by air, in sulfuric acid of a strength between 97% and 99.5% H_2SO_4 thereby converting said acid into oleum, which process consists in moving the gas in a direction opposite to that in which the finely divided acid moves and regulating the temperature in the vessel in which the substances meet and producing a substantially clear exit as specified.

2. The process of completely absorbing sulfuric anhydrid, carried by air, in sulfuric acid of a strength ranging between 97% and 99.5% H_2SO_4, thereby converting said sulfuric acid into oleum, which process consists in moving said gaseous mixture in a direction opposite to that in which said sulfuric acid, which has been finely divided, is moving and regulating the temperature within the vessel in which the substances meet by the application of a cooling medium to the outer side of said vessel and producing a substantially clear exit.

3. The process of completely absorbing sulfuric anhydrid, carried by air, in sulfuric acid, of a strength ranging between 97% and 99.5% H_2SO_4 thereby producing oleum, which process consists in moving said gaseous mixture in a direction opposite to that in which said sulfuric acid, which has been finely divided, is moving and maintaining within the vessel in which the substances meet a temperature below that at which sulfuric anhydrid is given off by the oleum and above that at which the sulfuric acid will not absorb sulfuric anhydrid and producing a clear exit.

4. The process herein described of completely separating sulfuric anhydrid from the air that carries it, in about the proportions specified, which process consists in bringing the ascending mixture of sulfuric anhydrid and air into contact with a descending film of sulfuric acid of the strength specified and so regulating the temperature of the apparatus that the sulfuric anhydrid will be substantially completely absorbed and the resulting oleum will flow downwardly, while the air will continue to ascend and escape.

1,013,639. PACKAGE FOR MILK. WILLIAM GRANT BROWN, New York, N. Y. Filed Dec. 17, 1910. Serial No. 597,871.

1. A package for milk comprising a can, a surrounding receptacle having a space for ice, a support having bearings permitting the rotation of the receptacle, and an agitator in the can brought into action by such rotation.

2. A package for milk comprising a can, a surrounding receptacle, a support having bearings permitting the rotation of the receptacle in a vertical plane, the can being located at one side of the axis of rotation so that when it is in its normal position it is substantially vertical and when rotated it is substantially horizontal, and an agitator within the can, brought into action by its rotation.

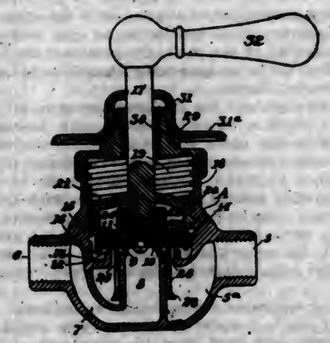
3. The combination of a can with an agitator therein, the agitator consisting of a substantially vertical perforated diaphragm, and bearings permitting the rotation of the can into a substantially horizontal position, the diaphragm when the can is so rotated being in a substantially horizontal plane.

4. The combination of a can with an agitator therein, and a faucet in the end of the can, the plane of the agitator being upon a transverse diameter of the can substantially at right angles to the one passing through the faucet; and means for rotating the can upon a horizontal axis in substantially the plane of the diaphragm.

5. The combination of a can having a cover, a faucet adjacent to the edge of the cover, and an agitator secured to the cover on a diameter substantially at right angles to the one passing through the faucet.

[Claims 6 to 15 not printed in the Gazette.]

1,013,640. ANTISCALDING-VALVE. ROBERT H. BRYON, Bay Ridge, N. Y., assignor to The J. L. Mott Iron Works, a Corporation of New York. Filed Oct. 9, 1905. Serial No. 281,943.



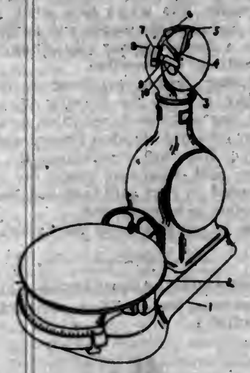
1. A valve having an inlet terminating in an extension centrally of the interior of the valve, a second inlet, and means for controlling the inlets comprising a stopper member having a tubular member outside of and telescoping with the central extension, said tubular member being provided with an outwardly extending projection adjacent the lower end thereof.

2. A valve provided with an inlet passage, a second inlet passage adjacent thereto, a stopper having a centrally disposed disk adapted to rest upon and entirely close the first-mentioned passageway, such stopper also having a thimble extending from the stopper around said central disk and formed with perforations of different sizes, and a rimlike member carried by said stopper and adapted to rest upon and entirely close the second passageway.

3. A valve having a plurality of inlet passages, an outlet passage communicating with said inlets, and a stopper having a perforated member adapted to control the flow through one of said inlets, said perforated member having a projection thereon adapted to prevent the flow of fluid through another of said inlets when fluid is passing from the first inlet through the perforated member.

4. A valve having a plurality of inlets, an outlet, and means for preventing the flow of fluid from the inlets to the outlet, said means including a stopper having a depending perforated member adapted to close one of the inlets when a second inlet is open to the outlet and provided with a flaring end portion adapted to close said second inlet when the first mentioned inlet is open to the outlet.

1,013,641. WEIGHT-MEASURING INSTRUMENT. EDMUND S. CHURCH, Dayton, Ohio, assignor to The Toledo Computing Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed May 27, 1910. Serial No. 563,683.



1. In a device of the class described, a movable scale controlled by the weight in the pan, a stationary scale substantially parallel to the movable scale and past which the latter moves one of the scales bearing a series of larger weight indications only and the other a series of indications fractional with respect to the indications of the first mentioned scale, the two series of indications being parallel to each other and to the line of separation between the stationary and movable scales.

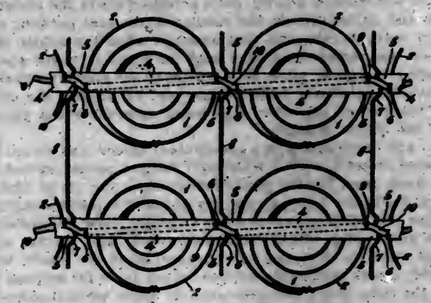
2. In a device of the class described, a movable scale under the control of the weight in the scale pan, and bearing a series of weight indications, and a stationary scale substantially parallel to the movable scale and bearing a series of indications representing fractions of the units of the movable scale, the two series of indications being parallel to each other and to the line of separation between the stationary and movable scales.

3. In a device of the class described, a movable scale actuated by the weight imposed upon the scale pan and containing a series of larger weight indications only, a stationary scale parallel thereto past which the first mentioned scale moves and bearing a series of weight indications fractional with respect to the indications on the movable scale, the two series of indications being parallel to each other and to the line of separation between the stationary and movable scales.

4. In a device of the class described, a movable scale actuated by the weight imposed upon the scale pan and containing only larger weight indications, a stationary scale parallel thereto past which the first mentioned scale moves and bearing weight indications fractional with respect to the indications on the movable scale, the surfaces which bear the weight indications being subetantially flush with each other.

5. In a device of the class described, a scale having a movable member, a rotary chart connected to the movable member for operation thereby carrying a series of larger weight indications only, a stationary scale parallel to the scale on the rotary chart past which the latter moves and bearing a series of weight indications which are fractional with respect to the indications on the movable scale the two series of indications being parallel to each other and to the line of separation between the stationary and movable scales.

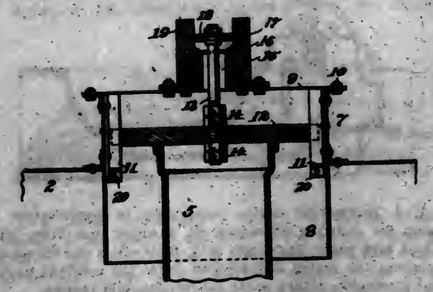
1,013,642. SPRING-BED. BENJAMIN D. COURTS, Cincinnati, Ohio. Filed May 1, 1911. Serial No. 624,327.



1. In a spring-bed, a spring-structure comprising a plurality of spirals having end-coils, flat sheet-metal strips having loops or eyes at opposite ends thereof adapted to engage the said end-coils, longitudinal extensions or tongues at the opposite ends of said flat sheet-metal strips and having loops or eyes therein adapted for alinement with loops or eyes in adjacent tongues projecting from adjacent spirals and transverse tie-wires having inwardly-bent portions therein that are adapted to engage the alined loops or eyes in said tongues whereby a hinge-connection is provided between adjacent end-coils of said spirals.

2. In a spring-bed, a spring-structure comprising spirals each having end-coils, flat sheet-metal strips having loops or eyes at opposite ends thereof adapted to engage said end-coils with said strips diametrically-crossing said end-coils, integral tongues projecting from the opposite ends of said flat sheet-metal strips at reverse sides of said opposite ends and having loops or eyes made therein that are adapted to aline with loops or eyes in tongues projecting from adjacent flat sheet-metal strips attached to end-coils of adjacent spirals, transverse tie-wires having bends therein that are adapted to engage said alined loops or eyes in said alined tongues and to form longitudinal stops and hinge-connections for said spirals and tapes of textile fabric interlaced or wound around said flat sheet-metal strips and adapted to form mufflers or cushions between contacting or rubbing parts of said spirals and strips.

1,013,643. SAFETY DEVICE FOR GAS-HOLDERS. ARTHUR R. CRUSE, Philadelphia, Pa. Filed July 20, 1911. Serial No. 639,501.



1. The combination of a gas or other holder, and an outlet pipe therefor, with a water seal tubular portion extending down from the top of the holder about the outlet pipe

when the holder is down, a cover plate arranged above the outlet pipe and guided within the tubular water seal portion, and means for suspending the cover plate with provision for slight vertical movement relatively to the holder.

2. The combination of a gas or other holder, and an outlet pipe therefor, with a water seal tubular portion extending down from the top of the holder about the outlet pipe when the holder is down and provided with a vent aperture to the atmosphere, a cover plate arranged above the outlet pipe and guided within the tubular water seal portion, a relief valve to close the vent aperture when the holder is raised, and means connecting with the relief valve for suspending the cover plate with provision for slight vertical movement relatively to the holder and for raising the relief valve when the cover plate seats upon the outlet pipe and the holder descends.

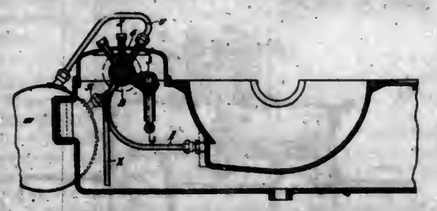
3. The combination of a gas or other holder, and an outlet pipe therefor, with a water seal tubular portion extending down from the top of the holder about the outlet pipe when the holder is down and provided with a vent aperture to the atmosphere, a cover plate arranged above the outlet pipe and guided within the tubular water seal portion, a relief valve to close the vent aperture when the holder is raised, means connecting with the relief valve for suspending the cover plate with provision for slight vertical movement relatively to the holder and for raising the relief valve when the cover plate seats upon the outlet pipe and the holder descends, and means carried by the water seal portion for supporting the cover plate should it become detached from the suspending means or relief valve.

4. In a gas or other holder structure, the combination of a movable holder having a man-hole opening in its top, an outlet pipe opening from within the holder adjacent to the man-hole when the holder is down, a cover plate to seal the outlet pipe when the holder is down, suspending devices for the cover plate to hold it to the holder with provision for slight vertical movement relatively to the holder, and a removable cover for the man-hole in the holder carrying the suspending devices.

5. The combination of a gas or other holder having an outlet pipe, and an exhauster sucking upon the holder through the outlet pipe, with a cover plate to seal the outlet pipe when the holder is down, suspending devices for the cover plate to hold it to the holder with provision for slight vertical movement relatively to the holder, guiding devices on the holder for guiding the cover plate vertically and holding it against lateral displacement, and separate safety supports normally out of contact with the cover plate and carried by the holder for limiting the downward movement of the cover plate and holding it substantially horizontal should it become detached.

[Claims 6 to 9 not printed in the Gazette.]

1,013,644. LUBRICATING SYSTEM. PAUL DAIMLER, Untertürkheim, Germany, assignor to The Firm of Daimler Motorengesellschaft, Untertürkheim, Germany. Filed Sept. 4, 1907. Serial No. 391,317.



1. A lubricating device comprising in combination a pump for drawing off waste oil, a cooler and filter into which said pump discharges said waste oil, a smaller pump pumping the cooled and purified oil to the machine parts, and a common rotary valve controlling said pumps.

2. A lubricating device comprising in combination a pump drawing off waste oil, a cooler and purifier into which said pump discharges said waste oil, a smaller pump for taking the oil from the purifier, distributing pumps driven from the same shaft as said first mentioned pump and adapted to deal only with purified oil, and a common rotary distributing valve for said pumps, substantially as described.

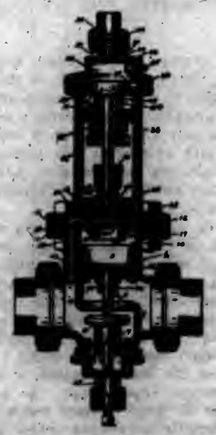
3. A lubricating device comprising in combination a pump for drawing off waste oil, a cooler and filter into which said pump discharges said waste oil, distributing pumps for distributing purified oil to the required parts of the engine, a common driving shaft for all said pumps, a common rotary valve for all said pumps, driving gearing from said driving shaft to said rotary valve.

4. A lubricating device for use in engines comprising in combination with the engine frame and crank pit, a waste oil pipe leading from the maximum oil level in said crank pit, a pump with which said waste oil pipe connects, a filter and cooler into which said pump discharges, a smaller pump pumping the cooled and purified oil to the machine parts, a common rotary controlling valve for said pumps, substantially as described.

5. A lubricating device comprising in combination a cooler and filter, a pump for drawing off waste oil and discharging it into said cooler and filter, a clean oil tank, a pump for removing the oil when cleaned and cooled from said cooler and filter and discharging the cleaned and cooled oil into said tank and means for removing the cleaned and cooled oil from said tank and distributing the same to the points to be lubricated.

[Claims 6 to 11 not printed in the Gazette.]

1,013,645. PRESSURE-REGULATING VALVE. DAVID LEWIS DALRYMPLE, Newark, N. J. Filed Mar. 17, 1908. Serial No. 421,674.



1. In an auxiliary operated pressure regulating valve, the combination of a body portion providing inlet and outlet openings and a cylinder, a main valve between said inlet and outlet openings, a piston in said cylinder adapted to impart movement to said main valve, a top piece seated upon said body portion to close the piston cylinder and recessed adjacent thereto to form an auxiliary valve chamber, an auxiliary valve projecting into said chamber, the said top piece forming around the stem of said valve an impervious wall for the chamber at its side away from the piston cylinder, a removable valve plug dividing said chamber from said piston cylinder and providing a seat for said auxiliary valve, said valve plug having in itself a passage opening at one end through the said auxiliary valve seat, means for conducting pressure from the inlet opening of the valve body portion to the other end of said valve seat passage of the valve plug independent of the auxiliary valve chamber and piston cylinder, and means of communication between the auxiliary valve chamber and piston cylinder.

2. In an auxiliary operated pressure regulating valve, the combination of a body portion providing inlet and outlet openings and a cylinder, a main valve between said inlet and outlet openings, a piston in said cylinder adapted to impart movement to said main valve, a top piece seated upon said body portion to close the piston cylinder and recessed adjacent thereto to form an auxiliary valve chamber, an auxiliary valve projecting into said chamber, the said top piece forming around the stem of said valve an impervious wall for the chamber at its side away from the piston cylinder, a removable valve plug dividing said chamber from said piston cylinder and providing a seat for said auxiliary valve, said valve plug having in itself a passage connecting the piston cylinder and auxiliary valve chamber and an independent passage opening at one end through the said auxiliary valve seat, and means for conducting pressure from the inlet opening of the valve body portion to the other end of said valve seat passage of the valve plug independent of the auxiliary valve chamber and piston cylinder.

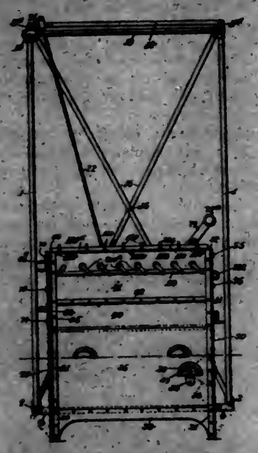
3. In an auxiliary operated pressure regulating valve, the combination of a body portion providing inlet and outlet openings and a cylinder, a main valve between said inlet and outlet openings, a piston in said cylinder adapted to impart movement to said main valve, a top piece seated upon said body portion to close the piston cylinder and recessed adjacent thereto to form an auxiliary valve chamber, an auxiliary valve projecting into said chamber, the said top piece forming around the stem of said valve an impervious wall for the chamber at its side away from the piston cylinder, a valve plug screwed into said recess of the top-piece and forming a valve seat for said auxiliary valve, the said valve plug top piece and body portion being bored to form a duct leading from the inlet of the body portion out through the said auxiliary valve seat of the valve plug independent of the auxiliary valve chamber and piston cylinder, and means of communication between the auxiliary chamber and piston cylinder.

4. In an auxiliary operated pressure regulating valve, the combination of a body portion providing inlet and outlet openings and a cylinder, a main valve between said inlet and outlet openings, a piston in said cylinder adapted to impart movement to said main valve, a top piece on said portion providing an auxiliary valve chamber, a yoke on said top piece, a cap forming with said yoke a diaphragm chamber, a diaphragm in said chamber, said yoke having an interior stop between the diaphragm and top piece, an auxiliary valve extending from the auxiliary valve chamber into engagement with the diaphragm and having means for engaging said stop on the yoke at its opposite side from the diaphragm and cap, whereby said cap and diaphragm may be removed without the auxiliary valve escaping, and a spring for holding said auxiliary valve against said stop.

5. In an auxiliary operated pressure regulating valve, the combination of a body portion providing inlet and outlet openings and a cylinder, a main valve between said inlet and outlet openings, a piston in said cylinder adapted to impart movement to said main valve, a top piece on said body portion providing an auxiliary valve chamber, a yoke on said top piece, a cap forming with said yoke a diaphragm chamber, a diaphragm in said chamber, said yoke having an interior flange between the diaphragm and top piece adjacent to the former and constituting a central guideway and a stop, an auxiliary valve extending from the auxiliary valve chamber through said guideway into engagement with the diaphragm and having a lateral shoulder adapted to engage the flange as a stop at its side away from the diaphragm, and a spring for holding said shoulder against said stop.

1,013,646. VOTING-MACHINE. JAMES H. DEAN, Chicago, Ill., assignor, by mesne assignments, to Empire Voting Machine Company, a Corporation of New York. Filed Dec. 27, 1904. Serial No. 238,886.

1. In a voting machine, vote registering mechanism, ballot keys therefor, an inclosing casing therefor comprising a cover plate through which the ballot keys project, one or more of the sides of the casing being provided with a flange to overlap said cover plate.



2. In a voting machine, vote registering mechanism, ballot keys therefor, an inclosing casing therefor comprising a removable cover plate through which the ballot keys project and locking mechanism within the casing for retaining said cover plate in position.

3. In a voting machine, vote registering mechanism, an inclosing casing therefor comprising a cover plate in combination with a locking bar within the casing for retaining said cover plate in position, said locking bar being provided with a yielding extension projecting into the path of the mechanism within the casing and arranged to prevent the removal of the cover plate while the voter is within the booth.

4. In a voting machine, vote registering mechanism, an inclosing casing therefor comprising a cover plate provided with projections on its inner side in combination with a movable locking bar within the casing, adjacent said cover plate, and arranged to engage said projections of the cover plate, and a lock having a bolt arranged to engage said locking bar.

5. In a voting machine, vote registering mechanism, ballot keys therefor arranged in several rows, an inclosing casing comprising a cover having a plurality of cut-away spaces for the passage of the several rows of ballot keys therethrough, and provided with a plurality of rows of sight openings on opposite sides of the cut-away spaces through which the rows of ballot keys project.

[Claims 6 to 68 not printed in the Gazette.]

1,013,647. SLATE-PICKER. FREDERICK H. EMERY, Scranton, Pa. Filed June 17, 1911. Serial No. 633,765.

1. A picker comprising a trough, a bottom pivoted therein, a pan slidably mounted in the trough below the delivery end of the bottom, a plate located between the delivery end of the bottom and the receiving end of the pan, a gate carried at the receiving end of the pan, and means connecting the gate with the bottom to move the gate transversely of the pan as the position of the bottom is adjusted.

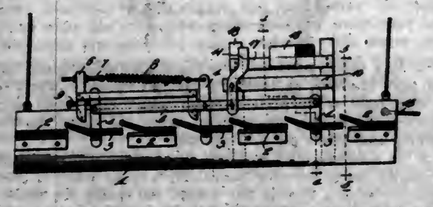
2. A picker comprising a trough, a bottom adjustably mounted therein, a pan adjustably mounted therein, a gate located between the bottom and the pan and adjustable with both the bottom and the pan.

3. A picker comprising a trough, a bottom adjustably mounted therein, a pan adjustably mounted therein, a gate located between the bottom and the pan and adjustable with both the bottom and the pan and mounted so that the adjustment of the pan does not disturb the adjustment of the bottom and vice versa.

4. A picker comprising a trough, a bottom adjustably mounted therein, a pan adjustably mounted therein, a gate slidably mounted upon the pan and slidably engaged by the bottom.

5. A picker comprising a trough, a bottom adjustably mounted therein, a pan adjustably mounted therein, a gate supported by the pan between the pan and the bottom, said gate having slots, bolts carried by the pan and passing through said slots, and arms carried by the bottom and passing slidably through the gate.

1,013,648. SHAKER-PICKER. FREDERICK H. EMERY, Scranton, Pa. Filed June 17, 1911. Serial No. 633,766.



1. A picker comprising a trunk, bottom sections pivoted therein, arms mounted upon the bottom sections, a rod pivotally connecting the arms together, means for moving the rod longitudinally as the trunk reciprocates, a post mounted upon the trunk, and a member adjustably mounted upon the post and located in the path of movement of one of the arms to limit the swinging movement of the bottom sections.

2. A picker comprising a trunk, bottom sections pivoted therein, arms carried by the bottom sections, a rod pivotally connecting the bottom sections together, means for moving the rod longitudinally as the trunk reciprocates, means for limiting the swinging movement of the bottom sections, and means for resiliently holding the bottom sections in normal position.

3. A picker comprising a trunk mounted for reciprocation, bottom sections pivoted therein, arms carried by the bottom sections, a rod pivotally connected with the arms, means for moving the rod longitudinally as the trunk reciprocates, means for limiting the swinging movement of the bottom sections, and an adjustable resilient means for holding the bottom sections in normal position.

4. A picker comprising a trunk mounted for reciprocation, bottom sections pivoted therein, arms carried by the bottom sections, a rod pivotally connecting the arms together, a frame carried by the trunk, a lever fulcrumed to the frame and having its working end pivoted to the rod, and a weight slidably mounted upon the frame, the power end of the said lever projecting into the path of movement of the said weight.

1,013,649. SOLID ROLLED METAL I-BEAM OF NINE INCHES AND UNDER TWELVE INCHES IN HEIGHT. HENRY GREY, New York, N. Y., assignor to American Universal Mill Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 14, 1903. Serial No. 173,108.

1. As a new article of manufacture, a solid rolled I-beam not less than nine inches in height, the width of the flanges of which is not less than twenty two times greater than the thickness of the web thereof.

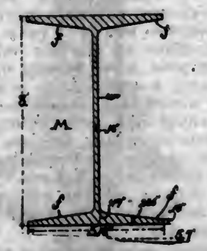
2. As a new article of manufacture, a solid rolled I-beam the width of the flanges of which is substantially five and one-half inches (5½) and the mean thickness of which flanges is substantially one-twelfth (1/12) of their width.

3. As a new article of manufacture, a solid rolled I-beam the height of which is over nine inches but under twelve inches, the ratio of the width of the flanges to the thickness of the web being not under twenty-two.

4. As a new article of manufacture, a solid rolled I-beam, the height of which is not less than nine inches, and the width of the flanges of which is substantially 5.5 inches, and the thickness of the web of which is .2 of an inch.

5. As a new article of manufacture, a solid rolled steel I-beam, the height of which is not less than nine inches, the width of the flanges of which is substantially 5.5 inches, the thickness of the web of which is substantially .2 of an inch, and mean thickness of the flanges of which is substantially .437 of an inch.

1,013,650. SOLID ROLLED METAL EIGHT-INCH I-BEAM. HENRY GREY, New York, N. Y., assignor to American Universal Mill Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 14, 1903. Serial No. 173,109.



1. As a new article of manufacture, a solid rolled I-beam eight inches or over in height and the ratio of the width of the flanges to the thickness of the web is not less than twenty-two.

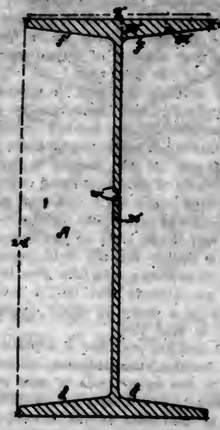
2. As a new article of manufacture, a solid rolled I-beam, the height of which is eight inches or over, and the ratio of the width of the flanges to the thickness of the web is not less than twenty two, the said width of flanges being substantially 5.18 inches and the said thickness of web being substantially .18 of an inch.

3. As a new article of manufacture, a solid rolled I-beam the width of the flanges of which is not less than fifteen (15) times greater than the mean thickness of said flanges.

1,013,651. SOLID ROLLED METAL I-BEAM OF SIXTEEN INCHES AND UNDER TWENTY-FIVE INCHES IN HEIGHT. HENRY GREY, New York, N. Y., assignor to American Universal Mill Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 16, 1903. Serial No. 173,413.

1. As a new article of manufacture, a solid rolled I-beam not less than sixteen inches in height, the width of the flanges of which is not less than twenty times greater than the thickness of the web thereof.

2. As a new article of manufacture, a solid rolled I-beam the height of which is not less than sixteen inches but under twenty-five inches, the ratio of the width of the flanges to the thickness of the web being not less than twenty.



3. As a new article of manufacture, a solid rolled I-beam, the height of which is substantially twenty inches, and the width of the flanges of which is substantially 7.6 inches, and the thickness of the web of which is substantially .35 inch.

4. As a new article of manufacture, a solid rolled steel I-beam, the height of which exceeds 16 inches, the width of the flanges of which is substantially 7.6 inches, the mean thickness of the flanges of which is substantially .70 of an inch, and the thickness of the web of which is substantially .35 of an inch.

5. As a new article of manufacture a solid rolled I-beam the width of the flanges of which is not less than twelve (12) times greater than the mean thickness of said flanges.

1,013,652. SOLID ROLLED METAL I-BEAM OF TWELVE INCHES AND UNDER SIXTEEN INCHES IN HEIGHT. HENRY GREY, New York, N. Y., assignor to American Universal Mill Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 16, 1903. Serial No. 173,414.

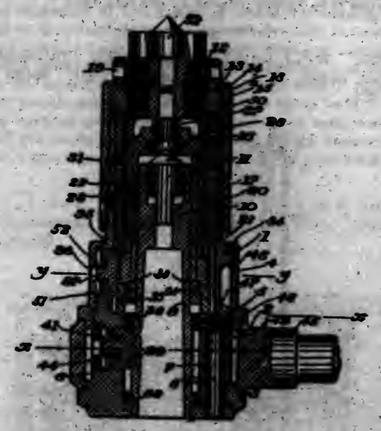
1. As a new article of manufacture, a solid rolled I-beam the height of which is over twelve inches but under sixteen inches, the ratio of the width of the flanges to the thickness of the web being not less than twenty two.

2. As a new article of manufacture, a solid rolled I-beam, the height of which is substantially twelve inches, and the width of the flanges of which is substantially six inches, and the thickness of the web of which is substantially .24 of an inch.

3. As a new article of manufacture, a solid rolled steel I-beam, the height of which is not less than twelve inches, the width of the flanges of which is substantially six inches, the mean thickness of the flanges of which is substantially .475 of an inch, and the thickness of the web is substantially .24 of an inch.

4. As a new article of manufacture, a solid rolled I-beam the height of which is substantially fifteen (15) inches, the width of the flanges thereof is six and seven-tenths (6-7/10) inches, and the mean thickness of said flanges being substantially one twelfth (1/12) of their width.

1,013,653. RATCHET-DRILL. CLARENCE B. GROFF, Camden, N. J. Filed Aug. 2, 1907. Serial No. 386,748.



1. In a ratchet drill, a casing, a ratchet sleeve mounted therein and adapted to be intermittently interlocked therewith, a hollow feed screw operatively connected with said sleeve and having only longitudinal movement with respect thereto, a bearing center movably carried by said sleeve and engaging said feed screw, a drill socket, a center bearing carried thereby and adapted to engage the bearing carried by said sleeve, and means co-acting with said drill socket and ratchet sleeve for rotating said drill socket.

2. In a ratchet drill, a casing, a ratchet sleeve carried thereby and adapted to be intermittently interlocked therewith, a hollow feed screw extending into said sleeve and having only longitudinal movement with respect thereto, a bearing carried by said sleeve and adapted to engage said feed screw, a drill socket extending into said sleeve, a center bearing movably carried thereby and adapted to engage the bearing carried by said sleeve, means for automatically actuating said feed screw, and means co-acting with said drill socket and ratchet sleeve for rotating said drill socket.

3. In a ratchet drill, a casing, a ratchet sleeve carried thereby, means for intermittently interlocking said sleeve and casing, a hollow feed screw extending into said sleeve and having only longitudinal movement with respect to said sleeve, a bearing movably carried by said sleeve, a drill socket extending into said sleeve, a center bearing movably carried thereby and co-acting with the movable bearing of said sleeve, and means co-acting with said drill socket and ratchet sleeve for actuating said drill socket.

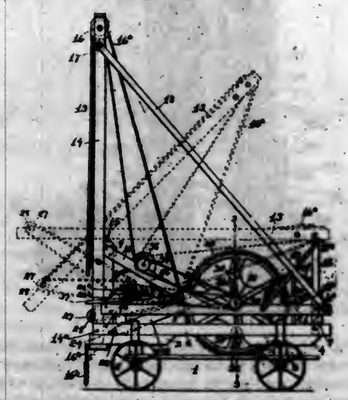
4. In a ratchet drill, a casing, a sleeve carried thereby, means for intermittently interlocking said sleeve and casing, a hollow feed screw extending into said sleeve and having only longitudinal movement with respect thereto,

a movable bearing carried by said sleeve and engaging said feed screw, a drill socket extending into said sleeve, a bearing carried thereby co-acting with the bearing of said sleeve, a bearing carried by said feed screw in alinement with said movable bearing, and means co-acting with said drill socket and ratchet sleeve for actuating said drill socket.

5. In a ratchet drill, a casing, a sleeve carried thereby, and provided with ratchet teeth, a pawl co-acting with said teeth and provided with a lug, a ring carried by said casing and provided with a recess into which said lug is adapted to extend, a spring interposed between said ring and said pawl, a hollow feed screw extending into said sleeve and having only longitudinal movement with respect thereto, a bearing carried by said sleeve engaging said screw, a drill socket, a bearing carried thereby engaging the bearing of said sleeve, and means co-acting with said drill socket and ratchet sleeve for actuating said drill socket.

[Claims 6 to 18 not printed in the Gazette.]

1,013,654. WELL-DRILLING MACHINE. CHARLES F. GULDE, Beach, N. D. Filed Aug. 31, 1911. Serial No. 647,027.



1. In a well drilling machine, a support having opposite posts, a tower having intermediately of its length a hinged connection with the upper ends of said posts and capable of being lowered to rest thereupon, a drill rope reel upon said support at one side of the tower, guide pulleys for the drill rope at the upper and lower ends of the tower, a pivoted trip arm carrying a pulley for the drill rope, and means for intermittently depressing said trip arm including a rotary wheel having a slot, and a laterally projecting trip roller having a carrying shaft engaging and capable of adjustment in said slot to vary the stroke of the trip arm.

2. In a well drilling machine, a support having opposite posts, a tower having intermediately of its length a hinged connection with the upper ends of said posts and capable of being lowered to rest thereupon, a drill rope reel upon said support at one side of the tower, guide pulleys for the drill rope at the upper and lower ends of the tower, a pivoted trip arm carrying a pulley for the drill rope, means for intermittently depressing said trip arm including a rotary wheel having a slot and a laterally projecting trip roller having a carrying shaft engaging and capable of adjustment in said slot, a drill rope passing from said reel under the pulley at the lower end of the tower, under the pulley from the trip arm, up over the pulley at the upper end of the tower, and a brake for the drill rope reel.

3. In a well drilling machine, a support having opposite forward posts and opposite rear posts, a transverse connection for the rear posts, a tower having intermediately of its length a hinged connection with the upper ends of the forward posts and capable of being lowered to rest thereupon and upon said transverse connection, a drill rope reel upon said support at one side of the tower, guide pulleys for the drill rope at the upper and lower ends of the tower, a pivoted trip arm carrying a pulley for the drill rope, and means for intermittently depressing said trip arm including a rotary wheel having an arcuate slot and a laterally projecting trip roller having a carrying shaft engaging and capable of adjustment in said slot to vary the stroke of the trip arm.

4. In a well drilling machine, a support having upper and lower vertically and transversely separated longitudinal bars, opposite posts having connection with said bars, a tower having bracing engagement within said bars and intermediately of its length a hinged connection with the upper ends of said posts and capable of being lowered to rest thereupon, a drill rope reel upon said support at one side of the tower, guide pulleys for the drill rope at the upper and lower ends of the tower, a pivoted trip arm carrying a pulley for the drill rope, and means for intermittently depressing said trip arm including a rotary wheel having an arcuate slot and a laterally projecting trip roller having a carrying shaft engaging and capable of adjustment in said slot.

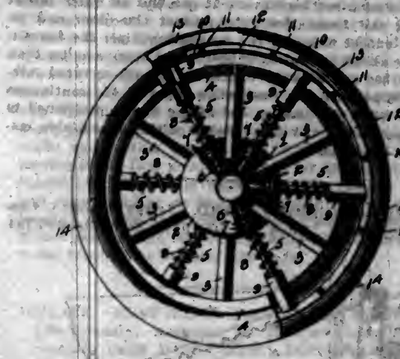
5. In a well drilling machine, a support having opposite posts, a tower having intermediately of its length a hinged connection with the upper ends of said posts and capable of being lowered to rest thereupon, a drill rope reel upon said support at one side of the tower, a friction brake for said reel, a slush bucket reel upon said support at one side of the tower, guide pulleys for the drill rope at the upper and lower ends of the tower, a guide pulley for the slush bucket rope at the upper end of the tower, a pivoted trip arm carrying a guide pulley for the drill rope, and means for intermittently depressing said trip arm, including a power shaft, a countershaft, a wheel upon the countershaft having a driving connection with the power shaft, and diametrically opposite arcuate slots, and laterally projecting trip rollers having carrying shafts engaging and capable of adjustment in said slots.

1,013,655. RAILROAD-TIE. ULYSSES GRANT HAMILTON, Peters, Cal., assignor of one-fourth to Louis Frederick Sanguinetti, Peters, Cal. Filed May 26, 1911. Serial No. 629,577.

A railroad tie comprising a cementitious body portion having transverse recesses in its upper face, corresponding lateral extensions at each end of said body portion into which the ends of said recesses respectively project, a rail bracket secured to said tie at each end, each of said brackets comprising a trough portion having its sides provided at its upper ends with laterally and downwardly extending flanges, a web integral with the bottom of said trough portion and disposed on said recesses of the tie respectively, throughout the entire extent of the latter, reinforcing rods embedded in said tie passing through the webs of said bracket to secure the latter to the body portion, and clamping means for securing the rails to respective brackets.

1,013,656. SPRING-WHEEL. WILLIAM D. HESTER, Durham, N. C. Filed Dec. 16, 1910. Serial No. 597,602.

A spring wheel comprising a hub, a rigid metal rim, spokes connected to said hub and rim, a tire rim comprising curved sections pivotally connected together, studs projecting from some of said sections, said studs extending inwardly and adapted to move through holes in the rigid metal rim, said studs each having a bore or socket, a pin connected to the hub and mounted to move in said bore, and a spring surrounding said pin and bearing at



one end against said stud, and lock nuts on said pin for adjusting the tension of said spring.

1,013,657. METHOD OF MAKING ABRASIVE ARTICLES. FRANCIS W. HIGGINS, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Feb. 28, 1907. Serial No. 359,911.

1. The method of making abrasive articles, which consists in shaping the article from a mixture of an abrasive material and a binder containing fluorin, coating the shaped article with a coat or layer which is substantially impervious to gases, and then firing; substantially as described.

2. The method of making abrasive articles, which consists in shaping the article from a mixture of an abrasive material and a binder containing fluorin, coating the shaped article with a coat or layer which is resistant to fluorin gases, and then firing; substantially as described.

3. The method of making abrasive articles, which consists in shaping the article from a mixture of an abrasive material and a binder containing fluorin, coating the shaped article with a coat or layer which will fuse at a kiln temperature below the vitrifying point of the binder, and then firing; substantially as described.

4. The method of making abrasive articles, which consists in shaping the article from a mixture of an abrasive material and a binder containing fluorin, coating the shaped article with a coat or layer containing kaolin and feldspar, and then firing; substantially as described.

1,013,658. ELECTRIC-LAMP SOCKET. ARTHUR L. JACOBS, Boston, Mass., assignor, by mesne assignments, to Jennie M. Jacobs, Boston, Mass. Filed May 16, 1910. Serial No. 561,611.

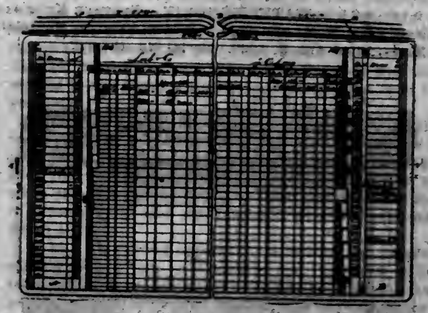
1. An electric lamp socket having, in combination, a base composed of two blocks of insulating material placed face to face and provided, respectively, with cavities forming a chamber, two conductors extending between the opposed faces of said blocks and held by their engagement therewith, and a switch mechanism located in said chamber adapted to electrically connect said conductors.

2. An electric lamp socket having, in combination, a base composed of two blocks of insulating material placed face to face and provided, respectively, with cavities forming a chamber, a spring located in said chamber and held in place therein by contact with the walls thereof, said spring having two relatively movable parts, two conductors extending between the opposed faces of said blocks and held in place by their engagement therewith, and a rotatable member located in said chamber and adapted to be rotated to actuate said spring parts to make electrical connection between said conductors.

3. An electric lamp socket having, in combination, a base composed of two blocks of insulating material placed face to face, means to secure said blocks to each other, two conductors extending between the opposed faces of said blocks and held by their engagement therewith, and a switch mechanism interengaging with said blocks and adapted to electrically connect said conductors, said mechanism being held in operative position solely by its interengagement with said blocks.

4. An electric lamp socket having, in combination, a base composed of two blocks of insulating material placed face to face and provided, respectively, with cavities forming a chamber, means to secure said blocks to each other, a switch mechanism located in said chamber, and two conductors extending between the opposed ends of said block, said mechanism and said conductors being held in operative position solely by the engagement of said mechanism with the walls of said chamber and by the engagement of said conductors with the opposed ends of said blocks.

1,013,659. ACCOUNT-BOOK. WILLIAM O. JOHNSON, Washington, D. C. Filed Jan. 25, 1904. Serial No. 190,550.



1. An account book having leaves provided with a middle column for dates, columns for credit information on the right hand portion and columns for debit information on the left hand portion, with appropriate headings, the leaves divided into a plurality of sections by projecting index sheets, each index sheet provided with properly indicated spaces for indexing the accounts in the adjacent section of the book, each leaf having a tab or projection opposite the spaces for indexing the accounts on the first two pages following the tab, the said leaves provided with classification tabs of different shapes and colors with different markings and arranged in rows across the edges of the leaves so as to distinguish different classifications of the accounts by means of differences in the position, shape, color and marking of the tabs, substantially as set forth.

2. An account book having leaves provided with a middle column for dates, columns on the right hand portion for credit balances, credits and memoranda and columns on the left hand portion for debit balances, debits and memoranda, with appropriate headings, the leaves divided into sections by a plurality of index sheets, the said index sheets ruled horizontally for each account in the adjacent section and vertically into a number column, a check column and a name column, with appropriate headings, the leaves having projections or tabs, the upper edge of each

tab alining with the horizontal space on the adjacent index designed for indexing the last account on the page immediately preceding the tab, substantially as set forth.

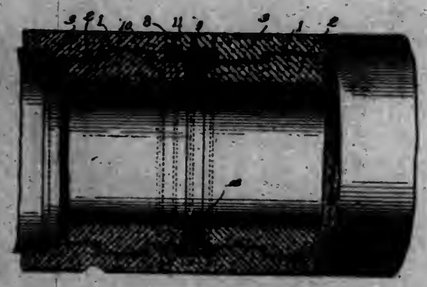
3. An account book having leaves provided with a middle column for dates, columns on the right hand portion for credit balances and credits and columns on the left hand portion for debit balances and debits, with appropriate headings, each leaf also having a column near the margin divided into a plurality of spaces equal in number to the days of a month and designated by numerals or other characters, the edges of the leaves having adjustable classification tabs of different colors and shapes with different markings and arranged in rows across the edges of the leaves so as to distinguish different classifications of the accounts by means of differences in the position, color, shape and marking of the tabs, substantially as set forth.

4. An indexed book having the leaves divided into groups by index sheets, each index sheet having horizontal rulings forming spaces equal in number to the pages in the adjacent group or number of accounts in the adjacent group of the book, and appropriately headed columns for names, numbers and check marks, the column for check marks covered with a removable facing, each leaf provided with a tab or projection opposite the spaces of the index for indexing the accounts on the first two pages following the tab, substantially as set forth.

5. A classified record having the record sheets provided with adjustable tabs of different shapes and colors with different markings and arranged in rows across the edges of the record sheets so as to distinguish different classifications of the record sheets by means of differences in the position, color, shape and marking of the tab, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,013,660. WATER-CONDUIT. GUSTAVE KAUFMAN, New York, N. Y., and COLEMAN MERIWETHER, Montclair, N. J. Filed Apr. 9, 1909. Serial No. 488,822.

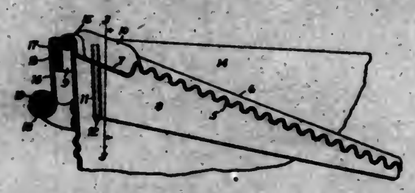


1. A conduit for conveying water under pressure, comprising a plurality of sections each consisting of a metal foundation pipe providing the tensile strength to withstand the internal pressure and incased inside and out in concrete and each section having at one end an outer rabbet exposing the foundation pipe and at the other end an internal rabbet exposing the foundation pipe the foundation pipe at the outwardly rabbeted end being smaller than at the other end whereby to leave a calking space between the foundation pipes of the contiguous sections when the smaller end of the one is positioned in the larger end of the next; and a calking of suitable material in said space.

2. A pipe section for water conduits, comprising a metal foundation pipe to withstand internal pressure having circumferential corrugations, inner and outer casings of concrete engaging the corrugations and terminating short of the ends of the foundation-pipe at opposite extremities of the section to provide bell and spigot ends, circumferential reinforcing members embedded in the outer casing outside of the foundation pipe at the bell end, and circumferential reinforcing members embedded in the inner casing inside the foundation pipe at the spigot end.

3. A conduit for conveying water under pressure, comprising a plurality of sections each consisting of an imperforate foundation pipe incased inside and out in concrete and each section having at one end an outer rabbet exposing the foundation pipe and at the other end an internal rabbet exposing the foundation pipe, the foundation pipe at the outwardly rabbeted end being smaller than at the other end whereby to leave a smooth-surfaced calking space between the foundation pipes of the contiguous sections when the smaller end of the one is positioned in the larger end of the next; and a calking of suitable material in said space.

1,013,661. SCRUBBING-BOARD. JAMES E. KEILY, Canandaigua, N. Y. Filed May 10, 1911. Serial No. 626,394.

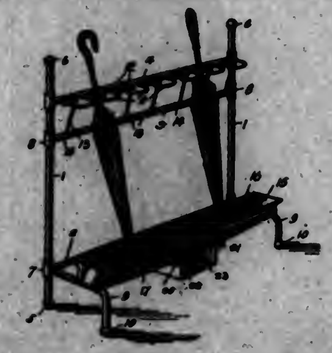


1. A scrubbing-board having, in combination, a corrugated body-portion, a hook for engaging the edge of a wash-tub to support the scrubbing-board, and an abutment for engaging the inner surface of the wash-tub to sustain the board in inclined position therein, said body-portion and hook comprising an integral sheet-metal member and the hook being formed by a depending flange thereon extending substantially across the end of the body-portion and horizontally curved so as to conform to the curvature of the wash-tub.

2. A scrubbing-board provided with a hook at its upper end to engage the upper edge of a wash-tub, an abutment to engage the inner surface of the tub only near the top thereof, and a fastening-device loosely connected with the upper end of the scrubbing-board and adapted to depend therefrom outside the tub and engage an external projection on the tub to secure the scrubbing-board in place.

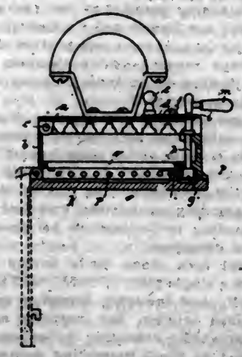
3. A scrubbing-board comprising an integral sheet-metal member having a corrugated body-portion, a depending flange at its upper end, a flange extending upwardly from the lower extremity of said depending flange, and a fastening-device comprising hooked upper and lower extremities adapted to engage, respectively, said upwardly-extending flange and an external projection on a wash-tub.

1,013,662. UMBRELLA-STAND. NICHOLAS KRAMER, Chicago, Ill. Filed July 27, 1911. Serial No. 640,893.



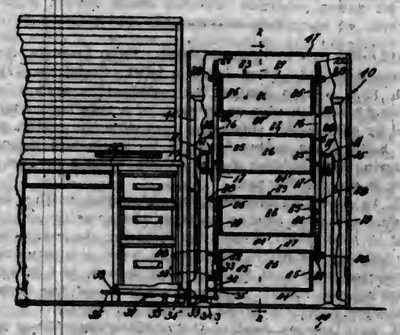
An umbrella stand comprising a pair of vertically disposed posts, inverted angle shaped supports projecting forwardly from the lower ends of said posts, a drip pan mounted upon the forward portions of said supports and spaced from said posts, a pair of superposed parallel bars connecting the upper portions of said posts together below the top thereof, a series of forwardly projecting split loops secured to the front portion of the upper of said bars and spaced from each other, one end of each of said loops bent inwardly to extend parallel with the upper of said bars, said inwardly extending portions of a length substantially half the diameter of the loop and providing forwardly thereof a side entrance opening for the handle of an umbrella and further providing in connection with the rear portion of the loop a reduced space for the reception of the handle of the umbrella when the latter extends upwardly and rearwardly at an inclination with the tip thereof in the drip pan, said inwardly extending portions terminating in downwardly and rearwardly inclined portions connected to the front of the lower of said bars.

1,013,663. FLAT-IRON. JOHN KRISET, Budapest, Austria-Hungary, assignor to Mistress Leopold Fehér, (maiden name Helene Csaki,) Budapest, Austria-Hungary. Filed Feb. 28, 1911. Serial No. 611,427.



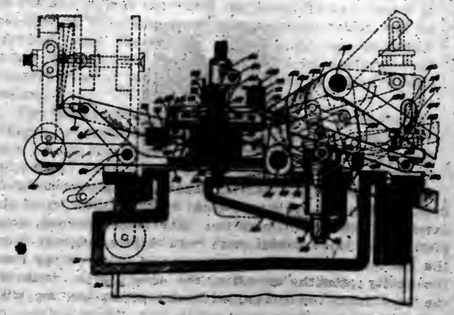
In a charcoal-iron, the combination with a body, of a cover and bottom hingedly secured thereto, said bottom being provided with an upwardly extending hook-shaped projection, a spindle rotatably mounted in said body provided in its upper end with a groove and at its lower end with a lug adapted to engage the projection of said bottom, and a latch hinged to said cover adapted to engage the groove in said spindle.

1,013,664. ROTARY BOOKCASE. GERMAIN A. LAVOIE, Glace Bay, Nova Scotia, Canada. Filed Nov. 4, 1910. Serial No. 590,710.



A rotary bookcase including standards having bearing boxes, a shaft journaled in said bearing boxes, spaced wheels on said shafts having radially arranged projections on their rims forming ratchet teeth, a treadle arranged transversely the rim of one of said wheels, a stand link loosely secured to said treadle and having one end equipped with an arcuate pawl the branches of which are adapted to bear upon the rim of the last named wheel and operatively engaged said ratchet teeth.

1,013,665. DIE-CASTING APPARATUS. WILLIAM A. LEDDELL, Red Bank, N. J., assignor to Henry F. Merriam, Summit, N. J. Filed May 6, 1909. Serial No. 494,481.



1. In a die casting apparatus: a melting pot: a pivoted casting pot, within said melting pot, provided with an inlet port and an outlet port; and means to tilt said casting pot such that the outlet port will be submerged in the metal when the said casting pot is in tilted position.

2. In a die casting apparatus: a melting pot; a pivoted casting pot, within said melting pot, provided with an inlet port and an outlet port; and means to automatically tilt said casting pot such that the outlet port will be submerged in the metal when the said casting pot is in tilted position.

3. In a die casting apparatus: a melting pot; a pivoted casting pot, within said melting pot, provided with an inlet port and an outlet port; means to tilt said casting pot such that the outlet port will be submerged in the metal when the said casting pot is in tilted position; and means to automatically open said inlet port when the said casting pot is tilted.

4. In a die casting apparatus: a melting pot; a pivoted casting pot, within said melting pot, provided with an inlet port and an outlet port; means to tilt said casting pot such that the outlet port will be submerged in the metal when the said casting pot is in tilted position; and means to close said inlet port when the casting pot is in casting position and to open same when the said casting pot is tilted.

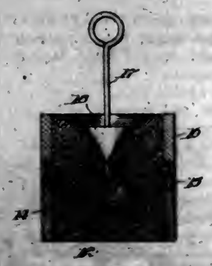
5. In a die casting apparatus: a melting pot; a pivoted casting pot, within said melting pot, provided with an inlet port and an outlet port; means to tilt said casting pot such that the outlet port will be submerged in the metal when the said casting pot is in tilted position; and means to automatically close said inlet port when the casting pot is in casting position and to automatically open same when the casting pot is tilted.

[Claims 6 to 40 not printed in the Gazette.]

1,013,666. PROCESS OF MAKING DENTAL INLAYS. JOHN P. LEDERLE, Chicago, Ill. Filed Jan. 21, 1911. Serial No. 603,853.

1. The method of making dental inlays consisting in first, coating the walls of the cavity with the inlay material; second, completing the inlay model with non-metallic fusible material; third, removing the model and coating from the cavity; fourth, investing the same; fifth, removing the fusible material; and sixth, casting with the inlay material.

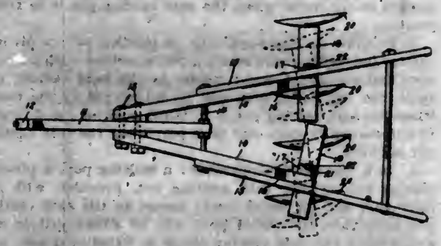
2. The method of making dental inlays consisting in first, coating the walls of the cavity and a portion of the exterior of the tooth with the inlay material; second, completing the inlay model with non-metallic fusible material before removal from the cavity; third, removing the model and coating from the cavity; fourth, investing the same; fifth, removing the fusible material; and sixth, casting with the inlay materials.



3. The method of making dental inlays consisting in first, coating the walls of the cavity and a portion of the exterior of the tooth with the inlay metal; second, completing the inlay model with wax before removal from the cavity; third, removing the model and coating from the cavity; fourth, investing the same; fifth, removing the wax from the investment; and sixth, casting with molten inlay metal.

4. The method of making dental inlays consisting in forming a model by swaging metal on the interior of the cavity and coating the exterior of the tooth adjacent the walls of said cavity, removing the model and investing the same, and casting the molten metal.

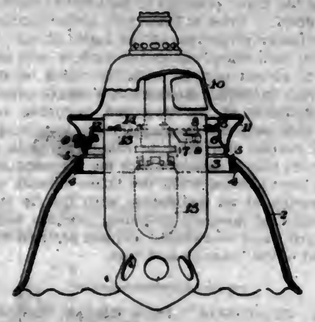
1,013,667. PLOW. FRANCIS M. LEMARR, Speedwell, Tenn. Filed Apr. 6, 1911. Serial No. 619,395.



In a cultivator, a pair of convergent beams having a draft means secured to their juxtaposed forward ends, each of said beams having oppositely disposed flat faces at its rear end, a disk carrying member assembled with each beam and comprising a stem having oppositely disposed flat faces relatively inclined to each other, a plurality of disks carried by said member, both of said relatively inclined flat faces being independently engageable with the flat faces of the rear end of the related beam whereby the disk carrying member may be angled in order to vary the width of the furrow cut by said disks.

1,013,668. GLOBE OR SHADE FOR INCANDESCENT GAS-LAMPS. THOMAS JAMES LITLE, Jr., Woodbury, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Nov. 4, 1910. Serial No. 590,700.

1. A metal neck glass shade having a neck portion made of one piece, said neck being provided with spaced apart interlocking devices arranged to engage inwardly extending projections on the shade-supporting portion of the burner without actuating said projections, and inwardly extending projections on the upper portion of the ring arranged to be engaged by projections on an inner chimney, substantially as described.



2. A metal neck glass shade having a neck portion made of one piece, said neck portion being provided at separated points with interlocking mechanism arranged to engage inwardly extending projections on the shade-supporting portion of the gas burner and a plurality of inwardly extending projections on the upper portion of the neck, there being openings between said projections to permit supporting projections on an inner chimney to pass through, substantially as described.

3. As a new article of manufacture, a metal neck for a glass globe, said metal neck having means for supporting and securing a glass globe, spaced apart interlocking devices arranged to engage the inwardly extending projections on the globe-supporting portion of the burner, and inwardly extending projections arranged to engage outwardly extending projections on an inner chimney, substantially as described.

4. A metal neck glass shade having a neck portion formed from a single piece of metal, said neck portion having outwardly and inwardly extending projections, there being openings between the inwardly extending projections, the outwardly extending projections being arranged to be engaged by shade-supporting devices on the burner and the inwardly extending projections being arranged to be engaged by supporting projections on an inner chimney, which can pass through the openings between the projections, substantially as described.

5. As a new article of manufacture, a metal neck for a glass globe formed of a single piece of metal, said neck having a plurality of notches arranged to engage inwardly extending projections on the shade-supporting portion of the burner, and a plurality of inwardly extending projections on the upper portion of the neck, said inwardly extending projections being arranged to be engaged by supporting projections on an inner chimney, substantially as described.

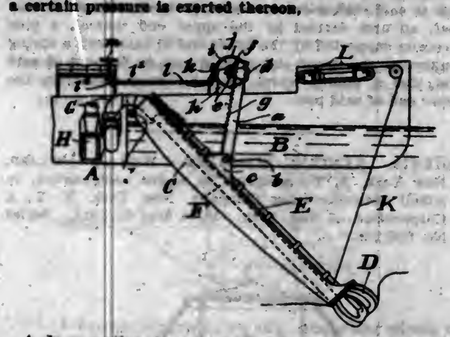
[Claims 6 and 7 not printed in the Gazette.]

1,013,669. SUCTION-DREDGER. FRED LORNITZ, Crookston, Scotland. Filed July 15, 1910. Serial No. 572,062.

1. In a suction dredger the combination, with a ladder having a suction pipe or passage, of a rotating cutter carried by said ladder, means for operating the cutter, means for holding the cutter down to its work, and means for allowing said holding means to slip when a certain pressure is exerted thereon.

2. In a suction dredger the combination, with a ladder having a suction pipe or passage, of a rotating cutter carried by said ladder, means for operating the cutter, means for holding the cutter down to its work, a rotary member connected with said holding down means, and means for allowing the rotary member to rotate and the cutter to rise when a certain pressure is exerted thereon.

3. In a suction dredger the combination with a ladder having a suction pipe or passage, of a rotating cutter carried by said ladder, means for operating the cutter, a holding down member secured to the ladder, means in engagement with said member for holding the cutter down to its work and means for allowing the cutter to rise when a certain pressure is exerted thereon,

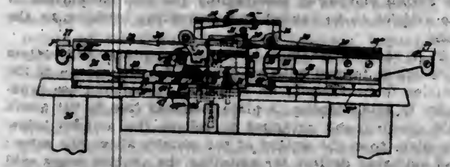


4. In a suction dredger the combination, with a ladder having a suction pipe or passage, of a rotating cutter carried by said ladder, means for operating the cutter, means for holding the cutter down to its work and for allowing slip when a certain pressure is exerted thereon, and means for adjusting the holding down means so as to vary the degree of pressure necessary to cause slip.

5. In a suction dredger the combination, with a ladder having a suction pipe or passage, of a rotating cutter carried by said ladder, means for operating the cutter, a rack pivotally secured to said ladder, a toothed wheel in engagement with the rack, a drum secured to the toothed wheel, a brake band engaging said drum, and means for operating the said band so as to hold the cutter down to its work and to allow the same to slip when a certain pressure is exerted thereon.

[Claims 6 to 9 not printed in the Gazette.]

1,013,670. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FRED F. MAIN, Chicago, Ill., assignor, by mesne assignments, to John T. Underwood, Brooklyn, N. Y. Filed Nov. 12, 1910. Serial No. 591,978.



1. The combination of types, a platen, a carriage, an adding and subtracting mechanism constructed to perform cross-computation during the run of said carriage in a single direction, and comprising a set of computing wheels and a single master wheel therefor, shiftable means for determining whether the computation performed by said mechanism shall be addition or subtraction, and automatic means for operating said shiftable means.

2. The combination of types; a platen; adding and subtracting mechanism, including as one element a gang of computing wheels and as another element a master-wheel; means, including letter-feeding devices, for automatically reciprocating one of said gang and master-wheel elements relatively to the other, to enable cross-computation to be performed; and means connected to said reciprocating means for determining automatically whether addition or subtraction shall be performed at successive runs of the letter-feeding element.

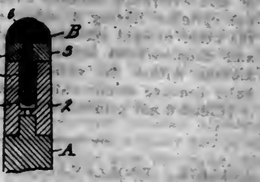
3. The combination of types; a platen; a carriage; adding and subtracting mechanism, including as one element a gang of computing wheels and as another element a master-wheel; means associated with said carriage and including letter-feeding devices, for automatically reciprocating one of said gang and master-wheel elements relatively to the other during the run of said carriage in letter-feeding direction, to enable cross-computation to be performed; and means connected to said reciprocating means for determining automatically whether addition or subtraction shall be performed at successive runs of said reciprocating element.

4. The combination of key-operated types, a platen, a letter-feeding carriage, adding and subtracting mechanism including as one element a gang of computing wheels, and as another element a master wheel, means for causing one of said elements to travel with said carriage while the other of said elements remains stationary at the letter-feeding operation, and for causing said traveling element to return after a number is computed and again travel with the carriage as the latter continues its own travel in letter-feeding direction, so that cross-computation can be performed, and means for determining automatically whether addition or subtraction shall be performed at successive runs of said traveling element in letter-feeding direction.

5. The combination of types; a platen; a letter-feeding carriage; an element consisting of a gang of computing wheels; a master-wheel element; one of said gang and master-wheel elements being connected to said carriage for a letter-feeding movement relatively to the other; means for automatically disconnecting said connected member and automatically re-connecting it at another point to the carriage, so that computation can be effected in respect to another column or number written on a work sheet; a shiftable device for determining whether addition or subtraction shall be performed on said gang of computing wheels, and means connected to said carriage for controlling said shiftable device.

[Claims 6 to 13 not printed in the Gazette.]

1,013,671. CUE-TIP. JOHN MASCAL, Worthington, Minn. Filed Sept. 12, 1910. Serial No. 581,581.



1. In combination, a billiard cue, its tip, means for securing said tip upon the end of the cue comprising a pair of independent bars each formed with a laterally bent prong whereby the pronged ends of said bars may be independently inserted into the tip and turned to bring them into laterally extending position and means arranged in connection with the end of the cue for securing said bars together to hold their pronged ends extending outwardly in the tip.

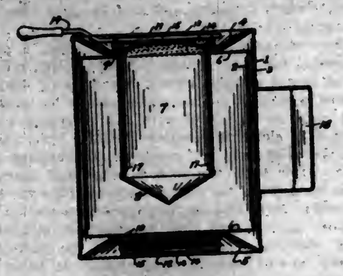
2. In combination a billiard cue, its tip, means for securing said tip upon the end of said cue comprising a pair of independent bars each formed with a laterally bent prong whereby the pronged ends of said bars may be independently inserted into the tip and turned to bring them into laterally extending position, and means for securing said bars together within the end of the cue for the purpose set forth.

3. In combination a billiard cue formed with a removable end, a resilient tip, a pair of bars formed with laterally directed end prongs fitted into said tip, said bars extending centrally through said removable cue end, and a nut threaded over the free end of said bars and bearing against the adjacent portion of the cue end for the purpose set forth.

1,013,672. ICE-CREAM FREEZER. WILLIAM B. McCANN, Omaha, Nebr. Filed Dec. 10, 1910. Serial No. 596,637.

1. An icecream freezer, comprising a cream cylinder, which has a screw-threaded mouth, a screw cap for said

mouth, and a rotary scraper, which is fastened to the inside of said cap, and works in unison therewith.



2. An icecream freezer, comprising a cream cylinder, which has a co-axial screw-threaded mouth, a screw cover for closing said mouth, a spring scraper, which is fastened to the inside of said cover, and rotates in said cylinder, when said screw cover is turned.

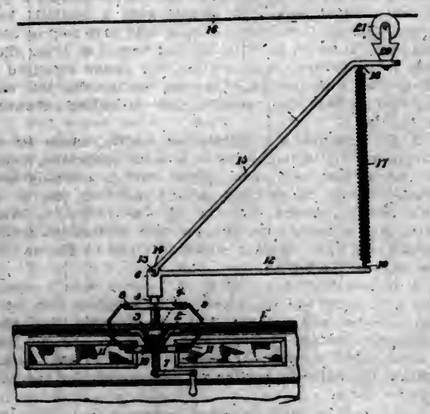
3. An icecream freezer, comprising an external double-walled cylinder having externally concave double-walled heads, projecting screw-threaded mouths in said double-walled heads, and double walled screw caps, closing said projecting mouths within the concavities of said externally concave double-walled heads.

4. An icecream freezer, comprising a cream cylinder, which has a screw-threaded mouth, a screw cap for said mouth, and an elastic scraper, which rotates in unison with said screw cap.

5. An icecream freezer, comprising an external double-walled cylinder having externally concave double-walled heads, an outwardly projecting screw mouth through one of said externally concave double-walled heads, an internal cylinder having a screw mouth projecting through the other of said externally concave double-walled heads, and double-walled screw caps covering said projecting mouths within the external concavities of said externally concave double-walled heads respectively.

[Claim 6 not printed in the Gazette.]

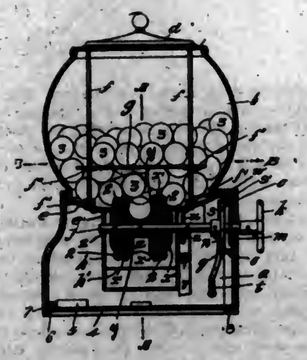
1,013,673. TROLLEY-POLE. MYKOLAJ MELINSKI, Albert City, Iowa. Filed July 3, 1911. Serial No. 636,579.



1. In a trolley, the combination with the car roof, of a post movably supported in said roof, disks mounted upon said post, retractile springs connecting the edges of said disks to said roof, a crank carried by the lower end of said post, and a trolley pole carried by the upper end thereof.

2. In a trolley, the combination with the car roof, of a post movably mounted therein, disks mounted upon said post, retractile springs connecting the edges of said disk to said roof, a crank carried by the lower end of said post, an arm carried by the upper end thereof, a pole pivotally supported by the upper end of said post, a spring connecting the upper end of said pole to the end of said arm, and a trolley wheel revolubly supported from the upper end of said pole.

1,013,674. VENDING-MACHINE. WILLIAM MILLARD, New York, N. Y., assignor, by mesne assignments, to Alball Manufacturing Company, New York, N. Y., a Corporation of New York. Filed May 5, 1911. Serial No. 625,289.



1. A vending machine having a receptacle the bottom of which is formed with an opening for the escape of the articles to be vended; an ejector shaft mounted in close proximity to said opening; and a plate mounted away from said shaft and above said opening and free to tilt and arranged to relieve the articles below the plate from the weight of the articles above the same; said plate by its tilting movement maintaining the free circulation of the articles to be vended and preventing bridging by the same.

2. A vending machine having a receptacle the bottom of which is formed with an opening for the escape of the articles to be vended; an ejector mounted in close proximity to said opening; a plate mounted free to tilt above said opening and arranged to relieve the articles below the plate from the weight of the articles above the same; and agitating devices for agitating the articles below said tiltable plate; the latter being moved by the movement of the articles below it and transmitting said movement to the articles above it.

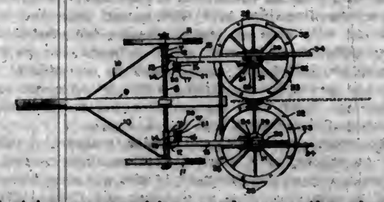
3. A vending machine having a receptacle the bottom of which is formed with an opening for the escape of the articles to be vended; an ejector shaft; and an ejector mounted thereon in close proximity to said opening and formed with a circumferential groove, the walls of said ejector on both sides of said groove and outside the same sloping therefrom downwardly toward said shaft.

4. A vending machine having a receptacle the bottom of which is formed with an opening and the side wall of which is formed with a swell above the bottom; an ejector shaft; and an ejector mounted thereon in close proximity to said opening and formed with a circumferential groove, the walls of said ejector on both sides of said groove and outside the same sloping downwardly therefrom toward said shaft; said swell directing the articles to be vended toward the last-named walls.

5. A vending machine having a receptacle the bottom wall of which is formed with an opening toward which said wall slopes from its edge; an ejector shaft; an ejector mounted thereon in close proximity to said opening and formed with a circumferential groove, the walls of said ejector on both sides of said groove and outside the same sloping downwardly therefrom toward said shaft and being reversely-inclined with respect to said bottom wall.

[Claims 6 to 8 not printed in the Gazette.]

1,013,675. ATTACHMENT FOR CULTIVATORS. ABNER A. MITCHELL, Earleton, Kans. Filed May 16, 1911. Serial No. 627,416.



1. A harrow comprising an axle, supporting wheels carried thereby, lugs projecting laterally from said axle, brackets pivotally connected to said lugs, supporting beams pivotally connected to said brackets, means for locking said beams to said brackets against relative movement, standards pivotally connected to said beams, harrow wheels rotatably connected to said standards, and adjusting means for locking said standards to said beams.

2. A harrow comprising an axle, supporting beams, means for connecting said beams to said axle to permit said beams to be adjusted vertically and rotated relative to said axle, standards pivotally connected to said beams, means for adjusting said standards relative to said beams, and harrow wheels carried by said standards.

3. A harrow comprising a portable support, beams, means for connecting said beams to the support to permit vertical and rotary adjustments of said beams relative to the said support, standards pivotally connected to said beams, means for adjusting said standards pivotally relative to said beams and harrow wheels journaled to said standards.

4. A harrow comprising a portable support, brackets pivotally connected thereto, supporting beams having angular end portions pivotally connected to said brackets, said angular portions terminating in heads provided with curved slots that are concentric relative to the pivotal points of the angular ends and brackets, locking means carried by the brackets and engaging said slots, standards adjustably connected to said beams, and harrow wheels carried by said standards.

5. A harrow comprising a portable support, beams, means for adjustably connecting the beams to said support, said beams having pendent rear portions, standards, means for pivotally connecting the lower portions of the standards to the lower portions of the pendent rear end portions of the beams, an adjusting bolt connecting the upper portions of said standards to the upper portions of the rear of said beams, and harrow wheels carried by said standards.

1,013,676. APPARATUS FOR HANDLING COKE AND SIMILAR LOOSE MATERIAL. WILLIAM C. MITCHELL, Sydney, Nova Scotia, Canada. Filed Oct. 24, 1910. Serial No. 588,690.

1. An apparatus for handling coke, etc., including a platform, a conveyer member extending across the platform and arranged to sweep or carry the material along the same, an endless chain or belt disposed longitudinally of the platform and connected with and actuating the conveyer and having a portion to move the conveyer continuously along the platform from one end to the other thereof, and another portion for elevating the conveyer member above the platform at the discharge end thereof.

2. An apparatus for handling coke, etc., including a platform, a conveyer member extending across the platform and arranged to sweep or carry the material along the same, and an endless chain or belt connected with the conveyer member and having a forwardly moving lower flight extending the length of the platform and arranged to move the conveyer member continuously along the platform, and a rearwardly moving upper inclined flight adapted to lift the conveyer member at the discharge end of the platform and carry the same into an elevated position back to the inner end of the platform.

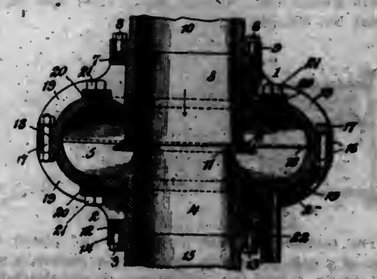
3. An apparatus for handling coke, etc., including a frame having a platform, a conveyer member arranged transversely of the platform, means for slidably and pivotally connecting the conveyer member with the frame, and an endless chain or belt connected with the conveyer member and having a portion arranged to move the conveyer member continuously along the platform from the rear to the front end of the same to sweep the material from the platform, said chain or belt being also provided with a rearwardly moving portion arranged to lift the conveyer member at the discharge end of the platform and carry the same in an elevated position back to the inner end of the platform.

4. An apparatus for handling coke, etc., including a frame having a platform, a conveyer member arranged transversely of the platform, means for slidably and pivotally connecting the conveyer member with the frame, and an endless chain or belt connected with the conveyer member and having a portion arranged to move the conveyer member forwardly along the platform to sweep the material therefrom, said chain or belt being also provided with a rearwardly moving inclined portion arranged to carry the conveyer member backwardly in an elevated position above the platform.

5. An apparatus for handling coke, etc., comprising a frame having a platform, a conveyer member arranged transversely of the platform, means for slidably and pivotally connecting the conveyer member with the frame, and including a forwardly moving lower flight arranged to move the conveyer member along the platform, and a rearwardly moving upper inclined flight adapted to carry the conveyer member rearwardly in an elevated position to return the conveyer member to the inner portion of the platform.

[Claims 6 to 38 not printed in the Gazette.]

1,013,677. STEAM-SEPARATOR. WILLIAM C. MITCHELL, Sydney, Nova Scotia, Canada. Filed Nov. 14, 1910. Serial No. 592,247.



1. A steam separator including a steam inlet tube having a flared edge at its inner end, a steam outlet tube

having its inner end smaller than and extending into the inner end of the inlet tube and projecting beyond the flared edge thereof, the inner side of the inlet tube and the outer side of the outlet tube being spaced apart at their ends to form an inclined passage for the water or oil, and an exterior annular chamber connecting the inlet and outlet tubes and surrounding the inner ends of the same and adapted to collect the oil or water.

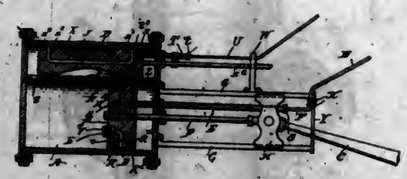
2. A steam separator including a steam inlet tube, a steam outlet tube having its inner end extended into the inner end of the inlet tube and spaced from the inner face of the inlet tube to provide a passage, and an exterior annular cylindrical chamber extending around the inner ends of the said tubes and connecting the same, the inner end of the inlet tube being provided with a flared annular edge extending into the said chamber and coöperating with the same to form a spiral, which is adapted to produce a whirling action of the water or oil within the chamber, direct the same from the inlet so as to keep the latter clear and prevent choking the chamber.

3. A steam separator including a steam inlet tube having a flared outwardly turned inner end, a steam outlet tube having its inner end smaller than and extending into the inner end of the inlet tube spaced therefrom to provide an inclined passage for the oil or water, and an exterior annular cylindrical chamber extending around and connecting the inner ends of the said tubes, the said flared end projecting within the chamber and coöperating with the adjacent portion of the chamber to form a trough when the steam separator is in a horizontal position.

4. A steam separator including a steam inlet tube, a steam outlet tube having its inner end of less diameter than the inlet tube and arranged concentric with and spaced from the inner end of the inlet tube and forming an annular space or passage, and a chamber arranged exteriorily of and surrounding the inner ends of the said tubes, the inner end of the outlet tube being tapered in thickness and presenting a sharp edge to the flow of the steam and the inner end of the inlet tube being provided with a curved annular flange extending into the chamber in spaced overlapping relation with the tapered portion of the outlet tube.

5. A steam separator including a steam inlet tube having a flared edge at its inner end presenting curved inner and outer faces, a steam outlet tube having its inner end smaller than and extending into the inner end of the inlet tube and projecting beyond the flared edge thereof and tapered in thickness and presenting a curved outer face, which is spaced from the curved inner face of the said flared edge of the inlet tube to form a passage, and an exterior annular tubular chamber connecting the inlet and outlet tubes and surrounding the inner ends of the same and the said flared edge, which projects into the said chamber, the flared edge and the walls of the chamber forming a spiral and adapted to produce a whirling action of the water or oil within the chamber to direct the same from the inlet to keep the latter clear and prevent choking the chamber.

1,013,678. LUBRICATING DEVICE FOR ENGINES. DAVID MOREHOUSE, Delphos, Ohio. Filed Apr. 29, 1911. Serial No. 623,999.



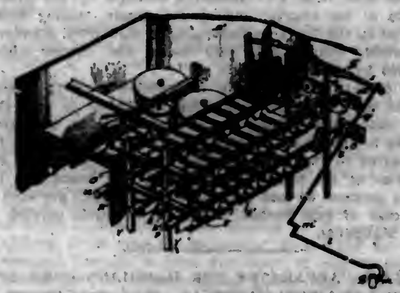
1. The combination with a cylinder and piston of an engine, of a pair of packing rings for the piston, a source of oil supply, means for establishing communication permanently between said source of oil supply and the space between the packing rings, means for establishing communication between the space between the packing rings and the interior of the cylinder on one side of the piston, and means for preventing back pressure on the oil.

2. The combination with a cylinder and piston of an engine, of a pair of packing rings for the piston, a source of oil supply, means for establishing communication permanently between said source of oil supply and the space between the packing rings, said means comprising a pipe secured to said piston and communicating with the space between said packing rings, and a stationary pipe having one end extending into said first named pipe and communicating with said oil supply, means for establishing communication between the space between the packing rings and the interior of the cylinder on one side of the piston, and means for permitting a flow of oil under pressure into the interior of the cylinder and for preventing the forcing of the oil back into the oil supply.

3. The combination with a cylinder, piston and piston rod of an engine, of a pair of packing rings carried by said piston, a cross-head secured to said piston rod, a pipe secured to said cross-head at one end and to said piston at the other, said pipe passing through the end of the cylinder and communicating with a space between the packing rings, a stationary pipe having one end arranged to extend within said first mentioned pipe, the other end being in communication with the oil supply, a conduit for establishing communication between the space between the packing rings and the interior of the cylinder on one side of the piston, and a valve arranged to open to permit the entrance of oil into the cylinder and to close to prevent back pressure upon the oil.

4. The combination with a valve casing and slide valve of an engine, of a pair of packing rings carried by said valve at each end thereof, a passage establishing communication between the spaces between the packing rings, a pipe secured to the valve stem and arranged to pass through the valve casing and having communication with the passageway, and a stationary pipe having one end disposed within said first mentioned pipe and the other end communicating with the oil supply.

1,013,679. VOTING-MACHINE. CHARLES HERBERT OCUMPAUGH, Rochester, N. Y. Filed Feb. 20, 1896. Serial No. 580,017.



1. The combination with the booth of a voting machine, having a key-plate across one side carrying suitable vote-registering mechanism with means for operating the same accessible from the voting compartment only, of the voting compartment open on one side next the booth and having its end walls separated by a distance greater than the length of the booth, and adapted to slide over the ends of the booth when the machine is collapsed, substantially as described.

2. The combination with the booth of a voting machine provided with suitable vote-registering mechanisms, of the voting compartment open on the side next the booth and having its end walls separated by a distance greater than the length of the booth, and adapted to slide over the ends of the booth, and a door hinged to one edge of the end wall of the booth, and adapted to close an opening in one end of the voting compartment when the machine is set up and to fold inward between the booth and the inside of the compartment when the machine is collapsed, substantially as described.

3. The combination of the booth A of a voting machine, provided with a suitable key-plate B carrying vote-registering mechanisms, and provided with the projecting ledges *d d* at the bottom of the opposite ends thereof, and the voting compartment, consisting of the side-wall *a*, the ends *b* b^1 and roof *c*, collapsible on the booth with the lower edges of the ends *b* b^1 in contact with the ledges *d d*, substantially as described.

4. The combination with the booth containing the voting mechanism, of the voting compartment arranged to telescope upon the booth and provided with a suitable door giving access to the voting mechanism, the turnstile removably located outside of and independent from the booth or compartment, a detachable arm connecting the turnstile and booth at one side of the door, and the detachable arm secured to the voting compartment on the opposite side of the door.

5. The combination of the booth A of a voting machine, having vote-registering devices arranged along one side thereof, the voting compartment C open on the side toward the booth and consisting of the roof *c*, the side-wall *a* and the two ends *b* b^1, separated by a greater distance than the length of the booth, the door D, and the exterior turnstile E located at the outer end of a passage leading to the door of the voting compartment, and suitable connections between the turnstile and the voting mechanism in the booth, whereby such mechanism is restored to normal position by the inlet movement of the turnstile, substantially as described.

[Claims 6 to 67 not printed in the Gazette.]

1,013,680. VOTING-MACHINE. CHARLES HERBERT OCUMPAUGH, Rochester, N. Y. Filed May 11, 1897. Serial No. 636,095.

1. In a voting machine, a plurality of slide bars, corresponding to candidates or the like, a register for each of the several bars, a slide bar mediately actuating each register but disconnected therefrom, said registers being arranged in vertical columns and in stepped lines lengthwise the machine, and the slide bars having register-operating teeth similarly arranged, all substantially as described, to economize space.

2. In a voting machine, the voting mechanism, the register mechanism comprising a plurality of registers arranged in vertical series and stepped lines, and means for moving the registers vertically, and a plurality of slide bars corresponding to the registers and normally in an inoperative relation to said registers, each bar having a projection normally out of coöperative relation with the register but being movable at will to carry said projection into operative relation to its corresponding register whereby when the registers are moved those corresponding to the selected bars will be operated.

3. In a voting machine, the combination of interlocking devices, slide bars corresponding to a plurality of parties, and a movable register rack, with a straight ticket rock-shaft operating in fixed bearings, said shaft when actuated moving all the slide bars of a given party engaging said interlocking devices, and said interlocking devices, the slide bars remaining free to move reversely thereby permitting individual slide bars of said party to be changed and returning of the straight ticket rock-shaft to its normal position, every other party's slide bars being thereby made free to be actuated before the voter leaves the booth.

4. In a voting machine, registering devices, a separate straight ticket mechanism for each party comprising devices to vote a straight ticket, devices to reset the straight ticket mechanism when it is desired to change and vote less than a straight ticket, partial ticket mechanism whereby less than the whole may be voted, and irregular voting mechanism, all or any of the actuated voting mechanism being changeable by the voter without registering before he leaves the booth, substantially as described.

5. In a voting machine, the combination of a series of slide bars, means for locking selected slide bars against operation without moving the bars, said means consisting of teeth on said bars, and a blade 23 adapted to interlock with the teeth on the selected bars, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,013,681. LAMP-SOCKET. RICHARD W. OSLAND, Plainfield, N. J., and MERION J. HUGGINS, Brooklyn, N. Y. Filed May 19, 1909. Serial No. 496,897.

1. In a lamp socket, the combination with a socket of non-conductive material having a keyway in its upper side, of a cap of non-conductive material with a similar keyway in its lower side, a key to fit the keyways, a metallic shell for the socket and pins extending from the shell to the top of the socket and into grooves in its upper face.

2. In an electric lamp socket, the combination with a socket of non-conductive material having vertical passages and intersecting horizontal grooves, of a cap of similar material having depressions coinciding with the vertical passages of the socket, a key with a double head to fit similar keyways in the socket and cap, a threaded metallic shell, a pointed pin secured to the side of the shell and passing up one of the passages, a second pointed pin of angular form secured to the center metal eyelet of a non-conducting washer at the bottom of the shell and occupying the other passage, and a washer of non-conductive material to insulate the horizontal part of the second pin from the shell.

1,013,682. ROTARY ENGINE. GEORGE A. PARKER, Brockton, Mass. Filed Aug. 5, 1911. Serial No. 642,537.

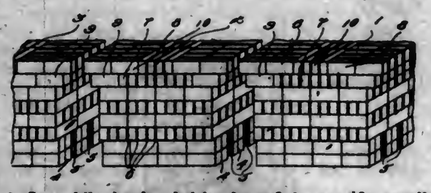
1. A rotary engine, having in combination a cylinder provided with an expansion chamber, a rotary shaft having intersecting angularly related diametric slots adapted for registration with said chamber, sliding diametric pis-

tons working in and of greater length than said slots, means for operating said pistons in the rotation of said shaft, a gas chamber, a passage connecting the same with said expansion chamber, a hollow reciprocatory casing in said passage, said casing having communication with the gas and expansion chambers, a valve normally closing the communication of said casing with said expansion chamber, means for retracting said casing and thrusting the same forward a plurality of times for each rotation of the engine shaft, and means for opening said valve upon the retraction of said casing.

2. A rotary engine, having in combination a cylinder provided with an expansion chamber, a rotary shaft having intersecting angularly related diametric slots adapted for registration with said chamber, sliding diametric pistons working in and of greater length than said slots, means for operating said pistons in the rotation of said shaft, a gas chamber, a passage connecting the same with said expansion chamber, a hollow reciprocatory casing in said passage, said casing having communication with the gas and expansion chambers, a valve normally closing the communication of said casing with said expansion chamber, means for retracting said casing and thrusting the same forward a plurality of times for each rotation of the engine shaft, including a cam wheel having alternate projections and recesses and a lever having alternate engagement with said recesses and projections, and means for opening said valve upon the retraction of said casing.

3. A rotary engine, having in combination a cylinder provided with an expansion chamber, a rotary shaft having intersecting angularly related diametric slots adapted for registration with said chamber, sliding diametric pistons working in and of greater length than said slots, means for operating said pistons in the rotation of said shaft, a gas chamber, a passage connecting the same with said expansion chamber, a hollow reciprocatory casing in said passage, said casing having communication with the gas and expansion chambers, a valve normally closing the communication of said casing with said expansion chamber, a reciprocatory slide having a projection, a bell crank lever having pivotal connection with said slide, a cam wheel having alternate recesses and projections, a spring-acting lever having a roller adapted for alternate engagement with said recesses and projections, and a link connection between said lever and said bell crank lever.

1,013,683. BRICK-STACKING. RAYMOND C. PENFIELD, New York, N. Y. Filed Feb. 9, 1911. Serial No. 607,649.



1. In a kiln having bricks formed to provide parallel fuel arches, a brick stack for burning extending between adjacent fuel arches with the bricks in separated relation and containing through passages adjacent the bottom to further promote heat circulation through the bottom of the stack, the layers directly over said passages being laid alternately lengthwise and crosswise of the stack whereby the stack is tied together so as to be transportable in units.

2. A series of brick stacks for kiln burning, arranged with intervening burning arches, the bricks being arranged in separated relation and having provision to further promote free circulation of heat through the bottoms of all the stacks, alternate layers above the stack bottoms being laid lengthwise of the stack whereby the stack portions are tied together so as to be transportable in units by a mechanical lifter.

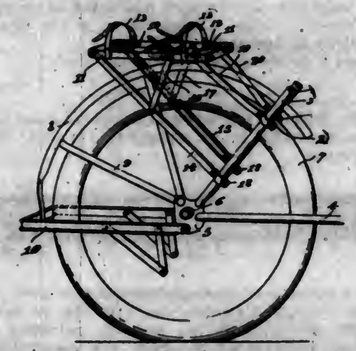
3. In a kiln having bricks formed to provide parallel fuel arches, a unit of bricks corresponding in width to the distance between arches, arranged in separated relation for kiln burning, the bottom portion thereof having the bricks massed in pairs two high to leave straight, parallel openings between pairs entirely across the bottom of the stack to promote circulation and adapted to receive the fingers of a mechanical lifter to transport said unit bodily to position.

4. A unit of bricks in separated relation for kiln burning, the two bottom courses extending in the same direction and massed together in pairs two high to leave enlarged openings between pairs to promote circulation and receive the fingers of a mechanical lifter, and the layers next above said bottom courses extending alternately lengthwise and crosswise of the unit whereby it is tied together and may be bodily transported by such mechanical lifter.

5. A plurality of brick stacks arranged side by side for kiln burning, the bottom portions of the stacks having the bricks bunched in pairs two high to provide enlarged openings, whereby connection for continuous heat circulation between the several stacks is provided and spaces provided to receive the fingers of a mechanical lifter so that the stacks may be bodily transported in units.

[Claims 6 to 12 not printed in the Gazette.]

1,013,684. PARCEL-CARRIER FOR MOTOR-CYCLES. DANIEL S. POPINI, Chicago, Ill. Filed July 24, 1911. Serial No. 640,099.



1. A cycle attachment comprising a supporting member, supporting bars rigidly secured thereto and adapted to be attached to the frame of a cycle and adjustable bars pivoted to said supporting member at its other end and also adapted to be attached to the frame of said cycle.

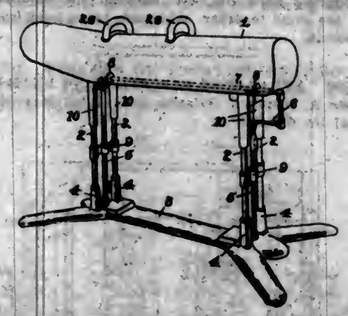
2. A cycle attachment comprising a supporting member, supporting bars secured thereto at one end and adapted to be attached to the frame of a cycle, brace bars rigidly secured to the supporting member and supporting bars and adjustable bars pivoted on opposite sides of the supporting member at its other end and adapted to be attached to said frame.

3. A cycle attachment comprising a supporting member, supporting bars secured thereto at one end, clamps pivoted to the other end of said supporting bars, brace bars rigidly secured to the supporting member and supporting bars, adjustable bars pivoted on opposite sides of the supporting member at its other end and pivoted clamps on the ends of said adjustable bars.

1,013,685. EXERCISING APPARATUS, VAULTING-HORSE. MILTON B. REACH, Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co., a Corporation of Massachusetts. Filed May 20, 1911. Serial No. 628,538.

1. In combination in a vaulting horse, buck or the like, a body, a base, means for adjusting the body vertically in relation to the base, and casters adjusted by said means in relation to the base, substantially as described.

2. In combination in a vaulting horse, buck or the like, a base, a body adjustable vertically in relation to the base, casters mounted on the base to lie either above or below the same, and means connected to and moving with the body for adjusting the casters in relation to the base, substantially as described.



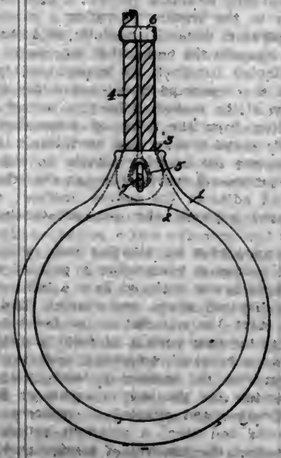
3. In combination in a vaulting horse, buck or the like, a body, a base, casters mounted on the base, a connection extending horizontally, and connections extending vertically and operated by the horizontal connection for adjusting the body in relation to the base, said vertical connections adjusting the casters in relation to the base, substantially as described.

4. In connection in apparatus of the class described, a body, a base, supporting means between the base and body, an adjusting screw rod at or near each end of the base and connected with the body for adjusting the same vertically, and a pair of casters at each end of the base with movable supports therefor connected with the base, said casters being projected below the base by lowering the screw rods, substantially as described.

5. In apparatus of the class described, a base, a vaulting horse or the like with means for supporting the same from the base consisting of the screw rod, and a caster operated by the screw rod when lowered to project the said caster below the base, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

1,013,686. FLYING OR TRAVELING RING. MILTON B. REACH, Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co., a Corporation of Massachusetts. Filed May 20, 1911. Serial No. 629,998.

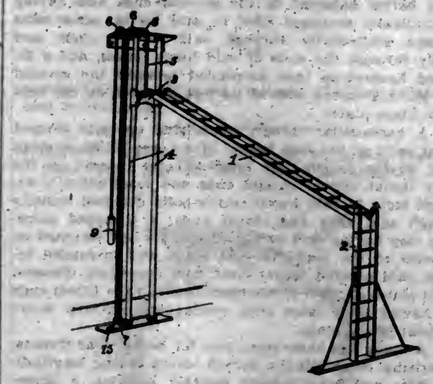


1. A flying ring having an extension at its upper end provided with a tapered socket, and a wedge piece within the socket to hold the rope providing suspending means wholly within the planes of the sides of the ring, substantially as described.

2. A flying ring having an extension at its upper part with a tapered socket therein open at top and bottom and a sliding wedge in said socket, substantially as described.

3. A flying or traveling ring for gymnasiums having a socket at its upper part through which the suspension rope extends, means in said socket for clamping the rope and a clip for adjustably holding the terminal of the suspension rope to the main portion thereof, substantially as described.

1,013,687. GYMNASIUM APPARATUS WITH CLAMPING DEVICE. MILTON B. REACH and WILLIAM F. REACH, Springfield, Mass., assignors to A. G. Spalding & Bros. Manf'g. Co., a Corporation of Massachusetts. Filed May 20, 1911. Serial No. 630,006.



1. In exercising apparatus, an exercising device, a rope connected therewith for adjusting it to different elevations, upper and lower guiding means for the rope for directing it downwardly and upwardly, and clamping means for the rope supported independently of the rope at a fixed point, substantially as described.

2. In exercising apparatus, an exercising device, a rope connected therewith for adjusting it to different elevations, guiding means for the rope, clamping means for the rope supported independently of the rope at a fixed point, and means for taking care of the terminal end of the rope to prevent slack, substantially as described.

3. In exercising apparatus, an exercising device, a rope connected therewith for adjusting it to different elevations, upper and lower guiding means for the rope, clamping means for the rope supported independently of the rope at a fixed point, and a weight for taking care of the terminal end of the rope to prevent slack, substantially as described.

4. In exercising apparatus, an exercising device, a rope connected therewith for adjusting it to different elevations, guiding means for the rope, and clamping means for the rope supported independently of the rope at a fixed point, said clamp being controlled by the foot, substantially as described.

5. In exercising apparatus, an exercising device, a rope connected therewith for adjusting it to different elevated positions, a guide for directing the rope downwardly, and a lower guide and clamp supported independently of the rope at a fixed point.

[Claims 6 and 7 not printed in the Gazette.]

1,013,688. HORSE-COLLAR THROAT. CYRUS C. ROSS, Walthill, Nebr. Filed Aug. 17, 1911. Serial No. 644,543.

1. A horse-collar throat, comprising centrally severed throat ends of opposite side halves of a horse-collar, a strap hinge having longitudinally bent leaves fitted to

the adjacent inner bends of said throat ends and longitudinally arranged slots in said leaves, screw-bolts disposed through said slots and seated laterally through said throat ends, and shield plates having their outer ends stitched to the inner ends of said throat ends and their inner ends disposed to overlap each other centrally above the joint of the hinge.

2. A horse-collar throat, comprising severed throat ends of the side halves of a collar, a strap hinge having leaves bent longitudinally to fit the inner bend of the collar halves adjacent to the severed ends and having longitudinally arranged slots in said leaves, screw-bolts disposed stationarily through said severed ends and loosely through the slots of said hinge leaves, and a U-shaped hame-strap loop suspended between the severed ends by eyes on the ends of its legs mounted on the ends of the hinge pintle.

3. A horse-collar throat, comprising opposite severed throat ends of the side halves of a horse collar, a strap hinge having leaves bent longitudinally to seat on the upper throat curves of said ends and longitudinally arranged slots in said leaves, screw-bolts disposed radially through said slots and throat ends, a U-shaped hame-strap loop having eyes at the ends of its legs mounted on the ends of the pintle of said hinge and suspended between said severed throat ends, and oppositely disposed shield plates stitched to the inner bends of the throat ends and having their inner ends overlapping centrally above the joint of the hinge.

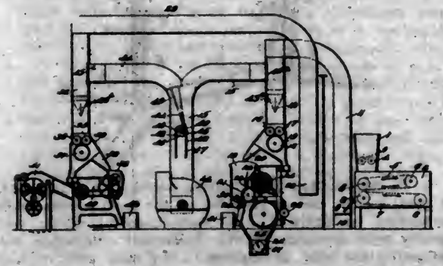
4. A hinge and hame-strap loop for horse-collar throats, comprising longitudinally curved leaves having longitudinal slots and hinge-jointed together endwise, a hinge-pintle longer than the hinge joint, and a U-shaped loop having the ends of its legs shaped to form eyes mounted on the projecting ends of said hinge-pintle.

1,013,689. RAILWAY-JOINT. ORIGENUS J. SCHROEDER, Larned, Kans. Filed Apr. 17, 1911. Serial No. 621,617.

1. In a rail joint, the combination with two abutting rail sections, of fish-plates secured upon opposite sides of the rails, one of said plates extending beneath the rails and terminating in an upwardly and downwardly directed portion forming a channel, said fish-plate being formed with recesses upon its opposite sides for receiving suitable securing means, the other fish-plate having its lower portion formed with a flange adapted to fit within said channel, a cushion strip in contact with the web portion of the last named fish-plate, a cover plate for said cushion strip, said cover plate having inwardly directed upper and lower edges contacting with the upper and lower edges of said cushion strip, the bails of the rails and the flange forming portion, and means for securing said sections in binding contact.

2. In a rail joint, the combination with the meeting ends of two rails; of a fish-plate engaging the web portions upon one side of the rails, said fish-plate extending outwardly over the flanges of the rails abd beneath said flanges, an enlarged portion at the opposite side of the flange formed with the base portion and having a rebent portion forming a channel, a second fish-plate in contact with the opposite side of the web portions of the rails and having an outwardly directed portion formed with a flange extending upwardly and slidably received in the channel, a cushion strip in contact with said last named fish-plate at the web portion, a cover plate having its upper and lower edges extending over the cushion strip and securing bolts disposed through the said parts to secure the same together, said bolts being held from rotation therein.

1,013,690. APPARATUS FOR TREATING SNAP-BOLLS. JAMES A. SHIELDS, Atlanta, Ga. Filed May 22, 1911. Serial No. 628,820.



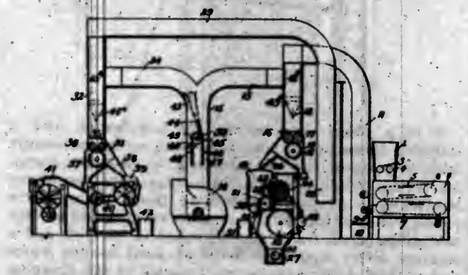
1. In an apparatus for treating snap bolls, the combination of a crusher adapted to form the bolls into a bat; a breaker for disintegrating the bat; a pneumatic conveyer for transferring the bat from the crusher to said breaker; a separator adapted to separate the broken bat into husks and fiber; a gin; and a pneumatic conveyer for transferring the fiber from the separator to the gin, substantially as described.

2. In an apparatus for treating snap bolls, the combination of a crusher for forming the bolls into a bat; a disintegrater for breaking the bat; a pneumatic conveyer for transferring the bat from the crusher to the conveyer; a separator adapted to separate the broken bat into husks and fiber; means associated with the separator for screening the dirt from the separated fiber; a second breaker located a considerable distance from the separator; a pneumatic conveyer for transferring the fiber from the separator to the second breaker and effecting to render the fiber fluffy; and a gin located adjacent the second breaker, substantially as described.

3. An apparatus for treating snap bolls, the combination of a crusher comprising a pair of movable belts; a breaker comprising co-acting rollers; a pipe leading from said crusher to the breaker providing a conduit for the bat; a separator disposed beneath said breaker and adapted to separate the broken bat into husks and fiber; a screen adapted to effect the removal of foreign substance from the separated fiber; means for effecting an accumulation of the separated fiber; a second breaker; a pipe extending from the point of accumulation of the fiber to said second breaker and providing a conduit for the fiber; means for creating suction in either of said pipes and shutting off suction through the other thereof; a gin located adjacent the second breaker; and a condenser located adjacent the gin, substantially as described.

4. In an apparatus for treating snap bolls, the combination of a crusher comprising a pair of coöperating belts for forming the material into a bat; one of said belts being disposed above and shorter than the other whereby to carry the material to the lower belt; means for depositing the snap bolls in uniform quantities on said shorter belt; a breaker comprising co-acting rollers; a pipe leading from the breaker to said rollers and providing a conduit for the bat; a separator disposed beneath the breaker and adapted to separate the broken bat into husks and fiber; a rotatable cylindrical screen adapted to effect the removal of foreign substance from the separated fiber; a roller coöperating with said screen and adapted to effect an accumulation of the fiber in a pile; a gin; a pipe leading from the point of accumulation of the fiber to said gin, providing a conduit for the fiber; a fan adapted to create suction in said first and second named pipes whereby to convey the material therethrough; a valve for permitting suction through either of said pipes and preventing suction in the other thereof; and intermittently actuated means for moving said valve, substantially as described.

1,013,691. PROCESS OF TREATING SNAP-BOLLS OF COTTON. JAMES A. SHIELDS, Atlanta, Ga. Filed July 10, 1911. Serial No. 637,794.



1. The process of treating snap bolls for the recovery of the fiber thereof, consisting in crushing said bolls; transferring the crushed bolls by suction; separating the boll husks from the fiber; transferring the fiber by an air blast to make it fluffy and finally ginning the fiber, substantially as described.

2. The process of treating snap bolls for the recovery of the fiber thereof consisting in crushing said bolls; transferring the crushed bolls by suction for a relatively great distance; separating the boll husks from the fiber and accumulating the fiber in a pile; transferring the pile of fiber by suction for a relatively great distance to render the fiber fluffy, and finally ginning the fluffed fiber, substantially as described.

3. The process of treating snap bolls for the recovery of the fiber thereof, consisting in crushing said bolls and forming the same into a bat; transferring said bat by suction for a relatively great distance; breaking up the bat; separating the bat into husks and fiber, and allowing the fiber to accumulate in a pile; transferring the pile of fiber by suction for a relatively great distance whereby to render the fiber fluffy; then breaking the fluffed fiber; and finally ginning the fiber, substantially as described.

1,013,692. NARROW FABRIC FOR SUSPENDER MEMBERS. CHARLES S. SMITH, Providence, R. I. Filed Jan. 22, 1910. Serial No. 539,551.

1. A suspender member comprising a strip of woven fabric having a solid body portion and having portions woven thicker and narrower than other portions, said strip provided at both of its ends with integral tubular woven portions, the free edges of said tubular end portions being turned into the same, and stitching securing said turned-in edges.

2. A suspender member comprising a woven strip having its intermediate portion woven narrower and thicker than its end portions, said end portions having tubular extremities with the edges thereof turned in and secured, and the remaining portions of the member woven solid.

3. A strip of woven fabric constituting a suspender member woven solid throughout the major portion of its length and composed of threads having sufficient strength and stability to adapt said strip for use as a suspender member, said strip having its intermediate portion woven narrower and thicker than its end portions, and the said end portions having tubular extremities with the edges thereof turned in and secured.

4. A strip of fabric constituting a suspender member, the end portions of which are woven wider and thinner than the intermediate portions, said strip woven solid throughout the major portion of its length, said wider portions having slots forming button holes and said wider

portions having increased amounts of filling adjacent to said button holes.

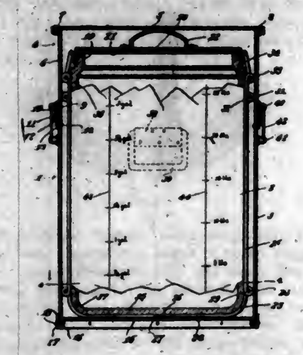
1,013,693. MILK-CAN. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 14, 1911. Serial No. 614,843.

A can including an outer jacket and an inner liner, the said jacket including sections each embodying superimposed bands, the lower band of one of the sections being arranged in embracing relation with respect to one of the bands of the other section, wire-connecting members connecting the superimposed bands of each section with each other, the wires of the lower section having hooked upper extremities extending through the upper band of the lower section and bent against the inner side of the band and bearing exteriorly upon the liner to hold the upper band of the lower section spaced from the liner, the said connecting members having inwardly curved spaced portions bearing against the walls of the liner, a cover for the liner, and a pouring mouth secured to the upper section of the jacket and extending outwardly beyond the cover end of the liner.

1,013,694. GLASS-LINED CAN. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 14, 1911. Serial No. 614,844.

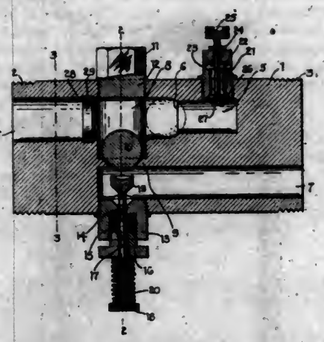
A can comprising a jacket constructed of separable upper and lower sections, a liner located in the jacket, a basket removably fitted to the liner and including vertical spaced side portions having lateral eyes extending outwardly in the direction of and contacting with the walls

of the jacket sections to hold the liner spaced from the walls of the said jacket, and connecting rings embracing



the liner and secured to the vertical portions of the said basket.

1,013,695. CUT-OFF. HARRY F. STORER and WILBURN WHITLEY JAMIESON, Jr., Central City, Ky. Filed July 6, 1911. Serial No. 637,211.



An automatic cut off comprising a body provided with longitudinally extending inlet and outlet openings, and a transverse opening connecting said inlet and outlet openings, said inlet opening being reduced at its inner end to provide a valve seat, the bottom of said inlet opening sloping downward from said valve seat, a ball normally seated in said transverse openings, and means for forcing said ball into said inlet opening.

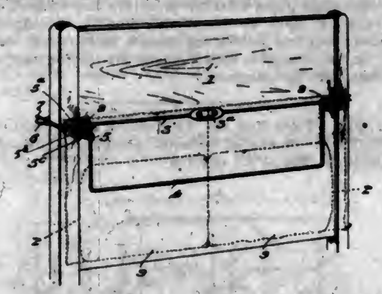
1,013,696. HORSE AND CATTLE FOOD. GEORGE H. STRONG, Warwick, N. Y., assignor to The Grove Products Company, Warwick, N. Y. Filed July 22, 1908. Serial No. 444,822.

1. The herein-described method of manufacturing a food for horse and cattle which consists in utilising the clippings and waste from bakeries, first by shredding, then drying, then baking them, grinding the mass in a mill, and finally molding the ground material into cakes or blocks.

2. The herein-described method of manufacturing a food for horse and cattle which consists in utilising the clippings and waste from bakeries, first by shredding, then drying, then baking them, grinding the mass in a mill, and finally molding the ground material into cakes or blocks.

3. The herein-described method of manufacturing a horse or cattle food made from the clippings, in dough form, of cake, biscuit, and crackers, the same being shredded, dried, and baked and finally ground.

1,013,697. PILLOW-SHAM HOLDER. WILLIAM C. STYLES, Bowdon, Ga. Filed Oct. 7, 1911. Serial No. 653,430.



1. In a pillow sham holder, the combination with a clamping frame having arms adapted to extend rearwardly when in position on a bed headboard, of releasable clamping devices on the arms adapted to engage the rear of the headboard, a pillow sham holding frame having parts loosely coiled about the clamping frame aforesaid so that said pillow sham frame may be raised or lowered, and a securing device carried by the pillow sham holding frame and adapted to engage one of the arms of the clamping frame to hold the pillow sham frame in raised position.

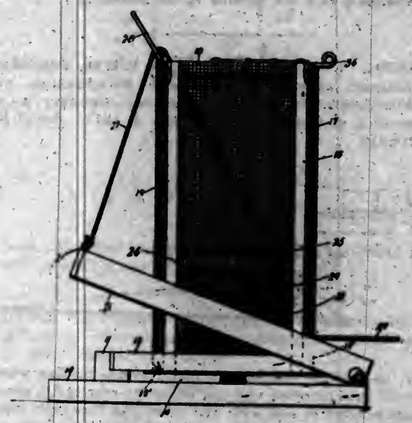
2. In a pillow sham holder, the combination with a clamping frame having arms adapted to extend rearwardly when in position on a bed headboard, of a releasable clamping devices on the arms adapted to engage the rear of the headboard, a pillow sham holding frame having parts loosely coiled about the clamping frame aforesaid so that said pillow sham frame may be raised or lowered, said pillow sham holding frame having one of its coiled parts continued laterally and provided with an angularly disposed latch having a hook which is adapted to be engaged with an arm of the clamping frame to hold the pillow sham frame in raised position.

1,013,698. FRAME FOR REINFORCED CONCRETE STRUCTURES. ARMEN H. TASHJIAN, Portland, Me. Filed Mar. 17, 1911. Serial No. 615,167.

1. In a reinforcing frame for concrete structures, a pair of main bars each being provided with a pair of outwardly extending flanges, each of said flanges having a series of recesses at equal distances apart, a series of transverse or secondary bars each transvere bar being provided with a series of lugs spaced apart at equal distances, the end lugs of said transverse bars being adapted to enter the recesses in said flange, the said transvere bars being arranged to be clamped between said flanges.

2. In a reinforcing frame for concrete structures, a pair of main bars, each of said main bars being provided with a pair of outwardly extending flanges on one side thereof, each of said flanges having a series of recesses stamped therein at equal distances apart, a series of transverse or secondary bars, each transverse bar being provided with a series of lugs spaced apart at equal distances, the end lugs of said transverse bars being adapted to enter the recesses in said flanges, and the intervening lugs serving as surfaces of attachment for the concrete, said transverse bars being arranged to be clamped between the flanges of said main bars.

1,013,699. INSECT-TRAP. WILLIAM L. THOMPSON, Highmore, S. D. Filed Feb. 1, 1911. Serial No. 605,925.



1. A fly trap consisting of a supporting base, supports transversely arranged on said base, a plate mounted on said supports, said plate being spaced from said base, a yoke pivotally connected to one of said supports, a cylinder formed of wire mesh, said cylinder being embraced by the edge portion of a centrally arranged opening formed in said plate, the lower end of said cylinder being secured to said plate, a conical extension within the cylinder and also secured to said plate, an annular member mounted at the mouth of said extension, a second annular member hingedly connected to the first mentioned member, said second member being covered with wire mesh, a cable secured to said second member, said cable passing through a plate adapted to form a closure for the upper end of said cylinder, the end portion of said cables being connected to said yoke, and a rod extending through said plate, said rod being connected to said second member to swing the same on its pivot.

2. A fly trap consisting of a base, a supporting plate spaced from said base, a pivotally supported yoke, a cylinder formed of wire mesh, the lower portion of said cylinder being arranged within an opening formed in said plate, a cone also arranged within the opening and extended within the cylinder, an annular member arranged on said extension, a closure pivotally connected to said annular member, and means for opening said closure as said yoke is swung on its pivot.

1,013,700. SILICON CARBID. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Nov. 1, 1905. Serial No. 285,462.

1. The process of making dense silicon carbid, which consists in heating segregated masses of carbonaceous material in proximity to a silicon-containing substance, to a temperature sufficient to cause the silicon to combine with the carbon *in situ*, and less than that required to destroy the resulting compound.

2. The process of making shaped pieces of dense silicon carbid, which consists in heating similarly shaped pieces of carbonaceous material in proximity to a silicon-containing substance, to a temperature sufficient to cause the silicon to combine with the carbon *in situ*, and less than that required to destroy the resulting compound.

3. The process of making dense silicon carbid, which consists in heating segregated masses of carbonaceous material in proximity to the vapor of a silicon-containing substance, causing the silicon to combine with the carbon *in situ*, the temperature being sufficient to cause the silicon and carbon to combine but insufficient to destroy the resulting compound.

4. The process of making shaped pieces of silicon carbid, which consists in heating similarly shaped pieces of carbonaceous material in proximity to vapors of a silicon-containing substance, and causing the combination of the silicon with the carbon *in situ*, the temperature being sufficient to cause the silicon and carbon to combine, but insufficient to destroy the resulting compound.

5. As a new article of manufacture, a carbon article having a portion of its surface covered with dense silicon carbid; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,013,701. MANUFACTURE OF SILICON CARBID. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed July 10, 1908. Serial No. 442,902.

1. The process of making dense silicon carbid which consists in heating silicon carbid in proximity to silicon and allowing the silicon to penetrate the pores of the silicon carbid and cement it together.

2. The process of making dense silicon carbid which consists in heating porous aggregations of silicon carbid crystals in proximity to vapors of silicon, and causing the silicon to penetrate and condense in the pores of the crystalline silicon carbid mass.

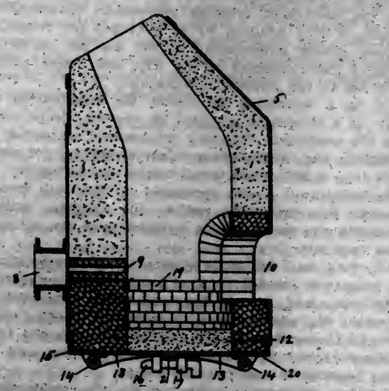
3. The process of making dense silicon carbid which consists in causing free silicon to form in a disseminated state throughout a silicon carbid mass.

4. As a new article of manufacture, a shaped piece of silicon carbid of great density and compactness and having silicon deposited in the pores thereof; substantially as described.

5. As a new article of manufacture, silicon carbid of great density and compactness and having silicon deposited in the pores thereof; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,013,702. CONVERTER. ALEXANDRE TROPENAS, Montelimar, France, assignor to Tropenas Converter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 28, 1910. Serial No. 594,620.



1. A converter of the side blown Bessemer type comprising a pivoted body having an inclosing shell, an openable bottom closure therefor hinged to the shell and a knockout bottom rammed up against said closure from the interior of the converter, substantially as described.

2. A converter of the side blown Bessemer type comprising a pivoted body having an openable bottom closure

hinged to the shell and a knockout refractory bottom lining rammed up against said closure from the interior of the converter.

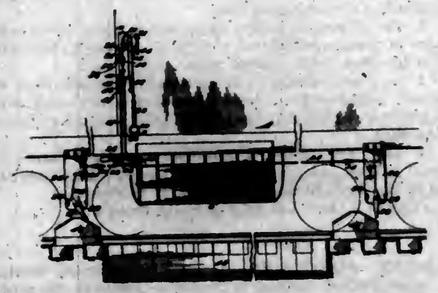
3. A converter of the side blown Bessemer type comprising a pivoted body having an inclosing shell provided with a rigid bottom supporting ring, a refractory lining in brick form extending up to the twyers supported on said ring and an arched manhole in brick form opposite said twyers and extending above the level of the latter, in combination with a perforated bottom closure pivoted to said ring and a knockout refractory bottom lining rammed up against said closure, substantially as described.

4. A converter of the type described, comprising a pivoted body having an inclosing casing, an openable bottom closure therefor and a refractory lining supported on the latter, said bottom being perforated to expedite the drying of said lining, substantially as described.

5. A converter of the side blown Bessemer type comprising a pivoted body having an inclosing shell provided with a refractory lining, a perforated bottom closure pivoted to said shell and a refractory knockout bottom lining rammed against said bottom closure, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,703. MAIL-DELIVERING APPARATUS. JAMES H. TUDOR, Lexington, Ky., assignor of one-fourth to L. M. Moore, Lexington, Ky. Filed Oct. 5, 1911. Serial No. 652,908.



1. In a delivering apparatus, the combination with a car, of a receptacle mounted on the car, doors connected to the receptacle, tripping mechanism connected to the doors, a trip adapted to be actuated for releasing the doors, means independent of the car for actuating the trip, a rod connected to the trip, and means connecting the rod to the tripping mechanism.

2. In a delivering apparatus, the combination with a car, of a receptacle mounted on the car, doors connected to the receptacle, tripping mechanism connected to the doors, a trip, means independent of the car for actuating the trip, a bell crank lever, means connecting the trip to the bell-crank, a rod connected to the bell crank, and means connecting the rod to the tripping mechanism, whereby the doors will be released upon the actuation of the trip lever.

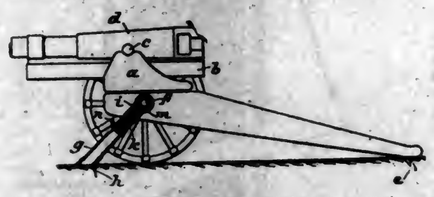
3. In a mail delivering apparatus, the combination with a receptacle carried by a car, and doors connected with the receptacle, of tripping mechanism connected to the doors, a trip adapted to be actuated for releasing the doors, means independent of the car for actuating the trip, and means carried by the car for disconnecting and rendering inoperative said tripping means.

4. In a mail delivering apparatus, the combination with a receptacle carried by a car, and doors connected with the receptacle, of tripping mechanism connected to the doors, two trips connected with the car and with the tripping mechanism for actuating the same, means independent of the car for actuating the trips, and means carried by the car for throwing one of the trips out of operative connection.

5. In a mail delivering apparatus, the combination with a car having an opening therethrough, and doors for the opening, of tripping mechanism connected to the doors, two trips depending from the car and connected with the tripping mechanism, means independent of the car for actuating the trips, one link for each trip, and means for connecting either link with the tripping mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,013,704. GUN-CARRIAGE. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Apr. 4, 1911. Serial No. 618,910.



1. In combination with a gun carriage having wheels and an axle therefor, and a spade at its rear end, a second spade pivoted to said axle and extending forwardly thereof, a fixed retaining element mounted on said axle, and means coöperating with said fixed element movable concentrically thereto for permitting the second spade to be lowered automatically and preventing it being raised when in operative relation to said fixed element.

2. In combination with a gun carriage having wheels and an axle therefor, and a spade at its rear end, a second spade pivoted to said axle and extending forwardly thereof, a fixed retaining element on said axle, a spring impelled locking pawl movable longitudinally of said second spade for engaging said fixed element, said pawl permitting said second spade to be lowered automatically and preventing it being raised when in operative relation to said fixed element.

3. In combination with a gun carriage having a spade at its rear end, a second spade pivoted to a part of the carriage and extending forwardly of the axis thereof, and a locking device between the pivoted spade and the carriage comprising a spring pressed bolt and a fixed ratchet with which said bolt engages, said bolt being free to move relatively to said ratchet in the lowering of the spade but preventing the latter from moving in the opposite direction.

4. In combination with a gun carriage having wheels and an axle therefor, and a spade at its rear end, a second spade pivoted to said axle and extending forwardly thereof, a fixed retaining element on said axle, a spring impelled locking pawl movable longitudinally of said second spade for engaging said fixed element, said pawl permitting said second spade to be lowered automatically and preventing it being raised when in operative relation to said fixed element, and means for disengaging said pawl from said fixed element when it is desired to raise the spade.

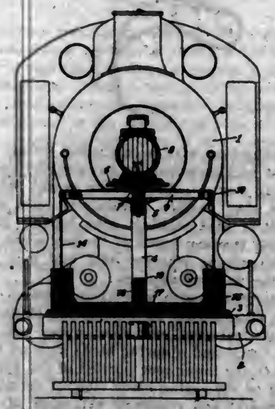
1,013,705. CARRIER FOR BOTTLES. WILLIAM WADSWORTH, Wichita, Kans. Filed Feb. 27, 1911. Serial No. 611,062.

In a device of the class described, an open, resilient ring, having a normal tendency to expand, the ring being provided with terminal eyes, and being bent to form a pair of oppositely disposed loops, all portions of which stand at right angles to the plane of the ring, the loops being twisted close to the ring to maintain the ring at a continuous length; and a closing member forming a continuation of the ring, the closing member having a coil at one end engaged in one eye, there being a pair of

arms extended from the coil, one arm having a projecting portion engaged through the other eye and provided with

a hook, the other arm being engaged with the hook; and a bail pivoted in the loops.

1,013,706. AUTOMATIC GRAVITY PIVOT-HEADLIGHT. RALPH A. WAKEFIELD, Sacramento, Cal. Filed May 9, 1911. Serial No. 626,071.



A device of the character described comprising a locomotive, a frame secured thereon, a swiveled platform on said frame, tubular members secured to said locomotive, liquid in said members, weights movable in said tubular members, and resting on said liquid, and cables connecting said weights with said swiveled platform, as described.

1,013,707. POULTRY-FEEDER. WILLIAM H. WATSON, Riverdale, Nebr. Filed Sept. 27, 1909. Serial No. 519,726.

1. A poultry feeder, comprising a base, a standard thereon, a bearing sleeve slidable on the standard, and provided with upwardly extending arms, a set screw traversing the sleeve and engaging the standard, a substantially cylindrical container supported between the arms, said container having a hopper bottom, and an opening at one side thereof, a compartment below the opening having a rounded bottom and flaring sides, a feed screw journaled in the compartment, said screw being radial to the container, a ratchet wheel on the outer end of the shaft, a distributer comprising a disk having radial ribs on its upper face, a hub secured to the disk and a shaft to which the hub is secured, said shaft being journaled in the top of the standards and in the bottom of the container, said hub having ratchet teeth on its lower edge, a crank shaft journaled below the feed screw and provided at its inner end with a crank arm, a weighted pawl pivoted to the arm and engaging the ratchet teeth, a lever secured to the outer end of the crank shaft, a rack bar engaging the pinion of the feed screw, and connected with the lever, levers pivoted on the base, a platform connecting corresponding ends of the levers, and a link connecting one of said levers with the crank shaft lever.

2. A poultry feeder comprising a container and a compartment below the container, a distributer comprising a rotatable disk provided on its upper face with radial ribs, means for rotating the disk, a feed screw in the compartment and delivering to the disk, means for operating the screw, a movable platform, a connection between each of said means and the platform for operating the same when the platform is depressed, a counter-weight in connection with the platform, and means for adjusting the weight for the purpose specified.

3. A poultry feeder comprising a container and a compartment below the container, a distributer comprising a rotatable disk provided on its upper face with radial ribs, means for rotating the disk, a feed screw in the compartment and delivering to the disk, means for operating the screw, a movable platform, and a connection between each of said means and the platform for operating the same when the platform is depressed.

4. A poultry feeder comprising a casing having a compartment for the food, and a compartment therebelow to which the food compartment delivers, a fed screw in the lower compartment, a rotatable distributer below the feed screw to which it delivers, a movable platform and means operated by the movement of the platform for rotating the food screw and the distributer.

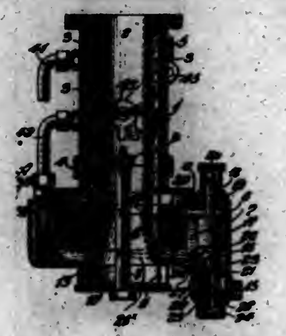
1,013,708. CARBURETER. ALFRED WEILAND, Reading, Pa. Filed Dec. 19, 1910. Serial No. 597,963.

1. In a device of the character stated, a casing having a mixture outlet, a throttle valve controlling said outlet, a mixing chamber in said casing having air and fluid fuel inlets, a fluid fuel supply for said mixing chamber, and means to deliver an auxiliary explosive mixture to said mixing chamber on opposite sides of said throttle valve.

2. In a device of the character stated, a casing having a mixture outlet, a throttle valve controlling said outlet, a mixing chamber in said casing having air and fluid fuel inlets, a reservoir for fluid fuel secured to said casing, a fluid fuel supply, a plurality of auxiliary reservoirs adjacent said main reservoir and communicating therewith, air inlets for said auxiliary reservoirs, and means to convey an auxiliary explosive mixture from each of said auxiliary reservoirs, the respective means of each auxiliary reservoir communicating with said mixing chamber on opposite sides of said throttle valve.

3. In a device of the character stated, a casing having a mixture outlet, a throttle valve controlling said outlet, a

mixing chamber in said casing having a main air inlet opening, a fluid reservoir secured to said casing and having ports communicating with said mixing chamber, a fluid fuel supply, means to control a supply of fluid fuel to said reservoir and maintain a constant level therein, a plurality of auxiliary reservoirs adjacent said main reservoir, each having communications therewith, a valve controlling



the flow of fluid between said reservoirs, means for conveying an explosive mixture from one of said auxiliary reservoirs to said mixing chamber between said outlet and said throttle valve, and means for conveying an auxiliary supply of explosive mixture from the other auxiliary reservoir to said mixing chamber between said throttle valve and main fluid inlets.

1,013,709. GAME APPARATUS. LOUIS M. WHITE and ROBERT J. SACKETT, New Orleans, La., assignors to New Orleans Specialty Co., New Orleans, La., a Firm. Filed May 22, 1911. Serial No. 628,765.

1. In an apparatus of the character described, the combination of an electric signaling device, a board having a plurality of sockets distributed thereon, contacts in some of said sockets and stops in others of said sockets, and a circuit closing device for fitting within said sockets, substantially as described.

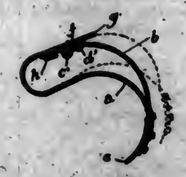
2. In an apparatus of the character described, the combination of an electric signaling device, a board having a plurality of sockets distributed thereon, a metallic strip providing contacts in said sockets, stops in some of said sockets covering their respective contacts; and a circuit closing device for fitting within said sockets, substantially as described.

3. In an apparatus of the character described, the combination of a board provided with a plurality of distributed apertures, an electric signaling device, circuit closing contacts for some of said apertures connected with the signaling device, stops located in others of said apertures, and a flexible conductor for fitting within said apertures, substantially as described.

4. In an apparatus of the character described, the combination of a board provided with a plurality of apertures, an electric conductor plate secured against said board to close said apertures and provide contacts, plugs in some of said apertures covering their respective contacts, an electrical signaling device, an electric conductor connecting said signaling device and plate, and a flexible electric conductor connected with the signaling device and adapted to close circuits through the contacts in said apertures, substantially as described.

5. In an apparatus of the character described, the combination of a board provided with a plurality of apertures therethrough, an electric conductor plate secured against said board to close said apertures and provide contacts, stops in some of said apertures covering said contacts, a casing secured against said board and providing a support therefor, a battery located in said casing, a signaling device mounted on the casing; conductors connecting said signaling device, battery, and metallic plate; a flexible conductor connected with said signaling device, and a plug on said flexible conductor adapted to be inserted in said apertures, substantially as described.

1,013,710. CULTIVATOR. VINCENS WIDDER, Riedlingen, Germany. Filed Aug. 23, 1911. Serial No. 645,629.



1. The combination with a cultivator frame, of a normally inclined tool mounted on downwardly inclined resilient carrying means, said carrying means being braced by a resilient stay flexibly maintaining said tool in an inclined position, said resilient stay having disengaging means to permit free movement of the tool when the latter strikes an obstruction, whereby said tool may pass over said obstruction without damage.

2. The combination with a cultivator frame, of a tool mounted on a downwardly inclined spring blade, having a horizontal and rearward extending upper end which is fixed on said frame and a spring blade support secured at its lower end to the lower rear portion of the spring blade, the upper end of the spring blade support terminating below the horizontal and rearward extension of the upper end of the main spring blade and against a fixed abutment on the cultivator frame.

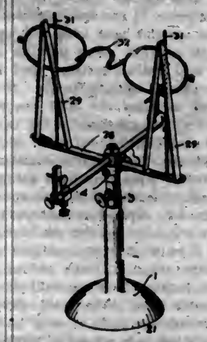
3. The combination with a cultivator frame, of a tool mounted on a downwardly inclined spring blade, having a horizontal rearward extending upper end which is fixed on said frame, a spring blade support secured at its lower end to the rear blade of the spring blade behind the tool, the upper end of the spring blade support terminating below the horizontal and rearward extension of the spring blade and against a fixed abutment provided on the cultivator frame, and means for guiding the abutment end of the spring blade support when the tool is moved by an obstruction.

4. The combination with a cultivator frame, of a tool mounted on a downwardly inclined spring blade, having a horizontal rearward extending upper end which is fixed on said frame, a spring blade support formed with an eye and secured at its lower end to the lower rear portion of the spring blade behind the tool, the upper end of the spring blade support terminating below the horizontal rearward extension of the spring blade and against a fixed abutment on the cultivator frame, a bracket secured under the horizontal rearward extension of the spring blade to provide an abutment, and a link connecting said bracket with the eye on the spring blade support.

5. The combination of a cultivator frame provided with an abutment, a resilient tool support secured to the frame and a resilient member fastened to the resilient tool support and having its free upper end normally in engagement with the abutment but adapted to be disengaged to permit the resilient tool support to yield when an obstacle is encountered.

[Claims 6 and 7 not printed in the Gazette.]

1,013,711. ADJUSTABLE CLAMPING-SUPPORT FOR SPECTACLES AND THE LIKE. EDGAR S. WIGGINS, Paris, Tenn. Filed Dec. 30, 1910. Serial No. 600,054.



1. A pivotal supporting member for a spectacle frame holder, comprising a body, a shank extending therefrom having a transverse bearing to receive a pivot, a transverse perforation through said body at one point of its length, a binding screw in operative relation to said perforation, a recess in the side of the body at another point along its length, the direction of said recess being transverse to the direction of said perforation, and a binding screw in operative relation to said recess.

2. A pivotal supporting member for a spectacle frame holder, comprising a body, a shank extending therefrom having a transverse bearing to receive a pivot, a transverse perforation through said body at one point of its length, a binding screw in operative relation to said perforation, a recess in the side of the body at another point along its length, the direction of said recess being transverse to the direction of said perforation, a semi-circular band partly inclosing the supporting member and having notched ends adjacent the ends of said recess, and a binding screw in operative relation to said recess.

3. In an adjustable clamping holder for spectacles and the like, the combination of a base, a support pivotally mounted on said base, a rod mounted in said support and carrying independently-adjustable clamps thereon, said rod being both longitudinally and rotatably adjustable, a second rod carried by said support, said second rod being also longitudinally and rotatably adjustable with respect to the support, spectacle-frame engaging members mounted on the ends of said second rod, including a spring, for engaging the frames of the spectacles or the like, and means for holding both of said rods in their respective adjusted positions, whereby said rods may be adjusted together around the pivot of said support and at the same time may be adjusted in a manner described, independently of each other.

4. In an adjustable clamping holder for spectacles and the like, the combination of a base, a standard rising therefrom, a support pivotally connected to said standard, a transverse rod mounted in said support, said rod being both longitudinally and rotatably adjustable, independently-adjustable clamping members carried by said rod, said rod having indications thereon and a sliding gage on said rod cooperating with said indications, whereby the degree of longitudinal adjustment of said rod may be indicated, a second rod carried by said support transversely to the first-mentioned rod, said rod also being longitudinally and rotatably adjustable, and spectacle-engaging frames carried by said second rod.

5. A pivotal supporting member for spectacle frame holders, comprising a body having a transverse bearing therethrough to receive a pivot, a transverse perforation therethrough to receive a rod, means adjacent said perforation to clamp said rod in place, a recess in the side of the member, the direction of said recess being transverse to the direction of said perforation, and binding means adjacent said recess.

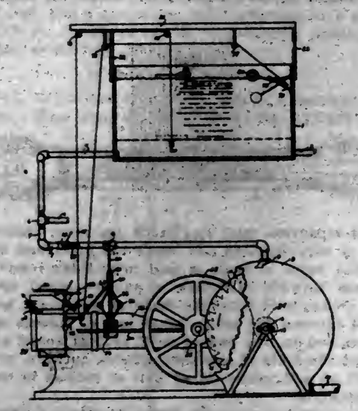
[Claims 6 and 7 not printed in the Gazette.]

1,013,712. TIE AND RAIL-FASTENER. ALFRED D. WILLIAMS, Glassport, Pa. Filed June 3, 1911. Serial No. 630,988.

1. In a tie and rail fastener, end plates having vertical side walls, a tie plate connecting said end plates and having a central depressed portion, chairs mounted upon said end plates and adapted to support rails, outer fastenings slidably connected to the side walls of said end plates, tie rods carried by said fasteners and extending into the depressed portion of said tie plate, a turn buckle connecting said tie rods, inner fasteners engaging said rails, and means adapted to adjustably hold one of said inner fasteners.

2. In a tie and rail fastener, a tie, chairs arranged upon the ends of said tie and adapted to support rails, outer fasteners engaging the outer base flanges of said rail, tie rods carried by said fasteners, a turn-buckle connecting said tie rods, inner fasteners engaging the inner base flanges of said rails, and means adapted to adjust one of said inner fasteners.

1,013,713. AUTOMATIC STARTER FOR TANK-FILLING APPARATUS. HENRY B. WILSON, Birmingham, Ala. Filed Apr. 15, 1910. Serial No. 555,609.



1. In an apparatus for maintaining water in tanks, the combination of an explosive engine driven pumping outfit, and a starting mechanism for the explosive engine comprising a water wheel, means to deliver a stream of water thereto, means to transmit motion from said water wheel to said explosive engine to start same, centrifugal clutch means to automatically disconnect the water wheel from said engine as the latter speeds up under its own power, and means to automatically cut off the flow of water to said water wheel as soon as said engine has started up.

2. In an apparatus of the character described, an explosive engine, a water motor for starting said engine, power transmission means whereby said motor will im-

part motion to said engine to start it up, and a clutch mechanism interposed in said transmission means between motor and engine and comprising a revolving element which, responsive to a predetermined centrifugal strain, will move to open the clutch and disconnect the motor and engine, substantially as described.

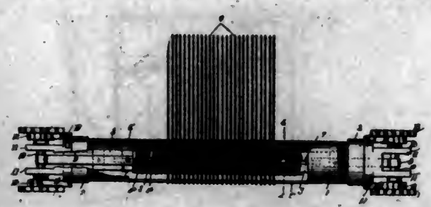
3. In an apparatus of the character described, an explosive engine having a crank shaft, a water motor for starting said engine, power transmission means whereby said motor will turn the crank shaft of said engine to start it up, and a clutch mechanism interposed in said transmission means and comprising a revolving element which, responsive to a predetermined centrifugal strain, will move to open the clutch and disconnect the motor and engine, substantially as described.

4. In an apparatus of the character described, the combination of an explosive engine for driving a pump, a water motor for starting said engine, speed responsive means to reduce the compression in the engine when it is being started up and to automatically restore said compression after the engine has started, and means to automatically disconnect said starting motor and engine only when the latter is runnuing under its own power.

5. In an apparatus of the character described, the combination with a water tank, a pump and pipe leading therefrom to supply water to the tank, a pipe leading from the tank to a point of use, a water motor, a pipe leading to said tank and supplying water to said motor, a float for said tank, a valve in the water motor supply pipe, means to transmit motion from said float to open said valve as the water level in the tank falls, an explosive engine for driving said pump, means also controlled by said float to admit the explosive mixture to said explosive engine, a speed governor driven by said engine, a valve controlled thereby to shut off the supply of water to the water motor only when the explosive engine has been started and is running under its own power, and means to automatically cut off the gasolene supply of said motor after the tank is filled.

[Claims 6 to 8 not printed in the Gazette.]

1,013,714. EXPANSION-COMB. PAUL WILSON, Maynard, Mass. Filed June 8, 1911. Serial No. 631,918.



1. An expansion comb for textile machines, comprising a pair of bars mounted one beside the other and spaced apart, the dents or teeth of said comb being received in the space between said bars, a pair of spiral springs, wound around said bars, the dents of said comb passing outward between the coils of said pair of springs in one direction, and another pair of coiled springs wound around said bars, the dents of said comb passing outward between the coils of said second-named pair of springs in the opposite direction.

2. An expansion comb for textile machines, comprising a pair of bars arranged side by side and spaced apart from each other, the dents of said comb being received in the space between said bars, a pair of coiled springs wound around said bars, the dents of said comb passing outward between the coils of said pair in one direction, a second pair of spiral springs being wound around said bars, the dents of said comb passing outward between the coils of said second-named pair of springs in the opposite direction, and spacing rods for said springs to cause said springs to fit tightly upon said bars.

3. In an expansion comb for textile machines, the combination of a pair of bars arranged longitudinally side by side and spaced apart, dents received in the space between said bars, coiled springs wound around said bars, the opposite ends of said dents passing outward between the coils of said springs, said bars having pin and slot engagement with each other, the coils of said springs being engaged by the pins, whereby, when the bars are moved longitudinally with respect to each other, the springs will be stretched or compressed to expand or contract said comb.

4. In an expansion comb for textile machines, the combination of a pair of bars arranged side by side longitudinally of each other and spaced apart, the dents or teeth of said comb being received in the space between said bars, spiral springs wound around said bars, the opposite ends of the dents or teeth of said comb passing outward between the coils of said spiral springs, and spacing and tightening rods passing longitudinally through said springs and arranged between the coils thereof to cause the springs to be in tight engagement with said bars, said bars having pin and slot engagement with each other, the pins of said pin and slot engagement engaging the coils of said springs, whereby, when the bars are moved longitudinally with respect to each other, the springs will be stretched or compressed to expand or contract said comb.

5. In an expansion comb for textile machines, the combination of a casing, a pair of bars arranged side by side longitudinally of each other in said casing and spaced apart, dents or teeth located between said bars, a pair of spiral springs inclosing said bars, said dents or teeth passing outward between the coils of said pair of springs in one direction, a second pair of spiral springs inclosing said bars, the dents or teeth of the comb passing outward between the coils of said second-named pair of springs in the opposite direction, said bars having pin and slot engagement with each other, the pins engaging the coils of said springs, a spindle arranged adjacent each end of each of said bars, means connected rigidly to the ends of said bars at one end and to the spindles at the other end, and means for operating said spindles in pairs, to cause the bars to move either to stretch or compress the springs to expand or contract said comb.

[Claims 6 and 7 not printed in the Gazette.]

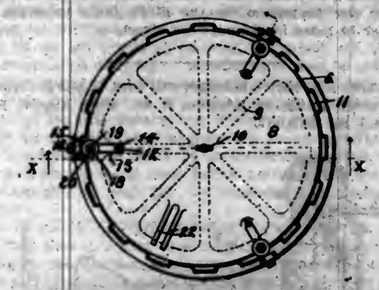
1,013,715. RECEPTACLE FOR BANDAGE-ROLLS, GAUZE, AND COTTON-WOOL. ELOY CARABIAS YUSTE and FRANCISCO DEL COLLADO, Mexico, Mexico. Filed Sept. 27, 1911. Serial No. 651,647.

1. A receptacle for bandage and other rolls, consisting of a hollow cylindrical body having a plurality of longitudinal slots and a spring finger located between said slots and forming a part of the side wall of said body, said finger having at one end connection with said body and being capable of yielding under pressure of, and exerting a spring pressure upon, the bandage material.

2. A receptacle for bandage and other rolls, consisting of a hollow cylindrical body having a plurality of longitudinal open-end slots and spring fingers located between said slots, said fingers forming a part of the side wall of said body, having at one end connection with said body, and being capable of yielding under pressure of, and exerting a spring pressure upon, the bandage material.

3. A receptacle for bandage and other rolls, consisting of a hollow cylindrical body having a plurality of longitudinal open-end slots and spring fingers located between said slots, said fingers forming a part of the side wall of said body, having at one end connection with said body, and being capable of yielding under pressure of, and exerting a spring pressure upon, the bandage material, and a removable hollow cylindrical cover having an open-end slot capable of registration with one of the slots of said body.

1,013,716. VULCANIZER. ALEXANDER ADAMSON, Akron, Ohio. Filed Aug. 12, 1911. Serial No. 648,602.



1. The combination with a vulcanizer and a cover therefor each provided with a series of spaced lugs, the lugs on said cover adapted to be passed through the spaces between the lugs on the said vulcanizer and to be interlocked behind the latter when the cover is given a partial rotation, of rollers carried by said cover and engaging said vulcanizer adapted to permit of the easy rotation of said cover during the interlocking operation.

2. The combination with a vulcanizer having at its open end a series of spaced lugs, a cover for said vulcanizer having a series of spaced complementary lugs adapted to interlock with the lugs on said vulcanizer, of rollers carried by said cover and engaging said vulcanizer adapted to permit the easy rotation of said cover during the interlocking operation.

3. The combination with a vulcanizer and a cover having complementary interlocking portions, said operation of interlocking embodying a partial rotation of said cover, of a plurality of rollers carried by said cover and adapted to engage the upper face of said vulcanizer for permitting the easy rotation of said cover during the operation.

4. The combination with a vulcanizer and a cover therefor which are provided with portions adapted to interlock, said interlocking operation involving a partial rotation of said cover, of a plurality of flanged rollers suitably mounted on said cover and running on the upper wall of said vulcanizer for permitting the easy rotation of said cover and guiding the same during the interlocking operation.

5. The combination with a vulcanizer and a cover therefor each provided with complementary portions adapted to interlock, the interlocking operation involving the partial rotation of said cover, of a plurality of radial arms carried by said cover, rollers on said arms adapted to run on the upper face of said vulcanizer to permit the easy rotation of said cover during the interlocking operation.

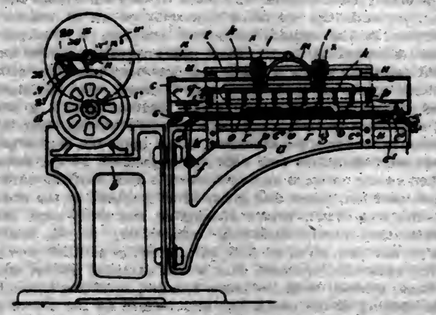
[Claim 6 not printed in the Gazette.]

1,013,717. ETCHING-MACHINE. EUGEN ALBERT, Munich, Germany. Filed Jan. 20, 1911. Serial No. 603,740.

1. In an etching machine, the combination with a bath tub having a reciprocating paddle, of means for imparting a rectilineal motion to same with a varying length of travel which periodically repeats itself, substantially as and for the purpose set forth.

2. The combination in an etching machine of a bath tub having a reciprocating paddle, and means for varying the motion of the said paddle consisting of a fixed central pivot, a fixed pinion thereon, a rotating disk on the pivot, a planet wheel meshing with the pinion, a pivot support for the planet wheel on the rotating disk, a slotted link pivoted at one end to the planet wheel, said slotted portion adapted to slide on an extension of the fixed central pivot, a connecting rod between the slotted link and the crosshead of the paddle, and means for rotating the disk on the central pivot, substantially as described.

3. The combination in an etching machine of a bath tub having a reciprocating paddle, and means for varying the motion of the said paddle consisting of a fixed central pivot, a fixed pinion thereon, a rotating disk on the pivot, a planet wheel meshing with the pinion, a pivot support for the planet wheel on the rotating disk, a slotted link pivoted at one end to the planet wheel, said slotted portion adapted to slide on an extension of the fixed central pivot, a slide on the planet wheel for the support of the slotted link pivot, means for securing the said support at any position in the said slide, a connecting rod between the slotted link and the crosshead of the paddle, and means for rotating the disk on the central pivot, substantially as set forth.



4. In an etching machine, a reciprocating paddle consisting of rows of corrugated sheets with angular uprights coöperating with rows of flat top plates having angular uprights, ends on the top plates overlapping the free ends of the corrugated sheets, cross plates coöperating with the uprights to form supports for the guide runners, guide runners attached thereto, and a cross-head also attached thereto, substantially as described.

5. The combination in an etching machine, of a framework having guide rails carrying the reciprocating paddle, a bath tub with a partially open top, crank and link mechanism by which the said bath tub is supported on the framework, driving means giving a varying motion to a slotted link, and a connecting rod connecting such slotted link with the crosshead of the reciprocating paddle, substantially as set forth.

1,013,718. MUSIC-STAND. WILLIAM N. ANDERSON, Troy, Idaho. Filed Jan. 8, 1909. Serial No. 471,303.

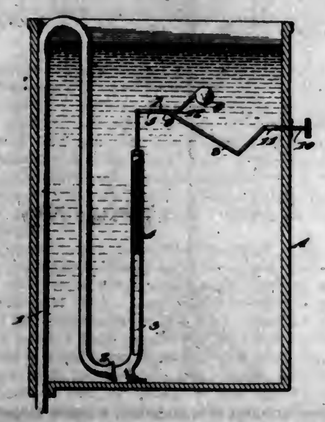
1. The combination of a standard, a music holder on the upper end thereof, a rotatable shaft in the standard, tripod legs pivoted to the lower ends of the standard, a gear on the lower end of the shaft, a second gear meshing with the

first, vertically-disposed members connected with the gear at diametrically opposite points and extending downwardly from the standard, pedals connected with the lower ends of the members, a single pivot connecting the rear ends of the pedals to one of the said legs, means for pivotally connecting the legs with the standard to permit the legs to fold upwardly alongside the latter, said pedals and members being foldable with the legs, and bracing means between the legs and standard, and a leaf-turning element mounted on the upper end of the standard and operatively connected with the shaft.

2. In a music stand, the combination of a standard, supporting means therefor, a stem having adjustable connection with the standard and adapted to be secured thereto in the required adjusted position, a rotatable shaft mounted on the standard, pedal operation means for said rotatable shaft, a crank arm having connection with said rotatable shaft, a music rest mounted upon the stem and comprising a bar and arms pivoted thereto, a set of said arms having supporting members having their inner ends constituting shoulders, stops upon the bar to engage said shoulders and limit the movement of the arms when swung outward and downward, a rock shaft mounted upon said bar, upper and lower arms disposed at the ends of the rock shaft, pivots connecting the arms with the shaft, said pivots extending transversely to the shaft to permit the arms to fold substantially parallel therewith, each arm provided with a leaf gripping device, and a finger pendent from the lower arm and operating through the opening of the crank arm and formed on the arc of a circle concentric with the pivot support of the aforementioned stem.

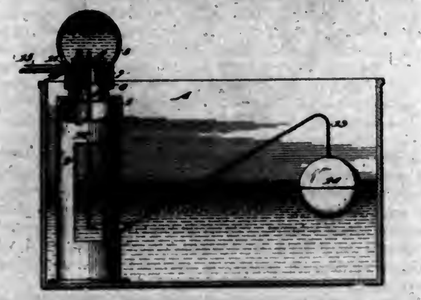
3. In a music stand, a tubular support, a beveled gear disposed against the lower side of said support, a second beveled gear supported in engagement with the first beveled gear, depending links pivoted at their upper ends to the second beveled gear and adapted to oscillate the same in opposite directions, pedal members connected with said links for independently operating the same, a shaft connected with the first beveled gear and extending through the support, a music rest swingingly mounted on the upper end of the tubular support, a turning shaft journaled on said music rest, an arm pivoted at one end to the shaft, an arcuate finger depending from said arm, sheet gripping means carried by the turning shaft, and an arm mounted on the upper end of the first shaft and having a slotted end receiving the arcuate finger.

1,013,719. TANK-SIPHON. ALFRED JOHNSON ASHFORD, Kinston, N. C. Filed Aug. 6, 1910. Serial No. 575,966.



The combination with the stem of a plunger, of a slotted lever provided with an abutment or projection, means connected with said lever for normally raising the plunger, a bell-crank lever having sliding connection with the first-mentioned lever through the medium of its slot, and means for rocking the bell-crank lever whereby it is caused to engage the projection on the other lever to cause the plunger to move in the opposite direction.

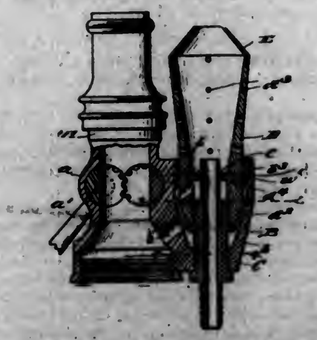
1,013,720. CLOSET-CISTERN-SUPPLY VALVE. ALFRED JOHNSON ASHFORD, Kinston, N. C. Filed Aug. 6, 1910. Serial No. 575,967.



The combination with a cistern and a slotted standpipe erected on the bottom thereof and extending to the top, said stand pipe provided at the upper end with a neck, the lower portion of which is externally screw-threaded and the upper portion of smaller diameter than the screw-threaded portion, of a valve fitted to the upper end of the neck and having slots therein, a rod extending down through the stand-pipe and to which this valve is screwed, a stem pivotally mounted on the stand pipe and pivotally connected with the lower end of this rod, and having a float on its outer end adapted to rest upon the surface of the water in the cistern, a reservoir screwed to the threaded portion of the neck and provided with an annular shoulder between which and the threaded portion of the neck a packing is held, and a water supply pipe leading into the reservoir.

1,013,721. [WITHDRAWN.]

1,013,722. AIR-PURIFYING INHALER ATTACHMENT. SAMUEL BANTA and BENJAMIN L. STOWE, Jersey City, N. J., assignors to Eureka Fire Hose Manufacturing Company, Jersey City, N. J. Filed Sept. 9, 1911. Serial No. 648,431.



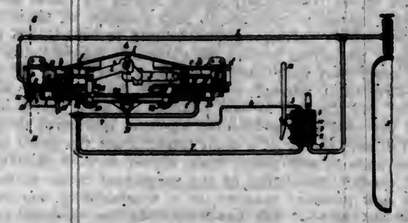
1. In an air purifying inhaler, a central air tube, provided in rear of its open front and with an opening from which the air to be inhaled is drawn, in combination with a water chamber adapted to communicate with a source of water supply under pressure, and an annular opening surrounding the air tube from which water under pressure is discharged as an annular jet through the walls of which the air to be inhaled must pass before entering the air tube, substantially as and for the purposes hereinbefore set forth.

2. In an air purifying inhaler, a central air tube, a water chamber adapted to communicate with a source of water supply and an annular water discharge opening surrounding said air tube, in combination with means in advance of the said opening for closing the annular stream or jet issuing therefrom, whereby the air space within said jet is completely inclosed by water walls, through which the outside air must pass before reaching the air tube, substantially as and for the purposes hereinbefore set forth.

3. In an air purifying inhaler, the combination of an air tube and a nozzle tube longitudinally movable relatively to one another, the nozzle tube encircling the air tube and adapted to communicate with a source of water supply under pressure, an annular opening between said air tube and nozzle tube from which the water is discharged in the form of an annular jet, and means controlled by the longitudinal movement of said tubes for shutting off and letting on said water discharge.

4. The combination with a hose nozzle or play pipe and valve for controlling the stream of water issuing from the same of an inhaler attachment comprising a central air tube, a water chamber having an annular water discharge orifice surrounding the air tube, a duct connecting the water chamber of the inhaler with the water way of the hose nozzle at a point in rear of the hose nozzle valve, and a separate and independent valve for controlling the passage of water to the inhaler, substantially as and for the purposes hereinbefore set forth.

1,013,723. STARTING DEVICE FOR ENGINES. CAMILLE BARBEY, Geneva, Switzerland. Filed Sept. 24, 1908. Serial No. 454,639.



1. An auxiliary motor for starting a main internal combustion motor and comprising a crank shaft, a cylinder, a piston in the cylinder adapted to drive the crank shaft, a main motor, a clutch between the auxiliary and main motors, a compressed air receiver, a valve box, a plurality of valves in the box, pipe connections from the box to the receiver, to the auxiliary motor cylinder, to the clutch and from the cylinder to the receiver, means in communication with the cylinder and receiver for causing the auxiliary motor to work as a pump and means for so successively operating the valves in the box that the clutch is first operated, then the auxiliary motor is started, and when starting has been accomplished, the driving force of the auxiliary motor is first cut off, upon which the auxiliary motor is driven by the main motor to act as a compressor and finally the auxiliary motor is de-clutched from the main engine.

2. An auxiliary motor for starting a main internal combustion motor, and comprising a plurality of cylinders, a crank shaft, a piston in each cylinder, a connecting rod for each piston and so working upon the common crank shaft that "dead centering" is prevented, a main motor, a clutch between the auxiliary and main motors, a compressed air receiver, a valve box, a plurality of valves in the box, pipe connections from the box to the receiver, to the auxiliary motor cylinders, to the clutch and from the cylinder to receiver, means in communication with the cylinder and receiver for causing the auxiliary motor to work as a pump, and a lever for so successively operating the valves in the box that the auxiliary motor may drive the main engine by the clutch or the main engine may drive the auxiliary motor so that the latter may compress air.

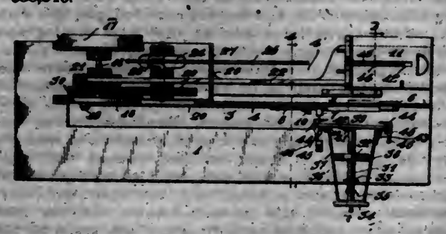
3. An auxiliary motor for starting a main internal combustion motor, and comprising a plurality of cylinders, a crank shaft, a piston in each cylinder, a connecting rod for each piston and so working upon the common crank shaft that dead centering is prevented, a main motor, a clutch between the auxiliary and main motors, a compressed air receiver, a valve box, a plurality of valves in the box, pipe connections from the box to the receiver, to the auxiliary motor cylinders, to the clutch and from the cylinder to the receiver, means in communication with the cylinder and receiver for causing the auxiliary motor to work as a pump, and a lever for so controlling the valves in the box that the auxiliary motor may drive the main engine through a clutch, or the latter may drive the former to compress air in one of the cylinders and means whereby air may be drawn into and discharged from one of the cylinders to the receiver.

4. An auxiliary motor for starting a main internal combustion motor, and comprising a plurality of cylinders, a crank shaft, a piston in each cylinder, a connecting rod for each piston and so working upon the common crank shaft that "dead centering" is prevented, a main motor, a clutch between the auxiliary and main motors, a compressed air receiver, a valve box, a plurality of valves in the box, pipe connections from the box to the receiver, to the auxiliary motor cylinders, to the clutch and from the cylinder to the receiver, means in communication with the cylinder and receiver for causing the auxiliary motor to work as a pump, and a lever for so successively operating the valves in the box that the clutch will first be actuated and then the auxiliary motor will be started to drive the main engine with a clutching force which will be proportional to the work to be performed and when starting has been accomplished the driving force of the auxiliary motor is first cut off, upon which said motor will be driven by the main engine to work as a compressor with a clutching force proportional to the compression work of the compressor and increasing with it and the auxiliary motor being finally de-clutched from the main engine.

5. An apparatus for starting internal combustion motors comprising in combination a plurality of cylinders, a crank shaft, a piston in each cylinder, a connecting rod to each piston working upon the crank shaft, a compressed air receiver, a slide valve for each cylinder, a valve box, connections from the valve box to the slide valves, inlet and outlet ports in the cylinders, a connection from the valve box to the receiver and from the end of one cylinder to the receiver, and means in and on the valve box to start and stop the starting motor or to permit one cylinder to compress air into the receiver.

[Claims 6 to 8 not printed in the Gazette.]

1,013,724. SHINGLE-MAKING MACHINE. JAMES BARBOUR, Stamps, Ark., assignor of one-half to W. B. Boggs, Plain Dealing, La. Filed July 13, 1911. Serial No. 638,846.



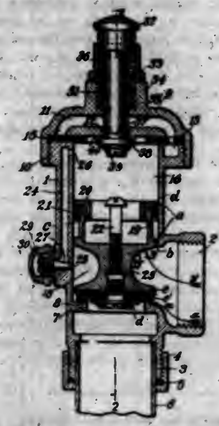
1. A feeding mechanism for shingle making machines comprising a feed screw supporting structure, a feed screw

having a threaded engagement with said structure, a feed board supporting yoke loosely connected to said screw and having diverging arms, a feed board firmly secured at one end to one of the arms and having a loose connection at its other end with the opposite arm, and means operable at each revolution of the feed screw for shifting the loose end of the board.

2. A feeding mechanism for shingle making machines comprising a feed screw supporting structure, a feed screw having a threaded engagement with said structure, a feed board supporting yoke loosely connected to said screw and having diverging arms, a feed board firmly secured at one end to one of the arms and having a loose connection at its other end with the opposite arm, means operable at each revolution of the feed screw for shifting the loose end of the board, and means for returning the free end of the board after it has been shifted.

3. A feeding mechanism comprising a feed screw supporting block secured to the table, a feed screw having a threaded engagement with said block, a hand wheel fixedly mounted on the outer end of said screw, a feed board supporting yoke loosely connected to said screw, said yoke having diverging arms, a feed board firmly secured at one end to one of said arms and having a loose connection at its other end to the opposite arm, a segmental cam arranged on one side of said board adjacent to the inner end of the feed screw, a shifting pin arranged in the end of said shaft and adapted to be engaged with said cam at each revolution of the feed screw whereby the loose end of the board is shifted, a spring to swing the free end of the board back after being shifted by said pin and cam.

1,013,725. VALVE MECHANISM. ERNEST D. BARRETT and IRVING B. WOOD, New York, N. Y., assignors, by mesne assignments, to said Irving B. Wood. Filed July 13, 1911. Serial No. 638,289.



1. In an automatic valve mechanism, the combination comprising a casing, provided with a pressure chamber at one end thereof, and having an inlet opening and an outlet opening respectively, a transverse partition, provided with an aperture, positioned between said inlet opening and said outlet opening, a longitudinally reciprocatable piston-element positioned in said pressure chamber above said partition, and adapted to normally seal communication through the aperture in said partition, said piston being loosely mounted in said pressure-chamber and being free to move transversely therein when unseated, in response to the pressure of water entering through the inlet-opening of said casing, and said piston having a maximum cross-sectional area substantially less than the cross-sectional area of said pressure-chamber, whereby said piston when seated is normally out of contact with the wall of said casing, said maximum cross-sectional area of said piston being sufficiently great to admit of frictional engagement between a portion of the wall of said piston and a portion of the wall of said casing when said piston moves transversely therein during its travel within said casing in response to said pressure of inflowing water, flexible valvular means secured to said piston capable of projecting beyond the outermost lateral limits of and completely surrounding the same, permitting of uni-directional passage only of fluid intermediate said piston and the wall of said pressure chamber, a conduit provided with a terminal aperture positioned in the wall of said casing at a point intermediate the upper and lower ends of said piston when seated on said partition, said conduit permitting of the permanent influx of fluid into said pressure chamber at a substantially less rate than the rate of the uni-directional flow around said piston-element permitted by said flexible valvular means, and means independent of and supplemental to said flexible valvular means for optionally permitting the efflux of fluid from said pressure chamber at a greater rate than the rate of influx thereto.

2. In an automatic valve mechanism, the combination comprising a casing, provided with a pressure chamber at one end thereof, and having an inlet opening and an outlet opening respectively, a transverse partition, provided with an aperture positioned between said inlet opening and said outlet opening, a longitudinally reciprocatable piston-element positioned in said pressure chamber above said partition, and adapted to normally seal communication through the aperture in said partition, said piston being loosely mounted in said pressure-chamber and being free to move transversely therein when unseated, in response to the pressure of water entering through the inlet-opening of said casing, and said piston having a maximum cross-sectional area substantially less than the cross-sectional area of said pressure-chamber, whereby said piston when seated is normally out of contact with the wall of said casing, said maximum cross-sectional area of said piston being sufficiently great to admit of frictional engagement between a portion of the wall of said piston and a portion of the wall of said casing when said piston moves transversely therein during its travel within said casing in response to said pressure of inflowing water, flexible valvular means secured to said piston capable of projecting beyond the outermost lateral limits of and completely surrounding the same, permitting of uni-directional passage only of fluid intermediate said piston and the wall of said pressure chamber, and a conduit provided with a terminal aperture positioned in the wall of said casing at a point intermediate the upper and lower ends of said piston when seated on said partition, said conduit permitting of the permanent influx of fluid into said pressure chamber at a substantially less rate than the rate of the uni-directional flow around said piston-element permitted by said flexible valvular means.

3. In an automatic valve mechanism, the combination comprising a casing, provided with a pressure chamber at one end thereof, and having an inlet and outlet opening respectively, a transverse partition positioned between said inlet and outlet opening and above the level of the lowermost portion of said inlet opening, said partition being provided with an aperture, a longitudinally reciprocatable piston element positioned in said pressure chamber above said partition and adapted to normally seal communication through the aperture in said partition, the said piston being loosely mounted in said pressure-chamber and being free to move transversely therein when unseated, in response to the pressure of water entering through the inlet-opening of said casing, and said piston having a maximum cross-sectional area substantially less than the cross-sectional area of said pressure-chamber, whereby said piston when seated is normally out of contact with the wall of said casing, said maximum cross-sectional area of said piston being sufficiently great to admit of frictional engagement between a portion of the wall of said piston and a portion of the wall of said casing when said piston moves transversely therein during its travel within said casing in response to said pressure of inflowing water and a portion of said piston having a configuration corresponding to superposed cone frusta inverted with respect to each other, a flexible cup-washer, secured to said piston adjacent the upper end thereof and completely surrounding the same, permitting uni-directional passage only of fluid intermediate said piston and the wall of said pressure chamber, a conduit provided with a terminal aperture positioned in the wall of said casing at a point intermediate the upper and lower ends of said piston when seated on said partition, said conduit permitting of the permanent influx of fluid into said pressure chamber at a substantially less rate than the rate of the uni-directional flow around said piston-element permitted by said flexible valvular means, and a relatively blunt end, adapted to be projected into proximity to said aperture in said casing wall, for regulating the passage of liquid through said aperture and for baffling the passage of solid particles therethrough.

4. In an automatic valve mechanism, the combination comprising a casing, provided with a pressure chamber at one end thereof, and having an inlet opening and an outlet opening respectively, a transverse partition, provided with an aperture, positioned between said inlet opening and said outlet opening, a longitudinally reciprocatable piston-element positioned in said pressure chamber above said partition, and adapted to normally seal communication through the aperture in said partition, said piston being loosely mounted in said pressure-chamber and being free to move transversely therein when unseated, in response to the pressure of water entering through the inlet-opening of said casing, and said piston having a maximum cross-sectional area substantially less than the cross-sectional area of said pressure-chamber, whereby said piston when seated is normally out of contact with the wall of said casing, said maximum cross-sectional area of said piston being sufficiently great to admit of frictional engagement between a portion of the wall of said piston and a portion of the wall of said casing when said piston moves transversely therein during its travel within said casing in response to said pressure of inflowing water, flexible valvular means secured to said piston capable of projecting beyond the outermost lateral limits of and completely surrounding the same, permitting of uni-directional passage only of fluid intermediate said piston and the wall of said pressure chamber, and a conduit provided with a terminal aperture positioned in the wall of said casing at a point in a different quadrant thereof from that in which said inlet opening is positioned, said conduit permitting of the permanent influx of fluid into said pressure chamber at a substantially less rate than the rate of the uni-directional flow around said piston-element permitted by said flexible valvular means.

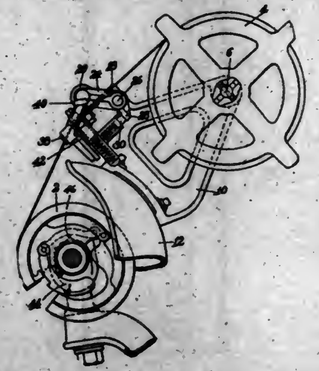
1,013,726. BUFFING-MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 9, 1908. Serial No. 456,913.

1. In a buffing machine having a rotary cylindrical tool formed to receive a removable covering of abrasive material, a holder supported independently of said cylindrical tool constructed to receive a supply strip of abrasive material and arranged to permit the strip to be led on to the periphery of the tool, and means for retarding the movement of the strip to permit it to be tightly drawn around the periphery of the tool.

2. In a buffing machine in which the buffing tool is constructed to receive a removable covering of abrasive material, a rotary holder formed to receive a supply strip of abrasive material arranged to permit a portion of the strip to be drawn around the periphery of the buffing tool, a member provided with a guiding surface arranged to guide the strip on its way to the buffing tool, and a spring-pressed roller arranged to yieldingly hold the strip in engagement with said surface and manual means for advancing said strip.

3. In a buffing machine, having a cylindrical buffing wheel constructed to receive a removable covering of abrasive material, a rotary holder for a supply roll of abrasive material arranged upon the frame of the machine outside of the buffing wheel and in the plane of the latter.

4. In a buffing machine, having a buffing wheel constructed to receive a removable covering of abrasive material, a rotary holder outside the wheel for a supply strip of abrasive material arranged in the plane of the buffing wheel, a tension device for the strip independent of said wheel and arranged intermediate the holder and wheel, and means for severing a length from said strip.



5. In a buffing machine having a buffing tool constructed to receive a removable covering of abrasive material, a holder for receiving a supply strip of abrasive material arranged so that the strip may be led on to the periphery of the buffing tool, a member having a guiding surface arranged between the holder and tool and a spring-pressed roller arranged to engage the roughened side of the strip and hold said strip in engagement with said surface.

[Claims 6 to 12 not printed in the Gazette.]

1,013,727. ELASTIC METAL SOLE. ULRICH ADANK BAUMANN, Lucerne, Switzerland. Filed June 28, 1911. Serial No. 635,837.

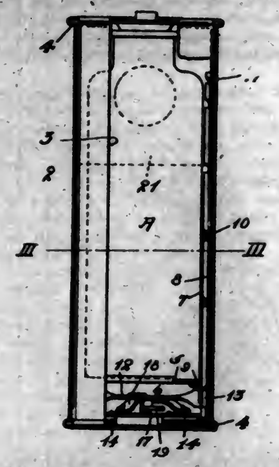
An elastic metal sole consisting of separate small metal plates and of a wire gauze to which said metal plates are fixed in a convenient manner.

1,013,728. VERTICALLY-ADJUSTABLE CASE FOR BOTTLES OR THE LIKE. FRANCIS W. BEACH, Schuylerville, N. Y. Filed May 5, 1911. Serial No. 625,193.

1. The combination of a case or support, longitudinally adjustable legs therefor provided at their ends with laterally extending feet, the legs being also rotatable about their longitudinal axes whereby when they are turned to certain positions the feet are brought within the confines of the case and when turned to other positions they extend out beyond such confines, and means for holding the legs in the positions to which they may be adjusted.

2. The combination of a support or case provided at its lower end with an open chamber, supporting legs therefor having feet at their ends, the legs being longitudinally adjustable and arranged to have the feet of the legs slide into the chamber in the end of the case and concealed or to be drawn out therefrom to support the case at an eleva-

tion, and means for holding the legs in the various positions to which they may be adjusted.



3. The combination of a case or support, a plurality of longitudinally adjustable legs therefor, each provided at its end with a laterally extending foot, the legs being rotatable about their longitudinal axes whereby when they are turned to certain positions the feet are brought within the confines of the case and when turned to other positions they extend outward beyond such confines, means for simultaneously rotating the legs, and means for holding them in the various positions to which they may be longitudinally adjusted.

4. The combination of a case or holder, longitudinally adjustable supporting legs therefor provided at their ends with laterally turned feet, the legs being rotatable, means for rotating the legs to turn the feet thereof outward, and catches for engaging with and holding the legs in the positions to which they may be adjusted when the feet thereof are turned outward.

5. The combination of a case provided near one end with a partition leaving below it an open chamber, longitudinally adjustable legs for supporting the case provided at their outer ends with laterally extending feet, means supported on the legs near their outer ends for turning them about their longitudinal axes, and means for holding the legs in the positions to which they may be adjusted, the said means for turning the legs, and the feet of the legs themselves, being adapted to enter and be concealed within the said chamber at the end of the case when the legs are rotated into proper positions.

[Claims 6 to 8 not printed in the Gazette.]

1,013,729. FOLDABLE WARDROBE. NINA J. BELL, (now by marriage Nina J. Litherbury,) Los Angeles, Cal. Filed Mar. 13, 1908. Serial No. 420,956.

1. In a foldable wardrobe, a molding hook, suspending straps attached to the molding hook and diverging downwardly, a hanger bar connected to the lowermost ends of the suspending straps, said straps being formed with two sets of socket devices above said hanger bar, a back curtain bar carried in one set of sockets, a front curtain bar carried in the other set of sockets, curtain rings on said front curtain bar, curtains carried by said curtain rings, and suspending devices fixed to the hanger bar.

2. A foldable wardrobe comprising a molding hook, two suspending straps containing socket attaching means attached to the molding hook and diverging downwardly, a bar attached to the lowermost ends of the suspending straps, toilet attaching devices for the bar, a back curtain bar attachable to said straps by said socket means, a front curtain bar attached to said strap by annular socket means, curtains upon said front curtain bar, curtains upon the back curtain bar, an extension upon the back curtains for covering the front curtains, and holding devices carried by the back curtains.

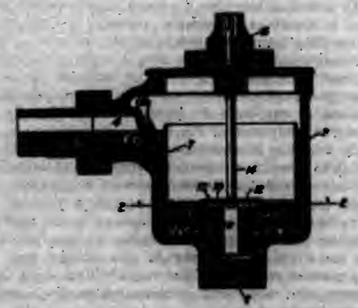
3. A foldable wardrobe comprising a supporting hook, straps attached to the supporting hook, frame-work supported by the straps, curtains supported by the frame-work to form an inclosure adapted to be mounted in the corner of a room, a bar behind said inclosure attached to said straps to engage the walls of the room, and running rings on said bar to support sliding curtains.

4. A wardrobe comprising a skeleton composed of a bar and suspending devices, curtain means to inclose a space below said bar, and a bag open at one end and adapted to receive and contain a hat, means at the closed end of the bag to clamp the hat within the bag, and means at said closed end for attaching the bag to the suspending devices above the curtain means.

5. In a foldable wardrobe, suspending straps, means for connecting the straps to the wall at the corner of the room, bars connecting the lower ends of said straps, curtains suspended upon said bars, a bar mounted on said straps behind the said curtains and engaging the walls to hold the device and its contents out from the corner, running rings on said bar and article attaching devices upon said running rings.

[Claims 6 to 10 not printed in the Gazette.]

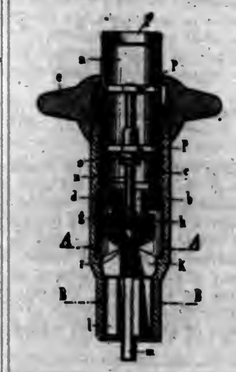
1,013,780. VACUUM-TRAP. JOHN A. BEMISH, Rochester, N. Y. Filed July 3, 1911. Serial No. 636,810.



1. A vacuum-trap having, in combination, a float-chamber provided with an inlet and an outlet, a hollow stem projecting upwardly from the outlet and provided with a valve-seat, a cap covering the upper end of said stem and provided with a valve-seat concentric with the valve-seat on the stem, the two valve-seats being spaced apart to provide a water-vent between the cap and the stem, and a float-cup provided at the bottom with a valve-member slidingly mounted on, and guided by said stem, said member having two valve-surfaces coöperating respectively and simultaneously with said valve-seats when the float-cup is in raised position, whereby the water-vent is normally sealed against the flow of fluid both from within and from without the cup.

2. A vacuum-trap having, in combination, a float-chamber provided with an inlet and an outlet, a hollow fixed guide projecting upwardly from the outlet and provided at the top with an air-vent, and, at a lower point, with a water-vent, a float-cup slidably mounted on said hollow guide and provided with a valve-member normally closing the water-vent, and a valve-rod of which the lower end extends downwardly to and coöperates directly with the air-vent, said valve-rod being adjustably supported in vertical position and passing upwardly through the float-cup and the top of the float-chamber so as to be adjustable from the outside of the vacuum-trap.

1,013,731. TAP OR COCK. CARL FRIEDRICH EMIL ALBERT BENKISER, Strassburg, Germany. Filed Oct. 3, 1910. Serial No. 585,105.



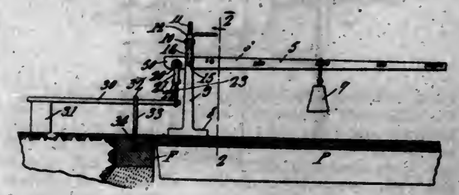
1. In a valve cock, the combination of a hollow spindle having an outlet and a valve seat at each side of the outlet, a casing threaded on the spindle, a main valve carried by the casing for engaging one of said valve seats, a secondary valve supported by the main valve adapted to engage the other valve seat, and means for supporting the main valve in the casing whereby it can be removed without disconnecting the casing from the spindle, substantially as described.

2. In a valve cock, the combination of a hollow spindle having an outlet and a valve seat at each side of the outlet, a casing threaded on the spindle, a handle secured to the casing for rotating same, a main valve for engaging one of said valve seats, a secondary valve supported by the main valve adapted to engage the other valve seat, a plurality of ribs extending radially from the main valve, a shoulder in the casing, and the casing being provided with grooves extending from the shoulder to the end of the casing for receiving the ribs whereby the ribs can be introduced into said grooves and moved beyond them and then rotated to engage said shoulder for supporting the main valve, substantially as described.

3. In a valve cock, the combination of a hollow spindle having an outlet and a valve seat at each side of the outlet, a casing threaded on the spindle, a handle secured to the casing for rotating same, a main valve for engaging one of said valve seats, a secondary valve supported by the main valve and adapted to engage the other valve seat, a stem fixed to the main valve, a plurality of ribs extending radially from the upper portion of the stem, the stem being slotted, a plurality of plates fixed in the slot in said stem and having their sides bent to form a jet regulator, a shoulder in the casing, and the casing being provided with grooves extending from the shoulder to the end of the casing whereby the ribs can be introduced into said grooves and moved beyond them and then rotated to engage said shoulder for supporting the main valve, substantially as described.

4. In a valve cock, the combination of a hollow spindle having a valve seat at each side of the outlet, a casing threaded on the spindle, a handle secured to the casing for rotating the same, a main valve for engaging one of said valve seats, a secondary valve supported by the main valve adapted to engage the other valve seat, a supporting member, the main valve being secured to the supporting member, a plurality of ribs extending radially from the supporting member, a stem threaded in the supporting member and having a longitudinal slot, a plurality of plates fixed in the slot and having their sides bent to form a jet regulator, a shoulder in the casing, and the casing being provided with grooves extending from said shoulder to the end of the casing for receiving the ribs whereby the ribs can be introduced into said grooves and moved beyond them and then rotated to engage said shoulder for supporting the main valve, substantially as described.

1,013,732. SCALE-TESTER. SAMUEL M. BOLING, Oklahoma, Okla., assignor of one-half to Louis W. Bozarth, Chandler, Okla. Filed Dec. 28, 1910. Serial No. 599,775.



1. In a scale-tester a fulcrum adapted to rest removably on the platform of the scale, a lever, a weight hung on the long arm of said lever, a knife-edge through the lever between its long and its short arm, a clevis, the eyes of which embrace the extremities of said knife-edge, an adjustable connection between said clevis and fulcrum, a second knife-edge through the short arm of the lever, a clevis hung thereon, a link swiveled in said clevis and having an eye at its lower end, and an anchor consisting of a bar extending over the edge of the scale platform and through said eye in the link, and screw-controlled means for adjusting the height of said bar.

2. In a scale-tester, a fulcrum adapted to rest removably on the platform of the scale, a lever hung in said fulcrum, means for anchoring the outer arm of said lever, said anchoring means comprising a bolt inserted in the frame-work of the scale, a bar held horizontally by said bolt and over the platform of the scale, a support for the outer end of said bar, the opposite end of said bar being attached to the aforesaid outer arm of said lever, and a weight carried by the inner arm of said lever.

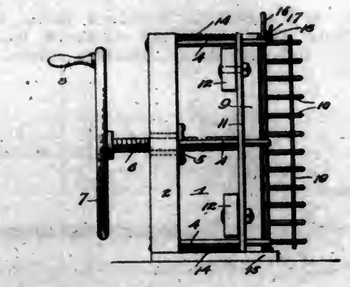
3. In a scale-tester a fulcrum adapted to rest removably on the platform of the scale, a lever having graduations, a weight hung on the graduated portion of said lever, a knife edge through the lever between its graduated portion and its short arm, a clevis whose eyes embrace the extremities of said knife edge, and adjustable connection between said clevis and fulcrum, a second knife edge through the short arm of the lever, a clevis hung thereon, a link swiveled in said clevis and having an eye at its lower end, an anchor consisting of a bar extending over the edge of the scale platform and through said eye in the link, and screw-controlled means for adjusting the height of said bar.

4. In a scale-tester, a fulcrum adapted to rest removably on the platform of the scale, a lever hung in said fulcrum, means for anchoring the outer arm of said lever, said anchoring means comprising an eye-bolt inserted in the frame-work of the scale, a bar extended horizontally

through the eye of said eye-bolt, and over the platform of the scale, a support for the outer end of said bar remote from said frame-work, the opposite end of said bar being attached to the aforesaid outer arm of said lever, and a weight carried by the inner arm of said lever.

5. In a scale-tester, a fulcrum adapted to rest removably on the platform of the scale, a lever hung in said fulcrum, means for anchoring the outer arm of said lever, said anchoring means comprising an eye-bolt inserted in the frame-work of the scale, a bar extended horisontally through the eye of said eye-bolt and over the platform of the scale, a support for the outer end of said bar remote from said frame-work, a knife-edge through the short arm of the lever, a clevis whose eyes are hung on the knife-edge, a link swiveled through the bend of said clevis and its eye inclosing the inner end of said bar, and a weight carried by the inner arm of said lever.

1,013,733. ICE-CUTTING MACHINE. JAMES B. BOWCOCK, Kirksville, Mo. Filed Aug. 21, 1911. Serial No. 645,237.



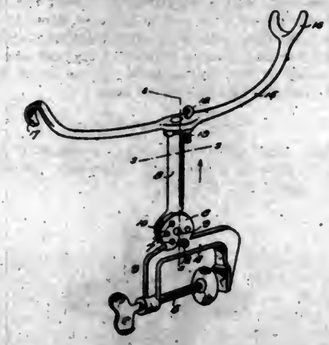
1. An ice cutting machine comprising a base, uprights at the front corners thereof, a horizontal cross bar connecting the uprights at about their mid lengths, a horisontal sleeve secured centrally in the cross bar, horisontal guide rods projecting rearwardly from the uprights, vertical bars slidably mounted on the guide rods, an elongated vertical plunger bar secured to the vertical slidable bars, a horizontal rod in the sleeve and means for propelling the rod endwise against the plunger bar, a series of picks projecting horisontally from the plunger bar, and retracting springs connecting the plunger bar with the corner uprights.

2. An ice cutting machine comprising a frame, horizontal guide rods, vertical bars slidably mounted on the guide rods, horizontal bars secured to the slidable vertical rods, a vertical plunger bar secured to the horisontal bars, a wear plate on the plunger bar, horizontal picks projecting from the plunger bar, a slidable bracing strip on the picks, a rod bearing against the wear plate to propel the plunger bar and picks, means for actuating the rod and retracting springs connecting the plunger bar with the frame.

3. An ice cutting machine comprising a frame, horizontal ice servering means, means for actuating and retracting the ice severing means horisontally, a pair of parallel vertical rods mounted on the frame, supporting means projecting from said parallel rods, and a transverse horisontal positioning rod slidably and removably supported in said supporting means, to indicate the proper position of the horisontal ice severing means.

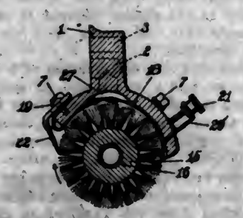
1,013,734. FISHING-ROD SUPPORT. JOHN WILLIAM BOYD, Mishawaka, Ind., assignor of one-half to Henry O. Kremer, Mishawaka, Ind. Filed June 26, 1911. Serial No. 635,341.

1. A fishing-rod support comprising in combination, a clamp provided with a disk having a plurality of apertures, a standard provided with a disk having a plurality of apertures, said clamp and standard being pivoted to each other concentrically with the said disks, a pin adapted to be inserted through two registering apertures in the said disks to retain the standard in an adjusted position, a sector plate carried by said standard and having a plurality of apertures arranged in an arc concentrically thereto, a rod holder pivotally mounted concentric to said sector, and a pin carried by said rod holder adapted to be inserted into any of the said apertures in said sector, or to be inserted to engage either of the radial margins of said sector permitting free oscillatory movement of said rod holder through an angle of predetermined magnitude.



2. In a fishing rod support, the combination with a clamp adapted to be secured to the seat or gunwale of a boat, of a standard adjustably carried by said clamp and provided with a sector having a plurality of apertures therein, a rod holder pivotally carried by said support, and a stop, carried by said rod holder, adapted to be inserted into any of the said apertures, or to be inserted to engage either of the radial margins of said sector permitting free oscillatory movement of said rod holder through an angle of predetermined magnitude.

1,013,735. CEMENTING-MACHINE. MICHAEL FRANK BROGAN, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 19, 1908. Serial No. 463,400.



1. In a machine of the class described, the combination of a distributer and a spreader which conforms approximately to the outline of the working face of the distributer.

2. In a machine of the class described, the combination of a distributer and an adjustable spreader which conforms approximately to the outline of the working face of the distributer.

3. In a machine of the class described, the combination of a distributer and a resilient spreader which conforms approximately to the outline of the working face of the distributer.

4. In a machine of the class described, the combination of a rotary distributer and a spreader which conforms approximately to the outline of the working face of the distributer.

5. In a machine of the class described, the combination of a distributer having a yielding working portion and means to compress said working portion to control the amount of cement taken up by said distributer.

[Claims 6 to 21 not printed in the Gazette.]

1,013,736. RAILWAY ROAD-BED, TRACK, AND RAIL CONSTRUCTION. JOHN N. D. BROWN, Anadarko, Okla. Filed Oct. 17, 1911. Serial No. 655,171.

1. A railway road-bed, track and rail construction in combination with parallel concrete rail-bases steel reinforced near the bottom of same by parallel lineal reinforcing bars wired to short lateral bars, and near the top by conduits, and at the top by rails securely anchored thereto; steel reinforced laterally by short reinforcing bars placed near the bottom of the rail-bases, by anchor-plates, and anchor-links with steel reinforcing bars attached to the same; reinforced and bound together vertically by anchors securing the rails to the concrete bases; as shown and specified.

2. A rail-way road-bed, track and rail construction in combination with concrete rail-bases, of the character shown, specified and claimed, united and bound together laterally by continuous concrete extending between the rail-bases near the top of the same; said central concrete steel reinforced lineally by parallel reinforcing bars and laterally by combined tie-rods and connected anchor-link reinforcing rods united at the center of track by an adjusting stirrup rod-coupling; as and for the purpose shown and specified.

3. A railway road-bed, track and rail construction in combination with steel reinforced concrete rail-bases, of the kind shown, specified and claimed, with a cushion of resilient material resting upon and within the same and rails of the usual form and pattern resting upon said cushions and anchored to the same and to said concrete rail-bases by anchor-bolts placed on both sides of the rail bases and extending down through an anchor-link and screwing into an anchor-plate placed below the center of said steel reinforced concrete rail-bases; as and for the purpose shown and specified.

4. A railway road-bed, track and rail construction in combination with a steel reinforced concrete road-bed, of the character shown, specified and claimed, with continuous cushions and rails of a common form in combination therewith; said opposing rails being laterally connected by steel reinforcing bars and tie-rods having an insulated, adjusting stirrup rod-coupling connecting the same at the center of the track; said rod-coupling being in the form of a stirrup with the approaching sides joined and welded to the inner end of the tie-rod, and the other end of said stirrup having a hole in the widest part and a molded mica thimble placed in said hole and the opposing threaded end of tie-rod passing through said insulating thimble with molded mica washers around said threaded end of the tie-rod and fitting over the ends of said mica thimble, with steel washers and nuts on said tie-rod, placed at both ends of the said insulating thimble, clamping the insulating washers to the said stirrup rod-coupling; as and for the purpose shown and specified.

5. A railway road-bed, track and rail construction comprising a steel reinforced concrete road-bed, of the class shown, specified and claimed, in combination with anchor plates, with threaded holes in the same, placed within and below the center of the concrete rail-bases; with anchor-links placed within said steel reinforced concrete rail-bases and connected to steel reinforcing bars and tie-rods by steel reinforcing bars united to said anchor-links and to said reinforcing bars and tie-rods; with non-connected anchor-links with upward curving reinforcing bars, having T shaped upper ends, united to said anchor-links and provided and used to place between said connected anchor-links to furnish additional anchorage for the rails; with anchor bolts of round iron with lower ends threaded to screw into anchor-plates and upper ends flattened and turned at an angle to engage the rail-bases; with anchor-bolts engaging the rail-bases and extending down into the concrete rail-bases, passing through the anchor-links and screwing into the anchor-plates, thus clamping the rails to the concrete rail-bases; with anchor-keys of a wedge shape placed on the outside of the anchor-bolts and against the flat side of the same and extending down through the anchor-links and by means of this wedge shape and the anchor-links holding the anchor-bolts snugly to the base of the rail and preventing them from turning therefrom; as and for the purpose shown and specified.

[Claims 6 to 24 not printed in the Gazette.]

1,013,737. TRANSMISSION-GEAR. LEWIS W. BROWN, Berkley, Va., assignor of one-half to Frank D. Bozarth, Williamsburg, Va. Filed Dec. 27, 1909. Serial No. 535,073.

1. In a transmission mechanism shafts journaled in the same plane, disks carried at the ends of the shafts and spaced apart, one of said disks being of greater diameter than the other, a shaft journaled transversely between the disks, a disk carried rigidly by the transverse shaft and engaging the larger disk adjacent its periphery, and a disk carried by and longitudinally movable upon the transverse shaft, such movement being diametrically upon and across the center of the smaller disk.

2. In a transmission mechanism, shafts mounted in the same plane, one of which is positively driven, disks carried at the extremities of the shafts and spaced apart, a shaft journaled transversely between the disks, a disk carried rigidly by the shaft in engagement with one of the first mentioned disks and a disk slidable upon the transverse shaft between and in engagement with the other of said first mentioned disks.

3. In a transmission gear, spaced disks, a shaft journaled between the disks, a disk carried rigidly by the shaft engaging one of the first mentioned disks and a disk slidable upon the shaft between and engaging the other of said first mentioned disks.

1,013,738. STUDDING FOR PLASTER-BOARDS OR THE LIKE. HARRY H. BURSON, Chicago, Ill., assignor to Burson Bros., Chicago, Ill., a Copartnership. Filed Dec. 5, 1910. Serial No. 595,676.

1. A studding of the class described, formed of a piece of metal bent to provide a shell-like structure cross-shaped in section and consisting of wings, the juncture of the wings providing crotches in which the ends of the plaster board rest, one set of wings being rectangular in cross section, and the other set of wings being triangular in cross sec-

tion, the rectangular wings being located between the triangular wings, and means for securing the ends of the plaster board in place upon the studding prior to the application of the plaster thereto, the body of the studding being provided with openings to permit of the ingress of plaster thereinto, substantially as described.

2. A studding of the class described, formed of metal bent to provide a shell-like structure cross-shaped in section having oppositely extending wings, the wings coöperating to provide crotches at their juncture in which the ends of the plaster board rest, and tines struck from the body portion of one set of wings, adapted to secure the ends of the plaster board in position prior to the application of the plaster thereto, substantially as described.

3. A studding of the class described, formed of metal bent to provide a shell-like structure cross-shaped in section having oppositely extending wings, the juncture of the wings providing crotches in which the ends of the plaster board rest, one set of wings being rectangular in cross section, and the other set of wings being triangular in cross section, the rectangular wings being located intermediate the triangular wings, and tines struck from the body portion of one set of wings, adapted to secure the ends of the plaster board in position upon the studding prior to the application of the plaster thereto, substantially as described.

4. A studding of the class described, formed of metal bent to provide a shell-like structure cross-shaped in section having oppositely extending wings, the wings coöperating to provide crotches at their juncture in which the ends of the plaster board rest, one set of oppositely disposed wings projecting beyond the ends of the plaster board, and members carried by the body of said set of wings projecting outwardly therefrom and serving to secure the ends of the plaster board in place prior to the application of the plaster, substantially as described.

5. A studding of the class described, formed of metal bent to provide a shell-like structure cross-shaped in section having oppositely extending wings, said wings coöperating to provide crotches at their juncture in which the ends of the plaster board rest, one set of oppositely disposed wings projecting beyond the ends of the plaster board, and members carried by said oppositely disposed wings and projecting outwardly therefrom and serving to secure the ends of the plaster board in place prior to the application of the plaster, the body of the studding being provided with openings to permit the ingress of the plaster thereinto, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,739. SHOE. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 14, 1908. Serial No. 452,836.

1. A shoe, comprising an upper, a single sole and a heel, said upper being lasted in upon the heel end only of said sole and turned out and stitched down along the edge of the remainder of said sole, said heel being attached to the heel end of said sole, and said sole being provided upon opposite sides with shoulders against which abut the forward ends of the lasted-in portion of the upper.

2. A shoe, comprising an upper and a counter, a single sole provided with shoulders at the forward ends of said counter and a heel, said upper and counter being lasted in upon the heel end only of said sole said upper being turned out and stitched down along the edge of the remainder of said sole and being slit in from its lower edge where the joint between the inturned and outturned portions occurs, and said heel being attached to the heel end of said sole.

3. A shoe, comprising an upper and a single sole split in from its rear end, said upper being lasted in upon the upper tongue of said split portion of the sole and turned out and stitched down along the remainder of the edge of said sole and said sole being provided with shoulders at the forward ends of the upper tongue of said split portion against which the forward ends of the inturned portions of the upper abut.

4. A shoe comprising an upper, a single sole and a heel, the sole being split in from its rear end and provided with shoulders at the forward end of the upper tongue of the split portion; said upper being lasted in upon the upper tongue of the heel portion and turned out and stitched down along the edge of the remainder of the sole and being slit in from its lower edge where the joints between the inturned and outturned portions occur, said heel being attached to both tongues of the heel portion of the sole.

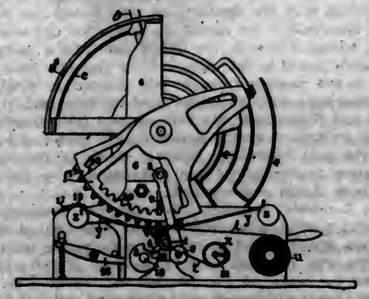
1,013,740. LIFTING MECHANISM FOR GANG-PLOWS. THOMAS J. CHANDONNET, Waubun, Minn. Filed July 21, 1911. Serial No. 639,733.

1. A plow, a supporting and gaging wheel, and a fluid pressure apparatus mounted on the frame of the plow for positioning the wheel with relation to the working end of the plow.

2. A gang plow comprising a plurality of plows, a fluid pressure lifting device mounted on the plows, and means for operating said device to lift the plows independently of each other.

3. A gang plow, comprising a plurality of plows arranged in pairs, each pair carrying a fluid pressure lifting device, a main conductor for conducting fluid under pressure from the frame of the gang of plows to the lifting devices, and means for controlling the fluid pressure supply of a pair of plows independent of adjacent pairs of plows.

1,013,741. CASH-REGISTER OR CHECK-TILL. FRANCIS AUGUSTE MARIE CHAPON, Paris, France, assignor to Société Francis Chapon & Cie., Paris, France. Filed Apr. 22, 1909. Serial No. 491,617.



1. A check till or cash registering apparatus for simultaneously printing a ticket and a checking band or strip, comprising a plurality of members, each consisting of two

sectors having characters on their outer faces and teeth on their inner faces, a bar connecting the sectors and two indicating segments carried by the bar, one for the employee and the other for the customer, a vertically movable transverse bar for engaging the teeth of the sectors to lock them in position, movable guides for forcing the band of tickets and the checking band against the printing surface of the sectors, a cutter for separating the tickets, a shaft provided with an operating handle, and means for operating the said bar, guides and cutter from the shaft.

2. A check till or cash registering apparatus for simultaneously printing a ticket and a checking band or strip, comprising a plurality of members, each consisting of two spaced and connected printing sectors having teeth on their inner faces, and two indicating segments carried by the sectors, one for the employee and the other for the customer, a vertically movable transverse bar for engaging the teeth of the sectors to lock them in position, vertically movable supports for the bands for pressing the bands against the sectors, a cutter for separating the tickets, a shaft provided with a handle, means for operating the locking bar from said shaft, a second shaft geared with the first shaft, and means for operating the supports and cutter from the second shaft.

3. A check till or cash registering apparatus for simultaneously printing a ticket and a checking strip, comprising a plurality of members each consisting of two spaced printing sectors having teeth on their inner faces and two indicating segments carried by the sectors, one for the employee and the other for the customer, a vertically movable bar for engaging the teeth of the sectors to lock them in position, means for pressing the bands against the sectors, a cutter for separating the tickets, a shaft provided with a handle, means for operating the locking bar from the shaft, a second shaft geared with the first shaft, means for operating the cutter and the band pressing means from the second shaft, a spring stop for the handle of said shaft, and a cam on the second shaft for operating the spring stop to permit the handle to be turned.

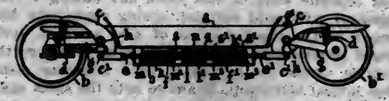
4. In a check till or cash registering apparatus for simultaneously printing a ticket and a checking band or strip, two groups of movable printing sectors having teeth on their inner faces, a locking bar for engaging the teeth of the sectors, a winding drum for one of the bands to be printed upon, vertically movable supports for pressing the bands against the printing surfaces, a cutter for severing one of the bands, a shaft provided with a handle, cams on the shaft, frames carrying the locking bar and in which the cams are mounted, means for operating the winding drum from one of the said frames, a second shaft geared with the first shaft, and means for operating the movable supports and cutter from the second shaft.

5. A check till or cash registering apparatus for simultaneously printing a ticket and a checking band or strip, comprising indicating segments one for the employee and the other for the customer, two groups of printing sectors carrying the indicating segments, a type holder for each group of sectors and in front of the same, inking ribbons for the sectors and type holder, spools on which the inking ribbons are wound, a winding drum for one of the bands to be printed upon, movable supports for the said bands, a cutter, a shaft provided with a handle, cams on the shaft, frames in which the cams are mounted, a locking bar for the sectors carried by the frames, means for operating the winding drum from one of the said frames, a second shaft geared with the first shaft, a printing cylinder on the shaft, an inking device for the cylinder, and means for operating the movable supports, ribbon carrying spools and cutter from the second shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,013,742. SPRING SUSPENSION FOR VEHICLES. JOHN JOSEPH CHARLEY, Malvern, Victoria, Australia. Filed May 31, 1911. Serial No. 630,288.

1. In a spring suspension for vehicles, transverse shafts each having pivoted thereon at each side a rocker and a wheel carrying arm, a spring or cushion between each rocker and arm whereby a shock to a wheel is transmitted to its rocker, and an intermediate spring connection between the front and rear rockers to mitigate and transmit a shock to restore the mechanism to its normal position, substantially as described.



2. In a spring suspension for vehicles, a frame, transverse shafts for supporting the front and rear ends of the frame, arms pivotally connected to the shafts at each side of the frame, wheels carried by the arms, rockers pivoted on the shafts at each side of the frame, a spring for transmitting shocks on each wheel and the adjacent rocker and resilient means for connecting the rockers on the same side of the frame tending to keep the frame in normal position and further mitigate the shocks on the wheels, substantially as described.

3. In a spring suspension for vehicles, a frame, transverse shafts for supporting the frame, arms pivotally connected to the shafts at each side of the frame, wheels carried by the arms, rockers pivoted on the shafts at each side of the frame, a spring between each rocker and arm for transmitting a shock to a wheel to its rocker, a rod pivotally connected to each rocker, a pressure plate at the end of each rod, a buffer plate slidably mounted on each rod, a spring interposed between each pressure plate and buffer plate, means connecting the buffer plates together, and means for further relieving shocks on the buffer plates, substantially as described.

4. In a spring suspension for vehicles, a frame, transverse shafts for supporting the frame, arms pivotally connected to the shafts at each side of the frame, wheels carried by the arms, rockers pivoted on the shafts at each side of the frame, a spring between each rocker and arm for transmitting a shock to a wheel to its rocker, a rod pivotally connected to each rocker, a pressure plate at the end of each rod, a buffer plate slidably mounted on each rod, a spring interposed between each pressure plate and buffer plate, a diaphragm arranged intermediate the pressure plates, bolts connecting the diaphragm with the buffer plates, a fixed stop plate at each side of the diaphragm, and a spring interposed between the diaphragm and each stop plate, substantially as described.

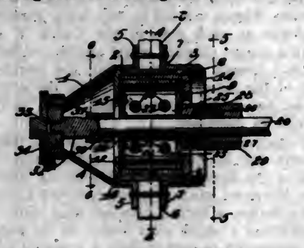
5. In a spring suspension for vehicles, a frame, transverse shafts for supporting the frame, arms pivotally connected to the shafts at each side of the frame, wheels carried by the arms, rockers pivoted on the shafts at each side of the frame, a spring between each rocker and arm for transmitting a shock to a wheel to its rocker, a rod pivotally connected to each rocker, a pressure plate at the end of each rod, a buffer plate slidably mounted on each rod, a spring interposed between each pressure plate and buffer plate, a diaphragm arranged intermediate the pressure plates, bolts connecting the diaphragm with the buffer plates, a fixed stop plate at each side of the diaphragm, a spring interposed between the diaphragm and each stop plate, and a spring arranged between the diaphragm and the inner ends of each said rod, substantially as described.

1,013,743. HUB FOR VEHICLE-WHEELS. CHRISTIAN CHRISTIANSEN, Kenmare, N. D. Filed Jan. 16, 1911. Serial No. 602,958.

1. A hub for vehicle wheels comprising an outer casing, an axle receiving member arranged in said casing, a journal block slidably mounted in said member to receive the end of the axle, springs engaged with said block, whereby said block and the axle are supported, adjustable means to hold said axle receiving member against lateral movement, means to hold said axle receiving member against rotation, and means to loosely connect the outer end of the axle with the outer casing of the hub, whereby said axle and casing are revolved together.

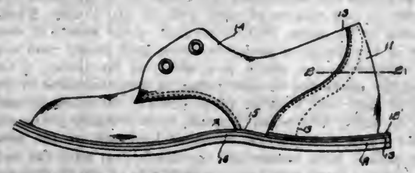
2. A hub for vehicle wheels comprising an outer casing, an axle receiving member, said member comprising a sleeve,

a head arranged therein, said head comprising two hollow substantially semi-circular sections, a journal block slidably mounted between said head sections and adapted to receive the end of the axle, laterally projecting lugs formed on the opposite sides of said block and having a sliding engagement with said sections, spring supporting blocks arranged in the lower portion of said sections, springs arranged between said lugs and the blocks in said sections, adjustable means to hold said axle receiving member against lateral movement, means to hold the same against rotation, and means to loosely connect the outer end of the axle with the outer casing of the hub whereby said axle and casing will revolve together.



3. A hub for vehicle wheels comprising a casing consisting of a central and end portions, said end portions engaging said central portion and having formed on their inner ends annular radially projecting flanges adapted to form an annular spoke receiving channel, an annular inwardly extending flange formed on the outer end of said central portion of the casing, an axle receiving member arranged in said casing and engaging said flange, an adjusting ring having a screw threaded engagement with the outer end of said central portion of the casing whereby said axle receiving member is held against lateral movement, set screws to lock said ring in its adjusted position, and a yieldingly supported journal block slidably mounted in said axle receiving member.

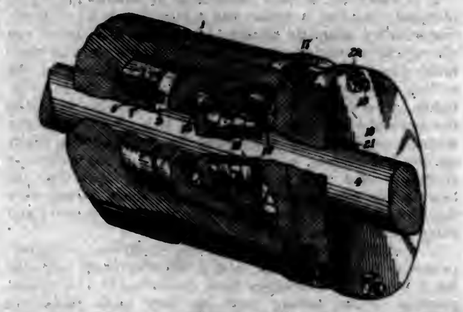
1,013,744. SHOE. GEORGE H. CLARK, Allston, Mass., assignor of one-half to himself, and one-half to Albert W. Griffith, Boston, Mass. Filed Jan. 30, 1911. Serial No. 605,347.



1. A shoe comprising a heel counter having the marginal portion of its outer face at the bottom thereof skived inwardly at an inclination to provide a shoulder positioned inwardly of the lower edge of the counter, that portion of the counter below said shoulder bent outwardly to provide a welt, the lower edge of said welt having its original thickness, a foxing piece having its lower portion bent outwardly to provide a welt, the central portion of said foxing piece secured to the central portion of said counter, an upper provided with a welt, the heel portions of said upper extending between the counter and the foxing piece and with the welt of the upper positioned between the welt of the foxing piece and the welt of the counter, and means for securing the welts together.

2. A shoe comprising a counter piece having the lower marginal portion thereof bent outwardly to provide a welt, a foxing piece positioned against the outer face of the counter piece and having the lower marginal portion bent outwardly to provide a welt, the intermediate portion of said foxing piece being secured to the intermediate portion of said counter piece, and an upper provided with a welt, the heel portions of said upper extending between said counter piece and said foxing piece and the welt at the heel portions of said upper extending between the welt of the counter piece and the welt of the foxing piece, means for securing the upper and the said pieces together, and means for securing the said welts together.

1,013,745. PACKING. JOSEPH V. CLARK, Steubenville, Ohio. Filed Apr. 27, 1911. Serial No. 623,654.



1. A packing comprising a stuffing box, an annulus mounted against the inner end of said box and formed in one face with a circumferentially-extending series of sockets, springs mounted in and projecting from said sockets, an apertured disk positioned against the projecting ends of said spring, a cylindrical adjusting member positioned against said disk and formed with a conical-shaped recess, a sectional truncated cone-shaped pressure member mounted in said recess and provided with an annular recess, sectional packing rings snugly fitting said annular recess, a gland extending in the stuffing box and engaging the outer packing ring and said pressure member for maintaining the ring and said member in position, and means engaging said gland and adjustably connected to said stuffing box for securing the gland in position whereby the packing rings are maintained in said annular recess and the pressure member held from outward movement with respect to the adjusting member.

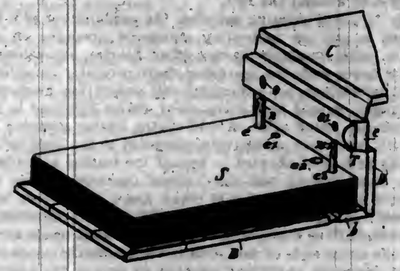
2. A packing comprising a stuffing box, a cushion face plate arranged therein, a cylindrical adjusting member positioned against the face plate and provided with a conical-shaped recess, a frusto conical-shaped pressure member extending in said recess to a point removed from the inner end of said recess and provided with an annular recess, a packing completely filling said annular recess, a packing gland extending in said stuffing box and engaging said packing and said pressure member for maintaining the latter in an adjusting member and the packing in said annular recess, and means for securing the packing gland in position.

1,013,746. LOOSE-LEAF BINDER AND LEAF THEREFOR. WILLIAM H. COOLEY, Brockport, N. Y. Filed May 6, 1911. Serial No. 625,574.

1. In a loose leaf binder in combination with the frame members, a plurality of impaling posts for engaging and holding the leaves, two of said impaling posts correspondingly positioned but differing in size whereby a leaf having openings corresponding in size and position to the posts is insertible over the posts in the binder with only one side thereof uppermost.

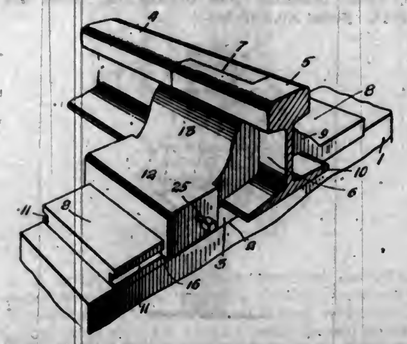
2. In a loose leaf binder in combination with the frame members, a plurality of impaling posts for engaging and holding the leaves, two of said impaling posts correspondingly positioned but differing in size and leaves for the binder having openings therein corresponding in size and position to the posts and insertible over the posts in the binder with only one and the same and corresponding side thereof uppermost.

3. A leaf for a loose leaf binder having a plurality of openings therein for receiving posts in the binder corresponding in position and size, at least two of said openings correspondingly positioned but differing in size whereby said leaf is insertible over the posts in the binder



with only one side thereof uppermost and whereby also a plurality of such leaves are insertible over the posts in the binder with only one and the same and corresponding side thereof uppermost.

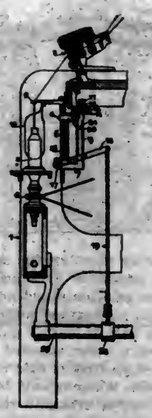
1,013,747. RAIL CONNECTION. WILLIAM H. CRIPPS, New Bethlehem, Pa. Filed Oct. 6, 1911. Serial No. 653,286.



1. In a rail connection, the combination with a tie, and rails adapted to have the ends thereof supported by said tie, of a chair secured to the top of said tie and supporting the ends of said rails, a splice bar formed integral with the outer end of said chair and bracing the outer sides of said rails, an inner fastener slidably mounted upon the inner end of said chair, a splice bar carried thereby and bracing the inner sides of said rails, a movable block arranged within said inner fastener and adapted to engage in said chair for locking said fastener relatively to said chair, and means including a shaft and a spring arranged within said inner fastener for moving said block whereby said inner fastener can be shifted off of said chair.

2. In a rail connection, the combination with a tie, and rails adapted to have the ends thereof supported by said tie, of a chair secured to the top of said tie, an outer splice bar carried by said chair and bracing the outer sides of said rails, an inner fastener slidably mounted upon the inner end of said chair, a splice bar carried thereby and bracing the inner sides of said rails, pins carried by said bar and extending through said rails into the outer splice bar, a spring arranged in said inner fastener, a block supported by said spring and extending into said chair for locking said inner fastener relatively to said chair, and means including a shaft and cam arranged below said spring and operable from one side of said inner fastener for elevating said block to release said inner fastener.

1,013,748. SPINNING-MACHINE. FREDERICK SLOCUM CULVER, Taunton, Mass. Filed Mar. 2, 1911. Serial No. 611,855.



1. In a spinning machine, the combination of a guide bracket, a lifter rod movable therein, a stop member attached to said rod for coaction with said bracket to determine the normal position of the rod, a flexible element connected at one end directly to said member, a pulley carried by said bracket and having said element trained thereover, a builder motion, and connections between the other end of said element and said builder motion for reciprocating said rod.

2. In a spinning machine, the combination of a guide bracket, a lifter rod movable therein, a member attached to said rod, a flexible element connected at one end directly to said member, a rocking lever to which the other end of said element is connected, a builder motion, and connections between said builder motion and said lever for rocking the latter.

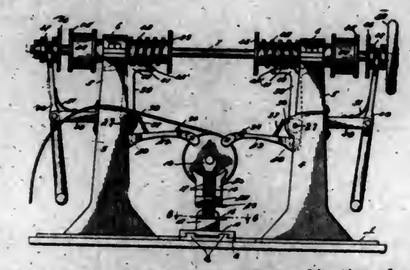
3. In a spinning machine, the combination of a bracket provided with a pair of guide arms, a reciprocatory lifter rod movable in said arms, a member adjustable longitudinally of said rod and arranged to contact with one of said arms, for limiting the movement of said rod in one direction, a pulley carried by the other arm, a flexible element trained over said pulley and secured at one end to said member, a builder motion, and connections between the builder motion and the opposite end of said element.

4. In a spinning machine, the combination of a bracket provided with a pair of guide arms, a reciprocatory lifter rod movable in said arms, a member attached to said rod and arranged to contact with one of said arms for limiting the movement of said rod in one direction, a pulley carried by the other arm, a flexible element trained over said pulley and secured at one end to said member, a rocking member having an arm to which the other end of said element is connected, and means for rocking the second-named member.

5. In a spinning machine, the combination of a bracket provided with a pair of guide arms, a reciprocatory lifter rod movable in said arms, a member attached to said rod and arranged to contact with one of said arms for limiting the movement of said rod in one direction, a pulley carried by the other arm, a flexible element trained over said pulley and secured at one end to said member, a rocking member having an arm to which the other end of said element is connected, a builder motion, and connections between the builder motion and the second-named member for rocking the latter.

[Claim 6 not printed in the Gazette.]

1,013,749. MACHINE FOR COVERING ROLLS WITH LEATHER. JOHN J. CUNNINGHAM, Manchester, N. H. Filed Sept. 22, 1910. Serial No. 583,290.



1. In a roll covering machine, the combination of a base plate, supporting standards arranged thereon, carriages slidably mounted on said plate and adjustable toward and from each other, roll supporting posts adjustably mounted in said carriages, a pair of leather guiding lugs adjustable toward and from each other adapted to engage the opposite sides of a roll supported by said posts, leather stretching levers, and means whereby said levers are operable to stretch a strip of leather around a roll.

2. In a roll covering machine, the combination of a base plate, a pair of standards arranged thereon and provided on their upper ends with offset bearing extensions, an operating shaft revolubly mounted in said extension, carriages mounted on the base and adjustable toward and from each other, roll supporting posts adjustably mounted on said carriages, leather guiding lugs adjustably supported on one of said posts and adapted to engage the opposite sides of a roll supported on the posts thereby holding and guiding the leather applied to the roll, a pair of stretching levers having adjustable guide lugs and a leather-gripping member arranged on their outer ends, and means to operatively connect said levers to said operating shaft whereby the levers are actuated to stretch the leather around the roll.

3. In a roll covering machine, the combination of a base plate, a pair of standards arranged thereon, roll supporting carriages slidably mounted on the base plate, means to adjust the carriages to support rolls of different widths, a pair of roll supporting posts adjustably mounted on the carriages to support rolls of different diameters, means to secure the posts in their adjusted positions, a pair of stretching levers, each having on one side of its outer end a fixed guide lug, a toothed gripping block having a sliding engagement with the outer end of the lever, an adjustable guide lug secured to one end of the block and adapted to co-act with the rigid guide lug on the opposite side of the lever whereby a strip of leather is guided when applied to the roll, means to hold the block and adjustable lug in their adjusted positions, and an operating mechanism connected with said levers but in a different plane, whereby the levers are actuated to stretch a strip of leather around a roll without cutting the leather before the same is stretched.

4. In a machine for covering rolls, the combination of a base plate, supporting standards secured thereto, roll supporting carriages comprising blocks mounted on the base plate having operatively threaded sockets on their inner sides, an adjusting bolt having its opposite ends engaged by said sockets whereby the carriages are adjusted to accommodate rolls of different lengths, roll supporting posts having a sliding engagement with the blocks and having a series of notches, latches pivotally mounted on the blocks and adapted to engage the notches whereby the bolts are supported at different elevations, a slotted guide supporting plate adjustably mounted on one of the posts, a latch pivoted on the supporting plate and adapted to engage the notches in the post whereby the plate is adjustably secured on the post, guide lugs adjustably mounted in the slot of the supporting plate, a stop arranged on the base plate to limit the movement of the carriages, an adjustable upright arranged on the stop to support the outer end of the supporting plate, a pair of leather stretching levers, and means arranged on the standards to operatively engage the levers with the leather whereby the latter is stretched around the roll.

5. In a roll covering machine, the combination of a base plate, a pair of supporting standards arranged on said plate, said standards having offset bearing extensions on their upper ends, an operating shaft revolubly mounted in said extensions, an adjustable roll supporting mechanism arranged on said base plate, pivot shafts arranged in said standards, crank arms on said shafts, leather gripping and stretching levers operatively connected to the ends of said crank arms and adapted to engage the leather and stretch the same around the rolls, crank operating levers connected to the hubs of said crank arms, said levers being offset from the arms and adapted to work in the offset extensions of the standards, toothed segmental heads formed on the upper ends of said levers, worms fixedly mounted on said operating shaft and adapted to engage the teeth on said heads whereby when the shaft is revolved in the proper direction said levers and crank arms will be actuated to engage the stretching levers with the leather to stretch the latter around the roll, and means whereby said operating shaft is driven.

[Claims 6 to 9 not printed in the Gazette.]

1,013,750. ATTACHMENT FOR CANS. THEODORE CHARLES DOREDANT, New Orleans, La. Filed Apr. 4, 1911. Serial No. 618,783.

1. In an attachment for cans, a base plate on which the bottom of the can is adapted to be seated, having a stop for centering the can in the attachment, a handle and a support projecting upwardly from said plate, the handle being extended at its upper end to overhang the base plate, a depending tongue carried at the end of the extended portion of the handle, and a lever connected with said tongue and support for clamping the can to the base plate.

2. In an attachment for cans, a base plate on which the bottom of the can is adapted to be seated, having a stop for centering the can in the attachment, a handle and a support projecting upwardly from said plate, the handle being extended at its upper end to overhang the base-plate, a depending tongue carried at the end of the extended portion of the handle, a lever connected with said tongue and support for clamping the can to the base plate, and a catch formed on said lever for locking it to said support.

3. In an attachment for cans, a base plate, a handle connected with the base plate, having the upper end thereof extended to overhang said plate, a spout carried by the extended portion of the handle, having a cutting edge, and means for forcing the extended portion of the handle toward the base plate, whereby the cutting edge of the spout is forced through the top of the can for the purpose described.

4. In an attachment for cans, a base plate, a handle connected with the base plate having the upper portion thereof extended to overhang said plate, a spout carried on the extended portion of the handle, having an extension provided with a cutting edge, a gasket surrounding said extension, and means for forcing the extended portion of the handle toward the base plate, whereby the cutting edge forms an opening in the top of the can and the gasket is pressed to the can about said opening for the purpose described.

5. In an attachment for cans, a base plate, a handle attached to the base plate, having the upper portion thereof extending to overhang said plate, a spout carried on the extended portion of the handle, means for forcing the extended portion of the handle in the direction of the plate to clamp the can therebetween, and a displaceable cap carried by the spout.

[Claims 6 to 8 not printed in the Gazette.]

1,013,751. BALCONY FOR FIRE-LADDERS. THOMAS FRANCIS DOUGHERTY, New York, N. Y. Filed Oct. 10, 1911. Serial No. 653,795.

1. A device of the character described comprising a balcony provided with slideways, a ladder for supporting said balcony, and brackets mounted upon said ladder and provided with arms for slidably engaging said slideways.

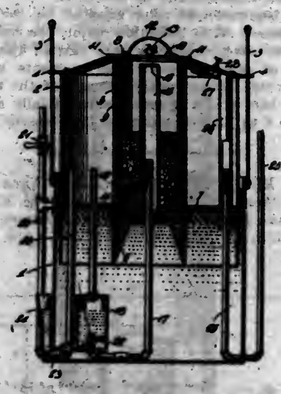
2. A device of the character described comprising a balcony provided centrally with an opening, a trap door for closing said opening, a ladder for supporting said balcony and brackets mounted upon said ladder and disposed upon opposite sides of said opening, said brackets being provided with arms for engaging said balcony in order to support the same.

3. A device of the character described comprising a ladder, brackets mounted thereupon and provided with arms and also with braces, said arms and braces being integral with said brackets, and a balcony provided with slideways for receiving said arms in order that said balcony may be detachably mounted upon said ladder.

4. A device of the character described comprising a ladder, a balcony separate from said ladder and adapted to reach in a substantially horizontal direction from one part of a building to another part thereof, and brackets mounted upon said ladder and engaging said balcony for the purpose of supporting the ladder.

5. A device of the character described comprising a ladder, brackets mounted thereupon and provided with arms, a balcony having a length greater than its width, said balcony being provided with slideways extending crosswise of its length and further provided with an opening extending substantially from one of said slideways to another, said slideways being adapted to receive said arms of said brackets in order to enable said balcony to be secured upon said ladder, and a door connected with said balcony and adapted for closing said opening.

1,013,752. ACETYLENE-GAS GENERATOR. ERNEST W. DUNHAM, Topeka, Kans. Filed Jan. 30, 1911. Serial No. 606,510.



A gas apparatus comprising a gasometer, a movable bell forming a part of the latter and adapted to receive the gas generated in the gasometer, a tubular casing secured to and depending from the top of the bell, a carbid holder removably located in said casing, a discharge tube projecting from the bottom of the carbid holder, a purifier located in the bottom of the gasometer and immersed in the water contained therein, said purifier having an inclined bottom, an inclined tube leading therefrom and arranged on a line with the said bottom, a spout located on the outside of the gasometer and in communication with the pipe leading from the purifier, a pipe fixedly mounted in the gasometer and having an upstanding portion adapted for telescoping engagement with the tube of the carbid holder, the opposite end of the pipe entering the bottom of the purifier, a pipe leading from the top of the latter and extending above the water contained within the gasometer, and a relief pipe for the apparatus thus constructed.

1,013,753. SQUIRREL-CAGE ROTOR FOR ELECTRIC MOTORS. GANO DUNN, East Orange, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Apr. 12, 1910. Serial No. 554,941.

1. In a squirrel-cage rotor adapted for use as the secondary element of an induction motor, the combination of a laminated core, conductor bars carried thereby, and a plurality of oblique overlapping segments, each having openings which tightly engage the ends of the conductor bars, substantially as described.

2. In a squirrel-cage rotor adapted for use as the secondary element of an induction motor, the combination of a laminated core, conductor bars carried thereby, and a plurality of oblique segments each having openings which tightly engage the ends of the conductor bars and overlapping with different amounts of overlap, substantially as described.

3. In a squirrel-cage rotor adapted for use as the secondary element of an induction motor, the combination of a laminated core, conductor bars carried thereby, and a plurality of like oblique segments each having openings which tightly engage the ends of the conductor bars and overlapping with different amounts of overlap, substantially as described.

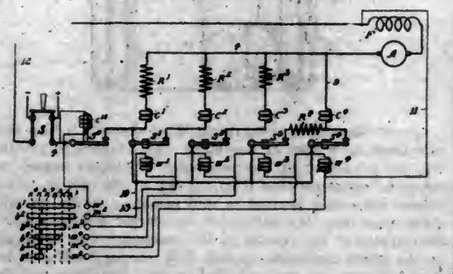
4. In a squirrel-cage rotor adapted for use as the secondary element of an induction motor, the combination of

a laminated core, conductor bars carried thereby, and a plurality of oblique overlapping spaced segments each having openings which tightly engage the ends of the conductor bars, substantially as described.

5. In a squirrel-cage rotor adapted for use as the secondary element of an induction motor, the combination of a laminated core, conductor bars carried thereby, and a plurality of oblique overlapping segments each having openings which tightly engage the ends of the intermediate conductor bars which it spans, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,013,754. ELECTRIC CONTROLLER. ARTHUR C. EASTWOOD, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 22, 1910. Serial No. 583,301.



1. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each having an operating winding adapted to be connected in the controlled circuit, and each having a locking winding arranged to prevent the operation of the switch with which it is associated.

2. In an electric controller, a controlled circuit, a series of magnetically-operated switches, the winding of each switch arranged to be included in the controlled circuit by the closing of a preceding switch of the said series, and a locking winding associated with each switch and arranged to prevent the closure of the switch with which it is associated.

3. In an electric controller, a controlled circuit, a series of magnetically-operated switches, the winding of each switch arranged to be included in the controlled circuit by the closing of a preceding switch of the said series, a locking winding arranged to prevent each of said switches from closing, and a switch mechanism arranged to control each locking winding.

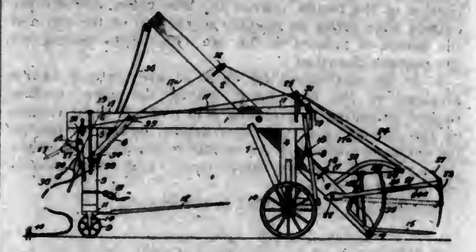
4. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each of said switches having its operating winding arranged to be included in the controlled circuit by the closing of a preceding switch, a locking winding arranged to prevent the closing of the said switches, and a switch mechanism arranged to de-energize each locking winding.

5. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each of said switches having its operating winding arranged to be included in the controlled circuit by the closing of a preceding switch, a locking winding arranged to prevent the closing of the said switches, and a master-switch to successively de-energize the said locking windings.

[Claims 6 to 13 not printed in the Gazette.]

1,013,755. MANURE-LOADER. CARL ELSASSER, Wakefield, Kans. Filed Aug. 8, 1911. Serial No. 642,984.

1. An improved apparatus for the purpose specified, comprising a wheeled frame, a lever pivoted therein and adapted to project at one end of the same, a fork pivoted to the projecting end of the lever and on a horizontal axis, and means under control of the operator for adjusting and tilting the fork, and means for tilting the lever, substantially as described.



2. An improved apparatus, comprising a wheeled frame, a lever pivoted therein and adapted to project at the end of the same, means for tilting the lever in a vertical frame, a fork pivoted to the projecting end of the lever, and means for adjusting it for supporting a load and releasing the same, and a load-detent consisting of a bar pivoted to the lever and provided at its free end with teeth to take into the material supported by the fork, and means for adjusting such detent, substantially as described.

3. An apparatus for the purpose specified, comprising a wheeled frame, a lever pivoted therein and projecting therefrom, means for tilting the lever vertically as required for raising and discharging a load, a fork adapted to take up material, and means for adjusting it as required, a load-detent pivoted to the lever and arranged above the fork, and comprising a frame provided at its free end with teeth for penetrating the material taken up by the fork, ratchet bars pivotally attached to the lever, and pawls on the detent which are adapted to engage the same for holding the detent when lowered, and means connected with the detent for raising it and also operating the ratchet pawls, substantially as described.

4. An improved apparatus, comprising a wheeled frame arranged vertically and comprising duplicate parts which are separated by a narrow space, a lever pivoted in such space adjacent to the rear end of the frame and projecting from the latter, a rope attached to the front end of the lever for depressing it and thus raising a load at the opposite end, a fork pivotally connected with the front end of the lever and adapted to swing in a vertical plane as required to adjust it for taking up, supporting and releasing a load.

5. A load detent, comprising a U-shaped frame pivoted to the lever above the fork and provided at its free end with teeth adapted to engage material and thus hold a load on the fork, ratchet bars attached to the lever and working in guides on the detent, spring pawls adapted to engage such ratchet bars, a crank lever pivoted on the detent, and shafts connecting it with the pawls and tension rope also attached to it, and a lever pivoted on the front end of the frame to which such rope is attached, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,013,756. MEAT-SLICING-MACHINE SUPPORT. FENWICK D. FADER, Vancouver, British Columbia, Canada. Filed Oct. 3, 1911. Serial No. 652,633.

1. In a meat slicing machine a reciprocating carriage, a slice feed carriage movable at right angles to the movement of the reciprocating carriage, a raised support along the edge of the reciprocating carriage adjacent to the cutting knife said raised support projecting upward approximately to the level of the top of the slice feed carriage.

2. In a meat slicing machine, a reciprocating carriage, a slice feed carriage slidable on said reciprocating carriage and at right angles thereto, a meat support along the edge of the reciprocating carriage adjacent to the cutting knife said support projecting upward to the approximate level of the top of the slice feed carriage and having the end farther from the knife bent upward.

3. In a meat slicing machine, a reciprocating carriage, a slice feed carriage on which the meat is secured the movement of which is normal to that of the reciprocating carriage, a meat support along the edge of the reciprocating carriage adjacent to the cutting knife said support projecting up approximately to the level of the slice feed and having the corner farther from the knife rounded.

1,013,757. GARMENT-POCKET. VICTOR FINSTEN, Toronto, Ontario, Canada. Filed July 3, 1911. Serial No. 636,683.

1. The combination with a garment pocket of the kind described having a partition extending up to the pocket slot, of a flap joined to the upper edge of said partition and having a slot adjacent to said joining, a tab secured within the pocket and adapted to extend through said flap and pocket slots to close the pockets.

2. In a garment pocket, the combination with a garment having a pocket slot therein, of a pocket member formed of three plies of material having the front and back ply secured to the inner side of the garment above and below the pocket slot and the center web terminating opposite the pocket slot, a pocket flap secured to the upper edge of said center web and from the sides inwardly leaving a central opening between said flap and said web, and a tab secured within the pocket above the pocket slot adapted to extend through the opening between said center web and flap.

3. In a garment pocket, the combination with a garment having a pocket slot therein, of a pocket member formed of three plys of material having the front and back ply secured to the inner side of the garment above and below the pocket slot and the center web terminating opposite the pocket slot, a pocket flap secured to the upper edge of said center web and from the sides inwardly leaving a central opening between said flap and said web, a tab secured within the pocket above the pocket slot adapted to extend through the opening between said center web and flap, said tab having a button hole therein, and a button secured to the outer face of the garment below the pocket slot.

1,013,758. METHOD OF AND APPARATUS FOR APPLYING PROTECTING-COVERING TO PILES. JOHN P. FOX, Tampa, Fla., and HENRY L. HATCHER, Savannah, Ga.; said Hatcher assignor to said Fox. Filed Aug. 9, 1911. Serial No. 643,222.

1. The method of applying a protecting covering to piles consisting in inclosing a space surrounding the pile; pumping out the bed of said pile within said space; and delivering loads of the protecting material *en masse* into said space and allowing the same to solidify, substantially as described.

2. The method of applying a protecting covering to piles consisting in inclosing a space surrounding the pile; pumping out the bed of said pile within said space; and lowering loads of the protecting material to the bottom of said space and releasing said loads *en masse* and allowing the same to solidify, substantially as described.

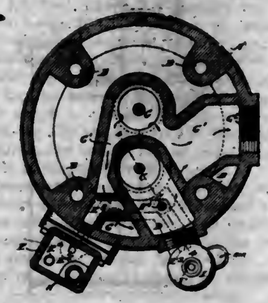
3. The method of applying a protecting covering to piles consisting in inclosing a water-tight space surrounding the pile; pumping out the bed of said pile and water within said space; and lowering loads of the protecting material into said space and releasing said loads *en masse* and allowing the same to solidify, substantially as described.

4. In an apparatus for applying protecting coverings to piles, the combination of a sectional casing adapted to surround the pile and be driven into the bed thereof; means for pumping out the bed of the pile within said casing; and means for conveying loads of the protecting material to the bottom of the space within said casing and releasing said loads *en masse*, substantially as described.

5. In an apparatus for applying protecting coverings to piles, the combination of a casing adapted to surround the pile comprising a plurality of superposed sections, each of said sections provided with beveled collars at the ends theerof; bands having wedge shaped clamps adapted to engage said beveled collars and hold the sections in assembled relation to provide a water-tight space; means for pumping out the bed of the pile within said space; and means for conveying loads of the protecting material to the bottom of the space within said casing and releasing said loads in solid masses, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,759. INTERNAL-COMBUSTION ENGINE. WILLIAM F. FREIDAG, Freeport, Ill., assignor to Stover Engine Works, Freeport, Ill., a Corporation of Illinois. Filed July 9, 1910. Serial No. 571,246.



1. The combination with a cylinder head provided with an internal exhaust chamber, with a mixing chamber within the exhaust chamber, and with a heavy oil conduit leading from without the head through the exhaust chamber into the mixing chamber, a valve controlling the delivery end of said conduit, means for supplying air to the mixing chamber, and valve controlled means for supplying light hydrocarbon liquid to the mixing chamber.

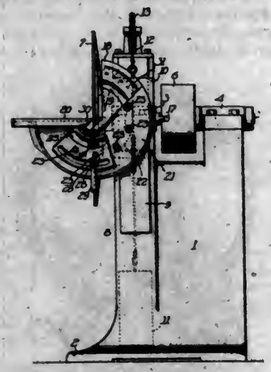
2. The combination with a cylinder head provided with an internal mixing chamber communicating with the external air, with a heavy-oil conduit leading from without the head into said chamber, and with an exhaust chamber adapted to permit exhaust gases to pass over the exterior surfaces of said mixing chamber and conduit before escaping from the head, a hand valve for closing the discharging end of said conduit, a heavy-oil reservoir communicating with the intake end of said conduit and arranged to keep the latter filled, and hand controlled means for supplying light hydrocarbon liquid to said mixing chamber.

3. The combination with a one-piece cylinder head having an internal exhaust chamber, a mixing chamber projecting into the upper part of the exhaust chamber, and a conduit leading from without along the lower part of the exhaust chamber and into said mixing chamber, of a reservoir secured to the head in position to supply heavy oil to said conduit, a hand valve controlling the delivery of oil by said conduit, a gasolene reservoir also carried by the head and arranged for delivering its contents to said mixing chamber, and a hand operated valve controlling such delivery.

4. The combination with a cylinder head having internal exhaust chamber and a mixing chamber within the exhaust chamber, of a constant-level heavy oil reservoir fixed to the head, a conduit leading from said reservoir through said exhaust chamber, at a lower level than that of the liquid in said reservoir, and opening into the mixing chamber, a valve controlling the passage from said mixing chamber to the cylinder, and a valve for closing the discharge end of said conduit.

5. The combination with a one-piece cylinder head having an internal exhaust chamber, a mixing chamber projecting into the upper part of the exhaust chamber and a conduit projecting into the lower part of the exhaust chamber and leading from the exterior of the head through the bottom of the mixing chamber, of a valve controlling the discharge end of the conduit, a heavy-oil reservoir fixed to the head and arranged to keep said conduit filled, a second reservoir for supplying gasolene to said mixing chamber, and a hand valve for controlling the supply of gasolene passing from the second reservoir.

1,013,760. DISK GRINDER. FREDERICK N. GARDNER and FREDERIC E. GARDNER, Beloit, Wis., assignors of one-third to Louis Waldo Thompson, Beloit, Wis. Filed Nov. 18, 1909. Serial No. 528,791.



1. In a disk grinder, the combination of a pedestal, a horizontal shaft rotatably supported by said pedestal, a grinding disk carried by the forward end of said shaft, a vertical guide on the pedestal, said guide extending entirely at one side of the vertical plane of the shaft, said guide being located behind the plane of said grinding disk, a slide adjustably mounted on said guide, a work-table arranged to extend across the face of the disk, a vertical supporting segment rigidly secured to one side face of said slide, the latter extending between the vertical plane of the shaft and the vertical plane of the segment, and a complemental segment carried by one end only of said table and adjustably engaging the first mentioned segment.

2. In a disk grinder, in combination, a base; a rotary grinding disk; a work table positioned along the forward face of said disk; means at the rear of said disk connected with said table for supporting the latter, said means being slidable vertically along said base; and means for counterbalancing the weight of the first mentioned means.

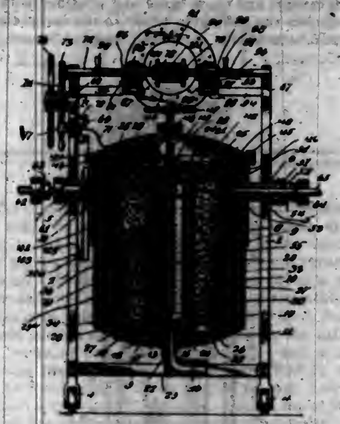
3. In a disk grinder, in combination, a base; a rotary grinding disk; a work table positioned along the forward face of said disk; a member slidable vertically on said base at the rear of said disk; connections between said member and said table for supporting the latter; a sheave in the upper portion of said base; a cable attached at one end to said slidable member and passing upwardly over said sheave; and a weight attached to the other end of said cable for counterbalancing the work table and its supporting means.

4. In a disk grinder, in combination, a base in the form of a pedestal; bearings at the upper end of said base; a horizontal shaft rotatably mounted in said bearings; a driving pulley fixed on said shaft between said bearings; a grinding disk fixed on the forward end of said shaft; a vertical guideway on said base at the rear side of said grinding disk; a member slidable on said guideway; means for fixing said member in adjusted positions on said guideway; a horizontal work table positioned along the forward face of said grinding disk; a pair of vertically disposed segments lying side by side at one edge of said grinding disk, one of said segments being fixed to said slidable member, and the other of said segments being attached to one end of said work table; a curved rib and groove connection between said segments, adapted to permit said work table to be tilted on an axis coincident with the inner edge thereof; means for locking said segments together; and means for counterbalancing the weight of said slidable member, segments and work table.

5. In a pattern-maker's disk grinder, in combination, a pedestal; a horizontal drive shaft supported by said pedestal; a grinding disk fixed to the forward end of said shaft; a vertical guide on one side of said pedestal at the rear side of the disk; a member slidable vertically on said guide and located rearwardly of the vertical plane of the face of the disk; means for fixing said member in adjusted position on said guide; a horizontal work-table positioned along the face of said disk; a segment fixed to said slidable member and lying in a vertical plane intersecting the plane of the disk and disposed so as to clear the periphery of the disk during the vertical movement of the slidable member; a segment fixed to the end of the work-table and lying beside the other segment; a rib and groove connection between said segments, the rib being curved upon the arc of a circle the center of which coincides with the inner edge of the work-table and is close to the face of the disk, the lower side of the table being beveled at its inner edge; means for adjustably securing the second mentioned segment to the first mentioned segment; and means for counterbalancing the weight of the slidable member, the segments and the table.

1,013,761. COOLING AND FILTERING MACHINE. JOSEPH GAVELACK, Monongahela, Pa. Filed Mar. 20, 1911 Serial No. 615,695.

1. A machine of the type described, comprising movable frames, a vessel tiltably arranged between said frames, a cover carried by one of said frames and adapted to close said vessel, an outer shell arranged in said vessel and having the upper edges thereof perforated, and an inner tapering foraminous shell arranged in said outer shell and adapted to contain a filtering material, a plurality of superimposed foraminous channel rings arranged in said inner shell, a foraminous cylinder arranged centrally of said inner shell and having a bottom thereof open, means adapted to detachably retain said cylinder in said shell and means for circulating a refrigeratory agent between said vessel and said outer shell.



2. A machine of the type described, comprising movable frames, a vessel tiltably arranged between said frames, a cover carried by one of said frames and adapted to close said vessel, an outer shell arranged in said vessel and having the upper edges thereof perforated, and an inner tapering foraminous shell arranged in said outer shell and adapted to contain a filtering material, a plurality of superimposed foraminous channel rings arranged in said inner shell, a foraminous cylinder arranged centrally of said inner shell and having the bottom thereof open, means adapted to detachably retain said cylinder in said shell, means for circulating a refrigeratory agent between said vessel and said outer shell, and means supported by said frames and including a presser head adapted to facilitate the packing of filtering material in said inner shell.

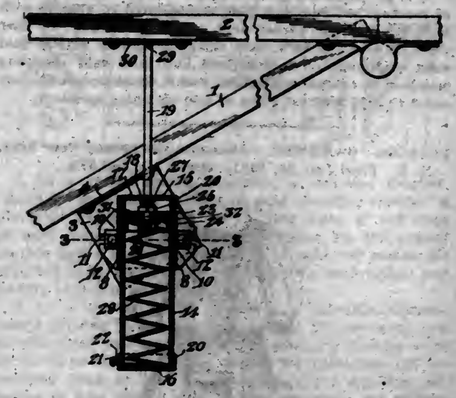
3. A beer cooling and filtering machine comprising a tiltable vessel, an outer shell arranged in said vessel and forming in connection therewith a cooling compartment, an inner foraminous shell positioned in said outer shell, said shell having a liquid receiving compartment in communication at its top with said cooling compartment, a foraminous cylinder arranged centrally of said inner shell and having its lower end open for the discharge of the liquid, means for supplying liquid to the cooling compartment, said cylinder and shell providing a filtering chamber, a filter medium mounted in said chamber and extending over the upper portion of the shell, and means for circulating a refrigerant through said cooling compartment.

4. A beer cooling and filtering machine comprising a tiltable vessel, an outer shell arranged in said vessel and forming in connection therewith a cooling compartment, an inner foraminous shell positioned in said outer shell, said shell having a liquid receiving compartment in communication at its top with said cooling compartment, a foraminous shell, means for supplying liquid to the cooling compartment, said cylinder and shell providing a filtering chamber, a filter medium mounted in said chamber and extending over the upper portion of the shell, means for circulating a refrigerant through said cooling compartment, means for tilting said vessel, and means whereby the filtering medium can be packed within said filtering chamber

5. A beer cooling and filtering machine comprising a tiltable vessel, an outer shell arranged therein and forming in connection therewith a cooling compartment, an inverted conical shaped foraminous shell positioned within said outer shell, said shells forming a liquid receiving compartment gradually increasing in width upwardly and communicating at its top through said outer shell with said cooling compartment, a foraminous cylinder positioned within and having in connection with said inner shell a filtering chamber, means for discharging liquid from said shell, a filtering medium arranged within said chamber and extending over said shell, means for supplying liquid to said cooling compartment, and means for circulating the refrigerant through said cooling compartment.

[Claim 6 not printed in the Gazette.]

1,013,762. DOOR-CHECK. JAMES E. GIBBS, Covington, Ky., assignor to The Gibbs Manufacturing Company, Covington, Ky., a Corporation of Ohio. Filed Nov. 18, 1910. Serial No. 593,101.



1. A door check provided with a piston having a packing member and a seating member therefor, the packing member having an extent of movement toward and from the seating member and provided with a passage adapted to be blanked or opened in accordance with the relation of the packing member to the seating member.

2. A door check comprising a headed cylinder having an air throttling means at one end, a piston within the cylinder provided with a backing plate and a ported packing leather adapted to have its port blanked by the backing plate when the ported portion is in engagement therewith, a rod carrying the piston and projecting through the cylinder head remote from the throttling means, and a spring on the rod between the piston and the head traversed by the piston rod.

3. A door check having a pneumatic cylinder, a carrying clip for the cylinder, a support for the clip upon which the latter is adjustable on an axis transverse to the longitudinal axis of the cylinder, and means for securing the clip in adjusted positions.

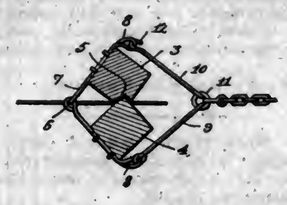
4. A door check having a pneumatic cylinder, a carrying clip for the cylinder, a bracket having slots therein described about a common center, and securing means traversing the clip and the slots in the bracket for fastening the clip to the bracket in any adjusted position within the length of the slots in the bracket.

5. A pneumatic door check provided with a cylinder and a piston therein having a valve and a seat therefor, said valve being movable to the open position by the frictional engagement of the piston with the walls of the cylinder on movement in one direction and closing on the movement of the piston in the other direction.

1,013,763. CLAMPING DEVICE. CAMPBELL GIBSON, Mount Sterling, Ky., assignor of one-half to C. M. Stafford, Mount Sterling, Ky. Filed July 14, 1911. Serial No. 638,558.

1. A device of the character described, comprising a pair of rectangular clamping members adapted to engage with each other at one corner only, means secured to the rear sides of said clamping members adapted to interlock and hold said clamping members in operative position and a

draft means also secured to said farthest sides of said members.



2. A device of the character described, comprising a pair of rectangular clamping members adapted to engage with each other at one corner only, means secured to the rear sides of said members, said means extending beyond said sides and adapted to interlock and hold said clamping members in operative position, and a draft means also secured to said farthest sides of said clamping members.

1,013,764. GARMENT. ABRAHAM GOLDBERG, New York, N. Y. Filed July 26, 1911. Serial No. 640,573.

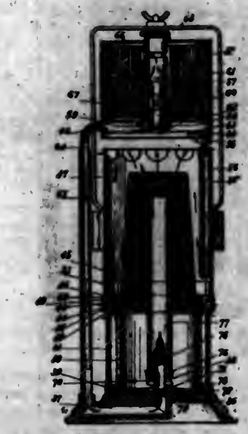
1. A dress comprising a waist and a skirt, a normally depending flap secured at one end thereof to the dress near the waist-line thereof, and means for securing said flap in a depending position and in a raised position, the dress having a pocket concealed by said flap when in a depending position, said pocket being uncovered and being available for use when in its raised position, said flap when in its depending position coinciding with the adjacent porton of the skirt, whereby it will simulate a part of the skirt.

2. A dress comprising a waist, a skirt, and a belt at the waist-line thereof, said belt having a removable part, a flap secured at one end thereof to the dress under the removable part of said belt and adapted to be arranged in two positions, and means for securing said flap in its different positions, said dress having a pocket normally concealed by said flap, said flap when in its depending position coinciding with the adjacent portion of the skirt.

1,013,765. HYDROCARBON MINER'S LAMP. JULES GOULET, Brussels, Belgium. Filed Jan. 4, 1911. Serial No. 600,690.

1. In a lamp of the class described, the combination of a base, a burner supported on the base, a casing surrounding the burner, a ring above the aforesaid casing and formed with inlet openings for the admission of air, a second casing supported on the ring and formed at the top with openings, a carbureter above the lamp adapted to contain a porous block, a regulating device, a connection between the regulating device and the burner, and a connection between the second mentioned casing and the regulating device for the passage of part of the air introduced through the openings in the ring.

2. In a lamp of the class described, the combination of a base provided with a burner, a casing mounted on the base and formed with openings for the admission of air, a carbureter mounted above the casing including a central tube provided with openings arranged at different levels, a partition in the carbureter to form a passage, a tube communicating with the passage and the casing, a short tube extending from the partition into the central tuge in the carbureter, a regulator including a tube interposed between the central and short tubes and provided with openings to regulate the admission of air to the carbureter, and a connection between the carbureter and the burner.



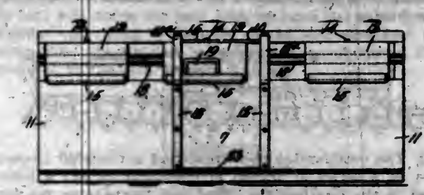
3. In a lamp of the class described, the combination of a base provided with a burner, a casing mounted on the base and surrounding the burner, the bottom of said casing communicating with the atmosphere for the admission of air and openings formed near the top of said casing for the exit of gas, a tube mounted in the casing and communicating therewith at its lower end, a second tube mounted in the aforesaid tube and communicating with the atmosphere at its upper end, a carbureter above the casing, said carbureter having a partition to form a space, a tube communicating with said space and the second one of the aforesaid tubes, a tubular extension on the partition and communicating with the space below the partition, a regulating device surrounding the tubular extension, said regulating device provided with openings near its lower end and openings near its upper end, and an interior casing mounted within the carbureter adapted to receive a porous block and formed with an opening at its bottom, the opening in the regulating device at the top of the latter communicating with the inner casing, the openings in the lower end of the regulating device communicating with a space formed between the partition and the interior casing, a deflector for directing the air through the lower openings in the regulating device, and a connection between the space formed by the partition and the interior casing and the burner.

4. In a lamp of the class described, the combination of a burner, a casing, said casing communicating with the atmosphere at the bottom for the admission of air, a carbureter provided with a porous block, a regulating device mounted in the carbureter, a pipe connecting the carbureter and the casing to direct the air introduced thereto to the regulating device, and a pipe connecting the burner and the carbureter.

5. In a lamp of the class described, the combination of a burner, a casing surrounding the burner and formed with openings for the admission of air thereto, a carbureter including an outer casing, a tube formed with upper and lower openings, a tube fitting in the last mentioned tube and provided with openings which register with the aforesaid openings, an inner casing provided with a porous block, the upper openings in the tubes communicating with the interior casing, the lower openings of said tubes communicating with the space formed between the inner and outer casings, a tube connecting the first mentioned casing and the carbureter, and a tube connecting the space formed between the inner and outer casings of the carbureter.

[Claims 6 to 10 not printed in the Gazette.]

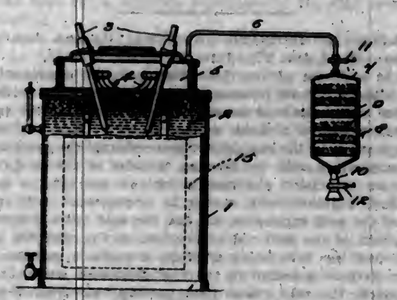
1,013,766. GRAIN-DOOR. MELVIN S. GREELEY, Des Moines, Iowa. Filed Aug. 7, 1911. Serial No. 642,616.



1. The combination with a wall having a doorway therein and guide-ways at the sides of the door-way, of a track secured to the said wall at each side of the door-way, a pair of tracks secured at the top of the door-way having their inner extremities spaced from each other, a plurality of door sections adapted to set one on the other in the said door-way between the guide-ways, a hook secured to each door section adapted to pass between the extremities of the tracks at the top of the door-way and engage the said tracks upon the door sections being slid to one side, and a track engaging member carried by each door section and adapted to engage the tracks at the sides of the door-way upon the door sections being slid sidewardly.

2. The combination with a wall having a doorway therein, and guide strips secured at the sides of the doorway having upper deflected portions, of a pair of tracks secured to the said wall at each side of the doorway having their inner extremities arranged within the said deflected portions of the guide strips, a pair of tracks secured at the top of the doorway having their inner extremities spaced from each other and having their outer extremities projecting in under the said deflected portions of the strips, a plurality of door-sections adapted to set one on the other in the said doorway between the guideways, a hook secured to each door section adapted to pass between the extremities of the tracks at the top of the doorway and engage the said tracks upon the door section being slid to one side, and a track engaging member carried by each door section adapted to engage the tracks at the sides of the doorway upon the door section being slid sidewardly, for the purpose described.

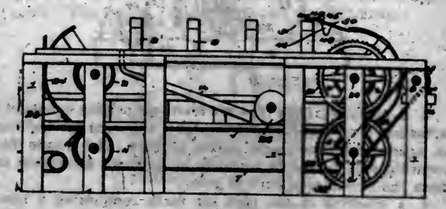
1,013,767. MEANS FOR PREVENTING MOISTURE FROM ENTERING TRANSFORMER-TANKS. FREDERICK W. HADLEY, Atlanta, Ga. Filed Mar. 22, 1911. Serial No. 616,279.



1. In a transformer the combination of a tank containing oil and having an air space above said oil; a pipe communicating with said air space; and a drying chamber connected to said pipe, whereby any air that may be sucked into said tank must be first subjected to the action of said drying chamber, substantially as described.

2. In a transformer, the combination of a tank containing the transformer coils and oil for insulating the same and having an air space above said oil; a drying chamber provided with an inlet and an exit; and a pipe connected to said inlet and air space, whereby heat from said coils may force said air only through said exit, and upon a lowering of the temperature additional air may be sucked only through said chamber back into said space, substantially as described.

1,013,768. CARTON-SEALING MACHINE. HARRY HAGER, Chicago, Ill. Filed Apr. 11, 1911. Serial No. 620,378.



1. In a carton sealing machine, a traveling member, means for supporting cartons on said traveling member, a pivotally mounted tucker for folding some of the flaps of said cartons, said tucker comprising an arc shaped portion and a cam portion, and a plurality of means for applying paste to the flaps not folded by said tucker and folding said last mentioned flaps.

2. In a carton sealing machine, a movable member, means secured to the movable member for receiving and moving filled and empty cartons, means for folding some of the flaps of said cartons, means for spreading the remaining flaps of said cartons, means for applying adhesive to said spread flaps, a cam structure for folding said spread flaps, a traveling belt structure coacting with said movable means for holding and pressing said folded flaps until the adhesive thereon has set, and a yielding gate arranged to guide empty cartons in one path and guide filled cartons in another path after the cartons have been sealed.

3. In a carton sealing machine, a traveling member, means for supporting cartons having flaps on said traveling member, a tucker for folding some of said flaps on said cartons, said tucker comprising an arc shaped portion and a cam portion, means for applying paste to the flaps not folded by said tucker, and means for folding said last mentioned flaps, said means comprising an arc shaped member formed with a substantially V shaped notch merging into an arc shaped way.

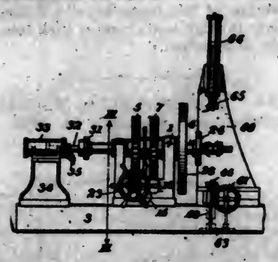
4. In a carton sealing machine, a movable member, means for receiving a carton connected with said movable member, means for folding some of the flaps of said carton, a plurality of means for spreading the other flaps of said carton, means for applying adhesive to said spread flaps, and a folding member for folding said spread flaps, said folding member comprising an arc shaped strip of sheet material provided with a substantially wedge shaped opening having an apex off center and an arc shaped slot merging into the apex of said wedge shaped opening, whereby the edges of said opening are of different shapes for causing one of the flaps of said carton to be folded before the other.

1,013,769. MACHINE FOR MAKING SPIRAL LATTICED POLES OR THE LIKE. BRODERICK HASKELL, Franklin, Pa. Original application filed Dec. 1, 1909, Serial No. 530,753. Divided and this application filed Mar. 23, 1910. Serial No. 551,125.

1. A machine of the type set forth comprising oppositely arranged non-rotatable and rotatable supports for holding in spaced relation plural series of bars, and means for rotating said rotatable supports for fashioning the bars into a latticed pole.

2. A machine of the type set forth comprising oppositely arranged non-rotatable and rotatable supports for holding

in spaced relation an inner and an outer series of bars and means for rotating said rotatable supports for twisting the bars into a latticed pole.



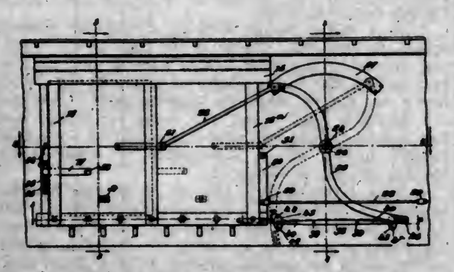
3. A machine of the type set forth comprising oppositely arranged non-rotatable and rotatable supports for holding in spaced relation plural series of bars, and means for rotating said rotatable supports in opposite directions to form the bars into a latticed pole.

4. A machine of the type set forth comprising a non-rotatable support and oppositely arranged rotatable supports for holding bars of an inner series in fixed relation, and bars of an outer series in fixed relation adjacent said inner series, and means to rotate said rotatable supports simultaneously in opposite directions.

5. A machine of the type set forth comprising a holder to hold one end of a set of bars in a circular and spaced relation and against twisting movement, a rotary holder for securing and twisting the other ends of certain of said bars in one direction, and a rotary holder for simultaneously twisting the ends of other of said bars in the opposite direction.

[Claims 6 to 17 not printed in the Gazette.]

1,013,770. CAR-DOOR. HENRY M. HAZEL and ALBERT STRONG COLTHARP, Tallulah, La. Filed July 14, 1910. Serial No. 571,900.



A car door, a lever pivoted intermediate its ends adjacent to the door, a link connecting one end of the lever to the door at one side and intermediate the ends thereof, a guard rod limiting the movement of the lever, and a latch for holding the lever in adjusted position, said latch comprising a resilient bar supported intermediate its ends adjacent to the other end of the lever, each end of the bar being bent laterally inward to form a shoulder for engagement by the lever to hold the same in adjusted position.

1,013,771. LOCOMOTIVE. GEORGE R. HENDERSON, Philadelphia, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 12, 1911. Serial No. 632,727.

1. The combination in a compound articulated locomotive, of a series of frames; pivots connecting the said frames; a set of driving wheels for each frame; a pair of cylinders on each frame and through which the wheels are driven; a boiler located above two of the frames; a tender mounted on the other frame; steam pipes leading from the boiler to the cylinders on one frame and pipes leading from said cylinders to the cylinders on the other two frames.

2. The combination in a compound articulated locomotive, of a series of frames pivotally connected; a boiler fixed to the intermediate frame and overhanging the forward frame; a tender carried by the rear frame; cylinders on the front end of the forward frame and on the front end of the intermediate frame also on the rear end of the rear frame; pipes leading from the steam dome of the boiler to the cylinders on the intermediate frame and pipes leading from the exhaust chambers of the cylinders on the intermediate frames to the steam space in the cylinders on the forward and rear frames, and driving wheels on each frame driven from the cylinders on said frames.

3. The combination in a compound articulated locomotive, of a series of frames pivotally connected; independent driving wheels carrying each of said frames; cylinders on each frame; a boiler extending over two of the frames; a tender mounted on the other frame; a radial truck at the forward end of the forward frame and at the rear end of the rear frame; and means for supplying steam from the boiler to the several cylinders.

4. The combination in an articulated locomotive, of a series of frames pivotally connected; driving wheels supporting each frame; cylinders carried by each frame and through which the wheels are driven; a boiler extending over the forward and the intermediate frames; a tender mounted on the rear frames; pipes supplying steam from the boiler to the cylinders on the intermediate frame; pipes extending from the exhaust space of said cylinders to the steam space of the cylinders on the forward and rear frames; an exhaust pipe leading from the cylinder frame to the stack of the locomotive; and a pipe extending at the end of the tender and communicating with the exhaust space of the rear cylinders.

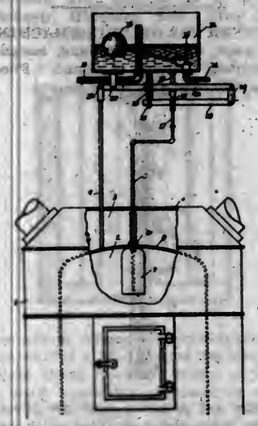
5. The combination in a tender of a locomotive, consisting of a frame; a water receptacle thereon; driving wheels supporting the frame; cylinders mounted on the frame and through which the wheels are driven; said cylinders having a rear exhaust pipe extending upward; with a sand box in close proximity to the exhaust pipe so that the sand is heated to the proper degree.

[Claim 6 not printed in the Gazette.]

1,013,772. HUMIDIFIER. ROBERT C. HERREN, Kenton, Ohio. Filed Apr. 27, 1911. Serial No. 623,618.

1. In a device of the class described, the combination of a suitable hot air furnace, a generator contained within the fire box of the said furnace, a pipe connecting the said generator with a suitable source of water supply, there being a valve in the said pipe, the interior of the generator communicating with the heating chamber of the said furnace, an expansion rod resting on one wall of the said fire box, together with means in engagement with the end of the said expansion rod and the said valve whereby expansion of the said rod by the heat of the said fire box will open the said valve whereby a suitable amount of water may be supplied to the said generator where it is vaporized, the said vapor then passing outwardly therefrom and into the said heating chamber whereby it is mixed with the heated air contained therein.

2. In a device of the class described, the combination of a fire box and heating chamber of a suitable furnace, a generator supported within the said fire box, a pipe leading from the said generator to a source of water supply, there being a valve in the said pipe, the interior of the said generator communicating with the said heating chamber of the furnace, an expansion rod in contact with the wall of the said fire box, together with a lever in engagement at one end with one end of the said expansion rod and adjacent its other end with the said valve whereby expansion of the said rod, due to the heating of the said fire box, will cause the said lever to open the said valve whereby water may be supplied to the said generator to be vaporized therein and to be supplied to the heated air contained in the said heating chamber.

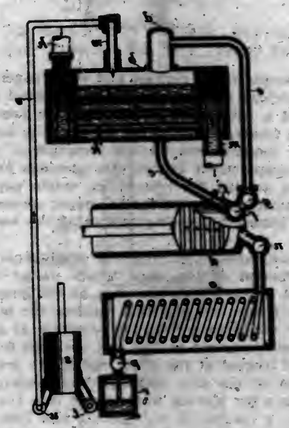


3. In a device of the class described, the combination of the fire box and heating chamber of a suitable furnace, a generator suitably supported within the said fire box, the generator communicating with the said heating chamber, a pipe communicating from the interior of the said generator to a suitable source of water supply, a valve in the said pipe, an expansion rod in contact with one of the walls of the said fire box, a lever and supporting means therefor, one end of the said lever being in engagement with one end of the said expansion rod, a lever in engagement with the spindle of the said valve, a link engaging adjacent ends of the said levers whereby as the expansion rod lengthens from the action of the heat of the said fire box it will actuate the said levers to operate the said valve, whereby a suitable amount of water may be supplied to the said generator which is therein vaporized, the said vapor mixing with the air contained in the said heating chamber, there being resilient means in engagement with one end of the lever connected to the spindle of the said valve whereby movement of the said lever is permitted.

4. In a device of the class described, the combination of the fire box and heating chamber of a suitable furnace, a generator suitably supported within the said fire box, a pipe leading from a suitable source of water supply and terminating within the said generator, the interior of the said generator communicating with the said heating chamber, an expansion rod resting on one of the walls of the said fire box, a valve contained in the afore-mentioned pipe, a lever having its intermediate portion in engagement with the spindle of the said valve, another lever having its shorter arm in pivotal engagement with one end of the said expansion rod, the other end of the said lever being in engagement with one end of the first lever through the medium of a link, the other end of the said first lever being suitably supported, a spring carried by the said support and in engagement with the said end of the lever whereby movement of the expansion rod moves the said levers and opens the said valve, thereby permitting a desired amount of water to enter the said generator.

5. In a device of the class described, the combination of a suitable hot air furnace, a generator contained within the fire box of the said furnace, a pipe connecting the said generator with a suitable source of water supply, there being a valve in the said pipe, the interior of the generator communicating with the heating chamber of the said furnace, a rod in operative relation with the said fire box whereby the rise of temperature in the said box will cause the said rod to expand, together with means engaging the expansion rod and the valve whereby expansion of the rod will operate the said valve, thereby permitting a suitable amount of water to be supplied to the generator where it is vaporized, the vapor passing outwardly into the heating chamber of the furnace.

1,013,773. VAPOR-ENGINE. HEINRICH HILDEBRAND, HANS HILDEBRAND, and FRITZ HILDEBRAND, Berlin, Germany. Filed July 14, 1910. Serial No. 571,920.



1. The method of working a vapor engine by means of gases of low boiling points, consisting in mingling in the engine cylinder liquefied gas or its vapor, before expansion, with heated absolute gas of the same agent, substantially as described.

2. The method of working a vapor engine by means of gases of low boiling points, consisting in mingling in the engine cylinder liquefied gas or its vapor, before expansion, with compressed absolute gas of the same agent, substantially as described.

3. The method of working a vapor engine by means of gases of low boiling points, consisting in mingling in the engine cylinder liquefied gas or its vapor, before expansion, with the absolute gas of the same agent, said absolute gas being generated by adiabatic compression of vapor of the liquefied gas, substantially as described.

1,013,774. SPRING. WILLIAM S. HODGES, Philadelphia, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 3, 1911. Serial No. 600,632.

The combination of a spring made up of a series of leaves, the top leaf stopping short of the end of the spring, the second leaf being longer than the spring and turned up a distance from the end of the top leaf, forming a transverse recess, a clip having side flanges extending on each side of the spring, and a transverse depending lip at the outer end shaped to enter the recess between the end of the top leaf of the spring and the flange.

1,013,775. RECEPTACLE FOR GARBAGE AND WASTE PAPER. ISRAEL HOFFMAN, New York, N. Y. Filed May 17, 1911. Serial No. 627,647.

1. A receptacle for garbage and waste paper, comprising a body formed of two cone frusta mounted at the apex ends, and a transverse partition at the junction of the said cone frusta, the partition dividing the said body into an upper compartment for the reception of garbage and a lower compartment having side openings forming handholds and serving for introducing waste paper into the lower compartment, a lid for the upper compartment, and a hinged bottom for closing or opening the lower compartment.

2. A receptacle for garbage and waste paper, comprising a body formed of two cone frusta united at the apex ends, and a transverse partition at the junction of the said cone frusta, the partition dividing the said body into an upper compartment for the reception of garbage, and a lower compartment having side openings forming handholds and located at the upper end of the lower compartment, one of the said openings being enlarged to form an entrance for placing waste paper into the lower compartment, a hinged lid for opening and closing the said upper compartment, and a hinged bottom for closing or opening the said lower compartment.

1,013,776. COMBINED CANE AND TOBACCO-PIPE. ISRAEL HOFFMAN, New York, N. Y. Filed May 27, 1911. Serial No. 629,782.

1. A combined cane and tobacco pipe, comprising a staff having a hollow, curved upper portion, a pipe having a curved bowl, and stem and curved mouthpiece, the mouthpiece being mounted to turn in the stem and form with its curvature a continuation of the curvature of the bowl and stem and adapted to pass into the said curved staff portion, the terminal of the said staff portion having an inwardly-extending flange provided with notches, and the said pipe stem having lugs adapted to pass through the said notches to engage the flange on the inner side thereof.

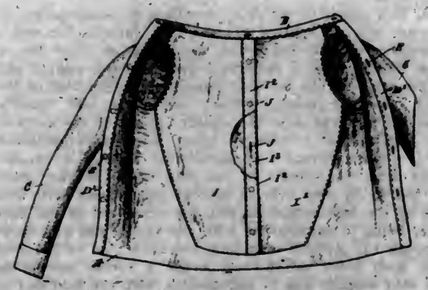
2. A combined cane and tobacco pipe, comprising a staff, the upper end of which is hollowed out and curved, a pipe having a similarly curved bowl and stem and a mouthpiece curved in an opposite direction to the curvature of the said bowl and stem, a cover for the bowl, said mouthpiece being mounted to turn in the stem to form with its curvature a continuation of the curvature of the bowl and stem and adapted for projection within the said curved staff portion, and means to secure said mouthpiece within the stem whereby to form a continuously curved handle for the staff.

1,013,777. RUNNER FOR GRINDING-MACHINES. JAMES GEORGE JACKSON, Glasgow, Scotland, assignor to J. G. Jackson, Limited, Glasgow, Scotland. Filed Mar. 25, 1910. Serial No. 551,486.

1. In a runner for grinding machines the combination of a supporting plate and a working plate, said working plate comprising a composition grinding face, wire mesh reinforcing material embedded in the grinding face, reinforcing means embedded in the back of said grinding face, and bolts having their heads embedded in said face and engaging said wire mesh and passing through said reinforcing means for detachably securing the working plate to the supporting plate, substantially as described.

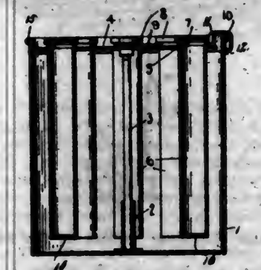
2. In a runner for grinding machines the combination of a supporting plate and a working plate, said working plate comprising a composition grinding face, wire mesh reinforcing material embedded in the grinding face, concentric rings embedded in the back of said grinding face and in contact with said wire mesh, and bolts having their heads embedded in said grinding face and engaging the wire mesh and passing through said concentric rings for detachably securing the working plate to the supporting plate, substantially as described.

1,013,778. NURSING-WAIST. JACOB JACOBY, New York, N. Y. Filed Apr. 18, 1911. Serial No. 621,742.



A combination nursing waist and corset cover, comprising a waist body open at the back and having an integral front, the side edges of which form with the said body bust openings, the sides of the front and the said body having overlapping members at the bust openings, fastening devices for fastening the said members together, and a corset cover in the rear of the said front and formed of flaps secured at their outer edges to the said waist body at a point to the rear of the said bust openings, the upper edges of the said flaps being secured to the neck of the waist body, the said flaps overlying the said bust openings and having their inner edges overlapping, and fastening means for fastening the said overlapping inner edges of the flaps together.

1,013,779. ICE-CREAM FREEZER. ROLAND LEE JAMESON, Hillsboro, Tex., assignor to H. W. Vaughan and J. H. Bennett, Hillsboro, Tex. Filed May 15, 1911. Serial No. 627,312.



In an ice cream freezer, the combination with a cylindrical can having a bead around its mouth, and a deep bearing socket rising from the center of its bottom; of an upright shaft removably journaled in said bearing, a plate carried by the upper end of the shaft and having a number of openings, cream-receiving tubes removably engaging said openings and having surrounding beads above the plate and closed lower ends, closures for the upper ends of the tubes, and an arm secured at its inner end to the upper extremity of said shaft and projecting radially therefrom, having a shoulder adjacent the inner face of the mouth of the can, then passing over the upper edge of the latter in a handle, and thence carried downward and upward into a stop standing outside of the can and beneath said bead, all as and for the purpose set forth.

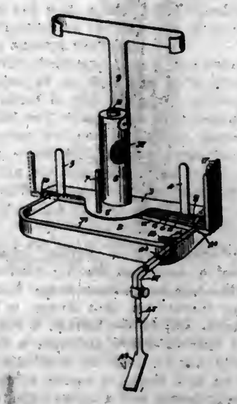
1,013,780. CENTRIFUGAL SWITCH FOR ALTERNATING-CURRENT MOTORS. THEODORE KARGAU, Warren, Ohio, assignor to The Peerless Electric Company, Warren, Ohio, a Corporation of Ohio. Filed Feb. 2, 1911. Serial No. 606,148.

1. In a motor, the combination with the terminals of starting coils, fixed segments with which they are connected, and a rotor, of brushes arranged within the segments and designed to normally engage the inner surfaces thereof, such brushes being carried by the rotor, and means for yieldingly holding the brushes in contact with the inner faces of the segments, and means for moving the brushes inwardly toward the axial center of the rotor and out of contact with the segments when the desired speed has been attained.

2. In a motor, the combination with the terminals of starting coils, fixed segments with which such terminals are connected, and a rotor, of a support carried by the rotor, brushes mounted on said support and designated to normally engage the inner surfaces of the segments, means for normally holding such brushes in such engagement, and means carried by such brushes for moving them inwardly toward the axial center of the rotor and out of contact with the segments when the desired speed has been attained.

3. In a motor, the combination with the terminals of starting coils, fixed segments with which such terminals are connected, and a rotor, of a connecting plate carried by such rotor, pins projecting from said plate paralleling the axis of the rotor, brushes having hubs mounted on said pins, said brushes being designed to normally engage the inner faces of said segments, weighted arms extending outwardly from said hubs, and springs connecting said arms to said connecting plate, said arms being designed to move outwardly under centrifugal action to cause the brushes to move inwardly toward the axial center of the rotor and out of engagement with the segments when the desired speed has been attained.

1,013,781. PAGE-TURNING DEVICE. SAMUEL C. KING, El Toro, Cal. Filed Feb. 13, 1911. Serial No. 608,454.



1. In a device of the class specified, the combination of a base having a rail partially cut away to provide a shoulder, a raised platform on the base, a barrel on the platform, a post mounted on the base and passing through said barrel, arms pivotally connected with said post and adapted to lie close together in parallel against said shoulder, nested helical springs arranged concentrically in the barrel and secured at their upper ends to said post and having the lower end portions thereof extending below said platform and severally secured to the arms, means whereby the torsion of said springs may be adjusted at will, and means operable at will to raise the arms above said shoulder, substantially as described.

2. In a device of the class specified, the combination of a base, a raised platform thereon, a barrel on the platform, a post mounted on the base and passing through said barrel, arms pivotally connected with said post, said arms adapted to lie together in parallel in the same horizontal plane, nested helical springs arranged concentrically in the barrel and secured at their upper ends to said post and severally secured at their lower ends to the arms, means whereby the torsion of said springs may be adjusted at will, a back rest pivotally connected with the top portion of the barrel, and means carried by said base for controlling the actuation of said arms, substantially as described.

1,013,782. MECHANICAL VIBRATOR. JOHN KOCH, New York, N. Y. Filed June 29, 1911. Serial No. 635,949.

1. A vibrator comprising a handle, cam lugs secured thereto, a shaft revolubly mounted in said handle, crank arms formed on the ends of said shaft, weights arranged on the ends of said arms, a cam fixed to said shaft, said cam having lugs adapted to play over the cam lugs on the handle, and a spring adapted to yieldingly resist the play of the cams on said shaft over the fixed cam lugs on the handle.

1,013,783. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,102.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,784. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,103.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,785. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,104.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,786. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,105.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,787. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,106.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,788. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,107.

1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

1,013,789. SAFETY-RAZOR. ALBERT KRAMER, Brooklyn, N. Y. Filed Aug. 19, 1911. Serial No. 645,108.

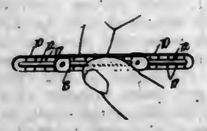
1. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, substantially as described.

2. In a safety razor, the combination with a handle, of a head pivoted thereto, a blade carried by said head, a guard plate carried by said head, a cutting edge on said guard plate, a cutting edge on said blade, said cutting edges being arranged to overlap, and means for adjusting said blade to vary the overlap of said cutting edges, said means comprising a screw, substantially as described.

2. A vibrator comprising a handle, cam lugs secured thereto, a shaft revolubly mounted in said handle, crank arms formed on the ends of said shaft, weights arranged on the ends of said arms, a cam fixed to said shaft said cam having lugs adapted to play over the cam lugs on the handle, a spring casing arranged in the lower end of said handle, a spring arranged in said casing and a collar adjustably secured to said shaft and adapted to engage said spring whereby the pressure of the same is regulated and the play of the cam on the shaft over the fixed cams thus yieldingly resisted.

3. A vibrator comprising a hollow handle, having formed in one end a combined bearing sleeve and spring casing, an annular cam supporting flange formed in said handle, cam lugs formed on said flange, a bearing cap secured to the upper end of the handle, a shaft revolubly mounted in said bearing sleeve and cap, a cam fixed on said shaft in said handle, lugs on said cam adapted to engage the lugs on said flange, a spring arranged on said shaft in said spring casing and a collar adjustably secured to the shaft to regulate the tension of said spring.

1,013,783. COLLAR-SUPPORT. NATHAN A. KRISCHER, New York, N. Y. Filed May 29, 1911. Serial No. 630,052.



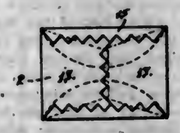
A collar support comprising two straight longitudinally slotted similar strips lying flatwise against each other in separate planes throughout, and clamping and guiding means holding the strips in friction-tight engagement, said means consisting of end members separate from the strips and disposed flatwise one on each strip, on opposite sides of the collar support and at opposite ends and conforming to the end formation of the strips, and a fastener extending through each of said flat end members, through the slot of the adjacent strip, and through the material of the opposite strip at the end of the latter, the said strips having series of perforations and each being gripped friction-tight between the companion strip and the clamp member carried by the latter.

1,013,784. MUSIC-RACK. JOHN KUGEL, Grand Rapids, Mich. Filed Sept. 29, 1910. Serial No. 584,390.

In a music rack, a body, a clip to hold music sheets, slidably adjustable on the body and formed by shaping a metallic sheet with two tongues, bending one tongue to slidably and yieldingly engage the body to retain the clip in a desired position thereon, and bending the other tongue to form a hook adapted to hold music sheets, said clip having a leaf spring whose butt end is fastened on the rear thereof and whose free end extends through a slot in the clip and is adapted to press music sheets held in

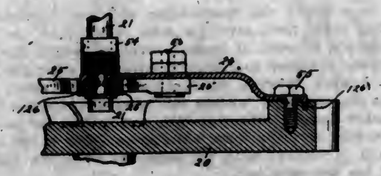
the clip against the inner surface of the hook portion thereof.

1,013,785. ENVELOP. FERENCZY, LAJOS, Easton, Pa. Filed Mar. 24, 1911. Serial No. 616,654.



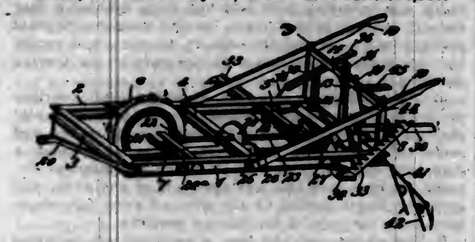
An envelop comprising a rectangular body having portions thereof gummed, an inner tissue paper envelop adapted to contain matter and be secured to the gummed portions of said body, rectangular end flaps carried by said body and having the edges thereof scalloped to provide saw-tooth tongues, rectangular top and bottom flaps carried by said body and having the edges thereof scalloped to provide saw-tooth tongues, adhesive material carried by the saw-tooth tongues of all said flaps whereby said flaps can be secured to the inner tissue paper envelop, the tongues of said top and bottom flaps being arranged to interlock with the tongues at the top and bottom edges of said end flaps, and the tongues at the outer edges of said end flaps to interlock centrally of the back of said envelop, substantially as, and for the purposes herein described.

1,013,786. POWER TRANSMISSION. JOHN W. LAMBERT, Anderson, Ind. Filed Nov. 9, 1908. Serial No. 461,787.



Friction transmission mechanism including a wheel for transmitting power, a longitudinally movable shaft mounted independently of and concentrically with said wheel, arms secured to and projecting from the end of said shaft near said wheel, and flat springs secured at their ends to the side of the wheel and to the ends of said arms and extending non-radially of the wheel the ends of said springs being turned at a right angle and fitting in sockets in said arms and wheel to maintain the constant relative angularity of the arms, springs and wheel.

1,013,787. MOWING-MACHINE. TURNER J. LANN, Saline, La. Filed May 20, 1911. Serial No. 628,580.

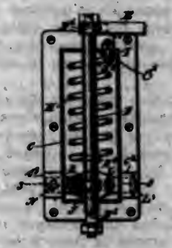


1. In a mowing machine, the combination of a frame, a forward supporting wheel for the frame, means for adjusting the rear end of the frame, a main shaft journaled in the frame and rotated from the forward supporting wheel, a crank actuated from the main shaft, a lever pivoted to the frame and operated by the crank, a cutter pivotally supported from the frame, means for raising the cutter, and means connecting the cutter to said crank for actuating the cutter when in its cutting position and allowing it to remain at rest when in a raised position, substantially as described.

2. In a mowing machine, the combination of a frame, a forward supporting wheel for the frame, means for adjusting the rear end of the frame, a main shaft journaled in the frame and rotated from the forward supporting wheel, a crank actuated from the main shaft, a lever pivoted to the frame and operated by the crank, a finger bar pivoted to the frame, a cutter reciprocatingly mounted in the finger bar, a loop projecting from the cutter and a bifurcated bar connecting said lever to the loop, whereby the cutter is reciprocated when in its cutting position and allowed to remain at rest when in a raised position, substantially as described.

3. In a mowing machine, the combination of a frame supported on wheels, a main shaft journaled in the frame and rotated from one of the supporting wheels, a crank actuated from the main shaft, a lever pivoted to the frame and operated by the crank, a finger bar pivoted to the frame, a cutter reciprocatingly mounted in the finger bar, a loop projecting vertically from the inner end portion of the cutter, a bar pivotally connected to said lever and having a bifurcated end embracing said loop, and a pin passing through the bifurcated end of said bar and through said loop, whereby the cutter is reciprocated in its cutting position and allowed to remain at rest when in a raised position, substantially as described.

1,013,788. DOOR CHECK AND CLOSER. JOHN G. LOFGREN, Norway, Mich. Filed Mar. 8, 1911. Serial No. 612,989.



1. A door check and closer, comprising a bearing arm adapted to bear against the door, a spring-actuated spindle carrying the said arm, a cam on the said spindle, a friction roller in engagement with the said cam, and a spring carrying the said friction roller.

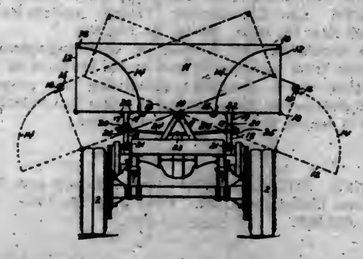
2. A door check and closer, comprising a bearing arm adapted to bear against the door, a spring-actuated spindle carrying the said arm, a cam on the said spindle, a friction roller in engagement with the said cam, a spring carrying the said friction roller, and means for adjusting the said spring.

3. A door check and closer comprising a bearing arm adapted to bear against the door, a spring-actuated spindle carrying the said arm, a cam on the said spindle, a friction roller in engagement with the said cam, a spring carrying the said friction roller, one end of the spring being fixed, and a set screw screwing in the free end of the spring to adjust the spring and to move the friction roller relative to the said cam.

4. The combination with a casing adapted to be fastened to a door casing, of a spindle journaled in the said casing, a bearing arm mounted on the spindle and adapted to bear against the door, an eye bolt held on the casing, a coiled spring on the said spindle and having one end fastened thereto, the other end of said spring adjustably engaging the eye bolt, a boss on the inside of the casing, and a nut screwing on the eye bolt to clamp the said end of the spring against the boss.

5. In a door check and closer, the combination with a casing adapted to be fastened to a door casing, of a spindle journaled in the casing, a bearing arm mounted on the spindle and adapted to bear against the door, an eye bolt having its stem extending through one end of the casing, a coiled spring on the spindle within the casing and having one end secured to the spindle, the other end of said spring adjustably engaging the eye of said eye bolt, a nut screwing on the stem of the eye bolt outside the casing to move the eye bolt, and means against which the end of the spring is drawn to clamp the same when the said nut is screwed up.

1,013,789. UNIT-COMPARTMENT DUMPING-BODY. WILLIAM B. LONGEST, Louisville, Ky. Filed May 29, 1911. Serial No. 630,273.



1. In a dumping vehicle, the combination with a wheeled frame, of a plurality of independent dumping body units disposed transversely over the same and each pivotally supported centrally between its ends, of a collapsible prop at each side of the pivotal support of each body unit, rods pivotally attached to the wheeled frame, and clamps mounted on said rods and adapted to be connected with the props to normally prevent collapse of the same.

2. In a dumping vehicle, the combination with a wheeled frame, a body unit disposed transversely over the same, and means constituting a central pivotal support for said body unit, of a prop at each side of the central support of said body member, each prop comprising two members and a hinge pin connecting said members, rods attached to the wheeled frame, and clamps carried by said rods and adapted to be removably secured to the hinge pins of said props.

1,013,790. GAS-RANGE. MARTIN W. LONGWELLOW, Baltimore, Md., assignor to The Baltimore Gas Appliance and Manufacturing Company, Baltimore, Md. Filed Aug. 5, 1911. Serial No. 642,475.

1. An improvement in gas ranges comprising a range front provided with a hinge box, a door provided with a pivot lug, a spring located in said box and engaging said

lug, a cover for said box provided at one end with an ear detachably engaging said front and at its top with an opening for the passage of lubricant, and a pivoted latch engaging the other end of said cover to hold the same in position over said hinge box.

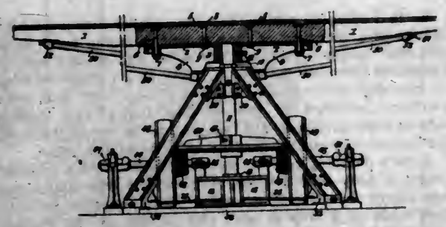
2. An improvement in gas ranges comprising a range front provided with a hinge box and an opening below said box, a door provided with a pivot lug, a spring located in said box and engaging said lug, a cover provided at one end with an ear engaging said opening and an opening in the top thereof, wicking secured in the top of said cover to receive lubricant through the opening in said cover, and a pivoted latch arranged to engage the other end of said cover.

3. An improvement in gas ranges comprising a range front provided with a hinge box and an opening below said box, a door provided with a pivot lug, a spring located in said box and having one end engaging said lug, the other end of said spring being provided with an angular portion engaging said opening, a cover provided at one end with an ear engaging said opening and an opening for the passage of lubricant in the top thereof, and a pivoted latch arranged to engage the other end of said cover.

1,013,791. PROCESS OF MAKING HYDROGEN PEROXID FROM IMPURE PERSULFURIC-ACID SOLUTIONS. LEO LÖWENSTEIN, Vienna, Austria-Hungary. Filed Nov. 15, 1910. Serial No. 592,534.

The hereindescribed process of obtaining peroxid of hydrogen from persulfuric acid or its products of transformation which comprises submitting the persulfuric acid to distillation while flowing in a thin film of large area which is heated to effect rapid evaporation.

1,013,792. ROUNDABOUT. ROBERT LUSSE and JOSEPH LUSSE, Philadelphia, Pa. Filed July 20, 1911. Serial No. 639,605.



1. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, and adjustable bracing members disposed between said plate and the ends of the arms.

2. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, and adjustable bracing members disposed between said ribs and the ends of the arms.

3. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members disposed between said plate and the ends of the arms, and receiving means for coöperation with the ends of the bracing members.

4. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members disposed between said ribs and the ends of the arms, and receiving means carried by the ribs and arms for coöperation with the ends of the bracing members.

5. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members for said arms, means carried by the ribs for engagement with the inner ends of the bracing members, means carried by the arms for engagement with the outer ends of the bracing members, and means for applying tension to said bracing members.

[Claims 6 to 11 not printed in the Gazette.]

1,013,793. FURNACE. MORRIS R. MACHOL, Staten Island, N. Y., assignor of one-fourth to Haldwell S. Colby, New York, N. Y. Filed Oct. 4, 1909. Serial No. 520,877.

1. In a furnace, a fire chamber, an arch over said fire chamber formed with orifices near each end thereof, means spaced on each side of said arch and extending over the arch and arranged to approach said arch at the orifices therein, thus forming restricted openings, whereby chambers containing air pressure are formed, and means for providing said chambers with air under pressure, said air under pressure being designed to escape through said restricted openings and mixing with the products of combustion from the fire chamber.

2. In a furnace, a fire chamber, an arch formed with orifices therein, means placed on the sides of said arch and extending therefrom and approaching said arch near said orifices thus forming a chamber between said means and said arch, and means for extending said first mentioned means whereby the same approaches said arch in such a direction as to partially inclose a space above said arch, said space defining a mixing chamber, (or combustion chamber), and means for forcing air into said first mentioned chamber, which air is designed to escape therefrom at the point where the means defining the chamber approaches the arch, whereby gases are drawn from the fire chamber and mixed with the air in said mixing chamber.

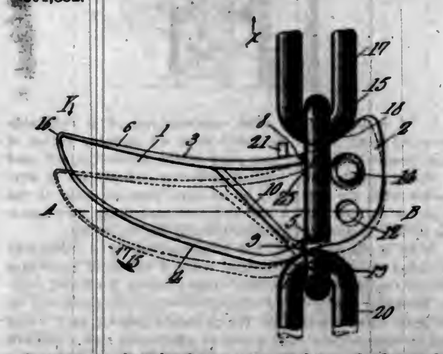
3. In a device of the character described, a furnace formed with a fire chamber, an arch above said fire chamber provided with orifices for the passage of gases from said fire chamber, a second arch arranged above said first mentioned arch and formed so as to approach said first mentioned arch near the orifices of said first mentioned arch, whereby a restricted opening is provided between said arches for causing the pressure in the chamber formed between the arches to force a jet of air through said restricted opening past the orifices in said arch.

4. In a device of the character described, a furnace formed with a fire chamber a plurality of arches arranged over the fire chamber, part of said arches forming a combustion chamber the lower arch having orifices arranged therein for forming a passageway for the gases to pass from the fire chamber into the combustion chamber, the upper arch being so constructed as to approach the lower arch at the orifices in the lower arch for defining openings, and means for supplying air between said arches, which air is designed to pass into said combustion chamber through said openings and to draw gas from said fire chamber and mix therewith, the position of the orifices being so arranged as to utilize the velocity of the air retained at such restricted openings between said arches to produce a suction after the manner of an injector for thoroughly drawing gases from said fire chamber and commingling therewith.

5. In a device of the character described, a furnace formed with a fire chamber a plurality of superimposed converging arches over said fire chamber, the lower arch having orifices opening into the fire chamber for providing a passageway between the fire chamber and combustion chamber, said combustion chamber being formed by the upper part of said superimposed converging arches, the lower part of said arches defining an air space, said orifices in said lower arch being the only exits from the fire chamber for the passage of gases into the combustion chamber, said orifices being located adjacent the point of convergence of said arches, the converging of said arches forming a restricted opening between the arches at said orifices for causing the utilization of the velocity of air as the same passes from the air chambers into the combustion chamber, whereby the gases in the fire chamber are drawn therefrom after the manner of an injector and mixed with the air as the same is forced into the combustion chamber.

[Claims 6 and 7 not printed in the Gazette.]

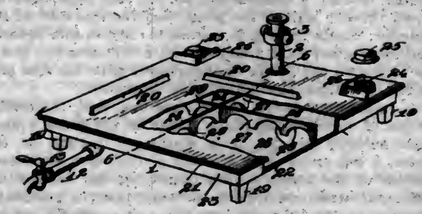
1,013,794. CONVEYER-CHAIN CLEAT. FREDERICK E. MARTIN, Bonami, La. Filed Jan. 10, 1911. Serial No. 601,832.



A conveyer cleat having a concave forward edge and a convex rear edge, one end of the cleat being broadened to form a shank for insertion through a conveyer chain link, the cleat being peripherally surrounded by a flange projected from one side and terminating short of one end of the cleat forming shoulders, the forward edge of the shank portion of the cleat being arranged in rocking contact with the rear side of the end of the forward link of the chain and the rear edge thereof having a concavity in rocking contact with the forward side of the end of the rear link of the chain, and a securing member projecting from the shank on the same side of the cleat as said flange for retaining the shank of the cleat between said shoulder and securing member when the cleat is not under the strain of a load, substantially as described.

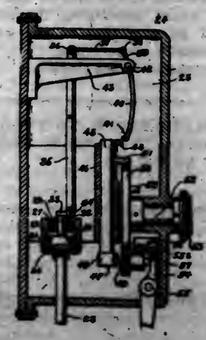
1,013,795. WATER-COOLING ATTACHMENT FOR REFRIGERATORS. AUGUSTUS MAY, New Orleans, La. Filed Feb. 11, 1909. Serial No. 477,385.

A water cooling attachment for refrigerators comprising a shallow closed ice supporting pan having flat top and bottom plates in parallel planes, the bottom plate being provided with supporting legs and the top plate being of relatively thin smooth-surfaced sheet material and being provided with cleaning openings which have removable closures, vertically disposed strips arranged within the pan and extending between the top and bottom plates thereof, the strips serving to brace the top plate and to take up the weight of the ice and being provided with arch-shaped openings which extend to their lower edges, a



fixed short length pipe for admitting water into the pan, said pipe being carried by the pan, and a fixed short length outlet pipe also carried by the pan, the height of the pan being chosen so as to cause the water to spread out in a relatively thin sheet to which the cooling influence of the ice is quickly and uniformly transmitted through the thin top plate.

1,013,796. CAN-TESTING MACHINE. CHARLES B. McDONALD and JOHN E. MCCULLOUGH, Chicago, Ill., assignors to McDonald Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 28, 1909. Serial No. 535,252.



1. In a testing device of the class described, the combination of an actuating pin, a finger on the same, a hook lever suitably pivoted to a stationary portion of the tester, a bell crank lever suitably pivoted to a stationary portion of the tester, a link connecting one arm of the bell crank with one arm of the hook lever, an air chamber and a pneumatic piston therefor in engagement with the other arm of the bell crank, the air chamber being in communication with a device under test, substantially as described.

2. In a testing device of the class described, the combination of an actuating pin, a finger on the same, a hook lever suitably pivoted to a stationary portion of the tester, a bell crank lever suitably pivoted to a stationary portion of the tester, a link connecting one arm of the bell crank with one arm of the hook lever, a pneumatic chamber having its walls inwardly and upwardly beveled in communication with a device under test, a piston within the chamber, and having its side wall inwardly and upwardly beveled, a compression sealing ring interposed between the side wall of the piston and the side wall of the chamber, and a piston rod on the piston in engagement with the free arm of the bell crank, substantially as described.

3. In a testing device of the class described, the combination of an actuating pin, a finger on the same, a hook

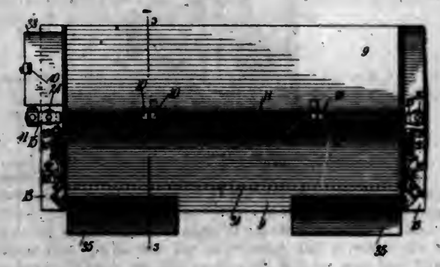
lever suitably pivoted to a stationary portion of the tester, a bell crank lever suitably pivoted to a stationary portion of the tester, a link connecting one arm of the bell crank with one arm of the hook lever, a pneumatic chamber having its walls inwardly and upwardly beveled in communication with a device under test, a piston within the chamber, and having its side wall inwardly and upwardly beveled, a compression sealing ring interposed between the side wall of the piston and the side wall of the chamber, means tending to restore the piston into lowered position against fluid pressure within the chamber, and a piston rod on the piston in engagement with the free arm of the bell crank, substantially as described.

4. In a teting device of the class described, the combination of ap actuating pin, a finger on the same, a hook lever suitably pivoted to a stationary portion of the tester, a bell crank lever suitably pivoted to a stationary portion of the tester, a link connecting one arm of the bell crank with one arm of the hook lever, a pneumatic chamber having its walls inwardly and upwardly beveled in communication with a device under test, a piston within the chamber, and having its side wall inwardly and upwardly beveled, a compression sealing ring interposed between the side wall of the piston and the side wall of the chamber, a spring normally tending to restore the piston into initial position against fluid pressure within the chamber, means for adjusting the tension on said spring, and a piston rod on the piston in engagement with the free arm of the bell crank, substantially as described.

5. In a can testing machine, the combination of a pressure chamber in communication with a device under test, a piston in said pressure chamber, an actuating member, a series of pivoted levers operatively connected at one end to the piston and at the pposite end to the actuating members, said levers amplifying the movements of the piston to effect an operation of the actuating member thereby, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,797. LOADED-TRUCK-COUNTING APPARATUS. RICHARD MCGAHEY, Walla Walla, Wash. Filed Aug. 1, 1911. Serial No. 641,850.



1. In a loaded truck counting apparatus, embodying a plurality of inclined floor sections and a suspension comptometer operating shaft therefor; a lock for said shaft; and means operable by one of said floor sections to release said lock.

2. In a loaded truck counting apparatus, embodying a plurality of inclined floor sections and a suspension comptometer operating shaft therefor; rigid supporting means for said shaft; and means connected with one of said floor sections for removing said supporting means.

3. In a loaded truck counting apparatus, embodying a plurality of inclined floor sections and a suspension comptometer operating shaft therefor; a sliding plate to engage said shaft in locking relation; and means connecting said plate with the free end of one of said sections to be released thereby from engagement with said shaft.

4. In a loaded truck counting apparatus, embodying a plurality of inclined floor sections and a suspension comptometer operating shaft therefor; a locking plate for said shaft; a rocking member for supporting the free end of one of said sections; and means connecting said plate and said member for removing said plate from engagement with said shaft when the free edge of said floor section is depressed.

5. In a loaded truck counting apparatus, embodying a plurality of inclined floor sections and a suspension comptometer operating shaft therefor; a locking plate to support said shaft; a rocking member to support the free edge of one of said floor sections; and means operatively connecting said plate and said member to move the same in unison.

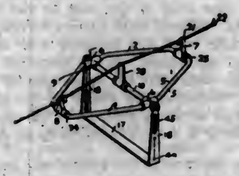
[Claims 6 and 7 not printed in the Gazette.]

1,013,798. FLUE OR DRAFT MOTOR. JOSEPH MESSINA, New Orleans, La. Filed June 3, 1911. Serial No. 631,175.

1. In a fluid motor, the combination of a rotatably mounted vane wheel provided with an annular series of apertures within the inner ends of the vanes thereof, and a stationary, hollow, conical deflector concentrically supported with the periphery of its open base adjacent to the pressure face of said wheel and circumscribing such annular series of apertures, substantially as described.

2. In a fluid motor, the combination of a rotatably mounted vane wheel provided with a series of apertures within the inner ends of the vanes thereof, a hollow, conical deflector stationarily supported with the periphery of its open base adjacent to the pressure face of said wheel and circumscribing such series of apertures, and a conduit surrounding said wheel and terminating in an outwardly flared open end positioned coaxially with said conical deflector.

1,013,799. SIGHT-SQUARE. FERDINAND P. MEYER, New York, N. Y. Filed Dec. 22, 1910. Serial No. 598,675.



1. In a sight square, a frame adapted to be hung from a supporting member, a sighting vane hanging vertically from said frame, and means on said frame, whereby said frame may be adjusted transversely of said supporting member.

2. In a sight square, a frame having sighting means therein, hooks projecting from opposite ends of said frame, and means for varying the location of one of said hooks with reference to said frame.

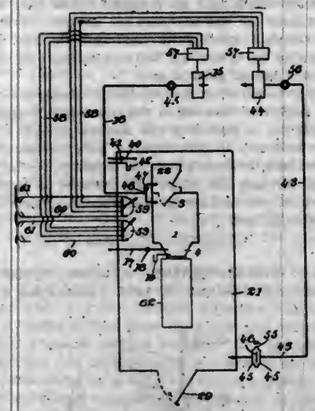
3. In a sight square, a frame, supporting elements extending from said frame and adapted to grip a base wire, and means extending from said frame intermediate said supporting elements, whereby said frame is immovably retained in position upon said base wire.

4. In a sight square, an open framework, means extending diametrically across said framework to reinforce the same, and a sight vane free to swing on said means.

5. In a sight square, having sighting means therein and comprising a framework positioned below a suspending wire and supported from the same by hooks extending therefrom, a transverse member connecting opposite sides of said framework, and a clamp positioned in said member and adapted to engage said supporting wire, whereby the device is locked to said wire.

[Claims 6 to 9 not printed in the Gazette.]

1,013,800. APPARATUS FOR CONDUCTING THORACIC OPERATIONS. WILLY MEYER and JULIUS MEYER, New York, N. Y., assignors to the people of the United States. Filed July 28, 1911. Serial No. 641,149.



1. A surgical apparatus comprising in combination two chambers of airtight construction having an opening between through which the head of a patient may project, and means for increasing the air pressure in one chamber above that of the atmosphere, and for reducing the air pressure in the other chamber below that of the atmosphere.

2. A surgical apparatus comprising in combination two chambers of airtight construction having an opening between through which the head of a patient may project, and means for varying the air pressure in both chambers.

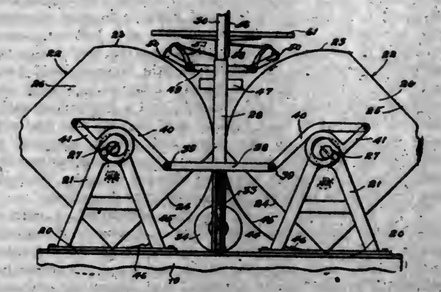
3. A surgical apparatus comprising in combination two chambers of air tight construction having an opening between through which the head of a patient may project, and means for increasing the air pressure in one chamber above that of the atmosphere, and for reducing the air pressure in the other chamber below that of the atmosphere, said means comprising an air pump having its discharge port connected with the first chamber and a second air pump having its intake connected with the second chamber, motors for driving said pumps, means for controlling the outflow of air from the first chamber and means for controlling the inflow of air to the second chamber.

4. A surgical apparatus comprising in combination two chambers of air tight construction having an opening between through which the head of a patient may project, and means for increasing the air pressure in one chamber above that of the atmosphere, and for reducing the air pressure in the other chamber below that of the atmosphere, the walls of the first chamber being formed of an open framework and a covering of flexible airtight material inside said framework, and the walls of the second chamber being formed of a similar framework and a covering of airtight material outside of said framework.

5. In a surgical apparatus the combination of an airtight chamber having an opening in one of its walls, a tapering head box projecting therefrom, said head box having an opening through which the head of a patient may be inserted into said head box, means for supporting the body of the patient outside of said chamber, an air inlet, an air outlet, means for forcing a stream of air through the inlet and means for varying the cross section of the outlet whereby the air pressure in the chamber may be varied.

[Claims 6 to 18 not printed in the Gazette.]

1,013,801. DUMPING-CAR. GEORGE ALEXANDER MINETTI, Davenport, Iowa. Filed Apr. 25, 1911. Serial No. 623,204.



1. In a dumping car of the class described, the combination of a plurality of oscillatable hoppers adapted normally to remain in upright position, and actuating mechanism therefor, comprising piston mechanism operated by a medium under pressure and located intermediate said hoppers, a slidable support operatively connected with said piston and adapted to be raised thereby, and connecting arms extending from said slidable support to each of said hoppers to oscillate the same simultaneously, said arms being symmetrically arranged and oppositely disposed with respect to the said slidable support, whereby the oscillating forces are equalized, substantially as described.

2. In a dumping car of the class described, the combination of a plurality of oscillatable hoppers adapted normally to remain in upright position, and actuating mechanism therefor, comprising piston mechanism operated by a medium under pressure and located intermediate said hoppers, a slidable support operatively connected with said piston mechanism and adapted to be raised thereby, and connecting arms extending from said slidable support to each of said hoppers to oscillate the same simultaneously, said arms being symmetrically arranged and oppositely disposed with respect to the said slidable support whereby the oscillating forces are equalized, and locking means operated in conjunction with the actuating mechanism for normally preventing movement of said hoppers, substantially as described.

3. In a dumping car of the class described, the combination of a plurality of oscillatable hoppers adapted normally to remain in upright position, and actuating mechanism therefor, comprising piston mechanism operated by a medium under pressure and located intermediate said hoppers, a slidable support operatively connected with said piston mechanism and adapted to be raised thereby, and connecting arms extending from said slidable support to each of said hoppers to oscillate the same simultaneously, said arms being symmetrically arranged and oppositely disposed with respect to the said slidable support whereby the oscillating forces are equalised, and locking means operated in conjunction with the actuating mechanism for normally preventing movement of said hoppers, said locking means comprising a pivotally swinging lock-

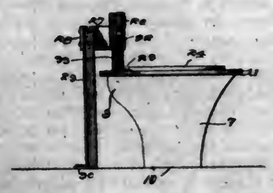
ing arm adapted normally to prevent oscillation of said hoppers, a shoulder adjacent the swinging end of said arm, a bow-shaped dog pivoted at a point substantially above said shoulder and adapted to bear its acting end thereagainst, a chain secured to said dog and said arm and hanging loosely therebetween, and means operated in conjunction with the said actuating mechanism for retracting said chain a determined distance whereby the acting end of said dog is disengaged from said shoulder to permit upward swinging of said locking arm, substantially as described.

4. In a dumping car of the class described, the combination of a plurality of oscillatable hoppers adapted normally to remain in upright position, and actuating mechanism therefor, comprising piston mechanism operated by a medium under pressure and located intermediate said hoppers, a slidable support operatively connected with said piston mechanism and adapted to be raised thereby, and connecting arms extending from said slidable support to each of said hoppers to oscillate the same simultaneously, said arms being symmetrically arranged and oppositely disposed with respect to the said slidable support whereby the oscillating forces are equalized, and locking means operated in conjunction with the actuating mechanism for normally preventing movement of said hoppers, said locking means comprising a locking arm adapted to engage and prevent oscillation of said hoppers, and a gravity actuated member adapted to bear against said locking arm and prevent displacement of the same, and means operated in conjunction with the said hopper actuated mechanism for retracting said gravity actuated member whereby the locking arm may be released, substantially as described.

5. In a dumping car of the class described, a pair of oscillatable hoppers adapted normally to remain in upright position, piston mechanism for operating the same located intermediate said hoppers, and actuating arms connected therewith symmetrically arranged and oppositely disposed with respect to said mechanism, whereby the oscillating forces are equalized, in combination with locking means operated in conjunction with said piston mechanism for normally preventing movement of said hoppers, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,013,802. COMMODE. THOMAS E. MORGAN, Starkweather, N. D. Filed Apr. 27, 1911. Serial No. 623,687.

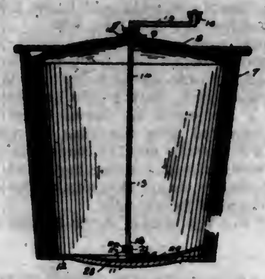


1. A commode comprising a bowl, a flue therefor, an upper flue section telescoping with said bowl flue section, said upper flue section being provided with a laterally projecting arm, said arm terminating in a flange, a supporting standard to which said flange is fastened, and flat divergent feet carried by said standard.

2. In a commode, a flue, an arm extending from said flue and having its outer end bent at an angle, and a standard formed of angle iron secured to the bent end portion of said arm and having its lower end portion split and bent to form diverging feet.

1,013,803. MIXER AND STIRRER. OLIVER C. NILSON, Carthage, Mo. Filed May 13, 1911. Serial No. 626,956.

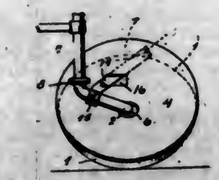
1. A mixer and stirrer comprising a receptacle, a cover therefor, provided with a central projection, said projection being provided with an opening, a shaft extending through said opening, said shaft being provided with a handle, a blade provided with a shank having upper and lower spaced parallel flanges, said flanges being provided with alined openings through which the lower portion of the shaft extends, and means extending through said shaft and engaging said shank to support and prevent rotation of said shank relative to said shaft.



2. A mixer and stirrer comprising a receptacle, a cover therefor provided with a bearing opening, a shaft extending through said opening, means for rotating said shaft, a flat blade provided with an integral shank that is bent to provide a pair of spaced parallel flanges having alined openings through which said shaft extends, and removable means carried by said shaft for supporting and preventing relative rotation of said shank.

3. A mixer and stirrer comprising a receptacle, a cover therefor, a shaft journaled in the cover and projecting into the receptacle, a stirrer blade having a shank provided with a rebent end to form spaced parallel flanges having alined openings through which the shaft projects, and a pin extending through the shaft and forming a seat for said shank and having end hooks that engage opposite edges of one of said flanges.

1,013,804. WHEEL-FENDER. JULIUS NITZSCHE, Wisner, Nebr. Filed June 26, 1911. Serial No. 635,337.



The combination with an axle, a wheel rotatably mounted thereon, a fender comprising a circular disk disposed adjacent one side of the wheel and having an opening formed eccentrically therethrough for receiving the axle, said disk being provided upon its upper portion with a laterally extending flange spanning the upper portion of the periphery of the wheel, said disk having the lower portion of its periphery coinciding with the lower portion of the periphery of the wheel and the upper portion of its periphery extending beyond the upper portion of the periphery of said wheel to form a space between the wheel and the laterally extending flange, means for rigidly connecting the disk with the axle, and a scraper attached to the axle and extending through an opening in the disk to be positioned adjacent the periphery of the wheel within the space formed between said flange and the wheel.

1,013,805. RAZOR. CHARLES H. OCUMPAUGH, Rochester, N. Y. Filed Feb. 15, 1910. Serial No. 544,112.

1. In a safety razor, the combination of a two edged razor blade, a holder to support the blade and provided on one edge with a guard, located adjacent one edge of said blade, a clamp fitting over the blade and provided on its edge with a guard located adjacent the opposite edge of said blade, the two guards being on opposite sides of the blade, and each being in a different relative position with respect to the cutting edge than the position of the other guard with respect to the other cutting edge, and means for securing the clamp blade and holder together.

2. In a safety razor, the combination of a curved two edged razor blade having reinforcing means at its ends to permanently curve it in cross section, a curved holder provided on one of its edges with a guard located adjacent one edge of said blade, a curved clamp fitting over the blade and provided on its edge with a guard located adjacent the opposite edge of said blade, the two guards being on opposite sides of the blade and each in a different horizontal plane, and each being in a different relative position with respect to the cutting edge than the position of the other guard with respect to the other cutting edge, and means for securing the clamp blade and holder together.

3. In a safety razor, the combination of a curved two edged razor blade formed with an opening, a curved holder to support the blade and provided on one edge with a guard located adjacent one edge of said blade, said holder having an opening, a handle having a threaded opening, a curved clamp fitting over the blade and provided with a screw which passes through the openings in the blade and holder and engages the threads in the opening in the handle, and said clamp having a guard located adjacent the opposite edge of said blade, the two guards being on opposite sides of the blade, and each being in different relative position with respect to the cutting edge than the position of the other guard with respect to the other cutting edge.

4. In a safety razor, the combination of a two edged razor blade, a holder to support the blade and provided on one edge with a guard located adjacent one edge of said blade, a clamp fitting over the blade and provided on its edge with a guard located adjacent the opposite edge of said blade, the two guards being on opposite sides of the blade, and each being in a different relative position with respect to the cutting edge than the position of the other cutting edge, means for securing the clamp blade and holder together, and lugs extending from the clamp to engage the blade to hold the latter and clamp in relative position while the securing means are being tightened.

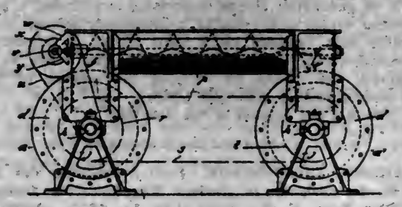
1,013,806. VALVE. JAMES OGG, Pahala, Hawaii. Filed Apr. 22, 1910. Serial No. 556,921.

1. A valve comprising a valve casing body having its bore reduced intermediate of the ends thereof and provided with a valve seat at the upper end of the reduced bore, a lateral inlet above the valve seat and an outlet at its lower end, a cap screwing into the upper end of the casing body and having its inner end reduced and terminating a short distance above the valve seat, said cap being provided with two chambers of unequal size, the larger chamber leading out through the inner reduced end of the cap, a valve adapted to seat on said valve seat and having stems on its upper and lower faces, the stem on the lower face of the valve being triangular in cross section and projecting through the reduced bore of the casing body and the stem on the upper face extending through the larger chamber of the cap into the smaller chamber thereof, a spring surrounding the upper valve stem with one end engaging the valve and its other end engaging the upper end of the larger chamber of the cap, and a member mounted in the lower end of the casing body below this lower valve stem and engaging the same to raise the valve from its seat.

2. A valve, comprising a valve casing body having its bore reduced intermediate of the ends thereof and provided with a valve seat at the upper end of the reduced bore, a lateral inlet above the valve seat, and an outlet at the lower end of the body, a cap screwing into the upper end of the casing body and provided with two chambers of unequal size, a valve adapted to seat on the valve seat and having stems on its upper and lower faces the stem on the lower face being polygonal in cross section and projecting through the reduced bore of the casing body and the stem on the upper face extending through the larger chamber of the cap into the smaller chamber, a spring in the larger chamber of the cap and surrounding the upper valve stem, and a stem mounted in the lower end of the casing body and provided with an eccentric engaging the lower end of the polygonal valve stem.

3. A valve comprising a casing having an inlet and an outlet, a valve seat intermediate the inlet and the outlet, a valve chamber at one end of which is the said valve seat, a valve in the said casing and adapted to normally engage the said valve seat, a triangular valve stem secured to one face of the said valve and extending through the said valve chamber, manually-controlled eccentric means mounted on the said casing and adapted to engage the said valve stem to operate the same, a guiding valve stem secured to the other face of the said valve, a spring encircling the said guiding valve stem and adapted to control the said valve, a cap removably secured to the said casing, a chamber in the cap for the reception of the said guiding stem, and a second chamber in the cap for the reception of the said spring.

1,013,807. APPARATUS FOR WASHING COFFEE AND THE LIKE. ROBERTO OKRASSA, Antigua, Guatemala. Filed Sept. 30, 1911. Serial No. 652,171.

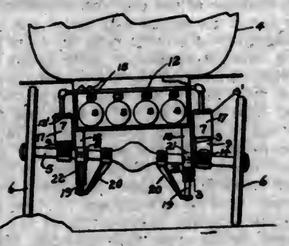


1. The improved coffee washing apparatus, comprising, in combination, a plurality of separated cylinders disposed parallel to each other, inlet and discharge hoppers fitted to the ends of each cylinder, a revoluble beater-drum fitted within each cylinder, a perforated conveyer trough disposed transversely of the axes of the cylinders and connecting the discharge hopper of one cylinder with the inlet hopper of an adjoining cylinder, and a rotary conveyer working in said trough.

2. The improved coffee washing apparatus, comprising in combination, a pair of corrugated cylinders disposed parallel to each other and each provided with inlet and discharge hoppers, standards located outside said cylinders, drums, one on each shaft, each drum fitted within a cylinder, said drums being provided with radially projecting beaters disposed obliquely to the axes of their respective shafts, a rotary conveyer disposed transversely of the axes of the cylinders, a perforated trough connect-

ing the discharge hopper of one cylinder with the inlet hopper of the other cylinder and in which said conveyer works, means for driving the shafts, and means for driving the conveyer.

1,013,808. PNEUMATIC SPRING FOR VEHICLES. CHARLES R. PALMER, Cincinnati, Ohio. Filed Dec. 16, 1910. Serial No. 597,673.



1. In combination with a vehicle body and its supporting frame, pneumatic springs located between the body and the frame, pressure tanks communicating with said springs, and valves for varying the number of tanks communicating with said springs.

2. In combination with the body and the supporting frame of a vehicle, pneumatic springs located between said body and said frame and comprising cylinders, compressible tubes located within said cylinders, and pistons located between said cylinders and adapted to operate to compress said tubes, a plurality of tanks communicating with said tubes, and valves for controlling the communication between each tank and said tubes.

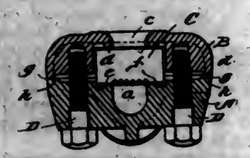
3. A pneumatic spring comprising a cylinder, a piston located within said cylinder and provided with an integrally formed annular apron which surrounds said cylinder, a pneumatic bellows located within said cylinder below said piston, and a source of pneumatic pressure communicating with said bellows.

4. A pneumatic spring comprising a cylinder, a piston located within said cylinder, a pneumatic bellows located within said cylinder below said piston, a source of pneumatic pressure communicating with said bellows, and means for varying the effective operating pressure within said bellows.

5. A pneumatic spring comprising a cylinder, a piston located within said cylinder, a pneumatic bellows located within said cylinder below said piston, a plurality of pressure tanks, means for connecting said tanks to said bellows, and means for varying the number of tanks in communication with said bellows.

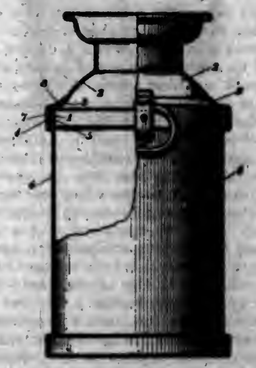
[Claim 6 not printed in the Gazette.]

1,013,809. LIQUID-GAGE. PAUL PANHORST, New York, N. Y., assignor to Nathan Manufacturing Company, New York, N. Y. Filed Aug. 14, 1911. Serial No. 643,946.



In liquid gages of the class described, the combination with a glass, of a casing consisting of a body and cap between which the glass is interposed and held, said parts contacting with each other along their outer edges only and being provided for this purpose with outer bearing ribs or faces extending practically the length of the casing which meet when the two parts of the casing are fitted together, and being also provided with inner bearing faces which take upon the outer edges of the opposed faces of the glass, and fastening bolts located between the outer and inner sets of bearing faces on each side of the glass, and operating to draw the same together, the outer faces upon each other and the inner faces upon the glass, substantially as and for the purposes hereinbefore set forth.

1,013,810. MILK-CAN. EDWARD M. PEACOCK, Jersey City, N. J., assignor to Dairymen's Manufacturing Company, a Corporation of New York. Filed Sept. 15, 1911. Serial No. 649,558.



1. In a milk can or the like, a breast including a cylindrical portion surmounted by a frusto-conical portion, and a cylindrical body having an annular offset at its upper end fitting over the cylindrical portion of the breast and having an inwardly turned flange at the top of the offset, the offset making a flush joint on the inside of the can between the walls of the body and of the cylindrical portion of the breast below the top of the cylindrical body.

2. In a milk can or the like, a breast including a cylindrical portion surmounted by a frusto-conical portion, and a cylindrical body having an annular offset at its upper end fitting over the cylindrical portion of the breast and having an inwardly turned flange at the top of the offset fitting over the bottom of the frusto-conical portion of the breast, the offset making a flush joint on the inside of the can between the walls of the body and of the cylindrical portion of the breast below the top of the cylindrical body.

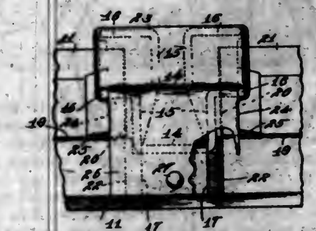
3. In a milk can or the like, a breast including a cylindrical portion surmounted by a frusto-conical portion, a reinforcing hoop surrounding the cylindrical portion of the breast, and a cylindrical body having an annular offset at its upper end fitting over the cylindrical portion of the breast and over the reinforcing hoop and terminating in a flange at the top of the offset inwardly turned over the top of the reinforcing hoop, the offset making a flush joint on the inside of the can between the walls of the body and of the cylindrical portion of the breast.

4. In a milk can or the like, a breast including a cylindrical portion surmounted by a frusto-conical portion, a reinforcing hoop surrounding the cylindrical portion of the breast, and a cylindrical body having an annular offset at its upper end fitting over the cylindrical portion of the breast and over the reinforcing hoop and terminating in a flange at the top of the offset inwardly turned over the top of the reinforcing hoop and overlapping the bottom of the frusto-conical portion of the breast, the offset making a flush joint on the inside of the can between the walls of the body and of the cylindrical portion of the breast.

5. In a milk can or the like, a breast including a cylindrical portion having an outwardly turned flange at its bottom and surmounted by a frusto-conical portion, a reinforcing hoop surrounding the cylindrical portion of the breast and resting on the outwardly turned flange, and a cylindrical body having an annular offset at its upper end fitting over the cylindrical portion of the breast and terminating in an inwardly turned flange locking over the top of the reinforcing hoop, the offset making a flush joint on the inside of the can between the walls of the body and of the cylindrical portion of the breast.

[Claims 6 to 11 not printed in the Gazette.]

1,013,811. CAR-ROOF. JOHN PEARSON, Chicago, Ill. Filed May 26, 1911. Serial No. 629,675.



1. A trough-shape metal carline having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends.

2. In a car-roof, a plurality of trough-shaped metal carlines having lateral flanges on the upper face and the trough-portion being wider in cross-section at its ends, metal panels having upturned side flanges under the lateral flanges of the carlines, and caps on the carlines each having a top and sides covering the joint between two panels, the sides of the cap overlying the lateral flanges of the carlines and the upturned flanges of adjacent panels at a distance therefrom.

3. In a car-roof, a plurality of trough-shape metal carlines having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends, purlins into which the carlines are stepped, panels on the purlins and having upturned flanges under the lateral flanges of the carlines, and caps on the carlines having tops and sides covering the joints between adjacent panels, the sides of the caps being inturned under the lateral flanges of the carlines and resting at their edges on the panels at a distance from the upturned flanges thereof.

4. In a car-roof, a plurality of trough-shape metal carlines having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends, purlins secured to the undersides of the carlines, roof-panels having upturned flanges adjacent the carline-webs, and carline-caps of inverted trough shape having tops and sides embracing the lateral flanges of the carlines and overlapping the upturned flanges of adjacent panels.

5. In a car-roof, side-plates, a ridge-pole, a series of purlins, a series of metallic body-carlines extending the width of the car above the pole and purlins and U-shape in cross-section with lateral flanges, means to secure the carlines to the pole and to the purlins at their intersections therewith, rectangular metallic panels overlying the purlins intermediate the carlines and having upturned edges lying adjacent the carlines, and caps on the carlines having inturned sides embracing the lateral flanges of the carlines and covering the upturned flanges of adjacent panels, and the carlines having their outer ends turned down over the side-plates.

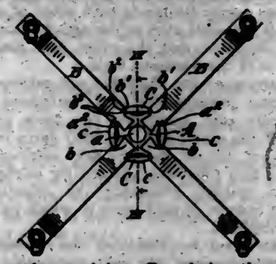
[Claim 6 not printed in the Gazette.]

1,013,812. CONVERTIBLE WRENCH. JOSEPH W. PERKINS and DANIEL W. ROBERTS, Youngstown, Ohio. Filed July 6, 1910. Serial No. 570,668.

A convertible wrench comprising a tool-shank carrying an outer jaw having upon its inner side a flat gripping face, a tubular handle-member slidably and adjustably mounted on the tool-shank and carrying an inner jaw provided with oppositely arranged toothed gripping surfaces and formed between the said surfaces with a depression constituting a seat of tapering depth, an auxiliary jaw-piece slidably mounted on the tool-shank between the two jaws

and provided upon one side with a plain flat face, and upon its opposite side with a centrally arranged projecting toothed wedge adapted to lie in a plane between and oppose said toothed gripping surfaces, and also adapted to be completely housed within the said seat, and reversible fastenings for securing the auxiliary jaw piece to either jaw.

1,013,813. BASE FOR REVOLVING OFFICE-CHAIRS. ARTHUR D. PETTIBONE, Cleveland, Ohio, assignor to The B. L. Marble Chair Company, Bedford, Ohio, a Corporation of Ohio. Filed Feb. 10, 1911. Serial No. 607,762.



1. In a base for revolving office chairs, the combination of a central metal core; legs secured to and projecting laterally from said core; separate filler members placed between and secured in the space formed by adjacent legs and extending from leg to leg, one end of said core being formed with a flange; a plate secured to the other end of said core; said filler members extending between and abutting the opposing faces of said plate and flange.

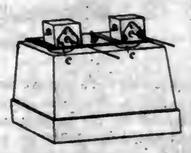
2. In a base for revolving office chairs, the combination of a central metal core; legs suitably secured to and projecting laterally from said core; that portion of the sides of the legs adjacent to said core being formed with channels; opposing channels of adjacent legs forming a dovetail groove; and filler members seated in said grooves, whereby such members form irremovable lateral braces for the legs as well as coverings for said core.

1,013,814. HAT-PIN-POINT PROTECTOR. FRANK REICHENBACH, Joliet, Ill. Filed Sept. 6, 1911. Serial No. 647,814.

A hatpin protector comprising a conical-shaped hollow body having the lower end thereof reduced to provide a seat, a gripping member arranged upon said seat and hav-

ing oppositely disposed arms with some of said arms of a greater length than the other arms and the upper ends of said arms bent to provide teeth adapted to grip a hatpin placed in said body, a funnel-shaped mouthpiece carried by the upper end of said body, and a horizontal brace arranged in said body for the lower end of said mouthpiece.

1,013,815. STEREOSCOPIC CAMERA. JULES RICHARD, Paris, France. Filed Feb. 26, 1908. Serial No. 417,900.



1. In an optical device for obtaining non-reversed negatives in sterescopic cameras, the combination with the two objectives of the stereoscopic camera, of two tetrahedra, each tetrahedron presenting two faces perpendicular the one with the other, and two other faces each inclined at an angle of 45° to the two first mentioned faces, and means whereby the said tetrahedra are adapted to be arranged in front of the two objectives of the camera, so that one of the two faces perpendicular to each other of each of said tetrahedra is perpendicular to the optical axis of the corresponding objective, and the other face constitutes the entrance face of the inminous rays.

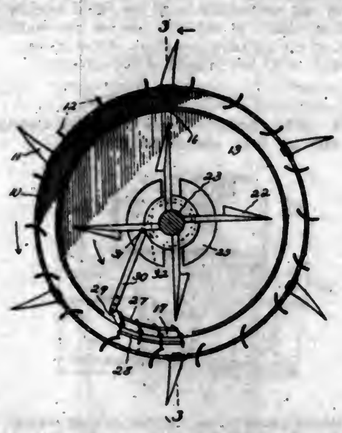
2. An instrument for obtaining non-reversed negatives in stereoscopic cameras, the said instrument comprising two tetrahedra each presenting two faces perpendicular the one with the other, and two other faces each inclined at an angle of 45° to the two first mentioned faces, a plate having two tubulures adapted for engagement with the tubular casings containing the objectives of the camera, and casings on said plate in which the said tetrahedra are mounted.

3. An instrument for obtaining non-reversed negatives in stereoscopic cameras, the said instrument comprising a plate adapted to be mounted upon a stereoscopic camera, and having two tubulures adapted for engagement with the two tubular casing containing the objectives of the camera, the said plate being provided with recesses, two casings mounted to slide in said recesses, the said casings being open on the sides corresponding to the entrance and exit of the light rays, and a tetrahedron mounted in each of said casings, each tetrahedron presenting two faces perpendicular the one with the other and two other faces each inclined at an angle of 45° to the two first mentioned faces.

4. The combination with a stereoscopic camera having two tubular casings containing objectives both of same focal length, of a plate having tubulures adapted to engage the tubular casings containing the said objectives, casings adjustable on said plate and open on the two sides corresponding to the entrance and exit of the light rays, and a tetrahedron contained in each of said adjustable casings, and arranged in front of the corresponding objectives, each of said tetrahedra presenting two faces perpendicular the one with the other, and two other faces each inclined at an angle of 45° to the two first mentioned faces, each tetrahedron being so mounted in its casing that the two faces perpendicular to each other constitute respectively the entrance and exit faces of the light rays, the said inclined faces of the tetrahedra reflecting the images and reversing them in both the vertical and the lateral direction, and the objectives of the camera again reversing them in both directions.

1,013,816. THRESHING-MACHINE. EDWIN F. RICHMOND, Lake Charles, La. Filed Oct. 2, 1911. Serial No. 652,349.

1. In a device of the character described, the combination in a threshing machine structure, of a picker device, means for spreading matter from said picker device, means for forcing a blast of air through the matter while in a spread condition, and a plurality of adjustable shutters arranged in the path of said air blast for controlling the same.



2. In a device of the character described, the combination in a threshing machine structure, of a drum for spreading grain, a screen for supporting the grain while in a spread condition, a fan, a housing for said fan formed with an opening for directing the air blast from the fan toward said screen, and a plurality of pivotally adjustable shutters arranged in said opening.

3. In a device of the character described, the combination in a threshing machine, of means for spreading grain, means for forcing an air blast through said grain, a housing surrounding said last mentioned means formed with an opening through which said air blast passes, a plurality of pivotally mounted shutters arranged in said opening and designed to be moved for closing to any desired extent said opening, means connecting all of said shutters for causing the same to act simultaneously, a controlling lever, and a plurality of means connecting said controlling lever and said shutter, whereby said controlling lever may adjust the shutters as desired.

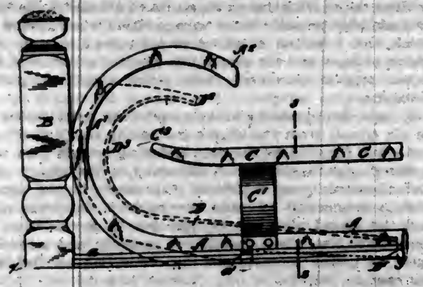
4. In a device of the character described, the combination in a threshing machine structure, of a picker drum, a screening arranged at one side of the picker drum, a spreading drum adapted to take the grain from said picker drum and spread the same in a sheet over said screening, a fan for creating a blast of air, and a plurality of guiding shutters arranged to guide said blast of air so that the same will pass through said screening and the grain thereon in a direction at substantially right angles to the travel of the grain.

5. In a device of the character described, the combination in a threshing machine structure, of a picker drum, means for receiving straw from the picker drum, a spreading drum for forcing straw from the picker drum to said means for receiving the straw, a fan, a housing for said fan formed with a discharge opening, a plurality of guiding shutters arranged in said discharge opening for guiding air from said fan so that the same will pass through said straw after the same has been spread, and means for adjusting the angle of said guiding shutters.

[Claim 6 not printed in the Gazette.]

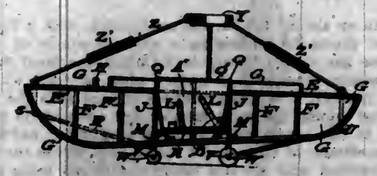
1,013,817. BOWLING-ALLEY BALL-RETURNWAY. PARIS J. RIDDELL, New York, N. Y., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y., a Corporation of New York. Filed Apr. 21, 1910. Serial No. 556,805.

1. In a ball returnway mechanism the combination with a receiving rack; and a return chute lower than said rack terminating in a segmental track overhanging said rack; of a separate track segment of greater curvature adapted to be removably supported in conjunction with said return chute, and overhang said rack.



2. An attachment for the loop-the-loop type of ball returnway,—which has a receiving rack and a segmental track overhanging said rack,—said attachment comprising a member provided with a supplemental ball track having an inclined portion, and a curved portion of greater curvature than the segmental portion of the main track, to overhang the said receiving rack, and adapted to be held in position to home the smaller series of alley balls.

1,013,818. PROPELLING DEVICE FOR LAND AND WATER. MAURICE ROCHAT, New York, N. Y. Filed Feb. 28, 1911. Serial No. 611,439.



1. In a propelling device for land and water, a carriage composed of a crib, a frame therefor and running gear, and a float adapted to occupy said crib and connected with the same and said frame.

2. In a propelling device for land and water, a carriage having a crib, a frame therefor, running gear, and means on the frame of the carriage and crib to hold a float thereon.

3. In a propelling device for land and water, a carriage having a crib, and a float on said crib, said float comprising a frame with a water and air-tight covering adapted to be inflated, and a foot-receiving chamber within the frame of said float.

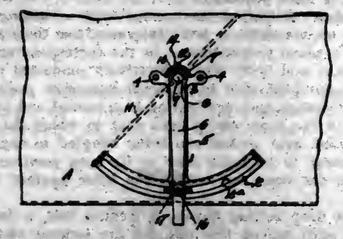
4. In a propelling device for land and water, a float comprising a frame composed of a keel-piece, top members, and ribs connected with said piece and members, a water and air-tight covering for said frame, a foot-receiving chamber within said frame, a crib, and means on said crib for connecting said float therewith.

5. In a propelling device for land and water, a float having a foot receiving chamber in the frame thereof, a carriage having a crib, running gear therefor, a frame on the latter with looped members on its ends, and a float adapted to occupy said crib and have its bow and stern portions fitted in said members, a foot rest in said chamber of the float, and means for connecting said rest with the frame of the carriage.

[Claims 6 to 13 not printed in the Gazette.]

1,013,819. DAMPER. HEYMAN ROSENBERG, New York, N. Y. Filed Aug. 30, 1911. Serial No. 646,204.

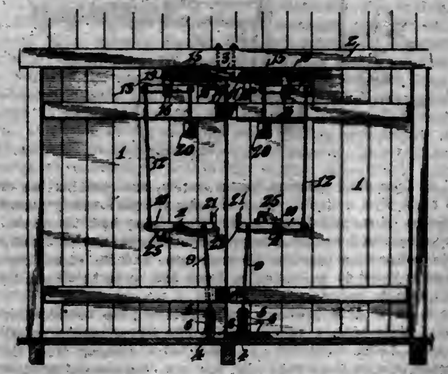
1. A frame adapted for attachment to a duct or the like, the lower end of said frame being curved, said curved end being provided with a slot, a handle having an opening adapted to receive the end of a damper-spindle, a projection located at the upper end of said handle, the upper end of said frame being provided with a slot adapted to receive the projection on said handle, and a thumb-screw carried by said handle and adapted to travel in the slot in the curved lower end of said frame.



2. A frame adapted for attachment to a duct or the like, comprising a head provided with an opening, an offset lower end having a slot, and a bar connecting said head and said offset lower end, a handle having an opening adapted to receive the end of a damper-spindle, a projection located at the upper end of said handle, a rail carried by the upper end of said frame, said rail being positioned away from the face of said frame, whereby a slot, adapted to receive the projection on said handle, is provided, and a thumb-screw carried by said handle adapted to travel in the slot in the curved lower end of said frame.

3. A frame comprising a head provided with an opening, the lower end of the frame having a curved slot, a handle having an opening in alinement with the opening in said head, a curved rail at the upper end of said frame, said rail being positioned away from the face of the frame so as to form a slot therebetween, and a teat on the head of said handle entering said slot, togther with means for holding the handle in desired position along said slot in the lower end of the frame.

1,013,820. DOOR-BOLTING DEVICE. JOHN M. SAUSSER, Osnaburg, Ohio. Filed Feb. 28, 1910. Serial No. 546,407.



1. A door bolting device comprising a locking bolt mounted on the door, a lever fulcrumed on the door independent of the bolt mounting and movable on an axis perpendicular to the face of the door upon which it is mounted to move in a plane parallel with the said face of the door, said lever having one end projecting through the door and adapted to engage a fixed element to thereby hold the door in the open position, and connections between the lever and the locking bolt.

2. A door bolting device comprising a locking bolt mounted on the door, and a lever operatively connected to the bolt, said lever being fulcrumed on the inner face of

the door to move about an axis perpendicular to the door in a plane parallel with the corresponding face of the door, said lever being also provided with a hooked end extending through the door at an angle to the length of the lever to engage a fixed element and thereby hold the door in the open position.

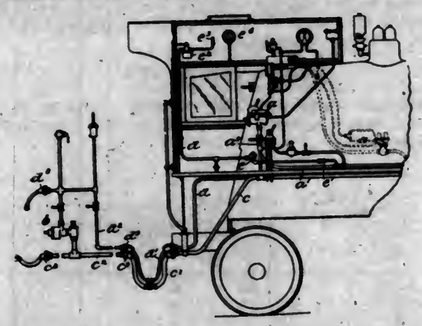
3. A door bolting device comprising a locking bolt mounted on the door, a lever fulcrumed on the door to move in a plane perpendicular to the corresponding face of the door, said lever being operatively connected to the bolt and provided with an integral extension projecting through the door and terminating in a hooked end beyond the face of the door remote from that to which the lever is fulcrumed, said hooked end being adapted to engage a fixed element to hold the door in its open position, and means on the door for locking the lever against movement.

4. In a door bolting device, a locking bolt, a bracket provided with spaced bearings for the locking bolt and also having an arm at one end extending to one side of the line of travel of the locking bolt in its bearings, and a lever fulcrumed on said arm and connected to the bolt.

5. In a door bolting device, a locking bolt, a bracket having means for securing it to the door and provided with spaced bearings for the bolt, a spring coiled around the bolt between said bearings, an arm on the bracket at an angle thereto and extending to one side of and at an angle to the line of travel of the bolt, and a lever mounted on the arm and operatively connected to the bolt to move the latter in opposition to the spring.

[Claims 6 to 9 not printed in the Gazette.]

1,013,821. SAFETY DEVICE FOR FLUID-PRESSURE BRAKE SYSTEMS. WILLIAM H. SAUVAGE, New York, N. Y., assignor of one-half to Vance S. Manson, New York, N. Y. Filed Sept. 28, 1910. Serial No. 584,231.



1. In a fluid pressure brake system, the combination of a train pipe, a signal pipe, a cab signal, and a safety signal device connected between the train pipe and the signal pipe remote from the cab, said safety signal device closing the connection between the train pipe and the signal pipe and adapted to be opened by hand and to be held open by train pipe pressure.

2. In a fluid pressure brake system, the combination of a train pipe, a signal pipe, a cab signal, and a safety signal device comprising a check valve opening from the train pipe to the signal pipe, and a spring-pressed plunger holding the check valve to its seat and movable by hand to release the check valve and adapted to be held in open position by the train pipe pressure.

3. In a fluid pressure brake system, the combination of a train pipe, a signal pipe, a cab signal, and a safety device comprising a check valve opening from the train pipe to the signal pipe, and a spring-pressed piston plunger movable by hand to release the check valve and subject to the pressure from the train pipe when the check valve is open to be thereby held in open position.

4. In a fluid pressure brake system, the combination of a train pipe, a signal pipe, a cab signal, and a safety signal device comprising a check valve opening from the train pipe to the signal pipe, a spring-pressed piston plunger holding the check valve to its seat and adapted to be held by train pipe pressure in its open position when opened by hand, and a second check valve interposed between the piston plunger and the signal pipe whereby pressure in the signal pipe is prevented from acting upon the piston plunger.

5. In a fluid pressure brake system, the combination of an air circuit from the engine cab to the rear end of the train and forward to the cab, including a train pipe and a signal pipe, a cab signal connected to the signal pipe and operated by a reduction of pressure in the signal pipe, a connection on each car between the train pipe and the signal pipe, means operated by a reduction of pressure to close the connection on each car, and manually operated means to maintain the connection on the rear car open.

[Claims 6 to 8 not printed in the Gazette.]

1,013,822. HEATER. WILLIAM B. SHARP, Chicago, Ill., assignor of one-half to George B. Robbins, Hinsdale, Ill. Filed Feb. 18, 1911. Serial No. 608,455.

1. In an alcohol burner, the combination with a burner cap of means for furnishing a uniform supply of combustible gas to the burner to maintain a normal flame, said means comprising a supply pipe provided with a valve member, a vaporising tube connected with the supply pipe around the valve member and arranged in proximity to the burner and composed of a metal having a high coefficient of expansion, a rod secured within the tube and provided with a valve member, said rod being composed of a material which is non-expansive, and said tube serving as a vaporizer, a conduit for the generated gas and as a thermostatic element, and in connection with the valve member fixed in relation thereto and said first-mentioned valve member constituting the sole means for admitting, regulating and shutting off the supply of liquid fuel, and connections between the delivery end of said tube and the burner to deliver the gas, substantially as described.

2. In a device of the character described, the combination of a burner, a vaporizing expansion tube subjected to the heat of the burner, a chamber member connected to said tube and forming therewith a conduit for the passage of a fluid fuel for said burner, a distributing rod secured in said tube and chamber, and loose deposit-collector members in said chamber around said rod, and means controlled by the relative expansion and contraction of said conduit and rod to govern the flow of fuel through said conduit to the burner, substantially as described.

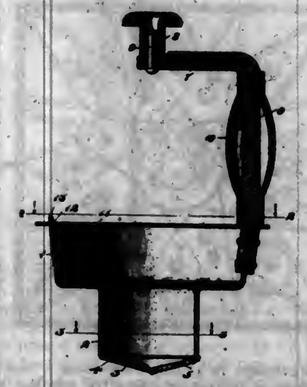
3. In a device of the character described, the combination of a burner, a vaporizing tube, a chambered member in connection with said tube and forming therewith a portion of the conduit subjected to the heat of the burner and acting as a passage for a fluid fuel for said burner, a distributing rod extended through said tube and chamber, loose distributing members in said chamber surrounding said rod, and means to control the flow of fuel through said tube and chamber comprising a member with a valve-seat and port, and a valve on said rod coöperating with said seat, the lengths and coefficients of expansion of said tube and rod being such that the valve and the valve-seat will be separated by the expansion of the conduit due to a normal flame at the burner an amount sufficient only to maintain such normal flame at the burner, whereby said valve acts as a fluid regulator and as a safety shut-off, substantially as described.

4. In a device of the character described, the combination of a burner, a vaporising expansion tube subjected to the heat of said burner and adapted to form a passage for a fluid fuel for said burner, a distributing rod arranged axially in said tube, means carried by said rod to control the flow of fuel though said tube, a chambered member connected to said tube, loose deposit-collecting members in said chambered member, and a deflector adapted to direct heat from said burner to said chambered member, substantially as described.

5. In a device of the character described, the combination of a burner, a vaporising expansion tube affording a passage for a fluid fuel for said burner, a chambered member connected with said tube and forming therewith at least a portion of a conduit for a fluid fuel for said burner, a distributing rod arranged in said tube and chamber, means carried by said rod to control the flow of fuel through said conduit, and a deflector adapted to direct heat from said burner to said chambered member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,823. ICE CUTTING OR SHAVING DEVICE. EDGAR H. SHELDON, Chicago, Ill. Filed Mar. 24, 1904. Serial No. 199,710.



1. A device of the class specified, comprising a rotary bowl adapted to be placed upon the ice and rotated, and having its bottom provided with cutting devices adapted to cut the ice upon the rotation of the bowl, and a crank device attached to the bowl for rotating the same said crank device having a handle substantially in alinement with the axis of rotation of said bowl.

2. A device of the class specified, comprising a bowl having its bottom provided with radially disposed cutting devices, and a crank device having a vertically disposed portion 6 secured to the rim of the bowl and extended upwardly therefrom, and a transverse portion 7 extending transversely to the portion 6 and provided with a hand piece 8 located substantially over the center of the bowl.

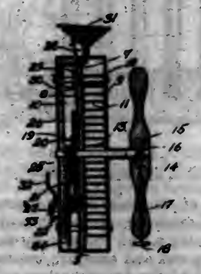
3. A device of the class specified, comprising a bowl consisting of a reduced bottom portion 2 and an enlarged upper portion 1, the bottom portion 2 having its bottom provided with radially disposed cutting devices, and a crank device for rotating the bowl, consisting of a bent member secured to the rim of the enlarged portion 1 of the bowl and having a vertically extending portion 6 and a transverse portion 7, and also having a hand piece 8 located substantially over the center of the bowl.

4. A device of the class specified, comprising a bowl having its bottom provided with a pair of diametrically arranged cutting devices 5, 5, facing in opposite directions, and also provided with apertures 4, 4 in advance of said cutting devices when the bowl is rotated, and a crank handle 6 having its lower end secured to one side of the bowl and being extended upwardly therefrom and having its upper end extending laterally over the bowl and provided with a handle 8 above the center of the bowl.

5. A device of the class specified, comprising a rotary bowl having a reduced lower portion and an enlarged upper portion, cutting devices in the bottom of the bowl adapted to cut upon the rotation of the bowl, and means for rotating the bowl, said means including a handle, etc.

[Claims 6 to 12 not printed in the Gazette.]

1,013,824. MASSAGE-MACHINE. WILLIS G. SHOCKEY, Chicago, Ill. Filed July 15, 1910, Serial No. 572,146. Renewed Oct. 24, 1911. Serial No. 656,487.



1. In a massage machine, the combination of a pivotally mounted funnel-shaped massage member composed of a spirally wound resilient substance, a member having a serrated edge in engagement with the massage member, and means operatively connected for actuating the serrated edge member, whereby the engagement thereof with the massage member will impart a vibratory movement to the latter, substantially as described.

2. In a massage machine, the combination of a pivotally mounted funnel-shaped massage member composed of a spirally wound resilient substance, a member having a serrated edge in engagement with the massage member, means operatively connected for actuating the serrated edge member, whereby the engagement thereof with the massage member will impart a vibratory movement to the latter, and means for controlling the movement of the serrated edge member, substantially as described.

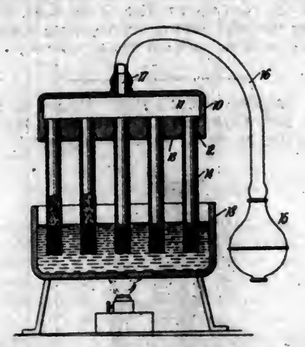
3. In a massage machine, the combination of a casing, a pivotally mounted funnel-shaped massage member composed of a spirally wound resilient substance mounted within the casing and having its acting end extending outside of the casing, a member having a serrated edge, mounted within the casing and positioned to have said edge in engagement with the massage member, whereby the actuation of the serrated edge member will impart a vibratory movement to the massage member, and tension actuated mechanism within the casing, operatively connected to the serrated edge member, for actuating the same, substantially as described.

4. In a massage machine, the combination of a casing, a pivotally mounted funnel-shaped massage member composed of a spirally wound resilient substance mounted within the casing and having its acting end extending outside of the casing, a member having a serrated edge, mounted within the casing and positioned to have said edge in engagement with the massage member, whereby the actuation of the serrated edge member will impart a vibratory movement to the massage member, tension actuated mechanism within the casing, operatively connected to the serrated edge member, for actuating the same, and means for controlling the movement of the serrated edge member, substantially as described.

1,013,825. METHOD OF PRODUCING MOUTHPIECES ON CIGARETTES. LEWIS H. SONDHEIM, New York, N. Y. Filed July 1, 1911. Serial No. 636,360.

1. A method of forming mouth-pieces on cigarettes, consisting in impregnating an end thereof with a binding substance, and producing an air current therethrough.

2. The method of forming mouth-pieces on cigarettes, consisting of impregnating an end thereof with a binding substance while maintaining an air current through the cigarette, from the opposite end toward the impregnated end.



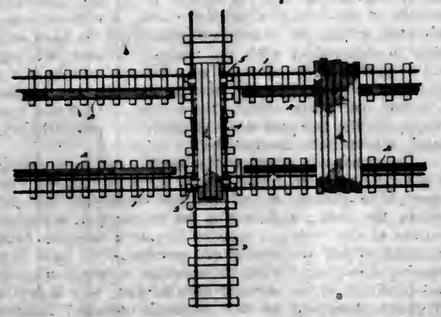
3. A method of forming mouth-pieces on cigarettes, consisting in impregnating an end thereof with a binding substance, producing an air current through the cigarette from the opposite end and opposing an obstruction to the free outlet of air at the impregnating end except at segregated points.

4. The method of treating cigarettes in the formation of mouth-pieces, consisting in applying at an end thereof a substance to form a coating, and passing a current of air through the cigarette from the opposite end to expel any fumes produced by said substance.

5. In the production of a mouth piece on a cigarette end, the herein-described process consisting in immersing the end of the cigarette in a substance made fluid by heat and which sets when cold, withdrawing the immersed end from the said fluid, and subjecting the said end to heat after its withdrawal from the fluid and while maintaining an air current through the cigarette in a direction toward the treated end.

[Claim 6 not printed in the Gazette.]

1,013,826. LUMBER-JACK. JOHN D. STROEMAN, Alameda, Cal. Filed Nov. 29, 1910. Serial No. 594,734. Renewed Nov. 8, 1911. Serial No. 659,252.



1. Means for handling lumber comprising parallel tracks, lumber supports arranged between said tracks, a track at right angles to and crossing the parallel tracks, a lumber conveying car on said angular track, and jacks on said parallel tracks for removing a load from said car and delivering the same to said supports.

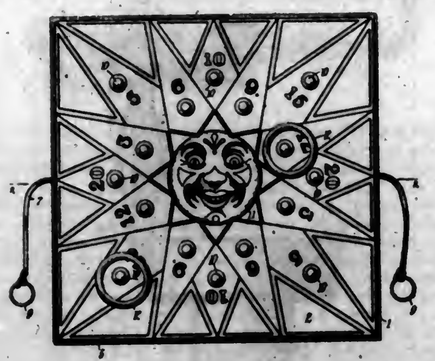
2. Means for handling lumber in bulk comprising parallel tracks, a crossing track at right angles thereto, lumber supports adjacent the parallel tracks, a lumber carrier on the crossing track, and means on said parallel tracks for removing the load from said carrier and delivering the same to said supports.

3. Means for handling lumber in bulk comprising stationary supports arranged in spaced parallel relation, a lumber carrier, and adjustable portable means for engaging the ends of lumber on said carrier and removing the same therefrom and depositing the lumber on said supports.

4. Means for handling lumber in bulk comprising stationary trestles arranged in spaced parallel relation, a carrier for transporting lumber with the ends thereof projecting beyond the ends of the carrier, and adjustable means movable in spaced relation between said trestles for engaging the ends of the lumber to lift the same therefrom and deposit the same on said trestles.

5. Means for handling lumber in bulk comprising spaced parallel tracks and an intersecting crossing track, a carrier on the crossing track, lumber supports arranged in spaced parallel relation between the parallel tracks, and adjustable means on the parallel tracks for removing a load from said carrier and depositing the same on said supports.

1,013,827. JUMPING-RING GAME. JULIEN STRANDBERG, New York, N. Y., assignor to Selchow & Righter Company, a Corporation of New York. Filed Sept. 26, 1911. Serial No. 651,353.



1. An improvement in games, comprising a base-board, an impact member located in operative relation to said base-board, means for operating said impact member, a plurality of members adapted to be laid upon said board adjacent the center of impact, to be thrown upward when the impact member strikes the board, and means carried by the face of said board to indicate the position in which said members come to rest after falling, so as to enable the players to mark scores accordingly.

2. An improvement in games, comprising a base-board, an impact member located beneath said board, means for operating said impact member to strike said board, a plurality of members to be placed upon the upper side of said board adjacent the center of impact to be thrown upward by the shock of impact, and means mounted upon the face of said board to mark the positions in which said members come to rest after falling, and enable the players to keep score accordingly.

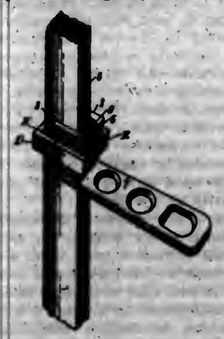
3. An improvement in games, comprising a base-board, an impact member located beneath said board, means for operating said impact member to strike said board, a plurality of perforated members to be placed upon the upper side of said board adjacent the center of impact to be thrown upward by the shock of the impact, and means mounted upon the face of said board to mark the positions in which said members come to rest after falling and enable the players to keep score accordingly.

4. An improvement in games, comprising a base-board, an impact member beneath the same in position to strike the under side thereof, means for operating said impact member, a plurality of perforated members adapted to be located on the top of the base-board in operative position with respect to the center of impact, and a plurality of score pegs having numbers marked adjacent the same, carried by said base-board to mark the position of said perforated members when the same come to rest after falling, and enable the players to keep score accordingly, when one of said perforated members comes to rest encircling one of said pegs.

5. An improvement in games, comprising a base-board, a frame surrounding the same, said base-board being supported above the lower edges of said frame, apertures passing through the opposite sides of said frame, an operating cord passing through said apertures, said cord carrying an impact member of suitable mass between its ends, rings attached to the outer ends of said cords to operate said impact member, and a plurality of movable members adapted to be placed on the top of said base-board adjacent the center of impact, to be thrown upward when the rings are pulled to throw said impact member into action.

[Claim 6 not printed in the Gazette.]

1,013,828. STILT. HARVEY SHERMAN THOMAS, Fort Thomas, Ky. Filed Aug. 11, 1911. Serial No. 643,521.



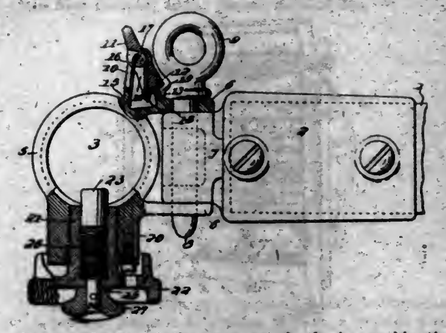
1. A vertical member, a block having an upwardly extending portion with sides disposed one at each side of the vertical member, and an outwardly extending portion, the first-mentioned sides being connected by the upwardly extending portion of the block which tapers downwardly to the body of the block, and a member fitting snugly around the vertical member, and the upwardly extending portion of the block, for holding the block in position relatively to the vertical member.

2. A vertical member, a block having an upwardly extending portion with sides disposed against opposite sides of the vertical member, the upwardly extending portion of the block tapering downwardly, and a member fitting snugly around the vertical member, and the upwardly extending portion of the block, the inner sides of the second-mentioned member converging downwardly for fitting the vertical member and the tapering surface of the block.

1,013,829. VAULTING-BAR. ALBERT J. THORNLEY, Pawtucket, R. I., assignor to Narragansett Machine Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Apr. 17, 1911. Serial No. 621,662.

1. In a device of the type set forth, in combination with an upright bar having a coupling slidable thereon, a horizontal bar, a connection carried by the horizontal bar and secured to the coupling, a pin for securing said connection to the coupling, and a spring pressed latch normally engaging said pin to prevent accidental movement thereof.

2. In a device of the type set forth, in combination with an upright bar having a coupling slidable thereon, a horizontal bar, a connection carried by the horizontal bar and secured to the coupling, a pin for securing said connection to the coupling, said pin having a projection, and a spring pressed locking element having a nose normally extending across the path of movement of the projection, said element being movable to a position to permit said projection to pass the same.



3. In a device of the type set forth, in combination with an upright having a coupling thereon, and a boom connected to the coupling, a spring pressed pin carried by the coupling for engagement with openings provided therefor in the upright, and a screw member carried by the coupling to bind against the upright to prevent rattling of the coupling with respect to the upright.

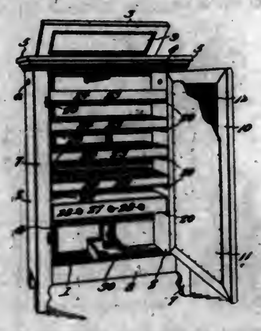
4. In a device of the type set forth in combination with an upright having a coupling thereon, and a boom connected to the coupling, a hollow screw threaded member carried by the coupling, and having a head to operate same to cause the screw to bind against the upright, and a spring pressed pin arranged on the interior of said screw for entry into one of a plurality of openings provided therefor in the upright.

5. In a device of the type set forth in combination with an upright having a coupling thereon, and a member carried by the coupling, and having a head to operate same to cause the screw to bind against the upright, and a spring pressed pin arranged on the interior of said screw for entry into one of a plurality of openings provided therefor in the upright, said pin having a head thereon, and said head of the screw threaded member being formed hollow to receive said head of the pin, so that said head of the screw threaded member surrounds the head of the pin to protect the latter.

1,013,830. RECEPTACLE-CLOSURE AND CUP. RUDOLPH WEIMER, Sheboygan, Wis. Filed Oct. 7, 1908. Serial No. 456,586.

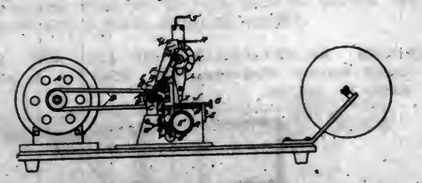
A receptacle closure, comprising a receptacle provided with inwardly extending knobs, and a closure provided with an annular stop and with outwardly extending diagonal locking ribs and with downwardly inclined guide ribs extending from the lower ends of the locking ribs to the lower edge of the closure, said guide ribs being positioned to engage the knobs and guide the closure to a position in which the locking ribs will engage the knobs and upon a partial revolution of the closure the said closure will be drawn into locked position with the annular stop engaging a portion of the receptacle.

1,013,831. GRAIN-SPROUTER. ALFRED H. WHEAT, Horseheads, N. Y. Filed Apr. 18, 1911. Serial No. 621,743.



A cabinet of the character described, embracing a connected bottom, ends, and back, two similar front battens secured to said bottom and ends, a top skirt connecting said two battens at their upper ends, a four sided flat frame secured to said battens, skirt, ends, and back, a horizontally disposed top door frame hinged to said flat frame, a glass plate being inserted within said top door frame, a vertically disposed door frame hinged to one of said front battens, a fabric covering said door frame, a plurality of superposed cleats secured to said ends, each having a tray supporting ledge projecting beyond said front batten said cleats and ends having vent openings, trays removably held upon said ledges, a strip of asbestos upon the two opposite lowermost ledges, pins horizontally extending from said lowermost ledges and resting upon said strips, an apertured metallic hot air chamber removably held below said trays and upon said pins, and a safety lamp located below said chamber, all arranged substantially as and for the purpose set forth.

1,013,832. MACHINE FOR TESTING THE LIFE OF TYPE-WRITER RIBBONS. FRANK M. ALLEN, Washington, D. C. Filed Sept. 23, 1910. Serial No. 583,515. (Dedicated to the public.)



1. In a machine of the character described, comprising a machine housing, a pulley, a shaft for supporting said pulley and carrying thereon a bevel gear, a second shaft provided with worms at both ends and having a bevel gear secured to one end, said bevel gear engaging the bevel gear on said first mentioned shaft, a revolving shaft supporting a series of cams and provided with a worm gear, a worm gear pivoted to said machine housing, one of the worms on said second shaft engaging said first mentioned worm gear and the other having contact with said last mentioned worm gear, a series of hammers resting on said cams, said revolving shaft adapted for elevating consecutively the said cams, thereby causing the elevation of said hammers and allowing said hammers to fall voluntarily in consecutive order, means for operating said apparatus and testing the life of a typewriter ribbon, substantially as specified.

2. In a machine of the character described, consisting of a machine housing, a worm gear pivoted to said machine housing, a pulley, a shaft for supporting said pulley and carrying thereon a bevel gear, a second shaft provided with worms at both ends and having a bevel gear secured to one end adapted to engage the bevel gear carried by said first mentioned shaft, a main shaft supporting a series of cams and provided with a worm gear, said worm gear engaging one of the worms on said second shaft, and the other worm on said shaft having contact with said first mentioned worm gear, a plurality of hammers resting on said cams, said hammers having type-letters mounted thereon, means for communicating motion to said pulley bevel gears and worm shafts, for revolving said main shaft.

3. In a machine of the character described, comprising a machine housing, a worm gear pivoted to said machine housing, a pulley, a shaft for supporting said pulley and carrying a bevel gear thereon, a second shaft provided with worms at both ends and having a bevel gear secured to one end, said bevel gear engaging the bevel gear carried by said first mentioned shaft, a main shaft for supporting a plurality of cams and provided with a worm gear, said worm gear engaging one of the worms on said second shaft and the other worm on said shaft having contact with said first mentioned worm gear, a plurality of hammers having type letters mounted thereon, said hammers adapted to rest on said cams, means for communicating motion to said mentioned parts, said main-shaft being adapted to revolve and elevate said cams alternately, said hammers responding alternately to the elevation of said cams, and falling voluntarily, supports and clamps for holding a typewriter ribbon, a platen roll for carrying paper, a shaft for supporting said platen roll having a ratchet wheel attached thereto, a pawl having mechanical connection with the main shaft and adapted to automatically engage the said ratchet wheel and produce a forward motion of said platen roll for spacing substantially as specified.

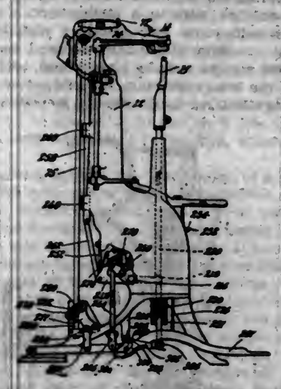
4. In a machine of the character described, comprising a machine housing, a pulley, a shaft for supporting said pulley and carrying thereon a bevel gear, a second shaft provided with worms at both ends and having a bevel gear secured to one end, said bevel gear being adapted to engage said first mentioned bevel gear, a worm gear pivoted to the machine housing; a revolving main-shaft carrying a series of cams and provided with a worm gear, said worm gear engaging one of the worms on said second shaft and the other worm on said shaft having contact with said worm gear pivotally secured to the machine housing, said cams supporting a series of hammers having type letters mounted thereon, a pawl having mechanical connection with said main-shaft and adapted to respond automatically to its rotation, a platen roll supported by a shaft having a ratchet wheel attached thereto, means for holding a ribbon in proper position, and means for communicating motion to said parts for testing the life of a typewriter ribbon by impact, substantially as specified.

1,013,833. MECHANISM FOR ACTUATING WORK-SUPPORTS. GEORGE A. AMBLER, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 26, 1906, Serial No. 340,707. Divided and this application filed Dec. 20, 1907. Serial No. 407,826.

1. In a machine of the class described the combination with a work support and automatic means for moving said work support into work clamping and then into work releasing position, comprising oppositely operating clutches, of means for simultaneously rendering said clutches inoperative while a part of said automatical means continues to operate.

2. In a machine of the class described, the combination with a work support and automatic means for moving said work support into work clamping and then into work releasing position, comprising oppositely operating clutches, of a single means for rendering said clutches inoperative while a part of said automatic means continues to operate.

3. In a machine of the class described, the combination with a work support and automatic means for moving said work support into work clamping and then into work releasing position, comprising oppositely operating clutches, of a single means for moving a member of each of said clutches positively into inoperative position.



4. In a machine of the class described, the combination with a work support, of automatic means for moving said work support into work clamping position and then into work releasing position, comprising oppositely operating work thickness compensating clutches, and means for simultaneously rendering said clutches inoperative while a part of said automatic means continues to operate.

5. In a machine of the class described, the combination with a constantly operating shaft, a work support and automatic means for moving said work support into work clamping and then into work releasing position, comprising oppositely operating clutches, of means for interrupting the action of said clutches while said shaft continues in operation whereby the movement of the work support is also interrupted.

[Claims 6 to 11 not printed in the Gazette.]

1,013,834. SPACER FOR LINER-PLATES OF CENTRIFUGAL CREAM-SEPARATORS. GUSTAF M. ANDERSON, Waterloo, Iowa. Original application filed June 16, 1909, Serial No. 502,505. Divided and this application filed Apr. 17, 1911. Serial No. 621,518.

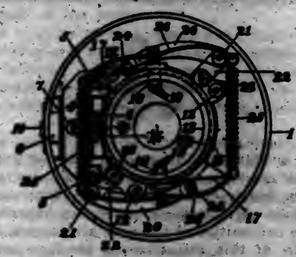
1. In a centrifugal cream separator bowl, liner separating plates, and spacing means located between said plates formed angularly with the apices of their angles directed toward the outer edges of the plates.

2. In a centrifugal cream separator bowl, liner separating plates, and spacers between said plates formed with narrowed outwardly directed parts adapted to stem the inwardly moving cream, as the latter passes to the cream zone of the bowl over said plates.

3. In a centrifugal cream separator bowl, liner separating plates having a plurality of slots, and spacing-clips inserted in said slots, the clips being formed to have their projecting portions narrow in width in a direction radially outward from the axis of the bowl.

4. In a centrifugal cream separator bowl, liner separating plates having each a plurality of slots, and U-shaped spacers inserted in said slots, each spacer having its members gradually narrowed to points with the pointed ends directed outwardly along the surfaces of the plate to stem the inwardly moving current of cream.

1,013,835. LOCK FOR MOTOR-BOAT SHAFTS. MYRON T. BAIRD, St. Louis, Mo. Original application filed Feb. 17, 1910, Serial No. 544,495. Divided and this application filed Dec. 10, 1910. Serial No. 596,655.



1. In a locking device, the combination of a hollow member, a member adapted to revolve therein, a pivoted member, a notched member borne by said pivoted member for connecting said hollow member directly to said revoluble member, means for actuating said pivoted member in one direction, a cam adapted to actuate said pivoted member in the opposite direction, and means for actuating said cam.

2. In a locking device, the combination of a hollow member, a member adapted to revolve therein, a pivoted member, a notched member borne by said pivoted member for connecting said hollow member directly to said revoluble member, means for actuating said pivoted member in one direction, a cam adapted to actuate said pivoted member in the opposite direction, and a key-operated member for actuating said cam.

3. In a locking device, the combination of a hollow member having an opening, a member adapted to revolve in said hollow member and having teeth registering with said opening, a pivoted member, a toothed pin borne by said pivoted member and adapted to reciprocate in said opening, means to cause the toothed part of said pin to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, a cam arranged to act upon said pivoted member to withdraw said pin from the teeth of said revoluble member, and means for actuating said cam.

4. In a locking device, the combination of a hollow member, a member adapted to revolve therein and having a toothed periphery, a reciprocatory member having a toothed end adapted to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, means for yieldingly holding said reciprocatory member in interlocking engagement with said revoluble member, a sleeve encircling said hollow member and provided with a cam for withdrawing said reciprocatory member from such engagement, and means for revolving said sleeve.

5. In a locking device, the combination of a hollow member, a member adapted to revolve therein and having a toothed periphery, a reciprocatory member having a toothed end adapted to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, means for yieldingly holding said reciprocatory member in interlocking engagement with said revoluble member, a pivoted member for withdrawing said reciprocatory member from such engagement, a sleeve encircling said hollow member and provided with means for actuating said pivoted member, and means for revolving said sleeve.

[Claim 6 not printed in the Gazette.]

1,013,836. SNAP-SEAL. WINFRED MUDGE BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New Jersey. Filed Oct. 20, 1911. Serial No. 656,760.

1. An improved snap seal having, in combination, a bulb-shaped sheet-metal seal part composed of top and body

pieces, the former constructed with inwardly bent resilient jaws and an inlet slot beneath which the extremities of said jaws are located, and a flexible shackle constructed with projections adapted to be inserted through said slot and to coöperate with said jaw-extremities in the fastened seal.

2. The combination, in a snap seal, of a bulb-shaped sheet-metal seal part composed of top and body pieces the former constructed with inwardly bent resilient jaws and an inlet slot having a central enlargement beneath which the extremities of the jaws are located, and a flexible shackle of thin metal having its face provided with hollow-backed projections adapted to enter through said slot enlargement, and constructed with rounded opening surfaces to interact with said jaws in the fastening operation, said projections being also adapted to coöperate with said jaw extremities in the fastened seal.

3. The combination, in a snap seal, of a bulb-shaped sheet-metal seal part composed of top and body pieces the former constructed with inwardly bent resilient jaws, an inlet slot having a central enlargement beneath which the extremities of the jaws are located, and upturned guard flanges at the sides of said slot; and a flexible shackle of thin metal having its face provided with projections adapted to enter through said slot enlargement and to coöperate with said jaw extremities in the fastened seal, and hollow backed projections adapted to coöperate with said upturned flanges as inlet guards.

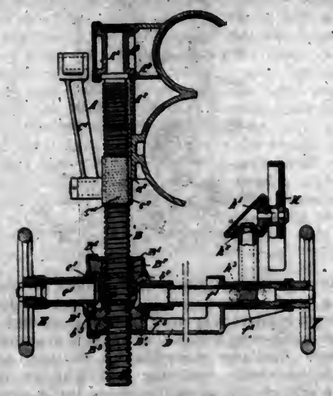
4. The combination, in a snap seal, of a bulb-shaped sheet-metal seal part composed of top and body pieces the former constructed with inwardly bent resilient jaws, an inlet slot having a rounded central enlargement beneath which the extremities of the jaws are located and upturned guard flanges at the sides of said slot; and a flexible shackle of thin metal having its face provided with projections adapted to enter through said slot enlargement and to coöperate with said jaw extremities in the fastened seal, and hollow-backed semi-ovoidal inlet-guard projections tapering toward the respective extremities of the shackle and adapted to coöperate with said upturned flanges and to become wedged between the same by inward pressure.

5. The combination, in a snap seal, of a bulb-shaped sheet-metal seal part composed of top and body pieces the former constructed with inwardly bent resilient jaws having downturned terminal locking points of reduced width, an inlet slot having a rounded central enlargement beneath which said locking points are located, and a flexible shackle of thin metal having its face provided with hollow-backed locking projections adapted to enter through said slot enlargement and cut away to admit said locking points into the respective locking projections, substantially as hereinbefore specified.

1,013,837. ELEVATING AND SIGHTING APPARATUS OF FIELD-GUNS. GEORGE THOMAS BUCKHAM, Westminster, London, England, assignor to Vickers Sons & Maxim Limited, Westminster, England. Original application filed Aug. 20, 1909, Serial No. 513,769. Divided and this application filed Aug. 6, 1910. Serial No. 575,870.

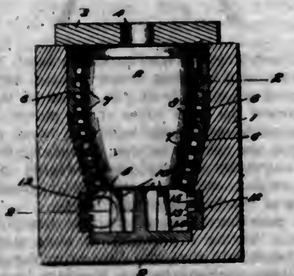
1. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a single ranging and pointing screw connected to the gun cradle, a sliding nut mounted on said screw, sighting apparatus connected with said sliding nut, means for rotating the screw without displacing the sliding nut for the ranging operation, and means for longitudinally displacing the said screw together with the sliding nut for the pointing operation.

2. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a single ranging and pointing screw connected to the gun cradle, a sliding nut mounted on said screw, sighting apparatus connected with said sliding nut, a rotary nut mounted on said screw and connected with the pointing hand wheel, a rotary sleeve also mounted on said screw and actuated by the ranging hand wheel, and means for connecting the rotary sleeve to the said screw so that the latter can be displaced longitudinally therethrough.



3. In elevating and sighting apparatus for ordnance, the combination with the trail of the gun and the ranging and pointing hand wheels mounted thereon, of a single ranging and pointing screw connected to the gun cradle, a sliding nut mounted on said screw, sighting apparatus connected with said sliding nut, a rotary nut mounted on said screw and connected with the pointing hand wheel, a rotary sleeve also mounted on said screw and actuated by the ranging hand wheel, means for connecting the rotary sleeve to the said screw so that the latter can be displaced longitudinally therethrough, means for keeping the said sleeve stationary when the rotary nut is being actuated by the pointing hand wheel, and means for keeping the rotary nut stationary when the said sleeve is being actuated by the ranging hand wheel.

1,013,838. MELTING-FURNACE. WILLIS W. CASE, Denver, Colo.; Nettie J. Case administratrix of said Willis W. Case, deceased. Filed Apr. 12, 1911. Serial No. 620,623.



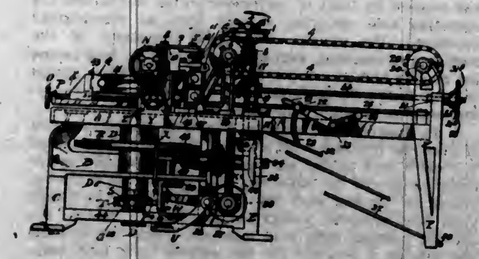
1. In a melting furnace the combination of a crucible; a stool provided with spaced supports on which said crucible rests; a plurality of heater projections and passages surrounding said crucible; and a plurality of heater projections surrounding said supports, the projecting ends of said last named projections being located at a greater distance from the central axis of the crucible than are the bottoms of the lowest of said passages, substantially as described.

2. In a melting furnace the combination of a crucible; a stool provided with spaced supports on which said crucible rests; a plurality of heater projections and passages surrounding said crucible; a plurality of heater projections surrounding said supports, the projecting ends of said last named projections being located at a greater distance from the central axis of the crucible than are the bottoms of the lowest of said passages; and an inlet adapted to deliver fuel to the space between said supports, said supports being so spaced as to provide a free passage for said fuel to said last named projections, substantially as described.

3. In a melting furnace the combination of a crucible; a stool provided with spaced supports on which said crucible rests; a plurality of heater projections and passages surrounding said crucible; a plurality of heater projections surrounding said supports, the projecting ends of said last named projections being located at a greater distance from the central axis of the crucible than are the bottoms of the lowest of said passages; and a fuel inlet tangentially entering said furnace below said crucible and adapted to deliver fuel to the space between said supports and last named projections, substantially as described.

4. In a melting furnace the combination of a crucible having a mouth open to the atmosphere; a passage for the exit gases of combustion located to one side of said mouth; a stool provided with spaced supports on which said crucible rests; a plurality of heater projections and passages surrounding said crucible; a plurality of heater projections surrounding said supports, the projecting ends of said last named projections being located a distance from the central axis of the crucible greater than are the bottoms of the lowest of said passages; and a fuel inlet tangentially entering said furnace below said crucible and adapted to cause said fuel to rotate in the space between said supports and last named projections, substantially as described.

1,013,839. PIPE-BENDING MACHINE. JAMES FILLMORE COX, Bayonne, N. J., assignor of one-half to Matthew T. Cronin, Bayonne, N. J. Filed June 3, 1909. Serial No. 499,868.



1. A pipe bending machine of the character described, including an endless carrying member, pipe-bending means receiving the object or pipe from said endless carrying member, a follower, connecting means between said follower and said carrying member a lost-movement compensating means for said follower and a mandrel and a guide rod bearing said follower.

2. A pipe bending machine, including an endless carrying member, pipe-bending means receiving the object or pipe from said endless carrying member, a follower, means of connection between said follower and said carrying member, and a lost-movement compensating resilient member for said follower, applied to said mandrel.

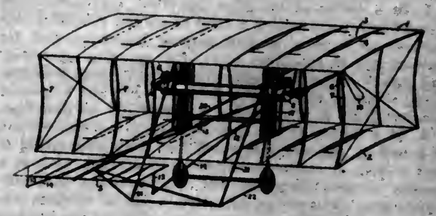
3. A pipe-bending machine, comprising a bending former, a shaft carrying said bending former, and an automatically tripping mechanism for said shaft including an arm carried by said shaft, a right angled or bell-crank lever, a vertical bearing, an additional bearing at right angles to said vertical bearing, a horizontal shaft carried by said vertical bearing and equipped with an emergency lever and a swinging dog, and treadle actuated means adapted to be engaged by said emergency lever for arresting the action of the parts.

4. A pipe bending machine, comprising a bending former, a shaft carrying said bending former, an endless carrying member, a follower, resiliently cushioned telescoped members, a hook-ended member connected to the follower proper and adapted to engage said endless carrying member.

5. A pipe bending machine, comprising a bending former, a shaft carrying said bending former, an overgearing mechanism for said shaft, an endless-carrying member, a follower, a resiliently cushioned compensating member for said follower, and means of connection between said carrying member and follower.

[Claim 6 not printed in the Gazette.]

1,013,840. FLYING-MACHINE. WILLIAM G. HAMILTON, San Diego, Cal., assignor of one-fourth to A. B. Bowman, San Diego, Cal. Filed Aug. 8, 1910. Serial No. 576,220.



1. In a flying machine, a normally horizontal main plane comprising a plurality of sections on each side of the center thereof, the central portions of each of said sections inclining upwardly laterally with normally vertical openings between the inclined parts of said sections, all substantially as set forth.

2. In a flying machine, two normally horizontal parallel aeroplanes superposed one above the other, each composed of a plurality of sections on each side of the center thereof, the central portion of each of said sections inclining upwardly laterally and normally vertical openings between the inclined parts of said sections, all substantially as set forth.

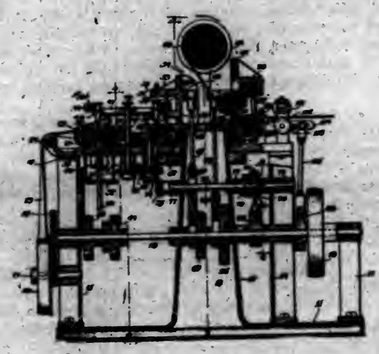
3. A flying machine comprising a plurality of parallel aeroplanes, superposed one above the other, each comprising a plurality of sections, the front and rear portions of said sections in each plane being in the same horizontal plane, and the central portions of each section inclined upwardly and from the longitudinal center of the machine laterally with openings between said sections, all substantially as set forth.

4. A flying machine comprising two superposed aeroplanes each comprising a plurality of inclined sections with each section inclining upwardly and laterally from the center of said main planes, upright standards bowed inwardly connecting the margins of said aeroplanes, driving means pivotally supported on said upright standards; and a guide frame pivotally mounted therewith, all substantially as set forth.

5. A flying machine comprising superposed and connected aeroplanes, each comprising a plurality of sections, each of said sections being inclined upward laterally from the center of the main plane, a horizontal rudder, means for controlling the movement of said rudder, a guide plane revolubly mounted on said machine, and a foot lever means for controlling and guiding said guide plane, all substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,013,841. MACHINE FOR FORMING SEALS IN METALLIC CAPS. CHARLES D. MCDONALD, Chicago, Ill., assignor, by mesne assignments, to American Cork & Seal Company, Philadelphia, Pa., a Corporation of Maine. Filed Oct. 28, 1909. Serial No. 525,170.



1. In a device of the class described, the combination of mechanism for feeding a strip of sealing substance into position to have a portion severed therefrom and for retracting said substance after the severing operation, and means operatively connected to said feeding mechanism, whereby said substance is fed forward a greater distance than it is retracted, substantially as described.

2. In a device of the class described, the combination of a pair of oppositely disposed feed rolls coöperating to feed a strip of sealing substance into position to have a portion severed therefrom and for retracting said substance after the severing operation, a pair of ratchets connected to one of said rolls, the teeth on one of the ratchets being spaced farther apart than the teeth on the other, an arm positioned intermediate the ratchets, oppositely disposed pawls carried by said arm and engaging the ratchets, and mechanism operatively connected to the arm, for imparting a swinging movement thereto, substantially as described.

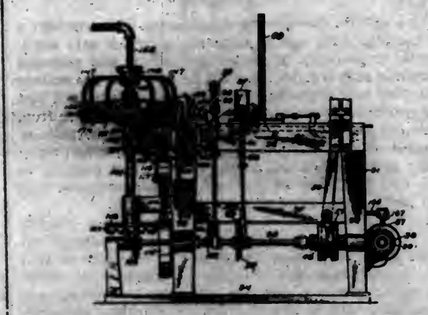
3. In a device of the class described, the combination of mechanism for feeding a strip of sealing substance into position to be cut into sections, cutting tools for performing said cutting operation, a rotatable head, means for rotating said head, a pivotally mounted spring controlled arm carried by said head, mechanism operatively connected to said arm for imparting a swinging movement thereto, a slidably mounted horizontally extending cutter carried by said arm and held against swinging movement with said arm, and a connection between said arm and cutter, whereby the swinging movement of the arm will impart a rectilinear reciprocating movement to the cutter, substantially as described.

4. In a device of the class described, the combination of a rotatable member comprising a plurality of outwardly extending arms, a fixed pin carried by each of said arms, a head having a circumferential groove on each of said pins, onto which the sealing substance is fed prior to the cutting operation and upon which the severed section is retained, means for moving the rotatable member in a step-by-step movement to bring the heads into position to receive the sealing substance and thence into position for placing the section of sealing substance into a metallic cap, and means for stripping the sealing substance off from said head and positioning it within a metallic cap, substantially as described.

5. In a device of the class described, the combination of a rotatable member comprising a plurality of outwardly extending arms, a fixed pin carried by each of said arms, a head of each of said pins adapted to retain a section of sealing substance, means for intermittently moving the rotatable member, a member surrounding said pin, and means operatively connected to said member for actuating it to strip the sealing substance off from said head and deposit it within a metallic cap, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,013,842. MACHINE FOR POSITIONING AND SECURING GASKETS WITHIN METALLIC CAPS. CHARLES D. MCDONALD, Chicago, Ill., assignor, by mesne assignments, to American Cork & Seal Company, Philadelphia, Pa., a Corporation of Maine. Filed Jan. 3, 1911. Serial No. 600,542.



1. In a machine of the class described, the combination of means for feeding a cap forward in a rectilinear path of travel, means for placing a gasket within said cap during said feeding operation, mechanism for receiving the cap after it has reached its limit of rectilinear travel, mechanism operatively connected for actuating said receiving mechanism with a rotary movement, and means for placing and securing a retainer within said cap while it is being conveyed by the receiving member, substantially as described.

2. In a machine of the class described, the combination of means for feeding a cap forward in a rectilinear path of travel with an intermittent movement, means for placing a gasket within said cap during said feeding operation, rotative mechanism for receiving the cap after it has reached its limit of rectilinear travel, mechanism for operating said receiving member with an intermittent movement, the periods of rotative movement of the feeding and receiving mechanisms alternating, and means for placing and securing a retainer for the gasket within the cap during the conveyance of the cap upon the receiving member, substantially as described.

3. In a machine of the class described, the combination of a carrier provided with a plurality of members adapted to receive caps having gaskets therein, mechanism operatively connected for imparting movement to said carrier, means for feeding said caps into position to be placed upon said members, means for placing and holding the caps in position upon said members, means for forming and placing a retainer for the gaskets upon said members prior to the placing of the caps thereon, and means for securing the retainer to the caps during their conveyance by said members, substantially as described.

4. In a machine of the class described, the combination of a carrier provided with a plurality of members adapted to receive caps having gaskets therein, mechanism operatively connected for imparting movement to said carrier, means for feeding said caps into position to be placed upon said members, means for placing and holding the caps in position upon said members, means for forming and placing a retainer for the gaskets upon said members prior to the placing of the caps thereon, and means for applying heat to said caps during their conveyance by said members, whereby the retainers are secured in place within the caps, substantially as described.

5. In a machine of the class described, the combination of a bed-plate provided with a horizontally extending T-shaped slot, a feed bar extending practically the entire length of the slot, the widened portion of said slot serving as a passageway for caps, the contracted portion of said slot serving as a guideway for the feed bar, and members overhanging the widened portion of the slot and serving to prevent displacement of the caps therefrom during the feeding operation, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

1,013,843. AMUSEMENT DEVICE. MALCOLM W. MCINTYRE, Cincinnati, Ohio, and REBA PRICE CONNER, Covington, Ky. Filed Mar. 27, 1911. Serial No. 617,238.

1. In amusement devices of the general nature of "switchbacks," a pivotal frame structure suspended beneath said way, one end of which supports one set of over-lapping surfacing plates, and the other end of which supports another set of over-lapping plates, of said way.

2. In amusement devices of the general nature of "switchbacks" and in combination, a railless way, in plan view, U-shaped; suitable means for elevating, including and undulating said way; a pivotal frame structure suspended underneath said way, one end of which supports one set of over-lapping hinged surfacing plates, and the other end of which supports another set of over-lapping hinged surfacing plates, of said way; a cliff-structure erected between the out-going and the in-coming portions of, and carried a suitable distance above, said way; gravity-actuated vehicles, suitably equipped with steering gears and brakes and of the general nature of "go-carts," running on said way; a rotary inclined elevator, connecting the two ends of said way and operating to elevate said vehicles from the lowest point of the in-coming portion, to the highest point of the out-going portion, of said way; and a suitable building inclosing the two ends of said way.

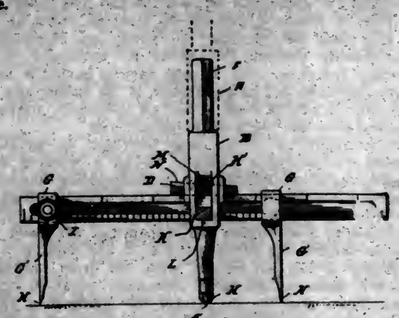
1,013,844. KNIFE. JASPER C. OWENS, Los Angeles, Cal. Filed Jan. 11, 1911. Serial No. 602,010. Renewed Oct. 30, 1911. Serial No. 657,622.

1. A knife, comprising a handle, a thin sheath of curved configuration mounted upon the handle and closed at its end nearest the handle and open at its other end and along its inner edge near the open end, a cutting blade of similar curved configuration and having cutting edges on its inner edge near its ends, the blade being adapted to fit within the sheath with one end projecting from the open end thereof and its cutting edge projecting from the open inner edge of the sheath, and means to hold the blade in place in the sheath.

2. A knife, comprising a hollow sheath of curved configuration, being entirely closed at one end and being open at its other end and along its inner edge adjacent the open end, and a knife blade of similar curved configuration sharpened on its inner edge and adapted to be slipped longitudinally into the sheath, leaving one end projecting from the open end thereof and its sharpened edge projecting from the open inner edge of the sheath.

1,013,845. CIRCULAR CUTTER. WILLIAM E. PRADEN, Jr., Corbett, Fla. Filed Mar. 24, 1911. Serial No. 616,578.

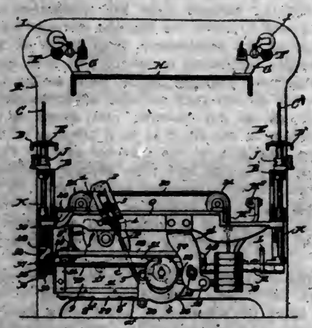
1. A tool as described comprising a slotted shank, a pair of beams angularly disposed in the slotted shank and a wedge key for securing the parts together, and a series of slides adjustable on the beams each having a cutting edge.



2. A tool as described comprising a shank having diametrically disposed slots, a beam in each slot and adjustable means for securing the parts together, and slides on the beams, each having a set-screw and a cutting edge.

3. A tool as described comprising a slotted shank, a pair of beams formed with complementary mortises, angularly disposed in the slotted shank and a wedge key for securing the parts together, and a series of slides adjustable on the beams each having a cutting edge.

1,013,846. TRAVERSE-MOTION FOR YARN SPINNING OR TWISTING APPARATUS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 5, 1911. Serial No. 619,062.



1. In apparatus of the class described, an oscillating builder-arm having a constant stroke, a winding drum longitudinally movable thereon, a reciprocating ring-rail, a flexible connection between it and the drum to effect the reciprocation of the rail by or through oscillation of the builder-arm, means to effect intermittent movements of the drum away from the fulcrum of said arm to at first gradually accelerate the increase of the traverse, means to effect rotation of the drum by a series of angular movements gradually increasing in amplitude during the formation of the base of the yarn mass upon a receiver, to increase the gain during acceleration of the traverse increase, and an instrumentality including a cam controlled device acting upon the flexible connection to temporarily neutralize a portion of the increase in the gain due to the drum, whereby the bottom of the base of the yarn mass is built out and convexed.

2. In apparatus of the class described, an oscillating builder-arm having a constant stroke, a reciprocating ring-rail, a connection between it and the builder-arm, and controlling means carried by the latter and acting through such connection to effect reciprocation of the ring-rail with an accelerated increase in its traverse at first and thereafter with a gradual and substantially uniform in-

crease, said means including two devices separately acting upon the connection between the rail and builder-arm to effect a resultant gain of the traverse which at first is very small but gradually increasing and thereafter is substantially uniform throughout the remainder of the winding operation, each of said devices having a bodily movement upon and longitudinally of the builder-arm and one only of said devices having an additional movement transverse to the length of the builder-arm.

3. In apparatus of the class described, an oscillating builder-arm having a constant stroke, a winding drum longitudinally movable thereon, a reciprocating ring-rail, a flexible connection between it and the drum to effect the reciprocation of the rail by or through oscillation of the builder-arm, a modifying roll coöperating with said connection between the rail and the drum and movable longitudinally of the builder-arm with the drum, means to effect a series of gradually increasing advances of the drum away from the fulcrum of the builder-arm during the building of the base of the yarn mass, other means to effect a corresponding angular movement of the drum for each advance of the latter along the arm, to increase the gain in accordance with the increase in the traverse, and a controlling cam fixedly mounted on the builder-arm and operatively connected with said modifying roll, to neutralise a portion of the gain due to rotation of the drum during the formation of the base of the yarn mass.

4. In apparatus of the class described, an oscillating builder-arm having a constant stroke, a traverse-changer movable longitudinally on the builder-arm, a rotatable drum carried by said traverse-changer, a reciprocating ring-rail, a connection between it and the drum, to effect reciprocation of the rail by or through oscillation of the builder-arm, a modifying member coöperating with said connection adjacent the drum and movable therewith longitudinally of the builder-arm, a controlling cam on the latter, operatively connected with and to vary the action of the modifying member upon the connection with the ring-rail, means to move the traverse-changer away from the fulcrum of the builder-arm by a series of advances at first rapidly increasing in length and then decreasing to a substantially uniform length, said means including a cam lever to govern such variable advances and the resulting changes in the traverse, and means to effect a partial rotation of the drum at each advance of the traverse-changer, the gain of the traverse effected thereby at first rapidly increasing and then becoming substantially uniform, the modifying member being caused by its controlling cam to partly neutralise the rapidly increasing gain due to rotation of the drum and thereafter causing the gain to be regulated by rotative movement of said drum.

5. In apparatus of the class described, mechanism, including an oscillating builder-arm having a constant stroke, to effect the winding of yarn upon a yarn receiver with an accelerated increasing traverse during the formation of the base of the winding and thereafter with a gradually and uniformly increasing traverse, separate devices acting contemporaneously to effect a resultant gain of the traverse but slightly increasing during the formation of the base, the gain thereafter being substantially uniform and regulated mainly by one of said devices, and a common actuating instrumentality for said means and devices, combined with the oscillating builder-arm on which said means, devices and actuating instrumentality are mounted, said devices having a simultaneous bodily movement upon and longitudinally of the builder-arm, one of said devices having a variable movement transversely to the builder-arm, and means to control such movement.

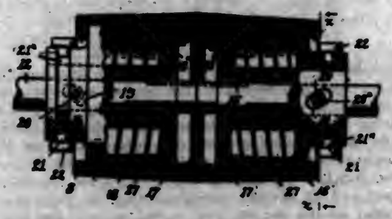
[Claims 6 to 12 not printed in the Gazette.]

1,013,847. SPINDLE-BEARING. DAVID B. SALSTROM, Chicago, Ill., assignor of one-half to Emanuel Kopriwa, Chicago, Ill. Original application filed July 19, 1906, Serial No. 326,834. Divided and this application filed Nov. 4, 1907. Serial No. 400,510.

1. The combination, with a spindle having a head and a conical annular shoulder, of a bearing comprising a block having an opening therein to receive the spindle, said block being split at one side of said opening; a screw extending through the split portion for tightening said block upon said spindle; two blocks each having a shoulder upon which said head bears, and an annular conical shoulder adapted to contact the shoulder upon the spindle; and means for adjustably securing said last mentioned blocks to the first mentioned block.

2. The combination with a spindle having an annular groove formed therein near its upper end, said groove providing a head of the same diameter as the spindle, one wall of said groove being conical, a bearing block in which said spindle is rotatably mounted below said groove, one side of said block being split, means acting upon said split portion for compressing said block to hold the spindle against lateral vibration, a pair of blocks mounted upon said bearing block at opposite sides of the spindle, and means for securing said pair of blocks for adjustment toward the spindle, each block of said pair of blocks having two shoulders thereon to contact the opposite walls of said groove, one of said shoulders being inclined to correspond with the conical wall of the groove.

1,013,848. FRICTION-CLUTCH. WALTER VAN PATTEN STRIKER, Bridgeport, Conn. Filed Sept. 3, 1909. Serial No. 516,042.



1. The combination with a driving element having an internal clutch surface and a driven element of an interposed clutch element, consisting of a spirally slotted sleeve positively attached at one end to the driven element and slidingly attached at the other end to the same element by a pin and slot connection and provided with means for compressing the sleeve axially with relation to its fixed end.

2. In a clutch of the class described, the combination with a shaft, of a wheel mounted thereon and having an internal clutch surface, a hub fixed upon said shaft, a spirally slotted clutch member secured to one end of said hub and slidably mounted upon the other end and adapted to be compressed axially thereon and thereby expanded to engage the wheel surface, a yoke to engage said clutch member, and a lever for operating the yoke and clutch.

3. In a clutch of the class described, the combination with a shaft, of a wheel mounted thereon and having an internal clutch surface, a hub fixed to the said shaft and having a slot therein, a spirally slotted clutch member upon the hub and having one end secured thereto and the other end slidably connected to said hub and bearing a pin for the engagement of the said slot, and means for compressing the slotted clutch member lengthwise for expanding the same to engage the inner face of the wheel.

1,013,849. SHORT-BASE RANGE-FINDER. HAROLD DENNIS TAYLOR, Bishophill, York, England. Filed Mar. 11, 1911. Serial No. 613,821.

1. In a short base rangefinder, a pair of binocular eyepieces, means for producing in the upper and lower halves of one eyepiece views of the upper and lower parts of a distant object as seen from the right and left hand ends of the instrument, and for producing in the upper and lower halves of the second eyepiece views of the same parts of the object as seen from left and right ends respectively of the instrument, whereby if there is any unneutralised parallax it will show itself as a displacement of the upper image to the right of the lower image for the one eye and to the left of the lower image for the other eye, and whereby also the apparent separation or parallax is made to appear doubled when both eyes are binocularly focused upon either upper or lower images, in combination with means including a scale whereby any parallax can be removed and whereby the amount of adjustment required to remove the parallax can be read on the scale.

2. In a short base rangefinder, the combination of a pair of binocular eyepieces, means for producing in the lower half of the left and right eyepieces views of the bottom parts of a distant object as seen from the left and right ends respectively of the instrument, means for producing in the top halves of the left and right eyepieces views of the upper parts of the distant object as seen from the right and left ends of the instrument respectively, means for adjusting the position of the images in such a manner as to remove the parallax, and means for indicating the adjustment required.

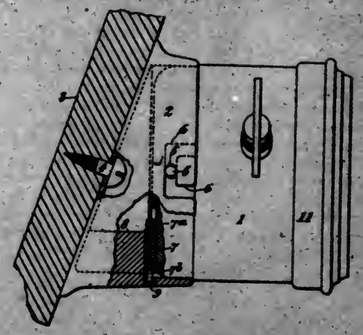
3. In a short base rangefinder the combination of a pair of binocular eyepieces, means for receiving and transmitting views of the upper and lower parts of a distant object as seen from both the right and left ends of the instrument, means for partially superposing the pupilary images of the objective formed by light coming from opposite ends of the instrument, means for transmitting the images such that the two eyepieces receive in the lower parts thereof images from the right and left ends respectively of the instrument, and in the upper parts thereof images from the left and right ends respectively of the instrument, together with means for adjusting the position of the images as seen in the instrument whereby any unneutralised parallax can be removed, and means for indicating the adjustment required in order to remove the said parallax.

4. In a short base rangefinder, a pair of binocular eyepieces, means for receiving and transmitting views of a distant object as seen from opposite ends of the instrument, the said means including a swinging prism, mechanism for moving the same about an axis parallel to its refracting edge and for indicating the amount of movement on a scale, in combination with means for splitting up and separating the upper and lower partial images of a distant object as viewed from opposite ends of the instrument and means for combining into each eyepiece the upper portion of the image from one end of the instrument and the lower portion of the image from the other end of the instrument, the said upper and lower portions of the images being respectively from the left and right ends of the instrument in the one and from the right and left ends of the instrument in the other of the eyepieces.

5. In a short base rangefinder the combination of a pair of binocular eyepieces, means for receiving and transmitting images of a distant object as viewed from opposite ends of the instrument, said means including adjusting mechanism whereby the image as seen from one end can be caused to move for the purpose of eliminating any parallax, an object glass through one half of which the image from one end of the instrument passes and through the other half of which the image from the other end of the instrument passes, and means for splitting up and transmitting separately into the two eyepieces the upper and lower halves of the images as seen from opposite ends of the instrument.

[Claims 6 to 10 not printed in the Gazette.]

1,013,850. PROTECTIVE CASING. BERNHARD VOLKMAR, New York, N. Y., assignor, by mesne assignments, to Conrad Hubert, New York, N. Y. Filed Dec. 9, 1909. Serial No. 532,177.

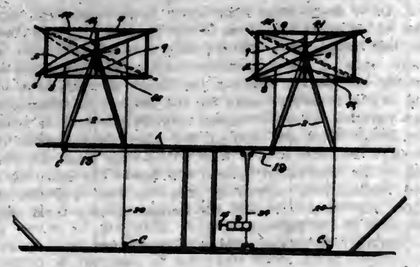


1. A protective inclosing casing comprising two parts secured together by rotational engagement, means for securing the casing to a support, such means being inaccessible for release when the parts are secured together, the parts being provided with notches on opposed faces arranged to register when the parts are engaged to form a pin-receiving opening between the parts, and means for preventing disengaging rotation of the parts comprising a pin entering the opening between the parts.

2. A protective inclosing casing comprising two parts secured together by rotational engagement, means for securing the casing to a support, such means being inaccessible for release when the parts are secured together, a screw-threaded notch being provided in each of the two parts, the two notches being on opposed faces of the parts and arranged to register when the parts are engaged to form a pin-receiving threaded opening between the parts, and a screw-threaded locking pin engageable in the threaded opening between the parts.

3. A protective inclosing casing comprising two parts secured together by rotational engagement, means for securing the casing to a support, such means being inaccessible for release when the parts are secured together, a screw-threaded notch being provided in each of the two parts, the two notches being on opposed faces of the parts and arranged to register when the parts are engaged to form a pin-receiving threaded opening between the parts, a screw-threaded locking pin engageable in the threaded opening between the parts and constructed so as to be countersunk therein when in engaged and locking position and having its outer end formed to receive a key, and a key conformed to the outer end of the pin and adapted to enter the pin receiving opening and to rotatively engage the pin.

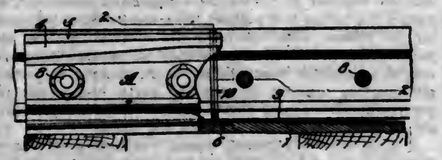
1,013,851. AEROCRAFT. JOSEPH J. V. KAULYNSKAS, Philadelphia, Pa. Original application filed Jan. 21, 1910, Serial No. 539,329. Divided and this application filed Oct. 29, 1910. Serial No. 589,734.



1. In apparatus of the class recited a main frame, standards surmounting the frame, a pair of fore and aft compound central planes, tiltably mounted on said standards, single auxiliary planes tiltably mounted and connected in pairs upon each side of the central planes, a separate steering wheel for each pair of planes, cables connecting each steering wheel, with each pair of planes, whereby the main planes may be simultaneously tilted at opposite angles and the respective pairs of fore and aft auxiliary planes may be simultaneously tilted at the same angle upon one or both sides of the apparatus.

2. In apparatus of the class recited, a main frame, standards arranged fore and aft of and surrounding the said frame, bearings for said standards, shafts journaled in said bearings, a pair of compound central planes tiltably mounted on said shafts, auxiliary single planes arranged in pairs tiltably mounted on said shafts upon each side of the central planes and means for simultaneously operating each pair of planes independently of each of the other pairs of planes.

1,013,852. RAIL-JOINT. HARRY F. ROACH, St. Louis, Mo. Original application filed May 5, 1911, Serial No. 625,175. Divided and this application filed Sept. 2, 1911. Serial No. 647,304.



1. An insulated rail-joint comprising a rail-supporting member provided with a portion that extends alongside of the rails, an insulating member arranged upon said rail-supporting member under the base flanges of the rails and provided with an integral portion that lies between the terminals of the rails, and a separate and distinct insulating member arranged between the rails and the portion of said rail-supporting member that extends alongside of the rails.

2. In an insulated rail-joint, a metallic rail-supporting member, and a pair of sole plates of insulating material arranged between the base flanges of the rails and said rail-supporting member and provided with integral end-posts that lie between the terminals of the rails.

3. An insulated rail-joint consisting of a horizontally disposed rail-supporting member provided adjacent one edge with a portion that extends alongside of the rails, the top face of said horizontally disposed member being flat at approximately its center and inclined downward toward its ends, an insulating member arranged between said portion and the rails and provided at its lower edge with a depending flange, sole plates arranged under the base flanges of the rails, and upwardly projecting flanges on said sole plates which lie adjacent the dependent flange on said insulating member.

4. An insulated rail-joint consisting of a member having a horizontally disposed rail-supporting portion and a portion which extends alongside of the rails, the top face of said rail-supporting portion being flat at approximately the center and inclined downward toward its ends, and insulating material arranged between said member and the rails.

5. An insulated rail-joint consisting of a member having a horizontally disposed rail-supporting portion and a portion which extends alongside of the rails, the top face of said rail-supporting portion being flat at approximately the center and inclined downward toward its ends, insulating sole plates arranged between said horizontally disposed portion and the base flanges of the rails and provided with integral end-posts which lie between the terminals of the rails, upturned flanges on one edge of said sole plates, an insulating member arranged between the rails and the portion of said member which extends alongside of the rails, and a depending flange on said insulating member which laps over the upturned flanges on the sole plates.

[Claims 6 and 7 not printed in the Gazette.]

1,013,853. INDEPENDENT-VOTING DEVICE. CHARLES HERBERT OCUMPAUGH, Rochester, N. Y. Original application filed July 3, 1902, Serial No. 114,301. Divided and this application filed Feb. 2, 1904. Serial No. 191,692.

1. In a voting machine, an indicator, an irregular ballot receptacle, a chute adapted to communicate with the receptacle, and a resetting bar having a cut off adapted to close communication between the chute and receptacle.

2. In a voting machine, an indicator, an irregular ballot receptacle, a chute adapted to communicate with the receptacle, and a resetting bar having a cut off adapted to close communication between the chute and receptacle, said cut off holding a ballot in manner to permit its withdrawal by the votor.

3. In a voting machine, an indicator, a chute for a ballot, a cover for said chute, a device intermediate the indicator and cover to move the latter, and a resetting device to return said intermediate device and cover, said resetting device forming also an indicator lock.

4. In a voting machine, an indicator, a chute for a ballot, a cover for said chute, a device intermediate the indicator and cover to move the latter, a resetting device to return said intermediate device and cover, and a chute cut-off distinct from said cover and adapted to support a ballot left in voted position, said cut-off being operatively connected to the resetting device.

5. The combination of an indicator, a bar movable by the indicator, an irregular ballot receptacle, a chute cover fixed to said bar, a resetting bar, and a chute closing slide fixed to the resetting bar.

[Claims 6 to 9 not printed in the Gazette.]

1,013,854. THERMOSTAT. GÜNTHER PHILIP WILD, Philadelphia, Pa., assignor to Frederick W. Schmidt, Philadelphia, Pa. Filed Dec. 7, 1910. Serial No. 596,056.

1. A thermostat, a concrete and unitary casing for the same formed from electrically conductive material and electrically connected to one contact of the thermostat and having portions of its outer surface rendered non-conductive by an electrically non-conducting and acid-resisting coating and the noncoated portions of the conductive material being acid-resisting.

2. A thermostat, a concrete and unitary casing for the same formed from electrically conductive material and having the greater part of its outer surface rendered non-conductive by an electrically non-conducting and acid-resisting coating, and an acid-resisting electrode electrically connected to one element of the thermostat and uncovered by said coating.

3. A thermostat, a concrete and unitary casing for the same having its outer surface wholly acid-resisting and having parts of such surface electrically non-conductive and parts of the same electrically conductive and electrically connected to one element of the thermostat.

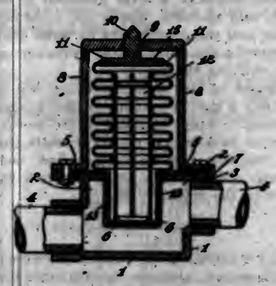
4. A thermostat, a concrete and unitary casing for the same having its outer surface wholly acid-resisting and the greater part thereof electrically non-conductive and a part of the same electrically conductive to form an electrode connected to one of the elements of the thermostat.

5. A thermostat, a concrete and unitary casing for the same forming an electrode electrically connected to one element of the thermostat and having its outer surface wholly acid-resisting and the greater part thereof electrically non-conductive and having a portion exposed through the non-conductive surface.

[Claim 6 not printed in the Gazette.]

REISSUES.

13,346. MECHANISM SUITABLE FOR USE AT OR AS PART OF A DAMPER-REGULATING APPARATUS. EDWARD J. DEEGAN, New York, N. Y. Filed Oct. 31, 1911. Serial No. 657,868. Original No. 1,000,379, dated Aug. 15, 1911, Serial No. 596,847.



1. A device of the character described comprising a damper regulator supporting casing having formed therein a fluid chamber and fluid pipe reception means, an expansible mechanism reception chamber depending into said fluid chamber formed in said casing, a pipe adapted for expansion having formed on its lower end, a supporting base adapted to engage said reception chamber in said casing and having its upper body portion formed into a plurality of convolutions, a cap having cast integrally therewith an actuating pin adapted to engage the extreme upper convolution in said pipe and a hood surrounding said expansible pipe provided with an aperture adapted to receive the pin on said cap.

2. A device of the character described including an expansible pipe for damper regulators having formed on its lower closed end a supporting base and in its upper body portion a plurality of convolutions, a regulator supporting casing having formed therein a fluid chamber and fluid pipe reception means, an expansible pipe reception chamber formed in said casing and depending into said fluid chamber adapted to receive the lower closed end of said expansible pipe, a cap mounted on the upper convolution of said expansible pipe having cast integrally therewith an actuating pin, a hood engaging said casing and adapted to surround the convoluted portion of said expansible pipe, the lower closed end of said expansible pipe being so arranged with relation to the reception chamber as to form a supporting base or wall for the upper convoluted portion of said pipe.

3. A device of the character described, comprising an expansible tube, a fluid chamber with fluid pipe reception means, a chamber projecting into said fluid chamber substantially as set forth, and provided with a closed wall interposed between the fluid chamber and the interior of the chamber projecting into the fluid chamber, whereby it will be surrounded and acted upon by the fluid entering the fluid chamber, a hollow extension projecting from the expansible tube and entering and fitting closely within the chamber projecting into the fluid chamber, but removable therefrom as described, without opening the pipe or its chamber, and means connected with said expansible tube for operating a regulating device, all substantially as set forth.

4. A device of the character described, comprising an expansible tube, a fluid chamber with fluid pipe reception means, a chamber projecting into said fluid chamber substantially as set forth, and provided with a closed wall interposed between the fluid chamber and the interior of the chamber projecting into the fluid chamber, whereby it will be surrounded and acted upon by the fluid entering the fluid chamber, a hollow extension projecting from the expansible tube and entering and fitting closely within the chamber projecting into the fluid chamber, but removable therefrom, as described, without opening the pipe or its chamber, a cap closing the outer end of the expansible tube and provided with a pin extending therefrom all substantially as set forth.

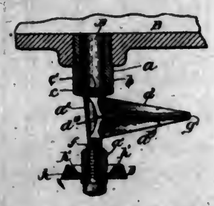
5. A device of the character described, comprising an expansible tube, a fluid chamber with fluid pipe reception means, a chamber projecting into said fluid chamber substantially as set forth, and provided with a closed wall interposed between the fluid chamber and the interior of the chamber projecting into the fluid chamber, whereby it will be surrounded and acted upon by the fluid entering the fluid chamber, a hollow extension projecting from the expansible tube and entering and fitting closely within the chamber projecting into the fluid chamber, but removable therefrom, as described, without opening the pipe or its chamber, a cap closing the outer end of the expansible tube and provided with a pin extending therefrom, and a casing apertured for the passage of said pin, and surrounding said expansible tube all substantially as set forth.

6. A fluid conveying pipe, provided with a fluid chamber therein, closed at the sides, a chamber projecting into said fluid chamber substantially as set forth, and provided with a closed wall interposed between the fluid chamber and the interior of the chamber projecting into the fluid chamber, whereby it will be surrounded and acted upon by the fluid entering the fluid chamber, an expansible tube, a hollow extension projecting from the expansible tube and entering and fitting closely within the chamber projecting into the fluid chamber, but removable therefrom as described, without opening the pipe or its chamber, and means connected with said expansible tube for operating a regulating device, all substantially as set forth.

7. A fluid holding chamber, a chamber projecting into said fluid chamber, substantially as set forth, and provided with a closed wall interposed between the fluid holding chamber and the interior of the chamber projecting into the fluid chamber, whereby the projecting chamber will be surrounded and acted upon by fluid in the fluid holding chamber an expansible tube, a hollow ex-

tension projecting from the expansible tube and entering and fitting closely within the chamber projecting into the fluid holding chamber, but removable from said projecting chamber as described, without opening said fluid holding chamber, and means connected with said expansible tube for operating a regulating device, all substantially as set forth.

13,347. AUTOMATIC FIRE-EXTINGUISHER. WILLIAM ESTY, Laconia, N. H., assignor to Esty Sprinkler Company, a Corporation of New Hampshire. Filed May 5, 1902. Serial No. 106,095. Original No. 696,884, dated Apr. 1, 1902, Serial No. 459,676.



1. In an automatic fire extinguisher, the combination with a water-supply pipe provided with a discharge orifice and a valve seat surrounding said orifice, of a valve for closing said orifice, a valve-support made in two parts secured together by a metal that will fuse at a low temperature, and a sprinkler-cup having its main body made concavo-convex and provided at its outer edge with a flaring petticoat-like flange, and also having a series of oblique notches cut through its raised angular ridge and forming openings between the petticoat-like flange and the concavo-convex portion of said cup, substantially as described.

2. In combination with the supply-pipe B, the stirrup-like casting A set in an opening in said pipe and provided with a discharge orifice through its hub *a*, and with the seat *b* surrounding said orifice, the screw step *f* mounted adjustably in the hub *a'*, the valve *c*, the mica disk *c'* the valve-support C made in two parts secured together by a metal that will fuse at a low temperature, and the concavo-convex sprinkler-cup D provided with the petticoat-like flange *h*, the oblique notches *h'*, and the openings *i*, substantially as described.

3. In an automatic fire extinguisher, the concavo-convex sprinkler cup D provided with the annular pendent flange *h*, the series of notches *h'*, and the openings *i*, substantially as described.

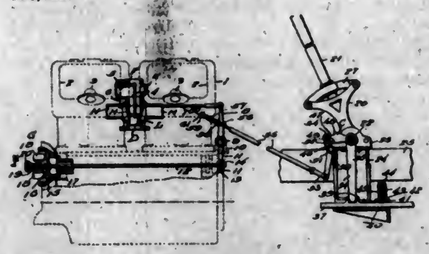
4. In combination with a supply-pipe provided with a discharge orifice, a seat surrounding said orifice, a valve for closing said orifice, a support for said valve, constructed and adapted to be disintegrated when the temperature of the room is raised above a predetermined point, and an adjustable step for said support, of the concavo-convex cup D provided with the annular flange *h*, the series of notches *h'*, and openings *i*, loosely mounted upon a suitable bearing, and adapted to be reversed to present either its concave or convex side toward the outflowing jet of water, substantially as described.

5. A valve-holding device for automatic sprinklers comprising two opposed substantially counter-part lever members one thereof resting upon and supported by the other the said members constructed and arranged to fulcrum or swing upon each other at a point closely adjacent but normally outside the line of thrust and connected by a fusible connection at the resistance side of the fulcrum along a line at right angles to the line of strain.

6. In an automatic sprinkler, the combination with an outlet, of a valve for closing the outlet, a valve-holding device interposed between said valve and the frame of the sprinkler, said device being composed of two opposed lever members arranged to bear upon and fulcrum upon each other at a point closely adjacent the line of thrust but normally outside such line substantially midway between the bearing points on the valve and frame respectively, and a fusible connection acting upon the lever members at the resistance side of the fulcrum along a line extending outward from the fulcrum.

7. In an automatic sprinkler, the combination with the outlet, of a valve for closing the outlet, and a valve-holding device composed of two lever-members of similar form which fulcrum upon each other adjacent but outside the line of thrust, and substantially midway between the bearing-points on the valve and frame, respectively, the said members being provided with lever-arms extending laterally beyond the fulcrum and connected by a fusible connection along a line extending outward from the fulcrum.

13,348. SPEED-REGULATING DEVICE FOR AUTOMOBILES AND THE LIKE. HIPPOLYT SAURER, Arbon, Switzerland. Filed Sept. 11, 1911. Serial No. 648,773. Original No. 976,834, dated Nov. 22, 1910, Serial No. 516,712.



1. The combination with a fluid operated motor, a governor therefor, and a shaft driven thereby, change-gears between said motor and shaft, and means for shifting said gears, of a valve connected to said governor to control the supply of fluid to said motor and connections between said gear-shifting means and the connections between said valve and governor, whereby the effect of the governor on the valve is varied by shifting the gears.

2. The combination with a fluid operated motor, a governor therefor and a shaft driven thereby, change-gears between said motor and shaft, and means for shifting said gears, of a valve connected to said governor to control the supply of fluid to said motor, said gear-shifting means comprising cam-surfaces, a lever mounted to be rocked by contact with said surfaces, and a rod yieldingly connecting said lever and the connections between said valve and governor, whereby the effect of the governor on the valve is varied by shifting the gears.

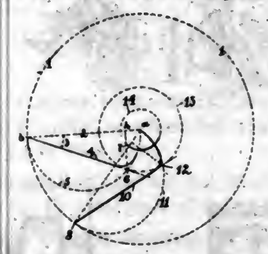
3. In a device of the class described, the combination with the motor, a governor therefor and means controlled by the governor to vary the speed of the motor, of change gears driven by said motor, means to shift the same and connections between said shifting means and said governor, whereby shifting the gears controls the effect of the governor on the motor.

13,349. SHIP-PROPELLER. GEORG ARTHUR SCHLOTTER, Dresden, Germany, assignor to Schlotter-Propeller-Patentverwertungs-Gesellschaft mit beschränkter Haftung, Dresden, Germany. Filed May 15, 1911. Serial No. 627,377. Original No. 921,896, dated May 18, 1909, Serial No. 405,738.

1. A propeller comprising helicoidal blades the surface of which is formed by the movement of a genaratrix composed of a straight line of constant length whose end-points move on an outer and an inner cylinder concentric with the axis of the propeller, said genaratrix being tangential with the inner cylinder and forming with a radius drawn from its outer end-point to the propeller axis an angle which is equal to the angle of pitch of the blades.

2. A propeller comprising helicoidal blades which are formed by the movement of a genaratrix composed of a straight line of constant length, the end-points of which

are placed and moved on cylinders concentric with the axis of the propeller, said blades being each bounded by a curved line which determines the circumference of the propeller and by lines which are tangential to the inner cylinder and connected at their inner ends with the hub or shaft, the generatrix making with the radius from the axis passing through the end point of the generatrix an angle which is equal to the angle of the pitch of the blades.

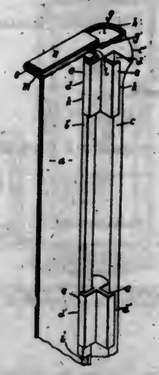


3. A propeller comprising helicoidal blades, each of which is formed by the movement of a generatrix, the end-points of which are placed and moved on cylinders concentric with the axis of the propeller, said blades being each bounded by a curved line which determines the circumference of the propeller and by lines which are tangential to the inner cylinder, and being joined by roots at their inner ends to the hub or shaft, the generatrix making with the radius from the axis passing through the end-point of the generatrix an angle which is equal to the angle of the pitch of the blades.

4. A propeller comprising helicoidal blades, the surface of which is formed by the movement of a generatrix formed by a line whose end points move concentric with the axis of the propeller and which in respect to the direction of rotation lags behind the radius from the propeller axis passing through the outer end point of the generatrix for an angle which is equal to the angle of the pitch of the blades.

5. A propeller comprising helicoidal blades, the surface of which is formed by the movement of a generatrix formed by a line whose end points move on an outer and an inner cylinder concentric with the axis of the propeller, said generatrix being tangential to the inner cylinder, and which is inclined to the axis of the propeller, and making with a plane passing through its outer end and vertical to the axis of the propeller, an angle which is equal to the angle of the pitch of the blades.

13,350. BURIAL-CASE. PATRICK D. SKAHEN, Syracuse, N. Y. Filed Nov. 7, 1905. Serial No. 286,297. Original No. 766,000, dated July 26, 1904, Serial No. 201,806.



1. In a knockdown burial-case, the combination of the end walls and side walls composed of separate sheet-metal plates and formed at their vertical edges with inwardly-projecting flanges, corner-posts formed with vertical grooves having contracted side entrances and receiving the flanged portions of said walls, and keys inserted endwise in said grooves and engaging said flanges and contracted portions of the grooves and firmly locking the walls in said grooves as set forth.

2. A burial-case comprising sheet-metal side walls and end walls formed at their vertical edges with flanges, corner-posts formed with vertical grooves receiving said flanges and each groove provided with a vertical rib on one of its sides, and keys inserted in said grooves and engaging said flanges and ribs and locking the walls to the posts as set forth and shown.

3. In a burial-case, the combination of corner-posts formed with vertical grooves, the side walls and end walls formed at their vertical edges with flanges entering said grooves and at their lower longitudinal edges with outwardly-projecting ledges bearing on the ends of the posts, keys inserted in said grooves and locking the flanges therein, and the bottom secured to the lower ledges of the walls as set forth and shown.

4. In the burial-case, the combination of corner-posts, each formed at its top and bottom with a pair of vertical grooves and at its intermediate portion with a pair of grooves disposed in line with the end grooves, the side walls and end walls formed at their vertical edges with flanges entering said grooves, and keys inserted in said grooves and engaging said flanges to lock the walls to said posts as set forth and shown.

5. In a burial-case, the combination of metallic corner-posts formed with vertical grooves, sheet-metal side walls and end walls formed with flanges entering said grooves, keys inserted in said grooves and locking the flanges therein, the longitudinal edges of the walls formed with outwardly-projecting ledges bearing on the ends of the posts and terminating with inwardly-folded flanges producing channels, and the bottom and lid inserted in said channels as set forth and shown.

6. In a burial-case, the combination of corner-posts formed with vertical grooves in the inner sides and with steps projecting from the end faces of the posts, the walls formed with vertical flanges locked in said grooves and at their longitudinal edges with outwardly-projecting ledges bearing on the ends of the posts and abutting against said steps and in a plane therewith and terminating with inwardly-folded flanges producing channels, and the lid and bottom inserted in the upper and lower channels, respectively as set forth and shown.

7. In a burial-case, the combination of corner-posts formed in the inner sides with vertical grooves, and with steps projecting from their end faces and rims or guards partly surrounding the lower steps, sheet-metal side and end walls formed at their vertical edges with inwardly-projecting flanges entering said grooves, keys inserted in said grooves and locking the said flanges therein, the longitudinal edges of the walls formed with outwardly-projecting ledges bearing on the end faces of the posts and abutting against the aforesaid steps and terminating with inwardly-folded flanges producing inwardly open channels, the lid removably inserted in the upper channels, and the bottom inserted in the lower channels and having its corner portions abutting against the said rims or guards as set forth and shown.

8. In a burial-case, the combination of corner-posts formed with enlarged end portions and provided in their inner sides with vertical grooves, the side walls and end walls formed at their vertical edges with inwardly-projecting flanges entering said grooves, keys inserted in said grooves and locking the flanges therein, the longitudinal edges of the walls formed with outwardly-projecting ledges extending beyond said flanges and bearing on the end faces of the posts, said ledges terminating with inwardly-folded flanges producing channels, the bottom inserted in the lower channels and locked permanently therein, and the lid seated removably in the upper channels as set forth and shown.

9. A burial case comprising sheet-metal side walls and end walls provided with vertical edge flanges, vertical

corner posts having parts coöperating with said flanges for uniting said walls, and additional flanges on the side and end walls having parts overlapping ends of the corner posts for limiting the movement of the side and end walls.

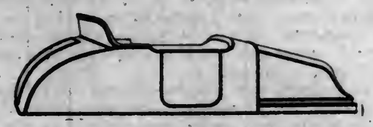
10. A burial case comprising sheet-metal side and end walls, corner posts for uniting said walls, said posts having horizontally and vertically disposed engaging surfaces and vertically and horizontally disposed edge flanges on the side and end walls for coöperating with the corresponding surfaces of the end posts.

11. In a burial-case, the combination of metallic corner-posts formed with vertical grooves, sheet-metal side walls formed with flanges entering the grooves, the upper and lower edges of the walls being formed with outwardly-projecting portions bearing on the ends of the posts, and keys inserted in said grooves and locking the flanges therein.

12. In a burial-case, the combination of corner-posts formed with vertical grooves in their inner sides and with steps projecting from the end faces of the posts, the walls formed with vertical flanges locked in said grooves and at their longitudinal edges with outwardly-projecting portions bearing on the ends of the posts and abutting against said steps.

DESIGNS.

42,073. AUTOMOBILE-BODY. OLIVER P. FRITCHLE, Denver, Colo., assignor to The Fritchle Automobile & Battery Co., Denver, Colo., a Corporation of Colorado. Filed Oct. 20, 1911. Serial No. 655,809. Term of patent 14 years.



The ornamental design for an automobile body, as shown.

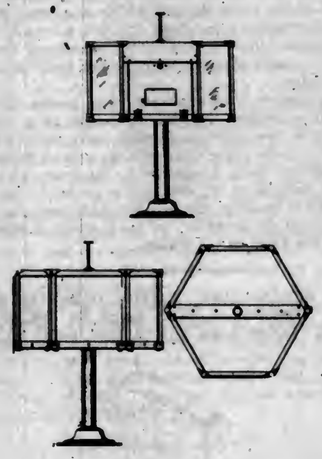
42,074. VEHICLE-BODY. HENRY B. JOY, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 13, 1911. Serial No. 660,146. Term of patent 7 years.

The ornamental design for a vehicle body, as shown.

42,075. VEHICLE-BODY. RICHARD SHELTON RICHESON, St. Louis, Mo. Filed Oct. 31, 1911. Serial No. 657,862. Term of patent 7 years.

The ornamental design for a vehicle body, as shown.

42,076. SHOW-CASE. LESLIE ASBURY VANDIVER, Chicago, Ill. Filed Apr. 26, 1911. Serial No. 623,524. Term of patent 14 years.



The ornamental design for a show case, as shown.

TRADE-MARKS

PUBLISHED JANUARY 2, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 11,808. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SLIGO IRON & STEEL CO., Connellsville, Pa. Filed Aug. 22, 1905.

SS

Particular description of goods.—Wrought-Iron.
Claims use since 1873.

Ser. No. 33,256. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. T. PIVER & CIE., Paris, France. Filed Mar. 9, 1908.

Particular description of goods.—Perfumery Extracts, Toilet Powders, and Sachet-Powders.
Claims use since Sept. 2, 1907.

Ser. No. 36,791. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REDDING & CO., INCORPORATED, Melrose, Mass. Filed Aug. 17, 1908. Under ten-year proviso.

RUSSIA SALVE

Particular description of goods.—A Salve.
Claims use since 1848.

Ser. No. 36,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REDDING & CO., INCORPORATED, Melrose, Mass. Filed Aug. 17, 1908. Under ten-year proviso.

Particular description of goods.—A Salve.
Claims use since 1848.

Ser. No. 36,793. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REDDING & Co., INCORPORATED, Melrose, Mass. Filed Aug. 17, 1908. Under ten-year proviso.

Particular description of goods.—A Salve.
Claims use since 1848.

Ser. No. 40,986. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MICHELIN TIRE COMPANY, Milltown, N. J. Filed Mar. 8, 1909.

Particular description of goods.—Pneumatic Tires for Automobiles.
Claims use since 1907.

Ser. No. 45,548. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MALLORY & Co., Baltimore, Md. Filed Oct. 26, 1909.

Particular description of goods.—Canned Fish, Oysters, Fruits, and Vegetables.
Claims use since 1860.

Ser. No. 45,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CAMP CHOCOLATE Co., McKeesport, Pa. Filed Nov. 15, 1909.

Particular description of goods.—Sweetened Popcorn.
Claims use since Nov. 1, 1908.

Ser. No. 48,675. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) VICTOR SPORTING GOODS COMPANY, Springfield, Mass. Filed Mar. 26, 1910. Under ten-year proviso.

Particular description of goods.—Boxing-Gloves, Base-Ball Gloves, Striking-Bag Gloves, Fencing-Gloves, Foot-Ball Protectors; Exercisers, Weight and Elastic; Indian-Clubs, Dumb-Bells, Medicine-Balls as Used in Base-Ball, Plastrons, Archery-Arrows, Archery-Bows, Croquet-Balls, Croquet-Mallets, Shin-Guards, Nose-Guards, Fencing-Foils, Fencing-Masks, Hockey-Balls, Hockey-Guards, Hockey-Sticks, Golf-Balls, Golf-Clubs, Golf Caddy-Bags, Polo-Balls, Polo-Sticks, Polo-Guards, Hand-Balls, Volley-Balls, Base-Balls, Indoor Base-Balls, Base-Ball Masks, Base-Ball Protectors, Base-Ball Mitts, Base-Ball Bases, Base-Ball Bats, Base-Ball-Bat Bags, Foot-Balls, Foot-Ball Bladders, Basket-Ball Goals, Basket-Ball Bladders, Lawn-Tennis Balls, Lawn-Tennis Nets, Lawn-Tennis Rackets, Striking-Bags, Striking-Bag Frames, Striking-Bag Bladders.
Claims use since April, 1883.

Ser. No. 49,619. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE O. K. TOOL HOLDER COMPANY, Shelton, Conn. Filed May 9, 1910.

Particular description of goods.—Cutters and Holders Therefor for Lathes, Shapers, Planers, and Boring-Mills, and Tool-Posts and Dogs for Lathes.
Claims use since on or about the 1st day of July, 1901.

Ser. No. 48,922. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND MILLING Co., Cleveland, Ohio. Filed May 26, 1910.

Particular description of goods.—Flour.
Claims use since about Apr. 10, 1910.

Ser. No. 51,766. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HALL & CARPENTER, Philadelphia, Pa. Filed Sept. 12, 1910.

ASBESTILE

Particular description of goods.—Asbestos and Cement Griddles.
Claims use since Sept. 15, 1909.

Ser. No. 52,279. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE TURNER BRASS WORKS, Sycamore and Chicago, Ill. Filed Oct. 15, 1910. Under ten-year proviso.

OLD RELIABLE

Particular description of goods.—Gasolene-Operated Torches and Paint-Breamers.
Claims use since the early part of the year 1891.

Ser. No. 53,050. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AMERICAN PIN COMPANY, Waterbury, Conn. Filed Nov. 19, 1910.

Independent

Particular description of goods.—Safety-Pins.
Claims use since the 27th day of October, 1910.

Ser. No. 53,018. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURKE & JAMES, Chicago, Ill., assignors to Burke & James, Inc., a Corporation of Delaware. Filed Nov. 29, 1910.

INGENTO

Particular description of goods.—Toning and Fixing Tubes, Carbon Sensitizers, Reducing-Powders, Red Litmus Papers, Blue-Print Powders, Restraining-Tablets, Metol-Quinol Developers, Reducing Solutions, Hydro-Metol Developers, Reducing-Tablets, Platinum Toning Solutions, Concentrated Eiko-Hydro Developers, Acid Hypos, Toning and Fixing Solutions, Edinol-Quinol Developers, Toning and Fixing Powders.
Claims use since May, 1903.

Ser. No. 53,175. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) METEOR CARBON COMPANY, Charleston and Stonecoal, W. Va. Filed Dec. 8, 1910.

No claim being made for the words "Carbon Black."
Particular description of goods.—Carbon-Black.
Claims use since Oct. 1, 1910.

Ser. No. 53,857. (CLASS 37. PAPER AND STATIONERY.) JAPANESE TISSUE MILLS, Holyoke, Mass. Filed Jan. 13, 1911.

Particular description of goods.—Toilet-Paper.
Claims use since on or about Sept. 15, 1910.

Ser. No. 53,858. (CLASS 37. PAPER AND STATIONERY.) JAPANESE TISSUE MILLS, Holyoke, Mass. Filed Jan. 13, 1911.

Particular description of goods.—Toilet-Paper.
Claims use since on or about Sept. 15, 1910.

Ser. No. 54,586. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) M. GOUDARD AND MENNESSON, Paris, France. Filed Feb. 18, 1911.

SOLEX

Particular description of goods.—Carbureters, Explosion-Motor Radiators, Pumps, and Lubricators.
Claims use since the 15th of May, 1910.

Ser. No. 54,761. (CLASS 12. CONSTRUCTION MATERIALS.) NASHVILLE HARDWOOD FLOORING COMPANY, Nashville, Tenn. Filed Feb. 27, 1911.

Particular description of goods.—Flooring, Edge-Strips for Floors, and Wood Flooring-Squares.
Claims use since Jan. 1, 1904.

Ser. No. 55,299. (CLASS 2. RECEPTACLES.) THE AMERICAN PAPER GOODS COMPANY, Montclair, N. J., and Kensington, Conn. Filed Mar. 24, 1911. Under ten-year proviso.

Kensington

Particular description of goods.—Paper Bags and Drinking-Cups Composed Wholly or in Part of Paper.
Claims use since Jan. 1, 1898.

Ser. No. 55,520. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ZERA L. BURRESS, Anderson, S. C. Filed Apr. 4, 1911.

SUCCESS

Particular description of goods.—Remedies for Cattle.
Claims use since Oct. 15, 1910.

Ser. No. 55,549. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARNOLD C. SHIVELEY, North Manchester, Ind. Filed Apr. 6, 1911.

LITTLE GIANT

Particular description of goods.—A Hand Seed-Sower.
Claims use since Jan. 1, 1895.

Ser. No. 55,621. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. W. TAYLOR & CO., New York, N. Y. Filed Apr. 8, 1911.

Particular description of goods.—Hair-Tonic.
Claims use since Aug. 13, 1876.

Ser. No. 55,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. WHITE COMPANY, Mount Morris, N. Y. Filed Apr. 12, 1911.

SLEEPY EYE

The portrait shown is that of old Sleepy Eye, a Sioux Indian, deceased.
Particular description of goods.—Canned Fruits and Vegetables.
Claims use since about May 1, 1910.

Ser. No. 55,703. (CLASS 32. FURNITURE AND UPHOLSTERY.) SAMUEL G. KRUPKA, Fairfield, Conn. Filed Apr. 12, 1911.

Particular description of goods.—Mattresses.
Claims use since Apr. 1, 1911.

Ser. No. 56,023. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN RICE & CEREAL CO., Keokuk, Iowa. Filed Apr. 28, 1911.

Particular description of goods.—Rolled Oats.
Claims use since 1904.

Ser. No. 56,387. (CLASS 38. PRINTS AND PUBLICATIONS.) J. EARLY WOOD, New York, N. Y. Filed May 16, 1911.

THE PLAYER-PIANO

Particular description of goods.—A Periodical Publication.
Claims use since May 1, 1911.

Ser. No. 56,629. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LANMAN & KEMP, New York, N. Y. Filed May 27, 1911. Under ten-year proviso.

The picture being fanciful, all the words and names being disclaimed.
Particular description of goods.—A Liquid Tonic for Preserving and Beautifying the Hair.
Claims use since 1864.

Ser. No. 56,693. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HINKLE CAPSULE COMPANY, Mayfield, Ky. Filed May 29, 1911.

Particular description of goods.—A Remedy for Gonorrhea, Gleet, and Bladder Affections.
Claims use since Mar. 1, 1911.

Ser. No. 56,981. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Hoboken, N. J. Filed June 12, 1911. Under ten-year proviso.

GENUINE Glidden Barb Wire

Particular description of goods.—Barb-Wire.
Claims use since 1890.

Ser. No. 57,071. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa. Filed June 15, 1911.

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since on or about Jan. 1, 1909.

Ser. No. 57,089. (CLASS 39. CLOTHING.) FRED F. FIELD COMPANY, Brockton, Mass. Filed June 16, 1911.

Tite-Oke

Particular description of goods.—Leather Boots and Shoes.
Claims use since Jan. 15, 1911.

Ser. No. 57,125. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. B. MOORE & Co., New York, N. Y. Filed June 17, 1911.

Sumar

Consisting of the word "Sumar," inclosed in a circle.
Particular description of goods.—Mixed Silk and Worsted Piece Goods.
Claims use since the spring of 1910.

Ser. No. 57,189. (CLASS 12. CONSTRUCTION MATERIALS.) KELLEY-HOW-THOMSON CO., Duluth, Minn. Filed June 20, 1911.

HICKORY

The outline of the diamond shown being in red.
Particular description of goods.—Asphalt Prepared Roofing.
Claims use since Sept. 1, 1902.

Ser. No. 57,316. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) UNITED STATES CARTRIDGE COMPANY, Lowell, Mass. Filed June 26, 1911. Under ten-year proviso.

The trade-mark is colored black, no claim being made to the representation of a shell.
Particular description of goods.—Cartridge-Shells.
Claims use since 1881.

Ser. No. 57,365. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa. Filed June 29, 1911.

Particular description of goods.—Candy.
Claims use since about May 1, 1911.

Ser. No. 57,539. (CLASS 10. FERTILIZERS.) JACOB A. ENGEL, Syracuse, N. Y. Filed July 8, 1911.

G
N L

Particular description of goods.—Fertilizer.
Claims use since about the 20th day of June, 1911.

Ser. No. 57,597. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. A. METZ & Co., New York, N. Y. Filed July 12, 1911.

ARSAN

Particular description of goods.—A Remedy for Syphilis, Sleeping-Sickness, Trypanosomiatis and other Tropical Infectious Diseases.
Claims use since July 7, 1911.

Ser. No. 57,766. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARGREAVES MERC. CO., Lincoln, Nebr. Filed July 21, 1911.

Particular description of goods.—Oysters; Evaporated Milk; Mince-Meat; Canned Pork and Beans with Tomato Sauce; Canned Asparagus; Corn; Peas; Beans; Beets; Tomatoes; Hominy; Sauer-Kraut; Peanut-Butter; Catsup; Muscat Grapes; Peaches; Plums; Apricots; Hawaiian Pineapple; Cherries; Blackberries; Strawberries; Succotash; Raspberries; Blueberries; Gooseberries; Self-Raising Pancake-Flour; Self-Rising Pancake-Flour; Breakfast-Wheat; and Rolled Oats.
Claims use since Mar. 15, 1911.

Ser. No. 57,754. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILDMAN MFG. CO., Norristown, Pa. Filed July 22, 1911.

Particular description of goods.—Knitting-Machines, Stop-Motion for Knitting-Machines, and Cloth-Cutting Machines.
Claims use since Apr. 1, 1911.

Ser. No. 57,795. (CLASS 39. CLOTHING.) SPEAR & CO., Woodhaven, N. Y. Filed July 24, 1911.

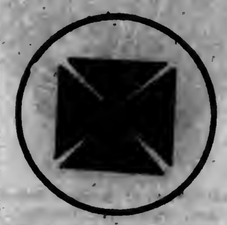
Particular description of goods.—Stiff and Soft Felt Hats, Wool Hats, Straw Hats, and Cloth Caps for Men, Boys, Women, and Girls.
Claims use since Jan. 1, 1911.

Ser. No. 57,911. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEO. R. GIBSON CO., New York, N. Y. Filed July 28, 1911.

THE COM

Particular description of goods.—Toilet-Brushes.
Claims use since Apr. 1, 1911.

Ser. No. 57,945. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH BROTHERS, Baltimore, Md. Filed July 31, 1911.



Particular description of goods.—Cough-Drops.
Claims use since Jan. 21, 1891.

Ser. No. 58,014. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN BROTHERS COMPANY, Boston, Mass. Filed Aug. 3, 1911.

ROCKPHALT

Particular description of goods.—Bituminous Cements and Pavements.
Claims use since about Jan. 1, 1902.

Ser. No. 58,101. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEATTIE MANUFACTURING COMPANY, Little Falls, N. J. Filed Aug. 9, 1911.

WILTANA
WILTANA

Particular description of goods.—Velvet Rugs.
Claims use since July 27, 1911.

Ser. No. 58,130. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARL H. LIPS, New York, N. Y. Filed Aug. 10, 1911.

ETOIMO

Particular description of goods.—Skin-Stain Removers.
Claims use since July 25, 1911.

Ser. No. 58,188. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC PACKING CO., Baltimore, Md. Filed Aug. 14, 1911.

MAJESTIC

Particular description of goods.—Raw Shucked Oysters in Cans.
Claims use since July 10, 1911.

Ser. No. 58,202. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORNEL PÁRTOS, New York, N. Y. Filed Aug. 14, 1911.

PARTOCYL

Particular description of goods.—A Remedy for Diseases of the Skin.
Claims use since June, 1909.

Ser. No. 58,382. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Aug. 25, 1911.

ALGOL

Particular description of goods.—Lubricating-Oils.
Claims use since Mar. 20, 1911.

Ser. No. 58,432. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETER G. CHARBONNET, New Orleans, La. Filed Aug. 29, 1911.

SKYLO

Particular description of goods.—Ointments and Remedies for Purifying the Blood, Disorder of the Stomach and Kidneys, Costiveness, Depression of the Spirits Depending upon Digestion, Bilious Attacks, Dyspepsia, Nausea, Headache, Liver Complaint, Dizziness, Skin Disease, Worms, Bronchitis, Asthma, Catarrh, Cold, Consumption, Hay-Fever, Croup, Sore Throat, Earache, Toothache, Neuralgia, Rheumatism, and All Affections of the Throat and Lungs and in Case of Irregular and Imperfect Menstruation and Pregnancy or Confinement.
Claims use since Mar. 1, 1910.

Ser. No. 58,445. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WELSBACH COMPANY, Gloucester, N. J. Filed Aug. 30, 1911.

Cottage

Particular description of goods.—Incandescent Gas-Lamps and Parts Thereof.
Claims use since Aug. 10, 1911.

Ser. No. 58,555. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAMS REMEDY CO., Ty Ty, Ga. Filed Sept. 6, 1911.

Consisting of a portrait and the facsimile-signature of I. A. Williams.
Particular description of goods.—A Remedy for Colds, Coughs, Croup, La Grippe, Headache, Neuralgia, Rheumatism, Colic, and Diseases of the Liver, Stomach, Bowels, Kidneys, and Blood, also Diseases of Females.
Claims use since January, 1910.

Ser. No. 58,573. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE F. F. DALLEY CO., OF HAMILTON, LIMITED, Hamilton, Canada. Filed Sept. 7, 1911.

Particular description of goods.—Stove-Polish.
Claims use since Aug. 1, 1907.

Ser. No. 58,584. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOLESLAUS J. ROZANSKI, Chicago, Ill. Filed Sept. 8, 1911.

Particular description of goods.—Remedies for Neuralgia, Rheumatism, Headache, Sprains, Bites, Insect-Stings, Cramps, Colic, Cholera, Pain in Sides, Chest, and Back, Stiff Neck, Catarrh, Coughs, and Colds.
Claims use since September, A. D. 1910.

Ser. No. 58,693. (CLASS 39. CLOTHING.) CLARK-HUTCHINSON COMPANY, Boston, Mass. Filed Sept. 16, 1911.

Particular description of goods.—Leather and Canvas Boots and Shoes.
Claims use since June 14, 1910.

Ser. No. 58,754. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TWIN FALLS MILLING & ELEVATOR CO., Twin Falls, Idaho. Filed Sept. 21, 1911.

IDAHOME

Particular description of goods.—Wheat-Flour.
Claims use since August, 1911.

Ser. No. 58,755. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MICHIGAN MILLING COMPANY, Ann Arbor, Mich. Filed Sept. 21, 1911.

Particular description of goods.—Wheat-Flour.
Claims use since Aug. 17, 1911.

Ser. No. 58,798. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAROLD WEDDLE, New York, N. Y. Filed Sept. 21, 1911.

RAJAH

Particular description of goods.—Tea.
Claims use since August, 1878.

Ser. No. 58,846. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLISH MILLING COMPANY, Seymour, Ind. Filed Sept. 25, 1911.

The picture shown being fanciful and no claim being made to the exclusive use of the words "Extra Fine."
Particular description of goods.—Self-Rising Flour.
Claims use since March, 1911.

Ser. No. 58,873. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RECKITT & SONS LTD., Hull, England. Filed Sept. 27, 1911. Under ten-year proviso.

RECKITT

Particular description of goods.—Starch and Blue for Laundry Purposes and for Laundry Tints.
Claims use since before the year 1867.

Ser. No. 58,987. (CLASS 39. CLOTHING.) BIRDSEY-SOMERS CO., New York, N. Y. Filed Oct. 4, 1911.

MayDor

Particular description of goods.—Children's, Misses', and Ladies' Corset-Waists and Underwaists.
Claims use since Sept. 9, 1911.

Ser. No. 59,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEVILLE CORMIER, Crowley, La. Filed Oct. 11, 1911.

The portrait forming a part of the trade-mark is that of myself.

Particular description of goods.—Cancer Remedy.
Claims use since Sept. 22, 1911.

Ser. No. 59,138. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. H. HOKE, Coalport, Pa. Filed Oct. 13, 1911.

PALALIA

Particular description of goods.—Medicine in Powder Form for Use in the Treatment of Indigestion and Nervous Affections.
Claims use since Oct. 7, 1911.

Ser. No. 59,173. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) PAUL REVERE SILVER COMPANY, Boston, Mass. Filed Oct. 12, 1911.

Particular description of goods.—Silver-Plated Flat Ware and Silver-Plated Hollow Ware.
Claims use since Sept. 2, 1911.

Ser. No. 59,237. (CLASS 39. CLOTHING.) WEINGARTEN BROS., INC., New York, N. Y. Filed Oct. 19, 1911.

Sansos

Particular description of goods.—Corsets.
Claims use since Oct. 2, 1911.

Ser. No. 59,317. (CLASS 2. RECEPTACLES.) SMITH, KLINE & FRENCH COMPANY, Philadelphia, Pa. Filed Oct. 24, 1911.

BLUE DANUBE

Particular description of goods.—A Vanity-Box.
Claims use since Sept. 1, 1911.

Ser. No. 59,346. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ENTERONOL COMPANY, Tempe, Ariz., and Oswego, N. Y. Filed Oct. 25, 1911.

Enteronol

Particular description of goods.—A Remedy in Tablet Form for Diseases of the Stomach and Bowels.
Claims use since Oct. 10, 1905.

Ser. No. 59,355. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THEODORE SCHISGALL, New York, N. Y. Filed Oct. 26, 1911.

Particular description of goods.—Clocks.
Claims use since Oct. 1, 1910.

Ser. No. 59,366. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAN FRANCISCO SALT REFINERY, San Francisco, Cal. Filed Oct. 26, 1911.

Crystalmesh

Particular description of goods.—Salt.
Claims use since about the 10th day of the month of April, 1911.

Ser. No. 59,432. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM C. ROBERSON, New York, N. Y. Filed Oct. 31, 1911.

HOME COMFORT

Particular description of goods.—Wheat-Flour.
Claims use since on or before Jan. 1, 1872.

Ser. No. 59,463. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAUNCEY F. YORK, Detroit, Mich. Filed Nov. 1, 1911.

Ma-Le-Na

Particular description of goods.—Pills for Diseases of the Blood, Nervous Disorders, Restlessness, Sleeplessness, Headache, Loss of Appetite, Nausea, Dyspepsia, Anemia, and Weak and Run-Down Conditions of the Body.
Claims use since July 20, 1911.

Ser. No. 59,515. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PERSEVERANCE WORSTED COMPANY, Woonsocket, R. I. Filed Nov. 2, 1911. Under ten-year proviso.

SINGLETON

Particular description of goods.—Worsted Cloths.
Claims use since 1888.

Ser. No. 59,522. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS C. BOOTH, New York, N. Y. Filed Nov. 3, 1911.

Particular description of goods.—Face-Creams.
Claims use since Oct. 23, 1911.

Ser. No. 59,572. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) F. G. KLEIN CO., Burlington, Wis. Filed Nov. 6, 1911. Under ten-year proviso.

Klein's

Particular description of goods.—Mineral Waters, Still Waters, Spring-Waters, and Non-Intoxicating Carbonated Tonic Beverages.
Claims use since Jan. 1, 1894.

Ser. No. 59,604. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) KARL AUGUST SCHOTT & ROTH, Stuttgart, Germany. Filed Nov. 7, 1911.

KSUR

Particular description of goods.—Umbrellas and Parasols.
Claims use since 1907.

Ser. No. 59,647. (CLASS 39. CLOTHING.) THE HAWES CORSET CO., Bridgeport, Conn. Filed Nov. 10, 1911.

Lady Betty

Particular description of goods.—Corsets.
Claims use since Apr. 25, 1911.

Ser. No. 59,666. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. W. CARNRICK COMPANY, New York, N. Y. Filed Nov. 11, 1911.

KINAZYME

Particular description of goods.—A Digestive-Ferment Product.
Claims use since Aug. 31, 1911.

Ser. No. 59,718. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) FERDINAND GUTMANN & CO., New York, N. Y. Filed Nov. 14, 1911.

EXRAY

Particular description of goods.—Matches.
Claims use since Sept. 1, 1911.

Ser. No. 59,720. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARTINS-BIRMINGHAM LIMITED, Birmingham, England. Filed Nov. 14, 1911.

ZOME

Particular description of goods.—Golf-Balls.
Claims use since June, 1911.

Ser. No. 59,731. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HARRY C. LEE & Co., New York, N. Y. Filed Nov. 15, 1911.

Dreadnought

Particular description of goods.—Tennis-Rackets.
Claims use since Nov. 2, 1911.

Ser. No. 59,809. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. ROSENFELD & COMPANY, Baltimore, Md. Filed Nov. 20, 1911. Under ten-year proviso.

"Faultless"

Particular description of goods.—Cotton, Linen, Silk, and Woolen Piece Goods and Admixtures of Same.
Claims use since 1881.

Ser. No. 59,814. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARTINS-BIRMINGHAM LIMITED, Birmingham, England. Filed Nov. 20, 1911.

ZODIAC

Particular description of goods.—Golf-Balls.
Claims use since August, 1906.

[Vol. 174. No. 1.]

TRADE-MARKS

REGISTERED JANUARY 2, 1912.

84,711. WORSTED AND MERINO YARN. ANDREW ADIE, Newton and Boston, Mass.
Filed September 7, 1911. Serial No. 58,570. PUBLISHED OCTOBER 31, 1911.

84,712. GLUE. AMERICAN GLUE COMPANY, Boston, Mass.
Filed July 19, 1911. Serial No. 57,707. PUBLISHED OCTOBER 31, 1911.

84,713. GLUE. AMERICAN GLUE COMPANY, Boston, Mass.
Filed July 19, 1911. Serial No. 57,708. PUBLISHED OCTOBER 31, 1911.

84,714. TALKING-MACHINES AND PARTS THEREOF. AMERICAN GRAPHOPHONE COMPANY, Bridgeport, Conn.
Filed January 31, 1910. Serial No. 47,554. PUBLISHED MARCH 29, 1910.

84,715. COLD-CREAM AND GREASELESS CREAM. AUBRY SISTERS, New York, N. Y.
Filed September 2, 1911. Serial No. 58,513. PUBLISHED OCTOBER 31, 1911.

84,716. HAIR-TONIC AND REMEDIES FOR CERTAIN DISEASES. AZONE MANUFACTURING COMPANY, Kingman, Kans.
Filed August 2, 1911. Serial No. 57,988. PUBLISHED OCTOBER 31, 1911.

84,717. WATERPROOF SHEATHING AND BUILDING PAPERS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed November 29, 1910. Serial No. 53,006. PUBLISHED JUNE 27, 1911.

84,718. CORE-MAKERS' OILS FOR MAKING CORES FOR MOLDS FOR CASTINGS. BATESON OIL WORKS, Erie, Pa.
Filed April 11, 1911. Serial No. 55,667. PUBLISHED AUGUST 8, 1911.

84,719. LEATHER SHOES. BEDFORD-PITTMAN COMPANY, Philadelphia, Pa.
Filed July 21, 1911. Serial No. 57,891. PUBLISHED OCTOBER 31, 1911.

84,720. VETERINARY BALLING AND POWDER GUN. THOMAS BLAND, Waterbury, Conn.
Filed May 14, 1910. Serial No. 49,739. PUBLISHED OCTOBER 31, 1911.

84,721. TOWELING. BLODGETT, ORDWAY & WEEBER, Boston, Mass.
Filed August 25, 1911. Serial No. 58,399. PUBLISHED OCTOBER 31, 1911.

84,722. WATER-FILTERS. BRASS GOODS M'F'G. CO., New York, N. Y.
Filed April 7, 1911. Serial No. 55,580. PUBLISHED OCTOBER 31, 1911.

84,723. CIGARETTES. AIMÉE C. BRENNIG, New York, N. Y.
Filed June 12, 1911. Serial No. 56,978. PUBLISHED OCTOBER 31, 1911.

84,724. REMEDY FOR MALARIA. ALBERT E. BROWN, Mobile, Ala.
Filed September 21, 1911. Serial No. 58,775. PUBLISHED OCTOBER 31, 1911.

84,725. CAUSTIC SODA. BURGESS SULPHITE FIBRE COMPANY, Berlin, N. H.
Filed August 21, 1911. Serial No. 58,303. PUBLISHED OCTOBER 31, 1911.

84,726. BOOTS AND SHOES AND SLIPPERS OF LEATHER OR TEXTILE MATERIAL. EDWIN C. BURT COMPANY, Brooklyn, N. Y.
Filed August 14, 1911. Serial No. 58,193. PUBLISHED OCTOBER 31, 1911.

84,727. MANILA AND SISAL ROPE. COLUMBIAN ROPE CO., Auburn, N. Y.
Filed September 12, 1911. Serial No. 58,645. PUBLISHED OCTOBER 31, 1911.

84,728. AGRICULTURAL JOURNAL ISSUED WEEKLY. CURTIS PUBLISHING COMPANY, Philadelphia, Pa.
Filed July 17, 1911. Serial No. 57,671. PUBLISHED OCTOBER 31, 1911.

84,729. HAIR-TONICS. R. D. DENISE, Kansas City, Mo.
Filed September 30, 1911. Serial No. 58,953. PUBLISHED OCTOBER 31, 1911.

84,730. TOOTH-POWDER. AUGUST E. DRUCKER, San Francisco, Cal.
Filed August 12, 1911. Serial No. 58,170. PUBLISHED OCTOBER 31, 1911.

84,731. CHEMICAL AND LAUNDRY STARCHES. B. P. DUCAS CO., New York, N. Y.
Filed July 15, 1911. Serial No. 57,636. PUBLISHED OCTOBER 31, 1911.

84,732. REMEDY FOR EPILEPSY. MOSES DUCKMAN, Brooklyn, N. Y.
Filed May 18, 1911. Serial No. 56,433. PUBLISHED OCTOBER 31, 1911.

84,733. WATCHES, CLOCKS, WATCH-MOVEMENTS, WATCHCASES, CLOCK-MOVEMENTS, AND CLOCK-CASES. EISENSTADT MANUFACTURING COMPANY, St. Louis, Mo.
Filed September 1, 1911. Serial No. 58,493. PUBLISHED OCTOBER 31, 1911.

84,734. SALVE AND CERTAIN TOILET PREPARATIONS. THE ELIZABETH CHEMICAL COMPANY, New York, N. Y.
Filed May 27, 1910. Serial No. 49,963. PUBLISHED OCTOBER 31, 1911.

84,735. WATCH-MOVEMENTS, WATCHES, AND PARTS THEREOF. EQUITY WATCH COMPANY, Boston, Mass.
Filed September 18, 1911. Serial No. 58,705. PUBLISHED OCTOBER 31, 1911.

84,736. TOOL-STEEL. FIRTH-STERLING STEEL COMPANY, McKeesport, Pa.
Filed September 21, 1911. Serial No. 58,750. PUBLISHED OCTOBER 31, 1911.

84,737. TEA FOR COUGHS AND COLDS AND TABLETS FOR STOMACH TROUBLES. LEO C. GOLDSTEIN, New York, N. Y.
Filed April 17, 1911. Serial No. 55,796. PUBLISHED OCTOBER 31, 1911.

84,738. REMEDY FOR CATARRH. R. A. GOSSETT, Atlanta, Ga.
Filed December 28, 1910. Serial No. 53,517. PUBLISHED OCTOBER 31, 1911.

84,739. FURNITURE. E. GREENBERGER & COMPANY, New York, N. Y.
Filed May 9, 1911. Serial No. 56,270. PUBLISHED OCTOBER 31, 1911.

84,740. CERTAIN DETERGENTS AND POLISHING MATERIALS. HAMTON & Co., New York, N. Y.
Filed April 28, 1911. Serial No. 56,021. PUBLISHED OCTOBER 10, 1911.

84,741. REMEDY FOR SORE THROAT AND MOUTH AND A VETERINARY MEDICINE. HAMPTON DRUG Co., Carterville, Ill.
Filed September 28, 1911. Serial No. 58,893. PUBLISHED OCTOBER 31, 1911.

84,742. SPRAYING DEVICE. F. O. HILFIKER Co., Syracuse, N. Y.
Filed July 8, 1911. Serial No. 57,545. PUBLISHED OCTOBER 31, 1911.

84,743. BRASS BINDING FOR LINOLEUM. RAY HUBBELL, Northville, N. Y.
Filed January 14, 1910. Serial No. 47,123. PUBLISHED OCTOBER 31, 1911.

84,744. CIGARS. HULMAN & Co., Terre Haute, Ind.
Filed July 28, 1911. Serial No. 57,917. PUBLISHED OCTOBER 31, 1911.

84,745. MATTRESSES AND SPRING-BEDS. THE M. A. HUNT COMPANY, Cincinnati, Ohio.
Filed July 24, 1911. Serial No. 57,802. PUBLISHED OCTOBER 31, 1911.

84,746. REMEDY FOR AILMENTS OF THE MOUTH AND THROAT. HARRY H. INK, Canton, Ohio.
Filed December 11, 1909. Serial No. 46,441. PUBLISHED OCTOBER 31, 1911.

84,747. TRADING-COUPONS. THE I. O. U. COMPANY, New York, N. Y.
Filed February 15, 1911. Serial No. 54,536. PUBLISHED OCTOBER 31, 1911.

84,748. CERTAIN HARDWARE, COOKING UTENSILS, AND WIRE-CLOTH. JANNEY, SEMPLE, HILL & Co., Minneapolis, Minn.
Filed April 22, 1908. Serial No. 34,267. PUBLISHED AUGUST 24, 1909.

84,749. SIX-PASSENGER TORPEDO-BODY AUTOMOBILES. THE THOMAS B. JEFFERY COMPANY, Kenosha, Wis.
Filed September 29, 1911. Serial No. 58,931. PUBLISHED OCTOBER 31, 1911.

84,750. FIVE-PASSENGER TOURING-BODY AUTOMOBILES. THE THOMAS B. JEFFERY COMPANY, Kenosha, Wis.
Filed September 29, 1911. Serial No. 58,932. PUBLISHED OCTOBER 31, 1911.

84,751. EFFERVESCENT WINES. MANUEL RAVENTÓS, San Sadurni de Noya, Spain.
Filed August 21, 1911. Serial No. 58,308. PUBLISHED OCTOBER 31, 1911.

84,752. METALLIC COVERINGS FOR WALLS AND CEILINGS. REVÊTEMENTS JOSZ SOCIÉTÉ ANONYME, Koekelberg-Brussels, Belgium.
Filed May 3, 1911. Serial No. 56,145. PUBLISHED OCTOBER 31, 1911.

84,753. MATTRESSES. ROSE SPRING BED COMPANY, Memphis, Tenn.
Filed May 23, 1911. Serial No. 56,553. PUBLISHED JULY 4, 1911.

84,754. FACE-POWDER, FACE-CREAM, HAIR-TONIC, AND HAIR-DYE. ROTKOWITZ BROS., New York, N. Y.
Filed June 9, 1911. Serial No. 56,933. PUBLISHED OCTOBER 31, 1911.

84,755. GRATES. SALAMANDER GRATE BAR Co., New York, N. Y.
Filed October 24, 1910. Serial No. 52,408. PUBLISHED OCTOBER 31, 1911.

84,756. CIGARS. SAN TELMO CIGAR MFG. Co., Detroit, Mich.
Filed August 18, 1911. Serial No. 58,269. PUBLISHED OCTOBER 31, 1911.

84,757. REMEDY FOR CONSUMPTION. SEAT BROTHERS, Hugo, Okla.
Filed August 15, 1911. Serial No. 58,218. PUBLISHED OCTOBER 31, 1911.

84,758. COTTON THREAD AND YARN. THE SPOOL COTTON COMPANY, Newark, N. J., and New York, N. Y.
Filed December 8, 1910. Serial No. 53,178. PUBLISHED OCTOBER 31, 1911.

84,759. COTTON THREAD AND YARN. THE SPOOL COTTON COMPANY, Newark, N. J., and New York, N. Y.
Filed December 8, 1910. Serial No. 53,179. PUBLISHED OCTOBER 31, 1911.

84,760. COTTON THREAD AND YARN. THE SPOOL COTTON COMPANY, Newark, N. J., and New York, N. Y.
Filed March 18, 1911. Serial No. 55,151. PUBLISHED OCTOBER 31, 1911.

84,761. REMEDIES FOR SKIN AND BLOOD DISEASES, CUTS, AND WOUNDS. LUCY ST. AMANT, Baton Rouge, La.
Filed August 16, 1911. Serial No. 58,227. PUBLISHED OCTOBER 31, 1911.

84,762. BLOOD-PURIFIER AND TONIC. BESSIE ELLEN STEVENS, Chicago, Ill.
Filed May 16, 1911. Serial No. 56,504. PUBLISHED OCTOBER 31, 1911.

84,763. WORSTED, WOOLEN, AND PART-WOOLEN PIECE GOODS. M. T. STEVENS & SONS COMPANY, North Andover, Mass.
Filed July 26, 1911. Serial No. 57,830. PUBLISHED OCTOBER 31, 1911.

84,764. WORSTED, WOOLEN, AND PART-WOOLEN PIECE GOODS. M. T. STEVENS & SONS COMPANY, North Andover, Mass.
Filed July 26, 1911. Serial No. 57,831. PUBLISHED OCTOBER 31, 1911.

84,765. MATTRESSES. STOCKWELL-HALEY Co., Los Angeles, Cal.
Filed March 16, 1910. Serial No. 48,446. PUBLISHED OCTOBER 31, 1911.

84,766. CIGARS, CHEROOTS, AND LITTLE CIGARS. SUPERIA CIGAR MANUFACTURING Co., Detroit, Mich.
Filed September 11, 1911. Serial No. 58,632. PUBLISHED OCTOBER 31, 1911.

84,767. FOOT-BALLS AND BASKET-BALLS. ALEXANDER TAYLOR, New York, N. Y.
Filed August 30, 1909. Serial No. 44,425. PUBLISHED OCTOBER 31, 1911.

84,768. LEATHER BOOTS AND SHOES. E. E. TAYLOR, Co., Boston, Mass.
Filed August 16, 1911. Serial No. 58,237. PUBLISHED OCTOBER 31, 1911.

84,769. CARD GAMES. JOHN T. TODD, Springfield, Ill., assignor to The Eureka Study System, Springfield, Ill., a Corporation of Illinois.
Filed July 14, 1911. Serial No. 57,624. PUBLISHED OCTOBER 31, 1911.

84,770. SEMIMONTHLY MAGAZINE. THE VOGUE COMPANY, New York, N. Y.
Filed May 4, 1911. Serial No. 56,180. PUBLISHED OCTOBER 31, 1911.

84,771. VETERINARY REMEDY. WARNER REMEDY COMPANY, Chicago, Ill.
Filed April 21, 1911. Serial No. 55,861. PUBLISHED OCTOBER 31, 1911.

84,772. DISINFECTING FLUID. WEST DISINFECTING COMPANY, New York, N. Y.
Filed September 22, 1911. Serial No. 58,816. PUBLISHED OCTOBER 31, 1911.

84,773. WEEKLY PERIODICALS. WHITE RATS ACTORS' UNION OF AMERICA, New York, N. Y.
Filed March 16, 1911. Serial No. 55,107. PUBLISHED MAY 30, 1911.

84,774. MUSICAL STRINGS. THE RUDOLPH WURLITZER Co., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,149. PUBLISHED OCTOBER 24, 1911.

84,775. PAPER-FILES. YAWMAN & ERBE MANUFACTURING Co., Rochester, N. Y.
Filed June 14, 1911. Serial No. 57,031. PUBLISHED OCTOBER 31, 1911.

84,776. SEVEN-PASSENGER TORPEDO-BODY AUTOMOBILES. THE THOMAS B. JEFFERY COMPANY, Kenosha, Wis.
Filed September 29, 1911. Serial No. 58,933. PUBLISHED OCTOBER 31, 1911.

84,777. SEVEN-PASSENGER LIMOUSINE-BODY AUTOMOBILES. THE THOMAS B. JEFFERY COMPANY, Kenosha, Wis.
Filed September 29, 1911. Serial No. 58,934. PUBLISHED OCTOBER 31, 1911.

84,778. REMEDIES FOR ASTHMA, HAY-FEVER, CATARRH, CROUP, AND COLDS. HENRY E. JOHNSON, Grand Junction, Colo.
Filed October 18, 1910. Serial No. 52,315. PUBLISHED OCTOBER 31, 1911.

84,779. TRAPS FOR ANIMALS. OTTO KAMPFE MFG. Co., Newark, N. J.
Filed August 16, 1911. Serial No. 58,234. PUBLISHED OCTOBER 31, 1911.

84,780. TONIC IN PULVERIZED FORM. FRIEDRICH AUGUST VOLKMAR KLOPFER, Dresden-Leubnitz, Germany.
Filed August 31, 1908. Serial No. 37,076. PUBLISHED OCTOBER 31, 1911.

84,781. SAMPLE CASES AND BAGS ADAPTED TO HOLD MERCHANDISE-SAMPLES, INSTRUMENTS, AND TOOLS. THE KNICKERBOCKER CASE COMPANY, Chicago, Ill.
Filed June 30, 1909. Serial No. 43,338. PUBLISHED OCTOBER 31, 1911.

84,782. HAIR-TONIC. HENRY J. LOUBEQUE, New York, N. Y.
Filed June 26, 1909. Serial No. 43,285. PUBLISHED OCTOBER 31, 1911.

84,783. HAIR-TONIC. TONY MANGANIELLO, New York, N. Y.
Filed September 27, 1911. Serial No. 58,883. PUBLISHED OCTOBER 31, 1911.

84,784. MEDICINAL PREPARATION FOR THE TREATMENT OF DISEASED CONDITIONS OF THE NERVE SYSTEM. THE MANINE MEDICINE COMPANY, INC., St. Louis, Mo.
Filed July 25, 1911. Serial No. 57,819. PUBLISHED OCTOBER 31, 1911.

84,785. INSECTICIDES. JOHN P. MCCAFFERY, Moline, Ill.
Filed July 26, 1911. Serial No. 57,839. PUBLISHED OCTOBER 31, 1911.

84,786. WORK-SHIRTS, OVERALLS, AND CHILDREN'S ROMPERS. MCCAWLEY & Co., Baltimore, Md.
Filed April 1, 1911. Serial No. 55,454. PUBLISHED OCTOBER 31, 1911.

84,787. HOSIERY. MILLER & SONS Co., Philadelphia, Pa.
Filed September 6, 1911. Serial No. 58,553. PUBLISHED OCTOBER 31, 1911.

84,788. REMEDIES FOR PILES AND FOR SKIN DISEASES. GILES A. MILLS, Girard, Kans.
Filed June 1, 1911. Serial No. 56,719. PUBLISHED OCTOBER 31, 1911.

84,789. CERTAIN TOILET PREPARATIONS AND FOOD-COLORING COMPOUNDS. NATIONAL TUBE FLAVOR Co., Newark, N. Y.
Filed May 22, 1911. Serial No. 56,538. PUBLISHED OCTOBER 31, 1911.

84,790. TANKAGE. THE NATIONAL UTILIZATION Co., Norfolk, Va.
Filed August 18, 1911. Serial No. 58,261. PUBLISHED OCTOBER 31, 1911.

84,791. COLD-CREAM. NEW ENGLAND LABORATORY COMPANY, Lynn, Mass.
Filed April 27, 1911. Serial No. 55,990. PUBLISHED OCTOBER 31, 1911.

84,792. TOYS IN ANIMAL FORM. NONBREAKABLE TOY Co., New York, N. Y.
Filed April 11, 1911. Serial No. 55,669. PUBLISHED OCTOBER 31, 1911.

84,793. REMEDY FOR DISEASES OF THE BLOOD. DIOMEDE PETILLO, New York, N. Y.
Filed September 21, 1911. Serial No. 58,784. PUBLISHED OCTOBER 31, 1911.

84,794. REMEDY FOR SYPHILIS. PETTEWAY & POWELL, Freeman, Fla.
Filed April 27, 1910. Serial No. 49,336. PUBLISHED OCTOBER 31, 1911.

84,795. CAT-TONIC. THE PURR PUSS Co., South Framingham, Mass.
Filed September 7, 1911. Serial No. 58,559. PUBLISHED OCTOBER 31, 1911.

LABELS

REGISTERED JANUARY 2, 1912.

16,104.—*Title:* "SUGAR PLUMS." (For Candy and Confections.) FARLEY CANDY COMPANY, Chicago, Ill. Filed November 11, 1911.

16,105.—*Title:* "PRINCETON." (For Bicycles.) D. P. HARRIS HARDWARE CO., New York, N. Y. Filed November 16, 1911.

PRINTS

REGISTERED JANUARY 2, 1912.

2,925.—*Title:* "THE NEW HOME SEWING MACHINE CO." (For Sewing-Machines.) THE NEW HOME SEWING MACHINE CO., Orange, Mass. Filed November 11, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE TAYLOR.

Decided October 30, 1911.

APPLICATION—PROSECUTION—DECLARATION OF INTERFERENCE.

Where the Examiner held that a design for an automobile-lamp was not patentable in view of the references of record, *Held* that he properly refused to declare an interference with a prior patent for a design for a similar lamp.

ON PETITION.

AUTOMOBILE HEAD-LAMP.

Mr. H. H. Stebbins for the applicant.

MOORE, *Commissioner:*

This is a petition from the refusal of the Examiner to declare an interference between this application, which is for a patent on a design for an automobile head-lamp, and the patent to Apple, No. 41,611, also covering a design for a vehicle-lamp.

The applicant insists that there is an interference in the subject-matter in these two cases and points to the statement of the Examiner in answer to the petition, wherein he says:

If it should be held on appeal that applicant's design is not anticipated by the references of record, the interference will be declared promptly between the application and the design patent referred to.

Petitioner further argues that if the two designs become identical as the result of the appeal they are identical prior to the appeal and that therefore the interference should not be made to depend upon the outcome of such appeal.

The fact, however, that this application stands rejected on the prior art is controlling in the present situation. The Examiner has stated that in his opinion the applicant's design is unpatentable over the art cited, while that shown in the Apple patent is patentable over such art; but, whether this is true or not, it is clear that an interference cannot be declared involving the present application until the subject-matter thereof is found to be patentable, and it is unnecessary to consider here whether the Apple patent was properly allowed over the references.

The petition is denied.

EX PARTE WARREN WEBSTER & COMPANY.

Decided November 20, 1911.

TRADE-MARKS—DESCRIPTIVE—"MODULATION" FOR STEAM-HEATING AND VENTILATING APPARATUS.

The word "Modulation" *Held* descriptive as applied to steam-heating and ventilating apparatus, and hence not registrable as a trade-mark therefor.

ON APPEAL.

TRADE-MARK FOR STEAM-HEATING SYSTEMS.

Mr. Rudolph M. Hunter for the applicants.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the word "Modulation" as a trade-mark for steam-heating and ventilating apparatus, on the ground that it is descriptive of a characteristic or quality thereof.

The Examiner cites the definition of the word "modulation" as found in the *Century Dictionary*—

a state or condition reached by a process of modulating, modifying, or varying,

and has also drawn attention to a patent owned by applicants for registration in which the following language is used:

The object of my invention is to provide a simple construction of valve especially adapted as a modulation-valve for use in steam-heating systems and more especially for controlling the supply of steam to the radiator thereof, whereby predetermined amounts of steam may be admitted to the radiator to suit the particular heating requirements thereof.

In my opinion the word "Modulation" is descriptive of the character of the goods in the same way that the expression "Getwell" is descriptive of a medicine, as it has been held to be. (*In re Anti-Cort-Zinc Company*, 151 O. G., 452; 34 App. D. C., 191.)

It is believed that the registration was properly refused.

The decision of the Examiner of Trade-Marks is affirmed.

DECISIONS OF THE U. S. COURTS.

U. S. District Court—District of Oregon.

UNITED STATES OF AMERICA *v.* PATTERSON.

Decided May 11, 1911.

PERJURY—AFFIDAVIT TO SUPPORT APPLICATION FOR LETTERS PATENTS.

An oath, declaration, or affidavit subscribed by an applicant for patent in support of his application is one

touching a matter material to an inquiry before the Commissioner of Patents and is such a one upon which perjury may be predicated under section 4392, Revised Statutes of the United States, if the party making the oath or making the declaration or affidavit swore falsely in relation thereto or if at the time of making such oath he did not believe the matter set forth therein to be true.

Mr. Walter H. Evans, Assistant United States Attorney.

Mr. H. H. Riddell and *Mr. L. H. Mahone* for the defendant.

BEAN, *Dis. J.*, (charging jury:)

Now, gentlemen, you have heard the testimony and the argument of counsel in this case and it only remains for the court to define the law by which you are to be governed in arriving at your verdict. The defendant is accused by the indictment returned against him, with a violation of section 5392 of the Revised Statutes, which provides that every person who having taken an oath before a competent tribunal, officer or person in any case in which the law of the United States authorizes an oath to be administered, that he will testify, declare, depose or certify truly or that any written testimony, declaration, deposition or certificate by him subscribed is true, wilfully and contrary to such oath states or subscribes any material matter which he does not believe to be true, is guilty of perjury.

The indictment charges that on the 14th day of March, 1907, the defendant in this case swore falsely, under an oath administered to him by C. W. Hodson, a notary public for this State, in a material matter on an inquiry then pending before the Commissioner of Patents of the United States. A copy of the oath is set out in the indictment, and it is charged that Patterson on the day mentioned, swore in this affidavit that he verily believes himself to be the original, first and sole inventor of the improvement in buckles described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, whereas, in truth and in fact, he well knew that he was not the original and first inventor of the improvement, and that one A. E. Van Emon was such original and first inventor and discoverer of this improvement in buckles, and that he, the said Patterson well knew and believed that the same had been known and used before his alleged invention and discovery thereof.

Now, under the laws of Congress relating to patents, it is requisite for one desiring to obtain a patent upon a new invention or a novel improvement upon an old invention, to make an application therefor in writing to the Commissioner of Patents and file the same in the Patent Office, specifying in a certain manner the invention he wishes to have patented. The law further requires that the petitioner or applicant for the patent shall make an oath that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, or improvement for which he solicits patent, and that he does not know and does not believe that the same was ever before known or used.

Such an oath, affidavit or declaration constitutes in part the proof upon which the Commissioner of Patents acts in determining whether or not the invention claimed is new or useful and is such a one as to entitle the applicant to a patent. Thus it is that the claim for the patent forms the basis upon which the inquiry proceeds, and the oath, declaration or affidavit subscribed by the applicant in support of his application is, therefore, touching a matter material to an inquiry before the Commissioner of Patents, and is such a one upon which perjury may be predicated under the section to which I have alluded, if the party making the oath or making the declaration or affidavit swore falsely in relation thereto, or if, at the time of taking such oath he did not believe the matter set forth therein to be true.

The defendant has entered a plea of not guilty. This plea challenges—controverts and challenges every material allegation of the indictment and casts upon the Government the burden of substantiating or proving all material allegations to your satisfaction beyond a reasonable doubt before you would be justified in finding the defendant guilty. He comes before you clothed with the presumption of innocence and this presumption continues until it is overcome by the proof.

The oath or declaration alleged to have been subscribed or verified by the defendant, and which the evidence in this case shows he did subscribe and verify to, was touching a matter material to an inquiry before the Commissioner of Patents, and this disposes of that element in the case. Furthermore, the proof touching the defendant's subscription and verification of the oath or affidavit before Mr. Hodson, a notary public, is very persuasive, so that there can scarcely be any question about that. Indeed, neither did the defendant make any substantial question upon that subject. However, I will leave it for you to determine whether or not the defendant so subscribed and verified such declaration, and I instruct you, as a material fact, that Hodson, if he was a notary public at the time, was an officer before whom an oath of this kind could be—by whom an oath of this kind could be administered, and a false statement made in an oath before Hodson would be perjury within the meaning of the Federal statute.

Now, the invention in controversy in this case, and about which this case hinges, is an alleged improvement upon a buckle—a harness-buckle—which has been exhibited and explained to you. You will remember that some time about the 1st of January, 1905,—and there is some controversy about the date—but about that time Mr. Larson prepared or manufactured a one-piece buckle—harness-buckle—and that he subsequently applied for a patent upon his alleged invention. Before the patent—before his application was disposed of by the Patent Office at Washington, he transferred his interest in the buckle to the defendant, Mr. Van Emon and Mrs. Parrish, and the subsequent patent that was issued to Mr. Patterson, the defendant, and in the proceedings in which it is alleged he made the false affidavit, was an improvement upon the Larson buckle. The improvement consists of a binding-plate—is alleged to consist of a binding-plate across the front of the buckle and a projection or lip on the connecting-bar at the rear. The binding-plate which is the front part of the buckle, is one element of the invention and the lip or extension on the after bar is another part or element of the invention, and these are the only two changes that were made, or alleged to have been made, in the Larson buckle, that are of any practical consequence on this trial.

Now, it is important that you should bear in mind that this is not a controversy—this case is not a controversy between this defendant and Mr. Van Emon as to the ownership or the right to patent upon this alleged invention. That question is not in this case, because the charge here is simply one of perjury. Nor is there any question in this case as to whether Van Emon lost his right by abandonment. If he was the original inventor or discoverer of this article which was subsequently patented to Mr. Patterson, and abandoned his rights or failed to prosecute his application in the department, that, of course, would not have justified Patterson in making the affidavit that he, himself, was the first and original inventor, so the question here is for you to determine whether the statements in the affidavit filed by Patterson in March, 1907, when he applied for a patent upon this one-piece buckle, was true or false, and that is the real question in this case: whether he knew it to be so.

You will notice that the indictment charges that the oath mentioned contained statements alleged to be false in two particulars: first, that the defendant well knew that he was not the original and first inventor of this improvement and that he well knew that Van Emon was such inventor. Second, that he well knew and believed that the said invention had been known and used before his said invention and discovery thereof. If you are satisfied from the evidence beyond a reasonable doubt of the proof of either of these charges, in the light of the instructions given you by the court, you should find the defendant guilty.

If you are satisfied from the evidence beyond a reasonable doubt that Van Emon was the original, first and sole inventor of said improvement and that defendant knew the same at the time he took and subscribed the oath—if you find that he did take and subscribe it as alleged in the indictment—it will be your duty to find the defendant guilty; but if you find from the evidence that the defendant was the first and original inventor of this improvement, or that he was the original and first inventor jointly with Van Emon or some one else, you cannot find the defendant guilty. And if you are not satisfied beyond a reasonable doubt that the defendant was not the original and first inventor, either jointly or solely it will be your duty to acquit him unless you further find to your satisfaction beyond a reasonable doubt that he knew and believed said improvement to have been known or used before his alleged invention or discovery thereof.

Now, the first inventor is the one who first reduces the idea to some practical or useful form. It does not exist in the mere inventor's theories or ideas until they are reduced to some practical form. An invention cannot be predicated upon a mere conjecture or mere speculation or conjecture, so that the mere idea of itself would not of itself constitute an invention until it was reduced to some practical form—put into some practical mechanical form.

It is alleged in the indictment that the defendant well knew and believed that the invention had been known and used before his alleged invention and discovery thereof, and that defendant wilfully made a false statement in said oath in this regard, therefore if you find that the defendant knew he was not the first and original inventor, either joint or sole, of said invention, and knew Van Emon or some one else was such inventor, and wilfully made the oath, then he would be guilty as charged.

The oath set forth in the indictment, and which it is alleged defendant wilfullly took and subscribed, is one required by law. In the oath set forth it is stated that the applicant, or defendant, does verily believe himself to be the original, first and sole inventor of the improvement mentioned. You will note that the word "sole" is added to this affidavit. The statute, however, does not require an applicant for a patent to state whether he is the sole or joint inventor of the art or machine or improvement for which he solicits a patent, but only requires the applicant to state that he verily believes himself to be the first and original inventor.

I instruct you that, inasmuch as the statute does not require the applicant to state whether he is the sole inventor, perjury cannot be predicated upon any statement that he is the sole inventor, and it is immaterial whether the defendant invented the patent solely by his own effort or jointly with another; that is, if defendant was either a joint or the sole inventor of the improvement, the oath would not be false in a material matter as to the part thereof relating to that question, but if he was neither a joint nor a sole inventor, the oath would in that respect be false in a material matter.

If Van Emon was the first, original and sole inventor of the improvement and the defendant had no part in originating the same, he, the defendant, could not be either the sole or joint inventor thereof, and if he knew this at the time he took and subscribed the oath set forth in the indictment, the oath would be false in two material particulars: first, wherein it is stated that the defendant is the original and first inventor of the improvement; and, second, wherein it is stated that he does not know and does not believe that the same was ever known before. And if you are satisfied beyond a reasonable doubt that the defendant wilfully took and subscribed the same, knowing it to be false in either particular as stated, he will be guilty as charged in this indictment.

The statements, however, in the affidavit made by the defendant, are presumed to be true because they were made under oath. And such an oath is of

equivalent value to the testimony of a credible witness. In order, therefore, to convict one who subscribed such an affidavit of perjury, the Government must satisfy you beyond a reasonable doubt of the falsity of the oath, by the testimony of more than one credible witness, or the testimony of one witness and other corroborating proof sufficient to satisfy you that the statements were not true, or that the defendant did not honestly and in good faith believe that he was the first and original inventor at the time he made the affidavit.

The rule is based—this doctrine is based upon the presumption that when one takes an oath or swears to a statement, that he tells the truth, and therefore if the same is contradicted by another single witness, and there are no corroborating witnesses, it is simply the testimony of two witnesses, one against the other, both under oath, and it would not be sufficient to convict; but there must either be the testimony of two witnesses or one witness and corroborating circumstances. It is not necessary there should be the testimony of witnesses directly to the matter in controversy; one witness is sufficient if there are corroborating circumstances of sufficient importance and weight to justify you in concluding that the affidavit is false.

Again, the false oath must have been taken wilfully and corruptly; that is to say, it must have been taken with some degree of deliberation and with an intent to testify falsely, and the accused must not at the time have believed the facts so verified and sworn to to be true. The intent or motive being a condition of the mind, you must determine that as to the acts and demeanor of the accused and by all the attendant facts and circumstances. Men do not usually act without some impelling influence, some purpose in view, and for the ascertainment of that purpose, or the intent or motive behind it, where there is no express declaration by the accused, resort must be had to his acts and demeanor, his relationship with the principal and controlling facts in the case, and all the attendant circumstances that might throw light on the subject.

False swearing in an honest belief that the statements verified are true, would not constitute perjury, and if the defendant when he made oath or declaration in question truly believed that he was the original, first and sole inventor of the specific improvement, and honestly and in good faith believed such statements to be true, he could not be guilty as charged.

The law also presumes that the person to whom a patent has been issued is the original and first inventor of the device or thing patented; that is to say, the production of the patent makes a *prima facie* case in his favor. But this presumption may be overcome by proof to the contrary, and has been overcome in the courts, because patents have been set aside and canceled on subsequent ascertainment and proof that the claimant was not in fact such original and first inventor.

It is further essential to this case, before a conviction can be had upon the charge in the indictment, that the defendant well knew he was not the original and first inventor of said improvement, but well knew that Van Emon was such inventor; that Van Emon must have been the original, first and sole inventor of the improvement on a one-piece buckle containing the elements that defendant has obtained a patent to, which principal and essential elements I have explained to you heretofore. For the ascertainment therefore of whether Van Emon was the original, first and sole inventor of this improvement in question, or whether defendant was the original and first inventor, joint or sole, thereof, you are to take into consideration the relationship of the parties, the purchase of Larson's claim or application for patent jointly by Van Emon, the defendant and Mrs. Parrish, the opportunity afforded the parties, namely, the defendant and Van Emon, for ascertaining the elements of such claim, the suggestions and discussions between them and others as to its utility, and touching any improvement and especially the improvement in question; the further joint application for patent upon a buckle by Van Emon, the defendant, and Mrs. Parrish, the purpose they had in view in making such application, and the final withdrawal of such claim, and how and why it was done and the subsequent application by the defendant alone for the patent to the improvement in question, and how and why he so made the application alone and without joining with the other parties in the previous claims for a patent particularized by the last application for a one-piece buckle.

You will further take into consideration the models that have been produced by Van Emon and the defendant, and determine if you can, who originated or produced the first or primary idea of the improvement which is shown forth by the one-piece-buckle patent—whether, considering all these things, together with other testimony in the case, bearing upon the subject, bearing in mind at the same time the credibility of the witnesses and the weight to be given such testimony, Van Emon produced the first, original, distinct and definite idea of the improvement, not vague and fanciful but well defined, exact and susceptible of demonstration, or whether the defendant was the original and first inventor as he declared under oath he was.

If he was not such first and original inventor thereof, as I have said before and was conscious that Van Emon was the original, first and sole inventor—if you so find that he was—or was conscious that he was not the original and first inventor thereof, and deliberately, wilfully, intentionally and with culpable and corrupt intent swore to a declaration that he believed he was the original, and first inventor of such improvement and did not at the time believe the declaration to be true, he would be guilty under the charge; otherwise he should be acquitted.

Now, I have stated to you that before you can find the defendant guilty you must be satisfied of his guilt beyond a reasonable doubt. I do not mean by that word a mere possible doubt. Nor do I mean a mere captious doubt. But it is a real substantial doubt, such a one as would cause an honest man to

hesitate in his own most grave and important affairs. It is not a doubt conjured up by the ingenuity of counsel, nor one that you may conjure up in your own mind, but it must be based either upon the testimony in the case or the want of testimony. And if you entertain such a doubt and are unable to say, after you have considered all the testimony that you have a deep and abiding conviction to a moral certainty as to the truth of the charge, then the defendant is entitled to the benefit of that doubt by an acquittal. If, on the other hand you are satisfied and can unhesitatingly say that you believe the defendant guilty, then you should so declare by your verdict.

It is the province of the court to instruct you touching the law governing the cause at issue, and you will take and accept the law given to be the law as your guide; but it is your sole province under the direction of the court, to find the facts from the testimony adduced; that is, you must judge of the effect of the evidence and return your verdict accordingly.

Your power and authority of judging the effect of the evidence however, is not arbitrary, but your function in that regard should be exercised with legal discretion and in subordination to the rules of evidence. For instance, you are not bound to find in conformity with the declarations of any number of witnesses which do not produce conviction in your minds, against a less number or against a presumption or other evidence satisfying your minds. To justify conviction upon a charge of perjury as I have said to you—to justify conviction it must be supported by the testimony of two credible witnesses, or by one witness worthy of credit and other corroborating proof of circumstances.

A witness is presumed to speak the truth. The law presumes that whenever a party comes into court and takes an oath to tell the truth, the whole truth and nothing but the truth, that he or she does so. But this presumption is not at all conclusive. It may be overcome by the manner in which he testifies; by his character, or by evidence affecting his character or oath or by contradictory evidence, and it is for you and you alone to determine what weight is to be given the testimony of each and every witness who has testified here. You have observed them, noticed their appearance on the stand, their manner of testifying and their general demeanor, and it is for you and you alone to determine whether they were stating the truth or not.

The evidence in many respects has been conflicting; indeed, in some material respects, diametrically opposed. The witnesses for the Government and the witnesses for the defense are diametrically opposed to one another and it will be for you to arrive at a verdict to consider the manner in which these witnesses have testified, the probable truth of their statements and determine on which side truth lies.

Being the judges of the effect and value of the evidence, you are necessarily the judges also, as I have said, of the credibility of the witness, and this you must determine by the manner in which the witness testifies; whether he appears to be candid and free, or whether he is evasive or is wavering, or is reserving part of the truth, not detailing the whole truth, and also any testimony serving to contradict or corroborate him, or by any facts and circumstances appearing in the case tending to his credit or discredit, and to consider at the same time any bias or interest the witness may have in the case. Where a witness has a direct personal interest in the result of the suit, the temptation is strong to color, pervert or withhold the facts. And in this connection I call your attention to the fact that the defendant has taken the witness stand in his own behalf, which he had a right to do, if he chose. Having gone upon the stand and testified, it is competent for the Government to discredit his testimony as that of any other witness, and by the same means. The deep personal interest which he had in the result of the action should be considered by you in weighing his evidence and in determining how far or to what extent it is worthy of credit. The fact that he is a defendant does not condemn him as unworthy of belief, but at the same time it justifies the jury in viewing his testimony with care and caution.

Now, gentlemen, I have stated to you the rules of law by which you are to be governed in arriving at your verdict in this case. I do not care to allude to the testimony further than to call your attention to some of the dates, in order that you may have them fresh in your mind. As I stated to you before, the Larsen buckle, which is the foundation of the subsequent patented article to the defendant, was manufactured or devised by Mr. Larsen some time in the latter part of December, 1904, or the first part of 1905. You will remember the testimony upon that subject. Mr. Larsen says he discovered or invented this on the night of the 1st of January, 1905.

There is some testimony given by the defendant which it is claimed tends to show that he was mistaken about the date and that the buckle was, in fact, in existence in the latter part of December, 1904, so that the date, of course, is not material at all, unless it may affect the credibility of Mr. Larsen, and in judging that question you will not overlook the fact that it is admitted here that Larsen did have a different buckle which he was exploiting and trying to dispose of—or an interest in it—during the latter part of 1904 and before he claims to have invented the particular buckle in controversy.

In January, 1905, on the 13th of January, Larsen made an application for a patent upon his one-piece buckle and the model has been introduced in evidence and you will have it in the jury-room, and I have no doubt you will remember the buckle in question. He subsequently, along in April, I think, of 1905, sold or transferred or assigned his interest in this patent application to Van Emon, the defendant Patterson and Mrs. Parrish, and on the 21st day of July, 1905, they made a joint application for a patent on an improvement on the Larsen buckle. This improvement consisted, as I now recall the testimony,—and if I am mistaken about it you will depend on your own judgment and not mine—but this improvement that was described in the

joint application made by the parties on the 21st day of July, 1905, consisted principally, if not exclusively, in the lip that was added to the hamebar of the Larsen buckle.

This joint application was pending in the Patent Office until the 3d of March, 1906, when it was either considered abandoned by the department, or was rejected, but it is immaterial which. Nothing further was done in reference to the matter until about a year later, the 20th of March, 1907, when the defendant Patterson made his application for a patent for it, and in support of that application made the affidavit in which it is charged in this case he committed the crime of perjury.

That is all I care to say to you about the dates, so that you may get the dates and their relation, one to the other.

NOTE.—The defendant was found guilty as indicted, and sentenced to serve two years in the penitentiary.

ADJUDICATED PATENTS.

The Byerley patent, No. 524,130, for asphaltic petroleum products and process of making same, *Held* valid and infringed on motion for preliminary injunction. *Byerley* v. *Ellis Co.*, (C. C.,) 190 Fed. Rep., 772.

The Doble reissue patent, No. 12,460, (original No. 751,722,) for an improvement in nozzles for impact water-wheels, *Held* valid and infringed. *Pelton Water Wheel Co.* v. *Doble*, (C. C. A.,) 190 Fed. Rep., 760.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 19, 1911.

The Dempsey Candy Works Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Frederic M. Palst, 211 Chancellor street, Philadelphia, Pa., and Henry Heide, 313 Hudson street, New York, N. Y., for trade-marks and trade-mark registration No. 39,369, dated December 2, 1902, to The Dempsey Candy Works Co., of Nevada City, Nev., and the notice of such declaration sent by registered mail to the said The Dempsey Candy Works Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said The Dempsey Candy Works Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 4, 1911.

Casade, Crooks & Reynaud, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of a trade-mark filed by Chas. Mackinlay & Co., the registrations granted to James Saunders & Co., Limited, John Gillon & Co., Limited, and trade-mark granted to Casade, Crooks & Reynaud, No. 8,729, registered October 18, 1881, and the notice of such declaration sent by registered mail to the said Casade, Crooks & Reynaud at the address of record has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Casade, Crooks & Reynaud, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 8, 1911.

The Bellaire Stamping Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the New York Stamping Co., North Eleventh and Berry streets, Brooklyn, N. Y., for registration of a trade-mark and trade-mark registration No. 24,239, dated February 13, 1894, to The Bellaire Stamping Co., of Harvey, Ill. The Office has failed to secure satisfactory service upon The Bellaire Stamping Co., and the Columbian Enameling & Stamping Co., claiming to be its successor, has failed to file evidence of its right to intervene.

Notice is therefore hereby given to The Bellaire Stamping Co., its assigns or legal representatives, that if the said company or any of them desire to contest the interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 29, 1911.

A. J. Chapman & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Mary A. Mittell, 168 West One Hundred and Twenty-sixth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 26,703, dated June 18, 1895, to A. J. Chapman & Co., of Atlanta, Ga., and the notice of such declaration and the accompanying letter setting times sent to the said A. J. Chapman & Co. at the address given have been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said A. J. Chapman & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 21, 1911.

Illinois Shoe Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Paul Brothers, Inc., 617 Chestnut street, Philadelphia, Pa., for trade-mark registration and trade-mark registration No. 40,752, dated July 14, 1903, to the Illinois Shoe Co., of Alton, Ill., and the registry return-receipt for the notice of such declaration sent to the Illinois Shoe Co. has been returned, signed by A. Newmann, by Mrs. A. Newmann, and Newmann has failed to file evidence of his right to intervene on behalf of the Illinois Shoe Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Illinois Shoe Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 16, 1911.

The Kisyou Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Lillie B. Worrell, of Dayton, Ohio, for a trade-mark and trade-mark registration No. 25,550, dated July 7, 1896, to The Kisyou Company, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said The Kisyou Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said The Kisyou Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 174—No. 2. TUESDAY, JANUARY 9, 1912. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JANUARY 9, 1912	293
PATENT OFFICE PUBLICATIONS	293
THE OFFICIAL GAZETTE	293
APPLICATIONS UNDER EXAMINATION	294
PATENTS GRANTED	295
REISSUES	560
DESIGNS	569
TRADE-MARKS—REGISTRATION APPLIED FOR	573
TRADE-MARKS—REGISTERED	579
TRADE-MARKS CANCELED	582
LABELS AND PRINTS	None.
COMMISSIONER'S DECISIONS—	
Pope v. McKenzie	583
Rotter v. Samuelson	584
Ex parte Société Anonyme Des Usines Remy	585
DECISIONS OF THE U. S. COURTS—	
Carmel Wine Company v. California Winery	586
The Summit City Soap Works v. The Standard Soap Company	587
DISCLAIMER	588
INTERFERENCE NOTICES	588

ISSUE OF JANUARY 9, 1912.

Patents	776—No. 1,013,855 to No. 1,014,630,	inclusive.
Designs	18—No. 42,077 to No. 42,094,	inclusive.
Trade-Marks	127—No. 84,796 to No. 84,922,	inclusive.
Labels	None.	
Prints	None.	
Reissues	10—No. 13,251 to No. 13,300,	inclusive
Total	931	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	2	Ohio	56	3
Arkansas	2	....	Oklahoma	5	....
California	25	2	Oregon	8	....
Colorado	13	2	Pennsylvania	67	7
Connecticut	25	1	Rhode Island	5	....
Delaware	2	....	South Carolina	3	1
Florida	1	1	South Dakota	4	....
Georgia	7	....	Tennessee	2	3
Idaho	2	....	Texas	17	....
Illinois	74	10	Utah	1	....
Indiana	19	5	Vermont	2	....
Iowa	12	2	Virginia	6	2
Kansas	20	1	Washington	7	....
Kentucky	3	....	West Virginia	5	....
Louisiana	6	1	Wisconsin	14	....
Maine	2	1	Wyoming	1	....
Maryland	7	1			
Massachusetts	30	9	Alaska, District of	....	....
Michigan	22	1	Arizona Territory	1	....
Minnesota	13	1	Canal Zone	1	....
Mississippi	3	....	District of Columbia	4	1
Missouri	35	5	Hawaii Territory	....	2
Montana	6	2	New Mexico Ter'y	....	....
Nebraska	7	....	Philippine Islands	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	....	U. S. Navy	....	....
New Jersey	51	9			
New York	112	41	Total to citizens of the United States	725	116
North Carolina	4	....			
North Dakota	....	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	....	....	Netherlands	....	....
Argentina	....	....	Newfoundland	....	....
Austria-Hungary	5	....	New South Wales	....	....
Belgium	....	1	New Zealand	....	....
Brazil	....	....	Norway	....	....
British West Indies	....	....	Queensland	....	....
Canada	9	....	Roumania	....	....
Cape Colony	....	....	Russia	1	....
Chile	....	....	Scotland	3	....
China	....	....	South Australia	....	....
Costa Rica	....	....	Spain	....	....
Cuba	....	2	Sweden	1	....
Denmark	....	....	Switzerland	2	....
Ecuador	....	....	Transvaal, South Africa	....	....
England	16	3	Victoria	1	....
France	6	....	Western Australia	....	....
Germany	24	6			
Ireland	....	....	Total to citizens of foreign countries	68	12
Italy	....	....			
Japan	....	....			
Mexico	....	....			

Patent Office Publications.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1911.

The stock of publications, exclusive of printed copies of patents, formerly held for sale by the Patent Office, has been transferred to the Superintendent of Documents, Government Printing Office. Orders for Patent Office publications should NOT be sent to the Patent Office, but to the "Superintendent of Documents," to whom all remittances for such publications should be made payable.

Printed copies of specifications and drawings of patents will be furnished by the Patent Office, as heretofore.

EDWARD B. MOORE,
Commissioner.

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 6, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 15	Nov. 22	437
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 1	Dec. 1	470
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 7	Dec. 26	196
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Nov. 25	Dec. 4	397
167	5. Bookbinding; Harvesters; Jewelry; Music.	Nov. 22	Nov. 20	396
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 7	Dec. 7	284
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 11	Nov. 20	492
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Dec. 7	Dec. 4	412
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 7	Dec. 4	323
235	10. Carriages and Wagons.....	Nov. 2	Nov. 22	635
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 1	Nov. 27	375
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 1	Dec. 1	573
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Oct. 19	Nov. 22	474
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structures; Wire-Working.	Nov. 8	Dec. 6	419
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Nov. 23	Nov. 14	779
109	16. Telegraphy; Telephony.....	Nov. 18	Nov. 23	195
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Dec. 6	Dec. 6	253
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 1	Dec. 2	256
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Dec. 1	Dec. 4	421
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 24	Nov. 4	248
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 25	Dec. 6	364

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
240	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 5	Dec. 5	414
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 1	Dec. 1	421
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 1	Dec. 2	413
316	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 5	Dec. 8	232
106	26. Electricity, Generation; Motive Power.	Sept. 5	Sept. 26	485
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 4	Dec. 1	391
65	28. Internal-Combustion Engines.	Nov. 4	Nov. 3	776
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Oct. 3	Nov. 17	479
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 11	Dec. 8	321
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Dec. 4	Dec. 1	210
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 6	Dec. 8	266
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 1	Dec. 1	406
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 4	Dec. 4	461
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Nov. 27	Dec. 1	765
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Nov. 25	Nov. 18	609
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Sept. 18	Dec. 6	498
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Nov. 2	Nov. 14	605
221	39. Water Distribution.....	Dec. 1	Nov. 7	488
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 6	Dec. 18	321
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 20	Nov. 27	390
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 1	Nov. 4	659
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 7	Dec. 1	350

Oldest new case, Sept. 5; oldest amended, Sept. 26.

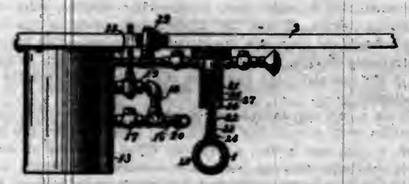
Total number of applications awaiting action 18,559

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Nov. 13	Nov. 13	1618
	Designs.....	Nov. 3	Nov. 20	426
	Labels and Prints.....	Dec. 15	Dec. 4	132

PATENTS

GRANTED JANUARY 9, 1912.

1,013,855. VEHICLE-SPRING. WARREN W. ANNABLE, Grand Rapids, Mich., assignor to Annable Pneumatic Spring Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 4, 1905. Serial No. 272,728.



1. In combination with a vehicle, an air tank and pump mounted on the body of the vehicle, a rod connecting the spring support and the piston and movable longitudinally of the piston, and a spring engaging the piston to operate the same.

2. In combination with a vehicle, a pneumatic spring, a pump to supply compressed air to the spring and mounted on the body of the vehicle, a rod movably connected to the pump piston at one end and attached to the spring support at the other end, and a spring yieldingly engaging the piston to operate the same.

3. In combination with a vehicle, a pneumatic spring, a pump to supply compressed air to the spring and mounted on the vehicle body, a rod movably connected to the piston, a spring engaging the piston at one end, and an adjustable support for the other end of the spring.

4. In combination with a vehicle, a pneumatic spring, a pump to supply compressed air to the spring and mounted on the vehicle body, a piston for the pump and having a longitudinal opening, a rod having a head at one end movable in said opening, said rod being attached at the other end to the spring support of the vehicle, a spring on the rod and engaging the piston, and an adjustable nut on the rod to support the spring.

5. In a vehicle, a pneumatic spring, an air pump connected to the spring and mounted on the vehicle body, a piston having an axial opening, a removable plug to close the opening, a rod extending through the plug and having a head at one end and traversing the opening, said rod being attached at the other end to the spring support of the vehicle, a spring on the rod and engaging the plug at one end, and an adjustable nut on the rod to support and adjust the spring.

[Claims 6 and 7 not printed in the Gazette.]

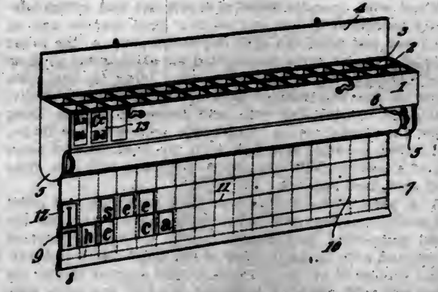
1,013,856. EDUCATIONAL APPLIANCE. ANNA W. ARNETT, Lawrence, Kans. Filed Mar. 17, 1911. Serial No. 615,099.

1. A device of the class described including a roll, a flexible strip adapted to be wound thereon, and a plurality of separate flexible pockets upon the strip and adapted to be wound therewith upon the roll.

2. A device of the class described including a roll, a flexible element adapted to be wound thereon, and parallel series of separate pockets of flexible material upon said element and adapted to be wound therewith upon the roll.

3. A device of the class described including a flexible strip adapted to be wound, and flexible pockets upon the strip and adapted to be wound therewith.

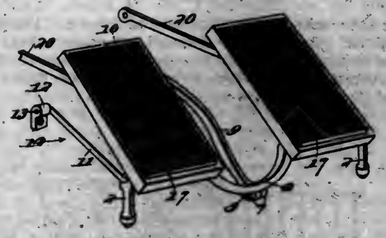
4. A device of the class described including a flexible strip adapted to be wound, and parallel series of flexible pockets upon the strip and adapted to be wound therewith.



5. A device of the class described including a strip having plaits extending transversely thereof, and means for dividing the spaces back of the plaits into separate pockets.

[Claims 6 to 11 not printed in the Gazette.]

1,013,857. PEDAL MECHANISM. GEORGE P. BRAND, New York, N. Y. Filed Mar. 12, 1910. Serial No. 548,988.



1. A pedal frame having rigid feet and a depressed portion between said feet, side arms connected at one end with said frame, and a link pivotally connected at one end with a fixed support and at the other end with said depressed portion, the depressed portion lying in the same plane as the longitudinal axes of the feet and the pivotal point of said link with said depressed portion being below the pivotal points of said side arms with the frame, the pivotal point of said link with the fixed support being out of alinement with the pivotal points of said side arms with said fixed support.

2. A pedal frame having rigid feet and a depressed portion between said feet, side arms connected at one end with said frame, and a link pivotally connected at one end with a fixed support and at the other end with said depressed portion, the pivotal point of said link being disposed in a plane below the plane of the upper face of the said frame and in the same plane as the longitudinal axes of the feet and below the pivotal points of the side arms with the frame, the pivotal point of said link with its

fixed support being out of alinement with the pivotal points

automatically brought into cooperative relation with the

3. The combination of a filament loop, a coiled helical

of said plates from the one plate to the other, and inclos-

fixed support being out of alinement with the pivotal points of the side arms to said fixed support.

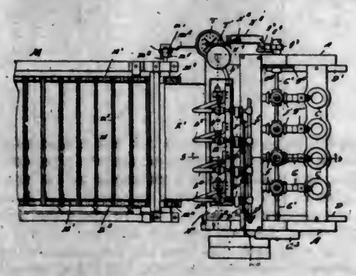
3. A pedal frame having legs rigid therewith and pedal supporting portions and a depressed portion between the pedal supporting portions, side arms pivotally connected at one end with opposite sides of the frame, and a link pivotally connected at one end with a fixed support and at the other end with the said depressed portion, the depressed portion lying in the same plane as the longitudinal axes of the feet and the pivotal point of said link with said depressed portion being below the pivotal points of said side arms with the frame, the pivotal point of said link with some fixed support being out of alinement with the pivotal points of said side arms with said fixed support.

4. A pedal frame having legs rigid therewith and pedal supporting portions and a depressed portion between the pedal supporting portions, side arms pivotally connected at one end with opposite sides of the frame and a link pivotally connected at one end with a fixed support and at the other end with the said depressed portion, the other ends of said side arms constructed for attachment to some fixed support, the depressed portion lying in the same plane as the longitudinal axes of the feet and the pivotal point of said link with said depressed portion being below the pivotal points of said side arms with the frame, the pivotal point of said link with the fixed support being out of alinement with the pivotal points of said side arms with said fixed support.

5. A pedal frame having legs rigid therewith and pedal supporting portions and a depressed portion between the pedal supporting portions, side arms pivotally connected at one end with opposite sides of the frame and a link pivotally connected at one end with a fixed support and at the other end with the said depressed portion, the other ends of said side arms constructed for attachment to some fixed support, said link being formed upon a compound curve, the depressed portion lying in the same plane as the longitudinal axes of the feet and the pivotal point of said link with said depressed portion being below the pivotal points of said side arms with the frame, the pivotal point of said link with the fixed support being out of alinement with the pivotal points of said side arms with said fixed support.

[Claims 6 to 14 not printed in the Gazette.]

1,013,858. CAN-CAP LACQUERING OR COATING MACHINE. CHARLES S. BUCKLIN, Baltimore, Md., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 13, 1908. Serial No. 432,691.



1. In a can cap lacquering or coating machine, the combination with a spraying device, of a magazine for the can caps, a can cap feeder, a can cap lifter, a series of magnetic rotatable can cap holders, a carrier upon which said cap holders are mounted and by which said holders are automatically brought into coöperative relation with the spraying device, substantially as specified.

2. In a can cap lacquering or coating machine, the combination with a spraying device, of a magazine for the can caps, a can cap feeder, a can cap lifter, a series of magnetic rotatable can cap holders, a carrier upon which said cap holders are mounted and by which said holders are automatically brought into coöperative relation with the spraying devices, and means for successively rotating the can cap holders as they are presented to the spraying device, substantially as specified.

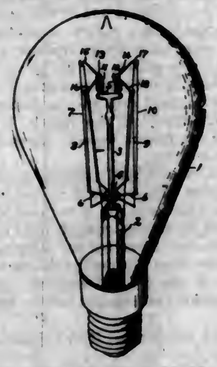
3. In a can cap lacquering or coating machine, the combination with a spraying device, of a magazine for the can caps, a can cap feeder, a can cap lifter, a series of magnetic rotatable can cap holders, a carrier upon which said cap holders are mounted and by which said holders are automatically brought into coöperative relation with the spraying device, means for successively rotating the can cap holders as they are presented to the spraying device and a stripping device, substantially as specified.

4. In a can cap lacquering or coating machine, the combination with a spraying device, of a magazine for the can caps, a can cap feeder, a can cap lifter, a series of magnetic rotatable can cap holders, a carrier upon which said cap holders are mounted and by which said holders are automatically brought into coöperative relation with the spraying device, means for successively rotating the can cap holders as they are presented to the spraying device, a stripping device, a drier and a connecting chute extending from the stripping device to the drier, substantially as specified.

5. In a can cap lacquering or coating machine, the combination with a spraying device, of a magazine for the can caps, a can cap feeder, a can cap lifter, a series of magnetic rotatable can cap holders, a carrier upon which said cap holders are mounted and by which said holders are automatically brought into coöperative relation with the spraying device, means for successively rotating the can cap holders as they are presented to the spraying device, a stripping device, a drier and a connecting chute extending from the stripping device to the drier, said drier having an intermittently moving conveyer for the can caps, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

1,013,859. FILAMENT-SUPPORT. WILLIAM R. BURROWS, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Mar. 13, 1907. Serial No. 362,175.



1. The combination of a lamp stem having a central pedestal, a coiled spring supported thereby and having its axis parallel with that of the pedestal, laterally extending arms supported by said spring, and filament loops engaging with said radial arms, the portion of an arm engaging with a filament undergoing displacement with reference to a plane perpendicular to the filament loop as the longitudinal direction of the loop varies in length while the portion adjacent the spring remains relatively stationary.

2. The combination of a lamp filament, a supporting arm engaging therewith, and a coiled spring attached to said arm and subjected to compression and transverse flexure when said filament contracts.

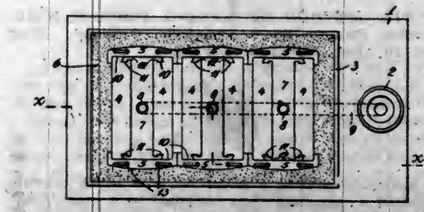
3. The combination of a filament loop, a coiled helical spring having its axis substantially parallel to that of the loop, and a laterally extending arm supported by said spring engaging with said filament loop and free to tilt with reference to said axis.

4. The combination of a lamp stem, a pedestal carried thereon, a spring mounted on said pedestal, a bead of insulating material supported by said spring, a plurality of supporting arms carried by said bead, and a filament loop engaging with each of said arms.

5. The combination of a lamp stem, a pedestal mounted thereon, a plurality of filaments disposed about said pedestal, a spring carried by said pedestal, and means for supporting said filaments comprising a plurality of suitably rigid devices carried by said spring and movable laterally with reference to said pedestal.

[Claims 6 and 7 not printed in the Gazette.]

1,013,860. METHOD OF AND APPARATUS FOR PRODUCING COMPOUND METAL INGOTS. FERDINAND E. CANDA, New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J., a Corporation of New Jersey. Filed Sept. 6, 1911. Serial No. 647,958.



1. The process of forming composite metal ingots herein described, comprising casting molten metal to form an intermediate layer of the composite ingot into a space inclosed by plates and by separate end pieces, said plates being plates which are to form outer layers of the composite ingot, the said space into which the metal is so cast including interlocking spaces in the ends of said metal plates; and permitting the molten metal to solidify, and by the interlocking of the cast metal with said plates, thus produced, causing said plates to follow the cast metal during its contraction.

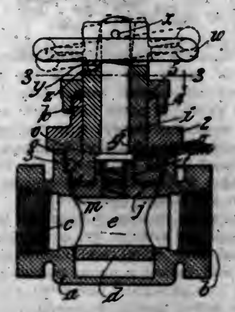
2. The process of forming composite metal ingots herein described, comprising casting molten metal of relatively high melting point to form an intermediate layer of the composite ingot into a space inclosed by plates of relatively lower melting point and by separate end pieces, said plates being plates which are to form outer layers of the composite ingot, the said space into which the metal is so cast including interlocking spaces in the ends of said metal plates; and permitting the molten metal to solidify and by the interlocking of the cast metal with said plates, thus produced, causing said plates to follow the cast metal during its contraction.

3. The process of forming composite metal ingots herein described, comprising casting molten metal to form an intermediate layer of the composite ingot into a space inclosed by plates and by separate end pieces, said plates being plates which are to form layers of the composite ingot, the said space into which the metal is so cast including interlocking spaces of dovetail contour in the ends of said metal plates; and permitting the molten metal to solidify, and by the interlocking of the cast metal with said plates, thus produced, causing said plates to follow the cast metal during its contraction.

4. A mold for forming composite metal ingots, comprising plates which are to form outer layers of the composite ingot, said plates having interlocking projections and corresponding recesses at their ends, the said plates being spaced apart a distance corresponding to the desired thickness of the intermediate layer of the composite ingot, and separate end pieces extending across the ends of said plates from the one plate to the other, and inclosing with said plates, the space between said plates and spaces behind said interlocking projections and communicating with the space between said plates, and means for holding said plates and end pieces together.

5. A mold for forming composite metal ingots, comprising plates which are to form outer layers of the composite ingot, said plates having interlocking projections and corresponding recesses at their ends, said recesses being of dovetail contour, the said plates being spaced apart a distance corresponding to the desired thickness of the intermediate layer of the composite ingot, and separate end pieces extending across the ends of said plates from the one plate to the other, and inclosing with said plates, the space between said plates and spaces behind said interlocking projections and communicating with the space between said plates, and means for holding said plates and end pieces together.

1,013,861. VALVE. JOHN H. CHANDLER, Indian Orchard, Mass. Filed Jan. 18, 1911. Serial No. 603,248.



1. A valve having in combination with the plug thereof, a cylindrical member provided with a recessed opening in the lower portion thereof, a projection on the plug for engaging the opening in the cylindrical member, a stem having threaded engagement with the plug for moving the projection with the plug, and means for connecting the stem and cylindrical member together to move the plug and cylindrical member and stem as one piece.

2. In a plug valve, means for lifting the plug from its seat prior to its rotation, said means comprising a stem having a threaded connection with the plug, a disk-shaped portion having a recess therein, and a projection on the plug entering the recess.

3. In a valve, the combination with the plug thereof, a stem having a threaded engagement with the same, a cylindrical member inclosing the stem and provided with a recess in its lower portion, the upper part of the plug having a projection corresponding in shape with the recess and normally in engagement with the same, means for locking the stem and cylindrical member together subsequent to the vertical movement of the plug, whereby the plug and cylindrical member may be rotated together in opening or closing the valve.

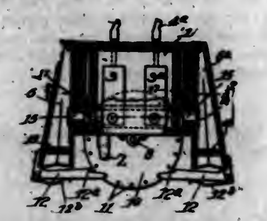
4. In a valve, the combination with the plug thereof, a valve stem having a threaded connection therewith for imparting a vertical or axial movement thereto prior to the opening of the valve, a cylindrical member provided with a disk-shaped lower end and having a recess in the edge thereof, a projection on the valve-body for engaging the recess for limiting the rotative movement of the plug and cylindrical member, and means for locking the stem and cylindrical member together for effecting such movement.

5. In a valve, the combination with the plug thereof, the upper portion of which is provided with a packing, a projection on the plug, a cylindrical member having a recess in the lower portion thereof for receiving the pro-

jection, the portion around the recess being engaged by the packing on the plug when an axial movement is imparted to the plug, a stem, and means between the stem and the cylindrical member for locking the two together, whereby the plug may be operated, substantially as described.

[Claim 6 not printed in the Gazette]

1,013,862. STEP-FEED FOR AUTOMATIC MODIFYING DEVICES FOR AUTOMATIC MUSICAL INSTRUMENTS. MELVILLE CLARK, Chicago, Ill. Filed Nov. 12, 1910. Serial No. 591,934.



1. In an automatic musical instrument, in combination with parts which are movable for modifying the playing, a gear wheel and connections therefrom for actuating said parts; a motor pneumatic and means for controlling it; a pawl connected with the moving member of the motor pneumatic positioned for encounter with the tooth of the wheel in the collapse of the pneumatic, and having a shoulder which stops a subsequent tooth of the wheel to arrest the feeding movement.

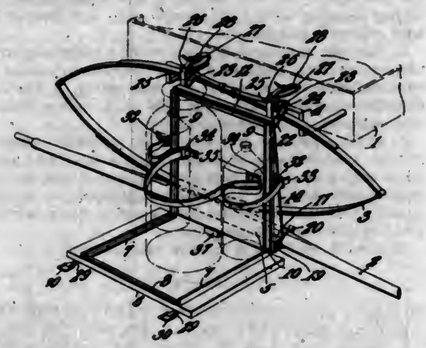
2. In an automatic musical instrument, in combination with parts which are movable for modifying the playing, a crown-toothed gear wheel and connections therefrom for actuating said parts; a motor pneumatic and means for controlling it, and a pawl connected with the moving member of the motor pneumatic, positioned to encounter with one of the laterally projecting teeth of the wheel in the collapse of the pneumatic, and having a shoulder which stops against the next succeeding tooth of the wheel to arrest the feeding movement.

3. In an automatic musical instrument, in combination with parts which are movable for modifying the playing, a motor pneumatic and connections therefrom for actuating said parts; means for controlling such motor pneumatics, said motor pneumatics having an inlet port and an exhaust port; a check valve controlling the inlet port opening freely for inlet, and a throttle valve for controlling the exhaust port mounted for adjustment in said exhaust port to reduce the port-way thereof to cause slow collapse of the motor pneumatic.

4. In an automatic musical instrument, in combination with parts which are movable for modifying the playing, a motor pneumatic for actuating said parts, primary pneumatics for controlling said motor pneumatics; a valve operated by the primary pneumatics to open exhaust air communication with the latter for collapsing it, the motor pneumatic having an inlet port and an exhaust port; a check valve which controls the inlet port opening freely for inlet of atmospheric air, and the throttle valve for controlling the exhaust port mounted for adjustment in such exhaust port to reduce the port-way thereof below that of the port which is controlled by the primary pneumatic.

1,013,863. FOLDING CARRIER. CHARLES H. CRONK, Curtis, Nebr. Filed Feb. 24, 1911. Serial No. 610,613.

A device of the class described comprising a back and a platform hinged together, and abutting to stand normally in angular relation; guides secured to the back; rings held against sliding movement in the lower ends of the guides; flexible elements mounted in the rings; rings slidable upon the guides; flexible elements in the last named rings; rings secured in the upper ends of the guides; rings secured to the free outer edges of the platform; and flexible securing elements adapted to engage



the two last named sets of rings, to uphold the platform against the back.

1,013,864. METHOD OF MAKING FUSIBLE WIRE. LUDWIG PHILIPP DAUB, Pforzheim, Germany. Filed Oct. 20, 1910. Serial No. 588,044.

1. Method of making a solderable wire which consists in bending a compound strip composed of a sheet metal carrier and a solder film into cylindrical form, sliding it into a metal shell and drawing the resulting product into a wire.

2. Method of making a solderable wire which consists in intimately uniting a sheet metal carrier with a solder film, reducing the thickness of the compound sheet thus formed by rolling, cutting the rolled sheet up into strips, bending each strip into a cylindrical form, inserting it into a shell, and drawing the resulting product into a wire.

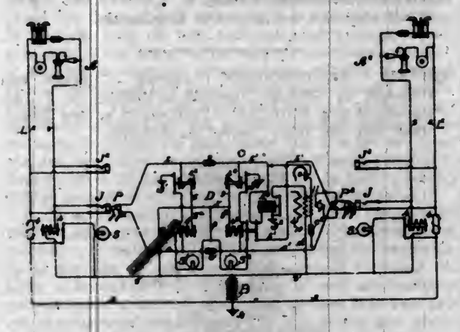
3. Method of making a solderable wire which consists in intimately uniting a sheet metal carrier with a solder film, reducing the thickness of the compound sheet thus formed by rolling, cutting the rolled sheet up into strips, bending each strip into a tubular form, inserting it into a shell, introducing a metal core into the tube, and drawing the resulting product into a wire.

1,013,865. TELEPHONE SYSTEM. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 5, 1901. Serial No. 67,075.

1. The combination with a telephone line, of a line signaling device therefor, a battery and a comparatively low resistance impedance coil in series in the line; a cord connector having a tip strand, a supervisory relay of comparatively low resistance possessing impedance and normally connected between said tip strand and the same pole of the battery as the said signaling device, whereby the latter is short circuited by the relay when the contractor is connected with the line for conversation, a supervisory signal having its circuit at one point controlled by said relay, and means to open the circuit of said signal at a different point when the connector is not connected with the line to prevent the normal operation of the signal, substantially as described.

2. The combination with a telephone line, of a connecting jack for the line, a line relay in one of the conductors of the line, a battery having a pole connected with said conductor and its other pole connected with the other line

conductor, a cord circuit, a relay for the cord circuit connected with a limb thereof and with the former pole of said battery, the connection of said cord with said jack being adapted to include said relay in a local branch circuit comprising the entire battery, the coil of said relay, a portion of one limb of the cord circuit, contacts of said jack and the portion of said other line conductor between the contact of said jack and said source, substantially as described.



3. The combination with a telephone line, of a battery and two supervisory relays adapted to be associated with the line during a connection therewith for conversational purposes, said relays having their coils directly connected to the same pole of the battery, and a supervisory signal jointly controlled by said relays, substantially as described.

4. The combination with a telephone line, of a battery connected with the line, two supervisory relays adapted to be bridged across the line when a conversational circuit is established, the coils of said relays being directly connected with the same pole of the battery, and a supervisory signal controlled jointly by said relays.

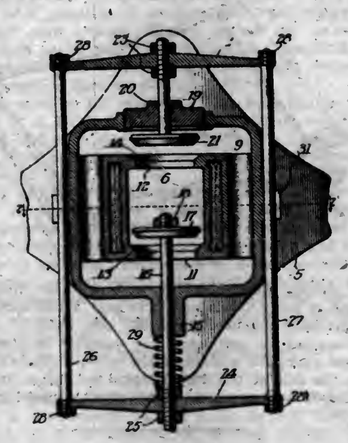
5. The combination with a telephone line, of a battery, a cord circuit and supervisory relays associated with the end of the cord circuit adapted to be connected with the line and connecting directly with a common pole of the battery, said relays serving to jointly control a supervisory signal, substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

1,013,866. NUT-LOCK. JAMES DE HAVEN, Dante, Va., assignor of one-half to William R. Jennings, Dante, Va. Filed Jan. 23, 1911. Serial No. 604,201.

The combination with a threaded bolt and a nut provided on its inner face with a series of annularly arranged notches which are gradually inclined from the surface of the nut to their dog engaging shoulders, of a metal washer provided with a series of annularly arranged spring dogs adapted to enter the notches in the nut, the spring dogs of the washer being so spaced apart with relation to the dog engaging shoulder of the nut, that only part of the dogs will engage some of the shoulders on the nut, while the remaining spring dogs will in part rest idly in the notches of the nut and out of engagement with the dog engaging shoulders, and means for preventing the washer from turning on the bolt, substantially as set forth.

1,013,867. EXHAUST-VALVE MECHANISM. CHARLES T. DENKER, Chicago, Ill. Filed Dec. 24, 1910. Serial No. 599,081.



1. In an exhaust valve mechanism, the combination of an exhaust chamber provided with a plurality of valve seats, a valve mounted to seat against one of said seats and open into said chamber, a second valve mounted to seat against another of said valve seats and open outwardly from said chamber, and means arranged exteriorly of the chamber connecting said valves, whereby counterbalancing of the valves is effected by pressure within the chamber, substantially as described.

2. In an exhaust valve mechanism, the combination of an exhaust chamber provided with a pair of valve seats, a pair of valves adapted to seat against said valve seats, means disposed exteriorly of said chamber for rigidly connecting said valves together whereby said valves are operated simultaneously, one valve opening into said chamber and the other opening outwardly therefrom, substantially as described.

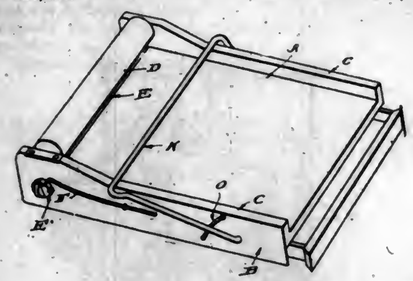
3. In an exhaust valve mechanism, the combination of an exhaust chamber having a pair of valve seats, one of said seats being disposed interiorly of the chamber and the other exteriorly thereof, a pair of valve disks adapted to coöperate with said seats, a yoke arranged exteriorly of the chamber and rigidly connecting said valve disks together, said yoke being adapted to reciprocate to simultaneously seat and unseat said valve disks, substantially as described.

4. In an exhaust valve mechanism, the combination of an exhaust chamber provided with a pair of valve seats, a casing disposed around said chamber, a pair of valve stems mounted in said casing and carrying upon their inner ends valve disks adapted to seat against said valve seats, a yoke arranged to reciprocate exteriorly of said casing, said valve stems being rigidly attached to said yoke whereby reciprocation of the yoke will alternately seat and unseat said valve disks, one of said disks opening into said exhaust chamber and the other opening outwardly therefrom, substantially as described.

5. In an exhaust valve mechanism, the combination of an exhaust chamber provided with a pair of oppositely disposed exhaust ports, a tapered valve seat surrounding each of said ports, a compartment adapted to contain water, arranged around said exhaust chamber to provide a water jacket for cooling the valve seats, and a pair of valves connected together exteriorly of the chamber to operate simultaneously to open and close said ports, substantially as described.

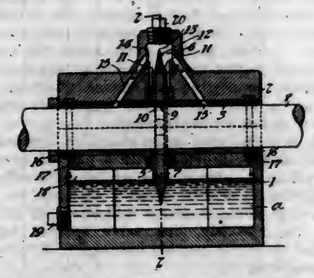
[Claims 6 to 8 not printed in the Gazette.]

1,013,868. WRITING-DESK. JAMES LAWRENCE DOW, Manhattan, Kans. Filed Feb. 25, 1911. Serial No. 610,894.



A writing desk provided with a table upon which a sheet of paper is adapted to be held, a ball-shaped member pivotally mounted upon the side walls of the desk and adapted to rest upon the opposite marginal edges thereof above the surface of the table, a ratchet segment upon the side of the desk adapted to engage an arm of the bail to hold the same in an adjusted position.

1,013,869. BEARING. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Mar. 23, 1908. Serial No. 422,652.



1. The combination of a shaft, a casing within which said shaft is journaled, a ring and spring plates for frictionally securing said ring to said shaft, said ring being formed with continuous lateral surfaces 12 converging to a sharp edge and with shoulders 11, and an oil well into which said ring dips, substantially as set forth.

2. In a device of the class described, the combination of the shaft 8, ring 7 having an annular internal groove 10, and spring plates 9 within said groove for frictionally securing said ring to said shaft, substantially as set forth.

1,013,870. CAISSON. OLIVER CROMWELL EDWARDS, Jr., Troy, N. Y. Filed Dec. 13, 1906. Serial No. 347,686.

1. In a caisson, the combination with inclosing walls and a roof, of an arched brace portions of which are structurally independent of said roof disposed for strengthening some of said parts.

2. In a caisson, the combination with inclosing walls and a roof, of a truss portions of which are structurally independent of said roof for strengthening some of said parts, one of the members of said truss being arched.

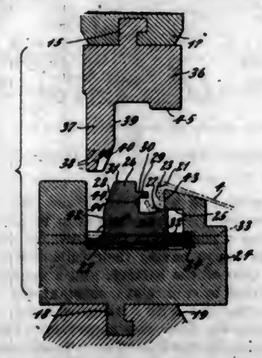
3. In a caisson, the combination with inclosing walls, of a trussed arch connected therewith for strengthening said walls.

4. In a caisson, the combination with inclosing walls, of a truss formed integrally therewith for strengthening the walls, said truss having one of its members arched.

5. In a caisson, the combination with inclosing walls, of a strengthening truss formed integral with one of said walls throughout the length of the truss, one of the members of the truss being arched.

[Claims 6 to 66 not printed in the Gazette.]

1,013,871. BENDING-DIES. ALFRED J. ELLIS and CHARLES E. NELLIS, Woodcliff-on-Hudson, N. J., assignors to A. J. Ellis, Inc., a Corporation of New Jersey. Filed Jan. 30, 1911. Serial No. 605,425.



1. In sheet bending appliances, three dies adapted for relative movement therebetween, one of said dies being recessed and having a laterally projecting rib extending along one side of said recess, a wall opposite the edge of said rib, said rib and wall being adapted to receive a portion of the sheet to be bent therebetween, the wall of said recess adjacent said rib being adapted to engage another portion of said sheet and to fold over said portion between said wall of the recess and the wall of the second die above referred to, said third die having a portion thereof adapted to co-act with a lateral surface of said rib to form a second fold in said material when the dies are being closed.

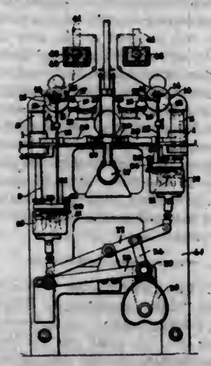
2. In sheet bending appliances, a substantially U-shaped die having a recess in one of the interior faces thereof, a laterally displaceable die disposed in said recess, said last mentioned die having a groove along one side thereof and having a rib projecting laterally therefrom over said groove, and a third die, angularly displaceable with respect to the path of movement of said laterally displaceable die, said third die having a surface adapted to co-act with the upper surface of said rib to form a fold in sheet material therebetween, a wall of said groove disposed below said rib being adapted to co-act with an interior surface of said U-shaped die to form a second fold in said material substantially at right angles to the first fold when said wall and surface are proximated, and means carried by said third die for moving said laterally displaceable die into the recess in the interior face of said U-shaped die, whereby said wall and surface are proximated.

3. In sheet binding appliances, a substantially U-shaped die having a recess in one of the interior faces thereof, a laterally displaceable die disposed in said recess, said last mentioned die having a groove along one side thereof and having a rib projecting laterally therefrom over said groove, and a vertically displaceable die having a surface adapted to co-act with the upper surface of said rib to form a fold in sheet material therebetween, a wall of said groove being adapted to co-act with an interior surface of said U-shaped die to form a second fold in said material substantially at right angles to the first fold when said wall and surface are proximated, said vertically movable die having a depending wedge-shaped rib adapted for insertion between an outer wall of said laterally displaceable die and the interior surface of said U-shaped die which is opposed to the recessed surface thereof aforesaid.

4. In sheet bending appliances, three dies adapted for relative movement therebetween, one of said dies being recessed and having a laterally projecting rib extending along one side of said recess, a wall opposite the edge of said rib, said rib and wall being adapted to receive a portion of the sheet to be bent therebetween, the wall of said recess adjacent said rib being adapted to engage another portion of said sheet and to fold over said portion between said wall of the recess and the wall of the second die above referred to, the recess aforesaid adjacent the rib being free from die parts when the dies are in closed position, said third die having a portion thereof adapted to co-act with a lateral surface of said rib to form a second fold in said material when the dies are being closed.

5. In sheet bending appliances, three dies adapted for relative movement therebetween, one of said dies being recessed and having a laterally projecting rib extending along one side of said recess and partially inclosing the same, a second of said dies having a wall substantially perpendicular to said rib, the space between said wall and rib varying with the movement of one of the dies aforesaid, the wall of said recess normal to said rib being adapted to co-act with the wall aforesaid to fold over sheet metal therebetween, said wall of said recess being spaced from said wall of said second die by at least double the thickness of the material to be folded when the dies are in closed relationship whereby to accommodate the folded material, said rib having a lateral surface thereof substantially normal to at least one of said walls, the third die having a portion thereof adapted to co-act with said lateral surface of the rib to form a second fold in said material when the dies are being closed, and means for supporting the material along the line of the first mentioned fold when the dies are being proximated, said means preventing displacement of said folding line.

1,013,872. SPINNING-MACHINE. SEBASTIAN ZIANI DE FERRANTI, London, England. Filed Aug. 3, 1905. Serial No. 272,560.



1. In a machine for twisting fibrous material, the combination of a rotatable twisting element; means acting to transfer said material in a certain direction; a driving connection between said twisting element and said transferring means; means for driving said twisting element in either direction at will, together with means for maintaining constant said certain direction of transfer.

2. In a machine for twisting fibrous material, the combination of a rotary twisting element; rolls feeding the material forward; means for driving said rolls from said twisting element together with means for reversing the direction of rotation of said twisting element, and means for maintaining constant the direction of rotation of said feed rolls.

3. In a machine for twisting fibrous material, the combination of a plurality of twisting units each comprising a lagging part, electro-magnetic means for retarding each of said parts, said means including a magnetic circuit, together with means for simultaneously adjusting the reluctance of said circuits.

4. In a machine for twisting fibrous material, the combination of a lagging part; electro-magnetic means for retarding said part, said means including a magnetic circuit, together with means for adjusting the reluctance of said circuit.

5. In a machine for twisting fibrous material, the combination of a plurality of rotatable twisting elements; means co-acting therewith to transfer said material in a certain direction, a driving connection between said twisting elements and said transfer means; means for reversing the direction of rotation of said twisting elements and a single instrumentality common to a plurality of said twisting elements for maintaining constant said certain direction of transfer.

[Claims 6 to 20 not printed in the Gazette.]

1,013,873. BAG-FASTENER. ABRAHAM C. FISHER, New York, N. Y., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed May 12, 1911. Serial No. 626,821.

1. In combination, two members movable relatively to each other, knobs carried by said members and adapted to engage with each other for holding said members together, and a catch secured to one of said knobs for additionally holding said members together and independently operated from the movement of said knobs.

2. In combination, two hinged frame members, knobs carried by said frame members, and adapted to snap past each other for holding said frame members together, and a locking device pivotally secured to one of said knobs for additionally holding said frame members and independently operated from said knobs.

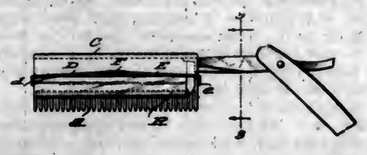
3. In a purse or bag fastener, the combination with a pair of hinged frame members, of a catch member mounted on each of said frame members for mutual coöperation and adapted to engage with each other for holding said frame members together, and a catch for additionally holding said members together pivotally mounted upon one of said catch members and operated independently from said catch members.

4. In a purse or bag fastener, the combination with a pair of hinged frame members, of a catch member mounted on each of said frame members for mutual coöperation and adapted to engage with each other for holding said frame members together, each catch member comprising a base having an angularly disposed engaging enlargement extending therefrom, and a pivoted catch for additionally holding said members together, said catch being pivotally secured to the base of one of said catch members and operated independently from said catch members.

1,013,874. DEVICE FOR CUTTING HAIR. FREDERICK H. FOOKS, Baltimore, Md. Filed May 17, 1911. Serial No. 627,683.

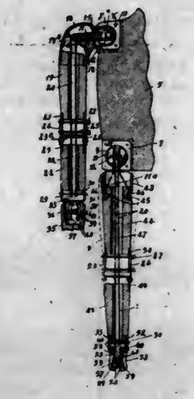
The combination with a blade of a razor, of an attachment therefor comprising a comb having a portion bent

back upon itself to form a socket for the razor, and a pair of oppositely directed spring arms, one of said spring arms having a laterally bent portion normally extending over



one end of the comb and the other spring arm having a similar bent portion normally extending over the other end of the comb, both of said spring arms being secured to the bent over portion of the comb near the center thereof.

1,013,875. GARMENT-DISPLAY FORM. MICHAEL J. FORQUER, Greeley, Colo. Filed Dec. 4, 1909. Serial No. 531,332.

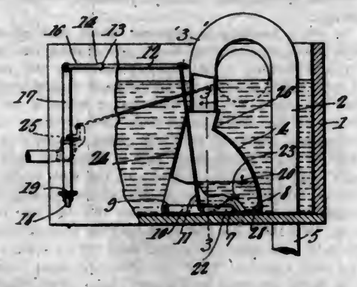


1. In a display-form, the combination of two members representing different parts of the human figure, and means for adjustably connecting said members, said means comprising a socket in one member, expansible devices adapted to frictionally engage said socket walls, said devices connected with the other member, and means for expanding and contracting said devices said means comprising pulleys mounted in both of said members, wires connecting said pulleys and means for manually operating some of said pulleys.

2. In a display-form, the combination of two members representing different parts of the human figure, and means for adjustably connecting said members, said means comprising a socket having spherical walls, hemi-spherical devices adapted to frictionally engage the walls of said socket, and connected with the other member, a shaft connecting said devices and adapted to expand and contract same, pulleys mounted on said shaft, wires arranged on said pulleys, and means for normally manipulating said wires.

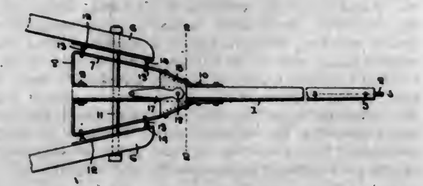
1,013,876. VALVELESS-TANK SIPHON. IRVING L. HAMMOND, Lewiston, Me. Filed Sept. 27, 1910. Serial No. 584,148.

In apparatus of the class described the combination with a tank having a valved inlet, of a siphon within the tank and having its long leg extending downwardly from the tank, a housing having an outlet opening into the short leg of the siphon, said housing constituting a portion of the short leg and having an arcuate and an inclined straight wall, said walls diverging downwardly from the outlet, the bottom of said housing being open to constitute an inlet, a charging gate fulcrumed within the housing at the lower end of the inclined wall, said arcuate wall being concentric with the axis of the gate, means for swinging the gate within the housing to charge the siphon and open the inlet of the housing, said gate being movable past the upper end of the arcuate wall, and a spring carried by the



gate for holding said gate spaced from the inclined wall of the housing when the gate is elevated, to form a water receiving pocket between said wall and the gate and a water passage between the gate and the upper end of the arcuate wall.

1,013,877. TONGUE CONSTRUCTION. BENNIE P. HANSON and NELS I. NELSON, Elmore, Minn. Filed Sept. 27, 1910. Serial No. 584,072.



The combination with the hounds and tongue of a vehicle of a pair of straps, one secured to each side of the tongue in advance of the hounds, each of said straps comprising a portion parallel with its respective hound provided with threaded openings through it, a transverse rear end bent inwardly at substantially a right angle to the tongue, and a forwardly bent end secured to the side of the rear end of the tongue, a transverse bolt passing through the hounds and tongue, a plate mounted on each end of said bolt and bearing against its respective hound, threaded studs projecting transversely inward from said plates and engaging in said threaded openings, and a double-tree support straddling the tongue comprising a horizontal body resting upon and extending across the tongue and vertical depending flanges at the outer sides of said body inclined with relation to the tongue lying against and bolted to the inner sides of the inclined straps adjacent to their connection with the hound.

1,013,878. SAFETY CRANKING DEVICE. ROLAND C. HILTON, Quincy, Mass., assignor to Hilton Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 10, 1910. Serial No. 537,130.

1. In a safety cranking device, the combination with a shaft, of a crank arm thereon for giving turning movement thereto, a locking member situated within the crank arm, a handle connected to said arm for turning movement relative thereto, a finger associated with the handle and provided with a cam surface at its end to engage the end of the locking member, turning movement of the handle operating to carry the finger into line with the locking member and thereby force the latter into locking engagement with the shaft.

2. In a safety cranking device, the combination with a shaft, of a crank arm thereon for giving turning movement

thereto, a locking member situated within the crank arm, a handle connected to said arm for turning movement relative thereto, a finger associated with the handle and provided with a cam surface at its end to engage the end of the locking member, turning movement of the handle operating to carry the finger into line with the locking member and thereby force the latter into locking engagement with the shaft, and a spring acting on said finger to throw it out of line with the arm when the handle is released.

3. In a safety cranking device, the combination with a shaft, of a crank arm loosely mounted thereon, a spindle extending from the end of the arm, a handle mounted on the spindle for turning movement, a locking member situated within the crank arm, and a finger loosely mounted on the spindle and frictionally connected with the handle whereby turning movement of the handle will bring the finger into engagement with the locking member thereby to lock the crank arm to the shaft.

4. In a safety cranking device, the combination with a shaft, of a crank arm loosely mounted thereon, a locking member situated within the crank arm, a spindle extending from the crank arm, a handle loosely mounted on the spindle, a sleeve also loosely mounted on the spindle and having frictional engagement with the handle, and a finger carried by the sleeve and adapted to engage the locking member and move it into locking position when the handle is turned.

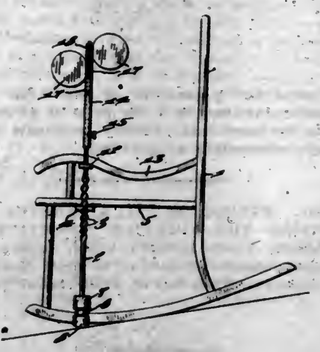
5. In a safety cranking device, the combination with a shaft, of a crank arm loosely mounted thereon, a locking member situated within the crank arm, a spindle extending from the crank arm, a handle loosely mounted on the spindle, a sleeve also loosely mounted on the spindle and having frictional engagement with the handle, a finger carried by the sleeve and adapted to engage the locking member and move it into locking position when the handle is turned, and means to lock positively said sleeve to the handle when the latter is turned backwardly.

[Claim 6 not printed in the Gazette.]

1,013,879. FAN ATTACHMENT FOR ROCKING-CHAIRS. MARTIN HOBIN, Philadelphia, Pa., assignor of one-half to William H. Hobin, Indianapolis, Ind. Filed Apr. 15, 1911. Serial No. 621,194.

1. An attachment of the character described, comprising a rod having a screw-threaded portion, a bearing cup receiving the lower end of the rod, said rod having a thrust bearing in said cup, a nut screwed onto said rod and against one end of the cup, confining the rod in the cup, said cup comprising a screw-threaded cylinder, and nuts screwed onto the ends of said cylinder, one of said nuts having an opening to receive the rod, and the other a thrust bearing to receive the end of the rod, a bar adapted to be secured to a chair and having an opening to receive the threaded portion of the rod, a tube adjustably secured on the upper end of said rod, and having longitudinal slots therein, fans, and springs secured to said fans and binding in said slots, substantially as described.

2. An attachment of the character described, comprising a rod having a screw-threaded portion, a bearing cup receiving the lower end of the rod, said rod having a thrust bearing in said cup, a nut screwed onto said rod and against one end of the cup, confining the rod in the cup, said cup comprising a screw-threaded cylinder, and nuts screwed onto the ends of said cylinder, one of said nuts having an opening to receive the rod, and the other a thrust bearing to receive the end of the rod, a bar adapted to be secured to a chair and having an opening to receive the threaded portion of the rod, a tube adjustably secured on the upper end of said rod, and having longitudinal slots therein, fans, and springs secured to said fans and binding in said slots, substantially as described.



3. An attachment of the character described, comprising a rod having a screw-threaded portion, a bearing cup receiving the lower end of the rod, said rod having a thrust bearing in said cup, a nut screwed onto said rod and against one end of the cup, confining the rod in the cup, a bar adapted to be attached to a chair and having an opening engaging the screw-threaded portion of the rod, a tube adjustably secured on the upper end of said rod and having longitudinal slots therein, fans, and springs secured to said fans and binding in said slots, said springs comprising two sheets of spring metal bent forming perforated ears secured to opposite sides of the fans, bent angularly to engage within the slots, and curved inwardly at their free ends, substantially as described.

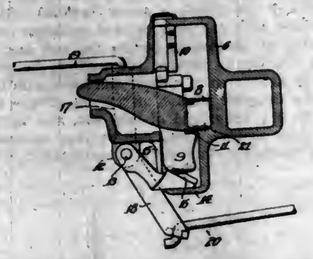
4. An attachment of the character described, comprising a rod having a screw-threaded portion, a bearing cup receiving the lower end of the rod, said rod having a thrust bearing in said cup, a nut screwed onto said rod and against one end of the cup, confining the rod in the cup, said cup comprising a screw-threaded cylinder, and nuts screwed onto the ends of said cylinder, one of said nuts having an opening to receive the rod, and the other a thrust bearing to receive the end of the rod, a bar adapted to be secured to a chair and having an opening to receive the threaded portion of the rod, a tube adjustably secured on the upper end of said rod, and having longitudinal slots therein, fans, and springs secured to said fans and binding in said slots, substantially as described.

1,013,880. CAR-COUPLING. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Jan. 20, 1910. Serial No. 540,733.

1. In a car coupler, the combination of a coupler head having a pivoted knuckle, a lock, and a lifter disposed internally of said head, a lifter actuating lever pivoted to said head, said lever having a weighted portion which is normally disposed within a recess in said head, and means for actuating said lever, substantially as described.

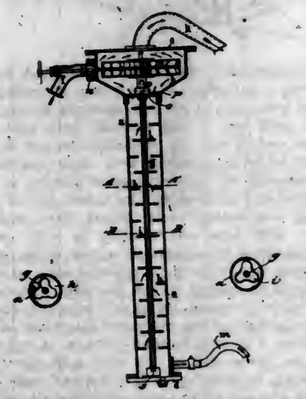
2. In a car coupler, the combination of a draw head having a depressed portion provided with an opening in the side thereof, a knuckle pivoted in said head, a lock

for said knuckle, a lifter for the lock, and means for operating the lifter pivoted to the side of the draw head and comprising a bearing portion projecting into the draw head through the opening in the side of the depressed por-



tion thereof and a plurality of lever arms extending in opposite directions from the point of pivotal attachment to the draw head, whereby to actuate said lifter and lock, substantially as described.

1,013,881. METHOD OF AND APPARATUS FOR VAPORIZING THE VOLATILE CONSTITUENTS OF LIQUIDS. CLAUS HINRICH KÖHN, Leipzig-Lindenau, Germany, assignor of one-half to Ernst Munster, Leipzig, Germany. Filed July 26, 1910. Serial No. 573,960.

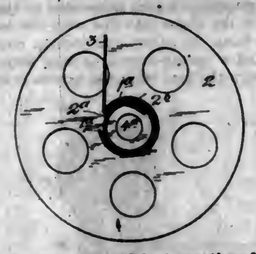


1. Method of vaporizing the volatile constituents of liquids consisting in heating the materials beyond their boiling point, utilizing the energy supplied in heat to separate the liquids into fine spray by causing them to drive a turbine wheel mounted in a casing at its upper end and subjecting the material flowing thereinto to centrifugal action by means of a member driven by the turbine as and for the purpose set forth.

2. Apparatus for vaporizing the volatile constituents of liquids comprising in combination with a casing, an elongated chamber depending therefrom, a nozzle valve mounted on said casing, a turbine wheel rotatably mounted in said casing, said turbine wheel arranged so as to be driven by the liquid itself impinging thereon, a perforated pipe positively actuated by said turbine wheel, and extending axially of said chamber, transverse stripe arranged on the walls of said chamber and transverse strips arranged on said pipe as and for the purpose set forth.

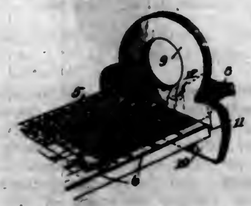
1,013,882. RIBBON-SPOOL. WILLIAM W. LASKER, Brooklyn, N. Y. Filed Aug. 3, 1910. Serial No. 575,294.

In a ribbon spool, a spool member comprising a section of a hub and a disk from the side of which the hub projects, said hub section having a slot extending from its outer end toward said disk and adapted to receive a typewriter ribbon, a second spool member comprising a section of a hub and a disk from the side of which the sec-



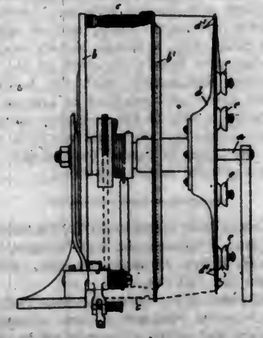
tion of the hub projects, said last mentioned hub section having a slot extending from its outer end toward said disk, the said hub sections being telescopically connected and in such relation as to hold a portion of said ribbon therebetween.

1,013,883. COMPUTING-MEASURE. DAVID H. LAYNE, Cove, Oreg. Filed Mar. 25, 1911. Serial No. 616,860.



A measuring stick having a tongue projecting from one end thereof and of less width than the stick, whereby a shoulder is formed on the stick, and a guide ring having an enlargement provided with a slot to receive the tongue, said ring abutting against the shoulder.

1,013,884. WEFT-END SUPPORT IN NORTHROP LOOMS. ALFRED MARCHAL, Crouhans, France. Filed Apr. 10, 1911. Serial No. 619,939.

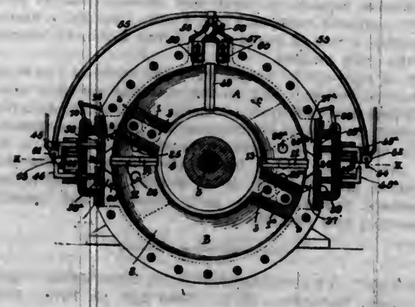


1. In mechanism of the character specified, the combination with a rotary magazine for bobbins, of a rotary weft end support provided with peripheral guide grooves for the threads and having radial slideways therein curved at their inner ends, a weft end holder adapted to hold the ends of a plurality of threads and slidable by its own weight in each of the said slideways, and means arranged on the support adjacent the guide grooves for retarding the unwinding of the threads from the bobbins.

2. In mechanism of the character specified, the combination with a rotary magazine adapted to carry a supply of filled bobbins, of a rotary weft end support provided with peripheral guide grooves for the threads and having radial slideways therein curved at their inner ends in a direction opposite to that in which the magazine is adapted to rotate, a weft end holder adapted to hold the ends of a plurality of therads and slidable by its own weight in each of the said slideways, and elastic means arranged on the support adjacent the bottoms of the guide grooves for retarding the unwinding of the threads from the bobbins.

3. In mechanism of the character specified, the combination with a rotary magazine adapted to carry a supply of filled bobbins, of a rotary weft end support provided with peripheral guide grooves for the threads and having radial slideways therein curved at their inner ends in a direction opposite to that in which the magazine is adapted to rotate, a weft end holder adapted to hold the ends of a plurality of threads and slidable by its own weight in each of the said slideways, and a ring of plush arranged on the support adjacent the bottoms of the guide grooves for frictionally retarding the unwinding of threads from the bobbins.

1,013,885. FLUID-PRESSURE MOTOR. JOSEPH McCONNELL, Connellsville, Pa. Filed Jan. 10, 1910. Serial No. 537,295.



1. In a rotary motor, the combination of an annular chamber, a head movable along said chamber and connected to a concentric rotating shaft, an abutment movable to and from a position in which it forms a transverse wall across said annular chamber, a compression chamber into which gas is compressed by the movement of said head toward said abutment, a port leading from said compression chamber to said annular chamber, a valve controlling said port, and an operating arm driven by the rotation of said shaft and in its movement shifting said valve to alternate open and closed positions, substantially as described.

2. In a rotary motor, the combination of an annular chamber, a head movable along said chamber and connected to a concentric rotary shaft, an abutment movable to and from a position in which it forms a transverse wall across said annular chamber, and a compression chamber adjacent to said abutment and disposed partly on each side thereof, said compression chamber provided with direct communication to each side of said abutment through the walls of the said annular chamber, said head in its rotation toward said compression chamber adapted to compress to an operative pressure ignitable gas in said compression chamber.

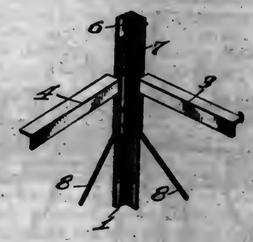
3. In a rotary motor, the combination of an annular chamber, a head movable along said chamber and connected to a concentric rotary shaft, a pair of abutments movable by the rotation of said shaft to open and close across said annular chamber at diametrically opposite points, a third abutment movable manually to close across said annular chamber at a point intermediate the pair of abutments first named, and a port for propelling fluid opening into said annular chamber at one side of said manually movable abutment, substantially as described.

4. In a rotary motor the combination of an annular chamber, a head movable along said chamber and connected to a concentric rotary shaft, an abutment movable to and from position in which it forms a transverse wall across said annular chamber, a compression chamber into which gas is compressed by the movement of said head toward said abutment, and means for directing the explosive gas to either side of said head, substantially as described.

5. In a rotary motor the combination of an annular chamber, a head movable along said chamber and connected to a concentric rotary shaft, an abutment movable to and from position in which it forms a transverse wall across said annular chamber, a compression chamber into which gas is compressed by the movement of said head toward said abutment, said compression chamber being placed adjacent to said abutment and provided with valve-controlled ports communicating with said annular chamber on each side of said abutment and means for reversing the action of the valves within said ports, substantially as described.

[Claim 6 not printed in the Gazette.]

1,013,886. HOISTING-TOWER. FRANK R. MCCUNE, St. Louis, Mo., assignor, by direct and meane assignments, to Acme Hoisting Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 20, 1909. Serial No. 534,125.



In a metallic tower, the combination with angular metallic uprights and angular metallic plates arranged in pairs for the connection of the ends of the uprights, of angular metallic ledgers having reduced ends for insertion between said pairs of plates and the ends of the uprights, and crossed adjustable stay rods connecting diagonally opposite pairs of said plates serving the double function of trussing the entire structure and holding said ledgers in place between the ends of the uprights.

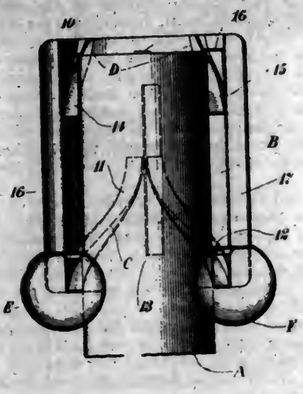
1,013,887. DEVICE FOR CREATING A DRAFT THROUGH SMOKE-STACKS. JAMES DONNELLY MCKAY, St. John, New Brunswick, Canada, assignor of one-half to Jarvis Carry Purdy, St. John, Canada. Filed Mar. 23, 1911. Serial No. 616,549.

1. The combination with a smoke pipe, of a partially cylindrical shell surrounding the same, supporting members on the shell adapted to extend over the top of the smoke pipe by which the shell is supported on the exterior below the top of the pipe and deflecting wings within the shell spacing the same from the pipe and adapted to deflect the air upwardly.

2. The combination with a smoke pipe of a partially cylindrical shell surrounding the same and spaced a slight distance therefrom, a pair of spiral wings leading from the bottom of the shell upwardly and meeting at the center and a vertically extending wing at the juncture of said aforesaid wings.

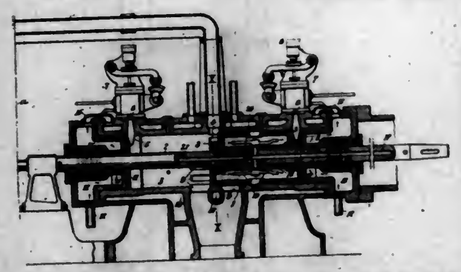
3. The combination with a smoke pipe of a partially

cylindrical shell surrounding the same, a set of inclined wings leading from the bottom of the shell upwardly and



a second set of spirally inclined wings leading from a point a short distance below the top of the shell.

1,013,888. GAS-ENGINE. GEORGE F. MURPHY, Providence, R. I., assignor to Fuel Oil Engine Company, a Corporation of Rhode Island. Filed May 5, 1910. Serial No. 559,497.



In combination, an internal combustion engine comprising a double acting cylinder having an air inlet at the middle thereof, an exhaust port, an offset cavity in each end of said cylinder and a fuel inlet in each of said cavities, a piston having a cavity on each face both of which are adapted to coöperate with said air inlet to deflect the air entering from the same and each of which is adapted to co-act with the corresponding offset cavity in the cylinder to form therewith a compression chamber, a double acting air pump having a cylinder capacity per stroke greater than that of the engine cylinder, said pump being directly connected to said engine piston, the pump and engine piston being reciprocable in unison, and air conduits between the respective sides of said pump and the air inlet of said engine cylinder.

1,013,889. CIGAR-TIP CUTTER. ISIDOR NEWMAN, New York, N. Y. Filed Mar. 10, 1911. Serial No. 613,519.

1. A cigar-tip cutter comprising a pair of cutters pivotally connected together, and having outwardly extending arms, a pair of members pivotally connected at adjacent ends and respectively pivotally connected at their opposite ends with said arms, and a spring coiled about the pivot of and normally separating said members to normally hold the cutters in operating position.

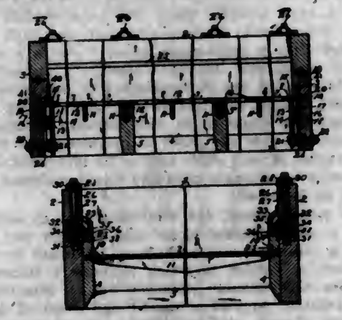
2. A cigar-tip cutter provided with a pair of cutters pivotally connected together and having normally alined openings, arms extending from said cutters in diverging directions from the pivot, and members pivotally connected with said arms and pivotally connected together, and a spring coiled about the pivot of said members to normally spread them apart.

3. A cigar-tip cutter provided with a pair of cutters pivotally connected together and having normally alined openings, arms extending from said cutters in diverging directions from the pivot, members pivotally connected with said arms and pivotally connected together, and a spring coiled about the pivot of said members normally holding said arms spread apart and the openings of the cutters alined.

4. A cigar-tip cutter comprising a pair of cutters pivotally connected together and having openings normally alined and provided with arms extending in diverging directions beyond the pivot, and channel-members pivotally connected with said arms and pivotally connected together, a web of one member fitting within the channel of the other member.

5. A cigar-cutter comprising a pair of cutters pivotally connected together and having openings normally alined and provided with arms extending in diverging directions beyond the pivot, channel-members pivotally connected with said arms and pivotally connected together, a web of one member fitting within the channel of the other member, and a spring coiled around the pivot of said members, located within their channels, and normally spreading said members apart.

1,013,890. PULP-SCREEN-PLATE FASTENER. JOHN OLSEN, Watertown, N. Y. Filed Apr. 10, 1911. Serial No. 619,951.



1. A screen-plate fastener, comprising a pair of side-clamps disposed longitudinally in a screen vat, each of said clamps having a catch-rod embedded in one side, and having a plurality of recesses for affording access to said catch-rods, a series of screen-plates disposed in the vat beneath said side-clamps, a series of screws pivoted in the side walls of the vat opposite the recesses in said side-clamps, and a nut carried by each screw adapted to engage the said catch-rods, for compressing said side-clamps tightly upon the screen-plates and also against the side walls of the vat.

2. In a screen-plate fastener, the combination with a series of screen-plates and a screen vat, of a pair of rocking clamping members pivotally disposed in the vat below the level of the tops of the screen-plates, grooves formed in said clamping members for interlocking with the screen-plates, and a series of bolts piercing the clamping members and also the end walls of the vat, for rocking said clamping members in the direction for compressing the screen-plates tightly together laterally.

3. The combination with a screen vat and a series of screen-plates disposed horizontally in the vat, of a screen-plate fastener, comprising a pair of side-clamps disposed longitudinally in the vat, adapted to press and hold the plates tightly upon the side parts of the vat, a series of screws carried by the side walls of the vat, rods carried by the side-clamps and a series of nuts carried by said screws, adapted to engage said rods for locking and holding the side-clamps in place.

4. The combination with a screen vat and a series of screen-plates, of a pair of rocking clamping members pivotally disposed below the level of the screen-plates, grooves formed in said clamping members for interlocking with the screen-plates at each end of the vat, and a series of bolts carried by said clamping members adapted for rocking said clamping members toward the screen-plates for compressing and holding said plates in a continuous level position, and for rendering the joints between said plates and said clamping members water-tight.

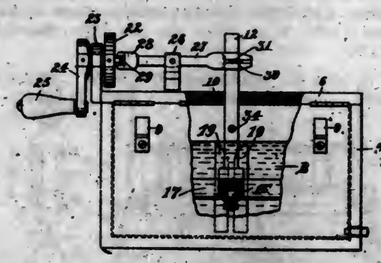
5. The combination with a screen vat and a series of screen-plates adjustably arranged within the vat, of a pair of rocking clamping members pivoted in said vat below the level of the screen-plates, grooves formed in said clamping members for interlocking with the screen-plates at the ends of the vat, a series of bolts carried by said clamping members adapted for rocking said clamping members toward the screen-plates for compressing and holding said plates in a continuous level position, and for rendering the joints between the plates and said clamping members water-tight, and a series of springs for rocking said clamping members away from said plates for permitting the removal of the plates.

[Claims 6 to 20 not printed in the Gazette.]

1,013,891. SEAL-LOCK. HERBERT JAMES PAGE, Hamilton, Ontario, Canada, assignor of one-fourth to Joseph Francis Haits and one-fourth to Aaron Hyman, Hamilton, Canada. Filed Apr. 10, 1911. Serial No. 620,148.

A seal lock comprising, in combination, a body portion embodying a head and a rearward extension having a longitudinal recess formed therein opening into a facial recess of the head, said extension also having a vertical external recess adjacent its rear end, a shackle member, one extremity of which enters the external vertical recess when the shackle is in its closed position and the other member of which is vertically slidable through the head at the juncture of the longitudinal and facial recesses, a spring actuated bolt mounted in the longitudinal recess and adapted to engage in a cut-out portion of the shackle member, there being a key opening formed transversely through said shackle member which lies in alinement with said bolt when the shackle is in closed position, and a frangible opaque sealing member seated in a recessed portion of the shackle member, and bodily slidable into position with said shackle member, said frangible member concealing and covering said key opening and being freely accessible through the facial recess of the head.

1,013,892. ETCHING-MACHINE. ROBERT R. PAGE, New York, N. Y., and FRANK J. BLACK, Philadelphia, Pa. Filed Dec. 28, 1910. Serial No. 599,747.



1. An etching machine as described, comprised of a tank or receptacle having a cover hinged thereto, a plunger having plate gripping means and guiding members oppositely arranged thereon, said receptacle having a pair of oppositely located vertically arranged guides thereon, said guides adapted to receive said plunger guiding means, said cover being so mounted as to permit inversion of the plate for inspection and washing exteriorly of the tank without removing the plate from the plate gripping means.

2. In an etching machine, comprised of a receptacle, a hinged cover thereon, a vertically operated plunger provided with an adjustable plate gripping means, said plunger being removably mounted upon said cover, said plate gripping means comprised of a groove in said plunger, adjustable plate holding means fitting in said groove and slidable therein whereby various sized plates may be adjustably held, guiding members oppositely arranged on said plunger, and side guides in said receptacle for engaging said plunger guiding members.

3. In an etching machine, the combination of a receptacle, a lid hinged at the top of the receptacle, a plunger reciprocating in an opening in the lid, guiding members on said plunger, an adjustable plate carrier on the plunger arranged to move a plate up and down in the bath in the receptacle when the plunger is reciprocated, a pair of side guides interiorly arranged in said receptacle to guide said plunger, and operating means carried by the lid outside of the receptacle for reciprocating the plunger to move the plate up and down in the bath in the receptacle.

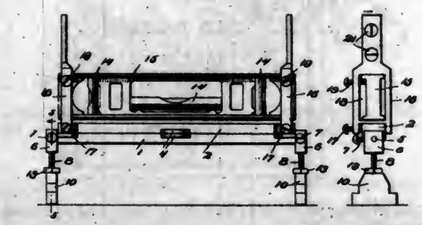
4. In an etching machine, the combination of a receptacle, a lid hinged at the top of the receptacle, a plunger reciprocating in an opening in the lid, guiding members on said plunger, an adjustable plate carrier on the plunger arranged to move a plate up and down in the bath in the receptacle when the plunger is reciprocated, said guiding means on said plunger adapted to fit into a pair of oppositely located vertically arranged guideways, and operating means carried by the lid outside of the receptacle for causing said reciprocation of the plunger, the said plunger being adjustably connected with the operating means to permit its being shifted upward near the lower face of the lid, whereby the lid can be swung entirely open and the plate supported on top of the said lid when the same is in its inverted position.

5. In an etching machine, the combination of a receptacle, a lid hinged at the top of the receptacle, a plunger reciprocating in an opening in the lid, guiding members on said plunger, an adjustable plate carrier on the plunger ar-

ranged to carry a plate up and down in the bath in the receptacle when the plunger is reciprocated, vertical guide-ways in said receptacle, said guide-ways adapted to slidably receive the said plunger guiding members, operating means carried by the lid outside of the receptacle for causing said reciprocation of the plunger, the same being adjustably connected with the operating means to permit its being shifted near the lower face of the lid, whereby the lid can be swung entirely open and the plate supported on top of the lid when the same is in the inverted position, and lid supporting means attached to the side of the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

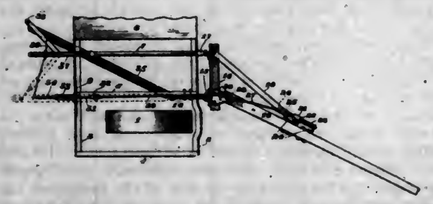
1,013,893. LEVELING INSTRUMENT. JOHN K. PARK, Atlantic City, N. J. Filed Apr. 10, 1911. Serial No. 620,128.



1. An instrument of the character described, comprising base blocks, screws projecting through the base blocks, nuts on said screws for adjusting said screws vertically, bearing blocks secured on the upper ends of said screws, a supporting bar having rotary mounting in said blocks, means for locking the supporting bar against turning in the blocks, a pivot bar pivotally secured to said supporting bar, a level on said pivot bar, and sight posts on said pivot bar, substantially as described.

2. An instrument of the character described, comprising base blocks, screws projecting through the base blocks, nuts on said screws for adjusting said screws vertically, bearing blocks secured on the upper ends of said screws, a supporting bar, trunnions on the ends of said supporting bar mounted in the bearing blocks, set screws engaging said trunnions and locking said bar against rotary movement, a pivot bar pivotally secured centrally to said supporting bar, a spirit level on said pivoted bar, and sight posts on said pivoted bar, substantially as described.

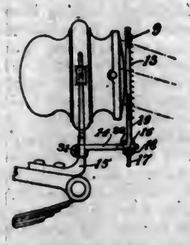
1,013,894. TANDEM DRAFT CONNECTION FOR HARVESTERS. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Mar. 2, 1911. Serial No. 611,824.



1. A tandem draft connection for harvesters including, in combination, a draft tongue pivotally connected with the machine in a manner to swing laterally relative to the line of draft of the machine, means for adjusting the front end of said draft tongue laterally, a reach bar having its forward end pivotally connected with the front side of the machine in a manner permitting it to swing freely at its rear end in a lateral direction relative to the line of draft, a bracket pivotally mounted upon the frame of the machine above the rear end of said reach bar in a manner to swing laterally at its rear end, and a link connection between the rear end of said bracket and the rear end of said reach bar whereby the latter is supported.

2.–A tandem draft connection for harvesters including, in combination, a draft tongue pivotally connected with the machine in a manner to swing laterally relative to the line of draft of said machine, means for adjusting the said draft tongue laterally, a reach bar having its forward end pivotally connected with front side of the machine in a manner permitting it to swing freely at its rear end in a lateral direction relative to the line of draft of the machine, a bracket pivotally mounted upon the frame of the harvester and extending in rear thereof above the rear end of said reach bar, a link connection between the rear end of said bracket and the rear end of said reach bar, and a flexible connection between the rear end of said reach bar and a fixed part of the machine adapted to limit a lateral swinging movement of said bar in opposite directions.

1,013,895. MASK FOR AUTOMOBILE-LAMPS. HAROLD D. PENNEY, Pelham, and CHESTER A. WEED, New York, N. Y. Filed July 9, 1909. Serial No. 506,788.



1. The combination with a lamp of the class described, of a mask supported substantially in a perpendicular position relatively to and exteriorly and in front of and spaced from such lamp and constructed to permit the passage of the light therethrough and having normally stationary, downwardly projecting means for preventing the escape of the upwardly projecting rays of light and thereby the glare of the lamp, and means for supporting the mask in such position and unconnected with the front of the lamp.

2. The combination with a lamp of the class described, of a shiftable mask shiftably supported substantially in a perpendicular position relatively to and exteriorly and in front of and spaced from such lamp and constructed to permit the passage of the light therethrough and having normally stationary, downwardly projecting means for preventing the escape of the upwardly projecting rays of light and thereby the glare of the lamp, and means for supporting the mask in any of its shifted positions.

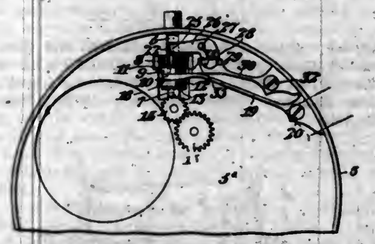
3. The combination with a lamp of the class described, of a shiftable mask shiftably supported exteriorly and in front of and spaced from such lamp and constructed to permit the passage of the light therethrough and having downwardly projecting means for preventing the escape of the upwardly projecting rays of light and thereby the glare of the lamp, means for supporting the mask in any of its shifted positions, and means for shifting said mask sidewise from the front of the lamp.

4. The combination with a lamp of the class described of a shiftable mask shiftably supported exteriorly and in front of and spaced from such lamp and having openings and means thereover for preventing the escape of the upward rays of light and thereby the glare of the lamp, means for supporting the mask in any of its shifted positions, means for shifting said mask away from the front of the lamp, and means for returning said mask to its initial position.

5. The combination with a lamp of the class described, of a mask supported exteriorly and in front of and independently of the lamp and comprising a disk having a plurality of normally downwardly inclined louvers for preventing the glare of the lamp, and means for supporting the mask in such position.

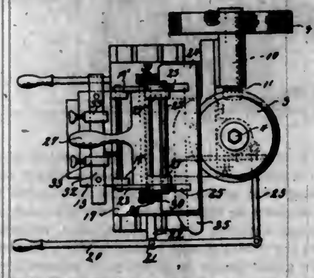
[Claims 6 to 33 not printed in the Gazette.]

1,013,896. WATCH. EARLE SLOAN PERRY, Waltham, Mass., assignor to Keystone Watch Case Company, a Corporation of Pennsylvania. Filed Aug. 27, 1910. Serial No. 579,210.



In a winding and setting mechanism, the combination with a rotatable winding stem capable of longitudinal movement, of a clutch mounted on said stem and rotating therewith, a pendant lever engaging at one end with said stem and provided at the other end with a substantially semi-circular notched cam, a spring-detent, the free end of which is provided with a recess conforming in outline to that of said cam, and nicely containing the latter when in the winding adjustment, and a spring, the free end of which engages said clutch for shifting the latter in accordance with the longitudinal movement of the winding stem, the notch in said cam engaging with the wall of the recess formed in said spring-detent when the parts are in the setting position, substantially as described.

1,013,897. SPLITTING-MACHINE. MATTHEW A. REILLY and THOMAS J. ALDRIDGE, Rochester, N. Y. Filed Jan. 18, 1911. Serial No. 603,361.

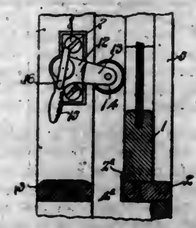


1. In a splitting machine, the combination of a supporting frame, a cutter mounted thereon, a slide movable on the frame toward and from said cutter, a shaft mounted on said frame beneath said slide, an arm projecting upwardly from said shaft, a link connecting said arm with the slide, a lever arranged adjacent to one side of the machine and connected with said shaft to rock the arm thereof and effect movement of the slide toward and from the cutter, a second slide supported on the first mentioned slide and movable at a right angle to the movement of the latter for carrying the work past the cutter, work clamping mechanism mounted on the second mentioned slide, stop means carried by the respective slides to limit the movement of the second mentioned slide upon the first mentioned slide, an arm projecting from the second mentioned slide at the side of the machine opposite the aforesaid lever, an auxiliary lever pivoted between its ends to said arm, and a link connection between one end of the auxiliary lever and the frame whereby on movement of the auxiliary lever, the second mentioned slide will be shifted with respect to that slide first mentioned.

2. In a machine of the class described, work clamping means comprising a relatively stationary member and a movable clamp member coacting therewith, a supporting frame to which the movable clamp member is pivotally connected, a handle pivotally connected with the movable clamp member for operation thereof, and toggle links connecting said handle with the frame.

3. In a machine of the class described, the combination of a relatively stationary clamping member, a movable clamping member coacting therewith, a support, an adjustable pivot connecting the movable clamp member with said support, a handle pivotally connected with the movable clamp member intermediate its ends, and spaced toggle links connecting the movable clamp member with the support.

1,013,898. WINDOW-FASTENER. EDWARD H. REMDE, Cleveland, Ohio. Filed Feb. 25, 1911. Serial No. 610,897.



1. A window fastener comprising, in combination, a member adapted to be attached to the casing and having a laterally extending internally threaded boss, a screw secured therein and having a shoulder spaced from the end thereof, a lever pivoted upon said screw between said shoulder and said boss, and having its forward end adapted to engage the window sash and having its other end bent into an angle, said lever and said boss being formed with interfitting radial serrations or teeth.

2. A window fastener comprising, in combination, a base member adapted to be attached to a window casing and having a laterally extending internally threaded boss, a screw threaded into said boss and having a shoulder spaced from the boss, a lever pivotally mounted upon said screw between said shoulder and said boss and having at one end thereof means adapted to engage the window sash and having an operating handle projecting beyond said screw.

3. A window fastener comprising, in combination, a base adapted to be attached to a window casing and having a supporting member, a lever pivoted upon said member and having its forward end provided with a compressible window-engaging device, said lever having an operating arm extending beyond said member, the pivotal portion of the lever and the adjacent portion of the base being provided with interfitting serrations or teeth, and means adapted to engage the pivotal portion of the lever to force the lever laterally along its supporting member and bring the teeth or serrations of the lever into engagement with those of the base.

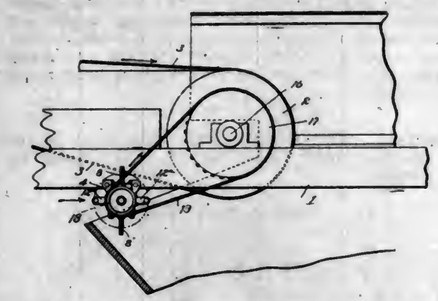
4. A window fastener, comprising, in combination, a base member adapted to be attached to the casing adjacent to the sash and having a lateral projection, a pivoting member secured to said projection, an arm journaled on said pivoting member and having its forward end provided with a sash engaging device, a handle extending beyond said projection and operatively connected with said arm, and means carried by the pivoting member whereby the said arm may be clamped against said projection to hold said arm in operative or inoperative position.

5. A window fastener, comprising, in combination, a base member adapted to be attached to the casing and having a raised supporting portion, an arm pivoted to

said supporting portion and having a sash-engaging device at one end, a handle for swinging said arm about its pivot, said handle being pivoted about the same axis as said arm and said arm being formed for coöperation with parts of said base member whereby it may be maintained in operative or inoperative position.

[Claim 6 not printed in the Gazette.]

1,013,899. BELT-CLEANER. JOHN J. RIDGWAY, New York, N. Y. Filed Apr. 10, 1911. Serial No. 620,077.



1. A belt cleaner comprising a shaft journaled adjacent to the belt and running transversely thereto, a hub fixed on said shaft having a suitable number of beaters pivotally attached to it and each extending across the whole width of the belt and adapted to be thrown out from said hub by centrifugal force when the shaft rotates to strike the belt, each of said beaters having means at its outer end for effecting rolling engagement with the belt, and means for rotating said shaft.

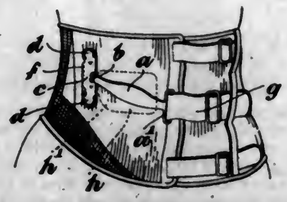
2. A belt cleaner comprising a shaft journaled adjacent to the belt and running transversely thereto, a hub consisting of two disks fixed on said shaft apart from each other a distance approximately equal to the belt width, said disks conjointly pivotally holding a suitable number of beaters which are thrown out from said disks by centrifugal force when the shaft rotates to strike the belt, and means for rotating said shaft.

3. A belt cleaner comprising a shaft journaled adjacent to the belt and running transversely thereto, a hub consisting of two disks fixed on said shaft apart from each other a distance approximately equal to the belt width, said disks conjointly pivotally holding a suitable number of beaters which are thrown out from said disks by centrifugal force when the shaft rotates to strike the belt, means for moving and securing said shaft any desirable distance away from said belt to increase or decrease the force of the blow of said beater against said belt and means for rotating said shaft.

4. A belt cleaner comprising a shaft journaled adjacent to the belt and running transversely thereto, a hub consisting of two disks fixed on said shaft apart from each other a distance approximately equal to the belt width, said disks having conjointly pivoted to them a suitable number of beaters, each beater comprising two double links, one double link pivotally attached to each of said disks, with its pivotal axis in line with that of the link on the other disk, a pivot rod connecting the outer ends of said two double links and having a tubular roller disposed between said links, of a length approximately equal to the width of the belt, said links being thrown out from said disks by centrifugal force when said shaft rotates whereby said rollers strike said belt a glancing blow, and means for rotating said shaft.

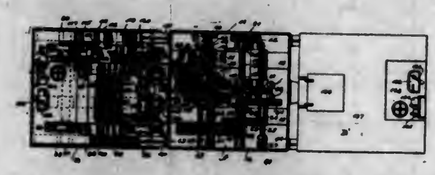
5. A belt cleaner comprising a shaft journaled adjacent to the belt and running transversely thereto, a hub consisting of two disks fixed on said shaft apart from each other a distance approximately equal to the belt width, said disks having conjointly pivoted to them a suitable number of beaters, each beater comprising two double links, one double link pivotally attached to each of said disks, with its pivotal axis in line with that of the link on the other disk, a pivot rod connecting the outer ends of said two double links and having a tubular roller disposed between said links, said links being thrown out from said disks by centrifugal force when said shaft rotates whereby said rollers strike said belt a glancing blow, means for moving and securing said shaft any desirable distance away from said belt to increase or decrease the force of the blow of said rollers against said belt and means for rotating said shaft against the direction of travel of said belt.

1,013,900. SURGICAL BELT OR DEVICE FOR THE TREATMENT OF MOVABLE KIDNEYS AND OTHER LIKE PURPOSES. EDWARD WILLIAM SALT, Birmingham, England. Filed May 20, 1911. Serial No. 628,499.



A surgical belt or device including a cushion, a spring adapted to operate upon said cushion, and a plate for securing said springs to the belt, said plate being secured to the belt at its upper and lower extremities and being in the form of a spring curved inwardly at its central part when the spring is released.

1,013,901. TOWING SYSTEM FOR CANALS. EDWARD SCHILDHAUER, Culebra, Canal Zone. Filed Nov. 28, 1910. Serial No. 594,500.



1. In a traveling winch, the combination of a housing, a winch within said housing, a motor within said housing for driving said winch, a guide frame pivoted to the roof of said housing to rotate about a vertical axis and having an opening through which cable may extend from the winch to the exterior, and a guide sheave journaled in said rotatable guide frame in position to accurately guide the cable to and from the winch during any position of said guide frame.

2. In a traveling winch, the combination of a supporting frame, a winch supported on said frame, a motor mounted on said frame for driving said winch, a guide frame pivoted over said winch to rotate about a vertical axis and having an opening through which cable may extend from said winch to the exterior to be connected with a vessel to be towed, and a guide sheave journaled to said guide frame with its horizontal inner section coincident with the axis of the opening through said guide frame whereby the section of cable between said winch and sheave will maintain a substantially permanent alinement and direction with reference to the winch.

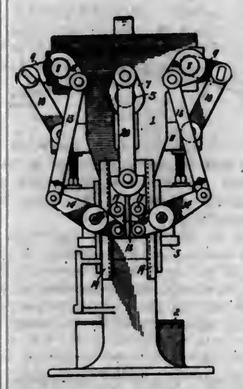
3. In a traveling winch, the combination of a supporting frame, means for propelling said supporting frame, a winch mounted on said supporting frame, means for guiding cable from said winch to the exterior for connection with a vessel to be towed, a main driving motor for said winch, a transmission train for connecting said motor with said winch to cause slow and powerful operation thereof when the cable is connected with the vessel to be towed, and an auxiliary motor adapted for connection with said winch to cause increased speed thereof for hauling in the cable after disconnection thereof from the vessel.

4. In a traveling winch, the combination of a supporting frame, means for propelling said supporting frame, a winch mounted on said supporting frame, means for guiding cable from said winch to the exterior for connection with a vessel to be towed, a main driving motor for said winch, a transmission train for connecting said motor with said winch to cause slow and powerful operation thereof when the cable is connected with the vessel to be towed, an auxiliary motor adapted for connection with said winch to cause increased speed thereof for hauling in the cable after disconnection thereof from the vessel, and means for automatically disconnecting the main motor from driving relation with said winch when said auxiliary motor is connected in driving relation with the winch.

5. In a traveling winch, the combination of a supporting frame, means for propelling said frame, a winch mounted on said frame, means for guiding cable to and from said winch, a main electric driving motor on said frame adapted for driving said winch slowly and powerfully, an auxiliary electric driving motor adapted for driving said winch at increased speed, and coupling mechanism adapted for automatically effecting disconnection of the main driving motor from the winch when driving current is supplied to the auxiliary motor.

[Claims 6 to 15 not printed in the Gazette.]

1,013,902. DRAWING-PRESS. ADOLPH H. SEIDEL, Toledo, Ohio, assignor to The Toledo Machine & Tool Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 20, 1911. Serial No. 655,814.



1. In a drawing-press, a blank-holder, a crank, a reciprocal member movable by said crank, a substantially straight lever having link connection with said member, a second lever having one arm in link connection with the first lever and its other arm in link connection with the blank-holder.

2. In a drawing-press, a blank-holder, a crank, a reciprocal member movable by said crank, a substantially straight lever mounted at one side of the path of movement of said member, a lever having one arm in link connection with an arm of the first lever and its other arm in link connection with the blank-holder, and a link connecting said member and first lever and standing outward from its point of connection with the member when the first lever and the other link attached thereto are substantially in longitudinal alinement.

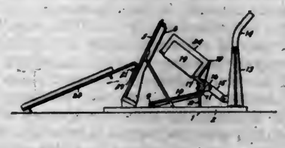
3. In a drawing-press, a blank-holder, a crank, a reciprocal member movable by said crank, a substantially straight lever mounted at one side of the path of movement of said member and having one arm longer than the other, a lever having one arm in link connection with the longer arm of the first lever and its other arm in link connection with the blank-holder, and a link connecting the shorter arm of the first lever to said member and standing outward from its point of connection with the member when the first lever and the other link attached thereto are substantially in longitudinal alinement.

4. In a drawing-press, the combination of a blank-holder, a pair of oppositely disposed bell-crank levers, a second pair of oppositely disposed substantially straight levers, means connecting one arm of each of one pair of levers with an arm of respective levers of the other pair, means connecting each bell-crank lever with the blank-holder, a reciprocal member, and means connecting said member to an arm of each of the straight levers to rock the same when the member is moved.

5. In a drawing-press, the combination of a blank-holder, a reciprocal member, means to reciprocate said member, a pair of oppositely disposed levers, a pair of oppositely disposed substantially straight levers, links connecting said members with the straight levers, means connecting one arm of each lever of one pair with an arm of each lever of the other pair, and means connecting the angled levers with the blank-holder.

[Claim 6 not printed in the Gazette.]

1,013,903. CUTTING-MACHINE. TRACY N. SHAW, Rockford, Ill. Filed Nov. 8, 1910. Serial No. 591,317.



1. In apparatus of the character set forth, the combination with a base and a plurality of spaced stationary cutters mounted thereon, of a movable material carrier pivoted to the base and comprising a plurality of spaced supporting sections that swing back and forth between the spaced cutters, and means for thus swinging said carrier.

2. In apparatus of the character set forth, the combination with a base, of an upstanding open frame mounted thereon and disposed at an inclination, stationary cutting wires mounted on the frames and spaced apart, a pivoted material carrier mounted on the base and having spaced plates that pass in an edgewise direction between the wires, and means mounted on the base and connected to the carrier for thus moving the same.

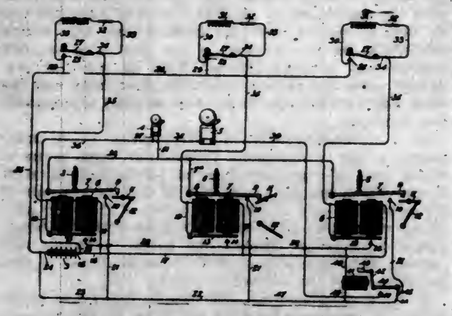
3. In apparatus of the character set forth, the combination with spaced cutters, of a movable carrier comprising spaced sections movable between the cutters, a pivoted operating device for the carrier, and a link connection between the operating device and the carrier.

4. In apparatus of the character set forth, the combination with a base, of stationary upstanding spaced cutters mounted thereon, an article carrier pivoted to the base including spaced plates that are movable between the cutters, a lever fulcrumed on the base, and a link connection between the lever and the carrier.

5. In apparatus of the character described, the combination with spaced cutters, of a platform on one side of the same that inclines downwardly away from said cutters, and an article carrier normally located on the opposite side of the cutters and including spaced sections that are movable between the cutters and into coacting relation with the platform.

[Claims 6 and 7 not printed in the Gazette.]

1,013,904. ELECTRIC INDICATOR SYSTEM. STUART RUTHERFORD STONE, New York, N. Y. Filed May 3, 1909, Serial No. 493,522. Renewed May 2, 1911. Serial No. 624,670.



1. An electric indicator system, comprising a source of electricity, an alarm circuit connected therewith and normally closed, said circuit including a magnetic member which is normally energized by current from said battery, said circuit further including a high resistance and also a member to be destroyed by fire or other disturbing cause, so as to open said circuit when said member is thus destroyed, means controllable by a person located at a distance from said magnetic member for the purpose of cutting out said high resistance and said member, thereby increasing the current flowing through said magnetic member, an armature associated with said magnetic member and adapted to be moved thereby when the current through said magnetic member is thus increased, and mechanism controllable by movements of said armature for the purpose of attracting the attention of an operator.

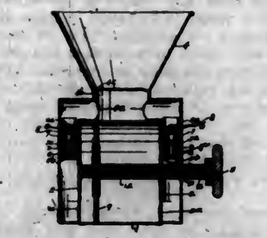
2. An electric indicator system, comprising a source of electricity, a circuit connected therewith and including a magnetic member, said circuit also including means controllable by a disturbing cause for opening said circuit, a high resistance, and mechanism controllable by an operator for cutting out said means and said high resistance, so as to form a short circuit through said magnetic member, and mechanism controllable by said magnet for sounding an alarm.

3. The combination of an electrically-operated member for giving an alarm, a plurality of circuits connected with said member for the purpose of enabling any one of a number of distant operators to control said alarm, and a second alarm connected with all of said first-mentioned circuits and controllable by any one of said first-mentioned circuits, independently of whether the circuit for energizing said alarm be in use or not.

4. An electric indicator system, comprising an electrically-operated fire alarm, an electrically-operated call bell connected therewith, and a plurality of separate circuits each connected with said call bell and said fire alarm, each of said last-mentioned circuits containing a member to be acted upon automatically by fire for the purpose of causing said fire alarm to be energized, each of said circuits further including means controllable by an operator for energizing said call bell independently of said fire alarm.

5. In an electric indicator system, the combination of a magnetic member, a plurality of armatures associated therewith and controllable thereby, one of said armatures being more sensitive than another in relation to the action of said magnetic member upon it, a circuit connected with said magnetic member and normally closed, said circuit including a high resistance for the purpose of cutting down the current through said magnetic member, thus affecting the more sensitive armature only and holding the same in a predetermined position, means included in said circuit and controllable by a disturbing cause for opening said circuit, thereby causing a movement of said more sensitive armature, means controllable at will for cutting out said high resistance in order to increase the current through said magnetic member, thereby causing the less sensitive armature to be moved, and mechanisms controllable by movements of said armatures respectively for actuating different alarms or indicating devices.

1,013,905. SIGNAL-HORN. IRA E. STUMP, Cleveland, Ohio, assignor of one-half to Hugh Pease, Lakewood, Ohio. Filed Jan. 17, 1911. Serial No. 603,074.



1. In a signal horn, a tubular holder provided with a cross member and a slot, a U-shaped sounding element looped across said cross member and having its tongues disposed within said slot, and a movable sleeve having projections interposed between said tongues.

2. In a signal horn, a tubular holder provided with a slot, a cross member carried by said holder, a sounding element carried by said cross member and having oppositely disposed reeds within the sides of said slot, and a sleeve movable on said holder and provided with lugs in engagement with said reeds.

1,013,906. CAR-COUPLING. KAZIMER SZAFRAN, Philadelphia, Pa. Filed June 15, 1911. Serial No. 633,605.

1. A coupling of the character described, comprising an intermediate casting having openings in its ends, links positioned in said openings, and cross bars on the links engaging the casting and limiting the pivotal movement of the links, substantially as described.

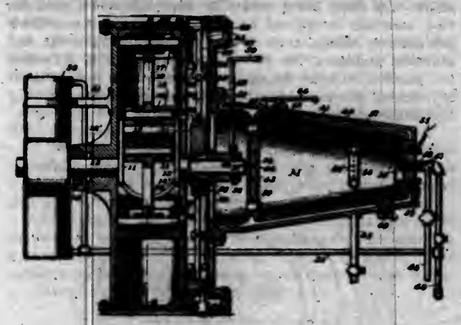
2. A coupling of the character described, comprising an intermediate casting having openings in its ends, and depending lugs at the ends of said casting, links pivotally mounted in said openings, and cross bars on the links engaging said lugs and limiting the downward pivotal movement of the links, substantially as described.

1,013,907. ENGINE. EDWIN TAYLOR, Farmingdale, N. Y., assignor to David M. Neuberger, New York, N. Y. Filed Aug. 22, 1910. Serial No. 578,825.

1. In an apparatus for generating motive power, the combination with a hydrocarbon motor including a chamber, a plurality of cylinders radiating therefrom, pistons in said cylinders, a combustion chamber secured to and connected with said first chamber, means for supplying a combustible fuel to said combustion chamber, conduits connecting said combustion chamber with the ends of said cylinders, and means for opening and closing said conduits.

2. In an apparatus for generating motive power, the combination with a reciprocating fluid pressure motor having a crank case, of a combusted hydrocarbon working fluid generator secured to and supported from said crank case.

3. In an apparatus for generating motive power, the combination with a reciprocating fluid pressure motor having a crank case, of a combusted hydrocarbon working fluid generator coaxial with said crank case, opening therein, and secured to and supported therefrom.



4. In an apparatus for generating motive power, the combination with a fluid pressure motor including a cylinder, a piston therein, a crank driven from the piston, and a crank case for said crank, of a hydrocarbon working fluid generator secured to and supported from said crank case, a valve for said cylinder, valve operating means on said crank shaft, and a partition between said generator and said valve operating means.

5. In an apparatus for generating motive power, the combination with a hydrocarbon motor including a casing and a crank shaft supported in a bearing therein, of a working fluid generator supported from and opening into said casing, and a deflecting wall between the bearing and the interior of the generator.

[Claims 6 to 10 not printed in the Gazette.]

1,013,908. LATHE-DRIVER. DANIEL H. TRAS, New Haven, Conn., and GEORGE T. REISS, Hamilton, Ohio, assignors to Niles-Bement-Pond Company, Jersey City, N. J. Filed Aug. 25, 1911. Serial No. 646,045.

1. A lathe driver comprising, a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, and a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, combined substantially as set forth.

2. A lathe driver comprising, a bracket adpated to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, and a stop to limit the sliding of the toothed block upon the inclined floor, combined substantially as set forth.

3. A lathe driver comprising:—a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, and a spring coöperating with the carrying-block and toothed block and acting to press the toothed block to the deeper end of said gap, combined substantially as set forth.

4. A lathe driver comprising:—a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, a pin supported by the end walls of said gap and passing freely through said toothed block, and a spring surrounding said pin and coöperating with the toothed block and one of the end walls of said gap, combined substantially as set forth.

1,013,909. MEANS FOR OPENING ENVELOPS. JOHN W. VANDEGRIFF, Atlanta, Ga. Filed Dec. 12, 1910. Serial No. 596,956.

1. An envelop having embossed grooves therein and a tape embedded in the paper between the grooves to rip the paper along the grooves when said tape is pulled.

2. An envelop having embedded in the paper thereof a tape, and grooves formed in the paper at the side of the tape to form weak lines to rip the paper when the tape is pulled, the walls of the grooves projecting beyond the surface of the envelop.

3. An envelop having a flap with an adhesive substance thereon, a tape embedded in the flap and secured therein, said flap having grooves alongside the tape to provide weak lines for tearing the paper, the walls of said grooves projecting beyond the surface of the envelop.

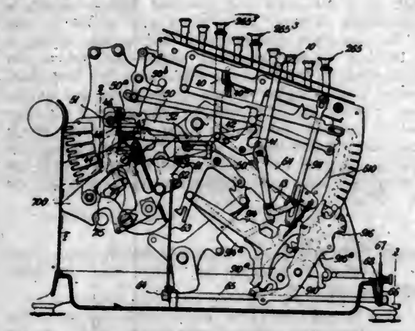
4. An envelop having a tape embedded in the paper thereof and a groove formed alongside the tape, the paper where the grooves are formed being reduced in thickness, and the walls of the grooves projecting beyond the surface of the paper adjacent said grooves.

1,013,910. ADDING AND LISTING MACHINE. JESSE G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 14, 1910. Serial No. 555,226.

1. In a machine of the character described, the combination of two sets of adding wheels, reciprocatory combined type carriers and wheel actuators, means for effecting engagement and disengagement of the actuators and the wheels with provisions whereby one set of wheels is engaged with the actuators during their advance and the other set of wheels during their return, and means under control of such provisions for preventing advance of certain actuators.

2. In a machine of the character described, the combination of two sets of adding wheels, a reciprocatory combined type carriers and wheel actuators, means for effecting engagement and disengagement of the actuators and the wheels with provisions whereby one set of wheels is engaged with the actuators during their advance and the other set of wheels during their return, means

under control of such provisions for preventing advance of certain actuators, and impression devices coöperatively related for cipher printing with provisions for suspending coöperative relationship at a point corresponding with that to which prevention of advance of actuators extends.



3. In a machine of the character described, the combination of two sets of adding wheels, reciprocatory combined type carriers and wheel actuators, means for effecting engagement and disengagement of the actuators and the wheels; controlling devices for causing one set of wheels to engage the actuators during their advance and the other sets of wheels during their return; and an obstructing member controlled by said devices, said member adapted to prevent advance of certain actuators.

4. In a machine of the character described, the combination of two sets of adding wheels, reciprocatory combined type carriers and wheel actuators, means for effecting engagement and disengagement of the actuators and the wheels; controlling devices for causing one set of wheels to engage the actuators during their advance and the other sets of wheels during their return; an obstructing member controlled by said devices, said member adapted to prevent advance of certain actuators; impression devices coöperatively related for cipher printing with provisions for suspending coöperative relationship at a point corresponding with that to which prevention of advance of actuators extends; and manipulative means for effecting such suspension and permitting control of the obstructing member by the aforesaid controlling devices.

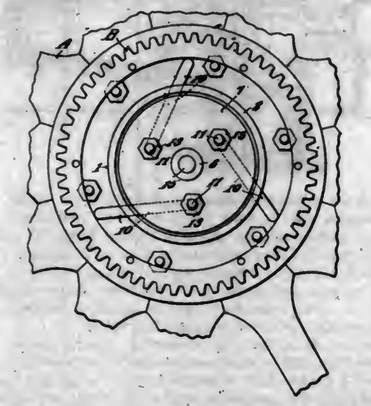
5. In a machine of the character described, the combination of two sets of adding wheels, reciprocatory combined type carriers and wheel actuators, means for effecting engagement and disengagement of the actuators and the wheels; controlling devices for causing one set of wheels to engage the actuators during their advance and the other sets of wheels during their return; an obstructing member controlled by said devices, said member adapted to prevent advance of certain actuators in varying number: impression devices coöperatively related for cipher printing with provisions for suspending coöperative relationship at a point corresponding with that to which prevention of advance of actuators extends; and manipulative means for effecting such suspension at one point or another and correspondingly controlling the number of actuators to be obstructed.

[Claims 6 to 13 not printed in the Gazette.]

1,013,911. TOOL FOR CENTERING SPROCKETS UPON VEHICLE-WHEELS. HERMAN WEBER, Colorado Springs, Colo. Filed Dec. 16, 1910. Serial No. 597,593.

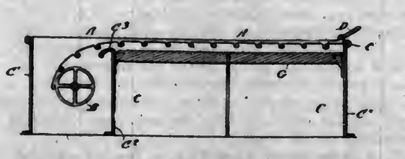
1. A tool of the class described including a centering device, parallel disks separately revoluble about the axis of said device, and members extending between and spacing the disks, said members pivotally engaging one of the disks and slidably engaging the other disk, said members having terminals capable of projecting beyond the peripheral portions of the disks.

2. A tool of the class described including a disk having an annular flange, another disk surrounded by said flange, a centering device having a stem extending through the disks, said disks being separably revoluble about said device, members interposed between the disks and constituting spacing means, each of said members having one end pivotally engaging one of the disks and having its other end portion slidably engaging the other disk and projecting beyond the periphery thereof, and means for securing the disks against relative movement.



3. A tool of the class described including a disk having an annular flange and slots within the peripheral portion of the disk and extending into the flange, another disk surrounded by the flange, a centering device having a stem extending through the disks, said disks being separably movable upon the centering device, members interposed between the disks and constituting means for spacing them, each member having an end portion extending into and pivotally engaging one of the disks and another end portion extending through and slidable within one of the slots, said end terminating in a finger parallel with the centering device and movable within the slot, and means for securing the disks against relative movement.

1,013,912. HATCHWAY-COVER. JOHN WEIR, Scotstown, Scotland, assignor of one-half to Archibald Nicol Low, Patrick, Scotland. Filed May 3, 1911. Serial No. 624,732.



In combination with a vertical hatchway inclosing wall opening upwardly and having a substantially horizontal upper margin provided with bead-like guides extending therefrom, a partition wall dividing said inclosing wall into a roller compartment and hatchway proper and extending toward but not to the top of said inclosing wall, a roller in said compartment disposed below the upper edge of said partition wall, a cover guide on said partition, a horizontal cover guide bar extending across the hatchway proper and attached to said partition and said inclosing wall, a jointed cover adapted to be wound off from said roller over said guide bar and fitting inside of the inclosing wall to close the hatchway, and guides on the end of said cover embracing the feet-like extensions on the exterior of said inclosing wall.

1,013,913. IODIN SOLUTION. JOHN WEMER, New York, N. Y. Filed Apr. 23, 1910. Serial No. 557,110.

1. The herein described solution of iodin comprising glycerite of tannic acid with free iodin held in solution therein.

2. The herein described solution of iodin comprising glycerite of tannic acid with free iodin held in solution therein, and a preservative syrup of sugar and water.

3. The herein described solution containing free iodin, comprising four parts of tannin, sixteen parts of glycerin with one part of iodin.

4. The herein described solution containing free iodin, comprising four parts of tannin, sixteen parts of glycerin with one part of iodin, and a preservative syrup of sugar and water.

5. The herein described method of obtaining free iodin in solution which comprises reducing crystalline iodin to a powder, placing it in a closed vessel with glycerite of tannic acid and causing it to be moved through said liquid.

[Claim 6 not printed in the Gazette.]

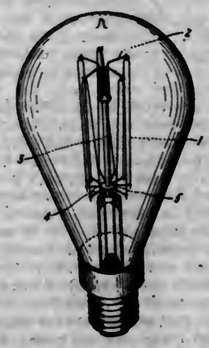
1,013,914. ATTACHING FILAMENTS TO LEADING-IN WIRES. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 14, 1907. Serial No. 378,933.

1. The method of attaching a tungsten lamp filament to a leading-in conductor which consists in pressing one about the other while the filament is heated to a temperature lower than that at which tungsten oxidizes in air.

2. The method of attaching a non-ductile lamp filament to a leading-in conductor which consists in rendering a portion of said filament pliant by heating and then pressing the filament into intimate contact with the leading-in conductor and locking it thereto.

3. A joint between a fragile metal filament and its supply conductor comprising a spiral on said conductor pinched tight about said filament and holding it in place.

1,013,915. METAL-FILAMENT LAMP. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 19, 1907. Serial No. 389,312.



1. In a metal filament lamp, a filament loop and an anchorage for said loop having a local contraction adapted to take a permanent bend as a result of course exerted by the filament on the anchorage to protect said filament from dangerous longitudinal stress.

2. In a lamp, a fragile metal filament, and an anchoring wire therefor having a weakened portion adapted to limit the tension to which the filament can be subjected by undergoing permanent deformation whenever tension on the filament exceeds a certain amount.

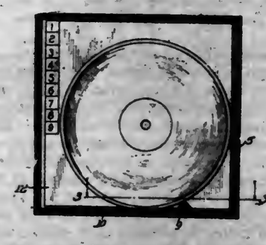
3. In a lamp, a metal filament, and a current supply wire therefor mechanically weak to stresses along the filament and adapted to take a permanent bend to protect the filament from mechanical rupture whenever the stress on the filament becomes excessive.

4. The combination of a filament loop, a resilient support for one end of the loop, and an anchorage for the other end of the loop capable of deformation under the pull of the filament to protect the filament from dangerous tension.

5. The combination of a fragile filament loop, a resilient support for one end of the loop, and means at the other end of the loop adapted to compensate for improper adjustment of said resilient support by undergoing permanent deformation as a result of force exerted by the filament.

[Claims 6 to 9 not printed in the Gazette.]

1,013,916. RECORD-DISK HOLDER. LESLIE C. WISWELL, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Mar. 18, 1911. Serial No. 615,186.



1. In a holder for talking machine record disks or the like, a rectangular-shaped box having an opening at one end thereof, a plurality of sheets of paper or the like within said receptacle between which the disks are adapted to be held, and a stop for partially preventing the withdrawal of said disks.

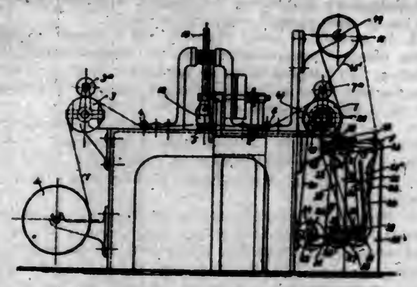
2. In a holder for talking machine record disks or the like, a rectangular-shaped box having an opening at one end thereof, a plurality of sheets of paper or the like within said receptacle between which the disks are adapted to be held, a stop for holding said sheets within the holder and for partially preventing the withdrawal of said disks.

3. In a holder for talking machine record disks or the like, a rectangular-shaped box having an opening at one end thereof, a plurality of sheets of paper or the like within said receptacle between which the disks are adapted to be held, a triangular-shaped projection extending along one side of said box and a corresponding indentation in said sheets to hold the same within the casing.

4. In a holder for talking machine record disks or the like, a rectangular-shaped box having an opening at one end thereof, a plurality of sheets of paper or the like within said receptacle between which the disks are adapted to be held, a stop to prevent sad disks from passing back too far within said holder, and a second stop to partially prevent the withdrawal of said disks.

5. In a holder for record disks or the like, a box having a cover for one end thereof, said cover having an extension which in closed position extends over part of one side of said box, and interlocks with said side, a plurality of sheets of paper or the like within said box, between which the record disks are adapted to be held, said sheets having suitable indexes, and a pair of stops in said box to prevent said disks from entering too far within said receptacle and also to prevent the accidental removal of said disks.

1,013,917. WINDING APPARATUS FOR PAPER, CLOTH, OR THE LIKE. FRANZ ZWINS, Vienna, Austria-Hungary. Filed Aug. 6, 1910. Serial No. 575,926.



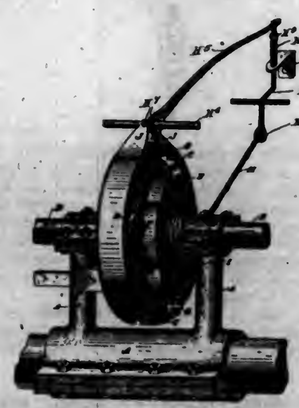
1. In winding apparatus for paper, cloth and the like, in combination, a winding roller, a shaft therefor, a pulley keyed on said shaft and connected by a belt with a loosely arranged pulley on a positively driven main shaft, mechanism for throwing the loosely arranged pulley in and out of action, a rod carried and supported by a loop of the paper formed in the paper web in the feed movement, a standard provided with guide grooves for said rod, and means for raising the rod to a certain height in said guide grooves for enabling the rod to actuate said mechanism.

2. In winding apparatus for paper, cloth and the like, in combination, a winding roller, a shaft therefor, a pulley keyed on said shaft and connected by a belt with a loosely arranged pulley on a positively driven main shaft, mechanism comprising a clutch for throwing the driving means in and out of action, a rod carried by a loop of the paper formed in the paper web in the feed movement, a continually driven cam, a rocking lever pivoted in the standard and extending into the lower part of the path of the rod and adapted to raise the rod on its upward movement for enabling the latter to actuate said mechanism.

3. In winding apparatus for paper, cloth and the like, in combination, a winding roller, a shaft therefor, a pulley keyed on said shaft and connected by a belt with a loosely arranged pulley on a positively driven main shaft, a conical tapering coupling member slidably mounted on said main shaft, a rod carried by a loop of the paper formed in the paper web in the feed movement, a continually driven cam, a rocking lever pivoted in the standard, and extending into the lower part of the path of the rod and adapted to raise the rod on its upward movement, a spring actuated slide extending normally into the path of the rod and pressed back by the rod, a crank connected with one end to the slide by means of a pin engaging a slot in the slide and keyed with the other end on an axis, an arm fixed thereto and having on its free end a conical roller pressing against the center of said conically tapering coupling member and having a spring actuated coupling pin engaging a hole of the loosely mounted pulley when moved against it by the rocking of the arm and crank by means of the slide being pressed back thereby coupling the positively driven main shaft with the shaft of the winding roller, means for retaining the slide in its back position and means actuated by the rod for throwing the driving mechanism of the winding roller out of action.

4. In winding apparatus for paper, cloth and the like, in combination, a winding roller, a shaft therefor, a pulley keyed on said shaft and connected by a belt with a loosely arranged pulley on a positively driven main shaft, a conical tapering coupling member slidably mounted on said main shaft, a rod carried by a loop of the paper formed in the paper web in the feed movement, a continually driven cam, a rocking lever pivoted in the standard and extending into the lower part of the path of the rod and adapted to raise the rod on its upward movement, a spring actuated slide extending normally into the path of the rod and pressed back by the rod, a crank connected with one end to the slide by means of a pin engaging a slot in the slide and keyed with the other end on an axis, an arm fixed thereto and having on its free end a conical roller pressing against the center of said conically tapering coupling member and having a spring actuated coupling pin engaging a hole of the loosely mounted pulley when moved against it by the rocking of the arm and crank by means of the slide being pressed back thereby coupling the positively driven main shaft with the shaft of the winding roller, a bell crank lever journaled in the standard, a contractile spring connected to one arm of said lever and to said standard, said spring constantly pressing the other arm of said lever against said slide to lock the latter in position, a lever journaled in said standard, said lever having one of its ends in the path of the rod as it descends and having its other end operatively connected to said bell crank lever to rock same against the action of said contractile spring, whereby as the rod rises it will engage said lever to cause said bell crank lever to move out of engagement with said slide, thereby unlocking the latter and allowing it to return to its original position to uncouple the driving mechanism of the winding roller.

1,013,918. AUTOMATIC BRAKE. ANSON C. ALEXANDER, Penacook, N. H. Filed Mar. 31, 1911. Serial No. 618,173.



1. An automatic brake comprising a rotating member, a rotarily mounted main drum, means for connecting said member and said main drum to cause them to rotate together, an auxiliary drum mounted to rotate concentrically with and independently of said main drum, a brake shoe carried by the main drum and in coöperative relation with the auxiliary drum, centrifugally-controlled means carried by said main drum to bring the brake shoe against the auxiliary drum upon the rotation of the main drum at a certain speed, a friction brake in cooperative relation with the main drum, and connections between said auxiliary drum and said friction brake whereby rotary movement of the former sets the latter.

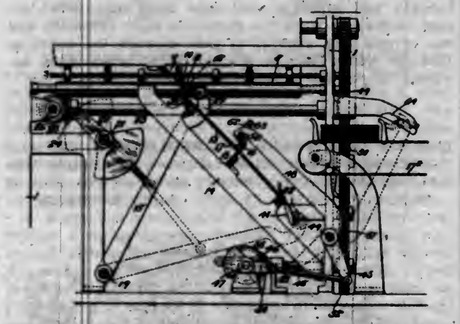
2. An automatic brake comprising a rotary main drum, an auxiliary drum mounted to rotate concentrically with and independently of said main drum, a brake shoe carried by the main drum and adapted to bear upon the periphery of the auxiliary drum, centrifugally-controlled means carried by said main drum to operate the brake shoe upon a predetermined speed of rotation of the main drum, a friction brake in coöperative relation with the main drum, and connections between said auxiliary drum and said friction brake whereby rotary movement of the former sets the latter.

3. An automatic brake comprising a rotary main drum, an auxiliary drum mounted to rotate concentrically with and independently of said main drum, a brake shoe carried by the main drum and adapted to bear upon the periphery of the auxiliary drum, centrifugally-controlled means carried by said main drum to operate the brake shoe upon a predetermined speed of rotation of the main drum, a friction brake in coöperative relation with the main drum, and connections including multiplying levers between said auxiliary drum and said friction brake whereby rotary movement of the former sets the latter.

4. An automatic brake comprising a rotary main drum, an auxiliary drum mounted to rotate concentrically with and independently of said main drum, a lever fulcrumed on the side of said main drum, a brake shoe carried by the shorter arm of said lever and in coöperative relation with the periphery of the auxiliary drum whereby upon the rotation of the main drum at a predetermined speed centrifugal force acting upon the longer arm of the lever will bring the brake shoe into engagement with the auxiliary drum and braking means connected with and actuated by said auxiliary drum.

5. An automatic brake comprising a rotary main drum, an auxiliary drum mounted to rotate concentrically with and independently of said main drum, a lever fulcrumed on the side of said main drum, a brake shoe carried by the shorter arm of said lever and in coöperative relation with the periphery of the auxiliary drum whereby upon the rotation of the main drum at a predetermined speed centrifugal force acting upon the longer arm of the lever will bring the brake shoe into engagement with the auxiliary drum, a friction brake in coöperative relation with the main drum, and connections between said auxiliary drum and said friction brake whereby rotary movement of the former sets the latter.

1,013,919. CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 19, 1910. Serial No. 538,929.



1. In a folding machine, an inclined folding table, a fixed folding blade, a set of reciprocating folding jaws arranged to coact with the folding blade from above the table and means for bringing the sheets into position on the folding table over the folding blade.

2. In a folding machine, an inclined folding table, a folding blade, a set of reciprocating folding jaws arranged to coact with the folding blade from above the table and means reciprocating in substantially right lines for bringing the sheets into position on the folding table.

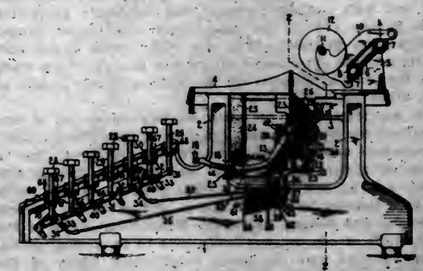
3. In a folding machine, a delivery carrier, an inclined folding table, a fixed folding blade means for bringing the sheets into position on the folding table over the folding blade and a set of reciprocating folding jaws arranged to coact with the folding blade from above the table for folding the sheets and transferring them to the delivery carrier.

4. In a folding machine, two folding tables and their folding mechanisms each folding mechanism including a fixed folding blade and a set of folding jaws arranged to co-act therewith, the folding jaws of the first folding mechanism operating to fold the sheets from the first folding table and transfer them onto the second folding table over its folding blade.

5. In a folding machine, a horizontal folding table, an inclined folding table and their folding mechanisms each folding mechanism including a fixed folding blade and a set of folding jaws arranged to coact therewith, the folding jaws of the folding mechanism for the horizontal table operating to fold the sheets from the horizontal table and transfer them onto the inclined folding table over its folding blade.

[Claims 6 to 14 not printed in the Gazette.]

1,013,920. TYPE-WRITING MACHINE. JOHN H. BARR, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 27, 1907. Serial No. 394,854.



1. In a typewriting machine, a type action comprising a fulcrum and a lever of the third order arranged to turn about and to slide endwise over said fulcrum, and means acting to guide said lever for a sliding and turning motion such that the sliding motion preponderates in the first part of the key stroke and the turning motion preponderates in the last part of said stroke.

2. In a typewriting machine, a type action comprising a fulcrum and a lever of the third order arranged to turn about and to slide endwise over said fulcrum in such manner that the effective lengths of the lever arms constantly diminish during the stroke.

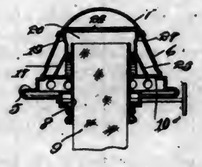
3. In a typewriting machine, the combination of a type bar, a key for actuating said type bar, and connections between said key and type bar comprising a sliding lever of the third order connected with said type bar and means operated by said key for sliding said lever across its fulcrum and turning said lever so that the sliding motion preponderates in the first part of the key stroke and the turning motion preponderates in the last part of said stroke.

4. In a typewriting machine, the combination of a type bar, a key for actuating said type bar, and connections between said key and type bar comprising a sub-lever actuated by said key, and a sliding lever actuated by said sub-lever, the proportions and relative dispositions of the parts being such that in the first part of the key depression the sliding motion of said sliding lever preponderates and in the last part of said key depression the turning motion of said lever preponderates.

5. In a typewriting machine, a type action comprising a compound lever consisting of two levers of the third order, one of which turns about a fixed fulcrum as a center and the other of which slides over its fulcrum, the two levers when in normal position being approximately at right angles to each other and at the end of a key depression said levers being at a wide oblique angle with each other.

[Claims 6 to 24 not printed in the Gazette.]

1,013,921. LAMP-BURNER ATTACHMENT. JAMES G. BARRETT, Hatton, Ark., assignor of one-half to Frank P. Hutchison, Mena, Ark. Filed July 6, 1911. Serial No. 637,111.

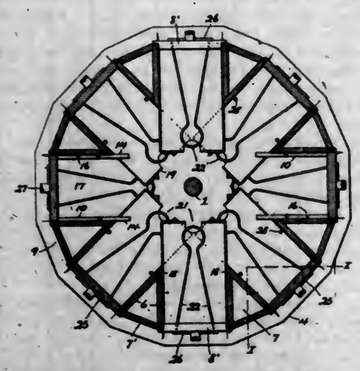


1. An attachment for lamp burners consisting of two members connected to each other for relative longitudinal movement, said members each including side walls and an end wall and downwardly and outwardly projecting side flanges and an end flange, and tongues stamped from said end walls.

2. An attachment for lamp burners consisting of two members connected to each other for relative longtiudinal movement, said members each including side walls and an end wall and downwardly and outwardly projecting side flanges and an end flange, and longitudinal flanges respectively extending from the upper edges of the side walls and the outer edges of the side flanges of one member for conjointly receiving the walls and side flanges of the other member.

3. An attachment for lamp burners consisting of two members connected to each other for relative longitudinal movement, one of said members being formed from a strip of metal and centrally bent to form spaced side walls and an end wall, the lower portions of said walls of each member being respectively bent outwardly to form side and end flanges, the upper longitudinal edges of the side walls of one member being bent to form longitudinal guide flanges and the lower longitudinal edges of the outwardly projecting side flanges thereof being bent under and inwardly to form longitudinal guide flanges, the other member being also formed from a strip of metal and bent centrally to form spaced parallel side walls and an end wall, the lower portions of the walls being bent to form outwardly and downwardly projecting side and end flanges, the longitudinal walls and the side flanges being disposed within the guide flanges of the first mentioned member, and tongues stamped from the end walls of the members.

1,013,922. FILING-CABINET. ABRAHAM S. BATRICK, Kansas City, Mo. Filed Oct. 4, 1910. Serial No. 585,327.



1. In a revolving filing cabinet, a circular series of box-like columns, said columns forming drawer-guides; a plurality of tiers of drawers mounted between said columns; the inner ends of the drawers of each tier interlapping the corresponding portions of the drawers of adjacent tiers; a pair of sheet-metal supports secured to said columns for each drawer, said supports being shorter than the drawer and having upturned rear ends and downturned hooks at their forward ends; pins projecting beneath each drawer and adapted to pass beneath the upturned rear ends of the supports and engage the downturned hooks at the forward ends of said supports when the drawer is extended, and means projecting over the drawer to hold the same upon the supports until the hooks pass beneath said supports.

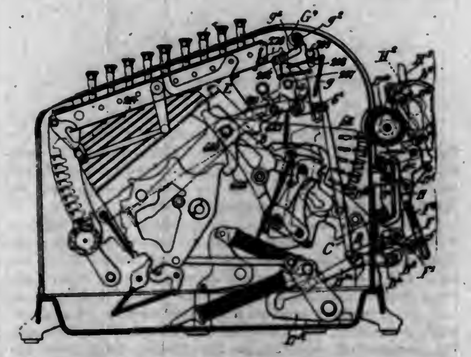
2. In a filing cabinet, an annular series of pairs of vertical strips forming drawer-guides, horizontal sheet metal drawer-supports secured to said guides, tiers of drawers resting upon said support, the inner end of each drawer being interlapped with the corresponding portions of the drawers in adjacent tiers, and a resilient retainer engaging each tier of drawers, for the purpose described.

3. In a filing cabinet, sheet metal drawer-supports adapted to support a drawer and having downwardly turned hooks at their outer ends; a drawer resting upon said supports, and pins on the drawer projecting laterally beneath said supports and adapted to engage said hooks when the drawer is fully extended.

4. In a filing cabinet, vertical strips inclosing a tier of drawers, filling strips between said drawers at the forward ends thereof to assist in supporting the drawers in inclined depending position when fully extended, sheet metal drawer-supports secured to said vertical strips and adapted to support a drawer and having downwardly turned hooks at their outer ends, a drawer resting upon said supports, and pins on the drawer projecting laterally beneath said supports and adapted to engage said hooks and coact with the filling strip in supporting the drawer in inclined position when the drawer is fully extended.

5. In a filing cabinet, a pair of sheet metal drawer-supports adapted to support a drawer and having downwardly turned hooks at their outer ends, one of said supports having a notch therein; a drawer resting upon said supports; pins carried by the drawer and projecting laterally beneath said supports, said pins being adapted to engage said hooks when the drawer is fully extended; and one of said pins adapted to pass through the notch so that the drawer may be removed bodily when tilted upwardly on the side adjacent said notch.

1,013,923. ADDING AND LISTING MACHINE. RUSSELL E. BENNER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1908. Serial No. 424,333.



1. In a machine of the class described, the combination of manipulative amount-determining devices, paper feeding devices, and means controlled by the latter for automatically locking said amount-determining devices against manipulation after a predetermined number of successive operations of the feeding devices.

2. In a machine of the character described, the combination of setting-up devices, paper feeding devices, and means controlled by the latter for automatically locking the setting-up devices after a predetermined number of successive operations of the feeding devices with provisions for disabling said means at will.

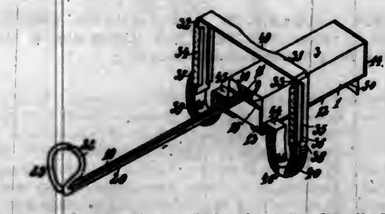
3. In a machine of the character described, the combination of manipulatively depressible amount keys, paper feeding devices, and means controlled by the latter for automatically locking the keys against manipulative depression after a predetermined number of successive operations of the feeding devices.

4. In a machine of the character described, the combination of depressible amount keys, paper feeding devices, and means controlled by the latter for automatically locking the keys against depression after a predetermined number of successive operations of the feeding devices with provisions for disabling said means at will.

5. In a machine of the character described, the combination of depressible amount keys, detents for holding the keys depressed, means for displacing the detents to release the keys, said means capable of blocking further depression of keys, paper feeding devices, and means controlled thereby for holding said detent-displacing means in key-blocking position.

[Claims 6 to 44 not printed in the Gazette.]

1,013,924. SURGICAL APPLIANCE. ALBERT BITTERLICH, Cassel, Germany. Filed Apr. 29, 1911. Serial No. 624,051.



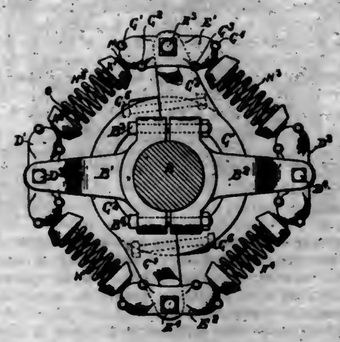
1. A surgical appliance of the character described comprising a spring-pressed extensible frame, a guide connected with said frame at right angles thereto, a slide guided in said guide, means for securing said slide, two supporting wires mounted to rock at one end on said slide in a plane parallel to said guide and being at the other end upwardly extended, laterally curved and rearwardly inclined, and means for yieldingly pressing together said two supporting wires.

2. A surgical appliance of the character described comprising a spring-pressed extensible frame, a casing connected with said frame, a slide guided in said casing, means for securing said slide, two supporting wires mounted to rock at one end on said slide in a plane at right angles to said frame and being at the other end upwardly extended, laterally curved and rearwardly inclined, and two leaf springs in said casing for pressing together said two supporting wires.

3. A surgical appliance of the character described comprising a spring-pressed extensible frame, a casing connected with said frame and open below and at opposite ends parallel to said frame, a shutter adapted to close said casing below and at the ends while leaving a slit at the front end and having a longitudinal slot, a slide guided in the slot of said shutter and having a screw projecting outward through the slot, a winged nut on said screw, two supporting wires mounted to rock at one end on said slide and passing through the slit between said casing and said shutter and being at the other end upwardly extended, laterally curved and rearwardly inclined, and two leaf springs in said casing adapted to press together said two supporting wires.

4. A surgical appliance of the character described comprising a casing open below and at two opposite ends, a shutter adapted to close said casing below and at the ends while leaving a slit at the front end and having a longitudinal slot, a slide guided in the slot of said shutter and having a screw projecting outward through the slot, a winged nut on said screw, two supporting wires mounted to rock at one end on said slide and passing through the slit between said casing and said shutter and being at the other end upwardly extended, laterally curved and rearwardly inclined, two leaf springs in said casing adapted to press together said two supporting wires, two guides at the front end of said casing, a bow vertically guided in said two guides, and springs connecting said bow with said two guides.

1,013,925. DRIVING MECHANISM FOR AXLE-DRIVEN DYNAMOS. WILLIAM LORD BLISS, New York, N. Y., assignor, by mesne assignments, to The United States Light and Heating Company, New York, N. Y., a Corporation of Maine. Filed Apr. 11, 1903. Serial No. 152,130.



1. In a driving mechanism, the combination with a driving member and a driven member, of a cup carried by each of said members, a spring formed with cone shaped ends and having said ends arranged within said cups, and means arranged within said springs for fastening the ends thereof within said cups.

2. In a driving mechanism, the combination with a driving member and a driven member, of a cup carried by each of said members, a spring formed with cone shaped ends and having said ends arranged within said cups, conical washers arranged within said spring, and means connecting said washers to said cups to hold the ends of said spring between said washers and said cups.

3. In a driving mechanism, the combination with a driving member and a driven member, of a cup carried by each of said members, a spring formed with cone shaped ends and having said ends arranged within said cups, conical washers arranged within said spring, and bolts connecting said washers to said cups to hold the ends of said spring between said washers and said cups.

4. In a driving mechanism, the combination with a driving member and a driven member, of a cup carried by each of said members and having a pivotal connection to each of said members, a spring formed with cone shaped ends and having said ends fitting within said cups, and means arranged within said spring for fastening the ends thereof to said cup.

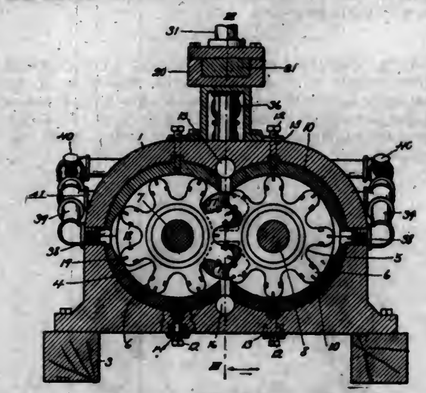
5. In a driving mechanism, the combination with a driving member and a driven member, of a cup connected to each of said members by a ball and socket joint, a spring formed with cone shaped ends and having said ends arranged within said cups and means arranged within said spring for fastening the ends thereof within said cups.

[Claims 6 to 13 not printed in the Gazette.]

1,013,926. ROTARY MOTOR. AUGUST BRAUER, Independence, Mo., assignor to August Brauer Steam Rotary Motor Company, Independence, Mo. Filed July 29, 1910. Serial No. 574,500.

1. A rotary motor comprising two cylinders of unequal dimensions, two coupled shafts extending through the

cylinders, twin intermeshing pistons fixedly-mounted on the shafts, within each cylinder, means for supplying fluid at full pressure to the smaller cylinder, connections between the exhaust of the smaller cylinder and the intake of the larger cylinder, a connection between one intake or exhaust port of the smaller cylinder and one intake or exhaust port of the larger cylinder, and a connection between the last-named connection and the above-named connections.



2. A rotary motor comprising two cylinders of unequal dimensions, two coupled shafts extending through the cylinders, twin intermeshing pistons fixedly-mounted on the shafts within each cylinder, means for supplying fluid at full pressure to the smaller cylinder, a pipe 34 connecting a port of the smaller cylinder with a port of the larger cylinder, pipes 39 connecting exhaust ports of the former with an inlet port of the latter, a pipe 41 connecting the pipes 39, a connection between pipes 41 and 34, and exhaust connections to both cylinders.

3. A rotary motor comprising two cylinders, two coupled shafts passing through the cylinders, twin intermeshing pistons fixedly-mounted on the shafts within each cylinder, a valve-chest, connections between said chest and the inlets and exhausts of each cylinder, a valve in said chest, adapted to start and stop the motor and also to govern the flow of the fluid for compound or other operation, connections for fluid between the cylinders, and manual valves in said connections.

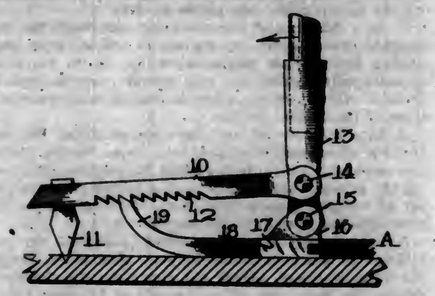
4. A rotary motor comprising two cylinders, two coupled shafts passing through the cylinders, twin intermeshing pistons fixedly-mounted on the shafts within each cylinder, a valve-chest, connections between said chest and the inlets and exhausts of each cylinder, a valve in said chest, adapted to start and stop the motor and also to reverse the running direction of the motor, connections for fluid between the cylinders, and manual valves in said connections.

5. A rotary motor comprising two cylinders, two coupled shafts passing through the cylinders, twin intermeshing pistons fixedly-mounted on the shafts within each cylinder, a valve-chest, pipes 33 and 36 connecting opposite ports of one cylinder to the valve chest, pipes 42 and 43 connecting opposite ports of the other cylinder to the valve-chest, a valve adapted to connect pipes 36 and 43 simultaneously to pressure and pipe 42 to exhaust, or to close pipe 43 only, or to connect pipe 33 to pressure and pipes 36 and 43 to exhaust while closing pipe 42; connections between exhaust ports of one cylinder and a port of the other cylinder, and a connection 34 between other ports of the cylinders.

[Claims 6 to 8 not printed in the Gazette.]

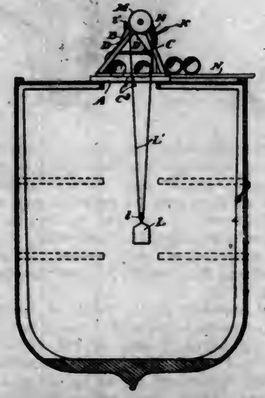
1,013,927. FLOOR-JACK. WILLIAM H. CHAMBERLAIN and FRANK A. HADLEY, Worcester, Mass. Filed Sept. 2, 1911. Serial No. 647,358.

1. In a floor jack, the combination with a brace bar having a spur or dog at one end, and a rack along the underside thereof, of an operating lever fulcrumed at the other end of said brace bar and extending beyond the same, and a push bar pivoted to the end of said lever and having a pawl extending rearwardly and upwardly therefrom into position to engage said rack.



2. In a floor jack, the combination with a brace bar having a spur or dog and a rack along the underside thereof, of an operating lever fulcrumed at the end of said brace bar, and a push bar having a fixed block and pivoted to the lever at a point above the block and having an integral rear extension in the plane of the block extending upwardly at the end into contact with the rack.

1,013,928. APPARATUS FOR LOADING VESSELS. JOHN T. CLARK, New York, N. Y. Filed Aug. 9, 1910. Serial No. 576,350.



1. In an apparatus for loading merchandise into vessels, a frame adapted to be positioned at the hatchway of a vessel, hoisting mechanism carried by the frame, a cage suspended by said hoisting mechanism, said cage being provided with a movable load platform, means for tilting said load platform to an inclined position when the cage is lowered a predetermined distance within the hold of a vessel, and means for controlling the up and down movement of said cage.

2. In an apparatus of the class described, a cage, a plurality of movable members carried thereby, means cooperating with the respective movable members for tilting said movable members in oppositely inclined directions, and means for controlling the vertical movement of the cage.

3. In an apparatus for loading merchandise into vessels, a portable frame adapted to be positioned upon the deck of a vessel and over a hatchway therein, hoisting mechanism carried by the frame, a cage suspended by said hoisting mechanism for movement within the hold of a vessel, said cage being provided with a plurality of load platforms, means for operating said load platforms so as to move them into oppositely inclined positions upon the descent of the cage to a predetermined position into the hold of a vessel, a counterweight for automatically elevating the cage when unloaded, and means for controlling the movement of said cage.

4. In an apparatus of the class described, a cage, a plurality of movable members carried thereby, said movable members being independent of each other, means for operating said members whereby the loads thereon will be discharged simultaneously in opposite directions from the cage, and means for controlling the vertical movement of said cage.

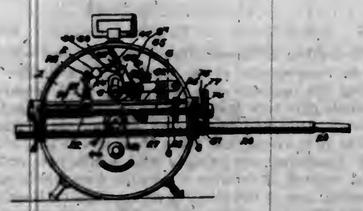
5. In an apparatus of the class described, a cage, a plurality of movable members carried thereby, means for operating said members whereby the members will be inclined in opposite directions to each other for automatically discharging the load from the respective sides of the cage, and means for controlling the vertical movement of the cage.

[Claims 6 to 17 not printed in the Gazette.]

1,013,929. DUMP-WAGON. WILBUR L. COLLINS, Newark, N. Y., assignor to Newark Wagon Company, Newark, N. Y., a Corporation of New York. Filed Sept. 22, 1910. Serial No. 583,148.

A dump wagon comprising a box having laterally-swinging bottom doors, upwardly-extending bell crank levers at each end of and having their fulcrums eccentrically disposed with respect to the ends of the box, a pair of links connecting each of the bell cranks to said doors, the links of each pair crossing each other, a longitudinally-extending rock-shaft at one side of and greater length than the box, crank arms projecting from said shaft, and a link connection between each of said crank arms and one of the arms of each of the bell crank levers, and releasable means for rocking the shaft in one direction.

1,013,930. AUTOMATIC FIRE-KINDLER AND ALARM. REUBEN C. DAYTON, Rhinelander, Wis. Filed May 31, 1911. Serial No. 630,471.



1. A match igniting and projecting device, comprising the combination with a time controlling mechanism; of a supporting frame removably mounted thereon, telescoping members mounted in said frame, said telescoping members being under spring tension and adapted to carry a match, a spring-rotated shaft carrying a friction surface adapted to engage the head of the match, means to retain the shaft and friction surface thereon in position under tension of the spring, and additional means cooperating with portions of said time controlling mechanism to automatically release the same.

2. A match igniting and projecting device, comprising the combination with a time controlling mechanism; of a spring rotated shaft, supporting means therefor, telescoping members carried by the supporting means, said telescoping members being under spring tension and adapted to receive a match, a friction disk carried on one end of the shaft and in position to engage the head of the match when said members are telescoped, means to retain said shaft and correspondingly the disk in spring-held position, and additional means coöperating with portions of said time controlling mechanism to release the same, whereby the match will be ignited and projected.

3. A device of the character described, comprising the combination with a time controlling mechanism; of a spring rotated shaft, supporting means therefor, a friction disk carried on one end of said shaft and having a notch therein, telescoping members carried by the supporting means, said telescoping members being under spring tension and adapted to receive a match, the head of which is adapted to contact with the friction face of the disk, an additional shaft rotatably carried by the supporting means, means carried by said additional shaft to retain said other shaft in a position under tension by the spring, a trip lever carried by this last referred to shaft, and means on the time controlling mechanism to trip said lever.

4. In a device of the character described, the combination with a pair of supporting posts, an alarm clock and means to secure said posts thereto; of a shaft rotatably mounted between said supporting posts, a spring encircling the same and having connection with one of said posts and said shaft, a friction disk carried on one end of said shaft provided with a notch therein, a plunger carried by said supporting posts comprising a plurality of telescoping tubular members, said tubular members being under spring tension and adapted to receive a match, means to retain said shaft and disk in a position under tension by the spring, and means to release the same from such position to ignite the match and allow the same to be projected.

5. A device of the character described, comprising the combination with supporting posts, an alarm clock and means to secure said posts thereto; of a spring-rotated shaft carried between said supporting posts, a friction disk carried on one end of said shaft and beyond one of said posts, said disk being provided with a notch therein, a tubular member carried between said posts and having one end thereof extended to a point immediately adjacent said friction disk, additional tubular members adapted to be telescoped within said first referred to tubular member and carrying a match, means to retain said shaft and disk in position under tension by the spring when said tubular members have been telescoped, additional means to release the shaft and disk from its spring-held position to ignite the match, and means to limit the rotative movement of said disk to allow the match therein to aline with said tubular member, whereby said match may be projected.

[Claims 6 and 7 not printed in the Gazette.]

1,013,931. REDUCTION OF SILVER ORES. COLIN G. FINK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 4, 1908. Serial No. 465,982.

1. The process of treating ores containing silver and arsenic, which consists in fusing said ores in an attenuated atmosphere, thereby distilling off the arsenic and allowing the silver to separate from the slag by gravity.

2. The process of treating a silver-bearing arsenic ore, which consists in heating said ore to fusing temperature in a vacuum and maintaining said ore fused until the crude silver separates by gravity.

3. The process of separating substantially pure silver from an arsenical silver ore which consists in fusing said ore out of contact with the atmosphere, distilling part of the arsenic, and allowing the silver to segregate from the rest of the charge while the charge is maintained fused.

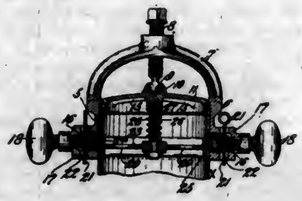
4. The process of treating an ore containing silver, cobalt, nickel, a metalloid and earthy impurities which consists in heating said ore in an inert environment.

thereby vaporizing most of the metalloid, and maintaining the residue in a state of fusion thereby causing segregation into distinct layers of respectively crude silver, a speiss containing cobalt and nickel and a slag.

5. The process which consists in heating a silver ore containing a metalloid in an inert environment at a temperature high enough to volatilize a large part of said metalloid and maintaining the residue of said ore in a state of fusion to produce segregation of the crude silver from the rest of the mass.

[Claim 6 not printed in the Gazette.]

1,013,932. DEVICE FOR CLOSING PIPE ENDS. WILLIAM A. FLEMING, New York, N. Y. Filed Mar. 6, 1911. Serial No. 612,494.



1. A device of the character described, comprising an annulus provided with a seat for a pipe end, a plug of less diameter than said seat and normally in the plane thereof, clamping jaws carried by said annulus, and opposing clamping means to coact with said jaws to grip the pipe in a different plane from that of the plug and seat.

2. A device of the character described, comprising an annulus provided with a seat for a pipe end, a plug of less diameter than said seat and normally in the plane thereof, said annulus having recesses, jaws mounted in said recesses, means for adjusting said jaws, and a circular jaw connected to said plug and adapted to fit within the pipe in substantially the plane of the first-mentioned jaws.

3. A device of the character described, comprising inner and outer jaw members adapted to clamp a pipe, an annulus provided with a seat for a pipe end, and a plug connected to said jaw members and adjustable toward and from the plane of the annulus to clamp and unclamp the pipe between it and the annulus.

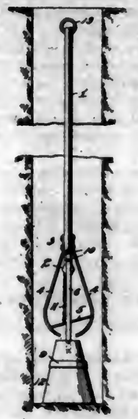
4. A device of the character described, comprising an annulus having outer jaw members, a plug and means to adjust it axially of said annulus, and an inner jaw member to oppose the pressure of the outer jaws.

5. A device of the character described, comprising an annulus having outer jaw members, a plug, and means to adjust it axially of said annulus, and an inner jaw member to oppose the pressure of the outer jaws, said inner jaw member being yieldingly connected to said plug.

1,013,933. WELL-CLEANER. DOCK FRY, Charleston, Ark. Filed Aug. 29, 1911. Serial No. 646,739.

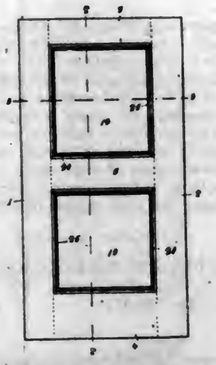
1. A well cleaner of the kind described comprising a main bar, a pair of curved resilient grabs secured adjacent the lower end thereof which normally contact each other, said grabs adapted to be spread apart and held in such position, means whereby they are held in such position comprising a trigger consisting of a short bar of suitable material, a funnel held immediately below the lower ends of the grabs.

2. A well cleaner of the kind described comprising a main bar, a pair of curved resilient grabs secured adjacent the lower end thereof which normally contact each other, said grabs adapted to be spread apart and held in such position, means whereby they are held in such position comprising a trigger consisting of a short bar of suitable material, a funnel held immediately below the lower ends of the grabs, said funnel adapted to be contracted and expanded comprising a band of metal contacting the outer periphery thereof and means interposed between



the upper portion of the funnel and the lower end of the main bar whereby said funnel is secured to the latter.

1,013,934. METALLIC DOOR. EVERETT N. GOULD, Jamestown, N. Y. Filed Mar. 15, 1911. Serial No. 614,657.



1. A method of constructing a metallic door which consists in forming one of the vertical stiles in two parts, forming the opposite stile of a single part, securing to the single part stile and to the parts of the two-part stile the cross stiles and panels and bending the single part stiles so as to overlap the parts of the double part stile and finally connecting the parts of said double part stile.

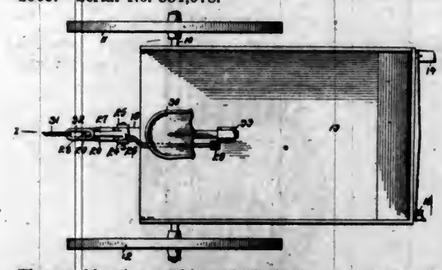
2. A method of forming a metallic door which consists in forming one of the stiles of separate parts, forming the opposite stile of a single part, securing panels and cross stiles to said vertical stiles, bending the single part stile to bring the panels parallel with each other and to overlap the parts of the double part stile, and finally connecting the parts of the double part stile.

3. A method of forming a metallic door which consists in forming one of the stiles of separate parts, forming the opposite stile of a single part, securing panels and cross stiles to said vertical stiles, bending the single part stile to bring the panels parallel with each other and to overlap the parts of the double part stile, and finally connecting fillers in certain of the cross stiles.

4. A method of constructing a metallic door which consists in forming one of the vertical stiles of two members and the opposite stile of a single member, connecting said vertical stiles with cross stiles and panels by welding, the blister of which is arranged on the inside, bending said single part stile to bring the cross stiles and panels into parallel relation, and welding the parts of the double part stile together.

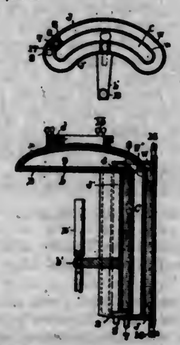
5. A method of constructing a metallic door which consists in forming one of the vertical stiles of two members and the opposite stile of a single member, connecting said vertical stiles with cross stiles and panels by welding, the blister of which is arranged on the inside, bending said single part stile to bring the cross stiles and panels into parallel relation, welding the parts of the double part stile together, filling the space formed between the stiles and panels with a refractory material, and securing filler members to hold the refractory material in place to close said space.

1,013,935. TRIPPING ATTACHMENT FOR VEHICLES. AUGUSTUS M. GREEN, Hamilton, Ill. Filed Dec. 20, 1909. Serial No. 534,078.



The combination with a vehicle body, of a rearwardly extending supporting bar removably secured thereto, apertured standards secured to the opposite sides of the supporting bar, a rearwardly extending bracket secured to the supporting bar, a pin extending vertically from said bracket, an enlarged head formed upon said pin and being provided with a lower beveled side, a lever pivoted between the apertured standards, a loop formed upon one end of the lever and loosely surrounding the pin, a forward extension formed upon the lever and provided upon its terminal with a foot operated treadle, an endless link surrounding said pin and held against displacement by frictional engagement with the head of said pin, the said link adapted to be disengaged from the head of the pin upon the depression of the treadle upon the upward movement of the lever substantially as and for the purpose set forth.

1,013,936. WATER-DISTILLING APPARATUS. JOHN MARION HARSH, Cleveland, Ohio. Filed May 1, 1911. Serial No. 624,374.



1. A water distributing apparatus having a boiler with a flat bottom and a dome-shaped top closing down about the said bottom, a condensing space segmental in cross section inclosed about its top by said dome and a water jacket segmentally shaped to conform to said condensing space and having a discharge opening in its outer portion into said boiler next beneath the dome therein.

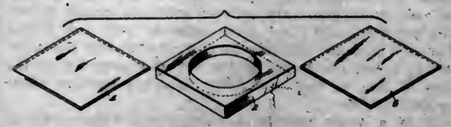
2. A distilling apparatus consisting of a boiler having a flat bottom and a dome-shaped top of greater area at its bottom portion than said bottom, a condensing space segmental in cross section depending from and carried by said top and having a flange at its inner edge over which the steam is adapted to pass into said space, and a water jacket about said space the full depth thereof and provided with an outlet at its top and outer portion through the wall of said dome on a level above the boiler bottom.

3. In a water distilling apparatus, a circular boiler of semi-elliptical cross section and a steam condensing chamber depending from one side thereof and a water-cooling jacket about the same forming a side portion of the boiler, said jacket and said condensing chamber being segmental in cross section and of uniform depth transversely, whereby a large condensing area is provided.

4. In a water distilling apparatus, a boiler and a segmentally shaped steam condensing chamber vertically at the rear thereof and open thereto at its top, and water-cooling jackets front and rear of said chamber segmental shape in cross section and having water communicating openings with the boiler above the bottom thereof and an overflow outlet from said boiler to maintain a shallow depth of water therein.

5. In a water distilling apparatus, a boiler having a steam condensing chamber open thereto at its rear and a water jacket encircling said chamber having an inlet and an outlet at its bottom and provided with a division wall between said inlet and outlet and also an overflow wall parallel with said division wall to maintain a fixed level of water in the boiler and jacket and promote a circuitous flow of water around the front and back of said chamber from bottom to top thereof.

1,013,937. COLOR-FILTER. JOSEPH ARTHUR HENRY HATT, Brooklyn, N. Y. Filed May 3, 1906. Serial No. 314,944.



1. A color filter including in combination a single member so shaped as to form an imperforate wall for the receptacle for the filtering medium, and light-transmitting means for completely closing the said receptacle.

2. A color filter including in combination a single member so shaped as to form an imperforate wall about the filtering medium, and opposed light-transmitting surfaces forming with the said member a closed receptacle for the filtering medium.

3. A color filter including in combination a plate having an internal portion thereof cut away to form an imperforate wall for the receptacle for the filtering medium, and a light-transmitting plate on each side of said first-named plate to form the faces of the receptacle.

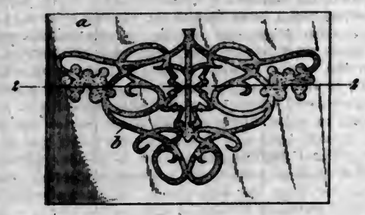
4. A color filter including in combination a plate having an internal portion thereof cut away to form an imperforate wall for the receptacle for the filtering medium, a light-transmitting plate on each side of said first-named plate to form the faces of the receptacle, and means for rendering the joints of the said plates air-tight.

5. A color filter including in combination a plate of glass having a portion within the plate cut away to form an imperforate wall for the receptacle for the filtering medium, a glass plate on each side of said first-named plate, a sealing material for rendering the edge joints of the said plates air-tight, and a binder placed about the edges of the said plates for holding them together.

[Claims 6 to 14 not printed in the Gazette.]

WITHDRAWN

1,013,938. [illegible]. OTTO L. HEINTZ, Buffalo, N. Y. [illegible] Filed [illegible]. Serial No. 631,800.



An article having a base containing copper and zinc, and a facing of silver secured to the base fusion.

1,013,939. BRUSH-GRUBBER. WILL R. HORNE, Glade, Cal. Filed Dec. 22, 1910. Serial No. 598,734.

1. In a brush grubber, a substantially horizontal frame, a pair of spaced parallel knives secured on the under surface of said frame and transversely of the line of draft, a V-shaped knife also secured to the under surface of said frame and rearwardly of said first named knives, the point of said "V" lying adjacent said first named knives, the angle between the cutting edge and the plane of the frame decreasing as the outward extension of the legs of the V, and means for applying tractive effort to said frame.

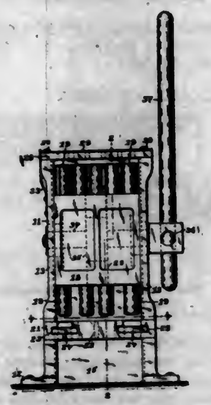
2. In a brush grubber, a frame comprising a pair of spaced parallel transverse members, a pair of longitudinal members secured to said first named members adjacent their middle points and having divergent extensions, a rear transverse member connecting the outward points of said extensions, downwardly and forwardly directed cutting elements secured to the under faces of said frame members, and means for applying tractive effort to said frame.

1,013,940. DENTAL PRESS. FERNANDO OSCAR JAQUES, Jr., Cranston, R. I., assignor to The Central Tool Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 28, 1911. Serial No. 617,420.

1. A dental press, comprising a frame, guide-ways in the frame, a slide reciprocably supported in the guide-ways, a plurality of plungers of graduated diameters on each end of the slide, a die-plate supported by the frame adjacent each end of the slide, each die-plate having a plurality of drawing holes corresponding in size to and in axial alinement with the plungers, and means for reciprocating the slide.

2. A dental press, comprising a frame having a base and vertical guide-ways, a slide in the vertical guide-ways, a plurality of plungers of graduated diameters secured to the bottom of the slide, a die plate secured to the frame below the slide and having a plurality of drawing holes corresponding in size to and in axial alinement with the plungers and a transverse slot, a blank holding member in the slot, a plurality of plungers of graduated diameters secured to the top of the slide, a die plate secured to the frame above the slide and having a plurality of drawing holes corresponding in size to and in axial alinement with the upper plungers, and means for reciprocating the slide.

3. A dental press, comprising a frame, guide-ways in the frame, a slide in the guide-ways, a plurality of plungers of graduated diameters on the slide, a die plate secured to the frame and having a plurality of drawing holes corresponding in size to and in axial alinement with the plungers and an undercut slot extending over one of the drawing holes, a blank holding member having a sliding fit in the slot, a shallow depression in each face of said member and a central hole, and means for reciprocating the slide.



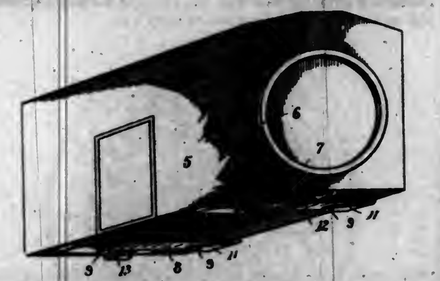
4. A dental press, comprising a frame, guide-ways in the frame, a slide in the guide-ways, a plurality of plungers of graduated diameters on the slide, a die plate secured to the frame and having a plurality of drawing holes corresponding in size to and in axial alinement with the plungers, a stripping plate having a plurality of holes corresponding in size to and in axial alinement with the drawing holes in the die plate, when in a position to coincide therewith, means for reciprocating the slide, and means for holding the stripping plate in an off-center position under spring tension.

5. A dental press, comprising a frame having a base and vertical guide ways, a slide in the guide ways, a plurality of vertical plungers of graduated diameters secured to the top of the slide, a die plate secured to the frame above the slide and having a plurality of drawing holes of graduated diameters corresponding in size to and in axial alinement with the plungers, a stripping plate reciprocally secured to the top of the die plate and having a plurality of holes of graduated diameter corresponding in size to and in axial alinement with the drawing holes in the die plate, when in a position to coincide therewith, means for holding the stripping plate in an off center position under spring tension, consisting of a spring secured to the frame and engaging with the stripping plate, and means for reciprocating the slide.

[Claims 6 to 8 not printed in the Gazette.]

1,013,941. COMBINED PACKAGE AND TOY. GEORGE H. KAY, Naugatuck, Conn. Filed May 4, 1911. Serial No. 625,009.

A combined toy and package, comprising a sheet metal receptacle formed to represent a car body, and provided with a removable cap for inclosing one end thereof, wheel bearing strips secured transversely to the under side of the body and having their end portions normally folded in against the strip, couplers attached to the end portions of the body and also normally folded in under



and against itself and axles and wheels for attachment to the said end bearings when disposed down, as shown.

1,013,942. FISHING-REEL. WILLIAM KRAMER, Brooklyn Hill, N. Y. Filed Oct. 14, 1907. Serial No. 397,237.

1. A fishing reel having two members, one of which is a frame and the other an end piece, said members being provided with devices adapted for engagement upon turning of one member relatively to the other, to hold the members in relation; an internal flange having teeth provided on its edge carried by the frame, a spring pawl to engage the teeth on the flange of the frame to automatically lock the end piece against backward movement with relation to the frame, a stud rotatively mounted in the end piece acting as a pivot for the pawl, means for rotating the stud, and means carried by the stud contacting with the pawl to disengage the pawl from the teeth upon rotation of the stud.

2. A fishing reel having two members, one of which is a frame and the other an end piece, said members being provided with devices adapted for engagement upon turning of one member relatively to the other, to hold the members in relation; an internal flange having teeth provided on its edge carried by the frame, a spring pawl to engage the teeth on the flange of the frame to automatically lock the end piece against backward movement with relation to the frame, a stud rotatively mounted in the end piece acting as a pivot for the pawl, means for rotating the stud, said pawl having a shoulder formed in its edge adjacent the stud, and a pin carried by the stud to contact with the shoulder to disengage the pawl from the teeth upon rotation of the stud.

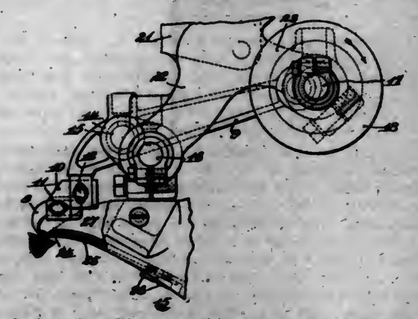
3. A fishing reel having two members, one of which is a frame and the other an end piece, said members being provided with devices adapted for engagement upon turning of one member relatively to the other, to hold the members in relation, an interna. flange having teeth carried by the frame, a spring pawl pivoted to the end piece to engage the teeth on the flange of the frame to automatically lock the end piece against backward movement with relation to the frame, a stud rotatively mounted in the end piece acting as a piece for the pawl, means for rotating the stud and an eccentric pin carried by the stud to contact with the shoulder to disengage the pawl from the teeth upon rotation of the stud.

1,013,943. BURNER-SHADE SUPPORT. CHARLES KUENHOLDT, Milwaukee, Wis., assignor to Olga A. Pfeil, Milwaukee, Wis. Filed Aug. 29, 1911. Serial No. 646,671.

1. In a gas supply pipe having a burner secured thereto; the combination of a pendant shield support comprising a sleeve, pairs of spaced forked spring clips secured to one end of the sleeve for frictional engagement with the gas pipe, an elbow bracket having a corrugated arm in telescopic union with the sleeve, a pendant shield in flexible union with the opposite bracket arm, said last named arm being of such length as to permit the shield to assume a position at a right angle to clear the sleeve when the latter is set vertically, and a spring tongue carried by the sleeve for friction engagement with the corrugated bracket arm.

2. A pendant shield support comprising a hollow sleeve rectangular in cross-section, a pair of forked and spaced clip members having shanks fitted within one end of the sleeve, means for securing the shanks of the fork members to the sleeve, an elbow bracket composed of flat metal having one arm, the upper edge of which is corrugated and adapted to slide within the sleeve, a spring tongue carried by the sleeve for engagement with the corrugated edge of the arm, links connected to the other arm of the bracket, and a pendant shield secured to the links.

1,013,944. TACK-PULLING MACHINE. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 8, 1911. Serial No. 619,775.



1. A tack pulling machine having, in combination, a jaw supporting arm, a crank directly connected to one end of the arm, an oscillatory supporting link pivotally connected to the arm intermediate its ends, a tack pulling jaw rigidly connected to the free end of the arm and having its tack engaging end directed toward the crank, and means for rotating the crank in a direction to cause the jaw to move forward over the tack and pull the tack during its backward stroke, substantially as described.

2. A tack pulling machine having, in combination, a jaw supporting arm, a crank directly connected to one end of the arm, an oscillatory supporting link pivotally connected to the arm intermediate its ends, a tack pulling jaw rigidly connected to the free end of the arm and having its tack engaging end directed toward the crank, a co-operating stationary jaw provided with a work engaging face extending substantially parallel to the direction of the tack pulling movement, and means for rotating the crank in a direction to cause the jaw to move forward over a tack and pull the tack on its backward stroke, substantially as described.

3. A tack pulling machine having, in combination, a tack pulling jaw arranged to move forward over a tack and pull a tack on its backward stroke and actuating mechanism for imparting the proper movement to the jaw comprising a crank, a supporting arm directly connected thereto at one end and having the jaw rigidly connected to its opposite free end and an oscillatory supporting link pivotally connected to the arm intermediate its ends, the actuating mechanism being constructed and arranged to impart a retard tack engagement movement and an accelerated tack pulling movement to the jaw, substantially as described.

4. A tack pulling machine having, in combination, a tack pulling jaw arranged to move forward over a tack and pull a tack on its backward stroke, a stationary jaw provided with a work engaging face extending substantially parallel to the direction of the tack pulling movement, and actuating mechanism for imparting the proper movement to the jaw comprising a crank, a supporting arm directly connected thereto at one end and having the jaw rigidly connected to its opposite free end, and an oscillatory supporting link pivotally connected to the arm intermediate its ends, the actuating mechanism being constructed and arranged to impart a retarded tack engaging movement and an accelerated tack pulling movement to the jaw, substantially as described.

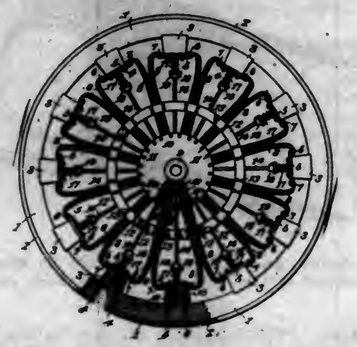
1,013,945. FLEXIBLE FIRE-RESISTING SHUTTER. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Jan. 27, 1908. Serial No. 412,775.

1. A slat for the construction of flexible shutters or curtains consisting of a strip or wall of metal bent to have its edges stand horizontally and formed with rolls, and the face of its body portion having its lower portion formed with a lip to overhang the upper edge of the face of a slat to be joined to it below, combined with a strip or wall of metal in rear of the first mentioned strip or wall bent at its lower edge and connected with said overhanging lip and provided with a roll doubled with the roll at the upper edge of the first mentioned strip to form a single roll, the two rolls thus provided constituting hinging members for connecting the slat with slats having similar hinging members.

2. A slat for the construction of flexible shutters or curtains consisting of a strip or wall of metal bent to have its edges stand horisontally and formed with rolls, and the face of its body portion having its lower portion formed with a lip to overhang the upper edge of the face of a slat to be joined to it below, combined with a separate strip or wall of metal in rear of the first mentioned strip or wall said last named strip being bent at its lower edge and inserted in said overhanging lip and connected with the upper edge of the first mentioned strip, substantially as described.

1,013,946. SPRING-WHEEL. WILLIAM B. MCPIKE, Bowling Green, Mo. Filed June 16, 1910. Serial No. 567,327.

1. A spring wheel including a rim, a hub, resilient spokes consisting of springs arranged in pairs and connected with the hub and with the rim at spaced points around the latter, and radially arranged spring rods also connected with the hub and the rim and slidable between the outer ends of the springs of each pair.



2. A spring wheel including a rim, a hub, resilient spokes consisting of springs, arranged in pairs and extending to the hub and connected at their outer ends with the rim, the members of each pair converging inwardly and having their inner portions fitted against the springs of the adjacent spokes radially arranged rods operating between the springs of each pair and connected with the hub and with the rim, and means located between the outer ends of the springs for cushioning the rods.

3. A spring wheel including a rim, a hub, an annular series of blocks arranged at intervals at the inner periphery of the rim of the wheel, and resilient spokes consisting of springs arranged in pairs and hingedly connected at their outer ends with the blocks at opposite sides thereof and having their inner ends fitted against the hub, centrally arranged plates mounted on the hub and located at opposite sides of the springs, spaced fastening devices connecting the plates and receiving the springs between them, radial rods extending from the hub to the blocks and fitted against the former and slidable in the latter, and cushioning means for the rods located between the springs of each pair.

4. A spring wheel including a rim, a hub, an annular series of blocks arranged at intervals at the inner periphery of the rim of the wheel, and resilient spokes consisting of springs arranged in pairs and hingedly connected at their outer ends with the blocks at opposite sides thereof and having their inner ends fitted against the hub, centrally arranged plates mounted on the hub and located at opposite sides of the springs, spaced fastening devices connecting the plates and receiving the springs between them, and intermediate rings located between the ends of the spokes and having spaced fastening devices connecting the rings and receiving the adjacent springs of the adjacent pairs of spokes between them.

5. A spring wheel including a rim, an annular series of blocks arranged at the inner periphery of the rim, a hub, resilient spokes consisting of springs extending from the hub and hingedly connected at their outer ends with the blocks, resilient rods extending from the hub to the blocks and slidable with respect to the latter, said rods operating between the springs of the spokes and cushioning springs mounted on the outer portions of the rods and having a bearing at the inner ends of the blocks to cushion the outward movement of the rods.

[Claims 6 to 10 not printed in the Gazette.]

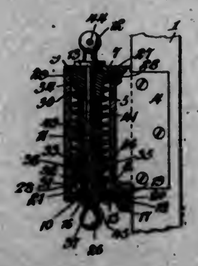
1,013,947. LAMP. GEORGE E. NEIL, Cleveland, Ohio. Filed Apr. 3, 1911. Serial No. 618,653.

1. A lamp body having a front door provided with a cluster of lenses differing in light-transmitting properties, and a removable light support within said body comprising a base plate, division plates at the front thereof, and electric lamp sockets between said plates.

2. A lamp body of cylindrical form having a window in its cylindrical wall, a front door for said body having a cluster of lenses mounted therein, and a light support

within said body subdivided into compartments corresponding in number and position to said lenses, one of said compartments being open to said window.

1,013,948. DOOR-HINGE. WILLIAM H. NORTHALL, Evansville, Ind., assignor of one-half to Charles W. Halsey, Evansville, Ind Filed Oct. 18, 1910. Serial No. 587,765.



1. A spring hinge comprising two members, one housed in the other, a pivot pin or pintle traversing the parts in axial relation thereto, a spring within the housed member, a ratchet member engaging one end of said spring and also lodged in the housed member and provided with teeth presented toward the corresponding end of the hinge, and a pawl for the ratchet carried by the corresponding end of the housing member and having a manipulating portion exterior to the said end of the housing member, said pawl being mounted for movement into and out of engagement with the ratchet in substantially the direction of the length of the pivot pin or pintle.

2. In a hinge, a spring, a ratchet member engaging the spring and provided with a circular series of teeth concentric with the longitudinal axis of the hinge and extending in the same direction as said longitudinal axis, and a pawl lever carried by the corresponding end of the hinge and provided with a pawl for engaging the ratchet, said lever being readily accessible for manipulation and mounted for movement to carry the pawl thereon into and out of engagement with the teeth of the ratchet member in substantially the direction of the length of the pivot pin or pintle.

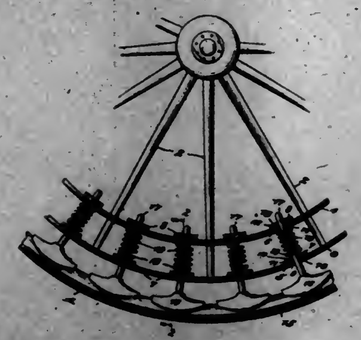
3. A spring hinge comprising a cylindrical casing, a housing member therefor having spaced heads adapted to receive the casing and close the ends thereof, a spring within the casing, means for coupling one end of the spring to the casing, a ratchet member within the casing and having means for coupling it to the other end of the spring, and a spring controlled lever exterior to one of the heads of the housing member and provided with a pawl extension projecting through the head carrying the lever into the path of the ratchet teeth of the ratchet member.

4. A hinge provided with a spring and a ratchet member connected to said spring, an inclosing member for the spring and ratchet member having a portion in relatively fixed relation to the ratchet member and provided with a slot or perforation formed with a tooth, and a pawl member carried by the relatively fixed member and provided with a pawl extending through the slot or perforation into operative relation to the ratchet teeth of the ratchet member, the pawl being shaped to coact with the tooth in the slot of the relatively fixed member to lock the pawl in engagement with the ratchet member.

5. In a spring hinge, a spring, a ratchet member connected thereto, a relatively fixed member in operative relation to the ratchet member and provided with a passage therethrough coincident with the teeth of the ratchet member, and a pawl member carried by said relatively fixed member and provided with a pawl adapted to the passage through the fixed member, said passageway and pawl being relatively shaped and coacting to lock the pawl against release from the ratchet member under working conditions.

[Claims 6 and 7 not printed in the Gazette.]

1,013,949. SPRING-FELLY AUTOMOBILE-WHEEL. THOMAS F. O'BRIEN, Highmore, S. D. Filed Dec. 22, 1910. Serial No. 598,870.



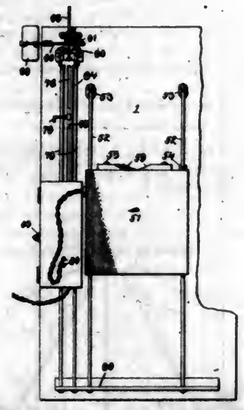
In a wheel of the class described and provided with outer and inner spaced rims having threaded openings, outer and inner boxing burs respectively provided with threaded portions engaging the said openings of the rims, the said boxing burs being provided with radial alining openings, a tire, felly sections engaging the tire and provided with radial movable stems operating in the openings of the boxing burs, the said stems being each provided with a stop, and coil springs on the said stems and bearing between said stops and the inner boxing burs, the diameter of the stops and springs being less than that of the threaded openings of the inner rim, so that said springs and stems may be removed through said openings, after the said inner burs have been detached from the inner rim, the said felly sections being detachably connected to the outer ends of the said stems.

1,013,950. PHOTOGRAPHIC-PRINTING MACHINE. GUSTAVE R. OLSON, Plattsmouth, Nebr. Filed July 13, 1910. Serial No. 571,746.

1. In a photographic printing machine, the combination of a support having an opening and means for supporting a negative at said opening, vertical guide rods on the side of said support opposite the negative supporting means, a box connected to the guide rods for vertical movement across the opening and open on the side next the support, means to secure said box at any desired vertical adjustment, and a lamp in and carried by the box and movable therein toward and from the support.

2. In a photographic printing machine, the combination of a support for a negative, vertical guide rods on the support, a box movable vertically on said guide rods across the negative support, a locking dog carried by the box and co-acting with one of the guide rods to support the box at any desired vertical adjustment, and a lamp in and carried by the box.

3. In a photographic printing machine, the combination of a support having an opening, an electric lamp on one side of the support and supported adjacent said opening, an electric switch in circuit with the lamp and including a movable member, a timing mechanism including a movable member, means actuated by the movable member of the timing mechanism to operate the movable switch member, a platen on the opposite side of and movable toward and from the support and means operated by the platen to set and reset the movable member of the timing mechanism.

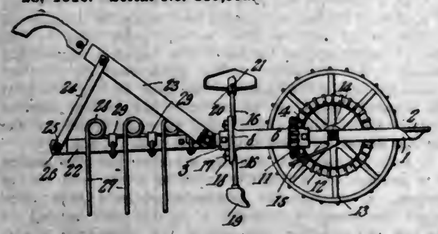


4. In a photographic printing machine, the combination of a support having an opening, an electric lamp adjacent said opening, an electric switch in circuit with the lamp and having a movable member, a trigger to operate the movable switch member and a timing mechanism having a movable member provided with trips to successively engage the trigger and move the latter and the movable switch member first in one direction and then in the reverse direction, and setting and releasing means for said movable member of the timing mechanism.

5. In a photographic printing machine, the combination of a support having an opening, an electric lamp adjacent said opening, an electric switch in circuit with the lamp and having a movable member, a trigger to operate the movable switch member and a timing mechanism having a movable member provided with trips to successively engage the trigger and move the latter and the movable switch member first in one direction and then in the reverse direction, setting and releasing means for said movable member of the timing mechanism, and a platen movable toward and from the opening of the support, said setting and releasing means being connected to and operated by said movable platen.

[Claims 6 to 14 not printed in the Gazette.]

1,013,951. COTTON-CHOPPER. WILLIAM A. PLEDGER, Jr., and BENAJAH W. WOOD, Geneva, Ala. Filed Jan. 25, 1910. Serial No. 539,992.



A cotton chopper, comprising a beam having a tubular portion intermediate of its ends, a drive wheel journaled to the beam forward of the tubular portion, a handle having its forward end attached to the beam in the rear of the tubular portion of the beam, two sleeves adjustably connected to the tubular portion of the beam and provided with cone bearing ends, a spool-shaped member surrounding and out of contact with the tubular portion and provided with cone bearings to engage and co-act with the cone bearings of the sleeves and by means of which the member is rotatably mounted upon the tubular portion of the beam, chopper blades carried thereby near the handle end of the beam, and coacting gears carried by the forward ends of the spool and the drive wheel.

1,013,952. AIR-CYCLE. JOSEPH H. PRICE, Fort Worth, Tex. Filed Apr. 3, 1911. Serial No. 618,605.

1. A flying machine having a frame including a tubular casing, a propeller, gearing including shafts journaled within said casing for driving said propeller, a plane mounted on said frame, movable wings below said plane, ball and socket joints mounted on said casing for connecting said wings to the casing, and a yielding member connected to the balls of said wings and tending to hold said wings in their normal positions.

2. A flying machine having a frame including a tubular casing, a propeller, gearing including shafts journaled within said casing for driving said propeller, a plane mounted on said frame above said casing, wings below said plane pivotally connected to said casing, handles for operating said wings, a rudder and a horizontally disposed rod connecting said rudder to said tubular casing.

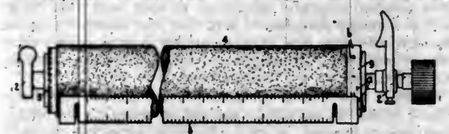
3. A flying machine having a frame including a tubular casing and a vertically disposed fork connected to the upper part of said casing and a horizontally disposed fork connected to the lower part of said casing, a shaft journaled in both forks, a balance wheel mounted on said shaft, a propeller, gearing including shafts journaled within said casing, pedals for actuating said gearing, a plane above said frame attached thereto, wings below said plane pivotally connected to said casing, and arm rests and handles rigid with said wings for operating said wings.

4. A flying machine having a tubular casing, a frame connected with said casing, a propeller, gearing including shafts journaled within said casing for driving said propeller, a rudder connected to said casing, a plane above said frame attached thereto, wings below said plane, and means for pivotally connecting said wings to said machine consisting of balls and shanks attaching the wings to the balls, sockets for said balls and a tubular casing connecting said sockets, and coil springs connected to said balls, and handles for operating said wings.

5. A flying machine having a tubular casing, a frame connected with said casing, a propeller, gearing including shafts journaled within said casing for driving said propeller, a rudder connected with said casing, a plane above said frame attached thereto, wings below said plane, balls and shanks attaching said wings to said balls, a tubular casing having sockets therein for said balls attached to said first named casing, coil springs within said last named casing attached to said balls for holding the same in operative relation, handles for operating said wings, and means for locking said wings in different operative positions.

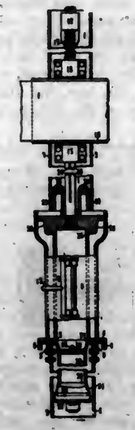
1,013,953. TYPE-WRITING MACHINE. DANIEL JUDSON RICHARDSON, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 23, 1907. Serial No. 407,760.

In a typewriting machine, the combination of a rotative platen, an index strip encircling the platen and affixed directly to the face thereof at one end, said strip having two sets of indices placed side by side and which extend around the platen, one set of indices being of linear measurement corresponding to the circumference of the platen and the other set being numerical indices progressively arranged and spaced apart according to the line spacing



of the machine, the extent of the last mentioned set of indices corresponding approximately to the extent of rotation of the platen required to feed a sheet from the point of introduction to the printing line, and an indicator coöperating with both sets of indices.

1,013,954. METHOD AND MACHINE FOR MAKING CEMENT SEWER-PIPE. ROBERT LEE RICKMAN, Vancouver, British Columbia, Canada. Filed June 9, 1910. Serial No. 566,076.



1. In apparatus of the character described, in combination, a mold, a sectional core, means to move the mold and core relatively to each other, and means to cause relative rotative movement between the sections.

2. In apparatus of the character described, in combination, a mold, a molding core therein, means to move the core longitudinally of the mold, the core being of a length to extend throughout the mold at any point in its molding movement, and means to rotate the core.

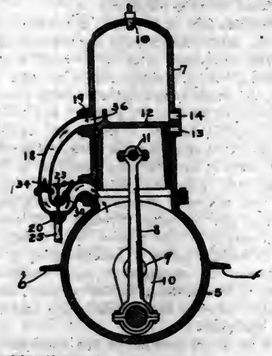
3. In apparatus of the character described, in combination, a mold, a molding core therein, means to move the core longitudinally of the mold, the core being of a length to extend throughout the mold at any point in its movement, and means to give the core simultaneous movement of translation and rotation.

4. In apparatus of the character described, in combination, a hollow mold having a flange adapted to retain material to be molded, said flange defining an opening in the mold, a movable sectional core in the mold adapted to extend throughout the mold during its movement, means to move the core longitudinally of the mold, and means to rotate a section of the core with respect to another.

5. In apparatus of the character described, in combination, a hollow mold having a flange adapted to retain material to be molded, said flange defining an opening in the mold, a movable sectional core in the mold adapted to extend throughout the mold during the molding movement, means to give the core a movement of translation, and means to rotate one section relatively to another.

[Claims 6 to 62 not printed in the Gazette.]

1,013,955. CARBURETER. ROBERT M. ROBERTS, Anderson, Ind. Filed Aug. 29, 1910. Serial No. 579,525.



1. The combination of a crank, a crank-case, a cylinder opening into said case, means for supplying air to the case, a piston connected with said crank and mounted in said cylinder, a conduit connected at one end to the crank-case and at the other to the cylinder, said conduit having a U-shaped bend at its lowest portion and an oil reservoir below said conduit having a discharge opening into the bottom of said U-shaped bend, a flange extending upwardly within the conduit around said opening to form a reservoir therein for gasolene which is drawn by suction caused by the outward stroke of the piston and which is blown into the cylinder through said conduit on the compression stroke of the piston.

2. The combination of a crank, a crank-case, a cylinder opening into said case, means for supplying air to the case, a piston connected with said crank and mounted in said cylinder, a conduit connected at one end to the crank-case and at the other to the cylinder, said conduit having a U-shaped bend at its lowest portion and an oil reservoir below said conduit having a discharge opening into the bottom of said U-shaped bend, a flange extending upwardly within the conduit around said opening to form a reservoir therein for gasolene which is drawn by suction caused by the outward stroke of the piston and which is blown into the cylinder through said conduit on the compression stroke of the piston, said flange also forming a seat for a needle-valve, and a needle-valve.

3. The combination of a crank, a crank-case, a cylinder opening into said case, means for supplying air to the case, a piston connected with said crank and mounted in said cylinder, a conduit connected at one end to the crank-case and at the other to the cylinder, said conduit having a U-shaped bend at its lowest portion and an oil reservoir below said conduit having a discharge opening into the bottom of said U-shaped bend, a flange extending upwardly within the conduit around said opening to form a reservoir therein for gasolene which is drawn by suction caused by the outward stroke of the piston and which is blown into the cylinder through said conduit on the compression stroke of the piston, said flange also having a seat for a needle-valve, a needle-valve, and a valve in the conduit between the needle-valve and crank-case to regulate the size of the opening in the conduit.

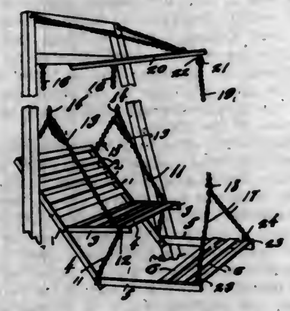
4. The combination of a crank, a crank-case, a cylinder opening into said case, means for supplying air to the case, a piston connected with said crank and mounted in said cylinder, a conduit connected at one end to the crank-case and at the other to the cylinder, said conduit having a U-shaped bend at its lowest portion and an oil reservoir below said conduit having a discharge opening into the bottom of said U-shaped bend, a flange extending upwardly within the conduit around said opening to form a reservoir therein for gasolene which is drawn by suction caused by the outward stroke of the piston and which is blown into the cylinder through said conduit on the compression stroke of the piston, said flange also having a seat for a needle-valve, a needle-valve, a valve in the conduit be-

tween the needle-valve and crank-case to regulate the size of the opening in the conduit, and perforated barriers in the lower bend of said conduit.

5. The combination of a crank, a crank-case, a cylinder opening into said case, means for supplying air to the case, a piston connected with said crank and mounted in said cylinder, a conduit connected at one end to the crank-case and at the other to the cylinder, said conduit having a U-shaped bend in its lowest portion and an oil reservoir below said conduit having a discharge opening into the bottom of said U-shaped bend, a flange extending upwardly within the conduit around said opening to form a reservoir therein for gasolene which is drawn by suction caused by the outward stroke of the piston and which is blown into the cylinder through said conduit on the compression stroke of the piston, said flange also having a seat for a needle-valve, a needle-valve, a valve in the conduit between the needle-valve and crank-case to regulate the size of the opening in the conduit, and a strainer in the conduit between said needle-valve and the discharge end of the conduit.

[Claims 6 to 9 not printed in the Gazette.]

1,013,956. COMBINATION-SWING AND OTHER ARTICLES OF FURNITURE. IRA B. SANDERS, Fort Worth, Tex. Filed Sept. 21, 1911. Serial No. 650,640.



1. As a new article of manufacture a back rest member, a seat member pivotally connected thereto adapted to fold and form a continuation of the back rest member, a foot rest member pivotally connected to said back rest member and adapted to fold and to swing to different positions relative to said back rest member to form different articles of furniture, hanging chains, a pair of supporting chains, one of each pair of chains being attached to the corners of one side of said back rest member and the other chain attached to the other corners of said back rest member, and a plurality of hooks for each of said pair of chains adapted to engage said hanging chains at different positions and thereby to form different articles of furniture with said members.

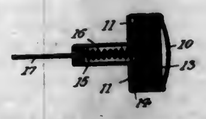
2. As a new article of manufacture, a back rest member, a seat member pivotally connected to said back rest member at the back edge and having hooks at the front edge, a foot rest member pivotally connected to said back rest member, a plurality of hanging chains, chains connected to said foot rest member and provided with hooks to engage one of said hanging chains at different positions to hold said foot rest at different elevations, and a pair of chains provided with a plurality of hooks to engage said hanging chains at different positions to form different articles of furniture, one of said pair of chains being connected to the corners of one side of said back rest member and the other chain connected to the corners on the other side of said back rest member.

3. As a new article of furniture, a back rest member, a chain attached to the corners of one side of said member and a chain connected to the corners of the other side of said member, a plurality of hooks attached to each chain, a seat member pivotally connected to said back rest member and provided with hooks at the front edge thereof adapted to engage said chains to hold said seat member at different angles relative to said back member, hanging chains, the hooks of said first mentioned chains being adapted to engage said hanging chains at different elevations to form different articles of furniture, a foot rest member pivotally connected to said back rest member, and chains attached to said foot rest member adapted to hold said foot rest member at different positions relative to said back rest member for forming different articles of furniture.

4. As a new article of manufacture, a back rest member, a chain on each side thereof attached to the upper and lower corners, a seat pivotally connected to said back rest member and provided with hooks adapted to engage said chains at different positions, a foot rest member pivotally connected to said back rest member and adapted to fold and to form different articles of furniture with said back member, and chains attached to said foot rest member and adapted to hold said foot rest member in different positions relative to said back rest member.

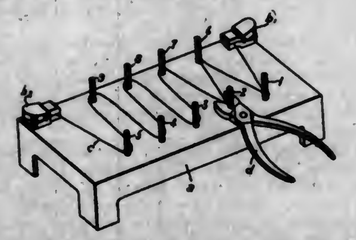
5. As a new article of manufacture, a chair provided with a back-rest member, a foot-rest, means by which said foot-rest may be pivotally connected to said back-rest member at different positions on said back-rest member, and chains adapted, when said foot-rest is projected in front of said back-rest member, to support the foot-rest to form a swing and when the foot-rest is reversed and projected in the rear of said back-rest member and pivotally connected thereto to form a chain to hold the foot-rest member and the back-rest member from spreading at the lower ends of the foot-rest and the back-rest member.

1,013,957. HAT-PIN GUARD. MAGDALENA SCHNEIDER, Jersey City, N. J. Filed June 17, 1911. Serial No. 633,747.



A hat pin guard comprising a pad, a pin-receiving nozzle having a flange that rests against said pad, and a cap engaging the pad and having a plurality of bendable spaced claws folded around the pad and against the nozzle flange thereby removably holding the pad between cap and flange.

1,013,958. SHAPING AND MOUNTING FILAMENTS, KARL SCHRÖTER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1911. Serial No. 600,732.

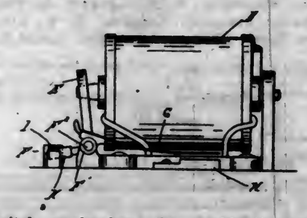


1. The method of shaping and mounting a filament of complex form consisting of bends and intervening portions supported by means engaging at its successive bends, which consists in giving to the filament a definite bent form conformable to its arrangement on its supporting means and placing it upon the supporting means as distinct operations.

2. The method of shaping and mounting long incandescent lamp filaments bent back and forth supported at the bends which consists in giving to a ductile metallic filamentary body a bent form conformable to its arrangement in the lamp and afterward placing it upon its final supporting system in such manner that the bends previously formed rest on the filament-engaging members of said system.

3. The method for the manufacture of filament mounts comprising long filaments carried back and forth on supporting frames which consists in giving the filamentary body a sinuous form on a suitable shaper and afterward placing the shaped filamentary body upon the supporting frame in such manner that its bent portions rest on the filament-engaging members of said frame.

1,013,959. MECHANISM FOR CHARGING STORAGE BATTERIES. JOHN B. SCHUO, Detroit, Mich. Filed Oct. 20, 1910. Serial No. 588,133.



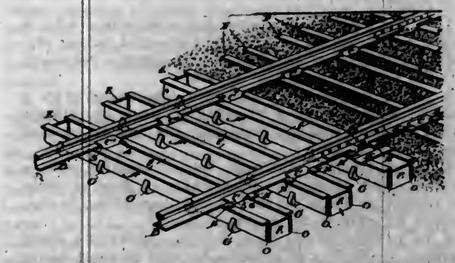
1. In switch mechanism, the combination with an electro-magnet, of its armature, a circuit closer operated by the armature upon the energizing of the magnet, and a circuit breaker also operated by the armature and acting to retain the latter normally in its retracted position.

2. In an electric switch mechanism, the combination with a vertically disposed electro-magnet, of a horisontal rock shaft therebeneath, an armature and a contact arm carried by the shaft, a circuit breaker below the armature, and a depending arm connected to the armature projecting in operative relation to the circuit breaker.

3. In switch mechanism, the combination with an electric magnet, of its armature, a circuit closer operated by the armature upon the energizing of the magnet, a projecting arm upon the armature, and a circuit breaker operated by said arm and acting to retain the armature normally in its retracted position.

4. In switch mechanism, the combination with an electric magnet, of a rockable shaft, an armature and a circuit closer secured to the shaft to rock therewith, an arm projecting from said armature, and a circuit breaker operated by said arm and acting to retain the armature normally in its retracted position.

1,013,960. METALLIC RAILROAD. JOHN S. SEYMOUR, Whitney Point, N. Y. Filed Feb. 26, 1906. Serial No. 303,065.



1. In a railway, the combination of a rail, a metallic tie, a clip, and a splice-bar and clip combined engaging the longitudinal flanges of the tie or of adjacent ties and the rail, substantially as described.

2. In a railway, a metallic channel-shaped tie having inside flanges on the upper edges adapted to receive, engage and firmly hold clips by which the rails may be secured to the tie, and having the material of the side of the tie so disposed that the part thereof adjacent to the flange will be slightly inside a perpendicular from the part of the side adjacent to the base, and adapted to hold the rail more firmly at the moment the trainload passes.

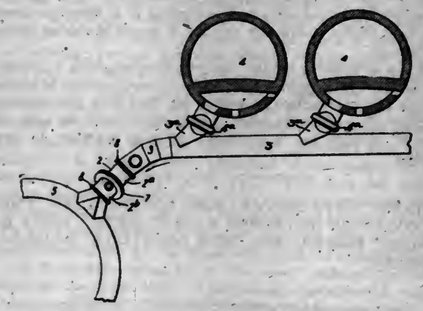
3. In a railway, a metallic channel-shaped tie having an inside flange on the upper edge thereof adapted to receive, engage and firmly hold clips by which the rails may be secured to the tie and adapted to hold the rail more firmly at the moment the trainload passes, and having the sides thereof substantially flat, and having the material of the side of the tie carrying the flange so disposed that the part thereof adjacent to the flange will be slightly inside a perpendicular from the part of the same side adjacent to the base.

4. In a railway, a metallic channel shaped tie having inside flanges on the upper edges and having recesses at the rail seats adapted to receive, engage and firmly hold clips by which the rails may be secured to the tie, substantially as described.

5. In a railway, a metallic channel shaped tie having flanges on the upper edges, having recesses to receive clips by which the rails may be secured to the tie, and means to prevent shifting of the tie, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,013,961. SAFETY DEVICE FOR BLAST-FURNACES. SAMUEL B. SHUTTS and WILLIAM MCHUGH, Joliet, Ill. Filed July 25, 1910. Serial No. 573,727.



1. In a safety device for blast furnaces the combination with the furnace hot blast main and hot blast valves to shut off the furnace stoves from the hot blast main, of a check valve in said main between the furnace and the stoves and arranged to close and prevent backward flow and escape of gases from the furnace.

2. In a safety device for blast furnaces the combination with the furnace hot blast main and hot blast valves to shut off the main from the furnace stoves, of a flap valve in said main between the furnace and stoves arranged to close and prevent escape of gases from the furnace, and means connected with said flap valve arranged to hold the valve in open position.

3. In a safety device for blast furnaces, the combination with the furnace stoves and the hot blast main connecting the furnace and furnace stoves of a water cooled check valve having a water cooled seat located and arranged in said hot blast main to prevent backward flow of gases from the furnace into the hot blast main.

4. In a safety device for blast furnaces, the combination with the furnace stoves, the hot blast main and stove valves on said main of a check valve on said hot blast main located and arranged to close and prevent passage of gases through the main from the furnace and a fluid pressure cylinder to open and hold the check valve in its open position when the blast is on the furnace.

5. In a safety device for blast furnaces, the combination with the furnace stoves, the hot blast main and stove valves on said main of a check valve on said hot blast main located and arranged to close and prevent passage of gases through the main from the furnace, a counterweight for the valve and a cylinder on the valve arranged to cushion and hold the valve in its open position.

[Claim 6 not printed in the Gazette.]

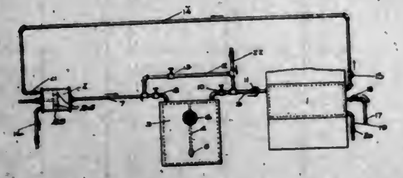
1,013,962. FILAMENT CONNECTION. FRANZ SKAUPY, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 26, 1910. Serial No. 573,867.

1. In a filament mount, the combination with a plurality of filaments arranged adjacent a carrier of a terminal connecting neighboring filaments which comprises a V member having its apex directed toward said carrier and supported therefrom by a projection from the apex of the V, the sides of the V being flat and having an extended surface in planes substantially parallel to the filaments and also having at their extremities tubular sockets in which the filaments are secured.

2. A terminal for filaments consisting of a strip of sheet metal bent to the form of a V having a projection adapted for mounting the same consisting of a portion punched from said strip and extending in a direction from the apex of the V opposite to that in which the sides thereof extend.

3. In a filament mount, the combination with a plurality of filaments mounted adjacent a carrier of a V member to the extremities of which the filaments are secured electrically connecting them, a projection from the apex of the V serving for attachment of said member to the carrier.

1,013,963. APPARATUS FOR CONTROLLING THE CONDITION OF CLOSED RECEPTACLES. EDWIN B. SMITH, Fremont, Ohio. Filed Oct. 3, 1910. Serial No. 584,990.



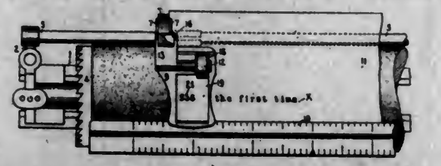
1. In apparatus for controlling the condition of closed receptacles, the combination of a closed conduit circuit including a receptacle and a pump, and means normally closing the conduit adjacent the points at which the receptacle is connected in the circuit, said means being adapted to be opened by fluid pressure upon the operation of said pump.

2. In apparatus for controlling the condition of closed receptacles, the combination with a closed receptacle, of a closed tank, a first pipe leading into said tank, a second pipe leading from said tank to said receptacle, a third pipe leading from said receptacle, a pump connected with said first and third pipes, and valves disposed in the second and third pipes, said valves being normally closed and being adapted to open on operation of said pump.

3. In apparatus for controlling the condition of closed receptacles, the combination with a closed receptacle, of a closed tank, a first pipe leading into said tank, a second pipe leading from said tank to said receptacle, a third pipe leading from said receptacle, a pump connected with said first and third pipes, valves disposed in the second and third pipes, said valves being normally closed and being adapted to open on operation of said pump, and a pipe connected with said first and second pipes and arranged to form a by-pass around said tank.

4. In apparatus for controlling the condition of closed receptacles, the combination with a closed receptacle, of a pump, a conduit leading from the outlet side of said pump to said receptacle, a check-valve in said conduit opening toward said receptacle, a second conduit leading from said receptacle to the inlet side of said pump, and a check-valve in said second conduit opening from said receptacle.

1,013,964. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed June 26, 1909. Serial No. 504,459.



1. In a typewriting machine, the combination of a cylindrical platen; and a left-hand marginal paper finger adapted to bear on the paper at the printing line, said finger being apertured at and adjacent to the printing line, the aperture being of a sufficient size to enable the types to print therethrough.

2. In a typewriting machine, the combination of a carriage; a platen carried thereby; a rod supported by said carriage; and a paper finger carried by and adjustable longitudinally of the platen along said rod, said paper finger being apertured at the printing line, the aperture being of a sufficient size to expose the paper beneath the paper finger and to permit writing through the aperture and at said line.

3. In a typewriting machine, the combination of a cylindrical platen; a platen scale; and an adjustable paper finger coöperative with a margin of the paper and guiding the paper from the platen scale to and beyond the printing line and apertured at that portion thereof which is at and adjacent to the printing line, the size of the aperture being sufficient to expose the margin of the paper beneath the paper finger and to expose printed matter at the printing line and within the field of the paper finger.

1,013,965. FILAMENT-SUPPORTS FOR INCANDESCENT LAMPS. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 28, 1905. Serial No. 271,605.

1. In an incandescent lamp, the combination with a fragile metal filament of a plurality of coiled springs supporting said filament at a plurality of points in its length so as to permit contraction thereof.

2. In an incandescent lamp, the combination with a filament supported in a plurality of loops of resilient means for independently regulating the tension on each loop of said filament.

3. In an incandescent lamp, the combination with a metal filament consisting of a plurality of loops of resilient supporting means for each of said loops acting to compensate for changes in the length thereof.

4. In an incandescent lamp, the combination of a metal filament, a plurality of supports for said filament, and a plurality of tension regulating devices engaging the filament between adjacent filament supports, each of said devices acting upon the portion of the filament engaged by it independently of other portions.

5. In an incandescent lamp, the combination of a filament, a plurality of supports arranged to support said fila-

ment in a plurality of loops, and a coiled spring connected to each of said loops.

[Claims 6 to 24 not printed in the Gazette.]

1,013,966. WARP STOP-MOTION FOR LOOMS. WALLACE I. STIMPSON and ALONZO E. RHOADES, Hopedale, Mass, assignors to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 31, 1911. Serial No. 618,217.

1. In a warp stop-motion for looms, vertically movable detectors arranged in two parallel banks and suspended from and maintained elevated by intact warp-threads, said detectors being almost wholly below and concealed by the warp-threads, fixed guides for said detectors, located below the warp, the lower ends of the detectors extending below said guides, a stationary back-stop for each bank, to support the rear edge of a released detector, the front stop having its upper edge at a distance below the lower ends of the detectors of the front bank, to leave an unobstructed sight opening through which the lower ends of the detectors of the rear bank, and a released detector in such bank, can be clearly seen by the weaver, connected feeler members, one for each bank of detectors, and means normally acting to vibrate said members in a horizontal path below the back-stops, a released detector engaging one of the feeler members and arresting movement thereof, such arrangement of the front stop and relative location of the feeler members permitting a released detector in either bank to be readily located.

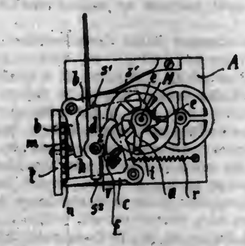
2. In a warp stop-motion for looms, opposite, fixedly supported brackets each having a depending, frontwardly curved foot, a feeler rock-shaft supported by the lower ends of said feet, open seats in the upper portions of said feet, located opposite each other, transverse and parallel detector-guides removably mounted in the seats, a bank of longitudinally slotted detectors loosely strung upon each guide and suspended from the warp-threads between the lease-rods, said lease-rods, positioning means for the same, mounted on the brackets, a plurality of fixedly connected feeler members, one for each bank of detectors, supporting means on the inner faces of the bracket feet, on which the feeler members are slidably sustained, and operating connections between the rock-shaft and said members to effect normal vibration thereof in a substantially horizontal path.

3. In a warp stop-motion for looms, opposite, fixedly supported brackets each having an upturned ear, an end-plate bolted to each ear on its inner face, a pivot member carried by and extended inwardly from each end-plate, a fore and aft guide member fulcrumed on the inner end of each of the pivot members and having eyes at its ends opposite the extremities of the adjacent end-plate, lease-rods loosely extended through the eyes and vertically supported by the warp threads, the end-plates limiting endwise movement of the lease-rods, a head on the inner end of each pivot member, having an upright slot and a pin crossing the lower end of such slot, and a warp-rest detachably held in the slotted heads and vertically supported by the transverse pins, combined with two banks of detectors suspended from and hanging below the warp-threads between the lease-rods, the warp rest being located between the two banks of detectors.

4. In a warp stop-motion for looms, vertically movable controlling-detectors arranged in two transverse, parallel banks, suspended from and maintained elevated by intact warp-threads, a pair of feeler members normally vibrating back and forth in a substantially horizontal path below the banks of detectors and adapted to be engaged and arrested by a released detector, and a fixed transverse bar for each bank, to support the rear edge of a released detector when in engagement with its feeler member, the upper edge of the front bar being below the lower ends of the front bank of detectors and exposing to view the lower ends of the detectors in the rear bank, whether the latter detectors be in normal or abnormal position.

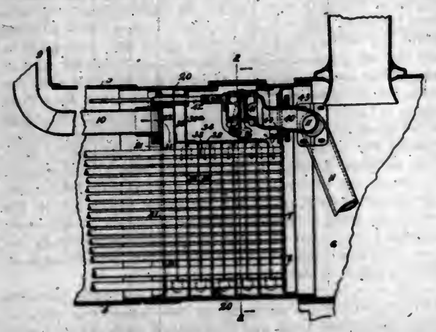
5. In a warp stop-motion for looms, opposite, fixedly supported brackets each having a depending, frontwardly extended foot, a feeler rock-shaft supported by the lower ends of said feet, transverse and parallel detector-guides sustained by the upper portions of the feet, a bank of longitudinally slotted detectors loosely strung upon each guide and suspended from and almost wholly below the warp-threads, fixedly connected feeler members, one for each bank, supports on the inner faces of the bracket feet, on which the feeler members are slidably sustained, operating connections between said feeler members and the rock-shaft, to effect normal vibration of the former in a substantially horizontal path, and a back-stop for each bank of detectors, said stops being fixedly mounted on the front and rear edges of the bracket feet above the feeler path, each stop serving to support the rear edge of a released detector in the corresponding bank, the upper edge of the front stop being below the lower ends of the detectors of the front bank, to permit an unobstructed view of the lower end of a released detector in the rear bank.

1,013,967. AUTOMATIC CARTRIDGE-EXPLODING DEVICE. GEORG STOCKER, Hanau, Germany. Filed July 5, 1911. Serial No. 636,947.



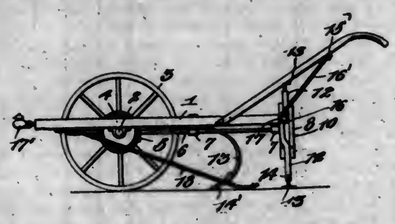
A device of the character described, comprising a clockwork, a cartridge drum, a cartridge drum feed lever and an exploding lever operated by the clockwork, a locking lever adapted to simultaneously engage the feed lever and exploding lever, and clock-actuated means for tilting said locking lever out of said engagement.

1,013,968. STEAM-BOILER SUPERHEATER. HOWARD D. TAYLOR, Reading, Pa. Filed June 29, 1909. Serial No. 504,957.



A boiler having a partition flue sheet therein forming a cylindrical superheater section rearward of the smoke-box flue sheet, a longitudinal partition in said section forming a storage chamber therein above the flues, and a series of vertical baffle plates in said section extending across the flues; the outer edges of said plates being provided with spacing flanges extending between the plates and forming insulating partitions substantially as described.

1,013,969. COTTON-CHOPPER. MORGAN C. TEDDER, Simms, Tex. Filed June 19, 1911. Serial No. 633,972.



1. In a cotton chopper of the class described, the combination with a frame oscillatingly mounted on an axle, and driving wheels carried on said axle; of a shaft extending longitudinally of the frame, means to rotate said shaft through the rotation of the axle, a chopping device carried on said shaft, comprising a body member, arms pivoted thereto, spring means carried by said body member adapted to retain said arms in a predetermined position, and means carried by the frame adapted to contact with said arms to swing the same on their pivots against the action of said springs as said chopping device is rotated.

2. In a cotton chopper of the class described, the combination with a frame oscillatingly mounted on an axle, and driving wheels carried by said axle; of a shaft extending longitudinally of the frame, means to rotate said shaft with the rotation of the axle, a chopping device carried on the free end of said shaft, comprising a body member, arms pivoted intermediate of their ends to said body member, said arms being provided with shoulders adjacent their pivotal points, spring members carried by said body member having contact with said shoulders to normally retain said arms in a predetermined position, and means carried on said frame in the path of said arms adapted to swing said arms against the action of said springs as the chopping device is rotated.

3. In a cotton chopper of the class described, the combination with a frame oscillatingly mounted on an axle, and driving wheels carried on said axle; of a shaft extending longitudinally of the frame, means to rotate said shaft with the rotation of the axle, a body member carried on the free end of said shaft to form a substantial head at that end thereof, a pair of arms pivoted intermediate of their ends to opposite sides of the body member, said arms being provided with shoulders adjacent their pivotal points, hoes carried on opposite ends of said arms, spring members carried by said body member and engaging the shoulders of said arms to retain the same in a predetermined position, and a roller carried on the rear end of said frame in the path of said arms to swing the same against the action of said springs as said chopping device is rotated.

1,013,970. AUGER FOR BORING REVERSED-TAPER HOLES. SETH B. THOMPSON, Jersey City, N. J. Filed Sept. 6, 1910. Serial No. 580,779.

In a tool for boring a reversed taper hole, the combination with main gear and means to rotate the same, together with the general framework necessary in the makeup of the brace, hollow auger 1, and plunger 2, running through the center of said auger, both of which are connected to the gear by which they are rotated, cutting knives detachably attached to the plunger at the lower end and means at the upper end to engage the mechanism which gives the plunger a downward movement, means to throw said mechanism in and out of engagement, means to connect auger and plunger to gearwheel, also means to connect the knives detachably attached to the plunger, substantially as and for the purpose set forth.

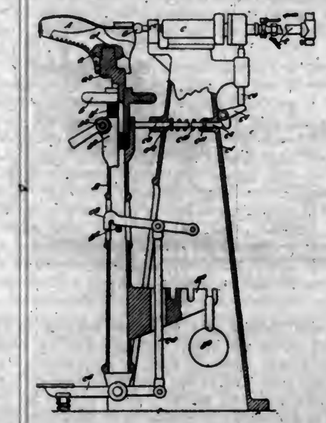
1,013,971. APPARATUS FOR HAMMERING THE HEELS OF BOOTS AND SHOES. JOHN WILBUR TIERNEY, Upper Norwood, England. Filed Jan. 18, 1911. Serial No. 602,461.

1. In a machine for hammering boots and shoes the combination of a power hammer, a hammering tool adapted to transmit the blows of the hammer, a movable rest for the boot or shoe, and mechanism controlled by the said rest for starting and stopping the said hammer automatically.

2. In a machine for hammering boots and shoes, the combination of a power hammer, a hammering tool adapted to transmit the blows of the hammer, a rest for the boot or shoe adapted to turn around a fulcrum, and mechanism controlled by the turning of the said rest around the fulcrum for starting and stopping the said hammer automatically.

3. In a shoe machine for hammering boots and shoes, the combination of a pneumatic hammer, a movable rest for the boot or shoe, and valve mechanism controlled by the movement of said rest for putting the pneumatic hammer into and out of operation.

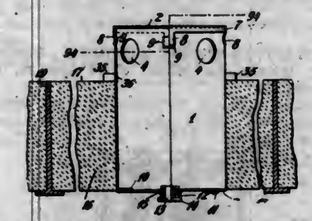
4. In a machine for hammering boots and shoes, the combination of a pneumatic hammer, a rest for the boot or shoe adapted to turn around a fulcrum, and valve mechanism controlled by the turning of the said rest around the fulcrum for putting the pneumatic hammer into and out of operation.



5. In a machine for hammering the heels of boots and shoes, the combination of a power hammer, a fixed guide or socket in which such tool is slidably mounted, an adjustable rest for the boot or shoe, adjustable heel guides situated at opposite sides of the hammering tool, a movable head carrying the aforesaid hammer, rest and guides, and a stationary abutment arranged to coöperate with the hammer for putting the latter into and out of operation.

[Claims 6 to 9 not printed in the Gazette.]

1,013,972. JUNCTION-BOX. WALTER S. TIMMIS, New York, N. Y. Filed Nov. 13, 1906. Serial No. 343,236.



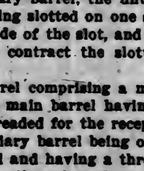
1. In a junction box, a tubular body having a tube-receiving opening near one of its ends and provided with means for holding said body in desired relation to a slab when fitted thereto, in combination with caps secured to the upper and lower ends of the tubular body, one of said caps provided with an insulating bushing fitting within an opening of the cap.

2. In a junction-box, a tubular body provided with a tube receiving opening near one end of the body and a stop projecting outwardly from the exterior of said body, in combination with caps secured to the upper and lower ends of the tubular body, the last-named cap having an opening therethrough and an insulating bushing fitted in said cap.

1,013,973. RADIATOR. SAMUEL E. TRISLER, Dayton, Ohio. Filed Feb. 28, 1910. Serial No. 546,310.

1. In a radiator, inlet and outlet chambers, a plurality of conduits connecting the chambers, radiator fins attached to each of the conduits comprising a plurality of arches of heat conductive material arranged in rows, the individual arches of each row being set out of registry with succeeding arches of the same row, each conduit and its attached radiator fins being independent of and separate from every other conduit and the fins thereof.

2. In a radiator, inlet and outlet chambers, independent conduits connecting the chambers, radiator fins carried on the conduits comprising a multiplicity of pieces of heat conductive material attached at opposite ends to the same conduit to form a plurality of arches each of such arches being out of registry with the neighboring arches.



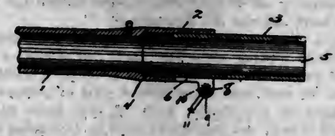
3. In a radiator, inlet and outlet chambers, independent conduits connecting the chambers, radiator fins carried on the conduits comprising plates of heat conductive material extending intermediate successive conduits and parallel therewith, said plates having therein a multiplicity of slots, the strips of material formed intermediate such slots being bent into loops or arches projecting beyond the plane of the plate.

4. In a radiator, inlet and outlet chambers, conduits connecting the chambers, radiator fins located intermediate the conduits and attached thereto, comprising strips of heat conductive material attached to the conduits at regular intervals the portion of strips between the points of attachment being bent into arches of which the wall of the conduit forms the base, the arches of succeeding strips of heat conductive material attached to the same conduit being bent out of registry with those of the preceding strip.

5. In a radiator, inlet and outlet chambers, a plurality of conduits connecting the chambers, radiator fins independently carried by each of the conduits comprising a multiplicity of strips of heat conductive material attached at intervals to the same, conduit and forming non-registering arches intermediate the points of attachment, each conduit with its attached fins being independent of every other conduit and fins.

[Claims 6 and 7 not printed in the Gazette.]

1,013,974. SHOTGUN-BARREL. PETER F. VANDENBOSCHE, Harrison township, Macomb county, Mich. Filed Feb. 2, 1911. Serial No. 606,258.

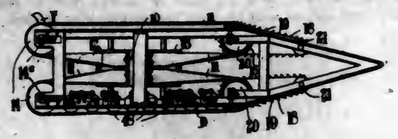


1. A shot gun barrel comprising a main barrel and an auxiliary barrel, the main barrel having an enlarged and contractible end integrally formed therewith adapted to receive an end of the auxiliary barrel, and means for contracting said enlarged end to maintain the barrels in fixed relation.

2. A shot gun barrel comprising a main barrel and an auxiliary barrel, the main barrel having an enlarged end integrally formed therewith, said enlarged end being threaded for a portion of its length to receive the threaded end of the auxiliary barrel, the unthreaded portion of said enlarged end being slotted on one side and having an ear or lug on each side of the slot, and a screw carried by the lugs adapted to contract the slotted portion of the enlarged end.

3. A shot gun barrel comprising a main barrel and an auxiliary barrel, the main barrel having an enlarged end counterbored and threaded for the reception of the auxiliary barrel, the auxiliary barrel being of a different choke than the main barrel and having a threaded end whereby it may be screwed into the enlarged end of the main barrel, and a clamp connected with said enlarged end whereby the barrels may be maintained in axial alinement.

1,013,975. FLAX-PULLING MACHINE. CHARLES HENRI VESSOT and ALLAN GILMOUR MATHER, Ottawa, Ontario, Canada. Filed Apr. 13, 1910. Serial No. 555,299.



1. In a flax puller and in combination a plurality of pairs of contacting pulling belts adapted to engage and pull the flax plants, a main driving shaft extending across all the belts, each of said belts extending around the shaft and being operatively connected thereto in such a way as to be driven thereby, and means for supporting the belts and shaft.

2. In a flax puller and in combination, a plurality of pairs of contacting pulling belts adapted to engage and pull the flax plants, a main driving shaft having pulleys at intervals thereon with which each of the belts are engaged, each of said belts extending around the shaft and being operatively connected thereto in such a way as to be driven thereby, and means for supporting the belts and shaft.

3. In a flax puller and in combination, a main driving shaft having pulleys at intervals thereon, a plurality of flax pulling elements each formed with a pair of belts adapted to contact on the outer side with the belts on the adjacent element, the flax plants being adapted to be engaged between the belts, said belts at their center extending over pulleys which impart a turn to the belts, said belts then extending over and contacting with the pulleys on the driving shaft, means for supporting the driving shaft and belts, and means for feeding the belts against the flax plants.

4. In a flax puller and in combination, an improved pulling element, comprising a pair of forwardly and downwardly inclined belts, pulleys supporting said belts in such a way that the belts on one side contact with each other, and on the other side are formed with a twist extending below the contacting surface and at substantially right angles thereto, driving pulleys engaged with the portion of each belt extending below the contacting portion, means for operating said driving pulleys, means for supporting all of said pulleys, and means for advancing the belts against the flax plants.

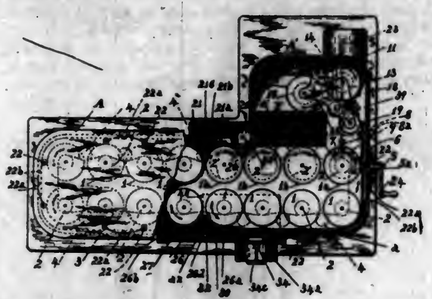
5. In a flax pulling machine and in combination, a plurality of pulling elements, each comprising a frame, pairs of pulleys at opposite sides thereof, a pulling belt mounted on said pair of pulleys, a pair of pulleys at the lower part of the frame, both of said belts extending over each of said last mentioned pulleys, and being adapted to contact with the belts in adjacent elements, a shaft having pulleys thereon over which the belts are adapted to extend, means for supporting all the pulling elements, and means for advancing the pulling elements against the flax plants.

[Claims 6 to 14 not printed in the Gazette.]

1,013,976. APPARATUS FOR DISPLAYING AND VENDING POSTAL CARDS. BEN S. WALLICK, Springfield, Ill. Filed Nov. 18, 1910. Serial No. 593,118.

1. The combination of a magazine adapted to contain a stock of cards on edge with the face of one card contacting with the back of the adjacent card, vertical rotative propellers adapted to propel the cards on edge in succession in a horizontal circuit from the front to the back of the stock of cards, means for actuating the propellers, and means for placing on edge at the back of the stock of cards, the cards previously propelled in succession from the front of the stock of cards.

2. The combination of a magazine adapted to contain a stock of cards on edge with the face of one card contacting with the back of the adjacent card, rotative vertical propellers propelling cards successively on edge in a horizontal circuit outwardly from the magazine and back to the magazine, and means for separating the cards propelled outwardly from the magazine.



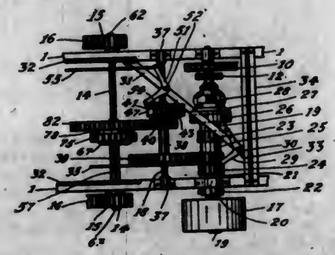
3. The combination of a magazine adapted to contain a stock of cards on edge, vertical rotative propellers adapted to propel cards on edge in succession in a horizontal circuit from and to the magazine, means for actuating the propellers, and spring-pressed means for keeping each card in succession in contact with said propellers.

4. The combination of a magazine adapted to contain a stock of cards, half-speed rotative propellers adapted to extract cards from the magazine, means for actuating the half-speed propellers, full-speed rotative propellers adapted to propel cards away from the magazine and also adapted to propel them back to the magazine, and means for actuating said full-speed propellers.

5. The combination of a magazine adapted to contain a stock of cards on edge, a spring-actuated carriage within the magazine and automatically adjustable with respect to the stock of cards in the magazine, rotative card propellers mounted on the carriage, and means for actuating said card propellers.

[Claims 6 to 9 not printed in the Gazette.]

1,013,977. TRACTION-ENGINE GEARING. EDWIN M. WHEELOCK, Minneapolis, Minn. Filed Apr. 30, 1910. Serial No. 558,570.



1. In a traction engine, a driving shaft, a power transmission sleeve on said shaft having thereon two pinions, a countershaft, driving gears thereon, a clutch for connecting the sleeve to rotate with the driving shaft, an idler shaft, an idler sleeve thereon provided with gears adapted to be placed in or out of mesh with said driving gears, one of said idler gears being adapted to mesh with the pinions on the transmission sleeve, and means to position said idler sleeve so that said last named gear will mesh with either one or the other of said pinions on the transmission sleeve thereby effecting driving connection for rotating the countershaft at different speeds.

2. In a traction engine, a driving shaft, a power transmission sleeve on said shaft having thereon two pinions, spaced apart so as to leave an intermediate portion of the sleeve free from gearing, and a driving pulley, a countershaft, change-speed gearing adapted to connect said countershaft with said power transmission pinions including a gear adapted to mesh with either of said pinions, a clutch for connecting the sleeve to rotate with the driving shaft, and means to position said gear so as to mesh with either of said pinions or to occupy a position in said intermediate portion of the sleeve between said pinions.

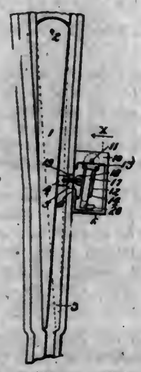
3. In a traction engine, a driving shaft, a power transmission sleeve on said shaft, two pinions thereon, spaced apart so as to leave an intermediate portion of the sleeve free from gearing, a driving pulley on said shaft, a clutch for connecting the sleeve to rotate with the driving shaft, a countershaft, a plurality of gears thereon, and slidable means intermediate said countershaft and said transmission pinions for connecting the latter with each of said gears or permitting said transmission sleeve to be disconnected therefrom.

4. In a traction engine, a driving shaft, a power transmission sleeve on said shaft having thereon two pinions, a countershaft, a plurality of gear wheels connected thereto, an intermediate idler shaft, a plurality of slidable gears on the idler shaft, one of which is adapted to mesh with either pinion on the transmission sleeve and with one of the countershaft gear wheels and the other of which is adapted to mesh with a second gear wheel on the countershaft, means for sliding the gear wheels on the idler shaft to and from engaging positions, and means for connecting the power transmission sleeve to rotate with the driving shaft.

5. In a traction engine, a driving shaft, a power transmission sleeve on said shaft having thereon two pinions, a clutch for connecting the sleeve to rotate with the driving shaft, a countershaft, a plurality of gear wheels connected thereto, an intermediate idler shaft, a slidable sleeve on the idler shaft, a plurality of gears mounted on the sleeve, a reversing pinion suspended from the sleeve, one of the gears on such slidable sleeve being adapted to mesh with either pinion on the transmission sleeve and with one of the countershaft gear wheels, and one of the other gears on the slidable sleeve and the reversing pinion being adapted to engage a second gear on the countershaft, and means for sliding the sleeve on the idler shaft to move the gears thereon to and from engaging positions.

[Claim 6 not printed in the Gazette.]

1,013,978. SWITCH-POINT LOCK. WILLIAM HENRY HARRISON WELTON, Akron, Ohio. Filed Sept. 25, 1911. Serial No. 651,276.



1. The combination with a switch-point of a railroad track of an oscillatory-arm mounted adjacent thereto, means for connecting said oscillatory-arm with said switch-point, a resilient element carried by said oscillatory-arm, and a roller revolving upon a fixed axis and engaged by the free end of said resilient element for assisting in shifting said oscillatory-arm and its connected switch-point to one of its extreme positions.

2. The combination with a switch-point of a railroad track of an oscillatory-arm mounted adjacent thereto, means for connecting said oscillatory-arm with said switch-point, a resilient element carried by said arm, and a roller revolving upon a fixed axis and positioned in the path of said resilient element and coöperating with said fixed element for assisting in shifting the latter and its connected switch-point to one of its extreme positions.

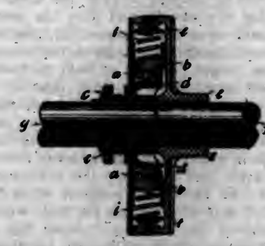
3. The combination with a switch-point of a casing positioned adjacent thereto, a resilient element mounted in said casing, means for connecting said resilient element with said switch-point, and a deflecting element arranged in the path traveled by said resilient element and engaged by the latter tending to deflect said resilient element to one of its extreme positions whereby said connected switch-point is similarly moved.

4. The combination with a switch-point of a railroad track of a casing mounted adjacent thereto, an oscillatory-arm mounted in said casing, means for connecting said oscillatory-arm with said switch-point, a resilient element carried by said oscillatory-arm, and a roller revolving upon a fixed axis mounted in the path of said resilient element and coöperating therewith for assisting in shifting said oscillatory-arm and its connected switch-point to one of its extreme positions.

5. The combination with a switch-point of a railroad track of an oscillatory-arm mounted adjacent thereto, a casing inclosing said arm, means for connecting said oscillatory-arm with a switch-point, a resilient element provided with an inclined portion at its free end and carried by said oscillatory-arm, and a roller mounted upon a fixed axis and engaged by the inclined end of said resilient element and coöperating therewith for assisting in shifting said oscillatory-arm at its connected switch-point to one of its extreme positions.

[Claim 6 not printed in the Gazette.]

1,013,979. CLUTCH. LUIS WIRTZ, Edgbaston, Birmingham, England. Filed Dec. 6, 1909. Serial No. 531,632.



1. A ball clutch comprising in combination, coacting rotatable clutching members, one of said members having a plurality of ball-engaging surfaces increasing in size in a direction axially away from the balls whereby the latter may ride over said surfaces at their more shallow portions but will be arrested by the larger portions of said surfaces, the companion clutch member being provided with means for positively engaging the balls to prevent bodily movement thereof independently of such member but to permit rotation of the balls within said means whereby upon axial movement of one clutch member toward the other, the said balls will first engage the more shallow portions of said surfaces, to effect partial clutching of said members and, upon further movement, will engage the larger portions of said surfaces to positively clutch said members in locked relation.

2. A ball clutch comprising in combination, clutch balls, coacting rotatable clutch members, one of said members having an initial smooth ball-engaging surface and ball-locking surfaces gradually increasing in size in a direction axially from said balls and from said smooth surface whereby the balls may ride over said smooth surface and the more shallow portion of said ball-locking surfaces but will be arrested by the larger portions of said ball-locking surfaces, the companion member being

provided with means for positively engaging the balls to prevent bodily movement thereof independently of such member but to permit rotation of the balls within said means, whereby upon axial movement of one clutch member toward the other said balls will engage the shallower portions of said ball-locking surfaces to effect partial clutching of said members and, upon further movement, will engage the larger portions of said ball-locking surfaces to positively lock said members in clutched relation.

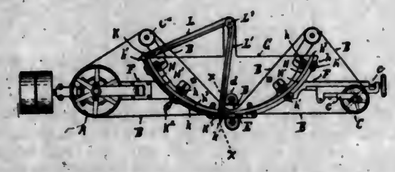
3. A ball clutch comprising in combination, coacting rotatable clutch members, one of said members having a plurality of spirally arranged tapering ball-engaging surfaces with the more shallow portions toward the balls and the larger portions axially away from the balls whereby the latter may ride over the shallow portions but will be arrested by the larger portions, the companion member being provided with means for positively engaging the balls to prevent bodily movement thereof independently with respect to such member but to permit rotation of the balls within said means whereby upon axial movement of one clutch member toward the other the said balls will first engage the more shallow portions of said surfaces to effect partial clutching of said members and, upon further movement, will engage the larger portions of said surfaces to positively lock the said members in clutched relation.

4. A ball clutch comprising in combination, coacting rotatable clutch members, one of said members having an initial smooth surface and a plurality of spirally arranged ball-engaging portions merging with said smooth surface and tapering therefrom whereby the balls after passing the smooth surface may ride over the more shallow tapering surfaces but will be arrested by the larger portions of said tapering surfaces, the companion clutch member being provided with sockets embracing the balls to a sufficient extent to prevent bodily movement thereof independently of said member but to permit rotation of the balls within said socket whereby upon axial movement of one clutch member toward the other the balls will first engage the smooth and then the more shallow portions of said tapering surfaces to partially effect clutching of said members and, upon further movement, will engage the larger portions of said surfaces to positively lock said members in clutched relation.

5. A ball clutch comprising in combination, clutch balls, coacting rotatable clutching members, one of said members having a plurality of ball-engaging surfaces increasing in size in a direction axially away from the balls whereby the latter may ride over the shallower portions and be arrested by the larger portions of said surfaces, the other clutch member engaging the balls whereby upon axial movement of one member toward the other the balls will first engage the more shallow portions to effect partial clutching of said members and, upon further movement, will engage the larger portions of said surfaces to positively lock said members in clutched relation, and means for gradually increasing the force of engagement of said balls with said surfaces as the balls reach the larger portions thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,013,980. BELT SANDPAPERING-MACHINE. OLMEDO CORTEZ WYSONG, Greensboro, N. C. Filed Mar. 11, 1909. Serial No. 482,663.



1. In a mechanism of the character indicated, a traveling abrasive belt supported upon a plurality of pulleys with its abrasive face toward the pulleys, a guideway for the work located within the loop of said belt, and a plurality of forms supporting the rear face of said belt at opposite sides of said guideway.

2. In a mechanism of the character indicated, a traveling abrasive belt supported upon a plurality of pulleys with the abrasive face of said belt toward the pulleys, a plurality of stationary forms oppositely arranged to support the rear face of different reaches of said belt, and means to feed the work between said forms to simultaneously treat opposite faces of the work.

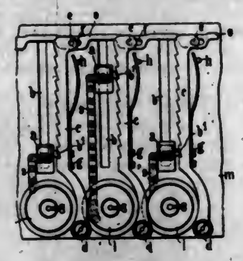
3. In a mechanism of the character indicated, a curved guideway, means for feeding the work along said guideway, oppositely arranged non-rotary forms on opposite sides of said guideway to support sections of a traveling abrasive belt in contact with opposite faces of the work.

4. In a mechanism of the character indicated, a guideway, means for feeding the work along said guideway, a stationary form at one side of said guideway, a non-rotary form located at the opposite side of said guideway, and exerting a yielding pressure upon the rear face of a belt, said forms being adapted to support sections of a traveling abrasive belt in contact with opposite faces of the work.

5. In a mechanism of the character indicated, a curved guideway, a pivotally supported work feeding mechanism adapted to feed the work in either direction in said guideway, a form at one side of said guideway to support a section of traveling abrasive belt in contact with the work, and a form located at the opposite side of said guideway to support a section of traveling abrasive belt in contact with the rear face of the work with a yielding pressure.

[Claims 6 to 13 not printed in the Gazette.]

1,013,981. DEVICE FOR ADJUSTING SLIDES IN CALCULATING-MACHINES. BERNHARD BEHR, Dresden, Germany. Filed Apr. 17, 1911. Serial No. 621,564.



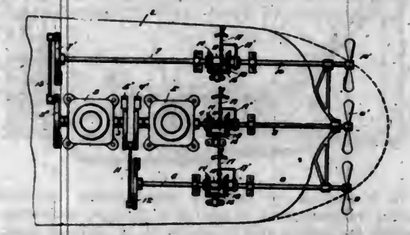
1. In a device for adjusting slides in a calculating machine the combination of a slide, a dial plate, the slide being movable in a slot of said plate, an element pivotally supported adjacent the slot, means for interlocking said slide with said element at a plurality of positions, and means for swinging said element about its pivot to release said slides.

2. In a device of the class described, the combination of a dial plate, a plurality of slides movable independently of each other in slots of said plate, an element pivotally supported adjacent each slot and interlockable with said slide at a plurality of positions and means for swinging each of said elements independently of the others about its pivot to release the slide interlocked therewith.

3. In a device of the class described the combination of a dial plate, a plurality of slides movable independently of each other in rectilinear slots in the plate, an element pivotally supported adjacent each slot and interlockable with said slides at a plurality of positions, and a common means for swinging all of said elements about their pivots to release all of the slides interlocked therewith.

4. In a device of the class described the combination of a dial plate, a plurality of slides movable independently of each other in slots of said plate, an element pivotally supported adjacent each slot and interlockable with said slides at a plurality of positions, and a common means for swinging all of said elements simultaneously about their pivots to release simultaneously all of the slides interlocked therewith.

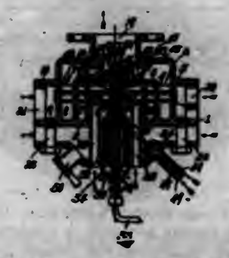
1,013,982. MARINE PROPULSION. JOHN BENYO, Cudahy, Wis., assignor of one-half to John Slamka, Cudahy, Wis. Filed Jan. 10, 1911. Serial No. 601,859.



1. The combination in a marine vessel of tandem engines and their shafts, counter-shafts in wrist-plate and pitman connection with the engine shafts, a series of propeller shafts, mechanism for clutching each propeller-shaft with one of the shafts aforesaid alined therewith, and means for reversing the normal forward drive-motion of each propeller-shaft.

2. The combination in a marine vessel of engine and counter-shafts connected to run in the same direction, a miter-gear wheel fast on each of said engine and counter-shafts, an idler in mesh with each miter-wheel, a series of propeller-shafts each alined with one of the shafts aforesaid, a lever-controlled friction-sleeve splined on each propeller-shaft and adjustably engaging the adjacent engine shaft or counter-shaft in opposition to the gear-wheel thereon, and a lever-controlled miter-gear wheel splined on each propeller-shaft to be brought in and out of mesh with one of the aforesaid idlers.

1,013,983. CARBURETER. PEHR MARTIN BLOM, Abo, Russia, assignor, by direct and mesne assignments, of two-thirds to Jacob Bruun and one third to Frank Sparks, Toledo, Ohio. Filed Apr. 10, 1909. Serial No. 489,225.



1. In a carbureter, a carbureting chamber, and outlet chamber, a plurality of walls surrounding the carbureting chamber in spaced relation thereto and to each other, the spaces between the walls being in communication with each other and with the carbureting and outlet chambers, and passages through the carbureting chamber for the exhaust from an engine.

2. In a carbureter, an initial carbureting chamber, passages around through and below said chamber for exhaust gases from an engine, and air-tubes leading to said carbureting-chamber from the atmosphere and heated by such exhaust.

3. In a carbureter, a carbureting chamber, means for injecting fuel therein, air-tubes leading to such chamber, channels arranged around such chamber and in communication therewith, and means for directing the exhaust from an engine around said air-tubes and around said chamber and channels.

4. In a carbureter, a casing having a central chamber and annular passages therearound, said chamber and a portion of said passages being intercommunicating, conduits for directing exhaust gases around the outer of said passages and through said passages and chamber and under the same, tubes heated by said exhaust for the passage of air from the atmosphere to said chamber, and means for injecting the liquid fuel into said chamber.

5. In a carbureter, a body having a carbureting-chamber therein, a chamber above said body, means for admitting air to said carbureting-chamber, means for injecting liquid fuel into said chamber, means for causing the fuel mixture to have a circuitous course in passing from said carbureting-chamber to said other chamber, and conduits provided through and around said carbureting-chamber for the passage of exhaust gases.

[Claims 6 to 17 not printed in the Gazette.]

1,013,984. PROCESS OF MAKING NITRATES. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Dec. 7, 1909. Serial No. 531,869.

1. The process of producing nitrate by treating a solution containing a nitrite with an oxid of nitrogen and oxygen substantially as hereinbefore described.

2. The process of producing nitrate by treating a solution containing a nitrite and a nitrate with a gaseous mixture containing an oxid of nitrogen and oxygen substantially as hereinbefore described.

3. The process of producing practically pure calcium nitrate by treating a solution containing calcium nitrite and calcium nitrate with a gaseous mixture containing an oxid of nitrogen and oxygen substantially as hereinbefore described.

1,013,985. BUCKLE. ROYL A. BROWN, Ashland, Ohio. Filed Oct. 8, 1909. Serial No. 521,680.

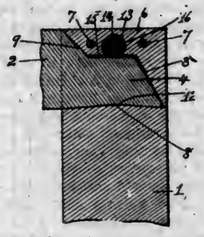
1. A one-piece buckle having a flanged bar extending across one end thereof and having flanged sides substantially the full depth of said bar and said bar provided with teeth at its inner edge projecting laterally and terminating substantially in line with the outer edge of said bar and approximately in the same plane as the inner edges of said side flanges.

2. A one-piece buckle having cross-bars at its ends and a cross-bar at its middle provided with plain edges and depressed between its ends to a plane beneath the face of the buckle, and one of said end cross-bars having a smooth outer edge on the face of the buckle and a series of sharpened teeth along its inner edge terminating substantially in line with said outer edge transversely of the buckle and spaced from said outer edge approximately the full depth of the buckle between its face and bottom.

1,013,986. SQUARE. LLEWELLYN W. COLE, South Shaftsbury, Vt., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt., a Corporation of Vermont. Filed Mar. 29, 1909. Serial No. 486,370.

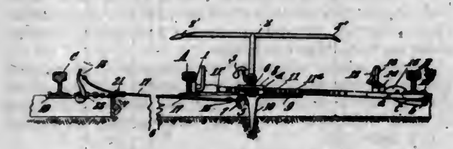
1. A square composed of separable members, one having a tang and the other provided with a recess adapted to receive said tang, and with a chamber opening into said recess, and an oblong rotatively floating-key loosely confined within said chamber and adapted in one rotary position to simultaneously engage the outer wall of said chamber and said tang through said chamber-opening.

2. A square composed of separable members, one having a tang and the other provided with a recess adapted to receive said tang, and with a chamber opening into said recess, and with an aperture extending through a side-wall of said recess into said chamber, and a detachable



key rotatively confined in said chamber adapted in one rotary position to simultaneously engage the outer wall thereof, and through said opening a surface on said tang parallel with the sides of the tang-bearing member, said key being provided with means whereby it can be operated through said aperture in said recess-wall.

1,013,987. TRACK-ADJUSTER. JOHN CONTOS, Grand Island, Nebr. Filed May 8, 1911. Serial No. 625,910.



1. A rail straightener, comprising a fixed element for engagement with a road-bed, a bar, means for adjusting the bar with respect to said element, a pushing head at one end and a pulling hook at the other end of the bar, and means connected to a third rail and the fixed element of the bar for locking the parts in operative relation.

2. A rail straightener, comprising a fixed element for engagement with a road-bed, a bar, means for adjusting the bar with respect to said element, and hinged at opposite ends of said bar, one having a bearing plate for engaging inside a rail and the other having a hook for engaging outside the opposite rail, a member for engaging inside of the last named rail, and means connected to a third rail and the fixed element for locking the parts in operable relation.

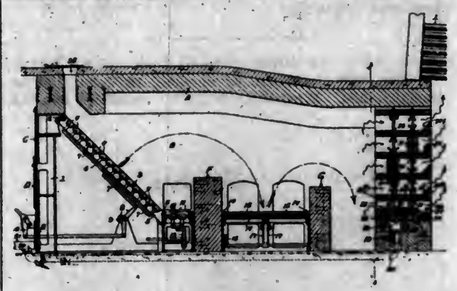
3. A rail straightener, comprising a fixed element for engagement with a road-bed, a rack bar slidably mounted through said element and having at its opposite ends respectively rail-engaging heads of which one includes a hook, a gear journaled in said element and engaging the teeth in the bar, and a ratchet mechanism for locking the bar.

4. A rail straightener, comprising a fixed element for engagement with a road-bed, a rack bar slidably mounted through said element and having at its opposite ends respectively rail-engaging heads of which one includes a hook, a gear journaled in said element and engaging the teeth of the bar, a rack mechanism for locking the bar, and means connected to a third rail and the fixed element for locking the parts in operable relation.

5. A rail straightener, comprising a fixed element for engagement with a road-bed, heads for engaging with the rails, respectively, a bar connecting said heads and made up of sections detachably connected and removable to adjust the device to differently spaced rails, means on said elements for moving the bar through it in either direction at will, and means connected to the third rail and fixed element for locking the parts in operable relation.

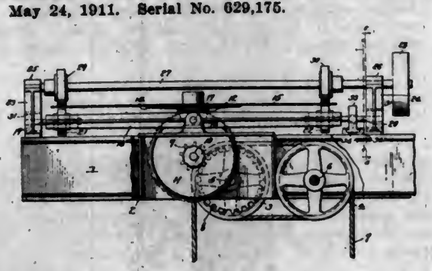
[Claims 6 to 14 not printed in the Gazette.]

1,013,988. METHOD FOR UTILIZING SPENT BARK OR ANALOGOUS MATERIAL AS A FUEL. GEORGE M. CONWAY, Milwaukee, Wis. Filed Apr. 16, 1910. Serial No. 555,942.



In a method of utilizing disintegrated combustible fibrous substances as a fuel in a furnace, consisting of feeding the ignited fuel substance in an inclined sheet incidental to consumption thereof, admitting air thereto during its travel, freeing the burning fuel from coarse, non-combustible refuse during its travel by agitation, collecting the freed refuse at the base of the inclined sheet of traveling fuel, passing the light carbureted hydrogen gas that is freed from the burning fibrous substance over an ignited bed of coal that is partitioned from the inclined traveling sheet of fuel substance whereby the light carbureted hydrogen gas is mingled with the rich carbon liberated from the bed of coals and thus enriched to the proper degree of combustion, collecting the mingled hydrogen and carbon gases in a chamber whereby they are properly mixed, thereafter slightly confining, separating and superheating the confined mixed gases in their travel, and admitting air to said confined gases prior to their escape whereby the proper amount of oxygen is supplied for perfect combustion.

1,013,989. REVERSING FRICTIONAL DRIVING MECHANISM. FREDERICK W. DAEUBLE, Buechel, Ky. Filed May 24, 1911. Serial No. 629,175.



1. In a frictional driving mechanism, the combination with a pair of driving members, of a flexible driven member, and means for forcing said flexible member into engagement with either of said driving members.

2. In a reversing frictional driving mechanism, the combination with a pair of frictional driving members, of a flexible driven member, a rock frame, and rollers carried by said rock frame for forcing said frictional member into engagement with either of said driving members.

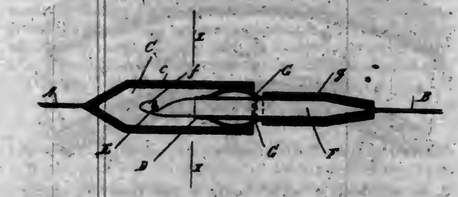
3. The combination with a pair of driving members, of a flexible driven member, means for forcing said flexible member into engagement with either of said driving members, and shifting mechanism for operating said means.

4. The combination with a pair of driving members, of a flexible driven member capable of engaging either of said driving members, and means for forcing said driven member into engagement with either of said driving members.

5. The combination with a driving shaft, of a flexible driven member, driving members carried by said driving shaft, rollers arranged to engage said flexible member in alinement with said driving members, and means for moving and holding said rollers into engagement with said flexible member.

[Claims 6 to 18 not printed in the Gazette.]

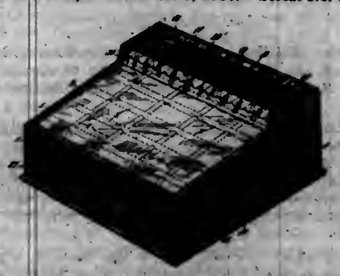
1,013,990. ELECTRIC SWITCH. JAMES EBL DU VAL, Bowie, Tex., assignor of one-half to Ezra A. Lee, Bowie, Tex. Filed May 12, 1911. Serial No. 626,804.



1. The combination with two line wire sections, of a case secured to one section and provided with a pair of contact springs and a pin arranged crosswise of the case, a bar secured to the other wire section and provided with a hook for engaging with the said pin when thrust into the case between the contact springs, and springs secured to the edges of the said bar and bearing against the case.

2. The combination, with two line wire sections, of a case having one end secured to one section and having a pair of flat contact spring projecting within it from its other end, said casing having also a pin arranged crosswise of it, a flat bar secured to the other wire section and provided with a hook for engaging with the said pin when thrust into the case between the contact springs, and springs secured to the edges of the said bar and bearing against the case and working in the spaces between the said contact springs.

1,013,991. COIN-DISPLAYER. FRAUE C. FABRY, Berlin, Germany, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (incorporated in 1906.) Filed Feb. 8, 1907. Serial No. 356,472.



1. A check receiver, having in combination, a table having corrugations and on which checks are deposited, a pushing device above said table having complementary corrugations, and means for reciprocating said device over the table.

2. A check receiver, having in combination, a table having corrugations and on which checks may be deposited, a pushing device having complementary corrugations, a traveling conveyer, and means for moving said pushing device to carry the checks from the table and deposit them on the conveyer.

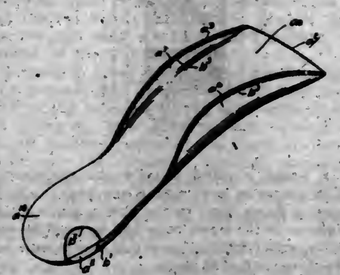
3. A check receiver, having in combination, a table having corrugations, and on which checks may be placed, a plate over said table and having complementary corrugations, and means for producing relative motion between said table and plate to deposit the checks in the receiver.

4. A check receiver, having in combination, a table having corrugations and on which checks may be placed, a traveling conveyer, a plate over said table and having corrugations complementary to those on the table, and means for producing relative motion between said plate and table to deposit the checks on the conveyer.

5. A check receiver, having in combination, a table having corrugations and on which checks may be placed, a traveling conveyer, a plate over said table and having corrugations complementary to those on the table and a common means for moving said conveyer and said plate.

[Claims 6 to 14 not printed in the Gazette.]

1,013,992. FOOT-CUSHION. ROLON W. FOSTER, Needham, Mass; assignor to Essex Manufacturing Company, Kittery, Me., and Lynn, Mass., a Corporation of Maine. Filed Jan. 10, 1910. Serial No. 537,212.



1. A foot cushion or arch support comprising a molded homogeneous elastic cellular body, having at one end a heel seat or pad and a thick narrowed body portion intermediate its ends, upwardly and outwardly curved flanges extending along said narrowed body portion and merging at either end into said body portion, one of the said flanges being higher than the other and the upper surface of the cushion and the flanges curved from side to side, substantially as described.

2. A foot cushion or arch support comprising a molded homogeneous elastic cellular body, having at one end a heel seat or pad and a thick narrowed body portion intermediate its ends, upwardly and outwardly curved flanges extending along said narrowed body portion and merging at either end into said body portion, one of said flanges being higher than the other and the upper surface of the cushion and the flanges curved from side to side, the said body portion having an upper and under covering of molded leather stitched together along their edges, substantially as described.

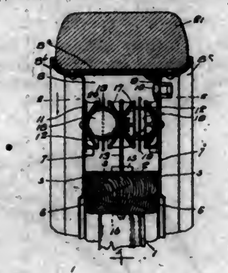
3. A foot cushion or arch support comprising a homogeneous elastic, cellular-body shaped to the natural curves of the foot and having thick and thin portions, said thick portions or greatest mass being intermediate the ends of said support, said elastic cellular-body acting against the foot in lines perpendicular to the contacting surface of the foot and throughout the extent of said cushion and support.

1,013,993. DENTAL TOOTH-REGULATING APPLIANCE. FRANK A. GOUGH, Brooklyn, N. Y. Filed Apr. 29, 1911. Serial No. 624,116.

1. A dental tooth regulating appliance of the arch-bar type comprising an anchor-band, means on said band for securing it upon a tooth, a tube for the reception of an arch-bar, and a detachable, interlocking connection between said tube and anchor-band.

2. A dental tooth regulating appliance of the arch-bar type comprising an anchor-band, means on said band for securing it upon a tooth, a socket on said band, a tube for the reception of an arch-bar, and a latch on said tube having detachable, interlocking engagement with said socket.

1,013,994. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,063.



1. In a wheel, a wheel body, a rim surrounding the same, guide plates at each side of the wheel body having their outer portions fixed to the rim, a plate spring disposed edgewise to the wheel body and inclosed between the guide plates, and frictional means of engagement between the guide plates and said spring.

2. In a wheel, a wheel body, a rim surrounding the same, guide plates at each side of the wheel body having their outer portions fixed to the rim, a plate spring annulus disposed edgewise of the wheel body and surrounding the same and inclosed between the guide plates, and frictional means of engagement between the guide plates and said spring annulus.

3. In a wheel, a wheel body, a rim surrounding the same, guide plates at each side of the wheel body having their outer portions fixed to the rim, a plate spring annulus disposed edgewise to the wheel body and having free lateral movement upon the wheel body and inclosed by the guide plates, and frictional means of engagement between the guide plates and said spring annulus.

4. In a wheel, a wheel body, a rim therefor, a spring annulus disposed edgewise to and surrounding the wheel body, and means of engagement between the wheel body and the spring annulus and means between the spring annulus and rim for transmitting power from the wheel body to the rim disposed and adapted for constantly subjecting portions of the spring annulus to torsion directly from the regular action of sustaining the load, said last mentioned means being on each side of said spring annulus.

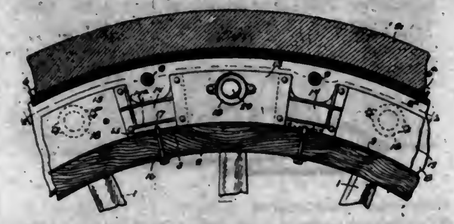
5. In a wheel, a wheel body, a plate spring annulus disposed edgewise to the periphery of the wheel body and freely laterally movable relative to the wheel body and positioned substantially along the circumferential median line of the wheel body, means of engagement between the spring annulus and wheel body, a rim for the wheel body, and means of engagement between opposite sides of the spring annulus and the rim.

[Claims 6 to 23 not printed in the Gazette.]

1,013,995. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,064.

1. In a wheel, a wheel body, a rim therefor, and a spring annulus surrounding the wheel body and engaging the same and comprising spaced plate spring sections disposed endwise with respect to each other and edgewise with respect to the wheel body and rim, and connectors rigidly connecting adjacent ends of the sections, and means of engagement between the annulus and the rim.

2. In a wheel, a wheel body, a rim therefor, an annulus surrounding the wheel body within the rim and disposed edgewise to the wheel body and rim, said annulus comprising laterally spaced spring plate sections, and rigid diagonal sections, each of said diagonal sections having its edge adjacent the wheel body notched intermediate the ends of the respective rigid section, a projection extending from the periphery of the wheel body into the notch of each rigid section, and means of engagement between the annulus and the rim.



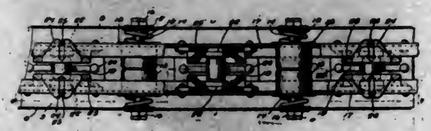
3. In a wheel, a wheel body, a rim therefor, spring plate sections disposed between the rim and wheel body, rigid connectors connecting said sections and arranged circumferentially of the wheel body, and each formed with a notch adjacent the wheel body, and a projection extending from the wheel body into each notch and forming a rocking engagement for the respective rigid section with the wheel body, and means of engagement between the spring plate sections and the rim.

4. In a wheel, a wheel body, a rim therefor, guide plates extending from the rim past portions of the wheel body and engaging the same, bolts spacing and connecting the guide plates, spring plate sections disposed edgewise of and engaging the wheel body and spaced laterally between the guide plates, longitudinally between the bolts, and laterally disposed connections between the guide plates and spring sections.

5. In a wheel, a wheel body, a rim therefor, spring plate sections in engagement with the wheel body and disposed at opposite sides of the circumferential median line thereof, a diagonally disposed connector for said sections, and laterally acting frictional means of engagement between the spring plate sections and rim.

[Claims 6 to 14 not printed in the Gazette.]

1,013,996. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,065.



1. In a wheel, a wheel body, a rim therefor, a pair of oppositely facing rigidly connected cones having a journaled engagement with the wheel body intermediate their faces, and means of resilient and frictional engagement for the cones on opposite sides thereof with the rim.

2. In a wheel, a wheel body, a rim therefor, oppositely facing cups having engagement with one of the first two mentioned elements, and bearing members frictionally engaging said cups and connected together and having means of journaled connection with the other of the first two mentioned elements, such means of connection engaging the bearing members intermediate their points of frictional contact with the cups.

3. In a wheel, a wheel body, a rim therefor, shiftable relative thereto, sets of cones, each having a journaled connection to one of the two first mentioned elements, a pair of cups for each set of cones engaging the outer faces thereof, spring pressure means for forcing said cups toward each other against the cones, and means of engagement between the cups and the other of the first two mentioned elements.

4. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring having marginal flanges, frictional means of engagement between one side of the ring and wheel body, and resilient means of engagement between the other side of the ring and the rim, said frictional means of engagement including cups partly embraced by the marginal flanges.

5. In a wheel, a wheel body, a rim therefor, circumferentially disposed, rings between the rim and wheel body, brackets extending from the wheel body and between the rings, a shaft journaled in each of the brackets, frictional contacting means between the shafts and rings adapted to exert pressure tending to shift the rings laterally, and resilient connections between the rings and rim.

[Claims 6 to 16 not printed in the Gazette.]

1,013,997. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,066.

1. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring between the rim and wheel body, means of frictional engagement between the ring and wheel body, means of resilient engagement between the ring and rim adapted to allow lateral movement of the ring, a plate rigidly fixed to and extending from the ring, and guiding means carried by the rim and engaging the plate for directing movement of the ring.

2. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring between the two first mentioned elements, means of frictional engagement between the ring and one of the first two mentioned elements, means of resilient engagement between the ring and the other of the first two mentioned elements, a guide plate rigidly fixed to and extending from the ring, and guiding means carried by one of the first two mentioned elements and slidingly engaging said guide plates.

3. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring between the first two mentioned elements, means of frictional engagement between the ring and one of the first two mentioned elements, means of resilient engagement between the ring and the other of the first two mentioned elements, guiding means extending from the ring toward one of the first two mentioned elements, and a channel guiding member fixed to one of the first two mentioned elements and having a sliding engagement with said guiding means.

4. In a wheel, a wheel body, a rim therefor, shiftable means of engagement between the rim and wheel body, said rim comprising detachable circumferential sections, means for securing the sections together, and a guiding member for the shiftable means of engagement, said guiding member being fixed to one section of the rim and lapping the other.

5. In a wheel, a wheel body, a rim therefor, transversely disposed guide members fixed to the rim on the inner surface thereof, circumferentially disposed rings between the wheel body and rim, means of frictional engagement between the wheel body and rings, means of resilient engagement between the rings and rim, and slotted plates fixed to the rings and disposed with the guiding members extending in the slots of the plates.

[Claims 6 to 10 not printed in the Gazette.]

1,013,998. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,067.

1. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring engaging the wheel body and comprising spaced annuli fixed together, cups fixed to the inner faces of the respective annuli, and each opening toward the opposite annulus, each annulus being formed with an aperture for each of the cups of the other annulus exposing such cups through the respective openings, and friction means engaging the exposed faces of the cups through said apertures, said friction means being carried by the rim.

2. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring comprising annuli fixed together, cups fixed to the inner surface of each annulus of said ring and facing the other annulus, each annulus of the ring having openings exposing the cups of the other annulus through the respective openings, means of engagement between the ring and the wheel body, frictional means engaging the cups of said ring through the openings, and resilient means of engagement between the frictional means and the rim.

3. In a wheel, a wheel body, a rim therefor, circumferentially disposed rings between the rim and wheel body, a ring interposed between said rings and formed of annuli, alternate, oppositely facing staggered cups carried by the second mentioned ring, corresponding cups carried by the first mentioned rings and forming pairs with the cups of the second mentioned ring, and a ball disposed between and within the cups of each pair, means of engagement between the first mentioned rings and one of the first two mentioned elements, and means of engagement between the second mentioned ring and the other of the first two mentioned elements.

4. In a wheel, a wheel body, a rim therefor, spaced rings between the wheel body and rim, a ring interposed therebetween and formed of annuli, cups fixed to the inner face of each annulus of the second mentioned ring and facing the other annulus, each annulus being formed with openings exposing the cups of the other annulus, cups carried by the first mentioned rings and facing and forming pairs with the cups of the second mentioned ring, and a ball between and inclosed by the cups of each pair, means of engagement between the rings and the respective first and second mentioned elements.

5. In a wheel, a wheel body, a rim therefor, guide plates fixed to the rim and extending into sliding engagement with the wheel body, a circumferentially disposed ring connected to the wheel body, coaxial rings at opposite sides of said first mentioned ring, and having frictional engagement therewith, means connecting the guide plates and extending through and limiting edgewise movement of the second mentioned rings for maintaining the said frictional engagement.

[Claims 6 to 16 not printed in the Gazette.]

1,013,999. WHEEL. LEVIN GESSFORD HANDY, Rutherford, N. J., assignor to William C. Dickerman, New York, N. Y. Filed June 4, 1910. Serial No. 565,068.

1. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring engaging the wheel body, coaxial rings disposed at either side of the first mentioned ring, guide plates fixed to the rim and extending past said rings, cups fixed to each of the coaxial rings, cups fixed to each of the guide plates, and telescoping with the respective first mentioned cups and forming sets therewith, a spring within each of the sets of telescoping cups press-

ing the coaxial rings toward the first mentioned ring, and means of frictional engagement between the first mentioned ring and the coaxial rings.

2. In a wheel, a wheel body, a rim therefor, a ring surrounding the wheel body and engaging the same, coaxial rings disposed at either side of the first mentioned ring, a cup fixed to each of the coaxial rings, a bolt extending through all of said rings and connected to the rim, said bolt being flattened at the place of passage through the first mentioned ring, said first mentioned ring being formed with an aperture for permitting of the passage of said bolt, and means of frictional engagement between the coaxial rings and the first mentioned ring, cups carried by the bolt and telescoping with the first mentioned cups, and springs interposed between the first and second mentioned cups and disposed for pressing the coaxial rings toward the first mentioned ring.

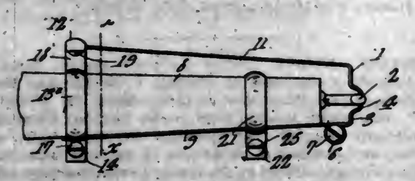
3. In a wheel, a wheel body, a rim therefor, a ring surrounding the wheel body and engaging the same, coaxial rings disposed at either side of the first mentioned ring, said co-axial rings being provided with stiffened flanges upon their inner and outer edges, a cup fixed to each of the coaxial rings, a bolt extending through all of said rings and connected to the rim, said bolt being flattened circumferentially of the wheel at the place of passage through the first mentioned ring, said first mentioned ring being formed with an aperture for permitting of the passage of said bolt, and means of frictional engagement between the coaxial rings and the first mentioned ring, cups carried by the bolt and telescoping with the first mentioned cups, and springs interposed between the first and second mentioned cups and disposed for pressing the coaxial rings toward the first mentioned ring.

4. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring having means of engagement with the wheel body, and means of engagement between the ring and rim, said ring comprising annuli having contacting webs, and having their edge portions formed into marginal flanges, one of the means of engagement of the ring being resilient.

5. In a wheel, a wheel body, a rim therefor, a circumferentially disposed ring between the rim and wheel body, said ring comprising annuli having their webs contacting and their edge portions formed into marginal flanges, one of said flanges being recessed, radial lugs extending from the wheel body into the recesses of said flange, and means of resilient engagement between said ring and the rim.

[Claims 6 to 9 not printed in the Gazette.]

1,014,000. TRACE-FASTENER. CHARLES O. HATHAWAY and FRANCIS W. HUFFAKER, Big Timber, Mont. Filed May 15, 1911. Serial No. 627,202.



1. A device of the character described, including the combination with a whiffletree and a trace-carrier, of a trace-retainer having a recess-forming vertical portion to receive the trace-engaging end of said trace-carrier, said vertical portion having a lower-end inturned-horizontal extension, means effecting pivotal connection for said vertical portion with respect to the whiffletree, said vertical portion having in continuation of its upper end a resilient handle-forming extension, and means for the connection of said handle-forming extension to the whiffletree.

2. A device of the character described, including the combination with a whiffletree and a trace-carrier, of a trace-retainer having a recess-forming vertical portion adapted to receive the trace-engaging end of said trace-carrier, a strap-member applied to said whiffletree, upon one side thereof, means effecting pivotal connection between said strap-member and an inturned or horizontal extension of said vertical portion, said vertical portion having in continuation of its upper end a resilient handle-forming extension, and means for the connection of said handle-forming extension to said whiffletree.

3. A device of the character described embracing the combination with a whiffletree and a trace-carrier of a trace-retainer having a handle-forming extension and adapted to engage the outer or face end of said trace-carrier, means for the manipulation of said trace-retainer, a strap-member applied to said whiffletree, means effecting pivotal connection between said strap-member and said trace-retainer, and means for the attachment of said strap-member to said whiffletree including clips applied to the latter and said strap member, one of said clips having an overhanging catch-forming portion for engaging the handle-forming extension of said trace-retainer.

1,014,001. ALTERNATING-CURRENT MOTOR. HARRY FORMAN HITNER, Pittsburgh, Pa., assignor to Burke Electric Company, a Corporation of Pennsylvania. Filed Dec. 24, 1906. Serial No. 349,235.

1. In an alternating current motor, the combination of a stationary element, a rotor having a winding, and means comprising a fluent substance for connecting said winding to cause starting as a repulsion motor and for automatically changing connections upon increase in speed to cause running as an induction motor.

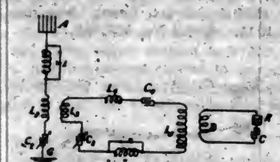
2. In an electric motor, the combination of a stationary element, a rotor having a winding, means comprising a fluent substance acted upon by gravity to cause connections of said winding for starting as one type of motor and for automatically changing connections upon increase in speed to cause running as a different type of motor.

3. In an electric motor, the combination of a stationary element, a rotor having a winding, connections from said winding, and a fluent substance acted upon by gravity for closing certain of said connections for causing starting as one type of motor and acted upon by movement of the rotor for closing certain of said connections for causing running as a different type of motor.

4. In an alternating current electric motor, the combination of a stationary element, a rotor having conductors, a fluent substance acted upon by gravity for connecting said conductors in one relationship with reference to each other and acted upon by a movement of the rotor for connecting said conductors in a different relationship with reference to each other.

5. In an alternating current motor, the combination of a stationary element, a rotor having conductors, a fluent substance acted upon by gravity for connecting said conductors to cause operation as a repulsion motor and acted upon by centrifugal force to cause operation as an induction motor.

1,014,002. APPARATUS FOR WIRELESS SIGNALING. JOHN L. HOGAN, Jr., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 9, 1910. Serial No. 581,334.



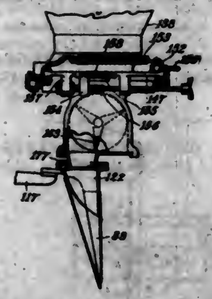
1. The combination with several adjustable oscillation circuits, of a tuning device connecting the several circuits and having an adjustable tuning element arranged to equally and simultaneously vary the electrical periods of the several circuits, substantially as described.

2. The combination with several interdependent resonant circuits of a tuning device having an element common to said circuits and adjusted so that the variation of said element changes equally the electrical periods of all the said circuits at once and alike.

3. The combination of several associated resonant circuits, each of said circuits having a plurality of tuning elements, one of said tuning elements being variable and common to all the circuits, and the other tuning elements in the respective circuits being equalized, so that the variation of said common element will equally and simultaneously change the electrical period of all the circuits, substantially as described.

4. A tuning instrument serving to connect two interdependent resonant circuits, the tuning elements in said two circuits being equalized, and having one tuning element common to both circuits and variable, substantially as and for the purpose described.

1,014,003. FEED-REGULATOR FOR FINE MATERIAL. GUY L. HOYT, New York, N. Y., assignor to Robert Gair Company, Brooklyn, N. Y., a Corporation of New York. Original application filed Nov. 12, 1909, Serial No. 527,724. Divided and this application filed Aug. 3, 1910. Serial No. 576,112.



1. In a machine for feeding variable volumes of fine material, the combination of a hopper, a valve casing below said hopper, a valve device in said casing having vanes which form with the casing a charge-receptacle of constant volume, means for intermittently operating said device to intercept and discharge the material in separate charges whose bulk depends upon the relation between the rate of flow of the material from the hopper and the rate of operation of said valve device, a diaphragm device controlling the outlet from the hopper and composed of slides adapted to preserve a variable opening substantially central with said valve-device when the latter is in its intercepting position, and means for coincidently adjusting said slides to various predetermined degrees of opening.

2. In a machine for feeding fine material, the combination of a hopper for the material, a diaphragm below said hopper composed of adjustable slides forming a measuring aperture to regulate the feed of the material, means for yieldingly drawing said slides together to contract said aperture, mechanism for spreading the slides, and an adjustable stop for said slides, which determines the maximum opening between them.

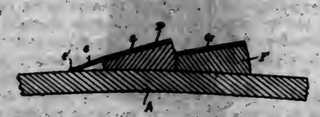
3. In a machine for measuring separate charges of fine material by volume, the combination of a rotary valve in the path of the material to be fed, rotating means therefor constructed to provide for movement of the valve independent of such means, mechanism for automatically and intermittently accelerating and then interrupting the rotation of said valve, and adjustable means for feeding a regulated stream of material to said valve.

4. In a machine for feeding fine material, the combination of a valve-driving member, a multiple valve mounted to rotate vertically in the path of the material being fed and having a lost-motion connection with said member, a multiple-pointed cam attached to the valve, a spring presser coöperating with said cam for intermittently accelerating the valve as the latter is carried around by said member, and means for discharging material into the path of movement of said valve.

1,014,004. BOTTLE-HOLDER. CHESTER GRIER IRWIN, Ardmore, Pa. Filed Dec. 22, 1910. Serial No. 598,801.

In combination, a nursing bottle provided with a nipple, a flexible strap provided intermediate its ends with a strap of flexible material stitched thereto to form with an oppositely arranged portion of said strap a pocket open at both ends to receive the bottle and frictionally hold the same from displacement, hooks, secured to the strap for holding the same stretched in a straight longitudinal position, whereby the bottle may have slight oscillatory movement due to the flexibility of the stretched strap, said hooks having openings formed therethrough to receive the ends of said strap, buckles longitudinally movably mounted upon said strap, and each of said buckles being provided with spaced openings separated by a transverse section of material, the end of the strap passing through said openings and resting against said transverse section of material, to be clamped thereto by pressure from the strap.

1,014,005. BULGE-HOOP FOR BARRELS. HERMAN KABSTNER, Cudahy, Wis. Filed Oct. 25, 1909. Serial No. 524,352.

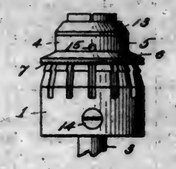


1. A barrel provided with a bulge hoop on each side of its central portion, each comprising a wooden member and a flat metal band covering substantially the whole outer surface of the wooden member, said hoops being of such thickness that the metal bands may support the barrel horizontally from a flat surface; each of said metal bands being wider than the wooden member, and arranged to extend therefrom toward the central bulge portion of the barrel and into engagement with the surface of the barrel at a distance from the wooden member, and substantially

at the same distance from the longitudinal center line of the barrel as the outer surface of the wooden member, without forming an abrupt shoulder at the inner margin of the hoop of sufficient height to permit the hoop to be driven off by accidental impacts.

2. A bulge hoop for barrels comprising a wooden hoop member, having its ends beveled and lapped upon each other and unconnected, in combination with a metallic hoop inclosing the wooden hoop, and having its ends riveted together, the inner margin of the metallic hoop extending beyond the wooden hoop and bearing upon the surface of the barrel and expanded along its edge, in substantial conformity to its tapered surface, together with a second bulge hoop having a similar wooden member, and a metallic hoop of substantially the same width as the wooden member.

1,014,006. EDGE-SETTING IRON FOR SHOES. CHARLES F. KELLER, Lancaster, Ohio. Filed Mar. 23, 1911. Serial No. 616,385.

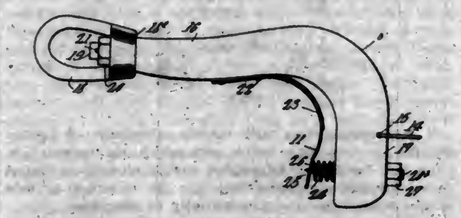


In an edge setting iron for single sole shoes, a cylindrical member for the face of the sole fixedly mounted on the shaft of the iron and provided in its outer face with an interiorly threaded socket, a set screw for securing the cylindrical member to the shaft, an indenting wheel revolubly mounted on the outer face of the cylindrical member, said wheel comprising a hollow cylindrical body portion provided with an outwardly extending flange formed at its outer edge with teeth adapted to form the indentations on the lip of the shoe sole and a cap for holding the indenting wheel in operative position, said cap having a central socket to receive one end of the shaft, an exteriorly threaded stem screwing in the socket of the cylindrical member and a cylindrical outer portion provided at its outer end with an outwardly extending flange, said body portion and flange forming a bearing for the hollow cylindrical portion of the indenting wheel.

1,014,007. TIRE. GEORGE W. KITTERMAN, Berwyn, Ill., assignor of one-half to Milo D. Matteson, Chicago, Ill. Filed Oct. 5, 1910. Serial No. 585,452.

A resilient tire comprising a rim, a channel tread portion of resilient material, flexible sides having their inner portions secured against opposite sides of the rim and having their outer portions placed against the inner side walls of the tread portion, guide rings and filling rings placed between the outer portions of the flexible sides, a metal band encircling the guide and filling rings and coming between them and the inner wall of the tread portion of the tire, and forced against the inner walls of the filling rings, means for securing the parts between the side walls of the tread portion, and a guide member secured to the rim portion of the tire and arranged to operate in the space formed between the inner portions of the said guide rings.

1,014,008. HOOK. HIRAM KNOX, Livingston, Tex. Filed July 10, 1911. Serial No. 637,840.



1. The combination with a hook and a spur projecting therefrom adapted to bite an object, of automatic disengaging means adapted to bear against the object to release the spur from the object upon the weight of the object being relieved from the hook.

2. The combination with a hook, and biting means thereon adapted to engage an object, of automatic disengaging means adapted to bear against the object to release the spur from the object upon the weight of the object being relieved from the hook.

3. The combination with a hook and a spur projecting therefrom adapted to bite an object, of a spring secured to the hook and adapted to bear against the object to release the spur from the object upon the weight of the object being relieved from the hook.

4. The combination with a hook and a spur projecting therefrom adapted to bite an object, of a spring secured to the hook and adapted to bear against the object to release the spur from the object upon the weight of the object being relieved from the hook, said spring giving an outward tension to the hook when the spur is in engagement with the object.

5. The combination with a hook and a spur projecting therefrom adapted to bite an object, of a flat spring secured to the hook and having an aperture therein through which the spur is arranged to pass.

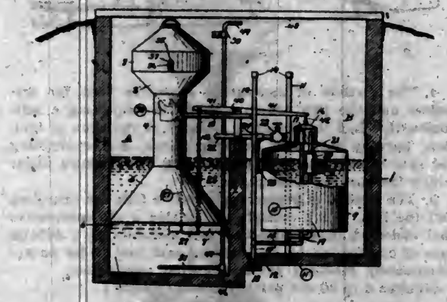
[Claims 6 and 7 not printed in the Gazette.]

1,014,009. ADJUSTABLE TROUSERS-GUARD. WALTER S. KOONS, Temple, Okla. Filed Aug. 12, 1911. Serial No. 643,750.

1. A trousers guard embodying a longitudinally adjustable arm and a pair of substantially U-shaped leg-engaging clasps at the ends of said arm and each hinged thereto, the hinged connections between the clasps and the arm being intermediate the ends of said clasps, and the pivotal axes of the clasps extending transversely across the said arm so that the clasps may be turned at right angles to the arm or extended in longitudinal alinement therewith.

2. In a device of the character described, the combination of a sectional adjustable arm, said arm comprising rigid lower, central and upper sections, a hinged connection between said lower and central sections, collars formed on the upper end of said central section and on the lower end of the upper section in which said sections are slidably mounted, means carried by one of said collars to hold said sections in an adjusted position, and spring clasps hinged to each end of said adjustable arm.

1,014,010. ACETYLENE-GAS GENERATOR. THOMAS W. LACY, Kansas City, Mo. Filed Dec. 11, 1909. Serial No. 532,649.



1. In combination, a concrete well having an inwardly projecting ledge above the bottom of the well, said well being D-shaped in horizontal section; a generator casing having a downwardly flaring, conical base adapted to rest upon said ledge; and plates arranged below said ledge and adapted to prevent waste of gas through the space between the conical base and the straight side of the well.

2. The combination of a well, a generator in said well, a second well, a gasometer in said second well, a pipe connecting the generator and gasometer, regulating means connected with both the generator and gasometer, a vertical pipe adapted for receiving water of condensation, a cap for said vertical pipe, a pipe connecting the interior of said gasometer with said vertical pipe, above the bottom thereof, a service pipe connected with said vertical pipe below the top thereof, and a water sealed drain pipe in said service pipe extended into said gasometer well, for the purpose set forth.

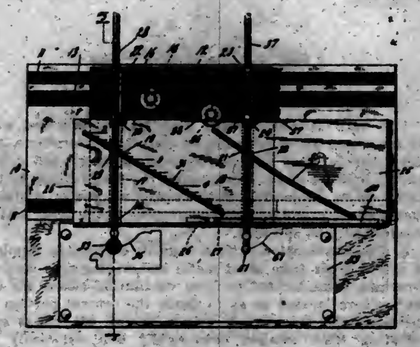
,014,011. STEAM PRESSING-BED. AUGUST LASANCE, Dayton, Ohio. Filed July 24, 1911. Serial No. 640,085.

1. In a steaming and heating machine for garment pressing, a hollow bed with perforated top, a steam circulating box within the bed, with pipes for circulating steam therethrough, an open condensing chamber within the lower portion of the bed underneath the circulating box, and passageways from the condensing chamber to the perforated top for the passage of the dry steam.

2. In a steaming and heating machine for garment pressing, a hollow bed with perforated top, a steam circulating box within the bed, with pipes for circulating steam therethrough, a pair of open condensing troughs disposed lengthwise of the bed underneath the circulating chamber, with perforated steam pipe for supplying steam to said condensing troughs, and passageways from the condensing troughs around the circulating box to the perforated top for the passage of dry steam.

3. In a steaming and heating machine for garment pressing, a hollow bed with perforated top, a steam circulating box within the bed, with pipes for circulating steam therethrough, a pair of open condensing troughs disposed lengthwise of the bed underneath the circulating chamber, with shelves within the troughs to increase the condensing surface and cause circulation of the steam therein, with perforated steam pipe for supplying steam to said condensing troughs, and passageways from the condensing troughs around the circulating box to the perforated top for the passage of dry steam.

1,014,012. PANTOGRAPH. ALFRED B. LYON, Indianapolis, Ind. Filed Nov. 17, 1910. Serial No. 592,907.



1. A cutter pantograph comprising a support, a base plate mounted on said support, means by which said base plate may be shifted on the support, a gage plate movably mounted on the base plate, means by which said gage plate may be shifted upon the base plate, a pattern follower structure mounted upon the base plate and movable relative thereto, a marker structure mounted upon the base plate and movable relative thereto, and interengaging means between the gage plate, the pattern follower structure and the marker structure differentially affecting said pattern follower structure and marker structure, whereby movement of the gage plate to correspond to movement of the pattern follower will move the marker to a different extent to compensate for the angle of position of the cutter.

2. A cutter pantograph comprising a support, a base plate mounted on said support, a gage plate movably mounted on the base plate, a pattern follower structure mounted upon the base plate and movable relative thereto, a marker structure mounted upon the base plate and movable relative thereto, and means carried by the gage plate for engaging the pattern follower structure and the marker structure differentially, whereby movement of the gage plate to correspond to movement of the pattern follower structure will move the marker structure to a different extent to compensate for the angle of position of the cutter.

3. A cutter pantograph comprising a support, a base plate slidably mounted in suitable guides on said support, means by which said base plate may be shifted in its guides, a gage plate slidably mounted upon the base plate, means by which said gage plate may be shifted upon the base plate, a pattern follower structure carried by the base plate and slidable transversely of the gage plate, a finger carried by said pattern follower structure and projecting into an angularly arranged slot in the gage plate, a marker structure carried by the base plate and slidable transversely of the gage plate, and a finger carried by the marker structure and projecting into a slot carried by the gage plate, said last mentioned slot having a different

character from the first mentioned slot to compensate for the angularity of the cutter.

4. A cutter pantograph comprising a support, a base plate slidably mounted in suitable guides on said support, a gage plate slidably mounted upon the base plate, a pattern follower structure carried by the base plate and slidable transversely of the gage plate, a finger carried by said pattern follower structure and projecting into an angularly arranged slot in the gage plate, a marker structure carried by the base plate and slidable transversely of the gage plate, and a finger carried by the marker structure and projecting into a slot carried by the gage plate, said last mentioned slot having a different character from the first mentioned slot to compensate for the angularity of the cutter.

1,014,013. PRESSED-METAL SEAT. ROBERT T. J. MARTIN, Elyria, Ohio. Filed Apr. 12, 1906. Serial No. 311,264.

1. A seat made from sheet material and provided with an inner and an outer series of circular perforations, the metal surrounding said perforations being swaged downwardly and the metal surrounding the perforations in the outer series projecting downwardly a greater distance than that surrounding the perforations in the inner series, substantially as specified.

2. The combination, with a metallic supporting member, of a seat made from sheet metal and having circular perforations, some located to form ventilating means for the seat, others located so as to drain the central portion of the seat, the latter perforations having the metal surrounding them swaged downwardly and outwardly so as to engage said support, the perforations being unobstructed.

3. The combination, with a metallic supporting member, of a seat made from sheet metal and having circular drainage perforations formed in the bottom thereof, said supporting member being formed with similar perforations registering with the perforations in said seat, and the metal surrounding said seat perforations being swaged downwardly from the perforations in said supporting member and outwardly so as to engage the edges of said perforations, the passage through said perforations being unobstructed.

4. A seat made from sheet material and provided with an inner and an outer series of perforations, the metal adjacent said perforations being depressed downwardly to form guides for seat supports of varying widths, substantially as specified.

5. A seat made from sheet material and provided with an inner and an outer series of perforations, the metal adjacent said perforations being depressed downwardly to form an inner and an outer series of guide projections for seat supports of varying widths, one series of projections extending downwardly a greater distance than the other series, substantially as specified.

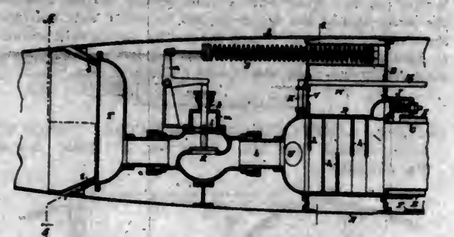
[Claims 6 and 7 not printed in the Gazette.]

1,014,014. AUTOMOBILE TORPEDO AND METHOD OF AND APPARATUS FOR ITS PROPULSION. HUDSON MAXIM, Hopatcong, N. J. Filed Mar. 9, 1908. Serial No. 420,084.

1. The method of generating a motive fluid for torpedoes and the like, which consists in burning a self-combustive material under pressure and controlling the rate of combustion by controlling the pressure under which the burning takes place.

2. The method of generating a motive fluid for torpedoes and the like, which consists in burning a self-combustive material under pressure due to the gases of its own combustion, and controlling the rate of combustion by controlling the pressure of said gases of combustion.

3. The method of generating a motive fluid for torpedoes and the like, which consists in burning a self-combustive fuel, combining with the gases of combustion water evaporated by the heat thereof, subjecting said fuel to the pressure of said evaporated water and gases of combustion, and controlling the rate of combustion of said fuel by controlling the said pressure.

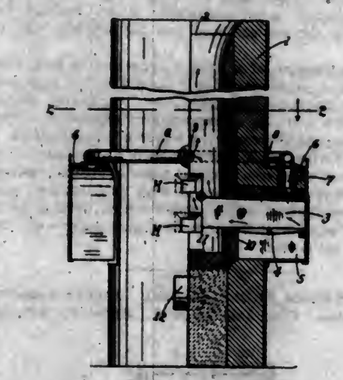


4. The method of generating a motive fluid for torpedoes and the like, which consists in subjecting a self-combustive fuel to an initial pressure at the time of ignition, burning said fuel under pressure, and controlling the rate of combustion by controlling the pressure under which the burning takes place.

5. The method of generating a motive fluid for torpedoes and the like, which consists in igniting a self-combustive fuel under an initial pressure, and maintaining a definite rate of combustion by maintaining said fuel under an approximately constant pressure during combustion.

[Claims 6 to 20 not printed in the Gazette.]

1,014,015. LIMEKILN. NELSON E. MCLOON, Glencoe, Mo. Filed Aug. 7, 1911. Serial No. 642,751.



1. In combination with a kiln having a main chamber, a pair of downwardly and outwardly diverging draw-shafts having bottoms meeting at a central ridge at the bottom of the chamber, fire-boxes disposed on opposite sides of the chamber and discharging at the rear into the chamber in paths parallel to, and at a suitable distance above, the ridge, hooded extensions for the fire-boxes projecting out beyond the walls of the kiln, conduits leading from the tops of the hoods at points outside the kiln-walls and extending partially around the kiln in opposite directions, said conduits discharging into the kiln-chamber, in paths at right angles to the direction of the discharges from the rear ends of the fire-boxes, and at a relatively higher level, for the purpose set forth.

2. In combination with a kiln having a main chamber for the charge, a fire-box discharging in the rear into said chamber at a certain level, and means for diverting a portion of the hot gases and combustion products from said fire-box and discharging the same into the kiln-chamber at a relatively higher level, and at an angle to the general direction of the first discharge.

1,014,016. COIN-CONTROLLED VENDING-MACHINE. CHARLES A. MELCHERT, Kansas City, Mo., assignor, by mesne assignments, to The Accident Insurance Machine Company, Kansas City, Mo., a Corporation of New Mexico. Filed Jan. 8, 1909. Serial No. 471,313.

1. The combination with a ticket feeding mechanism of a printing mechanism, a driving shaft, connection between the driving shaft and feeding mechanism, and connection between the shaft and the printing mechanism, embodying a hammer, means tending to force the hammer to printing position, means for holding the hammer from printing position, and gearing between the driving shaft and hammer holding means adapted for twice releasing said hammer and returning same to its held position with each complete operation of the driving shaft.

2. The combination with a ticket feeding mechanism, of a printing mechanism, a driving shaft, connection between the shaft and feeding mechanism, and connection between the shaft and printing mechanism comprising a hammer and hammer post, a spring tending to force the hammer to printing position, a dog on the hammer post, a rotatable shaft having a boss normally engaging said post dog to hold the hammer against the tension of its spring, and gearing between said rotatable shaft and drive shaft whereby the rotatable shaft is moved through two complete revolutions upon each single revolution of the drive shaft, for the purpose set forth.

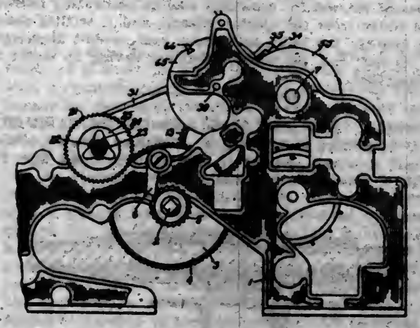
3. The combination with a ticket feeding mechanism, of a printing mechanism, a driving shaft, connection between the driving shaft and feeding mechanism, and connection between the driving shaft and printing mechanism comprising a hammer and hammer post, a striking spring tending to force the hammer to printing position, a spring adapted to partially lift the hammer after the actuation by said striking spring, a dog on the hammer post, a rotatable shaft having two to one gear connections with the driving shaft, a disk on said rotatable shaft, and a boss on said disk adapted for engagement with the post dog, substantially as and for the purpose set forth.

4. The combination with a ticket feeding mechanism, of a printing mechanism, a driving shaft, connection between said shaft and printing mechanism, and connection between said shaft and ticket feeding mechanism embodying a lever, a cam adapted for actuation from the driving shaft and adapted for producing a plurality of actuations of said lever during each complete operation of the driving shaft, and means for returning said lever to a set position after each cam action.

5. The combination with a ticket feeding mechanism, of a printing mechanism, a driving shaft, connection between the driving shaft and printing mechanism, and connection between the driving shaft and feeding mechanism embodying a rocking lever having yielding means tending to hold it from the printing mechanism, a rotatable cam shaft, and a cam eccentrically mounted on said shaft and adapted for producing a plurality of actuations of said lever during each operation of said driving shaft.

[Claim 6 not printed in the Gazette.]

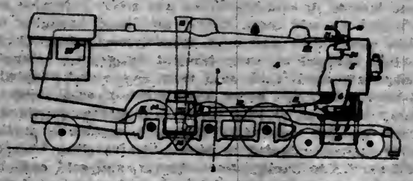
1,014,017. CLOCK-SET PRINTING MECHANISM. CHARLES A. MELCHERT, Kansas City, Mo., assignor, by mesne assignments, to The Accident Insurance Machine Company, Kansas City, Mo., a Corporation of New Mexico. Filed Feb. 6, 1911. Serial No. 606,842.



1. A clock set mechanism comprising a primary shaft, a plurality of type wheels revolubly mounted on said shaft, a motor having driving connection with the first wheel, an escapement wheel carried by the first wheel and comprising dogs projecting alternately from opposite sides of said wheel, a timing shaft, a double ratchet fixed on the timing shaft, and levers pivotally mounted and having their respective ends adapted for frictional engagement with the ratchet on the timing shaft and positive locking engagement with the escapement wheel on the first type wheel, substantially as and for the purpose set forth.

2. In a clock set mechanism, a primary shaft, a plurality of type wheels revolubly mounted on said shaft, means for revolving the first type wheel, a timing shaft, a gear revolubly mounted on said shaft, a friction clutch comprising a washer having frictional engagement with said gear and a spring disk fixed on the shaft and pressing against said washer, a ratchet on said timing shaft, an escapement lever operatively connecting the ratchet and the first type wheel, and means on said timing shaft for actuating same independently of the driving gear, substantially as and for the purpose set forth.

1,014,018. SPARK-ARRESTER. HENRY W. MIELKE and GEORGE M. SERGENT, Rochester, N. Y., assignors of one-fourth to George Fort Slocum and one-fourth to Charles F. Mielke, Rochester, N. Y. Filed Mar. 16, 1911. Serial No. 614,972.

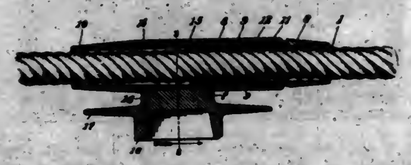


1. In a locomotive, the combination, with the boiler and the smoke-box, of a cylinder-saddle provided with an

ejector-passage leading from the smoke-box downwardly and then rearwardly beneath the boiler, the cylinder-saddle being further provided with exhaust-steam passages terminating in a discharge-nozzle located in the ejector-passage and directed rearwardly, a plurality of tubes leading rearwardly beneath the boiler from the ejector-passage and constituting a surface-condenser, a settling-chamber beneath the boiler into which said tubes discharge at their rear ends, and a stack leading from the settling-chamber upwardly at one side of the boiler to a point above the boiler.

2. In a locomotive, the combination, with the boiler and the smoke-box, of a cylinder-saddle provided with an ejector-passage leading from the smoke-box and directed rearwardly beneath the boiler, the cylinder-saddle being further provided with exhaust-steam passages terminating in a discharge-nozzle located in the ejector-passage and directed rearwardly, a conduit leading rearwardly beneath the boiler from the ejector-passage, and a settling-chamber beneath the boiler into which said conduit discharges at its rear end, the settling-chamber having an outlet to atmosphere.

1,014,019. TRIP FOR HAY AND OTHER CARRIERS. D D MILLER and DAVID E. ROWLAND, Canton, Ohio; said Rowland assignor to said Miller. Filed Apr. 28, 1910. Serial No. 558,302.



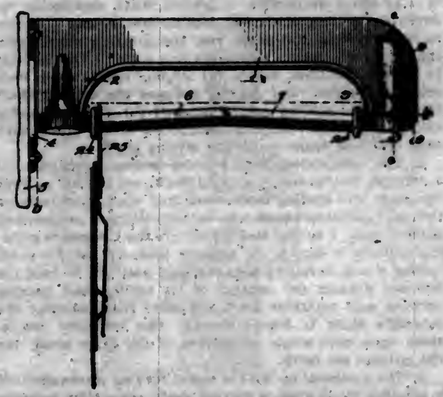
1. For a hay or other carrier suspended by traveling wheels from and adapted to travel along a cable or rod track and provided with tripping mechanism, a trip comprising a main sleeve and an adjusting sleeve adjustably connected to each other, said sleeves provided with longitudinal openings accommodating said track, said main sleeve provided externally intermediate its ends with an annular depression, a swinging block comprising a tripping-mechanism-engaging portion and a band, said band located in said depression and freely rotatable with reference to said main sleeve, said band engaging said main sleeve and said tripping-mechanism-engaging portion adapted to hang pendent by gravity, means arranged inside said main sleeve and adapted, by the relative adjustment of the sleeves to clamp the same to said track, and said sleeves provided at their opposite ends with enlongated, inclined outer surfaces adapted to permit the traveling wheels of said carrier to freely pass thereover.

2. For a hay or other carrier suspended by traveling wheels from and adapted to travel along a cable or rod track and provided with tripping mechanism, a trip comprising a main sleeve and an adjusting sleeve provided with interfitting screw threads and adapted, by said threads, for relative adjustment, said sleeves provided with longitudinal openings accommodating said track, said main sleeve provided externally, intermediate its ends with an annular depression, a swinging block comprising a tripping-mechanism-engaging portion and a band, said band located in said depression and freely rotatable with reference to said main sleeve, said band engaging said main sleeve only and said tripping-mechanism-engaging portion adapted to hang pendent by gravity, clamping wedges arranged inside said main sleeve and adapted to be actuated by the screw adjustment of said sleeves to clamp the same to said track, said sleeves provided at their opposite ends with elongated, gradually inclined outer surfaces adapted to permit the traveling wheels of said carrier to freely pass thereover, and said ends also provided externally with flattened surfaces adapted to be engaged by a wrench for accomplishing said screw adjustment.

1,014,020. HANGER-RACK. ISAAC W. MILLER, St. Louis, Mo. Filed Dec. 16, 1908. Serial No. 467,869.

An extensible hanger rack comprising a carrier member, said carrier member comprising two formed channel members placed back to back and rigidly secured together to constitute substantially an I-beam, the flanged portions of said channel members being formed into rounded channels on either side of the structure lengthwise thereof and the upper channels being inverted, supporting brackets having oppositely mounted rollers arranged to engage said inverted, rounded upper channels for movably supporting said carrier member, a hanger member having brackets thereon provided with oppositely mounted rollers arranged to travel in the rounded lower channels of said carrier member, stops on each end of said carrier member for limiting the outermost positions of said carrier member and said hanger member thereon, each of said stops comprising an end plate having inwardly projecting lugs arranged on either side of the web of said carrier member and secured thereto, and a manipulating handle on said hanger member.

1,014,021. SUPPORT. GEORGE W. NIEBLING, Rochester, N. Y., assignor of one-half to John J. Connell, Rochester, N. Y. Filed Mar. 30, 1911. Serial No. 617,989.



1. A support comprising a pair of substantially straight arms extending one toward the other substantially in alinement into coöperation at their free ends, one of said arms being mounted to swing in but a single plane into and out of coöperation with the other.

2. A support comprising a pair of substantially straight arms extending one toward the other substantially in alinement into coöperation at their free ends, one of said arms being mounted to swing only about an upright axis into and out of coöperation with the other.

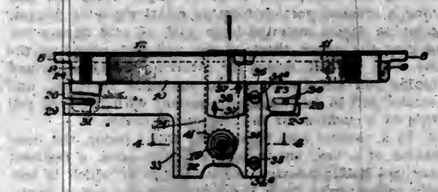
3. A support comprising a pair of substantially straight arms extending one toward the other substantially in alinement into coöperation at their free ends, one of said arms being mounted to swing in but one plane into and out of coöperation with the other arm, and the free ends of said arms having interlocking portions.

4. A support comprising a pair of substantially straight arms extending one toward the other substantially in alinement into coöperation at their free ends, one of said arms being mounted to swing in but one plane and the free ends of the arms having overlapping portions.

5. A support comprising two substantially straight arms extending one toward the other substantially in alinement, one of said arms being mounted to swing relatively to the other, and the arms being inclined upwardly from their inner ends toward their free ends.

[Claims 6 to 17 not printed in the Gazette.]

1,014,022. SEWING-MACHINE. WINSLOW RANDALL PARSONS, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 362,902.



1. In a sewing machine, the combination with a feed-dog, of a horizontally movable carrier-plate, means for restraining said plate from vertical movements, a vertically movable plate carrying the said feed-dog, means for restraining said vertically movable plate from horizontal movement independently of the said carrier plate, a lever for actuating said parts, and means for imparting a four-motioned movement to said lever, whereby an exact rectangular movement will be imparted to the said feed-dog.

2. In a sewing machine, the combination with a feed-dog, of a horizontally movable carrier-plate, means for restraining said plate from vertical movements, a vertically movable plate carrying the said feed-dog, means for restraining said vertically movable plate from horizontal movements independently of the said carrier-plate, a vibrating lever for actuating said parts, and means for imparting a four-motioned movement to said lever, said lever having a universal joint connection with the said vertically movable plate, whereby an exact rectangular movement will be imparted to the said feed dog.

3. In a sewing machine, the combination with a feed-dog, of a horizontally movable carrier-plate, means for restraining said plate from vertical movements, a vertically movable plate carrying the said feed-dog, means for restraining said vertically movable plate from horizontal movements independently of the said carrier-plate, a vibrating lever for actuating said parts, and means for imparting a four-motioned movement to said lever, the latter having a universal joint connection with the said vertically movable plate at a point immediately below and in the vertical plane of said feed-dog.

4. In a sewing machine, the combination with a feed-dog, of a horizontally movable carrier-plate, means for restraining said plate from vertical movements, a vertically movable plate carrying the said feed-dog, means for restraining said vertically movable plate from horizontal movement independently of the said carrier-plate, and a vibrating lever for actuating said parts, said lever having a universal joint connection with the said vertically movable plate and also a universal joint connection with a support on the bed-plate at a point adjacent to said carrier-plate, whereby an exact rectangular movement will be imparted to the said feed-dog.

1,014,023. ROAD-MACHINE. FRANK B. PECK, Mount Vernon, Mo. Filed Jan. 30, 1911. Serial No. 605,567.

1. In a road machine, the combination with a suitable truck and a scraper carried thereby, of a laterally adjustable plow carried in front of said scraper.

2. In a road machine, the combination with a suitable truck and a scraper carried thereby, a plow located in front of the scraper, and laterally and vertically adjustable means for supporting said plow.

3. In a road machine, the combination with a suitable truck, of a shaft journaled on said truck and provided with a cranked portion, means for actuating the shaft, a hanger bar carried by the crank, a link carried by the hanger bar, and a plow having its frame suspended from forward and back positions to said hanger bar and link respectively.

4. In a road machine, the combination with a suitable truck, of a shaft journaled on said truck and provided with a cranked portion, means for actuating the shaft, a hanger bar carried by the crank, an extensible link carried by the hanger bar, and a plow having its frame suspended from forward and back positions to said hanger bar and link respectively.

5. In a road machine, the combination with a suitable truck, of a shaft journaled on said truck and provided with a cranked portion, means for actuating the shaft, a hanger bar carried by the crank, a link carried by the hanger bar, and a plow having its frame suspended from forward and back positions to said hanger bar and link respectively, said link being formed in separate members, and each member being provided with a pin and a plate having a plurality of apertures adapted for receiving said pins.

[Claims 6 to 9 not printed in the Gazette.]

1,014,024. TROUSERS-STRETCHER. JAMES J. PILLIOD, Chicago, Ill. Filed Nov. 7, 1910. Serial No. 591,081.

A trousers stretcher comprising clamping members each of said clamping members comprising two flat pieces 13 and 15; an eye piece 6 on the edge of one of said pieces; a threaded socket 4 secured to the edge of the other piece in alinement with said eye piece; an angular post 5 threaded in said socket and passing through said eye piece, the free end of said post being turned over said members; and an eccentric clamping lever 7 pivoted in the free end of said post and contacting with the adjacent clamping piece to force said pieces together, substantially as described.

1,014,025. CLIP FOR MINERS' LAMPS. GRANT I. RAWSON and LLEWELLYN B. SHULTZ, St. Louis, Mo., assignors to Pilley Packing & Flue Brush Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 8, 1910. Serial No. 576,240.

1. The combination with a member provided with a pair of projecting terminals, said terminals being provided adjacent to their outer ends with enlarged heads, of a body of insulating material, a pair of spring contacts carried by said body, each of said contacts being provided with a slot for receiving the stem of one of said terminals, said contacts being adapted to bear against the heads of said terminals, and a flexible cable connected with said contacts.

2. The combination with a member provided with headed terminals, of a body of insulating material, a pair of spring contacts carried by said body and adapted to engage with said terminals, said contacts being provided with oppositely arranged slots, and a flexible cable connected to said contacts.

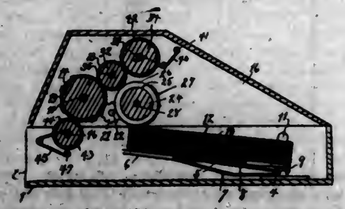
3. The combination with a member provided with laterally projecting headed terminals, of a body of insulating material, a pair of spring contacts carried by said body, terminal engaging means for said contacts, and a flexible cable connected to said contacts.

4. The combination with a member provided with laterally projecting headed terminals, of a body of insulating material, a pair of slotted spring contacts carried by said body and adapted to engage with said terminals, and a flexible cable connected to said contacts.

5. The combination with a member provided with laterally projecting headed terminals, of a body of insulating material, a pair of spring contacts carried by said body and adapted to engage with said terminals, said contacts being provided with oppositely arranged slots, and a flexible cable connected to said contacts.

[Claims 6 to 8 not printed in the Gazette.]

1,014,026. COMBINED CABINET AND PRINTER FOR TOILET-PAPER. WILLIAM G. STEWART and LOUIS GAUERMANN, Philadelphia, Pa. Filed May 4, 1911. Serial No. 624,993.



1. In a cabinet and printer for toilet paper, the combination of a box, one end of which is open, a resilient paper pad holding device, the outer end of which is normally forced away from the bottom of the box, a cover, a type roll, a shaft passing through the walls of the cover and said type roll, a hand wheel carried by said shaft for revolving the type roll, an impression device mounted upon the periphery of the type roll, a gripping roll for removing the uppermost sheet of paper from the pad, having a reduced portion forming relatively wide flanges, a gripping device mounted upon each of said flanges for engaging the upper sheet of the pad and removing the same from the pad, means for revolving the type roll and gripping roll simultaneously in the same direction, means for supplying ink to the type roll, and a carrier roll mounted in the box in frictional engagement with the type roll.

2. In a cabinet and printer for toilet paper, the combination of a box, one end of which is open, a resilient paper pad holding device, the outer end of which is normally forced away from the bottom of the box, a cover, a type roll, a shaft passing through the walls of the cover and said type roll, a hand wheel carried by said shaft for revolving the type roll, an impression device mounted upon the periphery of the type roll, a gripping roll for removing the uppermost sheet of paper from the pad having a reduced portion forming relatively wide flanges, a gripping device mounted upon each of said flanges for engaging the upper sheet of the pad and removing the same from the pad, means for revolving the type roll and gripping roll simultaneously in the same direction, and a carrier roll in frictional engagement with the type roll acting as a cushion for the impression device.

3. In a cabinet and printer for toilet paper, the combination of a box, one end of which is open, a resilient paper pad holding device, the outer end of which is normally forced away from the bottom of the box, a cover, a type roll, a shaft passing through the walls of the cover and said type roll, a hand wheel carried by said shaft for revolving the type roll, an impression device mounted upon the periphery to the type roll, a gripping roll for removing the uppermost sheet of paper from the pad, having a reduced portion forming relatively wide flanges, a gripping device mounted upon each of said flanges for engaging the upper sheet of the pad and removing the same from the pad, a gear wheel carried by the type roll and the gripping roll, an intermediate pinion meshing with said gear wheel for causing the gripping roll to revolve simultaneously with and in the same direction as the type roll when the latter is revolved, a carrier roll in frictional engagement with the type roll for carrying the sheet of paper forward, and acting as a cushion for the impression device, and means for supplying the impression device with ink.

4. In a cabinet and printer for toilet paper, the combination of a box, one end of which is open, a resilient paper pad holding device, the outer end of which is normally forced away from the bottom of the box, a cover, a type roll, a shaft passing through the walls of the cover and said type roll, an impression device mounted upon the periphery of the type roll, a gripping roll for removing the uppermost sheet of paper from the pad, having a reduced portion forming relatively wide flanges, a gripping device mounted upon each of said flanges for engaging the upper sheet of the pad and removing the same from the pad, a gear wheel carried by the type roll and the gripping roll, an intermediate pinion meshing with said gear wheel for causing the gripping roll to revolve simultaneously with and in the same direction as the type roll when the latter is revolved, a carrier roll, a shaft on which said carrier roll is mounted, the ends of said shaft being journaled in the box, lugs carried by the inner side walls of the box, springs, one end of each spring engaging one of the lugs, the opposite end of said springs engaging the shaft of the carrier roll for normally holding said carrier roll in frictional engagement with the type roll, a jacket of fabric covering the carrying roll, and means for supplying the type roll with ink.

5. In a cabinet and printer for toilet paper, the combination of a box, one end of which is open, a resilient paper pad holding device, the outer end of which is normally forced away from the bottom of the box, a cover, a type roll, a shaft passing through the walls of the cover and said type roll, an impression device mounted upon the periphery of the type roll, a gripping roll for removing the uppermost sheet of paper from the pad, having a reduced portion forming relatively wide flanges, a gripping device mounted upon each of said flanges for engaging the upper sheet of the pad and removing the same from the pad, a gear wheel carried by the type roll and the gripping roll, an intermediate pinion meshing with said gear wheel for causing the gripping roll to revolve simultaneously with and in the same direction as the type roll when the latter is revolved, a carrier roll, a shaft on which said carrier roll is mounted, the ends of said shaft being journaled in the box, lugs carried by the inner side walls of the box, springs, one end of each spring engaging one of the lugs, the opposite end of said springs engaging the shaft of the carrier roll for normally holding said carrier roll in frictional engagement with the type roll, a jacket of fabric covering the carrying roll, and a font roll for supplying ink to the type roll.

[Claims 6 to 8 not printed in the Gazette.]

1,014,027. PNEUMATIC CARPET-SWEEPER. DAVID C. WALTER, Toledo, Ohio, assignor of one-half to Almon Hall, Toledo, Ohio. Filed May 4, 1907. Serial No. 371,904.

1. A pneumatic carpet cleaning apparatus comprising a motor driven fan mounted upon a vertical shaft, a removable hood inclosing said fan and having an open bottom, means for movably supporting said hood and said fan in close proximity to the carpet, and receiving means for the dust connected to the hood.

2. A pneumatic carpet cleaning aparatus comprising a traveling hood having an open bottom, a motor driven fan mounted upon a vertical shaft in said hood in proximity to the open bottom thereof, and dust collecting means connected to said hood.

3. A pneumatic carpet-sweeper, comprising a rotary fan mounted upon a vertical shaft, an electric motor operatively connected thereto, a hood inclosing said fan having an open bottom detachably secured to said motor and constituting a suction chamber, means whereby said hood may be moved over the carpet with its mouth in close proximity thereto, and means connected with the hood for collecting the dust.

1,014,028. DENTAL TOOTH REGULATING AND RETAINING APPLIANCE. EDWARD H. ANGLE, New London, Conn. Filed Mar. 12, 1910, Serial No. 548,822. Renewed Aug. 18, 1911. Serial No. 644,890.

1. An arch-bar for dental tooth regulating appliances having a middle segment of spring material and externally threaded end sections, and a straight spur or spurs connected to said middle segment and extending directly in a line substantially perpendicular to the plane of said arch-bar.

2. An arch-bar for dental tooth regulating appliances having a middle segment of spring material and externally threaded end sections, and a straight spur or spurs connected to said middle segment and extending directly in a line substantially perpendicular to the plane of said arch-bar, said spur or spurs also being of spring material.

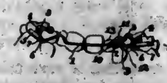
3. An arch-bar for dental tooth regulating apliances consisting of a middle segment of spring material and externally threaded end sections having detachable connection with said middle section, said end sections being in alinement with said middle section and forming continuations thereof.

4. An arch-bar for dental tooth regulating and retaining appliances consisting of a smooth solid middle segment and externally threaded end sections in alinement with said middle segment and forming continuations therefof, said middle section being readily bendable and having but little resiliency and said end sections being stiff and of relatively greater diameter.

5. An arch-bar for dental tooth regulating appliances having a smooth middle segment of spring material, a slide mounted on said smooth middle segment, means for preventing said slide from turning thereon, a straight spur connected to said slide and extending directly in a line substantially perpendicular to the plane of said arch-bar.

[Claims 6 to 10 not printed in the Gazette.]

1,014,029. DENTAL TOOTH - REGULATING APPLIANCE. EDWARD H. ANGLE, New London, Conn. Filed June 1, 1910, Serial No. 564,348. Renewed Aug. 16, 1911. Serial No. 644,891.



1. In a tooth regulating appliance the combination of an arch-bar, means for connecting said arch-bar to anchor teeth, a coiled spring torsion device for applying pressure to a malposed tooth, said torsion device being connected to said arch-bar.

2. In a tooth regulating appliance the combination of an arch-bar, means for connecting said arch-bar to anchor teeth, and a coiled spring torsion device having detachable connection with said arch-bar.

3. A tooth regulating device consisting of an arm or finger adapted to bear upon a malposed tooth for applying pressure thereto, a coiled spring for imparting rotative force to said arm or finger, and means for connecting said device to an arch-bar.

4. A tooth regulating device consisting of a coiled spring adapted to fit upon a spur projecting from an arch-bar having one end extended into an arm or finger for bearing upon and applying force to a malposed tooth and the other end formed into a hook for engaging said arch-bar.

5. In a tooth regulating appliance the combination of an arch-bar, means for connecting said arch-bar to anchor teeth, and a coiled spring torsion device having sliding connection with said arch-bar.

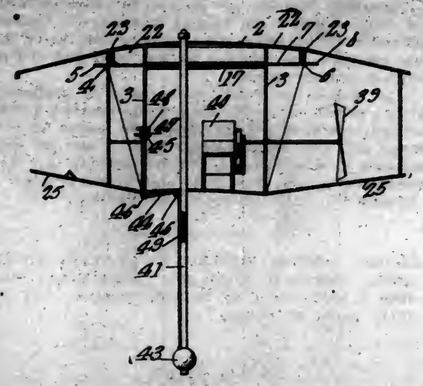
[Claims 6 and 7 not printed in the Gazette.]

1,014,030. DENTAL TOOTH-REGULATING APPLIANCE. EDWARD H. ANGLE, New London, Conn. Filed June 1, 1910, Serial No. 564,349. Renewed Aug. 18, 1911. Serial No. 644,892.

1. In a dental tooth regulating appliance, the combination of an arch-bar consisting of a resilient middle section, exteriorly threaded end sections forming continuations of said middle section, detachable mortise and tenon connections between the ends of said middle section and said end sections, anchor tubes through which said end sections pass, and adjusting nuts on said end sections and bearing against the ends of said anchor tubes.

2. An arch-bar for dental tooth regulating appliances consisting of a resilient middle section, exteriorly threaded end sections forming continuations of said middle section, and non-turning detachable mortise and tenon connections between the ends of said middle section and said end sections.

1,014,031. AERODROME. HENRY H. ASHLOCK, Kansas City, Mo. Filed Apr. 6, 1911. Serial No. 619,408.



1. An aerodrome including a sustaining plane, supplemental planes, and means for shifting said supplemental planes to coöperate with the sustaining plane to form a parachute, and means for automatically locking said supplemental planes relative to the sustaining plane when used as a parachute.

2. An aerodrome including a sustaining plane, front and back supplemental planes mounted to swing about axes extending transversely of the line of flight, means for simultaneously closing said planes against the front and back edges of the sustaining plane, and means for locking the supplemental planes in closed positions.

3. An aerodrome including a sustaining plane, supplemental planes arranged below the front and back edges of the sustaining plane, means for tilting said supplemental planes simultaneously to steer the machine in an upward or downward direction, said supplemental planes being movable to positions substantially at right angles to path of movement of the sustaining plane, and means for automatically locking the supplemental planes when brought to said positions at right angles to the path of the sustaining plane.

4. An aerodrome including a sustaining plane, supplemental planes below the front and back edges of the sustaining plane, supplemental planes below the side edges of the sustaining plane, and separate means for shifting the front and back and the side supplemental planes to positions substantially perpendicular to the path of movement of the sustaining plane to coöperate with said sustaining plane and form a parachute.

5. An aerodrome including a sustaining plane, supplemental planes below the front and back edges of the sustaining plane, supplemental planes below the side edges of the sustaining plane, and means for shifting the front and back and the side supplemental planes to positions substantially perpendicular to the path of movement of the sustaining plane to coöperate with said sustaining plane and form a parachute.

[Claims 6 to 9 not printed in the Gazette.]

1,014,032. THERMOSTATIC DRAFT-REGULATOR. JAMES H. ATTERBURY, Litchfield, Ill. Filed Apr. 29, 1910. Serial No. 558,435.

1. In a thermostatic draft regulator, the combination with a heater having a draft opening therein, of a member capable of being bodily distorted by the action of heat radiating from the heater, means for securing one end of said member, a damper secured to the free end of said member and arranged to open or close the draft opening in the heater, and means for bodily shifting said member, carrying the damper, relative the heat zone of the heater, for the purposes stated.

2. In a thermostatic draft regulator, the combination with a heater having a draft opening therein, of a thermostatic bar composed of members of elastic materials which are of different expansive coefficiencies, means for securing one end of the thermostatic bar to the heater, a damper secured to the free end of the thermostatic bar and arranged to open and close the draft opening in the

heater, a shaft supported in the bar adjacent its fixed end, an inclined disk carried by the shaft, and means for rotating the shaft and disk whereby the thermostatic bar may be shifted bodily in the heat zone of the heater, for the purposes stated.

1,014,033. SEWING-MACHINE. FREDERICK BAKER, Blackheath, and LESSER JACOBS, London, England, assignors to Baker Sewing Machines Trust Limited, London, England. Filed May 23, 1908. Serial No. 434,702.

1. In a single thread sewing machine, the combination with a reciprocating needle, of a common means for drawing out from said needle loops of thread which alternately form a main loop and a sub-loop through the main loop, means for inter-engaging said main loops one with another, and means for carrying each sub-loop around and over the main loop through which it passes, before said main loop inter-engages with the next succeeding main loop, to enable said sub-loop to interlock with the main loop.

2. In a single thread sewing machine, the combination with a reciprocating needle, of a common means for drawing out from said needle loops of thread which form main loops and a plurality of sub-loops passing through each of said main loops, means for inter-engaging said main loops one with another, and means for carrying the sub-loops in succession around and over the main loop through which they pass, before said main loop inter-engages with the next succeeding main loop, to enable the sub-loops to interlock with the main loop.

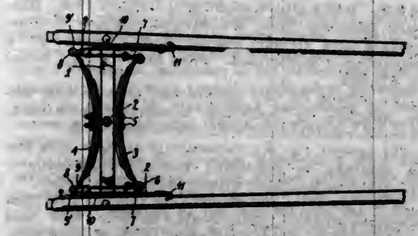
3. In a single thread sewing machine, the combination with the reciprocating needle and the needle plate, of means located below the needle plate for drawing loops of thread from the needle, and a stationary tension device over which a main loop is drawn and by which it is retained while a sub-loop is pulled from the same source by said means through the main loop, drawn over the tension device and over the main loop, and a second main loop is pulled by said means through the bight of the first main loop.

4. In a single thread sewing machine, the combination with the reciprocating needle and the needle plate, of a hook located below the needle plate for drawing loops of thread from the needle, and a stationary tension device over which a main loop is drawn and by which it is retained while a sub-loop is pulled from the same source by said hook through the main loop, drawn over the tension device and over the main loop, and a second main loop is pulled by said hook through the bight of the first main loop.

5. In a single thread sewing machine, the combination with the reciprocating needle and the needle plate, of means located below the needle plate for drawing loops of thread from the needle, and a stationary tension device over which a main loop is drawn and by which it is retained while a plurality of sub-loops is pulled from the same source by said means through the main loop, drawn over the tension device and over the main loop, and a second main loop is pulled by said means through the bight of the first main loop.

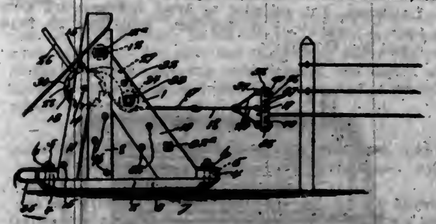
[Claims 6 to 38 not printed in the Gazette.]

1,014,034. WHIFFLETREE. RICHARD E. BARRETT, Boykins, Va. Filed May 2, 1911. Serial No. 624,591.



A spring whiffle-tree, comprising a bar adapted to be pivotally secured to the running gear of a vehicle, semi-elliptical leaf-springs secured one upon either side of said bar, said springs being bowed in opposite directions, pulleys secured to the free ends of one of said springs, and flexible members secured by one end to the free ends of the other spring, the free ends of said members being extended through the pulleys and then back in parallel spaced relation and terminating in trace connecting means.

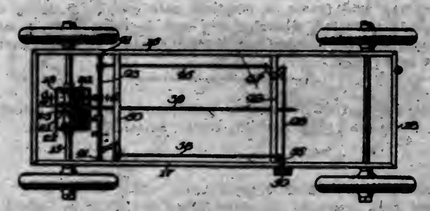
1,014,035. WIRE-STRETCHER. ROBERT LARKIN BELL, Waxhaw, N. C. Filed Apr. 29, 1911. Serial No. 624,192.



1. In a device as set forth, a triangular shaped skeleton frame, said frame having a plurality of apertures arranged in corresponding series in one portion, a shaft adapted to be journaled in any two corresponding apertures, a combined winding drum and ratchet mounted on the shaft, a pawl for the ratchet, a shaft on which the pawl is mounted, said frame having an additional plurality of apertures, in any two of which the shaft of the pawl may be journaled, the first apertures being arranged in staggered relation and in such a relation with the second apertures that the combined winding drum and ratchet and pawl may be vertically adjusted, so as to stretch wires at different heights.

2. In a device as set forth, a triangular shaped skeleton frame, said frame having a plurality of apertures arranged in corresponding series in one portion, a shaft adapted to be journaled in any two corresponding apertures, a combined winding drum and ratchet mounted on the shaft, a pawl for the ratchet, a shaft on which the pawl is mounted, said frame having an additional plurality of apertures, in any opposite corresponding two of which the shaft of the pawl may be journaled, the first apertures being arranged in staggered relation and in such a relation with the second apertures that the combined winding drum and ratchet and pawl may be vertically adjusted, so as to stretch wires at different heights, a cable wound around the drum and having connections with the wire clamp for stretching a fence wire, said drum having a plurality of sockets, and a member to engage the socket for rotating the drum.

1,014,036. GEARING FOR MOTOR-VEHICLES. STEPHEN S. BENNETT, Chicago, Ill. Filed June 23, 1909. Serial No. 503,809.



1. The combination with a shaft, of different sized gears thereon provided with clutch-faces, clutches movable on said shaft into and out of engagement with said clutch faces, a yoke-shaft journaled near each of the clutches, a yoke on one end and a rod on the other end of each of the yoke-shafts, a suitably fulcrumed operating-lever, a pair of shafts transversely journaled with respect to the rods on the yoke-shafts and connected together, one of said shafts having rotary and longitudinal movement and the other of said shafts having rotary movement, means on said shafts to alternately engage the rods on the yoke-shafts, means uniting the operating-lever and said shafts whereby both of them may be rocked and one of them moved longitudinally.

2. The combination with a shaft, of different sized gears thereon provided with clutch-faces, clutches movable on said shaft into and out of engagement with said clutch-faces, a yoke-shaft journaled near each of the clutches, a clutch-engaging-yoke on one end and a rod on the other end of each of the yoke-shafts, a suitably fulcrumed operating-lever, a pair of shafts transversely journaled with respect to the rods on the yoke shafts and one having rotary and longitudinal movement and the other rotary movement, a plurality of forked projections mounted on each of said shafts and adapted to engage the said rods, the said projections on each shaft being disposed at angles to one another, and means uniting the operating-lever and said shafts whereby they may be partially rotated and one of them moved longitudinally.

1,014,037. COMB. ALFRED BENSON, Seattle, Wash. Filed Mar. 13, 1911. Serial No. 614,204.

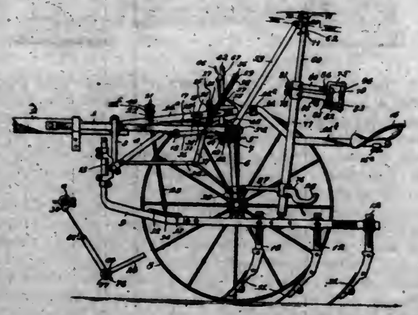
1. A comb comprising a plurality of teeth, means connecting said teeth for independent swinging, an inclosing frame normally holding said teeth in alinement, and coöperating securing parts on said frame and one end tooth

securing said frame in position, said last named end tooth being of a resilient construction, whereby it can be bent to disengage its securing part from the coöperating securing part of said frame.

2. A comb comprising a plurality of teeth formed in one end portion with alining apertures, the end teeth being provided on their inner side faces with projecting bearings disposed below their apertures, a connecting rod passing through the apertures of said teeth, an inclosing frame normally holding said teeth in alinement, and coöperating parts on said frame and adjacent end teeth below the bearings of the latter for holding said frame in position.

3. A comb comprising a plurality of teeth formed in one end portion with alining apertures, the end teeth being provided on their inner side faces with projecting bearings disposed below their apertures, a connecting rod passing through the apertures of said teeth and engaged with the end teeth thereof to clamp the intermediate teeth therebetween, an inclosing frame normally holding said teeth in alinement, and coöperating parts on said frame and adjacent end teeth below the bearings of the latter for holding said frame in position, said end teeth being of spring material, whereby they can be bent to disengage their securing parts from the coöperating securing parts of said frame.

1,014,038. CULTIVATOR. ADELBERT S. BEYMER, Kansas City, Mo. Filed Jan. 17, 1910. Serial No. 538,368.



1. In a cultivator, the combination of gangs loosely connected at their forward ends to the cultivator frame, rocker-arms mounted upon the cultivator frame, shafts connected to the gangs and said rocker-arms, means for preventing rotation of said shafts, tubular shafts mounted to turn upon the first-mentioned shafts, means loosely connecting said tubular shafts to the cultivator frame, levers to turn said tubular shafts to adjust the gangs laterally, and means for locking the tubular shafts to the first-mentioned shafts.

2. In a cultivator, the combination of gangs loosely-connected at their forward ends to the cultivator frame, rocker-arms mounted upon the cultivator frame, shafts connected to the gangs and said rocker-arms, means for preventing rotation of said shafts, tubular shafts mounted to turn upon the first-mentioned shafts, means loosely connecting said tubular shafts to the cultivator frame, foot-levers to turn said tubular shafts to adjust the gears laterally, and means for locking the tubular shafts to the first-mentioned shafts.

3. In a cultivator, the combination of gangs loosely connected at their forward ends to the cultivator frame, rocker-arms mounted upon the cultivator frame, shafts connected to said rocker-arms and the gangs, means for preventing said shafts from turning, tubular shafts mounted to turn upon the first-mentioned shafts, means loosely-connecting said tubular shafts to the cultivator frame, hand-levers to turn the tubular shafts to adjust the gangs laterally, latches carried by said hand-levers, and sectors fixed to the first-mentioned shafts for engagement with said latches.

4. In a cultivator, the combination of gangs loosely-connected at their forward ends to the cultivator frame, rocker-arms mounted upon the cultivator frame, shafts connected to said rocker-arms and the gangs, means for preventing said shafts from turning, tubular shafts mounted to turn upon the first-mentioned shafts, means loosely-connecting said tubular shafts to the cultivator frame, hand-levers to turn the tubular shafts to adjust the gangs laterally, latches carried by said hand-levers, sectors fixed to the first-mentioned shafts for engagement with said latches, and means for holding the latches out of engagement with said sectors.

5. In a cultivator, the combination of gangs loosely connected at their forward ends to the cultivator frame, rocker-arms mounted upon the cultivator frame, shafts operably connected to the gangs and said rocker-arms, means loosely connecting said shafts to the cultivator frame, hand-levers to turn the shafts to adjust the gangs laterally, and a connecting-bar yieldingly-secured to said hand-levers to normally hold the same a predetermined distance apart.

[Claims 6 to 21 not printed in the Gazette.]

1,014,039. DARK-BLUE MONOAZO DYESTUFFS. MELCHIOR BÖNIGER, Basel, Switzerland, assignor to Chemische Fabrik vormals Sandoz, Basel, Switzerland, a Corporation of Switzerland. Filed June 6, 1911. Serial No. 631,892.

1. The process for the manufacture of dark blue monoazo dyestuffs by combining monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid with phenol compounds.

2. The process for the manufacture of dark blue monoazo dyestuffs by combining monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid with naphthol compounds.

3. As new products, the monoazo dye-stuffs derived from monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid and phenol compounds, which yield violet to violet black solutions in boiling water, blue solutions in strong sulfuric acid and dye unmordanted wool from an acid bath in brownish-violet shades, which on subsequent chroming turn to dark blue.

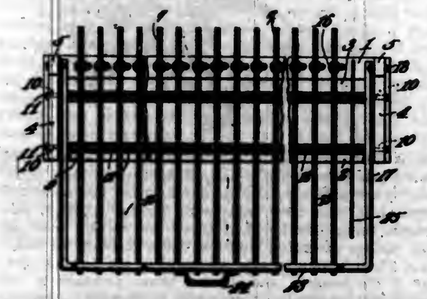
4. As new products, the monoazo dyestuffs derived from monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid and the naphthols which dissovle in strong sulfuric acid with blue, in boiling water with violet-black color, turning to pure blue on addition of alkali carbonates and to blue-red on addition of caustic alkalis and which dye unmordanted wool from an acid bath in brownish violet shades, changing into blue black by subsequent chroming.

1,014,040. AMMONIA-GENERATOR. ADOLPHE E. BOSSE, Pittsburgh, Pa., assignor to Acme Refrigerating Company, a Corporation of Delaware. Filed Mar. 25, 1910. Serial No. 551,439.

1. An ammonia generator comprising a cylindrical casing arranged with its longitudinal axis horizontal, a cooling coil centrally arranged within said casing, and a heating coil arranged beneath said cooling coil in the lower part of said casing.

2. An ammonia generator comprising a cylindrical casing arranged with its longitudinal axis horizontal, a cooling coil centrally arranged within said casing, a heating coil arranged beneath said cooling coil in the lower part of said casing, an outlet pipe communicating with the upper part of said casing, and an inlet for the ammonia gas at the lower part of the said casing.

1,014,041. PAPER-CUTTER. MOODY BOYD, Louisville, Ky. Filed Feb. 25, 1911. Serial No. 610,792.



1. In a device of the class described, a table; relatively fixed blades disposed transversely of the table; interlocking elements upon said blades and the table, permitting a transverse movement of the blades, but holding the blades upon the table against longitudinal movement; adjustable means for maintaining said blades at fixed distances apart; and other blades coöperating with said fixed blades.

2. In a device of the class described, a table provided with spaced, overhanging ribs, blades having lugs adapted to engage slidably beneath the ribs; rods extended through the blades; washers on the rods between the blades; and other blades coöperating with the first-named blades.

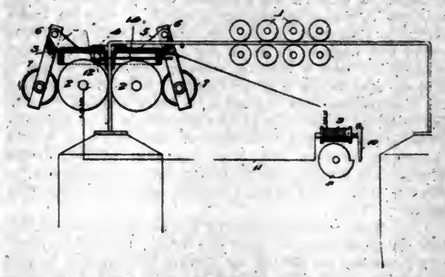
3. In a device of the class described, a table provided with longitudinally extended, overhanging ribs; blades having lugs adapted to register beneath the ribs, one of said ribs being cut away to provide for an insertion of the lugs beneath the ribs; means for adjustably spacing the blades apart, and other blades coöperating with the first-named blades.

4. A device of the class described, comprising a table; relatively fixed blades interlocked with the table for transverse sliding movement, but against longitudinal sliding movement; means for adjustably spacing said blades apart; an arcuate frame pivotally connected with the table; and other blades, pivotally connected at one end with the first-named blades, and at the other ends connected with the frame.

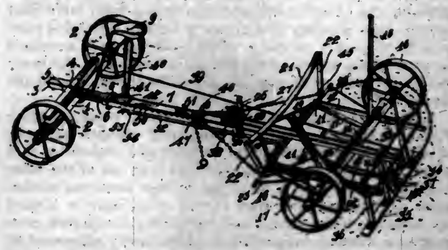
5. A device of the class described comprising a table; rods mounted thereon; blades carried by the rods; an edge guide carried by the rods and upstanding above the said blades; washers upon the rods between the blades and about the edge guide; and other blades pivoted to the first-named blades.

1,014,042. CLEARER AND STOP-MOTION FOR DRAWING-FRAMES. JOHN BRADY, Fall River, Mass. Filed Sept. 30, 1910. Serial No. 584,720.

In a revolving clearer and stop motion for drawing frames, the combination with calender rolls lying in a horizontal plane, of pivoted arms adjacent thereto, a clearer roll mounted in said arms in such position that the split, broken or bunched sliver will wind thereon and cause shifting thereof, a pivoted switch arm positioned to be shifted into electrical contact with one of the calender rolls, a link pivoted at one end to said switch arm and at the other to an arm carrying the clearer roll, an electric stop motion, and a circuit for controlling said stop motion by the movement of the switch arm due to the shifting of the clearer roll.



1,014,043. CORN-SHOCK LOADER. AUGUST BRANDHORST, Hermann, Mo. Filed July 3, 1911. Serial No. 636,574.



1. A shock loader comprising a front truck, a reach formed of inner and outer telescopic members, said inner member having its forward end secured to said front truck, a cross bar secured to the rear end of the outer member of the reach, a pawl and ratchet fastening mechanism to hold said members of the reach against inward movement, a shock lifting and supporting mechanism comprising a wheeled supporting frame hingedly connected at its forward end to the cross bar of said outer reach member and adapted to be tilted to a vertical position by the rearward movement of the loader, and a flexible shock binding element having an adjustable connection with the inner member of said reach and adapted to be engaged with a shock whereby the forward movement of the inner member of the reach will draw said shock into tight engagement with the supporting frame.

2. A shock loader comprising a front axle having thereon front supporting wheels, a bolster engaged with said axle, a reach comprising inner and outer telescopically engaged sections, said inner section having its forward end secured to said bolster, a cross bar secured to the outer end of the outer reach section, a shock lifting and supporting mechanism comprising a wheeled supporting frame hingedly connected at its forward end to the cross bar on said outer reach member, a catch arranged on said reach, a holding bar secured to said lifting and supporting frame and adapted to be swung down into engagement with said catch whereby said frame is held in an operative position to support the shock, means to release said catch to permit the frame to be tilted to a vertical position, a fulcrum frame arranged on said supporting frame and adapted to be swung into operative position to form a fulcrum on which said lifting and supporting frame is adapted to rock when tilted to a position for engaging a shock.

3. A shock loader comprising a front truck, a reach comprising inner and outer telescopically engaged members, said inner member having its forward end secured to said truck, a cross bar secured to the rear end of said outer reach section, a shock lifting and supporting frame

hingedly connected at its forward end to the cross bar of said outer reach member, supporting wheels operatively arranged on said frame, means to hold said frame in an operative position to support a shock, a fulcrum frame pivotally connected to the rear end of said supporting frame and adapted to be swung down into an operative position to form a fulcrum whereby when the loader is backed, said frame will be tilted to a vertical position for engagement with the shock, a brace adapted to hold said fulcrum frame in operative position, a lever pivotally mounted on the outer member of said reach, a flexible connection between said lever and said fulcrum frame whereby the latter is swung to and held in an inoperative position, and means to bind a shock onto said supporting frame.

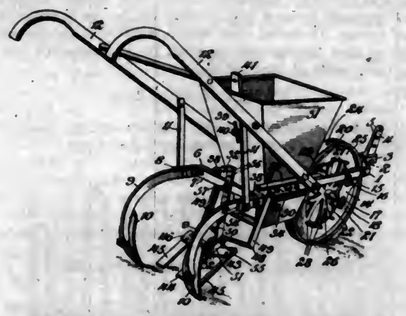
4. A shock loader comprising a front truck, an adjustable reach composed of inner and outer telescopic sections, said inner section having its forward end secured to said front truck, a cross bar secured to the rear end of the outer reach member, guide plates secured to the outer member of the reach, a spring catch connected with one of said guide plates, a shock lifting and supporting mechanism comprising a frame, an axle secured to said frame, supporting wheels engaged with said axle, a frame holding bar having its forward end projecting beyond the forward end of the frame and adapted to be swung down between the guide plates and into engagement with said spring catch whereby said frame is held in operative position to support a shock, a shock receiving rack arranged on said frame, and a binding chain connected to the inner member of said reach and adapted to be passed around the shock.

5. A shock loader comprising a front truck, a reach formed in inner and outer telescopically engaged members, said inner member having its forward end secured to said front truck, a cross bar secured to the rear end of the outer member of the reach, a pawl and ratchet fastening mechanism to hold said members of the reach against inward movement, a shock lifting and supporting mechanism comprising a wheeled supporting frame hingedly connected at its forward end to the cross bar of said outer reach member, means whereby said frame is tilted to a vertical position by the rearward movement of the loader, a flexible shock binding element having an adjustable connection with the inner member of said reach and adapted to be engaged with a shock whereby the forward movement of the inner member of the reach will draw said shock into tight engagement with the supporting frame and will swing the latter to an operative position for supporting the shock, a brace bar loosely connected to the outer member of the reach and adapted to be swung down into engagement with the ground to hold the shock lifting and supporting mechanism in a tilted position while the shock is being bound thereto, and means to support said bar in an inoperative position.

1,014,044. FERTILIZER-DISTRIBUTER. JOHN M. BRASINGTON, Bennettsville, S. C., assignor, by mesne assignments, to T. E. & C. S. McCall Co., Bennettsville, S. C. Filed July 2, 1910. Serial No. 570,172.

1. A fertiliser distributer including a frame composed of side bars having spaced parallel portions connected at their front ends and having laterally extending rear terminals, and a rear transverse connecting bar extending beyond the parallel portions of the side bars and secured to the laterally extending rear terminals thereof and having its ends extended rearwardly to form projecting attaching arms, means mounted on the frame for distributing the fertiliser, and covering blades having standards secured to the said rearwardly extending arms.

2. A fertiliser distributer including a frame composed of side bars having spaced parallel portions connected at their front ends and having laterally extending rear terminals, and a rear transverse connecting bar extending beyond the parallel portions of the side bars and secured to the laterally extending rear terminals thereof and having its ends extended rearwardly to form projecting attaching arms, means mounted on the frame for distributing the fertiliser, covering blades having standards secured to the said rearwardly extending arms, inclined handle bars secured at their lower ends to the sides of the frame, and braces supporting the handle bars and connected at their lower ends to the rearwardly extending arms of the frame.



3. A fertilizer distributer including a frame having spaced side bars, opposite hangers secured at their upper ends to the side bars and depending from the same and provided at their lower ends with bearing openings, said hangers being also provided above the bearing openings with casings extending from the inner faces of the hangers, a wheel having an axle journaled in the bearing openings of the hangers, and spacing blocks arranged in the casings and provided at their lower faces with bearing recesses to receive the axle and extending across the space between the hangers and the wheel and spacing the latter from the side bars and the hangers.

4. A fertilizer distributer including a frame having spaced side bars, hangers secured at their upper ends to the side bars and depending therefrom and provided with bearing openings and having inwardly extending approximately inverted U-shaped casings located above the bearing openings, a wheel having an axle arranged in the bearing openings of the hangers, and spacing blocks fitted in the said casings and extending across the space between the hangers and the wheel and spacing the latter from the side bars and the hangers.

5. A fertilizer distributer including a frame having opposite side bars, supporting members arranged at the inner faces of the side bars of the frame and extending longitudinally thereof and provided with upper and lower outwardly projecting flanges extending over the upper edges of the side bars and beneath the lower edges of the same, filler bars arranged within the supporting members, fastening means for securing the supporting members and the filler bars to the sides of the frame, and a hopper fitted between and supported by the said members.

[Claims 6 to 8 not printed in the Gazette.]

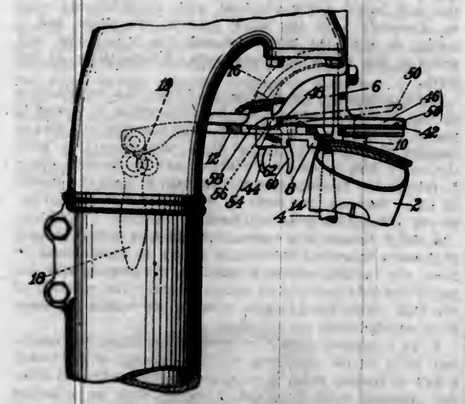
1,014,045. HAND-CULTIVATOR. ELBERT J. BROOKS, Sparta, Wis. Filed Apr. 3, 1911. Serial No. 618,505.

1. In a device of the described class, the combination of a shaft, a plurality of bifurcated teeth each tooth comprising two pointed members diverging oppositely from each other, centrally connected together by an annular member which surrounds and is supported directly upon said shaft, means for clamping the central member of said teeth together and directly around said shaft, an operating handle, and means for revolubly supporting said shaft from said handle.

2. In a device of the described class, the combination of a shaft, a plurality of bifurcated teeth centrally connected together by an annular member which annular member surrounds and is supported directly from said shaft, a pair of clamping sleeves carried by said shaft located upon the respective sides of said teeth, a stationary bearing connected with one end of said shaft and a nut threaded upon the opposite end of said shaft, said nut being adapted as it is turned down thereon, to force said collars against the central connecting members of said teeth, whereby said teeth are clamped together and rigidly secured to said shaft, an operating handle, shaft supporting arms connected at one end to said handle and provided at their opposite ends with journal bearings for the reception of the ends of said shaft.

3. In a device of the described class, the combination of a shaft, a plurality of bifurcated teeth supported on said shaft, a pair of clamping sleeves carried by said shaft located upon the respective sides of said teeth, a fixed bearing connected with said shaft upon one side of said teeth, a nut threaded upon the opposite end of said shaft adapted as it is turned down thereon, to force said collars against said teeth, whereby said teeth are clamped together upon said shaft, an operating handle, shaft supporting arms connected at one end to said handle and provided at their opposite ends with journal bearings for the reception of the ends of said shaft, and a pair of washers secured to said shaft outside of said journal bearings between the outer ends of said collars and the opposing surfaces of said nut, and fixed bearing, all substantially as and for the purpose specified.

1,014,046. MACHINE FOR USE IN MANUFACTURE OF BOOTS AND SHOES. JOHN HENRY BROWN and JOSEPH GOULDBOURN, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 9, 1909. Serial No. 511,989.



1. A machine of the class described, having in combination, a work abutment against which the work is pressed during the operation of the machine thereon and a work rest against which the work is also pressed during the operation of the machine thereon, means independent of said work rest for causing the work to be moved away from said work abutment between the successive operations thereon, and means for yieldingly maintaining said work rest constantly in engagement with the work.

2. A machine of the class described, having in combination, mechanism for operating upon the sole of a boot or shoe and an edge gage and a sole rest arranged to engage the sole only at points upon opposite sides of the point of operation of said mechanism and adjustable together transversely to the line of feed of the sole past said mechanism.

3. A machine of the class described, having in combination, mechanism for successively inserting fastenings into a sole fed past said mechanism, an edge gage and a sole rest adjustable horizontally in a direction transverse to the line of the work feed, and means for positively correlating the movements of adjustment of said gage and rest.

4. A machine of the class described, having in combination, mechanism for successively inserting fastenings into a sole fed past said mechanism, an edge gage and a sole rest adjustable horizontally in a direction transverse to the line of the work feed, and disconnectible means for positively correlating the movements of adjustment of said gage and rest.

5. A machine of the class described, having in combination, mechanism for successively inserting fastenings, an edge gage and a work rest arranged to engage the sole only at points upon opposite sides of the point of operation of said mechanism and adjustable transversely to the line of work feed, guides in which both said gage and rest are movable to effect such adjustment, and means for simultaneously adjusting said gage and rest constructed to maintain the spaced relation of said parts.

[Claims 6 to 8 not printed in the Gazette.]

1,014,047. JOURNAL-BOX LID. EDWIN G. BUSSE and PHILIP B. HARRISON, Chicago, Ill., assignors to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1909. Serial No. 506,033.

1. The combination with a journal box provided with an opening, of a lid hinged thereto, a resilient member arranged on the outside of the lid, the free end of which engages a part of the journal box, and a resilient member arranged on the inside of the lid, the ends of which last-mentioned resilient member engage on the journal box inside the opening by virtue of their own resiliency.

2. The combination with a journal box provided with an opening, of a lid hinged thereto, a resilient member arranged on the outside of the lid, the free end of which engages a part of the journal box, and a resilient member arranged on the inside of the lid, the free ends of which resilient member yieldingly engage the interior of the box at points adjacent the opening therein by virtue of their own resiliency.

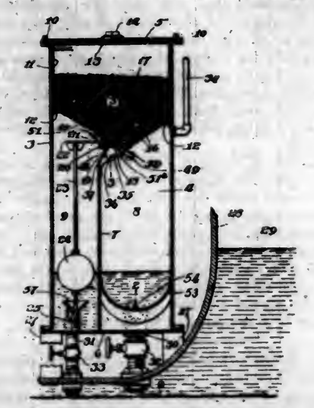
3. The combination with a journal box provided with an opening, of a lid hinged thereto, a spring fixed on the outside of the lid, the free end of which spring engages a part of the box, and a spring fixed to the inside of the lid, the free ends of which last-mentioned spring engage the edges of the opening in the journal box at the top and bottom thereof by virtue of their own resiliency.

4. A journal box lid having a spring attached to the outside and a spring attached to the inside, and retaining devices mounted on the outside and inside of the lid and adapted to engage each spring adjacent its attaching means.

1,014,048. ACETYLENE-GAS GENERATOR. HARRY A. BYRNS, Camden, N. J. Filed Dec. 17, 1910. Serial No. 597,849.

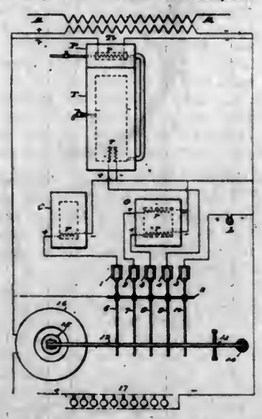
In an acetylene gas generator, the combination of a tank having a gas outlet, means for supporting said tank with respect to an outside body of water, said tank being

provided with two compartments each having communication with said body of water, a carbid holder, and means



including a float in one of said compartments for delivering carbid from said holder to the other compartment.

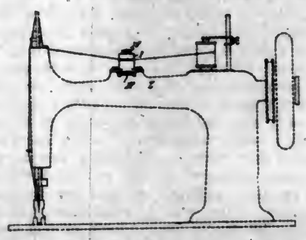
1,014,049. ART OF ELECTRICAL DISTRIBUTION. RALPH D. CUTLER and MICHAEL F. OWENS, Hartford, Conn., assignors to The Hartford Electric Light Company, Hartford, Conn., a Corporation of Connecticut. Filed June 10, 1911. Serial No. 632,503.



1. The improvement in the art of distributing electrical energy to various electrical translating apparatus which consists in continuously supplying a current of uniform voltage and fixed wattage of less amount than the aggregate capacity of the translating apparatus but of sufficient amount to cause certain of the electrical translating apparatus to perform their normal functions, automatically diverting from said translating apparatus a sufficient quantity of current for temporarily energizing other translating apparatus when the latter apparatus are switched in, and automatically re-directing the diverted current to the former apparatus when the latter apparatus are switched out, whereby the amount of current used never varies.

2. The improvement in the art of heating and lighting, which consists in continuously supplying an electric current of uniform voltage and fixed wattage of less amount than the aggregate capacity of the heating apparatus and lighting apparatus but of sufficient amount to cause the electrical heating apparatus to perform their normal functions, automatically diverting from said heating apparatus sufficient quantity of current for temporarily energizing lamps, when the lamps are switched in, and automatically redirecting the diverted current to the heating apparatus when the lamps are switched out, whereby the amount of current used never varies.

1,014,050. SEWING-MACHINE TENSION. STEPHEN A. DAVIS, Newark, N. J., assignor, by mesne assignments, to Domestic Sewing Machine Company, a Corporation of Maine. Filed Mar. 29, 1909. Serial No. 486,491.



1. In a tension for sewing machines, the combination of a barrel, a disk fitting the bore of the barrel and held from lateral movement thereby, a second disk below the first, and fitting the bore of the barrel and guided vertically thereby, a thread being passed between the two disks, a spring for pressing the second disk upward, and adjustable means beneath the said spring for regulating the compression thereof, substantially as set forth.

2. In a tension for sewing machines, the combination of a pair of freely rotatable disks through which a thread is passed, a barrel wherein the disks are held and fitting the bore thereof to be held thereby from lateral movement, the said barrel being provided with a semicircular slot in alinement with the space between the disks and a spring in the said barrel beneath the lower disk and pressing the lower disk upwardly, substantially as set forth.

3. In a tension for sewing machines, the combination of two freely rotatable disks between which a thread is passed, means for pressing said disks together and means passing through one of the disks and contacting with the other disk whereby the disks may be pressed apart to release the tension, and serving also to hold the thread in place between the disks to prevent its accidental removal, substantially as set forth.

4. In a tension for sewing machines, a barrel, a pair of tension members therein, a spring in said barrel to force the tension members together, a rotatable disk beneath the said barrel and means whereby the rotation of the disk varies the pressure between the tensioning members, substantially as set forth.

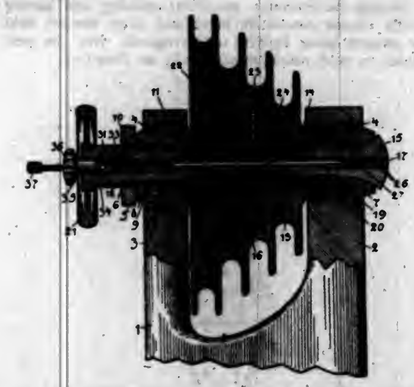
5. In a tension device for sewing machines, the combition of a barrel apertured for the passage of a thread, a pair of tension disks therein, a spring beneath said disks for pressing them together, a screw with an enlarged head beneath the said spring, means for preventing rotation of the screw, and a rotatable disk on said screw for raising and lowering the screw to vary the tension on the spring, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,014,051. ATTACHMENT FOR LATHE HEAD-STOCKS. CHARLES E. DE LONG, Dallas, Tex., assignor to H. H. Hawley Company, Dallas, Tex. Filed Apr. 24, 1911. Serial No. 622,994.

1. In a device of the character described, the combination with an elongated stem, of a plurality of divergent resilient wires, fixed in one extremity of the stem, having their free ends equidistant in a plane transverse with the stem, a sleeve slidable upon the extremity of the stem, having an inwardly projecting annular flange at

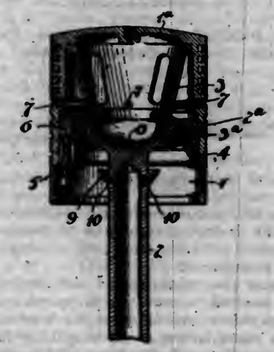
one end contacting with the wires, and means limiting the sliding motion of the sleeve toward the wire extremities.



2. In a device of the character described, the combination with an elongated stem, having one of its extremities threaded, of a plurality of divergent resilient wires, fixed in the other extremity of the stem, an apertured means through which said wires pass, adapted to adjust the divergence of the wires by sliding displacement thereupon, a nut carried by the threaded extremity of the stem, and a sleeve loose upon the stem, engaging said nut, having a portion of its outer surface tapered to frictionally engage a tapering inlet to the aperture of a hollow lathe spindle.

3. In a device of the character described, the combination with an elongated stem, having one of its extremities threaded, of a plurality of divergent resilient wires, fixed in the other extremity of the stem, an apertured means through which said wires pass adapted to adjust the divergence of the wires by sliding displacement thereupon, a nut carried by the threaded extremity of the stem, having opposite projecting pins, and a sleeve loose upon the stem, having opposite longitudinal slots, which engage said pins, a portion of the outer surface of the sleeve being tapered to frictionally engage the walls of a tapering inlet to the aperture of a hollow lathe spindle.

1,014,052. PISTON. HERMAN DOCK, Westerly, R. I., assignor, by mesne assignments, to Alfred A. Whitman, New York, N. Y. Filed May 7, 1909, Serial No. 494,631. Renewed June 8, 1911. Serial No. 632,020.



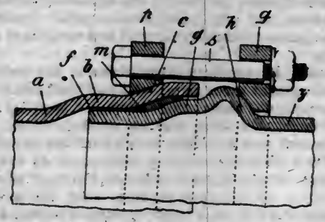
1. In an apparatus of the character described, a piston of hollow cylindrical cross section closed at its upper end, an inverted dome-shaped bearing extending from a point well above the center of the piston down to a point approximately midway in the length of the piston, the bearing end of said dome being of semi-spherical shape, a piston having a cupped-shape head, the concave bearing surface thereof corresponding in shape and size to the semi-spherical bearing end of said inverted dome, and means to hold said connecting rod bearing in operative engagement against the bearing end of the dome.

2. In an apparatus of the character described, a piston of hollow cylindrical cross section closed at its upper end, an inverted dome-shaped bearing extending from a point well above the center of the piston down to a point approximately midway in the length of the piston, the bearing end of said dome being of semi-spherical shape, a piston having a cupped-shape head, the concave bearing surface thereof corresponding in shape and size to the semi-spherical bearing end of said inverted dome, means to hold said connecting rod bearing in operative engagement against the bearing end of the dome, said means comprising an annular under bearing and an adjusting device coöperating therewith and operatively connecting said annular under bearing with the inner side wall of the piston.

3. The combination with a connecting rod having a cupped bearing face at one end, of a piston having a similarly curved but convexed bearing face, upon which said rod has its bearing, an oil duct leading from the side of the piston to the upper side of the convexed bearing, the latter having an oil passage communicating with the concaved bearing face of the cupped end of the connecting rod.

4. The combination with a connecting rod having a cupped bearing face at one end, of a piston having a similarly curved but convexed bearing face, upon which said rod has its bearing, an oil duct leading from the side of the piston to the upper side of the convexed bearing, the latter having an oil passage communicating with the concaved bearing face of the cupped end of the connecting rod, said connecting rod having a longitudinal oil passage therein, and means carried by the connecting rod for catching surplus oil from the cupped bearing and conducting the same to the longitudinal passage in said connecting rod.

1,014,053. COUPLING FOR PIPES AND THE LIKE. EUGEN DOLINSKY, Frankfort-on-the-Main, Germany, assignor to The Corporation of Dellwik-Fleischer Wassergas-Gesellschaft M. B. H., Frankfort-on-the-Main, Germany. Filed Nov. 23, 1908. Serial No. 463,994.



1. A pipe coupling comprising an outer member having a divergent end section, an inner telescoping member having a convergent section and an adjacent cylindrical section to form a packing chamber tapering in opposite directions between the respective members, said telescoping member having a shoulder to the rear of the said sections, a packing substantially filling said chamber, coöperating rings and bolts connecting the respective sections.

2. A pipe coupling, comprising an outer member having a divergent section and an adjacent cylindrical section, an inner telescoping member having a convergent section and an adjacent cylindrical section to form a packing chamber tapering in opposite directions, between the respective members, said telescoping member having a shoulder to the rear of said sections, a packing substantially filling said chamber, rings engaging the outer surfaces of the divergent portion of the first member and the shoulder of the second member respectively, and bolts connecting said rings.

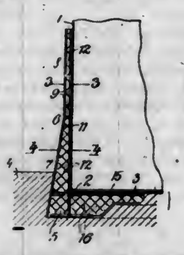
3. In couplings for pipes and the like the combination of a conical sleeve coupling one part of which is enlarged to a cylindrical sleeve with a divergent conical extension while the other part is cylindrical and provided with a conical elastic enlargement with a flanged coupling substantially as and for the purpose described.

4. In couplings for pipes and the like the combination of a conical sleeve coupling one part of which is enlarged to a cylindrical sleeve with a divergent conical extension while the other part is cylindrical and provided with a conical elastic enlargement with flanges arranged on the conical parts of the pipe ends, substantially as and for the purpose described.

5. In couplings for pipes and the like the combination of a conical sleeve coupling one part of which is enlarged to a cylindrical sleeve with a divergent conical extension while the other part is cylindrical and provided with a conical elastic enlargement with flanges arranged on the conical parts of the pipe ends, and connected by screw bolts substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,014,054. TANK OF LARGE DIAMETER. PHILIPP FORCHHEIMER, Gratz, Austria-Hungary, assignor to The Firm of Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft, Berlin, Germany. Filed June 8, 1909. Serial No. 500,947.



1. In a tank of relatively large diameter, the combination of an upright sheet metal wall and a horizontal base, of a ferro-concrete angle ring having a vertical arm closely embracing the lower portion of the upright wall, and a horizontal arm connected with and arranged to support the peripheral portion of the base, and a foundation into which said angle ring extends, said foundation being in engagement with the vertical and horizontal arms of said ring.

2. In a tank of relatively large diameter the combination with an upright sheet metal wall and horizontal base, of a ferro-concrete angle ring having a vertical arm closely embracing the lower portion of the vertical wall and a horizontal arm arranged to support the peripheral portion of the base and vertical projections of substantially V-shape extending from said vertical wall into the vertical portion of the ferro-concrete ring, the said V-shaped projections having their points directed downwardly.

3. In a tank of relatively large diameter, the combination with an upright sheet metal wall and horizontal base, of a ferro-concrete angle ring having a vertical arm closely embracing the lower portion of the wall and a horizontal arm arranged to support the peripheral portion of the base, V-shaped angle members extending from said upright wall into the vertical portion of the ferro-concrete ring and arms carried by said V-shaped members and connected to the said sheet metal wall.

1,014,055. WHEEL. MELVIN J. FOYER, Toledo, Ohio, assignor to The Foyer Brothers & Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 16, 1911. Serial No. 644,428.

1. In a device of the described character, a cylindrical thimble having at each end a circumferentially enlarged portion, a ring seated in each of said enlarged portions and having perforations therethrough, and a pair of caps fitted over the opposite enlarged ends of the thimble, said caps having therethrough a central opening and having inwardly turned concentric inner and outer flanges, said outer flanges being slotted to correspond with the perforations in said rings, substantially as described.

2. A wheel of the described character, comprising a rim, spokes secured at their outer ends to the rim and being alternately bent inwardly close to their converging ends, a pair of rings engaged respectively with the alternate inwardly turned ends of the spokes, a thimble enlarged at each end to form external shoulders and to form recesses in which said rings are seated, and a pair of caps which cover the opposite ends of the thimble, said caps having therethrough a central opening and having inwardly turned concentric inner and outer flanges, the outer flanges being slotted to receive the spokes and being engaged with said shoulders.

3. In a device of the described character, a thimble, a perforated ring disposed in each end of the thimble, a cap fitted over each end of the thimble, said caps having therethrough a central opening and having concentric outer and inner flanges, the latter flanges being adapted to serve as bearings for an axle.

4. In a device of the described character, a thimble having at each end a circumferentially enlarged portion, a ring seated in each of said enlarged portions and having porforations therethrough, and a pair of caps fitted over the opposite enlarged ends of the thimble, said caps having therethrough a central opening and having inwardly turned concentric inner and outer flanges, said outer flanges being slotted to correspond with the perforations in said rings, the inner flanges being adapted to serve as bearing surfaces for an axle.

1,014,056. DENTAL TOOL. CHARLES LAMB GIBBS, Philadelphia, Pa. Filed May 8, 1911. Serial No. 625,830.

1. A dental tool comprising a tube having a slotted closure in one end, a spiral shank operable in said tool through the slot in said closure, the head on the outer end of said shank having an opening in its free end, and passages extending obliquely from said opening through the side walls of said head.

2. A dental tool comprising a tube having a slotted closure in one end, a spiral shank operable in said tool through the slot in said closure, the head on the outer end of said shank having an opening in its free end, and passages extending obliquely from said opening through the side walls of said head, and means at the inner end of said shank for retaining it against accidental withdrawal from the tube.

1,014,057. SPINDLE-BEARING. BRITT C. GIBSON, Lockhart, S. C. Filed Oct. 19, 1910. Serial No. 588,008.

1. In a spindle bearing structure, a rotatable step bearing comprising a member having at one end a socket with the inner end thereof forming a bearing for the spindle, the longitudinal axis of said socketed end being at an angle to the axis of rotation of said member.

2. In a spindle bearing structure, a rotatable step bearing comprising a member having at one end a socket with the inner end thereof formed into a bearing for the spindle, the longitudinal axis of the socketed end being at an angle to the axis of rotation of said member and the other end of the member being externally screw-threaded, and a support for said member threaded to receive the said threaded portion of the member.

3. A spindle bearing comprising a body portion having at one end a threaded passage at an angle to the longitudinal axis of the body portion, a bolster within the body portion, and a step bearing for the spindle adapted to said bolster, said bearing having one end threaded to enter the threaded portion of the body member and the other end at an angle to the threaded end and formed with a socket adapted to receive the corresponding end of a spindle.

4. In a spindle bearing structure, an elongated rotatably adjustable step bearing for the spindle, and a support for said bearing, the bearing having a spindle engaging portion and a support engaging portion both in one piece, and with the longitudinal axes of the two portions at an angle one to the other.

5. In a spindle bearing structure, a rotatable step bearing member for the spindle having the end remote from that engaging the spindle externally screw threaded, a sleeve having a central passage of sufficient extent to pass over the screw threads and having one face hollowed out for the reception of packing, and a nut for the threaded end of the bearing, said step bearing having at the end remote from the threaded end a socket for receiving the corresponding end of the spindle and provided with a bearing portion eccentric to the axis of rotation of the bearing member.

[Claims 6 and 7 not printed in the Gazette.]

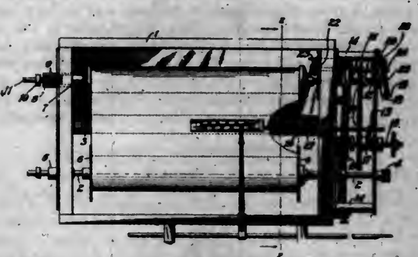
1,014,058. VENTILATOR FOR HOUSES. EDWARD GOLDBERG, Malden, Mass. Filed Nov. 8, 1910. Serial No. 591,232.

1. A device of the kind described, comprising a casing adapted to fit within the upper portion of a window frame and extending outwardly therefrom, rotatable blades arranged in said casing and adapted to alternately open and close the outer portion of the casing, a shutter mechanism carried by the inner portion of the casing and common means for operating said blades and shutter.

2. A device of the kind described comprising a casing adapted to be arranged in a window frame and extending outwardly, a shutter mechanism arranged at the inner end of the casing, rotatable blades arranged in the casing and adjacent its outer end, said blades being adapted to close said casing twice during each rotation, means for driving said blades and means connecting the blade driving mechanism with the shutter mechanism, whereby said shutters are opened once during each revolution of said blades.

3. A device of the kind described comprising a casing, a downwardly open hood carried by the casing, transversely arranged shutters carried by the casing and adjacent its inner end, rotatable blades carried by the casing adjacent the hood, said blades closing the outer entrance to the casing twice during each rotation, a clock mechanism for driving said blades, a reciprocating bar operatively connected to said shutters, and a link mechanism operatively connected to said bar and actuated from said clock mechanism, as and for the purpose set forth.

1,014,059. PIANO-PLAYER. IRA L. GRINNELL, Detroit, Mich. Filed Mar. 13, 1911. Serial No. 613,986.



1. In piano player mechanism, a casing, a tracker board therein, a roll spool bearing longitudinally movable and rotatable in one end of the casing parallel to the board, a spring yieldingly projecting the bearing inwardly, a spool bearing and driving shaft rotatable and reciprocable in the other end of the casing in alinement with the spool bearing, a rock shaft journaled in the casing parallel to the roll driving shaft, a spring finger secured at one end to the casing with its free end in contact with the spool bearing shaft, a rock arm from the rock shaft adapted to move the free end of the spring finger when the rock shaft is rotated, a finger pull extension on the rock shaft, and a quadrant on the casing yieldingly engaged by the finger pull extension.

2. In piano player mechanism, a casing, a tracker board in the casing, a gage longitudinally adjustable on the face of the tracker board, a bearing rotatable and longitudinally reciprocable in one end of the casing, a spring yieldingly projecting the bearing inwardly, a bearing plate secured in spaced relation to the outer side of the other end of the casing, a spool driving shaft reciprocable and rotatable in the bearing plate and the adjacent end of the casing in axial alinement with the spool bearing, a spring finger secured at one end on the bearing plate with its other end yieldingly contacting with the outer end of the spool bearing and driving shaft, a quadrant on the inner side of the casing end adjacent the bearing plate, a rock shaft journaled in the bearing plate and adjacent end of the casing with one inbent end forming a finger pull yieldingly engaging the quadrant, a rock arm on the other end of said shaft riding in contact with the spring finger adapted to move the latter inwardly when the rock shaft is swung, and means mounted on the casing end

and bearing plate adapted to rotate the spool bearing and drive shaft regardless of the longitudinal position of the latter.

3. In piano player mechanism, a casing, a tracker board in the casing, a gage longitudinally adjustable on the face of the tracker board, a bearing rotatable and longitudinally reciprocable in one end of the casing, a spring yieldingly projecting the bearing inwardly, a bearing plate secured in spaced relation to the outer side of the other end of the casing, a spool bearing and driving shaft reciprocable and rotatable in the bearing plate and the adjacent end of the casing in axial alinement with the spool bearing, a spring finger secured at one end of the bearing plate with its other end yieldingly contacting with the outer end of the spool bearing and driving shaft, a quadrant on the inner side of the casing end adjacent the bearing plate, a rock shaft journaled in the bearing plate and adjacent end of the casing with one inbent end forming a finger pull yieldingly engaging the quadrant, a rock arm on the other end of said shaft riding in contact with the spring finger adapted to move the latter inwardly when the rock shaft is swung, a main driving shaft journaled in the casing parallel to the tracker board and spool bearings, and mechanism mounted on the casing end and bearing plate for driving the said shaft and the spool bearing shaft.

4. In a piano player mechanism, a casing, a tracker board therein, a driving shaft journaled in the casing parallel to the tracker board and provided with roll guide flanges, a gage longitudinally adjustable on the tracker board in substantial alinement with one of said guide flanges, a pair of alined spool bearing and driving members rotatable and longitudinally reciprocable in the casing, on the side of the tracker board opposite the main shaft and in parallel relation to the latter, a spring yieldingly projecting the bearing remote from the board gage toward the interior of the casing, and means for positively moving the other spool bearing member inwardly.

1,014,060. WORK-BOX. FREDERIC W. HAWKES, New York, N. Y. Filed Nov. 3, 1909. Serial No. 526,075.

1. A work box comprising a receptacle having a perforation, a thimble passing outwardly through said perforation and constituting a handle, and means within the receptacle preventing inward movement of said thimble.

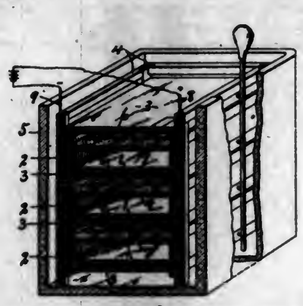
2. A work box comprising a receptacle, a removable cover therefor having an opening, a thimble passing outwardly through said opening and constituting a handle, and means within the receptacle constituting an abutment for said thimble.

3. A work box comprising a receptacle, a cover therefor having an opening, a thimble passing through said opening and engaging the wall thereof, a tubular body within the receptacle and constituting an abutment for said thimble, and a needle holder supported by said tubular body and projecting upwardly therefrom and into said thimble.

1,014,061. PROCESS OF RECOVERING COPPER FROM ITS ORES. HENRY K. HESS, Philadelphia, Pa., assignor to American Copper Extracting and Refining Company, a Corporation of Arizona. Filed Aug. 27, 1907, Serial No. 390,371. Renewed June 23, 1911. Serial No. 635,017.

1. The herein described process of separating copper from its ores consisting in subjecting the copper containing ore to the action of a chromic acid solution.

2. The herein described process of separating copper from its ores consisting in subjecting the copper containing ore to the action of a solution of sulfuric acid and chromic acid.

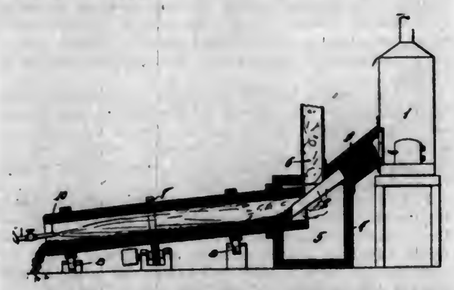


3. In a process for depositing copper, subjecting the copper containing body to the action of a chromic acid solution and passing a suitable electric current through the resulting solution.

4. The herein described process of separating copper from its ores consisting in placing the copper containing ore in one of two compartments divided by a porous partition, subjecting such ore to the action of chromic acid and immersing in the compartments separate electrodes one of which is in contact with the copper whereby the copper in contact with its electrode is dissolved.

5. In a process for depositing copper, subjecting a copper containing body to the action of an electrolyte containing a chromium compound and passing a suitable electric current through the electrolyte.

1,014,062. METHOD OF PRODUCING ZINC OXID. HARRY H. HUGHES, St. Louis, Mo. Filed May 27, 1911. Serial No. 629,912.

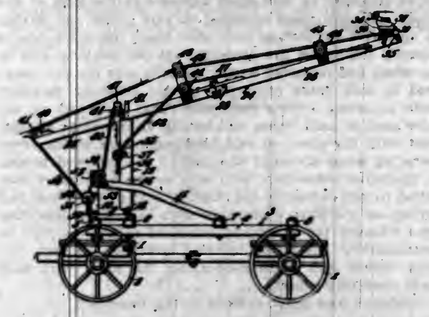


1. The herein described continuous method of producing zinc oxid from sulfid and other sulfur bearing ore consisting in roasting the ore to eliminate practically all of the sulfur in the form of fumes, delivering the roasted ore while still in a heated condition into a rotary reduction furnace, the interior of which is heated solely by the combustion of liquid or gaseous hydrocarbon within said furnace, causing the heated ore to pass through the furnace, and introducing air into said furnace to reduce the zinc vapor to an oxid.

2. The herein described continuous method of producing zinc oxid, consisting in initially applying heat to the zinc ore under treatment to eliminate practically all of the sulfur from said ore, then delivering said ore to and passing it through a chamber heated solely by the combustion of hydrocarbon within the chamber, continuously agitating the ore while in the chamber, and introducing air into said chamber to reduce the zinc vapors to an oxid.

3. The herein described continuous method of producing zinc oxid from zinc ore from which the sulfur has been eliminated, consisting in passing the heated zinc ore through a chamber heated solely by the combustion of hydrocarbon within said chamber, continuously agitating said ore while passing through the chamber, and introducing air into said chamber to reduce the zinc vapors to an oxid.

1,014,063. FRUIT-GATHERER'S AND PAINTER'S LADDER. WILEY R. IRBY, West Middleton, Ind., assignor of one-half to James Moulder, West Middleton, Ind. Filed June 12, 1911. Serial No. 632,696.



1. A device of the class described comprising a support; a ladder pivotally connected intermediate its ends with the support, for vertical swinging movement; a seat pivoted to the outer end of the ladder; and means connected with the seat, for simultaneously tilting the seat and for raising and lowering the seat-carrying end of the ladder.

2. A device of the class described comprising a support; a ladder fulcrumed intermediate its ends upon the support; a seat pivotally connected with the ladder, adjacent the outer end thereof; means connected with the seat for simultaneously tilting the seat, and for raising and lowering the seat-carrying end of the ladder; and a spring device engaged with the seat, to oppose the action of said means.

3. A device of the class described comprising a support; a ladder pivoted intermediate its ends upon the support, for vertical swinging movement; a seat pivotally supported upon the ladder, adjacent the outer end thereof; a spring uniting the seat with the ladder, upon one side of the pivotal mounting of the seat; a flexible element connected with the seat, upon the opposite side of the pivotal mounting of the seat, the flexible element being carried longitudinally of the ladder and engaged in its intermediate portion with the ladder; and means for operating the flexible element, to effect a simultaneous tilting of the seat, and a raising and lowering of the seat-carrying end of the ladder.

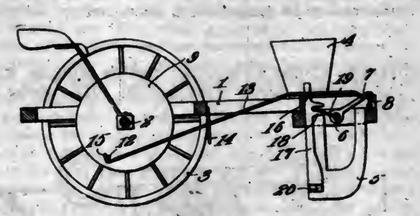
4. A device of the class described comprising a frame; a support hinged to the frame for vertical swinging movement; a ladder pivoted intermediate its ends upon the support; means for raising and lowering the support; and means for tilting the ladder upon the support.

5. A device of the class described comprising a frame; a support pivoted to the frame for vertical swinging movement; a ladder comprising hingedly connected parts, one of which parts is pivotally connected with the support for vertical swinging movement thereon; means for raising and lowering the support; means for folding one of said ladder members upon the other of said members; and means for tilting the ladder upon the support.

[Claims 6 to 11 not printed in the Gazette.]

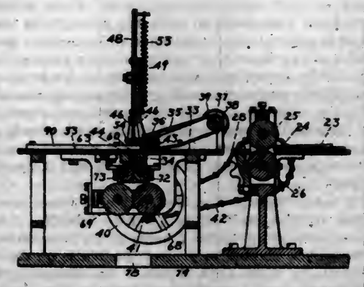
1,014,064. CORN-PLANTER. ANDREW F. KEETER, Catoosa, Okla. Filed Nov. 25, 1910. Serial No. 594,100.

In combination with a planter having a shaft journaled thereon and operatively connected with the seed separating and dropping mechanisms, guides mounted upon the frame of the planter, markers mounted for vertical sliding movement in said guides, said markers having upon those sides adjacent the shaft spaced lugs, a U-shaped arm connected at each end with the shaft and having its intermediate portion lying in the spaces between the lugs of the said



markers, means for partially rotating said shaft in one direction and a return spring operatively connected with said shaft and with the planter frame.

1,014,065. STRAP-FORMING MACHINE. ALBERT F. KESSLER, Utica, N. Y. Filed May 13, 1910. Serial No. 561,060.



1. In a strap-folding machine, the combination of means for supporting the blank preparatory to doubling it, a stationary former for folding or tucking the doubled end of the blank, a pair of feed-rolls mounted for relatively-yielding movement, a pair of doubling and folding blades mounted to reciprocate past said former and adapted to introduce the doubled and tucked end of the strap to the nip of said feed-rolls, and a second pair of feed-rolls located posterior to the first-said pair and adapted to set the fold in said strap.

2. In a strap-folding machine, the combination of a table formed with a slot, a pair of forming plates mounted edge-to-edge in said slot, a pair of feed-rolls of relatively-small diameter located below said slot and mounted for relative yielding movement, a second pair of feed-rolls of relatively-large diameter adapted to receive the strap from the first-said rolls, a pair of parallel blades adapted to double the blank and advance it past said forming-plates into the nip of the first pair of feed-rolls, and means for reciprocating said blades in a straight line through said slot.

3. In a strap-folding machine, the combination of a pair of doubling and folding blades each having inclined end edges substantially meeting at a point, means coöperating with said blades for tucking the corners of a doubled blank advanced by the blades, a pair of feed-rolls whose intermediate zones are adapted to admit the points of said blades within their peripheries, means for reciprocating said blades into and out of the space between said rolls, and means for positively rotating said rolls.

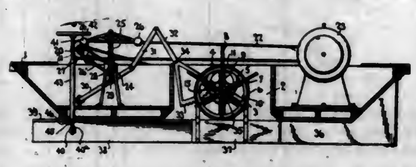
4. In a strap-folding machine, the combination of a pair of pointed doubling and folding blades, means to reciprocate them, a pair of formers working between said blades, and a pair of circumferentially-grooved feed-rolls adapted to receive the doubled strap from the doubling and folding blades and further advance it.

5. In a folding-machine, the combination of a blank-supporting table having a folding-slot, means for advancing

the blanks across the slot, means for doubling the blanks through said slot, and a support intermittently movable over said slot.

[Claims 6 to 12 not printed in the Gazette.]

1,014,066. CURRENT-MOTOR. GEORGE MICHAEL KIEVLAN, Atchison, Kans. Filed Aug. 10, 1911. Serial No. 643,386.



1. In a curent motor, a boat, a power wheel shaft revolubly mounted therein, a power wheel, said wheel comprising heads fixedly mounted on said shaft, segmental plates secured at their ends to said ends and forming between themselves longitudinal slots, a series of blades slidably engaged at their ends with the heads of the wheel and adapted to be projected and retracted through the slots between said plates, blade adjusting plates revolubly mounted on said shaft at the ends of the wheel, cam grooves formed in said blade operating plates, segmental blade operating blocks slidably mounted in said grooves and connected with said blades whereby they are projected and retracted, a power transmitting shaft geared to the shaft of said power wheel, a governor driven by said power transmitting shaft, and means to connect said governor with said blade adjusting plates.

2. In a current motor, a boat, a power wheel revolubly mounted therein, said wheel having slidably mounted therein a plurality of blades, a blade projecting and retracting mechanism adapted to project the blades on the working side of the wheel, and means to automatically adjust said blade projecting mechanism whereby the blades are projected to a greater or less extent and the power of the wheel thereby controlled.

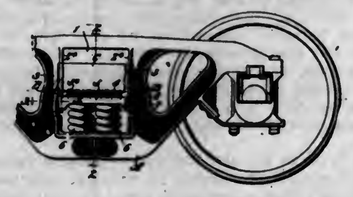
3. In a current motor, a boat, a power wheel revolubly mounted therein, a plurality of radially disposed blades slidably mounted in said wheel, means to project said blades on the working side of the wheel and to retract the same on the opposite sides thereof, blade projecting plates arranged at the ends of said power wheel, eccentrically arranged rings formed on said plates or disks and having therein annular grooves, segmental blocks pivotally connected to the ends of said blades and adapted to slidably engage the grooves in said eccentric rings whereby as the power wheel is turned, said grooved rings will project and retract the blades, a governor mechanism connected to and driven by said wheel, and means to operatively connect said governor mechanism with said blade adjusting plates or disks whereby the latter are turned and the position of the grooved eccentric rings thereon adjusted to cause said rings to project the blades into the water to a greater or less extent.

4. In a current motor, a boat, a power shaft revolubly mounted therein, a power wheel or drum operatively mounted on said shaft, said wheel comprising heads fixedly mounted on said shaft and having formed therein series of radially disposed slots, segmental plates connected at their ends to the edges of said heads and spaced apart to form radially disposed slots, a series of blades slidably mounted in said slots, operating rods secured to the inner edges of said blades and having their ends projecting through the slots in said heads, segmental blade operating blocks pivotally mounted on the ends of said rods, blade operating plates arranged on said shaft adjacent to the heads of the wheel, eccentric rings arranged on said plates, said rings having formed therein annular grooves adapted to receive the segmental blocks on said blade operating rods whereby when said wheel is turned the blades will be projected and retracted between the segmental plates of the wheel and a governor mechanism driven by said wheel and having an operative connection with said blade operating plates whereby the latter are turned and the eccentric rings thereon adjusted to change the position at which the blades are projected to their greatest extent thereby automatically controlling the power and speed of the wheel.

5. In a current motor a revolubly mounted power shaft, a power wheel fixedly mounted on said shaft, a series of blades adapted to be projected from and retracted into said wheel, operating rods connected to said blades, segmental blocks arranged on the ends of said rod, operating plates arranged on said shaft adjacent to the ends of the wheel, eccentric rings arranged on said plates and having an operative connection with said blade operating blocks whereby the blades are projected on the working side of the wheel and retracted on the opposite side thereof, gears fixed to said blade operating plates, pivotally mounted blade adjusting levers, segmental racks arranged on the outer ends of said levers and having an operative engagement with the gears on said blade operating plates, lever operating arms pivotally mounted at one end and having an operative connection with said levers, a governor connected to and driven by the shaft of said power wheel and having an operative connection with said lever operating arms whereby the speed and power of said wheel will be automatically controlled by said governor through the arms, levers and gears connecting the same with said blade operating plates.

[Claims 6 and 7 not printed in the Gazette.]

1,014,067. CAR-TRUCK SIDE FRAME. GUSTAV KOMAREK, St. Louis, Mo., assignor to Charles L. Gilbert, St. Louis, Mo. Filed Sept. 2, 1911. Serial No. 647,302.



1. A car truck provided with a cast metal side frame having a bolster opening provided with an enlarged portion, removable column members arranged in the enlarged portion of said bolster opening which form continuations of the upper straight portions of the integral columns of the side frame, and a roller seat member arranged under the bolster and held in position by said removable column members.

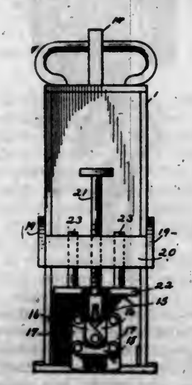
2. A car truck provided with a cast metal side frame having a bolster opening which is provided with an enlarged portion intermediate its upper and lower edges, removable members arranged at the ends of the enlarged portion of the bolster opening so as to form continuations of the sides of the bolster opening that lie above the enlarged portion of the same, and a roller seat member arranged between said removable members and having portions which embrace same.

3. A car truck provided with a cast metal side frame having a bolster opening which is enlarged intermediate its top and bottom edges, removable members on the side frame which are adapted to be arranged in operative position after the bolster has been inserted so as to reduce the width of the enlarged portion of the bolster opening, and a roller seat member arranged under the bolster and provided with lugs which embrace said removable members.

4. A cast metal side frame for car trucks having integral columns which are curved intermediate their ends, the curved portions of said columns being provided with vertically disposed recesses, and removable column members arranged in the curved portions of said integral columns and provided with ribs that fit in said recesses.

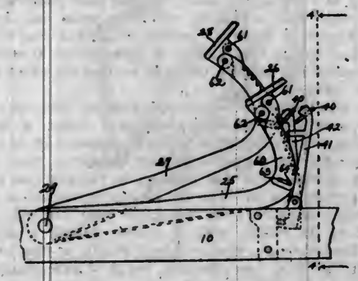
5. A cast metal side frame for car trucks having integral columns which are curved intermediate their ends, vertically disposed recesses in the curved portions of said columns whose upper ends merge into the upper straight portions of the columns, removable column members whose rear faces conform to the shape of the curved portions of said integral columns, and ribs on said members which project into the recesses in said integral columns.

1,014,068. SPIKE-PULLER. HOWARD T. KOSTENBADER, Chapman Quarries, Pa., assignor of one-half to William M. Smith, Chapman Quarries, Pa. Filed Aug. 20, 1908. Serial No. 449,427.



In a spike puller, a casing, a plunger having spike gripping jaws mounted vertically movable in the casing, means for raising the plunger, an off set frame projecting forwardly of the casing, a rod threaded vertically through the off-set frame and provided with a foot plate adapted to engage the tread of a railway rail, this foot plate constituting fulcrum means for the casing whereby the spike may be extracted, the threaded rod constituting means whereby the foot plate may be adjusted at various intervals as the spike is being extracted.

1,014,069. PEDAL-LOCKING MECHANISM. JOHN W. LAMBERT, Anderson, Ind., assignor to The Buckeye Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed June 9, 1910. Serial No. 566,001.



1. The combination of a plurality of pedal levers with forwardly up-turned ends having ratchet teeth thereon, a pedal plate pivoted on the upper end of each pedal lever, a movable locking means for engaging the ratchet teeth and locking each lever when actuated, and means operated by the oscillation of the pedal plate for disengaging said locking means from said pedal lever.

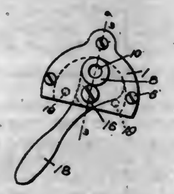
2. The combination of a plurality of pedal levers with forwardly up-turned ends having ratchet teeth thereon, pedal plates pivoted on the upper end of each pedal lever, a movable locking means for engaging the ratchet teeth and locking each lever when actuated, a releasing plate pivoted at its upper end to one side of the fulcrum of said pedal plate and extending down beside the pedal lever, and means on said lever for guiding the lower end of said releasing plate when actuated and causing it to project forwardly beyond the ratchet teeth and engage and release the locking means from the ratchet teeth.

3. The combination of a pair of pedal levers with up-turned forward ends provided with ratchet teeth, and a spring-pressed locking frame provided with means for engaging the ratchet teeth of each pedal lever and locking it when actuated, said locking frames being placed one in front of the other but reversely formed and each provided with a lateral projection at the side remote from its corresponding actuating pedal lever in position to be engaged by the other pedal lever when actuated.

4. The combination of a pair of pedal levers having up-turned forward ends provided with ratchet teeth, a pedal plate pivoted on the upper end of each pedal lever, a releasing plate mounted on the side of the up-turned portion of each pedal lever and pivoted to the pedal plate in front of the fulcrum and arranged so that when not operated said releasing plate will project beyond the teeth of the pedal lever, and a pair of spring-pressed frames located one in front of the other and having at opposite ends locking plates adapted to engage the teeth of the corresponding pedal levers and having lateral projections on both sides in position to be engaged by said releasing plate, whereby each pedal can release itself from its own locking means and each pedal when actuated will release the locking means of the other pedal.

5. The combination of a pair of pedal levers with up-turned forward ends provided with ratchet teeth, a locking frame provided with means for engaging the teeth of each pedal lever and locking it when actuated, said locking frames being placed one in front of the other but reversely formed and each provided with a lateral projection at the side remote from its corresponding actuating pedal lever in position to be engaged by the other pedal lever when actuated, a spring tending to force said locking frames toward the pedal levers, and a stop on one of said frames for limiting said movement.

1,014,070. VALVE. JOHN W. R. LAXTON, Lynn, Mass. Filed Mar. 11, 1910. Serial No. 548,728.

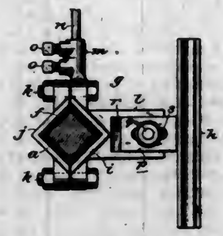


1. A valve, comprising a casing composed of a top and a bottom member each provided with a passage, one of said members being provided with a flange and forming with the other of said members a substantially semi-circular chamber having an opening at one side, flat substantially parallel seat surfaces on said members, a valve plate pivotally mounted within said casing and having a handle projecting through said opening, said valve plate being provided with an aperture and having substantially parallel flat surfaces adapted to coact with said seat surfaces, said valve plate being also arranged to protect said seat surfaces from contact with the material passing through the valve, substantially as described.

2. In a valve, the combination of a casing composed of a top and a bottom member each having a plurality

of passages therein, a pair of substantially parallel flat seat surfaces within the casing, a valve body pivotally mounted to swing between said surfaces and provided with an aperture adapted to be placed in communication with either of said passages, and means for holding said seat surfaces in contact with said valve body, said valve body sliding over said seat surfaces and protecting them from contact with the material passing through the valve, substantially as described.

1,014,071. CURRENT-COLLECTOR FOR ELECTRIC CRANES. FREDERICK C. LEMON, Milwaukee, Wis. Filed Sept. 11, 1908. Serial No. 452,606.



1. A current collector for electric cranes comprising a conducting body formed integrally with a half box, a conductor connection and a lateral arm, and provided with a detachable cap, a grooved metallic sliding contact piece formed integrally with a transverse arm, and a bolt detachably connecting said arms, one of which is longitudinally recessed to receive and hold the other in the proper relation thereto, the bolt hole in one arm being slotted to permit adjustment of the contact piece relative to the body.

2. A current collector for electric cranes comprising a metallic body formed integrally with a conductor socket and with a lateral arm and provided with a binding screw for fastening a conductor in said socket and with a clamping cap and bolts for securing the collector on a supporting post, and a grooved metallic sliding contact piece rigidly and detachably fastened to the arm of the body, substantially as described.

3. The combination with a post adjustable endwise relative to the support on which it is mounted and a number of current collectors each comprising a body mounted on said post and formed with an arm projecting therefrom transversely to the conductor from which current is taken and a grooved contact piece detachably and adjustably fastened to said arm, substantially as described.

1,014,072. FLUSHING-VALVE. SAMUEL W. LEWIS, New York, N. Y. Filed July 7, 1910. Serial No. 570,718.

1. The combination of a valve casing provided with an inlet and an outlet, a main valve controlling said outlet, means for opening said main valve, an apertured chamber connected with said main valve, a septum in said chamber on which the water pressure is exerted to close said main valve, a movable tubular stem extending lengthwise of and beyond said chamber and carrying said septum, and provided with a channel below said septum for automatically withdrawing water from beneath the septum and a relief valve carried by said stem and arranged to be opened before the main valve is opened and to be closed and maintained closed during the closing operation of the main valve by the water pressure on the septum.

2. The combination of a valve casing provided with an inlet and an outlet, a main valve controlling said outlet, an apertured chamber connected with said main valve and extending below the same, a channeled stem extending loosely through said chamber, the exit end of the channel terminating outside of said chamber, a relief valve carried by said stem, means for successively opening said relief valve and said main valve, and a septum on said stem within said chamber on which the water pressure is exerted to close the relief valve and to keep it closed during the closing operation of the main valve and to close the main valve, said stem being provided with a channel below the septum through which the water is automatically withdrawn from beneath said septum.

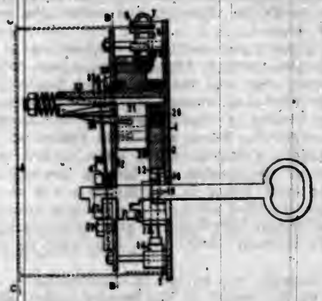
3. The combination of a flushing valve provided with an inlet, an outlet, and a main valve arranged to open and close said outlet, a controller located below and connected with said main valve and of substantially the same cross-sectional area as said outlet, said controller comprising an apertured chamber provided with a relief passage, a valve stem having a limited longitudinal movement relatively to said chamber, a relief valve carried by said stem and controlling said relief passage and a septum connected with said stem and having a loose piston fit in said chamber on which the pressure of the water acts to close the relief valve, said aperture of the said chamber being located entirely above said septum.

4. The combination of a casing having an inlet, an outlet, and a chamber disposed above said outlet, a main valve mounted to reciprocate in said chamber to control said outlet, a hollow controller depending from the underside of said valve and adapted to throttle and substantially close said outlet in the closing movement of said main valve, said controller being apertured near its top, the combined length of the valve and controller being less than the length of said chamber above the outlet, a relief passage through said valve and controller, a relief valve governing said passage, a stem carrying said relief valve, and a septum also carried by said stem below said aperture, said septum being of greater area than the relief passage and having substantially a loose piston fit within said controller and adapted to aid in seating the relief and the main valve.

5. The combination of a casing having an inlet, an outlet, and a chamber disposed above said outlet, a main valve mounted to reciprocate in said chamber and to control said outlet, a hollow controller depending from the underside of said valve and adapted to throttle and substantially close said outlet in the closing movement of the valve, said controller being apertured near its top and provided at its bottom with a closure having a single opening therethrough, the combined length of the valve and controller being less than the length of said chamber, a relief passage through said valve and controller, an auxiliary valve governing said passage, a stem carrying said auxiliary valve and passing through and substantially filling the opening in the bottom closure of said controller and a member carried by said stem and housed within said hollow controller and adapted to aid in seating the auxiliary and the main valve.

[Claim 6 not printed in the Gazette.]

1,014,073. LOCK. SALVATORE LAGAMMORI, New York, N. Y. Filed Nov. 1, 1910. Serial No. 590,105.

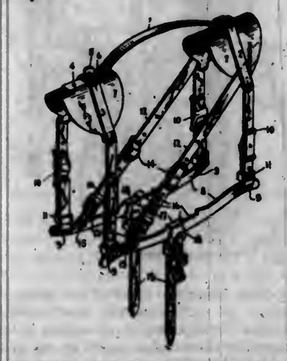


1. In a device of the character described, in combination, a slidable bolt, an alarm mechanism including a revoluble cylinder adapted to hold a plurality of cartridges, means for exploding said cartridges, means connecting said cylinder with said bolt whereby the same is rotated as the bolt is moved, and means adapted to co-act with said exploding means for moving the same to safety position, said means including a slidable member adapted to be actuated by the key for the lock.

2. In a device of the character described, in combination, a slidable bolt, having a gear along one edge, an alarm mechanism including a revoluble cylinder and a pinion meshing with said gear, said cylinder having a plurality of holes therein, each adapted to receive a cartridge, means for exploding said cartridges, and means for actuating said exploding means as said bolt is moved to unlocking position.

3. In a device of the character described, in combination, a plate, a bolt slidable thereon having a gear along one edge, an alarm mechanism including a revoluble cylinder having a pinion meshing with said gear, said cylinder having a plurality of holes therein, each adapted to receive a cartridge, means for exploding said cartridges, means for actuating said exploding means as said bolt is moved to unlocking position, and means for moving said exploding means to safety position.

1,014,074. COLLAR AND NECK-PAD SUPPORT. FRANK W. LINDQUIST, Winthrop, Minn. Filed Oct. 2, 1911. Serial No. 652,364.



1. A collar and neck pad support comprising a pair of collar supporting bars, said bars having slotted outwardly turned ends and having in their upper edges midway between their ends a plurality of notches, a collar engaging strap adapted to be secured in one of the notches of said bars, front and rear supporting straps secured to the slotted ends of said bars, adjustable holding straps secured at their upper ends to said rear supporting straps, means to adjustably connect the lower forward ends of said holding straps with said collar supporting bars, a spacing bar secured at one end to said rear supporting strap and having an adjustable connection at its opposite end with said forward supporting strap, and pads secured to said supporting straps below the ends of said spacing bar.

2. A hame collar support comprising a pair of supporting bars, said bars having in their upper edges intermediate their ends a plurality of notches, clips adapted to be engaged with the notches in said bars, collar attaching straps engaged with said clips whereby said bars are adjustably secured to the hames of the collar, front and rear adjustable supporting straps secured to the ends of said bars, adjustable holding straps secured at one end to said rear supporting straps and having a detachable connection at their opposite ends with the forward ends of said supporting bars, a spacing bar secured at one end to the rear supporting straps and having an adjustable connection at its opposite end to the forward supporting strap, said bar being curved upwardly between its ends, and pads secured to the front and rear supporting straps below the ends of said spacing bar.

1,014,075. VEHICLE WHEEL-TIRE. JOHN H. LORIMER, Philadelphia, Pa. Filed Nov. 12, 1906, Serial No. 342,981. Renewed May 26, 1911. Serial No. 629,556.

1. A vehicle wheel tire, including individual tread units of coil springs and composition alternating with each other, and said composition units held in place by spring units.

2. A vehicle wheel tire, comprising a plurality of transversely arranged spiral spring tread units, and alternating composition tead units having flanges beneath said spring units and held thereby.

3. A vehicle wheel tire, including a rim, coil spring tread units and composition tread units, the latter being held in place by the former, and positive connections between the former and said rim.

4. A vehicle wheel tire, including a rim, coil spring tread units and resilient composition tread units placed between said coil spring units and underneath the same, and means for positively connecting said spring units to said rim.

5. A vehicle wheel tire, including a rim, coil spring tread units and composition tread units, the latter being held in place by the former, a plurality of said composition units being connected underneath the coil spring units, and means for positively connecting said spring units to said rim.

1,014,076. NASAL EXPANDER. FRANZ MARSHALL MCCONNELL, Longview, Tex. Filed Jan. 7, 1910. Serial No. 536,919.

1. A nasal expander, comprising a bridge member having a central curved portion to engage the terminal of a nose cartilage and provided with integral disk portions upon each side of the curved central portion, said disk portions having laterally extending integral members arranged approximately parallel to one another having loops, said members being of sufficient resiliency as to bear against the inner surfaces of the outer side walls of a nose to spread the nasal passages, screw members

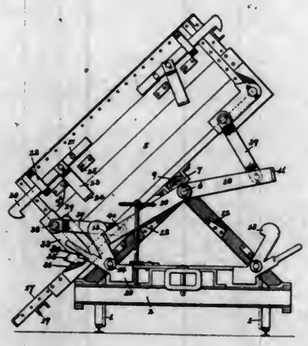
threaded into the disk portions and projecting downwardly therefrom, levers having disk members pivoted upon the screw members, coil springs coiled about the screw members and interposed between the heads of the screw members and the disk members of the levers, said springs having one of their ends engaging the laterally extending integral members, while the other ends bear against the inner free portions of the levers, to hold said portions against the cartilage of the nose, said free portions terminating in loops, as and for the purpose specified.

2. A nasal expander, comprising a bridge portion, extending transversely of the nose, a wing connected with each side of said bridge and formed integrally therewith, a lever pivotally mounted at the junction of each wing and bridge, the inner ends of said levers being flattened and provided with an opening in the flattened portion for enabling said levers to lock themselves in engagement with the cartilage of a patient's nose.

3. In a nasal expander, a bridge, wings connected with said bridge, and designed to be inserted in the nasal passages, spring press levers, adapted to extend into the nasal passages, for clamping the nasal expander to the patient's nose.

4. A device of the class described comprising a bridge, wings connected with each end of said bridge and adapted to expand the nasal passages, spring press levers having flattened inner ends, said flattened portions being provided with openings whereby said levers effectively lock said expander in engagement with the cartilage of the patient's nose.

1,014,077. SIDE-DUMP CAR. RICHARD P. MCCORMICK, Jr., Portland, Oreg. Filed Apr. 14, 1911. Serial No 620,967.



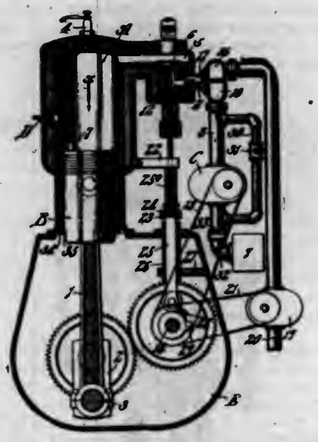
1. A dumping car having in combination a car-body pivoted at its center to tilt sidewise; a side door hinged at its lower edge and opening by the top of the door tilting outward and downward; a suitable latch to hold the door closed; a bracket attached to the end of the door and its bottom having an arm projecting substantially at a right-angle; a door-operating lever whose pivot has its axis in alinement with the axis of the pintles of the door-hinges and said lever provided with a lateral prong which forces the door to open when the lever moves in one direction, and said lever when moving in the opposite direction contacting with said right-angled arm to close the door, and a link whose upper end connects with said door-operating lever and whose lower end is pivoted at a point below the car-body.

2. A dumping car having in combination a car-body pivoted at its center to tilt sidewise; a side door hinged at its lower edge and opening by the top of the door tilting outward and downward; a latch lever pivoted to tilt in a vertical plane and having a hook that engages the door by the action of gravity; a trip-lever jointed to the latch and hanging therefrom; a door-operating lever and a link whose upper end connects with said door-operating lever and whose lower end is pivoted at a point below the car-body, whereby when the door-side of the car-body tilts downward the said link will force relatively upward the free end of the door-operating lever and cause it to lift the trip-lever and release the latch-hook from the door.

3. A dumping car having in combination a car-body pivoted at its center to tilt sidewise; a side door hinged at its lower edge and opening by the top of the door tilting outward and downward; an upright bracket attached to the end of the said door and its bottom having an arm projecting at an angle with respect to the said upright part; a door-operating lever pivoted above the said arm of the bracket and forcing the door to open when the lever moves in one direction and closing the door when the lever moves in the opposite direction, and means to impart movement to said door-operating lever when the car-body either tilts downward or is raised upward.

4. A dumping car having in combination a car-body pivoted at its center to tilt toward either side; two levers below the car-body the adjoining ends of both levers pivoted and one projecting from its pivot toward one side and the other toward the opposite side; a stop device for each of said levers to prevent the lever from tilting down too far; means to engage each lever and hold it down while the other lever may be disengaged and free to tilt up; a door at each side of the car-body and hinged at its lower edge and opening by the top of the door tilting outward and downward; a suitable latch to hold each door closed; a bracket attached to the end of each door and at its bottom having an arm projecting substantially at a right-angle; a door-operating lever pivoted above said bracket arm and said lever provided with a lateral prong which forces the door open when moving in one direction and said lever when moving in the opposite direction contacting with said right-angled arm to close the door; and a link connecting each door-operating lever with one of said two levers below the car-body.

1,014,078. TWO-CYCLE ENGINE. JAMES J. MCGUIRE, St. Louis, Mo. Filed Jnne 9, 1910. Serial No. 565,956.

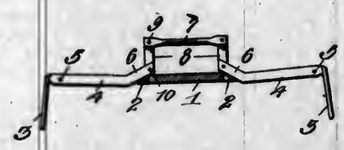


1. A two-cycle internal combustion engine provided with a plurality of cylinders, gas inlet valves for said cylinders, means for opening said valves at each cycle of operations when the exhaust ports of the cylinders are closed, a gas manifold that communicates with the inlet ports of said cylinders, means for partially compressing combustible gas and supplying it to said manifold, means for maintaining a certain pressure in said manifold when the engine is in operation, an auxiliary exhaust manifold, auxiliary exhaust valves which open and close at each cycle of operations, and means for creating a partial vacuum in said exhaust manifold.

2. In a two-cycle internal combustion engine, a gas manifold, a compressor arranged between said manifold and the source of supply for partially compressing the gas that is introduced into said manifold, a by-pass arranged around said compressor, and a valve in said by-pass.

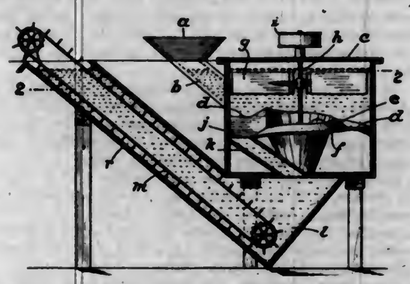
3. In a two-cycle internal combustion engine, a gas manifold, a compressor arranged between said manifold and the source of supply for partially compressing the gas that is introduced into said manifold, a by-pass arranged around said compressor, a relief valve in said by-pass that opens automatically when the pressure in the manifold exceeds a certain degree, and a check valve arranged between said by-pass and the source of supply.

1,014,079. BRICK-HOOK. JESSE MARTIN MCKAY and ROBERT ALFRED MCKAY, Olathe, Colo. Filed Sept. 24, 1910. Serial No. 583,630.



The herein described brick hook comprising a link plate having a solid central portion and longitudinal slots extending therefrom to the ends of the link plate, gripping jaws pivotally mounted in the outer ends of said slots and each having a lever arm extending inwardly therefrom, operating in one of said slots and having its inner end up-turned and extending above the link plate and over the inner end of the slot so that the said up-turned inner end forms a stop to bear on the solid central portion of the link and limit the downward movement of the lever arm, a handle above the solid central portion of the link plate, and links having their lower ends pivotally connected to the up-turned inner ends of the lever arms and their upper ends pivotally connected to the ends of the handle, the inner ends of the lever arms being spaced apart and the handle extending over the space between them.

1,014,080. COAL-SEPARATOR. MORTON H. MCTURK, Philadelphia, Pa. Filed Aug. 30, 1910. Serial No. 579,727.



1. In a solids separator, the combination with a runway having an unobstructed inner edge and having an upper face extending upward and inward toward a central opening, of means to maintain above the runway a current of water in a direction corresponding to the downward lengthwise slant of the runway.

2. In a solids separator, the combination with a helical runway having an unobstructed inner edge and a part of whose upper face extends inward and upward, there being a centrally disposed outlet communicating with the inner higher rim of the runway, and a peripherally disposed outlet communicating with the lower end of the runway, and means to maintain a constant circular current of water above said runway in a direction corresponding to the downward lengthwise slant of the runway.

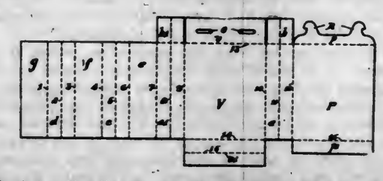
3. In a solids separator, the combination with a tank adapted to contain water and to receive the solids to be separated, of a runway, extending around the inner wall thereof, whose inner edge is at a substantially higher elevation than its outer edge at any transverse section substantially throughout the length of the runway, and means to maintain above the runway a current of water in a direction corresponding to the downward slant of the runway.

4. In a solids separator, the combination with a tank, of a helical runway extending around the inner wall thereof, having an unobstructed inner edge and having an upper face extending upward and inward toward a central opening, there being a second opening at the lower end of the runway, and means to maintain a constant circular current of water above the runway in a direction corresponding to the downward lengthwise slant of the runway.

5. In a solids separator, the combination with a tank adapted to contain water and to receive the solids to be separated, of a runway, extending around the inner wall thereof, having an unobstructed inner edge and having an upper face inclined upward toward said edge, and means to maintain above the runway a circular current of water in a direction corresponding to the downward lengthwise slant of the runway.

[Claims 6 to 10 not printed in the Gazette.]

1,014,081. CELL-CASE AND BLANK THEREFOR. JAMES B. MILLER, Rochester, N. Y. Filed Dec. 19, 1910. Serial No. 598,097.

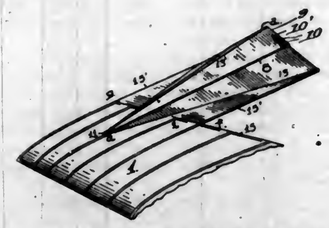


1. A box for the purpose described formed from a blank comprising the following members arranged *seriatim* in straightened out relation, viz.,—a first side member carrying at its opposite free edges end flaps for the box; flexibly secured to the first side member a collapsible side member and flexibly connected thereto in turn a side member corresponding to and adapted to lie opposite to the first named side member and having on opposite ends end flaps coöperating with the end flaps on the first named side member; flexibly connected to such last named side member a second collapsible side member corresponding to and adapted to lie opposite to the first named collapsible side member and flexibly connected therewith an attaching member adapted to be secured to and lie parallel with the first named side member and flexibly connected therewith a collapsible partition member and flexibly connected therewith in turn a second attaching member similar and corresponding to the first named attaching member and adapted to lie parallel with and be connected to the third named side member.

2. A box for the purpose described formed from a blank comprising the following members arranged *seriatim* in straightened out relation, viz.,—a first side member carrying at its opposite free edges end flaps for the box; flexibly secured to the first side member a collapsible side member and flexibly connected thereto in turn a side member corresponding to and adapted to lie opposite to the first named side member and having on opposite ends end flaps coöperating with the end flaps on the first named side member; flexibly connected to such last named side member a second collapsible side member corresponding to and adapted to lie opposite to the first named collapsible side member and flexibly connected therewith an attaching member adapted to be secured to and lie parallel with the first named side member and flexibly connected therewith a collapsible partition member and flexibly con-

nected therewith in turn a second attaching member similar and corresponding to the first named attaching member and adapted to lie parallel with and be connected to the third named side member; flexibly connected to such last named attaching member a second collapsible partition member and flexibly connected therewith in turn a third attaching member adapted to lie parallel with and be connected with the first named side member.

1,014,082. EQUILIBRIUM ATTACHMENT FOR AEROPLANES. ARTHUR RANDOLPH MONRO and HAROLD BEATTY, Berkeley, Cal. Filed July 13, 1910. Serial No. 571,749.



1. The combination with the sustaining planes of an aeroplane, of an equilibrium attachment secured to and overhanging the rearward edge thereof, the same comprising an open bottomed pocket formed of two triangular sides situated with its apex in the direction of travel and the base thereof being in approximately the horizontal plane of the sustaining plane of the aeroplane.

2. The combination with the sustaining planes of an aeroplane, of an equilibrium attachment secured to and overhanging the rear edge thereof, the same comprising an open bottom air receiving pocket formed of two triangular sides arranged at an upward inclination and situated relative to the sustaining plane with its apex in the direction of travel and its base in approximately the horizontal plane of the said sustaining planes, and laterally disposed horizontal sustaining planes extended from the base of the said pocket.

3. The combination with the sustaining planes of an aeroplane, of an equilibrium attachment secured to the rear edge portion thereof, the same comprising an open bottomed pocket consisting of a relatively fixed body section and a top section adjustable thereon, and means for imparting adjustment to the top section of the pocket to vary the height thereof to the surface of the sustaining planes.

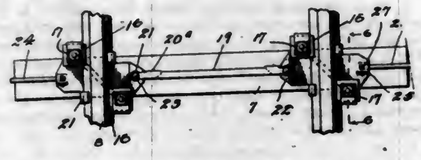
4. The combination with the sustaining plane of an aeroplane, of an equilibrium attachment secured to and situated at the lateral extremities thereof, the same comprising an open bottomed substantially V-shaped pocket composed of two triangular sides, and laterally disposed horizontal sustaining planes extended from the base of the pocket, the closed forward end of the open bottomed pocket being situated in the direction of the movement of the aeroplane.

5. An equilibrium attachment for the sustaining planes of an aeroplane, the same comprising an open bottomed substantially V-shaped pocket composed of a relatively fixed body section and an adjustable top section, the sides of each section being triangular in form, means for adjusting the top section for varying the height of the pocket, and laterally disposed horizontal sustaining planes extended from the base of the said pocket.

[Claims 6 to 11 not printed in the Gazette.]

1,014,083. U-SHAPED TRACK-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed Apr. 3, 1911. Serial No. 618,731.

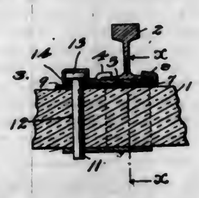
1. In a structure of the character set forth, the combination of a tie, of a rail located thereover, a tie plate interposed between the tie and rail and having diagonally opposite integral hooks that engage the opposite sides of the rail, and detachable rail engaging fastening means engaged with the rail and tie plate directly opposite the hooks, said fastening means embracing the tie.



2. In a structure of the character set forth, the combination with a tie, of a rail located thereover, a tie plate interposed between the tie and rail and having diagonally opposite integral hooks that engage the opposite sides of the rail, a diagonally disposed substantially U-shaped bolt embracing the tie and having its ends passing through the tie plate on opposite sides of the rail and directly opposite the hooks, and rail engaging devices detachably mounted on the ends of the bolt.

3. In a structure of the character set forth, the combination with a tie, of tie plates located thereon, rails mounted on the tie plates, U-bolts embracing the tie, rail fasteners connected to the U-bolts, a connection between the tie plates, and hooks connected to the tie plates and engaging over the ends of the tie.

1,014,084. RAIL-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed Apr. 12, 1911. Serial No. 620,627.



1. In a track fastening, the combination with a tie, of a rail thereon, a tie plate comprising a band embracing the tie and having a portion interposed between the tie and rail, another tie plate interposed between the tie and rail, and a rail-engaging element carried by each of the tie plates.

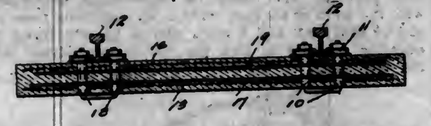
2. In a track fastening, the combination with a tie, of a rail thereon, a tie plate comprising a band embracing the tie and having a portion interposed between the tie and rail, and another tie plate interposed between the tie and rail, said tie plates having rail-engaging hooks.

3. In a track fastening, the combination with a tie, of a rail thereon, a tie plate comprising a band embracing the tie and having a portion interposed between the tie and rail, another tie plate interposed between the tie and first tie plate, means connecting the tie plates, and rail engaging elements carried by the tie plates.

4. In a track fastening, the combination with a tie, of a rail thereon, a tie plate comprising a band embracing the tie and having a portion interposed between the tie and rail, another tie plate interposed between the tie and first tie plate, means connecting the tie plates, and rail-engaging hooks carried by the tie plates and engaging opposite sides of the rail.

5. In a track fastening, the combination with a tie, and a rail thereon, of a tie plate comprising a band encircling the rail and having its upper portion interposed between the rail and tie, said portion having a rail engaging hook, another tie plate interposed between the first mentioned tie plate and tie and having a hook that engages over the opposite side of the rail, said tie plates having projecting tongue portions, and a holding pin passing through said portions.

1,014,085. CONCRETE TIE. ALVUS H. MOFFET, Larned, Kans. Filed May 4, 1911. Serial No. 625,039.



1. In a railway tie, a concrete body and a reinforcement therein comprising a casing embedded in the body and having one wall separate from the others.

2. In a railway tie, a concrete body and a reinforcement therein, comprising a casing substantially angular in cross section and having connected bottom and side walls, and a top wall that is separate therefrom, said casing being embedded in the body.

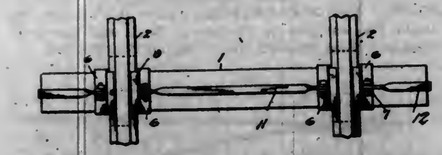
3. In a railway tie, a concrete body and a reinforcement therein comprising a casing embedded in the body and having one wall separate from the others, and longitudinal bars located within the casing.

4. In a railway tie, a concrete body and a reinforcement therein comprising a casing formed of netting embedded in the body and having one wall separate from the others.

5. In a railway tie, a concrete body, socket-forming sleeves located therein, and reinforcing bars engaged with and twisted together on opposite sides of the sleeves.

[Claim 6 not printed in the Gazette.]

1,014,086. RAIL-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed May 4, 1911. Serial No. 625,040.



1. The combination with a tie and rail, of means for securing the rail to the tie, including oppositely disposed tie-embracing elements, a device connecting the elements, and means engaged with said device for holding the rail against movement longitudinally of the tie.

2. The combination with a tie and rail, of means for securing the rail to the tie, including oppositely disposed tie-embracing hooks, a bolt connecting the hooks, and means through which the bolt passes for holding the rail against displacement longitudinally of the tie.

3. The combination with a tie, of spaced rails thereon, means for securing the rails to the tie, including tie-embracing elements for each rail, a device connecting the elements for each rail, and a connecting bar engaged with the devices for holding the rails against relative movement longitudinally of the tie.

4. The combination with a tie and spaced rails thereon, of means for securing the rails to the tie, including oppositely disposed tie embracing hooks for each rail, a bolt connecting the hooks for each rail, and a bar disposed longitudinally of the tie and engaged with the bolts.

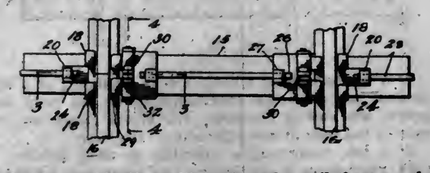
5. The combination with a tie and spaced rails thereon, of means for securing the rails to the tie, including oppositely disposed tie-embracing hooks for each rail, said hooks having upstanding ears arranged on the inner sides of the rails, bolts connecting the coacting ears, and a bar disposed longitudinally of the tie and engaged with the bolts between the ears.

[Claims 6 to 8 not printed in the Gazette.]

1,014,087. RAIL-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed June 8, 1911. Serial No. 632,068.

1. The combination with a tie and a rail thereon, of a yoke passing beneath the tie, and rail-fastening means including elements engaging the ends of the yoke on opposite sides of the tie.

2. The combination with a tie and a rail thereon, of a yoke passing beneath the tie and having upturned ends on opposite sides of the tie and terminating short of its upper surface, and rail fastening means including depending elements interlocked with the ends of the yoke.



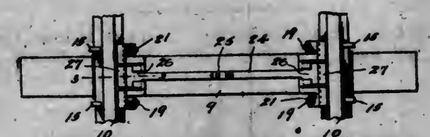
3. The combination with a tie and a rail thereon, of a yoke passing beneath the tie, and rail-fastening means including separate elements engaging the yoke on opposite sides of the tie, and means connecting said elements above the tie.

4. The combination with a tie and a rail thereon, of a yoke passing beneath the tie, and rail-fastening means including separate clips having downturned ends connected to the yoke on opposite sides of the tie and also having upturned ends located above the tie, and a bolt connecting said upturned ends.

5. The combination with a tie and a rail thereon, of a tie plate interposed between the tie and rail, separate elements having downturned portions engaging the yoke on opposite sides of the tie, said elements extending over the tie plate, and means connecting the elements above the tie and tie plate.

[Claims 6 to 8 not printed in the Gazette.]

1,014,088. RAIL-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed June 8, 1911. Serial No. 632,070.



1. The combination with a tie and a rail thereon, of a yoke surrounding the tie and engaging the rail base on one side, and rail-fastening means engaging the opposite side of the rail and including means connected to the yoke at one side of the tie.

2. The combination with a tie and a rail thereon, of a yoke surrounding the tie and engaging the rail base on one side, and rail-fastening means engaging the opposite side of the rail and including means connected to the yoke on opposite sides of the tie.

3. The combination with a tie and a rail thereon, of a yoke surrounding the tie and having terminals engaging one side of the rail base on opposite sides of the tie, and holding means for the opposite side of the rail base including elements extending along opposite sides of the tie and detachably engaging with the sides of the yoke.

4. The combination with a tie and a rail thereon, of a yoke surrounding the tie and having terminals engaging one side of the rail base on opposite sides of the tie, and holding means for the opposite side of the rail base including elements extending along opposite sides of the tie and having hooks engaged with the sides of the yoke.

5. The combination with a tie and a rail thereon, of a yoke surrounding the tie and having terminal hooks engaging one side of the rail base, said hooks having offsets on opposite sides of the tie, and holding means for the opposite side of the rail base including elements extending along opposite sides of the tie and having hooks engaged with the sides of the yoke at the offsets.

[Claims 6 to 9 not printed in the Gazette.]

1,014,089. TIE STRUCTURE. ALVUS H. MOFFET, Larned, Kans. Filed June 8, 1911. Serial No. 632,071.

1. A tie, comprising a body, a yoke consisting of a continuous bar extending longitudinally of the body and around one end of the same, and means connecting the ends of the yoke at the other end of the body.

2. A tie, comprising a plurality of body sections, a yoke comprising a continuous bar extending longitudinally of the body and around one end of the same, and means connecting the ends of the yoke at the other end of the body for clamping the sections together.

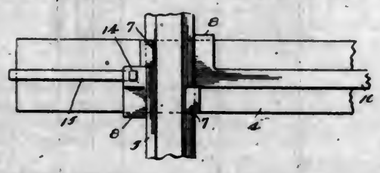
3. A tie, comprising a plurality of body sections having longitudinal grooves in their opposite sides, and means embracing the sections and engaged in the grooves for securing said sections together.

4. A tie, comprising a plurality of sections, a yoke surrounding the sections, a cross piece engaging the ends of the yoke, and means mounted on said ends and engaging the cross piece for drawing the sections tightly together.

5. A tie, comprising a plurality of sections arranged end to end and having longitudinally alined grooves in their opposite sides, a yoke surrounding the sections and engaged in the grooves, said yoke having its ends projecting beyond one end of the tie, a cross piece mounted on the projecting ends and abutted against the adjacent end of the tie, and means mounted on the projecting ends of the yoke and engaging the cross piece for clamping the same against the tie.

[Claims 6 and 7 not printed in the Gazette.]

1,014,090. RAIL-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed June 8, 1911. Serial No. 632,072.

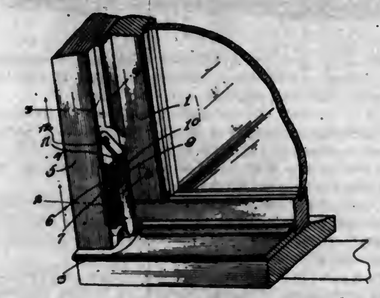


1. The combination with a tie and a rail thereon, of a tie plate interposed between the rail and tie, said tie plate having diagonally opposite rail embracing hooks and other diagonally opposite tie embracing hooks, and a hook detachably engaged with the tie plate and extending around the end of the tie.

2. The combination with a tie and a rail thereon, of a tie plate interposed between the rail and tie, said tie plate having diagonally opposite rail-embracing hooks and other diagonally opposite tie-embracing hooks, an ear formed between one of the rail embracing hooks and one of the tie-embracing hooks and provided with an opening, and a hook extending around the end of the tie and having an offset end engaged in the opening.

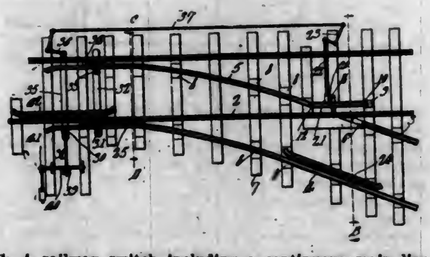
1,014,091. WINDOW-LOCK. GEORGE PARKER, Portsmouth, Va., assignor of nine-twentieths to Gray G. Holladay, Portsmouth, Va. Filed Mar. 4, 1911. Serial No. 612,294.

1. A sash lock comprising a vertically arranged flat plate carried by a window sash, said plate having one longitudinal edge projecting laterally from said sash, said projecting edge being inclined and provided with teeth, a vertically arranged plate carried by a window frame, a flat leaf hinged thereto and having its free longitudinal edge provided with teeth for interlocking engagement with the teeth of the sash plate, a lip projecting from one end of said leaf, and a latch carried by said frame for engaging said lip to lock the leaf in engagement with the sash plate.



2. A sash lock comprising a plate carried by a window sash, said plate having one edge inclined and projecting laterally from said sash, a second plate carried by a window frame, a leaf hinged to said frame plate and having one edge adapted for locking engagement with the inclined edge of the sash plate, said leaf having a lip projecting from one end, and a latch pivotally connected to the window frame and adapted for locking engagement with said lip.

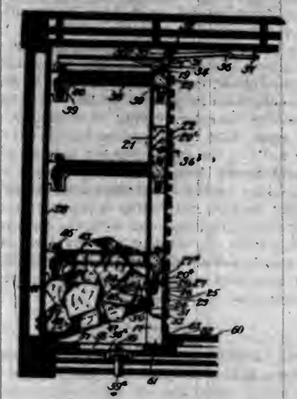
1,014,092. RAILWAY-SWITCH. JAMES D. PERKINS, Atlanta, Ga., assignor to Thomas C. Biggs and Roscoe F. Bishop. Filed May 22, 1911. Serial No. 628,745.



1. A railway switch including a continuous main line rail, a siding rail section spaced therefrom and extending beyond one side thereof, a siding rail spaced from the main line rail and extending from the other side thereof, a switch tongue pivotally mounted at one end, and normally extended parallel with the main line rail, a block for supporting the other end of the tongue when in its normal position, a plate extending transversely under the tongue and having an arcuate slot, the upper edge of the plate being parallel with the longitudinal walls of the slot, a bracket secured to the tongue, a stud outstanding therefrom and mounted to slide within the slot, and means for shifting the bracket, said plate constituting means for elevating the free end of the tongue over the main line rail and lowering it onto the adjoining siding rail, the stud and the walls of the slot coöperating to limit the upward movement of the tongue.

2. A railway switch including a main line rail, a siding rail section at one side thereof and spaced therefrom, a siding rail extending from the other side of the main line rail, a switch tongue pivotally connected to the siding rail sections and normally parallel with the main line rail, said tongue having a transverse recess in its lower face, a plate extending transversely under the tongue and having an arcuate slot, the upper edge of the plate being parallel with the walls of the slot, a stud fixedly connected to and movable with the tongue and adapted to travel within the slot, said stud coöperating with the walls of the slot to limit the upward movement of the tongue, and means for shifting the tongue about its pivot, said plate operating to elevate the tongue over the main line rail and to permit it to lower onto the siding rails and with the main line rail seated within the recess in the bottom of the tongue.

1,014,093. MOVABLE BULKHEAD FOR REFRIGERATOR-CARS. EDWARD POSSON, Chicago, Ill. Filed Nov. 4, 1909. Serial No. 526,222.



1. A refrigerator car having a movable partition across the end thereof whereby space may be divided off as an ice chamber or may be connected to the central part of the car, flanged guides in the walls of said car, and flanged members projecting from the body of said partition and adapted to slide in said guides.

2. A refrigerator car having a movable partition across the end thereof whereby a space may be divided off as an ice chamber or may be connected to the central part of the car, flanged guides in the walls of said car for said partition, and flanged members projecting from the body of said partition and adapted to slide in said guides, said guides having offsets for holding said partition in different positions.

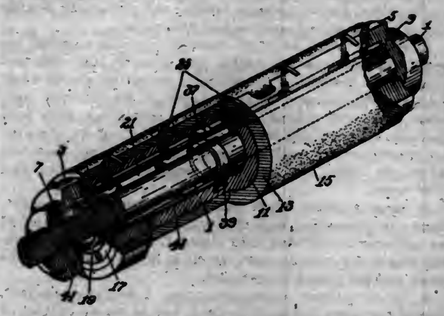
3. A refrigerator car having a movable partition across the end thereof whereby a space may be divided off as an ice chamber or may be connected to the central part of the car, guides in the walls of said car for said partition, said guides having offsets for holding said partition in different positions, and means for moving said partition out of engagement with said offsets and into position for moving along said guides.

4. A refrigerator car having a movable partition across the end thereof whereby a space may be divided off as an ice chamber or may be connected to a central part of the car, guides in the walls of said car for said partition, said guides having offsets for holding said partition in different positions, means for moving said partition out of engagement with said offsets and into position for moving along said guides, and means for supporting the weight of said partition while it is being moved along said guides.

5. A refrigerator car having a movable partition across the end thereof whereby a space may be divided off as an ice chamber or may be connected to the central part of the car, guides in the walls of said car for said partition, said guides having offsets for holding said partition in different positions, means for moving said partition out of engagement with said offsets and into position for moving along said guides, means for retaining said partition in the latter position, and means for supporting the weight of said partition while it is being moved along said guides.

[Claims 6 to 34 not printed in the Gazette.]

1,014,094. ABRADING-TOOL. WILLIAM A. REED, Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 29, 1910. Serial No. 589,747.



1. A tool for an abrading machine comprising a body portion provided with a bore to receive a shaft and adapted to support an abrasive cover, a hook for holding said cover in place, an actuator movable with respect to said shaft for tightening and releasing said hook, and a locking member for connecting said hook with said actuator and for disconnecting it therefrom.

2. A tool for an abrading machine comprising a body portion provided with a bore to receive a shaft and adapted to support an abrasive cover, a hook for holding said cover in place, said hook having provision at the base of its shank for receiving a locking member, an actuator movable with respect to said shaft for tightening and loosening said hook, said actuator being provided with a socket to receive said base, and a locking member connecting said base and actuator.

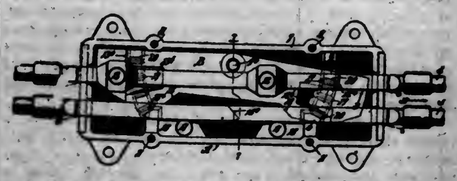
3. A roll for an abrading machine comprising a body portion provided with a bore to receive a shaft, a plurality of hooks for holding an abrasive cover on said roll, a member carried by said roll and movable with respect to said shaft, and means for detachably connecting said hooks with said member.

4. A roll for an abrading machine comprising a body portion provided with a bore to receive a shaft, a plurality of hooks for holding an abrasive cover on said roll, an actuating member, means for removing said member toward and from the shaft and a movable locking member for connecting said hooks with said actuating member and for disconnecting them therefrom.

5. A roll for an abrading machine comprising a body portion provided with a bore to receive a shaft, a plurality of hooks for holding an abrasive cover on said roll, a member movable toward and from the periphery of said roll and means movable in one direction for connecting said hooks with and in the opposite direction for disconnecting them from said member.

[Claims 6 to 14 not printed in the Gazette.]

1,014,095. MECHANISM FOR ACTUATING AND LOCKING THE MOVABLE ELEMENTS OF RAILWAY-TRACK STRUCTURES. HARRY F. ROACH, St. Louis, Mo. Filed May 16, 1910. Serial No. 561,680.



1. In a railway track structure, a movable element, an operating means which shifts said element into different

positions, a device which operates automatically and locks said element when it arrives in either of its extreme positions, an independent locking device coöperating with said movable element, and means under control of an operator for moving said independent locking device into operative position and simultaneously causing the automatic locking device to become inoperative and vice versa.

2. In a railway track structure, a movable element, an operating means which shifts said element into different positions, a device which locks said operating means when said movable element reaches either of its extreme positions, a second locking device that coöperates with said movable element, and means under control of an operator for causing one of said locking devices to become operative when the other locking device becomes inoperative and vice versa.

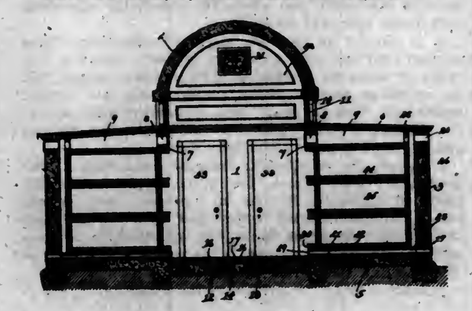
3. In a railway track structure, a movable element, means for operating said element, means under control of an operator for locking said element, and automatic locking means for said element which is inoperative when the other locking means is operative.

4. In a railway track structure, a movable element, means for operating said element, means under control of an operator for locking said element, automatically operating means for preventing the operating means for said movable element from being actuated after said element reaches a certain position, and means for causing said automatically operating means to become inoperative when the locking means first referred to moves into operative position.

5. In a railway track structure, a movable element, an operating means for said movable element, a device that according to its position automatically locks said operating means when said element reaches certain positions, an independent lock for said movable element, means for controlling said independent lock, and means operated by said lock-controlling means for determining the position of said automatic locking device.

[Claims 6 to 15 not printed in the Gazette.]

1,014,096. MAUSOLEUM. THAD H. ROWLAND, Oberlin, Ohio. Filed July 3, 1911. Serial No. 636,609.



1. In a mausoleum, a shell of masonry or concrete comprising a corridor and a crypt chamber, floor supporting means in the corridor and provided with ventilating channels communicating with the outside air, a floor on said floor supporting means, crypt supporting means in the crypt chamber provided with ventilating channels communicating with the corridor above the floor and with the outside air, and a crypt of masonry or concrete mounted upon said crypt supporting means and spaced on all sides and the top from the shell to form ventilating spaces, said shell being provided with upper and lower ventilating openings.

2. In a mausoleum, a shell of masonry or concrete, a crypt chamber within said shell, a corridor within said shell, a crypt of masonry or concrete within said crypt chamber and exposed at one end to the corridor, a floor in said corridor, means for providing an independent source of outside air supply under the floor of the corridor and for the corridor, and means for providing a source of ventilation and outside air supply about the crypt and communicating with the corridor, said shell being provided with suitable openings for establishing a circulation.

3. In a mausoleum, a shell of masonry or concrete, a crypt chamber within said shell, a corridor within said shell, a crypt of masonry or concrete within said crypt chamber, means whereby ventilation is supplied to the crypt chamber about the crypt, said ventilating means communicating with the corridor, floor supporting means in said corridor and provided with ventilating channels independent of the other ventilating means of the building and connected with the outside air, and a floor upon said floor supporting means, said floor being provided with openings communicating with the corridor.

4. In a mausoleum, a shell of masonry or concrete, a crypt chamber therein, a corridor communicating with said crypt chamber, crypt supporting means provided with transverse channels in communication with the outside air and with the corridor, crypts of masonry or concrete mounted upon said crypt supporting means and spaced from the walls of the crypt chamber to provide ventilating spaces, said spaces being in communication with the ventilating openings in the crypt floor supporting means and communicating with ventilating openings in the upper portion of the crypt chamber and with the corridor, floor supporting means in the corridor and provided with ventilating openings communicating with the outside air, a floor mounted upon said means, and suitable ventilating means in the upper part of the corridor.

1,014,097. FLUE ATTACHMENT. GEORGE H. RUPP, Baltimore, Md. Filed Apr. 22, 1911. Serial No. 622,660.

1. In a device of the character described, the combination of a flue sheet, a flue terminating short of the flue sheet, a tubular flue attaching member having an exterior diameter smaller than that of the flue so as to increase the water space adjacent the flue sheet, the inner end of the flue attaching member being formed with a conical enlargement which has a threaded engagement with the end of the flue, while the outer end of the flue attaching member engages the flue sheet.

2. In a device of the character described, the combination of a flue sheet, a flue terminating short of the flue sheet and having the end portion thereof thickened, and a tubular flue attaching member, the inner end of the said flue attaching member being formed with a conical enlargement which has a threaded engagement with the thickened end portion of the flue, while the outer end of the flue attaching member engages the flue sheet.

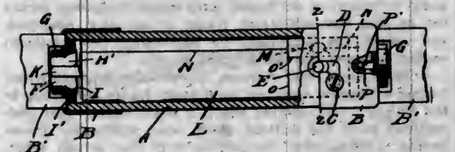
3. In a device of the character described, the combination of a flue sheet, a flue terminating short of the flue sheet, a tubular flue attaching member having the inner end thereof applied to the flue while the outer end thereof extends through the flue sheet and is expanded into engagement with the opening of the flue sheet, and an annular flange carried by the flue attaching member for engagement with the inner face of the flue sheet.

4. In a device of the character described, the combination of a flue sheet, a flue terminating short of the flue sheet, a tubular flue attaching member having the inner end thereof applied to the flue, while the outer end thereof extends through the flue sheet and is expanded into an engagement with the opening thereof, the said tubular flue attaching member being provided at a point spaced from the outer end thereof with a shoulder, and a collar fitted upon the flue attaching member and engaging the shoulder, the said collar being formed with a flange adapted to bear against the inner face of the flue sheet.

5. In a device of the character described, the combination of a flue sheet, a flue terminating short of the flue sheet, a tubular flue attaching member having the inner end thereof applied to the flue while the outer end thereof extends through the flue sheet and is expanded into engagement with the opening thereof, the said flue attaching member being provided at a point spaced from the outer end thereof with an annular shoulder, and a collar fitted upon the tubular flue attaching member and having a threaded engagement with the before mentioned shoulder, the inner end of the collar having a polygonal formation and being provided with an annular flange engaging the inner face of the flue sheet, while the outer end of the collars is slightly contracted and fits around that portion of the flue attaching member received within the flue sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,014,098. THERMAL CUT-OUT. JOSEPH SACHS, Hartford, Conn., assignor to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed May 5, 1908. Serial No. 430,976.



1. In an inclosed fuse, an external casing and circuit connecting contacts, a fusible conductor within said casing and electrically connected to said contacts, and a cohering cellular filling surrounding the conductor so as to be removable as a whole with the conductor from the casing.

2. In an inclosed fuse, an external casing and circuit connecting contacts, a fusible conductor within said casing, means for detachably electrically connecting the conductor to the contacts, and a cohering cellular filling surrounding the conductor so as to be removable as a whole with the conductor from the casing.

3. An inclosed fuse comprising an insulating tubular casing provided with end closures and circuit connecting contacts, a fusible conductor surrounded by an integral cellular jacket forming a reload and removable as a whole from said casing, and means for detachably holding the reload in the casing and electrically connecting the fusible conductor to the said contacts.

4. A tubular casing, a reload consisting of a fusible conductor and a cohering unitary cellular filling forming a mass held thereto, said fusible conductor having terminals electrically extended in line with the axial center of said mass, said casing being provided with detachable electrical connections at the ends thereof and concentric with and engaging said terminals.

5. In an inclosed fuse, an external casing provided with circuit connecting contacts, a fusible conductor therein electrically connected to said contacts, a cohering cellular filling surrounding the conductor and removable as a whole with the conductor from the casing, and indicating means attached to and removable with the removable filling and conductor, and means provided in the casing and coacting with the indicating means on the filling for externally indicating the condition of the fusible conductor.

[Claims 6 to 11 not printed in the Gazette.]

1,014,099. FOOD PRODUCT. GUSTAV SCHOCK, New York, N. Y. Filed Apr. 1, 1910. Serial No. 552,792.

1. Oats in the form of slightly compressed opened husks containing the kernel, each portion of oats being essentially free from closed husks, from husks separated from kernels, from kernels separated from husks, and from pulverulent particles of oats.

2. Oats in the form of slightly compressed opened husks and containing the kernel, each portion of oats being essentially free from closed husks, from husks separated from kernels, from kernels separated from husks, and from pulverulent particles of oats, the kernels within said husks being scored.

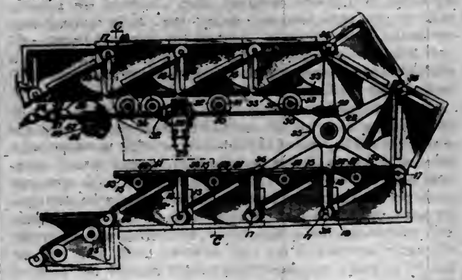
3. Oats in the form of slightly compressed opened husks and containing the kernel, each portion of oats being essentially free from closed husks, from husks separated from kernels, from kernels separated from husks, and from pulverulent particles of oats, the kernels being retained within the husks and united therewith by means of scorings pressing the kernel and husk together along the scoring lines.

4. An oat in the form of a slightly compressed husk opened into connected sections, and containing the complete kernel.

5. An oat in the form of a slightly compressed husk opened into connected sections and containing the complete kernel, said kernel being scored.

[Claim 6 not printed in the Gazette.]

1,014,100. CONVEYER. CHARLES D. SEEBERGER, New York, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Filed Jan. 20, 1903, Serial No. 139,774. Renewed Feb. 27, 1905. Serial No. 247,539.



1. In a device of the class described, a series of moving steps, and driving members providing a way having inclined and horizontal portions and by which the steps are supported.

2. In a device of the class described, a series of moving steps, and rotating members supporting and constituting the drive for the steps and providing a way having inclined and horizontal portions.

3. In a device of the class described, a series of moving steps, a way having inclined and horizontal portions, and rotating members located at intervals upon the way for driving and supporting the steps.

4. In a device of the class described, a conveyer having inclined and horizontal portions and consisting of a connected series of moving steps, and rotating driving members for the steps constituting the supports therefor and arranged to form a horizontal and inclined way.

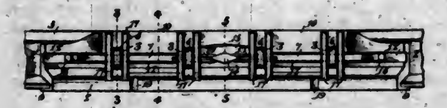
5. In a device of the class described, a connected series of moving steps, rotating members mounted in fixed bearings along a way having inclined and horizontal portions and providing the support for the steps, and means for driving the steps.

[Claims 6 to 55 not printed in the Gazette.]

1,014,101. RAIL-JOINT. ROBERT EDWARD TESREAU, LARS FREDERICK SUNDMAN, and COMMODORE P. HILL, Doe Run, Mo. Filed May 27, 1911. Serial No. 629,885.

1. A rail joint including inner and outer splice bars or fish plates adapted to fit against the opposite faces of the ends of the rails, one of the splice bars being provided with integral horizontally projecting lugs having aligned openings and the other splice bar being provided with open-

ings to receive the lugs and having upright guard ribs arranged in pairs and located at opposite sides of the said opening and extending above and below the same and receiving the outer portions of the lugs between them, said ribs being of a width to project outwardly beyond the ends of the lugs to prevent the wheels of a train from striking the same should the wheels jump the track and provided with alined openings, and a locking key passing through the said lugs and guard ribs.



2. A rail joint including inner and outer splice bars or fish plates adapted to fit against the opposite faces of the ends of the rails, one of the splice bars being provided with integral horizontally projecting lugs having alined openings and the other splice bar being provided with openings to receive the lugs and having upright guard ribs arranged in pairs and located at opposite sides of the said opening and extending above and below the same and receiving the outer portions of the lugs between them, said ribs being of a width to project outwardly beyond the ends of the lugs to prevent the wheels of a train from striking the same should the wheels jump the track and provided with alined openings, and a locking key passing through the said lugs and guard ribs, split locking keys extending from opposite ends of the plate through said lugs and ribs with their inner ends in opposition, and a diamond-shaped spreading member engaging the inner split ends of the keys.

3. A rail joint including inner and outer splice bars or fish plates adapted to fit against the opposite faces of the ends of the rails, one of the splice bars being provided with integral horizontally projecting lugs having alined openings and the other splice bar being provided with openings to receive the lugs and having upright guard ribs arranged in pairs and located at opposite sides of the said opening and extending above and below the same and receiving the outer portions of the lugs between them, said ribs being of a width to project outwardly beyond the ends of the lugs to prevent the wheels of a train from striking the same should the wheels jump the track and provided with alined openings, and a locking key passing through the said lugs and guard ribs, split locking keys extending from opposite ends of the plate through the said lugs and ribs with their inner ends in opposition, and a diamond-shaped spreading member engaging the inner split ends of the keys, the splice bars arranged to underlie the ball of the rails, and also having inwardly turned flanges underlying the base of the rails to form a chair, and one of the members having its upper end extending flush with the tread of the rails.

1,014,102. POWER-TRANSMISSION DEVICE. LEROY VORHIES, Yoder, Colo. Filed Apr. 1, 1911. Serial No. 618,421.

1. In combination, a revoluble friction wheel having a concave face, an oscillatory frame, a friction wheel carried thereby to engage the concave face, a rear driving axle, a shaft having connections therewith, a telescopical connection between the shaft and the oscillatory frame, and means for adjusting the oscillatory frame, said means including means for holding the frame adjusted.

2. In combination, a frame, a revoluble friction wheel having a concave face, an oscillatory frame connected to the frame, a rear driving shaft, a shaft having gear connections with the driving shaft, said oscillatory frame having a telescopical connection with the second shaft, a friction wheel carried at the free end of the oscillatory frame, gear connections between the second friction wheel and the telescopical connections, for transmitting motion to the driving shaft, and means for adjusting the oscillatory frame whereby the mechanism may be reversed, or the speed increased or decreased.

3. In combination, a frame, a revoluble friction wheel having a concave face, an oscillatory frame connected to the frame, a rear driving shaft, a shaft having gear connections with the driving shaft, said oscillatory frame having telescopical connections with the second shaft, a friction wheel carried at the free end of the oscillatory frame, gear connections between the second friction wheel and the telescopical connections, for transmitting motion to the driving shaft, means for adjusting the oscillatory frame whereby the mechanism may be reversed, or the speed increased or decreased, said means including means for holding the oscillatory frame in adjusted positions, and means for increasing or decreasing the frictional contact between the two friction wheels.

4. In combination, a frame, a revoluble friction wheel having a concave face, an oscillatory frame connected to the frame, a rear driving shaft, a shaft having gear connections with the driving shaft, said oscillatory frame having a telescopical connection with the second shaft, connections between the friction wheel and the second shaft whereby motion is transmitted from the friction wheel to the driving shaft, and means for adjusting the oscillatory frame whereby the second connections may be reversed in motion so that the mechanism may be reversed, the adjusting means for the oscillatory frame constituting means whereby the speed of the second connections may be increased or decreased.

5. In combination, a frame, a revoluble friction wheel having a concave face, an oscillatory frame connected to the frame, a rear driving shaft, a shaft having gear connections with the driving shaft, said oscillatory frame having a telescopical connection with the second shaft, connections between the friction wheel and the second shaft whereby motion is transmitted from the friction wheel to the driving shaft, and means for adjusting the oscillatory frame whereby the second connections may be reversed, the adjusting means for the oscillatory frame constituting means whereby the speed of the second connections may be increased or decreased, said second connections including a friction wheel, and means for increasing the friction between the two friction wheels.

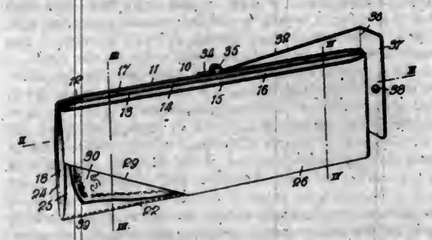
[Claims 6 and 7 not printed in the Gazette.]

1,014,103. HYDROCARBON EMULSION. REINHOLD WALLBAUM, Charlottenburg, Germany. Filed Dec. 3, 1910. Serial No. 595,486.

The hereindescribed process of manufacturing emulsions of solid hydrocarbons, such as asphalt, coal-tar pitch, petroleum pitch, paraffin, ozocerite, Japan wax and the like or mixtures thereof, which consists in melting one or more of the solid hydrocarbons with a saponifiable substance, heating the mixture thus obtained to a temperature of about or upward of one hundred degrees centigrade, and pouring the hot mixture into a solution of water, naphthenic acid and ammonia while agitating the same.

1,014,104. COMBINATION POCKET-BOOK. HARRIET M. WALSH, Sandy Hook, Conn., assignor to Emil Weisbrod & Sons, Incorporated, Greenfield, Mass. Filed May 12, 1910. Serial No. 560,831.

1. In a pocket book, the combination with a casing having a flap at the free end thereof, of a body having two parallel arranged side parts and folded transversely of its longitudinal center and fastened at each side of the fold to the casing, a transverse opening adapted to hold a pencil or the like provided between the body and said casing and the fastenings on each side of said fold, a central part having two walls provided between and fastened at the longitudinal sides of the two side parts the ends of one of which are fastened to the ends of one of said walls and the ends of the other side part are fastened to ends of the second wall, a container adapted to hold cards and the like provided at one end of the body between the two walls of the central part, a second container adapted to hold coin and the like provided at the opposite end of said body between the said walls, a closure adapted to hold papers provided between the central part and one side part, a pocket adapted to hold paper money provided between the central part and the other side part, an opening provided in one corner of the pocket and adapted to permit paper money to be exposed to sight and to be withdrawn from said pocket through said opening, and means adapted to lock the pocket book when folded.



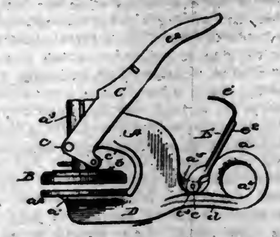
2. A pocket book of the character described, comprising a blank folded to form an outside part and a central part having two walls the ends of one of which are fastened to the ends of the outside part to provide a closure adapted to hold papers and the like, a second blank fastened at each end to each of the ends of the second wall and also fastened at one of the longitudinal sides thereof to both of said walls so as to provide a pocket for holding paper money, a container adapted to hold cards and the like provided at one end of the blanks between the two walls, a second container adapted to hold coin and the like provided at the opposite end of said blanks between the said walls, an opening provided in one corner of the pocket and adapted to permit paper money to be exposed to sight and to be withdrawn from said pocket through said opening, a holder fastened at one end to one of the blanks and having a flap at the free end thereof, and means provided upon the flap and one end of the blank adapted to lock the pocket book when folded and in a closed position.

3. In a device of the class described, the combination of a rectangular body portion, a flexible rectangular member attached to said body portion in such manner as to form an open pocket substantially equivalent to the length and breadth of a bill of paper money, said pocket being provided with an opening across the corner thereof, the width of said opening being substantially the width of a bill of paper money.

4. In a pocket bill fold the combination comprising a pair of flexible members permanently attached, at but three of their coincident edges, in such manner as to form a pocket opening along one edge long enough to receive unfolded paper money, with portions of two edges opposite said opening at one corner, permanently detached, whereby a smaller opening is provided for the withdrawal of such paper money.

5. In a pocket bill fold, the combination comprising a pair of flexible members permanently attached at only portions of some of their coincident edge portions and permanently detached along certain other of their coincident edge portions, whereby there is provided a pocket having one opening substantially the length of said attached members and a corner opening opposite said first mentioned opening.

1,014,105. SEAL-PRESS. HERMAN H. WENTHE, Chicago, Ill. Filed Jan. 5, 1910. Serial No. 536,586.

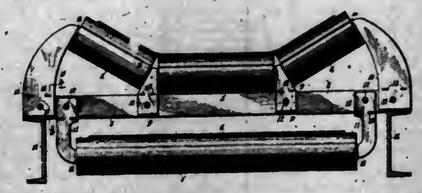


1. In a seal-press, a frame having a rearwardly extending vertical web terminating in a handle and formed with an intermediate vertical lip, and lateral flanges extending to both sides below the lip, in combination with a rearwardly extending die-depressing lever pivoted at the forward portion of the frame, said lever being concave and provided with a detent on its lower surface, and a latch straddling and pivoted at its lower end on the lip of the frame and having a beak for engaging the said detent.

2. In a seal-press, a frame having a rearwardly extending vertical web terminating in a handle and formed with an intermediate vertical lip, in combination with a rearwardly extending die depressing lever pivoted at the forward portion of the frame, said lever being concave and provided with a detent on its lower surface, and a latch straddling and pivoted at its lower end on the lip of the frame and having a beak for engaging the said detent.

3. In a seal-press a frame having a rearwardly extending vertical web terminating in a handle and formed with an intermediate vertical lip, and laterally extending flanges located below the intermediate vertical lip, in combination with a rearwardly extending die-depressing lever pivoted at the forward portion of the frame, said lever being provided with a detent on its lower surface, and at an intermediate portion of the said lever, and a latch pivoted at its lower portion on the vertical lip and having a beak for engaging the said detent.

1,014,106. BELT CONVEYER. JESS L. WENTZ, Passaic, N. J., assignor to Robins Conveying Belt Company, a Corporation of New Jersey. Filed Mar. 7, 1910. Serial No. 547,668. Renewed Dec. 8, 1910. Serial No. 595,846.



1. A conveyer belt supporting structure comprising one or more laterally disposed supporting bars having vertical extension, a plurality of carrying brackets mounted on said bars and having projections for alinement with said bars, a plurality of rollers having bearings mounted at the ends thereof, and a plurality of cone bearing blocks mounted on said brackets and disposed to receive the said bearings.

2. A conveyer belt supporting structure comprising one or more cross bars having vertical extension, a plurality of carrying brackets formed from plate metal and having extension in the line of resistance, means formed on said brackets for alining the same with said cross bars, bearing blocks adapted to be mounted upon the ends of said brackets, and a plurality of tubular conveyer rollers hav-

ing heads provided with bearings adapted to receive in supported relation the said bearing blocks.

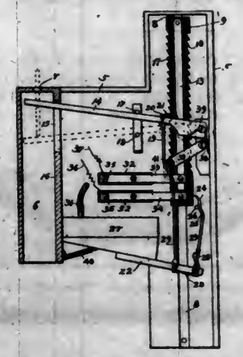
3. A conveyer belt supporting structure comprising one or more cross bars having vertical extension, a plurality of carrying brackets formed from plate metal and having extension in the line of resistance, means formed on said brackets for alining the same with said cross bars, a plurality of bearing blocks adapted to be forced over the ends of said brackets to be held thereby, a plurality of tubular conveyer rollers having supporting heads, and a plurality of bearings mounted in said heads and held in supported relation upon said bearing blocks.

4. A conveyer belt supporting structure comprising one or more cross bars having vertical extension, a plurality of carrying brackets fixedly secured on said cross bars formed from plate metal, means formed on said brackets for alining the same with said cross bars, a plurality of bearing blocks having conical ends and a central perforation adapted to be extended over the ends of said brackets to be held thereon, a plurality of conveyer rollers, a plurality of heads for said rollers having an outwardly opening centrally disposed recess, and a plurality of bearings adapted to be held within said recesses and to receive the cones of said bearing blocks.

5. A conveyer belt supporting structure comprising one or more cross bars having vertical extension, a plurality of stringers for supporting said bars, a plurality of conveyer rollers disposed in trough-like arrangement, a plurality of carrying brackets for supporting said rollers, said brackets being formed from plate metal and fixedly attached to said cross bars, said cross bars having horizontal flange members for connecting them to the said stringers adapted to maintain the vertical position of said cross bars.

[Claims 6 to 18 not printed in the Gazette.]

1,014,107. MAGAZINE-SLOT FOR COIN-OPERATED MUSICAL INSTRUMENTS. PETER WIGGEN, Chicago, Ill., assignor to J. P. Seeburg Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1910. Serial No. 545,141.



1. In a device of the character described, the combination with a supporting-frame, of a contact member movably mounted thereon, electrically connected contact springs extended into the path of said member, means adapted for engagement with and to move said member in on direction, and pneumatically operated means to move said member in the opposite direction and to disengage the first named means therefrom.

2. In a device of the character described, the combination with a supporting-frame, of a suitably fulcrumed lever, a movably mounted rack carrying a metal piece, a pawl pivotally secured to the lever and adapted to engage teeth on the rack, to move it in one direction, a pneumatic mounted on the supporting frame, a pawl carried by the pneumatic and adapted to engage teeth of the rack to move it in the opposite direction, and electrically connected contact springs mounted on the supporting-frame and extended into the path of the metal piece on the rack.

3. In a device of the character described, the combination with a supporting-frame, of a suitably fulcrumed lever, a movably mounted rack carrying a metal piece, a spring actuated pawl pivotally secured to the lever and adapted to engage teeth on the rack to move it in one direction, a suitably mounted pneumatic, a spring actuated pawl carried by the pneumatic and adapted to engage teeth of the rack to move it in the opposite direction, and electrically connected contact springs suitably mounted and extended into the path of the metal piece on the rack.

4. In a device of the character described, the combination with a supporting-frame, of a suitably supported and spring actuated lever, a movably mounted rack carrying a metal piece, a pawl carried by the lever and adapted to engage teeth on the rack to move it in one direction, a suitably mounted pneumatic, a pawl carried by the pneumatic and adapted to engage teeth of the rack to move it in the opposite direction, means actuated by the pneumatic to disengage the first named pawl from the rack when the latter is moved by the last-named pawl, and electrically connected contact springs suitably supported and extended into the path of the metal piece on the rack.

5. In a device of the character described, the combination with a supporting-frame, of a suitably fulcrumed lever, a movably mounted rack carrying a metal piece, a pawl secured to the lever and adapted to engage teeth on the rack to move it in one direction, a pneumatic suitably supported and having at one of its ends an extension, a pawl mounted on said extension and adapted to engage teeth of the rack to move it in the opposite direction, a link pivotally supported at one of its ends and having a pin on its other end to engage the first-named pawl, a connection uniting the link and extension on the pneumatic, and electrically connected contact springs mounted on the supporting frame and extended into the path of the metal piece on the rack.

1,014,108. ELECTRIC COUPLING. PAUL C. WILD, Rochester, N. Y. Filed Apr. 26, 1910. Serial No. 557,666.

In an electric coupling, the combination with two separable coöperating coupling members, one of which embodies a tubular barrel and the other a plug fitting in said barrel, the said members being provided with terminal contacts movable into and out of engaging position by the relative longitudinal movement of the plug within the barrel, of a cam guide on one of the members, a pair of abutments thereon spaced longitudinally and circumferentially thereof along the guide, a stop on the other coöperating with one abutment when the contacts are out of engagement to prevent total separation of the members and with the other abutment when the contacts are in engagement to prevent relative movement of the members longitudinally and disengagement of the contacts, said stop and guide coöperating to cause a relative longitudinal movement of the members when they are given a relative rotary movement and the stop moves from one abutment to the other, and a spring interposed between the members and tending to separate them and to hold the stop in coöperative relation with either abutment.

1,014,109. DRUM-ROD SUPPORT. TOM WILSON, Chicago, Ill. Filed Jan. 20, 1910. Serial No. 539,107.

In a drum a cylindrical shell, membranes covering the open ends thereof, hoops surrounding the ends of said shell and engaging said membranes, hooks engaging said hoops, said hooks being arranged in pairs, one hook of each pair having an aperture extending therethrough and the other having a screw threaded opening therein, a perforated support fixed to the shell between the hooks of each pair, a rod extending through each of said apertured hooks and the coacting support and having a screw threaded end engaging the screw threaded opening in the opposite hook of the pair, each of said rods having a shouldered head bearing against the coacting apertured hook.

1,014,110. PRINTING-ROLL. HEINRICH WOLLHEIM, Berlin, Germany, assignor to American Stamp and Ticket Vending Machine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 22, 1909. Serial No. 529,241.

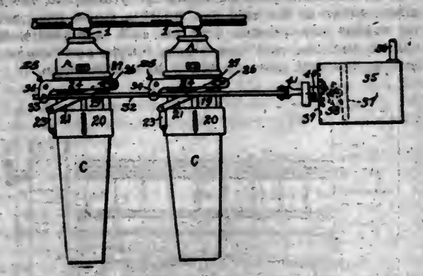
1. In a device of the kind described, having a shaft, a plurality of removable printing disks longitudinally and independently slidable on and rotatably carried by said shaft, said printing disks having terminally inclined faces, the combination of a plurality of spacing members mounted in said shaft, interposed between adjacent disks and having flared terminal edges adapted to engage the opposite inclined faces of adjacent disks, said spacing members forming with said disks, a rigid roll terminating short of one end of said shaft, a fixed collar at the other end of said shaft against which said roll normally abuts, and means removably carried at the first-mentioned end of said shaft and adapted to hold said disks and spacing members in frictional engagement whereby said roll will be held against lateral displacement on said shaft.

2. A printing roll comprising a shaft a fixed collar near one end, a plurality of removable disks of equal diameters mounted on said shaft and slidable longitudinally thereof, each of said disks having a circumferential series of printing surfaces narrower than the width of said disks and formed with beveled peripheries extending outwardly from said printing surfaces, and spacing disks adapted to be placed between said printing disks having beveled surfaces of like angles on their sides to engage with the beveled surfaces of the printing disks, means between the shaft and the printing disks to prevent rotation, and means for clamping said printing disks and spacing disks firmly against each other and against the fixed collar on the shaft.

3. A printing roll comprising a shaft having a fixed collar near its end, a plurality of printing disks of equal diameter mounted on said shaft and slidable longitudinally thereof, spacing rings having beveled surfaces on each side adapted to engage coöperating beveled surfaces on said printing disks, each of said spacing rings being formed with a hub and spokes and slidably mounted on said shaft, and means for clamping said disks and spacing rings firmly on the shaft.

1,014,111. GAS-BURNER. JAMES B. ANDERSON, Shaler township, Allegheny county, Pa., assignor of one-fourth to William G. Boyle, one-fourth to Joseph Gehring, and one-fourth to John Fuerstenberg, Allegheny county, Pa. Filed Aug. 16, 1911. Serial No. 644,412.

1. In a gas burner containing a mixing chamber provided with air ports and a gas passage leading into the same, a shutter adapted to close said ports, a multiple needle valve in said passage, a common control for said shutter and said valve, whereby a predetermined ratio may be maintained between the gas and the air, and means for adjusting said control to vary said ratio.



2. In a gas burner, a multiple needle valve consisting of a perforated diaphragm interposed in the gas passage, a plate mounted in said passage to slide longitudinally thereof, needles mounted on said plate and engaging the perforations in said diaphragm, a stem provided with a notch extending axially from said plate, a rock shaft mounted without the gas passage, and an arm fixed to said rock shaft and extending through the wall of said gas passage and engaging the notch in said stem, for the purpose described.

3. In a gas burner, a multiple needle valve consisting of a perforated diaphragm interposed in the gas passage, a plate mounted in said passage to slide longitudinally thereof, needles mounted on said plate and engaging the perforations in said diaphragm, a gas tight journal box communicating with said passage, and a rock shaft journaled in said box and operatively connected with said plate, whereby the passage of gas through said perforations may be controlled.

4. In a gas burner containing a valve chamber and a mixing chamber which is provided with air ports through the wall thereof, a perforated diaphragm interposed between said chambers, a needle plate mounted to slide longitudinally in said valve chamber, needles mounted on said plate and engaging the perforations in said diaphragm, a shutter adapted to cover said air ports, and common operative means for moving said needle plate and said shutter in unison, whereby a predetermined ratio between the quantities of gas and air admitted to said mixing chamber is maintained.

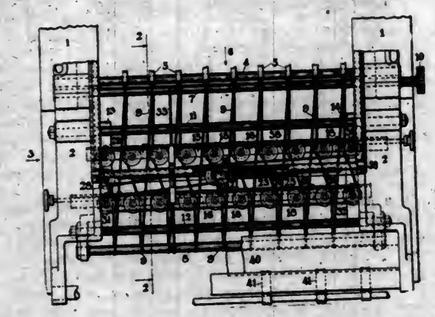
5. In a gas burner containing a valve chamber and a mixing chamber which is provided with air ports through the wall thereof, a perforated diaphragm interposed between said chambers, a needle plate mounted to slide longitudinally in said valve chamber, needles mounted on said plate and engaging the perforations in said diaphragm, a gas tight journal box communicating with said valve chamber, a rock shaft mounted in said box, an arm rigidly attached to said shaft and extending into said valve chamber and connected to said needle plate, a shutter controlling said air ports, and operative connection between said rock shaft and said shutter, whereby said needle plate and said shutter are moved in unison and a predetermined ratio is maintained between the quantities of gas and air admitted to said mixing chamber.

[Claim 6 not printed in the Gazette.]

1,014,112. SHEET-REGISTERING DEVICE. OTTO S. BEYER, East Rutherford, N. J., assignor to Automatic Platen Press Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 21, 1908. Serial No. 428,458.

1. In a device of the class described, the combination of tape shafts, idler rollers interposed between the said tape shafts, an endless tape passing over said tape shafts and rollers and means for changing the direction of the run of said endless tape by shifting the position of the said idler rollers.

2. In a device of the class described, the combination of an upper and lower tape shaft, roller carrier slidably supported parallel to the said shafts, idler rollers fixed with said carriers, a slotted bar interposed between the said carriers, a single movable roller carried by the said slotted bar, means for adjusting the position of the said single roller in the said bar, another single fixed roller, an endless tape passing over the said tape shafts, idler rollers and the said two single rollers and means for driving the said tape constantly in one direction.



3. In a device of the class described, the combination of an upper and lower tape shaft, roller carrier slidably supported parallel to the said shafts, idler rollers fixed with said carriers, a slotted bar interposed between the said carriers, a single movable roller carried by the said slotted bar, means for adjusting the position of the said single roller in the said bar, another single fixed roller, an endless tape passing over the said tape shafts, idler rollers, and the said two single rollers, means for adjusting the said carriers parallel to the said shafts and means for driving the said tape constantly in one direction.

4. In a device of the class described the combination of tape shafts, idler roller carriers below said shafts, fixed side bars for slidably supporting the said carriers, depending lugs on the latter and the said carriers and means passing through both of said lugs on the respective carriers for adjusting the position of the said carriers in the said bars.

1,014,113. GASOLENE-HEATED APPLIANCE. FRANK C. BINKLEY, Sycamore, Ill. Filed Sept. 29, 1911. Serial No. 651,965.

1. A gasolene-operated heating apparatus, including, in combination, a tank constructed to retain liquid fuel, said tank being a relatively long tube as compared with its diameter, closures at both ends of said tank, a burner at one end of said tank, an air compressor at the other end of said tank, a supply pipe within said tank, two elbows in screw-threaded engagement with said supply pipe one of said elbows being located near one end of said tank the other elbow being located near the other end of said tank, each elbow having a branch substantially parallel to said supply pipe, a screw-threaded nipple in said branch said nipple having a valve-seat, a casing in screw-threaded engagement with said nipple, a piston valve in said casing, a stem on said piston valve projecting from said casing, and a weight on said stem without said casing.

2. A gasolene-operated heating apparatus, including, in combination, a tank, said tank being a tube having considerable length as compared with its diameter, there being closures at each end of said tube to adapt it to retain liquid fuel, an air compressor connected to one of said closures, the other closure being cup-shaped, a burner removably secured to this cup-shaped closure by a bayonet fastening, a supply pipe in said tube connecting both of its closures, two inlet valves connected to said supply pipe one of said valves being located near one of said closures, the other valve being located near the other of said closures, and a valve rod and valve in said supply pipe constructed to open and close connection between said tank and said burner.

1,014,114. RED MONOAZO DYESTUFFS. MELCHIOR BÖNIGER, Basel, Switzerland, assignor to Chemische Fabrik vormals Sandoz, Basel, Switzerland, a Corporation of Switzerland. Filed June 8, 1911. Serial No. 631,893.

1. The process for the manufacture of red monoazo dyestuffs which consists in brominating 1-diazo-2-naphthol-4-sulfonic acid and combining the so obtained monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid with 1-aryl-3-methyl-5-pyrazolones.

2. An improvement in the manufacture of monoazo dyestuffs, consisting in the process for the manufacture of monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid, by treating with bromin the naphthalene-1-diazo-2-oxid-4-sulfonic acid.

3. An improvement in the manufacture of monoazo dyestuffs, consisting in the process for the manufacture of monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid, by treating with bromin the napthalene-1-diazo-2-oxid-4-sulfonic acid dissolved in chlorsulfonic acid.

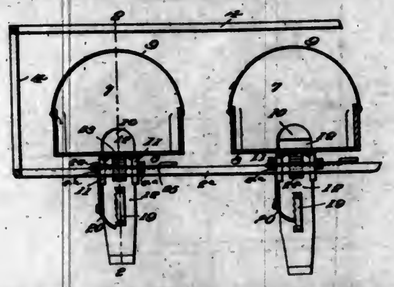
4. As new products the monoazo dyestuffs derived from monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid and 1-aryl-3-methyl-5-pyrazolones, dissolving in water with a brownish yellow-red, in strong sulfuric acid with a pure bluish red color, producing on wool from an acid bath orange shades, which on subsequent treatment with bichromates become blue-red.

5. As new product the monoazo dyestuff, derived from monobromnaphthalene-1-diazo-2-oxid-4-sulfonic acid and 1-phenyl-3-methyl-5-pyrazolene, being easily soluble in water with a brownish yellow-red color, turning to orange on addition of caustic soda lye and depositing the sulfonic acid of the dyestuff in brick-red flakes upon addition of mineral acids, dissolving in strong sulfuric acid with a pure blue red color and producing on wool from an acid bath bluish orange shades, which on subsequent treatment with bichromates become blue-red.

1,014,115. DISPENSING APPARATUS. THOMAS C. BOUNDS, Wahalak, Miss. Filed Feb. 18, 1911. Serial No. 609,478.

1. In a dispensing apparatus a supporting frame, a receptacle having a discharge opening, a movable closure for said opening, means for supporting said receptacle for swinging movement upon said frame, a wheel having radial teeth and mounted for rotation upon said frame, and means for rotating said wheel to cause its teeth to successively engage the receptacle and impart a jarring motion thereto.

2. In a dispensing apparatus a receptacle having a discharge opening, a closure mounted for slidable movement upon said receptacle for opening and closing said discharge opening, means for maintaining said closure yieldably in closed position, a member having spaced notches and connected to said closure, and a pawl carried by said receptacle in position to engage said notches.



3. In a dispensing apparatus a receptacle having a discharge opening, means for mounting said receptacle for swinging movement, means for imparting a jarring movement to said receptacle, a closure mounted for slidable movement upon said receptacle for opening and closing said discharge opening, means for maintaining said closure yieldably in closed position, a member having spaced notches and connected to said closure, and a pawl carried by said receptacle in position to engage said notches.

4. A dispensing apparatus, including a support and frame, a plurality of hoppers pivotally mounted on the supporting frame at their upper ends, the lower ends of the hoppers being free to oscillate, a gate at the lower end of each hopper whereby the discharge of its contents may be regulated, a tooth on the lower end of each hopper, a toothed wheel for each hopper engaging the tooth thereon, and means for rotating each toothed wheel independently of the others.

1,014,116. EYEGLASS-MOUNTING. ANDREW V. BROWN, Philadelphia, Pa. Filed Aug. 20, 1910. Serial No. 578,119.

1. In eye glasses, in combination, lenses, a bridge, the said bridge extending upwardly and forwardly from the plane of the said lenses and the said bridge at its opposite end portions and interiorly of the lenses being provided with bends and the said bridge beyond the said bends extending downwardly to a point in front of the plane of said lenses and the ends of the said bridge being then bent rearwardly and extended upwardly in the plane of the said lenses, means for connecting the said lenses to the said upwardly extended portions and guard supporting means pivotally connected to the said upwardly extending portion.

2. In eye glasses, in combination, lenses, a rigid bridge having its opposite ends connected to the said lenses, the said bridge extending upwardly and forwardly from the plane of the said lenses, the opposite end portions of the body of said bridge extending downwardly to a point in front of or in the plane of said lenses, and the opposite ends being then bent and extended upwardly in the plane of the said lenses, means for connecting the said lenses to the said upwardly extended portions and guard supporting means pivotally supported upon the upper ends of the said upwardly extending portions.

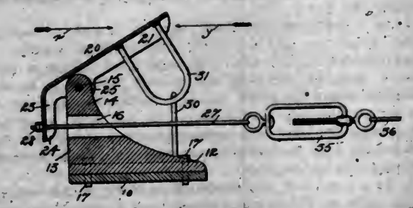
3. In eye glasses, in combination, lenses, a rigid bridge extending forwardly from and at an acute angle to the plane of the said lenses, the said bridge upon opposite sides of its central portion extending downwardly and rearwardly to a point slightly in front of the plane of the lenses and being then bent and extended upwardly in the plane of the lenses, spring pressed levers pivotally supported upon the said upwardly extended portions, guards secured upon the rear ends of the said levers and the said levers having forwardly extended finger portions and means for connecting the said lenses to the said upwardly extending portions.

4. In eye glasses, in combination, lenses, a rigid bridge having connection at its opposite ends with the said lenses, the said bridge extending upwardly from and at an acute angle to the plane of the said lenses and being provided with bends at its opposite ends, which bends are located at points below the point of connection of the lenses to the said bridge and the opposite ends of the bridge beyond the bends extending upwardly means for connecting the said lenses to the said bridge and guard supporting means pivotally connected to the opposite ends of the said bridge.

5. In eye glasses, in combination, lenses, a rigid bridge having connection at its opposite ends to the said lenses, the opposite end portions of the body of the said bridge extending rearwardly and downwardly at an angle to the plane of the said lenses and having rearwardly extended bends at points below the major axes of the said lenses beyond which bends the ends of the said bridge extend upwardly, posts or standards secured to the said lenses, which posts or standards are provided with boxes or housings in their ends in which the upwardly extended end portions of the said bridge are seated, and means for securing the said end portions in the said boxes or housings and spring pressed guard carrying means pivotally secured to the opposite ends of the said bridge.

[Claim 6 not printed in the Gazette.]

1,014,117. RAILWAY-CROSSING SIGNAL. AARON T. CABEEN, Aledo, Ill. Filed Sept. 21, 1909. Serial No. 518,805.

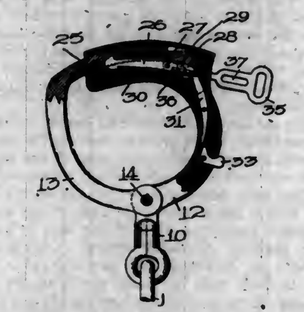


1. In a crossing signal the combination with a stand disposed at a suitable distance from the crossing, of a trip pivotally secured to said stand having a head, said head being inclined upwardly in the direction of the crossing, means limiting the upward movement of said trip, a base, a gong secured to said base, an elastic stop, a pivotally held bell lever, a spring to normally force said lever against said stop, and an adjustable connection extending from said trip to said bell lever.

2. In a crossing signal, the combination with a stand having a horizontal passage, and disposed at a suitable distance from the crossing, of a trip pivotally securing to said stand having a head, said head being inclined upwardly in the direction of the crossing, a staple extending from said stand, a staple extending from said trip in engagement with said first mentioned staple, a base, a gong secured to said base, an elastic stop, a pivotally held bell lever, a spring to normally force said lever against said stop and an adjustable connection extending from said trip through said horizontal passage and secured to said bell lever.

2. In a crossing signal, the combination with a suitable base, of two pins supported by said base, a bell lever secured to each of said pins, each bell lever having a socket, said sockets being held in spaced relation, a spring having its ends engaged within said sockets, elastic stops, said spring forcing said levers against said stops, a gong, two oppositely positioned stands, a trip secured to each stand and upwardly inclining in the direction of said gong and having a downwardly projecting end, at its lower extremity, a rod connected to said downwardly projecting end of the trip and to one of said levers, a loop on said stand, and a loop on said trip interlinking with said first named loop to limit the upward movement of said trip.

1,014,118. HANDCUFF. JAMES F. CARBERRY, Worcester, Mass. Filed Feb. 6, 1911. Serial No. 606,730.



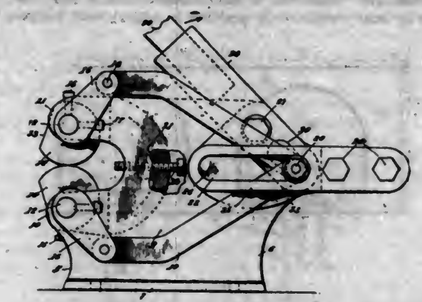
1. In a hand-cuff, the combination of two arms pivotally connected with each other, one having a locking rack and the other a locking lever for engaging said rack, a pivot pin on which said locking lever is pivoted, a spring for normally forcing the locking lever about its pivot into position to engage the rack, a pawl pivoted on said pin independently of the locking lever, said locking lever having a projection for engaging said pawl and forcing it with it in one direction about the pivot, and means for locking the pawl.

2. In a hand cuff, the combination of a pivoted locking lever, a pin on which said locking lever is pivoted, a pawl pivoted on the same pin, said lever having a projection engaging the pawl for moving it with it in one direction about the pivot, the pawl being free to move in the other direction independently of the lever, a spring for forcing the lever into locking position, and means for locking the pawl in a position to prevent the spring from acting to move the lever.

3. In a hand cuff, the combination of a pivoted locking lever, a pin on which said locking lever is pivoted, a pawl pivoted on the same pin, said lever having a projection engaging the pawl for moving it with it in one direction about the pivot, the pawl being free to move in the other direction independently of the lever, a spring for forcing the lever into locking position, and means for locking the pawl in a position to prevent the spring from acting to move the lever, said means comprising a second lever for engaging said pawl, said pawl having a notch for receiving the end of the second lever.

4. In a hand cuff, the combination of a pivoted locking lever, a pin on which said locking lever is pivoted, a pawl pivoted on the same pin, said lever having a projection engaging the pawl for moving it with it in one direction about the pivot, the pawl being free to move in the other direction independently of the lever, a spring for forcing the lever into locking position, and means for locking the pawl in a position to prevent the spring from acting to move the lever, said means comprising a second lever pivotally connected with said spring, the spring being in position normally to move the second lever into locking position.

1,014,119. MACHINE FOR SHARPENING PLOW-SHARES. ARCHIE C. CASH, Coalmont, Ind. Filed June 15, 1910. Serial No. 567,045.



1. A share sharpening machine including a supporting frame, spaced shafts journaled on the frame, compression rolls of different widths eccentrically mounted on the shafts, means operatively connected with the shafts for rotating the rolls, and means whereby the rolls of one width may be moved into engagement with the work, while the rolls of another width remain idle.

2. A share sharpening machine including a supporting frame, spaced shafts journaled on the frame, sets of compression rolls eccentrically mounted on the shafts, means operatively connected with said shafts for rotating the rolls, and means whereby either set of rolls may be moved into engagement with the work to the exclusion of the other.

3. A share sharpening machine including a supporting frame, spaced shafts journaled on the frame and provided with crank arms, sets of compression rolls secured to the shafts, a slotted plate secured to the frame, a lever pivotally mounted on the frame, a bolt extending through the slot in said plate and operatively connected with the adjacent end of the lever, rods forming a pivotal connection between the bolt and crank arms, and means whereby either set of rolls may be moved into engagement with the work to the exclusion of the other.

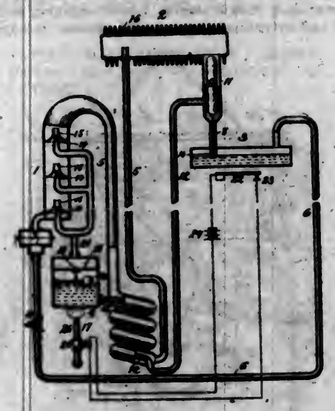
4. A share sharpening machine including a supporting frame having a chamber, spaced shafts journaled on the frame and provided with crank arms, sets of compression rolls eccentrically mounted on said shafts and provided with flat faces to permit the insertion of a plow share, a gage operating in the chamber for limiting the forward movement of the plow share, an operating lever pivotally mounted on the frame, a connection between the operating lever and crank arms, and means whereby either set of rolls may be moved into engagement with the work to the exclusion of the other.

5. A share sharpening machine including a supporting frame, spaced shafts journaled on the frame, compression rolls of different widths eccentrically mounted for rotative adjustment on each shaft and provided with flat faces to permit the insertion of the work between said rolls, a fastening device extending through each roll and engaging the adjacent shaft, whereby one roll of each shaft may be moved into engagement with the work to the exclusion of the other, an operating lever, and means connecting the operating lever and ends of the shafts for rotating the latter.

[Claim 6 not printed in the Gazette.]

1,014,120. REFRIGERATING APPARATUS. CLYDE J. COLEMAN, New York, N. Y. Filed June 19, 1901. Serial No. 65,116.

1. A refrigerating apparatus comprising a cooling chamber, a conduit extending therefrom above the fluid level therein, means for generating a power medium, a gaseous jet exhauster entering the conduit and connected to the generating means so as to receive power medium therefrom, and a static column feed conduit communicating with and leading to the generating means.



2. A refrigerating apparatus comprising a cooling chamber, a condenser, a conduit extending from the cooling chamber above the fluid level therein, means for generating a power medium, a gaseous jet exhauster entering the conduit and connected to the generating means so as to receive power medium therefrom, and a static column feed conduit communicating with and leading to the generating means.

3. A refrigerating apparatus comprising a cooling chamber, a conduit leading therefrom, means for generating a power medium, a compound gaseous jet device leading from the generating means and successively arranged in the conduit, and a static column feed conduit communicating with the condenser and leading to the generating means and arranged to supply medium thereto.

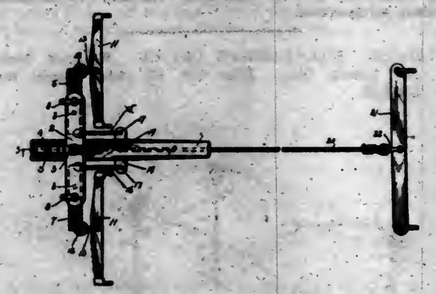
4. A refrigerating apparatus comprising a cooling chamber, a condenser, a conduit extending from the cooling chamber to the condenser, means for heating a power medium, a compound gaseous jet device leading from the generating means and arranged in the conduit and a static column conduit communicating with the condenser and leading to the power medium heating means and supplying medium thereto.

5. In a refrigerating apparatus, in combination, a cooling chamber, a conduit leading therefrom, a gaseous jet exhauster for expanding the medium in the cooling chamber and withdrawing the same therefrom, means for supplying motive medium to the exhauster including motive medium generating means, a static column feed conduit communicating with the condenser and leading to the generating means, and automatic means controlled by the condition of the refrigerant medium in the cooling chamber and controlling the supply of motive means to the exhauster.

[Claims 6 to 22 not printed in the Gazette.]

1,014,121. DRAFT-EQUALIZER. EVERETT COMPTON, Earlham, Iowa. Filed Nov. 30, 1910. Serial No. 594,846.

In a draft equalizer, the combination of a pole, an equalizing bar pivoted thereto, a pair of levers pivoted to the ends of said equalizing bar, a draft plate arranged transversely of the pole and movable relatively thereto when disconnected from the pole, means for connecting the inner ends of said levers with the ends of said plate, a draft member adapted to be connected at one end to said plate, whiffletrees connected to the outer ends of said levers and said member, and means for pivotally connecting said plate to said pole, whereby the inner ends of said levers become connected together through said plate and



are adapted to adjust themselves about the pivot point of said plate independently of said equalizing bar.

1,014,122. GRAIN-DRIER. JOHN B. CORNWALL, Moline, Ill., assignor to Barnard and Leas Manufacturing Company, Moline, Ill., a Corporation of Illinois. Filed Aug. 5, 1911. Serial No. 642,527.

1. In a grain drier, the combination of an upper heating drying section and a lower cooling section, each having internal and external perforated walls; with an intermediate section having an imperforate wall, and a hopper in said intermediate section receiving grain from the upper heating section and discharging it into the lower section.

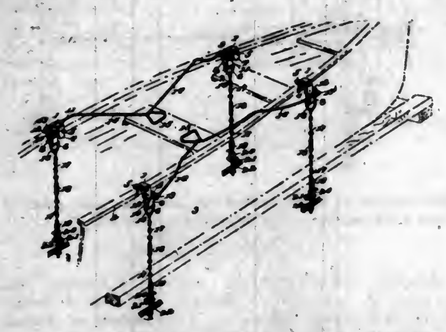
2. In a grain drier, the combination of an upper annular heating section, and a lower annular cooling section, each having internal and external perforated walls; an intermediate section having an imperforate wall, a hopper in said intermediate section receiving grain from the upper heating section, and an inverted cone receiving grain from said hopper and distributing it into the lower section; with means for introducing hot air into the upper section above the grain passage therein; means for introducing cool air into the lower section above the grain passage therein; and means for regulating the discharge of grain from said lower section.

3. In combination with a grain drier having a discharge outlet, a rotary disk below the outlet, means for rotating said disk, a cup surrounding the disk, a chute connected with said cup; said disk having flanges on its under side to direct grain into said chute.

4. The combination with a grain drier having a discharge pipe at bottom, of a rotary disk below the lower end of the pipe, means for rotating said disk, an adjustable

collar on the lower end of the pipe for regulating the escape grain over the edge of said disk; a cup surrounding the disk, and a chute connected with said cup, substantially as described.

1,014,123. BOAT-LASHING DEVICE. WILLIAM COULTER, Lorain, Ohio. Filed Oct. 29, 1910. Serial No. 589,812.



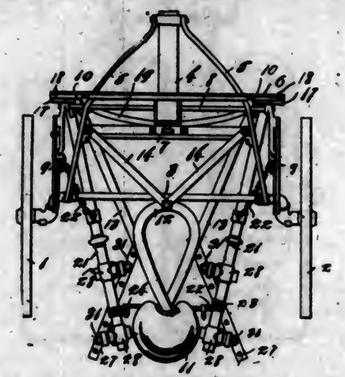
1. In a boat lashing device, the combination of a hook, a plate hingedly connected to the hook, a tongue at the free end of the plate and forming shoulders thereon, a stirrup pivoted to the hook adapted to rest on said shoulders and engage said tongue for holding the plate angularly to the hook, a link interposed between and engaging both the hook and said plate, and adjustable means whereby a strain can be exerted on the link and thereby force the tongue into engagement with said stirrup, substantially as described.

2. In a boat lashing device, the combination of a hook adapted to fit over the gunwale, a plate hingedly connected to the hook, a tongue of less width than the plate projecting centrally from the free end thereof to form shoulders thereon, a stirrup pivoted to the hook adapted to rest on said shoulders and engage said tongue for holding the plate in an angular position with relation to the hook, a link interposed between and engaging both the hook and said plate, and adjustable means connecting the link to a flooring whereby tension can be exerted on the link thereby causing it to have a wedging effect upon the plate for forcing the tongue into engagement with the stirrup, substantially as described.

1,014,124. HARROW ATTACHMENT FOR CULTIVATORS. STEPHEN A. COWART, Midlothian, Tex., assignor of one-half to J. P. Kimmel, Midlothian, Tex. Filed May 12, 1911. Serial No. 626,807.

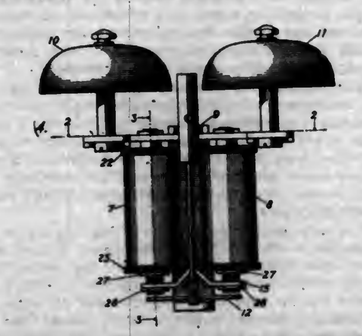
1. The combination of a cultivator having beams pivotally mounted at the forward ends and means for elevating the rear ends and holding the same at different adjustments and harrow attachments consisting of harrow beams, clamps for attaching said harrow beams to said cultivator beams whereby said harrow beams may be held at angles to or parallel with said cultivator beams, teeth carried by said harrow beams, and means for holding said harrow beams at different adjustments whereby said teeth may be set at different angles said means consisting of sleeves having the lower ends thereof flattened to form a bearing surface against the harrow beams, I-bolts engaging the harrow beams and extending through said sleeves, the eyes of said I-bolts being engaged by said flattened portions of the sleeves, washers having tubular flanges for holding said bolts centrally in said sleeves, and nuts for clamping said sleeves against said beams.

2. In a cultivator having beams pivotally mounted at their forward ends and means for holding the rear ends of said beams at different elevations, harrow beams provided with teeth, clamps for attaching said harrow beams to said cultivator beams at different angles, sleeves engaged by said clamps rigidly, and means for permitting the turning of said harrow beams and holding the same at different adjustments whereby said teeth may be set at different angles, said means consisting of flattened mouths formed on the lower ends of said sleeves, I-bolts engaging said harrow beams and extending through said sleeves, the eyes of the



bolts being engaged by said flattened mouths, washers having tubular flanges projecting with said sleeves to hold said bolts centrally within said sleeves, nuts clamping said sleeves against said harrow beams, and means for adjusting said beams laterally and holding the same at different adjustments.

1,014,125. HARMONIC RINGER. EDWARD B. CRAFT, Hackensack, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 21, 1910. Serial No. 539,293.



1. The combination with an electromagnet and its armature, of a support for said armature, and a rotatable member extending through a coil of said electromagnet and having threaded engagement with said support.

2. The combination with the coils of an electromagnet and the armature of said magnet, of a support for said armature, and cores extending through said coils, said cores being rotatably mounted and in threaded engagement with said support.

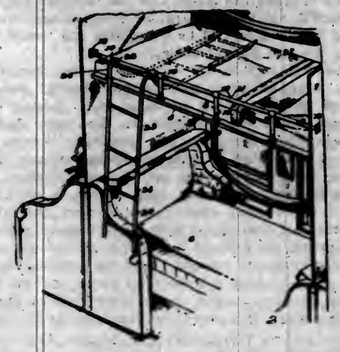
3. The combination with the coils of an electromagnet, of a yoke bridging said coils, an armature, a support for said armature, and cores for said coils, said cores being rotatably carried by said yoke and in threaded engagement with said support.

4. The combination with a yoke, of cores rotatably carried by said yoke, sleeves surrounding said cores, coils surrounding said sleeves, an armature, and a support for said armature in threaded engagement with said cores.

5. The combination with a yoke, of cores rotatably carried by said yoke, sleeves surrounding said cores, coils surrounding said sleeves, a projection upon each said sleeve adapted to engage with said yoke, an armature, and a support for said armature in threaded engagement with said cores.

[Claims 6 to 8 not printed in the Gazette.]

1,014,126. GUARD-RAIL FOR UPPER BERTHS. HERBERT O. CRIPPEN, New York, N. Y. Filed Sept. 14, 1911. Serial No. 649,271.



1. The combination with a berth, of a folding guard rail pivotally mounted on the berth at the forward portion thereof and adapted to be swung downwardly and rearwardly to inoperative position, and means for securing the guard rail in upright position.

2. The combination with a berth, of a folding guard rail pivotally mounted on the berth and adapted to be swung downwardly and rearwardly to inoperative position, means for securing the guard rail in upright position, and a ladder mounted on said guard rail.

3. The combination with a berth, including a mattress and end supports, of a guard rail pivotally mounted on the forward portion of the berth and movable to folded position beneath the mattress, a ladder pivotally mounted on the guard rail, and means for locking said guard rail in upright position.

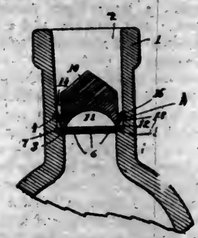
4. The combination with a berth, of a folding guard rail pivotally mounted on the berth, a ladder pivotally mounted on the guard rail and having its upper end off-set to clear the forward longitudinal edge of the berth, and means for securing the guard rail in upright position.

5. The combination with a berth, including a mattress and end supports, of a folding guard rail pivotally mounted on the berth, a ladder pivotally mounted on the guard rail and having its upper end off-set to clear the forward longitudinal edge of the berth, and means for locking the guard rail in upright position, the off-set portion of the ladder being adapted to engage and prevent accidental displacement of the mattress when the guard rail is swung downwardly and rearwardly to inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

1,014,127. NON-REFILLABLE BOTTLE. WILLIAM CROSSLEY and THOMAS D. ADAMS, West Haven, Conn. Filed Feb. 17, 1911. Serial No. 609,130.

1. In a non-refillable bottle the combination of a bottle provided with an annular shoulder in its mouth and a groove above the shoulder, a valve support resting upon the shoulder, a valve resting upon the shoulder above the support a guard, comprising a vertical central cylindrical body recessed on its lower side for the lift of the valve, and a flange at the bottom supported by the shoulder above the support and valve, having channels from the recess around to the upper surface of the flange, and an expansible ring received in the groove of the neck projecting upon and holding the guard flange with the openings of the channels interior thereto, the said body of the guard being reduced in caliper from the bore of the neck to just provide for the passage of the ring in being inserted to place, and the annular space thus provided serving for the outward flow of the liquid from the bottle after passing around the flange and interior to the ring.



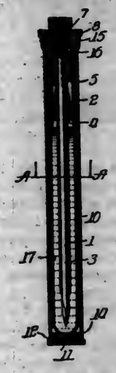
2. In a non-refillable bottle the combination of a bottle provided with an annular shoulder, a valve support supported by the shoulder, a valve supported above the support comprising a disk cut by a spiral line of cleavage to form a spiral flap or tongue, a guard supported above the valve having a central recess on its lower side for the upward lift of the valve, and channels from the recess to the periphery of its lower part, and corresponding channels in said periphery opening above the valve, and an expansible ring received in the groove of the bottle projecting over and engaging the guard to hold it upon its seat.

3. A valve comprising a plate cut by a line of cleavage into a spiral scroll the convolutions of which have their edges in contact to form a tight joint when in their original form, but are separable by distention of the convolutions from such form to permit the flow of fluid between them.

4. A valve comprising a plate cut by a line of cleavage into folds having their edges in contact to form a tight joint in their original form but capable of distention to separate their edges for the flow of a fluid.

5. In a non-refillable bottle the combination of a bottle having an annular shoulder in its mouth, a valve support seated upon the shoulder having a spiral line of perforation, a valve seated upon the suport having a spiral flap covering the perforations of the support, a guard supported above the valve provided with a recess for the lift of the valve and channels from the recess around the edge of the guard to its outer surface, and a ring expanded by its spring tension into the groove of the bottle in engagement with the upper side of the guard to hold the same in place.

1,014,128. TROCAR. CHARLES E. CROWE, Chicago, Ill. Filed Dec. 16, 1910. Serial No. 597,664.



1. An instrument of the class described, comprising a trocar, an operating handle adapted to be rigidly connected

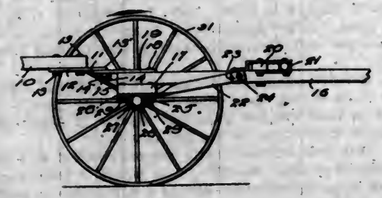
thereto, a cannula, a bulbed hose connection at the rear end of the cannula, and a limiting annular shoulder in front of said connection, said shoulder and connection being spaced apart to provide a hand grip between them.

2. An instrument of the class described, comprising a trocar, a cannula; a liquid-tight receptacle adapted to contain said trocar, said cannula, and a liquid bath therefor; and a sheath for said receptacle adapted to serve as a handle for said trocar.

3. In a trocar, the combination of a sheath, a glass receptacle fitted in said sheath, a reversible screw-threaded plug forming a liquid-tight closure for said sheath and receptacle, a trocar secured to said plug, a cannula fitting said trocar and having a shoulder and a hose connection spaced apart to provide a holding grip between them, said trocar and said cannula being adapted to be held submerged in an antiseptic solution in said receptacle.

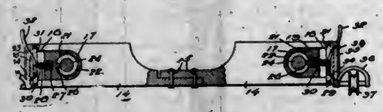
4. In a trocar, the combination of a sheath, an annular shoulder in said sheath, a glass tube forming a lining for said sheath, means holding said tube in liquid-tight contact with said shoulder, a reversible screw-threaded plug forming a liquid-tight closure for said sheath and tube, a trocar secured to said plug, a cannula fitting said trocar and having a limiting shoulder, a hose connection, and a grip space between them, said trocar and cannula being adapted to be held submerged in an antiseptic solution in said casing.

1,014,129. TONGUE-TRUCK FOR CORN-BINDERS. FRED W. CURTIS, Hereford, Tex. Filed July 21, 1911. Serial No. 639,773.



A brace for the pole of a tongue truck, comprising an elongated portion, one end being adapted to be attached to the pole of the truck, the opposite end being twisted into a plane at right angles to the body portion, tubular threaded members formed integrally with the last-named member and struck up therefrom, and a curved portion between the threaded members, said threaded members being adapted to pass through openings in the bolster of the truck, and the curved portion to receive and support the shaft.

1,014,130. QUILTING-FRAME. GILBERT DALTON, Oglesby, Tex. Filed June 2, 1911. Serial No. 630,794.

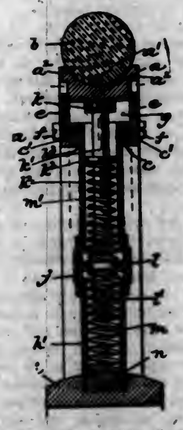


1. A quilting frame, comprising beams having a slot at their outer ends, a bearing block slidably mounted in the slot and provided with a blade spring projecting therefrom, a second bearing block slidably mounted in the slot, said bearing blocks having recesses formed in their adjacent faces to provide a bearing, a metal sleeve having its end engaged in the bearing recess, said sleeve having a reduced portion, the outer bearing block being formed with an inwardly projecting lug fitting into said reduced portion of the sleeve, rollers having their ends engaged in the sleeves, and ratchet wheels secured on the sleeves, the blade springs of the bearing blocks engaging said ratchets to prevent the rotation of the sleeves and thus of the rollers in one direction.

2. A quilting frame, comprising a frame beam slotted at each end, a second frame beam spaced from the first, said latter beam being also formed with slots at its ends, separable bearings slidably mounted in the slots of the beams, plates secured to the ends of the beams for closing the slots, rollers connecting the beams and provided with reinforced ends fitting into the bearings, springs having one end bearing against the outer members of the bearings and the other against the said plates for retaining the bearings in position, levers pivoted to the plates, connections between the levers and the bearings for shifting the bearings against the tension of the springs, and roller bearing brackets carried by the plates and locked in position by the said pivoted levers.

3. An end section for quilting frames, comprising a slotted beam, an inner half bearing slidably mounted in the slot of the beam, an outer half bearing slidably mounted in the slot exterior to the inner portion, a plate secured to the beam and forming a closure for the open end of the slot, a spring interposed between the plate and the outer half bearing for forcing the latter inward, the plate having reversely bent flanges, a lever pivoted between the flanges, connections between the lever and the outer half bearing for shifting said bearing block outward against the force of the spring, toothed plates fitting under the flanges of the end plate, the lever having a yoke on its end engaging said toothed plates to lock them in position, brackets formed at the lower ends of the plates, and a grooved wheel rotatably supported by the brackets.

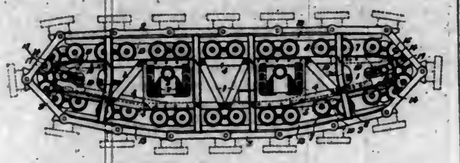
1,014,131. VEHICLE-WHEEL. BENJAMIN A. DENNIS, Providence, R. I., assignor to Thomas A. McGrath, Providence, R. I. Filed Feb. 9, 1911. Serial No. 607,563.



In a vehicle wheel, the combination with a rim formed with a laterally-extending ledge at each side and said rim provided with a concave seat to receive a solid rubber tire, a ring of lesser diameter than the rim and said ring having fixed annular flanges in sliding contact upon the side faces of said rim; a spoke composed of two tubes, one of which is secured in the ring and the other secured in the wheel-hub; a union connection for the inner ends of said tubes; a sector block whose curved surface rests against the rim and said block having a rod projecting into the outer tube and provided with an integral collar; a disk; an expanding coil spring interposed between the collar and said disk, a second expanding coil spring interposed between said disk and the wheel-hub.

1,014,132. ROAD-VEHICLE. BRAMAH JOSEPH DIPLOCK, Wheatsheaf Wharf, Fulham, England. Filed Feb. 28, 1910. Serial No. 545,532.

1. The combination of an endless series of foot carriers, feet on the carriers, and two guides acting on the carriers at two points in their length such guides being parallel to each other above the places where the feet are on the ground but being inclined at an angle to each other where the feet are nearing the ground line.



2. The combination of an endless series of foot carriers, feet on the carriers, two guides acting on the carriers at two points in their length such guides being parallel to each other above the places where the feet are on the ground but being inclined at an angle to each other where the feet are nearing the ground line, and anti-friction devices interposed between the guides and the carriers.

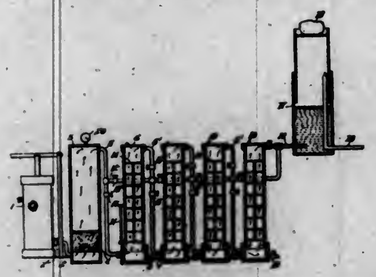
3. The combination of an endless series of foot carriers, feet on the carriers, two wheels on the carriers one in advance of and to one side of the other and two rails on which the said wheels run, such rails being parallel to each other above the places where the feet are on the ground but being inclined at an angle to each other where the feet are nearing the ground line.

4. The combination of an endless series of foot carriers, feet on the carriers, two wheels on the carriers one in advance of and to one side of the other, two rails on one side of the carriers on which the said wheels run, such rails being parallel to each other above the places where the feet are on the ground but being inclined at an angle to each other where the feet are nearing the ground line, a third rail on the other side of the carriers, a part on each carrier and movable relatively to it, and a spring tending to press this part toward the third rail.

5. The combination of a foot carrier, a bulb on the underside of the carrier, a foot having a cup on its upper side to receive the bulb and a pin fixed to the foot and passing through a slot in the bulb.

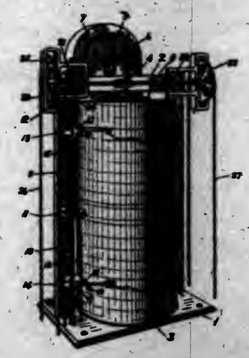
[Claims 6 to 8 not printed in the Gazette.]

1,014,133. CARBURETER. ORLANDO DUCKER, Washington, D. C., assignor of one-fourth to Fredrick E. Lykes, Tampa, Fla. Filed Sept. 28, 1909. Serial No. 520,029.



A carbureter comprising an air compressor, a gas reservoir, a plurality of tanks, a drier, a pipe establishing communication between the drier and the air compressor, vertical pipes establishing communication between the tanks, a vertical pipe establishing communication between the drier and one of the tanks, a horizontal pipe establishing communication between another of the tanks and the reservoir, a horizontal shunt pipe communicating with the vertical and horizontal pipes, valves mounted in the shunt pipe between the vertical pipes, another valve mounted in the shunt pipe between said horizontal pipe and the adjacent vertical pipe, valves mounted in said first named vertical pipes below and above the shunt pipe, a valve mounted in said second named vertical pipe below the shunt pipe, and a valve mounted in said horizontal pipe between the shunt pipe and the tank.

1,014,134. HYDROCHRONOGRAPH. EMERY W. EATON, Philadelphia, Pa., assignor to Barrett & Lawrence, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 10, 1911. Serial No. 626,358.



1. A hydro-chronograph for recording difference in level or head which comprises a clock driven drum, nested revoluble screws, stylus arms spaced apart and operated respectively by said screws and both adapted to simultaneously coöperate with the drum, and float mechanisms for independently operating the screws, substantially as described.

2. A hydro-chronograph for recording difference in level or head which comprises a clock driven drum, nested screws provided respectively with driven toothed wheels and whereof one projects through and beyond the other, stylus arms spaced apart and mounted respectively on said screws and both adapted to coöperate with the drum, and independent sets of float mechanism provided with driving toothed wheels which respectively mesh with said driven wheels, substantially as described.

3. A hydro-chronograph for recording difference in level or head which comprises a base, a yoke rising therefrom, a vertical drum revolubly mounted between the yoke and base, a clock mechanism carried by the yoke, gear wheels between said mechanism and drum for revolving the latter, a pair of vertically arranged screws revolubly carried by the yoke frame, stylus arms respectively engaging the screws, guides for said arms, a driven wheel on each screw, and shafts carried by the yoke frame and provided with float driven wheels and with driving wheels respectively meshing with the driven wheels on the screws, substantially as described.

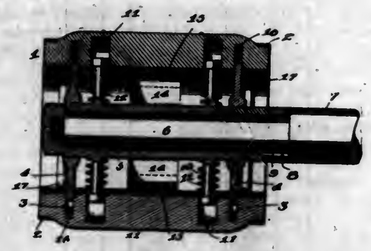
4. In combination independent floats one for head level and one for tail level, a clock driven paper carrying drum, stylus arms spaced apart and having their operative ends arranged in alinement axially of the drum, and screws, one for each stylus arm, and whereof one is operated by one float and the other by the other float, whereby a contemporaneous record of each level is made.

5. In an instrument of the type specified the combination of a clock driven drum, a pair of screws, and a pair of stylus arms mounted on the screws and having their operative ends arranged in the same axial line on the drum whereby two records are contemporaneously made.

1,014,135. SHOCK-ABSORBING HUB. ALLEN R. FELLOWS, Sioux Falls, S. D. Filed Feb. 17, 1910. Serial 544,467.

1. A shock-absorbing hub, comprising an outer hub and an inner casing, the hub being provided with annular

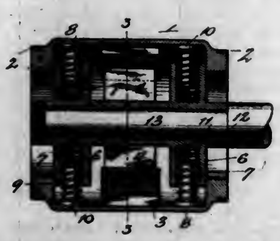
grooves and the casing with disks operative within said grooves, a plurality of radial arms integral with and projecting from the casing, sockets arranged in the inner wall of the hub, in which the arms are adapted to freely move, and springs encircling said arms, whereby the casing and the hub are sustained in concentric relation.



2. A shock-absorbing-hub, comprising an outer hub and an inner casing, the hub being provided with annular grooves in its inner wall and the casing with disks operative within said grooves, a number of radial arms integral with an projecting from the casing, sockets arranged in the inner wall of the hub, in which the arms are adapted to freely move, springs encircling said arms, whereby the casing and the hub are sustained in concentric relation, centrally-arranged recesses in the inner wall of the hub, and a power-impelling wheel, carried by the casing and adapted to engage said recesses and lock the hub to the casing.

3. A shock-absorbing hub, comprising a longitudinally-divided hub having its inner wall, near each end, provided with an annular groove, and with sockets, an axle-box provided with disks adapted to operate within the grooves, a plurality of headed arms projecting radially from opposite ends of the axle-box and operative in said sockets, springs encircling said arms, whereby said axle-box and the hub are sustained in concentric relation, and means for locking the hub to the axle-box.

1,014,136. SHOCK-ABSORBING HUB. ALLEN R. FELLOWS, Sioux Falls, S. D. Filed June 4, 1910. Serial No. 565,098.

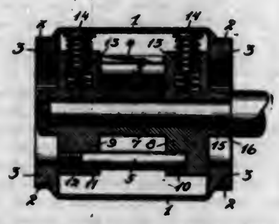


1. A shock-absorbing hub for vehicle wheels, comprising a longitudinally-divided shell, an axle box provided adjacent its opposite ends with annular, integral disks having sockets in their peripheries, said disks serving to close the respective ends of the hub, and spring-pressed pins operating in said sockets, whereby the box is yieldingly sustained in concentric relation with the outer shell.

2. A shock-absorbing hub for vehicle-wheels, comprising a longitudinally-divided shell, an axle-box provided adjacent its opposite ends with annular, integral disks having sockets arranged in their peripheries, said disks serving to close the respective ends of the hub, spring-pressed pins operating in said sockets to yieldingly sustain the box in concentric relation with the shell, contacting devices arranged on the inner surface of the shell, and power-impelling arms carried by the box and adapted to engage said contacting devices, whereby the shell may be revolved with said box.

3. A shock-absorbing hub for vehicle wheels, comprising a longitudinally-divided shell, an axle-box provided adjacent its opposite ends with annular, integral disks having sockets in their peripheries, said disks serving to close the respective ends of the hub, spring-pressed pins operating in said sockets to yieldingly sustain the axle-box in concentric relation with the shell, studs projecting from the inner surface of the shell, and power-impelling arms, carried by the axle-box, adapted to engage the projecting studs, whereby said axle-box and shell may be propelled in unison.

1,014,137. SHOCK-ABSORBING HUB. ALLEN R. FELLOWS, Sioux Falls, S. D. Filed July 21, 1910. Serial No. 573,132.

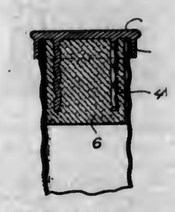


1. A shock-absorbing hub for vehicle wheels, comprising a longitudinally-divided outer shell provided on its inner wall with inwardly-projecting studs, an inner shell provided at opposite ends with annular, integral disks, shock-absorbing devices carried by said disks, and rollers journaled in the disks and adapted to engage the studs, whereby the outer shell will be caused to revolve.

2. A shock-absorbing hub for vehicle wheels, comprising a longitudinally-divided outer shell provided on its inner wall with inwardly-projecting pairs of studs, an inner shell provided with annular, integral disks carrying shock-absorbing devices, and rollers journaled in the disks and adapted to be so arranged in relation to the inwardly-projecting studs that the wheel may have a lesser or greater movement before engaging said studs.

3. A shock-absorbing hub for vehicle wheels, comprising a longitudinally-divided outer shell provided on its inner wall with a number of studs arranged to provide alternately wide and narrow spaces therebetween, an inner shell provided with annular, integral disks carrying shock-absorbing devices, and driving rollers carried by said disks and operative in the wider spaces between the studs, so that the wheel will have a greater movement before the studs are engaged by the rollers, than if said rollers were positioned in the narrow spaces.

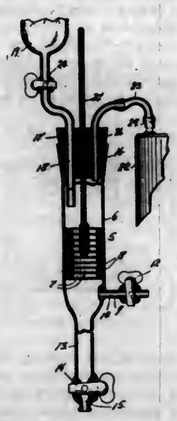
1,014,138. COVER FOR SERVICE-BOXES. CHARLES T. FORD, Washington, D. C. Filed Mar. 5, 1910. Serial No. 547,585.



1. A gravity retained service box cover comprising a relatively light metallic sustaining member adapted to fit the end of the box and a relatively deep body of heavy masonry secured to and depending from said sustaining member, adapted to enter the box for which the cover is intended and hold the cover in place by its inertia.

2. A service box cover for the purpose described, comprising a metallic supporting member constructed on its under side with means for interlocking with a molded body of plastic material, and a body of plastic material molded upon said under side of the base having a transverse dimension which adapts it to enter and project within the box and having a vertical dimension which lends a relatively large weight to the body and adapts it to resist shocks and hold the cover in place by its weight or inertia.

1,014,139. APPARATUS FOR MEASURING THE EVAPORATION OF LIQUIDS. NAT H. FREEMAN, Boulder, Colo. Filed Feb. 1, 1911. Serial No. 606,045.



1. In an apparatus for measuring the evaporation of liquids, the combination of a receiver containing a porous element, means for introducing the liquid to be volatilized above the porous element, means for introducing air below the porous element, and a liquid-containing tank in communication with the receiver above the porous element for producing suction within the receiver by the escape of liquid from the tank, substantially as described.

2. An apparatus for measuring the volatility of liquids, comprising a vertically disposed receiver, a porous element located therein intermediate its extremities, means for introducing liquid to be evaporated above the porous element, means for introducing air below the porous element, and means for introducing suction above the porous element, the lower portion of the receiver below the porous element being reduced in size and graduated to indicate the quantity of unevaporated liquid, substantially as described.

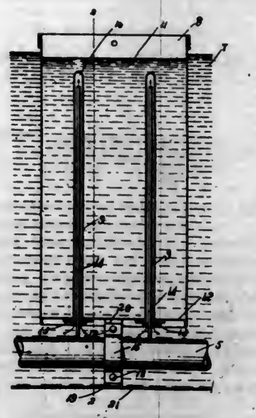
3. In an instrument of the class described, the combination of a vertically disposed receiver having a porous element interposed therein between its extremities, the said element consisting of a number of porous diaphragms arranged one above another and suitably spaced, means for introducing liquid above and air below the porous element, means for producing suction above the porous element, and means inserted in the receiver and protruding therefrom for measuring the temperature in the receiver during the process of evaporation, substantially as described.

4. In a device of the class described, the combination of a vertically disposed receiver whose body portion contains a porous element, means for introducing a volatile liquid into the receiver above the porous element, means for regulating the flow of said liquid, means for introducing air to the receiver below the porous element, and a liquid-containing tank in communication with the receiver for producing suction therein by the escape of liquid from the tank, whereby the volume of air employed to volatilize a given quantity of liquid may be determined.

5. In a device of the class described, the combination of a vertically disposed receiver, a porous element interposed therein and composed of a series of foraminous diaphragms arranged one above another and suitably spaced, the portion of the receiver below the porous element being reduced in size and graduated for liquid measuring purposes, means for introducing air between the said graduated portion of the receiver and the porous element, a graduated liquid-containing receptacle in communication with the receiver by a valve-controlled passage, and means for producing suction in the receiver to facilitate the passage of air through the porous element, the suction-producing device being equipped to measure the quantity of air employed in the volatilization of a given quantity of liquid, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,014,140. ICE-MAKING APPARATUS. EDWARD E. GAINER, New York, N. Y., assignor to Zenas U. Dodge, New York, N. Y. Filed Mar. 15, 1911. Serial No. 614,731.



1. In an ice making apparatus, in combination, a refrigerant tank, a header arranged in the tank and spaced from the bottom thereof, a stand-pipe connected to the header, a can spaced from the header, a freezing tube opening at one end through the bottom of the can and closed at its opposite end and adapted to receive the stand-pipe, and a common support for the header and can adapted to hold the same in their relative positions.

2. In an ice making apparatus, in combination, a refrigerant tank, a header arranged therein, two stand pipes connected to the header and extending vertically therefrom, a can, two freezing tubes arranged vertically in the can and each opening at one end through the bottom of the can and being closed at its upper end, said tubes being arranged to receive the stand pipes and to cooperate with the stand pipes to hold the can upon its support, and a support for the can arranged between said stand pipes.

3. In an ice making apparatus, in combination, a refrigerant tank, a header arranged therein, a stand-pipe connected to the header, a can, a freezing tube opening at one end through the bottom of the can and closed at its upper end, said tube being adapted to receive the stand-pipe and coöperating with the same to prevent displacement of the can with respect to the header, and a common support for the header and can serving to hold the same in spaced relation to each other.

4. In an ice making apparatus, in combination, a refrigerant tank, a header arranged therein, a stand-pipe connected to the header, a can, a freezing tube opening at one end through the bottom of the can and closed at its upper end, said tube corresponding in length approximately to the length of the stand-pipe and adapted to

receive the same and coöperating therewith to prevent displacement of the can with respect to the header, and a support for the header bearing on the bottom of the can and holding the same in space relation to the header.

1,014,141. LEAD-SHARPENER. CHARLES A. GAISER, Toledo, Ohio. Filed Feb. 11, 1911. Serial No. 608,061.

As a new article of manufacture, a pencil sharpener comprising a holder having sockets spaced apart and extending in parallel relations, and two cylindrical members having peripheral abraiding surfaces and supported in said sockets and engaging the same with sufficient force to prevent rotary movement therein while in use, but which will yield for turning when abnormal force is applied.

1,014,142. TRAP-COVER. ROBERT TUDOR GARRISON, Princeton, N. J. Filed Feb. 16, 1911. Serial No. 609,009.

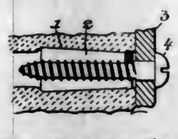
The herein described trap cover comprising a threaded boss having a depression in its upper side, an annular flange surrounding the boss and extending from its upper side, a shoulder surrounding the depression in the boss, a centrally disposed wrench-engaging projection formed integral with the boss and extending from the depression in the upper side of said boss, and a removable disk fitted to lie against the shoulder for covering the wrench-engaging projection, the entire cover and disk being adapted to lie substantially flush with the upper surface of the floor and to form an air-tight trap cover.

1,014,143. INSTRUMENT FOR TOPOGRAPHICAL SURVEYING. PAUL GAULTIER, Versailles, France. Filed Sept. 14, 1909. Serial No. 517,687.

1. A stand; a table adjustable into a horizontal position; grooves on the under surfaces of the said table; a bar, called 'base line bar,' supported by means movable in the said grooves and fixable in a predetermined direction, on the table; two other movable bars pivoted and fixable in position as desired, on the base line bar; slides movable on the base line bar and supporting the pivots of the pivoted bars; a telescope mounted on one of the pivoted bars and designed for sighting points on the land; millimetric scale and vernier on the said bar; divided circles fixed on the movable slides on the base line bar and having their centers of the pivots on the pivoted bars; microscopes disposed on the pivots of the pivoted bars; pricking cylinders for replacing eventually said microscopes; adjusting screws for enabling the bars to be brought quickly into their exact positions; plunger prickers to be brought over the intersection of the two pivoted bars; and an angled microscope for replacing eventually the said pricker.

2. An instrument for topographical surveying comprising; a table adapted to be adjusted into a horizontal position and provided with grooves on its lower face; a base line bar; means movable in said groove and adapted to support said bar; a pair of slides movable on the base line bar; pivots carried thereon; additional bars pivotally supported on said slides and adapted to cross each other; a telescope mounted on one of the pivoted bars; a scale and vernier on said last named bar; divided circles fixed on said slides and having their centers on the pivots coincident of the pivoted bars; microscopes disposed on said pivots and adapted to be replaced by pricking cylinders; adjusting screws for enabling the bars to be brought quickly to the desired positions; plunger prickers adapted to be brought over the intersection of the pivoted bars and an angled microscope adapted to replace the plunger prickers.

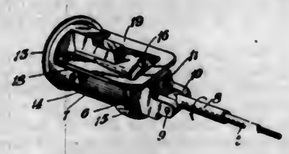
1,014,144. EXPANSION-BOLT. JAMES EDWARD GORMEY, Newark, N. J. Filed Jan. 19, 1911. Serial No. 603,429.



1. An anchor-bushing for screws, the blank of which has its opposite sides substantially equal and parallel, said blank being divided lengthwise into two approximately triangular members shaped and assembled in separated relation to form a two-part cylinder provided with a tapered bore, a tie-piece uniting the members, and a screw adapted to enter the bore and expand the cylinder.

2. An anchor bushing for screws consisting of a cylinder of metal divided lengthwise into two parts, and provided with a smooth tapered bore, a member of C-shaped cross section uniting said cylinder parts at the larger end of the bore, and a coöperating screw adapted to cut its way into the tapered bore and produce parallel expansion of the cylinder parts.

1,014,145. LOCK FOR MOTOR-VEHICLES. DAVID P. GRAHAM, Detroit, Mich., assignor of one-half to Levi C. Hayden, Tecumseh, Mich. Filed Jan. 9, 1911. Serial No. 601,584.

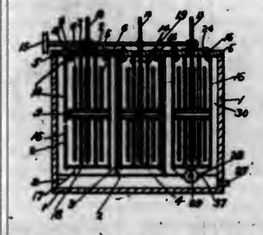


1. A device for the purpose described comprising a lock having a stationary barrel and a rotatable bolt in said barrel having an end extending beyond the barrel and formed with a plurality of faces, a spring secured to the barrel in engagement with one of said faces to yieldingly hold the bolt from turning, a tubular casing inclosing the barrel and spring, and a shaft pivotally attached to the extended end of the bolt at one end.

2. A device for the purpose described comprising a lock having a stationary barrel and a rotatable bolt formed with a squared end projecting beyond the barrel, said bolt and barrel being also formed with projections forming stops to limit the turning of said bolt, a U-shaped spring secured at its ends to the barrel with its connecting middle portion engaging the squared end of the bolt, a tubular casing inclosing the barrel and spring, and a shaft pivotally attached to said end of said bolt.

3. A device for the purpose described comprising a lock having a stationary barrel and a rotatable bolt in said barrel having a lug and a squared projecting end, a stop on the barrel to be engaged by the lug, a U-shaped spring secured at its ends to the barrel with its connecting end portion engaging the squared end of the bolt, a tubular casing inclosing said barrel and spring, ears on the end of said bolt, and a shaft pivotally attached to said ears.

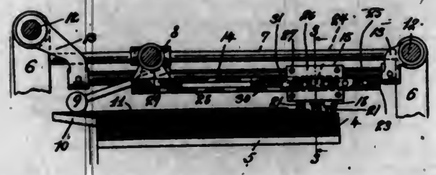
1,014,146. ELECTRIC BATTERY. HENRY HALSEY, New York, N. Y., assignor to Halsey Electric Generator Company, a Corporation of New Jersey. Filed May 6, 1903. Serial No. 155,858.



1. In a battery, the combination of a receptacle, a plurality of sets of electrodes, each set forming a couple, an electrolyte common to all of said electrodes, partitions in said receptacle forming casings and open at the bottom to permit flow of the electrolyte and interposed between said sets of electrodes, separate frames for suspending the respective sets of electrodes, each frame being attached to its cover, and insulated terminals carried by each cover and respectively connected to the electrodes of opposite polarity.

2. In a battery, the combination of a receptacle, a plurality of sets of fixed and movable electrodes, each set forming a couple, an electrolyte common to all of said electrodes, partitions in said receptacle forming casings and open at the bottom to permit flow of the electrolyte and interposed between said sets of electrodes, separate covers for each casing, a frame for separately suspending each set of electrodes, each frame being attached to its cover, a driven device carried by each cover for moving the movable electrode of its corresponding set, a common means for driving said driven devices, and insulated terminals carried by each cover and respectively connected to the electrodes of the different polarities of its corresponding set.

1,014,147. BACK-STOP ATTACHMENT FOR PAPER-FEEDS. FRANK A. HAZARD, New York, N. Y., assignor to Joseph T. Kavenaugh, New York, N. Y. Filed Sept. 28, 1909. Serial No. 520,012.



1. In a back stop mechanism the combination of a sheet advancing device, a plurality of pins adapted to engage the top sheets of a stack of sheets, a reciprocating cam for operating said pins in succession and means for operating said cam from the said sheet advancing device.

2. In a back stop mechanism the combination of a sheet advancing device, a plurality of pins, a cam for supporting and operating said pins to cause the same to successively engage the top sheets of a stack of sheets and means for causing the said cam to travel a distance equal to the distance of travel of the said device.

3. In a back stop mechanism the combination of a plurality of pins, a cam, a sheet advancing device, means for reciprocating the cam from the said device to cause the said pins to be lifted successively in such a manner that the pin nearest the sheet advancing device is lifted first.

1,014,148. GARMENT-FASTENER. HERMAN S. HELLER, San Francisco, Cal. Filed Aug. 29, 1910. Serial No. 579,557.

1. In a garment fastener, a socket member comprising a strip of sheet-metal bent upon itself having its free ends adapted to straddle the edge of a garment and to be attached thereto, the said bent portion having an opening with inwardly projecting coöperating spring jaws.

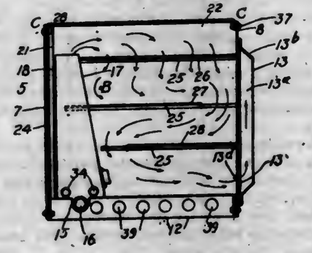
2. Means for fastening the ends of a garment together, said means comprising a socket member made from a strip of sheet metal bent centrally upon itself, with its free ends adapted to straddle a garment and to be attached thereto, said bent portion having a portion intermediate of the ends slitted, to form spring jaws, and a head member attachable to another portion of the garment insertible between the folded portion of the socket member and engageable by said jaws.

3. A garment fastener comprising a socket member made from a strip of sheet metal bent centrally on itself, said strip having an opening at the bend and the sides of the strip on each side of said opening slitted to provide inwardly extending spring jaws, and a telescoping member having a resilient head insertible through the opening and engageable with said spring jaws.

4. A garment clasp comprising a socket member of sheet metal perforated to form retaining shoulders and bent into a U-shape, the base of which is perforated and flared; and a resilient male section having a shouldered head.

5. A detachable fastener for garments comprising a socket piece formed of sheet material bent into parallel perforated leaves, a connecting portion uniting the leaves, said portion having an opening with a flaring mouth, a spring jaw formed in each of said leaves having ends forming one side of the perforations of the leaves, and a complementary male section formed of sheet material having an expansible head and adapted when inserted into the socket-piece to engage the jaws.

1,014,149. OVEN. RALPH P. HELMAN, Los Angeles, Cal. Filed Feb. 7, 1911. Serial No. 607,078.



1. An oven provided with an interiorly located flue opening into the oven; in combination with means for causing heat units to traverse an irregular course within

the oven; said last named means comprising spaced shelves one of which contacts with the flue and the other of which is spaced from the flue.

2. An oven provided with a flue disposed interiorly thereof and opening into the oven, and with a door having an interior flue communicating with the interior of the oven, in combination with means for causing heat units to traverse an irregular course within the oven to and fro between the flues.

3. An oven provided with an interiorly disposed flue opening into the oven and with a door spaced therefrom, the door being provided with a flue chamber communicating with the interior of the oven, spaced shelves within the oven one of which contacts with the flue and the other of which is spaced from the flue.

4. An oven provided with a bottom member having a transverse burner opening, a burner applied at the burner opening, an upright flue within the oven above the burner opening and opening into the oven, an oven door spaced from the flue and having a flue chamber communicating with the interior of the oven, there being vents for the flue chamber of the door at the upper and lower portions thereof, and a deflector upon the door above the vent at the lower portion of the flue chamber.

1,014,150. ROTARY ENGINE. GERARDUS POST HERRICK, New York, N. Y. Filed May 23, 1910. Serial No. 562,823.

1. In a rotary engine, a casing having an inlet and an exhaust, a rotor, a rotary abutment in rolling contact with the rotor, a clearance strip in the casing, and manually operable means engaging said strip and extending exterior of the casing for positively moving said strip toward and away from the abutment.

2. In a rotary engine, a casing having an inlet and an exhaust, a rotor, a rotary abutment in rolling contact with the rotor, a manually operable member projecting into the casing, a clearance strip movably connected to the operating member, and means whereby movement of the operating member relative to the clearance strip positively moves the latter toward or away from the casing.

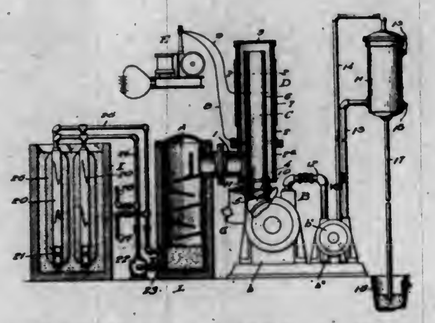
3. In a rotary engine, a casing having an inlet and an exhaust, a rotor, a rotary abutment in rolling contact with the roller, a manually operable member projecting into the casing, a clearance strip movably connected to the operating member, and a spring for cushioning the clearance strip.

4. In a rotary engine, a casing having an inlet and an exhaust, a rotor, a rotary abutment in rolling contact with the rotor, a manually operable member projecting into the casing, a clearance strip movably connected to the operating member, and a spring for cushioning the clearance strip, said spring being located between said member and the strip.

5. In a rotary engine, a casing having an inlet and an exhaust, a rotor, a rotary abutment coöperating with the rotor, a rotatable member projecting into the casing, a clearance strip, and means whereby said strip is positively moved toward and away from said abutment by the rotation of said rotatable member.

[Claims 6 to 18 not printed in the Gazette.]

1,014,151. APPARATUS FOR THE ELECTRICAL TREATMENT OF VAPORS OR GASES. WILLIAM T. HOOFNAGLE, Glen Ridge, N. J. Filed Oct. 6, 1911. Serial No. 653,210.



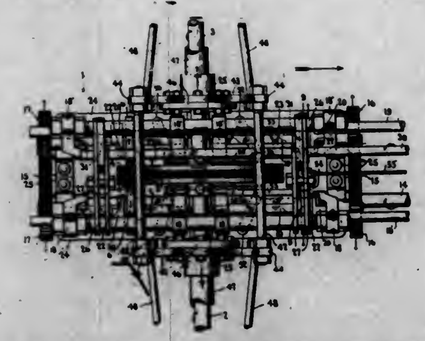
1. The combination with a chamber, and means for maintaining a flow of gas or vapor therethrough under substantially less than atmospheric pressure, of means for maintaining an electrical field within said chamber.

2. The combination with a chamber having walls of insulating material and means for maintaining a flow of gas or vapor therethrough under substantially less than atmospheric pressure, of means for maintaining an electrical field within said chamber.

3. The combination with an exhaust mechanism of a closed chamber adapted to contain a fluid, an intermediate chamber connecting the closed chamber with said mechanism, and means for maintaining an electrical field in said intermediate chamber.

4. The combination with an exhaust mechanism, of a tube of insulating material connected thereto, a casing of insulating material surrounding the tube and separated therefrom, a closed chamber communicating with said casing, and means for maintaining an electrical field between said tube and casing.

1,014,152. FRICTION DRIVING MECHANISM. ALBERT E. IMLER, Kalkaska, Mich. Filed Mar. 23, 1911. Serial No. 616,427.



1. A friction driving mechanism including driven disks, friction drive wheels mounted to engage the outer faces of said driven disks and the peripheries thereof, and means under the control of the operator for applying said drive wheels to the faces or peripheries of said disk for varying the speed of said disks.

2. A friction driving mechanism including driven disks, friction drive wheels mounted to engage the outer faces of said driven disks and the peripheries thereof, means under the control of the operator for applying said drive wheels to the faces or peripheries of said disks for varying the speed of said disks, and means for limiting the movement of said drive wheels toward each other.

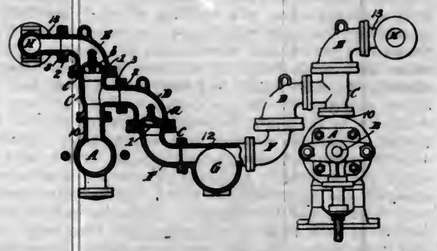
3. A friction driving mechanism comprising a supporting structure, an axle, a friction disk fixed to said axle, angular shafts mounted in said structure at right angles to said axle, driving wheels slidable on said shafts, bearing members pivotally mounted in said structure, shifting rods slidably mounted in said bearing members, means fixed to said rods and engaged with said driving wheels, whereby said wheels are connected to move with said rods, and means under the control of the operator for moving said bearing members toward and away from each other to bring said driving wheels into and out of engagement with said disks.

4. A friction driving mechanism comprising a supporting structure, axle sections mounted therein and arranged in longitudinal alinement with their inner ends in close proximity, friction disks fixed to said sections adjacent their inner ends, a thrust plate arranged between said disks, friction driving wheels mounted in said structure in position to engage said disks, bearing members pivotally mounted in said structure on opposite sides of said disks and movable toward and away from each other, shifting rods slidably mounted in said bearing members, fixed means on said shifting rods and detachably engaged with said driving wheels whereby said wheels are connected to move with said rods, a rock shaft, means for operating said rock shaft, and means connected with said bearing members and operable by said rock shaft for moving said bearing members toward and away from each other, whereby said driving wheels are engaged with and disengaged from said disks.

5. A friction driving mechanism comprising two independently revoluble driven disks, a ball thrust plate arranged between them whereby side pressure on the bearings is prevented, slidably mounted friction drive wheels arranged to engage the outer faces of said disks, and means for moving said drive wheels into position to cause the flat faces thereof to engage the peripheries of said disks to cause said disks to be driven at a slow speed.

[Claims 6 to 9 not printed in the Gazette.]

1,014,153. PUMP. ARTHUR B. JENNINGS, Hazleton, Pa., assignor to International Steam Pump Company, a Corporation of New Jersey. Filed May 12, 1911. Serial No. 626,686.



1. A pump having a number of T's mounted on the pump chamber, elbow suction and force valve chambers connected to the T's, and suction and discharge manifolds connected to the valve chambers, said elbow valve chambers being made removable for access to the valves.

2. A pump having a number of T's mounted on the pump chamber, elbow suction and force valve chambers connected to the T's, and suction and discharge manifolds connected to the valve chambers, said elbow valve chambers being made removable for access to the valves and the suction and force valve chambers being interchangeable.

3. A pump having a number of T's mounted on the pump chamber, elbow suction and force valve chambers connected to the T's, suction and discharge manifolds connected to the valve chambers, and a valve in each chamber having a flange held in position between the valve chamber and connecting part, said elbow valve chambers being made removable for access to the valves.

4. A pump having a number of T's mounted on the pump chamber, elbow suction and force valve chambers connected to the valve chambers, suction and discharge manifolds connected to the valve chambers, and a valve in each chamber having a flange held in position between the valve chamber and connecting part, and the valve chamber and connecting part being recessed to hold the valve flange in place but permitting sliding movement of the parts, and interlocking shoulders on the opposite ends of the valve chambers and parts with which they connect released by the sliding movement of the valve chambers to permit the removal of the valve chambers.

5. A pump having the plunger chamber A with connections 10, T's C on said connections, elbow suction and force valve chambers D, E, valves a, b in said chambers, suction and force manifolds G, H, and connections between said valve chambers and manifolds.

1,014,154. SAFETY CORN-PARER. SIMON KORPER, New York, N. Y. Filed Mar. 30, 1911. Serial No. 617,926.

1. As a new article of manufacture, a corn parer comprising a handle and a blade formed of a single sheet of metal, the handle consisting of part of the plate bent into tubular form, the edges being gradually opened out to flatten one end of the metal to form a blade casing, said flattened end lying substantially in the plane of the axis of the handle and laterally out of line therewith at an angle to said axis and folded back upon itself to form a blade holder and guide, whereby the blade is brought into position at substantially an angle of forty five degrees to the axis of the handle.

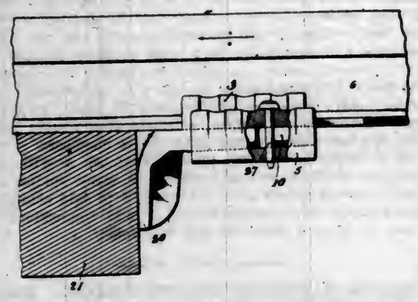
2. As a new article of manufacture a corn parer comprising a handle and a blade casing formed of a single sheet of metal, the handle consisting of part of the plate bent into tubular form, the edges being gradually opened out to flatten one end of the metal to form the casing, said flattened end lying laterally out of line at an angle to the handle portion and folded back upon itself to form a blade holder and guide, a notch being formed in the folded edge to expose the edge of the back of a blade inserted in the casing, the inner edge wall of the notch bearing against the back piece of the blade to prevent too great a projection of the edge of the blade.

1,014,155. RAIL-ANTICREEPING DEVICE. ADAM T. KRAMER, Bluffton, Minn. Filed Oct. 18, 1911. Serial No. 655,315.

1. In a device of the class described, the combination with a wedge having a base to extend wholly beneath the rail base and a lateral flange to engage one edge of the rail, of a supporting member having flanges to fit over a rib on said wedge and the other edge of the rail, respectively, said parts having coöperating wedging surfaces arranged for gripping the rail vertically and horizontally.

2. In a device of the class described, the combination with a wedge having a base to extend wholly beneath the rail base, a lateral flange to engage one edge of the rail, an inclined rib beyond said flange, and an abutment to engage a tie, of a supporting member having a base below the wedge base, a flange to engage the other edge of the rail, and a second flange to fit over said rib.

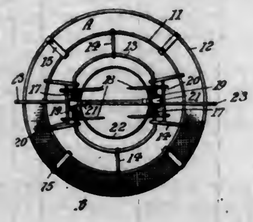
3. In a device of the class described, the combination with a wedge having a rail-supporting base having an inclined surface, a flange to engage one end of the rail, a tie abutment, and a tapering rib inclined horisontally of a supporting member having a coöperating inclined surface, and flanges to engage the other rail edge and said rib respectively, the parts being overlapped whereby when said parts are forced together with a rail between them a gripping force will be applied both vertically and horizontally.



4. In a device of the class described, the combination with a wedge having a base, a rail-engaging flange and a tapering, inclined rib provided with an elongated recess, of a supporting member having a base, a rail-engaging flange, a flange having a tapering recess to fit said rib, and alined perforations, and a locking pin to engage said recess and perforations, whereby upon a contraction of the rail in excess of that of the supporting member the supporting member and wedge will be drawn more tightly into wedging engagement and relative movement between said parts permitted by the elongated recess.

5. In an anti-creeper for rails, the combination with the wedge member 3, having the base 7 formed with the lateral and longitudinally inclined surface 14ª, the flange 8, tapering and inclined rib 10 having the recess 12, and the abutment 20, of the supporting member 5 having the base 14 formed to correspond with the surface 14ª, the flange 18, the flange 16 having a recess to fit the rib 10, alined perforations, and the pin 27 fitting said recess and perforations.

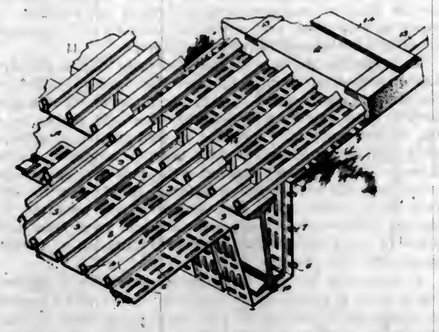
1,014,156. HAT-HOLDER. JOHN KWARNSTROM, New York, N. Y. Filed June 8, 1911. Serial No. 631,896.



1. A hat holder comprising a frame adapted to be secured within a hat, two sets of opposed twin hooks pivoted to the frame, spring-controlled sockets pivoted to the hooks, and a pair of laterally extending hat pins removably engaging the sockets and adapted to operate the hooks by being longitudinally moved in opposite directions.

2. A hat holder comprising a wire frame, adapted to be secured within a hat, two sets of opposed twin hooks having shanks that are coiled around one of the frame wires and have integral bails, threaded sockets pivoted to the bails, a spring engaging the sockets, and a pair of laterally extending threaded hat pins removably engaging the sockets and adapted to operate the hooks by being longitudinally moved in opposite directions.

1,014,157. FLOOR AND CEILING CONSTRUCTION. HENRY L. LEWEN, New York, N. Y. Filed July 12, 1911. Serial No. 638,085.



1. In a ceiling and floor construction, a building element comprising a metal plate with projecting ribs running lengthwise thereof, said plate being slitted adjacent the bases of the ribs and the slitted portions bent to one side so as to leave the ribs projecting beyond the bent portion of the plates.

2. In a ceiling and floor construction, a building element comprising a metal plate with projecting ribs running lengthwise thereof, said plate being slitted adjacent the bases of the ribs and the slitted portions bent to one side so as to leave the ribs projecting beyond the bent portion of the plates, the portion of the plates intermediate of the ribs being slitted with portions offset from the outer surface of the plate to form holding means for plastering.

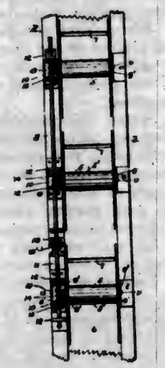
3. In ceiling and floor construction, the combination with a flanged beam, of a building element comprising a metal plate fashioned with hollow ribs which project from the surface thereof and extend along the plate in parallel order, said plate being slitted from the end inwardly whereby the ribs project and overlap the beam and the slitted portions of the plate may be bent downwardly relatively to the beam, to provide openings for the admission of concrete material, said element being continued over the sides and beneath the beam to form a mold to enable the beam to be embedded in concrete, tension rods engaging the beam and extending substantially parallel with the ribs, and tension wires passing around the mold portion of said element and suspended from said rods.

4. In a ceiling and floor construction, the combination with a flanged beam, of a building element comprising a metal plate fashioned with hollow ribs which project from the surface thereof and extend along the plate in parallel order, said plate being slitted from the end inwardly whereby the ribs project and overlap the beam and the slitted portions of the plate may be bent downwardly relatively to the beam, to provide openings for the admission of concrete material, said element being continued over the sides and beneath the beam to form a mo'd to enable the beam to be embedded in concrete, tension rods engaging the beam and extending substantially parallel with the ribs, and tension wires passing around the mold portion of said element and suspended from said rods, said plates being slitted at numerous points intermediate of the ribs with the slitted portions expanded outwardly to form holding means for plastering, and said ribs and tension rods adapted to be embedded in concrete.

5. In a ceiling and floor construction, the combination with a beam of a building element inclosing the lower portion of the beam, said element being fashioned with hollow ribs which project from the surface and said element being slitted in parallel lines to allow portions of the ribs to be bent to one side and to afford open spaces for the reception of concrete by which the beam is embedded, and means suspending the plate from the beam, said plate being slitted intermediate of the ribs with the slitted portions expanded outwardly to form binding means for the reception of plastering.

[Claims 6 to 9 not printed in the Gazette.]

1,014,158. DISPLAY-CABINET. DAVID LOCHNER, Woodburn, Ind. Filed Oct. 18, 1911. Serial No. 655,279.

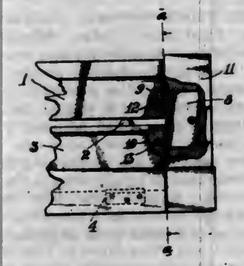


1. The combination in a device of the class described of a plurality of spools revolubly mounted in a row, a revolubly mounted shaft adjacent the spools, means to rotate the shaft, means to independently connect the shaft and spools whereby by the rotation of the shaft one or more of the spools may be rotated independently of the others.

2. The combination in a display cabinet of a plurality of spools revolubly mounted in a row, a revolubly mounted shaft, means to rotate the shaft, slidable means on the shaft adapted to be connected to the spools but normally disconnected therefrom, and means to move the latter means to connect one or more of the spools to the shaft independently of the others.

3. In a display cabinet the combination of a plurality of spools revolubly mounted in a column, a gear on one end of each spool, a revolubly mounted shaft, means to rotate the shaft, a plurality of gears slidably secured to the shaft and adapted to mesh with the respective spool gears but normally separated therefrom and a cam for and adjacent each sliding gear and independently operative to move the sliding gears into mesh with the associated spool gears independently of each other, whereby one or more of the spools may be rotated by the shaft independently of the others.

1,014,159. LOCK FOR PIANOS. CHARLES LOGAN, Jr., Yonkers, N. Y. Filed Mar. 24, 1911. Serial No. 616,644.



1. In a piano, the combination with a fall board, a folding key-slip and a side arm, of a lock within the side arm and having means for engaging the fall board and key-slip, substantially as set forth.

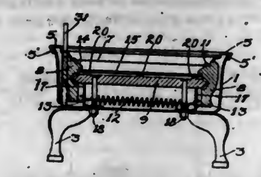
2. In a piano, the combination with a fall board, a folding key-slip and side arm, of a lock in the side arm, two bolts in said lock, for engagement with the fall board and key-slip respectively, substantially as set forth.

3. In a piano, in combination, a fall board, a bolt socket in the end of the same, a folding key-slip, a bolt socket in the end of the same, a side arm, a lock in the same, and two bolts, in said lock, for engagement with said two sockets respectively, substantially as set forth.

1,014,160. COMBINED CURRYCOMB AND CLEANER. ORIEN S. LOVELY, Colchester, Ill. Filed June 3, 1911. Serial No. 631,151.

In combination, a curry comb having teeth and provided with hinged members, a cleaner having hinge members, a bolt passing through the hinge members for connecting the cleaner hingedly to the curry comb, the cleaner having a pair of lugs and comprising a pair of end bars and a plurality of transversely extending flat bars, one of the end bars having a depression, while one of the flat bars is provided with an opening registering with the depression, a spring coiled about the bolt having one end adjustably anchored to one of the hinge members of the curry comb, while the other end is extended downwardly and arranged between the lugs, the downwardly extending end of the spring terminating into an angle portion arranged in the opening, the angle portion having an upturned lug received by the depression, the opening, the depression and the lugs constituting means to prevent displacement of the downwardly extending end of the spring.

1,014,161. ELECTRICAL HEATER. CHARLES P. MADSEN, Chicago, Ill., assignor to Pelouze Electric Heater Co., Chicago, Ill., a Corporation of Illinois. Filed July 9, 1910. Serial No. 571,234.



1. In an electrical heating device a heating element consisting of an electrical conductor wound in a plane of suitable geometric form, a tension bar on each side of said heating element common to the several portions of said conductor and tension members connecting said bars for maintaining said heating element in its given plane regardless of the contraction and expansion of said conductor due to changes in temperature thereof, a food grid holding the food out of contact with and parallel to said conductor, a heat reflector disposed below said heating element in parallel relation thereto and at a given distance therefrom, said reflector coöperating with said heating element to render the heat developed by said heating element effective on the food side of said heating element.

2. In an electrical heating device a suitable casing open at its top, and a heating element disposed within said casing and separated therefrom by an air space, said heating element being removable as a unit from said casing and comprising a plate of refractory insulating material, an electrical conductor supported thereby out of contact therewith and wound in one plane, and tension

bars movable relatively to said plate and common to the several portions of said heating element and tension members below said insulating plate acting to maintain said heating element in its given plane, irrespective of the contraction and expansion thereof.

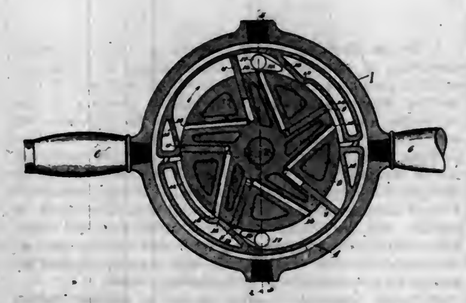
3. In an electrical heating device a suitable casing open at its top, and a heating element disposed within said casing and separated therefrom by an air space, said heating element being removable as a unit from said casing and comprising a base of refractory insulating material, an electrical conductor supported thereby above said base and wound in one plane and oppositely acting tension bars movable relatively to said plate and common to the several portions of said heating element for maintaining said heating element in its given plane irrespective of the contraction and expansion thereof, a removable heat reflector carried by said insulating base below said heating element, and a food grid removably supported by said casing above said heating element, said heating element and heat reflector coöperating to render effective above said heating element the heat radiated therefrom below said heating element.

4. In an electrical heating device the combination with a suitable casing open at its top, a refractory insulating plate disposed within said casing and separated therefrom by an air space, tension bars on each side of said plate movable relatively thereto, a reflexively wound electrical heating conductor disposed above said plate and supported in one plane by said bars and having contact terminals secured to said plate, and tension members connecting said bars below said plate for compensating for the contraction and expansion of said heating conductor to maintain it constantly and automatically in its given plane.

5. In an electrical heating device the combination with a suitable casing open at its top, a refractory insulating plate disposed within said casing and separated therefrom by an air space, tension bars on each side of said plate, movable relatively thereto and having attachments for the heating conductor, a reflexively wound electrical heating conductor disposed above said plate and supported by said attachments on said bars to lie in one plane, and tension members connecting said bars below said plate for compensating for the contraction and expansion of said heating conductor to maintain it constantly and automatically in its given plane, a heat reflector disposed parallel to and at one side of said heating conductor, and a food-holding grid removably supported by said casing in parallel relation and on the opposite side of said heating conductor.

[Claims 6 to 17 not printed in the Gazette.]

1,014,162. ROTARY ENGINE. ANDREW MCCORMICK, Chicago Heights, Ill. Filed Jan. 16, 1911. Serial No. 602,877.



1. In a rotary engine, the combination of an outer casing having an interior piston chamber and an annular supply passage surrounding said chamber; two diametrically disposed abutments arranged on the inner periphery of said chamber, each of said abutments being provided with an admission port passing therethrough adjacent the rearward end thereof with reference to the direction of rotation to said passage and a centrally disposed recess in its face extending from said port to the forward end thereof with reference to the direction of rotation; a rotary piston in said chamber and provided with sets of symmetrically arranged admission recesses in its outer periphery each set comprising two laterally spaced recesses one of which is arranged in circumferential advance of the other; radially slidable piston blades arranged between said sets of admission recesses, there being a passage connecting the inner end of said pistons with the central periphery thereof at a point to the rear of the corresponding piston blade; and exhaust ports for said chambers arranged adjacent the forward ends of said abutments, substantially as described.

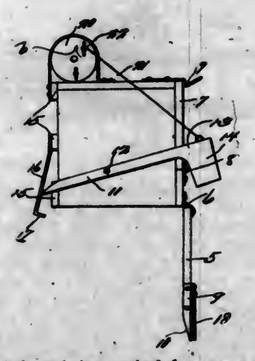
2. In a rotary engine, the combination of an outer casing having an interior piston chamber and an annular supply passage surrounding said chamber; two diametrically disposed abutments arranged on the inner periphery of said chamber, each of said abutments being provided with an admission port passing therethrough adjacent the rearward end thereof to said passage and a centrally disposed recess in its face extending from said port to the forward end thereof; a rotary piston in said chamber and provided with five sets of symmetrically arranged admission recesses in its outer periphery, each set comprising two laterally spaced recesses one of which is arranged in circumferential advance of the other; five radially slidable piston blades arranged in said piston between said sets of admission recesses, there being a passage connecting the inner end of each of said pistons with the central periphery thereof at a point to the rear of the corresponding piston blade; and exhaust ports for said chambers arranged adjacent the forward ends of said abutments, substantially as described.

3. In a rotary engine, the combination of an outer casing having an interior piston chamber and an annular supply passage surrounding said chamber; two diametrically disposed abutments arranged on the inner periphery of said chamber, each of said abutments being provided with an admission port passing therethrough adjacent the rearward end thereof to said passage and a centrally disposed recess in its face extending from said port to the forward end thereof, the rear ends of said abutments being made sloping; a rotary piston in said chamber and provided with five sets of symmetrically arranged admission recesses in its outer periphery, each set comprising two laterally spaced recesses one of which is arranged in circumferential advance of the other; five radially slidable piston blades arranged in said piston between said sets of admission recesses, there being a passage connecting the inner end of each of said pistons with the central periphery thereof at a point to the rear of the corresponding piston blade; and exhaust ports for said chambers arranged adjacent the forward ends of said abutments, there being recesses formed in the inner walls of said casing leading from said exhaust ports toward said abutments, substantially as described.

1,014,163. TIME STOCK-FEEDER. GEORGE T. MELSON, Coleman, Fla. Filed July 29, 1911. Serial No. 641,373.

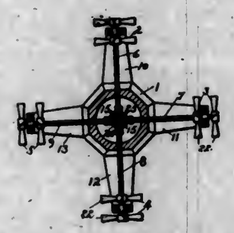
1. In combination, a receptacle having a food containing compartment, a hinge bottom therefor having a cleat upon one of its side edges, a spring arm secured to the receptacle and provided with an angle end to engage the cleat to support the hinge bottom in a closed position, a gravitating rocking lever disposed in contact with the spring arm and the cleat for releasing the spring arm from engagement with the cleat, and a spring facing strip secured at one end to the cleat, between which and the cleat the angled end of the spring arm is arranged to prevent the angled end from being pushed from engagement with the cleat.

2. In combination, a receptacle having a food containing compartment, a hinge bottom therefor having a cleat upon one if its side edges, a spring arm secured to the receptacle and provided with an angled end to engage the cleat to support the hinge bottom in a closed position, a gravitating rocking lever disposed in contact with the spring arm and the cleat for releasing the spring arm from engagement with the cleat, and a spring facing strip secured at one end to the cleat, between which and the cleat the angled end of the spring arm is arranged to prevent



the angled end from being pushed from engagement with the cleat, and means to oppose the gravitating rocking lever, the means adapted to be automatically operated, so as to relieve the opposition to the lever and permit the same to gravitate.

1,014,164. WATER-MOTOR. KARL H. MENKE, Portland, Oreg. Filed Jan. 30, 1911. Serial No. 605,618.



1. In a water motor, the combination with transmission means, of oppositely facing companion water wheels or motors adapted to be actuated, respectively, in the same direction, by the movement of water therethrough in opposite directions, and clutch mechanism for locking said wheels or motors to said transmission means when turning in one direction and permitting them to run loosely when turning in the opposite direction.

2. In a water motor, the combination with a transmission shaft, of oppositely facing companion water wheels or motors adapted to be actuated, respectively, in the same direction, by the movement of water therethrough in opposite directions, clutch mechanism for locking said wheels or motors to said shaft when turning in one direction and permitting them to run loosely when turning in the opposite direction, and means supporting said motors beneath the surface at a distance from the shore to bring same within the heavy surging movement of the water.

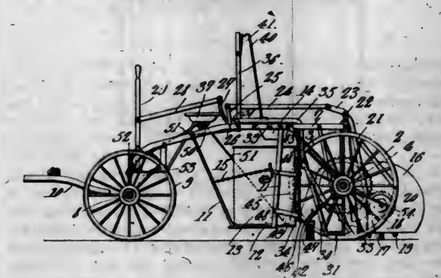
3. In a water motor, the combination with a transmission shaft, of oppositely facing companion wheels or motor members, each comprising a hub or casing, a plurality of vanes set at an angle and concaved in cross section, a clutch mechanism within said hub or casing for locking said wheels or members to said transmission shaft when turning in one direction and for permitting them to run loosely when turning in opposite direction, substantially as shown and described.

4. In a water motor, the combination with a transmission shaft, of oppositely facing companion water wheels or motors, each comprising a hub or casing, a plurality of concaved and curved vanes set at an angle whereby to be engaged by the advancing body of water, clutch mechanism for locking said wheels or motors to said transmission shaft when turning in one direction and for permitting them to run loosely when turning in the opposite direction, substantially as shown and described.

5. A water motor, comprising in combination, a supporting structure built at a distance from the shore in the sea, a plurality of transmission shafts projected from said structure in different directions beneath the surface of the water, transmission mechanism for the inner ends of said shafts, and companion water motors mounted upon the outer end of each shaft, said motors facing in opposite directions and arranged to be actuated, respectively, in the same direction by the movement of the surrounding body of water in opposite directions, and clutch mechanism for locking said motors to said transmission shafts when turning in one direction, and for permitting them to run loosely when turning in the opposite direction.

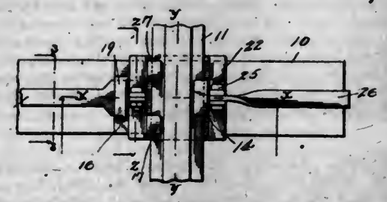
[Claim 6 not printed in the Gazette.]

1,014,165. STREET-CLEANING MACHINE. ROBERT CHARLES MENZIES, Glens Falls, N. Y. Filed Sept. 21, 1910. Serial No. 583,076.



In a street cleaning machine the combination with a wheel supported frame, a platform, and hangers for supporting the platform below the frame, of a stem, rearwardly extending arms integral with the stem at the lower end thereof, a scraping brush fixedly connected to said arms, a spring connecting the upper end of the stem to the frame and constituting means for yieldingly supporting the brush out of contact with the ground, a yoke-like link pivotally connected to the hangers and to the stem, a foot lever carried by the frame and a flexible connection between the foot lever and the stem and operable to shift the stem against the stress of the spring and to move the brush into contact with the ground.

1,014,166. TRACK-FASTENING. ALVUS H. MOFFET, Larned, Kans. Filed June 8, 1911. Serial No. 632,069.



1. The combination with a tie and a rail thereon, of a rail engaging device mounted on the tie, opposite rail-embracing members extending about opposite sides of the tie and over the rail engaging device, and means for securing the members together over the rail-engaging device.

2. The combination with a tie and a rail thereon, of a rail engaging clip mounted on the tie, opposite tie engaging hooks extending about opposite sides of the tie and

over the clip, and a bolt for securing the hooks together over the clip.

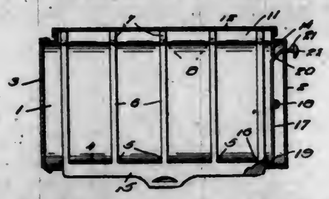
3. The combination with a tie, of a rail thereon, a tie plate interposed between the tie and rail, oppositely disposed tie embracing hooks having separate portions extending over the tie plate, and a device detachably connecting said portions of the hooks above the tie.

4. The combination with a tie, of a rail thereon, a tie plate interposed between the tie and rail, and having an upstanding rail-engaging hook, oppositely disposed tie-embracing hooks having separate portions extending over the tie plate, and a detachable connection between said portions of the hooks over the tie and tie plate.

5. The combination with a tie, of a rail thereon, a tie plate having spaced outstanding tongues located on the tie and having an upstanding rail engaging hook between the tongues, and means embracing the tie and engaging over the tongues to hold the tie plate to the tie.

[Claims 6 to 10 not printed in the Gazette.]

1,014,167. MATCH-BOX. RICHARD MULLER, Highland Falls, N. Y. Filed Mar. 3, 1911. Serial No. 612,134.



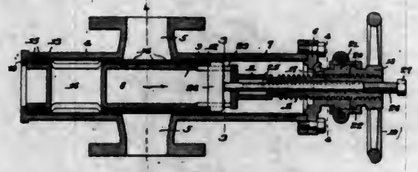
1. A match box, comprising a casing, having a slot formed in one side and a plurality of apertures formed in the diametrically opposite portion of the casing, rods slidably mounted in the openings, a plate connecting the lower ends of said rods, recessed members on the upper end of the rods, means for normally closing the slot, a locking device engaging the plate, and connections between the locking device and the cover for the slot to uncover the slot as the plate is unlocked.

2. In a delivery match box, the combination with a casing having a discharge slot formed in one side thereof, of a closure for the discharge slot, a spring for holding the cover in closed position, an ejector carried by the casing, means for locking the ejector within the casing, and connections between the closure for the slot and said locking means for removing the closure from the slot against the tension of the spring upon the unlocking of the ejector.

3. In a match box, the combination with a casing having a discharge slot formed within, of an ejector adapted to project through the slot, a spring pressed cap for covering the slot, a lever pivoted within the casing and having one end adapted to engage the ejector to lock the same in inoperative position, said lever having an outwardly projecting button on its other end and having an inclined intermediate portion, and an arm carried by the cap and engaged by the inclined portion of the lever, whereby pressure on the button will disengage the end of the lever from the ejector and will cause the inclined portion to cam the arm of the cap to remove the cap from above the discharge slot.

1,014,168. VALVE. JOHNSTON NOLAN, Philadelphia, Pa. Filed Nov. 28, 1906. Serial No. 345,527.

1. In a valve, the combination of a cylindrical casing having an outlet opening and a lateral inlet opening therein; a cylindrical piston within the casing having an opening therein affording communication between said inlet opening and said outlet opening when the piston opening is in registry with said inlet opening; packing surrounding the piston on one side of the piston opening and engaging the piston and the casing on both sides of said inlet opening when the piston opening is out of registry with the inlet opening; packing surrounding the piston on the other side of the piston opening and engaging the piston and the casing; a ring separating the first named packing from the second named packing; and means for moving the piston.



2. In a valve, the combination of a cylindrical casing having an outlet opening and a lateral inlet opening therein; a cylindrical piston within the casing having an opening therein affording communication between said inlet opening and said outlet opening when the piston opening is in registry with said inlet opening; a ring fixed to the piston and surrounding the same adjacent one end thereof; a ring surrounding the piston adjacent the other end thereof and movable thereon toward the first named ring; an inner ring surrounding the piston and movable thereon between the first and second named rings, said inner ring having an opening therein in registry with the piston opening; packing surrounding the piston between said inner ring and the first named ring; packing surrounding the piston between said inner ring and the second named ring; means for adjusting the first and second named rings toward each other; and means for moving the piston.

3. In a valve, the combination of a cylindrical casing having an outlet opening and a lateral inlet opening therein; a cylindrical piston within the casing and having an opening therein affording communication between said inlet opening and said outlet opening when the piston opening is in registry with said inlet opening; a packing ring surrounding the piston and engaged therewith and with said casing on one side of said inlet opening when the piston opening is in registry with said inlet opening; a packing ring surrounding the piston and engaged therewith and with said casing on the other side of said inlet opening when the piston opening is in registry with said inlet opening; a stem projecting from the piston; means coöperating with the stem for moving the piston longitudinally within the casing; a rod extending through the stem; and means associated with said rod for adjusting the packing.

4. In a valve, the combination of a cylindrical casing having an outlet opening and a lateral inlet opening therein; a cylindrical piston within the casing and having an opening therein affording communication between said inlet opening and said outlet opening when the piston opening is in registry with said inlet opening; packing surrounding the piston on one side of the piston opening and engaging the piston and the casing on both sides of said inlet opening when the piston opening is out of registry with the inlet opening; packing surrounding the piston on the other side of the piston opening and engaging the piston and the casing; a stem projecting from the piston; means coöperating with the stem for moving the piston longitudinally within the casing; a rod extending through the stem; and means associated with said rod for adjusting the packing.

5. In a valve the combination of a cylindrical casing having a lateral inlet opening and a lateral outlet opening therein, a piston within the casing and having an opening movable in to and out of register with said inlet and outlet openings, a ring surrounding the piston and having an opening therein in register with the piston opening, packing rings surrounding the piston on each side of the first named ring, means for adjusting the packing rings, and means for moving said piston to bring its opening into and out of register with the inlet and outlet openings.

[Claims 6 and 7 not printed in the Gazette.]

1,014,169. ELECTRIC-LAMP SOCKET. MORTIMER NORDEN, New York, N. Y. Filed May 17, 1911. Serial No. 627,846.

1. A receptacle for an incandescent electric lamp comprising a body portion and head of increased diameter, the body portion being formed with a single longitudinal groove and a single transverse groove, a single screw hole in said head alining with the single longitudinal groove in the body portion and the same thus adapted for connection by a screw with a support.

2. A receptacle for an incandescent electric lamp comprising a body portion and head of increased diameter, the body portion having a single longitudinal groove and a single circumferential groove at its intersection with the head, a single hole in said head alining with the single longitudinal groove in the body portion and the same thus adapted for connection by a screw with a support.

3. In an electrically illuminated sign, and in combination, a receptacle for an incandescent electric lamp comprising a body portion and head of increased diameter, the body portion being formed with a single longitudinal groove and a single transverse groove, a single screw hole in said head alining with the single longitudinal groove in the body portion, a plate having an opening therein adapted to receive the body portion of said receptacle and enter said transverse groove, and a screw to enter said hole in the head of the receptacle and lock said receptacle to said plate.

4. In an electrically illuminated sign and in combination, a receptacle for an incandescent electric lamp comprising a body portion and head of increased diameter, the body portion having a single longitudinal groove and a single circumferential groove at its intersection with the head, a single hole in said head alining with the single longitudinal groove in the body portion, a plate having an opening therein adapted to receive the body portion of said receptacle and enter said circumferential groove, and a screw to enter said hole in the head of the receptacle and lock said receptacle to said plate.

5. In an electrically illuminated sign and in combination, a receptacle for an incandescent electric lamp comprising a body portion and head of increased diameter, the body portion being formed with a single longitudinal groove, and the head with a hole in alinement therewith, there being a transverse groove in the body portion on its side opposite to said longitudinal groove, a plate having an opening therein adapted to receive the body portion of said receptacle and enter said transverse groove whereby said body portion will occupy an eccentric relation to the opening in the plate, and a screw to enter said hole in the head of the receptacle and act against the edge of the opening in said plate and within said longitudinal groove to lock said receptacle to said plate.

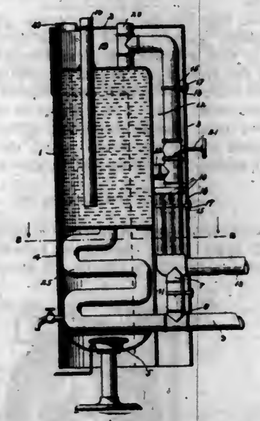
[Claim 6 not printed in the Gazette.]

1,014,170. WATER-HEATING DEVICE. MANCELIA E. OGDEN, Newark, N. J. Filed Jan. 4, 1911. Serial No. 600,739.

1. A boiler having depending walls with an opening therein a heater inclosed by said walls, a hood on the top of said boiler, said hood having a depending portion on one side thereof to form a flue, said flue communicating with said opening.

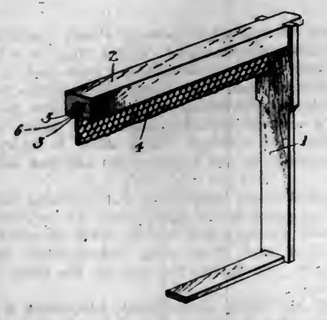
2. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue.

3. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue, said flue terminating in a drum over the upper part of said boiler.



4. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue, said flue terminating in a drum over the upper part of said boiler, and water circulation pipes located in said flue.

1,014,171. HONEY-FRAME. HENRY PERKINS, Los Angeles, Cal., assignor of one-half to H. J. Mercer, Los Angeles, Cal. Filed Jan. 28, 1911. Serial No. 605,283.



1. In combination with a comb foundation, a honey frame provided with a wooden top bar having two longitudinal grooves with an intervening elastic tongue, one of said grooves receiving and tightly fitting the upper portion of the foundation and the other of said grooves extending parallel to the first named groove and being open to allow the tongue between said grooves to press upon the foundation by reason of its own elasticity with sufficient pressure to retain the foundation in place.

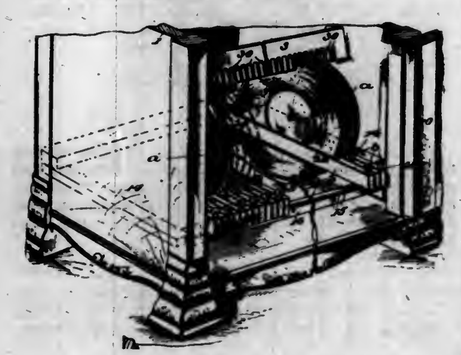
2. In combination with a comb foundation, a honey frame provided with a wooden top bar having two longitudinal grooves therein with an intervening elastic tongue, both of said grooves extending obliquely upward from the bottom of the top bar, one of said grooves receiving and tightly fitting the upper portion of the comb foundation, and the other of said grooves being open to permit the elastic tongue formed between said grooves to bear upon the comb by reason of its own elasticity with sufficient pressure to retain the foundation in place.

3. A wooden top bar for honey frames provided with two longitudinal grooves with an intervening elastic

tongue, one of said grooves being constructed and adapted to receive and tightly fit the comb foundation, and said elastic tongue being constructed and adapted to press resiliently on the comb when it is inserted in said comb receiving groove with sufficient pressure to retain the foundation in place.

4. A wooden top bar for honey frames provided with two longitudinal grooves with an intervening elastic tongue, one of said grooves being constructed and adapted to receive and tightly fit the comb foundation, and said elastic tongue being constructed and adapted to press resiliently on the comb when it is inserted in said comb receiving groove, said grooves extending obliquely upward from the bottom of the top bar to cause the comb to be bent where it leaves the groove and to give a clench hold thereon.

1,014,172. CABINET OR HOLDER FOR DISK RECORDS AND THE LIKE. EDWARD F. POOLEY, New York, N. Y. Filed Jan. 27, 1911. Serial No. 605,016.



1. Means for holding a series of closely and vertically arranged independently-carried record disks in a horizontal row, comprising a cabinet having cross bars, a row of closely arranged parallel individual disk holders mounted on and slidable transversely of said cross bars and maintained in a common horizontal plane, and means whereby said holders are confined and limited to independent sliding movement to and from normal and disk delivering positions.

2. In combination, supporting and confining means, a series of elongated slides each formed to vertically and longitudinally receive a disk and maintain the same in upright position, each slide being independently movable longitudinally, and means for spacing the disks carried by the slides.

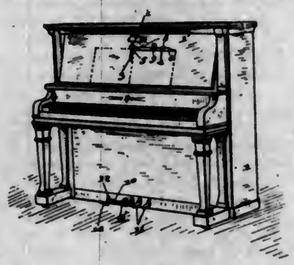
3. Means for holding record disks, comprising a row of independent, movable, closely-arranged, parallel, disk-carrying bars, and supporting and confining means maintaining said bars when in normal position in a common horizontal plane and in an elevated position to permit the disk carried thereby to depend therefrom, said bars being independently movable to and from normal and disk delivering positions, each bar being straight and longitudinally elongated and intermediate its length having an elongated single-disk-receiving socket opening vertically therethrough and having end disk supporting walls and side disk upholding walls, the disk resting on said end walls by gravity and depending from and extending above said bar.

4. Means for holding a series of record disks, comprising a row of parallel closely-arranged individual-disk holders, each consisting of an elongated bar having a vertical socket arranged longitudinally thereof and opening vertically therethrough to vertically receive a disk and uphold and carry the same in upright position, said bars being independently movable to and from normal and disk delivering positions, and end supports common to all of said bars and arranged at the front and rear portions thereof and between which the disks carried by the bars depend.

5. Means for holding a series of record disks vertically disposed and closely adjacent, comprising a series of independent parallel bars each having a disk-receiving slot opening vertically therethrough and arranged longitudinally thereof and terminating short of the ends of the bar to form disk supporting ends walls, the side walls of the slot adapted to uphold the disk in vertical position, said bars being separately and independently movable to and from normal and disk delivering positions, the ends of said bars extending forwardly in advance of said slots and provided with handles projecting upwardly from the top edges thereof, the handles of alternating bars being arranged out of line with the handles of the intervening bars.

[Claims 6 to 10 not printed in the Gazette.]

1,014,173. MUSIC-LEAF TURNER. FRANK H. POST, Webb, Iowa. Filed Dec. 20, 1910. Serial No. 598,338.



1. In combination with an upright piano case, a shaft journaled in the top front of said piano adjacent the upper edge thereof, an upright shaft carrying a music clip and geared to said first named shaft at the outer end thereof, a sprocket wheel mounted on the inner end of said first named shaft, a chain traveling over said sprocket, a tension spring connecting one end of said chain with the inner surface of said top front, a tape connected to the other end of said chain, rollers mounted in the piano case on which said tape is adapted to travel, and a pedal shaft journaled in the piano case carrying an interior arm connected to said tape and an exterior pedal, said pedal when depressed causing said music clip to move in one direction and said spring to return said clip to the normal position, substantially as described.

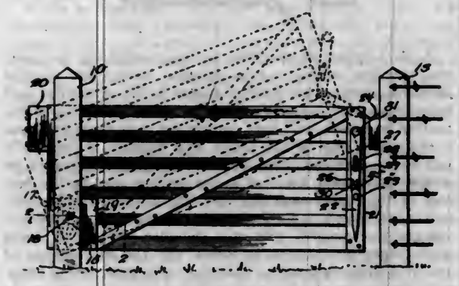
2. In a leaf turner, the combination with a piano case, of a shaft transversely journaled in the top front of the piano case adjacent the top and in the center thereof, an upright shaft having bevel gear connection to said transverse shaft, a music clip arm secured to said upright shaft, a sprocket wheel secured to the inner end of said transverse shaft, a chain traveling over said sprocket wheel, a tension helical spring connecting one end of said chain with the inner surface of said top front, a tape connected to the other end of said chain and passing between the piano keys, rollers mounted in the case over which said tape is passed for preventing the same from contacting with said keys, a pedal shaft journaled in the piano case adjacent the bottom thereof and carrying an interior arm and an exterior pedal, said tape being connected to said interior arm, and automatic means for locking said pedal in its lowermost position, substantially as described.

3. In a leaf turner, the combination with a piano case, of a shaft transversely journaled in the top front of the piano case adjacent the top and in the center thereof, an upright shaft having bevel gear connected to said transverse shaft, a music clip secured to said upright shaft, a socket wheel secured to the inner end of said transverse shaft, a chain traveling over said sprocket wheel, a tension helical spring connecting one end of said chain with the inner surface of said top front, a tape connected to the other end of said chain and passing between the

piano keys, rollers mounted in the case over which said tape passed, a pedal shaft journaled in the piano case adjacent the bottom thereof and carrying an interior arm and an exterior pedal, said tape being connected to said interior arm, and automatic means for locking said pedal in its lowermost position comprising a pivoted pawl engaging the end of said pedal, substantially as described.

4. In a leaf turner, the combination with a piano case, of a shaft transversely journaled in the top front of the piano case adjacent the top thereof, an upright shaft having bevel gear connection to said transverse shaft, a music clip secured to said upright shaft, a sprocket wheel secured to the inner end of said transverse shaft, a chain traveling over said sprocket wheel, resilient means connecting one end of said chain with the inner surface of said top front, a tape connected to the other end of said chain and passing between the piano keys, rollers mounted in the case over which said tape is passed, a pedal shaft journaled in the piano case adjacent the bottom thereof and carrying an interior arm and an exterior pedal, said tape being connected to said interior arm, and automatic means for locking said pedal in its lowermost position comprising a pivoted pawl engaging the end of said pedal and resilient means for maintaining said pawl in engaging position, said pedal being substantially coplanar with said interior arm and projecting from the same side of said pedal shaft, substantially as described.

1,014,174. TILTING-GATE MECHANISM. LEONARD Z. PRESTON, Topeka, Kans. Filed Mar. 21, 1911. Serial No. 616,005.



1. A tilting gate including a block having a vertical arcuate opening therethrough, a cylindrical bushing fitting in the opening of the block for adjustment in the opposite ends of the opening, a filler block engaging in the opening and binding the bushing in the end thereof, a supporting pin engaging through the bushing, a plurality of roller bearings disposed in the bushing about the supporting pin, and wear plates carried against the sides of the block and having reduced arcuate openings to snugly receive the ends of the pivotal pin, the bushing and the bearings and the filler block engaging at their ends against the inner faces of the wear plates.

2. A tilting gate mechanism including a gate, a block carried by the gate, a cylindrical bushing carried through the block and adapted for vertical adjustment therein, a supporting pin engaging through the bushing, bearings interposed between the pin and the inner wall of the bushing, and wear plates disposed against the opposite sides of the block and adapted to hold the bushing and the bearings in position.

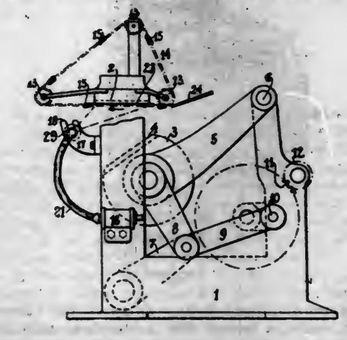
3. A tilting gate including a block, a cylindrical bushing adjustably disposed within the block, a pin engaging through the block for supporting the same, and bearings interposed between the bushing and the pin.

4. A tilting gate mechanism including a gate, a block carried at the head of the gate, a bushing carried in the block for vertical adjustment, a supporting pin engaging through the bushing, and bearings interposed between the bushing and the pin.

5. A device as specified including a block, a vertically adjustable bushing carried through the block, bearings arranged within the bushing, wear plates carried against the sides of the block for holding the bushing and the bearings in position, and a supporting pin engaging through the wear plates and between the bearings.

[Claims 6 to 10 not printed in the Gazette.]

1,014,175. PRINTING-MACHINE. ALEXIS R. PRIBIL, Detroit, Mich., assignor to The Automatic Platen Press Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 7, 1908. Serial No. 461,446.



The combination of a platen, mechanisms for conveying a sheet thereto, means for ejecting a blast of air toward said sheet, the said means comprising a nozzle pipe, a nozzle pivoted thereon in the center and a flexible connection between the nozzle and the pipe for permitting the adjustment of the direction of the said blast.

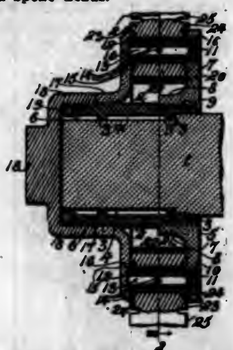
1,014,176. HAT-PIN FASTENER AND GUARD. MARTIN RASMUSSEN, Racine, Wis. Filed Dec. 29, 1910. Serial No. 599,809.

A hat pin fastener and guard comprising a clutch tube having one end closed, provided with a tapered portion and a reduced cylindrical end, a frame slidably mounted on the tube at one end and provided at its opposite end with an annular band slidably mounted in the reduced end of the tube, balls in the tapered portion of the clutch tube, a washer within the tube and bearing on the inner sides of the balls, and an expansive spring in the tube between its closed end and the washer, the balls being arranged to permit of the introduction of the point of the pin between them the annular band being adapted to contact with the balls to move them from clutching position.

1,014,177. VEHICLE WHEEL-HUB. GEORGE T. REICHENBACH, New Castle, Del., assignor to H. O. Peck Automobile Wheel Company, Incorporated, Portland, Oreg. Filed Feb. 25, 1911. Serial No. 610,798.

1. A vehicle wheel hub that includes a shaft engaging sleeve, a disk secured to said sleeve, a second disk mounted on said sleeve and spaced from said first mentioned disk,

one of said disks having a set of pin receiving apertures, pins secured in said apertures, the other disk having pin receiving recesses into which said pins project, spoke heads mounted on said pins between said disks and a cap secured on said sleeve to hold said second mentioned disk in engagement with said pins together with an annular thin metal partition held between said disks, and engaging said spoke heads.



2. In a vehicle wheel hub, a sleeve, a disk threaded onto said sleeve, a second disk mounted on said sleeve and spaced from said first mentioned disk, a set of spoke engaging pins threaded into one of said disks and projecting toward the other disk, said other disk having pin receiving recesses, said pins having longitudinal bores entering from one end and having other bores for effecting communication between said longitudinal bores and the outside of said pins, said second disk forming a closure for the open ends of said longitudinal pin bores.

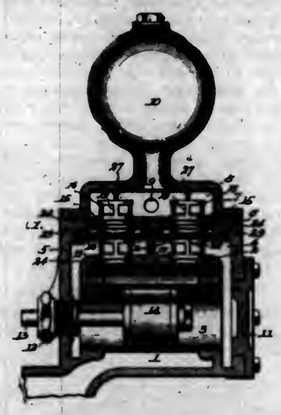
3. A vehicle wheel hub that includes a shaft engaging sleeve, a disk secured to said sleeve, a second disk mounted on said sleeve and spaced from said first mentioned disk, one of said disks having a set of pin receiving apertures, pins secured in said apertures, the other disk having pin receiving recesses into which said pins project, a cap secured on said sleeve to hold said second mentioned disk in engagement with said pins, spoke heads having bearing apertures to receive said pins and mounted between said disks, and a thin metal partition between said disks, said partition having pocket portions to receive said spoke heads.

4. In a hub, a sleeve having externally threaded ends, a disk having a hub threaded onto one of said ends and keyed thereto, said spoke having a set of threaded pin receiving openings, a set of spoke engaging pins threaded into said openings, said pins having a bore extending into the respective pins from their free ends, a cap disk loosely fitted on said sleeve and having recesses to receive the open ends of said pins and form caps therefor, means for securing said last named disk in position on said sleeve, said pins having supplemental bores for effecting communication between said first mentioned pin bores and the outside of said pins, spoke heads having bearing apertures to receive said pins and mounted between said disks, and a thin metal partition between said disks, said partition having pocket portions to receive said spoke heads.

5. A vehicle wheel hub that includes a shaft receiving sleeve having a disk at one end, a second disk mounted on said sleeve and spaced from said first mentioned disk, spoke heads pivotally mounted between said disks, and a thin metal web held between said disks and shaped to closely conform to the curvature of said spoke heads to form pockets in which said spoke heads are located.

1,014,178. VALVE FOR PRESSURE-PUMPS. FRED H. ROBERTS, Sterling, Colo. Filed May 1, 1911. Serial No. 624,313.

1. In a device as specified, a cage comprising upper and lower ring members, connected by integral bars, a removable cap in the upper ring member, the lower ring member being provided with an annular shoulder from which point it tapers to its extremity, said tapered end being adapted to enter a corresponding seating aperture for the cage, a vertically adjustable element in said cap adapted to engage an abutment thereby to hold said cage in its seat, a valve seat in the lower end of the cage, a disk valve in the cage, a coil spring interposed between the valve and cap for normally holding the valve on its seat, and means for dividing and directing the water flowing through the same.



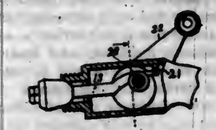
2. In a device as specified, a cage comprising an upper ring member, a lower ring member having an annular shoulder, from which point it tapers to its extremity, said tapered portion being adapted to enter a corresponding seating aperture, and bars connecting said ring members, a removable cap in the upper ring member, a vertically adjustable element threaded to the cap for engaging an abutment to hold the cage in its seat, a seat in the bottom of the cage comprising an integral circular shoulder, and arms which radiate from a common center and are integrally connected with the shoulder, said arms being knife edged on their under sides, and the convergence of the said arms forming at their junction intervening channels having an upward and outward inclination from the point of intersection of the knife edges, a disk member in the cage, and a spring interposed between the cap and valve to normally hold the same upon its seat.

3. In a device as specified, the combination with a cage comprising upper and lower band members connected by bars, a valve seat being formed in the lower band member, of a resilient disk valve in said cage, a metal band surrounding the same and having an inwardly extending flange which is embedded in the peripheral surface of said valve, and a spring for normally holding said valve upon its seat.

4. In a device as specified, a cage; a cap in the upper end thereof having a vertically adjustable element therein, and a depending band, a seat in the bottom of the cage; a disk valve on said seat; a cup on the valve adapted to engage telescopically with the said depending band, and a coil spring in the housing formed by the telescoping members, adapted to normally hold the valve against its seat.

1,014,179. FAUCET. ALEXANDER B. RONEY, Chicago, Ill. Filed Jan. 7, 1911. Serial No. 601,316.

In a faucet of the class described, a casing, an operating handle thereon comprising two side members, each having a hub portion with an annular shoulder on one side, the hub portion pivotally mounted to the respective sides of the casing, a rock shaft extending through the casing and having its ends supported in said hub portions and provided with adjustment means binding on said members, a valve stem in the water way of the casing pivoted to said rock shaft, a valve carried by said stem adapted to



close with the pressure, and a stop for limiting the movement of the valve toward its seat as described.

1,014,180. FREE-WHEEL GEAR WITH BACK-PEDALING BRAKE. ERNST SACHS, Schweinfurt, Germany. Filed Mar. 18, 1911. Serial No. 615,410.

1. In a free-wheel gear and back-pedaling brake, the combination with a driving roller-clutch, of a brake composed of adjacent axially alined rotatable and stationary disks, a spring carried by one of the stationary disks, a member engaging the roller-clutch and frictionally engaged by the spring, and means for moving some of the disks axially to bring all the disks into frictional engagement and thereby apply the brake.

2. In a free-wheel and back-pedaling brake mechanism, the combination with a ring to be screwed upon the hub, of a driving sprocket mounted on said ring, clutch rollers operative therebetween, a spacer ring engaging the said rollers, a brake mechanism also to be screwed on the hub and composed of disks, one of which is adapted to be nonrevolubly attached to the cycle frame, a spring carried by the non-revoluble brake member and frictionally engaging the spacer ring, and means for applying the brake mechanism.

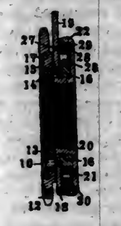
3. In a free-wheel gear and back-pedaling brake mechanism, adapted to be employed on a cycle hub, the combination with a driving clutch operative in one direction, of a brake mechanism composed of disks, means for applying the brake mechanism, a member engaging the driving clutch and interposed between the driving and brake mechanisms, and a checking device carried by a stationary part of the brake and engaging the said interposed member.

4. In a combined free-wheel and back-pedaling brake mechanism, the combination with a driving gear, of a brake device, either being arranged on a separate ring to be fixed on the wheel-hub by right and left-hand threads respectively, so as to be mounted on the hub independently, a member interposed between the said driving gear and the brake device and adapted to engage the driving gear, means for applying the brake device, and a checking spring which is in operative contact with the said interposed member and a stationary part of the brake.

5. In a combined free-wheel and back-pedaling brake mechanism, the combination with a driving gear operative in one direction, of a brake composed of rotatable and stationary disks, the gear and brake being adapted to be fixed on the wheel hub separately, a member interposed between the driving gear and brake and engaging the driving gear, means for applying the brake, and a friction spring in operative contact with the said interposed member and a stationary part of the brake.

[Claims 6 to 8 not printed in the Gazette.]

1,014,181. FREE-WHEELING AND BACK-PEDALING GEAR. ERNST SACHS, Schweinfurt, Germany. Filed Mar. 28, 1911. Serial No. 617,375.



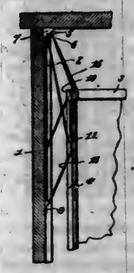
1. In a free-wheel and brake mechanism, the combination with driving means, of a coupling adapted to be operated by said driving means in one direction of rotation and to be released in the other direction, a member engaging the coupling and provided with external pockets at one end, a stationary brake member arranged around said coupling-engaging member, and rolling members disposed in the pockets of the coupling-engaging member and arranged to be carried thereby against the brake member.

2. A free-wheel mechanism having driving mechanism including a roller clutch and a guide ring engaging the same and provided with peripheral pockets having inclined bottoms, in combination with a back pedaling brake comprising a flange rotatable with the driving mechanism, a non-rotatable split brake ring adapted to bear against said flange, and rollers bearing against said brake ring and located in the peripheral pockets of the guide ring.

3. In a free-wheel and brake mechanism, the combination with a free-wheel roller clutch, of a guide ring engaging the same and provided with peripheral pockets, a brake member, a stationary split ring coöperating with said brake member, and rollers located in the peripheral pockets of the guide ring and bearing against said split ring to expand the same against the brake member.

4. In a free-wheel gear and brake mechanism, the combination with a driving mechanism, a roller clutch adapted to connect the same to a hub, and a guide ring engaging said clutch and provided with peripheral pockets, of a brake mechanism comprising a rim, a split brake ring encircled by said rim, rollers arranged in the peripheral pockets of the guide ring to bear against and expand the split brake ring, and a stationary disk member interposed between the driving and braking mechanisms and to which the split brake ring is fixedly secured.

1,014,182. SASH-BALANCING DEVICE. WILLIAM SAWYER, Armstrong, British Columbia, Canada. Filed Oct. 5, 1910. Serial No. 585,482.



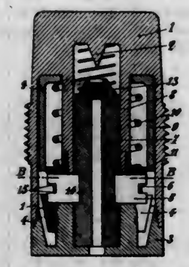
1. A counterbalancing means for a movable sash comprising pulleys carried by the movable sash, other pulleys sustained in fixed relation to the movable sash, and a strand connected at both ends to the movable sash and having the middle portion passed about the pulleys carried by the movable sash, and between such middle portion and the respective ends of the strand passed about the fixedly sustained pulleys.

2. The combination with a sash, of a balancing means therefor comprising spaced pulleys on the sash and other spaced pulleys sustained fixedly with relation to the sash and more widely separated than the pulleys on the sash, and a flexible strand connected at one end to the top of the sash and at the other end to an intermediate point on the sash, the strand extending from the top of the sash about one of the fixedly supported pulleys, thence to the lower one of the spaced pulleys on the sash, thence about the upper one of the spaced pulleys on the sash, and thence about the other one of the fixedly supported pulleys.

3. The combination with a sash having a longitudinal side groove, of a frame in which the sash is movable, spaced pulleys lodged in the groove in the sash in spaced relation one to the other, a pulley fixedly supported in the frame near the upper end thereof, another pulley below the first named pulley and spaced therefrom a distance permitting the lowering of the sash to its full extent without interference by the pulleys carried by the sash, and a flexible strand connected at one end to the upper part of the sash and at the other end in the groove below the lower one of the pulleys therein, said strand extending from the top of the sash about the pulley at the upper end of the window frame, thence to the lower one of the pulleys of the sash, thence to the upper one of said pulleys on the sash, thence about the lower pulley on the window frame, and finally returning and secured to the sash.

4. The combination with a sash having a longitudinal side groove, of a frame in which the sash is movable, spaced pulleys lodged in the groove in the sash in spaced relation one to the other, a pulley fixedly supported in the frame near the upper end thereof, another pulley below the first named pulley and spaced therefrom a distance permitting the lowering of the sash to its full extent without interference by the pulleys carried by the sash, a flexible strand connected to the upper end of the sash and extending from the same about the pulley at the upper end of the frame, thence about the lower pulley of the frame and finally returning and secured to the window sash below the lower pulley thereon, and another strand connected to the upper end of the sash and passing thence about the pulley at the upper end of the frame, and thence about the lower and upper pulleys on the sash in order and thence to the first named strand and there coalescing with the latter and by it continued about the lower pulley on the frame and ultimately connected to the sash.

1,014,183. PERCUSSION-FUSE. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Aug. 31, 1911. Serial No. 647,050.



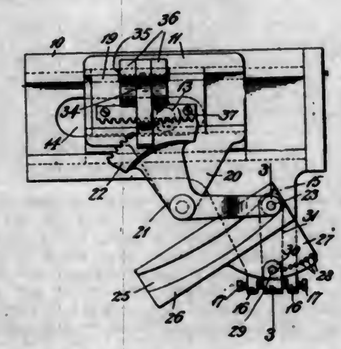
1. In a fuse, the combination of a casing or body, a plunger and a percussion cap, a plurality of segments normally locked and engaging said plunger and radially movable under the influence of centrifugal force, a stationary guiding member for each segment having a lateral clearance associated therewith, a corresponding guiding member on each segment and means automatically releasing each segment whereby it moves radially out of engagement with said stationary member and laterally through said clearance out of alinement therewith.

2. In a fuse, the combination of a casing or body, a plunger and a percussion cap, a plurality of segments normally locked and engaging said plunger and radially movable under the influence of centrifugal force, a stationary guiding member for each segment between which member and casing there is a clearance, a corresponding guiding member on each segment, and means automatically releasing each segment whereby it moves radially out of engagement with said stationary member and laterally through said clearance out of alinement therewith.

3. In a fuse, the combination of a casing or body, a plunger and a percussion cap, a plurality of segments normally locked and engaging said plunger and radially movable under the influence of centrifugal force, a stationary guiding member for each segment shorter than the extent of radial movement of said segments and having a lateral clearance associated therewith, a corresponding guiding member on each segment and means automatically releasing each segment whereby it moves radially out of engagement with said stationary member and laterally through said clearance out of alinement therewith.

4. In a fuse, the combination of a casing or body, a plunger and a percussion cap, a plurality of segments normally locked and engaging said plunger and radially movable under the influence of centrifugal force and each of said segments being provided with a guiding groove, a stationary tenon for each segment connected with said casing and engaging in said groove and having a clearance therebetween and said casing, and means automatically releasing each segment whereby it moves radially out of engagement with said stationary member and laterally through said clearance out of alinement therewith.

1,014,184. MECHANICAL MOVEMENT. ERNEST R. SEWARD, Hartford, Conn., assignor to The Hartford Machine Screw Company, Hartford, Conn., a Corporation of Connecticut. Filed June 10, 1908. Serial No. 437,701.



1. An actuating member, an actuated member, each slidable in a straight line and in the same direction as that of the other member, means for operating the actuating member, a lever pivotally mounted on the actuating member and having a toothed segment meshing with teeth on the actuated member and having a projection, a controller pivotally mounted and having a groove to receive said projection, and means for changing the positions of the controller.

2. An actuated member, an actuating member with means for operating it, both of said members being slidable in a straight line and in the same direction, a lever supported upon the actuating member and operatively connected with the actuated member, said lever having a projection, a controller having a slot to receive said projection, said controller being pivotally mounted upon a stationary part, and means upon said stationary part and controller for locating the latter in different fixed positions while maintaining the position of its pivot.

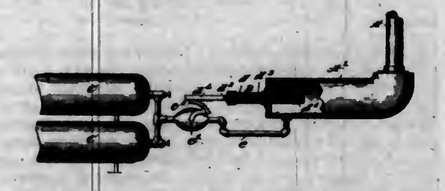
3. An actuated member, an actuating member with means for operating it, both of said members being slidable in a straight line and in the same direction, a lever supported upon the actuating member and operatively connected with the actuated member, said lever having a projection, a controller mounted upon a fixed member and having a slot to receive said projection, means for adjustably locating the controller in different positions and means for changing the positions of said controller locating means.

4. An actuated member and an actuating member with means for operating the latter, a lever mounted upon the actuating member and operatively connected with the actuated member, said lever having a projection, a controller mounted upon a fixed member and having a slot to receive said projection, an arm mounted upon the fixed member, means upon said arm and controller for locating the controller in established positions, and means for adjusting the position of said locating means.

5. An actuated member and an actuating member with means for operating the latter, a lever mounted upon the actuating member and operatively engaged with the actuated member, said lever having a projection, a controller movably mounted upon the fixed support and having a slot to receive said projection, an arm connected with the fixed support and having a stud to engage recesses in the controller, and means for adjusting the position of said arm.

[Claims 6 to 9 not printed in the Gazette.]

1,014,185. AUTOMATIC FIRE-EXTINGUISHING SYSTEM. SYLVESTER SPARLING, Evanston, Ill. Filed Sept. 20, 1909. Serial No. 518,634.



1. In an automatic fire extinguishing system, a supply pipe having branches provided with heads and containing gas under pressure, means to open and close said heads by a rise or fall respectively in temperature, a source of supply of fire-extinguishing gas under pressure connected with said pipe, and a controlling device to start the gas supply when the pressure is decreased by the opening of said heads and to stop the gas supply when the pressure is restored by the closing of said heads and to automatically regulate the pressure in said pipe.

2. In an automatic fire extinguishing system, a supply pipe having branches provided with heads and containing gas under pressure, means to open and close said heads by a rise or fall respectively in temperature, a source of supply of fire-extinguishing gas under pressure connected with said pipe, and a controlling device to start the gas supply when the pressure is decreased by the opening of said heads and to stop the gas supply when the pressure is restored by the closing of said heads and to automatically operate by changes of pressure in said pipe.

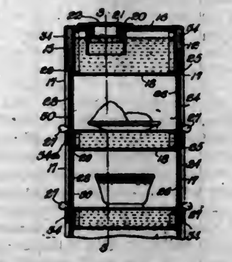
3. In an automatic fire extinguishing system, a supply pipe having branches provided with heads and containing gas under pressure, means to open and close said heads when exposed to different degrees of heat, a source of supply for fire-extinguishing gas under pressure connected with said pipe, and a spring-actuated controlling device to start the gas supply when the pressure is decreased by the opening of said heads and to stop the gas supply when the pressure is restored by the closing of said heads and to automatically regulate the pressure in said pipe and in which the tension of the spring is adjusted in accordance with the working pressure of the gas in the pipe.

4. In an automatic fire extinguishing system, a supply pipe having branches provided with heads and containing gas under pressure, means to open and close said heads when exposed to different degrees of heat, a source of supply for fire-extinguishing gas under pressure connected with said pipe, and a controlling-device in said pipe automatically operated by the pressure in said pipe to open and cut off the supply of gas to the pipe when the heads are opened and closed respectively.

5. In a system for extinguishing fire with gas, a receptacle for storing fire-extinguishing gas under pressure, a gas main for conducting gas from said receptacle to a compartment to be protected from fire and containing gas under pressure, a controlling device for automatically regulating pressure in said main, ducts for distributing the gas, and automatic mechanically controlled valves for opening and closing said ducts.

[Claims 6 to 8 not printed in the Gazette.]

1,014,186. LUNCH-COUNTER. BERTHA STEVENSON, Gloucester, Mass. Filed July 27, 1911. Serial No. 640,953.



1. A lunch counter for individual orders provided with external walls including front and rear walls, and a plurality of open-ended box-like food-holding receptacles having their ends secured to the front and rear walls respectively, the ends of said receptacles being each provided with a door, whereby each receptacle is accessible to an attendant in rear of the counter and also to a customer in front of the counter, said receptacles being spaced apart and coöperating with said external walls to form a cellular jacket for a temperature controlling medium.

2. A lunch counter for individual orders provided with external walls including front and rear walls, and a plurality of open-ended box-like food-holding receptacles having their ends secured to the front and rear walls respectively, the ends of said receptacles being each provided with a door, whereby each receptacle is accessible to an attendant in rear of the counter and also to a customer in front of the counter, the front doors having sight openings provided with transparent closures, said receptacles being spaced apart and coöperating with said external walls to form a cellular jacket for a temperature controlling medium.

3. A lunch counter for individual orders provided with external walls including front and rear walls, and a plurality of open-ended box-like food-holding receptacles having ther ends secured to the front and rear walls respectively, the ends of said receptacles being each provided with a door, whereby said receptacles are accessible to an attendant in rear of the counter and also to a customer in front of the counter, said receptacles being spaced apart and coöperating with said external walls to form a cellular jacket for a temperature controlling medium, the bottom external wall being adapted to conduct heat, while the remaining external walls are non-conductors of heat.

1,014,187. REVOLVING RAZOR. WILLIAM E. TRAVERS, Oakland, Cal., assignor of one-fourth to James D. Hahn, Oakland, Cal. Filed Feb. 21, 1911. Serial No. 609,976.

1. In a razor, a rotatable, cylindrical razor guard, a razor blade detachably mounted therein, a revoluble shaft on which said razor guard is revolubly mounted, a hand hold through which said revoluble shaft extends, a flexible drive shaft connected to said revoluble shaft, said shaft

having a collar with an outwardly projecting tubular flange, and said guard having its inner end fitting said flange and abutting said collar, and means for rotating said flexible shaft to rotate said razor guard and blade.

2. In a razor, the combination of a handle, a shaft extending longitudinally therethrough, means for rotating said shaft, means for retaining said shaft in said handle, a cylindrical member removably attached to said shaft, a detachable razor blade, a yielding spring-pressed abutment fixed to the inner wall of the cylinder having a free end to receive the back of the blade, and means for clamping said blade in said cylinder, said clamping means embodying a cap threaded on the shaft and having projections adapted to extend over the upper end of said cylinder.

3. In a razor, the combination of a handle, a revoluble shaft extending longitudinally therethrough, means for retaining said shaft in said handle, a cylindrical member removably attached to said shaft, a detachable razor blade, means for clamping said blade in said cylinder, said clamping means binding said cylinder to said shaft, said means embodying a cap threaded on the shaft and having projection adapted to extend over the upper end of said cylinder, and means for rotating said revoluble shaft to rotate said cylinder and razor blade.

4. In a razor, the combination of a handle, a revoluble shaft extending longitudinally therethrough, means for retaining said shaft in said handle, a longitudinally slotted cylindrical member removably attached to said shaft, a razor blade, extending at an angle across the chamber of the cylinder, said cylinder having a spring seat for the back of the blade, means for detachably clamping said blade in said cylinder with its cutting edge extending through the slot therein, a series of transverse slots formed in said cylinder adjacent the longitudinal slot, and means for rotating said revoluble shaft to rotate said cylinder and razor blade.

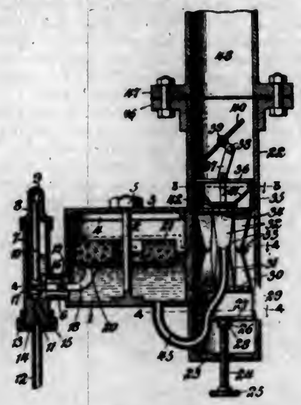
1,014,188. CARBURETER. WILSON ROSS VOORHEES, Perth Amboy, N. J. Filed Dec. 27, 1910. Serial No. 599,581.

1. In a carbureter, a chamber having means for the introduction of fuel thereinto, said chamber having its walls receding from a point adjacent to the point of entrance of the fuel, means for adjusting the degree of inclination of the walls with relation to the fuel inlet, and means other than the first-named means for also adjusting the degree of inclination of the walls with relation to the fuel inlet.

2. In a carbureter, a chamber having an inlet for fuel and provided with walls receding in both directions from the fuel inlet, means for adjusting the degree of inclination of the walls with relation to the fuel inlet, and other means independent of the first-named means for adjusting the degree of inclination of the walls with relation to the fuel inlet.

3. In a carbureter, a chamber having a fuel inlet and adjacent thereto series of plates hingedly connected together at their meeting ends and hingedly carried at their other ends, and means for causing the approach or recession of the connected ends of the plates of the said series toward or from the longitudinal axis of said series.

4. In a carbureter, a chamber provided with an inlet for fuel and two series of plates constituting the walls of the chamber adjacent the fuel inlet, the plates of one series being connected end to end with the plates of the other series, a valve in the chamber, and connections between the valve and the corresponding ends of one series of plates for causing a movement of said plates by the adjustment of the valve.



5. In a carbureter, a tubular chamber, a valve therein, a sleeve in the chamber movable axially therein, a circular series of segmental plates hingedly connected at one end to the sleeve, another series of segmental plates hingedly connected end to end to the first named series and in turn hingedly supported in the chamber, means for the introduction of fuel into the chamber, and connections between the valve and the sleeve for causing movement of the latter on the adjustment of the valve.

[Claims 6 to 13 not printed in the Gazette.]

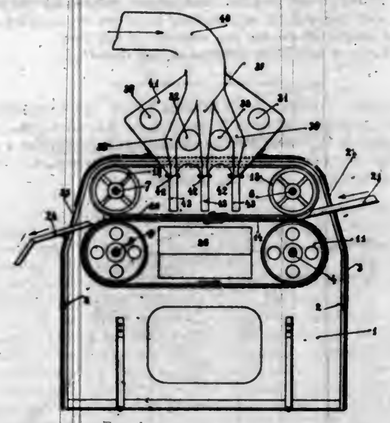
1,014,189. THRESHING-MACHINE. LUDWIG WEINFELD, Vienna, Austria-Hungary. Filed Oct. 27, 1910. Serial No. 589,410.

1. Threshing machine comprising the combination of means for flinging hard granular materials with means for producing a relative movement of the ears of cereals transversely to the jets of the said granular materials, for the purpose described.

2. Threshing machine comprising combination of nozzles fed with compressed air with means for introducing hard granular materials in the jets of air for giving them a flinging movement, means for leading the ears of cereals transversely to the jets of the said annular materials and means for holding fast the halms on the leading means, for the purpose described.

3. Threshing machine comprising the combination of nozzles fed with compressed air with means for introducing hard granular materials in the jets of air for giving them a flinging movement, means for leading the ears of cereals transversely to the jets of the said granular materials, the said leading means consisting of a perforated movable plane, means for holding fast the halms on the said leading means and means for collecting the cereal grains falling through the perforations of the leading means, for the purpose described.

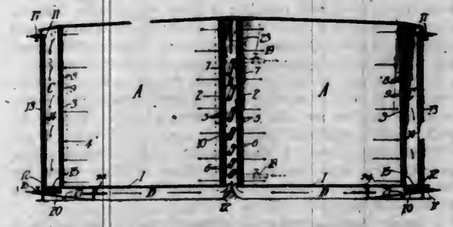
4. Threshing machine comprising the combination of nozzles fed with compressed air with a casing surrounding the said nozzles and having openings through which the nozzles blow out, the said casing being fed with hard granular materials, which pass the openings of the casing in order to get into the jets of air coming from the nozzles, means for leading the ears of cereals transversely to the jets of the said granular materials, the said leading means consisting of a perforated movable plane, means for holding fast the halms on the leading means and means for collecting the cereal grains falling through the perforations of the leading means, for the purpose described.



5. Threshing machine comprising the combination of nozzles fed with compressed air with a casing surrounding the said nozzles and having openings through which the nozzles blow out, the said casing being fed with hard granular materials which pass the openings of the casing in order to get into the jets of air coming from the nozzles, means for leading the ears of cereals transversely to the jets of the said granular materials, the said leading means consisting of a perforated movable plane, means for holding fast the halms on the leading means, means for collecting the cereal grains falling through the perforations of the leading means and means for connecting the collecting means with the said casing for conducting a portion of the cereal grains into this casing, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,014,190. DRY-KILN. CHARLES A. WENBORNE, Chicago, Ill. Filed Aug. 29, 1910. Serial No. 579,421.



1. A drying kiln, comprising a drying chamber, a heating chamber located at one side of said drying chamber, a cooling chamber located at the opposite side of said drying chamber, partitions separating said chambers, and containing distributed apertures arranged to permit air to flow fom said heating chamber to said cooling chamber in a uniformly distributed current throughout the area of said drying chamber, a return air passage connecting said cooling chamber with said heating chamber, heating means in said heating chamber, and cooling means in said cooling chamber, said heating and cooling means being located so as to produce by gravity a horizontal flow of air in said drying chamber.

2. A drying kiln, comprising a drying chamber, a heating chamber located at one side of said drying chamber, a cooling chamber located at the opposite side of said drying chamber, partitions separating said chambers and containing distributed apertures arranged to permit air to flow from said heating chamber to said cooling chamber in a uniformly distributed current throughout the area of said drying chamber, a return air passage connecting said cooling chamber with said heating chamber, heating means in said heating chamber, and cooling means in said cooling chamber, said heating, cooling and drying chambers being substantially co-extensive with each other in all directions transverse to the direction of the air current in said drying chamber.

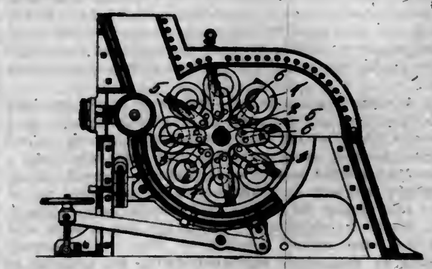
3. A drying kiln, comprising a drying chamber, a heating chamber located at one side of said drying chamber, a cooling chamber located at the opposite side of said drying chamber, partitions separating said chambers and containing distributed apertures arranged to permit air to flow from said heating chamber to said cooling chamber in a uniformly distributed current throughout the area of said drying chamber, a return air passage connecting said cooling chamber with said heating chamber, heating means in said heating chamber, and cooling means in said cooling chamber, said heating and drying chambers being constructed to prevent the radiation of heat from said heating means into said drying chamber.

4. A drying kiln, comprising a drying chamber, a heating chamber located at one side of said drying chamber, a cooling chamber located at the opposite side of said drying chamber, partitions separating said chambers and containing distributed apertures arranged to permit air to flow fom said heating chamber to said cooling chamber in a uniformly distributed current throughout the area of said drying chamber, a return air passage below said drying chamber, heating means in said heating chamber, and cooling means in said cooling chamber, and said partition between said drying and cooling chambers being constructed to deflect the air downwardly as it leaves said drying chamber.

5. A drying kiln, comprising a drying chamber, a heating chamber located at one side of said drying chamber, a cooling chamber located at the opposite side of said drying chamber, partitions separating said chambers and containing distributed apertures arranged to permit air to flow from said heating chamber to said cooling chamber in a uniformly distributed current throughout the area of said drying chamber, a return air passage below said drying chamber connecting said cooling chamber with said heating chamber, heating means in said heating chamber, cooling means in said cooling chamber, and said partition between said drying and cooling chambers being made up of horizontally disposed slats placed substantially in parallel relation and inclined downward toward said cooling chamber.

[Claims 6 to 14 not printed in the Gazette.]

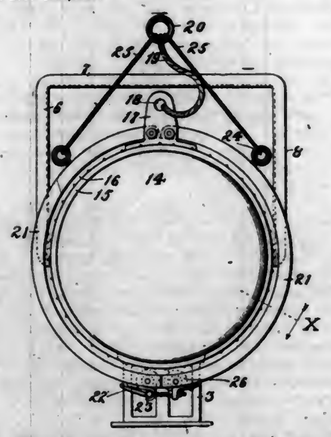
1,014,191. PULVERIZER. ARTHUR F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Filed June 15, 1910. Serial No. 567,034.



In a machine of the class described the combination of a casing and a breaker surface, a grinding surface, a shaft, supporting plates on the shaft with points staggered with

relation to each other, rings arranged between the ends of the projecting points on alternate plates, and in line with the body portion of an intermediate plate, the plates and rings being of substantially the same thickness and hammers or beaters adjustably and pivotally mounted on said supporting plates, said rings and hammers being nested to form a substantially continuous crushing area.

1,014,192. QUICK-OPENING DOOR FOR VULCANIZERS. JOHN K. WILLIAMS, Akron, Ohio, assignor of one-half to The Williams Foundry and Machine Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 4, 1911. Serial No. 612,310.



1. A vulcanizer comprising a receptacle having one open end, a door for said vulcanizer, said door and vulcanizer having coöperating abutting portions, a separable pivotally-mounted grooved locking-element positioned to clamp the abutting portions of said vulcanizer and said door for detachably holding the latter in its closed position, and means carried by said vulcanizer and engaged by said element tending to keep the portions thereof separated when said door is removed.

2. A vulcanizer comprising a receptacle having one open end, a door for said vulcanizer, said vulcanizer and door provided with outwardly-extending complementary abutting flanges, a pair of pivotally mounted semi-circular interiorly-grooved locking-rings carried by said door receiving said abutting flanges for holding said door in its closed position, and means engaged by said rings tending to keep them separated during the removal of said door.

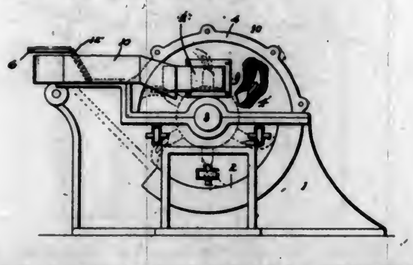
3. A vulcanizer comprising a receptacle having one open end, a door for said vulcanizer bodily and laterally removable therefrom, said door and vulcanizer having complementary abutting portions, clamping means embodying separable members engaging said complementary portions of said vulcanizer and door for detachably holding the latter in its closed position, and means engaged by said separable members tending to keep them spaced from each other during the removal of said door from said vulcanizer.

4. A vulcanizer comprising a receptacle having one open end surrounded by an outwardly-projecting flange, a door for said vulcanizer having a flange complementary to and adapted to abut against the flange on said vulcanizer, a pivotally mounted pair of semi-circularly formed locking members interiorly grooved carried by said door to receive said flanges for holding said door in its closed position, means for detachably uniting the free ends of said members, and means engaged by said locking-member tending to keep them separated during the removal of said door.

5. A vulcanizer comprising a receptacle having one open end, said end surrounded by an outwardly-extending flange, a door for said vulcanizer having a flange complementary to the flange on said vulcanizer, a pair of pivotally-mounted semi-circularly-formed and interiorly-grooved locking-members secured to said door and arranged to inclose said abutting flanges for holding said door detachably in its closed position, and means independent of said door and engaged by said locking members for keeping the latter separated during the removal of the door.

[Claims 6 to 10 not printed in the Gazette.]

1,014,193. DUST-DEFLECTOR FOR PULVERIZER-MACHINES. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 1, 1910. Serial No. 584,865.



1. In a crushing and pulverizing device, rotating hammers, a casing surrounding and supporting said hammers, having a feed opening formed therein, a dust hopper mounted directly over a portion of said opening and communicating with the interior of said casing and chutes extending from each side of the hopper and connected at substantially the center of rotation of the hammers to the casing.

2. In a grinding and pulverizing device, rotating hammers, a casing surrounding said hammers and having a feed opening at one side thereof, a dust hopper positioned directly over a portion of said opening and extending across the machine, a baffle plate mounted therein and chutes extending from the hopper on each side of the baffle plate and connected to the opposite side walls of the casing in proximity to the rotating hammers.

3. In a crushing and pulverizing device, rotating hammers, a casing supporting and surrounding said hammers, having a feed opening at the top, a supply hopper also communicating with said opening, a dust hopper also communicating with said opening and with the interior of said casing, and chutes connecting the dust hopper with openings in the casing in proximity to the rotating hammers.

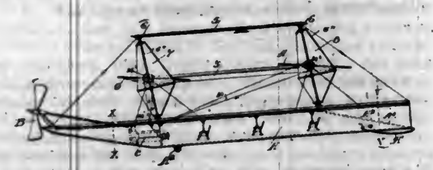
4. In a crushing and pulverizing device having rotating hammers, a casing supporting and surrounding said hammers, having an opening at the top, a supply hopper directly communicating with said opening through a restricted passageway, a dust hopper also communicating directly with said opening, and chute sections from the dust hopper to the sides of the casing in proximity to the rotating hammers.

5. In a crushing and pulverizing device having rotating hammers, a casing surrounding said hammers with an opening at the top, a dust-collecting hopper communicating directly with said opening, cast brackets attached to either side of the casing registering with openings therein, and chute connections between each cast bracket and opposite sides of the dust hopper.

1,014,194. AEROPLANE. SYLVESTER M. WILLIAMS, San Francisco, Cal. Filed Jan. 2, 1909. Serial No. 470,439.

1. In a flying machine, the combination with a plurality of superposed aeroplanes set at opposed angles to each other, of parallel frames holding the outer edges of the planes, upright standards connecting the planes, and horizontal arms pivoted at their ends, extending from each side of the standards, and bracing the parallel frames.

2. In a flying machine, the combination with superposed aeroplanes set at opposed angles, of upright standards connecting the planes, vertical steering planes turnable on the standards, horizontal brace arms connecting the outermost edges of the planes, and horizontally disposed controller planes turnable thereon.



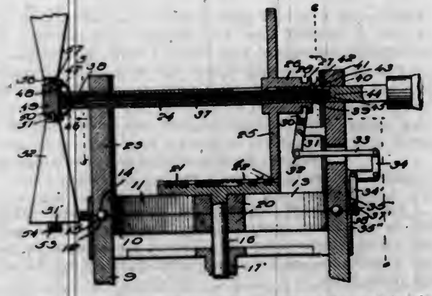
3. In a flying machine, comprising superposed aeroplanes set at opposed angles, parallel frames holding the outer edges of the planes horizontal, brace arms connecting the frames, horizontal controller planes turnable thereon and means for moving said planes to present different angles of incidence to the horizontal.

4. In a flying machine, comprising superposed aeroplanes set at opposed angles, parallel frames holding the outer edges of the planes horizontal, upright standards connecting the planes, horizontal brace arms connecting the parallel frames, horizontally disposed controller planes, and means for moving the planes at angles opposed to each other.

5. In an apparatus of the character described, aeroplanes set at opposed angles open at the ends and approaching each other at the sides, and means for maintaining the planes in an extended position, with the edges of the uppermost planes extending beyond the edges of the lower planes to allow air to enter between the two, and act upon the uppermost planes.

[Claims 6 to 11 not printed in the Gazette.]

1,014,195. PROPELLING MECHANISM. GUST WILLIAMSON, Bangor, Me. Filed Sept. 13, 1910. Serial No. 581,762.



1. In combination with a ship, a propeller mechanism comprising a turntable, a vertical shaft journaled in said turntable, a gear mounted on the upper end of said shaft, said turntable comprising an upper and lower member, a shaft journaled in the upper member of the turntable, a gear slidably keyed on said shaft, said air wheel having feathering blades, and means for simultaneously feathering said blades and throwing said gear out of mesh.

2. In combination with a ship having a propeller, a pinion on one end of the shaft of said propeller, a support, a rotary member on the upper end of said support, a vertical shaft passing through said support and said rotary member, a gear on the upper end of said shaft, vertical arms on said rotary member, a hollow shaft journaled in the upper ends of said vertical arms, an air wheel mounted on one end of said shaft having feathering blades, a gear slidably keyed on said shaft and adapted to engage said first named gear, a rod disposed longitudinally within said hollow shaft, said shaft having a slot formed therein, a lug on one end of said rod projecting through said slot, a grooved collar formed on said gear and adapted to engage said lug when said gear is moved to one side, connections between the opposite end of said rod and said feathering blades, an operating lever, a shifting lever loosely connected to said grooved collar and means between said operating lever and said shifting lever, whereby upon movement of said operating lever in one direction the said second named gear will be moved into engagement with said first named gear, and movement in the opposite direction will cause the movement of said gear away from said second named gear and simultaneously the feathering of said blades.

3. In combination with a ship having a propeller and a support carrying a shaft geared to said propeller, of a rotary member on the upper end of said support, a gear mounted on the upper end of said shaft and having a plurality of series of teeth, a hollow shaft journaled in said rotary member, a gear on said shaft adapted to rotate therewith and be movable longitudinally thereon, a wheel on one end of said hollow shaft, feathering blades on said wheel, a rod disposed longitudinally within said hollow shaft, heads formed on the opposite ends of said rod, pivotal connections between one of said heads and said feathering blades, a lug on the other of said heads and projecting through a slot formed in said shaft, a spring for retaining said rod in its normal position, a grooved collar formed integral with said second named gear, a shifting lever engaging in the groove of said collar, an operating lever, oppositely arranged bell-cranks pivotally mounted on said rotary member, bell cranks disposed on opposite sides of said operating lever, a rod pivotally connected at its central portion to said operating lever and at its ends to the second of said bell cranks, links between the first and second named bell cranks and said shifting lever whereby the movement of said operating lever in one direction will move the said second named gear into successive engagement with the series of teeth of the first named gear, and movement in the opposite direction cause the disengagement of the second named gear and the movement of said rod to effect the feathering of said blades.

4. In combination with a ship having a propeller and a support carrying a vertical shaft said propeller and shaft having meshing gears, of a rotary platform on said support, a wheel and gearing mounted on said platform, a slidable gear on said air gearing, a gear on said vertical shaft, a shifting lever connected to said slidable gear, a ring on said platform vertically slidable thereon and rotatably movable therewith, connections between said ring and shifting lever, a second ring on said support, a tubular member on said vertical shaft and connected to said second ring, a controlling lever, and connections between said controlling lever and said second ring for raising and lowering said ring to effect the vertical movement of said first ring and the shifting of said slidable gear.

5. In combination with a ship having a propeller and a support carrying a vertical shaft geared to said propeller; of a rotary platform on said support, a horizontal shaft on the platform, a feathering bladed air wheel mounted on said shaft, a slidable gear on said shaft, connections between the slidable gear and the blades of said air wheel, a gear on said vertical shaft, a sifting lever connected to said slidable gear, a ring on said platform vertically slidable thereon and rotatably movable therewith, connections between said ring and shifting lever, a second ring on said support, a tubular member on said vertical shaft and connected to said second ring, a controlling lever, and connections between said controlling lever and said second ring for raising and lowering said ring to effect the vertical movement of said first ring to cause the feathering of said blades and the shifting of said slidable gear.

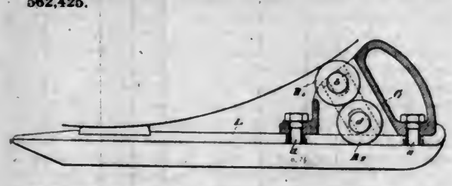
1,014,196. CARTRIDGE-BELT. JOHN B. WILLIAMSON, Louisville, Ky. Filed Jan. 5, 1911. Serial No. 601,011.

1. A cartridge belt of the class described comprising a relatively wide, flexible band, relatively narrow securing

strips attached to the upper corners of the band, a series of cartridge holding rings pivoted to the band at points in a line parallel to and immediately below the upper edge of the band, and a second series of cartridge holding rings pivoted to the band at points in a line parallel to and immediately below the longitudinal median line of the band, the rings of both series being adapted to lie flat against the respective portions of the band and the band being adapted to be folded along its longitudinal median line.

2. A cartridge belt of the class described including a relatively wide, flexible band, a series of cartridge holding rings pivoted to the band at points in a line parallel to and immediately below the upper edge of the band, and a second series of cartridge holding rings pivoted to the band at points in a line parallel to and immediately below the longitudinal median line of the band, the rings of both series being adapted to lie flat against the respective portions of the band and the band being adapted to be folded along its longitudinal median line, the first mentioned series of rings being spaced from the longitudinal median line of the band a distance greater than the diameter of the rings of the last mentioned series, whereby, when the band is folded, the said last mentioned series of rings will lie between the line of fold of the band and the first mentioned series of rings.

1,014,197. ROLLER-SKID FOR RAILWAY-CARS AND SIMILAR VEHICLES. HANS WINDHOFF, Berlin-Schöneberg, Germany. Filed May 20, 1910. Serial No. 562,425.



Roller skid for railway cars and similar vehicles, fitted with two rollers in contact with each other, said rollers so arranged and adapted to convert the sliding friction into rolling friction, for the purpose as described.

1,014,198. NON-TOXIC SUPRARENAL PREPARATION. GEORG ZUELZER, Berlin-Charlottenburg, Germany. Filed July 7, 1910. Serial No. 570,736.

1. The herein described suprarenal preparation which contains the blood-pressure-raising and sugar-mobilizing suprarenal substance and the extract from a suitable abdominal organ, such preparation, if injected, operating with a modified mobilization of sugar and diminished raising of the blood pressure, substantially as set forth.

2. The herein described suprarenal praparation which contains the blood-pressure-raising and sugar mobilizing suprarenal substance and pancreas extract, substantially as set forth.

3. The herein described process of manufacturing suprarenal praparations which consists in mixing the blood-pressure-raising and sugar-mobilizing suprarenal substance with the extract from a suitable abdominal organ which neutralises the blood-pressure-raising and sugar-mobilizing effect of the suprarenal substance, substantially as set forth.

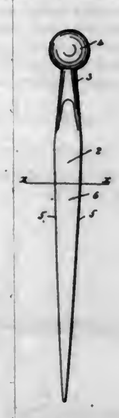
4. The herein described process of manufacturing suprarenal preparations which consists in mixing the blood-pressure-raising and sugar-mobilizing suprarenal substance with pancreas extract, substantially as set forth.

1,014,199. REFRACTORY BODY AND PROCESS OF MAKING THE SAME. EDWARD GOODRICH ACHESON, Stamford township, Welland county, Ontario, Canada. Filed May 27, 1909. Serial No. 498,643.

1. The herein described novel product, containing as essential constituents silicon and carbon, and characterized by a degree of toughness exceeding that of carborundum.

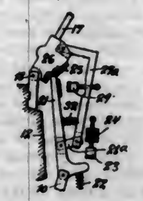
2. The process which consists in disposing in proximity to a resistor a charge containing a silicious material, carbon and a compound of boron, the compound of boron in less proportion than the silicious material, and effecting reduction of the same by heat developed in said resistor by the passage therethrough of an electric current, thereby producing a material containing as essential constituents silicon and carbon, and characterized by a degree of toughness exceeding that of carborundum.

1,014,200. MARLINE-SPIKE. JOHN V. ANDERSON, Seattle, Wash. Filed Aug. 24, 1911. Serial No. 645,752.



A marline spike of substantially triangular cross-section, and having three concave faces, the concavity of each face being substantially one-tenth of the breadth of the face, and the said spike being tapered from its handle portion to its point.

1,014,201. PIANO-ACTION. LEOPOLD AVISUS and ADOLPH DOLL, New York, N. Y. Filed Mar. 15, 1911. Serial No. 614,588.



1. A piano action comprising the combination with a hammer and jack of a hammer check comprising a bent link pivoted to the hammer butt at its bent end, and a shorter link pivoted to the jack and to the other end of the bent link.

2. A piano action comprising the combination with a hammer and jack, of a long link pivoted to the hammer butt, and a short link pivoted to the jack, the other ends of said links being pivotally connected together.

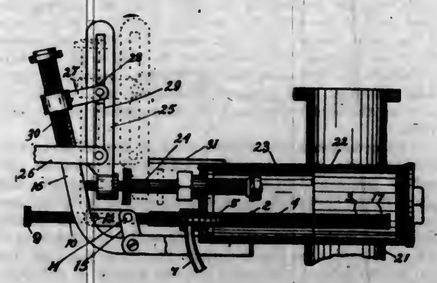
3. A piano action comprising the combination with a hammer and jack, of a hammer check comprising a system of pivoted links connected to the jack and to the hammer butt.

4. A piano action comprising the combination with a hammer and jack, of a hammer check comprising a system of pivoted links connected to the jack and to the hammer butt, together with a spring normally forcing the link system away from the jack.

5. A piano action comprising the combination with a hammer and jack, of a hammer check comprising a system of pivoted links connected to the jack and to the hammer butt with an adjustable check button mounted on one of the links and adapted to coöperate with the jack.

[Claims 6 and 7 not printed in the Gazette.]

1,014,202. FEED-NOZZLE FOR CARBURETERS. DAVIS BARNARD, Los Angeles, Cal. Filed Dec. 5, 1910. Serial No. 595,778.



1. In a nozzle, a tubular casing having a slot extending longitudinally through the wall thereof, a hollow plunger slidably fitting within said casing and adapted to deliver liquid fuel to the slotted portion of said casing, said plunger having a cut away portion to form a chamber between the same and the wall of said casing, and means to conduct liquid fuel to said chamber, there being perforations through said plunger to conduct said fuel from said chamber to the interior of said plunger.

2. In a nozzle, an elongated cylindrical casing having a longitudinal spraying slot near one end thereof, that end of said casing being closed beyond said slot, a hollow plunger fitting within said casing, said plunger being turned down to a reduced diameter along a portion thereof within said casing spaced away from said slot to form an annular chamber around said plunger at that point, means to conduct liquid fuel to said annular chamber, there being perforations through the reduced portion of said plunger to supply fuel to the interior thereof, and means to move said plunger longitudinally to regulate the discharge opening of said slot.

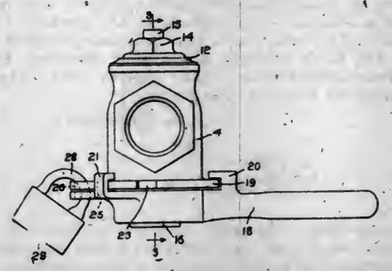
3. In a nozzle, an elongated casing having a longitudinal spraying slot, a closure engaging the inner side of said slot and longitudinally movable to regulate the discharge opening of said slot, means for conducting liquid fuel to the interior of said casing, means for sliding said closure without rotating the same to regulate the size of the feed opening of said slot, and a screw-threaded connection exterior to said casing for said plunger, to provide for an adjustment independent of the sliding adjustment thereof.

4. In a nozzle, an elongated tubular casing having a longitudinal spraying slot, a hollow plunger rotatable within and longitudinally movable along said casing, means to conduct liquid fuel to the interior of said casing, means to rotate said plunger, a part located externally to said casing having a screw threaded engagement with said plunger to cause the rotation of the latter to vary the size of said spraying slot, and operating means to move said part and plunger together to vary the size of the spraying opening.

5. In a carbureter, a fuel supply comprising a tube having a longitudinal spraying slot, a hollow plunger within said tube having an open end movable along the slotted portion thereof, means for supplying liquid fuel to the interior of said plunger, and a leaf spring projecting into the open end of said plunger to hold said plunger snugly against the inner side of the slotted portion of said tube.

[Claims 6 and 7 not printed in the Gazette.]

1,014,203. LOCK-VALVE. WILLIAM H. BEES, Chicago, Ill., assignor to Goetz & Flodin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 13, 1910. Serial No. 581,797.



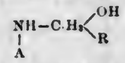
1. In combination, a valve casing provided with a longitudinal passage and a tapered transverse passage, a flange on said casing surrounding the larger end of said transverse passage, a correspondingly shaped plug rotatably disposed in said transverse passage, said plug having a transverse opening adapted to aline with said longitudinal passage, a flat-sided stud on the larger end of said plug, a wrench having a central portion adapted to fit said stud, a handle extending from said central portion, a lug extending from said central portion and having an opening therein, the opening in said lug being adapted to aline with an opening in said flange, hook-shaped lugs extending from said wrench and adapted to engage over said flange to prevent longitudinal movement of the plug, said flange being provided with notches for the passage of said hook-shaped lugs when said wrench is in a position intermediate of its on and off positions, and a lock having a hasp adapted to pass through the opening in said first named lug and the alining opening in said flange so as to prevent rotary movement of said plug.

2. In combination, a valve casing provided with a longitudinal passage and a tapered transverse passage, a flange on said casing surrounding the larger end of said transverse passage, a correspondingly shaped plug rotatably disposed in said transverse passage, said plug having a transverse opening adapted to aline with said longitudinal passage, a flat-sided stud on the larger end of said plug, a wrench having a central portion adapted to fit said stud, a handle extending from said central portion, a lug extending from said central portion and having an opening therein, the opening in said lug being adapted to aline with an opening in said flange, hook-shaped lugs extending from said wrench and adapted to engage over said flange to prevent longitudinal movement of the plug, said flange being provided with notches for the passage of said hook-shaped lugs when said wrench is in a position intermediate of its on and off positions, a lock having a hasp adapted to pass through the opening in said first named lug and the alining opening in said flange so as to

prevent rotary movement of said plug, and a washer secured to the smaller end of said plug and forming a flange engaging the face of the casing around the smaller end of said transverse opening.

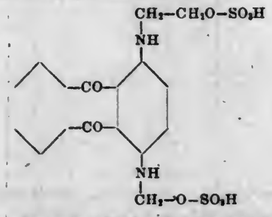
1,014,204. DYE. WILHELM BERCHELMANN, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 7, 1910. Serial No. 596,125.

1. The herein described new dyestuffs obtainable from 1-aminoanthraquinones and alkylene oxids containing in their molecule the characteristic group



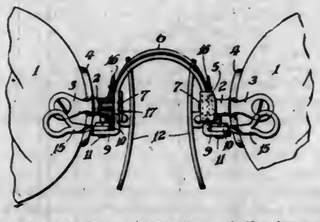
in which R stands for a substituting group and A for the anthraquinone nucleus which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with from a red to blue color, soluble in concentrated sulfuric acid generally with from a red to violet-red color; and dyeing wool generally from red to blue to violet shades, substantially as described.

2. The herein described new dyestuff obtainable from 1.4-diaminoanthraquinone and ethylene oxid, having probably the following constitution:



which dye is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a pure blue color and soluble in concentrated sulfuric acid with a violet-red color; dyeing wool pure blue shades fast to light, substantially as described.

1,014,205. EYEGLASS-MOUNTING. DANIEL V. BROWN, Philadelphia, Pa. Filed Nov. 2, 1910. Serial No. 590,349.



1. In eyeglasses, the combination of the lenses, posts or studs connected to the lenses, a bridge having its opposite side portions connected to the said posts or studs and the opposite ends of the said bridge extending beyond the said posts or studs, arms or levers pivoted to the opposite ends of the said bridge, nose bearing pieces or guards connected to the rear ends of the said arms or levers, springs having connection with the posts or studs and contacting with the said arms or levers to actuate the same to cause the nose bearing pieces or guards to clamp the nose of a wearer.

2. In eyeglasses, the combination of the lenses, posts or studs connected thereto, a bridge having its opposite side portions connected to the said posts or studs, the opposite ends of the said bridge being extended beyond the said posts or studs and being bent outwardly, arms or levers pivoted upon the said outwardly bent ends of the said bridge, nose bearing pieces or guards secured upon the rear ends of the said arms or levers, and springs for actuating the said nose bearing pieces or gusrds to cause them to clamp the nose of a wearer.

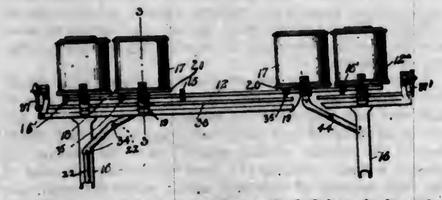
3. In eyeglasses, the combination of the lenses, posts or studs having housings at their inner ends, a bridge having its opposite side portions seated in the said housings, means for connecting the said bridge to the said posts or studs, and the opposite ends of the said bridge extending beyond the said housings and thereafter being extended outwardly, arms or levers pivoted upon the outwardly extended ends of the said bridge, nose bearing pieces or guards secured upon the rear ends of the said arms or levers, and springs seated in the said housings between the said bridge and the posts or studs for actuating the said guards to cause them to clamp the nose of a wearer.

4. In eyeglasses, the combination of the lenses, posts or studs connected to the lenses, the said posts or studs having housings at their inner ends, a bridge having its opposite side portions located in the said housings and having its opposite end portions extended beyond the said housings and then outwardly, arms or levers pivoted upon the said outwardly extended ends, nose bearing pieces or guards secured upon the rear ends of the said arms or levers, springs located in the said housings between the inner ends of the said stud and the opposite side portions of the said bridge, the said springs having extensions which are adapted to contact with the said arms or levers to actuate the said nose bearing pieces or guards to cause them to clamp the nose of a wearer, and means for securing the said bridge and the said springs to the said studs.

5. In eye-glasses, the combination of lenses, posts connected thereto, means extending from post to post for connecting the said lenses, devices for connecting the said means to the said posts, nose bearing pieces, pivotally supported arms or levers for supporting the said nose bearing pieces, and springs for actuating the said arms or levers to cause the said nose bearing pieces to clamp the nose, the said springs being connected to the said devices at points intermediate their ends, and the portions of the said springs upon opposite sides of their points of connection to the said devices being extended in substantially parallel relation with respect to each other, and one of the said end portions being longer than the other and bent laterally, the said laterally bent portion being connected to the other opposite end portion of the said spring, and the said laterally bent portion being further extended and placed in contact with the said lever whereby both end portions of the spring upon opposite sides of the said devices operate to exert pressure upon the said levers.

[Claims 6 and 7 not printed in the Gazette.]

1,014,206. ATTACHMENT FOR CORN-PLANTERS. ALBERT B. CHANCE, Centralia, Mo. Filed Jan. 3, 1911. Serial No. 600,393.

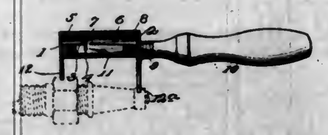


1. In a corn planter having a feed drive shaft and a check shaft, a fertilizer container, means associated with the feed drive shaft for actuating the fertilizer feeding mechanism, a tube into which the fertilizer feeder discharges, a housing on the tube, a valve in the housing closing the tube, an arm on the check shaft, a dog on the arm, means for pivotally mounting the dog on the arm, means for yieldingly holding the dog to operate the valve, and a tube on the housing for carrying the fertilizer.

2. In a corn planter having a feed drive shaft and a check shaft, a fertilizer container, means associated with the feed drive shaft for actuating fertilizer feeding mechanism, a tube into which the fertilizer feeder discharges, a housing on the tube, a valve in the housing closing the tube, an arm on the check shaft, a dog on the arm, means for pivotally mounting the dog on the arm, means for yieldingly holding the dog to operate the valve, a shoe, a tube associated with the shoe and connected to the housing for carrying the fertilizer.

3. In a corn planter having a feed drive shaft and a check shaft, a fertilizer container, means associated with the feed drive shaft for actuating the fertilizer feeding mechanism, a tube into which the fertilizer feeder discharges, integral spaced apertured ears extending from the housing, a valve comprising a body portion, an angularly disposed heel portion, trunnions provided on said valve, said trunnions adapted to be journaled within the apertures provided in said ears, and means adapted to engage the said heel portion of the valve for operating the said valve, a tube on the housing for feeding the fertilizer.

1,014,207. SPARK-PLUG TESTER. ADOLFO DE CLAIRMONT, Toledo, Ohio. Filed Nov. 28, 1910. Serial No. 594,598.

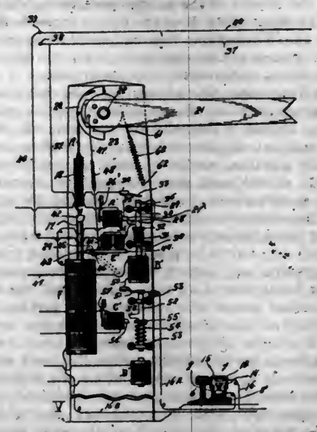


1. A spark plug tester, comprising end plates each of which is formed with a lateral extension, one extension being extended farther than the other, the shorter extension being formed with a recessed edge and the longer extension with a fork, stems formed in the respective end plates and extending in longitudinal alinement with each other with adjoining ends in close proximity but spaced from each other, insulating plugs through which the plugs extend, and a translucent tube surrounding said stems and connected to said plugs.

2. A spark plug tester, comprising end plates each of which is formed with a lateral extension, one extension being extended farther than the other, the shorter extension being formed with a recessed edge and the longer extension with a fork, stems formed in the respective end plates and extending in longitudinal alinement with each other with adjoining ends in close proximity but spaced from each other, insulating plugs through which the stems extend, and a translucent tube surrounding said stems and connected to said plugs the innermost end plate being formed with a boss, and a handle of insulating material secured to said boss.

1,014,208. RAILWAY SIGNALING APPARATUS. WILLIAM J. COOK, Denver, Colo., assignor to The Cook Railway Signal Company, Denver, Colo., a Corporation of Colorado. Filed Sept. 7, 1909. Serial No. 516,485.

1. A railway signaling apparatus, comprising signal stations, arranged along the track, each station including a semaphore arm located on each side of the track, electromagnetic means for raising the semaphore arm, an electromagnet for locking the semaphore arm in raised position, the circuit of the said electro-magnet being normally closed, electro-magnetic means for breaking the said circuit, the said means having its circuit normally broken, circuit make and break devices arranged along the track on each side thereof at each station and adapted to be momentarily placed in the closed position by a passing train, circuit connections between the track make and break device at each station, and the electro-magnetic means for raising the semaphore arm at a station a predetermined distance therefrom, whereby when any make and break device is closed on one side of the track, the said electro-magnetic means for raising the semaphore arm is energized, said circuit connections also including the electro-magnetic means for breaking the circuit of the electro-magnet at a predetermined distance in the opposite direction, whereby the said electro-magnet is de-energized, allowing the semaphore arm to drop to the danger position, substantially as described.



2. A railway signaling apparatus, comprising signal stations arranged along the track, each station including a semaphore arm, a solenoid, which when energized acts to raise the semaphore arm to the safe position, an electromagnet, which when energized acts on the core of the solenoid to lock the semaphore arm in the safe position, the circuit of the electro-magnet being normally closed, an electro-magnet for breaking the said circuit, the said electro-magnet having its circuit normally open, means for locking the circuit of the first mentioned electro-magnet in the open position, when broken by the second mentioned electro-magnet, and electro-magnetic means for releasing the locking means, substantially as described.

3. A railway signaling apparatus, comprising signal stations arranged along the track, each station including a semaphore arm, a solenoid which when energized serves to raise the semaphore arm to the safe position, an electromagnet for locking the semaphore arm in the safe position, the circuit of the electro-magnet being normally closed when in the locking position, electro-magnetic means for breaking the said circuit, the said electro-magnetic means having its circuit normally broken, means for locking the circuit of the electro-magnet in the open position, electromagnetic means for releasing the said locking means, circuit make and break devices arranged along the track on each side thereof at each station and adapted to be placed in the closed position by a passing train, and circuit connections between the track make and break devices at each station and the solenoid for raising the semaphore arm to the safe position and the electro-magnetic means for releasing the locking means at a station a predetermined distance in the rear of the train, substantially as described.

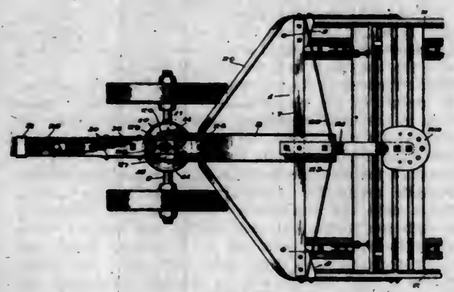
4. A railway signaling apparatus, comprising signaling stations arranged along the track, each station including a semaphore arm, a solenoid connected with the semaphore arm and serving when energized to raise the semaphore arm from the danger to the safe position, an electro-magnet which when energized serves to lock the semaphore arm in the raised position, electro-magnetic means for breaking the circuit of the electro-magnet in the open position, means for releasing the locking means, circuit make and break devices arranged along the track on each side

thereof at each station and adapted to be placed in the closed position by a passing train, and circuit connections between the track make and break device at each station and the solenoid for raising the semaphore arm and the lock-releasing electro-magnetic means at a station a predetermined distance from said make and break device, whereby when any track make and break device is closed on one side of the track the solenoid and the lock-releasing electro-magnetic means are energized, the said circuit connections also including the electro-magnetic means for breaking the circuit of the semaphore locking electro-magnet at a predetermined distance in the opposite direction, whereby the semaphore locking electro-magnet is de-energized allowing the semaphore arm to drop to the danger position, substantially as described.

5. A railway signaling apparatus, comprising signaling stations arranged along the track, each station including a mechanical signal, a solenoid, for throwing the signal to the safe position, an electro-magnet for locking the signal in the safe position, electro-magnetic means for breaking the circuit of the said electro-magnet for releasing the signal, a second electro-magnet for locking the circuit of the first named electro-magnet in the open position, circuit make and break devices arranged along the track at each station and adapted to be placed in the closed position by a passing train, and circuit connections between a track make and break device at each station and the solenoid and the second named electro-magnet for locking the circuit of the first named electro-magnet in the open position at a station a predetermined distance from said make and break device, whereby when the track make and break device is closed at any station the solenoid and the second named electro-magnet are energized, the said circuit connections also including the electro-magnetic means for breaking the circuit of the said magnet for locking the signal at a predetermined distance in the opposite direction, whereby the said magnet for locking the signal is de-energized, allowing the semaphore arm to drop to the danger position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

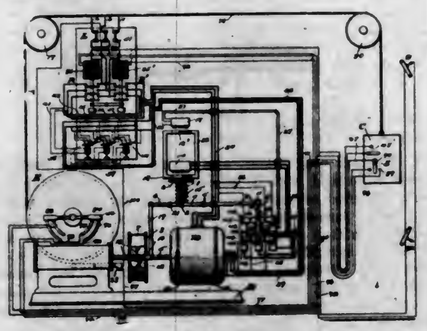
1,014,209. FRONT-WHEELED TRUCK FOR VEHICLES. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Oct. 20, 1911. Serial No. 655,712.



1. A fore truck for manure spreaders including, in combination, a receptacle having longitudinally arranged base sill members upon opposite sides thereof, vertically arranged bars having their lower ends secured to the front ends of said base sill members, a transverse bar having opposite ends thereof secured to the upper ends of said vertical bars, a truck bolster member having its rear end secured to the central portion of said transverse bar and curving forward and downward and terminating in a leg portion having the lower end thereof pivotally connected with a truck axle, a U-shaped truck frame member having its central portion secured to said bolster member and the side members thereof extending outward, downward and rearward and secured to said vertical bars and said base sill members.

2. A fore truck for manure spreaders including, in combination, a receptacle having longitudinally arranged base sill members upon opposite sides thereof, vertically arranged bars having their lower ends secured to the front ends of said base sill members and their upper ends turned inward, a transverse bar having opposite ends thereof secured to the inwardly turned ends of said vertical bars, a truck bolster member having its rear end secured to the central portion of said transverse bar and curving forward and downward and terminating in a leg portion, the lower end thereof being pivotally connected with a truck axle, truss members having one end thereof secured to the upper ends of said vertical bars, and inclined inward and rearward have their opposite ends secured to the rear end of said bolster member, a U-shaped truck frame member having its central portion secured to said bolster member and the side members thereof extending outward, downward and rearward and secured to said vertical bars and said base sill members.

1,014,210. ALTERNATING-CURRENT ELECTRIC MOTOR. WILLIAM N. DICKINSON, Jr., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 3, 1906. Serial No. 324,539.



1. The combination with a motor, of a brake therefor, electroresponsive means for releasing the brake, a holding device for maintaining the brake in released position, and an automatic switch for rendering effective said holding device after the brake has been released.

2. The combination with a motor, of brake apparatus therefor, electroresponsive means for releasing said brake apparatus, electro-magnetic mechanism for holding said brake apparatus in released position, devices coacting with said releasing means to close the magnetic circuit of said electromagnetic mechanism before its electric circuit is closed, and switch appliances operated by said releasing means for controlling the latter and said electromagnetic mechanism.

3. The combination with a motor, of brake apparatus therefor, means independent of movement of any part of the motor for releasing said brake apparatus, an alternating current holding electro-magnet, and connections to close the magnetic circuit of said holding magnet and afterward close its electric circuit.

4. The combination with a motor, of a brake therefor, brake-applying mechanism, electroresponsive means to release the brake, an alternating current holding electro-magnet, and means for almost simultaneously completing the magnetic and electric circuits of said holding electro-magnet and acting upon said brake-applying mechanism to effect the release of the brake.

5. The combination with an alternating current electric motor, of brake apparatus therefor, an alternating current electro-magnet for releasing said brake apparatus, an additional alternating current electro-magnet for holding the brake apparatus in released position, and a switch for closing the electric circuit of said holding electro-magnet after its magnetic circuit is closed.

[Claims 6 to 17 not printed in the Gazette.]

1,014,211. COMPOSITION FOR REMOVING SURFACE-FINISHES. GUSTAVE DOSSELMAN and PERCY NEYMANN, Chicago, Ill., assignors, by mesne assignments, to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed June 24, 1903. Serial No. 162,885.

1. A composition of matter for removing finish from surfaces comprising waxy material, a wax solvent for said waxy material and acetone.

2. A composition of matter for removing finish from surfaces comprising paraffin and ceresin wax, a wax solvent and acetone.

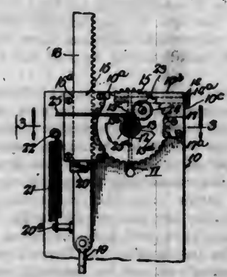
3. A composition of matter for removing finish from surfaces comprising waxy material, benzol and acetone.

4. A composition of matter for removing finish from surfaces comprising paraffin, ceresin wax, benzol and acetone.

5. A composition of matter for removing finish from surfaces comprising acetone and other solvents for dissolving the finish, and wax for preventing the too rapid drying of the composition.

[Claims 6 to 9 not printed in the Gazette.]

1,014,212. BINDING-MACHINE. CHARLES S. EMMERT, Chicago, Ill. Filed May 31, 1911. Serial No. 630,316.



1. A machine for applying a binding wire, comprising a tube adapted to support the member to be bound, the end of said tube being provided with a longitudinal shoulder and with a notch in advance of said shoulder, a binder member adapted for engagement with the wire, a carrier adapted to revolve said binder member in a circular path about said tube in engagement with the wire, means for guiding said wire as it is bound about the member to be bound, and means for rotating said carrier.

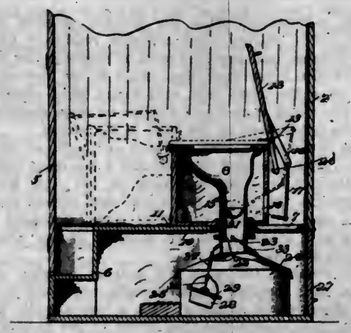
2. A machine for applying a binding wire, comprising a tube adapted to support the member to be bound, said tube having an end surface shaped to conform substantially to a helical curve the pitch of which is equal to the diameter of the wire, the end of said tube being provided with a longitudinal shoulder defining the beginning and the end of the convolution of the helical curve and with a notch in advance of said shoulder, a binder member adapted for engagement with said wire, a carrier adapted to revolve said binder member in a circular path about said tube in engagement with the wire, said binder member having a flange located in a plane at right angles to said tube adapted to coact with the end thereof to guide the wire about the member to be bound, and means for rotating said carrier.

3. A machine for applying a binding wire, comprising a tube adapted to support the member to be bound, said tube having an end surface shaped to conform substantially to a helical curve the pitch of which is equal to the diameter of the wire, the end of said tube being provided with a longitudinal shoulder defining the beginning and the end of the convolution of the helical curve and with a notch in advance of said shoulder, a rotative binding member adapted for engagement with the wire, a carrier adapted to revolve said binder member in a circular path about said tube in engagement with the wire, said binder having a radial flange located in a plane at right angles to said tube adapted to coact with the end thereof to guide the wire about the member to be bound, and means for rotating said carrier.

4. A machine for applying a binding wire, comprising a tube adapted to support the member to be bound, said tube having an end surface shaped to conform substantially to a helical curve the pitch of which is equal to the diameter of the wire, the end of said tube being provided with a longitudinal shoulder defining the beginning and the end of the convolution of the helical curve and with a notch in advance of said shoulder, a rotative gear concentric with said tube, a roller rotatively carried by said gear and adapted for engagement with said wire, said roller having a radial flange located in a plane at right angles to said tube adapted to coact with the end thereof to guide the wire about the member to be bound, and means for rotating said gear.

5. A machine for applying a binding wire, comprising a tapered tube adapted to support the member to be bound, said tube having at its smaller end an end surface shaped to conform substantially to a helical curve the pitch of which is equal to the diameter of the wire, said smaller end of the tube being provided with a longitudinal shoulder defining the beginning and the end of the convolution of the helical curve and with a notch in advance of said shoulder, a gear rotatively mounted on said tube, a reciprocable, spring-controlled rack bar adapted for operating said gear, a roller rotatively carried by said gear adapted for engagement with said wire, said roller having a radial flange located in a plane at right angles to said tube adapted to coact with the end thereof to guide the wire about the member to be bound, and means for operating said rack bar.

1,014,213. DRY CLOSET. DANIEL E. FITZGERALD, Shawnee, Okla., assignor of one-half to Charles M. Taylor, Shawnee, Okla. Filed Sept. 16, 1910. Serial No. 582,427.



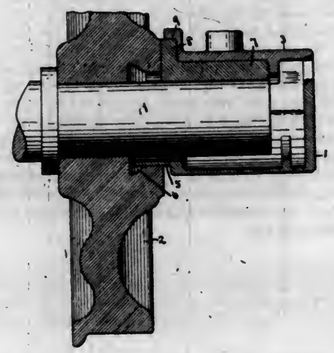
1. In a closet of the character described, a supporting platform, said platform being provided with a slot, a container located beneath the platform and provided with an upwardly extending neck registering with the slot, and a bowl hinged to the platform forward of the slot and having a neck in alinement with the slot and engaging the neck of the container to form an air tight joint therewith.

2. In a closet of the character described, an inclosing casing, a supporting platform located within the casing, said platform being provided with a slot extending from the rear edge of the platform toward the front thereof,

a removable container located beneath the platform and provided with an upwardly extending neck registering with the slot, a bowl hinged to the platform forward of the slot and having a neck in alinement with the slot to engage the neck of the container to form an air-tight joint therewith, the platform in front of the bowl having an area sufficient to support the bowl when in its turned down position, the rear of the casing being provided with a door located beneath the platform, whereby the container may be removed.

3. In a closet of the character described, a supporting platform provided with a rearwardly extending slot, a container located beneath the platform and provided with an upwardly extending neck registering with the slot, a bowl hinged to the platform forward of the slot and having a neck projecting down through said slot and into engagement with the neck of the container to form a joint therewith, a cover closing the bowl, a valve located within the neck of the bowl and normally closing the same, and a connection between the cover and the valve whereby when the cover is raised the valve is rotated to a receiving position and when the cover is lowered the valve is rotated to a discharging position.

1,014,214. AXLE-BOX. JAMES R. FLEMING, Scranton, Pa. Filed Jan. 4, 1911. Serial No. 600,706.



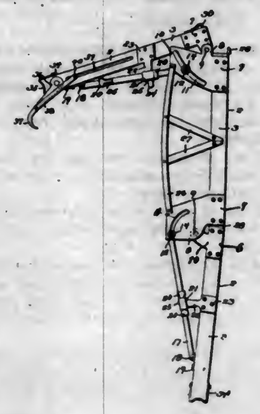
1. The combination with the bracket member of an axle box, of a bearing block movable relatively to said bracket member and provided with a semi-annular flange which fits into a corresponding recess in the face of said member upon the wheel side, said flange being adapted to receive the wheel thrust and having its ends engaged by transverse projections at the ends of the recess.

2. The combination with a wheel and axle, of an axle box comprising a bracket member and a lubricant containing member, and a bearing block in the first member which engages the hub of the wheel, said second member having a semi-cylindrical projection which is spaced from the axle and projects into an annular groove provided therefor in the hub.

3. The combination with the bracket member of an axle box, of a bearing block movable relatively to said bracket member and provided with a semi-annular flange which fits into a corresponding recess in the face of said member and is adapted to be engaged directly by the wheel hub and take the thrust thereof, the ends of said recess having walls extending toward the axle and engaging the ends of said flange.

1,014,215. LADDER. JOHN E. FORNDRAN, Rock Springs, Wyo. Filed Mar. 18, 1911. Serial No. 615,438.

1. The combination in a ladder provided with a series of foldable sections, of hinges connecting the adjoining ends of the said sections, the portion of said hinges mounted on the central section being provided with angularly extending plates, extensible truss bars connecting said plates with the sections of the ladder, and telescoping bars connecting the plates upon the opposite sides of the ladder, substantially as and for the purposes set forth.



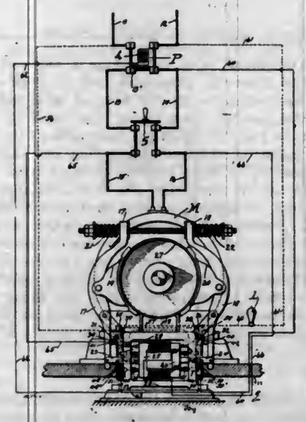
2. The combination of a ladder having a series of foldable sections, hinges connecting the said sections, plates extending angularly from the portion of the hinges mounted on the central section, extensible truss bars connecting the plates with the sections of the ladder, and arms engaging the extensible sections for supporting the intermediate portions of the foldable sections, and telescoping bars connecting the plates upon the opposite sides of the ladder, substantially as and for the purposes set forth.

3. A ladder comprising a series of foldable sections, hinges connecting the adjacent ends of the said foldable sections, plates extending from the portion of the hinge mounted on the central section, bars connecting the plates upon each side of the central section of the ladder, telescoping sections connecting the plates upon the opposite sides of the ladder, truss bars connecting the telescoping sections with the sections of the ladder, sleeves located upon the truss bars, and arms engaging the sleeves for supporting the intermediate portion of said foldable sections, substantially as and for the purposes set forth.

4. The combination in a ladder comprising a series of collapsible sections, hinges connecting the adjacent ends of the said foldable sections, plates extending angularly from the portion of the hinge secured to the central section, and having curved slots formed therein connecting the plates upon one side of the ladder, telescoping sections, the ends of which are adapted to slide within curved slots formed in the plates upon the opposite sides of the ladder, truss bars connecting the telescoping sections with the end sections of the ladder, sleeves located upon the truss bars, arms carried by the sections of the ladder for engagement with the sleeves for supporting the intermediate portion of said sections, and catches formed upon the adjacent ends of the sections for preventing the same from collapsing when extended, substantially as and for the purposes set forth.

5. A ladder such as described comprising a series of foldable sections, hinges connecting the adjacent ends of the said sections, plates extending angularly from the portion of the hinge secured to the central section, bars connecting the plates upon the sides of the central section, telescoping rods connecting the plates upon opposite sides of the ladder, extensible truss bars connecting the telescoping rods with the ends of the foldable sections, the inner ends of said extensible truss bars being provided with sleeves embracing the said truss bars, sleeves located upon the said truss bars between the before-mentioned sleeves, arms extending from the opposite sides of the foldable sections and engaging slots formed in the sleeves located between the first mentioned sleeves, shoulders formed upon these arms for engaging said sleeves, tongues formed upon the outer of the sleeves for engaging the shoulder for supporting the foldable sections upon the said truss bars, and catches formed upon the adjacent ends of the ladder sections, substantially as and for the purposes set forth.

1,014,216. BRAKE-MAGNET PROTECTIVE DEVICE. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 20, 1909. Serial No. 491,165.



1. The combination of an alternating current brake comprising movable magnet cores, and electro-responsive means for indicating when the cores are too far released.

2. The combination of an alternating current brake comprising a movable magnet core or cores, and means operated by the cores to signal when the core or cores are too far released.

3. The combination of an alternating current brake comprising cores which are operatively attracted when the brake is energized and released when the brake is de-energized, and means operated by the cores to signal when the cores are too far released.

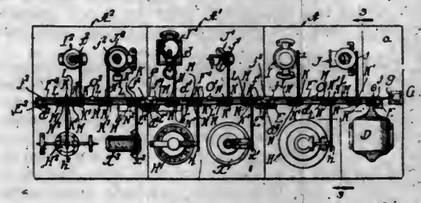
4. The combination of an electro-magnet having movable cores which are adapted to reduce an air gap when the electro-magnet is energized and which are separated to lengthen the air gap when the electro-magnet is de-energized, and means for automatically operating a signal when the air gap is increased beyond a certain definite limit.

5. The combination of an electro-magnet having a variable air gap, circuit connections for supplying energizing current to the electro-magnet, and means for automatically opening the circuit to the electro-magnet when the air gap of the electro-magnet is increased beyond a definite amount.

[Claims 6 to 35 not printed in the Gazette.]

1,014,217. POWER-TABLE FOR KITCHEN UTENSILS. JOHN H. GOEHST and RALPH G. CARPENTER, Chicago, Ill., assignors to The Federal Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1910. Serial No. 557,081.

1. A power table for kitchen utensils embracing a table, a power shaft supported on said table, an electric motor adapted to rotate said shaft, a driving member loosely mounted on said shaft and having fixed longitudinal relation thereon to a driven member, a clutch member feathered to said shaft adjacent said driving member, means for moving said clutch member into and out of operative engagement with said driving member, and a switch adapted to throw said motor in circuit with a source of current supply, said switch including a movable member adapted to be operated by said clutch operating means when the clutch is thrown into engagement with said driving member.



2. A power table for kitchen utensils embracing a table, a power shaft supported on said table, an electric motor adapted to rotate said shaft, a driving member loosely mounted on said shaft and having fixed longitudinal relation thereon to a driven member, a clutch member feathered to said shaft adjacent said driving member, a vertically swinging lever hinged to said table and operatively connected with said clutch member, a socket switch adapted to throw said motor in circuit with a source of current supply, a reciprocable member or bar supported above said table, a switch plug carried by said reciprocable bar, and a pin carried by said bar adapted to be engaged by said vertically swinging lever when said lever is swung to throw said clutch member into engagement with said driving member.

3. A power table for kitchen utensils embracing a table, a power shaft supported above said table, an electric motor adapted to rotate said shaft, a plurality of kitchen utensils secured to said table, each provided with a driven member adapted to operate said utensils, driving members loosely mounted on said shaft, each having fixed longitudinal relation thereon with respect to the driven member of one of said utensils, a clutch member feathered to said shaft adjacent each of said driving members, vertically swinging levers hinged to said table constructed to operate said clutch members, a socket switch supported above said table adapted to throw said motor into circuit with a source of current supply, a reciprocating bar supported above said table, a switch plug carried by said bar, and pins located on said bar, one for each vertically swinging lever, adapted to be engaged by said levers when they are thrown to bring said clutch members into engagement with their respective driving members.

4. A power table for kitchen utensils comprising a series of table sections and a power shaft section, a sectional switch operating member, and one or more kitchen utensils carried by each table section, means for detachably connecting said table, power shaft and switch operating member sections, a motor secured to one of said table sections adapted to rotate the power shaft section carried by said table section, a switch carried by said table section, and mechanism carried by said table sections adapted to operatively connect to said power shaft any one of the utensils carried by said table sections.

5. A power table for kitchen utensils comprising a series of table sections and a power shaft section, a sectional switch operating member, and one or more kitchen utensils carried by each table section, means for detachably connecting said table, power shaft and switch operating member sections, a motor secured to one of said table sections adapted to rotate the power shaft section carried by said table section, a switch carried by said table section, mechanism carried by said table sections adapted to operatively connect to said power shaft any one of the utensils carried by said table sections, and means adapted to automatically throw said switch operating member when any one of said utensils is operatively connected to its respective power shaft section.

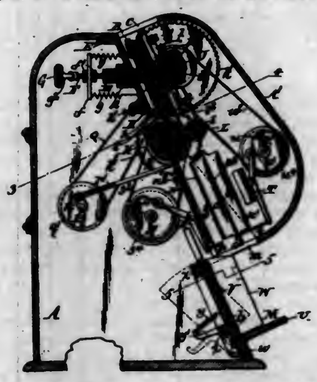
[Claim 6 not printed in the Gazette.]

1,014,218. METHOD OF MAKING MAGNETIC MATERIALS. ROBERT ABBOTT HADFIELD, Sheffield, England. Filed Mar. 21, 1907. Serial No. 363,658.

1. The herein described method of producing a magnetic material of high permeability and low hysteresis action, which consists in alloying a magnetic substance with silicon, reducing the alloy to a thin body, heating said body to a relatively high temperature below its melting point, cooling said body slowly, reheating it to a temperature below that first employed and cooling said body rapidly.

2. The herein described process of producing a magnetic material of high permeability and low hysteresis action, which consists in suitably alloying iron with silicon, aluminium, or phosphorous, rolling the alloy into thin sheets, heating said body to a temperature of from about 900° C. to about 1000° C. then cooling said body slowly, then reheating the body to a temperature from about 700° C. to about 800° C. and then cooling said body more rapidly than the first cooling.

1,014,219. CARD-SHUFFLER. CHARLES T. HALL, Buffalo, N. Y., assignor of one-half to Edward J. Smith, Buffalo, N. Y. Filed Nov. 1, 1909. Serial No. 525,616.



1. A card shuffler comprising a follower adapted to support a deck of cards, a guide rod connected with said follower, an adjusting screw connected with the guide rod and provided with screw nuts, a cross bar arranged on said adjusting screw between said nuts, and springs acting on said cross bar and operating to push the follower forwardly.

2. A card shuffler comprising a follower adapted to support a deck of cards, a guide rod connected with said follower, an adjusting screw connected with the guide rod and provided with screw nuts, a cross bar arranged on said adjusting screw between said nuts, springs acting on said cross bar and operating to push the follower forwardly, and a lever connected with said adjusting rod.

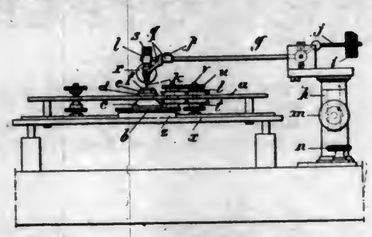
3. A card shuffler comprising a follower adapted to support a deck of cards on its flat side, a bracket on which said follower is guided, a front wall adapted to support the deck of cards at its front end and movable transversely thereto for adjusting its front edge relatively to the top of the deck and adjusting screws mounted on said bracket and engaging with the rear edge of the front wall.

4. A card shuffler comprising feeding means for delivering cards successively from a deck, and a mixing device comprising a plurality of chutes adapted to receive the cards from the feeding means, and means for temporarily retaining the cards in a chute.

5. A card shuffler comprising feeding means for delivering cards successively from a deck, and a mixing device comprising a plurality of chutes adapted to receive the cards from the feeding means and each having an inlet at one end for the admission of the cards and an outlet for discharging the cards, and means for temporarily retaining the cards in a chute.

[Claims 6 to 14 not printed in the Gazette.]

1,014,220. MONOTELEPHONE-RELAY. PAUL HEINA, Paris, France, assignor to Sté des Téléphones Multiplex, (System E. Mercadier,) Paris, France. Filed Dec. 22, 1910. Serial No. 598,702.



A mono-telephone relay comprising a plate of variable acoustic and magnetic properties and of great magnetic damping, an armature of soft iron of geometrical form assuring the general symmetry of the *ensemble* of plate and armature and devoid of all magnetism placed at the center of and at a certain distance from the said plate, a lever carrying at its end a knife made of an alloy which is a good conductor of electricity and non-oxidizable, a plate of like alloy, mounted on the first-named plate, and adapted to receive the said knife in contact with it and an electric circuit connecting the monotelephone relay with a continuous current relay comprising a source of continuous current, double windings one of which is used for actuating the printing apparatus, while the other is short circuited on itself, and a condenser shunted across the plate and the lever of the monophone relay.

1,014,221. DEVICE FOR MAKING PLATES OF ARTIFICIAL STONE. ADALBERT HERMANN, Vienna, Austria-Hungary. Filed Feb. 25, 1910. Serial No. 545,954.

1. In a device for feeding pulp prepared from fibers and hydraulic binding media or other filling materials over the progressively lengthwise moved sieve of a machine for making plates from this pulp the combination of the sieve with means for feeding the pulp over the top surface of the sieve transversely to the direction of movement thereof for the purpose described.

2. In a device for feeding pulp prepared from fibers and hydraulic binding media or other filling materials over the progressively lengthwise moved sieve of a machine for making plates from this pulp the combination of the sieve with means for feeding the pulp simultaneously from opposite sides over the top surface of the sieve transversely to the direction of movement thereof for the purpose described.

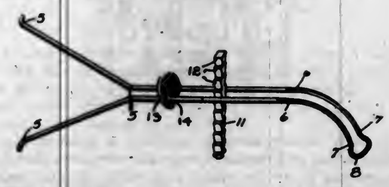
3. In a device for feeding pulp prepared from fibers and hydraulic binding media or other filling materials over the progressively lengthwise moved sieve of a machine for making plates from this pulp the combination of the sieve with means for periodically feeding the pulp over the top surface of the sieve transversely to the direction of movement thereof for the purpose described.

4. In a device for feeding pulp prepared from fibers and hydraulic binding media or other filling materials over the progressively lengthwise moved sieve of a machine for making plates from this pulp the combination of the sieve with means for periodically feeding the pulp simultaneously from opposite sides over the top surface of the sieve transversely to the direction of movement thereof for the purpose described.

5. In a device for feeding pulp prepared from fibers and hydraulic binding media or other filling materials over the progressively lengthwise moved sieve of a machine for making plates from this pulp the combination of the sieve with a pulp receptacle laterally disposed with respect to the sieve and displacing or propelling members acting within the said pulp receptacle for feeding the pulp on to the top of the sieve transversely to the direction of movement of the sieve, substantially as and for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

1,014,222. PRESS. MAMIE N. HOPPE, Hesperia, Mich. Filed Aug. 16, 1911. Serial No. 644,340.

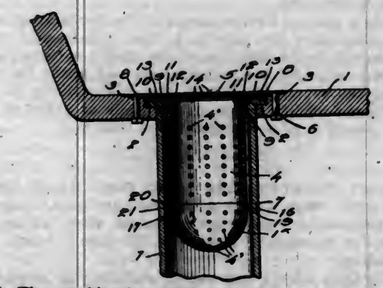


1. The combination with a cylindrical receptacle having a pouring lip with apertures formed therein, of arms having curved ends for engagement in the apertures, a piston fitting in the receptacle, a plunger bar projecting upward from the piston and having a ratchet portion, and means for clamping the arms against the ratchet portion of the bar.

2. The combination with a cylindrical receptacle having a pouring lip, of a pair of arms removably pivoted thereto, a piston within the receptacle, an upwardly projecting bar carried by the piston and means carried by one of the arms for engaging the other arm for clamping said arm in adjusted position on the bar.

3. The combination with a measure having a pouring lip, said lip having apertures formed therein, of arms connected at one end and having their other ends flaring and engaged in the apertures of the lip, a plunger bar having a ratchet portion and bearing a piston, and a curved finger pivoted to one of the arms and adapted to engage the other arm to hold the arms together in adjusted position on the ratchet portion of the bar.

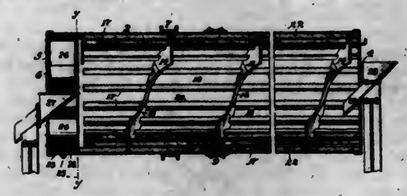
1,014,223. TRAP FOR WASHSTANDS. EDWIN SCHALL HUNSICKER, Norristown, Pa. Filed Sept. 24, 1910. Serial No. 583,660.



1. The combination with a sink having an opening therein, an annular ledge surrounding said opening, and a waste-pipe suspended on said ledge, of a strainer adapted to be secured within said waste-pipe and comprising an upper perforated tubular section, said section having a horizontal flange adapted to rest on the upper edge of said waste-pipe, a screw threaded enlargement interiorly of said waste-pipe and near its upper end, a screw threaded enlargement exteriorly of said tubular section disposed beneath said flange and adapted for engagement with the first-named enlargement, integrally formed cross bars on the upper end of said tubular section, and a perforated inverted dome shaped bottom hingedly connected to the lower end of said tubular section.

2. The combination with a sink having an opening therein, an annular ledge surrounding said opening, and a waste-pipe suspended on said ledge, of a strainer adapted to be secured within said waste-pipe and comprising an upper perforated tubular section, said section having a horizontal flange adapted to rest on the upper edge of said waste-pipe, a screw threaded enlargement interiorly of said waste-pipe, a screw threaded enlargement exteriorly of said tubular section disposed beneath said flange and adapted for engagement with the first-named enlargement, said first-named enlargement being disposed interiorly of said tubular section integrally formed cross bars on the upper end of said tubular section, a perforated dome-shaped bottom hingedly connected to the lower end of the tubular section, the lower portion of the upper section being formed with an integral annular recess, said bottom having a reduced annular lip adapted to enter said annular recess in the upper section, an integral lug on the outer face and near the lower end of said section, and a spring latch secured near one edge of said bottom and adapted to engage with said lug to retain the said bottom in engagement with the upper section.

1,014,224. APPARATUS FOR RECOVERING GOLD AND SILVER BY USE OF CYANID SOLUTIONS. WILLIAM L. IMLAY, Philadelphia, Pa. Filed Feb. 16, 1911. Serial No. 609,003.



1. In an apparatus of the character described, the combination of a substantially horizontal cylinder having an inlet at one end and a discharge at the other end and also provided on its interior with a helical flange secured to its interior side wall and of a depth less than the radius of the cylinder to provide a central passage through the same and divide the materials being treated into a plurality of separate bodies and also having a plurality of bucket devices arranged upon its inner walls between the helical flanges for lifting and spilling the contents being treated, means to rotate the cylinder slowly, means for delivering materials to the inlet end of the cylinder, and means for delivering the materials from the discharge end.

2. In an apparatus of the character described, the combination of a substantially horizontal cylinder having an inlet at one end and a discharge at the other end and also provided on its interior with a helical flange secured to its interior side wall and of a depth less than the radius of the cylinder to provide a central passage through the same and divide the materials being treated into a plurality of separate bodies and also having a plurality of longitudinal parallel inwardly directed ribs forming bucket devices arranged upon its inner walls between the helical flanges and abutting thereupon for lifting and spilling the contents being treated, means to rotate the cylinder slowly, means for delivering materials to the inlet end of the cylinder, a cement lining to the interior of the cylinder and forming fluid tight joints between the said cylinder and the helical flange and said flange and the longitudinal parallel ribs, and means for delivering the materials from the discharge end.

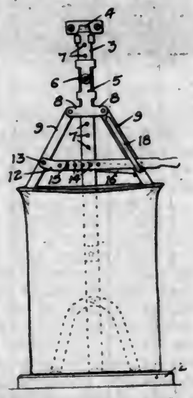
3. In an apparatus of the character described, the combination of a cylinder having an inlet at one end and a discharge at the other end and also provided on its interior with a helical flange secured to its interior side wall and of a depth less than the radius of the cylinder to provide a central passage through the same and a plurality of longitudinal inwardly directed ribs having serrated flanges at their free edges and forming bucket devices arranged upon its inner walls between the helical flanges for lifting and spilling the contents being treated, means to rotate the cylinder slowly, means for delivering materials to the inlet end of the cylinder, and means for delivering the materials from the discharge end.

4. In an apparatus of the character described, the combination of a cylinder having an inlet at one end and a discharge at the other end and also provided on its interior with a helical flange secured to its interior side wall and of a depth less than the radius of the cylinder to provide a central passage through the same and a plurality of bucket devices arranged upon its inner walls between the helical flanges for lifting and spilling the contents being treated and also having an annular chamber adjacent to the discharge end for holding amalgamating mercury, means to rotate the cylinder slowly, means for delivering materials to the inlet end of the cylinder, and means for delivering the materials from the discharge end.

5. In an apparatus of the character described, a substantially horizontal rotatable cylinder having a central aperture through the same to permit free passage of air from the outside and further having upon its interior wall a helical flange for dividing the fluid contents at the lower part into separate bodies, and a plurality of longitudinal buckets arranged upon the interior wall between adjacent flange portions of the helical flange, combined with means to rotate the cylinder.

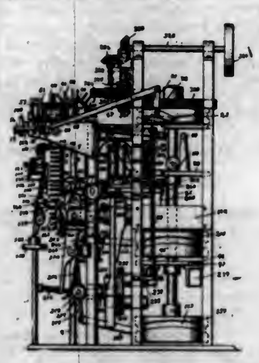
[Claims 6 to 13 not printed in the Gazette.]

1,014,225. BAG-HOLDER. WILLIAM H. IVERSON, Taylors Falls, Minn., and OLE E. ROOTH, St. Croix Falls, Wis. Filed Apr. 14, 1910. Serial No. 555,466.



A bag holder comprising an upright standard, a slide mounted thereon, bars pivotally connected at their upper ends to said slide, and having forwardly extending lower portions forming bag supporting arms, having means for engaging the top of a sack, a rod mounted on one of said bars and spaced therefrom to form a guide-way, a lever pivoted at one end of the other bar and having its free end projecting through the space between said bar and rod, and adapted to oscillate therein, means in the upper portion of said guide-way to engage and hold said lever in its raised position, said lever dropping by gravity to the bottom of said guide-way when released from said holding means to spread said arms, and a link connecting said lever near its pivot with the bar in which said rod is mounted.

1,014,226. COUNTER-FORMING MACHINE. ALBERT F. JONES, Salem, Mass. Continuation of application Serial No. 359,202, filed Feb. 25, 1907. This application filed May 26, 1909. Serial No. 498,411.



1. In a counter-forming machine, a blank-carrier consisting of an endless chain, rotatable supports therefor arranged one above the other, a plurality of blank-supports projecting outwardly from said chain, which hold the blanks in horizontal position, transversely with respect to the chain, means for moving said chain continuously and intermittingly operated means for engaging the ends of the blanks and for moving them endwise to remove them from their supports, substantially as described.

2. In a counter-forming machine, a blank-carrier consisting of an endless chain, a plurality of plates secured thereto and two pairs of pins projecting from each plate, disposed to present a space between them for a blank, substantially as described.

3. In a counter-forming machine, a blank-carrier consisting of an endless chain, a plurality of plates secured thereto and two pairs of pins projecting from each plate, disposed to present a space between them for a blank, means for moving said chain continuously and intermittently operated means for engaging the blanks borne by the carrier and for removing them therefrom, substantially as described.

4. In a counter-forming machine, the combination of a curving-device comprising coöperating convex and concave members, a pair of feeding-rolls arranged in front of said curving-device, and automatically operated means for delivering the blanks to said feeding-rolls, whereby flat blanks are automatically delivered to the feeding-rolls and fed to the curving-device and curved transversely in the direction of their length from end to end, substantially as described.

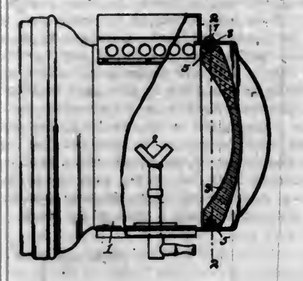
5. In a counter-forming machine, the combination with a curving-device for curving a blank transversely from end to end in the direction of its length, a feeding-and-bending device for the curved blank, and means for conveying the curved blank from the curving-device to the feeding-and-bending device, substantially as described.

[Claims 6 to 77 not printed in the Gazette.]

1,014,227. ADJUSTABLE LENS FOR HEADLIGHT-LAMPS. WILLIAM T. JONES, Detroit, Mich., assignor to Edmunds & Jones Mfg. Co., Detroit, Mich., a Corporation of Michigan. Filed Oct. 3, 1910. Serial No. 584,965.

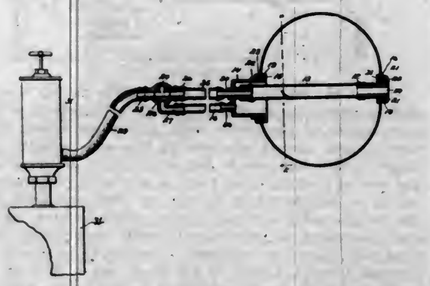
1. A lamp body, a lens having a channel in its periphery, a ring lying in said channel, the body of the lamp having slots therein, and an attaching device passing through said slots and engaging said ring.

2. A lamp body having diagonal slots in the wall thereof, an adjustable ring within the lamp body and crossing said slots, means passing through said slots and engaging said ring to enable the adjustment of the ring within the body, and a lens carried by and movable with said ring.



3. A lamp body, having diagonal slots in the wall thereof, a lens within the body of the lamp having a channel in its periphery, a ring lying in the said channel, and headed screws passing through the slots in the wall of the lamp and threaded in said ring.

1,014,228. SYRINGE. JOHN F. KELLOGG, Guthrie, Okla. Filed Jan. 4, 1911. Serial No. 600,802.



1. In a device of the class described, a rigid tubular head, a rigid shell, an expansible body detachably connected respectively to said head and to said shell, a flexible tubular conductor connected respectively to said head and to said shell within the expansible body, a main supply conductor connected to said flexible tubular conductor, a branch conductor leading at one end from said main conductor and connected at the other end into said shell, means for supplying liquid under pressure to said main conductor and to said flexible conductor, and means for conducting liquid from said main conductor to said branch conductor and thence through the shell into the expansible body.

2. In a device of the class described, a rigid tubular head, a rigid shell, an expansible body detachably connected respectively to said head and to said shell, a flexible conductor connected to said head and to said shell within the expansible body, a main supply conductor connected to said flexible tubular conductor, a three-way valve in said main conductor, and a branch conductor leading at one end from said three-way valve and connected at the other end into said shell, whereby means are provided for conducting liquid under pressure alternately through said main conductor or through said branch conductor or cutting off the supply of the conductors.

3. In a device of the class described, a flexible tubular conductor, an expansible body surrounding said tubular conductor, another conductor adapted to be connected to a source of liquid supply, and means for alternately conducting liquid from said last mentioned conductor to said flexible tubular conductor and to said expansible body.

1,014,229. AIR-VENT FOR STEAM-RADIATORS. ORLANDO KELSEY, Blackwood, N. J. Filed Jan. 31, 1911. Serial No. 605,800.

1. A device of the character described, comprising a casing having a chamber therein having an inlet passage in its lower end, a removable member in said chamber comprising a head, and a tubular extension communicating with and integral with the head, and of a diameter less than the diameter of the passage communicating with said chamber, screens around said tubular extension and in said head, and a cap on said casing having a restricted opening therein, substantially as described.

2. A device of the character described, comprising a casing having a chamber therein having an inlet passage in its lower end, a removable member in said chamber comprising a head, and a tubular extension communicating with and integral with the head, and of a diameter less than the diameter of the passage communicating with said chamber, screens around said tubular extension and in said head, a ring on said screens in the head, and a cap screwed onto said casing having a restricted opening therein, and holding said ring on the screens, substantially as described.

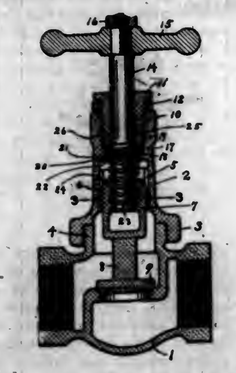
3. A device of the character described, comprising a casing having a chamber therein having an inlet passage in its lower end, a removable member in said chamber comprising a head, and a tubular extension communicating with and integral with the head, and of a diameter less than the diameter of the passage communicating with said chamber, screens around said tubular extension and in said head, screens on the head, a ring on said last-mentioned screens, other screens on the ring, a cap screwed onto said casing, a post in said cap bearing on the screens above the ring, and a restricted opening through said post, substantially as described.

4. A device of the character described, comprising a casing having a chamber therein having an inlet passage in its lower end, a removable member in said chamber comprising a head, and a tubular extension communicating with and integral with the head, and of a diameter less than the diameter of the passage communicating with said chamber, screens around said tubular extension and in said head, screens on the head, a ring on said last-mentioned screens, other screens on the ring, a cap screwed onto said casing, a post in said cap bearing on the screens above the ring, a restricted opening through said post, an upwardly projecting externally screw-threaded tubular post on said cap, and a cover screwed onto said last-mentioned post and having openings therein, substantially as described.

5. A device of the character described, comprising a casing, having an enlarged chamber in its upper portion and an inlet passage communicating with the center of the bottom of said chamber, inwardly projecting lugs in the bottom of said chamber, inwardly projecting lugs between the ends of said chamber, a removable member comprising a head adapted to fit on said upper set of lugs, and a tubular extension integral with the head and projecting through said chamber and into the inlet passage, and of a diameter smaller than said passage, said head having openings therein, screens in said head, screens on said head, screens on said lower lugs around the tubular extension, and a cap screwed onto said casing confining the screens and the removable member and having a restricted opening therein, substantially as described.

[Claim 6 not printed in the Gazette.]

1,014,230. VALVE. HARRY E. KERR, Detroit, Mich. Filed May 20, 1911. Serial No. 628,541.



1. In a valve, the combination of a body, a bonnet therefor, said bonnet having an outer bore and an interior flange intermediate its ends having a beveled upper face, a valve below the flange and adapted to engage a seat in the body, a stem engaging the valve and extending up through the bonnet, said stem having a collar formed with beveled upper and lower faces fitting against the upper face of the flange, a metal ring within the bore of the bonnet and fitting the upper face of the collar on the stem, and a sleeve, screw-threaded in the bore at the outer end of the bonnet and tapering downwardly, and engaging the upper end of the ring.

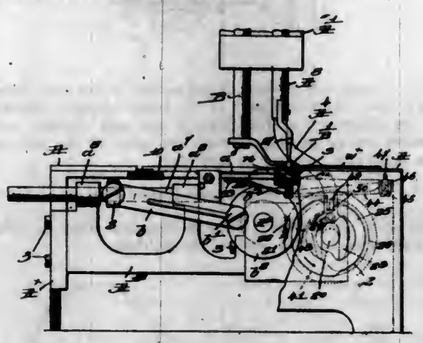
2. In a valve, the combination of a body, a hollow bonnet therefor having an enlarged portion engaging the body, an interior flange intermediate the ends, and also having a bore at its outer end beyond the flange which bore is smooth next to the flange and screw threaded at its outer end, a valve having a screw-threaded sleeve slidably mounted within the bonnet, a stem revolubly mounted within the bonnet and having a collar with inclined faces intermediate its ends and its inner end screw-threaded in said sleeve, said collar having its inner face fitting the adjacent face of the flange, a ring of malleable metal within said bore surrounding the stem and having an inclined inner face engaging the collar, and a gland having an inclined face to engage the ring, screw-threaded in said bore.

3. In a valve, the combination of a body, a bonnet therefor having an interior flange intermediate its ends, a valve mounted in the body and bonnet, a stem revolubly mounted in the bonnet and having a collar fitting against said flange, a malleable metal ring fitting the bore of the bonnet and the collar of the stem, and a screw threaded member having a downwardly tapering face engaging said ring to force the same in proper engagement with the bonnet and collar.

1,014,231. SEWING-MACHINE. JOHN KIEWICZ, Hyde Park, Mass. Filed Jan. 20, 1911. Serial No. 603,656.

1. In a sewing machine, a throat plate having a slotted cord guiding groove, a stitching mechanism including a needle, and means to reciprocate it in a path transversely of the groove, a vibrating bender to intermittingly engage and bend the work into the slotted portion of the groove, a cord positioning feed block having a concaved cord engaging surface and cord engaging teeth and located directly beneath the needle path and movable in the slotted portion of the groove, and means to operate said feed block to position the cord in the path of the needle.

2. In a sewing machine, a throat-plate having a slotted cord-guiding groove, a stitching mechanism including a needle, and means to reciprocate it in a path transversely of the groove, a vibrating bender to intermittingly engage and bend the work into the slotted portion of the groove, a cord positioning feed-block having a concaved cord-engaging surface and cord-engaging teeth and located directly beneath the needle path and movable in the slotted portion of the groove, means to elevate said feed-block toward the needle path thereby to place a cord sustained by the feed-block in position to be penetrated by the needle and to hold said feed-block stationary in its elevated position while said needle penetrates and is withdrawn from the portion of the cord immediately above and upheld by said feed-block and then to give said feed-block a forward feeding movement while in its elevated position with its teeth in engagement with the cord, the concaved cord-engaging surface acting to sustain the cord laterally against the thrust of the needle when said cord is upheld and penetrated by the needle, and means to depress the feed-block and return it to neutral position while the bender descends to form a bend in the work.



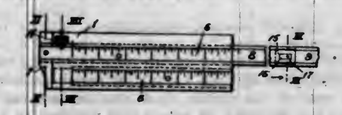
3. In a sewing-machine, a throat-plate having a cord-guiding groove longitudinally slotted in its bottom and at right angles to the needle path, a cord-positioning feed-block having a concaved operative face and vertically and longitudinally movable in the slotted part of the groove and having cord-engaging teeth, a vertically reciprocating bender to intermittingly engage and bend the work into the slotted portion of the groove, stitch-forming mechanism, including an eye-pointed needle reciprocated in a fixed path above the feed-block, to penetrate, on successive forward thrusts, a bend in the work and a cord at the underside of the work positioned in the needle path by the feed-block, the cord when penetrated by the needle being unheld beneath the latter by the feed-block, and mechanism to effect the actuation of the feed-block, said mechanism comprising means to elevate the feed-block and then to maintain said feed-block at rest for a sufficient length of time to permit the needle to penetrate the cord and then withdraw therefrom, while the cord is upheld by the feed-block directly under the needle, and then to give said feed-block a forward movement to feed the cord.

4. In a sewing-machine, a throat-plate having a cord-guiding groove longitudinally slotted in its bottom and at right angles to the needle-path, a feed-block having a toothed face longitudinally grooved and vertically and longitudinally movable in the slotted part of the groove, a vertically reciprocating bender to intermittingly engage and bend the work into the said groove, stitch-forming mechanism, including a horizontally-reciprocating eye-pointed needle to penetrate, on successive forward thrusts, a bend in the work and a cord at the under side of the work positioned in the needle path by the feed-block, the latter engaging and supporting the cord vertically and laterally when penetrated by the needle, and positively acting means to maintain the feed-block elevated and stationary during each cord-penetrating thrust of the needle and to effect the feed-stroke of the block while elevated and with its toothed face in engagement with the cord after withdrawal of the needle from the cord and prior to the next forward thrust of the needle into a bend in the work.

5. In a sewing-machine, a throat-plate having a cord-guiding groove longitudinally slotted in its bottom and at right angles to the needle path, a cord-positioning feed-block having a concaved operative face and vertically and longitudinally movable in the slotted part of the groove, a vertically reciprocating bender to intermittingly engage and bend the work into the slotted portion of the groove, stitch-forming mechanism, including an eye-pointed needle reciprocated in a fixed path to penetrate, on successive forward thrusts, a bend in the work and a cord at the underside of the work positioned in the needle path by the feed-block, a longitudinally slidable and vertically swinging bar on which the feed-block is mounted, a cam co-operating with said bar to lift it positively thereby to place a cord in said groove in position to be penetrated by the needle, said cam being provided with a dwell of considerable length which maintains the feed-block stationary in elevated position during each cord-penetrating thrust and subsequent retraction of the needle, said cam having also a lateral portion which becomes active after the termination of the dwell to move said bar longitudinally to effect the feed-stroke of the block while it is elevated and in engagement with the cord, and a single spring coöperating with the bar to depress it and the feed-block while the bender descends and to return said bar and the feed-block to the starting end of its feed stroke while the needle is penetrating the bend in the work.

[Claims 6 to 9 not printed in the Gazette.]

1,014,232. MEASURING INSTRUMENT. PHILIP N. KILLINGER, Pittsburgh, Pa. Filed July 20, 1908, Serial No. 444,380. Renewed June 8, 1911. Serial No. 632,022.



1. In a device of the character described, a body portion 1 provided with a slideway 2 extending throughout the length of the body portion and with another slideway 3 of the same cross section as the slideway 2, a graduated measuring section 6 mounted in the slideway 2 and provided with a head 7, another graduated measuring section 8 adapted to fit the slideway 3 and having a cross section the same as that of the section 6, and means at the ends of the sections whereby they may be detachably joined together, the said means being constructed to permit the joined part to slide freely through the slideway 2.

2. In a device of the character described, a body portion having an end adapted to act as a jaw and a slideway extending longitudinally through the body portion, a bar mounted in the slideway and provided with a jaw adapted to oppose the jaw end on the body portion, and another jaw mounted on the other end of the body portion and projecting from the side thereof in position to coöperate with the movable jaw for inside work when the bar is reversed in the slideway.

3. In a device of the character described, a body portion having an end adapted to act as a jaw and a slideway extending longitudinally through the body portion, a bar mounted in the slideway and provided with a jaw adapted to oppose the jaw end on the body portion, and a foldable jaw mounted on the other end of the body portion and adapted when open to project from the side thereof in position to coöperate with the movable jaw for inside work when the bar is reversed in the slideway.

4. In a device of the character described, a body portion provided on one side with a groove constituting a slideway, a flat graduated measuring bar mounted therein and provided on the edge with a rack, a graduated operating worm therefor and means whereby the worm may be moved laterally to disengage it from the rack.

5. In a device of the character described, a body portion provided with a slideway, a graduated measuring bar mounted therein and provided on the edge with a rack consisting of tapering teeth, and an expansible graduated operating worm therefor having a correspondingly shaped thread.

[Claims 6 to 8 not printed in the Gazette.]

1,014,233. PRACTICE-BALL. CHARLOTTE B. W. KIP, Montclair, N. J. Filed July 21, 1910. Serial No. 573,009.

1. A golf practice ball comprising a ball having an opening, a tether having an end inserted in the opening, and means wholly within the body of the ball intersecting the opening for securing the tether to the ball.

2. A golf practice ball consisting of a ball having an opening, a tether having one end inserted within the opening, and a rigid member intersecting the opening and engaging the tether to secure the same to the ball.

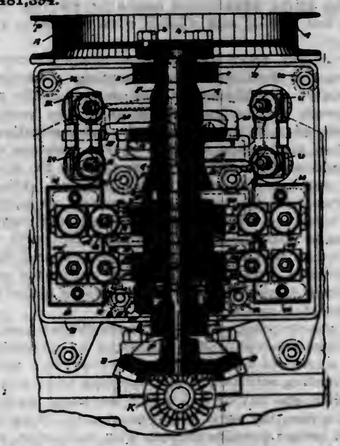
3. A golf practice ball consisting of a ball having an opening, a tether having one end inserted within the opening, and a rigid member intersecting the opening and engaging the tether to secure the same to the ball, said rigid member being located wholly within the body of the ball.

4. A golf practice ball consisting of a ball having an opening, a tether having one end inserted within the opening, and a bar embedded in the ball and intersecting the opening to which bar the tether is secured.

5. A golf practice ball consisting of a ball having an opening, a tether inserted within the opening and a member extending transversely through the ball and intersecting said opening to which member the tether is secured, the ends of said member terminating within the body of the ball short of the surface of the latter.

[Claim 6 not printed in the Gazette.]

1,014,234. MECHANICAL REVERSING AND ACCELERATING SWITCH. DAVID LARSON, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 5, 1909. Serial No. 481,394.



1. The combination with an electric motor, of manually operable starting and stopping means, and automatic selective means operated by the motor for accelerating itself when started in the intended direction and for effecting the stopping thereof when started in the opposite direction.

2. The combination of an electric motor, of manually operable starting and stopping means, and automatic mechanical means operated by the motor to accelerate the motor when it starts in the intended direction and to return the manual means to open position when the motor starts in the direction opposite to that intended.

3. The combination of an electric motor, of manually operable starting and stopping means, accelerating switches automatically closed by the rotation of the motor in the direction presumed in a closing of the starting means, and mechanical devices to effect the operation of the said stopping means and the stopping of the motor by rotation of the motor in the direction opposite to that intended.

4. The combination with an electric motor, of controlling mechanism therefor operable manually into positions to effect the starting in either direction and stopping of the motor, and means to automatically operate said mechanism to the motor stopping position when the direction of the motor is reversed independently of said mechanism.

5. The combination with an electric motor and circuits therefor, of mechanism for opening and closing said circuits to effect the rotation of the motor in either direction, and means for automatically operating said mechanism to cut off the supply of current to the motor when the direction of rotation of the motor is reversed.

[Claims 6 to 43 not printed in the Gazette.]

1,014,235. ENERGY-RELAY. GEORGES LAUDET and LÉON GAUMONT, Paris, France, assignors to Société des Etablissements Gaumont, Paris, France. Filed July 2, 1910. Serial No. 570,192.

1. An energy relay comprising a housing, orifices for the passage of fluid through said housing, a washer movably mounted in said housing and controlling the passage way through one of said orifices, said washer being of smaller dimensions than the housing whereby fluid may pass to both sides of the washer, and means for varying the pressure on one side of said washer with respect to that on the other.

2. An energy relay comprising a housing, orifices for the passage of fluid through said housing, a washer movably mounted in said housing, and controlling the passage way through said orifices, the parts of the housing on either side of said washer being in communication with each other, and means for varying the pressure on one side of said washer with respect to that on the other.

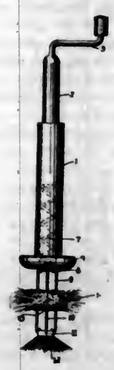
3. An energy relay comprising a housing, orifices for the passage of fluid through said housing, an obturating element movably mounted in said housing, and controlling the passage way through said orifices, the parts of the housing on either side of said obturating element being in communication with each other, and means for varying the pressure on one side of said obturating element with respect to that on the other.

4. An energy relay, especially for amplifying speech and sound vibrations, comprising a housing, an admission orifice for a current of fluid and a principal exit orifice, a disk controlling said exit orifice, said disk being thin, light and flexible and having but slight movement away from the said orifice, the parts of the housing on either side of said disk being in communication with each other, an exit from said housing at the rear side of said disk, and means for modifying the current of fluid escaping from said last-named exit.

5. An energy relay, especially for amplifying speech and sound vibrations, comprising a housing, an admission orifice for a current of fluid and a principal exit orifice, a disk controlling said exit orifice, said disk being thin, light and flexible and having but slight movement away from said orifice, an adjustable cap closing the end of said housing opposite said exit orifice, whereby the space in the rear of said disk may be varied, the parts of the housing on either side of said disk being in communication with each other, an exit from said space, and means for modifying the current of fluid escaping from said last-named exit.

[Claims 6 to 8 not printed in the Gazette.]

1,014,236. CUSPIDOR-CLEANER. LAURA D. LAWHON, Yellow Pine, La. Filed Aug. 23, 1911. Serial No. 645,548.



1. A cuspidor cleaner, comprising a tubular handle, a rod mounted within the handle and having a crank secured to one end and a spring secured to and depending from the other end, an expansible frame secured to the lower end of the spring, and cleaners secured to said frame at a plurality of points and adapted to be forced against the interior of a cuspidor by compression of the spring.

2. A cuspidor cleaner, comprising a tubular handle having an enlarged lower end, a rod slidable and rotatable within the handle, a spring secured to the lower end of the rod, an expansible cleaner frame secured to the lower end of the spring, cleaners carried by the frame, and means for shifting the rod to compress the spring to expand the frame and to rotate the rod to through the spring rotate the frame.

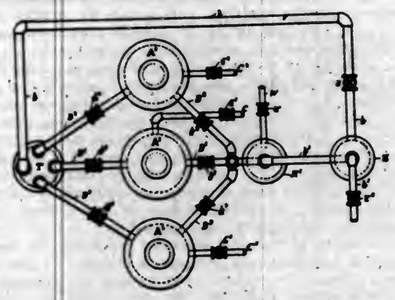
3. A cuspidor cleaner, comprising a tubular handle, a rod slidable and rotatable in the handle, an operating crank on one end of the rod, a helical spring having one end secured to the other end of the rod, a ring secured to the other end of the spring, a second ring, a plurality of jointed levers having their ends pivotally secured to the rings for connecting said rings, a cleaner member secured to the under face of the second ring, and additional cleaners secured to the levers at their joints.

1,014,237. COMPOSITION OF MATTER AND PROCESS FOR MANUFACTURING THE SAME. SAMUEL MORRIS LILLIE, Philadelphia, Pa. Filed Aug. 29, 1911. Serial No. 646,754.

1. A composite starch conversion product consisting of a mixture of two or more sub-products of starch conversion, each sub-product having all its parts of approximately the same degree of conversion; but the degree of conversion of each sub-product being materially different from that of every other sub-product.

2. The process of making a composite starch conversion product of the character described consisting in making the sub-products simultaneously each in its own converter, in discharging them simultaneously from their respective converters and in mixing together the several sub-products.

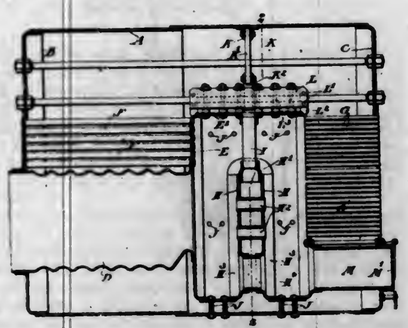
3. The process of making a composite starch conversion product of the character described consisting in making the sub-products simultaneously each in its own converter, in discharging them simultaneously from their respective converters, in mixing together the several sub-products, and in mixing the vapors from the several converters and heating with the mixed vapors the starch liquor on its way to the several converters.



4. The process of utilizing the vapors released from the converted starch products issuing simultaneously from as many converters consisting in mixing the vapors and heating with the mixed vapors the starch liquor on the way to the several converters.

5. The process of making a composite starch conversion product of the character described, consisting in making the sub-products each by itself and in mixing together the sub-products in the proportions desired to form the composite product.

1,014,238. STEAM-GENERATING BOILER. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Sept. 1, 1909. Serial No. 515,632.



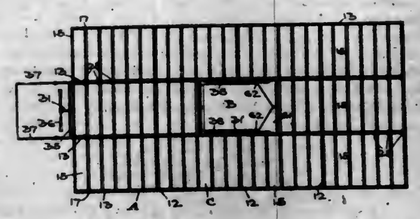
1. In a boiler of the type specified, the combination with the boiler shell, of a combustion chamber located therein and separated from each end of the boiler shell by a substantial distance, one or more furnace chambers and return flues extending between the combination chamber and one end of the boiler shell, other flues in line with the furnace chambers and said return flues extending from the combustion chamber to the rear end of the boiler shell, a hollow division member in the combustion chamber, open at its lower edge to the space in the boiler shell proper, tubular stays connecting the top of said division member to the top of said combustion chamber and permitting of a circulation between the space above the combustion chamber and the interior of said hollow division member, and other tubular stays connecting the front and rear walls of the said division member and permitting of a circulation through the division member between portions of the combustion chamber at the opposite ends of said division member.

2. A boiler of the type specified, the combustion with the boiler shell, of a combustion chamber located therein and separated from each end of said shell by substantial but unequal distances, furnace chambers and return pipes extending between the combustion chamber and the more remote end of the boiler shell, and other flues extending from the combustion chamber to the less remote end of the boiler shell, said other flues being arranged to offer a greater average resistance per unit of length to the flow of gases therethrough than the resistance per unit of length of the said return flues.

3. In a boiler of the type specified, the combustion with the boiler shell, of a combustion chamber located therein, and separated from each end of the boiler shell by substantial but unequal distances, one or more furnace chambers and return flues extending between the combustion chamber and the more remote end of the boiler shell, and other flues extending from the combustion chamber and the less remote end of the boiler shell, said other flues being smaller in diameter than said return flues.

4. In a boiler having a combustion chamber and furnace chambers and flues leading from the combustion chamber to a boiler end, the combination of a hollow division member in the combustion chamber directly open at its lower edge to the space in the boiler shell proper, and tubular stays connecting the top of said division member to the top of said combustion chamber and permitting of a circulation between the space above the combustion chamber and interior of said hollow division member.

1,014,239. FLYING-MACHINE. HERMAN LUDTKE, Ottawa, Ill. Filed Dec. 15, 1909. Serial No. 533,185.



1. A flying machine, comprising a frame, a main supporting frame therefor, a reciprocable plane slidably supported by the frame and having horizontally extending guide-ways formed thereon, a wheel rotatably mounted in the frame, a wrist member adjustably mounted on the wheel and projecting therefrom into the guide-ways, means for rotating the wheel, and means for adjusting the position of the wrist member while the wheel is rotating.

2. In a flying machine, the combination with the frame of a plane slidably supported thereby and formed with a guide-way, a wheel rotatably mounted in the frame and having a radially extending guide-way formed therein, a wrist member slidably engaged in the guide-way and having its outer end projecting in the guide-way of the plane, and flexible connections secured to the wrist member for securing the same in adjusted position.

3. In a flying machine, the combination with a frame, of a shaft journaled therein, means for rotating the shaft, wheels secured on the shaft and having radially extending guide-ways formed therein, a wrist member mounted in each guide-way, guide sheaves secured to the wheels at the ends of the guide-ways, flexible connections passing over the sheaves and secured to the wrist member, a plane slidably supported by the frame and having guide-ways extending therein at right angles to the direction of movement of the plane, the ends of the wrist members being engaged in the guide-ways of the plane, and means for shifting the flexible connections to vary the distance of the wrist member from the shaft, whereby the size of the circle of movement of the wrist members will be varied to cause the same to impart a greater or less reciprocal movement to the sliding plane.

1,014,240. SOUND-BOX FOR TALKING-MACHINES. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to

chamber, an outwardly opening valve arranged in the vent passage, and means for normally holding said valve to its

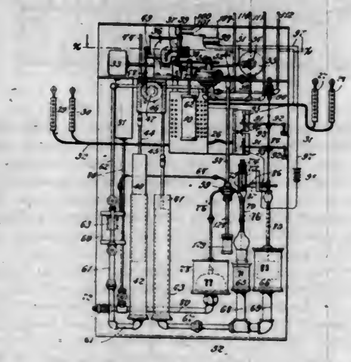
tudinally through engagement with said tracks by a relative movement of the hub and rim.

1,014,240. SOUND-BOX FOR TALKING-MACHINES. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 10, 1911. Serial No. 626,257.

1. In a sound-box for talking machines, a sound-box frame having a diaphragm-receiving chamber, a diaphragm in said chamber, two gaskets in said chamber, one on each side of the periphery of the diaphragm, a cover resting upon the outer gasket, and an elastic retaining ring resting upon the periphery of said cover and having a flange entering an annular groove in the said diaphragm chamber, whereby all the parts are secured in position by said ring.

2. In a sound-box for talking machines, a sound-box frame provided with a diaphragm chamber, a diaphragm in said chamber, a cover over said diaphragm, which cover is provided with a wall or portion extending substantially at right angles to the surface of the diaphragm, and having openings or perforations formed in said wall or portion.

1,014,241. INDICATING GAS-ANALYZER. CYPRIEN O. MAILLOUX and HENRY J. WESTOVER, New York, N. Y. Filed Jan. 21, 1910. Serial No. 539,419.



1. A device of the class described comprising in combination an automatic gas analyzer, a plurality of gas conveyers, a number of separate temporary indicators each complete in itself, and means for automatically and successively bringing each conveyer and its corresponding indicator into operative relation with said analyzer, substantially as described.

2. A device of the class described comprising in combination an automatic gas analyzer, a plurality of gas conveyers, a number of separate temporary indicators each comprising means for preserving its indication for a limited interval of time, and means for automatically and successively bringing each conveyer and its corresponding indicator into operative relation with said analyzer, subetantially as described.

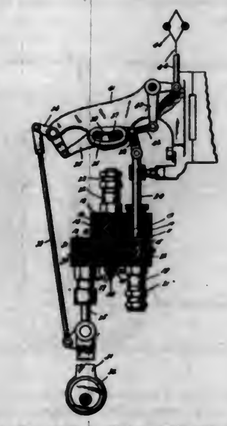
3. A device of the class described comprising in combination an automatic gas analyzer, a plurality of gas conveyers, a valve for connecting said conveyers successively to said analyzer, a plurality of electro-magnetic annunciators each comprising indicating and restoring circuits, a selecting switch for connecting both said indicating and restoring circuits in each annunciator successively to said analyzer, and means for causing said valve and selecting switch to operate always in appropriate correspondence, substantially as described.

4. A device of the class described comprising in combination an automatic gas analyzer, a plurality of gas conveyers, a valve for connecting said conveyers successively to said analyzer, a plurality of electro-magnetic annunciators, a selecting switch, an external main circuit, a local circuit depending thereon and including said analyzer and said switch, circuits between said switch and said annunciators, and means for causing said valve and selecting switch to operate always in appropriate correspondence, substantially as described.

5. A device of the class described comprising in combination an automatic gas analyzer, a plurality of gas conveyers, a valve for connecting said conveyers successively to said analyzer, a plurality of electric annunciators, a main circuit arranged to be controlled by said analyzer, a local circuit deriving its energy from said main circuit, means actuated by said main circuit for closing said local circuit, a selecting switch for controlling the relation of said local circuit with said annunciators, and means for causing said valve and selecting switch to operate always in appropriate correspondence, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,014,242. PUMP. NORMAN MCCARTY, Indianapolis, Ind., assignor to Atlas Engine Works, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 17, 1911. Serial No. 621,644.

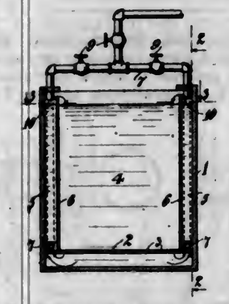


1. In a two-stage pump, the combination of a high pressure chamber, a low pressure chamber, a connection between said two chambers, a valve arranged in said connection to normally prevent flow from the high pressure chamber to the low pressure chamber, means for intermittently delivering material from the low pressure chamber to the high pressure chamber, means for intermittently delivering the material from the high pressure chamber, and a valved delivery passage leading from the low pressure side of the valve between the two pressure chambers, the valve in said last mentioned passage opening outwardly and yielding only at a pressure in excess of the pressure normally developed in the low pressure chamber.

2. In a pump having a high pressure chamber, a low pressure chamber, a connection between said chambers, a valve seat formed in said connection, and a vent passage leading from the low pressure side of said valve seat, a valve seated in said valve seat and opening toward the high pressure chamber, a plunger arranged in the high pressure chamber, an outwardly opening valve arranged in the vent passage, and means for normally holding said valve to its seat with a pressure exceeding the normal pressure developed in the low pressure chamber.

3. In a pump having a high pressure chamber, a low pressure chamber, a passage connecting said two chambers, an upwardly presented valve seat in said passage, a downwardly extending passage leading from said valve seat on the low pressure side, and an upwardly presented valve seat in said vent passage, a valve yieldingly seated upon the first mentioned valve seat and opening toward the high pressure chamber, a valve yieldingly seated upon the vent passage valve seat and opening downwardly, means for yieldingly urging said last mentioned valve to its seat by pressure exceeding the normal pressure developed in the low pressure chamber, a plunger in the low pressure chamber and a plunger in the high pressure chamber.

1,014,243. DYEING-TUB. RADCLIFFE B. MILLS, Philadelphia, Pa. Filed May 12, 1909. Serial No. 495,529.



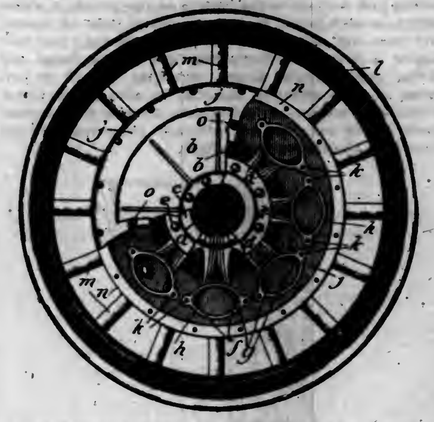
1. In a dyeing apparatus, a receptacle provided with a perforated plate arranged near its bottom, a partition resting on said plate to form a heating chamber in said receptacle, a steam supply pipe arranged in said heating chamber above the level of said perforated plate and provided with perforations to permit escape of steam from said pipe, and spacing blocks in said chamber above the steam pipe to divide said chamber into a plurality of compartments.

2. In a dyeing apparatus, a receptacle, to contain a dyeing liquor, a false bottom in said receptacle having a plurality of perforations therethrough, a plurality of partitions in said receptacle extending above the normal level of the dyeing liquor and seating upon said false bottom to form a plurality of heating chambers in said receptacle, means for supplying steam to said heating chambers above the level of said false bottom whereby the liquor contained therein is agitated and heated and caused to overflow said partitions and create a continuous uniform circulation between said chambers and the interior of the receptacle, and means for regulating the quantity of steam supplied to said heating chambers.

1,014,244. CUSHION-WHEEL FOR VEHICLES. JOHN F. MITCHELL, Topeka, Kans. Filed July 9, 1906. Serial No. 325,331.

1. In a vehicle wheel, the combination with a hub, of a rim surrounding the hub, endless cam tracks secured to the rim, and springs connected at their inner ends to the hub and extending at their outer ends within and movably engaging said endless cams, whereby said springs are flexed longitudinally by a relative movement of the hub and rim.

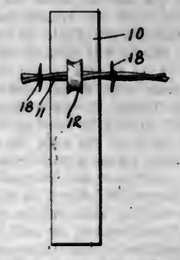
2. In a vehicle wheel, the combination with a hub, of a rim surrounding the hub, elliptical cam tracks secured to the rim, and springs secured to the hub at their inner ends and extending at their outer ends within said cam tracks, whereby said springs are flexed longitudinally through engagement with said tracks by a relative movement of the hub and rim.



3. In a vehicle wheel, the combination with a hub, of a rim surrounding the hub, elliptical cam tracks secured to the rim, a series of pairs of diverging leaf springs interposed between the hub and rim, and means for connecting said pairs of springs to the hub and rim, whereby the springs in each pair are longitudinally flexed toward each other by a relative movement of the hub and rim.

4. In a vehicle wheel, the combination with a hub, of a rim surrounding the hub, a plurality of pairs of diverging leaf springs secured to said hub, elliptical cam guides secured to said rim, and rollers secured to the outer ends of the springs in each pair and engaging within one of said elliptical guides, whereby each pair of springs will be deflected toward each other by a movement of the hub relatively to the rim.

1,014,245. WIRE-FASTENER. DAVID MONSON, Belview, Minn. Filed Aug. 27, 1908. Serial No. 450,541.

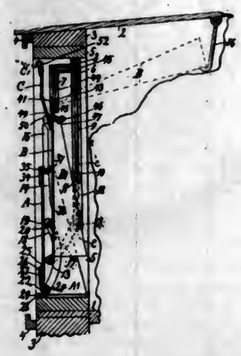


In an article of the class described the combination with a fence post, of a wire support comprising a transversely curved strip of sheet material bent to form an annulus with its concave side disposed outwardly, each end of the strip being provided with a pair of similarly spaced transversely disposed openings, the ends of the strip being disposed in overlapped relation with the openings in registry, and fastening members engaged through the respective registered openings from the inner face of the annulus, said openings being spaced adjacent the edges of the strip to allow the fastening members to be driven at an inclination with respect to the plane of the support, as and for the purpose described.

1,014,246. GRAIN-CAR DOOR. CALVIN MOORE, Providence, Iowa. Filed Mar. 3, 1911. Serial No. 612,154.

1. The combination with a car body having a door opening, of a door frame in the opening and provided with

a vertical groove in each of its upright members, a guide bar in each of said grooves and having its ends offset toward and secured to the bottom of the groove, a sleeve sliding on each guide, the two segmental links 12, having each one end pivoted to one of the sleeves; the door section A hinged to the bottom end of the frame and having angular side flanges extending inward in the frame, a lever pivotally mounted in each upper corner of the door section to fold within the side flanges, said levers having each one end pivotally connected with the outer ends of said segmental links.

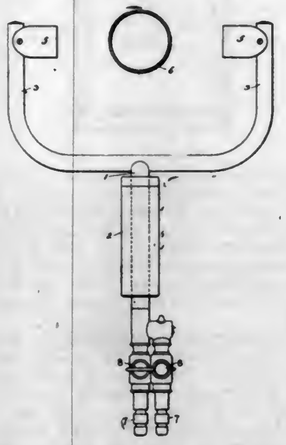


2. The combination with a car body having a door opening, of a door frame in the opening and provided with a vertical groove in each of its upright members, a guide bar fixed at its ends in the ends of the groove, a sleeve sliding on each guide bar, the two curved links 12, having each one end pivoted to one of the sleeves; the door section A hinged to the bottom end of the frame and having angular side flanges directed into the frame opening, a lever pivoted in each upper corner of the door section and foldable at the inner side of each side flange, said levers having each one end pivotally connected with the outer end of one of the links; said door section being detachably hinged to the frame, means for suspending the hinged end of the section from the roof of the car when it is detached from the frame, and means on the frame for supporting the other end of the section in the upper end of the frame, the sliding sleeves permitting the latter position of the section in the frame.

3. The combination with a car body having a door opening, of a door frame in the opening and provided with a long vertical groove in each of its upright members, a guide bar fixed at its ends in the ends of the groove, a sleeve sliding on each guide bar, the two curved links 12, having each one end pivoted to one of the sleeves; the door section A hinged to the bottom of the frame and having angular side flanges directed into the frame opening, a lever pivoted in each upper corner of the section and foldable at the inner side of each side flange, said levers having each one end pivoted to the outer end of one of the curved links; said door section being detachably hinged to the frame, means for suspending the hinged end of the section from the roof of the car when it is detached from the frame, and means on the frame for supporting the other end of the section in the upper end of the frame, the sliding sleeves permitting the latter position of the section in the frame; said grooved members of the frame having also shorter grooves with the short angular guides 44 secured therein, the horizontal shaft 41 having at its ends eyes slidable on said angular guides, the second door section, B, normally suspended in overlapping position at the inner side of section A and having its upper end journaled to the shaft 41, said section B having the angular side flanges B^1 and the studs 20 at the outer edges thereof, the curved links 18, having each in its upper end a slot detachably engaged with said studs and the lower ends pivotally connected with the lower corners of the section A, two studs on each link 12 arranged to guide the links 18 when the latter are engaged with the studs 20, said detachable hinging of the lower end of section A involving springs tending to raise said section from an inclined to an upright position when hinged.

4. The combination with a car body having a door opening, of a door frame in the opening, a door hung in the frame and comprising three partly overlapping sections, one section being hinged at its lower end in the lower end of the frame, the second section hinged with its upper end more than half way up in the frame, and the third section hinged with its upper end in the upper end of the frame and having two vertical slots; two bolts loosely inserted in holes in the second section and having at the inner ends nuts, and between said nuts and the section partly compressed springs, the outer ends of the bolts having each a shoulder bearing against the section and forming necks adapted to turn in the slots of the top section, said necks having each a flat thumb head adapted to slip through the slot and to engage the outer side of the top section when turned across the slot, substantially as and for the purposes set forth.

1,014,247. HAND-FIRE FOR MAKING JOINTS IN VACUUM-TUBE LAMPS. DANIEL MCFARLAN MOORE, Newark, N. J., assignor to Moore Electrical Company, New York, N. Y., a Corporation of New York. Filed Feb. 26, 1907. Serial No. 359,447.



1. The improved portable hand fire for forming joints between sections of glass tubing, comprising a forked tubular frame flexibly connected with a gas supply and adapted to embrace the tubing to be joined, and a pair of flat flame burners mounted on the arms of the fork and adapted to each deliver a flat flame into the space between them, the plane of each flame being substantially parallel to the plane of the joint to be formed.

2. The improved portable hand fire for forming joints between sections of glass tubing, comprising a tubular support having two branches, each constituting a gas supply and each provided with a burner having an inner and outer oblong gas exit, the major axes of which are parallel to the axis of the gas tube, and corrugated plates arranged between said oblong tubes and in the major axis of the inner tube, as and for the purpose described.

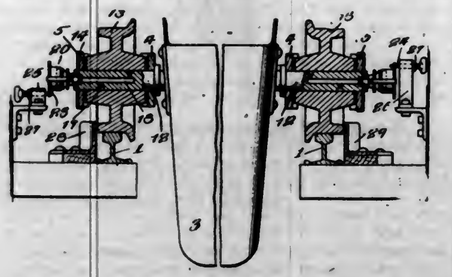
3. The improved portable hand fire for forming joints between sections of glass tubing, comprising a forked support flexibly connected with a gas supply and adapted to embrace the work, each arm of the fork being provided with an oblong burner the major axis of which is substantially parallel to the plane of the fork, said burner comprising an inner oblong burner tube having perforations near its base, an outer oblong burner tube and corrugated plates mounted in the space between the tubes and within the inner burner tube, as and for the purpose described.

4. The improved portable hand fire for forming joints between sections of glass tubing, comprising a pair of oblong burners set respectively on the two arms of a fork, said burners each containing a section of tube oblong in cross section secured in a vertical opening in its tubular support and projecting laterally therefrom each to deliver toward the other a flat flame whose plane is substantially parallel to the plane of the fork.

5. The improved portable hand fire for forming joints between sections of glass tubing, comprising a pair of burners carried by a forked support and each consisting of an oblong inner tube and an oblong outer tube with their major axes parallel substantially to the plane of the fork and connected to one another through perforations in the inner tube, a corrugated plate in the space between the tubes and a corrugated plate set in the inner tube in line with its major axis.

[Claim 6 not printed in the Gazette.]

1,014,248. LUBRICATING DEVICE FOR CONVEYER-CHAINS. GEORGE HENRY MUELLER, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Dec. 19, 1908, Serial No. 468,351. Renewed May 31, 1911. Serial No. 630,456.



1. In a conveyer or the like, the combination with a chain of positive feed lubricant cups carried by the chain to feed lubricant to the bearing surfaces thereof, and means for automatically actuating said lubricant cups.

2. In a conveyer or the like, the combination with a chain of positive feed lubricant cups carried by the chain to feed lubricant to the bearing surfaces thereof, and means operable through the movement of the conveyer for automatically actuating said lubricant cups.

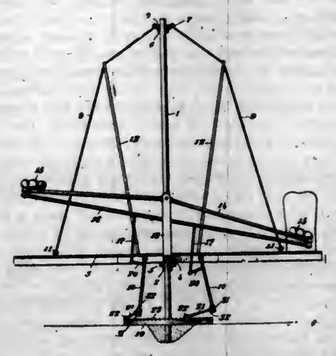
3. In a conveyer or the like, the combination with a chain having bearing surfaces and lubricant passages leading thereto, of lubricant cups carried by the chain, said cups being in communication with said lubricant passages and each having a toothed screw cup adapted to positively force the lubricant from the cups into the passages with which it communicates, and a relatively stationary contact device arranged adjacent the path of the conveyer in position to engage with and actuate the screw caps of the lubricant cups.

4. In a conveyer or the like, the combination with a chain having bearing surfaces and lubricant passages leading thereto, of lubricant cups carried by the chain, said cups being in communication with said lubricant passages and each having a toothed screw cap adapted to positively force the lubricant from the cups into the passages with which it communicates, and a relatively stationary contact device arranged adjacent the path of the conveyer in position to engage with and actuate the screw caps of the lubricant cups, said contact device being adjustable whereby its engagement with the screw caps can be limited to a given number of passes of the conveyer, substantially as set forth.

5. In a conveyer or the like, the combination with a chain having bearing surfaces and lubricant passages leading thereto, of lubricant cups carried by the chain, said cups being in communication with said lubricant passages and each having a toothed screw cap adapted to positively force the lubricant from the cups into the passages with which it communicates, a relatively stationary contact device arranged adjacent the path of the conveyer in position to engage with and actuate the screw caps of the lubricant cups, and means disposed adjacent the contact device for guiding the conveyer in a definite path as it passes the contact device.

[Claims 6 to 14 not printed in the Gazette.]

1,014,249. MERRY-GO-ROUND. JACOB NEY, Canton, Ohio. Filed July 29, 1911. Serial No. 641,318.



1. In a merry-go-round of the class described, the combination of a horizontal revolving platform, a see-saw mounted upon and carried by the revolving platform, rods pivotally connected to the revolving platform, said rods provided with lever arms, links connected to the lever arms and to the see-saw, push rods pivotally connected to the bottom or lower ends of the rods pivoted to the platform, and push heads connected to the push rods, a fixed toothed ring located below the revolving platform the teeth of the toothed ring being adapted for engagement with the push heads, substantially as and for the purpose specified.

2. In a merry-go-round of the class described, the combination of a horizontally revolving platform, a fixed toothed ring located below the platform, push heads adapted for engagement with the fixed toothed ring, rods connected to the push heads and means carried by the revolving platform adapted to impart movements to the push rods and push heads independent of the horizontal rotary movement of the push heads upon the toothed ring, substantially as and for the purpose specified.

3. In a merry-go-round, the combination of a fixed post, a revolving platform carried by said fixed post, a series of uprights extending from the platform, a revolving plate located at the top or upper end or portion of the post, a series of supporting members fixed to the revolving plate and to the platform respectively, a fixed toothed ring located below the platform, a see-saw carried by the platform and rotatable therewith, and means intermediate the see-saw and the fixed toothed ring adapted to impart rotary movement to the platform and see-saw, substantially as and for the purpose specified.

4. A merry-go-round comprising a rotatable mounted structure, oscillating elements carried by said rotary structure and rotatable therewith, said oscillating elements provided with seats, a fixed toothed ring located below the rotatable mounted structure, and means actuated by the oscillating elements carried by the rotatable mounted structure adapted for engagement with the teeth of the fixed toothed ring, substantially as and for the purpose specified.

1,014,250. RAKE. STERLING E. NORMAN, Attleboro, Mass. Filed Sept. 29, 1909. Serial No. 520,144.

1. A rake having a handle, a shield attached to the handle and extending downward therefrom approximately parallel thereto, and being then bent toward the free end of the handle at a slight angle therewith so that the bottom of the shield may rest upon the surface being raked, rake teeth extending beyond the edge of the shield and lying in the same plane as the flat bottom of the shield, said rake teeth being straight for their entire length and spaced from each other, the forward edge of the shield extending transversely between the teeth inward of the margin thereof, and at right angles to the direction of the teeth.

2. A rake having a handle, a shield attached to the handle and extending downward therefrom approximately parallel thereto, and being then bent toward the free end of the handle at a slight angle therewith to form a flat portion adapted to rest upon the surface being raked, and a tooth bar separate from and attached to the flat margin of the shield and having spaced teeth extending in the same plane as the flat portion of the shield.

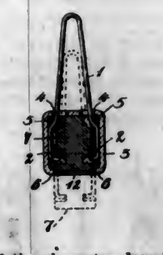
3. A rake having a handle, a shield attached to the handle, the upper portion of the shield being approximately parallel to the handle, the lower portion of the shield being bent and extending toward the free end of the handle, the upper portion of the shield overhanging the lower portion, the lower edge of the shield being returned upon itself to form a fold, and a tooth bar of a length equal to the width of the lower edge of the shield and formed with teeth extending out from the body of the tooth bar, said tooth bar being attached to the lower edge of the shield so that its teeth shall project out in the same plane as the shield, and thereby rest their whole length on the ground.

4. A rake having a handle, a shield attached to the handle, the upper portion of the shield being parallel to the handle, the lower portion of the shield being bent and extending toward the free end of the handle, the upper portion of the shield overhanging the lower portion, the lower edge of the shield being formed with a return bend, the fold formed thereby being provided with a plurality of perforations, and a tooth bar folded upon itself at equidistant points to form a plurality of outwardly projecting teeth, said tooth bar being carried within the return bend of the lower edge of the shield, the teeth projecting out through the perforations in the fold thereof.

1,014,251. WRENCH. JACOB ALPHEUS OVERLANDER, White Plains, N. Y. Filed Dec. 18, 1909. Serial No. 533,827.

In an improved wrench with outer and inner parallel opposing jaws, means for moving the inner jaw along a rectangular shank integral with said outer jaw, comprising two L-shaped interchangeable draw bars, screw-threaded and rounded on their exterior surfaces, the approximal surfaces thereof being in contact with the narrower sides of said rectangular shank and adapted to slide longitudinally thereon, a metallic grip-section, rotatable axially but fixed longitudinally in relation to said shank, having a circular wooden filling thereon, a metallic fixed-section, having a circular wooden filling thereon, a slidable lock entered in said rotatable grip-section for fixing said rotatable grip-section to said fixed-section, and a hexagonal nut, integral with said rotatable grip-section, having internal screw-threads engaging the external screw-threads of said draw bars for purposes herein set forth, substantially as shown and described.

1,014,252. SEALING DEVICE. GRANVILLE E. PALMER, Hartford, Conn. Filed Oct. 11, 1911. Serial No. 654,074.



1. In a device of the character described, the combination of an outer member with a seal wire, a destructible seal, and a movable inner member, the two latter members and the free ends of said seal wire being all within said outer member, said seal wire being in engagement with said destructible seal and with the other two members, said members being locked against separation by the engagement of said wire with said destructible seal.

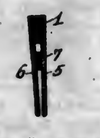
2. In a device of the character described, the combination of an outer member having a bore, an inner member revoluble within said bore, a destructible seal carried by one of said members, a seal wire engaging both of said members and free to be removed when said members are in one position but locked therein when said members are relatively moved from such position, said seal lying in the path of said wire so as to be ruptured thereby.

3. In a device of the character described, the combination of an inner revoluble member, an outer member having a bore embracing said inner member, one of said members having a shallow recess and the other of said members having a deep longitudinal cut-away portion and a deep transverse cut-away portion, a seal wire having a projection entering said transverse cut-away portion at a point out of alinement with said deep longitudinal cut-away portion, and a destructible seal between said two members covering one of said deep cut-away portions.

4. In a device of the character described, a revoluble inner member, an outer member having a bore and surrounding said inner member, the outer member having a shallow longitudinal recess and said inner member having a deep longitudinal recess and a deep transverse recess, a seal wire having an inward projection entering said transverse recess at a point out of alinement with its intersection with the connected deep longitudinal recess and a destructible seal secured to said inner member and covering one of said deep recesses.

5. In a device of the character described, a revoluble inner member, an outer member having a bore within which said inner member lies, each of said members having a shallow longitudinal recess, said inrer member having a deep longitudinal recess, and a deep transverse recess connecting one end of the deep longitudinal recess with the adjacent end of the shallow recess in said inner member, a seal wire having an inward projection entering the transverse recess at a point out of alinement with the deep longitudinal recess connected thereto, and a destructible seal carried by said inner member and covering one of said deep recesses.

1,014,253. COMMUTATOR. MATHIAS PFATISCHER, Bayonne, N. J. Filed July 10, 1907. Serial No. 383,050.



1. A composite commutator bar for dynamo-electric machines made up of an outer contact section of a material having good conductivity, joined at its base to a plurality of thin metallic plates forming an inner supporting structure, substantially as described.

2. A composite commutator bar for dynamo-electric machines made up of an outer contact section of a material having good conductivity, joined at its base to a plurality of thin metal plates forming an inner supporting structure and shaped for locking engagement with the commutator clamps, substantially as described.

3. A composite commutator bar for dynamo-electric machines made up of a contact section of copper supported by two thin metallic plates spaced apart and shaped for locking engagement with the commutator clamps and welded to the copper, substantially as described.

4. A composite commutator bar made up of the copper contact section 1, the supporting plates, 5 and 6, welded thereto, and the spacing piece 7, substantially as described.

5. A composite commutator bar for dynamo-electric machines made up of an outer contact section of a material having good conductivity, joined at its base to a plurality of stamped metal plates forming an inner supporting structure, substantially as described.

1,014,254. TREATMENT OF PHOSPHATES. NATHANIEL P. PRATT, Atlanta, Ga., assignor to Pratt Process Company, Atlanta, Ga., a Corporation of Georgia. Filed Jan. 27, 1911. Serial No. 604,998.

1. The method of enriching native phosphates containing sulfates, which consists in subjecting the same to the solvent action of water to separate the sulfates from the phosphates, and then draining off the water containing the sulfates.

2. The method of treating native phosphates containing sulfates which consists in subjecting the same to the solvent action of a saline solution to separate the sulfates from the phosphates, and then draining off the sulfate-impregnated water.

3. The method of treating native phosphates containing sulfates which consists in subjecting the same to the solvent action of a saline solution including sea water to separate the sulfates from the phosphates, and then draining off the sulfate-impregnated water.

4. The method of treating native phosphates containing calcium sulfate which consists in subjecting the same to the solvent action of water characterized by a sulfate-dissolving action, and draining off from the phosphates the solution produced.

5. The method of treating native phosphates containing sulfates, which consists in subjecting the same to the solvent action of sea water and subsequently draining off from the mass the water containing the sulfates.

[Claims 6 to 11 not printed in the Gazette.]

1,014,255. TREATMENT OF PHOSPHATES. NATHANIEL P. PRATT, Decatur, Ga., assignor to Pratt Process Company, Decatur, Ga., a Corporation of Georgia. Filed July 5, 1911. Serial No. 637,025.

1. The method of treating mixtures of phosphates and sulfates, which consists in separating the sulfates from the phosphates by dissolving out the sulfates and leaving the phosphates intact, or substantially so.

2. The method of treating phosphates containing sulfates, which consists in separating the sulfates from the phosphates, such separation being effected by subjecting the same to the solvent action of sea water and subsequently eliminating from the mass the water containing the sulfate.

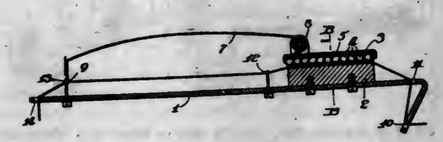
3. The method of treating mixtures of phosphates insoluble in water, and sulfates soluble therein, which consists in subjecting the same to the solvent action of water to separate the sulfates from the phosphates, and then eliminating the water containing the sulfates.

4. The method of treating mixtures of insoluble phosphates and calcium sulfate, which consists in subjecting the same to the solvent action of a medium characterized by a sulfate-dissolving action, and eliminating from the phosphates the solution produced.

5. The method of treating phosphates containing sulfates which consists in subjecting the same to the solvent action of a saline solution to separate the sulfates from the phosphates, and then eliminating the sulfate-impregnated solution.

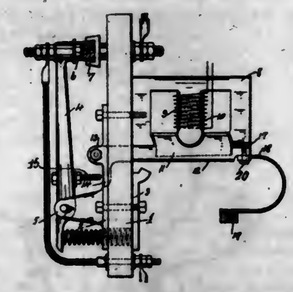
[Claims 6 to 13 not printed in the Gazette.]

1,014,256. TENSION DEVICE. AUGUST RIEFFEL, Philadelphia, Pa. Filed Feb. 10, 1911. Serial No. 607,822.



In a tension device, in combination, a groved box, one or more balls carried in said groove, and an L shaped cover one of the sides of which is adapted to be secured to one side of said box and the other of which covers, without touching, the top of said box, the ends of the latter part of said cover being bent downwardly substantially as and for the purposes set forth.

1,014,257. VIBRATION-ABSORBER FOR ALTERNATING-CURRENT-MAGNET ARMATURES. CONRAD L. ROSENQVIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 21, 1908. Serial No. 449,687.



1. The combination with a vibratory member, of electro-magnet means for producing a uniform rate of vibrations therein, and an attached body having the same normal rate of vibration as said member and adapted to vibrate in opposition thereto.

2. The combination with a vibratory member, of electro-magnetic means for producing vibrations therein, and an attached vibratory body having the same rate of vibrations as said member but differing in phase.

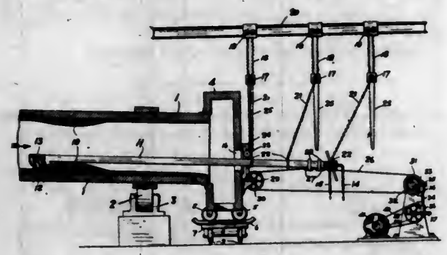
3. The combination of an electro-magnet adapted to be energized by an alternating current, and a mechanical device connected thereto and adapted to decrease the mechanical vibrations in said electro-magnet by means of counter-vibrations.

4. The combination with an alternating current magnet and its armature, of a weight, and an elastic vibration transmitter connecting said weight and armature.

5. The combination with an alternating current electro-magnet, a vibratory body, and means for reducing the vibrations of the electro-magnet due to current alterations by transmitting counter vibrations from said body to the electro-magnet.

[Claim 6 not printed in the Gazette.]

1,014,258. KILN-CLEANER. LEWIS P. ROSS, Standish, N. Y., assignor of one-half to Northern Iron Company, a Corporation of New York. Filed Mar. 13, 1911. Serial No. 613,078.



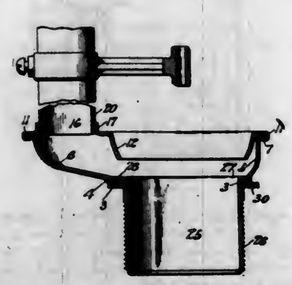
1. The combination, with a rotary kiln, of a longitudinally reciprocating bar having one or more projections thereon adapted for cleaning the lining of said kiln.

2. The combination, with a rotary kiln, of a longitudinally movable bar having a laterally projecting cutting member adapted for cleaning the lining of said kiln, and means for reciprocating said bar.

3. The combination, with a rotary kiln, of a bar adapted for cutting different sections of a ring adhering to the interior of said kiln, means whereby said bar is fulcrumed, and means for moving said bar longitudinally.

4. The combination, with a rotary kiln, of a longitudinally movable water cooled bar having one or more cutting teeth thereon adapted for acting upon the various parts of a ring of material adhering within said kiln, a fulcrum for said bar, and means for reciprocating said bar.

1,014,259. FLUSH-VALVE BODY. LOUIS S. ROTHWELL, Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed Nov. 25, 1910. Serial No. 594,068.

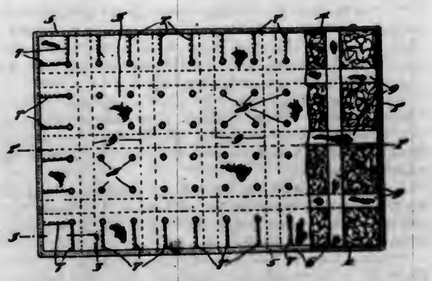


A flush valve body, comprising a main shell member formed with an outlet opening through its bottom wall and an annular depression and a radial recess beyond said annular depression in said bottom wall adjacent to said opening, a tubular member extending through said outlet opening and formed with a retaining flange which rests in the annular depression upon the bottom wall of said main shell member, a radial lug projecting from the flange of said tubular member and engaging the radial recess in said bottom wall, means for securing said tubular member upon said main shell member, and a cap member secured to the top of said main shell member and formed with an integral downwardly presented circular valve-seat flange, and an opening to receive an overflow pipe, substantially as set forth.

1,014,260. DATING-STAMP. ELMER H. SANBORN, Los Angeles, Cal., assignor to Sanborn Dating Stamp Company, Los Angeles, Cal., a Corporation of California. Filed June 22, 1911. Serial No. 634,794.

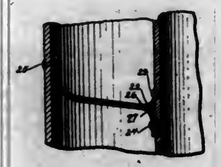
A stamp of the class described having a body portion carrying an outer and inner stamp surface, the inner portion carrying fixed central type having a pointer located thereon, an intermediate stamping face operating between the outer and inner stamps and carrying dating members adapted to be brought opposite the said pointer, a sleeve movably mounted in the body portion and carrying said intermediate stamping face, a collar upon said sleeve arranged above the said body portion and having its upper surface exposed to view and formed with dating members corresponding with dates upon the said intermediate member, and a handle adapted to carry the said body portion and the movable sleeve with its intermediate member and indicating collar, the said body portion having a pointer upon its upper surface corresponding with the position of the pointer on the surface of the central stamp.

1,014,261. MATTRESS. FREDERICK F. SCHMITT, Philadelphia, Pa. Filed Oct. 3, 1911. Serial No. 652,534.



A mattress comprising sides and ends, top and bottom of dimensions in excess of the dimensions of the sides and ends, said top and bottom secured to the sides and ends, and having plaits laid at regular intervals, and tufts formed in said mattress in line with said plaits, substantially as described.

1,014,262. SPIRAL BLADE FOR GRAVITY-CONVEYERS. MARTIN C. SCHWAB, Chicago, Ill., assignor to Gravity Conveyor Company, a Corporation of New York. Filed Apr. 23, 1908. Serial No. 428,795.



1. In a gravity conveyer, the combination with a tubular casing, of a cylindrical core therein, and a flat helical blade between the core and casing having its outer and inner longitudinal edges curved upwardly and downwardly respectively to form continuous flanges on the blade.

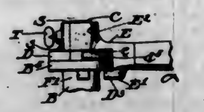
2. In a gravity conveyer, the combination with a tubular shell or casing, of an inner tubular core, a flat sheet metal spiral blade having its inner and outer longitudinal edges, turned downward and upward respectively, and forming flanges lying flat against the core and casing, and means for securing said flanges to the core and casing.

3. In a gravity conveyer, the combination with a shell or casing, of a core within the shell, a spiral blade having its inner edge curved downwardly to form a flange in contact with the core, and means for preventing articles entering the crevice formed between the core and blade.

4. In a gravity conveyer, the combination with a shell or casing, of a core within the shell, a spiral blade having a downturned inner edge in contact with the core, and a filling material in the crevice formed between the core and blade.

5. In a gravity conveyer, the combination with a casing, of a core, a flat helical blade having its inner edge curved downwardly, and a curved strip bridging the space between the core and the flat portion of the blade.

1,014,263. VALVE. HOWARD A. SELAH, Philadelphia, Pa., assignor to Henry R. Hoopes, West Chester, Pa. Filed July 7, 1910. Serial No. 570,707.



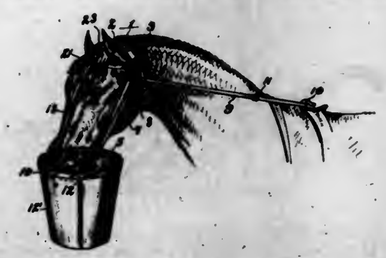
1. A locking device for air-brake valves comprising a valve casing provided with a valve and valve stem, said casing being provided with a flanged portion inclosing the valve-stem and having a recess to permit an operating handle to be applied to the valve-stem when the valve is closed, a locking lever adapted to turn with the valve-stem and to engage an opening in the valve casing when the valve is closed, and a detachable handle provided with a key adapted to release the locking lever.

2. A locking device for air-brake valves comprising a flanged valve casing provided with a valve-stem and valve, a collar secured to the valve stem and provided with a locking lever adapted to engage an opening in the casing of the valve to lock the valve when the same is in a closed position and a detachable operating handle provided with a key to unlock the valve and a lug adapted to register with a recess in the flanged portion of the casing permitting the operating handle to be removed from the valve stem only when the valve is in a closed position.

3. A locking device for air-brake valves comprising a valve casing, an operating valve provided with a valve-stem, a collar secured to and carried by the valve-stem, the collar being provided with a fulcrumed lever, constituting a clutch having a tooth adapted to engage an opening in a portion of the casing when the valve is closed, an operating handle provided with a depending key adapted to operate the clutch and means whereby the operating handle may be removed from the stem when the valve is in a closed position.

4. In a valve, a valve casing, a valve provided with a valve stem, a washer secured to the valve stem, a clutch pivoted to the washer and provided at one end with a tooth adapted to engage an opening in the casing, and an operating handle having a key adapted to release the clutch from the casing of the valve when the operating handle is applied to the valve stem.

1,014,264. FEED-BUCKET HOLDER. JOHN HARDY SINER, Pimento, Ind. Filed May 7, 1910. Serial No. 559,898.



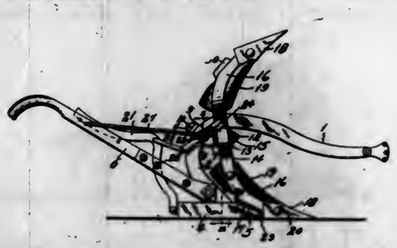
1. In a device of the class described, head and brow bands connected by the usual rosettes, loops fixed to said head band adjacent said rosettes, straps secured to said head band upon each side, said straps extending downwardly and then upwardly through said loops and then rearwardly, adjustable means connecting their ends whereby the straps may be adjusted to form a check rein, and snap hooks slidably mounted on said straps between the rosettes and said loops, whereby a feed bucket may be supported from said snap hooks when the straps are extended and a bit secured to the same when the straps are adjusted to form a check rein substantially as described.

2. In a device of the class described, the head and brow bands connected by the usual rosettes, loops fixed to said head band adjacent said rosettes, straps fixed to said head band upon each side thereof, said straps extending downwardly and then upwardly through said loops and then rearwardly, an adjustable connection between the ends of said straps, hooks slidably mounted on said straps between said head band and said loops, a strap fixed to the center of said head band and extending downwardly therefrom, a clamp at the lower portion of said strap, means for adjusting the length of said strap, a bit, rings on the ends of said bit adapted to be engaged by said hooks, a nose band connecting said rings and provided with an eyelet near the center and a lug on the inner face of one jaw of said clamp to engage said eyelet when the bit is in use substantially as described.

1,014,265. PLOW. JACOB SRAMEK; Bryan, Tex. Filed July 5, 1910. Serial No. 570,229.

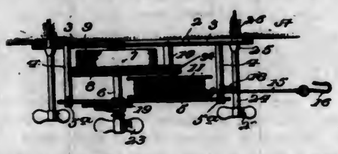
1. A reversible plow, comprising in combination, a plow beam having a bifurcated foot, a standard pivoted at its middle point on said beam and carrying a plow share on each end, a rectangular landside mounted on the outer sides of said bifurcated foot and extending rearwardly therefrom, a latch bar slidable longitudinally through said landside and embraced by said bifurcated foot, a latch pivoted adjacent the pivot point of said standard, and a lever mechanism connected to said latch and said latch bar, whereby said latch bar may be projected to lock either of said plow shares to said landslide in front of said foot, and said standard simultaneously locked to said plow beam.

2. A reversible plow, comprising in combination, a plow beam, a bracket secured to said plow beam adjacent its rear end, a standard pivoted on said bracket at its middle point, a plow share on each end of said standard, a latch also pivoted on said bracket and adapted to embrace opposite sides of said standard, a bifurcated foot at the lower end of said beam, a rectangular landside mounted on the outer sides of said foot and extending rearwardly therefrom, a latch bar extending longitudinally through said landside and through said foot, and adapted to enter a socket formed in the lower plow share, and a lever mechanism connected to said latch and said latch bar and adapted to actuate said latch and latch bar simultaneously to lock said standard in position, said landside being mounted to have one side always in alinement with the landside of the lower plow.



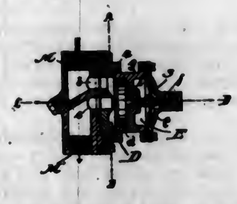
3. A reversible plow, comprising in combination, a plow beam having a pair of plow handles and a bifurcated foot, a landside secured to the sides of said foot and extending rearwardly therefrom, a bracket secured to said plow beam adjacent its rear end, a standard pivoted on said bracket at its middle point, a plow share carried by each end of said standard, each of said shares being adapted to be swung into longitudinal alinement with said landside with one side of the latter flush with the landside of said plow, a latch also pivoted to said bracket and adapted to engage the opposite sides of said standard, a latch bar slidably carried for longitudinal movement in said landside and through said bifurcated foot and adapted to enter a socket formed in each of said plow shares, and a lever mechanism connected to said latch and said latch bar and mounted on said handles, whereby said latch and bar may be actuated to lock said standard and said plow share to said plow beam.

1,014,266. DOOR-CLOSER. ABRAHAM H. STUTLER, West Union, W. Va. Filed Sept. 20, 1910. Serial No. 582,952.



A door closer comprising in combination a base plate, posts projecting from the base plate, a frame plate opposed to the base plate and mounted on the ends of the posts and extending parallel to the base plate, a gear wheel disposed between said plates, a spring acting to rotate said gear wheel in one direction, a spring-winding arbor upon which the spring and gear wheel are rotatably mounted, said arbor being mounted in said plates and having a winding head disposed exteriorly to the frame plate whereby the arbor may be rotated, a ratchet wheel on the arbor, a spring-actuated pawl mounted on the outer face of the frame plate, the active end of said pawl engaging the ratchet wheel, the other end of the pawl being extended to form a finger whereby the pawl may be moved out of engagement with the ratchet, a shaft extending parallel to the arbor, a winding drum fast on the shaft, a pinion fast on the shaft engaging the gear wheel and screws passing through the base plate at each end of the same and having elongated shafts provided with shoulders for engagement with the face of the base plate, said shafts being provided each with a winged head projecting beyond the outer face of the frame plate.

1,014,267. AUTOMATIC VALVE-CONTROLLED GAS LIGHTER AND EXTINGUISHER. HEINRICH SUSSMANN, Berlin, Germany, assignor to The Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany, a Corporation of Germany. Filed Aug. 8, 1910. Serial No. 576,040.



1. An automatic valve-controlled gas lighter and extinguisher comprising in combination, a casing having a main inlet and outlet, a spring-controlled valve arranged to normally intercept the flow of gas through said outlet, a partition serving as a stop against opening movement of the valve and dividing the casing into a gas chamber and a diaphragm chamber, a diaphragm in said chamber connected with the valve, said partition having an opening to establish communication between said gas and diaphragm chambers and arranged to be closed when the valve seats against said partition, and a pilot-light mechanism communicating with said casing and controlled by said valve.

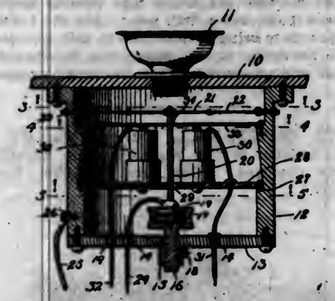
2. An automatic valve-controlled gas lighter and extinguisher comprising a casing provided with main inlets and outlets, and a chamber in communication therewith, a device in communication with the main inlet and actionable responsive to the rise or fall of gas pressure, and mechanism controlled by said device for closing said outlet through action of low pressure gas upon the device, and for opening said outlet and closing the communication between the said inlet and said device upon action of increased or high pressure gas, combined substantially as and for the purpose set forth.

3. An automatic valve-controlled gas lighter and extinguisher comprising, a casing provided with main inlets and outlets, a chamber in communication therewith, and a second chamber separated therefrom, a device within said second mentioned chamber in communication with the main inlet and actionable responsive to rise or fall of gas pressure, mechanism controlled by said device for closing said main outlet during action of low pressure gas upon the device, and for opening said outlet and closing the communication between said inlet and said device upon action of increased or high pressure gas, and pilot supply control means in communication with both of said chambers, whereby a continuous supply of gas may have egress therefrom, combined substantially as and for the purpose set forth.

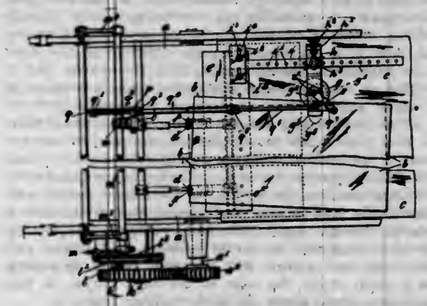
1,014,268. COMBINED TRANSMITTER AND RECEIVER. WILLIAM BARBER THOMPSON, North Conway, N. H., assignor of one-half to Arthur E. Kenison, North Conway, N. H. Filed June 20, 1911. Serial No. 634,361.

A combined telephone transmitter and receiver comprising a metallic box, a removable plate on the box, a granular microphone secured to said plate within the box, a shelf above the granular microphone, electro-magnets on the shelf, a diaphragm arranged above said magnets, said shelf and said diaphragm having central openings, a diaphragm above the first mentioned diaphragm,

wires secured to the diaphragm and the box to form electrical connection therebetween, a vertical stem extending from the granular microphone, through the openings of the said shelf and diaphragm, a mouth-piece arranged on the box, and means for vertically adjusting the granular microphone.



1,014,269. SHEET ADJUSTER AND GUIDE FOR PRINTING-PRESSES. WALTER F. C. TICHBORNE, Pelham, N. Y. Filed Mar. 27, 1909. Serial No. 486,084.



1. A sheet adjuster for printing presses comprising a shifter having a generally diagonal forward movement in the plane of the sheet and adapted to engage the sheet at one point only on one side edge of the sheet and to shift the same transversely and forwardly at the same time while permitting the sheet to swing about the point of contact with the shifter, a fixed front stop to coöperate with the forward edge of the sheet and means to actuate said shifter.

2. A sheet adjuster for printing presses comprising a cam or eccentric mounted to oscillate in a plane parallel with the feed board and adapted to engage the sheet at one point only on one side edge of the sheet and to shift the same transversely and forwardly at the same time while permitting the sheet to swing about the point of contact with the cam or eccentric and means to actuate said cam or eccentric.

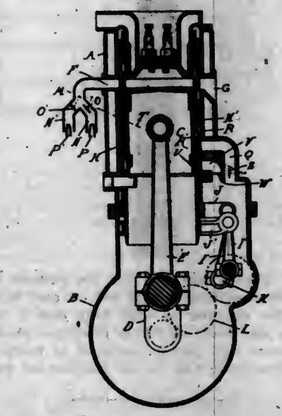
3. A sheet adjuster for printing presses, comprising a cam or eccentric mounted to oscillate in a plane parallel with the feed board and having a circumferentially grooved edge to engage one side edge of the sheet and to shift the same transversely and forwardly at the same time and means to actuate said cam or eccentric.

4. A sheet adjuster for printing presses, comprising a cam or eccentric mounted to oscillate in a plane parallel with the feed board and adapted to engage one side edge of the sheet and to shift the same transversely and forwardly at the same time, plates mounted on opposite sides of said cam or eccentric to guide the sheet thereto and means to actuate said cam or eccentric.

5. The combination with a supporting arm adapted to be secured to the feed board of a press longitudinally with respect thereto and a transverse arm mounted adjustably thereon, of an oscillating shifter supported by the last named arm and adapted to engage the sheet at one point only on one side edge of the sheet and to shift the sheet transversely and forwardly at the same time while permitting the sheet to swing about the point of contact with the shifter, and means to oscillate said oscillating shifter.

[Claims 6 to 12 not printed in the Gazette.]

1,014,270. EXPLOSION-ENGINE. JOHN G. UTZ, Detroit, Mich., assignor to Chalmers-Detroit Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 9, 1909. Serial No. 489,012.



1. In an explosion engine, the combination with means for introducing an explosive charge into the explosion chamber, and means for introducing a variable volume of compressed air to augment said explosive charge; of means automatically operating, upon the variation of the volume of said augmenting air, for proportionately varying the richness of the explosive mixture.

2. In an explosion engine, the combination with a cylinder and a piston, of a crank case forming a compression chamber, means for admitting an explosive mixture into said cylinder; means for transferring a variable volume of air compressed in said crank case to said cylinder to augment the explosive charge, and means operating automatically, upon a variation of the volume of air transferred, for proportionately varying the richness of the explosive mixture.

3. In an explosion engine of the four-cylinder type, the combination of a cylinder, a crank case in which air is compressed twice in each cycle, means for transferring the compressed air from the crank case to the engine cylinder, and a selective control for said transfer means adjustable to admit air to the cylinder either for scavenging or augmenting the explosive charge, said means being also adapted to completely cut-off communication between the transfer means and the engine cylinder.

4. In an explosion engine, the combination of means for introducing an explosive charge into the explosion chamber, means for introducing a volume of compressed air to augment said explosive charge, a valve controlling each of said means, and a connection between said valves whereby upon the adjustment of one of said valves the other is automatically and correspondingly adjusted.

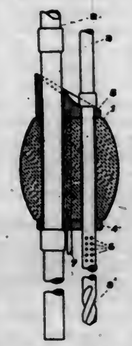
1,014,271. DEEP-WELL PUMP. CHARLES A. WAITZ, Rouseville, Pa. Filed July 5, 1910. Serial No. 570,272.

In a deep well pump the combination with a barrel provided with a check-valve seat at its lower end, of a check-valve arranged to seat in said seat and a piston adapted to operate in said barrel; said check-valve consisting of a tubular cage having an opening at the top

thereof, a seat within said cage, a hemispherical drop with its spherical face seating upon said seat, a pendant stem upon said drop, packing members between the outer wall of said cage and the inner wall of said barrel; said piston consisting of a tubular body open at the top and having imperforate side walls, the upper edge of the walls

of said body sloping inwardly for the purpose set forth, packing members carried by said body, a seat in the lower portion of the chamber of said body and a valve-drop seating upon said seat, said drop having a pendant stem projecting below said piston, arranged to bump the drop of said check-valve as and for the purpose set forth.

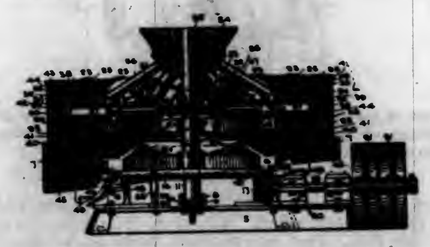
1,014,272. WALL-PACKER FOR OIL-WELLS. CHARLES A. WAITZ, Rouseville, Pa. Filed Oct. 10, 1910. Serial No. 586,312.



1. In a packer for oil wells, a flexible packing member provided with an oil-conducting tubing passage, and a gas-escape pipe passage, metallic disks positioned above and below said packing member, said disks being arranged for the passage of said pipe and tubing, an oil-conducting tubing passing through said flexible member and said disks, a gas-escape pipe passing through said flexible member and said disks and vertically moving therein and extending to the surface of the ground, there being perforations in said pipe positioned normally below said flexible member and in close proximity thereto, so that by a vertical adjustment of said pipe said holes may be positioned partly above and partly below said flexible member, for the purpose set forth.

2. In a wall packer for oil wells, a flexible sleeve provided with a tubing passage and a gas-escape pipe passage, a metallic disk positioned above said sleeve, a metallic disk positioned below said sleeve, said disks being provided with corresponding tubing and pipe passages, oil conducting tubing passing through said sleeve and said disks, a vertically movable gas escape pipe passing through said sleeve and disks, and a drill point upon the lower end of said pipe; there being perforations in said pipe positioned in close proximity to said sleeve and distributed over a length of said pipe greater than the length of said sleeve.

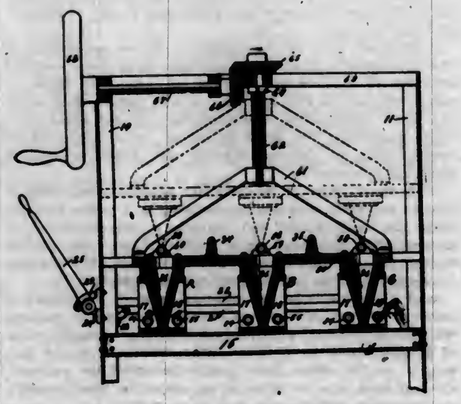
1,014,273. QUARTZ-MILL. CHARLES WALLACE, Denver, Colo., assignor to The Wallace-Owings Machinery and Supply Company. Filed July 27, 1906. Serial No. 328,037.



1. In a quartz mill, in combination, in annular concave mortar, a plurality of circumferentially convex crushing members having a circular and rotary movement therein, a continuous screen surrounding the mortar, a continuous fender surrounding the screen and a plurality of longitudinally extendable clamps connecting the upper edge of the screen with the circumferential rim of the mortar, and adapted to support the said fender.

2. In a quartz mill in combination, an annular concave mortar, a plurality of crushing members having a circular and rotary movement therein, a continuous perpendicular screen surrounding the mortar, a continuous fender surrounding the said screen and spaced therefrom, and a discharge trough separately and vertically adjustably supported subjacent the outlet between said screen and fender, the said screen and the said fender extending from a point below the edge of the said mortar to terminate in a plane above the said crushing members.

1,014,274. ICE-CREAM-CONE MACHINE. JAMES W. WEST, Des Moines, Iowa. Filed Jan. 23, 1911. Serial No. 604,206.



1. An ice cream cone machine, comprising a frame, a plurality of mold beds each formed of mating members slidingly mounted on said frame, said mating members substantially channel shaped in cross-section and disposed with their closed sides in juxtaposition, upwardly opening cores in said mold beds and formed one-half in each member thereof, a core plate mounted for vertical reciprocation in said frame, said core plate formed with downwardly projecting cores adapted to enter said molds, reciprocating bars fixed to opposite ends of the forward member of each mold bed, reciprocating bars fixed to opposite ends of the rear member of each mold bed, a rock shaft journaled for rotation in said frame, links pivotally connecting said reciprocating bars to said rock shaft, and a hand lever fixed to said rock shaft.

2. In an ice cream cone machine, a frame, a plurality of mold beds each formed of mating members slidingly mounted on said frame, reciprocating bars fixed to opposite ends of the forward member of each mold bed, reciprocating bars fixed to opposite ends of the rear member of each mold bed, a rock shaft journaled in said frame, oppositely extending ears at each end of said rock shaft, curved links pivotally connecting the first reciprocating bars to one set of said ears, curved links pivotally connecting the latter reciprocating bars to the other set of said ears, and a hand lever on said rock shaft, whereby opposite lateral movement may be imparted conjunctively to the forward and rear members of all of said mold beds.

3. An ice-cream-cone machine, comprising a frame, molds mounted on said frame and formed with open tops, a core plate suspended in said frame and adapted for vertical reciprocation, said core plate formed with downwardly projecting cores adapted to enter said molds, bell-crank levers fulcrumed on said frame, a rod connecting one arm of each bell-crank lever to said core plate, and means for oscillating said bell-crank levers conjunctively to raise and lower said core plate.

4. An ice cream cone machine, comprising a frame, molds mounted on said frame and opening upwardly, a core plate suspended in said frame and adapted for vertical reciprocation, said core plate formed with downwardly projecting cores adapted to enter said molds, bell-crank levers fulcrumed on said frame, a rod connecting one arm of each bell-crank lever to said core plate, means for oscillating said bell-crank levers conjunctively to raise and lower said core plate, and an eccentric latch on said frame adapted to hold said core plate in lowermost position.

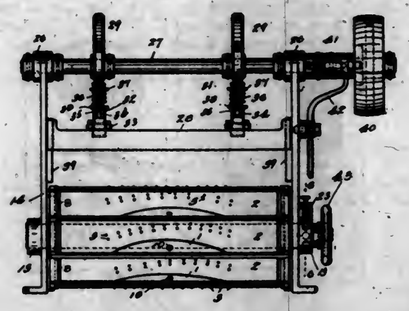
5. An ice cream cone machine, comprising a frame, upwardly opening molds mounted on said frame, a counterbalanced core plate suspended in said frame and adapted for vertical reciprocation, said core plate formed with downwardly projecting cores adapted to enter said molds, bell-crank levers fulcrumed on said frame and connected to said core plate, lever mechanism on said frame adapted to oscillate said bell-crank levers conjunctively and raise and lower said core plate, friction rollers on some of said bell-crank levers, a rock shaft journaled in said frame and formed with eccentric latches adapted to engage said rollers, and a lever on said rock shaft.

1,014,275. BUTTONHOLE-MARKING MACHINE. PETER K. WILLIAMS, Columbus, Ohio. Filed Feb. 9, 1911. Serial No. 607,546.

1. The combination with a base and a marker secured thereon and adapted to receive the "work," of a driving shaft and eccentrics thereon, a reciprocating hammer adapted to impress the marks of the marker upon the work, coupling members connected to the hammer, and bars yieldingly connected to said members and to the eccentrics.

2. The combination in a machine as described of a supporting base having a plurality of patterns attached thereto, selective mechanism for presenting a pattern to receive "work," a reciprocating hammer, coupling members connected to the hammer, a driving shaft with eccentrics thereon, and bars yieldingly connecting said eccentrics and coupling members.

3. The combination in a machine as described, of a shaft with bearing hubs, a rotatable base on the shaft provided with a plurality of tool faces, patterns of varying designs attached to said faces, and selective mechanism comprising a socket complementary to each tool face in one of said hubs and an adjustable plunger adapted to seat in said sockets.

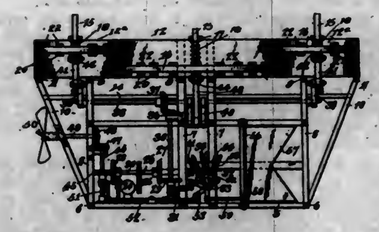


4. The combination with a rotatable drum having a plurality of tool faces, a marker on each face comprising a base plate and a pattern plate, pins projecting through the pattern plate from the base plate, and retaining means for said base plates.

5. The combination with a rotatable drum having a plurality of tool faces, a series of patterns, and a cross bar with an overhanging flange at each end of each face for retaining a pattern in place.

[Claim 6 not printed in the Gazette.]

1,014,276. AIR-CRAFT. JOHN W. WOLFE, Shenandoah, Iowa. Filed May 13, 1911. Serial No. 626,934.

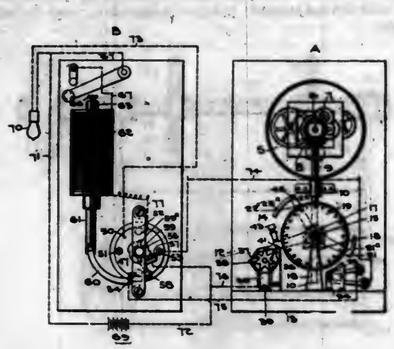


1. A flying machine comprising a frame, sustaining means therefor including end cylinders and an intermediate cylinder, said cylinders being vertically arranged and disposed in alinement longitudinally of said frame, the intermediate cylinder equaling in area the combined areas of the end cylinders, pistons in said cylinders, said pistons being provided with means for permitting air to pass through the same on their up-strokes and to prevent such passage of air on their downstrokes, and means for reciprocating the intermediate piston in alternation to the end pistons.

2. A flying machine comprising a frame, a longitudinal row of vertical cylinders carried thereby, pistons in said cylinder, said pistons being provided with openings, valves slidable in said openings and provided with ribs for spacing the same from the edges of said openings, said valves being provided with flanged ends that overlap said openings, springs carried by said pistons and engaging said valves, and means for reciprocating said pistons.

3. A flying machine comprising a frame sustaining means, therefor including vertical end and intermediate cylinders, the intermediate cylinder equaling in diameter the combined diameters of the end cylinders and pistons in said cylinders provided with means for permitting air to pass through on their upstrokes and to prevent such passage of air on their down strokes.

1,014,277. ELECTRIC TIME-SWITCH. WINFIELD WOOD, Denver, Colo. Filed July 1, 1908. Serial No. 441,326.



1. The combination with a clock-movement, of a rotatable disk operatively associated therewith and formed with peripheral, equidistant indentations, two radial arms of dissimilar lengths movable about an axis common with that of the disk, and terminating in contact blades, electric contacts respectively located in the path of said blades, means to automatically vary the position of one of the arms a predetermined variable distance relative to a point on the disk, during movement of the latter, and a detent on the other arm adapted to be inserted into any one of the indentations of the disk.

2. The combination with a time controlled rotatable wheel, of a disk mounted to move in unison therewith and having an independent circular movement about a point remote from the axis of the said wheel, and a contact blade in resilient engagement with the said disk.

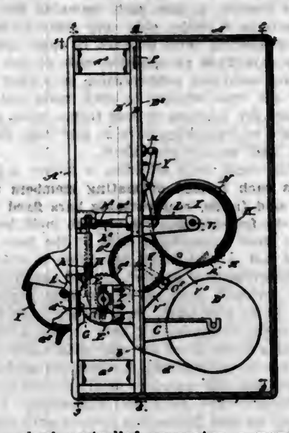
3. The combination with a time controlled rotatable wheel, of a worm-gear rotatable about an axis remote from that of the wheel and mounted to move in unison with the latter, a disk eccentrically mounted upon the gear and adjustable radially with relation thereto, a contact blade in resilient engagement with the said disk, a worm operatively engaging the gear and means to actuate the said worm during each revolution of the wheel.

4. In combination, a time-controlled rotatable dial, a radial arm movable therewith and projecting beyond its periphery, an electric contact in the path of said arm to be engaged thereby during each revolution of the dial, a button on the said arm, a rotatory, metallic disk having an aliquot part of its marginal portion, non-conductive a star wheel rigidly connected with said disk and disposed in the path of the said button, whereby it is intermittently actuated during the revolutions of the dial, a second arm in electric connection with the first named arm and movable about an axis at one of its extremities, its opposite end being in frictional contact with a face of said disk and normally in the path of the non-conductive part thereof, and means for adjusting said second arm to a position in which its free extremity engages the face of the disk out of the path of the non-conductive part thereof.

5. The combination with a clock-movement, of a rotatory dial, two contact blades mounted to move in unison therewith, electric contacts in the paths of the respective blades, a solenoid in an electric circuit with said contacts, a rotatory switch in the said solenoid circuit and in an electric lighting circuit and in electric connection with said blades, and mechanical means for transposing the movement of the solenoid-core when the solenoid circuit is closed by engagement of one of said blades with its respective contact, into intermittent motions of said switch in one direction whereby the solenoid circuit is opened during each movement and the lighting circuit is alternately closed and opened.

[Claims 6 to 11 not printed in the Gazette.]

1,014,278. COIN-CONTROLLED STAMP OR TICKET VENDING MACHINE. BYRON L. ZAERR, Chicago, Ill., and CHARLEY W. HAMLIN, Los Angeles, Cal. Filed Dec. 20, 1909. Serial No. 534,046.



1. In a check-controlled apparatus, a member having a check-receiving chute, a plurality of controlling devices, selective means for bringing a check in said chute into operative relation to any one of said devices, means for resting the aforesaid check while it remains in said chute and means controlled by another check entering said chute while the first check remains in the chute for governing said selective means.

2. In a check-controlled apparatus, a member having a check-receiving chute, two controlling devices, a selective device for directing a check in said chute toward either of said devices, means for resting the aforesaid check while it remains in said chute and means controlled by a second check entering said chute while the first check remains in the chute for governing said selective device.

3. In a check-controlled apparatus, a member having a main check-receiving chute and two branch chutes leading from the main chute, a selective device for directing a check from the main chute into either of the branch chutes, means for resting the aforesaid check while it remains in said chute and means governed by another check entering the main chute while the first check remains in the chute for controlling said selective device.

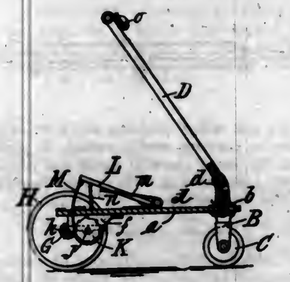
4. In a check-controlled apparatus, a member having a check-receiving chute, there being two paths for a check leading from said chute, selective means for determining which of said paths a check in said chute shall follow, means for resting the aforesaid check while it remains in said chute and means controlled by another check entering said chute while the first check remains in the chute for controlling said selective means.

5. In a check-controlled apparatus, a member having a check-receiving chute, a deflector for determining the direction of a check entering said chute, means for resting the aforesaid check while it remains in said chute and means controlled by a second check entering said chute while the first check remains in the chute for actuating said deflector.

[Claims 6 to 22 not printed in the Gazette.]

1,014,279. AMUSEMENT-VEHICLE. PHILIBERT AUGER, Easthampton, Mass. Filed Aug. 23, 1911. Serial No. 645,620.

1. In an amusement vehicle, in combination, a frame including a platform, a steering wheel swiveled at the front of the platform and having an operating handle, separate transverse shafts in alinement at the rear portion of the platform having each a traction wheel and a gear wheel affixed thereon, a pair of countershafts having each a gear wheel in mesh with the gear wheel on the traction wheel shaft and a ratchet wheel, a pair of hinged pedals on the top of the platform, pawls connected with and depending from said pedals and coacting with the ratchet wheels, and springs for elevating the pedals.

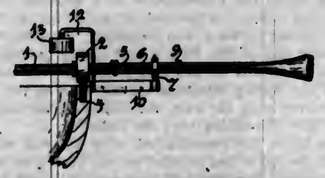


2. In an amusement vehicle, in combination, a frame including a platform, a steering wheel swiveled at the front of the platform and having an operating handle, separate transverse shafts in alinement at the rear portion of the platform having traction wheels and gear wheels affixed thereon, a pair of countershafts having each a gear wheel in mesh with the gear wheel on the traction wheel shaft and a ratchet wheel, a pair of hinged pedals on the top of the platform, pawls connected with and depending from said pedals and engaging with the ratchet wheels, springs for elevating the pedals, and flexible connections secured to the platform and to the pedals for limiting the upward swinging movements of the latter.

1,014,280. FEED-HOPPER. CHARLES F. BALL, New York, N. Y., assignor to Ball & Jewell, Brooklyn, N. Y., a Firm. Filed Nov. 15, 1910. Serial No. 592,487.

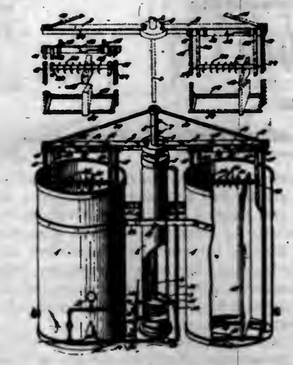
A hopper provided with a curved lip or guard projecting inwardly from the wall of the hopper, a mutilated cylinder provided with concave sides rotatably mounted at the base of the hopper with its cylindrical surfaces in position to travel in close proximity to the face of the curved lip or guard, a roller mounted within the hopper in coöperative relation to the said cylinder and free to move bodily away from the cylinder under pressure and means for rotating the cylinder.

1,014,281. OAR. THEODOR BAUMERT, Deutsch Lissa, Germany. Filed Mar. 13, 1911. Serial No. 614,270.



An improved oar comprising in combination the handle part, a thole pivotally mounted in the gunwale of the boat, a ring-shaped tilting support for the handle inclosed in said thole, the blade part of the oar, the hinged joint connecting said blade part with the handle, hinge-joints fixed to the outer surface of the boat, an angular support fixed with its outer end on said hinge-joints, a counterthole on the apex of the angular support and inclosing the blade part of the oar, a vertical support fixed at one end of the angular support and a counterweight fixed at the inner end of said vertical support, substantially as described and shown and for the purpose set forth.

1,014,282. LIQUID-COATING MACHINE. REME A. BEAUSEJOUR and GUSTAV DRUBEL, New York, N. Y., assignors to Standard Varnish Works, New York, N. Y., a Corporation of New York. Filed Mar. 19, 1908. Serial No. 422,023.



1. An article dipping apparatus, including a pair of liquid containing tanks, article holders, fluid actuated means for raising and lowering the holders, comprising a cylinder located between the tanks, its piston, means for controlling the admission and escape of the fluid to and from the opposite sides of the piston and means for accurately adjusting the position of the cylinder with respect to the tanks and holding it in such position.

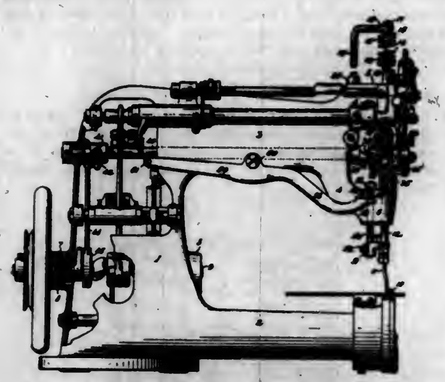
2. An article dipping apparatus including a pair of liquid containing tanks, article holders, fluid actuated means for raising and lowering the holders comprising a cylinder located between the tanks, its piston, means for controlling the admission and escape of the fluid to and from the opposite sides of the piston and means for accurately adjusting the position of the cylinder with respect to the tanks and holding it in such position comprising a frame fixed to the tanks and surrounding the cylinder, and adjusting screws mounted in said frame and fitted to engage the cylinder.

3. An article dipping apparatus including a pair of liquid containing tanks, article holders and fluid actuated ceans for raising and lowering the holders comprising a cylinder located between the tanks, its piston forming the sole support for the article holders, means for controlling the admission and escape of the fluid to and from the opposite sides of the piston and means for accurately adjusting the position of the cylinder with respect to the tanks and holding it in such position.

1,014,283. PRESSER-FOOT MECHANISM FOR SEWING-MACHINES. OTIS E. BROWN, Brockton, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Original application filed Mar. 4, 1910, Serial No. 547,246. Divided and this application filed Apr. 11, 1911. Serial No. 620,868.

1. In a sewing machine, the combination with a presser-bar and a presser-foot attached thereto, of a loose sleeve

embracing and endwise movable relatively to the presser-bar, a plurality of clamping members sustained by said sleeve and differentially movable into and out of operative relation with the presser-bar, and means for simultaneously actuating said clamping members and lifting said sleeve and presser-bar.



2. In a sewing machine, the combination with a presser-bar and a presser-foot attached thereto, of a loose sleeve embracing and endwise movable relatively to the presser-bar, a plurality of clamping members sustained by said sleeve and movable into and out of operative relation with the presser-bar, an operative connection between said clamping members whereby one is actuated through the other, and presser-bar lifting means connected with said clamping members.

3. In a sewing machine, the combination with a presser-bar and a presser-foot, attached thereto, of a loose sleeve embracing and endwise movable relatively to the presser-bar, a plurality of clamping levers sustained by said sleeve and each provided with a clamping jaw movable into and out of operative relation with the presser-bar, a pivotal connection between said levers, and presser-bar lifting means applied to one of said levers and adapted to throw both levers into clamping relation with the presser-bar.

4. In a sewing machine, the combination with a presser-bar and a presser-foot attached thereto, of a loose sleeve embracing and endwise movable relatively to the presser-bar, a plurality of clamping members sustained by said sleeve and movable into and out of operative relation with the presser-bar, uniformly acting presser-bar lifting means operatively connected with said clamping members and adapted to throw them into operative relation with the presser-bar, and means for simultaneously adjusting the timing of the engagement of the presser-bar by said clamping members under the action of said lifting means.

5. In a sewing machine, the combination with a presser-bar and a presser-foot attached thereto, of a loose sleeve embracing and endwise movable relatively to the presser-bar, a plurality of clamping members sustained by said sleeve and movable into and out of operative relation with the presser-bar, uniformly acting presser-bar lifting means operatively connected with said clamping members and adapted to throw them into operative relation with the presser-bar, and adjusting means applied to one of said clamping members and adapted to vary the period of engagement of both of said members with the presser-bar under the action of said lifting means.

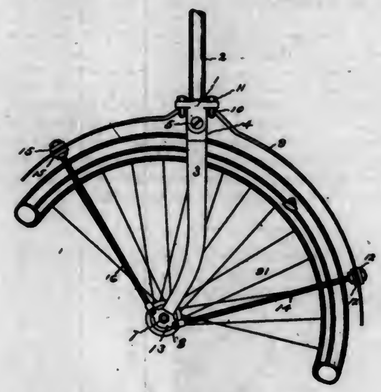
[Claims 6 to 10 not printed in the Gazette.]

1,014,284. GUARD FOR SWINGLETREES. HENRY F. CORBY, Marne, Iowa. Filed Feb. 21, 1911. Serial No. 610,090.

The combination, with a vehicle pole, a doubletree pivoted thereto, and two swingletrees pivoted to the doubletree; of a guard formed wholly of a single piece of stout wire having an eye at its middle portion which engages with the pivot of the doubletree, the portions of the wire adjacent to the said eye being twisted together to form a shank which is arranged at an acute angle to

the said eye and which projects above it, said wire having horizontal portions which extend in opposite directions from the top of the said shank and which terminate in cranked arms having eyes which engage with the pivots of the swingletrees.

1,014,285. CYCLE-FORK. GEORGE CUMMINGS, Dayton, Ohio, assignor of one-half to Elmer M. Lewis, Dayton, Ohio. Filed Sept. 12, 1911. Serial No. 648,989.



1. In a cycle, the combination of a steering crown, a fork with its upper end pivoted to the crown so that the fork may swing forward and backward, an axle attached to the lower end of the fork, a leaf spring secured at one point to the crown, and rods connecting said spring at apother point with said axle.

2. In a cycle, the combination of a steering crown, a fork with its upper end pivoted to the crown so that the fork may swing forward and backward, an axle attached to the lower end of the fork, a leaf spring secured at one point to the crown, and rods connecting both ends of said spring with said axle.

3. In a cycle, the combination of a steering crown, a fork with its upper end pivoted to the crown so that the fork may swing forward and backward, an axle attached to the lower end of the fork, a leaf spring secured intermediate its ends to the crown and curving forwardly and backwardly therefrom, and rods connecting the ends of the spring with the axle.

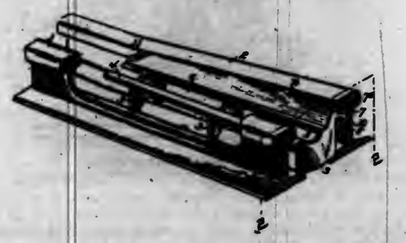
4. In a cycle, the combination of a steering crown, a fork with its upper end pivoted to the crown so that the fork may swing forward and backward, an axle attached to the lower end of the fork, a leaf spring extending forward and backward of the crown, clamp bars and nuts fastening the spring intermediate its ends to the crown, rods connected with the axle, and clamp plates connecting the rode with the spring near its ends.

5. In a cycle, the combination of a steering crown, a fork with its upper end pivoted to the crown so that the fork may swing forward and backward, an axle fastened to the lower end of the fork, a spring conforming to the contour of the wheel and of a width equal to substantially

the width of the tire, said spring at one locality being secured to the crown, and at another being connected with the axle.

[Claims 6 to 8 not printed in the Gazette.]

1,014,286. FOOT-GUARD. SAMUEL K. DUNKLE, Wheeling, W. Va., assignor to Safety Foot Guard & Railway Appliance Company, Wheeling, W. Va., a Corporation of Ohio. Filed Aug. 24, 1911. Serial No. 645,821.



1. In combination with a track-rail and a guard-rail, a foot-guard composed of a single piece of metal and comprising a horizontal table located on a plane below the heads of said rails, transverse supporting legs for said table, said table having the edge thereof adjacent to the track rail out of engagement with the latter and having a bearing wall on its opposite edge adapted for resting against the side of the head of the guard rail, and lugs carried by said wall and resting against the web of said guard rail.

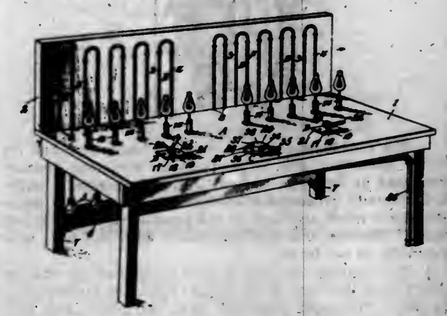
2. In combination with a track-rail and a guard-rail, a foot-guard composed of a single piece of metal and comprising a horizontal table located on a plane below the heads of said rails, transverse supporting legs for said table, said table having the edge thereof adjacent to the track rail out of bracing engagement with the latter, a bearing wall, substantially triangular in cross section, formed on the opposite edge of said table and seated against the inner face of the guard-rail, lugs having open slots therein formed on said wall and resting against the web of said guard-rail, and bolts projected through said guard-rail and resting in said slots.

3. In combination with a track-rail and a guard-rail, a foot-guard composed of a single piece of metal adjustably mounted between said rails and comprising a horizontal table located on a plane below the heads of said rails, said table having a slot for wheel flanges therein, that portion of said table adjacent to the track-rail being plain and being out of contact with said rail, and an upwardly extending longitudinally directed wall formed on the opposite portion of said table seated against the inner face of the head of the guard-rail, means for securing the last mentioned portion to the guard-rail, and transverse web-like supporting legs for said table.

4. In combination with a track-rail and a guard-rail, a foot-guard composed of a single piece of metal adjustably mounted between said rails and comprising a horizontal table located on a plane below the heads of said rails, said table having a slot for wheel flanges therein, that portion of said table adjacent to the track-rail being plain and being out of contact with said rail, and an upwardly extending longitudinally directed wall formed on the opposite portion of said table seated against the inner face of the head of the guard-rail, securing lugs formed on said wall and conforming in contour to the under side of the head and to the web of the rail, and legs supporting said table.

5. In combination with a track-rail and a guard-rail, a foot-guard composed of a single piece of metal adjustably mounted between said rails and comprising a horizontal table located on a plane below the heads of said rails, said table having a slot for wheel flanges therein, that portion of said table adjacent to the track-rail being plain and being out of contact with said rail, and an upwardly extending longitudinally directed wall formed on the opposite portion of said table seated against the inner face of the head of the guard-rail, securing lugs formed on said wall and conforming in contour to the under side of the head and to the web of the rail, and legs supporting said table, one of said legs constituting a guard-member for preventing the entrance of a foot beneath said table.

1,014,287. INCANDESCENT-ELECTRIC-LAMP LEAK-TESTER. BERNARD G. ERSKINE, Emporium, Pa., assignor to Novelty Incandescent Lamp Company, Emporium, Pa., a Corporation of Pennsylvania. Filed Dec. 14, 1909. Serial No. 533,046.



1. In an apparatus of the class described, the combination of a manometer, a flexible conduit connected to the manometer, means for connecting a lamp to be tested with the conduit, a valve for connecting the conduit with the atmosphere or with a suction pump in accordance with the position of the valve, and means on the lamp side of said valve for closing the conduit to test the lamp by the manometer.

2. In an apparatus of the class described, the combination of a manometer including an inverted U-shaped tube having legs of different lengths, a liquid-containing cup in which the open end of the longer leg is immersed, a conduit connected with the open end of the shorter leg, a flexible socket in the conduit for receiving the lamp to be tested, a controlling valve for connecting the conduit with the atmosphere or with the suction pump, and a pinch valve located between the said socket and controlling valve to close the said conduit.

3. In an apparatus of the class described, the combination of a manometer, a flexible tube connected therewith, a T-coupling connected with the tube, an elastic socket connected with the coupling to receive the tubulature of the lamp to be tested, a controlling valve connected with the conduit for establishing communication between the same and a suction pump, and a pinch valve disposed between the socket and controlling valve and including manually-operating means.

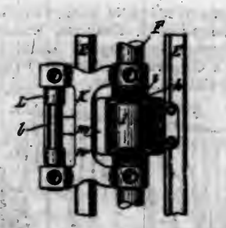
4. In an apparatus of the class described, the combination of a manometer, a conduit connected therewith and including a flexible part, a holder connected with the manometer through the conduit for receiving the lamp to be tested, a controlling valve for connecting the conduit with a suction pump, and a pinch valve for closing the flexible part of the conduit, said pinch valve consisting of a pair of relatively movable members disposed to engage the conduit at opposite points, and a device for drawing the members together for compressing the conduit.

5. In an apparatus of the class described, the combination of a group of manometers, flexible conduits individual to the manometers, means for connecting lamps to be tested with the manometers through the flexible conduits, each lamp being individual to the respective manometer, a controlling valve common to all the conduits for connecting them either to a suction pump or with the atmosphere, and a pinch valve common to all the conduits for

simultaneously interrupting communication between the suction pump and both the manometers of the group and the lamps connected to said manometers.

[Claims 6 to 21 not printed in the Gazette.]

1,014,288. PULP-SCREEN. FRANK G. FEELEY, Watertown, N. Y., assignor to Harmon Machine Company, Watertown, N. Y. Filed June 22, 1908. Serial No. 439,685.



1. The combination with a movable diaphragm and its rotary actuating cam, of an upright actuating member connected at its upper end with the diaphragm, a guide link pivotally connected with the lower end of said member, and a roller arranged at the junction of the link and upright member and making contact with the cam, substantially as set forth.

2. The combination with a movable diaphragm and its rotary actuating cam, of an upright actuating member connected at its upper end with said diaphragm and provided at its lower end with means for engaging said cam, and a guide link pivoted at its outer end to a fixed support and connected at its inner end by a horizontal pivot with the lower end of said upright member, substantially as set forth.

3. The combination with a movable diaphragm and its rotary actuating cam, of an upright actuating member connected at its upper end with said diaphragm and having a forked lower end, a horizontal arbor secured in said forked end, a roller mounted on said arbor within said fork, and a forked guide link connected with said arbor, substantially as set forth.

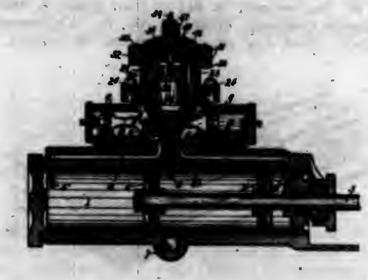
4. The combination with a movable diaphragm and its rotary actuating cam, of an upright actuating member connected at its upper end with said diaphragm and having a forked lower end, a horizontal arbor secured in said forked end, a roller mounted on said arbor within said roller and interposed between said roller and arbor, and a forked guide link connected with said arbor, substantially as set forth.

5. The combination with a stationary support, a movable diaphragm arranged therein and a rotary actuating cam, of an upright actuating member connected at its upper end with said diaphragm, a spring pressing said actuating member against said cam, a screw-threaded stud secured at its upper end to said support and extending downwardly therefrom, and a nut which is applied to said stud and against which the upper end of said spring bears, while the lower end of said spring bears against said upright member, substantially as set forth.

1,014,289. PUMP. SAMUEL E. FOLK, Bryan, Ohio. Filed June 19, 1911. Serial No. 634,105.

1. In an apparatus of the class described, the combination with a pump, fluid pressure actuated mechanism for operating said pump, and a closed receptacle to which fluid is delivered by said pump, of means associated with said mechanism and actuated by both fluid pressure therein and by pressure within said receptacle for automatically controlling the passage of the actuating fluid to or around said pump actuating mechanism.

2. The combination with a pump, and fluid actuated mechanism for operating said pump, of a chamber for distributing the fluid to the actuating parts of said mechanism, and valved controlled means in communication with said chamber, said means being operable by fluid pressure within said chamber to cause the fluid in said chamber to find an exit therefrom through the pump actuating mechanism to operate same and operable by a predetermined pressure created by the pump to cause the fluid in said chamber to by-pass the pump actuating-mechanism.



3. The combination with a pump, and fluid actuated mechanism for working said pump, said mechanism having a fluid delivery chamber therein and a fluid exit passage therefrom, of control means for the pump having a valve chamber in communication with said fluid distributing chamber and a passage from said valve chamber to the exit passage of said mechanism, a valve movable to open and close the communication between said valve chamber and exit passage, and diaphragm means operable by pressure of the actuating fluid on one side thereof to move said valve to close said passage to cause said fluid when flowing to actuate said mechanism, and operable by pump created pressure on the opposite side thereof to move the valve to open said passage to permit said fluid to flow to and through said exit without operating the mechanism.

4. The combination with a pump and the fluid operated mechanism therefor, said mechanism having a fluid delivery chamber and means associated therewith for directing the operating fluid to the operable parts of the mechanism, of an outlet passage from said chamber, a valve for opening and closing said passage, and means automatically operable by fluid pressure within said chamber to move the valve to close said passage and by a predetermined pressure without said chamber to move the valve to open said passage.

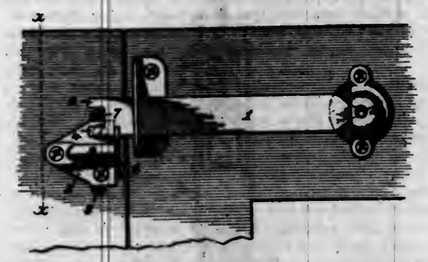
5. The combination with a pump and the fluid operated mechanism therefor, said mechanism having a fluid distributing chamber and a fluid outlet passage in communication with said chamber for the exit of fluid after actuating the operable parts of said mechanism, of a passage from said chamber to said outlet which by-passes the operable parts of said mechanism, a valve for opening and closing said outlet passage, and diaphragm means exposed on one side to the pressure in said chamber and on its other side to the created pressure of said pump and operable by pressure within said chamber to move the valve to close said passage and by predetermined pump created pressure to move the diaphragm and valve against said chamber pressure to open said passage.

[Claims 6 and 7 not printed in the Gazette.]

1,014,290. GATE-LATCH. PETER FRANTZ, Sterling, Ill., assignor to Frantz Manufacturing Co., Sterling, Ill., a Corporation of Illinois. Filed Mar. 14, 1911. Serial No. 614,460.

1. A latch, comprising in combination, a pivoted latch bar, and a keeper member formed with an attaching base having a lateral arrow shaped catch flange at one end and an inclined deflecting lug arranged above and to one side of the keeper flange aforesaid, substantially as set forth.

2. A latch comprising in combination, a pivoted latch bar, and a keeper member formed with an attaching base having a lateral arrow shaped catch flange arranged centrally at one end and a pair of inclined deflecting lugs arranged symmetrically above and below said keeper flange and to one side of the same, substantially as set forth.



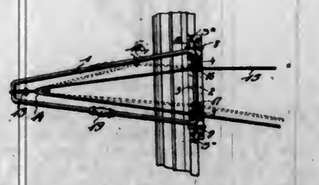
3. A latch comprising in combination, a pivoted latch bar the free end of which is recessed to form a pair of toes, and a keeper member formed with an attaching base having a lateral arrow shaped catch flange at one end and an inclined deflecting lug arranged above and to one side of the keeper flange aforesaid and adapted to engage the lowermost of the ties of the latch bar, substantially as set forth.

4. A latch, comprising in combination, a pivoted latch bar the free end of which is recessed to form a pair of toes, and a keeper member formed with an attaching base having a lateral arrow shaped catch flange arranged centrally at one end and a pair of inclined deflecting lugs arranged symmetrically above and below said keeper-flange and to one side of the same, substantially as set forth.

5. A latch comprising in combination, a pivoted latch bar, and a keeper member formed with an attaching base having a lateral arrow shaped catch flange at one end, an inclined deflecting lug arranged above and to one side of said keeper flange and a diagonal brace extending from a remote end of the base to the point of the keeper flange, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,014,291. CLOTHES-LINE SUPPORT. GUSTAVE FREY, New York, N. Y. Filed Mar. 31, 1908. Serial No. 424,346.

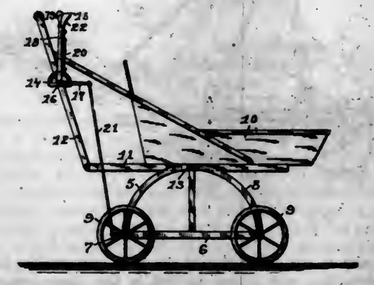


1. A clothes line support comprising a line carrying arm pivoted to swing horizontally into its inner and outer positions, and a hook carried by the arm arranged to engage the short upper section of the clothes line when the arm is in its outer position for the purpose of steadying said arm.

2. A clothes line support comprising a base, brackets thereon, a tube carried by said brackets, a horizontally swinging arm having its ends pivoted in said brackets and tube and means for locking the arm to the base in either of its inner or outer positions comprising a shelf on the base having an annular series of holes therethrough, the said arm being provided with a hole arranged to be brought into alinement with any one of said holes in the shelf and a locking key arranged to engage one of the holes in the shelf and the hole in the said arm.

1,014,292. BABY-CARRIAGE. MARCUS FRIED, Providence, R. I. Filed Oct. 8, 1910. Serial No. 585,999.

1. In a baby carriage and the like, a running-gear comprising a frame, upwardly extending semi-circular sides on the frame, a rearwardly extending arm on the frame, wheels rotatably secured to the frame, a body pivotally secured to the semi-circular sides of the running-gear frame and adapted to hold an infant or child, a handle member on the body, a bell-crank lever pivotally secured to the handle member, means for operatively connecting the bell-crank lever with the arm on the running-gear frame and means for adjustably securing the bell-crank lever to the handle member, whereby the body may be adjusted parallel with or at any desired angle relative to the running-gear and locked in the adjusted position.



2. A baby carriage, comprising a running-gear, upwardly extending side members on the running-gear, a rearwardly extending arm on the running-gear, a baby carriage body pivotally secured to the side members on the running-gear whereby the whole baby carriage body may be adjusted to a horizontal position in going up or down hill, a handle member on the body, a bell-crank lever pivotally secured to the handle member, a rod connecting the bell-crank lever with the rearwardly extending arm on the running-gear and means for adjustably securing the bell-crank lever to the handle member.

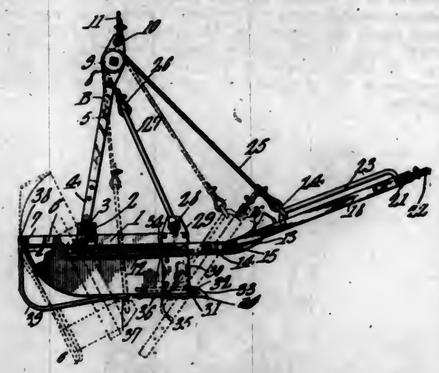
3. A baby carriage, comprising a running-gear 5. having a rearwardly extending arm 7. and upwardly extending sides 8. a baby carriage body 10. pivotally secured to the upwardly extending sides 8., and having an upwardly extending handle member 12, a pivot member 14. in the form of a segmental gear secured to the handle member 12, a bell-crank lever 15. pivotally secured to the pivot member 14. and having a forwardly extending arm 17. and an upwardly extending arm 18. terminating in a handle 19. and carrying a spring actuated latch 20, which engages with the teeth on the pivot member 14, and a connecting rod 21. pivotally secured at its upper end to the end of the arm 17. and at its lower end to the rearwardly extending arm 7. on the running-gear.

1,014,293. EXCAVATING-SCOOP. WILLIAM H. GADE, Iowa Falls, Iowa. Filed Sept. 18, 1911. Serial No. 649,989.

1. A drag line excavating scoop, having a body, a lifting bail pivotally connected to the upper edge thereof to the rear of the center of gravity, another bail rigidly connected to project beyond the open front end of said body, a drag line bail pivotally connected to the rigid bail and extending forwardly of said rigid bail, a rod carried by the drag line bail and in line with the drag line at all times, and a flexible connection of a fixed length having one end fast to the forward upper ends of the body, the body portion being slidable through the apex of the lifting bail while the other end is slidably connected to the rod of the drag line bail.

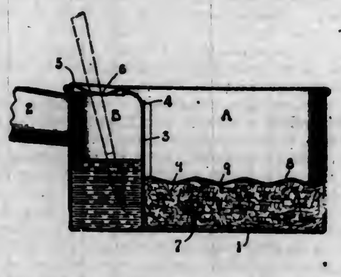
2. A drag line excavating scoop, having a body, a lifting bail pivotally connected to the upper edge thereof to the rear of the center of gravity, another bail rigidly connected to project beyond the open front end of the body, a drag line bail pivotally connected to the rigid bail and extending forwardly of the rigid bail, a rod connected to and carried by the drag line bail and disposed

in line with the drag line at all times, another bail having its terminals pivoted to the upper edges of the body, a pulley disposed at the apex of the lifting bail, a flexible connection having one terminal connected to the bail



pivoted to the front edge of the body and passing through said pulley, and a ring carried in the other terminal of the flexible connection mounted upon the rod of the drag line bail.

1,014,294. MARKING-POT. CHRISTOPHER A. GARVEY, St. Louis, Mo. Filed Aug. 28, 1911. Serial No. 646,482.



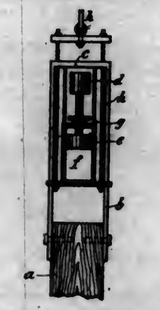
In a marking pot, a vessel, a partition subdividing said vessel into a marking brush compartment and a stencil brush compartment, said partition having apertures adjacent its upper end for the passage of ink from the marking brush compartment to the stencil brush compartment, a cover for said marking brush compartment provided with an aperture, a mass of absorbent material in said stencil brush compartment, and a perforated and corrugated delivery plate resting upon said mass of absorbent material.

1,014,295. WITHDRAWING OF PILES, POSTS, AND THE LIKE. ALEXANDER GIBB, St. Martin's Abbey, THOMAS GRAHAM MENZIES, North Queensferry, and ROBERT CHALMERS, Newport, Scotland. Filed Aug. 11, 1911. Serial No. 643,610.

1. In apparatus for withdrawing piles and the like, an anvil, means for attaching the same to the pile, a hammer and means for operating the same to strike the anvil in the proper direction substantially as described.

2. In apparatus for withdrawing piles and the like the combination with the ordinary withdrawing means, of an anvil attached to the pile and a vibrating hammer actuated to strike the anvil in the proper direction substantially as described.

3. In apparatus for withdrawing piles and the like, an anvil, means for attaching the same to the pile, a plurality of vibrating hammers and means for operating them



to strike the anvil in the proper direction substantially as described.

1,014,296. STEAM-HEATING SYSTEM. EDWARD E. GOLD, New York, N. Y. Filed Aug. 8, 1910. Serial No. 576,054.

1. A steam-heating system having means including a discharge valve and an admission valve controlled by the temperature of the discharge, said means being adapted in one position of said discharge valve to cause the admission of steam in unrestricted quantity and the maintenance of pressure in the system, and in another position to cause the admission of steam in restricted quantity and the opening of the system to substantially atmospheric pressure, a non-automatic admission valve, and a single means for operating both said discharge valve and said non-automatic admission valve.

2. A steam-heating system having an automatic admission valve, a cut-off admission valve and a discharge valve, thermostatic means exposed to the discharge and controlling said automatic admission valve said valve and thermostatic means being adapted to cause the system to operate as a pressure system with a free admission when said discharge valve is closed and steam is admitted, and to cause the system to operate as a vapor system with a restricted admission when the discharge valve is open and steam is admitted, and connecting means between said discharge valve and said cut-off admission valve by which said discharge valve may be set in the open or the closed position when said cut-off admission valve is open.

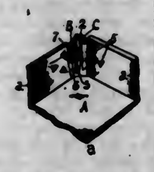
3. A steam heating system having a cut-off admission valve and a discharge valve, means for permitting a restricted discharge to cause the system to operate under pressure when said discharge valve is closed, thermostatically controlled means for controlling the supply of steam by the temperature of the discharge to cause the system to operate under vapor when said discharge valve is open, and connecting means between said valves by which said discharge valve may be set in either open or closed position when said admission valve is open.

4. A steam heating system having means including a discharge valve and an admission valve controlled by the temperature of the discharge, said means being adapted in one position of said discharge valve to cause the system to operate as a pressure system with a free admission and a restricted discharge, and in another position to cause the system to operate as a vapor system with a restricted admission and a free discharge, a non-automatic admission valve and a rotatable stem for operating both said discharge valve and said non-automatic admission valve, and having three different angular positions corresponding respectively to cut-off, pressure and vapor.

5. A steam heating system having means including a discharge valve and an admission valve controlled by the temperature of the discharge, said means being adapted in one position of said discharge valve to cause the system to operate as a pressure system with a free admission and a restricted discharge, and in another position to cause the system to operate as a vapor system with a restricted admission and a free discharge, a non-automatic admission valve and a rotatable stem for operating both said discharge valve and said non-automatic admission valve and having three different angular positions corresponding respectively to cut-off, pressure and vapor, and means for holding said stem impositively in each of said three positions.

[Claims 6 and 7 not printed in the Gazette.]

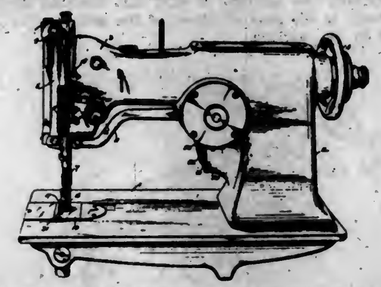
1,014,297. JUNCTION DEVICE FOR PAPER BOXES. HENRY N. GOSSS, St. Louis, Mo., assignor to American Papet Products Company, St. Louis, Mo., a Corporation. Filed July 24, 1911. Serial No. 640,062.



In a device of the character described, a junction member comprising a body portion and a main tongue, the main tongue being provided with a supplemental spring tongue extending backwardly toward said body portion; and a second junction member comprising a body portion and return flange parallel with said body portion terminating in a free rear edge, the joining fold at the forward end of said return flange being apertured to receive said main tongue and supplemental tongue of the first named junction member, and the free rear edge of said return flange being separated from the body portion of the second junction member permitting the straddling interlocking engagement therewith of said main and supplemental tongues.

1,014,298. FEEDING MECHANISM FOR SEWING-MACHINES. CHARLES FREDERICK GRAY, Sierra Madre, Cal., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 8, 1911. Serial No. 619,645.

1. In a feeding mechanism for sewing machines, a main shaft, a feed-dog, means for transmitting feed and vertical movements from said main shaft to said feed-dog, said means including a feed-lift connection pivoted at one end to oscillate on a given axis, its opposite end being operatively connected with said main shaft, and a link connection located between a stationary part of the sewing machine and said feed-lift connection for suspending or effecting vertical movements of said feed-dog, at the will of the operator.



2. In a feeding mechanism for sewing machines, a main shaft, a feed-dog, means for transmitting feed and vertical movements from said main shaft to said feed-dog, said means including a feed-lift connection pivoted at one end to oscillate on a given axis, its opposite end being operatively connected with said main shaft, and a link connection located between a stationary part of the sewing machine and said feed-lift connection for suspending or effecting vertical movements of said feed-dog at the will of the operator, said feed-lift connection being forked to permit of its being oscillated on said given axis when held against vertical movement.

3. In a feeding mechanism for sewing machines, a main shaft, a feed-dog, means for transmitting feed and vertical movements from said main shaft to said feed-dog, said means including a feed-lift connection pivoted at one end to oscillate on a given axis, its opposite end being operatively connected with said main shaft, a manually operated link connection located between a stationary part of the sewing machine and said feed-lift connection for suspending or effecting vertical movements of said feed-dog at the will of the opeartor, and means for limiting the adjustment of said link connection.

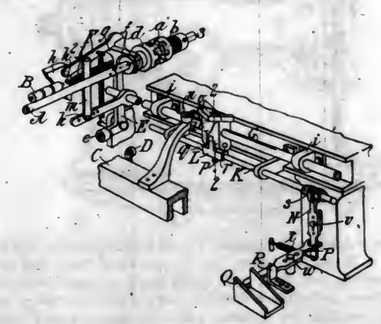
4. In a feeding mechanism for sewing machines, a bracket-arm, a main shaft, a feed-dog, means for transmitting feed and vertical movements from said main shaft to said feed-dog, said means including a feed-lift connection pivoted at one end to oscillate on a given axis, its opposite end being operatively connected with said main shaft, and a shaft mounted to oscillate in a bearing formed in the bracket arm and provided at its outer end with a shifting lever and at its opposite end with a link-adjusting lever, the latter being pivotally connected to a link having pivotal connection with said feed-lift connection, said shifting lever, shaft, link-adjusting lever and link comprising means for suspending or effecting vertical movements of said feed-dog, at the will of the operator.

5. In a feeding mechanism for sewing machines, a main shaft, a feed-dog, means for transmitting feed and vertical movements from said main shaft to said feed-dog, said means including a feed-lift connection pivoted at one end to oscillate on a given axis, its opposite end being operatively connected with said main shaft by an eccentric and an eccentric block, and a link connection located between a stationary part of the sewing machine and said feed-lift connection for suspending or effecting vertical movements of said feed-dog at the will of the operator.

1,014,299. YARN-EVENING ATTACHMENT FOR SPINNING-MULES. ROBERT JOSEPH HARRINGTON, Dalton, Mass. Filed Apr. 9, 1910. Serial No. 554,540.

1. In a spinning mule, the combination with the builder shoe and the roving delivery-controlling clutch mechanism, of a mechanism controlling the operation of such clutch mechanism comprising a rockshaft having a lever which coacts with the clutch mechanism and having a cam surfaced part non-rotative relatively to, but slidable along, the rockshaft, and a member on the backwardly

and forwardly moving carriage of the mule for successively engaging said cam surfaced member and means automatically controlled by the position of the builder shoe for varying the position of said cam surfaced member relatively to the zone of travel of the said member provided on the carriage.



2. In a spinning mule, in combination, a movable clutch member comprised in the roving delivery mechanism, and a yoke-provided lever engaging said clutch member, a locking lever for engagement with and disengagement from the clutch lever and a spring for forcing the clutch to opened position, a rockshaft having a cam surfaced member non-rotatively but slidably engaged thereon and having a lever arm, a link connecting said lever arm and said locking lever, the carriage of the spinning mule having a member coacting with the yoke-provided clutch operating lever and having a member coacting with said cam surfaced member, a slide rod having a part thereon engaging the cam surfaced member, a lever engaged with the slide rod, another lever coacting with the slide rod engaging lever and the builder shoe across the path of movement of which the last named lever is extended.

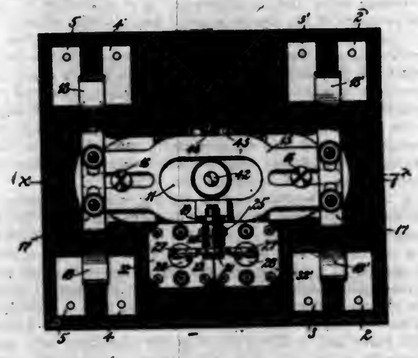
3. In a spinning mule, in combination, a movable clutch member comprised in the roving delivery mechanism, a lever for operating the movable clutch member, a member on the carriage coacting with said operating lever, a locking device for the clutch operating lever, a rockshaft having an arm connected with said locking device, a cam surfaced block having a sliding engagement along the rockshaft, and provided with a stud, another member on the carriage whereby in the traverses of the latter it engages said cam surfaced block, and through the latter rocks said shaft, a slide rod having a member extending therefrom and having an apertured portion, the opposite walls of which engage said stud of the cam surfaced block, the builder shoe and slide rod actuating mechanism, one of the movable parts of which is arranged across the path of movement of the builder shoe.

1,014,800. MULTITHROW SWITCH. GERALD W. HART, West Hartford, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed Mar. 3, 1911. Serial No. 612,071.

1. In a multi-throw switch, the combination of a base, two laterally displaced contacts thereon, a support movable toward and from said base, a carriage movably mounted on said support, a switch arm on said carriage and moving therewith so as to engage either one of said contacts, means for moving said support toward said base, and means for shifting said carriage thereon.

2. In a multi-throw switch, the combination of a base, two laterally displaced contacts thereon, a support movable toward and from said base, a carriage movably mounted on said support, a switch arm on said carriage and moving therewith so as to engage either one of said contacts, electromagnetic means for moving said support toward said base, and electromagnetic means for shifting said carriage thereon.

3. In a multi-throw switch, the combination of a base, two laterally displaced contacts thereon, a support movable toward and from said base, a carriage movably mounted on said support, a switch arm on said carriage and moving therewith so as to engage either one of said contacts, electromagnetic means for moving said support toward said base, electromagnetic means for shifting said carriage thereon, and a detent for holding said switch in closed position.

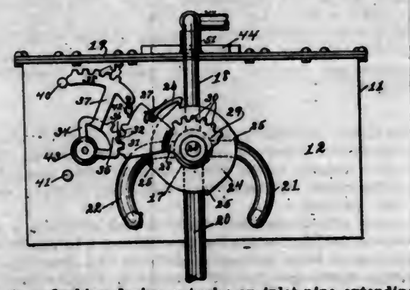


4. In a multi-throw switch, the combination of a base, two laterally disposed contacts thereon, a support movable toward and from said base, a solenoid mounted on said base, a core connected to said support and entering said solenoid, a carriage movably mounted on said support, a switch arm on said carriage and adapted to engage either of said contacts according to the position of said carriage, electromagnetic means for shifting said carriage upon said support, a local circuit controller in series with both the said electromagnetic means and said solenoid, a detent for holding said switch in closed position, and electromagnetic means for releasing said detent.

5. In a multi-throw switch, the combination of a base, a switch closing solenoid mounted thereon, a support above said solenoid having a depending core, a spring normally tending to move said support away from said base, a carriage movably mounted on said support, two switch arms secured to said carriage, two laterally disposed circuit terminals on said base for each of said arms, electromagnetic means for shifting said carriage, a detent for holding said switch closed, electromagnetic means for releasing said detent, local circuits for said electromagnetic means and solenoid, and local circuit controllers in said circuit.

[Claims 6 to 10 not printed in the Gazette.]

1,014,801. FLUSHING DEVICE. FRANCIS F. HAWKINS, Troy, N. Y. Filed Feb. 2, 1911. Serial No. 606,129.



1. In a flushing device, a tank; an inlet pipe extending above said tank; and a check valve for permitting a flow of fluid from the upper part of said tank into said pipe.

2. In a flushing device, a closed tank; an inlet pipe and a discharge pipe connected to said tank; and an independent connection between said tank and said inlet pipe provided with means for preventing a flow of liquid from said pipe to said tank and for permitting a flow of fluid from said tank to said pipe when the pressure in said tank exceeds that in said pipe.

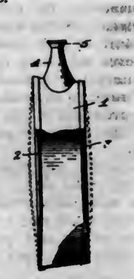
3. In a flushing device, a closed tank; an inlet and a discharge pipe connected to said tank; an independent connection between said tank and said inlet pipe; and a check valve in said connection for preventing a flow of liquid from said pipe to said tank and for permitting a flow of fluid from said tank to said pipe when the pressure in said tank exceeds that in said pipe.

4. In a flushing device; a closed tank; an inlet pipe connected to said tank; a discharge pipe also connected to said tank and having its free end open to the atmosphere; and an independent connection between the top of said tank and said inlet pipe provided with means for preventing a flow of liquid from said pipe to said tank and for permitting a flow of air from said tank to said pipe when the pressure in said tank exceeds that in said pipe.

5. In a flushing device, a four-way valve; an inlet and a discharge pipe connected to said valve; and a rotary valve blade in said valve constructed and fitted to permit a momentary direct connection between said inlet and discharge pipes during its rotation.

[Claims 6 and 7 not printed in the Gazette.]

1,014,802. SOUND-PRODUCING INSTRUMENT. EDWIN H. HAWLEY, Washington, D. C. Filed Nov. 8, 1910. Serial No. 591,278.



1. A sound-producing instrument, composed of a vessel having a plurality of heads of thin sheet metal provided with a normally inward buckle, means for introducing into said vessel a pneumatic pressure in excess of the atmosphere, and means for varying the relative times of response of said heads to said pressure.

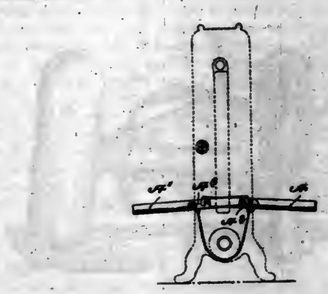
2. A sound-producing instrument, composed of a vessel having two heads of thin sheet metal of different diameters and provided with a normally inward buckle, and means for introducing air pressure into said vessel.

3. A sound-producing instrument, composed of a vessel having one or more heads of thin sheet metal of different thicknesses and provided with a normally inward buckle, and means for introducing air pressure into said vessel.

1,014,803. CARRIER FOR RADIATORS. FRED R. HESKETT, Alton, Ill. Filed Aug. 23, 1911. Serial No. 645,635.

1. A radiator carrier comprising, two handles of a width at their inner ends to be passed between the tubes of a radiator from opposite sides thereof and having means for readily connecting their meeting ends, and a depending flexible weight sustaining member secured at its ends to the handles between their ends and adapted to extend under the radiator.

2. A carrier comprising, two handles adapted to lie vertically parallel at their inner ends and each having at its inner end a downwardly opening slot and a lateral stud or projection therebeyond; the stud or projection on one handle being adapted to pass upwardly into the slot in the other, and a depending flexible weight-sustaining member secured at its ends to the handles between their ends and adapted to be passed under the article to be carried.



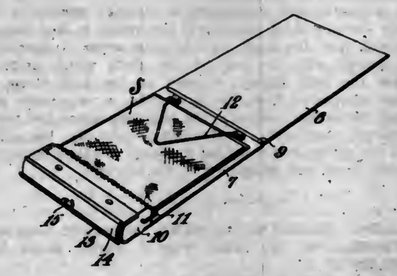
3. A radiator carrier comprising, two handles of a width at their inner ends to be passed between the tubes of a radiator from opposite sides thereof and provided at their inner ends with means for readily connecting them, shoulder-forming means on the handles for limiting their further inward movement between the tubes and a depending flexible weight-sustaining member secured at its ends to the handles adjacent to said shoulders and adapted to be passed under the radiator.

4. A radiator carrier comprising, two handles adapted to be passed at their inner ends between the tubes of a radiator and there provided with connecting means adapted to hold the handles inclined downwardly in opposite directions for the purpose described, stop shoulders on the handles to limit their inward movement between the tubes, and a depending flexible weight-sustaining member secured at its ends to the handles between their ends and adapted to be passed under the radiator.

5. A carrier comprising, two handles having flattened inner ends, each having a downwardly opening slot in its lower edge and lateral studs on the adjacent faces of the said ends to enter said slots, and a chain connected at its ends to said handles.

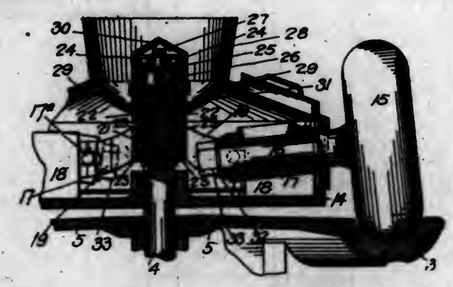
[Claim 6 not printed in the Gazette.]

1,014,804. COMBINED BOLT-BOARD AND SAMPLE-HOLDER. GEORGE A. HOLTZ, Riverside, Cal. Filed Nov. 8, 1910. Serial No. 591,235.



A sample holder, comprising two hingedly connected leaves, a head carried by the outer end of one of said leaves transversely thereof, a sample holder bent from a single strand of wire and having its terminals pivotally connected in the outer ends of the head and its body parallel to the inner face thereof, and a retaining clip carried by the same leaf as the head at the opposite end thereof and disposed to coöperate with the sample holder to retain the free end of the sample against the body of the leaf.

1,014,305. QUARTZ-MILL. SAMUEL S. JENNISON, Cleveland, Ohio, assignor to The Denver Quartz Mill and Crusher Company, Denver, Colo. Filed Sept. 20, 1910. Serial No. 582,868.



1. A quartz mill comprising a circular mortar, a rotatory upright shaft concentric therewith, an adjusting screw in operative engagement with said shaft, a head on said screw, hangers on said head extending in longitudinal grooves in said shaft, a spider connected with said hangers, axially inclined bearing boxes pivotally connected with the spider, and crushing members rotatably mounted in said boxes and supported in the mortar.

2. A quartz mill comprising a circular mortar, a rotatory upright shaft concentric therewith, a driving plate fixed on said shaft and having cheek plates arranged radially in pairs, an element vertically adjustably connected with the shaft and including outwardly extending arms formed in their extremities with slots which are open at their outer ends, axially inclined bearing boxes movable between the cheek plates of each pair and having trunnions extending in the slots of the respective arms, and crushing members rotatably mounted in the said boxes and supported in the said mortar.

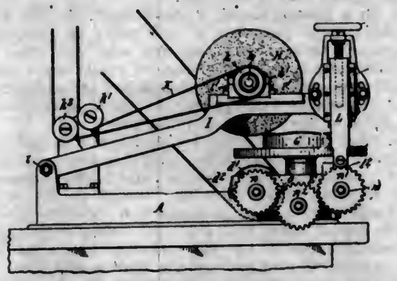
3. A quartz mill comprising a circular mortar, a rotatory upright shaft concentric therewith, an adjusting screw in operative engagement with the upper end of said shaft, a spider including a collar and outwardly extending arms, slidable on the shaft, said collar having notches in its upper and lower edges, a head on said screw, hangers connected with said head and having projections which occupy the notches in said collar, bearing-boxes pivotally connected with the arms of the spider, and crushing members rotatably mounted in said boxes and supported in the mortar.

4. A quartz mill comprising a circular mortar, a rotatory upright shaft concentric therewith, a feed hopper mounted upon the shaft, an adjusting screw in operative engagement with the end of the shaft which projects within the said hopper, a head on the said screw, a spider suspended from the said head, a removable cap within the hopper, inclosing the adjusting screw and parts connected therewith, bearing-boxes pivotally connected with the spider, and crushing members rotatably mounted in said boxes and supported in the mortar.

1,014,306. GRINDING-MACHINE. OLIVER J. JOHNSON, Wheeling, W. Va. Filed Feb. 5, 1910. Serial No. 542,360.

1. In a grinding machine, the combination of a movable work table, a grinding wheel which is mounted to move toward and from the work table at an angle to the plane of movement of said work table, and a driven device which supports said grinding wheel and which by its motion causes said grinding wheel to alternately approach and recede from said work table, substantially as set forth.

2. In a grinding machine, the combination of a rotary work table, a driven grinding wheel, one of said parts being mounted to move toward and from the other at an angle to the plane of rotation of the work table, and a driven mechanism which rotates said work table and includes a rotary device which causes said movably mounted part to alternately approach and recede from said other part during the rotation of said work table, substantially as set forth.



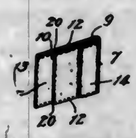
3. In a grinding machine, the combination of a rotary work table, a driven grinding wheel, one of said parts being mounted to move toward and from the other, and driven mechanism which rotates said work table and causes said movably mounted part to alternately approach and recede from said other part during the rotation of said work table, and which is adjustable to cause a greater or less number of movements of said movably mounted parts during a predetermined rotation of said work table, substantially as set forth.

4. In a grinding machine, the combination of a movable work table, a driven grinding wheel which is mounted to move toward and from said work table, and driven mechanism which moves said work table and causes said grinding wheel to alternately approach and recede from said work table and which is adjustable to cause a greater or less number of movements of the grinding wheel during a predetermined movement of said work table, substantially as set forth.

5. In a grinding machine, the combination of a rotary work table, a grinding wheel which is mounted to move toward and from the work table at an angle to the plane of rotation of said work table, and a driven rotary device which by its rotation causes said grinding wheel to approach and recede from said work table, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,014,307. POCKET. JOSEPH M. KAISER, Chicago, Ill. Filed June 29, 1911. Serial No. 636,076.



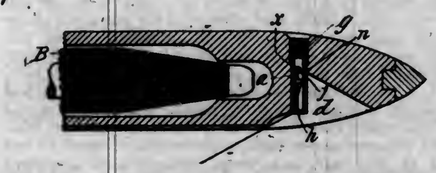
A pocket of the character described adapted to receive the end portion only of a stay, comprising a continuous strip of material folded lengthwise to provide a back-portion of multiple layers and a front-portion of multiple layers, the back-portion extending a short distance beyond the front-portion to form a guiding lip, the ends of the strip overlapping at the bottom of the pocket to reinforce the latter and to hold the inner layers of the material in place, the folded sections and said guiding lip extension being stitched along their side edges, for the purpose set forth.

1,014,308. JIG. GEORGE W. KELLER, CHARLES BRASSINGTON, and ABRAHAM BRASSINGTON, Aristes, Pa. Filed Oct. 29, 1910. Serial No. 589,772.

In a machine of the character described, the combination with a receptacle, of a transversely disposed gate hingedly mounted at one of its edges upon the bottom of said receptacle and at one end thereof, a shaft rotatably mounted upon said receptacle having a crank arm formed on each end, rods connected to the ends of said arms and to the opposite ends of said gate at its free edge, an arm rigidly fixed centrally upon said shaft and normally disposed in a horizontal plane, said arm having a rack formed on one end, a lever pivotally mounted upon said rack and having

an arm integrally formed therewith extending substantially at a right angle to the lever, said lever carrying a spring actuated dog for engagement with the teeth of the rack, a weight on the arm of said lever, the angular adjustment of the lever arm with relation to said horizontal arm determining the weight necessary to move the gate to its open position, and means for adjusting the weight on the lever arm to further control the movement of said gate.

1,014,309. SELF-THREADING SHUTTLE. WALTER LABONTÉ, Chicopee, Mass. Filed Mar. 22, 1911. Serial No. 616,263.



1. A shuttle body having an aperture in the side thereof to receive an eye member, and having the angularly related and intersecting thread guiding kerf-like slots communicating with said aperture, an eye member fitted in said aperture comprising a tubular shank having a longitudinal endwise opening slot along one side of its wall and having a substantially transverse recess connecting with said longitudinal slot and terminating in an eye opposite the slot, and said shank having a lip, provided as a part thereof and in separation from the wall thereof, adjacent the transverse slot, and overlying and extending therebeyond.

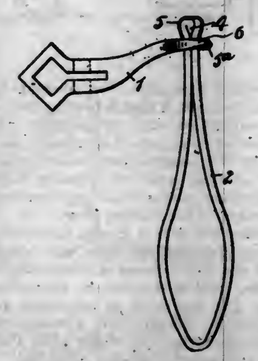
2. An eye member for a self threading shuttle comprising a tubular shank having a longitudinal slot therein, and having a substantially transverse recess connecting with said longitudinal slot and terminating in an eye opposite thereto, and said shank having a lip, provided as a part thereof, and in separation from the wall thereof, adjacent the transverse slot, and overlying and extending therebeyond.

3. An eye member for a self threading shuttle comprising a tubular shank having a longitudinal slot therein, and having a substantially transverse recess connecting with said longitudinal slot and terminating in an eye opposite thereto, said shank having a lip, provided as a part thereof, and in separation from the wall thereof, adjacent the transverse slot, and overlying and extending therebeyond, and the shank having a shoulder slightly separated from the end of the lip whereby between such shoulder and lip end a peripheral thread-guiding channel is produced.

4. An eye member for a shuttle, a tubular shank having a longitudinal slot therein open to one end thereof and having a substantially transverse recess connecting with said longitudinal slot and terminating in an eye opposite thereto, the side wall of the shank at the intersection of the longitudinal slot and transverse recess being obliquely inclined toward the open end of the eye member, and said shank having a lip, provided as a part thereof, and in separation from the wall thereof, adjacent the transverse slot, and overlying and extending therebeyond.

5. An eye member for a self threading shuttle comprising a tubular shank having a longitudinal slot therein, having a substantially transverse recess connecting with said longitudinal slot and terminating in an eye opposite thereto, said shank having a lip, in separation from its wall, adjacent the transverse slot, and overlying and extending longitudinally therebeyond, and said member also having an endwise located head provided with a longitudinal rib, and having a cavity in its end.

1,014,310. PULL-STRAP. PETER N. LANDINE, Milford, Conn., assignor to The Rostand Manufacturing Company, Milford, Conn., a Corporation of Connecticut. Filed Aug. 25, 1911. Serial No. 645,986.



1. A pull strap for a lever arm having an eye, said device comprising a strap having its two ends brought together at one end of the loop, a protector and keeper strip bent around the upper end of said loop, the ends of said strip extending down the sides of said loop, one end being arranged to pass through the eye of said lever and be bent outwardly, the upper part of said keeper strip being offset to prevent pulling through said eye.

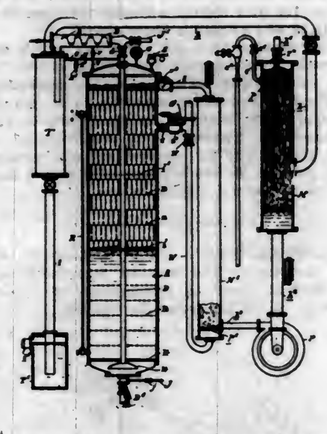
2. A pull strap for a lever arm having an eye, said device comprising a strap having the two ends thereof brought together side by side to form the upper end of the loop, the upper end of said loop being enlarged to form a head, a combined protector and keeper strip overstanding the headed upper end of said loop, part of said strip being arranged to pass through the eye of said lever arm.

3. A pull strap for a lever arm having an eye, said device comprising a strap having the two ends thereof brought together side by side to form the upper end of the loop, the upper end of said loop being enlarged to form a head, and a combined protector and keeper strip overstanding the headed upper end of said loop, both ends of said strip being arranged to pass through said eye.

4. A pull strap for a lever arm having an eye, said device comprising a strap formed into a loop, part of said loop being arranged to project through said eye, and a combined keeper and protector strip overstanding that part of the loop arranged to pass through said eye.

5. In combination, a lever arm having an eye, a pull strap therefor, part of said strap extending through said eye, and a combined protector and keeper strip overstanding that part of the loop passing through said eye, said strip being bent above and below said eye.

1,014,311. APPARATUS FOR CONVERTING STARCH BY A CONTINUOUS OPERATION INTO DERIVATIVES, DEXTRIN, DEXTROSE, &c. SAMUEL MORRIS LILLIE, Philadelphia, Pa. Filed May 23, 1910. Serial No. 563,028.



1. In converting apparatus, the combination of connected converting vessels, a starch heating tank, means for continuously introducing the starch from the heating tank to the first of the converting vessels, an expansion chamber, means for continuously introducing the converted liquor into the expansion chamber and for withdrawing it therefrom, and a vapor pipe leading from the expansion chamber to the heating tank.

2. The combination with a closed converter, of means for continuously supplying the same with starch and for simultaneously and continuously withdrawing the product of the conversion from said converter, means for introducing steam into the converter in quantities sufficient to maintain a pressure therein above atmospheric pressure and means for separating the steam from the converted liquor as it is discharged from the converter.

3. The combination with a converter, of means for continuously applying the same with starch, means for simultaneously and continuously withdrawing the product of the conversion from the converter, means for heating the starch before it is supplied to the converter, and means for separating the steam from the converted liquid as it comes from the converter and for conducting such steam to the means for heating the starch before it is supplied to the converter.

4. The combination with a closed converter, comprising a plurality of connected vessels, of means for maintaining steam in said vessels at pressure above atmospheric pressure, means for continuously supplying said converter with starch, and means for simultaneously and continuously withdrawing the product of such conversion from said converter and for separating the steam therefrom.

5. Converting apparatus, comprising a closed converter, means for maintaining a pressure in said converter above atmospheric pressure and an expansion chamber which receives the product of the conversion from the converter, the expansion chamber provided with a vapor discharge pipe and a separate liquid discharge pipe.

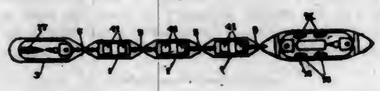
[Claims 6 to 26 not printed in the Gazette.]

1,014,312. MONOGRAM-PANEL. GEORGE HENRY LINE, Chicago, Ill. Filed Apr. 4, 1911. Serial No. 618,934.

The combination with a supporting member of a panel having an opening therein; a supporting flange at the bottom of said opening; a monogram fitted into said opening and resting on said flange; pliable projections on said monogram adapted to pass through said opening and be bent outwardly against the back of said panel; and means for securing said panel to said support with said

projections imprisoned between the rear of said panel and the surface of said support, substantially as described.

1,014,313. HYDROTRAIN. WILLIAM R. MACKLIND, Mineral Point, Mo. Filed Sept. 15, 1910. Serial No. 582,154.



1. A hydro-train including a plurality of boats linked together in chain, propelling means and steering means at each end of each boat, a power boat coupled to one end of the train, a brake boat coupled to the other end of the train, and means whereby said propelling means and steering means of each of said boats may be independently controlled from either the power boat or the brake boat.

2. A hydro-train including a plurality of boats linked together in chain, propelling means and steering means at each end of each boat whereby the boats may have their ends interchangeably used, a power boat coupled to one end of the train, and means whereby said propelling means and steering means may be independently controlled from the power boat.

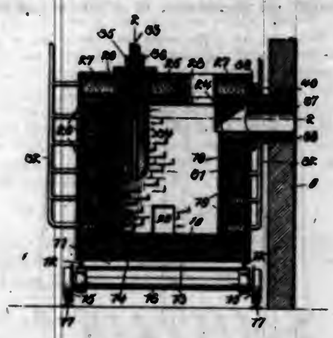
3. A hydro-train including a plurality of boats linked together in chain, propelling means and steering means at each end of each boat whereby the boats may have their ends interchangeably used, a power boat coupled to one end of the train, a brake boat coupled to the other end of the train, means whereby the steering means and propelling means of each boat may be independently controlled from either the power boat or the brake boat, and means whereby said power boat and said brake boat may be uncoupled from the train to have their respective positions reversed with relation to the train.

4. In combination wth a chain of boats arranged in end to end relation, a power boat coupled to one end of the train, steering means and propelling means on each boat, power means on said power boat to operate said steering means and propelling means, and means for controlling the operation of each of said steering means and said propelling means of each boat independently from said power boat.

5. A hydro-train including a plurality of boats arranged in end to end relation to form a chain of boats, propelling means and steering means at each end of each boat whereby the boats may have their ends interchangeably used, a power boat arranged to form a part of the chain, means carried by the power boat to operate the propelling means and steering means of said boats, and means whereby said operating means of the power boat has independent control of the propelling means and steering means of each boat.

[Claims 6 to 12 not printed in the Gazette.]

1,014,314. SODA-CALCINER. GEORGE H. MARSHALL, New York, N. Y. Filed Jan. 9, 1911. Serial No. 601,673.



1. A furnace of the class described having its walls composed of separable, superposed, alternately disposed water rings and rings of refractory material.

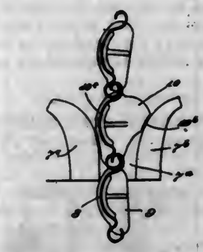
2. A furnace of the class described having its walls composed of separable, superposed, alternately disposed water rings and masonry rings.

3. A furnace having a wall formed of a series of superposed, separable, alternately disposed refractory rings and water rings, and a cap, said water rings and cap having bosses projecting from the outer sides thereof and bolt rods connecting the said bosses of the water rings and the cap.

4. A furnace of the class described comprising a wall formed of a series of separable superposed water rings and masonry rings and a cap, said water rings and cap having bosses projecting from their outer sides, bolt rods connecting the bosses of said water rings and cap and a fire box and lining.

5. A furnace of the class described having its walls composed of superposed, alternately disposed water rings and rings of refractory material, said water rings and refractory rings corresponding in interior and exterior diameter so that each extends entirely through the wall.

1,014,315. FIRE-RESISTING CURTAIN. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Mar. 4, 1908. Serial No. 419,209.

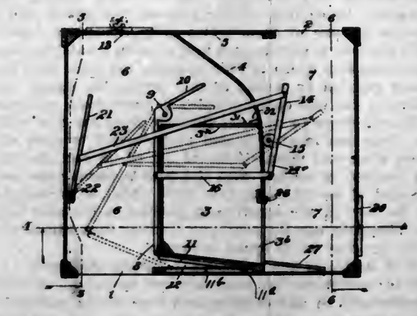


1. In a fire resisting curtain, the combination with end brackets, a roller mounted therein, and a vertically movable shutter mounted upon said roller, of rigid inward projections on said brackets embracing the edges of said shutter and serving to guide said shutter in its movements, and enlargements on the edges of said shutter arranged in the path of said rigid inward projections and normally carried by the shutter in line with said projections and adapted to engage said projections to support the shutter when in its lowered or closed position.

2. In a fire resisting curtain, the combination with end brackets, a roller mounted therein, and a vertically movable slatted shutter mounted upon said roller and provided with end locks upon its opposite vertical edges, of rigid inward projections on said brackets embracing and guiding the edges of said shutter and permitting the free passage of the end locks therebetween, one of said end locks upon each edge of the shutter being of greater width than the others and arranged upon the opposite ends of the same slat, and in the path of said inward projections and adapted to engage said projections to support the shutter in its lowered or closed position.

3. In a fire resisting shutter, the combination with end brackets, a roller mounted therein, and a vertically movable slatted shutter of slightly greater width than the length of the roller and provided with end locks upon its vertical edges, of rigid inward projections on said brackets embracing and guiding the edges of said shutter and permitting the free passage of the end locks therebetween, one of said end locks upon each edge of the shutter being of greater width than the others and arranged upon the opposite ends of the same slat and in the path of said inward projections, and adapted to engage said projections to support the shutter in its lowered or closed position, the said end locks of greater width adapted to overlap the ends of the roller when the shutter is rolled thereon.

1,014,316. LAYING-NEST. JAMES H. MCELROY, Middletown, N. Y. Filed Oct. 8, 1910. Serial No. 585,908.



1. A device of the character described consisting of a box having a nest compartment, an entrance passageway leading from an entrance opening in the box to the nest compartment, and an exit passageway leading from the nest compartment through an exit opening in the box, a door controlling the entrance opening of the box, said door opening outwardly but not inwardly, a member in connection with said door located in obstructing position in the entrance passageway so as to be pressed by the hen in passing through said passageway into the nest compartment, whereupon said member operates the door from open into closed position, means operatively connected with the aforesaid door and obstructing the exit of the hen from the nest by the exit passageway, said member, when pressed by the hen, operating the door from closed into open position, and means controlling the exit opening of the box, said means permitting the hen to go out through the exit opening in the box, but not to enter.

2. A device of the character described consisting of a box having a nest compartment, an entrance passageway leading from an entrance opening in the box to the nest compartment, and an exit passageway leading from the nest compartment through an exit opening in the box, a door controlling the entrance opening of the box, said door opening outwardly but not inwardly, a member in connection with said door located in obstructing position in the entrance passageway so as to be pressed by the hen in passing through said passageway into the nest compartment, whereupon said member operates the door from open into closed position, means operatively connected with the aforesaid door and obstructing the exit of the hen from the nest by the exit passageway, said member, when pressed by the hen, operating the door from closed into open position, and an auxiliary door controlling the entrance passageway, said door opening inwardly but not outwardly and having operative connection with the first

named door which closes it when the first named door is closed and which opens it when the first named door is open.

3. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means cotrolling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest.

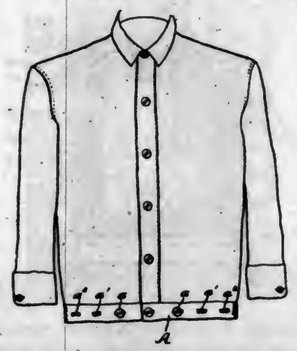
4. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, the first of the aforesaid two doors which is encountered by the fowl at the entrance in passing to the nest being the outwardly opening door, and the next encountered door being the one which opens inwardly.

5. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, the first of the aforesaid two doors which is encountered by the fowl at the entrance in passing to the nest being the outwardly opening door, and the next encountered door being the one which opens inwardly, the aforesaid means at the exit opening consisting of a swinging door and links running respectively from opposite sides of the axis about which said door swings to the two doors at the entrance opening to the box.

[Claims 6 to 10 not printed in the Gazette.]

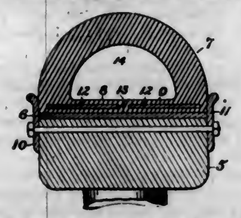
1,014,317. ADJUSTABLE GARMENT. ARTHUR E. MERKEL, Cleveland, Ohio, assignor to Schaffner Bros., Cleveland, Ohio, a Partnership. Filed Jan. 10, 1911. Serial No. 601,857.

As a new article of manufacture, a blouse for children opening in front from top to bottom, and provided upon its lowermost edge with a waist-band flexible throughout its entire circumference and extending continuously from one side of such opening completely around and to the other side thereof, said band being non-reinforced; said band being furthermore provided at its front portion and on each side of said opening with permanently secured buttons and button-holes, both the buttons and the button-holes being located adjacent to the end portions of the band, whereby the engagement of a button and button-



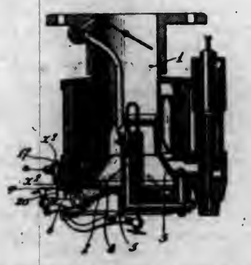
hole will form in the body of the fabric a fold or plait near the front portion of said blouse at either side of the opening.

1,014,318. CUSHION-TIRE. MYRON C. MERRIMAN, Detroit, Mich. Filed May 18, 1911. Serial No. 628,076.



The combination with a wheel the rim whereof is provided with side plates one of which is removable, of an endless cushion tire consisting of a resilient arch having inwardly projecting base portions integral with the feet of the arch and abutting to form a chord to the arch, and two rigid endless bands, one forming a part of each base portion whereby the chord maintains the feet of the arch firmly upon the rim and against the said side plates thereby giving full force and effect to the cushioning function of the arch regardless of the thrust of the wheel and without any possibility of displacement of the tire.

1,014,319. CARBURETER ATTACHMENT. HARRY A. MILLER, Los Angeles, Cal. Filed Apr. 18, 1910. Serial No. 556,253.

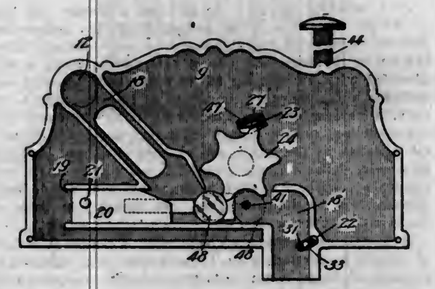


1. A carbureter provided with an air inlet valve and frictional means for restraining only the opening movement of the valve.

2. In a carbureter provided with an air inlet valve, a ratchet, a pawl for operating said ratchet, means coöperating with the air valve for operating said pawl during the opening movement of the air valve, and frictional means for retarding the rotation of the ratchet.

3. In a carbureter provided with an air inlet valve, a shaft on the carbureter, a ratchet journaled on the shaft, a washer in frictional contact with the ratchet for restraining the turning of the ratchet, a nut for adjusting said washer, said washer having a hub projecting on each side thereof, a casing journaled on said hub, a pawl pivoted within said casing and engaging the ratchet, an arm connected with the air inlet valve, and a link from said arm to said casing.

1,014,320. COIN-CONTROLLED DEVICE FOR VENDING-MACHINES. HERBERT S. MILLS, Chicago, Ill. Filed Oct. 5, 1911. Serial No. 653,067.



1. In a coin-controlled device of the character described, the combination of a push-bar, a coin-chute, a spring-pressed obstruction normally in the path of said bar and having a stud projecting into the coin-path through said chute to be actuated by a coin pressing flatwise against it to withdraw said obstruction, push-bar locking mechanism, coin-tripped means coöperating with said mechanism to unlock it by the coin in passing through said chute, and a pusher-finger for working a coin in the chute.

2. In a coin-controlled device of the character described, the combination of a push-bar, a coin-chute, a spring-pressed obstruction normally in the path of said bar and having a stud projecting into the coin-path through said chute to be actuated by a coin pressing flatwise against it to withdraw said obstruction, push-bar locking mechanism extending into the path of said bar to be re-set by depressing said bar, coin-tripped means coöperating with said mechanism to unlock it by the coin in passing through said chute, and a pusher-finger for working a coin in the chute.

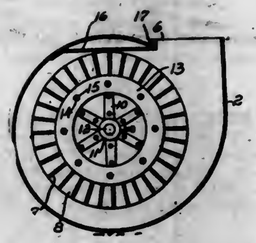
3. In a coin-controlled device of the character described, the combination with a casing having a coin-insertion opening and a coin-display opening, of a push-bar, a coin-chute extending from said insertion-opening past said display-opening, a spring-pressed obstruction normally in the path of said bar and having a stud projecting at the display-opening into the coin-path through said chute to be actuated by a coin under display, pressing flatwise against it, to withdraw said obstruction, push-bar locking mechanism, coin-tripped means coöperating with said mechanism to unlock it by the coin in passing through said chute, and a pusher-finger for working a coin in the chute.

4. In a coin-controlled device of the character described, the combination of a push-bar, a coin-chute, a spring-pressed obstruction normally in the path of said bar and having a stud projecting into the coin-path through said chute to be actuated by a coin pressing flatwise against it to withdraw said obstruction, push-bar locking mechanism including a spring-pressed lever normally locking said bar against depression and having a projection in the path of said bar for re-setting the locking-lever into its bar-locking position, coin-tripped means coöperating with said lever to unlock it by the coin in passing through said chute, and a pusher-finger for working a coin in the chute.

5. In a coin-controlled device of the character described, the combination of a push-bar, a coin-chute, a spring-pressed lever normally in the path of said bar and having a stud projecting into the coin-path through said chute to be actuated by a coin pressing flatwise against it to turn the lever out of said bar-path, push-bar locking-mechanism comprising a spring-pressed finger on the bar and a spring-pressed lever normally extending at its upper end into the path of said finger to lock the bar and having a projection on its opposite end in the path of said bar for re-setting the locking-lever into its bar-locking position, coin-tripped means coöperating with said locking-lever to unlock it by the coin in passing through said chute, and a pusher-finger for working a coin in the chute.

[Claims 6 and 7 not printed in the Gazette.]

1,014,321. FAN. DANIEL B. MINOR, St. Paul, Minn., assignor to Leslie S. Hackney, St. Paul, Minn. Filed Dec. 3, 1910. Serial No. 595,511.



1. The combination, with a rotary fan having a central air intake, of a ring encircled by said fan blades and lying on a plane at right angles substantially to the plane of said fan.

2. The combination, with a rotary fan having a casing provided with a central air intake, of a plurality of rings encircled by the blades of said fan and lying in planes at right angles substantially to the planes of said blades.

3. A rotary fan having a casing and a central air intake and a series of radial blades, a series of flat rings encircled by said blades and spaced apart and having central openings corresponding substantially to the air intake opening, and said rings operating to direct the air currents radially into the path of said blades.

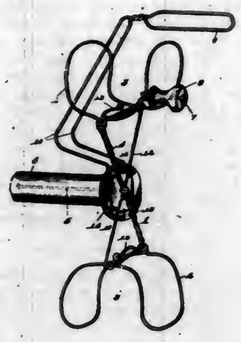
4. The combination, with a rotary fan having a central air intake and blades or vanes of uniform width substantially from end to end and a ring disposed within the space inclosed by said vanes or blades and lying in a plane at right angles substantially to the planes of said blades, for the purpose specified.

5. The combination, with a casing, of a rotary fan therein consisting of side plates and vanes or blades located between the outer portions of said plates, said casing having a central air intake and a peripheral discharge, rods passing through said fan plates from side to side and a series of rings mounted on said rods and inclosed by said fan blades, said rings operating to direct the air currents between said blades and in a direction parallel substantially with the planes thereof.

1,014,322. REEL. JOHN J. MOLCAR, Forest Park, Ill. Filed Dec. 3, 1910. Serial No. 595,461.

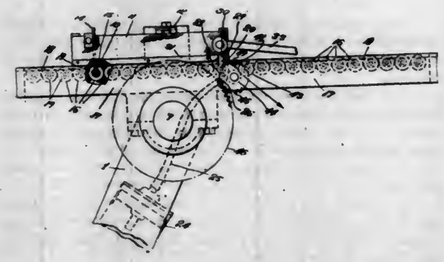
A reel, formed of a single piece of wire having its ends bent back upon each other forming elongated loops 2, each loop being bent upon itself in U-form to form a saddle 3, the ends of said wire being twisted together to form a portion 4 extending diagonally between said loops and one end 5 being extended laterally to form an axial handle; a handle 6 on end 5; a diagonally extending re-

inforcing wire 12, the ends of which are twisted around the outer ends of loops 2 and portion 4 and extended to



form spring engaging members 13; and handle 8 secured to one of loops 2, substantially as described.

1,014,323. SHEET-FEEDING MECHANISM. LEWIS E. MORRISON, Newark, N. J., assignor to Automatic Platen Press Company, New York, N. Y., a Corporation of New Jersey. Original application filed Jan. 2, 1907, Serial No. 350,516. Divided and this application filed Jan. 17, 1908. Serial No. 411,247.



1. In a sheet feeding device the combination of a layer of pivoted rollers for supporting the sheets, a separating mechanism carried by one of the said rollers in the center of the said layer, means for reciprocating the stack of sheets on the said layer and means for operating the said separating mechanism by the said reciprocating means.

2. In a sheet feeding device the combination of a sheet separating means, a layer of rollers extending on either side of the said means and mechanism for reciprocating the sheets on the said layer of rollers.

3. In a sheet feeding device the combination of a sheet separating means, a layer of rollers extending on either side of the said means, and mechanism for reciprocating a pack of sheets on the said rollers and for operating the said separating means.

4. In a sheet feeding device the combination of a separating mechanism, means for moving a pack of sheets over and past the said mechanism and rotatable members for supporting the sheets on both sides of the said mechanism.

5. In a sheet feeding mechanism the combination of a separating device, means for moving a pack of sheets over and past the said device, rotatable members for supporting the sheets on both sides of the said device and means for oscillating the latter from the said moving means.

[Claims 6 to 9 not printed in the Gazette.]

1,014,324. SANITARY DRINKING-FOUNTAIN. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,477.

1. A drinking fountain comprising a nozzle, the body of which is formed with passageways for independent streams of water, a deflector spaced a short distance above the top of the body over one of said passageways, a shell provided with an opening in its outer end inclosing said deflector and removably connected at its other end to the body, a narrow annular space separating the shell from the deflector, and a nipple extending inwardly through the opening in the outer end of said shell and threaded into said deflector, and provided with a bore in communication with the other passageway, said nipple being slightly less in diameter than the opening to form an annular outlet for water.

2. A drinking fountain comprising a nozzle, the body of which is formed with passageways for independent streams of water, separate means in each passageway for regulating the flow of water therethrough, a deflector integral with the body and spaced a short distance above the top of the same over one of said passageways, a shell formed with an opening in its outer end inclosing said deflector and removably connected at its other end to the body, a narrow annular space separating the shell from the deflector, and a nipple extending inwardly through the opening in the outer end of the shell and threaded into said deflector, and provided with a bore in communication with the other passageway, said nipple being slightly less in diameter than the opening to form an annular outlet for water.

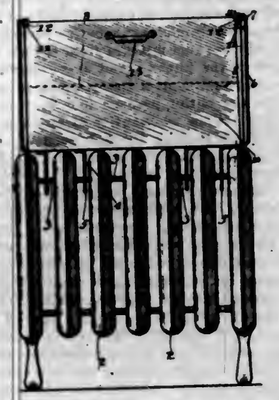
3. A drinking fountain comprising a nozzle, the body of which is formed with passageways for independent streams of water, a shell secured at one end to said body and having an opening through its other end, a nipple of slightly less diameter than said opening extending inwardly through the same and attached to the nozzle body, said nipple having an expanded head close to and projecting over the annular outlet surrounding the nipple, and a deflector within the shell over one of said passageways and lying in close relation to the wall of said shell to form a narrow channel for water passing through the said annular outlet surrounding the nipple, which latter is provided with a central bore communicating at its lower end with the other passageway.

4. A drinking fountain comprising a nozzle, the body of which is formed with passageways for independent streams of water, separate means in each passageway for regulating the flow of water therethrough, a deflector integral with said body extending over one of said passageways, a frusto-conical shell surrounding the deflector, a narrow space being left between them, and a nipple having a flaring head and a central bore adjustably connected to the deflector, a plurality of small holes being formed in the inner end of said nipple to connect the bore thereof with the other passageway.

5. A nipple for a drinking fountain comprising a body having an expanded head and a central bore extending nearly through said body with a plurality of small holes passing through the lower end of said nipple into said bore, and radial slots in said bottom extending from one of said holes to the periphery of the nipple.

[Claim 6 not printed in the Gazette.]

1,014,325. WARMING-OVEN. MAUD C. MUNSON, Chicago, Ill. Filed July 21, 1911. Serial No. 639,736.



1. The combination with a steam or hot water radiator having spacing members between the coils thereof, of an oven adapted to be placed over the radiator, and positioning members depending from the bottom of the oven and engaging said spacing members, substantially as described.

2. In a device of the class described the combination with a steam or hot water radiator having a pair of spacing members between each coil thereof, of an oven placed over the radiator; and a plurality of transversely extending plates depending from the bottom of the oven and having downward projections for engaging over said spacing members, substantially as described.

3. The combination with a radiator having stop members between the coils thereof, of an oven adapted to be placed over the radiator; and positioning members on said oven and engaging said stop members, substantially as described.

1,014,326. HOISTING DEVICE. HUBERT A. MYERS, Goshen, Ind. Filed Feb. 10, 1910. Serial No. 543,089.

1. In a device of the class described, a sheave, a rope thereon, a brake shoe, a pair of curved tracks or ways that follow the curve of the rope, but eccentric to said sheave, and means for connecting the sheave with said brake shoe, operative to move the latter along said ways, regardless of whether the rope is loaded or running light, whereby the sheave and ways coöperate to put the brake on the rope.

2. In a device of the class described, a sheave, a rope thereon, a brake shoe, adapted to bear on the rope, a pair of curved tracks or ways that follow the curve of the rope, but eccentric to said sheave, a connection between the sheave and the brake-shoe, operative to move the latter along the said tracks or ways regardless of whether the rope is loaded or running light, whereby the sheave and ways coöperate to put the brake on the rope and means for automatically controlling said connection.

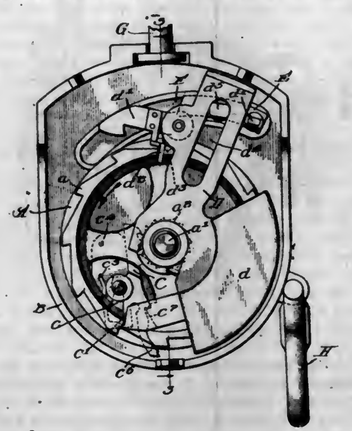
3. In a device of the class described, a sheave, a rope thereon, a brake shoe, means operated by the sheave for bringing the brake shoe into locking engagement with the rope, to clamp the rope to the sheave, operative either with or without a load on the rope, and means controlled by the rope for permitting the loaded or unloaded portion thereof to descend at will.

4. In a device of the class described, a sheave, a rope thereof, automatic means for locking the rope to the sheave when not loaded, to prevent return motion thereof, by clamping the rope to the sheave, means controlled by the rope for unlocking the sheave and rope.

5. In a device of the class described, a sheave, a brake shoe, mechanism operated by the sheave for causing the brake shoe to bear hard upon the rope, when the latter is loaded and allowed to run backward, to clamp the rope to the sheave, and means controlled by the rope for rendering the mechanism inoperative, whereby a load may be lowered.

[Claims 6 to 11 not printed in the Gazette.]

1,014,327. HOISTING DEVICE. HUBERT A. MYERS, Goshen, Ind. Filed Dec. 2, 1910. Serial No. 595,216.



1. In a hoisting device, a sheave, a shoe for clamping the rope to the sheave, a ratchet mechanism whereby rotation of the sheave in one direction will operate the shoe, means for rendering the said mechanism inoperative, and a device operated by the rotation of the sheave in the other direction to place said mechanism in operative condition.

2. In a hoisting device, a sheave, a shoe for clamping the rope to the sheave, a ratchet mechanism whereby rotation of the sheave in one direction will operate the shoe, means for rendering the said mechanism inoperative, and a device operated by the rotation of the sheave in the other direction to place said mechanism in operative condition, said device comprising a rack operated by a ratchet wheel that rotates with the sheave.

3. In a hoisting device, a sheave, a shoe for clamping the rope to the sheave, a ratchet mechanism whereby rotation of the sheave in one direction will operate the shoe, means for rendering the said mechanism inoperative, and a device operated by the rotation of the sheave in the other direction to place said mechanism in operative condition, said device comprising a movable element for controlling the position of said shoe, and a portion of which serves as medium of connection between the shoe and said ratchet mechanism.

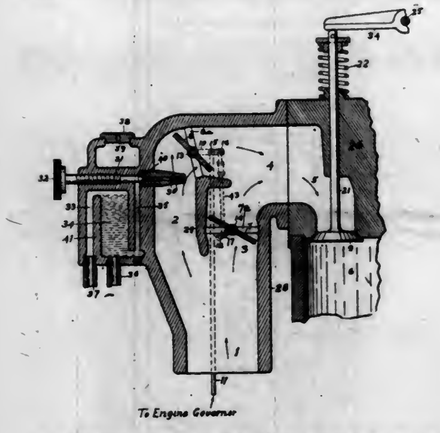
4. In a hoisting device, a sheave, a shoe for clamping the rope to the sheave, a ratchet mechanism whereby rotation of the sheave in one direction will operate the shoe, means for rendering the said mechanism inoperative, and

a device operated by the rotation of the sheave in the other direction to place said mechanism in operative condition, there being a pair of eccentric tracks or ways in which said shoe slides.

5. In a hoisting device, a sheave, a shoe for clamping the rope to the sheave, a ratchet mechanism whereby rotation of the sheave in one direction will operate the shoe, means for rendering the said mechanism inoperative, and a device operated by the rotation of the sheave in the other direction to place said mechanism in operative condition, said means comprising a projection for throwing the dogs of said mechanism out of engagement with the ratchet teeth on the sheave.

[Claims 6 to 8 not printed in the Gazette.]

1,014,328. MIXTURE-PRODUCING AND SPEED-GOVERNING DEVICE FOR GAS-ENGINES. HENRY JOSEPH PODLEŠÁK, Chicago, Ill. Filed Aug. 10, 1907, Serial No. 388,040. Renewed June 22, 1911. Serial No. 634,831.



1. A mixture-producing and speed-governing device for gas engines, comprising, in combination, plurality of air conduits each communicating with air supply, a port in each said air conduit, a valve in each said port and adapted to vary the free opening therethrough, means for actuating the valves to vary the said openings simultaneously and disproportionately, a fuel inlet port controlled by an adjustable valve and adapted to feed fuel into one of said air conduits, means for supplying fuel at constant pressure to the fuel inlet port, means to supply air, and an outlet conduit, in communication with the air conduits, for the mixture of fuel and air, substantially as set forth.

2. A mixture-producing and speed-regulating device for gas engines comprising, in combination, a casing having two air conduits therein, a valve in each said air conduit and adapted to vary opening therethrough, means to effect simultaneous action of the valves whereby said openings are varied in size, means to obtain variation of opening relatively faster in one of the openings than in the other, a fuel inlet port suitably adapted to feed fuel into one of said air conduits, a fuel supply, an air supply, and an outlet passage for the mixture of fuel and air, substantially as set forth.

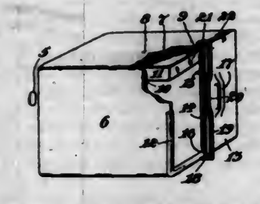
3. In a mixture-producing and speed-governing device for gas engines, the combination of an air supply, a fuel supply, plurality of air conduits, an adjustable fuel port adapted to convey fuel from the fuel supply into one of said air conduits, a valve in each air conduit and adapted to vary free aperture therethrough, means for simultaneously operating the valves, means operative to regulate relative rate of movement of the valves, means to adjust correlative positions of the valves, and an outlet passage for the mixture of fuel and air, substantially as set forth.

4. In a mixture-producing and speed-governing device for gas engines, the combination of plurality of air conduits in communication with an air supply, valve-controlled fuel port adapted to convey fuel from a fuel supply to one of the air conduits, an outlet passage adapted to receive the air and fuel mixture from the air conduits and convey same to the inlet port of a gas engine, means operative to vary and control the quantity of mixture passing through the outlet passage and to vary, simultaneously with variations of quantity of mixture, the relative quantities of air passing through each air conduit, and means to operate the said means for varying and controlling the quantity of mixture.

5. In a mixture-producing and speed-controlling device for gas engines, the combination of an air supply, fuel supply, plurality of air conduits, each communicating with the air supply, valve-controlled fuel port communicating the fuel supply with one of the air conduits, an outlet passage in communication with the air conduits, means to reduce the air pressure within the outlet passage and the air conduits to induce a flow of air and fuel therethrough, and operative means for varying and controlling the reduction of the air pressure within the air conduits and the outlet passage and for effecting a relatively disproportionate reduction of air pressure within each of the air conduits.

[Claims 6 to 26 not printed in the Gazette.]

1,014,329. REFRIGERATOR. ARTHUR AUBRIOT PONS, Brooklyn, N. Y. Filed Jan. 21, 1911. Serial No. 603,888.



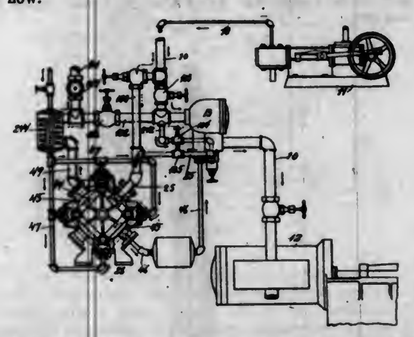
1. In a refrigerator, the combination of an outer casing comprising a plurality of compartments, and a heat insulated container within each of said compartments, each of said containers having an ice receptacle and a food compartment therein.

2. In a refrigerator, the combination with an outer casing having a suitable compartment therein, of a glass container having top, bottom, side and back double walls forming a vacuum space therebetween from which the air has previously been withdrawn, said side, top and bottom walls merging into a ledge at the front end and a door having double walls forming a vacuum space from which the air has previously been withdrawn, said double walls merging into a ledge completely therearound, a gasket secured on the former ledge and a spring lever pivotally secured to the bottom wall ledge and swinging over the outer face of said door and clamping it firmly into position.

3. In a refrigerator, the combination with an outer casing having a suitable compartment therein, of a container formed of top, bottom, side and back walls, said walls being of glass and double, forming a vacuum space therebetween, a gasket around the front edges of said walls and a door abutting said gasket, means for flexibly attaching said door to said container walls and a clamp rigidly holding said door to said gasket.

1,014,330. APPARATUS FOR HEATING COMPRESSED AIR. SIDNEY A. REEVE, Worcester, Mass., assignor, by mesne assignments, to C. P. Power Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 18, 1905. Serial No. 274,780.

1. In the art of reheating elastic pressure fluids, the combination with a fluid conduit supplied from a remote point, of a local heater for said conduit comprising an internal-combustion burner in the conduit adapted to moderately heat the fluid, and a pumping and regulating device supplied with motive fluid from the conduit and adapted to inject the fuel for said burner, said device being sensitive to the quantity of fluid flowing in the conduit, so as to inject fuel in proportion to said quantity of flow.



2. A compressed air system comprising mechanically-separate primary air compressing and using devices connected by a transmission conduit, an internal-combustion burner in said conduit adjacent to the air-using device, and local pumping means supplied with motive fluid from the conduit for injecting the burner fuel.

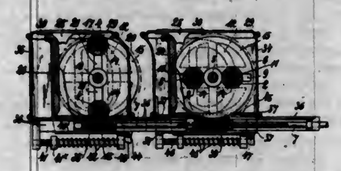
3. The combination of an air-compressor, a separate air-engine, a transmission conduit connecting the two, and a local self-regulating internal-combustion burner and fuel-pumping mechanism for reheating the air adjacent to the point of use, said mechanism being supplied with motive fluid from the conduit and sensitive to the quantity of air-flow in the conduit.

4. Fluid reheating means comprising a pressure conduit adapted to be interposed between a source of pressure-fluid supply and a remote using device, an internal-combustion reheating burner in said conduit, an independently-running motor-pump supplied with motive fluid from said conduit for injecting the burner fuel, and a thermostat subject to the reheating temperature and controlling the motive-fluid supply to said motor-pump.

5. In combination, a pressure-fluid conduit, an internal-combustion heater therein, a local motor-pump supplied with fluid by a branch from said conduit and adapted to inject the burner fuel, a throttle-valve in said branch, and a thermostat subject to the burner temperature and controlling said throttle-valve.

[Claims 6 to 10 not printed in the Gazette.]

1,014,331. MILKING-MACHINE. NILS ROSENQVIST, Stockholm, Sweden. Filed Nov. 23, 1910. Serial No. 593,787.



1. In a milking machine and in combination, a guide, a pair of frames, one of which is secured to said guide and the other is adjustable thereon, a drive shaft, a worm wheel in each frame, a worm fixed on said drive shaft and meshing with the worm wheel in the said fixed frame, a worm shiftable on said drive shaft and meshing with the worm wheel in the adjustable frame, a roller shaft for each worm wheel passing through a slot therein, a pair of rollers on each roller shaft, one on each side of its worm wheel, means in each frame for causing the rollers therein to travel in a vertically downward path during a portion of each revolution of their worm wheel and in a curved upward path during another portion of each revolution of their worm wheel, means in each frame for coacting with the rollers therein for effecting the milking, the said rollers in said frames being set so that the rollers in one frame act alternately to those in the other frame.

2. In a milking machine and in combination, a guide, a pair of frames, one of which is secured to said guide and the other is adjustable thereon, a drive shaft, a worm wheel in each frame, a worm fixed on said drive shaft and meshing with the worm wheel in the said fixed frame, a worm shiftable on said drive shaft and meshing with the worm wheel in the adjustable frame, a roller shaft for each worm wheel passing through a slot therein, a pair of rollers on each roller shaft, one on each side of its worm wheel, means in each frame for causing the rollers therein to travel in a vertically downward path during a portion of each revolution of their worm wheel and in a curved upward path during another portion of each revolution of their worm wheel, means in each frame for coacting with the rollers therein for effecting the milking.

3. In a milking machine and in combination, a guide, a pair of frames, one of which is secured to said guide and the other is adjustable thereon, a drive shaft, a worm wheel in each frame, a worm fixed on said drive shaft and meshing with the worm wheel in the said fixed frame, a worm shiftable on said drive shaft and meshing with the worm wheel in the adjustable frame, a roller shaft for each worm wheel passing through a slot therein, a pair of rollers on each roller shaft, one on each side of its worm wheel, means in each frame for causing the rollers therein to travel in a vertically downward path during a portion of each revolution of their worm wheel and in a curved upward path during another portion of each revolution of their worm wheel, an oval band or ring secured in the top of each frame, and a curtain stretched over said band in each frame and extending downward therefrom and coacting with the rollers therein for effecting the milking, the said rollers in said frames being set so that the rollers in one frame act alternately to those in the other frame.

4. In a milking machine and in combination, rollers circling in a vertical plane and acting upon the front teats, another set of rollers circling in a similar manner and acting upon the rear teats, a guide for the said rollers, resilient supports for the teats, shafts around which the rollers circle, a pair of frames, a central guide fixed to one of said frames at right angles to said shaft, and upon which the other of said frames is adjustable, worm-wheels embracing the said roller shafts, a drive shaft engaging the said worm wheels, sliding members movable upon said central guide and to which said supports for the teats are fixed, rods mounted along the said central guide, spiral springs surrounding said rods, said rods being embraced in a slidable manner by said supports actuated by said springs toward the rollers, and means for adjusting the supports to allow the teats to be inserted into the machine.

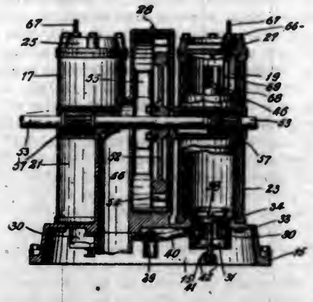
1,014,332. EXPLOSIVE-ENGINE. WALTER ROWBOTHAM, Montreal, Quebec, Canada. Filed Mar. 1, 1909. Serial No. 480,780.

1. An explosive engine comprising a turbine, a plurality of explosion chambers, connections between the explosion chambers and the turbine, and means for accelerating the exhaustion of spent gases from the turbine.

2. An explosive engine comprising a turbine having peripheral blades, a casing therefor, a plurality of detached explosion chambers operating in pairs, means connecting said explosion chambers and turbine casing, and means in the turbine casing for accelerating the exhaustion of spent gases.

3. An explosive engine comprising a turbine having peripheral blades, a casing therefor, a plurality of detached explosion chambers operating in pairs, pipes connecting said explosion chambers and turbine casing, nozzles adapted to direct the motive fluid against the turbine blades, valves for said explosion chambers, and a fan driven by the turbine for accelerating the exhaustion of spent gases.

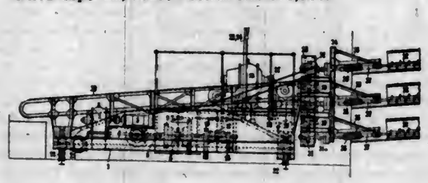
4. An explosive engine comprising a turbine having peripheral blades, a casing therefor, a plurality of detached explosion chambers, automatic valves controlling the admission of gas and air to said chambers, pipes between said chambers and the turbine casing, means for preventing the flame of combustion from entering said pipes, nozzles for directing the motive fluid against the turbine blades, and a fan in the turbine casing for accelerating the exhaustion of spent gases.



5. An explosive engine comprising a turbine having peripheral blades, a casing therefor, a plurality of detached explosion chambers, puppet valves in the bottoms of said chambers, levers connecting said valves across the axis of the turbine, pipes conecting said explosion chambers to the turbine casing in line with the axis of the turbine, nozzles for directing the motive fluid against the turbine blades, and a fan for accelerating the exhaustion of spent gases.

[Claims 6 to 9 not printed in the Gazette.]

1,014,333. MACHINE FOR CLEANING MUFFLES OR ZINC-FURNACES. OTTO SAEGER, Breslau, Germany. Filed Sept. 12, 1911. Serial No. 648,900.



1. In a machine for cleaning inclined muffles of zinc furnaces, the combination with a lower truck for running parallel to the front of a furnace and having an inclined track at right angles thereto, of an upper truck movable on the said track, one or more screw conveyers carried by the upper truck, and means on the upper truck for driving the one or more conveyers, the inclination of said track corresponding to the inclination of the muffles.

2. In a machine for cleaning the muffles of zinc furnaces, the combination with a lower truck for running along the front of a furnace, of an upper truck movable on the lower truck in a direction at right angles thereto, one or more screw conveyers carried by the upper truck, and means on the upper truck for driving the one or more conveyers, each conveyer including an elastically connected two-part rod or stem.

3. In a zinc muffle cleaning machine, the combination with a pair of trucks mounted one upon the other, of a muffle cleaning apparatus consisting of one or more extensible conveyers resiliently mounted upon one of the said trucks, said conveyers adapted to be moved into said muffles and to be rotated therein, and means on the other of said trucks for causing said rotation.

4. In a machine for cleaning the muffles of zinc furnaces, the combination with a primary truck adapted to move along the front of a furnace, and having an inclined track at right angles thereto, of a secondary truck movable on said track, one or more extensible screw conveyers resiliently mounted upon said truck, and adapted to extend into inclined muffles thereby to remove the contents thereof, the inclination of said track corresponding to the inclination of the muffles.

1,014,334. CASH-FARE-RECEIPT FORM. WILLIAM L. SEELIG, St. Louis, Mo. Filed Mar. 29, 1909. Serial No. 486,617.

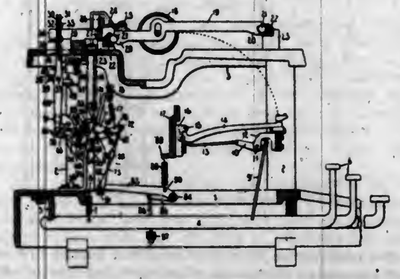
1. A cash fare receipt form comprising two superimposed sheets and means for transferring markings from the upper sheet to the lower sheet, the upper sheet bearing a printed form of an auditor's advice of cash fare paid, the lower sheet being divided by a transverse weakened line into two sections, one section bearing a printed form of a passenger's receipt for fare paid and the other section having an appropriately located space for indicating the destination and designated as a hat check, the blank spaces on the upper sheet being so positioned with reference to the blank spaces on the lower sheet that when properly filled in the markings will be transferred to the lower sheet to make one section thereof a complete receipt for fare and the hat check section indicate the destination.

2. A cash fare receipt form comprising two superimposed printed sheets, a part of the back of the upper sheet being carbonized and the lower sheet being divided into two parts by a transverse weakened line, each of said sheets having month and day indications and properly designated spaces for the amount of fare and stations, said indications and spaces on each sheet being positioned to register with like indications and spaces on the other and so arranged that the upper part of the lower sheet will contain the spaces for indicating the station of embarkation and the fare paid, and the lower part of said sheet will be provided with a suitable space for indicating the destination.

3. A cash fare receipt form comprising two superimposed sheets, the upper sheet having near the top thereof suitable spaces and markings for indicating the station of embarkation and the amount of fare paid, near its center a space for indicating the destination station and on its lower part a table of months and days, the lower sheet being provided with like spaces and markings identically arranged, said lower sheet being divided into two portions by a transverse weakened line immediately above the space for the destination station, and transfer means whereby markings may be simultaneously made on both sheets.

1,014,335. TYPE-WRITING MACHINE. CHARLES H. SHEPARD, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Nov. 10, 1910. Serial No. 591,680.

1. In a typewriting machine, the combination of a carriage; escapement mechanism therefor which includes two coöperative escapement members, one movable back and forth relatively to the other; finger keys and means controlled by said finger keys for controlling the operation of the escapement mechanism, said controlling means including means for moving the said movable escapement member alternately back and forth at successive printing operations, each complete operation of a finger key moving said movable member either back or forth; and means for regulating parts of the controlling means to feed "ordinary" or "reverse" as may be desired.



2. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising a dog member and a rack member, one of said members being movable relatively to the other transversely of the plane of the rack member; printing keys; means controlled by said printing keys for moving said movable member back and forth in the direction specified at successive printing operations, each complete operation of a printing key moving said movable member either back or forth; and means for effecting a relative adjustment of the parts at will to effect "ordinary" or "reverse" feed as may be desired.

3. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising two coöperative escapement members, one movable back and forth relatively to the other; finger keys; means controlled by said finger keys for moving the said movable escapement member alternately back and forth at successive printing operations, one key operation moving the movable member in one direction and the next key operation moving the movable escapement member in the opposite direction; and means for effecting a relative adjustment of the parts at will to effect "ordinary" or "reverse" feed as may be desired.

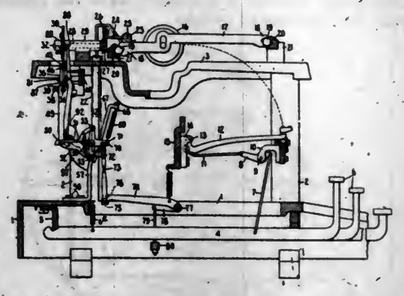
4. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising an escapement wheel and a feed dog, a single movement of the feed dog in one direction affording a complete letter space movement of the carriage; finger keys; means intermediate said finger keys and dogs for effecting a movement of said feed dog alternately in one direction and then in the opposite direction at successive operations of the keys, each complete operation of a key effecting a movement of the dog in but one direction; and means for effecting a relative adjustment of the parts at will to effect "ordinary" or "reverse" feed as may be desired.

5. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising a feed rack and a dog, one of said feed rack and dog members being movable relatively to the other; finger keys; means intermediate said keys and said movable member for effecting a movement of said movable member in one direction only at each complete actuation of a key, sucessive operations of the keys effecting a movement of said movable member first in one direction and then in the opposite direction; and means for effecting a relative adjustment between parts of said intermediate means to effect "ordinary" or "reverse" feed as may be desired.

[Claims 6 to 39 not printed in the Gazette.]

1,014,336. TYPE-WRITING MACHINE. CHARLES H. SHEPARD, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Nov. 10, 1910. Serial No. 591,681.

1. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising two coöperative escapement members, one movable back and forth relatively to the other; finger keys; means controlled by said finger keys for successively moving the said movable escapement member alternately back and forth at successive printing operations, each complete operation of a finger key moving said movable member either back or forth; an auxiliary holding dog; and means for moving said auxiliary dog into the path of one of said escapement members at each down stroke of a key and for moving said auxiliary dog out of the path of said escapement member at each up stroke of the key.



2. In a typewriting machine, the combination of a carriage; escapement mechanism therefor comprising a dog member and a rack member, one of said members being movable relatively to the other transversely of the plane of the rack member; printing keys; means controlled by said printing keys for moving said movable member back and forth in the directions specified at successive printing operations, each complete operation of a printing key moving said movable member either back or forth; an auxiliary holding dog; and means for moving said holding dog into the path of the rack member at each down stroke of a key and for moving said auxiliary dog out of the path of said rack member at each up stroke of a key.

3. In a typewriting machine, the combination of a carriage; feed devices therefor; finger keys; means intermediate said finger keys and certain of said feed devices for effecting back and forth movement thereof and for effecting a back or forth movement thereof only at each complete operation of a key; and an auxiliary feed dog that is moved back and forth at each complete operation of key.

4. In a typewriting machine, the combination of a carriage; feed devices therefor; finger keys; means intermediate said finger keys and certain of said feed devices for effecting back and forth movements thereof and for effecting a back or forth movement thereof only at each complete operation of a key; an auxiliary feed device in the nature of a holding dog; and means by which said holding dog is moved into the path of one of said first mentioned feed devices on the down stroke of the key and by which said holding dog is moved out of the path thereof on the up stroke of the key.

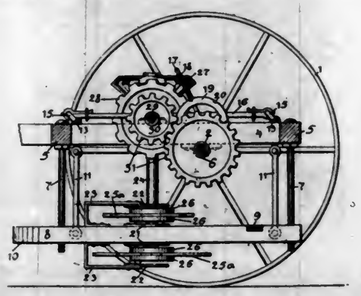
5. In a typewriting machine, the combination of a power driven carriage; coöperating escapement members therefor, one of said escapement members being movable back and forth relatively to the other; finger keys; means intermediate said finger keys and the said movable escapement member to control its back and forth movements, said means comprising two pawls which operate alternately at successive key operations to move said movable escapement member back and forth; an auxiliary feed device in the nature of a holding dog; and means for moving said holding dog into the path of the escapement member with which said movable member coöperates at each down stroke of a key and for moving the holding dog out of the path of said escapement member on the up stroke of a key.

[Claims 6 to 57 not printed in the Gazette.]

1,014,337. STALK-CUTTER. RUFUS N. SIKES, Burleson, Tex. Filed Apr. 4, 1911. Serial No. 618,827.

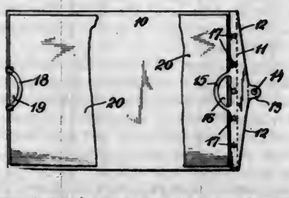
1. In a stalk cutter, the combination with a pair of transporting wheels, and an axle rigid with said wheels, of a frame pivotally mounted upon said axle, parallel guide

rods projecting rigidly downward from said frame, an adjustable frame mounted on said guide rods, a vertical shaft, having its extremities journaled in the two frames, a set of blades rigidly mounted on the lower extremity of the shaft, and projecting in a radial direction therefrom, a pair of bars transversely mounted upon the adjustable frame, between which said blades are adapted to rotate, means for raising or lowering the adjustable frame upon the guide rods, and a mechanism adapted to communicate rotation to said shaft when the adjustable frame is in its lowered position.



2. In a stalk cutter, the combination with a pair of transporting wheels, of an axle rigid on said wheels, a frame pivotally mounted upon the axle, a plurality of guide rods projecting rigidly downward from said frame, an adjustable frame mounted upon the lower extremities of the guide rods, rocker shafts mounted transversely upon the front and rear portions of the upper frame, the extremities of said shafts forming cranks, means supporting the adjustable frame from the extremities of the rocker shaft, means by which the rocker shafts may be simultaneously operated, a vertical shaft rotatably mounted at each side of the machine between the upper and lower frames, a plurality of knives rigidly mounted upon the lower extremity of each shaft, and projecting radially therefrom, a plurality of bars transversely mounted upon the lower frame, between which said blades are adapted to rotate, and a mechanism communicating rotation to the vertical shafts from the axle when the adjustable frame is lowered.

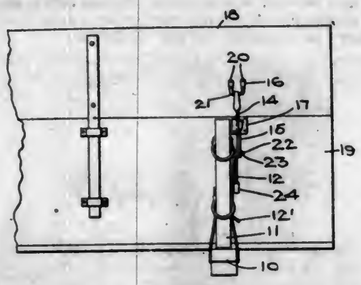
1,014,338. LETTER-HOLDER AND ENVELOP-OPENER. WULF SILVERMAN, New York, N. Y. Filed Jan. 5, 1910. Serial No. 536,455.



1. A letter holder adapted to be placed within an envelop, said holder comprising a card, metallic members affixed to the ends thereof, both of said members being constructed to form holding tongues and one of the members also forming a cutting edge and a tab adapted to project therefrom through the envelop.

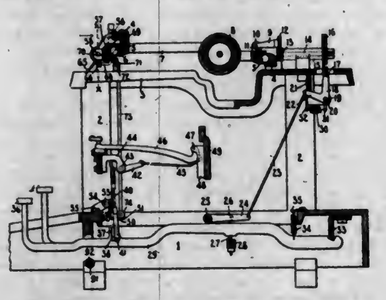
2. A letter holder adapted to be placed within an envelop, said holder comprising a card, means at opposite ends of said card arranged to lie over a letter placed upon the card and to hold the letter in place upon the card, and a cutting member of metal affixed to one end of the card, said member having obliquely disposed cutting edges, and a centrally disposed tab adapted to project through the envelop.

1,014,339. SIDE-BOARD AND WAGON-BODY CLAMP. ALBERT C. SMITH, Albion, Ill. Filed Apr. 4, 1910. Serial No. 553,235.



The combination with a wagon frame having sideboards and superposed sideboards, of an operating lever pivotally mounted on the standard of the wagon, a bolt disposed transversely through the lever below its pivotal point, a shorter angular lever and a longer curved hook member having openings to receive said bolt, and loops secured to the superposed sideboards, apertured plates secured to the sideboards of the wagon, said shorter angular hook members adapted to engage in the apertured plates, and and the longer curved hook members adapted to engage the loops on the superposed sideboards, to hold said boards together and to the wagon, when said operating lever is pressed into a downward depending position.

1,014,340. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Nov. 21, 1910. Serial No. 593,395.



1. In a typewriting machine, the combination of a carriage, contact devices which are brought into cooperation when the carriage reaches the end of a line, printing instrumentalities, finger keys therefor, and means controlled by the said contact devices coöperating one with the other and during the travel of the carriage to simultaneously disconnect all of the printing keys from the printing instrumentalities.

2. In a typewriting machine, the combination of a carriage, contact devices, one carried by the carriage and the other carried by the frame of the machine, said contact devices being brought into coöperation when the carriage reaches the end of a line, means for effecting a relative adjustment between said contact devices to determine the length of a line, printing instrumentalities, key levers normally operatively connected to said printing instrumentalities, and means controlled by said contact devices coöperating one with the other during the travel of the carriage to simultaneously break the operative connections between all of said key levers and printing instrumentalities.

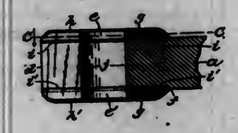
3. In a typewriting machine, the combination of a carriage, printing instrumentalities, finger keys normally operatively connected to said printing instrumentalities, and automatically operated means which are actuated by the travel of the carriage and when the carriage reaches the end of a line to simultaneously disconnect the finger keys from the printing instrumentalities.

4. In a typewriting machine, the combination of a carriage, printing instrumentalities, finger keys therefor, intermediate connections between said finger keys and printing instrumentalities, and automatically operated means controlled by the movement of the carriage for shifting certain of said connections relatively to others, to simultaneously disconnect the parts and render the movement of the finger keys inoperative to move the printing instrumentalities.

5. In a typewriting machine, the combination of a carriage, type bars, finger keys, intermediate connections between said finger keys and type bars, said connections including links, means for effecting a disconnection between said links and finger keys by a lateral movement of the links, and automatically operated means for moving said links laterally when the carriage reaches the end of a line, to effect a disconnection between the parts and thereby render the finger keys inoperative to move the type bars to the printing positions.

[Claims 6 to 14 not printed in the Gazette.]

1,014,341. ARTIFICIALLY-STRENGTHENED PAPER. AURELIUS SMITH, Indianapolis, Ind. Filed Dec. 23, 1909. Serial No. 534,718.



In reinforced paper, the combination of a sheet formed of pulp, flexible inherently adhesive substance laid on and adhering to a portion of said sheet, fibrous material embedded in said adhesive substance adjacent said portion of said sheet, and non-adhesive substance laid on the surface of said adhesive substance and thereby retained and covering the fibrous material.

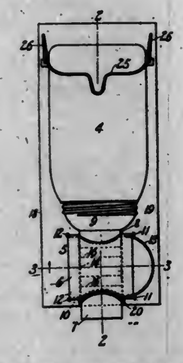
1,014,342. COOKING UTENSIL. EDWARD B. SMITH and ANNIE V. MARSTON, East Bridgewater, Mass. Filed Apr. 10, 1911. Serial No. 620,121.

1. A frying pan comprising a body-portion and a handle, said body-portion having an outwardly-bulged integral isolated stud below said handle to support the overbalancing weight of the handle and prevent skidding of the utensil when set in a stove hole.

2. A frying pan comprising a body-portion and a handle, an isolated stud or rest formed from the body of the pan and lying on the exterior of said body and below said handle, the lower face of said rest being flat and parallel with the bottom of said utensil to prevent the same from skidding and tilting under the weight of said handle when set in a stove hole.

3. A frying pan, comprising a body portion and a handle, said portion having an outwardly bulged integral stud or rest on its exterior below and in alinement with said handle, the lower face of said stud being flared and parallel with the bottom of the utensil, and the lateral wall thereof flaring upwardly and outwardly, substantially as shown and described.

1,014,343. MEASURING AND DISPENSING DEVICE. EDWARD P. SMITH, Pittston, Pa. Filed June 6, 1911. Serial No. 631,511.



1. In a device of the character described, the combination with a receptacle, of a cylindrical casing having openings at opposite ends and also having openings at right angles thereto, one of said openings terminating in a delivery spout, and the other in a hollow guide neck, a means for securing said guide neck to the receptacle, a cylindrical shell rotatively mounted within said cylindrical casing, having a limiting flange at one end, and a handle rigidly secured thereto, and provided with tongues at its opposite end having engagement with the edge of the cylindrical casing, a tube arranged transversely within said shell, and open at its opposite ends and registering with the guide neck and delivery spout, and having bottoms dividing it into opposite measuring chambers.

2. In a device of the character described, the combination with a receptacle, of a cylindrical casing having openings at opposite ends and also having openings at right angles thereto, one of said openings terminating in a delivery spout and the other in a hollow guide neck, a means for securing said guide neck to the receptacle, a cylindrical shell rotatively mounted within said cylindrical casing, having a limiting flange at one end and having a handle rigidly secured thereto, and provided with tongues at its opposite end, having engagement with the edge of the cylindrical casing, a tube arranged transversely within said shell and open at its opposite ends and registering with the guide neck and delivery spout, and cups slidably mounted within said tube.

3. In a device of the character described, the combination with a receptacle having a screw threaded neck, of a cylindrical casing having openings at opposite ends and also having openings at right angles thereto, one of said openings being continued in a delivery spout, and the other being continued in a hollow guide neck having an enlarged portion at its extremity, made screw threaded for engagement with the neck of the receptacle, a cylindrical shell rotatively mounted within said cylindrical casing, having a limiting flange at one end and a handle rigidly secured thereto, and provided with tongues at the opposite end, which have engagement with the edge of the cylindrical casing, and said shell having diametrically opposite openings, a tube transversely arranged within said shell connecting said openings, having marks of graduation on the inner wall thereof, and cups slidably mounted within said tube, having handles secured to the interiors thereof.

4. In a device of the character described, the combination with a receptacle having a measuring device secured

thereon which includes a cylindrical casing and a delivery spout, of a wall frame comprising a base or back provided at its upper portion with a U shaped wire spring having a detachable engagement about said receptacle, and having secured thereto at its lower portion a yoke-shaped wire member having an embracing relation about the delivery spout and a supporting engagement under the casing.

1,014,344. CALCULATING-SCALE. RUDOLPH C. SMITH, Yonkers, N. Y. Filed Sept. 21, 1909. Serial No. 518,843.

1. In combination with the logarithmic slide-rule, an auxiliary slide-rule of equal spacing and marked with a continuous series of the ciphers of powers of ten, a cursor therefor having indexes of the same spacing as the auxiliary series of ciphers, dividing line pointers on the slide and stock of the logarithmic slide-rule to point in a direction to the special index of the cursor for the ciphers determining the local value of the figures on the main slide, said pointers being formed by beveling the contiguous edges of the main slide and stock and said beveled portions being arranged to in part lie side by side or overlap each other and thereby become thicker on the move of the main slide and then direct the eye of the user to the index in the cursor in which the ciphers for the figures of the main slide must be made to appear and read.

2. In combination with the logarithmic slide-rule, an auxiliary slide-rule of equal spacing and marked with a continuous series of the ciphers of powers of ten, a cursor therefor having indexes of the same spacing as the auxiliary series of ciphers, dividing line pointers on the slide and stock of the logarithmic slide-rule to point in a direction to the special index of the cursor for the ciphers determining the local value of the figures on the main slide, said auxiliary slide being arranged longitudinally of the main rule and bearing at one side of a middle portion the ciphers for whole numbers and at the other side thereof the ciphers for the fractions in horizontal rows, said pointers and dividing lines being formed by beveling the contiguous edges of the main slide and stock and said beveled portions being arranged to in part lie side by side or overlap and thereby become thickened on the move of the main slide and then indicate the index in the cursor in which the ciphers for the figures of the main slide must be made to appear and read.

3. In combination with the logarithmic slide-rule, an auxiliary slide arranged longitudinally of the main rule and bearing in horizontal rows at one side of a middle portion the ciphers for whole numbers and at the other side thereof the ciphers for the fractions, a cursor for said auxiliary slide having indexes to which the said ciphers are moved and pointers on the slide and stock of the logarithmic slide-rule to point in a direction to the special index of the cursor in which the ciphers for the figures of the main slide must be made to appear and read, said pointers being longitudinal lines formed by beveling the contiguous edges of the main slide and stock and said beveled portions being arranged to in part lie side by side or overlap and thereby become doubled on the move of the main slide and then point to the proper index of the cursor in which is shown the number of ciphers for the correct local value of the first significant figure of those numbers which are used on the section of the logarithmic slide indicated by the double-line or overlapping portions of the pointer.

4. A logarithmic slide-rule comprising a main slide and stock, said main slide and stock having dividing line pointers formed by beveling the contiguous edges thereof and said beveled portions being arranged to in part lie side by side or overlap and thereby become doubled on the move of the main slide and then point to the proper index of the cursor in which is shown the number of ciphers for the correct local value of the first significant figure of those numbers which are used on the section of the logarithmic slide indicated by the thickened line or overlapping portion of the pointer.

1,014,345. VEHICLE-TIRE. GEORGE E. STARN, Camden, N. J., assignor to Hannah M. Dover, Palmyra, N. J. Filed Nov. 20, 1909. Serial No. 529,147.

1. An air cushioned tire comprising a hollow flexible female member having a socket therein open along its outer side and an air chamber within said member extending around said socket to opposite sides of the opening therein, and a male member having a broad substantially flat base seated on said correspondingly shaped outer side of said female member and provided with a projection fitted in said socket and adapted to be retained therein by air pressure within said chamber causing said female member to clench and hold said projection.

2. An air cushioned tire comprising a hollow flexible female member having a longitudinally extending and substantially circular socket therein open along its outer side, said side being broad and substantially flat, and a male member of hard rubber having a broad substantially flat base seated on said flat side and provided with a substantially circular projection fitting into said socket and adapted to be retained therein by air pressure within said chamber clenching the material of the socket around said projection.

3. An air cushioned tire comprising a tread and a substantially rectangular and inflatable portion, the tread and inflatable portion being substantially coextensive in width and being interlocked by having a portion of one entered into a socket of the other and held therein by the inflation of said inflatable portion.

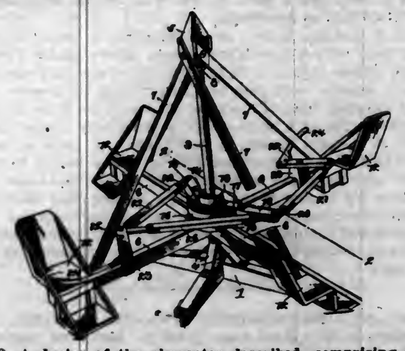
4. The combination with an air cushioned tire comprising a solid tread having a projection and an inflatable portion having a socket engaged by said projection, the tread and inflatable portion being substantially coextensive in width, and being substantially rectangular in cross section, and a wheel rim embracing the inflatable portion and forming a housing for the air chamber thereof.

5. The combination with an air cushioned tire substantially rectangular in cross section and comprising a non-puncturable tread and an inflatable portion, the tread and inflatable portion being interlocked by a portion of one being entered into a socket of the other, the inflation of the inflatable portion locking it and the tread together, and a substantially U-shaped rim embracing the inflatable portion and extending beyond its juncture with the tread and housing the air chamber of the inflatable portion and overlying the sides of the tread.

1,014,346. ROUNDABOUT. LAWSON B. STEWART, Rimersburg, Pa. Filed Feb. 11, 1911. Serial No. 608,093.

1. A device of the character described, comprising a fixed base, a mast thereon, a frame revolubly mounted on said mast, a disk fixedly mounted on said mast, levers carried by said frame, clamping members also carried by the frame in a position in close proximity to said disk, links connecting each clamp with a lever, and an additional link connecting one of said clamps with the opposed lever, whereby said clamps may be alternately forced into

frictional engagement with said disk to revolve the frame on said mast.



2. A device of the character described, comprising the combination with a fixed base, a mast thereon, a frame carrying seats thereon revolubly mounted on said mast, a circular plate carried by the frame through which said mast extends and a disk fixed on said mast provided with a depending flange, said disk being spaced a short distance above said plate; of clamping members resting on said plate provided with slots to receive the depending flange of the disk, operating means carried by the frame and disposed adjacent the seats for forcing the clamps into frictional engagement with the disk, and additional means connecting the operating means of the respective clamps, whereby the effective engagement of the clamps with the disk will be alternate.

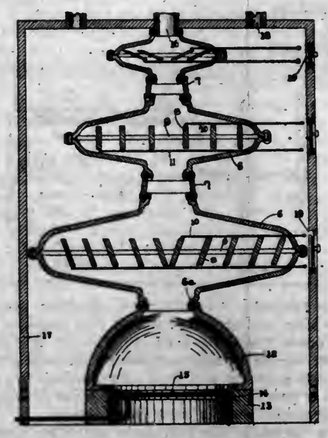
3. In a device of the character described, the combination with a fixed base, a mast thereon, a frame revolubly mounted on said mast, said frame being provided with a circular plate through which said mast extends and a disk fixed on said mast and spaced a short distance above said plate, said disk being provided with an annular depending flange; of a pair of clamping members resting on said plate provided with slots to receive the annular flange of said disk, the walls of said slots being serrated to provide effective engaging faces, plates removably engaged with said clamping members and contacting with the upper face of said disk to retain said clamping members in position thereagainst, and means carried on said frame for alternately forcing the engaging faces of said clamping members into frictional engagement with the flange of said disk.

4. In a device of the character described, the combination with a fixed base, a mast thereon, a frame revolubly mounted on said mast and a disk fixed on said mast; of a pair of clamping members carried by the frame and adapted to revolve with the frame about said disk, a pair of levers mounted on said frame at diametrically opposite points thereon, a link connecting each of said clamping members with a lever, and an additional linking member connecting one of said clamping members with the lever of the opposed clamping member, whereby the levers may only be operated alternately to force the clamping members into frictional engagement with the disk.

1,014,347. HOT-AIR HEATER. HENRY STRAND, Cleveland, Ohio. Filed Apr. 20, 1911. Serial No. 622,275.

1. In an air heater, the combination of an outer casing, and a succession of enlarged radiators located therein one above another and successively smaller in size, with contracted connecting necks, and an inlet for products of combustion at the bottom and an outlet for the same at the top, and independently adjustable deflectors in each radiator, comprising a plurality of blades spaced apart and adjustable to various inclinations to permit a direct flow from one neck to the neck above and to direct more or less of the products of combustion, entering through the necks, toward the peripheral portion of the radiator.

2. In an air heater, the combination of an outer casing, a fire box in the lower part thereof, a plurality of radiators mounted in communication one above the other and upon said fire box, the radiators decreasing successively in size, toward the top, and an independently operable damper



controlling the flow in each radiator, each damper comprising a plurality of blades extending across the radiator and adjustable to vary the flow of the products of combustion through said radiator, whereby the effective heating action of each radiator may be independently varied.

1,014,348. ARTIFICIAL TOOTH. GEORGE W. TODD, Omaha, Nebr. Filed July 12, 1911. Serial No. 638,083.

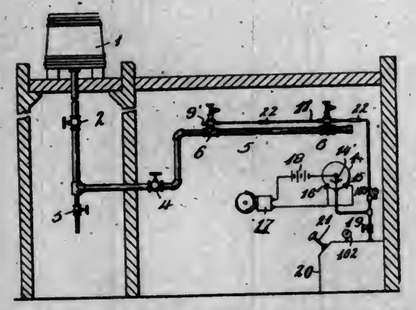
1. An artificial tooth, comprising an apertured body portion formed at its base with a concaved channel between its front and rear faces to open upon its sides, and having grooves formed in its sides opening upon said concaved channel and said aperture; apertured filler-strips adapted to be seated in said grooves; and a holding-pin adapted to traverse the apertures of said body portion and said filler-strips.

2. In combination with a tooth having a perforated part and formed with a channel opening upon its bottom and two of its sides, a metallic frame adapted to engage within the perforated part and to fill the channels at the sides of the tooth.

3. An artificial tooth, comprising a body portion formed with transverse apertures and a concaved channel in its base between its front and rear faces to open upon its sides, and having grooves formed in its sides to open upon said apertures and extending convergently from and opening upon said concaved channel; apertured filler-strips adapted to be seated in said grooves, and holding-pins adapted to be disposed in the apertures of said body portion and the apertures of said filler-strips.

4. In combination with a tooth having a perforated part, and formed with a channel opening upon its bottom and two of its sides, a metallic frame adapted to engage within the channels and perforated part and forming projections outwardly of said channels at the sides of the tooth.

1,014,349. AUTOMATIC SPRINKLER SYSTEM. EUGENE D. VAN NESS, Hoboken, N. J., assignor to Victor Garrett, New York, N. Y. Filed June 17, 1911. Serial No. 633,788.



1. In a sprinkler for automatic sprinkler systems, a sprinkler body having two passages, said passages having separate ports, means for connecting one of said passages to a water supply system, and means for connecting the other of said passages to a fluid alarm system in combination with a removable closure, which, when in normal position, maintains both of said ports closed.

2. In a sprinkler for automatic sprinkler systems, a sprinkler body having two passages, said passages having separate ports, means for connecting one of said passages to a water supply system, means for connecting the other of said passages to a fluid alarm system in combination with a removable closure, which, when in normal position, maintains both of said ports closed, and a heat affected fastening for said closure.

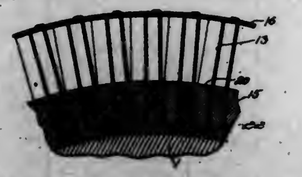
3. In an automatic sprinkler system, the combination of a sprinkler head having a removable closure, piping connected to said sprinkler head for conveying water thereto, an independent fluid actuated system having a port maintained closed by said closure, and an indicator connected to said independent system.

4. In an automatic sprinkler system, the combination of a sprinkler head having a removable closure, piping connected to said sprinkler head for conveying water thereto, an independent fluid actuated system having a port maintained closed by said closure, an indicator connected to said independent system, and an independent heat affected vent in said independent system.

5. In an automatic sprinkler system, the combination of a system of piping for conveying water, sprinkler heads connected thereto and having water releasing closures, intermediate members interposed between the sprinkler heads and said piping, said members having subsidiary outlets maintained closed by said closures, a pressure actuated fluid system connected to said outlets, and indicating means connected to said fluid system.

[Claims 6 to 9 not printed in the Gazette.]

1,014,350. TURBINE. NATHANIEL B. WALES, Boston, Mass., and GUY B. COLLIER, Kinderhook, N. Y.; said Wales assignor to said Collier. Filed May 21, 1909. Serial No. 497,403.

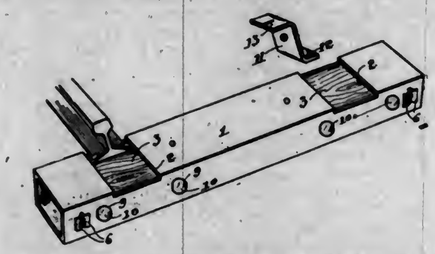


1. A turbine, having, in combination, a blade support provided with a groove, hollow blades having their shanks received within the groove, spacing blocks mounted within the groove between each pair of blades engaging the opposing faces of the blade shanks to retain them within the groove, and a mass of cast metal within each blade, substantially as described.

2. A turbine, having, in combination, a blade support provided with a dove-tailed groove, hollow blades having their shanks spread to fit the dove-tailed groove, a spacing block between each pair of blades fitting the groove and the opposing faces of the blade shanks, and a mass of cast metal within each blade shank, substantially as described.

3. A turbine, having, in combination, a blade support provided with a dove-tailed groove, hollow blades having their shanks spread to fit the sides of the groove and engaging the bottom of the groove, a spacing block mounted within the groove between each pair of blades fitting the groove and the opposing faces of the blade shanks, and a mass of cast metal within each blade, substantially as described.

1,014,351. RAILROAD-TIE. WALTER J. WATTERSON, Strawn, Ill. Filed Aug. 7, 1911. Serial No. 642,652.



1. A railroad tie comprising a hollow metallic shell notched on its upper side for the reception of the rail flanges; wooden blocks placed in said shell under said notches; and angular members having one leg passed through said shell laterally adjacent the outer ends of said blocks with the other leg thereof resting against the side of said shell, the end of said first mentioned leg being split and bent back against the side of said shell, substantially as described.

2. A railroad tie comprising a hollow metallic shell notched on its upper side for the reception of the rail flanges; wooden blocks placed in said shell under said notches; vertical posts secured in said shell against the inner ends of said blocks; and angular members having one leg passed through said shell laterally adjacent the outer ends of said blocks with the other leg thereof resting against the side of said shell, the end of said first-mentioned leg being split and bent back against the side of said shell, substantially as described.

3. A railroad tie comprising a hollow rectangular metallic shell notched on its upper side for the reception of the rail flanges; wooden blocks placed in said shell under said notches; vertical posts secured in said shell against the inner ends of said blocks; and angular members having one leg passed through said shell laterally adjacent the outer ends of said blocks with the other leg thereof resting against the side of said shell, the end of said first-mentioned leg being split and bent back against the side of said shell, substantially as described.

4. A railroad tie comprising a hollow rectangular metallic shell notched on its upper side for the reception of the rail flanges; wooden blocks placed in said shell under said notches; vertical posts secured in said shell against the inner ends of said blocks; and angular members having one leg passed through said shell laterally adjacent the outer ends of said blocks with the other leg thereof resting against the side of said shell, the end of said first-mentioned leg being split and bent back against the side of said shell; there being bolts passed through the second-mentioned leg, adjacent side of said shell and the corresponding block, said shell being perforated to permit the heads of said bolts to rest against the sides of said blocks, substantially as described.

1,014,352. CLAMP. FOLKE WILLIAM WESTON, New York, N. Y., assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 27, 1908. Serial No. 450,441.

1. The combination of a clamp and a base, the base having means whereby it may be positively engaged in successive positions by a separable tool capable of acting as a lever against the clamp, whereby the latter may be advanced and retracted.

2. The combination of a clamp and a base, the base having a succession of recesses so that it may be engaged at successive points by a separable tool capable of acting as a lever against the clamp, whereby the latter may be advanced and retracted.

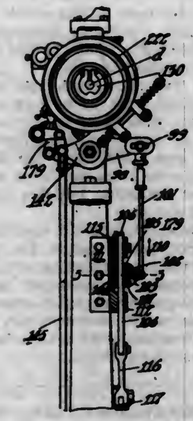
3. The combination of a clamp and a base, the base having grooves for the clamp and a succession of recesses in the bottom of the groove so that the base may be engaged at successive points by a separable tool capable of acting as a lever against the clamp, whereby the latter may be advanced and retracted.

4. The combination of a clamp and a base, the clamp being provided with means to fasten it to the base having a hole therein and the base being formed so that it may be engaged by a tool capable of acting as a lever through the hole in the clamp, whereby the latter may be advanced and retracted.

5. The combination of a clamp and a base, the clamp having a hole therein and the base having a succession of recesses so that it may be engaged at successive points by a tool capable of acting as a lever through the hole in the clamp, whereby the latter may be advanced and retracted.

[Claims 6 to 10 not printed in the Gazette.]

1,014,353. WORK-SUPPORT. JOSEPH M. WIGGIN, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed July 1, 1899, Serial No. 722,505. Divided and this application filed July 17, 1909. Serial No. 508,184.



1. In a machine of the class described, a vertically movable horn, a cam for moving said horn and work thickness compensating connections between said cam and said horn comprising a rack bar, a pallet bar pivoted at one end and means comprising a lever arranged to act upon said bar at or near its other end for moving said pallet bar positively into locking engagement with said rack bar for the purposes specified.

2. In a machine of the class described, the combination of the following instrumentalities, viz:—a vertically movable horn, a cam shaft provided with a disk or hub having a cam groove shaped to lower the horn sufficiently to effect the feed of the work and provided with an enlargement to permit further downward movement of the horn, a lever connected to said horn and acted upon by said cam groove, a second cam groove having a greater throw than the first mentioned cam groove, a lever positively controlled by said second cam groove, and means to connect said second lever with the first mentioned lever, whereby the second mentioned cam groove may lower the horn a greater distance than the first mentioned cam groove, for the purpose specified.

3. In a machine of the class described, the combination of the following instrumentalities, viz:—a vertically movable horn, a cam shaft provided with a cam disk or hub having a cam groove shaped to lower the horn sufficiently to permit the feed of the work and provided with an enlargement to permit further downward movement of the horn, a lever connected to said horn and acted upon by said cam groove, a second cam groove having a greater throw than the first mentioned cam groove, a lever acted upon by said second cam groove, a spring actuated latch arm having a notched end which is engaged by said second mentioned lever, a rock shaft, a dog loose on said rock shaft, a spring to act on said dog, and means to operate said rock shaft, substantially as described.

4. In a machine of the class described, the combination of the following instrumentalities, viz:—a vertically movable horn, a cam shaft provided with a cam disk or hub having a cam groove shaped to lower the horn sufficiently to effect the feed of the work and provided with an enlargement to permit further downward movement of the horn, a lever connected to said horn and acted upon by said cam groove, a second cam groove having a greater throw than the first mentioned cam groove, a lever acted upon by said second cam groove, a latch arm connected to the first mentioned lever and adapted to engage the second mentioned lever, a rock shaft, a dog on said rock shaft to engage the latch arm with the second mentioned lever, and a foot treadle connected to said rock shaft, substantially as described.

5. In a machine of the class described, the combination of the following instrumentalities, viz:—a vertically movable horn, a spring to normally move it upward, a main shaft, a cam disk thereon having a cam groove, a lever having a stud or roller extended into said cam groove, said groove being shaped to lower said horn a sufficient distance to permit the work to be fed and provided with an enlargement to permit the horn to be lowered a further distance, a latch arm pivoted to said lever, a dog to act on said latch arm, a rock shaft on which said dog is mounted, a foot treadle connected to said rock shaft, a second cam groove in said disk, a lever coöperating therewith and adapted to engage said latch arm when the pressure is relieved from said foot treadle, substantially as described.

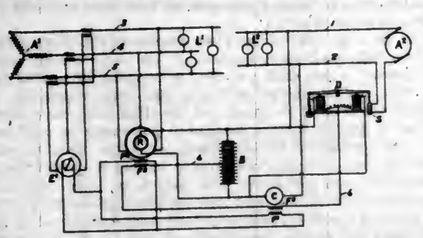
[Claims 6 to 9 not printed in the Gazette.]

1,014,354. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed Dec. 6, 1909. Serial No. 531,616.

1. In combination two independent electric circuits, a storage battery operatively arranged with respect to both circuits, independent means for controlling the transfer of energy between each circuit and the battery, and a regulating device responsive to changes of electrical condition on one of the circuits and adapted to regulate the operation of both controlling means.

2. In combination two independent electric circuits, a storage battery operatively arranged with respect to both circuits, and a regulating device responsive to changes of

electrical condition on one of the circuits and adapted to control the charge and discharge of the battery with respect to that circuit and simultaneously to neutralize the effect on the other circuit of said charge and discharge.



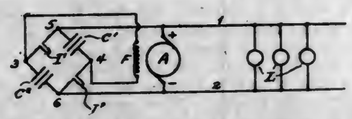
3. In combination two independent electric circuits, a storage battery operatively arranged with respect to both circuits, a field coil for controlling the operation of the battery in respect to one of the circuits, another field coil for controlling the operation of the battery with respect to the other circuit, and a device responsive to the electrical condition of one of the circuits for simultaneously varying the current in both coils.

4. In combination two independent electric circuits, a separate source of electrical energy for each circuit, a storage battery operatively arranged with respect to both circuits, independent means for controlling the transfer of energy between each circuit and the battery, and a regulating device responsive to changes of electrical condition on one of the circuits and adapted to regulate the operation of both controlling means.

5. In combination two independent electric circuits, a separate source of electrical energy for each circuit, a storage battery operatively arranged with respect to both circuits, and a regulating device responsive to changes of electrical condition on one of the circuits and adapted to control the charge and discharge of the battery with respect to that circuit and simultaneously to neutralize the effect on the other circuit of said charge and discharge.

[Claims 6 to 15 not printed in the Gazette.]

1,014,355. ELECTRICAL SYSTEM OF DISTRIBUTION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed June 16, 1911. Serial No. 633,609.



1. In combination, a consumption circuit, a variable speed dynamo connected thereto, a Wheatstone bridge whereof two opposite branches contain counter electromotive force cells, while the other two opposite branches contain resistances of high temperature coefficient, connections from two opposite junction points of the bridge to the consumption circuit and a field winding for the dynamo connected to the other two opposite junction points.

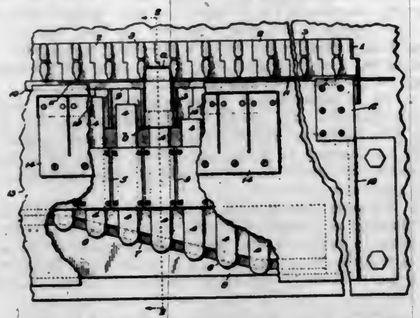
2. In combination, a consumption circuit, a variable speed dynamo connected thereto, two branch circuits connected in parallel across the consumption circuit, whereof one contains a source of counter electromotive force and a high temperature co-efficient resistance in series, and a field winding for the dynamo connected at one end to a point in the branch circuit between the counter electromotive force cell and the said resistance, and at the other end to an intermediate point in the other branch circuit.

3. The combination of a variable speed dynamo-electric machine having a field winding, with a circuit connected across the machine terminals containing a counter electromotive force cell and a resistance of hight temperature co-efficient, and connection from the field winding to a point in said circuit between the cell and the resistance.

4. In a system of electrical distribution comprising a consumption circuit and its source, the combination of a Wheatstone bridge connected across the consumption circuit and containing respectively counter electromotive force cells and high temperature co-efficient resistances in alternate branches, and a field winding for controlling the voltage of the source connected across opposite junction points of the bridge, substantially as described.

5. In a system of electrical distribution comprising a consumption circuit and its source, the combination of a Wheatstone bridge connected across the consumption circuit and containing respectively counter electromotive force cells and high temperature co-efficient resistances in alternate branches, a field winding for controlling the voltage of the source connected across opposite junction points of the bridge, and resistances connected in parallel with the counter electromotive force cells.

1,014,356. BOX-FILLING MACHINE. JACOB P. WRIGHT, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 28, 1909. Serial No. 498,858.



1. In a box filling machine, the combination of a box carrier for tray-and-shuck boxes, said carrier being provided with a longitudinal groove or channel in the floor thereof, a stationary bar extending into said groove or channel and having a lip or projection above the plane of the floor of the carrier, and a spring member bearing upon the box-shucks.

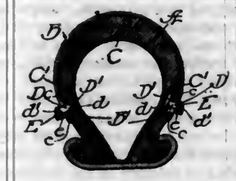
2. In a box filling machine, the combination of a carrier for tray-and-shuck boxes, means for pushing the box-trays endwise from their shucks within and transversely of the carrier, and a series of independent pressure devices bearing yieldingly upon the box shucks while the trays are being pushed therefrom.

3. In a box filling machine, the combination of a carrier for tray-and-shuck boxes, means for pushing the box-trays endwise from their shucks within and transversely of the carrier, a spring member provided with blocks or shoes which bear upon the box shucks within the carrier, while the trays are being pushed therefrom, and an abutment extending into the plane of the inner ends of the said shucks.

4. In a box filling machine, the combination of a carrier for tray-and-shuck boxes, means for pushing the box-trays endwise from their shucks within and transversely of the carrier, a spring plate divided to form a series of independent spring members which overhang the carrier, and a series of pressure blocks carried by said members and adapted to bear upon the box-shucks while the trays are being pushed therefrom.

1,014,357. ANTISKIDDING TIRE. GEORGE J. ADAM, Chicago, Ill. Filed Oct. 18, 1909. Serial No. 523,309.

1. An anti-skidding tread device for tires comprising, in combination with a tire having an outer tread surface provided with open channels running across the tread and extending about the sides of the tire, antiskidding pads of tough, non-metallic, flexible material confined in said channels, the thickness of said pads being greater than the depth of said channels and said pads and channels being laterally extended at their ends.

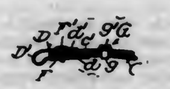


2. An anti-skidding tread device for tires comprising, in combination with anti-skidding pads, a tire having an outer tread surface provided with open channels running across the tread and extending about the sides of the tire, said channels being adapted to receive the pads and having walls adapted to engage the marginal edges of the pads, and bolts anchored to the tire adapted to anchor the ends of said pads within the ends of said channels, said bolts being provided with detachable caps to engage the outer surface of the pads.

3. An anti-skidding tread device for tires comprising, in combination with anti-skidding pads provided with lateral extensions at their ends, a tire having an outer tread surface provided with channels running across the tread and extending about the sides of the tires, said channels being conformed to receive the pads and being laterally extended at their ends to receive the lateral extensions of said pads with the walls of the channels in engagement with the marginal edges of the pads, the channels at the end being of a depth substantially equal to the pads, and means for detachably securing the ends of said pads within the channels.

4. An anti-skidding tread device for tires comprising, in combination with antiskidding pads, a tire having an outer tread surface provided with open channels running across the tread and extending about the sides of the tire, said channels being adapted to receive the pads and having walls adapted to engage the marginal edges of the pads, bolts anchored to the tire adapted to anchor the ends of said pads within the ends of said channels, said bolts having notched shanks adapted to project beyond the surface of the pads, and caps adapted to fit the ends of the bolt shanks, said caps being provided with locking means adapted to engage said notched shank.

1,014,358. ANTISKIDDING DEVICE FOR TIRES. GEORGE J. ADAM, Chicago, Ill. Filed Apr. 25, 1910. Serial No. 557,329.



1. In an anti-skidding device provided with tough, nonmetallic, flexible, friction-inducing pads, a retaining plate adapted to underlie the end of a pad, said retaining plate being provided with upturned flanges extending about one end adapted to engage the edges of the pad, and means for attaching the pad to the retaining plate.

2. In an anti-skidding device provided with tough, nonmetallic, flexible, friction-inducing pads, a retaining plate adapted to underlie the end of a pad, said retaining plate being provided with upturned flanges extending about one end adapted to engage the edges of the pad, anchoring means for the retaining plate comprising a clip having upper and lower extensions adapted to embrace, respectively, the top and bottom of the end of the pad, the lower extension lying upon the upper face of the retaining plate and means for securing said clip in place.

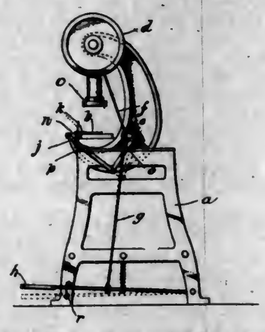
3. In an anti-skidding device provided with tough, nonmetallic, flexible, friction-inducing pads, a retaining plate adapted to underlie the end of the pad, said retaining plate being provided with upturned flanges extending about one end adapted to engage the edges of the pad, a clip provided with an anchor plate overlying the retaining plate and adapted to engage the underside of the end of the pad and to abut at its edges against said upturned flanges, a washer formed on said clip adapted to overlie the end of the pad, and means for removably securing said clip, pad and plate together.

4. In an anti-skidding device provided with tough, nonmetallic flexible, friction-inducing pads, a retaining plate adapted to underlie and support the end of a pad, said retaining plate being provided with upturned flanges extending about one end and adapted to engage the edges of the pad adjacent its end and having a depression formed at said end, a clip provided with a projecting anchor plate adapted to lie within the depression formed in the end of the retaining plate and to abut at its edges against the upturned flanges formed on said retaining plate, a washer formed on said clip adapted to overlie the end of said pad, and means for removably securing the ends of said clip, pad and retaining plate together.

5. In an anti-skidding device provided with tough, nonmetallic, flexible, friction-inducing pads, a retaining plate adapted to underlie and support the end of a pad, a clip provided with an anchor plate overlying the end of the retaining plate and adapted to engage the underside of the end of the pad, a washer formed on said clip adapted to overlie the end of the pad, and means for removably securing said clip, pad and plate together.

[Claims 6 to 10 not printed in the Gazette.]

1,014,359. SAFETY APPLIANCE FOR HAND-FED POWER-PRESSES. FRANK S. ALIANO, New York, N. Y. Filed June 28, 1911. Serial No. 635,761.



1. A safety appliance for hand fed power presses, embodying therein a guard normally extending across and below the feeding space between the punch and the operator, and means for simultaneously raising said guard and moving it toward the operator.

2. A safety appliance for hand fed power presses, embodying therein means adjacent the punch, a punch tripping mechanism, and connections between said means and the tripping mechanism whereby the tripping mechanism may be blocked by the hand of the operator to prevent the operation of the press.

3. A safety appliance for hand fed power presses, embodying therein an oscillatory guard normally extending across and below the feeding space and mounted between the punch and the operator, and means oscillating said guard for simultaneously raising same and moving it toward the operator.

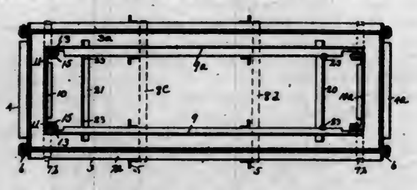
4. A safety appliance for hand fed power presses, embodying therein a guard normally extending across and below the feeding space between the punch and the opera-

tor, means for simultaneously raising said guard and moving it toward the operator, a punch tripping mechanism, and connections between said means and the tripping mechanism whereby said guard will be actuated through said tripping mechanism.

5. A safety appliance for hand fed power presses, embodying therein an oscillatory guard normally extending across and below the feeding space and mounted between the punch and the operator, means oscillating said guard for simultaneously raising same and moving it toward the operator, a punch tripping mechanism, and connections between said means and the punch tripping mechanism whereby said guard will be oscillated through said tripping mechanism.

[Claims 6 to 12 not printed in the Gazette.]

1,014,360. MOLD FOR VAULTS. EDWIN T. ALLEN, Detroit, Mich. Filed Aug. 1, 1910. Serial No. 574,907.



1. A mold for a burial vault having in combination, outer form members secured together at the corners, inner form members of which the side members are secured to the end members by a sliding pivot joint at the bottom and a bolt joint at the top, the end pieces of said inner form members being shorter than the longitudinal distance between the side members and the side members being provided with corner bearings adapted to engage against the outer inturned corners of the end members, substantially as described.

2. In a collapsible mold, a core member composed of a pair of side members and a pair of end members, the end portions of the side members being provided with inwardly extending corner bearings which terminate relatively pointedly, said side members being slightly shorter than the internal lengthwise measurement of the plastic article whose manufacture is intended, and the terminal portions of the end members being inturned for engagement against the pointed ends of the side members, and bolts engaging through the terminals of said end members and into the adjacent portions of said side members, substantially as described.

3. In a mold for burial vaults, a corner coupling for the inner member of said mold, having in combination a slip joint connection at the bottom and a bolt connection at the top, the interlocking members being provided with bearing parts only near each upper corner, the end members being shorter than the distance across between the side members at all parts except the bearing corners of the side members, and the side members being shorter than the distance between the inner surfaces of the ends of the finished vault at all parts, substantially as described.

1,014,361. SLASHER. LOUIS A. AUMANN, Chicopee, Mass. Filed July 21, 1910. Serial No. 573,099.

1. In a slasher, a pin structure, the teeth of which are placed in an inclined and angular position to the line of travel of the warp-threads to separate and arrange the said threads so that several horizontal planes of them, as they approach the teeth, are positively and automatically brought into one horizontal plane in a side-by-side position for winding on a beam-roll when the threads are drawn past the pin structure by the beam roll.

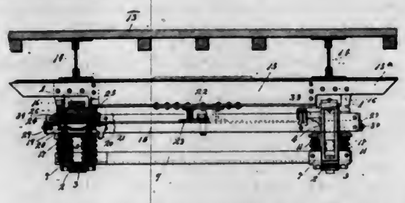
2. In a slasher, a beam roll, a comb-bar, the teeth of which are rigidly secured thereto and arranged in an oblique and angular position to the line of travel of several horizontal bands of warp-threads, whereby said warp-threads are automatically changed from the several horizontal planes to one horizontal plane as they engage the beam-roll, and means for retaining the comb-bar at an angle to the line of travel of the threads.

3. In a slasher, the combination with the beam-roll thereof, of a transversely arranged bar, a comb-bar pivotally secured thereto and provided with teeth each tooth of which is arranged at an angle to the line of travel of the warp-threads and inclined to the horizontal plane, and means for locking the comb-bar.

4. In a slasher, beam-roll, a comb element for causing several horizontal bands of warp-threads to be automatically and positively arranged into a single horizontal plane as they are wound onto the beam-roll, said element comprising a series of teeth arranged in parallel relation to each other and inclined to the horizontal plane and angular to the line of travel, the front and rear edges of the teeth being provided with a curved surface, and means for operating the beam-roll.

5. A comb-bar for slasher machines, the thin flat teeth of which are arranged in an angular position with respect to the line of thread travel and inclined position to and rigidly secured in said bar.

1,014,362. CAR-TRUCK. JOHN C. BARBER, Chicago Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 15, 1911. Serial No. 621,238.



1. In a car truck, the combination with truck side frames having top compression members, of a truck bolster and a body bolster pivotally connected for radial movements and for simultaneous endwise movements transversely of the truck, anti-friction lateral motion bearings supporting said truck bolster from said truck side frames, and radial motion anti-friction side bearings located within said side frames below the top compression members thereof and supporting said body bolster from said truck bolster.

2. In a car truck, the combination with truck side frames having top arch bars, of a truck bolster and a body bolster pivotally connected for radial movements and for simultaneous endwise movements transversely of the truck, anti-friction lateral motion bearings supporting said truck bolster from said truck side frames, radial motion anti-friction side bearings located within said side frames below the top arch bars thereof, laterally spaced bearing legs secured to said body bolster, straddling the said top arch bars with clearance and supporting said body bolster from said side bearings.

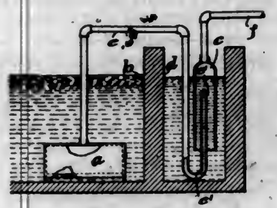
3. In a car truck, the combination with truck side frames, of a truck bolster and a body bolster pivotally connected for radial movements and for simultaneous endwise movements transversely of the truck, anti-friction lateral motion roller bearing devices spring supported from said side frames and supporting said truck bolster, and radial motion anti-friction roller side bearings located within said side frames below the top arch bars thereof and supporting said body bolster from said truck bolster.

4. In a car truck, the combination with truck side frames, of a body bolster connected to said truck for radial movements, anti-friction lateral motion and anti-friction radial motion bearing devices supporting said body bolster from said truck side frames, and a car body having main side sills resting on and secured to said body bolster and located directly above said truck side frames.

5. In a car truck, the combination with truck side frames, of a body bolster connected to said truck for radial movements, anti-friction lateral motion and anti-friction radial motion side bearings and coöperating supporting springs supporting said body bolster from said truck side frames, and a car body having main side sills resting on and secured to said body bolster and located directly above said truck side frames.

[Claims 6 and 7 not printed in the Gazette.]

1,014,363. AIR-FLUSHING APPARATUS. HUBERT BEDDOES, Philadelphia, Pa. Filed Jan. 27, 1910. Serial No. 540,432.



1. In apparatus for the purpose described, the combination of an air-bell arranged to be submerged in a variable column of liquid, an air-pipe leading from said bell and having a liquid-seal adapted to be forced by the accumulated air-pressure in said air-bell, a second bell of smaller area than the first normally sealed and having the liquid seal of the air-pipe from the first bell entering it, and a delivery-pipe for the flushed air leading from said second bell.

2. In apparatus for the purpose described, the combination of an air-bell arranged to be submerged in a variable column of liquid, a second bell normally sealed, an air-pipe leading from the first bell and terminating in a liquid-seal within the second bell, and a delivery-pipe for the flushed air leading from said second bell.

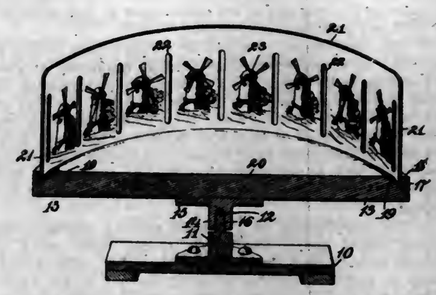
3. In apparatus for the purpose described, the combination of a bell arranged to be submerged in a variable column of liquid, a chamber containing a predetermined column of liquid, an air-bell submerged in the liquid in said chamber, an air-pipe leading from the first bell and terminating in an upturned end within the second bell and sealed by the liquid in said chamber, and an air-delivery pipe leading from said second bell.

4. In apparatus for the purpose described, the combination of an air-pipe having a liquid seal, a hydrostatically controlled pressure accumulator communicating with said air-pipe, a sealed receiver inclosing the liquid seal of said air-pipe, and a delivery-pipe for the flushed air leading from said receiver.

1,014,364. PNEUMATIC PIANO. WILLIAM G. BETZ, Chicago Heights, Ill., assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill., a Corporation. Filed Feb. 6, 1911. Serial No. 606,696.

A pneumatic player piano including finger keys, a key board, a locking bar under the forward portion of the finger keys, means for moving the locking bar to a locking position, a lever connected with the locking bar and extending through and fulcrumed in the key board for moving the locking bar to an unlocking position, a bell crank lever fulcrumed to the underside of the key board and connected to said unlocking lever, a bellows provided with an arm extending therefrom having an opening in it, a rod extending from the bell crank lever through said arm and enlarged beyond the arm, and means for exhausting air from the bellows, whereby when the bellows collapses it will permit the locking bar to move into locking position and when the bellows expands it will move the locking bar to an unlocking position.

1,014,365. MOVING-PICTURE TOY. CHARLES N. BOURGIN, Newark, N. J. Filed May 9, 1911. Serial No. 625,953.

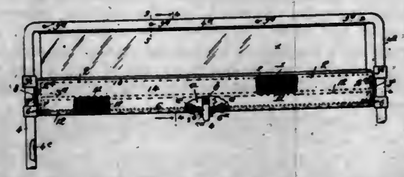


1. A moving-picture toy consisting of a plate having an annular groove near its outside edge, the groove having its outer wall substantially perpendicular to the plate and its inner wall curved toward the center of the plate, the top of the plate being flat, and a band having slits therein and having illustrations on the inside of the band visible through the slits when the band is formed into a ring, said band being adapted to be placed in coiled position on the top of the plate and by its own spring action pass down over the curved wall of the groove and be seated therein.

2. A moving-picture toy consisting of a plate having a groove therein, the groove having its outer wall substantially perpendicular thereby forming a marginal bead and having its inner wall curved to extend inwardly and upwardly, means for rotatably mounting the plate, and a band having slits and pictures alternating on its inner face, the band being adapted to be curled on the top of the plate within the groove and when released to spring by its own action down over the curved wall of the groove and be seated therein.

3. A moving-picture toy consisting of a rotatable plate and an annular groove or depressed portion at its edge, and a slitted strip with pictures arranged on its inside surface arranged to be coiled on the plate and when expanding, being adapted to be seated in the depressed portion of the plate.

1,014,366. SHIELD FOR AUTOMOBILES. THEODORE F. BOURNE, Montclair, N. J. Filed June 8, 1911. Serial No. 631,880.



1. The combination of a pair of rollers, a plurality of sheets of flexible material adapted to be wound upon one of said rollers in interposed convolutions, one end of one

of said sheets of material being adapted to be wound upon the other of said rollers, the other of said sheets of material being free at one end from the first named roller to permit said sheet to be unwound from said roller.

2. The combination of a pair of rollers, a plurality of sheets of flexible material adapted to be wound upon one of said rollers in interposed convolutions, one end of one of said sheets of material being adapted to be wound upon the other of said rollers, the other of said sheets of material being free at one end from the first named roller to permit said sheet to be unwound from said roller, and means for supporting the free end of the last named sheet of material in different positions of elevation.

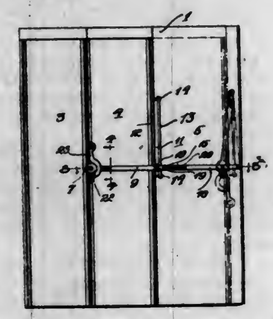
3. The combination of a pair of rollers, a plurality of sheets of flexible material connected with one of said rollers and adapted to wind thereon in interposed convolutions, the free end of one of said sheets of material being connected with the other of said rollers, and means for supporting the free end of the other sheet of said material in different positions of elevation.

4. The combination of a pair of spring-acting rollers, a plurality of sheets of flexible material connected at corresponding ends with one of said rollers and adapted to wind thereon in interposed convolutions, the free end of one of said sheets of material being connected with the other of said rollers to be wound thereon as unwound from the first named roller, the free end of the other sheet being free from both rollers, and means for supporting the free end of the last named sheet in different positions of elevation.

5. The combination of a pair of parallel spring-acting rollers spaced apart, the spring of one roller being of greater tension than the spring of the other roller, a plurality of sheets of flexible material secured to the roller having the stronger spring and rollable on said roller in interposed convolutions, one of said sheets of flexible material being connected with the other of said rollers to be wound thereon as unwound from the first named roller, and means connected with the free end of the other of said sheets of material to retain the same in different positions of elevation.

[Claims 6 and 7 not printed in the Gazette.]

1,014,367. DOOR-OPERATING MECHANISM. JULIUS BROMBACHER, Los Angeles, Cal. Filed June 19, 1911. Serial No. 635,213.



1. The combination with a door casing and a plurality of doors depending therefrom, of a bar pivotally connected to one of said doors and operatively connected with another of said doors, a link pivotally secured to said bar and said casing, and a means on one of said doors engaging the end of said bar to control the movement of said bar and link.

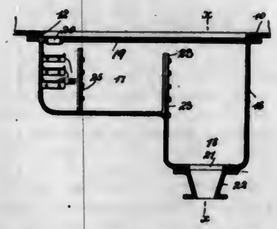
2. The combination with a door casing and a plurality of doors depending therefrom, of a bar pivotally connected to one of said doors and operatively connected with another of said doors, a link pivotally secured to said bar and casing, and geared means for controlling the movement of said bar and link and said doors.

3. The combination with a casing and a plurality of doors depending from and movable in said casing, of a bar pivotally connected to one of said doors and operatively connected with another of said doors, said bar having a geared end, a link pivotally secured to said bar and casing, and means engaging the geared end of said bar for controlling the movement of said bar and link to open and close said doors.

4. The combination with a door casing and a plurality of doors depending therefrom and movable therein, of a bar pivotally connected to one of said doors, a link pivotally secured to said casing and to the end of said bar, an element on said bar engaging another of said doors, and means movable relatively to and with one of said doors for operating said bar to control the movement of said doors.

5. The combination with a door casing and a plurality of doors depending therefrom and movable therein, of a bar pivotally connected with one of said doors, said bar having a geared end, a link pivotally connected to said casing and to the end of said bar, a buffer on said link to retard the movement of said bar and link, a roller on said bar engaging another of said doors, and means engaging the geared end of said bar to operate said bar and link and control the movement of said doors.

1,014,368. STEAM-CONDENSING APPARATUS. JOHN J. BROWN, Elizabeth, N. J., assignor to Wheeler Condenser and Engineering Company, Carteret, N. J., a Corporation of New Jersey. Filed July 14, 1911. Serial No. 638,443.



1. In a condensing apparatus, the combination with a condenser, of a hot-well having compartments of different depths from and to which the water of condensation flows, and means for determining the flow of the water of condensation through the hot-well.

2. In a condensing apparatus, the combination with a condenser, of a hot-well having a relatively deep compartment and a relatively shallow compartment, and means for determining the flow of the water of condensation as the same passes from the relatively shallow compartment to the relatively deep compartment.

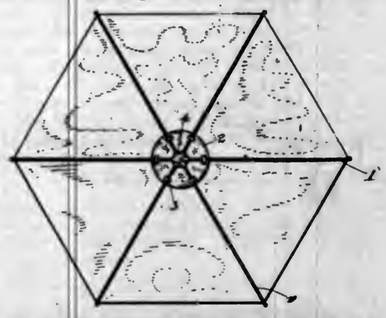
3. In a condensing apparatus, the combination with a condenser, of a hot-well having a relatively deep compartment and a relatively shallow compartment, means for reducing to a minimum the agitation of the water in the relatively shallow compartment, and means for determining the flow of the water of condensation as the same passes from the relatively shallow compartment to the relatively deep compartment.

4. In a condensing apparatus, the combination with a condenser, of a hot-well having a relatively deep compartment, and a relatively shallow compartment, a weir on the dividing line between the said compartments, and means for reading the height of the water of condensation on the said weir as the same passes from the said relatively shallow compartment to the relatively deep compartment.

5. In a condensing apparatus, the combination with a condenser, of a hot-well having a relatively shallow compartment and a relatively deep compartment, a weir on the dividing line between the said compartments, and a gage for ascertaining the height of said water on the said weir as the same passes from the said relatively shallow compartment to the relatively deep compartment.

[Claims 6 to 12 not printed in the Gazette.]

1,014,369. KITE. JOHN P. BUENGERS, Racine, Wis. Filed June 26, 1911. Serial No. 635,489.



1. A kite center-piece, comprising a circular disk of sheet metal, equally spaced struck-up loops formed in said disk adjacent the periphery thereof, and a series of centrally disposed sockets stamped in the center of said disk and arranged in radial alinement with said loops, substantially as described.

2. In a kite center-piece, a disk, a plurality of equally spaced struck-up loops formed in said disk adjacent to the periphery thereof, an equal number of sockets nearer the center of said disk, and an equal number of kite-frame members in said loops and sockets, substantially as described.

1,014,370. MONKEY-WRENCH. PHILIP H. BURGART, Chicago, Ill. Filed Aug. 26, 1911. Serial No. 646,167.

1. A monkey wrench comprising the usual jaws; a shank threaded upon two of its sides; a nut threaded to correspond with said shank to permit of longitudinal sliding of said nut upon said shank when disengaged from the threads of said shank, said nut having a circumferential groove formed therein for the reception of a lug upon the movable jaw; a longitudinal groove in said nut; and a spring catch releasable by depression in said longitudinal groove engaging said lug of said movable jaw for locking said nut in positions of engagement with the threads of said shank, subetantially as described.

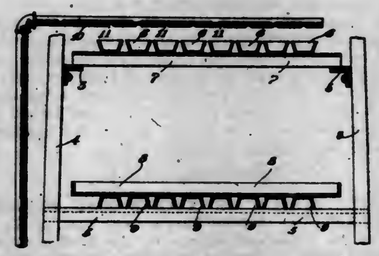
2. A monkey wrench comprising the usual jaws; a shank threaded upon two of its sides; a nut threaded to correspond with said shank to permit of longitudinal sliding of said nut upon said shank when disengaged from the threads of said shank said nut having a circumferential groove formed therein for the reception of a lug upon the movable jaw; a longitudinal groove in said nut; and a leaf spring catch releasable by depression arranged in said longitudinal groove and having one end secured to said nut, the free end of said catch being adapted to engage a notch in said movable jaw to lock said nut in positions of engagement of said nut with the threads of said shank, substantially as described.

3. A monkey wrench comprising the usual jaws; a shank threaded upon two of its sides; a nut threaded to correspond with said shank to permit of longitudinal sliding of said nut upon said shank when disengaged from the threads of said shank, said nut having a circumferential groove formed therein for the reception of a lug upon the movable jaw; a longitudinal groove in said nut; and a leaf spring catch releasable by depression arranged in said longitudinal groove and having one end secured to said nut, the free end of said catch being adapted to engage a notch in said lug of said movable jaw for locking said nut in positions of engagement with the threads of said shank, said catch being formed for manual engagement to effect depression thereof, substantially as described.

4. A monkey wrench comprising the usual jaws; a shank threaded upon two of its sides; a nut threaded to correspond with said shank to permit of longitudinal sliding of said nut upon said shank when disengaged from the threads of said shank, said nut having a circumferential groove formed therein for the reception of a lug upon the movable jaw; a longitudinal groove in said nut; a leaf spring arranged in said longitudinal groove and having one end secured to said nut, the free end of said spring being adapted to engage a notch in said lug of said movable jaw for locking said nut in positions of engagement with the threads of said shank, said spring being formed for manual depression to effect the release of said nut; and means for limiting the outward movement of the free end of said spring, substantially as described.

5. A monkey wrench comprising the usual jaws; a shank threaded upon two of its sides; a nut threaded to correspond with said shank to permit of longitudinal sliding of said nut upon said shank when disengaged from the threads of said shank, said nut having a circumferential groove formed therein for the reception of a lug upon the movable jaw; a longitudinal groove in said nut; and a leaf spring arranged in said longitudinal groove and having one end secured to said nut, the free end of said spring being adapted to engage a notch in said lug of said movable jaw for locking said nut in positions of engagement with the threads of said shank, the central portion of said spring being bent outwardly for manual depression of the free end thereof to effect the release of said nut, substantially as described.

1,014,371. COOLING-TOWER. EDWIN BURHORN, Hoboken, N. J. Filed Nov. 26, 1910. Serial No. 594,803.



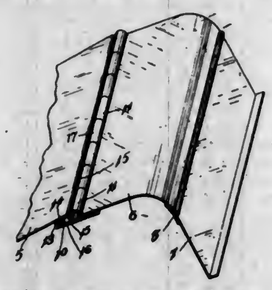
1. A deck for cooling towers comprising a plurality of parallel diffusing and supporting members each having a central longitudinal web and provided with sloping sides and a plurality of parallel troughs upon the diffusing and supporting members, substantially as shown and described.

2. A deck for cooling towers comprising a plurality of parallel troughs and a plurality of parallel counterpart supporting and diffusing members arranged at right angles thereto and carrying the said troughs substantially as shown and described.

3. A deck for cooling towers comprising a plurality of parallel diffusing and supporting members each having a central longitudinal web and a longitudinal cut out section in its under side and a plurality of parallel troughs having flaring side sections and resting upon the inverted troughs at right angles thereto substantially as shown and described.

4. In a device of the character described a plurality of decks, each deck comprising a double layer of counterpart members having sloping longitudinal sides and arranged at right angles, the members comprising the supporting layer being inverted and the said counterpart members of each deck being arranged at right angles to the like members of the adjacent decks and means for supplying liquid to be cooled to the counterpart members of the upper deck substantially as shown and described.

1,014,372. HINGE. PHILIP M. BUSH, Hartford, Conn., assignor to The Bush Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 1, 1910. Serial No. 595,140.



1. A hinge leaf having a knuckle formed by a turned over portion of the edge resting upon the main part thereof, and a bend in the main part of the leaf holding said edge in place.

2. A hinge leaf having a knuckle formed by a turned over portion of the edge resting upon the main part of the leaf, and a bend in the main part of the leaf overlying said edge to hold it in place, said bend being forced into the angle between the knuckle and edge to retain said bend in position.

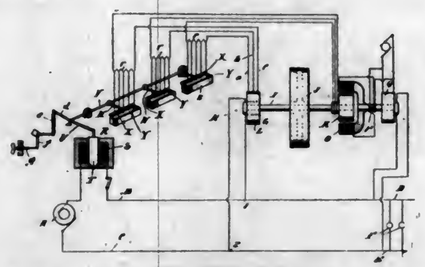
3. A hinge leaf having a knuckle formed by a turned over edge resting upon the main part of the leaf, a bend including one part extending toward the knuckle and another portion extending away from the knuckle, said bend being closed upon said edge to hold it in place.

4. A hinge leaf having a knuckle formed by a turned over portion of the edge resting upon the main part of the leaf, a bend in the main part of the plate including a portion extending toward the knuckle and another part extending away from the knuckle, said parts being closed down to hold said edge in place, and the bend pressed into the angle underneath the rounded part of the knuckle to hold said bent portion in place.

1,014,373. SYSTEM OF ALTERNATING-CURRENT REGULATION. JOSEPH BIJUR, New York, N. Y., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Oct. 16, 1906. Serial No. 339,184.

1. In a system of alternating current regulation, the combination with the main alternator and work circuit, of an auxiliary alternator, the ratio between the speeds of the two armatures thereof being variable, and means for maintaining said alternators in synchronism when the armatures are revolving at different speeds.

2. In a system of alternating current regulation, the combination with the main alternator and work circuit, of an auxiliary alternator connected to compensate for changes on the work circuit, the ratio between the speeds of the two armatures thereof being variable, and means for maintaining said alternators in synchronism when the armatures are revolving at different speeds.



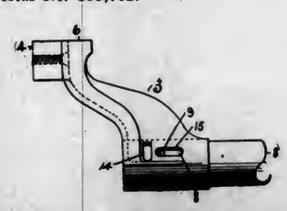
3. In a system of alternating current regulation, the combination with the main alternator and work circuit, of an auxiliary alternator, the ratio between the speeds of the two armatures thereof being variable, a fly-wheel connected to the auxiliary alternator and means for maintaining said alternators in synchronism when the armatures are revolving at different speeds.

4. In a system of alternating current regulation, the combination with the main alternator and work circuit, of an auxiliary alternator, a fly wheel connected thereto, means for causing the fly wheel to absorb a substantial amount of energy from or impart a substantial amount of energy to the work circuit, and means for maintaining said alternators in cynchronism.

5. In a system of alternating current regulation, the combination with the main alternator and work circuit, of an auxiliary alternator, the ratio between the speeds of the two armatures thereof being variable, a fly-wheel connected to said auxiliary alternator, means for causing a substantial amount of energy to be absorbed from or imparted to the work circuit by the acceleration or retardation of the fly wheel, and means for maintaining said alternators in synchronism when the armatures are revolving at different speeds.

[Claims 6 to 15 not printed in the Gazette.]

1,014,374. SPRING ADJUSTMENT FOR BEDS. WILLIAM H. CARICKHOFF, Philadelphia, Pa. Filed Dec. 28, 1910. Serial No. 599,701.

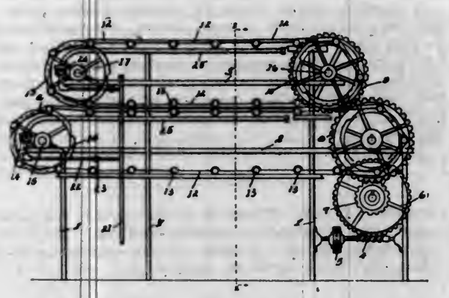


1. In a spring-bed, a bracket adapted to have one end of a bed spring attached to it and having a socket formed with an opening in its side near its closed end, a stretcher having its end longitudinally slidable in said socket and having a nut in its extreme end, and a screw engaging said nut and having its other end bearing against the closed end of the socket and provided with a head constructed to be engaged and rotated by a tool inserted through the opening in the side of the socket.

2. In a spring-bed, a bracket adapted to have one end of a bed spring connected to it and having a socket formed with a longitudinal observation slot and near its closed end with a circumferential slot, a stretcher having its end longitudinally slidable in said socket and having a nut in its extreme end, and a screw threaded into said nut and formed with a head having a peripheral series of holes registering with the circumferential slot in the socket to be engaged and rotated by a tool movable in said slot and also provided with a point bearing against the closed end of the socket.

3. In a spring-bed, brackets adapted to have the ends of a bed spring connected to them and constructed to slide on the rails of a bedstead, sockets upon said brackets and formed with openings in the sides, stretchers having their ends longitudinally movable in said sockets, and screws and nuts interposed between the ends of said stretchers and the closed ends of said sockets and said screws being accessible through the openings in the sides of the sockets to be rotated.

1,014,375. BAKING-MACHINE. JOHN H. CARPENTER and EDGAR O. HOFFMAN, Columbus, Ohio; said Hoffman assignor to said Carpenter. Filed Feb. 20, 1911. Serial No. 609,807.



1. A baking machine comprising a lower element in the form of a traveling chain of baking plates, an upper coactive element in the form of a traveling chain of complemental baking plates, said upper element being terminated short of said lower element at the delivery end, and heating means.

2. A baking machine comprising a lower element in the form of a traveling chain of baking plates, an upper coactive element in the form of a traveling chain of complemental baking plates, said upper element being terminated short of said lower element at the delivery end, and an external heating means for heating said plates during travel.

3. A baking machine comprising a lower element in the form of a traveling chain of baking plates, an upper element in the form of a traveling chain of complemental baking plates terminated short of said lower element at the delivery end, and means for maintaining the plates of said lower element against sagging away from the plates of said upper element.

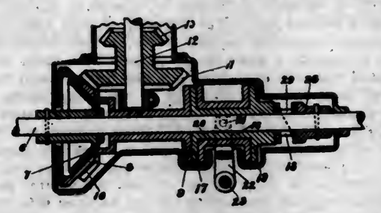
4. A baking machine comprising a lower element in the form of a traveling chain of baking plates, an upper element in the form of a traveling chain of complemental baking plates terminated short of said lower element at the delivery end, and a guide for maintaining the plates of said lower element against sagging away from the plates of said upper element.

5. A baking machine comprising a lower element in the form of a traveling chain of baking plates, an upper element in the form of a traveling chain of complemental baking plates terminated short of said lower element at the delivery end, a guide for maintaining the plates of said lower element against sagging away from the plates of said upper element, and rollers on said chain of plates for running on said guide to effect such maintenance.

[Claims 6 to 10 not printed in the Gazette.]

1,014,376. CONTROLLING MECHANISM. CYRUS CHAMBERS, Jr., Overbrook, Pa., assignor to Chambers Brothers Company, a Corporation of Pennsylvania. Filed Dec. 17, 1910. Serial No. 597,758.

1. A line shaft, a positively driven clutch element, a positively driven element spaced apart from the clutch element and a plurality of friction elements loosely mounted between said positively driven elements, one of said loosely mounted elements having a coöperating bevel.



2. A rotatable shaft, a positively driven friction element, another positively driven element spaced apart from said friction element, and a plurality of friction elements loosely mounted between the said positively driven elements, one of said loosely mounted elements having an incline engagement with the positively driven element.

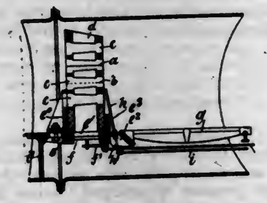
3. A rotatable shaft, a positively driven friction element, another positively driven element spaced apart from said friction element, a plurality of friction elements loosely mounted on the shaft between the said positively driven elements, one of said loosely mounted elements having an incline engagement with a positively driven element, and resilient means for normally controlling the incline engagement.

4. A rotatable shaft, a positively driven friction element, another positively driven element spaced apart from said friction element, a plurality of friction elements loosely mounted on the shaft between the said positively driven elements, one of said loosely mounted elements having an incline engagement with a positively driven element, resilient means for normally controlling said incline engagement, and means for adjusting the resilient control.

5. A rotatable shaft, a positively driven friction element, another positively driven element spaced apart from the friction element, a plurality of friction elements loosely mounted on the shaft between the said positively driven elements, one of said loosely mounted elements having an incline engagement with a positively driven element, and a spring acting on said loosely mounted element having the incline engagement.

[Claims 6 to 11 not printed in the Gazette.]

1,014,377. FIRE-BRIDGE. WILLIAM EDWARD CURRAN, Cardiff, England. Filed Sept. 10, 1909. Serial No. 517,040.



1. In a furnace fire-bridge, a base-plate having apertures, a fixed flange on said base-plate, an adjustable flange on said base-plate and between said flanges a wall composed of a plurality of refractory blocks having straight vertical passages above said apertures and straight horizontal passages extending through the thickness of said wall and intersecting said vertical passages.

2. In a furnace fire-bridge, a base-plate having apertures, a hit-and-miss valve adjacent to said apertures, means for operating said valve, a fixed flange on said base-plate, an adjustable flange on said base-plate and between said flanges a wall composed of a plurality of

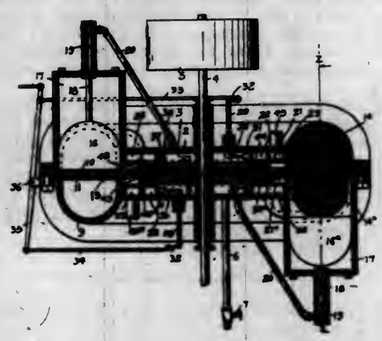
refractory blocks having straight vertical passages above said apertures and straight horizontal passages extending through the thickness of said wall and intersecting said vertical passages.

3. In a furnace fire-bridge, a base-plate having apertures, a hit-and-miss valve adjacent to said apertures, a bell-crank connected to said valve, a rod connected to said bell-crank, a fixed flange on said base-plate, an adjustable flange on said base-plate and between said flanges a wall composed of a plurality of refractory blocks having straight vertical passages above said apertures and straight horizontal passages extending through the thickness of said wall and intersecting said vertical passages.

4. In a furnace fire-bridge, a base-plate having two rows of apertures, a fixed flange on said base-plate, an adjustable flange on said base-plate and between said flanges a wall composed of a plurality of refractory blocks having straight vertical passages above the rear row of said apertures and straight horizontal passages extending through the thickness of said wall and intersecting said vertical passages.

5. In a furnace fire-bridge, a base-plate having two rows of apertures, a wall composed of a plurality of refractory blocks having straight vertical passage above the rear row of said apertures and straight horizontal passages extending through the thickness of said wall and intersecting said vertical passages, a rocker mounted in front of said wall having upwardly directed prongs and a downwardly directed arm and a rod connected to said rocker-arm.

1,014,378. ROTARY ENGINE. BENJAMIN DAHL, Minneapolis, Minn. Filed Oct. 28, 1910. Serial No. 589,631.



1. A rotary engine comprising an annular cylinder, rings mounted to revolve therein, pistons carried by said rings, means for supplying fluid pressure to said cylinders in the rear of said pistons, said pistons having inclined faces, cut off slides operating in said cylinder at right angles substantially to said rings and contacting with said inclined faces, and a driven shaft operatively connected with said rings.

2. A rotary engine comprising an annular cylinder, rings mounted to revolve back to back therein, pistons carried by said rings, abutments between which and said pistons fluid pressure is admitted, means for supplying fluid pressure to said cylinder in the rear of said pistons, valves arranged to vary the time of cut off of said fluid pressure, a driven shaft and means operatively connecting said rings with said shaft.

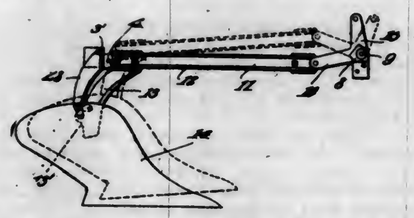
3. A rotary engine comprising an annular cylinder, a shaft concentric therewith, a disk mounted on said shaft and projecting into said cylinder, rings carried by said disk, pistons mounted on said rings on opposite sides of said disk within said cylinder, reciprocating slides operating in said cylinder at right angles substantially to the plane of said disk, said disk having a steam chamber on each side thereof and means for admitting steam thereto, rotary valves arranged in said chamber and having ports leading to said cylinder, and means for operating said valves to admit steam to either side of said slides, substantially as described.

4. A rotary engine comprising an annular cylinder having a steam chamber and means for supplying steam thereto, a driven shaft, a disk mounted thereon within said steam chamber, rings carried by said disk within said cylinder, pistons mounted on said rings and having inclined faces, slides arranged to reciprocate in said cylinder at right angles substantially to said rings and contacting with said inclined faces, ring valves provided in said steam chamber and capable of rotating therein and having ports communicating with said steam chamber and with said cylinder, said ring valves also having exhaust outlets, means connecting said ring valves with said disk, and a lever mechanism operatively connected with said valves for shifting the same and varying the time of cut off.

5. A rotary engine having an annular cylinder, revolving rings placed back to back therein, pistons mounted on said rings, said pistons being triangular in form and having inclined faces exposed to the fluid pressure in said cylinder, said cylinder having intake and exhaust ports and reciprocating slides operating at right angles substantially to said pistons and contacting with said inclined surfaces.

[Claims 6 to 19 not printed in the Gazette.]

1,014,379. PLOW. WILHELM G. DANIELSEN, Independence, Mo. Original application filed Dec. 22, 1910, Serial No. 598,832. Divided and this application filed Mar. 27, 1911. Serial No. 617,106.



1. The combination with a frame, of a series of plows operably connected thereto abreast and in staggered relation, each of said plows being pivoted to the frame and capable of tilting movement, a beam to each plow extending forwardly, a series of bell crank levers having their respective horizontal arms pivotally connected to the extreme free end of and beyond the free ends of the plow beams, individual means for adjusting the movement of the respective bell crank levers and their respective plow beams, and means for operating all of said bell crank levers and their respective beams in unison.

2. The combination with a harp-shaped frame having its longest side the land side and its forward side the side at right angles thereto, of a series of plows arranged in inclined relation below and in line with the rear side of the main frame and extending abreast of the rear of the main frame, each of said plows being individually pivoted to the main frame, a beam to each plow extending forwardly in the frame, a bell crank lever to each plow journaled in the frame and having one arm pivoted to the forward end of its respective plow beam, a transverse shaft journaled at the forward end of the main frame, a series of levers individually and adjustably connected thereto, a rod connected to each lever and its respective bell crank lever, and means for locking said levers to said shaft, whereby all plow beams may be moved in unison.

3. The combination with a harp-shaped frame having its longest side the land side and its forward side the side at right angles thereto, of a series of plows arranged in inclined relation below and in line with the rear side of the main frame and extending abreast of the rear of the main frame, each of said plows being individually pivoted to the main frame, a beam to each plow extending forwardly in the frame, a bell crank lever to each plow journaled in the frame and having one arm pivoted to the forward end of its respective plow beam, a transverse shaft journaled at the forward end of the main frame, a series of levers individually and adjustably connected thereto, an adjustable rod connected to each lever and its respective bell crank lever, and individual means for locking said levers to said shaft, whereby all plow beams may be moved in unison.

4. A plow comprising a frame, a series of shafts journaled upon the frame, a furrow opener operatively connected with each shaft, a transversely disposed shaft journaled upon the frame, arms fixed to the last mentioned shaft, levers journaled to said arms, means for fixing said levers with relation to said arms, and means operatively connecting said levers with the shafts to which the furrow openers are connected.

5. A plow comprising a frame, a series of shafts journaled thereon, furrow openers connected with said shafts, a transversely disposed shaft journaled upon the frame, a lever fixed to said shaft and operatively connected with one of the shafts to which a furrow opener is connected, arms fixed to said transverse shaft, levers fulcrumed to said arms, means for securing the last mentioned levers with relation to said arms, and means operatively connecting the last mentioned levers with the shafts to which the furrow openers are connected.

1,014,380. STAMP-HOLDER. JOHN J. DAVIS, Waterville, Conn., assignor of one-half to Elvira M. Clark, Waterville, Conn. Filed Nov. 1, 1911. Serial No. 658,035.

1. A stamp holder comprising a tubular casing forming chambers at opposite ends, said chambers longitudinally slotted, and one edge of the slot turned inward the depth of the chamber being less than the width of the strip to be contained therein, and caps adapted to set over and inclose said chamber.

2. A stamp holder comprising a tubular casing, a central plug within the same and forming chambers at opposite ends, said chambers being less in depth than the strips to be contained therein, said chambers formed with longitudinal slots, one edge of each slot turned inward, and caps adapted to set over and inclose said chamber and inclose said slots.

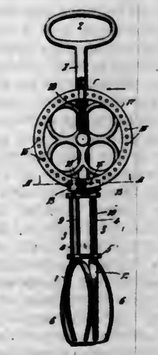
3. A stamp holder including a tubular chamber formed with a slot, the depth of the chamber being less than the strip of stamps to be contained therein, one edge of the slot turned inward, and a cap adapted to set over and close said chamber.

1,014,381. COMBINED MUSIC STAND AND HOLDER AND CARRYING-CASE FOR THE SAME. DAVID E. FORCE, Jersey City, N. J. Filed Feb. 25, 1911.. Serial No. 610,772.

1. In a folding music stand and in combination, a hollow cylindrical body member, a removable and reversible cap for one end of said body member, a rod permanently fixed centrally within said cap and projecting therefrom a predetermined distance, a brace for said rod attached to said cap, leg rods, one end of each of which is pivotally connected to said brace, links, one end of each of which is pivotally connected to one of said leg rods, a sliding guide block upon said fixed rod, lugs upon said sliding guide block to which the other ends of said links are pivoted, a fixed cap at the other end of said body member, a centrally disposed open ended tube therein and secured thereto, a partition fixed to said fixed cap and having a central opening through which said tube passes, telescoping tubes one end of the larger of which being adapted to be received within the tube in said fixed cap, springs secured to said fixed tube and by which said telescoping tube is held in adjusted positions within said fixed tube, a folding desk for music, and means for connecting the same with one of said telescoping tubes.

2. In a folding music stand and in combination, a hollow cylindrical body member, a removable and reversible cap for one end of said body member, a rod permanently fixed centrally within said cap and projecting therefrom a predetermined distance, a brace for said rod attached to said cap, leg rods, one end of each of which is pivotally connected to said brace, links, one end of each of which is pivotally connected to one of said leg rods, a sliding guide block upon said fixed rod, lugs upon said sliding guide block to which the other ends of said links are pivoted, a fixed cap at the other end of said body member, a centrally disposed open ended tube therein and secured thereto, a partition fixed to said fixed cap and having a central opening through which said tube passes, telescoping tubes one end of the larger of which being adapted to be received within the tube in said fixed cap, springs secured to said fixed tube and by which said telescoping tube is held in adjusted positions within said fixed tube, a folding desk for music and a bent rod adjustably secured in one of said telescoping tubes and adapted at its free end for connection with said folding desk.

1,014,382. MIXER OR BEATER. CHARLES FORTH, Boston, Mass. Filed Apr. 28, 1910. Serial No. 558,138.



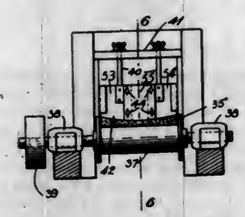
1. In a beater the combination with a rotary driving wheel formed with driving holes extending entirely there-

through, of driven pinions arranged on opposite sides of the wheel and provided with teeth adapted to engage in said holes, and beater arms operated by said pinions whereby the teeth will serve to prevent the lodgment of dirt in the holes.

2. In a beater the combination with a rotary driving wheel formed with driving holes therethrough, of driven pinions arranged on opposite sides of the wheel and provided with teeth adapted to engage in said holes, the said pinions being so disposed relatively to each other that the teeth of the respective pinions will engage simultaneously different holes in the wheel, and beater arms operated by the pinions.

3. In a beater the combination with a rotary driving wheel formed with a single row of driving holes therethrough, of driven pinions arranged on opposite sides of the wheel and provided with teeth adapted to engage in said holes, the said pinions being so disposed relatively to each other that the teeth of the respective pinions will simultaneously engage different holes in the wheel, and beater arms operated by the pinions.

1,014,383. CRUSHING-ROLLS. JEREMIAH S. FRAZER, New York, N. Y. Filed Feb. 25, 1911. Serial No. 610,910.



1. In crushing rolls, two opposing roll-shells one of which is provided with flanges at its ends inclosing the ends of the opposing roll-shell, in combination with means for feeding between said roll-shells a sheet of material of greater thickness at its edges than at its center, said flanges serving to guide and confine an increased amount of material adjacent to the flanges, for the purpose specified.

2. In crushing rolls, two opposing roll-shells one of which is provided with flanges at its ends inclosing the ends of the opposing roll-shell, in combination with means for feeding between said roll-shells a sheet of material of greater thickness at its edges than at its center and of a greater width than the length of the unflanged roll-shell, said flanges serving to guide and confine an increased amount of material adjacent to the flanges, for the purpose specified.

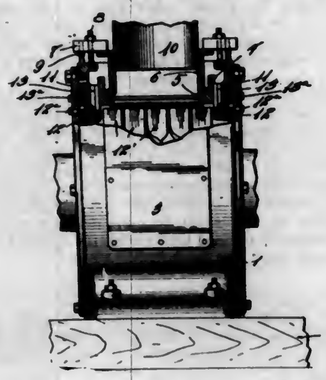
3. In crushing rolls of the kind described, the combination of two opposing roll-shells one of which is provided with flanges at its ends inclosing the ends of the unflanged roll, with means for feeding between said roll-shells a sheet of material of greater thickness at its edges adjacent to said flanges than at its center, said means comprising a feed-tray provided at its discharge end with an upright lip-dam of varying height, for the purpose specified.

4. In crushing rolls of the kind described, the combination of two opposing roll-shells one of which is provided with flanges at its ends inclosing the ends of the unflanged roll, with means for feeding between said roll-shells a sheet of material of greater thickness at its edges adjacent to said flanges than at its center, said means comprising a feed-tray provided at its discharge end with an upright lip-dam of varying height, and a guide-plate in said feed-tray arranged to rest upon the surface of the feed-stream.

5. In crushing rolls, the combination of two opposing roll-shells, means for feeding a larger amount of material along the sides of the faces of said roll-shells than at their centers, means for extending the edges of the feed-stream beyond the ends of one of said roll-shells and means for causing the exposed edges of said feed-stream to be acted on by a crushing pressure exerted against the ends of said roll-shell, for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,014,384. SCREEN FOR PULVERIZERS. EDWARD H. FRICKEY, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Original application filed June 9, 1910, Serial No. 565,949. Divided and this application filed Oct. 29, 1910. Serial No. 589,827.



1. In a device of the character described, the combination of a casing having a discharge opening, a screen covering said discharge opening, a frame for supporting said screen in position, means on each side of said frame for adjusting the same relative to the casing, a discharge pipe mounted above the screen, and a casting surrounding the discharge pipe and supported by the screen support.

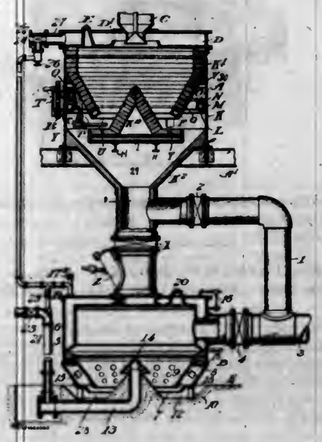
2. In a device of the character described, the combination of a casing having a discharge opening, a screen covering said discharge opening, a frame supporting said screen in position, means on each side of said frame for adjusting the same relative to the casing, a discharge pipe mounted above the screen, a casting surrounding the discharge pipe and supported by the screen support, and means for adjustably holding the casting in position.

3. In a device of the character described, the combination of a casing having a discharge opening, a supply pipe above said opening, a screen covering said discharge opening, a casting supported by said screen and embracing the discharge pipe, and means for adjustably holding said casting in position, comprising blocks engaging the face of the casting and screws adjustably connecting said blocks with the casing.

1,014,385. GAS-PRODUCER. CLAUDE M. GARLAND, Collingswood, N. J., assignor to Camden Iron Works, Camden, N. J., a Corporation of New Jersey. Filed Mar. 18, 1911. Serial No. 615,234.

1. In a gas producer, the combination of coaxially superimposed gas generating chambers, a fuel charging device centrally located at the top of each chamber, twyers at the top of the upper chamber and at the bottom of the lower chamber respectively, a pipe for the passage of gas and partially gasified fuel communicating from the center of the bottom of the upper chamber to the center of the top of the lower chamber, and a gas off-take pipe communicating with the upper portion of the lower chamber.

2. In a gas producer, the combination of superimposed gas generating chambers, a pipe communicating from the bottom of the upper chamber to the top of the lower chamber for the passage of both gas and partially gasified fuel, a valve in said pipe, a gas off-take pipe leading from the gas space in the upper part of the lower chamber, a valve in the gas off-take pipe, a connecting pipe leading from the first named pipe at a point above said valve therein, to the gas off-take pipe and located on the other side of the valve therein from said lower chamber, and a valve in said connecting pipe.



3. In a gas producer the combination of superimposed gas generating chambers, means for feeding both gas and partially gasified fuel from the bottom of the upper chamber to the gas space at the top of the lower chamber, a gas off-take pipe located at the upper portion of the lower chamber and communicating with the gas space therein, means for cutting off communication between the two chambers, and a gas off-take pipe communicating with the space above said means and below said chamber.

4. In a gas producer, the combination of communicating superimposed gas generating chambers, a water boiler jacket for the generation of steam, and located at the top of the lower chamber, a steam jacket at the top of the upper chamber and communicating with the water boiler jacket and with the interior of the upper chamber, a twyer at the upper portion of the upper chamber and communicating with the steam jacket for admitting air thereto, for causing air and steam to pass from the upper portion of the upper chamber, through the same and into the top of the lower chamber, and a gas off-take pipe leading from the top of the lower chamber.

1,014,386. HOSE-NOZZLE. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed Oct. 12, 1908. Serial No. 457,265.

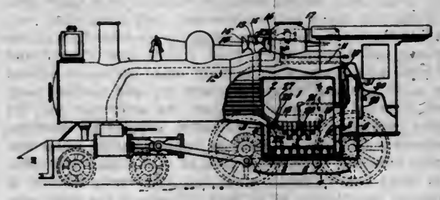
1. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, and an outer member revolubly mounted upon said inner member and provided with one or more inclined passages adapted to be brought opposite said ports of the inner member.

2. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, and an outer member revolubly mounted upon said inner member and provided with one or more inclined passages and with one or more straight passages adapted to be brought opposite said ports of the inner member.

3. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, an outer member revolubly mounted upon said inner member and provided with one or more channels having inclined upper parts and straight lower parts adapted to be brought opposite said ports of the inner member.

4. A hose nozzle of the character described comprising an inner member provided with a peripheral flange and a part extending above said flange having one or more lateral ports, an outer member provided with an interior flange to engage the peripheral flange of said inner member and having a chamber of considerably larger diameter than the inner member, said outer member having upon its interior inclined and straight channels and having a restricted discharge port at its end.

1,014,387. SMOKE AND GAS CONSUMER FOR LOCOMOTIVES. DANIEL GOFF, Millville, N. J., assignor to Goff Gravity Boiler Feed Company, Camden, N. J., a Corporation of New Jersey. Filed Jan. 16, 1911. Serial No. 602,755.



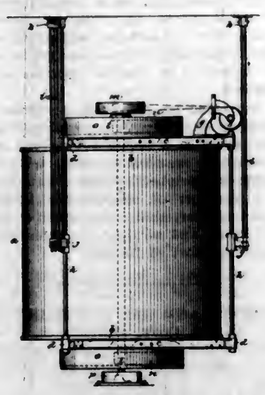
1. In a device of the character stated, a locomotive boiler, a fire box therefor, a suitable grate, a plurality of air inlets above said grate at each side of said fire box, an air conduit communicating with each series of air inlets, a steam nozzle connected to each air inlet and adapted to discharge steam into each inlet, a box transversely disposed in said fire box having a series of steam discharge openings, a steam supply having connection with said nozzles and said discharge openings, a furnace door, and means controlled by the movement of said door for regulating the flow of steam through said box.

2. In a device of the character stated, a locomotive boiler, a fire box therefor, a suitable grate, a plurality of air inlets above said grate at each side of said fire box, an air conduit communicating with each series of air inlets, a plurality of collectors secured to each conduit, means to control the passage of air through each collector, a steam nozzle connected to each air inlet and adapted to discharge steam into each inlet, a box transversely disposed in said fire box having a series of steam discharge openings, a steam supply connected to said steam openings, a furnace door, and means controlled by the movement of said door for regulating the flow of steam through said box.

3. In a device of the character stated, a locomotive boiler, a fire box therefor, a suitable grate, a plurality of air inlets above said grate at each side of said fire box, an air conduit communicating with each series of air inlets, a plurality of collectors secured to each conduit, means to control the passage of air through each collector, a steam nozzle connected to each air inlet and adapted to discharge steam into each inlet, a box transversely disposed in said fire box having a series of steam discharge openings, a steam supply connected to said steam nozzles and said discharge openings, a furnace door, means controlled by the movement of said door for regulating the

flow of steam through said box, and means independent thereof for effecting manual regulation of the flow of steam through said box.

1,014,388. GYRATORY BOLTING-MACHINE. WILLIAM D. GRAY, Milwaukee, Wis. Filed July 14, 1905. Serial No. 269,578.



1. A gyratory bolting machine, comprising a sieve case, a frame for bracing the sieve-case and preventing sagging of its heads, consisting of members extending across the top and bottom heads from side to side thereof and tie rods disposed at substantially equal distances around the sieve-case and connecting said top and bottom members together, and a support for the sieve-case and its frame consisting of three vibratory supporting members connected with the tie rods at approximately equal distances around the machine, each of said supporting members being longitudinally rigid and universally flexible in a lateral direction so as to hold the axis of the sieve case constantly perpendicular to a horizontal plane and at the same time permit a free gyratory movement, substantially as described.

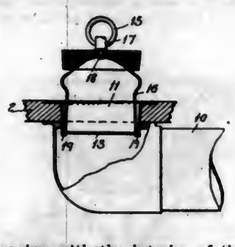
2. In a gyratory bolting machine the combination with the sieve case having upper and lower closing heads, of equilateral triangular stiffening frames applied to the heads of the case and connected with each other at their equidistant angles by tie rods and vibratory supporting members connected with said rods, substantially as described.

3. In a gyratory bolting machine the combination with the sieve case and vibratory supporting members connected therewith, of an eccentrically weighted shaft journaled in the heads of said case, means for turning said shaft, a stationary guide and spring support, a guiding ring movably mounted on said support around one end of said shaft and within which the shaft has a movement to and from the walls of the ring, and springs interposed between said support and ring and normally holding the latter in its central position, substantially as described.

1,014,389. WASHBASIN AND BATH-TUB PLUG. ERASTUS E. HAFF, Amityville, N. Y. Filed May 3, 1911. Serial No. 624,683.

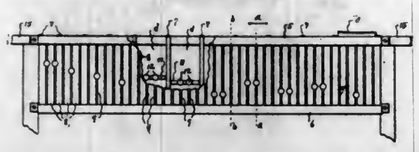
1. A plug for a waste outlet having a combined support and guide constructed with outwardly extended intermediate portions for frictionally engaging with such waste outlet, to guide and hold the plug therein, and with means for preventing the entire disconnection of such plug therefrom, substantially as described.

2. The combination with a waste outlet having a limiting stop, of a plug for engaging with such outlet having a spring strip connected thereto and constructed with arms that have over-turned ends for engaging with such limiting stop, to limit the upward movement of the plug, and with intermediate portions of said arms formed for



frictionally engaging with the interior of the outlet, substantially as described.

1,014,390. PAPER-BAG HOLDER. OTTO R. HAMMER, Harlan, Iowa. Filed Sept. 30, 1911. Serial No. 652,120.



1. A device for the purpose described, comprising an elongated, upright container having one of its sides formed of adjacent strips to provide therebetween substantially parallel recesses, and provided at longitudinal intervals with transverse, upright partitions to form elongated compartments of unequal widths, open at their upper ends; shelves disposed in the compartments, and screw members traversing said recesses in engagement with the shelves.

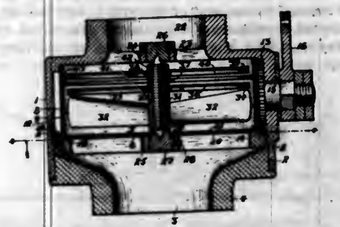
2. A bag holder, comprising a rectangular, elongated container having one of its sides formed of substantially parallel strips with spaces therebetween, and provided between its ends with partitions to form elongated, rectangular compartments therein; shelves disposed in the compartments; and adjustable means disposed in the spaces for securing the shelves at selected distances between the ends of the compartments.

3. In devices for the purpose described, an elongated, upright container having one of its sides formed of adjacently disposed strips to provide therebetween substantially parallel recesses, and provided at unequal, longitudinal intervals with transverse, upright partitions to form therebetween elongated compartments with open, upper ends; shelves disposed in the compartments and provided with lugs for engagement with the partitions; and screw members traversing said recesses in engagement with the shelves.

4. A bag holder comprising a rectangular, elongated container having one of its sides formed with substantially parallel strips and intervening spaces, and provided between its ends with partitions to form elongated, rectangular compartments therein; shelves disposed in the compartments and provided with holder-members adapted to engage the partitions; and adjustable means disposed in the spaces between the strips for securing the shelves at selected distances between the ends of the compartments.

1,014,391. GASEOUS-FUEL MIXER. ALIUS G. HATHCOCK, San Francisco, Cal., assignor to Hathcock Mechanical Device Company, San Francisco, Cal., a Corporation of California. Filed July 10, 1911. Serial No. 637,650.

1. In a mixer for carbureters, the combination of a vertical shaft, blades extending from said shaft and arranged to produce rotation of said shaft by the passage of gases therebetween, wheels on said shaft above said blades, said wheels having oppositely directed spokes, and screens secured to said wheels.



2. In a mixer for carbureters, the combination of a vertical shaft, blades extending from said shaft and arranged to produce rotation on said shaft by the passage of gases therebetween, wheels on said shaft above said blades, said wheels having oppositely directed spokes, screens secured to said wheels, a casing around said mixing blades and screens, and an annular baffle extending inwardly from said casing between said screens.

3. The combination of an outer casing, upper and lower spiders therein having central apertures, bearings screwed into said apertures, a shaft between said bearings, blades extending outwardly from said shaft and adapted to rotate said shaft by the passage of a fluid therebetween, screens carried by said shaft and extending transversely thereto into close proximity to said casing, and an annular baffle extending inwardly from said casing between said screens.

4. The combination of an outer casing, upper and lower spiders therein having central apertures, bearings screwed into said apertures, a shaft between said bearings, blades extending outwardly from said shaft and adapted to rotate said shaft by the passage of a fluid therebetween, screens above said blades rotatable with said shaft, a shutter below said shaft having openings therethrough, means adapted by the rotation of said shutter to close said openings, said shutter having marginal gear teeth, a pinion meshing with said teeth, a shaft for said pinion extending through the main casing, and means for turning said shaft.

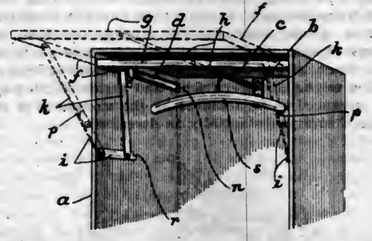
5. The combination of an outer casing, upper and lower spiders therein having central apertures, bearings screwed into said apertures, a shaft between said bearings, blades extending outwardly from said shaft and adapted to rotate said shaft by the passage of a fluid therebetween, screens above said blades rotatable with said shaft, a shutter below said shaft having openings therethrough, means adapted by the rotation of said shutter to close said openings, said shutter having marginal gear teeth, a pinion meshing with said teeth, a shaft for said pinion extending through the main casing, means for turning said shaft, and means for opposing the passage of fluid in a straight direction past the margins of said screens.

[Claim 6 not printed in the Gazette.]

1,014,392. GARMENT-SUPPORTER FOR WARDROBE-TRUNKS. EUGENE W. HAWLEY, Philadelphia, Pa. Filed June 13, 1911. Serial No. 632,963.

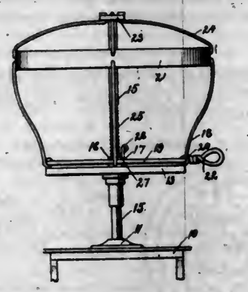
1. In a garment-supporter attachment, the combination with a receptacle, of side guides and a guide between the side guides, a frame slidably engaging said guides, and levers pivotally attached to each other and pivoted respectively to the side-walls of the receptacle and to the sliding frame and adapted to be moved from an angular to a parallel relation in the outward movement of the frame.

2. In a garment supporter, the combination with a receptacle, of a horizontal tube secured to the receptacle and extending outward from the rear wall thereof, horizontal guides secured to the receptacle and extending along the side walls thereof, a rod slidable in said tube, slides movable in said guides, a front cross-bar connecting the guides and secured to the rod, levers pivotally attached to each other and pivoted respectively to the side-walls of the receptacle and to the slides, and a pin in one lever adapted to engage a shoulder formed in its companion lever in the outward movement of the sliding parts.



3. In a garment supporter, the combination with a receptacle, of horizontal channel-shaped guides, each of oblong cross-section slotted along one flat side and extending outward from the rear of the receptacle, a horizontal tube arranged between the guides and extending out from the rear of the receptacle, said tubes and guides being fixed relatively to the receptacle, a rod telescoping in said tube, flat bars having cross-sections conforming to those of the channel-shaped guides and telescoping therein, and a front cross-bar connecting the guides and secured to the rod.

1,014,393. HAT-TRIMMING STAND. FRANZISKA HERMANN, East Helena, Mont. Filed Sept. 7, 1911. Serial No. 648,102.

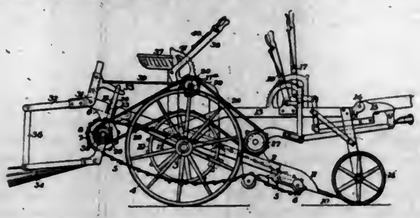


A hat trimming stand comprising a support, a standard on the support, said standard having a longitudinal bore in one end, a vertically sliding rod in the bore, a plate on the upper end of the standard, a hat holding frame disposed on the plate, said frame comprising a ring, radially extending wires connected to the ring, a larger ring concentrically arranged with relation to the first named ring, said radial wires being engaged with said larger ring, a band disposed above said larger ring, the ends of said wires being secured to said band, wires connected to the band and one end of said rod, ratchet teeth formed on the rod, and the inner end of one of said radial wires being turned and having its end pointed and adapted to engage said ratchet teeth, whereby said rod is adapted to be held in different vertical adjusted positions to regulate the size of the said frame.

1,014,394. POTATO-DIGGER. JOHN HIST, Berea, Ohio. Filed June 12, 1911. Serial No. 632,733.

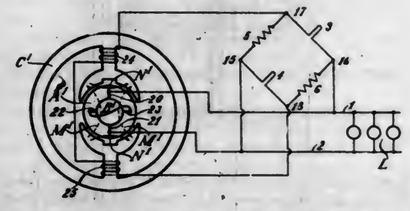
1. A potato digger having a conveyer frame, a movable conveyer mounted on said frame, means for adjusting the conveyer frame, a receiving frame adjustably mounted on the conveyer frame arranged to receive the potatoes from the conveyer, driving mechanism for the conveyer including a clutch, means for adjusting the receiving frame with relation to the conveyer frame, and clutch shifting mechanism arranged to be actuated by the movement of the receiving frame; substantially as described.

2. A potato digger having a conveyer frame, a movable conveyer mounted on said frame, an auxiliary frame, means on the auxiliary frame for adjusting the conveyer frame, a receiving frame adjustably mounted on the conveyer frame arranged to receive the potatoes from the conveyer, a driving shaft for the conveyer mounted on the conveyer frame, driving mechanism for said shaft including a clutch, means for adjusting the receiving frame with relation to the conveyer frame, and clutch shifting mechanism arranged to be actuated by the movement of the receiving frame; substantially as described.



3. A potato digger having a conveyer frame, a movable conveyer mounted on said frame, means for adjusting the conveyer frame, a receiving frame adjustably mounted on the conveyer frame arranged to receive the potatoes from the conveyer, means on the receiving frame for agitating the material received from the conveyer, driving mechanism for the conveyer and agitating means on the receiving frame including a clutch, means for adjusting the receiving frame with relation to the conveyer frame, and clutch shifting mechanism arranged to be actuated by the movement of the receiving frame; substantially as described.

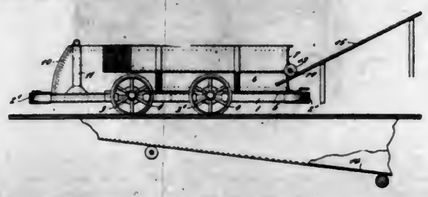
1,014,395. SYSTEM OF ELECTRICAL DISTRIBUTION. ROBERT C. HULL, Philadelphia, Pa. Filed Mar. 18, 1910. Serial No. 550,163.



In combination, a dynamo electric machine having an armature and its commutator and a field structure providing paths for two sets of magnetic lines, constituting a primary and a secondary magnetic flux displaced from each other whereof the path for the primary flux is in part distinct from the path for the secondary flux, one pair of brushes bearing upon the armature at points of potential difference due to the primary flux, a conducting circuit of low resistance connecting said brushes, a second pair of brushes bearing upon the armature at points of potential difference due to the secondary flux, a consumption circuit connected to said second pair of brushes, a Wheatstone bridge including resistances having different temperature coefficients, connections from two opposite junction points of said bridge to the consumption circuit, and a field winding on that part of the path for the primary flux which is distinct from the other path, said winding connected across the other two opposite junction points of the bridge.

1,014,396. DUMP-CAR. MARCUS L. HYDE, Chicago, Ill., assignor to William D. Ord, Landgraff, W. Va. Filed Oct. 15, 1910. Serial No. 587,169.

1. A car comprising a truck having side and end members, a body carried thereby, said body having an open discharge end, a pivotal support for said body and means for rotating the body about said support to lower the discharge end between the side and end members of the truck, a gate attached to one end of the truck, and means on the body adapted to coöperate with means associated with the track way to lower the discharge end of the body away from said guide.



2. In combination, a car comprising a truck, a body carried thereby, said body having a discharge end of less width than the truck frame, means on the truck for closing the discharge end of the body, rollers carried by the car, and an inclined track with which said rollers are adapted to coöperate to partially rotate said body to discharge the contents thereof and to restore it to closed position.

3. In combination, a car comprising a truck, a body carried thereby, said body having a discharge end of less width than the width of the truck frame, a pivotal support for said car carried by the truck, an inclined track, and means on the car adapted to coöperate with said track to partially rotate the body of the car in the longitudinal direction of the truck to discharge its contents and to restore it to its normal position on the truck.

4. In combination, a car comprising a truck, a body carried thereby, said body having a discharge end of less width than the truck frame, a pivotal support for said body carried by the truck, a trackway over which said car is adapted to travel, a receiver beneath the trackway, and means for lowering the discharge end of said body between the side members of the truck, said pivotal support being so placed that the discharge end of the body, when lowered, will pass into the receiver.

5. In combination, a car comprising a truck, a body carried thereby, said body having a discharge end of less width than the width of the truck frame, a pivotal support for said body carried by the truck, a gate attached to one end of the truck and adapted to close the open end of the body when the latter is in normal position, a trackway over which said car is adapted to travel, a receiver beneath the trackway, and means associated with the trackway to lower the discharge end of the body away from said gate, said pivotal support being so placed that the discharge end of the body, when lowered, will pass into the receiver.

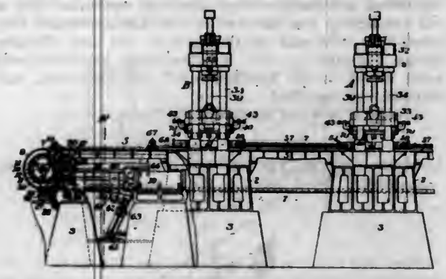
1,014,397. MACHINE FOR MAKING INLAID LINOLEUM. ALFRED JONES, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 9, 1911. Serial No. 643,185.

1. In a straight-line linoleum-machine, the combination with a plurality of punch presses arranged in tandem, or die boxes movable longitudinally with respect to the punches of the presses, and means for mechanically moving said boxes when the punches are raised, substantially as described.

2. In a straight-line lineoleum-machine, the combination with a plurality of punch presses arranged in tandem, of a longitudinally movable die box for each press, connections between the boxes, and means for automatically moving the boxes underneath and from under the punches at the proper time, substantially as described.

3. In a straight-line linoleum-machine, the combination with a plurality of punch presses having vertically reciprocating punches, of connected die boxes movable longitudinally underneath the punches, and means for mechanically moving said boxes in timed relation to the movements of the punches, substantially as described.

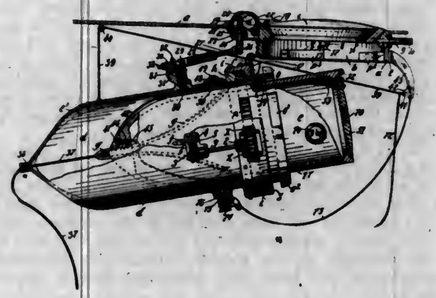
4. In a straight-line linoleum-machine, the combination with a plurality of punch presses arranged in tandem, of connected die boxes movable longitudinally underneath the punches, means for moving said boxes in timed relation to the movements of the punches, and means for synchronizing the boxes with respect to the punches, substantially as described.



5. In a straight-line linoleum-machine, the combination with band mechanism for intermittently feeding the foundation fabric, of a vertically reciprocable punch plate mounted above the fabric, a die plate movable longitudinally over the fabric below the punch plate, and connections between said punch plate and the feeding mechanism for the fabric, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,014,398. BUOY ATTACHMENT FOR SUBMARINE BOATS. GEORGE F. KEATING, Portland, Oreg. Filed Apr. 6, 1911. Serial No. 619,374.



1. In a submarine boat in combination: a water tight barrel; a casing for said barrel hinged on the boat deck; a water tight cover hinged on the boat deck and normally locked in place; means for locking said casing tightly to the deck, said means so arranged that the locking of the casing releases the cover lock; means for rotating said cover on its hinge; means actuated by the raising of the cover for locking the casing against disengagement from the boat deck while the cover remains open; and means for controlling the operations of said casing and cover from inside the barrel.

2. In a submarine boat, in combination: a cylindrical casing, pivotally suspended from a cylindrical tubular projection of the boat deck; means for locking said casing tightly on the deck projection; a cover, hinged on the boat deck; means for rotating the cover on its hinge; a barrel or buoy adapted to lodge in said casing, the mouth of the barrel provided with a hinged, water tight lid, normally held closed by a spring mechanism; a cable attached to the bottom of the barrel, by means of which the barrel, after being carried to the surface by its buoyancy, is returned to its position within the casing; and means for operating the casing locking mechanism and the cover raising mechanism from the inside of the barrel.

3. In a submarine boat, in combination: a cylindrical casing, pivotally suspended from a cylindrical, tubular projection of the boat deck; a gear drum rotatably mounted in said casing and provided with flange members adapted to engage the beveled surfaces of flange members rigid on the inner wall of said deck projection and to lock the casing tightly on said deck projection; means for rotating said gear drum; a cover hinged on the boat deck, tightly closing the mouth of said casing; means for rotating the cover on its hinge; a barrel or buoy adapted to lodge in said casing, the mouth of the barrel provided with a hinged, water tight lid, normally held closed by a spring mechanism; a cable attached to the bottom of the barrel, by means of which the barrel, after being carried to the surface by its buoyancy, is returned to its position within the casing; and means for operating the casing locking mechanism and the cover raising mechanism from the inside of the barrel.

4. In a submarine boat, in combination: a cylindrical casing, pivotally suspended from a cylindrical, tubular projection of the boat deck; a gear drum rotatably mounted in said casing and provided with flange members adapted to engage the beveled surfaces of flange members rigid on the inner wall of said deck projection and to lock the casing tightly on said deck projection; means for rotating said gear drum; a cover, hinged on the boat deck, tightly closing the mouth of said casing; means for rotating the cover on its hinge; means for locking the cover against rotation on its hinge; means for releasing said cover lock by the rotation of the casing flange in engaging the flange of the deck projection; a spring held bolt, normally held retracted and inoperative by the closed cover, and free to slide into the path of the casing flange, when the cover is raised, thus locking the casing against disengagement; a barrel or buoy adapted to lodge in said casing, the mouth of the barrel provided with a hinged, water tight lid normally held closed by a spring mechanism; a cable attached to the bottom of the barrel, by means of which the barrel, after being carried to the surface by its buoyancy, is returned to its position within the casing; and means for operating the casing locking mechanism and the cover raising mechanism from the inside of the barrel.

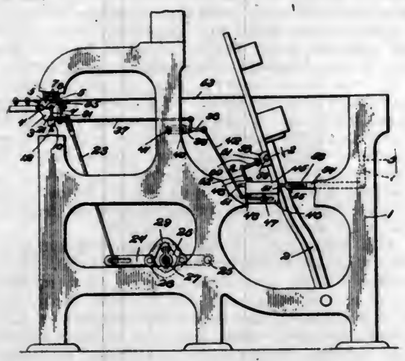
5. In a submarine boat, in combination: a cylindrical casing, pivotally suspended from a cylindrical tubular projection of the boat deck; a gear drum rotatably mounted in said casing and provided with flange members adapted to engage the beveled surfaces of flange members rigid on the inner wall of said deck projection and to lock the casing tightly on said deck projection; means for rotating said gear drum; a cover, hinged on the boat deck, tightly closing the mouth of said casing; means for rotating the cover on its hinge; a water valve, mounted in the wall of the deck projection normally held closed, and opened by the rotation of the casing flange in locking the casing in place; a barrel or buoy adapted to lodge in said casing, the mouth of the barrel provided with a hinge, water tight lid, normally held closed by a spring mechanism; a cable attached to the bottom of the barrel, by means of which the barrel, after being carried to the surface by its buoyancy, is returned to its position within the casing; and means for operating the casing locking mechanism and the cover raising mechanism from the inside of the barrel.

[Claims 6 to 9 not printed in the Gazette.]

1,014,399. WARP STOP-MOTION FOR LOOMS. WILLIAM H. KNOX and HARRY M. WHITE, Philadelphia, Pa. Filed Sept. 8, 1911. Serial No. 648,343.

1. An attachment for looms comprising a support, an oscillating frame mounted in the support, a crank arm secured to and adapted to oscillate said frame, detectors supported on the warp threads and adapted when one fails to stop the oscillation of said frame, a bell-crank-lever fulcrumed on said arm, means for moving said bell-crank-lever to move the arm and the frame, a lever hav-

ing a recess therein into which one end of said bell-crank-lever projects, whereby said last-mentioned lever is moved when the bell-crank-lever is moved and the frame held against movement, and means for stopping the loom connected with said last-mentioned lever, substantially as described.



2. In a loom, the combination with a frame, and means for stopping the loom, of detectors supported upon and normally elevated by the warp threads, an oscillating frame below the warp threads, an arm secured to and adapted to oscillate the frame, the movement of said frame stopped by the fall of one of said detectors, a lever fulcrumed on said arm, a second lever having a recess into which one end of the first-mentioned lever projects, means for moving the first-mentioned lever to oscillate the frame, and means connecting said recessed lever with the loom stopping means whereby the movement of the first-mentioned lever on its fulcrum causes the operation of the loom stopping means, substantially as described.

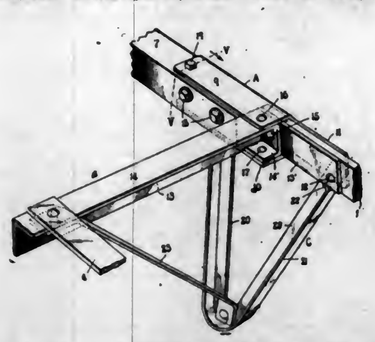
3. An attachment for looms, comprising end plates, rods connecting the end plates and adapted to support the warp threads, an oscillating frame supported by the end plates, detectors supported on the warp threads, and normally elevated out of the path of movement of the oscillating frame and adapted to stop said frame when said detectors fall, an arm secured to oscillate with said frame, a bell-crank-lever fulcrumed on the free end of said arm, means connected to said lever for oscillating said arm, loom stopping means operated by the movement of the lever when the arm is held against oscillating movement by one of the detectors, a pivoted lay, a finger on the pivoted lay, a spring-pressed loom stopping bar, a pivoted finger projecting through a slot in said bar and normally out of the path of movement of said first-mentioned finger, devices connecting said last-mentioned finger with said last-mentioned bell-crank-lever, whereby the movement of the latter causes said last-mentioned finger to move into the path of movement of the finger on the lay, and permit the latter to move the lay stopping bar, substantially as described.

4. An attachment for looms, comprising end plates, rods connecting the end plates and adapted to support the warp threads, a shaft supported in said end plates, an oscillating frame depending from and secured to said shaft, detectors supported on the warp and normally elevated out of the path of movement of the oscillating frame and adapted to stop said frame when said detectors fall, a depending crank arm secured to said shaft, a bell-crank-lever fulcrumed on the free end of said arm, means for moving said lever to swing the frame, a recessed lever pivoted on one plate and normally receiving the free end of said bell-crank-lever, said recessed lever constructed to stop the loom when moved and adapted to be moved by the bell-crank-lever when the frame is stopped by a detector, substantially as described.

5. In a loom, the combination with a frame, a starting and stopping lever, and a pivoted lay, of detectors supported upon and normally elevated by the warp threads, a shaft, a frame secured to said shaft, a crank arm on said shaft, means for oscillating said crank arm to oscillate the frame, the movement of said frame stopped by the fall of one of said detectors, a bell-crank-lever fulcrumed on the free end of said arm, a second bell-crank-lever having a recess into which one end of the first-mentioned bell-crank-lever projects, an oscillating link, a rod connecting one member of the first-mentioned bell-crank-lever with said oscillating link, and loom stopping means operated by the last-mentioned bell-crank-lever when moved by the first-mentioned bell-crank-lever, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,014,400. HAND-TRUCK. FRANK G. KOEHLER, St. Louis, Mo. Filed Apr. 24, 1911. Serial No. 623,100.



1. In a truck, the combination of a frame having side bars, supporting wheels for said frame, U-shaped socket pieces comprising a side wall and top and bottom horizontal flanges, said side wall extending beyond said horizontal flanges and forming a tail arm, said socket pieces being secured to the side bars of said frame by fastening devices passing through the side wall and tail arm of said socket piece and through said bars, and handles set into said socket pieces and secured therein.

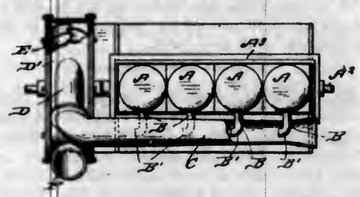
2. In a hand truck, a frame comprising side bars, tie bars connecting said side bars, one of the tie bars being an angle bar having vertical and horizontal wings integrally connected together, the vertical wing being bent to lie against the side bars, each end of the horizontal wing being bent to overlap and abut against the vertical wing, and fastening devices passing through the overlapping portions of said wings and connecting them to the side bars.

3. In a hand truck, a frame including side bars, U-shaped socket pieces secured to the ends of said side bars, a tie bar having a vertical wing and a horizontal wing; each end of the horizontal wing being bent to conform to the shape of and lie within one of the socket members, the end portions of the vertical wing being arranged between said side bars and the ends of the horizontal wing, fastening devices passing through both of said wings and connecting them to the side bars, and handles fitted to said socket pieces.

1,014,401. COMBINED RECIPROCATING ROTARY ENGINE. CHRISTOPHER J. LAKE, Bridgeport, Conn. Filed Jan. 28, 1911. Serial No. 605,218.

1. A combined reciprocating rotary explosive engine, comprising a power cylinder, a power piston operating therein, a crank-shaft operatively connected to said piston, a rotary motor wheel carried by said shaft, a casing for said wheel, and a conduit open at one end and having its opposite discharging end connected to said casing for conveying the exhaust gases from said power cylinder and directing them upon said rotary motor wheel for rotating said wheel in coöperation with said power piston.

2. A combined reciprocating rotary explosive engine, comprising a power cylinder, a power piston operating therein, a crank-shaft operatively connected to said piston, a rotary motor wheel carried by said shaft, a casing for said wheel, a conduit having one end open to the atmosphere and its opposite discharging end connected to said casing, for the purpose specified, and means for directing the exhaust gases from said power cylinder into and toward the discharge end of said conduit.



3. A combined reciprocating rotary explosive engine, comprising a power cylinder, a power piston operating therein, a crank-shaft operatively connected to said power-piston, a rotary motor wheel carried by said crank-shaft, a casing for said wheel, a conduit for conveying the exhaust gases from said power cylinder to and directing them upon said rotary motor wheel, said conduit being of gradually increasing diameter toward its discharge end and having a flaring air intake end, and means for directing the gases escaping into said conduit toward said discharge end.

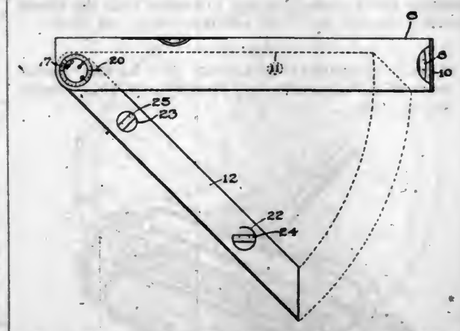
4. A combined reciprocating rotary explosive engine, comprising a power cylinder having an exhaust port, a power piston working in said cylinder, a crank-shaft operatively connected to said piston, a rotary motor wheel carried by said shaft, a casing for said rotary motor wheel, a conduit for conveying the gases escaping from said power cylinder and discharging them upon said rotary motor wheel, said conduit being of increasing diameter toward its discharge end and having an enlarged flaring open mouth at its opposite end, and a pipe extending from the exhaust port of said power cylinder into said conduit and having its outer end directed toward the discharge end of said conduit.

5. A combined reciprocating rotary explosive engine, comprising a power cylinder having an exhaust port, a power piston working in said cylinder, a crank-shaft operatively connected to said piston, a rotary motor wheel mounted upon said crank-shaft, said wheel having an annular channel in its periphery, and curved blades extending from the sides thereof into said channel, a casing for said rotary motor wheel, a conduit for conveying the exhaust gases from said power cylinder and directing them upon the periphery of said wheel, said conduit being open at one end and of gradually increasing diameter toward its opposite or discharge end and means for directing the gases escaping from said exhaust port into and toward the discharge end of said conduit.

[Claims 6 and 7 not printed in the Gazette.]

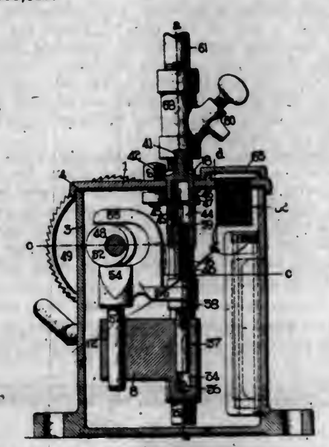
1,014,402. LEVEL. CARL M. L. LARSEN, Chicago, Ill. Filed June 24, 1911. Serial No. 635,217.

1. A device of the kind described, consisting of a main body provided with spirit tubes whereby said body is adapted for use as a level and plumb, and having a mortise and transverse bore and thereby adapted for the insertion of an arm in said mortise and the pivotal support of said arm in said body; an arm pivotally secured in said mortise in said body, said arm having transverse bores adapted for the insertion of spirit tubes therein, spirit tubes transversely secured in said bores, a screw bolt adapted to extend transversely through said body and said arm and to thereby pivotally secure said arm in said body, said bolt being adapted to be rotated in said body by the movement of said arm, and having a dial which forms the head of said bolt and is rotatable with it, said dial having radial lines adapted to register with a mark on said body whereby said arm and body can be used as a protractor, washers slidable and rotatable on said bolt and sunk in said body, adapted to form bearing surfaces for said dial bolt and a nut, a thumb nut on the threaded part of said bolt, adapted to be rotated on said bolt in contact with one of said washers and to thereby secure said arm, in the position relative to said body, described as shown and described.



2. A device of the kind described consisting of a mortised body portion, a plurality of spirit tubes therein and thereby adapting it for use as a level and plumb, an arm pivotally secured in the mortised part of said body, a plurality of spirit tubes in said arm, whereby said arm and body can be used as a level and plumb, and to test angular surfaces, and pivotal means adapted to secure said arm in said body, said means including a dial whereby said arm and body can be used as a protractor, as described.

1,014,403. FORCE-FEED LUBRICATOR. ADOLPH W. MANZEL, Buffalo, N. Y., assignor to Manzel Brothers Company, Buffalo, N. Y. Filed July 2, 1909. Serial No. 505,629.

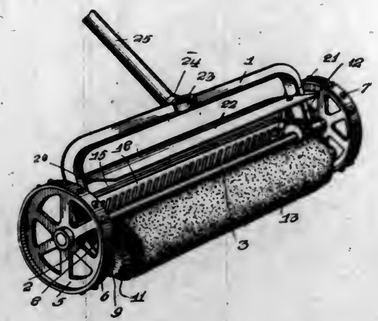


1. In a force feed lubricator, the combination with a box or reservoir having a cover, of a three armed block supported from the cover; said block being provided with a vertical opening forming a feed chamber, a vertical opening having valves therein, a horizontal communicating port between said openings and an outlet or overflow port extending from the feed chamber into communication with the interior of the box or reservoir, a plunger slidably mounted in the feed chamber and a conducting pipe extending from the valves opening through the cover, substantially as set forth.

2. In a force feed lubricator, the combination with a box or reservoir having a cover, of a multi-armed block

supported from the cover, said block being provided with a vertical opening forming a feed chamber, a vertical opening having valves therein, a horizontal communicating port between said openings and an outlet or overflow port extending from the feed chamber into communication with the interior of the box or reservoir, said overflow port being located in a plane above the plane of the communicating port, a plunger slidably mounted in the feed chamber and a conducting pipe extending from the valved opening through the cover, substantially as set forth.

1,014,404. COMBINED SWEEPER AND RAKE. PHILOMENA MAY, Pittsburgh, Pa. Filed Feb. 27, 1911. Serial No. 611,198.

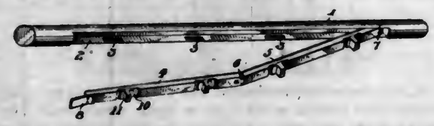


1. In combination, an axle, a frame mounted on the axle and provided on one side with bearings for a rotary brush and on the other side with a rake carrying bar, a handle associated with said frame, means to vary the position of said handle to lower the brush or the rake into operative position, and supporting wheels carried by said axle.

2. In combination, a revoluble axle, supporting wheels fixed thereto, a bail in the ends of which the axle is mounted, forwardly and rearwardly extending arms fixed to the ends of said bail, one pair carrying a rotary brush geared to the axle, and the other a rake bar, a handle adjustable on said bail to lower either set of arms to operative position, and a shield carried by the bail intermediate the handle and the brush and rake.

3. In combination, a revoluble axle, supporting wheels fixed thereto, a bail in the ends of which the axle is mounted, pairs of arms fixed to the ends of said bail and extending substantially radially from said axle, one pair carrying a rotary brush geared to the axle, the other pair being connected by a bar carrying rake supporting means, and a handle adjustable on said bail to lower either set of arms to operative position.

1,014,405. CURTAIN-POLE. ANDRZEJ MAZUREK, Philadelphia, Pa. Filed Aug. 28, 1911. Serial No. 646,342.



1. A curtain pole comprising a body portion provided with a longitudinally extending groove having the opposing walls thereof formed with pockets, a coupling rod pivotally connected at one end to said body and adapted to be swung into the said groove, said rod adapted to have a curtain draped thereon, and pivoted latches carried by said rod and shiftable to clamp the portions of the curtain in said pockets.

2. A curtain pole comprising a body portion provided with a longitudinally extending groove with the opposing walls thereof provided with pockets, a coupling rod pivoted to said body and adapted to have the curtain draped thereon and T-shape pivotally mounted upon said rod for clamping portions of the curtains in said pockets.

3. A curtain pole comprising a body portion provided with a longitudinally extending groove with the opposing walls thereof provided with pockets, a coupling rod pivoted to said body and adapted to be swung into said groove and further adapted to having the curtain draped thereon, and T-shape latches pivotally mounted upon said body for clamping portions of the curtain in said pockets, and a spring latch carried by the free end of said rod for engagement with said body.

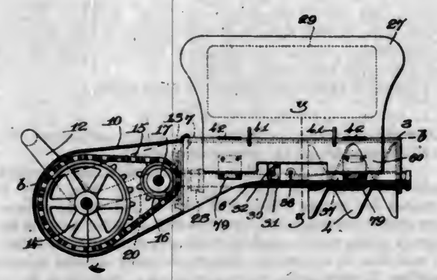
1,014,406. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 8, 1910. Serial No. 596,187.

1. A spring comprising a plurality of leaves of resilient metal and one or more leaves of relatively non-resilient metal combined with the former leaves and being of material strength and opposing a material resistance to the movements of the resilient leaves, whereby the non-resilient leaves contribute to the strength and diminish the vibrations of the resilient leaves.

2. A spring comprising a plurality of leaves of tempered resilient metal and one or more leaves of relatively non-resilient untempered metal interposed between the former leaves and being of material strength and opposing a material resistance to the movements of the former leaves, and means connecting the ends of the non-resilient leaves to the other leaves.

3. A spring comprising a plurality of leaves of tempered resilient metal and one or more leaves of relatively non-resilient metal interposed between the former leaves and possessing material strength and adapted to oppose material resistance to the movements of the resilient leaves without material detraction from the friction between the leaves of the spring, and means clamping the ends of the non-resilient leaves to the resilient leaves.

1,014,407. SWIMMING APPLIANCE. HARVEY W. MCLEOD, Quincy, Mass. Filed Oct. 3, 1910. Serial No. 584,962.



1. In a swimming appliance, the combination with a frame, of propeller mechanism carried thereby, buoyant clamping wings hinged to the frame and adapted to fold about and clamp the frame to the swimmer's body, and a lock carried by the frame and acting to hold the wings locked positively in their adjusted position.

2. In a swimming appliance, the combination with a frame, of propeller mechanism carried thereby, buoyant clamping wings hinged to the frame and adapted to fold about and clamp the frame to the swimmer's body, each wing having an arm extending therefrom, and a clamping member to engage each arm and thus positively lock the wing in adjusted position.

3. In a swimming appliance, the combination with a frame, of propeller mechanism carried thereby, rigid buoyant clamping wings hinged to the frame and adapted to fold about and clamp the frame to a swimmer's body, and means coöperating with the wings near their pivots to hold the wings rigidly in clamping position.

4. In a swimming appliance, the combination with a frame, of propeller mechanism carried thereby, buoyant clamping wings hinged to the frame and adapted to fold about and clamp the frame to a swimmer's body, a lock for each wing, and means to operate both locks simultaneously.

5. In a swimming appliance, the combination with a frame, of propeller mechanism carried thereby, a two-part buoyant wing hinged to each side of the frame, and a catch to hold the two parts of each wing in operative position.

[Claims 6 to 9 not printed in the Gazette.]

1,014,408. POMPON. DAVID METZGER, New York, N. Y. Filed Apr. 17, 1911. Serial No. 621,660.

1. A pompon constructed of strips of silk woven together so as to form a braid, one side of said braid consisting of cotton or similar material, the edge cut from the other side of the braid and the loose ends of the silk strips curled and the whole braid rolled into a pompon as shown and described.

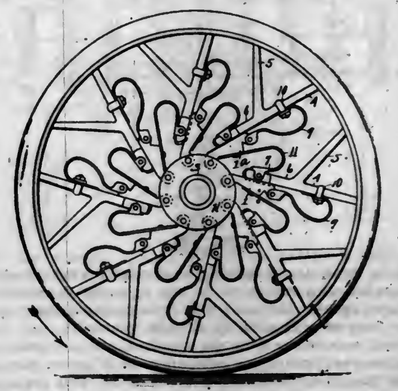
2. A pompon comprising a plurality of looped strips of ribboxine having their free ends curled, and a cotton warp secured to the looped portions of the strips for supporting the same, said warp being rolled upon itself to bunch the curled ends of the strips.

3. A pompon comprising looped strips of ribboxine curled at their free ends, and cotton strips secured to the looped portions of the ribboxine strips and extending longitudinally through the same, said cotton strips being clustered to bunch said ribboxine strips.

1,014,409. SPRING-WHEEL FOR VEHICLES. PAUL H. MINNIS, Lansing, Mich. Filed Mar. 4, 1911. Serial No. 612,246.

1. In a wheel, in combination with a hub, a felly, a plurality of spoke parts pivotally secured to the hub, fixed spoke parts equal in number secured to the felly, sliding connections between each pivotal part and its complementary fixed part, distending springs between each pivotal part and its complementary fixed part, and spacing springs between each fixed part and the adjacent pivotal part, substantially as described.

2. In a wheel, the combination of a felly, a hub, spokes connecting the hub with the felly, each spoke divided into an outer spoke portion attached to the felly and an inner spoke portion attached to the hub, resilient means slidably connecting each inner spoke portion to the companion outer spoke portion, and further resilient means connecting each inner spoke portion pivotally with the outer spoke portion next on one side of the companion outer spoke portion, substantially as described.



3. In a wheel, the combination of a felly, a hub, spokes connecting the hub with the felly, each spoke divided into an outer spoke portion attached to the felly and an inner spoke portion pivotally attached to the hub, a double spring connecting each inner spoke portion slidably with the companion outer spoke portion, and a second double spring connecting each inner spoke portion pivotally with the outer spoke portion next on one side of the companion outer spoke portion, substantially as described.

4. In a wheel, the combination of a felly, a hub, spokes connecting the hub with the felly, each spoke divided into an outer spoke portion attached to the felly and an inner spoke portion attached to the hub, the said inner spoke portion attached to the hub, the said inner spoke portion and the said companion outer spoke portion having a groove and tongue slidable connection, a double spring pivoted to the inner spoke portion and fixed to the outer spoke portion, a second double spring attached to the inner spoke portion and pivoted to the outer spoke portion next adjacent on one side of the companion outer spoke portion, substantially as described.

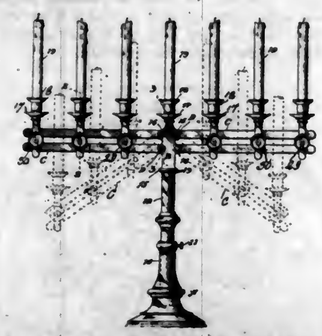
5. In a wheel, the combination of a felly, a hub, spokes connecting the hub and the felly, each spoke divided into an outer spoke portion comprising a body which is normally tangential with the hub and a brace connecting the body with the felly an inner spoke portion attached to the hub, resilient means connecting the outer spoke portions with the inner spoke portions and a second resilient means connecting the outer spoke portions with the inner spoke portions, the said two means coöperating to afford resilient support to the felly at all points about the periphery of the hub, substantially as described.

[Claim 6 not printed in the Gazette.]

1,014,410. CANDELABRUM. HERMAN F. NEHR, Rutherford, N. J. Filed May 6, 1908. Serial No. 431,218.

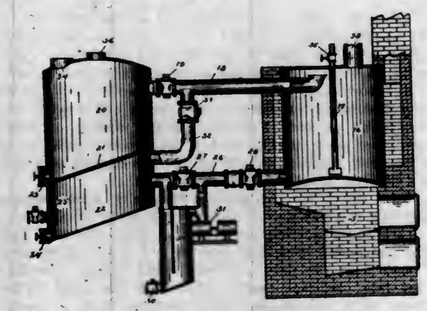
1. A candelabrum having a standard, arms pivotally connected with the standard and extended therefrom in parallel spaced relation, projections extended from opposite sides of said arms at different distances from their pivotal connections with the standard, and a plurality of devices positioned along said arms at different distances from the pivotal connections of the arms with the standard and each comprising two members extended across the space between the arms with apertures engaged with the opposite projections thereof and adapted for clamping engagement at opposite sides of said arms

to prevent pivotal movement of the arms upon their pivotal connections with the standard.



2. A candelabrum having a standard, arms pivotally connected with the standard and extended therefrom in parallel spaced relation, projections extended from opposite sides of said arms at different distances from their pivotal connections with the standard, and a plurality of devices positioned along said arms at different distances from the pivotal connections of the arms with the standard and each comprising two members extended across the space between the arms with means engaging the opposite projections thereof and adapted for clamping engagement at opposite sides of said arms to prevent pivotal movement of the arms upon their pivotal connections with the standard.

1,014,411. PROCESS FOR RECOVERING THE RESINOUS PRODUCTS FROM ROSIN WASTE AND THE LIKE. DAVID J. OGILVY, Cincinnati, Ohio. Filed Jan. 6, 1906. Serial No. 294,938.

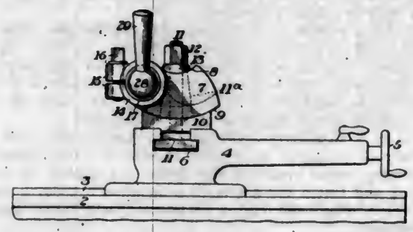


1. The herein described process for extracting the resinous matter from the waste resulting from the manufacture and handling of rosin, and which process consists in digesting the rosin waste in heated mineral oils ranging in specific gravity from 0.845 and upward, then separating the resinous solution from the insoluble in the oil matter.

2. The herein described process of producing resinous solution by digesting rosin waste in heated mineral oils ranging in specific gravity from 0.845 and upward, and then clarifying the resulting solution.

1,014,412. BORING AND TURNING BAR AND BAR-HOLDER. CHARLES A. PALMGREN, Chicago, Ill. Filed Dec. 24, 1910. Serial No. 599,141.

1. The combination with a lathe slide rest having a concave bearing, of a boring bar holder having concaved and convexed faces, the convex face fitting said bearing, securing bolts engaging the slide rest and arranged to secure the holder to the slide rest by engagement with the concaved face and also to hold it in different adjusted positions on said bearing, and a boring bar intermediate of said faces; substantially as described.



2. The combination with a lathe slide rest, of a bearing piece seated on the slide rest and having a concaved bearing surface, a tool bar holder having a portion of segmental form provided with concaved and convexed faces, the convexed face adjustably engaging said bearing surface, a plurality of securing bolts engaging the slide rest and passing upwardly through said piece and through slots in the holder, and having clamping means at their upper ends engaging the concaved face, and a sleeve at one end of the tool bar holder having its axis intermediate of the concaved and convexed faces thereof; substantially as described.

3. A boring bar comprising a sleeve having slots at its end, a bar extending longitudinally through said sleeve and having a slotted end portion, a tool holding jaw pivoted thereto and within the slotted end portion of the bar and extending into the slots of the sleeve, and means for effecting a longitudinal movement of the bar within the sleeve to clamp the tool between the jaw and the sleeve; substantially as described.

4. The combination with a lathe slide rest, of a bearing piece seated on the slide rest and having a concaved bearing surface, a tool bar holder having a portion of segmental form provided with concaved and convexed surfaces, the convexed surface engaging said bearing surface, the radius of said surfaces being such that the tool bar holder is within a circle which is coincident with said surfaces; substantially as described.

5. The combination with a lathe slide rest, of a bearing piece seating on the rest and having a concaved bearing surface, a tool bar holder having a portion of segmental form provided with a convexed surface, the convexed surface on the tool bar holder engaging the concaved bearing surface on the bearing face, the radii of said surfaces being such that the tool bar holder is within the circle which is coincident with said surfaces; substantially as described.

1,014,413. SALT AND PEPPER CELLAR. EVA PERI, Sacramento, Cal., assignor of one-half to Magnus Strand, San Francisco, Cal. Filed June 27, 1911. Serial No. 635,524.

1. A device of the character described comprising a surrounding wall, a closed bottom, a top formed with apertures, and a substantially helical web or partition making a half turn between its ends and dividing the interior of the device into compartments.

2. A device of the character described comprising a cylindrical wall, a closed bottom, a removable top having large apertures on one side and small apertures on the other side, and a helical web making a half turn and extending from the top to the bottom of the device, the end of said web adjacent to the top lying between the large and the small holes.

3. A salt and pepper cellar having a containing wall, a bottom, a top one portion of which is formed with large holes and another portion with small holes, a helical web making a half turn and extending from the top between said portions to the bottom, and guide plates extending from the end of the web adjacent to said top, each guide plate being connected to the wall except at the part remote from the top, and said part being spaced from the wall to form a discharge aperture.

1,014,414. EGG-CASE. FRED A. PURCHAS and ALLIE W. CHAPIN, McGraw, N. Y.; said Chapin assignor to said Purchas. Filed Oct. 25, 1905. Serial No. 284,327.

1. An egg-case comprising an elongated receptacle having opposite sides, a folding substantially flat supporting bottom foldably united to said sides, and transverse partitions connected to the inner faces of said sides and consisting of sections foldably united to each other, said partitions being scored near their side edges to form flaps for securement to the inner faces of said opposite sides, substantially as and for the purpose set forth.

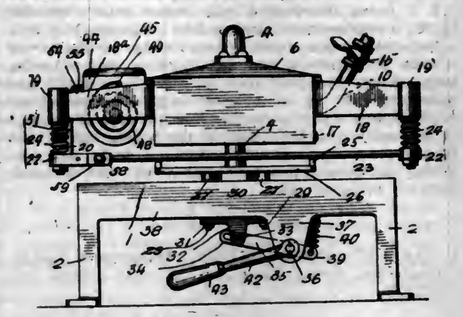
2. An egg-case comprising an elongated receptacle having opposite sides, a folding substantially flat supporting bottom foldably united to said sides, and transverse partitions connected to the inner faces of said sides and consisting of sections foldably united to each other, said partitions being scored near their side edges to form flaps for securement to the inner faces of said opposite sides, and said partitions terminating short of the bottom when the case is folded, and the folds thereof being in a plane coincident with the fold of the bottom, substantially as and for the purpose specified.

3. An egg-case comprising an elongated receptacle having opposite sides, a folding substantially flat supporting bottom foldably united to said sides, and transverse partitions, each being formed from a blank scored along its middle to form two sections, and scored near its side edges to form flaps for securement to the inner faces of said opposite sides, and said partitions terminating short of the bottom when the case is folded, and the folds along their middles being in a plane alined with the fold of the bottom, substantially as and for the purpose described.

4. An egg-case comprising a receptacle, the main portion of the receptacle being formed from a cardboard-sheet folded along parallel lines to form opposite sides, a folding substantially flat supporting bottom foldably united to said sides, and a cover foldably united to one of said sides, the receptacle including transverse partitions, each formed from a blank scored along its middle to form opposite sections, and scored near its side edges to form flaps, the central scores of the partitions being in a plane alined with the fold of the bottom, and the flaps being secured to the inner faces of said opposite sides, substantially as and for the purpose set forth.

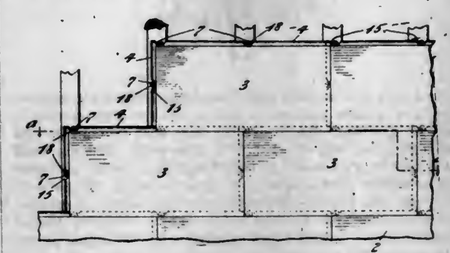
1,014,415. ENVELOP-OPENING DEVICE. LUDWIK SADOWSKI, Baltimore, Md. Filed July 10, 1911. Serial No. 637,693.

1. An envelop opening device comprising a steam chamber, a liquid receptacle, a spring wound apron arranged in said receptacle and adapted to have one end thereof drawn beneath said steam chamber, and means including a platform adapted to simultaneously place a sealed envelop flap in engagement with said apron and retain said apron in engagement with the bottom of said steam chamber.



2. An envelop opening device comprising a table, a steam heated chamber supported above said table, a liquid receptacle arranged at one end of said chamber, a spring wound apron arranged in said receptacle and adapted to have one end thereof shifted beneath said chamber, movable slide rods adapted to guide an outward movement of the end of said apron, a platform arranged between said table and said chamber, and means adapted to simultaneously elevate said platform and said slide rods to place a sealed flap in engagement with said apron and said apron in engagement with the bottom of said chamber.

1,014,416. BUILDING STRUCTURE. WILLIAM SCHWEIKERT, Brooklyn, N. Y. Filed Apr. 28, 1909. Serial No. 492,678.



1. A facing slab formed from molded plastic material, having a reinforcement embedded in it and provided with a projecting tongue extended along one edge portion and an attaching device having longitudinally divergent arms embedded in said slab and connected by means of the arms, with the reinforcement within the same and provided with a part projecting from the edge of the slab and adapted for engagement with a fastening device.

2. A facing slab formed from molded plastic material having a reinforcement embedded in it, and provided with a projecting tongue extended along its edge portion and having recesses at intervals, and an attaching device having longitudinally divergent arms embedded in said slab and connected with the reinforcement within the same, and provided with a part projecting from the edge of the slab in alinement with recesses in the tongue thereof, and adapted for engagement with a fastening device.

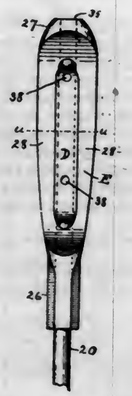
3. A facing slab formed from molded plastic material having a reinforcement embedded in it, and an attaching device having serrations engaged with the reinforcement within the slab and having a part projecting from the slab for engagement with a fastening device.

4. A facing slab formed from molded plastic material, having a reinforcement embedded in it and an attaching device having longitudinally divergent arms embedded in said slab, the free ends of the divergent arms being formed into loops which engage the reinforcement within the slab,

said attaching device having a part projecting from the slab for engagement with a fastening device.

5. A facing slab formed from molded plastic material having a reinforcement embedded in it and provided with a projecting tongue extended along its edge portion having recesses at intervals and an attaching device having longitudinally divergent arms embedded in said slab and connected with the reinforcement within the same, and provided with a part projecting from the edge of the slab in alinement with the recess in the tongue thereof and adapted for engagement with a fastening device, said projecting part being disposed out of alinement with the longitudinally divergent arms.

1,014,417. SCREW-DRIVER. AUGUSTUS R. SEELIG, Plantsville, Conn. Filed Apr. 18, 1911. Serial No. 621,858.



1. A tool of the class described comprising a bit member having a handle extension, and a handle shell having a portion provided with a circular bore that is a fit for the said extension and a portion in alinement with the said bore comprising a web, divided longitudinally by an opening of width corresponding to the diameter of the said bore, and the said handle extension comprising a circular portion fitting and received in the said bore and a flatted portion having lateral edges engaged with the edges of the said opening in the web.

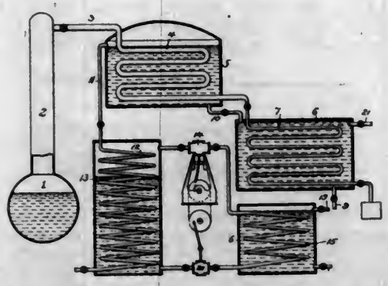
2. A tool comprising a bit member and a handle member, the said handle member comprising a shell-like structure having a circular bore and an opening in alinement therewith bordered laterally by the edges of web portions, the said edges wedge shaped, and the said bit member comprising a portion filling the said bore and another portion filling the said opening.

3. A tool of the class described comprising a handle shell and a bit member, the said bit member comprising a handle extension having a circular cross-section, the said shell having in alinement a body part having a hole fitting the said extension and a web provided with an opening having lateral walls of wedge shape and suitably spread to receive the said extension, the said extension received in the said hole and opening and the portion thereof in the said opening flatted on the top and bottom and spread out laterally to fill the said opening and have the side walls engaged with the said lateral walls.

4. A screw driver having a bit member and a handle member, the said handle member having a shell provided with a body portion having a bore and a web portion having an opening in alinement with the said bore and wedge-shaped lateral walls inclosing the said opening, the said bit member having a handle extension, one part of which is a fit for the said body portion and the other part having side walls engaged with the said wedge-shaped lateral walls.

5. A tool of the class described comprising a bit member having a handle extension and a handle shell, the said handle shell comprising a body portion having a longitudinal bore and a web portion having an opening in longitudinal alinement with the said bore, the lateral walls of the said opening non-concentric with the axis of the said bore, and the said handle extension fitting and filling the said bore and also fitting and filling the said opening between the said non-concentric walls, and provided with wooden handle scales on each side of the said web.

1,014,418. PROCESS FOR UTILIZING WASTE HEAT OF DISTILLATION. FRANK SHUMAN, Philadelphia, Pa. Filed Dec. 13, 1907. Serial No. 406,397.



1. The mode herein described of utilizing waste heat of distillation, said mode consisting in subjecting the vapor from the still to a two-stage condensation, and utilizing the heat of the condensing agent employed in the first stage for the performance of useful work.

2. The mode herein described of utilizing waste heat of distillation, said mode consisting in subjecting the vapor issuing from the still to a two-stage condensation, the volume of condensing agent used in the first stage being less than that used in the second stage, and utilizing heat of the condensing agent for the performance of useful work.

3. The mode herein described of utilizing waste heat of distillation, said mode consisting in subjecting the vapor issuing from the still to a two-stage condensation, the volume of condensing agent used in the first stage being less than that used in the second stage, and utilizing heat of the condensing agent used in the first stage for the performance of useful work.

4. The mode herein described of utilizing waste heat of distillation, said mode consisting in subjecting the vapor issuing from the still to a two-stage condensation, the volume of condensing agent used in the first stage being less than that used in the second stage, and causing heat acquired by the condensing agent to vaporize a power-developing agent having a lower boiling point.

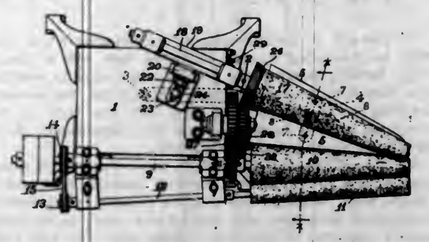
5. The mode herein described of utilizing waste heat of distillation, said mode consisting in subjecting the vapor issuing from the still to a two-stage condensation, the volume of condensing agent used in the first stage being less than that used in the second stage, and causing heat acquired by the condensing agent used in the first stage to vaporize a power-developing agent having a lower boiling point.

[Claims 6 to 13 not printed in the Gazette.]

1,014,419. HAT-NAP-RAISING MACHINE. JOHN H. STARR, Danbury, Conn., assignor to E. A. Mallory & Sons, Danbury, Conn., a Corporation of Connecticut. Filed May 31, 1911. Serial No. 630,355.

1. A hat nap raising machine, comprising a flat stationary support for a hat, and a pair of nap raising rolls adapted to contact with the hat, said rolls being revolved in the same direction but at different speeds, whereby the hat will sag and will be dragged across the face of said support against the slower speeded roll.

2. A machine of the character described, comprising a flat stationary triangular shaped support for the hat, spaced rolls angularly disposed in close relation with said support whereby a hat will hang loosely on the latter but will be confined thereagainst by said rolls at different locations, and means for revolving said rolls in the same direction and at different speeds, whereby the hat will be dragged across the face of said support and against the slower speeded roll.



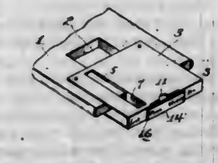
3. A machine of the character described, combining spaced rolls, a stationary triangular shaped support for the hat, a spring for normally separating said support from the rolls, and a treadle and flexible connection with said support for keeping the latter in contact with said rolls.

4. A machine of the character described, comprising a stationary support for the hat, spaced tapered napping rolls having close contact throughout their lengths with a hat on said support when said rolls and support are in operative positions, means for revolving said rolls in the same direction but at different speeds, and a cleaner roll operating against the surface of the higher speeded napping roll.

5. A machine of the character described, comprising a pair of spaced napping rolls, means for revolving said rolls in the same direction but at different speeds, and a support for the hat stationary as to rotation and capable of being swung into and out of operative position with respect to said rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,014,420. SAMPLE-HOLDER ATTACHMENT FOR STOCK-BOARDS. ROY R. STREETER, Big Rapids, Mich. Filed Oct. 24, 1911. Serial No. 656,453.



1. A sample holder attachment for stock boards, comprising a casing having a central portion fitting an opening in the end of a board and having lateral projections embracing said board end, a drawer slidable within the central portion of the casing, and a cover hinged to the rear end of the drawer and slidable with the drawer.

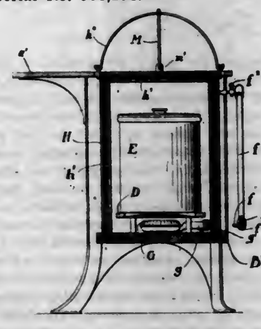
2. A sample holder attachment for stock boards having an opening in one end thereof, such holder comprising a casing fitting over said board end and having a drawer opening in the front thereof, a drawer housing formed by the casing and fitting the board opening, a sample-holding drawer slidably retained in the housing, and a cover hinged to the drawer and slidable therewith.

3. A sample holder attachment for stock boards having an opening through one end thereof, such holder comprising a casing fitting over said board end and having a drawer opening in the front thereof, a drawer housing formed by the casing and fitting the board opening, a sample-holding drawer slidably retained in the housing, projections on the sides of the drawer to limit the outward movement of the drawer, and a cover hinged to the drawer and slidable therewith.

4. The combination, with a sample-holding drawer for stock boards, of a device attachable to the board for housing the drawer, comprising a sheet of material foldable to form the front, the top, and the bottom of the housing, flanges cut from the said top for the back and one side of the housing, a flange cut from the said bottom for the other side of the housing, and cut out portions leaving an opening in said front for the drawer, such portions being folded inwardly and forming braces for said front.

5. In a sample holding attachment for stock boards, the combination, with a board having an opening therein at one end, of a casing, a drawer-housing formed in and supported by the casing in said opening, a sample-holding drawer held by the housing and slidable therein, and a cover hinged to the drawer and slidable in the housing with the drawer in closed position.

1,014,421. GAS-STOVE. ANTON STREIT and ALBERT WILLIAM STREIT, Cincinnati, Ohio. Filed July 19, 1909. Serial No. 508,298.



In a gas stove the combination of an insulated base, a stand located upon the base and adapted to support a cooking vessel, a burner beneath the stand, an extensible gas pipe connected to the burner and adapted to be extended beyond or to be retracted beneath the stand, and an insulating cover consisting of a vessel closed upon all sides but the bottom and adapted to fit down over the stand and the burner and to rest upon the base.

1,014,422. COMPRESSED-AIR PUMP. WILLIAM E. STUART, San Francisco, Cal. Filed Jan. 5, 1911. Serial No. 600,926.

1. A compressed air pump comprising a pump tube, a tube in said pump tube, for compressed air, a series of valve-controlled devices carried by said latter tube at intervals therealong for discharging compressed air into said pump tube, and means for automatically opening said devices in succession while maintaining the others closed, substantially as described.

2. A compressed air pump comprising a pump tube, a tube in said pump tube, for compressed air, a series of valve-controlled devices carried by said latter tube at intervals therealong for discharging compressed air into said pump tube, a device for discharging compressed air from the bottom of said compressed air tube into said pump tube, and means for automatically opening said devices in succession while maintaining the others closed, substantially as described.

3. A compressed air pump comprising a pump tube, a tube in said pump tube for compressed air, a series of valve-controlled devices carried by said latter tube at intervals therealong for discharging compressed air into said pump tube, and means operated by the pressure of compressed air for automatically opening each of said

devices in succession, and closing the last device which has been opened, substantially as described.

4. A compressed air pump comprising a pump tube, a tube in said pump tube for compressed air, a series of valve-controlled devices carried by said latter tube at intervals therealong for discharging compressed air into said pump tube, and means operated by the pressure of compressed air for automatically opening each of said devices in succession, in an upwardly and downwardly direction alternately, and closing the last device which has been opened, substantially as described.

5. A compressed air pump comprising a pump tube, a tube in said pump tube for compressed air, a series of valve-controlled devices carried by said latter tube at intervals therealong for discharging compressed air into said pump tube, a device for discharging compressed air from the bottom of said compressed air tube into said pump tube, and means operated by the pressure of compressed air for automatically opening each of said devices in succession and closing the last device which has been opened, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,014,423. HAT-PIN RETAINER. MARY SZEKELY, Lackawanna, N. Y. Filed Apr. 25, 1911. Serial No. 623,160.

The combination with the wire skeleton frame of a hat, of a circular coil of wire frictionally held in engagement with said frame by the convolutions of said coil engaging said frame and adapted to frictionally hold pins between the convolutions of said coil of wire.

1,014,424. METHOD OF AND APPARATUS FOR FORMING ROOFING-SHINGLES. JOHN W. TROEGER, La Grange, Ill. Filed Sept. 3, 1909. Serial No. 516,074.

1. The art of making composition shingles which consists in emplacing upon a traveling base web a plastic body, forming said body to present longitudinally continuous elevations and depressions constituting transversely tapering areas, and cutting said web and body at the junctures of said tapering areas and transversely at intervals to produce tapering shingles.

2. The art of making a shingle which consists in superposing upon a base of substantially uniform thickness, a plastic body, forming said body to present longitudinally continuous elevations and depressions constituting transversely tapering areas, and cutting said web and body transversely longitudinally and from which to produce composition tapering shingles.

3. The art of manufacturing composition shingles which consists in depositing upon a traveling web a coating of plastic material, forming said material in transit to present a plurality of longitudinally continuous elevations and depressions comprising transversely tapering areas, cutting said coated product lengthwise at the juncture of said tapering areas, and crosswise at proper intervals to produce tapered composition shingles.

4. The art of manufacturing roof shingles which consists in coating a moving elongated web of base material with a plastic melted coating of varying thickness to present in cross section a plurality of longitudinally continuous tapered zones, and cutting said web lengthwise between the zones and crosswise at intervals to produce relatively long, narrow, longitudinally tapering shingles.

5. The art of making composition shingles which consists in continuously applying to a moving web of porous base material an impregnating coating of water-proofing compound, applying to a surface of said web a permanent coating of water-proofing material, molding said plastic material to present in cross section a plurality of longitudinally continuous tapered zones, and cutting said web longitudinally and transversely to divide the web into longitudinally tapered shingles.

[Claims 6 to 11 not printed in the Gazette.]

1,014,425. MANUFACTURE OF STEEL. WILLIAM R. WALKER, New York, N. Y. Filed June 18, 1909. Serial No. 502,865.

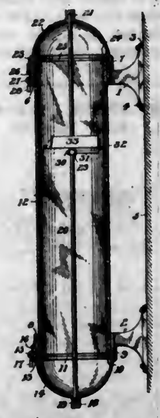
1. In the manufacture of steel, the steps consisting of removing the carbon of pig iron to a substantially definite percentage, then recarburizing to a sufficient extent to lessen skulling during transfer, and then transferring the metal to and treating it in an electric furnace.

2. In the manufacture of steel, the steps consisting in bessemerizing pig iron, reducing its carbon to a substantially definite percentage, then adding carbon to a sufficient extent to lessen skulling during transfer, and then transferring the metal to and treating it in an electric furnace.

3. In the manufacture of steel, the steps consisting of bessemerizing pig iron to a point where the flame drops, then removing the metal from the converter, adding carbon thereto to a sufficient extent to lessen skulling during transfer, and transferring the metal to and treating it in an electric furnace.

1,014,426. DISPLAY-RACK. THOMAS W. WARREN, Point Marion, Pa., assignor of one-fourth to John W. Evans, Point Marion, Pa. Filed July 31, 1911. Serial No. 641,552.

A display rack comprising a pair of laterally extending brackets arranged in vertical alinement and each provided with an exteriorly threaded collar having an inwardly extending flange, a gasket mounted against each of the flanges, a transparent tube abutting against said gaskets, oppositely disposed, semi-spherical caps formed with interior screw threads engaging with the threads of said collars and constituting means for closing the ends of said tube, and article holders arranged within the tube.



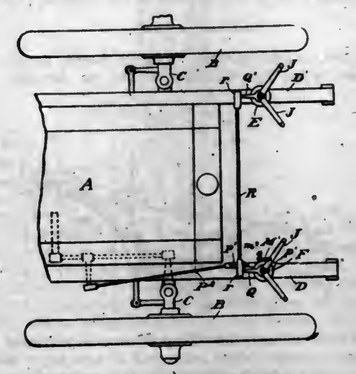
1,014,427. BOTTLE-STOPPER. THOMAS W. WARREN, Point Marion, Pa., assignor of one-fourth to John W. Evans, Point Marion, Pa. Filed July 31, 1911. Serial No. 641,553.

In a bottle stopper the combination with a bottle neck having the throat thereof at its outer portion provided with threads and flared to form a seat, of a cylindrical shank having its inner portion formed with threads engaging with the threads of the throat and having its outer portion formed with circumferential grooves, the inner end of said shank being of the same diameter as the outer end, a head integral with the outer end of the shank and in connection with the latter constituting a closure, and a tapering gasket formed from a resilient body of the same thickness from end to end, said gasket mounted against and projecting above said seat and surrounding said grooves and compressible upon the seat by the shank and head when said shank is screwed inwardly, said gasket entering said grooves and when compressed providing a seal for the mouth of a bottle.

1,014,428. TOOTH-FACING-ATTACHING DEVICE. SYLVESTER S. WHETSTONE, Toledo, Ohio, assignor of one-half to Frederick A. Kotts, Toledo, Ohio. Filed June 7, 1911. Serial No. 631,679.

In a device of the described character, a metal backing having a threaded aperture, a threaded stud engaged with said threaded aperture and having a forwardly projecting head, and a facing of suitable material having in its rear surface a slot corresponding in cross-section with and adapted to engage the head of the stud.

1,014,429. HEADLIGHT FOR AUTOMOBILES. OTIS B. WOODFIELD, OTTO M. MORRIS, and JOHN W. GOSLING, Spring Lake Beach, N. J. Filed July 25, 1910. Serial No. 573,762. Renewed June 6, 1911. Serial No. 631,566.



1. In a device of the class described, a supporting member, a lamp carrying member mounted thereon, an operating member adapted to be moved by a vehicle running gear, a rotative lamp-turning member coöperating with said lamp-carrying member and the operating member, said rotative lamp-turning member being movable relatively to the operating member so as to be disengaged therefrom, and means for locking the lamp-carrying member from rotative movement when the rotative lamp-turning member is disengaged from the operating member.

2. In a device of the class described, a lamp-carrying member, an operating member adapted to be moved by a vehicle running gear, a lamp-turning member coöperating with the lamp-carrying member and with said operating member, said lamp-turning member being shiftable relative to said members, whereby it is disengaged from the one and retained in operative relation to the other, and separate locking means for restraining the lamp-carrying member from rotative movement when the lamp-turning member is moved to said disengaged position.

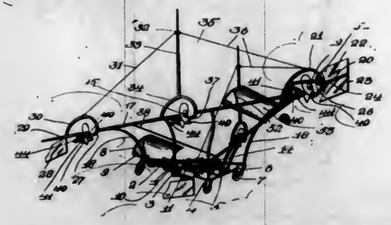
3. In a device of the class described, a chambered supporting member, a lamp-carrying member rotative therein, an operating member adapted to be moved by a vehicle running gear, a rotative member substantially incased within the chamber of said supporting member, said rotative member coöperating with the lamp-carrying member and the operating member, means for adjusting said rotative member relative to the lamp-carrying member and disengaging it from the operating member, and means for locking the lamp-carrying member from rotative movement when said rotative member is disconnected from the operating member.

4. In a device of the class described, a chambered supporting member, a lamp-carrying member rotative therein, an operating member adapted to be moved by a vehicle running gear, a rotative member substantially incased within the chamber of said supporting member, said rotative member coöperating with the lamp-carrying member and the operating member, adjusting means disconnected from the rotative member and coöperating therewith for moving said rotative member relative to the lamp-carrying member and the operating member, whereby said rotative member is disconnected from the one and retained in operative relation to the other, and means operable upon the disengaging adjustment of said rotative member for locking the lamp-carrying member from rotative movement.

5. In a device of the class described, a supporting member, a lamp operating spindle rotative therein, an operating member movable by the motion of a vehicle running gear, a rotative member slidable upon said spindle, whereby said member is adapted to be operatively connected to the operating member for imparting rotative movement to said spindle, means for adjusting said rotative member to disengage it from the operating member, and locking mechanism coöperating with the spindle for restraining it from rotative movement when said rotative member is disconnected from the operating member.

[Claims 6 to 23 not printed in the Gazette.]

1,014,430. AEROPLANE. KÁROLY ZUGGÓ, South Lorain, Ohio. Filed Jan. 6, 1911. Serial No. 601,088.



1. An aeroplane embodying an upper V-shaped frame, a lower V-shaped frame connected to said upper V-shaped frame, rear rudders carried by the upper frame, front rudders supported by said upper frame, a plane carried by said upper frame, a plurality of propellers carried by said frame, motors carried by said upper frame and adapted to operate said propellers, a suitable source of electrical energy carried by said lower frame, and means carried by said lower frame and including drums adapted to control the operation of said rudders.

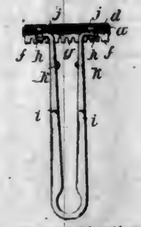
2. An aeroplane embodying a lower V-shaped frame, an upper V-shaped frame of larger size than said lower frame and connected thereto, adjustable rudders carried by said upper frame, adjustable propellers carried by said upper frame, motors carried by said upper frame and adapted to operate said propellers, an adjustable plane carried by said upper frame, an adjustable plane carried by said lower frame, means carried by said lower frame and including drums adapted to adjust said planes, said rudders and said propellers, and a suitable source of electrical energy carried by said lower frame adapted to operate said motors.

3. An aeroplane embodying a lower V-shaped frame, an upper V-shaped frame, a plurality of adjustable propellers carried by said upper frame, motors carried by said upper frame and adapted to operate said propellers, an adjustable plane carried by said upper frame, an adjustable plane carried by said lower frame, a suitable source of electrical energy carried by said lower frame and adapted to operate said motors, and means including drums carried by said lower frame and adapted to adjust said planes.

4. An aeroplane embodying an upper V-shaped frame, a lower V-shaped frame, braces connecting said frames, a plurality of adjustable propellers carried by said upper frame, a plurality of motors carried by said upper frame and adapted to operate said propellers, a plurality of adjustable rudders carried by said upper frame, an adjustable plane carried by said lower frame, a generator carried by said lower frame and adapted to operate said motors, and means carried by said lower frame and adapted to operate said generator.

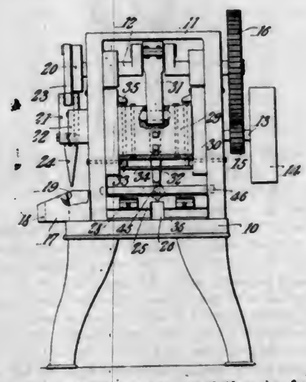
5. An aeroplane embodying an upper V-shaped frame, a lower V-shaped frame, braces connecting said frames, a plurality of adjustable propellers carried by said upper frame, a plurality of motors carried by said upper frame and adapted to operate said propellers, a plurality of adjustable rudders carried by said upper frame, an adjustable plane carried by said upper frame, an adjustable plane carried by said lower frame, a generator carried by said lower frame and adapted to operate said motors, means carried by said lower frame and including drums adapted to adjust said propellers, said planes and said rudders, substantially as described.

1,014,431. SAFETY-RAZOR. SAMUEL ADLER, Vienna, Austria-Hungary. Filed May 25, 1911. Serial No. 629,391.



In a safety razor, the combination of an apertured support, a protector cover, a blade arranged between the support and the cover, guide pins projecting from the support through the cover, heads on the pins, and a looped spring handle having oppositely disposed tapered forked ends, engaging the guide pins and exerting pressure on their heads to clamp said blade in position, substantially as described.

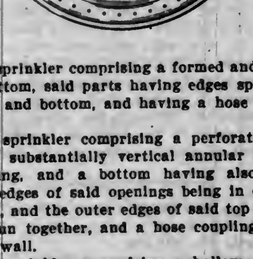
1,014,432. METHOD OF MANUFACTURING HOES. ELMER P. ALEXANDER, Lewistown, Pa. Filed Apr. 5, 1910. Serial No. 553,505.



The method of making hoes, consisting in forming a blade portion having a semi-circular recess in one edge, forming an eye portion provided with a rough or unfinished eye, and a web, heating and assembling these parts, crudely or temporarily welding said portions together with the side of the eye abutting the wall of the recess in the blade, and finally inserting a mandrel in the rough eye to expand it and cause it to fill the recess in the blade and simultaneously apply pressure to firmly weld the parts and spread the web.

1,014,433. GLOBE-HOLDER. CHARLES C. ARMSTRONG, Marysville, Ohio. Filed Apr. 20, 1911. Serial No. 622,372.

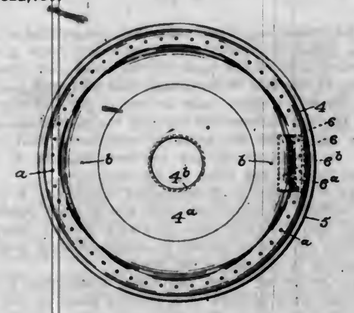
1. The combination with a collar, of a holder consisting of a piece of resilient material bent to form a coil with overlapping parts, said collar having elongated slots and said overlapping parts having terminal handle portions extending outwardly through the slots, and having centering notches for engaging the outer ends of the slots.



2. The combination with a collar, of a holder consisting of a piece of resilient material bent to form a coil with overlapping parts, said collar having elongated slots and said overlapping parts having terminal handle portions extending outwardly through the slots, said handle portions being formed by approximately circular bends of the ends of the wire, said bends providing notches for engagement with the outer ends of the slots.

3. The combination with a collar, of a holder consisting of a piece of resilient material bent to form a coil with overlapping parts, said collar having elongated slots and said overlapping parts having terminal handle portions extending outwardly through the slots, and having centering notches for engaging the outer ends of the slots, said coil having on the side opposite said overlapping parts an integral projection seated in a slot in the holder and provided with a deflected retaining end.

1,014,434. LAWN-SPRINKLER. CHARLES C. ARMSTRONG, Marysville, Ohio. Filed Apr. 22, 1911. Serial No. 622,755.



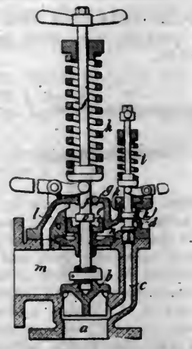
1. A lawn sprinkler comprising a formed and perforated top and a bottom, said parts having edges spun together at the center and bottom, and having a hose coupling at the side.

2. A lawn sprinkler comprising a perforated top provided with a substantially vertical annular wall and a central opening, and a bottom having also a central opening, the edges of said openings being in contact and spun together, and the outer edges of said top and bottom being also spun together, and a hose coupling carried by said vertical wall.

3. A lawn sprinkler comprising a hollow sheet metal body having an annular series of holes punched therein with the metal of the sheet through which the holes pass and adjacent some of the holes pressed to different angles from that adjacent other holes.

4. A lawn sprinkler having its top provided with a circular series of holes, the perforated portion of said top being shaped to cause the spray issuing from said perforations to cover a square area.

1,014,435. SAFETY-VALVE. JOHN AULD and JOHN GRAHAM, Glasgow, Scotland. Filed Apr. 25, 1911. Serial No. 623,249.



1. The combination of a valve casing having an inlet and outlet port, a main valve for closing and affording communication between the outlet and inlet ports, an auxiliary valve having a passage leading from the inlet port, and means adjacent to and operable upon the main valve, said means being affected by the opening of the auxiliary valve to increase the amount of opening of the main valve.

2. The combination of a valve casing having an inlet and outlet port, a main valve for closing or affording communication between the outlet and inlet ports, a loose piston mounted on the main valve stem, an auxiliary valve having a passage leading from the inlet port, said casing having a passage extending from the auxiliary valve to the loose piston, said loose piston being affected by pressure when the auxiliary valve is opened to increase the amount of opening of the main valve.

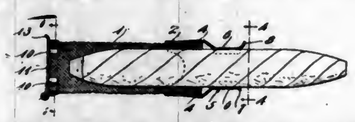
3. The combination of a valve casing for steam boilers or the like, having an inlet and an outlet port, a main valve for closing or affording communication between the outlet and inlet ports, means operative on the main valve stem to normally prevent communication between the inlet and outlet ports, a piston loosely mounted in a guideway adjacent to the main valve stem, said casing having a passage leading from the inlet port to a point adjacent the loose piston, an auxiliary valve stem, means operative upon the said auxiliary valve stem to normally close the passage, the main and auxiliary valve stems being automatically unseated by an abnormal pressure, said unseating of the auxiliary valve stem tending to actuate the loose piston to increase the amount of opening of the main valve stem.

4. The combination of a valve casing for steam boilers or the like, having an inlet and an outlet port, a main valve for closing or affording communication between the outlet and inlet ports, means operative on the main valve stem to normally prevent communication between the inlet and outlet ports, a piston loosely mounted in a guideway adjacent the main valve stem, said casing having a passage leading from the inlet port to a point adjacent the loose piston, an auxiliary valve stem, said casing also having a chamber formed therein and a duct leading from the chamber to the atmosphere, a balanced piston on the auxiliary valve stem and movable in said chamber, means operative upon the said auxiliary valve stem to normally close the passage, the main and auxiliary valve stems being automatically unseated by an abnormal pressure, said unseating of the auxiliary valve stem tending to actuate the loose piston to increase the amount of opening of the main valve stem.

5. In safety valves the combination comprising a main valve, a loaded main valve piston rod, a floating piston adjacent and adapted to move the valve rod, a cylinder within the valve casing containing the piston, a loaded auxiliary regulating valve, a balancing piston connected

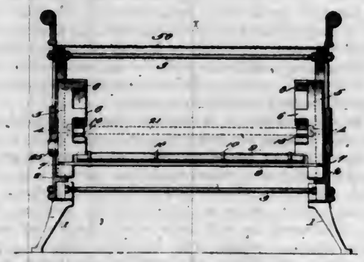
to the auxiliary valve, and steam passages leading to the underside of auxiliary valve and through it to the underside of operating piston substantially as set forth.

1,014,436. SPARK-ARRESTER FOR CIGARS. JAMES E. BASSETT, Oshkosh, Wis. Filed Sept. 11, 1911. Serial No. 648,723.



A spark arrester and wind shield for cigars comprising a wire netting body portion, a ferrule secured to the inner end of said body portion, spring gripping members formed on and projecting outwardly from said ferrule, cigar engaging plates formed on the ends of said members, said plates having their edges turned outwardly, a releasing lug formed on one of said plates, a binding band secured to the outer end of said body portion, fastening lugs formed on said band whereby the latter is secured to the body portion, a cover plate hingedly connected to said band, a spring to close and normally hold said plate in closed position, and a cover opening lug formed on said plate whereby the latter may be readily opened by one of the fingers of the hand holding the arrester.

1,014,437. ELECTRIC HEATER. CHARLES ORME BASTIAN, London, England. Filed Feb. 4, 1910. Serial No. 542,059.



1. In an electric heater, the combination of insulating head plates; clamping means provided with resilient jaws attached to said plates; a resistance element held by said clamping means and comprising a quartz tube; a conductor in said tube; heat insulating means surrounding the ends of said tube; a clamp with which said conductor is in electrical contact surrounding said insulating means, and suitable supports for said head plates, substantially as described.

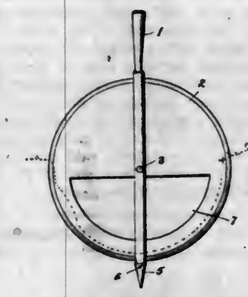
2. In an electric heater, the combination of insulating head plates provided with projecting lugs 6; clamping means provided with resilient jaws attached to said plates between said lugs; a resistance element held by said clamping means and comprising a quartz tube; a conductor in said tube; heat insulating means surrounding the ends of said tube; a clamp with which said conductor is in electrical contact surrounding said insulating means; and suitable supports for said head plates, substantially as described.

3. In an electric heater, the combination of suitable supports; castings 2 carried by said supports; insulating head plates provided with protecting lugs carried by said castings; clamps provided with resilient jaws secured to said head plates between said lugs; a heat deflecting plate extending between said head plates; and resistance elements extending between said clamps, substantially as described.

4. In an electric heater, the combination of suitable supports; castings 2 carried by said supports; rods for holding said castings together; insulating head plates provided with protecting lugs carried by said castings; clamps provided with resilient jaws secured to said head plates between said lugs; insulated fastenings for securing said clamps to said head plates; a heat deflecting plate extending between said head plates; a tube adapted to receive the conducting wires carried by said heat deflecting plate; and resistance elements extending between said clamps, substantially as described.

5. In an electric heater, the combination of an insulating head plate provided with means for securing it to a support and having protecting lugs; a clamp having resilient jaws attached to said head plate between said lugs; and a resistance element comprising a clamp fitting said jaws; a heat protecting sleeve 18 in said last mentioned clamp; a quartz tube in said sleeve; and a coiled conductor in said tube electrically connected with said last mentioned clamp, substantially as described.

1,014,438. IRRIGATING-DITCH CONTROLLER. ASHER BEAL, Montrose, Colo., assignor of one-half to A. R. Murdock, Denver, Colo. Filed Oct. 15, 1910. Serial No. 587,291.



1. An irrigating ditch controller comprising a stake, and a plate of approximately circular form pivotally connected at a middle point to the stake and having an opening at one side of its center, said plate being adapted to be turned to bring more or less of the opening below a line passing horizontally through the pivotal connection of the plate with the stake to completely shut off the water or to admit of any required amount of water passing through the ditch by the controller.

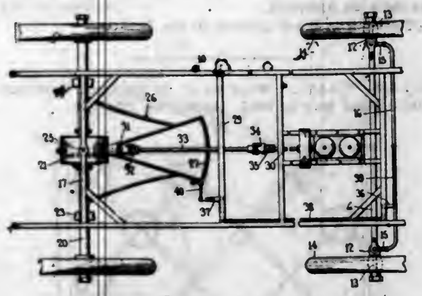
2. An irrigating ditch controller comprising a pointed stake having a longitudinal slot and a plate inserted in the slot and pivotally connected at a central point with the stake, said plate having an approximately semicircular opening at one side of its center.

3. An irrigating ditch controller comprising a stake, a circular plate pivoted at a central point to the stake and having its outer edge sharpened and provided at one side of its center with an opening of approximately semicircular form whereby the turning of the plate upon the stake brings more or less of the opening below a line passing horizontally through the center of the plate to shut off the water in the ditch or to admit of any required amount of water passing by the controller.

1,014,439. STEERING-GEAR FOR AUTOMOBILES. PHILIP H. BELLMORE, Missoula, Mont. Filed Feb. 10, 1910. Serial No. 543,084.

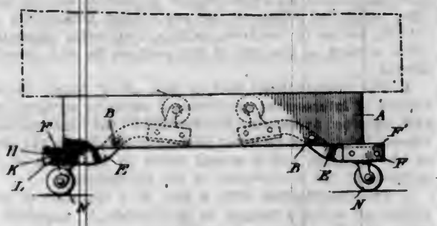
1. In an automobile, a frame including a rear bolster, a front axle, steering knuckles pivoted to the ends of said front axle and provided with front wheel journals, arms extending longitudinally of the frame from the journals, a tie rod connecting said arms, a casing swiveled to the rear bolster to swing in a horizontal plane, a rear axle carried in the casing, a lever including members extending forwardly from the casing on opposite sides of the pivot thereof, and a connection between the tie rod and the lever

for simultaneously swinging the front wheel journals and the rear axle casing.



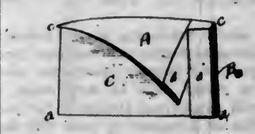
2. In an automobile, a frame including a rear bolster, a front axle, steering knuckles pivoted to the ends of said front axle and provided with front wheel journals, arms extending longitudinally of the frame from the journals, a tie rod connecting said arms, a casing swiveled to the rear bolster to swing in a horizontal plane, a rear axle carried in the casing, a lever including members extending forwardly from the casing on opposite sides of the pivot thereof, and a link rod disposed diagonally under the frame and pivotally connected at its ends to the lever and to the tie rod.

1,014,440. STOVE-TRUCK. JOSEPH BENSKIN, Mahomet, Ill., assignor of one-half to Isaac T. Bridges, Mahomet, Ill. Filed Sept. 25, 1911. Serial No. 651,265.



A device for moving stoves, etc., consisting of a hollow frame, curved legs pivoted to the inner faces of said frame, plates fastened to the corresponding edges of said legs, at their outer ends, and adapted to swing underneath the opposite ends of the frame, and form a support therefor, caster wheels swivelly mounted one underneath each of said plates, and fastened thereto, as shown and described.

1,014,441. COMBINED ENVELOP AND LETTER-SHEET PACKET. DANIEL M. BENTON, Macon, Ga. Filed July 5, 1911. Serial No. 636,936.



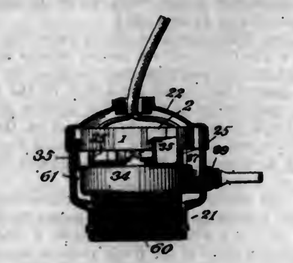
1. A folded packet comprising, a plurality of superimposed folds, an extension flap extending along the entire edge of all of said folds and substantially sealing the free edge of all of said folds, and certain of said folds cooperating with a portion of said extension flap to hold said packet in closed relation.

2. A packet comprising a sheet divided by a fold into two portions, one of which projects beyond the other to form a flap, and having a plurality of transverse folds crossing said flap whereby the sheet is folded into a plurality of overlying sections, and having a portion of one of said sections secured between a portion of the flap and another section.

1,014,442. PAPER-PERFORATING DEVICE. BENJAMIN F. BERRY, St. Louis, Mo. Filed Jan. 9, 1911. Serial No. 601,536.

A perforating device comprising a hollow cutter having a cutting edge and a discharge opening and a spiral conveyer within the hollow cutter having a beveled lip for engaging the cut out pieces and an enlarged recess corresponding with the discharge opening of the hollow cutter.

1,014,443. MECHANICAL MOVEMENT AND ELECTRIC-LIGHT SOCKET. TONJES AUGUST CARL BOTH, New York, N. Y., assignor to Ida S. Rosenheim, New York, N. Y. Filed Aug. 2, 1911. Serial No. 641,926.



1. In a mechanical movement, the combination of a rotary driven member provided with different sets of ratchet teeth and a driving member adapted to coöperate with the different sets of ratchet teeth to drive the driven member in the same direction regardless of the direction of rotation of the driving member.

2. In a mechanical movement, the combination of a rotary ring-shaped driven member provided with different sets of ratchets on its periphery and a driving member adapted to coöperate with the different sets of ratchet teeth to drive the driven member in the same direction regardless of the direction of rotation of the driving member.

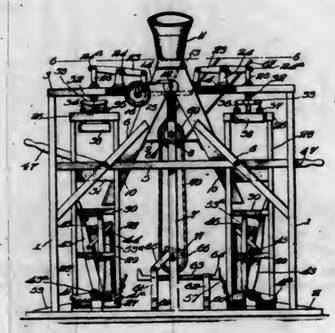
3. In a mechanical movement, the combination of a rotary driven member, a rotary driving member, means adapted to rotate the driven member always in the same direction regardless of the direction of rotation of the driving member, a member for actuating the driving member, and a teetering connection between the actuating member and the driving member.

4. In a mechanical movement, the combination of a rotary driven member, a rotary driving member, means adapted to rotate the driven member always in the same direction regardless of the direction of rotation of the driving member, a member for actuating the driving member, and a resilient member adapted to normally move the driving member toward the driven member.

5. In a mechanical movement, the combination of a rotary driven member and a rotary driving member each having coöperating engaging surfaces adapted to rotate the driven member always in one direction regardless of the direction of rotation of the driving member, and a resilient member adapted to normally move the driving member toward the driven member.

[Claims 6 to 32 not printed in the Gazette.]

1,014,444. BAG-FILLING MACHINE. JAMES BROUSSARD, Loreauville, La. Filed Sept. 18, 1911. Serial No. 649,920.



1. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth under the chute, and means engaging the handles of the truck to impart a jiggering movement to the truck while the sack is being filled, substantially as described.

2. In a bag filling machine, the combination of a delivery chute, a platform, a truck having wheels and handles, means fixed to the platform for chocking the wheels of the truck, means for supporting a sack on the truck with its mouth open, means engaging the handles of the truck when the truck is in an upright position on the platform with the sack under the chute, and means for imparting a jiggering movement to the last mentioned means, substantially as described.

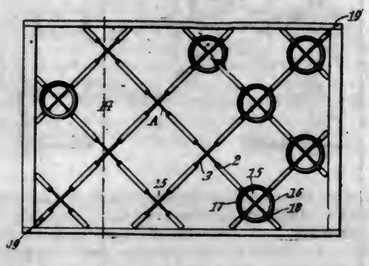
3. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a crank rod engaging the front edges of the truck handles when the truck is in an upright position with the sack under the chute, a shaker lever pivoted to the crank rod, and means for actuating the shaker lever to cause the truck to tilt backwardly, substantially as described.

4. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a rod engaging the front edges of the truck handles when the truck is in an upright position, cranks at each end of the rod, shaker levers pivotally connected to the cranks, a pivotally mounted shaker frame pivotally connected to the shaker levers, and means for actuating the shaker frame, substantially as described.

5. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a rod engaging the front edges of the truck handles when the truck is in an upright position, cranks at each end of the rod, shaker levers pivotally connected to the cranks, a pivotally mounted shaker frame pivotally connected to the shaker levers at the opposite sides from said rod, a reciprocating bar for imparting a jiggering movement to said frame, and means for reciprocating said bar, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,014,445. CRATE. WILLIAM F. BUSCHARDT, Baltimore, Md. Filed May 4, 1911. Serial No. 624,965.



1. The combination with a box, of a plurality of members arranged therein, the sides of said members forming pockets for receiving bottles in their upright position, the edges of said members forming pockets for receiving the bottles in inverted position.

2. The combination with a box, of a series of tapered posts located spaced apart therein, the sides of said posts forming pockets for receiving the bottles in upright position, while the edges of the posts form pockets for receiving bottles in inverted position.

3. The combination with a box, of a series of tapered posts located spaced apart therein, the sides of said posts forming pockets for receiving the bottles in upright position, while the edges of the posts form pockets for receiving bottles in inverted position, and bottle supporting rings located at the top of the pockets for the inverted bottles.

4. The combination with a box, of a frame therein formed of intersecting partitions, a series of uprights carried by the partitions, intermediate the intersections thereof, whereby a series of pockets is formed by the sides of the uprights, and a second series by the edges of the uprights at the intersection of the graduations.

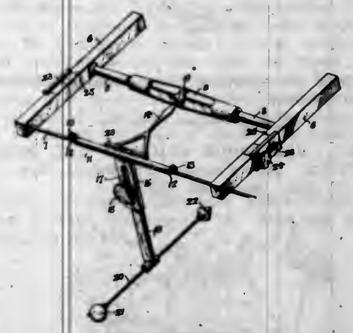
5. The combination with a box, of a plurality of partitions or strips arranged in parallelism, a plurality of other strips arranged in parallelism and connected at right angles to the first-mentioned strips, all of said strips having cut away portions for the reception of posts, tapered posts having their widened end portions engaging with the cut away portions in the partition, whereby a plurality of pockets are formed by the sides of the posts to hold the bottles in upright position, and a plurality of pockets also formed by the edges of the posts in maintaining the bottles in inverted position.

[Claims 6 and 7 not printed in the Gazette.]

1,014,446. ROLL-CENTERING DEVICE. JAMES BUTLER, Philadelphia, Pa. Filed Oct. 7, 1909. Serial No. 521,484.

1. A roll center indicating device consisting of a supporting structure including two members formed to engage the cheek pieces of a housing, means for moving said members apart to clamp them to such cheek pieces, means carried by said supporting structure for engaging a roll, with an indicator actuated by said roll engaging means and coöperating with a portion of said clamping means to show when the roll is centered.

2. The combination in a roll center indicating device, of two substantially parallel bars formed to detachably fit the cheek pieces of a housing; a supporting structure carried by the bars; a member slidably supported on said structure so as to be movable toward or from either bar and capable of engaging the roll; an indicator connected to said member; and a piece supported by the bars in position to coöperate with said indicator to show when a roll is centered.



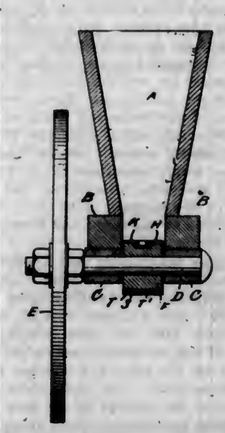
3. A roll center indicating device consisting of a framework, means for detachably clamping said framework to the frame of a machine, an indicator placed to coöperate with a part of said clamping means to show the position of a roll, and a roll engaging member connected to said indicator and adjustable upon said framework.

4. The combination of a framework including two bars, and means for clamping said bars to the framework of the machine, said means consisting of an adjustable nut and studs engaged by said nut, with a center indicating device, and roll engaging means connected to said device.

5. The combination in a roll center indicating device of a frame capable of being removably mounted on the roll housing, a member having a center line, a carriage movable on said frame, with a roll engaging member and an indicator connected to said carriage, and capable of coöperating with said center line.

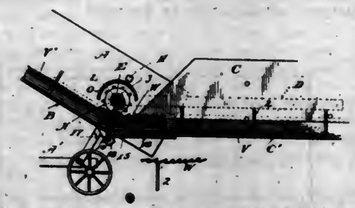
[Claims 6 to 11 not printed in the Gazette.]

1,014,447. PEA-DROPPER. DAVID HENRY BYRD, Duke, N. C. Filed June 29, 1911. Serial No. 636,108.



A seed dropper comprising a frame, a hopper thereon, a shaft journaled at the exit end of the hopper, a cylinder fixed to said shaft and adapted to rotate within the opening in the bottom of the hopper, a band fastened to the frame and about a portion of the circumference of the cylinder and provided with an aperture therein, said cylinder having a recess in its periphery, the walls of which are slotted, a plug therein fitted within said recess and having a cup for the reception of seed, pins projecting from the periphery of the plug and engaging said slots, as shown and described.

1,014,448. PORTABLE ELEVATOR. CHRISTIAN W. CAMP, Metamora, and JOSEPH E. CAMP, Washington, Ill. Filed May 12, 1908. Serial No. 432,514.



1. The combination of two pivotally related conveyer sections, a single drag chain extending through both sections and running upon their bottoms, a device to engage the chain and stationed in one of the sections at the point of its pivotal connection with the other of the sections, and means to carry the device and adapted for adjusting the same in a direction substantially perpendicular to the direction of travel of the said chain.

2. The combination of two pivotally related conveyer sections, a single drag-chain extending through both sections and running upon their bottoms, a wheel having its axis at the point of connection of the sections and having engagement with the chain, and means to adjust it in the direction of the chain.

3. The combination of two pivotally related conveyer sections, a single drag-chain extending through both sections and running upon their bottoms, a wheel having its axis of rotation substantially coincident with the pivots of the sections and having engagement with the chain, and means to adjust the wheel in the direction of the chain.

4. The combination of two conveyer sections, means for pivotally connecting them, a drag-chain extending through both sections and running upon their bottoms, a wheel having its axis of rotation substantially coincident with the pivoting point of the sections, and means to adjust the wheel and said pivoting means in the direction of the chain.

5. The combination with two conveyer sections, means to connect them pivotally, a drag-chain extending through both sections, a bucket carried by said chain and having a portion forward of its point of support to travel upon one of the sections, a member carried at the point of pivotal connection of the sections and in control of the chain, and means to adjust the same in the direction of the chain.

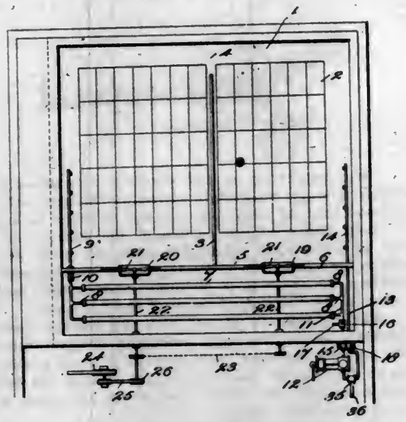
[Claims 6 to 34 not printed in the Gazette.]

1,014,449. ICE-MACHINE. CHARLES S. CAMPBELL, Atlanta, Ga. Filed Mar. 21, 1911. Serial No. 615,987.

1. In an ice machine the combination of a freezing tank; cooling coils located in a compartment separated from said tank, pipes for the circulation of brine between said compartment and tank; mechanical means in said pipes for causing a constant circulation of said brine between said compartment and tank; means for closing said pipes at will and thereupon isolating said compartment from said tank; and means for emptying said compartment, substantially as described.

2. In an ice machine the combination of a freezing tank; a partition provided with brine circulating passages and extending across the same to form a compartment; freezing coils in said compartment; a pump communicating with said compartment and tank; means located in said passages for circulating brine between said compartment and tank; and means for closing said passages and isolating said compartment substantially as described.

3. In an ice machine the combination of a freezing tank; a partition provided with brine circulating passages and extending across the same to form a compartment; freezing coils in said compartment; a pump provided with valved passages communicating with said compartment and tank; means comprising propellers located in said passages for circulating brine between said compartment and tank; means for rotating said propellers; and means for closing said passages and isolating said compartment, substantially as described.



4. In an ice machine the combination of a freezing tank provided with a partition extending partially across the same to form a circulating passage; a second partition having circulating passages extending entirely across the said tank to form a compartment; a freezing coil located in said compartment; brine pipes associated with said coil, a header fitted to said pipes and located in said tank; a pump connected to said pipes and to said tank; means located in said last-named passages for maintaining a constant circulation of brine through all of said passages; and means comprising a pivoted valve for closing said second mentioned passages and isolating said compartment, substantially as described.

5. In an ice machine the combination of a freezing tank provided with a partition extending partially across the same to form a circulating passage; a second partition having circulating passages extending entirely across the said tank to form a compartment; a freezing coil located in said compartment; brine pipes associated with said coil; a header fitted to said pipes and located in said tank; a pump connected to said pipes and to said tank; valves associated with said connections for cutting off communication between said pump and tank; additional connections between said pump and compartment by which the latter may be emptied by said pump; means located in said last named passages for maintaining a constant circulation of brine through all of said passages; and means comprising a pivoted valve for closing said second mentioned passages and isolating said compartment, substantially as described.

[Claim 6 not printed in the Gazette.]

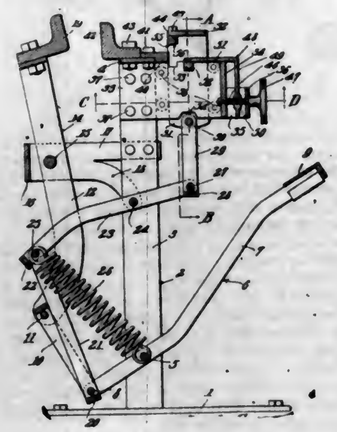
1,014,450. STOPPER. OLOF ALBERT CARLSSON, Chicago, Ill. Filed Feb. 15, 1911. Serial No. 608,675.

1. A device of the class described comprising a body; and a resilient, inverted, open bottomed, cup-shaped disk having its smaller end disposed toward the body and secured thereto.

2. A device of the class described comprising a body; and a resilient, inverted, open bottomed, cup-shaped disk having its smaller end disposed toward the body and secured thereto; the body being frusto-conical, whereby the body may be inserted into the neck of a receptacle, to serve as a plug therefor; or, at the will of the operator,

the neck of the receptacle may be engaged between the disk and the body.

1,014,451. HORSESHOE CLIPPING AND BENDING MACHINE. LECK CARPENTER, Stratford, Okla. Filed Oct. 31, 1910. Serial No. 580,971.



1. In a machine for cutting and bending horse-shoes, a frame; a primary cutting jaw fixed upon the frame; a carriage slidable in the frame and provided with a secondary cutting jaw coöperating with the primary jaw; and a frame-carried support located below the primary jaw, and upon which the shoe to be cut may be advanced between the jaws for cutting, the secondary jaw coöperating with the support in bending the shoe over the edge of the support subsequent to the cutting of the shoe.

2. In a machine for cutting and bending horse-shoes, a frame; a primary cutting jaw fixed upon the frame; a carriage slidable in the frame and provided with a secondary cutting jaw coöperating with the primary jaw; a frame-carried, slidable support located below the primary jaw; and upon which the shoe to be cut may be advanced between the jaws for cutting, the secondary jaw coöperating with the support in bending the shoe subsequent to the cutting of the shoe; and means for advancing and retracting the support.

3. In a machine for cutting and bending horse shoes, a frame; a primary cutting jaw fixed upon the frame; a carriage slidable in the frame and provided with a secondary cutting jaw; and a frame carried support located below the primary jaw, and upon which the shoe may rest; one face of the secondary jaw coöperating with the primary jaw to cut the shoe, and another face of the secondary jaw coöperating with the support to bend the shoe subsequent to the cutting of the shoe.

4. In a machine for bending horse shoes, a frame comprising inner and outer guides; a carriage slidable between the guides; a slidable support resting at one end upon one guide and at its other end disposed between the guides; means upon the carriage coöperating with the support to bend the shoe; and guide carried means engaging the last-named end of the support to advance and retract the support with respect to the bending means.

5. In a machine for bending horse shoes, a frame; spaced upper and lower levers pivoted to the frame; a connection between the levers; a bending member slidable in the frame; a member terminally pivoted to the upper lever and to the bending member; a shoe support slidable upon the frame over the edge of which support the bending member is adapted to turn the heels of the shoe; means for sliding the support; a lever pivotally supported intermediate its ends upon the frame; a link connecting the last-named lever and the lower lever; clamping jaws upon the intermediately supported lever and the frame; the said clamping jaws coöperating to limit the sliding movement of the bending member.

1,014,452. SLAT-HOLDER FOR BEDSTEADS. WILLIAM CHINTER, Connellsville, Pa. Filed Apr. 27, 1911. Serial No. 623,737.

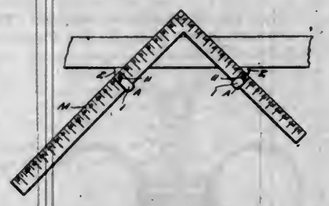
1. A device of the type described comprising a U-shaped member having one end thereof bent to provide a vertical retaining member, and a teat carried by the top of said U-shaped member and adapted to engage in the under side of a slat.

2. A slat holding device made of a single strip of metal bent to provide a U-shaped member and a vertical retaining member, said U-shaped member being punched or pierced to provide an upwardly extending teat, substantially as described.

3. The combination with an angle rail, of a U-shaped member adapted to embrace the lateral flange of said rail, a vertical retaining member carried by said U-shaped member, and integral means carried by the upper face of said U-shaped member and adapted to hold the end of a slat, said latter means being positioned above the plane of the rail part embraced by the U-shaped member, substantially as described.

4. A slat holding device comprising a U-shaped member adapted to embrace the side rail of a bed, said member having slat-retaining means on its upper face, said retaining means being positioned above the plane of the rail part embraced by the U-shaped member.

1,014,453. ATTACHMENT FOR SQUARES. JOSIAH F. CLARK and JOHN F. DORSEY, Thompson, Pa. Filed June 27, 1911. Serial No. 635,641.



1. The herein described device comprising a rigid body which is U-shaped in side elevation and has a threaded hole through its rear arm, a head having an ear standing inside the other arm of said body, means for pivotally and adjustably connecting the ear with the last named arm, and a set screw through said hole directed toward the back of said ear, for the purpose set forth.

2. The herein described attachment for squares and the like, comprising a body which is U-shaped in side elevation and has alined holes through its two arms, a head having an ear overlapping the front arm of the body and provided with a threaded hole adapted to come into register with that in said front arm, a set screw taking loosely through the latter and engaging the threaded hole in the ear, and a second set screw taking through the rear arm of the body.

3. The herein described attachment for squares and the like, comprising a body which is U-shaped in side elevation and has a threaded hole through its rear arm, its front arm being cut away on its inner face and the remaining thinner portion having a rounded upper edge, a head having a portion of its front face cut away to produce a rounded ear defined by a curved shoulder shaped accurately to fit over said rounded edge, the front faces of the body and head being marked with graduations, and a set screw taking through the rear arm of the body member toward the back of said ear, for the purpose set forth.

4. The herein described attachment for squares and the like, comprising a body which is U-shaped in side elevation and has a threaded hole through its rear arm, its front arm being cut away on its inner face and the remaining thinner portion having a rounded upper edge, a head having a portion of its front face cut away to produce a rounded ear defined by a curved shoulder shaped accurately to fit over said rounded edge, the front faces of the body and head being marked with graduations, a detachable and pivotal connection between said ear and body member, and a set screw taking through the hole in the rear arm and directed toward the inner end of said pivotal connection, for the purpose set forth.

1,014,454. METHOD OF COPPERIZING IRON. WILLIAM GEORGE CLARK, Geelong, Victoria, Australia. Filed June 9, 1909. Serial No. 501,142.

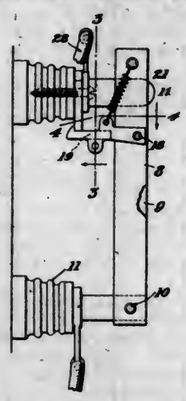
1. The herein described method of copperizing iron, consisting in immersing the iron in a pickling solution and rubbing the same until it presents bright surfaces, transferring the iron to a second bath containing an acidified solution of copper sulfate and allowing it to remain in the latter until the desired coating of copper is deposited thereon, removing the copper coated iron from the second bath and drying the same and then passing the coated iron through a furnace heated to the melting point of copper, and finally plunging the coated iron into a bath of boracic acid flux immediately on the removal of said coated iron from the furnace.

2. The herein described method of copperizing iron, consisting in immersing the iron in an acid pickling bath and rubbing the same until a bright surface appears, then immersing the iron in a solution of copper sulfate, drying the iron after it is fully coated with copper sulfate, then heating the copper coated iron in a furnace to the melting point of copper, removing dirt therefrom, and then passing the iron through the furnace in conjunction with a flux of boracic acid.

3. The herein described method of copperizing iron in any form, consisting in immersing the iron in a bath of a suitable acid and thoroughly cleaning the iron, then immersing the cleaned iron in a solution of copper sulfate, drying the iron, passing the iron in conjunction with a flux of boracic acid through a furnace heated to the melting point of copper, and removing the iron from the furnace and placing the same in a bath of dry boracic acid to cool.

4. The herein described method of copperizing iron in any form, consisting of immersing it in an acid pickling bath in the proportion of about 1 part of acid to 10 parts of water to cleanse the same, then immersing the cleansed iron in a bath containing a solution of approximately 1 part of copper sulfate, 2 parts of sulfuric acid, ½ part of boracic acid, and 18 parts of water, then drying the iron so treated and placing it in a furnace in conjunction with a flux of boracic acid and heating it to the melting point of copper, and then removing and placing the iron in a bath of dry boracic acid to cool.

1,014,455. MAGNETICALLY-CONTROLLED SWITCHING APPARATUS. SEARS B. CONDIT, Jr., Brookline, Mass. Filed Jan. 5, 1911. Serial No. 601,027.



1. The combination with a main switch and its circuit, of a disconnecting switch in the latter, and mechanism, including magnetic locking means, for normally holding the disconnecting switch closed for the transmission of normal main line current when the main switch is closed and rendered inoperative when the main switch is opened.

2. The combination with a main switch and its circuit, of a disconnecting switch in the latter, and mechanism rendered active by the passage of normal main line current for holding the disconnecting switch closed for the transmission of said current when the main switch is closed, said mechanism being rendered inoperative when the main switch is opened.

3. The combination with a main switch and its circuit, of a disconnecting switch in the latter, and mechanism, including magnetic locking means, for normally holding the disconnecting switch closed for the transmission of full normal main line current when the main switch is closed and rendered inoperative when the main switch is opened, said magnetic locking means having a latching armature on one of the relatively separable current switching members of said disconnecting switch and a coöperating magnet on the other of said relatively separable current switching members.

4. The combination with a main switch, the main line terminals, and a disconnecting switch between the latter and the main switch, of means rendered automatically operative by the passage of current for maintaining said disconnecting switch closed and connected for the transmission of normal main line current during said passage of current.

5. The combination with a main switch, the main line terminals, and a disconnecting switch between the latter and the main switch, of magnetic locking means actuated by the passage of current to the main switch to maintain said disconnecting switch positively locked in circuit-closing position and connected for the transmission of normal main line current.

[Claims 6 to 10 not printed in the Gazette.]

1,014,456. MEANS FOR PROTECTING WATER-GAGE TUBES OF STEAM-BOILERS. GASTON ERNEST EDOUARD DEGEORGIS, St.-Denis, Seine, France. Filed May 20, 1909. Serial No. 497,228.

1. A protector for water gages of steam boilers, comprising a metal envelop formed of two members hinged together and each provided with an opening, means for holding the members closed, a frame detachably secured to each member over the opening thereof, and a glass carried by each frame.

2. A protector for water gages of steam boilers comprising a metal envelop divided vertically into two equal parts hinged together, a pin for holding the parts closed, a window provided in each of the parts of the envelop, a thick plate of glass placed opposite each window, an apertured metal plate placed over the glass, screws for securing the apertured plate on the metal envelop, and a seating of indiarubber placed between this envelop and the plate of glass.

1,014,457. COMPOSITION BUTTER. LEE O. FOX and OSCAR A. FOX, Lewiston, Idaho. Filed Mar. 3, 1911. Serial No. 612,017.

1. As a new article of manufacture, the herein-described butter, made up of coconut butter, cottolene, cow's butter, dairy salt and butter coloring, substantially as specified.

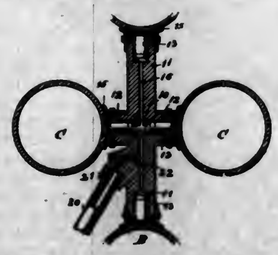
2. The herein described butter, comprising coconut butter, seventy-five per cent., cottolene, twelve and one-half per cent., cow's butter, six and one-half per cent., and dairy salt and butter coloring, six and one-half per cent.

3. The herein-described composition of matter, comprising coconut butter, cottolene, and cow's butter, substantially as specified.

1,014,458. PROTECTOR FOR TIRES. DARNEVILLE HYACINTHE GABRIEL, Adeline, La. Filed Mar. 12, 1910. Serial No. 548,884.

A protector for vehicle wheels, comprising two sections adapted to receive a vehicle wheel, said sections having flanges along the edges thereof, means for connecting the flanges of the two sections together, rubber strips received in the sections and connected to the periphery thereof having recesses therein, cushioning means received in the recesses, and ridges on the strips adapted to engage each side of the vehicle wheel tire.

1,014,459. TOOL FOR SPREADING BOILER-TUBES. AUGUST P. GERALD, Jersey City, N. J. Filed Apr. 6, 1909. Serial No. 488,159.



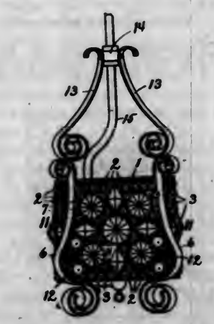
1. A tool of the character described, comprising a body portion provided with vertically and horizontally-arranged cylinder bores, all having their axes lying in the same vertical plane, a piston fitted to slide in each of said cylinder bores and having its outer face adapted to engage with a boiler tube, means for delivering fluid under pressure to each of said cylinder bores, and means connecting all of said pistons to insure their simultaneous movement.

2. A tool of the character described, comprising a body portion having a plurality of cylinder bores, a piston fitted to slide in each of said bores and having its outer end adapted for engagement with a boiler tube, a tube connected to said body for delivering fluid under pressure to each of said cylinder bores, and means connected to each of said pistons for positively returning each piston upon the escape of the fluid from the cylinder bores.

3. A tool of the character described, comprising a body portion having a plurality of cylinder bores, a piston fitted to slide in each of said bores and having its outer end adapted for engagement with a boiler tube, a tube connected to said body for delivering fluid under pressure to each of said cylinder bores, and means connected to each of said pistons for positively returning each piston upon the escape of the fluid from the cylinder bores, said means also serving as an indicator to show the position of the several pistons in their cylinders.

4. A tool of the character described, comprising the combination of a body, tube-spreading members carried thereby and movable relatively to said body, a tube connected to said body and through which a fluid under pressure may be delivered to the interior of said body, to move said tube-spreading members into operative position, a force pump, and two conduits connecting said force pump and said tube, one of said conduits including a check valve opening toward said tube and the other of said conduits including a manually-operated turning plug.

1,014,460. TRANSPARENCY. LOUIS F. GIROUX, Springfield, Mass. Filed Apr. 21, 1911. Serial No. 622,623.



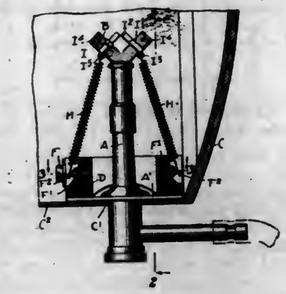
1. A suitable supporting frame, a woven-wire groundwork secured thereto and bent to conform to the frame, a plurality of ornaments mounted on the woven-wire groundwork and fastening means in engagement with the groundwork and the ornaments, substantially as shown.

2. The combination of a suitable supporting frame, a network backing comprised of woven-wire secured to the frame by folding over the top portion thereof and bent to conform to the shape of the frame, and a plurality of transparent ornaments secured to the woven-wire backing, substantially as shown.

1,014,461. ELECTRIC GAS-LIGHTER. HAROLD D. GRINNELL, Pittsfield, Mass. Filed Dec. 7, 1910. Serial No. 596,048.

1. An electric gas lighter having a spark terminal formed of a strip of sheet metal bent to encircle the burner tip and terminating at one end in a point and at the other end in retaining lugs engaging the strip at a distance from the said terminal, and an L-shaped arm extending integrally from one side of the strip for engagement with one side and the end of the burner tip.

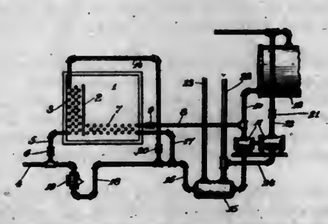
2. An electric gas lighter, having a spark terminal formed of a strip of sheet metal bent to encircle the burner tip and terminating at one end in a point and at the other end in retaining lugs engaging the strip at a distance from the said terminal, an L-shaped arm extending integrally from one side of the strip for engagement with the end of the burner tip, and a hook formed integrally on one side of the said strip opposite the said arm.



3. An electric gas lighter, comprising a base of insulating material, and having an opening, binding posts held in the said base and provided with hooks, a gas burner having a tip and extending through the opening in the base, spark points removably secured to the said tip and having hooks and coiled springs for removable attachment to the said hooks.

4. An electric gas lighter, comprising a burner tip provided with oppositely disposed portions, a plurality of spark terminals, each mounted upon one of said oppositely disposed portions, resilient members of conducting material connected with said spark terminals for holding the same upon said oppositely disposed portions, said resilient members of conducting material having elasticity sufficient to enable said spark terminals to be disconnected from said oppositely disposed portions, and electrical connections for establishing electrical communication through said resilient members to said terminals.

1,014,462. DRYING SYSTEM. WILLIAM M. GROSVENOR, Grantwood, N. J. Filed Apr. 9, 1909. Serial No. 488,982.



1. In a drying system, the combination of a suitable chamber in which the material to be dried may be placed, means for heating the drying medium before it comes in contact with the material, means for cooling the drying medium after it comes in contact with the material and means for utilizing heat absorbed in the cooling by transferring it to the heating means.

2. In a drying system, means for producing different temperatures in the drying medium at different points in the system, and means for transferring heat from one portion of the system to another independently of the drying medium.

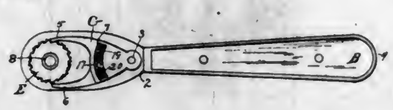
3. In a drying system, means for heating the drying medium at one part of the system, means for cooling the drying medium at another part of the system, and means for conveying heat absorbed by the cooling means to the heating means to be used in said heating means.

4. In a drying system, means for heating the drying medium, means for supplying a fluid to said heating means, means for cooling the drying medium, means for supplying water to the cooling means, a heat transferrer and means for conveying the water from the cooling means to the heat transferrer.

5. In a drying system, the combination of heating apparatus for the drying medium cooling apparatus for condensing the moisture absorbed by the drying medium, and means for augmenting the heat absorbed by the cooling apparatus so that it is available for reuse.

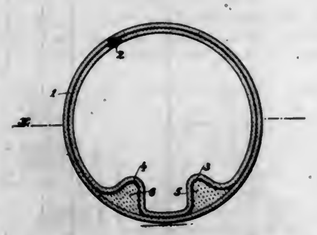
[Claims 6 to 14 not printed in the Gazette.]

1,014,463. RATCHET-WRENCH. DAVID E. HAINES, Battle Creek, Mich. Filed Oct. 17, 1910. Serial No. 587,505.



In a ratchet wrench, the combination with the double oppositely disposed ratchet revoluble between the handle frame members, and a pawl having oppositely disposed diagonally arranged jaws adapted to engage said ratchet and pivotally mounted between said handle frame members, one of said members having an arc-shaped aperture therethrough, and said pawl having a correspondingly formed recess therein, a bolt passing through the slot in said handle member and extending within the recess of said pawl, a spring fitted within said recess either side of said bolt and a thumb nut run on the upper threaded end thereof, as and for the purpose set forth.

1,014,464. REINFORCED INNER TUBE FOR PNEUMATIC TIRES. FREDERICK HAROLD HALL, Norton Lindsey, England. Filed Sept. 9, 1910. Serial No. 581,244.

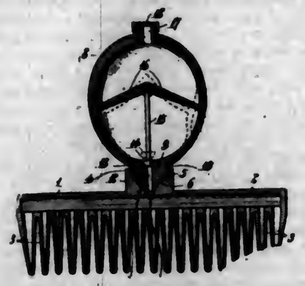


1. A reinforced inner tube for pneumatic tires the walls of which are combined with a continuous encircling band of fabric which is plaited circumferentially, said plait of the fabric contained within and filled by a thickened ridge of rubber which conforms to the shape of the plait.

2. A reinforced inner tube for pneumatic tires having a wall and a continuous encircling band of fabric embedded in said wall and plaited circumferentially, the portion of the wall inclosing the plaited portion of the fabric being ribbed internally to conform to such plaited portion of the fabric.

3. A reinforced inner tube for pneumatic tires having a wall and a continuous band of fabric embedded in said wall, such fabric being plaited circumferentially and the wall of the tube having a ridge which incloses and conforms to the shape of the plait of the fabric, such plait and ridge projecting into the interior of the tube while the latter is deflated and projecting to the exterior of the tube when the latter is inflated.

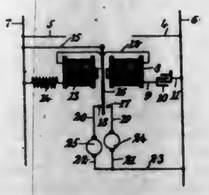
1,014,465. DEVICE FOR APPLYING HAIR-TONICS. INA O. HALL, Calgary, Alberta, Canada, assignor of one-half to Henry Charles Strange, Bassano, Canada. Filed June 13, 1911. Serial No. 632,905.



1. A liquid applying device comprising a liquid distributer, an elastic reservoir having a valve passage opening into the distributer, a valve movable in the reservoir, and an elastic controlling element forming a part of the reservoir and connected with the valve and operable to move the valve to an unseated position on compression of the reservoir to discharge the liquid to the distributer.

2. A liquid applying device comprising a liquid distributer, an elastic reservoir carried by the distributer, a valve for closing communication between the distributer and the reservoir, and means for opening and closing the valve, the said means including an integral part of the reservoir and comprising integral portions flared in opposite directions and connected at their points of intersection with the valve and operable when the reservoir is compressed to move the valve to an open position.

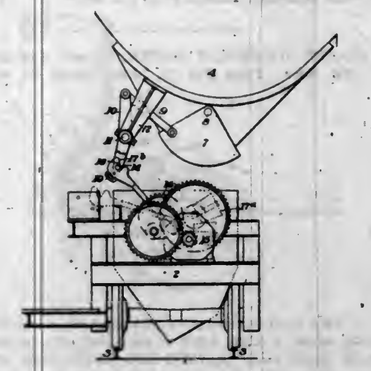
1,014,466. RECTIFIER. RALPH A. HAMANN, Omaha, Nebr. Filed Feb. 17, 1909. Serial No. 478,402.



1. In a rectifier for alternating currents, the combination of alternating current mains, a polarized relay provided with a movable armature and with magnetic members, a variable condenser, said magnetic members and said variable condenser being bridged across from one of said mains to the other for the purpose of enabling said magnetic member to be energized by alternating currents flowing into and out of said condenser, stationary contact members mounted upon opposite sides of said movable armature, and translating devices connected with said contact members and with one of said alternating current mains.

2. In a rectifier for alternating currents, the combination of alternating current mains, a polarized relay provided with a movable armature and with magnetic members, a variable condenser, said magnetic members and said variable condenser being bridged across from one of said mains to the other for the purpose of enabling said magnetic members to be energized by alternating currents flowing into and out of said condenser, stationary contact members to be energized and deënergized by movements of said armature, and translating devices connected with said contact members and energized by currents flowing through said contact members and through said alternating current mains.

1,014,467. CHARGING-CAR AND OTHER RECEPTACLE. GEORGE K. HAMFELDT, Kneuttingen, Germany. Filed Apr. 6, 1911. Serial No. 619,277.



1. The combination with a bin or receptacle, having a movable member controlling its discharge, of another receptacle to receive material from said discharge, a motor, and a movable arm operated by the motor and adapted to effect a varying movement of the said member; substantially as described.

2. The combination with a bin or receptacle having a movable discharge-controlling member, a rock shaft connected to said member and having an arm, another receptacle arranged to receive the material discharged by the first receptacle, a motor, and an oscillating, hooked arm actuated by said motor and arranged to engage the arm of said shaft; substantially as described.

3. The combination with a bin or receptacle having a movable member controlling its discharge, a rock shaft connected thereto and having an arm, a motor, and a swinging counterweighted arm actuated by the motor and arranged to engage the first named arm; substantially as described.

4. In apparatus of the character described, a bin or receptacle having a discharge controlling gate, a rock shaft connected to said gate and having an arm provided with a pin member, a motor, and an arm actuated by the motor, said arm having a hook portion for engagement with the pin member; substantially as described.

5. In apparatus of the character described, a bin or receptacle having a discharge controlling gate, a rock shaft connected to said gate and having an arm provided with a pin member, a motor, and an arm actuated by the motor, said arm having a hook portion for engagement with the pin-member; said hook portion having a latch device; substantially as described.

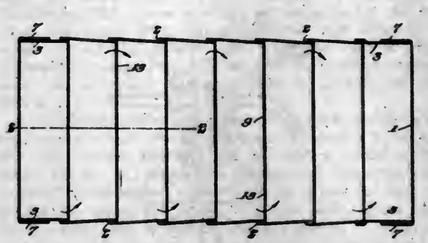
[Claim 6 not printed in the Gazette.]

1,014,468. EVAPORATING-PAN. ROBERT G. HAMILTON, Tryon, N. C. Filed June 9, 1911. Serial No. 632,181.

1. In an evaporating pan, a main body portion constructed of a single piece of sheet metal, said sheet of metal being crimped, and a series of baffles having portions arranged to be held by the crimps in said body portion.

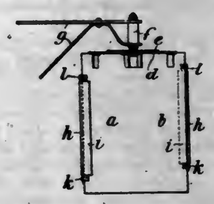
2. In an evaporating pan, a main body portion constructed of a single piece of sheet metal, said sheet of metal having a series of parallel crimps, and a series of parallel baffles held by the crimps in said body portion.

3. In an evaporating pan, a main body portion constructed of a single piece of sheet metal, said sheet of metal having a series of parallel crimps, and a series of parallel baffles having laterally extending flanges at their bottoms and ends, said flanges being held by the crimps in said body portion.



4. In an evaporating pan, a main body portion constructed of a single piece of sheet metal, said sheet of metal having a series of parallel crimps in its bottom and sides, a plurality of baffles, the baffles comprising a main body portion having flanges at each end and at its bottom arranged to be engaged and held by the crimps in said main body portion, and adjacent baffles being provided with openings at the opposite ends thereof.

1,014,469. ADVERTISING APPARATUS. PHILIP HART, London, England, assignor of one-half to Longinus Vivian Rogers, Westcliff-on-Sea, England. Filed May 20, 1911. Serial No. 628,420.



1. A rotary advertising device having curved surfaces provided at their outer edges with lips for increasing the effect of air currents upon the same, said lips having connected therewith a device adapted to be operated by centrifugal force to throw said lips out of action when the mechanism is rotated at an injuriously high rate of speed.

2. A rotary advertising device having curved surfaces, provided at their outer edges with pivoted lips adapted to increase the effect of air currents upon the same, said lips having rigidly connected therewith a device adapted to be operated by centrifugal force to throw said lips out of action when the mechanism is rotated at an injuriously high rate of speed.

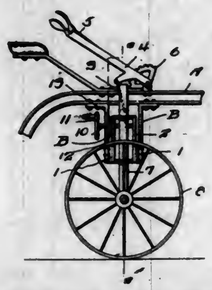
3. A rotary advertising device comprising a plurality of curved blades, lips pivoted to the outer edges of said blades, said lips having connected therewith a device adapted to be operated by centrifugal force to throw said lips out of action when the mechanism is rotated at an injuriously high rate of speed, and means combined therewith adapted to return said lips and said device to their normal positions when the revolution of the advertising device is reduced to normal.

1,014,470. PLOW. HENRY HEER, Ogden, Kans. Filed May 25, 1910. Serial No. 563,456.

1. A frame, a suitable supporting slide, lever means to effect vertical adjustment of the slide, and wheel carrying means movable in the slide and vertically adjustable with reference thereto and independently thereof.

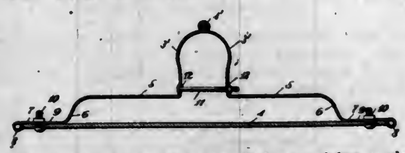
2. A frame having guides, a slide vertically movable upon the guides, a wheel-carrying rack bar vertically mov-

able in the slide, a hand lever fulcrumed upon the frame, a link connecting the lever with the slide, and means car-



ried by the slide for adjusting and supporting the wheel-carrying rack bar independently of said slide.

1,014,471. HOLDER FOR REGISTRATION-NUMBERS. OSWALD MAX HEROLD, Gardner, Mass. Filed Feb. 11, 1911. Serial No. 607,906.



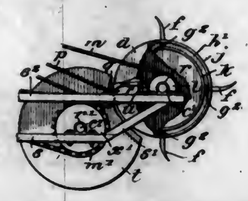
1. A device of the kind described comprising a clamp having a pair of members pivoted together at their adjacent ends, said members being curved toward each other adjacent said pivot, and then being bent away from each other, forming outwardly-bent alined sections, a fastening member carried by said members between their pivoted ends and said alined sections, to draw said alined sections toward each other; said outwardly-bent alined sections being bent forward near to their outer ends, and then outward to form terminal portions, and having longitudinal slots formed in said terminal portions, and fastening devices carried by said slotted terminal portions to secure a sign plate to the clamping members, said fastening devices being adjustably mounted in the slotted terminal portions.

2. A device of the kind described comprising a clamp having a pair of members yieldably secured to each other, said members being bent toward each other to engage a suitable support, and then being bent away from each other to form outwardly-extending alined sections, and a fastening member carried by said members between their bent portions and said alined sections, to draw said alined sections toward each other, said outwardly-extending alined sections having adjustable fastening devices at their outer ends to secure a sign plate to said clamping members.

1,014,472. METHOD OF PRODUCING ART-PLAQUES. CHARLES O. HENRIQUES, Jersey City, N. J. Filed May 27, 1911. Serial No. 629,775.

The herein described method of producing art plaques, consisting in applying a layer of grease to the bottom of a mold, then placing a decalcomania picture face down on the said layer of grease, then smoothing the said picture and saturating the carrying medium of the picture while under pressure, then floating off the carrying medium, and leaving the color forming the picture undisturbed in position in the mold, then pouring a plastic material into the mold and onto the top of the colored picture to embed the latter in the face of the plastic material, then allowing the latter to set, then heating the mold to melt the grease and then removing the plastic material with the colored picture embedded therein from the mold.

1,014,473. CORN-HARVESTER. JOHN HETTRICH, Lincoln, Nebr. Filed May 10, 1909. Serial No. 495,001.



1. In a corn harvester or like machine, a rotatory gathering drum, a drum head at each end of said drum, said drum heads being provided with radial slots, stationary cam trackways, one of said cam track ways being positioned at each end of the gathering drum, finger bars, said finger bars having each end adapted to project through a radial slot in the drum head and into and engage the cam track way and receive motion from each as the gathering drum rotates, ring bearings on the ends of said finger bars, gathering fingers, said fingers being attached to the finger bar, finger bar holders, said holders comprising a curved strip of metal attached to and near each end of the finger bar and a metal lug, attached to the inner face of each drum head, positioned and adapted to engage the end of the finger bar holder and lock the finger bar with the gathering fingers rigidly projecting from the gathering drum and alternately release same and permit the retraction of the gathering fingers within the drum as the projecting ends of the finger bars are moved through the outer and the inner portions of the cam orbit respectively by the radial slots in the heads of the rotating drum.

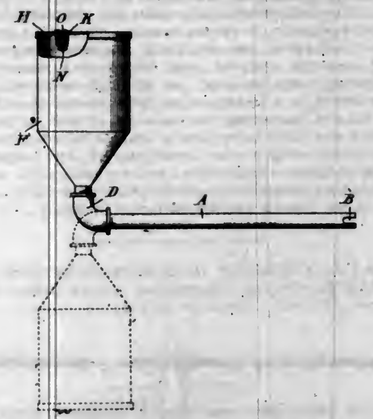
2. In a corn harvester or like machine, in combination, a gathering drum mounted upon an axle, a stationary cam trackway positioned at each end of said drum, radial slots in each head of said drum, a finger bar with gathering fingers mounted thereon, meahs of holding the finger bar and gathering fingers thereon rigidly in position for work and releasing the same as they are retracted within the drum, said means consisting of a finger bar support, said support comprising a strip of metal attached to and near each end of the finger bar and curving outwardly and rearwardly therefrom and adapted to strike against a metal lug, one of said lugs being positioned and attached to the inner face of each of said drum heads so as to guide and lock the finger bar support and thereby the finger bar with the gathering fingers thereon rigidly projecting in working position from said gathering drum and to release the said finger bar support, the finger bar and fingers thereon as the same are retracted within the drum, a machine frame, and a source of power with connections thereto substantially as described.

3. In a corn harvester, a drum provided with radial guideways, a finger bar having gathering fingers movable in each of the guideways, each bar having near its respective ends a support extending rearwardly from the bar, the drum having a lug for engagement by each support to hold the fingers of the bar radial to the drum when the said finger bar is at the periphery of the drum.

1,014,474. APPARATUS FOR ADMINISTERING MEDICINE TO LIVE STOCK. WILLIAM A. HOLLIDAY, Paradise, Tex. Filed Sept. 26, 1911. Serial No. 651,408.

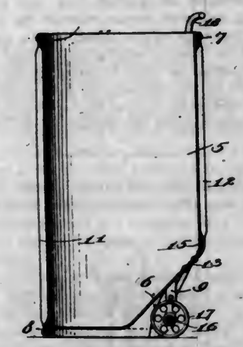
A device for administering medicine consisting of a tube having an open end, the walls of which are slotted, an elbow with which said tube has threaded connection, a funnel-shaped receptacle having threaded connection with

the elbow, a flanged cap fitted over the receptacle and having an opening therein, an apertured plug seated in said opening, the inner end of the plug being beveled about the



opening therein, forming a valve seat, a valve, a finger extending through the openings of the plug and engaging the outer end of the latter, as set forth.

1,014,475. REFUSE-RECEPTACLE. CHESTER L. HOLLOWAY, Passaic, N. J., assignor to Richardson Scale Company, Athenia, N. J., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,703.

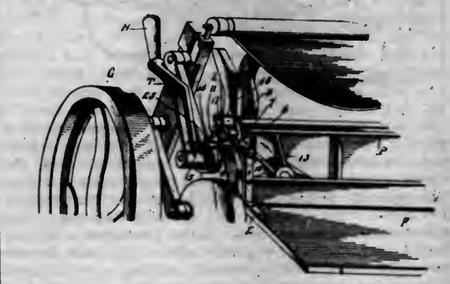


1. The combination of a can having a portion of the bottom from an intermediate point disposed upwardly at an angle of inclination and extending fully across the diameter of the can body, and an axle and rollers associated with the can under the lower inclined portion and located nearer the point in the bottom of the can from which the said inclined portion emanates to dispose the rollers fully under the can bottom, the rollers and bottom portion of the can in advance thereof bearing upon the support for the can when the latter is in upright position to remove weight strain from the rollers, the load weight of the can when tilted rearwardly being greater in rear of the vertical plane of the rollers than in advance of the latter.

2. The combination of a can having a bottom formed with an angular offset extending upwardly at an angle from an intermediate portion of said bottom and also fully across the latter, a frame within which the can is permanently secured, the lower portion of the frame and of the bottom of the can being coincident so that the flat portion of the can bottom rests on the support therefor when the can is in upright position, and an axle and rollers associated with the frame and located wholly under the angular offset portion nearer the flat part of the bottom, the rollers touching the support for the can when the latter is in upright position but relieved of weight strain, the weight load, when the can is tilted rearwardly, being greater in rear of the central vertical plane of the rollers and axle than in advance of said rollers and axle.

3. The combination of a can having a flat bottom with an angular offset portion extending upwardly therefrom and fully across the body of the can, a frame within which the can is permanently secured and extending fully to the flat can bottom and comprising a bottom band engaging the lower end of the can, the said bottom band having upwardly projecting arms adjacent to opposite portions of the angular offset, a cross-tie following the upper portion of the offset and connected to the said arms, and an axle terminally bearing in said arms and having rollers thereon disposed completely under the said angular offset, the rollers touching the supporting surface of the can when the latter is in upright position and relieved of weight strain, the load weight being greater in rear of the vertical plane through the axle and rollers when the can is tilted rearwardly than in advance of said plane.

1,014,476. COUNTER FOR PLATEN PRINTING-PRESSES. ALEXANDER J. HOOD, Muscoda, Wis. Filed Sept. 18, 1911. Serial No. 650,012.



1. The combination with a platen printing press, and its throw-off; of a numbering machine, actuating mechanism therefor standing normally in position to be struck by the platen as the press closes, and a finger connected with said mechanism and adapted to be engaged by the throw-off when the latter is set and which when so engaged holds said mechanism out of position to be struck by the platen.

2. The combination with a platen printing press and its throw-off; of a counter comprising a numbering machine, and a rock shaft connected therewith and having one finger adapted to be struck by the platen to rock the shaft and actuate the numbering machine and another finger adapted to be engaged by the throw-off when the latter is set and which when so engaged holds the first finger in position where it will not be struck by the platen.

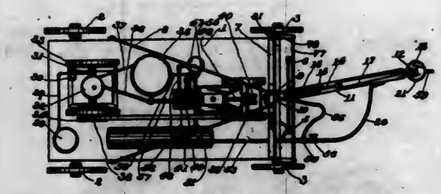
3. The combination with a platen printing press and its throw-off; of a counter comprising a numbering machine, a bracket detachably connected with the press and on which said machine is mounted, bearings carried by said bracket, a double crank shaft journaled in said bearings and having a finger at one extremity adapted to be struck by the platen, a finger at the opposite extremity with a projecting tip standing in the path of the throw-off, and a bowed center, and connections between the latter and said numbering machine.

4. The combination with a platen printing press and its throw-off; of a numbering machine having a lever, a bracket mounted on the press, a yoke carried by said bracket and having upturned ears provided with bearings,

a double crank shaft journaled in the latter and having a finger at one extremity adapted to be struck by the platen, a finger at the opposite extremity with a projecting tip standing in the path of the throw-off, and a bowed center, and a link loosely connecting said bowed center with the lever of the numbering machine.

5. The combination with a platen printing press and its throw-off; of a numbering machine having a lever, a bracket mounted on the press, a yoke carried by said bracket and having upturned ears provided with bearings, a double crank shaft journaled in the latter and having a finger at one extremity adapted to be struck by the platen, a finger at the opposite extremity with a projecting tip standing in the path of the throw-off, and a bowed center, a spring detachably engaging said crank shaft to hold its bowed center normally raised and its fingers normally thrown forward, a stop projecting from the yoke and limiting the turning of said crank shaft under the influence of said spring, and a link loosely connecting said bowed center with the lever of the numbering machine.

1,014,477. POLE-ERECTING APPARATUS. JOHN M. HUMISTON, Berwyn, Ill. Filed Mar. 28, 1907. Serial No. 364,957.



1. In a pole erecting apparatus the combination of a wheeled platform; a derrick mounted upon one end of said platform; steering knuckles associated with the wheels of said platform at the end supporting said derrick, whereby said derrick may be brought conveniently into position for operation; an air drill suspended from said derrick by tackle; an air hoist associated with said derrick and adapted to operate said tackle, said derrick and hoist being jointly adapted to bring said air drill into position for operation, substantially as described.

2. In a pole erecting apparatus the combination of a wheeled platform; a derrick mounted upon said platform; steering knuckles associated with the wheels of said platform whereby said derrick may be brought conveniently into position for operation; an earth auger suspended from said derrick by tackle; and an air hoist associated with said derrick and adapted to operate said tackle, said derrick and hoist being jointly adapted to bring said earth auger into position for operation, substantially as described.

3. In a pole erecting apparatus the combination of a wheeled platform; a derrick mounted upon said platform; steering knuckles associated with the wheels of said platform whereby said derrick may be brought conveniently into position for operation; a rotary air drill suspended from said derrick by tackle; an air hoist associated with said derrick and adapted to operate said tackle, said derrick and hoist being jointly adapted to bring said rotary air drill into position for operation; and an earth auger attached to the revolving spindle of said rotary air drill and adapted to be operated by said air drill, substantially as described.

4. In a pole erecting apparatus the combination of a wheeled platform; a derrick mounted upon said platform; steering knuckles associated with the wheels supporting said platform, whereby said derrick may be conveniently brought into position; a rotary air drill suspended from said derrick by a tackle; an air hoist associated with said derrick and controlling the operation of said tackle, said derrick and hoist being jointly adapted to bring said rotary air drill into position for operation; an earth auger attached to the revolving spindle of said rotary air drill and adapted to be operated by said air drill; and a source of compressed air carried by said wheeled platform, substantially as described.

5. In a pole erecting apparatus the combination of a wheeled platform; a derrick mounted upon said platform; steering knuckles associated with the wheels supporting said platform, whereby said derrick may conveniently be brought into position; an air drill suspended from said derrick by a tackle; an air hoist associated with said derrick and controlling the operation of said tackle, said derrick and hoist being jointly adapted to bring said air drill into position for operation; an air compressor mounted upon said platform; and a prime mover operating said air compressor, substantially as described.

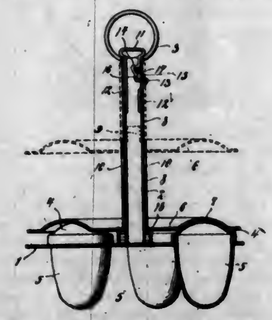
[Claims 6 to 19 not printed in the Gazette.]

1,014,478. COMBINED IRON REST, POLISHER, AND WAXER. WILLIAM HUTCHINGS, Duluth, Minn. Filed Sept. 30, 1910. Serial No. 584,711.

1. An iron-holder comprising a receptacle having inturned flanges and a concave bottom forming a convex upper surface, and layers of material received in the receptacle beneath the flanges, adapted to be held above the flanges by the convex upper surface of the bottom of the receptacle whereby the layers will be in a position to be engaged by a sad iron, said layers being impinged by the flanges and convex upper surface of the bottom, for confining the layers within the receptacle.

2. A combined iron-holder, polishing and waxing device comprising a plurality of receptacles hinged together, whereby the several receptacles fold into small compass, a plurality of asbestos sheets received in one of the receptacles, a plurality of polishing sheets received in another receptacle, and a waxing pad received in a third receptacle, flanges on the receptacles for holding the sheets and pad in the receptacles, said receptacles having the bottoms presenting a convex surface for causing the sheets to be raised above the flanges of the receptacles.

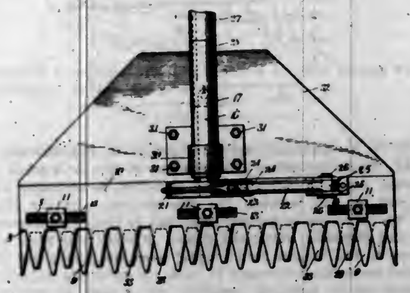
1,014,479. CULINARY DEVICE. JOHN S. JOHNSON, Fayette, Mich. Filed Apr. 25, 1911. Serial No. 623,217.



1. In a culinary device, the combination of a tray adapted to support eggs or similar articles, a tubular member projecting upwardly from said tray, a clamping plate mounted for movement upon said tubular member, and means carried by the tubular member for coöperation with said clamping plate to temporarily hold the latter in an inoperative position with respect to the tray, and a sliding catch mounted in the tubular member and having a hook coöperating with the clamping plate to hold the same temporarily in an inoperative position, said catch having means for disengaging the hook from the clamping plate on sliding movement of the catch.

2. In a culinary device, the combination of a tray adapted to support eggs or receptacles thereon, a tubular member projecting forwardly from the central portion of the tray, a clamping plate above the tray, spring means connecting the clamping plate and tray, a tubular extension projecting from the clamping plate and arranged concentric with respect to the tubular member, a handle at the upper end of the tubular member, a catch slidably mounted in the tubular member and having a hook to engage the tubular extension of the clamping plate, said catch also having a cam portion, and a lug on the tubular member coöperating with the cam portion of the catch to disengage the hook from the tubular extension when the catch is moved slidably in the tubular member.

1,014,480. HEDGE-TRIMMER. JAMES S. JOLINE and EDWIN H. WHEELER, Long Branch, N. J. Filed May 6, 1911. Serial No. 625,570.

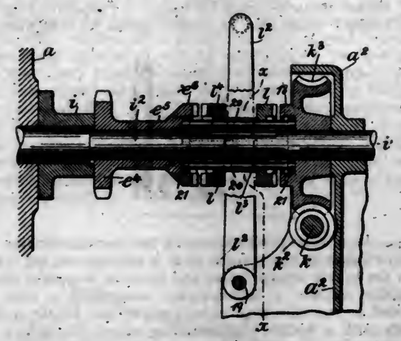


1. In a hedge trimmer, a flat surfaced guide board having formed at the forward edge thereof a series of forwardly extended separated cutting blades; a flat cutter bar slidably mounted on said plate adjacent the forward edge thereof, said bar being provided with a series of cutter blades to operate in conjunction with the cutter blades of said plate; a driving shaft suitably mounted on said plates; an eccentric disk mounted on said shaft; a pitman rod connecting said cutter bar and said disk said rod being provided with a collar to fit said disk; and a flexible transmission shaft for rotating said driving shaft and operatively connected with a prime mover removed from said trimmer.

2. In a hedge trimmer, a flat surfaced guide board having formed at the forward edge thereof a series of forwardly extended separated cutting blades; a flat cutter bar slidably mounted on said plate adjacent the forward edge thereof, said bar being provided with a series of cutter blades to operate in conjunction with the cutter blades of said plate; a driving shaft suitably mounted on said plate; an eccentric disk mounted on said shaft; a pitman rod connecting said cutter bar and said disk said rod being provided with a collar to fit said disk; a flexible transmission shaft for rotating said driving shaft and operatively connected with a prime mover removed from said trimmer; and a tubular hand hold for said trimmer adapted to receive in protected relation the end of said flexible shaft.

1,014,481. CLUTCH. CHARLES A. JUENGST, Croton Falls, N. Y., assignor to Higley Machine Company, Croton Falls, N. Y., a Corporation of New York. Original application filed Aug. 9, 1910, Serial No. 576,383. Divided and this application filed Apr. 19, 1911. Serial No. 621,980.

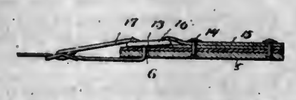
1. In a device of the character described and in combination, a shaft adapted for rotation in opposite directions, a sliding clutch member surrounding said shaft and movable but non-revoluble thereon, clutch members adjacent to the opposite ends of the sliding clutch member provided with means for connection therewith, and a cage between said end members for spacing them apart and which cage also surrounds the aforesaid shaft and parts of which pass through the sliding clutch member.



2. In a device of the character described and in combination, a shaft, a clutch member surrounding the said shaft and having teeth on the end faces thereof and movable but non-revoluble along said shaft, means for actuating said clutch member, and clutch members at the respective ends of said sliding clutch member also provided with end teeth corresponding with the teeth of the sliding clutch member and adapted for engagement therewith, and said members recessed around said shaft and within the boundaries of their teeth, and a cage device comprising collars received in said recesses and rods spaced around said shaft and extending through the sliding clutch member and engaging said collars for maintaining the separated distance of the toothed elements at the opposite ends of the sliding clutch.

3. In a device of the character described and in combination, a shaft, suitable bearings therefor and a spline in said shaft, a sliding clutch member surrounding said shaft and means for moving the same along said spline, said sliding clutch member having end teeth, a sleeve and integral clutch member surrounding said shaft at one end of said sliding clutch member and a member having clutch teeth also surrounding said shaft at the other end of said sliding clutch member, and the said end clutch members within their clutch teeth recessed around said shaft, collars within said recesses surrounding said shaft and rods spaced around said shaft passing through the sliding clutch member and having reduced ends passing into said collars and the collars and rods forming a cage for maintaining the separated distance between the clutch members having clutch teeth at the opposite ends of the sliding clutch member, substantially as set forth.

1,014,482. SNOW-SHOE. JOSEPH F. KAMINSKI, Duluth, Minn. Filed May 9, 1911. Serial No. 626,036.



A snow shoe boot comprising a base plate having slots, toe pieces secured to the base plate and having slots to register with the slots in the base plate and their free edges adjustably laced together, a heel strap connected to the toe pieces, looped reinforcing members secured to the base plate, eye members carried by the reinforcing

members and registering with the slots in the base plate and toe pieces, and buckle straps passing through the eye members and the slots in toe pieces and base plate for binging the device upon the shoe.

1,014,483. BOBBIN-WINDER FOR SEWING-MACHINES. JOHN D. KARLE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 18, 1910. Serial No. 550,200.

1. In a rotary bobbin-carrier for sewing machine bobbin-winders, a shaft mounted in a suitable bearing formed in the bobbin-winder frame and carrying a tapered bobbin-holder spindle, a bobbin-holder comprising a disk provided at one side with a hollow hub and at its opposite side with a flexible bobbin-holding sleeve, into which said bobbin-holder spindle projects, and means including co-acting rotary cam members on said hub and shaft whereby relative rotation of said members will draw the sleeve upon the spindle to secure the bobbin upon the holder.

2. In a rotary bobbin-carrier for sewing machine bobbin-winders, a shaft mounted in a suitable bearing formed in the bobbin-winder frame and provided with a cam-pin and a bobbin-holder spindle, and a bobbin-holder comprising a disk carrying at one side a hollow hub provided with a cam-slot and at its opposite side flexible bobbin-holding members between which the bobbin-holder spindle projects, said pin and slot coacting to adjust said bobbin-holder longitudinally in opposite directions upon said shaft.

3. In a rotary bobbin-carrier for sewing machine bobbin-winders, a shaft mounted in a suitable bearing formed in the bobbin-winder frame and provided with a bobbin-holder spindle and a shoulder, a cam pin carried by said shoulder, a bobbin-holder comprising a disk provided at one side with a hollow hub having a cam slot and at its opposite side with a flexible bobbin-holding sleeve into which the bobbin-holder spindle projects, said pin and slot coacting to adjust said bobbin-holder longitudinally in opposite directions upon said bobbin-holder spindle.

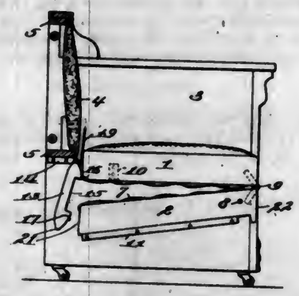
4. In a rotary bobbin-carrier for sewing machine bobbin-winders, a shaft mounted in a suitable bearing formed in the bobbin-winder frame, a tapered bobbin-holder spindle and a bobbin-holder carried by said shaft, said bobbin-holder comprising a disk, a hub and a flexible bobbin-holding member, and means carried by said shaft and acting upon the hub of said bobbin-holder to cause said bobbin-holder spindle to expand said flexible member for the purpose specified.

5. In a rotary bobbin-carrier for sewing machine bobbin-winders, a shaft mounted in a suitable bearing formed in the bobbin-winder frame, a cam pin and a bobbin-holder carried by said shaft, the latter comprising a disk, a cup-shaped hub and flexible bobbin-holding members, a hub provided with a cam-slot coacting with said pin to adjust said bobbin-holder longitudinally on said shaft, and means including a bobbin-holder spindle having an inclined surface for expanding said flexible members for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,014,484. COMBINED BED AND COUCH. THOMAS F. KELLY, Clinton, Iowa. Filed Mar. 25, 1911. Serial No. 616,950.

1. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which serves as a couch seat and is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, and means automatically operable to support the pivotally supported frame in its elevated position, the means also being operable consequent to the inward movement of the hinged frame to release the pivotally supported frame.



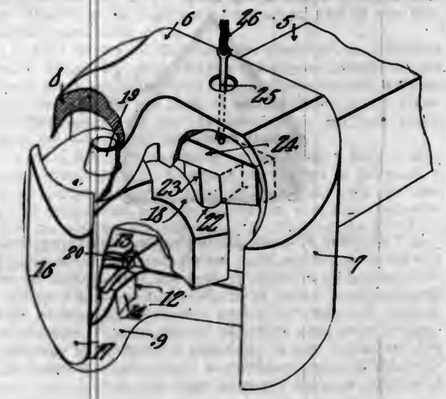
2. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which serves as a couch seat and is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, and a pair of pivotally hung catches having upper and lower cam faced projections, the catches being automatically operable after the upward movement of the pivotally hung frame past its lower projections to engage and support said pivotally hung frame and also being operable consequent to the engagement of the hinged frame during its inward movement with the upper projections to disengage and release the pivotally supported frame.

3. In a combined bed and couch, in combination, a main frame including side sections, a pair of companion spring supporting frames, one of which is pivotally supported by and between the side sections and the other of which is hingedly connected to the pivotally supported frame adjacent the front rail thereof, the hinged frame being operable during its outward swinging movement to rock the pivotally supported frame to an elevated position, means operable to support the pivotally supported frame in its elevated position, the means also being operable consequent to the inward movement of the hinged frame to release the pivotally supported frame, and fixedly mounted angle brackets which serve as supports for the hinged frame in the folded position of the latter and as stops to limit the upward movement of the pivotally supported frame.

1,014,485. CAR-COUPLING. HENRY CALVIN KERR, Roanoke, Va. Filed Feb. 7, 1910. Serial No. 542,537.

1. In a coupling, a draw head having spaced bosses formed each with a socket, one of the bosses being formed with a recess communicating with the respective socket, the walls of the recess being formed with vertically disposed grooves, a block removably disposed in the recess and having ribs seating in said grooves, and a knuckle having studs seating in said sockets.

2. In a coupling, a draw head having spaced bosses formed each with a socket, one of the bosses being formed with a recess communicating with the respective socket, the walls of the recess being formed with vertically disposed grooves, a block removably disposed in the recess and having ribs seating in said grooves, means locking said block in the recess including a resilient latching member,



adapted to engage said block, and a knuckle having studs seating in said sockets.

1,014,486. INDICATOR FOR STORAGE VESSELS. OTTO S. KING, New York, N. Y. Filed Mar. 28, 1911. Serial No. 617,411.

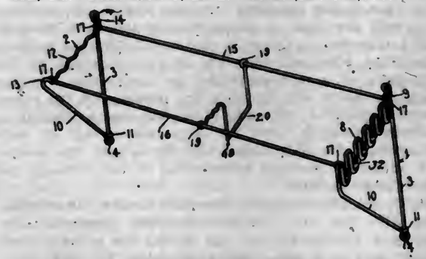
1. An indicator for storage vessels, comprising a strip of metal having a slot in one end and having recesses in its opposite edges, one of said recesses on each edge having a lug extending from the bottom thereof, and a series of colored markings formed on the face of said strip, each of said markings having an ear of the same color projecting therefrom and characters of warning formed upon its face, the strip being adapted to fit around a projection of the vessel, and having its opposite end projecting through the slot to hold the strip in place, part of said strip projecting outward, said part being held in projecting position by means of the lugs formed in the recesses on the sides of said strip being bent over to engage the opposite edges.

2. An indicator for storage vessels, comprising a strip of metal having a slot in one end and having oppositely-disposed recesses along its lateral edges over a portion of its length, one of said recesses on each edge having a lug extending from the bottom thereof, the said lugs being located at opposite ends of the row of recesses formed in the sides of the strip, the strip being adapted to fit around a projection on the storage vessel, and having its opposite end projecting through the slot to hold the strip in place, part of said strip along its length projecting outward, said part being held in projecting position by means of the lugs formed in the recesses on the sides of the strip being bent over to engage a corresponding recess in the opposite edge of the strip.

3. An indicator for a storage vessel, comprising an elongated member adapted to be bent into engagement with the outside surface of a projecting part of said storage vessel, the said member at a point intermediate its ends being bent away from the surface of the said projecting part, and then folded back upon itself and extending inward into reëngagement with the surface of the projecting part, said outward and inward extending portions of the said member constituting parallel longitudinal sections forming a projection from the outer curved surface of said elongated member.

4. An indicator for a storage vessel, comprising an elongated member adapted to be bent into engagement with the outside surface of a projecting part of said storage vessel, said member at a point intermediate its ends being bent away from the surface of said projecting part, and then folded back upon itself and extending inward into reëngagement with the surface of said projecting part, said outward and inward extending portions of the said member constituting parallel longitudinal sections forming a projection from said elongated member, and means for engaging said sections and holding them in such projecting position.

1,014,487. KNIFE-RACK. ALLISON S. KINSLEY, Scranton, Pa. Filed Oct. 5, 1911. Serial No. 652,970.



1. A knife rack comprising end frames, one of which is adapted to receive and support the blades and the other to receive and support the handles of the knives, connecting rods secured at their ends to said end frames whereby the latter are connected together to form the rack, and an adjustable handle supporting member slidably engaged with said connecting bars whereby short knives may be supported on the rack.

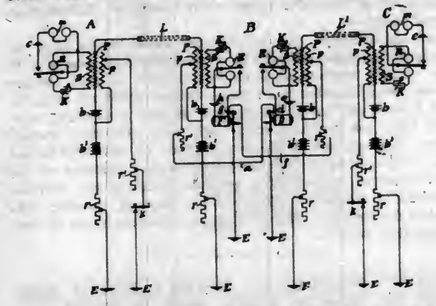
2. A knife rack comprising substantially triangular end frames formed from wire rods, one of said frames having its upper cross bar bent to form a plurality of blade receiving spaces, eyes formed on the upper and lower ends of the rear sides of the frames whereby the latter may be secured to a vertical support, connecting bars secured at their ends to said end frames whereby the latter are connected together to form the rack, an adjustable supporting rod having a sliding connection at its ends with said connecting bars, said rod being bent downwardly at one end to form a space whereby said support is prevented from interfering with the engagement of long knives with the rack.

1,014,488. CABLE DUPLEX REPEATING SYSTEM. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed Nov. 10, 1908, Serial No. 461,865. Renewed May 5, 1911. Serial No. 625,226.

1. In a duplex repeating telegraph system, the combination with the lines, of retransmitting apparatus comprising a transformer for and having its primary associated with each line, means controlled by each transformer secondary for impressing current upon the other line, and a neutralizing winding in inductive relation with the secondary circuit of each transformer.

2. In a duplex repeating telegraph system, the combination with the lines, of retransmitting apparatus comprising a transformer having its primary associated with one line, and means controlled by the transformer secondary for impressing impulses upon the other line.

3. In a duplex repeating telegraph system, the combination with the lines, of retransmitting apparatus comprising a transformer for each line and having its primary associated with said line, and means controlled by each transformer secondary for transmitting impulses to the other line.

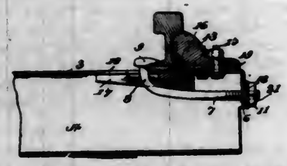


4. In a duplex repeating telegraph system, the combination with the lines, of retransmitting apparatus comprising a transformer for each line and having its primary associated with said line, and means controlled by the secondary of each transformer for impressing impulses upon the other line through the primary of the transformer associated with said other line, and a winding in inductive relation with the secondary circuit of each transformer for neutralizing the effects upon the secondary circuit of impulses transmitted to line through the transformer primary.

5. In a duplex repeating telegraph system, the combination with the lines, of retransmitting apparatus comprising a transformer for and having its primary associated with each line, means controlled by each transformer secondary for impressing impulses of alternate polarity upon the other line, and a winding in inductive relation with the secondary circuit of each transformer, said primary being traversed by current controlled by the secondary of the other transformer.

[Claims 6 to 8 not printed in the Gazette.]

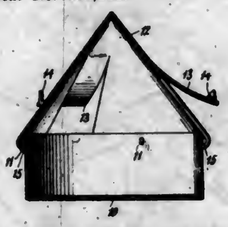
1,014,489. METALLIC RAILWAY-TIE AND FASTENING. HARRY TILGHMAN KLECKNER, Shamokin, Pa., assignor of one-half to Irvin Reber, Winfield, Pa. Filed Oct. 21, 1911. Serial No. 655,869.



1. The combination with a hollow tie having slots therein, clamp blocks mounted on the tie for engaging the rail, of rods supported by the tie having angular extensions extending through the slots in the tie, means engaging the rods for drawing the angular extensions onto the rail flange for fastening the rail upon the tie, and wedging means received between the bolt and tie for preventing the vibration of the rail upon the tie.

2. The combination with a hollow tie having slots therein, clamp blocks mounted on the tie for engaging the rail, of rods supported by the tie having angular extensions extending through the slots in the tie, means engaging the rods for drawing the angular extensions onto the rail flange for fastening the rail upon the tie, tapering blocks received between the rods and tie for affording a cushion and preventing the vibration and movement of the rail upon the tie.

1,014,490. DRINKING-FOUNTAIN FOR FOWLS. HERBERT C. LAMDIN, Egg Harbor City, N. J. Filed Sept. 9, 1910. Serial No. 581,133.

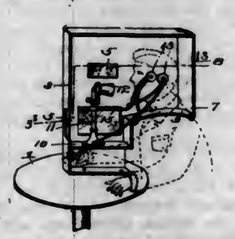


In a drinking fountain for fowls, the combination with a basin, of a conical cover seated upon the upper end of said basin, said cover being provided with a plurality of spaced slits extending longitudinally thereof and opening through its lower end to form a plurality of tongues, said tongues being bent outwardly of the cover in alternation and having the ends of their free terminals bent upwardly at an angle to the remainder of the tongue, and means for detachably securing the cover upon the basin.

1,014,491. WELDED WROUGHT-IRON ANNEALING-POT. EMIL THEODOR LAMMINE, Mülheim-on-the-Rhine, Germany. Filed Nov. 4, 1908. Serial No. 461,054.

An annealing pot comprising a body formed with corrugations terminating a short distance from each end thereof, one end of the body being open and provided with an integral flange reinforcing the body at its open end and forming a seat for the lid.

1,014,492. TELEPHONE CABINET OR HOOD. GEORGE WASHINGTON LANCASTER, Richmond, Va. Filed Dec. 7, 1910. Serial No. 596,145.



1. In a device of the character described, a hood formed with a substantially rectangular housing, and a rounded bulged portion on one side, said housing being formed with a neck opening, part of said opening being beneath said bulged portion, whereby the opening approaches the correct shape for accommodating the person of the speaker, means for supporting a telephone instrument in the hood, and means for switching on and off the telephone instrument by the speaker from the outside of the hood.

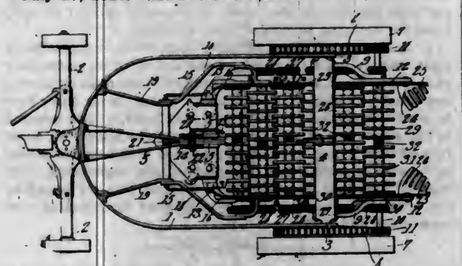
2. In a device of the character described, a hood formed with an opening for the admission of part of the speaker's person, a telephone instrument formed with a transmitter and a pair of receivers, means for holding the receivers against the ears of the speaker, and means operable from the outside of the hood for switching on and off the telephone instrument.

3. In a device of the character described, a telephone hood, means for supporting a telephone therein, a bell crank lever connected with the telephone formed with an arm for engaging the hook of the telephone, and a reciprocating controlling bar connected with said bell crank lever for controlling the action thereof.

4. In a device of the character described, a hood, a support for supporting a telephone instrument in the hood, a hook operating member pivotally connected with the telephone instrument, a reciprocating bar pivotally connected with the member for controlling the hook of the telephone instrument, said bar being formed with a notch, and means associated with the hood for engaging said notch for locking the bar normally against longitudinal movement.

5. In a device of the character described, a hood formed with a neck opening, means for supporting a telephone in said hood, a bar connected with said telephone for operating the same, said bar extending to the exterior of said hood and formed with a notch and pivotally mounted catch arranged on said hood adapted to engage said bar in said notch for locking the bar normally against movement.

1,014,493. POTATO-DIGGER. ALBERT LAURITZEN, Charlotte, and JOHN FRED NIELSEN, Greenville, Mich. Filed July 27, 1910. Serial No. 574,123.



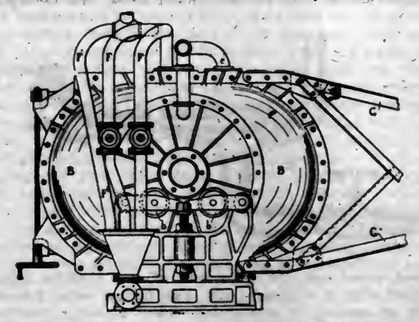
1. In a potato digger a trunk, a shaft journaled for rotation in the trunk and having a non-circular intermediate portion, a series of disks mounted upon the non-circular portion of the shaft and being free to slide thereon, means for spacing the said disks from each other, and a resilient means located between the intermediate disks of the series for resiliently holding the said disks in frictional engagement with the spacing means.

2. In a potato digger, a trunk, a shaft journaled for rotation therein and having a non-circular intermediate portion, disks slidably mounted upon the non-circular portion of the shaft, means for spacing said disks from each other, and a coiled spring surrounding the intermediate portion of the shaft and bearing at its ends against the sides of adjacent disks and adapted to resiliently hold the said disks in frictional engagement with the spacing means.

1,014,494. DYNAMOMETER. HENRY NORMAN LEASK, Egremont, England. Filed Dec. 30, 1910. Serial No. 600,009.

1. In a dynamometer, the combination with an indicating apparatus having resisting means coöperating therewith, of a casing provided with water chambers and associated with said indicating apparatus and a rotor operating in said casing and comprising in its construction a plurality of sets of cups the vanes of which are disposed in opposite directions to offer an equal resistance.

2. In a dynamometer the combination with a rotor having a plurality of sets of cups the vanes of which are set in opposite directions, a casing with intermediate set of cups, a balance arm connected to the casing, a double dash pot and two weighing apparatus connected to the balance arm to act in either direction.



3. In a dynamometer the combination of a rotor provided with cups and vanes A A' arranged in opposite directions, a casing B with fixed cups and vanes D D' arranged in opposite directions, a balance arm connected to the casing, said casing being provided with a central water chamber E and with water chambers E' at the sides of the machine and two weighing apparatus to act in either direction and connected to the balance arm.

1,014,495. RECIPROCATING ELECTRIC MOTOR FOR DRILLS. PURD J. LINCOLN, Birmingham, Ala. Filed Jan. 28, 1910. Serial No. 540,666.

1. A reciprocating electric motor including a central field coil, end field coils at the sides of said central coil, an armature within said field coils for reciprocation therein, an electric circuit introduced through said end coils to produce unchanged polarity thereof, a branch electric circuit from said first circuit introduced through said central coil and said armature, and means for changing the direction of the current of said branch circuit to reciprocate said armature.

2. A reciprocating electric motor including a central field coil, end field coils arranged at the extremities of said central coil, an armature within the field coils for reciprocation therein, a drill operating rod carried by said armature, a rotary armature on said rod to actuate the same, a field arranged about said rotary armature, a main electric circuit including said end field coils for the passage of a circuit therethrough, a shunt circuit over said main circuit including said field, and a branch circuit from the main circuit including said central field coil and said armatures.

1,014,496. BURNER. HENRY LITTLETON, Maricopa, Cal. Filed Aug. 17, 1911. Serial No. 644,517.

1. A burner including a substantially L shaped mixing chamber having a closed upper end, an oil supply pipe communicating with the open lower end of said chamber, a steam jet pipe within said oil pipe extending into said chamber, the outer wall of said chamber being formed with an elongated transverse slot which confronts the discharge end of said jet pipe, and the lower wall of said chamber being formed with a downwardly opening orifice of relatively small diameter.

2. A burner including an oil supply pipe, a steam jet pipe arranged within said oil pipe, an elbow carried by

said oil pipe, a stand pipe carried by said elbow, an elbow carried at the upper end of said stand pipe, and a substan-

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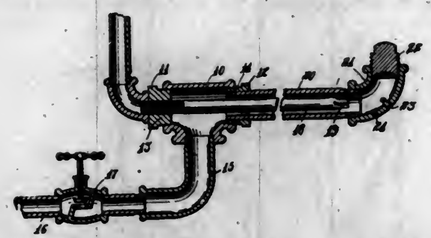
1,014,498. WIRE-TWISTER. ARLA E. LUNG, Garrett, Ind. Filed Feb. 6, 1911. Serial No. 606,832.

1,014,500. SAWING-MACHINE. RUDOLPH H. MARTENS, Fairfield, Wash. Filed Feb. 28, 1910. Serial No.

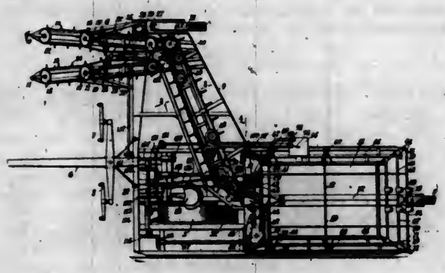
a cold water port, a hot water port, a discharge port, two chambers, a connecting passage leading from one chamber

said oil pipe, a stand pipe carried by said elbow, an elbow carried at the upper end of said stand pipe, and a substantially L-shaped mixing chamber having a lower open end communicating with the last named elbow, and having a



closed upper end, the outer wall of said chamber being formed with a transverse slot, and further being formed with an opening of substantially small diameter intermediate said slot and the lower open end of said chamber.

1,014,497. CORN HARVESTER AND SHOCKER. JOHN J. LONSWAY, Fostoria, Ohio. Filed Feb. 9, 1910. Serial No. 542,857.



1. In a harvester, the combination with a shock-forming mechanism, of a stalk-feeding mechanism, comprising a shaft and a plurality of conveying chains driven by said shaft, means for driving said shaft, a sleeve shaft on said shaft, means for clutching said sleeve shaft to said first-mentioned shaft, means for disconnecting said clutching means, and an auxiliary feed conveyer driven by said sleeve shaft and adapted to transport stalks from said feeding mechanism to said shock-forming mechanism.

2. In a harvester, the combination with feeding mechanism, of shock-forming mechanism, comprising a crib, means for packing said crib, pivot doors for said crib, gates for said crib, means for locking said gates closed, and means operated by said doors for releasing said locking means.

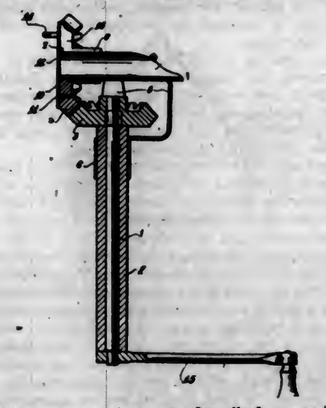
3. In a harvester, the combination with feeding mechanism, of shock-forming mechanism, comprising a crib, means for packing said crib, arms for maintaining the stalks packed by said packing means in a vertical position, doors for said crib, and means connected to said arms for preventing said arms extending transversely of said crib when said doors are open.

4. In a harvester, the combination with a crib, of packing mechanism for said crib, a gate for said crib, a bottom door for said crib, and connections between said gate and said bottom door, whereby the opening of said door unlocks said gate and the closing of said door locks said gate.

5. In a harvester, the combination with a crib, of a gate for said crib, a bottom door for said crib, a locking bar connected to said gate, a latch adapted to engage said locking bar to lock said gate closed, and means for connecting said door to said latch, whereby the opening and closing of said door will manipulate said latch to unlock and lock said gate.

[Claims 6 and 7 not printed in the Gazette.]

1,014,498. WIRE-TWISTER. ARLA E. LUNG, Garrett, Ind. Filed Feb. 6, 1911. Serial No. 606,832.



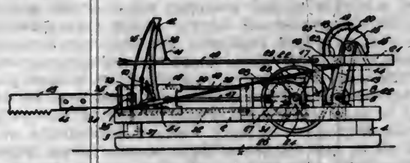
1. A device of the character described, comprising a split tubular head, an outwardly extending flange upon one end of said head, a split sleeve rotatably mounted upon said head and bearing against said flange, a bevel gear integral with said sleeve and provided with a radial slot, a disk secured to said bevel gear and having a radial slot registering with the slot of the bevel gear, wire-engaging lugs carried by said disk, and means carried by said head for rotating said bevel gear and disk.

2. A device of the character described, comprising a split tubular head provided at one end with an outwardly extending flange, a bevel gear rotatively mounted upon said head and provided with an annular recess in its outer face in which is seated the flange of said head, a disk secured to the outer face of said gear and bearing against the outer face of said flange, said bevel gear and disk being provided each with a radial slot, the slot of one registering with that of the other, means carried by said disk for engaging the wire, and means carried by said head for rotating said bevel gear and disk.

1,014,499. HOLDER FOR NECKTIES, BUTTONS, PINS, AND LIKE ARTICLES. JAMES MACDONALD, New York, N. Y. Filed Oct. 10, 1910. Serial No. 586,205.

A holder of the character specified, comprising a plurality of flaps, connected at one side edge and having at the other side edge means for detachably connecting the said edges together, a hook comprising a straight shank having at one end a bill and at the other a flange extending upwardly and thence downwardly to form a tongue for insertion in the joint of the flaps, the hook being substantially perpendicular to the tongue and extending transversely of the flaps when in place.

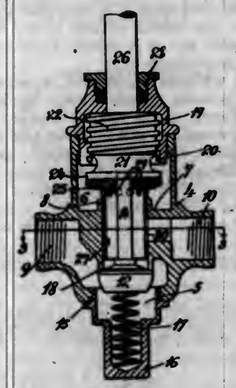
1,014,500. SAWING-MACHINE. RUDOLPH H. MARTENS, Fairfield, Wash. Filed Feb. 28, 1910. Serial No. 546,502.



1. In a sawing machine, the combination of a supporting frame, a main drive shaft mounted therein, a guide bar arranged on said frame, a pivot plate slidably mounted on said bar, a rocking frame connected at one end to said pivot plate, a drag saw having a sliding connection with said rocking frame, a drag saw operating pulley, a pitman connecting said pulley with the saw, and means operated by the pulley to actuate said rocking frame, whereby the saw will be oscillated simultaneously with its reciprocation.

2. The combination of a main frame, a shaft thereon, a crank wheel on said shaft, a cam on said shaft adjacent the crank wheel, a rocking frame having one end mounted on the main frame and its opposite end bearing on the cam, a slide mounted on the rocking frame, a saw secured to said slide, and a pitman connecting the crank wheel to the saw.

1,014,501. VALVE. MICHAEL J. MCCLOUD, Brooklyn, N. Y., assignor to Israel E. Ikelheimer, New York, N. Y. Filed May 22, 1911. Serial No. 628,627.



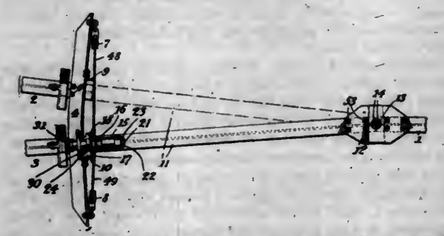
1. In a valve the combination of a casing provided with a cold water port, a hot water port, a discharge port, two chambers, a connecting passage leading from one chamber to the other chamber, provided with valve seats at its respective ends, a hollow rotatable plug, located within said passage and provided with a valve disk and an aperture leading through the wall of the plug on a line below the disk and above the valve seat, when the valve is open, quick acting threads on the valve disk and the valve casing in coöperative engagement with each other, a stem extending through the casing, a passage leading from the upper chamber to the main discharge port, a spring, a spring pressed valve adapted to close the lower end of the connecting passage, and provided with a stem reaching to and bearing against said valve disk, an inlet leading from the cold water port into the lower chamber, an inlet leading from the hot water port to the space within the connecting passage and an aperture in the wall of the hollow plug, adapted to register with the hot water passage during a portion of the rotation of the plug, all substantially as set forth.

2. In a valve the combination of a casing provided with a cold water port, a hot water port, a discharge port, two chambers, a connecting passage leading from one chamber to the other chamber, provided with valve seats at its respective ends, a hollow rotatable plug, located within said passage and provided with a valve disk and an aperture leading through the wall of the plug on a line below the disk and above the valve seat, when the valve is open, quick acting threads on the valve disk and the valve casing, in coöperative engagement with each other, a stem extending through the casing, a passage leading from the uper chamber to the main discharge port, a valve, adapted to close the lower end of the connecting passage, and provided with a stem reaching to and bearing against said valve disk, an inlet leading from the cold water port into the lower chamber, an inlet leading from the hot water port to the space within the connecting passage and an aperture in the wall of the hollow plug, adapted to register with the hot water passage during a portion of the rotation of the plug, all substantially as set forth.

1,014,502. CUE. HARRY W. MCLAUGHLIN, Aspinwall, Pa. Filed May 4, 1911. Serial No. 625,010.

The combination with a cue having a recess in its smaller end and a tip for said cue, of means for securing said cue and tip together, said means consisting of a cap secured to said cue end and provided with intersecting slots, a shank having an enlarged head slidable through one of said slots and adapted to be seated in the other, said shank extending into said recess, means carried by said head for engaging said tip, means carried by said shank and co-acting with said cap for yieldably holding the tip against vertical movement, and means carried by said cap for holding said tip against other than vertical movement.

1,014,503. I-BEAM-TRACK-SWITCHING DEVICE. CHARLES MESSICK, Hackensack, N. J. Filed Feb. 11, 1909. Serial No. 477,409.



1. In I beam track switches, a tongue with a broad plate bolted to the swivel end thereof, said plate carrying a swivel pin in the form of a disk riveted thereto, with the rivet heads countersunk into said plate, said plate resting on an end of a permanent track, a cover plate with a center hole, said cover plate set upon a filler, said center hole over said swivel, and both said cover plate and said filler plate bolted to the permanent track, all

constructed in such a manner as to form a hinge, having free lateral movements, but to prevent said tongue twisting relative to the said permanent track, a casting bolted to the movable end of the tongue, said casting having projection at the free end thereof, adapted to rest on the ends of branch tracks, and lugs to center it thereon, a longitudinal hole in said casting adapted to receive a shaft, a shaft journaled therein, another casting rigidly fastened to the free end of said shaft with upward projection for the attachment of operating ropes, a second shaft parallel with, but above, said before-mentioned shaft, and also rigidly fastened to said last-mentioned casting, a wheel revolubly mounted on said shaft resting on an angle iron, said angle iron having one of its legs resting on and rigidly fastened to the free ends of said branch tracks with the other leg thereof extending vertically upward between the second-mentioned casting and the said wheel, said angle iron being curved in arc of which the radius is the distance between it and the switch tongue swivel, said arc terminating at the branch tracks and extending between them, projections of said angle iron outside of said branch tracks and pulleys, mounted thereon with ropes fastened to and passing from the upward projection on the second-mentioned casting over said pulleys and hanging pendent therefrom adapted to be alternately pulled by hand, thereby first lifting said first-mentioned casting and said switch tongue by the lever action of said second-mentioned casting in connection with said wheel and said two shafts, freeing the projection and lugs from said branch track and then throwing the switch tongue from one branch track to the other, the release of said rope dropping said casting, projection, lugs, and switch tongue to a centered position at said second branch track, an extension of said second-mentioned shaft carrying a roller, rectangular oblong holes close to one side of the web of the branch track I beams with the long dimension parallel with the I beam in both upper and lower flanges, said holes being vertically one above the other, a flat bumper bar lying close against the said web passing through said holes and having attached to it at its upper end a "butterfly" which is adapted to be dropped by said roller as it and the switch tongue is pulled away from a branch track and as the switch tongue is pulled toward another branch track its "butterfly" and flat bumper bar are lifted, thereby dropping a bumper bar in any branch track at which the switch tongue is not centered and lifting the bumper bar at a branch track at which said switch tongue is centered.

2. A switch tongue, a casting bolted to the movable end of the tongue, said casting having a projection at the free end thereof, adapted to rest on the ends of branch tracks, and lugs to center it thereon, a longitudinal hole in said casting adapted to receive a shaft, a shaft journaled therein, another casting rigidly fastened to the free end of said shaft with an upward projection for the attachment of operating ropes, a second shaft parallel with, but above, said before-mentioned shaft, and also rigidly fastened to said last-mentioned casting, and a wheel revolubly mounted on said shaft, adapted to roll on a radial track.

3. A switch tongue, a casting bolted to the movable end of the tongue, said casting having a projection at the free end thereof, adapted to rest on the ends of branch tracks, and lugs to center it thereon, a longitudinal hole in said casting adapted to receive a shaft, a shaft journaled therein, another casting rigidly fastened to the free end of said shaft with upward projection for the attachment of operating ropes, a second shaft parallel with, but above, said before-mentioned shaft, and also rigidly fastened to said last-mentioned casting, a wheel revolubly mounted on said shaft, adapted to roll on a radial track, the second-mentioned casting being adapted to be alternately hand pulled in each direction, thereby first lifting said first-mentioned casting and said switch tongue by the lever action of said second-mentioned casting in connection with said wheel and said two shafts, freeing the projection and lugs from said branch track and then throwing the switch tongue from one branch track to the other, the release of said hand pulling dropping said casting, projection, lugs, and switch tongue to a centered position at a second branch track.

4. A switch tongue, a casting bolted to the movable end of the tongue, said casting having a projection at the free end thereof, adapted to rest on the ends of branch tracks, and lugs to center it thereon, a longitudinal hole in said casting adapted to receive a shaft, a shaft journaled therein, another casting rigidly fastened to the free end of said shaft with upward projection for the attachment of operating ropes, a second shaft parallel with, but above, said before-mentioned shaft, and also rigidly fastened to said last-mentioned casting, a wheel revolubly mounted on said shaft, adapted to roll on a radial track, the second-mentioned casting being adapted to be alternately hand pulled in each direction, thereby first lifting said first-mentioned casting and said switch tongue by the lever action of said second-mentioned casting in connection with said wheel and said two shafts, freeing the projection and lugs from said branch track and then throwing the switch tongue from one branch track to the other, the release of said hand pulling, dropping said casting, projection, lugs, and switch tongue to a centered position at a second branch track, an extension of said second-mentioned shaft carrying a roller, rectangular oblong holes close to one side of the web of the branch track I-beams with the long dimension parallel with the I beam in both upper and lower flanges, said holes being vertically one above the other, a flat bumper bar lying close against the said web passing through said holes and having attached to it at its upper end a "butterfly" which is adapted to be dropped by said roller as it and the switch tongue is pulled away from a branch track and as the switch tongue is pulled toward another branch track its "butterfly" and flat bumper bar are adapted to be lifted, thereby dropping a bumper bar in any branch track at which the switch tongue is not centered and lifting the bumper bar at a branch track at which said switch tongue is centered.

5. In I beam track switch devices, a radial angle iron track fastened between branch I beam tracks adapted to connect said branch tracks and to support a wheel on which a switch tongue is carried, said angle iron having straight extensions adapted to support operating rope pulleys with the vertical leg of said angle iron toward the switch tongue, a switch tongue and a head casting thereon, carrying said wheel and having a projection and centering lugs adapted to rest on the ends of the branch tracks.

[Claims 6 to 33 not printed in the Gazette.]

1,014,504. PIPE-CLAMP. SEWORTH G. MILLER, Russell, Kans. Filed Aug. 30, 1911. Serial No. 646,909.

1. A device of the class described comprising a body having a yoke portion adapted to receive a pipe or the like, a member pivotally associated with said body and having a threaded opening, and a gripping member having a threaded stem received in said opening and having a jaw adapted to grip the pipe.

2. A device of the class described comprising a body having a yoke portion adapted to receive a pipe or the like, a member pivotally associated with said body and having a threaded opening, and a gripping member having a threaded stem received in said opening and having a jaw adapted to grip the pipe, said gripping member having means for applying a pull thereto.

3. A device of the class described comprising a body having spaced sides adapted to receive a pipe or the like, a pivoted member journaled between said sides, a gripping member having a jaw adapted to engage the pipe, and having a threaded stem adjustably received by said member.

4. A device of the class described comprising a body having spaced sides and adapted to receive a pipe or the like, a transverse, pivotally movable member mounted between the sides of said body and having a threaded opening, a gripping member having a threaded stem arranged in said opening and provided with a V-shaped jaw adapted to engage the pipe, and means for adjustably locking said gripping member in position.

5. A device of the class described comprising a body consisting of two sections pivotally joined and having spaced sides, one of said sections having a transverse, pivotally mounted member, said member having a threaded opening, a gripping member having a threaded stem in said opening, and a V-shaped jaw, and means for applying a pull to the device.

[Claim 6 not printed in the Gazette.]

1,014,505. ADJUSTABLE HAT OR CAP. CHARLES I. MINKOFF and LOUIS KRONTHAL, New York, N. Y. Filed July 1, 1911. Serial No. 636,857.

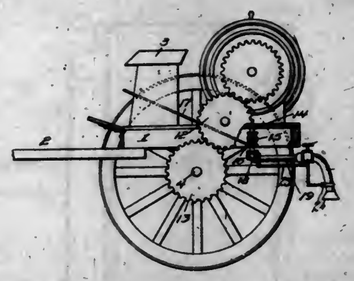
An adjustable band for caps or hats having an elastic member attached to one end thereof, the other end of the said member being secured to an intermediate portion of the band, the end portion of the band beyond the said point of intermediate connection being continued along and outside of the opposite end portion of the band, together with means for elastically securing the said end of the band in position.

1,014,506. PACKAGE-BINDER. ALFRED E. MORGAN, Hartford, Conn., assignor of one-half to William A. Morgan, Hartford, Conn. Filed Apr. 9, 1910. Serial No. 554,420.

1. A device of the class described comprising elastic and non-elastic cords, said non-elastic cord being of tubular form and fitting over one end of said elastic cord a sleeve fitting over the connected ends of the elastic and non-elastic cords, said sleeve being formed to provide a plurality of gripping portions to grip the connecting ends of said cords whereby to hold said cords against separation.

2. A device of the class described, comprising elastic and non-elastic cords, said non-elastic cord being of tubular form and fitting over one end of said elastic cord, a sleeve fitting over the connected ends of the elastic and non-elastic cords, said sleeve having portions stamped to engage the said elastic and non-elastic cords whereby to hold said cords against separation.

1,014,507. SPRINKLING-MACHINE. RAYMOND F. NORTH, Glendive, Mont. Filed Aug. 27, 1909. Serial No. 514,957.



1. A sprinkling apparatus of the character described comprising a wheeled frame, a reservoir superposed upon the rear portion of the frame and having a downwardly extending discharge pipe, an elevated driver's seat at the forward end of the frame, a transversely extending distributing pipe arranged beneath the frame and communicating centrally with said discharge pipe, a series of horizontal parallel branch pipes arranged at intervals along said distributing pipe and extending therefrom beyond the rear of the frame, each of said branch pipes having a controlling valve at its free end, flexible discharge nozzles coupled to and depending from the valved free ends of said branch pipes, stepped bracket arms connected with the distributing pipe at points between said horizontal branch pipes and extending downwardly and rearwardly from said distributing pipe to a point in rear of and below the valved ends of said horizontal branch pipes, a transversely arranged supporting bar carried by the rear ends of said bracket arms and disposed below and in rear of said branch pipes, said bar being provided at spaced intervals with forked holders to loosely receive the ends of the nozzles, a controlling valve arranged in the discharge pipe and having an operating crank, and an operating rod pivotally connected with said crank and extending forwardly beneath the driver's seat to a position in advance thereof.

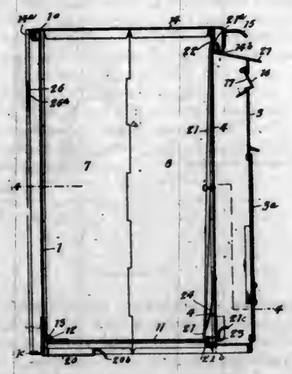
2. In a sprinkling apparatus, a supporting frame, a reservoir mounted thereon, a transverse distributing pipe communicating with the reservoir, a series of branch pipes communicating with said distributing pipe, flexible discharge nozzles depending from the free ends of said branch pipes, bracket arms carried by the distributing pipe, and a nozzle supporting bar carried by said bracket arms and having forked holders to receive said nozzles.

3. In a sprinkling apparatus, a supporting frame, a reservoir thereon, a transverse distributing pipe communicating with the reservoir, branch pipes leading therefrom, flexible nozzles coupled to said branch pipes, bracket arms upon the distributing pipe between the branch pipes, and a bar carried by said bracket arms and having forked holders to receive said flexible nozzles.

1,014,508. LETTER AND PACKAGE MAIL-BOX. CARL OHLSON, Sacramento, Cal. Filed Nov. 30, 1910. Serial No. 594,972.

1. In a combined letter and package mail box, a back having a run-way, a cover slidably carried in said run-way, collapsible sides adapted to be extended, a spring-controlled bottom pivotally secured at its rear edge, a front portion pivotally secured to the sides, said slidable cover being adapted to extend over the top of the box, and means for locking the cover to the top of the box when the latter is in its extended position.

2. In a combined letter and package mail box, a back having a run-way, a cover slidably carried in said run-way, collapsible sides adapted to be extended, a spring-controlled bottom pivotally secured at its rear edge, a front portion pivotally secured to the sides, said slidable cover being adapted to extend over the top of the box in its extended position, and means carried by said front portion for locking said bottom and said cover in the extended position of the box.



3. In a combined letter and package mail box, a back having a run-way, a cover slidably carried in said run-way, collapsible sides, a spring-controlled bottom pivotally secured at its rear edge, a front portion pivotally secured to the sides, and a spring actuated lever carried by said front portion provided with a bent portion at each end, one of said bent portions being arranged to engage the cover to lock it in position and the other bent portion being arranged to engage the bottom to lock it in position.

4. In a combined letter and package mail box, a back having a run-way, a cover slidably carried in said run-way, collapsible sides, a spring-controlled bottom pivotally secured at its rear edge, a front portion pivotally secured to the sides, and a spring actuated lever carried by said front portion provided with a bent portion at each end, one of said bent portions being arranged to project through an opening in said front portion and to engage the cover for locking the latter in position, and the second bent portion being arranged to extend through an opening in the front portion and being provided with a thumb piece for moving the lever against the spring, said second bent portion being arranged to extend over the spring bottom for retaining the latter in position.

5. In a combined letter and package mail box, a back having a run-way, a cover slidably carried in said run-way, collapsible sides, a spring-controlled bottom pivotally secured at its rear edge, a front portion pivotally secured to the sides, a spring actuated lever carried by said front portion provided with a bent portion at each end, one of said bent portions being arranged to project through an opening in said front portion and to engage the cover for locking the latter in position, and the second bent portion being arranged to extend through an opening in the front portion and being provided with a thumb piece for moving the lever against the spring, said second bent portion being arranged to extend over the spring bottom for retaining the latter in position, and a stop member carried by said front portion and adapted to engage said thumb piece for holding the ends of said lever out of engagement with said top and said bottom members.

[Claim 6 not printed in the Gazette.]

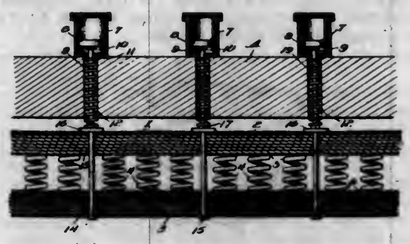
1,014,509. DISH-WASHING PAN. EDWARD O. C. ORD, Prescott, Ariz. Filed Aug. 30, 1910, Serial No. 579,674. Renewed Aug. 29, 1911. Serial No. 646,687.

1. In a dish washing pan, the combination of a vessel having a raised bottom portion surrounded by an annular groove for receiving the sediment from the liquid in the vessel, and the side of the vessel being provided with a recess communicating with the annular groove for holding knives, forks and spoons and also to serve as a spout, substantially as described.

2. In a dish washing pan, the combination of a vessel having an annular grooved shelf for holding dishes formed in its side, and a vertical spout formed in the side of the vessel and communicating with the bottom of the pan and with said annular groove of the shelf for holding knives, forks and spoons, substantially as described.

3. In a dish washing pan, the combination of a vessel having a raised bottom portion surrounded by an annular groove for the settling of sediment, an annular grooved shelf for holding dishes formed in the side of the vessel, and a vertical spout formed in the side of the vessel and communicating with the annular groove in the bottom of the pan and with said annular groove of the shelf for holding knives, forks and spoons on their ends, substantially as described.

1,014,510. ARMOR-PLATE. JOSEPH N. PAPENDRY, East Liverpool, Ohio. Filed May 13, 1911. Serial No. 627,070.



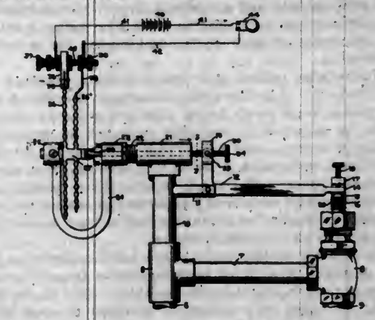
1. In an armor plate, the combination of an outer body of resilient material, a plurality of metallic armor plates, flexible means interposed between the armor plates and resilient material, a metallic mesh adjacent to the armor plates, and pneumatic means for cushioning the armor.

2. In an armor, the combination of a body of rubber, steel armor plate, springs interposed between the armor plate and the rubber, a facing of woven wire for the metallic armor plate, a plurality of air cylinders connected to the structure to be protected, and plungers moving in said cylinders and engaging with the rubber, steel plates and mesh.

3. In an armor, an armor plate comprising a facing of resilient material, a plurality of metallic armor plates arranged face-to-face, a body of woven wire in contact with the armor plate, springs interposed between the armor plate and body of rubber, air cylinders connected to the structure to be protected, plungers moving in said air cylinders, rods for said plungers projecting through the side of the structure to be protected and through the armor plate formed by the rubber, steel and wire mesh, and springs coiled about said rods between the cylinders and body of armor.

1,014,511. TEMPERATURE-CONTROLLER. FREDERICK WM. PENN, Petaluma, Cal. Filed Mar. 25, 1911. Serial No. 616,874.

A temperature controller comprising a supply pipe, a coupling carried thereby, a burner pipe provided with a controlling valve, means for connecting said coupling and said controlling valve, a support carried by said coupling and provided with a laterally projecting arm, a bell crank lever pivoted to said arm, a stem projecting from said controlling valve, an arm carried by said stem and provided with an overhanging flange, means carried by said stem for clamping the end of one arm of said bell crank lever to said stem, a housing carried by the other arm of



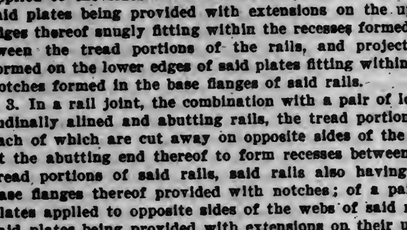
said lever, a pivotal bearing in said housing, a coupling carried by the end of said standard, said coupling having one end adjacent said housing and the other end provided with a bracket, thermostatic disks mounted in said bracket, and a rod pivoted to said disks and extending through the last mentioned coupling and engaging the pivotal bearing of said housing.

1,014,512. ENDLESS-BELT PROPELLER. OTTO AUGUST ANDREW PETERSEN, New Orleans, La. Filed Apr. 17, 1911. Serial No. 621,696.

1. The combination of a boat hull having side portions extending below its bottom and also having lower and upper longitudinal rails on the inner sides of said side portions, a partition wall extending longitudinally of the hull and between the side portions thereof at a point intermediate the lower rails and upper rails; said partition wall being separated by an intervening space from the bottom of the hull and being provided with upwardly deflected end portions, transverse shafts journaled in the hull adjacent the ends of the partition wall and provided with wheels, belts mounted on said wheels and having lower and upper stretches respectively disposed below and above the partition wall, an endless apron disposed between said belts, paddles connected with and disposed at opposite sides of and at right angles to the apron, axles extending between and connecting the belts and the apron and two wheels on each of the axles; one of said wheels being relatively arranged to travel against the upper side of one of the lower rails and against the underside of one of the upper rails, and the other of said wheels being relatively arranged to travel against the partition wall and also to extend a greater distance beyond the inner side of the apron than the paddles on said inner side, for the purpose set forth.

2. The combination of a boat hull having side portions extending below its bottom and also having lower and upper longitudinal rails on the inner sides of said side portions, a partition wall extending between said side portions, at a point between the lower and upper rails, a belt suitably supported in the hull with its stretches disposed at opposite sides of the partition wall and having paddles at its opposite sides, and two sets of wheels carried by the said belt; one set of wheels being relatively arranged to travel against the upper sides of the lower rails and against the under sides of the upper rails, and the other set of wheels being relatively arranged to travel against the partition wall and also to extend a greater distance beyond the inner side of the belt than the paddles on said inner side.

1,014,513. RAIL-JOINT. JOHN PETRI, Liberty, Minn., assignor of one-half to Lewis A. Hansen, Liberty, Minn. Filed Oct. 7, 1911. Serial No. 653,314.



1. In a rail joint of the class described, the combination with a pair of longitudinally alined members, the upper portions of said members having portions cut therefrom to form recesses therebetween, and the base portions of said members being also provided with notches; of a pair of locking members applied to the sides of said other members, said locking members being provided with extensions fitting within the recesses formed between the upper portions of said alined members and also provided with projections fitting within the notches of the aforesaid members.

2. In a rail joint of the class described, the combination with a pair of longitudinally alined rails, the tread portions of which are cut away at their abutting ends to form recesses therebetween and said rails also having the base flanges thereof provided with notches; of a pair of plates applied to the sides of said rails at their abutting ends, said plates being provided with extensions on the upper edges thereof snugly fitting within the recesses formed between the tread portions of the rails, and projections formed on the lower edges of said plates fitting within the notches formed in the base flanges of said rails.

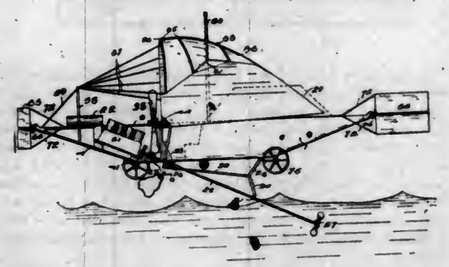
3. In a rail joint, the combination with a pair of longitudinally alined and abutting rails, the tread portions of each of which are cut away on opposite sides of the web at the abutting end thereof to form recesses between the tread portions of said rails, said rails also having the base flanges thereof provided with notches; of a pair of plates applied to opposite sides of the webs of said rails, said plates being provided with extensions on their upper edges snugly fitting within the recesses formed between the tread portions of said rails, and a pair of projections formed on the lower edge of each of said plates and fitting within the notches in the base flanges of the opposed rails.

4. In a rail joint of the class described, the combination with a pair of longitudinally alined and abutting rails, the tread portions of which are cut away at the abutting ends thereof to form recesses between the rails, the ends of the tread portions being beveled inwardly, and the base flanges of said rails provided with notches, the side walls of which are also beveled; of a pair of plates applied to the webs of said rails, said plates being provided with extensions on their upper edges fitting within the recesses formed between the tread portions of the opposed rails, the end walls of the projections being beveled coincident to the beveling of the ends of the tread portions, and projections formed on the lower edges of said plates fitting within the notches formed in the base flanges of the rails, said projections having the side edges thereof also beveled coincident with the beveling of the side walls of the notches.

5. In a rail joint of the class described, the combination with a pair of opposed rails arranged in longitudinal alinement, the tread portions of which are cut away at the abutting ends thereof to form recesses between the same on opposite sides of the web, the ends of the remaining tread

portions being beveled inwardly, and the base flanges of said rails provided with notches, the side walls of which are also beveled; of a pair of plates applied to the webs of said rails at their meeting ends, said plates being each provided with a longitudinal extension on the upper edge thereof, which extension is adapted to fit in the recess on one side of the web and has the end edges thereof beveled coincident to the beveling of the ends of the tread portions of the rails, and a pair of projections formed on the lower edge of each of said plates, said projections being adapted to fit within the notches in the base flanges of the rails, said projections having their side edges beveled coincident to the beveling of the walls of said notches.

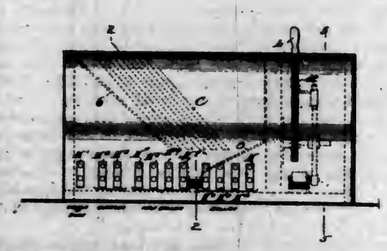
1,014,514. HYDROPLANE. JOHN H. PIERCE, Oakland, Cal. Filed Nov. 17, 1910. Serial No. 592,898.



1. In a flying machine, a body portion, aerial propellers, a water propeller, a toggle bracket mounted upon said body portion, said toggle bracket comprising a pair of upper side bars, a bolt connecting the lower end of said bars, a pair of lower side bars mounted upon said bolt, a sleeve slidably mounted upon said water propeller shaft and pivotally mounted between said lower side bars, a rod mounted upon said bolt, an operating lever pivotally connected with said rod, and body portion and adapted to move said rod to vertically adjust said water propeller, and operating means for said propellers.

2. In a flying machine a body portion, a motor carried by said body portion, a propeller shaft connected with the shaft of said motor, a sleeve slidably mounted upon said propeller shaft, a toggle-bracket mounted at one end to said body portion and at the other end connected with said sleeve, a rod connected to the pivot bar of said toggle-bracket, and means for moving said rod to open and close said toggle-bracket to raise and lower said propeller shaft.

1,014,515. ELECTRIC TICKET-SELLING DEVICE AND CHANGE-MAKER. LESLIE L. PIM and JOHN J. CHRISTMANN, Denver, Colo. Filed Oct. 18, 1910. Serial No. 587,660.



1. In a ticket selling and change making device, a casing, a plurality of metallic chutes in said casing, each chute being provided with a branch, a movable stop member disposed in each chute above said branch, said stop member being insulated from the walls of said chute, and means for actuating said stop member.

2. In a ticket selling and change making device, a casing, a plurality of inclined metallic chutes disposed within said casing, each chute being provided with an inclined branch, an upper stop pivotally mounted in each chute above said branch, and a lower stop pivotally mounted in each chute below said branch, said stop being insulated from the walls of said chute, and means for actuating said stops.

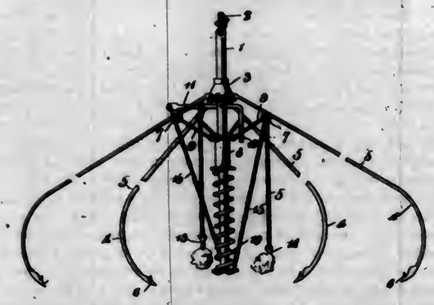
3. In a ticket selling and change making device, a casing, a plurality of inclined metallic chutes disposed within said casing, each chute being provided with an inclined branch, an upper stop pivotally mounted in each chute above said branch, said upper stop being insulated from the walls of said chute, a lower stop pivotally mounted in each chute below said branch, means for actuating said stops, said means comprising an armature connected with each stop, a magnet for actuating each armature, and current connections for said magnets.

4. In a ticket selling and change making device, a casing, a plurality of inclined metallic chutes disposed within said casing, each chute being provided with an inclined branch, an upper stop pivotally mounted in each chute above said branch, said upper stop being insulated from the walls of said chute, a lower stop pivotally mounted in each chute below said branch, means for actuating said stops, said means comprising an armature connected with each stop, a magnet for actuating each armature, and current connections for said magnets, said current connections including a series of keys and a contact lever.

5. In a ticket selling and change making device, a casing, a lever pivoted therein, a plurality of metallic chutes, a plurality of stops in each chute, one of said stops being insulated from the walls of said chute, a plurality of contacts arranged to be engaged by said lever, a series of magnets for operating said stops, said series of magnets being actuated by the closing of the contacts through the medium of said levers.

[Claims 6 to 10 not printed in the Gazette.]

1,014,516. TRAPPING DEVICE. GEORGE M. RAINS, Grosvenor, Tex. Filed Sept. 9, 1910. Serial No. 581,190.



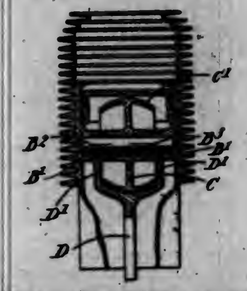
1. In a trapping device, a stem, a plurality of grab hooks pivoted at their upper ends to the stem and provided with inwardly curved lower ends, a runner slidable on the stem, links connecting the runner to the upper portions of the grab hooks, a spring for moving the runner on the stem, a trigger pivoted to the stem and provided with a depending arm having a notch to engage one of the links and a bait hook connected with the trigger.

2. In a trapping device, a stem having a sleeve secured thereon, a plurality of curved grab hooks pivoted at their upper ends to the sleeve, a runner slidable on the stem, a plurality of links pivoted to said runner and to the grab hooks, a spring mounted on said stem and connected with the runner to move said runner on the stem, a trigger pivoted to the stem between the runner and the sleeve and provided with a depending arm having a notch to engage one of the links and a bait hook connected with the trigger.

3. In a trapping device, a stem having a stop at one end thereof, a sleeve secured on the stem, a plurality of grab hooks pivoted at their upper ends to the sleeve, a runner slidably mounted on the stem, a plurality of links pivotally connecting the runner and the upper portions of the grab hooks, a spring engaging the stop and connected with the runner to move said runner on the stem, a trigger pivoted to the stem and having a depending arm provided with a notch to engage one of the links, and a flexible member connected with the trigger and with one of the grab hooks and slidable through the stop.

4. In a trapping device, a stem provided with a stop on one end thereof, a sleeve secured on the stem, a plurality of grab hooks pivoted at their upper ends to the sleeve, a runner slidable on the stem, and a contractile spring mounted on the stem and connected with the runner and the stop, a plurality of links pivoted to the runner and the grab hooks, said stem being formed with a slot adjacent the sleeve, a trigger pivoted in said slot and provided with a depending arm having a notch to engage one of the links; a flexible member connected with the trigger and provided with a bait hook on one end thereof, a second flexible member connected with the trigger and movable through the stop and one of the grab hooks and provided with a bait hook on its lower end.

1,014,517. PISTON-ROD CONNECTION. CHARLES BENJAMIN REDRUP, Cardiff, England. Filed May 6, 1911. Serial No. 625,532.



1. The combination with a cylinder of a piston therefor, a connecting rod pivotally secured to the piston, and a roller arranged beyond the contacting portion of the piston with the cylinder for engaging the cylinder to prevent the thrust of the connecting rod on the piston, substantially as described.

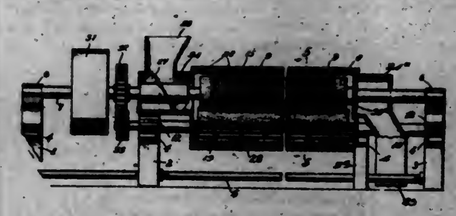
2. The combination with a cylinder of a piston therefor, a connecting rod pivotally secured to the piston, and rotatable means movable with the piston and arranged beyond the contacting portion of the piston with the cylinder for engaging the cylinder to take the thrust of the connecting rod, substantially as described.

3. The combination with the cylinder of a piston therefor, ears projecting from one end of the piston, a connecting rod pivotally secured to the ears, and means revoluble around said pivot point engaging the wall of the cylinder for relieving the thrust of the connecting rod on the piston, substantially as described.

4. The combination with a cylinder of a piston therefor, ears projecting from one end of the piston, a transverse pin carried by the ears, a connecting rod pivoted on the pin, and means rotatably mounted on the pin and engaging the wall of the cylinder for relieving the thrust of the connecting rod on the piston, substantially as described.

5. The combination with a cylinder of a piston therefor, a transverse pin carried by the piston beyond its contacting portion with the cylinder, a connecting rod pivoted on the pin, and hemispherical shaped members rotatably mounted on the ends of the pin and engaging the wall of the cylinder for relieving the thrust of the connecting rod on the piston, substantially as described.

1,014,518. COTTON-SEED-DELINTING MACHINE. JOSEPH G. REID, Atlanta, Ga. Filed Sept. 20, 1911. Serial No. 650,428.



1. In a delinting machine, the combination of a support; a corrugated cylindrical abrasive roller journaled in said support; a pair of supplemental cylindrical abrasive rollers journaled in said support, said supplemental rollers disposed below, radially of and adjacent the main roller, and the peripheral surfaces of said rollers providing a working space; a three lobed casing surrounding said rollers and having the curved surfaces thereof conforming with said rollers; a gear wheel carried by the corrugated roller; and relatively smaller gear wheels carried by said supplemental rollers and meshing with said first named gear wheel whereby to drive the supplemental rollers at an accelerated speed relatively to the main roller, substantially as described.

2. In a delinting machine, the combination of a casing; a main and supplemental cylindrical abrasive rollers journaled in said casing; each of said supplemental rollers disposed radially of and adjacent the main roller, and the peripheral surfaces of said rollers providing a working chamber therebetween and with said casing; scrapers mounted on said casing located intermediate of, and above and to either side of said supplemental rollers; and a gearing connecting said rollers and adapted to drive the supplemental rollers at an accelerated speed relatively to the main roller, substantially as described.

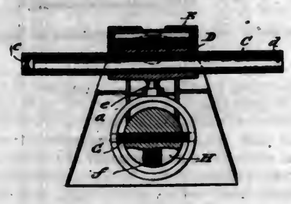
3. In a delinting machine, the combination of three horizontally arranged rotatable abrasive rollers, the rollers being arranged in spaced relation one centrally positioned above the other two, a casing concentric with the outer surfaces of the rollers and projecting upwardly between the two lower rollers, the lower portions of the casing being arranged substantially one fourth the distance from the surfaces of the lower rollers as the upper portion of the casing is from the surface of the upper roller, scraping bars carried by said upwardly projecting portion of the casing, bars fixed to the inner side of the casing and having scraping edges arranged approximately in alinement with the tops of the lower rollers, and a conveyer rotatable with the upper roller for forcing material through the casing, substantially as described.

4. In a delinting machine, the combination of a main shaft, an abrasive roller fixed to the main shaft, auxiliary shafts arranged below the main shaft and at each side thereof, abrasive rollers carried by the auxiliary shafts and arranged in spaced relation with each other and with the upper roller, a casing concentric with the surfaces of the rollers for inclosing same, a cylindrical chamber extending from one end of the casing in alinement with the upper roller, the casing having an outlet at its other end in alinement with the upper roller, a hopper leading to the cylindrical chamber, a worm conveyer fixed to the main shaft within the cylindrical chamber, a driving pulley fixed to the main shaft, a gear wheel secured to the main shaft, and pinions fixed to the auxiliary shafts and meshing with the gear wheel, said pinions being half the diameter of the gear wheel whereby the lower rollers rotate twice as fast as the upper roller, substantially as described.

5. In a delinting machine, the combination of a main shaft, an abrasive roller fixed to the main shaft, auxiliary shafts arranged below the main shaft and at each side thereof, abrasive rollers carried by the auxiliary shafts and arranged in spaced relation with each other and with the upper roller, means for rotating said shafts, a casing

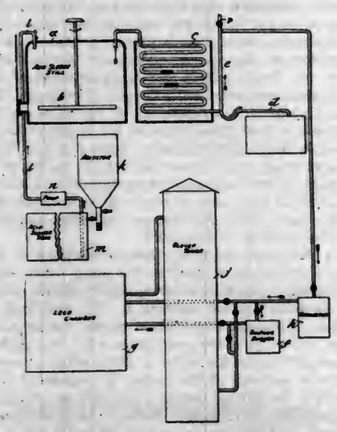
inclosing the rollers, the casing being provided with a discharge opening, a conveyer fixed to the main shaft for forcing material through the casing, and a disk provided with apertures rotatable with the main shaft for preventing a too rapid escape of the material through the discharge opening, substantially as described.

1,014,519. LEVELING DEVICE. JAMES ROAKE, Oregon City, Oreg. Filed May 25, 1911. Serial No. 629,283.



A leveling instrument comprising a main frame having sides, a vertically-swinging sighting tube mounted on pivots between said sides of the main frame, a spirit level arranged on said sighting tube, an open frame extending in the direction of the length of the sighting tube and connected and movable therewith and disposed between the sides of the main frame, a longitudinally-disposed threaded shaft fixed at its ends in the forward and rear portions of the open frame, and an interiorly threaded balancing weight mounted on said shaft and capable of adjustment in the direction of the length thereof.

1,014,520. UTILIZING ACID SLUDGE FROM REFINING PETROLEUM. CLARENCE I. ROBINSON, West New Brighton, N. Y., assignor to Standard Oil Company, Bayonne, N. J., a Corporation of New Jersey. Filed Aug. 21, 1903. Serial No. 170,326.



1. In utilizing acid sludge, the improvement consisting in heating the acid sludge in a compact body of several barrels at a minimum to above 500° F., to evolve sulfur containing gas therefrom, cooling said gas to separate the oil vapors from it, then subjecting the gas to combustion temperature with access of air to burn the combustible constituents of the gas without oxidizing the sulfur dioxid therein, and afterward oxidizing the sulfur dioxid in the gas to form sulfuric acid, substantially as described.

2. In utilizing acid sludge, the improvement consisting in subjecting gas from the decomposition of acid sludge by heat at lower temperatures to combustion temperature with access of air to burn the combustible constituents of the gas without oxidizing the sulfur dioxid therein, and afterward oxidizing the sulfur dioxid in the gas to form sulfuric acid, substantially as described.

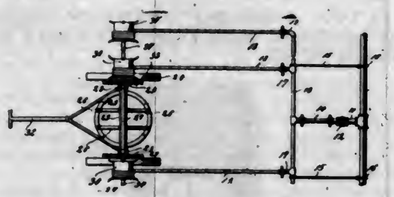
3. In utilizing acid sludge, the improvement consisting in subjecting gas from the decomposition of acid sludge by heat at lower temperatures to combustion temperature with access of air to burn the combustible constituents of the gas without oxidizing the sulfur dioxid therein, and afterward subjecting it to operations adapted to utilize the sulfur content of sulfur dioxid, substantially as described.

4. In utilizing acid sludge, the improvement consisting in causing gas from the decomposition of acid sludge by heat to pass over burning sulfur, and afterward subjecting it to operations adapted to utilize the sulfur content of sulfur dioxid, substantially as described.

5. In utilizing acid sludge, the improvement consisting in causing gas from the decomposition of acid sludge by heat to pass over burning sulfur, and then subjecting it while still hot to operations adapted to oxidize sulfur dioxid, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,014,521. IRRIGATION APPARATUS. ISHAM L. RODDY, Estes, Tex. Filed July 29, 1910. Serial No. 574,549.

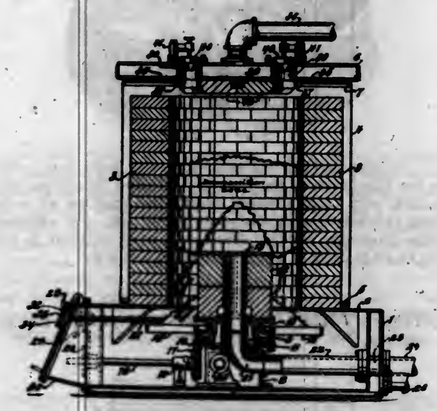


1. In irrigating apparatus, the combination of a plurality of hose, a hose truck embodying ground wheels, a plurality of reels mounted on said truck connected to and adapted to carry said hose, draft means secured to the truck for advancing the same, means for operating the reels from the ground wheels, and means whereby said draft means may be reversed without changing the position of said reels, to thereby reverse the direction of rotation of the reels on movement of the truck, for winding the hose.

2. In irrigating apparatus, the combination with a supply pipe, of a plurality of hose secured at one end thereto, a wheeled hose truck, a plurality of reels carried by said truck connected to the other ends of the hose, means for driving the reels from the wheels of the truck when the latter is in motion, draft means connected to the truck and normally extending therefrom in a direction opposite the hose for moving the truck to unwind the hose from the reels, means connecting the truck to the reels so as to permit the truck and its draft means to be reversed with respect to the hose, and detachable means normally operably connecting the driving means to the reels thereby preventing the reversal of the truck with respect to the hose.

3. In combination, a stationary supply pipe, an irrigating apparatus associated therewith including an auxiliary supply pipe, a plurality of hose connected at one end to said auxiliary supply pipe, a truck embodying ground wheels, a plurality of reels mounted on said truck and connected to the other ends of the hose, a draft member connected to the truck for advancing the same and normally extending therefrom in a direction opposite the hose aforesaid, driving connections for transmitting motion from the ground wheels to the reels, whereby when the truck is advanced the hose will be unwound from the reels, means so connecting the truck with the reels as to permit the truck and its draft means to be reversed without changing the positions of the reels, whereby to wind the hose thereon, and detachable members normally holding the driving connections aforesaid in operative relation to the reels thereby normally preventing the reversal of the truck and draft means, as above set forth.

1,014,522. GAS-PRODUCER. CLAUDE ROBABECK, Newark, N. J. Filed Apr. 29, 1911. Serial No. 624,001.



1. The combination with a furnace, of a revoluble grate therefor, a cylinder mounted upon said grate and rotatable therewith and arranged to project above the combustion zone of the fire, and an opening through said grate and cylinder to form a passage for the fresh fuel into said furnace above the combustion zone of the fire.

2. The combination with a furnace, of a base therefor, a fuel feed pipe connected with said base, a grate stand mounted in said base, a revoluble grate mounted upon said grate stand, a cylinder mounted upon said grate and rotatable therewith and arranged to project above the combustion zone of the fire, and an opening through said cylinder, grate and grate stand, and connected with said fuel feed pipe to form a passage for the fresh fuel into the decomposition zone of the fire in said furnace.

3. The combination with a furnace, of a base therefor, a fuel feed pipe connected to said base, a grate stand mounted in said base, a revoluble grate mounted upon said stand, a cylinder mounted upon said grate and rotatable therewith and projecting above the combustion zone of the fire, an opening in said cylinder, grate and stand connected with said fuel feed pipe to form a passage for the fresh fuel into the decomposition zone of the fire in said furnace, and means operable from without said base to rotate said grate and cylinder.

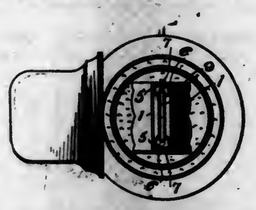
4. The combination with a furnace, of a base therefor, a revoluble grate, a cylinder mounted upon said grate and projecting above the combustion zone of the fire in said furnace, a fuel feed pipe connected to said base, and connections from said pipe to said furnace whereby the fresh fuel may be fed into the decomposition zone of the fire.

5. The combination with a furnace, of a base therefor, a fuel feed pipe connected to said base, a revoluble grate, a cylinder mounted upon said grate and arranged to project above the combustion zone of the fire, an opening through said grate and cylinder, and connections from said opening to said feed pipe to form a passage for the fresh fuel into the decomposition zone of the fire.

[Claim 6 not printed in the Gazette.]

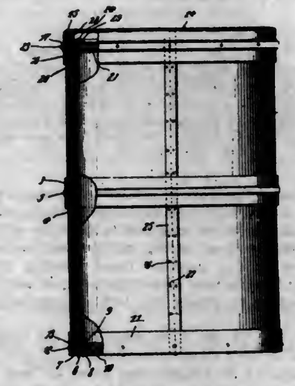
1,014,523. AIR-DEFLECTOR. SIDNEY S. RUSSELL, Memphis, Tenn. Filed June 4, 1910. Serial No. 565,057.

1. An air deflector for burners formed of a single sheet of material shaped to provide a casing having a contracted open top and a wide open bottom, the bottom edges of the sides of said casing being cut away to provide air inlets, said casing also provided with end openings for admitting air and from which wick tube lugs project, said ends also provided with upper flame deflectors.



2. An air deflector for burners comprising a casing formed of a single sheet of material shaped to provide a substantially rectangular casing having a contracted open top and a wide open bottom, the meeting ends of said casing being overlapped and provided with openings and ears for interlocking engagement, said casing having air admitting means in the ends and sides.

1,014,524. BARREL. FRANK H. SABOURIN, Newport, Vt. Filed Dec. 7, 1910. Serial No. 596,126.



A receptacle comprising a body member embodying a many-layer veneer structure, each having its grain extending in an opposite direction to the adjacent layer of veneer, hoops fitting over the ends of the receptacle, one of said hoops comprising an outer portion formed with a reinforcing bead and adapted to fit the outer surface of the barrel, an inner portion bent upon itself to form a head groove, said inner and outer portions integrally connected with a top portion, said top portion adapted to cover and rigidly secure together the layers of veneer, vertical fastening means extending through said head groove and adapted to securely hold the head of said receptacle in said groove, said reinforcing bead and head groove being in horizontal alinement, and horizontal fastening means passing through said bead and groove whereby to secure the head of said receptacle and the layers of veneer in receptacle-forming relation.

1,014,525. WOVEN-WIRE FENCE. ALFRED SCHNEIDER, Rockville, Conn. Filed Feb. 27, 1911. Serial No. 610,996.

1. The herein described insert strand for wire fence structures, said strand being composed of wire bent to a zig-zag shape with its bends gradually reduced.

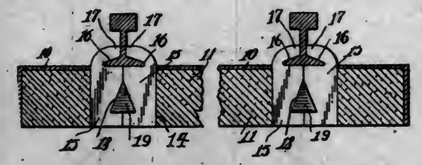
2. The herein described insert strand for wire fence structures, said strand being composed of wire bent into

flattened helical form with its succeeding convolutions of gradually reduced diameter.

3. The herein described insert for wire fences, said insert comprising a series of interwoven strands each bent to a zig-zag shape with its bends gradually reduced.

4. The herein described insert for wire fences, said insert comprising a series of interwoven flattened helical strands, each of which has its succeeding convolutions of gradually reduced diameter.

1,014,526. RAILWAY-TIE. CHARLES SEDDENS, Eastwood, Ohio. Filed Apr. 25, 1911. Serial No. 623,223.



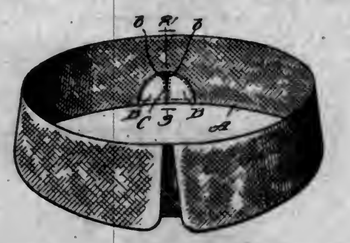
1. A device of the class described comprising the combination with a beam having spaced openings therethrough; of rail gripping members disposed in pairs in each of said recesses, said members having their inner faces formed with notches having inclined faces forming triangular openings and locking keys of triangular cross section fitted in said openings to retain the locking members against movement.

2. In a device of the class described, the combination with a beam having slots therethrough; of rail gripping members disposed in coöperating pairs in each of said slots, each pair of said members having their inner faces formed with notches having inclined faces coacting to form a triangular opening, said members extending to the bottom of the beam and communicating therewith and formed with overhanging lips with intermediate shoulders above the inclined openings horizontally disposed to receive a rail flange and locking keys having wedge faces, said keys being fitted in the openings to hold the lips in contact with the flanges and web of the rail.

3. A device of the class described comprising a beam having a rail fastening device at one end thereof, and a recess in the upper surface of its opposite end, said beam also having recesses in its opposite sides beneath the first named recesses, a plate having a recess in its upper surface engaged with the recess in the beam, wedge keys pivotally mounted in longitudinal slots in the plate and having sharpened inner ends adapted to engage the recesses in the sides of the beam, rail gripping members pivotally mounted in transverse recesses adjacent the ends of the plates and adapted for locking engagement with the flanges of rail sections by the wedges, said rail sections serving to hold said plate on the beam.

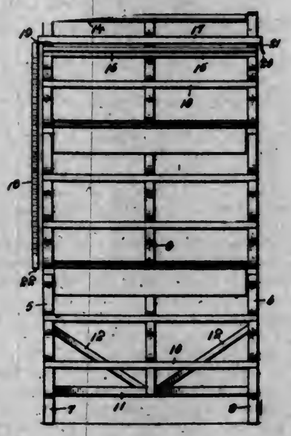
1,014,527. COLLAR. WILLIAM M. SHEWEY, Chicago, Ill. Filed Apr. 8, 1910. Serial No. 554,152.

1. A collar having two independent tabs secured to the inner side at the back thereof, said tabs lying side by side with their adjacent edges close together, said tabs being secured only at their lower ends so as to form between them a slit open at the top.



2. A collar having two tabs secured at their lower ends to the inner side at the back thereof, said tabs lying side by side with their adjacent edges close together so as to form between them a slit open at the top, said adjacent edges gradually receding from each other adjacent to the top so as to form a mouth leading to the slit.

1,014,528. OIL-CLOTH RACK. CHARLES C. SISLER, Mineola, Tex. Filed Apr. 4, 1911. Serial No. 618,839



1. In a rack of the class described, a pair of connected side members provided at their upper ends with sockets, a roller having its opposite ends journaled in said side members and arranged in advance of said sockets, a cutting strip having a longitudinal groove and its opposite ends secured to said side members below said roller, a cross piece having its opposite ends secured to said side members and located between said cutting strip and roller, a combined measuring rod and clamp having one end pivoted to one end of the cross piece and movable to a point above and parallel to the groove of the cutting strip, and means for securing the free end of the combined measuring rod and clamp to one end of the cross piece.

2. In a rack of the class described, a pair of connected side members provided at their upper ends with sockets, a roller having its opposite ends journaled in said side members and located in advance of said sockets, a cutting strip having a longitudinal groove and its opposite ends secured to said side members below said roller, a cross piece having its opposite ends secured to said side members and located between said cutting strip and roller, a combined measuring strip and clamp having one end hinged to one end of the cross piece and movable to a position above the groove and parallel with and spaced from the cross piece and cutting strip, whereby a flexible sheet

may be clamped between the cross piece and measuring strip, and coöperating fastening devices carried by the cross piece and free end of the combined clamp and measuring strip.

1,014,529. STOPPER-EXTRACTOR. JAMES F. SLUSSER, Jackson, Idaho. Filed Aug. 5, 1910. Serial No. 575,646.

The combination with a stopper, of an extractor therefor comprising a flat strip of metal, a loop formed intermediate the length of the same, angularly extending shoulder portions forming a continuation of said loop and resting upon the stopper, substantially parallel legs extending angularly from said shoulder portions, a series of laterally projecting prongs stamped up from either edge of said legs adjacent the ends thereof, the prongs of one side being parallel with the others of the opposite side, and prongs bent up from the ends of said legs at right angles thereto and at right angles to the lateral prongs.

1,014,530. SUPERHEATER. HUNTER SMITH, Berkeley, Cal., assignor of two-thirds to Frank D. Chase, Berkeley, Cal. Filed Apr. 15, 1911. Serial No. 621,859.

1. In a steam super-heater for boilers, a column consisting of a boiler tube, a header at each end of the tube, a casing built up of metal rings inclosing said tube, a shaft in said tube extending from end to end thereof, and a spiral flange extending from end to end of said shaft, said shaft and spiral flange being formed in sections.

2. In a steam super-heater for boilers, a column consisting of a boiler tube, a header secured to each end of said tube, a casing inclosing said tube and formed of a column of detachable metal rings and located between said headers, a shaft having a spiral flange extending from end to end of said tube and formed of detachable sections, a rod extending through said shaft, and a spider on each end of said rod detachably secured thereto, and bearing against the end of the tube.

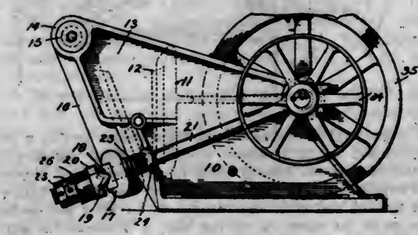
3. A steam super-heater for boilers, consisting of a pair of columns at each side thereof, each of said pairs of columns having a double header at the top and bottom, and each of said columns consisting of a boiler tube, a casing inclosing said tube and formed of built up metal rings, and a shaft in said boiler tube having a spiral flange, the lower double headers being connected by a pipe and one of the upper double headers being provided with an inlet pipe and the other with an outlet pipe.

1,014,531. LAMP BURNER AND GLOBE. JOHN C. SMITH, Gridley, Cal. Filed June 6, 1911. Serial No. 631,531.

1. In a device of the class described, the combination of a base plate, one side of which constitutes a seat for a globe, a pair of journal plates secured to the other side of the base plate at opposite ends respectively and having their terminals looped to form bearings, shafts journaled in the bearings at corresponding ends of said journal plates, clamping arms fixed to each of said shafts and extending laterally from the latter, the terminals of said arms being bent so as to overlie the first named side of the plate, and means constantly tending to rotate said shaft so as to hold the clamping arms in clamping relation to a globe seated upon the plate.

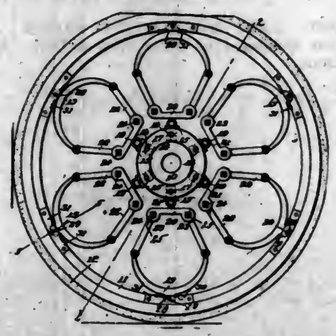
2. In a device of the class described, the combination of a base plate, one side of which constitutes a seat for a globe, a pair of shafts rotatably mounted on the other side of said plate having corresponding ends terminating in cranked portions, clamping arms fixed to each of said shafts and extending laterally from the latter, the terminals of said arms being bent so as to overlie the first named side of the plate, and a leaf spring supported between the crank portions of said shafts in tension and constantly tending to rotate same so as to hold the clamping arms in clamping relation to a globe seated upon the plate.

1,014,532. ROCK AND ORE CRUSHER. HOWARD ROY STACKS, Glenside, Pa., assignor of one-half to Richard O. Kohler, Catasauqua, Pa. Filed June 15, 1911. Serial No. 633,294.



In a crusher of the jaw type, the combination of a frame having guide lugs, a stationary jaw, a movable jaw pivoted at one end to the frame, an eccentric carrying shaft mounted in bearings on the frame, pull rods located on the outside of the frame and extending from the eccentrics to the jaw, and connections between said pull rods and said movable jaw comprising a bearing plate or bar extending crosswise of the movable jaw and engaging the same on one side, and having holes through which the pull rods pass, said movable jaw also having holes through which the pull rods pass, adjustable parts on said pull rods engaging said bearing plate on the opposite side, and a spring on each pull rod between said movable jaw and said guide lugs on the frame.

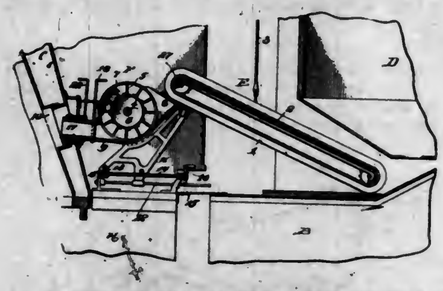
1,014,533. SPRING-WHEEL. GEORG V. STEIN, Washington, Ind., assignor, by direct and mesne assignments, of one-third to Austin F. Cabel, Washington, Ind., and one-third to Harry Weill, Indianapolis, Ind. Filed Mar. 9, 1911. Serial No. 613,220.



1. A wheel comprising a hub, a rim, arcuate springs connected intermediate their ends to the rim, spreader bars carried by the hub and adjustable toward and from the rim, and links connecting the ends of each spring to one of the spreader bars.

2. A wheel comprising a hub, a rim, arcuate springs connected intermediate their ends to the rim, non-traveling nuts carried by the hub, screw stems threaded into the nuts, spreader bars carried by the screw stems, and links connecting the ends of each spring to one of the spreader bars.

1,014,534. MECHANICAL STOKER. ROBERT F. STEWART, Omaha, Nebr., assignor of one-half to Charlie M. Hare and one-half to Harry N. Oldson, Grand Island, Nebr. Filed June 23, 1909, Serial No. 503,891. Renewed Sept. 27, 1911. Serial No. 651,616.



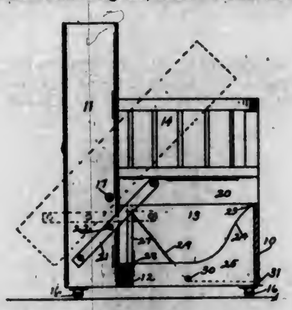
1. A mechanical stoker comprising a feeder having a delivery chute, means arranged within the chute for directing the fuel to the desired place in the furnace, a framework supporting said feeder, means for moving the framework toward and from the furnace to advance the feeder or to move the same out of the way, a conveyer for supplying fuel to the feeder, and means for moving the conveyer so as to be out of the way when access to the parts is required.

2. A mechanical stoker comprising a casing having a delivery chute and a receiving hopper, a rotary feeder arranged within the casing between the chute and hopper, means located in the chute for giving proper direction to the fuel in its discharge, a supporting framework for the casing, means for positively adjusting the framework toward and from the furnace, a conveyer movably mounted upon said framework, and power transmitting means between the feeder and conveyer whereby both are caused to operate simultaneously at any stage of adjustment of the parts.

3. In a mechanical stoker the combination of a feeder, means for supplying fuel to the feeder and relatively adjustable with reference thereto, a framework supporting the feeder and adjacent end of the fuel supplying means, guides for supporting the framework and directing the same in its movements, and a feed screw mounted in fixed bearings and having screwthread connection with said framework to move the same backward or forward.

4. In a mechanical stoker the combination of a casing having a chute, a rotary feeder mounted within the casing and adapted to deliver the fuel at a comparatively rapid speed through the chute to throw the fuel into the innermost portion of the fire box, wings arranged within the chute to direct the fuel to the right or to the left, hoods comprising upper and lower members arranged above and below the chute and outer members exterior to the chute and connecting the outer edges of said upper and lower members, the forward portions of the outer members of the hoods curving inwardly, said hoods being pivotally connected to the chute, vertically disposed rods, and slotted arms extended from said rods and having connection with the hoods to turn the same about their pivotal connections with the chute.

1,014,535. DAVENPORT. DENNIS E. SWEENEY, Indianapolis, Ind. Filed Aug. 10, 1911. Serial No. 643,460.



1. A davenport including a frame having a front bar, a seat portion with its forward end adapted to be normally supported by said frame bar, uprights pivoted at their lower ends to the frame for supporting the rear part of the seat portion when in normal position, means for moving said uprights on their pivots, a folding bed portion fulcrumed at its sides and between its ends to the rear part of the frame so that when turned downwardly it will be supported by said frame bar, and bars secured to the folding bed portion and pivoted to said seat portion so that the seat portion will be moved out of and into position by the movement of said bed portion.

2. A davenport including a frame having a front bar, a seat portion with its forward end adapted to be normally supported by said frame bar, uprights pivoted at their lower ends to the frame for supporting the rear part of the seat portion when in normal position, means for moving said uprights on their pivots, a folding bed portion fulcrumed at its sides and between its ends to the rear part of the frame so as, when turned downwardly, to be supported by said frame bar, bars secured to the folding bed portion and pivoted to said seat portion so that the seat portion will be moved out of and into position by the movement of said bed portion, and inclined tracks on the ends of the frame for supporting and guiding the forward part of the seat portion during its movements.

3. A davenport including a frame having a front bar, a seat portion with its forward end adapted to be normally supported by said frame bar, uprights for supporting the rear part of said seat portion, spring hinges for pivoting the lower ends of said uprights to the frame, a cord extending from the upper part of said uprights to the front part of the device for drawing said uprights from under the seat portion, a folding bed portion fulcrumed at its sides and between its ends to the rear part of the frame so as, when turned downwardly, to be supported by said frame bar, bars secured to the folding bed portion and pivoted to said seat portion so that the seat portion will be moved out of and into position by the movement of said bed portion, rollers on the lower front corners of the seat portion, and inclined tracks on the end of the frame for supporting and guiding the forward part of the seat portion during its movements.

1,014,536. VESSEL-CLOSURE. MINOSAKU TAKAHASHI, Harlowton, Mont. Filed May 24, 1910. Serial No. 563,122.

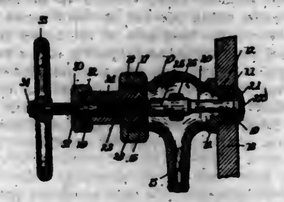
The combination with a vessel of a plurality of strands of wire, one of said strands being bent to surround the neck of the vessel in the form of a ring, an eye formed at one side of the ring, a vertical shank formed at the opposite side of the ring by bending one terminal of the strand laterally with respect to the ring, a hook formed upon said shank, the other of said strands being bent to produce a bail bisecting the mouth of the receptacle to engage the hook formed upon the shank, an arm formed at one end of the bail, a hook formed at the terminal of said arm to engage the eye provided upon the ring, a closure attached to said bail, and convolutions produced by bending the strand comprising the arm substantially as and for the purposes set forth.

1,014,537. ELECTRIC APPLIANCE. MARTIN THULIN, Ephraim, Utah. Filed Apr. 1, 1910. Serial No. 552,890.

An electrode for electro-medical use comprising a non-conducting casing of uniform diameter having a bore loosely receiving a conductor, and a counter-bore snugly receiving an enlarged conductor terminal, a plug in the outer end of the counter-bore retaining said terminal against movement within the said casing, said plug having liquid-receiving grooves extending longitudinally from the enlarged conductor terminal to the exterior of the electrode.

1,014,538. GAGE-COCK. GEORGE LEMUEL TILLOTSON and MARKS HAROLD NICHOLAS, Portland, Oreg. Filed May 18, 1911. Serial No. 627,946.

1. A device of the class described, comprising a valve member adapted to be mounted upon a boiler wall and having a valve seat and a threaded neck, a retaining nut mounted upon said threaded neck and having an annular groove, an internally threaded sleeve having a laterally extended flange received in said groove and clamped by said nut against said neck, and a valve stem extending through said sleeve and having a valve member adapted to engage at said seat.



2. A device of the class described, comprising a valve body having a neck for the attachment of said body to a boiler wall, said neck having at the end a valve seat, said body having at the other end a threaded neck, a retaining nut removably mounted upon said last-mentioned neck, and having an annular groove, an internally threaded sleeve having a flange and extending through said retaining nut, whereby said flange is clamped between the end of said last-mentioned neck and said retaining nut, and is received in said groove, a gland nut at the end of said sleeve, a threaded stem extending through said sleeve and having at the end a valve member adapted to coöperate with said valve seat, and means for manipulating said valve stem.

3. A device of the class described, comprising a valve body having a reduced neck for the attachment of said body to a boiler wall, said neck being adapted to extend through the boiler wall and having at the end a valve seat, said body having at the other end a threaded neck, a retaining nut removably mounted upon said threaded neck and having an annular groove, an internally threaded sleeve having a flange and extending through said retaining nut whereby said flange is clamped between the end of said threaded neck and said retaining nut and is received in said groove, a gland nut at the end of said sleeve, a threaded stem extending through said sleeve and said gland nut and having at one end a valve member adapted to coöperate with said valve seat, and a hand wheel at the other end of said valve stem, said valve body having means whereby it can be associated with a gage glass.

1,014,539. MANUFACTURE OF LAKES. ERNST ULRICHS, Elberfeld, Germany, assignor to The Firm of Willing, Dahl and Company, A. G., Barmen, Germany. Filed June 1, 1911. Serial No. 630,597.

1. A process for the manufacture of color-lakes which consists in treating the dye produced from diazotized alpha-naphthylamin and naphtholsulfo-acid 1.4, with salts of heavy metals.

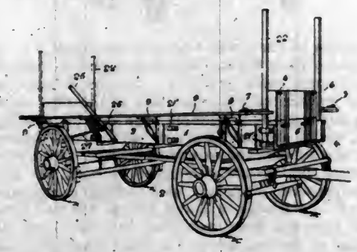
2. As new articles of manufacture, color-lakes obtained from the dye produced from diazotized alpha-naphthylamin and naphthosulfoacid 1:4, characterized by their Bordeaux-red shade, their resistance to water and alcohol, their insolubility in oil and their fast color against the action of light, yielding, upon reduction by means of tin and hydrochloric acid, alpha-naphthylamin and 2 amido 1 naphthol 4 sulfonic acid.

3. As a new article of manufacture, a color-lake obtained from the calcium salt of the dye produced from diazotized alpha-naphthylamin and naphtholsulfoacid 1:4, characterized by its Bordeaux-red shade, its resistance to water and alcohol, its insolubility in oil and its fast color against the action of light, yielding, upon reduction by means of tin and hydrochloric acid, alpha-naphthylamin and 2 amido 1 naphthol 4 sulfonic acid.

1,014,540. WAGON. MILNER VAN PELT, Sabina, Ohio. Filed Aug. 10, 1910. Serial No. 576,602.

1. A wagon comprising a box having fixed lower longitudinally extending sideboards, movable upper longitudi-

sally extending sideboards, a bracket connecting the sideboards with each other and comprising relatively movable upper and lower substantially identically constructed members each having a short arm and a long arm, the long arm of each member being secured to its sideboard and the short arms being pivoted at their outer extremities with each other, the long arm of the lower bracket member having a longitudinal slot therein, and a brace pivoted to the long arm of the upper bracket member and movably connected in the slot in the long arm of the lower member of the bracket, said brace having its sides bowed outwardly to bind the short arms together, whereby the upper long arm is held in a vertical position.

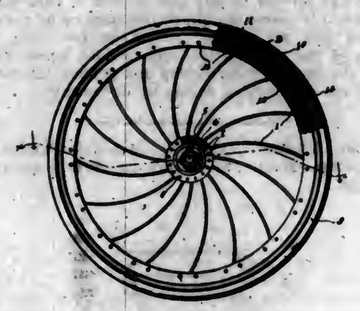


2. A wagon comprising a box having fixed lower longitudinally extending sideboards and angularly adjustable longitudinally extending upper sideboards, a bracket connecting the said upper and lower sideboards with each other and comprising a member having a long arm fixed to the lower sideboards and a short arm at the upper extremity of the long arm and extending outwardly from the sideboards, a member secured to the upper sideboards and including a short arm pivoted to the short arm of the first named member so as to hold the longitudinal surfaces of the sideboards entirely closed against each other when the upper sideboards are in a vertical position and to hold the said upper sideboards spaced laterally from the lower sideboards when the upper sideboards are in their horizontal positions, and means connecting both members of the bracket with each other for holding the upper sideboards in their horizontally adjusted positions and arranged to frictionally bind on the short arms when the upper long arm is in a vertical position.

3. A wagon comprising a box having longitudinally extending fixed lower sideboards and longitudinally extending angularly adjustable upper sideboards, a bracket connecting the sideboards with each other and comprising members each having a long arm fixed to the sideboards and a short arm, the short arms being pivotally connected with each other and being extended outwardly away from the sideboards when the upper sideboards are in a vertical position and operating to hold the sideboards with their longitudinal edges closed against each other and to hold the sideboards spaced laterally when the upper sideboards are in their horizontal positions, means connecting the members of the bracket with each other and operating to hold the upper sideboards in their horizontal positions and arranged to frictionally bind on the short arms to hold the upper long arm in a vertical position, and means for holding the upper sideboards in vertical positions.

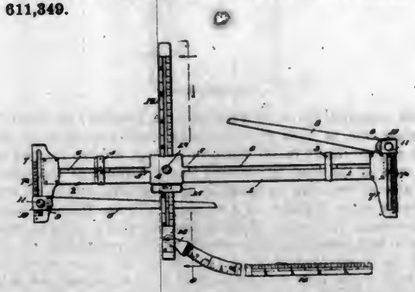
1,014,541. SPRING-WHEEL. SAMUEL F. WALKER and GUY HUNTER, Bozeman, Mont. Filed Apr. 15, 1910. Serial No. 555,610.

In a vehicle wheel, the combination of a rim of substantially U form, spokes curved throughout their length and having the outer terminal portions bent at obtuse angles and fitting against the inner side of the tread portion of the rim, filling pieces of like formation arranged in the space of the rim and between the outer ends of the spokes, the ends of the filling pieces being inclined to abut against the inclined ends of the spokes, one end of each filling piece being cut away to receive the bent end of a spoke which is retained in place by the opposing end of the adjacent filling piece, and fastenings passing through the



side flanges of the rim and filling pieces to secure them and the spokes together.

1,014,542. TAILOR'S MEASURE. ANDREW N. WALQUIST, Seattle, Wash. Filed Feb. 28, 1911. Serial No. 611,349.



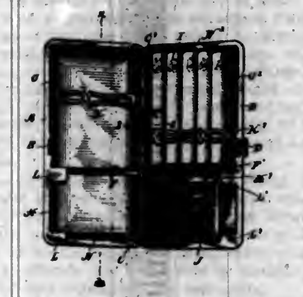
1. The improved tailor's measuring instrument, comprising a body portion formed of two graduated rules adapted to slide lengthwise on each other, clasps for holding the rules in due engagement, vertically slotted heads applied one to the end of each sliding rule, a device which is adapted for adjustment on the heads, a shoulder arm hinged to such device, and a vertically slidable scale consisting of a rigid graduated bar arranged at right angles to the sliding rules and adapted for adjustment lengthwise, and means for securing said scale in any desired adjustment, substantially as described.

2. The improved tailor's measuring instrument, comprising two graduated rules adapted to slide lengthwise on each other and each provided at its outer end with a vertically slotted head, clasps for holding the rules in slidable engagement, devices which are slidable on said heads, shoulder arms hinged to said devices and means for clamping the devices in any adjustment, a vertically slidable graduated bar arranged at right angles to the rules and adjustable vertically with relation thereto, means for securing the scale to said rules and clamping it in any adjustment, and a means for determining level of the rules, the same being attached to the body of the instrument, substantially as described.

3. In a tailor's measure, the combination with a rigid body portion and devices that are slidable transversely of its ends, of shoulder arms having a hinge connection with said devices which adapts them to be extended so as to project laterally from the body and to be adjusted with the devices higher or lower on the body portion when in such position, as shown and described.

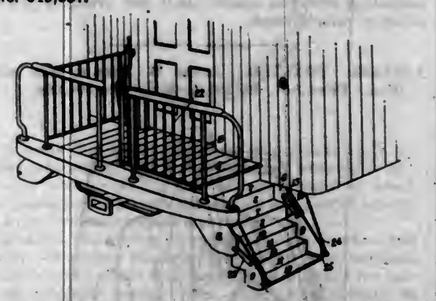
4. The combination of a body portion comprising two graduated rules laid together and adapted to slide upon each other, clasps for holding them in due engagement, a vertically extended and graduated head secured to the end of each rule, a shoulder arm, and a clasp to which it is hinged so as to swing outwardly, the said clasp being adjustable vertically on the graduated heads and means for clamping it in any required adjustment thereon, as shown and described.

1,014,543. CIGARETTE-CASE. ARTHUR QUINTON WALSH, New York, N. Y. Filed Apr. 22, 1911. Serial No. 622,669.



A case of the class described, comprising two case sections hinged together, said sections having transverse partitions dividing the same into separate compartments, and lugs at the ends of said sections for holding the latter against relative endwise movement in one direction, one of said partitions being extended beyond the end of the plane of its respective section and adapted to overlap the partition of the other section and prevent relative endwise movement of the case sections in the opposite direction.

1,014,544. EXTENSION CAR-STEP. WILLIAM GRAHAM WALTON, Ferriday, La. Filed Sept. 13, 1911. Serial No. 649,037.



1. In an extension car step a stationary step and an extension step, movable relatively to the stationary step, two pairs of links pivoted to the extension step and to the stationary step, one pair of links being spaced from the other pair so that the extension may be raised and lowered clear of the stationary step by one of the links, and means to operate the last-mentioned link.

2. In combination with a car a pair of links pivoted to the car, a second pair of links pivoted to the car on an axis disposed below the horizontal plane of the axis of the first links, and extending out beyond the vertical plane of the axis of the first links, and an extensible car step pivoted to the links, which permits the raising and the lowering of the car step as the car step is moved inwardly.

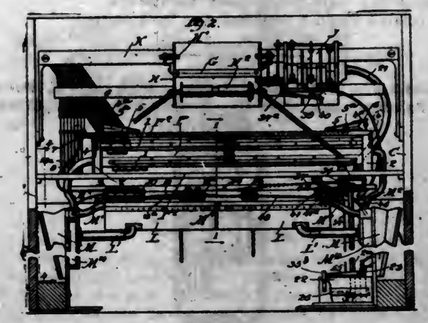
3. In an extension car step a stationary step, an extension step movable relatively to the stationary step, a pair of links one at each side of the stationary step connecting the extension step with the stationary step, a second pair of links one at each side of the stationary step and below the first-mentioned links for connecting the extension step with the stationary step, the links being adapted to raise the extension step and swing it upward and inward.

4. In an extension car step a stationary step, an extension step movable relatively to the stationary step, a pair of links one at each side of the stationary step connecting the extension step with the stationary step, a second pair of links one at each side of the stationary step and below the first-mentioned links for connecting the extension step with the stationary step, the links being adapted to raise the extension step and swing it upward and inward, a gate, and means connecting the gate with one of the links for operating the latter.

5. In an extension car step a stationary step, an extension step movable relatively to the stationary step, links connecting the extension step with the stationary step for holding the extension step clear of the stationary step when the extension step is raised, means for operating one of the links to move the extension step relatively to the stationary step, a gate, and means connecting the gate with one of the links for operating the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,014,545. AUTOPNEUMATIC PLAYING DEVICE FOR MUSICAL INSTRUMENTS. CHARLES WARREN, Rockford, Ill. Filed Aug. 20, 1909. Serial No. 513,756.



1. In an autopneumatic playing mechanism for musical instruments, in combination with the pneumatic action, take-up and re-roll mechanism and reversing means for the same, a shut-off valve for the pneumatic action, a motor pneumatic operatively connected with the reversing means; a motor pneumatic operatively connected with the shut-off valve; primary pneumatics for controlling said motor pneumatics respectively, and a manually operable vent valve controlling both said primary pneumatics.

2. In an autopneumatic playing mechanism for musical instruments, a pneumatic action comprising a primary pneumatic chamber; an air trunk communicating with such chamber; a shut-off valve controlling such communication; two motor pneumatics, both non-interferingly connected with such shut-off valve for operating the same; means limiting the valve actuating action of one of the motor pneumatics adapted to cause the valve to be only partially closed by said pneumatic; primary pneumatics for controlling said motor pneumatics respectively, and manually operable vent valves for the primary pneumatics.

3. In an autopneumatic playing mechanism for musical instruments in combination with a longitudinally extended primary pneumatic chamber and primary pneumatics therein, said chamber being partitioned intermediate its ends; air trunks communicating with the two end portion respectively; a shut-off and regulating valve for controlling each of said communications; a shut-off pneumatic and a regulating pneumatic operatively connected with each of said valves; means limiting the action of the regulating pneumatics to cause them to only partially close the respective valves; separate primary pneumatics for controlling each of said regulating pneumatics; a single

primary pneumatic for controlling both the shut-off pneumatics, and manually operable vent valves for controlling said three primary pneumatics respectively.

4. In an autopneumatic playing mechanism for musical instruments, exhaust mechanism; a pneumatic action comprising a primary pneumatic chamber; and air passage constituting means of communication from said exhaust mechanism to such chamber; a valve controlling such communication; a motor pneumatic operatively connected with such valve; adjustable means for positively limiting the valve-closing action of the motor pneumatic; a primary pneumatic for controlling such motor pneumatic, and a manually operable vent valve for controlling the primary pneumatic.

5. In an autopneumatic playing mechanism, in combination with a pneumatic action, a shut-off valve for the same; a motor pneumatic for operating such shut-off valve; a primary pneumatic for controlling such motor pneumatic; an exhaust air chamber; a pneumatic motor; take-up and re-roll mechanism operated thereby; a reversing means for said mechanism; a motor pneumatic which operates said reversing means; a governing device between the exhaust air chamber and the motor; a by-pass around said governing device; a valve which controls such by-pass; a motor pneumatic which operates such valve; a primary pneumatic which controls both the last-mentioned motor pneumatic and the motor penumatic which operates the reversing means, and a manually operable vent valve for controlling both said primary pneumatics.

[Claims 6 and 7 not printed in the Gazette.]

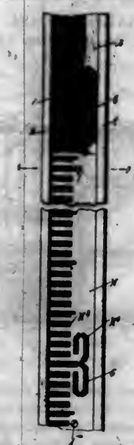
1,014,546. LIFE-PRESERVER. FERDINAND J. WICH, Baltimore, Md. Filed May 18, 1910. Serial No. 562,000.

A life preserver comprising a bellows, a spring mounted therein and normally acting to open the bellows, a gas producing medium mounted within the bellows, an inlet valve carried by the bellows, an outlet valve carried thereby, a gas bag secured to the bellows and adapted to receive the gas through said outlet valve, means to hold the gas bag collapsed which comprises a pair of cup-shaped members having recesses therein, one of said members having an aperture to expose the inlet end of the bellows, lugs on said members, soluble links connecting the lugs and lying in the recesses, and a soluble casing for the gas producing medium, whereby the action thereof is prevented until a sufficient amount of water has been drawn into the bellows to properly coact with the gas producing medium to fill the bag with gas.

1,014,547. LEVEL-ROD. FRANKLIN WHITFIELD WILLIS, Roanoke, Va. Filed July 5, 1911. Serial No. 636,849.

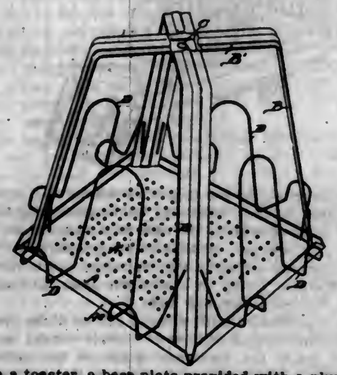
1. An engineer's level rod, comprising a stock provided on its face with differently colored bands, and a scale plate overlying the said stock face and provided with sets of openings, one of the sets of openings representing fractions of a unit and extending over one colored band, and the other set of openings representing unit-indicating numerals and overlying the other colored bands.

2. An engineer's level rod, comprising a stock provided on its face with differently-colored bands, and a scale plate overlying the said stock face and provided with sets of openings, one of the sets of openings representing fractions of a unit and extending over one colored band, and the other set of openings representing unit-indicating numerals and overlying the other colored bands, the scale plate having side flanges fitting the sides of the stock, and side pieces secured to the sides of the stock and clamping the said flanges in place against the side of the stock.



3. An engineer's level rod, comprising a stock provided on its face with a single colored band extending throughout the length of the stock and overlying approximately one-half of the width of the face, the latter being provided on the remaining portion with a series of spaced bands colored differently from the said single band, and a scale plate overlying the said stock face and provided with sets of openings, of which one set of openings represents fractions of a unit and overlies the said single colored band, and the other sets of openings represents unit-indicating numerals spaced apart and overlying the said series of colored bands.

1,014,548. TOASTER. JAMES B. WILLIS, Ann Arbor, Mich. Filed Nov. 30, 1910. Serial No. 594,824.



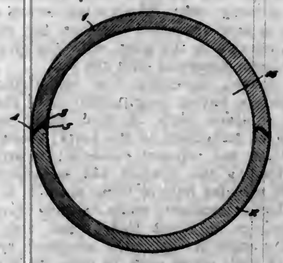
1. In a toaster, a base plate provided with a plurality of small perforations, standards rising from the base plate and secured thereto, wire racks inclined with respect to the base plate bridging the spaces between the standards, the area inclosed by the standards and wire racks above the base plate being entirely free and unobstructed, whereby the bread when placed on the racks may be directly exposed to rays of heat rising from the base plate.

2. In a toaster, a base plate, inclined cross-standards rising from the base plate, the intersecting upper portion of the same being formed parallel with the base plate, bread racks secured to said standards bridging the openings between the same, said base plate provided with a plurality of small perforations only for the passage of heat, the area inclosed by the standards and several bread racks and between the base plate and horizontal portion of the standards being free and unobstructed for the uninterrupted passage of the heat rays to toast the bread, substantially as described.

3. In a toaster, a base plate slightly convex having a central portion provided with a plurality of small perforations, a pair of intersecting cross standards rising from opposite sides of the base plate, means for securing said standards together at the point of intersection, wire bread racks bridging the openings between the standards forming a central inclosure surrounding the perforated portion of the base plate, the space inclosed by said bread racks being entirely free and unobstructed for the passage of the heat rays through the perforated base to the bread supported on said racks.

4. In a toaster, a base plate, standards rising from the base plate and secured thereto, wire racks inclined with respect to the base plate bridging the spaces between said standards, the area inclosed by the standards and several bread racks above the base plate being entirely open and unobstructed, whereby the bread may be directly exposed to the rays of heat rising from the base plate.

1,014,549. DRAIN-TILE. JOHN M. WILSON, Lottie, La. Filed Oct. 9, 1911. Serial No. 653,624.



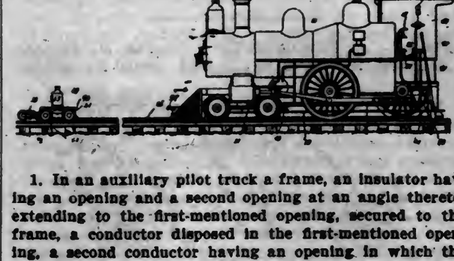
1. A drain tile having upwardly and downwardly extending passages through its body portion, adapted to permit water to enter the tile, but sufficiently small to retard under the action of gravity the passage of material heavier than water, substantially as described.

2. A drain tile having an impervious top portion, and upwardly extending passages through its side portions, adapted to admit water into the tile and to retard the passage of material heavier than water, substantially as described.

3. A drain tile comprising a top semicylindrical portion having inverted V-shaped grooves on its edges; and a similar bottom portion the edges of which are provided with angularly disposed surfaces adapted to coact with said grooves to form upwardly and downwardly extending passages adapted to permit the passage of water into the tile, but to retard the passage of material heavier than water, substantially as described.

1,014,550. ANIMAL-TRAP. JOSEPH F. WINKLER, Dollar Bay, Mich. Filed Sept. 16, 1911. Serial No. 649,603.

A trap comprising a base and a spring actuated striker, a lever pivoted to the base intermediate its ends and provided at one end with bait holding means, said lever having at its pivotal connection an upwardly extending loop rigid with the lever, a latch arm pivoted to the base adjacent to the end of the lever remote from the bait holding means, said latch having an arm engaging the rigid loop,



and a lug for engaging over the striker for holding said striker in set position.

1,014,551. CARBURETER. ALEXANDER WINTON, Cleveland, Ohio. Filed Apr. 3, 1909. Serial No. 487,669.

A carbureter having two horizontal air carbureting passages, a vertically arranged fluid chamber located between said passages at a point intermediate the ends of the horizontal passages, the fluid supply chamber having a separate exit passage extending into each air passage, one end of the passages having air inlet passages at one side of the supply chamber and the other ends having throttles located at the opposite side of the supply chamber.

1,014,552. AUXILIARY PILOT FOR RAILROAD-TRAINS. ISAAC WOLPER, New York, N. Y. Filed Jan. 30, 1911. Serial No. 605,435.

1. In an auxiliary pilot truck a frame, an insulator having an opening and a second opening at an angle thereto, extending to the first-mentioned opening, secured to the frame, a conductor disposed in the first-mentioned opening, a second conductor having an opening in which the insulator is disposed, and a second opening which communicates with the second-mentioned opening in the insulator, an insulated lining for the second-mentioned opening in the second conductor, a spring contact member having a terminal extending through the second-mentioned opening in the second-mentioned conductor, and the second-mentioned opening in the insulator, and in electrical

connection with the first-mentioned conductor, the contact member being adapted to engage the second conductor.

2. In an auxiliary pilot truck a frame, an insulator having a transverse opening and radially disposed openings extending thereto, a conductor disposed in the first-mentioned opening, a second conductor having an opening in which the insulator is disposed and radially disposed openings which communicate with the radially disposed openings in the insulator, an insulated lining for the radially disposed opening in the second conductor, a spring contact member having two terminals extending through the radially disposed openings in the second-mentioned conductor, and the radially disposed openings in the insulator, and in electrical communication with the first-mentioned conductor, the spring contact member being adapted to engage the second-mentioned conductor.

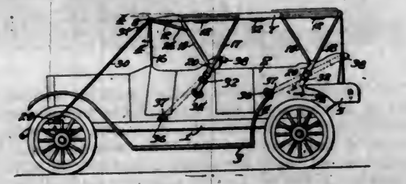
3. A truck, two insulated contact members normally spaced apart mounted on the front of the truck and projecting forwardly therefrom in position to be engaged by an obstruction, one of the contact members being adapted to engage the other contact member, means for propelling the truck, means commanding the first-mentioned means, an armature for controlling the second-mentioned means, and a solenoid commanding the armature having electrical connection with the contact member.

4. In an auxiliary pilot truck a frame, an insulator having an opening and a second opening at an angle thereto, extending to the first-mentioned opening, secured to the frame, a conductor disposed in the first-mentioned opening, a second conductor having an opening in which the insulator is disposed, and a second opening in which communicates with the second-mentioned opening in the insulator, an insulated lining for the second-mentioned opening in the second conductor, a spring contact member having a terminal extending through the second-mentioned opening in the second-mentioned conductor, and the second-mentioned opening in the insulator, and in electrical connection with the first-mentioned conductor, the contact member being adapted to engage the second conductor, a truck on which the frame is mounted, a rod having rack teeth secured to the truck, a gear wheel engaging the rack teeth for advancing the truck relatively thereto, means for rotating the gear wheel, means for controlling the last-mentioned means, and an electric circuit connected with the said two conductors having means for commanding the means for controlling the gear wheel.

5. A truck, a rod having rack teeth secured thereto, a gear wheel engaging the rack teeth for advancing the truck relatively to the gear wheel, a clutch member secured to the gear wheel, a companion clutch member for engaging the first-mentioned clutch member, a cylinder adapted to be connected with the train pipe of the train, a piston in the cylinder, a piston rod secured to the piston, and means for connecting the piston rod with the second mentioned clutch member for operating the latter.

[Claims 6 to 18 not printed in the Gazette.]

1,014,553. AUTOMOBILE-TOP. CLAUDE M. ZELLERS, St. Louis, Mo. Filed May 2, 1910. Serial No. 558,849.

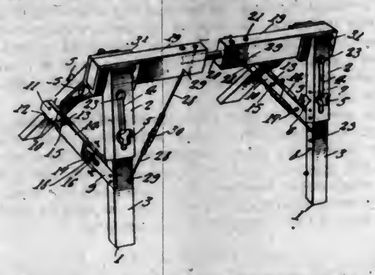


1. A bow for automobile tops, comprising a tubular member constructed of separable halves hinged together and means for holding said halves separated at times, which means occupy positions within the bow-members when folded.

2. In combination with suitable bows and means for holding the bows in open and folded positions, a flexible top, a spring actuated roller device for carrying said top when not in use, a roller device carried by said top, a flexible curtain carried by said roller, said flexible top being composed of several layers, curtains carried therebetween, and flexible detachable means for securing said top in place over said bows when in use.

3. In combination with suitable bows, a flexible top, a spring actuated roller device for carrying said top when not in use, a roller device carried by said top, a flexible curtain carried by said roller, said flexible top being composed of several layers, and curtains carried therebetween, substantially as shown.

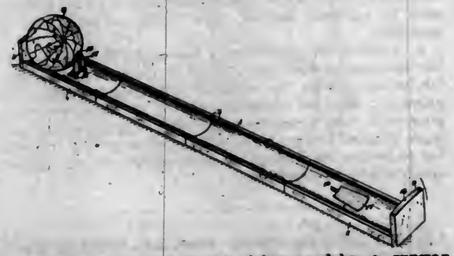
1,014,554. TRESTLE. OTTO ZENT, Little River, Kans. Filed Feb. 8, 1911. Serial No. 607,276.



1. In a trestle, diverging legs comprising primary channel members having longitudinal slots therein, provided with enlarged seats at their upper ends; turn buckles engaged terminally with the seats; secondary members slidable in the primary members; securing devices adjustably binding the primary members together, the securing devices being movable in the slots, with the primary members; and a beam connected with the legs.

2. In a trestle, diverging legs comprising primary channel members having longitudinal slots therein, provided with enlarged seats at their upper ends; turn buckles engaged terminally in the seats; secondary members slidable in the primary members; securing devices adjustably binding the primary and secondary members together, the securing devices being movable in the slots, with the primary members; angle brackets secured to the primary members, adjacent their upper ends; a beam resting in the angle brackets; the secondary members being slotted at their upper ends, to clear the turn buckles, and to permit the upper ends of the secondary member to abut against the angle brackets.

1,014,555. GAME APPARATUS. ANNA ZIMDARS, San Francisco, Cal., assignor of one-half to Ida M. Davis, San Francisco, Cal. Filed May 23, 1911. Serial No. 629,050.



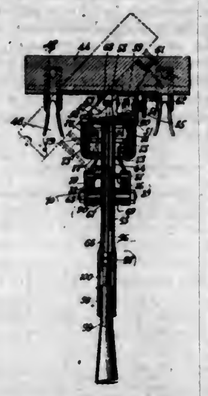
1. A game apparatus comprising a globe, a runway therefor having means for arresting the globe at either end, and indices arranged to be in position to the globe at each end of the runway, substantially as described.

2. A game apparatus comprising a globe having markings thereon the geographical features of the earth's surface, a runway therefor having means for arresting the

globe at either end, and indices arranged to be in position to the globe at each end of the runway, substantially as described.

3. A game apparatus comprising a globe having markings thereon the geographical features of the earth's surface, a runway therefor having means for arresting the globe at either end, a rear index on each arresting means, and a movable front index arranged to move into a position adjacent to the surface of the globe after the globe has passed thereover, substantially as described.

1,014,556. TRACKLESS TROLLEY. CHARLES A. AHL, Salem, N. J. Filed Oct. 25, 1909. Serial No. 524,371.



1. The combination of a pair of trolley wires spaced apart and substantially parallel with each other, a block adapted to tilt into an inclined position so as to be passed upwardly between said trolley wires, a shank mounted upon said block and extending downwardly between said trolley wires, said shank having a jointed connection with said block to facilitate tilting the latter, contact shoes carried by said block and adapted to engage said wires, and means for locking said block to said shank.

2. The combination of a pair of substantially parallel trolley wires spaced apart, a block movable among said trolley wires, a shank connected with said block and extending downwardly therefrom, the connection between said block and said shank being such as to permit the tilting of said block relatively to said shank in order to enable said block to be passed upwardly between said trolley wires, contact devices carried by said block and adapted to run upon said wires, a catch for locking said block against rotation relatively to said shank, and means for disengaging said catch from below.

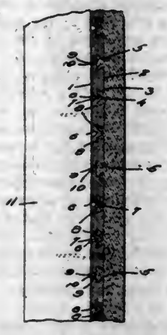
3. A shoe of the class described, comprising a shank having a catch head at the upper end thereof, a block having a hinge connection with said catch head, contact devices carried by said block adapted to engage the wires, a snap catch for locking said block to said shank, a spring constraining said catch to lock said block to said catch head, a member carried by said shank engaging said catch, and means for engaging said member to release said catch.

4. A shoe of the class described, comprising in combination, a shank, a block having a hinge connection therewith and having contact devices adapted to engage the trolley wires, means for locking said block to said shank, said shank having a handle formed therebelow, said handle being provided with a socket, a member adapted to engage said socket, and means actuated by said member for releasing the means for locking said block to said shank.

5. In combination, an overhead trolley conductor, a shoe running on said conductor and having a downwardly extending shank, a swivel rotatably mounted on said shank, an electric cord connected with said swivel and adapted to be attached to a vehicle propelled by the current passing in said cord, and means for maintaining metallic contact between said shoe and said swivel in all positions of said swivel.

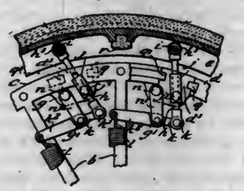
[Claims 6 to 10 not printed in the Gazette.]

1,014,557. LATH. JAMES S. ANDERSON and ROY ANDERSON, Wardner, British Columbia, Canada. Filed June 22, 1911. Serial No. 634,841.



A lath, comprising a wooden strip having a plurality of pairs of diverging grooves formed in one face and extending transversely of the strip partially through the thickness thereof, and said strip having a V-shaped groove formed in its opposite face with the apex of the groove in alinement with the pyramid formed between the diverging grooves, said V-shaped grooves having its apex disposed beyond the bases of the diverging grooves.

1,014,558. RESILIENT WHEEL. ERNEST CHARLES BASS and EDWARD STAMFORD HOUGH, London, England. Filed Dec. 2, 1909. Serial No. 530,940.



1. In a resilient wheel, a hub, a floating outer rim, an inner rim rigidly attached to the hub, a series of rocking links pivotally connected with one of the rims, a series of levers each fulcruming on a rocking link and elastically connected with the hub, and a series of main links pivoted at one end to the second rim and at the other end to the said levers.

2. In a resilient wheel, a hub, a floating outer rim, an inner rim rigidly attached to the hub, a series of rocking links pivotally connected with one of the rims, a series of levers each fulcruming on a rocking link and elastically connected with the hub, a series of main links pivoted at one end to the second rim and at the other end to the said levers, and means correlated with the main links, and the second rim and adapted to maintain the two rims in the same plane of rotation during a relative movement thereof.

3. In a resilient wheel, a hub, a floating outer rim, an inner rim rigidly attached to the hub, a series of rocking links pivotally connected with one of the rims, a series of levers each fulcruming on a rocking link and elastically connected with the hub, a series of main links pivoted at one end to the second rim and at the other end to the

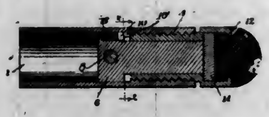
said levers, and trunnion blocks embracing the main links and pivotally supported on the rim carrying the rocking links, whereby the two rims are maintained in the same plane during a relative movement of the rims.

4. In a resilient wheel, a floating outer rim, an inner rim rigidly attached to the hub, a series of rocking links pivotally connected with the inner rim, a series of levers fulcruming on the rocking links, a corresponding series of springs connecting one end of each lever to the hub, a corresponding series of main links pivoted at one end to the outer rim and at the other end to the levers, sleeves embracing the main links and adapted to pivot on the inner rim and maintain the two rims in the same plane of rotation during a relative movement of the rims, and means for adjusting the tension of said springs.

5. In a resilient wheel, a floating outer rim, an inner rim rigidly attached to the hub, a series of rocking links pivotally connected with the inner rim, a series of levers fulcruming on the rocking links, a corresponding series of springs connecting the ends of the levers to the hub, a corresponding series of main links arranged in pairs and pivoted at one end to the outer rim and at the other end to the levers, guide sleeves embracing the main links and adapted to pivot on the inner rim and maintain the two rims in the same plane of rotation during a relative movement of the rims, means for adjusting the tension of said springs, and resilient means carried by the inner rim and adapted to limit the movement of the rocking and main links and to minimize shock.

[Claims 6 to 8 not printed in the Gazette.]

1,014,559. CUE-TIP HOLDER. JOSEPH CHARLES BECHTOLD, Detroit, Mich. Filed May 12, 1911. Serial No. 626,728.



1. In a device of the class described, the combination of a suitable ferrule, a core therein, and means for holding the core and ferrule in engagement, a plurality of jaws within the ferrule and in engagement therewith, other means carried by the core and engaging the jaws for holding them in position within the ferrule, the said jaws being provided with means for engagement with a cue tip.

2. In a device of the class described, the combination of a suitable ferrule, a core therein, a plurality of jaws within the ferrule and in engagement with the core, the said jaws being provided with means for engaging the cue tip, together with independent means within the ferrule for maintaining the fixed relation between the jaws and the ferrule.

3. In a device of the class described, the combination of a suitable ferrule having an interiorly threaded portion, a core within the ferrule carried thereby, a plurality of jaws within the ferrule and surrounding the said core, the said jaws being in engagement with the said threaded portion of the ferrule, the ends of the said jaws having an interiorly recessed portion for engagement with the body portion of a cue tip.

4. In a device of the class described, the combination of a suitable ferrule for engagement with the outer end of a cue, the interior portion of the ferrule being provided with screw threads, a core within the ferrule and in engagement therewith, a plurality of jaws within the ferrule and having threaded portions in engagement with the threads on the ferrule, the outer ends of the jaws being provided with means for holding the cue tip in position therein, together with resilient means within the ferrule for engagement with the said jaws whereby the parts are held in position.

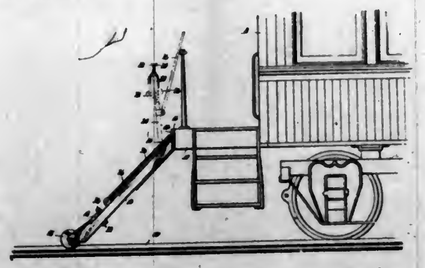
5. In a device of the class described, the combination of a suitable ferrule for engagement with the outer end of a cue, a core within the ferrule and in engagement therewith, a plurality of jaws within the ferrule and engaged thereby, the outer ends of the jaws being adapted to hold a cue tip, together with a spring and a member in engagement with the spring, the said member being adapted for engagement with the end of one of the said jaws whereby the jaws may be held in position within the ferrule.

[Claims 6 and 7 not printed in the Gazette.]

1,014,560. PROCESS OF ELECTROPLATING ALUMINIUM AND ITS ALLOYS. ERNST BECKER and OTTO BECKER, Iserlohn, Germany. Filed July 28, 1911. Serial No. 641,147.

A process of electroplating aluminium and its alloys with any metal, consisting in immersing the aluminium articles repeatedly for a short duration of time in a boiling bath composed of cyanid of potassium, water, and liquid ammonia, the articles being cooled after each such immersion in a solution of tartar and water, the electroplating being thereafter effected directly without the application of an intermediate layer of another metal, substantially as set forth.

1,014,561. TORPEDO-PLACING MACHINE. JOHN DAVID BELL, Arcadia, Kans. Filed Feb. 9, 1911. Serial No. 607,506.



1. A torpedo placing machine having a trailer frame adapted to be supported on the railway track and pivotally mounted upon the platform of a railway car; an arm pivotally connected with said frame adapted to be lifted to the level of said platform; gripping jaws mounted on said arm for receiving the torpedo; and manually operated means for raising and lowering said arm and jaws to the loading and discharging position.

2. A torpedo placing machine having a trailer frame supported at one end upon the platform of the car and at the other end by a wheel rolling on the railway track; a pivoted frame slidably mounted in the trailer frame and provided with resilient gripping jaws adapted to hold a torpedo; and means for lifting said pivoted frame to present the end having the gripping jaws above the platform of a car and for moving the said pivoted frame to deliver the torpedo carried thereby under the wheel supporting said trailer frame.

3. A torpedo placing machine having a trailer frame adapted for attachment to the platform of a car; a supporting wheel for said trailer frame to ride the railway track; a delivery frame movable in said trailer frame to and from the said wheel; and a torpedo adapted for engagement with said delivery frame to be held thereby, said torpedo having a tail piece extension adapted to extend under the said wheel at the moment of delivery of said torpedo from the delivery frame.

1,014,562. AUTOMOBILE-CHASSIS. WILLIAM H. BELL, New York, N. Y., assignor to Oswald J. Karsch, New York, N. Y. Filed Nov. 2, 1910. Serial No. 590,333.

1. An automobile chassis, comprising a plurality of rigid side bars; a plurality of carrying wheel axles; a plurality of swing bars pivotally connected with said axles and the ends of said side bars, each of said swing bars connecting one of said axles and that end of one of said side bars which is remote from the axle to which the said swing bar is connected; a plurality of springs interposed between said swing bars and said side bars at near the pivot connection thereof; and riding plates formed on said swing bars at the mid section thereof, and provided with slots formed therein, the curve of said slots being formed from the pivot connection of each of said swing bars and the axle whereupon each is mounted.

2. In an automobile chassis comprising a plurality of rigid side bars, a plurality of carrying wheel axles, said axles being fully extended across the chassis; a plurality of swing bars pivotally connected with said axles and the ends of said side bars, each of said swing bars connecting one of said axles and that end of one said side bars which is removed from the axle to which the said side bar is connected, said swing bars having straight sections normally disposed substantially in straight line extension between said axles; and a plurality of springs disposed between the body of said chassis and said swing bars, said springs being disposed adjacent the pivoted end of said swing bars.

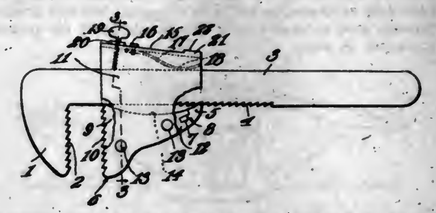
3. In an automobile chassis comprising a plurality of rigid side bars, a plurality of carrying wheel axles, said axles being fully extended across the chassis; a plurality of swing bars pivotally connected with said axles and the ends of said side bars, each of said swing bars connecting one of said axles and that end of one of said side bars which is removed from the axle to which the said side bar is connected, said swing bars having straight sections normally disposed substantially in straight line extension between said axles; connecting means for said swing bars, flexibly disposed, connecting said straight sections; and a plurality of springs disposed between the body of said chassis and said swing bars, said springs being disposed adjacent the pivoted end of said swing bars.

4. In an automobile chassis, a plurality of swing bars disposed in pairs each of said bars having a straight section pivotally connected with the carrying wheel axles and normally disposed in straight line extension between the said axles, and said swing bars being extended beyond the opposite axle and pivotally connected with the frame of said chassis, and said swing bars being arched adjacent the said opposite carrying axle to clear the same in its swing; and a plurality of springs disposed between the body of said chassis and said swing bars, said springs being disposed adjacent the pivoted end of said swing bars.

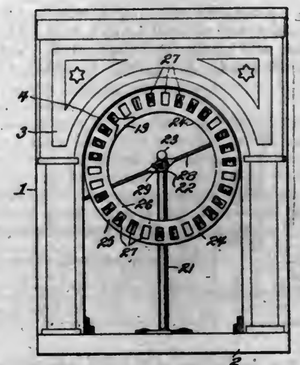
5. In an automobile chassis, a plurality of swing bars, each pivotally mounted on one of the carrying wheel axles, said axles being fully extended across the chassis of the automobile, said bars being extended beyond the opposite carrying axle of said automobile, and bent to avoid the said opposite axle; and a plurality of side bars adapted to be rigidly secured to the body of the automobile, said side bars having depended end extensions pivotally connected with said swing bars at a point approximately in line with the two axles when the body of the automobile is loaded.

1,014,563. WRENCH. WILLIAM BOWDEN, McHenry, Miss. Filed Dec. 12, 1910. Serial No. 596,801.

A wrench comprising a handle provided with a fixed jaw; a movable jaw including an arched member inclosing the handle slidably, and a filer held within the arched member, that edge of the filer which is adjacent the handle being concaved, whereby the filer will bear against the handle adjacent the ends of the filer only; there being teeth in the handle, adapted to be engaged by one end of the filer only, the teeth terminating at such a distance from the fixed jaw, that when one end of the filer is engaged with any of the teeth, the other end of the filer will bear upon a plane portion of the handle lying between the filed jaw and the teeth; there being a spring in the movable jaw, normally holding both ends of the filer in engagement with the respective parts of the handle; a movable member in the movable jaw, independent of the spring, and adapted to engage the handle to hold both ends of the filer against the handle; and means for holding the movable member in a handle-engaging position.



1,014,564. SIGN. OLIVER R. BUCK, Hotchkiss, Colo. Filed Dec. 31, 1910. Serial No. 600,306.



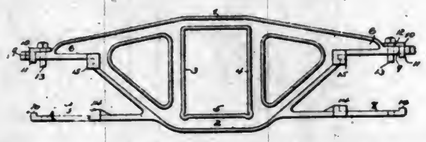
1. An advertising device embodying a supporting member, an apertured attention attracting member mounted thereon for rocking movement and having detachable engagement with the support, a hook located above the axis of the apertured member, and a sign removably mounted on the hook and disposed at one side of the apertured member and displayed therethrough on movement thereof.

2. An advertising device comprising a support, an apertured attention attracting member mounted for rocking movement thereon, a hook fixedly mounted above the axis of the apertured member, a sign disposed at one side of the apertured member and displayed therethrough and having a beaded portion for detachable engagement with the hook, and means for moving the apertured member.

1,014,565. MEANS FOR SECURING THE JOURNAL-BOX OF A CAR-TRUCK TO THE TRUCK SIDE FRAME. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Dec. 10, 1910. Serial No. 596,733.

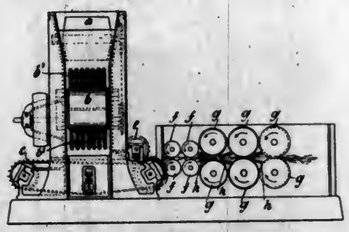
1. A journal box retaining means comprising a plate supported against the outer face of a member carrying the journal box, and provided with an integral lug the latter having bearing against said member throughout the entire thickness of the latter, and projecting beyond the same so as to form a stop or abutment for the journal box and a bolt passing through said plate for locking same and its integral lug to the truck frame.

2. A truck frame having an extension or jaw provided with an abutment or support of approximately the thickness of said jaw, a plate resting on the outer face of said extension or jaw and provided with a lug bearing against said abutment and supported against outward displacement by the latter, the said lug projecting inwardly beyond said extension or jaw, and a journal box bolt passing through said extension or jaw and said plate for locking the latter in place.



3. In combination of a truck side frame having two supporting members for each journal box, one of said members having an abutment approximately the thickness of said member, a plate resting on said member, and provided with a lug having outward bearing against said abutment, the said lug projecting inwardly beyond said member to form a stop for the journal box, and a bolt passing through both supporting members and through the plate.

1,014,566. PROCESS OF TREATMENT OF STRAW, DRIED GRASSES, OR THE LIKE FOR THE PRODUCTION OF ARTICLES OF COMMERCE. LOUIS CARR, London, England. Filed Aug. 16, 1910. Serial No. 577,447.



1. For the production of a rigid consolidated product from straw or the like material, a process consisting in arranging longitudinally the straw or the like, crushing same, cutting same into longitudinal filaments, impregnating same with a starchy substance and consolidating same under pressure and heat.

2. For the production of a rigid consolidated product from straw or the like material, a process consisting in arranging longitudinally the straw or the like, crushing same, cutting same into longitudinal filaments, impregnating same with a starchy substance and consolidating same under pressure and heat into boards.

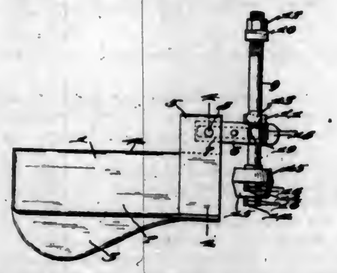
3. For the production of match-splints from straw or the like material, a process consisting in arranging longitudinally the straw or the like, crushing same, cutting same into longitudinal filaments, impregnating same with a starchy substance, consolidating and molding same under pressure and heat into boards consisting of fin-connected splints and laterally separating said splints.

4. For the production of match-splints from straw or the like material, a process consisting in arranging longitudinally the straw or the like, crushing same, cutting same into longitudinal filaments, impregnating same with a starchy substance, consolidating and molding same under pressure and heat into boards consisting of fin-connected splints laterally separating said splints and cutting said splints into uniform lengths.

5. For the production of match-splints from straw or the like material, a process consisting in arranging longitudinally the straw or the like, crushing same, cutting same into longitudinal filaments, impregnating same with a starchy substance, consolidating and molding same under pressure and heat into boards consisting of fin-connected splints laterally separating said splints, cutting said splints into uniform lengths and assembling said splints in superposed separated layers.

[Claims 6 to 13 not printed in the Gazette.]

1,014,567. PAPER-CUTTER. CHRISTIAN PETER CHRISTENSEN, Philadelphia, Pa., assignor to The Ridgely Trimmer Company, Springfield, Ohio, a Corporation of Ohio. Filed June 1, 1911. Serial No. 630,559.



1. A device of the character described, comprising a paper guide, parallel rods located at right angles to the guide, cutting rolls on said rods, a laterally projecting extension on said guide, a spring hook secured to said extension, and adapted to engage one of said rods, and a double spring also secured to said extension and adapted to clamp the other of said guides, substantially as described.

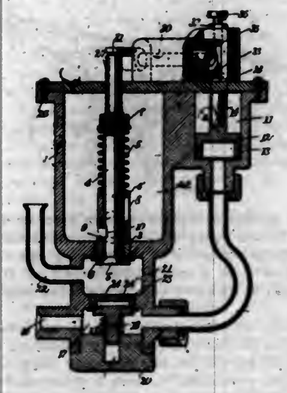
2. A device of the character described, comprising a paper guide, parallel rods located at right angles to the guide, cutting rolls on said rods, a laterally projecting extension on said guide, a spring hook secured to said extension, and adapted to engage one of said rods, a double spring also secured to said extension and adapted to clamp the other of said guides, a bar adjustable on said rods, a set screw locking said bar against movement on the rods, and said double spring bearing against said bar whereby the position of the bar regulates the width of the strip cut, substantially as described.

1,014,568. LUBRICATOR. ELMER E. COPE, Dubois, Pa. Filed May 26, 1911. Serial No. 629,555.

1. In a device of the class described, a body member having a cavity therein, the cavity communicating with a suitable oil chamber and with the cylinder of a compressor, means movably mounted within the cavity and the oil chamber whereby a desired amount of oil may be passed from the chamber into the cavity, together with a valve between the cavity and the cylinder and operable by the differences of pressure within the cylinder, there being also other means operable by the differences of pressure within the cylinder for actuating the means within the oil chamber and the cavity whereby during operation of the compressor a desired amount of lubricant is fed thereto on each rarefaction stroke.

2. In a device of the class described a body member having a cavity therein, the said cavity communicating with a suitable oil chamber and with the cylinder of a compressor, movable means within the cavity and the oil chamber whereby a desired amount of lubricant may be passed to the said cavity, a member movably mounted between the cavity and the compressor for closing the said communication on a compression stroke, and other means also actuated on the said compression stroke for actuating the means within the cavity and oil chamber to pass the desired amount of lubricant to the cavity

ber to pass the desired amount of lubricant to the cavity, the said lubricant within the cavity being carried on to the compressor on a rarefaction stroke.



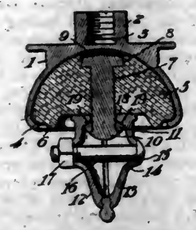
3. In a device of the class described a body member having a cavity therein, the said cavity communicating with an oil chamber, with the atmosphere, and with a compressor, movable means for passing a desired amount of lubricant from the chamber to the cavity, and a member movably positioned between the cavity and the compressor, the said member being in closed position on a compression stroke, and other means actuating the means for passing the lubricant from the chamber to the cavity also actuated on the compression stroke whereby, on a rarefaction stroke, communication between the cavity and the compressor being established, the lubricant contained within the cavity may be drawn into the compressor.

4. In a device of the class described, a body member having a cavity therein, the said cavity communicating with a suitable oil chamber, with the atmosphere, and with the air cylinder of a compressor, means contained within the cavity and the oil chamber whereby a desired amount of oil may be passed from the said chamber to the said cavity, together with means between the cavity and the said air cylinder and operable by the differences of pressure within the said cylinder, means also operable by the differences of pressure within the cylinder for actuating the said means within the oil chamber and the cavity, the said means between the cavity and the cylinder being movable to open position on a rarefaction stroke whereby the air may enter the cylinder through the cavity and there mix with a desired amount of oil, the said means being closed on a compression stroke, the other means actuating the means in the oil chamber and cavity being actuated by the compression to feed a desired amount of oil from the oil chamber to the cavity.

5. In a device of the class described, a body member having a cavity therein, together with a suitable oil chamber, means whereby a desired amount of lubricant may be passed from the oil chamber to the cavity, the cavity communicating at its upper portion with the atmosphere, as an air supply, and communicating at its bottom portion with the air cylinder of a compressor, means without the cavity and adapted to be moved in order to open and close the said communication with the cylinder, the said means being operable on a rarefaction stroke to open the communication whereby air may enter the cylinder through the cavity and carry with it an amount of the lubricant therein, the said means being operable on a compression stroke to close the said communication, together with means operable on this compression stroke to actuate the said means for feeding the desired amount of lubricant from the oil chamber to the cavity, whereby this amount of oil fed to the cavity may be carried on to the cylinder at the next rarefaction stroke.

[Claims 6 to 14 not printed in the Gazette.]

1,014,569. TROLLEY-HANGER. ROYDEN O. COUCH, Charleston, W. Va. Filed June 21, 1910. Serial No. 568,232.



1. In a trolley wire hanger, the combination of the shell and insulating block secured in said shell, and a bolt secured in said insulating block and depending therefrom, of a wedging ring secured on said bolt and conductor wire clamping jaws, a bevel face on said jaws to engage with the wedgeing ring between the ring and block, and means to draw the jaws together to force the jaws against the insulating block, whereby to secure the several parts in firm relation to each other.

2. In a trolley wire hanger, the combination with a bolt, insulating material secured around said bolt, said bolt depending below the insulating material, of a ring secured on said bolt and having an upper cam face and jaws having cam faces on the upper ends of said jaws, whereby when the jaws are clamped together the cam face on said ring forces the ends of the jaws up against the insulating material, thereby binding the several parts in firm relation to each other.

3. In a trolley wire hanger, the combination with a shell, an insulating block secured in said shell, and a bolt secured in said shell and depending therefrom, of a ring secured on said bolt and having an upper cam face, conductor wire clamping jaws, the upper ends of which are provided with cam faces constructed to engage the cam face of said ring, and means to clamp said jaws together.

1,014,570. SCREEN. LEVI S. COUPLIN, South Greenfield, Mo. Filed Jan. 31, 1911. Serial No. 605,703.

1. The combination with a frame having an open center and provided with inverted V-shaped exit passages at one end thereof, and openings through its inner and outer edges of wire cloth screens secured to opposite faces of the frame, one of said screens extending only a portion of the length of the frame and brackets secured to the inner edges of the sides of the frame and having upwardly converging portions provided with downturned forks engaging the inturned edge of one screen and a portion of the other screen whereby the said inturned edge and portion of the screen engaged by said forks will be brought into close relation to each other to provide a trap at one end of the frame.

2. A fly screen, comprising a frame, a screen secured to the outer side of the frame and having an inwardly deflected portion intermediate the length of the frame, a second screen connected to the inner side of the frame and having an inturned free edge, the said frame being provided with exit passages communicating with the space between the screens, and brackets fixed to the inner side edges of the frame and having upwardly converging portions provided with downturned forks for engagement

with the inwardly deflected portion of one screen and the inturned portion of the other screen whereby they will be sustained in close relation to each other to form an entrance to the space between the screens.

3. A fly screen, comprising a frame, a screen secured to the outer side of the frame and having an inwardly deflected portion intermediate the length of the frame, a second screen connected to the inner side of the frame and having an inturned free edge, the said frame being provided with exit passages communicating with the space between the screens, and brackets fixed to the inner side edges of the frame and having upwardly converging portions provided with downturned forks for engagement with the inwardly deflected portion of one screen and the inturned portion of the other screen whereby they will be sustained in close relation to each other to form an entrance to the space between the screens, a section hinged to the frame at the inner side thereof and supporting the screen disposed on the inside of the frame, whereby access may be had to the space between the said screens, and means carried by the section and frame, respectively, and coöperative with each for normally holding said section in closed position.

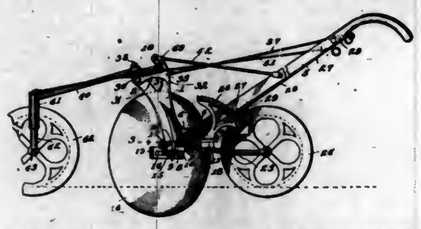
1,014,571. AMUSEMENT DEVICE. JAMES H. CRAUN and SCOTT BALDWIN, Marion, Ind. Filed Feb. 14, 1911. Serial No. 608,538.

1. A projecting device comprising a casing for holding material to be projected and formed of a plurality of hingedly connected sections, means constantly tending to move said sections to open position, a catch pin mounted on each section, a cap covering all of said pins and holding the sections in closed position, a connection of predetermined length having one end secured to the cap and its other end adapted for connection to a fixed part whereby said cap will be disengaged from said pins under the influence of said connection when the casing reaches a predetermined point in its flight and effect the discharge of the contents of the casing.

2. A device of the class described comprising a casing formed of a plurality of hingedly connected sections, means constantly tending to move said sections to open position, a catch member on each of said sections, and a locking device engaging said catch members and holding the sections in closed position against the influence of said tendency, said locking device being releasable from said catch members by movement away from the casing in a line extending through said casing.

3. A device of the class described comprising a casing formed of a plurality of hingedly connected sections, means constantly tending to move said sections to open position, a pin on each of said sections extending in a line passing through said casing, and a cap covering all of said pins and holding the sections in closed position against the influence of such tendency, said cap being disengaged from said pins by movement longitudinally of the latter.

1,014,572. CULTIVATOR. EDWARD J. DAVIS, Grenloch, N. J. Filed Apr. 1, 1911. Serial No. 618,343.



1. In a garden cultivator, a body member consisting of a casting having upwardly extending front and rear arms, said casting being provided at its lower end with a circular disk and with a rearwardly extending apertured lug and adjacent to its lower end with a transversely apertured web.

2. A body member terminating at its lower end in a circular disk having a downwardly extending axial pin, a turn table supported for rotation upon the pin and having an upwardly extending lug and a downwardly extending slotted flange, a set screw extending through the lug and engaging the disk of the turn table and a disk carrying element adjustably associated with the slotted flange of the turn table.

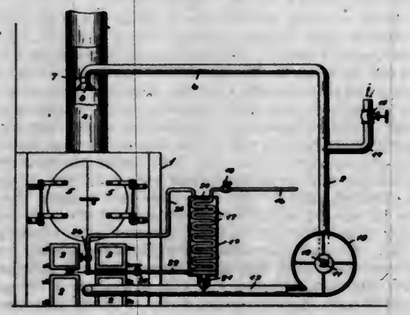
3. A body member having a rearwardly extending lug and a transversely apertured web, handles connected with the web, a slotted plate having eyes hingedly associated with the lug, a wheel carrying arm adjustably associated with the slotted plate, a rack segment connected with the slotted plate, and a rack engaging slide supported upon one of the handles.

4. A body member, a turn table connected with the lower end thereof and having a downwardly extending slotted flange, a disk carrying member adjustably associated with the said flange, a slotted plate hingedly connected with the body member, a wheel carrying arm adjustably connected with the slotted plate, and means for supporting the latter at various adjustments.

5. A body member having upwardly extending front and rear arms, an angle plate pivotally connected with the front arm, means associated with the rear arm for supporting the angle plate at various adjustments, a member pivotally associated with the angle plate and having a forwardly extending wheel carrying arm, and means for securing the member having the wheel carrying arm at various adjustments with reference to the angle plate.

[Claims 6 and 7 not printed in the Gazette.]

1,014,573. COMBINED SMOKE-CONSUMER AND VAPORIZER. OTHMAN DAVIS, Gainesville, Tex. Filed Apr. 15, 1911. Serial No. 621,265.



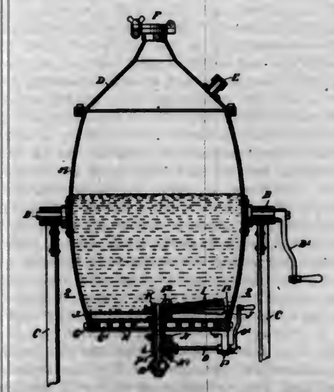
1. In apparatus of the character described, a furnace structure, including a stack, fire box and ash pit, apparatus to draw the products of combustion from the stack and introduce the same into the ash pit, a device for holding liquid fuel to be gasified, means for conducting a portion of the products of combustion circulating in the apparatus into proximity to said device for heating the same, and means for conducting the vaporized fuel into the fire box.

2. In apparatus of the character described, a furnace structure including a stack, fire box and ash pit, apparatus to draw the products of combustion from the stack and introduce the same into the ash pit, means to supply air to the products of combustion before such introduction, a device for holding liquid fuel to be gasified, means for conducting a portion of the products of combustion circulating in the apparatus into proximity to said device for heating the same, and means for conducting the vaporized fuel into the fire box.

3. In apparatus of the character described, a furnace structure including a stack, ash pit and fire box, a blower mechanism, a conduit establishing communication between the stack and the blower mechanism, a conduit establishing communication between the blower mechanism and the ash pit, a shell having communication with the second named conduit, a coil disposed within the shell to hold liquid fuel to be vaporized, a conduit connected with one end of said shell, and a conduit connected with the last named conduit and a portion of said coil and extending within the furnace structure to discharge its contents into the fire box.

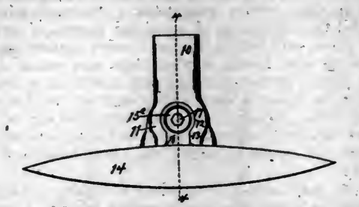
4. In apparatus of the character described, a furnace structure, a shell, a coil disposed within the shell to hold liquid fuel to be gasified, apparatus for conducting the products of combustion from the furnace structure and introducing the same into said shell and the ash pit of said furnace structure, a conduit connected with the shell and the furnace structure to deliver gases into the fire box, said coil having means of communication with the furnace structure to deliver the gasified fuel into the fire box, and separate valves connected with said conduit and means of communication for controlling the passage of material therethrough.

1,014,574. METHOD FOR MAKING AND PACKAGING BUTTER. JUSTIN DE LISLE, New York, N. Y.; Agnes de Lisle administratrix of said Justin de Lisle, deceased. Original application filed Feb. 15, 1909, Serial No. 477,869. Divided and this application filed May 5, 1909. Serial No. 494,024.



The herein described method for making butter, consisting in subjecting sterilized cream to a churning action while contained in a sterilized vessel, to separate the butter globules from the buttermilk, removing the buttermilk, washing the remaining butter globules, removing the wash water, kneading the butter globules into a mass and while still contained in the sterilized vessel, and finally filling the butter from the said vessel directly into a sterilized package.

1,014,575. MINER'S PICK. FRANK E. DERSCHMIDT, Ankeny, Iowa. Filed June 3, 1911. Serial No. 630,981.



1. A miner's pick, comprising a handle socket formed with a side-opening cavity, a pick having a laterally extending, centrally located, integral stem fitting within said cavity, and a bolt connecting said socket and stem transversely.

2. A miner's pick, comprising a handle socket formed with a side-opening cavity and formed with a stud, a pick having a stem extending within and fitted to said cavity and formed with a hole receiving said stud, and a bolt connecting said stud and stem transversely, said stem formed integrally with and extending laterally from the central portion of the pick.

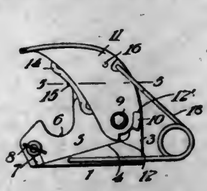
3. A miner's pick, comprising a handle socket formed with a side-opening cavity said cavity also opening to one side of said socket, a pick having a stem extending within and fitted to said cavity, a locking block overlying said stem, and detachable connections between said locking block and socket, said stem being formed on and extending laterally from the central portion of said pick, the side faces of the pick and socket being flush.

4. A miner's pick, comprising a handle socket formed with a side-opening cavity of key-hole form, a pick having an integral laterally projecting stem extending within and fitting to said cavity at one end portion of said socket fitted to and abutting the face of the pick on opposite sides of said stem, a locking block overlying said stem within said cavity, and detachable connections between said locking block and socket.

5. A miner's pick, comprising a handle socket formed with a side-opening cavity opening through one end of said socket, a pick having an integral, laterally projecting stem extending within and fitted to said cavity, a locking block overlying said stem within said cavity, a stud formed on said socket within said cavity and extending through said stem, and detachable connections between said locking block and stud, one end of the socket being fitted to and abutting one face of the pick on opposite sides of said stem, the outer face of the stem and adjacent side face of the pick being flush with the adjacent side face of the socket, the opposite faces of the pick and socket also being flush.

[Claims 6 and 7 not printed in the Gazette.]

1,014,576. CIGAR-CUTTER. DAVILA S. DU BRUL, Cincinnati, Ohio, assignor to The Miller, Du Brul & Peters Mfg. Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 13, 1910. Serial No. 581,890.



1. A cigar cutter, comprising a frame, a fixed blade carried by said frame, an operating handle, a spring cutting blade, said handle having a recess conforming to and receiving said spring cutting blade and means securing

said spring cutting blade to said handle at a point diametrically opposite the cutting edge of the blade.

2. A cigar cutter, comprising a frame, a fixed blade carried by said frame, an operating handle, a spring cutting blade, said handle having a recess conforming to and receiving said spring cutting blade and means securing said spring cutting blade to said handle at a point diametrically opposite the cutting edge of the blade; said blade being polygonal in form, with its angles located diametrically opposite its cutting edges and each adapted to receive the means by which the blade is secured to the handle.

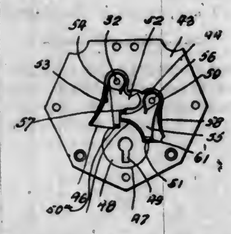
3. A cigar cutter, comprising a frame, a fixed blade carried by said frame, an operating handle, a polygonal cutting blade carried by said operating handle, said handle having a recess conforming to and receiving said cutting blade with either of its sides presented to the cutting position and providing abutment for the other edges of said cutting blade, whereby it is held rigid edgewise, and means for securing the cutting blade to the handle at a point diametrically opposite its edge in the cutting position; said cutting blade being adapted to receive said securing means when in each of the positions to which it may be adjusted.

4. A cigar cutter, comprising a frame, a fixed blade carried by said frame, said frame having a recess receiving said fixed blade and permitting adjustment of the blade therein, means adjustably fixing said blade in said frame, an operating handle, a polygonal cutting blade carried by said operating handle, said handle having a recess conforming to and receiving said cutting blade with either of its sides presented in the cutting position and providing abutment for the other edges of said cutting blade, whereby it is held rigid edgewise, and means for securing the cutting blade to the handle at a point diametrically opposite its edge in the cutting position; said cutting blade being adapted to receive said securing means when in each of the positions to which it may be adjusted.

5. A cigar cutter comprising a frame, a fixed blade carried by said frame, an operating handle overlapping and moving past said fixed blade, a cutting blade carried by said operating handle, said operating handle having a recess conforming to and adapted to receive said cutting blade and said cutting blade being secured to said handle at a point diametrically opposite its cutting edge and having its portion carrying the cutting edge sprung toward the plane of the fixed blade.

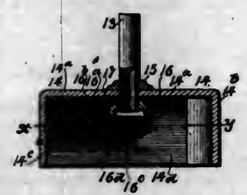
[Claims 6 and 7 not printed in the Gazette.]

1,014,577. LOCK. JOSEF DUNAI, Racine, Wis. Original application filed May 5, 1911, Serial No. 625,151. Divided and this application filed July 31, 1911. Serial No. 641,570.



In a lock mechanism, a lock body, plates carried by the front and rear sides thereof, an operating pin extending from the plates at the front side of said body through said body to the plates at the rear side thereof, a crank mounted upon said pin in one of the plates at the rear side of said body, an operating member arranged in the same plate and adapted to be actuated from the upper edge of said plate to move said pin, a key plate movably arranged in one of the plates at the front side of said body and having a key opening adapted to register with an opening in another of said plates, and means arranged within the plates for holding said key plate and operable by said pin for moving said key plate.

1,014,578. WASHING-MACHINE POUNDER. GEORGE C. DUNHAM, Cincinnati, Ohio. Original application filed Jan. 14, 1910, Serial No. 538,079. Divided and this application filed Dec. 1, 1910. Serial No. 595,066.



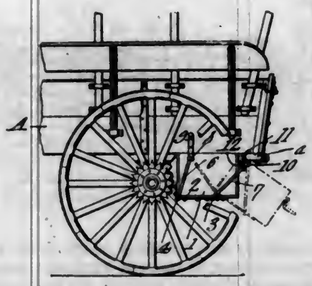
1. In a washing machine, a compressor-pounder consisting of a plurality of sections, a pipe for each section, a valve mechanism for each section to control the passage of air through said pipes, each of said compressor-pounder sections consisting of a plate and a depending rim, and dividing partitions to form a plurality of chambers, said partitions having apertures adjacent to said plate to establish communication between said chambers, each of said compressor-pounder sections having a cross-sectional form or shape equivalent to that of one-half the cross-sectional form of the tub of the washing machine to closely conform thereto, said valve mechanism including a valve casing or cup secured to said pipe within said compressor-pounder, the open end of said cup lying in a plane with the lowest point of the outline of said partition apertures, being located adjacent to the top or closed end of the respective pounder section, substantially as shown and described.

2. In a washing machine pounder, a body, consisting of a plate having a depending rim extending around the same to form a cup-like member, a pipe having one end projected through said body plate, means for securing said pipe to said body plate, said means including a valve casing, a valve in said casing to close over the end of said pipe, means for limiting the movement of said valve away from the end of said pipe, said body including partitions connecting said rim, said partitions having openings adjacent to said body plate, the depth of said openings corresponding to the depth of said valve casing whereby the open end of said valve casing will lie in a plane with the lower end of said openings.

3. A pounder consisting of a head formed of a body plate and a depending rim surrounding the same, partitions connecting the rim and dividing said head into a plurality of compartments, each of said partitions having an opening next to said body plate and extending downwardly therefrom, a pipe projected through said body plate, a collar threaded onto said pipe to engage the outer side of said body plate, a washer on said pipe within said pounder head to engage the inner side of said body plate, a cup-shaped valve casing threaded on said pipe against said washer, said valve casing having an enlarged portion for closing off the end of said pipe, and means carried by said valve casing for holding said valve in said casing.

4. A pounder consisting of a head formed of a body plate and a depending rim surrounding the same, partitions connecting the rim and dividing said head into a plurality of compartments, each of said partitions having an opening next to said body plate and extending downwardly therefrom, a pipe projected through said body plate, a collar threaded onto said pipe to engage the outer side of said body plate, a washer on said pipe within said pounder head to engage the inner side of said body plate, a cup-shaped valve casing threaded on said pipe against said washer, said valve casing having an enlarged portion for closing off the end of said pipe, means carried by said valve casing for holding said valve in said casing, the lower or open end of said valve casing lying in a plane that passes over the lower edge of said partition openings whereby to maintain air in all of the pounder head chambers between the opening of said valve casing and the inner face of said body plate.

1,014,579. ATTACHMENT FOR WAGON-BODIES. GEORGE F. EDGINGTON, Jeffersonville, Ind. Filed Nov. 6, 1911. Serial No. 658,903.



1. An attachment for vehicle bodies including a receptacle, hangers pivotally connected thereto and extending close to the sides thereof, one hanger on each side being longer than the other hanger, means for pivotally connecting the hangers to a vehicle body, and means on the receptacle for engaging a portion of the body and spacing the receptacle therefrom.

2. An attachment for vehicle bodies, including a receptacle, hangers of different lengths at each side thereof, said hangers being mounted for swinging movement relative to the receptacle, means for pivotally connecting the hangers to a vehicle body, and means on the receptacle and movable relative thereto for engaging a portion of a vehicle body to hold the receptacle in a predetermined position.

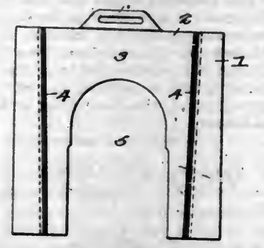
3. The combination with a vehicle body having a cross strip adjacent the rear end thereof, of a receptacle under the body, hangers at the sides of the receptacle, the hangers at each side being of different lengths, each hanger being mounted to swing relative to the receptacle supported thereby, means for pivotally connecting the hangers to the vehicle body and the cross strip, and means upon the receptacle and shiftable into engagement with the cross strip to hold the receptacle with its top in contact with the bottom of the vehicle body.

4. The combination with a vehicle body having a cross strip, of a receptacle, hangers for movably supporting the receptacle, said hangers constituting means for holding the receptacle in an inclined position under and beyond the cross strip, said receptacle being movable upwardly into contact with the bottom of the body, and means upon the receptacle for engaging the cross strip to hold the receptacle in raised position.

5. The combination with a vehicle body having a cross strip, of hangers pivotally connected to the body and cross strip, a receptacle pivotally connected to and supported by the hangers, said hangers being adapted to support the receptacle in an inclined position with a portion thereof projected under and beyond the cross strip, said receptacle being shiftable upwardly against the bottom of the vehicle body, and means upon the receptacle for engaging the cross strip to hold the receptacle in elevated position and against the bottom of the body.

[Claim 6 not printed in the Gazette.]

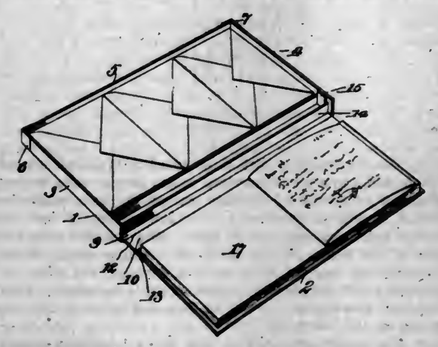
1,014,580. LOCOMOTIVE DRIVING AND TRUCK BOX. JAMES B. EDWARDS, Columbia, S. C., assignor of one-half to Rowland & Company, Columbia, S. C., a Corporation of South Carolina. Filed Sept. 16, 1910. Serial No. 582,351.



1. The combination with a box having its outer face formed with a depression, the side walls of which converge downwardly and are undercut, of a liner comprising a plate having its top, bottom and side edges of equal thickness, the rear surface of the plate being wholly plain to slidably engage and bear throughout on the bottom wall of the depression or recess in the box face, the side edges of the liner converging downwardly and being beveled to coöperate with the side walls of the box face recess, said box face recess opening wholly through the vertical extent of the box face whereby, through the equal thickness of the top, side and bottom edges of the liner, said liner is adapted for free vertical movement in said recess limited only by the coöperation of the side walls of the liner and recess through their wedge formation.

2. In a device of the class described, the combination with a box having its outer face formed with a depression, the side walls of which converge downwardly and are uniformly undercut from top to bottom, of a liner comprising a plate having its rear surface wholly plain to slidably engage and bear throughout on the bottom wall of said depression in the box face, the liner having edges converging downwardly to fit against the side edges of said depression, said edges being uniformly beveled to coöperate with the undercut side edges of the depression to clamp the liner tight against the bottom of said depression at all points.

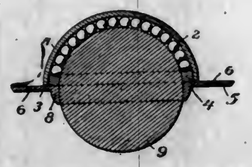
1,014,581. STATIONERY-BOX. ALEXANDER EHMLING, Philadelphia, Pa. Filed Oct. 5, 1910. Serial No. 585,526.



A box of the character described, formed of a blank having front and end scores to form front and end walls, the front and end walls turned upwardly and secured together to form an envelop receiving box, the blank having a transverse score located in a line with the rear edges of the end walls to form a hinged joint in a plane with the bottom of the envelop space, the blank having a second

transverse score located a distance from the first score equal to the height of the walls of the box and a distance from the opposite end of the blank equal to the length of the said end walls to receive a tablet, a tablet attached thereto and a tray located between the end walls at their rear ends and extending across the box, the side walls of the tray being of a height less than the height of the aforesaid walls of the envelop box equal to the thickness of said tablet, whereby the combined cover and tablet may be folded over the envelop box and the tray, and the swinging wall formed by said scores, and the cover folded outwardly in a plane with the bottom of the box for the purpose described.

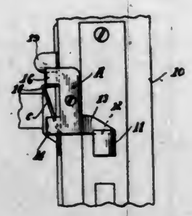
1,014,582. BALL-BEARING CASTER. JOSEPH H. EICHHOLZ, St. Louis, Mo. Filed May 12, 1911. Serial No. 626,684.



1. A ball bearing caster, comprising a plate, a caster ball retaining ring on the under side of said plate, a threaded ring carried by the upper side of said plate, a ball cup threaded onto said ring and antifriction bearings interposed between the caster ball and the ball cup.

2. A ball bearing caster comprising a flat plate having a caster ball opening therein, a retaining flange for the caster ball on the under side of said plate, a caster ball projecting through said opening and bearing against the retaining flange, a cup or socket for the reception of antifriction ball-bearings, a ring at the upper side of said plate to which the cup is connected, and ball-bearings within the cup and against which the caster ball is adapted to bear.

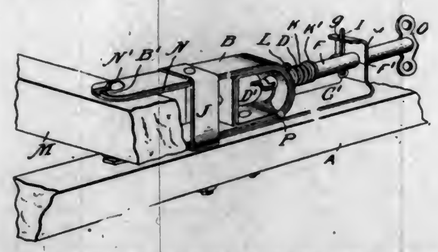
1,014,583. LATCH-BOLT LOCK. WILLIAM H. EISENHART, York, Pa. Filed Dec. 22, 1910. Serial No. 598,728.



1. The combination with a door and a latch bolt mounted therein having a transverse recess in one face thereof disposed exteriorly of the free end of the door when the bolt is in locking position, a lever pivoted on the free end of the door, one end of said lever being movable into and out of the recess in the latch bolt, and a single means movable into and out of the path of travel of the other end of said lever for holding same against movement when the first named end thereof is disposed in or out of the recess in the latch bolt.

2. The combination with a door and a latch bolt mounted therein having a transverse recess in one face thereof disposed exteriorly of the free end of the door when the bolt is in locking position, a lever pivoted on the free end of the door, one end of said lever being movable into and out of the recess in the latch bolt, and the other end thereof bent across the inner side of the door in spaced relation to the latter, and an arm pivotally mounted on the door having its free end stepped and forming a resultant shoulder, said shoulder in the active position of the arm engaging one edge of the bent portion of the lever when the latter extends into the recess in the latch bolt to hold same against movement out of said recess and interposed between the door and the bent portion of said lever when the latter is out of the recess in the latch bolt to hold same against movement into said recess.

1,014,584. WHIFFLETREE-DETACHING DEVICE FOR VEHICLE-THILLS. EMIL EKLUND, Pennock, Minn. Filed July 25, 1911. Serial No. 640,414.



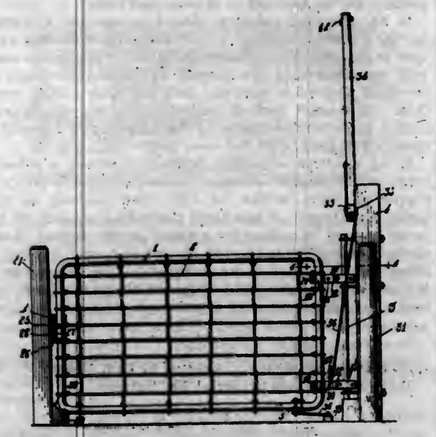
1. An apparatus for detaching whiffle trees from vehicle shafts consisting of two clevis-shaped members, one adapted to telescope within the other, one member fastened to the shaft, said member which is fastened to the shaft having an aperture, a rod passing through said aperture and provided with wings in its end, a whiffle tree pivoted to the other member, the latter having a slot in its inner end adapted to receive the wings of said rod, and means for holding said wings transversely of said slot.

2. An apparatus for detaching whiffle trees from vehicle shafts consisting of two clevis-shaped members, one adapted to telescope within the other, one member fastened to the shaft, said member which is fastened to the shaft having an aperture, a rod passing through said aperture and provided with wings in its end, a whiffle tree pivoted to the other member, the latter having a slot in its inner end adapted to receive the wings of said rod, a plate fastened to the shaft, a shell movable in an aperture in an upright portion thereof and in which said rod telescopes, and means carried by said shell and adapted to engage a notch in the plate to hold the rod from rotation.

3. An apparatus for detaching whiffle trees from vehicle shafts consisting of two clevis-shaped members, one adapted to telescope within the other, one member fastened to the shaft, said member which is fastened to the shaft having an aperture, a rod passing through said aperture and provided with wings in its end, a whiffle tree pivoted to the other member, the latter having a slot in its inner end adapted to receive the wings of said rod, a plate fastened to the shaft, a shell movable in an aperture in an upright portion thereof and in which said rod telescopes, a spring mounted upon the rod, a key passing through the latter, said spring bearing between the shell and key, and means carried by the shell and adapted to engage a notch in said plate to hold the rod from rotation.

4. An apparatus for detaching whiffle trees from vehicle shafts consisting of a plate adapted to be fastened to the shaft of a vehicle and having an upturned portion which is apertured and a bent end which is notched, a clevis-shaped member fastened to said plate and provided with slotted ends, an aperture in its bent portion, a brace about said member, a second clevis-shaped member, a whiffle tree, a pivotal screw passing through the same and adapted to engage said slots, a shell mounted in the aperture in said plate, a rod telescoping within said shell, wings at one end of said rod adapted to pass through said slot, a key fixed to the rod, a spring interposed between the shell and key, and a projection upon the shell adapted to be held by said spring in the notch in said plate.

1,014,585. GATE. BERTRAM J. ESSER, Pilot Grove, Mo. Filed June 8, 1911. Serial No. 631,975.



The combination in a device such as described, of a gate, a gate post, a rod secured in spaced relation to the gate post, eye bolts securing the rods in spaced relation to the post, hinges connecting the gate to the rod, said hinges being vertically movable upon the rod, whereby the gate is opened or closed, attaching means secured to said gate, said attaching means consisting of spaced parallel arms, an eye formed at the juncture of the arms, said arms being adapted to embrace the lower rail of the gate, a clamping bar adjustably secured to the said arms, whereby the attaching means will be held against displacement upon the rail, a post embedded in the path of the movement of the gate and a link connecting the attaching means with the post and means for raising said gate.

1,014,586. WRAPPER FOR SKEINS OF THREAD AND NEEDLES. CHARLES FISHER, San Francisco, Cal. Filed July 28, 1911. Serial No. 641,065.

1. A new article of manufacture comprising a skein of thread, a flexible wrapper adapted to be applied to and encircle the skein, comprising a plurality of layers of material sealed together, and a needle lying between the said layers and by them protected and inclosed practically air and water tight, and lying lengthwise of the skein when the wrapper is applied thereto.

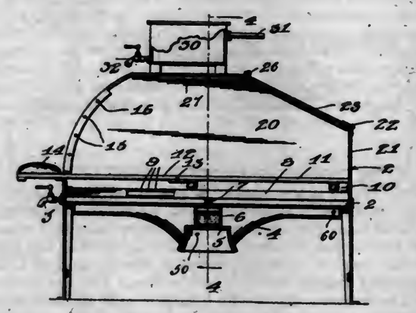
2. A wrapper for thread and a needle to be used therewith, comprising a flexible wrapper arranged to encircle the thread and a metal foil wrapper for the needle, the foil being arranged in a plurality of superposed layers between which is located the needle whereby it is sealed against air and moisture, the metal foil needle wrapper being secured to and held closed by the thread wrapper.

3. The combination with a skein of thread and a needle selected for use with the thread of the skein, of a paper wrapper adapted to encircle the skein, a metal foil wrapper secured to one edge of the paper wrapper and adapted to be folded over and protect the needle, the needle and its foil wrapper being arranged to lie lengthwise of the skein and be inclosed by the paper wrapper when the latter is applied to the skein.

4. A needle wrapper of metal foil arranged to be folded upon itself to inclose a needle, and a thread wrapper of two parts superposed and united by adhesive, the foil needle wrapper being partly inserted between the parts of the thread wrapper and held thereby.

5. A foil wrapper adapted to be folded and inclose a needle, the foil being perforated, and a threaded wrapper formed of two parts superposed and united by adhesive, the perforated part of the foil needle wrapper being inserted between the two parts of the thread wrapper, and held thereby.

1,014,587. BATH-CABINET. RUDOLPH FISHER and CHARLES A. YOUNG, Portland, Oreg. Filed June 29, 1911. Serial No. 635,980.



1. In a bath cabinet, the combination with a slatted bed, and a body rising above the same and having folding doors; of a tank carried by the upper portion of the body for containing a cooling liquid to be sprayed upon the patient, a pan extending below and co-extensive with said bed, steam generating mechanism located below said pan, a shield inclosing said mechanism and disposed immediately below said pan, a perforated pipe located within but out of communication with said pan, and a pipe connecting the perforated pipe with the steam generator and leading through but out of communication with the pan.

2. In a bath cabinet, the combination with a slatted bed, and a body rising above the same and having folding doors; of a tank carried by the upper portion of the body for containing a cooling liquid to be sprayed upon the patient, a pan extending below and co-extensive with said bed, an outlet from said pan, a water boiler located beneath and in contact with the bottom of the pan but out of communication with it, a perforated pipe between the pan and bed bottom, and connections between said boiler and pipe.

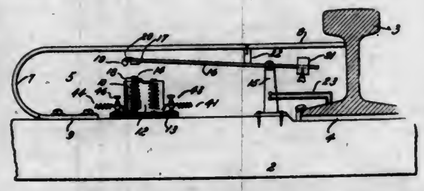
3. In a bath cabinet, the combination with a slatted bed, and a body rising above the same and having folding doors; of a tank carried by the upper portion of the body for containing a cooling liquid to be sprayed upon the patient, a pan extending below and co-extensive with said bed, an outlet from said pan, a water boiler located be-

neath and in contact with the bottom of the pan but out of communication with it, a perforated pipe between the pan and bed bottom, connections between said boiler and pipe, a heat collecting shell beneath said boiler and having outlets, and a shield surrounding the shell and extending to the edges of the pan and itself having heat exits.

4. In a bath cabinet, the combination with a slatted bed, and a body surrounding it and having folding doors; of a pan extending beneath and co-extensive with said bed and having an outlet, a triangular pipe located within but out of communication with said pan and having perforations in its upper side beneath said bed, a boiler located beneath and in contact with the bottom of the pan and connected with the interior of said perforated pipe, and means for directing the heat to the bottom of the boiler and to the bottom of the pan.

5. In a bath cabinet, the combination with a slatted bed, and a body surrounding it and having folding doors; of a pan extending beneath and co-extensive with said bed and having an outlet, a triangular pipe located within but out of communication with said pan and having perforations in its upper side beneath said bed, a boiler located beneath and in contact with the bottom of the pan and connected with the interior of said perforated pipe, a shell beneath the boiler, and a shield surrounding the shell and co-extensive with the pan, the shell having heat-openings into the shield and the shield having heat-exits around its edges.

1,014,588. ELECTRICAL SIGNALING DEVICE. EDWARD A. FITZGERALD, Highwood, Ill. Filed Dec. 9, 1909. Serial No. 532,215.



1. An electrical signaling device, comprising a vertically movable track rail, a resilient bar rigidly supported at one end and having its other end projecting beneath the head of the rail, an operating magnet beneath said bar, an equalizing magnet beneath said bar and adapted to prevent arcing when the circuit is broken, said magnets being connected parallel in a circuit, a contact on the operating magnet, a lever pivotally supported beneath the bar, a contact on the lever adapted to engage the contact on the operating magnet, a counterweight on the lever adapted to normally keep the contacts separated, an armature on the lever adapted to be attracted by the operating magnet and hold the contacts in engagement and means on the bar adapted when the bar is depressed to force the lever downwardly.

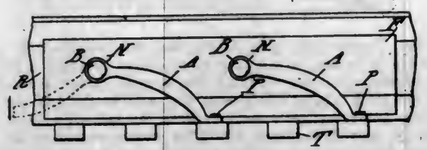
2. An electrical signaling device, comprising a normally open circuit including a movable rail, means adapted to break the circuit at a second point, an operating magnet connected in the circuit, an equalizing magnet connected in the circuit parallel with the operating magnet and adapted to prevent arcing when the circuit is broken, a resilient bar having one end rigidly supported and the other end projecting beneath the head of the movable rail, a pivotally supported lever having one end projecting above the operating magnet, an armature on the lever adapted to be attracted by said magnet, means on the bar adapted to move the armature into engagement with the operating magnet when the rail is depressed and close the circuit at the normally open point, and conductors connecting said lever with the rail.

3. An electrical signaling device, comprising a magnet having a contact thereon, a pivotally supported lever having a contact adapted to coöperate with the contact on the magnet, an armature on the lever adapting the magnet to hold the lever in position for the contacts to engage each other, and a resilient bar rigidly supported at one end in position for its free end to operate said lever.

4. An electrical signaling device, comprising a magnet having a contact thereon, a lever pivotally supported adjacent to the magnet, a contact on the lever adapted to coact with the contact on the magnet, an adjustable weight on the lever adapted to normally hold the lever contact away from the magnet contact, and a spring bar rigidly supported at one end adjacent to the magnet and adapted to operate the lever with the other end.

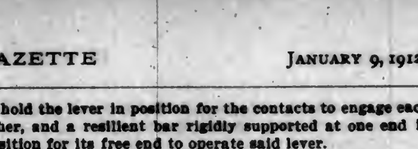
5. An electrical signaling device, comprising a movable track rail, a magnet having a contact thereon, a pivotally supported lever, means on the lever adapted to normally hold it out of operative position, a contact on the lever adapted to engage the contact on the magnet, and a spring bar rigidly supported at one end, and having its other end positioned to be operated by the depression of the rail and to engage the lever and throw the lever contact into engagement with the magnet contact.

1,014,589. RAIL-LOCK. ARCHIE E. FRY, Salem, W. Va. Filed Mar. 30, 1911. Serial No. 617,887.



The combination with a rail and a tie, of a bolt passing through the web of the rail and having its threaded end projecting therefrom and being constrained against rotatable movement, the thread of the bolt being of a large pitch, and a nut engaging the threaded end of the bolt and binding against the web of the rail, being removable upon less than a complete turn, the nut having a projecting arm extending diagonally downward and deflected outwardly beyond the base of the rail and having its outer end secured to the tie, the end of said arm being arranged to strike the tie upon the nut binding against the web of the rail.

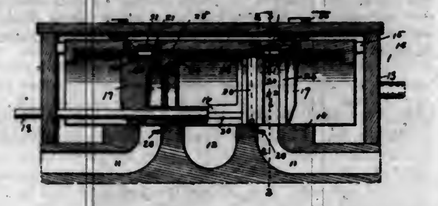
1,014,590. DRAFT-GEAR. CHARLES A. GILMORE, McComb, Miss. Filed Dec. 20, 1910. Serial No. 598,431.



In apparatus of the character described, the combination with an outer draw-bar casing provided at its outer end with an outstanding flange, of a transverse beam engaging the flange, longitudinal securing rods passing through the beam and flange, said outer draw-bar casing being provided at its inner end with an extension carrying lateral tongues disposed above and engaging the longitudinal securing rods, a draw-bar in the draw-bar casing, and draft gearing connecting the draw-bar and said outer draw-bar casing.

1,014,591. BALANCED VALVE. WILLIAM F. GOULD, Des Moines, Iowa. Filed May 19, 1909. Serial No. 496,892.

1. The combination of a valve, a valve cover, a packing bar between the valve and cover, means whereby pressure is applied to the packing bar to hold it toward one of said parts, the side of the packing bar opposite to the side to which said pressure is applied having a raised, longitudinal, central portion, for the purposes stated.



2. The combination of a valve seat having an induction port therein, a steam chest, a valve cover, a slide valve between the cover and valve seat, a steam chamber formed in the outer surface of the valve, a chamber formed within the valve cover, two comparatively large passageways formed in the valve cover communicating with said steam chamber in the cover and with the under surface of the valve cover, and a comparatively small passage-way formed in the valve cover communicating with said steam chamber and with the under surface of the valve for the purposes stated.

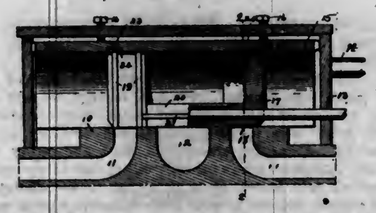
3. The combination of a valve seat having an induction port therein, a steam chest, a valve cover, a slide valve between the cover and valve seat, said valve being formed with a steam chamber on its outer surface, a steam chamber formed in the valve cover, and a number of passageways in the valve cover communicating between the steam chamber therein and the under surface of the valve cover and so arranged as to admit steam from the steam chest into the steam chamber on the outer surface of the valve in large quantities during certain portions of the valve stroke, and in smaller quantities during certain other portions of the valve stroke.

4. The combination of a valve seat having an induction port therein, a steam chest, a valve cover, a slide valve between the cover and valve seat, said valve being formed with a steam chamber on its outer surface leading to the valve seat, said valve seat being formed with passage-ways at its sides communicating between the induction port and said steam chamber in the valve when the valve is in a certain position relative to the induction port.

5. The combination of a valve seat having an induction port therein, a steam chest, a valve cover, a slide valve between the cover and valve seat, said valve being segmental on its outer surface, packing bars mounted in the valve and spaced apart from each other to form a steam chamber, said valve being provided on its under surface with passage-ways extending into the steam chamber, and said valve seat being provided with passage-ways leading from the sides of the induction port to the valve seat to discharge into the passage-ways of the valve leading to said steam chamber on the valve.

[Claims 6 to 11 not printed in the Gazette.]

1,014,592. BALANCED VALVE. WILLIAM F. GOULD, Des Moines, Iowa. Filed May 19, 1909. Serial No. 496,894.



1. The combination of a steam chest, a valve seat having induction ports, a slide valve on the valve seat, a steam chamber formed on the outer surface of the slide valve and closed from communication with induction ports at all positions of the slide valve, a valve cover within the steam chest being provided with a passageway designed to admit steam from the steam chest into said steam chamber during a portion of the valve stroke.

2. The combination of a steam chest, a valve seat having induction ports, a slide valve on the valve seat having a steam chamber on the outer surface of each end, said chambers being closed from communication with induction ports at all positions of the slide valve, a valve cover being provided with two passageways, each being designed to admit steam from the steam chest to the steam chamber on the adjacent end of the valve during a part of the valve stroke.

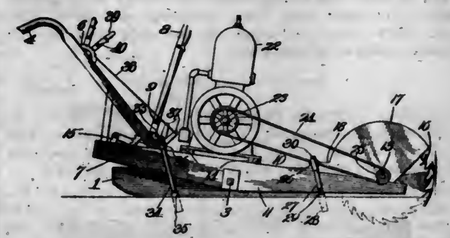
3. The combination of a steam chest, a valve seat having induction ports, a slide valve on the valve seat, a steam chamber formed on the outer surface of the slide valve and closed from communication with induction ports at all positions, a valve cover within the steam chest being provided with a passageway designed to admit steam from the steam chest into said steam chamber during a portion of the valve stroke, and also being designed to permit steam to exhaust from the steam chamber during a part of the valve stroke.

4. The combination of a steam chest, a valve seat having induction ports, a slide valve on the valve seat having a steam chamber on the outer surface of each end, said chambers being closed from communication with induction ports at all positions of the valve, a valve cover being provided with two passageways, each being designed to admit steam from the steam chest to the steam chamber on the adjacent end of the valve during a part of the valve stroke, said passageways being also designed to permit steam to exhaust from the chambers on the ends of the valve during a part of the valve stroke.

5. The combination of a steam chest, a slide valve therein having a steam chamber on its outer surface, a valve cover being provided with a steam chamber having passageways at its ends leading to the surface of the valve cover adjacent to the valve, said passage-ways being spaced apart slightly less than the width of the steam chamber on the outer surface of the valve.

[Claims 6 to 11 not printed in the Gazette.]

1,014,593. ICE-CUTTING MACHINE. ST. CLAIR GUTHRIE, Jr., Blue Rapids, Kans. Filed Jan. 6, 1910. Serial No. 536,736.



1. An ice cutting machine, comprising a support to travel upon the ice, a platform tiltingly mounted upon the support, a motor and a rotary saw carried by the tilting platform and bearing a substantially balanced relation with respect to the pivotal point of the platform, means connecting the motor and the rotary saw to drive the latter, a draft attachment for the machine at the opposite end of the same from that occupied by the saw, means whereby the platform may be tilted to raise or lower the saw, a transverse rock-shaft mounted on the tilting platform between the saw and motor, guides extending downward from and carried by said rock-shaft and capable of independent endwise sliding movement and provided with flattened lower ends, rock shafts suitably supported rearward of and above the tilting platform, independently adjustable guides extending from the said rock-shafts and provided with flattened lower ends in the same longitudinal plane as the flattened ends of the first-named guides, means for operating said rock-shafts, and means for securing said rock shafts against rotation.

2. An ice cutting machine, comprising a support to travel upon the ice, a platform tiltingly mounted upon the support, a motor and a rotary saw carried by the tilting platform and bearing a substantially balanced relation with respect to the pivotal point of the platform, means connecting the motor and the rotary saw to drive the latter, a draft attachment for the machine at the opposite end of the same from that occupied by the saw, means whereby the platform may be tilted to lower the saw, a transverse rock shaft mounted on the tilting platform between the saw and motor, guides extending downward from and carried by said rock-shaft and capable of independent endwise sliding movement and provided with flattened lower ends, rock shafts suitably supported rearward of and above the tilting platform, independently adjustable guides extending from the said rock-shafts and provided with flattened lower ends in the same longitudinal plane as the flattened ends of the first-named guides, means for operating said rock-shafts, levers suitably supported, connections between the same and the said rock-shafts whereby the latter may be operated, and means for locking said levers at the desired point of adjustment.

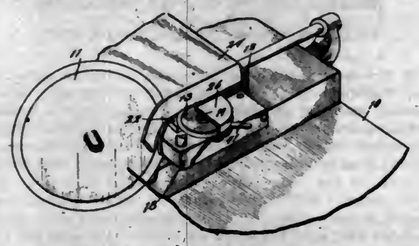
3. An ice cutting machine, comprising a sled, a tilting platform mounted upon said sled, a rotary saw and a motor mounted upon and bearing a balanced relation to said tilting platform, the saw being at the front end of said platform, means for transmitting motion from the motor to the saw, rigid handles projecting upward and rearward from the sled, a sector bearing a rigid relation to the sled, an angle lever fulcrumed on the sector, a link pivotally connecting the angle lever with the rear end of the tilting platform, a latch mechanism carried by the lever for engagement with the sector, a transverse rock shaft between the motor and the saw and carried by the tilting platform, guides extending downward from and carried by said rock-shaft and capable of independent endwise sliding movement, and provided with flattened lower ends, means secured to said guides and bearing a slidable relation to said rock-shaft to prevent turning or rotary movement of the guides, transverse rock shafts above the tilting platform and rearward of the motor and carried by said handles, guides slidingly secured to outer ends of said rock shafts and disposed in the same longitudinal planes as the first-named guides and provided with flattened lower ends, means to establish a rigid relation between the second guides and said rock-shafts, a crank arm projecting from each of said rock-shafts, levers carried by said handles near their upper ends, links connecting said levers with said crank arms, and means to lock said levers at the desired point of adjustment.

1,014,594. DENTAL CLEANING DEVICE. GEORGE B. HAKINS, Norwood, N. Y. Original application filed Mar. 26, 1908, Serial No. 423,432. Divided and this application filed May 27, 1910. Serial No. 563,790.

1. In a cleaning device, a mandrel having a rigid enlarged part on its free end, a cup-shaped element carried by the mandrel, a mass of sponge-rubber in the cup-shaped element, said mandrel being passed through said mass of sponge-rubber to cause the latter to be clamped in compressed state between said enlarged part of the mandrel and the base of the cup-shaped element whereby the outer portions of the mass of sponge-rubber will, due to the expansive properties thereof, project beyond the free end of the cup-shaped element.

2. In a cleaning device, a mandrel having a rigid enlarged part on its free end, a cup-shaped element carried by the mandrel, a mass of sponge-rubber in the cup-shaped element, said mandrel being passed through said mass of sponge-rubber to cause the latter to be clamped in compressed state between said enlarged part of the mandrel and the base of the cup-shaped element whereby the outer portions of the mass of sponge-rubber will, due to the expansive properties thereof, project beyond the free end of the cup-shaped element, a sleeve formed on said element and surrounding the mandrel, said sleeve being formed with a struck-out part which projects in a recess provided therefor in the mandrel.

1,014,595. SLICING-MACHINE. ENOS ALFRED HAND, Chicago, Ill. Filed Oct. 31, 1910. Serial No. 589,916.



1. In a meat slicing machine, the combination of a support for the meat to be cut, a cutter, said cutter and support being relatively movable, a rind removing cutter the cutting edge of which operates in a plane intersecting the plane in which the cutting edge of the first recited cutter operates, and means for imparting a cutting motion to the second recited cutter.

2. In a meat slicing machine, the combination of a support for the meat to be cut, a cutter, said cutter and support being relatively movable, a rind removing cutter the cutting edge of which operates in a plane intersecting the plane in which the cutting edge of the first recited cutter operates, and means for imparting a cutting motion to the second recited cutter relative to the movement of the first recited cutter.

3. In a meat slicing machine, the combination of a relatively movable meat support and slicing cutter extending beyond the upper surface of the support, a rind removing cutter, a support for the latter, and means for imparting movement to the rind removing cutter relative to its support and during the cutting operation.

4. In a slicing machine, the combination of a relatively movable meat support and slicing cutter extending beyond the upper surface of the support, a cutter for removing the rind from the slices as they are cut, a support for the rind removing cutter, and means for imparting movement to the latter relative to its support and during its cutting operation.

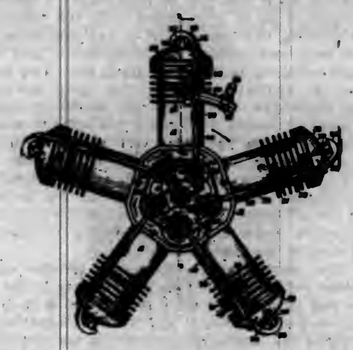
5. In a meat slicing machine, the combination of a relatively movable meat support and slicing cutter extending beyond the upper surface of the support, a cutter for removing the rind from the individual slices separately and as they are cut, a support for the rind removing cutter, and means for imparting movement to the latter during its cutting operation and relative to its support and the first recited cutter.

[Claims 6 to 28 not printed in the Gazette.]

1,014,596. ROTARY INTERNAL-COMBUSTION ENGINE. ALIUS G. HATHCOCK, San Francisco, Cal. Filed Nov. 10, 1910. Serial No. 591,575.

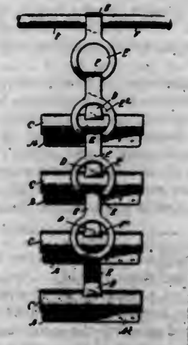
1. The combination of a stationary crank shaft, a rotating crank case thereon, cylinders secured to said crank case, pistons in said cylinders, piston rods connected at their outer ends to said pistons and rotating at their inner ends about the crank case, inlet and outlet valves for said cylinders, levers for controlling said valves, rods for actuating said levers, cams arranged to successively impart similar motion to said rods, sprocket wheels secured to said cams, a sprocket chain engaging all of said wheels whereby the remainder of said sprocket wheels are driven from one of them, a gear wheel rotating with the latter sprocket wheel, and a pinion on the crank shaft rotating with said gear wheel, substantially as described.

2. In combination with a stationary crank shaft, a rotating crank case thereon, cylinders secured to said crank casing, pistons in said cylinders, piston rods connected at their outer ends to said pistons and rotating at their inner ends about said crank shaft, inlet and outlet valves for the respective cylinders, levers for controlling said valves, rods for actuating said levers, cams for actuating said rods, means for rotating all of said cams in unison, sparking devices in the respective cylinders, flexible conductors carried by the rods and leading to said sparking devices, a contact piece secured to each rod and connected with said conductor, and a stationary contact adapted to contact with each contact piece in succession in the rotation of said cylinders, substantially as described.



3. The combination of a stationary crank shaft, a rotating crank case thereon, cylinders secured to said crank casing, pistons in said cylinders, piston rods connected at their outer ends to said pistons and rotating at their inner ends about said crank shaft, inlet and outlet valves for the respective cylinders, levers for controlling said valves, rods for actuating said levers, cams for actuating said rods, means for rotating all of said cams in unison, sparking devices in the respective cylinders, flexible conductors carried by the rods and leading to said sparking devices, a contact piece secured to each rod and connected with said conductors, a stationarily supported arm, a rack adjustably secured in said arm, a device secured to said arm adjustably of the length of said device, and a contact carried by said device arranged to engage each contact piece in succession in the rotation of said cylinders.

1,014,597. GARMENT-HANGER. CHARLOTTE WARREN HEWLETT, New York, N. Y. Filed June 26, 1911. Serial No. 635,247.



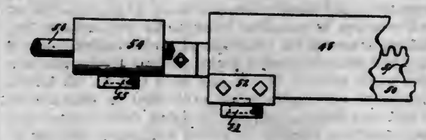
Garment hangers, one suspended from the other, for use in series, each hanger comprising spring-pressed front and rear clamping members for clamping the garment between the members, a fingerpiece extending upwardly from the front clamping member, a hook extending upwardly from the rear clamping member, the hook having a shank provided with a loop above the upper end of said front fingerpiece, the hook of one hanger engaging the loop of the next hanger above, and the fingerpiece of one hanger appearing in the opening of the loop of the next lower hanger.

1,014,598. DOILY-CABINET. BENJAMIN F. HUNTER, Cincinnati, Ohio. Filed Mar. 22, 1907, Serial No. 363,867. Renewed Sept. 6, 1910. Serial No. 580,773.

1. In a doily cabinet, the combination, with a box having a hinged back, of slotted guides pivoted at their lower ends to the bottom of the box and having pivoted link connection at their upper ends with the back of the box, and leaves provided with pins, said pins engaging with the slots in the guides, substantially as specified.

2. A device of the kind described comprising a casing having a wall hinged to its bottom and its top hinged to said wall, longitudinal slotted members arranged at opposite sides of the casing, inwardly of said hinged wall, a plurality of leaves superposed over the bottom of the casing, transversely extending pins flexibly connected to said leaves, and projecting at opposite ends through said slotted members, and means for causing said slotted members to move simultaneously with said hinged wall.

1,014,599. WIRE-WEAVING MACHINE. ALVA L. KITSELMAN, Muncie, Ind. Filed July 1, 1908. Serial No. 441,382.



1. In a wire weaving machine, the combination of a plurality of wire connecting devices arranged in a row, a support for said wire connecting devices, and means for moving said support longitudinally at predetermined intervals for deflecting wires engaged by said connecting devices.

2. In a wire weaving machine, the combination of a traveling carrier, a plurality of wire connecting devices arranged in a row and supported upon said carrier, means for moving said row of wire connecting devices at predetermined intervals for deflecting wires engaged thereby during the travel of the carrier, and means for actuating said wire connecting devices subsequent to the movement thereof for deflecting said wires.

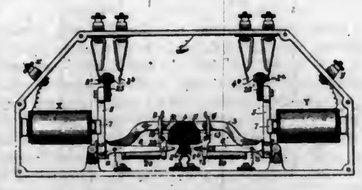
3. In a wire weaving machine, the combination of a traveling carrier, a plurality of rows of supports mounted upon said carrier, a plurality of wire connecting devices arranged in rows and carried by said supports, means for moving the successive supports lengthwise at predetermined intervals for deflecting wires engaged by the connecting devices carried thereby, and means for intermittently and successively operating said rows of wire connecting devices.

4. In a wire weaving machine, the combination of a traveling carrier, a plurality of rows of supports mounted upon said carrier, a plurality of wire connecting devices arranged in rows and carried by said supports, means for moving the successive supports lengthwise and in opposite directions at predetermined intervals for deflecting wires engaged by the connecting devices carried thereby, and means for intermittently and successively operating said rows of wire connecting devices.

5. In a wire weaving machine, the combination of a support adapted to travel in an endless orbit, a plurality of rows of wire connecting devices arranged on said support, means for shifting simultaneously and in succession, each row of wire connecting devices at predetermined intervals during the movement of said support for deflecting wires engaged by said connecting devices, and means for intermittently and successively operating said rows of wire connecting devices during the movement of said support.

[Claims 6 to 37 not printed in the Gazette.]

1,014,600. ELECTRICAL RELAY. EDWARD E. KLEINSCHMIDT, New York, N. Y. Filed Nov. 18, 1908. Serial No. 463,289.



1. In a relay, the combination of an interlocking member mounted to swing and remain stationary in the position last swung into; reciprocating arms one on each side of the interlocking member, each of said arms having spaced apart projections and having a forward reciprocation from a position No. 1 into a position No. 2, and a return reciprocation from position No. 2 back into position No. 1, each of said arms on its forward reciprocation having one of its projections engaging the interlocking member and swinging said member into a position wherein it arrests the other reciprocating arm in a position No. 3, should said arm be returning from its No. 2 position to No. 1, each arm having its aforesaid projection carried out of engagement with the interlocking member before the arm arrives in its position No. 2, and each arm on its return reciprocation having its other projection in engagement with the interlocking member to swing said member out of any arresting position which it may have relative to the opposite reciprocating arm; electro-magnetic means for each reciprocating arm adapted to effect its reciprocation; and electrical contacts respectively operated when the relay members are in their said positions.

2. In a relay, the combination of an interlocking member supported to swing and adapted to remain in the given position last swung into; latch arms one on each side of the interlocking member, each of said arms having a forward reciprocation from a position No. 1 into a position No. 2, and a reverse return reciprocation, and each having spaced apart projections, one of them a short projection 19 and the other a long projection 23, one or the other of said projections engaging the interlocking member and swinging said member in one direction or the other depending upon the direction of reciprocation of the latch arm; bell-cranks on oposite sides of the interlocking member pivotally supported at their angles and each having one of its arms conveniently termed its horizontal arm projecting toward the interlocking member and having its other arm conveniently termed its vertical arm provided with an armature; magnets for attracting and releasing said armatures to reciprocate the horizontal arms of the bell-cranks along with the latch arms, which are pivotally supported from the ends of said horizontal arms, each of said arms on its forward reciprocation having its short projection 19 in carrying engagement with the interlocking member until said member has been swung into the path of the extremity of the horizontal arm of the other bell-crank preventing the complete return reciprocation of the other latch arm back to its position No. 1; cam means acting on each latch arm to cam its short projection 19 out of the aforesaid carrying engagement with the interlocking member, after said member has been swung into the aforesaid obstructing position and before the particular latch arm has fully arrived in its No. 2 position, each of said latch arms on its return reciprocation fully back into its position No. 1 having its long projection 23 in engagement with the interlocking member to swing said member out of any obstructing position which it may have relative to the horizontal arm of the bell-crank belonging to the other latch arm; two contact points on the vertical arm of each bell-crank, one contact point on either side of said arm, and stationary members spaced apart to contact with one or the other of said contact points when the particular vertical arm is in either one of its positions of swing corresponding to the No. 1 or No. 2 positions of its latch arm, and additional electrical contacts comprising the ends of the horizontal arms of the bell-cranks and the portion of the interlocking member which obstructs said ends during the operation of said member as aforesaid.

3. A relay comprising an interlocking member supported to swing and adapted to remain stationary in the given position last swung into; relay members each reciprocating between positions Nos. 1 and 2 and coöperating with and swinging the interlocking member in one direction or the other depending upon the direction of reciprocation of the relay members, the reciprocation of said members from their position No. 1 into their position No. 2 being termed their forward reciprocation, and their reciprocation from position No. 2 back into position No. 1 being termed their return reciprocation, each of said members on its forward reciprocation coöperating with the interlocking member and swinging same until said member arrests the other relay member in a position No. 3, should said member be returning from its No. 2 position to No. 1, and each relay member on its return reciprocation coöperating with the interlocking member and swinging it out of any obstructing position it may have as to the other relay member; and electrical contacts respectively operated when the relay members are in said positions.

4. A relay comprising in combination a pair of relay members, each movable from a position No. 1 into a position No. 2 and return, means interlocking said relay members, said means being operated by either of said members on its motion into No. 2 position to obstruct the return of the other member fully back into its No. 1 position and to arrest it in a No. 3 position, said interlocking means being further operated reversely out of obstructing position as to either member by the return of the other member back into its No. 1 position; and electrical contacts respectively operated when the relay members are in said positions.

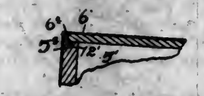
5. A relay comprising in combination a pair of relay members each movable from a position No. 1 into a position No. 2 and return, either of said relay members in position No. 2 operating to prevent the other member from returning into position No. 1 and to arrest it in a position No. 3, and electrical contacts respectively operated when the relay members are in said positions.

[Claims 6 to 8 not printed in the Gazette.]

1,014,601. RECEPTACLE. MATTHEW M. LOOMAM, New York, N. Y. Filed Nov. 28, 1911. Serial No. 662,834.

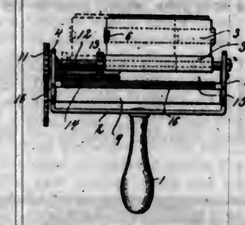
1. A receptacle of porous material with glazed and unglazed areas on its surface, the unglazed areas adapted to absorb moisture and give off the same and indicate by the change in color the extent of absorption of such moisture, and the glazed areas serving as reservoirs for absorbed moisture.

2. A receptacle of porous material with integral bottom and sides having glazed and unglazed areas on its surface, the unglazed areas being adapted to absorb moisture and give off the same and indicate by the change in color the extent of absorption of such moisture and the glazed areas serving as reservoirs for absorbed moisture.



3. A receptacle of porous material with glazed and unglazed areas on its surface one of such unglazed areas being surrounded by an upstanding integral flange, and a removable cover fitting such flange.

1,014,602. MECHANICAL RAZOR-STROPPING DEVICE. JOHN FRANKLIN MACINDOE, Philadelphia, Pa., assignor of one-half to L. Irving Reichner, Philadelphia, Pa. Filed Mar. 1, 1911. Serial No. 611,674.



1. In a device for mechanically stropping razor blades, the combination of a supporting frame movable lengthwise of a strop, a revoluble threaded transverse shaft in said frame, a blade holder movable endwise of the shaft and transversely of the frame, and means for actuating said shaft as the frame is moved bodily along the strop.

2. In a device for mechanically stropping razor blades, the combination of a frame adapted to be moved bodily along a strop, a revoluble threaded transverse shaft in said frame, strop actuated shaft revolving means carried by the frame, a blade holder mounted on said shaft, said shaft and blade holder being connected for moving the latter transversely of the frame during bodily movement of the frame along the strop.

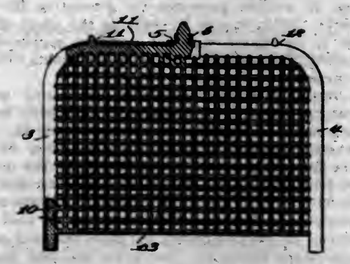
3. In a device for mechanically stropping razor blades, the combination of a supporting frame movable lengthwise of a strop, a revoluble threaded transverse shaft in the frame, said shaft being connected with a blade holder to move the latter transversely of the frame, means for actuating said shaft as the frame is moved bodily along the strop, and means for reversing the position of the blade holder when the movement of the frame with respect to the strop is reversed.

4. In a device for mechanically stropping razor blades, the combination of a frame adapted to be moved bodily along a strop, a revoluble threaded transverse shaft in said frame, strop actuated shaft revolving means carried by the frame, a blade holder mounted on said shaft, said shaft and blade holder being connected for moving the latter transversely on its shaft with respect to the frame during bodily movement of the frame along the strop, and means associated with the blade holder for reversing its position with respect to the strop when the movement of the frame is reversed.

5. In a device for mechanically stropping razor blades, the combination of a supporting frame adapted to be moved bodily along a strop, a threaded shaft mounted transversely in said frame, a blade holder having threaded connection with said shaft, and means for rotating the threaded shaft as the frame is moved bodily, whereby to cause transverse movement of the blade holder on the shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,014,603. METHOD OF MAKING RADIATORS AND ANALOGOUS TUBULAR STRUCTURES. JOHN A. MCPHAYDEN and CHARLES T. DE VEAUX, Chattanooga, Tenn. Filed May 12, 1911. Serial No. 626,820.



1. A method of making structures of the class described which comprises forming a grid-like core within a marginal frame, depositing metal on said core and frame to completely cover both, and removing the core.

2. A method of making radiators and similar tubular structures which comprises forming and supporting a complete metallic grid-like core in a reinforcing frame, depositing metal on said core and frame to completely cover both, and removing the core.

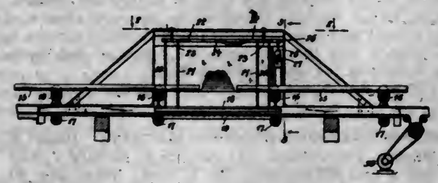
3. A method of making structures of the class described which comprises forming a solid soft metal grid-like core within a marginal hard metal frame, electrolytically depositing metal on said core and frame, and removing the core from the interior of the deposited metal.

4. A method of making structures of the class described which comprises molding a metal core within a marginal frame, electrolytically depositing metal on said core and frame, and heating the structure to remove the metal core therefrom.

5. A method of making structures of the class described which comprises molding a soft metal core in a hollow marginal frame, electrolytically depositing metal on the core and frame, and heating the structure to melt and remove the metal core from the interior of the deposited metal and the hollow frame.

[Claims 6 to 10 not printed in the Gazette.]

1,014,604. INTEGRATING MECHANISM. EDWIN H. MESSITER, Brooklyn, N. Y., assignor to Electric Weighing Company, New York, N. Y., a Corporation of New York. Filed Aug. 12, 1910. Serial No. 576,827.



1. Integrating means comprising a moving element, the speed of whose movement is one of the factors to be integrated, a liquid immersed plunger, the degree of whose immersion is determined by pressure as another factor to be integrated, such pressure being resisted by the liquid so displaced, an electric circuit, means for proportioning the electro-motive force therein by and in accordance with the speed of movement of the said moving element, means controlled by the amount of liquid displaced for varying the resistance in said circuit in accordance with such displacement, and means for measuring the said electric current.

2. Integrating means comprising a moving element, the speed of whose movement is one of the factors to be integrated, a liquid immersed plunger, the degree of whose

immersion is determined by pressure as another of the factors to be integrated, such pressure being resisted by the liquid so displaced, an electric circuit, means controlled by the amount of liquid displaced for varying the resistance in said circuit in accordance with such displacement, an electric generator for generating the current in said circuit, means for varying the speed of the generator in accordance with the speed of movement of the said moving element, and means for measuring the said electric current.

3. Continuous weighing mechanism comprising means for carrying a moving load, a mercury containing vessel, a plunger, means connecting the plunger with the said load conveying means, whereby the immersion of the plunger in the mercury will be determined by the weight of the load as it passes a given point, means for generating an electric current, means for proportioning the speed of the generator to the speed of movement of the load conveying means, an electric circuit fed from the said generator, a resistance device for controlling the said electric circuit, and a plurality of electric contacts in the said mercury containing vessel arranged to be successively closed by the mercury as it rises in the said vessel, whereby the amount of current in the said circuit is caused to be proportionate to the weight of the moving load.

4. Integrating mechanism comprising a plunger whose position is determined by the load to be measured, a mercury bath for receiving the plunger, the displacement of the mercury due to the immersion of the plunger therein being arranged to oppose the force exerted by the load to move the plunger, a vessel composed of a material whose co-efficient of expansion is substantially equal to the co-efficient of expansion of the mercury, a plurality of contact points arranged to be successively closed by the mercury as it is displaced, means to compensate for the expansion of the mercury and of the vessel due to rises of temperature, whereby the mercury level for any predetermined load will be unchanged under changes of temperature, means variably controlled by the closing of the contact points by the mercury for proportioning an electric current in accordance with the load, and means for measuring the said electric current to arrive at the load.

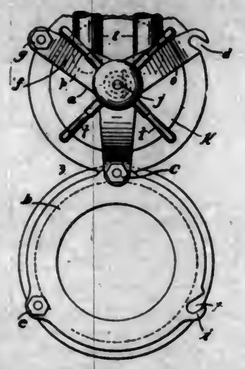
5. Continuous weighing mechanism comprising a traveling conveyer, means for supporting a loaded portion thereof, a plunger connected with said supporting means, a mercury bath for receiving the plunger, the displacement of the mercury by the plunger opposing the movement of the said supporting means, a plurality of contacts successively closed by the said mercury as it is displaced, means for compensating for changes in the volume of the mercury, due to changes in temperature whereby the varying movements of the mercury with respect to the contact points will be substantially uniform at different temperatures, means variably controlled by the said closing of the contact points for proportioning an electric current in accordance with the load upon the conveyer, and means for measuring the said electric current.

[Claims 6 to 20 not printed in the Gazette.]

1,014,605. SAUSAGE-STUFFING MACHINE. HENRY F. MÜLLER, Philadelphia, Pa., assignor to Richard T. Randall & Co., Philadelphia, Pa., a Firm. Filed Aug. 10, 1911. Serial No. 643,303.

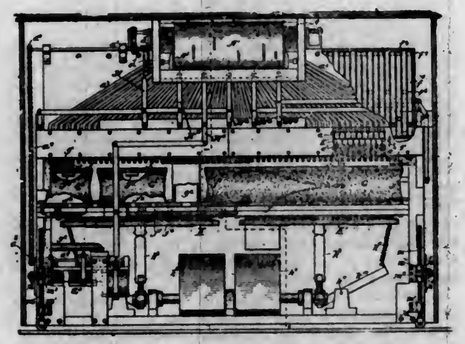
1. In a closure, in combination, a cylinder furnished with a fixed stop upon its top and a notch upon its side, said stop, a yoke having three legs one of which is pivotally secured to said cylinder so that it can be swung in a horizontal plane and the other two legs of which are furnished with means adapted to engage said stop and notch, said engaging means, a lid adapted to close the top of the cylinder, and means carried by said yoke for adjustably carrying said lid.

2. In a closure, in combination, a vertical cylinder, a yoke having three legs one of which is pivotally secured to said cylinder, one of which is furnished with a slot *d* and the other of which carries a bolt *g*, a stop carried by said cylinder adapted to be engaged by the slotted leg of the yoke, a slotted lug carried by said cylinder adapted to receive the bolt carried by the third leg of the yoke, a



screw carried by said yoke, and a head or lid carried by said screw.

1,014,606. MACHINE FOR AUTOMATICALLY PLAYING PIANOS AND SIMILAR INSTRUMENTS. ALFRED W. NUNN, Cambridge, Mass., assignor to Alfred W. Nunn, Cambridge, Mass., and Charles D. Lyford, Watertown, Mass., trustees. Filed Nov. 7, 1900. Serial No. 35,715.



1. In a machine for playing pianos and other musical instruments, the key-strikers having arms angularly arranged with respect to each other and pivoted at or near their point of divergence in a manner to cause the striking arms to extend backward horizontally and the power-receiving arms to extend downward vertically, in combination with a series of pneumatic motors, one for each key striker, each located in front of its striker with its movable side toward the vertical arm of said striker, and a rod connecting each motor with its striker, and means for operating said motor, whereby each motor will pull its striker to cause its action upon the piano key, as described.

2. In a machine for playing pianos and the like, the combination of a channel board having a horizontal portion, a series of pneumatic motors supported from the under side of the horizontal portion of said channel board, a series of strikers having arms angularly arranged with respect to each other, each striker being separately pivotally mounted upon the rear edge of said channel board, its horizontal striking arm extending rearward and its vertical arms extending downward substantially parallel with said pneumatic motors, a rod connecting each motor with its striker, and means whereby each motor is operated as described.

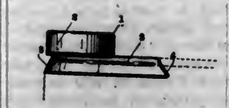
3. In a machine for playing pianos or the like, the combination with a tracker board and paper rolls, of a supporting rail located in rear of said tracker board and paper rolls, a series of independent striker supporters, one for each striker mounted on the upper rearward surface of said rail, each having an exposed movable fastener for attaching one of said strikers thereto, and an exposed movable fastener for attaching said supporter to said rail, whereby each separate striker may be reached and removed without removing either of the others and without interfering with said tracker board and paper rolls, as described.

4. In a machine for playing pianos and other musical instruments, in combination with a tracker board and paper rolls, a supporting rail located in rear of said tracker board and paper rolls, a series of striker supports each having two projecting portions between which and to which a striker may be pivoted, a striker pivoted to each support, and a series of pneumatic motors located in front of said strikers, and means connecting said strikers to said motors whereby the action of each motor upon said striker will cause said striker to strike the piano key, as described.

5. In a machine for playing pianos and other musical instruments, a channel board, and a series of striker supports each having a seat to rest upon the upper surface of said channel board, and a shoulder to bear against an edge of said channel board, and means for attaching said support to said channel board whereby said support is held against said channel board and prevented from moving laterally thereon, in combination with a series of strikers each striker being supported in its support, and means whereby each striker is operated, and a tracker board and its paper rolls, said tracker board and paper rolls being located in front of the rear edge of said channel board, whereby each striker may be reached without disturbing said tracker board and rolls, as described.

[Claims 6 to 42 not printed in the Gazette.]

1,014,607. NOZZLE FOR WATER-BAGS. ERNEST OVER, Portland, Oreg., assignor of one-half to Dan Kellaher, Portland, Oreg. Filed Aug. 22, 1910. Serial No. 578,392.



1. A nozzle having an enlarged head portion, and a base portion rounded at one end and elongated to a point at the other, substantially as described.

2. A nozzle having an enlarged head portion, and a base portion which is rounded at one end and elongated to a point at the other, the sides of which being reduced toward the head portion to form a shoulder therewith, substantially as described.

3. A nozzle for water bags composed of flexible material, having an enlarged head portion, a base portion which is rounded at one end and elongated to a point at the other, and a recess between said head and base portions adapted to receive the hem of the material forming the water bags, substantially as described.

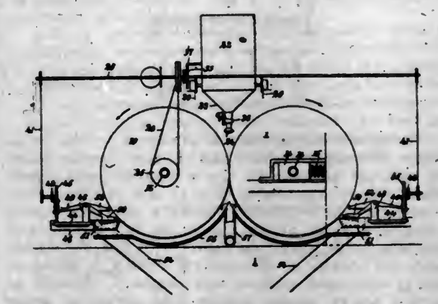
4. A nozzle for water bags, composed of flexible material, and consisting of head and base portions, the base being rounded at one end to conform to the head portion, and elongated at the other extending to a point, and the edge of the base being reduced toward its axial center to form a shoulder at the head portion, substantially as specified.

1,014,608. SYRINGE. NICOLA PERNICE, Atlantic City, N. J. Original application filed Sept. 20, 1910, Serial No. 582,049. Divided and this application filed Mar. 15, 1911. Serial No. 614,740.

1. A syringe of the character described, comprising a tubular body portion formed with a longitudinally elongated slot, and a tubular piston adapted to be thrust into the body portion and formed with an outlet opening adapted to register with said slot.

2. A syringe, embodying a tubular body portion formed with a longitudinally elongated slot, and a tubular piston adapted to be thrust into said body portion and formed with a side opening adapted to register with said slot, said piston being provided at one end with a branched inlet passage.

1,014,609. PROCESS OF DESICCATING MILK. JOHN ROEH, Spokane, Wash., assignor to Crystalized Milk Co., a Corporation of Spokane, Wash. Original application filed Aug. 13, 1908, Serial No. 448,302. Divided and this application filed Jan. 15, 1909. Serial No. 472,431.



1. The herein described process of desiccating liquid or semi-liquid substances, consisting in partially drying the substance upon a surface heated to a temperature from 110° to 150 degrees Fahrenheit, pressing the partially dried substance upon said surface by a rolling action to render the coating uniform and to expel the moisture, continuing the heating and repeating the pressing and rolling until the coating assumes a hard, dry, compact form, and scraping the coating from the surface.

2. The herein described process of desiccating liquid or semi-liquid substances, consisting in partially drying the substance upon a surface heated to a temperature below the coagulating point of the substance, alternately blowing artificial drying warm air upon said substance and pressing the partially dried substance upon said surface by a rolling action to render the coating uniform and to expel the moisture, continuing the heating and repeating the pressing and rolling until the coating assumes a hard, dry, compact form, and scraping the coating from the surface.

3. The herein described process of desiccating liquid or semi-liquid substances, which consists in spreading same in a thin layer upon a surface heated below the coagulating point of the substance, subjecting each portion of said layer for a brief period at stated intervals to the action of a current of artificially dried warm air and compressing said layer, substantially as described.

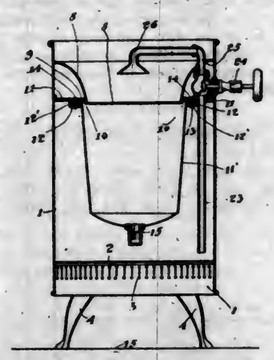
4. The herein described process of desiccating liquid or semi-liquid substances which consists in spreading same in a thin layer upon a surface heated below the coagulating point of the substance, subjecting each portion of said layer for a brief period at stated intervals to the action of a current of artificially dried warm air, and compressing said layer immediately after being subjected to said current of air substantially as described.

5. The herein described process of desiccating liquid or semi-liquid substances, which consists in spreading same

in a thin layer, continuously subjecting said layer to a uniform temperature below 150 degrees Fahrenheit and alternately subjecting same to pressure to expel the moisture and to the action of artificially dried and heated air.

[Claims 6 and 7 not printed in the Gazette.]

1,014,610. COFFEE-URN. CHARLES ROSA, Chicago, Ill. Filed Sept. 20, 1911. Serial No. 650,423.



1. A coffee urn comprising a cylindrical vertical boiler shell, a bottom provided for said shell, an annular partition arranged adjacent the top of said shell and rigidly secured thereto, the interior edge of said partition being dropped forming a horizontal flange, a receptacle having a peripheral flange at the edge or top end thereof, said peripheral flange being co-extensive with said first named flange and adapted to be supported thereby, a gasket or packing interposed between said flanges, a plurality of securing screws passed through said peripheral flange and said packing into said first named flange, a ring placed over said peripheral flange through which said screws are also passed, a depending flange at the inner portion of said last named ring, and a funnel supported by said last named flange, substantially as described.

2. A coffee urn comprising a vertical tubular boiler shell, a bottom provided for said shell, an annular partition secured to said shell and arranged adjacent the top thereof, the inner portion of said partition being formed into a horizontal flange which is dropped from the main portion of said partition forming a rabbet, means for introducing water into said boiler, a receptacle the large end of which is provided with a peripheral flange of an extent substantially co-extensive with the extent of said first named flange, said flanges being provided with a plurality of screw holes, an annular gasket or packing adapted to be interposed between said flanges and provided with screw holes registering with the screw holes provided in the latter, a ring having an interior depending flange substantially co-extensive with said peripheral flange and resting thereon, there being a plurality of screw holes provided in said ring registering with said first named screw holes, a plurality of screws passed through said registering screw holes and adapted to secure said ring, packing and flanges into close relation, a funnel fitting into the top of said boiler and supported by said depending flange formed in said ring, and means for drawing away liquid contained in said receptacle, substantially as described.

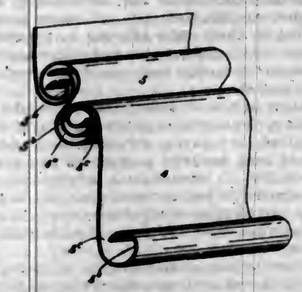
3. A coffee urn comprising a tubular vertical boiler shell, a bottom for said shell, a plurality of supporting legs secured to the lower edge of said shell, a pipe coupling provided on said shell through which water is introduced into the boiler, an annular partition secured to the interior of said shell adjacent the top thereof, a drop flange provided at the inner edge of said partition, a packing fitting said flange and supported thereby, a receptacle having a peripheral flange at the upper edge thereof which is substantially co-extensive with said first named flange and positioned thereabove, said receptacle tapering downwardly, a coupling provided at the center of the bottom of said receptacle, a pipe radiating from said coupling by means of which liquid contained in said receptacle is drawn off therefrom, a ring having an internal depending flange supported by the peripheral flange of said receptacle, means for securing said ring, peripehral flange, packing and said first named flange into close relation, a funnel fitting the interior of said boiler shell and supported by said depending flange, and means for introducing water into said receptacle from said boiler comprising a vertical pipe arranged in said boiler and extending through said annular partition, a valve into which said pipe terminates, an elbow secured into said valve, and a radially disposed pipe leading from said elbow to a point directly over the center of said receptacle, substantially as described.

4. A coffee urn comprising a vertical cylindrical boiler shell formed of metal, a metallic bottom for said shell, a metallic annular partition arranged concentrically in said shell adjacent the top thereof, a sheet metal receptacle having a peripheral flange at the upper end thereof projecting over the inner edge of said partition, a packing interposed between said peripheral flange and said partition, a ring superimposed on said peripheral flange, a plurality of screws adapted to hold said ring, peripheral flange, packing and partition in close relation, a bell-mouthed funnel the periphery of which is adapted to fit into said shell and the small end of which is supported by said ring, means for introducing water into said receptacle from said boiler, means for withdrawing liquid from said receptacle, and means for determining the level of the liquid in said boiler and receptacle, substantially as described.

5. In a coffee urn, a cylindrical metallic boiler shell the axis of which is vertically disposed, a bottom provided for said shell adjacent the lower edge thereof, an annular partition provided in said shell and arranged adjacent the top edge thereof, a depressed horizontally extending flange provided in said partition and having a plurality of tapped holes therein, a coffee receptacle the upper periphery of which is formed into a horizontally extending flange having screw holes arranged in registration with said tapped holes, a packing interposed between said horizontal and peripheral flanges and having holes for registration with the holes of said flanges, a ring superimposed on said peripheral flange and provided with a flange at the inner edge thereof, said ring being provided with screw holes arranged in registration with the screw holes of said flanges, a plurality of screws adapted to be passed through said screw holes of said ring, peripheral flange, and packing and screwed into the tapped holes of said horizontal flange, a bell-mouthed funnel supported by the flange on the inner side of said ring and fitted into said boiler shell adjacent the upper end thereof, a service pipe and gage glass pipe leading from the lower end of said receptacle which is formed of aluminum, and means for transferring water from said boiler into said receptacle, substantially as described.

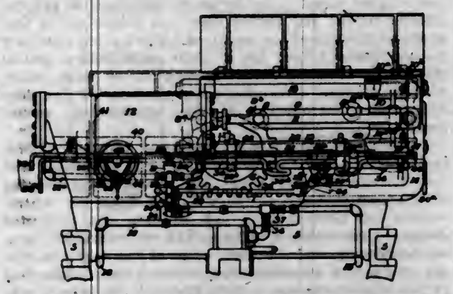
1,014,611. FIRE-RESISTING SHUTTER. ALBERT RUSH, Columbus, Ohio. Filed Feb. 10, 1908. Serial No. 415,124.

A fire resisting shutter or curtain constructed of main slats each having its edges formed as roll-like hooks extending from the body of the slat curvedly in opposite directions and terminating near the body portion of the slat, and jointing slats, alternating with and connecting the main slats, said jointing slats being of S-form in cross section and having rolled beads 5^a and 5^b at their edges, said beads being of much smaller diameter than the diameter of the main roll of the slat but of greater diameter than the gap between the edge of the roll of the main slat and the body portion thereof, whereby the edge portion of the roll of the main slat is free to oscillate in the cavity of the jointing slat and the shutter or curtain



when suspended vertically is flexible in opposite directions, substantially as shown and described.

1,014,612. DUMPING-CAR. ERWIN C. SHERMAN, WILLIAM W. MCKELVEY, and EDGAR J. REILLY, Youngstown, Ohio, assignors to The William B. Pollock Company, Youngstown, Ohio, a Corporation of Ohio. Filed Apr. 15, 1909. Serial No. 490,153.



1. A dumping car, a motor geared to said car, to effect the dumping movements thereof, and a controller for the motor arranged to increase the speed of the dumping movement during the last portion of such movement, substantially as described.

2. A dumping car, a fluid pressure motor geared to the car to effect the dumping movements thereof, a source of fluid pressure supply for the motor, and valve means for controlling the operation of the motor to dump the car at an increasing velocity during the last portion of such movement, substantially as described.

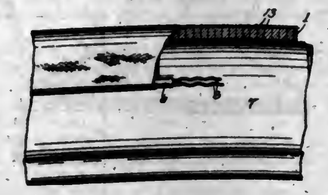
3. A dumping car, a fluid pressure motor geared thereto to effect the dumping movements, means for supplying fluid pressure to the motor, valve means for controlling the operation of the motor and means for actuating said valve to vary the speed of the dumping movement during different portions thereof, and to increase the speed during the last portion of such movement substantially as described.

4. A dumping car, a fluid pressure motor geared thereto to effect the dumping movements, means for supplying fluid pressure to the motor, a valve controlling the exhaust of the motor, and means for actuating said valve to gradually increase the speed of the dumping movement, substantially as described.

5. A dumping car, a fluid pressure motor geared thereto to effect the dumping movements, means for supplying fluid pressure to the motor, a valve controlling the exhaust of the motor, and a connection operated by the motor for actuating the said valve to increase the speed of the dumping movement toward the end of such movement, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

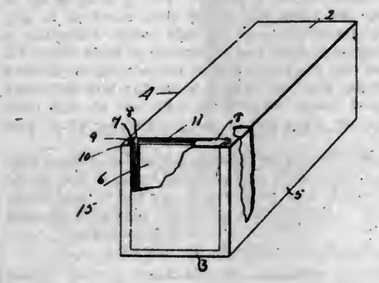
1,014,613. PROTECTIVE COVERING FOR PNEUMATIC TIRES. ALVIN H. SHOEMAKER, Seattle, Wash., assignor, by direct and mesne assignments, of one-eighth to Carl H. Yoeckel, Seattle, Wash., and three-eighths to John W. Hurley and one-half to Henry Copenhagen, Portland, Oreg. Filed Mar. 7, 1911. Serial No. 612,961.



1. In a protective covering for pneumatic tires, the combination with a tire, of a plurality of elements in side-by-side relation forming an annulus about the perimeter of said tire and capable of independent radial movements, a body of elastic material secured to the lateral edges of said elements, and undulating anchor wires embedded in said body upon each side of said elements about the perimeter of said annulus.

2. In a protective covering for pneumatic tires, the combination with a tire, of a plurality of elements in side-by-side relations forming an annulus about the perimeter of said tire and capable of independent radial movements, of a body of elastic material secured to the lateral edges of said elements, anchor wires embedded in said body upon each side of said elements about the perimeter of said annulus, and a flexible covering for said elements and securing means.

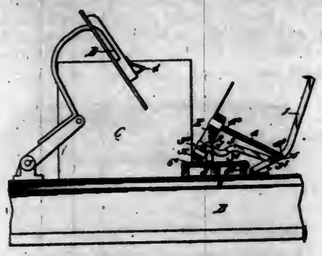
1,014,614. TEMPORARY-BURIAL VAULT. JOSEPH ST. CLAIR, Philadelphia, Pa. Filed May 8, 1911. Serial No. 625,698.



1. A burial vault comprising a box like structure of cement, open at one end, the top wall being shorter than the remaining walls, said remaining walls having a groove therein, the walls of said groove having longitudinally extending grooves formed therein, the top wall having a groove formed in its edge, a cover slidably mounted in the first named grooves, and a sealing substance entering the last named grooves for hermetically sealing the vault.

2. A burial vault comprising a box like structure of cement, open at one end, the top wall being shorter than the remaining walls, said remaining walls having a groove therein, the walls of said groove having longitudinally extending grooves formed therein, the top wall having a groove formed in its edge, a cover having a tongue formed therewith, said tongue having grooves formed therein which aline with the longitudinally extending grooves in the box like structure when the cover is in place, and a semi-liquid substance adapted to be poured in certain of said grooves, and when hard closing and hermetically sealing the vault.

1,014,615. BALING-PRESS. LUTHER TRABUE, Girard, Ill. Filed Sept. 5, 1911. Serial No. 647,756.



1. A block-dropping mechanism for baling presses comprising a block-holder, an operating lever, a link pivotally connected to said block-holder and pivotally connected to said lever, a guide with which said link coöperates, and an independent link pivotally connected to said lever and block-holder for causing said block-holder to turn from an inclined into a vertical position when it is moving into delivering position.

2. A block-dropping mechanism for baling presses comprising a block-holder, an operating lever, a link pivotally connected to said holder and lever and provided with a curved surface intermediate its ends, a guide coöperating with said link, and an independent connection between said block-holder and lever which causes said holder to turn from an inclined into a vertical position when it is moving into delivering position.

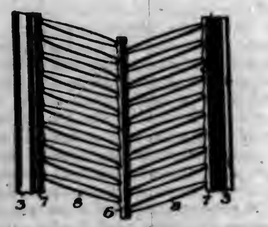
3. A block-dropping mechanism for baling presses comprising a block-holder, a support arranger under said holder for supporting the lower end of the block mounted in the holder, and means for moving the block-holder back and forth over said support and downwardly when it reaches one end of said support without engaging said support.

4. A block-dropping mechanism for baling presses comprising a block-holder, a support that is adapted to be engaged by the lower end of the block mounted in said holder, an operating means for said holder comprising a manually-operated lever and a plurality of links which are so arranged that the holder will be turned from an inclined into a vertical position when it is moving into delivering position, and means coöperating with one of said links for holding the lower end of the block-holder above said support.

5. A block-dropping mechanism for baling presses comprising a block-holder, an operating lever, a link pivotally connected to said lever and to one end of said block-holder, and a shorter link pivotally connected to said lever and to the opposite end of said block-holder.

[Claims 6 to 9 not printed in the Gazette.]

1,014,616. SELF-FURRING METALLIC LATH. HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Feb. 4, 1910. Serial No. 541,962.



1. As a new article of manufacture, a slitted and expanded sheet metal structure, consisting of slitted and unslitted portions, and having relatively deep ribs consisting of bent unslitted portions of the metal and a shallow rib intermediate of and connected to the deep ribs by oppositely directed slats, at least some of the deep ribs having their edges adjacent to the slitted portions formed with reverse bends facing the opposite side of the structure from the deep ribs themselves, substantially as described.

2. As a new article of manufacture, a slitted and expanded sheet metal structure, consisting of slitted and unslitted portions, and having relatively deep spaced ribs consisting of bent unslitted portions of the metal, and a central shallow rib between each pair of deep ribs and connected thereto by two series of slats, the inner edges of the deep ribs being reversely bent so as to face in the opposite direction from the deep ribs themselves, substantially as described.

3. As a new article of manufacture, a slitted and expanded sheet metal structure, consisting of slitted and unslitted portions, and having deep ribs consisting of bent portions of the metal sheet, said deep ribs being bent to form lips which face in the opposite direction from the deep ribs themselves, and also having shallow ribs intermediate the deep ribs, each shallow rib being connected with the upper inner portions of the adjacent side ribs by means of two series of oppositely disposed slats formed by the expansion of the slitted portions of the metal sheet; substantially as described.

4. As a new article of manufacture, a slitted and expanded sheet metal structure consisting of slitted and unslitted portions and having deep ribs consisting of bent unslitted portions of the metal, said ribs having relatively narrow reversely bent lips at their edges, and a central shallow rib connected with the deep ribs by series of oppositely directed slats, the outer portions of the deep ribs, having perforations therein; substantially as described.

5. As a new article of manufacture, a slitted and expanded sheet metal structure consisting of slitted and unslitted portions and having deep, spaced ribs, consisting of unslitted portions of the metal sheet, and a central shallow rib between each pair of deep ribs connected thereto by two series of oblique slats, the central rib opening rearwardly, and the inner edges of the deep ribs having rearwardly extending lips, whereby their edges face in the opposite direction from the ribs themselves, substantially as described.

[Claim 6 not printed in the Gazette.]

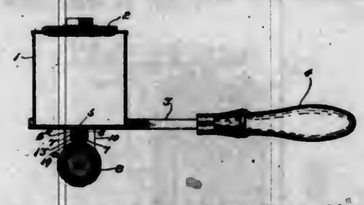
1,014,617. METHOD OF MAKING EXPANDED-METAL STRUCTURES. HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Feb. 4, 1910, Serial No. 541,961. Renewed Oct. 9, 1911. Serial No. 653,728.

1. The herein described method of making expanded metal structures, which consists in first forming a blank having a plain flat portion, and deep U-shaped ribs at its edge portions, and intermediate the plain portions, then forming two series of oppositely oblique cuts or slits in each plain portion at opposite sides of its center and also forming relatively shallow ribs intermediate each two adjacent series of cuts with their edges facing toward the same side of the structure as the nearests adjacent edges of the deep ribs, and then expanding the blank, the formation of the intermediate ribs in the manner described causing the slats to take half bends or twists in expanding, substantially as described.

2. The herein described method of making expanded sheet metal structures, which consists in first forming a blank having plain portions and deep U-shaped ribs at the edges of and between the plain portions, then making a series of cuts or slits in the plain portions and shaping the portions between adjacent series of cuts or slits into shallow ribs, and also bending the edge portions of the deep ribs adjacent to the ends of the cuts or slits to cause said edges to face toward the same side of the sheet as the edges of the shallow ribs, and then expanding the blank; substantially as described.

3. The herein described method of making expanded sheet metal structures, which consists in first forming a blank having plain portions and deep U-shaped ribs at the edges of and between the plain portions, then forming a plurality of series of cuts or slits in the plain portions and shaping the portions between adjacent series of cuts or slits into shallow ribs, and then expanding the blank, the initial provision of the deep U-shaped ribs serving to stiffen and guide the sheet in the subsequent operations, and thereby make possible greater accuracy therein, substantially as described.

1,014,618. HAND-OPERATED CEMENTING-MACHINE. VERTRUDE P. BUCK, Boston, Mass., assignor to Shawmut Machinery Company, Boston, Mass., a Corporation of Maine. Filed May 17, 1911. Serial No. 627,677.



1. A portable hand-operated cementing-machine having a handle by which to move the same about, a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve for such delivery-slit, and a distributing-roll in peripheral contact and driving engagement with the feed-roll whereby the distributing-roll in rotating takes cement from the feed-roll and in addition rotates the latter, the said distributing-roll adapted to rest upon the surface to which cement is to be applied and to be pressed thereagdinst by the weight of the machine and the cement contained therein, and being rotated through its contact with such surface, in being rolled about thereon.

2. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve for such delivery-slit and having its periphery recessed to carry cement, and a distributing-roll taking cement from the feed-roll and rotating the latter, the said distributing-roll adapted to rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through its contact with such surface in being rolled about thereon.

3. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a longitudinally-grooved feed-roll constituting a valve for such delivery-slit, and a distributing-roll taking cement from the feed-roll and in addition rotating the latter, the said distributing-roll adapted to rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through being rolled about upon such surface.

4. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve for such delivery-slit, and a distributing-roll taking cement from the feed-roll and in addition rotating the latter, the said distributing-roll consisting of a cylindrical brush adapted to rest by the ends of its bristles upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through its peripheral contact with such surface in being rolled about thereupon.

5. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a longitudinally-grooved feed-roll constituting a valve for such delivery-slit, and a cylindrical brush constituting a distributing-roll, the said brush taking cement from the feed-roll and through its rotation rotating the latter, and adapted to rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through being rolled about upon such surface.

1,014,619. PROPELLER. HENRY LAURENS CALL, Girard, Kans. Filed May 4, 1910. Serial No. 559,411.

1. A propeller, comprising a pair of oppositely projecting blades bifurcated at their inner ends, means extending longitudinally of the blades and projecting into said bifurcations and plates secured to the blades and bridging said bifurcations and provided with longitudinally extending bearings projecting into said bifurcations and pivotally embracing said means.

2. A propeller comprising a pair of oppositely projecting blades having longitudinally extending bifurcations at their inner ends providing a pair of arms at the inner end of each blade, one arm of each being shorter than the other, means projecting into the bifurcations of the blades, plates secured to the blades and bridging said bifurcations and projecting inwardly beyond the said short arms of the blades and provided with bearings projecting into the bifurcations of the latter, and plates secured to the first-named plates and fitting against the inner ends of the short arms of the blades.

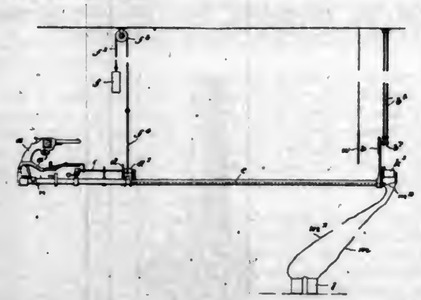
3. A propeller comprising a pair of oppositely projecting blades having their inner ends longitudinally bifurcated to provide a pair of arms at the inner end of each blade, one of which arms is shorter than the other, means projecting into said bifurcations of the blades, a pair of plates secured to opposite sides of each blade, and bridging the bifurcation thereof and projecting inwardly beyond the short arm thereof and provided with longitudinally extending bearings projecting into said bifurcation and pivotally embracing said means and plates secured to and between the first-named plates of each blade and bearing against the inner end of the short arm of the same.

4. A propeller, comprising a pair of oppositely projecting blades, a tube extending longitudinally of and forming a pivotal support for the blades, and circular heads rigid with and of greater diameter than said tube at the ends of the same and pivotally interlocked with the blades to prevent outward movement thereof.

5. A propeller, comprising a pair of oppositely projecting blades, a tube extending longitudinally of the blades, circular heads at the outer ends of said tubes and of greater diameter than the same, and plates secured to the blades and provided with longitudinally extending bearings pivotally embracing said tube and with segmental recesses pivotally interlocked with the heads of said tube to prevent outward movement of the blades.

[Claims 6 to 11 not printed in the Gazette.]

1,014,620. TARGET-PRACTICE APPARATUS. HENRY H. CUMMINGS, Newton, Mass., assignor, by mesne assignments, to Atlantic National Bank, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 16, 1905. Serial No. 274,424.



1. A target practice apparatus having an aiming device, means for indicating the aim thereof without the necessary issuance of a projectile, and a freely movable support upon which said aiming device has aiming movement.

2. A target practice apparatus having an aiming device for aiming at a target or like object, a freely movable support upon which said aiming device is fulcrumed, and following means to follow the aim of said device with relation to a reference object.

3. A target practice apparatus having an aiming device for aiming at a target or like object, following means to follow the aim thereof and a freely movable support for said aiming device and following means.

4. In an apparatus of the class described, an aiming device for aiming at a target or like object, following means to follow the aim thereof with relation to a reference object, and a common freely movable support for said aiming device, following means and reference object.

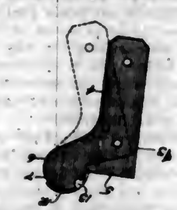
5. In a target practice apparatus having an aiming device for aiming at a target or like object, following means to follow the aim thereof with relation to a reference object, and supporting means for said aiming device, following means and reference object movable about a point substantially coincident with said target.

[Claims 6 to 70 not printed in the Gazette.]

1,014,621. SCREEN OR STORM-WINDOW HANGER. BURNAM B. CUTLER, Kansas City, Mo., assignor of one-half to Darwin G. Hadsell, Kansas City, Mo. Filed Feb. 14, 1911. Serial No. 608,635. Renewed Dec. 9, 1911. Serial No. 664,843.

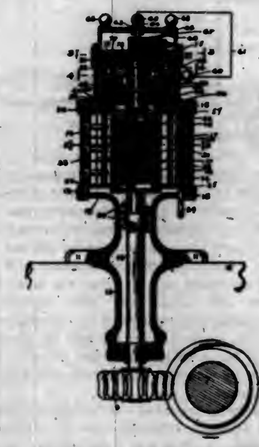
1. A sash hanger comprising a frame member having a flat body portion and an ear projected from the edge of said body portion and provided with a curved upper edge; and a sash member having a flat body portion, an ear projected from the edge of said body portion, a curved flange on the upper edge of said ear, and a lip depending from said flange, parallel with said body portion.

2. The combination with a window frame and sash, of a hanger comprising frame members having flat body portions fixed to the sides of the frame and having their upper edges bearing against the top of the frame, and ears projecting from the upper edges of the body portions above the window opening and provided with curved bearing



edges; and sash members comprising flat body sections fixed to the upper edges of the sash, ears projecting from the upper edges of the body sections above the top of the sash, curved flanges on said ears, movably supported on the ears of the frame members, and lips depending from said flanges over the frame member ears, substantially as and for the purpose set forth.

1,014,622. MAGNETO. JOHN M. DINKINS and FRANKLIN BUSCH HAYS, Indianapolis, Ind., assignors of fifty-three and one-third one-hundredths to William L. Taylor, Indianapolis, Ind. Filed Nov. 4, 1909. Serial No. 526,271.



1. An electric spark producing apparatus comprising a magnet having a magnetic field, an armature in said field, means for moving said field, means for producing a torque upon the armature by the movement of the field which will overcome the attraction between the armature and field and move the armature to generate electricity.

2. An electric spark producing apparatus comprising a magnet having pole-pieces, an armature between said pole-pieces, means for manually moving the magnet, means for producing a torque upon the armature by the movement of the magnet which will overcome the attraction between the armature and magnet and move the armature to generate electricity.

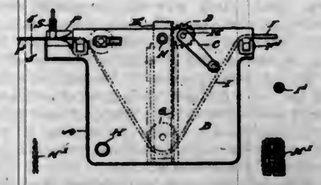
3. An electric spark producing apparatus comprising a magnet having pole-pieces which are segments of a cylinder connected at one of their ends with the poles of the magnet and separated by an air-gap from the magnet for the remaining major portions of said pole-pieces, means for manually moving the magnet, an armature between said pole-pieces, and resilient means for producing a torque upon the armature by the movement of the magnet which will overcome the magnetic attraction between the magnet and armature and move the armature.

4. An electric spark producing apparatus comprising a magnet having a magnetic field, an armature in said field, means for moving said field, means for producing a torque upon the armature by the movement of the field which will overcome the attraction between the armature and the field and move the armature to generate electricity, said armature having a core of the shuttle type, the heads of which are thickened on their sides to form blunt longitudinal edges to increase the magnetic attraction between the armature and magnet and thereby increase the torque.

5. An electric spark producing apparatus comprising a magnet having separate pole-pieces which are segments of a cylinder connected at one of their ends with the ends of the magnet and separated by an air-gap from the magnet for the remaining major portions of said pole-pieces, means for manually moving the magnet, an armature rotating between said pole-pieces having a core of the shuttle type, the heads of which core are thickened uniformly on their sides to form blunt longitudinal edges, and resilient means for producing a torque upon the armature by the movement of the magnet which torque will eventually move the armature at starting.

[Claims 6 to 11 not printed in the Gazette.]

1,014,623. LEATHER YARN AND LEATHER-YARN FABRIC. WILLIAM H. DRURY, Waltham, Mass., assignor to William C. Drury, Waltham, Mass. Filed May 1, 1911. Serial No. 624,475.



1. Leather yarn having in external appearance and corporeal property the characteristics of a single strand of flexible leather of like shape in cross section, and its leather fibers interlaced, consolidated, compressed and stuck together, and composed mainly of shredded leather enveloping one or more independently-spun cores, substantially as set forth.

2. Leather yarn having in external appearance and corporeal property the characteristics of a single strand of springy and wiry leather of like shape in cross section, and its leather fibers interlaced, consolidated, compressed and stuck together, and springy and wiry from sizing, and composed mainly of shredded leather enveloping one or more independently-spun cores, substantially as set forth.

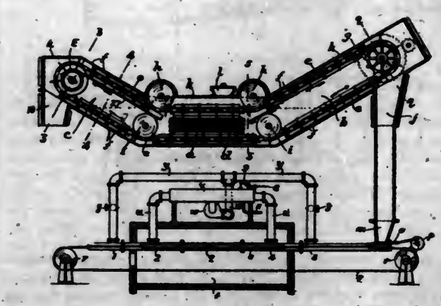
3. A leather fabric woven from leather yarn whose external appearance and corporeal property have the characteristics of a single strand of flexible leather of like shape in cross section, whose leather fibers are interlaced, consolidated, compressed and stuck together, and whose structure is mainly of shredded leather enveloping one or more independently-spun cores, substantially as set forth.

4. A leather fabric woven mainly from leather yarn whose external appearance and corporeal property have the characteristics of a single strand of flexible leather of like shape in cross section, whose leather fibers are interlaced, consolidated, compressed and stuck together, and whose structure is mainly of shredded leather enveloping one or more independently-spun cores, substantially as set forth.

5. A woven fabric of leather yarn having in face appearance and in face and body flexibility the characteristics of a sheet of soft leather, and its leather fibers interlaced, consolidated, compressed and stuck together, and composed mainly of shredded leather enveloping many independently-spun cores, some of which lie parallel to one another in one direction and the rest in the reverse direction, all embedded and interlaced crosswise of one another in the interior of the fabric, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,014,624. LIQUID ORE SEPARATION. FRANCIS I. DU PONT, Wilmington, Del. Filed Dec. 1, 1909. Serial No. 530,761.



1. The process of separating solids of different specific gravities, consisting in liquefying anhydrous antimony bromid, passing the mixture to be separated therethrough and separately discharging the portions which float and those which sink.

2. The process of separating solids of different specific gravities consisting of liquefying anhydrous antimony bromid, passing the mixture to be separated therethrough, and separately discharging the portions which float and those which sink, vaporizing the liquid carried by the separated constituents, condensing the same, and returning said solution to the original separating liquid.

3. The process of separating solids of different specific gravities, consisting in passing the mixture to be separated through a bath consisting of an anhydrous volatilizable salt in a liquid condition and separately discharging the portions which float and those which sink, and volatilizing any salt carried off by the separated constituents, the volatilizing point of the salt being below the vaporizing point of the constituents to be separated.

4. The process of separating solids of different specific gravities, consisting in passing the mixture to be separated through a bath consisting of an anhydrous volatilizable salt in a fused condition and separately discharging the portions which float and those which sink, and volatilizing any salt carried off by the separated constituents, the volatilizing point of the salt being below the vaporizing point of the constituents to be separated.

5. The process of separating solids of different specific gravities, consisting in passing the mixture to be separated through a bath consisting of a volatile anhydrous salt maintained in a fused condition, separately discharging the portions which float and those which sink, vaporizing from each discharged constituent the liquid carried thereby, condensing said liquid and returning the same to the initial separating liquid.

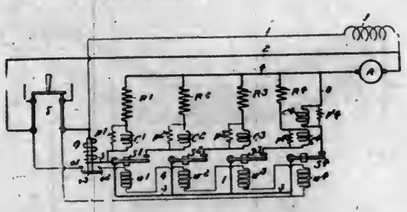
[Claims 6 not printed in the Gazette.]

1,014,625. ELECTRIC CONTROLLER. ARTHUR C. EASTWOOD, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Sept. 22, 1910, Serial No. 583,301. Divided and this application filed Jan. 7, 1911. Serial No. 601,334.

1. In an electric controller, a series of magnetically-operated switches, each of said switches having its operating winding arranged to be included in the controlled circuit by the closing of a preceding switch, a locking winding

arranged to prevent the closing of each of the said switches, and a relay responsive to the current in the controlled circuit for controlling said locking windings.

2. In an electric controller, a series of electro-magnetically operated switches, successively-energized windings adapted when energized to cause the successive closing of the said switches, a locking winding for each switch, each of said locking windings adapted when energized to prevent its respective switch from closing, and means responsive to the current in the controlled circuit for controlling said locking windings.



3. In a controller for electric motors, a resistance, means for closing the circuit through the said motor and the said resistance, a series of switches for controlling the amount of the said resistance in the motor circuit, each of said switches except the first having an operating winding included in the circuit closed at the main contacts of the switch which precedes it in operation, a locking winding for each switch for preventing the operation of the said switch, and a relay governed by the current in the motor circuit for controlling the locking windings.

4. In an electric controller, a controlled circuit, a series of switches arranged to close in a predetermined order, each of the said switches having an actuating winding included in the controlled circut by the closure of the switch which precedes it in operation, the last of the said switches having a maintaining winding included in the controlled circuit by the closure of the said switch.

5. In an electric controller, a controlled circuit, a series of switches arranged to close in a predetermined order, each of the said switches having an actuating winding included in the controlled circuit by the closure of the preceding switch, the last of the said switches having its contacts connected to close a path including a maintaining winding for said last switch, said path short-circuiting or shunting the actuating windings of all of said switches.

1,014,626. CAISSON. OLIVER CROMWELL EDWARDS, JR., Troy, N. Y. Filed Dec. 13, 1906. Serial No. 347,687.

1. In a concrete caisson, the combination with an inclosing wall forming a working chamber, of an arched brace connecting the opposite sides of the wall and extending across the working chamber.

2. In a concrete caisson, the combination with an inclosing wall, of a truss extending across the inclosure produced by said wall, and having its ends formed integral with the wall, one of the members of the truss being arched.

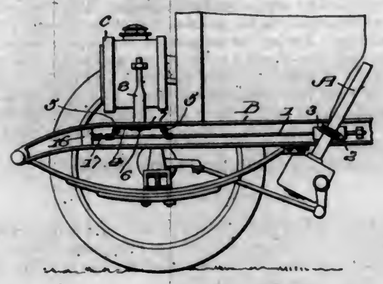
3. In a concrete caisson, the combination with an inclosing wall, of a truss extending across the inclosure produced by said wall and having its ends formed integral with the wall, said truss comprising an arch, and means retaining the ends of said arch against movement toward or away from each other.

4. In a concrete caisson, the combination with an inclosing wall, of a truss extending across the inclosure produced by said wall and having its ends formed integral with the wall, the said truss comprising an arch, and means connecting the ends of the arch together.

5. In a concrete caisson, the combination with an inclosing wall, of a truss extending across the inclosure produced by said wall, said truss comprising a concrete arch, and means for preventing separation of the ends thereof.

[Claims 6 to 101 not printed in the Gazette.]

1,014,627. AUTOMOBILE HEADLIGHT-TURNING DEVICE. RAYMOND G. GASKILL, Port Deposit, Md. Filed Mar. 9, 1911. Serial No. 613,435.



1. The combination with the channeled side bar of a vehicle frame, said bar being formed with a longitudinally extending slot, of a lamp supporting post mounted to turn on the outer side of said bar and provided with a crank arm extending inwardly through said slot, an actuating rod mounted in the channel of said side bar and effectually concealed thereby, steering mechanism and an operative connection between the steering mechanism and said actuating rod, whereby the latter will be turned upon the actuation of the former.

2. The combination with the side bar of a vehicle frame and the steering post of the vehicle, of an actuating rod supported by said bar and extending along the inner side thereof, the bar being formed with a longitudinal slot, a lamp supporting post journaled to turn about a vertical axis on the outer side of said bar and provided with a crank arm projecting inwardly through the slot and operatively connected to the forward end of the actuating rod, and a cable connection between the steering post and the actuating rod.

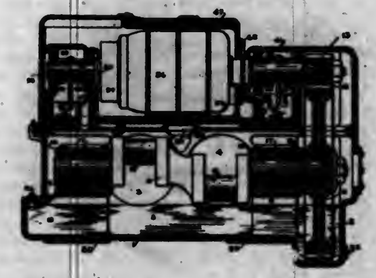
3. A light turning device, embodying an actuating rod, a drum loosely mounted thereon, means for imparting an initial movement to the drum independently of the rod and for subsequently compelling the simultaneous movement of the rod and drum, a lamp supporting post, a support in which said post is mounted to turn, and an operative connection between the post and rod.

4. A light turning device, embodying a rod mounted to turn about its longitudinal axis, means connected to said rod for yieldingly holding it in one position, means loosely mounted on the rod for turning the same, and means whereby the rod turning means will be permitted to have an initial movement on the rod independently thereof and a subsequent connection with the rod to turn the latter, a lamp supporting post, a support in which the post is mounted to turn, and an operative connection between said post and said rod.

5. A lamp turning device, embodying a post, a support in which the post is mounted to turn, a rod operatively connected to said post to turn the same, the rod being mounted to turn about its longitudinal axis, a drum loosely mounted on the rod, a pin with which the rod is provided, and stop lugs adjustably secured to said drum on opposite sides of said pin and designed to engage the same upon the turning of the drum, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,014,628. LUBRICATING SYSTEM. WILLIAM H. LIEBER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Original application filed Nov. 19, 1908, Serial No. 463,401. Divided and this application filed May 3, 1909. Serial No. 493,635.



1. In a lubricating system, a motor and a driven member, a plurality of oil pockets adjacent the bearings of said motor, common means for transmitting power from said motor to said driven member and for continuously supplying oil to one of said pockets, means for carrying oil from said pockets to said motor bearings, a conduit connecting said pockets and adapted to carry oil from one of said pockets to the other of said pockets, a basin adjacent said transmission means, and an overflow conduit leading from one of said pockets to said basin.

2. In a lubricating system, a motor and a driven member, a plurality of oil pockets adjacent the bearings of said motor, common means for transmitting power from said motor to said driven member and for continuously supplying oil to one of said pockets, means for carrying oil from said pockets to said motor bearings, a conduit connecting said pockets and adapted to carry oil from one of said pockets to the other of said pockets, a basin, and an overflow conduit leading from one of said pockets to said basin.

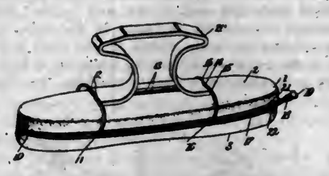
3. In a lubricating system, a motor and a driven member, a plurality of oil pockets adjacent the bearings of said motor, common means for transmitting power from said motor to said driven member and for continuously supplying oil to one of said pockets, means for carrying oil from said pockets to said motor bearings, a conduit connecting said pockets and adapted to carry oil from one of said pockets to the other of said pockets, a basin adjacent a bearing of said driven member, and an overflow conduit leading from one of said pockets to said basin.

4. In a lubricating system, a motor and a driven member, a plurality of oil pockets adjacent the bearings of said motor, gears for transmitting power from said motor to said driven member and for simultaneously and continuously supplying oil to at least one of said pockets, a conduit connecting said pockets and adapted to carry oil from one of said pockets to the other of said pockets, a basin adjacent a bearing of said driven member, and an overflow conduit leading from one of said pockets to said basin.

5. In a lubricating system, a motor, a crank case below said motor, a crank shaft and a bearing therefor within said crank case, pockets in the motor frame adjacent the bearings of said motor, common means for driving said crank shaft by said motor and for elevating oil to said pockets, a pipe connecting said pockets and adapted to carry oil from one of said pockets to the other of said pockets, means for carrying oil from said pockets to the bearings of said motor, a basin within the crank case adjacent said crank shaft bearing, and means for carrying oil from one of said pockets to said basin.

[Claim 6 not printed in the Gazette.]

1,014,629. REVERSIBLE BUFFER. HARRY MENDELSOHN, New York, N. Y. Filed May 24, 1911. Serial No. 629,140.



1. The combination of a buffer having buffing surfaces thereon, of a handle detachably connected to the buffer, the said handle comprising a hand grip and a clamp adjacent each end of the grip, the clamps being of resilient material, one of the clamps having a closed end with converging sides and adapted to fit around one end of the buffer, the other clamp having an open end with converging sides and adapted to extend around the other end of the buffer, the said open end being adapted to be closed in order to hold the buffer in the handle.

2. The combination with a buffer having a plurality of buffing surfaces thereon, of a handle removably connected to the buffer, the handle comprising a hand grip and a clamp at each end of the grip, the clamps being of resilient material, one of the clamps being closed and the sides thereof being convergent and adapted to fit around one end of the buffer, the other clamp having an open end, the sides being convergent and adapted to extend around the other end of the buffer, the said sides at the open end being provided with means for engagement with each other whereby the handle may be secured on the buffer.

3. The combination with a buffer having a plurality of buffing surfaces, of a handle detachably connected to said buffer, said handle comprising a hand-grip and a clamp, said clamp being formed of a single strip of wire bent intermediate its ends to embrace said buffer and having its ends adapted to interlock with each other.

4. The combination with a buffer having a plurality of buffing surfaces, of a handle detachably connected to said buffer, said handle comprising a hand-grip and a clamp, said clamp being formed of a single strip of wire bent intermediate its ends to embrace said buffer and having its ends adapted to interlock with each other, said ends having interlocking curved portions and interlocking knobs thereon.

5. The combination with a buffer, of a handle detachably connected to said buffer, said handle comprising a hand-grip and a clamp for securing said hand-grip to said buffer, said clamp comprising a single strip of wire bent intermediate its ends to form a U-shaped loop, legs extending upwardly from said loop, reaches extending toward each other from said legs, parallel connecting rods extending in close juxtaposition from said reaches, reaches extending outwardly from said rods, legs extending downwardly from said last-mentioned reaches, and lengths extending toward each other from last-mentioned legs, said lengths being adapted to interlock at their free ends, and being provided with enlargements for this purpose.

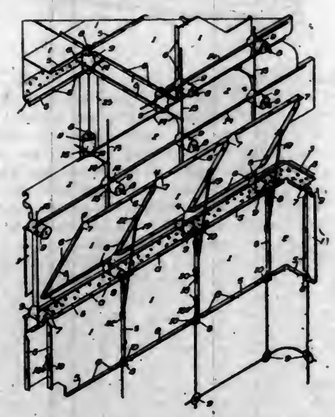
[Claim 6 not printed in the Gazette.]

1,014,630. SECTIONAL MOLD FOR CONCRETE CONSTRUCTION. MILTON D. MORRILL, Washington, D. C. Filed June 8, 1910. Serial No. 565,862.

1. A sectional mold for concrete construction comprising flanged metallic wall-plates recessed at the corners of adjoining plates, spacing cores or spools interposed between opposite wall-plates, removable slotted supports extending from the ends of the spacing spools and lying in the recesses of adjoining wall-plates, and locking keys passing through the slotted supports of the spacing spools and bearing against flanges of the wall-plates.

2. A sectional mold for concrete construction compris-

ing flanged metallic wall-plates recessed at the corners of adjoining plates, spacing cores or spools interposed between opposite wall-plates, removable slotted supports extending from the ends of the spacing spools and lying in the recesses of adjoining wall-plates, and locking keys passing through the slotted supports of the spacing spools, one key bearing against a flange of one plate and another against a flange of an adjoining plate to enable one set of plates to be removed without unlocking the other set of plates.



3. A sectional mold for concrete wall construction, comprising removable side-walls, and means hinging the sections of wall together to permit one section to be swung from one position to another in relation to an adjoining section in progressive extension of the mold.

4. A sectional mold for concrete construction comprising flanged metallic wall-plates arranged in rows, means for locking the plates together, and bars pivotally connected at one end with wall-plates of one of said rows and at the other end with the wall-plates of another row for transferring the plates of one row to a position in advance of the plates of another row.

5. A sectional mold for concrete construction comprising flanged wall-plates arranged in rows, means for locking the plates together, and bars pivotally connected at one end with plate locking means of one row of plates, and at the other end with plate locking means of an adjoining row of plates for transferring the plates of one row to a position in advance of the plates of another row.

[Claims 6 and 7 not printed in the Gazette.]

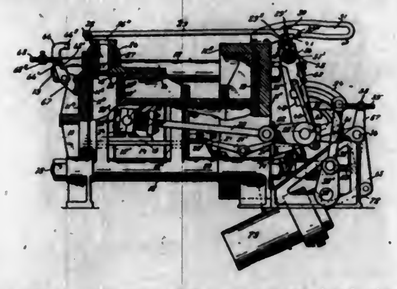
REISSUES.

13,351. AUTOMATIC FILTER-PRESS. ELISHA HENRY ALVORD, Seattle, Wash., assignor to Herschel H. Taber, Tacoma, Wash. Filed Aug. 23, 1909. Serial No. 514,324. Original No. 894,966, dated Aug. 4, 1908, Serial No. 385,343.

1. The combination with the non-movable head of the frame and the movable cylinder coacting therewith, of a plunger arranged to act within said cylinder, means for reciprocating the cylinder to and from said head and acting also to move the plunger therewith in its movement from the head, and means for moving the plunger toward said head independently of the cylinder.

2. The combination of the non-movable head, the movable cylinder provided with a charging aperture, a valve for opening and closing said aperture, a plunger acting within the cylinder and in opposition to the head, means to effect the movements of said cylinder, means for operating said valve, and means for operating said plunger.

3. The combination with the frame having a stationary head, a movable cylinder coöperating with the head, a plunger movable in the cylinder, means to actuate said plunger, means to accomplish the movements of the cylinder with respect to the head, an ejector, and means operative during the movement of the cylinder for actuating the ejector.



4. The combination of the non-movable head, the movable cylinder provided with a charging aperture, a valve for opening and closing said aperture, a plunger acting within the cylinder in opposition to the head, means to effect the movement of said cylinder, means for operating said valve, means for operating said plunger, and means for adjustably regulating the actions of each of the aforesaid means.

5. The combination with the compression cylinder, a head therefor, a plunger acting within the cylinder, means for operating the plunger to effect the compression of material introduced between said head and the plunger, of devices for regulating the application of a power medium to operate the plunger, an ejector, and means operating during the movement of the cylinder for actuating the ejector.

6. The combination with the non-movable head, the movable cylinder provided with the charging aperture, a valve for opening and closing said aperture, a plunger acting within the cylinder and in opposition to the head, means to effect the movements of said cylinder, means for operating said valve, and means for operating said plunger, of a means adapted to adjustably regulate the actions of each of the aforesaid means, such last named means comprising a vibrating carrier, spring-pressed dogs upon the carrier and adapted to engage with devices which are operatively connected with the respective means, and devices which are actuated by the vibratory movements of said carrier whereby the several dogs are disengaged from the first named devices to render the same inoperative.

7. In a press, the combination with the frame having a fixed head, and a cylinder adapted to reciprocate in the frame and coact with the fixed head thereof, said cylinder being provided with an aperture through which the material to be pressed is admitted into the cylinder, a plunger for the cylinder, power means for effecting forward movements to the plunger, means for imparting forward and return movements to said cylinder and serving also to effect the return of the plunger with the cylinder, a valve for controlling the opening and closing of said aperture of the cylinder, and power actuated means for adjustably controlling the operating of the means for accomplishing the aforesaid movements of the cylinder and the plunger and likewise the operations of said valve.

8. The combination of the frame having a non-movable head, a cylinder slidably mounted in the frame, a plunger acting within the cylinder, means for effecting the movement of the cylinder to cause it to periodically bear against the head, means to admit a charge of material for treatment within the cylinder, means to effect the movement of the plunger for pressing the material, and means for successively retracting the cylinder and the plunger from the said head after the pressing of the material is accomplished.

9. The combination of the frame having a non-movable head, a cylinder slidably mounted in the frame, a plunger acting within the cylinder, means for effecting the movement of the cylinder to cause it to bear periodically against the head, means to admit a charge of material for treatment within the cylinder, means to effect the movement of the plunger for pressing the material, means for retracting the cylinder from said head after the pressing of the material is accomplished but prior to the retraction of the plunger, means for effecting such retraction of the plunger, and means operated by the retractile movement of the cylinder for ejecting the pressed material from between the head and the plunger.

10. The combination of the frame having a non-movable head, a power cylinder fixedly connected to the frame, a cylinder slidably mounted in the frame, a piston in said first named cylinder, a plunger acting within the second named cylinder, said piston and plunger being connected to act in unison, means for effecting the movement of the last-named cylinder to cause it to bear periodically against the head, means to admit a charge of material for treatment within the second named cylinder, means for introducing a fluid under pressure into the first named cylinder to effect the movement of the plunger for pressing the material, means for retracting the cylinder from said head after the pressing of the material is accomplished but prior to the retraction of the plunger, means for effecting such retraction of the plunger, and means operated by the retractile movement of the second named cylinder for ejecting the pressed material from between the head and the plunger.

11. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, a rock-shaft, crank-arms upon the rock-shaft, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from said cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power shaft and said rock-shaft and likewise those between the power shaft and the respective valves are made inoperative.

12. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, means for locking the plunger against its return travel when it has reached the termination of said rearward travel, a rock-shaft, crank-arms upon the rock-shaft arranged to effect the disengagement of said locking means, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, springs included in said connections and adapted to yield during the terminal portion of the movements of the crank-arms for exerting a resilient pressure of the compression cylinder against said fixed head, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power-shaft and said rock-shaft and likewise those between the power shaft and the respective valves, are made inoperative.

13. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, means for locking the cylinder against its return travel when it has reached the termination of said rearward travel, a rock-shaft, crank arms upon the rock-shaft arranged to effect the disengagement of said locking means, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power-shaft and said rock-shaft and likewise those between the power-shaft and the respective valves are made inoperative.

14. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, face plates for said plunger and fixed head, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, means for locking the plunger against its return travel when it has reached the termination of said rearward travel, a rock-shaft, crank-arms upon the rock-shaft arranged to effect the disengagement of said locking means, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power-shaft and said rock-shaft and likewise those between the power shaft and the respective valves are made inoperative.

15. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, devices upon the plunger

adapted for engagement by the compression cylinder in the rearward travel of the latter, a rock-shaft, crank-arms upon the rock-shaft, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, springs included in said connections and adapted to yield during the terminal portion of the movements of the crank-arms for exerting a resilient pressure of the compression cylinder against said fixed head, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power shaft and said rock-shaft and likewise those between the power shaft and the respective valves are made inoperative.

16. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, a rock-shaft, crank-arms upon the rock-shaft, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, an ejector, means operated by the reciprocation of the compression cylinder for actuating said ejector, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power shaft and said rock-shaft and likewise those between the power shaft and the respective valves are made inoperative.

17. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as one piece, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, means for locking the plunger against its return travel when it has reached the termination of said rearward travel, a rock-shaft, crank-arms upon the rock-shaft arranged to effect the disengagement of said locking means, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, an ejector, means operated by the reciprocation of the compression cylinder for actuating said ejector, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between said power shaft and said rock-shaft and likewise those between the power shaft and respective valves are made inoperative.

18. In a press, the combination with a frame, a power cylinder at one end of the frame, and a fixed head at the other end of the frame, of a compression cylinder provided with a feed-aperture and arranged for reciprocation in said frame, a valve for said feed-aperture, a piston for said power cylinder, a plunger for the compression cylinder, said piston and plunger being formed or connected so as to operate as a single piece, face plates for said plunger and fixed head, devices upon the plunger adapted for engagement by the compression cylinder in the rearward travel of the latter, means for locking the plunger against its return travel when it has reached the termination of said rearward travel, a rock-shaft, crank-arms upon the rock-shaft arranged to effect the disengagement of said locking means, connections between the crank-arms and the compression cylinder whereby the reciprocation of the latter is accomplished, springs included in said connections and adapted to yield during the terminal portion of the movements of the crank-arms for exerting a resilient pressure of the compression cylinder against said fixed head, an ejector, means operated by the reciprocation of the compression cylinder for actuating the ejector, a valve for controlling the admission of the power medium into said power cylinder, a valve to control the outflow of such power medium from this cylinder, a power shaft having a continuous rotary motion, operative connections between said power shaft and the rock-shaft, operative connections between the power shaft and the several aforesaid valves, a carrier, connections between said power shaft and the carrier whereby a vibratory motion is imparted to the carrier, and adjustable devices upon said carrier and effected by the swinging of the latter whereby the connections between the power shaft and the said rock-shaft and likewise those between the power shaft and the respective valves are made inoperative.

19. A press comprising a cylinder, means supporting the same for movement, means for compressing material in said cylinder including a plunger, means for reciprocating said cylinder to expose the material compressed by said last means, means for connecting said plunger with said cylinder for movement thereby after said material has been exposed, and means for moving said plunger in a reverse direction independently of said cylinder.

20. A press comprising a cylinder, a frame supporting said cylinder for movement, two coacting compressing members one of which is supported for sliding in said cylinder, means for reciprocating said cylinder to expose the compressed material, means whereby the movement of said cylinder is communicated to the last named of said compressing members to move the same away from the other of said members and means for moving said last named compressing member toward the other independently of said cylinder.

21. The combination with the cylinder, the means for compressing the material therein, one of which is movable relatively to the other for exposing the compressed material, and means for operating the same, of an ejector supported for movement to and from a position exteriorly of said cylinder, and means for actuating said ejector to eject the compressed material.

22. The combination with the cylinder and the means for compressing the material therein, one of which is movable relatively to the other for exposing the compressed material, and means for operating the same, of an ejector for the compressed material, and means for operating said ejector by and during movement of said last named means to eject the material laterally of the said cylinder when exposed from the latter.

23. A press comprising a cylinder supported for movement in the direction of its length, means for compressing the material in said cylinder, means to move said cylinder independently of said first means to expose the compressed material, an ejector for the compressed material, and means operative by and during movement of said cylinder for actuating said ejector.

24. In a press, in combination with the comprising member thereof, fluid actuated means for operating said compressing member in one direction, other means for operating said compressing member in the reverse direction, releasable means for holding said compressing member against movement controlled for operation by said last means, and mechanism controlling said compressing member operating means for alternate operation.

25. A press, fluid operative means associated therewith for effecting the pressing operation, and mechanism for automatically terminating such operation irrespectively of the pressure applied therein and resetting the press, said mechanism being adjustable for varying the pressure period.

26. A press, fluid operative means associated therewith for effecting the pressing operation, mechanism for automatically terminating such operation irrespectively of the pressure applied therein and resetting the press, said mechanism being adjustable for varying the pressure period, and means for resetting said fluid operative means by and during the resetting of said press.

27. In a fluid operative press, fluid controlling means, and mechanism for automatically operating said means intermittently irrespectively of the pressure applied in the press, adjustable to vary the period of intermission.

28. In a fluid operative press, fluid controlling means, a continuously operating drive means, an intermittently operative mechanism connected to said drive means for operating said fluid controlling means irrespectively of the pressure applied in the press, and a controlling means for said mechanism adjustable for varying the length of intermission between the movements thereof.

29. A timing mechanism comprising a reciprocatory carrier, a normally inactive ratchet mechanism carried thereby, a second ratchet mechanism for setting said first ratchet mechanism operated by movement of said carrier, and adjustable means operated by said first ratchet mechanism for advancing said second ratchet mechanism.

30. A timing mechanism comprising a normally inactive ratchet mechanism, a second ratchet mechanism, means for operating the same, and means operated by said second ratchet mechanism for advancing and setting said normally inactive ratchet mechanism.

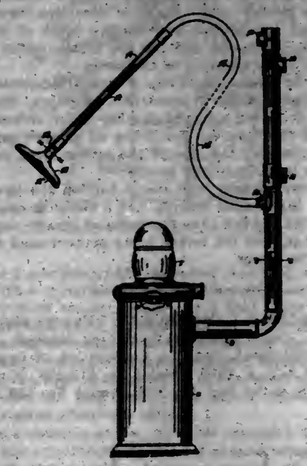
31. A timing mechanism comprising a normally inactive ratchet mechanism, a second ratchet mechanism, means operated by said second ratchet mechanism for setting said normally inactive ratchet mechanism, and adjustable means operated by said normally inactive ratchet mechanism for advancing said second ratchet mechanism.

13,352. VACUUM-CLEANER. CHARLES A. DILLON, Canton, Ohio, assignor to The United Electric Company, Canton, Ohio, a Corporation of Ohio. Filed Nov. 28, 1911. Serial No. 662,938. Original No. 1,005,005, dated Oct. 3, 1911, Serial No. 617,988.

1. A vacuum cleaner including a separating chamber having a plurality of valved inlet-openings communicating therewith, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the separating-chamber and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle-shanks.

2. A vacuum cleaner including a separating chamber having a plurality of valved inlet-openings communicating therewith, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle-shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the inlet-openings and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle shanks.

3. A vacuum cleaner including a separating chamber with a communicating conduit having a plurality of valved inlet openings therein, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle-shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the separating-chamber and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle shanks.



4. A vacuum cleaner including a separating chamber with a communicating conduit having a plurality of valved inlet openings therein, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle-shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the inlet-openings and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle shanks.

5. A vacuum cleaner including a separating chamber with a communicating conduit having a plurality of valved inlet openings therein, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle-shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the separating-chamber and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle shanks, the cross-area of the conduit being greater than the combined cross-areas of said particular number of nozzle-shanks.

6. A vacuum cleaner including a separating-chamber with a communicating conduit having a plurality of valved inlet openings therein, suction nozzles having tubular shanks adapted to be connected with the inlet-openings, a suction fan having a capacity greater than that required for the combined cross-areas of a particular number of nozzle-shanks, a motor connected with the fan having a capacity substantially equal to the requirements of said particular number of nozzle-shanks, and a partition between the inlet-openings and the fan having an orifice therein with a cross-area substantially equal to the combined cross-areas of said particular number of nozzle-shanks, the cross-area of the conduit being greater than the combined cross-areas of said particular number of nozzle-shanks.

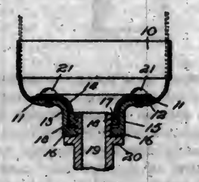
7. A vacuum cleaner including a separating-chamber having a nozzle conduit communicating therewith, a suction fan adjacent to the chamber with an intervening partition having a communicating orifice therein, and a motor in operative connection with the fan; the conduit and the fan being of greater capacity than the motor, and the size of the orifice being proportioned to the capacity of the motor.

8. A vacuum cleaner including a nozzle conduit, a suction fan having a case with an inlet orifice in communication with the conduit, and a motor in operative connection with the fan; the conduit and the fan being of greater capacity than the motor, and the size of the orifice being proportioned to the capacity of the motor.

9. A vacuum cleaner including a separating-chamber, a suction fan and a motor in operative connection, there being a partition having a communicating orifice between the chamber and the fan; the fan being of greater capacity than the motor, and the size of the orifice being proportioned to the capacity of the motor.

10. A vacuum cleaner including a suction fan having a case with an inlet orifice therein, and a motor in operative connection with the fan; the fan being of greater capacity than the motor, and the orifice being proportioned to the capacity of the motor.

13,353. ELECTRIC LAMP-SOCKET. HARVEY HUBBELL, Bridgeport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 4, 1910. Serial No. 575,578. Original No. 943,078, dated Dec. 14, 1909, Serial No. 516,209.



1. Means for locking a socket to a fixture, comprising a cap having a flange, bushing members lying on opposite sides of said flange and having female threaded flanges, a male threaded hub engaging the flanges of the bushing and means for drawing the members of the bushing toward each other, whereby the flange of the cap is clamped between the bushing members and the threaded flanges of said members are forced against the threads of the hub thereby locking the cap to the bushing and the bushing to the hub.

2. Means for locking a socket to a fixture, comprising a cap having a central depression and a circular flange, an outer bushing member lying in said depression and engaged by the flange, an inner bushing member engaging the opposite side of the flange, both members of the bushing having female threaded flanges, a male threaded hub engaging said flanges and means for drawing the bushing members toward each other.

3. The combination with a cap having a flange, of bushing members lying on opposite sides of said flange and themselves provided with female threaded flanges, a fixture hub having a male thread engaging said flanges and a screw passing through the bushing members and acting to draw them together.

4. A socket casing having, in combination, a shell, and a cap in two parts having interengaging means constructed to be moved into and out of interengagement with each other, whereby said parts may be locked against relative rotation.

5. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having provision to lock the same against relative rotation in opposite directions.

6. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having means to lock the same against relative rotation in opposite directions and prevent separation of said parts.

7. A socket casing having, in combination, a shell, and a cap in two parts one of which is provided with an annular flange and the other of which is provided with means engaging opposite sides of said flange, and means to lock said parts against relative rotation.

8. A socket casing having, in combination, a shell, and a cap in two parts one of which is provided with an annular flange and the other of which is journaled thereon and is provided with two projections one on each side of said flange, and means to lock said parts against relative rotation.

9. A socket casing having, in combination, a shell, and a cap in two parts one of which is provided with an inwardly turned annular flange and the other of which is journaled thereon and is provided with outwardly turned projections engaging opposite sides, respectively, of said flange, and means to lock said parts against relative rotation.

10. A socket casing having, in combination, a shell, a cap in two parts rotatably mounted one on the other, and means to lock said parts against relative rotation in opposite directions.

11. A socket casing having, in combination, a shell, a cap in two parts, and means to lock said parts against rotation in any one of a series of different positions.

12. A socket casing having, in combination, a shell, a cap in two parts, and means to lock said parts against relative rotation and to position said parts as to rotative movement with relation to said shell.

13. A socket casing having, in combination, a shell, a cap in two parts, means to lock said parts against relative rotation and to position said parts as to rotative movement with relation to said shell, and means to normally lock said shell and cap against longitudinal separation.

14. A socket casing having, in combination, a shell, a cap in two parts, and means to lock said parts against relative rotation and lock said parts against rotative movement with relation to said shell.

15. A socket casing having, in combination, a shell, and a cap in two parts having interengaging means to lock said parts against relative rotation at a plurality of predetermined points.

16. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having provision to lock the same against relative rotation at a plurality of predetermined points.

17. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having means to lock the same against relative rotation at a plurality of predetermined points and prevent longitudinal separation of said parts.

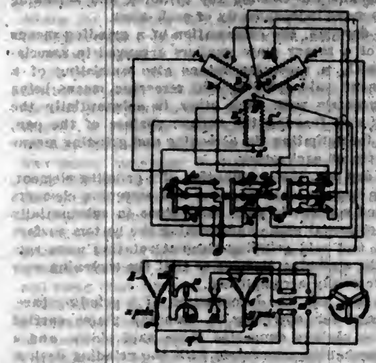
18. A socket casing having, in combination, a shell, a cap in two parts rotatably mounted one on the other, and means to lock said parts against relative rotation at a plurality of predetermined points.

19. A lamp socket, adapted for application to a fixture and having a shell and a cap in two parts, which two parts of the cap are rotarily adjustable one with reference to the other, and means carried by the cap to fixedly secure said two parts together in the position to which they have been rotarily adjusted.

13,354. DYNAMO-ELECTRIC MACHINE. LOUIS J. HUNT, Sandycroft, England. Filed Mar. 4, 1911. Serial No. 612,405. Original No. 926,192, dated June 29, 1909, Serial No. 522,879.

1. In an induction motor, the combination of a primary member provided with a winding having parallel paths and producing a set of poles, means for connecting pairs of equipotential points in said parallel paths to form local circuits producing another set of poles, and a secondary member having windings arranged to place said sets of poles in concatenation.

2. An induction motor comprising a stator having a winding arranged in parallel paths producing a certain number of poles, means for connecting equipotential points in said parallel paths for producing a second number of poles in said windings, and a rotor having windings arranged to produce sets of poles corresponding respectively with said sets of poles in the stator windings.



3. In a dynamo electric machine, a stator having a winding provided with terminal contacts and intermediate contacts, means for connecting said terminal contacts to produce a set of poles of a certain number, means for connecting pairs of said intermediate contacts, to produce another set of poles of a different number, a rotor having windings producing poles corresponding to the poles formed by the stator winding when connected through the terminal contacts, and additional poles corresponding to the local circuit formed in the stator windings by connecting said intermediate contacts.

4. In a dynamo electric machine, a stator having a winding provided with a plurality of sets of terminals, said winding producing different numbers of poles corresponding with the connections of the respective sets of terminals, a rotor having winding producing poles corresponding to the poles produced in the stator, and means for changing the coöperative effect of the windings on the rotor.

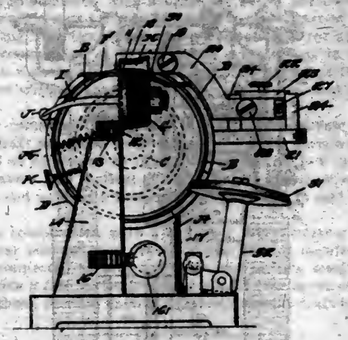
5. In a dynamo electric machine, a stator having a winding provided with terminal contacts and with intermediate contacts, said windings producing one number of poles when energized through the terminal contacts and another number of poles when energized through the intermediate contacts, a rotor having windings producing different sets of poles corresponding with said stator contacts, and means for short-circuiting the rotor windings.

6. In a dynamo electric machine, the combination with a rotating part having separate windings adapted to permit of the flow of currents producing two magnetic fields of different numbers of poles, connections between said windings, and means for reversing said connections, of a stationary part and windings on said part having a plurality of parallel paths adapted to allow of the flow of currents producing magnetic fields of two different numbers of poles.

18,355. SKIVING-MACHINE. WILLIAM A. PARMENTER and ARTHUR B. ALDEN, Brockton, Mass., assignors, by direct and mesne assignments, to C. S. Pierce Skiving Machine Company, Brockton, Mass., a Corporation. Filed Mar. 27, 1911. Serial No. 617,309. Original No. 944,103, dated Dec. 21, 1909, Serial No. 466,682.

1. In a skiving machine, the combination with a cylindrical knife, of a feed wheel internally disposed with relation thereto and having its effective surface at one side of a vertical line passed through the axis of the cylindrical knife, said side being that away from the main portion of the stock to be operated upon.

2. In a machine of the character described, the combination with a cylindrical knife and a feed wheel located internally with respect thereto, of a feed guide coöperating with said feed wheel, a support for said guide provided with a depending abutment adjacent the top side edge of the feed wheel, and a second abutment extending horizontally at the level of the edge of the work as it passes between the feed wheel and the feed guide.



3. In a machine of the character described, the combination with a cylindrical knife and a feed wheel located internally with respect thereto, of a feed guide coöperating with said feed wheel, a support for said guide provided with a depending abutment adjacent the top side edge of the feed wheel and a second abutment extending horizontally at the level of the edge of the work as it passes between the feed wheel and the feed guide, said second abutment flaring slightly away from said rolls.

4. In a machine of the character described, the combination with a cylindrical knife, of a feed wheel internally disposed with relation thereto, a guide roll coöperating with said feed wheel to feed the work, means for supporting said guide roll and an abutment on said supporting means adjacent the outside edges of both the feed wheel and the guide roll whereby stock is prevented from running over the edge of the feed wheel.

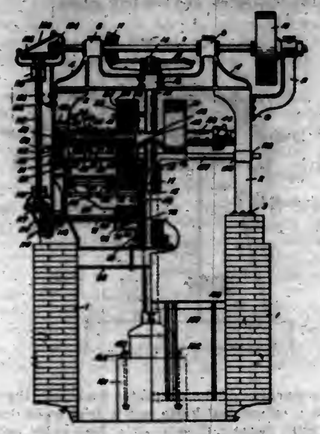
5. In a machine of the character described, the combination with a cylindrical knife, of the feed wheel internally disposed with relation thereto, a guide roll coöperating with said feed wheel to feed the work, and means for supporting the said guide roll and swinging it in the plane of the axes of said feed wheel and said guide roll, said supporting means being provided with an abutment adjacent the outside edge of the feed wheel whereby the stock is prevented from running over the edge of the feed wheel.

6. In a machine of the character described, the combination with a cylindrical knife of a feed wheel internally disposed with relation thereto and having a concaved end surface, a guide roll coöperating with said feed wheel to feed the work, means for supporting the said guide roll and swinging it in the plane of the axes of the said feed wheel and said guide roll, said supporting means being provided with an abutment coöperating with said concaved end surface of said feed wheel, whereby the stock is prevented from running off the edge of the feed wheel.

7. In a machine of the character described, the combination of a cylindrical knife, a feed wheel interiorly disposed with relation thereto and a feed guide having an abutment at the cutting point, said abutment having two faces one of which is substantially parallel to the plane of the edge of the knife and the other of which is substantially parallel to the edge of the feed wheel, said faces being closely adjacent to the planes of the edge of said knife and of the face of the feed wheel respectively.

8. In a machine of the character described, the combination with a cylindrical knife, a feed wheel interiorly disposed with relation thereto, and a feed guide having a depending abutment in the angle between the face of the feed wheel and the edge of the knife and closely adjacent both said face and said edge, the face of said abutment next the feed wheel being parallel with the face of the said feed wheel and projecting downwardly to overlap the periphery of the said face.

13,356. DRY-PAN. RAYMOND C. PENFIELD, New York, N. Y. Filed Oct. 2, 1911. Serial No. 652,467. Original No. 974,180, dated Nov. 1, 1910, Serial No. 507,423.



1. In a dry pan, the combination of a grinding member, a screening member for receiving the ground material from the grinding member, and driving mechanism for giving said two members separate differential movements, including means for operating the screening member in accordance with the requirements of the particular material being screened.

2. A dry pan having part of its container surface formed as a moving, grinding element and another part separately movable formed as a screening element, and means to move said screening element at a different speed from said grinding element.

3. A rotary dry pan having part of its bottom formed as a pulverizing element and another part formed as a screening element, said parts being separately movable, and driving connections for moving said parts at different speeds.

4. A dry pan, comprising a movable grinding element formed to deliver ground matter in a direction approximately in line with its path of movement, a screening element in position to receive the material from said grinding element, so delivered, and means for moving said grinding element and screening element separately and at different speeds.

5. A dry pan, comprising a rotary plane surface constituting a pulverizing element, a screening element in position to receive matter from said surface, driving means for said pulverizing element, the latter and said screening element being separately movable, and means for moving said screening element at a different speed from said pulverizing element.

6. A dry pan, whose bottom is composed of a plane grinding surface and a screening surface in position to receive material therefrom, said surfaces being independently movable, and means for moving said surfaces at different speeds.

7. In a dry pan, the combination of a grinding element, a screening element, said elements being concentric with each other and both situated in substantially the same horizontal plane and forming the bottom of the pan and moving at different speeds.

8. In a dry pan, the combination of a grinding element consisting of a rotary surface, a screening element, said elements being concentric with each other in substantially the same plane and forming the bottom surface of the pan, means for driving the grinding element, and means for independently driving the screening element, so that the relative speed of the two elements may be regulated.

9. In a dry pan, the combination of a grinding element consisting of a rotary surface, a screening element also consisting of a rotary surface, both situated in substantially the same plane and concentric with each other to form the bottom surface of the pan, a rim encircling the pan, and means for causing the grinding and screening elements to move independently of each other.

10. In a dry pan, the combination of a grinding means consisting of a rotary plate, mullers arranged in association therewith, a screening means also consisting of a rotary element, said grinding and screening means being located concentric with each other in substantially the same plane and forming the bottom surface of the pan, and means for actuating the screening and grinding means independently of each other.

11. In a dry pan, the combination of a grinding element, a screening element, said grinding and screening elements being located concentric with each other in substantially the same horizontal plane and forming the bottom surface of the pan, and said grinding element rotating more rapidly than the screening element so that the screening may be more effectually accomplished.

12. In a dry pan, the combination of a grinding base, driving means for operating it, grinding plates carried by said base, mullers supported above said plates, and a screening mechanism concentric with the grinding devices and moving independently thereof and at a different speed, said screening mechanism being situated in substantially the same plane with the grinding base and forming therewith the bottom surface of the dry pan.

13. In a dry pan, the combination of a central vertical drive shaft, a grinding base on the shaft, grinding plates carried by said base, mullers supported above the grinding plates and revolved by the movement of the latter, and screening mechanism concentric with the grinding base and operated at a different speed therefrom, said screening mechanism being in substantially the same plane with the grinding base and forming therewith the bottom surface of the dry pan.

14. In a rotary dry pan, the combination of a vertical drive shaft, a horizontal shaft geared thereto at the upper end, a grinding base secured to the vertical shaft, screening mechanism concentric with the grinding base, and moving independently thereof, mullers revolubly supported above the grinding devices, gearing mechanism for driving the screening mechanism, and connections consisting of shafting and gearing between the mechanism driving the screening mechanism and the upper shafting which actuates the vertical shaft.

15. In a dry pan, the combination of a grinding base, a vertical actuating shaft to which it is secured, grinding plates carried by said base, a screen-supporting frame loose on said shaft, a screen supported by said frame, a cylindrical rim encircling the screen, a gearing for actuating the screen-supporting frame, and means for driving the main shaft, all arranged so that the grinding mechanism may move independently of and at a different rate of rotation from that of the screening mechanism.

16. In a rotary dry pan, the combination of a grinding element, a screening element, said elements rotating at different speeds and being situated concentric with each other in substantially the same horizontal plane and forming the bottom surface of the pan, a receptacle beneath the screen into which the crushed material falls, a rim encircling the screen, and an outer husk surrounding the entire pan.

17. In a dry pan, the combination of a grinding base, a shaft to which it is secured, wearing plates on said base, a screen adjoining the base and moving at a different speed, said screen being concentric with the base and located in substantially the same horizontal plane and forming with the base the bottom surface of the pan, a frame supporting said screen, a receptacle beneath the screen for receiving the crushed material, said receptacle having an inclined side, and means for directing the crushed material from the screen into the receptacle.

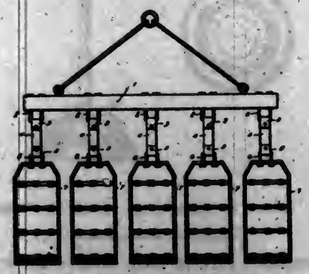
18. In a rotary dry pan, the combination of a drive shaft, a top shaft geared thereto for actuating it, a grinding base affixed rigidly to said shaft, grinding plates carried by said base, a screen-supporting frame loose on the shaft below the grinding base, screening devices carried by said frame in the same horizontal plane as the grinding plates, gearing for imparting a rotary motion to the screen-supporting frame and the screening devices at a different rate from that of the motion of the grinding base, and means for carrying the screen-supporting frame so that it may revolve freely about the shaft, said means including a thrust bearing.

19. In a dry pan, the combination of a main frame, a horizontal shaft journaled in the upper part thereof, a vertical drive shaft geared to said upper shaft and actuated thereby, a grinding base attached to said vertical shaft, mullers supported above said base and revolved by its movement, screening devices that receive the material from the mullers, scrapers for directing uncrushed material back to the mullers, a rim surrounding the screening devices, an outer husk around the rim, means for driving the screen at a different rate of rotation from that of the grinding base, a bin beneath the screen for receiving the crushed material, and means for carrying the said material away from the bin.

20. In a dry pan, the combination of a grinding element, a screening element moving at a different speed from that of the grinding element, one or more scrapers arranged in conjunction with the screening element to direct back any coarse material to the grinding element, and a preliminary screening mechanism supported in an inclined position above the first-named screening element to receive the first delivery of the material to be crushed.

21. In a dry pan, the combination of a grinding element, means for revolving it, a screening element receiving the material after it is crushed, means for driving said screening element at a different speed from that of the grinding element, one or more scraper devices for returning back the coarse material to be reground, mullers arranged above the grinding base, and means for yieldingly supporting said mullers so that they will automatically adjust themselves.

13,357. ANTITWISTING DRAFT MEANS FOR HARROWS AND THE LIKE. JONATHAN WILLIS RICE and JOHN FULTON, King City, Mo. Filed Mar. 3, 1911. Serial No. 612,155. Original No. 891,953, dated June 30, 1908, Serial No. 410,822.



1. In combination with a draft bar and a harrow member, eyes attached to the bar and the harrow member, loops journaled upon the eyes and a bar pivotally connected at its opposite ends to said loops.

2. In combination with a draft bar, and a harrow member, a draft means between the draft bar and the harrow member, comprising a bar having separate vertically pivoting connections and horizontally pivoting connections at each end thereof.

3. In combination with a draft bar and a harrow member, a connecting draft means between the draft bar and the harrow member, comprising a bar having a vertically pivoting and also a separate horizontally pivoting connection with said draft bar, and having a vertically pivoting and also a separate horizontally pivoting connection with said harrow member.

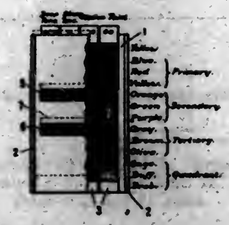
4. In combination with a draft bar and a harrow member, a connecting draft means between the draft bar and the harrow member comprising members each vertically pivoted to said draft bar and said harrow member, and a bar horizontally pivoted to each of said vertically pivoted members.

5. In combination with a draft-bar and a harrow member, a draft means between the draft-bar and harrow member having a vertical pivot and a horizontal pivot at each end so constructed as to allow said draft means to swing freely in a horizontal direction and a vertical direction at each end without turning axially relatively to said draft-bar.

6. In combination with a draft-bar and a harrow member, a draft means between the draft-bar and harrow member and so connected to the draft-bar and harrow member as to have a free vertical and horizontal pivotal movement at each end without turning axially relatively to said draft-bar.

7. In combination with a draft-bar and a harrow member, a bar between said draft-bar and harrow member pivotally connected to said draft-bar and harrow member so as to have a free vertical and horizontal movement at each end without turning axially relatively to said draft-bar.

13,358. COLOR-STUDY DEVICE. EMANUEL FREDERICK WAGNER, New York, N. Y. Filed July 27, 1909. Serial No. 509,954. Original No. 898,290, dated Sept. 8, 1908, Serial No. 400,807.



1. A device of the class described having a plurality of movable color scales, a shield with an opening adapted to expose the colors, and an overlay having a ground color and having an opening registering with said first named opening.

2. A device of the class described having a color scale, and a movable shield having transverse openings, said scale having such an arrangement that when a color is exposed at one opening the harmonizing color will be exposed at the other of said openings.

3. A device of the class described having color scales arranged side by side, a movable shield having an opening therein exposing the colors of said scales, and a slidable overlay having a plurality of openings with borders of different colors, said last openings being adapted to aline with said first opening to give a ground color for the exposed colors.

4. A device of the class described having a plurality of color scales, a movable shield having openings therein adapted to expose a part of said scales, and a movable overlay having a plurality of openings with differently colored edges.

5. A color scale having colors arranged thereon so that at a regular, definite interval from a color is located a harmony thereof, and a shield having two openings arranged so that any two of said harmonizing colors may be exposed therethrough respectively to the exclusion of all the other colors on the scale, said shield having a ground color.

6. A device of the class described having a color scale, a shield with an opening adapted to expose the colors, and said shield having a ground color.

7. A device of the class described having a color scale and a relatively movable shield provided with an opening adapted to expose the colors, and said shield having a ground color.

13,359. SPOON, FORK, OR SIMILAR ARTICLE. FREDERICK H. PRENTAT, Waterbury, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Nov. 23, 1911. Serial No. 662,064. Original No. 41,808, dated Sept. 26, 1911, Serial No. 642,416. Term of patent 7 years.

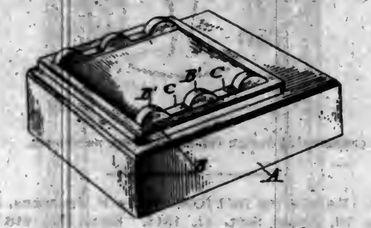
The ornamental design for a spoon, fork or similar article as shown.

13,360. SPOON, FORK, OR SIMILAR ARTICLE. GUSTAVE STROHMAIER, Wallingford, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Nov. 23, 1911. Serial No. 662,065. Original No. 41,804, dated Sept. 26, 1911. Serial No. 642,415. Term of patent 7 years.

The ornamental design for a spoon, fork or similar article as shown.

DESIGNS.

42,077. INKSTAND. FRANK M. ASHLEY, New York, N. Y. Filed Sept. 28, 1909. Serial No. 520,601. Term of patent 7 years.



The ornamental design for an inkstand as shown and described.

42,078. LAMP. HENRY E. BANDLOW, Chicago, Ill. Filed Sept. 28, 1910. Serial No. 584,382. Term of patent 7 years.

The ornamental design for a lamp, as shown.

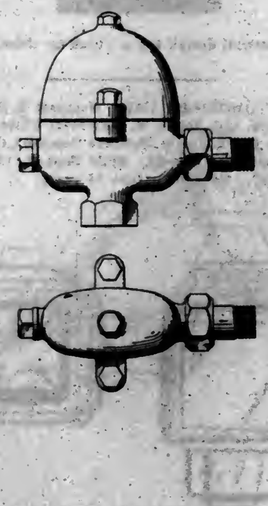
42,079. NAME-PLATE FOR BURIAL-CASKETS. NATHANIEL L. BARMORE, Chicago, Ill. Filed Oct. 26, 1910. Serial No. 589,264. Term of patent 14 years.

The ornamental design for a name-plate for burial caskets, as shown.

42,080. FRATERNAL EMBLEM. LEO N. BROOKER, St. Paul, Minn. Filed Sept. 25, 1911. Serial No. 651,805. Term of patent 7 years.

The ornamental design for a fraternal emblem as shown.

42,081. THERMOSTATIC VALVE. EUGENE S. CALDWELL, Philadelphia, Pa. Filed Sept. 25, 1911. Serial No. 651,297. Term of patent 14 years.

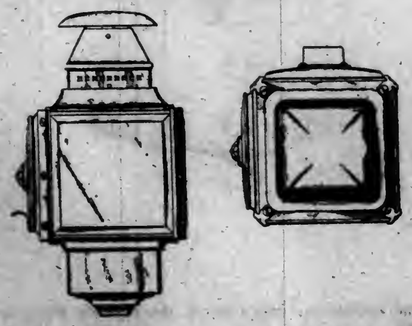


The ornamental design for a thermostatic valve, as shown.

42,082. NECK OR CHEST PROTECTOR. ALEXANDER C. DELSON, Chicago, Ill. Filed Oct. 26, 1910. Serial No. 589,265. Term of patent 7 years.

The ornamental design for a "neck or chest protector" as shown.

42,083. AUTOMOBILE-LAMP. WILLIAM S. HAMM, Hubbard Woods, and ROGER M. NEWBOLD, Chicago, Ill., assignors to The Adams & Westlake Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 7, 1911. Serial No. 648,247. Term of patent 14 years.



The ornamental design for an automobile lamp, as shown and described.

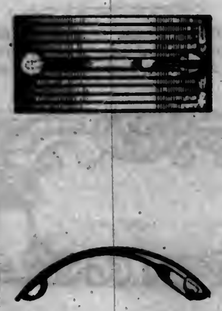
42,084. EGG-CUP. MAX JOHNSEN, Olympia, Wash. Filed July 13, 1911. Serial No. 638,383. Term of patent 7 years.

The ornamental design for an egg cup, as shown.

42,085. BADGE OR BUTTON. HANS P. JUERGENS, Chicago, Ill. Filed Sept. 11, 1911. Serial No. 648,774. Term of patent 14 years.

The ornamental design for a badge or button as shown.

42,086. BARRETTE. WILLIAM H. LANE and JOHN P. LEDGER, Leominster, Mass. Filed Nov. 30, 1910. Serial No. 595,005. Term of patent 3½ years.

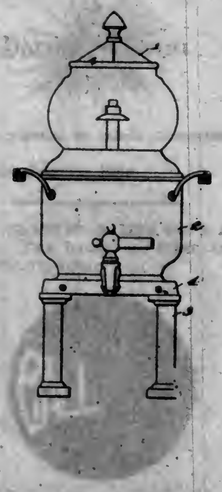


The ornamental design for a barrette, as shown.

42,087. PORTIÈRE. AUGUST E. NEFF, Chicago, Ill. Filed July 10, 1911. Serial No. 637,832. Term of patent 7 years.

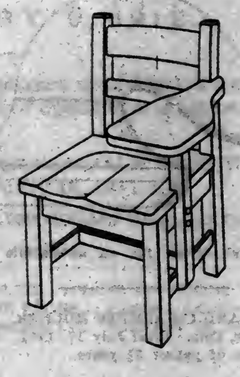
The ornamental design for a portière as shown.

42,088. COFFEE-PERCOLATOR. CHARLES NELSON, New York, N. Y., assignor to S. Sternau & Company, New York, N. Y., a Copartnership. Filed July 11, 1910. Serial No. 571,513. Term of patent 7 years.



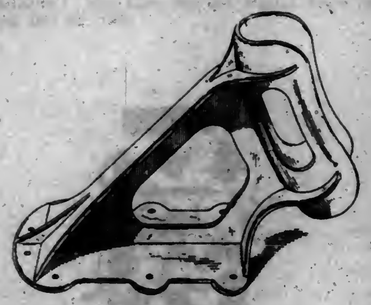
The ornamental design for a coffee percolator, as shown and described.

42,089. CHAIR. LEON W. NEWTON, Boston, Mass. Filed July 13, 1910. Serial No. 571,800. Term of patent 7 years.



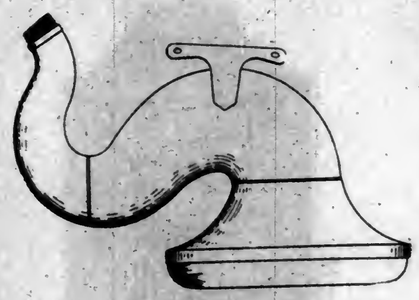
The ornamental design for a chair, as shown.

42,090. VEHICLE-WHEEL ANCHORAGE DEVICE. WILLIAM E. PERRINE, Cleveland, Ohio, assignor of one-third to Christian Girl, Cleveland, Ohio, and one-third to Ernest W. Farr, Cleveland Heights, Ohio. Filed Oct. 3, 1911. Serial No. 652,660. Term of patent 14 years.



The ornamental design for a vehicle wheel anchorage device, as shown.

42,091. AUTOMOBILE-HORN. ERNEST RUSSE, Brooklyn, N. Y. Filed Mar. 26, 1910. Serial No. 551,810. Term of patent 7 years.

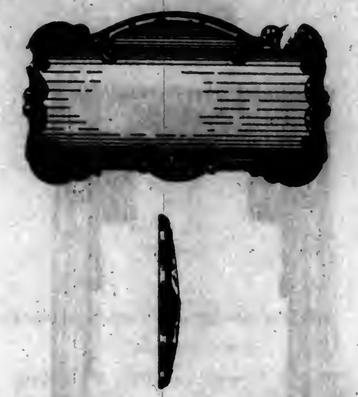


The ornamental design for an automobile horn, as shown.

42,092. CIGAR AND CIGARETTE HOLDER. HARRY O. SHUNK, Denver, Colo. Filed July 17, 1911. Serial No. 639,027. Term of patent 3½ years.

The ornamental design for a cigar and cigarette holder, as shown.

42,093. CASKET-TRIMMING. WILLIAM E. STEVENS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 28, 1911. Serial No. 651,868. Term of patent 14 years.



The ornamental design for a casket trimming, as shown.

42,094. KEY. ELMER B. STONE, New Britain, Conn. Filed July 21, 1911. Serial No. 639,856. Term of patent 14 years.

The ornamental design for a key as shown and described.

TRADE-MARKS

PUBLISHED JANUARY 9, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 6,249. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE WINEKE-BAUERNSCHMIDT CO., OF BALTO. CITY, Baltimore, Md. Filed May 22, 1905.

Particular description of goods.—Straight Rye Whisky.
Claims use since 1902.

Ser. No. 36,733. (CLASS 47. WINES.) HAMMONDSPORT WINE COMPANY, Hammondsport, N. Y. Filed Aug. 14, 1908.

Particular description of goods.—American Sparkling Wine.
Claims use since July 12, 1900.

Ser. No. 41,795. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE BALLEARDS COMPANY, Cleveland, Ohio. Filed Apr. 15, 1909.

Particular description of goods.—Playing-Cards.
Claims use since about September, 1908.

Ser. No. 43,722. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal. Filed July 23, 1909.

The picture being fanciful.
Particular description of goods.—Canned Fruits.
Claims use since July 1, 1904.

Ser. No. 46,658. (CLASS 48. MALT EXTRACTS AND LIQUORS.) HON KANO SHOTEN, Mikage Town, Japan. Filed Dec. 22, 1909.

Particular description of goods.—Japanese Sake.
Claims use since Oct. 1, 1900.

Ser. No. 47,008. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAATSCHAPPIJ TOT EXPLOITATIE VAN BADEMAKER'S KONINKLIJKE CACAO & CHOCOLADEFABRIEKEN, The Hague, Netherlands. Filed Jan. 8, 1910. Under ten-year proviso.

Particular description of goods.—Sugar Candy Known as "Hopjes."
Claims use since Jan. 1, 1885.

Ser. No. 51,705. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) H. G. LIPSCOMB & Co., Nashville, Tenn. Filed Sept. 7, 1910.

Particular description of goods.—Hatchets, Hammers, Axes, Mattocks, Picks, Hoes, Agricultural Rakes, and Agricultural Forks.
Claims use since July 1, 1909.

Ser. No. 52,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVID A. HARRISON, Los Angeles, Cal. Filed Oct. 3, 1910.

Particular description of goods.—Breakfast Foods.
Claims use since Sept. 20, 1910.

Ser. No. 52,630. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NUERA PHARMACAL CO., Detroit, Mich. Filed Nov. 5, 1910.

NUERA

Particular description of goods.—Remedies for Sore Throat and Bronchial Ailments.
Claims use since Oct. 25, 1910.

Ser. No. 52,661. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HAMMOND & GRAY, Attica, Ind., assignor to Pi-Ki Pile Remedy Co., Attica, Ind., a Partnership. Filed Nov. 8, 1910.

PI-KI

Particular description of goods.—A Salve.
Claims use since September, 1910.

Ser. No. 53,352. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILSON & WINEMAN, Auburn, Ill. Filed Dec. 19, 1910.

Particular description of goods.—Metal-Polish.
Claims use since Sept. 1, 1910.

Ser. No. 54,731. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALVAH W. HOLWAY, Boston, Mass. Filed Feb. 25, 1911.

I·X·L·

Particular description of goods.—Poisonous Fly-Paper.
Claims use since on or about Feb. 24, 1899.

Ser. No. 55,353. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL INSULATOR CO., Boston, Mass. Filed Mar. 27, 1911.

Particular description of goods.—Waterproofing and Protective Paint.
Claims use since June 15, 1909.

Ser. No. 55,578. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) STEPHEN MARTINELLI, Watsonville, Cal. Filed Apr. 7, 1911. Under ten-year proviso.

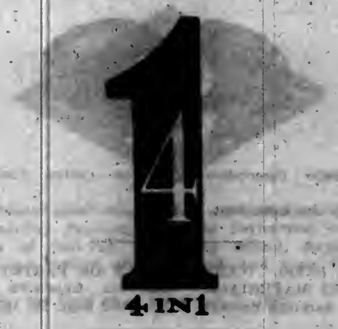
GOLD MEDAL

Particular description of goods.—Apple Cider.
Claims use since Jan. 1, 1895.

Ser. No. 56,376. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) GEORGE KEASBEY, New York, N. Y. Filed May 25, 1911.

Particular description of goods.—Crucible Tool-Steel.
Claims use since Apr. 1, 1910.

Ser. No. 57,197. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) CLARK & DUPRÉ WRINGER MOP CO., Worcester, Mass. Filed June 20, 1911.



Particular description of goods.—A Combined Brush, Scraper, Mop, and Wringer.
Claims use since Jan. 11, 1911.

Ser. No. 57,205. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERBERT HARPER, New Bedford, Mass. Filed June 21, 1911.

XL

Particular description of goods.—Gravy-Salt.
Claims use since October, 1908.

Ser. No. 57,410. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed June 30, 1911.

Particular description of goods.—Shovels, Spades, Scoops, and Drainage-Tools.
Claims use since March, 1904.

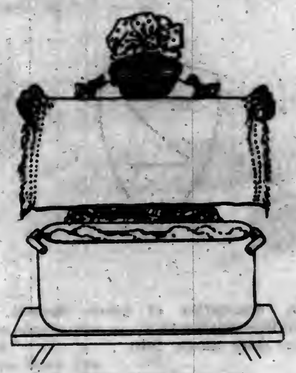
Ser. No. 57,411. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed June 30, 1911.

Particular description of goods.—Shovels, Spades, Scoops, and Drainage-Tools.
Claims use since March, 1904.

Ser. No. 57,681. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GEARLESS AUTOMATIC PUMP CO., Rock Island, Ill. Filed July 17, 1911.

No claim made for the word "Gearless."
Particular description of goods.—Automatic Pumps and Parts Thereof.
Claims use since June 22, 1911.

Ser. No. 57,696. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EDWIN G. FRANK, Philadelphia, Pa. Filed July 18, 1911.



Particular description of goods.—A Washing Compound.
Claims use since July 10, 1911.

Ser. No. 57,728. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE COLLIN VALVE COMPANY, Bridgeport, Conn. Filed July 20, 1911.

Particular description of goods.—Steam-Valves.
Claims use since July 10, 1911.

Ser. No. 58,278. (CLASS 15. OILS AND GREASES.) THE HOLT MANUFACTURING COMPANY, Stockton and Aurora, Cal. Filed Aug. 19, 1911.

CATERPILLAR

Particular description of goods.—Lubricating-Oils.
Claims use since about January, 1910.

Ser. No. 58,315. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) EAGLE TANNERY, San Francisco, Cal. Filed Aug. 22, 1911.

WINTAN

Particular description of goods.—Harness, Saddle, and Sole Leather.
Claims use since June 1, 1911.

Ser. No. 58,632. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio. Filed Sept. 12, 1911.

ALOHA

Particular description of goods.—Toilet Soaps.
Claims use since 1883.

Ser. No. 58,686. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PREMIER VACUUM CLEANER CO., Cleveland, Ohio. Filed Sept. 15, 1911.

PREMIER

Particular description of goods.—Vacuum-Cleaners.
Claims use since Oct. 1, 1910.

Ser. No. 58,870. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TITUS BLATTER & CO., New York, N. Y. Filed Sept. 27, 1911.

Particular description of goods.—Cotton Converted Goods.
Claims use since Sept. 1, 1911.

Ser. No. 58,940. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SARATOGA GRAPHITE COMPANY, Saratoga Springs, N. Y. Filed Sept. 29, 1911.

Particular description of goods.—Graphite.
Claims use since Apr. 1, 1911.

Ser. No. 58,964. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) "SOLO" ZÜNDWAREN- UND WICHSR-FABRIKEN ACT. GES., Vienna, Austria. Filed Oct. 2, 1911.

Particular description of goods.—Matches.
Claims use since April, 1907.

Ser. No. 58,983. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLESTON COCA COLA BOTTLING CO., Charleston, S. C. Filed Oct. 3, 1911.

SILVER ROCK

Particular description of goods.—Ginger-Ale.
Claims use since about Jan. 1, 1903.

Ser. No. 59,260. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Oct. 21, 1911.

Particular description of goods.—Disinfectants Containing Coal-Tar Products, and Also Derivatives and Distillates of Coal-Tar, Comprising Benzol, Naphthalene Crude and Refined, Carbolic Acid, and other Coal-Tar Acids.
Claims use since on or about Jan. 1, 1889.

Ser. No. 59,340. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WILLIAM H. HELLEN, Uniontown, Pa. Filed Oct. 25, 1911.

Particular description of goods.—Pineapple-Jack.
Claims use since Oct. 11, 1911.

Ser. No. 59,392. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. ASCIONE & COMPANY, New York, N. Y. Filed Oct. 28, 1911.

The picture of the individual being fanciful and no claim being made to the picture of the tomatoes.
Particular description of goods.—Canned Tomatoes.
Claims use since 1902.

Ser. No. 59,470. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE ROYAL SPECIALTY COMPANY, Cleveland, Ohio. Filed Nov. 1, 1911.

REX

Particular description of goods.—Electric Vibrators.
Claims use since October, 1910.

Ser. No. 59,471. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE ROYAL SPECIALTY COMPANY, Cleveland, Ohio. Filed Nov. 1, 1911.

Royal

Particular description of goods.—Electric Hair-Driers and Electric Vibrators.
Claims use since September, 1908.

Ser. No. 59,495. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) SCRANTON ACETYLENE LAMP COMPANY, Scranton, Pa. Filed Nov. 2, 1911.

SCRANTO

Particular description of goods.—Portable Lamps Using Acetylene Gas.
Claims use since Sept. 11, 1911.

Ser. No. 59,608. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND MILLING COMPANY, Cleveland, Ohio. Filed Nov. 8, 1911.

Particular description of goods.—Flour.
Claims use since Aug. 1, 1910.

Ser. No. 59,681. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORROW-LAWTON COMPANY, New York, N. Y. Filed Nov. 13, 1911.

SANTA CLAUS

The picture shown being fanciful.
Particular description of goods.—Breakfast Cereals Made of Oats.
Claims use since July 5, 1911.

Ser. No. 59,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STANDARD FRUIT CO., Pulaski, Pa. Filed Nov. 13, 1911.

VICTOR

Particular description of goods.—Pineapples, Oranges, Grape-Fruit, and Lemons.
Claims use since June 16, 1908.

Ser. No. 59,696. (CLASS 2. RECEPTACLES.) WAYNE PAPER GOODS COMPANY, Fort Wayne, Ind. Filed Nov. 13, 1911.

WAY-KUK

Particular description of goods.—Paper Bags.
Claims use since Aug. 9, 1911.

Ser. No. 59,697. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT L. JOHNSTONE, New York, N. Y. Filed Nov. 13, 1911.

Particular description of goods.—Chewing-Gum.
Claims use since May 1, 1911.

Ser. No. 59,698. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWK FISH COMPANY, Seattle, Wash. Filed Nov. 13, 1911.

FISH HAWK

Particular description of goods.—Canned Salmon.
Claims use since Oct. 21, 1911.

Ser. No. 59,758. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREEN & GREEN COMPANY, Dayton, Ohio. Filed Nov. 16, 1911.

CHEW CHEW CARS

Particular description of goods.—Crackers.
Claims use since Oct. 2, 1911.

Ser. No. 59,926. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MORRIS ROSENSTEIN, New York, N. Y. Filed Nov. 25, 1911.

DEVIL

Particular description of goods.—Cotton Piece Goods.
Claims use since July, 1909.

TRADE-MARKS

REGISTERED JANUARY 9, 1912.

84,796. AUTOMATIC PIANO-PLAYERS AND MUSIC FOR THE SAME. AEOLIAN COMPANY, Meriden, Conn.; Garwood, N. J., and New York, N. Y.
Filed August 1, 1911. Serial No. 57,967. PUBLISHED NOVEMBER 7, 1911.

84,797. CERTAIN FOODS AND STOCK FEED. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed December 16, 1908. Serial No. 39,361. PUBLISHED MAY 25, 1909.

84,798. VAULT-LIGHTS AND PRISMATIC GLASS. AMERICAN LUXFER PRISM COMPANY OF ILLINOIS, Chicago, Ill.
Filed August 19, 1911. Serial No. 58,277. PUBLISHED NOVEMBER 7, 1911.

84,799. MOLASSES. AMERICAN MOLASSES CO., New York, N. Y.
Filed July 10, 1911. Serial No. 57,565. PUBLISHED OCTOBER 31, 1911.

84,800. CERTAIN FOODS. THE AMERICAN PREPARED FOOD CO., South Bend, Ind.
Filed June 26, 1911. Serial No. 57,324. PUBLISHED OCTOBER 31, 1911.

84,801. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed September 20, 1911. Serial No. 58,737. PUBLISHED NOVEMBER 7, 1911.

84,802. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed October 4, 1911. Serial No. 58,998. PUBLISHED NOVEMBER 7, 1911.

84,803. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,928. PUBLISHED NOVEMBER 7, 1911.

84,804. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,930. PUBLISHED NOVEMBER 7, 1911.

84,805. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,933. PUBLISHED NOVEMBER 7, 1911.

84,806. PISTOLS, RIFLES, SPORTING-GUNS, AND METALLIC CARTRIDGES. ANCIENS ÉTABLISSEMENTS PIEPER STE ANE, Herstal, near Liege, Belgium.
Filed June 8, 1911. Serial No. 56,910. PUBLISHED NOVEMBER 7, 1911.

84,807. THREAD. JOHN E. BARBOUR, Lake View, N. J.
Filed September 20, 1911. Serial No. 58,727. PUBLISHED NOVEMBER 7, 1911.

84,808. THREAD. JOHN E. BARBOUR, Lake View, N. J.
Filed September 20, 1911. Serial No. 58,728. PUBLISHED NOVEMBER 7, 1911.

84,809. DUCK. WILLIAM L. BARRELL CO., New York, N. Y.; Boston and Lawrence, Mass.; Chicago, Ill., and St. Louis, Mo.
Filed February 7, 1911. Serial No. 54,363. PUBLISHED NOVEMBER 7, 1911.

84,810. CERTAIN FOODS. CHAS. W. BAUERMEISTER COMPANY, Terre Haute, Ind.
Filed May 1, 1911. Serial No. 56,096. PUBLISHED OCTOBER 31, 1911.

84,811. CONFECTIONS AND CHOCOLATES. PAUL F. BRICH COMPANY, Bloomington, Ill.
Filed December 30, 1910. Serial No. 53,577. PUBLISHED OCTOBER 24, 1911.

84,812. LAXATIVE CEREAL FOOD. J. D. BOURDEAU CO., Detroit, Mich.
Filed July 10, 1911. Serial No. 57,560. PUBLISHED OCTOBER 31, 1911.

84,813. CANNED FRUITS AND VEGETABLES. CALIFORNIA FRUIT CANNERS ASSOCIATION, San Francisco, Cal.
Filed January 30, 1909. Serial No. 40,257. PUBLISHED NOVEMBER 16, 1909.

84,814. QUARTERLY NEWSPAPER. JOHN ARMSTRONG CHALONER, Cobham, Va.
Filed June 21, 1911. Serial No. 57,236. PUBLISHED NOVEMBER 7, 1911.

84,815. GINGER-ALE. THE CHICAGO CONSOLIDATED BOTTLING COMPANY, Chicago, Ill.
Filed May 24, 1909. Serial No. 42,627. PUBLISHED NOVEMBER 7, 1911.

84,816. FIRE-BRICK AND FIRE-BRICK FOR HEAT-RESISTING PURPOSES. CHICAGO RETORT & FIRE BRICK CO., Chicago, Ill.
Filed March 23, 1911. Serial No. 55,269. PUBLISHED OCTOBER 3, 1911.

84,817. FLAVORING EXTRACTS AND SPICES. CUMBERLAND MFG. CO., Nashville, Tenn.
Filed August 23, 1911. Serial No. 58,338. PUBLISHED OCTOBER 24, 1911.

84,818. TOMATO PASTE. JACOB CUSIMANO, New Orleans, La.
Filed August 26, 1911. Serial No. 58,402. PUBLISHED OCTOBER 31, 1911.

84,819. CANNED PINEAPPLE. THEO. H. DAVIES & COMPANY, LTD., Honolulu, Hawaii Ter.
Filed June 21, 1911. Serial No. 57,223. PUBLISHED OCTOBER 24, 1911.

84,820. COTTON AND BALATA BELTING. JAMES DAWSON & SON LD., Boultham, Lincoln, England.
Filed August 12, 1910. Serial No. 51,379. PUBLISHED OCTOBER 31, 1911.

84,821. NON-ALCOHOLIC PHOSPHATE BEVERAGE AND SYRUP FOR MAKING SAME. DEACON BROWN MANUFACTURING COMPANY, Montgomery, Ala.
Filed July 27, 1911. Serial No. 57,865. PUBLISHED NOVEMBER 7, 1911.

84,822. RUBBER AND RUBBER AND FABRIC BOOTS AND SHOES. THE DIAMOND RUBBER CO., Akron, Ohio.
Filed March 21, 1911. Serial No. 55,222. PUBLISHED NOVEMBER 7, 1911.

84,823. THREAD FOR FINE NEEDLEWORK. DIECKERHOFF, RAFFLOER & COMPANY, New York, N. Y.
Filed August 3, 1911. Serial No. 58,025. PUBLISHED NOVEMBER 7, 1911.

84,824. GLASS MILK AND CREAM BOTTLES. EMPIRE BOTTLE & SUPPLY COMPANY, New York, N. Y.
Filed June 20, 1911. Serial No. 57,194. PUBLISHED NOVEMBER 7, 1911.

84,825. CERTAIN FOODS. THE FRANCO-AMERICAN FOOD COMPANY, Jersey City, N. J.
Filed May 25, 1911. Serial No. 56,578. PUBLISHED OCTOBER 31, 1911.

84,826. IMITATION LARD. GALBAN & CO. INC., New York, N. Y., and Habana, Cuba.
Filed May 4, 1911. Serial No. 56,171. PUBLISHED OCTOBER 24, 1911.

84,827. GARMENT-SUPPORTERS. HARRIS SUSPENDER COMPANY, New York, N. Y.
Filed July 3, 1911. Serial No. 57,467. PUBLISHED NOVEMBER 7, 1911.

84,828. LEATHER SHOES. MARGARET L. HATHEWAY, Cambridge, Mass.
Filed July 29, 1911. Serial No. 57,929. PUBLISHED NOVEMBER 7, 1911.

84,829. CANNED PINEAPPLES. HAWAIIAN PINEAPPLE CO., LTD., Honolulu, Hawaii Ter.
Filed February 28, 1911. Serial No. 54,769. PUBLISHED OCTOBER 24, 1911.

84,830. MIRROR-GLASS AND PLATE-GLASS. HIRES TURNER GLASS CO., Philadelphia, Pa.
Filed August 21, 1911. Serial No. 58,309. PUBLISHED NOVEMBER 7, 1911.

84,831. BUTLERS' CABINETS, KITCHEN-CABINETS, CUPBOARDS, CLOSETS, AND TABLES. HOOSIER MANUFACTURING COMPANY, Newcastle, Ind.
Filed May 22, 1911. Serial No. 56,513. PUBLISHED NOVEMBER 7, 1911.

84,832. ARTIFICIAL-SILK SKEIN-YARN. WM. H. HORSTMANN COMPANY, Philadelphia, Pa.
Filed July 19, 1911. Serial No. 57,713. PUBLISHED NOVEMBER 7, 1911.

84,833. ASBESTOS PIPE-COVERING. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed August 28, 1911. Serial No. 58,424. PUBLISHED OCTOBER 17, 1911.

84,834. OIL-CAKE AND OIL-MEAL. KELLOGGS & MILLER, Amsterdam, N. Y.
Filed June 16, 1911. Serial No. 57,090. PUBLISHED OCTOBER 31, 1911.

84,835. WHEAT-FLOUR. KEMPER MILL & ELEVATOR COMPANY, Kansas City, Mo.
Filed July 31, 1911. Serial No. 57,963. PUBLISHED OCTOBER 31, 1911.

84,836. TERRA-COTTA TILES. O. W. KETCHAM, Crum Lynne, Pa.
Filed May 16, 1911. Serial No. 56,380. PUBLISHED JULY 25, 1911.

84,837. CANVAS. B. KUPPENHEIMER & Co., Chicago, Ill.
Filed April 17, 1911. Serial No. 55,806. PUBLISHED NOVEMBER 7, 1911.

84,838. WHEAT-FLOUR. LEXINGTON FLOURING MILLS, Lexington, Mo.
Filed April 21, 1911. Serial No. 55,874. PUBLISHED AUGUST 1, 1911.

84,839. BUTTONS. G. A. LIPPINCOTT, Philadelphia, Pa.
Filed May 20, 1911. Serial No. 56,502. PUBLISHED NOVEMBER 7, 1911.

84,840. BLENDED COFFEE AND TEA. LOWRY COFFEE CO., Philadelphia, Pa.
Filed August 25, 1911. Serial No. 58,380. PUBLISHED OCTOBER 24, 1911.

84,841. LEATHER BOOTS AND SHOES. LUNN & SWEET SHOE CO., Auburn, Me.
Filed September 14, 1911. Serial No. 58,672. PUBLISHED NOVEMBER 7, 1911.

84,842. HORSE FOOD. FRANK C. MCAFEE, Moberly, Mo.
Filed December 14, 1910. Serial No. 53,276. PUBLISHED OCTOBER 24, 1911.

84,843. CERTAIN FOODS. MCNEIL & HIGGINS COMPANY, Chicago, Ill.
Filed February 23, 1911. Serial No. 47,970. PUBLISHED FEBRUARY 14, 1911.

84,844. WHOLE-MILK POWDER, HALF-SKIMMED-MILK POWDER, AND SKIMMED-MILK POWDER. MERRELL-SOULE CO., Syracuse, N. Y.
Filed April 27, 1910. Serial No. 49,823. PUBLISHED OCTOBER 24, 1911.

84,845. CEREAL COMPOUND USED AS A CEREAL FOOD BEVERAGE. MISSION CEREAL COMPANY, Minneapolis, Minn.
Filed March 6, 1911. Serial No. 54,879. PUBLISHED OCTOBER 31, 1911.

84,846. PREPARATION OF PORK. WILLIAM MOLAND'S SONS, Philadelphia, Pa.
Filed May 22, 1911. Serial No. 56,524. PUBLISHED OCTOBER 24, 1911.

84,847. WHEAT-FLOUR. MONTANA FLOUR MILLS CO., Harlowton, Mont.
Filed August 25, 1911. Serial No. 58,375. PUBLISHED OCTOBER 31, 1911.

84,848. WHEAT-FLOUR. MONTANA FLOUR MILLS CO., Harlowton, Mont.
Filed August 25, 1911. Serial No. 58,377. PUBLISHED OCTOBER 24, 1911.

84,849. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed August 24, 1911. Serial No. 58,361. PUBLISHED OCTOBER 24, 1911.

84,850. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed August 24, 1911. Serial No. 58,362. PUBLISHED OCTOBER 24, 1911.

84,851. CORN-STARCH. NATIONAL STARCH COMPANY, Jersey City, N. J., and New York, N. Y.
Filed June 19, 1911. Serial No. 57,162. PUBLISHED OCTOBER 24, 1911.

84,852. EDIBLE STARCH. NATIONAL STARCH COMPANY, New York, N. Y.
Filed August 18, 1911. Serial No. 58,266. PUBLISHED OCTOBER 24, 1911.

84,853. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 6, 1907. Serial No. 26,532. PUBLISHED NOVEMBER 7, 1911.

84,854. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,533. PUBLISHED NOVEMBER 7, 1911.

84,855. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,534. PUBLISHED NOVEMBER 7, 1911.

84,856. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,535. PUBLISHED NOVEMBER 7, 1911.

84,857. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,536. PUBLISHED NOVEMBER 7, 1911.

84,858. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,537. PUBLISHED NOVEMBER 7, 1911.

84,859. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,538. PUBLISHED NOVEMBER 7, 1911.

84,860. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,539. PUBLISHED NOVEMBER 7, 1911.

84,861. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,540. PUBLISHED NOVEMBER 7, 1911.

84,862. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,541. PUBLISHED NOVEMBER 7, 1911.

84,863. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,542. PUBLISHED NOVEMBER 7, 1911.

84,864. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed April 8, 1907. Serial No. 26,543. PUBLISHED NOVEMBER 7, 1911.

84,865. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed May 24, 1907. Serial No. 27,631. PUBLISHED NOVEMBER 7, 1911.

84,866. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1907. Serial No. 31,736. PUBLISHED NOVEMBER 7, 1911.

84,867. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1907. Serial No. 31,741. PUBLISHED NOVEMBER 7, 1911.

84,868. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1907. Serial No. 31,742. PUBLISHED NOVEMBER 7, 1911.

84,869. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1909. Serial No. 46,554. PUBLISHED NOVEMBER 7, 1911.

84,870. POPCORN. FRANK W. NOBLE, Southwick, Mass.
Filed April 1, 1911. Serial No. 55,461. PUBLISHED OCTOBER 31, 1911.

84,871. SILK THREAD, MACHINE-TWIST, SPOOL-SILK, AND SEWING-SILK. THE NONOTUCK SILK COMPANY, Florence and Boston, Mass.
Filed October 13, 1911. Serial No. 59,143. PUBLISHED NOVEMBER 7, 1911.

84,872. CERTAIN JOINTING MATERIAL, CLAP VALVES, HOSE, BELTING, AND PACKING. PAHL'SCHE GUMMI- UND ASBEST-GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dusseldorf-Rath, Germany.
Filed March 11, 1911. Serial No. 55,007. PUBLISHED NOVEMBER 7, 1911.

84,873. SUSPENDERS. PENN BROS. MFG. CO., Danville, Va.
Filed April 4, 1911. Serial No. 55,513. PUBLISHED NOVEMBER 7, 1911.

84,874. CERTAIN GRAIN FOODS. THE PIONEER CEREAL COMPANY, Akron, Ohio.
Filed June 21, 1911. Serial No. 57,228. PUBLISHED OCTOBER 31, 1911.

84,875. MONTHLY MAGAZINE PUBLICATION. WALTER QUACKENBUSH, New York, N. Y.
Filed August 25, 1911. Serial No. 58,389. PUBLISHED NOVEMBER 7, 1911.

84,876. CANNED VEGETABLES. THOMAS ROBERTS & CO., Philadelphia, Pa.
Filed September 7, 1911. Serial No. 58,561. PUBLISHED OCTOBER 31, 1911.

84,877. BUTTER AND EGGS. EDWARD RUBE & CO., Chicago, Ill.
Filed July 26, 1911. Serial No. 57,827. PUBLISHED OCTOBER 31, 1911.

84,878. LEAD-PENCILS AND COLORED PENCILS. SCHWANHAUSSER LATH GROSSBERGER & KURZ, Nuremberg, Germany.
Filed July 14, 1911. Serial No. 57,628. PUBLISHED NOVEMBER 7, 1911.

84,879. CERTAIN FOODS. SCOTT & GILBERT CO., San Francisco, Cal.
Filed May 25, 1911. Serial No. 56,585. PUBLISHED OCTOBER 24, 1911.

84,880. WASHCLOTHS, TOWELS, AND BATH-MATS. KNULAND SHAFFER, Boston, Mass.
Filed July 1, 1910. Serial No. 50,658. PUBLISHED NOVEMBER 7, 1911.

84,881. CERTAIN FOODS. T. M. SINCLAIR & CO., LIMITED, Cedar Rapids, Iowa.
Filed March 18, 1911. Serial No. 55,162. PUBLISHED OCTOBER 24, 1911.

84,882. CANNED FRUITS. SÖXELAND GEBR., Wandsbek, near Hamburg, Germany.
Filed December 9, 1907. Serial No. 31,627. PUBLISHED OCTOBER 24, 1911.

84,883. TEAS. SOULIS & SOULIS, Newton, Mass.
Filed May 27, 1911. Serial No. 56,669. PUBLISHED OCTOBER 24, 1911.

84,884. LEATHER BOOTS AND SHOES. CHARLES W. STROHBECK, New York, N. Y.
Filed October 4, 1909. Serial No. 45,184. PUBLISHED NOVEMBER 7, 1911.

84,885. CATALOGUES OF MERCHANDISE. THE SULLIVAN SYSTEM, INC., New York, N. Y.
Filed April 12, 1911. Serial No. 55,694. PUBLISHED NOVEMBER 7, 1911.

84,886. COTTON HANDKERCHIEFS. TOOTAL BROADHURST LEE COMPANY LIMITED, Manchester, England.
Filed April 4, 1911. Serial No. 55,519. PUBLISHED NOVEMBER 7, 1911.

84,887. COTTON FLANNELS. TOOTLE, WHEELER & MOTTER MER. CO., St. Joseph, Mo., assignor to Wheeler and Motter Mercantile Company, St. Joseph, Mo., a Corporation of Missouri.
Filed June 26, 1908. Serial No. 35,774. PUBLISHED JANUARY 12, 1909.

84,888. CULTURED WHOLE MILK. UNION DAIRY COMPANY, St. Louis, Mo.
Filed July 12, 1911. Serial No. 57,598. PUBLISHED OCTOBER 24, 1911.

84,889. CANDY. UNITED DRUG CO., Boston, Mass.
Filed November 18, 1909. Serial No. 45,972. PUBLISHED JANUARY 11, 1910.

84,890. MACHINERY PACKING. JAMES WALKER & CO., London, England, assignor to James Walker and Company Limited, London, England.
Filed December 1, 1910. Serial No. 53,056. PUBLISHED NOVEMBER 7, 1911.

84,891. MONTHLY MAGAZINE. PERCY WAXMAN, New York, N. Y.
Filed September 7, 1911. Serial No. 58,573. PUBLISHED NOVEMBER 7, 1911.

84,892. CERTAIN FOODS. WESTERN GROCER COMPANY, Marshalltown, Iowa.
Filed December 7, 1910. Serial No. 53,168. PUBLISHED OCTOBER 31, 1911.

84,893. CHEWING-GUM. THE TOM WILSON MANUFACTURING COMPANY, New York, N. Y.
Filed August 31, 1911. Serial No. 58,457. PUBLISHED OCTOBER 24, 1911.

84,894. OINTMENTS. THE ANTHOLINE MANUFACTURING CO., Hutchinson, Kans.
Filed May 29, 1911. Serial No. 56,675. PUBLISHED NOVEMBER 7, 1911.

84,895. DUCK. WILLIAM L. BARRELL CO., New York, N. Y.; Boston and Lawrence, Mass.; Chicago, Ill., and St. Louis, Mo.
Filed February 7, 1911. Serial No. 54,364. PUBLISHED NOVEMBER 7, 1911.

84,896. DISINFECTING MEANS FOR MOUTH AND THROAT. BAUER & CIE., Berlin, Germany.
Filed June 24, 1911. Serial No. 57,273. PUBLISHED NOVEMBER 7, 1911.

84,897. DISINFECTING MEANS FOR MOUTH AND THROAT. BAUER & CIE., Berlin, Germany.
Filed June 24, 1911. Serial No. 57,276. PUBLISHED NOVEMBER 7, 1911.

84,898. MEN'S CLOTHES. BURK, FRIED & COMPANY, Baltimore, Md.
Filed August 20, 1907. Serial No. 29,491. PUBLISHED NOVEMBER 7, 1911.

84,899. MEDICINE FOR FEMALE DISEASES. CHATTANOOGA MEDICINE CO., Chattanooga, Tenn.
Filed October 12, 1911. Serial No. 59,116. PUBLISHED NOVEMBER 7, 1911.

84,900. LIVER MEDICINE. CHATTANOOGA MEDICINE CO., Chattanooga, Tenn.
Filed October 12, 1911. Serial No. 59,118. PUBLISHED NOVEMBER 7, 1911.

84,901. MOUTH-WASH, TOOTH-PASTE, AND TOOTH-POWDER. THE DENCOLO CHEMICAL COMPANY, Denver, Colo.
Filed January 10, 1911. Serial No. 53,796. PUBLISHED NOVEMBER 7, 1911.

84,902. HAIR-TONIC. ALEXANDER CLYDE ELLERBE, Florence, S. C.
Filed May 8, 1909. Serial No. 42,317. PUBLISHED NOVEMBER 7, 1911.

84,903. CAMBRICS, SHEETING, SHIRTING, MUSLIN, LONG-CLOTH, AND NAINSOOK. GARNER PRINT WORKS & BLEACHERY, Wappingers Falls, N. Y.
Filed April 7, 1911. Serial No. 55,589. PUBLISHED NOVEMBER 7, 1911.

84,904. EXTERNAL REMEDY FOR PAINS AND ACHES. ERNEST W. GAUBE, Cleveland, Ohio.
Filed September 15, 1911. Serial No. 58,691. PUBLISHED NOVEMBER 7, 1911.

84,905. MONTHLY MAGAZINE. THE GRAND BAY LAND COMPANY, Grand Bay, Ala.; Chicago, Ill., and Scranton, Pa.
Filed June 7, 1911. Serial No. 56,879. PUBLISHED NOVEMBER 7, 1911.

84,906. LIVER-TONIC. GRIFFITH-WHITE CHEMICAL CO., Pensacola, Fla.
Filed August 30, 1911. Serial No. 58,447. PUBLISHED NOVEMBER 7, 1911.

84,907. FIGS. HABICHT, BRAUN & CO., New York, N. Y., and Chicago, Ill.
Filed August 28, 1911. Serial No. 58,427. PUBLISHED OCTOBER 31, 1911.

84,908. PILLS, TOILET PREPARATIONS, AND REMEDIES, AND MEDICINES FOR CERTAIN DISEASES AND AILMENTS. MICHAEL HALPERN, New York, N. Y.
Filed September 5, 1911. Serial No. 58,540. PUBLISHED NOVEMBER 7, 1911.

84,909. CAUSTIC SODA, BLEACHING-POWDER, AND SULFUR CHLORID. HOOKER ELECTROCHEMICAL COMPANY, Niagara Falls, N. Y.
Filed April 17, 1911. Serial No. 55,795. PUBLISHED NOVEMBER 7, 1911.

84,910. LINIMENT. EDWARD C. KIBIGER, Fort Wayne, Ind.
Filed October 7, 1911. Serial No. 59,047. PUBLISHED NOVEMBER 7, 1911.

84,911. VERMIN-EXTERMINATING PREPARATIONS. NATIONAL EXTERMINATING CO., New York, N. Y.
Filed June 29, 1911. Serial No. 57,373. PUBLISHED NOVEMBER 7, 1911.

84,912. STARCH FOR LAUNDRY AND MANUFACTURING PURPOSES. NATIONAL STARCH COMPANY, New York, N. Y.
Filed August 18, 1911. Serial No. 58,264. PUBLISHED NOVEMBER 7, 1911.

84,913. SPORTING CLOTHING AND HOUSE-COATS FOR MEN, WOMEN, AND CHILDREN. ALFRED NELSON COMPANY, New York, N. Y.
Filed June 8, 1911. Serial No. 56,938. PUBLISHED NOVEMBER 7, 1911.

84,914. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed January 3, 1907. Serial No. 24,399. PUBLISHED NOVEMBER 7, 1911.

84,915. REMEDIES FOR OBESITY, DYSPEPSIA, AND INDIGESTION. THE ROCK-A-WATER CHEMICAL COMPANY, Denver, Colo.
Filed January 20, 1911. Serial No. 53,987. PUBLISHED NOVEMBER 7, 1911.

84,916. SODA FOR COOKING PURPOSES. ROYAL BAKING POWDER COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 18, 1911. Serial No. 55,814. PUBLISHED NOVEMBER 7, 1911.

84,917. MEDICINE FOR ALL ABRASIONS OF THE SKIN. SAMERY & WANTZ, Lowville, N. Y.
Filed October 14, 1911. Serial No. 59,162. PUBLISHED NOVEMBER 7, 1911.

84,918. SHIRT-WAISTS. BERNARD SHORNFELD, New York, N. Y.
Filed March 21, 1911. Serial No. 55,220. PUBLISHED NOVEMBER 7, 1911.

84,919. SCALP-TONIC. MARTHA J. STEBBINS, Churchville, N. Y.
Filed September 25, 1911. Serial No. 58,832. PUBLISHED NOVEMBER 7, 1911.

84,920. MEDICINAL TABLETS. DANIEL B. STREET, Washington, D. C.
Filed July 6, 1911. Serial No. 57,508. PUBLISHED NOVEMBER 7, 1911.

84,921. HOOF-PADS MADE FROM LEATHER. UNITED STATES CHROME SOLE COMPANY, Chicago, Ill.
Filed February 16, 1911. Serial No. 54,562. PUBLISHED NOVEMBER 7, 1911.

84,922. DISINFECTANT AND AN ASTRINGENT REMEDY. JOHANN A. WÜLFING, Berlin, Germany.
Filed June 24, 1911. Serial No. 57,279. PUBLISHED NOVEMBER 7, 1911.

TRADE-MARKS CANCELED.

83,900. SHOE-COUNTERS. GARDINER, BEARDSELL & COMPANY, Boston, Mass.
Registered October 24, 1911. Canceled December 5, 1911.

83,901. SHOE-COUNTERS. GARDINER, BEARDSELL & COMPANY, Boston, Mass.
Registered October 24, 1911. Canceled December 5, 1911.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

POPE *v.* MCKENZIE.
Decided June 6, 1911.

INTERFERENCE—PRIORITY.

Priority *Held* properly awarded M., since the evidence fails to establish that P., the junior party, had a conception of the invention prior to M's filing date, or if he be assumed to be the first conceiver that he was diligent at the time M. entered the field.

APPEAL from Examiners-in-Chief.

APPARATUS FOR DISTILLING WOOD.

Messrs. Kay, Totten & Winter and *Mr. Frederick W. Winter* for Pope.

Messrs. Redding, Greeley & Austin for McKenzie.

MOORE, *Commissioner:*

This is an appeal by Pope from the decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences and awarding priority of invention to McKenzie.

The issue is in three counts, as follows:

1. An apparatus for the extraction of turpentine, etc., from wood, comprising a closed vessel for the reception of the wood to be treated provided with inlet and outlet for the bath and combined products respectively, a vessel for the reception of the bath and combined products, means for circulating the bath between the two vessels, means for introducing steam into the bath in the second-named vessel, means for condensing the vapors from the second-named vessel, and means for reheating the bath on its return from the second-named vessel to the first-named vessel.

2. An apparatus for the extraction of turpentine, etc., from wood, comprising a vessel for the reception of the wood to be treated provided with inlet and outlet for the bath and combined products respectively, a vessel for the reception of a portion of the bath with which the wood has been treated, means for circulating a portion of the bath between the two vessels, means for introducing steam into the portion of the bath in the second-named vessel to remove the extracted products, and means for condensing all the vapors from the second-named vessel.

3. An apparatus for extracting products from wood, a retort in which the wood is to be treated with a bath, a vaporizing-chamber connected to the retort, means for maintaining pressure in said retort, means for circulating the bath from the retort to the vaporizing-chamber and return, and means for heating the bath on its way back to the retort.

McKenzie is an applicant for the reissue of his Patent No. 852,236, the application for which was filed December 30, 1905. In his preliminary statement he alleges conception and disclosure in October, 1903, drawings in May, 1904, and reduction to practice in November, 1904.

Pope is an applicant for patent, his application having been filed December 13, 1906, and in his preliminary statement he alleges conception in July, 1904, disclosure in August, 1904, drawings September 13, 1904, and reduction to practice in December, 1904.

From the testimony filed it is clear that the actual reduction to practice to which each party lays claim in his preliminary statement is a single apparatus built by the Weed Distilling Company at Wilmington, N. C., about November or December, 1904. Both parties were then associated with this company, McKenzie as vice-president and general manager and Pope as superintendent. The apparatus in question was known as the paving-block unit, and was the outgrowth of plans and efforts upon the part of one Weed, which began about May, 1904. Weed was also the inventor of the process and apparatus under which the Weed Distilling Company originally operated. His testimony, which would doubtless have thrown much light on the present controversy, could not be obtained on account of his death.

Weed's scheme for making paving-blocks, upon which he began working about May, 1904, was to first distil the turpentine, etc., from the blocks and thereafter saturate them with some preserving compound, as usual. He conducted some experiments toward this end on Mayo's Island about May, 1904, and ordered from the Richmond Iron Works iron tanks and other apparatus for use in a full-sized plant. He also had drawings made, one of which showed diagrammatically a full apparatus for performing the distilling step of his process. This is in evidence as "McKenzie's Exhibit, Cates Sketch, Solid Rosin Bath Apparatus of June 2, 1904," and, as will be seen later, clearly embodies or implies all the elements called for by the counts of the present issue, except that it does not indicate an intention to introduce steam *into the bath*, as called for by counts 1 and 2.

It appears that Weed, after pursuing the project for some time on his own behalf and with some effort at secrecy, found himself unable to bear the expense and sold the apparatus being made to his order by the Richmond Iron Works, as well as that used on Mayo's Island, to the Weed Distilling Company.

The paving-block unit was completed by this company under Pope's care largely from the material thus acquired, and during its construction Pope had a drawing made of its lay-out, which is in evidence as "Pope's Exhibit, Drawing of Paving Block Unit." This drawing differs from the Cates sketch made for Weed in that it omits any suggestion of a stand-pipe or other means to produce pressure in the distilling-retort, as shown in the Cates sketch

and called for by count 3, and, further, in adding another outlet to the vaporizing-tank besides one in the bottom, as shown by Cates's sketch. This additional outlet was made in the side of the vaporizing-tank about thirteen inches from the bottom and was apparently put in under Pope's direction.

Assuming that the paving-block unit was built according to this exhibit drawing of Pope's, it would have embodied the invention of counts 1 and 2 if it was so operated that the outlet in the bottom of the vaporizing-tank was closed and the bath allowed to collect and flow out the opening in the side above referred to, so that the steam which enters this tank through perforated pipes at the bottom might be introduced "into the bath," as specified in these counts. There is no evidence, however, that the apparatus was used in this way or that if it was its operation was successful enough to demonstrate the practicability of the invention. (McKenzie record, p. 143, X-Q. 328; Pope record, p. 12, Q. 42; p. 44, Q. 18; p. 101, Qs. 55 and 56.) As above pointed out, the apparatus did not embody count 3 because there was no means for maintaining pressure in the vaporizing-tank.

Clearly, therefore, the paving-block unit cannot be taken as a reduction to practice of any of the counts of the issue by either party.

A second plant, called the "first distilling unit," was built by the Weed Distilling Company, which it is also claimed was a reduction to practice of the present invention. This plant was started while Pope was still superintendent, but finished several months after he left the company. There is somewhat more testimony as to its success than is found in regard to the success of the paving-block unit; but its structure is even less satisfactorily shown, and upon the whole the evidence is entirely insufficient to establish this apparatus as a reduction to practice—certainly not for Pope's benefit, for he was not present or responsible for its completion and test.

There is no other proof of actual reduction to practice by either party. Both parties must, therefore, rely upon the constructive reduction to practice to which they are entitled by the filing of their respective applications, and Pope, the junior party, can prevail over McKenzie only by showing that he conceived the invention prior to McKenzie and was diligent in reducing it to practice at and after the time McKenzie entered the field.

The time of McKenzie's entry into the field is very much in doubt. His claims to conception in 1903 are not proved by the evidence submitted in support thereof for reasons clearly pointed out by the tribunals below, and it seems doubtful whether he even had an understanding of the invention, whether original or not, until after 1904. In the view I take of the case, however, it is immaterial whether he be given a date of conception earlier than the filing of his original application on December 30, 1905, or not.

Pope admits full knowledge of the paving-block apparatus as proposed by Weed and shown in the Cates sketch prior to his alleged conception in July, 1904. (Pope record, p. 31, X-Q. 150; p. 52, X-Qs. 279 to 289.) This Cates sketch discloses a structure which satisfies count 3, including the means for producing pressure in the distilling-retort, as above indicated. Pope urges that no such means is shown, but it seems to be shown there as clearly as in the Pope application, the means being a stand-pipe in each case and apparently of about the same height. As to counts 2 and 3, Pope seems to rely upon his addition to the Weed apparatus of the pipe leading from the side of the vaporizing-tank about thirteen inches from the bottom (as shown in the drawing made for him) for evidence of conception by him of the invention covered therein. It has already been pointed out that the record fails to prove that this outlet was the exit of the rosin bath as used or that it was so intended. It was only by using it in this manner that the steam could be introduced "into the bath," as specified in counts 1 and 2. Even Pope's application as filed more than two years after the making of the Pope exhibit drawing of paving-block unit, into which this feature was introduced, is strangely silent on the question of introducing the steam *into* the bath. This is an expression adopted from McKenzie's case, where stress is laid on this point.

I do not find that Pope had established a conception of the invention by him prior to McKenzie's filing date; but it is clear that he cannot prevail even if he be granted the benefit of a conception as early as alleged in his preliminary statement, for there is absolutely no evidence of diligence on his part during December, 1905, when McKenzie came into the Office with an application, or thereafter, until December 13, 1906, when his (Pope's) application was filed.

The evidence in this case is such that the parties must, in effect, stand upon their respective filing dates, and on these McKenzie must prevail.

Pope also urged that McKenzie has no right to make a claim corresponding to count 3 of the issue. He brought a motion to dissolve upon this ground, which was denied by the Primary Examiner. I find no error in the holding of the Examiner on this point.

The decision of the Examiners-in-Chief is affirmed.

ROTTER *v.* SAMUELSON.

Decided December 26, 1911.

INTERFERENCE—ORDER TO SHOW CAUSE—MOTION TO DISSOLVE—DELAY IN BRINGING.

Where a party who is under order to show cause why judgment should not be rendered against him on the record brings a motion to dissolve the interference after the time allowed by the rules, it is incumbent upon him to justify the delay in bringing such motion by reasons which are compelling in their nature. It is not sufficient to merely show that it was not convenient to file the motion within the time or that the matter was delayed by other business which was deemed more pressing.

APPEAL on motion.

STEAM-TURBINE.

Mr. G. F. De Wein for Rotter.

Mr. Albert G. Davis for Samuelson.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Rotter from the decision of the Examiner of Interferences refusing to transmit his motion to dissolve the above-entitled interference.

The record shows that Rotter alleged in his preliminary statement a date of conception which is subsequent to the filing date of the Samuelson application.

The Examiner of Interferences thereupon issued an order upon Rotter to show cause within thirty days why judgment should not be rendered against him.

In response to the order to show cause and after the expiration of thirty days Rotter filed a motion to transmit a motion to dissolve the interference. The sole ground for dissolution set forth in the motion is that the invention defined in the issue is anticipated by certain prior patents.

Where a party is under order to show cause why judgment should not be rendered against him, because his date of conception as alleged in the preliminary statement is subsequent to the filing date of the senior party, the rules provide for the filing of the various motions which may be deemed pertinent to the order. When such motions, however, are filed late, it is incumbent upon such parties to justify the delay by reasons which are compelling in their nature. It is not sufficient in such cases to merely show that it was not convenient to file the motion within the time or that the matter was delayed because of other business which was deemed more pressing. To the same effect is the decision of the Commissioner in the case of *Ryder* v. *Brown* v. *Tripp* and *McMeans* v. *White*, (137 O. G., 228.)

In justification of the appellant's delay it is stated in the affidavit of counsel that he thought it necessary to consult with the chief engineer of the assignee company before filing the motion and that he could not gain an audience with this official until the day before the expiration of the time in which the motion should ordinarily be filed. It does not appear, however, that there was any special effort made to have an early interview.

The motion merely sets up a few patents in anticipation of the invention defined in the issue. It is not clear why it was necessary for counsel to interview the chief engineer of the company to ascertain whether such a motion should be filed.

The showing is wholly insufficient to justify transmission in view of the conditions of this interference—to wit, the moving party is *prima facie* the second inventor, and it is nowhere alleged that the senior party, so far as his disclosure is concerned, is not entitled to make the claims.

The decision of the Examiner of Interferences is affirmed.

EX PARTE SOCIÉTÉ ANONYME DES USINES REMY.

Decided November 28, 1911.

TRADE-MARKS—APPLICATION—DECLARATION—EXCLUSIVE USE.

A statement that a mark has been in exclusive use for ten years next preceding the passage of the Trade-Mark Act of February 20, 1905, *Held* not sufficient to bring the case under the provisions of that act as amended February 18, 1911, since the original act went into effect April 1, 1905, and the term "passage of the act" refers to that date. (*ex parte Joseph P. Funke Company*, 124 O. G., 2902,) whereas the amendment specifies that the use must have been exclusive for "ten years next preceding February 20, 1905."

ON PETITION.

TRADE-MARK FOR STARCH FOR LAUNDRY AND OTHER PURPOSES.

Mr. Henri Van Oldenneel for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition that the requirement of the Examiner that a new declaration be furnished be set aside and the declaration already filed be accepted.

This application is presented for registration under the ten-year proviso of section 5 of the act of February 20, 1905, and the declaration concludes as follows:

> • • • that said mark has been in actual use as a trade-mark of the applicants and of applicants' predecessors in business from whom title was derived for ten years next preceding the passage of the act of February 20, 1905, and that, to the best of deponent's knowledge and belief, such use has been exclusive.

The Examiner in his first letter criticized the declaration as follows:

> The words "the passage of the act of" should not have appeared therein. (See Trade-Mark Law Amendment, 165 O. G., 733.)

It is pointed out in response by counsel for the applicant that the Rules of Practice which were issued prior to the date of the passage of the amendment to the Trade-Mark Law which was approved February 18, 1911, and also the copies which were furnished to him afterward, contained in Form 8 of the Appendix a declaration in the precise terms used by the applicant. It is urged that in view of these facts the requirement for a new declaration should be waived.

In the act of February 20, 1905, the ten-year proviso contained the requirement that the marks must have been in exclusive use as a trade-mark by the applicant or his predecessors "for ten years next preceding the passage of this act." This provision was construed in the case of Joseph P. Funke Company (124 O. G., 2902) to mean that the period covered by exclusive use to warrant registration must be the period of ten years next preceding April 1, 1905. In that decision it was stated that—

> • • • the expression, "passage of the act" as usually construed when used to fix a date in a statute which goes into effect upon a different date from that upon which it is enacted or approved refers to the going into effect of the act and not to its approval.

By the amendment which was approved February 18, 1911, the terms of the statute were modified to provide that the period of exclusive use must be "ten years next preceding February 20, 1905." The provisions of section 5 of the act of February 20, 1905, as amended are conditions precedent to the issuance of a certificate of registration, and since such a grant follows the course of statutory procedure it is necessary that the applicant should follow the terms prescribed by statute. It is therefore held that the requirement of the Examiner that a new declaration should be filed is right.

It is unfortunate that in the present case the applicant has been misled by publications issued from

this Office. It is to be noted, however, that it has been the practice of the Office ever since the passage of the amendment of February 18, 1911, to inclose in the copy of Trade-Mark Rules a printed copy of the Trade-Mark Law. Notice of such amended law was also published in the OFFICIAL GAZETTE immediately after its approval. Under these circumstances it is not believed that the excuse given by the applicant is entitled to any special consideration, even if it could otherwise be accepted.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

CARMEL WINE COMPANY *v.* CALIFORNIA WINERY.

Decided December 4, 1911.

1. TRADE-MARKS—SIMILARITY.

A mark consisting of a label containing certain pictorial representations the essential feature of which is stated to be "the representation of a vineyard, a herd of camels and two men bearing a grape" *Held* deceptively similar to a mark consisting of the representation of two men bearing a bunch of grapes in the same manner as in the other mark.

2. SAME—SAME—ONE MARK INCLUDING ESSENTIAL FEATURE OF ANOTHER.

"It goes without saying that one has no right to incorporate the mark of another as an essential feature of his mark. Such a practice would lead to no end of confusion and deprive the owner of a mark of the just protection which the law accords him."

3. SAME—PRIORITY.

Evidence considered and *Held* to establish that appellee adopted and used its mark prior to the earliest date of adoption by appellant and that as the marks are deceptively similar a petition for the cancelation of the registration of appellant's mark was properly sustained.

Mr. Walter F. Rogers for the appellant.

Mr. A. E. Wallace for the appellee.

ROBB, *J.*:

This is an appeal from a decision of the Commissioner of Patents sustaining the petition of the California Winery, appellee here, for the cancelation of appellant's trade-mark registration.

Two questions are presented in this appeal, whether the marks are so similar—

as to be likely to cause confusion or mistake in the mind of the public or to deceive purchasers, (33 Stat., 724,)

and, if so, whether appellee is entitled to priority of adoption and use. Appellant's mark is a label containing certain pictorial representations—

the essential feature of which—

as stated in its application,

is the representation of a vineyard, a herd of camels, and two men bearing a grape.

These men are apparently garbed in the costume of Bible times, and this particular feature of the mark was undoubtedly inspired by the allusion in Numbers xiii, 23, to the cutting of a cluster of grapes and the bearing of it "between two upon a staff."

An examination of appellant's mark shows that the "two men bearing a grape" is its most striking feature. The figures of the men are considerably larger than the figures of the camels, and even the bunch of grapes carried by the men looks larger than any of the camels.

The mark claimed by appellee is a label containing a pictorial representation of two men with dress similar to that in appellant's mark, these men bearing a bunch of grapes between them as in appellant's mark.

We think it is apparent, without argument, that the two marks are deceptively similar within the meaning of the statute. It goes without saying that one has no right to incorporate the mark of another as an essential feature of his mark. Such a practice would lead to no end of confusion and deprive the owner of a mark of the just protection which the law accords him.

Appellant's mark was first used in this country in about 1898. We will here briefly review the evidence introduced by the appellee as to when it first adopted and used its mark. Fred J. Keisel, a man sixty-seven years of age, the organizer of the California Winery Company in the summer of 1895 and familiar with its affairs since that date, testified that upon the organization of the company he visited an engraver in Sacramento, Cal., and there selected from among the designs shown him—

the picture, or design, of Joshua and Caleb carrying between them, suspended on a pole, a large bunch of grapes;

that this design was immediately used as the company's trade-mark and soon thereafter, at the suggestion of the witness, it was registered in Mida's Criterion, a liquor-trade-mark registry bureau. A certificate of this registration was issued by this bureau under date of September 16, 1895. The witness further testified that he had personal knowledge that this "Joshua and Caleb" mark had been in continuous use by appellee since its adoption.

Fred W. Keisel, a son of the previous witness and a banker by occupation, testified that he was the president of the appellee company; that he was first connected with the company in 1894, as manager; that he was sent there by his father, who then had an option to purchase the winery, which option was taken up early in July of 1895; that this "Joshua and Caleb" mark was immediately thereafter adopted, and has ever since constituted the company's mark. The witness gave the names and addresses of individuals and firms to whom his company had shipped goods under this mark from 1895 to the present time. He identified a circular bearing this mark and containing in writing "July 10th, 1895." This notation, he testified, was in his own handwriting and presumably made on the date it appears to have been made. The witness further testified that when the cement sidewalk in front of the premises occupied by the Winery Company was constructed in December, 1895, he procured a wood cut of his trade-mark about twelve inches square and impressed the mark in the sidewalk in two or three places, and that the impression has been there ever since. This last testimony was directly corroborated by the older Keisel and also by a Mr. Sheehan, who testified that at the time the impression was made in the sidewalk he lived within two or three blocks of the winery, frequently passed the

premises, and observed this "Joshua and Caleb" mark, with the date 1895, stamped in the walk. There is considerable other testimony tending to show prior adoption and use of this trade-mark by appellee, but we do not deem it necessary to review it further.

Notwithstanding the above briefly-outlined evidence in favor of appellee, in contradiction of which no testimony has been introduced, appellant contends that the mark first adopted and used by appellee was not the mark of the issue but a mark containing a pictorial representation of two men dressed as hunters and bearing a large bunch of grapes between them. This contention grows out of an exhibit introduced by appellee. This exhibit is a photograph which purports to have been taken in November of 1895 and shows employees of appellee seated upon and about several barrels of appellee's goods, upon the ends of which was stenciled a mark of two hunters bearing a large bunch of grapes between them. The evidence above outlined is of too convincing a character to be overcome by this photograph. It may well be that the stenciling of these barrels was an experimental variation of the "Joshua and Caleb" mark.

We conclude, therefore, that the decision of the Commissioner was right and must be affirmed. The clerk will certify this opinion according to law.

Affirmed.

Court of Appeals of the District of Columbia.

THE SUMMIT CITY SOAP WORKS *v.* THE STANDARD SOAP COMPANY.

Decided December 4, 1911.

1. TRADE-MARKS—SIMILARITY.

A mark consisting of the representation of the head of a mammoth and the word "Mammoth" *Held* not deceptively similar to a mark consisting of the representation of two elephants in the attitude of a mother washing her child used in connection with the words "Rub-No-More-Soap."

2. SAME—SAME.

"This court has adopted a strict rule in refusing registration in all cases where the apparent similarity would probably lead to confusion in trade, holding that the field of selection for marks is so broad that no necessity exists for the invasion of one trader upon even the apparent rights of another, and that the broadest protection will be afforded the purchasing, consuming public by the courts."

Mr. Arthur Stewart and *Mr. J. B. Cross* for the appellant.

Mr. W. G. Henderson for the appellee.

VAN ORSDEL, *J.*:

This is a trade-mark opposition. Appellee company sought to register a trade-mark to be used on toilet soap consisting of the word "Mammoth," associated with a picture of the head and shoulders of the prehistoric animal, the mammoth. Appellant company, in its notice of opposition, describes its mark as—

the picture of two elephants in the attitude of a mother washing her child. This was commonly used in connection with the inscription, "Rub-No-More-Soap."

The material allegations as to the identity of the marks are stated in the notice of opposition as follows:

7. That the alleged trade-mark to which the above-mentioned application relates has such a near resemblance to the opponent's trade-mark, as to be certain to be mistaken therefor by the public and cause the applicant's goods to be substituted as and for the opponent's goods to the damage of the opponent and the deception of the public.

8. That, the picture is the most prominent feature of both marks and, in general appearance, the animals illustrated in the two pictures are substantially identical and both marks are appropriated to goods of the same descriptive properties. If the applicant is allowed to register or use the said alleged trade-mark, the trade and the public will be deceived and the opponent injured.

Appellee, the applicant, contends that its mark is not so similar to appellant's mark, though concededly used upon the same class of merchandise, as to be likely to create confusion in trade. Appellant's mark was registered February 6, 1900. The appellee took no testimony and established no date of adoption and use. The whole case turns, therefore, upon the similarity of the marks and the probability of their concurrent use creating confusion in trade.

The Examiner of Interferences sustained the opposition, and refused the registration of appellee's mark. This ruling was reversed by the Commissioner of Patents, from whose decision this appeal was taken.

The Commissioner turned the case upon the recent decision of this court in *Nestle & Anglo-Swiss Condensed Milk Co.* v. *Walter Baker & Co. Ltd.*, (37 App. D. C., 148.) In that case the marks were used on cocoa, chocolate, broma and cocoa preparations. The mark of the appellant consisted of the picture of a milkmaid in Swiss costume carrying a milk-pail in her right hand and another on her head, with the words "Milkmaid Brand;" while the mark of appellee consisted of the picture of a waitress in Puritan or Quaker costume carrying a tray supporting cups.

It was there held that the words "Milkmaid Brand," used in connection with the picture, was a distinguishing feature of the mark. Here the word "Mammoth" and the words "Rub-No-More-Soap," appearing as parts of the respective marks, may be held to be distinguishing features. Their tendency, we think, is not to attach to the products bearing these marks the trade-name, "Elephant Brand." The word "Mammoth" instantly attracts attention to the distinction plainly apparent between the pictures, which are the dominating features of the marks. The slight tendency there would be to confusion from the similarity of the pictures is removed by the suggestion on the label itself of the distinction which, in fact, plainly exists. The inclusion of the name of the animal illustrated on appellee's mark so distinguishes it from appellant's mark as to remove the probability of confusion.

This court has adopted a strict rule in refusing registration in all cases where the apparent similarity would probably lead to confusion in trade, holding that the field of selection for marks is so broad that no necessity exists for the invasion of one trader upon even the apparent rights of another, and that the broadest protection will be afforded the purchasing, consuming public by the courts. In this case, however, there is no such similarity as would impel us to hold that the mark sought to be

registered by appellee, invades the right of appellant, or tends to create confusion in trade.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Disclaimer.

777,096.—*Reinhold Herman*, Crafton, Pa. PRINTING APPARATUS. Patent dated December 13, 1904. Disclaimer filed December 28, 1911, by the patentee.

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"16. In a printing apparatus, a portable frame, a transparent cylinder, carried thereby, an electric lamp suspended from a support carried by the portable frame whereby the lamp is movable in unison with the cylinder and frame, and means supported by the portable frame for automatically lowering the lamp into the cylinder, substantially as described.

"17. In a printing apparatus, a transparent cylinder, an electric lamp, means for automatically lowering the lamp into the cylinder, a cut-out automatically operated when the lamp has reached a predetermined point, and a portable frame on which all parts are supported so as to be movable in unison, substantially as described.

"18. In a machine for making prints, in combination, a cylinder as described, an electric lamp, a cord or cords carrying said lamp, a governing device operating upon said cord or cords to cause said lamp to pass through said cylinder steadily, a cut-out, and an adjustable stop carried by said lamp-carrying cord or cords adapted to engage and operate said cut-out."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Salant & Salant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,890, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-mark registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 19, 1911.

The Dempsey Candy Works Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Frederic M. Palat, 211 Chancellor street, Philadelphia, Pa., and Henry Helde, 313 Hudson street, New York, N. Y., for trade-marks and trade-mark registration No. 39,369, dated December 2, 1902, to The Dempsey Candy Works Co., of Nevada City, Nev., and the notice of such declaration sent by registered mail to the said The Dempsey Candy Works Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said The Dempsey Candy Works Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 4, 1911.

Casade, Crooks & Reynaud, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of a trade-mark filed by Chas. Mackinlay & Co., the registrations granted to James Saunders & Co., Limited, John Gillon & Co., Limited, and trade-mark granted to Casade, Crooks & Reynaud, No. 8,729, registered October 18, 1881, and the notice of such declaration sent by registered mail to the said Casade, Crooks & Reynaud at the address of record has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Casade, Crooks & Reynaud, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 2, 1911.

The Bellaire Stamping Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the New York Stamping Co., North Eleventh and Berry streets, Brooklyn, N. Y., for registration of a trade-mark and trade-mark registration No. 24,239, dated February 13, 1894, to The Bellaire Stamping Co., of Harvey, Ill. The Office has failed to secure satisfactory service upon The Bellaire Stamping Co., and the Columbian Enameling & Stamping Co., claiming to be its successor, has failed to file evidence of its right to intervene.

Notice is therefore hereby given to The Bellaire Stamping Co., its assigns or legal representatives, that if the said company or any of them desire to contest the interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 29, 1911.

A. J. Chapman & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Mary A. Mittell, 163 West One Hundred and Twenty-sixth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 26,703, dated June 18, 1895, to A. J. Chapman & Co., of Atlanta, Ga., and the notice of such declaration and the accompanying letter setting times sent to the said A. J. Chapman & Co. at the address given have been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said A. J. Chapman & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
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Printed copies of patents are furnished by the Patent Office at 5 cents each. For this latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JANUARY 16, 1912	589
CLASSIFICATION OF PATENTS	589
PATENT OFFICE PUBLICATIONS	589
REMITTANCES TO THE PATENT OFFICE	589
APPLICATIONS UNDER EXAMINATION	590
PATENTS GRANTED	591
REISSUES	811
DESIGNS	813
TRADE-MARKS—REGISTRATION APPLIED FOR	815
TRADE-MARKS—REGISTERED	823
LABELS AND PRINTS	827
COMMISSIONER'S DECISIONS—	
Ex parte Grosse and French	829
Ex parte Dietrick	829
Knesly v. Kabling	830
Emerson v. Sandow	831
Ex parte Madden	833
Ex parte Amigo	833
INTERFERENCE NOTICES	834

ISSUE OF JANUARY 16, 1912.

Patents	648—No.	1,014,631 to No. 1,015,278, inclusive.
Designs	8—No.	42,022 to No. 42,029, inclusive.
Trade-Marks	103—No.	45,923 to No. 46,025, inclusive.
Labels	8—No.	10,105 to No. 10,112, inclusive.
Prints	2—No.	2,926 to No. 2,927, inclusive.
Reissues	4—No.	12,901 to No. 12,904, inclusive.
Total	771	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	1	Ohio	36	6
Arkansas	1	....	Oklahoma	2	....
California	37	3	Oregon	8	....
Colorado	9	2	Pennsylvania	77	4
Connecticut	20	1	Rhode Island	3	1
Delaware	2	....	South Carolina	2	2
Florida	1	1	South Dakota	3	2
Georgia	3	1	Tennessee	2	2
Idaho	1	....	Texas	7	1
Illinois	57	10	Utah	4	1
Indiana	23	1	Vermont	....	1
Iowa	6	1	Virginia	5	1
Kansas	13	1	Washington	14	....
Kentucky	6	2	West Virginia	1	....
Louisiana	4	2	Wisconsin	18	2
Maine	3	....	Wyoming	1	....
Maryland	7	3			
Massachusetts	40	5	Alaska, District of	1	....
Michigan	19	3	Arizona Territory	2	....
Minnesota	14	....	District of Columbia	3	1
Mississippi	1	....	Hawaii Territory	2	....
Missouri	19	1	New Mexico Territory	1	....
Montana	....	....	Philippine Islands	....	....
Nebraska	2	....	Porto Rico	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	3	U. S. Navy	....	....
New Jersey	10	3			
New York	68	39	Total to citizens of the United States	575	100
North Carolina	2	....			
North Dakota	4	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	....	....	Newfoundland	....	....
Belgium	1	....	New South Wales	2	....
Brazil	....	....	New Zealand	....	....
British West Indies	....	....	Norway	....	....
Canada	11	....	Queensland	....	....
Chile	....	....	Russia	2	....
China	....	....	Scotland	1	1
Cuba	....	....	South Australia	....	....
Denmark	....	....	Spain	....	....
Ecuador	....	....	Sweden	2	....
Egypt	....	....	Switzerland	1	....
England	23	4	Tasmania	....	....
France	4	2	Transvaal, South Africa	1	....
Germany	24	6	Venezuela	3	....
Guatemala	....	....	Victoria	....	....
India	....	....	Western Australia	....	....
Ireland	....	....			
Italy	1	....	Total to citizens of foreign countries	78	13
Japan	....	....			
Mexico	....	....			

Classification of Patents.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Beginning January 16, 1912, there will appear in the heading of each patent, in the OFFICIAL GAZETTE, the number of the class and subclass under which the patent is classified at the date of issue.

EDWARD B. MOORE,
Commissioner.

Patent Office Publications.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1911

The stock of publications, exclusive of printed copies of patents, formerly held for sale by the Patent Office, has been transferred to the Superintendent of Documents, Government Printing Office. Orders for Patent Office publications should NOT be sent to the Patent Office, but to the "Superintendent of Documents," to whom all remittances for such publications should be made payable.

Printed copies of specifications and drawings of patents will be furnished by the Patent Office, as heretofore.

EDWARD B. MOORE,
Commissioner.

Remittances to the Patent Office.

Checks should be certified. Cash should be registered; if by ordinary mail at risk of sender. Postage stamps not receivable.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 13, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 25	Dec. 1	437
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 4	Dec. 6	485
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 14	Jan. 2	222
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Dec. 11	Dec. 12	353
167	5. Bookbinding; Harvesters; Jewelry; Music.	Dec. 2	Dec. 1	422
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 14	Dec. 14	272
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 8	Nov. 11	535
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Dec. 11	Dec. 15	430
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 11	Dec. 11	343
235	10. Carriages and Wagons.....	Nov. 13	Nov. 23	650
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 5	Dec. 1	386
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 1	Dec. 4	605
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Oct. 20	Nov. 25	406
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 13	Dec. 11	399
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Nov. 23	Nov. 20	752
109	16. Telegraphy; Telephony.....	Dec. 5	Dec. 1	180
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Dec. 13	Dec. 13	249
227	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 12	Dec. 12	254
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Dec. 15	Dec. 14	440
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 12	Nov. 11	197
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Fur and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 2	Dec. 5	301

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 19	Dec. 13	416
276	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 7	Dec. 9	354
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 6	Dec. 7	444
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 15	Dec. 19	251
108	26. Electricity, Generation; Motive Power.	Sept. 20	Oct. 4	490
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 13	Dec. 13	351
65	28. Internal-Combustion Engines.	Nov. 4	Nov. 3	822
147	29. Coopering; Fire-Escapes; Ladders; Rock; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Oct. 9	Dec. 2	445
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 11	Dec. 21	206
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Dec. 13	Dec. 7	228
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 7	Dec. 14	252
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 4	Dec. 11	415
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 7	Dec. 8	457
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Dec. 1	Dec. 5	836
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Dec. 4	Dec. 4	603
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Oct. 13	Dec. 14	491
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Nov. 15	Nov. 24	574
221	39. Water Distribution.....	Dec. 2	Nov. 7	464
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 13	Dec. 20	319
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 27	Dec. 7	572
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 11	Nov. 9	635
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 8	Dec. 9	231

Oldest new case, Sept. 20; oldest amended, Oct. 4.

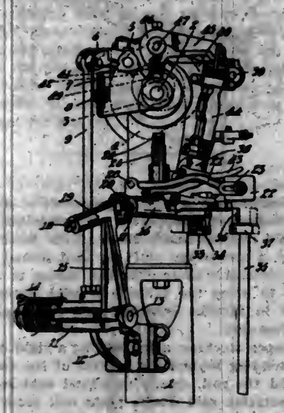
Total number of applications awaiting action 15,590

Room No.		Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Nov. 6	Nov. 13	1284
	Designs.....	Nov. 7	Dec. 7	226
	Labels and Prints.....	Jan. 3	Dec. 7	66

PATENTS

GRANTED JANUARY 16, 1912.

1,014,631. MACHINE FOR ASSEMBLING PARTS OF BOOTS AND SHOES. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 13, 1910. Serial No. 561,112. (Cl. 12—2.)



1. A machine of the class described having, in combination, means for supporting a shoe, and means for automatically inserting a fastening in the shoe at a point out of the plane of the sole thereof and in a direction at an angle to the median plane extending longitudinally in the direction of the height of the shoe.

2. A machine of the class described having, in combination, means for supporting a shoe, and means for insuring the insertion of a fastening in the shoe at a point out of the plane of the sole thereof so that said fastening shall intersect a median plane extending longitudinally in the direction of the height of the shoe.

3. A machine of the class described having, in combination, means for supporting a shoe, and means for insuring the insertion of a fastening in the shoe at a point out of the plane of the sole thereof and in a direction oblique to a median plane extending longitudinally in the direction of the height of the shoe.

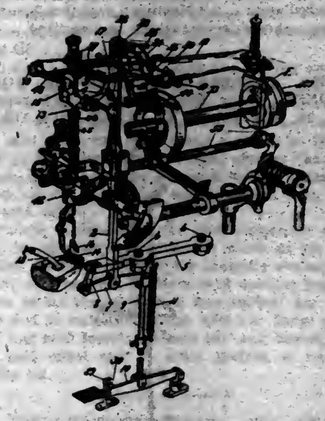
4. A machine of the class described having, in combination, means for supporting a shoe, and means for insuring the insertion of a fastening in the heel portion of the shoe at a point out of the plane of the sole thereof and in a direction oblique to a median plane extending longitudinally in the direction of the height of the shoe.

5. A machine of the class described having, in combination, means for supporting a shoe, and means for insuring the insertion of a fastening in the heel portion of the shoe at a point out of the plane of the sole thereof and in a direction at an angle to a median plane extending longitudinally in the direction of the height of the shoe.

[Claims 6 to 27 not printed in the Gazette.]

1,014,632. LASTING-MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 26, 1905. Serial No. 257,500. (Cl. 12—2.)

1. In a machine for working an upper over a last, the combination with grippers, of means under control of the operator for closing the grippers upon the upper, an abutment or rest about which the last may be rocked for pulling the upper between the grippers and the last, and manually controlled means for moving the grippers laterally while the upper is held under tension.



2. In a machine for working an upper over a last, the combination with grippers constructed and arranged for manual operation for engaging and releasing the stock at the will of the operator, of an abutment arranged to be engaged by the last and about which the last may be rocked for pulling the stock with relation to the last, and means for moving the grippers with relation to the abutment to lay the upper over the last bottom.

3. In a machine for working an upper over a last, the combination with grippers, of means under control of the operator for closing the grippers upon the upper, an abutment or rest about which the last may be rocked for pulling the upper between the grippers and the last, and other means for relatively moving the grippers and the abutment for further manipulating the upper.

4. In a machine for working an upper over a last, the combination with grippers, of means under control of the operator for closing the grippers, an abutment or rest about which the last may be rocked for pulling the upper between the grippers and the last, and means for automatically actuating the grippers for working the upper over the last.

5. In a machine for working an upper over a last, the combination with grippers, grippers closing mechanism and grippers moving mechanism, of manually controlled means for actuating said mechanisms first to close the grippers upon the upper and then to move the grippers for pulling the upper.

[Claims 6 to 44 not printed in the Gazette.]

1,014,633. NEW DYE. WILHELM BERGDOLT, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 28, 1910. Serial No. 574,372. (Cl. 8—1.)

1. The herein described azo dyestuffs obtainable from tetrazo compounds, for which 2-amino-5-naphthol-7-sulfonic acid has been employed as coupler, which dyestuffs

are in the shape of their alkaline salts dark powders soluble in water generally with a blue color, soluble in concentrated sulfuric acid with a blue color; dyeing cotton from blue to black shades, which can be developed on fiber with diazo compounds generally black shades being obtained which can be discharged to a pure white and yielding upon reduction with stannous chlorid and hydrochloric acid, 2.6-diamino-5-naphthol-7-sulfonic acid, substantially as described.

2. The herein described azo dyestuff obtainable from para-aminoacetanilid, 2.5.7-aminonaphthol sulfonic acid and phenol which is in the shape of its sodium salt a dark powder soluble in water with a blue color, dyeing cotton blue shades, which can be combined with diazotized para-nitranilin black shades being obtained, which can be discharged to a pure white and yielding upon reduction with stannous chlorid and hydrochloric acid paraphenylenediamin, 2.6-diamino-5-naphthol-7-sulfonic acid and aminophenol, substantially as described.

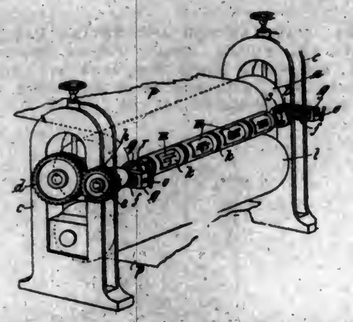
1,014,634. CONVERSATIONS-COUNTER FOR TELEPHONES. KURT BORN, Kreuzburg, Germany. Filed Dec. 20, 1910. Serial No. 598,369. (Cl. 179—7.)

An improved device for the registering of telephone conversations comprising in combination with the hook-lever of the receiver of the telephone, a traction rod mounted upon said hook lever at its upper end, a connecting rod, properly guided, hinged with its upper end to the lower end of said traction rod, a second traction rod, having a recess near its upper end, the bent end of the connecting rod engaging with said recess, a pawl hinged at the lower end of the second traction rod, a toothed wheel, the counting and registering apparatus driven by said toothed wheel with which said pawl engages, an electromagnet electrically connected with the call bell of the telephone, an armature fixed to the second traction rod opposite said electromagnet, a horizontal hook at the upper end of the second traction rod, a catch lever for retaining said hook when the traction rod is being attracted by the electromagnet and a horizontal lever pivoted to the connecting rod for releasing the hook of the second traction rod from the catch lever, substantially as described and shown and for the purpose set forth.

1,014,635. WATERMARKING DEVICE FOR PAPER. HOWARD BROWN, Springfield, Mass. Filed Mar. 28, 1911. Serial No. 617,493. (Cl. 92—48.)

1. In a paper machine, a rigid roll having thereon an impression plate whose surface is concentric with the roll, means to support said roll in rotative contact under pressure with the web of paper at a point in the machine in advance of the driers, and disks on said roll having a portion of their peripheries cut away, said disks bearing on an unyielding surface of the machine beyond the borders of the paper, said disks being out of contact with their supporting surface when said impression plate is in contact with the paper.

2. In a paper machine, the combination with a roll having means for impressing a mark on the paper, of bearing disks on the roll having a portion of their peripheries broken away, said broken away portion corresponding substantially to the width of the mark, together with means to press the roll forcibly against the paper, said disks serving to support the roll against said pressure when the means for impressing the paper are out of contact therewith.

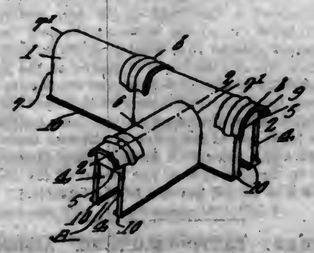


3. The combination with the press-roll of a paper machine, of a second roll supported in parallelism therewith, gears on said rolls to rotate them at the same circumferential speed, a stereotype plate on said second roll whose surface is concentric therewith, and means to adjust said second roll to bring the surface of said stereotype plate periodically in forcible contact with the paper running over the press-roll.

4. In a paper machine, a roll having a rigid design plate in relief extending beyond the surface of the roll and partially around the roll, means to adjust said roll whereby during its rotation said design plate will come in forcible periodic contact with the paper, and means to maintain the position of the roll relative to the surface of the paper when said design plate is out of contact with the paper.

5. In a paper machine, the combination with a roll having a rigid design plate thereon whose surface comes in periodic contact with the paper to impress a mark thereon, of two disks mounted on, and rotating with the roll to bear on an unyielding surface beyond the borders of the paper, said disks having a part of their peripheries broken away, and means to adjust said disks rotatively one relative to the other, whereby the extent of the interrupted peripheral contact of said disks with the surface on which they bear may be made to agree substantially with the width of that portion of the design plate which bears on the paper.

1,014,636. DRAIN-CONDUIT OR CULVERT. EDWARD CARROLL, Kirksville, Mo. Filed July 25, 1911. Serial No. 640,461. (Cl. 61—9.)



1. In a tile member for a drain conduit, an integral body portion having a curved dome and parallel longitudinally disposed walls providing an open bottomed conduit therethrough, an overlapping cap formed integral with one end and projecting therefrom to overlap the adjacent end of another section, and a strip of a greater width than the thickness of the walls carried by the free end thereof to provide a base or footer for each wall.

2. An intersection conduit or drain tile, made from an integral mass of material and having the top portion terminating in two parallel walls forming an open bottomed longitudinal channel therethrough, one of said walls being provided with a slot therein, a thimble upon three sides of said slot adapted to fit within the channel of an adjacent section, a strip of greater width than the thickness of each wall formed integral with the lower edge of each wall, and a connecting plate projecting beyond the exterior of the top of the tile and having its end projecting beyond the end of the tile to overlap and form a seal for the joint between the tile and an adjacent tile.

3. A tile for a conduit drain having formed integral a curved exterior top, two parallel walls depending therefrom and providing with the top an open bottomed channel, a curved plate formed integral with one end of the top thereof and projecting beyond the end of the tile to form a seal for the joint with an adjacent section, and a flange of greater width than the thickness of each wall formed integral at the lower edge thereof to provide a footer or base for the tile.

1,014,637. FLUSH-VALVE. FRANK B. CHARBOIN, South Bellingham, Wash., assignor to Bellingham Brass Mfg. Co., Bellingham, Wash., a Corporation of Washington. Filed Oct. 22, 1911. Serial No. 656,108. (Cl. 4—5.)

1. A device of the class described comprising a casing having an inlet and an outlet; a valve slidable in the casing and adapted to close the outlet; a closure for the inlet, hinged to the casing and movable under the impulse of the liquid entering the inlet, to engage the valve, and to hold the valve free from the outlet.

2. A device of the class described comprising a casing having an inlet and an outlet; a valve slidable in the casing and adapted to close the outlet; and a closure for the inlet, hinged to the casing, the valve, when in position to close the outlet, engaging the closure, to effect a closing of the inlet, the closure being adapted to swing beneath the valve to maintain the valve spaced from the outlet.

3. A device of the class described comprising a casing having an inlet and an outlet; a valve slidable in the casing and adapted to close the outlet; and a hinged closure for the inlet, the valve being slidably engaged with the closure, whereby, when the closure and the valve are in open positions, the closure will hold the valve against movement, and whereby, when the valve is in closed position, the valve will maintain the closure in closed position.

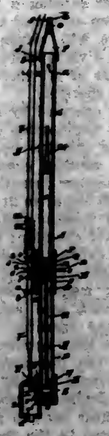
1,014,638. WINDOW CONSTRUCTION. EMMA M. CLEVENGER, Muncie, Ind. Filed Feb. 21, 1911. Serial No. 610,622. (Cl. 96—31.)

1. A sash bar having an opening therein, a hinge rod journaled adjacent to said opening, a lid having its edge secured to said hinge rod, there being a recess in the side of said lid at said hinge rod, and a notch being provided in the front side of said sash bar to register with said recess and having an offset therein, a lock dog disposed in said recess and held loosely on the said hinge rod and provided with a lug to engage said offset, the main portion of said dog being adapted to lie normally on the said lid.

2. In window construction, a sash bar having an opening therein, a hinge bar journaled adjacent to said opening, a notch in the side of said sash bar and having an offset therein with a beveled seat, a lid having its edge secured to said hinge rod there being a recess in the side of said lid at the hinge rod of length greater than that of the notch, and a lock dog disposed in said recess and held loosely on the hinge rod and provided with a lug to engage said offset.

3. In window construction, the combination of a sash bar having an opening therein and a notch at its upper edge provided with an offset, a lid hingedly connected to the sash bar and adapted to cover said opening and having a recess at its hinged side, a longitudinal bar across said recess and in axial alinement with the hinge center, and a lock dog held loosely on said bar and having a lug to engage said offset and its main portion to rest normally on the lid.

1,014,639. PNEUMATIC HAMMER FOR DRIVING NAILS. WILLIAM EVANS COLWELL, Kincardine, Ontario, Canada. Filed Nov. 26, 1910. Serial No. 594,410. (Cl. 121—20.)



1. A tool operated by motive fluid comprising the combination of a cylinder divided into a first and second chamber; a hammer operating in said second chamber, the outer end of which is open; a piston-rod attached to said hammer and operating in said first chamber; valve means for controlling the supply and exhaust of motive fluid into and out of said first chamber; means for locking said hammer in normal position, and means whereby when the tool is pressed against a wall, said hammer is unlocked and said valve means operated to permit a supply of motive fluid to drive said hammer outward.

2. A tool operated by motive fluid comprising the combination of a cylinder divided into a first and second chamber; a hammer operating in said second chamber, the outer end of which is open; a piston-rod attached to said hammer and operating in the said second chamber; valve means for controlling the supply and exhaust of motive fluid into and out of said first chamber; means for locking said hammer in normal position, and a trip-rod supported by said cylinder and normally extending beyond the front end thereof, and which, when pressed against a wall, will unlock said hammer and operate said valve means to permit a supply of motive fluid to drive said hammer outward.

3. A tool initially operated by motive fluid under pressure, comprising the combination of a cylinder divided by a wall into a power chamber provided with intake and exhaust ports, and another chamber, the front end of which is open; a member operating in said other chamber and provided with means to fit said chamber; a piston-rod attached to said member and operating through said wall and in the said power chamber; valve means for controlling the supply and exhaust of motive fluid into and out of said power chamber, and means whereby when the tool is pressed against a wall, said valve means will be operated to permit a supply of motive fluid to drive said member outward, and to open said exhaust port, the out-movement of said member causing a partial vacuum in said other chamber between said wall and said member so that atmospheric pressure will return said member back to normal position.

4. A tool initially operated by motive fluid under pressure, comprising the combination of a cylinder divided by a wall into a power chamber provided with intake and exhaust ports; and another chamber, the front end of which is open; a member operating in said other chamber and provided with means to fit said chamber; a piston-rod attached to said member and operating through said wall and in said power chamber; valve means for controlling the supply and exhaust of motive fluid into and out of said power chamber; means whereby when the tool is pressed against a wall said valve means will be operated to permit a supply of motive fluid to drive said member outward, and to open said exhaust port, the out-movement of said member causing a partial vacuum in said other chamber between said wall and said member so that atmospheric pressure will return said member back to normal position, and a valve leading into said other chamber to control passage of air thereinto and therefrom, as and for the purpose specified.

5. A tool initially operated by motive fluid under pressure, comprising the combination of a cylinder divided by a wall into a power chamber provided with intake and exhaust ports, and another chamber, the front end of which is open; a member operating in said other chamber and provided with means to fit said chamber; a piston-rod attached to said member and operating through said wall and in said power chamber; valve means for controlling the supply and exhaust of motive fluid into and out of said power chamber; means for locking said member in normal position; means whereby when the tool is pressed against a wall, said member will be unlocked, and said valve means operated to permit a supply of motive fluid to drive said member outward, and to open said exhaust port, the out-movement of said member causing a partial vacuum in said other chamber between said wall and said member so that atmospheric pressure will return said member back to normal position.

[Claim 6 not printed in the Gazette.]

1,014,640. CHART-DISPLAY APPARATUS. CHARLES H. CONGDON, Marshalls Creek, Pa. Filed Jan. 11, 1906. Serial No. 295,550. (Cl. 40—85.)

1. In a chart display apparatus, in combination, a screw threaded shaft, a tension device connected to one end thereof for operating the same, a coupling upon the other end of the shaft for detachably connecting a chart carrying roll thereto, a nut threaded on said shaft, relatively fixed means for preventing rotation of said nut, and a stop limiting the travel of said nut on said shaft.

2. In a chart display apparatus, in combination, a reversible chart, a roll for carrying same, a pair of driving shafts to either of which said chart carrying roll can be detachably connected so as to be driven thereby, said shafts having spring actuating means for operating them in opposite directions, and means upon said shafts for limiting their rotative movement.

1,014,641. COOLING DEVICE FOR ELECTROTYPE-PLATES. PATRICK J. CRONIN and EDWARD HARRINGTON, Chicago, Ill. Filed Feb. 23, 1911. Serial No. 610,378. (Cl. 22—4.)

1. A device of the class described comprising, in combination, a support, a plurality of looped air conduits carried by said support, said conduits having a plurality of equally spaced perforations in their upper walls, and means for supplying air under pressure to said looped conduits, substantially as described.

2. A device of the class described comprising, in combination, a support, a plurality of united loops of perforated pipes carried by said support and having equally spaced perforations in their upper walls, and connections to the extreme ends of the united loops whereby air is supplied under pressure thereto, substantially as described.

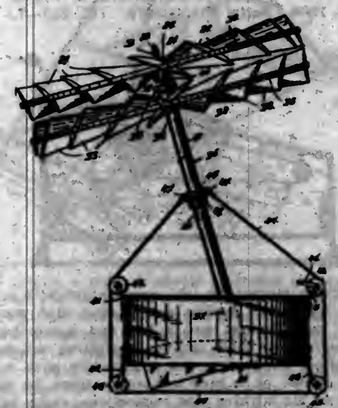
3. A device of the class described, comprising, in combination, a support, a plurality of looped air conduits carried by said support, said conduits having a plurality of perforations in their upper walls, the perforations in each conduit being staggered with relation to the perforations in the adjoining conduits, and means for supplying air under pressure to said looped conduits.

1,014,642. ALLOY. PAUL DEBAS, Savoie, France, assignor to Société des Carbures Metalliques, Paris, France. Filed Aug. 5, 1910. Serial No. 575,737. (Cl. 75—1.)

1. A ferro-silicon alloy substantially free from free and combined carbon and containing approximately 55% of silicon, approximately 28% of aluminium, and approximately 17% of iron.

2. A ferro-silicon alloy substantially free from free and combined carbon and containing approximately 53.53% of silicon, approximately 25.98% of aluminium, approximately 17.18% of iron, and approximately 2.7% of titanium.

1,014,643. AERIAL VESSEL. JOHN J. DONNELLY, Denver, Colo. Filed Jan. 18, 1909. Serial No. 472,991. (Cl. 244—19.)



1. Aerial apparatus, comprising a car, a framework hinged to the car so that the same may be tilted below the bottom of the car, the car having rollers mounted thereon at the top and bottom, flexible devices passing around the car and over the rollers, the extremities of the flexible devices being connected in operative relation with the framework, and means for tilting the framework, substantially as described.

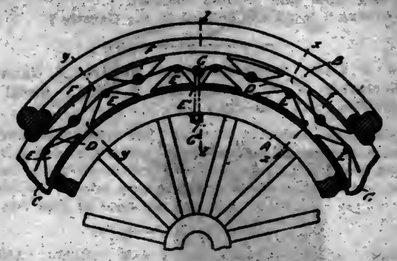
2. Aerial apparatus, comprising a car, a framework arranged within the car, and hinged thereon so that the framework may be tilted below the bottom of the car, the car having a flexible device passing entirely around the car and connected at its opposite extremity in operative relation with the framework, and means for operating the flexible device for tilting the framework, substantially as described.

3. Aerial apparatus comprising a car, a framework hinged to the car so that the same may be tilted below the bottom of the car, and a flexible device passing around the car and connected at its opposite extremities in operative relation with the framework, substantially as described.

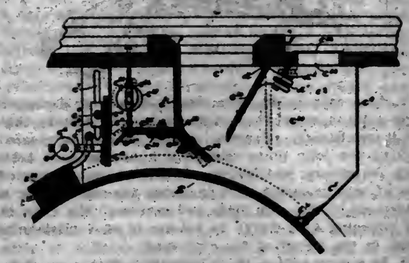
1,014,644. RESILIENT WHEEL. ROBERT ELWOOD ELLIS, Riddrie, Glasgow, Scotland. Filed Apr. 29, 1911. Serial No. 624,085. (Cl. 152—37.)

1. A resilient wheel comprising, in combination, an inner wheel member or felly, a separable outer rim encircling said wheel member or felly, supporting members on said inner wheel member or felly, supporting members on said outer rim, each of said last mentioned supporting members having a slot open at one side, and a resilient endless band engaging both sets of said supporting members and adapted to be entered laterally into said slots, substantially as described.

2. A resilient wheel comprising, in combination, an inner wheel member or felly, a separable outer rim encircling said wheel member or felly, supporting members on said inner wheel member or felly, supporting members on said outer rim, each supporting member on the outer rim having a slot open at one side, a metallic endless band under tension adapted to be entered laterally into said slots, and means for regulating the tension of said endless band, sugstantially as described.



1,014,645. APPARATUS FOR MEASURING AND FEEDING MATERIALS. FRANK B. GILBRETH, Boston, Mass. Filed Nov. 24, 1902. Serial No. 132,520½. (Cl. 83—44.)



1. The combination with a chute, of a moving delivery wall or surface therefor, a plate swingingly mounted above said wall and in a manner permitting it to swing toward the same to regulate the delivery of materials thereby, and means connected to the swinging plate at the rear thereof and adapted to be operated by the excess flow of materials beyond said plate whereby to cause the free edge of said plate to swing toward said delivery wall for the purpose set forth.

2. The combination with a chute, of a rotary delivery cylinder therefor, means for directing the flow of materials from said chute against the ascending side of the said delivery cylinder, a swinging gate adapted to check the excess delivery of material by said cylinder, and an operating member connected to said gate on the delivery side thereof to operate the same through the pressure of excess material delivered thereby.

3. The combination with a chute and a moving delivery wall therefor, of a settling chamber intermediate the chute and said moving wall, a swinging regulating device, a swinging safety gate, and a plurality of inwardly directed projections between which the moving material must pass.

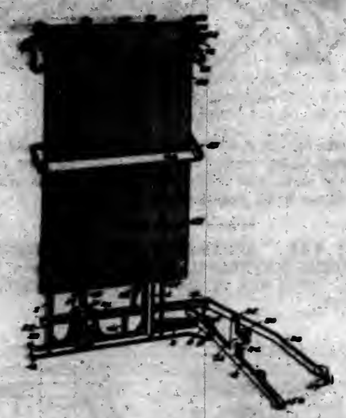
4. The combination with a chute and a movable delivery wall therefor, of means to direct the flow of materials from said chute upon said moving delivery wall in a direction opposed to the movement of said wall, and a swinging member pivoted above the exit from said chute and hanging in the path of the material carried away by the delivery wall so that said member will be actuated by the excess flow of materials over said delivery wall to swing into a position to oppose such excess flow.

5. The combination with a chute and a movable delivery wall therefor, of a settling chamber intermediate the

said chute and moving wall out of which chamber the said delivery wall must raise the material in the delivery thereof, and a device controlled by the excess delivery of the material itself upon the moving wall to prevent excess delivery from said settling chamber.

[Claims 6 to 12 not printed in the Gazette.]

1,014,646. COPY-HOLDER. RUSSELL B. GRIFFITH, Rochester, N. Y. Filed Jan. 6, 1906. Serial No. 409,550. (Cl. 120—29.)



1. In a copy holder, the combination with a support, a copy plate mounted thereon and means for moving the latter intermittently relatively to the support, of means for locking the copy plate relatively to the support between such movements embodying a retaining clutch carried by one of said members and engaging the other after each movement of the copy plate and means on the other member engaging said clutch to release it at a predeterminel point in the travel of the copy plate.

2. In a copy holder, the combination with a support and a copy plate movable relatively thereto and provided with a lifting rod, of a movable clutch engaging the rod to move the copy plate in one direction, a retaining clutch mounted on the support and normally engaging the rod to prevent movement of the copyplate in the opposite direction, means for operating the movable clutch and means carried by the copy plate and engaging the retaining clutch to release the latter at a predetermined point in the travel of the copy plate.

3. In a copyholder, the combination with a suppert and a copyplate movable relatively thereto and provided with a lifting rod, of a movable clutch engaging the rod to move the copy plate in one direction, a retaining clutch mounted on the support and normally engaging the rod to prevent movement of the copy plate in the opposite direction, means for operating the movable clutch and means arranged at the base of the rod and engaging the retaining clutch to release the latter at the limit of movement of the copy plate.

4. In a copy holder, the combination with a support embodying a cross bar and a copy plate movable relatively thereto and provided with a lifting rod guided in the cross-bar, of a movable clutch arranged upon one side of the latter and engaging the rod to move the copy plate in one direction, a retaining clutch arranged on the other side of the cross bar and normally engaging the rod to prevent movement of the copy plate in the opposite direction, means for operating the movable clutch and means carried by the copy plate and engaging the retaining clutch to release the latter at a predetermined point in the travel of the copy plate.

5. In a copy holder, the combination with a support embodying a cross bar and a copy plate movable relatively thereto, and provided with a lifting rod guided in the cross bar, of a movable clutch arranged upon one side of the latter and engaging the rod to move the copy plate in one direction, a retaining clutch arranged on the other side of the cross bar and normally engaging the rod to prevent movement of the copy plate in the opposite direction, a spring interposed between the cross bar and the retaining clutch to act against such parts respectively, means for operating the movable clutch and means carried by the copy plate and engaging the retaining clutch to release the latter against the tension of the spring at a predetermined point in the travel of the copy plate.

[Claims 6 to 20 not printed in the Gazette.]

1,014,647. CHECK CASH-REGISTER. CARL L. GROHMANN and IRA C. KOEHNE, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 3, 1906. Serial No. 346,070. (Cl. 235—7.)

1. In check mechanism, the combination with a check carrying means, of devices for moving said means, a latch for said devices, and a key and connections for first actuating said latch and then operating said devices.

2. In check mechanism, the combination with a check carrying means, of a rack and connections for moving same, means for latching said connections, and a manipulative device and connections for withdrawing said latching means and then operating said rack and connections.

3. In check mechanism, the combination with a check conveying means, of mechanism for moving said means, latching devices for said mechanism, a manipulative device and connections and a handle and connections to first release said latching means and then actuate the moving mechanism.

4. In check mechanism, the combination with a conveying means for checks, of mechanism for actuating said conveying means, a latching device for said mechanism, a manipulative device for releasing said latching device and operating said actuating mechanism and means for retaining said latching device in releasing position.

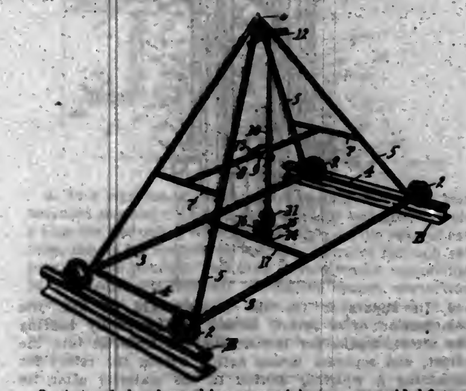
5. In check mechanism, the combination with a conveying means for checks, of means for operating same, latching devices for said operating means, a key having connections whereby its initial movement operates said latching devices, and a handle for actuating said operating means and said key.

[Claims 6 to 22 not printed in the Gazette.]

1,014,648. TRACK-LEVEL MACHINE. JAMES J. HILL, St. Paul, Minn. Filed Apr. 16, 1910. Serial No. 555,903. (Cl. 73—87.)

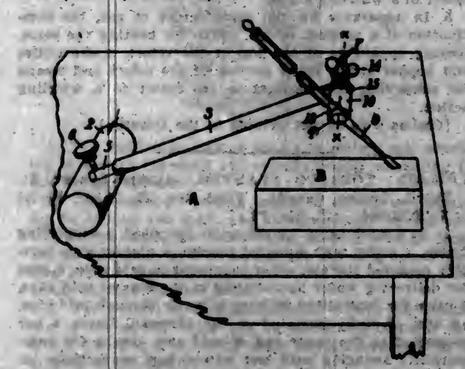
1. A track level machine comprising a skeleton pyramidal frame of metal tubing, a pair of flanged wheels upon each side of the frame adapted to rest upon the rails of a railway track, a cross tie connecting the sides of the frame at a point about midway of their height, a scale secured upon the frame near the apex thereof, and a weighted pointer pivotally mounted on said cross tie and oscillating upon a longitudinal horizontal axis, the upper end of the pointer working over the face of the scale and the lower end reaching nearly to the bottom of the frame.

2. A track level machine comprising a pyramidal frame of metal tubing having at the bottom a rectangular base, wheels journaled upon the transverse members of the base, longitudinal ties connecting the converging side members on each side of the frame at a point about midway of their height, a cross tie connecting said longitudinal ties, a scale near the apex of the frame, and a pointer pivotally supported upon said cross tie and rotatable on a longitudinal horizontal axis, the upper end of the pointer working across the face of the scale.



3. A track level machine comprising a pyramidal frame of metal tubing, a pair of wheels journaled on each side of the frame and adapted to rest on the rails of a railway track, a scale secured to the frame near the apex thereof, a cross tie connecting the sides of the frame at a point about midway of the height thereof, a pointer pivotally supported on said tie and oscillating upon a longitudinal horizontal axis over the face of the scale, a plumb-bob upon the lower end of the pointer and formed with a socket in the bottom, and a thumb screw supported upon the base of the frame directly beneath the plumb-bob when the pointer stands at zero on said scale, the upper end of said thumb screw being adapted to fit within the socket in the plumb-bob.

1,014,649. INSTRUMENT-HOLDER. CHARLES W. JOHNS, St. Paul, Minn. Filed July 24, 1906. Serial No. 327,587. (Cl. 51—7.)



An instrument holder of the class described comprising a weighted base consisting of a non-revolvable block adapted to be moved slidingly in any desired direction upon a supporting surface, a shank adjustably secured directly to the block at a point between the ends thereof, and a tool holding head revolubly mounted upon the shank at the free end thereof, the head and shank being revolubly adjustable in planes transverse to each other.

1,014,650. COMBINATION POINTER AND JOINTER FOR STONE AND BRICK LAYERS. ALBERT W. KLEIN, Oklahoma, Okla. Filed Apr. 15, 1910. Serial No. 555,627. (Cl. 72—198.)

A combined pointer and jointer, in one piece, comprising a blade, a handle integral therewith, and of varying cross-sectional areas at different points, and having the free end portion thereof gradually tapering, whereby the reduced end may be used for pointing.

1,014,651. COAT. MAX KOHN, Cleveland, Ohio. Filed Jan. 3, 1910. Serial No. 535,918. (Cl. 2—67.)

1. In a coat collar, the combination of a collar convertible into alternative forms and having the usual outer cloth facings and an inner canvas stiffener reinforcing the entire collar structure secured thereto, additional inner strips of stiffener fabric shaped to conform with and extra reinforce the several respective collar forms and secured in place therein with sufficient spaces between the adjacent edges of said additional stiffener strips to form lines of easy flexure which define the several shapes into which the collar may be folded.

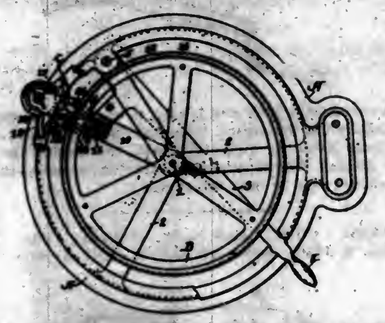
2. In a coat collar, the combination of a collar convertible into alternative forms and having the usual outer cloth facings and an inner canvas stiffener reinforcing the entire collar structure secured thereto, an additional inner strip of stiffener fabric extending the length of the collar and secured thereto near its outer edge, with other additional inner strips of stiffener fabric of desired shapes secured to the collar within the first mentioned long strip, all of said strips being suitably secured in place with sufficient spaces between them to form lines of easy flexure which define the several shapes into which the collar may be folded.

3. In a coat collar, the combination of a collar convertible into alternative forms and having the usual outer cloth facings and inner canvas stiffener reinforcing the entire collar structure secured thereto, an additional inner strip of stiffener fabric extending the length of the collar near its outer edge with other additional inner pieces of stiffener fabric of triangular shape with their opposed apices toward the middle of the collar and their bases merging into the lapels of the coat, all of said additional stiffener pieces being suitably secured in place with sufficient spaces between them to form lines of easy flexure which define the several sectional shapes into which the collar may be folded.

1,014,652. CLUTCH FOR CHEESE-CUTTERS. GUSTAVE F. KAISER, Minneapolis, Minn. Filed July 8, 1907. Serial No. 382,736. (Cl. 31—68.)

In a device of the character described including a horizontal base, a radial clutch lever having an arc-length movement on said base, a carrier rotatably mounted on said base overlying said clutch lever, and an actuator for said clutch arm comprising a lever pivoted on the base outside the perimeter of the carrier and provided with an offset arm slidably connected to said clutch lever, a clutch block interposed between said carrier and radial clutch lever, said clutch lever having a depressed outer end spaced from the carrier and forming a seat for said clutch block, a flange formed upon said carrier for entering a diagonal slot in said clutch block, the corners of

which slot engage with and move said flange when the clutch lever is actuated in one direction, said clutch lever having an aperture to receive a depending lug on said clutch block, which block bears upon said clutch arm at



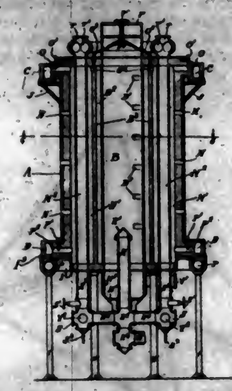
opposite sides of said flange, a housing for said clutch block, said housing embracing a member guiding said flange in its socket and carrying a spring bearing against said block to hold it in operative position.

1,014,653. COMBINATION-GARMENT. ANNIE K. KRONNENBERGER, New York, N. Y., assignor of one-half to Robert Stewart, Brooklyn, N. Y. Filed Nov. 11, 1909. Serial No. 527,410. (Cl. 2—144.)

1. A combination garment comprising a body portion and a pantaloons portion unitary with said body portion, said garment being provided at the front of the pantaloons portion with a vertically extending opening and at the rear of the pantaloons with another vertically extending opening, a skirt secured to the body portion and positioned to conceal a part of the vertically extending opening in the front of the pantaloons portion and concealing also the vertically extending opening in the rear of the pantaloons portion, and a hood unitary with the body portion at the neck thereof.

2. A combination garment comprising a body portion and a pantaloons portion unitary with said body portion, said garment being provided at its front with an opening which extends vertically through the body portion and through the pantaloons portion, and at its rear with a vertically extending opening in the pantaloons portion thereof, and a skirt attached to the body portion and positioned to cover a part of the opening in the front of the garment and to cover, also, the opening in the rear of the garment, said skirt being divided on a line at one side of the openings in front and rear of the garment, and a hood unitary with the body portion at the neck thereof.

1,014,654. APPARATUS FOR THE MANUFACTURE OF GAS. WILBUR G. LAIRD, New York, N. Y., assignor to The Improved Equipment Company, New York, N. Y., a Corporation of Colorado. Filed Mar. 1, 1909. Serial No. 480,614. (Cl. 48—99.)



1. In apparatus for the manufacture of gas, the combination of a retort, means for externally heating the retort, means for introducing the material into the retort, and separate means acting within the retort for imparting a whirling motion to the material after its introduction into the retort.

2. In apparatus for the manufacture of gas, the combination of a vertically arranged heated retort, means for externally heating it, a feeder at the top of the retort and tangentially arranged nozzles throughout the height of the retort for subjecting the material in the retort to a whirling action.

3. In apparatus for the manufacture of gas, the combination of a vertically arranged heated retort, means for externally heating it, means for passing material downwardly through said retort by gravity and tangentially arranged nozzles for subjecting the material to a whirling action as it falls.

4. In apparatus for the manufacture of gas, the combination of a vertically arranged heated retort, a surrounding heating chamber therefor, feeding apparatus at the top of the retort, a gas outlet at the lower portion of the retort and means for subjecting the material in the retort to a whirling action.

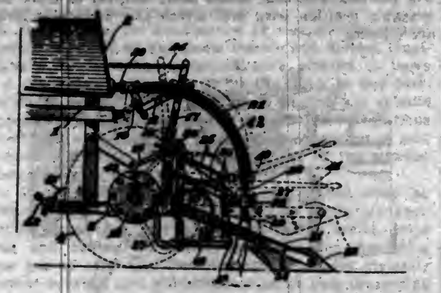
5. In apparatus for the manufacture of gas, the combination of a vertical retort, means for heating the same, feeding apparatus at the top of the retort, a gas outlet and hopper at the lower portion of the retort and means for subjecting the material in the retort to a whirling action.

[Claims 6 to 17 not printed in the Gazette.]

1,014,655. TOBACCO-PLANTER. ALBERT LAROSE, St. Esprit, Quebec, Canada. Filed Nov. 25, 1910. Serial No. 593,984. (Cl. 55—72.)

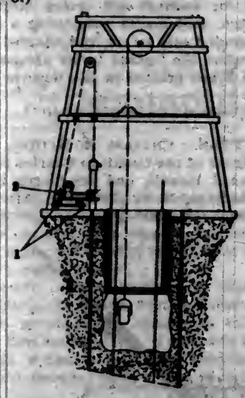
1. In a machine of the character described, a supporting frame, a water tank mounted therein, a planter shoe movably mounted therein, a bar connected to said shoe, a pipe for delivering water immediately in the rear of said shoe, a valve for controlling delivery of water through said pipe, an arm pivotally mounted on the aforesaid frame, a bar connected to the lower end of said arm, means for automatically swinging said last named bar, connections between said valve and said arm, and connections between the first mentioned bar and said arm.

2. In a machine of the character described, a supporting frame, a water tank mounted therein, a planter shoe movably mounted therein, a bar connected to said shoe, beams movably mounted in said frame, hilling plates carried by said beams, an arm pivotally mounted in said frame, a pipe for delivering water immediately in the rear of the aforesaid shoe, a valve in said pipe, connections between said valve and said arm, connections between said arm and the aforesaid bar, connections between said beams and said arm, a second bar connected to said arm, and means for automatically operating said second bar.



3. In a machine of the character described, a water tank mounted therein, a planter shoe movably mounted therein, a pipe for delivering water immediately in the rear of said shoe, means for controlling delivery of water through said pipe, an arm pivotally mounted in said frame, connections between said arm and said controlling means, connections between said arm and said shoe, a bar connected to said arm, a series of rods adapted to successively engage said bar, and means for moving said rods into engagement with said bar.

1,014,656. METHOD OF SINKING, LINING, AND CEMENTING SHAFTS. PAUL ALBERT LEGRAND, Brussels, Belgium. Filed Sept. 16, 1909. Serial No. 518,034. (Cl. 61—3.)



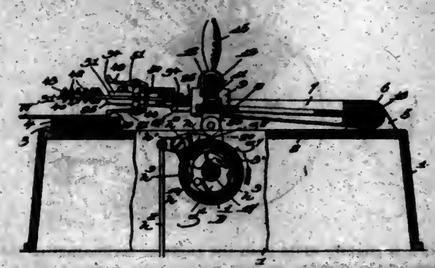
1. The method of sinking shafts in watery soil consisting in sinking the shaft and simultaneously cementing the soil around the same.

2. The method of sinking shafts in watery soil consisting in sinking the shaft and simultaneously boring holes around the same, the holes being made gradually deeper around the shaft, and cementing the soil in a spiral direction around the shaft by introducing the cementing material through the bore holes.

3. The method of sinking shafts in watery soil consisting in boring the holes and in cementing the soil in a spiral direction around the shaft simultaneously with the sinking of the shaft.

1,014,657. BUTTONHOLE AND BUTTON LOCATION MARKING MACHINE. BERNARD T. LEVESQUE, Boston, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Feb. 27, 1911. Serial No. 611,063. (Cl. 12—56.)

1. In a machine of the class described, a work-bed, a movable carrier, a head detachably sustained by the carrier and movable toward and from the work-bed, a series of fingers adjustably mounted on the head, a marking device carried by each finger, and an edge-gage for the work, yieldingly connected with the head and movable with it and also relatively thereto.



2. In a machine of the class described, a work-bed, a movable carrier, a head sustained by the carrier and movable toward and from the bed, a series of individually adjustable marking devices mounted on the head, and means to position the work on the bed, said means being mounted adjustably on the head, said head marking devices and work positioning means being bodily movable from the carrier as a unitary structure.

3. In a machine of the class described, a work-bed, a head movable toward and from it, a series of independently adjustable marking devices, individual means to fixedly connect each device in adjusted position on the head, and yielding edge gages for the work, operatively connected with the head and resting on the work-bed to position the work thereon when the head descends.

4. In a machine of the class described, a work-bed, a head movable toward and from the bed, and having a segmental slot extended from one to the other side, a series of fingers each provided at its outer end with an aperture and longitudinally slotted at its inner end to cross the slot in the head, a marking device detachably clamped in the aperture of each finger, a clamping member extended through the superposed slotted portions of the head and each finger, to clamp the latter in adjusted position on the head, whereby the marking devices are adjustable independently of each other, both laterally and also in the direction of the length of the fingers, and yielding edge gages for the work, each mounted on a finger.

5. In a machine of the class described, a work-bed, a movable carrier, a head detachably sustained by the carrier and movable toward and from the work-bed, a series of marking devices mounted on the head and independently adjustable laterally and also in and out relatively to the head, and separate means to clamp each marking device in individually adjusted position and fixedly connect it with the head, combined with a plurality of devices on the carrier to clamp the head thereupon, and manually operated means to open and close said devices simultaneously.

[Claims 6 to 20 not printed in the Gazette.]

1,014,658. METHOD OF FORMING UNDERCUT SLOTS. WILFRED LEWIS, Philadelphia, Pa. Filed Feb. 6, 1909. Serial No. 476,283. (Cl. 29—148.)

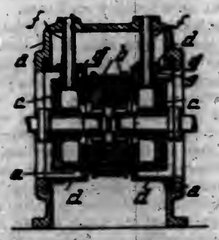
1. The method of forming an undercut helical groove in a cylindrical blank, which consists in cutting a groove with a saw having its sides substantially plane and parallel, by moving the saw relative to the blank through a helical path about the axis of the blank while holding the saw relative to the blank so that the plane of the saw makes an angle with a plane transverse to the axis of the blank which is slightly more than the angle or inclination of a helical line in the side wall of the finished slot at the outer margin of the undercut portion of the slot.

2. The method of forming an undercut helical groove in a cylindrical blank, which consists in cutting a groove with a rotating saw having a radius greater than the depth of the groove by moving the saw in a helical path about the axis of the blank while maintaining the saw with one of its radii approximately normal to the surface

of the blank and with its plane of rotation making an angle with a plane transverse to the axis of the blank

which is slightly more than the angle or inclination of the edges of the slot.

1,014,659. RADIAL TURBINE. BIRGER LJUNGSTRÖM, Stockholm, Sweden, assignor to Aktiebolaget Ljungströms Ångturbin, Stockholm, Sweden. Filed Mar. 8, 1911. Serial No. 613,054. (Cl. 121—87.)



1. In a turbine of the radial type a non-rotating disk inserted in the turbine casing and connected with the turbine casing by means of axial connections yielding in the radial direction.

2. In a turbine of the radial type a non-rotating disk inserted in the turbine casing and connected with the turbine casing by means of axial connections yielding in the radial direction and having a cylindrical shape.

3. In a turbine of the radial type a non-rotating disk inserted in the turbine casing and connected with the turbine casing by means of axial connections yielding in the radial direction and having in section the shape of a U.

4. In a turbine of the radial type a non-rotating disk inserted in the turbine casing and connected with the turbine casing by means of axial connections yielding in the radial direction and having in section the shape of a recumbent U, the one end thereof being united with the turbine casing, the other one with the disk.

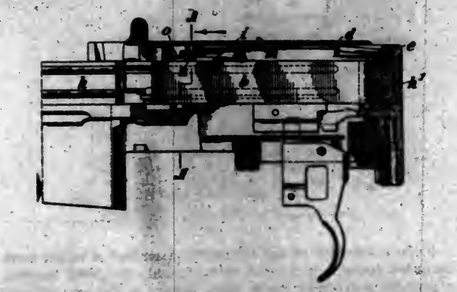
5. In a turbine of the radial type a non-rotating disk inserted in the turbine casing and connected with the turbine casing by means of axial connections yielding in the radial direction, the one end of the connection being united with the lateral wall of the turbine casing, the other one with the inner edge of the disk.

[Claim 6 not printed in the Gazette.]

1,014,660. AUTOMATIC GUN. PAUL MAUSER, Oberndorf-on-the-Neckar, Germany. Filed Sept. 15, 1908. Serial No. 453,107. (Cl. 42—4.)

1. An automatic fire arm having a breech mechanism including a breech bolt, locking means, and means for locking the breech mechanism, said means being normally held by said locking means in its inoperative position, and adapted to move into engaging position with said breech bolt when said locking means is missing.

2. An automatic firearm having a breech mechanism including a breech bolt, locking levers, and means for locking the breech mechanism, said locking levers normally engaging said locking means for holding it in its inoperative position, and said means being adapted to move into engaging position with said breech bolt when said levers are missing.



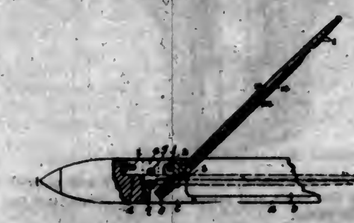
3. An automatic firearm having a breech mechanism including a breech bolt, locking means for said breech bolt, and means for locking said breech mechanism operating upon absence of the locking means.

4. An automatic firearm having a breech mechanism including a breech bolt, locking levers for said breech bolt, and means for locking said breech mechanism in inoperative position, said means comprising a stop normally engaging said levers, and adapted to engage said breech bolt when the locking levers are missing.

5. An automatic firearm having a breech mechanism including a breech bolt, locking levers for said breech bolt, and means for locking said breech mechanism in inoperative position, said means comprising a two-armed stop normally engaging said levers, and adapted to engage said breech bolt when the locking levers are missing.

[Claims 6 and 7 not printed in the Gazette.]

1,014,661. SHUTTLE. CHARLES E. MCGILL, Binghamton, N. Y., assignor of one-fourth to Charles Huber, one-fourth to Edward Howell, and one-fourth to Charles F. Ruoff, Binghamton, N. Y. Filed Feb. 17, 1911. Serial No. 609,169. (Cl. 139—27.)



1. In a shuttle, the combination of a supporting means, a spindle movable up and down therein and divided longitudinally to form two members, one of said members being pivoted to move on a transverse and relatively vertical axis in the butt-portion of the spindle, and means for effecting movement of said member upon movement of the spindle, substantially as described.

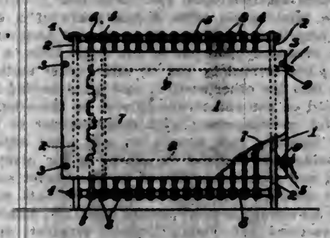
2. In a shuttle, the combination of a supporting means, a spindle movable up and down therein and divided longitudinally to form two members, each pivoted to move on a transverse and relatively vertical axis in the butt-portion of the spindle, and means for effecting movement of said members in opposite directions upon movement of the spindle, substantially as described.

3. In a shuttle, the combination of a supporting means, a spindle movable up and down therein and divided longitudinally to form two members, one of said members being pivoted to move on a transverse and relatively vertical axis in the butt-portion of the spindle, and means for holding the spindle depressed including a cam-projection extending into the path of movement of said pivoted member in the up and down movement of the spindle, substantially as described.

4. In a shuttle, the combination of a supporting means, a spindle movable up and down therein and divided longitudinally to form two members, each pivoted to move on a transverse and relatively vertical axis in the butt-portion of the spindle, and means for holding the spindle depressed including substantially opposed cam-projections respectively extending into the paths of movement of said members in the up and down movement of the spindle, substantially as described.

5. In combination, with a shuttle, a U-shaped mounting arranged therein with its side members projecting horizontally from the part of the mounting which joins them and having an inward cam-projection depending from one of said side members and a spindle pivotally movable between said side members on an axis connecting the latter, said cam-projection extending into the path of pivotal movement of the spindle and having wiping engagement therewith in the movement of the spindle, substantially as described.

1,014,662. ELECTRIC HEATER. JOHN F. MONNOT, Paris, France. Filed Dec. 10, 1910. Serial No. 596,709. (Cl. 219—34.)



1. An electric heater comprising in combination a structure comprising flues, the walls of which are composed of material substantially opaque to radiant heat rays and of low heat conductivity, and electric heating elements within such compartments.

2. An electric heater comprising in combination a structure comprising flues, the walls of which are composed of material substantially opaque to radiant heat rays and of low heat conductivity, and electric heating elements within such compartments, and comprising electric resistance coils mounted upon a base of non-conducting material.

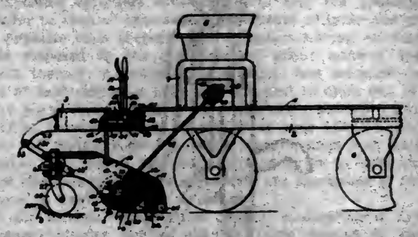
3. An electric heater comprising in combination side plates and end plates, and partitions dividing the space inclosed by said side and end plates into a plurality of flues, means for holding the side plates and end plates together, and for holding the partitions in place, said side and end plates and partitions being of material substantially opaque to radiant heat rays and of low heat conductivity, and electric heating elements within the several flues so formed.

4. An electric heater comprising in combination side plates and end plates secured together, partitions dividing the space inclosed by said side and end plates into a plurality of flues, through bolts upon which such partitions are mounted, heating elements also mounted on said through bolts, and means for spacing the partitions and heating elements apart.

5. A heating element for an electric heater, comprising a base of non-conducting refractory material, and a helically wound resistance conductor wrapped about said base.

[Claims 6 and 7 not printed in the Gazette.]

1,014,663. POWER-DRIVEN LAWN-MOWER. HERBERT S. MUSTIN, Chicago, Ill., assignor to The Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 16, 1911. Serial No. 608,970. (Cl. 56—10.)



1. In a power driven lawn mowing machine, the combination of the machine body and a driving engine mounted thereon, a cutting structure below said body comprising side frames and a rotary cutting frame journaled thereon, transmission mechanism between said engine and rotary cutting frame, brackets extending forwardly and downwardly from the machine body in advance of the cutting frame, links pivoted to the lower ends of said brackets and to the front ends of the side frames of the cutting structure, said cutting structure being normally supported entirely on the ground and said links serving, when the machine is driven, to pull the cutting structure forwardly and at the same time to exert upward lift on the front ends of the cutting structure to prevent the front end thereof from dropping, due to uneven ground and thereby preventing the cutting frame from digging into the ground.

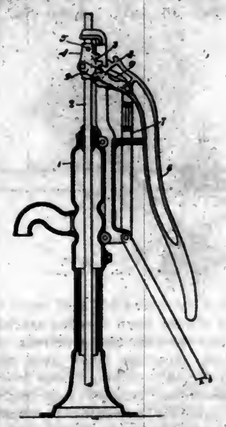
2. In a power driven lawn mowing machine, the combination of the machine body and a driving engine mounted thereon, a cutting structure comprising side frames and a rotory cutting frame journaled thereon, transmission mechanism between said engine and rotary cutting frame, and pull links having pivotal connection with said cutting structure and having pivotal connection with said machine body in advance of said cutting structure, said pull links exerting both forward pull and upward lift on the cutting structure when the machine is in operation.

3. In a power driven mowing machine, the combination of the machine body and a driving engine mounted thereon, a cutting structure below the machine body and comprising side plates and a rotary cutting frame journaled thereon, supporting casters journaled to the front end of said cutting structure, a guard roller at the rear end of said cutting structure, said casters and guard roller supporting the cutting structure on the ground, pull links pivoted to the machine body and having pivotal connection with the cutting structure in advance of the vertical plane passing through the center of gravity of the cutting structure, the pivotal connection of the pull links with the cutting structure being below the plane passing through the guard roller axis and the pivotal connection of the links with the machine body whereby upon forward movement of the machine the cutting structure will be pulled along the ground and upward lifting force exerted thereon, and transmission mechanism connecting said engine with the rotary cutting frame.

1,014,664. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed June 5, 1911. Serial No. 631,584. (Cl. 103—62.)

1. In a pump, the combination, with a reciprocating pump-rod having a segmental gear connected thereto and traveling therewith, of a pump handle having an intermeshing segmental gear, a support for said handle, whereby a reciprocating and a pivoted segment are combined, and a link connection between the handle support and the pump rod by which one of said members is given lateral

movement with respect to the other member as the rod reciprocates.



2. In a pump, the combination, with a reciprocating pump-rod having a segmental gear connected thereto and traveling therewith, of a pivoted pump handle having a segmental gear intermeshing with the first-mentioned segmental gear, whereby a pivoted and a reciprocating segment are combined, a pivoted support for said handle, and a link connection between said pivoted support and said pump-rod by which said support and said pump-handle are given lateral movement with respect to said pump rod as the latter reciprocates.

1,014,665. APPARATUS FOR LIGHTING FIRES. VALENTIN NEFF, Glatz, Germany. Filed Oct. 31, 1910. Serial No. 589,993. (Cl. 158—10.)

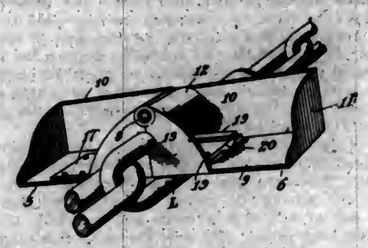
An apparatus for lighting fires, comprising in combination a sheet iron box open at the bottom and along one of its sides, a transverse receptacle at the open side, a sheet of metal in said receptacle conveniently bent outward toward the top of the box, transverse partitions upon said sheet forming compartments in said receptacle, and asbestos in said compartments, substantially as described and shown and for the purpose set forth.

1,014,666. CONVEYER-BUCKET. CHARLES W. OLSON, Rainier, Oreg. Filed Oct. 26, 1910. Serial No. 589,214. (Cl. 193—8.)

1. The combination with a conveyer chain of a bucket comprising two hingedly connected sections, a sliding locking element carried by one of said sections, and means on the other section to engage said element and rigidly secure said sections together upon said chain.

2. The combination with a conveyer chain of a bucket comprising two hingedly connected sections, a sliding locking plate carried by one of said sections and having a shoulder formed on one end, and a spring plate carried by the other bucket section, having an opening in one end to receive said shoulder whereby said sections are rigidly secured together upon said chain.

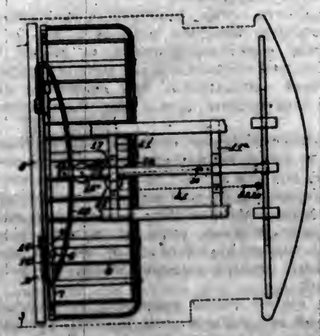
3. The combination with a link chain of a conveyer bucket adapted to be arranged on one of the chain links, said bucket comprising two hingedly connected sections, provided with grooves in their opposed walls to receive one of the parallel portions of the link, a movable locking member carried by one of the bucket sections and a resilient element adapted for co-engagement with said member to rigidly secure the sections together upon the chain link.



4. The combination with a link chain of a conveyer bucket comprising two hingedly connected sections adapted to be arranged upon one of the chain links, the opposed walls of said sections having openings therein, a slidable plate carried by one of said sections movable through the opening thereof, a shoulder formed on said plate, a spring plate secured at one end to the other bucket section having an opening in its free end to receive said shoulder and means to limit the sliding movement of said first named plate whereby said bucket sections are rigidly secured together upon the chain link.

5. The combination with a link chain of a conveyer bucket comprising two hingedly connected sections adapted to be arranged upon one of the chain links, a slidable locking plate carried by one of said bucket sections and movable into the other section, said plate having a shoulder formed on one end means carried by the other bucket section for co-engagement with said shoulder to lock the sections together, lugs formed on said plate adjacent to said shoulder to limit the movement of the plate in one direction and stop cleats formed on the bucket section to engage a shoulder on the opposite end of said plate and limit its movement in the opposite direction, whereby said bucket sections are rigidly locked together upon the chain link.

1,014,667. LIFE-GUARD FOR RAILWAY-CARS. GEORGE A. PARMENTER, Cambridge, Mass. Filed Mar. 27, 1909. Serial No. 486,136. (Cl. 105—130.)



1. The combination with a car body and swiveled truck frame, of a movable bar carried by the car body, a scoop pivotally supported from the truck frame, a curved bar pivotally connected with the scoop, anti-friction rollers on the movable bar engaging said curved bar, means for normally holding the movable bar against movement, and tripping means for releasing said bar from the holding means.

2. The combination with a car, of a pivoted scoop having upwardly extending resilient arms, a sliding bar, means connecting the rear end of the sliding bar with said resilient arms, means for locking the bar normally against movement, and a trip device for releasing the bar.

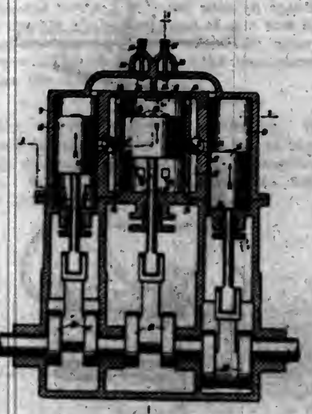
3. In combination with a car body and swivel truck frame, of a movable bar carried by the car body, a scoop pivotally supported from the truck frame and having upwardly extending resilient arms, a curved bar, and a part having a sliding engagement with said bar, one of said elements being connected with said resilient arms and the other with the movable bar, means for locking said bar against movement, and releasing means.

4. The combination with a car body and swiveled truck frame, of a movable bar carried by the car body, a scoop pivotally supported from the truck frame, and having upwardly extending resilient arms, a curved bar having its ends pivotally connected with said resilient arms and having a sliding connection with said movable bar, means for normally locking said bar against movement, and tripping means for releasing it.

5. The combination with a car body and truck frame, of a scoop pivotally supported from the truck frame and having upwardly extending resilient means for holding the scoop elevated, mechanism connected with said means and normally locked to hold the scoop elevated and tripping means.

[Claims 6 and 7 not printed in the Gazette.]

1,014,668. INTERNAL-COMBUSTION ENGINE. SAMUEL PEARSON, Kerrville, Tex. Filed Dec. 14, 1910. Serial No. 597,210. (Cl. 123—36.)



1. An internal combustion engine, comprising a low pressure cylinder having exhaust ports formed in the side wall thereof near the ends thereof; an exhaust chamber mounted on said cylinder and in communication therewith through said ports; a valve mounted in said chamber arranged to close said ports alternately; a piston mounted in said cylinder adapted to close said ports; a plurality of explosion cylinders connected with said low pressure cylinder to exhaust into said low pressure cylinder and at the opposite ends thereof, said cylinders having exhaust ports disposed in the wall thereof about midway the length thereof; a plurality of pistons, one mounted in each of said explosion cylinders, adapted to close the exhaust ports formed therein; a crank shaft having a plurality of cranks disposed at angles of near 120°; a plurality of piston rods connecting said cranks and said pistons; and means for shifting said valve in said exhaust chamber in timed relation with the movement of the pistons in said explosion cylinders.

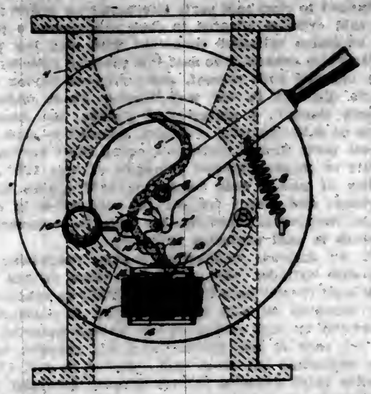
2. An internal combustion engine, comprising a low pressure cylinder having exhaust ports formed in the side wall thereof near the ends thereof; an exhaust chamber mounted on said cylinder and in communication therewith through said ports; a valve mounted in said chamber arranged to close said ports alternately; a piston mounted in said cylinder adapted to close said ports; a plurality of explosion cylinders connected with said low pressure cylinder to exhaust into said low pressure cylinder and at the opposite ends thereof, said cylinders having exhaust ports disposed in the wall thereof about midway the length thereof; a plurality of pistons, one mounted in each of said explosion cylinders, adapted to close the exhaust ports formed therein; a crank shaft having a plurality of cranks disposed at angles of near 120°; and a plurality of piston rods connecting said cranks and said pistons.

3. An internal combustion engine, comprising a low pressure cylinder having exhaust ports formed in the side wall thereof near the ends thereof and intake ports disposed at the ends of said cylinder; an exhaust chamber mounted on said cylinder and in communication therewith through said ports; a valve mounted in said chamber arranged to close said ports alternately; means for shifting said valve in said exhaust chamber in timed relation with the movement of the pistons in the explosion cylinders of said engine; a piston mounted in said low pressure cylinder adapted to close said ports; a plurality of explosion cylinders connected with said low pressure cylinder to exhaust into said low pressure cylinder through said intake ports; a plurality of pistons one mounted in each of said explosion cylinders, adapted to close the exhaust ports formed therein; a crank shaft having a plurality of cranks disposed at angles of near 120°; and a plurality of piston rods connecting said cranks and said pistons.

5. An internal combustion engine, comprising a low pressure cylinder having exhaust ports formed in the side wall thereof near the ends thereof and intake ports disposed at the ends of said cylinder; an exhaust chamber mounted on said cylinder and in communication therewith through said ports; a valve mounted in said chamber arranged to close said ports alternately; a piston mounted in said cylinder adapted to close said ports; a plurality of explosion cylinders, each connected with said low pressure cylinder through an exhaust port disposed midway the length of each explosion cylinder and through the intake ports at the opposite ends of said low pressure cylinder; deflecting valves disposed in the passage connecting the exhaust ports in said explosion cylinders and the intake ports in said low pressure cylinder, a plurality of pistons, one mounted in each of said explosion cylinders, adapted to close the exhaust ports formed therein; a crank shaft having a plurality of cranks disposed at angles of near 120°; and a plurality of piston rods connecting said cranks and said pistons.

[Claims 6 to 8 not printed in the Gazette.]

1,014,668. ENGINE STOP MECHANISM. MARTIN RAYMAKER and JAMES H. RAYMAKER, Sheboygan, Wis. Filed Dec. 27, 1910. Serial No. 599,309. (Cl. 136—15.)



1. The combination of an automatically closing steam-engine stop-valve, a field-magnet and an engine driven electric-generator in a constantly closed circuit with the magnet, the voltage of the line being variable in proportion to the speed of the engine; an armature opposing the magnet, a yielding mechanical resistance by which the armature is held away from said magnet when the energization of the same is of less than a predetermined degree, and an armature-controlled trip-mechanism by which the stop-valve is held in normally open position, said valve being freed when said armature is attracted to the aforesaid magnet against said resistance.

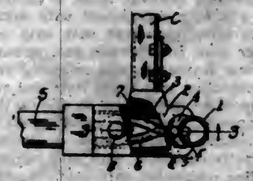
2. The combination of an automatically closing steam-engine valve, a field-magnet, electric resistance and an engine-driven electric-generator in a constantly closed circuit with the magnet, the voltage of the line being variable in proportion to the speed of the engine; an armature opposing the magnet, a yielding mechanical resistance by which the armature is held away from said magnet when the energization of the same is of less than a predetermined degree, and an armature-controlled trip-mechanism by which the stop-valve is held in normally open position, said valve being freed when said armature is attracted to the aforesaid magnet against said resistance.

3. The combination of an automatically closing steam-engine valve, a field-magnet, electric resistance and an engine-driven electric-generator in a constantly closed circuit with the magnet, the voltage of the line being variable in proportion to the speed of the engine; an armature opposing the magnet, a yielding mechanical resistance by which the armature is held away from said magnet when the energization of the same is of less than a predetermined degree, means for cutting out said electric resistance at a point distant from said engine, and an armature-controlled trip-mechanism by which the stop-valve is held in normally open position, said valve being freed when said armature is attracted to the aforesaid magnet against said mechanical resistance.

1,014,670. BEDSTEAD. FRANK P. SCHWALLIE, St. Louis, Mo. Filed May 19, 1911. Serial No. 628,186. (Cl. 5—55.)

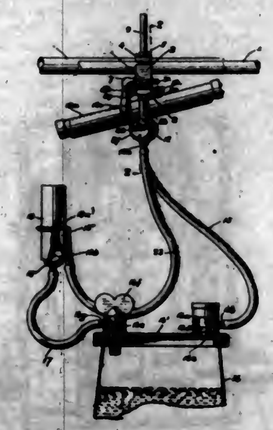
1. A metallic bedstead comprising corner-posts, side rails, terminal cross-rails, sockets at the ends of the cross-rails, loops formed on the ends of the side rails, and adapted to enter the sockets, pins for securing the loops within the sockets, suitable bearing formations on the sockets for receiving the posts, and means coöperating with the pins for coupling the posts to the sockets.

2. A metallic bed-stead comprising hollow corner-posts, side and terminal cross rails between the posts, open-ended socket formations at the ends of the cross-rails, loops at the ends of the side-rails, for entering the chamber of the sockets from one end, loops coupled to the posts and positioned to enter the socket chambers from the opposite end and overlap the first mentioned loops, suitable bearings for the posts formed on the sockets, and pins passed through the walls of the socket and through the opening of the overlapped loops, whereby the parts are coupled together.



3. In combination with a hollow bed-post having an opening in the wall thereof, a loop projecting from the post and provided with a bent terminal or finger to enter said opening and engage the inner wall of the post, the loop proper being disposed at right angles to the axis of the post, a terminal cross-rail for the bed, a socket at the end of said rail for receiving the loop carried by the post, and means for securing the loop within and to, the socket.

1,014,671. MILKING APPARATUS. DAVID TOWNSEND SHARPLES, West Chester, Pa. Filed Jan. 5, 1911. Serial No. 600,963. (Cl. 31—100.)



1. In a milking apparatus, a pulsator comprising a bearing member having a passage therein, a journaled member having a passage therein adapted for communication with the passage aforesaid, a tilter-tube connected with said journaled member, a piston in said tilter-tube, and means for connecting said tube with said passage of said journaled member.

2. In a milking apparatus, a pulsator comprising a valve body, a valve fulcrumed by means of said body, a tilting device fixed to said valve, a traveling device carried by said tilting device, and means whereby said traveling device is actuated to operate said tilting device.

3. In a milking apparatus, a pulsator comprising a bearing member, a journaled member supported by said bearing member, a cylinder fixed to said journaled member, a piston adapted to reciprocate in said cylinder, and means for reciprocating said piston in said cylinder.

4. In a milking apparatus, a pulsator comprising a valve body, a journaled valve fulcrumed by means of said body, a cylinder carried by said valve and a piston adapted to reciprocate in said cylinder, said mechanism having means

whereby pressure is communicated to said cylinder and piston.

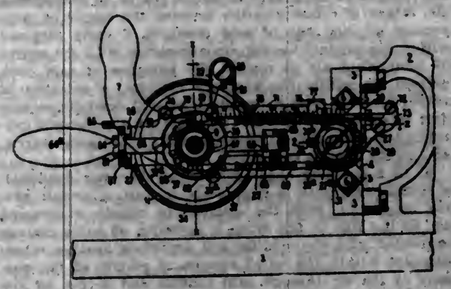
5. In a milking apparatus, a hanger having a bearing member, a valve body supported by said bearing member, a valve journaled on said body, and means for turning said valve on said body.

[Claims 6 to 23 not printed in the Gazette.]

1,014,672. TONGUE-TRUCK. ABRAM H. SNOOK and CLAUDE O. TRIPP, Winfield, Kans. Filed Oct. 14, 1911. Serial No. 654,611. (Cl. 21—63.)

A tongue truck of the class described comprising a stub tongue, a bolt extending vertically through the tongue adjacent the forward end thereof, an axle mounted on the lower end of said bolt and provided with supporting wheels at its ends, a U shaped plate pivotally mounted on a vertical axis at the forward end of said tongue, a draft tongue pivotally mounted on the horizontal axis of the U shaped plate, an additional plate carried on the U shaped plate and extending laterally therefrom, said latter plate being provided with a plurality of openings, an arm having one end thereof engaged with an opening in the last referred to plate, an additional laterally extending plate carried on the aforesaid bolt and provided with an opening adjacent its end thereof, the opposite end of said arm being loosely extended through the opening in the last referred to plate, and removable means to prevent the disengagement of said arm upon the same.

1,014,673. TYPE-WRITING MACHINE. HERBERT H. STERLIN, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 2, 1909. Serial No. 520,894. (Cl. 197—118.)



1. In a typewriting machine, the combination of a cylindrical platen; a line spacing wheel; a clutch to connect the line spacing wheel and platen to turn together or to disconnect said parts to enable the platen to rotate independently of the line spacing wheel; and stop mechanism for arresting the platen after a predetermined extent of rotation and for affording a continued rotation of the platen to any desired extent after it has been arrested, said mechanism comprising means for positively clutching and connecting certain portions of the stop mechanism with the platen at any position of relative adjustment between the two.

2. In a typewriting machine, the combination of a rotative platen; a line spacing wheel; a clutch to connect the line spacing wheel and platen to turn together or to disconnect said parts to enable the platen to rotate independently of the line spacing wheel; stops for arresting said platen; a chain for moving certain of said stops; and means for enabling the platen to rotate independently of said stops, said means comprising two coöperative positively engaging clutch members one operatively connected to the platen and the other operatively connected to the stop mechanism, said clutch members including means whereby they are coöperative to engage with one another at any position of relative adjustment between the two, and hand actuated means for controlling the engagement and disengagement of said clutch members.

3. In a typewriting machine, the combination of a rotative platen, a line spacing wheel; a clutch to connect the line spacing wheel and platen to turn together or to disconnect said parts to enable the platen to rotate independently of the line-spacing wheel; a platen frame; a chain; stops for arresting said platen, certain of said stops being held against movement on the platen frame and certain of them being moved by the chain; means for effecting a relative adjustment between certain of said stops; and means which enable the platen to be turned to any desired extent without being arrested by said stops, said last mentioned means comprising two positively engaging clutch members one of which is operatively connected to the platen and the other of which is operatively connected to said chain, the clutch members including means whereby they may be positively connected at any position of relative adjustment between the two, and hand actuated means operable at will for effecting an engagement and disengagement between the clutch members.

4. In a typewriting machine, the combination of a rotative platen; a line spacing wheel; a clutch to connect the line spacing wheel and platen to turn together or to disconnect said parts to enable the platen to rotate independently of the line spacing wheel; a platen shaft; a platen frame; a pair of wheels one of which is a driving wheel loosely mounted on the platen shaft; an endless chain which passes around said wheels; a rod or bar fixed to the platen frame and extending parallel with said chain where it passes from wheel to wheel; two relatively adjustable stops carried by said bar; a third stop connected to said sprocket chain; and a clutch for connecting the driving wheel to and disconnecting it from the platen shaft, said clutch comprising two positively engaging clutch members one operatively connected to the driving wheel and the other to the platen, and means whereby said clutch members may be positively engaged at any position of relative adjustment between the two.

5. In a typewriting machine, the combination of a rotative platen; a line spacing wheel; a clutch to connect the line spacing wheel and platen to turn together or to disconnect said parts to enable the platen to rotate independently of the line spacing wheel; stops for arresting said platen; a chain for moving certain of said stops; and means for enabling the platen to rotate independently of said stops, said means comprising two coöperative positively engaging clutch members one operatively connected to the platen and the other operatively connected to the stop mechanism, said clutch members including means whereby they are coöperative to engage with one another at any position of relative adjustment between the two, and hand actuated means for controlling the engagement and disengagement of said clutch members.

[Claims 6 to 35 not printed in the Gazette.]

1,014,674. MITER-BOX. JOHN L. STEVENS, South Bend, Wash. Filed May 16, 1911. Serial No. 627,406. (Cl. 143—89.)

1. The herein described miter box comprising a bed plate having a back against which the stock rests, a pair of T-shaped guides having slotted stems overlapping each other, means for adjustably connecting said stems, means for pivotally connecting the guides at their angles to said bed plate, and pins rising from opposite ends of the head of each guide and having saw-guiding barbs.

2. The herein described miter box comprising a bed

plate having a back against which the stock rests and a notch in its lower face at the center of its length opening out one edge, a pair of T-shaped guides whose stems overlap each other, means for adjustably connecting said stems, the said means standing within said notch when the stems are alined with each other, pivots connecting the guides at their angles to the bottom of the bed plate, and upright pins through the ends of the head of each guide, the pins having saw-guiding kerfs in their upper portions and their lower portions forming feet which support the bed plate and hold said means and pivots above a support.

3. The herein described miter box comprising a bed plate having a back against which the stock rests and a notch in its lower face at the center of its length opening out one edge, a pair of T-shaped members having slotted stems overlapping each other, a sliding nut adjustably engaging the slots with its upper end standing within said notch when the stems are alined with each other, pivots connecting the members at their angles to the bottom of the bed plate, saw-guides rising from the heads of said members, and feet depending from said heads and supporting the bed plate, sliding nuts, and pivots above a support.

4. The herein described miter box comprising a bed plate having a back against which the stock rests, a pair of T-shaped members whose stems overlap each other and whose heads underlie said plate, means for adjustably connecting the stems, set screws whose threaded portions pass loosely upward through said heads and make threaded engagement with said plate, the thumb portions of the screws standing below said plate, saw-guides rising from the heads of said members, and feet depending from the ends of said heads to a greater distance than the length of said thumb-portion.

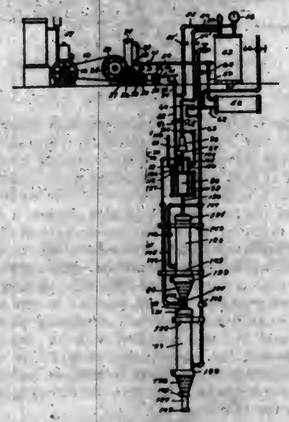
5. The herein described miter box comprising a bed plate having a notch in its lower face at the center of its length opening out one edge, a bottom lying over said plate and having a depending flange passing over said edge of the plate and notched to register with the notch therein, a back rising from said bottom, a pair of angular members whose stems overlap each other, means for adjustably connecting said stems, the adjusting means entering said notches when the stems are moved into alinement with each other, pivots connecting the members at their angles to the bottom of the bed plate, saw-guides rising from the heads of the members, and feet depending from said heads for a sufficient distance to hold all parts above a flat support.

[Claims 6 to 8 not printed in the Gazette.]

1,014,675. PUMP. ISAAC R. STOUT, Medicine Lodge, Kans. Filed Oct. 14, 1911. Serial No. 654,695. Cl. 103—8.)

1. In a pumping apparatus of the character described, a pressure storage tank, an auxiliary cylinder, a valve shifting cylinder, a conduit connecting the tank and valve shifting cylinder, valves associated with the conduit to alternately establish communication between the valve shifting cylinder and said tank and between the valve shifting cylinder and the atmosphere, means of communication between the tank and auxiliary cylinder, valves associated with said means of communication for controlling the passage of compressed air through the same, means arranged within the valve shifting cylinder and having connection with the second named valves to move the same, pump barrels, and means of communication between the pump barrels and the auxiliary cylinder.

2. In a pumping apparatus of the character described, a source of compressed air, valve shifting apparatus, means of communication between the valve shifting apparatus and the source of compressed air, valve structures associated with said means of communication whereby communication is alternately established between the valve shifting apparatus and the source of compressed air and the interior of the valve shifting apparatus and the atmosphere, a second means of communication between the source of compressed air and the valve shifting apparatus, an auxiliary cylinder, a third means of communication between the second means of communication and said auxiliary cylinder, pump barrels, means of communication between the auxiliary cylinder and a pump barrel, and valves associated with the third means of communication and adapted to be actuated by the valve shifting apparatus, whereby compressed air is supplied to one of the barrels and the other barrel has its interior placed in communication with the atmosphere.



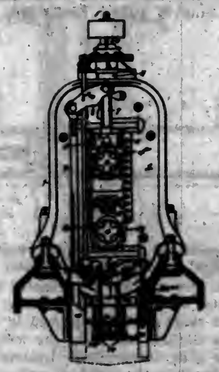
3. In pumping apparatus of the character described, a plurality of pump barrels, an auxiliary cylinder, a conduit establishing communication between the auxiliary cylinder and one of the pump barrels, a plurality of conduits having communication with the auxiliary cylinder and connected with each other, a source of compressed air, means of communication between the source of compressed air and one of said conduits, a valve disposed within the conduit having communication with the source of compressed air to control the entrance of said compressed air within the auxiliary cylinder, a plurality of valves disposed within the other of said conduits, a conduit establishing communication between the conduit containing the plurality of valves and the other pump barrel, and means to shift said valves.

4. In a pumping apparatus of the character described, a cylinder, a piston to reciprocate therein, a conduit having connection with the cylinder to supply compressed air or the like to the same, a plurality of valve casings connected with the conduit, and oppositely seating valves disposed within the valve casings to permit of the passage of the air through said conduit and to cut off the supply of air and establish communication between the interior of the cylinder and the atmosphere.

5. In apparatus of the character described, a pressure storage tank, an auxiliary cylinder, a plurality of pump barrels, a conduit establishing communication between the auxiliary cylinder and one pump barrel, a second conduit having communication with the other pump barrel, a plurality of conduits connected with the second conduit and leading into the auxiliary cylinder, means for controlling the passage of compressed air through said plurality of conduits, a valve shifting cylinder, a piston operating therein and having connection with said means, a third conduit establishing communication with said means, a third conduit establishing communication between the pressure storage tank and the valve shifting cylinder, means for controlling the passage of compressed air through said third conduit, and a fourth conduit connected with the pressure storage tank, the valve shifting cylinder and one of said plurality of conduits.

[Claims 6 to 8 not printed in the Gazette.]

1,014,676. THREE-HIGH-ROLL MILL. CLARENCE L. TAYLOR, Alliance, Ohio, assignor to The Morgan Engineering Company, Alliance, Ohio. Filed Aug. 16, 1909. Serial No. 513,205. (Cl. 80—56.)



1. In a three high mill, the combination with upper and lower rolls, of a middle roll, a counterweight for partly counterbalancing the weight of said middle roll, and means for assisting the counterweight in elevating the middle roll.

2. In a three high roll mill, the combination with upper and lower rolls, of a middle roll, a counterweight connected to the latter and partly counterbalancing same, a second counterweight and means for adding its weight to that of the first counterweight for elevating the middle roll.

3. In a three high roll mill the combination with upper and lower rolls, of a middle roll, a counterweight partly counterbalancing the middle roll and connected to the latter and tending to raise same, and means for applying additional power to that of the counterweight for elevating the middle roll.

4. In a three high roll mill, the combination with upper and lower rolls, of a middle roll, means insufficient, but constantly tending, to elevate the middle roll, and supplemental means adapted to coact with the first mentioned means for elevating the middle roll.

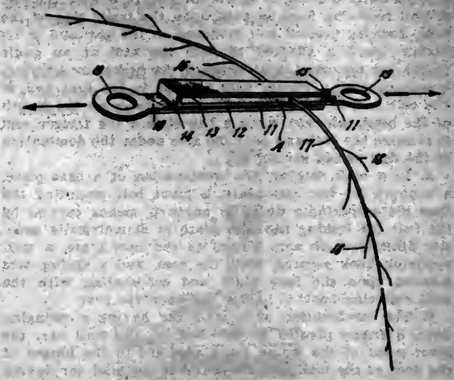
5. In a three high roll mill, the combination with upper and lower rolls, of a middle roll, means supporting said middle roller, a shaft carrying said supporting means, a counterweight connected with said shaft and tending to elevate the middle roll, a second counterweight and means for shifting the weight of said second counterweight onto said shaft whereby it assists the first mentioned counterweight in elevating the middle roll.

[Claims 6 to 15 not printed in the Gazette.]

1,014,677. FUSIBLE LINK. JOHN B. VACCARELLA, Spring Lake, N. J. Filed July 25, 1911. Serial No. 640,385. (Cl. 236—16.)

1. A fusible link comprising a plurality of members united by a material fusible at low temperature, a heat generating material supported or carried by the link intermediate the ends thereof, said heat generating material being positioned directly at the fusible material which unites the link members, and an inflammable fuse in communication with the heat generating material, the fuse being free or unconfined for substantially its length.

2. A fusible link comprising two members, said members being connected by a solder positioned between the meeting faces thereof, one of said members being provided with means for retaining a combustible heat generating material adjacent to the meeting faces of said members, the combustion of which material is adapted to soften the fusible connection, and an inflammable fuse in communication with the heat generating material, the fuse being free or unconfined for substantially its length.



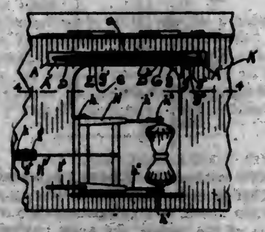
3. A link embodying a plurality of members united by a solder which is fusible at low temperature, one of said members being provided with a chamber, and a heat generating substance positioned within the chamber and adapted by its combustion to heat the walls of said chamber for the purpose of melting the solder.

4. A link comprising a plurality of members united by a solder fusible at low temperature, a chamber adjacent the united parts of the link, a heat generating substance contained within said chamber and adapted by its combustion to melt the solder uniting said members, and a fuse depending from said link and coöperating with the substance within the chamber.

5. A link comprising a plurality of members united by a solder fusible at low temperature, one of said members being provided with a chamber, and an inflammable heat generating material within said chamber whereby the link may be heated to soften the solder between the members thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,014,678. MAIL-BAG CATCHER. RICHARD S. VEACH, Walton, Ky. Filed Oct. 25, 1911. Serial No. 656,752. (Cl. 105—231.)



1. In a mail bag catcher, the combination of an arm hinged to the side of a mail car, a mail receiving hook secured to the arm, a bolt mounted upon the arm and in its normal position adapted to hold the arm at an angle outward from the car, a spring holding the bolt in its normal position, and a trigger arm pivoted to the arm and to the bolt and normally held by the bolt across the mouth of the hook.

2. In a mail bag catcher, the combination of a base plate, an arm hinged to the base plate, a mail receiving hook secured to the arm, a bolt mounted upon the arm and adapted to engage the base plate and to hold the arm

normally at an angle to the base plate, and a trigger arm pivoted to the arm and to the bolt and normally held by the bolt across the mouth of the hook.

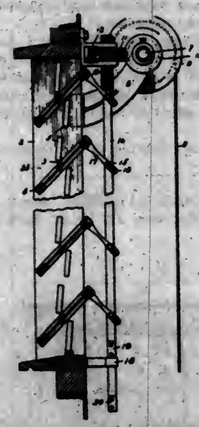
3. In a mail bag catcher, the combination of an arm hinged to the side of the car, a spring secured to the car and normally tending to throw the arm in toward the car, a mail receiving hook secured upon the inner side of the arm, a spring pressed bolt mounted on the arm and in its normal position adapted to hold the arm at an angle to the car against the pressure of the first-named spring, a bag-containing trigger arm pivoted to the arm and to the bolt and normally held by the bolt across the mouth of the hook, whereby when a bag strikes the trigger arm it releases the bolt and puts the arm under the domination of the first-named spring.

4. In a mail catcher, the combination of a base plate, a support for the base plate, a pivot bolt mounting the base plate rotatably upon its support, means carried by the bolt for locking the base plate in diametrically opposite directions, an arm hinged to the base plate, a mail receiving hook secured upon the arm, and a spring arm secured upon the base plate and coöperating with the mail receiving hook to hold a bag upon the arm.

5. The combination of a mail car having a swinging door, a frame pivoted in the door of the mail car, the pivot point of the frame being adjacent to the hinges of the door of the mail car, the walls of the mail car having an opening adjacent to the hinges of the door, a cable secured to the frame, passing through the opening and secured upon the inside of the car door, a spring tending normally to carry the frame toward the car door, and mail bag supporting arms mounted upon the frame.

[Claim 6 not printed in the Gazette.]

1,014,679. OPERATING DEVICE FOR WINDOW-LOUVERS. JOHANNES E. VON WAGNER, Oakmont, Pa. Filed Oct. 22, 1910. Serial No. 588,569. (Cl. 16—28.)



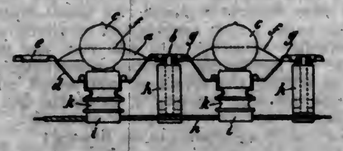
In combination with a frame having a plurality of centrally pivoted louver sashes adapted to overlap at their opposite edges when closed, straight arms rigidly carried upon the upper rails of the sashes, the arms having longitudinal slots in their free ends, registering brackets extending inwardly from the opposite ends of the frame, one of the brackets having an angular opening, and the opposite bracket having a circular opening therethrough, a rod mounted in the brackets in parallelism with the frame and being formed angular in cross section at one end for slidable engagement in the angular opening of the first bracket whereby the rod is held from turning, the rod further having a threaded rounded opposite end engaging through the circular opening of the opposite bracket, fixed pins projecting laterally from the rod and engaging directly in the slots of the arms, an operating gear threaded on the rounded end of the rod and being supported from longitudinal movement in the bracket having the circular opening, and operating means for reciprocating the gear whereby the rod is moved longitudinally of the frame to swing the arms and operate the sashes.

1,014,680. ROLLER-RETAINING DEVICE. ALONZO A. WARNER, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed June 9, 1911. Serial No. 632,227. (Cl. 45—32.)

1. In a device of the character described, the combination with brackets, one of which has a slot terminating in an enlarged aperture, and a roller adapted to be supported by said brackets, of a shaft-pin mounted in an end of said roller, said shaft-pin being formed in two diameters, one of which is slightly less than the width of said slot and adapted to slide therein, the diameter of the other part being greater than the width of said slot but adapted to fit within said enlarged aperture, said bracket and pin being adapted for relative movement longitudinally of the pin, and means for normally holding said enlarged section in alinement with said slot to thereby prevent disengagement of the roll from said bracket.

2. In a device of the character described a pair of brackets, a roller adapted to be supported thereby, one of said brackets having a slot terminating in an enlarged aperture, a shaft pin mounted in an end of said roller, and adapted to slide in said slot and having a section larger than said slot but adapted to fit in said aperture, means for normally holding said shaft pin in position with its enlarged section in said aperture, said pin being movable longitudinally against said holding means to disengage its enlarged section from said aperture.

1,014,681. SUPPORTING INCANDESCENT ELECTRIC LAMPS AND REFLECTORS. OTTO WEBER, Reinickendorf, near Berlin, Germany, assignor to Berliner Siriuslampen Vertriebsgesellschaft M. B. H., Berlin, Germany. Filed Sept. 14, 1911. Serial No. 649,350. (Cl. 240—9.)

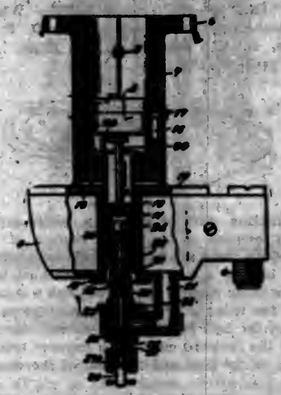


1. An illuminating device for electric lamps, for advertising and decorating purposes, comprising a series of reflector members, provided at each end with a substantially disk like projection to engage over the corresponding disk of the next member, and means for connecting same.

2. An illuminating device for electric lamps, for advertising and decorating purposes, comprising a series of cup-like reflector members, each having a lamp mounted therein and having a disk at each end to engage over the corresponding disk of the next member, a hollow bolt, to hinge the said members together and an insulating, wire carrying roll, supported on said bolt.

3. An illuminating device for electric lamps, for advertising and decorating purposes, comprising a series of cup-like reflector members, each having a lamp mounted therein and having a disk with a hollow bead around its edge at each end to engage over the corresponding disk of the next member, a hollow bolt, to hinge the said members together and an insulating, wire carrying roll, supported on said bolt.

1,014,682. CARBURETER. CARLET GOULD WELD, North Chatham, Mass. Filed Oct. 14, 1910. Serial No. 587,028. (Cl. 48—154.1.)



1. In a carbureter the combination with a piston open to the suction of the engine cylinder, of a member having an air port located in position to be controlled by the piston, a member having a gasolene port located in position to be controlled by the piston, means for regulating the relative timing of these ports, and means independent thereof for adjusting the efficient area of opening of one of the ports relative to the other.

2. In a carbureter the combination with a piston open to the suction of the engine cylinder, of a cylinder having an air port located in position to be opened and closed by the piston in its reciprocations, a member having a gasolene port located in position to be opened and closed by the piston in its reciprocations, means for regulating the timing of the opening and closing of these ports one relative to the other, and means independent of such regulating means for adjusting the efficient area of opening of the gasolene port relative to the air port.

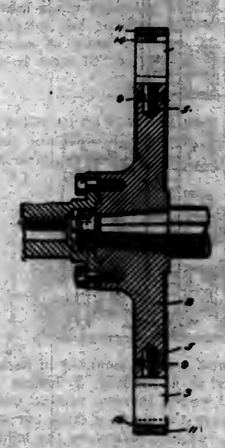
3. In a carbureter the combination with a piston exposed to the suction of the engine cylinder, of a cylinder therefor having an air port located in position to be controlled by the movement of the piston, a member in communication with a source of gasolene supply, and provided with an adjustable annular gasolene port, and a member adjustably carried by the piston and provided with a triangular port located in position to register with the said annular port upon the piston movement.

4. In a carbureter the combination with a piston exposed to the suction of the engine cylinder, of a cylinder therefor having an air port located in position to be controlled by the movement of the piston, a source of gasolene supply, a stand-pipe in connection therewith, a top for the stand-pipe adjustable relative to the top thereof for affording an adjustable annular gasolene port at the top, a sleeve surrounding said stand-pipe and adjustably carried by the piston and provided with a triangular port located in position to register with the said annular port upon the piston movement.

5. In a carbureter the combination with a two-diameter piston having a two-diameter chamber and a two-diameter cylinder for the piston, these being provided at their portions of greater diameter with air ports located in position to be closed when the piston is at the end of its inward stroke and opened by registering upon the outward piston movement, of a stand-pipe extending within the piston chamber of lesser diameter and in connection with a source of gasolene supply, and a closed top sleeve carried by the piston and surrounding the stand-pipe and provided with a port communicating with the piston chamber of lesser diameter and located in position to be closed by the stand-pipe in the inward position of the piston and to form a port with the end of the stand-pipe on the outward movement of the piston.

[Claim 6 not printed in the Gazette.]

1,014,683. TURBINE-BLADE. GEORGE WESTINGHOUSE, Pittsburgh, Pa. Filed June 24, 1910. Serial No. 568,679. (Cl. 121—57.)



1. In combination in a turbine, a plurality of blades mounted in an annular row on the turbine rotor and a ring threaded onto said blades.

2. In combination in a turbine, a plurality of blades mounted in an annular row, and a solid metal ring threaded on its inner face and screwed onto the ends of the blades.

3. In combination in a turbine, a plurality of blades mounted in an annular row, and a solid ring screw-threaded on its inner face and adapted to engage screw threads formed on the outer ends of the blades.

4. In combination in a turbine, a plurality of turbine blades mounted in an annular row, a ring provided with tapered threads and adapted to engage threads provided on the outer ends of the blades, and means for locking said ring in place.

5. In combination in a turbine, a plurality of blades mounted in an annular row, and provided with flanges which coöperate to form a shroud, and a solid ring, screw-threaded on its inner face, and adapted to engage screw threads formed on the peripheral face of said shroud.

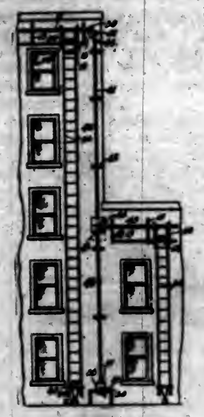
[Claims 6 and 7 not printed in the Gazette.]

1,014,684. JOINT AND CONNECTION FOR CROSSED OR ABUTTING PARTS. HEINRICH WEFGAND, Hattingen-Ruhr, Germany. Filed Apr. 6, 1909. Serial No. 488,262. (Cl. 189—36.)

A connection of the class described, comprising a first hollowed member having a transverse slot that opens into the hollow of said member at the axial center thereof, and a second member rigidly engaging with its longitudinal edge the outer side of the first member and projecting

with said edge in part through the slot into the hollow of said first member, said projecting part being upset within said hollow, to form a clenched connection between the members.

1,014,685. FIRE-ESCAPE. ANDREW DE WITT WILSON, Riverside, Wash. Filed Mar. 24, 1911. Serial No. 616,620. (Cl. 228—7.)



1. In a fire escape, a shaft mounted in horizontal position longitudinally of a building, a flexible ladder connected thereto and wound thereon, vertical guide bars for guiding the ladder on the shaft, a cross bar at the lower end of the ladder, resilient means on the ladder supporting the cross bar, and a weight depending from the cross bar.

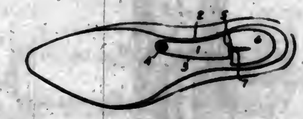
2. In a fire escape, a shaft mounted in horizontal position longitudinally of a building, a flexible ladder connected thereto and wound thereon, vertical guide bars for guiding the ladder on the shaft, a cross bar vertically slidable on the lower end portion of the ladder, resilient means on the ladder supporting the cross bar, a weight, means on the cross bar for supporting the weight, and an anchoring hook extending downward from the weight.

3. In a fire escape, a shaft, brackets for rotatably mounting the shaft in horizontal position, means for rotating the shaft, a ladder connected to the shaft and adapted to be wound thereon, guide bars supported by the brackets on opposite sides of the ladder, a cross bar slidable on the ladder, a yielding support for the cross bar, the said cross bar extending beyond the sides of the ladder and contacting the guide bars, and means for anchoring the ladder.

1,014,686. INCANDESCENT LAMP. JOHN WILSON, Victoria, British Columbia, Canada. Filed June 4, 1910. Serial No. 565,018. (Cl. 176—34.)

An electric lamp, comprising a supporting stock, a reflecting member extending from the stock and having a plurality of flat reflecting faces, a bulb inclosing the reflector, supporting arms projecting from the angles of the intersection of the flat faces near one end of said faces, and a filament tortuously wound on the arms, the disposition of the arms being such that the various convolutions of the filament will lie across the flat reflecting faces to secure a maximum amount of reflection from the said faces.

1,014,687. INSTEP-ARCH SUPPORT. WILLIAM H. WOOD, Rochester, N. Y., assignor to D. P. McGarry, Rochester, N. Y. Filed Mar. 21, 1910. Serial No. 550,812. (Cl. 36—76.)



In combination with a shoe, an instep-arch support permanently secured to the outer surface of the shank of the shoe-sole, the support being of less width than the shank and having a concave edge substantially coinciding with the inner edge of the shank, and a depending lug offset from the inner edge of the support so as to engage the breast of the heel substantially at the middle thereof, the lug and the forward end of the support being secured, respectively, to the heel and the sole of the shoe.

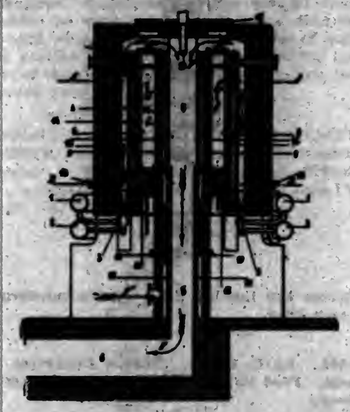
1,014,688. CLOTHES-LINE PROP. WESLEY BEAVER, Collinsville, Ill. Filed July 24, 1911. Serial No. 640,322. (Cl. 68—12.)

A clothes line prop including slidably coupled together members and a pin member insertible through said prop members, said pin member having as an adjunct thereof, a locking member loosely connected at one end to one end of said pin, the opposite end of said locking member being adapted to engage said pin at its free end.

1,014,689. FURNACE FOR MAKING ULTRAMARINE BLUES. FERDINAND BELLET, Paris, France. Filed Sept. 17, 1909. Serial No. 518,277. (Cl. 75—19.)

1. A retort furnace for subjecting solid materials to the action of air or other gases, comprising two concentric cylindrical walls spaced apart forming an annular retort, removable end closures for said retort, the walls of said retort having a plurality of passages lengthwise of the retort and opening into the retort space, conduits

for delivering air or gas to said retort through the passages in the inner wall of the retort, a conduit connected with the passages in the outer wall of the retort for escape of gaseous products, and means for heating said retort.



2. A retort furnace for subjecting solid materials to the action of air or other gases, comprising two concentric cylindrical walls spaced apart and forming a vertical annular retort, removable end closures for said retort, the walls of said retort having a plurality of passages lengthwise of the retort and opening into the retort space, the cross-sectional area of said passages being equal to the area of said openings into the retort, supply conduits delivering air or gas to the lower ends of the passages in the inner retort wall, a gas escape conduit connected to the upper ends of the passages in the outer retort wall, and means for heating said retort.

3. A retort furnace for subjecting solid materials to the action of air or other gases, comprising two concentric cylindrical walls spaced apart and forming an annular retort, removable end closures for said retort, the walls of said retort having a plurality of passages lengthwise of the retort and opening into the retort space, conduits for delivering air or gas to said retort through the passages in the inner wall of the retort, a conduit connected with the passages in the outer wall of the retort for escape of gaseous products, concentric walls inclosing the said annular retort and forming around the same inner and outer dead air spaces, and means for heating the inclosed retort.

4. A retort furnace for subjecting solid materials to the action of air or other gases, comprising two concentric cylindrical walls spaced apart and forming an annular retort, removable end closures for said retort, the walls of said retort having a plurality of passages lengthwise of the retort and opening into the retort space, conduits for delivering air or gas to said retort through the passages in the inner wall of the retort, a conduit connected with the passages in the outer wall of the retort for escape of gaseous products, concentric walls inclosing the said annular retort and forming around the same inner and outer dead air spaces, and furnace flues arranged in heat interchanging relation to said dead air spaces for heating said retort.

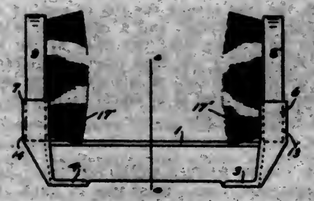
1,014,690. BUTTER-FLAVORING. HEINRICH CARL BUHZ, Bonn, Germany. Filed Aug. 21, 1909. Serial No. 514,040. (Cl. 99—13.)

1. A process for the production of butter flavoring emulsion which consists in agitating a small quantity of cream with lecithin, adding successive portions of cream with vigorous agitation, and final ripening of the product at a temperature of from 12° to 15° centigrade.

2. A process for the production of butter flavoring emulsion which consists in adding gradually to lecithin small quantities of non-sterilized cream with prolonged vigorous agitation until a completely homogeneous emulsion is formed, and allowing to stand for from 12 to 14 hours at a temperature of from 12° to 15° centigrade.

3. A process for the production of lecithin butter flavoring emulsion which consists in mixing 100 parts of lecithin with 50 parts of fresh non-sterilized cream and agitating together for from 10 to 15 minutes, then adding further 50 parts of cream and again agitating from 10 to 15 minutes, then adding a third portion of from 50 to 75 parts of cream again agitating until a completely homogeneous emulsion has been formed, and finally allowing the preparation to stand for from 12 to 14 hours at a temperature of from 12° to 15° centigrade.

1,014,691. SHOE-CLEANER. WARD G. CALLENDER, Mansfield, Ohio, assignor of one-third to John L. Young, Mansfield, Ohio. Filed Apr. 1, 1911. Serial No. 618,428. (Cl. 15—2.)



1. A shoe cleaner comprising a pair of hollow open topped brush-holders, supporting feet, and a scraper-plate, all integral, a brush carried by each brush-holder, said brushes being removably secured in a vertically disposed position, and in a fixed relation to each other, at opposite ends of the said scraper-plate, said brush-holders projecting above said scraper-plate and being provided with oppositely arranged openings through which the lower portion of the bristles of the said brushes project, so that they will lie over the adjacent ends of the said scraper-plate, substantially as described.

2. A shoe cleaner comprising a pair of hollow open topped brush-holders, supporting feet, and a scraper-plate, all integral, a brush carried by each brush-holder, the lower portion of the backs of said brushes being adapted to seat in the said brush-holders, whereby to removably secure the said brushes in a vertically disposed position, and in a fixed relation to each other, at opposite ends of the said scraper-plate, said brush-holders projecting above said scraper-plate and being provided with oppositely arranged openings through which the lower portion of the bristles of the said brushes project inwardly, so that they will lie over the adjacent ends of the said scraper-plate, the said brushes being reversible in the said brush-holders, substantially as, and for the purpose set forth.

1,014,692. WALL-BASE FOR ELECTRICAL SWITCHES. WILLIAM H. COLGAN, Newton, Mass. Filed Apr. 6, 1909. Serial No. 488,210. (Cl. 247—7.)

1. As a new article of manufacture, a base for electrical switches and similar devices, provided with a plurality of holes for electrical conductors, and individual covers for the holes, each cover consisting of a pair of disks and a screw, each disk being provided with a screw hole, and the screw being of such diameter and threaded throughout such portion of its length as to engage both disks at the same time to draw them together against opposite sides of the base.

2. As a new article of manufacture, a base for the reception of an electric switch or similar device, having a plurality of holes for electrical conductors, a device attached to the base around the rim of each of said holes

for holding a conductor, and separate covers for said holes, each cover comprising two disks having holes and a screw for drawing the disks together against opposite sides of the base, one of said disks having a portion bent toward the other disk outside the holding device, whereby said disk is held against lateral displacement.

3. As a new article of manufacture, a base for the reception of an electric switch or similar device, having a plurality of holes for electric conductors, a device attached to the base around the rim of each of said holes for holding a conductor, and a cover for each of said holes, the cover comprising two disks having holes, and a screw for drawing the disks together against opposite sides of the base, the rims of said disks being bent toward each other and adapted to be seated against the base outside the holding device.

1,014,693. NON-REFILLABLE BOTTLE. FRANK W. CROW, Clarence, Iowa. Filed May 12, 1911. Serial No. 626,769. (Cl. 215—27.)

1. The combination with a bottle having a neck, of retaining wires arranged interiorly of the neck and held fast therein, and a stopper insertible within the neck and having hook-like spring arms for locking engagement with the retaining wires, whereby the stopper will be held fast within the neck of the bottle.

2. The combination with a bottle neck having breakable retaining wires arranged interiorly thereof, of a stopper insertible within the neck, and means depending from the stopper and adapted for anchoring engagement with the retaining wires, whereby the stopper will be held fast within the neck and upon the extraction thereof and will sever the said retaining wires.

1,014,694. VEHICLE-WHEEL. ALPHA Y. DAVIS, Kansas City, Mo. Filed Oct. 31, 1910. Serial No. 589,983. (Cl. 152—28.)

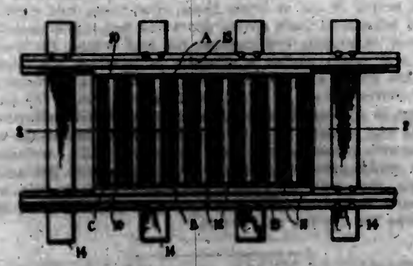
In a vehicle wheel, a hub, a rim having an inwardly extending, annular portion, a support for the hub having two plates disposed at opposite sides of said inwardly extending annular portion and supporting the hub and movable relative to each other in a direction parallel with the axis of the hub, said support having an inflatable, annular tube encircling the hub and disposed between said plates and resisting relative movement of the plates toward each other, and rods disposed parallel with the axis of the hub and having one set of ends supported by said inwardly extending, annular portion of the rim, the other set of ends being secured respectively to and supporting

said plates and limiting their relative movement away from each other.

1,014,695. RAIL-JOINT. FLOYDE DENSMORE, Haines, Alaska. Filed May 17, 1911. Serial No. 627,691. (Cl. 239—8.)

A rail joint comprising a rail having a head extended outwardly a distance beyond the base thereof, a laterally reduced web extended a distance outwardly beyond the base of the rail, a second rail having the base extended outwardly a distance beyond the head and web thereof, the web of the said second rail being reduced in thickness, the said first and second rails being adapted to abut with their corresponding sides in alinement and fish plates adapted to engage the reduced webs of the said rails with the outer sides of the fish plates in alinement with the webs of the rail, bolts being provided for engagement with the said fish plates and the said reduced webs to rigidly connect the said first and second mentioned rails.

1,014,696. CATTLE-GUARD. ROBERT JOSEPH DILLON, Killaloe, Ontario, Canada. Filed Feb. 15, 1911. Serial No. 608,813. (Cl. 39—42.)



1. A cattle guard comprising a frame, inclined slats located therein and smooth rollers located above said slats and extending parallel to the same.

2. A cattle guard, comprising a frame adapted to rest between the rails, slats located therein provided with inclined surfaces and smooth rollers located above and parallel with said slats adapted to precipitate the feet of the cattle upon the inclined surfaces of said slats.

3. A cattle guard, comprising a frame, slats located therein, provided with inclined surfaces and eccentrically mounted smooth rollers extending parallel with the slats and from end to end of the same adapted to precipitate the feet of the cattle upon the inclined surfaces of said slats.

4. A cattle guard comprising a frame, parallel slats extending across the same and being spaced a distance apart and formed with inclined surfaces, a series of rollers extending parallel to the slats located above the uppermost edges of the slats and adapted to precipitate the feet of an animal onto the slats.

1,014,697. FRONT-CLASP COVER AND STAY-POCKET FOR CORSETS. JAMES E. DOOLITTLE, Bridgeport, Conn., assignor to Birdsey, Somers Company, Bridgeport, Conn., a Corporation of New York. Filed June 16, 1911. Serial No. 633,622. (Cl. 2—73.)

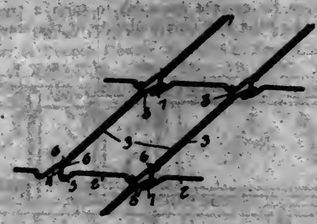
A corset comprising two plies of fabric, a strip of fabric located between said plies, a clasp member, a second strip of fabric folded over said clasp member and having its edges lying adjacent one of the edges of said first named strip, a line of stitches uniting the other edge of said first named strip to one of said plies, a second line of stitches uniting the adjacent edges of both of said strips to each other and to the other of said plies, a third line of stitches uniting said plies beyond said strips to form with said first named strip a stay pocket, and a removable stay in said pocket.

1,014,698. CREASING-IRON. FREDERICK E. FOSTER, Milwaukee, Wis. Filed May 29, 1911. Serial No. 630,155. (Cl. 68—9.)

1. A creasing-iron comprising a frame, a handle projecting therefrom, an arm pivoted to the frame provided with a thumb-extension, a roller mounted upon the end of the arm, another roller carried by said frame in opposition to the first named roller, a spring for holding said rollers under tension with relation to each other, a spool in connection with the arm, an endless belt connecting the spool and roller of the arm, a spool in connection with the frame, and an endless belt connecting the latter spool and roller carried by said frame.

2. A creasing-iron comprising a frame, a handle projecting therefrom, an arm pivoted to the frame provided with a thumb-extension, a hollow open-end roller mounted upon the end of the arm, another hollow open-end roller carried by said frame in opposition to the first named roller, detachable heating slugs adapted to be locked in the rollers, a spring for holding said rollers under tension with relation to each other, a spool in connection with the arm, an endless belt connecting the spool and roller of the arm, a spool in connection with the frame, and an endless belt connecting the latter spool and roller carried by said frame.

1,014,699. WIRE FABRIC. CHARLES H. GAIL, Kenosha, Wis., assignor, by mesne assignments, to The Simmons Manufacturing Company, Kenosha, Wis. Filed May 31, 1910. Serial No. 564,292. (Cl. 245—5.)



1. A wire fabric comprising substantially U-shaped links ranged in longitudinal rows and transverse rows, each link having the base portions of its arms provided with compound curves and having its web provided near the extremities thereof with offsets and each link having its arms provided with hooked extremities, said links being joined in transverse rows by the interlocking of said arms at said compound curves, and the hooks of the links of one transverse row engaging the offsets of the webs of the links of the next transverse row.

2. A wire fabric comprising links ranged in longitudinal rows and in transverse rows, each link comprising a U-shaped member having lateral offsets at the junction of the web and arms and having end offsets at the web, said arms having hooked extremities turned toward each other, said links being joined in transverse rows by the interlocking of said lateral offsets and joined in longitudinal rows by the engagement of said hooks with the end offsets of said webs.

3. A wire fabric comprising a plurality of transverse rows of similar U-shaped links with the arms of said links pivotally interlocked at their base portions, said links having hook-engaging eyes at their webs and having their arms provided with hooked extremities, the hooked extremities of the arms of one transverse row of links engaging eyes at the webs of the links of the next transverse row.

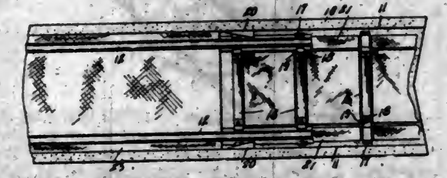
4. A wire fabric comprising substantially U-shaped links ranged in longitudinal and transverse rows, the arms of the links of each longitudinal row being intertwined with the arms of the links of adjacent longitudinal rows, the arms of the links of a given transverse row being in pivotal engagement with the base-portions of the links of the next transverse row.

5. A wire fabric comprising substantially U-shaped links ranged in longitudinal and transverse rows, the arms of adjacent links being of such form and disposition as to pivotally interlock and be substantially parallel with, and relatively close to each other, the arms of the links of one transverse row being in hooked engagement with the links of the next transverse row.

1,014,700. RAILROAD-BED. JOHN WILLIAM GIBSON, Muncie, Ind. Filed Aug. 18, 1911. Serial No. 644,776. (Cl. 104—14.)

1. In a railway track, a roadbed having a transversely convexed surface terminating in shoulders extending longitudinally of the track, rails extending along the said shoulders, asphalt filling interposed between the rails and the roadbed, a metallic plate transversely curved between the said rails and the said asphalt, cushion asphalt between the plates and the first mentioned asphalt, tie rods connecting the rails and asphalt filling between the edges of the two plates and between the edges of the base flanges of the rails on which the tie rods rest, and a filling between the two rails covering the said tie rods.

2. In a railway track, a roadbed having a transversely convexed surface terminating in shoulders extending longitudinally of the track, rails extending along the said shoulders, asphalt filling interposed between the rails and the roadbed, a metallic plate transversely curved between the said rails and the said asphalt, cushion asphalt between the plates and the first mentioned asphalt, tie rods connecting the rails and asphalt filling between the edges of the two plates and between the edges of the base flanges of the rails on which the tie rods rest, a filling between the two rails covering the said tie rods, the said asphalt filling having its surface concaved to form a trough between the two rails and longitudinally of the track.



3. In a railway track, a roadbed having a transversely convexed surface terminating in shoulders extending longitudinally of the track, rails extending along the said shoulders, asphalt filling interposed between the rails and the roadbed, a metallic plate transversely curved between the said rails and the said asphalt, cushion asphalt between the plates and the first mentioned asphalt, tie rods connecting the rails, wedges interposed between the shoulders and the rails for adjusting the rails, asphalt filling between the edges of the two plates and between the edges of the base flanges of the rails on which the tie rods rest, and an asphalt filling between the two rails covering the said tie rods.

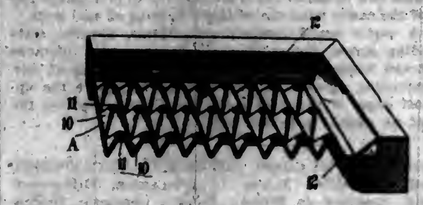
4. In a railway track, a roadbed having a transversely convexed surface terminating in shoulders extending longitudinally of the track, rails extending along the said shoulders, asphalt filling interposed between the rails and the roadbed, a metallic plate transversely curved between the said rails and the said asphalt, cushion asphalt between the plates and the first mentioned asphalt, tie rods connecting the rails, wedges interposed between the shoulders and the rails for adjusting the rails, asphalt filling between the edges of the two plates and between the edges of the base flanges of the rails on which the tie rods rest, an asphalt filling between the two rails covering the said tie rods, the said asphalt filling having its surface concaved to form a trough between the two rails and longitudinally of the track.

5. In a railway track, a roadbed having a transversely convexed surface terminating in shoulders extending longitudinally of the track, rails extending along the said shoulders, asphalt filling interposed between the rails and the roadbed, a metallic plate transversely curved between the said rails and the said asphalt, cushion asphalt between the plates and the first mentioned asphalt, tie rods connecting the rails, wedges interposed between the shoulders and the rails for adjusting the rails, asphalt filling between the edges of the two plates and between the edges of the base flanges of the rails on which the tie rods rest, and an asphalt filling between the two rails covering the said tie rods, the filling of asphalt engaging the outer surfaces of the wedges of the rails flush with the upper edge of the shoulders of the roadbed.

[Claims 6 to 8 not printed in the Gazette.]

1,014,701. VENTILATING GLASS PANE WITH FLY-ESCAPES. ANNIE SARAH GRANT, West St. John, New Brunswick, Canada. Filed Feb. 13, 1911. Serial No. 608,347. (Cl. 98—31.)

1. A ventilating glass pane and fly escape formed with a plurality of immediately adjacent outwardly extending minute pyramidical projections having apertures in their apices for the escape of insects, the bases of said projections being contiguous on the interior, whereby the said interior will only present a series of edges between the projections, which will not form a resting place for the fly.



2. A ventilating glass pane and fly escape formed with a plurality of immediately adjacent outwardly extending minute pyramidical projections arranged in transverse and longitudinal rows with their bases contiguous and having apertures in their apices for the escape of insects, said pane having a plane portion around the edges.

1,014,702. DENTAL-CHAIR ARM. GEORGE WALLACE GRANT, Bucyrus, Ohio. Filed Oct. 10, 1911. Serial No. 653,887. (Cl. 155—3.)

1. A chair arm comprising a metal cap open at one side and curved at right angles to the plane of its open side, the cap being coated with porcelain upon its outer surface, there being lugs projecting inwardly from the top of the cap, the lugs being spaced from the end walls of the cap and being connected with the side walls of the cap; a block fitted into the open side of the cap and resting against the lugs; and screws passing through the block and entering the lugs; one face of the block being flat, and the other face of the block curved, whereby the block may be reversed in the cap, to fit upon supporting structures of different configurations.

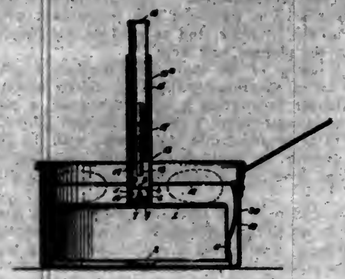
2. A chair arm comprising a cap open at one side and provided in its interior with spaced lugs; and a block fitted in the open side of the cap, one face of the block being curved, and the other face of the block being flat, whereby the block may be reversed in the cap, to fit supporting structures of different configurations; and securing elements passing through the block and engaging the lugs.

3. A chair arm comprising a cap open at one side; and a block fitting in the open side of the cap, one face of the block being flat, and another face of the block being curved, whereby the block may be made to fit upon supports of different configurations; and means for securing the block in the cap.

4. A chair arm comprising a cap open at one side and provided in its interior with spaced lugs; and a block insertible into the cap, one face of the block being plane, the other face of the block being convexed, the lugs constituting a multi-point support, adapted to engage the convexed face, to prevent relative movement between the block and the cap; and means for securing the block within the cap.

1,014,703. TIMING DEVICE. ARTHUR HAMMERSTEIN, New York, N. Y. Filed Mar. 29, 1910. Serial No. 552,243. (Cl. 161—16.)

1. The combination of a container for a liquid, a receptacle in said container having two apertures and arranged to contain a pressure medium adapted to control the entrance of the liquid in said container through one aperture and means for normally closing the other aperture maintained in position by the action of the pressure medium and arranged to be operated against the action of said pressure medium to open said last aperture and to permit the pressure medium to escape and the said liquid to freely enter said receptacle after a predetermined period of time has elapsed.



2. The combination of a container for a liquid, a receptacle in said container having two apertures and arranged to contain a pressure medium adapted to control the entrance of the liquid in the container through one aperture, means for normally closing the other aperture and an adjustable device carried by said receptacle for operating said means to open said last aperture and permit the pressure medium to escape and the said liquid to freely enter said receptacle after a predetermined period of time has elapsed.

3. The combination of a container for a liquid, a receptacle in said container having two apertures and arranged to contain a pressure medium adapted to control the entrance of the liquid in the container through one aperture, a valve for closing the other aperture and means carried by said receptacle for opening said valve to permit the pressure medium to escape and the said liquid to freely enter said receptacle.

4. The combination of a receptacle provided with openings, a cylinder carried by said receptacle, a valve controlling one of said openings, and a plunger in said cylinder arranged to open said valve after a predetermined period of time has elapsed.

5. The combination of a receptacle provided with openings, a valve controlling one of said openings, and a plunger and adjustable means on said plunger arranged to open said valve after a predetermined period of time has elapsed.

[Claims 6 to 11 not printed in the Gazette.]

1,014,704. BRANCH BOX. MORTON HAVENS, Jr., Albany, N. Y. Filed Mar. 24, 1906. Serial No. 307,785. (Cl. 247—12.)

A branch box for wires comprising a hollow elongated body formed with a passage for the inlet of the wires, and with an open side, and having its inner face provided with a lug, the outer face of the lug being disposed between, and spaced apart from, the planes of the open side and the wall opposite said open side, an elongated closure for the open side of the body, said closure being formed of insulating material and having a perforation for the outlet of a wire or wires, and being provided with a reduced portion inserted into the opening of said open side, the inner face of the reduced portion being opposed to, and engaged with, the outer face of the lug, and the closure being also provided with a ledge arranged at the base of the reduced portion and opposed to the edge surrounding said opening, and means connecting the closure and the lug for detachably securing the closure to the body, substantially as and for the purpose specified.

1,014,705. VAPOR ELECTRIC LAMP AND CONNECTION. PETER COOPER HEWITT, New York, N. Y., assignor to Cooper Hewitt Electric Company, a Corporation of New York. Filed Mar. 19, 1908. Serial No. 421,504. (Cl. 176—42.)

1. A vapor electric device comprising a vertical tubular portion, a condensing chamber at the top thereof inclosing a solid anode, a vaporizable cathode at the bottom thereof and a pocket intermediate of said tubular portion adapted to contain vaporizable material and thus act as an electrode and so disposed as to receive vaporizable material condensed in the said condensing chamber and to discharge any excess of vaporizable material to the said cathode.

2. A gas or vapor electric apparatus comprising a tubular portion, a plurality of vaporizable electrodes, a solid anode located at the top of said tubular portion, a condensing chamber around said anode and means for returning condensed vaporizable material from electrode to electrode by steps through the length of said tubular portion.

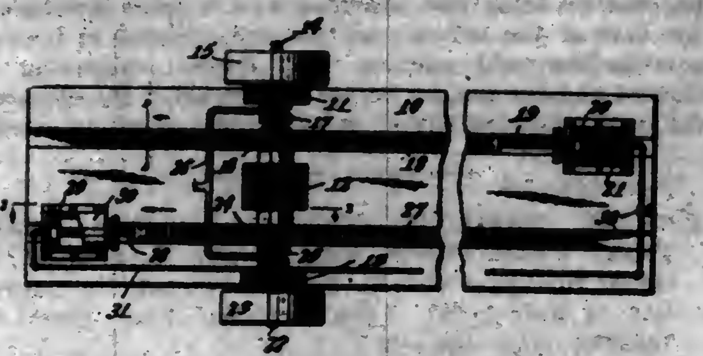
3. A gas or vapor electric apparatus, comprising a vertically disposed tubular portion, a solid anode therein located near the top thereof, a vaporizable cathode therein located near the bottom, together with an intermediate electrode located in a lateral extension of the said tubular portion.

4. A gas or vapor electric apparatus, comprising a vertically disposed tubular portion, a solid anode therein located near the top thereof, a vaporizable cathode therein located near the bottom, together with an intermediate electrode located in a lateral extension of the said tubular portion, and means for connecting said intermediate electrode to the said anode through a resistance.

5. A gas or vapor electric apparatus, comprising a vertically disposed tubular portion, a solid anode therein located near the top thereof, a vaporizable cathode therein located near the bottom, together with an intermediate electrode located in a lateral extension of the said tubular portion, and means for connecting the intermediate electrode with one of the first named electrodes.

[Claims 6 and 7 not printed in the Gazette.]

1,014,706. MECHANISM FOR RECIPROCATING PLANER-BEDS OR SIMILAR PURPOSES. Lewis T. Houghton, Worcester, Mass. Filed July 6, 1905. Serial No. 268,484. (Cl. 74—27.)



1. The combination of the part to be reciprocated, a driving pinion, a rack, and a yielding driving connection between the rack and reciprocated part, comprising a piston and a fluid cylinder having a restricted outlet therefrom through which liquid is forced alternately in both directions by the travel of the piston.

2. The combination of the part to be reciprocated, a driving mechanism, and a yielding driving connection between the reciprocated part and its driving mechanism comprising two opposed fluid cylinders, a restricted pipe or passage connecting the cylinders, and a piston mounted in each of said cylinders.

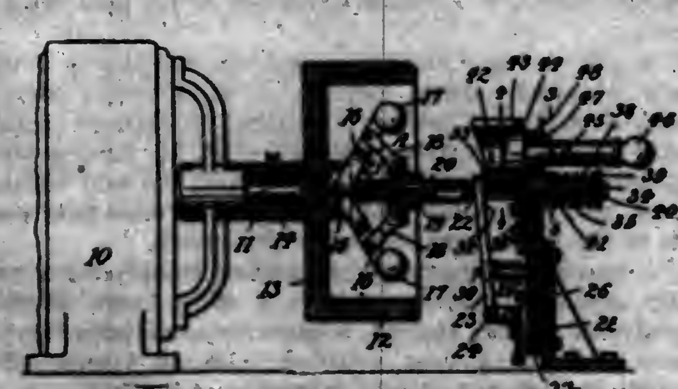
3. The combination of the part to be reciprocated, a driving mechanism, and a yielding driving connection between the reciprocated part and its driving mechanism comprising two opposed fluid cylinders, a pipe or passage connecting said cylinders, means for adjustably throttling the flow of fluid through said pipe, and a piston moving in each of said cylinders.

4. The combination of the table to be reciprocated, two racks, a driving mechanism for the racks comprising oppositely rotating shafts, a driving pinion on each of said shafts engaging one of said racks, a clutch for each of said driving pinions, a connection for simultaneously moving the clutches to disengage one clutch when the other clutch is thrown into operation, and yielding connections between the racks and table comprising two opposed cylinders secured near opposite ends of the table, a pipe connecting said cylinders, and a piston moved by each rack, said pistons being mounted in the cylinders.

5. The combination of a reciprocating bed, a driving pinion, a rack, and an initially yielding but finally solid driving connection between the rack and bed, said connection comprising a piston and a fluid cylinder having an outlet through which liquid is forced by the piston until a solid bearing is reached between the piston and cylinder, whereupon a solid mechanical connection is formed between the rack and bed during further travel of the bed.

[Claims 6 to 11 not printed in the Gazette.]

1,014,707. SPEED-REGULATOR FOR ELECTROMOTORS. Benjamin F. Hutches, Jr., Allendale, N. J. Filed Mar. 2, 1910. Serial No. 546,808. (Cl. 171—222.)



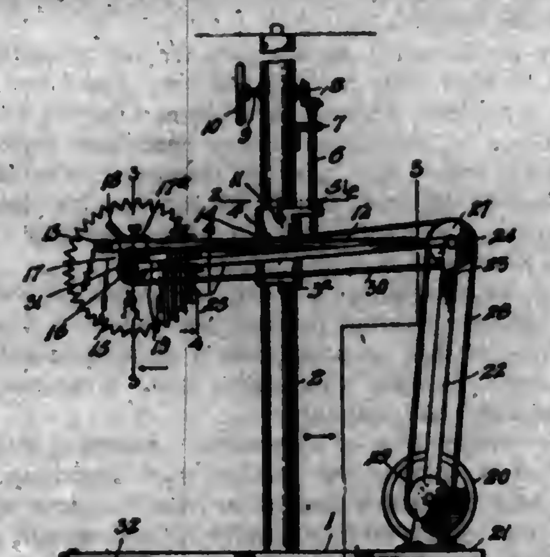
1. In a device of the character described, a governor operable by an electromotor-shaft, an axially movable plunger constituting a contact-member, a cam operably connected to the plunger, a spring-influenced contact-lever adapted to be advanced into engagement with the plunger by the governor, and an electromotor-circuit controlled by the plunger and lever.

2. In a device of the character described, a governor operable by an electromotor-shaft, an axially movable recessed plunger constituting a contact-member, a cam engaging the plunger-recess, a spring-influenced contact-lever adapted to be advanced into engagement with the plunger by the governor, and an electromotor-circuit controlled by the plunger and lever.

3. In a device of the character described, a governor operable by an electromotor-shaft, an axially movable recessed plunger consituting a contact-member, a cam engaging the plunger-recess, a spring-influenced contact-lever adapted to be advanced into engagement with the plunger by the governor, an electromotor-circuit controlled by the plunger and lever, and a speed-indicator coacting with the cam.

4. In a device of the character described, a governor operable by an electromotor-shaft, an axially movable recessed plunger constituting a contact-member, a cam engaging the plunger-recess, a spring-influenced contact-lever adapted to be advanced into engagement with the plunger by the governor, an electromotor-circuit controlled by the plunger and lever, a resistance permanently interpolated between the plunger and lever, and a speed-indicator coacting with the cam.

1,014,708. SAWING-MACHINE. Mackintosh Hutchinson, Toronto, Ontario, Canada. Filed Apr. 24, 1911. Serial No. 623,066. (Cl. 143—47.)



1. In a machine of the type set forth, in combination, an upright post, a frame associated with the post and adjustable axially thereof, beams carried by the frame and projecting forwardly from the post, a bracket mounted on the beams and adjustably movable in the direction thereof, a shaft supported by the bracket, a saw carried by the shaft, and means operable in any position of the bracket to drive the shaft.

2. In a machine of the type set forth, in combination, an upright post, a frame surrounding the post and adjustable axially thereof, beams carried by the frame and projecting forwardly from the post, a bracket fixedly mounted on the beams the latter being supported for axial sliding movement, the bracket having depending apertured lugs, a shaft journaled in the lugs and carrying a saw, and means operable in any position of the bracket and the beams to drive the saw.

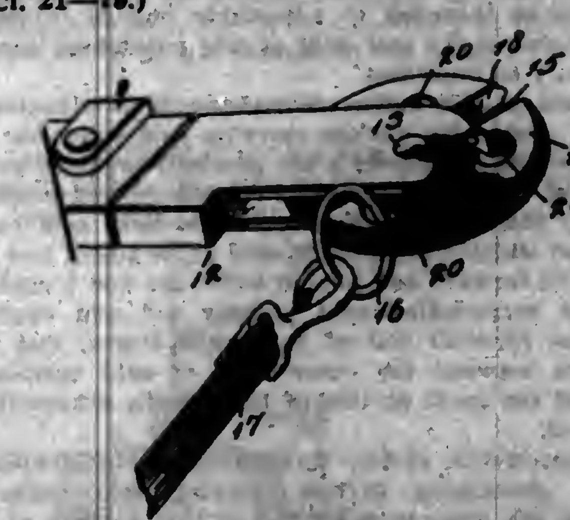
3. In a machine of the type set forth, in combination, an upright post a frame conformably surrounding the post and adjustable thereof in the direction of the axis of the post, the frame having apertured lugs at opposite sides thereof, parallel horizontal beams fitted in the lugs for sliding movement and projecting forwardly from the post, a bracket fixed on the beams and provided with apertured depending lugs, a shaft journaled in the lugs and carrying a saw, and means operable in any position of the bracket and the beams to drive the saw.

4. In a machine of the type set forth in combination, an upright post, a frame surrounding the post and adjustable axially thereof, beams carried by the frame and projecting forwardly from the post, a bracket mounted on the beams and adjustably movable in the direction thereof, an electric motor having a stationary support, an arm pivoted coaxially with the motor shaft and terminating at its upper end in a fork, a shaft journaled in the fork, a link connecting the arm and the bracket, gearing between the motor shaft and the last named shaft, a saw carrying shaft supported by the bracket and gearing between the second named shaft and the saw carrying shaft.

5. In a machine of the type set forth, in combination, an upright post having a coaxial pivotal mounting, a frame associated with the post and adjustable axially thereof, beams carried by the frame and projecting forwardly from the post, a bracket mounted on the beams, the bracket being movable in the direction of the beams, a shaft supported by the bracket a saw carried by the shaft, and means operable in any position of the carriage to drive the shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,014,709. TRACE-CONNECTOR. Lesley B. Irvin, Henagar, Ala. Filed Apr. 11, 1911. Serial No. 620,235. (Cl. 21—79.)



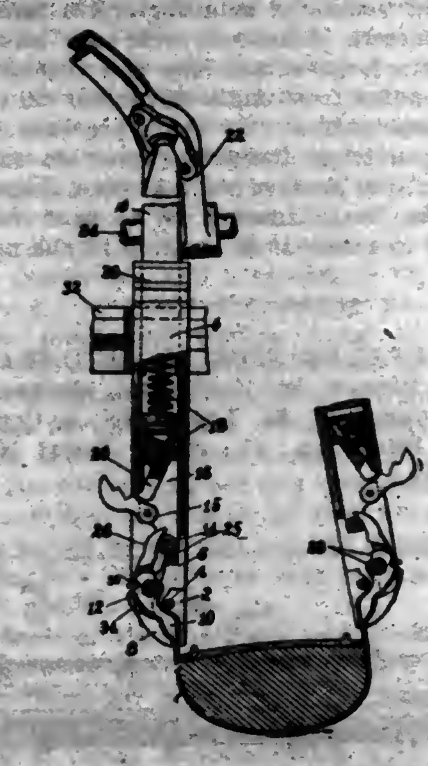
In a whiffle tree, a body having separated parallel sides, a wheel mounted between the sides near the end thereof, the end of the said body having notches, the said wheel having radial slots, lateral passages merging with the slots, and seats merging with the passages, the said passages being in such position from the center of the wheel as to be guarded by the whiffle tree except at the notched portion of said whiffle tree.

1,014,710. GRIPPER. Euclid I. La Chapelle, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 2, 1907. Serial No. 395,569. (Cl. 12—11.1.)

1. In a gripper mechanism, means for gripping and pulling an upper, and means for gripping the portion of lining under the gripped portion of upper, said two means comprising a plurality of jaws constructed and arranged to hold the two thicknesses of stock out of contact and actuating mechanism for closing and moving said jaws to pull both thicknesses of the gripped stock.

2. In a pulling grippers mechanism an outer jaw and an intermediate jaw formed with coöperating gripping faces extending in substantially the direction that the stock is to be pulled, and a second outer jaw having a gripping face coöperating with a second gripping face on the intermediate jaw and extending at an angle to the direction in which the stock is to be pulled.

3. A gripper mechanism for pulling over and similar machines, having in combination, a member arranged to be interposed between the lining and the upper of a shoe, means for gripping the upper against one side of said member, means for gripping the lining against the other side of said member, and mechanism for moving said two means and member together to effect pulling of both the upper and the lining, said means having relative structural variations for maintaining differential tensions upon the lining and upon the upper.



4. In a gripper mechanism, two outer jaws and an intermediate jaw arranged to hold upon opposite sides of the intermediate jaw a plurality of thicknesses of stock and having gripping surfaces formed to hold one thickness of the stock with greater security than another thickness is held, and actuating mechanism to effect movement of all three jaws together after they are closed to pull the upper and the lining.

5. In a gripper mechanism, the combination with devices for holding a plurality of thicknesses of stock including a jaw arranged to be interposed between two of the superposed thicknesses of the stock, and means shaped for holding the stock on one side of said jaw with a different degree of security from the stock on the other side of said jaw, of operating mechanism for closing the upper holding devices and for uplifting all of said devices, whereby the thicknesses of upper stock are stretched in proportion to the relative degrees of security with which they are held.

[Claims 6 to 21 not printed in the Gazette.]

1,014,711. METAL REINFORCING AND SPACING BAR. Alfred E. Lindau, St. Louis, Mo., assignor to Corrugated Bar Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 25, 1911. Serial No. 604,690. (Cl. 72—111.)

1. A metal reinforcing unit for concrete structures comprising a tension bar in combination with looped reinforcement, said tension bar having diametrically opposite longitudinal ribs and transverse ribs at intervals extending from one longitudinal rib to the other, one of said longitudinal ribs being provided with a thin flange having spaced notches in the edge thereof in which are seated the loops of said reinforcement, said notches being of such depth that the adjacent corners of said flange overlap the sides of the loops seated therein, said corners being turned in to embrace the loops.

2. A metal reinforcement for concrete structures comprising parallel tension bars having diametrically opposite longitudinal ribs and transverse ribs at intervals extending from one longitudinal rib to the other, one of said longitudinal ribs being provided with a thin flange having spaced notches therein, and transverse reinforcing elements arranged in said notches and supported thereby.

3. As a new article of manufacture, a tension bar for reinforced concrete structures, said bar having diametrically opposite longitudinal ribs and transverse ribs at intervals extending from one longitudinal rib to the other, one of said longitudinal ribs being provided with a thin flange having notches therein adapted to receive metal reinforcement, said notches being of such shape as to form corners on the flange adapted to be bent over the said reinforcement to retain it in position in the notches.

1,014,712. METAL REINFORCING AND SPACING BAR. ALFRED E. LINDAU, St. Louis, Mo., assignor to Corrugated Bar Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 25, 1911. Serial No. 604,691. (Cl. 72—111.)

1. As a new article of manufacture, a bar for reinforcing concrete comprising a thick body portion having thinner longitudinal flanges on diametrically opposite sides and a third longitudinal flange midway between said first mentioned flanges, said third flange having bar-seating notches in its edge, said first mentioned flanges being sheared to form spacing members which are bent outwardly in a direction opposite to that of said third flange.

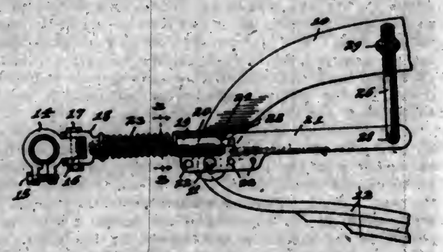
2. As a new article of manufacture, a bar for reinforcing concrete comprising a body portion having longitudinal ribs on diametrically opposite sides and thinner longitudinal flanges on said ribs, said flanges being sheared to form spacing members, a third flange extending longitudinally midway between said first mentioned flanges and having notches in its edge constituting bar retaining seats.

3. In a metal reinforce for concrete structures, the combination of a reinforcing bar comprising a body portion having longitudinal ribs on diametrically opposite sides and thinner flanges on said ribs, said flanges being sheared and the sheared portions bent outwardly to form spacing members and having a third longitudinal flange midway between said first mentioned flanges and on the side opposite said spacing members and having notches in its edge constituting bar retaining seats, and another reinforcing bar provided with longitudinal and transverse ribs, said last mentioned bar being arranged in a notch of said first mentioned bar, and the corners of said notch being mashed down to overlap the longitudinal ribs and thereby hold the bar in place.

1,014,713. AUTOMOBILE-BUFFER. ALLAN L. MCGREGOR, Duluth, Minn. Filed Aug. 27, 1909. Serial No. 514,902. (Cl. 105—33.)

1. An automobile buffer, comprising in combination a buffer-bar, cushioning devices carrying said buffer-bar pivoted on the hinge-bolts of the elliptic springs of the vehicle, and collars embracing said buffer-bar and connected by vertical hinge joints to the forward ends of said cushioning devices, substantially as and for the purpose described.

2. An automobile buffer, comprising in combination a buffer-bar, cushioning devices carrying said buffer-bar pivoted on the hinge-bolts of the elliptic springs of the vehicle and extending rearwardly thereof, and links adapted to interchangeably connect the rear ends of said cushioning devices with either the side bars of the vehicle or the underlying elliptic springs pivoted to said side bars, substantially as described.



3. An automobile buffer, comprising in combination a buffer-bar, cushioning devices carrying said buffer-bar pivoted on the hinge-bolts of the elliptic springs of the vehicle and extending rearwardly thereof, and links adapted to connect the rear ends of said cushioning devices with the front portion of the vehicle, said links comprising vertical rods having horizontally bent lower end portions screw-threaded to adjustably engage internally threaded holes in the rear ends of said cushioning devices, substantially as described.

4. An automobile buffer, comprising in combination a buffer-bar, cushioning devices carrying said buffer-bar and each comprising essentially a bar pivotally mounted on the hinge-bolt of the elliptic spring of the vehicle, and extending rearwardly thereof, a guide sleeve rigid with said bar, a plunger rod slidably mounted in said guide sleeve and connected at its forward end to said buffer-bar and a cushioning spring surrounding said plunger rod and abutting against the forward end of said guide-sleeve, and link connections between the inner ends of said cushioning devices and the front portion of the vehicle, substantially as described.

5. An automobile buffer, comprising in combination a buffer-bar, cushioning devices carrying said buffer-bar pivoted on the hinge-bolts of the elliptic springs of the vehicle and extending rearwardly thereof, and upwardly extending links flexibly connected at their lower ends to the rear extensions of said cushioning devices and at their upper ends connected to the forwardly projecting side bars of the vehicle, substantially as described.

[Claim 6 not printed in the Gazette.]

1,014,714. WRENCH. CHARLES H. MEKEEL, Jr., St. Louis county, Mo. Filed May 23, 1911. Serial No. 628,908. (Cl. 81—172.)

1. A wrench comprising a shank provided with a fixed jaw and a movable jaw, a shaft provided with oppositely disposed screw-threads, one of which coöperates with a thread on said movable jaw, an operating member slidingly mounted on said shank and comprising a nut that coöperates with the other screw-thread on said shaft, and means for locking said nut and operating member together.

2. A wrench consisting of a shank provided with a rigid jaw and a movable jaw, a shaft provided with oppositely disposed screw-threads, one of which coöperates with a thread on said movable jaw, an operating member reciprocatingly mounted on said shank and provided with a device that coöperates with the other screw-thread on said shaft to impart rotary movement to said shaft when said operating member is moved longitudinally of the shank, and means whereby said shaft may remain at rest when said operating member is actuated.

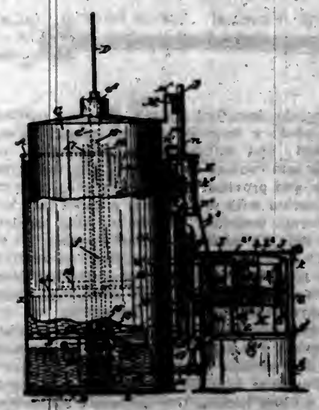
3. A wrench comprising a shank provided with a rigid jaw and a movable jaw, a shaft provided with oppositely disposed screw-threads, one of which coöperates with a thread on said movable jaw, an operating member slidingly mounted on said shank and coöperating with the other thread on said shaft, and a manually-operated device for preventing said nut from turning relatively to said operating member.

4. A wrench comprising a shank provided with a rigid jaw and a movable jaw, a shaft provided with oppositely disposed screw-threads, one of which coöperates with a thread on said movable jaw, an operating member slidingly mounted on said shank and coöperating with the other thread on said shaft, and a locking device carried by said operating member and adapted to engage said nut so as to prevent it from rotating relatively to said member.

5. A wrench comprising a shank provided with a rigid jaw and a movable jaw, a shaft having a screw-thread which coöperates with a thread on said movable jaw, an oppositely disposed screw-thread on said shaft of greater pitch than the thread first referred to, and an operating member slidingly mounted on said shank and provided with means under control of the operator for causing said shaft either to rotate or remain at rest when said operating member is moved longitudinally of the shank.

[Claims 6 to 11 not printed in the Gazette.]

1,014,715. AUTOMATIC WATER-FEED ACETYLENE-GENERATOR. IRA MUMMA, Dayton, Ohio. Filed Sept. 30, 1908. Serial No. 455,521. (Cl. 48—8.)



1. In a device of the character described, a generator comprising a receptacle forming a generating chamber, a closure for said receptacle, a plurality of containers mounted within said chamber and each adapted to contain a quantity of carbid, and means for starting the generation of gas by introducing water into one of said containers for the first time after said closure is in place, said container being in direct communication with each of the other containers.

2. In a device of the character described, a generator comprising a receptacle forming a generating chamber, a closure therefor, a carbid container mounted in said chamber, means for starting the generation of gas by introducing water into said container for the first time after said closure is in place, a plurality of other containers arranged about the exterior of the first-mentioned container, said first-mentioned container having a series of openings in the wall thereof arranged at different distances from the bottom thereof and connecting said first-mentioned container with each of the other containers.

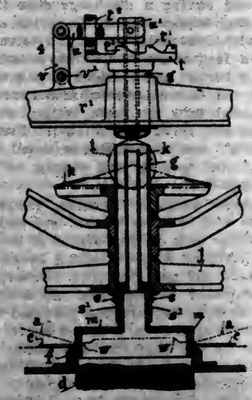
3. In a device of the character described, the combination, with a gasometer, and a receptacle forming a generating chamber, of a plurality of containers mounted within said chamber and each adapted to contain a quantity of carbid, means for feeding water to the carbid in one of said containers to start the generation of gas, said container being in direct communication with each of the other containers, and means actuated by the rise and fall of said gasometer to control the flow of water to said container after the generation of gas has begun.

4. In a device of the character described, the combination, with a gasometer, and a receptacle forming a generating chamber, of a carbid container mounted within said chamber, means for feeding water to said carbid container to start the generation of gas, a plurality of other carbid containers arranged about the first-mentioned container, said first-mentioned container having a series of openings in the wall thereof arranged at different distances from the bottom thereof and connecting said first-mentioned container with each of the other containers, and means actuated by the rise and fall of said gasometer to control the flow of water to said container after the generation of gas has begun.

5. In a device of the character described, a generator comprising a receptacle, a closure therefor, a plurality of containers mounted within said receptacle and each adapted to receive a quantity of carbid, one of said containers being in direct communication with each of the other containers, a water supply pipe extending into said receptacle and having a swiveled arm extending above and adapted to discharge into that container which is in communication with each of the other containers, and means for controlling the flow of water through said pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,014,716. MACHINE FOR WEAVING TUBULAR GOODS. WILLIAM MURPHY, Manchester, England, assignor to Frank Reddaway, Pendleton, England. Filed June 6, 1911. Serial No. 631,576. (Cl. 139—7.)

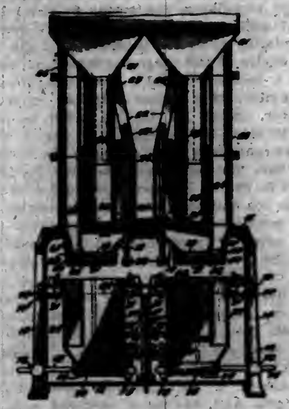


1. In combination in machines of the indicated kind the ring *f*, a presser device *m* having means to permit the changing of the shed formed therein and resting upon the fabric, a load *n* to force the presser device upon the fabric and means for rotating the presser device, substantially as described.

2. In combination in machines of the indicated kind the ring *f*, a presser device having means to permit the

changing of the shed formed therein, means to reciprocate such presser device to beat up the weft inserted into the tubular fabric and effect a close weave, and means for rotating such presser device, substantially as described.

1,014,717. AUTOMATIC WEIGHING-MACHINE. JOSIAH NIELD, North Milwaukee, Wis., assignor to Avery Scale Company, North Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 6, 1911. Serial No. 619,214. (Cl. 73—183.)



1. An automatic weighing machine, comprising a scale beam provided with weights at one end and a scale hopper at the other end having a discharged door in its lower portion, a holding hopper located above the scale hopper and provided with a discharge opening, a valve controlling said opening, a feed chute located above the holding hopper and provided with a valve closing its lower open end, a driven shaft, and mechanisms actuated by the shaft for controlling the opening and closing of the valves and the discharge door.

2. An automatic weighing machine, comprising a scale beam provided with weights at one end and a scale hopper at the other end having a discharge door in its lower portion, a holding hopper located above the scale hopper and provided with a discharge opening, a valve controlling said opening, a feed chute located above and extending into the holding hopper and provided with a valve closing its lower open end, a supplemental feed chute located to discharge material into the scale hopper and provided with a supplemental valve controlling its discharge opening, a driven shaft, and mechanisms actuated by the shaft for controlling the opening and closing of the valves and the discharge door.

3. An automatic weighing machine, comprising scale beams provided with weights at one end and scale hoppers at their other ends having discharge doors in their lower portions, holding hoppers located above the respective scale hoppers and provided with discharge openings, valves controlling said openings, feed chutes located above the respective holding hoppers and provided with valves closing their lower open ends, a driven shaft, and mechanisms actuated by the shaft for alternately controlling the opening and closing of the valves and the discharge doors of the respective hoppers and chutes.

4. An automatic weighing machine, comprising scale beams provided with weights at one end and scale hoppers at their other ends having discharge doors in their lower portions, holding hoppers located above the respective scale hoppers and provided with discharge openings, valves controlling said openings, feed chutes located above the respective holding hoppers and provided with valves closing their lower open ends, supplemental feed chutes located to discharge material into the scale hoppers and provided with supplemental valves controlling their discharge openings, a driven shaft, and mechanisms actuated by the shaft for alternately controlling the opening and closing of the valves and the discharge doors of the respective hoppers and chutes.

5. An automatic weighing machine, comprising a main frame having a scale beam fulcrumed thereon which is provided with weights at one end and with a scale hopper at its other end, a discharge door forming the lower part of the hopper, a holding hopper located above the scale hopper and provided with a discharge opening and with a supplemental material holding compartment having a discharge opening, a valve closing said hopper discharge opening, a valve closing the supplemental compartment discharge opening and positioned in the path of movement of the hopper valve toward its open position, means for moving the hopper valve and the supplemental valve to open positions, means for holding the supplemental valve in open position after the hopper valve has returned to its closed position, a feed chute located above the holding hopper and having a discharge opening in its lower end, a valve normally closing said discharge opening, a shaft journaled on the frame, mechanisms actuated by the shaft for moving the valves to open positions and for controlling the opening of the door, means for releasing the supplemental valve from its open position when the scale hopper has received its predetermined amount of material, and means for closing the hopper door after the material has been discharged from the scale hopper.

[Claims 6 to 12 not printed in the Gazette.]

1,014,718. ELECTRICAL COUPLING. ISAAC HARDY PARSONS, Kibworth Harcourt, near Leicester, England. Filed Mar. 8, 1910. Serial No. 547,956. (Cl. 173—332.)

1. The herein described electric coupling consisting of a suitable stud; a metallic, snap-on contact member to fit said stud; and suitable elastic insulating material surrounding said contact member to assist the springiness of the same, and provided with a suitable opening through which connection with said contact member may be made.

2. The herein described electric coupling consisting of a suitable stud; a metallic contact member to fit said stud; and suitable elastic insulating material within which said member is embedded, said material being provided with a blind opening through which connection with the said contact member may be made.

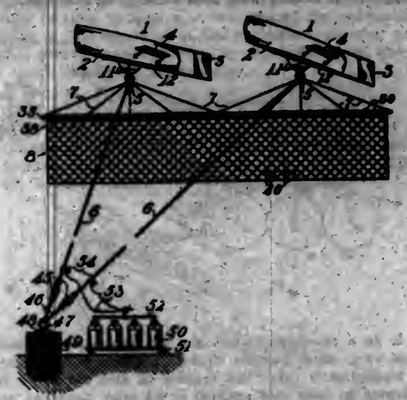
3. The herein described electric coupling consisting of a suitable stud; a metallic, snap-on contact member to fit said stud; and suitable elastic insulating material within which said member is embedded, said material being provided with a blind opening through which connection with the said contact member may be made.

4. The herein described electric coupling consisting of a suitable stud; a metallic, snap-on contact member to fit said stud; and a rubber pad or cushion within which the said member is embedded, said pad being provided with a blind opening through which connection may be made with said contact member.

5. The herein described electric coupling consisting of a suitable stud, and insulating material surrounding the same; a metallic contact member to fit said stud; suitable insulating material surrounding said contact member and provided with a suitable opening through which connection may be made with said contact member; and means on one of said insulations to resist the other, when the said stud makes contact with the contact member, to produce a back pressure under the head of the said stud.

[Claims 6 to 13 not printed in the Gazette.]

1,014,719. APPARATUS FOR COLLECTING ELECTRICAL ENERGY. WALTER I. PENNOCK, Philadelphia, Pa. Filed Jan. 4, 1911. Serial No. 600,777. (Cl. 171—28.)



A collector for charges of electricity, comprising a plurality of supporting means, a metallic gauze sustained thereby to lie in a plane and substantially equidistant from each of said supporting means, anchoring means emanating from a common point to each of said supporting means, means operative to maintain said supporting means in their normal positions, and means between each of said supporting means and said gauze to permit each of said supporting means to readily and independently aline itself to accord with any alteration in the direction of opposing air currents.

1,014,720. WIRING-BLOCK. EUGENE S. PEREIRA, Brooklyn, N. Y. Filed May 1, 1911. Serial No. 624,481. (Cl. 173—312.)

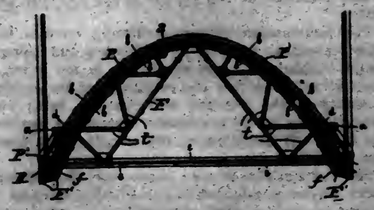
1. A wiring block comprising a body portion, a pair of connecting bases at opposite ends thereof, means for electrically connecting one side of an electric circuit to one of said contacting bases at one end of said block and means for connecting the other side of said electric circuit to one of said contacting bases at the other end of said block, means for connecting the unconnected bases at each end of said block to the sides of the electric circuit at the opposite ends of said block, and means for connecting branch circuits to said bases at opposite ends of said block.

2. A wiring block comprising a body portion, a pair of connecting bases at opposite ends thereof, means for electrically connecting one side of an electric circuit to one of said contacting bases at one end of said block and means for connecting the other side of said electric circuit to one of said contacting bases at the other end of said block, means for connecting the unconnected bases at each end of said block to the sides of the electric circuit at the opposite ends of said block, and means for connecting branch circuits to said bases at opposite ends of said block, said body portion cut away to receive said bases.

3. A wiring block comprising a body portion, a pair of connecting bases at opposite ends thereof, means for electrically connecting one side of an electric circuit to one of said contacting bases at one end of said block and means for connecting the other side of said electric circuit to one of said contacting bases at the other end of said block, means for connecting the unconnected bases at each end of said block to the sides of the electric circuit at the opposite ends of said block, and means for connecting branch circuits to said bases at opposite ends of said block, said means for connecting the unconnected bases at each end of said block to the sides of the electric circuit at the opposite ends of said block comprising metallic bars and longitudinally cut away portions at opposite sides of said block to receive said bars.

4. A wiring block comprising a body portion, a pair of connecting bases at one end thereof, means for connecting one side of an electric circuit to one of said bases, said block cut away at opposite sides to receive said bases and a longitudinally cut away portion at one side of said block and a bar adapted to enter the same for connecting the other side of said circuit to the other of said bases.

1,014,721. PNEUMATIC CAISSON OF FERROCONCRETE. STANISLAW RECHNIEWSKI, St. Petersburg, Russia. Filed May 7, 1910. Serial No. 560,006. (Cl. 61—8.)



1. An arched pneumatic ferro-concrete caisson having its lateral walls rigidly interconnected by a series of framed structures disposed in vertical planes, each frame structure comprising arched members, thrust resisting members for said arched members, and a system of ties and struts connecting said arched members and said thrust resisting members.

2. An arched pneumatic ferro-concrete caisson having its lateral walls rigidly interconnected by a series of framed structures disposed in vertical planes, each frame structure comprising an arched member, a thrust resisting member for said arched member, and a system of ties and struts connecting said arched member and said thrust resisting member.

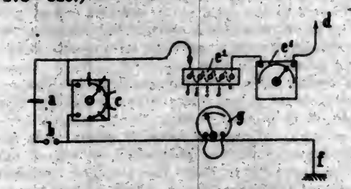
3. An arched pneumatic ferro-concrete caisson comprising in combination, a base structure of ferro-concrete having reinforced cutting edges, an arched ferro-concrete shell springing from said base structure, and a series of framed structures disposed in vertical planes, rigidly interconnected with said base structure and said arched shell, each of said frame structures comprising arched members, thrust resisting members for said arched members, and a system of ties and struts connecting said arched members and said thrust resisting members.

4. An arched pneumatic ferro-concrete caisson comprising in combination, a base structure of ferro-concrete having reinforced cutting edges, and arched ferro-concrete shell springing from said base structure, and a series of framed structures disposed in vertical planes rigidly interconnecting said base structure and said arched shell, said frame structure each comprising an arched member, a thrust resisting member for said arched member, and a system of ties and struts connecting said arched member and said thrust resisting member.

5. An arched pneumatic ferro-concrete caisson comprising in combination, an arched ferro-concrete shell, a marginal base structure forming an abutment for said arched shell, and a series of framed structures disposed in vertical planes and interconnecting said arched ferro-concrete shell and said marginal base, said framed structure comprising arched members, thrust resisting members for said arched members, and a system of ties and struts connecting said arched member and said thrust resisting members.

[Claims 6 to 8 not printed in the Gazette.]

1,014,722. MEANS FOR VARYING THE PERIOD OF OSCILLATION OF TWO OSCILLATORY CIRCUITS. RAGNAR HIKAN RENDAHL, Stockholm, Sweden, assignor to Gesellschaft Für Drahtlose Telegraphie, M. B. H., Berlin, Germany. Filed Sept. 8, 1909. Serial No. 516,702. (Cl. 178—319.)



1. The combination of two oscillatory circuits having constant capacity, variable self-induction and being galvanically coupled with and tuned one to the other, connections arranged so that the variations of the self-induction results in the coupling self-induction being for all wave-lengths a previously determined percentage of the total self-induction of the circuit which has the greater capacity.

2. The combination of two oscillatory circuits having constant capacity, variable self-induction and being galvanically coupled with and tuned one to the other, connections arranged so that the variations of the self-induction results in the coupling self-induction being for all wave-lengths an equal previously determined percentage of the total self-induction of the circuit which has the greater capacity.

3. The combination of two oscillatory circuits having constant capacity, and being galvanically coupled with and tuned one to the other, a self-induction being common to the coupled circuits and being arranged in a variometer, the self-induction of the secondary circuit not participating on the coupling being arranged in a coil variable by degrees and a fine tuning means connected therewith, connections arranged so that the variations of the self-induction results in the coupling self-induction being for all wave-lengths a previously determined percentage of the total self-induction of the circuit which has the greater capacity.

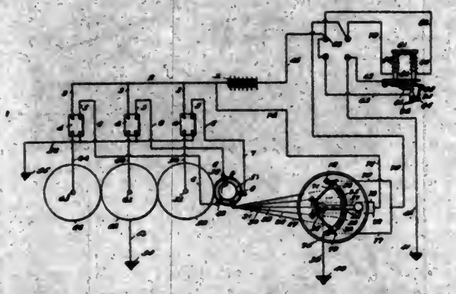
4. The combination of two oscillatory circuits having constant capacity and being galvanically coupled with and tuned one to the other, a series of variometers connected in series and being mechanically connected one with another to cause their simultaneous mechanical operation to the same angular degree, a part of these variometers being simultaneously electrically connected with the secondary circuit, the coupling self-induction being for all wave-lengths a previously determined portion of said series of variometers.

5. The combination of two oscillatory circuits having constant capacity, variable self-induction and being galvanically coupled with and tuned one to the other, connections arranged so that the variations of the self-inductions results in the coupling self-induction being for all wave-lengths a previously determined percentage of the total self-induction of the circuit which has the greater capacity, the latter circuit containing a constant self-induction.

1,014,723. AUTOMATIC REVERSING AND TIMING SWITCH FOR GAS-ENGINES. JAMES M. RHETT, Beaufort, S. C. Filed Dec. 12, 1910. Serial No. 596,933. (Cl. 123—41.)

1. In a reversing switch for gas engines, the combination of a main ignition circuit; magnetic means for breaking said circuit; means for holding said circuit open; and a governor operated by the engine adapted to move said last mentioned means when said engine slows down and thereupon permit said circuit to be closed, substantially as described.

2. In a reversing switch for gas engines, the combination of a main ignition circuit; magnetic means comprising an armature for breaking said circuit; means comprising a latch for locking said armature and thereupon holding said circuit open; and a governor operated by the engine adapted to move said latch and thereupon permit said circuit to be closed, substantially as described.



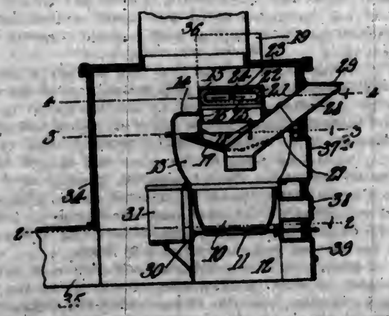
3. In a reversing switch for gas engines, the combination of a main ignition circuit; a timer in said circuit; a magnetically controlled contact in said circuit; a latch adapted to hold said contact in its open position; and a governor operated by the engine adapted to move said latch and permit said circuit to be reclosed at a predetermined period of the stroke of the piston, substantially as described.

4. In a reversing switch for gas engines, the combination of a main ignition circuit; a timer in said circuit; means for causing said timer to advance or to retard the spark as desired; contacts for controlling said circuit; an armature; a contact controlled by said armature adapted to break said circuit; a latch adapted to hold said contact in its open circuit position; and a governor operated by the engine adapted to move said latch and permit said circuit to be reclosed at a predetermined period of the stroke of the piston, substantially as described.

5. In a reversing switch for gas engines, the combination of a main ignition circuit; a revolving timer provided with a plurality of contacts in said circuit; means for causing said contacts to be made at different periods during the revolution of said timer and thereupon to advance or to retard the sparking as desired; contacts for controlling said main circuit; an armature; a contact controlled by said armature for breaking said circuit; a spring controlled latch for holding said last mentioned contact in its open circuit position; and a governor operated by said engine for moving said latch out of its locking position, substantially as described.

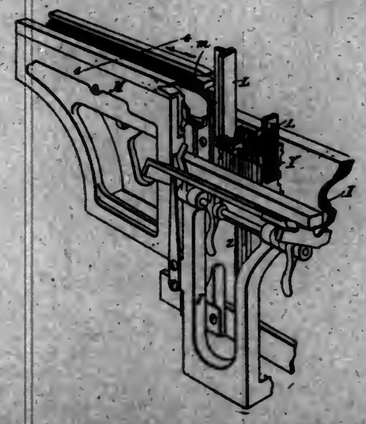
[Claims 6 to 14 not printed in the Gazette.]

1,014,724. FURNACE. ARCHIBALD ROBERTSON, Duluth, Minn. Filed June 2, 1910. Serial No. 564,655. (Cl. 126—107.)



In a furnace, a fire pot, a combustion chamber above the same and having a central opening in its top, a dome rising from the opening, a smoke outlet connected to the dome, a skirting depending from the opening, a baffle plate spaced from the skirting and comprising a frusto-conical plate located below the skirting and extending at its edge in close proximity to the wall of the combustion chamber, a fuel magazine in the combustion chamber and passing through and supported by the baffle plate, and a fuel chute leading to the magazine.

1,014,725. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 4, 1909. Serial No. 476,001. (Cl. 199—7.)



1. In a line casting machine, the combination of non-symmetrical matrices, double-wedge spaces having their shorter wedges non-symmetrical, an assembler wherein the line is composed, and means for transferring the composed line to the casting position, together with a stop located in advance of the casting position, whereby the passage thereto of the composed line is prevented in the event of its containing a reversed matrix or spacer.

2. In a line casting machine, matrices having notches y^6 in one side only, double-wedge spacers having notches z^6 in the shorter wedges, the said notches y^6 and z^6 normally registering in the composed line, an assembler wherein the line is composed, and means for conveying the composed line to the casting position, together with a stop m located in advance of the casting position to prevent the passage thereto of the composed line in the event of a spacer or matrix being reversed.

3. In a line casting machine, the combination of a line of matrices and non-symmetrical spacers, means for transferring the said line to the casting position, and a stop located in advance of the casting position to arrest the transfer of reversed spacers.

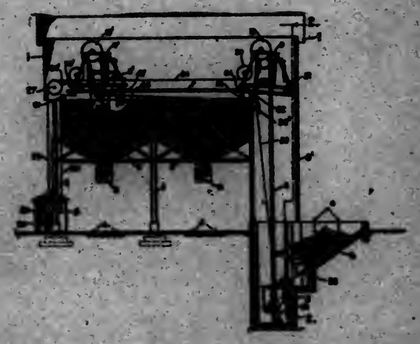
1,014,726. RAILWAY-TIE. WARREN A. SAUL, Bridgeport, Conn. Filed Oct. 2, 1911. Serial No. 652,352. (Cl. 238—8.)

1. A composite railway tie including a metallic trough open at its ends, a plastic filling within the trough, said trough having means extending inwardly therefrom for anchoring the filling therein, and metallic braces embedded within the filling and having their terminals extending under and retained by certain of said anchoring means.

2. A composite railway tie including a metallic trough open at its ends and having depressions in the walls thereof, the free corner portions of the walls being inturned, a plastic filling within the trough and anchored by said depressions and inturned corner portions, and crossed metallic braces embedded within the filling and having their terminals extending under and retained by certain of the depressions.

3. A composite railway tie including a metallic trough, rail supporting blocks seated therein and secured thereto, said blocks abutting against the walls of the trough, hollow extensions upon the sides of each block, there being shoulders within the blocks and converging upwardly away from the extensions, projections upon the blocks for engaging the outer base flanges of the rails to hold them against spreading, rail fastening plates mounted on the extensions, and bolts engaging the plates and extending into the extensions, each bolt having a head engaging the shoulder in the block.

1,014,727. CONVEYING SYSTEM. FRANK J. SCHRADER, Jr., Chicago, Ill. Filed June 3, 1909. Serial No. 499,857. (Cl. 214—4.)



1. In a device of the kind described, and in combination, a receptacle and carriage therefor, means for hoisting the receptacle to the carriage, and thereafter laterally moving the carriage and receptacle, means for controlling the discharge of material from said receptacle and means for positively returning the receptacle to the loading point.

2. In a device of the kind described and in combination, a plurality of material receptacles, means for vertically alternately lifting the receptacles from the loading point and laterally carrying the same to the discharging point, mechanism for automatically controlling the discharge of material from the receptacles, means for automatically resetting said discharging mechanism, and means coöperating with the filled receptacle for returning the empty receptacles to the loading point.

3. In a device of the kind described and in combination, a pair of material receptacles, means for alternately vertically lifting the receptacles from a loading point and thereafter laterally carrying the same to a discharging point, mechanism for automatically controlling the discharge of material from the receptacles and means for returning the empty receptacle to the loading point, comprising a cable connecting the receptacles, and guiding means for said cable.

4. In a device of the kind described and in combination, a pair of buckets arranged to alternately raise material from a lower to a higher level, an elevated track for each bucket, a carriage for each bucket mounted on said tracks, means for raising a filled bucket from the

lower level to said carriage and thereafter drawing the carriage and bucket laterally in said higher level, and means connecting the buckets for simultaneously drawing the empty bucket to the lower level.

5. In a device of the kind described and in combination, an elevator shaft, a plurality of buckets, an elevated track for each bucket, a carriage for each bucket mounted on said tracks, means permanently connecting the buckets for alternately raising said buckets in the shaft and thereafter laterally moving the buckets and carriages therefor, and means connecting the buckets for returning the buckets to the bottom of the shaft.

[Claims 6 to 11 not printed in the Gazette.]

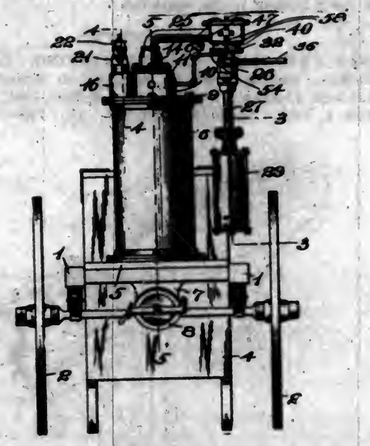
1,014,728. BLOCK OR HOISTING-GEAR. LOUIS TABULO, London, England. Filed June 25, 1910. Serial No. 568,875. (Cl. 57—34.)

1. A self-sustaining lower pulley block for differential hoisting and lowering apparatus comprising a hanging pulley rotatably supported within the frame of the block and formed with peripheral surfaces adapted to be gripped by the chain of the apparatus, loosely mounted brake wheels located at the sides of said hanging pulley and operatively connected to the latter by means of a free-wheel device and brake blocks adapted to be forced against the brake wheels by the weight of the load, substantially as described.

2. A self-sustaining lower pulley block for differential hoisting and lowering apparatus consisting of a frame, a pulley loosely mounted on a bolt, formed with pockets for the chain of the apparatus and provided at its sides with ratchet wheels, brake wheels loosely mounted on said bolt at the sides of said pulley and provided with pawls adapted to engage with said ratchet wheels, bell crank levers pivoted to the frame of the block and formed at their inner ends with slots, brake blocks pivoted to the outer ends of said bell crank levers, a hanging hook mounted in a shackle, and a bolt passing through the upper arms of said shackle and the slots formed in the inner ends of the bell crank levers, substantially as described.

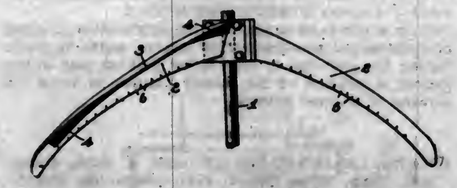
1,014,729. VACUUM-CONTROLLER FOR PNEUMATIC CLEANING APPARATUS. JOHN STROTHER THURMAN and JOHN ALEXANDER DUNLAP, St. Louis, Mo.; said Dunlap assignor to said Thurman. Filed Mar. 2, 1908. Serial No. 418,819. (Cl. 230—24.)

1. In an apparatus of the class described, the combination with a vacuum pipe and a vacuum-creating fluid-conductor, of a valve for controlling the flow of liquid through said conductor, a housing in communication with the vacuum pipe, means located in said housing and influenced by the vacuum for the operation of said valve, and a pair of spring controlled valves influenced by the vacuum for controlling the degree of vacuum in said housing, the springs for controlling said valves being of different tensions whereby the spring of the least tension will control a predetermined normal vacuum and the spring of greater tension control a predetermined maximum vacuum.



2. In an apparatus of the class described, the combination with a vacuum pipe and a vacuum-producing fluid-conductor arranged to discharge into the vacuum pipe, of a cut-off valve for controlling the passage of fluid through said last mentioned conductor, spring controlled means influenced by the vacuum for operating said valve, a housing for containing said means and a pair of spring controlled valves influenced by the vacuum for controlling the degree of vacuum in said housing, the springs of said last mentioned valves being of different tensions, whereby one valve is arranged to control the cut-off valve at a predetermined normal vacuum and the other valve arranged to control the cut-off valve at a predetermined maximum vacuum, and means for varying the tensions of said springs, whereby said valves will be operated at different normal and maximum degrees of vacuums.

1,014,730. VANE FOR PROPELLER-WHEELS. JOHN W. WAY, Edgeworth, Pa. Filed Nov. 15, 1909. Serial No. 528,199. (Cl. 115—46.)



1. A propeller blade of curved contour in cross section, the concave surface thereof being provided with a rearwardly diverging air-retarding projection extending longitudinally of the blade, substantially as described.

2. A propeller blade of curved contour in cross-section provided on its concave surface with an air-retarding projection, such projection being provided with openings to permit a restricted passage of air, substantially as described.

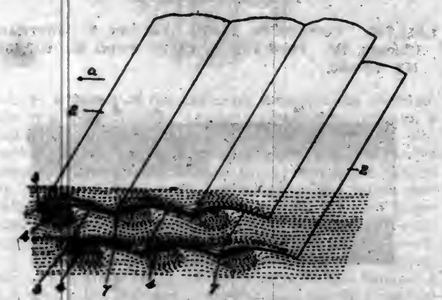
3. A propeller blade of curved contour in cross-section provided on its inner surface with a flexible air retarder, said air retarder extending longitudinally upon the surface of the blade, substantially as described.

4. A propeller blade of curved contour in cross section provided on its inner surface with a series of air-retarding projections extending longitudinally thereon, the width of the succeeding projections of the series increasing from the foremost rearwardly, substantially as described.

5. A propeller blade of spiral contour in cross section, the curve of spiral increasing in radius from the front to the rear edge of the said blade, and an air-retarding projection, extending longitudinally of the blade upon the concave surface thereof, and adjacent to the anterior edge thereof, and projecting from said surface rearwardly, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,014,731. AEROPLANE. JOHN W. WAY, Edgeworth, Pa. Filed Nov. 15, 1909. Serial No. 528,200. (Cl. 244—31.)



1. A sustaining wing for an aeroplane, said wing being of curved contour and having the continuity of its concave surface interrupted at a point rearwardly of but adjacent to its anterior edge by a projection which extends outwardly from the said concave surface, said projection forming with the concave surface a constantly open pocket.

2. A sustaining wing or sail for an aeroplane of curved contour from front to rear, and provided upon its concave surface and adjacent to the anterior edge thereof with a vented air-retarding projection, substantially as described.

3. A sustaining wing or sail for an aeroplane of curved contour from front to rear, and provided upon its concave surface with a series of air-retarding projections, the length of the projections of the series increasing from the foremost rearwardly, substantially as described.

4. A sustaining wing or sail for an aeroplane composed of a plurality of segments arranged edge to edge and united along their adjoining edges, each of said segments being of curved contour in cross section, the posterior edge of the rearmost section being flexible, substantially as described.

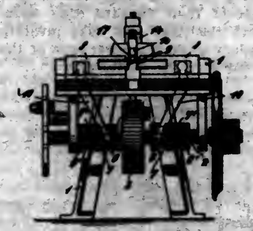
5. In an aeroplane, the combination of two arched supporting wings or sails arranged one above another and one in advance of the other in such relative positions that the condensation of air adjacent to the under surface of the upper wing due to the motion of the vessel shall be opposed to the rarefaction of air adjacent to the upper surface of the lower wing, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,014,732. MACHINE FOR MAKING WIRE NAILS AND PINS. JAKOB WIKSCHTRÖM, Dusseldorf, Germany. Filed Jan. 22, 1910. Serial No. 539,593. (Cl. 10—49.)

1. In a wire nail making machine, the combination, of means to separate a blank from a wire by two cuts which begin from a transverse line passing through the body of the wire and extend outward from said line and toward the end of the wire and being separated and at an angle to the longitudinal axis of the wire and leaving bifurcated portions on the wire, and means to form said bifurcated portions into a head.

2. In a wire nail making machine, the combination, of a pair of nail pointing and cutting dies adapted to separate a blank from a wire by two cuts which begin from a transverse line passing through the body of the wire and extend outward from said line and toward the wire end being separated and at an angle to the longitudinal axis of the wire and to leave bifurcated portions on the wire, and means to form said bifurcated portions into a head.



3. In a wire nail making machine, the combination of a pair of reciprocating nail pointing and cutting dies adapted to cut a blank from the wire, each of said dies having its front or working end formed with two transverse intersecting cutting edges, the surfaces forming said edges sloping outward and inward and away from the plane of said edges, said outwardly sloping surfaces providing on both sides of the cutting edges cut away portions which extend to the side face of the die which is adjacent to the point of intersection of the cutting edges, means to move said dies with their cutting edges in contact with each other transversely of the wire and to a plane within the body of the wire and to separate the dies, and means to form the portions remaining on the wire after the cutting operation into a head.

4. In a wire nail making machine, the combination with wire feeding means, of a pair of reciprocating nail pointing and cutting dies adapted to cut a blank from the wire and moving toward each other at right angles to and up to the central axis of the wire and away from each other, each of said dies having its front or working end formed with two transverse cutting edges intersecting each other and terminating in one of the side faces of the die, the surfaces forming said edges sloping outward and inward and away from the plane of said edges, said outwardly sloping surfaces providing cut away portions on both sides of the cutting edges which extend to the side face of the die in which said cutting edges intersect, means to operate said dies, and means to form the portions remaining on the wire after the cutting operation into a head.

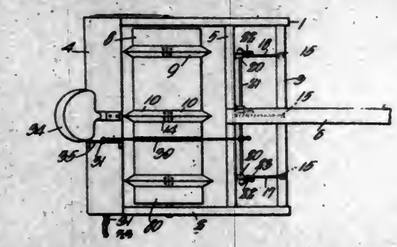
5. In a wire nail making machine, the combination with wire feeding means, of a pair of reciprocating nail pointing and cutting dies adapted to cut a blank from the wire and moving toward each other at right angles to and up to the the central axis of the wire and away from each other, each of said dies having its front or working end formed with two transverse cutting edges intersecting each other and terminating in one of the side faces of the die, the surfaces forming said edges sloping outward and inward and away from the plane of said edges, said outwardly sloping surfaces providing cut away portions on both sides of the cutting edges which extend to the side face of the die in which said cutting edges intersect, and the front ends of said dies being formed with coöperating faces adapted to abut against each other in operation of the dies and to limit the stroke of the dies toward each other, means to operate said dies, and means to form the portions remaining on the wire after the cutting operation into a head.

[Claims 6 to 16 not printed in the Gazette.]

1,014,733. COMBINED ROLLER AND DITCHER. WILLARD ANDRA WILSON, North Yakima, Wash. Filed Aug. 1, 1911. Serial No. 641,873. (Cl. 55—46.)

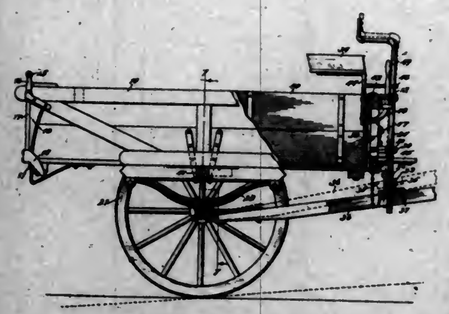
1. A device of the class described comprising a frame; rollers journaled for rotation in the frame; ribs circumscribing the rollers and outstanding therefrom; an operating member located between the rollers; lever mechanism

carried by the frame, to the rear of the rollers, and operatively united with the operating member; a shaft journaled for rotation in the frame, in advance of the rollers, and provided with an upstanding arm, pivotally connected with the forward end of the operating member; secondary arms outstanding from the shaft; shovel plows pivotally supported adjacent their forward ends upon the frame, and alined with the ribs; and links pivotally connected with the secondary arms, the lower ends of the links being loosely connected with the shovel plows.



2. A device of the class described comprising a frame; rollers journaled for rotation in the frame and provided with circumscribing ribs; a shaft journaled for rotation in the frame, in advance of the rollers; an upstanding primary arm upon the shaft; an operating member located between the rollers, the forward end of the operating member, and the primary arm being provided with a plurality of openings, adapted to be alined; a securing element adapted to be inserted in alined openings; latch and lever mechanism operatively connected with the rear end of the operating member; secondary arms forwardly extended from the shaft; goose necks pivoted to the forward portion of the frame and provided at their lower ends with earth-engaging blades, alined with the ribs; and links pivotally connected at their upper ends with the secondary arms, the lower ends of the links being united by a pin and slot connection, with the intermediate portions of the goose necks.

1,014,734. DUMP-CART. WILLIAM S. WITTEN, Chicago, Ill. Filed Sept. 24, 1909. Serial No. 519,361. (Cl. 21—20.)



1. A dump-cart, comprising an axle and wheels, a stationary frame mounted upon said axle, draft-devices connected with the axle, means adjustably connecting the draft-devices with the frame for varying the angular relation thereof, and a dumping bed mounted upon the frame.

2. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and adjustably connected with the frame for varying the angular relation of the frame and shafts, and a tilting bed supported by said frame.

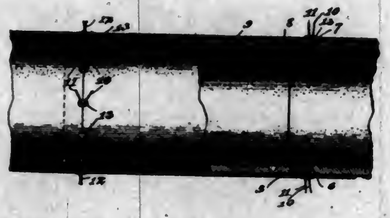
3. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and adjustably connected with the frame for varying the angular relation of the frame and shafts, and a tilting bed supported by said frame, said frame having side members which form a lateral support for the bed when it is in operative position.

4. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and adjustably connected with the frame for varying the angular relation of the frame and shafts, and a bed pivotally connected with the frame.

5. A two-wheeled dump-cart, comprising an axle and wheels, a stationary frame mounted upon and supported by the axle, a dumping bed pivotally mounted upon the frame and supported at its forward end when in operative position by said frame, and draft devices connected with the axle and with the forward portion of the frame.

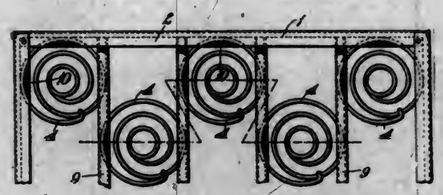
[Claims 6 to 8 not printed in the Gazette.]

1,014,735. CONCRETE PIPE. ELLIOTT S. WORTHAM, Chicago, Ill. Filed July 8, 1911. Serial No. 637,453. (Cl. 72—53.)



The combination with a plurality of concrete pipe sections, each section having a mouth at one end and a lip at its other end for complementary engagement with the mouth of an adjacent pipe section, of a plurality of fastening wires embedded in each section and having their ends projecting exteriorly of each section near both of its ends to bind the mouth and lip portions thereof, whereby the projecting ends of the wires of adjacent pipe sections may be twisted together for drawing and holding said adjacent pipe sections together.

1,014,736. REINFORCED-RIM SPRING CONSTRUCTION. LEONARD A. YOUNG, Detroit, Mich. Filed Nov. 11, 1911. Serial No. 659,726. (Cl. 5—21.)

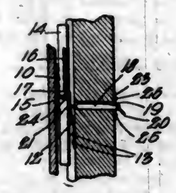


1. A spring construction comprising a rim frame, clamping strips reinforcing the frame members throughout the length thereof and having pairs of inwardly extending flanges, cross strips in spaced relation secured near their extremities to the rim frame with pairs of flanges disposed toward the flanges of the adjacent portions of the frame and spring members whose lower coils are gripped between the flanges of adjacent clamping and cross strips.

2. A spring construction comprising a rim frame, clamping U-shaped strips embracing the frame members with the flanges extending inwardly, cross strips secured to the frame and provided with pairs of flanges extending toward the corresponding portions of the U-strips and adjacent cross strips and springs whose lower coils are gripped between the pairs of flanges of the companion pairs of the U and cross strips.

3. In a spring construction, a spring supporting strip folded longitudinally to form oppositely disposed lateral flanges in substantially parallel, spaced relation to opposite faces of the middle portion of the strip for gripping springs inserted between the said flanges and adjacent portion of the strip.

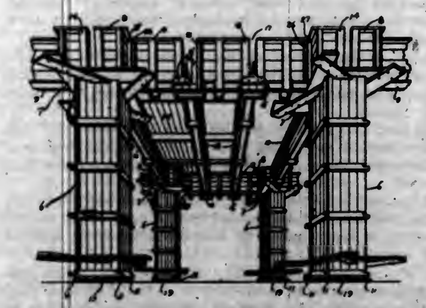
1,014,737. WINDOW-SASH. JOSEPH W. ADAMS, Pasadena, Cal. Filed June 29, 1911. Serial No. 635,918. (Cl. 20—49.)



1. In a device of the character described the combination of a window-casing having a vertical slot therein, a rack within the said slot, a window-sash having a slot therein, a spring-pressed rack-engaging finger carried thereby, a sash member carried by the said finger and lying in the slot of the said window-casing and forced partially into the slot of the said sash upon the said finger being engaged with the said rack to lock the said sash, and means for releasing the said finger from the said rack.

2. In a device of the character described, the combination of a window casing having a vertical slot therein, a rack within the said slot, a window sash having a vertical slot therein, a flat spring secured in the slot of the sash having an outward tension, an outwardly projecting rack engaging finger on the free end of the said spring, a channel shaped sash member pivotally mounted on the said finger and lying in the slot of the window casing and forced partially into the slot in the said sash upon the said finger being engaged with the said rack to lock the sash, means for releasing the said finger from the said rack and a sash cord secured to the said finger.

1,014,738. FORM WORK FOR CONCRETE CONSTRUCTION. ROBERT ANDERSON, Cincinnati, Ohio. Filed Dec. 27, 1910. Serial No. 599,594. (Cl. 25—131.5.)



1. A form-work for molding concrete buildings, consisting of a column form with an independent shelf flush with its upper edge, beam forms resting upon the shelf, and removable cap forms joining the ends of the beam forms and constituting a part of the molding device, whereby when the column form is removed, the shelf is lowered therewith from beneath the beam and cap forms.

2. A concrete building form-work consisting of column forms, girder and beam forms, the column forms having independent shelves at their upper ends, the girder forms and beam forms resting upon the shelves, and removable cap forms between the ends of the girder and beam forms resting upon the shelves and filling the space between the girder and beam forms.

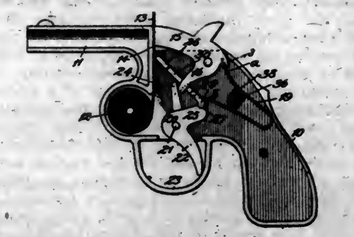
3. A concrete building form-work consisting of column forms, girders, beam and column cap forms, the column forms having independent shelves at their upper ends, the girder, beam and column cap forms resting upon the shelves, the cap forms filling in the space between the girder and beam forms and securing them temporarily together.

4. A concrete building form-work consisting of column forms, girder and beam forms resting upon the column forms, removable connections which secure the girder and the beam forms upon the top of the column forms, and means resting on the floor for engaging the sides of and supporting the column forms temporarily above their supporting floor.

5. In a form work for concrete structures, disintegrable column forms, removable wedges for supporting said forms, column cap forms supported on said column forms, girder and beam forms supported on said column forms and located between column cap forms, beam forms supported between the girder forms, and downwardly detachable connections between said column cap and girder forms and said beam forms.

[Claims 6 to 12 not printed in the Gazette.]

1,014,739. TOY PISTOL. WILLIAM R. ATKINSON, Homestead, Pa., assignor of one-half to Joseph D. Kilgore, Homestead, Pa. Filed Feb. 2, 1911. Serial No. 606,280. (Cl. 42—57.)



1. A device of the class described, comprising a frame having an abutment, a hammer, a trigger having a rigid arm for positively actuating said hammer, an explosive strip feeding pawl mounted to rock in a groove in said trigger, and a single spring in operative relation with the several movable parts and also serving to hold the strip feeding pawl in said groove.

2. A device of the class described, comprising a frame having an abutment, and an opening in one side, a hammer, a trigger for actuating said hammer, an explosive strip feeding pawl fulcrumed on said trigger, a closing plate for the opening in said frame, and a single spring in operative relation with said hammer, trigger, pawl and closing plate.

3. A device of the class described containing a hammer provided with an integral lifting finger having a beveled side at its lower end and a recess in said end at the rear, a trigger having an integral cocking arm the end of which is set at an angle to its plane of movement and designed to engage the recess in said finger and raise the hammer when the trigger is moved in one direction and slip past the beveled side of said finger when the trigger is moved in the opposite direction, and a spring common to both hammer and trigger.

4. A device of the class described, comprising a frame with a firing abutment, a hammer formed with an integral lifting finger beveled on one side, a trigger having an integral cocking arm beveled on the side next the beveled side of said finger for actuating said finger and raising said hammer, a pawl for feeding a cap strip over said abutment fulcrumed on and actuated by said trigger, and a spring common to the hammer, the trigger and the feeding pawl.

5. A device of the class described, comprising a frame

with a firing abutment, a hammer loosely pivoted in said frame and provided with an integral lifting finger, a trigger also loosely pivoted in the frame comprising a finger piece for operating the trigger, a cocking arm for engaging the hammer finger to raise the hammer, and an intermediate arm, said parts being integral, a feeding pawl fulcrumed on said intermediate arm for feeding a strip of caps over the abutment, and a spring common to the hammer, the trigger and the feeding pawl and holding said feeding pawl on said intermediate arm.

[Claims 6 and 7 not printed in the Gazette.]

1,014,740. PROCESS FOR PREPARING PRINTING-PLATES IN A GRAINED MANNER. HANS STRECKER-AUFERMANN, Munich, Germany. Filed Jan. 11, 1910. Serial No. 537,523. (Cl. 101—205.)

1. A process for preparing printing plates in a grained manner for monochrome and polychrome printing consisting in preparing a chromated mixture of a solution of a glue containing chondrin and glutin, having a concentration varying between 1.1 and 1.6 and an aqueous solution of Arabic gum having a concentration varying from 1.1 and 1.6 the proportions of the mixture of both solutions varying between 1.1 and 1.8, spreading the mixture as a coating over a metal plate, leaving the plate at rest so as to cause small drops of the Arabic gum solution to settle in the said mixture of solutions of Arabic gum and of glue containing chondrin and glutin, causing the said coating to dry so as to render the said drops of Arabic gum resisting to the action of the etching, exposing the plate under a suitable image and directly etching the plate thereafter with solutions of ferric chlorid, substantially as and for the purpose set forth.

2. A process for preparing printing plates in a grained manner for monochrome and polychrome printing, consisting in preparing a cnromated mixture of a solution of glue containing chondrin and glutin, the concentration of which solution varies between 1.1 and 1.6 and an aqueous solution of Arabic gum the concentration of which varies between 1.1 and 1.6 and another substance adapted to resist the action of the etching the proportion of said solutions in the mixture varying between 1.1 and 1.8, coating with this mixture a metal plate, leaving the metal plate thus coated at rest, drying the said coating, exposing the said coated plate under a suitable image and etching it directly after the exposition, with solutions of ferric chlorid, substantially as and for the purpose set fortn.

3. A process for preparing printing plates in a grained manner for monochrome and polychrome printing consisting in preparing a chromated mixture of a solution of glue containing chondrin and glutin, the concentration of which solution varies between 1:1 and 1:6 and an aqueous solution of Arabic gum the concentration of which varies between 1:1 and 1:6 and a suitable tanning agent, the proportion of said solutions in said mixture varying between 1:1 and 1:8, coating a metal plate with this mixture, leaving the metal plate thus coated at rest, drying the coating of the metal plate, exposing the coated plate under a suitable image and etching it directly after the exposition by means of solutions of ferric chlorid, substantially as and for the purpose set forth.

4. A process for preparing printing plates in a grained manner for monochrome and polychrome printing, consisting in preparing a chromated mixture of a solution of pure glutin, having a concentration varying between 1:1 and 1:6 and an aqueous solution of Arabic gum having a concentration varying from 1:1 and 1:6 the proportions of both solutions varying between 1:1 and 1:8, spreading the mixture as a coating over a metal plate, leaving the plate at rest so as to cause small drops of the Arabic gum solution to settle in the said mixture of solutions, causing the said coating to dry so as to render the said drops of Arabic gum resisting to the action of the etching, exposing the plate under a suitable image and directly etching the plate thereafter with solutions of ferric chlorid, substantially as and for the purpose set forth.

5. A process for preparing printing plates in a grained manner for monochrome and polychrome printing, consisting in preparing a chromated mixture of a solution of pure glutin, the concentration of which solution varies between 1:1 and 1:6 and an aqueous solution of Arabic gum the concentration of which varies between 1:1 and 1:6 and another substance adapted to resist the action of the etching, the proportion of said solutions in the mixture varying between 1:1 and 1:8, coating with this mixture a metal plate, leaving the metal plate thus coated at rest, drying the said coating, exposing the said coated plate under a suitable image and etching it directly after the exposition, with solutions of ferric chlorid, substantially as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,014,741. INCLOSED-FUSE INDICATOR. LAWRENCE E. BARRINGER and GILBERT WRIGHT, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed July 9, 1909. Serial No. 506,739. (Cl. 175—273.)

1. A fuse indicator comprising fibrous material coated with a readily combustible and non-hygroscopic material.

2. A combustible indicator comprising a sheet of fibrous material coated with collodion.

3. A combustible indicator comprising a sheet of fibrous material chemically treated and coated with collodion.

4. A combustible indicator comprising a sheet of fibrous material treated in oxidizing salt and then coated with a readily combustible and non-hygroscopic material.

5. A combustible indicator comprising a sheet of fibrous material treated in oxidizing salt and then coated with collodion.

[Claim 6 not printed in the Gazette.]

1,014,742. METHOD OF MANUFACTURING ARSENATE OF LEAD. EDWIN O. BARSTOW, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed June 10, 1911. Serial No. 632,446. (Cl. 23—13.)

1. In a method of making lead arsenate, the step which consists in mixing solid lead chlorid with soluble arsenate in the presence of water insufficient to dissolve said chlorid.

2. In a method of making lead arsenate, the step which consists in mixing lead chlorid with sodium arsenate in the presence of water insufficient to dissolve said chlorid.

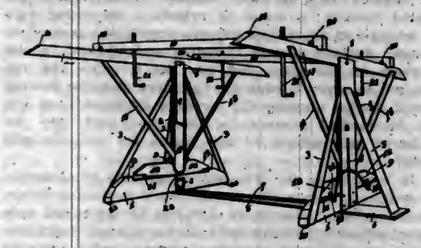
3. In a method of making lead arsenate, the step which consists in mixing lead chlorid with acid sodium arsenate in the presence of water insufficient to dissolve said chlorid.

4. The method of making lead arsenate, which consists in mixing solid lead chlorid in finely divided form with a solution of a soluble arsenate, the quantity of water present being insufficient to dissolve said chlorid; subjecting the mixture to prolonged stirring, whereby lead arsenate is formed; and then separating such arsenate from the solution.

5. The method of making lead arsenate, which consists in mixing solid lead chlorid in finely divided form with a solution of sodium arsenate, the quantity of water present being insufficient to dissolve said chlorid; subjecting the mixture to prolonged stirring, whereby lead arsenate is formed; and then separating such arsenate from the solution.

[Claim 6 not printed in the Gazette.]

1,014,743. WAGON-BOX LIFT. SAMUEL D. BASSFORD, Tooele, Utah. Filed Aug. 9, 1911. Serial No. 643,234. (Cl. 57—79.)



In a wagon box lift the combination of two sills parallel and spaced apart by another sill secured transversely thereto, vertical standards attached to said first mentioned sills, two detents hinged together and adapted to slide upon each of said first mentioned sills, a shoulder on each of said detents adapted to engage a stop block on the sill adjacent, a lever having a semi-circular member secured thereto, bell crank levers pivoted to one of said first mentioned sills and hinged to said semi-circular member and adapted to contact with a lug on said detent, and a wagon box rack pivoted to said standards.

1,014,744. LUBRICATING DEVICE. CHARLES S. BAVIER, New York, N. Y. Filed Mar. 1, 1911. Serial No. 611,616. (Cl. 121—115.)

1. In combination with a piston engine, a tumbling chamber containing loose and movable particles of non-fluid lubricating material adapted to be tumbled about by the movements of the piston, substantially as described.

2. The combination with the cylinder and piston of an engine, of a tumbling chamber and loose movable particles of non-fluid lubricant therein adapted to be tumbled about by the movement of said piston, and said tumbling chamber having walls adapted to induce tumbling motions in the particles of said lubricating material, substantially as described.

3. The combination in an engine of a cylinder and piston, a tumbling chamber in said piston, and a reservoir for non-fluid lubricant operatively connected with said tumbling chamber, substantially as described.

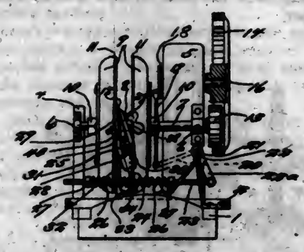
4. The combination with a piston and cylinder, of a tumbling chamber, a reservoir for non-fluid lubricant operatively connected with said tumbling chamber, and a closure for said reservoir, substantially as described.

5. The combination with a piston and cylinder, of a tumbling chamber in the cylinder, a reservoir for non-fluid lubricant operatively connected with said tumbling chamber, and a closure for said reservoir, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,014,745. RAZOR-SHARPENER. JOSEPH A. BEAMISDERFER, Jonestown, Pa. Filed Aug. 1, 1911. Serial No. 641,825. (Cl. 51—16.)

In a razor honing machine, a base having supporting standards thereon, a shaft journaled therein, a pair of parallel spaced apart honing disks on the shaft, a standard, means for adjusting the last standard transversely of the disks, a razor holder pivoted to the last standard, means for rotating the disks, a rock shaft having connections with the disk rotating means, a rod extending slidably to the lower end of the razor holder and having connections with the rock shaft, yieldable means on each



side of the lower end of the holder, and means threaded on the rod for adjusting the tension of the yielding means, the yieldable means constituting means for throwing the razor yieldably in contact with first one and then the other of the honing disks.

1,014,746. HOLDER FOR METAL-BALL MAKING. FRANK BEEMER, Philadelphia, Pa., assignor to Standard Roller Bearing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 24, 1908. Serial No. 454,591. (Cl. 51—4.)

In combination a ball holder having grooves angular in cross-section with the walls thereof disposed at such relative inclination as to present two paths of contact the lengths of which do not bear the same proportion to the length of the circumferences of the corresponding contact zones of the balls, a grinder, means for rotating one of these elements, and means for progressively and repeatedly feeding each of the balls through the entire length of all the grooves from the inlet to the outlet thereof.

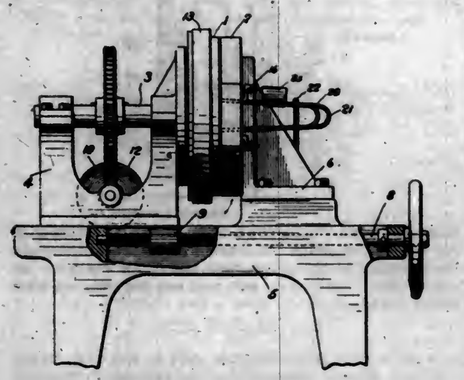
1,014,747. BALL-GRINDING MACHINE. FRANK BEEMER, Philadelphia, Pa., assignor to Standard Roller Bearing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 24, 1908. Serial No. 454,592. (Cl. 51—4.)

1. In a ball machine the combination with a pair of relatively rotating bodies furnished with a series of concentric grooves on their meeting faces and adapted to operate upon balls carried around between them, of a series of independent tubular channels respectively having their ends in communication with different grooves of the series, whereby each of the balls is compelled to progressively change from one groove to another as the balls are carried around again and again.

2. In a ball machine the combination with a pair of relatively rotating bodies furnished with a series of concentric grooves on their meeting faces and adapted to operate upon balls carried around between them, of a series of generally U-shaped tubes having their ends in communication with different grooves of the series, whereby each of the balls is compelled to progressively change from one groove to another as the balls are carried around again and again.

3. In a ball machine the combination of a pair of relatively rotating bodies furnished with a series of concentric grooves on their meeting faces and of which one

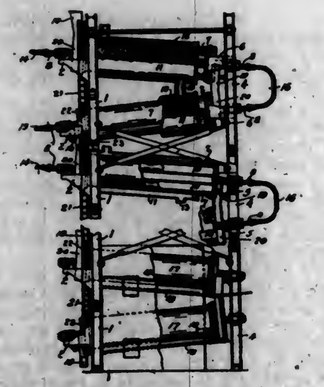
has an opening that extends across the grooves, a bracket arranged in the opening and provided with tube plates or heads and with a picker plate and a delivery plate each having ball passages alined with the concentric grooves and a series of tubes having their ends mounted in the openings in the tube heads or plates, substantially as described.



4. In a ball machine the combination with a pair of rotating bodies furnished with a series of concentric grooves, of a series of tubes having each of their ends connected with different grooves of the series, and a pipe ranging crosswise of the tubes and having communication with each for the introduction of liquid or the like, substantially as described.

5. In a ball machine the combination with a pair of relatively rotating bodies furnished with a series of concentric grooves on their meeting faces of means for connecting the respective grooves of the series which include a tube having an opening for the introduction and withdrawal of balls, and a hopper having a sleeve mounted on said tube and said sleeve adapted to open and close said opening, substantially as described.

1,014,748. MACHINE FOR TREATING CEREALS. JOHN W. BERRY, Tacoma, Wash., assignor to Christian S. Hofstetter, Tacoma, Wash. Filed July 28, 1910. Serial No. 574,230. (Cl. 34—8.)



1. In a machine for treating cereals, the combination with a frame; of a series of stationary ventilated drums mounted thereon; a series of heated rotating cylinders concentric with said drums and spaced therefrom; and passages joining adjacent drums whereby the cereal is conveyed from one drum to another and is heated by said cylinders.

2. In a machine for treating cereals, the combination with a frame; of a series of stationary ventilated drums mounted thereon; a series of cylinders concentric with said drums and spaced therefrom; projections secured to the outer surface of said cylinders and adapted to stir the grain in the space between the cylinder and the drum and to carry it over the cylinder; passages joining adjacent drums whereby the cereal is conveyed from one drum to another; means for conveying heat into the interior of said cylinders; and means for rotating said cylinders.

3. In a machine for treating cereals, the combination with a frame; of a series of stationary ventilated drums mounted thereon; a series of cylinders having closed ends mounted concentric within said drums, spaced therefrom, jacketed thereby, and extending therethrough; passages joining adjacent drums whereby the cereal in the jacket spaces is conveyed from one drum to another; means whereby the cylinders are rotated; means whereby heat is conveyed into the interior of said cylinders; a plurality of tubes passing through the interior of said cylinders from end to end, through the closed ends thereof, and open at their ends; and hoppers engaging the ends of said cylinders to receive the grain from the open ends of the tubes of one cylinder and to convey it to the tubes of another cylinder, all whereby the grain is dried and slightly heated within the jackets and is roasted in the tubes, substantially as and for the purpose described.

4. In a machine for treating cereals, the combination with a frame; of a series of cylinders, having closed ends, mounted thereon; means whereby said cylinders are rotated; means whereby heat is conveyed into the interior of said cylinders; a plurality of tubes passing through the interior of said cylinders from end to end, through the closed ends thereof, and open at their ends; and hoppers engaging the ends of said cylinders and adapted to receive the grain from the open ends of the tubes of one cylinder and convey it to the tubes of another cylinder.

5. In a machine for treating cereals, the combination with a frame; of bearings mounted therein; hollow axles mounted in said bearings; a cylinder mounted on said axles and having closed ends, said axles opening into the interior thereof and adapted to supply heat thereto; means whereby said cylinder is rotated; a jacket for said cylinder; tubes passing through the cylinder from end to end, through the closed ends thereof, and open at their ends; and a hopper engaging the end of the cylinder and adapted to convey the grain to the tubes.

1,014,749. COATING WITH METAL. CHARLES F. BURGESS, Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa., a Corporation of New Jersey. Filed Apr. 2, 1910. Serial No. 552,940. (Cl. 91—70.1.)

1. The process of coating a metal surface which consists in applying thereto a brittle alloy in granular condition and composed mainly of zinc, and submitting the same to heat.

2. The process of coating an iron surface, which consists in applying thereto a brittle alloy in solid condition and composed mainly of zinc, and submitting the same to the action of heat.

3. The process of coating an iron surface which consists in applying thereto a brittle alloy of zinc and iron in subdivided condition, and submitting the same to the action of heat.

4. The process of depositing a protective coating on an iron article which consists in applying to the article an alloy of zinc and iron in granular condition, and submitting the same to the action of heat.

5. The process of depositing a protective coating on an iron article which consists in applying to the article a granular zinc-iron alloy of about the composition $FeZn_{10}$, and submitting the same to the action of heat.

[Claims 6 to 16 not printed in the Gazette.]

1,014,750. COATING WITH METAL. CHARLES F. BURGESS, Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa., a Corporation of New Jersey. Filed June 16, 1910. Serial No. 567,244. (Cl. 91—70.1.)

1. The process of coating a metal article with a protective and adherent covering, which consists in applying to said article a material comprising a granular zinc-iron alloy enriched with uncombined zinc, and heating said article until it takes on a protective coating.

2. The process of coating an iron article with a protective layer, which consists in heating the article at about dull red while in contact with granular $FeZn_{10}$ enriched with additional zinc.

3. The method which consists in producing a granular body consisting largely of zinc and iron, heating said body in contact with iron articles to form a protective coating on said articles, and periodically enriching said granular material by heat treatment in the presence of additional zinc.

4. The process of coating iron articles which consists in heating said articles to about 850 degrees Fahr. while in contact with a granular material consisting essentially of zinc and iron, said material containing materially more zinc than would be represented by the symbol $FeZn_{10}$.

5. The method which consists in producing a body of granular material consisting largely of a zinc-iron alloy, applying said granular material to an iron surface, submitting the same to the action of heat to produce a uniform adherent coating, and periodically enriching said granular material by heat treatment in the presence of additional zinc.

[Claims 6 and 7 not printed in the Gazette.]

1,014,751. ALLOY FOR COATING WITH METAL. CHARLES F. BURGESS, Madison, Wis. Filed June 10, 1911. Serial No. 632,440. (Cl. 75—1.)

1. The method which consists in adding iron to heated zinc dross until the chemical compposition becomes about $FeZn_{10}$, and mechanically reducing the material so obtained to granular condition while hot.

2. The method which consists in saturating heated zinc dross with iron and simultaneously reducing to granular condition the material so produced.

3. The method of making a granular material consisting essentially of zinc and iron, which consists in tumbling zinc dross at about red heat in the presence of iron.

4. The method of making a granular alloy of about the composition $FeZn_{10}$, which consists in tumbling materials rich in zinc and iron at about red heat until the zinc and iron unite to form a brittle alloy and until the alloy is mechanically reduced to granular condition.

1,014,752. FINISH-REMOVING PROCESS. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Nov. 29, 1907. Serial No. 404,300. (Cl. 87—5.)

1. The finish removing process which consists in immersing a finished article in an aqueous solution of solid crystallizable substantially fixed neutral organic solvent bodies and allowing such remover to act until it has ruffled up the finish and softened and loosened the same and in withdrawing the article from the remover and removing the finish therefrom.

2. The finish removing process which consists in applying to a finished surface remover consisting essentially of an aqueous solution of solid substantially fixed, neutral organic solvent bodies comprising chloral hydrate, and allowing such remover to act upon the finish until it has softened and loosened the same by the action of said organic bodies thereon while the evaporation of the remover is prevented by the incorporated evaporation retarding material, and in removing the finish from the supporting surface.

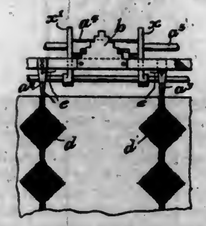
3. The finish removing process which consists in applying to a varnished surface a remover comprising an aqueous solution of chloral hydrate and sodium salicylate, and allowing said remover to act on the surface until the varnish is ruffled and softened by the action of the organic bodies thereon, and in removing the varnish from the supporting surface.

4. The finish removing process consisting in applying to a varnished surface a non-inflammable remover comprising an aqueous solution comprising chloral hydrate and allowing the remover to act until the varnish is softened and in removing the same.

5. The finish removing process consisting in applying to a surface a somewhat fluent non-inflammable remover comprising solid crystallizable substantially fixed neutral organic solvent bodies and thereby softening the finish and in removing the same.

[Claims 6 and 7 not printed in the Gazette.]

1,014,753. ATTACHMENT TO KNITTING-MACHINES FOR ORNAMENTING HOSIERY. ALBERT GEE, Philadelphia, Pa. Filed Mar. 23, 1911. Serial No. 616,417. (Cl. 66—33.)



1. In a knitting machine, two horizontal reciprocating bars, thread carriers supported by said bars, two step-like pattern forming devices secured to said bars and arranged one in advance of the other, a pivoted bifurcated bar provided with roller-means, said bar arranged to step up or down, notch by notch, of said pattern forming devices and a cam controlled pawl and ratchet mechanism to actuate said bifurcated bar and thereby to permit of reciprocations of said horizontal bars, substantially as and for the purposes described.

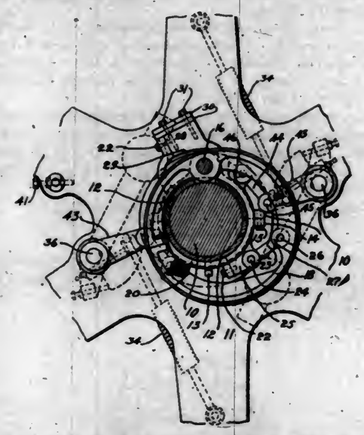
2. In a knitting machine, two horizontal reciprocating bars, thread carriers supported by said bars, two step-like pattern forming devices secured to said bars, and arranged one in advance of the other and a jointed bifurcated bar provided with roller-means, said bar arranged to step up or down, notch by notch, of said pattern forming devices, a spring connected with both members of said bifurcated bar and a cam controlled pawl and ratchet mechanism for actuating said bifurcated bar and thereby to permit of reciprocations of said horizontal bars, substantially as and for the purposes described.

1,014,754. GOVERNOR. HARRY V. HUNT, Jersey City, N. J. Filed Apr. 22, 1911. Serial No. 622,723. (Cl. 121—101.)

1. In a governor, the combination with a separately adjustable sleeve and means for fixing it on the shaft, of a ring encircling said fixed sleeve and having its pivotal axis located inside its contour, said ring constituting an eccentric, a second sleeve rotatable on said fixed sleeve, at one side of said eccentric ring, governor weights pivotally supported, independently of said fixed sleeve, connections between said weights and the rotatable sleeve and a connection between said rotatable sleeve and eccentric ring.

2. In a governor, the combination with a shaft and a fixed flywheel thereon, of a split sleeve distinct from the flywheel, means for adjustably securing said sleeve to the shaft, a second split sleeve rotatable on said fixed sleeve, a ring encircling said fixed sleeve at one side of said rotatable sleeve, said ring having its pivotal axis internally

of its contour and constituting an eccentric, governor weights and arms pivotally supported by the fly-wheel, link connections between said arms and the rotatable sleeve, and a link connection between said rotatable sleeve and said eccentric ring.



3. In a governor, the combination of a sleeve adapted to be adjustably fixed on a shaft, separate from the fly-wheel, said sleeve having alined short laterally projecting ears spaced apart longitudinally of the sleeve at each side thereof, a pivot pin carried by said ears, a ring constituting an eccentric pivoted inside its contour on said pin and encircling said sleeve between the ears, a sleeve rotatable on said fixed sleeve having central and direct link connection with said eccentric ring and governor weights and springs carried independently of said fixed sleeve adapted to actuate said rotatable sleeve.

4. In a governor, the combination with a shaft and a fixed fly-wheel thereon, of a split sleeve distinct from the fly-wheel, means for adjustably fixing said sleeve to the shaft, said sleeve being further provided with laterally projecting ears, spaced longitudinally thereof, a pin mounted at its ends in said ears, an eccentric ring having a long extension hub pivotally mounted on said pin between said ears, a second sleeve mounted on said fixed sleeve at one side of said eccentric ring connected with the latter and governor weights and springs carried by the fly-wheel operatively connected to rotate said second sleeve.

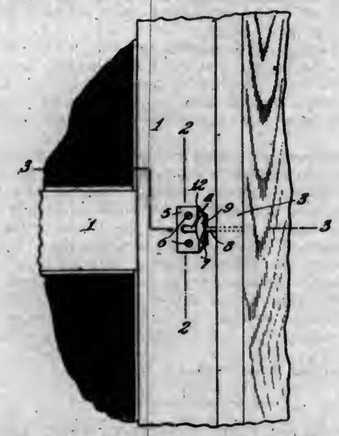
5. In a governor, the combination with a sleeve adapted to be adjustably fixed on a shaft separate from the fly-wheel, of an eccentric ring pivotally carried inside its contour by said fixed sleeve, encircling the latter, a second sleeve mounted to rotate on the fixed sleeve, governor weights and springs mounted independently of said fixed sleeve and connected up with said rotatable sleeve, and a link pivoted at one end to said sleeve and at the other end to said eccentric ring, lying within the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,014,755. DOOR-FASTENER. HOMER JETTÉ, Roxton Pond, Quebec, Canada. Filed Mar. 20, 1911. Serial No. 615,519. (Cl. 70—49.)

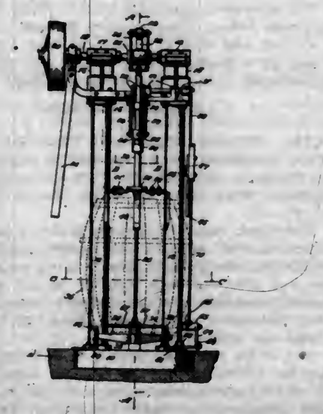
1. A door fastener comprising a hasp fixed to the inside of the door, a lever fulcrumed between its ends to the door and projecting on opposite sides thereof and being connected at one end to the said hasp and having its other end adapted to serve as an operating handle, a keeper upon the door frame adapted to be engaged by the said hasp, such keeper having an integral hook adapted to be moved into or out of position locking the hasp against disengagement from the keeper.

2. A door fastener comprising a spring hasp having one end bent to form a foot adapted to be attached to the door the opposite end being curved, the hasp being formed to present a slot near the last mentioned end, a lever fulcrumed between its ends to the door and projecting on opposite sides thereof and having one end curved and connected to the said hasp and the opposite end adapted to serve as an operating handle, a keeper swiveled upon the door frame and adapted to be engaged by the said hasp and project into the slot therein, such keeper having an integral hook adapted to assume either a position in line with the said slot or projecting over the hasp, substantially as described and for the purpose set forth.



3. A door fastener comprising a locking member secured upon the inside of the door, a device secured to the locking member and extending through the door, and a keeper swiveled upon the door frame and adapted to be engaged by the said locking member to prevent opening of the door, such keeper being adapted to be moved into or out of position retaining the said locking member against disengagement therefrom.

1,014,756. BARREL-LEVELING MACHINE. THORWALD JOHNSON, Chicago, Ill. Filed Sept. 27, 1911. Serial No. 651,571. (Cl. 147—1.)



1. In a barrel leveling machine, the combination with a rigid base member, of a movable spider adapted to be raised above and lowered into said base, guiding mechanism for centering a barrel over said spider, and automatic mechanism for raising and quickly lowering said spider to bounce a barrel centered thereon upon said base member.

2. In a barrel leveling machine, the combination with a rigid base member, of a movable spider adapted to be raised above and lowered into said base, guiding mechanism for centering a barrel over said spider, including a guide head having guiding surfaces adapted to be raised and lowered into the top of the barrel on the spider, and automatic mechanism for raising and quickly lowering said spider to bounce a barrel centered thereon upon said base member.

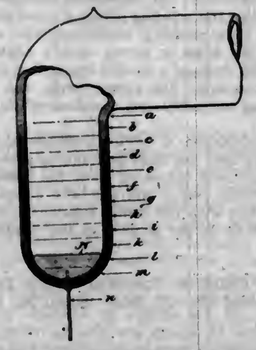
3. In a barrel leveling machine, the combination with a rigid base member, of a movable spider adapted to be raised above and lowered into said base, guiding mechanism for centering a barrel over said spider, including radially disposed guide fingers on the base adapted to cooperate with the exterior of the bottom of a barrel on the spider, and automatic mechanism for raising and quickly lowering said spider to bounce a barrel centered thereon upon said base member.

4. In a barrel leveling machine, the combination with a rigid base member, of a movable spider adapted to be raised above and lowered into said base, guiding mechanism for centering a barrel over said spider, comprising a guide head having guiding surfaces adapted to be raised and lowered into the top of a barrel on the spider, together with radially disposed guide fingers on the base adapted to coöperate with the exterior of the bottom of said barrel, and automatic mechanism for raising and quickly lowering said spider to bounce a barrel centered thereon upon said base member.

5. In a barrel leveling machine, the combination with a rigid base member, of a movable spider adapted to be raised above and lowered into said base, guiding mechanism for centering a barrel over said spider, a lever having a power arm shorter than the load arm connected to the spider so that the latter constitutes the load, a cam shaft, and connections between the shaft and the lever so that as the former is rotated the spider will be raised and quickly lowered by the action of the cam, for the purpose described.

[Claims 6 to 16 not printed in the Gazette.]

1,014,757. SEAL FOR FUSED-SILICATE CONTAINERS. FREDERICK G. KEYES, Boston, and CHARLES A. KRAUS, Newton Highlands, Mass. Filed Apr. 10, 1911. Serial No. 619,066. (Cl. 176—50.)



1. The combination with a fused silica vessel, of a series of zones of vitreous material fused in juncture, the first constituted and adapted to permanent fused juncture with the silica and fused thereto, the last constituted and adapted to seal over a metallic lead, the thermal coefficients of expansion of the several zones in series graded in steps from the first upward, the diversity between the thermal coefficients of any two joined members being less than that sufficient to produce rupturing stresses at the junctures.

2. The combination with a fused silica vessel, of a series of zones of vitreous material fused in juncture, the first fused in juncture with the silica, being a silica qualified by a content of titanium oxid, the last constituted and adapted to seal over a metallic lead, and a metallic lead sealed therein, the thermal coefficients of expansion of the several zones in the series being graded in steps from the first upward, the diversity between the thermal coefficients of any two joined members being less than that sufficient to produce rupturing stresses at the junctures.

3. The combination with a fused silica vessel, of a series of zones of vitreous material fused in juncture, the first fused in juncture with the silica being a silica qualified by a content of titanium oxid, and succeeding zones being silica qualified by progressively larger proportions of titanium oxid, the last zone constituted and adapted to seal over a metallic lead, the thermal coefficients of expansion of the several zones in series being graded in steps from the first upward, the diversity between thermal coefficients of any two joined members being less than that sufficient to produce rupturing stresses at the junctures.

1,014,758. NOSTRIL-EXPANDING DEVICE. ANNIE CECELIA KNOWLSON, Ann Arbor, Mich. Filed May 1, 1911. Serial No. 624,343. (Cl. 128—13.)

1. A nostril expanding device comprising a spring member or wire having a central cross bar terminating in coils and extending upwardly at each end and provided with a button and then downwardly in the form of a loop and then upwardly at each end and provided with a terminal button at each end as and for the purpose specified.

2. A nostril expanding device comprising a spring member or wire having a central cross bar terminating in coils and extending upwardly at each end and provided with a button and then downwardly in the form of a loop and then upwardly at each end and provided with a terminal button, the inner button at each side being provided with an outer pad and the outer button at each side with an inner pad as and for the purpose specified.

1,014,759. PICTURE. DYONIS KOVACS, Rochester, N. Y. Filed June 6, 1910. Serial No. 565,376. (Cl. 46—37.)

1. A picture comprising a base of sheet material having a chamber and also having a channel communicating with the chamber, a sheet of transparent material superposed on the base to cover the channel, a sheet of opaque material superposed on the base to hide the chamber, and flowing material movable from the chamber to the channel.

2. A portable picture having an invisible chamber, a plurality of visible channels defining an image, and granular material movable from the invisible chamber through the visible channels to form an image.

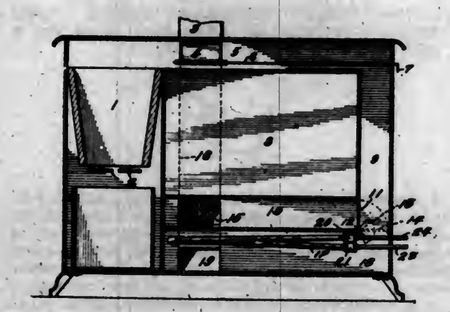
3. In a picture, the combination with the base of sheet material having an invisible chamber and visible channels forming an image and communicating with the chamber, of a sheet of transparent material covering the channels.

4. In a portable picture, the combination with the base having an invisible chamber and also having visible channels leading from said chamber and forming an image, of flowing material arranged to move from said chamber to the channels to bring out the image and vice-versa.

5. A picture having channels forming an image, channels arranged to obscure the image formed by the first named channels, and flowing material arranged to operate in the image-forming channels to bring out the image.

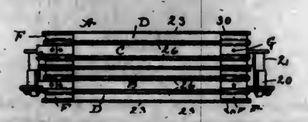
[Claims 6 to 12 not printed in the Gazette.]

1,014,760. COMBINED STOVE AND WATER-HEATER. GARRET HENRY KREUNEN, Cedar Grove, Wis. Filed Mar. 4, 1911. Serial No. 612,191. (Cl. 126—5.)



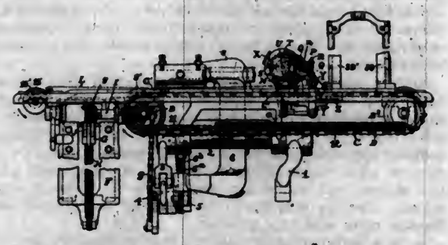
A stove comprising a combustion chamber, an oven, a horizontal passage located above the oven and leading from the combustion chamber to a vertical passage in rear of the oven, a vertical passage located between the rear wall of the oven and the rear wall of the stove and adapted to communicate with two horizontal passages beneath the oven, one of said horizontal passages being located directly beneath the oven and the additional horizontal passage being located below said last named horizontal passage, a vertical side duct leading from both of said last named passages beneath the oven to a smoke pipe above the oven, a smoke pipe located above the oven, heating coils located in said additional horizontal passage, a damper adapted to control the flow of the products of combustion from said combustion chamber to either one of said last named horizontal passages beneath the oven, whereby the oven may be heated without unduly heating the water in the heating coils or the water in the heating coils may be heated without unduly heating the oven.

1,014,761. MOLDER'S FLASK AND BAND. JOSEPH F. LAMB, New Britain, Conn. Filed Mar. 27, 1911. Serial No. 617,203. (Cl. 22—96.)



A flask or band having a side connected to a corner piece, the said side having flanges along the edges, the said corner piece having a wing, the said wing having an appreciable length, overlapping the said side for essentially the entire length, and having edges in abutment with the said flanges, a rivet penetrating the said side and wing, and the said edges and flanges coöperative with the said rivet to hold the said side and wing to prevent angular displacement and distortion of the same.

1,014,762. ADDRESSING AND PRINTING MACHINE. ULYSSES G. LEE, New York, N. Y., assignor to Montague Mailing Machinery Co., a Corporation of Tennessee. Filed Aug. 16, 1909. Serial No. 513,044. (Cl. 101—1.)



1. In combination a reciprocatory impression member, an endless carrier for printing plates consisting of the endless chain and wheels therefor, a driving member for the said carrier consisting of the drum and the pawl and ratchet, connections for operating the impression member, and connections connected with the drum for setting the driving member ready to act when the impression member is advanced, said driving member acting when the impression member retracts.

2. In combination, a reciprocatory impression member, a feeder for the address plate consisting of an endless chain and supporting wheels therefor, a spring and a pawl and ratchet, for operating the feeder, a drum carrying the pawl, a chain connected with the drum, a connection between the spring and drum, a connection for operating the impression member and means for operating the last mentioned chain to turn the drum and strain the spring, substantially as described.

3. In combination a reciprocatory impression member, an endless feeder for the printing plates, a drum, a pawl carried thereby, a shaft on which the drum is supported, a ratchet on the shaft, a spring connected with the drum, a connection for advancing the impression member and a connection for setting the pawl and the spring in position and condition to act to move the endless feeder to feed the plates when the impression member retracts, substantially as described.

4. In combination an impression member, a chain or belt for feeding the printing plates, a drive shaft, a ratchet thereon, a drum turning loosely on the shaft, a pawl carried by the drum, a spring with a connection to the drum to wind thereon, a flexible connection for turning the drum and rendering the spring tense, and a connection for operating the impression member, substantially as described.

5. In combination a table an impression member an arm reaching over the table and having a vertical portion, an operating lever connected with the lower part of the vertical portion, and a link pivotally connected with the upper part and with the frame, substantially as described.

[Claims 6 to 41 not printed in the Gazette.]

1,014,763. AIRSHIP. CHARLES ALBERT LONG, Spokane, Wash. Filed Dec. 21, 1910. Serial No. 598,646. (Cl. 244—18.)

1. An air ship having a body member with longitudinal series of planes on opposite sides thereof defining like series of air channels, said air channels having intake openings adjacent the top of the ship and above all obstructions to the flow of air into them and having their discharge openings adjacent the bottom of the ship, each air channel having an air propelling and compressing means therein.

2. An air ship having air directing forwardly inclined planes defining channels each provided with means individual thereto for indrawing the air at the upper end of the channel and forcibly expelling it at the lower end of said channel, each channel having a forward inclination with the upper end open and a lower end or extension expanded in the direction of the length of the vessel and directed downwardly substantially perpendicular to a transverse longitudinal plane of the vessel.

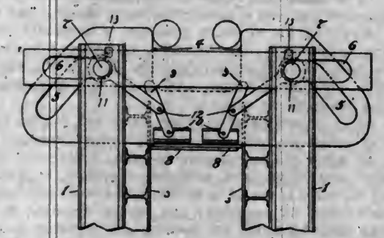
3. An air-ship having inclined air directing channels intaking at the upper ends and each with means for the forcible production of an air current therethrough, each channel being provided with a wall having a plane constituting a continuation thereof at the upper end, said plane being adjustable about an axis transverse to the length of the channel.

4. In an air ship, a longitudinal series of planes defining air channels between them, each channel being provided with means individual thereto for the forceful production of a current of air therethrough and having means at the intake end for determining the relation of said end to the remainder of the channel.

5. In an air-ship, air directing channels each having a forward inclination with the intake at the upper end, means within each channel for the forcible drawing of a current of air therethrough, and an adjustable plane at the intake end of each channel for determining the inclination of the intake end with relation to the remainder of the channel.

[Claims 6 to 26 not printed in the Gazette.]

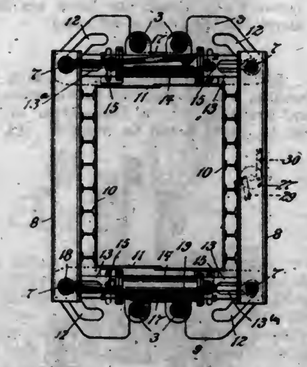
1,014,764. COTTON-PRESS. CHARLES J. LUCE, Niantic, Conn., assignor to The Standard Cotton Compress Company, a Corporation of Delaware. Filed Mar. 21, 1911. Serial No. 615,984. (Cl. 100—19.)



1. In a cotton press substantially as described, a pressure head formed of overlapping plates which are adapted to collapse before the pressure of corresponding pressure heads operating at right angles to said collapsible heads in combination with two levers pivotally connected one with each plate and two other levers pivotally connected at one end with corresponding movable parts of the compression and retraction mechanism of the press, the other end of the last mentioned levers being pivotally connected with the first mentioned levers at a suitable point, two stationary lugs adapted to engage the first mentioned levers as the press retracts, the system of levers being so adjusted as to accomplish engagement with said lugs at a predetermined point in the retraction of the press and when such engagement is had to operate to retract the plates to their initial position.

2. In a cotton press substantially as described, two pressure heads formed of overlapping plates which are adapted to collapse before the pressure of corresponding pressure heads operating at right angles to said collapsible heads in combination with four levers each pivotally connected with one plate, four other levers each pivotally connected at one end to a moving part of the compression and retraction mechanism of the press, the other end of each of said levers being pivotally connected respectively with one of the first mentioned levers at a suitable point, four stationary lugs adapted to engage the ends of said first mentioned levers as the press retracts, the system of levers being so adjusted as to cause engagement with the lugs at a predetermined point in the retraction of the press and operating to restore the plates to their initial position.

1,014,765. COTTON-PRESS. CHARLES J. LUCE, Niantic, Conn., assignor to The Standard Cotton Compress Company, a Corporation of Delaware. Filed Apr. 1, 1911. Serial No. 618,426. (Cl. 100—19.)



1. In a cotton press substantially as described means operated by fluid pressure to compress in combination with mechanical means to arrest and hold such compression against retraction, such mechanical means operating also to throttle the fluid pressure as said restraining means is brought into operation.

2. In a cotton press substantially as described means operated by fluid pressure to compress, in combination with a plurality of arms pivotally mounted at one end to the pressure shafts on one side of the press, and each arm provided at the other end with a hook adapted to intercept the path of retraction of the pressure shaft opposite the one to which it is secured, at a predetermined stage in the contraction of the press said arms operating to restrain the press against expansion when the fluid pressure is relieved.

3. In a cotton press substantially as described means operated by fluid pressure to compress, in combination with a plurality of arms pivotally mounted at one end to the pressure shafts on one side of the press, and each arm provided at the other end with a hook adapted to intercept the path of retraction of the pressure shaft opposite the one to which it is secured, at a predetermined stage in the contraction of the press, said arms operating to restrain the press against expansion when the fluid pressure is relieved, with means operated by the arms as the press contracts to throttle the fluid pressure when the hooks intercept the path of retraction of the pressure shafts.

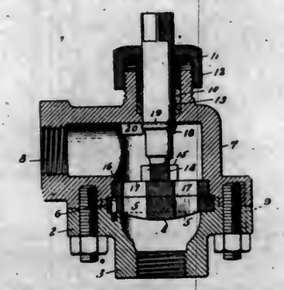
4. In a cotton press substantially as described means operated by fluid pressure to compress, in combination with a plurality of arms pivotally mounted at one end to the pressure shafts on one side of the press, and each arm provided at the other end with a hook adapted to intercept the path of retraction of the pressure shaft opposite the one to which it is secured, at a predetermined stage in the contraction of the press, said arms operating to restrain the press against expansion when the fluid pressure is relieved, with means to disengage the hooks from the shafts to permit retraction of the press consisting of two bolts one shorter than the other and both operated from a rotating disk to which they are pivotally connected.

5. In a cotton press substantially as described means operated by fluid pressure to compress, in combination with a plurality of arms pivotally mounted at one end to

flanges on the two sides adjacent the hinged side of the carriers and engaging the conical or tapering portion of

the pressure shafts on one side of the press, and each arm provided at the other end with a hook adapted to intercept the path of retraction of the pressure shaft opposite the one to which it is secured, at a predetermined stage in the contraction of the press, said arms operating to restrain the press against expansion when the fluid pressure is relieved, with means operated by the arms as the press contracts to throttle the fluid pressure when the hooks intercept the path of retraction of the pressure shafts, with means to disengage the hooks from the shafts to permit retraction of the press consisting of two bolts one shorter than the other and both operated from a rotating disk to which they are pivotally connected, with means to open the fluid pressure valve when the hooks are disengaged from the shafts and the press is retracted.

1,014,766. BOTTOM BLOW-VALVE. JARARD W. LYTTON, Franklin, Va., assignor to Lytton Manufacturing Company, Franklin, Va., a Corporation of Virginia. Filed Dec. 12, 1910. Serial No. 596,876. (Cl. 137—7.)

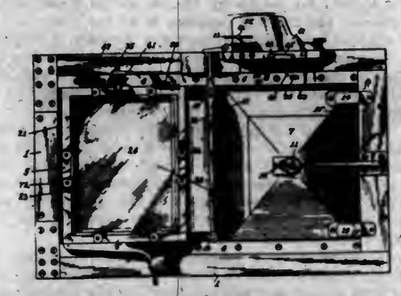


1. In a valve, a casing formed of two members directly connected, a circular valve seat having ports, fitting fluid tight in a socket formed in one of said members, means for preventing the rotation of said valve seat, a circular valve having ports registrable with the ports in the valve seat, and of less diameter than said valve seat fitting fluid tight in a socket formed in the other member, the outer face of said valve being flat and flush with the adjacent surface of said member, said valve adapted to rotate fluid tight in contact with the valve seat, and means for fastening together the two casing members and thereby securing the valve seat in place wholly within its socket and within the fastening means and holding the valve close against the valve seat and within its socket but permitting the same to be rotated.

2. In a valve, a casing formed of two members directly connected, a circular valve seat having ports, fitting fluid tight in a socket formed in one of said members, means for preventing the rotation of said valve seat, a circular valve having ports registrable with the ports in the valve seat, and of less diameter than said valve seat fitting fluid tight in a socket formed in the other member, the outer face of said valve being flat and flush with the adjacent surface of said member, said valve adapted to rotate fluid tight in contact with the valve seat, means for fastening together the two casing members and thereby securing the valve seat in place wholly within its socket and within the fastening means and holding the valve close against the valve seat and within its socket but permitting the same to be rotated, a removable valve stem engaging said valve and provided with a stop lug, and limiting stops depending from the upper wall of the casing against which said lug abuts when the valve is turned.

1,014,767. PHOTOGRAPHIC-PRINTING APPARATUS. JESSE A. MEISER, Eureka, Cal., assignor of one-fourth to John A. Prentice, Eureka, Cal. Filed Oct. 20, 1908. Serial No. 458,711. (Cl. 95—73.)

1. In an apparatus of the class described, a body-frame having near one end a sight opening and near the other end an exposure opening; a normally closed shutter for said exposure opening; a printing-frame mounted to travel in said body-frame into and out of register successively with its exposure and sight openings; and means for operating said shutter to make the exposure.



2. In an apparatus of the class described, a body-frame having near one end a sight opening and near the other end an exposure opening; a normally closed shutter for said exposure opening; a printing-frame mounted to travel in said body-frame into and out of register successively with its exposure and sight openings; and means operated by the moving printing-frame for opening said shutter to make the exposure.

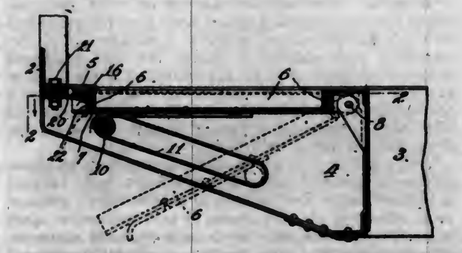
3. In an apparatus of the class described, a body-frame having near one end a sight opening and near the other end an exposure opening; a shutter for said exposure opening; a printing-frame mounted to travel in said body-frame into and out of register successively with said openings; means operated by the moving printing-frame for opening said shutter to make the exposure; and means operated by said moving frame to close said shutter after exposure.

4. In an apparatus of the class described, a body-frame having near one end a non-actinic sight opening and near the other end an exposure opening; a normally closed shutter controlling the exposure opening; a printing-frame mounted to travel in said body-frame to successively register with its openings; and means for operating the shutter to make the exposure.

5. In an apparatus of the class described, a body-frame having near one end a non-actinic sight opening and near the other end an exposure opening; a normally closed shutter controlling said exposure opening; a printing-frame mounted to travel in said body-frame to successively register with its openings; and means operated by the moving printing-frame for opening said shutter to make the exposure.

[Claims 6 to 21 not printed in the Gazette.]

1,014,768. DOOR. OTTO WILLIAM MEISSNER, Montreal, Quebec, Canada. Filed May 15, 1911. Serial No. 627,300. (Cl. 105—14.)



1. The combination with a door frame inclosing a gravity discharge opening and having downwardly projecting flanges, of a hinged door having fixed upwardly projecting flanges on the two sides adjacent the hinged side of the door, and a resilient strip adapted to extend across one side of the door between the ends of the flanges and seal the joint between the said side of the door and the door frame.

2. The combination with a door frame inclosing a gravity discharge opening, of a door upwardly flanged on three sides to form a trough with one end open, and resilient means for sealing the joint between the said open end and the adjacent portion of the door frame.

3. The combination with a door frame inclosing a gravity discharge opening, of a door upwardly flanged on three sides to form a trough having one end open, a member adapted to act as a flange for the fourth side of the door when in closed position, and means for causing such member to be pressed into yielding contact with the door.

4. The combination with a door frame inclosing a gravity discharge opening, of a hinged door upwardly flanged on the hinged and two adjacent sides, the free side of the door being without an upwardly projecting flange, and resilient means for sealing the joint between the said free side and the adjacent side of the door frame.

5. The combination with a door frame inclosing a gravity discharge opening, of a door upwardly flanged on three sides to form a trough with one end open, and an angular strip of resilient metal and having one flange adapted to close the said open end.

[Claims 6 to 8 not printed in the Gazette.]

1,014,769. SPREAD-ROLLER. JOSEPH E. MELCHIOR, Des Moines, Iowa, assignor of one-half to North and Judd Manufacturing Company, New Britain, Conn., a Corporation. Filed Apr. 20, 1911. Serial No. 622,258. (Cl. 54—73.)

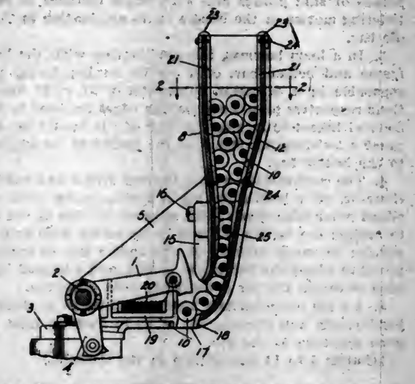
A spread roller comprising a rein space at one end, an eye at the other end suitable for admitting the loop of a supporting strap, and a loop space intermediate the said ends suitable for admitting a rein, a pivotally mounted tongue serving as the dividing wall between the said loop space and rein space, the said tongue acting to receive and retain the said loop of the supporting strap after the said strap has been run through the said eye of the spread roller.

1,014,770. FILLING-REPLENISHING HOPPER. JONAS NORTHROP, Hopedale, Mass., assignor, by mesne assignments, to Draper Company, a Corporation of Maine. Filed Dec. 23, 1910. Serial No. 598,997. (Cl. 139—85.)

1. In a filling replenishing loom, the combination of filling replenishing mechanism, a hopper having an upper chamber to contain filling carriers in plural line formation, and means on the interior of the hopper adjacent the delivery end of the filling carriers and separated from the ends walls of the hopper to contact with the conical portion of the filling on the carriers to cause said carriers to maintain positions in the hopper with the tip ends of the carriers out of contact with the end walls of the hopper.

2. In a filling replenishing loom, the combination of filling replenishing mechanism, a hopper having an upper chamber to contain filling carriers in plural line formation, and guides on the interior of the hopper separated from the end walls of the hopper and contacting with the conical portion of the filling on the carriers to cause said carriers to maintain positions in the hopper with the tip ends of the carriers out of contact with the end walls of the hopper.

3. In a filling replenishing loom, a hopper to contain a series of filling carriers, and means entering into the hopper chamber adjacent the delivery end of the filling carriers and engaging the conical or tapering portion of the filling on the carriers at a point within the hopper separated from the end walls thereof to maintain the ends of the carriers from contact with the end walls of the hopper.



4. In a filling replenishing loom, a hopper to contain a series of filling carriers, and guides extending in the hopper and having guiding surfaces separated from the end walls of the hopper and contacting with the conical or tapering portion of the filling on the carriers to maintain the ends of the carriers from contact with the end walls of the hopper.

5. In a filling replenishing loom, a hopper to contain a series of filling carriers, and guides extending downward in the hopper toward transferring position and adjacent the tip portions of the carriers, said guides having their guiding surfaces separated a distance from the end walls of the hopper and contacting with the conical or tapering portion of the filling to prevent the end of the carriers from contact with the end wall of the hopper.

[Claims 6 to 12 not printed in the Gazette.]

1,014,771. LOOM HARNESS-HEDDLE. EDWARD F. PARKS, Providence, R. I., assignor of one-half to Herman J. Waterhouse, Warwick, R. I. Filed Oct. 1, 1908. Serial No. 455,706. (Cl. 139—14.)

1. In a loom harness, the combination with the harness frame and a heddle bar, of a heddle having spring prongs that normally are perpendicular to the direction of extent

of the heddle bar, and open by separation in the direction of extent of the heddle bar as described.

2. In a loom harness, the combination with the harness frame and heddle bar, of a heddle having spring prongs separable in a direction substantially at right angles to the planes of said prongs and with edges inclined to cause a twisting motion of the heddle in its application to the heddle bar.

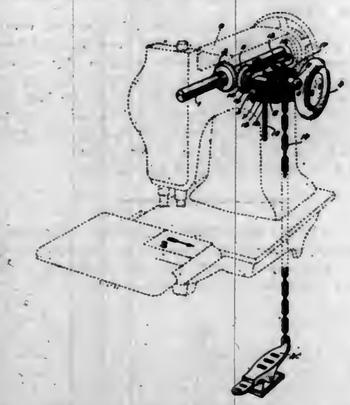
3. In a loom harness, the combination with the harness frame and heddle bar, of a heddle having spring prongs separable in a direction substantially at right angles to their respective planes and having edges inclined to form a clevical indent to receive the edge of the heddle bar and to cause a twisting movement of the heddle in its application to the heddle bar.

4. The combination with a harness frame and heddle bar therefor, of a heddle having a spring prong with an inclined outer edge overlapping another portion of the heddle to engage the heddle bar and by co-action with said other portion to cause turning of the heddle bar to spring the prong to admit the bar to the heddle, and a hooked interior edge to retain the bar after it has been admitted.

5. An eye for a harness heddle with necks to receive the heddle body and overlapping horns to form an inlet to the yarn aperture of the eye.

[Claims 6 to 14 not printed in the Gazette.]

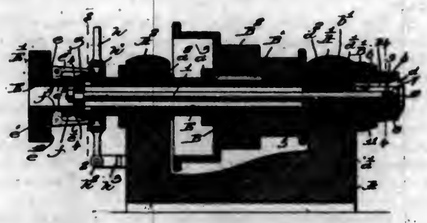
1,014,772. GEARING. JOHN C. RINGE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 14, 1910. Serial No. 571,885. (Cl. 74—7.)



In a power-transmitting mechanism, a rotary main-shaft, a rotary hand-wheel shaft having its axis of rotation in a direction transverse to the axis of said main-shaft and having sliding movements in the direction of its length, power-transmitting members one of which is carried by said main-shaft, its coacting member being carried by said hand-wheel shaft, a latch for holding said transmitting members in engagement, and means including a spring and a treadle for discontinuing the engagement of said power-transmitting members.

1,014,773. BOTTOMING DEVICE FOR LATHE-CHUCKS. EDWARD RIVETT, Brighton, Mass. Filed Feb. 27, 1911. Serial No. 611,194. (Cl. 29—113.)

1. The combination with a tubular chuck-spindle, a drawing-in spindle therein, a connected chuck, and means coöperating with the drawing-in spindle to effect longitudinal movement of the chuck and thereby clamp and unclamp the chuck, of a bottoming member within the chuck to determine the axial position of an object inserted in the chuck, and means permanently held from axial movement to support said member and maintain it fixedly positioned with relation to longitudinal movement of the chuck for clamping.



2. The combination with a tubular chuck-spindle, a drawing-in spindle therein, a connected chuck, and means coöperating with the drawing-in spindle to effect relative longitudinal movement of the chuck and chuck-spindle and thereby clamp and unclamp the chuck, of a bottoming member within the chuck to determine the axial position of an object inserted in the chuck, and means fixedly connected with the chuck-spindle to support the bottoming member within the chuck and prevent axial movement of said member when the chuck is clamped.

3. The combination with a chuck-spindle, a chuck therein, and means to effect relative longitudinal movement of the chuck-spindle and chuck, to thereby clamp and unclamp the chuck, of bottoming means including a positioning member located within said chuck and supported independently thereof, and a device connected with said member and held from axial movement relatively to the chuck.

4. The combination with a chuck-spindle, a chuck therein, and means to clamp and unclamp the chuck, of bottoming means, including a tubular positioning member axially movable within the chuck, a support for said member, independent of the chuck and extended loosely into the positioning member, and a device to coöperate with said member and the adjacent end of its support and adjust the position of the former axially of the chuck.

5. The combination with a tubular chuck-spindle, a drawing-in spindle therein, a connected chuck, and means coöperating with the drawing-in spindle to clamp and unclamp the chuck, of a bottoming member within the chuck to determine the axial position of an object inserted in the chuck, a supporting spindle co-axial with the drawing-in spindle and fixedly held by the chuck-spindle, the bottoming member loosely embracing the supporting spindle, and an adjustable connection between said spindle and the bottoming member to determine the axial position of the latter with relation to the chuck.

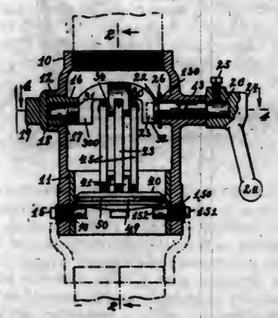
[Claims 6 to 8 not printed in the Gazette.]

1,014,774. EXERCISING DEVICE. RALPH A. ROHRER, Altoona, Pa. Filed Feb. 4, 1911. Serial No. 606,483. (Cl. 46—69.)

1. In a hand grip for exercising devices, the combination of a frame, a plurality of balls rotatably mounted upon one end of said frame, a movable cross bar intermediate the ends of said frame, a plurality of balls rotatably mounted upon said cross bar and elastic connections between the ends of the movable cross bar and the end of the frame, substantially as described.

2. In a hand grip for exercising devices, the combination of a frame, a plurality of balls rotatably mounted upon one end of said frame, a movable cross bar intermediate the ends of said frame, balls rotatably mounted upon said cross bar, springs surrounding the sides of said frame and attached at one end to the end of the frame and at the other end to the movable cross bar, thereby holding the sides of the frame together, substantially as described.

1,014,775. DISK VALVE. JOSEPH ROTHCHILD, New York, and HENRY S. CONOVER, Brooklyn, N. Y., assignors to the Rothchild Pressure Specialties Company, Canton, N. Y., a Corporation of New York. Filed May 16, 1910. Serial No. 561,569. (Cl. 137—4.)



1. The combination with a valve disk of a tilting frame work consisting of a cross head, two transverse pivots secured thereto, brackets secured to the valve disk, two transverse pivots secured thereto and links secured to the pivots on the cross head and the corresponding pivots on the valve disk.

2. A tilting frame for a valve disk comprising a cross head provided on one side with a laterally extending pivot and on the other side with means for turning it consisting of a squared aperture and a key provided with a handle adapted to fit therein, in combination with a valve disk and connections between it and the cross head.

3. A tilting frame for a valve disk comprising a cross head, means for oscillating it, two depending links pivoted one on one side of the center of oscillation and one on the other side, in combination with a valve disk and pivot connections between it and the links.

4. A tilting frame for a valve disk comprising a cross head, means for oscillating it consisting of a pivot on one side and a handle on the other, two depending links pivoted one on one side of the center of oscillation and one on the other side, in combination with a valve disk and pivot connections between it and the links.

5. A tilting frame for a valve disk comprising a cross head provided with two arms extending therefrom in opposite directions, pivoted links depending from the arms and a valve disk to which the links are secured at their other ends.

[Claims 6 to 20 not printed in the Gazette.]

1,014,776. VACUUM-CLEANER. SIMON L. RUBEL, Chicago, Ill., assignor to Home Vacuum Cleaner Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 1, 1910. Serial No. 574,013. (Cl. 15—60.)

1. In a vacuum cleaner, the combination of a nozzle, a tube rigid thereon, a second tube forming an extension of the first, said tubes having their adjoining ends pivoted together, a casing having a tube telescoping said second tube, and a flexible collar encircling said tubes.

2. In a vacuum cleaner, the combination of a pump casing, a nozzle flexibly connected to the casing, the flexible connection comprising a tube insertible in the end of said casing and having a pair of ears thereon, said nozzle having a part pivotally connected to said ears, and a flexible collar encircling said tube and part.

3. In a vacuum cleaner, the combination of a nozzle, a tube rigid thereon, a second tube forming an extension of the first, said tubes having their adjoining ends pivoted together, and a flexible collar inclosing the pivotal connection between said tubes and forming a substantially airtight joint between them.

1,014,777. GAS-BURNER. EDWARD S. SANDERSON, Waterbury, Conn., assignor, by mesne assignments, to Welsbach Light Company, a Corporation of New Jersey. Filed Feb. 14, 1910. Serial No. 543,753. (Cl. 158—118.)

1. A gas lamp comprising a tube, a second tube engaging the bore thereof, a flash diaphragm carried by one of said tubes and having one or more projections and an air shutter removably mounted on the other tube and having means interlocking with a projection on the flash diaphragm, substantially as described.

2. A gas lamp comprising a tube, a second tube engaging the bore thereof, a flash diaphragm carried by one of said tubes and having one or more projections, and a two-part air shutter removably mounted on the other tube, the parts of said air shutter being capable of relative movement with respect to each other and having one or more openings brought into and out of alinement by such movement, and one of said parts having means interlocking with one of said projections and separable therefrom, substantially as described.

3. A gas lamp comprising a tube, a second tube engaging the bore thereof, a flash diaphragm carried by one of said tubes, an air shutter removably mounted on the other tube, and separable means on said diaphragm and shutter which interlock when the parts are assembled, substantially as described.

4. A gas lamp comprising a pair of telescoping tubes, a flash diaphragm carried by one of said tubes, a two-part air shutter removably mounted on the other tube, the parts of said shutter being capable of relative movement, and separable means on said diaphragm and one of said parts which interlock when the tubes are telescoped, substantially as described.

5. A gas lamp comprising an outer tube, a second tube engaging the bore thereof, the outer tube carrying a flash

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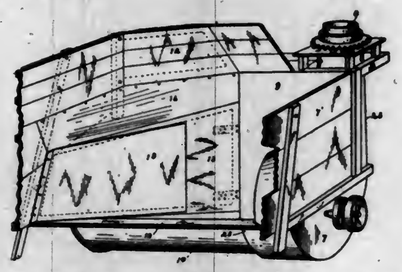
diaphragm and the other an abutment, and a two-part air shutter removably held against said flash diaphragm by said abutment, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,014,778. PNEUMATIC STACKER. JOSEPH K. SHARPE, Jr., Indianapolis, Ind., assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Apr. 10, 1909. Serial No. 489,056. (Cl. 193—21.)



1. The combination, in a pneumatic stacker, of a material-receiving chamber embodying a substantially vertical side wall inclined from the front to the rear of said chamber toward the opposite side wall thereof, a vertically-arranged fan in said chamber at the side thereof opposite to said inclined wall, and a hopper in the lower end of said chamber.

2. The combination, in a pneumatic stacker, of a material-receiving chamber having a vertically-arranged fan at one side thereof and a substantially vertical wall opposite said fan inclined from the front to the rear of said chamber toward said fan, and a hopper in said chamber communicating with said fan and having an air inlet in its side opposite said fan.

3. The combination, in a pneumatic stacker, of a material-receiving chamber having a substantially vertical wall inclined from the front to the rear of said chamber, a vertically arranged fan in the side of said chamber opposite to said wall, a hopper in said chamber communicating with said fan, and a chaff deflector in said chamber opposite said fan for directing material thereinto.

4. The combination, in a pneumatic stacker, of a material-receiving chamber embodying a substantially vertical side wall inclined from the front to the rear of said chamber toward the opposite side wall thereof, a vertically-arranged fan in said chamber at the side thereof opposite to said inclined wall, a hopper in the lower end of said chamber, and a chaff deflector in said chamber opposite said fan for directing material thereinto.

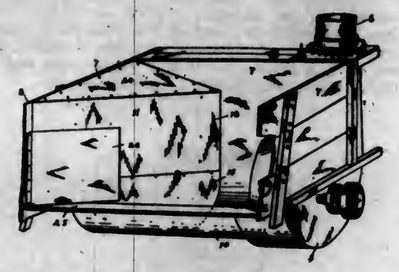
5. The combination, in a pneumatic stacker, of a material-receiving chamber having a substantially vertical side wall inclined from the front to the rear of said chamber and toward its opposite side wall and having a door therein, a fan in said chamber at the side thereof opposite to said substantially vertical wall, and a hopper in said chamber communicating with said fan and having an air inlet in its side opposite said fan.

[Claims 6 to 9 not printed in the Gazette.]

1,014,779. PNEUMATIC STACKER. JOSEPH K. SHARPE, Jr., Indianapolis, Ind., assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed May 3, 1909. Serial No. 493,540. (Cl. 193—21.)

1. In a pneumatic stacker, the combination of a material-receiving chamber comprising a substantially vertical diagonally arranged removable deflecting supplemental wall inclined inwardly from the front to the rear of said chamber, a vertically arranged fan in said chamber at the side thereof opposite to said wall, and a hopper at the lower end of said chamber.

2. A pneumatic stacker comprising a material-receiving chamber embodying a horizontally arranged hopper, a vertically arranged removably attachable deflecting supplemental wall inclined inwardly from the front to the rear of said chamber and forming the end wall for said hopper, an upwardly and outwardly inclined deflector at the upper end of said wall, and a vertically arranged fan in the side of said chamber opposite to said deflecting wall.



3. In a pneumatic stacker, a material-receiving chamber comprising a removable diagonally-arranged supplemental wall inclined inwardly from the front to the rear of said chamber, a fan arranged vertically at the opposite side thereof, a horizontally-arranged hopper at the lower end of said chamber, and a chaff deflector adjacent said diagonal wall for directing material toward said fan.

4. The combination, with a separator, of a pneumatic stacker having a material-receiving chamber comprising a vertical deflecting supplemental wall inclined inwardly from the front to the rear of said chamber a portion whereof is removable to permit withdrawal of structures from said separator, means for securing said removable wall portion in position, a fan vertically arranged at the side of said chamber opposite to said deflecting wall, and a hopper in said chamber communicating with said fan.

5. In a pneumatic stacker, a material-receiving chamber embodying a sectional deflecting wall inclined from the front to the rear of said chamber, means for supporting the sections of said wall, means for uniting said sections in the same vertical plane, a fan vertically arranged at the side of said chamber opposite to said deflecting wall, and a substantially horizontally arranged hopper in said chamber communicating with said fan.

[Claims 6 and 7 not printed in the Gazette.]

1,014,780. SPOOL-HEAD. CHARLES H. SMITH, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 24, 1910. Serial No. 551,322. (Cl. 175—21.)

1. A spool comprising a core, a spool head secured to each end of said core, an opening passing through one of said spool heads from the inner surface to the outer surface thereof, said opening being adapted at the said inner surface to receive an end or terminal of any diameter of winding the said spool head is adapted to inclose.

2. A spool for electromagnets having a winding and a spool head inclosing the ends thereof, the said spool head having a slotted aperture adapted to receive an end of any layer of the winding.

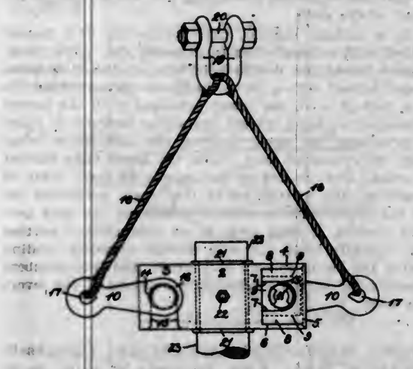
3. A spool for electromagnets, a winding of a definite number of layers on said spool, and an aperture in a head of said spool adapted to receive an end or terminal of any certain layer of said winding at a point adjacent to said layer.

4. A spool comprising a core, a head at each end of said core, a winding of a plurality of layers about said core and inclosed by said spool heads, an aperture extending through one of said spool heads, said aperture being adapted to receive an end of said winding at a point adjacent to any of said layers.

5. A spool for electromagnets comprising a core, a winding having a plurality of layers about said core, a spool head secured to said core having an inner and an outer surface, an opening extending through the said spool head, said opening being large at the inner surface and small at a definite point at the outer surface of said spool head, said opening at the inner surface being adapted to receive the end or terminal of any definite layer of said winding at a point adjacent to said layer, the position of the small opening designating that layer to which the end or terminal received thereby is connected to.

[Claims 6 and 7 not printed in the Gazette.]

1,014,781. GRIPPING OR CLAMPING DEVICE. HENRY JEREMIAH SMITH, Johannesburg, Transvaal. Filed Aug. 6, 1910. Serial No. 575,868. (Cl. 57—9.)

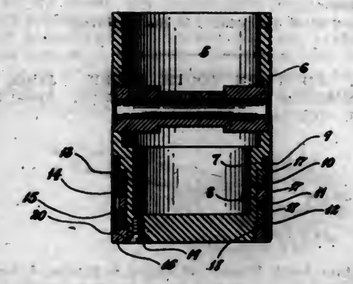


A gripping or clamping device comprising a pair of clamping members having perforated lateral lugs or projections, one of the projections or lugs of each member having projecting parts which form an external recess, a nut so arranged in each of said recesses that the projecting parts prevent it rotating, a pair of arms or levers having projections which pass through the perforations in the ends of the clamping members and have screw-threaded engagement with the aforesaid nuts, the lateral lug or projection of one of the clamping members being constructed with a slot to permit of its disengagement from the projection on the one arm or lever to open the clamp and the perforation in the opposing lug being made oval to permit of said disengagement, and means for connecting the ends of the arms or levers with the operating tackle, as set forth.

1,014,782. PISTON. MARTIN V. SMITH, Hartford, Conn., assignor of one-half to John J. Delahanty, Hartford, Conn. Filed Mar. 4, 1911. Serial No. 612,190. (Cl. 121—108.)

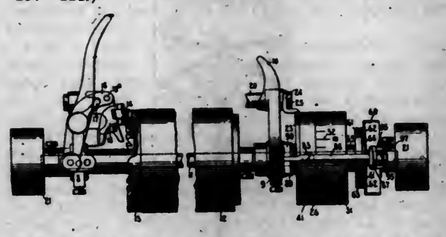
1. A piston having three diameters, a spacing ring encircling the portion of least diameter, bearing against the portion of intermediate diameter and having an outwardly extending flange opposite the portion of greatest diameter to thereby present a packing-receiving groove, and a confining ring for the spacing ring, threaded onto the portion of least diameter, and a headed key also threaded into said portion of least diameter, said confining ring having an opening to receive the head of said key.

2. A hollow piston, a spacing ring encircling said piston, and a confining ring, the confining ring and spacing ring having jointly a packing-receiving groove, and said confining ring also encircling the piston.



3. A hollow piston, a spacing ring encircling said piston, and a confining ring for the spacing ring, the confining ring and spacing ring jointly presenting a packing-receiving groove, the confining ring being threaded onto the piston, and a key threaded into the piston for holding the confining ring in place, the key having a head and the confining ring having an opening to receive said head.

1,014,783. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 28, 1909. Serial No. 535,276. (Cl. 197—118.)



1. In a typewriting machine, the combination of a rotative platen, stops for arresting said platen, a chain for moving certain of said stops, and a housing which surrounds said chain, the said certain of said stops driven by the chain following and bearing against an inner wall of said housing.

2. In a typewriting machine, the combination of a rotative platen, stops for arresting said platen, an endless chain for moving certain of said stops in a curved as well as in a rectilinear path, a housing surrounding said chain and against which the chain driven stop is adapted to bear.

3. In a typewriting machine, the combination of a rotative platen, stops for arresting said platen, an endless chain for moving certain of said stops in a curved as well as in a rectilinear path, a housing surrounding said chain, said housing being curved to conform to the curved path of movement of the said certain of said stops driven by the chain, the latter being adapted to bear against said housing and having curved contact faces which conform to the said curved portions of the housing.

4. In a typewriting machine, the combination of a rotative platen, stops for arresting said platen, a chain for moving certain of said stops, a housing which surrounds said chain and also supports one of said arresting stops, the said certain of said stops driven by the chain bearing against said housing, and means for affording an adjustment of the stop supported on said housing.

5. In a typewriting machine, the combination of a rotative platen, stops for arresting said platen, a chain for moving certain of said stops, a housing which surrounds said chain, the said certain of said stops driven by the chain bearing against said housing, said housing having a

series of stop-receiving openings therein adjacent to the path of travel of the chain driven stop or stops, and a stop adjustable to different stop positions in said stop-receiving openings.

[Claims 6 to 46 not printed in the Gazette.]

1,014,784. FOUNTAIN TOOTH-BRUSH. JAMES E. TATE, Middleton, Ga. Filed Oct. 31, 1910. Serial No. 590,015. (Cl. 15—52.)

A fountain tooth brush comprising a handle, a brush supporting housing, a slotted brush frame provided with bristles detachably mounted in said housing, a division wall formed in the handle and provided with a port opening, a slotted tubular valve member located in the handle for regulating the passage of the fluid from the handle to the valve, thence to contact with the bristles of the brush member, substantially as specified.

1,014,785. PACKAGE-REACHER. EDWARD O. TETRAULT, Hartford, Conn. Filed Apr. 27, 1911. Serial No. 623,598. (Cl. 57—113.)

1. In a package reacher, the combination of a handle, a pair of U shaped levers provided at one end with opposed gripping jaws and having the opposite ends thereof crossed and pivoted at their point of intersection to the handle, the extremities of the levers projecting beyond the pivot point, springs connecting the said projecting portion of each lever with an intermediate portion of the opposite lever and normally tending to hold the jaws together, and means upon the handle for separating the jaws.

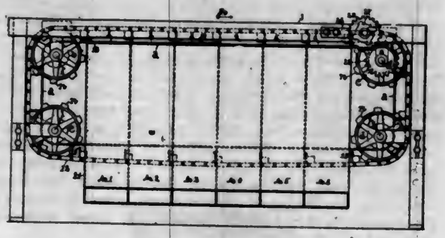
2. In a package reacher, the combination of a handle, a pair of U shaped levers each of which is provided at one end with a jaw while the opposite end thereof is curved inwardly, the said inwardly curved ends of the levers being crossed and pivoted at their point of intersection to the handle, a tension spring connecting the extremity of the curved end of each lever with an intermediate portion of the opposite lever, the said springs normally tending to swing the levers toward each other so as to cause the jaws to grip an article placed between the same, and means upon the handle for separating the jaws.

3. In a package reacher, the combination of a handle, a pair of U shaped levers having the curved intermediate portions thereof extending laterally in opposite directions, the upper ends of the levers being deflected laterally away from the handle and provided with inwardly extending opposed jaws, while the lower ends of the levers are crossed and pivoted at their point of intersection to the handle, the extremities of the lower ends of the levers projecting beyond the said pivot point, springs connecting the projecting portion of each lever with an intermediate portion of the opposite lever and tending to swing the levers toward each other, and means upon the handle for swinging the levers apart.

4. In a package reacher, the combination of a handle, a pair of U shaped levers arranged with the curved intermediate portions thereof extending laterally in opposite directions, the upper ends of the said levers being provided with opposed jaws while the lower ends thereof are crossed and pivoted at their point of intersection to the handle, the extremities of the said lower ends of the levers projecting beyond the pivot point, springs connecting the said projecting portion of each lever to an intermediate portion of the opposite lever and normally tending to swing the levers inwardly toward each other, a slide mounted upon the handle, and an operative connection between the slide and the levers for controlling the levers through the medium of the slide.

5. In a package reacher, the combination of a handle provided with a longitudinally disposed slot, guide members upon the handle, a slide mounted upon the guide members and formed with a curved portion received within the slot, a pair of U shaped levers arranged with the curved intermediate portions thereof projecting laterally in opposite directions, the upper ends of the said levers being formed with opposed jaws, while the lower ends thereof are crossed and pivoted to the handle at their point of intersection, the extremities of the levers projecting beyond the pivot point, a spring connecting the said projecting portion of each lever to an intermediate portion of the opposite lever, the said springs normally tending to swing the levers toward each other, and link members connecting the curved intermediate portions of the levers to the slide.

1,014,786. DISTRIBUTING APPARATUS. CHARLES B. TEWKSBURY, Boston, Mass. Filed Sept. 22, 1910. Serial No. 583,216. (Cl. 193—8.)



1. In an apparatus of the class described, in combination, an endless belt or band provided with an opening through it, means to move it continuously while in operation, an endless series of scrapers coöperating with said band to form compartments, and means to move said scrapers simultaneously with and in the same direction as the endless band but at a greater speed having a predetermined relation to the speed of the said band, for the purpose specified.

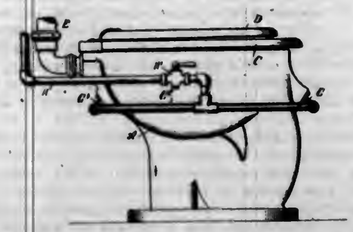
2. In an apparatus of the class described, in combination, a movable support for the articles to be distributed provided with an opening for the passage through it of said articles, means coöperating with said support to form therewith compartments, and means to simultaneously move said support and said compartment-forming means at different speeds having a predetermined relation, for the purpose specified.

3. In an apparatus of the class described, in combination, an endless belt or band provided with an opening through it, means to move it continuously while in operation, an endless series of scrapers coöperating with said band to form compartments, and means to simultaneously move said scrapers with relation to said endless band at a different predetermined speed, substantially as described.

4. In an apparatus of the class described, in combination, a movable support for the articles to be distributed, means coöperating with said support to form therewith compartments, and means to simultaneously move said support and said compartment-forming means at different speeds having a predetermined relation, substantially as described.

5. In an apparatus of the class described, in combination, an endless belt or band provided with an opening through it, rollers about which said band is passed, shafts for said rollers, sprocket wheels fast on said shafts at the opposite ends of said rollers, endless link chains passed about the sprocket wheels at each end of the rollers, scrapers secured to said endless chains and coöperating with said endless band to form compartments, and means to rotate said shafts to simultaneously move said endless band and said link chains and scrapers, substantially as described.

1,014,787. WATER-CLOSET. BEDROS R. TOROSSIAN, West Hoboken, N. J. Filed Dec. 24, 1909. Serial No. 534,790. (Cl. 4—25.)



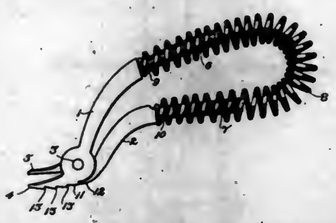
1. A water closet having a bowl, nozzles on the front and rear of the bowl, nipples secured in the wall of the bowl and connected with the said nozzle, a pipe connecting the nipples with each other, and a valve-controlled pipe leading to a water supply and connected with the first mentioned pipe.

2. A water closet having a bowl, nozzeles formed integrally in the wall of the bowl at the front and rear thereof and pointing upward in an inclined direction toward the center of the top opening of the bowl, nipples secured in the wall of the bowl and connected with the said nozzles, a pipe arranged exteriorly of the bowl at one side thereof and connecting the said nipples with each other and a pipe leading to a water supply and provided with a valve under the control of the user, the said pipe being connected with the first mentioned pipe.

1,014,788. LIFTER FOR STOVE-LIDS. EDWARD TOWER, Salem, Mass. Filed Aug. 16, 1911. Serial No. 644,441. (Cl. 126—323.)

1. In a lifter for stove lids, the combination of two crossed pivotally connected tong members having their upper ends formed with spring receiving spindles which are substantially parallel when the jaws are closed and having their lower ends provided with coöperating gripping jaws, one of said jaws being adapted to enter the recess of a stove lid and the other of said jaws being adapted to grip against the top of the stove lid, and a helical spring bent into a substantially U-shaped form and having its free ends fitted over and held on the spindle-like ends of the tong members so as to act both as a heat dissipating handle for the lifter and as a spring for normally holding the gripping jaws open, substantially as described.

2. In a lifter for stove lids, the combination of two crossed pivotally connected tong members, having their upper ends extending substantially parallel when the jaws are closed, and having their lower ends provided with coöperating gripping jaws, and a helical spring bent into a substantially U-shaped form and having its free ends secured to the upper ends of the tong members so as to act both as a heat dissipating handle for the lifter and as a spring for normally holding the gripping jaws open, substantially as described.



3. In a lifter for stove lids, the combination of two crossed pivotally connected tong members, having their upper ends extending substantially parallel when the jaws are closed, and having their lower ends provided with coöperating gripping jaws, and a helical spring bent into a substantially U-shaped form, having its free ends secured to the upper ends of the tong members so as to act both as a heat dissipating handle for the lifter and as a spring for normally holding the gripping jaws open, and stop shoulders formed on the tong members to limit the opening of the jaws under the action of the spring, substantially as described.

4. In a lifter for stove lids, the combination of two crossed pivotally connected tong members, having their upper ends extending substantially parallel when the jaws are closed, and having their lower ends provided with coöperating gripping jaws, and a helical spring bent into a substantially U-shaped form and having its free ends secured to the upper ends of the tong members to act both as a heat dissipating handle for the lifter and a spring for normally holding the gripping jaws open, the gripping jaw which is adapted to enter the lifter receiving recess of the stove lid being formed on its under side with backwardly facing shoulders to engage the edge of the recess and prevent the lid from slipping from between the gripping jaws, substantially as described.

1,014,789. FURNACE-FEEDING APPARATUS. FRANCIS H. TREAT, Cleveland, Ohio. Filed Apr. 12, 1909. Serial No. 489,362. (Cl. 75—115.)

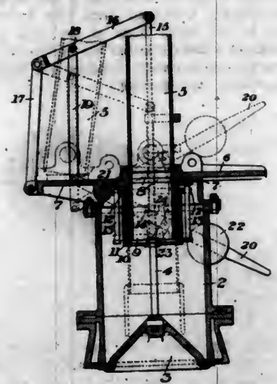
1. In feeding apparatus for furnaces, a hopper, a feed pipe extending downwardly into the hopper to discharge therein, a plurality of telescoping pipe sections surrounding the depending portion of said pipe, and actuating connections for effecting successively a downward telescoping movement of the said section; substantially as described.

2. In feeding apparatus for furnaces, a hopper, and a pipe arranged to be discharged within the hopper, said pipe having a plurality of telescoping discharge sections; substantially as described.

3. In fuel feeding apparatus for furnaces, a hopper having a feed opening in its upper portion, a pipe extending downwardly into the hopper below the said opening, a feed pipe above the said opening and arranged to be moved laterally into and out of register therewith, an open end pipe section telescopically mounted upon the lower end of the first named pipe, together with actuating connections for effecting a vertical movement thereof; substantially as described.

4. In furnace feeding apparatus, a hopper having a feed opening at its upper portion, a fixed discharge pipe extending downwardly into the hopper below the said opening, a plurality of telescoping pipe sections mounted on

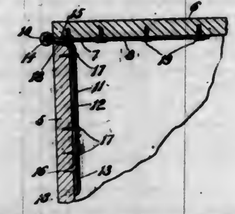
the said pipe, actuating connections for effecting a successive telescopic movement of the said sections, and means for securing the sections in different adjustments; substantially as described.



5. In fuel feeding apparatus for furnaces, a hopper having a feed opening at its upper end, a fixed pipe section extending downwardly into the hopper below said opening, a plurality of telescopic sections mounted on the depending portion of said pipe, guiding means for said sections, and link and lever actuating connections for moving the section; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

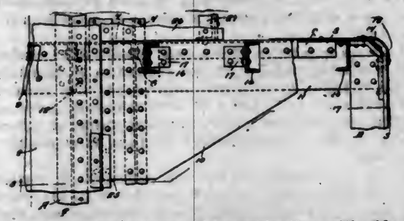
1,014,790. HINGE. SIMON VOLZ, Milwaukee, Wis. Filed Dec. 13, 1909. Serial No. 532,733. (Cl. 16—104.)



A box hinge, comprising an upper member formed of a straight strip of sheet metal bent at one end to form a knuckle and adapted to be fastened to the iner face of a box cover with the knuckle portion extending beyond the rear edge of the box, and a lower member formed of a metal rod bent into an inverted U-shape to form depending legs and a pivotal portion, said legs bent substantially at right angles to offset the pivotal portion with relation to the legs and said pivotal portion extending through the knuckle of the upper member, the legs of said lower member being adapted to be fastened to the inner surface of the back portion of a box with the right angularly bent portions extending over the upper edge thereof to provide for covering the major portion of the hinge with the box cover when in closed position and to prevent said hinge from being pulled off the box by the cover, when said cover is swung to open position.

1,014,791. PASSENGER-CAR UNDERFRAME. WILLIAM VOSS, Wilmington, Del., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 27, 1910. Serial No. 579,322. (Cl. 105—76.)

1. In a car underframe, the combination with a center sill and platform extension sills at opposite sides thereof, of an end sill comprising sections between the center sill and platform extension sills and between the platform extension sills and the sides of the car, and platform sills fixed to outer faces of some of said sections.



2. In a car underframe, the combination with side connecting members, of an end sill comprising channel sections, and a bottom cover plate connecting said sections and fixed to the lower flanges thereof and to said side connecting members.

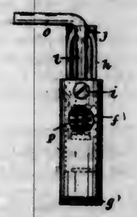
3. In a car underframe, a center sill and an end sill comprising separate sections at each side of the center sill, a cover plate at each side of the center sill extending longitudinally of the sections and fixed thereto, said cover plates having their inner edges spaced from said center sill, and means connecting said cover plates to said center sill.

4. In a car underframe, the combination with a center sill and side connecting members, of an end sill comprising a plurality of sections at each side of the center sill, a bottom cover plate fixed to the center sill and extending longitudinally of and fixed to the several sections of the end sill and being fixed to the side connecting members, and a discontinuous top cover plate connecting said sections.

5. In a car underframe, the combination with side connecting members, a center sill comprising spaced beams, and a center sill cover plate, of an end sill comprising a plurality of sections at each side of the center sill, a bottom cover plate fixed to the center sill and extending longitudinally beneath and fixed to the end sill sections and to said side connecting members, and a separately formed gusset plate fixed to the end sill sections and to the center sill cover plate for connecting said sections together and to said center sill.

[Claims 6 to 27 not printed in the Gazette.]

1,014,792. DETONATING-ALARM DEVICE. EDWARD B. WALDRON, Paterson, N. J. Filed Sept. 28, 1911. Serial No. 651,755. (Cl. 116—42.)



1. The combination of a supporting member including an anvil, a hammer rectilineally movable in said member against the anvil, a detent arranged in the supporting member and adjustable therein around the path of movement of the hammer, and a spring normally forcing the hammer against the anvil, said hammer being normally restrained from such movement by the detent but being revoluble out of engagement therewith and having a lateral projection affording means to rotate it, substantially as described.

2. The combination of a supporting member including an anvil, a hammer rectilineally movable in said member against the anvil, a sleeve-shaped detent arranged in the supporting member and adjustable therein around the path of movement of the hammer and surrounding the hammer, and a spring normally forcing the hammer against the anvil, said hammer being normally restrained from such movement by the detent but being revoluble out of engagement therewith and having a lateral projection affording means to rotate it, substantially as described.

1,014,793. PROCESS OF OBTAINING TITANIC OXID. GEORGE WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 2, 1909. Serial No. 530,939. (Cl. 23—13.)

1. The method which consists in decomposing ilmenite with about double its own weight of hot concentrated sulfuric acid, treating the reaction product with water, and precipitating a relatively pure titanium compound by boiling.

2. The method which consists in decomposing ilmenite with sulfuric acid in the proportions and at a temperature sufficient to produce a substantially dry mass containing titanium sesquisulfate, and subsequently converting said titanium sesquisulfate into titanium oxid.

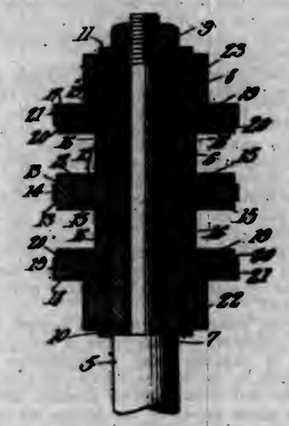
3. The process which consists in decomposing ilmenite with sulfuric acid, treating the reaction product with sufficient water to dissolve the iron sulfates while maintaining the titanium sulfate in suspension and adding a large amount of boiling water, thereby forming a relatively insoluble titanium compound while maintaining the iron sulfates in solution.

4. The step which consists in treating ilmenite with about double its weight of hot concentrated sulfuric acid to produce a nearly dry mass of ferrous sulfate, ferric sulfate, and titanium sesquisulfate.

5. The method which consists in treating ilmenite with hot concentrated sulfuric acid in the proportions and at a temperature sufficient to produce a substantially dry mass containing sulfates, treating said product with water, treating with a reducing agent to reduce any ferric sulfate present, and then heating to the boiling point to form meta-titanic acid.

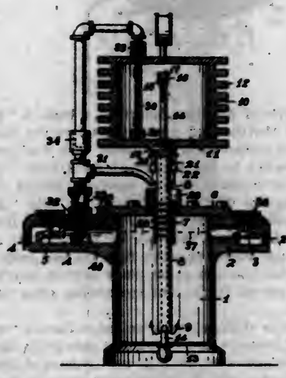
[Claims 6 to 8 not printed in the Gazette.]

1,014,794. CUTTER-HEAD. HENRY T. WEIRBACH, Allentown, Pa. Filed Apr. 20, 1910. Serial No. 556,511. (Cl. 144—231.)



The combination with a spindle having a shouldered end and provided with a threaded terminal, a washer engaging the shouldered end, and a washer mounted upon the threaded terminal, of a cutter head comprising a main sleeve adapted to surround the said spindle and abutting the two washers at its respective ends, a centrally disposed annular collar formed integral with said sleeve and provided with two parallel grooves extending across the sides thereof and upon each side of the sleeve, two collars slidably mounted upon the sleeve one upon each side of its integral collar, each of said slidable collars having grooves to correspond with the grooves of the integral collar, cutter blades mounted in the grooves of the collars, and two clamping sleeves one to each respective end of the main sleeve mounted thereon and adapted to be engaged by the respective washers and a nut to clamp the collars and cutters together.

1,014,795. STEAM-PUMP. WALTER O. WHEELER, Worcester, Mass. Filed Sept. 24, 1909. Serial No. 519,481. (Cl. 230—16.)



1. In an apparatus of the class described, a fluid chamber, valve controlled inlet and outlet passages thereto, a condensing chamber separate from said fluid chamber, a valve controlled steam admission pipe leading to said condensing chamber, a connecting pipe between said fluid chamber and said condensing chamber, and a predetermined amount of liquid in said fluid chamber arranged to close said connecting pipe.

2. In an apparatus of the class described, a fluid chamber, inlet and outlet passages communicating with the upper part of said chamber, check valves in said passages, a pivoted lever, a shell inclosing a steam condensing chamber supported on one end of said lever, with the bottom of said condensing chamber communicating with the top of said fluid chamber, a steam pipe leading from a source of steam supply to the upper part of said condensing chamber, and a valve closing said steam pipe and operatively connected with said pivoted lever.

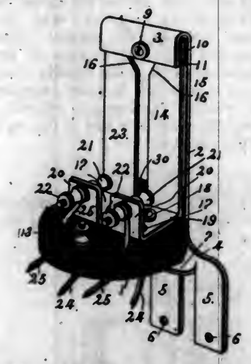
3. In an apparatus of the class described, a fluid chamber arranged to be filled with liquid to a certain level, a condensing chamber separate from said fluid chamber and communicating therewith below said level, a steam pipe leading to said condensing chamber, and means for opening and closing said steam pipe.

4. In an apparatus of the class described, a pumping chamber partially filled with liquid, a condensing chamber communicating with said fluid chamber below the level of said liquid, a steam passage leading from a source of steam supply to said condensing chamber, and automatic means for opening and closing said steam passage.

5. In an apparatus of the class described, a fluid chamber having valve controlled inlet and outlet openings, a cover for said chamber, a sleeve vertically movable in said cover, a shell mounted on said sleeve and inclosing a condensing chamber, a counterweight for said shell, a steam pipe leading to said condensing chamber, a valve closing said steam pipe, and means for opening and closing said valve controlled by the vertical movement of said shell.

[Claims 6 to 8 not printed in the Gazette.]

1,014,796. LIGHTNING-ARRESTER AND TEST DEVICE. HENRY E. WIRT, Lewiston, Minn. Filed Mar. 13, 1911. Serial No. 613,965. (Cl. 175—30.)



1. In a device of the class described, a base, a "ground" plate secured thereto and projecting upwardly therefrom, a pair of line plates secured to said base and projecting upwardly parallel to but separated from said "ground" plate and separated from one another, means for electrically insulating said line plates from said "ground" plate, and means for mechanically securing said line plates to said "ground" plate together with means for securing line and house wires to said line plates, said "line" plates being held in the same plane and in a plane parallel to, but spaced from, that containing said "ground" plate.

2. In a device of the class described, a base, a "ground" plate secured thereto and projecting upwardly therefrom, a pair of line plates secured to said base and projecting upwardly parallel to but separated from said "ground" plate and separated from one another, means for electrically insulating said line plates from said "ground" plate, and means for mechanically securing said line plates to said "ground" plate together with means for securing line and house wires to said line plates, and a housing fitted over the aforesaid parts, said "ground" plate having a downwardly projecting portion by means of which the same may be secured to a support, and said housing adapted to contact said "ground" plate.

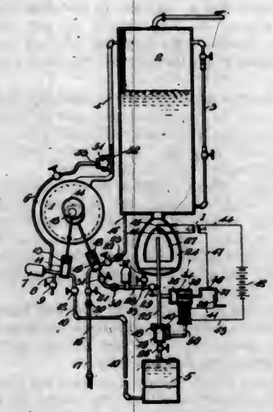
3. In a device of the class described, an insulating base, a "ground" plate secured to said base and projecting upwardly therefrom, a pair of line plates secured to said base and each including an arm projecting parallel to but separated from said "ground" plate, said line plates also having a second arm, a pair of binding posts secured to the second arm of each of said line plates, one of said binding posts of each of said line plate arms adapted to receive the ends of line wires, and the other binding posts adapted to receive the ends of the house wires.

4. In a device of the class described, an insulating base, a "ground" plate secured to said base and projecting upwardly therefrom, a pair of line plates secured to said base and each including an arm projecting parallel to but separated from said "ground" plate, said line plates also having a second arm, a pair of binding posts secured to the second arm of each of said line plates, one of said binding posts of each of said line plate arms adapted to receive the ends of line wires, and the other binding posts adapted to receive the ends of the house wires, and a binding post on said "ground" plate to which a grounding wire may be secured.

5. In a device of the class described, an insulating base, a "ground" plate secured to said base and projecting upwardly therefrom, a pair of line plates secured to said base and each including an arm projecting parallel to but separated from said "ground" plate, said line plates also having a second arm, a pair of binding posts secured to the second arm of each of said line plates, one of said binding posts of each of said line plate arms adapted to receive the ends of line wires, and the other binding posts adapted to receive the ends of the house wires, a "ground" binding post mounted on said base, and a bracket portion secured beneath said base in electrical contact with said "ground" binding post, and electrically and mechanically connected to said "ground" plate.

[Claims 6 to 10 not printed in the Gazette.]

1,014,797. STEAM GENERATOR AND REGULATOR FOR TURBINES. ELMER A. WURTZ, Barberton, Ohio. Filed June 28, 1909, Serial No. 504,813. Renewed June 19, 1911. Serial No. 634,111. (Cl. 60—31.)



1. A steam generator for turbines, engines and heating systems, comprising a boiler, a fuel supply device communicating with the lower end thereof, an igniting device for the fuel, a cut-off valve for the fuel, and means for throwing the igniting device out of operation when the maximum steam pressure is reached.

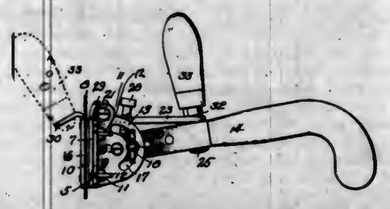
2. A steam generator for turbines, engines and heating systems comprising a boiler, a fuel supply device communicating with the lower end thereof, an electro-magnetic device for igniting the fuel, a cut-off valve for the fuel, normally held open by the igniting device, and means for breaking the circuit through the igniting device when the maximum pressure of the steam is reached to permit the cut-off valve to close.

3. A steam generator for turbines, engines, and heating systems, comprising a steam boiler, a fuel supply device involving a gasolene tank communicating therewith, means driven by the turbine for forcing a charge of air through the tank to mix with the gasolene, connections including a piston driven by the turbine for continuously passing water through the upper end of the fuel supply device, an igniting device for the fuel, a cut-off valve for the fuel, means for normally holding the cut-off valve in open position to permit the air and gasolene mixture to pass into the boiler, and means to throw the valve holding means out of operation to provide for the release of the valve when the maximum steam pressure in the boiler has been reached.

4. A steam generator for turbines, engines and heating systems, comprising a steam boiler, a fuel supply device involving a gasolene tank communicating therewith means driven by the turbine for forcing a charge of air through the tank to mix with the gasolene, connections including a piston driven by the turbine for continuously passing water through the upper end of the fuel supply device, an igniting device for the fuel, a pivoted fuel cut-off valve, electro-magnetic means for normally holding the valve in open position, and means for breaking the circuit through the electro-magnetic means when the maximum pressure of the steam in the boiler is reached.

5. A steam generator for turbines, engines and heating systems, comprising a steam boiler, a fuel supply device involving a gasolene tank communicating therewith, means driven by the turbine for forcing a charge of air through the tank to mix with the gasolene, connections including a piston driven by the turbine for continuously passing water through the upper end of the fuel supply device, an igniting device for the fuel, a fuel cut-off valve pivoted to the fuel supply device and provided with an armature and electro-magnetic means including a solenoid for attracting the armature of the valve in order to hold the latter in open position when the circuit is closed through the igniting device and solenoid, and means for breaking the circuit through the solenoid and igniting device when the maximum steam pressure in the boiler is reached.

1,014,798. SCRAPING-TOOL. GUSTAV ZUZULY, Pullman, Ill. Filed Aug. 25, 1911. Serial No. 646,058. (Cl. 145—47.)



1. A scraper comprising a head having outstanding flanges, blade-holding jaws carried by the head, a handle extending between the flanges, a pivot bolt passing through the handle and the flanges, an apertured tongue pivotally mounted between the flanges above the handle, and a bolt passing through the handle and one of the apertures of the tongue.

2. A scraper comprising a head having outstanding flanges provided with arcuate slots, blade-holding jaws carried by the head, a handle extending between the flanges, a pivot bolt passing through the handle and the flanges, a bolt passing through the handle and the slots of the flanges, an apertured tongue pivotally mounted between the flanges above the handle, and a bolt passing through the handle and one of the apertures of the tongue.

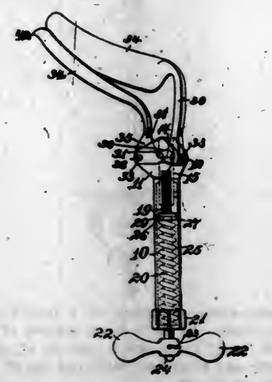
3. A scraper comprising a head having outstanding flanges, blade-holding jaws carried by the head, a handle extending between the flanges, a pivot bolt passing through the handle and the flanges, an apertured tongue pivotally mounted between the flanges above the handle, a bolt passing through the handle and one of the apertures of the tongue, and a set screw carried by the tongue and engageable with the top of the handle.

4. A scraper comprising a head having outstanding flanges, blade-holding jaws carried by the head, a handle extending between the flanges, a pivot bolt passing through the handle and the flanges, an apertured tongue pivotally mounted between the flanges above the handle, a bolt passing through the handle and one of the apertures of the tongue, and an auxiliary handle connected to the bolt.

5. A scraper comprising a head consisting of a pair of plates which are spaced apart at their inner edges and have outstanding flanges at said edges, blade-holding jaws carried by the head, a handle extending between the flanges and pivotally connected thereto, a tongue pivotally mounted between the flanges above the handle, and an adjustable connection between the handle and the free end of the tongue.

1,014,799. SURGICAL INSTRUMENT. RICHARD S. ARTHUR, Newark, N. J. Filed Sept. 16, 1910. Serial No. 582,314. (Cl. 128—24.)

1. A speculum comprising a barrel having a head thereon, the head having slots therein, a set of fingers having plates on their inner ends, the plate of each finger having a recess on its outer edge and a nose on its inner edge, pins so arranged that each pin bridges a slot in the head, the plates of the fingers being adapted to have their recessed portions detachably fitted over the pins, the fingers having their projecting ends projecting at an obtuse angle to the handle and all to one side thereof, and means extending through the barrel and engaging the noses on the plates for swinging the fingers toward and from each other.



2. A speculum comprising a barrel having a head thereon, the head having radial slots therein, a pin bridging each slot, a thimble arranged to slide in the head, means for operating the thimble to slide it, fingers, each finger having a recessed portion to detachably receive a pin in one of the slots and having a nose to engage the thimble and spring means on the thimble with which the noses of the fingers engage to detachably secure them so that when the thimble is slid the fingers are swung toward or from each other.

3. A speculum comprising a barrel having a head thereon, the head having radial slots therein, a pin in each slot, a thimble arranged to slide in the head, means for sliding the thimble, said means extending through the barrel, an annular groove on the thimble, the thimble having a rounded head which is split to give the head a spring action, and fingers, each finger having a plate provided with a recess on one edge to receive a pin in one of the slots of the head and having a nose on its other edge, said nose being adapted to be sprung over the spring head of the thimble and be seated in the annular groove.

4. A speculum comprising a head having radial slots therein, a pin extending across each slot, fingers, each finger having a plate on one end, the plate having a recess in one edge and a nose on the opposite edge, the recess of each plate being adapted to receive one of the pins, a thimble sliding in the head and having a rounded end, the thimble having an annular groove below the rounded end and being split on its rounded end to give it a spring action whereby the noses on the plates can be sprung over the rounded end and into the annular groove of the thimble, a suitable support for the head, and means for sliding the thimble to cause the fingers to be swung toward or from each other.

5. A speculum comprising a barrel forming a handle, a stem in the barrel terminating in a screw-threaded post, a head on the barrel, the head being slotted, a pin bridging each slot, fingers having plates on one end of each finger, each plate having a recess on one edge and a nose on the opposite edge, the recess being adapted to receive a pin and to permit the plate to swing in a slot in the head, means for turning the stem, and a thimble sliding in the head, the thimble having a screw-threaded recess to receive the post and having a rounded split head and an annular groove adjacent to the head, the groove being adapted to receive the noses of the plates.

[Claims 6 to 10 not printed in the Gazette.]

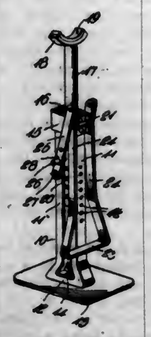
1,014,800. THERMOMETER. HENRY L. BALDERSTON, Philadelphia, Pa. Filed June 2, 1911. Serial No. 630,798. (Cl. 73—52.)

1. A thermometer consisting of a tube having a heat measuring column the main body portion of which consists of one liquid and a small portion of colored liquid located above and in contact with the top of the main or body portion of liquid.

2. A thermometer consisting of a tube having a heat measuring column therein consisting of two liquids the boiling point of one of which is high and which constitutes the main or body portion of the column and the other one of which consists of a small portion of colored liquid located above and in contact with the first-named portion.

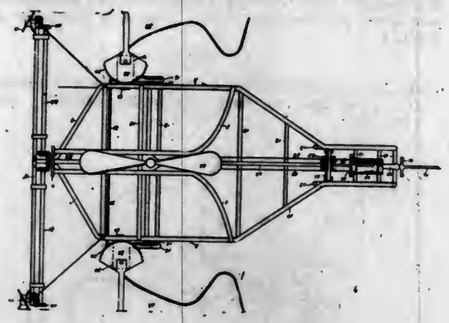
3. A thermometer consisting of a tube having a heat measuring column therein which consists of two liquids the specific gravity and boiling point of one of which constituting the main or body portion of the column are high and the other one of which consists of a small portion of colored liquid of low specific gravity and relatively low boiling point which is located above and in contact with the first-named portion of liquid.

1,014,801. VEHICLE-JACK. GEORGE M. BEARD, Lagrange, Ind. Filed Jan. 10, 1911. Serial No. 601,818. (Cl. 57—101.)



As an article of manufacture, a jack comprising a base, a fixed standard section mounted upon the base comprising a channel bar bent upon itself with its flanges presented toward each other, a slidable standard section fitted between the spaced portion of the fixed standard section, a clip embracing the upper ends of the spaced portions of the fixed section and having terminal portions projecting beyond one of the said spaced portions, a flanged plate secured to the said spaced portion of the fixed standard section and located between the projecting portions of the clip, a pivot pin held between the said plate and the said portion of the fixed standard section and projecting at its ends through the projecting portions of the clip, an operating lever pivoted to the projecting ends of the pivot pin, and links pivoted to the lever and to the movable standard section.

1,014,802. FLYING-MACHINE. OTTO W. BOCHE, Meriden, Conn. Filed June 26, 1911. Serial No. 635,270. (Cl. 244—15.)



1. A flying machine comprising a frame and a motor carried thereby, two propellers carried at opposite sides of the forward end and a rudder at the rear end, a wing carried at each side of the frame, said wings each having a segmental rack at its inner end, and means connected with the motor for driving the propellers and including gears engaging with the racks on the wings whereby the wings may be moved forward or backward.

2. In a flying machine, the combination with a frame, a motor carried thereby, propellers at the forward end of the frame, a wing on each side of the frame adapted to be turned rearward, a rudder at the rear of the frame, a vertically movable shaft carrying a retarding propeller at its upper end, a frame carrying a rear controlling propeller mounted on the frame near the rear end, connections between the motor for moving the propellers, and wings, and means for controlling the movement of the same including clutch mechanism whereby the retarding propeller may be set in motion when the forward propellers are at rest.

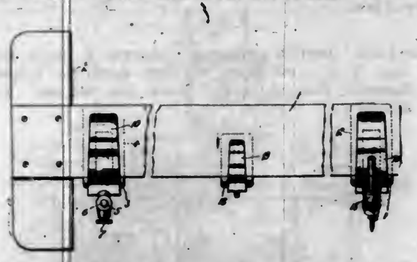
3. A flying machine comprising a frame, a motor carried thereby, shafts at the forward ends of the frame, propellers at the outer ends of the shafts, a wing mounted at each side of the frame, a rudder at the rear, a vertically movable shaft carrying a propeller at its upper end, a propeller mounted near the rear of the frame, connections between the motors and the propellers, and wings, mechanism for controlling such connection including a clutch whereby the forward propellers may be driven without moving the vertical shaft or the vertical shaft driven without moving the forward propellers.

1,014,803. DRAFTING INSTRUMENT. HARRY GEORGE BOHN, New York, N. Y. Filed Feb. 24, 1911. Serial No. 610,465. (Cl. 33—13.)

1. In a drafting instrument, the combination of a beam, a clamp adjustably secured thereto, a clip and a projection carried by said clamp, a style in said clip, said style and projection both pointing downwardly and having their lower ends disposed laterally relatively to one another so as to be on opposite sides of the vertical longitudinal plane passing through the center of gravity of the apparatus.

2. In a drafting instrument, the combination of a beam, a clamp adjustably secured thereto, a style clip and a

projection carried by said clamp, a style in said clip, said style and projection both pointing downwardly and having their lower ends disposed laterally relatively to one another so as to be on opposite sides of the vertical longitudinal plane passing through the center of gravity of the apparatus, the lower end of the style being out from beneath the beam and on one side thereof.



3. In a drafting instrument, the combination of a horizontally disposed thin flat beam, a clamp adjustably secured thereto, a style clip and a projection carried by said clamp, a style in said clip, said style and projection both pointing downwardly and having their lower ends disposed laterally relatively to one another so as to be on opposite sides of the vertical longitudinal plane passing through the center of gravity of the apparatus; a second clamp removably secured to said beam at a distance from said first clamp, a point and a projection carried by said clamp and extending downwardly and disposed laterally relatively to one another so as to be on opposite sides of said plane.

4. In a drafting instrument, the combination of a beam, a clamp adjustably secured thereto, a style clip and a projection carried by said clamp, both pointing downwardly and disposed laterally relatively to one another so as to be on opposite sides of the vertical longitudinal plane passing through the center of gravity of the apparatus; said projection terminating in a roller whose axis is substantially parallel to the edges of said beam, a second clamp removably secured to said beam at a distance from said first clamp, a point and a projection carried by said clamp and extending downwardly and disposed laterally relatively to one another so as to be on opposite sides of said plane, said last named projection terminating in a roller whose axis is substantially at right angles to the edges of said beam.

5. In a drafting instrument, an attachment adapted to be secured to a beam, having in combination a base having an upper surface adapted to engage the lower surface of said beam, a clip located adjacent to one end of said base, and a projection located adjacent to the other end of said base, both pointing downwardly and means for holding said base to said beam.

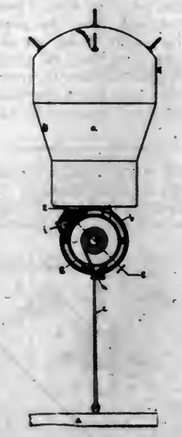
[Claim 6 not printed in the Gazette.]

1,014,804. AUTOMATIC SPEED-BRAKE FOR SUBMARINE MINES. FRITZ BRÜCK, Osnabrück, Germany. Filed Dec. 8, 1909. Serial No. 532,104. (Cl. 102—8.)

1. The combination, in a submarine mine of the class described, of a head, an anchor, a cable connecting said head and anchor, a winding drum for said cable, and a speed brake entirely independent of but driven by and controlling said winding drum.

2. In combination with the winding drum, in a submarine mine of the class described; a speed brake comprising a housing having two chambers, a pair of meshed spur gears embraced by one of said chambers, a spindle fixed to one of said gears and actuated by the winding drum, and a pair of orifices connecting the two chambers, said orifices being oppositely situated as to a line through the axes of the two spur gears, substantially as and for the purpose described.

3. In combination with the winding drum, in a submarine mine of the class described; a speed brake comprising a housing having two chambers, a pair of meshed spur gears embraced by one of said chambers, a spindle fixed to one gear and actuated by the winding drum, a pair of orifices connecting the two chambers, said orifices being oppositely situated as to a line through the axes of the spur gears, and an adjustable screw adjacent one of said orifices, substantially as and for the purpose described.

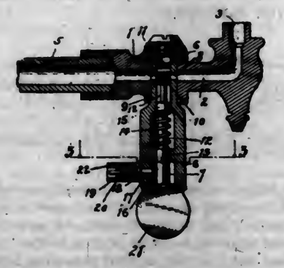


4. The combination, in a submarine mine of the class described, of a head, an anchor, a cable connecting said head and anchor, a winding drum, a speed brake entirely independent of but driven by and controlling said winding drum, and means for regulating the magnitude of the braking effect exerted by said speed brake.

5. The combination, in a submarine mine of the class described, of a head, an anchor, a cable connecting said head and anchor, a winding drum for said cable attached to said head, and a speed brake entirely independent of but driven by and controlling said winding drum.

[Claim 6 not printed in the Gazette.]

1,014,805. SAFETY-COCK. FRANK S. BUA, Lodi, N. J. Filed July 13, 1911. Serial No. 638,415. (Cl. 137—7.)



1. In a device of the character described a body member having a longitudinal gas passage, a valve member therein and having a port, a plunger in the valve member provided with a head also having a port which lies normally out of the plane of the port in the valve member, a catch in the valve member, a lug upon the plunger member adapted to engage said catch when the plunger member is extended and a spring adapted to hold the plunger in its normal position substantially as shown and described.

2. In a device of the character described, a body member having a longitudinal gas passage, a valve member therein having a port, a plunger having a port in its

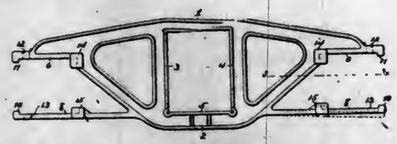
head, a spring upon the plunger adapted to hold the port in the plunger head away from the port in the valve member and a catch in the valve member adapted to hold the plunger out of its normal position substantially as shown and described.

3. In a device of the character described, a body member having a longitudinal gas passage, a valve member therein having a port lying in the plane of the said gas passage and revoluble in the body member, a plunger in said valve member provided with a head having a port formed therein, a spring upon the plunger adapted to hold the port in the plunger head out of the port in the valve member, a finger hold upon the plunger whereby the plunger may be extended to bring its port within the port in the valve member and a catch for holding the plunger in an extended position substantially as shown and described.

1,014,806. ANCHOR FOR WIRE FENCES AND OTHER USES. DAVID M. BURNS, WILLIAM B. SHRIVER, and ALBERT WADE SHRIVER, Ashland, Ohio. Filed May 22, 1911. Serial No. 628,655. (Cl. 189—92.)

An anchor plate having a substantially V-shaped driving point and substantially square wings at its side having forwardly curved points at the top and right angle corners at the sides of the plate and separated by a substantially square recess above said driving point, and said plate provided with a driving hole beneath its middle and a walled channel on its back leading thereto and provided with a hole on each side of said channel and a bowed transverse rib between said holes across the back of said channel on the face of said plate next above said driving hole.

1,014,807. CAR-TRUCK. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Dec. 8, 1910. Serial No. 596,305. (Cl. 105—243.)



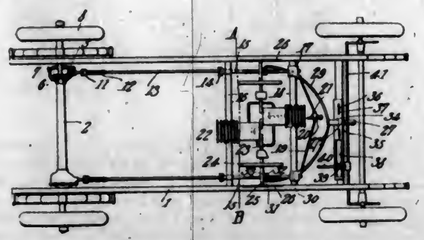
1. A truck frame consisting of compression and tension members and two jaws at each end, all cast integral, the lower jaws each being provided with an upwardly projecting lug, and adapted to yield or give vertically, whereby each journal box may be entered side-wise between its jaws and over the lug and when in place be held against lateral displacement by the lug on the yielding lower jaw.

2. A truck frame consisting in part of compression and tension members, and jaws projecting at each end from said frame, all of said parts being cast integral, the lower jaws being slightly inclined downwardly at their free ends.

3. A truck frame consisting in part of compression and tension members, and jaws projecting at each end from said frame, all of said parts being cast integral, the lower jaws being elastic and slightly inclined downwardly at their free ends and each provided with an upwardly projecting lug at its free end.

4. A truck frame consisting of compression and tension members and the jaws 6 and 8, the latter having upwardly projecting lugs, all cast integral, the jaws 8 being of greater length than the jaws 6 and adapted to yield or give vertically whereby each journal box may be entered side-wise between the jaws and over the lug, and when in place be held against displacement by the lug on the yielding lower jaw.

1,014,808. MOTOR-VEHICLE. BRITTON E. BYRD, Durham, N. C. Filed Oct. 15, 1909, Serial No. 522,809. Renewed Nov. 25, 1911. Serial No. 662,468. (Cl. 21—90.)



1. A motor vehicle including separately revoluble drive wheels, a motor, drive disks actuated by said motor, friction gears driven by the disks, separate means for transmitting motion from said gears to the respective wheels, a longitudinally movable pivoted slide, connections between said slide and the gears for simultaneously shifting the gears in one direction, means for actuating the slide, a steering mast, and means actuated by said mast for shifting the slide about its pivot to move the gears simultaneously in opposite directions.

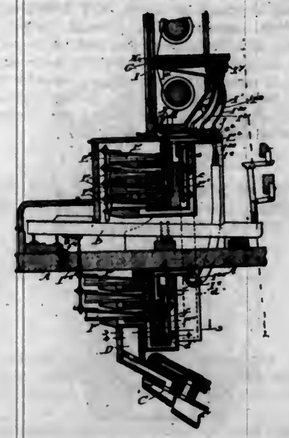
2. In a motor vehicle the combination with drive friction disks, of friction gears actuated thereby, a pivotally supported slide, means actuating the same, connections between the slide and gears for simultaneously shifting the gears in the same direction upon the working faces of the disks, a revoluble steering mast, a gear thereon, a rack meshing with the gear, a slide movable with the rack, the first mentioned pivoted slide projecting through and being actuated by the slide of the rack to simultaneously shift the gears in opposite directions.

1,014,809. INTERIOR-PLAYER PIANO. MELVILLE CLARK, Chicago, Ill. Filed Apr. 12, 1909. Serial No. 489,473. (Cl. 84—233.)

1. An interior player piano, comprising, in combination with a manual, a principal pneumatic action and a supplemental pneumatic action positioned for operating independently of each other upon the manual keys; a tracker board and tubes leading therefrom, a portion of said tubes being connected directly with the principal pneumatic action; a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected and ducts with which said ports register leading to the primaries of said action; a second valve slide mounted on the same support as the first slide having ports to which a third group of said tubes are connected, said support having ports with which the ports of said second slide are adapted to register, and tubes leading from said last-mentioned ports to the supplemental action.

2. An interior player piano comprising, in combination with a manual, a principal pneumatic action and a supplemental pneumatic action, and connections from the motor penumatics of said actions respectively for operating on the manual keys at different points in their length; a tracker board and tubes leading therefrom, a portion of said tubes being connected directly to the principal action; a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected

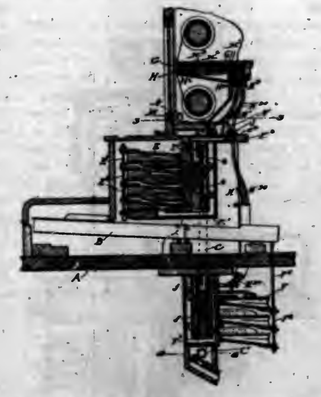
and ducts with which said ports register leading to the primaries of said action; a second valve slide mounted on the same support as the first slide having ports to which a third group of said tubes are connected, said supports having ports with which the ports of the second slide are adapted to register, and tubes leading from said last-mentioned ports to the supplemental action.



3. In an interior player piano, comprising the combination of a manual, a principal pneumatic action and a supplemental pneumatic action, the former being located above the manual keys, and positioned for acting downward upon said keys forward of their fulcrums, the other being located below the portion of the manual keys forward of their fulcrums, connections from the motor pneumatics of the latter action, for engaging the manual keys for depressing them at their forward ends, a tracker board and tubes leading therefrom, a portion of said tubes being connected directly to the principal pneumatic action, a valve slide mounted on said principal action having ports to which a second portion of said tubes are connected and ducts with which said ports register, leading to the primaries of said action, a second valve slide mounted on the same support as the first slide, having ports to which a third group of said tubes are connected, said support having ports with which the ports of said second slide are adapted to register; tubes leading from said last mentioned ports to the supplemental action, said tubes being grouped for extending down past the manual keys at the opposite ends of the instrument to reach their connections with the supplemental action.

1,014,810. INTERIOR-PLAYER PIANO. MELVILLE CLARK, Chicago, Ill. Filed Apr. 13, 1909. Serial No. 489,624. (Cl. 84—233.)

1. In an interior player piano, in combination with the foundation board and manual keys, a tracker device mounted above the manual keys; a pneumatic action mounted between the tracker device and the manual keys, and a second pneumatic action mounted below the foundation board; ducts from the tracker device comprising a group for connection with the first mentioned action, a group for connection with the second-mentioned action, and a branched group for connection with both of said actions, the upper action having at its upper end a duct board extending rearward and overhanging the manual provided with ports extending through it at its overhanging part, and also with the primary ducts of said action leading to ports in the upper surface of the board; a slide or valve bar mounted upon said overhanging portion having ports for registration with the first-mentioned ports of said duct board and adapted for movement for non-registration therewith; flexible tubes from said ports of said duct board leading to the lower action, said valve bar having connected to its ports the ducts of the second group and one set of branches of the third group; a second valve bar mounted on said duct board having ports for registration with the duct ports and adapted for movement for non-registration therewith, said valve bar having connected to it the second set of branches of the third group of ducts, and means for moving said valve bars for registration and non-registration of their ports with those of the duct board.



2. In an interior player piano, in combination with the case, foundation board, manual keys and tracker device, two pneumatic actions, one of which is mounted above the manual keys and the other below the foundation board, the tracker device having ducts for connection with both said actions, the upper action having at its upper end a duct board extending rearward and overhanging the rear portion of the manual keys; a valve bar mounted on said duct board; flexible tubes from such valve bar to the tracker device and from the overhanging portion of the duct board to the lower pneumatic action, and means for operating the valve bar.

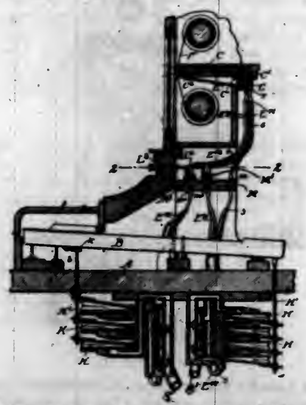
3. In an interior player piano, in combination with the case and tracker device, an upper and a lower pneumatic action, the tracker device having ducts for connection with both of said actions, the upper action having at its upper end a duct board projecting rearward; a valve bar mounted on said duct board; flexible tubes from said valve bar to the tracker device and from the rearwardly extending portion of the duct board to the lower pneumatic action, and means for operating the valve bar.

1,014,811. INTERIOR-PLAYER PIANO. MELVILLE CLARK, Chicago, Ill. Filed Apr. 13, 1909. Serial No. 489,625. (Cl. 84—233.)

1. In an interior player piano, in combination with the manual keys, a tracker device and a roll carriage mounted above the manual keys forward of the hammer action; a principal pneumatic action and a supplemental pneumatic action mounted below the manual keys; a duct connection board mounted above the manual keys and below the roll carriage frame and tracker device, the tracker device having ducts comprising a group for connection with the principal action, a second group for connection with the supplemental action, and a third group branched for connection with both actions; a valve bar mounted on the duct connection board, and flexible tubes connected therewith from the second group and one of the branches of the third group; a second valve bar mounted on said duct connection board, and flexible tubes of the second branch of the third group connected with it, and means for operating said valve bars independently of each other.

2. An interior player piano comprising in combination with the case and the manual keys, a principal pneumatic action and a supplemental pneumatic action mounted for operation upon the manual keys at points requiring such

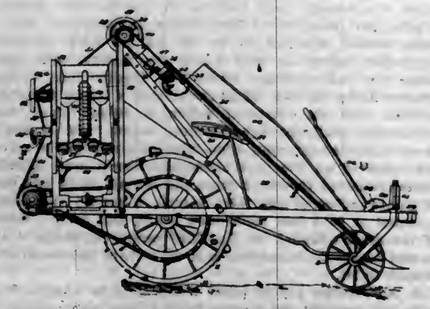
operation to be in opposite directions; a tracker device having ducts for connection with the pneumatic actions respectively; a duct connection board mounted within the case above the part of the manual keys rearward of their exposed portion; valve bars on such duct connection board; flexible tubes from the tracker devices to the valve bars respectively; flexible tubes from the duct connection board to the pneumatic actions respectively, and valve bar operating devices extending through the front of the case.



3. In an interior player piano, in combination with the case, tracker devices and pneumatic actions, a duct-connection board mounted in the case apart from the tracker device and from the pneumatic actions; valve bars on such duct connection board; flexible tubes from the tracker device to the valve bars and flexible tubes from the duct connection board to the pneumatic actions, and means for operating such valve bars extending to the exterior of the case.

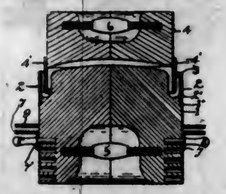
4. An interior player piano comprising, in combination with the case and the manual keys, a principal penumatic action and a supplemental pneumatic action mounted for independent operation on the manual keys; a tracker device having ducts for connection with said pneumatic actions respectively; a duct connection board mounted within the case above the part of the manual keys rearward of their exposed portion; valve bars on such connection board; flexible tubes from the tracker device to the valve bars respectively; flexible tubes from the duct connection board to the pneumatic actions respectively, and valve bar operating connections extending through the front of the case.

1,014,812. CORN HARVESTER AND HUSKER. WILLIAM CLOUSER, Dana, Ind. Filed Jan. 4, 1908. Serial No. 409,322. (Cl. 56—113.)



In a corn harvester including coöperating snapping rolls one located at a higher elevation than the other and both arranged longitudinally of the machine, coöperating husking rolls arranged transversely of the machine, and a conveyer operating between the two sets of rolls adjacent the lowermost snapping roll and arranged to receive ears of corn from the lowermost snapping roll with their long dimensions in vertical planes parallel with the vertical planes in which the axes of the husking rolls lie, said conveyer being arranged to travel in a direction parallel with the vertical planes passing through the axes of the snapping rolls, and an inclined pan located below the delivery end of the conveyer and leading to the husking rolls and arranged to receive the ears of corn sidewise from the conveyer and deliver them endwise to the husking rolls without turning the same and means for reciprocating the pan longitudinally of the husking rolls.

1,014,813. HAT BLOCK, TELESCOPER, AND PRESSER. JACOB H. COHN, Cleveland, Ohio. Filed Oct. 26, 1910. Serial No. 589,231. (Cl. 223—31.)



1. A hat block of the type set forth comprising a hat block proper provided with a shoulder at its upper portion; a casing surrounding said hat block; a recess formed by said casing at the shouldered portion of the hat block proper, in combination with a telescoper, adapted to enter said recess.

2. A hat block of the type set forth comprising a hat block proper provided with a shoulder at its upper portion; a casing surrounding said hat block; a recess formed by said casing at the shouldered portion of the hat block proper, in combination with a telescoper comprising a downwardly projecting flange, said flange being of such contour as to fit within the recess of the block proper at all points.

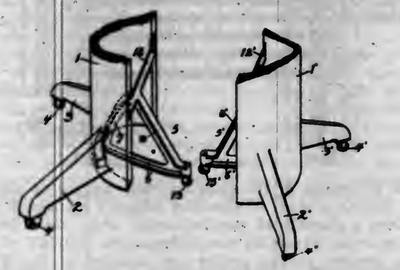
3. A hat block of the type set forth comprising a hat block proper provided with a shoulder at its upper portion; a casing surrounding said hat block; a recess formed by said casing at the shouldered portion of the hat block proper, in combination with a telescoper and means for pressing and forming the hat rim substantially as and for the purpose set forth.

1,014,814. METALLIC TIRE. CLARENCE E. COX, Fairfax, Mo. Filed June 20, 1910. Serial No. 568,026. (Cl. 152—8.)

1. A tire including a plurality of metallic sections each having grooves at one edge and inturned tongues at its oposite edge, the tongues and the grooves being formed for interlocking engagement, and beads carried upon the outer faces of the sections and overhanging the grooves to retain the tongues therein.

2. A tire comprising sections having interlocking tongues and grooves, and angular beads carried on the sections and having their angular portions extending over the tongues and grooves to hold the same at spaced points from spreading apart.

1,014,815. SUPPORT FOR TABLES AND SIMILAR ARTICLES. ARTHUR A. CUSHMAN, Bristol, R. I. Filed May 19, 1909. Serial No. 496,954. (Cl. 45—9.)



1. A pedestal extension-table comprising two halves, each of said halves being provided with a support which is located beneath the opposing half when the table is closed.

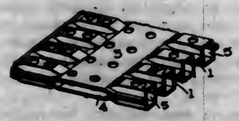
2. A pedestal extension-table comprising a central pedestal consisting of two oppositely disposed halves, each of said halves being provided with a support secured to said half and having the free end thereof arranged and adapted to extend beyond the contacting edge of the half to which it is secured and lie beneath the opposite half when the pedestal is closed.

3. A pedestal extension-table comprising a central pedestal formed of two oppositely disposed hollow halves, and a supporting leg secured upon the interior of each of said halves and having the free end thereof located within the opposite half when the table is closed.

4. A pedestal extension-table comprising a central pedestal formed of two oppositely disposed hollow halves, each of said halves being provided with a support upon the interior thereof, said support consisting of a triangular frame, having at one angle a segmental plate secured to the pedestal half, at another angle a cross-piece secured to the inner edges of said pedestal half and at the other angle a caster, said caster being located outside of said inner edges of the pedestal half.

5. A pedestal extension-table comprising a central pedestal formed of two oppositely disposed hollow halves, each of said halves being provided wth a triangular support, one angle of said support being provided with a segmental plate secured in a recess near the bottom of the pedestal body, another angle of said support being secured to a cross-piece extending across the inner open side of said pedestal body and the other angle of said support being provided with a caster adapted to be located in a recess at the bottom of the opposite pedestal half when the table is closed.

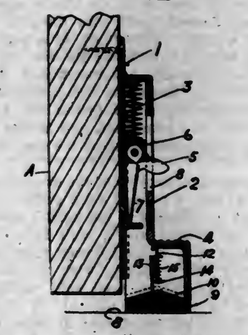
1,014,816. RADIATOR FOR AUTOMOBILES AND THE LIKE. ALFRED DIPPERT, Detroit, Mich., assignor to Charles W. Dippert, Buffalo, N. Y. Filed Aug. 12, 1910. Serial No. 576,899. (Cl. 62—28.)



1. In a radiator, a plurality of superimposed fins formed intermediate their front and rear edges to provide separate superimposed longitudinal passages, the front and rear portions of said fins on opposite sides of the longitudinal passages being formed to provide inner and outer sets of passages disposed at an angle to the aforesaid passages and communicating with the first named passages, and a plurality of water pipes intersecting and piercing said passages, the inner ends of the inner and outer sets of passages being contracted so that air currents are forced into and out of the first named passages.

2. In a radiator, a plurality of superimposed fins formed to provide separate superimposed longitudinal passages and also formed to provide inner and outer sets of passages disposed at an angle to the aforesaid passages, the longitudinal passages being more shallow than the inlet and outlet ends of the outer and inner passages respectively, and a plurality of water pipes piercing and extending through said passages, the inner ends of the inner and outer sets of passages being contracted so that air currents are forced into and out of said longitudinal passages, whereby the air currents are retarded in their flow through the passages to cool the tubes.

1,014,817. DOOR-CHECK. JOSEPH C. EARNSHAW, Germantown, Pa. Filed Apr. 7, 1911. Serial No. 619,494. (Cl. 16—83.)



1. A door check or holder comprising the combination with a casing and its spring actuated slotted bolt of a spring actuated pivotal wedge lever having its wedge like faces arranged for coöperation with the side walls of the slot of the bolt and with a shoe adapted to move in respect to the end of the bolt and having inclined or wedge-like sliding surfaces between it and the end of the bolt.

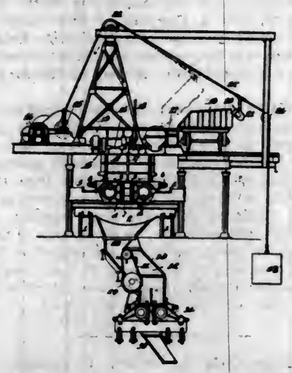
2. In a door check or holder the combination of a spring actuated bolt having a longitudinally ranging slot therein and a spring actuated pivotal lever protruding through the slot and having a wedge-like portion adapted to coöperate with the side walls of said slot.

3. In a door check or holder the combination with a bolt and means for locking it, of a shoe arranged at the end of the bolt and having between it and the end of the bolt a double wedge surface of sliding contact, an extension spring coupling between the shoe and bolt for affording the shoe a limited range of movement, and for automatically returning it to normal position upon release of the bolt.

1,014,818. GIANT ROLLS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Jan. 13, 1903. Serial No. 138,813. (Cl. 83—12.)

1. In rock-breaking apparatus of the character described, the combination with a pair of rolls sufficiently massive to break the rock by changes in the kinetic energy thereof when running at normal speed, of a pair of motors, each of power sufficient to bring its roll up to normal speed when running freely, but insufficient to break the

rock by the direct application of the power, and positive connections whereby one motor drives one roll, and the other motor drives the other roll, substantially as set forth.



2. In rock-breaking apparatus of the character described, the combination with a pair of rolls sufficiently massive to break the rock by changes in the kinetic energy thereof when running at normal speed, and rotating in opposite directions with a gap between them, of a pair of motors, each of power sufficient to bring its roll up to normal speed when running freely, but insufficient to break the rock by the direct application of the power, and positive connections whereby one motor drives one roll and the other motor drives the other roll, and means for adjusting said rolls to change the width of the gap, substantially as set forth.

3. In rock-breaking apparatus of the character described, the combination with a pair of rolls sufficiently massive to break the rock by changes in the kinetic energy thereof when running at normal speed, said rolls rotating in opposite directions with a gap between them, of a motor connected directly and positively with the shaft of each roll for rotating the same, each said motor being of power sufficient to bring its roll up to normal speed when running freely, but insufficient to break the rock by the direct application of the power, substantially as set forth.

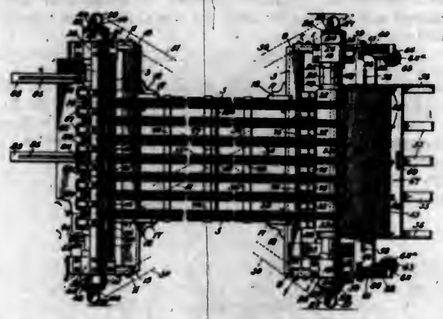
4. In a rock-breaking apparatus of the class described, the combination with a pair of massive rolls rotating in opposite directions with a gap between them, and means for rotating said rolls, said means being of sufficient power to bring the rolls up to normal working speed when running freely, but being insufficient to break the rock by the direct application of power, of a roller-feed for delivering material to the gap between the rolls, and means for starting and stopping said roller feed independently of the position of the rolls, substantially as set forth.

5. In a rock-breaking apparatus of the class described, the combination with a pair of massive rolls rotating in opposite directions with a gap between them, of pillow-blocks in which said rolls are mounted, one or both of which are adjustable for varying the width of the gap, and independent motors carried by the pillow-blocks for independently driving said rolls, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,014,819. MACHINE FOR USE IN SORTING VENEER. ORIN C. FENLASON, Hoquiam, Wash. Filed Feb. 21, 1908. Serial No. 417,169. (Cl. 193—1.)

1. A machine of the class described comprising means for holding a stack of sheets of material in fixed relation, a conveyer, a rotary device for feeding the sheets of material onto the conveyer, said rotary device engaging the stack at its periphery throughout its entire rotary movement and projecting outwardly beyond the working plane of the conveyer to off-set the latter from the stack.



2. A machine of the class described comprising means for holding a stack of sheets of material, a conveyer including a plurality of sprocket chains, and a shaft carrying sprocket wheels for the chains, and a plurality of rotary annular suction devices also mounted on the shaft for feeding the material onto the conveyer and forming a stop for the stack, the latter being supported in fixed relation with the suction devices, said suction devices being of greater diameter than the sprocket wheels so as to space the conveyer from the stack and engaging the latter throughout their entire rotary movement.

3. A machine of the class described comprising a conveyer including a plurality of endless chains, shafts, and sprocket wheels mounted on the shafts, and front and rear rotary devices also mounted on the shafts for feeding the veneer onto the conveyer and for removing it therefrom.

4. A machine of the class described comprising a conveyer including a plurality of endless chains, hollow front and rear vacuum shafts, and sprocket wheels mounted on the shafts, and front and rear rotary suction devices mounted on and communicating with the shafts for feeding the sheets onto the conveyer and for removing them therefrom.

5. In a machine of the class described, the combination of front and rear shafts, spaced endless carriers connecting the same, front and rear rotary suction devices mounted on the shafts and having their peripheral surfaces projecting outwardly beyond the working plane of the carrier, the front suction device being arranged to feed sheets of material onto the carriers and the rear suction device being adapted to remove the sheets from the carriers.

[Claims 6 to 44 not printed in the Gazette.]

1,014,820. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed June 15, 1911. Serial No. 633,342. (Cl. 70—116.)

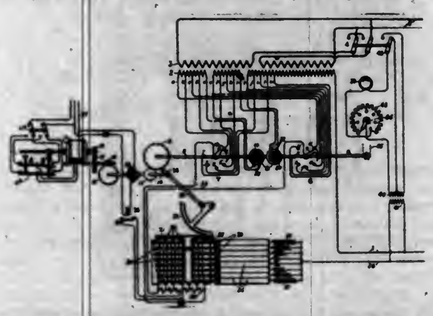
1. In a purse or bag fastener, the combination with a pair of hinged frame members, of a catch member mounted upon each of said frame members for mutual coöperation, each catch member comprising a base provided with integral nibs, and an angularly disposed engaging element extending from said base, and a chambered casing mounted upon each of said frame members provided with a receiving opening, the engaging element of said catch member projecting through and extending beyond the receiving opening in said casing.

2. In a purse or bag fastener, the combination of a pair of hinged frame members, of a chambered casing mounted upon each of said frame members provided with a receiving opening, engaging elements extending outwardly from one side of the receiving opening of said chambered casing adapted to engage with each other, and enter the receiving openings in said chambered casing for holding said engaging elements together.

3. In a purse or bag fastener, the combination of a pair of hinged frame members, of a chambered casing mounted upon each of said frame members provided with a receiving opening, a catch member mounted upon each of said frame members adapted to snap past each other for holding said frame sections together, said catch member located within said chambered casing and projecting through and extending beyond one edge of the receiving opening in said chambered casing.

4. In a purse or bag fastener, the combination of a pair of hinged frame members, of a chambered casing mounted upon each of said frame members provided with a receiving opening on its inner side and a knob extending from its top side, a catch member mounted upon each of said frame members adapted to snap past each other for holding said frame sections together, said catch member located within said chambered casing and projecting through and extending beyond the receiving opening in said chambered casing.

1,014,821. ALTERNATING-CURRENT REGULATOR. EDWARD F. GEHRKENS, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 2, 1910. Serial No. 546,947. (Cl. 171—119.)



1. The combination with a transformer having its primary winding divided into sections and connected at one end with one of the supply mains, of two switches controlling alternate sections of said winding, a compensator having its terminals connected respectively to the moving members of said switches, means for actuating said members, a connection to the other supply main, and means dependent upon said actuating means for shifting said connection from end to end of said compensator.

2. The combination with a transformer having its primary winding divided into sections, of two switches each having stationary contacts connected to alternate sections, a movable member for each switch, means for actuating said members, a subdivided compensator having its terminals connected respectively to said members, contacts connected with the divisions of said compensator, a movable switch coöperating with said contacts, and means operating said switch dependent upon said actuating means.

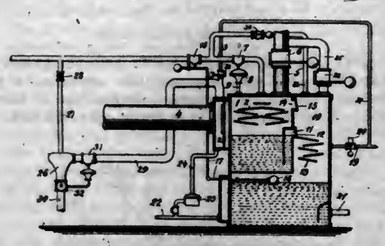
3. The combination with a transformer having its primary winding divided into sections, of two dial switches having their clips connected to alternate sections, a subdivided compensator having its terminals connected to the movable blades of said switches, contact bars connected in between the divisions of the compensator, and a carrier provided with a plurality of stepped fingers adapted to traverse said bars.

4. The combination with a transformer having its primary winding divided into sections, of two dial switches having their clips connected to alternate sections, a subdivided compensator having its terminals connected to the movable blades of said switches, contact bars connected in between the divisions of the compensator, a carrier provided with a plurality of stepped fingers adapted to traverse said bars, and means for intermittently moving said switch blades when said fingers rest on the end bars.

5. The combination with a transformer having its primary winding divided into sections, of two dial switches having their clips connected to alternate sections, a common shaft for the blades of said switches, a subdivided compensator in circuit with said blades, a switch coöperating with the coils of said compensator, a shaft for actuating said compensator switch, and intermittent gearing between said shaft and the shaft carrying the dial switch blades.

[Claims 6 to 9 not printed in the Gazette.]

1,014,822. WATER-HEATING APPARATUS. GEORGE H. GIBSON, Montclair, N. J., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership. Filed Sept. 4, 1909. Serial No. 516,205. (Cl. 122—211.)



1. The combination of a heater, a pipe for carrying water thereto, means for carrying steam to the heater to heat the water therein, a valve in said water pipe operating automatically in response to predetermined conditions of steam within the heater, a second heater, a connection through which water may pass from the first heater to the second, means for admitting steam to the second heater automatically under predetermined conditions to heat the water therein and means for automatically precluding the passage of steam admitted to the second heater from that heater to the first heater, substantially as set forth.

2. The combination of a heater, a pipe for carrying water thereto, means for carrying steam to the heater to heat the water therein, a valve in said water pipe operating automatically in response to predetermined conditions of steam within the heater, a second heater, a connection through which water may pass from the first heater to the second, means for admitting steam to the second heater to heat the water therein, means for automatically precluding the passage of steam admitted to the second heater from that heater to the first heater and means for supplying fresh water to the second heater automatically under predetermined conditions from a source other than the first heater, substantially as set forth.

3. The combination of a heater, a pipe for carrying water thereto, means for carrying steam to the heater to heat the water therein, a valve in said water-pipe responsive to predetermined condition of steam within the heater, a second heater, a connection through which water may pass from the first heater to the second, a float-controlled valve in said water-pipe, a connection from said second heater to said water-pipe at a point in the latter between the float-controlled valve and the first heater, and means for admitting steam to the second heater to heat the water therein, substantially as set forth.

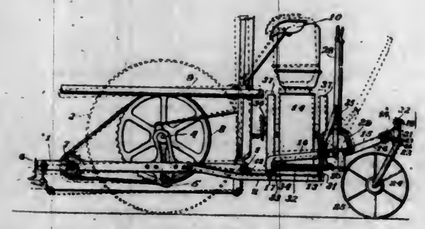
4. The combination of a heater, a pipe for carrying water thereto, means for carrying steam to the heater to heat the water therein, a valve in said water-pipe responsive to predetermined condition of steam within the

heater, a second heater, a connection through which water may pass from the first heater to the second, a connection through which steam may pass from the first heater to the second, a non-return valve in said steam connection, a float-controlled valve in said water-pipe, a connection from said second heater to said water-pipe at a point in the latter between the float-controlled valve and the first heater, and a steampipe for admitting steam to the second heater to heat the water therein, substantially as set forth.

5. The combination of a heater, a pipe for carrying water thereto, means for carrying steam to the heater to heat the water therein, a second heater, connections through which steam and water may pass from the first heater to the second heater arranged to prevent the passage of steam from the second heater to the first heater, a steampipe connected to said second heater, a float in said second heater, a valve in said water-pipe controlled by said float, a second valve in said water-pipe between said float-controlled valve and the first heater and responsive to changes of conditions within the first heater, and a pipe leading to the second heater from a point in said water-pipe between the two said valves therein, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,014,823. MOTOR ATTACHMENT FOR HARVESTERS. LUD HOLLAND-LETZ, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 8, 1911. Serial No. 625,739. (Cl. 56—31.)



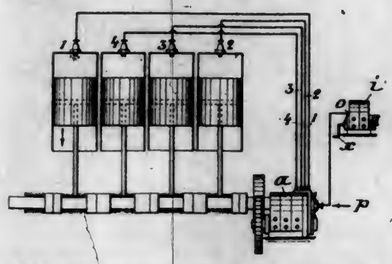
1. A motor attachment for harvesters including, in combination, a motor platform rigidly secured to the frame of a harvester at its rear side, a motor mounted upon said platform, a supplemental frame having its forward end pivotally connected with the motor platform, a caster wheel journaled upon a supporting arm, said arm having a pivotal connection with the rear end of said supplemental frame, and means mounted upon said supplemental frame and connecting said motor platform with said supplemental frame and operative to raise or lower said motor platform relative to said caster wheel.

2. A motor attachment for harvesters including, in combination, a motor platform rigidly secured to the frame of a harvester at its rear side, a motor mounted upon said platform, a support for the rear end of said platform pivotally connected therewith and including a caster wheel mechanism, a hand lever mounted upon said support and means connecting said platform with said hand lever whereby the rear end of said platform may be raised or lowered relative to said caster wheel.

3. A motor attachment for harvesters including, in combination, a motor platform including rearwardly extending side frame members having their forward ends rigidly secured to a harvester frame, a supplemental frame including side members having their forward ends pivotally connected with the side members of said motor platform and their rear ends inclined upward, rearward and inward, a caster wheel, a supporting arm having said caster wheel journaled thereon, a bracket secured to the rear ends of said supplemental frame members, a vertically arranged sleeve forming part of said bracket, said supporting arm being journaled in said sleeve, a hand lever mounted upon said supplemental frame and flexibly connected with said platform, said lever being operative to raise or lower said motor platform relative to said caster wheel.

4. A motor attachment for harvesters including, in combination, a motor platform including rearwardly extending side frame members having their forward ends rigidly secured to a harvester frame, a supplemental frame including side members having their forward ends pivotally connected with the side members of said motor platform and their rear ends inclined upward, rearward and inward, a caster wheel, a supporting arm having said caster wheel journaled thereon, a bracket secured to the rear ends of said supplemental frame members, a vertically arranged sleeve forming part of said bracket, said supporting arm being journaled in said sleeve, a hand lever mounted upon said supplemental frame, bell crank levers pivotally mounted upon the side members of said supplemental frame, links connecting one arm of said levers with said motor platform, and counterbalancing springs connecting the other arm with said motor platform, and a link connection between one of said bell crank levers and said hand lever whereby the operator may manipulate the hand lever in a manner to raise or lower said motor platform relative to said caster wheel.

1,014,824. ELECTRIC IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. GOTTLOB HONOLD, Stuttgart, Germany, MAX RALL, Paris, France, and PAUL MUMPRECHT, Brussels, Belgium, assignors to The Firm of Robert Bosch, Stuttgart, Germany. Filed June 13, 1911. Serial No. 632,948. (Cl. 123—184.)



1. In an electric ignition system for internal combustion engines, a cylinder having a piston and a spark plug, a current supply adapted to produce a spark at said plug for starting ignition, an independent current supply adapted to produce a spark at said plug for running ignition, means for electrically connecting the first named supply to said plug when the piston is in the working stroke and means for electrically connecting the second named supply to said plug when the piston is in the compression stroke.

2. In an electric ignition system for internal combustion engines, a cylinder having a piston and a spark plug, a current supply adapted to produce a spark at said plug for starting ignition, an ignition machine adapted to produce a spark at said plug for running ignition, means for electrically connecting the supply for starting ignition to said plug when the piston is in the working stroke, and means for electrically connecting said machine to said plug when the piston is in the compression stroke.

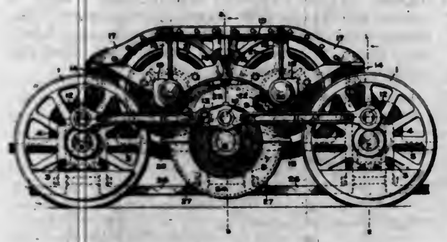
3. In an electric ignition system for internal combustion engines, a cylinder provided with a spark plug, an ignition machine adapted to produce a spark at said plug for starting ignition when the engine is at rest, a second ignition machine operatively connected to the engine and adapted to produce a spark at said plug for running ignition when the engine is rotating at sufficiently high speed, and means for electrically connecting said machines alternately to said plug.

4. In an electric ignition system for internal combustion engines, a cylinder having a piston and a spark plug, an ignition machine adapted to produce a spark at said plug for starting ignition, a second ignition machine adapted to produce a spark at said plug for running ignition, means for electrically connecting the first named machine to said plug when the piston is in the working stroke, and means for electrically connecting the second named machine to said plug when the piston is in the compression stroke.

5. In an electric ignition system for internal combustion engines, a cylinder provided with a spark plug, an ignition machine adapted to produce a spark at said plug, a second ignition machine operatively connected to the engine and adapted to produce a spark at said plug for running ignition when the engine is rotating at sufficiently high speed, means for electrically connecting said machines in succession to said plug, and means disconnected from the engine for operating the first named machine to produce a spark at said plug for starting ignition when the engine is at rest.

[Claims 6 to 9 not printed in the Gazette.]

1,014,825. ELECTRIC LOCOMOTIVE. FRED B. HOWELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 15, 1910. Serial No. 582,171. (Cl. 105—220.)



1. An electric locomotive comprising a frame, driving wheels and axles, a transverse jackshaft between said axles, a gear wheel on each end of said jack-shaft, crank-pins on said wheels and gears, side rods connecting said crank-pins, two electric motors supported above said jack-shaft and between it and said driving axles, said motors having armature shaft extending across said locomotive, and a pinion on each end of each armature shaft, the pinions on each side of the locomotive both meshing with the gear wheel on that side.

2. An electric locomotive comprising a frame, driving wheels and axles, a jack-shaft journaled transversely in said frame, gear wheels on said jack-shaft, side rods connecting said gears and driving wheels, and two motors provided with pinions to mesh with said gears and having field frames resting on said frame and removable vertically therefrom without disturbing the driving and running gear.

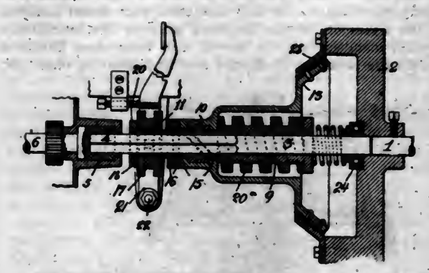
3. An electric locomotive comprising a frame, driving wheels and axles at the ends thereof, a transverse jack-shaft journaled at the middle thereof, a gear at each end of said shaft, side rods connecting said gears and wheels, two motors located above and on either side of said shaft and between it and the driving axles, pinions on the motor shafts meshing with said gears, and a gear cover for each set of gear and pinions, the upper half of each cover being secured to the motor frame and the lower half to the locomotive frame.

4. An electric locomotive comprising a frame supported on driving wheels, a motor field frame supported on the locomotive frame, brackets on each side of said field frame, and journal bearings in said brackets for the armature shaft of said motor.

5. An electric locomotive comprising a frame supported on driving wheels, a motor field frame supported on said locomotive frame, brackets secured to the upper part of said field frame on each side thereof, and extending laterally and downward therefrom, and journal bearings in said brackets for the armature shaft of said motor.

[Claim 6 not printed in the Gazette.]

1,014,826. CLUTCH. MORRIS B. IRELAND, New York, N. Y. Filed Jan. 22, 1909. Serial No. 473,613. (Cl. 192—8.)



1. The combination with a driving and a driven shaft, of coöperating clutch members carried by said shaft, one of said clutch members being movably mounted to releasably engage the other member, and means whereby upon a predetermined load the shaft carrying one of said clutch members is permitted to rotate differentially with respect to said clutch member.

2. The combination with a driving and a driven shaft, of a releasable clutch connection between the two shafts, said clutch including a movable member mounted on one of said shafts for clutching the other shaft, and means whereby upon a predetermined load, the movable clutch member is moved in a direction tending to release the driving connection and relatively to its shaft.

3. The combination with a driving and a driven shaft, of a releasable clutch connection between the two shafts, said clutch including a member mounted to move longitudinally on one of said shafts toward and from the other clutch member, means for holding the clutch members in engagement, and means whereby upon a predetermined load the movable clutch member is moved longitudinally and rotated relatively to its shaft to relieve the driving torque.

4. The combination with a driving and a driven shaft, of a friction clutch for releasably connecting said shafts, means for holding the clutch in engagement, means whereby the engagement of the clutch tends to automatically effect a release independently of the holding means, and yielding means separate from the holding means for opposing such release and adapted to overcome said holding means at a predetermined load.

5. The combination with a driving and a driven shaft, of clutch members coöperating to couple said shafts, one of said clutch members being movable toward and from the other, a movable sleeve carrying said clutch member, said clutch member being threaded thereon, means tending to move the sleeve to engage the clutch members, and a spring carried by the sleeve and resiliently holding the movable clutch member from turning backward on said sleeve when engaged.

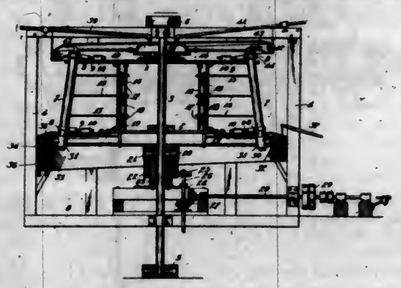
[Claims 6 to 9 not printed in the Gazette.]

1,014,827. ORE-CONCENTRATING MACHINE. ORRIN H. KING, Chicago, Ill., assignor to United States Concentrating Company, a Corporation of Illinois. Filed June 8, 1910. Serial No. 565,677. (Cl. 83—87.)

1. In an ore concentrating machine, a series of tubular members provided with concentrating channels within, means located within the tubular members and forming one wall of the concentrating channel, mechanism common to the series of tubular members whereby said means may be moved in a transverse direction within said tubular members, and resilient means intermediate of the first-mentioned means and the wall of the tubular members whereby the first mentioned means will be restored to normal position.

2. An ore concentrating machine comprising a vertically arranged rotatable shaft, a series of tubular members having concentrating channels within, said members being provided with inlet and outlet ports at their tops and

bottoms, respectively, mechanism extending from end to end in said members and yieldingly held in close proximity to one side of said members to form a wall of the concentrating channels in said members, and means common to the series of tubular members whereby the mechanism in said members may be moved in a transverse direction within the members to expand the concentrating channels.



3. An ore concentrating machine comprising a vertically arranged rotatable shaft, a series of tubes arranged vertically in a circular manner about the shaft and connected therewith, said tubes being provided with concentrating channels and inlet ports at their upper ends and outlet ports at their lower ends, the lower ends of the tubes being so arranged as to describe a larger circle than the upper ends, mechanism extending from end to end in said tubes and yieldingly held in close proximity to one side of the tubes to form a wall of the concentrating channels, and means common to the series of tubes whereby said mechanism may be moved in a transverse direction within the tubes to expand the concentrating channels.

4. An ore concentrating machine comprising a vertically arranged rotatable shaft, a series of tubes arranged vertically in a circular manner about said shaft and operatively connected therewith, the tubes being provided with concentrating channels and inlet and outlet ports at their upper and lower ends respectively, mechanism extending from end to end in said tubes to form one wall of the concentrating channels within said tubes, resilient means whereby said mechanism is yieldingly held in normal position, and means common to the series of tubes whereby said mechanism may be moved in a transverse direction within the tubes and against the action of said means.

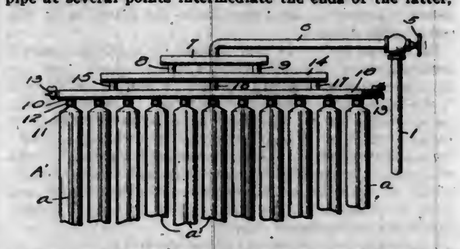
5. An ore concentrating machine comprising a vertically arranged shaft, a series of tubes arranged vertically in a circular manner about the shaft and operatively connected therewith, said tubes being provided with concentrating channels and inlet and outlet ports at their upper and lower ends respectively, the lower ends of the tubes being arranged to describe a larger circle than that described by the upper ends, yieldingly held mechanism extending from end to end in said tubes and normally in close proximity to one side of said tubes to form a wall of the concentrating channels within the tubes, and means common to the series of tubes whereby said mechanism may be moved in a transverse direction within the tubes to expand the concentrating channels.

[Claims 6 to 22 not printed in the Gazette]

1,014,828. RADIATOR. WILLIAM F. KLEES, Scranton, Pa. Filed July 26, 1911. Serial No. 640,717. (Cl. 237—19.)

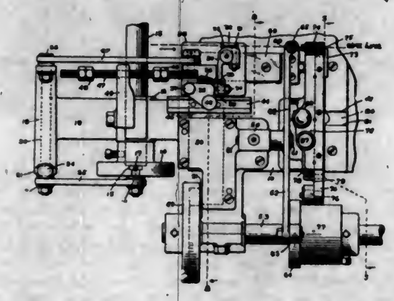
1. The combination with a radiator comprising a series of vertically arranged sections, of a distributing pipe having branch connections with the upper ends of the several radiator sections, a second distributing pipe connected to said first mentioned pipe at several points intermediate the ends of the latter, a steam pipe connected to the base of the radiator and also connected to said second distributing pipe intermediate the ends of the latter.

2. The combination with a radiator comprising a series of vertically arranged sections, of a distributing pipe having branch connections with the upper ends of the several radiator sections, a valve-controlled vent in said pipe, a second distributing pipe connected to said first mentioned pipe at several points intermediate the ends of the latter,



a steam pipe connected to the base of the radiator and also connected to said second distributing pipe intermediate the ends of the latter, and a valve in said steam pipe for regulating the flow of steam to the distributing pipes.

1,014,829. WIRE-FEEDING MECHANISM. JOHN G. LEPPER and WILLIAM W. MANVILLE, Waterbury, Conn., assignors to The Manville Brothers Company, Waterbury, Conn., a Corporation of Connecticut. Filed Feb. 3, 1911. Serial No. 606,405. (Cl. 140—130.)



1. In a wire feeding mechanism, a feeding slide, means for actuating the same, a lever pivoted to said slide and having one end arranged as a wire gripping member, a cam pivoted to said slide, means for holding the other member of said lever normally in engagement with said cam, and means independent of said slide and its operating means for oscillating said cam, whereby said lever is rocked.

2. In a wire feeding mechanism, a feeding slide, means for actuating the same, a lever pivoted to said slide and having one end arranged as a wire gripping member, a cam pivoted to said slide, means for holding the other member of said lever normally in engagement with said cam, and means independent of said slide and its operating means for oscillating said cam, whereby said lever is rocked, and means carried by said cam for varying the length of the oscillations, whereby said cam is rendered inoperative.

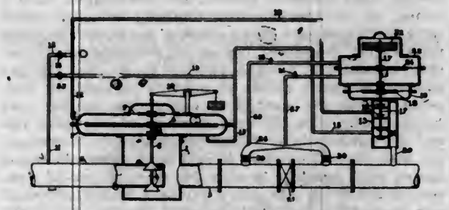
3. In a wire feeding mechanism, a feeding slide, means for actuating the same, a lever pivoted to said slide and having one end arranged to directly grip a wire, a cam pivoted to said slide, means engaging the other member of said lever to hold the latter normally in engagement with said cam, and means movable at an angle with relation to said feeding slide for periodically oscillating said cam.

4. In a wire feeding mechanism, a feeding slide, means for actuating the same, a lever pivoted to said slide and having one end arranged as a wire gripping member, a cam pivoted to said slide, means for holding the other member of said lever normally in engagement with said cam, a second slide normally engaging said cam, and movable at an angle with relation to said feeding slide, and means for actuating the second slide.

5. In a wire feeding mechanism, a feeding slide, means for actuating the same, a lever pivoted to said slide and having one end arranged as a wire gripping member, a cam pivoted to said slide, means for holding the other member of said lever normally in engagement with said cam, a second slide provided with a guide way normally in engagement with said cam, and means for periodically reciprocating the second slide.

[Claims 6 to 28 not printed in the Gazette.]

1,014,830. PRESSURE-INCREASER. ERNEST F. LLOYD, Detroit, Mich. Filed Jan. 31, 1910. Serial No. 540,945. (Cl. 50—11.)



1. The combination with a conduit of regulating means for automatically maintaining a constant pressure in the conduit on the outlet side of the regulator, means for causing a local drop in pressure at a point in the outlet side of the conduit, and a reciprocable member that is operated by variations in the difference between the pressures on the opposite sides of the point and is adapted when so operated to coact with the regulator to vary the pressure in the outlet side of the conduit as the volume of flow past said point varies.

2. The combination with a conduit of regulating means for automatically maintaining a constant pressure in the conduit on the outlet side of the regulator, means for causing a local drop in pressure at a point in the outlet side of the conduit, a reciprocable member that is operated by variations in the difference between the pressures on the opposite sides of the point and is adapted when so operated to coact with the regulator to vary the pressure in the outlet side of the conduit as the volume of flow past said point varies, and means between the conduit and member for multiplying the effect of the differential pressure thereon.

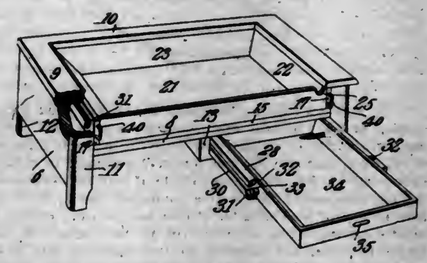
3. The combination with a conduit of regulating means for automatically maintaining a constant pressure in the conduit on the outlet side of the regulator, means for causing a local drop in pressure at a point in the outlet side of the conduit, a reciprocable member that is operated by variations in the difference between the pressures on the opposite sides of the point and is adapted when so operated to coact with the regulator to vary the pressure in the outlet side of the conduit as the volume of flow past said point varies, and a Venturi tube for multiplying the effect of the differential pressure on the member.

4. The combination with a conduit of a regulating valve therein, means actuated by fluid under pressure and adapted to operate the regulating valve, a master valve that is operated by variations in pressure in the conduit on the outlet side of the regulating valve and is adapted to direct flow from the conduit on the inlet side of the regulating valve to the operating means of the latter, to open the regulating valve when the pressure in the conduit on the outlet side falls and to close it when said pressure rises, means for causing a local drop in pressure at a point in the conduit on the outlet side of the regulating valve, and means operated by variations in the difference between pressures on opposite sides of said point and adapted to so control the master valve that the pressure in the outlet side of the conduit increases as the volume of flow past said point increases.

5. The combination with a conduit of a regulating valve therein, means actuated by fluid under pressure and adapted to operate the regulating valve, a master valve that is operated by variations in pressure in the conduit on the outlet side of the regulating valve and is adapted to direct flow from the conduit on the inlet side of the regulating valve to the operating means of the latter, to open the regulating valve when the pressure in the conduit on the outlet side falls and to close it when said pressure rises, means for causing a local drop in pressure at a point in the conduit on the outlet side of the regulating valve, means operated by variation in the difference between pressures on opposite sides of said point and adapted to so control the master valve that the pressure in the outlet side of the conduit increases as the volume of flow past said point increases, and means for multiplying the effect of the differential pressure on the master valve controlling means.

[Claim 6 not printed in the Gazette.]

1,014,831. KITCHEN-CABINET. JOSEPH LONG, Evansville, Ind. Filed May 12, 1909. Serial No. 495,437. (Cl. 45—17.)



A kitchen cabinet comprising a frame-work including an open top with overhanging ends, a full-length horizontal partition connecting the ends of the framework, a strip depending therefrom, a half-length partition connecting the strip with one end of the framework, and cleats across the front edges of both partitions; a supporting frame over each partition and comprising side bars movable over said cleats, and a bottom cleat secured across the lower edges of said bars at the rear end of this frame, the bars of the upper frame having slots of dovetailed cross sections and those of the lower frame having plain slots with grooves rising from their outer ends, all said slots having depressions at their outer ends; a sink having headed studs in its sides engaging the slots in the upper supporting frame, and a discharge spout in one front corner of said sink; a tray having plain studs in its sides engaging the slots in the lower supporting frame and removable out of the grooves at the outer end thereof, the tray being disposed beneath the spout end of the sink and having handles in its front and rear ends, the notches at the front ends of all slots being so disposed relative to the position of the frame-cleats that when the latter are in contact with the partition-cleats, the members whose studs rest in said notches may be inverted or tilted and the tray member may have its studs lifted out of said grooves.

1,014,832. TRAIN-SPEED COMPUTER AND INDICATOR. DUMONT LOVE, Chicago, Ill. Filed Feb. 3, 1910. Serial No. 541,944. (Cl. 235—88.)

1. In a direct reading indicator, the combination with a casing, of an indicator dial rotatable within said casing having a series of numbers arranged in a circle adjacent to its edge, and two rows of numbers arranged in smaller, concentric circles, said larger circle of numbers representing one component factor of a computed result, the numbers in one of said smaller circles representing computed

results corresponding with certain of the numbers in said larger row and the numbers in the other smaller circle representing computed results corresponding with certain other numbers in the larger row, sight openings in said casing corresponding with each of said rows of numbers through which single numbers of each row may be viewed, and a movable shutter within said casing having a limited movement and controlling the sight openings through which the numbers of said smaller circles can be viewed, and adapted, when placed in its limiting positions, to open one of said sight openings and close the other, substantially as described.

2. In a direct reading indicator, the combination with a casing, of an indicator dial rotatable within said casing having a series of numbers arranged in a circle adjacent to its edge, and two rows of numbers arranged in smaller concentric circles, said larger circle of numbers representing one component factor of a computed result, the numbers in one of said smaller circles representing computed results corresponding with certain of the numbers in said larger row and the numbers in the other smaller circle representing computed results corresponding with certain other numbers in the larger row, said casing having sight openings corresponding with each of said rows of numbers through which single numbers of each row may be viewed, and a movable shutter within the casing having two openings adapted respectively to register with the two sight openings through which the numbers in the smaller circles can be viewed, said openings through the shutter being spaced to prevent both thereof registering with their opposed openings at the same time, substantially as described.

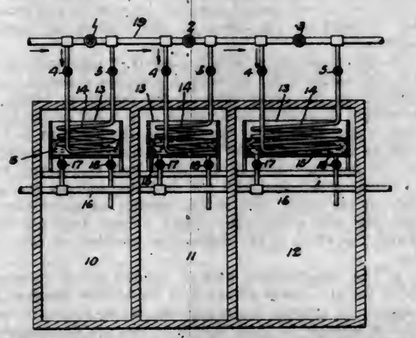
3. In a direct reading indicator, the combination with a casing, of an indicator dial rotatably mounted within same and bearing on its face a series of consecutive numbers arranged in a circle adjacent to its edge and representing component factors of computed results, and a series of computed results corresponding with said component factors and arranged in two smaller circles concentric with the circle of component factors, the numbers in one of said smaller circles representing computed results related to even numbers in the circle of component factors, and the numbers in the other of said smaller circles representing computed results corresponding with the odd numbers in the circle of component factors, said casing being provided with sight openings through which one of the numbers in each of said circles can be viewed at a time, and a shutter within said casing having a limited movement and adapted at one of its limits to uncover the sight opening through which the numbers of one of said smaller circles can be viewed and at the same time to close the opening through which the numbers of the other smaller circle can be viewed and vice versa, substantially as described.

4. In a direct reading indicator the combination with a casing, of an indicator dial rotatably mounted within same and bearing on its face three concentric rows of numbers, the outer row comprising consecutive numbers representing component factors of computed results, and one of the inner concentric rows of numbers representing computed results corresponding with the even numbers in said outer row, and the other of said inner rows representing computed results corresponding with the odd numbers in said outer row, said casing being provided with sight openings corresponding with each of said concentric rows of numbers, a shutter mounted within said casing and having a limited movement and adapted at one limit of its movement to close the sight opening corresponding with one of said inner rows of numbers and open the sight opening corresponding with the other of said inner rows of numbers, and vice versa, and means on said casing indicating which of the sight openings the shutter should uncover to expose to view the computed result corresponding with any specific number in the circle of component factors, substantially as described.

5. In a direct reading indicator having its obverse and reverse sides similarly formed, the combination with a casing, of an indicator dial rotatably mounted within same bearing on each face a series of consecutive numbers representing component factors of computed results arranged thereon in a circle adjacent to its edge and two smaller concentric circles of numbers representing computed results, the numbers in one of said smaller rows corresponding with the even numbers of said outer row and the numbers in said other smaller circle corresponding with the odd numbers in said outer orw, said casing having sight openings in each side for each row of numbers, a shutter in said casing having a limited movement and controlling the sight openings through which the numbers of the smaller circles on each side of the dial can be viewed, and adapted at one limit of its movement to close one of said sight openings on each side of the indicator, and at the other limit of its movement to close the opposite opening on each side of the indicator, and means on said casing indicating which of the sight openings should be uncovered to correspond with any specific number exposed in the sight opening of the component factors, substantially as described.

[Claim 6 not printed in the Gazette.]

1,014,833. TEMPERATURE CONTROL OF REFRIGERATING-COMPARTMENTS. ALBERT T. MARSHALL, Hartford, Conn., assignor to The Automatic Refrigerating Company, Hartford, Conn., a Corporation of New Jersey. Filed July 30, 1910. Serial No. 574,684. (Cl. 62—6.)



1. In a refrigerating chamber, the combination with a refrigerating coil disposed therein, through the whole length of which the refrigerant passes, and means for increasing and decreasing the effective area of said coil, while its entire length is traversed by the refrigerant.

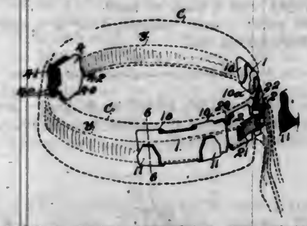
2. In a refrigerating chamber, the combination of a refrigerating coil for conducting a continuous flow of refrigerant through its entire length and means for variably insulating portions of said coil from said chamber.

3. In a refrigerating chamber, the combination of a refrigerating coil for conducting a continuous flow of refrigerant, a heat conductor incasing said coil and having heat conductive connection with said coil and means for varying the extent of said connection with the coil.

4. In a refrigerating chamber the combination with a refrigerating coil disposed therein, a metal tank in said chamber in which said coil is disposed, said tank adapted to contain non-freezing fluid, and means for varying the level of the fluid in said tank to submerge more or less turns of said coil therein.

5. In a refrigerating chamber the combination with a refrigerating coil disposed therein, a metal tank in said chamber in which said coil is disposed, said tank adapted to contain brine, means for supplying brine to and draining it from said tank to vary the brine level and thus the number of turns of said coil submerged in the brine at will to increase or decrease the effective area of said coil for the purpose set forth.

1,014,834. COLLAR AND NECKTIE HOLDER. DANIEL RYAN MCDUFF, Berclair, Tex. Filed Jan. 5, 1911. Serial No. 601,018. (Cl. 24—49.)



1. A holding device comprising two plates of like shape, each having means at one edge for slipping over a shirt band and means at the lower edge for receiving and holding a collar and tie, a member hinged to one end of each of the said plates and removably connected therewith, and a spring snap connection joined with the hinged members.

2. As a new article, a holder for collars and ties that consists of two curved resilient metal plates each of which has a plunger at the upper edge that is bent inwardly and downwardly to form a clasp for slipping over a neckband of a shirt, and like flanges at the lower edge bent outwardly and upwardly for receiving a collar and a tie, a member having a removable hinge connection joined with the meeting end of one of the curved plates, and a snap connected to the other plate for joining with the hinge member, the said snap member having a clasp for engaging the neckband of a shirt.

1,014,835. GRIPPER. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 19, 1905. Serial No. 265,924. (Cl. 12—11.1.)

1. In a grippers mechanism, the combination with a gripper member and a coöperating gripper member with relation to which the first-mentioned member is arranged to rock, of means for moving said rocking gripper member longitudinally toward the coöperating gripper member, a closing device movable laterally with relation to said coöperating gripper member, and other means for actuating the closing device to swing said rocking gripper member toward the coöperating gripper member.

2. In a grippers mechanism, the combination with a plurality of gripper members, of means for relatively moving the gripper members longitudinally, a closing device substantially stationary during said longitudinal movement, and means independent of the gripper members for relatively actuating the closing device and one of said gripper members to swing that gripper member laterally toward the other gripper member.

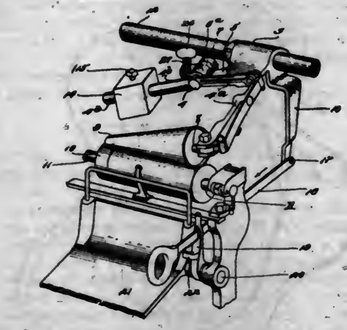
3. In a grippers mechanism, the combination with a plurality of gripper members, of means for relatively moving said gripper members longitudinally to position their gripping faces approximately opposite each other, a closing device, and means arranged to remain inoperative until after the gripping faces have assumed this relation for actuating the closing device relatively to the gripper members for moving said gripping faces from a position approximately opposite each other into a position in holding engagement with the work.

4. In a grippers mechanism, the combination with a plurality of gripper members, of means for relatively moving said gripper members longitudinally to position their gripping faces approximately opposite each other, a closing device for engaging one of said gripper members, and means independent of the means which effects said relative longitudinal movement of the gripper members for actuating said closing device laterally to close the grippers.

5. In a grippers mechanism, the combination with a rocking gripper member and a coöperating gripper member, of a closing device for engaging said rocking gripper member, means for relatively moving the rocking gripper member and the closing device lengthwise of the grippers mechanism, and automatic means for actuating said closing device laterally to turn the rocking gripper member toward the coöperating member for gripping the stock.

[Claims 6 to 44 not printed in the Gazette.]

1,014,836. WINDING-MACHINE. JOHN O. MCKEAN, Westfield, Mass., assignor to Foster Machine Company, Westfield, Mass., a Corporation of Maine. Filed June 29, 1911. Serial No. 635,950. (Cl. 242—34.)



1. In a winding machine the combination with the driving drum, of a cop support for yieldingly holding a conical cop against said drum, said support comprising means to provide for lateral rocking movement of the cop upon an axle perpendicularly tangential with relation to the axis of the driving drum, and means for holding one end of the cop more forcibly against the driving drum than the opposite end.

2. In a winding machine the combination with the driving drum, of a cop support for yieldingly holding a cop against said drum, said support comprising means to provide for lateral rocking movement of the cop upon an axis

passing through the cop intermediate its ends and which is perpendicularly tangential with relation to the axis of the driving drum, and means for holding the smaller end of the cop more forcibly against the driving drum than the larger end.

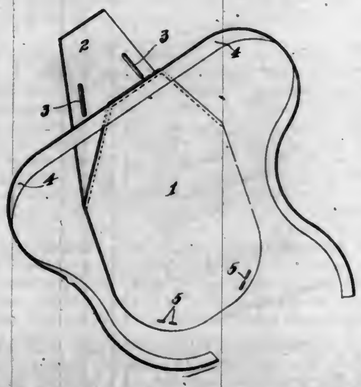
3. In a winding machine the combination with the driving drum, of a cop support for yieldingly holding a cop against said drum, said support comprising means to provide for lateral rocking movement of the cop upon an axis which intersects the axis of the cop midway between the ends of the latter and which is perpendicularly tangential with relation to the axis of the driving drum, and a weight or the like for holding the smaller end of the cop more forcibly against the driving drum than the larger end.

4. In a winding machine the combination with the cop driving drum, of a cop support comprising two members consisting of a hub pivotally supported on an axis parallel with the driving drum and a cop-holding lever pivotally mounted on the hub so as to rock laterally on an axis perpendicularly tangential to the axis of the driving drum and which intersects the axis of the cop intermediate the ends of the latter, said lever being made up of two arms one at one side of the last-mentioned axis provided with a cop holding spindle, and the other arm at the opposite side of said axis provided with a counterbalance weight.

5. In a winding machine the combination with the cop driving drum, of a cop-support comprising two members consisting of a hub pivotally supported on an axis parallel with the axis of the driving drum and a cop-holding lever pivotally mounted on the hub so as to rock laterally on an axis perpendicularly tangential with relation to the axis of the driving drum and which intersects the axis of the cop intermediate the ends of the latter, said lever being made up of two arms one at one side of the last-mentioned axis provided with a cop holding spindle, and the other arm at the opposite side of said axis provided with a counterbalance weight; stop motion devices connected with the hub of the cop, and means on the hub to limit the lateral rocking movements of the lever member of the cop support.

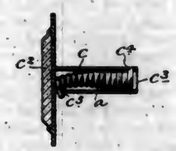
[Claims 6 and 7 not printed in the Gazette.]

1,014,837. VENEREAL BAG. WILLIAM H. MERRILL, St. Louis, Mo. Filed Nov. 4, 1908. Serial No. 461,088. (Cl. 128—38.)



In a device of the class described, a pouch comprising front and back sections, the front section having greater length than the back section and the uppermost end of the back section being of less width than the width of the upper end of the front section, there being slots formed in the front section opposite the upper end of the back section and spaced apart a distance equal to the width of the top edge of the back section, and tapes secured to the upper end of the back section, for the purposes stated.

1,014,838. HAT-PIN GUARD. RUDOLPH MEYER, New York, N. Y. Filed Feb. 23, 1911. Serial No. 610,178. Cl. 24—155.)



1. A pin point guard consisting of a longitudinally curved helical spring coil, one end portion of which is tapered.

2. A pin point guard, consisting of a longitudinally curved helical spring coil, one end of which is tapered and a tube or sleeve in which said coil is secured, said tube or sleeve being open at one end and the other end thereof being provided with a knob or head.

3. A pin point guard, consisting of a longitudinally curved helical spring coil.

1,014,839. TAPE-LINE SPRING-SCALE. EDWIN H. MILLER, Los Angeles, Cal. Filed Nov. 9, 1910. Serial No. 591,433. (Cl. 73—49.)

1. A device of the class described, comprising a frame carrying a tape, a handle connected with said frame, a tension device interposed between the handle and the frame comprising a spring fastened to the frame at one end and extending into a recess in the handle, an enlarged head being secured to the spring within said handle, a movable shoulder mounted in said handle for limiting the outward movement of the head of the spring, a bolt extending from the frame into said handle, and locking means carried by the handle and adapted to engage said bolt, for holding the parts against separation, the movable shoulder permitting the rod to be drawn away from the securing nut when the spring is to be employed, and a scale coöperating with said spring to indicate the pull upon the parts.

2. In a device of the class described, in combination, a frame adapted to receive a tape, a graduated sleeve extending from said frame, a handle mounted to slide on said sleeve, a spring connecting said handle with said frame, and adapted to be extended when said handle is pulled, said scale affording means for measuring the displacement of said handle and measuring the tension of said spring, and a telescoping bushing in said handle having a collar forming an abutment for the said spring.

1,014,840. PISTON LUBRICATING-PUMP. AUGUST MLITZ, Charlottenburg, Germany. Filed Dec. 16, 1909. Serial No. 533,435. (Cl. 184—27.)

In a lubricating pump the combination of a pump-cylinder, a piston, a piston rod carrying the piston, a driving mechanism, actuating the piston a socket member adjustably connected with the driving mechanism the lower part of the piston rod being arranged within the socket member said socket member being provided with a flange, a confining member on the piston rod, a spring arranged between the flange and confining member whereby the piston is pressed against the under side of the socket member, substantially as and for the purpose set forth.

1,014,841. TONE-CLARIFIER FOR TALKING-MACHINES. FRANK VAN VLECK MORSE, Minneapolis, Minn. Filed July 28, 1910. Serial No. 574,319. (Cl. 181—27.)

1. A tone clarifier for a talking machine comprising a plurality of nested tubes of varying lengths adapted to be inserted in the tone arm of the machine.

2. A tone clarifier for a talking machine comprising a plurality of nested tubes of varying lengths adapted to be inserted in the tone arm of the machine, the ends of the tubes at one end of the clarifier being cut off diagonally.

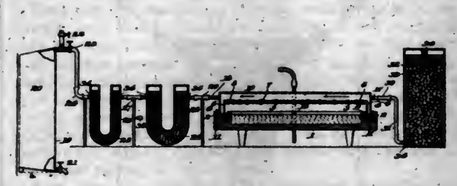
3. A tone clarifier for a talking machine comprising a plurality of nested tubes of varying lengths adapted to be inserted in the tone arm of the machine, the ends of the tubes at one end of the clarifier being cut off squarely in the same plane, and those at the opposite end being cut off diagonally.

4. A tone clarifier for a talking machine comprising a plurality of nested tubes of varying lengths and a circular band of very thin material arranged around said nested tubes, the whole being firmly united by a suitable adhesive substance and adapted to be inserted in the tone arm of the machine.

1,014,842. METHOD OF AND APPARATUS FOR TESTING PAINT. ANTHONY M. MUCKENFUSS, University, Miss. Filed July 30, 1909. Serial No. 510,439. (Cl. 73—51.)

1. A method of testing paint or the like which comprises forming a film of the substance to be tested, exposing one side of said film to a mass of vapor capable of passing through the pores of said film, permitting said vapor to pass through said pores for a substantially definite period, absorbing the vapor which thus passes through said film by absorptive material, and measuring the quantity of the vapor so absorbed.

2. A method of testing paint which consists in exposing a porous diaphragm coated with the paint to be tested within a chamber or cavity containing water vapor on one side of said diaphragm, simultaneously exposing the other side of the diaphragm within a second closed chamber or cavity absorbing substantially all of the vapor which may pass through said diaphragm by a vapor absorbing medium, and finally determining the weight of vapor so absorbed in a given interval of time.



3. A method of testing paint or the like which comprises forming a film of the substance to be tested, exposing one side of said film to aqueous vapor, permitting said vapor to pass through said pores for a substantially definite period, absorbing the vapor which thus passes through said film by absorptive material capable of absorbing acqueous vapor, and measuring the quantity of aqueous vapor as absorbed.

4. In an apparatus for testing paint, a porous diaphragm adapted to be coated with the paint to be tested, means coöperating with said diaphragm to establish a chamber or cavity on one side thereof adapted to hold vapor, means also coöperating with the diaphragm to establish a second closed chamber or cavity on the other side of said diaphragm also adapted to hold vapor, and means for accurately determining the amount of vapor which traverses the diaphragm from the first to the second chamber mentioned, said means comprising vapor collecting material.

5. In an apparatus for testing paint, a porous diaphragm adapted to be coated with the paint to be tested, means removable and replaceable with respect to said diaphragm for establishing a chamber or cavity on one side thereof adapted to hold vapor, means also coöperating with the diaphragm to establish a second closed chamber or cavity on the other side thereof also adapted to hold vapor and also removable and replaceable with respect to the diaphragm, and means for accurately determining the amount of the vapor which traverses the diaphragm from the first to the second chamber mentioned, said means comprising vapor collecting material.

[Claims 6 to 12 not printed in the Gazette.]

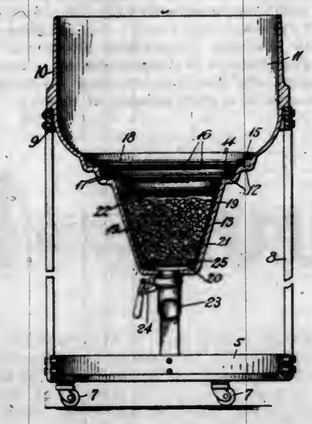
1,014,843. GREASE-FILTER. HARRISON D. NOBLES, East Hartford, Conn. Filed Oct. 7, 1909. Serial No. 521,441. (Cl. 210—12.)

1. A receptacle having an outlet therefrom and a recess therein, a pot constructed to closely fit said receptacle and removably located therein, said pot having a perforated bottom, a screen removably located within the casing on the bottom of said pot, a filtering medium located in the pot above said screen, a pan removably located within and resting upon the bottom of said recess in said receptacle, said recess being located outside the edge of said pot and a screen removably located in the bottom of said pan.

2. A receptacle having an outlet therefrom, a pot removably located in said receptacle and having a perforated bottom, a screen removably resting upon the bottom of said pot, a filtering medium located in the pot above said screen, a pan removably located above said pot and having a perforated bottom, and a screen removably located in the bottom of said pan.

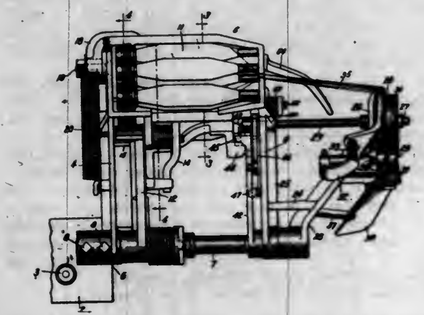
3. A receptacle having an outlet therefrom, a pot removably located in the bottom of said receptacle, a pan having a perforated bottom removably located in said pot, a

filtering medium resting upon said pan, and a second pan removably located in the receptacle above said pot, said



pot and pans each having inturned handles at the upper edge thereof for removal purposes.

1,014,844. FILLING-REPLENISHING LOOM. JONAS NORTHROP, Hopedale, Mass., assignor, by mesne assignments, to Draper Company, a Corporation of Maine. Filed June 22, 1910. Serial No. 568,290. (Cl. 139—85.)



1. In a loom, the combination of filling carrier supply means, a transferrer to transfer filling carriers from said means, a take-up for taking up the slack in the filling ends, and means acting upon a filling end disconnected from the carrier to cause its disengagement from the take-up.

2. In a loom, the combination of filling carrier supplying means, a transferrer to transfer filling carriers from said means, a take-up for taking up the slack in the filling ends, and means for engaging a filling end disconnected from the filling for a carrier and directing it from the action of the take-up.

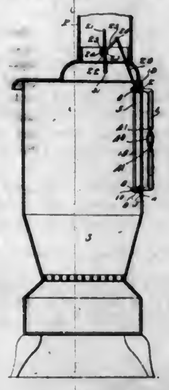
3. In a filling replenishing loom, the combination of filling carrier supplying means, a transferrer for transferring filling carriers from said supplying means, means for holding the end of the filling as the carrier is transferred, and a device acting upon the new filling end to cause its disengagement from said holding means.

4. In a filling replenishing loom, the combination of of filling carrier supplying means for holding a supply of filling carriers, a transferrer for transferring filling carriers from said supplying means, a device for holding the end potion of a filling thread when the carrier is transferred, means acting upon the new filling end to cause its disengagement from said device after said end is disconnected from the filling on the carrier, and a guide for the filling end.

5. In a filling replenishing loom, the combination of filling carrier supplying means for holding a supply of filling carriers, a transferrer for removing a filling carrier from said supplying means, a take-up for taking up the slack occurring in the filling ends, and means for causing the filling ends to pass to and be acted on by the take-up in spread relation.

[Claims 6 to 33 not printed in the Gazette.]

1,014,845. AUTOMATIC DAMPER-REGULATOR. ELBERT A. ORR, Pueblo, Colo. Filed July 3, 1911. Serial No. 636,587. (Cl. 236—5.)



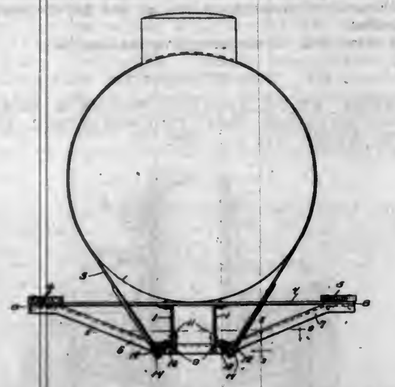
1. In a damper regulator, the combination with the stove having an upright slot in its wall, the damper, the thermal elements, a lever between two of the latter, and connections between said elements and damper; of an inexpansive support whose body is located outside the stove, its upper end passing through and connected with the wall of the stove, and with one extremity of one of said thermal elements, and its lower extremity passing through said slot and connected with the fulcrum of said lever.

2. The combination with a stove having an upright slot in its rear wall, a stove pipe opening out of the stove, and a damper therein; of an inexpansive support whose body stands outside the stove wall with its upper end bent inward and secured thereto and its lower end bent inward and passing loosely through said slot, a thermal bar within the stove body connected at its upper end with the upper end of said support, a lever fulcrumed between its extremities to the lower end of said support with its short arm connected with the lower end of said thermal bar, and connections between its long arm and said damper.

3. The combination with a stove having an outlet, and a damper therein; of an inexpansive support secured at one end to the stove wall, a turn buckle within the length of said support exterior of the stove body, a lever fulcrumed to the other end of the support, connections between one arm of the lever and said damper, and a thermal bar connected at one end to the upper end of said support and pivoted at its lower end to the other arm of said lever, for the purpose set forth.

4. The combination with a stove having an outlet, and a damper therein; of the thermal elements, connections between one of them and said damper, an inexpansive member composed of two upright arms having their outer extremities inturned and a turn buckle connecting their inner extremities, the stove having through its wall a hole and an upright slot and one of said extremities projecting through the hole and the other through the slot, and connections between said extremities and the thermal elements, as and for the purpose set forth.

1,014,846. ANCHOR FOR TANK-BANDS. ALLEN E. OSTRANDER, Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 30, 1910. Serial No. 600,015. (Cl. 105—264.)



1. In a tank car, a cross-bearer, center sills and tank band anchors connecting said sills and cross-bearers.

2. In a tank car, a cross-bearer and running board support, center sills and tank band anchors connecting said sills and cross-bearers.

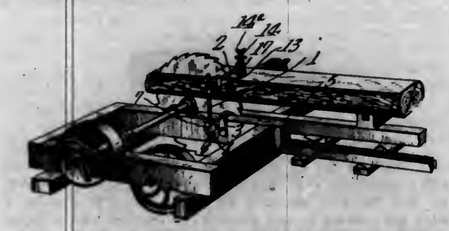
3. In a tank car, a center sill, a cross-bearer extending partly below said center sill, tank band anchors connecting said sill and cross-bearer and tank bands terminating in said anchors.

4. In a tank car, a center sill, a cross-bearer and running board support extending partly below said center sill, tank band anchors connecting said sill and cross-bearer and tank bands terminating in said anchors.

5. In a tank car, center sills, a cross-bearer and tank band anchors connected respectively between and to said sills and to the cross-bearer.

[Claims 6 to 9 not printed in the Gazette.]

1,014,847. SAWMILL-CARRIAGE TESTER. ARTHUR D. PLOWDEN, Sutherland, Tenn. Filed July 21, 1911. Serial No. 639,805. (Cl. 73—66.)



1. A device of the character described, including a marker, means for supporting said marker, comprising a fixed tubular member, a movable tubular member within the aforesaid tubular member, receiving said marker and means for the retention of said marker in operative position within said movable tubular member, and a shoe-member applied to said movable member and having its lower portion adapted for preliminary or initial engagement with the object being marked for suitably disposing the marker with respect to the upper surface of said object.

2. A device of the character described, including a marker, means for supporting said marker comprising a movable tubular member, a fixed tubular member, receiving said marker, and an adjusting screw engaging said movable tubular member and adapted to bear upon said marker, means for guiding said movable tubular member with respect to said fixed tubular member, and a shoe-member applied to the marker-receiving member and having its lower portion adapted for preliminary or initial engagement with the object being marked for suitably disposing the marker with respect to the upper surface of said object.

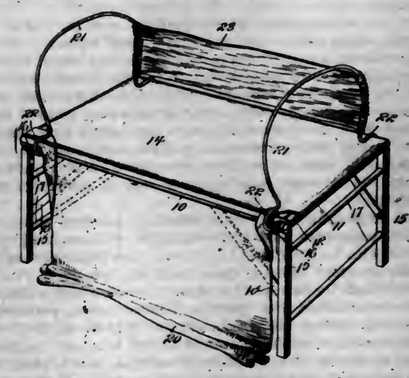
3. A device of the character described, including a marker, means for supporting said marker comprising a fixed tubular member, a movable tubular member, receiving said marker, and an adjusting screw engaging said movable tubular member and adapted to bear upon said marker, means for guiding said movable tubular member with respect to said fixed tubular member, and a shoe member applied to the marker receiving member and having a lower downwardly curved portion adapted for preliminary or initial engagement with the object being marked for suitably disposing the marker with respect to the upper surface of said object.

4. A device of the character described, comprising a marker, means for supporting said marker, including a fixed tubular member, a movable tubular member receiving said marker, and an adjusting screw engaging said tubular member, and adapted to bear upon said member, said fixed tubular member having a vertical slot therein, a screw inserted through said slot and engaging said movable tubular member, and a shoe-member applied to transfer its weight to the marker receiving member, said shoe-member having a lower downwardly curved portion adapted for preliminary or initial engagement with the object being marked for suitably disposing the marker with respect to the upper surface of said object.

5. A device of the character described, including a marker for engaging the surface of the work and means for the support of said marker with respect to said work comprising a fixed tubular member, a vertically movable tubular member within the aforesaid tubular member, receiving said marker, and an adjusting screw engaging said movable tubular member and adapted to bear upon said marker, said fixed tubular member having a vertical slot therein, a set screw inserted through said slot and engaging said vertically movable member, and a shoe applied to transfer its weight to the marker carrying member.

[Claim 6 not printed in the Gazette.]

1,014,848. CRADLE. PETER J. REINERT, Pittsburgh, Pa. Filed Dec. 19, 1910, Serial No. 598,016. Renewed Dec. 5, 1911. Serial No. 664,079. (Cl. 5—56.)

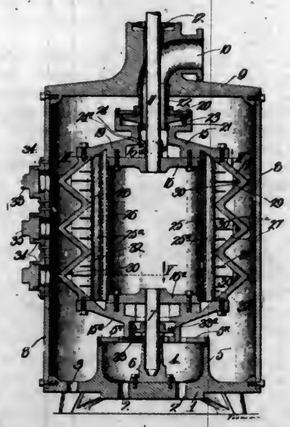


1. A crib comprising a substantially rectangular-shaped frame, including side and end bars, each being provided with a groove disposed in its outer face longitudinally thereof, a canvas sheet disposed across said frame, means detachably securing the edges of the sheet in the grooves in the side and end bars, and a removable cover having

its edges wrapped about the side and end bars and held connected thereto by the sheet when supporting an infant.

2. A crib comprising a substantially rectangular-shaped frame, including side and end bars, each being provided with a groove disposed in its outer face longitudinally thereof, a canvas sheet disposed across said frame, means detachably securing the edges of the sheet in the grooves in the side and end bars, a removable cover having its edges wrapped about the side and end bars and held connected thereto by the sheet when supporting an infant, and means for supporting the frame.

1,014,849. CENTRIFUGAL WATER-CLARIFIER. WILLIAM K. RICHARDSON, Leavenworth, Kans. Filed Dec. 15, 1910. Serial No. 597,581. (Cl. 127—3.)



1. In a centrifugal water clarifier, a rotary vessel in which separation takes place contained within a shell, provided with a centrifugal liquid seal, said vessel having an inlet provided with a centrifugal liquid seal, an outlet, a centrifugal actuated valve controlling said outlet, a chamber having outwardly tapering pockets provided with jet orifices at their diminished ends, said chamber provided with baffle plates surrounded by a strainer through which water must pass to reach the jet orifices of the pockets.

2. In a centrifugal water clarifier, a rotary vessel in which separation takes place contained within a shell, provided with a centrifugal liquid seal, said vessel having an inlet provided with a centrifugal liquid seal, an outlet, a centrifugal actuated valve controlling said outlet, a chamber having outwardly tapering pockets provided with jet orifices at their diminished ends, skeleton frames fitting into said pockets, said chamber provided with baffle plates surrounded by a strainer through which water must pass to reach the jet orifices of the pockets.

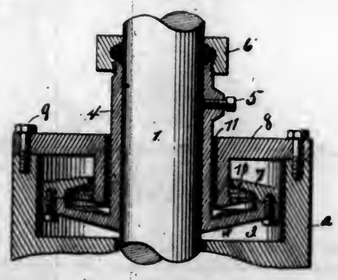
3. In a centrifugal water clarifier, a rotary vessel in which separation takes place contained within a shell, provided with a centrifugal liquid seal, said vessel having an inlet, provided with a worm, and also provided with a centrifugal liquid seal, an outlet, a centrifugal actuated valve controlling said outlet, a chamber having outwardly tapering pockets provided with jet orifices at their diminished ends, skeleton frames fitting into said pockets, and consisting of a plurality of vertical, and a plurality of horizontal plates secured together, said chamber provided with baffle plates surrounded by a strainer through which water must pass to reach the jet orifices of the pockets.

4. In a centrifugal water clarifier, a rotary vessel in which separation takes place, having an inlet, an outlet in communication with a chamber, said chamber provided with baffle plates having an angle of pitch in the direction of rotation as and for the purpose specified.

5. In a centrifugal water clarifier, a rotary vessel in which separation takes place, having an intake, an outlet in communication with a chamber, the outer walls of said chamber forming pockets, constituting deflecting surfaces converging to discharge outlets as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,014,850. LIQUID PACKING. WILLIAM K. RICHARDSON, Leavenworth, Kans. Filed May 12, 1911. Serial No. 626,848. (Cl. 121—109.)



1. A liquid packing, which consists of a bifurcated recess adapted to contain a liquid, said recess extending from points less removed to points more removed from the center of rotation, and surrounding a stationary member, said liquid being subjected to centrifugal force whereby it will hermetically seal the bifurcated recess to the passage of a fluid under pressure, substantially as described.

2. A liquid packing, comprising a thimble adapted to receive a rotary member and turned therewith, said thimble having an annular projection, to which is secured a disk, in a manner to form an annular chamber adapted to contain a fluid, and also adapted to receive a stationary centrally perforated disk, secured upon a flange of the cover to the chamber in which the greater end of the thimble rotates, effecting a seal against internal, or external pressure, in the presence of centrifugal force.

1,014,851. TIRE-PLUG. PHILIP A. ROSENTHAL, New York, N. Y. Filed July 22, 1911. Serial No. 640,047. (Cl. 152—26.)

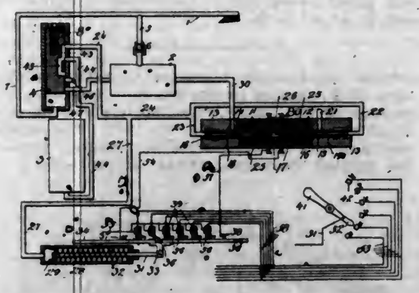
1. A tire plug comprising a base portion consisting of a plate having an opening, a lug carried by said plate and surrounding said opening, a guard removably mounted on said lug also provided with an opening in alinement with the opening in said plate, a cap member, and a shank carried by said cap member adapted to engage the opening in said plate and said guard.

2. A tire plug comprising a base portion, consisting of a plate having a threaded opening, an exteriorly threaded lug carried by said plate, and surrounding the opening therein, a threaded guard removably mounted on said threaded lug also provided with a threaded opening in alinement with the threaded opening in said plate, a cap member, and a threaded shank carried by said cap member adapted to engage the threaded openings in said plate and said guard.

3. A plate adapted for insertion in a tire, having a threaded opening, an exteriorly threaded lug carried by said plate and surrounding said opening, a threaded guard carried by said threaded lug, having a threaded opening in alinement with the opening in said plate, said guard being provided with a relatively small opening in communication with the threaded opening therein.

4. A tire plug comprising a base member, a lug carried by said base member having a threaded opening, a guard carried by said lug, said guard being provided with a groove extending over the end thereof and down the side thereof, said base member being provided with openings adjacent said lug and in alinement with the groove in said guard, a cap member, a threaded shank carried by said cap member and integral therewith, said threaded shank being adapted to engage the threads in the opening in said lug, and a manipulating shank also carried by said cap, the shank last named being partially severed adjacent the point of meeting of said shank and said cap.

1,014,852. ELECTRIC CONTROL MECHANISM FOR AIR-BRAKES. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, a Corporation of West Virginia. Filed June 29, 1908. Serial No. 440,846. (Cl. 188—4.)



1. In an air brake system, a brake mechanism and electrical devices for maintaining any desired predetermined pressure supply to the brake mechanism, circuits for said electrical devices, and means for automatically controlling said circuits.

2. In an air brake system, a brake mechanism, and electrically operated means for controlling the supply and exhaust of pressure medium to and from the brake mechanism, said controlling means operating to automatically maintain any desired predetermined pressure supply to the brake mechanism.

3. In an air brake system, a brake mechanism, electrical devices for controlling the exhaust of pressure from said brake mechanism, and means for automatically controlling the circuit of said electrical devices to maintain uniform pressure in the brake mechanism varying in amount according to the relative position of the control lever.

4. In an air brake system, a brake mechanism, electrically operated devices for controlling the supply and exhaust of operating medium to and from the brake mechanism, and means operating to automatically control the circuits of said devices to maintain predetermined pressures in the brake mechanism.

5. In an air brake system, a brake mechanism, valves for controlling the supply and exhaust of pressure medium to and from the brake mechanism, electrical devices for operating said valves, and means automatically controlled according to different predetermined pressures for controlling the circuits of said electrical devices.

[Claims 6 to 29 not printed in the Gazette.]

1,014,853. DRESSER-TRUNK. LILLIAN RUSSELL, New York, N. Y. Filed Nov. 10, 1910. Serial No. 591,651. (Cl. 190—4.)

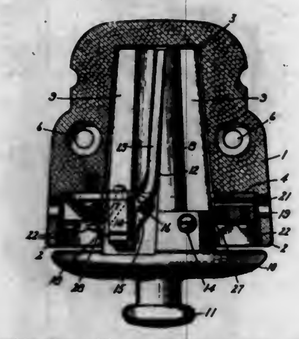
1. In a dresser trunk, a body-portion, a lid closure hinged thereto, said closure being of substantial depth and substantially corresponding in size to the height and width of the body-portion and constituting a front wall of the dresser when open, said closure carrying a drawer cabinet of greater depth than the depth of the lid closure, said cabinet being movable with the lid closure, whereby a portion of the cabinet will project from the lid when the later is open, and permanent means within the trunk body and spaced from the open front thereof for maintaining the cabinet closed when the lid closure is in closed position, said means comprising cleats positioned at opposite sides of the body-portion intermediate the open front and the rear of the dresser and acting to position the cabinet in opposition to and spaced from the rear wall of the dresser when the lid is closed to form a recess for storing articles.

2. In a dresser trunk, a body-portion, a lid closure hinged thereto and constituting a front wall of the dresser when open, said closure carrying a drawer cabinet of greater depth than the depth of the lid closure, whereby a portion of the cabinet will project from the lid when the latter is open, permanent means within the trunk body and spaced from the open front thereof for maintaining the cabinet closed when the lid closure is in closed position, said means comprising cleats positioned at opposite sides of the body-portion intermediate the open front and the rear of the dresser and acting to position the cabinet in opposition to and spaced from the rear wall of the dresser when the lid is closed to form a recess for storing articles, cleats interposed between the rear of the dresser and the drawer-retaining cleats within said recess and having a length to project beyond one end of the body-portion, said lid closure having a length less than the length of the trunk in closed position, and a cover hinged to the opposite end of the body-portion and completing the length of the trunk when closed, said cover having a size substantially corresponding with the size of the trunk end formed by the body-portion and lid closure when the latter is in closed position, said cover having a depth to receive the projecting ends of said interposed cleats and increase the length of said recess to permit the latter to carry articles of greater length than the length of the body-portion.

3. In a dresser trunk, a body-portion, a lid closure hinged thereto and constituting a front wall of the dresser when open, said closure carrying a drawer cabinet of greater depth than the depth of the lid closure, whereby a portion of the cabinet will project from the lid when the latter is open, permanent means within the trunk body and spaced from the open front thereof for maintaining the cabinet closed when the lid closure is in closed position, said means comprising cleats positioned at opposite sides of the body-portion intermediate the open front and the rear of the dresser and acting to position the cabinet in opposition to and spaced from the rear wall of the dresser when the lid is closed to form a recess for

storing articles, said lid closure having a length less than the length of the trunk in closed position, a cover hinged to the opposite end of the body-portion and completing the length of the trunk when closed, said cover having a size substantially corresponding with the size of the trunk end formed by the body-portion and lid closure when the latter is in closed position, said cover having a depth to increase the length of said recess to permit the latter to carry articles of greater length than the length of the body-portion, a partition at the cover end of the trunk body of less depth than the depth of the body-portion and greater than the telescoped depth of the cabinet, and cleats within the body-portion at the rear of said partition.

1,014,854. ELECTRIC CUT-OUT. HOWARD R. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 21, 1911. Serial No. 645,180. (Cl. 175—273.)



1. The combination with a stationary contact clip, of a movable contact blade adapted to engage said clip and provided with a cam surface and a shoulder, and a spring latch having a curved tongue for engagement with said contact blade.

2. The combination of a binding post, a contact clip secured thereto, a spring latch fixed to said post transversely to said clip, and a movable contact blade provided with a cam surface and a shoulder for engagement with said latch.

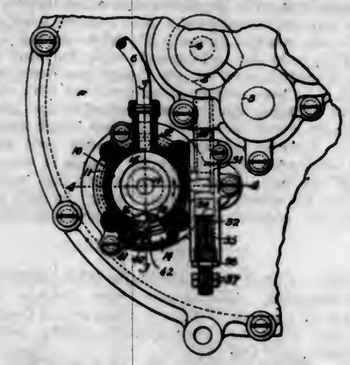
3. The combination of a binding post, a contact clip secured thereto, and a sheet metal latch secured to said post transversely to said clip and provided with a slot and a bent tongue at one end of said slot.

4. The combination with a box having a recessed chamber therein, two binding posts secured to one end of said box and having contact clips offset therefrom, sheet metal latches disposed transversely to the outer ends of said clips, and a winged plug adapted to enter the recess of the box and provided with U-shaped contact blades having their outer ends provided with cam surfaces and shoulders for engagement with said latches.

1,014,855. OIL-FEED MECHANISM. WILLIAM G. SCHAEFFER, Reading, Pa., assignor to Reading Standard Company, Reading, Pa., a Corporation of Pennsylvania. Filed Dec. 17, 1909. Serial No. 533,654. (Cl. 184—31.)

1. In an oil feed mechanism comprising a cylinder with peripheral inlet and outlet openings, a rotary piston in said cylinder having a peripheral charge-recess adapted to register alternately with said openings, and a recess-sweeper pivotally mounted adjacent said outlet opening.

2. An oil feed mechanism comprising a cylinder with peripheral inlet and outlet openings and a coaxial ratchet-wheel chamber, a rotary piston in said cylinder having a peripheral charge-recess adapted to register alternately with said openings and a piston shaft extended into said chamber, a ratchet-wheel fixed to said piston shaft, a rocking-lever having an operating hand encircling said wheel, a plunger guide-way into which said lever projects, a reciprocating plunger for operating said lever and an



alined spring-pressed plunger coöperating therewith, substantially as set forth.

1,014,856. ELEVATOR. CHARLES D. SEEBERGER, New York, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Continuation of application Serial No. 114,995, filed July 10, 1902. This application filed Nov. 11, 1904, Serial No. 232,270. Renewed Dec. 24, 1907. Serial No. 407,942. (Cl. 104—165.)

1. In a traveling stairway, the combination with inclined ways, of a series of steps each having a single support at each end, and connecting linkage of constant length having a bearing on each step coöperating with a bearing on an adjacent step.

2. In a traveling stairway, the combination with inclined ways, of a series of steps each having a single support at each end, and connecting linkage of constant length having a curved bearing on each step coöperating with an engaging member on an adjacent step.

3. In a traveling stairway, the combination with inclined ways, of a series of steps each having a single support at each end, links connecting the steps, and a slotted extension on each step coöperating with an engaging member on an adjacent step.

4. In a traveling stairway, the combination with ways forming ascending and descending inclined runs, of a series of steps each having a single support at each end, links connecting the steps, and a curved bearing on each step coöperating with a bearing on an adjacent step upon both the ascending and descending runs or inclines.

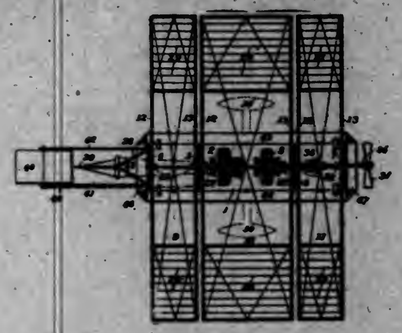
5. In a traveling stairway, the combination with inclined ways, of a series of steps each having a single support at each end, and linkage of constant length connecting adjacent steps and comprising an extension on each step having a curved slot and a coöperating member on an adjacent step.

[Claims 6 to 46 not printed in the Gazette.]

1,014,857. FLYING-MACHINE. GEORGE SEIFERT, Northampton, Pa. Filed Dec. 31, 1908. Serial No. 470,141. (Cl. 244—20.)

1. In a flying machine, the combination with the platform, of a motor, centrally supported oscillating frames

operated by said motor, valved wings carried by said frames on opposite sides of the support, and means for adjusting the vertical angle of said wings in the frames.



2. In a flying machine, the combination with a series of transverse open frames rectangular in cross section the edges of which are in parallel planes, of a pivotal support for said frames at the center, two sets of shutters loosely hinged at one edge across said frames one above the other one set being along the top of said frame, and the other along the bottom, the said shutters being adapted to turn against the frames with adjacent edges meeting.

3. In a flying machine, the combination with a series of transverse open frames rectangular in cross section the edges of which are in parallel planes, of a pivotal support for said frames at the center, two sets of shutters loosely hinged at one edge across said frames one set being along the top of said frame, and the other along the bottom, the said shutters being adapted to turn against the frames with adjacent edges meeting, supports for said shutters on said frames, and means for adjusting the supports for the lower sets of shutters at different angles to the upper set around said pivotal support.

4. In a flying machine, the combination with the platform, of a motor, a centrally supported oscillating frame operated by said motor, the said frame comprising an upper section carrying loosely hinged shutters, and a lower section underneath the upper section carrying loosely hinged shutters, the lower sections upon opposite sides of the central support being adjustable to vary the angle between them and the upper sections.

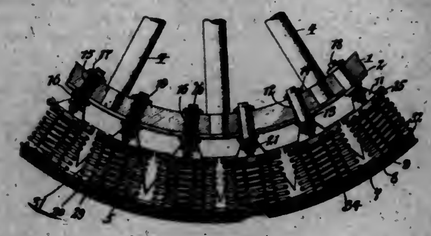
5. In a flying machine, the combination with the platform, of a motor, a centrally supported oscillating frame operated by said motor, the said frame comprising an upper straight section carrying at its ends loosely hinged depending shutters and a lower section made in two parts, each hinged near the central support and each carrying at its end loosely hinged depending shutters, and means for adjustably connecting the upper and lower sections so as to hold them at different angles to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,014,858. SPRING-WHEEL. ROBERT STOCK, New York, N. Y. Filed May 27, 1911. Serial No. 629,709. (Cl. 152—8.)

1. A spring wheel comprising a felly, a tire casing arranged around the felly, springs engaging with the inner side of the tire casing, and adjusting devices constructed to draw the casing inwardly and press the springs outwardly or vice versa comprising a follower bearing against the inner ends of said springs and provided with an inwardly projecting screw stem, an adjusting screw journaled on the felly and having an internal screw thread which engages with said stem, and a yoke connected with said casing and having an internally screw threaded opening which engages with an external screw thread on the adjusting screw.

2. A spring wheel comprising a felly, a tire casing arranged around the felly, springs engaging with the inner side of the tire casing, and adjustable devices constructed to draw the casing inwardly and press the springs outwardly or vice versa comprising a follower bearing against the inner ends of said springs and provided with an inwardly projecting screw stem and two inwardly projecting guide pins on opposite sides of said stem, a yoke con-

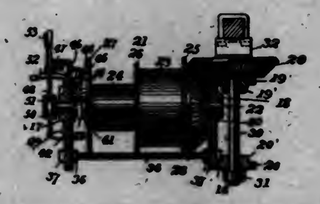


nected at opposite ends with said casing provided centrally with a screw threaded opening and on opposite sides of its center with guide openings which receive said guide pins, and an adjusting screw journaled on the felly and having an internal screw thread which engages with said stem and an external screw thread which engages with said central opening of the yoke.

1,014,859. GLYCOL ESTER OF BENZOIC ACID. LUDWIG TAUB and HANS HAHL, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 17, 1911. Serial No. 627,813. (Cl. 23—24.)

The herein described glycol benzoic acid ester of the formula $C_6H_5—COO—CH_2—CH_2—OH$ which is a colorless crystalline substance melting at 45° C. and being a valuable remedy against scabies, substantially as described.

1,014,860. WINDING-MACHINE. JOHN L. WILDS, Darlington, S. C. Filed June 23, 1909. Serial No. 503,923. (Cl. 57—103.)



1. In a winding machine, in combination, a supporting frame including side members provided with bearing plates, a drum provided with a bevel-gear on one end thereof and journaled in the bearing plates, a driving bevel-gear journaled on one of the plates and in mesh with the bevel-gear on the drum, and staybolts connecting the side members and bearing plates and spaced around the drum.

2. In a winding machine, in combination, a supporting frame including sheet metal side members, a drum provided with a bevel gear, a meshing driving bevel gear, a bearing in one of said side members for one end of said drum, a bearing plate secured to the other side member, a bearing in said bearing plate for the other end of said drum, spaced bearing lugs formed integral with said plate, a shaft for said driving bevel gear journaled in said bearing lugs and means for sliding said shaft longitudinally.

3. In a winding machine, in combination, a supporting frame including side members, a drum provided with a bevel-gear, a meshing driving bevel-gear, a bearing for

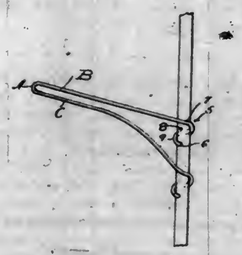
one end of the drum, a plate secured to one of the side members, bearings for the other end of the drum and the driving bevel-gear integral with the plate, and stayboits connecting the side members spaced around the drum and passing through the plate.

4. In a winding machine, in combination, a supporting frame including side members, a drum having a bevel-gear secured to one end thereof, a meshing bevel-gear, a bearing plate for one end of the drum on one of the side members, a plate secured to the other side member, bearings for the bevel-gear end of the drum and the driving bevel gear integral with the plate, and stayboits connecting the side members spaced around the drum and passing through the plates.

5. In a winding machine, in combination, a supporting frame, a drum having a bevel-gear secured thereto, a driving bevel-gear meshing therewith, shafts and bearings for the drum and driving bevel-gear, means for shifting one of said shafts axially to shift the gears into and out of mesh, and a sliding wedge to hold and lock them in mesh.

[Claims 6 and 7 not printed in the Gazette.]

1,014,861. MAP-RACK. RUSSELL H. BENNETT, Los Angeles, Cal. Filed Sept. 7, 1910. Serial No. 580,929. (Cl. 248—19.)



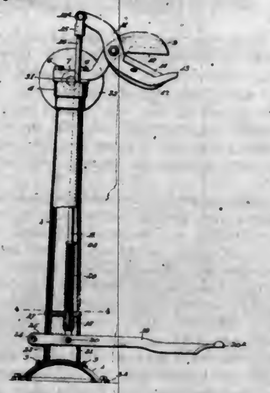
A holder comprising a strand of resilient wire bent upon itself to form two parts of unequal length and having their free ends bent downwardly and outwardly and finally inwardly to form a gripping means for a suitable support, the longer of said two parts extending parallel with the other part for a short distance of its length and then curving downwardly and away from the said other part to form a yielding support therefor, such longer part being expansible relatively to said other part and the support.

1,014,862. FUSE-CUTTING MACHINE. ALBERT H. BOYD, Denver, Colo., assignor of one-half to Thomas M. Hamilton, Helena, Mont. Filed Mar. 20, 1911. Serial No. 615,558. (Cl. 164—44.)

1. A fuse cutting machine comprising a supporting column, a pair of shear cutting jaws, one of which is fixed to said column and the other is pivotally connected to said fixed jaw intermediately of its ends, said shear jaws being provided with fuse cutting edges, a foot pedal lever pivotally secured to said column, a pull-rod connected at one end to the end of said movable jaw opposite to its fuse cutting end, said pull rod being connected at its opposite end to the foot pedal lever, and a spring arranged in operative relation to hold said movable jaw in an open fuse receiving relation to said fixed jaw.

2. A fuse cutter comprising a supporting column, a pair of fuse cutting shears mounted on said column, one jaw of which shears is fixed and the other jaw of which is movable to and from said fixed jaw, means including a foot-pedal for holding said movable jaw in an open fuse-receiving position relatively to said fixed jaw, said movable jaw being provided with an upwardly projecting lip portion at its outer end adapted to hold lines of fuse on said movable jaw against accidental displacement.

3. In a fuse cutter, the combination of a suitable supporting base and column, an aperture being formed through said base, a foot-pedal lever extending through said aperture, a bracket portion secured to said column adjacent to said aperture and pivoted at its outer end to one end of said foot-pedal lever, a foot portion at the opposite end of said lever, a pull-rod extending up through said column and pivotally connected to said foot-lever between its ends, a fixed fuse-cutting jaw mounted on the top portion of said column, a movable fuse-cutting jaw pivoted to said fixed jaw intermediate of its ends and being provided with an upwardly extending lip portion, said movable jaw being pivotally secured to the upper end of said pull-rod, a fixed bridge-piece extending into said column and provided with an aperture through which said pull-rod extends loosely, an expansive spring mounted on said pull-rod and resting at one end on said bridge, a collar secured on said pull-rod and positioned to confine the opposite end of said spring on said pull-rod under expansive tension, and a stop on said pull-rod below said bridge-piece adapted to be held up against said bridge-piece by said spring, whereby said movable jaw is held in open fuse-receiving relation to said fixed jaw.



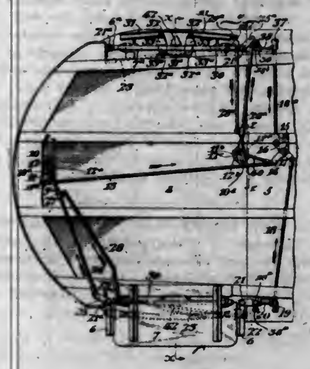
4. In a fuse cutter, the combination with a supporting column, a stationary shearing jaw upon the upper end thereof, a shearing jaw pivotally attached to the stationary jaw in shearing relation therewith, a foot-lever pivotally attached to the lower end of the column, a rod connecting said lever and pivoted jaw, and a spring for normally holding the latter jaw out of cutting relation with the stationary jaw.

1,014,863. DOOR AND STEP OPERATING MECHANISM FOR PASSENGER RAILWAY-CARS. JAMES H. E. BRANSON, Philadelphia, Pa. Filed Mar. 22, 1911. Serial No. 610,103. (Cl. 105—88.)

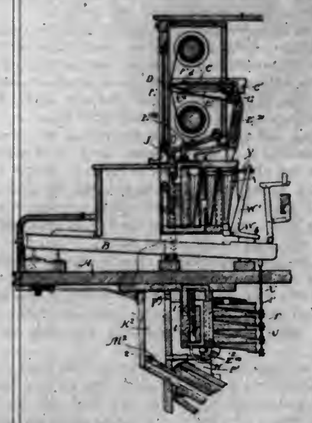
1. A passenger railway-car provided with a platform having shiftable doors and movable steps, an operating station on the platform, an operating station in rear of the platform and mechanism connected with said stations and doors and steps, the doors and step on one side being operative from the station of said platform and the doors and step on the other side being operative from the station in rear of said platform, and an emergency means in operative relation with said mechanism and arranged both inside and outside of the car to operate both sets of said doors, and steps.

2. A passenger railway-car provided with a platform having hinged double-twin doors and movable steps, a motorman's station on the platform, a conductor's station in rear of the platform, mechanism connected with both of said stations and doors and steps, the doors and step on one side being operative from said motorman's station, and the doors and step on the other side being operative from the conductor's station, and emergency means inside and outside of the car, in operative relation with said mechanism, to actuate the doors and steps on both sides of said car.

3. A passenger railway-car provided with a platform having hinged doors and folding steps, a motorman's station on the platform, a conductor's station in the rear of the platform, mechanism connected with said stations and doors and steps, the doors and step on one side being operative from said motorman's station and the doors and step on the other side being operative from said conductor's station, locking-means connected with said mechanism to prevent, when the doors are open and a step is lowered, the movement of the doors and a step on either side of said car until manually operated from either the said motorman's or conductor's station, emergency connections and means connected with the same to operate the doors and steps on both sides of said car.



1,014,864. INTERIOR-PLAYER PIANO. MELVILLE CLARK, Chicago, Ill. Filed Apr. 13, 1909. Serial No. 489,623. (Cl. 84—233.)



1. In an interior player piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action, the motor pneumatics of each of said pneumatic actions being mounted for actuating the hammer action of the piano independently of the motor pneumatics of the other action; a tracker device having tracker ducts comprising a group connected directly with the principal action; a second group connected directly with the supplemental action, and a third group branched for connection with both actions; valve bars mounted on such actions respectively to which the branches of said group of ducts respectively are connected, such valve bars being movable for effecting and cutting off communication with said actions respectively, and means for operating said valve bars.

2. In an interior player piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action, the motor pneumatics of each of said pneumatic actions being mounted for actuating the hammer action of the piano independently of the motor pneumatics of the other action; a tracker device having tracker ducts comprising a group connected directly with the principal action; a second group connected directly with the supplemental action, and a third group branched for connection with both actions; valve bars mounted on such actions respectively to which the branches of said group of ducts respectively are connected, such valve bars being movable for effecting and cutting off communication with said actions respectively; motor pneumatics connected with said valve bars for operating the same; primary pneumatics controlling said motor pneumatics; air connections for said primary pneumatics, and valves accessible for operation at will controlling such air communications.

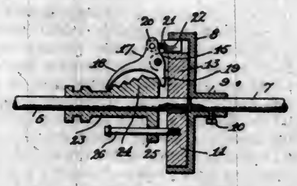
3. In an interior player piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action, one mounted above the portion of the keys rearward of their fulcrums and the other mounted below said portion of the keys; a tracker device having tracker ducts comprising a group connected directly with the principal action; a second group connected directly with the supplemental action, and a third group branched for connection with both said actions; valve bars mounted on said actions respectively to which the branches of said third group of ducts respectively are connected, such valve bars being movable for effecting and cutting off communication with said actions respectively, and means for operating said valve bars independently of each other.

4. In an interior player piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action, one mounted above the portion of the keys rearward of their fulcrums and the other mounted below said portion of the keys; a tracker device having tracker ducts comprising a group connected directly with the principal action, a second group connected directly with the supplemental action, and a third group branched for connection with both said actions; valve bars mounted on said actions respectively to which the branches of said third group of ducts respectively are connected, such valve bars being movable for effecting and cutting off communication with said actions respectively; motor pneumatics connected with said valve bars for operating the same; primary pneumatics controlling said motor pneumatics; air connections for such primary pneumatics, and valves accessible for operation at will controlling such air communications.

5. In an interior player piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action, one mounted above the portion of the keys rearward of their fulcrums and the other mounted below said portion of the keys; a tracker device having tracker ducts comprising a group connected directly with the principal action, a second group connected directly with the supplemental action, and a third group branched for connection with both said actions; valve bars mounted on said actions respectively to which the branches of said third group of ducts respectively are connected, such valve bars being movable for effecting and cutting off communication with said actions respectively; an exhaust chamber communicating with the supplemental action; a valve which controls such communication; a motor pneumatic for operating such valve; primary pneumatics controlling such motor pneumatic, and a valved air supply for controlling the primary pneumatic, the valve bar pertaining to the supplemental action being operatively connected with said motor pneumatic.

[Claims 6 and 7 not printed in the Gazette.]

1,014,865. SPLIT-RING CLUTCH. WILLIAM A. COOK, South Bend, Ind. Filed Aug. 4, 1911. Serial No. 642,876. (Cl. 192—13.)



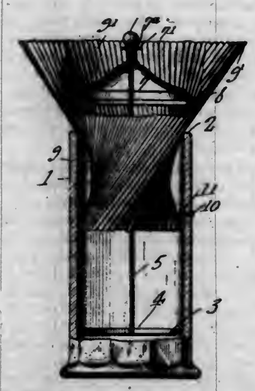
1. A clutch, comprising a friction drum, a split ring, means for expanding said ring, and a member provided with a toothed lug for operating said expanding means, said teeth gradually increasing in distance from the axis of said member.

2. A clutch, comprising a friction drum, a split ring, means for expanding said ring, and a member provided with a toothed lug for operating said expanding means, said teeth gradually increasing in distance from and inclined relative to the axis of said member.

3. A clutch, comprising a friction drum, a split ring, means for expanding said ring embodying a wedge and a pawl provided with a locking arm and a tripping projection, and a member for operating said expanding means adapted to engage the tripping projection and having a toothed lug for operating said expanding means, said teeth gradually increasing in distance from the axis of said member.

4. A clutch, comprising a friction-drum, a split ring, means for expanding said ring embodying a wedge and a pawl pivoted on the hub of said split ring and provided with a locking arm and a tripping projection, and a slidable sleeve for operating said expanding means having a toothed lug and an apertured lug, the said teeth adapted to engage the end of the said locking arm, and the inner end of said sleeve adapted to engage the tripping projection, and a guide pin secured in the hub of said split ring and adapted to engage said apertured lug.

1,014,866. STRAW-HOLDER. WILLIAM J. EISENHARDT, Baltimore, Md. Filed June 8, 1911. Serial No. 631,962. (Cl. 211—8.)



1. A dispenser of this character, comprising a substantially cylindrical receptacle, a circular tray, a rod mounted concentrically thereof and having a knob at its upper end, and a cover slidably mounted upon the rod.

2. A dispenser of this character, having a circular tray, a rod, a cover having a rim disposed toward the tray, and slidably mounted upon the rod, and a knob carried at the other end of the rod.

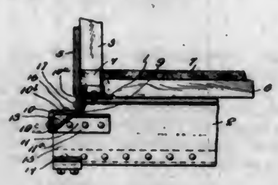
3. A dispenser of this character, comprising a substantially cylindrical receptacle, a circular tray having an upwardly projecting annular rim, a rod mounted concentrically thereof, a knob provided at its upper end, and a cover having a sleeve slidably mounted upon said rod between the tray and the knob.

4. A dispenser of this character, comprising a substantially cylindrical receptacle, a circular tray having an upwardly projecting annular rim, a rod mounted concentrically thereof, and of length sufficiently to project above the mouth of the receptacle, and a slidably mounted cover for the receptacle carried upon the rod and of a greater diameter than the mouth of the receptacle.

5. A dispenser of this character, comprising a receptacle, and a straw holder adapted to removably fit the said receptacle, and comprising a tray of lesser diameter than the opening of the receptacle, a rod connected concentrically thereof and adapted to project exteriorly of the receptacle, and a cover of greater diameter than the mouth of the receptacle, slidably mounted upon said rod.

[Claims 6 to 8 not printed in the Gazette.]

1,014,867. END UNDERFRAME CONSTRUCTION FOR CARS. ROBERT E. FRAME, Chicago, Ill., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Original application filed July 18, 1910, Serial No. 572,509. Divided and this application filed Nov. 23, 1910. Serial No. 593,969. (Cl. 105—76.)



1. In an end underframe construction for cars, an end sill of commercial shape, a wood-nailing strip thereon formed in sections, end posts, and post pockets fixed to the web of said sill, and disposed between the sections of the nailing strip for receiving said end posts.

2. In an end underframe construction for cars, an end sill comprising a flanged member, draft sills secured to the web of said end sill and extending beyond the end sill, said draft sills being notched to receive a flange of said end sill, and a cover plate fixed to the end sill, said cover plate depending across the ends of said draft sills.

3. In an end underframe construction for cars, an end sill comprising a flanged member, draft sills extending beyond the end sill and notched to receive a flange of the end sill, and a cover plate fixed to the end sill and extending along the draft sills to and depending across the end thereof, and a filler connecting the draft sills adjacent the ends thereof and fixed to the cover plate.

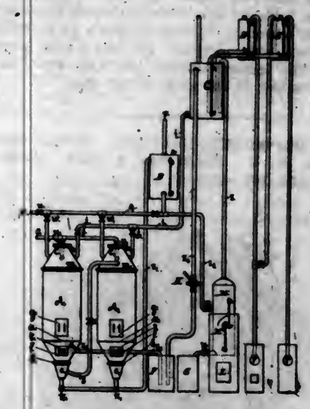
4. In an end underframe construction for cars, spaced sills and a filler connecting the same and comprising a plate having side flanges and an end flange extending from one sill to the other, the plate and end flange being depressed transversely intermediate the ends of the end flange.

5. In an end underframe construction for cars, an end sill of T-section, draft sills extending in part beyond said end sill, and means for tying said draft sills and said end sill, said means serving as a striking plate beyond the ends of said draft sills.

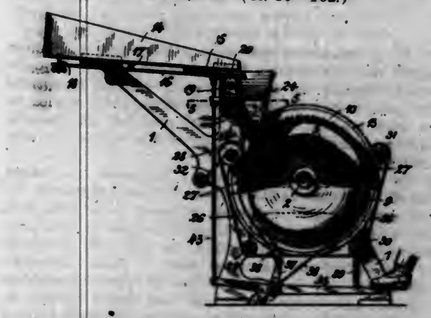
[Claims 6 to 19 not printed in the Gazette.]

1,014,868. METHOD OF EXTRACTING COPPER FROM CALCINED ORE OR SLAGS. ANTONY GADOMSKY, Tiflis, Russia. Filed Feb. 14, 1910. Serial No. 543,896. (Cl. 75—18.)

An improved process for extracting copper from calcined ore and slags consisting in submitting the same to the combined action of an ammonia solution, of ammonium carbonate and of oxygen of the air, dissolving the copper salts thus obtained in the excess of the ammonia solution, boiling the solution, recuperating the ammonia gas and the carbonic acid gas generated, precipitating the oxid of copper in form of powder and smelting this powder to obtain pure copper, substantially as described.



1,014,869. MACHINE FOR FACILITATING THE PACKING OF MAGNETIC OBJECTS OF OBLONG SHAPE. OTTO GAMPER, Münchwilen, Switzerland. Filed Jan. 26, 1911. Serial No. 604,870. (Cl. 10—162.)



1. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, means for inserting the magnetic objects into said groove, and means for equally distributing the magnetic objects over the whole length of said groove.

2. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable chute, a rotatable cam normally engaging said chute, and means for disengaging said chute from the cam.

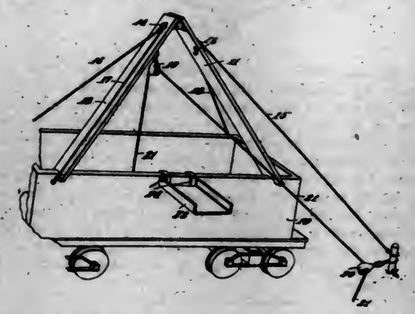
3. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable chute, a driving shaft, a cam on the latter engaging said chute, a lever fulcrumed on the machine frame, a belt brake operated by the lever, means operated by the lever to break the circuit of the magnetic poles, and a push bar carried by said lever to disengage said movable chute from the cam.

4. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, means for inserting the magnetic objects into said groove, means for equally distributing the magnetic objects over the whole length of said groove, and means for varying the width of said groove.

5. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, means for displacing one of the poles with relation to the other, a feeding receptacle for the objects having a movable chute, a driving shaft, a cam on the latter engaging said chute, a lever fulcrumed on the machine frame, and a belt brake actuated by the lever, means operated by the lever to break the circuit of the magnetic poles, and a push bar carried by the lever adapted to disengage the chute from the cam.

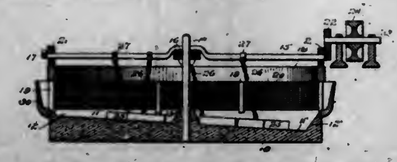
[Claims 6 to 18 not printed in the Gazette.]

1,014,870. UNLOADING APPARATUS. JAMES M. GARNER, Columbus Grove, Ohio, assignor of one-half to Daniel M. Allen, Columbus Grove, Ohio. Filed Aug. 19, 1911. Serial No. 645,018. (Cl. 212—14.)



In an unloading mechanism for vehicle, a tackle support formed of hingedly connected members, the free ends of which are bifurcated to embrace the side walls of a vehicle, and a plurality of guys secured to each of said members at points adjacent their connected ends, the guys of one of said members being secured to either side wall of the vehicle, one of the guys of the other member being secured to the vehicle, the other of said guys being secured at a point remote from the vehicle.

1,014,871. AGITATING AND GRINDING MECHANISM. EDWIN B. GOODWIN, Puzzler, Colo. Filed Jan. 19, 1910. Serial No. 538,879. (Cl. 83—45.)



1. In a mechanism of the class described, a floor constructed as an inclined plane, means moved from the center of the floor for dragging weights over such floor and means to care for the overflow from such floor.

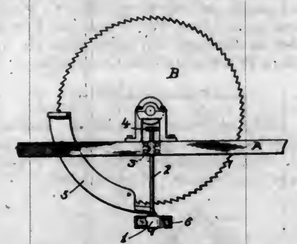
2. In a mechanism of the class described, a floor constructed as an inclined plane, drag stones disposed upon the floor and means centrally of the floor for moving the drag stones.

3. In a mechanism of the class described, a floor constructed as an inclined plane and operating means mounted centrally of the floor.

4. In a device of the class described, a floor constructed as an inclined plane, drag stones mounted upon the floor and means to move the stones upon the plane.

5. In a mechanism of the class described, an inclined floor, drag stones disposed upon the floor, and means for moving the drag stones alternately between the higher and the lower levels of said floor.

1,014,872. SAWDUST-CONVEYER FOR CIRCULAR SAWS. WILLIAM T. GRAY and ERNEST S. HASKIN, Vienna, Mo.; said Haskin assignor to said Gray. Filed Aug. 26, 1911. Serial No. 646,211. (Cl. 143—157.)



1. In combination with a circular saw, a fan conveyer, a shaft for actuating said fan conveyer, and a friction wheel secured to said shaft and engaging the saw, the speed of the fan shaft being regulated relative to the speed of the saw by adjusting the friction wheel thereon.

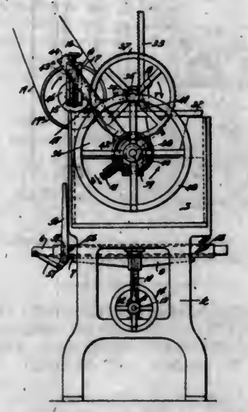
2. In combination with a circular saw, a fan conveyer, a shaft for actuating said fan conveyer, a friction wheel secured to said shaft and engaging the saw, a trough inclosing the edge of the saw and leading to the fan conveyer, and a discharge tube leading away from the conveyer, the speed of the fan shaft being regulated relative to the speed of the saw by adjusting the friction wheel thereon.

1,014,873. WATERPROOF OVERSHOE AND LEGGING. EDWARD L. HAIL, Providence, R. I. Filed May 7, 1910. Serial No. 559,879. (Cl. 36—4.)

1. The combination with a water-proof shoe, of a legging composed of thin flexible water-proof gossamer material attached at its lower end to said shoe by a continuous water-tight joint, said legging being of such circumferential proportion as to receive a loose trousers leg and turned up at its lower end to form a pocket for the lower end of the trousers leg, said legging having excess material at the front and rear, and non-elastic strips at the sides of the legging between the excess material attached to the sides of the shoe and extending to the upper end of the legging.

2. The combination with a water-proof shoe, of a legging composed of a thin flexible water-proof material attached at its lower end to the shoe by a continuous water-tight joint, said legging being provided with material at the front and rear above the shoe in excess of the side portions, whereby said front and rear portions may hang in folds when the legging is drawn up to eliminate slack from said side portions, and non-elastic strips at the sides of the legging between the front and rear portions and attached to the sides of the shoe.

1,014,874. DEPOSITING-MACHINE. EMILE HERISSE, New York, N. Y. Filed June 8, 1911. Serial No. 631,904. (Cl. 107—27.)



1. In a depositing machine, a reservoir, a plunger adapted for reciprocation therein, gears adapted to operate said plunger, an operating shaft adapted to operate said gears, a disk carried by said shaft, teeth carried by said disk adapted to mesh with one of the plunger-operating gears during a portion of the rotation of said operating shaft.

2. In a depositing machine, a reservoir, a plunger adapted for reciprocation therein, a gear adapted to actuate said plunger, a ratchet adapted to actuate said gear, a reciprocating arm, a pawl carried by said arm adapted to actuate said ratchet, an operating shaft, an arm carried by said operating shaft, a block adjustably mounted on said arm, means carried by said block adapted to actuate said reciprocating arm, and means adapted to relax the pressure of said plunger on the material in said reservoir, at a predetermined point.

3. In a depositing machine, a reservoir, a plunger adapted for reciprocation therein, a gear adapted to actuate said plunger, a ratchet adapted to actuate said gear, a reciprocating arm, a pawl carried by said arm adapted to actuate said ratchet, an operating shaft, an arm carried by said operating shaft, a block adjustably mounted on said arm, means carried by said block adapted to actuate said reciprocating arm, a disk carried by said operating shaft and teeth carried by said disk adapted to mesh with one of the plunger-actuating gears at predetermined intervals.

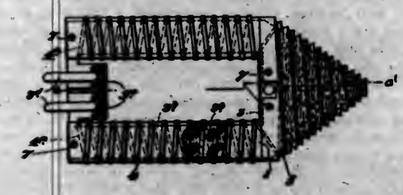
4. In a depositing machine, a reservoir, a plunger adapted for reciprocation therein, a gear adapted to actuate said plunger, a ratchet adapted to actuate said gear, a reciprocating arm, a pawl carried by said arm adapted to actuate said ratchet, an operating shaft, an arm carried by said operating shaft, a block adjustably mounted on said arm, means carried by said block adapted to actuate said reciprocating arm, and means carried by said actuating shaft adapted to slightly raise said plunger after said plunger has reached a predetermined point of its downward movement.

5. In a depositing machine, a reservoir, a plunger adapted for reciprocation therein, a gear adapted to actuate said plunger, a ratchet adapted to actuate said

gear, a reciprocating arm, a pawl carried by said arm adapted to actuate said ratchet, an operating shaft, an arm carried by said operating shaft, a block adjustably mounted on said arm, means carried by said block adapted to actuate said reciprocating arm, means carried by said actuating shaft adapted to slightly raise said plunger after said plunger has reached a predetermined point of its downward movement, and means adapted to cause said operating shaft to rotate intermittently.

[Claims 6 to 10 not printed in the Gazette.]

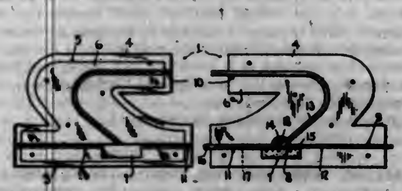
1,014,875. ELECTRIC HEATING ELEMENT. FRANK ERNE HEWITT, Toronto, Ontario, Canada. Filed Apr. 22, 1911. Serial No. 622,098. (Cl. 219—25.)



1. An electric heating element comprising a metal plate having a triangular shaped head and rearwardly extending legs, insulating plates one above and the other below the metal plate, and of substantially the same form as the said metal plate, resistance wire wound up around one leg of the insulating plates and around the heads thereof, and auxiliary insulating plates similar in shape to the triangular heads of the main insulating plates placed on the top and bottom of said main insulating plates, the aforesaid wire being wound around the auxiliary plates and down the other leg of the insulating plates as and for the purpose specified.

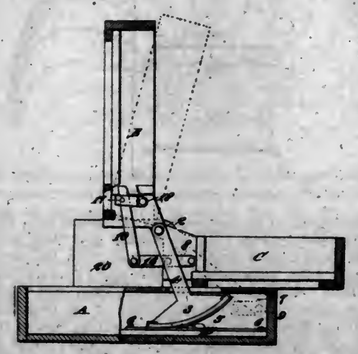
2. An electric heating element comprising a metal plate having a head and rearwardly extending legs, insulating plates one above the other below the divided plate and of substantially the same form as the said metal plate, resistance wire wound up around one leg of the insulating plates and around the heads thereof, auxiliary insulating plates similar in shape to the triangular heads of the main insulating plates placed on the top and bottom of said main insulating plates, the aforesaid wire being wound around the auxiliary plates and down the other leg of the insulating plates, and terminal plates formed integrally with the aforesaid metal plate at the rear thereof having suitable means for connecting them to the electric circuit as and for the purpose specified.

1,014,876. LIGHTNING-ARRESTER. WILLIAM F. HIATT, Fittsboro, Ind. Filed Oct. 27, 1910. Serial No. 589,380. (Cl. 175—30.)



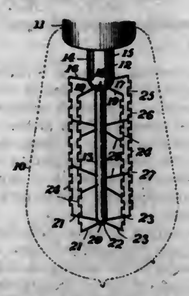
In a lightning arrester, a casing provided with a chamber, a conductive block therein having on one end an insulating piece, a ground wire resting on the block, a line wire having a pointed bend resting on the insulating piece, the terminals of the ground wire being pointed and in juxtaposition to the pointed bend in the line wire, means to permit inspection of the gap between said points, and means for holding the ground wire in proper adjustment to said pointed bend.

1,014,877. COUCH. JOHN HOEY, San Francisco, Cal. Filed Sept. 28, 1910. Serial No. 584,280. (Cl. 5—48.)



In a bed couch, a basal frame, a seat member, a back member pivoted thereto, means to retain the seat and back members at right angles, said means comprising a pair of arms pivoted together, one of said arms being fixed to the back member and the other arm having a notch extending parallel with the seat end, and a guide on the seat coöperating with said other arm within which guide the said last-named arm may tilt to engage or disengage.

1,014,878. INCANDESCENT-LAMP FILAMENT. GWILYM R. HOLMES, Baltimore, Md., assignor of one-fourth to Frank Porto and one-fourth to Joseph Deluca, Baltimore, Md. Filed May 6, 1909, Serial No. 494,377. Renewed June 12, 1911. Serial No. 632,770. (Cl. 176—40.)

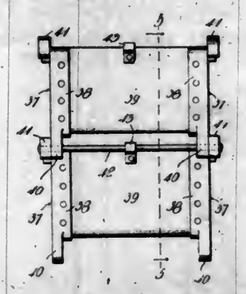


1. A filament for electric lamps, composed of an elongated conductor corrugated so as to form a plurality of nearly closed loops, said loops being in the same plane, and a plurality thereof facing outwardly and in the same direction.

2. A filament for electric lamps, composed of an elongated conductor corrugated so as to form a plurality of oppositely facing angular and nearly closed loops, said loops being in the same plane, and a plurality thereof facing in the same direction.

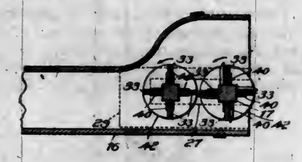
3. An incandescent lamp having a support and anchor arms radiating therefrom, a filament composed of an incandescing conductor shaped so as to form a plurality of outwardly facing nearly closed loops, said anchor arms engaging the loops.

1,014,870. WATER-ELEVATOR. GEORGE M. HOLT, Spokane, Wash., assignor to L. F. Boothe, Spokane, Wash. Filed Nov. 7, 1910. Serial No. 591,173. (Cl. 193—28.)



The combination of an endless chain of buckets each provided at its lower corners with rearwardly projecting apertured lugs having their outer faces flush with the outer end surfaces of the buckets and at their upper corners with laterally offset rearwardly extending apertured lugs fitting against the outer sides of the lower lugs of the preceding buckets, pivots inserted through and projecting beyond the said lugs, and sprocket wheels having straight faces to engage the backs of the buckets and provided between said faces with recesses to engage said lugs and flanges at the outer sides of said recesses to engage the outer sides of said offset lugs and thereby maintain the alinement of the buckets, the flanges having notches to receive the pivots.

1,014,880. COTTON-HARVESTING MACHINE. ANDREW L. JACKSON, Fort Worth, Tex. Filed May 16, 1903. Serial No. 157,379. (Cl. 56—117.)



1. A cotton harvesting machine comprising a suction tube or pipe, a rotary picker mounted in the mouth of said tube and being provided with teeth projecting out of said tube, and means for operating said picker.

2. A cotton harvesting machine comprising a tube provided with means for forcing the cotton therethrough, a rotary picker mounted in the mouth of said tube and provided with teeth projecting out of said tube, and means for operating said picker.

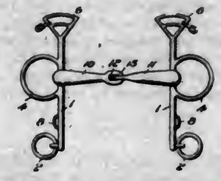
3. A cotton harvesting machine comprising a tube provided with means for forcing the cotton therethrough, a rotary picker mounted in the mouth of said tube and having teeth that will reach out of the mouth of the tube as the picker is rotated, and means for operating the picker.

4. A cotton harvesting machine comprising a tube having an unobstructed passage therethrough and provided with means for creating suction therein, a rotary picker mounted in the mouth of said tube and provided with teeth projecting out of the mouth of said tube, and means outside of said tube for driving said picker.

5. A cotton harvesting machine comprising a receiver having a part of the walls thereof constructed of wire screen, flexible pipes or tubes having communication with said receiver and provided with means for creating suction in said tubes, a rotary picker mounted in and provided with teeth projecting out of the mouth of each pipe or tube, and means outside of each tube or pipe for driving the picker mounted therein.

[Claims 6 to 22 not printed in the Gazette.]

1,014,881. COMBINED CURB AND SNAFFLE BIT. GORDON JOHNSTON, Fort Riley, Kans. Filed Apr. 9, 1908. Serial No. 426,007. (Cl. 54—8.)



1. A bit comprising side bars, a mouth-piece connecting said bars, said mouth-piece comprising two sections, means integral with the mouth piece sections which interlock and join said sections together to provide a free play in one plane and a predetermined limited play in planes at angles to said first plane, and means for the connection of curb reins and chain to said bit, substantially as described.

2. A combined snaffle and curb bit comprising a single mouth-piece formed of two sections, and a joint connecting said sections and formed of interlocking parts integral with said sections which permit free play of the mouth piece in one plane and have portions which engage after a predetermined limited cocking thereof in other planes at angles to said plane of free play and prevent further flexing in such other planes, and means for the operative connection with said bit of curb reins, snaffle reins, and a curb chain, said snaffle reins being connected with their plane of pull in said plane of free play, substantially as described.

3. A combined curb and snaffle bit comprising side bars having curb loops at the lower ends, snaffle loops at intermediate points, and loops for the curb chain at the top, a mouth-piece formed in two sections connected to the side bars, means to flexibly join said mouth-piece sections together comprising a pair of interlocking loops in planes at right angles to each other, and shoulders on one of said loops which engage a portion of the other loop and lock the mouth-piece against free play except in the plane of pull of the snaffle reins, said shoulder and portion engaging after a limited play or flexing of the mouth-piece in planes at angles to the plane of pull of the snaffle rein.

4. A combined snaffle and curb bit comprising a single mouth-piece formed of sections, one section having an eye and the other section a loop member formed integral therewith, side bars connected to said mouth-piece and provided with connections for curb reins, snaffle reins and a curb chain, said eye being disposed substantially at right angles to the plane of pull of the snaffle reins, and having opposing surfaces between which the loop, when moving in the plane of pull of the snaffle reins, works freely and which are spaced to engage and lock the loop, when it has swung through a predetermined angle in other planes under tension from the curb reins, to lock the bit sections in angular relationship under curbing action.

5. A bit of the character described comprising a sectional mouth-piece formed by jointed sections, one section having an integral loop member and the other section provided with an integral eye member through which the loop passes, said eye having portions which engage the loop, when it tends to move in a plane at an angle to the plane of the loop itself, thereby rigidly setting and locking the mouth-piece sections at a predetermined angle, and means to connect reins to the outer ends of the bit sections, substantially as described.

[Claim 6 not printed in the Gazette.]

1,014,882. PROCESS FOR PREPARING RESISTANT MATERIAL AND THE PRODUCT RESULTING THEREFROM. HENRY T. JONES, East Orange, N. J. Filed May 9, 1911. Serial No. 626,060. (Cl. 219—75.)

1. The process of preparing resistant material, consisting in impregnating substantially pure graphite in its solid form with a stable, refractory substance of lower electrical conductivity than the graphite.

2. The process of preparing resistant material, consisting in impregnating a block of graphite with a material yielding a stable, refractory substance of lower electrical conductivity than the graphite, and then converting said material into said stable, refractory substance.

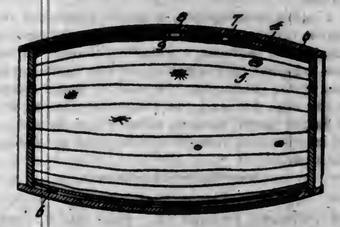
3. The process of preparing resistant material, consisting in first impregnating a block of graphite with a material yielding a stable, refractory substance of lower electrical conductivity than the graphite, and then subjecting the impregnated graphite to heat.

4. The process of preparing resistant material, consisting in first impregnating a block of graphite with a mixture comprising a suitable fluid medium and a material yielding a stable, refractory substance of lower electrical conductivity than the graphite, then raising the impregnated graphite to a temperature sufficient to convert said material into said stable, refractory substance.

5. The process of preparing resistant material, consisting in first impregnating a block of graphite with a mixture comprising a suitable fluid medium, and a substance yielding a stable, refractory residue of lower electrical conductivity than the graphite and then subjecting the impregnated graphite to heat.

[Claims 6 to 13 not printed in the Gazette.]

1,014,883. CONTAINER FOR THE AGING OF WHISKY. ALBERT S. KLEIN, St. Louis, Mo. Filed Mar. 13, 1911. Serial No. 614,232. (Cl. 195—7.)



1. A container for the aging of whisky comprising a shell charred both within and without in combination with a barrel or container in which the same is placed and separated therefrom by means of the hoops with which the same is bound, substantially as specified.

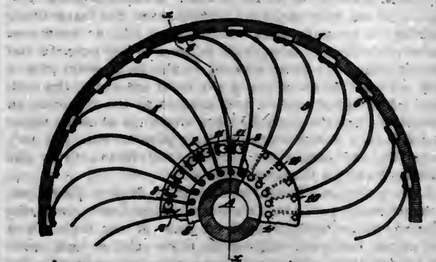
2. A container for the aging of whisky in bond comprising a shell composed of a plurality of irregular strips or staves of inferior white oak and bound by hoops, the same being charred on both sides in combination with a used whisky barrel, the said staves providing the proper amount of tannic acid or caramel required for the aging of the contents therein, substantially as specified.

3. A container for aging whisky comprising a shell composed of a plurality of culls charred on both sides and bound together by means of hoops, said shell open at both ends, in combination with a used barrel in which the same is placed and separted from the sides thereof by means of the hoops, substantially as specified.

1,014,884. RESILIENT WHEEL. HARRY LEAP, Camp Meeker, Cal. Filed Nov. 18, 1910. Serial No. 592,973. (Cl. 152—29.)

1. The combination in a wheel of a hub having parallel separated flange plates, a resilient rim, flat curved elastic spokes having eyes seated between the flanges, bolts passing through the flanges and eyes, segmental shoes fixed to the outer ends of the spokes and forming approximately continuous seats for the resilient rim, and means for varying the tension of the spokes.

2. The combination in a wheel of a hub having parallel separated flange plates, a resilient rim, flat curved elastic spokes having eyes seated between the flanges, bolts passing through the flanges and eyes, segmental shoes fixed to the outer ends of the spokes and forming approximately continuous seats for the resilient rim, and means for varying the tension of the spokes, said means consisting of eccentrically journaled cylinders turnable to vary the pressure upon and change the curvature of the spokes.

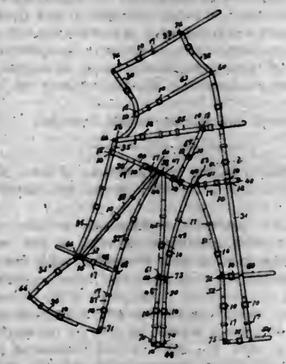


3. The combination in a wheel of a flanged hub, a rim, flat eccentrically curved elastic spokes having concaved seats at the outer end in which the rim fits, turnable attachments to the hub, and means for varying the curvature and tension of the spokes, said means consisting of cylinders eccentrically journaled between the hub flanges, said cylinders formed to provide separated bearing points against the spoke surface.

4. The combination in a wheel of a flanged hub, a rim, flat eccentrically curved elastic spokes having concaved seats at the outer end in which the rim fits, turnable attachments to the hub, means for varying the curvature and tension of the spokes, said means consisting of cylinders eccentrically journaled between the hub flanges, said cylinders formed to provide separated bearing points against the spoke surface, and means for turning the cylinders.

5. The combination in a wheel of a flanged hub, a rim, flat eccentrically curved elastic spokes having concaved seats at the outer end in which the rim fits, turnable attachments to the hub, means for varying the curvature and tension of the spokes, said means consisting of cylinders eccentrically journaled between the hub flanges, said cylinders formed to provide separate bearing points against the spoke surface, means for turning the cylinders, and means for locking said cylinders against movements.

1,014,885. GARMENT-FITTER FOR WAISTS. HARRIET LEE, Kansas City, Mo. Filed May 20, 1910. Serial No. 562,411. (Cl. 223—16.)



1. In a garment fitter for a waist, a sleeve pattern having a scye rib, two front seam ribs respectively connected to opposite ends of the scye rib, a back seam rib intermediate of the front seam ribs, a dart rib pivoted to the back seam rib and movable from a position substantially parallel with the back seam rib to a position at an angle thereto, two wrist ribs respectively pivoted to the front seam ribs

and to the back seam and dart ribs, and means for releasably securing together in the parallel position the dart and back seam ribs.

2. In a garment fitter for a waist, a sleeve pattern having a scye rib, two longitudinal front seam ribs respectively secured to opposite ends of the scye rib, a transverse elbow rib vertically adjustable relative to the scye rib and having means for being secured to the front seam ribs, a back seam rib intermediate of the front seam ribs, the back seam rib being extensible and secured to the scye rib, an extensible dart rib pivoted to the elbow rib so as to swing to and from a position substantially parallel with the back seam rib, and means for securing the elbow rib in the position to which it may be adjusted.

3. In a garment fitter for a waist, a flexible sleeve pattern having a scye rib, two longitudinal front seam ribs respectively secured to opposed ends of the scye rib, a transverse vertically adjustable elbow rib, a back seam rib intermediate of the front seam ribs and secured to the scye rib, a dart rib pivoted to the elbow rib so as to swing to and from a position substantially parallel with the back seam rib, two wrist ribs respectively pivoted to the front seam ribs and to the back seam and dart ribs, all of said ribs being extensible, means for releasably locking the elbow rib in the position to which it may be adjusted, means for releasably locking together the front seam ribs when the pattern has been formed to encircle an arm of a person, and means for releasably locking the back seam and dart ribs in the parallel position.

4. In a garment fitter for a waist, a front pattern having front and side ribs, neck and scye ribs respectively connected to the front and side ribs, a breast rib connected with the front and side ribs, a top of dart rib connected and vertically adjustable relative to the front and side ribs, two side of dart ribs secured to the top of dart rib and movable relative to each other from and to a position substantially parallel with each other, a waist rib connected with the side rib and with one of the side of dart ribs, all of said ribs being extensible, a brace rigidly secured to the top of dart rib and pivoted to the breast rib for locking the top of dart rib in the position to which it is adjusted, and means for releasably locking the side of dart ribs in the parallel position.

5. In a garment fitter for a waist, a front pattern having a front and a side rib, a breast rib rigidly secured to the front rib and pivoted to the side rib, a vertically adjustable top of dart rib connecting the front and side ribs, an extensible brace conected to the breast rib and the top of dart rib intermediate of the front and side ribs for regulating the adjustment of the top of dart rib, two side of dart ribs secured, one pivotally, to the top of dart rib, the pivoted side of dart rib being movable to and from a position substantially parallel with the other side of dart rib, a waist rib connecting the side rib with the pivoted side of dart rib, all of the aforesaid ribs being extensible, and an adjustable brace connecting the top of dart rib with the waist rib.

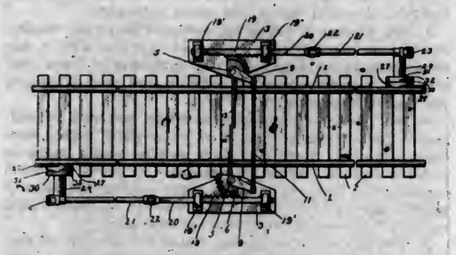
[Claims 6 to 9 not printed in the Gazette.]

1,014,886. MINE-DOOR OPERATOR. PLINY MACE, Irwin, Pa. Filed Oct. 2, 1909. Serial No. 520,610. (Cl. 39—43.)

1. In a door operating mechanism, a door operating shaft, a gear rack connected thereto, a rod connected pivotally to the rack, a disk connected with the rod and means engageable by a passing car wheel operating the disk in steps.

2. In a door operating mechanism, a vertical operating shaft, a door thereon, a segmental gear on the shaft, a gear rack engaging with the gear, a rod connected pivotally with the rack, a disk connected with the rod and means engageable by a passing car operating the disk in steps.

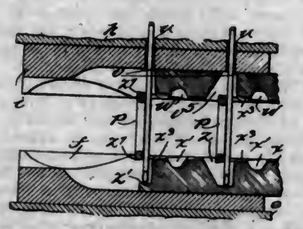
3. In a door operating mechanism, a vertical operating shaft having a door supported thereon, a segmental gear on the lower end of the shaft, a gear rack connected with the gear, a rod pivotally connected with the gear rack, a disk connected to said rod having an arcuate recess therein, a weighted member having a lug moving in the disk recess, means for suporting the member and the disk, and means carried by the member engageable by a passing car.



4. In a door operating mechanism, a pair of vertical shafts, doors carried by the shafts, segmental gears on the lower ends of the shafts, gear racks extending in opposite directions operating the gears, rods pivotally connected with each of the racks, disks connected to the rods by operating cranks, cranks on the upper ends of the shafts, a tie rod pivotally connecting the shaft cranks, car operated members engaging the disks adapted to impart motion to the rods and gear mechanism, and means carried by the members adapted to return the same to their normal positions.

5. In a mine door opener, a shaft supported door, a gear segment connected with the shaft of said door, a gear rack engaging the segment, a weighted member having two hook arms adapted to project above the tread surface of a rail, means for supporting the member and a connection between the rack bar and the weighted member whereby the rack bar is moved in steps when the hook arms of the weighted member are successively engaged by the passing wheels of a car.

1,014,887. BROOM-BANDING MACHINE. JOHN SHERMAN MCCHESNEY, Chicago, Ill. Filed Dec. 9, 1908. Serial No. 466,600. (Cl. 15—4.)



1. A machine of the character described including one die, a companion die, mechanism for moving one of said dies toward the other, said dies being provided with formations for holding previously formed bands into position, said dies being adapted to compress a band about the waist of a broom previously passed into the band, and stapling mechanism for stapling the band and broom straw together, said stapling mechanism including two members slidable substantially parallel in the direction in which the broom is fed and having relative motion similar to the relative movement between the dies and serving to turn in the staple wire when relatively approached.

2. A machine of the character described including one die, a companion die, mechanism for moving one of said dies toward the other, said dies being provided with formations for holding previously formed bands in position, said dies being adapted to compress a band about the waist of a broom previously passed into the band, stapling mechanism for stapling the band and broom straw together, said stapling mechanism including two members slidable substantially parallel to the direction in which the broom is fed and having relative motion similar to the relative movement between the dies and serving to turn in the staple wire when relatively approached, one die, a companion die, mechanism for moving one of said dies toward the other, said dies being provided with formations for holding previously formed bands in position, said dies being adapted to compress a band about the waist of a broom previously passed into the band, stapling mechanism for stapling the band and broom straw together, said stapling mechanism including two members slidable substantially parallel to the direction in which the broom is fed and having relative motion similar to the relative movement between the dies and serving to turn in the staple wire when relatively approached, one of said members being adapted to shear wire that is to form the staples, and mechanism for feeding said wire.

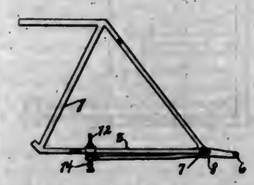
3. A machine of the character described including one die, a companion die, mechanism for moving one of said dies toward the other, said dies being provided with formations for holding previously formed bands in position, said dies being adapted to compress a band about the waist of a broom previously passed into the band, stapling mechanism for stapling the band and broom straw together, said stapling mechanism including two members slidable substantially parallel to the direction in which the broom is fed and having relative motion similar to the relative movement between the dies and serving to turn in the staple wire when relatively approached, one of said members being adapted to shear wire that is to form the staples, and mechanism for feeding said wire, said cutting mechanism acting to cut the wire on the bias, whereby it may be fed through the broom straw preparatory to the stapling operation.

4. A machine of the character described including two members adapted to hold a previously formed band in position and provided with band-receiving grooves in their opposed faces, mechanism for effecting relative motion between said members, whereby said band may be compressed about a broom waist previously passed thereinto, said mechanism permitting the broom handle to be passed between said members and through the band in order that the waist of the broom may be passed into the band, and stapling mechanism operable by the member actuating mechanism for stapling the band and broom straw together.

5. A machine of the character described including two members adapted to hold a previously formed band in position and provided with band-receiving grooves in their opposed faces, one of said grooves being enlarged to receive the band enlargement formed in the band structure in the process of making the same, mechanism for effecting relative motion between said members, whereby said band may be compressed about a broom waist previously passed thereinto, said mechanism permitting the broom handle to be passed between said members and through the band in order that the waist of the broom may be passed into the band, and stapling mechanism operable by the member actuating mechanism for stapling the band and broom straw together.

[Claim 6 not printed in the Gazette.]

1,014,888. SPRING BICYCLE-FRAME. LEE S. MCCLAVE, Peabody, Kans. Filed Feb. 8, 1911. Serial No. 607,396. (Cl. 208—94.)



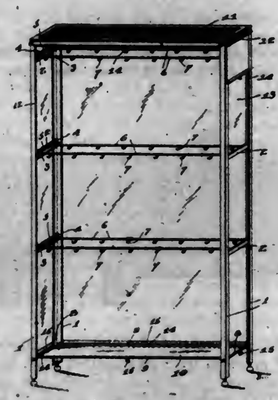
1. The combination with a bicycle frame, of an auxiliary fork adapted to be pivotally connected to the rear ends thereof, the rear ends of said fork adapted to receive a wheel, a plate on said frame, a bolt adjustably mounted in said plate and depending therefrom, the forward end of said fork being slidably mounted upon said bolt, and a spring interposed between said fork and the head of said bolt.

2. In a device of the character described, the combination with a bicycle frame, of an auxiliary fork adapted to be connected to said frame, one end of said fork adapted to receive a wheel, the other end of said fork having a perforation therein, a plate on said frame having a perforation therein, a bolt passed through both of said perforations, a spring on said bolt between the head thereof and said fork, and means for regulating the tension of said spring.

3. In a device of the character described, the combination with a bicycle frame, of forks adapted to be connected to the rear end thereof, a plate adapted to pass over the lower opposite bars of said frame at the constricted portion thereof, said plate adapted to be wedged tight by moving it over the diverging portions of said bars, a bolt depending from said plate, and means whereby the forward end of said fork is resiliently mounted on said bolt.

4. In a device of the character described, the combination with a bicycle frame, of forks adapted to be connected to the rear end thereof, a plate having inwardly curved ends, said plate being adapted to pass over the lower opposite bars of said frame at the constricted portion thereof, and to be wedged tight by moving it over the diverging portions of said bars, said plate having an aperture therein, a screw threaded bolt passed through said aperture, said forks being connected to said bolt, a spring resiliently supporting said forks, and means for regulating the tension of said spring.

1,014,889. PORTABLE STAND. GEORGE L. MCDONALD, Paragould, Ark. Filed June 22, 1910. Serial No. 568,381. (Cl. 45—16.)



1. A portable stand consisting of four right angle corner posts 1, a plurality of cross bars 4 interposed between the two end posts of said portable stand, each of said end bars consisting of a vertical part 2 and an inwardly extending flange 3, said vertical part provided with a plurality of vertically disposed notches 5 on its inner face, a plurality of side bars interposed between each two corresponding end bars, the ends thereof being engaged by said vertical part and resting on said inwardly extending flanges, said side bars 6 adapted to be removed from said notches and to be adjusted forwardly or rearwardly.

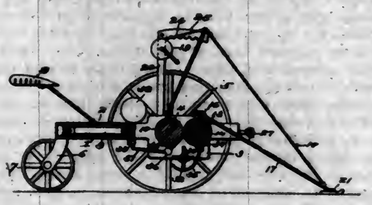
2. A portable stand consisting of four right-angle corner posts; a plurality of cross bars secured in the angles of said posts, each of said bars having a corrugated vertical part and an internally extending flange; a plurality of side bars fitting in the corrugations of said vertical part and resting on said internally extending flanges, said side bars adapted to be adjusted in said cross bars or removed therefrom, substantially as shown.

1,014,890. GRASSHOPPER-DESTROYER. CHARLES F. MCMULLEN. Fort Lupton, Colo. Filed Nov. 26, 1910. Serial No. 594,378. (Cl. 43—1.)

1. A grasshopper destroyer, comprising a frame, catching and crushing mechanism mounted thereon, and means for injecting poison into the crushed mass.

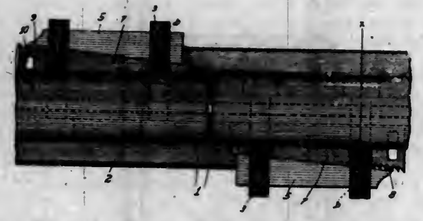
2. A grasshopper destroyer, comprising a frame, an axle-shaft journaled therein, supporting wheels mounted on

said shaft and driving the same, crusher rollers driven by the shaft, a catcher discharging onto the rollers, and means for poisoning the crushed mass.



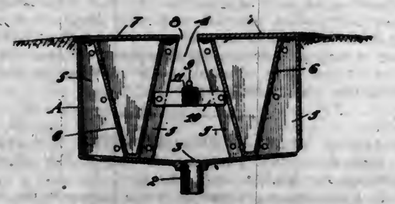
3. A grasshopper destroyer, comprising a frame, an axle-shaft journaled therein, supporting wheels secured thereon for driving the same, a roller mounted on the shaft, a gear on the shaft, a second roller journaled in the frame and having a gear in mesh with the gear on the shaft, means for feeding grasshoppers onto the rollers, a mixer for receiving the grasshoppers after they are crushed between the rollers, a gear on the mixer in mesh with and driven by the gear on the roller, a guiding trough extending partially around the mixer, and means for poisoning the crushed mass before it leaves the machine.

1,014,891. RAIL-FASTENER. MANUEL G. MEDEIROS, Irvington, Cal. Filed May 2, 1911. Serial No. 624,612. (Cl. 239—11.)



A device of the character described comprising unthreaded bolts provided with longitudinal slots, two wedge shaped keys adapted to project through said slots and engage each other, teeth on the side of one of said keys at one end thereof, a lug projecting horizontally from one end of the other key and adapted to be bent into an engagement with said teeth, and said key having said teeth being provided with a transverse slot in its end which is provided with said teeth, said slot being adapted to receive an instrument adapted to pull said key to disengage said teeth from said lug.

1,014,892. UNDERGROUND CONDUIT FOR ELECTRIC RAILWAYS. JOHN C. MINES, Oakland, Cal. Filed Aug. 24, 1910. Serial No. 578,739. (Cl. 191—5.)



1. In an underground conduit, the combination of the track rails of a series of boxes placed end to end between the track rails, each box provided with end seats and with cover members on each side of the trolley slot, and means carried by and removable with the cover and projecting into the box and constituting the walls of the conduit passage, said means comprising hollow sections having end portions removably fitting the seats in the ends of the boxes.

2. In an underground conduit, the combination of the track rails of a series of boxes placed end to end between the track rails, each box provided with cover members on each side of the trolley slot, and means carried by and removable with the cover and projecting into the box and constituting the walls of the conduit passage, said means comprising hollow sections angular in cross section, and means angularly arranged on the inside of the box conforming to and receiving the ends of the sections, said boxes each having inclined bottoms and a drain pipe connected therewith.

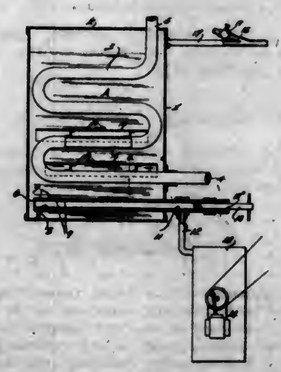
3. In a conduit, a box section therefor, a pair of cover members fitting the box and spaced from one another to provide a trolley slot, and wall sections depending from each cover and removable therewith constituting walls to inclose a slot space below the covers, and guides on the inner walls of the box forming seats for the ends of the wall sections.

4. In a conduit, a box section therefor, having V-shaped seats in the ends, a pair of cover members fitting the box and spaced from one another to provide a trolley slot, and means depending from each cover and removable therewith, constituting walls to inclose a slot space below the cover, said last named means comprising members which are substantially V-shaped in cross section, fitting said V-shaped seats in the ends of the boxes.

5. In a conduit, a box section therefor, having V-shaped seats in the ends, a pair of cover members fitting the box and spaced from one another to provide a trolley slot, and means depending from each cover and removable therewith constituting walls to inclose a slot space below the cover, said last named means comprising members which are substantially V-shaped in cross section, fitting said V-shaped seats in the ends of the boxes, the ends of said boxes having substantially A-shaped slots between said seats and open at the top and in continuation of the trolley slot and between the covers.

[Claims 6 and 7 not printed in the Gazette.]

1,014,893. COOLING DEVICE. HENRY MOELLER, New York, N. Y. Filed Aug. 5, 1911. Serial No. 642,548. (Cl. 62—22.)



1. A cooling device, consisting of a tank for retaining an anti-freezing liquid, a pipe within said tank adapted to contain a refrigerating medium, a perforated pipe within said tank adapted for the passage therethrough of air under pressure, and a tubular slidably mounted valve in said pipe provided with openings adapted to aline with the openings in said pipe.

2. A cooling device, comprising a tank, means adapted to introduce air under pressure to said tank, means within said tank for cooling the air, an outlet pipe for the cooled air from said tank, a pipe or duct connected to said outlet pipe at an angle thereto, whereby the flow of cool air through said outlet pipe will suck in warm air through said angularly disposed pipe, and a valve located in said angularly disposed pipe.

1,014,894. SHOE-SHANK STIFFENER. ALFRED M. MOORE, Malden, and CHESTER M. MOORE, Everett, Mass. Filed Aug. 9, 1909. Serial No. 512,048. (Cl. 36—76.)

1. A compressed shank stiffener comprising a thick molded body, approximately triangular in cross section and having at its upper side a longitudinal groove, and at one end of said groove a recess, the said groove and recess having compressed walls and being substantially dissimilar in cross sectional shape from the cross sectional shape of the body and providing supporting walls of increased strength for the body below the groove and recess.

2. A compressed shank stiffener comprising a thick molded body approximately triangular in cross section, provided with longitudinally beveled ends and having at its upper side a longitudinal groove, and at one end of said groove a recess, the said groove and recess having compressed walls and being substantially dissimilar in cross sectional shape from the cross sectional shape of the body, providing compressed supporting walls of increased strength for the body below the groove and recess, and providing on the under face of said stiffener a pyramidal section having sharply defined edges and supporting walls of increased strength, and a reinforcing member upon the grooved face of said body.

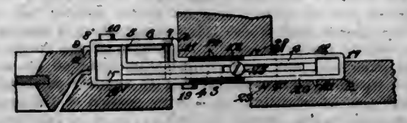
3. A compressed shank stiffener comprising a thick molded body having a substantially flat upper face, downwardly and inwardly inclined lower faces and longitudinally beveled ends, the apex of said lower and end faces at one end of said shank being sharply outlined, forming sharply defined ridges extended angularly toward the respective corners of the front end of said shank, said shank having at its upper side a longitudinal groove and at one end of said groove a recess, the said groove and recess having compressed walls and being substantially dissimilar in cross sectional shape from the cross sectional shape of the body and providing compressed supporting walls of increased strength for the body below the groove and recess, and a reinforcing member upon the upper face of said body.

4. A compressed, thick, shank stiffener molded from leather board, said stiffener having a substantially flat upper face, a longitudinal groove 7 and a substantially triangular recess 8 compressed in one end of said groove, lower longitudinally beveled faces 10 and laterally beveled ends 12, 13 on the opposite face of said shank, said beveled ends 12, 13 being adjacent said faces 10 and having inclined outer edges, a longitudinal ridge 9 and divergingly disposed ridges 14 substantially opposite said groove and recess and forming an apex 15, said groove 7 and recess 8, owing to their compression in said stiffener with said beveled faces and ends providing wall sections of increased strength for said ridge 9 and apex 15.

5. A compressed molded shank stiffener comprising a thick body having a substantially flat upper face and inwardly inclined longitudinal lower faces forming a substantially triangular waist section, the ends of said body having beveled lower faces forming, at their intersection with said inwardly inclined longitudinal lower faces, at one end of said body sharply defined angularly extended ridges, and at the opposite end of said body less sharply defined oppositely extended curved ridges meeting and blending with the outer edge of the adjacent end of said body, a relatively narrow longitudinal curved groove in the upper face of said body within the length of said triangular waist section opening at one end into a relatively small substantially triangular depression, said groove and depression providing compressed wall sections of increased strength adjacent said groove at said waist and adjacent said depression at one of the ends of said body, and a reinforcing member secured to the upper face of said body.

[Claims 6 and 7 not printed in the Gazette.]

1,014,895. LOCK AND MORTISE GAGE. EDGAR G. MORIN, Jr., San Francisco, Cal. Filed Mar. 7, 1911. Serial No. 612,619. (Cl. 73—146.)



1. A lock and mortise gage, comprising a rectangular composite body portion having scribing points, and longitudinal adjustable gage members carried by the body portion, the upper member of the body portion carrying one of the scribing points and having the end opposite said point bent parallel therewith and housed within one of the gage members, said gage member also housing one end of the composite body portion.

2. A lock and mortise gage, comprising a rectangular composite body portion composed of upper, lower and intermediate plates, said plates having integral scribing points, longitudinal adjustable gage members carried by the body portion, the upper member of the body portion carrying one of the scribing points and having the end opposite said point bent parallel therewith and housed within one of the gage members, said gage member also housing one end of the body portion, and adjustable scribing points reciprocably mounted in the composite body portion.

3. A lock and mortise gage, comprising a rectangular composite body portion composed of upper, lower and intermediate plates, said plates having integral scribing points, longitudinal adjustable gage members carried by the body portion, the upper member of the body portion carrying one of the scribing points and having the end opposite said point bent parallel therewith and housed within one of the gage members, said gage member also housing one end of the body portion, adjustable scribing points reciprocably mounted in the composite body portion, and means for locking the scribing points in adjusted positions.

4. A lock and mortise gage, comprising a rectangular body portion composed of upper, lower and intermediate plates, said plates having scribing points, an adjustable butt member bent to inclose one end of the composite body portion and slidably engaging opposite surfaces of the body portion, the upper part of the butt member being recessed longitudinally, and means for temporarily locking the butt member in adjusted position.

5. A lock and mortise gage, comprising a rectangular body portion, composed of upper, lower and intermediate plates, said plates having integral slotted scribing points, an adjustable butt member having parallel upper and lower portions inclosing one end of the body portion, said upper part of the butt member being recessed longitudinally, an adjustable nose member housing the other end of the body portion and having parallel parts slidably engaging opposite surfaces thereof, said nose member having a longitudinal extension slidably fitting the recessed portion of the butt member, means for temporarily locking the butt member in adjusted position, and means for locking the nose member in adjusted position.

1,014,896. ECCENTRIC. WALTER DEVEREUX NASH, Atlanta, Ga., assignor to Atlanta Utility Works, East Point, Ga. Filed Jan. 20, 1911. Serial No. 603,757. (Cl. 74—1.)

1. A device of the class described including an eccentric strap having a lubricant compartment in the lower portion thereof and an interior annular groove opening into the compartment, said groove being substantially T-shaped in transverse contour, the narrow portion of the groove being innermost, and an eccentric block mounted for rotation within the strap and having an annular outstanding flange revoluble within the narrow portion of the groove and constituting means for setting up a circulation of lubricant through the wide portion of the groove from and to the lubricant chamber.

2. In a device of the class described, an eccentric strap having a lubricant chamber in the lower portion thereof and an annular interior groove opening into said chamber and substantially T-shaped in cross section, the wide portion of the groove being outermost, interior annular grooves within the end portions of the strap, return passages extending from the lower portions of said grooves to the lubricant chamber, and an eccentric mounted for rotation within the strap and having an annular flange projecting into the T-shaped groove and constituting means for setting up a circulation of lubricant from and to the chamber and within the outer or wide portion of the groove, there being annular ribs upon the eccentric and revoluble within the grooves in the end portions of the strap.

1,014,897. ELECTRIC FIXTURE. JOHN NEUHOEFER, ARTHUR POLACHECK, and WILLIAM POLACHECK, Milwaukee, Wis., assignors to Chas. Polacheck & Bro. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 2, 1911. Serial No. 647,343. (Cl. 240—78.)

1. An electric fixture, comprising a vertically extending tube, a clamping ring rigidly connected to the end thereof and provided with a depending tubular threaded portion, another tubular clamping ring loosely surrounding the depending tubular portion, both of said rings provided with recessed edge portions, tubular arms extending into the recesses, and a nut threaded on the tubular threaded portion for clamping the tubular arms between the rings.

2. An electric fixture, comprising a vertically extending tube, a clamping ring rigidly connected to the end thereof and provided with a depending tubular threaded portion, another tubular clamping ring loosely surrounding the depending tubular portion, both of said rings provided with recessed edge portions, tubular connectors extending into the recessed portions of the rings, tubular arms carried by said connectors, and a nut threaded on the tubular threaded portion for clamping the connectors between the rings.

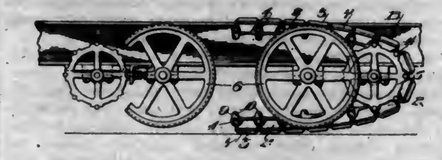
3. An electric fixture, comprising a vertically extending tube, a clamping ring rigidly connected to the tube and provided with a depending tubular portion, another clamping ring loosely surrounding the tubular portion, both of said rings provided with recessed edge portions, tubular arms extending into the recesses, and means for clampingly drawing the rings together.

4. An electric fixture, comprising a vertically extending tube, a clamping ring rigidly connected to the lower end of the tube and provided with a depending tubular portion, another clamping ring loosely mounted on the tubular portion of the first mentioned ring, said rings provided with registering recessed portions having projecting teeth, tubular arms extending into the recesses and provided with perforations into which the teeth are adapted to enter, and means for clampingly drawing the rings together.

5. An electric fixture, comprising a vertically extending tube, a clamping ring rigidly connected to the lower end of the tube and provided with a depending tubular portion, another clamping ring loosely mounted on the tubular portion of the first mentioned ring, said rings provided with registering recessed portions having projecting teeth, tubular connectors extending into the recesses of the rings and provided with perforations into which the teeth are adapted to enter, tubular arms connected to and extending from the connector, and means for clampingly drawing the rings together.

[Claims 6 and 7 not printed in the Gazette.]

1,014,898. SELF-LAYING ENDLESS TRACK FOR VEHICLES. WALTER G. NOACK, Elmhurst, Cal., assignor of one-half to William A. Sage, Hanford, Cal. Filed Aug. 1, 1910. Serial No. 575,044. (Cl. 21—114.)

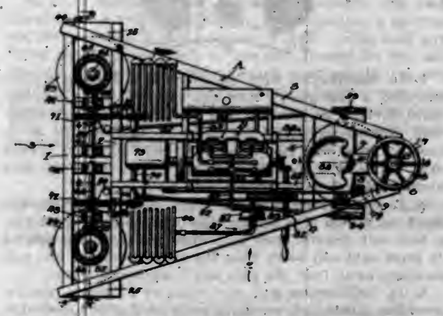


1. A pair of links, each substantially T-shaped in cross-section, the horizontal part of each T forming a tread, the web of the two T's pivoted together and abutting endwise, and the webs of the two links having overlapping lugs and stops on the side of the pivot opposite said treads.

2. A link for a platform wheel having a flat tread member, a longitudinal central web, tracks on the back of the tread and on each side of the web, the web perforated at the ends for a pivot bolt and lateral hollow hub bosses at one end surrounding one perforation and through which a pivot pin may pass and said bosses divided so as to accommodate and protect the cotters.

1,014,899. HYDROCARBON DISK CULTIVATOR. WILLIAM E. NYE and JAMES E. CRAM, Highland, Cal., assignors of one-third to Harry A. Johnston, Redlands, Cal. Filed Nov. 26, 1910. Serial No. 594,305. (Cl. 97—30.)

1. In a disk cultivator, a frame comprising two parallel cross I-beams mounted some distance apart, two longitudinal I-beams placed on top of the ends of the cross I-beams and coming nearer together at their forward ends, a second two cross I-beams inserted between the forward ends of the longitudinal I-beams and on the same level, a bearing block inserted between the forward ends of the longitudinal I-beams and between the second pair of cross I-beams and on the level therewith, a vertical bearing at the center of the bearing block, a steering wheel turn table mounted under the forward ends of the longitudinal I-beams and under the second pair of cross I-beams, a pintle extending upwardly from the steering wheel turn table through said bearing, housing plates secured to the lower faces of the I-beams and having flanges extending under the edge of the steering wheel turn table, and a wheel for supporting the steering wheel turn table.



2. In a disk cultivator, a frame comprising two parallel cross I-beams mounted some distance apart, two longitudinal I-beams placed on top of the ends of the cross I-beams and coming nearer together at their forward ends, a second two cross I-beams inserted between the forward ends of the longitudinal I-beams and on the same level, a bearing block inserted between the forward ends of the longitudinal I-beams and between the second pair of cross I-beams and on the level therewith, a vertical bearing at the center of the bearing block, a steering wheel turntable mounted under the forward ends of the longitudinal I-beams and under the second pair of cross I-beams, a pintle extending upwardly from the steering wheel turntable through said bearing, housing plates secured to the lower faces of the I-beams and having flanges extending under the edge of the steering wheel turntable, a wheel for supporting the steering wheel turntable, gear teeth upon the periphery of the steering wheel turntable, a steering post rigidly mounted, and a pinion upon the steering post meshing with the teeth upon the steering wheel turntable.

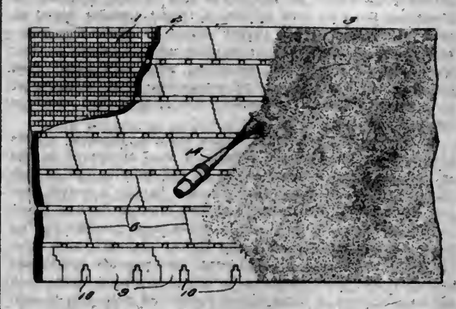
3. In a disk cultivator, a frame comprising two parallel cross I-beams mounted some distance apart, two longitudinal I-beams mounted on top of the ends of the cross I-beams and coming nearer together at their forward ends, cultivator disk turntables mounted under the ends of the cross I-beams, posts extending downwardly from the cultivator disk turn tables, cultivator shafts mounted in the lower ends of the posts, arms extending laterally from the cultivator disk turntables and hand levers mounted upon the longitudinal I-beams and connected to said arms.

1,014,900. [WITHDRAWN.]

1,014,901. WALLING AND DAUBING BRICK-KILNS. RAYMOND C. PENFIELD, New York, N. Y. Filed Feb. 9, 1911. Serial No. 607,651. (Cl. 25—157.)

1. The herein described method, which consists in walling up a stack of green bricks with a wall of burned, dry, porous bricks, and mechanically projecting a daubing mixture to form a smear coat thereon in a relatively thin condition so that it is capable of flowing and being forced in a stream or spray against said wall, whereby the excess of water in said mixture is at once absorbed as it strikes the wall, so that a continuous and substantial smear coat is produced over the wall.

2. The herein described method, which consists in incasing a stack of green bricks with a wall of burned, dry, porous bricks, and mechanically projecting a relatively thin clay mixture in a spray or stream against said wall in such a direction and manner that it is forced into the interstices of the wall and evenly spread thereover, the bricks of said wall being adapted to instantly absorb the excess water in said mixture whereby a substantial, continuous smear coat will adhere to the wall.



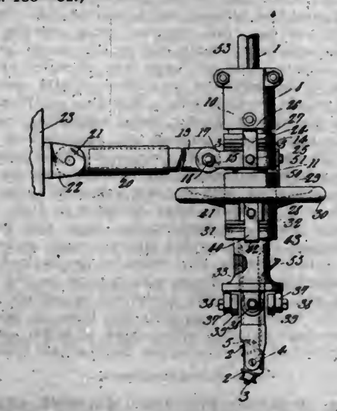
3. The herein described method, which consists in reducing a wall-daubing clay mixture to a relatively thin condition so as to be capable of projection in a stream or spray, and mechanically forcing the same against an incasing wall of burned, dry, porous bricks, whereby said bricks take up the excess water in said mixture so that a substantial, continuous smear coat is formed over said wall.

4. The herein described method, which consists in reducing a daubing mixture to a relatively thin condition capable of being projected in a stream or spray, and forcing the same mechanically as a nozzle stream over the different portions of a kiln wall of burned, dry, porous bricks, whereby said bricks absorb the excess of water and said mixture adheres to the wall in a relatively thick, continuous coating.

5. The herein described method, which consists in reducing a daubing mixture of clay and loam to a relatively thin condition capable of being projected in a stream or spray, and forcing the same mechanically as a nozzle stream over the different portions of a kiln wall of burned, dry, porous bricks, whereby said bricks absorb the excess of water and said mixture adheres to the wall in a relatively thick, continuous coating.

[Claims 6 to 19 not printed in the Gazette.]

1,014,902. BUSH-FLANGER. FRANK X. PFLUGER, Portland, Oreg. Filed Dec. 27, 1910. Serial No. 599,364. (Cl. 153—81.)



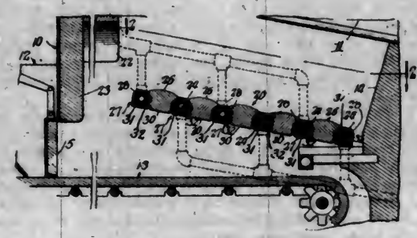
1. A bush flanger comprising a spindle, flanging rollers mounted on said spindle, a fixed abutment on said spindle, a movable thrust element on said spindle having thrust rollers mounted thereon, a feed member having a swiveled connection with said abutment, and a second feed member

coöperating with said first mentioned feed member and having a swivel connection with said thrust member.

2. A bush flanger comprising a spindle, flanging rollers pivotally mounted on the lower end of said spindle, an abutment fixed on said spindle, a thrust element keyed on said spindle and having thrust rollers, an upper feed member having a swivel connection with said abutment, a lower feed member adjustably connected with said upper feed member and having a swivel connection with said thrust element, and means for holding one of said feed members against rotation.

3. A bush flanger comprising a spindle, flanging rollers pivotally mounted on the spindle, a fixed abutment on the spindle, a thrust element keyed on the spindle and having thrust rollers, an upper feed member having a swivel connection with the abutment, and anti-friction devices interposed between said members, a lower feed member having a swivel connection with the thrust element, and anti-friction devices between said lower feed member and thrust element, said feed members having a threaded connection with each other, a hand wheel connected with one of said feed members, and an extensible arm connected with the other of said feed members for holding it against rotation.

1,014,903. DEFLECTING-PARTITION FOR FURNACES. HERMAN A. POPPENHUSEN, Evanston, and JOSEPH HARRINGTON, Riverside, Ill. Original application filed Apr. 12, 1909, Serial No. 489,290. Divided and this application filed Nov. 10, 1910. Serial No. 591,576. (Cl. 110—98.)



1. A furnace provided with a deflecting partition comprising a plurality of tubular, metal, supporting members extending transversely between and supported at their ends by the side walls of the furnace, fire brick coverings upon said tubular supporting members, and fire brick members extending between and supported upon the said fire brick coverings, said members being provided with downward extensions which occupy the spaces between the said coverings and the lower faces of which are substantially in line with the lower faces of said coverings.

2. A furnace provided with a deflecting partition comprising a plurality of tubular, metal supporting members extending transversely between and supported at their ends on the side walls of the furnace, fire brick coverings upon the said tubular supporting members, and fire brick members extending between and supported upon said coverings, said coverings being provided at their upper parts with lateral, inclined bearing faces, and the fire brick members being provided at their upper parts with inclined, lateral bearing faces engaging the inclined faces on the coverings and between said inclined bearing faces, provided with downwardly projecting extensions which occupy the spaces between the side faces of said fire brick coverings and the bottom faces of which are substantially in line with the bottom faces of said coverings.

1,014,904. DYNAMO-ELECTRIC MACHINE. EDWARD D. PRIEST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 12, 1910. Serial No. 576,926. (Cl. 171—252.)

1. In combination with the frame of a dynamo electric machine, a field pole, a field coil therefor, and a resilient plate having two portions bent at an angle to each other, said portions engaging the sides of the coil so as to tend to press said coil away from said pole and toward said frame.

2. In combination with the frame of a dynamo electric machine, a field pole, a field coil therefor, and a resilient plate having two portions bent at an angle to each other, said portions engaging the sides of said coil so as to tend to press said coil away from said pole and toward said frame, one of said portions having its ends bent about said pole so as to keep said plate in place.

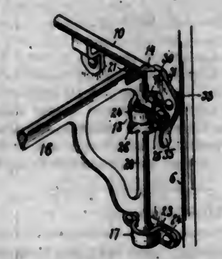
3. In combination with the frame of a dynamo electric machine, a field pole having a main portion and pole tips, a field coil therefor, and a resilient flanged plate tending to press said coil away from the main portion of the pole and also away from the pole tips toward said frame.

4. In combination with the frame of a dynamo electric machine, a field pole having a main portion and pole tips, a field coil therefor, and a resilient flanged plate tending to press said coil away from the main portion of the pole and also away from the pole tips toward said frame, the portion of said plate adjacent to the main portion of the pole having its ends bent about said pole so as to keep it in place.

5. In combination with the frame of a dynamo electric machine, a field pole having a main portion and pole tips, a field coil therefor, and a resilient plate having two portions bent at an angle to each other, said angle being less than 90 degrees, said plate tending to press said coil away from the main portion of the pole and also away from the pole tips toward said frame.

[Claim 6 not printed in the Gazette.]

1,014,905. DEVICE FOR CARRYING GARMENTS. OTTO RANGNOW, Philadelphia, Pa. Filed Feb. 1, 1911. Serial No. 605,844. (Cl. 211—16.)



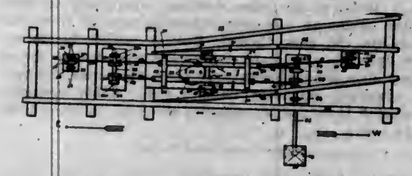
1. In a device of the character described the combination of a track secured in a fixed position, a bearing, a member consisting of a horizontal arm with a vertical shaft formed at one end thereof and at right angles thereto, said vertical shaft being pivotally mounted in said bearing to permit said arm to swing horizontally and aline with said track.

2. In a device of the character described, the combination of a track secured in a fixed position, a bearing, a member consisting of a horizontal arm with a vertical shaft formed at one end thereof and at right angles thereto, said vertical shaft being pivotally mounted in said bearing, a lug upon said vertical shaft, and a pawl to engage said lug and lock said arm in alinement with said track.

3. In a device of the character described, the combination of a track secured in a fixed position, a bearing, a member consisting of a horizontal arm with a vertical shaft formed at one end thereof and at right angles thereto, said vertical shaft being pivotally mounted in said bearing, a lug upon said vertical shaft, a pawl to engage said lug to lock said arm in alinement with said track, a second lug upon said shaft and a stop formed on said bearing to limit the movement of said arm when the latter is turned at right-angles to said track.

4. In a device of the character described, the combination of a track secured in a fixed position, a bearing, an arm forming a continuation of said track, said arm being pivotally mounted at one end thereof in the said bearing, said arm adapted to swing horisontally, the said track and the said arm having their adjacent ends overlapping each other and having their respective ends formed with vertical surfaces extending diagonally to the length of said track and to the length of the said arm.

1,014,906. AUTOMATIC SAFETY-SWITCH. EDMAN ROUTT, Santa Clara, Cal. Filed Mar. 3, 1911. Serial No. 612,097. (Cl. 104—77.)



1. In an automatic safety switch, the combination with the main track, the switch rails and a foundation plate; of a wheel pivoted to said foundation plate, a shift bar with shoulders cut therein and connected at each end to a switch rail, shift bar levers pivoted to said wheel and running in opposite directions, the other ends thereof being pivoted at the ends of the shift bar, sliding bars, parallel with each other and the main track, passing over said wheel each at an equal distance from the center of said wheel, an oblong slot cut in each parallel bar, pins set in said wheel and passing upward through said slots, a bracket attached to each of said sliding bars, and springs attached to said brackets adapted to engage the shoulders in the shift bar, as shown and described.

2. In an automatic safety switch, the combination of a wheel between the switch rails, parallel sliding bars passing across said wheel at an equal distance from the center thereof, an oblong slot cut in each bar, pins set in said wheel passing upward through said slots, the switch rails, a shift bar connecting said rails, shift bar levers pivoted to said wheel and to said bar, a bracket attached to each of said parallel bars, springs attached to said brackets adapted to engage shoulders cut in the shift bar, cams set at a predetermined distance from said switch rails within said switch, rods connecting said cams and said parallel sliding bars, a shaft, running a distance beyond an outer rail, on which said cams are rigidly attached, and a lever adapted to turn said shaft by hand, as shown and described.

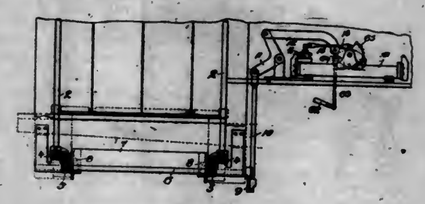
3. In an automatic safety switch, the switch unlocking device comprising a wheel between the switch rails, parallel sliding bars passing across said wheel at an equal distance from the center thereof, an oblong slot cut in each of said bars, pins set in said wheel passing upward through said slots, a pair of switch rails, a shift bar connecting said rails, and levers pivoted to the ends of said bar extending inward a like distance and pivoted to the under side of said wheel near the rim thereof, as shown and described.

4. In an automatic safety switch, the device for unlocking, resetting and locking the switch rails, consisting of a wheel with pins set in the side thereof and passing upward, parallel sliding bars with oblong slots cut therein through which said pins pass, a shifting bar, with shoulders cut therein, connecting the switch rails, switch bar levers attached to said wheel and to said shift bar, brackets attached to said sliding bars, springs attached to said brackets adapted to engage the shoulders in the shifting bar, cams set between the rails at predetermined distances at the approach of the switch, cams set at predetermined distances between said rails within the switch, rods connecting said cams and said sliding bars, and the means of operating the same from a moving train, as shown and described.

5. An automatic safety switch, adapted to be unlocked, reset and locked from the rear of a moving train while on said switch, and consisting of a main track, a switch, switch rails, a wheel located between said switch rails, parallel bars passing over said wheel, pins in said wheel passing upward through oblong slots in said parallel bars, a shift bar connected at each end to a switch rail, shift bar levers pivoted to the ends of the shift bar, the opposite ends of said levers being pivoted to said wheel, brackets on said parallel bars, springs contained in said brackets adapted to engage shoulders cut in the shift bar, cams at a predetermined distance within said switch, rods connecting said cams and said parallel bars, and mechanism attached to the rear of said train adapted to turn said cams and operate said switch, as shown and described.

[Claim 6 not printed in the Gazette.]

1,014,907. DOOR AND STEP OPERATING MECHANISM. HAROLD ROWNTREE, Chicago, Ill., assignor, by mesne assignments, to National Pneumatic Company, a Corporation of West Virginia. Filed Feb. 4, 1909. Serial No. 476,031. (Cl. 105—88.)



1. A door including swinging panels, gearing intermediate said panels for folding the same the one upon the other, a movable step, and means also operating to move said step whereby all of said parts move in unison.

2. A door composed of panels hinged together, gearing intermediate adjacent panels and operating, when one panel is moved to swing the next adjacent panel relative thereto, a movable step and means for moving one of said panels, said means also operating to move said step.

3. A door composed of foldable panels, an operating shaft therefor, a driving shaft for the operating shaft, a step having operating connection with said driving shaft, and means for operating said driving shaft whereby said door panels and step are operated in unison.

4. A door composed of foldable panels in combination with a movable step, and a motor for operating the panels and step in unison.

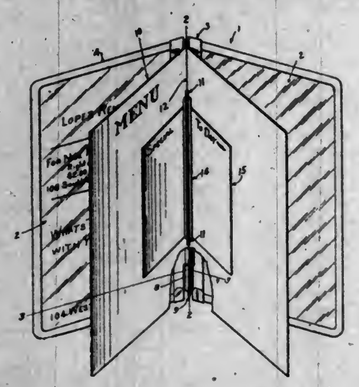
5. A door composed of swinging sections in combination with a step, and a motor for operating the swinging door sections and step in unison.

[Claim 6 not printed in the Gazette.]

1,014,908. MENU-CARD HOLDER. WALTER H. SAWYER, Wichita, Kans. Filed July 3, 1911. Serial No. 636,738. (Cl. 129—21.)

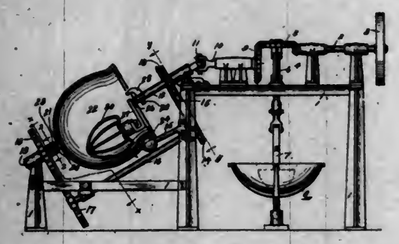
In a menu-card holder, the combination of a pin, covers hingedly connected to the pin, and parts attached to said

pin and adapted to pass through a crease in a menu-card to hold the menu-card stationary in position between said



covers, said parts provided with hooks thereon for the purpose set forth.

1,014,909. CAKE-MIXER. CHARLES SCHENK, Chicago, Ill. Filed July 29, 1910. Serial No. 574,581. (Cl. 107—33.)



1. A dough stirrer comprising a frame; an inclined shaft rotatably mounted in said frame; means for rotating said inclined shaft; a supplemental shaft mounted in alinement with said inclined shaft; a bowl provided with an opening in its top and means at its bottom removably engaging the upper end of said supplemental shaft, supporting rollers secured to said frame and arranged to rotatably support said bowl in axial alinement with said inclined shaft; a crank arm on said inclined shaft and operating in said bowl; a stirrer on said crank arm; a counter shaft mounted in said frame parallel with the axis of said bowl; a sprocket wheel and chain between said inclined and counter shafts; and gears connecting said counter and supplemental shafts, substantially as described.

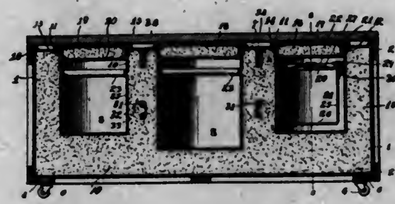
2. A dough stirrer comprising a frame; a horizontal shaft mounted in said frame; an inclined shaft having a universal joint connection with said horizontal shaft; a supplemental shaft mounted in alinement with said inclined shaft; a socket on the upper end of said supplemental shaft; a bowl provided with a central stud at its bottom fitting said socket and having an opening in its top; supporting rollers secured to said frame and arranged to rotatably support said bowl in axial alinement with said inclined shaft; a crank arm on said inclined shaft and operating in said bowl; a stirrer on said crank arm; a counter shaft mounted in said frame parallel with the axis of said bowl; a sprocket wheel and chain connection between said inclined and counter shafts; and gears connecting said counter and supplemental shafts, substantially as described.

1,014,910. DEVICE TO PREVENT COWS FROM KICKING. BENJAMIN M. SHARIT, Morris, Ala. Filed Apr. 15, 1911. Serial No. 621,301. (Cl. 119—126.)

1. An anti-kicking device for cows comprising an arch member, ratchet blocks upon said arch member near the ends thereof, levers pivotally connected with the ends of the arch member and having ratchet engaging pawls, and U-shaped leg engaging shoes upon the lower ends of the levers.

2. A device of the class described comprising an arch member having an upwardly extending angular recess intermediate the ends thereof, flanged ratchet blocks secured upon the arch member near the ends thereof, levers pivoted upon the arch member at the ends thereof and having upwardly extending handles and ratchet engaging pawls, and U-shaped leg engaging shoes at the lower ends of the levers.

1,014,911. FIRELESS COOKER. JOHN E. SHEAFFER, Washington, D. C., assignor to Sheaffer-Marion Company, of the District of Columbia, a Corporation of South Dakota. Filed Feb. 4, 1911. Serial No. 606,555. (Cl. 62—23.)

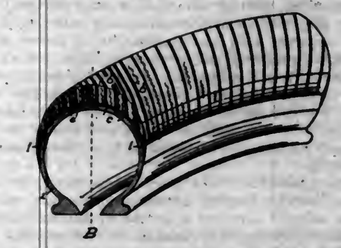


1. A cooker of the class described comprising an insulated cooking vessel container, a closure therefor, a continuous supporting bead stamped from the walls of the container and extending horizontally thereinto, a cooking vessel removably mounted in the container, a closure therefor, and means on the vessel having clamped engagement with the closure therefor and having engagement with the bead of the vessel container so as to hold the walls of the vessel spaced from the walls of the container.

2. A cooker of the class described comprising an insulated cooking vessel container, a closure therefor, the said container having an inwardly extending supporting portion disposed horizontally and located between the ends of the container, a cooking vessel removably mounted in the container, and movable devices on the vessel having engagement with the supporting member of the vessel container to hold the walls of the vessel spaced throughout from the walls of the container.

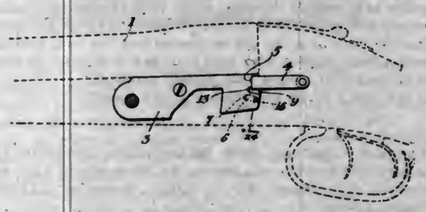
3. A cooker of the class described comprising an insulated cooking vessel container, a closure therefor, a supporting element extending into the container, a cooking vessel removably mounted in the container, a cover for the vessel, and clamping devices carried by the vessel and having clamping engagement with the cover of the vessel and engaging the supporting element of the container to hold the upper end of the vessel spaced from the supporting element.

1,014,912. TREAD FOR PNEUMATIC TIRES. ALVIN H. SHOEMAKER, Portland, Oreg., assignor, by mesne assignments, to Hurley Hercules Pneumatic Tire Company, Portland, Oreg., a Corporation of Oregon. Filed Apr. 8, 1911. Serial No. 619,851. (Cl. 152—16.)



A pneumatic tire comprising a body portion provided on its outer surface with a peripheral layer of rubber, a plurality of alternate strips of fabric and rubber beyond the layer of rubber on the body portion, each layer of fabric and rubber being crescent shape and arranged perpendicular to and diagonally across the peripheral layer of rubber on the body portion; the outer edges of the crescent shape strips of fabric forming with the alternate strips of rubber a crescent shape tread, and the strips of rubber between the fabric merging into and forming part of the layer of rubber on the body portion, the ends of said strips of rubber being elongated and merging into and forming a part of the side portions of said peripheral layer of rubber on the body portion.

1,014,913. COMPENSATING LUG FOR SHOTGUNS. JOSEPH SINGER, Los Angeles, Cal., assignor of one-half to Christian Krempel, Los Angeles, Cal. Filed Nov. 19, 1910. Serial No. 593,245. (Cl. 42—44.)

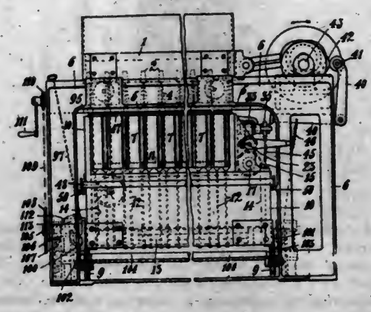


1. In combination with a gun barrel and frame, and lug and bolt means on the barrel and frame for fastening the barrel to the frame, of a compensating member on said lug adjustable relatively to the bolt to provide tight contact therewith, said compensating member being slidably mounted in the lug means on the barrel to move obliquely relatively to the engaging portion of the bolt and provided with a seat for engaging the bolt, and means for adjusting the said member longitudinally in its oblique mounting.

2. In combination with a gun barrel and frame, and lug and bolt means on the barrel and frame for fastening the barrel to the frame, of a compensating member mounted to slide obliquely on said lug so as to be adjustable relatively to the bolt to provide tight contact therewith, and a screw connected to said lug means on the barrel and engaging the said compensating member to adjust the same longitudinally in its oblique mounting.

3. The combination with a gun barrel and frame, a lug on the barrel and a bolt on the frame engaging said lug, of compensating means for providing tight contact between the lug and bolt consisting of a member comprising a cylindrical barrel, an extension therefrom formed with a seat for engaging the bolt, the said lug being provided with a cylindrical channel for receiving and guiding said barrel, a screw engaging in said barrel and having a head provided with an annular groove, and a locking screw screwing in the lug and engaging in said groove, said cylindrical channel extending obliquely to the engaging portion of the bolt whereby longitudinal adjustment of the barrel in said channel tightens the seat of said compensating member on said bolt.

1,014,914. MATCH-SPLINT-PARALLELIZING MACHINE. JOHN GOTTHARD SJÖSTRÖM, Jönköping, Sweden. Filed Nov. 5, 1909. Serial No. 526,461. (Cl. 144—61.)



1. In a machine of the kind described, the combination of a reciprocable cell-box comprising vertical rectangular cells open at their tops and bottoms and adapted to be continuously kept filled with match splints lying parallel therein, means for reciprocating the said box horizontally in the direction of the walls of the cells corresponding to the longitudinal direction of the match splints, trays removably placed in the machine below the said box, splint-carrying bottoms movable in the said trays, and means for raising and automatically lowering the said bottoms.

2. In a machine of the kind described, the combination of a reciprocable cell-box, means for reciprocating the said box, trays removably placed in the machine below the said box, and partition walls swingably placed between the cell-box and the trays and partaking with their upper ends in the movement of the cell-box.

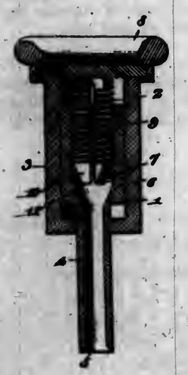
3. In a machine of the kind described, the combination of a reciprocable cell-box, means for reciprocating the said box, trays removably placed in the machine below the said box, a frame movable vertically below the said trays, means for raising and automatically lowering the said frame, standards projecting from the said frame into the trays, and bottoms carried by the said standards.

4. In a machine of the kind described the combination of a reciprocable cell-box comprising vertical rectangular cells open at their tops and bottoms and adapted to be continuously kept filled with match splints lying parallel therein, means for reciprocating the said box horizontally in the direction of the walls of the cells corresponding to the longitudinal direction of the match splints, trays removably placed in the machine below the said box, partition walls swingably placed between the cell-box and the trays, splint-carrying bottoms movable in the said trays, and means for raising and automatically lowering the said bottoms.

5. In a machine of the kind described the combination of a reciprocable cell-box comprising vertical rectangular cells open at their tops and bottoms and adapted to be continuously kept filled with match splints lying parallel therein, means for reciprocating the said box horizontally in the direction of the walls of the cells corresponding to the longitudinal direction of the match splints, trays removably placed in the machine below the said box, partition walls swingably placed between the cell-box and the trays, a frame movable vertically below the said trays, means for raising and automatically lowering the said frame, standards projecting from the said frame into the trays, and bottoms carried by the said standards.

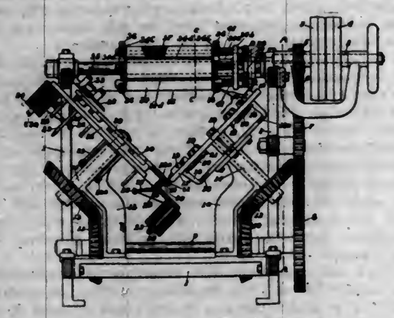
[Claims 6 to 14 not printed in the Gazette.]

1,014,915. PIN-LOCK. LEONARD R. STEEL, Cleveland, Ohio. Filed July 20, 1910. Serial No. 572,894. (Cl. 24—155.)



In a device for the purpose set forth, a hollow member comprising an enlarged portion and a reduced extension, said hollow member having its bore threaded and being provided with a cone-shaped portion adjacent its juncture with the reduced extension, a securing member having a hollow slitted stem and a cone-shaped extension, said stem being formed with threads adapted to engage with the threads of the hollow member, the cone-shaped extension of the said member aliining with the bore of the reduced extension of the first named member, both the bore of the reduced extension and the bore of the slitted stem adapted to receive the point of the hat pin, the reduced extension being formed with a flaring end, the securing member being provided with a head, and a casing connected with the head and surrounding the enlarged portion of the first named member, said casing having its end opposite the head reduced and formed with an opening through which the reduced extension of the said first named member projects.

1,014,916. MACHINE FOR MAKING TAGS. ARTHUR L. STEVENS, New York, N. Y., assignor to Charles B. Tewksbury, Boston, Mass. Filed July 11, 1907. Serial No. 383,168. (Cl. 154—1.)



1. In an apparatus of the character described the combination of rotatable means for drawing out one or more strands of flexible material to the required length and conveying said flexible material to a certain position, other rotatable means to grasp said flexible material when in such position and to convey said flexible material between stripe of other material, one or more of said stripe of last mentioned material having a cemented surface, means for supporting and feeding said strips of last mentioned material to the point where said flexible material is brought between said strips and means for pressing said strips together after said flexible material has been laid between them.

2. In an apparatus of the character described the combination of a rotatable member carrying a strand of flexible material, another rotatable member provided with means to grip said flexible material, the rotation of said members drawing said material out to a predetermined length, other rotatable means to grasp said flexible material when it has been carried to a certain position during the rotation of said first mentioned rotatable members and lay the same between stripe of other material adapted to form the body of a tag and means for supporting and feeding said stripe of last mentioned material into position.

3. In an apparatus of the character described, in combination, a rotatable member having gripping jaws, another rotatable member carrying a strand of flexible material, means for supporting said members in such relative position that said flexible material when grasped by said jaws, will by the rotation of said members, be drawn out to a predetermined length, other rotatable means to grasp said material when it has been carried to a predetermined position by the rotation of said first mentioned rotatable members, and means for supporting and feeding to a certain position stripe of material adapted to form the body of a tag.

4. In an apparatus of the character described the combination of rotatable means for drawing out a strand of flexible material and conveying it to a certain position, other rotatable means adapted to grasp said flexible material when it is in position and to convey it transversely between stripe of other material, and means for supporting and feeding said strips of last mentioned material to the position where said flexible material is brought between said strips.

5. In an apparatus of the character described the combination of rotatable means for conveying one or more strands of flexible material to a predetermined position, a roll having a plurality of fingers adapted to grasp said flexible material when it is in position, means whereby a plurality of strips of other material for forming the body of a tag are supported and fed to a position where they contact with said roll, and means for causing said fingers to release said flexible material.

[Claims 6 to 30 not printed in the Gazette.]

1,014,917. DEVICE FOR MEASURING INTERPUPILLARY DISTANCE. CLARENCE M. STEVENSON, Los Angeles, Cal. Filed Mar. 2, 1911. Serial No. 611,898. (Cl. 88—21.)

1. A device for measuring interpupilary distance comprising means for fixing the location of the eyes to be measured, an eye-piece movably relatively to the aforesaid means, and scale means for measuring the movement of said eye-piece relatively to the aforesaid means, said eye-piece being provided with ray deflecting means for producing virtual images of the observed eyes when viewed from the eye-piece, said virtual images being shifted proportionally to the movement of the eye-piece relatively to the observed eyes.

2. A device for measuring interpupilary distance comprising a head rest, ray deflecting means mounted to move relatively to said head rest, and scale means for indicating the relative movement of said ray deflecting means and said head rest.

3. A device for measuring the distance between pupils of a person, comprising a head rest, a double prism, means for movably mounting said double prism relatively to said head rest, and a scale means for indicating the relative movement of said double prism and head rest.

4. A device for measuring interpupilary distance comprising a head rest, a scale member connected thereto, a slide member mounted to move longitudinally on said scale member, and an eye piece on said slide member provided with a double prism.

5. The combination of a head rest, an indicator thereon, a scale member extending from said head rest, and a mirror movably mounted on said scale member and facing said indicator, whereby the eyes of a person located by said head rest may be positioned to definite focal distance by observation of said indicator in said mirror.

[Claims 6 and 7 not printed in the Gazette.]

1,014,918. BELTING. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Oct. 17, 1910. Serial No. 587,630. (Cl. 74—63.)

1. In a belt, a tubular fabric and a lining therefor of adhesive vulcanizable material, and a longitudinal layer therein of parallel twisted cords laid at a slight angle to the sides of the belt to provide flexibility thereof.

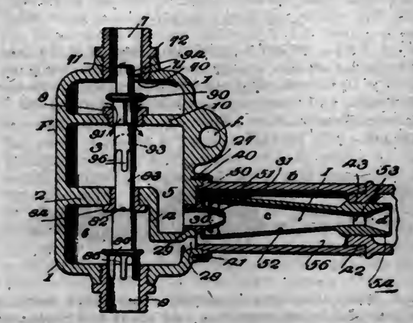
2. In a belt, a tubular layer of fibrous members crossing each other around the tube, a tubular layer of slightly inclined longitudinally directed members comprising parallel cords laid at an angle to the sides of said belt, a tubular lining of adhesive vulcanizable material, an intervening rubber layer between the fibrous layers and a binding for said fibrous members of adhesive vulcanizable material.

3. In a belt, in combination, a tubular layer composed of crossing equally spaced parallel bands of fibrous material forming two plies, the spaces between said bands filled by succeeding bands until all spaces are covered, a tubular layer comprising parallel cohering cords laid at an angle to the sides of the belt, the parallel cords in one side of said tubular layer crossing the cords in the other side, and an intervening layer of rubber between said layers, a rubber lining and an outer coating.

4. As an article of manufacture, a belt, comprising a flattened tube composed of interwound groups of parallel twisted close lying cords, flattened to form selvage edges, and a flattened layer of parallel twisted closely lying cords longitudinally directed and adhering together, said parallel twisted cords laid at an angle to said edges.

1,014,919. FEED-WATER HEATER. JARED S. SWEENY and WILLIAM W. GRINDLE, Decatur, Ill. Filed June 28, 1909. Serial No. 504,903. (Cl. 162—3.)

1. In a high pressure feed water heater, in combination, a shell having a high pressure water passage with an outlet therefrom and an inlet thereto, a check valve for closing said inlet and normally held open by the water entering the same, said shell having a projecting steam nozzle and an internal steam passage thereto comprising a steam inlet port, a steam check valve adapted to close said port against back flow of water through said passage, said steam check valve being normally held in open position by said first mentioned check valve and adapted to move therewith to position closing said steam passage against forward flow of steam therethrough when said first mentioned valve moves to closed position, substantially as described.



2. A feed water heater comprising a shell having separate steam and water passages, feed water heating and forcing means communicating with said passages, the shell having a steam inlet port and said steam passage comprising a steam port spaced from said inlet port, an oppositely movable check valve arranged between said ports and movable in one direction to close the inlet port against back flow from the shell and movable in the opposite direction to close the steam port against forward flow of steam into said steam passage, said valve being normally in open position with respect to both ports, and means to normally maintain said valve in said position.

3. In a high pressure feed water heater, in combination, a shell having a projecting steam nozzle and formed with a steam passage thereto, an emergency check valve in said steam passage and held open by the passage of steam therethrough, said shell having a high pressure feed water supply inlet port and passage and an outlet passage therefrom adjacent to said nozzle, a check valve for closing said water inlet port and held open by the passage of water therethrough, a boiler-feed-water pipe coupled to said shell around said nozzle and in registration with said outlet passage, and an elongated tubular injector member arranged longitudinally in said pipe and closed against overflow and forming a combining tube receiving high pressure water from said pipe and a delivery tube, the receiving end of the combining tube being enlarged with respect to said nozzle and receiving and inclosing the same and formed to direct the inflowing water thereagainst.

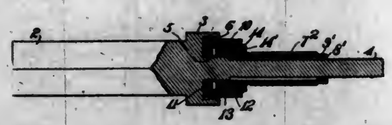
4. A high pressure feed water heater comprising a longitudinally elongated tubular injector member at its receiving end having a surrounding series of water inlet openings and at its receiving end extremity having a central opening, means forming a water chamber around said body closed at its forward end and into which said water inlet openings open, a feed water pipe receiving the delivery end of said body, means for supplying high pressure feed water to said chamber, a forwardly tapered steam nozzle projecting through said receiving end opening and arranged within and reduced with respect to said bore, and means for supplying steam to said nozzle, said inlet openings arranged to deliver high pressure jets of water against the tapered portion of said nozzle within said bore, substantially as described.

5. A high pressure feed water heater comprising a longitudinally elongated non-overflow tubular injector body having a combining tube, a delivery tube, and a contracted intermediate cylindrical connecting passage, said combining tube at its inner end formed for the inlet of high pressure feed water, means forming a high pressure feed water

chamber around said inlet end of said combining tube, a feed water pipe receiving said delivery tube and extending to the boiler, a forwardly tapered steam nozzle extending forwardly into the water inlet end of said combining tube and reduced with respect thereto to form a water space therein and around said tapered nozzle, and means whereby the high pressure feed water entering said tube is directed against said tapered nozzle and is thereby sprayed forwardly within said tube, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,014,920. NIPPLE-HOLDER. GEORGE J. THOMAS, Watertown, Mass., assignor of twenty-four one-hundredths to himself, fifty-one one-hundredths to Thomas E. Eustis, and twenty-five one-hundredths to Frank T. Cazmay, Newton, Mass. Filed Apr. 18, 1910. Serial No. 556,143. (Cl. 10—108.)



1. A device of the class described, comprising a shank, a maximum size socket formed on said shank and having an internal right-hand screw thread, a spindle centrally of said shank consisting of an enlarged right-hand threaded portion adjacent to said socket, and a reduced left-hand threaded portion beyond said socket, a socket adapted to fit within said maximum socket and having an internally threaded opening through to receive said enlarged portion of said spindle, and a plurality of threaded followers of slightly less external diameter than the internal diameters of said sockets.

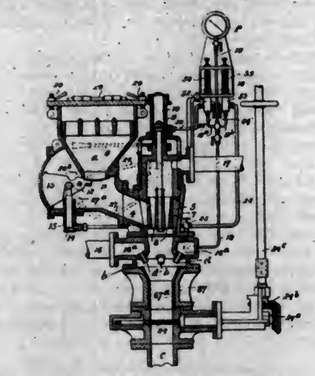
2. A device of the class described, comprising a shank, a maximum size socket formed on said shank and having an internal right-hand screw thread therein, a spindle centrally of said shank and having an enlarged right-hand threaded portion adjacent to said socket, and a reduced left-hand threaded portion beyond said socket, a reversible piece having a socket on each side and having an internal right-hand thread and an internally threaded opening through to receive said enlarged portion of said spindle, and having an internal right-hand thread, said sockets being of different diameters, a threaded filler piece adapted to fit one of said sockets and having an external screw thread adapted to engage the threading of that socket, and an internal right-hand screw threaded socket adapted to receive the end of the nipple, and a plurality of threaded followers of slightly less external diameter than the internal diameters of said socket.

1,014,921. APPARATUS FOR EJECTING ASHES AND OTHER REFUSE FROM SHIPS. FRANCIS JAMES TREWENT and WILLIAM EDWARD PROCTOR, London, England. Filed Mar. 2, 1910. Serial No. 546,897. (Cl. 114—186.)

1. In apparatus for ejecting ashes or other refuse from ships, the combination with an ejector chamber through which the refuse passes and adapted to be flooded with water, of a plurality of water nozzles disposed in said chamber about the path of the refuse therethrough, whereby the refuse is embraced by the water jets from said nozzles, substantially as and for the purpose described.

2. In apparatus for ejecting ashes or other refuse from ships, the combination with an ejector chamber through which the refuse passes, and adapted to be flooded with water, of a plurality of ejecting nozzles disposed in said chamber about the path of the refuse therethrough whereby to embrace the refuse by the jets from said nozzles, and means for supplying pressure water to said ejecting nozzles, substantially as and for the purpose described.

3. In apparatus for ejecting ashes or other refuse from ships, the combination with an ejector chamber through which the refuse passes, and adapted to be flooded with water, of a ring of water nozzles disposed in said chamber about the path of the refuse through said chamber, whereby to embrace the refuse by the jets from said nozzles, substantially as and for the purpose described.

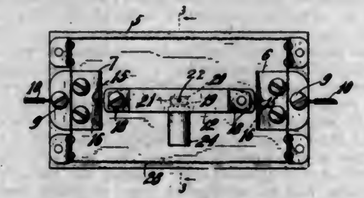


4. In apparatus for ejecting ashes and other refuse from ships, the combination with an ejector chamber through which the refuse passes, and adapted to be flooded with water, of a ring of ejecting nozzles disposed in said chamber about the path of the refuse therethrough, whereby to embrace the refuse by the jets from said nozzles, and means for supplying pressure water to said ejecting nozzles, substantially as and for the purpose described.

5. In apparatus for ejecting ashes or other refuse from ships, the combination with an ejector chamber through which the refuse passes and adapted to be flooded with water of a plurality of water nozzles disposed in said chamber about the path of the refuse therethrough, whereby the refuse is embraced by the water jets from said nozzles, and a water nozzle located to discharge through the ejector chamber from behind the said plurality of nozzles, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,014,922. FIRE-ALARM. RUDOLF URCHNIAK and GEORGE WERHNJAK, Milwaukee, Wis., assignors of one-third to Hans Tschernitz, Milwaukee, Wis. Filed May 20, 1911. Serial No. 628,418. (Cl. 177—302.)



1. A thermostatic alarm, comprising a support, electric terminals carried thereby and insulated from each other, and thermostatically controlled contacts having a universal jointed connection with the terminals for completing an electric circuit through said terminals when subjected to a predetermined degree of heat.

2. A thermostatic alarm, comprising a support, electric terminals carried thereby and insulated from each other, contact members insulated from each other and having a universal jointed connection with the terminals, and a thermostatic means for forming an electrical connection between the contacts to complete an electric circuit through the terminals when subjected to a predetermined degree of heat.

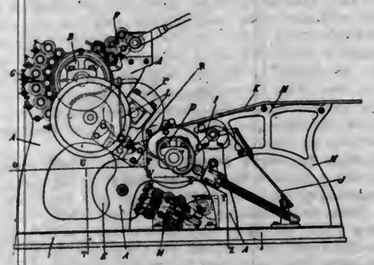
3. A thermostatic alarm, comprising a support, electric terminals projecting therefrom and insulated from each other, contact members insulated from each other and having a universal jointed connection with the terminals, a tube open at one end and carried by one of the contact members, and a material within the tube which will expand and flow through the open end of the tube and form an electrical connection between the contacts when subjected to a predetermined degree of heat.

4. A thermostatic alarm, comprising a base, angle brackets projecting therefrom and insulated from each other, a frame pivotally connected to the brackets, said frame formed of two sections insulated from each other and each section having an electrical connection with one of the brackets and insulated from the other bracket, contact members pivotally connected to the frame in a line transverse to the pivotal connection of the frame with the brackets, said contact members being insulated from each other and each member having an electrical connection with one of the frame sections and insulated from the other frame section, and a thermostatic means for forming an electrical connection between the two contact members when subjected to a predetermined degree of heat.

5. A thermostatic alarm, comprising a base, angle brackets projecting therefrom and insulated from each other, a frame pivotally connected to the brackets, said frame formed of two sections insulated from each other and each section having an electrical connection with one of the brackets and insulated from the other bracket, contact members pivotally connected to the frame in a line transverse to the pivotal connection of the frame with the brackets, insulating material provided with a medial opening interposed between the contact members to insulate said members from each other, each contact member being electrically connected with one of the frame sections and insulated from the other frame section, a tube open at one end and carried by one of the contact members, the open end of said tube being in register with the medial opening of the insulating material, and a material within the tube which will expand and flow through the open end of the tube and through the medial opening of the insulating material and contact with the contact member other than the contact member which carries the tube for electrically connecting the two contact members together.

[Claim 6 not printed in the Gazette.]

1,014,923. PRINTING-MACHINE. AUGUSTE VALENTIN, JEAN ZERREISS, and HENRI GEORGES, Puteaux, France. Filed Feb. 24, 1910. Serial No. 545,684. (Cl. 101—104.)



1. In a printing machine, a cylinder, an armor or casing attached to a portion of the surface of said cylinder, said armor or casing being adapted to carry plates engraved in intaglio, inking mechanism for said intaglio plates, ink wiping mechanism for said intaglio plates, a pressure cylinder, a cylinder intermediate said pressure cylinder and said first named cylinder carrying a soft rubber blanket, a reversing cylinder coacting with said pressure cylinder, said pressure cylinder being provided with means for seizing and driving the paper to be printed, mechanism for feeding paper to said pressure cylinder, a cylinder coacting with said pressure cylinder for carrying typographic blocks, and inking mechanism for said last named cylinder.

2. In a printing machine, a cylinder, an armor or casing attached to a portion of the surface of said cylinder, said armor or casing being adapted to carry plates engraved in intaglio, inking mechanism for said intaglio plates, ink wiping mechanism for said intaglio plates, a pressure cylinder, a cylinder intermediate said pressure cylinder and said first named cylinder carrying a soft rubber blanket, a reversing cylinder coacting with said pressure cylinder, said pressure cylinder being provided with means for seizing and driving the paper to be printed, mechanism for feeding paper to said pressure cylinder, a cylinder coacting with said pressure cylinder for carrying typographic blocks, and inking mechanism for said last named cylinder.

3. In a printing machine, a cylinder, an armor or casing conforming to the curvature of the said cylinder carrying plates engraved in intaglio, grooves at the end of said cylinder into which a portion of said armor or casing enters, fastening means disposed in said grooves for holding said armor or casing in position, inking mechanism for said intaglio plates, means for moving said inking mechanism to and from contact with said intaglio plates, a plurality of wiping contact rollers engaging said cylinder, a plurality of wiping cylinders engaging said wiping contact rollers, a plurality of scrapers adjustable with reference to said wiping cylinders, a pressure cylinder, pincers on said pressure cylinder for seizing and driving the paper during printing, and an intermediate cylinder between said pressure cylinder and said first named cylinder, said last named cylinder being provided with a soft rubber blanket.

4. In a printing machine, a cylinder, an armor or casing conforming to the curvature of the said cylinder carrying plates engraved in intaglio, grooves at the end of said cylinder into which a portion of said armor or casing enters, fastening means disposed in said grooves for holding said armor or casing in position, inking mechanism for said intaglio plates, means for moving said inking mechanism to and from contact with said intaglio plates, a plurality of wiping contact rollers engaging said cylinder, a plurality of wiping cylinders engaging said wiping contact rollers, a plurality of scrapers adjustable with reference to said wiping cylinders, a pressure cylinder, pincers on said pressure cylinder for seizing and driving the paper during printing, an intermediate cylinder between said pressure cylinder and said first named cylinder, said last named cylinder being provided with a soft rubber blanket, a reversing cylinder coacting with said pressure cylinder, a cylinder coacting with said pressure cylinder carrying typographic blocks, and inking mechanism for said typographic cylinder.

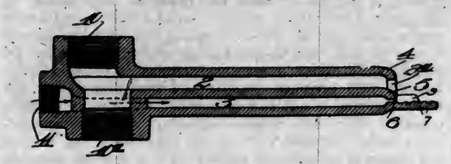
5. In a printing machine, a cylinder, an armor or casing conforming to the curvature of the said cylinder carrying plates engraved in intaglio, grooves at the end of said cylinder into which a portion of said armor or casing enters, fastening means disposed in said grooves for holding said armor or casing in position, inking mechanism for said intaglio plates, a pressure cylinder, pincers on said pressure cylinder for seizing and driving the paper during printing, an intermediate cylinder between said pressure cylinder and said first named cylinder, a reversing cylinder coacting with said pressure cylinder, and paper discharging means coacting with said reversing cylinder.

[Claims 6 to 14 not printed in the Gazette.]

1,014,924. OIL-BURNER. GEORGE B. VON BODEN and EDWIN F. INGLES, San Francisco, Cal. Filed June 28, 1911. Serial No. 635,834. (Cl. 158—75.)

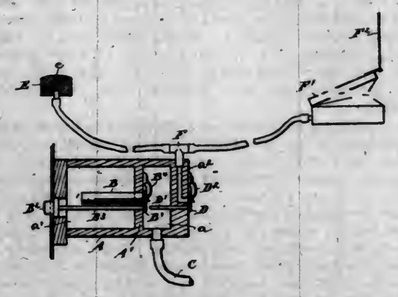
An oil burner, comprising a metal conduit with parallel steam and oil passages, the latter located above the former, said conduit having means for discharging the steam and oil, and having a plurality of vertical inlet passages connecting with the rear of the oil passage, one from above and the other from below, a centrally located steam inlet at the rear of the conduit, the wall of the lower vertical inlet

passage being projected across the path of and intercepting the incoming steam and serving as an abutment for diverting the path thereof, said abutment forming between



itself and the inner walls of the conduit side passages through which the diverted portions of the steam may pass, and plugged openings leading to said passages.

1,014,925. TUNING DEVICE FOR SELF-PLAYING MUSICAL INSTRUMENTS. JOSEPH WAUTERS, Scranton, Pa., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Original application filed Aug. 1, 1908, Serial No. 446,397. Divided and this application filed Apr. 15, 1911. Serial No. 621,201. (Cl. 84—43.)

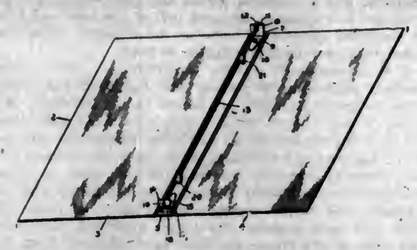


1. In a self-playing instrument, a tracker-board, a string-sounding pneumatic, a pipe connection from said tracker-board to said pneumatic, and a tuning device connected to said pipe, comprising a box, a partition therein, a pitch-pipe in said partition, a valve controlling said pitchpipe, an exhaust tube leading from said box, and means for moving said valve to sound said pitchpipe.

2. In a self-playing instrument, a tuning device comprising a box, a partition therein dividing said box into compartments and having an opening leading from one of such compartments to the other, a pitchpipe in said opening and extending into one of said compartments, a valve located in the other compartment and controlling said opening and pitchpipe, means for opening said valve, a passage in the wall of said box, an air-valve exterior to the latter and closing one end of said passage, a pipe connection from a tracker-board to the open end of said passage, a pipe connection from the open end of said passage to a string-sounding pneumatic, and means actuated by the opening movement of said valve for opening said air-valve.

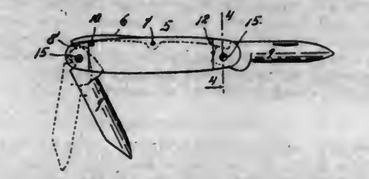
3. In a self-playing instrument, a tuning device comprising a box, partitions therein forming a series of cells and a compartment, an opening from each of said cells to said compartment, a pitchpipe in each of said openings, valves in said compartment for closing said openings, pushbuttons and means actuated thereby for opening said valves, a series of passages in the wall of said box, and an air-valve for each of said passages, a T in the open end of each passage, a pipe connection from a tracker-board to one branch of said T, a pipe connection from the other branch of said T to a string-sounding pneumatic, an exhaust tube leading from said compartment, and means actuated by the movement of said valves for opening said air-valves.

1,014,926. MAGAZINE-BINDER. BENJAMIN FRANKLIN WESTERVELT, New York, N. Y. Filed Apr. 8, 1911. Serial No. 618,568. (Cl. 129—38.)



A magazine holder including in combination a back and sides, standards fixed to the back at each end thereof, a thin, stiff, resilient rod having one end attached to, but swinging relatively to, one of said standards, said rod having a plurality of short inwardly extending bends formed therein, said bends being spaced relatively far apart along said rod, said bends being adapted to enter between the leaves of a magizine to press the back of the magazine against the back of the binder, the other of said standards having means for holding the other end of said rod under flexing tension to hold said bends pressing the back of the magazine against the back of the holder.

1,014,927. TAKE-DOWN POCKET-KNIFE. CARL H. WHITE, Denver, Colo., assignor to The Piogran Sales Company, Denver, Colo., a Corporation of Colorado. Filed Oct. 4, 1910. Serial No. 585,212. (Cl. 30—10.)



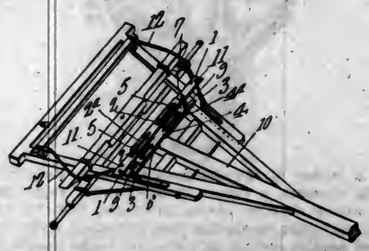
1. In a take-down pocket knife ,the combination with a blade, of a removable blade-holding pivot pin, and a spring, the shank of the blade being of rectangular shape and the corners of the shank being arranged to come into contact with the spring to lift the same into such a position as to be free from the shank of the blade, when the blade is in the half-open wide open or closed positions, and a pin for retaining the spring in such raised position, substantially as described.

2. In a take-down pocket knife, the combination of a removable blade, a spring, the shank of the blade being of approximately rectangular shape and the corners of the blade being arranged to come into contact with the spring to lift the same into such a position as to be free from the shank of the blade when the blade is in the half-open wide-open or closed positions, and means for retaining the spring in such raised position.

1,014,928. WAGON OR VEHICLE TONGUE SUPPORT. DEE W. WILHELM, De Leon, Tex., assignor of one-half to John H. Williams, De Leon, Tex. Filed Sept. 25, 1911. Serial No. 651,178. (Cl. 21—63.)

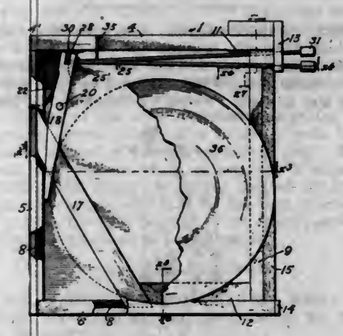
1. A device of the character described, including parallel spaced apart members, each member comprising a central plate, and end-plates, means effecting adjustable connection between said central and end-plates, means effecting the attachment of the upper end-plates to vehicle-hounds, resilient members interposed between the upper and lower end-plates, and bolt-like members extending

through said resilient members, and having their lower ends headed into said lower end-plates and their upper ends movable through said upper end-plates and means to hold said bolt-like members against displacement with respect to the latter end-plates.



2. A tongue or pole, vehicle-hounds, parallel upper and lower members, each including a central plate and end-plates, means connecting together each central plate and two end-plates, means connecting the upper end-plates to said vehicle-hounds, resilient members interposed between said upper and lower end-plates, and bolt-like members extending through said resilient members, and having their lower ends headed into said lower end-plates and their upper ends movable through said upper end-plates.

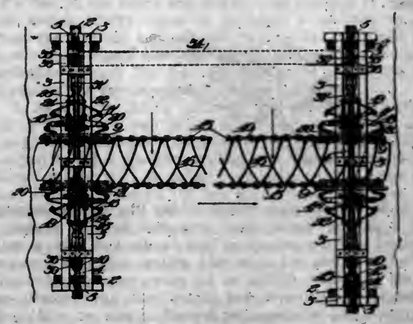
1,014,929. CASE FOR DISK RECORDS. FREDERICK W. WOOD, Mayer, Ariz. Filed May 8, 1911. Serial No. 625,874. (Cl. 211—16.)



1. A case for disk records provided with vertical slots for insertion and withdrawal of the records, a series of strips within the case spaced apart to form guide-ways back of the respective slots for receiving the records, a pivot-shaft extending transversely in said case above said strips therein, a series of levers mounted on said pivot-shaft to turn thereon, said levers extending down between the respective guide-strips and extending upwardly above said pivot-shaft and provided above said pivot-shaft with grooves in their rear faces, springs secured to the case and engaging in said grooves to press the upper ends of the levers forwardly, and a series of push-rods mounted to slide in said case and engaging at their rear ends with the said levers.

2. A case for disk records provided with slots for insertion and withdrawal of the records and with guides for the records, in combination with a plurality of ejector levers pivotally mounted side by side in the case, springs supported on the back of the case and engaging the levers to move their lower portions rearwardly, and bars slidably mounted in the front of the case and having push buttons on their forward ends, said levers having transverse slots and having their portions in front of said slots provided with slits, and said push bars having reduced portions extending through said slits and being provided with heads engaging in said slots.

1,014,930. CURRENT-MOTOR. HENRY ALLES, Spokane, Wash. Filed Mar. 16, 1911. Serial No. 614,841. (Cl. 138—11.)



1. A current motor comprising a number of angularly adjustable blades, a shaft, means mounted upon said shaft supporting the adjustable blades, and means for adjusting the angle of the blades, said means including a sleeve slidably mounted upon the shaft, a spider secured upon the shaft, levers mounted upon the spider, links connecting said levers and said slidable sleeve and connections between said levers and the blades.

2. A current motor comprising a number of angularly adjustable blades, a shaft, means mounted upon said shaft supporting the adjustable blades, means for adjusting the angle of the blades, said means including a sleeve slidably mounted upon the shaft, a spider secured upon the shaft, levers mounted upon the spider, links connecting said levers and said slidable sleeve and connections between said levers and the blades, and means for operating said sleeve, said means including a block in which said sleeve is turnable and screws engaging said block whereby the latter may be actuated.

3. A current motor comprising a shaft, a series of blades, and a mechanism for adjusting the blades angularly relative the shaft, said means including a sleeve, a spider, levers pivoted upon said spiders, connections between the levers and the sleeve and connections between the blades and the levers whereby the blades are moved.

4. A current motor comprising a plurality of angularly adjustable blades, a pair of spaced chains connected to the ends of the blades, sprocket wheels upon which the chains are supported, a shaft carrying the sprocket wheels, and means for adjusting the angular relation of the blades to the axis of the shaft, said means including a sleeve slidably mounted upon the shaft and levers and links connecting said sleeve and one of the sprocket wheels.

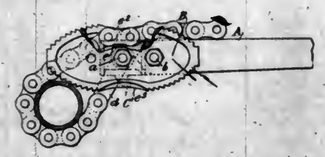
5. A current motor comprising a plurality of angularly adjustable blades, a pair of spaced chains connected to the ends of the blades, sprocket wheels upon which the chains are supported, parallel shafts carrying the sprocket wheels, and means for adjusting the angular relation of the blades to the axes of the shafts, said means including sleeves slidably mounted on the shafts and levers and links connecting said sleeves and the sprocket wheels.

[Claims 6 to 10 not printed in the Gazette.]

1,014,931. CHAIN PIPE-WRENCH. GEORGE AMBORN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Apr. 21, 1910. Serial No. 556,726. (Cl. 81—70.)

1. In a chain pipe wrench or the like, the combination of a pair of double-ended reversible jaws, a handle, a

central bolt for connecting said handle and jaws, a chain pivoted at one end upon said central bolt, and a lock integrally formed on an outer face of said handle transversely opposite said central bolt, and interengaging provisions between said handle and jaw on each side of the handle, said interengaging provisions constituting a pair of projections and complementary sockets and permitting a flush engagement of the sides of said handle and jaws, said projections being upon opposite sides of said central bolt.



2. In a chain pipe wrench or the like, the combination of a pair of double-ended reversible jaws, a handle, a central bolt for connecting said handle and jaws, a chain pivoted at one end upon said central bolt, and a pair of locks integrally formed in an outer face of said handle transversely opposite said central bolt and opposite one another, and interengaging provisions between said handle and jaw on each side of the handle said interengaging provisions constituting a pair of projections and complementary sockets and permitting a flush engagement of the sides of said handle and jaws, said projections being upon opposite sides of said central bolt.

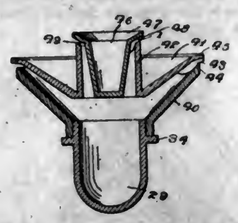
3. In a chain pipe wrench or the like, the combination of a pair of double-ended reversible jaws, a handle, a central bolt for connecting said handle and jaws, a chain pivoted at one end upon said central bolt, and a lock integrally formed on an outer face of said handle transversely opposite said central bolt, and interengaging provisions between said handle and jaw, on each side of the handle said interengaging provisions constituting a pair of ribs formed upon the inner face of each of the jaws, and slots in said handle adapted to receive said ribs, whereby the faces of said handle are flush with those of said jaws.

4. In a chain pipe wrench or the like, the combination of a pair of double-ended reversible jaws, a handle having a bifurcated end, a central bolt for connecting said handle and jaws, a chain pivoted at one end upon said central bolt, a lock integrally formed on an outer face of said handle transversely opposite said central bolt, and interengaging provisions between said handle and jaw, on each side of the handle said interengaging provisions constituting a pair of ribs formed upon the inner face of each of the jaws and extending laterally of the handle, slots on the inner sides of said handle, one of the ribs on each of the jaws being adapted to fit within a slot on one side of the handle, and the other rib on each jaw being adapted to fit against the end of the handle whereby the faces of said handle are flush with those of said jaws, said ribs being on opposite sides of the central bolt.

5. In a chain pipe wrench or the like, the combination of a pair of double-ended reversible jaws, a handle, having a bifurcated end, a central bolt for connecting said handle and jaws, a chain pivoted at one end upon said central bolt, and a lock integrally formed on an outer face of said handle transversely opposite said central bolt, and interengaging provisions between said handle and jaw on each side of the handle said interengaging provisions constituting a pair of ribs formed upon the inner face of each of the jaws and extending laterally of the handle, slots on the inner sides of said handle, above said bifurcations, one of the ribs on each of the jaws being adapted to fit within a slot on one side of the handle, and the other rib on each jaw being adapted to fit against the end of the handle whereby the faces of said handle are flush with those of said jaws, said ribs bieng on opposite sides of the central bolt.

[Claims 6 to 8 not printed in the Gazette.]

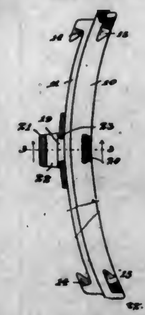
1,014,932. BURNER. JOSEPH ANTONUCCIO, Oakland, Cal. Filed July 18, 1911. Serial No. 639,103. (Cl. 158—116.)



1. A burner of the character described, comprising a mixing chamber, a funnel shaped member supported on said mixing chamber having its largest diameter uppermost and having an opening therethrough, a flatter funnel shaped member resting upon the first funnel shaped member and having lugs to space its outer edge a short distance above the first funnel shaped member, said second funnel shaped member having a walled opening therethrough, and a small cup shaped member supported on said second funnel shaped member and having its edges projecting beyond the vertical walls thereor, substantially as described.

2. In a burner of the character described, a mixing chamber, a funnel shaped member supported on said mixing chamber with its largest diameter uppermost, a second shallower funnel shaped member supported upon the first funnel shaped member and having a cylindrical walled opening through its center, and a cup shaped member having a flaring edge supported on said cylindrical walls with its edges beyond said cylindrical walls, substantially as described.

1,014,933. BRAKE-SHOE. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-fourth to Sydney Stein, Chicago, Ill. Original application filed Dec. 22, 1910, Serial No. 598,700. Divided and this application filed May 27, 1911. Serial No. 629,880. (Cl. 188—28.)

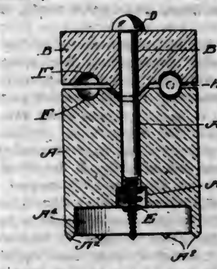


1. A brake-shoe comprising a body-member, an independently formed fastening lug, and means for detachably keying the latter on the back of said body-member, substantially as described.

2. A brake-shoe comprising a body-member and a detachable fastening lug therefor, said body-member and fastening lug being provided with interfitting parts whereby said fastening lug may be secured to and removed from said body-member by a relative sliding movement therebetween, substantially as described.

3. A brake-shoe comprising a body-member and a detachable fastening lug therefor, said body-member and detachable fastening lug being provided one with a dovetailed member and the other with a dovetailed recess adapted to be slidingly engaged by said dovetailed member in applying and removing said fastening lug, substantially as described.

1,014,934. INSULATOR-KNOB. GEORGE BAKER, Torrington, Conn. Filed Aug. 11, 1910. Serial No. 576,720. (Cl. 173—28.)



1. An insulator formed of two sections secured together by a screw, and means for locking said screw in said sections.

2. An insulator formed of a base, and a top having a screw extending vertically therethrough, and a coiled spring carried by the base through which said screw extends.

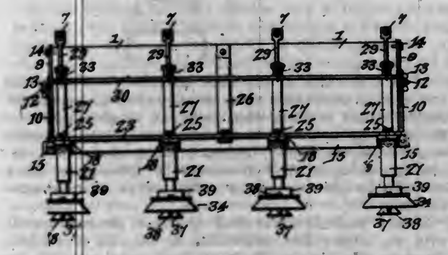
3. An insulator comprising a base provided with a central bore having an enlarged portion, said base being provided with a circular groove in its top having its walls notched, a top mounted on said base provided with a central bore and having its bottom grooved to correspond with the groove of the base, and its walls notched, a screw extending through the vertical bores of said base and top, and a spring mounted in an enlarged portion of said base engaging said screw.

4. An insulating knob formed of two sections secured together by a screw, the opposing faces of said sections being provided with circular grooves registering with one another, the outer walls of said grooves being provided with V shaped notches having semi-circular bottoms forming biting members, and a spring carried by said base through which said screw passes, said spring holding said screw within said sections.

5. A device of the class described, comprising a pair of members having current wire receiving seats in adjacent faces thereof, a fastener passed through the said members and adapted to be driven into a support or foundation, and tensioning means carried by the said fastener and acting upon one of the said members for pressing it in clamping relation to the other member.

[Claim 6 not printed in the Gazette.]

1,014,935. LIQUID-FILLING DEVICE. HENRY BARRY, Chicago, Ill. Filed May 31, 1910. Serial No. 564,209. (Cl. 226—22.)



1. The combination with a tank having an outlet in its bottom, of a valve controlling the said outlet, a pipe leading from said outlet, a filling tube having a port and movable to carry the port into and out of register with the end of the pipe, and means for simultaneously moving the filling tube to bring the port into register with the end of the pipe and to open the valve.

2. The combination with a tank having an outlet in its bottom, of a pipe detachably secured to the tank with one end around the said outlet, a filling tube movable across the opposite end of the said pipe and having a port adapted to register therewith, a valve within the tank adapted to close the outlet therein, and means for simultaneously moving the said valve and the filling tube in opposite directions.

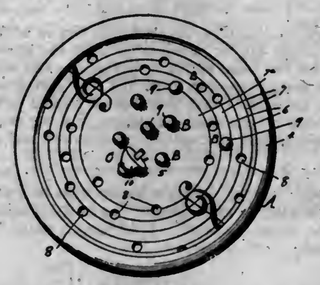
3. In a bottle filler, the combination with a filling tube, of a cap on the lower end of the same adapted to engage the mouth of the bottle to be filled, a deflector spaced from the said cap and adapted to enter the mouth of the bottle to be filled, and vent pipes leading from the said deflector through the cap and serving to secure the deflector to the cap in spaced relation therewith.

4. In a bottle filling machine, the combination with a filling tube, of a cap at the lower end of the said tube adapted to rest upon the mouth of a bottle to be filled, a conical deflector spaced from the said cap and adapted to enter the bottle to be filled, vent tubes leading from the said deflector through the cap and serving to secure the deflector to the cap, and a liquid catching and retaining device on the upper side of the cap around the filling tube, the cap being provided with openings within the area defined by the said catching and retaining devices.

5. The combination with a filling tube, of a cap at the lower end of the said tube adapted to fit upon the mouth of a bottle to be filled, a conical deflector arranged immediately below the lower end of the filling tube and adapted to enter the mouth of the bottle to be filled, vent tubes leading from the said deflector through the top of the cap and serving to secure the deflector to the cap, a retaining rib on the upper side of the cap around the filling tube and spaced from the filling tube, and means for conducting through the cap liquid caught by the said retaining rib.

[Claims 6 to 14 not printed in the Gazette.]

1,014,936. GAME FOR MUSICAL INSTRUCTION. EMMA A. BETTIN, Los Angeles, Cal. Filed May 25, 1911. Serial No. 629,321. (Cl. 46—61.)



A game device of the character set forth comprising a body having an extended surface provided with a plurality of lines and spaces arranged to simulate a musical staff, there being recesses in said extended surface in registration respectively with said lines and spaces and adapted to temporarily retain an object traversing said extended surface; there being a cleff mark applied to said lines and spaces.

1,014,937. LOCK-TIE FOR MAIL AND OTHER PURPOSES. BENJAMIN A. BLAKEMORE, Staunton, Va. Filed Mar. 11, 1911. Serial No. 613,716. (Cl. 24—18.)

In a device of the character described, a flat plate provided with means whereby a cord or the like may be permanently attached thereto, a post attached to the flat plate and adapted to be engaged by the cord, a housing formed upon the plate and having both ends and one side thereof formed open, said housing being provided upon one end with a curved laterally extending head, a lever pivoted intermediate its ends to the plate and positioned

adjacent the open side of said housing to be capable of swinging movement into and out of the same, said lever having one end thereof provided with a horizontal groove to receive the cord, said head of the housing being adapted to extend over that end of the lever provided with said horizontal groove, the opposite end of said lever being in the form of a clamping jaw, a post attached to the plate and disposed in proper relation to the lever whereby the cord may be clamped by the lever against the last

named post said last named post having an upper horizontal portion to extend across the clamping jaw of the lever when said lever is in a certain position, to prevent the upward displacement of the cord, said plate being provided with a small and a large upwardly extending lug, and said lever being provided upon its lower face with a recess adapted to receive the small lug whereby said lever may be held in its open position while the large lug limits the movement of the lever in that direction.

1,014,938. EYEGLASSES. WILHELM BLUME, Rathenow, Germany. Filed Dec. 5, 1910. Serial No. 595,844. (Cl. 88—45.)

Improved eyeglasses adapted to be put on with one hand only, comprising in combination with the glasses proper and with the usual spring bridge supporting said glasses, a blade spring arranged under the yoke part of said spring bridge, the ends of said blade spring formed to force open the spring bridge when a pressure is being exerted upon the blade spring, substantially as described and shown.

1,014,939. HAND ATTACHMENT SERVICEABLE FOR SWIMMING. ERIC BOMAN, Annandale, Sydney, New South Wales, Australia. Filed May 7, 1910. Serial No. 559,880. (Cl. 9—21.)

1. In a molded rubber hand attachment for swimmers, composed of a single piece of material, the combination, with a beaded narrow base strip having finger and thumb openings formed therein, a molded margin piece, and strap slits above the beading, of, tapering channeled finger and thumb coverings joined to each other and to the base strip by extended pieces made concave and veined and molded on their surfaces with ribbed lines, and having the top edge beaded between the said channeled pieces and around the tips of the finger and thumb coverings, substantially as described.

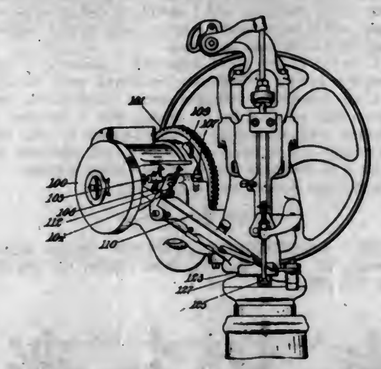
2. In a molded rubber hand attachment for swimmers, composed of a single piece of material, and having channeled finger and thumb coverings joined together with molded ribbed extended pieces, the combination, with the said finger and thumb coverings, of, the thickened pad pieces formed on the front thereof and located midway between each of the finger and thumb joints, substantially as described.

3. In a molded rubber hand attachment for swimmers, the combination, with the narrow base strip, channeled parts formed on said base strip, ribbed and molded extended pieces connecting the channeled parts, beading formed on part of the base strip and along the edge of the extended pieces and the finger tips, of, knuckle holed back finger pieces joined to the said channeled parts and the said shroud piece, substantially as described.

4. In a molded hand attachment composed of a single piece of material, the combination, with a beaded narrow base strip, having finger and thumb openings formed therein, a molded margin piece, strap slits formed above the beading, tapering channeled finger and thumb coverings joined to each other and to the narrow base strip by extended pieces made concave, veined and molded on their surfaces with ribbed lines having the top edge beaded between the said channeled pieces and around the tips of the finger and thumb coverings of the back finger and thumb covering pieces having holes therein located to receive the knuckles of the fingers and thumb, substantially as described.

5. In a molded rubber hand attachment for swimmers, the combination, with a molded narrow base strip having strap slits, of, the Y shaped straps, the wrist strap, and, zig-zag lines of eyelets or holes formed in the straps, substantially as and for the purposes set forth.

1,014,940. MACHINE FOR INSERTING FASTENINGS. WILLIAM A. BOND, Lynnfield, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Feb. 25, 1907, Serial No. 359,081. Divided and this application filed May 5, 1908. Serial No. 431,010. (Cl. 1—18.)



1. In a machine of the class described, tack-supplying and driving mechanism comprising a raceway, means for supplying the raceway with tacks, an oscillating clearer for removing misplaced tacks from the raceway, a guide over which the clearer slides, yielding means 112 for holding the guide from movement by the clearer and a cam 105 to hold the said yielding means in inoperative position.

2. In a machine of the class described, the combination with the hopper, the tack-lifting devices, the wheel 101, the cams 109, the rock shaft 103 having the arm 107, the clearer 106, the clearer guide 104, and the holder 112 having a spring to force it into operative position and a cam to lock it in inoperative position.

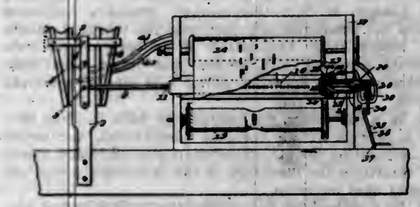
3. In a machine of the class described, a raceway section having a tack guiding slot, a second raceway section having the tack guiding slot 121 extending at an angle to the slot in the first section, and the tack separating plate having a face inclined at substantially the same angle to each of the slots for forcing the tack through the slot 121.

4. In a machine of the class described, the combination with a raceway of a removable end block, a support upon which the end block is rested and guided for movement bodily transversely of said raceway into and out of operative position, and means for automatically stopping and holding the end block when it reaches correct adjusted relation to the raceway.

5. In a machine of the class described, the combination with a raceway and its carrier of a removable end block, a support upon which the end block is mounted and is movable bodily to position the block in operative relation to the raceway, locating means to facilitate positioning the block in operative relation to the raceway grooves, and additional means for clamping the block so located.

[Claims 6 to 20 not printed in the Gazette.]

1,014,941. TRACKING DEVICE. GEORGE P. BRAND, New York, N. Y. Filed Mar. 16, 1910. Serial No. 549,711. (Cl. 84—161.)



1. An endwise movable tracker bar, an edge guide mounted intermediate its ends for unrestricted movement back and forth, to follow the lateral movement of the music sheet, a frame slidable with relation to the tracker bar, means pivoted on said frame and on which said edge guide is mounted, and a valve mechanism connected therewith and operable by movement of the edge guide.

2. An endwise movable tracker bar, a frame movable lengthwise of the tracker bar, an edge guide mounted on the frame for contact with one edge only of a note sheet and having movement in both lateral directions, and means controlled by the movement of the edge guide for moving the tracker bar in both directions.

3. An endwise movable tracker bar, a frame movable lengthwise of the tracker bar, an edge guide mounted on the frame for contact with one edge only of a note sheet and having movement in both lateral directions, said edge guide being movable transversely of the length of the note sheet and pneumatic means controlled by the movement of the guide for moving the tracker bar in both directions.

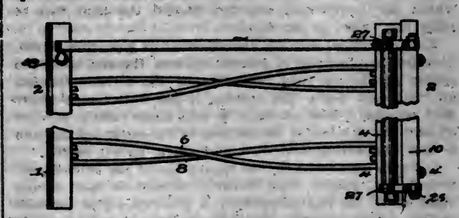
4. An endwise movable tracker bar, a frame movable endwise with relation thereto and having a portion with ports controlling the movement of the tracker bar, an edge guide adapted to contact with one edge only of a note sheet, a sliding valve controlling said ports, and connections between said edge guide and valve.

5. An endwise movable tracker bar, a frame movable endwise with relation thereto and having a portion with ports controlling the movement of the tracker bar, an edge guide adapted to contact with one edge only of a note sheet, a sliding valve controlling said ports, and connections between said edge guide and valve, said edge guide being mounted intermediate its ends and counter-balanced.

[Claims 6 to 31 not printed in the Gazette.]

1,014,942. TRACKER DEVICE. GEORGE P. BRAND, New York, N. Y. Filed May 10, 1910. Serial No. 560,410. (Cl. 84—165.)

1. The combination with a tracker bar having two rows of ducts of different sizes, of a single chamber with bleeds of different sizes for relative coöperation with said different rows of ducts, connections between said tracker and bleeds, and a member frictionally held in contact with said chamber and having ports and constructed for coöperation with said bleeds.



2. The combination with a trackerbar having two rows of ducts of different sizes, of two members one connected with the two dows of ducts of the trackerbar and one movable upon and relatively to the other, one of said members having ports and the other having bleed holes of different sizes for relative coöperation with the ports in the other member.

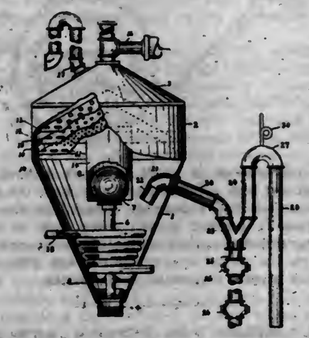
3. The combination with a trackerbar having two rows of ducts of different sizes, of two members, one connected with the two rows of ducts of the trackerbar and one movable upon and relatively to the other, one of said members having ports and the other having bleed holes of different sizes for coöperation with said ports, and means for moving one of said members with relation to the other.

4. The combination with a trackerbar having two rows of ducts of different sizes, of two members one connected with the trackerbar and one of which is movable upon and with relation to the other, one of said members constituting a single chamber with bleeds of different sizes and the other with ports for coöperation with said bleeds.

5. The combination with a trackerbar having two rows of ducts of different sizes, of two members one of which is in communication with the trackerbar and one of which is movable upon and with relation to the other, one of said members having ports and the other constituting a single chamber with bleeds of different sizes for relative coöperation with the ducts of the trackerbar, and means for moving one of said members to bring the bleeds of one size alternately into communication with the rows of ducts of the corresponding size.

[Claims 6 to 18 not printed in the Gazette.]

1,014,943. SEPARATOR FOR REMOVING GAS FROM OIL OR OTHER LIQUIDS. EUSTACE VIVIAN BRAY, Coalinga, Cal., assignor of one-half to Richard S. Haseltine, Coalinga, Cal. Filed Mar. 25, 1911. Serial No. 616,975. (Cl. 48—142.)



1. In an apparatus for the separation of gas from liquid, a casing having an opening at the bottom thereof, a supply pipe therefor, screens in said casing upon which the liquid impinges, a gas outlet pipe for said casing, an inner casing below the screens, a float movable in said

inner casing, a valve in the opening in the bottom of said outer casing, and a hollow stem connecting said valve and said float, said float having an opening therein through which the liquid may overflow should the float fail to raise the valve, as set forth.

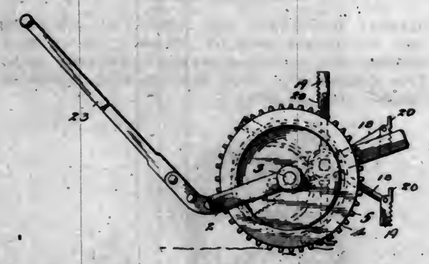
2. In an apparatus for the removal of gas from liquid, a casing, a plurality of conical screens therein, a second casing within the first casing below the screens thereof, an inlet pipe above the screens, a gas outlet pipe above said screens, a float movable in said inner casing, a valve closing the opening at the bottom of the outer casing, and a stem connecting said float and valve, as set forth.

3. In an apparatus for the separation of gas from liquid, a casing, a supply pipe therefor, screens in said casing upon which the liquid impinges, a gas outlet pipe for said casing, an inner casing below the screens, a float movable in said inner casing, a valve in the opening in the bottom of said outer casing, a hollow stem connecting said valve and said float, said float having an opening therein through which liquid may overflow should the float fail to raise the valve, and a steam coil within the outer casing to heat the liquid therein, as set forth.

4. In an apparatus for the removal of gas from liquid, a casing having an opening at the bottom thereof, a supply pipe at the top of the casing, a plurality of conical screens therein, a second casing within the first casing below the screens thereof, an inlet pipe above the screens, a gas outlet pipe above said screens, a float movable in said inner casing, a valve closing the opening at the bottom of the outer casing, a stem connecting said float and valve, and an outlet pipe having a trap therein connected with the outer casing to discharge oil should the quantity thereof fed to the separator be too great to pass off through the opening in the bottom of the casing, as set forth.

5. In an apparatus for the removal of gas from liquid, a casing having a conical bottom, a plurality of conical screens in said casing, an inlet pipe above the screens, a gas outlet pipe above said screens, a float below said screens, a valve at the bottom of the conical casing, and a stem connecting said valve and float whereby liquid will be permitted to escape from the casing upon filling the same with liquid to the float, as set forth.

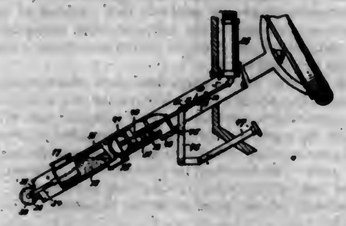
1,014,944. CULTIVATOR. JOSEPH G. BRIGGS, Santa Monica, Cal. Filed Jan. 23, 1911. Serial No. 604,205. (Cl. 55—1.)



In a clod crusher, a shaft, castings secured on the shaft, socketed lugs extending radially from the castings, rods having one end removably engaged in the sockets, plates pivotally secured to the outer ends of the rods and having serrated ground contacting faces, and reduced portions on the plates adapted to contact with the rods to limit the pivotal movement of the plates.

1,014,945. MEANS FOR FEEDING AND MIXING FLUIDS. JAMES B. BROCKHURST, Red Bank, N. J. Filed Jan. 28, 1910. Serial No. 540,601. (Cl. 48—148.)

1. In a carbureter, the combination with two closed chambers having a common wall between them,—one containing liquid hydro-carbons and the other having connections by which the exhaust gases from the internal combustion engine may be circulated therethrough,—of an eduction pipe leading from the liquid chamber through the said heated gas circulating chamber.



2. In a carbureter, the combination with a casing provided with a channel for the passage of currents of air therethrough, and a nozzle located in the said passage, of a needle valve for controlling the discharge through the said nozzle, a valve in the said channel for regulating the passage of fluid therethrough, manually controlled means for simultaneously operating the two said valves, and means under the control of an operator for temporarily throwing both of the said valves open independently of the operation of the said manual operating means.

3. In a carbureter, the combination with a casing having a passage for air currents therethrough, and means for carbureting the air, of automatically controlled means for throttling the discharge of the carbureted air as the amount used increases.

4. In a carbureter, the combination with a casing having a passage for air currents therethrough, and means for carbureting the air, of automatically controlled means for throttling the admission of air as the speed at which the carbureted air is discharged, increases.

5. In a carbureter, the combination with a casing having a passage for air currents therethrough, and means for admitting hydro-carbon fluid to carburet the air, of automatically controlled means for throttling the admission of air and also for reducing the supply of hydro-carbon fluid admitted, as the speed at which the carbureted air is discharged, increases.

[Claims 6 to 24 not printed in the Gazette.]

1,014,946. ALLOY FOR COATING WITH METAL. CHARLES F. BURGESS, Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa., a Corporation of New Jersey. Original application filed June 16, 1910, Serial No. 567,244. Divided and this application filed Dec. 2, 1910. Serial No. 595,205. (Cl. 75—1.)

1. The method of making a brittle alloy which consists in adding iron to zinc dross, producing therefrom a granular material of about the composition of $FeZn_{10}$, and then adding zinc to said granular material.

2. The method of making a brittle zinc-iron alloy which consists in saturating heated zinc dross with iron, reducing the material to granular condition, and then distributing zinc uniformly throughout the granular mass.

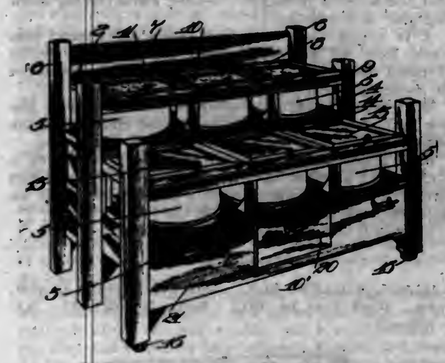
3. The method which consists in adding iron to zinc until the chemical composition becomes about $FeZn_{10}$, reducing said material to granular condition, and then enriching with additional zinc.

4. The method which consists in producing a brittle zinc alloy in granular condition and then enriching said material with zinc by heating to about red heat in contact with zinc.

5. The method which consists in maintaining zinc dross in the presence of iron at red heat until said dross becomes saturated with iron, reducing said material to granular condition, and enriching with zinc by heating to about red heat in the presence of uncombined zinc.

[Claims 6 to 9 not printed in the Gazette.]

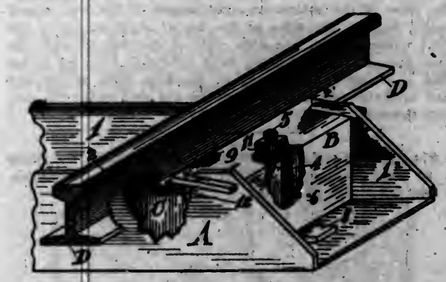
1,014,947. STOCK-DISPLAY CASE. GEORGE H. BURLINGAME, San Francisco, Cal. Filed May 25, 1911. Serial No. 629,423. (Cl. 211—14.)



1. In a display case, a main stationary stand having corner posts connected by a shelf, removable containers, a horizontal rail connecting the front post, a horizontal bar, individual covers for said containers hinged to said bar and when lowered, resting upon said containers, transverse cleats at each end of the stand, a supplemental removable frame having a shelf supporting removable containers, covers therefor, corner posts at the front end of the frame, rollers slidable on said cleats when the frame is telescoped.

2. In a display case, a main stationary stand having corner posts connected by a shelf, removable containers, a horizontal rail connecting the front post, a horizontal bar, individual covers for said containers hinged to said bar and when lowered resting upon said containers, transverse cleats at each end of the stand, a supplemental removable frame having a shelf supporting removable containers, covers therefor, corner posts at the front end of the frame, rollers slidable on said cleats when the frame is telescoped, and a leg at the center of the back of said frame to support the same when disassembled from the stand.

1,014,948. RAILWAY-TIE AND FASTENER. JOHN T. CLARK, Provo, Utah. Filed Apr. 19, 1911. Serial No. 621,982. (Cl. 238—5.)

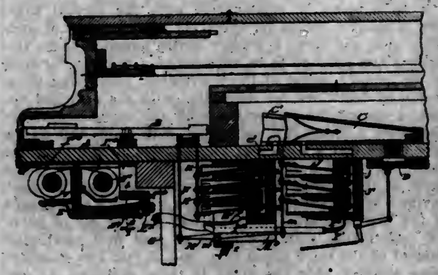


1. In a railway tie the combination of, a metal channel having rail receiving cuts in the sides and cross-shaped slots in the bottom; short blocks of hydrocarbon cementitious concrete closely fitted within said channel and having vertical channels in the sides thereof; clamp plates, one portion thereof being adapted to fit transversely within said channel, and one portion to engage the flanges of the rails, and vertically placed bolts adapted to engage within the cross-shaped slots in the bottom of said metal channel and the said channels in said blocks and adapted to hold said clamp plates in place.

2. A railway tie and fastener formed from a sheet of metal having open cuts in its edges and cross-shaped slots in the central portion thereof and bent to form an open, upturned channel, hydrocarbon concrete blocks within each end portion of said channel and adjacent to said open cuts, plates cut from a sheet of metal and bent to form bracket-shaped clamps, one portion having open slots therein and bent to grip the flanges of the rail, the other portion adapted to fit transversely within said channel, its lower end bent upon itself and a portion at right angles to the bent upon section, vertically placed bolts with threaded nuts thereon which engage the bottom of said channel and said clamps.

3. In a railway tie and fastened the combination of, an upturned metal channel, hydrocarbon cementitious blocks within each end portion thereof, bracket-shaped clamp plates, one portion having open slots therein and bent to clamp the flanges of the rail, the other portion being adapted to fit transversely within said channel, and means to hold said clamp plates and channel together, which means consist of a vertically placed threaded bolt, the head of which engages in the bottom of said channel and having a threaded nut thereon which engages one portion of said clamp plates.

1,014,949. INTERIOR-PLAYER PIANO. MELVILLE CLARK, Chicago, Ill. Filed May 12, 1909. Serial No. 495,440. (Cl. 84—233.)



1. In a piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action for operating independently of each other upon the manual keys at the same side of their fulcrums, the motor pneumatics of one action being rearward of those of the other, the strikers of both actions being located forward of the foremost group of motor pneumatics; horizontal levers from the rear group of motor pneumatics extending past the forward group to the strikers, such levers being fulcrumed intermediate their ends and nearer to the striker connections than to the pneumatic connections.

2. In a piano, in combination with the manual keys, a principal pneumatic action and a supplemental pneumatic action for operating independently of each other upon the manual keys, both actions being positioned below the keys for action upwardly thereon rearward of their fulcrums, the motor pneumatics of one action being rearward of those of the other, and the strikers of both actions being located forward of the foremost group of motor pneumatics; horizontal levers from the rear group of motor pneumatics extending past the forward group to the strikers, such levers being fulcrumed intermediate their ends and nearer to the striker connections than to the pneumatic connections.

3. In a piano, in combination, the manual keys, principal pneumatic action and a supplemental pneumatic action for operating independently of each other upon the manual keys, both actions being positioned below the keys for action upwardly thereon rearward of their fulcrums, the motor pneumatics of one action being rearward of those of the other, and having its strikers forward of those of the other, the strikers of both actions being for-

ward of the forward group of motor pneumatics, and levers from the rear group of motor pneumatics extending to the forward set of strikers, said levers being fulcrumed between their ends and nearer to the striker connections than to the pneumatic connections.

4. In a piano, in combination with the manual keys, two pneumatic actions for operating independently of each other upon the keys; a tracker device mounted under the manual and adapted to be adjusted to a position forward of the manual breast of the instrument, comprising three groups of ducts, one for connection with the principal action, a second for connection with the supplemental action, and a third for connection with both actions; a duct board and a valve bar thereon, one of said elements having a set of ports connected with the tracker board ducts of the second and third groups, the other element having a set of ports for registration with both said groups of the first mentioned element, and another set of ports for registration with the ports of said first mentioned element of the third group only, one of said two elements being movable upon the other to three positions, at one of which the first set of ports of said second element registers, as stated, and at another of which the second set of ports of said second element registers as stated, and at the third of which neither of said sets registers; flexible tubes leading from the supplemental action to said second element connected thereto at said first set of ports, and flexible tubes from the principal action leading to said second element and connected thereto at said second set of ports.

5. In a piano, in combination with the manual keys, two pneumatic actions for operating independently of each other upon the keys; a tracker device mounted under the manual and adapted to be adjusted to a position forward of the manual breast of the instrument, comprising three groups of ducts, one for connection with the principal action, a second for connection with the supplemental action, and a third for connection with both actions; a duct board and a valve bar thereon, one of said elements having a set of ports connected with the tracker board ducts of the second and third groups, the other element having a set of ports for registration with both said groups of the first mentioned element, and another set of ports for registration with the ports of said first mentioned element of the third group only, one of said two elements being movable upon the other to three positions, at one of which the first set of ports of said second element registers, as stated, and at another of which the second set of ports of said second element registers as stated, and at the third of which neither of said sets registers; flexible tubes leading from the supplemental action to said second element connected thereto at said first set of ports; flexible tubes from the principal action leading to said second element and connected thereto at said second set of ports, and means for moving said two elements to shift said registration.

[Claims 6 and 7 not printed in the Gazette.]

1,014,950. FUSE-BLOCK CONTACT-POST. ROBERT C. COLE, West Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed May 16, 1911. Serial No. 627,517. (Cl. 175—273.)

1. In a fuse block, a base, a hollow sheet metal post rising from the base and secured thereto, the post having a central tubular portion or member threaded to receive the binding screw.

2. In a fuse block, an insulating base, a hollow post stamped from sheet metal rising from the base, and a tubular member which serves to secure the post to the base and which is internally threaded, and a binding screw engaging said member.

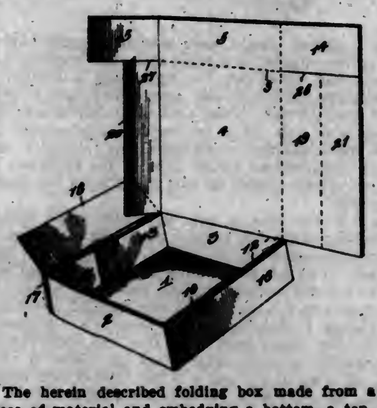
3. In a fuse block, a base, a hollow sheet metal post rising from the base and secured thereto, an internally threaded eyelet, and a screw coöperating with the eyelet for securing a terminal to the post.

4. In a fuse block, a porcelain or vitreous base, a hollow post stamped from sheet metal and rising from the base, and an upset eyelet securing the post to the base.

5. In a fuse block a porcelain or vitreous base block, a hollow post stamped up from a sheet metal blank and having interlocking engagement with said base, and an upset eyelet securing said post to the base.

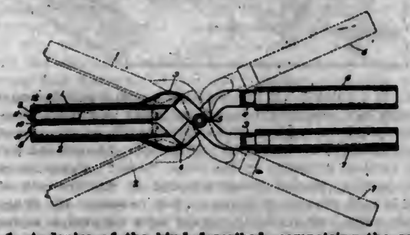
[Claims 6 to 8 not printed in the Gazette.]

1,014,951. FOLDING BOX. GEORGE C. CORNELL, Canton, Pa. Filed June 14, 1911. Serial No. 633,063. (Cl. 229—33.)



The herein described folding box made from a single piece of material and embodying a bottom, a top, a wall united to and between the bottom and top, a wall united to the bottom and opposite the first mentioned wall, a flap parallel with said walls and united to the outer end of the top, reinforce flaps at opposite ends of and bendable from the said walls and the top end flap, side walls at the sides of the bottom at right angles to the first named walls, flaps at the sides of the top at right angles to the first named walls, one side wall of the bottom and one side flap of the top being each provided with an outer flap, said outer flaps being at opposite sides of the box and bendable respectively over the top and under the bottom thereof.

1,014,952. HAIR-STRAIGHTENING DEVICE. ALBERT F. COX, Chicago, Ill. Filed Jan. 16, 1911. Serial No. 602,951. (Cl. 132—19.)



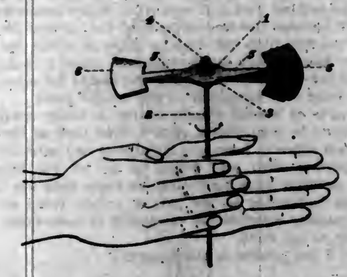
1. A device of the kind described, comprising the combination of recessed coöperating parts and means for separating and bringing said parts together, each part being provided with a rotatable roller mounted in the recess thereof.

2. A device of the kind described, comprising the combination of coöperating mating parts each part being provided with a pair of rotatable rolls extending longitudinally thereof, said pairs of rolls being arranged to lie parallel in proximity to each other with one roll of each pair positioned between the rolls of the other pair when the mating parts are brought together, and means for bringing said mating parts together with the pairs of rolls in proximity to each other.

3. A device of the kind described comprising the combination of coöperating mating parts, said parts being extended and crossed to form handles, and means for pivotally securing the extended parts together, each coöperating part being recessed and provided with a plurality of rollers rotatably mounted therein, the ends of said rollers near the end walls of the recesses being reduced in size to lessen the friction between the ends of the rollers and said parts.

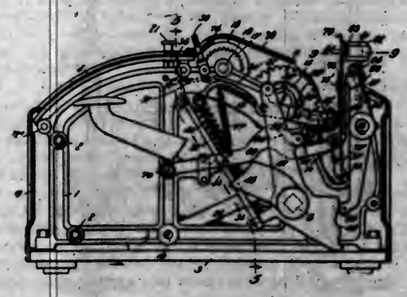
4. A device of the kind described, comprising coöperating parts, each part including a hollow shell substantially semi-cylindrical in cross section, and a roll mounted in the shell and extending longitudinally thereof, and means for bringing said parts together with the rolls in proximity to each other to grasp a lock of hair therebetween.

1,014,953. AERIAL TOY. ERNEST W. DAVIS, Chicago, Ill. Filed Jan. 20, 1911. Serial No. 603,662. (Cl. 244—2.)



In an aerial toy, the combination of an air propeller having a slot in the center thereof; and a single piece of wire adapted to be rotated between the hands and bent at one end to provide two offset portions insertible within said slot.

1,014,954. BANK-CHECK-PRINTING MACHINE. MERTON LEWIS DODGE, Olympia, Wash., assignor to Print Check Co., Seattle, Wash., a Corporation of Washington. Filed Mar. 6, 1911. Serial No. 612,564. (Cl. 101—57.)



1. In a printing machine, the combination with the type wheels, the indicating wheels, and gear wheels secured to the respective type and indicating wheels, of segmental gears in mesh with the gear wheels of the associated type and indicating wheels for actuating the same, springs for the several segmental gears acting through the medium of the latter to restore the indicating and type wheels to inoperative position, a bumper for overcoming the momentum of said segmental gears, and a latch for each of such gears to prevent the rebound of same.

2. In a printing machine, the combination of the rotary type wheels, gear wheels for the respective type wheels, segmental gears in mesh with said gear wheels, keys carried by the segmental gears for selectively adjusting the various type wheels, pins provided on the respective keys, a rack frame arranged to be engaged by the pins when said frame is in its normal position, means made operative in the printing operation of the machine whereby said frame is shifted to disengage the pins for releasing the keys, and means whereby the aforesaid means may be made inoperative.

3. In a printing machine, the combination of the rotary type wheels, gear wheels for the respective type wheels, segmental gears in mesh with said gear wheels, keys carried by the segmental gears for selectively adjusting the various type wheels, pins provided on the respective keys, a rack frame arranged to be engaged by the pins when said frame is in its normal position, and means made operative in the printing operation of the machine whereby said frame is shifted to disengage the pins for releasing the keys.

4. In a printing machine, the combination with type wheels and the setting mechanism therefor, of a carrier including a platen, an inking roll, devices coöperating with the inking roll whereby the latter is caused to be moved radially with respect to said wheels when the inking roller is swung across the printing line of the wheels, and means operated by a single handle whereby the inking roll is actuated to apply ink to the type wheels and also serving to operate the carrier to present the article for printing to the type wheels.

5. In a printing machine, the combination with the machine frame, the type wheels, means for setting said type wheels in predetermined printing positions, and devices for releasably securing said means to retain the wheels in set positions, of a carrier for an article to be printed, a platen supported by the carrier, means for imparting downward and forward movements to said carrier, and means for effecting a forward movement to the platen supplementary to that derived from its movement with the carrier.

[Claim 6 not printed in the Gazette.]

1,014,955. APPARATUS FOR ELEVATING CASINGS. EDWARD DOUBLE and ALLEN CRAIG, Los Angeles, Cal. Filed May 31, 1910. Serial No. 564,802. (Cl. 166—7.)

1. An apparatus for elevating well casings, comprising a solid ring adapted to pass freely over the casing and an enlargement thereon, and freely removable and insertible split ring members adapted to be slipped into the solid ring

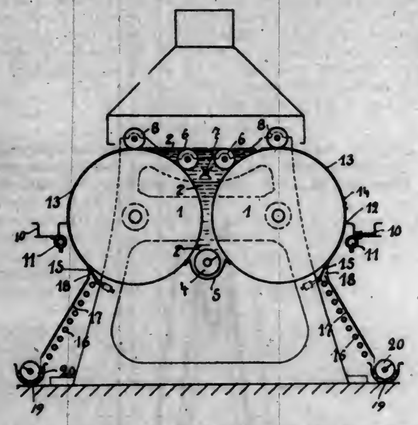
and fit between the solid ring and the casing and to engage under the enlargement on the casing, each of said insertible members having a flange extending over the top of the solid ring between the enlargement on the casing and the top of the solid ring.

2. An apparatus for elevating well casings, comprising a solid main ring member of sufficient internal diameter to pass freely over the casing and over an enlargement at the top of the casing, means for suspending said main ring member and a split ring removably seated within said main ring member and of internal diameter sufficiently small to engage under such enlargement at the top of the casing, said split ring and adapted to fit the casing fitting within said main ring and the engaging portion of said rings being downwardly tapering, and said split ring having lateral flanges at its upper end engaging over the top of the main ring.

3. An apparatus for elevating well casings, comprising a solid main ring member of sufficient internal diameter to pass freely over the casing and over an enlargement at the top of the casing, means for suspending said main ring member and a split ring removably seated within said main ring member and of internal diameter sufficiently small to engage under such enlargement at the top of the casing, and a flexible connector connected to each portion of the said split ring for suspending the split ring.

4. An apparatus for elevating well casings comprising a solid ring adapted to pass freely over the casing and collar thereon, and means removably supported on and engaging with the top of the solid ring and constructed to engage under the enlargement on the casing to support the same, said supporting means being provided with extensions adapted to be slipped between the solid ring and the casing.

1,014,956. TWO-ROLL DRYING APPARATUS FOR PULP-LIKE PASTE. THEODOR DRZYMALLA, Magdeburg, Germany. Filed Mar. 29, 1911. Serial No. 617,697. (Cl. 127—9.)



1. A potato drier consisting of a frame, two large heated drying and mashing drums mounted in said frame and turning in opposite directions away from each other, a wedge shaped boiler formed between said drums, a screw feeder located in the bottom of said boiler and an agitator located in the upper part of said boiler, in combination with a spreading roller for each drum, a cold smoothing and peel removing roller for each drum, a scraper for each drum, a plate conveyer for each drum receiving the potato film or layer from each drum respectively, said knife and plate forming a hot air space, means for heating said conveyer plates to facilitate the drying action, a trough receiving the potato film or layer from each of the conveyer plates, a screw-conveyer located in each last mentioned trough and means for actuating the device, said rollers, drums, screw conveyers and agitator being geared up together.

2. A potato masher and drier comprising a frame, two large heated drums mounted in said frame and turning in opposite directions away from each other, a boiler formed between said drums, means for feeding the potatoes to the bottom of said boiler and an agitator in the upper part of said boiler, in combination with a spreading roller for each drum, a cold smoothing and peel removing roller for each drum, means of separating the film of potato from the drum, a plate receiving the film from the drum, means for heating said plate, a trough for each plate receiving the film therefrom and means for conveying the film from each of said troughs, all as, and for the purpose, set forth.

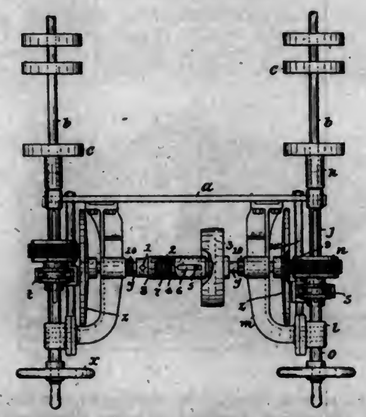
3. A potato masher and drier comprising a frame, a plurality of large heated drums mounted in said frame and turning in opposite directions, a boiler formed between them, means for feeding the potatoes from below to said boiler and an agitator in said boiler, in combination with a cold smoothing roller for each drum, means of separating the film from each drum, a plate receiving the film from each drum, means of heating each of said plates, a trough for each plate receiving the film from its respective plate and a screw conveyer located in said trough.

4. A potato masher and drier comprising a frame, a heated drum mounted and turning in said frame, said drum forming one side of a boiling or cooking space, means of feeding potatoes from below into this space, and an agitator located in said space, in combination with a spreading roller for spreading the potato in a film on said drum, a cold smoothing and peel removing roller removing all peels and bubbles and smoothing said film, means for separating the film from the drum, a plate receiving the film from the drum, means for heating said plate, a receptacle receiving the film from said plate and means for conveying the film from said receptacle to the desired point.

5. A pair of heated drums having a boiler space between them, in combination with a fixed part at the bottom of said space to form said boiler and two pairs of rollers in contact with said drums to act on the films of mashed material adhering thereto as these films are lifted from said boiler, the second pair of rollers being cold to more effectually complete the smoothing of these films, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,014,957. GEARING. JAMES EASTWOOD, Paterson, N. J., assignor to The Benjamin Eastwood Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 17, 1908. Serial No. 467,978. (Cl. 74—26.)

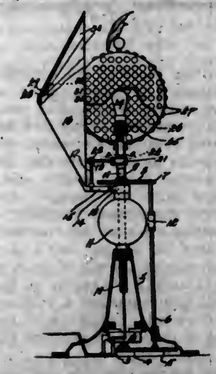


1. The combination, with a suitable support, of two rotary members to be driven arranged in said support in spaced relation to each other, a rotary driving member disposed between said driven members and comprising two parts each movable axially of said driving member, means acting normally to move said parts axially, and coöperating power transmitting devices carried by the driving and driven members and limiting the axial movements of said parts, substantially as described.

2. The combination, with a suitable supporting structure, of two substantially parallel rotary members to be driven, a friction-wheel on each of said members and adjustable thereon axially thereof, a rotary driving member arranged with its axis transverse to the driven members and comprising two parts each movable axially of said driving member, means acting normally to move said parts axially, and a face-plate, on each part, bearing against a friction-wheel, substantially as described.

3. The combination, with a suitable supporting structure, of two substantially parallel rotary members, a friction-wheel splined on each of said members, a rotary driving member arranged with its axis transverse to said driven members and comprising alined parts each movable axially of said member, a spring acting normally to press said parts apart, and face-plates arranged between said friction wheels and each carried by one of said parts, substantially as described.

1,014,958. ELECTRIC LAMP. KARL EDISON, New York, N. Y., assignor of one-half to John B. Moschenross, New York, N. Y. Filed May 18, 1911. Serial No. 627,928. (Cl. 240—49.)



1. A lamp comprising a rotatable globe, means for rotating said globe, a plurality of transparent bodies in the wall of said globe, a reflector mounted adjacent said globe, means for moving said reflector toward and away from said globe, and an illuminating medium in said globe.

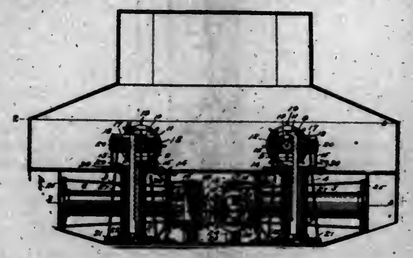
2. A lamp comprising a rotatable globe, an illuminating medium within said globe, a reflector mounted adjacent said globe and adapted for an oscillating movement, and means for rotating said globe and oscillating said reflector simultaneously.

3. A lamp comprising a support, a rotatable shaft mounted on said support, a globe rotated by said shaft, an illuminating medium within said globe, a reflector adapted for movement toward and away from said globe, an eccentric carried by said shaft adapted to operate said reflector, and means for rotating said shaft.

4. A lamp comprising a support, a rotatable shaft mounted on said support, a globe rotated by said shaft, an illuminating medium within said globe, a reflector pivotally mounted at the lower end thereof and located adjacent said globe, an ecentric carried by said shaft adapted to operate said reflector, and means for rotating said shaft.

1,014,959. SUBMARINE BOAT. ADOLPH EHRMANN, Eureka, S. D. Filed June 23, 1911. Serial No. 634,859. (Cl. 114—16.)

1. A submarine boat comprising a plurality of vertical and a plurality of horisontal cylinders, each of said cylinders provided with a reduced portion at its outer end forming a shoulder, an annular plate provided at the opposite end of the cylinder, said plate provided with a central opening therein, a piston head reciprocally held in each cylinder, each piston head binding against the shoulder of its cylinder when the same is in extreme outward position, a piston rod extending from the piston head inwardly and protruding through the opening in the plate, and means for the reciprocation of the piston heads, said means comprising a rack and pinion.



2. A submarine boat comprising a plurality of vertical and a plurality of horizontal cylinders each of said cylinders provided with a reduced portion at its outer end forming a shoulder, an annular plate provided at the opposite end of the cylinder, said plate provided with a central opening therein, a piston reciprocally held in each cylinder, the piston head thereof binding against the shoulder of its cylinder when the same is in extreme outward position, the piston rod of each piston extending inwardly and protruding through the opening in the plate, said piston rods provided with a plurality of teeth upon one of their edges, means for the reciprocation of each piston head comprising a frame, a pinion rotatably mounted within the frame, the teeth of said pinion engaging the teeth of its respective piston rod, means to secure the teeth of the pinion in engagement with the teeth of said piston rod and means for the rotation of said pinion in either direction.

3. A submarine boat comprising a plurality of cylinders which are adapted to receive water without the boat, each of said cylinders provided with a piston reciprocally held therein, said piston comprising a piston head and a piston rod extending from the head inwardly, the piston rod provided with a plurality of teeth, a frame secured to the inner end of the cylinder, a pinion rotatably held in said frame, means comprising a revolving shaft to secure the teeth of the piston rod in engagement with the teeth of the pinion, means for the rotation of the pinion in either direction thereby drawing the pinion inward or forcing it outward as desired, and means to lock the shaft upon which said pinion is keyed against rotation when the piston has been placed at the desired point within said cylinder.

1,014,960. LOCKING MECHANISM FOR DOORS. CHARLES JOS. ERICSON, Salt Lake City, Utah. Filed Nov. 15, 1911. Serial No. 660,865. (Cl. 70—120.)

1. In locking mechanism for doors, the combination with a casing to be secured to the door and locking devices at the top and bottom of the door, of a slotted slide within said casing, rods rigidly secured to the respective ends of said slide and connected respectively with the locking devices at the upper and lower ends of the door, a bell-crank mounted on said casing and having a free, loose connection with the slide whereby the inner member of the bell-crank may be depressed without hindrance from and without actuating said slide, and an operating bar connected at one end with said bell-crank and pivotally connected at its opposite end to the door.

2. In locking mechanism for doors, the combination with a casing to be secured to the door and locking devices to be located at the upper and lower ends of the door, of a slide movable in said casing and having an elongated slot, a bell-crank mounted on the casing and

having one arm entering said elongated slot of the slide but disconnected from the latter, an operating bar attached at one end to the other arm of said bell-crank, a pivoted link supporting the other end of the operating bar, and two rods rigidly secured to said slide and connected respectively to the locking devices at the upper and lower ends of the door.

3. In locking mechanism for doors, the combination with a casing to be secured to the door between the ends thereof, a casing secured to the door near the bottom thereof, a casing to be secured to the door near the top thereof, and a strike plate having a socket, of a slide movable in the first mentioned casing, a bolt movable in the lower casing and adapted to engage the strike plate, a rod secured at one end to said bolt and at the other end to the slide, a plunger in the upper casing, a rod connecting said plunger with the slide, a latch pivoted independently of the door and adapted to engage the upper casing and to be raised from engagement therewith by said plunger when the slide is raised to raise the bolt at the lower end of the door from the socket in the strike plate and a bell crank pivoted to the casing carrying the slide, one arm of said bell crank loosely resting within the slot in the slide, whereby it may be moved in one direction without moving the slide.

4. In locking mechanism for doors, the combination with three alined casings, a slide movable in the central casing and an operating bell crank for said slide, the said bell crank having a free loose connection with the slide whereby the inner member of the bell crank may be depressed without hindrance from and without actuating said slide, of a sleeve and a bolt mounted in the lower casing, a shank connecting said sleeve and bolt, a guide lug on the casing through which the shank passes, a spring embracing the shank and bearing against the guide lug and bolt for forcing the latter downwardly, a strike plate to be engaged by the bolt, a rod connecting said sleeve with the slide in the central casing, a plunger movable in the upper casing, a rod connecting the upper end of said slide with the plunger and a latch pivoted to the door frame and adapted to engage the upper casing and to be moved from engagement therewith by the plunger in the upper casing.

1,014,961. ADVERTISING NOVELTY. FRANK GILES FAWKES, Chicago, Ill. Filed July 25, 1910. Serial No. 573,728. (Cl. 46—46.)

1. A musical device consisting of a tubular member having a mouth opening in its side, a vibrating cap thereon and a covering adapted to secure said cap to said member.

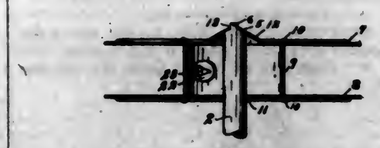
2. A musical device consisting of a cylindrical tube, provided with an opening in the side thereof, a flexible cap therefor, a vibrating member secured to said tube and extending centerward thereof, a head on said vibrating member adapted to barely contact with the central portion of said cap.

3. A musical device consisting of a tubular member having a mouth opening in its side, a vibrating cap thereon, and an advertising covering adapted to secure said cap to said member.

4. A musical device consisting of a tubular member having an opening in its side, a vibrating cap on its end and an advertising covering for said tubular member.

5. A musical device consisting of a tubular member having a single cap, said cap adapted to vibrate, said member having an opening in the side thereof.

1,014,962. RIBBON-SPOOL DEVICE FOR TYPE-WRITING MACHINES. WILLIAM R. FOX, Grand Rapids, Mich. Filed June 5, 1911. Serial No. 631,244. (Cl. 197—175.)



1. In a typewriting machine, the combination of a ribbon spool comprising side flanges, one of which projects conically outward with a non-circular central aperture; and a sheet metal barrel connecting said flanges, open at one side, consisting of a scroll of sheet metal, said barrel having an aperture formed in the side thereof and containing a hook member formed within said aperture and integral with said barrel for engaging the end of the ribbon, coacting for the purpose specified.

2. In a typewriting machine, the combination of a ribbon spool comprising side flanges; and a barrel connecting said flanges, consisting of a scroll of sheet metal, open at one side, said sheet metal scroll having an aperture formed in the side thereof and containing a hook member formed within said aperture and integral with said barrel for engaging the end of the ribbon, coacting for the purpose specified.

3. In a typewriting machine, the combination of a ribbon spool comprising side flanges; and a barrel connecting said flanges, consisting of a scroll of sheet metal, having an aperture formed in the side thereof and containing a hook member formed within said aperture and integral with said barrel for engaging the end of the ribbon, coacting for the purpose specified.

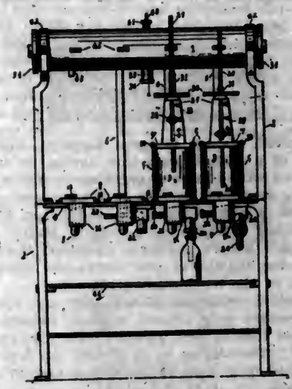
4. In a typewriting machine, the combination of a ribbon spool comprising a scroll-like barrel and side flanges, one of which side flanges projects conically outward with a non-circular central aperture, the said conical flange projection being disposed to guide the spool onto the spool shaft.

5. In a spool for a typewriter, the combination of flanges secured together by a suitable barrel, one flange having a conical projection and a central oblong slot, and a ribbon spool shaft with a rectangular shouldered end to engage said oblong slot, as specified.

[Claims 6 and 7 not printed in the Gazette.]

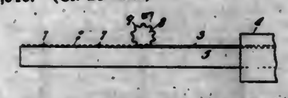
1,014,963. BOTTLING-MACHINE. JOSEPH M. FREDERICK, Louisville, Ky., assignor to Frederick-Ruggles Manufacturing Company, Louisville, Ky., a Corporation of Kentucky. Filed Oct. 23, 1909. Serial No. 524,135. (Cl. 226—18.)

1. In a bottling machine, a measuring-chamber, a base-plate on which said chamber rests, a valve-chamber formed integral with said base-plate, a tapered, two-way, plug valve adapted to be yieldingly seated in said valve-chamber, and a filling-tube removably attached to the shank of the valve.



2. In a bottling machine, a measuring-chamber provided with a base plate, a valve casing pendent from said base plate and having inlet and outlet passages, a plug valve mounted in the valve casing and having two passages to alternately register with the inlet and the outlet passages of the valve casing, and a filling tube carried by the valve and in communication with the passage thereof adapted to register with the outlet passage of the valve casing.

1,014,964. METHOD OF MAKING BRICK. CHARLES H. FROST, Pasadena, Cal. Filed Jan. 27, 1908. Serial No. 412,949. (Cl. 25—20.)



1. The herein described method of producing a brick, which consists in forming a body portion with one or more ribs on its face and then forming recesses in said ribs by indenting said ribs.

2. The herein described method of producing a brick, which consists in forming a body portion with ribs projecting an appreciable distance from its face and then compressing portions of the ribs to form recesses therein without further appreciably compressing said body portion.

1,014,965. VAPOR ELECTRIC LAMP AND CONNECTION. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor to Cooper Hewitt Electric Company, a Corporation of New York. Original application filed Mar. 19, 1903, Serial No. 148,504. Divided and this application filed July 11, 1911. Serial No. 637,951. (Cl. 176—42.)

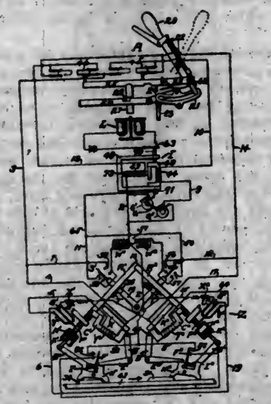
1. In a system of electrical distribution, the combination with a gas or vapor electric apparatus containing a plurality of anodes and a vaporizable reconstructing cathode, of a source of electric current, leads from the several electrodes to the source and means for storing and restoring energy in the anode leads, said means consisting of suitable inductances.

2. In a system of electrical distribution, the combination with a gas or vapor electric device containing a plurality of anodes and a vaporizable reconstructing cathode, of leads from the several electrodes to the supply and suitable inductances, one located in each anode lead.

3. In a system of electrical distribution, the combination with a gas or vapor electric apparatus including a vaporizable reconstructing cathode, of a supply of electric energy leads from the several electrodes to the supply, two anode leads being connected to the same point therein and means for controlling the flow of current to the anodes and preventing the robbing of one anode of

current by the other anode, said means consisting of suitable inductances in the several anode leads.

1,014,966. APPARATUS FOR GOVERNING THE PASSAGE OF CARS OR VEHICLES ALONG A RAILWAY AND THE CONTROL THEREOF. JOHN S. HOLLIDAY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Oct. 26, 1910. Serial No. 589,106. (Cl. 246—53.)



1. In combination with an apparatus for moving a part or appliance controlling the passage of cars along a railway, a two-phase alternating current motor operatively connected therewith and having two field windings, a source of two-phase alternating current, a circuit controlling lever means controlled thereby for connecting each of said windings respectively with one phase of the source of current for the operation of the part or appliance, an indication device for said lever, and means controlled by the movement of the part or appliance for connecting one of said motor windings with the indication device for controlling said indication device.

2. In combination with an apparatus for moving a part or appliance controlling the passage of cars along a railway, a two-phase alternating current motor operatively connected therewith and having two field windings, a source of two-phase alternating current, a circuit controlling lever, means controlled thereby for connecting

each of said windings respectively with one phase of the source of current for the operation of the part or appliance, an indication device for said lever, and means controlled by the movement of the part or appliance for disconnecting one of said motor windings from the source of current and connecting it with the indication device for the control of said indication device.

3. In combination with an apparatus for moving a part or appliance controlling the passage of cars along a railway, a two-phase alternating current motor operatively connected therewith and having two field windings, a source of two-phase alternating current, a circuit controlling lever, means controlled thereby for connecting each of said windings respectively with one phase of the source of current for the operation of the part or appliance, an indication device for said lever, comprising two windings and a plunger, one of which windings of the indication device is connected with one phase of the source of current, and means controlled by the apparatus after the part or appliance has been moved for disconnecting one of the motor windings from the source of current and connecting it with the other winding of the indication device.

4. In combination with apparatus for moving a part or appliance controlling the passage of cars along a railway, a two-phase alternating current motor operatively connected therewith and comprising two field windings; a source of two-phase alternating current; a circuit controlling device for the control of said motor and comprising two magnets, two movable members which members are operatively connected with the magnets and are moved in one direction or the other according to whether one or the other of the magnets is energized, contacts closed by each member for connecting one winding of the motor with either one phase or the other of the source of current according to whether such member is moved in one direction or the other by the magnets; a controlling lever, and contacts operated thereby for connecting one magnet or the other with one phase of the source of current according to whether the lever is in one position or another.

5. In combination with an apparatus for moving a part or appliance governing traffic along a railway, a two-phase alternating current motor operatively connected therewith and having two field windings, a source of two-phase alternating current furnishing currents approximately in quadrature, a circuit controlling device for connecting said phases of the source of current with the two windings of the motor respectively for the operation of the said part or appliance, a controlling lever, means controlled thereby for governing the said circuit controlling device in its control of the motor, an indication device for said lever comprising two windings and a plunger and requiring currents of the proper relative direction and approximately the same phase for the operation of the plunger, one of which windings of the indication device is connected with one phase of the source of current, means operated upon the completion of the movement of the part or appliance for mechanically operating the circuit controlling device, connections controlled by such operation for disconnecting one winding of the motor from the source of current and for connecting the last-mentioned motor winding with the other winding of the indication device, the motor continuing to be operated by current supplied to its other winding.

[Claims 6 to 15 not printed in the Gazette.]

1,014,967. RESISTANT SURFACE. CHARLES B. JACOBS, Port Chester, N. Y., assignor, by direct and mesne assignments, to Murray and Jacobs Manufacturing Company, New York, N. Y., a Corporation of New York. Original application filed Apr. 21, 1906, Serial No. 312,967. Divided and this application filed Feb. 3, 1908, Serial No. 413,949. Renewed Apr. 8, 1911. Serial No. 619,886. (Cl. 137—75.)

1. A conduit adapted to resist abrasion, said conduit consisting of a shell of cast metal, said shell having its inner surface provided with a layer of granular mineral elements, said elements being of such material and size that they will not be injured by the heat of the molten metal when casting the same and said elements being so closely arranged as to protect the shell from abrasion.

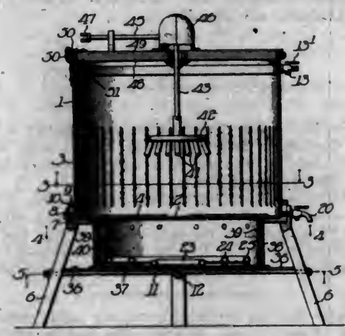
2. A conduit adapted to resist abrasion, said conduit consisting of a shell of cast iron having its inner surface provided with a layer of granular corundum, the particles of the corundum being so closely arranged as to protect the iron in which they are embedded from abrasion.

3. A conduit consisting of a metallic matrix and particles of hard mineral elements embedded therein, such particles being distributed with substantial uniformity in the matrix on the inner surface thereof.

4. A conduit consisting of cast iron and particles of highly refractory hard mineral elements embedded in the inner surface thereof, such particles being distributed with substantial uniformity so as to protect the inner surface of the conduit from wear by the impact thereon of abrading materials.

5. A conduit adapted to resist wear by particles of abrasive material moving at a high velocity, said conduit consisting of a shell of cast metal having embedded in its inner surface a layer of hard mineral elements so closely arranged as to protect the metal in which they are embedded from the action of the abrasive materials.

1,014,968. WASHING-MACHINE OR THE LIKE. FREDERICK R. KING, Chicago, Ill. Filed Mar. 14, 1910. Serial No. 549,272. (Cl. 126—350.)



1. A supporting device for washing machine bodies, and the like, comprising supporting legs, a seat carried by said supporting legs and fashioned to receive the body of a washing machine, a shelf carried by said legs and positioned beneath said body, a plurality of burners supported on said shelf, means for controlling said burners independently of each other, and a guard supported on said shelf and surrounding said burners.

2. The combination with a body of supporting means therefor comprising a stand formed of a plurality of legs and a flanged ring constituting a seat for the lower portion of the body, said ring and body being provided with interengaging portions preventing the relative movement of the parts, and a burner carried by said stand.

3. The combination with a stand formed of a plurality of supporting legs connected at their upper ends by a flanged ring, a shelf positioned within the legs of said stand and below said flanged ring, a burner on said shelf, an annular guard supported on said shelf and surrounding said burner, and a body removably fitting within said flanged ring on the stand, said body and ring being provided with interengaging portions preventing relative movement of the parts.

4. The combination with a stand formed of a plurality of supporting legs connected at their upper ends by a ring provided with an upstanding peripheral flange, a shelf positioned within the legs of said stand and below said flanged ring, a burner on said shelf, and a body removably fitting within said flanged ring on the stand, the upstanding flange of said ring being provided with a plurality of slots extending downwardly from the upper edge thereof, and said body being provided with a plurality of lateral projections adapted to fit into said slots when the body is secured in position on the stand.

1,014,969. FIRE, SMOKE, STEAM, AND AIR SHAFT. GEORGE MATCHELL, South Pasadena, Cal. Filed Sept. 29, 1910. Serial No. 584,567. (Cl. 98—30.)

1. A fire and smoke flue for buildings adapted to extend from the bottom through all the floors free from the walls thereof, and through the top of the building, said flue having relatively large inlet apertures just below the ceilings of each floor, the said apertures extending practically entirely around the flue so as to employ the entire capacity of the flue in accommodating the escape of smoke, gas, or the like, in case of fire, and inclined funnel-shaped floors arranged opposite each of said openings and extending above the plane of the ceilings, the inclination thereof tending to direct the smoke upwardly in the flue.

2. An integral single flue fire and smoke stack for buildings, adapted to extend from the bottom of a building through all the floors and top thereof, said flue having inlet apertures arranged just below the ceiling of each floor, the said apertures extending practically entirely around the flue, so as to secure a converging draft to the extent of the capacity of the flue in accommodating the escape of smoke, gases and the like in the case of fire, and inclined floors arranged at each of said openings, the inward projection of said floors tending to facilitate the entrance of smoke and flames into the flue at the successive floors without the entrance thereof being cut off by the column of materials already moving in said flue.

1,014,970. PHOTOGRAPHIC NEGATIVE AND METHOD OF PRODUCING THE SAME. ARTHUR W. MCCURDY, Baddeck, Nova Scotia, Canada. Filed Feb. 3, 1904. Serial No. 191,868. (Cl. 95—9.)

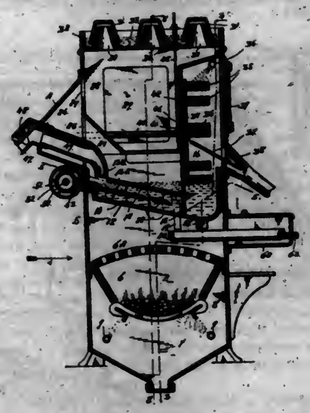
1. A negative having light-reflecting high-lights and transparent shadows of such highly contrasting degree as to produce a clear and well-defined positive when viewed from the side upon which the light falls upon the negative, and in which the film or coating and image are permanent, fixed and stable and not liable to disintegration or perforation when subjected for a considerable time to the atmosphere.

2. The herein-described method of treating a photographic negative to produce a negative-positive, which consists in subjecting the negative after development and fixation to the action of the fumes or vapors of a bleaching agent.

3. The herein-described method of producing a positive-negative, which consists in exposing a sensitised plate or film in a camera, developing the latent image thereon and fixing the same in the usual way; clearing the negative by subjecting it to the action of an acid bath; and finally subjecting the negative to the fumes or vapors of a bleaching agent and thereby bleaching and rendering light-reflecting the darkened portions of the negative.

4. The herein-described method of producing a positive-negative, which consists in exposing a sensitized plate or film in a camera, developing the latent image thereon and fixing the same in the usual way; clearing the negative by subjecting it to the action of an acid bath; subjecting the negative to the action of the fumes or vapors of a bleaching agent and thereby rendering light-reflecting the darkened portions of the negative; and finally clearing the negative by subjecting it to the action of an acid bath.

1,014,971. METALLURGICAL FURNACE. JOHN R. MOFFITT, Denver, Colo.; Eugenia A. Moffitt, Denver, Colo., administratrix of said John R. Moffitt, deceased. Filed Jan. 25, 1907, Serial No. 354,000. Renewed Jan. 11, 1911. Serial No. 602,095. (Cl. 75—64.)



1. A metallurgical furnace provided with a chamber adapted to contain a metal bath, means for feeding material into the bath and submerging the material so fed, means for removing the ash from the bath, a condensing chamber, and a liquid seal for the condensing chamber, for the purpose set forth.

2. A furnace provided with a chamber adapted to hold molten metal, a second chamber separated from the first named chamber, means for introducing material to be treated into the first named chamber, means for forcing the non-fusible portion of the material from the first named chamber into the second named chamber, and a liquid seal in communication with the first named chamber, for the purpose set forth.

3. A metallurgical furnace provided with a chamber adapted to hold molten metal, means for discharging material to be treated into a metallic bath contained within the said chamber, means for submerging the material within the said bath and causing it to travel in the submerged condition a suitable distance, and means for permitting the non-fusible material to rise to the top of the bath within the chamber, and means for skimming off the non-fusible ash.

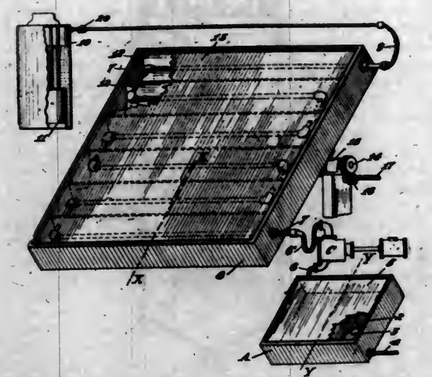
4. A metallurgical furnace provided with a chamber adapted to contain a metallic bath, means for feeding material into the bath and means for submerging the material so fed to the bath, and causing it to travel in a submerged condition a suitable distance after which the non-fusible portion of the material is allowed to rise to the top of the molten mass, means for removing the

said non-fusible portion as fast as it accumulates, a condensing chamber located above the metallic bath and in communication therewith, a liquid receptacle mounted on top of the furnace and communicating with the condensing chamber by hooded outlets, whereby volatile products escaping from the furnace are caused to enter the liquid, substantially as described.

5. A furnace provided with a chamber adapted to hold a molten metal, a second chamber separated from the first named chamber by a partition, the two chambers communicating through an opening formed in the bottom of the chamber, means for introducing material to be treated into the first named chamber, means for forcing the non-fusible portion of the said material from the first named chamber to the second named chamber through the opening in the partition, a rotatable skimmer located in the second chamber for removing the non-fusible portion of the material as fast as it rises to the top of the molten mass, and a liquid seal in communication with the first named chamber, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,014,972. SOLAR HEATER. THOMAS F. NICHOLS, Ray, Ariz. Filed June 28, 1911. Serial No. 635,831. (Cl. 126—271.)



1. In a solar steam generator, the combination of a preliminary water heating tank adapted to be acted on by the sun's rays, means for admitting water thereto and discharging it therefrom, a generator pipe which receives the water from the preliminary heater, a series of parabolic mirrors arranged to focus the sun's rays on said generator pipe, and means for adjusting the position of the mirrors to correspond with changes of the sun's position.

2. In a solar steam generator, the combination of a preliminary water heating tank adapted to be acted on by the sun's rays and having a shallow water receiving space, said space covered with a thin metal plate, means for admitting water to said tank, means for discharging it therefrom, a generator pipe which receives the water from the preliminary heater, and a series of parabolic mirrors arranged to focus the sun's rays on said generator pipe.

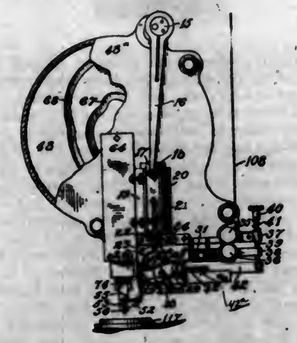
3. In a solar steam generator, the combination of a preliminary water heating tank adapted to be acted on by the sun's rays and having a shallow water receiving space, said space covered with a thin metal plate, an inclosed space above said metal plate, a plate of glass covering said space, means for admitting water to said tank, means for discharging it therefrom, a generator pipe which receives the water from the preliminary heater, and a series of parabolic mirrors arranged to focus the sun's rays on said generator pipe.

4. In a solar steam generator, the combination of a preliminary water heating tank adapted to be acted upon by the sun's rays and having a shallow water receiving space, said space covered with a thin metal plate, a plate of glass disposed above said metal plate and spaced therefrom and incased to form an inclosed space above said plate, means for admitting water to the tank, means for discharging it therefrom, comprising a force pump, a generator pipe into which the heated water is discharged by the force pump, a series of parabolic mirrors arranged to focus the sun's rays on said generator pipe, and means for adjusting the position of the mirrors.

5. In a solar steam generator, the combination of a preliminary water heating tank adapted to be acted upon by the sun's rays and having a shallow water receiving space, said space covered with a thin metal plate, a plate of glass disposed above said metal plate and spaced therefrom and incased to form an inclosed space above said plate, means for admitting water to the tank, means for discharging it therefrom, comprising a force pump, a generator pipe into which the heated water is discharged by the force pump, a series of parabolic mirrors arranged to focus the sun's rays on said generator pipe, said mirrors mounted on a rocking frame and inclosed therein, said rocking frame, a plate of glass on said frame disposed above said mirrors and generator pipe forming a dead air space between said mirrors and said last named plate of glass, and means for adjusting the position of the rocking frame.

[Claim 6 not printed in the Gazette.]

1,014,973. BRUSH-MACHINE. DAVID P. PAGE, Grand Rapids, Mich., assignor to Grand Rapids Brush Company, Grand Rapids, Mich., a Corporation. Filed Dec. 5, 1904. Serial No. 235,564. (Cl. 15—7.)

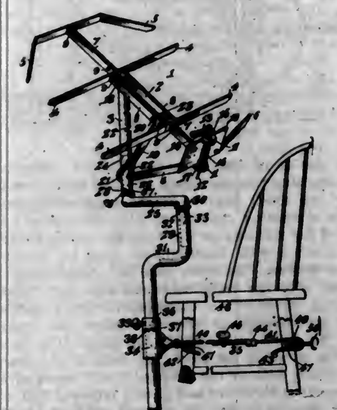


1. In a brush machine, a frame, an anchor material feeding means, means for forming anchors of said material, means for moving the anchors made by said forming means, away from the latter, means for limiting the movement of said anchor moving means, a combined anchor and tuft setting mechanism, means for gripping the anchor and delivering it from said limiting means to said combined anchor and tuft setting mechanism, a block to receive the tufts and anchors, means for centering the block, a receptacle for the bristles, means for removing tufts of the bristles from said receptacle, means for delivering the bristles from said removing means to said combined anchor and tuft setting mechanism, and means for operating the setting mechanism after it has received an anchor and tuft to secure the tuft in said block.

2. In a brush machine, a frame, an anchor material feeding means, means operating upon said material to form anchors, a combined anchor and tuft setting mechanism, means for delivering the anchors successively to said combined anchor and tuft setting mechanism, a block to receive the tufts and anchors, a receptacle for the bristles having an open inner end, means within the receptacle to feed the tufts gradually toward the open inner end of said receptacle, an arcuate head provided with a notch to receive bristles from said receptacle, means for raising and lowering said head to remove tufts of bristles from the receptacle by its upward movement, means constructed and arranged to remove the tuft from the notch of said head while the latter is at one limit of its movement and deliver the tufts successively to the combined anchor and tuft setting mechanism, means for operating the combined anchor and tuft setting mechanism after it has received an anchor and a tuft to effect a securing of the tufts and anchors in said block, and means operable to accurately position the block to receive the tufts and anchors.

3. In a brush machine, a frame, anchors, means for moving the anchors from one part of the frame to another part thereof, means for limiting the movement of the anchor moving means, a combined anchor and tuft setting mechanism, means for gripping the anchors one at a time and delivering them one at a time from said limiting means to said combined anchor and tuft setting mechanism, a block to receive the tufts and anchors, a receptacle for the bristles, means for removing tufts of bristles from said receptacle, means for delivering the bristles from said removing means to said combined anchor and tuft setting mechanism, and means for operating the setting mechanism after it has received an anchor and tuft to secure the tuft in said block.

1,014,974. ADJUSTABLE BOOK-SUPPORT. BAILIS T. PHELPS, Natchitoches, La. Filed Nov. 14, 1910. Serial No. 592,264. (Cl. 45—82.)



1. A book support including a book rack comprising metallic bars bent outwardly and spaced apart at their central portions to form a longitudinal opening and having their terminals bent laterally to provide book supporting arms, said bars being secured together between the opening and the arms, and approximately U-shaped bars secured to the first mentioned bars at opposite sides of the said opening and forming intermediate laterally projecting arms, a standard fitted in the said opening, a pivot connecting the book rack with the standard, and an inclined adjusting brace pivoted at its upper end in the said opening and adjustably engaging the standard.

2. A book support including a tubular standard provided at its lower end with serrations, a book rack carried by the standard, an upper approximately crank-shaped rod having upper and lower pivot portions provided with shoulders and having serrations thereat, the upper pivot portion fitting in the tubular standard and the serrations of such pivot portion engaging with the serrations of the standard, and a lower approximately crank-shaped tubular section provided at its upper end with serrations and receiving the lower pivot portion of the upper section and engaging with the serrations thereof.

3. A book support including a book rack, a vertical rod or section connected therewith, and a horizontal metallic clamp composed of front and rear sections connected at their inner ends, the metal of the front section being bent to form a circular loop or sleeve and having a quarter bend adjacent to the loop or sleeve to arrange the same in a vertical position to receive the inner rod or section, the front terminal of the metal being extended rearwardly beneath the clamp and spaced therefrom to provide a front rung engaging jaw and the rear section being bent downwardly and inwardly at its outer end to form a hook-shaped rung engaging jaw.

1,014,975. HYDROSTATIC TOY. HENRY E. POEHLMAN, San Francisco, Cal., assignor of one-half to John W. Fricke, San Francisco, Cal. Filed Mar. 16, 1911. Serial No. 614,840. (Cl. 46—37.)

1. An amusement device comprising a receptacle for liquid, irregular surfaces of suitable material and contour attached to the receptacle, a series of communicating passageways bisecting said irregular surfaces, means for closing communication between said passageways, and means for varying the level of the liquid within the passageways.

2. An amusement device comprising a receptacle for liquid, irregular surfaces of suitable material and contour attached to the receptacle, a series of communicating passageways of various elevations bisecting said irregular surfaces, means for closing communication between said passageways, and means for varying the level of the liquid within the passageways.

3. An amusement device comprising a receptacle for liquid, irregular surfaces of suitable material and contour attached to the receptacle, a series of communicating passageways of various elevations bisecting said irregular surfaces, means for closing communication between said passageways, and means for varying the level of a liquid within the several passageways.

4. An amusement device comprising a receptacle for liquid, irregular surfaces of suitable material and contour attached to the receptacle, a series of communicating passageways of various elevations bisecting said irregular surfaces, means for closing communication between said passageways, and means for varying the level of a liquid within the several passages, said means including devices connected to respective passageways, whereby a volume of liquid may be added to the fluid already contained in the passageways.

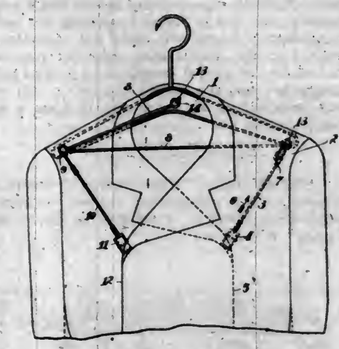
5. A device comprising a receptacle adapted to contain liquid, vessels floatable upon said liquid, irregular surfaces representing mountainous or hilly country, and a series of passageways representing canal locks at different elevations bisecting the aforesaid irregular surfaces through which said vessels may be moved, and means for varying the level of the liquid within the passageways.

[Claim 6 not printed in the Gazette.]

1,014,976. COAT-HANGER. ROBERT REIN, Schlachtensee, near Berlin, Germany, assignor to Edmund Boehm & Co., Berlin, Germany. Filed Aug. 30, 1911. Serial No. 646,893. (Cl. 211—13.)

1. In combination with a coat hanger having ends disposed in supporting relation with the shoulder portions of the coat, of a support connected with the hanger and extending beneath one lapel and through the neck outside the other lapel, suspension means attached to the inner lapel and supported on said hanger inside of the garment, and suspension means connected with said support outside

of the coat and attached to the other lapel, substantially as described.



2. In combination with a coat hanger having ends disposed in supporting relation with the shoulder portions of the coat, of a rod like support horizontally disposed and extending from end to end of the hanger and supported thereon, one portion of the rod extending beneath one lapel and through the neck and outside of the other lapel of the coat, suspension means attached to the inner lapel and connected with said rod inside of the coat, and suspension means attached to the outer lapel and connected with said rod outside of the coat.

3. The combination with a hanger having end in supporting relation with the shoulders of the coat, a rod having one end secured to one end of the hanger and lying inside of the coat and projecting horizontally through the neck and lying outside of the coat abreast of the other end of said hanger, said rod having an extension projecting angularly upwardly toward an attached central portion of the hanger, and lapel suspension means connected with that end of the rod lying inside of the coat and with the inner lapel, and suspension means connected with the outer lapel and with that portion of the rod lying outside of the coat.

4. In combination with a coat hanger having ends disposed in supporting relation with the shoulder portions of the coat, means mounted on the hanger and extending outside and through the neck inside of the coat, and pendent suspension devices connected with said means and attached to the lapels of the coat inside and outside of the same, respectively, substantially as described.

5. In combination with a coat hanger having ends disposed in supporting relation with the shoulder portions of the coat, means mounted on the hanger, and independent flexible pendent suspension devices connected with said means and attached to the lapels of the coat, substantially as described.

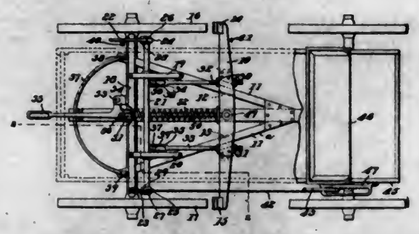
[Claims 6 to 8 not printed in the Gazette.]

1,014,977. APPARATUS FOR THE WET DRESSING OF SULFID ORES. BENJAMIN SEDGELY SMITH, Manly, near Sydney, New South Wales, Australia. Filed Aug. 28, 1911. Serial No. 646,339. (Cl. 83—85.)

1. In an apparatus for concentrating and classifying sulfid ores, a trough, inclined to the horizontal, included lateral walls converging toward the lower ends thereof and provided with a slot extending crosswise the bed thereof, an inclined table, provided with a well, arranged below the lower end of said trough, means delivering a film of water upon said trough, mechanism for distributing the ores upon the surface of the film of water, and a drowning box interposed between said trough and said table to conduct the ore carrying film of water from the former to the latter and to thoroughly submerge the ore therein, combined substantially as and for the purposes set forth.

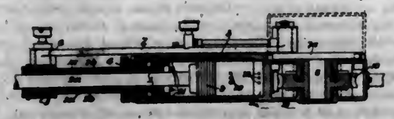
2. In an apparatus for concentrating and classifying sulfid ores, the combination of conducting means for a film of water, means for distributing ores on the surface of the film of water, an inclined table provided with an aperture therein, a valve controlled receptacle open to and in water tight engagement with the said aperture in said table, and a drowning box interposed between said conducting means and said table to conduct the ore carrying film of water from the former to the latter, to thoroughly submerge the ore therein whereby it sinks into said receptacle upon reaching the same.

1,014,978. VEHICLE-BRAKE. DAVID S. STUCK, Cocolamus, Pa. Filed Dec. 28, 1910. Serial No. 599,750. (Cl. 21—8.)



In a device of the class described, a wheel-mounted supporting structure including an axle and a bolster carried by the axle; hounds in the supporting structure; brackets connecting the bolster with the hounds; a shaft journaled for rotation in the brackets, and provided with radial arms; a brake beam slidable upon the hounds; connections between the arms and the brake beam; a rod connected with the brake beam and extended through the supporting structure; a compression spring surrounding the rod and bearing at one end against the brake beam and at the other end against the supporting structure; means for rotating the shaft; an arcuate bar connecting the diverging ends of the hounds; a bell crank pivoted to the supporting structure and loosely engaged with the rod, whereby the shaft may be rotated without moving the bell crank; and interengaging elements upon the bell crank and the arcuate bar, whereby the bell crank may be engaged with the arcuate bar, to hold the rod against movement, and to maintain the brake beam in set position, after the brake beam has been moved to set position, by the aforesaid means for rotating the shaft.

1,014,979. PERCUSSIVE DRILL, HAMMER, OR LIKE PERCUSSIVE TOOL OR MACHINE. ALFRED SYKES, Huddersfield, England. Filed Jan. 22, 1910. Serial No. 539,560. (Cl. 125—10.)

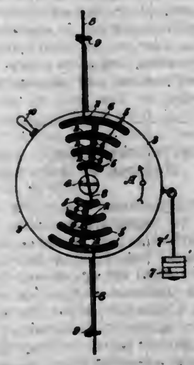


1. In a percussive tool, the combination, with a cylinder having a stuffing-box at one end, of a front piston slidable in the said cylinder and provided with a tubular piston-rod also having a stuffing-box, driving mechanism connected to the end of the tubular piston-rod which projects from the said cylinder and its stuffing-box, said driving mechanism being adapted to reciprocate the said piston positively, and a rear piston slidable in the said cylinder and arranged wholly to the rear of the front piston and having a piston-rod which is slidable in the stuffing-box of the tubular piston-rod and which is adapted to actuate the tool or bit.

2. In a percussive tool, the combination, with a cylinder having a stuffing-box at one end, of a front piston slidable in the said cylinder and provided with a tubular piston-rod also having a stuffing-box, driving mechanism connected to the end of the tubular piston-rod which projects from the said cylinder and its stuffing-box, said driving mechanism being adapted to reciprocate the said piston positively, and a rear piston slidable in the said cylinder and arranged wholly to the rear of the front piston and having a piston-rod which is slidable in the stuffing-box of the tubular piston-rod and which is adapted to actuate the tool or bit, said cylinder being also provided with a port in its side wall which is uncovered by the rear edge of the front piston at the end of its forward stroke to admit pressure fluid to the annular space between the front and rear pistons.

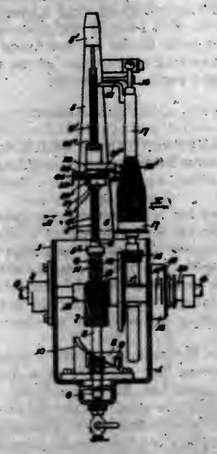
3. In a percussive tool, the combination, with a cylinder having a stuffing-box at one end, of a front piston slidable in the said cylinder and provided with a tubular piston-rod also having a stuffing-box, driving mechanism connected to the end of the tubular piston-rod which projects from the said cylinder and its stuffing-box, said driving mechanism being adapted to reciprocate the said piston positively, and a rear piston slidable in the said cylinder and arranged wholly to the rear of the front piston and having a piston-rod which is slidable in the stuffing-box of the tubular piston-rod and which is adapted to actuate the tool or bit, said cylinder being also provided at its rear end portion with a longitudinal passage having ports at its ends which communicate respectively with the space between the two pistons and with the space behind the rear piston, and a non-return valve arranged in the said passage and permitting compressed air to flow through the said passage into the space behind the rear piston to compensate for leakage.

1,014,980. YARN-TENSION DEVICE. EDWIN SYKES, Huddersfield, England. Filed Mar. 13, 1911. Serial No. 614,010. (Cl. 242—153.)



In a yarn tension device, the combination, with a stationary disk, guide eyes projecting from the said disk at opposite sides of its center, and two rows of pins arranged radially between the guide eyes in line with each other and projecting from the face of the disk; of a movable disk pivoted concentric with the stationary disk and provided with curved slots which clear the said pins and which limit the motion of the movable disk by contact with the said pins, two rows of pins projecting from the movable disk between its slots, and means for turning the movable disk automatically in one direction, the yarn being passed from one guide eye to the other across the center of the disks and in a sinuous course between the pins.

1,014,981. YARN OR LIKE WINDING MACHINE. EDWIN SYKES, Huddersfield, England. Filed Mar. 13, 1911. Serial No. 614,011. (Cl. 242—27.)



1. In a winding machine, the combination, with a revoluble bobbin spindle, of a revoluble guide spindle provided with a screwthreaded portion, means for reciprocating the guide spindle longitudinally, a yarn guide, an arm for supporting the yarn guide, a sectional nut operatively connected with the said arm and normally held in frictional driving engagement with the screw threaded portion of the guide spindle, and means for arresting the rotation of the sectional nut periodically without arresting the rotation of the guide spindle, thereby moving the said arm and yarn guide longitudinally of the bobbin spindle.

2. In a winding machine, the combination, with a revoluble bobbin spindle, of a revoluble guide spindle provided with a screw threaded portion, means for reciprocating the guide spindle longitudinally, a pivoted yarn guide having an extension, an arm for supporting the yarn guide, a screw threaded sleeve encircling the guide spindle and having the said arm mounted on it, a toothed wheel secured on the said sleeve and adapted to be engaged periodically by the extension on the yarn guide to arrest the rotation of the wheel without arresting the rotation of the guide spindle, and a sectional nut carried by the said sleeve and normally held in frictional driving engagement with the screw threaded portion of the guide spindle.

3. In a winding machine, the combination, with a revoluble bobbin spindle, and a beveled toothed pinion secured thereto; a revoluble guide spindle, a helical toothed wheel secured to the guide spindle, and an arm also secured to the guide spindle; and a stationary cam for actuating the said arm and reciprocating the guide spindle longitudinally; of a revoluble driving shaft, a beveled toothed wheel secured on the driving shaft and gearing into the said beveled toothed pinion, and a helical toothed wheel gearing into the aforesaid helical toothed wheel and also secured on the driving shaft; and a yarn guide operatively connected with the said guide spindle.

4. In a winding machine, the combination, with a revoluble bobbin spindle, of a revoluble guide spindle pro-

vided with a screw threaded portion, means for reciprocating the guide spindle longitudinally, a pivoted yarn guide having an extension, an arm for supporting the yarn guide, a screw threaded sleeve encircling the guide spindle and having the said arm mounted on it, a toothed wheel secured on the said sleeve and adapted to be engaged periodically by the extension on the yarn guide to arrest the rotation of the wheel without arresting the rotation of the guide spindle, a sectional nut carried by the said sleeve and normally held in frictional driving engagement with the screw threaded portion of the guide spindle, a spring controlled lever pivotally supported by the said arm and provided with a pawl which is also adapted to engage with the said toothed wheel, and a stationary projection which places the said pawl in engagement with the wheel at one end of each stroke of the guide spindle thereby temporarily arresting the rotation of the wheel and giving build to one end portion of the cop.

1,014,982. MANUFACTURE OF BLACK COLORING-MATTERS. JOSEPH TURNER and HARRY DEAN, Huddersfield, England. Filed Apr. 24, 1911. Serial No. 622,909. (Cl. 8—1.)

1. A process for manufacturing a dyestuff which consists in combining one molecule of a diazo chlor benzol with one molecule of amido naphthol disulfonic acid (1.8.3.6) (H acid) in slightly mineral acid solution, then combining the intermediate body thus obtained with one molecule of a tetrazotized para diamin in alkaline solution, and finally adding one molecule of chlor meta phenylene diamin 1:2:4.

2. A process for manufacturing a dyestuff which consists in combining one molecule of a diazo chlor benzol with one molecule of amido naphthol disulfonic acid (1.8.3.6) (H acid) in slightly mineral acid solution, then combining the intermediate body thus obtained with one molecule of tetrazotized benzidin in alkaline solution, and finally adding one molecule of chlor meta phenylene diamin 1:2:4.

1,014,983. MANUFACTURE OF BLACK COLORING-MATTERS. JOSEPH TURNER and HARRY DEAN, Huddersfield, England. Filed Apr. 24, 1911. Seral No. 622,910. (Cl. 8—1.)

1. A process for manufacturing a dyestuff which consists in combining one molecule of a tetrazotized para diamin with one molecule of amido naphthol disulfonic acid (1.8.3.6) (H acid) in slightly mineral acid solution, then combining the intermediate body thus obtained with one molecule of a diazo chlor benzole, and finally adding one molecule of chlor meta phenylene diamin 1:2:4.

2. A process for manufacturing a dyestuff which consists in combining one molecule of tetrazotized benzidin with one molecule of amido naphthol disulfonic acid (1.8.3.6) (H acid) in slightly mineral acid solution, then combining the intermediate body thus obtained with one molecule of a diazo chlor benzole, and finally adding one molecule of chlor meta phenylene diamin 1:2:4.

1,014,984. MANUFACTURE OF BLACK COLORING-MATTERS. JOSEPH TURNER and HARRY DEAN, Huddersfield, England. Filed Apr. 24, 1911. Serial No. 622,911. (Cl. 8—1.)

1. A process for manufacturing a dyestuff which consists in combining a diazo compound with one molecule of amido naphthol mono sulfonic acid (2.8.6) (G acid), further diazotizing the intermediate body thus formed, and finally combining it with one molecule of chlor meta phenylene diamin 1:2:4 in alkaline solution.

2. A process for manufacturing a dyestuff which consists in first treating a para amido azo compound with one molecule of nitrous acid, then combining the diazo compound thus formed with one molecule of amido naphthol mono sulfonic acid (2.8.6) (G acid), further diazotizing the intermediate body thus formed, and finally combining it with one molecule of chlor meta phenylene diamin 1:2:4 in alkaline solution.

1,014,985. SEMAPHORE. LUTHER H. VAN ZANDT, Fort Worth, Tex. Filed Dec. 22, 1908. Serial No. 468,770. (Cl. 246—13.)

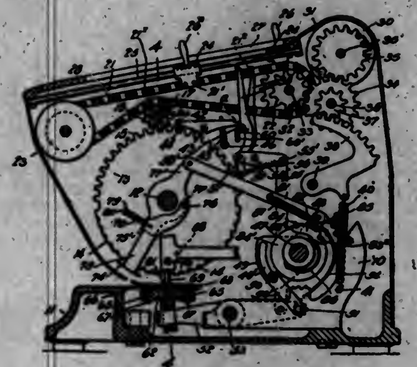
1. A semaphore having a tubular tower, a tubular cap secured to said tower, a shaft mounted in said cap and journaled in one side of said cap and projecting therefrom, a spectacle and a blade carried by said shaft, a sleeve journaled in the other side of said cap and forming a bearing for said shaft, a blade and a spectacle carried by said sleeve, gearing for operating said shaft and sleeve housed within said cap and tower, a lantern bracket carried by said cap, and lanterns carried by said bracket for coöperating with said spectacles.

2. A semaphore having a tower, a cap engaging said tower, a shaft journaled in said cap, a lantern bracket mounted on said cap and projecting from opposite sides thereof, a spectacle fixed on one end of said shaft and a pulley fixed on said shaft within said cap for operating said spectacle, a vertically movable lantern suspended from said bracket and coöperating with said spectacle, a sleeve loosely mounted on the other end of said shaft and projecting within said cap, a spectacle fixed on said sleeve and a pulley fixed on said sleeve within said cap for operating said spectacle, and a vertically movable lantern suspended from said bracket and coöperating with said last mentioned spectacle.

1,014,986. PRINTING-MACHINE. ALFRED J. WARR, Seattle, Wash. Filed Jan. 3, 1910. Serial No. 536,232. (Cl. 101—57.)

1. In a printing machine, a plurality of type wheels, springs serving to yieldingly maintain the respective wheels in inoperative position, chain actuated means for rotating said wheels into selected printing positions in opposition to the several springs, means for securing said wheels in adjusted positions, a platen on which the article to be printed is supported, means for applying ink to the wheels, and a means for successively actuating the ink applying means, the platen to effect the printing and the release of said wheel securing means whereby said springs are enabled to restore the wheels to their inoperative positions.

2. In a printing machine, a plurality of type-wheels, springs serving to yieldingly maintain the respective wheels in inoperative position, chain actuated means for rotating said wheels into selected printing positions in opposition to the several springs, means for securing said wheels in adjusted positions, a platen on which the article to be printed is supported, means for applying ink to the wheels, a means for successively actuating the ink applying means, the platen to effect the printing and the release of said wheel securing means whereby said springs are enabled to restore the wheels to their inoperative positions, and a series of drums operatively connected with said wheels whereby the setting of the wheels may be determined from the relative positions of the drums.



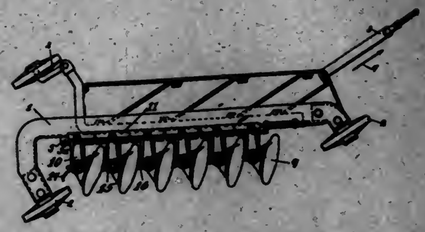
3. In a printing machine, the combination with a stationary shaft, a series of type-wheels rotatably mounted upon said shaft, an automatic braking device for each wheel, a platen on which the article to be marked is supported, an inking pad, an inking-pad carrier connected for limited oscillatory movements to said shaft, a controller for said carrier mounted upon said shaft, a second shaft, a crank handle for operating the last named shaft, connections between this shaft and the platen, the brake devices, and said controller whereby the oscillatory movements of such shaft causes the successive operations of the inking-device, the platen, and the disengagement of the brake devices.

4. In a machine for printing checks or other articles, the combination with a stationary shaft, a series of type-wheels rotatably mounted upon said shaft, an automatic braking device for each wheel, a platen on which the article to be marked is supported, an inking pad, an inking-pad carrier connected for oscillatory movements to said shaft, a controller for said carrier mounted upon the shaft, a second shaft, a crank handle for operating the last named shaft, connections between this shaft and the platen, the brake devices, and controller whereby the oscillatory movements of such shaft causes the successive operations of the inking device, the platen, and, normally, the disengagement of the brake devices, and a means whereby the last named shaft may be operated without affecting the brake devices.

5. In a machine for printing checks or other articles, the combination with a stationary shaft, a series of type-wheels rotatably mounted upon said shaft, a spring for each wheel and tending to yieldingly retain the same in inoperative positions, means for individually setting said wheels in opposition to the respective springs, an automatic braking device for each wheel, a platen on which the article to be marked is supported, an inking pad, an inking pad carrier connected for limited oscillatory movements to said shaft, a controller for said carrier mounted upon the shaft, a second shaft, a crank handle for operating the last named shaft, connections between this shaft and the platen, the brake devices, and controller whereby the oscillatory movements of such shaft causes the successive operations of the inking-device, the platen, and the disengagement of the brake devices, and a means whereby the aforesaid springs are rendered temporarily inoperative.

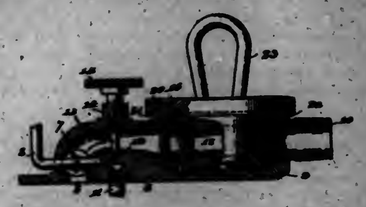
[Claims 6 and 7 not printed in the Gazette.]

1,014,987. GANG-PLOW. NICHOLAS WEHLER, Fort Collins, Colo., assignor of one-half to B. L. Shrader, Fort Collins, Colo. Filed Dec. 12, 1910. Serial No. 596,966. (Cl. 97—40.)



A gang plow, comprising a plurality of revolving disks carried by vertical rock-shafts having internal bearings in combination with a plurality of vertical plates having stems adjustable both vertically and rotarily in said internal bearings.

1,014,988. CARBURETER. FRANK DREW WINKLEY, Madison, Wis., assignor to Fuller & Johnson Manufacturing Co., Madison, Wis., a Corporation of Wisconsin. Filed Oct. 15, 1910. Serial No. 587,155. (Cl. 123—130.)



1. In combination with a carbureter for gas-engines, a conductor leading from said carbureter to the combustion space of the engine and formed with a chamber intersecting the conducting passage, and a plug adapted to occupy said chamber and suitably cored to constitute a section of said conducting passage, said plug being removable to heat the same, substantially as described.

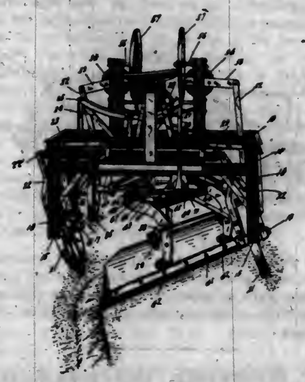
2. In combination with a carbureter for gas-engines, a conductor leading from said carbureter to the combustion space of the engine and formed with a chamber intersecting the conducting passage, and a plug adapted to occupy said chamber and suitably cored to constitute a section of said conducting passage, said plug having a flange adapted to overlie and seal the upper end of said chamber and being removable to heat the same, substantially as described.

3. In combination with a carbureter for gas-engines, a conductor leading from said carbureter to the combustion space of the engine and formed with a chamber intersecting the conducting passage, a plug adapted to occupy said chamber and suitably cored to constitute a section of said conducting passage, and a handle on said plug whereby the same may be readily removed and replaced, substantially as described.

1,014,989. ROAD-GRADER. JOSEPH D. ADAMS and ROY E. ADAMS, Indianapolis, Ind., assignors to J. D. Adams & Co., Indianapolis, Ind., a Copartnership. Filed Dec. 23, 1910. Serial No. 598,945. (Cl. 37—49.)

1. In a road scraper, the combination with a main frame provided with a pair of carrying wheels, means for adjusting the vertical angle of said wheels relative to the main frame, a mold board frame pivotally connected at its forward end to the forward end of the main frame, means for adjusting the rear end of the mold board frame transversely, a mold board pivotally mounted upon the rear end

of the mold board frame upon a vertical axis, and adjusting means carried by the main frame and engaging the rear end of the mold board frame for adjusting the mold board vertically.



2. In a road scraper, the combination with a main frame provided with a pair of carrying wheels, a mold board frame pivotally connected at its forward end to the forward end of the main frame, means for adjusting the rear end of the mold board frame transversely, a mold board pivotally mounted upon the rear end of the mold board frame upon a vertical axis, and adjusting means carried by the main frame and engaging the rear end of the mold board frame for adjusting the mold board vertically.

3. In a road scraper, the combination with a main frame provided with a pair of carrying wheels, means for adjusting the vertical angle of said wheels relative to the main frame, a mold board frame pivotally connected at its forward end to the forward end of the main frame, a mold board pivotally mounted upon the rear end of the mold board frame upon a vertical axis, and adjusting means carried by the main frame and engaging the rear end of the mold board frame for adjusting the mold board vertically.

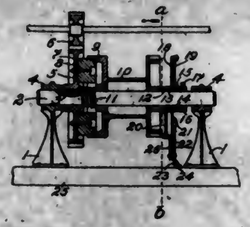
4. In a road scraper, the combination with a main frame provided with a pair of carrying wheels, a mold board frame pivotally connected at its forward end to the forward end of the main frame and extended rearwardly between the rear wheels, a mold board pivotally mounted upon the rear end of the mold board frame upon a vertical axis, and adjusting means carried by the main frame and engaging the rear end of the mold board frame for adjusting the mold board vertically.

5. In a road scraper, the combination of a main frame, supporting wheels for said main frame, a mold board frame carried by the main frame, a mold board carried by said mold board frame upon a substantially vertical axis, and means carried by the main frame for raising and supporting the main frame and its supporting wheels above the mold board whereby the mold board may be swung beneath the supporting wheels.

[Claims 6 to 19 not printed in the Gazette.]

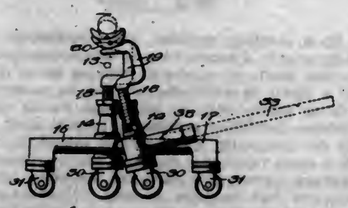
1,014,990. WINDING-DRUM. THEODORE AHLBORN, Chicago, Ill., assignor to Waterloo Cement Machinery Corporation, Waterloo, Iowa. Filed Aug. 26, 1910. Serial No. 579,057. (Cl. 57—83.)

In combination, a rotatable shaft, a hub carrying a hollow friction-cone fixed on said shaft, a body having a friction-rim rotatably and slidably mounted on said shaft, a cam-body having a helical cam-face mounted movably on said shaft to rock thereon, another cam-body having a like helical cam-face mounted on said shaft to rock thereon, the said helical cam-faces being in coacting engagement, a compression-spring engaged between said friction-cone hub and said friction-rim carrying-body, an arm projecting from each of said bodies, each arm having its outer end broadened and provided with a plurality of adjusting orifices, a pivoted hand-lever, and suitable link-connections between said lever and said arms adjustably connected



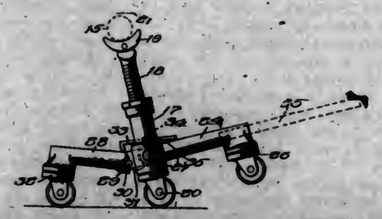
with certain of the said orifices in said arms, said cam-bodies when rocked past each other being adapted to thrust said friction-rim carrying-body toward said friction-cone, compressing said spring and also placing said friction-rim into frictional driving engagement with said friction-cone.

1,014,991. AUTOMOBILE JACK-TRUCK. OSCAR H. AMES, Coal Hill, Pa., assignor of one-half to Robert McCalmont, Franklin, Pa. Filed Feb. 2, 1911. Serial No. 606,192. (Cl. 57—43.)



An automobile jack truck comprising in combination a cross piece, two standards pivotally mounted on the cross piece and provided at their upper ends with axle supporting devices and at their lower ends with rollers, means on the standards adapted to be engaged by a lever for rocking the standards separately into position to elevate the ends of the axle, locking devices for locking the standards to the cross piece, longitudinal sustaining members rigidly connected with and extending from the cross piece on opposite sides thereof and rollers on the outer ends of the said sustaining members adapted to bear upon the ground so as to prevent the truck from tilting and dumping its load.

1,014,992. AUTOMOBILE JACK-TRUCK. OSCAR H. AMES, Coal Hill, Pa., assignor of one-half to Robert McCalmont, Franklin, Pa. Filed Feb. 2, 1911. Serial No. 606,193. (Cl. 57—43.)



1. A device of the character described, comprising in combination a pair of axle supports provided at their upper ends with means adapted to sustain the opposite ends of a vehicle axle and at their lower ends with rollers, a cross

piece rigidly connected with said standards, means comprising a hand lever for rocking said standards into position to lift the axle of said vehicle, longitudinal sustaining members on opposite sides of said cross piece, and locking means for maintaining said standards in their elevating position.

2. A device of the character described, comprising a pair of axle supports provided at their upper ends with means adapted to sustain the opposite ends of a vehicle axle and at their lower ends with rollers, a cross piece connecting said standards, means comprising a hand lever for rocking said standards into position to lift the axle of said vehicle, longitudinal sustaining members on opposite sides of said cross piece, and locking means for maintaining said standards in their elevating position.

3. A device of the character described comprising a pair of axle supports in rigid relation to each other provided with a rolling bearing on the ground and adapted to be rocked so as to elevate the axle, and sustaining members on opposite sides of said supports, one of which is rigid with said supports and the other having a hinged relation thereto.

4. A device of the character described comprising a pair of axle supports in rigid relation to each other provided with a rolling bearing on the ground and adapted to be rocked so as to elevate the axle, sustaining members on opposite sides of said supports, one of which is rigid with said supports and the other having a hinged relation thereto, and a locking mechanism for holding the hinged sustaining member in rigid relationship with the rest of the structure.

5. In a device of the character described, the combination with axle supports provided at their lower ends with rollers, of a cross piece to which said supports are rigidly connected, a longitudinal sustaining member rigid with said cross piece, a longitudinal sustaining member hinged to the other side of said cross piece, and locking mechanism for holding said hinged sustaining member in rigid relationship with the rest of the structure when the axle supports are in operative position.

[Claims 6 to 11 not printed in the Gazette.]

1,014,993. WATER-SKEE. HUGO J. ANDERSON, Melrose, Mass. Filed Oct. 10, 1911. Serial No. 653,841. (Cl. 9—21.)

1. A water skee, comprising a body composed of sections hinged together, means for maintaining said sections in extended position, said body being provided with means for receiving the foot of the operator, one or more wings pivotally mounted on said body, and means arranged to be operated by the foot of the operator for swinging said wings outwardly, substantially as described.

2. A water skee, comprising a hollow body provided with means for receiving the foot of the operator, one or more wings pivotally mounted on one side of said body, and means operable by the foot of the operator for swinging said wings outwardly to aid in steering the skee, substantially as described.

3. A water skee, comprising a hollow body, a pit in said body for receiving the foot of the operator, a crank arm extending into said pit and operable by the foot, one or more wings mounted on said body, and means cooperating with said crank arm to control the operation of said wings, substantially as described.

4. A water skee, comprising a hollow body, a pit in said body for receiving the foot of the operator, a crank arm operable by the foot of the operator within the pit, a lever operatively related to said crank arm, and one or more wings arranged to be moved by said lever, substantially as described.

5. A water skee, comprising a hollow body, a pit in said body for receiving the foot of the operator, a crank arm operable by the foot of the operator within the pit, a lever operatively related to said crank arm, one or more wings arranged to be moved by said lever, and means for restoring the crank arm to normal position, substantially as described.

[Claims 6 not printed in the Gazette.]

1,014,994. HANDLING, UNLOADING, STORING, AND RELOADING PLANT. HERMAN P. ANDRESEN, Chicago, Ill., assignor to David J. Evans, Chicago, Ill. Filed Dec. 19, 1908. Serial No. 468,295. (Cl. 214—4.)

1. The improvements herein described, comprising a storage dock having parallel stock pile spaces, in combination with tracks arranged at the dock front and between said spaces, a storage house at the landward side of said spaces, a traveling bridge constructed to travel on said tracks, and to overhang said storage house, a hopper at the dock end of said bridge and a conveyer carried by said bridge for carrying material from said hopper across said spaces to said house, substantially as described.

2. The improvements herein described, comprising a storage dock having parallel stock pile spaces, in combination with tracks arranged at the dock front and between said spaces, a storage house at the landward side of said spaces, a traveling bridge constructed to travel on said tracks and to overhang said house at the landward end, a hopper carried by the dock front end of the bridge, unloading means at said end of said bridge to deposit material in said hopper and a conveyer carried by said bridge for carrying material from said hopper to said house, substantially as described

3. The improvements herein described, comprising a storage dock having parallel stock pile spaces, in combination with tracks arranged at the dock front and between said spaces, a storage house, having a receiving conveyer extending from end to end at the top, said house arranged at the landward side of said spaces, a traveling bridge constructed to travel on said tracks, a hopper carried by the dock front end of the bridge, unloading means at said end of said bridge to deposit material in said hopper and a conveyer carried by said bridge for carrying material from said hopper to the receiving means at the top of said house, substantially as described.

4. The improvements herein described, comprising a storage dock having parallel stock pile spaces, in combination with tracks arranged at the dock front and between said spaces a storage house at the landward side of said spaces, having a receiving opening in its roof, a traveling bridge constructed to travel on said tracks and extending from the dock front to the opening in the roof of said house, an unloader boom or movable extension at the dock front end of said bridge, a grab bucket operating trolley movable on said bridge and boom, a grab bucket, a hopper carried by the dock front end of said bridge to receive material from said bucket and a conveyer carried by the bridge and arranged to convey material from said hopper to the opening in the roof of said house, substantially as described.

5. The improvements herein described, comprising a storage dock having parallel stock pile spaces, in combination with tracks arranged at the dock front and between said spaces a storage house at the landward side of said spaces, having a receiving opening in its roof, a traveling bridge constructed to travel on said tracks and extending from the dock front to the opening in the roof of said house, an unloader boom or movable extension at the dock front end of said bridge, a grab bucket operating trolley movable on said bridge and boom, a grab bucket, a hopper carried by the dock front end of said bridge to receive

material from said bucket, a conveyer carried by the bridge and arranged to convey material from said hopper to the opening in the roof of said house and means for discharging material from said conveyer at a point between said hopper and said house, substantially as described.

[Claims 6 to 69 not printed in the Gazette.]

1,014,995. CEMENT MATERIAL. PHILIP F. APPEL and NEELIE B. APPEL, Seattle, Wash. Filed Nov. 15, 1909. Serial No. 528,059. (Cl. 106—29.)

1. A cement-material consisting of a water-combined mixture of magnesium-oxid and sodium bicarbonate.

2. A cement-material consisting of a water-combined mixture of magnesium-oxid and sodium bicarbonate, with filler-material.

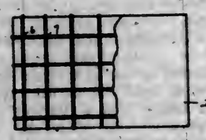
3. A cement-material consisting of a water-combined mixture of magnesium-oxid and sodium-bicarbonate, with filler-material and coloring material.

4. A cement-material, consisting of a paste composed of a mixture of magnesium-oxid and a saturated solution in water of sodium bicarbonate.

5. A cement-material consisting of a paste composed of a mixture of magnesium-oxid and a saturated solution in water of sodium bicarbonate, with filler-material.

[Claim 6 not printed in the Gazette.]

1,014,996. REINFORCED PAPER-BOARD. EDWARD D. BENNETT, Pulaski, N. Y. Filed Apr. 14, 1911. Serial No. 621,065. (Cl. 154—53.)



1. In a material of the character described, a plurality of sheets of paper permeated with a water-proof chemical, a wire netting with the ends of its constituent wires free interposed between successive sheets of said paper, whereby to render the product nonpliable, a water proof glue for holding the paper and netting together, and the ends of said wire netting bent over the edges of the paper alternately to support the edges of the same, substantially as described.

2. In a material of the character described, a plurality of sheets of paper permeated with a water-proof chemical, a wire netting with the ends of its constituent wires free disposed between successive sheets of said paper, whereby to render the product nonpliable, and the ends of said wire netting bent back over the edges of the paper alternately to support the edges of the same, substatnially as described.

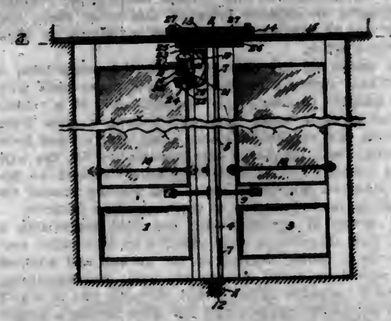
1,014,997. SPEED-CONTROLLING MECHANISM FOR REVOLVING DOORS. GEORGE C. BLICKENSDERFER, Stamford, Conn. Filed Mar. 29, 1909. Serial No. 486,528. Renewed June 6, 1911. Serial No. 631,568. (Cl. 20—18.)

1. The combination with a door mounted to revolve, of a speed controlling device, and connections between said device and the door whereby the rate of movement of the door is automatically controlled.

2. The combination with a door mounted to revolve, of a speed controlling device carried by the door, and connections between said device and the door whereby the rate of movement of the door is automatically controlled.

3. The combination with a door mounted to revolve, of a governor mechanism, operating connections between the door and said mechanism, and means whereby the governor mechanism controls the rate of movement of the door.

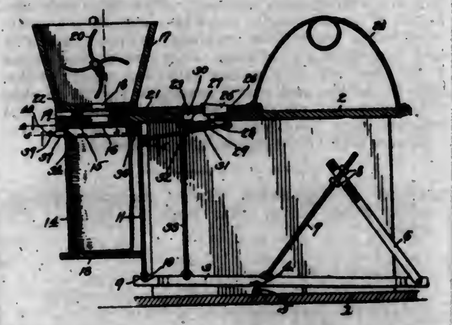
4. The combination with a door mounted to revolve, of a governor mechanism mounted on the door, operating connections between the door and said mechanism, and means whereby the governor mechanism controls the rate of movement of the door.



5. The combination with a door mounted to revolve, of a governor mechanism, operating connections between the door and said mechanism, a brake for the door, and connections between the governor mechanism and the brake.

[Claims 6 to 8 not printed in the Gazette.]

1,014,998. BAG-FILLING DEVICE. JAMES BOWEN, Linden, Mich. Filed Apr. 29, 1911. Serial No. 624,148. (Cl. 73—181.)



1. In a bag filling device, the combination of tilting scales, a bag supporting frame mounted upon the tilting scales, a hopper arranged over the bag supporting frame so as to feed material into a bag mounted thereon, a slide for shutting off the flow of material from the hopper, yielding means normally tending to move the slide into operative position, a pawl mounted upon the slide, a rotary detent adapted to engage the pawl to lock the slide in an inoperative position, a rock shaft carrying the rotary detent and provided with a crank arm, and a link member connecting the crank arm to the tilting scales for rotating the rock shaft and releasing the detent when the scales are tilted.

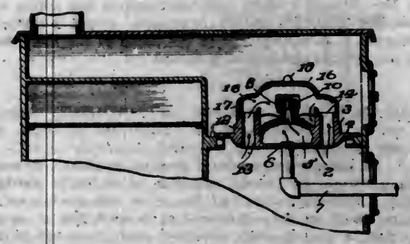
2. In a bag filling device, the combination of tilting scales, a bag supporting frame mounted upon the tilting scales, a hopper arranged over the bag supporting frame so as to feed material into a bag mounted thereon, a slide for shutting off the flow of material from the hopper, yielding means normally tending to move the slide into operative position, a pawl mounted upon the slide and normally tending to drop by gravity into such a position as to project below the slide, a rock shaft mounted under the slide, a rotary detent carried by the rock shaft and formed with a notch adapted to be engaged by the downwardly projecting end of the pawl to hold the slide in an inoperative position, and an operative connection between the rock shaft and the scales for releasing the detent from engagement with the pawl when the scales are tilted.

3. In a bag filling device, the combination of tilting scales, a bag supporting frame mounted upon the scales, an elevated platform arranged over the scales, a hopper mounted upon the plaform and disposed over the bag supporting frame so as to feed into a bag mounted upon the same, a slide mounted upon the platform and adpated to cut off the flow of material from the hopper, the said slide being formed with a slot, yielding means normally tending to move the slide into operative position, a wedge shaped pawl having the reduced end thereof pivoted within the slot, the opposite end of the pawl being designed to drop by gravity into such a position as to project below the slide and being formed with a lip projecting over the top of the slide to limit the dowaward movement thereof, a rock shaft mounted upon the elevated platform, a detent mounted upon the rock shaft and formed with a notch adapted to be engaged by the pawl to hold the slide in an inoperative position, and an operative connection between the rock shaft and the scales for automatically releasing the slide when the scales are tilted.

4. In a bag filling device, the combination of tilting scales, a fixed superstructure arranged over the tilting scales, an upright bag supporting frame having the lower end thereof pivotally connected to the scales, the said bag supporting frame being formed with a lower shelf adapted to engage the bottom of the bag and also with an upper head having an inlet opening therein, means upon the said upper head for engaging the mouth of a bag, a link pivotally connecting the bag supporting frame to the superstructure for holding the bag supporting frame in an upright position, a hopper mounted upon the fixed superstructure and adapted to discharge through the inlet opening of the upper head into the bag, and means for automatically cutting off the flow of material from the hopper when the scales are tilted by the weight of the material in the bag.

5. In a bag filling device, the combination of tilting scales, a fixed structure arranged over the tilting scales, an upright bag supporting frame having the lower end thereof pivotally connected to the tilting scales, the said bag supporting frame being formed with a lower shelf for engaging the bottom of the bag, and also with an upper head having an inlet opening and an air outlet opening therein, a link pivotally connecting the bag supporting frame to the superstructure for holding the said bag supporting frame in an upright position, a hopper mounted upon the superstructure and adapted to discharge through the inlet opening of the upper head into the bag, an air outlet member upon the superstructure registering with the air outlet of the said upper head, and means for cutting off the flow of material from the hopper when the scales are tilted by the weight of the material in the bag.

1,014,999. OIL-BURNER. MOSES L. BULSON, Glasco, Kans. Filed Apr. 18, 1911. Serial No. 621,030. (Cl. 158—53.)



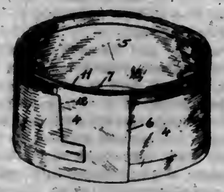
1. An oil burner including a base having the form of a pan, a gas generating chamber forming part of the base, a supply pipe opening into the gas generating chamber, a nozzle projecting from the chamber opposite to the supply pipe, a plurality of air chambers located around the generating chamber and having discharge openings, said air chambers opening upon the under side of the base, and a deflecting cover extending over the nozzle and supported upon the base and acting to direct the air from said air discharge openings toward the nozzle.

2. An oil burner including a base having the form of a pan, a gas generating chamber formed within the base, a fuel supply pipe opening into the gas generating chamber, an upwardly projecting nozzle extending from the chamber, a cap resting upon the upper end of the nozzle and deflecting the vapor therefrom downward against the base, a plurality of air chambers mounted on the base and located at intervals around the gas chamber, each air chamber being formed with an outlet opening and a cover supported upon the base and extending over the gas generating chamber and inclosing the nozzle thereof, said cover acting to direct the air entering through the outlet openings of the air chambers toward the nozzle.

3. An oil burner including a base having the form of a pan, a gas generating chamber integral with the base and formed in the center thereof, a fuel supply pipe opening into the generating chamber, an upwardly projecting nozzle extending from the gas generating chamber, a deflecting cap on the nozzle, a plurality of air chambers formed integral with the base and located at intervals around the gas chamber, each of said air chambers being open at its lower end, and a concavo-convex cover larger in diameter than the diameter of the generating chamber, said cover being provided at intervals with chamber sections completing the chamber sections carried upon the base, each of said chamber sections in the cover being provided with an inwardly directed opening.

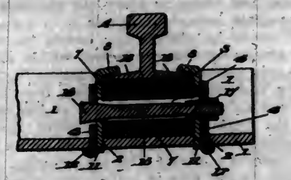
4. An oil burner including a circular pan-shaped base having an annular marginal flange, a central gas generating chamber formed integral with the base and having a rounded upper wall, a nozzle projecting from the gas generating chamber and having a removable tip, a concavo-convex deflecting cap supported on the end of the nozzle, air chamber sections integral with the base and located at intervals around the gas generating chamber, said air chamber sections being open at their lower ends and at their upper ends, a concavo-convex cover less in diameter than the diameter of the pan-shaped portion of the base and having a plurality of air chamber sections formed integral therewith and resting upon the air chamber sections first-named, said last-named air chamber sections being formed with openings directed toward the nozzle, and a supply pipe opening into the generating chamber.

1,015,000. COLLAR OR CUFF PACKAGE. CHARLES CAHN, Baltimore, Md. Filed Mar. 27, 1911. Serial No. 617,171. (Cl. 206—46.)



A collar or cuff package comprising a transparent double walled wrapper with the article inserted between the walls thereof, said package walls having a permanently closed flap at one end, one wall of the package being shorter than the other and adhesively secured to the inner side of the longer wall so as to completely seal the inclosed article between the opposite ends of the shorter wall, and said package and articles therein being rolled with the shorter wall on the inside and with the longer wall outermost,—and the free end of said longer wall adhesively secured to the outer surface of the package—the complete package being in a rolled condition.

1,015,001. RAILWAY-TIE AND FASTENER. ARTHUR C. CANDLAND, Provo, Utah. Filed Oct. 3, 1911. Serial No. 652,662. (Cl. 238—5.)



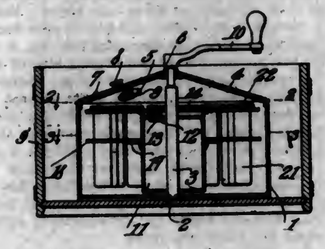
1. A railway tie and fastener consisting of an upturned metal channel, spaced apart transverse slots in the bottom of said channel, open cuts in the edges of said channel, cushion blocks in said channel of the same length as the space between the said transverse slots and thicker than the height of the said channel at said open cuts and having a horizontal opening therethrough, clamps having an elongated beveled opening in each and a portion of each bent to engage the base flange of a rail, a lug on the bottom of each of said clamps adapted to fit within one of said transverse slots, extended portions of said clamps forming lugs adapted to engage within said open cuts to prevent lateral outward movement of said clamps, locking members having a portion of each bent upon itself and adapted to fit within one of said transverse slots and at the side of one of said lugs on the bottom of said clamps, partial registering elongated slots in said clamps and said locking members having the top and bottom of each slot outwardly beveled, a bolt having a cone shaped head placed horizontally through said elongated slots and said cushion blocks, and a frusto-conically shaped nut on said bolt and adapted to be operated within said partially registered slots.

2. In a railway tie and fastener the combination of an upturned metal channel having transverse slots in the bottom thereof, clamps adapted to extend through said slots and with the upper portion of each bent to engage the base flange of a rail, an elongated circular opening in each of said clamps having the top and bottom thereof outwardly beveled, locking members adapted to engage the bottom of said channel and having an elongated circular opening in each with the top and bottom outwardly beveled and with the sides of said opening registering with the sides of the opening in the clamp adjacent and with the top and bottom not registering when the said clamps and locking members are in position, cushion blocks between each pair of clamps having a horizontal opening therethrough, a bolt through said clamps, said locking members and said cushion block to bind them together having a cone shaped head thereon, and a frusto-conically shaped nut on said bolt adapted to slide in said partially registering openings in said clamps and locking members to make the said openings more nearly register.

3. In a railway tie and fastener the combination of an upturned metal channel, transverse slots in the bottom thereof, blocks between said transverse slots, clamps engaging the base flange of a rail each having an elongated circular opening therein with the top and bottom thereof outwardly beveled and adapted to be moved vertically in one of said transverse slots, locking members adapted to engage the bottom of said channel and each having an elongated circular opening therein with the top and bottom outwardly beveled and with the sides of said opening registering with the sides of the opening in the clamp adjacent but with the top and bottom not registering, and a bolt and conically shaped nut thereon adapted to bind said clamps and locking members on said blocks and to draw said clamps downward as well as inward and to cause said openings to more nearly register.

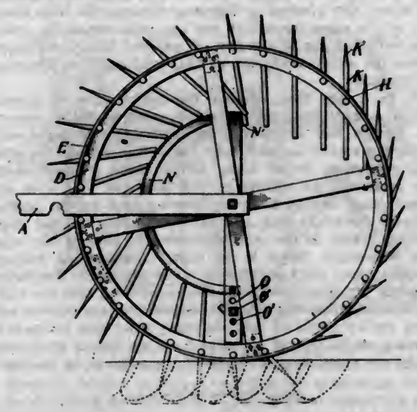
1,015,002. FREEZER. JAMES R. CARROLL, Bollinger, Tex. Filed June 1, 1909, Serial No. 499,330. Renewed Nov. 22, 1911. Serial No. 661,850. (Cl. 62—4.)

A freezer comprising a can, a detachable cover for the can having an opening, a hood journaled upon the cover and having an opening adapted to register with the opening in the cover, a shaft journaled in the cover and the bottom of the can, a relatively large receptacle concentrically fixed to the shaft and spaced from the cover and bottom of the can and having an opening, a detachable closure



for said opening, plates concentrically arranged within the can and having vertically registering openings, a series of relatively small receptacles loosely supported in the registering openings of said plates, and spaced from the cover and sides and bottom of the can and the sides of the large receptacle.

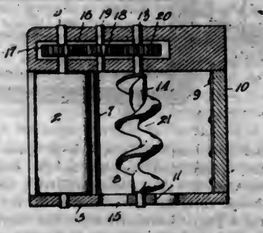
1,015,003. PLOW. JOHN TAYLOR CHAMBERS, New Orleans, La. Filed Aug. 7, 1911. Serial No. 642,632. (Cl. 97—38.)



A rotary plow comprising a cylinder, a frame in which the same is mounted, a series of pointed excavating members pivotally mounted upon the cylinder, means for throwing the points into positions to give end thrusts thereto as the cylinder rotates, bars fastened to the frame and provided with registering apertures, a rod adjustably mounted in said apertures in the paths of the inner ends of the pointed excavating members.

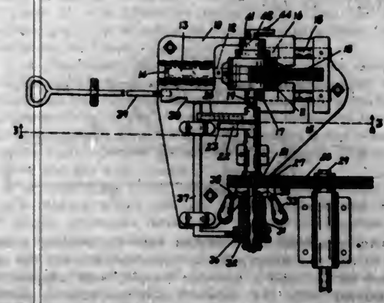
1,015,004. ROAD-GRADER ATTACHMENT. PHILIP CHOUNARD, Pembina, N. D. Filed May 5, 1911. Serial No. 625,271. (Cl. 37—48.)

1. An attachment for road grading machines, comprising a rectangular frame, one side of which is provided with a recessed casing and the other side having an integral shaft support, a depending bracket and a cut-out portion, a geared roller carrying shaft mounted in the recessed casing and extending transversely across the frame to the integral shaft support, a roller carried thereby and operating in the space between the recessed casing and the supporting structure, a geared conveyer carrying shaft mounted in the recessed casing and extending transversely across the frame to the depending bracket, a conveyer carried thereby and operating in the space between the recessed casing and the depending bracket, a geared stub shaft mounted in the recessed casing intermediate the roller and conveyer shafts and meshing with said geared roller and conveyer carrying shafts, a belt passing over the roller, a vertical rear wall extending transversely across the frame, and a scraper device contacting with the roller to clean same.



2. An attachment for road grading machines, comprising a rectangular frame one side of which is provided with a recessed casing and the other side having an integral shaft support, a depending bracket and a cut-out portion, a geared roller carrying shaft mounted in the recessed casing and extending transversely across the frame to the integral shaft support, a geared conveyer carrying shaft mounted in the recessed casing and extending transversely across the frame to the depending bracket, a geared stub shaft mounted in the recessed casing intermediate the roller and conveyer shafts, a roller carried by the roller shaft and a conveyer carried by the conveyer shaft, said members operating in the space between the casing and the respective shaft supports, a belt passing over the roller, a vertical rear wall extending transversely across the frame and a scraper having its rear end secured to the vertical wall at right-angles to the belt, said scraper passing along the bottom of the frame between the casing and side wall in a direction parallel with that of the belt and having its forward end bent upwardly to contact with the roller.

1,015,005. SPARKING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. HARRY C. CLAY, Columbus, Ind., assignor to Reeves & Company, Columbus, Ind., a Corporation of Indiana. Filed July 8, 1910. Serial No. 571,024. (Cl. 123—149.)



1. The combination, with a generator and a driving member, of an intermediate driving train between said driving member and generator having relatively movable portions capable of occupying different speed relations to produce differences in speed effect of the driving member upon the generator, means for normally holding the members of said driving train in one speed relation, means for holding said driving train in abnormal speed relation, and a speed controlled governor connected to said driving train and arranged to withdraw said last mentioned holding means to permit the driving train to assume its normal speed relation.

2. The combination of a driving shaft, a generator with its shaft, a support for one of said parts permitting shifting of one of said shafts to a position eccentric to the other, a wrist-pin crank and a slotted crank engaged thereby, one carried by one of said shafts and the other by the other, means for yieldingly shifting one of said shafts to a position in normal relation to the other, means for holding said last mentioned shaft in a position eccentric to the other shaft, and a speed controlled governor connected to one of said shafts and to said holding means whereby, when desired speed of one of the shafts has been attained, the holding means will be withdrawn and the yielding means will serve to bring the displaced shaft to normal relationship with the other shaft.

3. The combination of a driving shaft, a generator with its shaft, a support for one of said parts permitting shifting of one of said shafts to a position eccentric to the other, a wrist-pin crank and a slotted crank engaged thereby, one carried by one of said shafts and the other by the other, means for yieldingly shifting one of said shafts to a position in normal relation to the other, means for holding said last mentioned shaft in a position eccentric to the other shaft, a speed controlled governor connected to one of said shafts and to said holding means whereby, when desired speed of one of the shafts has been attained, the holding means will be withdrawn and the yielding means will serve to bring the displaced shaft to normal relationship with the other shaft, a timer connected with said generator, and means controlled by the movement of the shiftable shaft for shifting the time to retard the spark produced when the shiftable shaft is in abnormal position.

4. The combination of a driving shaft, a generator with its shaft, a suport for one of said parts permitting shifting of one of said shafts to a position eccentric to the other, a wrist-pin crank and a slotted crank engaged thereby, one carried by one of said shafts and the other by the other, a timer connected with said generator, and means controlled by the movement of the shiftable shaft for shifting the time to retard the spark production when the shiftable shaft is in abnormal position.

5. The combination of a driving shaft, a generator with its shaft, a support for one of said parts permitting shifting of one of said shafts to a position eccentric to the other, a wrist-pin crank and a slotted crank engaged thereby, one carried by one of said shafts and the other by the other, means for yieldingly shifting one of said shafts to a position in normal relation to the other, means for holding said last mentioned shaft in a position eccentric to the other shaft, a timer connected with said generator, and means controlled by the movement of the shiftable shaft for shifting the time to retard the spark production when the shiftable shaft is in abnormal position.

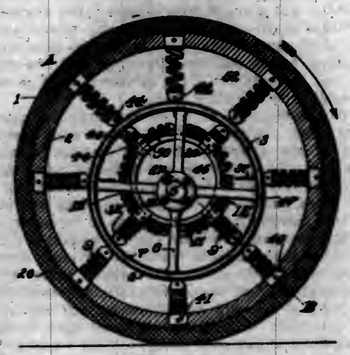
[Claims 6 not printed in the Gazette.]

1,015,006. AUTOMOBILE SPRING-WHEEL. MAX E. CRANDALL, Lawton, Okla. Filed Feb. 28, 1910. Serial No. 546,573. (Cl. 152—28.)

1. A wheel of the character described, comprising an outer rim, an inner rim spaced from the outer rim, side plates conected to the outer rim and provided in their inner faces with radial grooves, spring holders connected to said outer rim and projecting inwardly therefrom, the said spring holders being formed with radially disposed inwardly projecting threaded stems, coiled compression springs secured at their outer ends around said stems and projecting radially therefrom, an abutment head connected to the inner end of each of said springs and bearing upon said inner rim, each of said abutment heads being provided with laterally projecting pins movably engaging in the radial grooves of the plates.

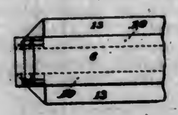
2. A wheel of the character described, comprising an outer rim, an inner rim spaced from the outer rim, side plates secured to the outer rim and extending centrally beyond the inner rim, compression springs interposed between the inner and outer rims and bearing against the same, the said springs being secured to one of said rims and frictionally engaging the other rim, spring engaging members carried by the side plates within the circle of the

inner rim, radially disposed compression springs secured to said members and bearing frictionally against the inner rim, spokes connected to the inner rim and extending inwardly therefrom, a hub connected to the inner ends of said spokes, and compression springs bearing against said spring engaging members and provided with abutment heads engaging the spokes.



3. A wheel of the character described, comprising an outer rim, an inner rim, resilient devices interposed between said rims and bearing against the same, spokes extending inwardly from the inner rim, a hub connected to the inner ends of said spokes, side plates connected to the outer rim, spring engaging members carried by said side plates, radially extending compression springs secured to said side plates and extending outwardly therefrom and bearing against the inner edge of the inner rim, and oppositely extending circumferential compression springs carried by said spring engaging members and provided at their ends with rollers bearing against the opposite edges of said spokes.

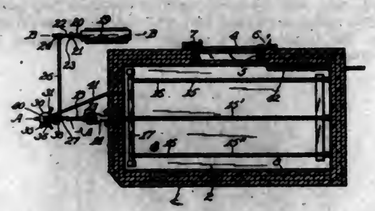
1,015,007. PAPER BAG. DAVID CUTLER, Rumford, Me. Filed Oct. 28, 1911. Serial No. 657,284. (Cl. 229—53.)



1. A paper bag including in combination, a tubular body having an upper and a lower longitudinal mid-portion, a pair of outwardly extending oppositely disposed side plaits between said body mid-portions and joined to said upper body mid-portion by a pair of inwardly folded tucks respectively and to said lower body mid-portion by another pair of inwardly folded tucks respectively, the forward ends of said opposite side plaits being folded over diagonally into and joined to the members respectively of one pair of said inwardly folded tucks and means for closing the bottom.

2. A paper bag including in combination, a tubular body having an upper and a lower longitudinal mid-portion, one of which is longer than the other, a pair of outwardly extending oppositely disposed side plaits between said body mid-portions and joined to said upper body mid-portion by a pair of inwardly folded tucks respectively and to said lower body mid-portion by another pair of inwardly folded tucks respectively, the forward ends of said opposite side plaits being folded over diagonally into and joined to the members respectively of one pair of said inwardly folded tucks and said longer mid-portion being folded over onto and joined to said shorter mid-portion.

1,015,008. APPARATUS FOR FUMING WOOD. HARRY W. DE FREZ, Shelbyville, Ind. Filed Sept. 6, 1910. Serial No. 580,650. (Cl. 99—12.)

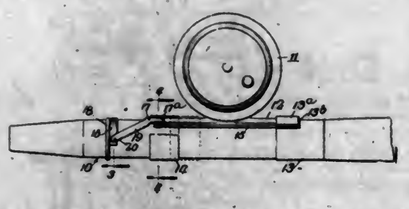


1. Means for treating wood with fumes including a fuming-kiln, a distributing-pipe in the lower portion of the fuming-kiln, a valve connected with the distributing-pipe, a closed receiver connected with the valve, a container, and a pipe connected with the container and the receiver and having a needle-valve therein.

2. Means for treating wood with fumes including a fuming-kiln, a container for anhydrous ammonia under pressure, a closed receiver having a scale-plate thereon and provided also with a gage-glass adjacent to the scale-plate, means for conducting the anhydrous ammonia from the container and discharging it in liquefied state into the receiver, and means for conducting the liquefied ammonia from the receiver and converting it into fumes discharged into the fuming-kiln.

3. Means for treating wood including a fuming-kiln, a container, a closed receiver having a graduated scale thereon and provided with a gage-glass adjacent to the scale, a pipe connected with the container and the receiver and having a stop-cock and also two needle-valves therein, one needle-valve being near the stop-cock and the other near the receiver, a header, a supply-pipe connected with the receiver and the header and having a needle-valve therein near the receiver, perforate distributing-pipes connected to the header and extending along the floor of the fuming-kiln, a pressure-gage connected with the receiver, a vent-cock connected with the receiver, and a pipe connected with the vent-cock and extending into the upper portion of the fuming-kiln.

1,015,009. ATTACHMENT FOR FISHING-RODS. JOHN DINEEN, Chicago, Ill. Filed Apr. 19, 1911. Serial No. 621,971. (Cl. 43—15.)



1. An attachment for fishing rods for locking a reel-base to the rod comprising in combination with the rod, a fixed ferrule and a movable ferrule, each adapted for engagement with the ends of said reel-base, a locking member with an end having direct endwise abutting engagement with that end of the reel-base opposite the end engaged by said fixed ferrule, and means for connecting said locking member to the rod providing a swinging movement of said locking member toward and away from the rod.

2. An attachment for fishing rods for locking a reel-base to the rod comprising in combination with the rod, a fixed ferrule and a movable ferrule, each adapted for engagement with the ends of said reel-base, a locking member having an end adapted for abutting engagement with that end of the reel-base opposite the end engaged

by the fixed ferrule, said locking member having an upper inclined surface adapted to engage as a wedge between the movable ferrule and the rod when said movable ferrule is moved in a direction to slide it off the reel-base, and means for connecting said locking member to the rod providing a swinging movement of said locking member toward and away from the rod.

3. An attachment for fishing rods for locking a reel-base to the rod comprising in combination with the rod, a fixed and movable ferrule, each adapted for engagement with the ends of said reel-base, a locking member having an end adapted for engagement with that end of the reel-base opposite the end engaged by the fixed ferrule, said locking member having an upper inclined surface adapted to engage as a wedge between the movable ferrule and the rod when said movable ferrule is moved in a direction to slide it off the reel-base, an arcuate member adapted to embrace the rod, and having rigid connection therewith, and arms made integral with said locking member and having pivotal connection with said arcuate member.

4. An attachment for fishing rods for locking a reel-base to the rod comprising an arcuate member adapted to embrace the rod, a locking member adapted to present a wedge surface when engaged with the rod, and arms integral with said locking member and pivotally connected at their ends to said arcuate member.

5. An attachment for fishing rods for locking a reel-base to the rod comprising a rod-member adapted to be secured to the rod, a locking member having direct endwise abutting engagement with one end of said reel-base, and means connecting said locking member in hinged relation with said rod member.

1,015,010. FOUR-WHEEL TRUCK. HARRY E. DOERR, St. Louis, Mo., assignor to Scullin-Gallagher Iron & Steel Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 30, 1911. Serial No. 652,064. (Cl. 105—243.)

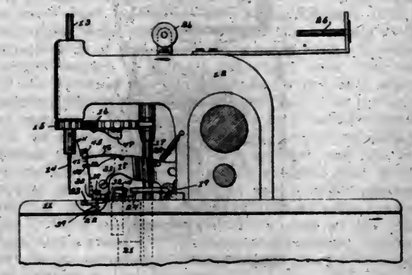
1. A four-wheel truck having a frame which comprises a single casting that consists of two wheel-pieces and two single transoms integrally connected together, the end portions of said transoms being wider than the intermediate portions of same so as to act as guides for the bolster of the truck.

2. A four-wheel truck having a frame which comprises a single casting that consists of two channel-shaped wheel-pieces and two channel-shaped transoms whose horizontal flanges and vertical webs are integrally connected together, the intermediate portions of said transoms being relatively narrow and arranged approximately midway between the bolster and the wheel axles of the truck.

3. A four-wheel truck having a frame that comprises a single casting which consists of wheel-pieces and a pair of single transoms integrally connected together, the transoms being reduced intermediate their ends so that the central portions of same are spaced away from the bolster of the truck, and integral lugs projecting downwardly from the under sides of said transoms for supporting the links which carry the spring plank of the truck.

4. A four-wheel truck having a frame that comprises a single casting which consists of channel-shaped wheel-pieces and a pair of single channel-shaped transoms having their horizontal flanges and vertical webs integrally connected together, the intermediate portions of said transoms being relatively narrow, integral spring seats or pockets on the under sides of said wheel-pieces which are integrally connected to the transoms, vertical ribs connected to the vertical webs and horizontal flanges of said wheel-pieces for reinforcing and strengthening the portions of said spring pockets which project outwardly from the wheel-pieces, depending lugs on the under sides of said transoms for supporting the links which carry the spring plank of the truck, and pedestals secured to box-shaped portions of said wheel-pieces.

1,015,011. BUTTONHOLE-MACHINE. GARRY J. DORMANDY, Troy, N. Y., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed July 26, 1911. Serial No. 640,623. (Cl. 164—2.)

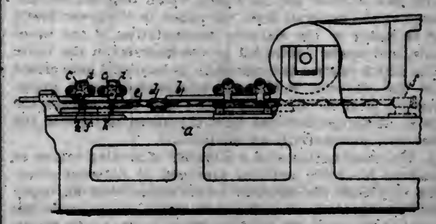


1. In a button-hole machine, a hollow punch for cutting out a punching from the fabric; means within said punch for impaling and raising such punching; and means also within said punch for disengaging such punching from said impaling means.

2. In a button-hole machine, a hollow punch for cutting out a punching from the fabric; an impaling needle within said punch for impaling and raising such punching; and vertically movable means also within said punch for disengaging such punching from said needle.

3. In a button-hole machine, a hollow punch for cutting out a punching from the fabric; an impaling needle within said punch for impaling and raising such punching; and a vertically movable loop embracing said needle for disengaging such punching therefrom.

1,015,012. DRIVING MECHANISM FOR INKING-ROLLERS. GEORGE P. FENNER, New London, Conn. Filed Sept. 19, 1911. Serial No. 650,257. (Cl. 101—78.)



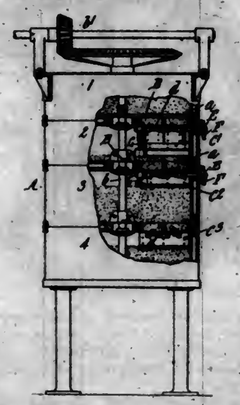
1. In a device for driving inking rollers, the combination with a reciprocating bed, inking rollers coöperating with the bed, a spiral cylinder engaged by the bed and connected to the inking rollers adapted to receive rotary reciprocating motion by the actuation of the bed and impart rotary reciprocating motion to the inking rollers.

2. In a device for driving inking rollers, the combination with a reciprocating bed, inking rollers coöperating with the bed, a spiral cylinder mounted on the frame and operatively engaged by the bed, devices carried by the spiral for engagement with the inking rollers, said spiral being adapted to receive rotary reciprocating motion by the actuation of the bed and impart rotary reciprocating motion to the inking rollers.

3. In a device for driving inking rollers, the combination with a reciprocating bed, inking rollers coöperating with the bed, a grooved spiral cylinder mounted on the

frame, a nut attached to the bed for engagement with and to impart rotary reciprocating motion to the spiral cylinder, and gears carried by the spiral cylinder for engagement with and adapted to transmit rotary reciprocating motion to the inking rollers.

1,015,013. STEAM-COOKER FOR OIL-BEARING MEAL AND THE LIKE. ALFRED W. FRENCH, Piqua, Ohio. Filed May 27, 1911. Serial No. 629,798. (Cl. 87—6.)



1. The combination with a plurality of heating kettles or chambers for solid material arranged to permit the material to discharge from one kettle into another, of a gate which controls the discharge of the material from the former kettle and is closed by the material accumulating in the latter kettle, and controlling means which holds said gate closed until the material is reduced substantially to a predetermined level in said latter kettle and then automatically release the gate to discharge material from said former kettle into said latter kettle, substantially as set forth.

2. The combination with a plurality of heating kettles or chambers for solid material arranged at different elevations to permit the material to discharge from an upper kettle into a lower one, of a gate which controls the discharge of the material from the upper to the lower kettle and is closed by the material accumulating in the lower kettle, and means controlled by the material in the lower kettle which operate automatically to hold said gate closed until the material is reduced substantially to a predetermined level in the lower kettle and then release the gate to discharge material from the upper kettle into the lower one, substantially as set forth.

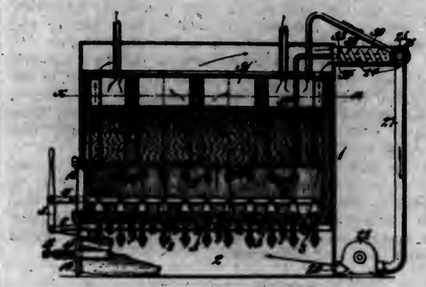
3. The combination with a plurality of heating kettles or chambers for solid material arranged at different elevations to permit the material to discharge from an upper kettle into a lower one, of a gate which controls the discharge of the material from the upper to the lower kettle, a latch for holding said gate closed, and a latch-releasing device controlled by the material in the lower kettle which operates said latch to release the gate when the material is reduced substantially to a predetermined level in the lower kettle, for discharging material from the upper kettle, substantially as set forth.

4. The combination with a plurality of heating kettles or chambers for solid material arranged at different elevations to permit the material to discharge from an upper kettle into a lower one, of a gate which controls the discharge of the material from the upper to the lower kettle and is closed by the material accumulating in the lower kettle, a latch for holding said gate closed, and a latch-releasing device controlled by the material in the lower kettle which operates said latch to release the gate when the material is reduced substantially to a predetermined level in the lower kettle, substantially as set forth.

5. The combination with a plurality of heating kettles or chambers for solid material arranged to permit the material to discharge from one kettle into another, of a gate which controls the discharge of the material from the former kettle, an automatic latch which holds said gate when it has been closed, and a latch-releasing device which is caused to move by the changing of the level of the material in said latter kettle and operates said latch to release the gate when the material is reduced substantially to a predetermined level in said latter kettle substantially as set forth.

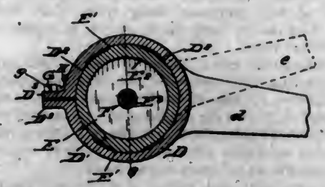
[Claims 6 and 7 not printed in the Gazette.]

1,015,014. FURNACE. SAMUEL B. GOFF, Camden, N. J. Filed Jan. 14, 1910. Serial No. 538,006. (Cl. 110—22.)



A furnace having grate bars, a tightly closed ash pit, means for supplying a blast of air and steam below said grate bars, means for heating said air prior to its entrance to said blast-supplying means, oil vaporizing tubes situated between said grate bars constructed and arranged to deliver the vapors of the oil therefrom to the solid fuel, oil vaporizing tubes in the combustion chamber above the grate bars disposed to cause the vapors of the oil therefrom to intermingle with the gases arising from the solid fuel, and means for supplying liquid fuel to both sets of the vaporizing tubes.

1,015,015. SHOCK-ABSORBING DEVICE. MAXIMILIAN K. GOLDEN, Detroit, Mich. Filed Aug. 25, 1910. Serial No. 578,898. (Cl. 21—105.)



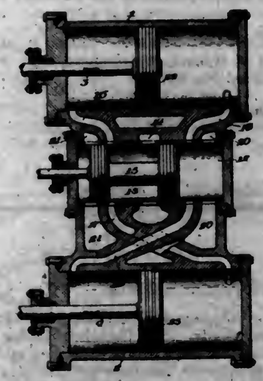
1. A shock absorber comprising a pair of disks, each disk having a marginal flange, the flange of one disk telescoping with the flange of the other disk and having direct peripheral engagement therewith, said disks being respectively connected with the body of a vehicle and its axle or spring, means for pivoting the disks together, means connected with the aforesaid means and engaging one of the disks to hold the disks yieldably together, the flange of one disk being slitted peripherally throughout a portion of its circumference to provide for frictional adjustment of said flange with relation to the flange of the other disk, and means for operating upon the slitted flange to expand or compress the latter and thereby regulate the frictional relation of said flanges, said flanges having coacting cam surfaces operative independently of said yieldable holding means.

2. A shock absorber comprising a pair of disks arranged side by side and pivotally connected together and having marginal telescoping flanges, the outer flange having a pair of oppositely disposed cam surfaces and the inner flange having a pair of oppositely disposed cam surfaces for coöperation with the cam surfaces of the outer flange, said cam surfaces being confined between the disks and their flanges and operative parallel with the pivoted means of the disks, the disks being respectively connected with the body of a vehicle and its axle or spring.

3. A shock absorber comprising a pair of disks arranged side by side and pivotally connected together and having marginal telescoping flanges, the outer flange having a pair of oppositely disposed cam surfaces and the inner flange having a pair of oppositely disposed cam surfaces for coöperation with the cam surfaces of the outer flange, said cam surfaces being confined between the disks and their flanges and operative parallel with the pivoted means of the disks, the disks being respectively connected with the body of a vehicle and its axle or spring, means engaging one of the disks to hold the disks yieldably together, the flange of one disk being slitted throughout a portion of its circumference to facilitate frictional adjustment of said flange with relation to the flange of the other disk, and means for expanding or compressing the slitted flange to regulate the frictional relation between the flanges, the cams being operative independently of the yieldable holding means.

4. A shock absorber comprising a pair of disks arranged side by side and provided with marginal telescoping flanges, one of the disks having a central inwardly directed nipple, the other disk having a central opening, a bolt passed through the nipple and said opening, means on the bolt to yieldably secure the disks together with said nipple confined between the disks and flanges with the outer end of the nipple bearing normally against the inner face of the opposing disk, the inner surface of the outer flange having cams arranged between the disk and the free edge of the flange and the inner flange having cams for coöperation with the aforesaid cams and arranged between the corresponding disk and the free edge of the flange, the flanges being parallel with said nipple, said cams coacting independently of said yieldable holding means and the disks being respectively connected with the body of a vehicle and its axle or spring.

1,015,016. ENGINE. WILLIAM FREEMAN MYRICK GOSS, Urbana, Ill. Filed Apr. 12, 1910. Serial No. 555,053. (Cl. 121—23.)



1. A double cylinder single valve engine, having a simple-type valve, provided with two port controlling members, and a single set of non-communicating passages between the valve chest and each cylinder, and exhaust and supply ports, all controlled by said two port controlling members of said valve.

2. A double cylinder single valve engine, having a single set of ports from the valve chamber to each cylinder, and also having a simple-type valve having two heads arranged to control both the steam supply and exhaust for both of said cylinders.

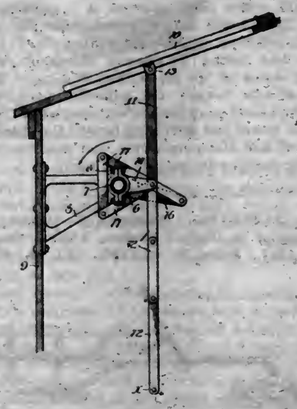
3. A double cylinder single valve engine, having passages between the valve chest and said cylinders, and also having exhaust ports at both ends of the valve chest, and a valve having two heads which control both the admission and exhaust for said cylinders.

4. An engine of the type described, having passages between the valve chest and the cylinders, there being two passages between each cylinder and the valve chest, which said passages connect opposite ends of the cylinders with the valve chest, said engine also having a supply inlet at the middle of the valve chest and exhaust outlets at the opposite ends of said chest, and a valve having a central chamber serving to connect the supply inlet with said cylinder passages, and having heads forming said central chamber, which heads serve to open and close the cylinder passages to the adjacent or associated exhaust outlets.

5. An engine of the type described, having two passages between the valve chest and each cylinder, and also having the valve chest provided with a supply port located between the valve chest ports of said cylinder passages, and also provided with outlet or exhaust ports between said cylinder passage ports and the ends of the valve chest, and a valve for controlling said passages, the same port closing members of the valve controlling both supply and exhaust of the cylinders.

[Claim 6 not printed in the Gazette.]

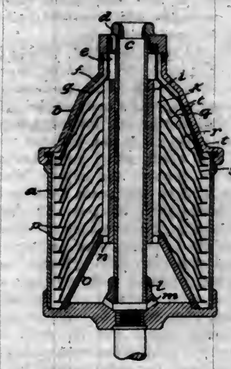
1,015,017. LIFTER-ARM. MATHIAS A. GROBL, Chicago, Ill. Filed Oct. 9, 1911. Serial No. 653,686. (Cl. 16—28.)



1. A lifter-arm device of the character described, comprising a head rotatable on an axial support, and a lifter-arm having a rigid section adapted to be connected to a sash, or the like, and a flexible section formed of a series of links pivotally connected at one end to said rigid section on one side thereof and at its opposite end to said head, and a second series of links pivotally connected at one end to said head and at its opposite end to said rigid section between its ends on the other side thereof.

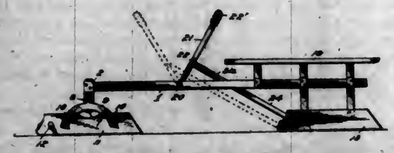
2. A lifter-arm device of the character described, comprising a head rotatable on an axial support and having crank-fingers extending from its opposite ends, and a lifter-arm having a rigid section adapted to be connected to a sash, or the like, and a flexible section formed of a series of links pivotally connected at one end to said rigid section on one side thereof, and at its opposite end to the crank-finger at that side, and a second series of links pivotally connected at one end to the other crank-finger and at its opposite end to said rigid section between its ends on the other side thereof.

1,015,018. CREAM-EXIT FOR CENTRIFUGAL CREAM-SEPARATORS. CHARLES H. HACKETT and THOMAS W. MORGAN, Waterloo, Iowa, assignors to Wilbur W. Marsh, Waterloo, Iowa. Filed Aug. 26, 1910. Serial No. 579,028. (Cl. 127—20.)



In a centrifugal cream separator, a rotary bowl having a removable cover secured thereto, and having both a milk-exit and an axial orifice, a hollow clamping-bolt, flanged outwardly at the top to bear upon the top of said cover around said orifice, and adapted to pass through said orifice and to be detachably secured to the bottom of the bowl, with its interior hollow effecting communication between the exterior and interior of the bowl, the inner wall of said axial orifice being grooved to a depth extending outwardly beyond the flange of said clamping-device, a distributing-partition within and spaced away from the said cover and having an upward extension removably seated and closed at its top within said cover to direct the skimmed-milk toward the milk-exit, said extension having an upwardly-projecting trough seated in the groove of said axial orifice and delivering beyond the outer wall of the flange on said clamping-device, and said trough opening from the cream-zone only of the bowl.

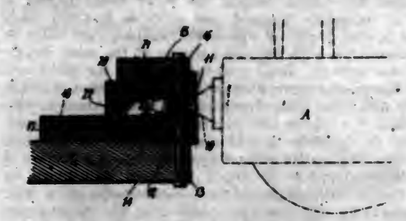
1,015,019. AUTOSLED. CHARLES F. HAMEL, Toledo, Ohio, assignor to Michael Pauken, Toledo, Ohio. Filed Apr. 26, 1911. Serial No. 623,367. (Cl. 21—47.)



1. A sled comprising parallel beams, a single runner pivoted between the beams at the front end, said runner being provided with foot rests, longitudinal guides secured to the inner sides of the beams, a lever pivoted centrally between the beams, a propeller bar pivotally connected to said lever and provided with a plow or pusher at its lower end, pins projecting from the opposite sides of the propeller bar and adapted to bear upon the upper edges of the guides in the operation of the propeller bar, said lever being provided with handles, and a pair of rear runners connected to the beams.

2. An auto-sled comprising parallel beams spaced apart and provided at their front ends with a pivoted runner having foot rests for directing the movements of the sled, curved members connected to the runner, braces connected to the beam and provided with alined apertures, and a stud for pivoting said runner in said braces, a lever pivoted centrally between the beams, a propeller adjustably pivoted to the lever and provided with an oppositely projecting pin, guides on the inner sides of the beams for said pin, a plow on the end of the propeller bar, and two runners connected to the rear ends of the beams.

1,015,020. TYPE-MOLD. JOHN E. HANRAHAN, Baltimore, Md., assignor to The Chesapeake Addressing Company, a Corporation of Maryland. Filed July 23, 1909, Serial No. 509,085. Renewed May 20, 1911. Serial No. 628,564. (Cl. 22—8.)



1. The combination with a mold base including an upstanding longitudinal rib; of a member held on said base and slidable therealong, including a pair of mold sides, a mold cap and a matrix, said sides, cap and matrix being fixed together.

2. In a mold for type, the combination with a base having projections and arranged to form a surface of a type and the nicks therein; of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix, said sides, cap and matrix being integral.

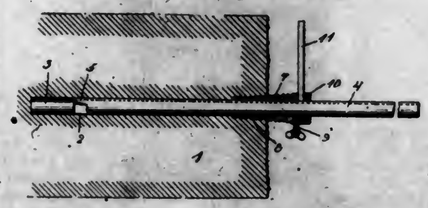
3. The combination with a mold base including an upstanding longitudinal rib, of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix.

4. In a mold for type the combination with a base having projections and arranged to form a surface of a type and the nicks therein, of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix.

5. The combination with a mold base including an upstanding longitudinal rib, of a member on said base and having a mold cavity one side of which is formed by the said rib, one of the said elements being movable longitudinally with respect to the other.

[Claims 6 to 11 not printed in the Gazette.]

1,015,021. BLASTING DEVICE. LOUIS E. M. HARRIS and THOMAS S. HARRIS, Westernport, Md. Filed Apr. 18, 1911. Serial No. 621,769. (Cl. 102—11.)



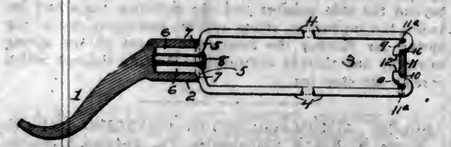
1. A device of the character described, comprising a plug member, an externally screw-threaded locking member movably mounted thereon, and means to lock said member in adjustment at different positions upon the plug member.

2. A device of the character described, comprising a plug member having one end thereof reduced and tapered, said plug member being provided with a groove, a locking member movably mounted on the plug member, and means to hold the locking member in adjustment at different positions upon said plug member.

3. A device of the character described, comprising a plug member in the form of a shaft to approximately fill the opening formed in the material to be blasted and adapted to engage and puncture a package containing the explosive charge, a locking member movably mounted upon said plug member, and means to hold the locking member in adjustment at different positions upon said plug member.

4. A device of the character described, comprising a plug member provided with means for receiving a squib, an externally screw-threaded locking member rotatably and longitudinally movably mounted upon said plug member, said locking member being provided with means to cooperate with a suitable instrument employed to rotate said locking member, and means to hold the locking member in adjustment at different positions upon said plug member.

1,015,022. HANDLE FOR ARTICLES OF HARDWARE. OWEN L. HARRISON, Coleta, Ill. Filed Sept. 3, 1910. Serial No. 580,374. (Cl. 126—322.)



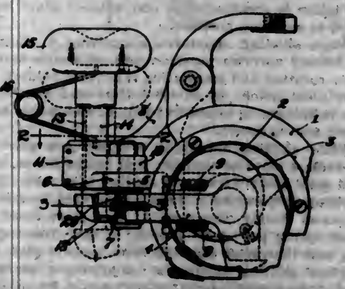
1. A handle comprising a socket member, a plurality of wire handle members having portions at one end closely assembled and inserted in said socket member, a key driven between the portions of the wire handle members which enter said socket member and forcing them outwardly against the walls of the socket member, and means connecting the other ends of said wire members.

2. A handle comprising an annular series of wire members provided at one end with hooks having shoulders at their free ends, a circular member to which said hooks are secured, a socket member into which the opposite ends of the wire members project, and a key forcing said wire members outwardly against the wall of said socket member.

3. A handle comprising an annular series of wire members, each having a hook at one end and each having a shoulder and a finger at the other end, a perforated disk receiving the hooked ends of said wire members, a socket member into which the fingers of said wire members project, and a key forcing said fingers outwardly against the wall of the socket member.

4. A handle comprising a plurality of wires each having a hook at one end provided with a shoulder, a disk having perforations receiving the hooked and shouldered ends of the wires for connecting said wires properly spaced apart, and means for securing the other ends of said wires in fixed positions.

1,015,023. BOBBIN-HOLDING DEVICE. FRANK R. HATCH, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 10, 1910. Serial No. 548,466. (Cl. 112—22.)



1. A lock stitch sewing machine, having, in combination, a bobbin, a pivotally mounted bobbin holding arm, a movable locking device for holding said arm in closed position, means for automatically opening the arm when the device is removed from locking position, and means for holding the locking device in inoperative position while the arm remains in open position.

2. A lock stitch sewing machine, having, in combination, a bobbin, a pivotally mounted bobbin holding arm, a movable locking device for holding said arm in closed position, means for automatically opening the arm when the device is removed from locking position, and clamping means for holding the arm in open position.

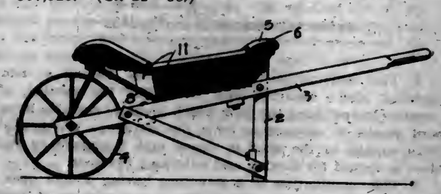
3. A lock stitch sewing machine, having, in combination, a bobbin, a pivotally mounted bobbin holding arm, a cam to lock the arm in closed position and held in inoperative position when the arm is in open position, and means for automatically moving said cam into locking position when the arm is closed by the operative.

4. A lock stitch sewing machine, having, in combination, a bobbin, a pivotally mounted bobbin holding arm, a spring to move the arm from closed to open position, a locking cam arranged to engage the arm and lock it in closed position, and means to move said cam out of locking position to permit the spring to open the arm.

5. A lock stitch sewing machine, having, in combination, a bobbin, a pivotally mounted bobbin holding arm, an axially movable shaft extending transversely of the plane of movement of the arm, and a cam carried by the shaft arranged to engage the arm and lock it in closed position.

[Claims 6 to 11 not printed in the Gazette.]

1,015,024. WHEELBARROW. ARTHUR O. HUBBARD, Minneapolis, Minn. Filed June 17, 1910. Serial No. 567,525. (Cl. 21—68.)



1. A wheel barrow tray comprising a metallic, circumferential rail, cross bars connecting the opposite sides of said rail and forming therewith a truss frame, a middle panel composed of comparatively small strips having their ends secured to said cross bars and side panels having their inner ends secured to said cross bars and their outer ends secured to said rail.

2. A wheel barrow tray comprising a metallic, circumferential rail composed of angle bar and cross bars also composed of angle bar, said tray having a middle and side panels composed of comparatively short strips, the outer ends of said side panels fitting into the angle formed by the flanges of said rail and one of said flanges having its edge bent over the ends of the strips composing said side panels, and said middle panel and the inner ends of said side panels being secured to said cross bars.

3. A wheelbarrow tray comprising a metallic circumferential rail and cross bars composed of angle bar, said tray having middle and side panels composed of comparatively short strips, the strips of said middle panel having grooved ends secured to one of the flanges of said cross bars, and the strips of said side panels having tongues at their inner ends to enter the grooves in said middle panel and secured to the other flanges of said cross bars, the outer ends of said side panel strips being secured to said circumferential rail.

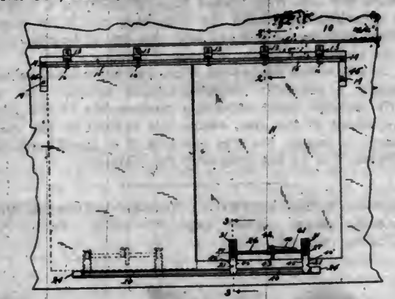
4. A wheel barrow comprising handle bars and legs therefor and a wheel, a tray mounted on said handle bars and comprising a metallic circumferential rail and cross bars therefor, said rail and cross bars forming a truss frame, panels filling the space inclosed by said rail, the edges of said panels being secured to said rails and cross bars respectively, the forward portion of said rail being upwardly and forwardly inclined and overhanging said wheel, and braces secured to said upwardly and forwardly

inclined portion and to the forward ends of said handle bars on each side of said wheel.

5. A wheel barrow comprising handle bars, legs and a wheel, a tray, including a circumferential band, cross bars extending from the front to the rear of said band on each side of the middle portion of the tray, side panels composed of short strips secured to said rail and to said cross bars, a middle panel, also composed of short strips, secured to said cross bars, the forward portions of said rail and cross bars being upwardly turned and overhanging said wheel, and said rail and cross bars being composed of angle bars, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,015,025. SLIDING-DOOR CONSTRUCTION. JOHN R. HUSSEY, Indianapolis, Ind. Filed May 9, 1910. Serial No. 560,221. (Cl. 20—23.)



1. The combination with a structure having a door opening, and a separate door for closing the opening, of means for operating the door which includes movable bars, and means in connection with the structure which said bars engage as the door is closed and disengage as the door is opened for locking and unlocking the door.

2. The combination of a structure having a door opening provided with recesses in the lower surface of said opening, a separate door for closing said opening, and means mounted in connection with the lower portion of the door for operating the door which includes vertically movable bars adapted to enter said recesses for locking and unlocking the door.

3. The combination of a structure having a door opening provided with recesses in the lower surface of said opening, a separate door for closing said opening, means mounted in connection with the lower portion of the door for supporting the door, and means for operating the door which includes bars vertically movable independently of the door and adapted to enter said recesses when the door is closed.

4. The combination with a structure having a door opening, and a separate door for closing said opening, of a track on the structure below the door opening, standards on said track provided with lugs on which the bottom of the door rests while in the outer position and whereby the door is supported while in said position, and means mounted in connection with said standards for lowering the door upon said lugs while opening the door and for elevating said door from said lugs to the door opening for closing the door.

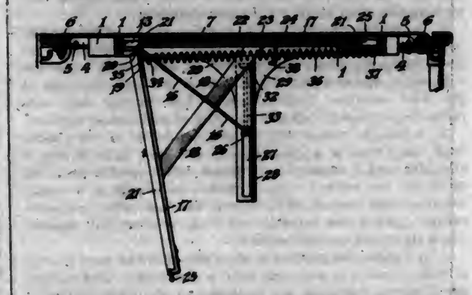
5. The combination with a structure having a door opening, and a separate door for closing said opening, of a track on the structure below the door opening, standards on said track provided with lugs near their lower ends, frames secured to the door into which the upper ends of said standards extend and whereby the lower portion of the door is guided in its vertical movements and which telescope with said standards and rest upon said lugs when the door is in its open position, and means mounted in connection with said standards for giving the door its vertical movements.

[Claims 6 to 10 not printed in the Gazette.]

1,015,026. COMBINATION-TOOL. WAYNE JACKSON and WILLIAM E. FRY, Paola, Kans. Filed Nov. 30, 1909. Serial No. 530,613. (Cl. 7—11.)

An implement of the class described including a side member and a partition plate, a spring between the side member and the partition plate and rigidly secured at one end thereto and provided with a stop lug at the other end, a rivet extending through the spring and connecting it intermediate its ends to said side and partition plate, said spring being further provided with a thumb lug projecting beyond the side member and the partition plate and between the supporting rivets and the stationary end of the spring for forcing the intermediate part of the spring inwardly and thereby outwardly deflecting the end which carries the stop lug.

1,015,027. AUTOMATIC PLATE-CHANGING DEVICE. EDWIN W. KELLY, Philadelphia, Pa., assignor to Roentgen Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed July 27, 1910, Serial No. 574,045. Divided and this application filed Apr. 10, 1911. Serial No. 619,923. (Cl. 95—73.)



1. Plate shifting apparatus comprising a plurality of plate holders movable together in fixed relation with respect to each other, and means for rotating and translating said plate holders, whereby one plate holder is removed from and another plate holder is brought to exposure position.

2. Plate shifting apparatus comprising a plurality of plate holders movable together in fixed relation with respect to each other, and an automatic motive device for rotating and translating said plate holders, whereby one plate holder is removed from and another plate holder is brought to exposure position.

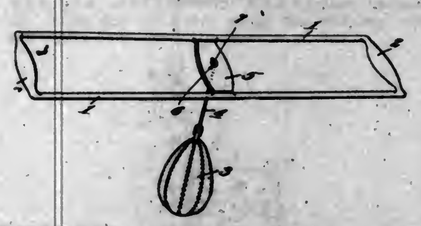
3. Plate shifting apparatus comprising a plurality of plate holders movable together, and automatic motive device for rotating and translating said plate holders, whereby one plate holder is removed from and another plate holder is brought to exposure position, and means for locking said motive device.

4. Plate shifting apparatus comprising a plurality of plate holders movable together, and means for moving one of said plate holders from and another to exposure position comprising coöperating springs, one of said springs exerting tension during movement of said plate holders, and another spring put under tension by said first mentioned spring and thereafter exerting force on said plate holder.

5. Plate shifting apparatus comprising a plurality of plate holders movable together, and means for moving one of said plate holders from and another to exposure position comprising coöperating springs, one of said springs exerting tension during movement of said plate holders, another spring put under tension by said first mentioned spring during movement of said plate holders, and during the latter part of the movement of said plate holders exerting a force on them.

[Claims 6 to 26 not printed in the Gazette.]

1,015,028. BIFFLE-BAG. JOHN KNAUSS, Indianapolis, Ind. Filed Oct. 19, 1911. Serial No. 655,471. (Cl. 46—69.)

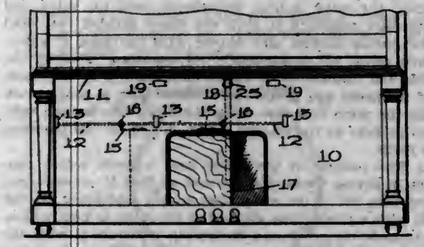


1. A device of the character described, including a carrying member adapted to be manually grasped at its ends and a dependable inflated bag for engagement with the clenched hands as said carrying member is vibrated.

2. A device of the character described, including a carrying member engageable by the hands at its ends, a dependable inflated bag, and a flexible means for connection between said carrying member and said bag, the connection with said carrying member being effected about centrally thereof.

3. A device of the character described, including an oblong frame-member having hand-hold forming end-bars and an intermediate transverse member, a dependable inflated bag, and a flexible means of connection between said bag and said intermediate transverse member, said bag being adapted to contact with the clenched hands grasping said hand-hold forming end-bars as said frame-member is vibrated.

1,015,029. PANEL-OPERATING DEVICE. ALBERT KRELL, Connersville, Ind., assignor to Krell Auto-Grand Piano Co. of America, Connersville, Ind., a Corporation of Indiana. Filed July 11, 1910. Serial No. 571,298. (Cl. 84—159.)



1. In a panel operating device for a musical instrument, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, and three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel.

2. In a panel operating device for a musical instrument having a bottom board and key bed, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, cleats for supporting the rods, and a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out above the top of the bottom board between it and the key-bed.

3. In a panel operating device for a musical instrument having a bottom board, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel, and a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out over the top of the bottom board.

4. In a panel operating device for a musical instrument, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, three cleats for supporting the rod, the central one of said cleats being located in position to engage the brackets at the opposite ends of the stroke of the panel, a handle rigidly mounted on the panel and projecting upwardly therefrom, and having a downwardly extending knob on the outer end thereof, and a pair of stops for said handle, said stops being located in position for the handle to engage them when the brackets engage the middle cleat.

5. In a panel operating device for a musical instrument having a bottom board, the combination of a horizontal supporting rod, a panel having brackets provided with upwardly extending projections having perforations hung on said rod whereby said panel is supported from the rod, a handle rigidly mounted on the panel and projecting upwardly therefrom and extending out at the top of the bottom board, and having a downwardly extending knob on the outer end thereof, and a pair of stops on the bottom board near the top thereof for said handle.

1,015,030. TOOL FOR GRINDING BOTH FIELDS OF BIFOCAL LENSES SIMULTANEOUSLY. CHANCIE C. KEITH, Ossian, Ind. Filed June 16, 1911. Serial No. 633,586. (Cl. 51—3.)

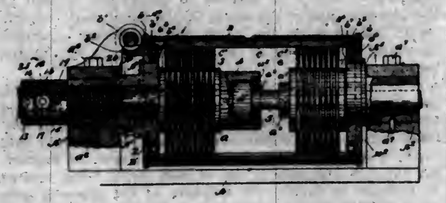
A tool for grinding the fields of bifocal lenses simultaneously comprising a head having a grinding surface thereof, an annular channel in the head interrupting the continuity of the said surface, openings in the head extending from the bottom of the channel to the rear or lower side of the head, a ring in the channel having a grinding surface, the curvature of which differs from that of the curvature of the grinding surface of the head, and rotatable means in said openings and engaging the ring for removably securing the ring in the channel.

1,015,031. CHANGE-SPEED GEARING. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Oct. 28, 1907. Serial No. 399,447. (Cl. 74—26.)

1. In a change speed gearing, the combination, of a driving and a driven shaft arranged substantially in alinement with each other, a plurality of disks on each of said shafts mounted to move longitudinally, a parallel revoluble part, and a plurality of disks carried by said parallel revoluble part, a series of which are adapted to engage with the disks upon the driving shaft and another series of which are adapted to engage with the disks on the driven shaft, substantially as set forth.

2. In a change speed gearing, the combination, of the driving shaft, a series of longitudinally slidable disks locked against circumferential movement thereon, a driven

shaft mounted substantially in line with said driving shaft, a series of longitudinally slidable disks locked against circumferential movement thereon, a rotary part parallel with said shafts, a series of disks on said rotary part adapted to engage with the disks on the driving shaft, and another series of disks on said rotary part adapted to engage with the disks on the driven shaft, substatially as set forth.



3. In a change speed gearing, the combination, of a driving shaft, a series of disks mounted thereon, a driven shaft journaled substantially in line with said driving shaft, a series of disks on said driven shaft, a cylinder mounted to rotate on suitable bearings around said shafts, a series of disks mounted in the interior of said cylinder and arranged to engage with the disks on said driving shaft, and another series of disks in said cylinder arranged to engage with the series of disks on said driven shaft, whereby motion may be transmitted from said driving shaft to said driven shaft, substantially as set forth.

4. In a change speed gearing, the combination, of the driving shaft, a series of disks slidably mounted on said shaft, the driven shaft mounted substantially in line with said driving shaft, a series of disks slidably mounted on said driven shaft, a cylinder mounted on suitable bearings to revolve around said shafts, a series of disks carried in the interior of said cylinder and mounted to slide longitudinally thereof and arranged to engage between the disks of said driving shaft, another series of disks similarly mounted within said cylinder and arranged to engage between the disks on the driven shaft, one series of disks in each set being formed with tapered faces and the other series which engages with the tapered faces being formed with narrow engaging edges, substantially as set forth.

5. In a change speed gearing, the combination, of the driving shaft, a series of disks mounted on said driving shaft, a driven shaft, a series of disks mounted on said driven shaft, a cylinder mounted to rotate on suitable bearings surrounding said shafts, two sets of disks mounted in said cylinder, one to engage with the disks on the driving shaft, and the other to engage with the disks on the driven shaft, bearings for said cylinder mounted on circular bearings eccentric to the axis of said shafts, and means for rotating said part on said eccentric bearings, whereby the points of engagement between the faces of the disks on the shafts and the disks carried by the cylinder may be moved toward and from the axis of said shafts, substantially as set forth.

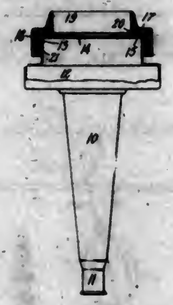
[Claims 6 to 18 not printed in the Gazette.]

1,015,032. TEAT-CUP FOR MILKING-MACHINES. FREDERIC A. LANE, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed Mar. 6, 1911. Serial No. 612,521. (Cl. 31—102.).

1. The combination with a teat cup, of a flat annular diaphragm, a flat support for the flat marginal portion of said diaphragm arranged on said cup, and an elastic attaching collar engaging said cup and holding said diaphragm on said support, substantially as set forth.

2. The combination with a teat cup provided with an external attaching rim, of a flat annular diaphragm, a flat support for the flat marginal portion of said diaphragm arranged on said cup, and an elastic attaching collar engaging said rim and securing the diaphragm to the cup, substantially as set forth.

3. The combination with a teat cup provided with an external attaching rim, of a flat flexible diaphragm, means for supporting the diaphragm on the cup, and an elastic attaching collar engaging said rim and securing the diaphragm to the cup, substantially as set forth.



4. The combination with a teat cup provided with an external attaching rim, of an annular flexible diaphragm, means for supporting the diaphragm on the cup, and an elastic attaching collar bearing against the lower side of said rim and extending with its upper portion inwardly over the diaphragm and securing the latter to the cup, substantially as set forth.

5. The combination with a teat cup provided with an external attaching rim, of an annular flexible diaphragm, a rigid washer resting on said cup and supporting the marginal portion of said diaphragm, and an elastic attaching collar engaging said rim and securing the diaphragm to the cup, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,015,033. COAL BRIQUET AND PROCESS OF FORMING THE SAME. WARREN WILFORD LANGDON, Walla Walla, Wash., assignor to Baker & Baker, Walla Walla, Wash., a Corporation of Washington. Filed Jan. 12, 1911. Serial No. 602,349. (Cl. 44—1.)

1. The process of producing coal briquets which consists in drying finely divided coal so that it contains not more than 3% of moisture, then mixing said finely divided coal with an oil, then mixing therewith a pitch, then subjecting the mass to heat whereby to melt the pitch and intimately associate it with the finely divided coal, and subsequently adding and mixing with the mass a water-mixed paste, all substantially as described, whereby the pitch will operate as a binder in resistance to moisture, and the paste will operate as a binder both in conjunction with the pitch and also when the pitch has become softened by heat as the briquet burns, as and for the purposes set forth.

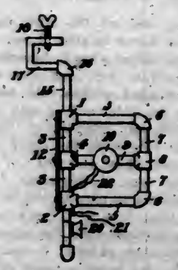
2. The process of producing coal briquets which consists in drying finely divided coal so that it contains not more than 3% of moisture, then mixing said finely divided coal with a pitch, then subjecting the mass to heat whereby to melt the pitch and intimately associate it with the finely divided coal, and subsequently adding and mixing with the mass a water-mixed paste, all substantially as described, whereby the pitch will operate as a binder in resistance to moisture, and the paste will operate as a binder both in conjunction with the pitch and also when the pitch has become softened by heat as the briquet burns, as and for the purposes set forth.

3. A briquet consisting of finely divided coal with which an oil has been mixed, pitch incorporated with the coal particles, the latter being enveloped and united by the pitch, and water-mixed paste uniting the said enveloped particles, all substantially as and for the purposes set forth.

4. A briquet consisting of finely divided coal, pitch incorporated with the coal particles, the latter being enveloped and united by the pitch, and water-mixed paste uniting the said enveloped particles, all substantially as and for the purposes set forth.

5. A briquet consisting of finely divided coal, pitch incorporated with the coal particles, the latter being enveloped and united by the pitch, and water-mixed paste uniting the said enveloped particles, the said briquet having the pitch uniformly spread upon its outer surface forming a water-proof and mold-proof glaze, substantially as set forth.

1,015,034. TELEPHONE. JOHN LAPICKI, De Kalb, Ill. Filed Oct. 25, 1911. Serial No. 656,569. (Cl. 179—146.)

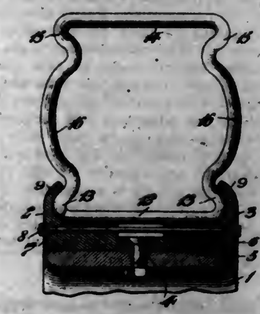


1. A telephone apparatus comprising an upright, a rectangular frame carried thereby, a receiver trunnioned in said frame, and a switch arm carried by one of the trunnions of said receiver and adapted to complete a circuit with said receiver.

2. A telephone receiver comprising an upright, a transmitter carried by one end thereof, a rectangular frame supported by said upright, a receiver trunnioned in said frame, and a switch arm carried by ope of the trunnions of said receiver and adapted to complete a talking circuit in connection with said receiver and said transmittter.

3. A telephone apparatus comprising an upright, a clamp carried by one end thereof, a transmitter carried by the opposite end thereof, a rectangular frame carried by said upright, a receiver trunnioned in said frame, and a switch arm carried by one of the trunnions of said receiver and adapted to complete a talking circuit in connection with said receiver and said transmitter.

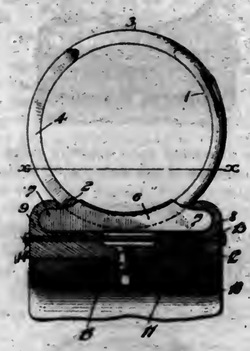
1,015,035. TIRE FOR VEHICLE-WHEELS. BENJAMIN F. LANE, Philadelphia, Pa. Filed Sept. 30, 1910. Serial No. 584,658. (Cl. 152—8.)



1. A spring section for a tire consisting of a convolution of spring material having a plurality of surfaces, either surface serving as a tread or rim engaging surface, and one serving as the tread when the other is positioned to engage the rim, off-sets upon opposite sides of each surface, and clamping means adapted to engage the off-set on each side of the surface which is positioned to engage the rim.

2. A tire formed of convolutions of spring material each having a plurality of flattened surfaces, either surface serving as a tread or a rim engaging surface, and one serving as the tread when the other is positioned to engage the rim, off-sets upon opposite sides of each surface, and clamping means adapted to engage the exterior of an off-set on each side of the surface which is positioned to engage the rim.

1,015,036. VEHICLE-TIRE. BENJAMIN F. LANE, Philadelphia, Pa. Filed Dec. 12, 1910. Serial No. 596,750. (Cl. 152—8.)



1. In a tire, a plurality of convolutions of suitable material, bifurcated clips engaging said convolutions, an extension on each side of each end of said clips and clamping means adapted to engage said extensions to secure said convolutions to a wheel rim.

2. A spring section for a tire consisting of a coil, having a tread portion and a rim engaging portion, formed of a convolution of spring material, the ends of which extend upon opposite sides of the tread, whereby two portions of the material form the tread of the section, and removable means embracing said rim engaging portion and adapted for engagement by suitable clamping means, said removable means serving as an abutment for said ends.

3. A spring section for a tire consisting of a coil, having a tread portion and a rim engaging portion, formed of a convolution of spring material, the ends of which extend upon opposite sides of the tread, whereby two portions of the material form the tread of the section, and a clip embracing said rim engaging portion and adapted for engagement by suitable clamping means.

4. A spring section for a tire consisting of a coil, having a tread portion and a rim engaging portion, formed of a convolution of spring material, the ends of said convolution extending upon opposite sides of the tread, whereby two portions of the material form the tread of the section, and bifurcated removable means embracing said rim engaging portion and having extensions for engagement by suitable clamping means.

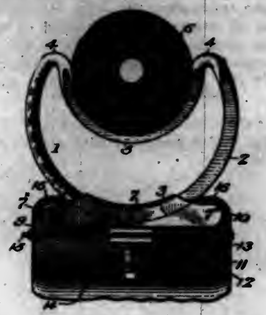
1,015,037. VEHICLE-TIRE. BENJAMIN F. LANE, Philadelphia, Pa. Filed Dec. 16, 1910. Serial No. 597,631. (Cl. 152—8.)

1. In a tire, a plurality of convolutions of suitable material, each convolution being depressed at the outer portion thereof to form a seat, the ends of each convolution passing each other and extending toward the rim on each side of said seat, and a tread member held in said seat.

2. In a tire, a plurality of convolutions of suitable material, each convolution being depressed at the outer portion thereof to form a seat, the ends of a convolution passing each other, and extending on each side of the seat, the outer edges of said depressed portions and the said ends being tapered, and a tread member held in said seat.

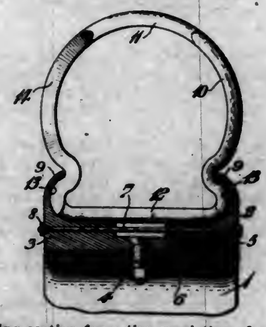
3. A spring section for a tire consisting of a coil having

a tread supporting portion and a rim engaging portion and formed of a convolution of spring material depressed at the tread supporting portion to form a seat, the ends



of the section extending upon opposite sides of the seat, whereby two portions of the material form the seat of the section.

1,015,038. TIRE. BENJAMIN F. LARE, Philadelphia, Pa. Original application filed Sept. 30, 1910, Serial No. 584,658. Divided and this application filed Jan. 28, 1911. Serial No. 605,152. (Cl. 152—8.)



1. A spring section for a tire consisting of a coil formed of a convolution of spring material, the ends of which terminate upon opposite sides of the tread whereby two abutting portions of the material form a continuous tread of the section, and said ends extending toward the rim and abutting the sides of the next adjacent sections.

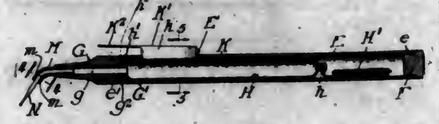
2. A spring section for a tire consisting of a coil formed of a convolution of spring material, the ends of which terminate upon opposite sides of the tread whereby two portions of the material form the tread of the section, and said ends being curved in the same radius as the convolution.

3. A spring section for a tire consisting of a coil formed of a convolution of spring material, the ends of which terminate upon opposite sides of the tread whereby two portions of the material form the tread of the section, and said ends being tapered.

4. A spring section for a tire consisting of a coil having a tread portion and a rim engaging portion, formed of a convolution of spring material, the ends of which pass each other at the tread section and extend upon opposite sides thereof and said ends being tapered, whereby the planes of the edges of the section are oppositely inclined to a radial plane.

1,015,039. DENTAL TOOL. VINCENT LASBURY, Chicago, Ill. Filed Jan. 31, 1910. Serial No. 540,942. (Cl. 22—186.)

1. In a dental tool of the class described, a hollow handle member, a nozzle located at one end of said handle member, a compressible, elastic reservoir member carried by said handle member and connected with said nozzle, a pin removably connected to said nozzle, and a channel or channels communicating with said nozzle and adapted to discharge about the body of said pin upon the article engaged thereby.



2. In a dental tool of the class described, a hollow handle member, a nozzle located at one end of said handle member, a compressible, elastic reservoir member carried by said handle member and connected with said nozzle, a discharge tube engaged within said nozzle, a pin removably mounted in the outer end of said discharge tube, and a channel or channels adapted to connect the interior of said discharge tube with the outer surface of said pin at a point or points above the point of the pin.

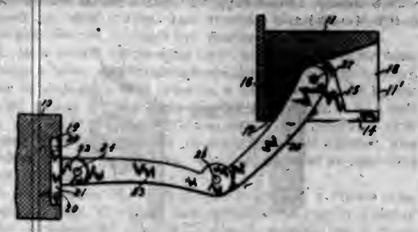
3. In a dental tool of the class described, a hollow barrel comprising the handle of the tool, a nozzle located at one end of said barrel, a compressible, elastic tube located within said barrel and connected with said nozzle, a compression member adapted to compress the compressible, elastic tube and bearing upon substantially the full length thereof located within said barrel, an operating member located without the barrel adapted to operate said compression member, a pin removably connected to said nozzle, and a channel or channels communicating with said nozzle adapted to discharge about the body of said pin.

4. A dental tool of the class described comprising a barrel forming the handle of the tool, a compressible, elastic tube located within said barrel, a nozzle secured to the end of said barrel, a compression member comprising a flat bar located between the inner walls of said barrel and the outer wall of said compressible, elastic tube, an operating member located without the barrel adapted to operate said compression member, said operating member being adapted to be brought against the body of the barrel when said compression member is operated, a discharge tube secured to the end of said nozzle, a pin removably secured at the outer end of said discharge tube, and a channel or channels adapted to connect the interior of said discharge tube with the outer surface of said pin at a point or points above the point of the pin.

5. A dental tool of the character described comprising a barrel forming the handle of the tool, a compressible, elastic tube located within said barrel, a nozzle provided with a discharge opening therethrough secured to the end of said barrel, said compressible, elastic tube being closed at one end and having its other end secured to the inner end of said nozzle, a compression member in the form of a flat bar extending longitudinally of said compressible, elastic tube and located between said tube and the inner walls of said barrel, said barrel being provided with a slot near said nozzle, a web formed on said compression member projecting through said slot, a finger piece formed on said web lying without said barrel and having a projection adapted to engage the outer surface of said barrel when said compressible, elastic tube is compressed, a discharge tube adapted to fit within the discharge opening of said nozzle, a pin removably secured to the outer end of said tube, and channels formed about the base of said pin and connecting with the interior of said tube.

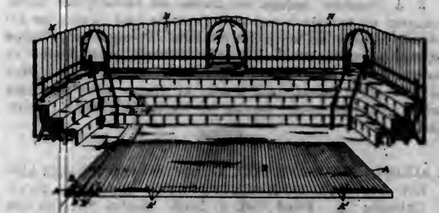
1,015,040. CARRIAGE-HINGE. JOSEPH LAURICH, New York, N. Y. Filed Nov. 24, 1911. Serial No. 662,206. (Cl. 16—5.)

A hinge comprising a door plate provided with outwardly projecting lugs, a jamb plate having a transverse slot and rearwardly projecting flanges below and above said slot, said flanges being connected by a vertical web extending from the front of said jamb plate beyond the middle portions of said flanges, a hinge arm pivoted to said lugs, and a second hinge arm pivoted to said first arm, the other end of said second arm being located between said flanges and being pivoted thereto, said second



arm being adapted to abut against said web when the door is being opened.

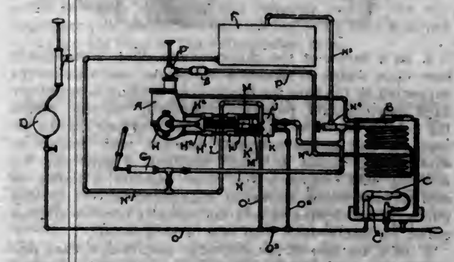
1,015,041. THEATER APPLIANCE. JOHN LEAR, Kingston-upon-Hull, England. Filed July 3, 1911. Serial No. 636,654. (Cl. 46—70.)



1. In a theater appliance, the combination, with a floor provided with insulated surface plates of conducting material, of electromagnets arranged between and in circuit with the said plates, whereby they attract any objects of conducting material moved over the floor.

2. In a theater appliance, the combination, with a floor provided with a surface formed of plates of conducting material and plates of non-conducting material arranged alternately, of electromagnets arranged between and in circuit with the first said plates, whereby they attract any objects of conducting material moved over the floor.

1,015,042. AUTOMATIC REGULATOR FOR STEAM-PROPELLED VEHICLES. HERMANN LEMP, Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Feb. 28, 1900. Serial No. 6,806. (Cl. 122—448.)



1. In a system of control for steam-actuated apparatus, the combination of a boiler, a burner therefor, an engine, a pair of pumps driven by the engine and arranged to deliver water directly to the boiler and fuel to the burner, said pumps bearing a fixed relation to each other, and a regulator comprising a spring device which assumes different operative positions under changes in pressure on the boiler for automatically varying the length of the strokes of the pumps.

2. In a system of control for steam-actuated apparatus, the combination of an engine, a boiler, a burner for heating the boiler externally, variable-stroke pumps which are arranged to deliver water directly to the boiler and fuel to the burner, and a driving connection between the engine and the pumps including elastic means controlled by the pressure on the boiler for varying the lengths of the piston strokes of the pumps to vary the supplies of water to the boiler and fuel to the burner in accordance with the demand made on the boiler for steam.

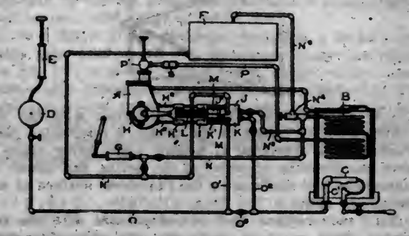
3. In a system of control for steam-actuated apparatus, the combination of an engine, a boiler, a burner, a water-pump, a fuel-pump, and an automatic regulator comprising spring means which acts on both pumps and is itself controlled by the water pressure on the boiler.

4. In combination, a coil-burner, a burner for heating the coil externally, pumps for supplying liquid to the coil and fuel to the burner, a propelling engine that receives its vapor from the boiler, means for communicating motion from the engine to the pump plungers and a spring regulating device which directly controls the admission of fuel to the burner and is itself responsive to variations in pressure on the boiler.

5. In a system of control for a steam-actuated apparatus, the combination of an engine, a shaft driven thereby, a boiler, a water-pump, a connection establishing a direct communication between the boiler and the pump, a mechanical connection between the engine shaft and the pump, and a spring regulating device which is acted upon by the pressure at the water end of the boiler for varying the length of stroke of the pump.

[Claims 6 to 24 not printed in the Gazette.]

1,015,043. METHOD OF REGULATING THE PRODUCTION OF STEAM. HERMANN LEMP, Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Original application filed Feb. 28, 1900, Serial No. 6,806. Divided and this application filed Nov. 3, 1902. Serial No. 129,859. (Cl. 122—248.)



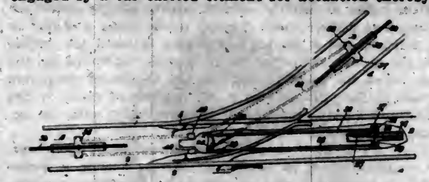
1. The method of generating superheated vapor which consists in supplying liquid to a suitable generator at a substantially predetermined pressure, supplying a fuel for heating the generator, and varying both of said supplies in substantial accordance with the variations in pressure of the liquid supplied to the generator.

2. The method of generating steam which consists in forcing water under pressure into a coil boiler, and fuel under pressure to a burner for heating said boiler, and simultaneously increasing and decreasing the supplies of both water and fuel as the pressure of the water forced into the boiler increases and decreases.

1,015,044. SWITCH-THROWING MECHANISM. JOHN M. LEONARD, Marquette, Mich. Filed Jan. 7, 1911. Serial No. 601,291. (Cl. 104—24.)

1. In a switch throwing mechanism, the combination of track switch points, a device located between the points and operatively connected therewith for moving the points to open or closed positions, a plurality of trips operatively connected with the said device and all operated at the same time, each trip device consisting of a member extending longitudinally of the track and pivoted at its

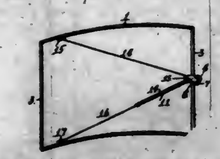
center, and abutments on the ends of the members to be engaged by a car carried element for actuation thereby.



2. In a switch operating mechanism, the combination of switch points, an oscillatory element connected therewith to move the points to open or closed positions, devices connected with the element at opposite sides of the center of oscillation and extending along the track, a trip consisting of a cruxiform structure centrally pivoted and having opposite arms connected respectively with the said devices, and abutments on the extremities of the other arms and movable alternately to and from a longitudinal line passing through the pivotal center of the cruxiform structure to be struck by a car carried shoe.

3. In a switch throwing mechanism, a trip device comprising a casing having a longitudinal trough provided with openings adjacent its ends, a lever centrally pivoted in the casing, abutments on the ends of the lever and opposite the respective openings and so arranged that one abutment will be projected into the trough and the other retracted therefrom, and a plurality of elements connecting the lever with the switch and movable longitudinally in opposite directions.

1,015,045. AEROPLANE. GEORGE H. LOOSE, San Francisco, Cal. Filed June 30, 1910. Serial No. 569,741. (Cl. 244—12.)



1. In an aeroplane, and in combination with the sustaining plane or planes of the device, a controlling plane adapted to be presented at a fixed angle either above or below the direction of travel of the device, and means for augmenting and diminishing the functional surface of said controlling plane.

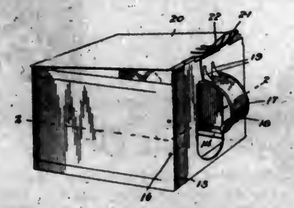
2. In an aeroplane, and in combination with the sustaining plane or planes of the device, a controlling plane adapted to be presented at a fixed angle either above or below the direction of travel of the device, and means for extending and contracting said controlling plane to augment or diminish its functional surface.

3. In an aeroplane, and in combination with the sustaining plane or planes of the device, a controlling plane adapted to be presented at a fixed angle either above or below the direction of travel of the device, and means for furling and unfurling said controlling plane to diminish or augment its functional surface.

4. In an aeroplane, and in combination with the sustaining plane or planes of the device, a controlling plane adapted to be presented at a fixed angle either above or below the direction of travel of the device, and means for rolling up and unrolling said controlling plane to diminish or augment its functional surface.

5. In an aeroplane, and in combination with the sustaining plane or planes of the device, a controlling means comprising a spring controlled roller, a flexible sheet carried by said roller, connections to unwind the sheet from the roller in a plane at an angle on either side of the direction of travel of the device, and a guide roller parallel with and separated from the sheet-carrying roller to direct the unwinding of the sheet to either angle.

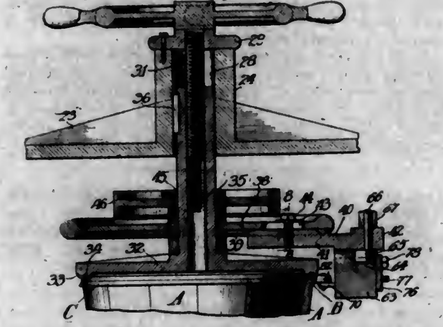
1,015,046. CUSPIDOR. HENRY C. LOVIS, New York, N. Y., assignor to Seabury & Johnson, a Corporation of New Jersey. Filed Sept. 12, 1910. Serial No. 581,546. (Cl. 4—39.)



1. A cuspidor holder or frame, of rectangular form, adapted to contain a cup or receptacle, and having an integral handle, an open bottom and a supporting flange extending inward around said bottom, said holder or frame, flange, handle and all, consisting of a single piece of thin sheet metal.

2. A cuspidor holder or frame, of rectangular form, adapted to contain a cup or receptacle and having an integral handle, an open bottom and a supporting flange extending inward around said bottom, said holder or frame, flange, handle and all, consisting of a single piece of thin sheet metal, said holder or frame being provided with a hinged cover having an integral, ribbed thumbpiece.

1,015,047. MACHINE FOR APPLYING COVER-RETAINING DEVICES TO RECEPTACLES. HENRY N. MANN, Chicago, Ill. Filed Feb. 3, 1908. Serial No. 414,038. (Cl. 113—24.)



1. In a device of the character described, a stationary base upon which to receive a receptacle, centering means supported by the base for temporarily holding in relatively fixed position said receptacle, vertically movable means for holding its cover and a separate ring seal on the receptacle, and means rotatably movable with respect to said holding means to deflect portions of said ring for securing said receptacle and cover together, a pulley on said last-mentioned means for engagement with a driving pulley, and a constantly rotating laterally movable friction pulley for engagement with said driving pulley.

2. In a machine of the character described, a base support for a receptacle, mechanism secured to and supported by the base and capable of vertical movement with relation thereto for temporarily holding said receptacle, its cover, and a separate sealing ring in fixed relation to each other upon said base support, a tool carrier vertically movable with said holding mechanism and rotatable thereon, a tool carried by said carrier, and means for holding said tool yieldingly in operative relation with said receptacle.

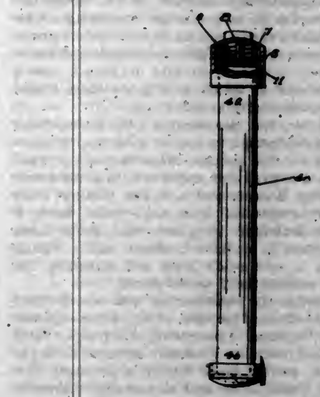
3. In a device of the character described, a frame comprising a base, a bridge, and uprights spaced apart for holding them in separated relation, a platen vertically movable with respect to and between said base and bridge, a tool carrier mounted on, moving with, and rotatable with respect to, said platen, and yielding means for holding said tool carrier in operative position.

4. In a device of the character described, a frame comprising a base, a bridge, and uprights for rigidly holding them in their separated relation, a platen supported by the bridge, means for vertically moving the platen, a tool carrier vertically movable with the platen and rotatable with respect thereto, means for rotating said tool carrier, and yielding means for holding said tool carrier in operative working relation.

5. In a device of the character described, a frame comprising a base, a bridge, and uprights for rigidly holding them in separated relation, a platen movable on a right line in said frame, a tool carrier movable with the platen and having an independent rotary motion with respect to the platen, a driven wheel rotatively movable with said tool carrier, and a constantly rotating friction wheel laterally movable for engagement with said driven wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,015,048. HOLDER FOR FIRE-EXTINGUISHERS. WILBUR J. A. MANNING, Detroit, Mich. Filed Aug. 10, 1911. Serial No. 643,383. (Cl. 169—16.)



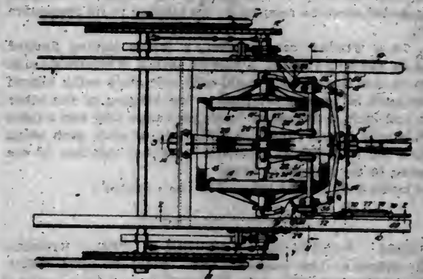
A holder for fire extinguishers, having in combination a base bar, a socket adapted to engage one end of the extinguisher tube and provided with a cushion, a second socket adapted to engage the opposite end of the extinguisher tube provided with a spring and a hook adapted to engage the ring on the extinguisher tube.

1,015,049. POWER-TRANSMISSION DEVICE. GEORGE W. MARBLE, Milwaukee, Wis. Filed Mar. 18, 1911. Serial No. 615,275. (Cl. 74—26.)

1. In a power transmission device the combination of two confronting friction disks, two opposed friction wheels, between said disks, on opposite sides of the axis of rotation of said disks, a shaft for each of said wheels adapted to be readily moved in parallel paths, to and from said disks, and a self-adjusting equalizing means for moving said shafts and respective wheels into contact with the respective disks.

2. In a friction power transmission device a main shaft, confronting friction disks, spaced apart and mounted on said shaft, a pair of transversely arranged shafts, in the plane of the main shaft, friction wheels on said transverse shafts, and a self-adjusting equalizing means for moving said transverse shafts respectively in opposite directions, to bring their respective wheels into contact with either of said disks with substantially equal pressure.

3. In a device of the character described, a main shaft, confronting friction disks spaced apart and mounted on said shaft, a bracket support, superposed above and independent of said main shaft, bearing members for transversely positioned shafts pivoted to said bracket support, two transversely positioned shafts, one on each side of said main shaft, mounted in said pivoted bearings, friction wheels rotatable with said transverse shafts, and independently movable means for shifting said pivoted members in either direction to bring either of said wheels into contact with either of said disks.



4. In a device of the character described, a combination of two spaced apart, confronting friction disks, two opposed friction wheels, between said disks, on opposite sides of the axis of rotation of said disks, a shaft for each of said wheels adapted to be bodily moved in parallel paths transversely of its axis, to and from said disks, movable bearings for said shafts, a substantially parallel, compound shaft comprising two independently rotatable members each carrying eccentrics connected to said bearings respectively, a centrally pivoted arm having each of its ends connected to one of said shaft members to rotate same, and means connected to the center of said arm to bodily move same, and to thereby bring said wheels into substantially equal contact with either of said disks.

5. In a device of the character described, a frame comprising side members 10, 10', transverse connecting members 12, 12', a power transmission device within said frame, and a supporting bracket, 20, connected as at 21, to said transverse members 12, 12', said bracket carrying near its middle portion a pendulous freely movable shaft bearing for affording bearing for one member of said power transmitting device.

1,015,050. SLIDING AND SWINGING WINDOW. CHARLES M. MARCH, Portland, Me. Filed Nov. 7, 1910, Serial No. 590,996. Renewed July 22, 1911. Serial No. 640,016. (Cl. 20—50.)

1. A window comprising a frame, a pair of overlapping sashes slidably supported therein and means for supporting each sash so as to permit it to swing inwardly and outwardly, both inside and outside of its sliding plane, said supporting means being so disposed as to permit, in swinging, the following sash to turn outside of the plane of the leading sash.

2. A window comprising a frame, a pair of overlapping sashes slidably supported therein and means for supporting each sash so as to permit it to swing on spaced axes in opposite directions, so that the following sash will turn outside of the plane of the leading sash when they are swung either inside or outside of the sliding plane.

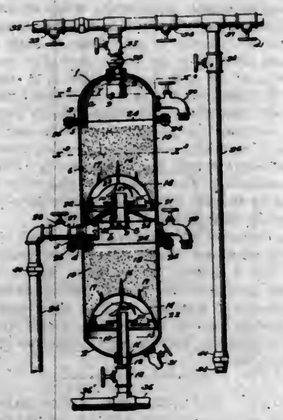
3. In combination with a frame having a pair of vertical slideways, a pair of sashes slidably held therein, each of said sashes having a double line of vertical cleavage adjacent to one of its edges, and means for pivotally joining said sash to permit each sash to swing with the other but at the opposite line of cleavage.

4. In a window construction a frame having runs on one side thereof, a pair of sashes, a separable side strip on one side of each sash, each side strip being hinged to its sash in reverse relation to the hinging of the other sash and strip, a slide for each sash and guided within said frame runs, the side strip of each sash being hinged to its slide in opposite reversed relation to its hinging to its respective sash.

5. In a window construction, a frame having flanged runs on one side thereof, a pair of sashes, a separable side strip on one side of each sash, each side strip being hinged to its sash in reverse relation to the hinging of the other sash and strip, a flanged slide for each sash held and guided within said frame runs, the side strip of each sash being hinged to its slide in opposite reversed relation to its hinging to its respective sash.

[Claims 6 to 11 not printed in the Gazette.]

1,015,051. SANITARY PRESSURE-FILTER. RICHARD W. MARTIN, Los Angeles, Cal. Filed Dec. 23, 1910. Serial No. 599,009. (Cl. 210—8.)



1. A filter comprising a filter chamber, an intake head provided with an intake chamber and a wash-out cock, a screen between the intake chamber and filter chamber and a nipple extending down from the center of the intake head and provided with a cylindrical nozzle cap centrally arranged in the filter head above said screen and provided in its periphery with tangential outlets to deliver liquid into the chamber at the center thereof with a rotary motion.

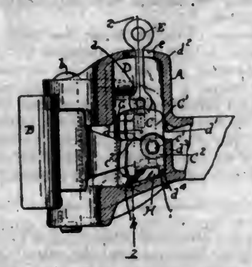
2. In a filter, a filter chamber, a loose concavo-convex support for filtering material in said filter chamber, said support being provided in its coucave face with propeller blades, and means to direct a stream of liquid against said propeller blades to lift and rotate the support.

3. A filter comprising a filtering chamber, a loose hollow inverted support for filtering material in said filtering chamber; said support being provided on its upper face with agitating means and on its under face with propeller blades, and means to direct liquid against said support and propeller blades to lift and rotate the support.

4. A filter comprising a filtering chamber, a loose support for filtering material in said filtering chamber, agitating means on the top of said support, propeller blades on the underside of said support, and means for directing liquid against said propeller blades to lift and rotate the support.

5. In a filter, a hemispherical dome to support the filtering material, propeller blades fixed to the underside of the dome and means to direct liquid against said blades.

1,015,052. CAR-COUPLING. EDMUND M. MAW, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Apr. 25, 1911. Serial No. 623,233. (Cl. 213—10.)



1. In a car coupler, the combination with a drawhead and a horizontally-swinging knuckle, of a vertically-movable locking device for the knuckle consisting of an upper guide block and a lower locking block which is pivotally suspended from said guide block, said upper and lower blocks being entirely contained in said drawhead, and a guide in the drawhead in which said guide block slides and is confined, substantially as set forth.

2. In a car coupler, the combination with a drawhead and a horizontally-swinging knuckle, of a vertically- movable locking device for the knuckle consisting of an upper guide block which is located and movable within the drawhead below the top thereof, and a lower locking block which is pivotally suspended from said guide block, a guide within the drawhead in which said guide block slides and is retained in upright position, and a lifting member connected to said guide block and extending out of the drawhead, substantially as set forth.

3. In a car coupler, the combination with a drawhead and a horizontally-swinging knuckle, of a gravity-actuated locking device for the knuckle consisting of an upper block which is located and movable vertically within the drawhead, and a lower locking block which is pivotally suspended from said guide block and is movable therewith into and out of locking engagement with the knuckle, and a guide located within the upper portion of said drawhead below the top thereof in which said guide block is confined from lateral movement but is adapted to slide vertically, substantially as set forth.

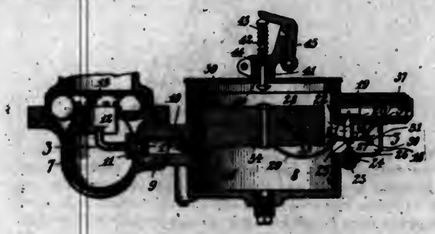
4. In a car coupler, the combination with a drawhead and a horizontally-swinging knuckle, of a vertically-movable locking device for the knuckle consisting of an upper guide block which is located and movable within said drawhead and a lower combined locking and lock-set block which is pivotally suspended from said guide block, said combined locking and lock-set block being movable with the guide block to release the knuckle and being adapted, when the locking device is raised, to swing on its pivotal connection with the guide block into engagement with a part of the drawhead to support the locking device in the raised position, substantially as set forth.

5. In a car coupler, the combination with a drawhead and a horizontally-swinging knuckle, of a vertically-movable locking device for the knuckle consisting of an upper guide block which is located and movable within the drawhead, and a lower combined locking and lock-set block which is pivotally suspended from said guide block to swing in a vertical plane extending longitudinally of the coupler, said combined locking and lock-set block being movable vertically with the guide block to release the knuckle and being adapted, when the locking device is raised, to swing on its pivotal connection with the guide

block into engagement with a part of the drawhead to support the locking device in raised position, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,015,053. GASOLENE FEED-CHAMBER. GODFRIED J. MAYER, Buffalo, N. Y. Filed Oct. 14, 1909. Serial No. 522,664. (Cl. 158—38.)



1. A gasolene feed-chamber having an inlet and an outlet, a float within said chamber, a valve operatively connected with said float and acting to open and close said inlet, a spring-supported stem held above said float and out of contact therewith, a bracket adjustable vertically on and rotatably around said stem, and an elbow-lever pivoted between its ends to said bracket and adapted to rotate with and to depress said stem with one of its arms.

2. A gasolene feed-chamber having an inlet, an outlet, an externally-threaded boss formed on its top and a bore centrally through said boss, a float within said chamber, an inlet-valve operatively connected with said float, a stem movable within said bore and having an enlargement at its upper end, a spring surrounding said stem between said enlargement and said boss, a bracket threaded onto said boss so as to be adjustable vertically and rotatably thereon, and a manipulating-lever pivoted to said bracket and adapted to actuate said stem, said lever rotating with said bracket.

3. A gasolene feed-chamber having an outlet and a laterally-extended valve-chamber provided with a threaded opening in its lower wall and an inlet in its opposite wall, a screw-plug fitting said threaded opening and having its inner end tapered and provided with an axial guide-bore, said inner end extending upward into said valve-chamber, a valve guided in said bore and acting to open and close said inlet, and a float in said feed-chamber operatively connected with said valve.

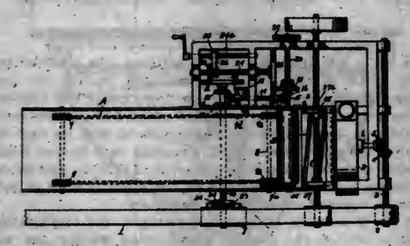
1,015,054. TENSION-ANCHOR FOR HOSE-SUPPORTERS. CHARLES R. MCBRIDE, New York, N. Y., assignor of one-half to himself, and one-half to Cyclolights Romola Laurenzi, Brooklyn, N. Y. Filed June 14, 1911. Serial No. 633,026. (Cl. 2—189.)

1. A body appliance for connection thereto of the hose supporters of a corset, comprising a strap of circular form to surround the leg above the knee and including oppositely disposed angular members to which the hose supporters are to be connected, parallel straps connected to the lower ends of the angular members and adapted to come at opposite sides of the leg and at the lower end pass around beneath the hollow of the foot, and a strap secured near the lower ends of said parallel straps and adapted to surround the ankle of the wearer.

2. A body appliance for connection thereto of the hose supporters of a corset, comprising a strap of circular form to surround the leg above the knee and including oppositely disposed angular members and provided with button-holes to receive the head of the hose supporter fastening devices, parallel straps connected to the lower ends of the angular members and adapted to come at opposite sides of the leg and at the lower end pass around beneath the hollow of the foot, and a strap secured near the lower ends of said parallel straps and adapted to surround the ankle of the wearer.

3. A body appliance for connection thereto of the hose supporters of a corset, comprising a strap of circular form to surround the leg above the knee and including oppositely disposed angular members, parallel straps each composed of elastic webbing parts and ordinary webbing parts connected to the lower ends of the angular members and adapted to come at opposite sides of the leg and at the lower end pass around beneath the hollow of the foot, and a strap secured near the lower ends of said parallel straps and adapted to surround the ankle of the wearer.

1,015,055. GEARING. JOHN MCDONALD, Byron, Mich., assignor of one-half to Robert Muirhead, Orchard Lake, Mich. Filed Mar. 27, 1911. Serial No. 617,019. (Cl. 74—26.)



1. A transmission device, having in combination driven mechanism, driving mechanism, means connecting said two mechanisms for changing their relative speeds, reversing their relative motions and disconnecting them while the power is on, comprising a friction pinion and a friction wheel engaging with said friction pinion and adapted to be driven across the face of said friction pinion, means for driving said friction wheel across the face of said friction pinion, the said means being provided with a pair of selected gears, one adapted to drive said friction wheel across the face of said friction pinion in one direction, and the other adapted to drive said friction wheel across the face of said friction pinion in the other direction, and means for connecting either one of said gears to the driving mechanism, substantially as described.

2. A transmission device, having in combination driven mechanism, driving mechanism, manually operated means for disconnecting the driven and the driving mechanism and for setting the ratio of relative speed thereof, and the direction of their motion, and emergency means for changing their relative speed, changing their relative mo-

tion and for disconnecting them while the machine is in operation, substantially as described.

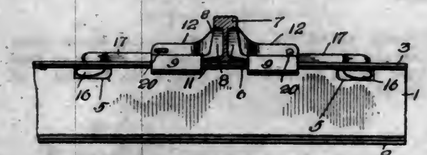
3. A transmission device, having in combination driven mechanism, driving mechanism, manually operated means for throwing off the power, setting the ratio of speed and direction of motion of the driving mechanism, and emergency means, connecting the driven mechanism with the driving mechanism, for changing their relative speed, reversing their relative motion and disconnecting them while the power is on, and means for utilizing the power in making such changes with respect to the emergency means, substantially as described.

4. A transmission device, having in combination a drive shaft, a friction driving pinion driven thereby, a driven shaft, a friction wheel splined on the driven shaft engaging the friction driving pinion, and slidable across the face thereof, a worm shaft adapted to drive said friction wheel across the face of the friction driving pinion, and selective gears for driving the worm shaft, and means for selecting one of said gears to rotate said worm shaft, whereby the direction of rotation of the worm shaft is controlled, substantially as described.

5. A transmission device, having in combination a drive shaft, an intermediate shaft, a friction driving pinion driven thereby, a driven shaft, a friction wheel splined on the driven shaft engaging the friction driving pinion and slidable across the face thereof, a worm shaft adapted to drive said friction wheel across the face of the friction driving pinion, and means to operatively connect the said drive shaft and worm shaft to drive the latter, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,015,056. METALLIC TIE AND RAIL-FASTENER. DAVID CALVIN MILLER, Mount Braddock, Pa., Filed Oct. 27, 1911. Serial No. 657,050. (Cl. 238—4.)



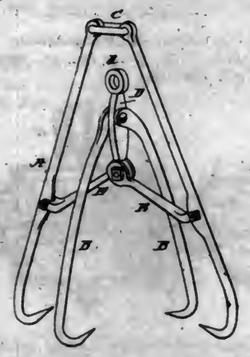
1. In a metallic tie and rail fastener, the combination with a tie of the I-beam construction having the top flanges thereof provided with openings, and a rail adapted to be supported by the top flanges of said tie, of fasteners slidably mounted upon the top flanges of said tie and engaging the sides of said rail, clamping bars having hook-shaped ends engaging in the openings of said tie, and means including cotter pins for holding the opposite ends of said bars in engagement with said fasteners.

2. In a metallic tie and rail fastener, the combination with a tie of the I-beam construction having the top flanges thereof provided with openings, and a rail adapted to be supported by said tie, of a cushioning plate interposed between said rail and the top flanges of said tie, fasteners slidably mounted upon the top flanges of said tie and engaging the sides of said rail, retaining bars having the ends thereof mounted in said fasteners for retaining said cushioning plate upon said tie, clamping bars having the outer ends thereof anchored in said openings, and means carried by the outer ends of said fasteners for holding the inner ends of said clamping bars in engagement therewith.

1,015,057. GRAPPLE. EDMUND MITCHELL, Old Trap, N. C. Filed July 19, 1911. Serial No. 639,322. (Cl. 57—9.)

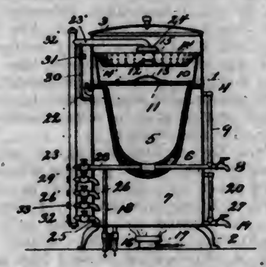
1. The improved grapple, comprising two sets of jaws, the members of each set being arranged opposite each other and one set within the other at right angles thereto, the shanks of the outer jaws being pivotally connected at the top, a head or pull-piece to which the inner jaws are pivoted, and links that pivotally connect said pull-piece with the outer jaws, substantially as described.

2. The improved grapple, comprising two sets of jaws, the members of each being arranged with their points projecting inward and one set of jaws within the other but at right angles thereto, a pull-piece to whose body the



inner and shorter jaws are pivoted, and links pivotally connecting the lower end of the pull-piece with the jaws, the head being adapted for attachment of a cable, substantially as described.

1,015,058. COFFEE AND TEA URN. ALPHONSE F. MONEUSE, New Rochelle, N. Y. Filed June 21, 1910. Serial No. 568,196. (Cl. 53—3.)



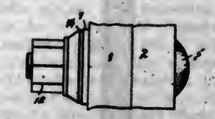
1. An infusion apparatus, having in combination a beverage-container, a percolator arranged above the container, a boiler and a number of supply-devices arranged at different vertical levels, whereby measured quantities of water may be withdrawn from the boiler and fed into the percolator.

2. An infusion apparatus, having in combination a beverage-container, a percolator arranged above the container, a boiler, a feed-pipe, and a plurality of valved devices in communication with the boiler and feed-pipe, whereby measured quantities of water may be withdrawn from the boiler and supplied to the percolator.

3. An infusion apparatus, having in combination a beverage-container, a percolator arranged above the container, a boiler, a feed-pipe, and a plurality of faucets vertically arranged on the feed-pipe at prescribed distances apart and in communication with the boiler, whereby measured quantities of water may be withdrawn from the boiler and fed into the percolator.

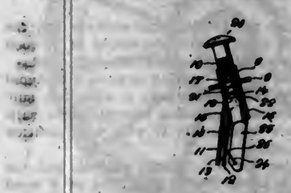
4. An infusion apparatus, having in combination a beverage-container, a percolator arranged above the container, a boiler, a feed-pipe in communication with the lower part of the boiler and the upper part of the apparatus, said feed-pipe being provided with faucets in communication with the boiler and arranged vertically thereon at prescribed distances apart, whereby measured quantities of water may be withdrawn from the boiler and fed into the percolator, and a valved-pipe in communication with the beverage-container and the feed-pipe, and a valved injector-pipe in communication with the boiler and feed-pipe, whereby continued circulation of the infusion through the percolater and container may be obtained to give additional strength thereto.

1,015,059. NUT-LOCKING DEVICE. WILLIAM F. MORGAN, Duquesne, Pa. Filed Mar. 10, 1911. Serial No. 613,553. (Cl. 151—1.)



A nut lock comprising a bolt, a washer having its rear face provided with radially-disposed ribs adapted to enter the material through which the bolt is adapted to pass, said washer having its other face cut away to provide radially-disposed teeth, a nut mounted upon the screw-threaded portion of the bolt and having its inner end provided with an enlargement recessed to provide a socket, the bottom wall of said socket cut-away to provide radially-disposed teeth, and a resilient disk interposed and compressible between said nut and washer, extending into said socket and adapted when compressed to have the front and rear faces thereof embedded in the front face of the washer and the bottom wall of the socket whereby said disk will engage the teeth of the washer and the teeth of the nut, thereby preventing the nut from rotating relatively to the washer.

1,015,060. CABINET. HARRY C. MUIR, Rushville, Ind. Filed May 18, 1911. Serial No. 628,096. (Cl. 211—8.)



1. A cabinet for the purpose set forth, provided with compartments and a closure for each compartment, a plurality of sleeves upon each of the closures, a plunger for each of the sleeves, and means including a pointed element provided between the plunger and the sleeve for sustaining an envelop when the plunger is in position and removing the envelop when the plunger is in a second position.

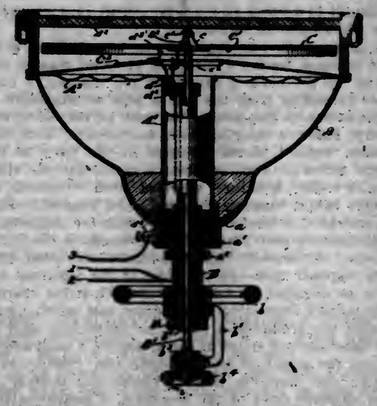
2. A cabinet for the purpose set forth, said cabinet being provided with a plurality of compartments, each of said compartments being provided with an inclined floor, a closure for each of the compartments, the front of the cabinet being formed with openings communicating with the inclined floors of the compartments, a plurality of sleeves upon the closures, a plunger for each of the sleeves, means including a pointed element provided between the plunger and sleeve for sustaining an envelop when the plunger is in one position, said means also adapted to release the envelop when the plunger is in a second position.

3. A cabinet for the purpose set forth, having a front, sides, a back and a face, the front being of a greater height than the back, the front being provided with an opening adjacent the base, the cabinet having a floor formed of a smooth material and inclined from the back toward the front of the base, a closure for the cabinet, said closure being provided with a plurality of openings, a sleeve within each of the openings, a spring pressed plunger within each of the sleeves, the said plunger having its lower extremity formed with an inclined pointed member, the sleeve being provided with a pair of spaced arms, one of these arms being bifurcated to receive the pointed member of the plunger when the said plunger is in its normally raised position, substantially as and for the purpose set forth.

4. A holding and sustaining device for envelops, including a sleeve, said sleeve having its lower portion formed with angular depending spaced arms, one of said arms being bifurcated, the second arm being provided with a groove registering with the bifurcation, a plunger within the sleeve, a spring for normally raising the plunger within the sleeve, means for preventing the rotation of the plunger within the sleeve, the lower extremity of the plunger being provided with an opening, and a removable pin arranged within said opening and adapted to normally engage the groove of one of the arms of the sleeve and pass through the bifurcated portion of the second arm of the sleeve.

5. The herein described envelop sustaining a releasing mechanism comprising a sleeve having its lower extremity formed with off-set arms, the inner arm being bifurcated, the outer arm being spaced away from the inner arm and being provided with a groove registering with the bifurcation of the first arm, the sleeve having its inner portion formed with a flange, a plunger provided with a reduced extension within the sleeve, a removable button for the plunger having a head contacting the sleeve, a helical spring surrounding the reduced portion of the plunger and contacting the under face of the button and the flange of the sleeve, the lower extremity of the plunger being angular and flattened, the said lower portion being formed with an opening having inclined walls, a pointed member having its body portion arranged within the opening, the said pointed member adapted to pass between the opening provided by the bifurcation of the inner arm of the sleeve and to normally engage within the groove formed in the second arm of the sleeve.

1,015,061. AUTOMATIC STEERING DEVICE. AUGUST T. NELSON, Milwaukee, Wis., assignor to Automatic Steering Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 12, 1906, Serial No. 300,685. Renewed June 15, 1908. Serial No. 438,501. (Cl. 172—3.)



1. A magnetic steering apparatus comprising a liquid containing bowl, a rotatorily adjustable hollow arbor extending into the bowl, a pair of electrodes carried by the arbor, a pivot-post mounted in the hollow arbor, a permanent magnet provided with a compass card mounted upon the end of the pivot-post within the liquid containing bowl, a contact finger carried thereby arranged to engage either one of the electrodes, means for varying the relative vertical position of the finger and electrodes, a steering gear, a motor therefor, and an electric circuit having terminals connecting the electrodes and contact finger for controlling the steering gear motor.

2. A magnetic steering apparatus comprising a compass having a make and break mechanism, a steering gear, a motor therefor, an electric controlling circuit for the motor, a motor-controlling switch in the circuit, a magnetically-controlled relay switch, a local circuit connecting the make and break mechanism of the compass and relay switch, a make and break indicator mechanism in connection with the steering gear, and a motor-reversing circuit connecting the make and break indicator mechanism, relay switch and motor controlling switch, whereby said motor is reversed incidental to opening the local circuit by the compass carried make and break mechanism.

3. A magnetic steering apparatus comprising a mariner's compass having a card and attached magnet, a pivot-post for the card, a contact finger carried by said card, a pair of electrodes normally disposed in the path of travel of the contact finger, means for effecting rotatory adjustment of the electrodes, means for effecting disengagement of said electrodes from their normal contact relation with the contact finger, a steering gear, an indicator arm in connection therewith, contact plates disposed in the path of travel of the indicator arm, an electric motor for the steering gear, a motor circuit, a motor-controlling magnetic switch for the circuit, a local circuit in connection with the controlling switch of the motor circuit, the local circuit being under control of the electrodes and contact finger of the compass, a magnetically controlled relay switch in the local circuit, and conductors connecting the motor-controlling switch, relay switch, indicator arm and its contact plates, whereby the motor is reversed incidental to a break in the local circuit when the indicator arm is in contact with either one of its contact plates.

4. A magnetic steering apparatus comprising a compass having a circuit-closing mechanism, a motor, a steering gear in connection with the motor, an indicator arm carried by the steering gear, contact plates arranged in the path of travel of the indicator arm, a motor circuit, a magnetically-controlled motor switch for the motor circuit, a motor switch circuit, a local circuit in connection with the circuit-closing mechanism of the compass, a magnetically controlled relay switch in the local circuit, and conductors in connection with the indicator arm, its contact plates, motor-switch and magnetically controlled relay switch whereby the motor circuit current is reversed incidental to a break in the local circuit through the compass circuit-closing mechanism.

5. A magnetic steering apparatus comprising a mariner's compass having a card and attached magnet, a cap carried by the card, a pivot-post for the cap, a contact finger extending from the cap, a pair of adjustable electrodes normally disposed in the path of the travel of the contact finger, a steering gear, an indicator arm carried thereby, contact plates disposed in the path of travel of the indicator arm, an electric motor for the steering gear, a relay armature provided with insulated outer contact strips, magnets disposed upon opposite sides of the armature, a local circuit connecting the magnets, electrodes and contact finger of the compass, a contact post arranged to normally engage the armature, other contact posts disposed upon opposite sides of the armature adapted to be engaged by the outer contact strips thereof, a main battery connecting that contact post which normally engages the armature, a conductor connecting said posts and outer contact strips of the armature, a conductor connecting the armature and indicator arm, conductors connecting the indicator contact plates and contact posts upon opposite sides of the armature, a motor-controlling switch comprising an armature having oppositely disposed pairs of contact plates, the plates of each pair being cross-connected to the opposite pair, magnets for controlling the armature, conductors connecting the magnets and main battery, other conductors connecting the magnets and contact posts upon opposite sides of the relay switch armature, a binding-post for each contact plate of the motor-controlling armature, a conductor connecting each pair of the binding-posts with the motor, and line wires connecting one pair of the contact plates of said motor-controlling armature.

[Claims 6 and 7 not printed in the Gazette.]

1,015,062. RAILWAY SIGNAL-FUSEE. ISADORE NITDITCH, Dorchester, Mass., assignor to American Fog Signal Company, Pittsburgh, Pa. Filed July 26, 1910, Serial No. 574,006. Renewed Oct. 20, 1911. Serial No. 655,749. (Cl. 102—24.)

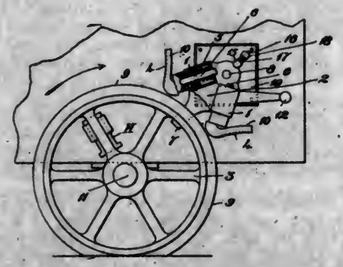
1. A signal fusee comprising a tube, a signal compound therein, a lighting stratum at one end of the fusee and a wood peg saturated with a combustible compound, the outer end of the wood peg united with the lighting stratum and its inner end united to the signal compound whereby the peg binds the lighting stratum to the signal compound and conveys the fire from the lighting stratum to the signal compound.

2. A binding member for the lighting stratum and the signal compound of a signal fusee, consisting of a wood peg soaked and saturated with a combustible compound.

3. A binding member for the lighting stratum and signal compound of a signal fusee comprising a wood peg subjected to a hot compound consisting essentially of saltpeter and lead nitrate to saturate it with said solution for the purpose described.

4. A binding member for the lighting stratum and the signal compound of a signal fusee, consisting of a wood peg subjected to a hot compound comprising essentially saltpeter and lead nitrate until the peg is thoroughly saturated and impregnated throughout with the said compound.

1,015,063. CAR-BRAKE. JOHN ABRAHAM NOEL, Cardiff, England. Filed Mar. 8, 1911. Serial No. 613,152. (Cl. 188—24.)

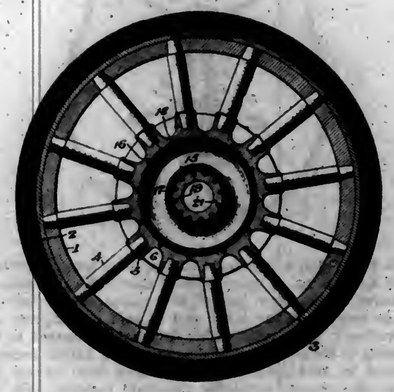


1. In a braking apparatus for wheeled vehicles, the combination, with a catch carried by a wheel, of a rocking chamber having a projection associated therewith, and a brake block having a spring-controlled stem slidably working in said chamber, said catch being adapted to strike against said projection during the rotation of said wheel, for rocking said chamber, to move said block into engagement with the rim of said wheel.

2. In a braking apparatus for wheeled vehicles, the combination, with a catch slidably mounted on one of the spokes of a wheel and adapted to move outwardly upon the spoke under the centrifugal force exerted thereon when the speed of rotation of the wheel reaches a predetermined point, of a rocking chamber having a projection associated therewith, and a brake block having a spring-controlled stem slidably working in said chamber, said catch being adapted to strike against said projection during its outward movement for rocking said chamber, to move said block into engagement with the rim of said wheel.

3. In a braking apparatus for wheeled vehicles, the combination of a pair of connected pivotally-mounted chambers disposed at an angle to each other and tangentially to the rim of a wheel, a brake block having a spring-controlled stem working in each chamber, and means for swinging said chambers in unison to move one of said blocks into engagement with said wheel rim.

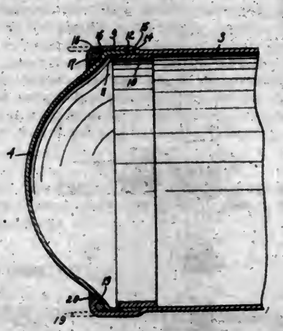
1,015,064. VEHICLE-WHEEL. SAMUEL OLDHAM, Philadelphia, Pa. Filed June 28, 1910. Serial No. 569,312. (Cl. 152—41.)



In a wheel, a disk having a centrally projecting hub-sleeve and an annular flange at the inner end of the latter formed with a circumferential series of seats, a disk having a central outwardly projecting neck fitted upon the sleeve and an inwardly projecting flange formed with a circumferential series of seats registering with and complementary to the first-recited seats, a nut threaded upon the sleeve to bear against the end of the neck to force and hold the flanges together, an annular wheel-portion the inner rim of which has lateral confinement and radial play in the annular space formed between the disks and is formed with a series of seats in its inner periphery, and a tubular resilient ring confined in the space between the disks, seat-flanges and inner wheel rim and formed with transverse lugs upon its inner and outer peripheries to fit into the seats.

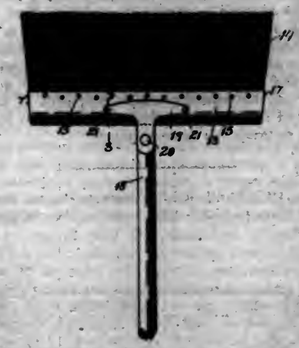
1,015,065. BOILER. FRANK PACZIOA, New York, N. Y. Filed June 22, 1911. Serial No. 634,787. (Cl. 220—125.)

The combination with a boiler body enlarged in diameter at its end, of a sleeve attached to the inner surface of said body projecting into said enlarged end, whereby an annular recess is formed, a head having a flange located in said recess, said head and body being united by soldering, and a ring placed upon said head and contacting throughout its peripheral portion with said boiler body, the outer portion of said boiler body being beaded over said ring and



the annular space between said bead and head being filled with solder.

1,015,066. BROOM. FREDERICK W. PENDERGAST, Cambridge, Mass. Filed May 11, 1910. Serial No. 560,587. (Cl. 15—20.)



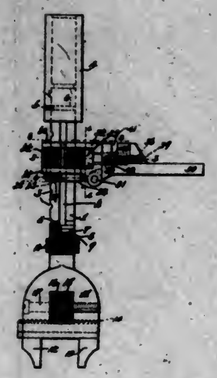
A broom comprising an inner head member, a layer of broom filaments bent over the back and extending across the sides of said inner member, the free ends of the filaments projecting from the outer edge of the inner member, an outer head member of sheet material formed to bear on the outer surfaces of the portions of said layer which are backed by the inner member, and having ears bent over the end portions of the inner member to confine the end portions of the layer, and fasteners securing the edges and ears of the outer member to the inner member.

1,015,067. RATCHET-TOOL. WILLIAM A. PLATH and HARRY L. RISEDORF, New York, N. Y. Filed Mar. 15, 1911. Serial No. 614,553. (Cl. 81—60.)

1. In an implement of the class described, a shank, a ratchet wheel and ratchet lever mounted on said shank, said ratchet lever extending at right angles to the shank, a hinge between the ratchet lever and its connection with the ratchet wheel, whereby the lever may occupy a position at right or other angles to the shank and means for disengaging the ratchet tool from the wheel by the mere folding of the lever into position parallel with the shank.

2. In an implement of the class described, a shank, a ratchet wheel and ratchet lever mounted on said shank, said ratchet lever extending at right angles to the shank; a hinge between the ratchet lever and its connection with the ratchet wheel, a pawl for the ratchet carried by the ratchet lever, and guides for the pawl in both parts of the

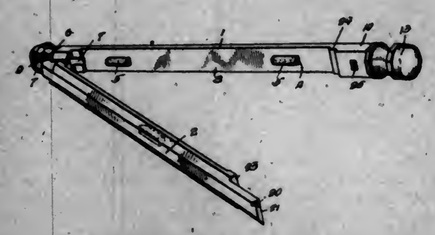
lever, whereby the pawl will lock the lever in position at right angles to the shank.



3. An implement of the class described, comprising a shank, a ratchet wheel thereon, a two-part hinged lever rotatable on the shank, a latch adapted to latch the two-part lever at right angles to the shank, and a pawl carried by the lever adapted to engage the ratchet wheel.

4. In an implement of the class described, a shank, a ratchet wheel keyed thereto, a two-part hinged lever rotatable on the shank, a pawl, a shank therefor, and a spring therefor, the spring and shank of said pawl adapted to occupy a position entirely within one part of said lever, the shank of said pawl adapted to bridge both portions of said lever to latch the same in place.

1,015,068. CURTAIN-POLE. JOSEPH PULIT, New Haven, Conn. Filed Oct. 25, 1911. Serial No. 656,566. (Cl. 156—19.)

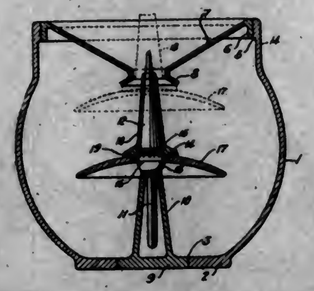


1. A curtain pole comprising a main section, a hinged section having one end thereof pivoted in one end of said main section, said sections having the confronting faces thereof provided with pockets, pieces of felt arranged in the pockets of said sections, said main section having one end thereof enlarged and provided with a longitudinal bore, a rotatable stem arranged in said bore and provided with a recess, a pin carried by said stem and extending across said recess, a hook carried by the end of said enlarged section and adapted to extend into the enlarged end of said main section and into the recess of said stem to be engaged by the pin thereof, and means carried by said stem for limiting the movement thereof in the enlarged end of said main section.

2. A curtain pole comprising a main section, a hinged section provided with a tongue pivotally mounted in one end of said main section, said main section having the opposite end thereof enlarged and provided with a longitudinal bore, a stem rotatably mounted in said bore and having a recess formed therein, a pin carried by said stem and extending across said recess, a hook carried by the end of said hinged section and adapted to extend into the enlarged end of said main section and into the recess of said stem to be engaged by the pin thereof, and means carried by said stem for retaining said stem within the bore of said main section.

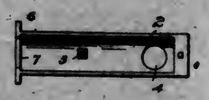
3. A curtain pole comprising a main section, a hinged section provided with a tongue pivotally mounted in one end of said main section, said main section having the opposite end thereof enlarged and provided with a longitudinal bore, a stem rotatably mounted in said bore and having a recess formed therein, a pin carried by said stem and extending across said recess, a hook carried by the end of said hinged section and adapted to extend into the enlarged end of said main section and into the recess of said stem to be engaged by the pin thereof, means carried by said stem for retaining said stem within the bore of said main section, and means arranged in the confronting face of said sections for frictionally holding the upper ends of curtains between said sections.

1,015,069. CHECK-VALVE FOR CUSPIDORS. WALENTY PYZIKOWSKI, Elizabeth, Pa. Filed Oct. 2, 1911. Serial No. 652,403. (Cl. 4—38.)



In a cuspidor, a receptacle having a flat bottom provided with an opening, a funnel-shaped mouth-piece detachably mounted in the upper end of said receptacle, an annular flange carried by the lower end of said mouth-piece and providing a valve seat, a plug detachably mounted in the opening in the bottom of said receptacle, a hollow pedestal carried by said plug, a conical-shaped stem having the lower end thereof extending into said pedestal with the central portion thereof rounded to rest upon the said pedestal, said stem having an annular shoulder and a threaded portion, a deflector mounted upon the annular shoulder of said stem, and a valvular member screwed upon the threaded portion of said stem and having an annular flange adapted to seat upon the lower end of said funnel-shaped mouth-piece, substantially as, and for the purpose herein described.

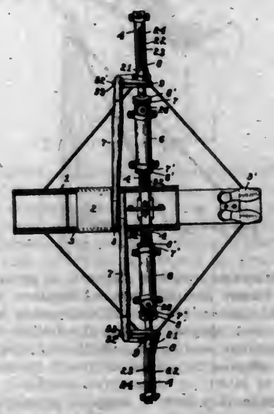
1,015,070. DOOR-LOCK. MARTIN RASMUSSEN, Racine, Wis. Filed Mar. 21, 1910. Serial No. 550,693. (Cl. 70—29.)



1. A lock comprising a casing, a transverse stop therein, a bolt slidably mounted in said casing and provided with a longitudinal slot engaging said stop, said bolt having a reduced rear end provided with a rack on its under edge, a latch pivoted to the rear end of said bolt and having a longitudinal slot to fit over said transverse stop, said slot having notches at the ends thereof to engage the transverse stop and hold the latch against longitudinal movement, and releasing means operable in the casing below the rear ends of the bolt and the latch and adapted to impinge against the under edge of the latch to disengage it from the transverse stop and to engage the rack on the bolt to move the bolt longitudinally.

2. A lock comprising a casing, a transverse stop therein, a bolt slidably mounted in the casing and provided with a longitudinal slot engaging said stop, said bolt having a reduced rear end provided with a rack on its under edge, a latch pivoted to the rear end of the bolt and having a longitudinal slot to fit over said transverse stop and notches at the ends of said slot to engage the transverse stop and hold the latch against longitudinal movement, and key actuated bolt operating means mounted in the casing below the rear ends of the bolt and the latch and adapted on the turning of the key to engage the rack on the bolt to move the bolt longitudinally a key for engagement with said means, said means being disposed in position to cause the body of the key when inserted therein and rotated to impinge against the under edge of the latch and raise it out of engagement with said transverse stop prior to the actuation of the bolt operating means.

1,015,071. GYMNASIUM ROWING APPARATUS. ROBERT REACH, Springfield, Mass. Filed Aug. 28, 1911. Serial No. 646,464. (Cl. 46—69.)



1. In combination in a rowing machine, a horizontal cylinder, a piston therein, connections between the same and the oar handle, an outer casing, with a space between the same and the cylinder communicating with the ends of the cylinder and containing therewith a body of liquid extending horizontally, and a reservoir having communication with the casing containing said horizontal body of liquid, said reservoir containing a supplementary liquid supply whereby a full supply of liquid is maintained in the casing and cylinder from end to end thereof.

2. In apparatus of the class described, resistance means consisting of a piston and cylinder, an oar handle, a bracket to which the said oar handle is pivoted and which handle has vertical movement, a second bracket having a socket in which the first bracket is swiveled, and a connection between the piston and the first mentioned bracket, substantially as described.

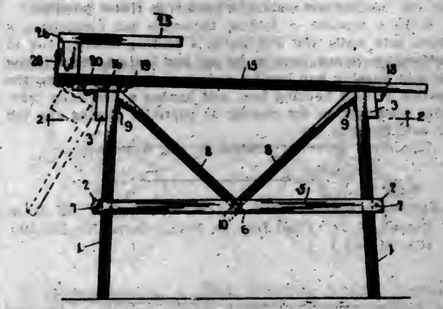
3. In a rowing apparatus, a piston and cylinder, a piston rod, an oar handle pivoted at a point elevated in respect to the piston rod, a swiveled bracket in which the oar handle is pivoted, said bracket having an arm extending outwardly and downwardly toward the plane of the piston rod, and a connection between the said arm and the piston rod, substantially as described.

4. In combination with a main frame, a cylinder, a piston in said cylinder, an oar handle swiveled above the cylinder, an arm extending from the oar handle, a piston rod, and a link connecting the said arm with the piston rod, substantially as described.

5. In combination in a rowing machine, a piston and cylinder, an oar handle, a bracket in which said oar handle is pivotally mounted and having a pintle, a second bracket having a socket to contain grease and to receive said pintle by which the bracket first mentioned is swiveled, and means for retaining the pintle in the socket while permitting it to turn, substantially as described.

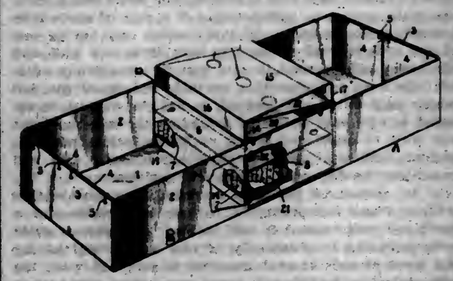
[Claims 6 to 9 not printed in the Gazette.]

1,015,072. IRONING-TABLE. CASPER M. RESCH, Fowler, Ill. Filed July 20, 1911. Serial No. 639,691. (Cl. 68—10.)



In an ironing table, a base comprising parallel side bars, a cross bar connecting them midway between their ends, two A-shaped standards consisting of converging legs and a cross bar connecting them, the cross bars of the standards being pivoted between the ends of said side bars, blocks carried by the upper ends of said standards, a third block having converging undercut sides, a hinge connection between this block and that on one of said standards, and braces hinged to the latter and having notched inner ends adapted to engage said first-mentioned cross bar; combined with a board having converging longitudinal undercut cleats on its under side near its head and a cross cleat near its other end, these cleats being so spaced that when the hinged block is engaged between the undercut cleats the remaining cleat will stand just outside the block on the standard at the other end of the base.

1,015,073. KNOCKDOWN BROODER. LEY P. REXFORD, St. Louis, Mo. Filed June 19, 1911. Serial No. 634,069. (Cl. 119—33.)



1. In a brooder, a foldable housing box having an open top, and a removable lining in said housing box having a hood section for closing or partially closing the open top of said housing box when the brooder is in service.

2. In a brooder, a foldable housing box having an open top, and a removable lining in said housing box having a hood section for closing or partially closing the open top of

said housing box when the brooder is in service; the said hood section being hinged to a wall member of the lining and being provided at its free edge with a pendent supporting flap for engagement with the wall of said housing box.

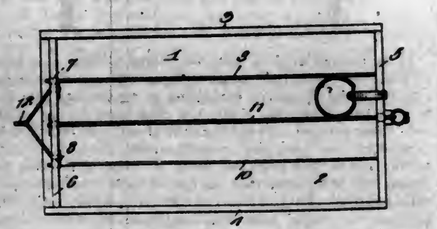
3. In a brooder, a housing box, and a lining in said housing box, comprising a floor section, a wall section and a hood section hinged to each other, the said hood section being movable to close or partially close the top of said housing box.

4. In a brooder, a folding housing box, and a lining in said housing box, comprising a floor section, a wall section, and a hood section hinged to each other, the said hood section being movable to close or partially close the top of said housing box and being apertured to afford ventilation for the housing box when the hood is in closed position.

5. In a brooder, a folding inclosure box comprising a floor, side walls and end walls, a folding housing box in said inclosure box, open at its top and bottom, and a lining in said housing box having a floor section for closing the bottom of said housing box, and having a vertically movable hood section for closing or partially closing the top of said housing box.

[Claims 6 to 8 not printed in the Gazette.]

1,015,074. UNLOADING-RACK. FREDERICK M. RICE, Russell, N. D. Filed July 19, 1911. Serial No. 639,300. (Cl. 214—1.)

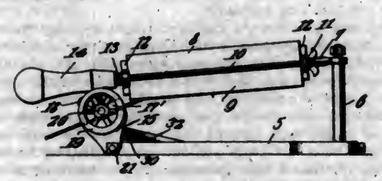


1. In a rack of the class described, the combination with a frame comprising a bottom, side walls and a front end wall; of a pair of guide rods spaced above the bottom of said rack and extending longitudinally thereof from the front end walls to a point adjacent the rear end of said bottom, a movable end board through which said guide rods extend, and means operable from either end of the frame to draw said board to its operative and inoperative positions.

2. In a rack of the class described, the combination with a frame comprising a bottom, side walls and a front end wall secured to said bottom; of a pair of guide rods extending longitudinally of said bottom and having one of the ends thereof mounted in said front end wall and the other end mounted in said bottom immediately adjacent the rear end thereof, a movable end board through which said guide rods extend, a flexible connection secured to said end board and extending through the front end wall to draw said board to its ineffective position, and an additional flexible connection whereby said end board may be drawn to its effective position.

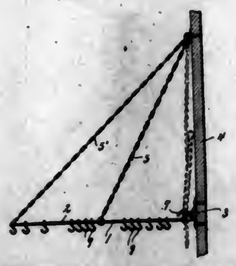
3. In a rack of the class described, the combination with a frame comprising a bottom, side walls and a front end wall secured to said bottom; of a pair of guide rods extending longitudinally of said bottom and having the forward ends thereof mounted in said end wall, the rear end of said guide rods being mounted in said bottom adjacent the rear end thereof, a movable end board through which said rods extend, a flexible connection secured to the board for drawing the same to the forward end of the rack, an additional flexible connection secured to the board, and means to engage the last referred to connection with a moving object, whereby said board may be drawn to the rear end of said rack.

1,015,075. SHARPENING-MACHINE. FRANK RIES, Tiffin, Ohio, assignor of one-half to John G. Heilman, Tiffin, Ohio. Filed Aug. 22, 1911. Serial No. 645,384. (Cl. 51—7.)



In a sharpening machine, a base, a table having a leg pivoted to the base, means for adjusting the table at various inclinations, a block adjustably secured on one end of the table, the table having an ear on the other end thereof, a bolt screwthreaded through the said ear, a hand wheel on the outer end of the said bolt, and a block slidable on the table and carried by the inner end of the bolt.

1,015,076. GARMENT-HANGER. CHARLES ROBERT, Cedar Rapids, Iowa. Filed May 26, 1911. Serial No. 629,634. (Cl. 211—15.)



1. In combination with a support, a garment hanger comprising frames pivotally secured together, brackets secured to said support for pivotally mounting said frames, flexible members adapted to hold the frames in extended operative position, and locking members formed in one of the frames adapted to engage with said brackets to hold the hanger in folded or inoperative position.

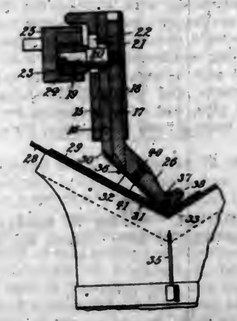
2. In combination with a support, a garment hanger comprising frames pivotally secured together, brackets secured to said support for pivotally mounting said frames, flexible members adapted to hold the frames in extended operative position, locking members formed in one of the frames adapted to engage with said brackets to hold the hanger in folded or inoperative position, and hooks formed in the other frame to lock the same in folded or inoperative position.

3. In combination with a support, a garment hanger comprising frames pivotally secured together, brackets secured to said support for pivotally mounting said frames, flexible members adapted to hold the frames in extended operative position, one of said frames being formed with lateral arms and provided with locking members having recesses therein to engage with said brackets to hold the hanger in folded inoperative position, and hooks formed in the other frame to engage with the lateral arms aforesaid to lock the last mentioned frame in inoperative position.

4. In combination with a support, a garment hanger comprising frames pivotally secured together, a support for pivotally mounting said frames, and flexible members secured to the support, one of said frames being adapted to fold upwardly upon the other into inoperative position and also adapted to fold beneath the other frame when the latter is raised into folded inoperative position.

5. In combination with a support, a garment hanger comprising an inner frame, brackets secured to said support for pivotally mounting said inner frame, an outer frame pivotally secured to the inner frame, flexible members secured to said support and attached to the outer frame to hold said frames in extended horizontal operative position, lateral arms formed in the inner frame and mounted in said brackets, angular locking members having recesses therein formed in said frame and adapted to engage with the brackets aforesaid to lock the hanger in folded inoperative position, hooks formed in the outer frame adapted to support garments, and to lock the latter in inoperative folded position, and garment hooks slidably mounted upon said frames.

1,015,077. PRESSER-FOOT FOR PAMPHLET-STITCHING MACHINES. HORACE L. ROBERTS, New York, N. Y. Filed Aug. 23, 1910. Serial No. 578,526. (Cl. 112—13.)



1. In a stitching machine, an apertured table adapted to receive a number of sheets having a longitudinal fold, a series of needles adapted to pass through the table aperture, pierce said sheets and draw a thread therethrough, a presser foot having an inclined lower side, the lowermost edge of which is adapted to press the sheet fold against the table, and a series of prongs flanking the needles and extending forwardly and downwardly from the inclined lower side of the presser foot, thereby exercising an additional downward pressure upon the sheets in proximity to said needles, said prongs also constituting a support for the thread while the latter is drawn through the sheets.

2. In a stitching machine, a V-shaped apertured table having a pair of uniformly diverging sides and adapted to receive a number of sheets provided with a longitudinal fold, a presser foot having a pair of uniformly inclined lower sides, the angle formed thereby being less than that formed by the diverging table sides, said presser foot having a plurality of communicating needle holes opening into its lower edge, means for lowering the presser foot upon the sheets to concentrate the pressure along the sheet-fold, a slide movably secured to one of the inclined sides of the presser foot and having a plurality of forwardly and downwardly extending notched prongs that flank the needle holes and exercise an additional downward pressure upon the sheets in proximity to said holes, and a plurality of needles adapted to draw a thread through the needle holes and over the prongs.

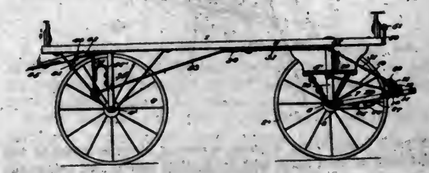
3. In a stitching machine, a table adapted to receive a number of sheets having a longitudinal fold, a symmetrical angular presser foot having a pair of lower inclined sides that form a lower edge and are deflected at a like angle from the table, said presser foot being provided with a plurality of communicating needle holes opening into its lower edge, a slid movably secured to one of the inclined sides of the presser foot and having a plurality of forwardly extending notched prongs that flank the needle holes, and a plurality of needles adapted to draw a thread through said holes and over the prongs.

4. In a stitching machine, a support adapted to receive the article to be stitched, a shank vertically reciprocative above said support and having a perforated foot, a plunger vertically movable on the shank, a slide carried by the foot and actuated by the plunger, said slide flanking the foot perforations, and a plurality of needles adapted to draw a thread through the foot and over the slide.

5. In a stitching machine, a support adapted to receive the article to be stitched, a shank vertically reciprocated above said support and provided with a V-shaped perforated foot having a pair of converging lower sides and flanking the foot-perforations, a slotted slide movable along one of said sides, a plunger slidably engaging the shank and having a tongue which engages the slide-slot, and a plurality of needles adapted to draw a thread through the foot and over the slide.

[Claims 6 and 7 not printed in the Gazette.]

1,015,078. BRAKE. FRANK N. ROBINSON, Wayland, N. Y. Filed July 24, 1911. Serial No. 640,302. (Cl. 21—8.)



1. In combination, a truck including wheels, running gear and a pivoted handle, a flat leaf spring secured to the handle, shoes at or near the ends of the flat leaf spring to engage the peripheries of the front wheels of the truck, cables connecting the flat leaf spring to the running gear, one of the cables extending rearwardly and upwardly above the plane of the point of attachment to the flat leaf spring, the other cables being secured at their rear ends below the point of attachment to the flat leaf spring, whereby when the handle is raised the cables will pull the shoes into contact with the wheels, and whereby when the handle is lowered the other cable will pull the shoes into contact with said wheels.

2. In combination, a truck including wheels, running gear, and a pivoted handle, a flat leaf spring secured to the handle, shoes at or near the ends of the flat leaf spring to engage the peripheries of the front wheels of the truck, a cable connecting the flat leaf spring to the running gear, guides for said cable, said guides being in a different horizontal plane than the point of attachment of the front ends of the cable to the flat leaf spring.

3. In combination, a truck including wheels, running gear, and a pivoted handle, a flat leaf spring secured to the handle, shoes at or near the ends of the flat leaf spring to engage the peripheries of the front wheels of the truck, cables connecting the flat leaf spring to the running gear, certain of said cables extending rearwardly and below the plane of the flat leaf springs, a flat spring to which said cable is attached, the other cable extending upwardly and rearwardly of said flat leaf spring, guides for the latter cable, said guides secured to the running gear, whereby when the handle is raised or lowered the brake shoes will be applied.

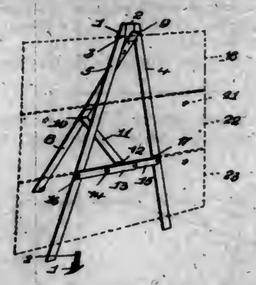
4. In combination, a truck including a platform, front and rear wheels, running gear, and a pivoted handle, a transversely mounted flat leaf spring secured to the pivoted handle, shoes on the ends of the flat leaf spring, a flexible connection between the flat leaf spring and the running gear, shoes for the rear wheels, yielding supports for the shoes for the rear wheels, a bell crank lever for rocking the rear brake shoes, a connection between the pivoted handle and the bell crank lever, and a swiveled guide on the pivoted handle through which the said connection passes, whereby when the handle is rocked on its pivot, the front and rear brake shoes will be simultaneously applied to the wheels.

5. In combination, a truck including wheels, running gear, and a pivoted handle, brake shoes carried by the

handle, resilient mountings for the brake shoes, and means connecting the resilient mounting and the truck for exerting a pull on the resilient mountings to cause the brake shoes to engage the wheels when the pivoted handle is rocked.

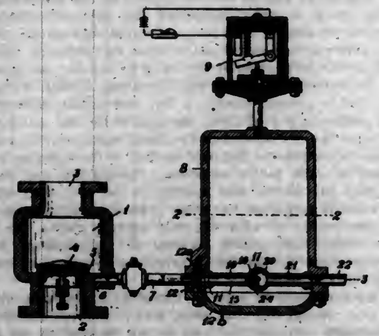
[Claims 6 to 11 not printed in the Gazette.]

1,015,079. DISPLAY-RACK. MARIO S. ROCHERETO and LOUIS D. BERT, Pittsburgh, Pa. Filed Mar. 14, 1911. Serial No. 614,432. (Cl. 40—146.)



A rack comprising a head, a center piece secured to the front side of said head and projecting above and below the same, side legs pivotally connected to said head and having their outward movement limited by said center piece, a center leg pivotally connected to the lower end of said center piece and having its upper end provided with a strap for limiting the forward movement of said leg, said strap further constituting a hook, a stretcher hinged at one end to the front side of said center leg, braces pivotally connected at one end to the side legs, a link pivotally connecting the other ends of said braces together, and means for hinging said stretcher to said link.

1,015,080. APPARATUS FOR OPERATING ALARMS OR OTHER DEVICES. GEORGE I. ROCKWOOD, Worcester, Mass. Filed Apr. 17, 1908. Serial No. 427,705. (Cl. 169—22.)



1. The combination with a receiving chamber and a liquid supply system, of an entrance pipe connecting said chamber and said supply system, with the diameter of said entrance pipe gradually reduced from each end toward the center, a transverse chamber in the center of said pipe at said reduced portion, and an exit pipe for said receiving chamber leading from said transverse chamber.

2. The combination of a receiving chamber, a liquid supply system, an entrance pipe connecting said chamber and said supply system, said entrance pipe having an exit passage between said supply system and said chamber, with said pipe so constructed as to increase the velocity of the liquid in said pipe as it passes by said passage going toward said chamber, thereby preventing the entrance into said passage of liquid going through said pipe toward said chamber.

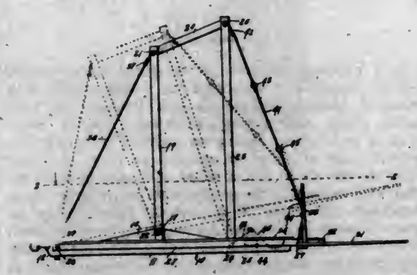
3. The combination of a receiving chamber, a pipe forming an entrance for liquid into said chamber in order to operate an alarm, said entrance pipe having a portion of restricted diameter, and an exit passage for the liquid in said chamber leading from the restricted portion of said entrance pipe.

4. The combination with a receiving chamber and a liquid supply system under pressure, of an inlet passage connecting said supply system with said receiving chamber, arranged to be normally closed, an escape passage leading from said inlet passage between said receiving chamber and said supply system, with the smallest diameter of said inlet passage arranged at the opening into said escape passage and at right angles thereto.

5. The combination with a receiving chamber and a liquid supply system, of a passage leading from said supply system, an inclosed chamber connected with said passage, a pipe connecting said inclosed chamber with said receiving chamber, said pipe constructed with its entrance end of enlarged diameter and gradually lessening toward the middle of the pipe, and an exit opening for the water in said chamber leading from said pipe at its most restricted portion.

[Claims 6 to 11 not printed in the Gazette.]

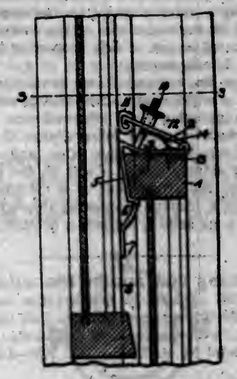
1,015,081. LOADER. WALTER W. ROSENAU, Germania, Iowa. Filed July 16, 1910. Serial No. 572,356. (Cl. 57—53.)



The device of the nature described comprising a base consisting of longitudinal brace runners, ears extending from said runners intermediate their ends, converging standards pivoted to said ears, converging standards pivoted to the runners in advance of the ears, the converged terminals of the forward standards being spaced below the converged terminals of the rear standards, a bar pivoted between the converged terminals of the standards, side bars pivoted to the rear ends of the runners and projecting beyond the forward ends thereof, a fork secured to the forward ends of the side bars, a cross bar connecting the front standards, a flexible member connecting said cross bar and fork, a weight carried by said flexible member, guy wires connecting the front standards and the fork, pulleys secured to the rear standards and the runners, an operating cable passing over said pulleys, the rear standards being foldable between the runners, the forward standards being foldable upon the rear standards, and the fork foldable upon the runners and engaging the standards and folding them against displacement.

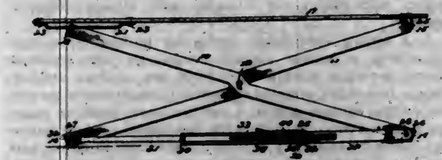
1,015,082. SASH-HOLDER. ONESIME ROUSSEAU, Detroit, Mich. Filed Apr. 24, 1911. Serial No. 622,923. (Cl. 16—120.)

1. A combined sash holder and sash fastener having in combination an anchoring plate, a clamping plate hinged thereto, and having on its free end a soft frictional material, a screw fastened to the anchoring plate and passed through the clamping plate, a thumb nut running on said screw and adapted to press the free end of the clamping plate into frictional engagement with the sash, and means for causing the clamping plate to follow the thumb nut, substantially as described.



2. A sash-holder, having in combination an anchoring plate comprising a tablet portion adapted to rest on the upper surface of the meeting rail of the lower sash, a web portion extending in continuation of said tablet portion about the outside of said meeting rail as an engaging member thence bent under the overhang of the said meeting rail over the stile of the lower sash and from there bent into the form of a hanger having a broad surface bearing against the stile of the upper sash, a clamping plate connected to said anchoring plate, and means for causing said clamping plate to frictionally engage against the stile of the upper sash, and for withdrawing said clamping plate therefrom, substantially as described.

1,015,083. TAILOR'S APPLIANCE. ARTHUR F. ROWE, Springfield, Mass. Filed Oct. 5, 1910. Serial No. 585,441. (Cl. 45—74.)



In a device of the class described, a supporting frame including pivotally connected crossed legs, a platform, means for hingedly connecting one of said legs at one end thereof to said platform, means for slidably connecting the other of said legs at one end thereof to said platform, a bar swinging at one end from one of said legs, said bar having a guide lug at its free end and another guide lug intermediate its ends, a threaded rod swinging at one end from the other of said legs and slidable through said guide lugs, a threaded sleeve engaging the threaded portion of said rod and bearing against said intermediate lug at one side, and a resilient member having a downwardly directed portion bearing against said intermediate lug at the other side, said downwardly directed portion having an extension for engaging around the intermediate lug, and a tongue depending from the resilient member and yieldably engaging said threaded sleeve and holding the same from movement away from the intermediate lug while permitting the sleeve to freely rotate upon the rod.

1,015,084. PLUNGER DEVICE. GEORGE H. ROWE, Berwyn, Ill. Filed Sept. 29, 1911. Serial No. 651,944. (Cl. 175—268.)

1. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch for holding said plunger in set position, and automatically operated means for releasing said catch.

2. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch for holding said plunger in set position, and electrically actuated means for releasing said catch.

3. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch interposed in the path of rotary-motion of said plunger for holding the same in set position, and means for operating said catch to release said plunger.

4. The combination with a plunger and its mounting provided with coöperating means for causing the longitudinal motion of said plunger to be dependent upon a simultaneous rotary motion thereof, of means tending to impart longitudinal motion to said plunger, a catch for holding said plunger in set position against rotary motion, and automatically operated means for releasing said catch.

5. The combination with a spring actuated plunger and its mounting, said plunger and mounting being provided with coöperating means for causing the longitudinal motion of the plunger to be dependent upon a simultaneous rotary motion thereof, a catch for holding said plunger in set position against rotary motion, and electrically actuated means for operating said catch to release said plunger.

[Claims 6 to 9 not printed in the Gazette.]

1,015,085. COLLAPSIBLE CUP OR TRAY. AXEL F. SALSTROM, Paxton, Ill. Filed Aug. 5, 1910. Serial No. 575,750. (Cl. 229—1.)

1. A device of the character described comprising a substantially conical cup, and supporting legs arranged at points around the cup, said legs being provided at their upper ends with coiled spring clips bent laterally at an angle thereto and engaging the rim edge of the cup.

2. A device of the character described comprising a substantially conical cup, and supporting legs arranged at points around the cup and extending below the apex of

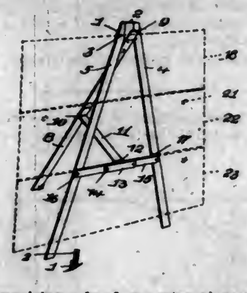
744 OFFICIAL GAZETTE JANUARY 16, 1912.

JANUARY 16, 1912. U. S. PATENT OFFICE. 745

handle, resilient mountings for the brake shoes, and means connecting the resilient mounting and the truck for exerting a pull on the resilient mountings to cause the brake shoes to engage the wheels when the pivoted handle is rocked.

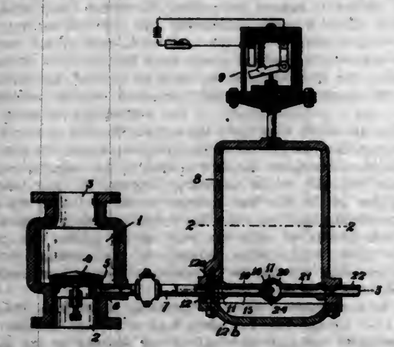
[Claims 6 to 11 not printed in the Gazette.]

1,015,079. DISPLAY-RACK. MARIO S. ROCERETO and LOUIS D. BERT, Pittsburgh, Pa. Filed Mar. 14, 1911. Serial No. 614,432. (Cl. 40—146.)



A rack comprising a head, a center piece secured to the front side of said head and projecting above and below the same, side legs pivotally connected to said head and having their outward movement limited by said center piece, a center leg pivotally connected to the lower end of said center piece and having its upper end provided with a strap for limiting the forward movement of said leg, said strap further constituting a hook, a stretcher hinged at one end to the front side of said center leg, braces pivotally connected at one end to the side legs, a link pivotally connecting the other ends of said braces together, and means for hinging said stretcher to said link.

1,015,080. APPARATUS FOR OPERATING ALARMS OR OTHER DEVICES. GEORGE I. ROCKWOOD, Worcester, Mass. Filed Apr. 17, 1908. Serial No. 427,705. (Cl. 169—22.)



1. The combination with a receiving chamber and a liquid supply system, of an entrance pipe connecting said chamber and said supply system, with the diameter of said entrance pipe gradually reduced from each end toward the center, a transverse chamber in the center of said pipe at said reduced portion, and an exit pipe for said receiving chamber leading from said transverse chamber.

2. The combination of a receiving chamber, a liquid supply system, an entrance pipe connecting said chamber and said supply system, said entrance pipe having an exit passage between said supply system and said chamber, with said pipe so constructed as to increase the velocity of the liquid in said pipe as it passes by said passage going toward said chamber, thereby preventing the entrance into said passage of liquid going through said pipe toward said chamber.

3. The combination of a receiving chamber, a pipe forming an entrance for liquid into said chamber in order to operate an alarm, said entrance pipe having a portion of restricted diameter, and an exit passage for the liquid in said chamber leading from the restricted portion of said entrance pipe.

4. The combination with a receiving chamber and a liquid supply system under pressure, of an inlet passage connecting said supply system with said receiving chamber, arranged to be normally closed, an escape passage leading from said inlet passage between said receiving chamber and said supply system, with the smallest diameter of said inlet passage arranged at the opening into said escape passage and at right angles thereto.

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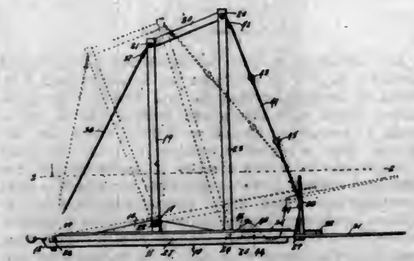

The device of the nature described comprising a base consisting of longitudinal brace runners, ears extending from said runners intermediate their ends, converging standards pivoted to said ears, converging standards pivoted to the runners in advance of the ears, the converged terminals of the forward standards being spaced below the converged terminals of the rear standards, a bar pivoted between the converged terminals of the standards, side bars pivoted to the rear ends of the runners and projecting beyond the forward ends thereof, a fork secured to the forward ends of the side bars, a cross bar connecting the front standards, a flexible member connecting said cross bar and fork, a weight carried by said flexible member, guy wires connecting the front standards and the fork, pulleys secured to the rear standards and the runners, an operating cable passing over said pulleys, the rear standards being foldable between the runners, the forward standards being foldable upon the rear standards, and the fork foldable upon the runners and engaging the standards and folding them against displacement.

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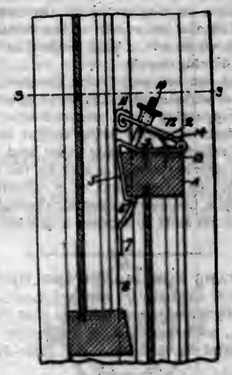
1. A combined sash holder and sash fastener having in combination an anchoring plate, a clamping plate hinged thereto, and having on its free end a soft frictional material, a screw fastened to the anchoring plate and passed through the clamping plate, a thumb nut running on said screw and adapted to press the free end of the clamping plate into frictional engagement with the sash, and means for causing the clamping plate to follow the thumb nut, substantially as described.



2. A sash-holder, having in combination an anchoring plate comprising a tablet portion adapted to rest on the upper surface of the meeting rail of the lower sash, a web portion extending in continuation of said tablet portion about the outside of said meeting rail as an engaging member thence bent under the overhang of the said meeting rail over the stile of the lower sash and from there bent into the form of a hanger having a broad surface bearing against the stile of the upper sash, a clamping plate connected to said anchoring plate, and means for causing said clamping plate to frictionally engage against the stile of the upper sash, and for withdrawing said clamping plate therefrom, substantially as described.

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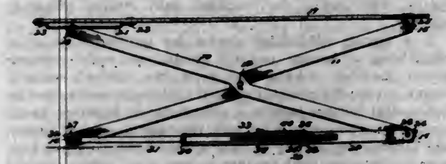


In a device of the class described, a supporting frame including pivotally connected crossed legs, a platform, means for hingedly connecting one of said legs at one end thereof to said platform, means for slidably connecting the other of said legs at one end thereof to said platform, a bar swinging at one end from one of said legs, said bar having a guide lug at its free end and another guide lug intermediate its ends, a threaded rod swinging at one end from the other of said legs and slidable through said guide lugs, a threaded sleeve engaging the threaded portion of said rod and bearing against said intermediate lug at one side, and a resilient member having a downwardly directed portion bearing against said intermediate lug at the other side, said downwardly directed portion having an extension for engaging around the intermediate lug, and a tongue depending from the resilient member and yieldably engaging said threaded sleeve and holding the same from movement away from the intermediate lug while permitting the sleeve to freely rotate upon the rod.

1,015,084. PLUNGER DEVICE. GEORGE H. ROWE, Berwyn, Ill. Filed Sept. 29, 1911. Serial No. 651,944. (Cl. 175—268.)

1. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch for holding said plunger in set position, and automatically operated means for releasing said catch.

2. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch for holding said plunger in set position, and electrically actuated means for releasing said catch.

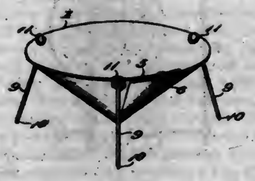
3. The combination with a plunger and means for imparting a rotary-longitudinal motion thereto, of a catch interposed in the path of rotary-motion of said plunger for holding the same in set position, and means for operating said catch to release said plunger.

4. The combination with a plunger and its mounting provided with coöperating means for causing the longitudinal motion of said plunger to be dependent upon a simultaneous rotary motion thereof, of means tending to impart longitudinal motion to said plunger, a catch for holding said plunger in set position against rotary motion, and automatically operated means for releasing said catch.

5. The combination with a spring actuated plunger and its mounting, said plunger and mounting being provided with coöperating means for causing the longitudinal motion of the plunger to be dependent upon a simultaneous rotary motion thereof, a catch for holding said plunger in set position against rotary motion, and electrically actuated means for operating said catch to release said plunger.

[Claims 6 to 9 not printed in the Gazette.]

1,015,085. COLLAPSIBLE CUP OR TRAY. AXEL F. SALSTROM, Paxton, Ill. Filed Aug. 5, 1910. Serial No. 575,750. (Cl. 229—1.)

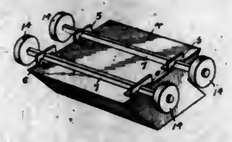


1. A device of the character described comprising a substantially conical cup, and supporting legs arranged at points around the cup, said legs being provided at their upper ends with coiled spring clips bent laterally at an angle thereto and engaging the rim edge of the cup.

2. A device of the character described comprising a substantially conical cup, and supporting legs arranged at points around the cup and extending below the apex of

the cup, said legs being provided at their upper ends with clips bent at an angle corresponding to the angle of inclination of the wall of the cup and engaging the rim edge of said cup.

1,015,086. CONVEYER. HARRY WESLEY SANNER, Baltimore, Md. Filed June 14, 1910. Serial No. 566,729. (Cl. 193—7.)

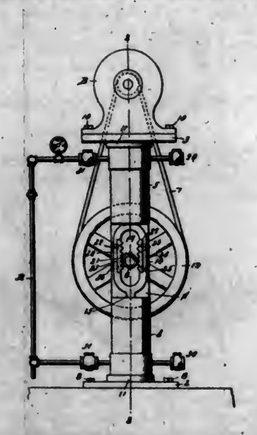


1. In a conveyer, the combination with a frame having sprocket wheels journaled thereon, of endless chains mounted on the wheels, means for transmitting motion to the chains, axles connected to the chains, buckets, slotted brackets connected to the buckets, said axles having recesses therein, adapted to receive the brackets for locking the buckets upon the axles.

2. In a conveyer, the combination with a frame having sprocket wheels, of endless chains mounted on the sprocket wheels, means for transmitting motion to the chains, axles connected to the chains having recesses therein, buckets mounted on the axles, and slotted brackets connected to the buckets through which the axles pass, said brackets adapted to be received in the recesses in the axles for locking the buckets upon the axles and preventing lateral movement of the buckets on the axles.

3. In a conveyer, the combination with a frame having sprocket wheels mounted thereon, of endless chains mounted on the wheels, axles connected to the chains, buckets, brackets on the buckets having slots through which the axles extend, said axles having recesses therein which receive the edges of the brackets upon a partial rotation of the axles, whereby the axles and brackets are connected together.

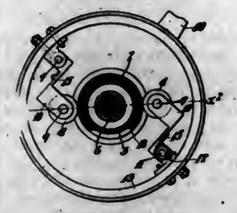
1,015,087. AIR-PUMP. GOTTFRIED SCHMIDT, Hazleton, Pa. Filed Nov. 28, 1910. Serial No. 594,578. (Cl. 230—27.)



1. In a pump, a frame comprising a column formed with a laterally projecting bracket or plate at each end perpendicular to said column and having a seat on its inner side, said brackets or plates being similar to each other in all respects and lying in parallel relation with each other, bearings in said column midway between said brackets, a driving shaft mounted in said bearings parallel to said brackets, a cylinder secured on each seat on the inner side of the brackets and projecting toward each other and in the same axial line, a piston in each cylinder, a piston rod formed with an intermediate yoke joining said pistons, a gear segment on one end of said shaft adapted to alternately engage said racks as the shaft rotates for operating the pistons, a driving wheel on the opposite end of said shaft and on the outer side of the column, and driving means mounted on one of said projecting brackets connected to said driving means.

2. In a pump, an integral frame comprising a column from each end of which and in the same direction projects a bracket or supporting plate perpendicular to said column, said brackets or plates being similar in all respects and in parallel relation with each other, and either adapted to support a driving motor, a seat on the inner side of each bracket for the attachment of a cylinder, and bearings surrounding a transverse opening through the column midway between its ends to support a driving shaft.

1,015,088. MEANS FOR PRODUCING HIGH-TENSION DISCHARGES. JAMES E. SEELEY, Los Angeles, Cal., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 15, 1909. Serial No. 490,168. (Cl. 123—167.)



1. A circuit controlling device for ignition apparatus comprising a central contact means, an outer contact means movable toward and from the central contact means, means for pressing the outer contact means toward the central contact means, a rotary circuit breaking member mounted concentrically with the central contact means and rotatable relatively to both of said coutact means, said rotary circuit breaking member being formed as a shell movable between said central and outer contact means, and means for rotating said circuit breaking member.

2. A circuit controlling device for ignition apparatus comprising a central contact means, an outer contact means movable toward and from the central contact means, means for pressing the outer contact means toward the central contact means, a rotary circuit breaking member mounted concentrically with the central contact means and rotatable relatively to both of said contact means and movable between said contact means, said rotary circuit breaking member comprising a shell formed as a segment of a cylinder, and means for rotating said circuit breaking member.

3. In a circuit controlling device for ignition apparatus, a central contact roller, a circuit breaking segmental shell mounted to rotate on an axis concentric with said contact roller, an outer contact roller, means for movably supporting said outer contact roller and permitting movement thereof to and from the central contact roller, and a spring for pressing the outer contact roller upon the central contact roller and enabling separation of the rollers by the circuit breaking shell in the rotation thereof.

4. A circuit controlling device for ignition apparatus comprising a central contact roller, a plurality of outer contact means movable toward and from the central contact roller and provided with means whereby they are pressed toward the central contact roller, a rotary circuit breaking member mounted concentrically with the central contact roller and movable between the outer contact means and the central contact roller to lift the outer contact means successively from contact with the central contact roller, and means for rotating said circuit breaking member.

5. A circuit controlling device for ignition apparatus comprising a central contact means, a plurality of outer contact means provided with supporting devices holding the same yieldingly in contact with the central contact means, and a rotary segmental shell adapted to rotate between the central and outer contact means, said shell being rotatable relatively to the central and to the outer contact means, said shell having an opening to permit the outer contact means to contact with the inner contact means.

[Claim 6 not printed in the Gazette.]

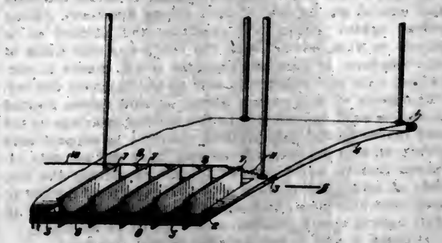
1,015,089. IGNITION SYSTEM. JAMES E. SEELEY, Los Angeles, Cal., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 28, 1910. Serial No. 594,597. (Cl. 123—148.)

1. In an ignition system, the combination of a source of electric current, a charging circuit connected thereto and including self-induction means, a plurality of discharge connections, a distributer for establishing connection successively from said charging circuit to said discharge connections, an interrupter connected in the charging circuit, a condenser connected to the charging circuit, to receive a charge therefrom on interruption of said circuit, and to discharge through the discharge connections, means for controlling the time of operation of said interrupter and a supplementary connection for the charging circuit independent of the discharge connections through the distributer to enable energization of the charging circuit, precedent to the connection of the charging circuit to any given discharge connection by the distributer.

2. In an ignition system, the combination of a source of electric current, a charging circuit connected thereto and including self-induction means, a plurality of discharge circuits, a distributer for establishing connection successively from said charging circuit to said discharge circuits, an interrupter connected in the charging circuit, a condenser connected to the charging circuit, to receive a charge therefrom on interruption of said circuit and to discharge through the discharge circuits, means for controlling the time of operation of said interrupter and a supplementary connection for the charging circuit independent of the discharge connections through the distributer, to enable energization of the charging circuit precedent to the connection of the charging circuit to any given discharge connection by the distributer, said supplementary connection for the charging circuit including self-induction means of lower inductance than the self-inductance means in the charging circuit and said discharge connections including high-tension induction devices of lower inductance than the said supplementary connection.

1,015,090. AEROPLANE. HORACE LEONARD SHORT, ALBERT EUSTACE SHORT, and HUGH OSWALD SHORT, Battersea Park, London, England. Filed July 28, 1910. Serial No. 574,213. (Cl. 244—14.)

1. An aeroplane having oblong through apertures, the length of said apertures being in a direction parallel with the direction of motion of the plane through the air, said apertures being located between the forward and rearward edges of said plane, oblong valves located within said apertures and adapted to be turned on their axes parallel with the lengthway side walls of said apertures to open and close the latter, pivots on said valves located on the forward and rearward edges thereof, means in connection with said plane to support said pivots, an arm projecting from each valve and securely attached thereto, a rod pivoted to and connecting the free ends of said arms to turn said valves on said pivots to open said apertures, a helical spring located between said rod and said main plane to pull said rod in a direction tending to keep the valves in their closed position, substantially as set forth:



2. An aeroplane comprising in combination a rigid frame composed of rearward, forward and intermediate parallel members and members arranged at right angles to said rearward, forward and intermediate members, a membrane covering said members and having oblong through apertures, the length of said apertures being in the direction of motion of the plane through the air, said apertures being located between said rearward and intermediate members, oblong valves located within said apertures and adapted to be turned on axes parallel with the lengthway side walls of said apertures to open and close the latter, pivots on said valves located on the forward and rearward edges thereof, bearings in the said rearward and intermediate members to support said pivots, means for turning said valves on said pivots to open said apertures, and means for returning said valves to their normal position to close said apertures, substantially as set forth.

3. An aeroplane comprising in combination a rigid frame composed of rearward, forward and intermediate parallel members and members arranged at right angles to said rearward, forward and intermediate members, a membrane covering said members and having oblong through apertures, the length of said apertures being in the direction of motion of the plane through the air, said apertures being located between said rearward and intermediate members, oblong valves located within said apertures and adapted to be turned on axes parallel with the lengthway side walls of said apertures to open and close the latter, pivots on said valves located on the forward and rearward edges thereof, bearings in the said rearward and intermediate members to support said pivots, an arm projecting from each valve and securely attached thereto, a rod pivoted to and connecting the free ends of said arms to turn the said valves on said pivots to open said apertures, and means to return said valves to their normal closed position, substantially as set forth.

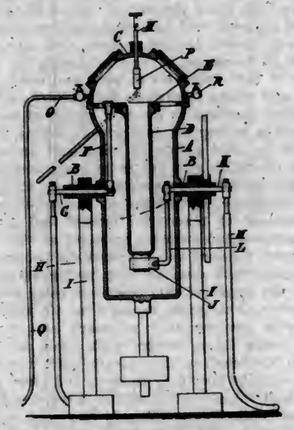
4. An aeroplane comprising in combination a rigid frame composed of rearward, forward and intermediate parallel members and members arranged at right angles to said rearward, forward and intermediate members, a membrane covering said members and having oblong through apertures, the length of said apertures being in the direction of motion of the plane through the air, said apertures being located between said rearward and intermediate members, strips arranged between the rearward and intermediate members and located at the side of said oblong apertures, oblong valves located within said apertures and adapted to be turned on axes parallel with the lengthway side walls of said apertures to open and close the latter, pivots on said valves located on the forward and rearward edges thereof, bearings in the said rearward and intermediate members to support said pivots, an arm projecting from each valve and securely attached thereto, a rod pivoted to and connecting the free ends of said arms to turn said valves on said pivots to open said apertures,

and means to return said valves to their normal closed position, substantially as set forth.

5. An aeroplane comprising in combination a rigid frame composed of rearward, forward and intermediate parallel members and members arranged at right angles to said rearward, forward and intermediate members, a membrane covering said members and having oblong through apertures, the length of the said apertures being in the direction of motion of the plane through the air, strips arranged between the rearward and intermediate members and located at the side of said oblong apertures, oblong valves located within said apertures and adapted to be turned on axes parallel with the lengthway side walls of said apertures to open and close the latter, means in connection with said valves and said strips to insure the correct closure of said valves, pivots on said valves located on the forward and rearward edges thereof, bearings in the said rearward and intermediate members to support said pivots, an arm projecting from each valve and securely attached thereto, a rod pivoted to and connecting the free ends of said arms to turn said valves on said pivots to open said apertures, and means to return said valves to their normal closed position, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,015,091. APPARATUS FOR MELTING AND MIXING METALS IN VACUUMS. WILLIAM SPEIRS SIMPSON, London, England. Filed May 5, 1911. Serial No. 625,286. (Cl. 204—64.)



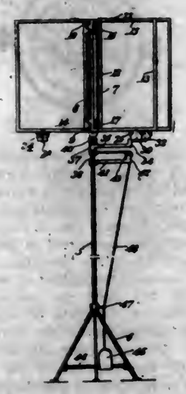
1. Apparatus for melting, mixing and treating metals embodying a hollow crucible composed of refractory material possessing the property of conducting and offering resistance to the passage of an electric current to thereby convert directed electrical energy into heat energy, the crucible having an open chamber to receive and contain the metals to be treated, means for connecting electrical conductors to the top and bottom of such crucible, and a vacuum chamber inclosing the crucible.

2. In apparatus of the character described, the combination of a vacuum chamber, a crucible inclosed therein having an interior chamber to contain a charge of material to be treated and embodying means for heating it, and an adjustable device operable from the exterior of said chamber and extending into the chamber, said device being provided with means for introducing purifying substances or metals for alloying purposes into said chamber within the crucible and also operative as a stirrer or mixer.

3. In apparatus of the character described, the combination of a vacuum chamber comprising a body portion and a cover removably related thereto and adapted to form a fluid-tight connection with the body portion, a crucible contained within the body portion and having a chamber to contain a charge of the material to be treated and having an opening leading thereto, and a device carried by and extending movably through the cover and bearing a clip on its inner end, said device being movable in alinement with and into said opening and chamber in the crucible while the cover is applied to the body portion.

4. In apparatus of the character described, the combination of a vacuum chamber comprising a body portion having trunnions for mounting it tiltably, and a cover removably applied to the upper end thereof and adapted to form a fluid-tight connection therewith, a crucible contained within and carried by the body portion and having an interior chamber to contain a charge of material to be treated and having its mouth arranged toward the top of the body portion, and means for conducting a heating medium to the crucible through said trunnions of the tiltably mounted body portion.

1,015,092. MUSIC-LEAF TURNER. BENJAMIN F. SOUTHER, Berkeley, Cal. Filed Jan. 14, 1910. Serial No. 538,092. (Cl. 84—17.)



1. A music leaf turner comprising a vertical support, a leaf holder hingedly mounted on the upper end portion of said support, a pair of spaced dogs pivotally mounted on said holder, said dogs being adapted for movement in opposite directions, and a selector arm having one end journaled on the upper end portion of the support and below the leaf holder, said selector arm being movable in a plane oblique to the plane of the movement of the leaf holder and adapted to engage said dogs independently, whereby said leaf holder may be moved in opposite directions.

2. A music leaf turner comprising a vertical support, a leaf holder hingedly mounted on the upper end portion of said support, a pair of spaced dogs pivotally mounted on said holder, said dogs being adapted for movement in opposite directions, a manually operated selector arm having one end journaled on said support and adjacent to said leaf holder, said selector arm being movable in a plane oblique to the plane of movement of the leaf holder and adapted to engage with one of said dogs whereby said leaf holder is operated in one direction, and means for operating the selector arm in the opposite direction when said selector arm engages with the other of said dogs.

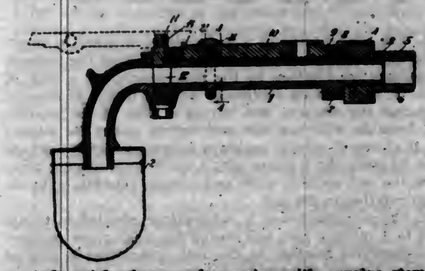
1,015,093. TROUSERS-STRETCHER. ASTOR M. STRINDAL, Brainerd, Minn. Filed Jan. 19, 1911. Serial No. 603,535. (Cl. 223—19.)

1. A trousers hanger including a rod, trousers waist engaging means adjacent one end of the rod, a trousers leg bottom engaging clamp adjustably mounted on said rod and movable relatively to said waist engaging means for maintaining the trousers stretched taut longitudinally, a pair of clamps arranged on opposite sides of said rod, braces arranged transversely of said rod and adjustably

secured to the last named clamps whereby said clamps are movable relatively to each other for stretching the trousers taut transversely, each of said clamps comprising a pair of slats hingedly connected together, a folding leaf on each slat adapted to clamp the trousers legs to said slat and form creases in said legs, the hinge of said slats being located at approximately the knees of the trousers legs whereby the clamp assumes a V-shaped contour and conforms to the outline of the trousers.

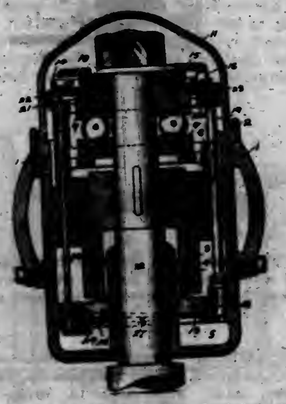
2. A trousers hanger including a rod, trousers waist engaging means adjacent to one end of the rod, a trousers leg bottom engaging clamp adjustably mounted on said rod and movable relatively to said waist engaging means for maintaining the trousers stretched taut longitudinally, a pair of clamps arranged on opposite sides of said rod, a plurality of cross braces on said rod adjustably secured to said clamps through the instrumentality of pins selectively passed through any one of a series of openings in the brace ends and openings in said clamps, each clamp comprising a pair of longitudinally rabbeted slats hingedly connected together at their opposing ends, a leaf fitting in the rabbet of each slat, hinges arranged on the outer faces of said slats and leaf, and buttons on the outer face of said slat turnable over the outer face of said leaf, the hinges which connect together the opposing ends of each pair of slats permitting of said slats assuming a V-shaped contour when applied whereby to conform to the outline of the trousers.

1,015,094. LOCK-COCK. CARL STIFT, Honolulu, Hawaii. Filed Apr. 11, 1911. Serial No. 620,481. (Cl. 137—7.)



A faucet having a valve casing with a valve stem extending therethrough and projecting above said casing, the projecting part of said stem having a longitudinally-extending recess therein, a boss integral with said casing, the forward end of which is beveled to form an overhanging shoulder spaced from the stem, a separable locking key adapted to be positioned on said stem, to actuate the same, said key having a beveled end adapted to fit beneath the overhanging shoulder, the other end of which key has a projection adapted to fit in said recess, to prevent the rotation of the stem, and means locking said key in position.

1,015,095. POSITIVE OILING DEVICE FOR BEARINGS. WILLIAM S. SUTTON, Madison, Wis., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed July 29, 1907. Serial No. 386,051. (Cl. 64—24.)



1. In combination with a shaft to be lubricated, an oiling device comprising a yieldingly supported member having a bearing surface inclined to the axis of rotation of the shaft, and a device driven by said shaft and pressing on said bearing surface, and a pump operatively connected to said member.

2. An oiling device comprising in combination two members with opposing bearing surfaces normally lying in different planes, one of said members being transversely movable with respect to the other, a device adapted to move between said bearing surfaces and thereby actuate the movable member, and a pump operatively connected to the movable member.

3. An oiling device comprising in combination two members, one of said members being transversely movable with respect to the other, said members having opposing bearing surfaces normally lying in different planes, a device adapted to roll between said bearing surfaces and thereby actuate the movable member, and a pump operatively connected to the movable member.

4. An oiling device comprising in combination two members, one of said members being transversely movable with respect to the other and yieldingly supported, said members having opposing bearing surfaces normally lying in different planes, a device adapted to roll between said bearing surfaces, and thereby actuate the movable member, and a pump operatively connected to the movable member.

5. An oiling device comprising in combination two members with opposing bearing surfaces, one of said members being transversely movable with respect to the other and spring supported, a device adapted to move between said bearing surfaces and thereby actuate the movable member, and a pump operatively connected to the movable member.

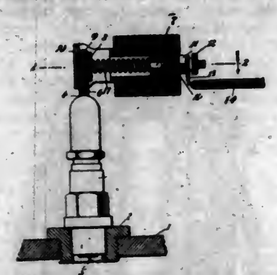
[Claims 6 to 17 not printed in the Gazette.]

1,015,096. SPARK-INDICATOR. LEROY E. TAIT, Red Cloud, Nebr. Filed Mar. 14, 1911. Serial No. 614,318. (Cl. 175—183.)

1. In a spark indicator, comprising an electric terminal having a yoke end adapted to engage one side of a combustion engine spark plug, an insulating cap surrounding said terminal adjacent the yoke end, a frame positioned within said cap and inclosing and spaced apart from said yoke end, a sleeve insulating said terminal from said end, and a spring within said sleeve bearing on the same and on the yoke end forcing said yoke and frame together, to hold the spark plug between the same.

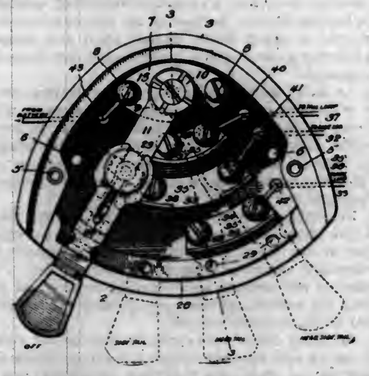
2. In a spark indicator, a hollow sleeve, a frame having a closed curved outer end, the inner end of which engages said sleeve, a terminal projecting through said sleeve and

having a yoke coacting with the curved end of the frame to hold a spark plug therebetween, a spring in said sleeve maintaining said yoke and frame resiliently in contact



with the plug, and means insulated from said frame, by means of which said yoke may be withdrawn from said plug, to form a spark space between said yoke and plug.

1,015,097. SWITCH. EDWARD E. TAYLOR and DAVID H. ELKINS, Amesbury, Mass., assignors to William Gray, Amesbury, Mass. Filed Sept. 14, 1910. Serial No. 582,009. (Cl. 175—282.)



1. A switch having a body portion of insulating material, three separate insulated contact pieces fixed thereto, each of two of said contact pieces having a continuous unbroken surface, and the third contact piece having a base and two separate curved surfaces located in the same arc of a circle, and a spring lever pivoted to the said body portion said lever having contact pieces of spring metal in connection therewith and carried thereby.

2. A switch having a body portion of insulating material, a single insulated lever pivoted at one end to the body portion and carrying contact pieces, and three fixed insulated contact pieces arranged in parallel arcs of circles; two of said fixed contact pieces having a single contact surface one of which is adapted to continuously engage a contact piece on the lever when the circuit is closed, and the third contact piece having a common base with two separate contact surfaces, for the purpose set forth.

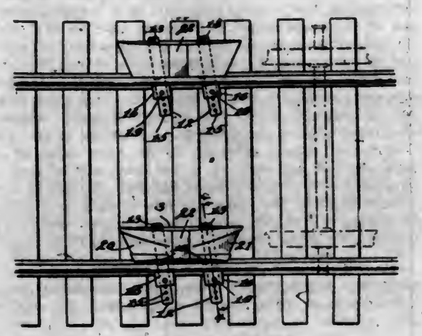
3. A switch consisting of a box like body portion of insulating material with a cover and a slot in the side of the body portion, a lever with a handle extended through the said slot outside the body portion, means for pivoting the lever to the base of the body portion, contact pieces carried by the lever, means for connecting the lever with one terminal of a source of electrical energy, three separate fixed contact pieces secured to the body portion, and means for connecting each contact piece with the other terminal; the said fixed contact pieces being arranged in parallel arcs of circles corersponding with the slot in the said body portion, and one of said contact pieces having two separate contact surfaces adapted to be successively engaged by a contact piece on the lever.

4. A switch consisting of a box like body portion of insulating material provided with a cover and having a slot, a lever of resilient material pivoted to the base of the body and carrying contact pieces, a handle projecting through the said slot and outside the box and connected with the lever, separate insulated fixed contact pieces secured to the body portion, and a metallic strip having a series of seats or recesses secured to the interior of the body portion; the lever being provided with a projection adapted to successively engage the said seats or recesses in the metallic strip, whereby said lever may be held successively in fixed poitions relative to the fixed contact pieces.

5. A switch consisting of a box shaped body portion of insulating material with a cover and said box having an open slot in the body of the same, a post secured to the body portion, a single lever pivoted to the post and having contact pieces all of which are secured to the surface of the lever, said lever also being provided with a handle extended through the said slot, three separate fixed contact pieces secured to the said body portion and arranged in parallel arcs each of two contact pieces consisting of a base and a curved flange, and a third contact piece consisting of a base and two separate curved flanges located in the same arc of a circle.

[Claims 6 to 9 not printed in the Gazette.]

1,015,098. CAR-REPLACER. ERNEST M. TAYLOR, Petersburg, Va., assignor of one-third to William Edward Poole, Petersburg, Va. Filed Feb. 16, 1911. Serial No. 608,907. (Cl. 104—1.)



1. The combination of a car replacer adapted to be applied to a railway rail, and means for locking the replacer in coöperative relation to the rail, comprising a pair of anchors, each having detachable holding means at one end engaging the replacer and having a slide at its opposite end lockable with the rail and having means for adjusting it at one of several positions longitudinally of said anchor whereby the replacer may be held from moving away from the rail while in close and parallel relation or in angular relation to the rail.

2. The combination of a car replacer adapted to be applied to a railway rail, and means for locking the replacer in coöperative relation to the rail, comprising a pair of anchors having detachable holding means engaging the replacer at different points in its length and provided with detachable locking slides which are lockable with the base flange of a rail, said slides being adjustable independently of each other and also adjustable relatively to the respective anchors whereby the replacer may be held from moving away from the rail while in close parallel relation to the rail or in angular relation thereto.

3. The combination of a car replacer adapted to be applied to a railway rail, and means for locking it in cooperative relation therewith, comprising a pair of anchors, each embodying a bar connected at one end to that side of the replacer which is distant from the rail and the opposite end of the bar being provided with a set of longitudinally spaced locking apertures, a slide adjustable longitudinally on the said apertured end of the bar and having a recess in one end to receive and interlock with an edge of the base flange of the rail, and a locking pin adapted to fit any one of said apertures in the bar and thereby lock said slide in an adjusted position longitudinally thereon.

4. In an apparatus of the character described, the combination of a replacer adapted to be placed in coöperative relation to a railway rail and having a hole in the wall thereof removed from the rail and also formed with a transverse reinforcing rib the lower edge of which forms a guide leading to said hole, and an anchor having an end adapted to coöperate with the lower edge of said rib as a guide and to enter said hole, means for detachably connecting such end of the bar to said replacer, and means for adjustably and detachably connecting the opposite end of the anchor to a rail.

1,015,099. HAT-PIN-POINT PROTECTOR. FRANK TROJAN, New Bedford, Mass. Filed Sept. 6, 1911. Serial No. 647,817. (Cl. 24—155.)

1. A hatpin point protector comprising a conical-shaped shell having the outer end thereof flanged inwardly and the inner edges of the flange bent to provide a collar, a tapering resilient block arranged in the large end of said shell and having an annular groove to receive said collar, and a flat spring arranged in the small end of said shell and adapted to frictionally engage the end of a pin extending into said shell and into said block.

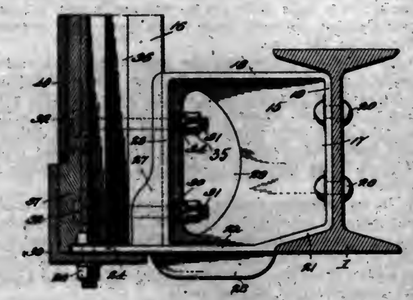
2. A hatpin point protector comprising a conical-shaped shell having the outer end thereof flanged inwardly and the inner edges of the flange bent to provide a collar, a tapering resilient block arranged in the large end of said shell and having an annular groove to receive said collar, a flat spring arranged in the small end of said shell and adapted to frictionally engage the end of a pin extending into said shell and into said block, a cap arranged upon the large end of said shell and against the flange thereof, and means engaging the block for retaining said cap in engagement with said flange.

1,015,100. PASSENGER-CAR. THOMAS H. TUTWILER, Memphis, Tenn. Filed Sept. 21, 1911. Serial No. 650,633. (Cl. 105—76.)

1. In a car, the combination with the sills of brackets connected to the outer sides thereof, the outer end of each bracket being provided with a seat for the base of a side post and vertical sides for embracing the inner portion thereof, boards arranged on the outer sides of the side posts, and an angle bar secured to the seats of the brackets and engaging said boards, substantially as described.

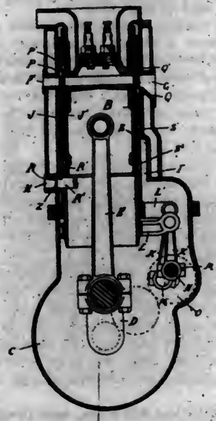
2. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the side post, and means for securing the side post between said vertical sides of the bracket, substantially as described.

3. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the inner portion of the side post, the central rib of the bracket being cut away near the outer end flange thereof, and T headed bolts passing through the side post and through the outer end flange of the bracket, substantially as described.



4. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the inner portion of the side post, the central rib of the bracket being cut away near the outer end flange thereof, T headed bolts passing through the side posts and through the outer end flange of the bracket, boards secured to the faces of the side posts, and an angle bar secured to the seats of the brackets and engaging said boards, substantially as described.

1,015,101. EXPLOSION-ENGINE. JOHN G. UTZ, Detroit, Mich., assignor to Chalmers-Detroit Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 22, 1908. Serial No. 468,752. (Cl. 123—75.)



1. In an explosion engine, the combination of a crank case forming a chamber, a cylinder, a piston therein, and a plurality of differentially moving ported sleeves surrounding said piston and controlling communication between said crank case and cylinder above the piston.

2. In an explosion engine, the combination of a cylinder having inlet and exhaust ports, a crank case forming a compression chamber, a piston in said cylinder, a plurality of differentially moving ported sleeves surrounding said piston and controlling said inlet and exhaust ports and communication between said crank case and said cylinder above the piston.

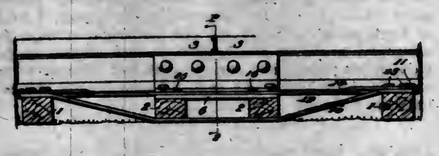
3. In an explosion engine, the combination of a cylinder, having inlet and exhaust ports, a crank case forming a compression chamber, a piston in said cylinder, a plurality of ported sleeves surrounding said piston, and means for actuating said sleeves to open and close said inlet and exhaust ports each once during the cycle and to open communication between said crank case and cylinder twice during the cycle.

4. In an explosion engine, the combination of a casing forming a cylinder, and a closed crank case constituting the compression chamber, said casing being provided with exhaust, inlet and transfer ports, a piston in said cylinder, and a slide valve intermediate the piston and cylinder having ports coöperating with said first mentioned ports and timed in its operation to open and close said ports in sequence.

5. In an explosion engine, the combination of a crank case forming a compression chamber, a cylinder constituting the explosion chamber and having inlet and exhaust ports, said crank case having an inlet and a transfer passage leading from the crank case to the cylinder, and a slide valve controlling all of said ports.

[Claims 6 and 7 not printed in the Gazette.]

1,015,102. RAIL-BRACE. JAMES P. VAUGHT and COLUMBUS M. WALKER, Kellerman, Ala. Filed May 16, 1911. Serial No. 627,562. (Cl. 238—12.)



1. In a rail brace, a saddle bar formed at its ends with upstanding bosses, a bridge bar disposed at its ends upon the saddle bar with its end edges seating against the said bosses, and securing elements inserted through the ends of the saddle and bridge bars.

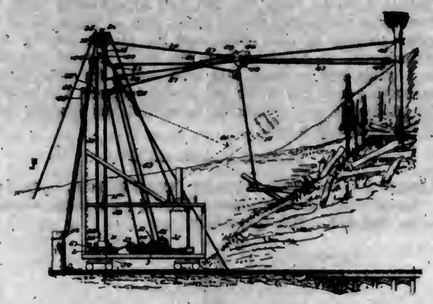
2. In a rail brace, a saddle bar formed at its ends with upstanding bosses, a bridge bar disposed at its ends upon the saddle bar with its end edges seating against the said bosses, securing elements inserted through the ends of the saddle and bridge bars, a rail chair having a rail engaging portion and a base extending beneath the bridge bar, and securing elements inserted through the bridge bar and the base of the rail chair.

3. In a rail brace, a saddle bar, a bridge bar disposed at its ends upon the saddle bar, a rail chair having a base projecting beneath the bridge bar, securing elements inserted through the ends of the saddle and bridge bars, and securing elements inserted through the bridge bar and the base of the rail chair.

4. In a rail brace, a saddle bar, a bridge bar disposed at its ends upon the saddle bar, a fish plate having a base formed at one side with a rail engaging portion and extending at its other side beneath the bridge bar, securing elements inserted through the ends of the saddle and bridge bars, and securing elements inserted through the bridge bar and the said portion of the base of the rail chair.

5. The combination with ties, and the meeting ends of rails disposed thereon, of a rail brace comprising a saddle bar disposed at its ends upon certain of the ties and extending at its intermediate portion beneath another of the ties, a bridge bar disposed at its ends upon the ends of the saddle bar, securing elements inserted through the ends of the bridge and saddle bars and secured into the first mentioned ties, a rail chair having a portion engaging one side of the meeting ends of the rails, and a base extending beneath the said ends of the rails and beneath the intermediate portion of the bridge bar, the said base of the chair resting upon the last mentioned tie, and a securing element inserted through the bridge bar and the said portion of the base of the rail chair and secured to the last mentioned tie.

1,015,103. APPARATUS FOR TRANSPORTING LOGS. FREDERICK W. VIERLING, Davis, W. Va. Filed Sept. 11, 1911. Serial No. 648,708. (Cl. 214—14.)



1. In combination, a mast formed with an opening in its bottom which communicates with an open slot, a rotatable base for supporting the mast, said base having openings which communicate with the opening in the lower end of the mast, a pulley located in the base to guide a cable through the openings, a pulley secured on the mast above the slot therein, a cap including a housing secured on top of the mast, a support remote from the mast, a swiveled pulley mounted on the support, a cable passing through the opening and open slot and around the pulleys, a swiveled guy cable holder secured on top of the housing, and means for bracing the mast.

2. In combination, a stationary support, a rotating base mounted on the stationary plate means for guiding the rotating base on the plate, a mast hinged to the rotating base, means for holding the mast in locked vertical position on the rotating base, a cable guide, under the plate, said mast having an opening in its lower end, a pulley in the opening, a cap on the mast, pulleys mounted in the cap, a cable passing over the guide and the pulleys, means for controlling the cable, and a guy cable support swiveled at the top of the mast.

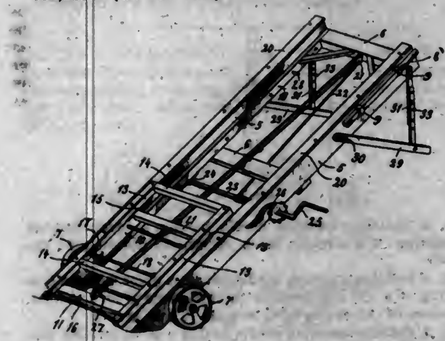
3. In combination, a car, a hoisting engine including a series of drums mounted on the car, a stationary base mounted on the car, said base having an opening, a revolving plate located above the stationary plate, said plate having an opening, a flange on the base for guiding and holding the plate in position, anti-friction rollers between the plate and the base, a base collar hinged to the plate, a detachable latch for securing the base collar in locked position, rollers on the mast near the bottom of the latter, a swiveled roller near the top of the mast, a swiveled roller mounted remote from the car, a housing on top of the mast, a series of rollers in the housing, a stationary support remote from the car, a cable passing from one of the drums through the openings and over the aforesaid rollers, guy ropes for the mast, a carriage mounted on the cable, and cables coöperating with the other drums of the hoisting engine and the carriage to lift and transport logs.

4. In combination, a mast formed with an opening at its bottom, a base collar secured to said mast, a plate on which the base collar is hinged, means for locking the base collar and mast in vertical position, a base on which the plate revolves, a flange on the base to hold and guide the plate in position, a cap on the mast, said cap having a housing in which is mounted guide rollers, a trunnion projecting from the housing, and a guide loosely mounted on the trunnion.

5. In combination, a base formed with an opening, a plate mounted above the base, and formed with an opening, anti-friction rollers between the base and the plate, a mast hinged to the plate, a locking device for holding the mast in vertical position, a cap on top of the mast, said cap comprising two spaced apart members, a cap portion, and a trunnion, rollers mounted between the two spaced apart members, one of said rollers being higher than others, a guy cable support loosely mounted on the trunnion, and rollers on the mast to guide a cable to the rollers in the housing.

[Claims 6 to 11 not printed in the Gazette.]

1,015,104. ELEVATING-TRUCK. DAVID M. WADLINGTON, Goree, Tex. Filed June 9, 1911. Serial No. 632,225. (Cl. 187—10.)



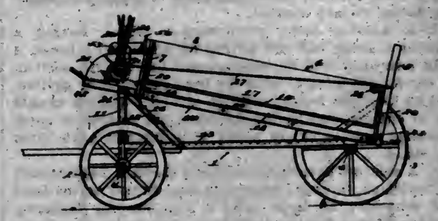
1. An elevating apparatus comprising an inclined track, a carriage mounted for travel thereon, a hoisting device connected to the carriage, a tilting load carrier mounted on the carriage, said load carrier comprising spaced longitudinal bars pivotally connected to the upper end of the carriage and normally supported on top of the carriage, a portion of the side bars projecting beyond the upper end of the carriage, a latch for locking the load carrier, and a trip extending from the track into the path of the latch for releasing the same.

2. An elevating apparatus comprising an inclined track, a carriage mounted for travel thereon, said carriage comprising spaced longitudinal side bars extending parallel to the track and connected by cross bars, a hoisting device connected to the carriage, a latch carried by one of the longitudinal bars of the carriage, a tilting load carrier mounted on the carriage, said load carrier comprising spaced longitudinal bars supported on and pivotally connected to the side bars of the carriage at the upper ends thereof, a keeper on the load carrier for the aforesaid latch, and a trip extending from the track into the path of the latch for releasing the same.

3. An elevating apparatus comprising an inclined track, a carriage mounted for travel thereon, said carriage comprising spaced longitudinal side bars extending parallel to the track and connected by cross bars, a hoisting device connected to the carriage, a tilting load carrier mounted on the carriage, said load carrier comprising spaced longitudinal bars supported on and pivotally connected to the side bars of the carriage at the upper ends thereof, a latch for locking the load carrier to the carriage, and a trip extending from the track into the path of the latch for releasing the same.

1,015,105. DUMPING-WAGON. JAMES WATSON, Wilmington, Del. Filed July 27, 1911. Serial No. 640,556. (Cl. 298—20.)

1. A body for dumping wagons provided with a movable bottom, an inclined track along which the same is adapted to travel, and a pair of movable sides, means for moving said bottom in one direction along said track, and means for simultaneously moving said sides toward or from each other.



2. A body for dumping wagons provided with a pair of movable sides, a downwardly inclined track, a movable end gate located at the lower end of the track, and a movable bottom adapted to travel along said track and onto and across said gate when the latter is lowered, separate mechanisms for raising said bottom and said gate, and means for simultaneously moving said sides toward or from each other.

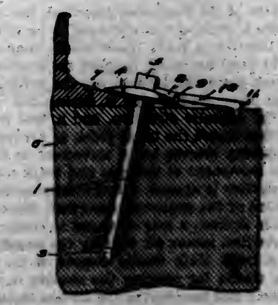
3. A body for dumping wagons provided with a downwardly inclined track, a movable end gate located at the lower end thereof, and a movable bottom adapted to travel along said track and onto and across said gate when the latter is lowered, a brake for controlling the downward movement of said bottom, and means for returning said bottom to its initial position.

4. A body for dumping wagons provided with a downwardly inclined track, a movable end gate located at the lower end thereof, and a movable bottom adapted to travel along said track and onto and across said gate when the latter is lowered, a rotary element located at the front end of the wagon body, flexible connecting means between said element and said bottom, a lever for rotating said element to wind up said connecting means thereon and raise said bottom, and a brake device operatively connected to said lever for controlling the downward movement of said bottom.

5. A body for dumping wagons provided with a pair of movable sides, a lever pivoted to the front member of said body and connected with said sides for simultaneously moving the same toward or from each other, and separate retaining devices carried by said front member for engagement with said lever, to hold the latter in its normal and actuated positions.

[Claim 6 not printed in the Gazette.]

1,015,106. SPIKE. GEORGE WEBER, Mount Vernon, N. Y. Filed Sept. 25, 1911. Serial No. 651,176. (Cl. 85—23.)



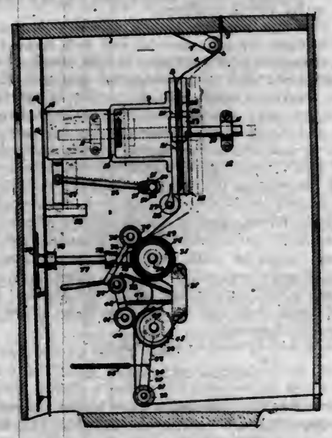
1. A fastening device, comprising a shank, an enlarged head formed on one end thereof, the other end of said fastening device tapering to an entering point, said head having a squared upstanding portion projecting therefrom and having an upwardly projecting ear formed integral with the head and squared portion, a bar having one end pivotally secured to said ear, and a triangular shaped point

formed on the bar at right angles to the body of the bar to engage the member in which the securing device is engaged at a different point and angle to retain the securing device in said member.

2. A securing device comprising a shank having a pointed entering end and having its other end squared, a head formed around the shank below the squared portion, an ear formed integral with the head and squared portion, and an L-shaped locking member pivotally secured to said ear at one end and having its other end pointed to enter the same member as the shank at a different angle from the shank.

3. A securing device, comprising a shank, a head formed on the shank, laterally projecting ears formed on the head and connected at their base, a supplemental fastening member passing downward through the portion connecting the base of the ears, a pivot engaged in the ears, an L-shaped locking member pivotally mounted on the pivot, and a bolt passed through the ears above said locking member whereby the locking member and its pivot prevent upward movement of the supplemental securing device and the bolt prevents upward movement of the locking member on its pivot.

1,015,107. MOVING-PICTURE APPARATUS. JAMES F. WHITFIELD, San Francisco, Cal., assignor to E. C. Miles, San Francisco, Cal. Filed May 10, 1911. Serial No. 626,167. (Cl. 88—17.)



1. In a machine of the character described, the combination of a movable shutter, a lens arranged to reciprocate to and from said shutter, a track plate fixedly connected to, and behind, said lens, means for opening the shutter in the line of said track plate and lens during the motion in one direction of the latter and closing it during the whole of the motion in the opposite direction, and a feed roller for drawing the ribbon across the track plate, so arranged that the ribbon in passing thereto has a movement in the same direction as the movement of the lens and track plate during which the shutter is opened, substantially as described.

2. In a machine of the character described, the combination of a movable shutter, a lens arranged to reciprocate to and from said shutter, means for varying the length of said reciprocation, a track plate fixedly connected to, and behind, said lens, means for opening the shutter in the line of said track plate and lens during the motion in one direction of the latter and closing it during the whole of the motion in the opposite direction, and a feed roller for drawing the ribbon across the track plate, so arranged that the ribbon in passing thereto has a movement in the same direction as the movement of the lens and track plate during which the shutter is opened, substantially as described.

3. In a machine of the character described, the combination of a movable lens, a track plate fixedly connected to the lens, a movable shutter, a movable feed device for a ribbon adapted to move on said track plate, and means for moving in harmony said elements, whereby, during a portion of the motion, the feed device is inoperative to move said ribbon on the track plate and the shutter is inoperative to prevent rays of light passing from the lens on the track plate, and, during the remainder of said motion, the feeding device and shutter are both so operative, substantially as described.

1,015,108. KNITTING-MACHINE NEEDLE. LOUIS N. D. WILLIAMS, Ogontz, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Sept. 19, 1910. Serial No. 582,697. (Cl. 66—5.)

1. A knitting machine needle having a pivot member consisting of a circular block secured to the stem of the needle.

2. A knitting machine needle having a pivot member consisting of a circular block with transverse groove therein, the stem of the needle being secured in said groove.

3. A knitting machine needle having a pivot member consisting of a block with transverse groove which receives the stem of the needle, said stem being secured in the groove by a displaced portion of the metal of the block.

4. A knitting machine needle having a pivot member consisting of a block with transverse groove which receives the stem of the needle, said stem being secured in the groove by a displaced portion of the metal of the block on each side of the groove.

5. A knitting machine needle having a pivot member consisting of a block with transverse groove which receives the stem of the needle, said stem being secured in the groove by a displaced portion of the metal of the block, said displaced metal overlapping the stem of the needle.

[Claims 6 to 14 not printed in the Gazette.]

1,015,109. KNITTING-MACHINE NEEDLE. LOUIS N. D. WILLIAMS, Ogontz, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Sept. 19, 1911. Serial No. 650,125. (Cl. 66—5.)

1. A knitting machine needle having a pivot member consisting of a cupped disk, and a second disk secured within the cupped disk, and engaging the shank of the needle.

2. A knitting machine needle having a pivot member consisting of a cupped disk, and a second disk secured within said cupped disk, and having a portion overlying the shank of the needle so as to press the same against the back of the cupped disk.

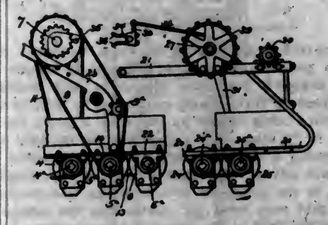
3. A knitting machine needle having a pivot member consisting of a cupped disk, and a second disk secured within said cupped disk, and having a portion overlying the shank of the needle so as to press the same against the base of the cupped disk, and also having a portion engaging the shank of the needle to prevent longitudinal movement of the same in respect to the pivot member.

4. A knitting machine needle having a pivot member consisting of a cupped disk, and a second disk engaging the shank of the needle and located within said cupped disk, the two disks being connected together by spot-welding whereby the temper of the needle shank is not destroyed by the heat of the welding operation.

5. A knitting machine needle having a pivot-member consisting of a cupped disk, and a second disk secured within said cupped disk and having a hood for the reception of the needle shank which is confined between the two disks.

[Claims 6 to 8 not printed in the Gazette.]

1,015,110. ATTACHMENT FOR POTATO-DIGGERS. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed Sept. 9, 1910. Serial No. 581,307. (Cl. 56—51.)



1. The combination of a potato digging machine having a series of disk carrying shafts located one behind another and gearing for driving said shafts with an attachment also provided with a series of disk carrying shafts one behind another, means for connecting the frame members of said attachment to corresponding frame members of the machine, and gearing whereby the disk carrying shafts of said attachment are operated from a driven shaft of the main machine.

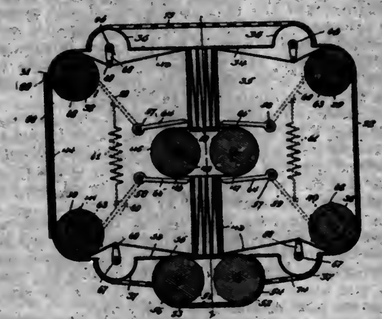
2. The combination of a potato digging machine having a series of disk carrying shafts located one behind another and gearing for driving said shafts, an attachment also provided with a series of disk carrying shafts located one behind another and with a crank shaft carrying a pivoted pusher bar, means for connecting the frame members of the attachment to corresponding frame members of the main machine, gearing for driving the disk carrying shafts of the attachment from a driven shaft of the main machine, and means for connecting the pusher bar of the attachment to a fixed member of the main machine.

3. An attachment for potato digging machines, said attachment having frame members for connection to the main frame of the machine and being provided with a plurality of disk-carrying shafts and with a crank shaft carrying a pivoted pusher bar, and means for connecting a member of the attachment to the fixed frame of the machine, said means including a bracket having a clamp for securing the same to a bar of the machine and a brace for bearing upon a shaft of said machine.

4. An attachment for potato digging machines, said attachment having frame members for being secured to the fixed frame of the machine and being provided with a plurality of disk-carrying shafts, a crank shaft, a sprocket wheel thereon, and an idler for directing the sprocket driving chain.

5. An attachment for potato digging machines, said attachment having frame members for connection with the fixed frame of the machine, and a plurality of disk-carrying shafts, said frame members being projected in the rear of said shafts for receiving the bearings of another disk-carrying shaft.

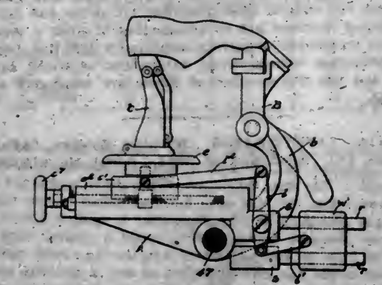
1,015,111. STREET-INDICATOR FOR CARS. HERMANN WILMS, East Pittsburgh, Pa. Filed Feb. 28, 1911. Serial No. 611,364. (Cl. 40—57.)



1. In a street car indicator, a casing having a window, feed rollers revolubly mounted in said casing, an endless flexible sectional apron adapted to be shifted past said window by said feed rollers and having sections thereof folded in said casing, a motor carried by said casing and adapted to revolve said feed rollers, a trolley attachment adapted to control the operation of said motor, and means including belts for moving the folded sections of said apron within said casing.

2. In a street indicator for cars, a casing having a window, feed rollers arranged in said casing, an endless sectionad apron adapted to be shifted by said rollers past said window and having sections thereof folded in said casing, endless belts supporting the folded sections of said apron within said casing, holding members movably arranged within said casing for retaining said sections upon said belts and adapted to be actuated by a movement of said feed rollers, and means including a motor adapted to operate said feed rollers and said belts.

1,015,112. SHOE-JACK. ERASTUS EDWIN WINKLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 18, 1910. Serial No. 572,412. (Cl. 12—127.)



1. A last supporting jack, having, in combination, a freely pivoted base portion having rising directly therefrom suitable heel and toe supports, one of said supports being adjustable relatively to the other, and means controlled by the movement of the adjustable support for effecting a substantially even distribution of the weight about the pivotal point for all positions of adjustment of said supports, substantially as described.

2. A pivotally mounted last supporting jack, having, in combination, heel and toe supports, said heel support being at one side of the pivotal point and adjustable toward and from the toe support, a movable counter-balance weight at the other side of the pivotal point, and suitable connections between the heel support and weight to cause

the weight to move oppositely to the direction of movement of the heel support whenever it is adjusted, substantially as described.

3. A pivotally mounted last supporting jack, having, in combination, heel and toe supports, one of said supports being adjustable relatively to the other, a movable counter-balance weight, a lever of the first class between said adjustable support and weight, and separate links connecting one end of the lever to the support and its other end to the weight, substantially as described.

4. A pivotally mounted last supporting jack, having, in combination, a toe post, a heel post adjustable toward and from the toe post, a counter-balance weight also adjustable toward and from the toe post, and a single means for adjusting said heel post and weight both toward and away from said toe post, substantially as described.

5. A last supporting jack, having, in combination, a base portion freely pivoted on a transverse axis and having mounted directly thereon means to accommodate shoes of varying sizes, and means to counter-balance the weight of the jack about the pivotal point whatever the size of shoe on the jack, substantially as described.

[Claim 6 not printed in the Gazette.]

1,015,113. TIRE. AUGUAT E. WINTER, Franklin, Pa. Filed Mar. 22, 1910. Serial No. 550,896. (Cl. 152—8.)

1. A resilient, metallic tire for vehicle wheels, consisting of the combination of flat strips and round members interwoven into a fabric, said fabric being formed into a longitudinal, endless semi-roll, tire rings to which the respective edges of said fabric are attached, and transverse strips conecting said rings, in combination with a wheel, to the rim of which said rings are removably secured.

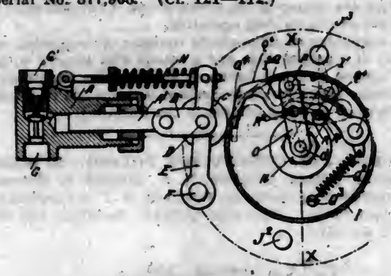
2. A resilient tire for vehicle wheels, consisting of a fabric composed of flat strips extending longitudinally of said tire, flat strips transversely interwoven with said longitudinal strips, round members diagonally interwoven with said longitudinal and transverse strips, tire rings to which the ends of said transvere flat strips and diagonal round members are so attached as to form a semi-roll, and transverse connecting members for said tire rings, in combination with a wheel, to the rim of which said rings and the thereto-attached fabric are removably attached.

1,015,114. SAFETY-RAZOR. WILLIAM WINTER, Indianapolis, Ind. Filed Mar. 30, 1911. Serial No. 617,959. (Cl. 30—12.)

1. A safety razor incinding a relatively fixed frame plate, a blade holding plate adapted to slip longitudinally into connection with said frame plate so as to be flexibly mounted with relation thereto, and means at each lateral edge of the blade holding plate for clamping said two plates together for holding the blade between them.

2. A safety razor including a handle, a loop-like frame of spring metal with one member of said frame secured to the handle and the other member forming a plate and said frame at the union between the members thereof being substantially more than semi-circular in form, and a blade holding plate with one edge formed substantially circular and adapted to slip longitudinally into the circular part of the frame and be held thereby and pivotally movable therein, and spring catches at each side of said blade holding plate adapted to clasp the frame plate for holding the blade.

1,015,115. MEANS FOR OPERATING OIL-ENGINES. LEON WYGODSKY, New York, N. Y. Filed Aug. 19, 1910. Serial No. 577,965. (Cl. 121—112.)



1. A governor comprising a casing having a circular periphery provided with an opening, a fly-weight hinged to said casing a cam-lever hinged to said casing from another portion thereof and controlled by said fly-weight, the cam-face being formed as an arc of a circle the center of which is its hinge, and projecting through said opening in the casing a distance depending on the speed of the casing, and having the periphery of the cam disposed at an angle to the periphery of the casing, and means operated by said cam lever for controlling the admission of the operating fluid to the cylinder of an engine.

2. A governor comprising a casing having a circular periphery provided with an opening, a plurality of fly-weights coupled together in coöperative engagement, each of which is hinged to said casing, a cam-faced lever hinged to said casing and controlled by said fly-weights, said cam-face being formed as an arc of a circle having same center with its hinge and projecting through said opening in the casing a distance depending on the speed of the casing, and having the periphery of the cam disposed at an angle to the periphery of the casing, and means operated by said cam-lever for controlling the admission of the operating fluid to the cylinder of an engine.

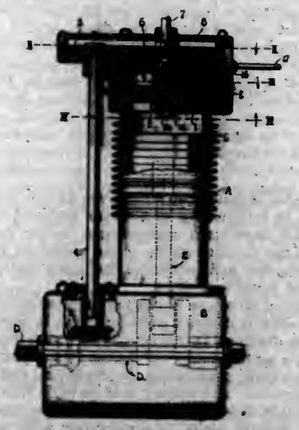
3. A governor comprising a casing having a circular periphery provided with an opening, a fly-weight hinged to said casing, a cam-lever hinged to said casing and controlled by said fly-weight, said cam-face being formed as an arc of a circle the center of which is in line with the axis of its hinge and projecting through said opening in the casing a distance depending on the speed of the casing, and having the periphery of the cam disposed at an angle to the periphery of the casing, and means operated by said cam-lever for controlling the admission of the operating fluid to the cylinder of an engine.

4. A governor comprising a casing having a circular periphery provided with an opening, a fly-weight hinged to said casing, a cam-faced lever hinged to said casing and controlled by said fly-weight, said cam-face being formed as an arc of a circle having same center with its hinge and projecting through said opening in the casing a predetermined distance depending on the speed of the casing, and having the periphery of the cam disposed at an angle to the periphery of the casing, means for holding the cam in a fixed position when the casing is rotating in one direction and for permitting the cam to be pressed into said casing when rotating in the opposite direction, and means operated by said cam-lever for controlling the admission of the operating fluid to the cylinder of an engine.

5. A governor comprising a casing having a circular periphery provided with an opening, a plurality of fly-weights hinged together at points diametrically opposite to each other and near the periphery thereof, a coupling rod connecting said fly-weights in pivotal relation therewith, a cam-face lever hinged to said casing near one end thereof, said cam-face being formed in an arc of a circle the center of which is the pivotal point and projecting through said opening in the casing, a radial lever pivoted at one of its ends to said casing and carrying a projection or finger at its opposite end which contacts with the said cam-lever and its guiding surface, a link connecting said fly-weights with said radial lever, the circular face of said cam-face lever being arranged at an angle to the periphery of said casing, and means operated by said cam-lever for controlling the admission of the operating fluid to the cylinder of an engine.

[Claims 6 to 16 not printed in the Gazette.]

1,015,116. EXPLOSIVE-ENGINE. SAMUEL YBARRA, St. Louis, Mo. Filed Feb. 27, 1911. Serial No. 611,186. (Cl. 136—7.)



An explosive engine comprising a cylinder having a head provided with ports, a valve rotatably fitted to the inner face of said head and adapted to open and close one of said ports, and a shaft fixed to said valve, a duct being formed in said shaft and valve, said duct leading to the top face of the valve, the cylinder head having a passageway adapted to register with said duct, said duct and passageway providing a channel through which oil may be conducted from the exterior of said cylinder head to the top face of the rotatable valve.

1,015,117. CRANK-SHAFT LATHE. HENRY P. ARNHOLD and ADAM P. WITTEMAN, Philadelphia, Pa.; said Arnhold assignor to said Witteman. Filed July 20, 1910. Serial No. 572,921. (Cl. 82—9.)

1. In apparatus of the character stated, a rotating face-plate having on one face circularly and radially adjustable means for eccentrically supporting a crank-shaft to have a crank-pin concentric with it, and a circularly and radially adjustable counter-weight on the opposite face of said face plate, such circular adjustment extending entirely around the face of the face-plate.

2. In apparatus of the character stated, a rotating face-plate having circularly and radially adjustable means on one face for eccentrically supporting a crank-shaft to have a crank-pin concentric with it and having an annular undercut groove in its opposite face extending entirely around and concentric with the same, a weight having slots parallel with each other and with a radius of the face-plate, and bolts having their heads engaging and sliding in the annular groove and projecting through the slots and having nuts clamping the weight against the face of the face-plate.

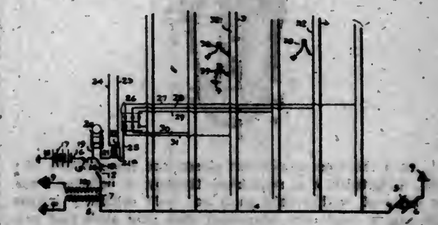
3. In apparatus of the character stated, an annular rotating head, and cheek-clamping jaws circularly and radially adjustable upon the face of and in their relation to the center of the same.

4. In apparatus of the character stated, an annular rotating head, jaw supports secured to be circularly adjustable upon one face of said head, and cheek-clamping jaws secured to be radially adjustable upon said supports.

5. In apparatus of the character stated, an annular rotating head formed with an annular undercut groove in one face, supports having radial grooves in their outer faces, headed bolts having their heads engaging and sliding in said annular groove and passed through holes in the supports and provided with nuts clamping said supports, cheek-supporting jaws having tongues engaging and sliding in the grooves in the supports and formed with parallel slots, and bolts in the supports and passing through the slots and having clamping nuts securing said jaws.

[Claims 6 to 8 not printed in the Gazette.]

1,015,118. THERMOSTATIC ALARM SYSTEM. WILLIAM GEORGE ASMUS, Cleveland, Ohio. Filed Dec. 21, 1910. Serial No. 598,537. (Cl. 178—160.)



1. In a thermostatic alarm system, the combination of a car, a trolley carried by said car and normally used for supplying current for propelling said car, a thermostatic circuit closer mounted upon said car and connected with said trolley, a trolley wire to be normally engaged by said trolley, a signal wire disposed adjacent to said trolley wire and adapted to be engaged by said trolley when said car is not in active service, and alarm mechanism connected with said signal wire and controllable by said circuit closer mounted upon said car.

2. A thermostatic alarm system, comprising a car movable in a general direction, a trolley wire extending in a direction substantially parallel to that in which said car travels, a signal wire disposed adjacent to said trolley wire and substantially parallel therewith, a trolley carried by said car and controllable at the will of the operator for engaging either said trolley wire or said signal wire, a thermostatic circuit closer carried by said car and connected with said trolley, and electrically-operated alarm mechanism connected with said signal wire and controllable by said circuit closer.

3. A system of the character described, comprising a car movable in a general direction, a signal conductor

extending generally in a direction parallel with the path of travel of said car, a trolley carried by said car and adapted for engagement with said signal conductor, a thermostatic circuit closer carried by said car and connected with said trolley, an electrically-operated alarm mechanism located at a distance and connected with said signal conductor, said alarm mechanism being controllable by said circuit closer.

4. In a system of the character described, the combination of a trolley wire, a circuit for energizing the same, a transformer connected with said circuit, a signaling circuit connected with said transformer and energized inductively from said first-mentioned circuit, a movable car, a thermostatic circuit closer carried thereby, means for temporarily connecting said thermostatic circuit closer with said signaling conductor, and an alarm operated electrically and connected with said signaling circuit and controllable by said thermostatic circuit closer.

5. The combination of an electrically-operated vehicle adapted to travel in a certain path, a trolley wire disposed substantially parallel with said path for supplying current for propelling said vehicle, a signal wire likewise disposed substantially parallel with the path of travel of said vehicle, a trolley carried by said vehicle and adapted to engage either said trolley wire or said signal wire at the will of the operator, means for supplying current to said trolley wire for the purpose of propelling said vehicle, a distant alarm connected with said signal wire, and a thermostatic circuit closer mounted upon said car and connected with said trolley.

1,015,119. THERMOSTATIC CIRCUIT-CLOSER. WILLIAM GEORGE ASMUS, Cleveland, Ohio. Filed Dec. 21, 1910. Serial No. 598,538. (Cl. 177—303.)

1. In a thermostatic circuit closer, the combination of a shell, a metallic cup supported thereby, a tubular member disposed within said shell and held centrally within said cup, a conductor connected with said shell and provided with a portion extending through said tubular member and reaching to a point adjacent to the bottom of the cup, another conductor also extending through said tubular member and reaching to a point adjacent to the bottom of said cup, a member of fusible metal encircling said tubular member and encircled by said cup, said member of fusible metal being adapted to melt and close a circuit from one of said conductors to the other, and a contact member connected with said last-mentioned conductor.

2. A thermostatic circuit closer, comprising a screw plug of the type generally used for incandescent lamps and provided with inside and outside contact members, a cup mounted upon said screw plug, contact conductors connected respectively with said inside and outside contact members and extending into said cup, and a member of fusible metal mounted within said cup and adapted when melted to establish metallic communication from one of said conductors to the other.

3. A thermostatic circuit closer, comprising a shell made of sheet metal and having generally the form of a hollow screw, a filling mounted within said shell, a contact member carried by said filling and insulated thereby from said shell, a cup mounted upon said shell, separate conductors connected with said shell and with said contact member and extending within said cup to a point adjacent to the bottom thereof, and a member of fusible metal disposed within said cup and normally held out of engagement with said conductors, said member of fusible metal being adapted upon melting to form a metallic connection from one of said conductors to the other.

4. In a thermostatic circuit closer, the combination of a cup, a supporting member disposed within said cup and provided with a head resting upon the bottom of said cup, a plurality of conductors extending through said supporting member to points adjacent to the bottom of said cup, and a fusible member located adjacent to said supporting member and adapted when fused to flow into the bottom of said cup and engage both of said conductors.

1,015,120. TUBULAR STRUCTURE AND PROCESS OF MAKING THE SAME. LEONARD ATWOOD, Philadelphia, Pa., assignor, by direct and mesne assignments, to Tubular Construction Company, a Corporation of New Jersey. Filed Jan. 7, 1907. Serial No. 351,126. (Cl. 137—90.)

1. A tubular structure of interwoven fibrous and metallic strands, in combination with means designed to render the structure impervious comprising a sealing compound forced into the fibrous strands of the structure, penetrating, impregnating and combining the same together, and coating said metallic strands.

2. A tubular structure consisting of interwoven fibrous warps and spirally disposed metallic wefts, in combination with means designed to render the structure impervious comprising a sealing compound forced into the strands of the fibrous warps, penetrating, impregnating and uniting the same together, and coating said metallic wefts.

3. A tubular structure consisting of interwoven fibrous warps and metallic wefts, in combination with means designed to render the structure impervious comprising a sealing compound having rubber as a base forced into and between the strands of the fibrous warps, penetrating, impregnating and uniting the same together, and coating said metallic wefts.

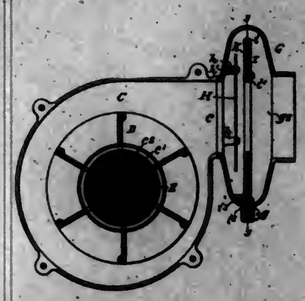
4. As a new article of manufacture, a yielding impervious tubular structure having a base of interwoven fibrous and metallic strands combined with a sealing compound penetrating, impregnating and uniting the fibrous portions of said structure and coating the metallic strands of the same.

5. As a new article of manufacture, a yielding impervious tubular structure having a base of interwoven fibrous and metallic strands combined with a sealing compound penetrating, impregnating and uniting the fibrous portions of said structure and coating the metallic strands, said compound comprising a mixture of rubber, white lead and zinc sulfid.

[Claims 6 and 7 not printed in the Gazette.]

1,015,121. HAIR-DRIER. ALFRED BARKER, Philadelphia, Pa., assignor to James Barker, Philadelphia, Pa. Filed June 20, 1911. Serial No. 634,239. (Cl. 34—26.)

1. The combination in a hair drier, of a blowing chamber; a blower therein; a heating chamber having an opening communicating with the blowing chamber; an electric heater mounted within the heating chamber; and a deflector also within the heating chamber between the opening from the blowing chamber and the electric heater, said deflector being of greater diameter than the opening, whereby the air is deflected as it passes into the heating chamber, causing it to come in close contact with the electric heater.



2. The combination in a hair drier of a blower casing; a fan therein; means for admitting air to the blower casing and having a passage leading from the casing; an electric motor for driving said fan; a heating chamber connected to the outlet end of the blower chamber; an annular electric heater mounted in said chamber; said heater consisting of inner and outer rings; with electric wires laced on said rings; a deflector within the heating casing; studs carrying said deflector; said deflector being of greater diameter than the opening from the blower chamber whereby the air will be deflected as it is forced through the apparatus and caused to circulate through the heating chamber in contact with the electric wires.

3. The combination in a hair drier of a casing; an inlet and an outlet for the said casing; an electric motor; the shaft of the motor extending into the casing; a fan mounted on the shaft within the casing; a two-part heating chamber transversely arranged and secured to the outlet end of the blower casing; an annular electric heater secured within the casing; a deflector mounted between the heater and the outlet from the blower chamber so as to deflect the air as it enters the heating chamber; a flexible tube; with means for supporting the tube in any position to which it is adjusted; and an electric switch; with wiring connecting the switch to the motor and to the electric heater.

4. The combination in a hair drier, of a blower casing; a blower therein; means for driving the blower; a heating chamber having an opening forming a communication with the blowing chamber; said heating chamber being of greater diameter than the opening; with a flat electric heater, consisting of inner and outer rings with electric wires laced thereon; and a deflector mounted between the opening leading from the blowing chamber and the electric heater, whereby the air, as it is forced from the blowing casing, will be deflected and will pass in close contact with the wires of the electric heater.

1,015,122. MOVING ADVERTISING-MACHINE. WILLIAM W. BATES, Sedgwick, Kans. Filed July 2, 1910. Serial No. 570,152. (Cl. 116—33.)

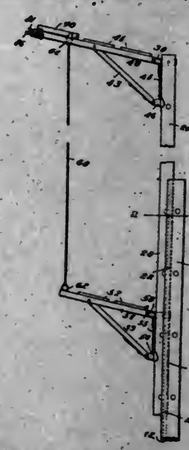
1. In a machine of the character described, the combination of a support; a series of brackets adjustably mounted on said support, bells carried by said brackets, trip arms pivoted on said brackets adjacent said bells, a movable element carrying spring hammers to co-act with said trip arms and bells, and stops for limiting the downward movement of said trip arms.

2. In a machine of the class described, the combination of a support, a series of brackets mounted on said support, bells arranged on said brackets, trip elements pivoted on said brackets, a movable element carrying hammers to contact with said bells and trip elements, and means for limiting the downward movement of said trip elements.

3. In a machine of the class described, the combination of a support, a series of substantially Z-shaped brackets adjustably mounted on said support with the intermediate portions thereof disposed horizontally and their ends arranged vertically the free ends depending, bells arranged on the depending ends of said brackets, and a movable element carrying hammers to coact with said bells, trip arms pivoted on said brackets and extending normally into the path of the said hammers, and means for limiting the downward movement of the said trip arms.

4. In a machine of the class described, the combination of a support, a series of substantially Z-shaped brackets adjustably mounted on said support with the intermediate portions thereof disposed horizontally, and their ends arranged vertically the free ends depending, bells arranged on the depending ends of said brackets, a movable element carrying hammers to coact with said bells, trip arms pivoted on said brackets and extending normally into the path of the said hammers, and lugs arranged in the path of said trip arms for limiting their downward movement.

1,016,123. LADDER. MARTIN BAUER, Cleveland, Ohio. Filed Feb. 10, 1911. Serial No. 607,867. (Cl. 228—24.)



1. In an extension ladder, the combination, with a supporting ladder, of an extension therefor and longitudinally adjustable therealong, and a pair of platforms secured to the extension at distant points, whereby such platforms will be maintained at a fixed distance from each other irrespective of their position with regard to said supporting ladder.

2. In a device of the character described, the combination, with a supporting member adapted to be set up in an inclined position adjacent to the wall of a building, of an extension therefor and longitudinally adjustable therealong, and a pair of platforms secured to said extension at distant points whereby said platforms will be maintained at a fixed distance from each other in all positions in which said extension may be placed, the vertical dis-

tance between said platforms being not less than the height of a man.

3. In a device of the character described, the combination, with a lower ladder section, of an upper ladder section extendably mounted thereon, a pair of platforms hinged to said upper ladder section, and rigid means pivotally connected with each of said platforms adjacent to their rear ends, said platforms being spaced apart not less than the height of a man.

4. The combination of a ladder, a platform hinged to the rear side thereof, means for holding the platform projecting from the ladder, a pair of bars pivoted to the platform near its rear end, and means for holding said bars extended laterally from the platform or folded along the platform.

5. The combination of a ladder, a platform hinged to the rear side thereof, means for supporting said platform extended, means for enabling it to be folded against the ladder, a pair of bars carried by the platform, said bars being adapted to extend laterally in opposite directions, means for holding the bars when so extended, the bars being adapted to be folded inwardly over the platform.

[Claims 6 to 8 not printed in the Gazette.]

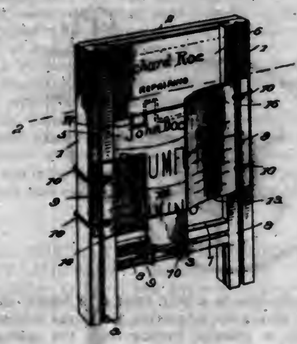
1,015,124. ADJUSTABLE AXLE-NUT. LARKIN BECK, Kirtland, N. Mex. Filed May 5, 1911. Serial No. 625,180. (Cl. 21—30.)

In combination, an axle having a screw-threaded portion extending from one end thereof, a nut in screw-threaded engagement with said portion, said nut having a countersunk portion adjacent said axle, a series of washers disposed in said countersunk portion, bearing against the end of said axle, the pitch of the threads on said portion being equal to the thickness of each of said washers, said portion having a longitudinal slot in the side thereof adjacent its outer end, and a pin carried by said nut engaging said slot, whereby as the washers are removed in succession, one rotation of the nut on the portion will bring said pin and slot in alinement to lock the nut in position.

1,015,125. ADJUSTING MEANS FOR TROUSERS. ARTHUR E. BENNETT, Garnett, Kans. Filed July 18, 1910. Serial No. 572,579. (Cl. 2—143.)

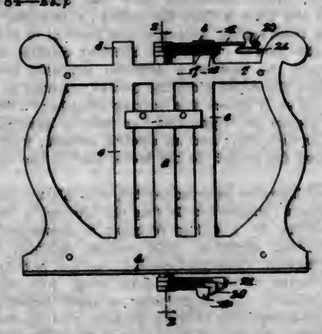
A pair of trousers of the character described formed with a split at the waist line at each side thereof, and formed at that point with a pair of overlapping flaps, a reinforcing strip attached to the inner side of the inner flap and extending to the end thereof, hooks on said inner flap for engagement with the inner side of the waist of said trousers, a buckle secured to the trousers adjacent said split, and a strap secured to the outer overlapping flap, said strap being widened at its secured end to provide a larger securing surface and tapering toward its free end, and adapted to be fastened to said buckle.

1,015,126. SIGN-FRAME. HARRY BENNEWIS, Philadelphia, Pa. Filed Oct. 19, 1910. Serial No. 586,602. (Cl. 40—63.)



A sign support consisting of two vertical members and two transverse members, grooves on the inward side of the said vertical members for the reception of a sign, the lower transverse member adapted to support the sign, grooves on the front sides of both the vertical and lower transverse members, and means cooperating with each of the said grooves for holding additional signs, substantially as described.

1,015,127. MUSIC-LEAF TURNER. JOHN A. BENTZ, Harrisburg, Pa. Filed Jan. 7, 1911. Serial No. 601,305. (Cl. 84—17.)



1. In a leaf turner, a music rack, leaf turning elements rotatably mounted thereon, means connected with said elements for independently turning the same, a spring operated book clamp mounted upon the rack, and means forming a part of the clamp for holding certain of the leaf turning elements from rotating while others are being rotated by turning means.

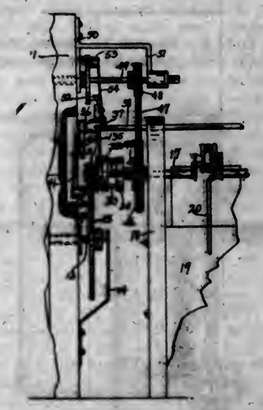
2. In a leaf turner, a music rack, a plurality of leaf turning elements rotatably mounted in the rack, means connected with said elements for turning the same independently of one another, and a spring operated book clamp adjustably mounted upon the rack and having a yoke to hold certain of the elements from turning while others are rotated by said turning means.

3. In a leaf turner, a music rack, a plurality of leaf turning elements carried by the rack, a yoke surrounding certain of said elements, a clamping plate, and spring operated means coacting with the clamping plate and the yoke to hold a book upon the rack and to hold certain of said elements from turning while others are rotated by said turning means.

4. In a device of the class described, the combination with a support, of standards mounted thereon, a music rack mounted thereon, a plurality of concentrically arranged

leaf turning elements journaled in the standards, leaf supporting members carried thereby, means for independently turning said leaf supporting members, a yoke plate surrounding the outside element, a clamping plate bridged across a portion of the rack, resilient means for holding the clamping plate in clamping position and the yoke plate in frictional engagement with the outside element to prevent its turning until positively operated, said plates adjustable over the rack and element.

1,015,128. REWINDING DEVICE FOR PNEUMATIC PIANOS. WILLIAM G. BETZ, Chicago Heights, Ill., assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill., a Corporation. Filed June 12, 1911. Serial No. 632,264. (Cl. 84—106.)



In a pneumatic piano, the combination with a take-up spool shaft, a gear secured thereon, a motor shaft, a sliding pinion mounted loosely thereon so as to be moved into and out of mesh with said gear, a rewind shaft, a brake disk thereon, a sprocket wheel loosely mounted on the motor shaft for driving the rewind shaft, a collar secured on the motor shaft, a pin extending from the pinion thereon that operates in and is slidable through the said collar, a pin on the sprocket wheel of the motor shaft in position to engage the pin extending from the pinion when the latter is moved out of engagement with the gear on the take-up roll shaft, a longitudinally slidable rod having a frame thereon, an arm extending from the frame in position to stop said pinion on said motor shaft, a brake mechanism extending from said frame in position to engage the brake disk on the rewind shaft when said pinion is in mesh with the gear on the take-up roll shaft, and a brake extending from said frame in position to engage the gear on the take-up roll shaft when the pinion is moved out of engagement therewith, substantially as set forth.

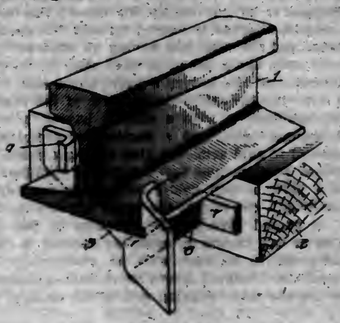
1,015,129. RAIL-ANCHOR. JOHN A. BODKIN, New York, N. Y. Filed June 5, 1911. Serial No. 631,388. (Cl. 238—4.)

1. A rail anchor comprising a yoke, rail-engaging members and a post all cut out of a sheet of steel, the post being bent at an angle to the yoke.

2. A rail anchor comprising a yoke, rail-engaging hooks at the ends of and above the yoke, and a post all cut out of a sheet of steel, the post being bent at an angle to the yoke.

3. A rail anchor comprising a yoke, rail-engaging members and a post all cut out of a sheet of steel, the post being bent at an angle to the yoke, and the free end of the post being bent laterally to form a foot for engaging with a tie.

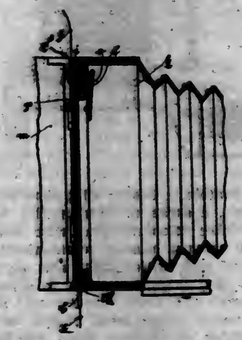
4. A rail anchor comprising a yoke, rail-engaging hooks at the ends of and above the yoke, and a post all cut out of a sheet of steel, the post being bent at an angle to the yoke, and one of the hooks being bent laterally out of the plane of the yoke.



5. A rail anchor comprising a yoke, rail-engaging hooks at the ends of and above the yoke, and the post all cut out of a sheet of steel, the post being bent at an angle to the yoke, said hooks being bent laterally in opposite directions relative to the plane of the yoke.

[Claims 6 to 9 not printed in the Gazette.]

1,015,130. PHOTOGRAPHIC PLATE OR FILM HOLDER AND CAMERA ADAPTED TO RECEIVE THE SAME. SAMUEL KONRAD BOHLIN, Gottenborg, Sweden. Filed Feb. 28, 1911. Serial No. 611,426. (Cl. 95—72.)



1. In a photographic film holder the combination of two bags of a thin material, the one inserted into the other, having the film fastened at one edge to the outer bag, said outer bag being provided with an exposure opening in its front and a slit in its back, and the inner bag provided with a tongue at its lower end and a similar tongue at its top and extending through said slit, both tongues being designed to reach outside a camera when the holder is placed in its proper position in the camera.

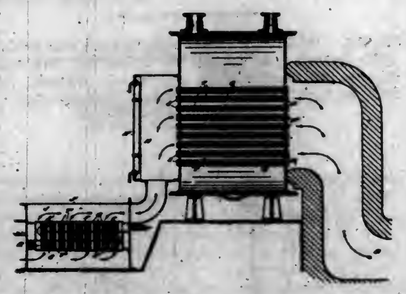
2. In a photographic film holder the combination of two bags made to slide the one into the other, and having the film fastened at one edge to the outer bag, the outer bag having a slit the edges of which are oblique, a tongue projecting from the top end of the inner bag and extending through said slit, a similar tongue projecting from the lower end of the same bag, both tongues being designed to reach outside a camera when the holder is placed in the same.

3. A photographic plate or film holder comprising bags made to slide one within the other; the inner bag having tongues and the outer bag having a slit for the passage of one tongue and also having an exposure opening and a sleeve above said opening; said sleeve being formed of a flap displaced in the provision of the opening which flap is bent up and secured to the major portion of the outer bag.

4. The combination with a camera having a swinging arm and a portion opposed to said arm and also having openings and a door; of a plate or film holder comprising bags arranged to fit one within the other; the inner bag having tongues adapted to extend through the openings of the camera, and the outer bag having an exposure opening in its front wall, and a slit in its back wall for the passage of one tongue, and also having a sleeve above said exposure opening receiving the said swinging arm of the camera.

5. The combination with a camera having a swinging arm, of channel form, and a portion, of complementary form, opposed to said arm, and also having a guide rail on said opposed portion, and further having openings and a door; of a plate or film holder comprising bags arranged to fit one within the other; the inner bag having tongues adapted to extend through the openings of the camera, and the outer bag having an exposure opening in its front wall, and a slit in its back wall for the passage of one tongue, and also having a sleeve above said exposure opening receiving the said swinging arm of the camera.

1,015,131. MEANS AND APPARATUS FOR THE GENERATION OF STEAM. WILLIAM ARTHUR BONE and JAMES WILLIAM WILSON, Leeds, and CYRIL DOUGLAS MCCOURT, London, England. Filed Apr. 25, 1911. Serial No. 623,179. (Cl. 122—4.)



1. In water heaters, a heater inlet chamber adapted to receive hot gases, a series of substantially vertically arranged heater tubes communicating with said heater inlet chamber, an exhaust passage communicating with the discharge end of said heater tubes and an exhaust fan connected with said exhaust passage to draw the cooled gases therethrough and down through said heater tubes, each of said heater tubes being packed with granular refractory material of between about one-half and one inch mesh and means including a series of horizontal baffles to pass the feed water through said heater around said tubes in a sinuous direction.

2. In water heaters, a heater inlet chamber adapted to receive hot gases, a series of substantially vertically arranged heater tubes communicating with said heater inlet chamber, an exhaust passage communicating with the discharge end of said heater tubes and an exhaust device connected with said exhaust passage to draw the cooled gases therethrough and down through said heater tubes, each of said heater tubes being packed with granular material of between about one-half and one inch mesh and means to pass the water through said heater around said tubes in a sinuous upward direction.

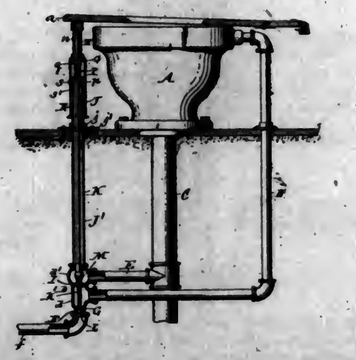
3. In water heaters, a heater inlet chamber adapted to receive hot gases, a series of substantially vertically arranged heater tubes communicating with said heater inlet chamber, an exhaust passage communicating with the discharge end of said heater tubes and an exhaust device connected with said exhaust passage to draw the cooled gases therethrough and down through said heater tubes, each of said heater tubes being packed with granular material and means to pass the feed water through said heater around said tubes in a sinuous upward direction.

4. In water heaters, a heater inlet chamber adapted to receive hot combustion gases, a series of heater tubes communicating with said heater inlet chamber, an exhaust passage communicating with the discharge end of said water tubes and an exhaust device connected with said exhaust passage to draw the cooled gases therethrough and through said heater tubes, each of said heater tubes being packed with granular material and means to pass the water through said heater around said tubes.

5. In water heaters, a heater inlet chamber, means to supply hot combustion gases thereto, a series of heater tubes communicating with said heater inlet chamber to receive said gases therefrom, an exhaust passage communicating with the discharge end of said heater tubes, each of said heater tubes being packed with granular material and means to supply water around said tubes.

[Claims 6 to 10 not printed in the Gazette.]

1,015,132. VALVE. GEORGE P. BOWER, Buffalo, N. Y. Filed Oct. 25, 1909. Serial No. 524,338. (Cl. 137—69.)



1. A valve comprising a casing having a lower service chamber adapted to be connected with a service pipe, an inlet port in its lower side provided with a downwardly facing valve seat, and a waste chamber adapted to be connected with a waste pipe and having a waste port which is in line with said inlet port and is provided with an upwardly facing valve seat, and a valve rod arranged in said casing and ports and having a lower stopper adapted to engage said lower seat upon raising said rod and an upper stopper adapted to engage said upper seat upon lowering said rod, said lower port and stopper being of smaller diameter than said uper port and stopper, said lower port flaring upwardly and downwardly from its central part and said lower stopper being constructed of elastic material and narrowing from its center upwardly and downwardly and being of larger diameter than said lower port.

2. A valve comprising a casing having a lower service chamber adapted to be connected with a service pipe, an inlet port in its lower side provided with a downwardly facing valve seat, and a waste chamber adapted to be connected with a waste pipe and having a waste port which is in line with said inlet port and is provided with an upward facing valve seat, and a valve rod arranged in said casing and ports and having a lower stopper adapted to engage said lower seat upon raising said rod and an upper stopper adapted to engage said upper seat upon lowering said rod, said lower port and stopper being of smaller diameter than said uper port and stopper, and said lower port flaring upwardly and downwardly from its central part, and said lower stepper being constructed of elastic material of spherical form and of larger diameter than the lower port.

3. A valve comprising a casing having a lower service chamber adapted to be connected with a service pipe, an inlet port in its lower side provided with a downwardly facing valve seat, and a waste chamber adapted to be connected with a waste pipe and having a waste port

which is in line with said inlet port and is provided with an upwardly facing valve seat, and a valve rod arranged in said casing and ports and having a lower stopper adapted to engage said lower seat upon raising said rod and an upper stopper adapted to engage said upper seat upon lowering said rod, said lower port and stopper being of smaller diameter than said uper port and stopper, said lower port flaring upwardly and downwardly from its central part and said lower stopper being constructed of elastic material and narrowing from its center upwardly and downwardly and being of larger diameter than said lower port.

4. A valve comprising a casing having a lower service chamber adapted to be connected with a service pipe, an inlet port in its lower part which flares upwardly and downwardly from its central part forming an upwardly flaring compressing face and a downwardly flaring valve seat, an upper waste chamber adapted to be connected with a waste pipe, and a waste port which is arranged vertically in line with and constructed of larger diameter than the lower port and which has an upwardly facing upper valve seat, an upright valve rod arranged in said casing and ports and having an upper downwardly facing stopper which is adapted to engage the upper valve seat upon lowering the rod, a lower elastic ball shaped stopper of larger diameter than the lower port adapted to be forced through said lower port from the upper to the lower end thereof and to be compressed by engaging with said compressing face and to expand below said lower valve seat, and means for expanding said ball stopper.

5. A valve comprising a casing having a lower service chamber adapted to be connected with a service pipe, an inlet port in its lower part which flares upwardly and downwardly from its central part forming an upwardly flaring compressing face and a downwardly flaring valve seat, an upper waste chamber adapted to be connected with a waste pipe, and a waste port which is arranged vertically in line with and constructed of larger diameter than the lower port and which has an upwardly facing upper valve seat, an upright valve rod arranged in said casing and ports and having an upper downwardly facing stopper which is adapted to engage the upper valve seat upon lowering the rod, a lower elastic ball shaped stopper of larger diameter than the lower port adapted to be forced through said lower port from the upper to the lower end thereof and to be compressed by engaging with said compressing face and to expand below said lower valve seat, and means for expanding said ball stopper comprising a screw passing through said lower stopper and entering a threaded opening in the lower end of the valve rod.

1,015,133. TIRE-FILLING COMPOUND. HERBERT J. BREEZE, Portland, Oreg. Filed Jan. 4, 1910. Serial No. 536,280. (Cl. 106—39.)

The herein described compound consisting of a cooked mixture of one pound of glue, two pounds of syrup, and glycerin, rosin, and beeswax, in the proportions of one-half ounce, each.

1,015,134. TIME-CONTROLLED SHUTTER-ACTUATING MECHANISM. BARNABEE BRYAN, Washington, D. C. Filed Mar. 14, 1911. Serial No. 614,503. (Cl. 161—26.)

1. In a time controlled device for operating camera shutter mechanism, a movable part, a lengthwise movable flexible shaft or rod connected to said movable part and adapted by its lengthwise movement to actuate said shutter mechanism, a second movable part with means for conecting it with said first named movable part, a spring in which power is stored on the movement of said second movable part, and time controlled means for controlling the operation of said second movable part.

2. In a time controlled device for operating camera shutter mechanism, a longitudinally movable part, a lengthwise movable flexible shaft or rod connected to said movable part and adapted by its lengthwise movement to actuate said shutter mechanism, a second movable part, a spring connected with said second movable part in which power is stored on its movement in one direction, means whereby said second movable part is automatically connected to said first named movable part and flexible shaft on its power storing movement, and automatically disconnected therefrom on its movement in the opposite direction, and time controlled mechanism for retaining said second part for a predetermined time.

3. In a time controlled device for operating camera shutter mechanism, a movable part, a lengthwise-movable flexible shaft or rod connected to said movable part and adapted by its lengthwise movement to actuate said shutter mechanism, a second movable part with means for connecting it with said first named movable part, a spring in which power is stored on the movement of said second movable part, time controlled means for controlling the operation of said second movable part, and means for effecting movement of said first named part and flexible shaft independently of the second movable part.

4. In combination a suitable case, a movable part therein for operating a shutter, a second movable part within the case, means for automatically connecting said second part with said first part on movement in one direction and disconnecting it therefrom on movement of said first part in the opposite direction, time controlled power means for effecting movement of said second part in said last named direction, and folding means on the outside of the casing operable through the casing for effecting movement of said first named movable part independently of the time controlled means.

5. In combination a shutter operating plugner, time controlled means normally disconnected therefrom for operating said plunger, means for connecting said parts and starting the operation of the time controlled means, and manually operable means for effecting the movement of the plunger while disconected from said time controlled means, said manually operable means comprising a folding plunger adapted to be brought into operative connection with said first named plunger.

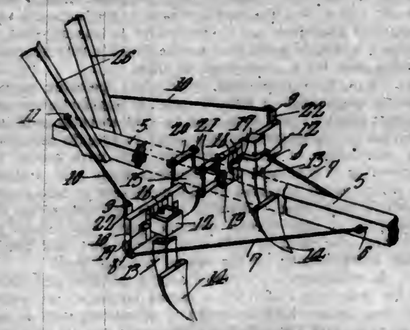
[Claims 6 to 9 not printed in the Gazette.]

1,015,135. DIPPER. HENRY B. BRYAN, Pittsburgh, Pa. Filed May 26, 1911. Serial No. 629,568. (Cl. 65—28.)

1. A dipper of the type described comprising a cylindrical shell having a reduced end, a cup-shaped receptacle movably mounted in said shell and adapted to seat in the reduced end of said shell, and a bar arranged transversely of said shell and adapted to retain said receptacle therein.

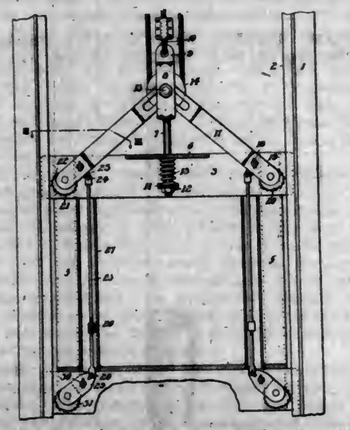
2. A dipper comprising a cylindrical shell having a lower reduced end, a cup-shaped weighted receptacle adapted to seat in the reduced lower end of said shell, a handle carried by said dipper, and means arranged in the upper end of said shell and adapted to limit the upward movement of said receptacle within said shell.

1,015,136. CULTIVATOR-BLADE ATTACHMENT. WILLIAM CANTRELLE, Lockport, La. Filed July 18, 1911. Serial No. 639,158. (Cl. 97—10.)



An attachment of the character described comprising a body having vertical wings provided with elongated horizontal slots therein extending through the vertical sides of the wings and a plurality of vertical flutes in one side of the wings along the edges of the slots, U-shaped straps adapted to receive standards and having bolts projecting from the ends thereof through the respective slots, a washer on each pair of bolts, and nuts on the said bolts, whereby upon tightening the nuts the U-shaped straps clamp the standards against the vertical sides of the said wings and the ends of the straps engage in the said flutes to prevent horizontal movement of the standards.

1,015,137. SAFETY ELEVATOR DEVICE. ROBERT D. CLARK, Duquesne, Pa. Filed Mar. 24, 1911. Serial No. 616,670. (Cl. 187—85.)



1. A safety device for elevators comprising the combination with guide rails, a vertically movable cage arranged between said rails, a hoisting cable for the cage, and a web carried by the cage, of a yoke having the reduced lower end extending through said web, a washer supported upon the lower terminus of said reduced end, a spring surrounding the reduced end of said yoke and interposed between the web and said washer, a bolt carried by the enlarged portion of said yoke, a sheave on said bolt, said hoisting cable connected by one end to said yoke and extending around said sheave, levers having their inner and outer ends provided with forks, the arms of the forks at the inner ends of the levers being provided with elongated slots through which extends said bolt, means for pivotally connecting the forked outer ends with said cage, and gripping wheels mounted in the forked outer ends of said levers and adapted to engage said rails.

2. A safety device for elevators comprising the combination with guide rails, a vertically movable cage arranged between said rails, a hoisting cable for the cage, and a web carried by the cage, of a yoke having the reduced lower end extending through said web, a washer supported upon the lower terminus of said reduced end, a spring surrounding the reduced end of said yoke and interposed between the web and said washer, a bolt carried by the enlarged portion of said yoke, a sheave on said bolt, said hoisting cable connected by one end to said yoke and extending around said sheave, levers having their inner and outer ends provided with forks, the arms of the forks at the inner ends of the levers being provided with elongated slots through which extends said bolt, means for pivotally connecting the forked outer ends with said cage, gripping wheels mounted in the forked outer ends of said levers and adapted to engage said rails, vertically disposed adjustable rods pivoted at their upper ends to the outer forked ends of said levers and extending through said cage, levers pivotally connected with the cage and having their inner ends pivotally connected to the inner ends of said rods and having their outer ends forked, and gripping wheels mounted in the forked ends of the last mentioned levers and adapted to engage said rails.

3. A safety elevator device comprising the combination with guide rails, a vertically movable cage traveling between said rails, and a hoisting cable for the cage, of a web supported by the cage, a vertically disposed yoke extending through said web and carrying a washer, a spring surrounding the reduced end and interposed between the web and the washer, a bolt extending through said yoke above said web, a sheave pivotally mounted upon said bolt, said hoisting cable connected to the upper end of said yoke and extending around said sheave, levers pivoted near their outer ends with said cage and having their inner ends provided with forks extending into said yoke, the arms of said forks provided with elongated slots through which extends said bolt, and gripping elements carried by the outer ends of said levers and adapted to engage said rails.

4. A safety elevator device comprising the combination with guide rails, a vertically movable cage traveling between said rails, and a hoisting cable for the cage, of a web supported by the cage, a vertically disposed yoke extending through said web and carrying a washer, a spring surrounding the reduced end and interposed between the web and the washer, a bolt extending through said yoke above said web, a sheave pivotally mounted upon said bolt, said hoisting cable connected to the upper end of said yoke and extending around said sheave, levers pivoted near their outer ends with said cage and having their inner ends provided with forks extending into said yoke, the arms of said forks provided with elongated slots through which extends said bolt, gripping elements carried by the outer ends of said levers and adapted to engage said rails, levers pivotally connected with the lower end of said cage, gripping elements carried by the last mentioned levers and adapted to engage said rails, and vertically disposed bars pivotally connected at their lower ends to the inner ends of the last mentioned elements and having their upper ends pivotally connected to the first mentioned levers in proximity to the outer ends thereof.

1,015,138. SWITCH-SHIELD. RAMÓN FERRES CORDERO, Rubio, Venezuela. Filed Mar. 7, 1911. Serial No. 612,892. (Cl. 104—12.)

1. In a switch device, a rail, a switch tongue disposed adjacent to said rail, and a closed bag disposed between said rail and said tongue, thereby preventing the insertion of obstacles between said tongue and said rail or of foreign matter into said bag.

2. In combination a rail, a switch movable relative to said rail, a collapsible member inserted between said rail and said switch, and means controlled by the actuation of said switch to maintain said member in inflated position.

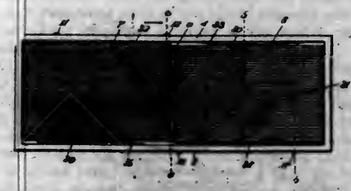
3. In combination a rail, a switch, a member normally closing the space between said rail and said switch; and means disposed within said member to melt any ice which may form on said member.

4. In a switch device in combination a rail and a switch tongue, a rubber bag disposed between said rail and said tongue, a pneumatic reservoir in fluid connection with said bag; and means controlled by the movement of the switch tongue to admit or exhaust fluid to or from said bag.

5. A switch shield, adapted to be placed between the rail and the tongue of a switch, comprising a closed bag, a compressed fluid reservoir, a flexible tubing connecting said reservoir with said bag, and means controlled by the actuation of said switch to admit and exhaust compressed fluid to and from said bag.

[Claim 6 not printed in the Gazette.]

1,015,139. INDICATOR. RAMÓN FERRES CORDERO, Rubio, Venezuela. Filed Mar. 7, 1911. Serial No. 612,895. (Cl. 40—80.)

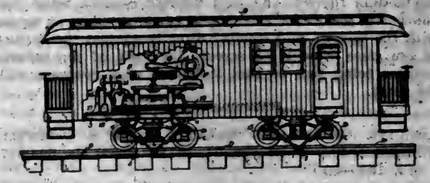


In an indicator, a receptacle having two compartments, one of said compartments having an opening in the side thereof, a stack of display plates disposed in each of said compartments, said plates disposed in planes parallel with the plane of said opening, one of said stacks facing said opening, a plurality of top and bottom rollers bearing on the face of said stacks in rear of one compartment and in the front of the other compartment, springs bearing on said stacks and forcing the same into engagement with said rollers, whereby the rotation of said rollers will move an end plate from the stack in one compartment to the stack in the other compartment, a spindle depending from a bottom roller in each compartment, a sprocket wheel carried by each of said spindles, a diagonally extending endless chain connecting said spindles beneath said receptacle, and means for actuating said chain, whereby the end plate of each stack will be moved simultaneously from one compartment to the other.

1,015,140. SAFETY DEVICE FOR MONORAILS. RAMÓN FERRES CORDERO, Rubio, Venezuela. Filed Apr. 6, 1911. Serial No. 619,202. (Cl. 105—234.)

1. In a safety device for monorail cars, a pair of cylinders disposed in the form of a V on opposite sides of each car truck, a wheel journaled at the apex of the V and adapted to bear against one side of the monorail, a compressed fluid receptacle within the car, conduits leading from said receptacle to each of said cylinders, a valve controlling the passage of fluid through said conduits, and a freely swinging pendulum actuating said valve.

2. In a safety device for monorail cars, a pair of cylinders disposed in the form of a V on opposite sides of each car truck, a wheel journaled at the apex of the V and adapted to bear against one side of the monorail, a compressed fluid receptacle within the car, conduits leading from said receptacle to each of said cylinders, a valve controlling the passage of fluid through said conduits, a freely swinging pendulum actuating said valve, and manually-operated means releasing the fluid from said cylinders.



3. In a safety device for monorail cars, a compressed air actuating means engaging the monorail, said means reacting on the car to maintain the same in stable equilibrium, and means automatically controlling the air pressure in said means.

4. In a monorail car, a connection between the car and the rail on opposite sides of the car, said connection comprising a fluid cylinder, and means controlled by the position of the car with reference to the monorail, controlling the passage of the actuating fluid to said cylinder.

5. In a safety device for monorail cars, a series of braces between each side of the car and the corresponding side of the monorail, and means actuated by the transverse movement of the car on the monorail, controlling the length of said connecting braces.

[Claims 6 to 10 not printed in the Gazette.]

1,015,141. INSECT-TRAP. GARRETT J. CRANDALL, Los Angeles, Cal., assignor to Catherine H. Crandall, Los Angeles, Cal. Filed June 9, 1910. Serial No. 566,093. Renewed June 3, 1911. Serial No. 631,182. (Cl. 43—22.)

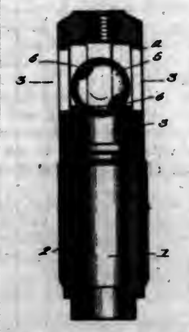
1. An insect trap for use in connection with a window or screen, consisting of a tubular member having a slot in its top and with a support below said slot and within the tubular member for holding insecticide, said support consisting of a ledge extending from one wall of the tubular member into the interior of the tubular member above the bottom thereof, and said tubular member being provided with means for supporting it in contact with the glass or screen surface.

2. An insect trap for use in connection with a window or screen, consisting of a tubular member having a slot in its top, with a ledge below said slot and within the tubular member and above the bottom of the tubular member, and with a lip extending toward said ledge from the top

of the tubular member, forming a passage permitting ingress of insects but preventing their egress, said tubular member being provided with means for attachment to the window or screen with the back of the said member directly against the glass pane or screen surface thereof.

3. An insect trap for use in connection with a window or screen, consisting of a tubular member having a slot in its top, with a ledge below said slot, for holding insecticide, said ledge extending from a wall of the tubular member into the interior of the tubular member and above the bottom thereof, and said tubular member being provided with means for attachment to the window or screen with the back of said member directly against the surface of the glass window or screen, the back of the tubular member being bent so that its upper edge contacts with the glass.

1,015,142. STANDING VALVE. DAVID S. CRISWELL, Prospect, Pa. Filed Apr. 24, 1911. Serial No. 623,077. (Cl. 103—66.)



1. A standing valve for oil wells having a ball valve provided with oppositely disposed recesses capable of forming an imperfect closure.

2. A device for flooding and agitating an oil well comprising a valve casing having a ball valve mounted therein having recesses formed in its periphery capable of forming an imperfect closure.

1,015,143. GARMENT-FASTENER. MARTHA C. DALLAS, Kist, Oreg. Filed Feb. 2, 1911. Serial No. 606,185. (Cl. 24—86.)

A garment fastener comprising a hook member consisting of a strip of sheet metal bent or folded flatwise upon itself substantially midway between its ends, and again bent or folded flatwise upon itself near the mid-length of the folded strip, the middle portion extending from the second bend to the first forming the bill of the hook, the inner fold of the bill being bent inward forming a hump on the inside of the bill, the inner fold of the end portion adjacent the bill forming the body of the hook and the outer fold of the end portion formed into a pin, the inner body fold being bent laterally and inwardly and having its side edges turned inwardly to form a guard for the pin point.

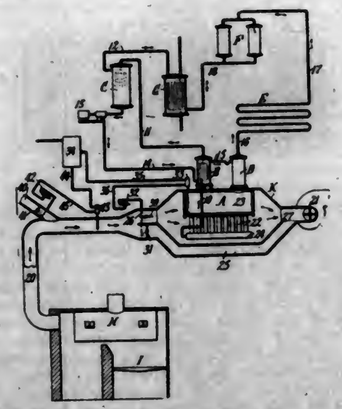
1,015,144. BLIND-SLAT TIP. WILLIAM O. DALY, Mobile, Ala., assignor to Daly, Hatch and Buschane, Mobile, Ala., a Firm. Filed May 11, 1911. Serial No. 626,576. (Cl. 20—62.)

1. A blind slat provided in its end with a slit extending from edge to edge of the slat and midway between the faces thereof and a tip comprising a base plate whose inner edge is tapered from end to end, the said base plate being inserted in the slit of the slat and having its broad end provided with tongues bent in opposite directions along the corresponding edge of the slat and with the narrow end of the plate bent along this edge of the slat, and a stud integral with the base plate and having its base projecting on opposite sides of the base plate and resting against the end of the slat, all substantially as and for the purposes set forth.

2. A blind slat provided in its end with a slit extending from edge to edge of the slat parallel with the flat plane of the slat and a tip comprising a stud and a tapered base plate seated in the slit of the slat and means for retaining the plate in the slat, substantially as set forth.

3. A blind slat tip comprising a stud and a base plate connected at one edge with the stud and having its other edge tapered from end to end, the plate being of sufficient length to extend approximately from edge to edge of a blind slat when applied for use, substantially as set forth.

1,015,145. AMMONIA-STILL. HARRY S. DAVIS, Buffalo, N. Y., assignor of one-half to Daniel E. Knowlton, Buffalo, N. Y. Filed Jan. 27, 1908. Serial No. 412,697. (Cl. 203—1.)

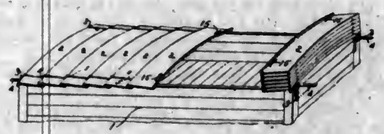


1. The combination with an ammonia still, of an apparatus in which fuel is burned, a heating chamber for the still, a conduit for conducting the hot gases from such apparatus to said chamber, said conduit being provided with an air inlet and a by-pass, dampers in said conduit and by-pass, automatic means for controlling said dampers by the temperature of the still, a damper controlling said air inlet, and automatic means for controlling said damper by the temperature of the gases in said conduit, substantially as set forth.

2. The combination with an ammonia still, of an apparatus in which fuel is burned, a conduit for the hot gases passing off from the fuel, a heating chamber for the still which receives the hot gases from said conduit, means thermostatically controlled by the temperature of the still for regulating the supply of hot gases to the still, and means thermostatically controlled by the temperature of the hot gases in the conduit for admitting air to said conduit, substantially as set forth.

3. The combination with an ammonia still, of an apparatus in which fuel is burned, a conduit for the hot gases passing off from the fuel, a heating chamber for the still located in said conduit through which said gases are adapted to pass, a by-pass in said conduit leading around said chamber, means thermostatically controlled by the temperature of said still for regulating the supply of the hot gases to said chamber and to said by-pass, and means thermostatically controlled by the temperature of the hot gases in the conduit for admitting air to the conduit, substantially as set forth.

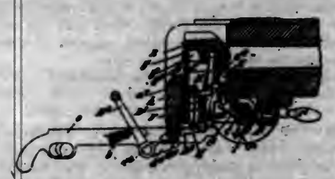
1,015,146. COLLAPSIBLE AND EXTENSIBLE ROOF FOR OPEN-TOP RAILWAY-CARS, &c. WILLIAM R. DAVIS and JOHN J. KAIN, Maysville, Ky. Filed July 25, 1910. Serial No. 573,661. (Cl. 105—78.)



1. In an extensible and collapsible roof for cars and similar vehicles, an open top car body; a series of plates permanently secured together and of sufficient length to extend across the car body and each plate after the first of the series being capable of being moved into a position such that it overlies the next preceding plate, said plates when extended being adapted to form a roof for the car; and series of guides each comprising U-shaped section one secured to the upper and one to the lower surface of said plates, the guide upon the upper surface of a plate being in engagement with the guide upon the lower surface of the next following plate of the series whereby said plates are maintained in proper relation as the roof is extended or collapsed.

2. In an extensible and collapsible roof for cars and similar vehicles, an open top car body; a series of plates permanently secured together and of sufficient length to extend across the car body and each plate after the first of the series being capable of being moved into a position such that it overlies the next preceding plate, said plates when extended being adapted to form a roof for the car, and the edges of said plates being bent in opposite directions and substantially at right angles to the plate to thereby form flanges; and guides secured to adjacent plates of said series of plates and in engagement with one another for maintaining said plates in proper relation with one another as the roof is extended or collapsed.

1,015,147. SEMI-AUTOMATIC AND OTHER QUICK-FIRING GUN. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Sons & Maxim Limited, London, England. Filed Mar. 14, 1905. Serial No. 250,079. (Cl. 89—4.)



1. In a quick firing gun, the combination with the firing pin cocking arm pivoted to the breech block, of a rotary hand lever independent of the cocking arm, and a single lever separately and independently pivoted to a recoiling part of the gun for transmitting the movement of the rotary hand lever to the cocking arm.

2. In a quick firing gun, the combination with the firing pin cocking arm pivoted to the breech block, of a rotary hand lever pivoted to a non-recoiling part of the gun, and a single lever pivoted to a recoiling part of the gun for transmitting the movement of the rotary hand lever to the cocking arm.

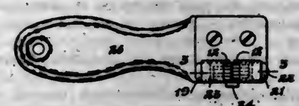
3. In a quick firing gun, the combination with the firing pin cocking arm pivoted to the breech block, of a rotary hand lever pivoted to a non-recoiling part of the gun, and a single lever pivoted to a recoiling part of the gun and interposed between the rotary hand lever and the cocking arm for transmitting the movement of the said rotary hand lever to the cocking arm.

4. In a quick firing gun, the combination with the firing pin cocking arm pivoted to the breech block, of an intermediate lever adapted to actuate said cocking arm and to move in a plane transverse to the axis of the gun, and a hand-lever adapted to actuate said intermediate lever substantially as and for the purpose specified.

5. In a quick firing gun, the combination with the firing pin cocking arm, of an intermediate lever mounted on a recoiling part of the gun and adapted to move in a plane transverse to the axis of the gun to actuate said cocking arm, and a hand-lever mounted on a non-recoiling part of the gun and adapted to actuate said intermediate lever substantially as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

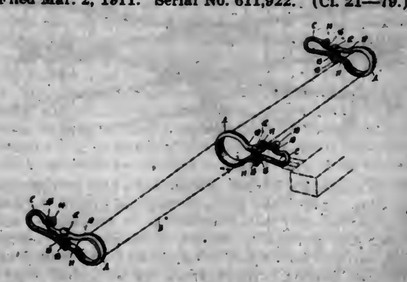
1,015,148. KNIFE-SHARPENER. RICHARD J. DEARBORN, Beverly, Mass., assignor of one-half to Charles B. Dean, Boston, Mass. Filed Feb. 23, 1911. Serial No. 610,318. (Cl. 76—87.)



1. A knife sharpener comprising a holder composed of separable parts forming a chamber, one of said parts having a knife-receiving opening communicating with the chamber, and a pair of circular sharpening members loosely deposited in said chamber and confined against displacement by the walls thereof, the members being held in contact with each other by opposite sides of the chamber, and each having a plurality of peripheral planing cutters.

2. A knife sharpener comprising a base having fixed abutments which form opposite sides of a chamber, a pair of circular sharpening members loosely deposited side by side in said chamber, said members bearing at their outer sides on said abutments and being held by the abutments in contact with each other, each member having a plurality of peripheral planing cutters, and a detachable hood completing said chamber and adapted to prevent removal of the cutting members therefrom, said hood having a knife-receiving opening communicating with the chamber.

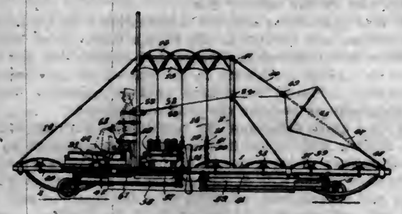
1,015,149. HOOK. PHILIP L. DILLS, Blairsville, Ga. Filed Mar. 2, 1911. Serial No. 611,922. (Cl. 21—79.)



A device of the class described comprising a U-shaped clip, a bolt extending through the arms of said clip, a

nut adjustably mounted on the bolt for forcing the arms of the clip together, a hook having its shank disposed between the arms of the clip and provided with a longitudinal slot through which the bolt extends, and means for connecting the free end of the hook with one of the arms of the clip to close the mouth of the former.

1,015,150. FLYING-MACHINE. LOUIS DOBBERTIN, Lake Charles, La. Filed May 6, 1911. Serial No. 625,484. (Cl. 244—12.)



1. A flying machine having a supporting surface composed of laterally extending wings, each provided with a series of longitudinally extending pockets or channels, alternately increasing and diminishing in depth respectively toward the ends of the wings.

2. A flying machine having a supporting surface composed of laterally extending wings corrugated to provide longitudinally extending air channels between their front and rear edges, each wing having its channels alternately tapering in opposite directions toward the respective ends of the wing.

3. A flying machine having a supporting surface composed of laterally extending wings corrugated to provide longitudinally extending air channels, the air channels of each wing being formed by a substantially conical section arranged to taper alternately toward opposite ends of the wing, the corresponding inwardly and outwardly tapering portions of the respective wings being arranged in longitudinal alinement with each other.

4. In a flying machine, a supporting plane provided with longitudinally extending pockets or channels, alternately increasing and diminishing in depth respectively toward the ends of the plane.

5. In a flying machine, a supporting plane curved in a direction transversely thereof, and provided with longitudinally extending pockets or channels, said pockets or channels increasing or diminishing in depth respectively toward the ends of the plane.

[Claims 6 to 15 not printed in the Gazete.]

1,015,151. RAILWAY-CROSSING. BERMAN S. DUNHAM, Detroit, Mich. Filed Mar. 6, 1911. Serial No. 612,527. (Cl. 104—116.)

1. In a crossing, a track composed of a pair of traffic rails extending continuously and unbroken throughout the crossing, a pair of rigid rails constituting an intersecting track divided into sections to provide for transit over the first track, movable rails hingedly connected to the divided rails with their bearing surfaces above the horizontal plane of the bearing surface of the first named track whereby the wear of either track is dependent only upon its own respective use, an easing rail connected to each of said rigid rail sections and projecting longitudinally beyond said sections, the movable rail sections being adapted to engage the projecting portions of said easing rails when the rigid and movable rails are shifted into alinement, and means for operating said movable rails.

2. In a crossing, a track composed of a pair of traffic rails extending continuously and unbroken throughout the crossing, a pair of rigid rails constituting an intersecting track divided into sections and adapted to provide transit over the first named track, movable rails hingedly connected to the divided rigid sections, said movable rails operable within the gage of the last named track and having bearing surfaces for the wheels above the horizontal plane of the first named track whereby the last named track may be made continuous over said first named track, an anchor plate between the gage side of the unbroken rails and the sectional rails and located at the points of hinged connections between the corresponding rigid and movable sections, and means for operating said movable rails.

3. In a crossing, a fixed track composed of a pair of traffic rails extending continuously and unbroken throughout the crossing, a pair of rigid rails constituting an intersecting track divided to provide for transit over the first named track, movable rails adapted to connect the divided rails above the plane of the first track, means for supporting said movable rails upon a higher plane than the first named track, an easing rail disposed adjacent the outer side of the unbroken rails at the point where the movable rails connect the rigid rails of the divided track, and means for operating said movable rails.

4. In a crossing, a fixed track composed of a pair of traffic rails extending continuously and unbroken throughout the crossing, a pair of rigid rails constituting an intersecting track divided to provide for transit over the first named track having ends bent at an angle to their main portion to provide an abutment for the free ends of swinging rails adapted to connect the divided track, swinging rails connecting the divided rails above the traction plane of the first named track, their free ends abutting with the bent out portion of the rigid connecting rails, an easing rail secured to each rigid rail of the divided intersecting track and against which easing rail the coöperating swinging rail engages at one limit of its movement, an anchor plate disposed adjacent said easing rail, an easing rail disposed adjacent the outer side of each of the first mentioned tracks, filling blocks disposed between the last mentioned easing rails and the tracks adjacent which said easing rails are disposed, and suitable lever actuating mechanism connected with the several movable rails whereby they may be simultaneously operated either manually, or automatically by the flanges of the wheels engaging one of the movable rails upon approaching the crossing.

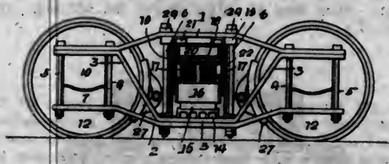
5. In a crossing, a fixed track composed of a pair of traffic rails extending continuously and unbroken throughout the crossing, a pair of rigid rails constituting an intersecting track divided to provide for transit over the first track, swinging rails adapted to connect the divided rails above the traction plane of the first track, the free ends of the swinging rails resting upon the rails of the first named track, joint splices hinged together and respectively fastened to the webs of the divided rails and the swinging rails, and suitable lever mechanism adapted to simultaneously operate the several swinging rails.

[Claims 6 to 9 not printed in the Gazette.]

1,015,152. TRUCK. JOHN DU ROTH, Johnstown, Pa. Filed June 3, 1911. Serial No. 630,972. (Cl. 105—138.)

1. A car truck embodying two sets of side frames, journal boxes supported by the ends of said frames, wheels arranged between said journal boxes, oppositely disposed stub axles carried by said wheels and extending into said journal boxes, transverse beams connecting said side-frames, corner straps connecting the inner frames with said transverse beams, a cushioning device carried by each set of frames, transverse beams connecting said devices, a car

bearing supported centrally of said transverse beams, each cushioning device comprising a bearing, a wooden block, a spring-housing, springs in said housing, a cap, a yoke connecting the cap of one device with the cap of the other device, and channel-beams supported by the ends of said yoke for supporting the last mentioned transverse beams.



2. A car truck embodying two sets of side frames, journal boxes supported by the ends of said frames, wheels arranged between said journal boxes, oppositely disposed stub axles carried by said wheels and extending into said journal boxes, transverse beams connecting said side frames, corner straps connecting the inner frames with said transverse beams, a cushioning device carried by each set of frames, transverse beams connecting said device, a car bearing supported centrally of said transverse beams, and a yoke connecting said cushioning devices.

1,015,153. FIBER-CASE RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa. Filed Aug. 25, 1910. Serial No. 578,981. (Cl. 246—20.)

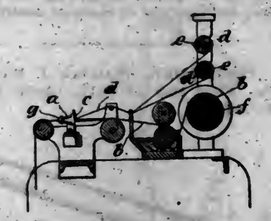
1. A fiber case torpedo having a thick strengthening disk of cement completely covering its top, and sand incorporated therein throughout the thickness of the cement disk, substantially as and for the purpose described.

2. A fiber case torpedo, consisting of telescoped cup-shaped members, one of said members having a strap opening, a strap passing through said opening with its ends projecting beyond the case, and a cement disk applied to the inner side of the member having the opening, and closing the opening, holding the strap, and uniting the cement engaging members of the case together.

1,015,154. MACHINE FOR THE MANUFACTURE OF TWINE. JOHN DYMOCK, Stockport, England. Filed Oct. 7, 1909. Serial No. 521,538. (Cl. 28—21.)

1. In a machine for the manufacture of twine having a textile fiber core and a paper ribbon covering, the combination with a ribbon curling cone, of an attachment extending downwardly at the inlet end of the said curling cone and having an eye through which the said core passes, the said paper ribbon passing outside the said attachment, to guide the said core at the inlet end of the said ribbon curling cone, substantially as and for the purpose set forth.

2. In a machine for the manufacture of twine having a textile fiber core and a paper ribbon covering, the combination with a ribbon curling cone, of an attachment extending downwardly at the inlet end of the said curling cone and having an eye through which the said core passes, the said paper ribbon passing outside the said attachment, to guide the said core at the inlet end of the said ribbon curling cone, and of a removable nozzle at the outlet end of the said ribbon curling cone, substantially as and for the purpose set forth.



1,015,155. CELLULOSE-ACETATE COMPOSITION AND PROCESS OF MAKING THE SAME. ARTHUR EICHENGRÜN, Berlin, Germany. Filed Jan. 21, 1910. Serial No. 539,246. (Cl. 106—40.)

1. The herein described process of manufacturing solutions of cellulose acetates, which comprises treating cellulose acetates with mixtures of alcohols and hydrocarbons under the action of heat.

2. A composition comprising a cellulose acetate dissolved in an alcohol and a hydrocarbon.

3. The process of manufacturing solutions of cellulose acetates, which comprises forming a mixture of aliphatic alcohol and an aromatic hydrocarbon, placing the cellulose acetate in the mixture and subjecting the mass to the action of the heat.

4. The process of manufacturing solutions of cellulose acetates, which comprises mixing equal quantities by weight of alcohol and a hydrocarbon, adding thereto one-tenth the amount in weight of cellulose acetate, heating slowly, under constant agitation, up to 60° C. and then raising the temperature up to the boiling point of the mixture of alcohol and hydrocarbon.

5. The process of manufacturing solutions of cellulose acetates, which comprises forming a mixture of cellulose acetate, methyl alcohol and benzol, heating the same slowly up to the boiling point of the alcohol and benzol mixture and adding to said solution a solvent capable of dissolving the acetates when cold.

[Claims 6 to 10 not printed in the Gazette.]

1,015,156. PLASTIC SIMILAR TO CELLULOID AND MANUFACTURING THE SAME. ARTHUR EICHENGRÜN, Berlin, Germany. Original application filed Jan. 21, 1910, Serial No. 539,246. Divided and this application filed Feb. 9, 1911. Serial No. 607,617. (Cl. 106—40.)

1. The process of manufacturing solid celluloid like masses which comprises causing a heated mixture of an alcohol and an aromatic hydrocarbon to act on cellulose acetates in the presence of camphor or camphor substitutes in such proportions relative to said acetate that homogeneous masses may be produced.

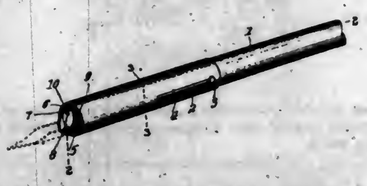
2. The process of manufacturing solid celluloid like masses which comprises causing a heated mixture of an alcohol and an aromatic hydrocarbon to act on cellulose acetates in the presence of camphor or camphor substitutes in such proportions relative to said acetate that homogeneous masses may be produced, and evaporating the mixture of alcohol and aromatic hydrocarbons.

3. The process of manufacturing solid celluloid like masses which comprises causing a heated mixture of an alcohol and an aromatic hydrocarbon to act on cellulose acetates in the presence of nonvolatile solvents for cellulose acetates and of camphor or camphor substitutes in such proportions relative to said acetate that homogeneous masses may be produced.

4. A celluloid-like plastic comprising cellulose acetate, an alcohol, an aromatic hydrocarbon and camphor or camphor substitutes.

5. A celluloid-like plastic comprising cellulose acetate alcohol, toluol and camphor or camphor substitutes.

1,015,157. PENHOLDER. WILLIAM J. EICHER, Perryopolis, Pa. Filed May 16, 1911. Serial No. 627,470. (Cl. 120—101.)



1. A penholder comprising a stock, a grooved member secured thereto, jaws hingedly mounted in the groove of said member, and a retaining sleeve movably mounted on the stock and adapted to embrace the jaws to hold the same closed.

2. A penholder comprising a stock, a grooved member secured thereto, a pintle extending through the groove of the member and having portions engaged with the stock, jaws movably mounted on the pintle, and a retaining member movable on the stock and adapted to hold the jaws in closed position.

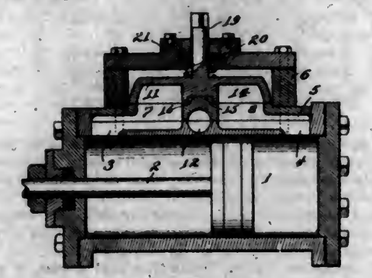
1,015,158. DOOR AND OPERATING MECHANISM THEREFOR. LEWIS J. EYTH, Butler, Pa., assignor of one-fourth to R. L. De Haven and one-fourth to W. J. Allison, Butler, Pa. Filed July 8, 1910. Serial No. 571,066. (Cl. 106—14.)

1. The combination with a door, and a revolvable shaft, of a depending bracket carried by said door, a crank mounted upon said shaft, a supporting member loosely connected to said bracket and having a hook-shaped end adapted to engage the upper end of said crank, links pivotally connecting the hook-shaped end of said member to the lower end of said crank, and means carried by the lower end of said crank and adapted to engage said member for locking said member in engagement with said crank.

2. The combination with a door, and a revolvable shaft, of a depending bracket carried by said door, a crank mounted upon said shaft, a supporting member loosely connected to said bracket and having a hook-shaped end adapted to engage the upper end of said crank, a latch carried by said member, a keeper carried by said crank and adapted to receive said latch, and means for movably connecting the hook-shaped end of said supporting member to the upper end of said crank.

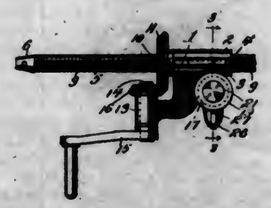
3. The combination with a door, and a revolvable shaft, of a depending bracket carried by said door, a crank mounted upon said shaft, a supporting member having a segment-shaped end provided with a slot and a hook-shaped end adapted to engage the upper end of said crank, a pin carried by said bracket and extending through the slot of the segment-shaped end of said member, links arranged in parallelism and connecting the hook-shaped end of said member to the outer end of said crank, a latch carried by the segment-shaped end of said member, and a keeper carried by the outer end of said crank and adapted to receive said latch, substantially as described.

1,015,159. VALVE. LAWRENCE E. FINDAHL, Sheridan, Wyo. Filed May 25, 1910. Serial No. 563,354. (Cl. 136—7.)



In a device of the class described, the combination with a steam cylinder, having inlet ports at its opposite ends and a central exhaust port, of a valve chest secured thereto and having a steam inlet, and ports to correspond with the inlet and outlet ports of the cylinder, ribs for separating said ports carried by the steam chest, a boss formed in the steam chest between the inlet ports, a socketed valve adapted to oscillate on said boss and having a socket therein, in constant communication with the exhaust port, and means to alternately uncover one of the inlet ports and to connect the opposite inlet port with the exhaust port through the socket in the valve, together with means for holding the valve upon its seat.

1,015,160. DRILLING-MACHINE POST. WILLIAM FIRMAN, Ottumwa, Iowa. Filed Oct. 26, 1910. Serial No. 589,209. (Cl. 125—10.)



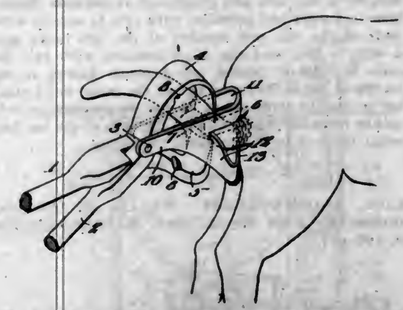
A drilling machine of the class set forth, comprising a boxing provided with an L-shaped offset member, a screw shaft mounted within the boxing and means for rotating the screw shaft, the boxing being further provided with a longitudinally extending bolt approximately alining with the L-shaped offset, a hollow post being provided with a plurality of openings adapted to receive the bolt, a nut engaging the bolt and adapted to force the post against the boxing and the longitudinal arm of the offset of the boxing, substantially as and for the purpose set forth.

1,015,161. COMBINED DOOR-HANGER AND TRACK. WILLIAM J. FISHER, Sault Ste. Marie, Mich. Filed Apr. 19, 1909. Serial No. 490,881. (Cl. 16—7.)

1. In a door hanger, the combination with an inverted U-shaped track and having a vertical rib and a long and a short leg, the long leg being attachable to a wall; of a bracket member provided with a thickened lower end adapted to be secured to a door and to engage the edge of the short leg of the track, and a wheel mounted in the bracket and adapted to engage the rib of the track member, the short leg of the track member being spaced outwardly of the long leg to receive the upper edge of a door.

2. In a door hanger, a track member having the combination with a rib on its bearing surface, a door bracket, vertical members secured to the upper end of the bracket and extending transversely thereof, and wheels mounted between the ends of the vertical members and adapted to engage the rib of the track member, said track member being of inverted U-shaped form with a long and a short leg, the long leg forming an attaching member, and the short leg engaging the bracket, said bracket being formed with a thickened lower end to engage the lower edge of said short leg.

1,015,162. RINGING AND DOCKING INSTRUMENT. GEORGE W. FLETCHER, Mendon, Ill. Filed Oct. 16, 1911. Serial No. 654,905. (Cl. 128—27.)



1. A device of this character, having a pair of pliers, the jaws of which have cutting edges, and a tail guide and gage mounted for coöperation with said cutting edges.

2. A device of this character, having a pair of pliers the jaws of which are provided with cutting edges, and a tail guide and gage pivoted to the pivot of the jaws for swinging movement into and out of operative position.

3. A pair of cutting pliers having a pivoted tail guide and gage connected thereto.

4. A pair of cutting pliers, having a bail with its terminals pivoted to the pivot of the jaws of the pliers, said bail being of sufficient length to straddle the jaws of the pliers, and a downwardly extending finger carried thereby at one side of the bail and coacting with the underside to form a tail guide and gage.

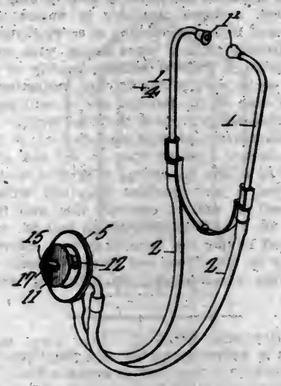
5. An instrument of the class described, comprising a pair of pliers having bowed jaws terminating in cutting edges, a frame straddling the jaws and pivoted to swing with the pivot of the jaws its pivotal point, and an arm having a terminal disposed to coact with the forward underside of the frame to receive a tail to be docked.

[Claims 6 to 9 not printed in the Gazette.]

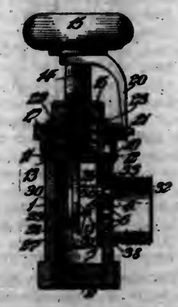
1,015,163. LOCALIZING-STETHOSCOPE. DANIEL O. FOSGATE, Chicago, Ill. Filed July 12, 1911. Serial No. 638,191. (Cl. 181—24.)

1. In a stethoscope, a transmitter embodying a main diaphragm, a supplemental diaphragm provided with an outwardly projecting casing having a central orifice, and a localizer and sound intensifier removably attached to the supplemental diaphragm and in contact with the main diaphragm through said central orifice.

2. In a stethoscope, a transmitter embodying a main diaphragm, a supplemental diaphragm, provided with an outwardly projecting casing having a central orifice, and a localizer and sound intensifier detachably connected to the casing of the supplemental diaphragm and provided with a tube adapted to enter the central orifice thereof and engage the main diaphragm.



1,015,164. VALVE. WILLIAM T. FOWDEN, Chester, Pa. Filed Apr. 25, 1911. Serial No. 623,247. (Cl. 137—7.)



1. In a device of the character stated, a valve casing, a valve therein consisting of a cylinder open at one end and closed at the other and having a port whose transverse area is increased successively step by step from each end thereof, said port having a reinforcing rib extending thereacross, a closure for said casing and a spring intermediate said closure and valve.

2. In a device of the character stated, a casing having an inlet and an outlet, a partition in said casing having a plurality of ports therein, and a valve in said casing consisting of a cylinder open at one end and closed at the other, said cylinder having a port therein provided with an irregular-shaped wall at one side thereof, whereby a port of successively varying unobstructed area is formed, which has its widest and narrowest portions at each extremity thereof, the transverse area of said port being increased successively step by step from end to end thereof and said valve having a reinforcing rib extending across said port.

3. In a device of the character stated, a valve casing, a valve therein consisting of a cylinder open at one end and closed at the other and having a port whose transverse area is increased successively step by step from each end thereof, said valve having a reinforcing means extending across said port, a closure for said casing, a spring intermediate said closure and valve, said valve having also a beveled wall at the outer upper portion thereof, and a similarly beveled wall on said casing coacting therewith, in combination with a closure for said casing, and a tension device intermediate said closure and valve.

4. In a device of the character stated, a valve casing, a valve therein consisting of a cylinder open at one end and closed at the other and having a port whose transverse area is increased successively step by step from end to end thereof, a finger rotatable in unison with said valve, a series of indices consisting of screw-threaded seats near the extremity of said valve casing with which said finger is adapted to register and a plurality of stops engaging said seats, said casing having indicating data in proximity to each of the indices, one of said stops being removably connected with said threaded seats.

5. As an improved article of manufacture, a valve consisting of a hollow cylinder open at one end and closed at the other by a top 10, having a beveled wall 12, said cylinder having a port provided with end walls 26 and 27, a side wall 25, and an opposite side wall formed by the cuts 28, 29, 30, 31, 32, 33, 34, 35 and 36, whereby a port is formed having its transverse area increased successively step by step from end to end thereof, and said cylinder having a reinforcing rib extending across said port.

1,015,165. BITLESS BRIDLE. IVAN FOX, Media, Pa. Filed June 2, 1911. Serial No. 630,784. (Cl. 54—6.)

1. In a bitless bridle, the combination of cheek straps, an under jaw strap and a flexible nose band having a rigid member secured thereto and extending throughout a portion only of the length of said band and said rigid member being of greater curvature than the curvature of the nasal bone of the horse by which the bridle is worn.

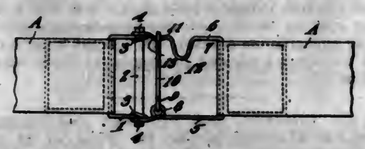
2. In a bitless bridle, the combination of the head band or strap, cheek straps secured thereto, an under jaw strap, a nose band, members for connecting the cheek straps, the nose band and the under jaw strap together, the opposite ends of the under jaw strap sliding through the said means, and reins connected to the opposite ends of said under jaw strap, and the said nose band having a stiff metallic member secured thereto intermediate its ends, the said member being curved and having a curvature greater than the curvature of the front lower portion of the horse's head over which the nose band extends.

3. In a bitless bridle, the combination of cheek straps, a nose band, an under jaw strap, and loops for connecting the said straps together, the nose band being of a length less than the circumferential distance around or over the front lower part of a horse's head around which the said band extends, and the said band being provided with a curved metallic stiffening member of a wider curvature than that portion of the front lower part of the horse's head around which it extends, and the opposite ends of the under jaw straps extending through the said loops and terminating at points in close proximity to the said loops, and means secured to the opposite ends of said under jaw strap for exerting a pull thereon.

4. In a bitless bridle, the combination of cheek straps and head band, an under jaw strap, a nose band, the said nose band being provided with a centrally disposed rigid member of less length than the said band so as to provide portions of said band beyond the ends of said rigid member which portions are flexible and are adapted to flex laterally into engagement with the sides of the horse's head, and means for connecting said nose band, under jaw strap and cheek straps together.

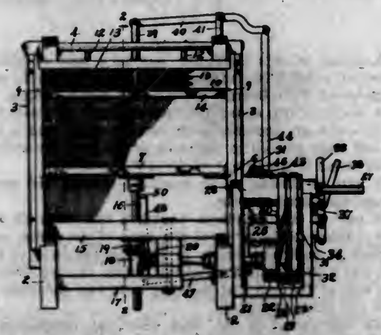
5. In a bitless bridle, the combination of cheek straps, a nose band, an under jaw strap and buckles or loops for connecting the said band and strap together, the said band being provided with a curved metallic stiffening member at its center of less length than the band, and the opposite ends of the under jaw strap extending through the said buckles or loops and terminating at points in close proximity to the said buckles or loops, and means secured to the opposite ends of said under jaw strap for exerting a pull thereon and upon the opposite ends of the said band.

1,015,166. HALTER. ABNER FRAILEY, Union City, Ind. Filed July 5, 1911. Serial No. 636,836. (Cl. 24—201.)



A buckle for halters and the like including a bail, a bar secured to the bail and projecting at its ends beyond the same, a second bail provided with eyes to engage with the ends of the bar, one member of the bail being provided with a loop and the other member with two depressions of different depths, and a keeper having at one end an eye to engage the loop and at the other end a similar eye to engage with either of the depressions to hold the eyes in locked engagement with the ends of the bar and to permit them to be disconnected therefrom.

1,015,167. CLOTHES-PRESS. WILLIAM T. FRANCIS, Danville, Va. Filed July 22, 1910. Serial No. 573,279. (Cl. 100—57.)



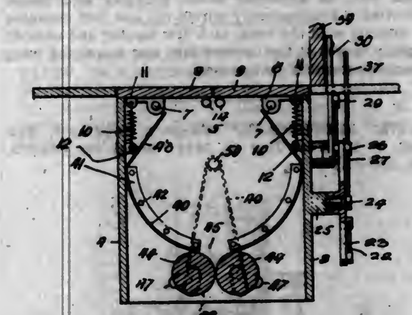
1. A press comprising a yieldingly supported head, a plunger movable toward and away from the head, actuating means for the plunger, means arranged in the path of movement of the head, and means arranged in the path of movement of the plunger, both of said means adapted to reverse the movement of the plunger in the operation thereof whereby to impart continuous motion to the plunger.

2. A press comprising a yieldingly supported head, a plunger movable toward and away from the head, actuating means for the plunger including a belt shifting mechanism, means arranged in the path of movement of the head, means arranged in the path of movement of the plunger, both of said means adapted to operate the belt shifting mechanism to reverse the movement of the plunger in the operation thereof, whereby to impart continuous motion to the plunger.

2. A press, comprising a yieldingly supported head, a plunger movable toward and away from the head, an operating shaft for said plunger, fixed and loose pulleys respectively on the operating shaft, driving belts operatively associated with the pulleys, belt shifting mechanism operatively associated with the belts, a crank shaft operatively connected with said belt shifting mechanism, means arranged in the path of movement of the head and operatively connected with said crank shaft, means arranged in the path of movement of the plunger and operatively connected with said crank shaft, both of said means adapted to operate the crank shaft whereby to actuate the belt shifting mechanism to reverse the movement of the plunger in the operation thereof and impart continuous motion thereto.

4. The combination with a driving shaft, a sliding plunger geared thereto and fixed and loose pulleys respectively on the driving shaft, of driving belts operatively associated with the pulleys, belt-shifting mechanism operatively associated with the belts, a yieldingly supported head disposed in the path of movement of the plunger to be engaged thereby in one direction of its movement, and actuating elements disposed in the path of movements of the plunger and head respectively and operatively connected with the belt-shifting mechanism.

1,015,168. TRAP. WILLIAM PAGE FRITCHMAN, West Newton, Pa. Filed Aug. 26, 1911. Serial No. 646,296. (Cl. 49—24.)

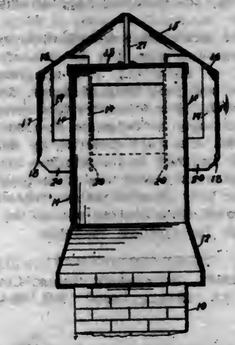


1. In a trap, the combination with a floor having an opening formed therein, of a casing located beneath said opening, tiltable trap doors arranged in the upper end of said casing and adapted to normally close the opening of said floor, locking pins adapted to normally retain said trap doors in a horisontal position, chutes arranged in said casing, means including rock shafts and cranks adapted to move said locking pins and release said doors, and means including yieldable rolls arranged in said casing and adapted to retain a person therein.

2. In a trap, the combination with a floor having an opening formed therein, of a casing located beneath said opening, trap doors tiltably arranged in the upper end of said casing and adapted to normally close the opening of said floor, chutes arranged in said casing, yieldable rolls at the lower ends of said chutes, and means including locking pins adapted to lock said trap doors in a horisontal position.

1,015,169. CHIMNEY-CAP. FRANK FUMARO, Carona, Kans. Filed Apr. 11, 1910. Serial No. 554,752. (Cl. 98—4.)

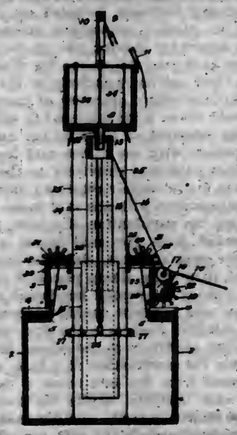
1. In a chimney cap, the combination of a shell closed at the top and adapted to bear over a chimney and having openings in its sides, a closed-top hood supported above said closed-top shell and with outwardly directed portions forming guards above said shell openings, downwardly directed guards depending from the outwardly directed guards and spaced from said openings, and wings directed inwardly from said last mentioned guards and extending below the openings of the shell, said wings being provided with apertures which extend above the top of the shell to the hood.



2. In a chimney cap, the combination of a shell closed at the top and adapted to bear over a chimney and having openings in its sides, a hood fitting over said shell and with outwardly directed portions forming guards above said shell openings, downwardly directed guards depending from the outwardly directed guards and spaced from said openings, wings directed inwardly from said last-mentioned guards and extending below the openings of the shell, said wings being provided with apertures which extend above the top of the shell to the hood and means for detachably connecting said hood to said shell.

3. In a chimney cap, the combination of a shell closed at the top and adapted to bear over a chimney and having openings in its sides, a closed-top hood supported above said closed-top shell and with outwardly directed portions forming guards above said shell openings, downwardly directed guards depending from the outwardly directed guards and spaced from said openings and extending below the same, and wings directed inwardly from said last mentioned guards and extending below the same, the lower portions of said wings being engaged against the shell, said wings being provided with apertures which extend above the top of the shell to the hood.

1,015,170. METHOD OF DREDGING CHANNELS. STEWART ALBERT GROOMBRIDGE, Baltimore, Md. Filed Apr. 18, 1911. Serial No. 621,950. (Cl. 37—9.)

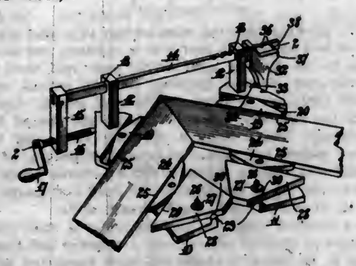


1. The method herein described of removing and recovering solid matter from the bottom of waterways which consists in first disturbing the solid matter and

mingling it with the overlying water and then delivering the commingled bodies primarily at the bottom of a suitable receptacle upon a floating dredge and then successively close to the accumulating body of solid matter in said receptacle.

2. The method hereinbefore described of recovering the solid matter removed from the bottom of waterways, which consists in disturbing and mingling the solid matter with the overlying body of water, delivering the water mingled with the solid matter to a receptacle above a series of pockets upon a dredge and successively loading said pockets with the solid material by delivering the water and solid material in its mingled condition, first at the bottom of each pocket and subsequently close to the accumulating body of solid matter, whereby the solid matter is prevented from floating within the pocket and escaping through the overflow channels.

1,015,171. CLAMP. ELLSWORTH GOBLE, Louisville, Ky. Filed Sept. 12, 1911. Serial No. 648,880. (Cl. 144—293.)



1. A clamp comprising a plurality of bases, uprights secured to the said bases, a bar slidably extended through the said uprights, clamping members pivotally mounted on the said bases, adjusting plates mounted to slide on the said bases, clamping members mounted to swing on the said adjusting plates, means for locking the said adjusting plates, serrations formed on the said bar, a locking dog mounted on the serrated end of the said bar and adapted for locking engagement with one of the said bases and a screw having connection with the said bar and adapted for engagement with the other base to move the said other base relatively to the said bar.

2. A clamp comprising a plurality of bases, uprights secured to the said bases, a bar mounted to slide on the said uprights, clamping members mounted on the said bases and adapted to receive connectible pieces of material therebetween means for moving one of the said bases toward the other said base and means for retaining the said other base in rigid position relatively to the said bar.

3. A clamp comprising a plurality of bases, uprights secured to the said bases, a bar mounted to slide on the said uprights, a dog mounted on the said bar and adapted for locking engagement with one of the said bases, means for sliding the other said base relatively to the said bar and clamping means for releasably retaining pieces of material in clamping engagement with the said bases.

4. In a clamp the combination of a base, a second base, uprights extended from the said bases, a bar slidably mounted on the said uprights, clamping members on the said bases and adapted to clamp pieces of material thereto, means for locking the second mentioned base relatively to the said bar and a screw having connection with the said bar and adapted to engage the first mentioned base to move the same relatively to the second mentioned base.

5. In a clamp the combination of a base, a second base, uprights extended from the said bases, a bar mounted to slide on the said uprights, means for locking the first mentioned base relatively to the said bar, means for moving the first mentioned base on the said bar, clamping members pivotally mounted on the said bases, adjusting plates mounted to slide on the said bases and clamping members pivotally mounted on the said adjusting plates.

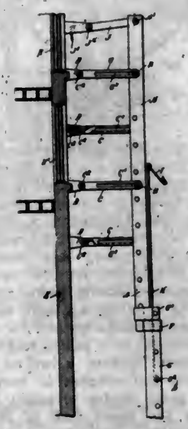
1,015,172. RAILROAD-TIE. HOWARD F. GORSUCH, Sunbury, Ohio. Filed July 13, 1911. Serial No. 638,338. (Cl. 238—5.)

1. A metallic railway tie including opposed similar sections each including a base and a web, said webs being slotted, means upon each web for projecting into the slot in the opposed web, oppositely disposed jaws upon the webs, and an adjusting element connected to each web and engaging the means in the slot in said web for shifting the webs relative to each other.

2. A metallic railway tie including oppositely disposed similar sections each having a slot in one end thereof, means upon the other end of each web for slidably engaging the slotted portion of the opposed web, means upon each web and engaging said slidable portion for adjusting the webs relative to each other, and oppositely disposed rail engaging jaws upon the webs.

3. A metallic railway tie including oppositely disposed similar sections each including a slotted web, means upon each web for slidably engaging the slotted portion of the opposed web, an adjusting device engaging said means for shifting it longitudinally within the slot, rail engaging jaws integral with the webs, each jaw lapping and slidably engaging the web of the opposed jaw, and means for tying the sections together transversely.

1,015,173. FIRE-ESCAPE. HEINRICH GRÜNBAUM, New York, N. Y. Filed July 13, 1911. Serial. No. 638,270. (Cl. 228—3.)



1. A fire escape for a building, comprising a main ladder, links pivoted on the wall of the building and pivotally connected with the main ladder, an extension ladder on the lower end of the main ladder, and means for normally holding the extension ladder in raised position and allowing the extension ladder to drop on swinging the main ladder into extended position.

2. A fire escape for a building, comprising a main ladder, links pivoted on the wall of the building and pivotally connected with the main ladder, an extension ladder on the lower end of the main ladder, a releasing lever pivoted on the building and pivotally connected with the main ladder and a connection between the said extension ladder and the said lever, to normally hold the extension ladder in raised position and to release the extension ladder on swinging the main ladder into position for use.

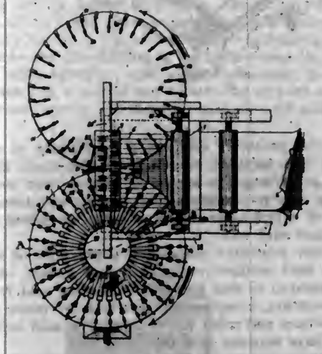
3. A fire escape for a building, comprising a main ladder, links pivoted on the wall of the building and pivotally connected with the main ladder, an extension ladder on the lower end of the main ladder, a releasing lever fulcrumed on the building and provided with a releasing hook, and a supporting and releasing means for the said extension ladder and connected with the said hook.

4. A fire escape for a building, comprising a main ladder, links pivoted on the wall of the building and pivotally connected with the main ladder, an extension ladder, a releasing lever fulcrumed on the building, said lever being connected at one end to the main ladder and having its opposite end provided with a releasing hook, a supporting and releasing link attached at its lower end to the extension ladder and provided at its upper end with a hook for engagement with the said lever hook.

5. A fire escape for a building, comprising a main ladder, links pivoted on the wall of the building and pivotally connected with the main ladder, an extension ladder on the lower end of the main ladder, a releasing lever pivoted on the building and pivotally connected with the main ladder, a connection between the said extension ladder and the said lever to normally hold the extension ladder in raised position to release the extension ladder on swinging the main ladder into position for use, and manually-controlled means connected with the said releasing lever for swinging the man ladder into open or folded position.

[Claim 6 not printed in the Gazette.]

1,015,174. MACHINE FOR PRODUCING FABRIC, PAPER, OR CARDBOARD HAVING AN INCLOSURE OF CROSSING THREADS. HERMANN GUEFFROY, Berlin, Germany, assignor to Drahtpapier G. M. B. H., Berlin, Germany. Filed Sept. 14, 1910. Serial No. 581,983. (Cl. 154—1.)



1. A machine for making paper and the like having an inclosure of crossing threads, comprising a pair of pressure rolls, spools having threads wound thereon, means for unwinding, stretching and feeding the threads one after the other to the pressure rolls, and a cutting device which cuts off the thread taken hold of by the said rolls.

2. A machine for the production of a fabric having an inclosure of crossing threads, the said machine comprising a pair of pressure rolls, two disks rotating at the same speed in opposite directions, spools carried by one of said disks and having threads wound thereon, and means carried by the other disk for unwinding the threads from said spools and introducing them between said pressure rolls.

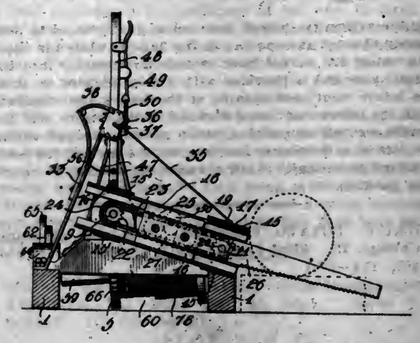
3. A machine for the production of a fabric having an inclosure of crossing wires between the covering webs, comprising in combination two horizontal disks adapted to rotate at the same speed in opposite directions, wire spools carried by one of said disks at a uniform circumferential distance from each other, and grippers on the other disk to grasp the wires unwound from said spools, the said grippers corresponding in number with the said spools.

4. In a machine for the production of a fabric having an inclosure of crossing wires, two disks adapted to rotate at the same speed in opposite directions, wire spools carried by one of said disks, and nozzles provided at the circumference of said disk and to which the wires are led from said spools.

5. A machine for the production of a fabric having an inclosure of crossing wires, the said machine comprising two disks adapted to rotate at the same speed in opposite directions, wire spools carried by one of said disks, levers, rolls carried by said levers and under which the wires are led from said spools, and nozzles at the edge of the disk and through which the wires pass.

[Claims 6 to 12 not printed in the Gazette.]

1,015,175. DRAG SAWING-MACHINE. WILLIAM STANLEY HAHN, Mountain Dale, Oreg. Filed June 8, 1911. Serial No. 631,957. (Cl. 143—68.)



1. In a sawing machine, the combination with a driving shaft having a sprocket wheel on its end, a bearing supporting this shaft and another adjacent to but spaced from said wheel, a saw blade, a saw head secured thereto and having an upright groove, and a block movable in said groove; of a supporting frame having one side of its inner end mounted on said shaft and its top and bottom provided with channeled lugs and extended into the other side of the frame, a pivot shaft carried by this side and engaging the outer bearing in line with the driving shaft, an extension from the first-named side, a bearing plate adjustably secured to said extension and having similar channeled lugs, top and bottom guides connecting said lugs in pairs and loosely embracing the saw-head, an idle sprocket carried by said plate, a chain inclosing the idle sprocket and that on the driving shaft, and a pin in one of its links engaging the block on the saw-head.

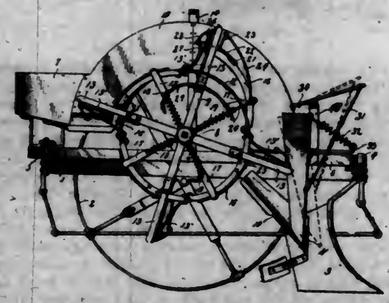
2. In a sawing machine, the combination with the driving shaft having a wheel on its end, a saw blade, and a head secured thereto; of a supporting frame having its inner end mounted on said shaft, top and bottom lugs carried by the inner and outer ends of this frame, upper and lower guides connecting said lugs in pairs and loosely embracing the saw-head, a clamp carried by the outer end of the frame and having blocks embracing the uppermost lug at either side of the guide therein, a set screw through this clamp onto the guide, means for adjusting the outer and inner ends of said frame with respect to each other, a wheel in the outer end, a belt connecting this wheel with that on the driving shaft, and connections between said belt and saw-head.

1,015,176. POT-HANDLE. WILLIAM H. HALL and LOUIS H. HALL, Winlock, Wash. Filed Aug. 11, 1910. Serial No. 576,735. (Cl. 53—8.)

The combination of a pot, a keeper projecting from the pot and having an opening therein, a hollow handle having

an opening in the top thereof and provided at one end thereof with a laterally projecting arm adapted to be received within the keeper, a shoulder being provided upon the arm for engagement with the end of the keeper and the lateral arm being hollow and having the rear side thereof open, a transverse pin extending across the interior of the handle at a point toward the inner end thereof, a curved lever pivotally mounted at an intermediate point in its length upon the said transverse pin, one end of the lever extending forwardly into the hollow handle and having the extremity thereof deflected upwardly so as to pass loosely through the opening in the handle, while the opposite end of the curved lever extends downwardly into the lateral arm and is provided with a nose adapted to enter the before mentioned opening of the keeper and coöperate with the before mentioned shoulder of the arm to hold the handle securely in position, and a spring arranged within the lateral arm so as to bear against the back of the lever and tend to normally throw the nose thereof into an operative position.

1,015,177. POTATO-PLANTER. CHRISTIAN HANSEN, Chicago, Ill. Filed Feb. 25, 1911. Serial No. 610,884. (Cl. 111—27.)



1. In a potato planter, in combination, a frame, a hopper on said frame, a delivery means, means for conveying potatoes from said hopper for delivery to said first means, said conveying means being provided with an outwardly projecting arm, a member mounted on said conveying means for outward movemen., means for retaining a potato on said arm, said last named means being mounted on said member for relative angular movement, and means for independently moving said last named means by and during movement of said member.

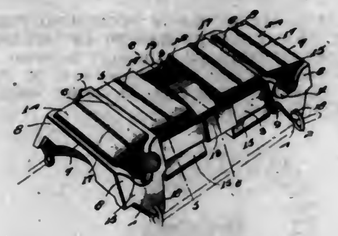
2. In a potato planter, in combination, a frame a hopper on said frame, a delivery means, means for conveying potatoes from said hopper for delivery to said first named means, said conveying means being provided with an outwardly projecting arm, a member mounted on said conveying means for outward movement, means for retaining a potato on said arm, said last named means being mounted on said member for relative movement, and means for independently moving said last named means by and during movement of said member.

3. In a potato planter, in combination, a frame, a hopper on said frame, a delivery means, means for conveying potatoes from said hopper for delivery to said first means, said conveying means being provided with an outwardly projecting arm, a member mounted on said conveying means for outward movement, means for retaining a potato on said arm and swingingly supported on said member, and means for independently moving said last named means by and during movement of said member.

4. In a potato planter, in combination, a frame, a hopper on said frame, a delivery means, means for conveying potatoes from said hopper for delivery to said first means, said conveying means being provided with an outwardly projecting arm, a member mounted on said conveying means for outward movement, means for retaining a potato on said arm and swingingly supported on said member, and means carried by said arm for moving said last named means by and during movement of said member.

5. In a potato planter, in combination, a frame, a hopper on said frame, a delivery means, means for conveying potatoes from said hopper for delivery to said first means, said conveying means being provided with an outwardly projecting arm, a member mounted on said conveying means for outward movement, means for retaining a potato on said arm and swingingly supported on said member, means carried by said arm for moving said last named means by and during movement of said member, and means for limiting the movement of said potato retaining means.

1,015,178. TIRE-PROTECTOR. RHODA C. HARRIS, Pittsburgh, Pa. Filed Feb. 21, 1911. Serial No. 609,967. (Cl. 152—16.)



1. A tire protector comprising a plurality of sections, each of said sections comprising end frames, side bars holding said frames in spaced relation, a web connecting said side bars intermediate their length, and tread blocks carried by said frames and by said side bars between said frames and said web.

2. A tire protector comprising a plurality of sections, each of said sections comprising end frames, side bars rigidly secured to said frames and holding said frames in spaced relation, a connecting web slidably mounted upon said side bars and tread blocks carried by said frames and by said bars between said links and web.

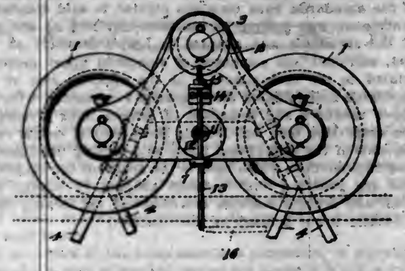
3. A tire protector comprising a plurality of sections, each of said sections comprising end frames, side bars, said bars provided with notches near their end portions to receive portions of said frames, the end portions of said bars bent around said links, and tread blocks carried by said sections.

4. A tire protector comprising a plurality of sections, said sections having end frames, each of said frames having outwardly converging side walls, webs connecting said walls, outwardly converging side bars connecting the frames of each of said sections and tread blocks fitting within said frames and between said bars, the ends of said blocks being outwardly converging to cause the blocks to be held within said frames and between said bars.

5. A tire protector comprising a plurality of sections, said sections comprising end frames, side bars connecting said frames, a bracing band connecting said bars and conforming to the contour of a tire, and tread blocks carried by said sections.

[Claims 6 to 8 not printed in the Gazette.]

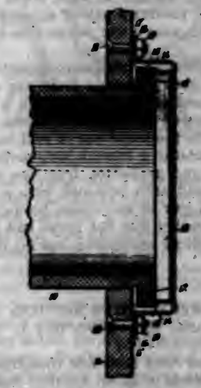
1,015,179. TROLLEY-RETAINER FOR DUMPING-BUCKETS. WILLIAM HEINRICH, Mosgrove, Pa. Filed May 10, 1911. Serial No. 627,522. (Cl. 104—4.)



1. A trolley having a vertical rotatable rod mounted on one side thereof with a lateral arm at its lower end normally located in transverse position to and beneath the trolley, a transverse longitudinally movable rod hinged to the crank of said crank rod, and a compression spring connected to said rod, and holding the lateral arm at the lower end of the crank rod in its normal position and operable to automatically return said lateral arm to its normal position when swung laterally in a horizontal plane.

2. In a device of the kind described, a frame having spaced side members provided with alined centrally disposed openings, trolley wheels mounted in said frame, an L-shaped strip extending across one of said openings and provided with an opening in axial alinement with the opening in the frame side, the remaining portion of said strip extending across and beneath said frame and being provided with an opening vertically disposed in its outer end, means for securing said strip to said frame, a crank rod extending upward through the vertical opening in the strip, a bracket secured to the upper part of said frame and having a journal opening to receive the upper end of the crank rod, a lateral projection extending from the lower end of the crank rod and normally lying transversely beneath the frame, a rod extending through the openings in the frame and the opening in the strip alined therewith, said rod being provided with an eye engaging the crank of the crank rod, a nut on the opposite end of said rod, and a compression spring held between said nut and said strip.

1,015,180. FLUID-TIGHT EXPANSION-JOINT. CHARLES EASTON HEITMAN, New York, N. Y., assignor to HERMAN LANGE, Dorchester, Mass. Filed Jan. 19, 1910. Serial No. 538,826. (Cl. 122—17.)



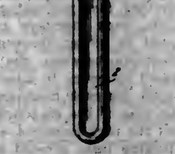
1. The combination with a tube sheet and a tube extending therethrough, of a fluid-tight expansion joint, including a collar threaded to the exterior of said tube, a sheet metal expansion ring having one edge in engagement with the periphery of said collar, a second collar shrunk upon said edge to hold the latter to said first-mentioned collar, the other edge of said sheet metal expansion ring being bent at an angle to lie in a plane parallel to said tube sheet, an annular packing intermediate said last-mentioned edge and said tube sheet, and a plurality of bolts extending through said last-mentioned edge, said tube sheet and said packing, for securing the ring and packing in position.

2. The combination with a tube and a tube sheet, of a fluid-tight expansion joint, including an annular sheet metal band encircling the tube but out of engagement therewith, two collars engaging with opposite sides of said band adjacent one edge of the latter and serving to hold said band therebetween, one of said collars being detachably secured to said tube, and means for securing the other edge of said sheet metal to said tube sheet.

3. The combination with a tube sheet and a tube movable longitudinally therethrough, of a fluid-tight expansion joint including an expansion ring of flexible sheet metal having two substantially concentric cylindrical portions integral with each other and an intermediate connecting portion, means for rigidly securing the edge of the inner one of said portions to the periphery of the tube to form a fluid-tight joint, and means for rigidly securing the edge of the outer one of said cylindrical portions to the surface of the tube sheet to form a fluid-tight joint, the inner and outer portions of said ring being relatively movable upon an expansion or contraction of the tube.

4. The combination of a tube sheet having an opening, a tube extending loosely through said opening, a packing ring engaging said sheet and concentric to said tube, a ring of sheet metal provided with a flange engaging said packing ring, said metallic ring being provided with another portion bent back upon itself, and a collar mounted upon said tube and engaging said portion thus bent back upon itself.

1,015,181. WRENCH. FREDERICK VICTOR HENDRICKSON, Kellettville, Pa. Filed Mar. 30, 1911. Serial No. 617,975. (Cl. 81—136.)

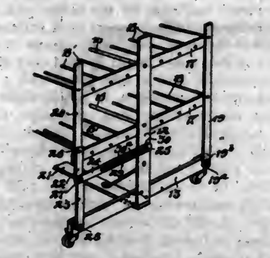


1. A wrench comprising a handle, a stem thereon, a stationary jaw on the outer end of said stem, a movable jaw adjustably mounted on said stem, a spring projected pawl adapted to engage said stem and hold said jaw in its adjusted positions, said pawl having its shank curved inwardly intermediately of its ends toward said stem, said curved portion operating against said stem to form a fulcrum for the pawl, means to loosely connect said pawl to said movable jaw.

2. A wrench comprising a handle, a stem thereon, said stem having on its rear edge a series of rack teeth, a stationary jaw on the outer end of said stem, a movable jaw, stem engaging plates formed on said jaw whereby the latter is slidably connected with the stem, a pawl adapted to be engaged with the rack teeth on said stem, said pawl having a curved shank arranged between the projecting ends of the side plates of the adjustable jaw and having

an operative engagement with the rear edge of the stem whereby the pawl may be rocked and thus disengaged from the rack teeth on the stem, a thumb piece on said shank, a spring secured between the ends of said jaw plates and having its outer end engaged with said pawl and links to connect the pawl with said movable jaw.

1,015,182. FOLDING RACK. FREDERICK LEON HERBIN, Swampscott, Mass., assignor of one-half to Thomas J. Gallivan, Lynn, Mass. Filed Nov. 23, 1911. Serial No. 662,007. (Cl. 211—14.)



1. A folding rack comprising a pair of vertical standards, supporting feet projecting from opposite sides of the standards, rack members pivoted to said standards, and adapted to swing thereon to open and fold the rack-connections between the rack members whereby they are caused to swing in unison, folding legs pivotally connected with the rack members and with the supporting feet at one side of the standards, and adapted to be alined to support the rack members and to be folded with the rack, and means for locking said legs in alinement with each other.

2. A folding rack comprising a pair of vertical standards, supporting feet projecting from opposite sides of the standards, rack members pivoted to said standards, and adapted to swing thereon to open and fold the rack-connections between the rack members whereby they are caused to swing in unison, folding legs pivotally connected with the rack members and with the supporting feet at one side of the standards, and adapted to be alined to support the rack members, and to be folded with the rack, and locking links pivoted to the joints of the folding legs, the said links and the supporting frame of the rack being provided with complemental means for locking the links against endwise movement.

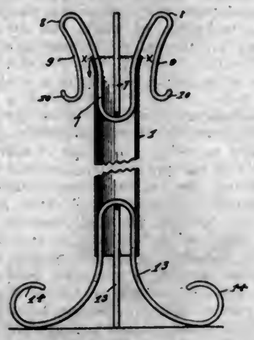
3. A folding rack comprising a pair of vertical standards provided with outwardly projecting studs at their lower portions, supporting feet projecting from opposite sides of the standards, rack members pivoted to said standards, and adapted to swing thereon, to open and fold the rack, connections between the rack members whereby they are caused to swing in unison, folding legs pivotally connected with the rack members and with the supporting feet at one side of the standards, and adapted to be alined to support the rack members, and to be folded with the rack, and locking links pivoted to the joints of the folding legs, the said links being provided with longitudinal slots receiving said studs and having recesses adapted to engage the studs to lock the links against endwise movement.

4. A folding rack comprising a pair of vertical standards, supporting feet projecting from opposite sides of the standards, rack members pivoted to said standards, continuous legs jointed to the rack members at one side of the standards and adapted to bear removably on the feet, sectional legs composed of elongated upper members jointed to the rack members at the opposite side of the standards and foldable lower members connected with the upper members and composed of hinged links pivoted to the supporting feet, and locking links pivoted to the meeting ends of the said hinged links, said locking links and the standards having complemental means for detachably locking the links to the standards.

5. A folding rack comprising a pair of vertical standards having outwardly projecting studs at their lower portions, supporting feet projecting from opposite sides of the standards, rack members pivoted to said standards, continuous legs jointed to the rack members at one side of the standards and adapted to bear removably on the feet, sectional legs composed of elongated upper members jointed to the rack members at the opposite side of the standards and foldable lower members connected with the upper members and composed of hinged links pivoted to the supporting feet, and locking links pivoted to the meeting ends of the said hinged links, said locking links having longitudinal slots which receive the studs on the standards and are provided with recesses adapted to engage said studs and prevent endwise movement of the locking links.

[Claim 6 not printed in the Gazette.]

1,015,183. STAND. ARDO HERING, Philadelphia, Pa. Filed June 29, 1910, Serial No. 569,492. Renewed Sept. 9, 1911. Serial No. 648,495. (Cl. 45—13.)



1. A stand comprising a tubular body-portion, members bent to provide V-shaped portions extending in the upper end of said body-portion and further bent to provide supporting loops and suspension arms terminating in hooks, and inverted V-shaped bars extending in the lower end of said body-portion and constituting supporting legs.

2. A stand comprising a tubular body-portion, a pair of bars having the central portion thereof substantially V-shaped in contour and extending in the upper end of said body-portion, said V-shaped portions of said bars disposed at right angles with respect to each other, each of said bars further bent to provide a pair of supporting loops and a pair of suspension hooks, and supporting means for the body-portion.

3. A stand comprising a tubular body-portion, a pair of bars extending in and projecting from the upper end of said body-portion and each provided with a pair of supporting loops and a pair of suspension hooks, and supporting legs extending in the lower end of said body-portion.

4. A stand comprising a tubular body-portion, a pair of bars extending in and projecting from the upper end of said body-portion and each provided with a pair of supporting loops and a pair of suspension hooks, and inverted V-shaped bars extending into the lower end of said body-portion and constituting supporting legs for the latter.

1,015,184. WIRE-STRETCHING DEVICE. WILLIAM A. HOLCOMB, Pebworth, Ky. Filed May 5, 1911. Serial No. 625,206. (Cl. 57—34.)

1. A device of the class described comprising a hook, a pulley mounted thereon, a block, a pulley mounted on the said block, a cord secured to the said hook and extending over the pulley on the said block, the said cord being then passed over the pulley on the said hook, a second hook, and a pulley mounted on the second hook and having the cord passed thereover, the said cord being then secured to the said block.

2. A device of the class described comprising a hook, a pulley mounted thereon, a block, a pulley mounted on the said block, a cord secured to the said hook and extending over the pulley on the said block, the said cord being then passed over the pulley on the said hook, a second hook, a pulley mounted on the second hook and having the cord passed thereover, the said cord being then secured to the said block, and a handle secured to the said cord between the said hooks.

3. A device of the class described comprising a plurality of hooks, a cord secured to one of the hooks, a block, a pulley mounted on the said block and having the cord passed thereover, pulleys mounted on the said hooks, the said cord being passed over the pulley on the hook having the end of the cord secured thereto and the said cord being then passed over the pulley on the other said hook, and an eye pivotally mounted on the said block and having the other end of the said cord secured thereto.

4. A device of the class described comprising a plurality of hooks, a cord secured to one of the hooks, a block, a pulley mounted on the said block and having the cord passed thereover, pulleys mounted on the said hooks, the said cord being passed over the pulley on the hook having the end of the cord secured thereto and the said cord being then passed over the pulley on the other said hook, an eye pivotally mounted on the said block and having the other end of the said cord secured thereto, and a handle secured to said cord and positioned between the said hooks.

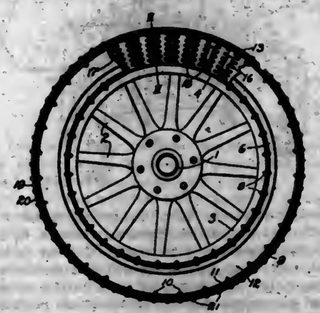
5. A device of the class described comprising a plurality of attaching members, each formed of an integral piece of material, pulleys mounted on the said attaching members, a block, a pulley mounted on the said block and a cord having an end thereof secured to one of the attaching members and passed over the pulley on the said block, the said cord being then successively passed over the pulleys on the attaching members with the other end of the said cord secured to the said block.

1,015,185. SAD-IRON. WILLIAM E. HOYT, New York, N. Y. Filed Apr. 25, 1911. Serial No. 623,263. (Cl. 68—26.)

1. A sad iron formed with a combustion chamber, a flue leading from said combustion chamber, a door leading into said combustion chamber, a draft valve in said door, a damper in said flue, side air inlets at the top of said combustion chamber, sliding side valves for controlling the area of said air inlets, said sliding valve being mounted on a pivoted lever by means of a depending pin extending through a slot in the top of said iron and engaging at its lower end with a cross bar connecting said side valves, a heat protecting shield covering the inner face of the top of said combustion chamber interposed between said face and said cross bar of said side valves and supported thereon, a handle for manipulating the iron, a standard for supporting one end of said handle, and heat insulating material interposed between said standard and the top of said iron, substantially as set forth.

2. A sad iron formed with a self-contained heating chamber, a vertically sliding door to said chamber, draft openings and valves for controlling the same, a handle supported on a standard on the top of said iron and a pivoted button on said standard for securing said sliding door, said button being pivoted to one side of its longitudinal center, whereby when turned one way it will hold the door in one position and when reversed will hold the door in another position, substantially as set forth.

1,015,186. VEHICLE-WHEEL. WILLIAM H. HUMFELD, Kansas City, Mo. Filed Feb. 6, 1911. Serial No. 606,740. (Cl. 152—28.)



1. In a vehicle wheel, a felly plate, plates extending radially from the felly plate and having flanges bolted thereto, said plates being spaced to form a channel, a tread plate, guide members extending inwardly from the tread plate and having flanges secured thereto, said last named plates being spaced to form a channel into which the projecting members on the felly plate are extended, cups fixed to the tread plate, posts threaded into said cups, and springs surrounding said posts and cups and bearing against the felly plate and tread plate, the inner ends of said springs being projected through the felly plates into the wheel felly, substantially as set forth.

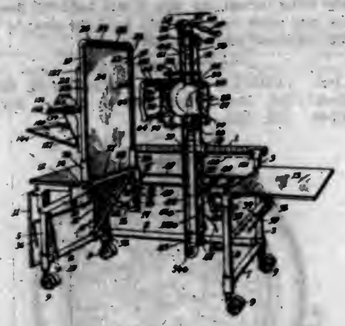
2. In a vehicle wheel, the combination with the wheel felly, of a plate fixed to the felly and projecting from opposite sides thereof, plates projecting radially from the felly plate and having flanges projecting over the parts thereof on the outside of the felly, bolts securing said flanges to the projecting parts of the felly plate, a tread comprising metal rings separated by a ring of yielding material, guide members projecting inwardly from the tread member and having flanges securing same thereto by bolts which pass through the entire tread member, said guide members and the projecting members on the felly plate being adapted for frictional contact, cups fixed to the tread member and having inwardly facing sockets, posts threaded into said sockets, and coil springs surrounding the cups and posts and bearing against the tread member and felly plate, the inner ends of said springs being projected through the felly plate, substantially as and for the purpose set forth.

1,015,187. X-RAY OPERATING-TABLE. EDWIN W. KELLY, Philadelphia, Pa., assignor to Roentgen Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 27, 1910. Serial No. 574,045. (Cl. 175—313.)

1. The combination with a table, of an X-ray tube, a plurality of plate holders secured together, a pivotal support for said plate holders, means for rotating said plate holders about said pivotal support, and means for translating said pivotal support.

2. In combination, a table, a member translucent to X-rays, a frame attachable on one side of said translucent member, a plurality of plate holders secured together, a pivotal support for said plat holders in said frame, and means for rotating and translating said plate holders, whereby said plate holders are successively in operative relation to said translucent member.

3. In combination, a table, a pivoted member translucent to X-rays supported thereon, a frame detachably secured to said member, a plurality of plate holders in fixed relation at an angle to each other supported by said frame, and means for rotating and translating said plate holders.

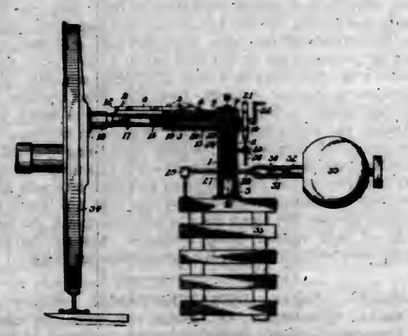


4. In combination, a table, a pivoted member translucent to X-rays supported thereon, a frame detachably secured to said member, a plurality of plate holders in fixed relation at an angle to each other supported by said frame, means for rotating and translating said plate holders, and an opaque member between said plate holders and movable therewith.

5. An operating table comprising an open front frame and a table member, said frame comprising back and end frames rigidly secured together and movable as a unit, said table member being pivoted and adapted to bridge said end frames, an X-ray tube, and means supporting the same carried by said operating table and adjustable with respect thereto.

[Claims 6 to 42 not printed in the Gazette.]

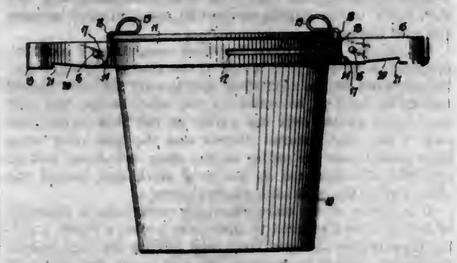
1,015,188. MACHINE FOR TURNING CRANK-PINS. JACOB KESSLER and JOHN WEISS, Pittsburgh, Pa. Filed Nov. 23, 1910. Serial No. 593,811. (Cl. 82—4.)



1. A crank pin turning machine comprising a guide fixedly engaging with the crank pin, a rotatable tool carrying element surrounding the guide, a feed screw extending in said element and engaging with the guide, means whereby said element is shifted longitudinally of the guide when the feed screw is revolved, a crank for manually revolving the feed screw, a star wheel carried by the screw and interposed between said element and the crank, and a rotatable actuating wheel provided with spokes adapted to engage the arms of the star wheel for intermittently revolving it thereby rotating the screw.

2. A crank pin turning machine comprising a guide fixedly engaging with the crank pin, a rotatable tool carrying element surrounding the guide, a feed screw extending in said element and engaging with the guide, means whereby said element is shifted longitudinally of the guide when the feed screw is revolved, a crank for manually revolving the feed screw, a star wheel carried by the screw and interposed between said element and the crank, and a rotatable actuating wheel provided with spokes adapted to engage the arms of the star wheel for intermittently revolving it thereby rotating the screw, said actuating wheel arranged below said star wheel.

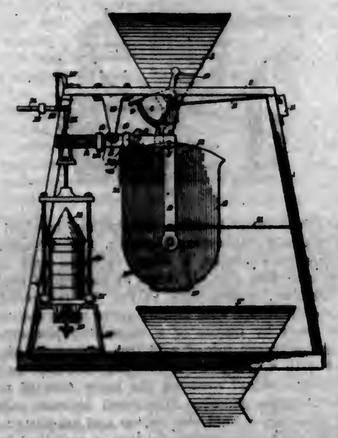
1,015,189. MILKING-PAIL ATTACHMENT. WILFORD W. KIMMEL, New Weston, Ohio. Filed June 1, 1911. Serial No. 630,639. (Cl. 31—14.)



1. An attachment for milking pails including a contractile ring formed of a single length of resilient material having overlapping ends adjustably secured together, oppositely disposed lugs projecting from said ring and extending in the plane thereof, and a resilient loop having terminal clamping ends detachably engaging said ring.

2. An attachment for milking pails including a contractile ring formed of a single leangth of resilient material having overlapping ends, one of said ends having a longitudinal slot formed therein, and the other of said ends being equipped with adjusting bolts engaged through said slots, oppositely disposed lugs on said ring having pail engaging rabbets and formed in their underneath faces, and a resilient loop having inturned terminals removably embracing said ring.

1,015,190. SCALE. VICTOR O. KLINGLER, Slayton, Minn. Filed Apr. 2, 1910. Serial No. 552,977. (Cl. 73—174.)



1. An automatic scale comprising a frame having a hopper thereon, a plurality of valves carried by the frame and adapted to close the mouth of the hopper, a scale beam suitably supported on the said frame and having a bucket pivotally supported thereon adjacent one end thereof, suitable weights adjacent the opposite end of the said beam, a locking bar carried by the scale beam on the bucket end, means on the bucket in engagement with the locking bar, and other means on the bucket in engagement with the valves, whereby when the bucket is brought into normal position under the hopper it is maintained in such position and the valves are removed from the mouth of the hopper, thereby permitting the bucket to receive material from the hopper.

2. An automatic scale comprising a frame having a hopper thereon, a valve carried by the frame and adapted to close the mouth of the hopper, a scale beam suitably supported on the said frame and having a bucket supported thereon adjacent one end thereof, suitable weights adjacent the opposite end of the said beam, a locking means carried by the scale beam adjacent the bucket end, means on the bucket in engagement with the first said means, and other means on the bucket in engagement with the valve, whereby when the bucket is brought into normal position under the hopper it is maintained in such position and the valve is removed from the mouth of the hopper thereby permitting the bucket to receive material from the hopper.

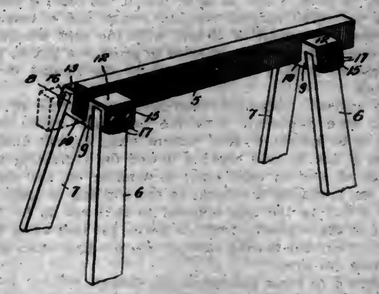
3. An automatic scale comprising a frame having a hopper adjacent thereto, a valve carried by the frame and adapted to close the mouth of the hopper, a scale beam suitably supported on the said frame and having a bucket supported thereon adjacent one end thereof, suitable weights adjacent the opposite end of the said beam, a locking bar carried by the scale beam on the bucket end, a notched bar carried by the bucket in engagement with the said locking bar, and a projecting bar on the bucket in engagement with the valve whereby when the bucket is brought into normal position under the mouth of the hopper it is maintained in such position and the valve is removed from the mouth of the hopper, thereby permitting the bucket to receive material from the hopper.

4. An automatic scale comprising a frame having a hopper adjacent thereto, a valve carried by the frame and adapted to close the mouth of the hopper, a scale beam suitably supported on the said frame and having a bucket supported thereon adjacent one end thereof, suitable weights adjacent the opposite end of the said beam, a locking bar carried by the scale beam on the bucket end, means on the bucket in engagement with the locking bar, and other means on the bucket in engagement with the valve, whereby as material is deposited into the bucket from the hopper the bucket will be moved to a lower position after the weights on the other end of the scale beam have been balanced, the means on the bucket in engagement with the valve being removed therefrom, whereby the valve will move into another position closing the mouth of the hopper, the valve during its travel releasing the locking bar out of engagement with the said means on the bucket whereby the bucket is in position to be tilted.

5. An automatic scale comprising a frame having a hopper suitably supported adjacent thereto, a valve having a lug projecting therefrom carried by the frame and adapted to close the mouth of the hopper, a scale beam suitably supported on the said frame and having a bucket pivotally supported thereon adjacent one end thereof, suitable weights adjacent the opposite end of the said beam, a locking bar carried by the scale beam on the bucket end, a notched bar on the bucket in engagement with the locking bar, and a projecting bar on the bucket in engagement with the valve, whereby as the bucket assumes a lower position due to the weight of material deposited by the hopper therein, the projecting bar will be moved out of engagement with the valve permitting the valve to close the mouth of the hopper, the lug on the valve during the travel of the valve from one position to the other engaging the locking bar and carrying it out of engagement with the notched plate, whereby the bucket is in position to be tilted.

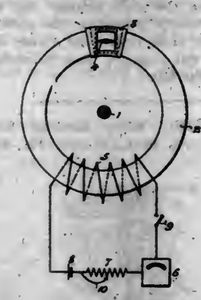
[Claim 6 not printed in the Gazette.]

1,015,191. TRESTLE. RUSSELL KNEISLEY, Carrollton, Mo. Filed Aug. 3, 1910. Serial No. 575,261. (Cl. 20—83.)



In a trestle, a body portion comprising a central bar adapted to receive a horizontal supporting member or beam and inverted U-shaped end portions, the opposing walls of each end portion being inclined upwardly and inwardly and the top walls of said end portions being inclined in a common direction, the outer walls of said end portion having openings therein and legs having beveled upper terminals fitting between said walls and snugly engaging the inclined surfaces thereof, said end portion being adapted to bind against the supporting member or beam under the influence of a load upon said supporting member or beam, and means extending through said under portions for securing the legs thereto.

1,015,192. ELECTRIC-CURRENT-MEASURING INSTRUMENT. OTTO A. KNOPP, Oakland, Cal. Filed Feb. 7, 1911. Serial No. 607,077. (Cl. 171—95.)



1. A current measuring instrument consisting of an annular core having ends spaced apart to permit of the introduction of a current carrying conductor; a device for indicating the presence of flux in said core; a winding for the core; means in circuit with the winding for causing a current flow therein; and means for indicating the amount of said current.

2. A current measuring instrument consisting of an annular core having its ends spaced apart to permit of the introduction of a current carrying conductor capable of causing a flux to be set up in said core; current actuated means for neutralising the flux set up in the core by the current in said conductor; and means for measuring the current necessary to cause such neutralization of the flux.

3. A current measuring instrument consisting of an annular core having ends spaced apart to permit of the introduction of a conductor carrying a current capable of setting up a flux in said core; a device for indicating the presence of a flux in said core; means for setting up a flux in said core in opposition to that produced by the conductor within the same; and means for indicating the amount of current necessary to produce said opposing flux.

4. A current measuring instrument consisting of a core; a device for indicating the presence of a flux in said core; a conductor carrying a current to be measured and in position to cause a flux to be set up in the core; a winding on the core; current varying means and a current measuring instrument in circuit with the said winding; and a source of current connected to produce a flux in the core opposed to that set up therein by the current to be measured.

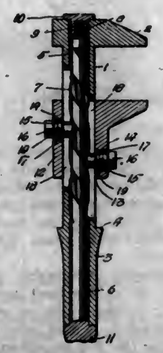
5. A current measuring instrument consisting of an annular core concentric with the conductor whose current is to be measured; said current being capable of setting up a flux in said core; a device for indicating the presence of flux in said core; a winding on the core; means for producing a current in the winding in order to set up a flux in the core opposed to that set up by the current in the conductor; with a device for indicating the amount of current flowing through the winding when said two fluxes are equal.

[Claims 6 to 9 not printed in the Gazette.]

1,015,193. LAMP-IGNITION DEVICE. CARL KOCH, Linden-on-the-Ruhr, Germany. Filed Aug. 30, 1909. Serial No. 515,295. (Cl. 67—10.)

An ignition device for miners' safety lamps, comprising, in combination, means for supporting a pyrophoric substance in operative position, a reciprocatory slide having a friction surface arranged to coöperate with said pyrophoric substance, a leaf spring lying in the plane of movement of said slide and acting thereon to move the latter in one direction, and a disk mounted revolubly beneath the plane of said slide and spring and having means for gradually retracting the slide against the action of the spring and for suddenly releasing the slide to permit a quick motion of the slide under the action of the spring, the parts being in flat compact form to enable the device to be placed in a flat box.

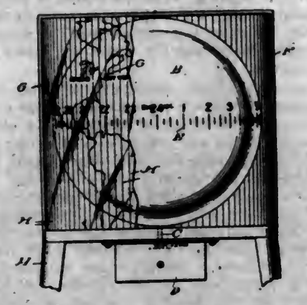
1,015,194. WRENCH. JOSEF KOVACS, Mount Carmel, Pa. Filed Oct. 14, 1911. Serial No. 654,713. (Cl. 81—172.)



1. A wrench comprising a shank having a longitudinal bore formed therein, a fixed jaw carried by the outer end of said shank, a rod rotatably mounted in the bore of said shank and having a spiral groove formed therein, a hand piece carried by the inner end of said rod, a nut carried by the outer end of said rod and retaining said rod within the bore of said shank, an adjustable jaw slidably mounted upon said shank, plugs mounted in said jaw, and pins carried by the inner ends of said plugs and extending through slots provided therefor in said shank with said pins engaging in the spiral groove of said rod whereby said adjustable jaw will be shifted upon said shank when said rod is rotated.

2. A wrench of the type described comprising a shank, a fixed jaw carried by the outer end thereof, said shank having a longitudinal bore formed therein, a rod rotatably mounted in the bore of said shank and having a spiral groove, a hand piece carried by the inner end of said rod, an adjustable jaw slidably mounted upon said shank, inwardly projecting pins supported by said jaw and extending through slots provided therefor in said shank with said pins engaging in the groove of said rod, means engaging the first mentioned jaw for retaining said rod within the bore of said shank, and means carried by said adjustable jaw for detachably holding the pins thereof.

1,015,195. GEOGRAPHICAL CLOCK. GUSTAV KRETZSCHMAR, Paauilo, Hawaii. Filed June 15, 1911. Serial No. 633,279. (Cl. 58—44.)



1. A geographical clock, comprising a sphere having a reflecting surface, and provided with a graduation along the equator representing the hours of a day and subdivisions, and a transparent cylinder surrounding the said sphere and provided with a projected map of the earth and with meridian lines, the said sphere and cylinder having revolving movement one relative to the other.

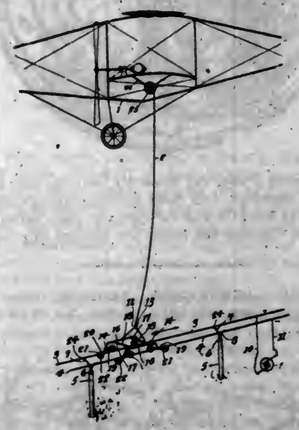
2. A geographical clock, comprising a sphere having a graduation along the equator representing the hours of a day and subdivisions, a fixed transparent cylinder surrounding the said sphere and provided with a projected map of the earth and with meridian lines, and a clock mechanism for rotating the said sphere relatively to the said cylinder.

3. A geographical clock, comprising a clock-driven sphere having a reflecting surface and provided along the equator with a graduation representing the hours of a day and sub-divisions, means for indicating the portions of the day, and a transparent fixed cylinder concentrically surrounding the said sphere, and provided with a projected map showing the principal points of the earth and the meridians.

4. A geographical clock, comprising a supporting stand, a sphere mounted to rotate on the stand and having a reflecting surface, the said sphere being provided along the equator with a graduation representing the hours of a day and sub-divisions, a cylinder of transparent material mounted on the stand and surrounding the said sphere, the said cylinder being provided with a map of the earth and with meridian lines, and mechanism for rotating the said sphere.

1,015,196. TRANSMISSION OF ELECTRIC POWER. THEODORE T. KRYSTOPOVICH, St. Louis, Mo. Filed Apr. 22, 1911. Serial No. 622,683. (Cl. 104—154.)

1. In combination with the spaced conducting wires, and the means for supporting the same, of an aerial vehicle provided with an electric motor, a reel journaled on the vehicle and a cable winding on the reel and composed of two wires insulated from each other, a trolley running on the conductor wires and comprising a section for each wire and insulated from the other section, said trolley comprising a pair of spaced substantially parallel bars of conducting material, each bar being on the outer side of a conducting wire and having a downwardly and outwardly extending arm at each end, an inclined cross bar at the free end of each arm, the bars at each end of the trolley being inclined in the same direction and in the opposite direction to the bars at the other end, each of the said cross bars having an inwardly extending lateral journal pin at each end, a disk on each pin, and a roller on each face of the disk and coaxial therewith and engaging the adjacent conducting wire, the outermost rollers of the trolley engaging beneath the wires and the innermost rollers engaging above the wires, cross bars connecting the first-named bars and a section of insulating material interposed in each cross bar intermediate its ends.



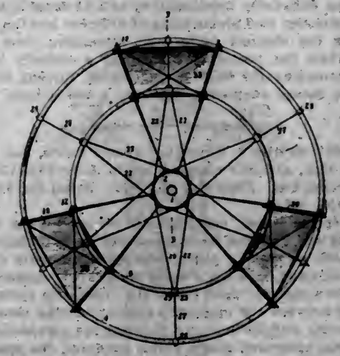
2. In combination with the spaced conducting wires, and the means for supporting the same, of an aerial vehicle provided with an electric motor, a reel journaled on the vehicle and a cable winding on the reel and composed of two wires insulated from each other, a trolley running on the conducting wires and comprising a section for each wire and insulated from the other section, said trolley comprising a pair of spaced substantially parallel bars of conducting material, each bar being on the outer side of a conducting wire and having a downwardly and outwardly extending arm at each end, an inclined cross bar at the free end of each arm, the bars at each end of the trolley being inclined in the same direction and in the opposite direction to the bars at the other end, each of the said cross bars having an inwardly extending lateral journal pin at each end, a disk on each pin, and a roller on each face of the disk and coaxial therewith and engaging the adjacent conducting wire, the outermost rollers of the trolley engaging beneath the wires and the innermost rollers engaging above the wires, and means for connecting the first-named bars and insulating them from each other.

4. In combination with the spaced conducting wires, and the means for supporting the same, of an aerial vehicle provided with an electric motor, a reel journaled on the vehicle and a cable winding on the reel abd composed of two wires insulated from each other, a trolley running on the conductor wires and comprising a section for each wire and insulated from the other section, said trolley comprising a pair of spaced substantially parallel bars of conducting material, each bar being on the outer side of a conducting wire and having a downwardly and outwardly extending arm at each end, an inclined cross bar at the free end of each arm, the bars at each end of the trolley being inclined in the same direction and in the opposite direction to the bars at the other end, each of the said cross bars having an inwardly extending lateral journal pin at each end, a roller on each pin engaging the adjacent conducting wire, the outermost rollers of the trolley being below the innermost rollers above the wires, and means for connecting the first-named bars and insulating them from each other.

5. In combination with the spaced conducting wires, and the means for supporting the same, of an aerial vehicle provided with an electric motor, a reel journaled on the vehicle and a cable winding on the reel and composed of two wires insulated from each other, a trolley running on the conducting wires and comprising a section for each wire and insulated from the other section, said trolley comprising a pair of spaced substantially parallel bars of conducting material, each bar being on the outer side of a conducting wire and having a downwardly and outwardly extending arm at each end, an inclined cross bar at the free end of each arm, the bars at each end of the trolley being inclined in the same direction and in the opposite direction to the bars at the other end, a roller journaled on the end of each cross bar and engaging the adjacent wire, and means for connecting the first-named bars and insulating them from each other, the outermost rollers of the trolley engaging above the wires and the innermost rollers engaging below the wires.

[Claims 6 to 9 not printed in the Gazette.]

1,015,197. FLYING-MACHINE PROPELLER. WALTER HULBERT LAWRENCE, Harwich Port, Mass. Filed Nov. 26, 1910. Serial No. 594,297. (Cl. 244—26.)



1. In a flying machine propeller, a frame comprising two pairs of concentric rings arranged in parallel planes, clamps attached to the rings of each pair, rods connecting the clamps of rings in the same plane, and a vane stretched from the rod of one pair in one plane to the rod of a pair in the other plane.

2. In a flying machine propeller, a cylindrical shaft, concentric rings about said shaft, a leaf on said shaft, connections fastened to said leaf and extending at a tan-

gent to the shaft, sleeves encircling said rings, and means on said sleeve uniting said connections with said rings.

3. In a propeller, a shaft, concentric inner and outer rings about said shaft, reinforcements on said inner and outer rings, and a connection between said inner and outer rings passing through said reinforcements.

4. In a flying machine propeller, a frame comprising rings disposed in parallel planes, reinforcing sleeves surrounding said rings, and vertical and horizontal connections between said reinforcements on adjacent rings.

5. In a flying machine propeller, a frame comprising rings disposed in parallel planes, reinforcing sleeves surrounding said rings, vertical and horizontal connections between said reinforcements on adjacent rings, and inclined vanes extending from the rings in one plane to the rings in the other plane.

[Claims 6 to 9 not printed in the Gazette.]

1,015,198. FISHING-TOOL. BENTON J. LONG and JOHN I. KEITH, Finley, N. D. Filed June 27, 1911. Serial No. 635,545. (Cl. 166—5.)

In a fishing tool, a socket, a series of plates disposed about said socket and extending from the same, said plates extending outwardly from said socket, to form a funnel-shaped member, said plates being of different lengths, starting with the shortest plate each succeeding plate being longer than the preceding plate, and a spirally formed plate connecting the ends of said plates, thereby forming a finding means adapted to embrace a lost article.

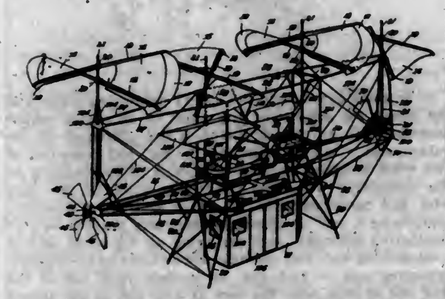
1,015,199. SPRING-WHEEL. JAMES LOWE, San Francisco, Cal., assignor of one-third to John Pellaxio, San Francisco, Cal. Filed May 29, 1911. Serial No. 629,965. (Cl. 152—37.)

1. A spring wheel, comprising a hollow rim, a hollow hub, said rim and hub having annular walls in juxtaposition, pairs of radially alined hemispherical seats formed upon said walls, said seats being perforated, washers having sockets seatable upon said seats, expansible springs interposed between the opposed washers, limiting bars passing through said springs and through the perforations in said seats, apertured guard plates spanning the space between the rim and hub, and clamping members passing through said guard plates to thereby secure the plates to the rim and press the same against the hub.

2. An improved spring wheel, having in combination a hollow rim, a hollow hub, said rim and hub being provided with annular walls in juxtaposition, pairs of radially alined hemispherical seats formed upon said walls, said seats having central perforations, washers having sockets engaging said seats, expansible springs interposed between the opposed washers, limiting bars passing through said springs and through the perforations in said seats, guard plates attachable to the sides of the rim and permitting eccentric movement of the hub relative to the rim, and

spaced hangers projecting inwardly over the rim and provided with openings, and bolts passing through the perforations in the hangers and through like perforations in the guard plates whereby the latter are secured in place.

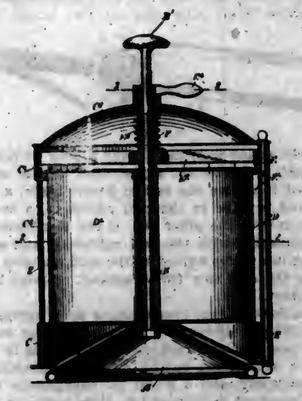
1,015,200. AEROPLANE. ALBERT E. LYCAN, Tahoe, Idaho. Filed Apr. 29, 1911. Serial No. 624,002. (Cl. 244—19.)



1. An aeroplane, comprising a horizontally disposed driving shaft; a plurality of vertically disposed rotary shafts operatively connected with said driving shaft; a plurality of arms fixedly connected with said rotary shafts; a plurality of inclined planes connecting said arms to form levitating planes when said shafts are rotated; a propeller operatively connected with said driving shaft; a prime mover for said driving shaft; means for varying the effective speed of said driving shaft; and means for varying the angle of incidence of the blades of said propeller to compensate for the variation in speed of said driving shaft.

2. An aeroplane, having a driving shaft disposed longitudinally in said aeroplane; rotary levitating means arranged to operate vertically and perpendicularly to said driving shaft, said levitating means being operatively connected with said driving shaft; a driving propeller operatively connected with said driving shaft and disposed to operate in line therewith; a steering propeller operatively connected with said driving shaft and at the end opposite that at which the said driving propeller is connected, said steering propeller being disposed to operate horizontally and perpendicular to the said shaft; means for varying the rotary speed of said driving shaft; and manually operated means for independently varying the operative angle of the blades of said propellers.

1,015,201. TABLE-CASTER. AUGUSTO MARINELLI, Loreto, Italy. Filed Dec. 20, 1910. Serial No. 598,321. (Cl. 65—55.)



1. A table caster, comprising a rotary casing having openings in its side wall, a drum within the said casing and having compartments opposite the said openings, and a manually-controlled cut-off interposed between the said drum and the side wall of the casing to normally disconnect the compartments and the said openings, the cut-off having cut-out portions adapted to register with the said compartments and the said openings.

2. A table caster, comprising a rotary casing having openings in its side wall, a drum within the said casing and having compartments opposite the said openings, a manually-controlled cut-off interposed between the said drum and the side wall of the casing to normally disconnect the compartments and the said openings, the cut-off having cut-out portions adapted to register with the said compartments and the said openings, a handle on the said casing, a handle on the said cut-off and arranged opposite the said casing handle, and a spring pressing the said cut-off.

3. A table caster, comprising a stand having a central post, a cylindrical casing mounted to turn on the said post and having its side wall provided with spaced openings, a drum within the said casing and having compartments for the reception of holders, the compartments being opposite the said openings, a cylindrical cut-off interposed between the said drum and the side wall of the casing, the cut-off having spaced cut-out portions adapted to register with the said casing openings and the said compartments, the said cut-off being mounted to turn on the said post, a spring pressing the said cut-off to hold the latter normally in closed position, and opposite handles on the said casing and cut-off.

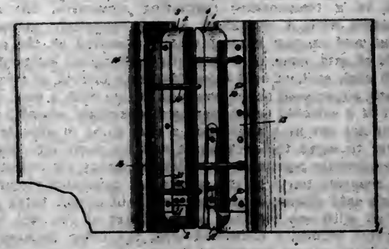
4. A table caster, comprising a rotary casing having openings in its side wall, a drum in the casing and having compartments opposite the openings of said casing, a spring actuated cut-off interposed between the drum and casing and having openings adapted to register with the compartments of the drum and the openings of the casings, and means for turning the cut-off against the action of its spring.

1,015,202. CARDING-DOFFER AND METHOD OF CONSTRUCTING SAME. FRED M. MOORE and JOHN C. ELLIOTT, Oldtown, Me. Filed Apr. 1, 1911. Serial No. 618,321. (Cl. 19—22.)

1. A carding doffer having a continuous clothing strip wrapped spirally on a doffer roll; and a plurality of parallel carding rings formed on said strip, said rings being constructed of carding wire secured in said strip and extended from the surface thereof, and said rings being disposed in planes perpendicular to the axis of said roll.

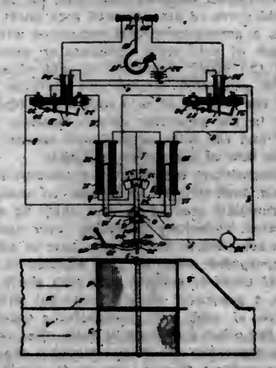
2. In a carding doffer of the character described, a clothing strip for wrapping spirally on a doffer roll; and a plurality of diagonally disposed raised wire sections, said sections being spaced apart on said clothing strip, each section being disposed on said strip to register with the adjacent sections to form therewith a complete circular ring when said cloth is spirally wound on the carding roll, the plane of the said ring being perpendicular to the axis of said roll.

1,015,203. LOOSE-LEAF BINDER. CHARLES E. MOSSICK, Chicago, Ill. Filed Mar. 23, 1911. Serial No. 616,354. (Cl. 129—17.)



The combination with a back, comprising a plurality of sections, of one or more hinges on the outside of said back, for securing said sections together, covers secured to said back and projecting a sufficient distance beyond the outside of said back to extend beyond said hinges, whereby said hinges will be prevented from coming in contact with a surface on which said back is supported.

1,015,204. AUTOMATIC TEMPERATURE-REGULATOR. MICHAEL F. MURRAY, Oakland, Cal. Filed Aug. 3, 1910. Serial No. 575,325. (Cl. 236—4.)



1. In a temperature regulator, hot and cold air ducts, a gate movable to open one duct and to close the other, a rock shaft on which said gate is mounted, an electrically controlled means for imparting to said gate a step-by-step opening or closing movement, said last named means including a lever fulcrumed between its ends and having

connections with the rock shaft, solenoids, acting successively to rock said lever, means for controlling said solenoids including a series of commutator segments corresponding to the step-by-step movements of a valve, a brush member carried by the lever and moveable over said commutator segments, and electrical connections with the segments, solenoids and brush.

2. In a temperature regulator, hot and cold air ducts, a gate movable to open one duct and to close the other, a rock shaft on which said gate is mounted, an electrically controlled means for imparting to said gate a step-by-step opening or closing movement, said last named means including a lever fulcrumed between its ends and having connections with the rock shaft, solenoids, acting successively to rock said lever, means for controlling said solenoids including a series of commutator segments corresponding to the step-by-step movements of a valve, a brush member carried by the lever and movable over said commutator segments, electrical connections with the segments, solenoids and brush, circuit breakers, and solenoids controlled by a thermostat for operating said circuit breakers to successively energize the before-mentioned solenoids.

3. In a temperature regulating apparatus, the combination with a rock-shaft having oppositely extending arms, and magnet cores pivotally mounted on the outer ends of said arms, of a normally deënergized solenoid for each core, each of said solenoids being formed of two adjacent superposed parts arranged in line with a core, each part of a solenoid being energized separately whereby said parts act one at a time upon a core so as to actuate the latter to move the rock shaft and its arms into one of three definite positions, thermostatic means for energizing the separate parts of the solenoid, a generator circuit in which said solenoids are disposed, said circuit being connected with one terminal of each part of the coil, commutator segments connected with the other terminal of said coils, means controlled by the thermostat for opening and closing said circuit to energize each part of a solenoid separately, said last named means comprising a pair of circuit breakers having double contacts, one of the contacts of each circuit breaker being normally closed and magnets of a battery circuit adapted to be controlled by the thermostat to operate the circuit breakers to protect the normally closed contact and close the other contact.

4. In a temperature regulator, the combination with a gate in an air duct adapted to assume an open, a closed, and an intermediate position, a rock shaft by which said gate is operated, oppositely extending lever arms on said shaft, a core attached to each arm, a pair of normally deënergized superposed solenoid coils adapted to act separately on said cores to actuate said rock shaft and operate the gate, a generator circuit connected with one terminal of each of said coils, commutator segments connected with the other terminals of said coils, a brush wiper on the generator circuit and movable over said segments by the rocking of said rock shaft, circuit breakers disposed in the generator circuit between the generator thereof and the coils, said circuit breaker operating to control the flow of current to said coils.

5. In a temperature regulator, the combination with a gate in an air duct adapted to assume an open, a closed, and an intermediate position, a rock shaft by which said gate is operated, oppositely extending lever arms on said shaft, a core attached to each arm, a pair of normally deënergized superposed solenoid coils adapted to act separately on said cores to actuate said rock shaft and operate the gate, a generator circuit connected with one terminal of each of said coils, commutator segments connected with the other terminals of said coils, and a brush wiper on the generator circuit and movable over said segments by the rocking of said rock shaft, circuit breakers disposed in the generator circuit between the generator thereof and the coils, said circuit breakers operating to control the flow of current to said coils, and means for actuating said circuit breakers comprising magnets and means for controlling said magnets by a thermostat.

[Claim 6 not printed in the Gazette.]

1,015,205. COMBINATION-TOOL. JOHN FRANCIS O'MALLEY, Avoca, Pa. Filed June 29, 1911. Serial No. 635,925. (Cl. 7—1.)

1. A combination tool, comprising a body having a head provided with a guideway, a jaw fixed on the said head and adapted to secure one end of a saw blade, a movable jaw mounted to slide in the said guideway, a saw frame adapted to receive the other end of the saw blade and removably connected with the said guideway, and adjusting and locking means for adjusting the said movable jaw and for locking the said saw frame against removal from the said guideway.

2. A combination tool comprising a body having a head provided with a guideway, a jaw fixed on the said head, a movable jaw having a rack mounted to slide in the said guideway, a saw frame having an arm removably fitting the said guideway, and a wheel for engagement with the said rack, mounted to turn and to slide bodily in the said head, the wheel having means for engagement with the said saw frame arm, to lock the latter in position in the guideway.

3. A combination tool comprising a body having a head provided with a guideway, a jaw fixed on the said head, a movable jaw having a rack mounted to slide in the said guideway, a saw frame having an arm removably fitting the said guideway, a wheel for engagement with the said rack, mounted to turn and to slide bodily in the said head, the wheel having means for engagement with the said saw frame arm, to lock the latter in position in the guideway, and a spring-pressed shoe mounted to slide in the said head and adapted to engage the said wheel.

4. A combination tool comprising a body having a head provided with a guideway, a jaw fixed on the said head, a movable jaw having a rack mounted to slide in the said guideway, a saw frame having an arm removably fitting the said guideway, a wheel for engagement with the said rack, mounted to turn and to slide bodily in the said head, the wheel having means for engagement with the said saw frame arm, to lock the latter in position in the guideway, a shoe mounted to slide in the said head and provided with a threaded shank, a nut screwing on the said shank, and a spring pressing the said nut.

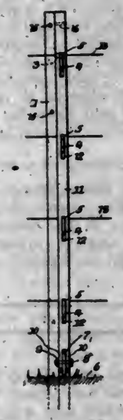
5. A combination tool comprising a body having a head provided with a guideway, a jaw fixed on the said head, a movable jaw having a rack mounted to slide in the said guideway, a saw frame having an arm removably fitting the said guideway, and provided with a slot, a wheel adapted to mesh with the said rack and mounted to slide bodily in the said head, the wheel having a collar adapted to engage the said slot, a shoe mounted to slide in the said head and adapted to bear against the said wheel, the shoe having a threaded shank, and a nut screwing on the said shank and adapted to bear on the said head.

[Claims 6 to 8 not printed in the Gazette.]

1,015,206. FENCE-POST. WILLIAM A. PEPPER, Smithville, Mo. Filed May 22, 1911. Serial No. 628,703. (Cl. 39—76.)

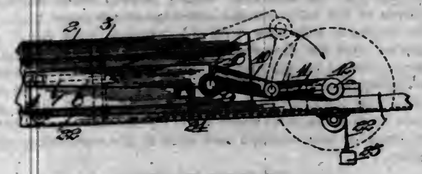
1. In fence posts for wire fences, a post body provided on its front face with wire-receiving grooves, laterally-projecting tongues carried by the grooved face of said post, upwardly-projecting lips carried by said tongues and disposed in front of said grooves, and retaining bar pivotally-connected to the front face of the post at a point below the lowermost tongue, said bar having slots to admit the tongues and lips when the bar is swung toward the post, the pivotal connection between the bar and post being such as to allow the bar to drop behind the lips and rest on the tongues after said lips and tongues have passed through the slots in the bar.

2. The combination with the post, laterally extending lugs carried thereby, and lips carried by the lugs and projecting above the same, of a retaining bar extending longitudinally of the post and pivotally-connected at its lower end to said post, said retaining bar



having slots spaced to receive the lugs on the post, the pivotal connection between the post and bar being such as to allow sufficient vertical movement of the bar to engage the same back of the lips to hold the bar in alinement with the post.

1,015,207. HAY-PRESS. ALFRED H. PERRY, San Leandro, Cal., assignor of twenty one-hundredths to M. E. Scorce, twenty one-hundredths to M. A. Rego, and twenty one-hundredths to M. Agrella, San Leandro, Cal., and ten one-hundredths to Frank Ramos and ten one-hundredths to M. F. Ramos, Hayward, Cal. Filed July 11, 1911. Serial No. 637,887. (Cl. 100—7.)

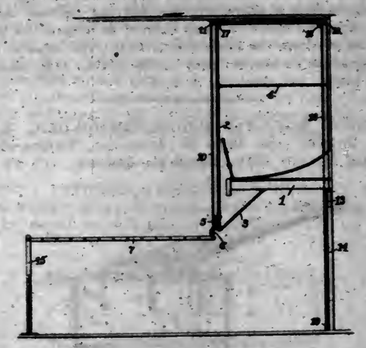


1. A hay press operating mechanism comprising a follower movable in the casing of a hay press, a constantly driven crank-shaft, knuckle jointed links connecting the follower to the crank-shaft, and stationary means on the casing with which the links contact to open the joints of said links.

2. A hay press operating mechanism comprising a follower movable in the casing of a hay press, a constantly driven crank-shaft, knuckle jointed links connecting the follower to the crank-shaft, and means for opening the joints of the links, said means including limiting stops secured upon the casing of the press.

3. A hay press operating mechanism comprising a follower movable in the casing of a hay press, a constantly driven crank-shaft, knuckle jointed links connecting the follower to the crank-shaft, means for opening the joints of the links, said means including limiting stops secured upon the casing of the press, and means for retracting the hay press follower independently of the motion of the crank-shaft.

1,015,208. GYMNASIUM APPARATUS. MILTON B. REACH, Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co., a Corporation of Massachusetts. Filed May 29, 1911. Serial No. 630,000. (Cl. 46—69.)



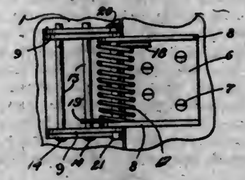
1. In combination in gymnasium apparatus, a vertically movable carriage, a ladder pivotally connected at one end to the carriage, means for raising the carriage and supports depending from the ceiling to a point suitable for head room below and on which pendant supports the carriage slides, substantially as described.

2. In combination the pendant supports, a carriage mounted on said pendant supports, brace rods connected with the pendant supports intermediate of their height, said carriage having members embracing the pendant supports, said members having openings to pass the brace rods, and an exercising device connected with the carriage, substantially as described.

3. In combination in gymnasium apparatus, a vertically movable carriage, a ladder pivotally connected at one end to the carriage, means for raising the carriage and supports depending from the ceiling to a point suitable for head room below and on which pendant supports the carriage slides, said carriage having a portion reaching below the lower end of the depending supports and to which portion the pivotal connection of the ladder is made, substantially as described.

4. In gymnasium apparatus a ladder, a support therefor at one end extending up from the floor, a support for the other end of the ladder depending from the ceiling and terminating at the ladder, leaving a free space at this end of the ladder and means for hoisting the ladder along the pendant support, substantially as described.

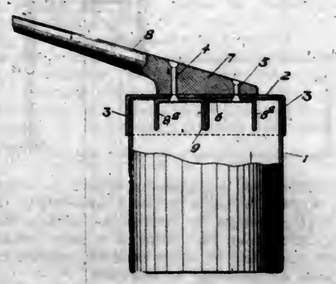
1,015,209. HINGE. JAMES RICHARDSON, New Castle, Pa. Filed May 18, 1911. Serial No. 628,004. (Cl. 16—25.)



The combination with a door casing, of a plate secured thereto, integral upstanding ears formed on the plate, said ears having recesses formed in one edge and a plurality of apertures formed intermediately in the ears, a hinge plate fitting against the plate of the casing and having upstanding ears engaging the inner face of the ears of the casing plate, a second hinge plate having upstanding ears, a hinge pin pivotally connecting the ears of the two hinge plates, a helical spring mounted on said hinge pin and

having one end bearing against the inner face of the second hinge plate, locking pins passing through the apertures of the ears of the casing plate and through the ears of the first mentioned hinge plate, said pins having serrations formed thereon near their head, and the helical spring having a projecting end bearing against the pins and engaging the serrations thereof to secure the locking pins in position, the hinge-pin fitting in the recesses of the casing plate to prevent play of the plates with respect to each other.

1,015,210. WALL-PAPER-CLEANER HOLDER. WALTER J. ROWLEY and JOHN G. ALBRIGHT, Pittsburgh, Pa. Filed Apr. 25, 1911. Serial No. 623,320. (Cl. 15—13.)



1. A holder of the type described, comprising a flanged lid, a flanged retainer arranged in said lid, a handle having an enlarged end mounted upon said lid, and means adapted to secure said retainer and said handle to said lid.

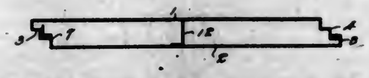
2. A detergent holder comprising a flanged receptacle lid, a one-piece retainer arranged in said lid and having depending parallel flanges with one of said flanges of a greater length than the other said flanges, a handle having an enlarged end mounted upon said lid, and means adapted to secure said retainer and the enlarged end of said handle to said lid, substantially as described.

1,015,211. BAG-HOLDER. THOMAS J. ROWLEY and RAY M. FRANCE, Vandergrift, Pa. Filed Nov. 24, 1911. Serial No. 662,125. (Cl. 83—26.)

1. A bag supporting device comprising a board adapted to be suspended from a suitable support, cleats carried by the lower ends of said board at the front and rear sides thereof, shafts having the rear ends thereof journaled in the ends of said cleats, a plurality of prongs carried by the forward ends of said shafts and adapted to support the upper edges of a bag, spring actuated yokes carried by the rear ends of said shafts and adapted to move said shafts, and catches pivotally mounted in the vertical edges of said board and adapted to hold said yokes in a closed position.

2. A bag supporting device comprising a board adapted to be suspended from a suitable support, cleats carried by the lower ends of said board and having the ends thereof protruding beyond the vertical edges of said board to provide bearings, shafts having the rear ends thereof journaled in the ends of said cleats, a plurality of radially disposed prongs carried by said shafts for holding the upper end of a bag, yokes carried by the rear ends of said shafts between the ends of said cleats, catches pivotally mounted in the vertical edges of said board for holding said yokes, and means arranged adjacent to the rear ends of said shafts and engaging said yokes for swinging said yokes to an open position when released by said catches.

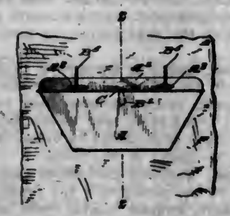
1,015,212. METAL STRUCTURE FOR DOORS AND ANALOGOUS USES. ADOLF H. SCHAFFERT, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed June 2, 1911. Serial No. 630,963. (Cl. 189—46.)



1. A metal structure of the class described comprising a pair of spaced metal wall plates, the outer wall plate being provided at one side edge with an inturned stepped flange element, at its opposite side edge with an outturned stepped flange element, and with inturned stepped flange elements at its top and bottom edges, and the inner of said wall plates being provided at one side edge with a flange engaging inside of the inturned flange element of the outer plate, at its opposite side edge with a flange engaging over the outturned flange element of the outer plate, and at its top and bottom edges provided with flange elements which respectively engage over the top flange and inside of the bottom flange of the outer wall plate.

2. A metal structure of the class described, comprising a pair of spaced metal wall plates, the outer wall plate being provided at its side and top and bottom edges with stepped flange elements, and having combined clearance and guiding slots in the top flange element, and the inner of said wall plates carrving an interior brace piece and provided at one side edge with a stepped flange engaging inside of the flange at one side edge of the outer plate, at its opposite side edge with an inturned hook flange engaging over the flange at the other side edge of the outer plate, and at its top and bottom edges with stepped flange elements which respectively engage over the top flange and inside of the bottom flange of the outer wall plate, one side flange and said brace piece of the inner plate being adapted to pass through said slots in the assembling operation.

1,015,213. BRACKET FOR TURPENTINE-CUPS. JAMES S. SHANDS, Gainesville, Fla. Filed June 1, 1911. Serial No. 630,575. (Cl. 248—20.)



1. A supporting bracket for turpentine cups bent from a length of metal and having at its middle portion a projecting shank formed with a contracted neck portion for engagement by a staple, arms extending laterally from the said shank, forwardly projecting approximately horizontal offset portions at the ends of said arms and inclined studs projecting upwardly from the said offset portions, substantially as set forth.

2. A supporting bracket for turpentine cups having at its middle a shank formed with a contracted neck for engagement by a securing staple, arms projecting laterally from the said shank and in approximately the same plane as said shank and means at the ends of said arms for engagement with a cup, substantially as set forth.

3. A supporting bracket for turpentine cups having at its middle means for engagement by a securing device, arms extending laterally therefrom, approximately horizontal offset portions projecting forwardly from said arms, and upwardly projecting studs on said portions substantially as set forth.

1,015,214. LOADING CHARGE FOR BURSTING SHELLS FOR GUNS, TORPEDO-HEADS, MARITIME MINES, AND THE LIKE. ERNST SOKOLOWSKI, Hamburg, Germany, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed June 9, 1911. Serial No. 632,206. (Cl. 102—29.)

1. A loading charge for bursting shells, comprising densified trinitrotoluol and plastic trinitrotoluol.

2. A loading charge for bursting shells, the major portion of which charge is densified trinitrotoluol and the remainder of the charge plastic trinitrotoluol.

1,015,215. PROJECTILE-LOADING FOR SCATTERING CHARGES. ERNST SOKOLOWSKI, Hamburg, Germany, assignor to E. I. du Pont deNemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed June 9, 1911. Serial No. 632,207. (Cl. 102—29.)

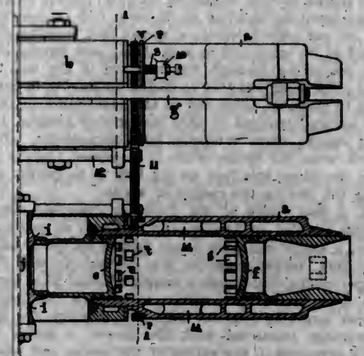
1. An improved projectile loading for scattering charges, comprising a scattering charge embedded in plastic trinitrotoluol.

2. An improved projectile loading for scattering charges, comprising a scattering charge embedded in pressed plastic trinitrotoluol.

3. An improved projectile loading for scattering charges, comprising balls rigidly placed by means of embedding formed of plastic trinitrotoluol.

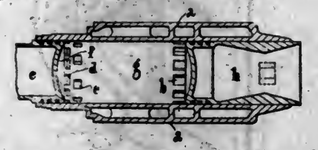
4. An improved projectile loading for scattering charges, comprising balls rigidly placed by means of embedding formed of pressed plastic trinitrotoluol.

1,015,216. INTERNAL-COMBUSTION ENGINE. WILLIAM JOSEPH STILL, Southall, England. Filed Apr. 14, 1911. Serial No. 621,164. (Cl. 123—51.)



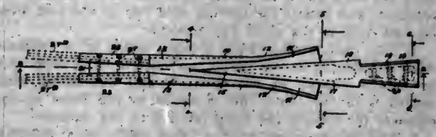
A scavenging internal combustion engine having a cylinder, with a ring of exhaust ports at one end of the same, and a ring of gaseous combustible and a ring of scavenging air inlet ports at the other end, two pistons adapted to move oppositely in said cylinder, and the one adapted to uncover the exhaust ring of ports, and the other to uncover the two other rings of ports aforesaid, a rotary ring valve embracing the ring of said two rings of ports nearer the center of said cylinder and having a surface substantially perpendicular to the surface which embraces the cylinder ports, these two surfaces being connected by ducts, and a gas duct in proximity to said cylinder provided with a ring of ports, said ring valve being adapted by angular movement to place the ring of ports which it embraces on the cylinder in communication with the ring of ports in the gas duct; as set forth.

1,015,217. INTERNAL-COMBUSTION ENGINE. WILLIAM JOSEPH STILL, Southall, England. Filed Apr. 14, 1911. Serial No. 621,165. (Cl. 123—51.)



An internal combustion engine having a cylinder with inlet ports substantially annularly symmetrically disposed around the same and a piston with concave head adapted to cover and uncover the said ports the radius of curvature of said concave head being about equal to the bore of the cylinder; as set forth.

1,015,218. REVERSIBLE RAILWAY-FROG AND CONNECTION. OTTO SWANSON, Chicago, Ill. Filed Aug. 2, 1911. Serial No. 641,920. (Cl. 104—5.)



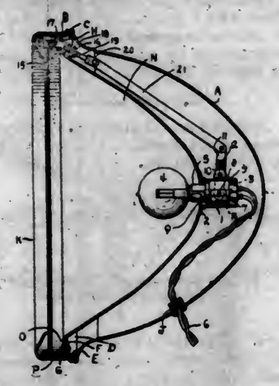
1. A reversible railway frog consisting of a plate having on each of its faces and at each edge thereof a guard rail and provided on each of its faces with a frog-point extended between said guard rails and projected beyond one end of the plate, said plate having at its other end a horizontally disposed extension provided with a flange at each of its edges, and rail sections having grooves on their inner surfaces to receive the flanges on said extension and secured thereto.

2. A reversible railway frog consisting of a plate having on each of its faces and at each edge thereof a guard rail and provided at each of its faces with a frog-point extended between said guard rails and projected beyond one end of the plate and having at its outer end a reduced extension provided with transverse openings, the said rails being diverged toward one of their ends and converged toward their outer ends, the said plate also having at its opposite end from that beyond which the frog-point projects, a horizontally disposed extension provided with a flange at each of its edges, and rail sections having grooves on their inner surfaces to receive the flanges on said extension and secured thereto.

1,015,219. LAMP. EDWARD E. TAYLOR, Chelsea, Mass., assignor to William Gray, Amesbury, Mass. Filed Jan. 7, 1911. Serial No. 601,287. (Cl. 240—44.)

1. A lamp comprising a shell, a reflector within the shell, said shell and reflector being spaced apart, an illuminating device movably supported at the xertex of and by the reflector, and a pivoted lever in connection with the illuminating device for moving said device relative to the reflector.

2. A lamp comprising a shell, a reflector within the shell, said shell and reflector being spaced apart, an illuminating device movably supported at the vertex of the reflector, and means at the rear of the reflector connected with said device and extended forward to the edge of the said reflector for moving the device relative to the reflector.



3. A lamp comprising a shell, a reflector within the shell, the front edges of the shell and reflector being united and the rear portions spaced apart to form an inclosure, a movably supported electric lamp at the vertex of the reflector, and means extended outside the shell and reflector for moving the electric lamp relative to the reflector, said means comprising a movable lever connected with the lamp and a bar or rod extended to the edge of the reflector, and means for moving said bar or rod and lever located outside the shell and reflector.

4. The combination with a lamp shell, of a reflector with an opening at the vertex, an electric lamp supported by means located at the opening, and mechanism connected with the lamp and extended to the front of the reflector for moving the lamp relative to the reflector.

5. The combination with a lamp shell, of a reflector having an opening at the vertex, a lamp with a socket located within the opening, and means connected with the said socket and extended to the front of the reflector for moving the lamp and socket relative to the reflector.

[Claims 6 to 10 not printed in the Gazette.]

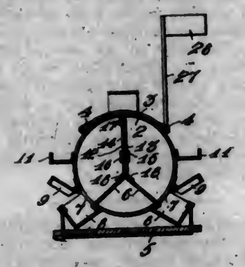
1,015,220. PROCESS OF MAKING SODIUM-ALUMINUM FLUORID. EMIL TEISLER, Dohna, Germany, assignor of one-half to Alex. Humann, Dohna, Germany. Filed Jan. 27, 1910. Serial No. 540,434. (Cl. 23—13.)

1. The process of making sodium-aluminum fluorid which consists in mixing together sodium-silico-fluorid and alumina in a very finely divided state with water and heating them at approximately 100° C with the addition of the required quantity of sodium carbonate necessary for the formation of the double salt in stoechiometrical proportion.

2. The process of making sodium-aluminum fluorid which consists in mixing together pulverulent sodium-silico-fluorid 400 kg., pulverulent anhydrous alumina 106.5 kg., soda 113 kg. with water, and at a temperature of about 100° C.

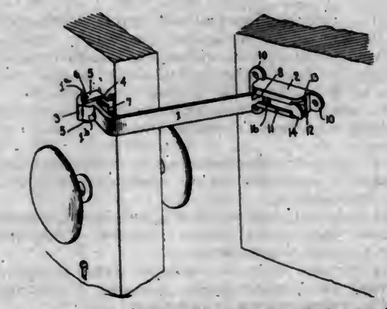
1,015,221. FEED-BOX. AUGUST TONINI, Grandview, Ind. Filed Oct. 13, 1910. Serial No. 586,933. (Cl. 119—52.)

A feed trough comprising a hopper having oppositely located discharge passages and a filling opening in its top, the length of which is shorter than the length of the hopper, a longitudinally arranged V-shaped deflecting ridge centrally positioned in the hopper, a removable longitudinally extensible partition of two sections adapted to be extended the full length of the hopper, said partition having a forked lower edge adapted for sliding engagement upon the deflecting ridge, the upper edge of one section of the partition being engaged with one end portion of the



top of the hopper, whereby said partition will be held in a vertical position, means for slidably connecting said sections of the partition, and a sliding cover for closing the filling opening in the top.

1,015,222. DOOR-CHECK. EDWARD VON GUNTEN, Akron, Ohio. Filed Nov. 16, 1911. Serial No. 660,671. (Cl. 16—6.)



1. A door check of the character described comprising a spring controlled link, means to pivotally attach the inner end of the link to the door, a curved reduced keeper engaging finger formed on the outer end of said link, keeper engaging lugs formed on said finger, a keeper comprising a hollow casing adapted to be secured to the door frame, said casing having formed in its outer side a longitudinal finger receiving slot and in its outer end an aperture having in one edge a notch, a spring link holding plate secured at its inner end in said casing and having its outer end projecting through the aperture in the end thereof, said plate being adapted to spring outwardly in said aperture to close the outer end of said slot, and a plate engaging spring arranged in said casing and adapted to force said spring plate laterally into engagement with said notch when the spring plate is depressed thereby permitting the finger and lugs on the link to be readily engaged with the slot in the casing or keeper.

2. A door check of the character described comprising a link adapted to be pivotally attached at one end to a door, a keeper engaging finger formed on the outer end of said link, keeper engaging lugs formed on said finger, a keeper comprising a hollow casing adapted to be secured to the door frame in position to receive the finger and keeper engaging lugs on said link whereby the latter is detachably connected with the keeper, a spring holding plate arranged in the casing of the keeper and adapted to engage said finger and studs whereby the latter are yieldably held in engagement with the keeper, and a stop spring also arranged in said casing, said stop spring having its free end shaped to engage the finger and lugs on the end

of the link whereby the latter is held and the door prevented from being blown or accidentally swung to a closed position.

3. A door check of the character described comprising a spring controlled link, means to pivotally attach the inner end of the link to the door, a finger on the outer end of said link, lateral lugs on said finger, a keeper comprising a hollow casing adapted to be secured to the door frame and having in its outer side a longitudinal slot and in its outer end an aperture having in one edge a notch, a spring plate secured at its inner end in said casing and having its outer end projecting through the aperture in the end thereof, said plate being adapted to spring outwardly in said aperture to close the outer end of said slot, and a spring pivotally secured at one end under said spring plate, and pressing outwardly against the edge thereof to press its opposite edge into said notch, the edges of the pivoted spring being bent up parallel with the spring plate and embracing its lower edge thereof, whereby said pivoted spring will swing on its pivot when the spring plate is depressed or retracted.

1,015,223. GAGE-INSPECTING DEVICE. WILLIAM F. WARDEN, Akron, Ohio, assignor to Perry E. Tanner, Akron, Ohio. Filed Oct. 9, 1911. Serial No. 653,745. (Cl. 21—90.)

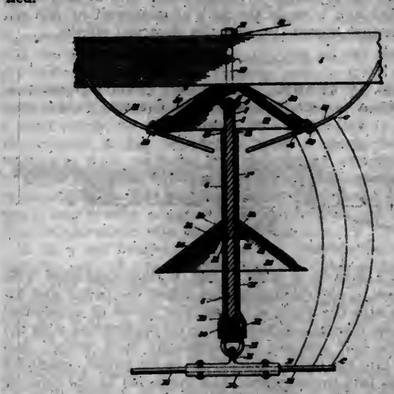
1. The combination with a self-propelled instrumentality, adapted to carry a tank for a supply of fluid fuel, of an indicator capable of indicating the quantity of fluid fuel in said tank with a suitable portion of said vehicle positioned immediately over said indicator and provided with a well or air-shaft, of a transparent closure member for said air-shaft or well, a controllable lighting instrumentality positioned within said well provided with means for controlling the lighting thereof, a hinge cover for said well adapted to be shifted to permit entrance thereto and means for locking said hinge cover in position.

2. The combination in a self-propelled vehicle adapted to carry a tank for a supply of fluid fuel and having a suitable portion of said vehicle projecting over said tank and provided with a light-shaft or well therein, of an indicator for said tank positioned at the lower end of said well or shaft, a transparent member for said air-shaft, a controllable lighting instrumentality positioned within said well and adapted to illumine the face of said indicator, means for controlling said light, a hinge cover for the well-containing portion of said vehicle adapted to be shifted to permit entrance to said well and means for locking said hinge cover in position.

3. The combination in a self-propelled vehicle adapted to carry a tank for a supply of fluid fuel and having a suitable portion of said vehicle projecting over said tank and provided with a light-shaft or well therein, of an indicator for said tank positioned at the lower end of said well or shaft, a transparent member for said light-shaft, a controllable lighting instrumentality positioned within said well and adapted to illumine the face of said indicator, and means for controlling said light.

1,015,224. INSULATOR. JULIUS ALSBERG, New York, N. Y. Filed Nov. 18, 1908. Serial No. 463,285. (Cl. 175—30.)

1. The combination with a conductor and an insulator therefor, comprising an insulating element and a protecting hood, and a plurality of conducting members on said protecting hood arranged in the same vertical plane as said conductor and at an angle thereto, substantially as specified.



2. The combination with a conductor and an insulator therefor, of a plurality of conducting members on said insulator arranged in the same vertical plane with said conductor and at an angle thereto, substantially as specified.

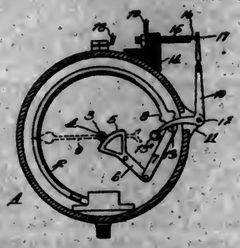
3. The combination with a conductor and an insulator therefor, of a plurality of conducting members secured to said insulator adjacent to said conductor and arranged in the same vertical plane with the said conductor and at an angle thereto; said conducting members having their inner ends lowermost, substantially as specified.

4. The combination with a conductor and an insulator therefor, of a plurality of conducting members secured to said insulator adjacent to said conductor and arranged in the same vertical plane therewith, and at an angle thereto; said conducting members having their inner ends lowermost, substantially as specified.

5. The combination with a conductor and an insulator therefor, of a plurality of conducting members secured intermediate their ends to said insulator and arranged in the same vertical plane with said conductor, and at an angle thereto; said conducting members having their inner opposing ends lowermost, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

1,015,225. PRESSURE-CLOSED ELECTRIC SWITCH. THOMAS P. BACON and WILLIAM A. GWYNN, Santa Rosa, Cal., assignors to Gwynn-Bacon Vulcanizer Co., Inc., St. Louis, Mo., a Corporation of California. Filed Apr. 26, 1910. Serial No. 557,814. (Cl. 177—311.)



The combination in a gage, of a casing, having a dial, an expansible member within the casing, a pointer movable over the dial, a shaft for said pointer, a pinion on the shaft, a lever fulcrumed within the casing having a segmental gear to engage said pinion, a link connecting said lever with one portion of said expansible member, a lever fulcrumed between its ends upon the casing, said lever having one arm provided with a contact, an insulated support on the casing and an electrical contact adjustably car-

ried thereby and against which the first-named contact is closable, said lever having its other arm provided with a weight, and a pin carried by the expansible member and normally out of contact with the other arm of said lever, said other arm lying in the path of movement of said pin and operated thereby to open the electrical circuit.

1,015,226. FIREARM. LUDOVICO CUDIA, Greensburg, Pa. Filed Aug. 28, 1911. Serial No. 646,361. Cl. 42—17.)

1. In a firearm, a rifled barrel, a stock connected with the barrel, a cartridge magazine below the barrel and extending into the stock, a plurality of series of superposed cartridges therein, elevator means communicating with the magazine and adapted to successively feed, singly, cartridges into the firing chamber end of the barrel, means for insertion into the magazine, and controlled by the elevator means for timing the admission, of cartridges in series from the forward end of the magazine to the said elevator means, a slidable breech block arranged rearwardly of the barrel for inserting the cartridges into the firing chamber end of the said barrel, a firing pin carried by the breech block, means for retaining the firing pin when the breech block advances and independently operable quick and slow trigger mechanisms for releasing the firing pin.

2. In a firearm, a rifled barrel, a stock connected with the barrel, a cartridge magazine below the barrel and extending into the stock, a plurality of series of superposed cartridges therein, elevator means communicating with the magazine and adapted to successively feed, singly, cartridges into the firing chamber end of the barrel, means for insertion into the magazine, and controlled by the elevator means for timing the admission, of cartridges in series from the forward end of the magazine to the said elevator means, a slidable breech block arranged rearwardly of the barrel for inserting the cartridges into the firing chamber end of the said barrel, a firing pin carried by the breech block, means for retaining the firing pin when the breech block advances, independently operable quick and slow trigger mechanisms for releasing the firing pin, means arranged in opposite ends of the barrel for advancing the cartridges therein to the elevator means, and means for holding one of said advancing means inactive.

3. In a firearm, a rifled barrel, a stock connected with the barrel, a cartridge magazine below the barrel and extending into the stock, a plurality of series of superposed cartridges therein, elevator means communicating with the magazine and adapted to successively feed, singly, cartridges into the firing chamber end of the barrel, means for insertion into the magazine, and controlled by the elevator means for timing the admission, of cartridges in series from the forward end of the magazine to the said elevator means, a slidable breech block arranged rearwardly of the barrel for inserting the cartridges into the firing chamber end of the said barrel, a firing pin carried by the breech block, means for retaining the firing pin when the breech block advances, independently operable quick and slow trigger mechanisms for releasing the firing pin, means arranged in opposite ends of the barrel for advancing the cartridges therein to the elevator means, means for holding one of said advancing means inactive, means movable step-by-step on the removal of each of the cartridges from the forward end of the magazine and operated by one of said trigger mechanisms, and means on said last-named means for freeing the cartridge advancing means at the opposite end of the magazine.

4. In a firearm, a rifled barrel, a stock connected with the barrel, a cartridge magazine below the barrel and extending into the stock, a plurality of series of superposed cartridges therein, elevator means communicating with the magazine and adapted to successively feed, singly, cartridges into the firing chamber end of the barrel, means for insertion into the magazine, and controlled by the elevator means for timing the admission, of cartridges in series from the forward end of the magazine to the said elevator means, a slidable breech block arranged rearwardly of the barrel for inserting the cartridges into the firing chamber end of the said barrel, a firing pin carried by the breech block, means for retaining the firing pin when the breech block advances, independently operable quick and slow trigger mechanisms for releasing the firing pin, means arranged in opposite ends of the barrel for advancing the cartridges therein to the elevator means, means for holding one of said advancing means inactive, means movable step-by-step on the removal of each of the cartridges from the forward end of the magazine and operated by one of said trigger mechanisms, means on said last-named means for freeing the cartridge advancing means at the opposite end of the magazine, manually operable means for freeing the step-by-step movable means and means on the step-by-step movable means for engagement with the cartridge advancing means in the forward end of the magazine to hold the same locked when distended.

5. In a firearm, a rifled barrel, a stock connected with the barrel, a cartridge magazine below the barrel and extending into the stock, a plurality of series of superposed cartridges therein, elevator means communicating with the magazine and adapted to successively feed, singly, cartridges into the firing chamber end of the barrel, means for insertion into the magazine, and controlled by the elevator means for timing the admission, of cartridges in series from the forward end of the magazine to the said elevator means, a slidable breech block arranged rearwardly of the barrel for inserting the cartridges into the firing chamber end of the said barrel, a firing pin carried by the breech block, means for retaining the firing pin when the breech block advances, independently operable quick and slow trigger mechanisms for releasing the firing pin, means arranged in opposite ends of the barrel for advancing the cartridges therein to the elevator means, means for holding one of said advancing means inactive, means movable step-by-step on the removal of each of the cartridges from the forward end of the magazine and operated by one of said trigger mechanisms, means on said last-named means for freeing the cartridge advancing means at the opposite end of the magazine, manually operable means for freeing the step-by-step movable means, means on the step-by-step movable means for engagement with the cartridge advancing means in the forward end of the magazine to hold the same locked when distended, and automatically operated means controlled by one of the trigger mechanisms for oiling the firing chamber end of the barrel.

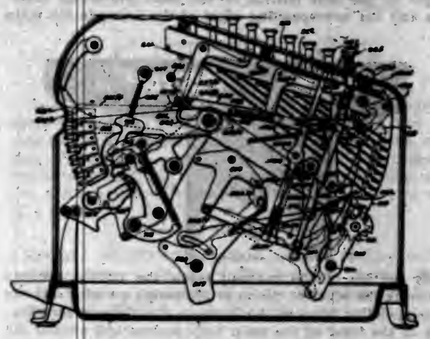
[Claims 6 to 11 not printed in the Gazette.]

1,015,227. ADDING-MACHINE. JOHN P. HARRISON, Ludlow, Ky., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 31, 1905. Serial No. 263,063. (Cl. 235—60.)

1. In an adding machine, the combination with the clearing, printing, and adding mechanisms thereof, of mechanism for automatically printing in association with the first item a suitable character to indicate the fact that the machine was "clear" when such item was printed, and means for rendering the latter mechanism inoperative except when the machine is "clear" and the first item is put into the machine.

2. In an adding machine, the combination with the clearing, printing, and adding mechanisms thereof, of a special type bar or carrier bearing a distinguishing type character, and means coöperating with said type bar for causing said character to be printed whenever the machine is operated for the printing of the first item put into the machine after "clearing" but preventing printing of such character at all other times; substantially as described.

3. In an adding machine, the combination with the clearing, printing, and adding mechanisms thereof, of special mechanism for automatically printing a suitable character to designate the fact that the machine was "clear" when the first item of a column or list was printed, and means for preventing action of said special mechanism except in conjunction with the printing by the regular printing mechanism of the first item printed after "clearing" of the machine; substantially as described.

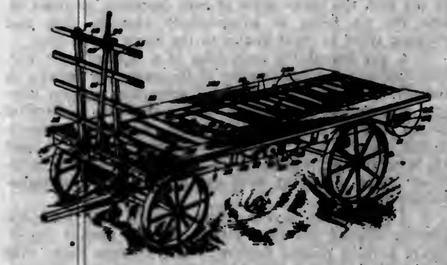


4. In an adding machine, the combination, with the clearing mechanism, the adding mechanism, and the regular printing mechanism of the machine, of special printing mechanism for automatically printing a suitable character to designate the fact that the machine was "clear" when the first item of a column or list was printed, said special printing mechanism being under the control of the regular printing mechanism; substantially as described.

5. In an adding machine, the combination, with the clearing mechanism, the adding mechanism, and the regular printing mechanism of the machine, of special printing mechanism for automatically printing a suitable character to designate the fact that the machine was "clear" when the first item of a column or list was printed, and an interference between said printing mechanisms to prevent action of the special mechanism until the operation of the regular mechanism; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,015,228. HAY-RACK. WILLIAM A. HEUBLEIN, Wilson, Minn. Filed May 11, 1908. Serial No. 432,156. (Cl. 21—74.)



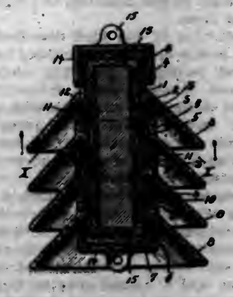
1. In a self-loading hay rack, the combination with a running gear, of a rack mounted thereon said rack being provided with a floor formed of a flexible section and a non-flexible section, a shaft in the rear of the rack on which the flexible section may be wound, and means connected to the non-flexible section and adapted to draw the floor from its rear position to the front of the rack.

2. In a self-loading hay rack the combination with a running gear, of a rack mounted on said running gear, said rack being provided with a flexible floor, a shaft rotatably mounted on the rack, flexible connectors between the floor and the shaft, a ratchet wheel mounted on the shaft, a pivoted arm, means carried by the running gear for oscillating the arm, a pawl mounted on the arm and adapted to normally engage the ratchet wheel, and means operated by the movement of the floor for moving the pawl out of engagement with the ratchet.

3. In a self-loading hay rack the combination with a running gear, of a rack mounted on said running gear, said rack being provided with a flexible floor, a shaft rotatably mounted on the rack, flexible connectors between the floor and the shaft, a ratchet wheel mounted on the shaft, an eccentric mounted on the running gear, a strap on the eccentric, a pivoted arm, a link connecting the eccentric strap with the pivoted arm whereby the latter is oscillated, a pawl carried by the pivoted arm and adapted to engage the ratchet, a bar carrying a head, a spring normally tending to force the head into engagement with the pawl to throw the same out of engagement with the ratchet, a latch adapted to hold the head out of engagement with the pawl, and a stop adapted to be engaged by the flexible floor to disconnect the latch from the bar.

4. In a self-loading hay rack the combination with a running gear, of a rack mounted on said running gear, the rack being provided with a flexible floor, a shaft rotatably mounted on the rack, flexible connectors between the floor and the shaft, a ratchet wheel mounted on the shaft, a pivoted arm, means carried by the running gear for oscillating the arm, a pawl mounted on the arm and adapted to normally engage the ratchet wheel, a reciprocable bar provided with a pawl-engaging head, a pin carried by said bar, a second reciprocable bar provided with a cam slot adapted to be engaged by the pin of the first-mentioned bar, and means for reciprocating said last-mentioned bar to throw the head into and out of engagement with the pawl.

1,015,229. INSULATOR. JOHN D. HILLIARD, Jr., and CHARLES E. PARSONS, Glens Falls, N. Y., assignors to J. E. Way, New York, N. Y. Filed Jan. 29, 1906. Serial No. 298,553. (Cl. 172—366.)



1. An insulator comprising a core, tubular insulating members surrounding said core and cemented thereto, a plurality of nested insulators cemented to said tubular members, each of said nested insulators provided with an annular flange adapted to overlap a complementary flange on the next succeeding insulator, and cap insulators for the ends.

2. An insulator comprising a core, tubular insulating members surrounding said core and cemented thereto, a plurality of nested insulators cemented to said tubular members, each of said nested insulators provided with an annular flange adapted to overlap a complementary flange on the next succeeding insulator, cap insulators for the ends, and means connected to the cap insulators for suspending the entire structure and thereby flexibly supporting a conductor.

3. An insulator formed of a plurality of separate elements or shells, with the space between them filled with material comprising in part a solid cement to give strength, and in part a viscous insulating material as cesocerite, stearic acid and resin to give insulation, the latter being held in place by the said cement.

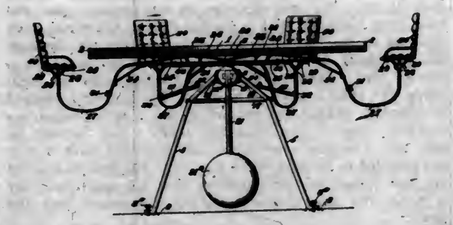
4. A built-up insulator for high voltage transmission lines comprising a treated wood core, cup-shaped insulating shells surrounding said core and inclosing the opposite

ends thereof, a plurality of petticoated rings or shells surrounding said cup-shaped shells and having upper and lower nested flanges between each pair, cement filling between the core and cup-shaped shells and a yielding cement filling between said nested flanges, and caps or securing means cemented upon opposite ends of the structure.

5. A built-up strain insulator for high tension transmission lines comprising a core, a plurality of nested insulating shells cemented upon said core intermediate of its ends, and attaching means secured upon opposite ends thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,015,230. SELF-LEVELING TABLE AND CHAIR. JACOB H. JACOB, Peoria, Ill. Filed Mar. 20, 1911. Serial No. 615,618. (Cl. 114—94.)



1. In an apparatus of the kind described, a vertical frame having a socket in its top; a rocking ball mounted in said socket, a stem depending from said ball, a weight on the lower end of said stem, an oscillating table top mounted on said rocking ball, arms secured to and projecting beyond the sides of said table top, and a chair mounted on each of said arms.

2. In an apparatus of the kind described, a vertical frame having a socket in its top, a rocking ball located in said socket and having a depending stem, a weight on the lower end of said stem, a framework centrally mounted on said oscillating ball and having arms branching therefrom, each of said arms being of a bow shape at its outer end and having a foot rest, a chair on the outer end of each of said arms, and an oscillating table top mounted on said framework.

3. In an apparatus of the class described, a table, means for maintaining said table level, a collar carried by said means for maintaining said table level, a chair supporting beam spaced below the bottom of said table and connected at one end to said collar, a chair carried by said chair supporting beam, and a hanger adapted to support said chair-supporting beam in its spaced position.

4. In an apparatus of the class described, a table, means for maintaining said table level, angularly disposed chair supporting beams supported below said table, chairs carried by said chair supporting beams, and spacing members connected to said chair-supporting beams and adapted to maintain them in their relative angularly-disposed positions.

1,015,231. WEATHERPROOF OUTING-GARMENT. ADOLPH RALPH JACOBS, Portland, Oreg. Filed Feb. 11, 1911. Serial No. 608,147. (Cl. 2—41.)

A garment comprising a main body portion open at the front and having a collar and sleeves, an outer protecting covering formed of a seamless piece of material and slit at its front and sides and including oppositely extended lateral portions, said outer protecting covering fitting over the main body portion and extending below the sleeves and the slit sides brought together, the bottom of said outer protecting covering being detached, the oppositely extended lateral portions fitting over the upper portions of the sleeves, the bottom edges of such lateral portions terminating at the sides of the sleeves above the bottom of the latter, the outer ends of said lateral portions terminating some distance from the ends of the sleeves and being detached therefrom, a lining of waterproof material formed of one piece, and substantially of the same shape as the outer protecting covering, said lining being interposed between the outer protecting covering and the main portion of the garment, stitches securing the meeting edges of the body portion of the outer protecting covering and the corresponding edges of the lining to the main

body portion of the garment below the sleeves, stitches securing the edges of the outer protecting covering and the corresponding edges of the lining to the edges of the opening in the front of the main body portion and around the collar of the garment, and stitches securing the bottom edges of said lateral portions and a waterproof lining along the sides of the sleeves of the garments.

1,015,232. GAS-BURNER TIP. PETER KELLER and PHILIPP SEILER, Chicago, Ill., assignors, by direct and mesne assignments, to Herman Sander, Chicago, Ill. Filed Dec. 14, 1907, Serial No. 406,561. Renewed June 15, 1911. Serial No. 633,351. (Cl. 67—105.)

1. A gas burner tip, having an upper portion produced to form integral imperforate parallel flanges having rounded edges and forming a slot between them communicating directly with the interior of the burner, and depressed portions in the tip adjacent to the opposite ends of the slot, the lower parts of said depressed portions inside the tip being in substantially straight lines and forming stops at right angles to the plane of the slot.

2. A gas burner tip consisting of a tubular body portion having the opposite sides of the upper part drawn in toward each other and extended upwardly to form integral imperforate flanges with their inner faces in parallel planes forming a slot between them, said slot communicating directly with the interior of the burner, the said tip being further provided with internally projecting rectilinear stops placed at each end of said slot and transversely thereto.

3. A gas burner having a tubular body with the upper portion thereof provided with integrally formed imperforate parallel flanges forming a slot between them, said burner being further provided with stops in the body portion below said flanges facing inside the burner to form an oblong passage-way between them, said passage-way and slot being so placed that vertical planes midway thereof will be at right angles to each other.

1,015,233. RIFLE-SIGHT. DEAN W. KING, Denver, Colo. Filed May 17, 1911. Serial No. 627,672. (Cl. 42—80.)

1. A rifle sight comprising a base portion, an upwardly extending integral shank portion, a bead contrasting in color with that on the shank, a portion of the shank being inclosed within the bead, and the edges of said shank and bead forming an arc of a circle.

2. A rifle sight comprising a base portion, an upwardly extending integral shank portion, a bead of a color contrasting with that of the shank, a portion of the shank being inclosed within said bead, and the edges of said shank and bead forming a continuous curve.

3. A rifle sight comprising a base portion, an upwardly extending integral shank portion, a reinforcing fillet on each side of said shank, a bead of a color contrasting with that of the shank, a portion of the shank being inclosed within said bead, the front edge of said shank being matted, and the edges of said shank and bead forming an arc of a circle.

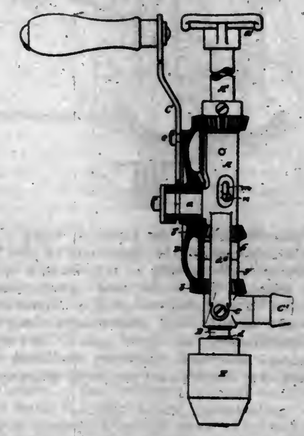
1,015,234. SHEET-METAL BOX. GOTTLIEB KLENK, Defiance, Ohio, assignor to The Defiance Pressed Steel Company, a Corporation of Ohio. Filed June 30, 1911. Serial No. 636,288. (Cl. 220—111.)

1. A sheet metal box of the class described, comprising side and end sections crimped at their lower edges to form a horizontal flange around the bottom of the box, a rectangular wire stacking base projecting downward below the flange along lines within the periphery thereof, beaded sheet metal strips secured to the side and end sections and serving to hold the wire base in place, a series of vertical transverse partitions terminating at their lower edges in wide horizontally bent flanges above the bottom plane of the base, a series of vertical longitudinal partitions, the two series of partitions serving to divide the box into bottle compartments, and a series of longitudinal bottle supporting rods having their end parts rigidly secured to the end sections of the box, the intermediate parts of the rods extending through the transverse partitions and resting directly upon the horizontal flanges at the bottoms thereof.

2. A sheet metal box of the class described, comprising side and end sections crimped at their lower edges to form a horizontal flange around the bottom of the box, a rectangular stacking base formed of two adjacent wire rectangles, the base projecting downward below the flange along lines within the periphery thereof, beaded sheet metal strips secured to the side and end sections and engaging the outer sides of the wire rectangles to hold them in place, a binding strip for holding together the adjacent inner sides of the wire rectangles, a series of vertical transverse partitions terminating at their lower edges in wide horizontally bent flanges above the bottom plane of the base, a series of vertical longitudinal partitions, the two series of partitions serving to divide the box into bottle compartments, and a series of longitudinal bottle supporting rods having their end parts rigidly secured to the end sections of the box, the intermediate parts of the rods extending through the transverse partitions and resting directly upon the horizontal flanges at the bottoms thereof.

3. In a sheet metal box of the class described, the combination of side and end walls, a rectangular stacking base formed of wire, sheet metal strips at the sides and ends of the box crimped at their outer edges with the bottom edges of the side and end walls to form a horizontal flange extending around the bottom of the box, and beaded at their inner edges to engage the wire stacking base and hold it in place, transverse and longitudinal vertical partitions in the box dividing it into bottle compartments, the bottom edges of the transverse partitions being bent to form wide horizontal flanges each of which is extended at its ends and crimped with the side strips and walls into the horizontal bottom flange, and bottle supporting rods at the bottoms of the bottle compartments extending through the transverse partitions and resting directly upon the horizontal flanges thereof.

1,015,235. GEARING. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 10, 1911. Serial No. 653,871. (Cl. 74—59.)



1. The combination in a drill, of a frame; a spindle mounted therein; two pinions loosely mounted on the spindle; a driving wheel having two sets of teeth, one set meshing with one pinion and the other set meshing with the other pinion, said spindle being grooved; a slide located in the groove; two pawls pivotally mounted in the groove and actuated by the slide, one pawl engaging one pinion and the other engaging the other pinion; and means for shifting the slide so that either one or the other of the pinions will be locked to the spindle, or both will be locked to the spindle.

2. The combination of a spindle; two pinions mounted thereon, said spindle being slotted; a longitudinally movable slide mounted in the slot; a collar secured to the slide; projections on the slide; two pawls pivotally mounted in the slot and actuated by the projections on the slide; a spring mounted within the spindle resting against the slide; with a gear wheel having two sets of teeth, one set meshing with one pinion and the other set meshing with the other pinion.

3. The combination in a breast drill, of a frame; a driving wheel mounted thereon; a spindle; two pinions loosely mounted on the spindle and meshing with the teeth of the driving wheel, said spindle and pinions being slotted; a slide in the slot in the spindle; two pawls independently pivoted in the slot and arranged to be projected into the slots of their respective pinions; a spring acting to force the slide toward the pinions; and a sleeve secured to the slide and projecting through an opening in the frame.

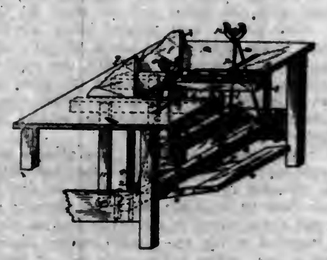
1,015,236. POLE-DERRICK. DAVID A. MANROSS, Franklin, Pa., assignor of one-half to Harry Smith, Franklin, Pa. Filed Aug. 1, 1910. Serial No. 574,902. (Cl. 212—14.)

1. A pole derrick for use about oil wells consisting of a metallic mast, a cylindrical, removable pulley-head

therefor, a pulley carried by said head, in combination with a socket arranged approximate to a well for receiving the base of said mast, and means for securing said mast in the upright position.

2. In a pole derrick for use about oil wells, a metallic mast, a reinforcement at the upper end of said mast of larger diameter than the body of said mast, a cylindrical pulley-cap adapted to receive said reinforcement and the upper end of said pole or mast, a reinforcement at the lower end of said cap, set-screws passing through said cap reinforcement, the inner ends of said set-screws bearing against said mast, upwardly extending arms secured to said cap, and a pulley revolubly mounted in said arms.

1,015,237. BOX-PRESS. ALBERT I. MASON, Hood River, Oreg. Filed Apr. 8, 1911. Serial No. 619,854. (Cl. 100—57.)



1. A box press comprising a table, a frame mounted thereon for seating a box in place, and means, also mounted on the table, for guiding the placing in position of the box-top on the box; a bar and coil-springs pendently supporting it under the table, rods hinged to the bar and grapples pivoted to the upper ends of such rods, said grapples provided with claws at their extremities; a treadle pivoted under the table, and connections between the treadle and said bar; means for normally holding the grapples outward, in their inactive position and moving them inward upon the depression of the treadle.

2. A box press comprising a table, a frame mounted thereon for seating a box in place, and means, also mounted on the table, for guiding the placing in position of the box-top on the box; a bar and coil-springs pendently supporting it under the table, rods hinged to the bar and bifurcated grapples pivoted to the upper ends of such rods, said grapples provided with claws at their extremities; a treadle pivoted under the table, and connections between the treadle and said bar; a second bar between the first mentioned bar and the treadle, and coil-springs suspending such second bar pendent from the table; links connecting the grapples with said second bar; the table being provided with slots for said rods and links to work in; the devices controlling the operation of the grapples being adapted to cause the latter to stand normally outward and to be moved inward upon the depression of the treadle.

3. A box press comprising a table, a frame mounted thereon for seating a box in place, and means, also mounted on the table, for guiding the placing in position of the box-top on the box; a bar and coil-springs pendently supporting it under the table, rods hinged to the bar and grapples pivoted to the upper ends of such rods, said grapples provided with claws at their extremities; a treadle pivoted under the table, and connections between the treadle and said bar; means for normally holding the grapples outward in their inactive position and moving them inward upon the depression of the treadle.

4. A box press comprising a table, a frame mounted thereon for seating a box in place, and means, also mounted on the table, for guiding the placing in position of the box-top on the box; a bar and coil-springs pendently supporting it under the table, rods hinged to the bar and bifurcated grapples pivoted to the upper ends of such rods, said grapples provided with claws at their extremities; a treadle pivoted under the table, and connections between the treadle and said bar; a second bar between the first mentioned bar and the treadle, and coil-springs suspending such second bar pendent from the table; links connecting the grapples with said second bar; the table being provided with slots for said rods and links to work in; the devices controlling the operation of the grapples being adapted to cause the latter to stand normally outward and to be moved inward upon the depression of the treadle.

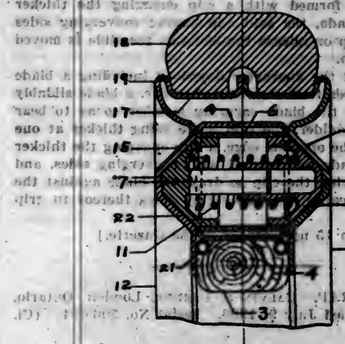
5. A box press comprising a table, cleats on the table for guiding the placing of a box in position, standards on the table and projections on the upper ends of the standards for guiding the placing in position of the box and the top thereon; grapples and operating means therefor including a treadle, such operating means adapted to position the grapples normally out of contact with the ends of the box top and upon depression of the treadle to cause them to seize and bear down upon such ends; a bar and coil-springs pendently supporting it under the table, rods hinged to the bar and bifurcated grapples pivoted to the upper ends of such rods, said grapples provided with claws at their extremities; a treadle pivoted under the table, and connections between the treadle and said bar; a second bar between the first mentioned bar and the treadle, and coil-springs suspending such second bar pendent from the table; links connecting the grapples with said second bar; the table top being provided with slots for said rods and links to work in; the devices controlling the operation of the grapples being adapted to cause the latter to stand normally outward and to be moved inward upon the depression of the treadle.

1,015,238. VEHICLE WHEEL AND TIRE. SAMUEL N. MCCLEAN, Cleveland, Ohio. Filed Nov. 12, 1908. Serial No. 462,234. (Cl. 152—28.)

1. In a resilient wheel, inner and outer rim members, one of said rim members being provided in its sides with a plurality of cone seats, the other member carrying a plurality of transversely extending spring pressed cones engaging said seats.

2. In a resilient wheel, inner and outer substantially rigid rim members, one of said rim members having radially extending side flanges provided with a plurality of cone seats, the other of said rim members carrying a plurality of transversely extending spring pressed cones engaging said seats.

3. In a resilient tire, inner and outer substantially rigid rim members, the outer one of said rim members having side plates provided with a plurality of cone seats, the other of said rim members consisting of a ring having its inner face cylindrical and carrying a plurality of transversely extending spring pressed cones engaging said cone seats.

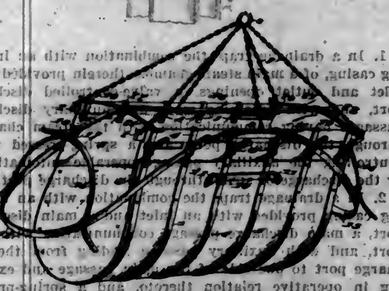


4. In a resilient tire, inner and outer rim members, one of said rim members having radially extending side flanges provided with a plurality of pairs of oppositely arranged cone seats, the other of said rim members being arranged between said side flanges and carrying a plurality of pairs of oppositely arranged transversely extending spring pressed cones engaging said seats.

5. In a resilient tire, inner and outer substantially rigid rim members, one of said rim members having side plates provided with a plurality of pairs of oppositely arranged cone seats, the other member being arranged between said side plates and carrying a plurality of transversely extending spring pressed cones engaging said seats, one of the cones of each pair being provided on its inner side with a tubular extension and the other cone being provided on its inner side with a pin adapted to extend into said tubular extension.

[Claims 6 and 7 not printed in the Gazette.]

1,015,239. HORSE-SWING. HENRY MILLER, Pekin, Ill. Filed Apr. 26, 1911. Serial No. 622,518. (Cl. 119—102.)

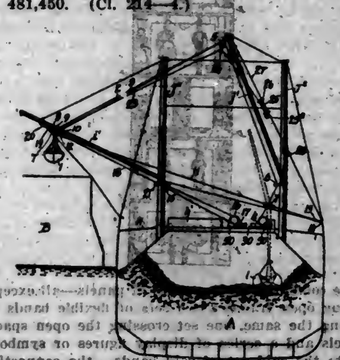


1. In an animal swing or stock, the combination with a flexible body having straps thereon, of rods, means for supporting the rods, means for connecting the straps to the rods for supporting the flexible body, a breeching and breast collar connected to the flexible body, and a back strap connecting the breeching and breast collar.

2. In an animal swing or stock, the combination with a flexible body having straps thereon, of rods, means for supporting the rods, means for connecting the straps to the rods for supporting the flexible body, a breeching and breast collar connected to the flexible body, a back strap connecting the breeching and breast collars, and means connecting the rods for supporting the back strap.

3. In an animal swing or stock, the combination with a flexible body, of rods, means for supporting the rods, means connecting the flexible body to the rods, a breeching and breast strap connected to the body, and means connecting the breeching and breast strap together.

1,015,240. MARINE TRANSFER. THOMAS SPENCER MILLER, South Orange, N. J. Filed Mar. 5, 1909. Serial No. 481,450. (Cl. 214—4.)



1. In a marine transfer, in combination, a boat containing a hatchway, a pair of masts, a boom extending from one of the masts to a point above the hatchway, a hoisting rope sheave thereon, a second boom extending outboard from the other mast, an outhaul swinger rope sheave thereon, the swinger frame, the hoisting rope extending therethrough, the outhaul and inhaul swinger ropes and means for actuating the same.

2. In a marine transfer, in combination, a boat containing a hatchway, a pair of masts, a boom extending from one of the masts to a point above the hatchway, a hoisting rope sheave thereon, a second boom extending outboard from the other mast, an outhaul swinger rope sheave thereon, the swinger frame, the hoisting rope extending therethrough, the outhaul and inhaul swinger ropes and means for actuating the same and a suspender rope.

3. In a marine transfer, in combination, a boat having a hatchway, a hoisting rope sheave above the hatchway, inhaul and outhaul swinger rope sheaves, the swinger frame, the hoisting rope extending therethrough, the outhaul and inhaul swinger ropes, means for actuating the same, a suspender rope, a counterweight for the same, a stop whereby the fall of said counterweight is arrested and a supplemental slack pulling counterweight.

4. In a transfer apparatus, in combination, an elevated hoisting rope sheave, a hoisting rope, a swinger frame engaging the fall of said hoisting rope, inhaul and outhaul swinger ropes connected with said swinger frame, an engine or motor shaft and drums for said inhaul and outhaul swinger ropes, one of said drums being revoluble and the other nonrevoluble on said shaft.

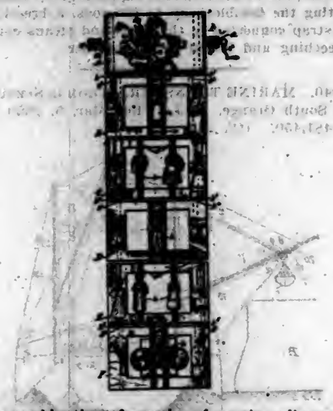
5. In a transfer apparatus, in combination, an elevated hoisting rope sheave, a hoisting rope, a swinger frame engaging the fall of said hoisting rope, inhaul and outhaul swinger ropes connected with said swinger frame, an engine shaft and drums for said inhaul and outhaul swinger ropes, one of said drums being revoluble and the other nonrevoluble on said shaft, and a brake applied to said revoluble drum.

[Claims 6 to 13 not printed in the Gazette.]

1,015,241. MOVING ADVERTISEMENT DEVICE. EDWARD L. NIMS, Cincinnati, Ohio. Filed Dec. 6, 1910. Serial No. 595,572. (Cl. 40—28.)

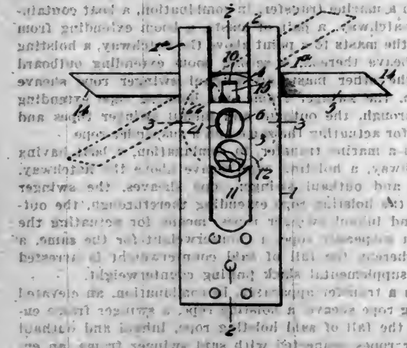
1. An display advertising device consisting of an inshell or master panel, a plurality of open frame panels, two sets of flexible bands, inter-connecting the said panels, one set crossing the open spaces of the panels and a series of

effigies or display symbols attached to the said set of bands.



2. The combination of a series of panels—all except the first being open frames; two sets of flexible bands interconnecting the same, one set crossing the open spaces of the panels and a series of display figures or symbols attached to the said set of said bands,—the connection of the bands and panels being such that upon reversing the first panel, the succeeding panels reverse, and the figures or symbols assume a different series relation to the panels.

1,015,242. BEVEL-PROTRACTOR. WALTER W. OWEN, Youngstown, Ohio. Filed Feb. 21, 1911. Serial No. 610,031. (Cl. 78—6.)



1. In a tool of the class described, the combination of a slotted stock, a slide mounted within the stock and movable longitudinally thereof, a blade-carrying disk rotatably supported by the slide, a longitudinally adjustable blade slidably mounted upon the blade-carrying disk, a head journaled within the disk, and means actuated by said head for locking and releasing said blade.

2. A tool of the character described including a pivotally mounted blade carrying member, supporting means for the same, a blade slidably mounted upon the blade carrying member and thicker at one edge than at the opposite edge, a clip engaging the thicker edge of the blade, and an eccentric member mounted upon the blade carrying member and having an operative connection with the clip for moving the same to grip or release the blade.

3. In a tool of the character described, the combination of a stock, a blade carrying member upon the stock, a blade slidably mounted upon the blade carrying member and thicker at one edge than at the opposite edge, a clip engaging the thicker edge of the blade and formed with converging sides, and means for moving the clip for causing the converging sides to grip or release the blade.

4. A tool of the character described including a blade carrying member having an opening therein, a head rotatably mounted within the opening and formed with an eccentric, a blade slidably mounted upon the blade carrying member and thicker at one edge than at the opposite edge, and a slide having an operative connection with the eccentric and formed with a clip engaging the thicker edge of the blade, the said clip having converging sides adapted to grip or release the blade as the slide is moved back and forth.

5. A tool of the character described including a blade carrying member formed with a shoulder, a blade slidably mounted upon the blade carrying member so as to bear against the shoulder, the said blade being thicker at one edge than at the opposite edge, a clip engaging the thicker edge of the blade and formed with converging sides, and means for moving the clip to draw the blade against the shoulder and cause the converging sides thereof to grip the blade.

[Claims 6 to 15 not printed in the Gazette.]

1,015,243. TRAP. CALVIN S. PARKER, London, Ontario, Canada. Filed July 9, 1909. Serial No. 506,684. (Cl. 122—37.)

1. In a drainage trap, the combination with an inclosing casing, of a main steam chamber therein provided with inlet and outlet openings, a valve-controlled discharge port, and with adjoining main and auxiliary discharge passages having communication with the steam chamber through the discharge port, and a spring-pressed valve controlling the auxiliary passage operable automatically by the discharge of steam through the discharge port.

2. In a drainage trap, the combination with an inclosing casing provided with an inlet and a main discharge port, a main discharge passage communicating with said port, and with auxiliary passage leading from the discharge port to one side of the main passage and extending in operative relation thereto, and a spring-pressed valve controlling the auxiliary passage.

3. In a drainage trap, the combination with an inclosing casing formed with a main steam chamber having normally open inlet and outlet ports, a normally closed discharge port, a main discharge passage leading from said discharge port, and having an auxiliary discharge passage communicating with the main chamber through the discharge port and surrounding the main passage, an auxiliary valve chamber adjoining the main chamber, and a spring-pressed valve within the auxiliary chamber controlling the auxiliary passage.

4. In a trap, the combination with a casing provided with an inlet port, a main discharge port, and with an auxiliary discharge port at one side of and communicating with the casing through the main discharge port, of separate and independently operable valves respectively controlling the main and auxiliary discharge ports, one of said valves being adapted to be automatically operated by the heating fluid.

5. In a trap, the combination with a casing provided with an inlet port, a main discharge port, and with an auxiliary discharge port at one side of and communicating with the casing through the main discharge port, of a valve controlling the main discharge port and a valve controlling the auxiliary discharge port adapted to be automatically operated independently of the main valve by the heating fluid.

[Claims 6 to 8 not printed in the Gazette.]

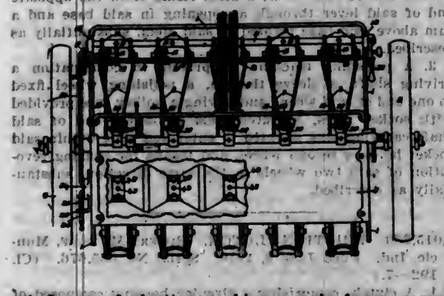
1,015,244. REEL-DRUM OR THE LIKE. HOWARD PARKER, Nashua, N. H. Filed May 23, 1910. Serial No. 562,858. (Cl. 242—77.)

1. An article of the character described comprising a plurality of spiders, strips of suitable material laid lengthwise thereon and spaced apart, binding blocks located between adjacent strips, and means for moving said binding blocks toward said spider.

2. An article of the character described comprising a plurality of spiders, strips of suitable material laid lengthwise on and extending from one spider to the other, said strips being spaced apart, binding blocks located between adjacent strips and studs passing through said blocks and having threaded engagement with said spiders.

3. An article of the character described comprising a plurality of spiders, strips of suitable material laid lengthwise on and extending from one spider to another, said strips being of square cross section, binding blocks located between adjacent strips the edges thereof being oppositely inclined and means for moving said binders toward said spiders.

1,015,245. PLANTING MACHINE. CHARLES E. PATRIC, Springfield, Ohio. Filed Oct. 10, 1910. Serial No. 586,267. (Cl. 111—18.)



1. In a seed planting machine, a main frame, a seed hopper having a series of feeding devices therein, a feed shaft operatively connected with said feeding devices, a series of furrow opening devices pivotally connected at their forward ends to said frame, valves in said furrow opening devices, a rock shaft supported by said frame in proximity to the pivotal points of said furrow openers, a connection from said rock shaft to each of said valves, a tripping mechanism operated directly by said feed shaft, and a connection from said tripping mechanism to said rock shaft, substantially as specified.

2. In a seed planting machine, a series of furrow openers, said openers having drag-bars pivotally connected at their forward ends, and means for raising and lowering said pivotal connections, substantially as and for the purpose specified.

3. In a seed planting machine, a series of furrow openers, having drag-bars pivoted at their forward ends, valves in said furrow openers, valve operating mechanism, said valve operating mechanism having pivotal connections to compensate for the rise and fall of the furrow openers, and means for correspondingly raising and lowering the pivotal connections of said drag-bar and valve operating mechanism, substantially as specified.

4. In a seed planting machine, a series of furrow openers having drag-bars, a transverse rock shaft having crank arms, the forward ends of said drag-bars being pivotally connected to said crank arms, seed dropping valves in said furrow openers, operating mechanism for said valves, said operating mechanism comprising a rod revolubly supported by said rock shaft and parallel therewith, and means for rocking said shaft, substantially as specified.

5. In a seed planting machine, a series of furrow openers having drag-bars pivoted at their forward ends, seed dropping valves in said furrow openers, a transverse shaft having crank arms, rods connecting said valves with said crank arms, a tripping machanism, and a connection between said tripping mechanism and said shaft to rock said shaft, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

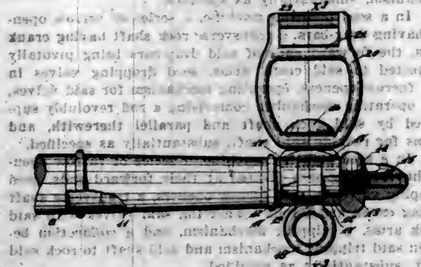
1,015,246. REDUCING-MILL. MILTON C. PETERS, Omaha, Nebr. Filed Apr. 26, 1909. Serial No. 492,123. (Cl. 146—29.)

1. In a reducing mill of the character described, the combination of a casing having a feed inlet at one end and an air chamber at the other end into which reduced material is delivered, a screen and a contained revoluble rotary cutter within the casing intermediate of the feed inlet and the air chamber, the inlet end of the casing having a foraminous wall over which the material passes and by which it is partially screened, a feed roller for delivering material into the screen, and an air conducting pipe connecting the feed end of the chamber in advance of the feed roll with the air chamber at the opposite end of the casing whereby the leaves and light particles of matter may be conducted directly through said pipe and delivered into the air chamber in the presence of material delivered into said chamber directly from the screen.

2. The combination of a casing having a feed-inlet and outlet arranged substantially and vertically in line, a circular screen in the casing and with its central portion vertically in line with said feed-inlet and the entrance to the outlet, a rotary cutter operable in the cylinder, a fixed cutter-bar arranged in said feet-inlet, a pneumatic

conveyer for creating a draft directly through the central portion of the cylinder to facilitate the separation of the reduced material, and an exterior branch of the draft-creating means having one end connecting with the casing in advance of the inlet to the screen and the opposite end connecting with the main conveyer at a point below the screen.

1,015,247. NECK-YOKE END COUPLING. SAMPSON H. RENVILLE, Peever, S. D. Filed Oct. 28, 1910. Serial No. 589,599. (Cl. 21—77.)

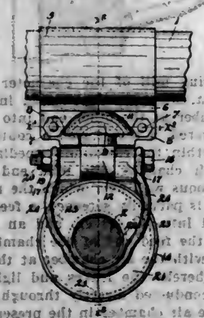


1. The combination with a neck yoke, of a coupling eye and a headed coupling member having interlocking bearing rings pivotally mounted on each end of said neck yoke, and a strap loop swiveled to said headed coupling member, substantially as described.

2. The combination with a neck yoke provided at its ends with metallic caps formed with reduced trunnions and projecting threaded gudgeons and nuts applied to said gudgeons, of a headed coupling member pivoted on each trunnion, and a metallic strap loop swiveled to said trunnion, substantially as described.

3. The combination with a neck yoke, provided at its ends with metallic caps formed with reduced trunnions and projecting threaded gudgeons and nuts applied to said gudgeons, of a headed coupling member having laterally spaced bearing rings pivoted on each of said trunnions, a coupling eye having a bearing ring pivotally mounted on each of said trunnions between the bearing rings of said headed coupling members, and a strap loop swiveled to said headed coupling member, substantially as described.

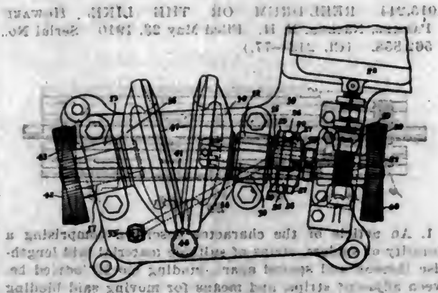
1,015,248. NECK-YOKE CENTER. SAMPSON H. RENVILLE, Peever, S. D. Filed Dec. 27, 1910. Serial No. 599,343. (Cl. 21—77.)



1. In a neck yoke center, the combination with a neck yoke and a clamping band surrounding the same and having formed therein a pair of coöperating head receiving seats, of detachable half-sockets secured to said clamping band for coöperation with said seats, a pole socket having a pole passage, and a connecting head secured to said pole socket and swiveled in said seats and coöperating half-sockets, substantially as described.

2. In a neck yoke center, the combination with a neck yoke and a clamping band surrounding the same and having formed therein a pair of coöperating head receiving seats, of detachable half-sockets secured to said clamping band for coöperation with said seats, a pole socket having a pole passage, and a connecting head secured to said pole socket by a hinge joint, and swiveled in said seats, and coöperating half-sockets, substantially as described.

1,015,249. POLISHING-MACHINE. HENRY ROBINSON, South Orange, N. J. Filed Oct. 20, 1910. Serial No. 588,079. (Cl. 51—6.)



1. A polishing machine comprising in combination, two polishing wheels mounted upon axes at a suitable angle to each other and so placed as to be adapted to have the edge portion of their faces brought in contact and one of said wheels being movably mounted on its axis, a bent lever pivoted upon and extending under said base, a shifting fork at one end of said lever, adapted to produce movement of one of said wheels toward and away from the other, a stem rising from the opopsite end of said lever through an opening in the base and a pivoted handle provided with a cam adapted to move said stem up and down for the purpose of controlling the movable wheels, substantially as described.

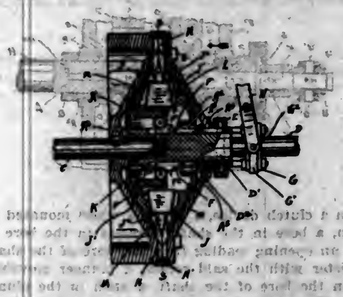
2. A polishing machine comprising in combination two polishing wheels mounted upon a suitable base, one of said wheels being movably mounted on its axis to permit of contact or separation of said wheels at will, a bent lever pivoted on and extending under said base, a shifting fork on one end of said lever, a stem rising from the opposite end of said lever through an opening in said base and a cam above said base pivoted to said stem, substantially as described.

3. A polishing machine comprising in combination a driving shaft, a sleeve thereon, a polishing wheel fixed to one end of said sleeve and having a hollow face provided with socket holes, a clutch member on the end of said shaft carrying pins adapted to enter and slide within said socket holes, a second wheel, and means for causing revolution of said two wheels in the same direction, substantially as described.

1,015,250. FRICTION-CLUTCH. ROBERT M. ROOF, Muncie, Ind. Filed June 8, 1910. Serial No. 565,676. (Cl. 192—7.)

1. A clutch, comprising a circular housing composed of recessed half sections secured together at their peripheral portions, a hub for one of said half sections adapted to be secured to the driving shaft, a driven shaft, friction-shoes between the said half-sections and mounted slidingly and non-rotatively on the driven shaft, wedges between the friction shoes, means to pull the friction shoes yieldingly toward each other and to move the wedges, means carried by the driven shaft to move the said wedges to force the friction shoes apart from each other and to locked engagement with the housing.

2. A clutch, comprising a circular housing composed of cone shaped half sections secured together at their peripheral portions, a hub for one of said half sections adapted to be secured to the driving shaft, a driven shaft, friction shoes between the said half sections and mounted slidingly and non-rotatively on the driven shaft, springs to pull the friction shoes toward each other, means to overcome the tension of the springs and force the friction shoes apart and into frictional contact with the half sections.



3. A clutch comprising a housing composed of cone shaped half sections secured together at their peripheral portions, a hub for one of said half sections adapted to be secured to the driving shaft, a driven shaft, friction shoes between the said half sections and mounted slidingly and non-rotatively on the driven shaft, wedges between the friction shoes, means to pull the friction shoes yieldingly toward each other and to move the wedges, means carried by the driven shaft to move said wedges to force the friction shoes apart from each other and into locked engagement with the housing, and means to adjust the distance between the wedges and the wedge moving means.

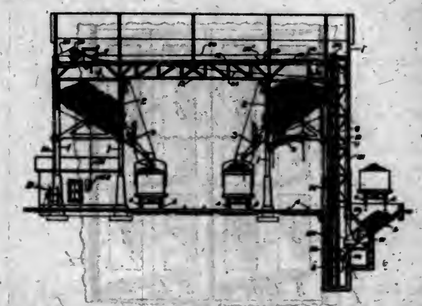
4. A clutch comprising a housing composed of cone-shaped half sections secured together at their peripheral portions, a hub for one of the said half sections adapted to be secured to the driving shaft, a driven shaft having a bore in which the end of the driving shaft will have bearing, friction shoes between the said half sections and mounted slidingly and non-rotatively on the driven shaft, means to urge the friction shoes yieldingly toward each other, wedges between the shoes, push bars carried by the driven shaft and movable slidingly thereon and having their ends tapered, connections between the wedges and the tapered ends of the push bars, means to vary the distance between the said connections and the tapered ends of the said push bars.

5. A friction clutch, comprising a circular housing composed of cone shaped half sections secured together, a hub for one of said half sections, a driving shaft secured in the said hub, a driven shaft to extend through the opposite half-section and having a bore in which the end of the driving shaft will have bearing, opposed cone-shaped shoes mounted on the driven shaft slidingly and non-rotatively, wedges between the said shoes, springs to connect the said shoes, tapered push bars carried by the driven shaft and which extend outside of said housing, rollers between the ends of the wedges and the tapered push bars, a collar mounted loosely on the driven shaft and to which collar the outer ends of the push bars are secured and which collar is adapted to receive connections for a shifting lever.

[Claims 6 to 8 not printed in the Gazette.]

1,015,251. CONVEYING SYSTEM. FRANK J. SCHRAEDER, Jr., Chicago, Ill. Filed Dec. 27, 1910. Serial No. 599,302. (Cl. 214—4.)

1. In a conveying system, a vertically and horizontally movable receptacle and means for propelling the same in either direction between a receiving point and a discharging point, a hopper at said receiving point, a plurality of gates for controlling the discharge of material from said hopper into the receptacle, a measuring chute arranged between said gates, and means coöperating with the receptacle for operating said gates.



2. In a conveying system and in combination, a receiving hopper, a vertically and horizontally movable bucket, means for propelling the bucket in either direction between said receiving hopper and a discharging point, a plurality of gates for controlling the discharge of material from the hopper into the bucket, a stationary measuring chute arranged between said gates and means coöperating with the bucket for alternately operating said gates.

3. In a conveying system and in combination, a receiving hopper, a vertically and horizontally movable bucket, means for propelling the bucket in either direction between said receiving hopper and a discharging point, a plurality of gates for controlling the discharge of material from the hopper into the bucket, comprising a rotatable undercut filling gate and an apron discharge gate, and a measuring chute arranged therebetween, and means coöperating with the bucket for alternately and independently controlling said gates.

4. In a conveying system, a receiving hopper, a vertically and horizontally movable bucket, means for propelling the bucket vertically and horizontally in either direction between said receiving hopper and a discharging point, means for controlling the discharge of material from the hopper into the bucket, comprising a plurality of gates and a measuring chute arranged therebetween, one of said gates comprising a rotatable undercut filling gate and the other an apron discharge gate, means arranged in the path of the bucket between the hopper and discharging point for operating said rotatable gate, and independently controlled means arranged in the path of the bucket for controlling said apron discharge gate when the bucket is in loading position.

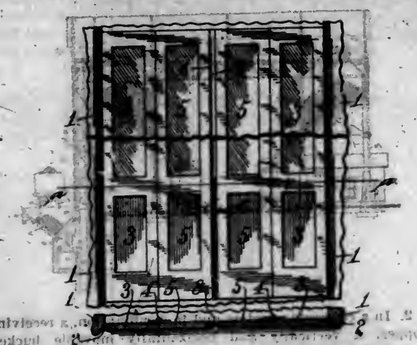
5. The combination in a conveying system of a shaft and tracks extending therefrom, a bucket movable in said shaft and on said tracks, means for hoisting said bucket and drawing the same on the tracks, means for positively returning the bucket to the foot of the shaft, a receiving hopper at the foot of said shaft and an automatic measuring device comprising a chute extending from said hopper, a filling gate for controlling the discharge of material from the hopper into said chute, a discharge gate for controlling the discharge of material from the chute into the bucket, and means coöperating with the bucket for alternately and independently controlling said gates.

[Claims 6 to 28 not printed in the Gazette.]

1,015,252. PREPAYMENT-STREET-CAR DOOR. GEORGE C. TOWLE, Dayton, Ohio, assignor to The Pay-Within Car Sales Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Sept. 8, 1911. Serial No. 648,862. (Cl. 20—16.)

1. In a street car, the combination of oppositely folding door panels the adjacent edges of which are spaced, and flexible strips arranged in the adjacent edges of said door panels to overlap each other when the said panels are in a closed position and to thus close the space between the spaced edges of said panels, substantially as specified.

2. In a street car, the combination with oppositely folding door panels the adjacent edges of which are spaced, and flexible strips arranged in the adjacent edges of said panels



on angles to the planes of said panels and to overlap each other to close the space between said panels when closed, substantially as specified.

1,015,253. MEDICATING-DILATOR. THEODORE WEAVER and DELLA M. ENNIS, Cleveland, Ohio. Filed June 10, 1911. Serial No. 632,476. (Cl. 128—46.)

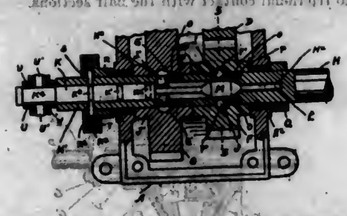
1. An instrument of the kind described, comprising a recessed base, a tube attached thereto, a spring actuated plunger in the tube, tending to advance toward the front end of the tube, a rod connected to the plunger and movable through a hole in the base, said rod having a head at its outer end, and a catch slidable laterally in the recess in the base and engageable with the head of the rod to hold the plunger in retracted position.

2. An instrument of the kind described, comprising a tube with openings at the front end, an enlarged base, having a threaded projection to which the rear end of the tube is screwed, and a circular raised portion surrounding said projection, the rear end of the tube being reduced in external diameter to form a groove between the tube and said raised portion of the base, and a plunger in the tube.

1,015,254. CLUTCH DEVICE. ISMA S. WHISLER, Newcastle, Ind., assignor of one-half to Leonard Daniel, Newcastle, Ind. Filed July 28, 1911. Serial No. 641,093. (Cl. 192—22.)

1. In a clutch device, the combination of a shaft, a wheel mounted loosely on said shaft, a bore in said shaft, a recess in the bore of the wheel, an opening leading from the bore of the shaft and to register with said recess, a plunger disposed slidingly in the bore of the shaft, a stem in said plunger, a projector head on said stem, a ball in said opening, means to yieldingly retain the ball at retracted position.

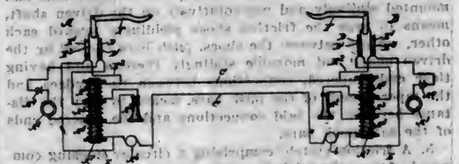
2. In a clutch device, the combination of a shaft, a wheel mounted loosely on said shaft, a bore in said shaft, a recess in the bore of the wheel, an opening leading from the bore of the shaft and to register with said recess, a plunger disposed slidingly in the bore of the shaft, a stem in said plunger, a ball in said opening, a projector head on said stem which when moved longitudinally will protrude the ball from the opening, means to yieldably retain the ball at retracted position, and means supported by the shaft to yieldably hold the plunger against longitudinal movement.



3. In a clutch device, a shaft, a wheel mounted loosely thereon, a bore in the shaft, a recess in the bore of the wheel, an opening leading from the bore of the shaft and to register with the said recess, a plunger movable slidingly in the bore of the shaft, a stem in the plunger, a ball in the said opening, and means to yieldably retain the ball in the opening and against the stem.

4. In a clutch device, the combination of a shaft, a wheel mounted loosely thereon, a bore in the shaft, a recess in the bore of the wheel, an opening leading from the bore of the shaft and to register with the said recess, a ball in said opening, means to yieldably retain the ball against escapement from the said opening, and means operable in the bore of the shaft to protrude the ball and retain it at engagement with the recess in the bore of the wheel.

1,015,255. TELEPHONE APPARATUS. DAVID H. WILSON, Chicago, Ill., assignor, by mesne assignments, to Stilwell-Wilson Telephone Company, New York, N. Y., a Corporation of Arizona. Filed Aug. 7, 1903. Serial No. 168,571. (Cl. 179—1.)



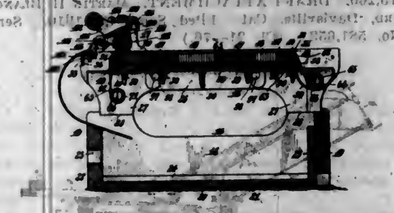
1. A telephone apparatus, comprising a transmitter circuit and a receiver circuit, a coil in one of said circuits wrapped about a suitable core, a divided coil in the other circuit having a part located on each side of the first mentioned coil a receiver in circuit with the divided coil and a source of electric supply in both of said circuits.

2. A telephone apparatus, comprising a transmitter circuit and a receiver circuit separate from each other, a coil in the transmitter circuit, a divided coil in the receiver circuit the two parts of which are located at one end of said circuit, a receiver connected between the sections of said divided coil and in circuit therewith and a source of electric supply in both of said circuits and means for short-circuiting the two parts of said divided coil.

3. A telephone apparatus comprising a main line containing a source of electric supply, a receiver connected in said main line at each end thereof, a local circuit at each end of said main line comprising a source of electric supply and a transmitter, a part of each local circuit being wound around the middle portion of the core at the end of the main line with which it is associated, a portion of the main line being wound around said core on both sides of the winding of the local circuit, the receiver being connected in the main line circuit between the two sections of said windings.

4. A telephone apparatus comprising two circuits one containing a transmitter and the other a receiver, the circuit containing the receiver being the main line circuit, a coil located in each of said circuits and in proximity to each other, the coil in the main line circuit divided into two sections, one located on each side the coil in the other circuit, an independent source of electric supply connected with each of said circuits, and means for short-circuiting the coil in the main line circuit and opening the circuit containing the transmitter under predetermined conditions.

1,015,256. DUPLICATING MACHINE. CHARLES E. ADAMSON, Buffalo, N. Y., assignor to The Writerpress Company, Buffalo, N. Y., a Corporation of New York. Filed July 20, 1907. Serial No. 384,734. (Cl. 101—11.)



1. The combination of a frame having guides and a type-bed between said guides on which type are assembled in parallel rows, a carriage movable on said guides, bearing-boxes in said carriage, pressure-screws passing through said carriage and bearing on said boxes, eccentric-bushings in said boxes having actuating-arms to turn the same, stops on said frame adapted to be engaged by said arms, an impression-roller journaled in said bushings, and an inking-ribbon between the type on said type-bed and the impression-roller.

2. The combination of a frame having guides and a type-bed between said guides on which type are assembled in parallel rows, a transversely-disposed carriage movable on said guides and having vertical openings in oppoite ends, bearing-boxes in said openings, pressure-screws bearing against the tops of said bearing-boxes, springs interposed between said bearing-boxes and the bottoms of said openings, an impression-roller journaled in said boxes, and an inking-ribbon between said roller and the type on said type-bed.

3. The combination of a frame having a type-bed and angular guides on opposite sides of said type-bed, a chase on said bed containing assembled type, a reciprocating carriage bearing on the upper sides of said guides and having fiber blocks secured thereto which bear against the lower sides of said guides, an impression-roller journaled in said carriage, and a transfer-medium movable between said roller and the type within said chase.

4. The combination with a frame having a type-bed, of a chase having type-assembled therein, a concaved roller-support at one end of said type-bed and supported thereby, a ribbon-roller resting in said roller-support, a ribbon wound upon said roller and passing over the type in said chase, a second roller rotatably mounted at the other end of said type-bed and having one end of said ribbon attached thereto, an impression-member movable on said frame, and cooperating mechanism between said impression-member and said last-mentioned roller to cause the latter to rotate.

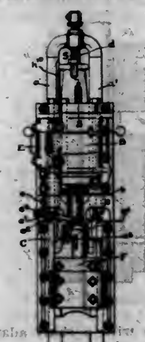
5. The combination of a type-bearing-member, an impression-roller movable lengthwise of said type-bearing member and rotatably mounted, an inking-ribbon adapted to move over said type-bearing member, a concaved roller-rest at one end of said member and supported thereby, a roller lying loosely in said roller-rest and having said inking-ribbon rolled thereon, and means for unwinding the ribbon from said roller and moving the same over said type-bearing member.

[Claims 6 to 87 not printed in the Gazette.]

1,015,257. FOOTLOCK FOR PRINTERS' GALLEYS. FRANK J. ANTELOTTI, Norfolk, Va. Filed June 22, 1911. Serial No. 634,744. (Cl. 101—54.)

In a printer's galley, a foot clamp having its end provided with a right angular projection, a spring device having secured to one of its ends and side surface a curved finger-piece for said foot clamp, and a set screw, for detachably securing the parts together, all operated as herein shown and described.

1,015,258. CHANNELING MACHINE. ALBERT BALL, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed Aug. 25, 1906. Serial No. 332,018. (Cl. 121—10.)



1. A channeling machine, comprising, in combination, a channeling tool carrying member; a cylinder and piston to actuate the same; valve means to govern the cylinder; valve controlling connections between the tool carrying member and the valve means; a tail rod to guide the piston and tool; an auxiliary cylinder head to receive the tail rod; a lubricating chamber in the auxiliary head; and means to regulate the flow of lubricant to the tail rod; the whole being arranged to facilitate the guiding of the piston and tool and thereby to insure the proper control of the cylinder governing valve through its connections with the tool.

2. A channeling machine comprising, in combination, a channeling tool carrying member; a cylinder and piston to actuate the same; an auxiliary cylinder head having a lubricant chamber; a tail rod extending into the auxiliary cylinder head and receiving lubricant from said chamber; and means to regulate the flow of lubricant to the tail rod.

3. A channeling machine comprising, in combination, a channeling tool carrying member; a cylinder and piston to actuate the same; a tail rod to guide the piston and tool carrying member; an auxiliary cylinder head; a bushing in said head in which the tail rod is mounted; a lubricant chamber around said bushing; lubricating passages leading from the chamber to the tail rod; an adjustable valve controlling said passages; and provision for

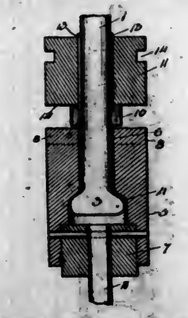
controlling the operation of the auxiliary cylinder head and lubricating means, by movement of the channeling tool.

4. A channeling machine comprising, in combination, a channeling tool carrying member; an actuating cylinder and piston for the same; a lubricant reservoir associated with said cylinder; lubricant feeding passages leading from said reservoir; a pressure-governed check valve controlling said passages; and means to control the pressure governing said valve, said means being connected to and controlled by the piston in its movement.

5. A channeling machine comprising, in combination, a channeling tool carrying member; an actuating cylinder and piston for the same; a tail rod attached to the piston; an auxiliary cylinder head; a bushing therein in which the tail rod is mounted; a lubricant chamber around said bushing; lubricating passages leading from the chamber to the tail rod; an adjustable ball valve controlling said passages; a pressure passage connecting the cylinder with the interior of said bushing; a cylinder valve controlling the pressure in the cylinder and the pressure within said bushing; and operating means for the cylinder valve controlled by movement of the piston, said means being offset from in front of the cylinder to leave the head of the latter unobstructed.

[Claims 6 and 7 not printed in the Gazette.]

1,015,259. FLEXIBLE JOINTED CLUTCH. CARROLL BEALE and DAVID P. MOORE, Washington, D. C. Filed Oct. 3, 1908. Serial No. 456,022. Renewed June 10, 1911. Serial No. 632,472. (Cl. 192—9.)



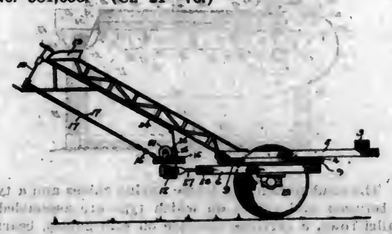
1. In combination with a shaft adapted to be rotated but remain in the same relative position, and another shaft adapted to have a slight gyroscopic motion, of a clutch for transmitting motion from the first to the second shaft, comprising two members, one slidably carried upon and surrounding the first shaft and the other loosely mounted upon and inclosing the lower end of the first shaft and secured to the second shaft, whereby when the two members coact, power is transmitted through the two members of the clutch to the second shaft so that the gyroscopic motion is taken care of between the members of the clutch without affecting the first shaft.

2. In combination with a shaft having a ball upon one end, of a clutch, comprising two members, one of which is carried upon said ball end of the shaft in such a manner as to allow the shaft to rotate freely therein and allow the member a tilting motion, and another member slidably mounted upon said shaft and adapted to rotate at all times with said shaft, each of the members being provided with co-acting means which when the members are together cause the shaft to rotate the free member through the fast member.

3. In combination with a shaft having a ball upon one end, said shaft being adapted to retain its relative position, and another shaft which may at times be out of alinement and have a tilting motion with relation to the first shaft, of a clutch for transmitting motion from the first to the second shaft and comprising, a member mounted upon the ball end of the first shaft and rigidly connected to the second shaft so that the first shaft may rotate without affecting the second shaft, and another member slidable, yet adapted to rotate with the first shaft, both of said members having co-acting means, which are adapted to be brought together to cause the members to engage and thereby transmit motion from the first to the second shaft.

4. A clutch, comprising a lower member having a socket, a shaft having a ball thereon fitted in said socket so that the shaft may rotate freely in the member and the member be allowed to tilt in various directions, another member slidably mounted upon said shaft but adapted to at all times rotate therewith, and co-acting means carried by the opposed faces of the members adapted to engage, as and for the purpose set forth.

1,015,260. DRAFT ATTACHMENT. MARTIN H. BLANCHARD, Davisville, Cal. Filed Sept. 12, 1910. Serial No. 581,653. (Cl. 21—76.)



1. In a vehicle having a frame carrying a guide wheel, a draft attachment including a double-tree attached to said frame and provided with means for partially rotating the frame in a horizontal plane independent of the motion of the double-tree.

2. In a vehicle adapted to be drawn, a guide wheel, a double-tree, and means on the double-tree operative to vary the direction of movement of the guide wheel independent of the motion of the double-tree.

3. A draft attachment for vehicles provided with a steering wheel comprising means on the double-tree operative to vary the angular position of the steering wheel independently of the direction of pull of the team.

4. A draft attachment for vehicles having a steering wheel comprising oppositely disposed levers on the double-tree connected to opposite sides of the frame carrying the steering wheel, and means for oppositely varying the angular position of the levers to shift the frame about a vertical axis.

5. In a draft attachment for vehicles provided with a steering wheel, a double-tree, oppositely disposed levers on the double-tree pivoted at their outer ends, means for moving the inner ends of the levers in opposite directions and links connecting the levers to the frame carrying the steering wheel.

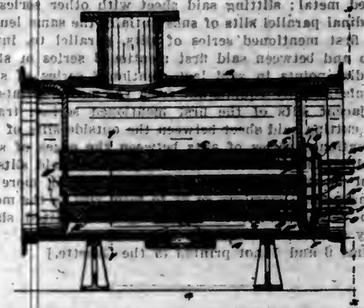
[Claims 6 and 7 not printed in the Gazette.]

1,015,261. STEAM GENERATION, FEED-WATER HEATING, AND HEATING OF LIQUIDS GENERALLY. WILLIAM ARTHUR BONE and JAMES WILLIAM WILSON, Leeds, and CYRIL DOUGLAS MCCOURT, London, England. Filed Dec. 3, 1910. Serial No. 595,438. (Cl. 122—44.)

1. A boiler comprising a liquid receptacle, a body of refractory material, means for protecting said refractory material from contact with the liquid and means for directing into contact with said refractory material an explosive gaseous mixture.

2. A boiler comprising a liquid reservoir, a body of granular refractory non-metallic material therein, means for protecting said refractory material from contact with the liquid and means for directing an explosive gaseous mixture into said refractory material.

3. A boiler comprising a liquid reservoir, a tube therein, refractory non-metallic material in said tube and means for directing against said refractory material an explosive gaseous mixture of combustible gas and of supporter of combustion therefor in substantially the proportions required for complete combustion.



4. A boiler comprising a liquid reservoir, a tube extending therethrough, granular refractory material within said tube throughout part of its length and means for passing an explosive gaseous mixture into the tube and effecting combustion thereof within said refractory material.

5. A boiler comprising a liquid reservoir, a metallic tube extending therethrough, granular refractory material filling said tube throughout part of its length and means for passing into said tube an explosive gaseous mixture of combustible gas and supporter of combustion therefor in substantially the proportions required for complete combustion.

[Claims 6 to 44 not printed in the Gazette.]

1,015,262. DESICCATING MILK. CHARLES H. CAMPBELL, New York, N. Y. Filed Nov. 2, 1907. Serial No. 400,338. (Cl. 99—5.)

The process of converting milk into a light powder which consists in preliminarily partially concentrating it and subsequently forming it into a film on a flexible traveling support, limiting the thickness of the film by a member at a substantially fixed distance from the support, extracting the remaining moisture from such film, and removing the product by heating or shaking said support.

1,015,263. BROOM. VICTOR E. CLARK, Grand Rapids, Mich., assignor to The Victor Broom Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 30, 1911. Serial No. 606,557. (Cl. 15—19.)

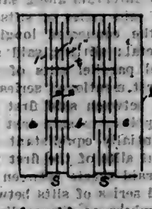
1. A broom comprising a brush, a clamp embracing the brush, inwardly projecting and slidably overlapping perforated members on the clamp sides to the brush, inwardly projecting concave members at the top of the clamp, and a handle oppositely engaged by the concave members and having a tapered and screw threaded end extending through the perforated members and into the brush.

2. A broom, comprising a handle having a tapered and screw threaded end, a brush, sheet metal clamps oppositely engaging the brush and extending above the same, said clamps having at the upper end inwardly projecting members to engage opposite sides of the handle and also having inwardly projecting and overlapping members near the middle provided with openings to receive the end of the handle and having their lower ends adapted to embrace and hold the brush.

3. A broom, comprising a handle having a tapered and screw threaded end, a clamp comprising sheet metal members each having an arched upper part provided with inwardly turned portions at the top to engage the handle and also having semi-circular portions turned inward and slidably overlapping and provided with openings to receive the said end of the handle and having its lower edge turned inward to engage and hold a brush.

4. A broom, comprising a brush formed of broom corn and secured by sewing transversely intermediate its ends, a clamp adapted to embrace the upper part of the brush and having overlapping, inwardly projecting members close above the upper end of the brush and overlapping members at each edge of the brush and also having inwardly projecting members at the top to engage the handle, and a handle having a tapered and screw threaded end inserted in the clamp and extending into the upper end of the brush.

1,015,264. PROCESS FOR MAKING EXPANDED METAL. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor of one-half to Alexander M. Neeper, Pittsburgh, Pa. Filed Dec. 12, 1910. Serial No. 596,761. (Cl. 164—6.5.)



1. The process of making an expanded metal having longitudinal members transversely connected by independent disconnected meshed members, which consists in slitting a sheet of metal with series of longitudinal parallel slits made at intervals along said sheet, the outside lines of slits of said series of slits being coincident with the edges of the connected longitudinal members of said expanded metal; slitting said sheet with other series of

longitudinal parallel slits of substantially the same length as the first mentioned series of slits, parallel to, intermediate and between said first mentioned series of slits, the medial points in said last mentioned series of slits being substantially equidistant from the medial points of the adjacent slits of the first mentioned series, transversely cutting said sheets between the outside slits of the first mentioned series of slits between the edges of said longitudinal members at the medial points of said slits of the first mentioned series; then stretching said slitted sheet laterally so as to form the meshed members thereof.

2. The process of making an expanded metal having longitudinal members transversely connected by independent disconnected meshed members, which consists in slitting a sheet of metal with series of longitudinal parallel slits made at intervals along said sheet, the outside lines of slits of said series of slits being coincident with the edges of the connected longitudinal members of said expanded metal; slitting said sheet with other series of longitudinal parallel slits of substantially the same length as the first mentioned series of slits, parallel to, intermediate and between said first mentioned series of slits, the medial points in said last mentioned series of slits being substantially equidistant from the medial points of the adjacent slits of the first mentioned series; transversely cutting said sheet between the outside slits of the first mentioned series of slits between the edges of said longitudinal members at the medial points of said slits of the first mentioned series; corrugating the longitudinal members so as to form more than one corrugation thereon; then stretching said slitted sheet laterally so as to form the meshed members thereof.

3. The process of making an expanded metal having longitudinal members transversely connected by independent disconnected meshed members, which consists in slitting a sheet of metal with series of longitudinal parallel slits made at intervals along said sheet, the outside lines of slits of said series of slits being coincident with the edges of the connected longitudinal members of said expanded metal; slitting said sheet with other series of longitudinal parallel slits of substantially the same length as the first mentioned series of slits, parallel to, intermediate and between said first mentioned series of slits, the medial points in said last mentioned series of slits being substantially equidistant from the medial points of the adjacent slits of the first mentioned series; transversely cutting said sheets between the outside slits of the first mentioned series of slits between the edges of said longitudinal members at the medial points of said slits of the first mentioned series; corrugating one or more of the longitudinal members thereof so as to form more than one corrugation in the corrugated members; then stretching said slitted sheet laterally so as to form the meshed members thereof.

4. The process of making an expanded metal having longitudinal members transversely connected by independent disconnected meshed members, which consists in slitting a sheet of metal with series of longitudinal parallel slits made at intervals along said sheet, the outside lines of slits of said series of slits being coincident with the edges of the connected longitudinal members of said expanded metal; slitting said sheet with other series of longitudinal parallel slits of substantially the same length as the first mentioned series of slits, parallel to, intermediate and between said first mentioned series of slits, the medial points in said last mentioned series of slits being substantially equidistant from the medial points of the adjacent slits of the first mentioned series; transversely cutting said sheet between the outside slits of the first mentioned series of slits between the edges of said longitudinal members at the medial points of said slits of the first mentioned series; corrugating one or more of said longitudinal members so as to form ribs in the members so corrugated; then stretching said slitted sheet laterally so as to form the meshed members thereof.

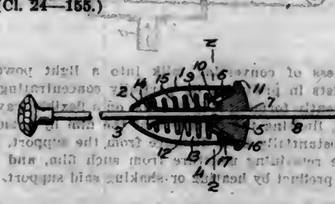
[Claims 6 and 7 not printed in the Gazette.]

1,015,265. SCARF-PIN GUARD. ROBERT W. HARDIE, Yonkers, N. Y. Filed Sept. 8, 1911. Serial No. 648,372. (Cl. 24—155.)

1. A scarf pin guard, comprising a body having an insertion opening, and provided at the end of the body opposite the insertion end with an inclined wall flaring outwardly and with a shoulder extending outwardly from said body, a head having a central aperture to receive a scarf pin and with lateral apertures, friction balls arranged within said lateral apertures and adapted to extend into the central aperture of said head and to bear against said inclined wall of said body, a coiled spring encircling said body and bearing against said shoulder, and a sleeve overlapping and inclosing said spring and provided with a shoulder connected with said head.

2. A scarf pin guard, comprising a body having an insertion aperture at one end, and at the opposite end an interior inclined wall flaring outwardly, a head provided with a sleeve inclosing the adjacent end of said body, and with a gripping device adapted to bear against said inclined wall, and means arranged between said sleeve and body adapted to press said head toward said inclined wall by spring tension.

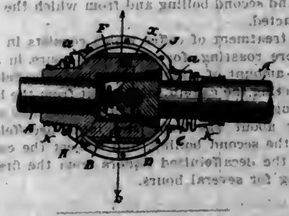
1,015,266. SCARF-PIN GUARD. ROBERT W. HARDIE, Yonkers, N. Y. Filed Sept. 9, 1911. Serial No. 648,425. (Cl. 24—155.)



1. A scarf pin guard, comprising a casing having an insertion opening at one end and at the opposite end an inner end wall inclined inwardly forming a recess and provided with an aperture, a head within said recess provided with an aperture to receive a scarf pin and with a stem extending through said end wall into the interior of said casing, a pin gripping device mounted in said head adapted to bear against one side of said end wall, and a spring within said casing on the opposite side of said end wall adapted to press said stem and head normally inward.

2. A scarf pin guard, comprising a casing having an insertion opening at one end and at the opposite end an inner end wall inclined inwardly forming a recess, a head within said recess and provided with an aperture to receive a scarf pin and with a stem extending into said casing through said end wall and provided with a flaring inner end, a gripping device mounted in said head bearing against said inclined end wall of the casing and projecting into said scarf pin aperture of said head, and a spring within said casing between the inner side of said end wall and insertion end of said casing to press said stem and head normally inward.

1,015,267. UNIVERSAL JOINT. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 27, 1906. Serial No. 323,604. (Cl. 74—19.)



1. In a universal joint, the combination with the rotating members thereof, of a rigid spherical casing movably fitted to one of said members and having engagement therewith in zones on opposite sides of a central plane and also having an opening through which the other of said members extends, and said casing extending in both directions beyond the connection between said members and inclosing the same for the purpose set forth.

2. In a universal joint, the combination with the two rotating members thereof, of a rigid spherical casing movably fitted to one of said members and having engagement therewith in zones on opposite sides of a central plane and also having an opening through which the other of said members extends, said second member fitting said opening and adapted to slide therein, and said casing extending in both directions beyond the connections between said members and inclosing the same, for the purpose set forth.

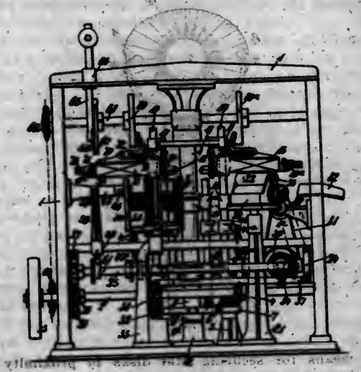
3. In a universal joint, the combination with the two rotating members thereof, of a rigid spherical casing movably fitted to one of said members and rotating therewith and having an opening through which the other member extends, said casing extending in both directions beyond the joint and inclosing the same, and flexible dust guards connected to said casing and to each of said members, for the purpose set forth.

4. In a universal joint, the combination with the two rotating members thereof, of a rigid spherical casing movably fitted to one of said members and having engagement therewith in zones on opposite sides of a central plane and also having an opening through which the other of said members extends, and said casing comprising a plurality of sections secured together and extending in both directions beyond the connections between said members and inclosing the same for the purpose set forth.

5. The combination with two shaft sections, of a universal coupling for said shaft sections, and a spherical casing surrounding said coupling and rotating therewith and having a universal movement on one member thereof and a sliding movement with respect to the other member, said casing extending in both directions beyond the joint and inclosing the same, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,015,268. MACHINE FOR MAKING PAPER RECEPTACLES. KARL OTTING, Ludwigsburg, Germany. Filed Sept. 16, 1907. Serial No. 393,066. (Cl. 93—44.)



1. In a machine of the character described, the combination with a plurality of forming mandrels each of a shape corresponding to the shape of the article to be formed, of means for intermittently rotating the same about a common center, a frame surrounding each mandrel and rotatable therewith, an adhesive applying stamp carried by said frame, means for applying adhesive to said stamp, a stack holder, means for reciprocating the same to place the uppermost sheet of the stack in contact with the stamp, means for depressing the mandrels individually and successively whereby the sheet adhering to the stamp is stripped therefrom and partially folded about the mandrel, and means for completing the folding of the sheet about the mandrel.

2. In a machine of the character described, the combination with a center shaft, of a plurality of vertical shafts secured thereto, means for intermittently rotating said vertical shafts and the center shaft, a forming mandrel of a shape corresponding to the shape of the article to be formed mounted to slide on each of said vertical shafts, a frame surrounding each mandrel and rigidly fixed to the vertical shaft, an adhesive applying stamp carried by each frame, means for applying adhesive to said stamps, a stack holder, means for reciprocating the same to place the uppermost sheet of the stack in contact with the stamp, means for successively moving individual mandrels along the vertical shafts to a point where the sheet adhering to the stamp is stripped therefrom and partially folded about the mandrel, and means for completing the folding of the sheet about the mandrel.

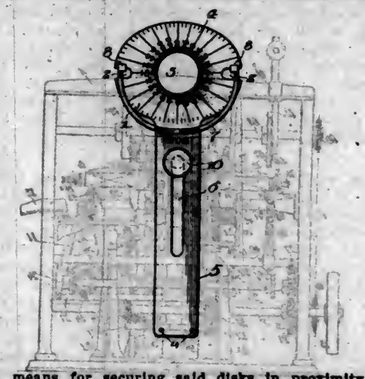
1,015,269. NEUTRALIZING-CELL AND AXIS-INDICATOR. CHARLES HENRY PIXLEY, Chicago, Ill., assignor to F. A. Hardy & Company, a Corporation of Illinois. Filed May 22, 1911. Serial No. 628,707. (Cl. 88—56.)

1. A neutralizing cell and axis indicator comprising a pair of lens holding disks, central apertures therein, means for securing said disks in proximity, radial scales upon said disks about said apertures, and spring lens clips extending laterally from said disks.

2. A pair of lens holding disks shaped to accommodate a meniscus lens between them, central apertures therein, spring arms extending therefrom, means for securing the remote ends of said spring arms, a slot in said arms, a double headed bolt in said slot whereby said arms may be brought together or released, central apertures in said disks and spring lens clips extending laterally from said disks.

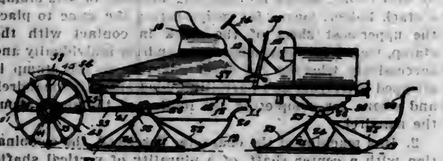
3. A pair of lens holding disks of unequal diameters, the peripheries whereof are given the peripheral form of the usual lenses whereby lenses may be located between said

disks by bringing their peripheries parallel with the edges of either or both of said disks, central apertures in said



disks, means for securing said disks in proximity and spring lens clips extending laterally in front of said disks.

1,015,270. SNOWMOBILE ATTACHMENT. FRED BOND and EDGAR W. LANTZ, Hannah, N. D. Filed May 19, 1910. Serial No. 562,213. Renewed Dec. 11, 1911. Serial No. 665,372. (Cl. 21—47.)



1. The combination with a vehicle body having a rigid rear axle and a front steering axle and means for operating the same; of sleds correspondingly carried by said axles, the runners of said steering sled being connected at their forward ends, a motor carried by said body and having suitable controlling means, a frame pivotally mounted upon the rear axle, a drive axle rotatably mounted at the rear end of said frame, propeller wheels rigidly carried at the ends of said drive axle, said rear axle having an intermediate bowed portion and a power shaft operatively connected with the drive axle and having a universal connection with the shaft of the motor whereby it will be permitted movement downwardly out of the bowed portion of the rear axle.

2. The combination with the usual automobile body having a rigid rear axle and a front steering axle provided with steering means; of sleds secured to said axles, a frame structure pivotally secured at the rear of the body and comprising side arms and cross braces connecting said arms, a gear casing at the rear ends of said arms, a drive axle rotatable therein, a motor carried by the vehicle, geared connections between the motor and the drive axle, drive wheels secured to the ends of the drive axle in alinement with the runners of the rear sled, means for disposing said traction wheels into and out of engagement with the surface traveled over and a cover for said frame, said cover being carried thereby.

1,015,271. TREATMENT OF COFFEE. LEO W. GRUEN, New York, N. Y. Filed Dec. 3, 1909. Serial No. 531,222. (Cl. 99—11.)

1. The treatment of coffee which consists in boiling the green coffee in two different lots of water, withdrawing both lots, removing the caffein from that lot of water in which the coffee is first boiled then soaking the coffee in liquid from which caffein has been removed and, after the soaking withdrawing the liquid remaining with the coffee.

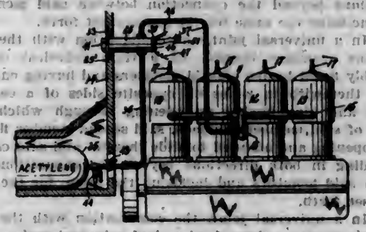
2. The treatment of green coffee which consists in boiling in water, the same to remove the caffein constituent, extracting the caffein constituent from the liquor after such boiling, boiling the coffee a second time, and soaking the coffee thereafter in the liquor obtained from the first boiling and from which the caffein has been extracted.

3. The treatment of coffee which consists in boiling the same before roasting for about two hours in about four times the amount of water to remove the caffein constituent, extracting the caffein constituent from the liquor after such boiling, boiling the coffee in another like quantity of water for about one hour, and subjecting the coffee to the action of the decaffeinized liquor from the first boiling for several hours.

4. The treatment of green coffee which consists in boiling the same in water to remove the caffein constituent, extracting the caffein from the liquid after such boiling, boiling a second time, boiling down the liquor from the second boiling and extracting the caffein therefrom and soaking the coffee thereafter in the liquors obtained from the first and second boiling and from which the caffein has been extracted.

5. The treatment of coffee which consists in boiling the same before roasting, for about two hours in about four times the amount of water to remove the caffein constituent, extracting the caffein constituent from the liquor after such boiling, boiling the coffee in another like quantity of water for about one hour and later decaffeinizing the liquor of the second boiling, and subject the coffee to the action of the decaffeinized liquors from the first and second boiling for several hours.

1,015,272. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. GEORGE L. HENRY, New York, N. Y., assignor to The Henry Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 3, 1911. Serial No. 652,539. (Cl. 123—180.)



The combination with an engine consisting of a plurality of working cylinders having inlets through which a supply of hydrocarbon fuel is supplied to the same, an intake manifold communicating with said inlets, an ignition system for the engine, a tank for gas under pressure, a valve casing, gas carrying connections leading from said valve casing to said tank and to said manifold, a valve plug in said casing for controlling the flow of gas therethrough, electric contacts upon said casing connected with the ignition system, and a switch carried by said plug adapted to complete a circuit between said contacts during the time that gas flows through said valve casing.

1,015,273. ROLLER-BEARING. WILLIAM J. CARTWRIGHT, New York, N. Y. Filed Feb. 9, 1909. Serial No. 476,941. (Cl. 64—32.)

1. A roller bearing comprising oppositely-tapered rollers, a traction ring having oppositely conical surfaces against which said rollers roll, and guide rings connected together and engaging the rollers at their opposite ends, said rollers having at their larger ends a thrust engagement with such rings.

2. A roller bearing comprising oppositely tapered rollers arranged upon parallel axes, traction rings having oppositely coned surfaces against which said rollers roll, the rollers of opposite taper being independent of each other, and guide rings connected together and engaging the ends of the rollers and receiving the longitudinal thrust thereof.

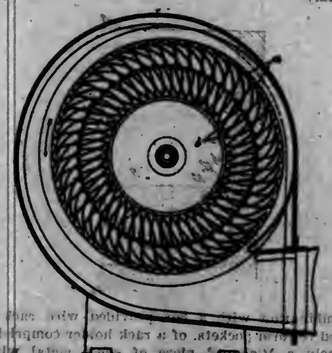
3. A roller bearing comprising oppositely tapered rollers arranged in pairs the two rollers of each pair being upon a common axis, and being movable longitudinally independently of one another, traction rings having conical surfaces against which said rollers roll, and guide rings connected together and engaging the outer ends of the pairs of rollers.

4. A roller bearing comprising oppositely tapered rollers arranged in pairs, the two rollers of each pair being upon a common axis, and being movable longitudinally independently of one another, guiding means loosely engaging said rollers to keep them in axial alinement, traction rings having conical surfaces against which said rollers roll, and guide rings connected together and engaging the outer ends of the pairs of rollers.

5. A roller bearing comprising oppositely tapered rollers arranged in pairs upon a common axis with their smaller ends approaching and their larger ends remote from one another, and independently movable longitudinally, traction rings having oppositely coned surfaces against which said rollers roll, and guide rings connected together and engaging the outer ends of the pairs of rollers and receiving the outward thrust thereof.

[Claim 6 not printed in the Gazette.]

1,015,274. CENTRIFUGAL FAN. JAMES KEITH, London, England. Filed Oct. 21, 1910. Serial No. 588,314. (Cl. 230—11.)



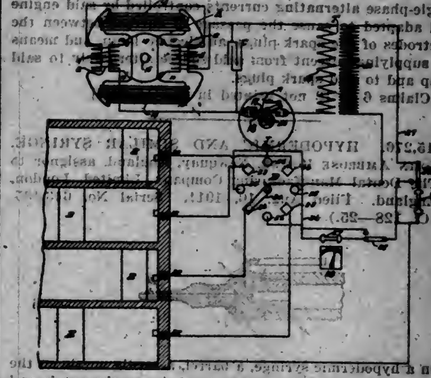
1. A fan runner comprising a plurality of scooped blades the outer and inner longitudinal edges of which lie on substantially conical surfaces differently inclined to the axis of the runner, the outer cone being less inclined than the inner cone, and both cones being truncated, and each blade being so set that both its outer and inner longitudinal edges deviate from a plane rotating on the axis of the fan runner; means joining the inner ends of the blades, and means joining the outer ends of the blades.

2. A fan runner comprising a plurality of blades the outer and inner longitudinal edges of which lie on substantially conical surfaces differently inclined to the axis of the runner, the outer cone being less inclined than the inner cone, and both cones being truncated, and each blade being so set that both its outer and inner longitudinal edges deviate from a plane rotating on the axis of the fan runner; and means joining the ends of the blades.

3. A fan runner comprising a plurality of scooped blades the outer and inner longitudinal edges of which lie on substantially conical surfaces differently inclined to the axis of the runner, the outer cone being less inclined than the inner cone, and both cones being truncated, and each blade being so set that both its outer and inner longitudinal edges deviate from a plane rotating on the axis of the fan runner.

4. A fan runner comprising a plurality of scooped blades, the outer and inner longitudinal edges of which lie on substantially conical surfaces differently inclined to the axis of the runner, the outer cone being less inclined than the inner cone, and both cones being truncated, and each blade being so set that both its outer and inner longitudinal edges deviate from a plane rotating on the axis of the fan runner; a disk joining the inner edges of said blades, and a ring joining the outer edges of said blades.

1,015,275. ELECTRICAL EQUIPMENT FOR AUTOMOBILES. JOHN L. MEGRON, Chicago, Ill. Filed May 23, 1908. Serial No. 433,564. (Cl. 123—148.)



1. In an automobile, the combination with an internal combustion engine, of an inductor generator or alternating current geared to said engine in a fixed relation such that the generation of the positive current half-waves shall synchronize with the compression strokes of the engine, a transformer having its primary winding included in a circuit with the generator, a circuit breaker driven by the engine and adapted periodically to close and open the primary circuit in synchronism with the compression strokes of the engine, a condenser in bridge of the circuit from the generator, spark plugs associated with the engine cylinders, a distributer geared to the engine and having a contact connected with each spark plug, the secondary winding of the transformer being connected with the spark plug through said distributer contacts during the positive current half-waves, an instrument having a suitable dial, a vacuum tube mounted to light said dial, and intermediate contacts on said distributer connected with said vacuum tube and adapted to include said vacuum tube

in circuit with the secondary winding of the transformer during the negative current half-waves.

2. In an automobile, the combination with an internal combustion engine, of a generator of alternating current driven by said engine in a relation such that the positive current half-waves shall synchronize with the compression strokes of the engine, a transformer having its primary winding included in circuit with the generator, a circuit breaker driven by the engine and adapted periodically to close and open the primary circuit of the transformer in synchronism with the current waves, a condenser in bridge of the circuit from the generator, spark plugs associated with the engine cylinders, an instrument having a suitable dial, a vacuum tube glow lamp mounted to light said dial, means for connecting the spark plugs with the secondary of the transformer during the generation of alternate current half-waves, and means for connecting the glow lamp with the secondary of the transformer during the generation of the intervening current half-waves.

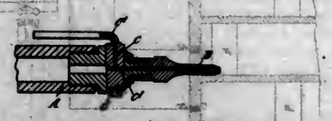
3. In an automobile, the combination with an internal combustion engine, of a generator of alternating current driven by the engine, a transformer having its primary winding adapted for connection with the generator, spark plugs associated with the engine cylinders, a vacuum tube glow lamp, and means for alternately connecting the spark plugs and the glow lamp with the secondary of said transformer.

4. In an automobile, the combination with an internal combustion engine, of spark plugs therefor, a source of single-phase alternating currents controlled by said engine and adapted to cause the passage of current between the electrodes of the spark plugs, an instrument, an electric glow lamp mounted to light the dial of said instrument, and means for supplying current from said source alternately to said lamp and to said spark plugs.

5. In an automobile, the combination with an internal combustion engine, of spark plugs therefor, a source of single-phase alternating currents controlled by said engine and adapted to cause the passage of current between the electrodes of the spark plugs, an electric lamp, and means for supplying current from said source alternately to said lamp and to said spark plugs.

[Claims 6 to 18 not printed in the Gazette.]

1,015,276. HYPODERMIC AND SIMILAR SYRINGE. JOHN AMBROSE ROWSE, Newquay, England, assignor to The Dental Manufacturing Company, Limited, London, England. Filed Aug. 10, 1911. Serial No. 643,435. (Cl. 128—25.)

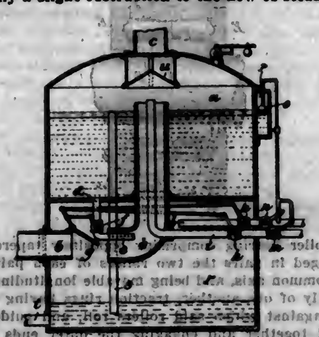


In a hypodermic syringe, a barrel, a needle nozzle on the end of the said barrel, a valve plug between the nozzle and the barrel and a tubular operating handle for the said plug forming a continuation of a passage in the plug adapted to be placed into or out of communication with the barrel, whereby the barrel is charged with fluid through the said handle independently of the nozzle.

1,015,277. STEAM REGENERATION. ADOLPH SORGE, St. Joseph, Mich., assignor to American Regenerator Company, New York, N. Y., a Corporation of New York. Filed Feb. 18, 1909. Serial No. 478,718. (Cl. 121—95.)

1. A steam regenerating apparatus including in combination, a regenerating chamber, a conduit for conveying steam to said chamber, and means for delivering water from said chamber to said conduit in a finely divided state, the conduit being substantially unrestricted beyond the place of delivery of the water, whereby the water is heated and returned to the chamber by the steam flowing through the conduit with only a slight obstruction to the flow of steam.

2. A steam regenerating apparatus including in combination, a regenerating chamber, a conduit for conveying steam to said chamber, and means rendered operative by the steam for delivering water from said chamber to said conduit in amount approximately proportional to the amount of steam flowing through said conduit, the conduit being substantially unrestricted from the place of delivery of the water, whereby the water is heated and returned to the chamber by the steam flowing through the conduit with only a slight obstruction to the flow of steam.



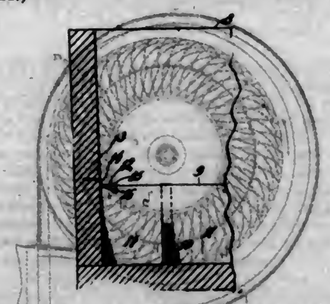
3. A steam regenerating apparatus including in combination, a regenerating chamber, a conduit for conveying steam to said chamber, and valve controlled means rendered operative by the steam for delivering water from said chamber to said conduit.

4. A steam regenerating apparatus, including in combination, a regenerating chamber, a conduit for conveying steam to said chamber, valve controlled means for delivering water from said chamber to said conduit, a vane located in the path of the steam and connections between said vane and said valve.

5. A steam regenerating apparatus including in combination, a regenerating chamber, a conduit for the introduction of steam, a pipe terminating in a spraying nozzle to deliver liquid from said chamber into said conduit, a valve in said pipe, a vane in said conduit, and operative connections between said valve and vane.

[Claims 6 to 14 not printed in the Gazette.]

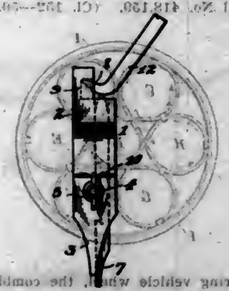
1,015,278. RACK HOLDER. SIMON VOLZ, Milwaukee, Wis. Filed Nov. 16, 1910. Serial No. 592,675. (Cl. 217—22.)



In combination with a box provided with rack strips positioned to form pockets, of a rack holder comprising approximately a V-shaped piece of sheet metal with the pointed end portion thereof bent upwardly and forwardly with a double bend to form a shoulder extending at right angles with relation to the body portion and a pointed end portion extending forwardly from the upper edge of the shoulder and with the side edges of the body portion bent downwardly at right angles to the body portion to form rack strip engaging wings, said body portion adapted to be placed on top of the upper edge of one of the rack strips with the wings engaging and extending on each side thereof, and with the pointed end portion driven into one of the walls of said box to hold said rack strip within the box.

REISSUES.

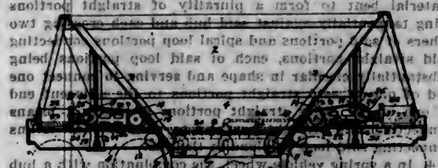
13,361. DENTAL TOOL FOR REMOVING CROWN-PINS. GEORGE T. CARPENTER, Chicago, Ill.; Flora C. Carpenter, executrix of said George T. Carpenter, deceased, assignor to Frank H. Skinner, Chicago, Ill. Filed Aug. 9, 1907. Serial No. 387,932. Original No. 812,976, dated Feb. 20, 1906, Serial No. 260,403. (Cl. 32—10.)



1. In a dental tool, the combination with a rod or post, of a vise having formed therethrough a vertically-disposed passage whereby the same is engaged with said post, said vise having its upper end cut away and recessed, and a lever adapted to be engaged with the upper end of said rod and with the recess in said vise whereby the latter is forced outwardly on said rod, substantially as described.

2. In a dental tool, the combination with a rod or post, of a vise having formed therein a vertically-disposed passage whereby the same is engaged with said post, spring-jaws formed on the inner end of said vise, a screw to operate said jaws and a lever adapted to be fulcrumed on said rod and engaged with said vise to force the latter outwardly on said rod, substantially as described.

13,362. DOOR-OPERATING DEVICE FOR CARS. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 9, 1911. Serial No. 632,295. Original No. 947,793, dated Feb. 1, 1910, Serial No. 520,505. (Cl. 105—185.)



1. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a locking-member carried by said flexible connections, and means for releasing said locking-member by the movement of the piston of said cylinder.

2. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a locking-member carried by said flexible connections, an abutment with which said locking-member engages, and means for releasing said locking-member by the movement of the piston of said cylinder.

3. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a locking-member carried by said flexible connections, an abutment with which said locking-member engages, and means for releasing said locking-member by the movement of the piston of said cylinder.

4. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a trunnioned locking member carried by said flexible connections, an abutment with which said locking-member engages, and means for releasing said locking-member by the piston of said cylinder.

5. In a car-door operating mechanism, the combination of a swinging door, a movable sheave, flexible connections attached to said door and engaging said sheave, a fixed abutment, a locking-member carried by said flexible connections engaging said abutment and means for releasing said locking-member by the movement of said sheave.

6. In a car-door operating mechanism, the combination of a swinging door, a movable sheave, flexible connections attached to said door and engaging said sheave, a fixed abutment, a locking-member carried by said flexible connections engaging said abutment, said locking-member being in the path of movement of said sheave.

7. In a car-door operating mechanism, the combination of a swinging door, a movable sheave, means for moving same, flexible connections attached to said door and engaging said sheave, a fixed abutment, a locking-member carried by said flexible connections engaging said abutments and means for releasing said locking-member by the movement of said sheave.

8. In a car-door operating mechanism, the combination of a swinging door, a movable sheave, flexible connections attached to said door and engaging said sheave, a fixed abutment, a locking-member carried by said flexible connections engaging said abutment, means for moving said sheave, said locking-member being engaged by the flange of said sheave to release said locking member.

9. In a car-door operating mechanism, the combination of a plurality of swinging doors, a fluid operated cylinder, a locking-member, flexible connections leading from opposite doors to said locking-member, a sheave, flexible connections from the other side of said locking-member, passing around said sheave, connected to a permanent support, connections between said sheave and piston of said cylinder, and means for releasing said locking-member by the movement of said sheave.

10. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a locking-member carried by said flexible connections, a movable sheave, connections between said sheave and piston of said cylinder, and means for releasing said locking-member by the movement of said sheave.

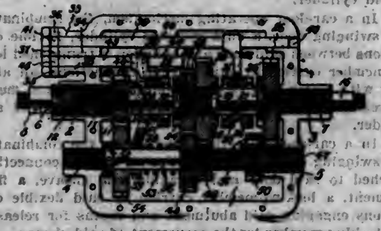
11. In a car-door operating mechanism, the combination of a swinging door, a fluid operated cylinder, flexible connections between said door and cylinder, a locking-member carried by said flexible connections, a movable sheave, connections between said sheave and piston of said cylinder, said locking-member being in the path of movement of said sheave.

12. In a car-door operating mechanism, the combination of a swinging door, flexible connections attached to said door, a locking-member carried by said flexible connections, trunnions on said locking-member, a support having an abutment with which said trunnions engage, and guides on said support with which said trunnions engage when said locking-member is released.

13. In a car-door operating mechanism, the combination of a swinging door, flexible connections attached to said door, a locking-member carried by said flexible connections.

trunnions on said locking-member and a support having an abutment with which said trunnions engage, said trunnions engaging the upper edges of said support when said locking member is released.

13,363. CHANGE-SPEED GEARING. CHARLES COTTA, Rockford, Ill., assignor to Cotta Transmission Co., Inc., Rockford, Ill. Filed Jan. 4, 1911. Serial No. 600,833. Original No. 934,505, dated Sept. 21, 1909, Serial No. 520,637. (Cl. 74—59.)



1. A speed changing mechanism comprising a main driving shaft, a jack shaft, a plurality of sets of gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, means for withdrawing said transmitting gear from engagement with said high speed gear when the clutch is connected to the latter.

2. A speed changing mechanism comprising a main driving shaft, a jack shaft, gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, and means for automatically withdrawing said transmitting gear from engagement with said high speed gear when the clutch is connected to the latter.

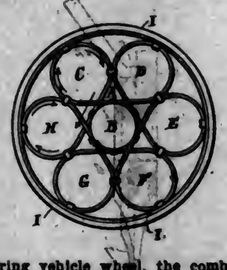
3. A speed changing mechanism comprising a main driving shaft, a jack shaft, gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, and a lever operatively connecting one of said clutches with said transmitting gear whereby the latter is withdrawn from engagement with said high speed gear as said clutch is moved into engagement with said speed gear.

4. A speed changing mechanism comprising a main driving shaft, a jack shaft, a plurality of sets of gears on said shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, a pivoted lever operatively connecting one of said clutches with said transmitting gear whereby the latter is withdrawn from engagement with said high speed gear as said clutch is moved into engagement with said speed gear, and a spring for returning said transmitting gear to its engaging position when said clutch is released.

5. In change speed gearing, the combination of a shaft 6, a shaft 7, a counter shaft, gearing connecting the counter shaft and shaft 7 to impart to the shaft 7 two different speeds in one direction and one speed in the reverse direction, clutches for connecting the gears of the shaft 7 with the shaft 7, means for locking one clutch against movement while the other is being moved, means for forming a direct connection between the shafts 6 and 7, and a gear connection between the shaft 6 and the counter shaft, the counter shaft being at rest when a direct connection is formed between the shafts 6 and 7.

6. In change speed gearing, the combination of a shaft 6, a shaft 7, a counter shaft, gearing connecting the counter shaft and shaft 7 to impart to the shaft 7 two different speeds in one direction and one speed in the reverse direction, clutches for connecting the gears of the shaft 7 with the shaft 7, means for locking one clutch against movement while the other is being moved, means for forming a direct connection between the shafts 6 and 7, a gear connection between the shaft 6 and the counter shaft, the counter shaft being at rest when a direct connection is formed between the shafts 6 and 7, and a spring for restoring the connection between the shaft 6 and the counter shaft.

13,364. SPRING VEHICLE-WHEEL. ESTHER MURRAY, London, England, assignor to The Resilient Motor Wheel Syndicate Limited, London, England, a Limited Company of Great Britain. Filed Nov. 6, 1911. Serial No. 658,888. Original No. 939,432, dated Nov. 9, 1909, Serial No. 418,159. (Cl. 152—50.)



1. In a spring vehicle wheel, the combination with a hub and a rim, of a continuous one-piece strip of yielding material supportingly interposed between the hub and the rim, said strip being bent to form a plurality of circular loops arranged in abutting relation with respect to each other and with respect to the rim and out of engagement with the hub, means connecting said loops with each other at engaging points thereof and means connecting said loops with said rim at engaging points of the loops therewith, said strip being provided with a plurality of straight sections connecting adjacent loops and lying tangentially against the hub with the straight sections crossing each other, and means connecting said straight connections with the hub at the point of engagement therewith.

2. In a spring vehicle wheel, the combination with a hub and a rim, of a continuous one-piece strip of yielding material supportingly interposed between the hub and the rim, said strip being bent to form a plurality of circular loops, means connecting said loops with each other, and means connecting said loops with said rim, said strip being provided with straight sections connecting adjacent loops, and means connecting said straight sections with said hub.

3. In a spring vehicle wheel, the combination with the hub and a rim, of a continuous one-piece strip of yielding material bent to form a plurality of straight portions lying tangentially against said hub and each crossing two others of said portions and spiral loop portions connecting said straight portions, each of said loop portions being substantially circular in shape and serving to connect one end of one of said straight portions to the adjacent end of one of the other straight portions crossing it, means connecting said straight portions to the hub, and means connecting said loop portions to the rim.

4. In a spring vehicle wheel, the combination with a hub and a rim, of a continuous strip of yielding material supportingly interposed between the hub and the rim, said strip being bent to form a series of alternate right and left hand spiral loop portions arranged at intervals around the hub and each extending into proximity with the rim, and intervening loop connecting portions which lie next the hub and are alternately arranged in two series, one beside the other, means connecting the outer sides of the loops to the rim, and means for clamping the loop connecting portions to the hub.

DESIGNS.

42,095. MAIL-BOX. CARLISLE H. BALDWIN, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 9, 1909. Serial No. 521,961. Term of patent 7 years.

The ornamental design for a mail-box, as shown and described.

42,096. CHAIR-ARM. JAMES BARKER, ALFRED BARKER, and JOSEPH P. BARKER, Philadelphia, Pa, assignors to said James Barker. Filed June 20, 1911. Serial No. 634,390. Term of patent 14 years.

The ornamental design for a chair arm, as shown.

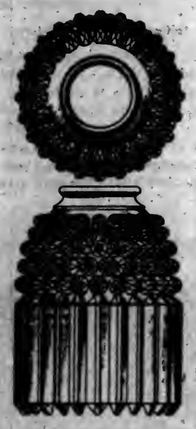
42,097. LINING FOR GRAVES. JAMES M. DODDRIDGE and WILBUR I. DODDRIDGE, Milton, Ind. Filed Dec. 5, 1908. Serial No. 466,197. Term of patent 14 years.

The ornamental design for a lining for graves, as shown.

42,098. LAMP-SHADE. REUBEN HALEY, Beaver, Pa., assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Oct. 18, 1911. Serial No. 655,421. Term of patent 7 years.

The ornamental design for a lamp shade as shown.

42,099. LAMP-SHADE. REUBEN HALEY, Beaver, Pa., assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Oct. 18, 1911. Serial No. 655,422. Term of patent 7 years.



The ornamental design for a lamp shade as shown.

42,100. EYELET. WILLIAM HUGHES, Taunton, Mass. Filed June 5, 1911. Serial No. 631,465. Term of patent 14 years.

The ornamental design for an eyelet as shown.

TRADE-MARKS

PUBLISHED JANUARY 16, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 14,893. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) IROQUOIS IRON WORKS, Buffalo, N. Y. Filed Nov. 22, 1905.

The portrait being fanciful.

Particular description of goods.—Fire-Wagons, Stationary Melting-Kettles, and Portable Melting-Kettles.

Claims use since Nov. 1, 1904.

Ser. No. 23,602. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) WILLIAMS ORGAN & PIANO CO., Chicago, Ill. Filed Nov. 30, 1906. Under ten-year proviso.

Epworth

Particular description of goods.—Organs and Pianos.

Claims use since about Jan. 1, 1887.

Ser. No. 29,577. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARSON, PIRIE, SCOTT & CO., Chicago, Ill. Filed Aug. 26, 1907.

SQUARE DEAL

Particular description of goods.—Ribbons.

Claims use since about January, 1904.

Ser. No. 33,175. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. H. MERRILL CO., Ottumwa, Iowa. Filed Mar. 5, 1908.

The picture being fanciful.

Particular description of goods.—Corn-Starch, Candies, Tomato Catsup, Canned Sardines, Canned Oysters, Sliced Dried Beef, Blended Coffee, Tea, Flavoring Extracts, Imitation Pineapple Extract, Imitation Banana Extract, Macaroni, Mustard, Olives, Spices, Tapioca, a Compound of Maple and Cane Syrup, Chilli Sauce, and Pepper Sauce.

Claims use since about the 1st day of January, 1905.

Ser. No. 40,386. (CLASS 47. WINES.) "CELROX" LTD., London, England. Filed Feb. 6, 1909.

CELROX

Particular description of goods.—Medicated Wine.

Claims use since July 1, 1898.

Ser. No. 42,423. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOSSLER BROS., New York, N. Y. Filed May 14, 1909. Under ten-year proviso.

Particular description of goods.—A Blend of Straight Rye Whiskies and Cordials.

Claims use since Mar. 1, 1894.

Ser. No. 49,351. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SANITAS M'F'G Co., Boston, Mass. Filed Apr. 28, 1910. Under ten-year proviso.

SANITAS

Particular description of goods.—Basin-Traps, Bath-Traps, Lavatories, Basins, Bath-Tubs, Sinks, Water-Closet Couplings, Water-Closets, Faucets, Tank-Valves, Ball-Cocks, Showers, Flushing-Valves, Urinals, Flush-Pots, Drinking-Fountains, Water-Closet Seats.
Claims use since on or about Jan. 1, 1884.

Ser. No. 50,791. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM S. SCULL COMPANY, Camden, N. J. Filed July 11, 1910.

The picture shown being fanciful.
Particular description of goods.—Coffee and Blended Coffee.
Claims use since about April, 1900.

Ser. No. No. 51,506. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LITTLE GIANT PUNCH & SHEAR Co., Sparta, Ill. Filed Aug. 23, 1910. Under ten-year proviso.

Little Giant

Particular description of goods.—Machines for Punching and Shearing Iron and Combined Machines for Punching and Shearing Iron.
Claims use since Jan. 1, 1889.

Ser. No. 52,394. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WALDEMAR EITINGON, New York, N. Y. Filed Oct. 24, 1910.

Pony Elk

Particular description of goods.—Calfskins.
Claims use since July 28, 1910.

Ser. No. 52,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOLASSES PRODUCTS COMPANY, New York, N. Y. Filed Oct. 27, 1910.

M AND M

Particular description of goods.—Stock Food.
Claims use since the beginning of the year 1906.

Ser. No. 52,502. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE ULLMAN COMPANY, Cincinnati, Ohio. Filed Oct. 28, 1910.

KINOTA

Particular description of goods.—Straight Malt Whisky.
Claims use since May 25, 1910.

Ser. No. 54,198. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUST KOUBEK, Chicago, Ill. Filed Jan. 28, 1911.

Particular description of goods.—A Medicinal Tonic.
Claims use since about Jan. 8, 1910.

Ser. No. 54,923. (CLASS 15. OILS AND GREASES.) JOSEPH DIXON CRUCIBLE Co., Jersey City, N. J. Filed Mar. 7, 1911. Under ten-year proviso.

EVERLASTING

Particular description of goods.—A Lubricating-Grease.
Claims use since October, 1878.

Ser. No. 54,942. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COLT AND DIXON PACKING AND MANUFACTURING COMPANY OF FREDERICK, MARYLAND, Frederick, Md. Filed Mar. 8, 1911.

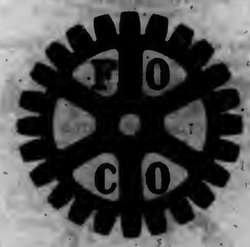
The colt being printed in brown.
Particular description of goods.—Canned Vegetables.
Claims use since Sept. 6, 1904.

Ser. No. 55,474. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREAT ATLANTIC AND PACIFIC TEA COMPANY, Jersey City, N. J. Filed Apr. 3, 1911. Under ten-year proviso.

SULTANA

Particular description of goods.—Coffee.
Claims use since about January, 1870.

Ser. No. 55,719. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FREDERICK OSANN COMPANY, New York, N. Y. Filed Apr. 12, 1911.



Particular description of goods.—Cloth-Cutting Machines, Sewing-Machines, Eyeleting Machinery, Shoe-Skiving Machines, Shoe-Tip Presses, Shoe-Top Scourers, Shoe-Pasting Machines, Shoe Duplex Cementers, Shoe-Button-Sewing Machines, Machines for Pinking the Edges of Cloth Samples, and Sewing-Machine Needles.
Claims use since Mar. 30, 1911.

Ser. No. 56,659. (CLASS 39. CLOTHING.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed May 27, 1911.

Garden Party

Particular description of goods.—Women's and Children's Silk and Cotton Dresses.
Claims use since Apr. 17, 1911.

Ser. No. 57,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CAPMETONE CHEMICAL Co., Suffolk, Va. Filed June 21, 1911.

CAPMETONE

Particular description of goods.—Remedies for Headaches, Neuralgia, Colds, Grip, Sour Stomach, Indigestion Pains, Sick Headache, Nervous Headache, Sciatic and Rheumatic Pains, Periodic Pains of Women, Train-Nausea, Travelers' Headache, and Tobacco-Nerves.
Claims use since Feb. 1, 1911.

Ser. No. 57,241. (CLASS 39. CLOTHING.) EARNSHAW KNITTING COMPANY, Chicago, Ill. Filed June 22, 1911.

VantaVest

No claim, however, being made to the word "Vest."
Particular description of goods.—Undershirts.
Claims use since Apr. 20, 1911.

Ser. No. 57,327. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUSTAV BANTHIEN, Hamburg, Germany. Filed June 27, 1911.

Dixi

Particular description of goods.—A Preparation for Making Bouillon.
Claims use since Feb. 11, 1909.

Ser. No. 57,406. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed June 30, 1911.

Particular description of goods.—Shovels, Spades, Scoops, and Drainage-Tools.
Claims use since March, 1904.

Ser. No. 57,409. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed June 30, 1911.

Particular description of goods.—Shovels, Spades, Scoops, and Drainage-Tools.
Claims use since March, 1904.

Ser. No. 57,529. (CLASS 17. TOBACCO PRODUCTS.) NICHOLAS KUHNEN CIGAR CO., Davenport, Iowa. Filed July 7, 1911.

Particular description of goods.—Cigars, Cigarettes, Chewing and Smoking Tobaccos.
Claims use since January, 1880.

Ser. No. 57,569. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CROSSE & BLACKWELL, LIMITED, London, England. Filed July 10, 1911. Under ten-year proviso.

Particular description of goods.—Pickles.
Claims use since 1846.

Ser. No. 57,609. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) UNITED RIBBON CO., New York, N. Y. Filed July 13, 1911.

TU-IN-ONE

Particular description of goods.—Neckties.
Claims use since Nov. 1, 1909.

Ser. No. 57,661. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. & F. VINCENTELLI & COMPANY, Anvers, Belgium. Filed July 17, 1911.

The picture shown being fanciful, no claim being made to the words "Corsican Brand" and "Selected Fruits."
Particular description of goods.—Candied Fruits and Peels.
Claims use since the year 1906.

Ser. No. 57,723. (CLASS 17. TOBACCO PRODUCTS.) RODRIGO FERNANDEZ, Key West, Fla. Filed July 19, 1911.

No claim being made to the name "R. Fernandes y Ca."
Particular description of goods.—Cigars.
Claims use since Dec. 1, 1906.

Ser. No. 57,772. (CLASS 15. OILS AND GREASES.) HIRST & BEGLEY LINSEED CO., Chicago, Ill. Filed July 21, 1911.

The representation of a man being purely fanciful and not a portrait.

Particular description of goods.—Oxidizable Vegetable Oils.
Claims use since July 17, 1911.

Ser. No. 57,931. (CLASS 47. WINES.) HECH. STUMPF ERBEN, Flonheim, near Bingen-on-the-Rhine, Germany. Filed July 29, 1911.

Friedrichshofer

Particular description of goods.—Still Wines and Sparkling Wines.
Claims use since Feb. 1, 1903.

Ser. No. 58,291. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ROBERT HEATH & SONS LIMITED, Stoke-on-Trent, England. Filed Aug. 21, 1911.

RAVENSDALE

Particular description of goods.—Iron and Steel Bars and Hoops.
Claims use since about June, 1866.

Ser. No. 58,351. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPYROS A. MICROUTSICOS, New York, N. Y. Filed Aug. 23, 1911.

SANTA MARIA

Particular description of goods.—Olive-Oil Diluted with Cotton-Seed Salad-Oil.
Claims use since Apr. 1, 1911.

Ser. No. 58,824. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Sept. 23, 1911. Under ten-year proviso.

Particular description of goods.—Pocket-Knives.
Claims use since May 1, 1879.

Ser. No. 59,028. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Oct. 7, 1911.

SUPERIOR

No claim being made to the word "Superior."
Particular description of goods.—Tobacco-Pipes.
Claims use since June 27, 1911.

Ser. No. 59,033. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) OTTO GOETZE CO., New York, N. Y. Filed Oct. 7, 1911.

OGEECO

Particular description of goods.—Dyed Cotton Piece Goods.
Claims use since Aug. 30, 1911.

Ser. No. 59,206. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TRIPPE, BARKER & CO., New York, N. Y. Filed Oct. 17, 1911.

Particular description of goods.—Cotton and Linen Piece Goods.
Claims use since Sept. 25, 1911.

Ser. No. 59,214. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) NEW YORK LEATHER BELTING CO., New York, N. Y. Filed Oct. 18, 1911.

No claim being made to the words "New York Leather Belting Co."

Particular description of goods.—Leather Belting.
Claims use since 1907.

Ser. No. 59,287. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ILLINOIS WATCH CASE CO., Elgin, Ill. Filed Oct. 23, 1911. Under ten-year proviso.

ILLINOIS WATCH CASE CO

Particular description of goods.—Watchcases.
Claims use since Nov. 24, 1888.

Ser. No. 59,327. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HUBERT UNDERBERG, Rheinberg, Germany. Filed Oct. 24, 1911. Under ten-year proviso.

Particular description of goods.—Bitters.
Claims use since 1847.

Ser. No. 59,328. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GLADSTONE SPRINGS WATER CO., Narragansett Pier, R. I. Filed Oct. 24, 1911. Under ten-year proviso.

GLADSTONE

The picture being that of the late William Evart Gladstone,

Particular description of goods.—Natural Spring-Water.
Claims use since 1889.

Ser. No. 59,293. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MADAM MARIE, Chicago, Ill. Filed Oct. 28, 1911.

Being a likeness of Marie E. Farlow, above mentioned.

Particular description of goods.—A Toilet Preparation for the Skin.
Claims use since Nov. 4, 1910.

Ser. No. 59,439. (CLASS 2. RECEPTACLES.) BRYANT BOX COMPANY, Westfield, Mass. Filed Oct. 30, 1911.

"THE FOLDO"

Particular description of goods.—Lunch-Boxes.
Claims use since on or about May 18, 1911.

Ser. No. 59,447. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PETER D. KEIM, Kalamazoo, Mich. Filed Oct. 31, 1911.

AVIS
et
FLORA

Particular description of goods.—A Card Game.
Claims use since Oct. 11, 1911.

Ser. No. 59,450. (CLASS 33. GLASSWARE.) GILL BROTHERS COMPANY, Steubenville, Ohio. Filed Oct. 31, 1911.

UNICORN

Particular description of goods.—Glass Chimneys, Glass Lantern-Globes, Glass Shades, and Glass Reflectors; Glass Electric-Arc-Light Globes, Glass Globes for Incandescent Electric Lamps, and Glass Bulbs for Incandescent Electric Lamps.
Claims use since Aug. 28, 1911.

Ser. No. 59,483. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HALTIWANGER-TAYLOR DRUG CO., Atlanta, Ga. Filed Nov. 1, 1911. Under ten-year proviso.

DR. BIGGERS
HUCKLEBERRY
·CORDIAL·
COMPOUND

Particular description of goods.—A Remedy for the Alleviation of Affections of the Bowels.
Claims use since about June 1, 1884.

Ser. No. 59,690. (CLASS 17. TOBACCO PRODUCTS.) THE L. C. NICHOLSON CO., Indianapolis, Ind. Filed Nov. 13, 1911.

MILLIONAIRE

Particular description of goods.—Cigars.
Claims use since Oct. 10, 1910.

Ser. No. 59,918. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein and Berlin, Germany. Filed Nov. 25, 1911.

The Winner

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, and Ink-Pencils.
Claims use since Sept. 14, 1911.

Ser. No. 59,972. (CLASS 39. CLOTHING.) GARDINER, BEARDSELL & COMPANY, Boston, Mass. Filed Nov. 28, 1911.

N.C.S.

Particular description of goods.—Shoe-Counters.
Claims use since Mar. 1, 1906.

Ser. No. 59,973. (CLASS 39. CLOTHING.) GARDINER, BEARDSELL & COMPANY, Boston, Mass. Filed Nov. 28, 1911.

Particular description of goods.—Shoe-Counters.
Claims use since Mar. 1, 1909.

Ser. No. 60,036. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) KENTUCKY SUPPLY CO., Memphis, Tenn. Filed Dec. 1, 1911.

HI-KI

Particular description of goods.—Gin.
Claims use since Oct. 6, 1911.

Ser. No. 60,121. (CLASS 37. PAPER AND STATIONERY.) JOHN CARTER AND COMPANY, INCORPORATED, Boston, Mass. Filed Dec. 8, 1911.

MONOPLANE

Particular description of goods.—Writing and Printing Paper.
Claims use since Nov. 17, 1910.

TRADE-MARKS

REGISTERED JANUARY 16, 1912.

84,923. CONDITION-POWDERS. ACKERMAN-STEWART Dave Co., Palatka, Fla.
Filed February 17, 1911. Serial No. 54,572. PUBLISHED NOVEMBER 14, 1911.

84,924. COTTON PIECE GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H., assignor to Charles W. Amory, Boston, Mass., Theophilus Parsons, Mattapoisett, Mass., Frank P. Carpenter, Manchester, N. H., Frederic C. Dumaine, Concord, Mass., T. Jefferson Coolidge and T. Jefferson Coolidge, Jr., Manchester, N. H., George Wigglesworth, Milton, Mass., William Amory and Philip Dexter, Boston, Mass., Galen L. Stone, Brookline, Mass., George von L. Meyer, Hamilton, Mass., and George A. Gardner, Boston, Mass., trustees.
Filed September 8, 1911. Serial No. 58,597. PUBLISHED NOVEMBER 14, 1911.

84,925. FLAVORING EXTRACTS AND POWDERED COCOA. O. E. ANDREWS & COMPANY, Jersey City, N. J.
Filed March 18, 1911. Serial No. 55,162. PUBLISHED NOVEMBER 7, 1911.

84,926. LINIMENT. ANGLO-AMERICAN PHARMACEUTICAL COMPANY LTD., Croydon, England, and New York, N. Y.
Filed September 18, 1911. Serial No. 58,713. PUBLISHED NOVEMBER 14, 1911.

84,927. FILES FOR PAPERS AND BOOKS. J. H. ATWATER COMPANY, Providence, R. I.
Filed June 8, 1911. Serial No. 56,904. PUBLISHED NOVEMBER 14, 1911.

84,928. MOTOR-CYCLES. ARMAC MOTOR CO., Chicago, Ill.
Filed September 1, 1906. Serial No. 21,856. PUBLISHED NOVEMBER 14, 1911.

84,929. REFRIGERATORS AND ICE-BOXES. THE BALDWIN REFRIGERATOR CO., Burlington, Vt.
Filed December 22, 1910. Serial No. 53,432. PUBLISHED NOVEMBER 14, 1911.

84,930. LIQUID PREPARATION HAVING A BASIS OF HORSE-MEAT JUICE. SAMUEL BERNHEIM, Paris, France.
Filed July 12, 1911. Serial No. 57,591. PUBLISHED NOVEMBER 7, 1911.

84,931. ELASTIC WEBBING. BOSTON GORE AND WEB MANUFACTURING COMPANY, Boston, Mass.
Filed September 8, 1911. Serial No. 58,594. PUBLISHED NOVEMBER 14, 1911.

84,932. COTTON DOMETTS AND FLANNELS. BROGON MILLS, Anderson, S. C.
Filed August 8, 1911. Serial No. 58,090. PUBLISHED NOVEMBER 14, 1911.

84,933. CARDIAC MEDICAMENTS. JOHANNES BÜRGER, Wernigerode-on-the-Harz, Germany.
Filed April 2, 1910. Serial No. 48,817. PUBLISHED NOVEMBER 14, 1911.

84,934. WATERPROOF FABRICS. CANVAS DECOY CO., Union City, Tenn.
Filed August 3, 1911. Serial No. 58,016. PUBLISHED NOVEMBER 7, 1911.

84,935. HOSIERY. CARTER, WEBSTER & CO., Baltimore, Md.
Filed September 29, 1911. Serial No. 58,920. PUBLISHED NOVEMBER 14, 1911.

84,936. BEER. CENTERVILLE BREWING COMPANY, Cleveland, Wis.
Filed September 22, 1911. Serial No. 58,808. PUBLISHED NOVEMBER 14, 1911.

84,937. ORANGES AND LEMONS. CHARTER OAK CITRUS ASSN., Charter Oak, Cal.
Filed August 24, 1911. Serial No. 58,357. PUBLISHED NOVEMBER 7, 1911.

84,938. REMEDY FOR FOUL AND CHILLED BROODS AMONG BEES. CHRISTIAN CHRISTENSEN, Gayville, S. D.
Filed August 7, 1908. Serial No. 36,527. PUBLISHED NOVEMBER 14, 1911.

84,939. OBTUNDENTS. CLAY & ABRAHAM, Liverpool, England.
Filed April 8, 1911. Serial No. 55,633. PUBLISHED NOVEMBER 14, 1911.

84,940. HANDKERCHIEFS. COCHRANE MANUFACTURING Co., Dedham, Mass.
Filed May 11, 1910. Serial No. 49,643. PUBLISHED NOVEMBER 14, 1911.

84,941. BRICK. THE COLUMBUS BRICK AND TERRA COTTA Co., Columbus, Ohio.
Filed May 4, 1910. Serial No. 49,507. PUBLISHED NOVEMBER 14, 1911.

84,942. PICKLES AND MALT VINEGAR. CROSSE & BLACKWELL, LIMITED, London, England.
Filed July 10, 1911. Serial No. 57,570. PUBLISHED NOVEMBER 7, 1911.

84,943. BLANKETS. ALBERT DE CRENEA, New York, N. Y.
Filed May 31, 1911. Serial No. 56,706. PUBLISHED NOVEMBER 14, 1911.

84,944. REMEDY FOR CORNS, BUNIONS, AND CALLOUS SPOTS. WILLIAM F. DINGES, Baltimore, Md.
Filed July 28, 1911. Serial No. 57,918. PUBLISHED NOVEMBER 14, 1911.

84,945. CALENDARS. DODGE PUBLISHING COMPANY, New York, N. Y.
Filed July 29, 1911. Serial No. 57,923. PUBLISHED NOVEMBER 14, 1911.

84,946. CALENDARS. DODGE PUBLISHING COMPANY, New York, N. Y.
Filed July 29, 1911. Serial No. 57,924. PUBLISHED NOVEMBER 14, 1911.

84,947. REMEDY FOR SYPHILIS, GONORRHEA, AND GLEET. EDWARD C. DUNHAM, Dunham, La.
Filed October 7, 1910. Serial No. 52,163. PUBLISHED NOVEMBER 14, 1911.

84,948. DRESS-SHIRTS AND NEGLIGÉE SHIRTS. M. H. ELLENBOGEN & SONS, Paterson, N. J., and New York, N. Y.
Filed August 9, 1911. Serial No. 58,103. PUBLISHED NOVEMBER 14, 1911.

84,949. HERB REMEDY USED AS A BLOOD-PURIFIER AND LIVER-REGULATOR. LLEWELLYN WHITING ESTES, Washington, D. C.
Filed May 15, 1909. Serial No. 42,465. PUBLISHED NOVEMBER 14, 1911.

84,950. FERTILIZER. FARMERS' COTTON OIL & FERTILIZER CO., Huntsville, Ala.
Filed August 28, 1911. Serial No. 58,423. PUBLISHED NOVEMBER 14, 1911.

84,951. STOCK FEED. FEEDERS' SUPPLY COMPANY, Kansas City, Mo.
Filed September 21, 1911. Serial No. 58,760. PUBLISHED NOVEMBER 7, 1911.

84,952. REMEDIES FOR HEADACHE. BURTON J. FULLER, Denver, Colo.
Filed September 20, 1910. Serial No. 51,893. PUBLISHED NOVEMBER 14, 1911.

84,953. WHEAT-FLOUR. GALBAN & Co. INC., New York, N. Y., and Habana, Cuba.
Filed May 4, 1911. Serial No. 56,172. PUBLISHED NOVEMBER 7, 1911.

84,954. EGG-PRESERVING COMPOUND. GARANTOL-GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dresden, Germany.
Filed February 28, 1911. Serial No. 54,772. PUBLISHED JULY 18, 1911.

84,955. SOY-BEAN OIL. GARRELS & BÖRNER, Hamburg, Germany.
Filed February 7, 1911. Serial No. 54,373. PUBLISHED NOVEMBER 7, 1911.

84,956. CERTAIN MEDICINE. ROBERT H. GREER, Marietta, Ohio.
Filed May 2, 1911. Serial No. 56,119. PUBLISHED NOVEMBER 14, 1911.

84,957. LINEN AND HEMP PIECE GOODS. THE GOUROCK ROPEWORK CO. LTD., Port Glasgow, Scotland.
Filed April 20, 1911. Serial No. 55,853. PUBLISHED NOVEMBER 14, 1911.

84,958. FURNITURE. E. GREENBERGER & COMPANY, New York, N. Y.
Filed May 20, 1911. Serial No. 56,492. PUBLISHED NOVEMBER 14, 1911.

84,959. REMEDIES FOR CONSTIPATION. ALFRED H. GRISWOLD, New York, N. Y.
Filed July 21, 1911. Serial No. 57,760. PUBLISHED NOVEMBER 14, 1911.

84,960. CREAM-CHEESE. GERHARD HAGENDORFF, Jersey City, N. J.
Filed July 26, 1911. Serial No. 57,840. PUBLISHED NOVEMBER 7, 1911.

84,961. FEATHER AND WOOL DUSTERS. HAYES DUSTER COMPANY, New York, N. Y.
Filed October 29, 1909. Serial No. 45,614. PUBLISHED NOVEMBER 14, 1911.

84,962. WATERPROOFING AND STRENGTHENING FOR CEMENT. HERCULES WATERPROOF CEMENT COMPANY, Buffalo, N. Y.
Filed May 27, 1910. Serial No. 49,969. PUBLISHED NOVEMBER 14, 1911.

84,963. DRESSES, SKIRTS, AND PETTICOATS FOR WOMEN AND CHILDREN. JACOB AARON HERMAN, New York, N. Y.
Filed June 3, 1911. Serial No. 56,811. PUBLISHED NOVEMBER 14, 1911.

84,964. EXPLOSIVES. ABRAHAM HEYMAN, New York, N. Y.
Filed June 30, 1911. Serial No. 57,394. PUBLISHED NOVEMBER 14, 1911.

84,965. CHILL AND FEVER TONIC. ERNEST F. HUDGINS, Columbia, S. C.
Filed October 11, 1910. Serial No. 52,219. PUBLISHED NOVEMBER 14, 1911.

84,966. CANDY. HUDSON'S, New York, N. Y.
Filed June 6, 1911. Serial No. 56,859. PUBLISHED NOVEMBER 7, 1911.

84,967. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed September 21, 1911. Serial No. 58,752. PUBLISHED NOVEMBER 7, 1911.

84,968. HOSIERY. IPSWICH MILLS, Boston, Mass.
Filed October 18, 1909. Serial No. 45,385. PUBLISHED NOVEMBER 14, 1911.

84,969. MEDICAMENTS FOR THE SKIN. WILLIAM THOMAS JAMES, Chicago, Ill.
Filed September 20, 1911. Serial No. 58,729. PUBLISHED NOVEMBER 14, 1911.

84,970. TOILET WATER, FACE-POWDER, AND PERFUMES. THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio.
Filed September 12, 1911. Serial No. 58,639. PUBLISHED NOVEMBER 14, 1911.

84,971. FELTS FOR LINING OR FILLING WALLS, &c. H. W. JOHNS-MANVILLE COMPANY, New York, N. Y.
Filed July 20, 1911. Serial No. 57,742. PUBLISHED NOVEMBER 14, 1911.

84,972. COTTON-SEED OIL. KENTUCKY REFINING CO., Louisville, Ky.
Filed February 9, 1910. Serial No. 47,694. PUBLISHED NOVEMBER 7, 1911.

84,973. COTTON-SEED OIL. KENTUCKY REFINING CO., Louisville, Ky.
Filed February 9, 1910. Serial No. 47,699. PUBLISHED NOVEMBER 7, 1911.

84,974. WHEAT-FLOUR. THE KING MILLING CO., Lowell, Mich.
Filed June 17, 1911. Serial No. 57,141. PUBLISHED NOVEMBER 7, 1911.

84,975. GINGER-ALE. KIWASSA LITHIA SPRING CO. INC., Richmond, Va.
Filed September 29, 1911. Serial No. 58,929. PUBLISHED NOVEMBER 14, 1911.

84,976. PEARL BUTTONS. WM. KRAL & Co., Astoria, N. Y.
Filed October 9, 1911. Serial No. 59,071. PUBLISHED NOVEMBER 14, 1911.

84,977. BROOMS. OSCAR S. KULMAN, Savannah, Ga.
Filed August 2, 1910. Serial No. 51,239. PUBLISHED MAY 30, 1911.

84,978. SALVE. THE LA DOMUS CO., Freeport, Ill.
Filed September 8, 1911. Serial No. 58,585. PUBLISHED NOVEMBER 14, 1911.

84,979. AUTOMOBILE-HOODS. WILLIAM LAMPLUGH, Levallois-Perret, France.
Filed May 18, 1911. Serial No. 56,438. PUBLISHED NOVEMBER 14, 1911.

84,980. HATS AND CAPS. W. G. LEVAN AND SONS, Reading, Pa.
Filed June 14, 1911. Serial No. 57,027. PUBLISHED NOVEMBER 14, 1911.

84,981. WEEKLY PUBLICATION. LIFE PUBLISHING COMPANY, New York, N. Y.
Filed September 22, 1911. Serial No. 58,803. PUBLISHED NOVEMBER 14, 1911.

84,982. WATERPROOF ROOFING. THE LINCOLN WATERPROOF CLOTH COMPANY, Boundbrook, N. J.
Filed April 22, 1911. Serial No. 55,908. PUBLISHED AUBUST 15, 1911.

84,983. REFRIGERATORS. MAINE MANUFACTURING COMPANY, Nashua, N. H.
Filed May 4, 1911. Serial No. 56,165. PUBLISHED SEPTEMBER 5, 1911.

84,984. STIMULANT LAXATIVE TONIC. MATIENZO-SAINZ COMPANY, Newburgh, N. Y.
Filed June 10, 1911. Serial No. 56,941. PUBLISHED NOVEMBER 14, 1911.

84,985. BEDSPREADS AND COUNTERPANES. MONUMENT MILLS, Housatonic, Mass., and New York, N. Y.
Filed October 5, 1910. Serial No. 52,130. PUBLISHED NOVEMBER 14, 1911.

84,986. FIRE-RESISTING CEMENT. ERNEST V. MORGAN, Cleveland, Ohio.
Filed July 13, 1906. Serial No. 20,916. PUBLISHED NOVEMBER 14, 1911.

84,987. REMEDY FOR CATARRH. KATIE MORRIS, Beaumont, Cal.
Filed July 7, 1909. Serial No. 43,417. PUBLISHED NOVEMBER 14, 1911.

84,988. WHEAT-FLOUR. MOSELEY & MOTLEY MILLING Co., Rochester, N. Y.
Filed September 21, 1911. Serial No. 58,763. PUBLISHED NOVEMBER 7, 1911.

84,989. CANNED VEGETABLES AND CANNED FRUITS. NALLEY GROCERY Co., Austin, Tex.
Filed September 14, 1911. Serial No. 58,666. PUBLISHED NOVEMBER 7, 1911.

84,990. SMOKED BEEF AND BACON. NEWARK PACKING COMPANY, Newark, N. J.
Filed May 17, 1910. Serial No. 49,776. PUBLISHED JUNE 20, 1911.

84,991. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1907. Serial No. 31,739. PUBLISHED NOVEMBER 14, 1911.

84,992. PICTURES AND ILLUSTRATIONS PUBLISHED SERIALLY. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed December 16, 1907. Serial No. 31,740. PUBLISHED NOVEMBER 14, 1911.

84,993. FOOD PRODUCTS DERIVED FROM OLIVE-OIL. MAXIM NIVEN, New York, N. Y.
Filed April 10, 1911. Serial No. 55,688. PUBLISHED NOVEMBER 7, 1911.

84,994. REMEDY FOR HEADACHE, NEURALGIA, AND CONSTIPATION. THE NONCARPICINE COMPANY, Pierre, S. D., and Chicago, Ill.
Filed May 15, 1911. Serial No. 56,368. PUBLISHED NOVEMBER 14, 1911.

84,995. WOOLEN YARN. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,391. PUBLISHED NOVEMBER 14, 1911.

84,996. WOOLEN YARN. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,393. PUBLISHED NOVEMBER 14, 1911.

84,997. WOOLEN YARN. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,400. PUBLISHED NOVEMBER 14, 1911.

84,998. FANS FOR PERSONAL USE. NATHALIE TOWNSEND PALMER, Middletown, Conn.
Filed July 15, 1910. Serial No. 50,843. PUBLISHED NOVEMBER 14, 1911.

84,999. BUTTER. S. PFEIFER & Co., New Orleans, La.
Filed September 21, 1911. Serial No. 58,745. PUBLISHED NOVEMBER 7, 1911.

85,000. AUTO TIRE AND LUGGAGE TRUNKS, SUITCASES, AND PORTFOLIOS. PROGRESS AUTO TIRE TRUNK MFG. Co., Philadelphia, Pa.
Filed September 21, 1911. Serial No. 58,781. PUBLISHED NOVEMBER 14, 1911.

85,001. LADIES' OUTER SKIRTS. THE QUEEN MFG. Co., Cincinnati, Ohio.
Filed February 23, 1911. Serial No. 54,708. PUBLISHED NOVEMBER 14, 1911.

85,002. ARTIFICIAL MINERAL WATER. THEODORE E. QUEER, Cleveland, Ohio.
Filed September 27, 1911. Serial No. 58,887. PUBLISHED NOVEMBER 14, 1911.

85,003. LEATHER BOOTS AND SHOES. REGAL SHOE COMPANY, INC., Boston, Mass., assignor to Regal Shoe Company, Boston, Mass., a Corporation of Maine.
Filed November 8, 1906. Serial No. 23,166. PUBLISHED NOVEMBER 14, 1911.

85,004. TOBACCO-PIPES. REISS BROS. & Co., Chicago, Ill.
Filed December 31, 1910. Serial No. 53,612. PUBLISHED NOVEMBER 14, 1911.

85,005. TOBACCO-PIPES. REISS BROS. & Co., Chicago, Ill.
Filed December 31, 1910. Serial No. 53,611. PUBLISHED NOVEMBER 14, 1911.

85,006. CANDIES. HERBERT F. ROBERTS, Boston, Mass.
Filed August 17, 1911. Serial No. 58,254. PUBLISHED NOVEMBER 7, 1911.

85,007. BONNETS, HATS, AND CAPS. JACOB ROSTENBERG, White Plains and New York, N. Y.
Filed June 6, 1911. Serial No. 56,853. PUBLISHED NOVEMBER 14, 1911.

85,008. KNITTED UNDERSHIRTS. RUBENS & MARBLE, Chicago, Ill.
Filed September 5, 1907. Serial No. 29,764. PUBLISHED NOVEMBER 14, 1911.

85,009. KNITTED UNDERSHIRTS. RUBENS & MARBLE, Chicago, Ill.
Filed September 5, 1907. Serial No. 29,766. PUBLISHED NOVEMBER 14, 1911.

85,010. KNITTED UNDERSHIRTS. RUBENS & MARBLE, Chicago, Ill.
Filed September 5, 1907. Serial No. 29,767. PUBLISHED NOVEMBER 14, 1911.

85,011. REMEDIES FOR GENITO-URINARY DISEASES OF BOTH SEXES. CARL SCHULTZ, Trinidad, Colo.
Filed August 19, 1911. Serial No. 58,276. PUBLISHED NOVEMBER 14, 1911.

85,012. SADDLERY AND HARNESS HARDWARE. THE SENECA CHAIN COMPANY, Kent, Ohio.
Filed September 23, 1909. Serial No. 44,875. PUBLISHED NOVEMBER 14, 1911.

85,013. WHEAT-FLOUR. SHANNON & MOTT COMPANY, Des Moines, Iowa.
Filed June 22, 1910. Serial No. 50,499. PUBLISHED NOVEMBER 7, 1911.

85,014. GAME. SIDNEY AND SMITH, London, England.
Filed September 23, 1910. Serial No. 51,927. PUBLISHED NOVEMBER 14, 1911.

85,015. CERTAIN TOILET PREPARATIONS. HARRY A. SKINNER, New York, N. Y.
Filed February 6, 1911. Serial No. 54,342. PUBLISHED NOVEMBER 14, 1911.

85,016. CHEWING-GUM. ALBERT LANGENBACH, Escanaba, Mich.
Filed September 21, 1911. Serial No. 58,747. PUBLISHED NOVEMBER 7, 1911.

85,017. CANNED FISH. SOUTHERN CALIFORNIA FISH COMPANY, Los Angeles, Cal.
Filed July 24, 1911. Serial No. 57,794. PUBLISHED NOVEMBER 7, 1911.

85,018. HOSIERY. E. SUTRO & SON COMPANY, Philadelphia, Pa.
Filed November 21, 1908. Serial No. 38,814. PUBLISHED NOVEMBER 14, 1911.

85,019. YARN FOR KNITTING AND CROCHETING. BERNHARD ULMANN & Co., New York, N. Y.
Filed February 15, 1909. Serial No. 40,534. PUBLISHED NOVEMBER 14, 1911.

85,020. DRIED FRUITS AND CHEESE. WALTER H. UNDERWOOD, Hutchinson, Kans.
Filed April 16, 1910. Serial No. 49,129. PUBLISHED NOVEMBER 7, 1911.

85,021. LOCKS AND LATCHES. VON DUPRIN FIRE EXIT LATCH COMPANY, Indianapolis Ind.
Filed August 7, 1909. Serial No. 44,010. PUBLISHED AUGUST 22, 1911.

85,022. ADHESIVE LIQUID FOR MENDING LEAKS. GUSTAV WILKENING, Crete, Ill.
Filed May 11, 1911. Serial No. 56,306. PUBLISHED NOVEMBER 14, 1911.

85,023. CERTAIN FLAVORED SODA. THE WIL-MAR BOTTLING CO., Baltimore, Md.
Filed July 14, 1911. Serial No. 57,630. PUBLISHED SEPTEMBER 12, 1911.

85,024. UMBRELLAS. B. O. WRIGHT & COLE, New York, N. Y.
Filed August 14, 1911. Serial No. 58,197. PUBLISHED NOVEMBER 14, 1911.

85,025. WOMEN'S, CHILDREN'S, AND MEN'S HOSIERY. THE PITTSBURGH DRY GOODS COMPANY, Pittsburgh, Pa.
Filed September 21, 1911. Serial No. 58,751. PUBLISHED NOVEMBER 14, 1911.

LABELS

REGISTERED JANUARY 16, 1912.

16,105.—*Title:* "BENTLEY'S LOUSE KILLER." (For a Preparation to Relieve All Kinds of Animals from Vermin.) GEORGE G. BENTLEY, Chateaugay, N. Y. Filed December 20, 1911.

16,106.—*Title:* "LA VADURA." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed December 22, 1911.

16,107.—*Title:* "HAVAKAN." (For Canned Crab-Meat.) HENRY W. PEABODY & Co., New York, N. Y. Filed December 22, 1911.

16,108.—*Title:* "PAPOOSE." (For Hosiery.) RICHMOND HOSIERY MILLS, Rossville, Ga., and Chattanooga, Tenn. Filed December 21, 1911.

16,109.—*Title:* "SLICK-SHINE FURNITURE POLISH." (For Furniture-Polish.) ALBERT T. SCHLICHTING, Newark, N. J. Filed December 21, 1911.

16,110.—*Title:* "MAGIC BAR TOP OIL." (For Bar-Top Oil.) ALBERT T. SCHLICHTING, Newark, N. J. Filed December 21, 1911.

16,111.—*Title:* "SLICK-SHINE LIQUID METAL POLISH." (For Liquid Metal-Polish.) ALBERT T. SCHLICHTING, Newark, N. J. Filed December 21, 1911.

16,112.—*Title:* "VICTOR COUSIN." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 22, 1911.

PRINTS

REGISTERED JANUARY 16, 1912.

2,926.—*Title:* "FRAVOLIO." (For Toilet Cream.) ALFRED PELLEGRINI, New York, N. Y. Filed December 15, 1911.

2,927.—*Title:* "ALLIGATOR HIDE ROOFING." (For Composition Roofing.) UTAH LUMBER COMPANY, Salt Lake City, Utah. Filed September 6, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE GROSSE AND FRENCH.

Decided February 4, 1911.

PATENTABILITY—IRONING-MACHINES.

A claim for an ironing-machine *Held* unpatentable over the prior art, since neither the substitution of gas for steam as the heating medium or placing the gas-burner below the level of the median line of the shoe required invention.

APPEAL from Examiners-in-Chief.

IRONING-MACHINE.

Mr. William L. Hall for the applicants.

MOORE, *Commissioner:*

This is an appeal from a decision of the Examiners-in-Chief affirming the action of the Primary Examiner finally rejecting the following claim:

7. The combination with a rotary drum of a chamber in rear of said drum the forward side of which comprises a concave shoe, between which and the drum the work is passed, the axis of the drum being disposed at a substantial distance above the level of the longitudinal median line of the shoe whereby the shoe is inclined rearwardly from the vertical and a horizontal burner arranged longitudinally of said chamber in rear of said shoe, and below the level of said longitudinal median line.

The references are: Crawford, No. 238,657, March 8, 1881; Poland, No. 540,334, June 4, 1895; Binder, No. 568,732, October 6, 1896.

The object of the invention covered by this claim is, as stated in the specification—

* * * to so arrange the shoe relatively to the drum as to facilitate the heating of the ironing-surface of the shoe.

The patent to Poland discloses an ironing-machine in which the heating-chamber is so arranged that the longitudinal median line thereof is disposed a substantial distance below the axis of the drum. This chamber is heated by steam; but the position of the Primary Examiner is that applicants have done nothing more than to substitute gas for steam as a heating medium, such use of gas being old in the patents to Crawford and Binder.

This holding is believed to be entirely correct. The mere placing of the gas-burner below the level of the longitudinal median line of the shoe, so that the flame plays upwardly on the heating-surface, cannot be held to rise to the dignity of invention. Such a modification of the devices of the prior art is believed to be well within the skill of the ordinary mechanic.

The decision of the Examiners-in-Chief is affirmed.

EX PARTE DIETERICH.

Decided November 6, 1911.

1. APPLICATION—PROSECUTION—PRESENTATION OF CLAIMS. AFTER FINAL REJECTION—INSUFFICIENT SHOWING.

Where after a final rejection an amendment was filed directing that the finally-rejected claims be canceled and presenting new claims, *Held* that a statement that neither the applicant nor his attorney had looked for a final rejection and in view of the Examiner's action applicant was willing to take narrower claims was not such a showing as required by Rule 68, (citing *ex parte Willer*, 91 O. G., 1033.)

2. SAME—SAME—INSUFFICIENT PROSECUTION—ABANDONMENT.

Where within a year from the date of a final rejection an amendment was filed directing that the finally-rejected claims be canceled and adding new claims, which amendment the Examiner refused to enter for lack of sufficient showing under Rule 68, and after the expiration of the year applicant directed that the new claims be canceled, *Held* that no responsive action had been made within the year and that the application was abandoned.

ON PETITION.

MATCH-PACKAGE.

Mr. Wilbur W. Williamson for the applicant.

MOORE, *Commissioner:*

This is a petition from the Examiner holding the above-entitled application abandoned.

On June 30, 1910, the Examiner rejected all the claims in view of the references, giving his reasons for such holding, certain of the references being already of record. On August 1, 1910, the applicant filed an amendment presenting one new claim and containing an argument as to the patentability of the remaining claims. On August 12, 1910, the Examiner held that claims 5 and 6 were allowable, subject to certain corrections, pointed out that the new claim presented in the amendment of August 1, 1910, covered subject-matter which had already been considered, and finally rejected the claims other than 5 and 6. On January 3, 1911, an amendment was presented canceling the finally-rejected claims, adding three claims, and stating that claim 6 was in proper form as it stood, since "a separate integral portion" referred to the portion D'. This amendment the Examiner refused to enter, since the case was under final rejection and no good and sufficient reason, duly verified, was given why the amendment was not earlier presented. He also notified the applicant that the year in which proper action could be taken ran from "August 12, the date of final rejection."

On April 28, 1911, there was presented an affidavit of the attorney stating that the three claims had not been earlier presented since neither applicant nor attorney had looked for a final rejection, but that since the Examiner was of the opinion that the claims were not allowable applicant was willing to take narrower claims. This amendment was refused admission, and on August 21, 1911, an amendment was presented directing the cancelation of "claims 3, 4 and 5." The Examiner thereupon held this case abandoned, since the amendment was not presented within the year, and from this holding the present petition is taken.

The final rejection of August 12, 1910, appears to have been properly given; in fact, the applicant does not contend that it was premature. Having presented a claim for substantially the subject-matter already considered by the Examiner, with an argument as to the patentability of the other rejected claims, there was no reason why the Examiner should not have finally rejected the claims if he was still of the opinion that they were not patentable.

The amendment of January 3, 1911, was properly refused admission, since no showing such as required by Rule 68 accompanied that amendment.

The affidavit of the attorney presented on April 28, 1911, did not constitute such a showing. (*Ex parte Willer*, 91 O. G., 1033.) The amendment presented on August 21, 1911, does not direct the cancelation of the finally-rejected claims, but if it could be construed in connection with the amendment presented January 3, 1911, as directing the cancelation of the finally-rejected claims no showing is made why it was not presented within one year from the date of the final rejection. Rule 171 provides that—

> * * * the admission of an amendment not responsive to the last official action, or refusal to admit the same, and any proceedings relative thereto, shall not operate to save the application from abandonment under section 4894 of the Revised Statutes.

After the final rejection was entered applicant should within one year from the date thereof either have canceled the claims, taken an appeal, or taken steps which resulted in having that final rejection set aside as premature. No such action having been taken, the case must be held to be abandoned.

The petition is denied.

KNEISLY *v.* KAISLING.

Decided January 4, 1912.

1. INTERFERENCE—INSTITUTION OF PUBLIC-USE PROCEEDINGS.

   It is not the practice to suspend an interference after the initial stage thereof has been passed in order to investigate the question of public use, especially where the bar, if established, would apply only to the application of one party.

2. PUBLIC USE—CAN BE ESTABLISHED ONLY BY PROPERLY-TAKEN TESTIMONY.

   The bar of public use can be established only by properly-taken testimony, with the right of cross-examination. Mere affidavits are insufficient.

ON PETITION.

SIGNAL-TRANSMITTER.

Mr. F. L. Walker for Kneisly.

Mr. Curtis B. Camp for Kaisling.

MOORE, *Commissioner:*

This is a petition by Kneisly that the interference be suspended and the case remanded to the Primary Examiner for his consideration of the matter of a statutory bar to the grant of a patent to Kaisling and that the Primary Examiner be instructed to dissolve the interference and to grant petitioner a patent for the invention set forth in counts 1, 2, 3, 7, 8, and 9.

Petitioner alleges that he placed in public use and on sale in the United States mechanism as described and set forth in counts 1, 2, 3, 7, 8, and 9 of the interference more than two years prior to the filing of the application of Kaisling involved in this interference.

The record shows that a motion brought by petitioner to dissolve the interference upon this and other grounds was denied transmission by the Examiner of Interferences on December 21, 1911, and that the limit of appeal from his decision is fixed to expire January 10, 1912. Although this petition does not purport to be an appeal from said decision, it may be stated that the Examiner of Interferences rightly held that this is not such a question as can be raised by a motion to dissolve in an interference proceeding.

The question of public use is considered a question separate from that of priority of invention raised in an interference proceeding and to require a separate investigation. It is not the practice to suspend an interference proceeding when a case has reached the stage presented by the one before me in order to investigate the question of public use, especially where the bar, if established, would apply only to the application of one party. (*Sarfert v. Meyer*, 98 O. G., 793; *Perrault v. Pierce*, 108 O. G., 2146; *Burson v. Vogel*, 131 O. G., 942; 29 App. D. C., 388.) Obviously if petitioner is not the prior inventor he is not entitled to the patent, irrespective of whether Kaisling's right to a patent is barred by public use. Moreover, inasmuch as petitioner alleges public use only on the device called for in claims 1, 2, 3, 7, 8, and 9 the interference would have to proceed as to the remaining counts.

Furthermore, the record shows that Kaisling has been made the senior party in the interference by giving him the benefit of the parent application of which his application directly involved in the interference is alleged to be a division. In the matter of public use an applicant is also entitled to the benefit of his parent application, and the allegation that the device of the counts mentioned above was placed in public use and on sale on March 6, 1908, is not two years prior to the filing date of Kaisling's parent application.

It is further noted that petitioner has not filed a request for the institution of a public-use proceeding, but apparently requests that the interference be dissolved and a patent issued to him upon the strength of the affidavits accompanying his motion for dissolution. It was held by the Supreme Court of the District of Columbia in *ex parte von Heffner-Altneck* (23 O. G., 269; 1883, C. D., 189) that the Commissioner is without authority to determine

the question of public use upon mere *ex parte* affidavits. It is now well settled that such affidavits will be considered merely upon the question of establishing a *prima facie* case which will warrant the institution of a public-use proceeding. The determination of the bar of public use can be based only upon properly-taken testimony with the right of cross-examination. (*Shrum v. Baumgarten*, 104 O. G., 577.) Such a proceeding is instituted only upon formal petition therefor, accompanied by proof of service upon the applicant, together with an offer to produce the witnesses and to bear the expenses of the investigation. (*Siebert v. Bloomberg*, 124 O. G., 628.)

For the several reasons stated above and also because this petition is not accompanied by proof of service upon the other party the petition is dismissed.

EMERSON *v.* SANDERS.

Decided March 24, 1911.

1. INTERFERENCE—PRIORITY—RIGHT TO MAKE THE CLAIM.

   Celluloid *Held* to be a "shellac-like" record material within the meaning of the claims and that therefore E. is entitled to make the claims in issue.

2. SAME—SAME—REDUCTION TO PRACTICE—COMMERCIAL PRACTICABILITY NOT NECESSARY.

   It is well established that commercial practicability of a device is not necessary to constitute a reduction to practice of the same.

3. SAME—SAME—SAME.

   Evidence reviewed and *Held* to establish that the work done by E. prior to S.'s conception constituted a reduction to practice and not a mere abandoned experiment and that priority was properly awarded to the former.

APPEAL from Examiners-in-Chief.

GRAMOPHONE-RECORD TABLET.

Messrs. Mauro, Cameron, Lewis & Massie for Emerson.

Mr. D. P. Wolhaupter for Sanders. (*Mr. Melville Church* of counsel.)

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Sanders from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention in favor of Emerson.

The issue is in three counts, as follows:

> 1. A sound-record composed of a body portion containing inferior plastic material unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material, and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere.
>
> 2. A sound-record composed of a body portion containing inferior plastic material rendered plastic by heat and unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere.
>
> 3. A sound-record composed of a body portion containing inferior plastic material unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material, and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere under heat and pressure.

The nature of the invention forming the subject-matter of the issue is briefly and concisely stated in the decision of the Examiners-in-Chief as follows:

> The graphophone-record involved in the issue is of the disk type and the structure as defined in the counts includes three elements,—a body portion containing inferior plastic material unsuitable for a smooth record-surface, a record-surface coating of superior shellac-like record material, and a separating-sheet between said body portion and said coating, to which sheet said body portion and said coating adhere. The object of the invention is to cheapen the cost of manufacture without decreasing the quality of the article. It is stated by all the parties in their specifications that the ordinary record material which has been found best for making the playing-surface of the record is a mixture of shellac with other materials. On account of the cost of shellac it is desirable to use as little of this material as possible, and for this reason the parties have employed a body portion of inferior material, unsuitable for the face of the record, covered with a thin coating of a finer material suitable for the face of the record, the two being separated by a sheet of suitable material. The separating-sheet is stated to have several functions, one of which is to prevent the body portion when softened by heat and under pressure from oozing up into the thin film of record material and thus producing surfaces which will wear unequally and possibly fill the surface material with particles of grit and earthy matter which are contained in the base material. Another function of the separating-sheet is that of acting as a carrier for the thin film of record material, and still others are to obtain greater strength and a better adherence of the several strata of material.

Emerson's preliminary statement alleged conception and disclosure of the invention in 1902 and reduction to practice in 1903. His application was filed April 15, 1905.

Sanders's preliminary statement alleged conception and disclosure of the invention in 1904, but no reduction to practice prior to the filing of his application on January 6, 1905.

The Examiner of Interferences and the Examiners-in-Chief, in a divided opinion, held that the testimony taken by Emerson showed that in December, 1903, he made records having a celluloid record-surface separated from a base or body portion containing inferior plastic material by a sheet of paper and that these records were tested and found to be satisfactory. They held that these 1903 records constituted a reduction to practice of the invention of the issue and that as this date is prior to any date claimed by Sanders Emerson was the prior inventor.

The main contentions of Sanders are, first, that the celluloid constituting the record-surface of the 1903 Emerson record was not a shellac-like record material and that these records did not, therefore, embody the invention of the issue, and, second, that what Emerson did in 1903 amounted, at most, only to an abandoned experiment.

The first contention calls for a consideration of the question of whether celluloid is a shellac-like material as applied to a record-surface.

As heretofore stated, it is well understood and conceded by both parties that shellac itself forms a superior and one of the best, if not, so far as now known, the best, material for the sound-record. Shellac, however, is relatively expensive, and it is the object of the invention of the issue to produce a record having the advantages of the shellac record, but more economical to manufacture.

In his application Emerson describes a record having a record-surface of shellac separated by a sheet of paper from the body of inferior material and then says that celluloid may be used in place of shellac in the following statement:

> Although reference has been made above solely to shellac, which gives the best results of any material thus far tried for the purpose, it is obvious that other gums, celluloid, or like materials may be employed in the same way.

Sanders states in the specification of his application:

> My invention has reference to improvements in gramophone-record tablets, the object being to secure economy

in gramophone-record material which enters into the construction of such tablets, and to facilitate the manufacture of such tablets upon a large commercial scale.

In the commercial gramophone-record tablet shellac has proved to be the best material as a base and as a binder for the other substances employed, but shellac always was and now particularly is quite expensive; therefore a construction of gramophone-tablets in which only a small amount of gramophone-record material proper is employed, cheapens the article considerably and renders it more accessible to the public, and this is one of the objects of my invention.

Thereafter in his specification Sanders makes no mention of shellac, but refers to the material constituting the record-surface as "gramophone-record material."

It thus appears that the application of Emerson mentions celluloid as an equivalent or substitute for shellac in the device of the invention, while no statement is found in Sanders's application indicating that celluloid is not a shellac-like record material. Obviously, the term "shellac-like record material" in the issue is not to be limited merely to shellac, else the word "shellac" alone would have been used.

The record shows that the counts of the issue are not claims originally made by any of the parties to the interference, but are claims formulated by the Primary Examiner and suggested to each party as a basis for the interference. No motion to dissolve was brought in the present interference; but such a motion was made in the companion interference, No. 27,965, at present limited to the same parties, Emerson and Sanders, as the present interference, and in which I have rendered a decision of even date herewith. Said other interference, No. 27,965, involves the same application of Sanders, No. 239,961, as the interference under consideration, but another application, No. 267,589, of the party Emerson. In the latter application Emerson discloses sheet-celluloid as the material of his record-surface. The invention of said interference, No. 27,965, is closely related to that of the present interference, the issue, which was also formulated and suggested by the Primary Examiner, reading as follows:

A sound-record tablet comprising a body portion consisting of a plurality of separate sheets of fibrous material united by an adherent under heat and pressure, and a surface portion consisting of a coating of shellac-like record material.

In his decision on the motion to dissolve said interference the Examiner states what he meant to cover by the term "shellac-like record material" as follows:

The issue was framed by the Examiner, and he meant to cover by the term "shellac-like record material" all materials which when heated become like shellac, soft enough to receive a sound-record from a matrix, and when cold, like shellac, to form a record hard enough to withstand the cutting or tearing action of a sharp gramophone-needle.

With this construction, the issue is patentable, and with this construction it clearly reads on Emerson's celluloid record material.

A copy of this decision was introduced by Emerson in the present interference and identified as "The Examiner's decision, interference No. 27,965." This decision of the Examiner was rendered prior to the taking of testimony in the present interference. The objection to said exhibit noted by the Examiner of Interferences in his decision on priority—namely, that Smith and Wickes, who were originally a party to the present interference, were not a party to said companion interference, and therefore did not have notice of the Examiner's interpretation of the term "shellac-like" of the issue until the introduction of said exhibit during Emerson's time for taking testimony—does not apply to the parties Emerson and Sanders left in the interference since the elimination of Smith and Wickes.

This interpretation by the Primary Examiner of said term of the issue is believed to be a proper interpretation thereof and in accord with the well-established practice of the Patent Office of construing the terms of the issue as broadly as the language will permit without giving a strained or unnatural meaning. Under such interpretation celluloid is clearly a shellac-like record material.

An analogous case regarding the construction of the issue is that of the *American Graphophone Company* v. *Walcutt*, (87 Fed. Rep., 556.) In that the complainant's patent was for a—

recording-tablet for a phonograph coated with a wax or wax-like composition, preferably a compound or mixture of beeswax and paraffin,

while one of the claims was substantially for a recording-tablet—

provided with a wax or wax-like coating for receiving the sound-record.

The defendant's record was composed of—

stearin, caustic soda, acetate of aluminum, and sometimes ceocerite;

in fact, a soap record. The court found that defendant's record was "wax-like," since it was amorphous, slightly cohesive, solid, and adapted to be removed in chips or shavings and that it infringed complainant's claim.

The specifications of the applications in interference, as well as the patent to Lambert, No. 664,223, of record in the case, show that it was old prior to the invention constituting the issue to use an inferior base material coated with a superior record-surface. It therefore appears that a novel feature of the issue of this interference is the separating-sheet interposed between the superior and inferior materials. The invention does not reside in the character of the superior record material, although, of course, for a device to come within the terms of the issue it must embody all of the elements of the issue and have a shellac-like record-surface.

The celluloid record-surface of the Emerson 1905 record is found to be a shellac-like record-surface and to come within the terms of the issue.

The contention of Sanders that the Emerson 1903 device did not embody the invention of the issue, since the celluloid layer was secured to the sheet of paper by a shellac coating and did not adhere directly to the paper, is not well taken. The wording of the issue is that said body portion and coating adhere to the separating-sheet or adhere under heat and pressure thereto. This language does not exclude adherence obtained by a paste or cement, and, in fact, Sanders describes in his own specification a construction in which the separating sheet of paper 2' "is cemented onto the disk 1'."

It remains to consider whether the work of Emerson resulted in a reduction to practice of the invention or amounted merely to an abandoned experiment.

It is contended by Sanders that the record shows that Emerson's work in December, 1903, amounted merely to an unsuccessful and abandoned experiment. This contention is based upon testimony to the effect that Godwin commenced on February 4, 1904, a series of experiments upon this character of record for the purpose of perfecting the same, which extended over several months. It is noted, however, that the testimony shows that the experiments of Godwin related to perfecting the device commercially and producing a desirable form for placing upon the market. It is well established that commercial practicability of a device is not necessary to constitute a reduction to practice of the same, and the fact that further work had to be done upon the 1903 device to render it a commercial article does not prove that said device was not practical or did not successfully produce the designed function. Nor is said reduction to practice negatived by the fact that the celluloid used in the records ultimately placed upon the market differed from that used in the early experiments and—

was composed of pyroxylin and camphor and 20 per cent. of shellac,

(Emerson's testimony, X-Q. 119,) for, as above stated, the invention did not reside in any particular kind of shellac-like record material.

The testimony, which is carefully analyzed in the decisions below, is believed to show that Emerson made records in December, 1903, having a celluloid surface separated by a sheet of paper from an inferior plastic base, which records embodied the issue of the invention under the interpretation thereof rendered above, that these records were tested and the sound reproduction was of good character, and that said records constituted a reduction to practice and not an abandoned experiment. As this occurred at a date prior to the earliest date alleged by Sanders in his preliminary statement, it follows that Emerson is the prior inventor.

Sanders has criticised the forms of questions and the position taken by counsel for Emerson in advising his client that certain questions need not be answered. I do not regard it as necessary at this time either to justify or censure the methods adopted in the taking of the testimony which has been presented. It is sufficient to say that in my opinion Emerson has satisfactorily established his claim of prior inventorship of the invention in issue by a preponderance of competent evidence.

For the reasons stated above the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences awarding priority in favor of Emerson is affirmed.

EX PARTE MADDEN.

Decided March 21, 1911.

PATENTABILITY—DESIGN.

A design for a water-closet bowl *Held* not patentable over the prior art, since it possesses no ornamental feature which is patentable over the designs disclosed therein.

APPEAL from Examiners-in-Chief.

DESIGN FOR BOWL OF A WATER-CLOSET.

Mr. L. M. Hopkins for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Examiner refusing to grant a patent upon a design for a bowl of a water-closet shown in the drawing of this application.

The references cited are as follows: Plantier, No. 31,048, June 20, 1899; Madden, No. 37,179, October 11, 1904; Plate 1472—M, page 207 of Catalogue M of Haines, Jones, Cadbury Company.

In my opinion the modification in form or design of applicant's device over those of the references is merely such as flows from the substitution of one well-known form of bowl for another, and I agree with the Examiners-in-Chief that the—

* * * forward projection of the top of the bowl, which is characterized by the Examiner as the most striking difference from the references, is a feature which applicant has borrowed without invention from other articles known to the art, which borrowing was induced in view of the utilitarian rather than the ornamental results sought. No invention was involved in the production of applicant's article in view of what was old in the art, and the structure which has resulted from what applicant has done possesses no ornamental feature which is patentable over the designs disclosed in the references.

The decision of the Examiners-in-Chief is affirmed.

EX PARTE AMIGO.

Decided December 7, 1911.

APPLICATION—PROSECUTION—ABANDONMENT.

An allegation that an amendment was mailed within the statutory period and that the attorney was unaware that such amendment had not been received until he made inquiry of the Office long after the expiration of that period, in view of a letter from his foreign associate, *Held* insufficient to show that the delay in the prosecution of the case was unavoidable.

ON PETITION.

PLASTIC VEHICLE-WHEEL.

Mr. Herbert John Haddam and *Mr. Joshua R. H. Potts* for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition for rehearing of the applicant's petition to revive the above-entitled case, which became abandoned by failure to respond to the rejection of the Examiner, dated March 1, 1910.

It appears from the present affidavit, which is supplemental to the affidavit previously filed, that the delay was due to the belief upon the part of the associate attorney that a proper amendment had been filed on July 5, 1910. It is asserted in the affidavit that on or about July 15, 1910, such amendment was placed in an envelop having a return address thereon and mailed to the Patent Office and that the said envelop had never been returned to the affiant. He therefore believes the same was either lost in the mails or mislaid in the Patent Office. The affiant states that—

after said communication was placed in his records of said case as having been filed in the Patent Office, he placed his office records of said case in the usual office files in the proper compartment, containing cases awaiting action on the part of the Patent Office; * * * that under his system of doing business, when an application is awaiting action from the Patent Office the record thereof is placed in his office files under such a classification; that he relies solely on the action of the Patent Office to call the matter again to his attention and has no other means of knowing when the time for action, in an application supposed to be awaiting action on the part of the Patent Office, expires.

He further states that he was unaware of the delay in the action on this case until he received a

communication from the foreign attorney calling attention to the fact, and upon correspondence with the Patent Office he was advised that the case had become abandoned. It is asserted that in view of these facts the delay was unavoidable.

The excuse in my opinion is not sufficient to warrant the revival of this application. The associate attorney admits that no special care is taken in his office to find out whether or not an application which has been amended has been acted upon by the Patent Office, and no attempt was made in this case to find whether or not the Office had received such amendment until nearly a year had elapsed after the alleged amendment was supposed to have been filed. There clearly was no reasonable care upon the part of the associate attorney in attending to this application. The attorney was advised of the division in which this application was classified in the Examiner's first letter and such advice is found in each succeeding letter. The Patent Office publishes weekly a statement giving the oldest dates of both new and amended cases awaiting action by the Examiner in each division, and reasonable prudence upon the part of the attorney would have caused an inquiry to be made long before the expiration of the year allowed in which action should be taken by the applicant. It does not appear that the applicant himself made any inquiry of his attorneys as to the status of the application or that the foreign attorneys took any steps to look after the interests of their client until after the expiration of the year from the date of the Examiner's action of which they are said to have been advised. It is unfortunate that the applicant's rights have been jeopardized, but I do not find any showing in the affidavits which would justify holding that the delay in responding to the Examiner's action in the above-entitled application was unavoidable within the meaning of section 4894, Revised Statutes.

The petition is denied.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Salant & Salant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,800, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-marks registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 19, 1911.

The Dempsey Candy Works Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Frederic M. Paist, 211 Chancellor street, Philadelphia, Pa., and Henry Heide, 313 Hudson street, New York, N. Y., for trade-marks and trade-mark registration No. 39,869, dated December 2, 1902, to The Dempsey Candy Works Co., of Nevada City, Nev., and the notice of such declaration sent by registered mail to the said The Dempsey Candy Works Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said The Dempsey Candy Works Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 4, 1911.

Casade, Crooks & Reynaud, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of a trade-mark filed by Chas. Mackinlay & Co., the registrations granted to James Saunders & Co., Limited, John Gillon & Co., Limited, and trade-mark granted to Casade, Crooks & Reynaud, No. 8,729, registered October 18, 1881, and the notice of such declaration sent by registered mail to the said Casade, Crooks & Reynaud at the address of record has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Casade, Crooks & Reynaud, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 2, 1911.

The Bellaire Stamping Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the New York Stamping Co., North Eleventh and Berry streets, Brooklyn, N. Y., for registration of a trade-mark and trade-mark registration No. 24,239, dated February 13, 1894, to The Bellaire Stamping Co., of Harvey, Ill. The Office has failed to secure satisfactory service upon The Bellaire Stamping Co., and the Columbian Enameling & Stamping Co., claiming to be its successor, has failed to file evidence of its right to intervene.

Notice is therefore hereby given to The Bellaire Stamping Co., its assigns or legal representatives, that if the said company or any of them desire to contest the interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 174. No. 4. TUESDAY, JANUARY 23, 1912. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JANUARY 23, 1912	835
PATENT OFFICE PUBLICATIONS	835
ACCESS TO PENDING APPLICATIONS	835
REMITTANCES TO THE PATENT OFFICE	835
APPLICATIONS UNDER EXAMINATION	836
PATENTS GRANTED	837
REISSUES	1008
DESIGNS	1008
TRADE-MARKS—REGISTRATION APPLIED FOR	1011
TRADE-MARKS—REGISTERED	1023
LABELS AND PRINTS	1024
COMMISSIONER'S DECISIONS—	
Jackson Company v. Rogers & Thompson	1025
In re Aerial Telephone and Power Company	1025
Ex parte F. R. Chamberlain Company	1026
The Alexander Milling Co. v. Vernier	1026
Johnson Educator Food Co. v. Sylvanus Smith & Co., Inc.	1027
DECISIONS OF THE U. S. COURTS—	
In re John Broadland, Limited	1029
INTERFERENCE NOTICES	1030

ISSUE OF JANUARY 23, 1912.

Patents	489	No. 1,015,279 to No. 1,015,767, inclusive.
Designs	16	No. 42,101 to No. 42,116, inclusive.
Trade-Marks	25	No. 85,026 to No. 85,050, inclusive.
Labels	28	No. 16,113 to No. 16,140, inclusive.
Prints	6	No. 2,928 to No. 2,933, inclusive.
Reissues	1	No. 12,365.
Total	565	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama			North Dakota	2	
Arkansas	2		Ohio	43	3
California	20	2	Oklahoma	5	
Colorado	9		Oregon	4	
Connecticut	13		Pennsylvania	47	11
Delaware			Rhode Island	5	1
Florida	2		South Carolina		
Georgia	2		South Dakota	2	
Idaho	3		Tennessee	6	2
Illinois	49	4	Texas	13	
Indiana	17	3	Utah	3	
Iowa	9		Vermont		
Kansas	9		Virginia	2	
Kentucky	2	1	Washington	5	
Louisiana	2		West Virginia	3	
Maine	3		Wisconsin	12	2
Maryland	2	1	Wyoming		
Massachusetts	23	7			
Michigan	15		Alaska, District of		
Minnesota	6	1	Arizona Territory		
Mississippi	1		Canal Zone		
Missouri	13		District of Columbia	2	
Montana	1		Hawaii Territory		
Nebraska	2		Philippine Islands		1
Nevada	1		U. S. Army		
New Hampshire			U. S. Navy		
New Jersey	18	1			
New Mexico	3		Total to citizens of the United States	504	58
New York	47	18			
North Carolina	1				

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria			Mexico		
Argentina			Netherlands		
Austria-Hungary	6		Newfoundland		
Belgium			New South Wales		
Brazil			New Zealand		
British West Indies			Norway		
Canada	7		Queensland		
Cape Colony			Roumania		
Chile			Russia	1	
China			Scotland	3	
Costa Rica			South Australia		
Cuba			Spain		
Denmark			Sweden	3	
Ecuador			Switzerland	4	
Egypt	1		Transvaal, South Africa	1	
England	14		Victoria		
France	6		Western Australia		
Germany	27	1			
Ireland	1		Total to citizens of foreign countries	74	1
Italy					
Japan					

Patent Office Publications.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1911.

The stock of publications, exclusive of printed copies of patents, formerly held for sale by the Patent Office, has been transferred to the Superintendent of Documents, Government Printing Office. Orders for Patent Office publications should NOT be sent to the Patent Office, but to the "Superintendent of Documents," to whom all remittances for such publications should be made payable.

Printed copies of specifications and drawings of patents will be furnished by the Patent Office, as heretofore.

EDWARD B. MOORE,
Commissioner.

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

Remittances to the Patent Office.

Checks should be certified. Cash should be registered; if by ordinary mail at risk of sender. Postage stamps not receivable.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 20, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 25	Dec. 7	428
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 4	Dec. 7	517
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 21	Jan. 8	207
223	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Dec. 14	Dec. 14	315
167	5. Bookbinding; Harvesters; Jewelry; Music.	Dec. 16	Dec. 9	363
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 22	Dec. 21	247
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 15	Nov. 29	546
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Dec. 12	Dec. 22	350
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 14	Dec. 18	294
235	10. Carriages and Wagons	Nov. 27	Nov. 27	653
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 5	Dec. 6	357
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 4	Dec. 4	615
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Nov. 16	Dec. 8	459
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 27	Dec. 18	373
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Nov. 23	Nov. 29	749
109	16. Telegraphy; Telephony	Nov. 14	Dec. 5	176
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Dec. 21	Dec. 20	273
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 20	Dec. 16	249
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Dec. 18	Dec. 21	408
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 20	Nov. 20	204
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 18	Dec. 20	334

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 19	Dec. 20	379
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 9	Dec. 15	382
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 11	Dec. 9	443
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 26	Dec. 23	229
106	26. Electricity, Generation; Motive Power.	Oct. 2	Oct. 14	500
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 20	Dec. 18	328
65	28. Internal-Combustion Engines	Nov. 11	Nov. 6	859
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Oct. 30	Dec. 11	438
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 13	Jan. 2	273
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Dec. 14	Dec. 18	235
276	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 7	Dec. 16	233
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 2	Dec. 15	410
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 13	Dec. 14	431
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Dec. 8	Dec. 14	757
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Dec. 12	Dec. 5	596
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Nov. 1	Dec. 20	461
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Nov. 21	Dec. 4	551
221	39. Water Distribution	Dec. 2	Nov. 7	493
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 20	Jan. 5	253
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 3	Dec. 13	556
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 18	Nov. 13	595
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 19	Dec. 12	320

Oldest new case, Oct. 2; oldest amended, Oct. 14.

Total number of applications awaiting action 17,848

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 13	Nov. 13	1540
	Designs	Nov. 16	Dec. 16	308
	Labels and Prints	Jan. 11	Dec. 22	65

PATENTS

GRANTED JANUARY 23, 1912.

1,015,279. BEAM-FORM AND JOIST FOR CONCRETE STRUCTURES. ROBERT ANDERSON, Cincinnati, Ohio. Filed Dec. 27, 1910. Serial No. 599,599. (Cl. 25—131.5.)

1. A form for concrete members provided with vertically extending battens, spaced along the form, a coping secured to the battens and provided with joist-receiving notches, located immediately adjacent to and on one side of the battens, and joist-supporting means secured to the battens.

2. A form for concrete members provided with vertically extending battens spaced along the form, a coping secured to the battens and provided with a joist-receiving notch, located immediately adjacent to and on one side of each batten, and joist-supporting strips extending longitudinally of the form and secured to the battens.

3. In combination in a form work, beam forms provided with vertically extending battens spaced longitudinally of the form, coping mounted on the form and provided with a joist-receiving notch, located immediately adjacent to and on one side of each batten, and a joist-supporting strip mounted on the battens and joist located on said strips with their ends projecting into said notches.

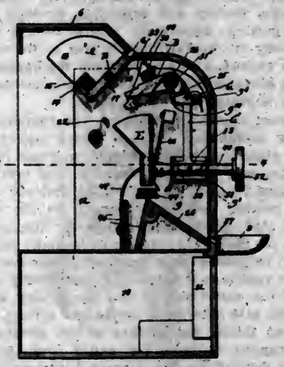
4. A form for concrete members provided with vertically extending battens spaced along the form, a coping secured to the battens and provided with joist-receiving notches, located immediately adjacent to and on one side of each batten, joist-supporting strips extending longitudinally of the form and secured to the battens, and extensible joists whose ends engage the notches in adjacent copings.

1,015,280. TELEPHONE TOLL APPARATUS. EDWARD P. BAIRD, Chicago, Ill., assignor to Baird Manufacturing Company, Chicago, Ill. Filed July 22, 1901. Serial No. 69,204. Renewed June 16, 1911. Serial No. 633,592. (Cl. 194—16.)

1. In a toll-apparatus for telephones, the combination with a coin-controlled switch for controlling passage of current over an electrical circuit, of means whereby said switch will be locked in shifted position, coin-distributer-mechanism, means whereby said distributer-mechanism can be operated by the depositor, and means whereby said switch-locking-means will be operated to release said switch when the means whereby the depositor shifts the distributer-mechanism is shifted to place a coin beyond control of the depositor.

2. In a toll-apparatus for telephones, the combination with a coin-controlled-switch for controlling passage of current over an electrical circuit, of means whereby said switch will be locked in shifted position, coin-distributer-mechanism, means whereby said distributer-mechanism can be operated by the depositor, and means whereby said switch-locking-means will be operated to release said switch when the means whereby the depositor operates the distributer-mechanism is shifted to place a coin beyond control of the depositor or to refund a coin.

3. In toll apparatus for telephones, the combination with a signal circuit and a line-signal at the central exchange, of a switch at the sub-station for controlling the operation of said line-signal, means whereby said switch will be shifted into position to cause the operation of the line-signal when a coin is deposited, means for holding said switch in position to cause the operation of the line-signal, coin distributer mechanism operable by the depositor to place a coin beyond his control, and means whereby the switch holding means will be operated to release the switch when the distributer mechanism is operated.



4. In toll apparatus for telephones, the combination with a signal-circuit and a line-signal at the central exchange, of a line-signal-switch at the sub-station for controlling the operation of said line-signal, coin-controlled mechanism for shifting said switch, a latch for holding said switch in position to cause the actuation of the line-signal, and means whereby the release of said switch may be manually effected by the depositor.

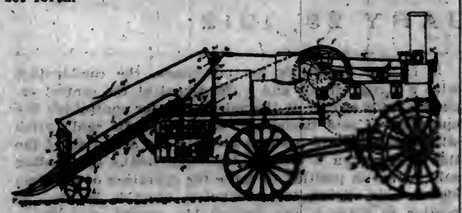
5. In toll apparatus for telephones, the combination with a signal-circuit and a line-signal at the central exchange, of a line-signal-switch at the sub-station for controlling the operation of said line-signal, mechanism whereby a coin can be positively shifted to set said switch into position to cause the actuation of said line-signal, means comprising a latch for holding the switch in such position, and means whereby the release of said switch may be manually effected by the depositor.

[Claims 6 to 19 not printed in the Gazette.]

1,015,281. CORN-HARVESTING MACHINE. CHARLES E. BALKEMA, La Fayette, Ind., assignor to Henry H. Bliss, trustee, Washington, D. C. Filed Dec. 11, 1901. Serial No. 85,521. Renewed June 16, 1911. Serial No. 633,563. (Cl. 56—118.)

1. In a corn harvesting apparatus, the combination of a vehicle, the mechanism through which power for propelling the apparatus is transmitted, a detachable frame rigidly connected to the vehicle, and an ear-picking mechanism hinged to the said detachable frame, the hinge of the ear-picking mechanism being in advance of the forward supporting wheels of the vehicle, substantially as set forth.

2. In a corn harvesting and husking apparatus, the combination of the vehicle having front and rear supporting wheels, the frame rigidly secured on the front end of the vehicle, the husking mechanism mounted in said frame, the ear-picking mechanism hinged at its upper rear end to said frame, and the ground-engaging support for the front end of said picking mechanism, substantially as set forth.



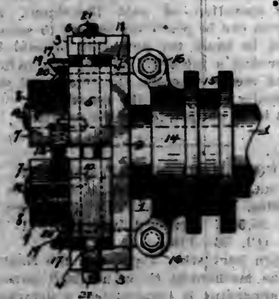
3. In a corn harvesting apparatus, the combination of a vehicle, the mechanism through which power for propelling the apparatus is transmitted, a frame rigidly supported by the said vehicle arranged in the vertical, longitudinal planes thereof and extending forward from said vehicle, a picking mechanism hinged to the said rigid frame whereby its forward end is free to follow the surface of the ground, and side delivery mechanism for the picked ears arranged between the picking mechanism and the vehicle, substantially as set forth.

4. In a corn harvesting machine, the combination of a vehicle, the mechanism through which power for propelling the apparatus is transmitted, a frame rigidly supported by the said vehicle arranged in the vertical longitudinal planes thereof, and extending forward from said vehicle, a picking mechanism hinged to the said rigid frame, and side delivery mechanism for the picked ears mounted in the said rigid frame, substantially as set forth.

5. A self propelling corn harvesting machine comprising a motor vehicle, a detachable frame rigidly secured to one end of the motor vehicle, an ear-picking mechanism hinged to the said detachable frame and arranged to have its front end follow the surface of the ground, driving gearing arranged between the motor and the traction wheels, and driving gearing arranged between the motor and the ear-picking mechanism, respectively, a clutch device being arranged in each of the said sets of driving gearing, the one for the ear picking mechanism being detachable therewith, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

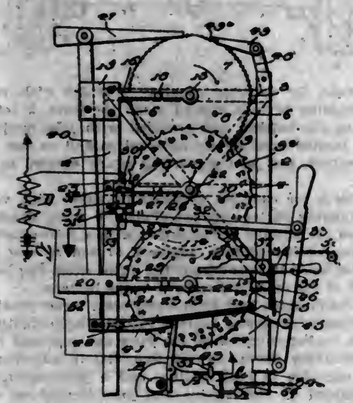
1,015,282. DIE STOCK OR HEAD. JAMES A. BECHER, Chicago, Ill. Filed Aug. 9, 1910. Serial No. 576,422. (Cl. 10—95.)



1. The combination with a shaft, a head fixed thereto and provided with parallel arms or flanges, of guide-bars connecting said arms or flanges, die holding jaws movable on said guide-bars, a sheave or collar, and pins attached to said sheave or collar, passing through said fixed head and coöperating with the jaws to move them toward each other.

2. The combination with a shaft, a head fixed thereto and die holding jaws movably supported in said head and provided with lugs, of a sheave or collar slidable on and rotatable with said shaft, rods or pins pivotally connected with said sheave or collar and passing freely through the fixed head, said rods or pins being beveled at their free ends and adapted to coöperate with the lugs on the jaws to move the latter toward each other, and screws to engage said rods or pins for adjusting the same to adjust the extent of movement of the jaws toward each other and the dies carried by said jaws relatively to the work.

1,015,283. AUTOMATIC MOTOR-CONTROLLER. TJEBBE D. BEINTEMA and DICK DE ROOI, Oskaloosa, Iowa. Filed Oct. 7, 1909. Serial No. 521,553. (Cl. 235—132.)



1. A device of the character described including a train of coacting disks, means moving each disk through a portion of a revolution upon a complete revolution of the disk engaging therewith, motor-actuated means for giving a step by step movement to the first disk of the train, a pivoted motor-controlling lever, means acting to move the lever in one direction, a latch for holding said lever from said movement, means mounted on the last disk of the train to release the latch from its engagement with the lever when the last disk of the train has completed its revolution, an ignition circuit, and means operatively connected to the controlling lever for breaking said ignition circuit upon a release of said lever by the latch.

2. A device of the character described, including a frame composed of oppositely arranged longitudinal bars connected by transverse cross pieces, a train of disks mounted on said cross pieces and overlapping each other, means for moving each disk through a portion of a revolution upon a complete revolution of the disk engaging therewith, motor actuated means for giving a step by step movement to the first disk of the train, a pivoted motor controlling lever mounted on one of the side bars of the frame, a motor, electrical ignition devices on the motor, a switch to which the controlling lever is connected, an electric circuit including the electrical ignition devices and said switch, means acting to move the lever in one direction to cause the switch to break the ignition circuit, means holding the lever from movement, and means for releasing said lever upon a complete revolution of the last disk of the train to break the circuit to the ignition devices and simultaneously actuate the motor controlling lever to move it in one direction.

3. A device of the character described including opposed longitudinally extending frame-bars, a plurality of toothed disks mounted on said cross-pieces, said disks overlapping each other and each disk having thereon a pin projecting from its face and adapted to engage with a tooth on the next succeeding disk to give said next succeeding disk a movement through a portion of a revolution upon a complete revolution of the first disk, a reciprocating lever pivoted upon one of the frame-bars, means for reciprocating said lever from an explosive engine, a dog on said lever engaging with the first disk of the train for a step-by-step movement, a motor controlling lever pivoted to one of the frame-bars, a latch also pivoted to said frame-bars and detachably engaging the controlling lever to lock it in one position, a stud on the last disk of the train so disposed as to engage said latch, a spring acting to move the lever in one direction, an electrical switch mounted on one end of the frame-bars and adapted to be connected in circuit with the ignition device of said engine, a connection between said switch and the controlling lever whereby the switch shall be opened when the controlling lever is moved by the spring to break the circuit to the ignition devices, and a connection from said lever to the fuel controlling devices of said engine whereby upon an actuation of the lever by the spring the switch shall be opened to break the circuit to the ignition devices and the fuel supply to said engine simultaneously closed.

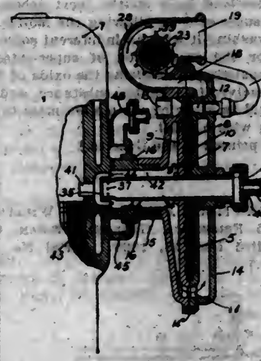
4. A device of the character described, including opposed longitudinally extending frame bars connected by a plurality of transverse cross pieces, a plurality of toothed disks mounted on said cross pieces, each disk having thereon a pin projecting from its face, engaging with a tooth on the next succeeding disk to give said next successive disk a movement through a portion of a revolution upon a complete revolution of the first disk, a motor-actuated reciprocating lever pivoted upon one of the frame bars, a dog on said lever, engaging with the first disk of the train for a step-by-step movement, a dog mounted on the opposite frame bar and engaging with the teeth of the first disk of the train for preventing a reverse movement of said disk, a controlling lever pivoted to one of the frame bars, a latch also pivoted to said frame bars and having notches engaging the controlling lever to lock it in one position, said latch projecting over the last disk of the train, a stud on said last disk, located to engage with said latch and move it to release the lever, a spring acting to move the controlling lever in one direction, an electrical switch mounted upon one of the frame bars and adapted to be connected to the ignition devices of a motor, and a connection between the said switch and the controlling lever, whereby the switch shall be opened when the controlling lever is moved by the spring.

5. A device of the character described, including opposed longitudinally extending frame bars connected by a plurality of cross bars, a toothed disk mounted on each of the cross bars, each disk having a pin projecting from its face, adapted to engage with a tooth on the next succeeding disk, a lever pivoted on one of the frame bars and having an inward projection at one end engaging with motor-actuated reciprocating devices, a dog on the other end of the lever, engaging with the teeth of the first disk of the train for a step-by-step movement, a hooked dog mounted on the opposite frame bar and engaging with said teeth to prevent a reverse movement of the disk, a controlling lever pivoted to the frame, an electrical switch adapted to be connected to the ignition devices of a motor, a connection between the lever and the switch, whereby when the lever is moved in one direction, the switch is broken, a latch engaging the lever to hold it against movement, a spring connected to one of the frame bars and at its other end connected to said lever to move it to break the switch, and a stud on the last disk of the train, located to engage with said latch to move it to release the lever.

1,015,284. HAIR-PIN. CHARLES R. BENDIX, Philadelphia, Pa. Filed May 12, 1910. Serial No. 560,811. (Cl. 132—22.)

A hair-pin consisting of an elongated loop bent or offset at a point in its length from the normal plane of the tines, and having the side bars at a point adjacent to said bend or offset bent laterally away from one another to form a laterally enlarged offset looped head extending from a relatively contracted opening, whereby the hairs passing through said opening will be confined in said offset head.

1,015,285. VAPORIZER. ELIJAH B. EDNHAM, New London, Conn., assignor, by direct and mesne assignments, to Hydrocarbon Converter Company, New York, N. Y., a Corporation of Delaware. Filed June 2, 1908. Serial No. 436,200. (Cl. 48—102.)



1. A vaporizer or gasifier for hydrocarbon oils and the like, comprising in combination a solid body of porous material having a port or passage leading from one side of it to the other, means for distributing oil over one side of said body, means for collecting gas or vapor from the other side of said body, and means for heating said porous body.

2. In a vaporizer or gasifier for hydrocarbon oils, a porous member having a port leading from one side to the other, means for subjecting the opposite sides of said member to heat of different degrees, means for passing the fuel over both faces of said member, and means for collecting the vapor produced.

3. In a vaporizer or gasifier for hydrocarbon oils, a porous member having a port leading from one side to the other, means for subjecting the opposite sides of said member to heat of different degrees, means for passing a thin film of fuel over both faces of said porous member whereby said fuel is decomposed and the gases separated, and means for collecting the gas or vapor evolved.

4. In a vaporizer or gasifier for hydrocarbon oils, a porous member provided with a port leading from one side thereof to the other, means for heating the opposite faces of said member to temperatures of different degrees by circulating gases therearound, an inclosing plate on each side of said member, said plates being each provided with channels adapted to guide the fuel first over one face of said member and then on the opposite face of said member.

5. A vaporizer or gasifier for hydrocarbon oils and the like, comprising in combination a solid body of porous material and inclosing members therefor, space being provided on one side of said porous body for distributing oil

thereover, space being provided on the other side of the said porous body for collecting gas or vapor, a heating chamber inclosing said porous body and its inclosing members, and adapted for the flow through it of the exhaust gases of a gas engine, and means for introducing air to such chamber to complete the combustion of such exhaust gases.

[Claim 6 not printed in the Gazette.]

1,015,286. PROCESS OF MAKING ALKALI-EARTH PEROXID. FRIEDRICH BERGIUS, Hanover, Germany. Filed Apr. 11, 1911. Serial No. 620,402. (Cl. 23—13.)

1. Process for the preparation of super-oxids of the alkali earths, consisting in oxidising the oxids of the alkali earths when dissolved in a molten inert substance.

2. Process for the preparation of super-oxids of the alkali earths, consisting in oxidising the oxids of the alkali earths when dissolved in an alkali in molten condition.

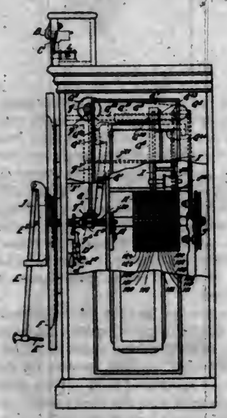
3. Process for the preparation of super-oxids of the alkali earths, consisting in oxidising the oxids of the alkali earths when dissolved in a molten inert substance by passing a gas containing free oxygen through the molten product.

4. Process for the preparation of super-oxids of the alkali-earths, consisting in oxidising the oxids of the alkali earths when dissolved in a molten inert substance, and separating the super-oxid by allowing the molten mass to cool and then washing it with an indifferent solvent agent.

5. Process for the preparation of super-oxids of the alkali earths, consisting in oxidising the oxids of the alkali earths when dissolved in a molten substance, and separating the super-oxid by allowing the molten mass to cool and then washing it with alcohol.

[Claim 6 not printed in the Gazette.]

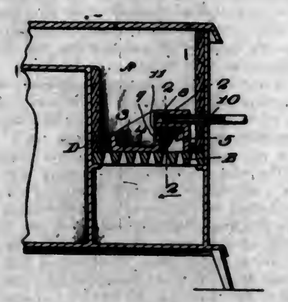
1,015,287. TIME-CHECK APPARATUS. WILLIAM DAVID BOWMAN and FREDERICK GEORGE BOWMAN, Glasgow, Scotland. Filed Dec. 18, 1909. Serial No. 533,935. (Cl. 234—41.)



1. The combination with time check apparatus, said apparatus including a clock, marking devices for marking the times given by the clock, connections between the clock and the marking devices, imprint taking mechanism, and controlling mechanism for controlling the position of the imprint produced by said marking devices, of cooperating parts adapted to be locked together and unlocked, the locking and unlocking of which are controlled by said controlling mechanism, said controlling mechanism being so constructed and arranged in relation to said marking devices and to said coöperating parts that the marking and unlocking operations controlled thereby shall be consequent one on the other.

2. The combination with a clock, of marking devices in gear with the clock, imprint taking mechanism, controlling mechanism for controlling the position of the imprint produced by said marking devices, a number of sets of cooperating parts adapted to be locked together and unlocked the locking and unlocking of which are controlled by said controlling mechanism, said controlling mechanism being so constructed and arranged in relation to said marking devices and said coöperating parts that the marking and unlocking operations controlled thereby shall be consequent one on the other, and a selector coöperating with the controlling mechanism and the marking devices.

1,015,288. OIL-BURNER. HUGH L. BRALY, Clarendon, Tex. Filed Nov. 27, 1909. Serial No. 530,151. (Cl. 158—91.)



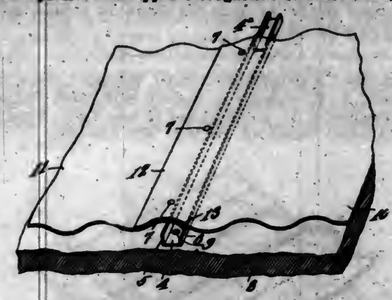
1. In an oil burner, a hollow body of refractory material open on its under side for its entire length and adapted to rest upon the grate of a stove, said body having a hearth projecting out laterally therefrom at the base of the body, an oil supply duct extending through the interior of the hollow body and opening upon the face of the body above the hearth, and an air supply duct spaced from the oil supply duct and communicating with the hollow interior of the body, said duct also opening upon the face of the hearth adjacent to the opening of the oil supply duct, said body being further provided with a plurality of air openings disposed on either side of the opening of the oil supply duct and extending along the wall of the hollow body above the bottom of the hearth.

2. In an oil burner, a hollow body of refractory material rectangular in section and open on its under side and adapted to rest upon the grate of a stove, said body having a hearth projecting out laterally therefrom at its base, the ends of said hearth having upwardly extending walls joining the body, an oil supply duct extending through the interior of the hollow body and opening upon the face of the body above the hearth, air supply ducts disposed one on either side of the oil duct and communicating with the hollow interior of the body and so arranged as to direct a blast of air outwardly to drive the flames away from the face of the body and away from the oil duct, and a plurality of air openings disposed on each side of the oil duct, but below the same and extending along the face of the body and communicating with the hollow interior thereof.

1,015,289. ATTACHMENT FOR CORRUGATED ROOFING. THOMAS G. REAWLEY, Arcanum, Ohio. Filed Nov. 20, 1911. Serial No. 661,424. (Cl. 108—12.)

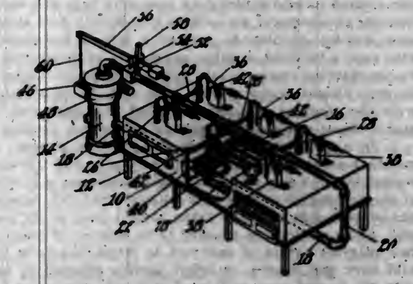
In combination, a base, corrugated sheets thereon having the end corrugations overlapped, a channel arranged on the base and under the edge of the inner corrugation

and having the flanges of lengths to bring the edges against the respective overlapped corrugations to brace same, and



securing members passed through the overlapped corrugations to engage the base, as and for the purpose specified.

1,015,290. HEATING SYSTEM FOR INCUBATORS. COURTNEY S. BRYANT, Greene, N. Y. Filed Mar. 11, 1910. Serial No. 548,603. (Cl. 237—23.)



1. An incubator comprising, in combination, a plurality of compartments arranged horizontally, a main circulating system for the heating fluid comprising an outgoing conductor lying in a plane above the compartments and a return conductor having at all times free communication with the outgoing conductor and lying in a plane below the compartments, compartment circulating systems each communicating at its respective termini with the outgoing and return conductors, means for automatically controlling the temperature of the heating fluid in the main circulating system and means for automatically and independently controlling the circulation of the heating fluid through each of the compartment circulating systems.

2. An incubator comprising, in combination, a main circulating system for the heating fluid, a compartment circulating system communicating with the main circulating system, means for automatically controlling the temperature of the fluid in the main circulating system, a valve centrally suspended in the communication between the main circulating system, and the compartment circulating system and gravitating to open position in the direction of flow of the heating fluid through said compartment system, a thermostat in the compartment and operative connections between said valve and said thermostat whereby a rise in temperature in the compartment effects a positive movement of said valve against the flow of the fluid toward closed position.

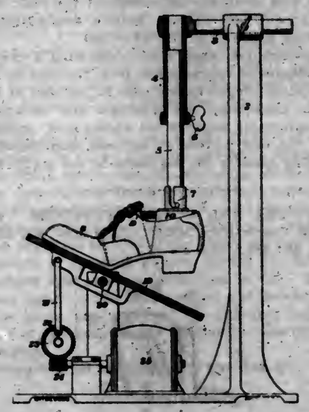
3. An incubator comprising, in combination, a main circulating system for the heating fluid, a compartment circulating system communicating with the main circulating system, means for automatically controlling the temperature of the fluid in the main circulating system, a valve in the communication between said circulating systems comprising a true cone arranged to move to open position in the direction of flow of the heating fluid through said compartment system, a transversely rounded seat for said valve, and thermostatic means for controlling the movements of said valve in accordance with variations in the temperature of the compartment.

4. An incubator comprising, in combination, a compartment, fluid heating means, a main circulating system for the heating fluid comprising an outgoing conductor arranged above the compartment and a return conductor arranged below the compartment, a compartment circulating system communicating at its respective ends with the outgoing and return conductors, the communication between the outgoing conductor and compartment system comprising a vertical pipe, the open upper end of which is above the level of the heating fluid in the main circulating system, a conical valve suspended by its apex in said pipe below the point at which the heating fluid is introduced, a valve seat above said valve and below said point, and thermostatic means for controlling the movements of said valve in accordance with the variations of the temperature in said compartment.

5. An incubator comprising, in combination, two rows of compartments arranged in horizontal lines, back to back, fluid heating means, a main circulating system for the heating fluid comprising an outgoing conductor extending along a median line above the rows, a return conductor in substantially a similar location below the rows and means providing free communication between the outer ends of said conductors, compartment circulating systems each communicating at its respective ends with the outgoing and return conductors, thermostatic means for maintaining at substantial uniformity the temperature of the heating fluid in the outgoing conductor, a valve in the communication between the outgoing conductor and each compartment system and a thermostat in each compartment operatively connected with the appropriate valve to control the circulation of the heating fluid through the compartment system in such manner that the temperature of the compartment is maintained at substantial uniformity.

[Claims 6 and 7 not printed in the Gazette.]

1,015,291. APPARATUS FOR BREAKING IN SHOES. CLARENCE P. BYRNES, Sewickley, Pa. Filed Apr. 28, 1909. Serial No. 492,660. (Cl. 12—130.)



1. In apparatus for breaking in shoes, a shoe support, a flexible last, a support for the last, and connections arranged to set up an alternating relative movement between the last and shoe support to flex both the heel and toe portions of the shoe; substantially as described.

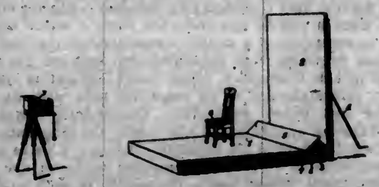
2. In apparatus for breaking in shoes, a flexible last arranged to be inserted in the shoe, a carrier for the last, a support on which the shoe loosely rests, and connections arranged to set up an oscillatory movement between the last and shoe support.

3. In apparatus for breaking in shoes, a flexible last, a carrier therefor, a support for the shoe, and connections arranged to set up a relative motion between the last carrier and the support corresponding to the movement in walking, whereby the shoe is flexed both at the heel and toe; substantially as described.

4. In apparatus for breaking in shoes, a flexible last, a fixed support therefor, a carrier on which the shoe rests, and mechanism for oscillating said carrier in both directions to flex both the heel and toe portions of the shoe; substantially as described.

5. In apparatus for breaking in shoes, a rigid support for the shoe, a flexible last, a support for the last, and connections arranged to set up a relative motion between the last support and the shoe support to oscillate at least a portion of the shoe; substantially as described.

1,015,292. PHOTOGRAPHIC APPARATUS. JOSEPH C. CALHOUN, Holland, Mich. Filed Aug. 11, 1910. Serial No. 576,725. (Cl. 95—82.)



1. A photographic apparatus comprising a rigid platform having a hinged and vertically adjustable rear portion, a background at the rear of said adjustable portion and means for holding the background and the said portion in various relatively adjusted positions.

2. A photographic apparatus, comprising a raised platform, a background spaced apart therefrom, an adjustable rear portion hinged to the platform at the front and vertically adjustable at the rear, and means for holding said rear portion in adjusted position.

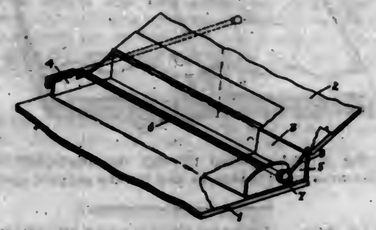
3. A photographic apparatus comprising a raised platform, a portion at the rear hinged to the platform at the front side and vertically adjustable at the rear, segments attached at one end to said portion and adjustably attached to the platform at the other end.

4. A photographic apparatus, comprising a raised platform, a background spaced apart from the rear of the platform, a portion hinged at one side to the rear of the platform, rods connecting the platform and background, a brace to adjustably support the background, segments attached to the said portion at one end, and thumb screws to adjustably connect the segments to the platform.

1,015,293. TEA AND COFFEE STRAINER. AXEL L. CARLSON, Center City, Minn. Filed Sept. 12, 1910. Serial No. 581,483. (Cl. 53—3.)

The herein described strainer comprising a substantially trough shaped body having downwardly converging side walls to fit in the lower side of the spout of a coffee or tea pot, the said body being open at its inner end and provided at its outer end with a foraminous pouring lip extending from and connecting the bottom and the side walls thereof and adapted to project beyond the outer end of the spout to which the strainer is applied, the strainer being further provided with a U-shaped clamping spring, the ends of which are secured to the sides of the strainer, the bight portion of said spring being adapted to engage the outer side of the spout and secure the strainer detachably in place therein.

1,015,294. MANIFOLDING-PAD. EDWARD CARNEY, Glendale, N. Y., assignor to Eastern Sales Book Company, Glendale, N. Y., a Corporation of New York. Filed Jan. 19, 1909. Serial No. 473,102. (Cl. 129—38.)



1. In a device of the character described, the combination with a pad, of a support therefor, a sheet metal member secured to said support, an upwardly bent end thereof forming an abutment for said pad, upwardly bent sides to said member adapted to prevent a lateral movement of said pad, a resilient member adapted to be interposed between adjacent leaves of said pad, to prevent a withdrawal thereof, hinged to one of said sides, and means associated with the other of said sides adapted to engage and hold said resilient member when sprung into proper position.

2. In a manifolding pad, in combination, a back, side members extending upwardly therefrom, a rear abutment connecting said side members, a pad comprising a plurality of sheets adapted to be placed between said side members, one of said side members being turned over at its upper edge, and a spring arm adapted to be inserted between any two adjacent sheets of said pad to retain the same upon said back and having an offset portion adapted to coact with the turned over portion of said side member to form a hinge, said arm being adapted to interlock with the other of said side members.

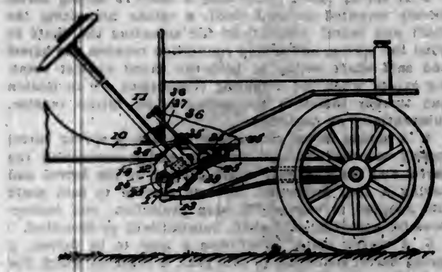
3. In a manifolding pad, in combination, a back, side members extending upwardly therefrom, a rear abutment connecting said side members, a pad comprising a plurality of sheets adapted to be placed between said side members, one of said side members being turned over at its upper edge, a spring arm adapted to be inserted between any two adjacent sheets of said pad to retain the same upon said back and having an offset portion adapted to coact with the turned over portion of said side member to form a hinge, and a recess in the other of said side members opening upwardly in a direction toward said abutment and within which the free end of said arm is adapted to be sprung and retained against the pull exerted thereon by the removal of sheets from said pad.

1,015,295. STEERING-GEAR. GEORGE H. CHAPLAIN, Leavenworth, Kans. Filed Feb. 2, 1911. Serial No. 606,271. (Cl. 21—60.)

1. A steering gear including a quadrant having an elongated hub, independent shafts journaled in the ends of the hub, clutch-members carried upon the shafts for alternate interlocking engagement with the hub, holding means connected to the clutch-members for interlocking one of the same normally with the hub, and a lever connected to the clutches for alternating the interlocking of the clutches.

2. Steering gear including independent steering mechanisms, shafts independently connected to the steering mechanisms, a single steering post, a quadrant connected for operation to the steering post, and clutches between the shafts and the quadrant for alternately interlocking the shafts thereto.

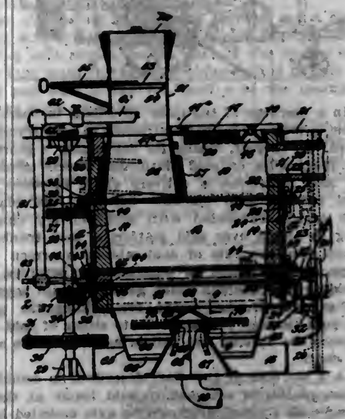
3. A steering gear including a pair of independent steering mechanisms, shafts connected to the mechanisms, clutches keyed upon the shafts for longitudinal sliding movement, an operating quadrant arranged between the shafts and having clutch teeth at its opposite ends, a spring connected to the clutch-sleeves for normally holding one of the same in engagement with the quadrant, and an operating lever connected to the clutch-sleeves for effecting the alternate interlocking engagement of the clutch-sleeves with the quadrant.



4. A steering gear including separate steering mechanisms, a quadrant arranged between the shafts for interlocking engagement with the quadrant, operating members connected to the clutch-sleeves for holding the same for alternate interlocking engagement with the quadrant, a spring connected to the operating members for holding the same in one position, and a lever communicating with the operating members for changing the position of the same.

5. A steering gear including a hub, means for rotating the hub, clutch members carried at the ends of the hub, one of which is adapted for normal interlocking engagement with the hub, steering mechanisms connected independently to the clutches, holding means having connection to the clutch members for interlocking one of the same with the hub, and a lever connected to the clutches for alternating the interlocking of the same.

1,015,296. GAS-PRODUCER. WILLIAM B. CHAPMAN, New York, N. Y. Filed Nov. 23, 1908. Serial No. 464,150. (Cl. 48—66.)



1. A gas producer, having a stationary top portion, a rotating section below it adapted to carry burning fuel, a charging hopper in the upper portion of the producer, the bottom of the hopper being open so that its contents may rest superimposed on the fuel in the rotating section, a stationary section below the rotating section, a second rotating section below the stationary section, the second rotating section carrying the ashes a plowing means located in the ash zone, said plowing means serving, through the ash, to agitate the lower part of the burning fuel, an ash pan below the lower or second rotating section, a nozzle standing in the pan and rising into said second rotating section and to which nozzle the plowing means are immovably attached, horizontally disposed ribs in the lower rotating section to assist in sustaining the ashes therein, means for drawing off the gases generated in the charging hopper and by-passing such gases to the interior of the producer through the second named stationary section and seals between the relatively moving section formed of members in sliding contact with each other.

2. A gas producer, having a stationary top portion, a rotating section below it adapted to carry burning fuel, a charging hopper in the upper portion of the producer, the bottom of the hopper being open so that its contents may rest superimposed on the fuel in the rotating section, a stationary section below the rotating section, a second rotating section below the stationary section, the second rotating section carrying the ashes, a plowing means located in the ash zone, said plowing means serving, through the ash, to agitate the lower part of the burning fuel, an ash pan below the lower or second rotating section, a nozzle standing in the pan and rising into said second rotating section and to which nozzle the plowing means are immovably attached and horizontally disposed ribs in the lower rotating section to assist in sustaining the ashes therein.

3. A gas producer having a stationary top portion a rotating section below it adapted to carry burning fuel, a charging hopper in the upper portion of the producer, the bottom of the hopper being open so that its contents may rest superimposed on the fuel in the rotating section, a stationary section below the rotating section, a second rotating section below the stationary section, the second rotating section carrying the ashes, a plowing means located in the ash zone, said plowing means serving, through the ash, to agitate the lower part of the burning fuel and horizontally disposed ribs in the lower rotating section to assist in sustaining the ashes therein.

4. A gas producer, having a stationary top portion, a rotating section below it adapted to carry burning fuel, a charging hopper in the upper portion of the producer, the bottom of the hopper being open so that its contents may rest superimposed on the fuel in the rotating section, a stationary producer section below the rotating section, a second rotating section below the stationary section, the second rotating section carrying the ashes and a plowing means located in the ash zone said plowing means serving, through the ashes, to agitate the lower part of the burning fuel.

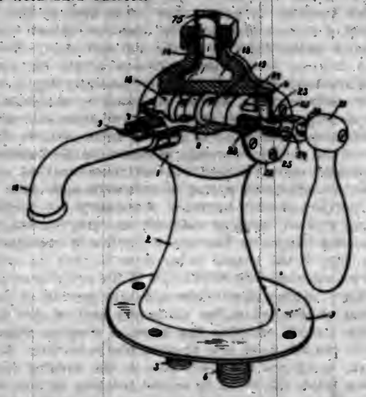
5. A gas producer, having a body formed of a stationary top section, an upper rotating section, a lower stationary section and a lower rotating section, a crusher nozzle projecting upward into the lower rotating section, a stationary plow sustained by the nozzle, whereby the ashes moving with the lower rotating section are caused to exercise an agitating action on the lower part of the burning fuel above, a charging hopper carried by the stationary top section and open at its bottom so that the fuel supply may bear on the burning fuel and means for bypassing the gases generated in the charging hopper to the interior of the body of the producer at the lower stationary section.

[Claims 6 to 48 not printed in the Gazette.]

1,015,297. FAUCET. JOSEPH EDMOND LAURENT CHATILLON, Hull, Quebec, Canada. Filed Sept. 26, 1910. Serial No. 583,919. (Cl. 137—26.)

1. A faucet, comprising a body portion having a valve chamber formed therein, a cold water passage and a hot water passage leading to said valve chamber and a plurality of outlets communicating therewith, a valve plug fitting said valve chamber and turning therein and having a pair of channels in peripheral alinement with one water inlet passage and a third channel parallel to said pair of channels and in peripheral alinement with the other of

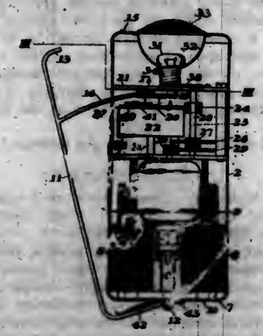
said inlet passages adapted to be brought into communication with said outlets.



2. A faucet, comprising a body portion having a longitudinally-extending valve chamber formed therein, a plurality of water inlet passages communicating with said valve chamber in longitudinal alinement one with the other, a plurality of water outlets, a plurality of outlet ports connecting each of said water outlets with said valve chamber at points in circumferential alinement with said inlet passages and a plug valve having a pair of channels in circumferential alinement one with the other and located on opposite sides of the periphery of said valve plug and adapted to register with one of said inlet passages and corresponding outlet ports and a third channel equal in length to the combined length of said pair of channels in said valve plug and parallel therewith and in circumferential alinement with the other of said water inlet passages and corresponding outlet ports.

3. In a faucet having a tapered longitudinal valve chamber extending thereinto from one side, a plurality of inlet and outlet passages communicating therewith and a tapered valve plug fitting said chamber, of a cover plate having a central orifice through which the stem of said valve plug extends, means securing said plate over the open end of said valve chamber, a spring encircling the stem of said valve plug on the inside of said plate, a pin projecting from the outer end of said valve plug and a stop lug projecting inwardly from said cover plate.

1,015,298. SPRING-MOTOR. HARRY W. CLELAND, Wilkinsburg, Pa., assignor to G. Brewer Griffin, Edgewood Park, Pa. Filed May 28, 1906. Serial No. 261,858. (Cl. 185—6.)



1. A spring motor having a hand-operated device for winding the spring, and means for preventing the spring from acting except while the hand-operated device is being actuated and thereby maintain the spring under an initial tension, substantially as described.

2. A spring motor having actuating connections for winding the spring, manual means for actuating said connections, and a connection between said manual means and the spring, whereby the spring will exert a driving action only when the manual means is being operated and thereby maintain the spring under an initial tension, substantially as described.

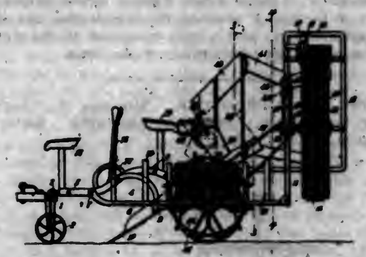
3. A spring motor comprising a shaft, a spring barrel loosely mounted on said shaft, a spring connecting the shaft and barrel, connections for actuating the shaft to wind the spring, and a stop connection between the barrel and said shaft acting to hold the barrel against rotating except when the actuating connections are in motion and thereby maintain the spring under initial tension, substantially as described.

4. A spring motor comprising a shaft, a spring barrel loosely mounted on said shaft, a spring connecting the barrel and shaft, a gear wheel carried by the barrel and having a stop projection, an arm secured to said shaft and adapted to engage the stop projection, and connections for actuating said shaft, substantially as described.

5. A spring motor comprising a gear to be driven, a spring barrel connected to said gear, a shaft on which the spring barrel is loosely mounted, a ratchet wheel connected to said shaft, a spring within the barrel and connecting the barrel and shaft, and a stop between the spring barrel and the shaft arranged to maintain the spring under an initial tension, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

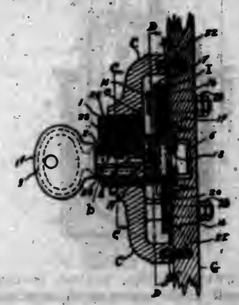
1,015,299. ATTACHMENT FOR ELEVATED POTATO-DIGGERS. GEORGE WILLIAM COOPER, Patten, Me. Filed Dec. 10, 1909. Serial No. 532,351. (Cl. 130—32.)



1. In a machine of the class described, in combination, a frame, a pair of platforms attached to said frame at the forward end thereof, means for supporting a plurality of empty receptacles on said platforms, wheels mounted between said platforms, a delivery chute disposed on the central axis of said machine between said platforms, branch trunks connected with said delivery chute and leading to points over said platforms, said trunks being disposed over the axis of said wheels, a screen in said delivery chute adapted to separate the potatoes, means for guiding the potatoes which pass over said screen into either of said trunks, means for guiding the potatoes which pass through said screen into either of said trunks, and means for raising and delivering potatoes to said delivery chute.

2. In a machine of the class described, in combination, a frame, platforms attached to said frame at the front and rear ends thereof, a transverse axle mounted between said platforms, driving wheels mounted on said transverse axle, outside wheels secured to the outer edges of said platforms, a delivery chute disposed over the central axis of said frame, means for raising and delivering potatoes to said delivery chute, driving connections between said means and said driving wheels, a screen in said delivery chute, trunks leading from said delivery chute to points over said platforms, means for guiding the potatoes which pass over said screen into either of said trunks, and means for guiding the potatoes which pass through said screen into either of said trunks.

1,015,300. AUTOMATIC LOCK-SWITCH. WARREN R. COX, Cleveland, Ohio. Filed Aug. 4, 1910. Serial No. 575,451. (Cl. 175—282.)



1. In devices as described, a suitable base and casing, an electrical switch adapted to be oscillated in said casing, a barrel having a flat sided extension operatively engaged with said switch and projecting through the same, a key removably engaged in said barrel and means engaging said barrel adapted to be liberated by the insertion of said key and release the barrel for operation, and means to lock said flat sided extension to said base.

2. In electric switches, a suitable base and a casing fixed thereon, an electric switch in said casing, a barrel adapted to be turned axially having operative engagement at its inner end with said switch and means adapted to lock the said casing securely to the said base when the key to said barrel is withdrawn.

3. An electric switch mechanism comprising a base, a casing fixed on said base, a barrel in said casing adapted to receive a key, a switch engaged between its ends with the said barrel, and means adapted to lock the said casing securely to the said base when the key is withdrawn and to be unlocked only when the key for said lock is set at a certain predetermined position.

4. An electric switch, a casing therefor and a base supporting said parts, a barrel set in said casing operatively engaging said switch, means to lock the casing securely to the base when the key is withdrawn and dowels in said casing and base to prevent turning of the casing to release the same from the base.

5. A base and an electric switch and a casing covering the switch, screws securing the casing to the base, a barrel set in said casing to operate said switch and means to lock the casing to the base when the key is withdrawn comprising an extension rigid with said barrel and adapted to be turned into engagement with said base.

1,015,301. PLOW. FRANK E. DAVIS, La Crosse, Wis., assignor of one-half to Albert Hirshheimer, La Crosse, Wis. Filed July 28, 1911. Serial No. 641,097. (Cl. 97—58.)

1. In riding plows, the combination of a frame, a plow carried thereby, a foot-lever having a traveling fulcrum connected to the plow so that the plow will be operated as the fulcrum is shifted, a fixed stop on the frame for holding the lever in position to secure the plow, and an abutment for said lever and on which it travels as the lever is operated to shift the plow.

2. In riding plows, the combination of a frame, a plow carried thereby, a plow operating crank, a foot-lever fulcrumed on the crank so that the plow will be operated as the lever fulcrum is shifted, a fixed stop on the frame for holding the lever in position to secure the plow, and an abutment engaged by said lever and on which it travels as the lever is operated to shift the plow.

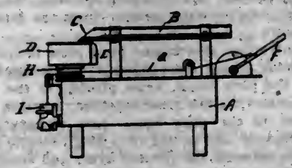
3. In riding plows, the combination of a frame, a plow carried thereby, a foot-lever having a traveling fulcrum connected to the plow so that the plow will be operated as the lever-fulcrum is shifted, a fixed stop on the frame for holding the lever in position to secure the plow, a yielding abutment for engaging said lever to hold it in engagement with said stop, and means for positively limiting the movement of the abutment by the lever, the latter having a traveling engagement with said abutment as the lever is shifted to operate the plow.

4. In riding plows, the combination of a frame, a plow carried thereby, a crank connected to the plow, a foot-lever fulcrumed on the crank so that the plow will be operated as the lever fulcrum is shifted, a fixed stop on the frame for holding the lever in position to secure the plow, a yielding abutment engaged by the lever and on which the lever travels, and means for positively limiting the movement of the abutment to limit the movement of the lever as it moves on the abutment.

5. In riding plows, the combination of a frame, a plow carried thereby, a foot-lever having a traveling fulcrum connected to the plow so that the plow will be operated as the fulcrum is shifted, a fixed stop on the frame for holding the lever in position to secure the plow, means on the lever for engaging the stop to hold the lever in different positions, and an abutment engaged by said lever, and on which it travels as the plow is operated by the lever.

[Claims 6 to 15 not printed in the Gazette.]

1,015,302. TREATMENT AND UTILIZATION OF SEWAGE AND DISTILLERY OR BREWERY WASH OR WASTE. ALEXANDER DICKSON, Dublin, Ireland. Filed Nov. 30, 1910. Serial No. 594,956. (Cl. 71—6.)



1. The process of separating the nitrogenous matter from sewage and other waste liquids containing organic matter, which consists in adding brewer's yeast to the liquid to be treated, agitating the mixture, allowing the mixture to stand until the said nitrogenous matter is separated, and finally removing the nitrogenous matter from the liquid.

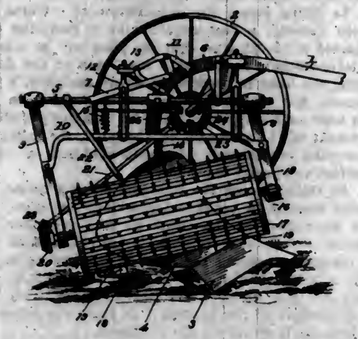
2. The process of separating the nitrogenous matter from sewage and distillery wash, which consists in adding brewer's yeast to the said liquids, allowing the mixture to stand until the said nitrogenous matter is separated, and finally removing the nitrogenous matter from the liquid.

3. The process of separating the nitrogenous matter from sewage and other waste liquids containing organic matter which consists in adding approximately one-half per cent. of brewer's yeast to the liquid to be treated, agitating the mixture, allowing the mixture to stand until the said nitrogenous matter is separated, and finally removing the nitrogenous matter from the liquid.

4. The process of treating sewage and other waste liquids containing organic matter which consists in adding brewer's yeast to the liquid to be treated, agitating the mixture, allowing the mixture to stand until the said

nitrogenous matter is separated, removing the said nitrogenous matter from the liquid, treating the liquid with phosphate of calcium, and removing the phosphate of calcium from the liquid.

1,015,303. SOIL-PULVERIZER. EUGENE R. EAGAN, Hubbard, Iowa. Filed Apr. 29, 1911. Serial No. 624,467. (Cl. 97—44.)



1. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivotally mounted upon the bar, means adapted to be carried by the plow beam for limiting the downward movement of the arms, resilient means for holding the arms in lowermost position, a soil engaging member journaled upon the arms, and means for rotating the said soil engaging member from the landside wheel of the plow.

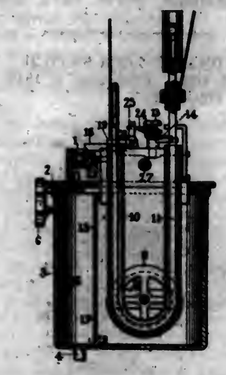
2. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivotally mounted upon the bar and rigidly connected together, means adapted to be carried by the plow beam for limiting the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a soil engaging member journaled for rotation between the arms, and means for rotating said member from the landside wheel of the plow.

3. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivoted to the bar, means rigidly connecting the arms together, brackets adapted to be applied to the plow beam, bars adjustably mounted in the brackets and having slots which receive the connecting means between the pivoted arms and which limit the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a soil engaging member journaled between the arms, and means for rotating the soil engaging member from the landside wheel of the plow.

4. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivoted to the bar, means for limiting the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a shaft journaled in the arms, means for rotating the shaft from the landside wheel of the plow, spiders mounted upon the shaft, spaced bars connecting said spiders together, and soil engaging members mounted upon the said spaced bars.

1,015,304. THREAD-WAXING DEVICE FOR SEWING-MACHINES. ANDREW EFFLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 26, 1906. Serial No. 302,853. (Cl. 112—28.)

1. A thread-waxing device having, in combination, a support, thread guides mounted thereon, and a wax receptacle movably mounted on the support so as to be movable into or out of a position in which the thread is immersed in the wax, substantially as described.



2. A thread-waxing device, having, in combination, a support, a thread guide mounted thereon and acting to hold a bight of thread, and a wax receptacle adjustably mounted on the support, the wax receptacle normally inclosing the thread guide but being movable downward to expose the thread guide, substantially as described.

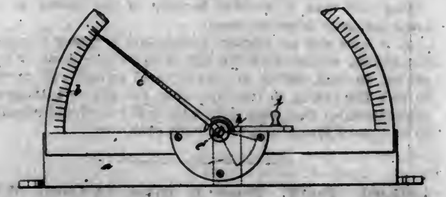
3. A thread-waxing device having, in combination, a wax receptacle, a heating member partially immersed in the wax receptacle, and means for supporting these parts having provision for relative adjustment of the parts to vary the extent to which the heating member is immersed, substantially as described.

4. A thread-waxing device having, in combination, a wax receptacle, a heating member located in the wax receptacle, and an air jacket inclosing the heating member and preventing contact of the wax therewith, substantially as described.

5. A thread-waxing device having, in combination, a wax receptacle, a steam pipe therein, and a tube loosely surrounding the steam pipe to prevent contact of the wax therewith, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

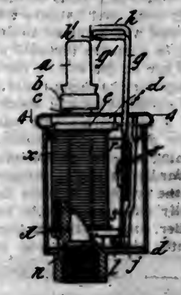
1,015,305. DEFLECTOMETER. WILHELM FENTELOFF, Frankfort-on-the-Main, Germany. Filed May 25, 1909. Serial No. 498,335. (Cl. 73—51.)



1. In a deflectometer the combination of a scale, a balanced pointer, a roller carrying said pointer, bearings for said roller, which confine it to rotary movement; a pressure roller in contact with the roller which carries the pointer; a slide carrying said pressure roller; a spring crowding said pressure roller against the roller which carries the pointer, and a slotted frame carrying said slide, and a handle for moving said slide, substantially as described.

2. In a deflectometer the combination of a scale, a balanced pointer, a roller carrying said pointer, bearings for said roller, which confine it to rotary movement; means for adjusting the tension of said bearings; a pressure roller in contact with the roller which carries pointer; a slide carrying said pressure roller; a spring crowding said pressure roller against the roller which carries the pointer, and a slotted frame carrying said slide, and a handle for moving said slide, substantially as described.

1,015,306. GAS-LIGHTING BURNER. EDWARD N. FRARY and ERNEST A. FRARY, South Deerfield, Mass. Filed Nov. 5, 1910. Serial No. 590,629. (Cl. 175—115.)



1. A gas burner having an electromagnet combined therewith and an armature therefor, a pair of terminals in circuit with the electromagnet and both bodily carried by the armature, one of said terminals being insulated from the other and having a shank member comprising flat spring portions above and below its place of confinement on the armature, and upper and lower abutment pieces on the body of the burner, against the upper one of which the upper spring portion of the terminal shank engages for securing the separation of the terminals and against the lower one of which abutments the lower spring portion of the terminal engages for securing the retraction of the armature.

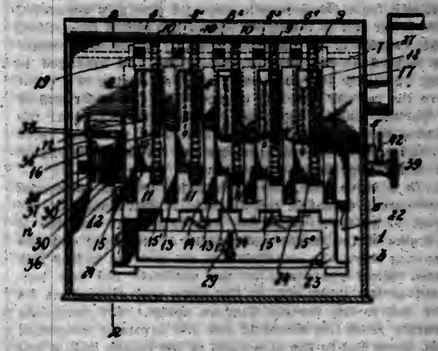
2. A gas burner having an electromagnet combined therewith provided at its upper portion with a laterally located pole piece and having a lateral extension at its lower portion, an armature hinged to the lower extension and carrying two terminals, one of which is insulated from the other and which has its shank portion of flat form to constitute spring portions above and below the place of its confinement on the armature, both said terminals being in electrical connection with the electromagnet, an abutment provided at an upper part of the electromagnet against which the upper spring portion of the terminal shank engages,—the lower spring portion of the terminal shank having an armature retracting coaction with said lateral extension.

1,015,307. ADDING-MACHINE. ABRAHAM I. GANCHER, New York, N. Y. Filed May 18, 1911. Serial No. 627,895. (Cl. 235—71.)

1. In an adding machine, the combination with number wheels and manually controlled means for turning said number wheels, of a slidable member for each number wheel, said slidable member bearing on its face successive numerals and having perforations arranged in alinement with said numerals and in register with the said means, and serving to enable the simultaneous operation of the said means and of the displacement of said sliding members.

2. In an adding machine, the combination with number wheels, and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over a sprocket chain and having on its face successive numerals and perforations arranged in alinement with the said numerals and in register with the links of said sprocket chains, and serving to enable the simultaneous operation of the said sprocket chains and of the displacement of the said sliding members.

3. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains and having on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, and manually controlled means for simultaneously resetting the displaced sliding members.

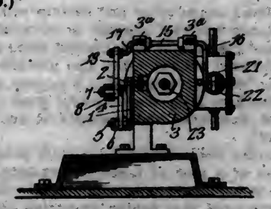


4. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains, and having on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, reciprocatory members arranged in the path of said sliding members and means for manually controlling said reciprocatory members to simultaneously reset all said sliding members.

5. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains and bearing on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, a reciprocatory frame having members arranged in the path of said sliding members, a manually controlled spindle and means operatively connecting said spindle with said reciprocatory frame.

[Claims 6 and 7 not printed in the Gazette.]

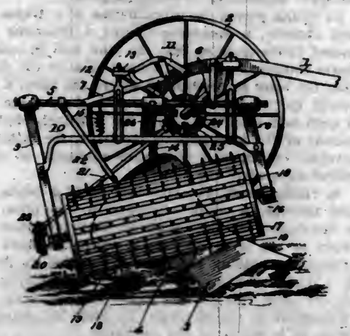
1,015,308. VALVE-GEAR. JOHN H. GENTRY, Greentown, Ind. Filed Nov. 10, 1910. Serial No. 591,739. (Cl. 121—99.)



1. In a valve gear, the combination with a valve rod, and a horizontal reciprocatory eccentric rod disposed longitudinally of the engine, of an inverted reverse link pivoted at its upper end and extending below the plane of the eccentric rod, an inverted radius link pivotally connected at its lower end to the lower end of the reverse link and at its upper end with the said eccentric rod and located below the plane of the same, an upright link extending upwardly, from the eccentric rod and pivotally connected at its lower end with the radius link, and a bell crank actuated by the upright link and connected with the valve rod.

nitrogenous matter is separated, removing the said nitrogenous matter from the liquid, treating the liquid with phosphate of calcium, and removing the phosphate of calcium from the liquid.

1,015,303. SOIL-PULVERIZER. EUGENE R. EAGAN, Hubbard, Iowa. Filed Apr. 20, 1911. Serial No. 624,487. (Cl. 97—44.)



1. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivotally mounted upon the bar, means adapted to be carried by the plow beam for limiting the downward movement of the arms, resilient means for holding the arms in lowermost position, a soil engaging member journaled upon the arms, and means for rotating the said soil engaging member from the landside wheel of the plow.

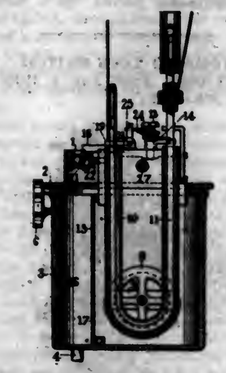
2. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivotally mounted upon the bar and rigidly connected together, means adapted to be carried by the plow beam for limiting the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a soil engaging member journaled for rotation between the arms, and means for rotating said member from the landside wheel of the plow.

3. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivoted to the bar, means rigidly connecting the arms together, brackets adapted to be applied to the plow beam, bars adjustably mounted in the brackets and having slots which receive the connecting means between the pivoted arms and which limit the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a soil engaging member journaled between the arms, and means for rotating the soil engaging member from the landside wheel of the plow.

4. A pulverizer attachment for a plow including a beam and landside wheel, comprising a bar adapted to be applied to the plow beam, arms pivoted to the bar, means for limiting the downward swinging movement of the arms, resilient means for holding the arms in lowermost positions, a shaft journaled in the arms, means for rotating the shaft from the landside wheel of the plow, spiders mounted upon the shaft, spaced bars connecting said spiders together, and soil engaging members mounted upon the said spaced bars.

1,015,304. THREAD-WAXING DEVICE FOR SEWING-MACHINES. ANDREW EPPLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 26, 1906. Serial No. 302,853. (Cl. 112—28.)

1. A thread-waxing device having, in combination, a support, thread guides mounted thereon, and a wax receptacle movably mounted on the support so as to be movable into or out of a position in which the thread is immersed in the wax, substantially as described.



2. A thread-waxing device, having, in combination, a support, a thread guide mounted thereon and acting to hold a bight of thread, and a wax receptacle adjustably mounted on the support, the wax receptacle normally inclosing the thread guide but being movable downward to expose the thread guide, substantially as described.

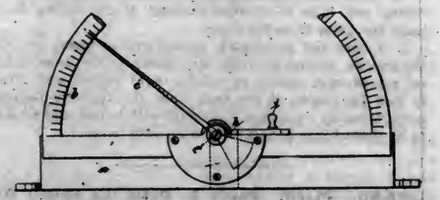
3. A thread-waxing device having, in combination, a wax receptacle, a heating member partially immersed in the wax receptacle, and means for supporting these parts having provision for relative adjustment of the parts to vary the extent to which the heating member is immersed, substantially as described.

4. A thread-waxing device having, in combination, a wax receptacle, a heating member located in the wax receptacle, and an air jacket inclosing the heating member and preventing contact of the wax therewith, substantially as described.

5. A thread-waxing device having, in combination, a wax receptacle, a steam pipe therein, and a tube loosely surrounding the steam pipe to prevent contact of the wax therewith, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

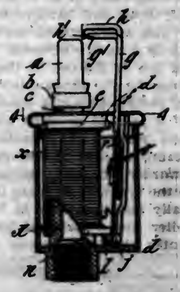
1,015,305. DEFLECTOMETER. WILHELM FENTELOFF, Frankfort-on-the-Main, Germany. Filed May 25, 1909. Serial No. 498,335. (Cl. 73—51.)



1. In a deflectometer the combination of a scale, a balanced pointer, a roller carrying said pointer, bearings for said roller, which confine it to rotary movement; a pressure roller in contact with the roller which carries the pointer; a slide carrying said pressure roller; a spring crowding said pressure roller against the roller which carries the pointer, and a slotted frame carrying said slide, and a handle for moving said slide, substantially as described.

2. In a deflectometer the combination of a scale, a balanced pointer, a roller carrying said pointer, bearings for said roller, which confine it to rotary movement; means for adjusting the tension of said bearings; a pressure roller in contact with the roller which carries pointer; a slide carrying said pressure roller; a spring crowding said pressure roller against the roller which carries the pointer, and a slotted frame carrying said slide, and a handle for moving said slide, substantially as described.

1,015,306. GAS-LIGHTING BURNER. EDWARD N. FRARY and ERNEST A. FRARY, South Deerfield, Mass. Filed Nov. 5, 1910. Serial No. 590,829. (Cl. 175—115.)



1. A gas burner having an electromagnet combined therewith and an armature therefor, a pair of terminals in circuit with the electromagnet and both bodily carried by the armature, one of said terminals being insulated from the other and having a shank member comprising flat spring portions above and below its place of confinement on the armature, and upper and lower abutment pieces on the body of the burner, against the upper one of which the upper spring portion of the terminal shank engages for securing the separation of the terminals and against the lower one of which abutments the lower spring portion of the terminal engages for securing the retraction of the armature.

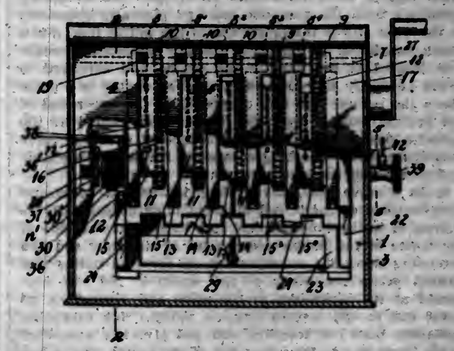
2. A gas burner having an electromagnet combined therewith provided at its upper portion with a laterally located pole piece and having a lateral extension at its lower portion, an armature hinged to the lower extension and carrying two terminals, one of which is insulated from the other and which has its shank portion of flat form to constitute spring portions above and below the place of its confinement on the armature, both said terminals being in electrical connection with the electromagnet, an abutment provided at an upper part of the electromagnet against which the upper spring portion of the terminal shank engages,—the lower spring portion of the terminal shank having an armature retracting coaction with said lateral extension.

1,015,307. ADDING-MACHINE. ABRAHAM I. GANCHER, New York, N. Y. Filed May 18, 1911. Serial No. 627,895. (Cl. 235—71.)

1. In an adding machine, the combination with number wheels and manually controlled means for turning said number wheels, of a slidable member for each number wheel, said slidable member bearing on its face successive numerals and having perforations arranged in alinement with said numerals and in register with the said means, and serving to enable the simultaneous operation of the said means and of the displacement of said sliding members.

2. In an adding machine, the combination with number wheels, and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over a sprocket chain and having on its face successive numerals and perforations arranged in alinement with the said numerals and in register with the links of said sprocket chains, and serving to enable the simultaneous operation of the said sprocket chains and of the displacement of the said sliding members.

3. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains and having on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, and manually controlled means for simultaneously resetting the displaced sliding members.

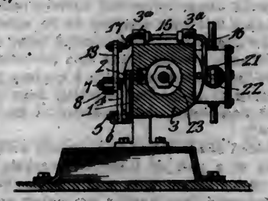


4. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains, and having on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, reciprocatory members arranged in the path of said sliding members and means for manually controlling said reciprocatory members to simultaneously reset all said sliding members.

5. In an adding machine, the combination with number wheels and manually controlled sprocket chains for operating said wheels, of a slidable member for each number wheel arranged longitudinally to and over said sprocket chains and bearing on its face numerals and perforations arranged in alinement with said numerals and in register with the links of said sprocket chains, a reciprocatory frame having members arranged in the path of said sliding members, a manually controlled spindle and means operatively connecting said spindle with said reciprocatory frame.

[Claims 6 and 7 not printed in the Gazette.]

1,015,308. VALVE-GEAR. JOHN H. GENTRY, Greentown, Ind. Filed Nov. 10, 1910. Serial No. 591,739. (Cl. 121—99.)

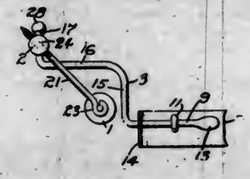


1. In a valve gear, the combination with a valve rod, and a horizontal reciprocatory eccentric rod disposed longitudinally of the engine, of an inverted reverse link pivoted at its upper end and extending below the plane of the eccentric rod, an inverted radius link pivotally connected at its lower end to the lower end of the reverse link and at its upper end with the said eccentric rod and located below the plane of the same, an upright link extending upwardly, from the eccentric rod and pivotally connected at its lower end with the radius link, and a bell crank actuated by the upright link and connected with the valve rod.

2. In a valve gear, the combination with a horizontal reciprocatory eccentric rod disposed longitudinally of the engine, of an inverted reverse link located at one side of the frame of the engine and pivoted at its upper end and extending below the eccentric rod, and inverted radius link located below the plane of the eccentric rod and connected at its upper end to the same and pivoted at its lower end to the reverse link, an upright link extending upwardly from the eccentric rod and pivotally connected at its lower end to the upper end of the radius link, a bell crank consisting of an approximately horizontal rocker arm located at one side of the engine and arranged to swing upwardly and downwardly and extending to a point above the reverse link and connected to the upper end of the upright link, a depending rocker arm located at the opposite side of the engine and connected with the valve rod, and a pivot extending across the frame of the engine and connecting the said rocker arms.

3. In a valve gear, the combination with a horizontal reciprocatory eccentric rod disposed longitudinally of the engine, of an inverted reverse link located at one side of the frame of the engine and pivoted at its upper end and extending below the eccentric rod, an inverted radius link located below the plane of the eccentric rod and connected at its upper end to the same and pivoted at its lower end to the reverse link, an upright link extending upwardly from the eccentric rod and pivotally connected at its lower end to the upper end of the radius link, a bell crank consisting of an approximately horizontal rocker arm located at one side of the engine and arranged to swing upwardly and downwardly and extending to a point above the reverse link and connected to the upper end of the upright link, a depending rocker arm located at the opposite side of the engine and connected with the valve rod, a pivot extending across the frame of the engine and connecting the said rocker arms, a reverse lever, and a horizontal reach rod connected with the reverse lever and with the reverse link and located below the plane of the eccentric rod.

1,015,309. COMBINED SHADE-ROLLER AND CURTAIN-HANGER. EMANUEL GERBER, Kansas City, Mo. Filed Nov. 27, 1909. Serial No. 530,080. (Cl. 156—24.)



1. In a combined shade roller and curtain pole hanger, a pair of L-shaped brackets adapted to be secured to a window sash and the base of each bracket being concaved horizontally and each bracket being also provided with a rectangular stop, in combination with a curtain pole, and shade roller brackets suspended directly from the pole so as to extend downward and inwardly at an angle of substantially 45°.

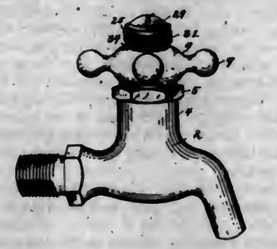
2. In a combined shade roller and curtain pole hanger, the combination of a pair of L-shaped brackets adapted to be fastened to a window sash, said brackets being provided with a concaved base having projecting and biting edges, a curtain pole, a shade roller, and supporting arms for the shade roller and curtain pole, said arms being formed with a horizontal portion which is secured against the outside surface of the bracket, and hangers which are fastened to the pole and extend inwardly and downwardly at an angle of substantially 45°.

3. In a combined shade roller and curtain pole support, the combination with a pair of L-shaped supporting brackets adapted to be secured directly to a window sash and provided with rectangular stops, supporting arms for carrying the shade roller and curtain pole, each supporting arm having a reversely bent form providing a horizontal portion, a telescopic curtain pole on said arms, a shade roller, and shade roller hangers suspended directly from the pole and which are fastened to the pole diagonally so as to extend inwardly and downwardly at an angle of substantially 45°, terminating at the lower end so as to provide bearings for the shade roller.

4. In a combined shade and curtain pole hanger, the combination with the roller and the pole, of a pair of supporting L-shaped brackets adapted to be directly attached to a window sash, supporting arms secured thereto, said arms being reversely bent, and hangers which screw into the pole diagonally and which extend inwardly and downwardly, terminating in a square throated hook at the end of one and a round eye at the end of the other, whereby the necessary bearings for the shade roller are provided.

5. In a combined curtain pole and shade roller support, the combination of a pair of brackets adapted to be secured to the window sash, a shade roller, an extensible curtain pole containing a series of receiving perforations, outwardly and upwardly extending supporting arms adjustably secured to the brackets, hangers that are fastened to the pole diagonally and terminate in bearings for carrying the shade roller, and a series of transverse curtain pins adapted to enter the perforations in the pole.

1,015,310. SELF-CLOSING FAUCET. JOSEPH H. GLAUNER, Cleveland, Ohio. Filed Jan. 12, 1911. Serial No. 602,167. (Cl. 137—4.)



1. A self-closing faucet comprising a body having a valve-seat and a valve therefor having a screw-threaded stem, a spring, an anti-friction member having slidable inter-locking engagement with the screw-threaded end of said stem and having a rounded bottom, means to removably secure said member on said stem, a rotatable handle having a bearing surface for said anti-friction member, and means to cause up-lift of said valve stem upon rotation of said handle.

2. A self-closing faucet comprising a body having a valve-seat and a valve therefor having a stem, a spring, an anti-friction member axially adjustable without rotation on said stem and having a rounded bottom, means to removably secure said member in adjusted position on said stem, a rotatable handle having a bearing surface for said anti-friction member, a screw cap detachably secured upon the top of said handle to inclose said stem and parts thereon, and means to cause up-lift of said valve stem upon rotation of said handle.

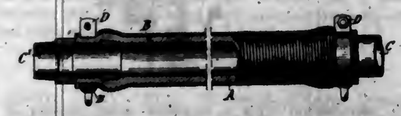
3. In a self-closing faucet, a valve stem having a threaded end of substantially D shape in cross section, an anti-friction member having a rounded face and a central opening of substantially D shape, and means to adjustably fix said member in set position upon said stem, in combination with a handle having a recessed seat for said member and provided with means adapted to co-act therewith to raise said valve stem upon rotation of said handle.

4. In a self-closing faucet, a valve stem having a screw threaded end of segmental formation, a lift member for said stem sleeved upon said stem end and having a rounded bottom, a nut to adjustably fix said lift member in place upon said stem, and a locking device for said nut, in combination with a recessed handle to seat said lift member, a spring to depress said valve stem, and a series of balls and reversely inclined rests therefor and for said handle to cause uplift of said stem when the handle is rotated.

5. A self-closing faucet comprising a body having a valve-seat, a valve stem having a valve head and an annular enlargement above said head to centrally seat a spring and provide a stop shoulder on said stem, a screw-nut on said body to support said valve stem and provided with reversely inclined ball seats, balls for said seats, a rotatable lift handle for said stem seated upon said balls, a stop sleeve of the same diameter as said enlargement adapted to seat against the bottom of said nut and having its lower end spaced apart from the upper portion of said annular enlargement relatively less than the plane of uplift of travel of said balls up the said inclines, and a spring mounted upon said sleeve and valve stem enlargement.

[Claims 6 to 14 not printed in the Gazette.]

1,015,311. STEAM-HOSE. EDWARD E. GOLD, New York, N. Y. Filed Jan. 18, 1911. Serial No. 602,376. (Cl. 137—90.)



1. In a steam hose, a flexible body portion and an outer reinforcing covering therefor of wire, the adjacent coils of which lie close together and a packing of compressible material between adjacent coils.

2. In a steam hose, a flexible body portion and an outer reinforcing covering therefor of helically coiled wire fitting snugly thereto, the adjacent coils of which lie close together and a packing of compressible material between adjacent coils.

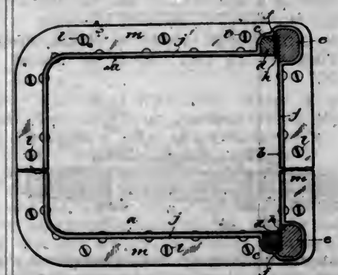
3. In a steam hose, a flexible body portion and an outer reinforcing covering therefor of wire inclosed in compressible material, said wire coiled on said flexible body portion so that adjacent coils are close together.

4. In a steam hose, a flexible body portion and an outer reinforcing covering therefor of helically wound wire covered with compressible material, the adjacent coils of wire lying close together.

5. In a steam hose, a flexible body portion and an outer reinforcing covering therefor of wire, the adjacent coils of which lie close together and a covering for said wire of textile material inclosing same.

[Claims 6 to 9 not printed in the Gazette.]

1,015,312. TUBULAR STRUCTURE. WILLIAM D. GRAY, Milwaukee, Wis. Filed Mar. 30, 1908. Serial No. 423,088. (Cl. 193—22.)



1. A tubular structure for elevator legs and the like, composed of a U-shaped section having reinforcing strips applied to its longitudinal edges on the outer side thereof, and a cover section having angular reinforcing strips applied to its longitudinal edges on the outer side thereof and secured to the other strips and binding the sections together, the angular strips overlapping the other strips and covering the joints between the adjoining sections, substantially as described.

2. A tubular structure for elevator legs and the like, composed of a U-shaped section flanged outwardly along its longitudinal edges, a cover section fitted to the open side of the first section and lapping its out-turned flanges, and longitudinal strips secured to each other with the flanges of the U-shaped section and the edges of the cover section clamped between them, one of each pair of strips having a lip or flange fitting over and covering the intermediate edges of the sections and the joint between them, and the other strip of each pair fitting into the external angle between one side and the adjoining flange of the U-shaped section, substantially as described.

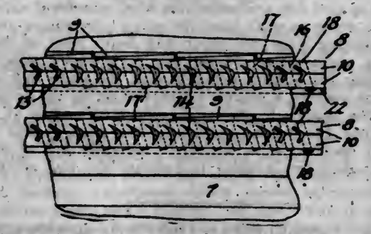
3. A tubular structure for elevator legs and the like, made in lengths each composed of sections having outwardly projecting longitudinal lapped edges and provided with external strips which are secured together and form closed joints between the sections, and flanged rings fastened to the ends of the lengths for connecting them end to end and formed with recesses into which the lapped edges of the sections extend at adjoining ends of the lengths, substantially as described.

4. A tubular structure for elevator legs and the like, made in lengths each composed of sections provided along their longitudinal edges with external strips which are secured together in pairs and form closed joints between the sections, and flanged rings attached to ends of the lengths for coupling them together end to end and having recesses adjacent to the joints between the sections and corresponding in cross section with said strips, substantially as described.

5. A tubular structure for elevator legs and the like, made in lengths each composed of a U-shaped section having outturned flanges along its edges and of a cover section fitted flatwise against said flanges, reinforcing and clamping strips secured together in pairs over the adjoining edges of the sections and covering the joints between them, flanged coupling rings attached to adjoining ends of the lengths and recessed to receive the projecting edges of the sections and plugs inserted in the recesses in said rings and corresponding in cross section with said reinforcing and clamping strips against which they abut endwise, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,015,313. TURBINE-BLADING. JONATHAN S. GREEN, Pittsburgh, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 6, 1908. Serial No. 447,229. (Cl. 121—57.)



1. In combination with a plurality of blades, a base strip for said blades and an independent locking pin extending transversely of said strip for securing one of said blades to said strip.

2. In combination with a plurality of blades, a compound base strip comprising separate strips for receiving the bases of the blades, and separate locking pieces extending transversely of said strip for securing each blade to said base strip.

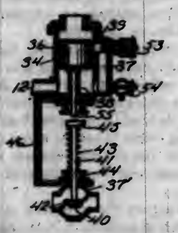
3. In combination with a plurality of blades, a base strip therefor and pins extending transversely of said strip for independently locking said blades to said strip.

4. In combination with a blade-carrying element provided with a blade-mounting groove, a plurality of blades, a compound base strip therefor, comprising two separate strips provided with coöperating notches adapted to receive the base of the blades, and separate locking pieces extending transversely through said strips for securing each blade in place.

5. In combination with a plurality of blades comprised in a row, a compound base strip for said blades comprising separate strips each provided with radially extending and coöperating notches for receiving the bases of said blades, and separate pieces extending transversely through each strip for securing said strips together and each of said blades in place.

[Claims 6 and 7 not printed in the Gazette.]

1,015,314. INSTANTANEOUS WATER-HEATER. GEORGE H. HARRINGTON, Cincinnati, Ohio. Filed Apr. 5, 1909. Serial No. 487,901. (Cl. 126—351.)



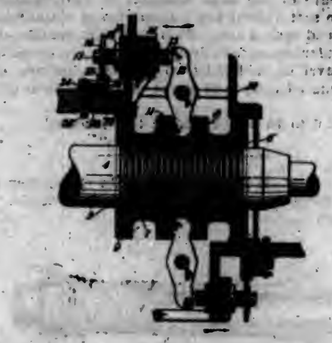
1. In combination with a water heater comprising a coil, gas burner for heating said coil, a gas delivery valve for controlling the delivery of gas to said burner, a source of water supply for said coil, a water valve between said source and said coil and consisting of a cylindrical valve casing, a water passage upon the side of the casing and communicating with the upper and lower ends of the casing, a reciprocating plunger within the casing, a coiled spring between the bottom of the plunger and the bottom of the casing and adapted to hold the plunger normally over the upper end of the water passage, and a small by-pass connecting the upper end of the passage and the casing at a point above the normal position of the plunger, whereby the pressure of the water is normally communicated to both sides of the plunger.

2. In combination with a water heater comprising a coil, a gas burner for heating said coil, a gas delivery valve for controlling the delivery of gas to said burner, a source of water supply for the coil, a valve between said source and said coil and consisting of a cylindrical valve casing, a water passage upon the side of the casing and communicating with the upper and lower ends of the casing, a reciprocating plunger within the casing, means for holding the plunger normally over the upper end of the water passage, a small by-pass connecting the upper end of the passage to the upper end of the casing at a point above the normal position of the plunger, and a manually operated valve located in the upper end of the water passage and adapted to regulate the size of the passage.

1,015,315. LONGITUDINAL ADJUSTING MEANS FOR TURBINE-ROTORS. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 11, 1905. Serial No. 255,034. (Cl. 64—25.)

1. In combination with a shaft capable of longitudinal adjustment, a casing surrounding said shaft, adjustment blocks extending circumferentially around and movable longitudinally of said shaft, levers mounted on said casing and contacting with said blocks and means operating between said casing and said levers for varying the positions of said blocks to adjust said shaft.

2. In combination with a shaft capable of longitudinal adjustment, adjustment blocks extending circumferentially around said shaft and movable longitudinally of said shaft, a casing surrounding said blocks and means located between said casing and said blocks for moving one block in one direction and the other in the other direction to adjust the longitudinal position of said shaft.



3. In combination with a rotatable shaft capable of longitudinal adjustment, two semi-cylindrical adjustment blocks extending circumferentially around said shaft and movable longitudinally of the shaft and means for moving one block in one direction and the other block in the other direction to thereby adjust the longitudinal position of said shaft.

4. In combination with a shaft capable of longitudinal adjustment and having a plurality of circumferentially-extending slots, two adjustment blocks extending circumferentially around said shaft and movable longitudinally of said shaft, projections on said blocks and coöperating with said slots, a casing surrounding the shaft and independent means operating between each block and said casing for moving one block in one direction and the other block in the other direction to thereby adjust the longitudinal position of the shaft.

5. In combination with a rotatable shaft capable of longitudinal adjustment and having a plurality of circumferentially-extending slots, two semi-cylindrical adjustment blocks surrounding said shaft and movable longitudinally thereof, semi-annular projections on said blocks and coöperating with the slots of said shaft, a casing surrounding said shaft and independent means operating between each block and said casing for moving one block in the one direction and the other block in the other direction to thereby adjust the longitudinal position of said shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,015,316. NUT-LOCK. LEWIS W. HUBER, Brookville, Pa. Filed Apr. 12, 1911. Serial No. 620,587. (Cl. 151—54.)

1. The herein described nut locking devices comprising a base plate to bear against the inner sides of the nuts, a link pivotally connected to the base plate, a cam spring pivotally connected to the link and a locking plate for insertion in the link, and provided with slots to clear the outer ends of the bolts, and also provided with means to engage the nuts and prevent them from turning on the bolt, the locking plate being held in place on the nuts by the said cam spring.

2. In combination with a rail joint having fish plates and bolts, a base plate bearing against one of the fish plates, and under the nuts, a link pivotally connected to the base plate, a cam spring pivotally connected to the outer side of the said link, and provided with an arm, and a channel locking plate adapted to be passed through the said link and disposed with its channeled side on the outer sides of the nuts, said locking plate having slots to clear the projecting ends of the bolts, the said cam spring being adapted to be turned to bear on the outer side of the locking plate, and to engage its spring arm with one of the bolts.

3. In combination with a rail joint having fish plates and bolts, a base plate bearing against one of the fish plates, and under the nuts, a link pivotally connected to the base plate, and detachable therefrom, a cam spring pivotally connected to the outer side of the said link, and provided with an arm, and a channel locking plate adapted to be passed through the said link, and disposed with its channeled side on the outer sides of the nuts, said locking plate having slots to clear the projecting ends of the bolts, the said cam spring being adapted to be turned to bear on the outer side of the locking plate, and to engage its spring arm with one of the bolts.

1,015,317. DRY CELL. FRANK J. HUMEL, Cleveland, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Oct. 14, 1911. Serial No. 654,585. (Cl. 204—38.)

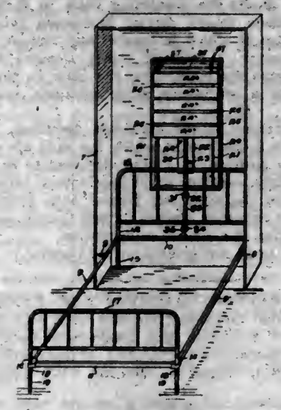
1. A dry cell comprising a lined cup, a hollow perforated electrode, battery mix packed in said lined cup around the electrode, and shelves of porous material which are buried in the battery mix, and extend from the perforated electrode outward toward the cell lining.

2. A dry cell comprising a lined cup, a hollow perforated electrode, battery mix packed in said lined cup around the electrode, and disks of porous material fitted around the perforated electrode and buried in said mix, and extending therein toward the cell lining.

1,015,318. WALL-BED WEIGHTS. HARRY A. JAVINS, Oakland, Cal., assignor to Javins-McGeehan Manufacturing Company, a Corporation of California. Filed Mar. 4, 1911. Serial No. 612,305. (Cl. 5—37.)

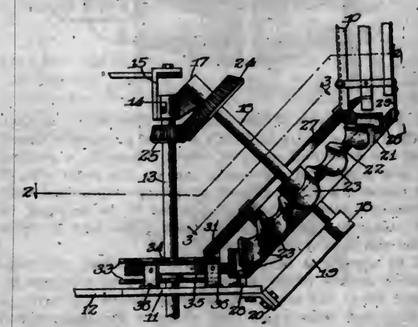
1. A folding bed comprising a casing, a weight frame therein, guide rods in said frame, a plate in said frame between said rod, vertical rows of laterally projecting pins carried by said plate, weights slidable on said rods and provided with rear grooves into which said pins project, one groove of each weight being provided with an abutment for limiting the movements of the weights in one direction, a rod fastened to the lowermost weight and slidable through said frame, a bed pivotally connected to said casing, a bracket ear carried by said bed, and a link connection between said ear and said weight rod.

2. A folding bed comprising a casing, guide rods therein, bed counterbalancing weights slidable on said rods, means for controlling said weights to regulate their counterbalancing actions, a bed pivotally mounted in said casing, auxiliary weights slidable on said rods for use in counter-



balancing extra weight on the bed, and means for locking said auxiliary weights to said rods.

1,015,319. APPARATUS FOR HANDLING CANS AND THE LIKE. FREDRICK LESTER JEFFERIES; Granite City, Ill., and WILLIAM SPAIN, St. Louis, Mo., assignors to Corn Products Refining Company, a Corporation of New Jersey. Filed Feb. 18, 1911. Serial No. 609,297. (Cl. 226—9.)



1. In apparatus of the character described, the combination with means for sustaining the cans in a horizontal position, of means sustaining the cans in an upright position, an oblique rotary carrier interposed between the same which receives the cans while in one of said positions and delivers the same in the other position.

2. In apparatus of the character described, the combination with means for sustaining the cans in a horizontal position, of means sustaining the cans in an upright position, an oblique rotary carrier interposed between the same which receives the cans while in one of said positions and delivers the same in the other position, and a recessed rotary element associated with the means for supporting the cans in the upright position which coöperates with the carrier in handling the cans.

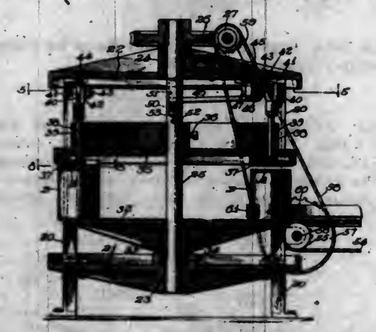
3. In apparatus of the character described, the combination with means for sustaining the cans in the horizontal position, of means for sustaining them in upright position, an oblique rotary carrier interposed between the same, the edge of which is beveled and formed with can receiving grooves, and a recessed rotary element associated with the means for supporting the cans in the upright position which coöperates with said carrier in handling the cans.

4. In apparatus of the character described, the combination with means for sustaining the cans in horizontal position, of means for sustaining them in upright position, an oblique rotary carrier interposed between the same, the edge of which is beveled and formed with can receiving grooves, a recessed rotary element associated with the means for supporting the cans in the upright position, and a stationary guide adjacent said rotary element.

5. In apparatus of the character described, the combination with a can run in which the cans are sustained in horizontal position, of a table designed to support the cans in upright position, an oblique rotary carrier interposed between the same and formed with beveled edges and with can receiving grooves formed therein, and means for maintaining the cans in said grooves.

[Claims 6 to 14 not printed in the Gazette.]

1,015,320. CAPPING-MACHINE FOR CANS. FREDRICK LESTER JEFFERIES, Granite City, Ill., and WILLIAM SPAIN, St. Louis, Mo., assignors to Corn Products Refining Company, a Corporation of New Jersey. Filed Feb. 18, 1911. Serial No. 609,298. (Cl. 113—30.)



1. In apparatus of the character described, the combination with a rotary table, of a series of plungers arranged above the table and so as to rotate therewith, a stationary cam support, a depressing cam on the under side of said support, a lifting cam on said support provided with a laterally projecting flange adapted to be engaged by said plungers, and a yielding support for said plungers at one end of said lifting cam.

2. In apparatus of the character described, the combination with a rotary table, of a series of plungers arranged above the table and so as to rotate therewith, a pressing cam with which said plungers are engaged and which depresses them, a lifting cam which raises the plungers out of contact with the cans, and a yielding support for said plungers during a portion of the period in which they are in contact with the pressing cam.

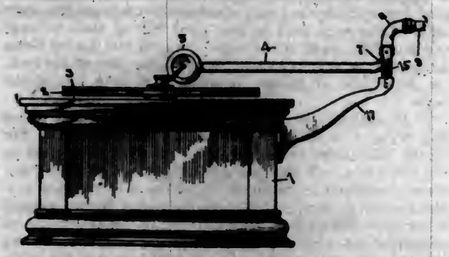
3. In apparatus of the character described, the combination with a rotary table, of a series of plungers arranged above the table and so as to rotate therewith, a pressing cam with which said plungers are engaged and which depresses them, a lifting cam which raises the plungers out of contact with the cans, and a supporting device for the plungers which is pivoted to one end of the lifting cam and yieldingly supported at the other end.

4. In apparatus of the character described, the combination with a series of plungers, of means for supporting the cams in alinement with said plungers, means for raising said plungers, means for depressing the same, and a yielding support for the plungers during a portion of the depressing operation.

5. In apparatus of the character described, the combination with a support for the cams, of a series of plungers arranged one close to the other so that more than one plunger may operate upon a can, and means for successively depressing and raising said plungers.

[Claims 6 to 13 not printed in the Gazette.]

1,015,321. SOUND-CONVEYING DEVICE FOR TALKING-MACHINES. ELDRIDGE R. JOHNSON, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Dec. 24, 1903. Serial No. 186,482. (Cl. 181—3.)



1. In a talking machine, the combination of a conducting tube carrying a sound reproducer and having a telescoped joint forming a shoulder therein, an imperforate elastic diaphragm intermediate of the ends of said tube, and means for holding said diaphragm seated upon said shoulder.

2. In a talking machine, the combination with a sound reproducer, of a sound conducting tube therefor having a telescopic joint forming a shoulder therein, an elastic pliant diaphragm arranged to divide said tube into opposed chambers, and a ring for removably holding said diaphragm seated upon said shoulder within said tube.

3. In a talking machine, the combination of a sound reproducer, a swinging arm connected therewith, a sound conveying tube, said tube having an enlarged portion telescoping with said arm, and forming a shoulder therein, an elastic diaphragm seated against said shoulder, a flexible ring for holding said diaphragm in position, and means for pivotally supporting said arm where the tube joins said arm.

4. In a talking machine, the combination of a sound reproducer, a swinging arm carrying said reproducer, a pivotal support for said arm, a sound conveying tube, a telescoping connection between said arm and tube forming a chamber at the point of said pivotal support, an elastic diaphragm seated in said chamber, and means for securing said diaphragm in said chamber.

5. In a talking machine, the combination with a sound reproducer of a sound conducting tube, and means located in said tube to prevent the harsher vibrations or sounds from passing beyond a predetermined point in said tube, said means comprising an elastic pliant imperforate diaphragm located in said tube at said point.

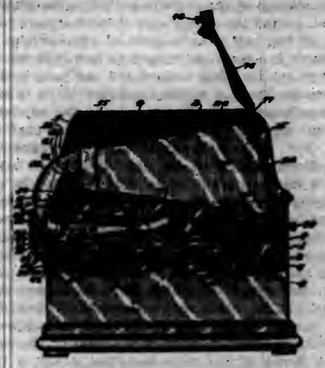
[Claims 6 to 10 not printed in the Gazette.]

1,015,322. TALKING-MACHINE. ELDRIDGE R. JOHNSON, Merion, Pa., and JOHN C. ENGLISH, Camden, N. J., assignors to Victor Talking Machine Company, a Corporation of New Jersey. Filed July 10, 1909. Serial No. 506,867. (Cl. 181—3.)

1. In a talking machine, the combination with a cabinet provided with a movable cover, of sound reproducing means in said cabinet, and an amplifier having its major portion in said cabinet and mounted to swing independently of said cover upon an axis substantially coincident with the axis of movement of said cover, and means between said cover and said major portion to secure the same rigidly together to move in unison.

2. In a talking machine, the combination with a cabinet comprising a body portion and a cover, of a pintle upon which said cover is mounted to swing, sound reproducing means within said cabinet, and an amplifier having its major portion extending within said cabinet and supported by said pintle and movable independently of said cover.

3. In a talking machine, the combination with a cabinet comprising a base portion and a movable cover, of sound reproducing means within said cabinet, an amplifier having its major portion projecting through said cabinet, and mounted to swing independently of said cover.

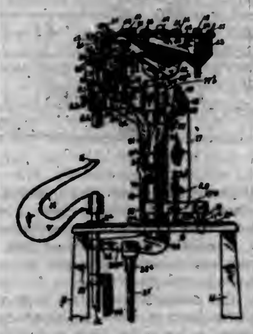


4. In a talking machine, the combination with a cabinet comprising a base portion and a movable cover, of sound reproducing means within said cabinet, an amplifier having its major portion projecting through said cabinet, and mounted to swing independently of said cover, and means between said cover and said major portion to connect the same together to move in unison.

5. In a talking machine, the combination with a cabinet comprising a base portion and a movable cover, of sound reproducing means within said cabinet, an amplifier having its major portion projecting through said cabinet, and mounted to swing independently of said cover, and means between said cover and said major portion to secure the same rigidly together to move in unison.

[Claims 6 to 47 not printed in the Gazette.]

1,015,323. SHOE-NAILING MACHINE. LAWRENCE E. JOHNSON and JOHN CROWE, St. Joseph, Mo., assignors to Specialty Shoe Machinery & Tool Company, St. Joseph, Mo., a Corporation of Missouri. Filed Mar. 18, 1909. Serial No. 484,114. (Cl. 1—18.)



1. In a shoe nailing machine, the combination with nail driving mechanism, of a rotatable nail hopper, a plurality of triangular pockets in said hopper, each pocket being provided with a longitudinal slot in its bottom, a nail selecting finger arranged below said hopper, and adapted to be projected into said slot, means for projecting the finger into the slot, and means for retracting said finger.

2. In a shoe nailing machine, the combination with nail driving mechanism, of a rotatable nail hopper, having a plurality of pockets, each of said pockets having a longitudinal slot in its bottom, a lever pivoted below the hopper, a nail selecting finger attached at one end to said lever, and means for operating said lever to project the finger into said slot.

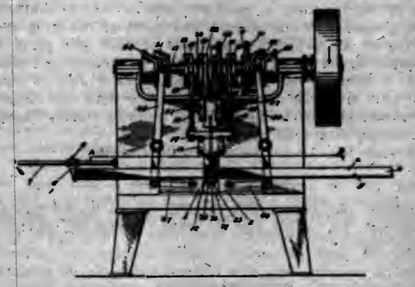
3. In a shoe nailing machine, the combination with nail driving mechanism and operative means therefor, of a rotatable hopper having a plurality of pockets adapted to be brought successively into operative position, means for locking the hopper when rotated, and nail feeding mechanism coöperating with said hopper, said feeding mechanism comprising a rock-plate provided with a nail slot, a nail conduit adjacent said plate, and the means for clearing said slot when said hopper is turned.

4. In a shoe nailing machine, the combination with nail driving mechanism including a driving arm, and operative means therefor, of a rotatable hopper having a plurality of pockets, each pocket provided with a longitudinal slot, a finger adapted to engage said slot when the pocket is in operative position, means for operating said finger, a rocker plate having a nail slot therein, said plate being adapted to be operated by said driving arm, means for locking the hopper in each of its operative positions, and means for clearing said nail slot when the hopper is unlocked.

5. In a shoe nailing machine, the combination with nail driving mechanism including a driving arm, and operative means therefor, of a hopper having a plurality of slotted pockets, said hopper arranged so as to bring the pockets in succession to an operative position, a nail selecting finger arranged below the hopper, means for operating said finger, nail feeding mechanism comprising a rock plate having a nail slot therein, said plate being arranged to be operated by said driving arm at each end of its stroke, means for locking the hopper in any of its operative positions, and means for clearing said nail slot when the hopper lock is released.

[Claims 6 to 11 not printed in the Gazette.]

1,015,324. METAL-SHAPING MACHINE. LOU B. KAUFFMANN, New York, N. Y., assignor to Kauffmann Kase Kompany, New York, N. Y., a Corporation of New York. Filed Nov. 17, 1909. Serial No. 528,590. (Cl. 153—18.)



1. A metal forming machine including in combination means for positioning a strip of metal bent longitudinally into two parts at substantially right angles to each other, a reciprocable die block movable into and out of operative relation with one of the parts of said strip, said die block being hollowed from said longitudinal bend between the parts of said strip with increasing depth outwardly to the edge of said part of said strip, a reciprocable former for bending said part into the hollow of the die block, said bend beginning adjacent to said longitudinal fold and deepening outwardly to the edge of the strip, a pair of reciprocable blocks at either side of said die block for closing said bend upon itself, means for moving said die block out of operative relation with the strip after the bend is formed, means for moving said reciprocable blocks together to close said bent portion upon itself, and means for engaging said strip at the point of forma-

tion of said bend and causing it to form substantially a right angle at the point of bend when the bend is closed upon itself by said blocks.

2. A metal forming machine including in combination means for positioning a strip of metal bent longitudinally into two parts at right angles to each other, an engaging member movable into engagement with one of said parts of said strip, said member having a right angled part presenting its edge to said other part of said strip, a die block movable into position on the opposite face of the strip from said member, said die block being hollowed from a point opposite said angled portion with increasing depth outwardly to the edge of said strip, a former for bending said part of the strip into the hollow of the die block with a depth increasing from said longtudinal bend outwardly to the edge of the strip, means for withdrawing the die block from operative relation with the strip, and means for closing said bend together upon itself whereby the entire strip is bent at a right angle, and the other part of the strip is bent about the right angled part of said engaging member.

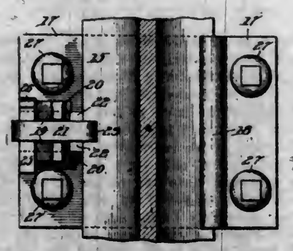
3. A metal forming machine for operating upon a strip of metal bent longitudinally throughout its length including in combination a movable member which contacts with a surface of one of said bent parts of the strip and having an angle against the other of said bent parts, a movable former working within said member and operating upon said first mentioned bent part, a movable die block on the opposite side of said bent part from the former to cooperate with the former in bending said part and a pair of movable closing blocks for closing said bend upon itself.

4. A metal forming machine for operating upon a strip of metal bent longitudinally throughout its length including in combination a reciprocating member which contacts with a surface of one of said bent parts of the strip and having an angle against the other of said bent parts, a reciprocating former working within said member and operating upon said first mentioned bent part, a reciprocating die block on the opposite side of said bent part from the former to coöperate with the former in bending said part, and a pair of reciprocating closing blocks for closing said bend upon itself.

5. A metal forming machine for operating upon a strip of metal bent longitudinally throughout its length including in combination a movable member which contacts with a surface of one of said bent parts of the strip and having an angle against the other of said bent parts, a movable former operating upon said first mentioned bent part, a movable die block on the opposite side of said bent part from the former to coöperate with the former in bending said part and a pair of movable closing blocks for closing said bend upon itself.

[Claims 6 to 13 not printed in the Gazette.]

1,015,325. RAILWAY-TIE PLATE. JOHN W. KENDRICK, Chicago, Ill. Filed Apr. 30, 1910. Serial No. 558,577. (Cl. 238—2.)



1. In a device of the class described, a rail, a tie plate thereunder having opposed spaced lips on its upper surface, a member engaging the said lips and also engaging the rail base, said lips being inclined where they are engaged by said member, the direction of the inclination of such lips being in a plane transverse to the rail and a key to lock the said member.

2. In a device of the class described, a tie plate, a rail thereupon, a fixed lip on one side of the tie plate to engage an edge of the rail base, a pair of opposed lips on the other side of the tie plate extending perpendicularly from the edge of the tie plate toward the rail base and having a slot between them, a member adapted to lie in said slot and engage these lips and also engage the adjacent edge of the rail base, and means to force the part of said member that engages the rail base downwardly in an inclined direction against the edge of the rail base.

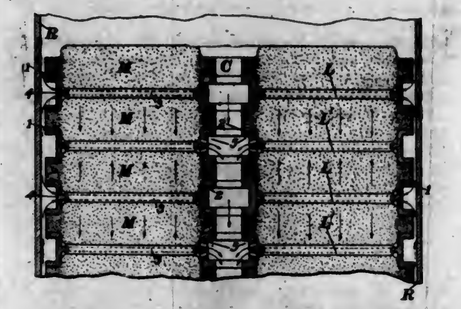
3. In a device of the class described, a tie plate, a rail thereupon, means on one side of the tie plate to engage an edge of the rail base, a pair of opposed lips on the other side of the tie plate extending perpendicularly from the edge of the tie plate toward the rail base and having a slot between them, a member adapted to lie in said slot and engage these lips and also engage the adjacent edge of the rail base, and means to force the part of said member that engages the rail base downwardly in an inclined direction against the edge of the rail base.

4. In a device of the class described, a rail, a tie plate thereunder having opposed spaced lips on its upper surface, the inner ends of these lips being upwardly inclined, a member lying between the said lips and having lugs engaging their inclined ends, said member also engaging the rail base, and a key to lock said member.

5. In a device of the class described, a rail, a tie plate thereunder having opposed spaced lips on its upper surface, a member having lugs projecting under the said lips, said member also engaging the rail base, and a key to lock the said member.

[Claims 6 to 8 not printed in the Gazette.]

1,015,326. FILTER. KARL KIEFER, Cincinnati, Ohio. Filed Feb. 12, 1906, Serial No. 300,765. Renewed July 13, 1911. Serial No. 638,397. (Cl. 210—13.)



1. In a filter, the combination of an inclosing drum, a series of flat, disk-shaped filtering layers of compressed moist, fibrous pulp, each one previously compressed more at the periphery than at the remaining surface, of liquid conductors having compression elements to correspond with the depression in the filter layer.

2. In a filter, the combination of an inclosing drum, a series of flat, disk-shaped filter layers of compressed, moist, fibrous pulp, a series of inlet and outlet liquid conductors, each of said liquid conductors supporting a filtering layer and bearing upon one, said liquid conductors consisting of an open work part in contact with the filtering layers, and thicker parts in contact with the edges of said filter layers, said filter layers being previously compressed to substantially correspond with the outlines of the liquid conductor, and out of contact with it.

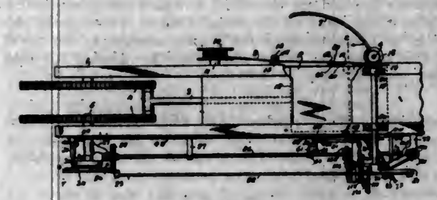
3. In a filter, the combination of an inclosing drum, a series of flat, disk-shaped filter layers of compressed, moist, fibrous pulp, a series of inlet and outlet liquid conductors, each of said liquid conductors supporting a filtering layer and bearing upon one, said liquid conductors consisting of an open work part in contact with the filtering layers, and thicker parts in contact with the edges of said filter layers, said filter layers being previously compressed and out of contact with the liquid conductor.

4. In a filter, the combination of an inclosing drum, a series of flat, disk-shaped filter layers of compressed, moist, fibrous pulp, a series of inlet and outlet liquid conductors, each liquid conductor supporting a filtering layer and bearing upon one, said liquid conductors consisting of an open-work part and a thicker part in contact with the edges of the filter layers.

5. In a filter, the combination of an inclosing drum, a series of flat, disk-shaped filter layers of compressed, moist fibrous pulp, a series of inlet and outlet liquid conductors consisting of a series of bars spaced apart so as to support the filter layers, and of a height to leave under compression a space sufficient for draining and supplying the liquid between said filter layers, and having thicker edges in contact with the edges of the filter pulp adapted to more compress them than the rest of the filter layer.

[Claims 6 to 25 not printed in the Gazette.]

1,015,327. MECHANISM FOR BALE-TYING. ELMER R. KOOSTZ, Richards, Mo. Filed Sept. 7, 1909. Serial No. 516,448. (Cl. 100—20.)



1. In baling machine, the combination with a reciprocative plunger having a longitudinal slot extending transversely through its forward end, of a pivoted needle, and means for oscillating the needle through said slot as the plunger is reciprocating, an oscillation of the needle consuming the same time as a reciprocation of the plunger.

2. In baling machines, the combination with a reciprocative plunger having a longitudinal slot extending transversely through its forward end, of a pivoted needle having means at its free end for engaging a binding wire and having a concave side across which is adapted to be stretched the portion of a binding wire which embraces the rear end of a bale, and means for oscillating the needle through said slot during a reciprocation of the plunger, an oscillation of the needle consuming the same time as a reciprocation of the plunger.

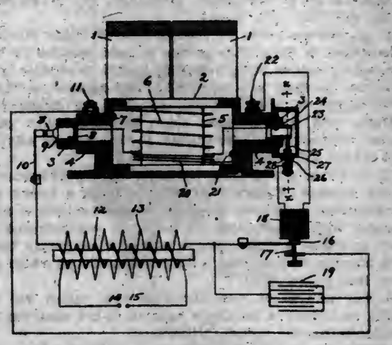
3. In baling machines, the combination with a reciprocative plunger having a plurality of slots extending transversely through the forward end of the plunger, of a plurality of needles, and means for oscillating the needles respectively through said slots when the plunger is reciprocated, an oscillation of the needles consuming the same time as a reciprocation of the plunger.

4. In baling machines, the combination with a baling chamber having slots in its opposite sides, of a plunger reciprocative in said chamber and having a longitudinal slot extending transversely through its forward end, a pivoted needle, and means for oscillating said needle to and fro through the slots in the baling chamber and plunger, as the plunger is reciprocated, an oscillation of the needle consuming the same time as a reciprocation of the plunger.

5. In baling machines, the combination with a rotary driving shaft, of a plunger having in its forward end a longitudinal slot extending transversely therethrough, means actuated by the shaft for reciprocating the plunger, and manually controlled means by which the shaft in rotating oscillates the needle through said slot when the plunger is reciprocating, an oscillation of the needle consuming the same time as a reciprocation of the plunger.

[Claims 6 to 33 not printed in the Gazette.]

1,015,328. MAGNETO-CIRCUIT CONTROLLER. EDWIN S. LINCOLN, Brookline, Mass., assignor to Electric Goods Manufacturing Company, a Corporation of Maine. Filed Jan. 27, 1910. Serial No. 540,415. (Cl. 123—149.)



1. In combination with a current inducing means including an energizing circuit, instrumentalities for controlling the flow of current in said energizing circuit, said instrumentalities including an electric circuit for actuating the same; an electric generator having current generating windings, one portion of said windings being electrically connected in energizing relation with said energizing circuit, and another portion of said windings being connected in energizing relation with said actuating electric circuit.

2. In combination with an induction coil, an electric circuit for energizing said coil, and a circuit interrupting device intercalated in said energizing circuit, said device including a magnetizing circuit for actuating the same; an electric generator having current generating windings, one portion of said windings being electrically connected in energizing relation with said energizing circuit, and another portion of said windings being electrically connected in energizing relation with said magnetizing circuit.

3. In combination, an induction coil having a primary winding, an electric generator having revoluble current generating windings grouped into a plurality of electrically distinct portions, an energizing circuit connecting one portion of said current generating windings in energizing relation with said primary winding, a circuit interrupter intercalated in said energizing circuit, said circuit interrupter including an electromagnet for actuating the same, and electric conductors connecting another portion of said current generating windings in energizing relation with said electromagnet.

4. In combination with spark points, an induction coil for producing a high tension discharge at said spark points, said induction coil including a primary winding, an electric generator having revoluble generating windings, and comprising an energizing winding and an auxiliary winding, an electric circuit connecting said energizing winding in energizing relation with said primary winding, a circuit interrupter adapted to control the electrical continuity of said circuit, said circuit interrupter including an electromagnet for actuating the same, and an electric circuit connecting said auxiliary winding in energizing relation with said electromagnet.

5. In combination with spark points, an induction coil for producing a high tension discharge at said spark points, said induction coil including a primary winding, an electric generator having revoluble generator windings, and comprising an energizing winding and an auxiliary winding, an electric circuit connecting said energizing winding in energizing relation with said primary winding, a circuit interrupter adapted to control the electrical continuity of said circuit, said circuit interrupter including an electromagnet for actuating the same, a discontinuous electric circuit adapted to connect said auxiliary winding in energizing relation with said electromagnet, and a timing device closing said last mentioned circuit at the moment of discharge production.

1,015,329. VAT DYESTUFFS AND PROCESS OF MAKING SAME. RUDOLF MAAG, Sindlingen, near Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Apr. 17, 1911. Serial No. 621,670. (Cl. 8—1.)

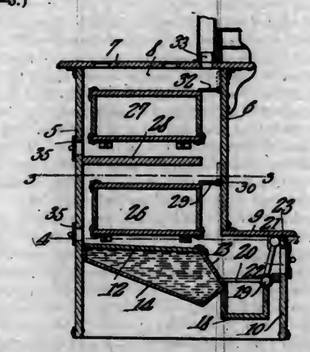
1. As new products, the benzoquinonedianilids which are substituted in the anilido groups in para position by halogen, said products being yellowish-brown to reddish-brown powders, insoluble in alcohol, ether and benzene, soluble in nitrobenzene with a brownish-red color, in concentrated sulfuric acid with a violet color, yielding, when gently heated with alkaline hydrosulfite, light-yellowish solutions and dyeing wool fast yellow tints.

2. As a new product, the benzoquinonedi-parabromanilid of the formula: $C_6H_2O_2(NHC_6H_4Br)_2$, being a brown powder insoluble in alcohol, ether and benzene, soluble in nitrobenzene with a brownish-red color, in concentrated sulfuric acid with a violet color, yielding, when gently heated with alkaline hydrosulfite, a light-yellowish vat which dyes wool fast yellow tints.

3. The process of manufacturing new yellow vat dyestuffs, consisting in causing a halogen to act upon the benzoquinone-dianilid $C_6H_2O_2(NHC_6H_5)_2$.

4. The process of manufacturing a yellow vat dyestuff, consisting in causing bromin to act upon benzoquinonedianilid.

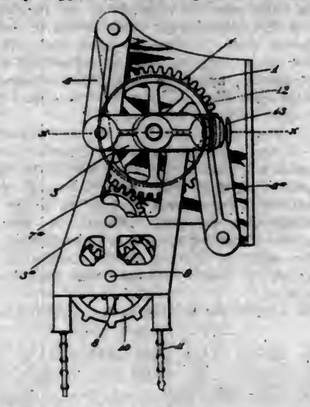
1,015,330. STOVE. DANIEL WILLIAMS MARLOW, East Point, Ga. Filed Dec. 4, 1909. Serial No. 531,429. (Cl. 126—5.)



In a stove, a body having front, rear and side walls, a fire box within the body, said fire box being located at the front of the said body, a partition extending from side to side within the body and from the rear wall thereof forwardly and terminating short of the front wall, an oven arranged within the body below the partition and with its front and rear walls spaced from the corresponding walls of the body and its top wall spaced below the partition, the said oven being rearwardly off-set with respect to the fire box, a damper extending across the body at the front thereof and movable to position to close the space between the front of the oven and the front wall of the body, an oven located within the body above the partition and having its bottom wall spaced from the said partition and its front and rear walls spaced from the corresponding walls of the body, the body having an outlet in the top thereof, and a damper extending across the body at the front thereof and movable to position to close the space between the front of the last mentioned oven and the front wall of the body.

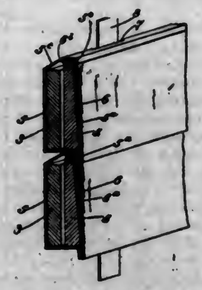
1,015,331. MEANS FOR SUPPORTING AND OPERATING CURTAIN-ROLLERS. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Feb. 28, 1907. Serial No. 359,723. (Cl. 156—28.)

In combination with a curtain roller having journals and fixed brackets between which the roller is hung, a support for the roller comprising horizontally movable carriers having bearings to receive the journals of the roller, a pair of links to support each carrier said links being pivotally attached to the carrier at opposite sides of the bearings therein and extending in opposite directions and pivotally supported at fixed points on the brackets



whereby the carriers can swing in substantially horizontal plane, a gear fixed on the roller, a spiral projection on the roller and projections on the bracket engaged by the spiral projection on the roller, and means for driving the said gear, substantially as described.

1,015,332. FLEXIBLE FIRE-RESISTING SHUTTER AND SLAT THEREFOR. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Jan. 31, 1908. Serial No. 413,518. (Cl. 189—56.)



A shutter or curtain constructed of slats consisting of a core of wood or other heat retarding material, a metal sheathing for said core composed of two strips 5 and 6, one strip, 5, bent longitudinally to form a trough like structure to inclose one side and the two edges of the core, said strip provided at the edge of its upper margin with a seaming member and at the edge of its lower margin with a downwardly bent longitudinal flange 5^a, and the other strip, 6, provided at its upper edge with a longitudinal seaming member for connection with the seaming member at the upper portion of the first mentioned strip and with a hook like member bent around and upward against the flange 5^a to form a lip to close the horizontal space between the slat and that next below, and flexible means passed through the upper and lower edges of the slats and connecting them substantially as described.

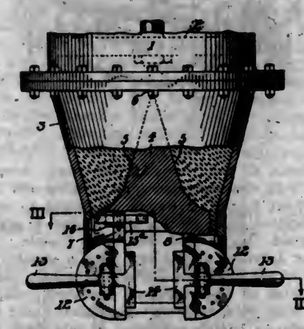
1,015,333. BOBBIN-CARRIAGE AND BOBBIN OF LACE MACHINERY. WILLIAM BRUCE MITCHELL, Edgbaston, Birmingham, England, assignor to William Mitchell (Pens) Limited, Smethwick, near Birmingham, England. Filed Sept. 6, 1910. Serial No. 580,661. (Cl. 66—6.)

1. In bobbin carriages and bobbins, a carriage having a cage in which the bobbin runs, a "verge" within said cage, a bobbin having a thread slot between peripheral lips, said bobbin engaging said verge by means of said lips, and a retaining spring holding said bobbin in proper working position on said verge, the engaging portions of said bobbin and said verge being co-acting inclines which upon partial closing of the lips of said bobbin automatically alter their relative position so that a satisfactory engagement still takes place.

2. In bobbin carriages and bobbins a carriage having a cage in which the bobbin runs, a verge within said cage, a bobbin having a thread slot between peripheral lips, said bobbin engaging said verge by means of said lips, and a retaining spring holding said bobbin in proper working position on said verge by means of a nib, the engaging portions of said bobbin and said verge and said nib of the retaining spring being coacting inclines as set forth.

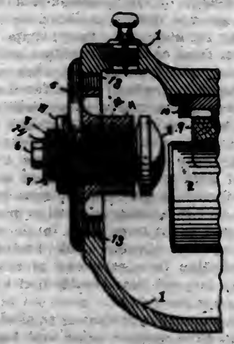
3. In bobbin carriages and bobbins a carriage having a cage in which the bobbin runs, a recess in said carriage for a portion of the extent of said cage, a bobbin having a thread slot and inturned lips, said bobbin working in the recess in said carriage, the outer sides of its lips engaging the walls thereof, the engaging surfaces of said carriage and said bobbin being formed as coacting inclines, and retaining means for holding said bobbin in place, substantially as described.

1,015,334. PIPE-FORMING APPARATUS. GEORGE M. MYERS, Toronto, Ohio. Filed Jan. 18, 1910. Serial No. 538,755. (Cl. 25—30.)



In an apparatus for molding half-tubes, a hopper, a plunger operable in the upper end thereof, a partition dividing the lower end of the hopper below the plunger into lateral portions, a die connected to the bottom of each of the lateral portions of the hopper, each die having a fixed vertical base member with a convex portion, and a hinged concave member having its edges resting on the base portion, and a latch carried by each hinged member and adapted to catch over the edges of the base member, the two dies being parallel and close together, whereby they may be formed simultaneously and readily joined by their edges to form pipes.

1,015,335. JOURNAL-BOX. MICHAEL P. NEWCOMB, Sandpoint, Idaho, assignor to The Locomotive Equipment Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1909. Serial No. 490,614. (Cl. 64—25.)

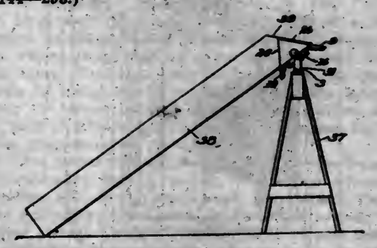


1. The combination with a journal box having a threaded opening, of a cap mounted in said opening provided with an inwardly projecting sleeve having an internally threaded portion, a threaded shank provided with an abutting head mounted within said sleeve portion and extending out through said cap, said shank being provided with an internally threaded portion, and a bolt adapted to thread in said threaded portion of the shank.

2. The combination with a journal box, of a cap for closing the opening of the box provided with a sleeve having an internally threaded portion, a hollow shank provided with an abutting head, said shank being internally and externally threaded and mounted within the sleeve, a bolt arranged in the outer end of said shank a pin securing said bolt in position, and a locking nut mounted on the shank adapted to engage the cover for holding said abutting head in its adjusted position.

3. A journal box having a threaded opening at one end, a flange cap threaded into said opening, said cap having a central inwardly projecting, internally threaded sleeve portion, a rounded abutting head having a tubular internally and externally threaded shank mounted in said sleeve portion, and extending out through a boss formed on the cap, a threaded bolt mounted in said shank, a pin extending transversely through said shank, and a bolt, a spring carried by the box having a bowed end portion, provided with an aperture adapted to receive said bolt, and a lock nut mounted on said bolt.

1,015,336. MITER-CLAMP. JOHN ORLANDI, Salisbury, Conn. Filed Jan. 14, 1911. Serial No. 602,542. (Cl. 144—298.)



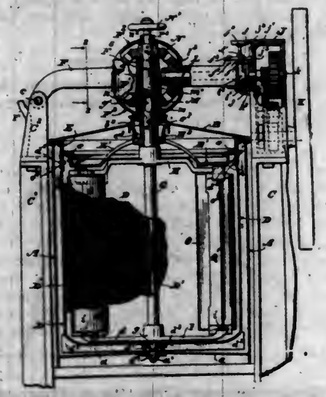
1. A clamp comprising a fixed block, a movable block, means for positively advancing and retracting the latter, said blocks having surfaces to guide a tool in working a board or plank clamped between said blocks, and means permitting said clamp as a unit to swivel about an axis substantially parallel to the direction of motion of the said movable block.

2. A mitering clamp comprising a base frame consisting of two parallel guides grooved on their adjacent faces and connected at their ends by cross-bars, the cross-bar at one end carrying a block having guide faces lying in planes parallel to the longitudinal edges of the guide members, but oblique to the plane of the base or frame, a cross-head movable longitudinally of said guides and having tongues slidable in the grooves therein, a block secured to said cross-head having inclined guide faces, strips of wood secured to the outer faces of the longitudinal guide members, said strips having inclined guide faces, each of said guide faces and the adjacent inclined guide faces of the fixed and movable blocks lying in the same plane, and means for forcing said cross-head and movable block toward said fixed block to clamp a board or plank between said blocks.

3. A mitering clamp comprising a base, a block fixed thereto, a second block movably mounted on said base and slidable longitudinally thereof, said blocks having guide faces to guide a tool in working a board or plank clamped to said blocks, said guide faces lying in the same plane, means for forcing said movable block toward said fixed block, studs projecting from each end of said base, and supporting blocks for said base provided with bearings in which said studs are journaled.

4. A mitering clamp comprising a supporting base, a block mounted in fixed position upon said base having a guiding surface inclined to the plane of said base, a block movably mounted upon said base and slidable longitudinally thereof and having an inclined guide face lying in the same plane as the guide face upon said fixed block, means for forcing said movable block toward said fixed block to cause the same to clamp a board or plank in position to be worked by a tool guided by the guide surfaces of said fixed and movable blocks, and a wedge-shaped filling block adapted to be supported upon said base between said fixed and movable blocks, said filling block having an upper surface adapted to support the board or plank to be clamped between said fixed and movable blocks, said upper surface lying in a plane passing through the line of intersection of the plane of the inclined guide surfaces on the fixed and movable blocks with the plane of the upper surface of the supporting base, the inclination of the plane of the upper surface of said wedge-piece with relation to the plane of said base being more acute than the corresponding inclination of the guiding surfaces of said blocks.

1,015,337. CULINARY SEPARATING-MACHINE. ALVIN C. PANCOAST, Cleveland, Ohio, assignor of one-fourth to William G. Pancoast, East Cleveland, Ohio. Filed Jan. 31, 1910. Serial No. 540,966. (Cl. 146—9.)



1. In a utensil of the specified character, the combination of an outer receptacle, an inner cylindrical straining vessel closely fitting in the outer receptacle and adapted to rotate on a vertical axis, a carrying frame adapted to rotate on the same axis but in an opposite direction from the strainer vessel, with a plurality of vertical rollers link connected to the carrying frame and adapted to be pressed against the walls of the strainer vessel.

2. In a utensil of the specified character, the combination of an outer receptacle, an inner cylindrical strainer vessel closely fitting in the outer receptacle and adapted to rotate on a vertical axis, a carrying frame adapted to rotate on the same axis but in an opposite direction from the straining vessel, with a plurality of vertical rollers link connected to the carrying frame and adapted to be pressed by centrifugal force against the walls of the strainer vessel.

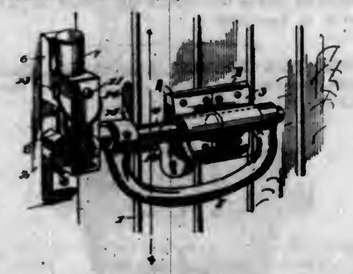
3. In a utensil of the specified character, the combination of an outer cylindrical receptacle, an inner cylindrical strainer vessel closely fitting in the outer receptacle and rotatable on a vertical axis, a carrying frame rotatable on the same axis, vertical rollers carried by said frame and adapted to yieldingly press against the inner walls of the strainer vessel with means for rotating the strainer vessel in one direction and the carrying frame in the other direction.

4. In a utensil of the specified character, the combination of an outer fixed receptacle, an inner cylindrical strainer vessel closely fitting in the outer receptacle and adapted to rotate on a vertical axis, a carrying frame adapted to rotate independently on the same axis, rollers carried by said frame and having rolling contact with the surrounding walls of the strainer vessel, with a step bearing in the outer receptacle to receive a trunnion of the strainer vessel and a step bearing in the strainer bearing to receive a trunnion of the carrying frame.

5. In a utensil of the specified character, the combination of an outer fixed receptacle, an inner cylindrical vessel having vertical strainer walls and a tight bottom which curves upwardly at its outer edge with fin blades or arms depending from the said bottom.

[Claims 6 to 11 not printed in the Gazette.]

1,015,338. COMBINED LATCH AND HANDLE. VANCE W. PERL, Topeka, Kans. Filed Mar. 10, 1911. Serial No. 613,592. (Cl. 16—64.)

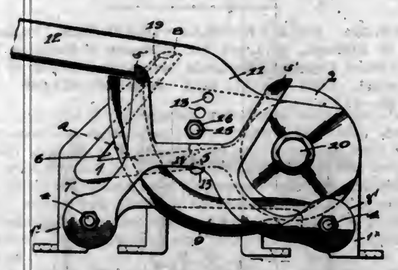


1. A device of the character described, comprising a casing, a latch stem mounted for a turning and longitudinal movement therein, a handle connected to said stem, a keeper bracket, and a locking pin mounted in said bracket for a limited longitudinal movement therein, the latch stem being provided at one end with a shoulder for engagement by the adjoining end of the locking pin.

2. A device of the character described, comprising a casing, a latch stem movable longitudinally and rotatably in the casing, a handle connected to said stem, the stem being formed at its free end with a shoulder, a keeper bracket into which said end of the stem is adapted to project, and a locking pin mounted for a limited longitudinal movement in said bracket and designed for locking engagement with the shoulder of the latch stem, the bracket and locking pin being formed with registering transverse slots designed for the reception of a seal, as and for the purpose set forth.

3. A device of the character described, comprising a casing constructed in two separate and disconnected parts each of which is arranged for separate attachment to a door, a latch-stem mounted for free movement in said casing, a loop handle connected at its ends to said stem, a keeper bracket, and a locking-pin mounted in said bracket for a limited longitudinal movement therein, the latch-stem being provided at one end with a shoulder for engagement by the adjoining end of the locking-pin, the combined width of the two parts of the casing being less than the distance between the two ends of the handle, whereby the two parts of the casing may be secured to a support in abutting relation with each other so as to permit the stem to have both a turning and a longitudinal movement, and whereby, the two parts may be separated and secured to a support in spaced relation to each other and in engagement with the end of the handle, respectively, so as to limit the movement of the latch-stem to a turning movement.

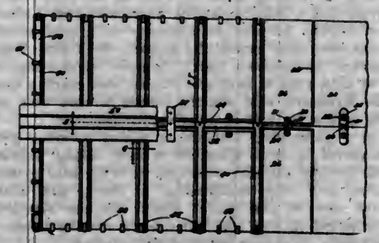
1,015,339. YARN-CUTTER. BENJAMIN HYATT PONDER, Camden, Ark., assignor of one-half to James Henry Waters, Camden, Ark. Filed Mar. 17, 1910. Serial No. 550,063. (Cl. 146—23.)



1. A cutting mechanism consisting of a bed plate provided with a downwardly inclined bottom portion adapted to support the material to be cut, an arm extending upwardly from the lower end of said bottom portion at an acute angle thereto, and forming therewith an inclined V-shaped recess, a blade supporting arm extending upwardly from said bed plate at the upper end of said inclined bottom portion and a cutting blade pivotally supported by said arm and having shearing engagement with the side walls of said inclined bottom portion and with said first named arm and a material supporting bracket consisting of a recessed bar disposed parallel with the side walls of said bed plate and means for supporting said bar in spaced relation from said bed plate.

2. In a cutting device, the combination of a bed plate having a V-shaped throat at one end and a bearing at the other provided with a plane vertical face, a blade carriage secured to said bearing and having a bowed knife adjustably secured thereto, and a guide bar having a base with upwardly projecting arms at its ends, said frame being connected to said bed plate by bolts and spacing sleeves.

1,015,340. CAR-ROOF. EDWARD POSSON, Chicago, Ill. Filed Nov. 27, 1906. Serial No. 464,706. (Cl. 108—5.)



1. A car roof comprising a supporting framework, metal sheets laid thereon side by side, means to hold said sheets approximately in place but permitting slight adjustment thereof relatively to each other and to said framework, said means comprising clips each having one end fastened between the side wall of the bar and the fascia and the other end reaching up over the lateral edge of the roof sheets.

2. A car roof comprising a supporting framework, metal sheets laid thereon side by side, and means to hold said sheets approximately in place but permitting slight adjustment thereof relatively to each other and to said framework, said means comprising clips each having one end attached to the car underneath the fascia and the other end extending up over the lateral edge of the roof sheet, each clip being bent out to provide clearance for the edges of the roof sheets.

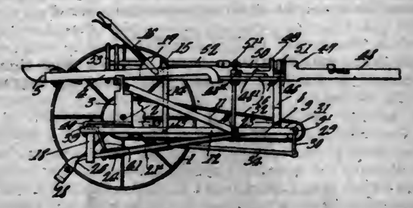
3. A car roof comprising a supporting framework, metal sheets laid thereon side by side, a flashing bent over the eaves of the car roof and extending under the eaves edges of said metal sheets, and means to hold said sheets down upon said flashing while permitting lateral displacement relatively thereto.

4. A car roof comprising a supporting framework, metal sheets laid thereon side by side, a flashing under said sheets at the eaves of the car roof, and clips attached to the side wall of the car below the edge of the roof and extending up above the eaves edges of the metal sheets and holding the same down upon the flashing, but permitting relative displacement.

5. A car roof comprising a supporting framework, metal sheets laid thereon side by side and having their lateral edges folded under, and clips attached to the side wall of the car underneath the fascia and extending up over the folded edges of said roof sheets.

[Claim 6 not printed in the Gazette.]

1,015,341. COTTON-CHOPPER. CECIL PRICKETT, Reading, Okla. Filed July 5, 1911. Serial No. 636,891. (Cl. 97—45.)



1. In a cotton chopper, the combination of a frame, traction wheels journaled therein, a pair of spring-actuated chopper-blade-carrying arms normally held toward each other, means operably connected to the traction wheels for intermittently separating said arms, and individual means for changing the relative vertical position of the free ends of the chopper blade arms.

2. In a cotton chopper, the combination of a frame, traction wheels journaled therein, a pair of spring-actuated chopper-blade-carrying arms normally held toward each other, means operably connected to the traction wheels for intermittently separating said arms, individual means for changing the relative vertical position of the free ends of the chopper blade arms, and means for regulating the separation of said arms.

3. In a cotton chopper, the combination of a frame, an axle journaled therein, a pair of traction wheels for operating said axle, a crank shaft journaled in the forward end of the frame, two chopper-blade-carrying arms pivoted at their forward ends to the frame and mounted for transverse separation, means for changing the relative vertical position of the free ends of said arms, means operably connecting said crank shaft to the axle, and means operated by said crank shaft for imparting to the chopper-blade-carrying arms a transverse movement.

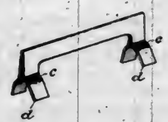
4. In a cotton chopper, the combination of a frame, traction wheels journaled therein, a crank shaft mounted

in the forward portion of the frame and operably connected to said traction wheels, a pair of spring pressed chopper-blade-carrying arms pivotally mounted at their forward ends for movement toward and away from each other, means for changing the relative vertical position of the free ends of said arms, and a reciprocating wedge operably connected to the crank shaft and to said arms for separating said arms against the tension of the springs thereof.

5. In a cotton chopper, the combination of a frame, traction wheels journaled therein, a crank shaft mounted in the forward portion of the frame and operably connected to said traction wheels, a pair of spring pressed chopper-blade-carrying arms pivotally mounted at their forward ends for movement toward and away from each other, means for changing the relative vertical position of the ends of said arms, a reciprocating wedge operably connected to the crank shaft and to said arms for separating said arms against the tension of the springs thereof, and means for regulating the separation of the arms.

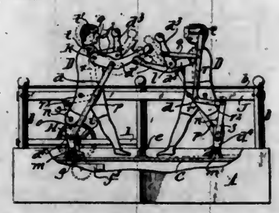
[Claims 6 to 10 not printed in the Gazette.]

1,015,342. FRAMEWORK OF ROOFS FOR TOY BUILDINGS. FRIEDRICH ADOLF RICHTER, Rudolstadt, Germany. Filed Feb. 2, 1909. Serial No. 475,712. (Cl. 46—37.)



A support for a roof for toy buildings comprising a horizontal section composed of two members bent upon each other with their adjacent faces substantially in contact with each other and connected along one edge, and integral legs extending outwardly and downwardly from each of said sections at the opposite edges thereof..

1,015,343. MECHANICAL TOY. GEORGE RIEXINGER, Buffalo, N. Y. Filed May 12, 1911. Serial No. 626,754. (Cl. 46—40.)



1. In a toy, the combination of a base, a vibratory platform pivoted centrally to the base, a pair of figures supported above the platform and each having a movable part, and actuating connections between the movable parts of the figures and the platform, the connections of the two figures being attached to the platform on opposite sides of its pivot.

2. In a toy, the combination of a base, a vibratory platform mounted thereon, a figure supported above the platform and having an upper movable part and a lower leg-section movable vertically on the body portion of the figure, the lower end of said leg-section being pivoted to the platform to vibrate vertically therewith, and means for operatively connecting said upper movable part of the figure with said movable leg-section.

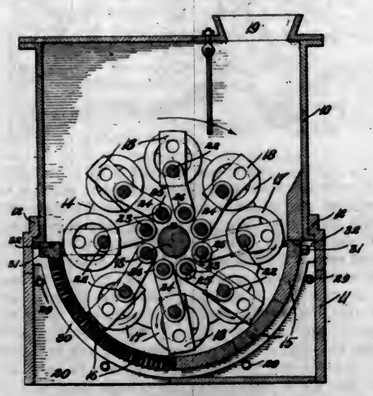
3. In a toy, the combination of a base, a vibratory platform mounted thereon, a figure supported above said platform and having an arm provided with a jointed fore-arm, a lever pivoted to the body of the figure and connected with said jointed fore-arm, and means for operatively connecting said lever with the platform.

4. In a toy, the combination of a base, a vibratory platform mounted thereon, a figure supported above said platform and provided with arms, one of said arms having a jointed fore-arm and the other arm being pivoted to the body of the figure, a lever pivoted to the body of the figure and connected with said fore-arm, means for operatively connecting said lever with the platform, and means for operatively connecting the other arm of the figure with the platform.

5. In a toy, the combination of a base, a vibratory platform mounted thereon, a figure supported above the platform and having an arm provided with a jointed fore-arm and a leg-section movable vertically relatively to the body of the figure, said leg-section being pivoted to the platform to vibrate therewith, a bell crank lever pivoted to the body of the figure, a link connecting the upper arm of said lever with said fore-arm, and a second link connecting the lower arm of said lever with said movable leg-section.

[Claims 6 to 9 not printed in the Gazette.]

1,015,344. ROCK AND CLAY PULVERIZER. FREDERIC W. ROEBBEL, St. Louis, Mo., assignor to American Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 17, 1911. Serial No. 621,645. (Cl. 83—11.)



1. In a rotor for pulverizing machines, a main shaft, frame members directly mounted on said shaft, a series of rods extending lengthwise of said shaft and secured in said frame members, hammers carried thereby, and braces carried by said frame members and attached to said rods at spaced intervals to secure the latter against deflection.

2. A rotor for a pulverizing machine comprising a main shaft, parallel end frames mounted thereon and connected by two circular series of rods fixed at both ends and out of radial line from the shaft, hammers carried by the outer series of rods and spaced links rigidly connecting the rods of the outer series with the rods of the inner series.

3. In a pulverizing machine, a casing carrying grinding concaves, and a rotor mounted in said casing, hammers carried thereby adapted to coöperate with said grinding concaves, said rotor comprising a shaft, end frames mounted thereon and spaced apart, hammer supporting rods fixed at both ends in said end frames, and spacing means for the hammers, said spacing means serving also as a bracing means for said hammer supporting rods.

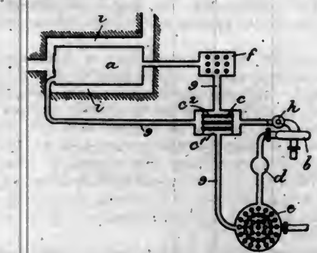
4. In a pulverizing machine, a casing carrying grinding concaves, a rotor mounted in said casing, hammers carried thereby adapted to coöperate with said grinding concaves, said rotor comprising a shaft, end frames mounted thereon and spaced apart, hammer supporting rods arranged in said end frames, and spacing means for the hammers removable independently thereof.

5. A rotor for a pulverizing machine comprising parallel disks mounted for rotation and connected by two series

of rods arranged in concentric circles about the axis of rotation, hammers carried by the outer series of rods and spaced links connecting the rods of the outer series with the rods of the inner series, the rods of the inner series being out of radial line with the rods of the outer series.

[Claim 6 not printed in the Gazette.]

1,015,345. PROCESS OF MAKING AMORPHOUS ANHYDROUS BARIUM HYDROXID. CHARLES ROLLIN, Newcastle-upon-Tyne, England. Filed Oct. 8, 1910. Serial No. 586,049. (Cl. 23—13.)



1. A process for producing anhydrous amorphous barium hydroxid from crystallizer barium hydroxid, said process consisting in causing dry inert gaseous fluid to flow over the barium hydroxid while melted in its water of crystallization and until the mass reaches the solidification stage, then breaking up the mass and afterward removing the remaining water of crystallization therefrom by heating the mass to a low temperature in a partial vacuum.

2. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in melting the crystallized barium hydroxid in its water of crystallization at a comparatively low temperature and at substantially ordinary atmospheric pressure, causing gaseous fluid heated to a temperature not much exceeding 220° C. to flow slowly over the liquefied barium hydroxid until the mass thereof reaches the solidification stage, then breaking up the resulting mass of partly dehydrated barium hydroxid and afterward slowly removing the remaining water of crystallization therefrom while heated at a comparatively low temperature in a partial vacuum.

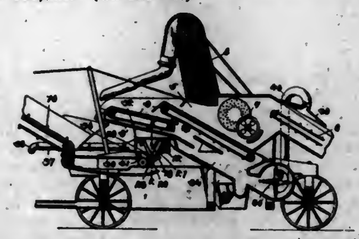
3. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in melting the crystallized barium hydroxid in its own water of crystallization at a comparatively low temperature, causing a stream of dry gaseous fluid inert to barium hydroxid to flow continuously over the liquefied hydroxid at a comparatively low temperature, until the mass reaches the solidification stage, the gaseous fluid after leaving the hydroxid being dehydrated and then being again passed over the barium hydroxid, breaking up the mass of partly dehydrated barium hydroxid and afterward removing the remainder of the water of crystallization therefrom by heating the same to a comparatively low temperature in a partial vacuum.

4. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in causing dry purified air to flow slowly and at substantially atmospheric pressure over the barium hydroxid while melted in its water of crystallization, removing moisture from the air after it leaves the hydroxid, re-heating the air and again passing it over the hydroxid and continuing the operation until the mass reaches the solidification stage, breaking up the solidified mass, and afterward removing the remaining water of crystallization therefrom, by heating the same to a comparatively low temperature in a partial vacuum.

5. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in causing dry purified air to flow slowly, continuously and at substantially atmospheric pressure and at a temperature above 100° C. but not much exceeding 220° C. over the barium hydroxid, while melted in its own water of crystallization, until the mass reaches the solidification stage, the air after leaving the hydroxid being dehydrated, purified and re-heated and then being passed over the hydroxid, breaking up the mass of solidified barium hydroxid and removing the remaining water of crystallization therefrom while heated to a comparatively low temperature as set forth in a partial vacuum.

[Claim 6 not printed in the Gazette.]

1,015,346. SUCTION DEVICE FOR CORN-SHELLING MACHINES. CLYDE M. BUSHING and ALBERT J. WHEELER, Charleston, Mo. Filed Dec. 24, 1910. Serial No. 599,099. (Cl. 130—7.)



1. The combination with a corn shelling machine including a feed elevator, corn shelling mechanism, and a cob carrier, of a suction device arranged beneath said carrier, said device comprising a drum into which dust from the denuded cobs on the carrier is adapted to be drawn, a fan in said drum, a discharge tube connected to the drum, a second fan carried by the machine and disposed below the plane of said suction device, a dust conducting tube connected to said casing and having its open end disposed above the elevator, said fan partially withdrawing the dust from the corn before it enters the shelling mechanism, and driving the same upwardly and into the drum of said suction device, the fan of said suction device finally expelling the dust which is first drawn from the corn and that drawn from the denuded cobs, from the machine.

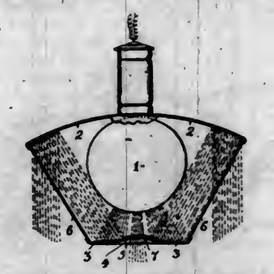
2. The combination with a corn shelling machine including a feed elevator, corn shelling mechanism, and a cob carrier; of a suction device arranged beneath said carrier, said device comprising a drum, a fan mounted to rotate within said drum in a horizontal plane, a dust conducting tube connected to said drum, a second fan mounted to rotate in a vertical plane and disposed below said suction device, said latter fan partially withdrawing the dust from the corn as it enters the machine and driving the same into the drum of said suction device, from whence together with the dust drawn from the denuded cobs it is expelled from the machine.

1,015,347. FRICTION-HINGE. CHARLES J. SCHNAUS, St. Louis, Mo., assignor to Emerson Electric Mfg. Co., St. Louis, Mo. Filed Apr. 15, 1911. Serial No. 621,388. (Cl. 248—20.)

In a device of the class described, a stationary member, a movable member pivoted to said stationary member by

a removable bolt and nut, a plurality of removable washers contiguously disposed on said bolt, some of said washers being formed with projecting portions adapted to engage the stationary member so as to be held stationary by it, others of said washers being formed with projecting portions adapted to engage the movable member so as to be moved by it, said washers adapted to engage the stationary member and said washers adapted to engage the movable member being disposed on said bolt interchangeably.

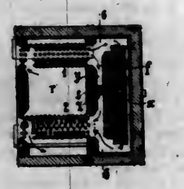
1,015,348. LIGHT-REFLECTOR. SIEGFRIED SCHOPFLOCHER, Montreal, Quebec, Canada. Filed Feb. 3, 1911. Serial No. 606,395. (Cl. 240—103.)



1. In light reflectors, the combination with the lighting member and a large concave reflector arranged thereabove, of a transparent holder supported from the outside edge of said reflector and converging downwardly and holding at its lower end below the light a smaller reflector adapted to throw the light onto the said upper reflector.

2. In light reflectors, an illuminating member, a circular concave reflector above said member, a frusto-conical globe supported from the outside edge of said reflector and converging downwardly, a smaller reflector supported by said globe at its lower edge below the light and adapted to reflect the light onto said upper reflector.

1,015,349. WATER-TUBE BOILER. RICHARD SCHULZ, Berlin, Germany. Filed Jan. 4, 1910. Serial No. 536,374. (Cl. 122—327.)



1. A water tube boiler having two or more groups of tubes through which the furnace gases pass substantially horizontally, a horizontal passage at the rear of said groups of tubes through which the furnace gases pass from one group of tubes to another, a superheater in said passage, a horizontal by-pass from one group of tubes to the other, both passage and by-pass connecting the ends of the passages through the groups of tubes and at the same level, and means to control the passage of gases through the by-pass and thereby control the volume of gases passing through the super-heater while maintaining the lengths of the paths through the passage and by-path substantially the same.

2. A water tube boiler having two or more groups of tubes through which the furnace gases pass substantially horizontally, a transverse passage at the rear of said groups of tubes through which the furnace gases pass from one group of tubes to another, a superheater in said passage, a transverse by-pass from one group of tubes to the other and at the same level and means to control the passage of gases through the by-pass and thereby control the volume of gases passing through said superheater while maintaining the lengths of the paths through the passage and by-pass substantially the same and horizontal.

3. A water-tube boiler having two or more groups of tubes, a horizontal passage through which the furnace gases pass from one group of tubes to another and at the same level, a superheater in said passage, a horizontal by-pass from one group of tubes to another also at the same level as the passages through the groups of tubes and a wall extending across and partially closing the by-pass, thereby maintaining the lengths of the paths of the gases through the passage and by-pass substantially the same.

4. A water-tube boiler having two or more groups of tubes, a transverse passage at the rear of said groups of tubes through which the furnace gases pass from the end of one group of tubes to the end of another, a superheater in said passage, a transverse by-pass from one group of tubes to another, said passage and by-pass at the same level as the passages through said groups of tubes separated by a wall and a wall extending across and partially closing the by-pass, thereby maintaining the lengths of the paths of the gases through said passage and by-pass substantially the same.

5. A water-tube boiler having two or more groups of tubes, a horizontal passage at the rear of said groups of tubes through which the furnace gases pass from one group of tubes to another, a superheater in said passage, a horizontal by-pass for gases, said horizontal passage and by-pass at the same level as the passages through said groups of tubes, a wall extending across and partially closing the by-pass and a valve coöperating with the wall.

[Claims 6 and 7 not printed in the Gazette.]

1,015,350. TRANSFER MECHANISM FOR HOTBEDS. JAMES SIMPSON, McKeesport, Pa., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 18, 1909. Serial No. 478,536. (Cl. 80—48.)

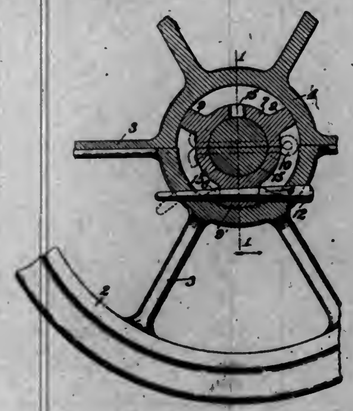
1. In a transfer mechanism for hot beds and similar apparatus, a pair of slides working in substantial parallelism, means on each slide for engaging a work-piece and moving the same by the movement of the slide, and a stop on one of the slides for engagement by a work-piece which is being moved by the other slide; substantially as described.

2. In a transfer device for hot beds and similar apparatus, a sliding frame movable transversely across the hot bed having a pivoted dog arranged to contact with and push materials on said hot bed, a second sliding frame having a pivoted dog adapted to contact with and pull materials lying on the hot bed, a stop on the second frame against which materials are pushed by the first frame, and means for actuating said frames, said second frame being arranged to move the materials from the position into which they are pushed by the dog on the first frame; substantially as described.

3. In a transfer device for hot beds and similar apparatus, a sliding frame movable transversely across the hot bed having a pivoted dog arranged to contact with and push materials on said hot bed, a second sliding frame having a pivoted dog adapted to contact with and pull materials lying on the hot bed, means at one side of the hot bed for actuating one sliding frame, and means in the other side of the hot bed for actuating the second sliding frame, said second frame being arranged to move the materials from the position into which they are pushed by the dog of the first frame; substantially as described.

4. The combination of a hot bed, a runway, a pair of reciprocatory slides working transversely across the runway and the hot bed from opposite sides of the runway, means on one slide for engaging the work-piece and removing the same from the runway to the hot bed, and means on the other slide for engaging the work-piece and moving it into a new position on the hot bed; substantially as described.

1,015,351. MINE-CAR WHEEL. JOHN S. SKELLY, Monongahela, Pa. Filed June 21, 1910. Serial No. 568,235. (Cl. 105—67.)



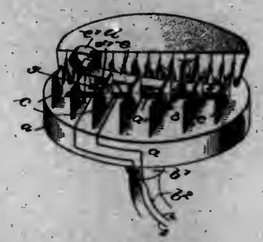
1. The combination of a wheel hub having two longitudinal ribs projecting inwardly from the surface of its bore, an axle box, longitudinal ribs on the exterior of the box which bear against the wall of the hub bore and provide lubricant space, one of the box ribs fitting between the two hub ribs, and a locking key extended transversely through the hub and box and through the interfitting ribs.

2. The combination of a wheel hub, an axle box, longitudinal ribs on one of said parts which space apart the hub and axle to provide lubricant space, longitudinal ribs on the other of said parts adapted to receive therebetween one of the first mentioned ribs, said coöperating ribs and the hub formed with alining transverse apertures, and a tapered key extended through the apertures with its extremity bent at the exterior of the hub to confine it in place.

3. The combination of a car wheel having a hollow internally tapered hub, an axle box smaller than the hub interior and having external longitudinal projections tapered on their outer faces to fit within the tapered hub, separated ribs on the inner surface of the hub between which one of the box projections is entered when the parts are assembled, the hub being formed with a transverse keyway which extends through said ribs and the box projection between the ribs having a similar keyway which registers therewith when the parts are assembled, and a tapered key entered in the keyways for forcing and holding the parts in tightly fitting relation.

4. The combination of a car wheel having a hollow hub open at its inner end and closed at its outer end save for an oil inlet, the interior of the hub tapered inwardly from its open end, an axle-box tapered on its exterior to removably fit within the tapered hub, the box having a headed portion which closes the open end of the hub, packing interposed between said head and the hub extremity, the hub and the box formed with a transverse keyway, and a tapered key entered in the keyway for wedging and holding the interfitting parts in close relation with said packing compressed between the parts confining the same.

1,015,352. ELECTRIC SWITCH ATTACHMENT FOR VACUUM CLEANING DEVICES. JAMES J. SLEVIN, New York, N. Y. Filed Mar. 20, 1911. Serial No. 615,677. (Cl. 119—84.)



1. A vacuum cleaning and electric power controlled device for cleaning animals, comprising a foundation of suitable material to be held in the hand, provided with a slot, cleaning members connected to one surface thereof and an intake nozzle connected to the other side of the foundation over the slot and adapted for connection with the flexible hose, and a switch structure connected to the foundation or holder and placed in the midst of the cleaning devices and adapted to complete the electric circuit upon contact with the surface to be cleaned, and electric wires passing along the flexible hose to the source of power.

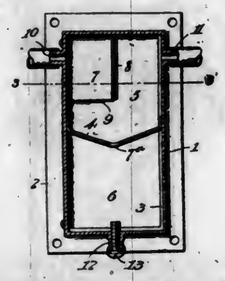
2. A vacuum cleaning and electric power controlled device for cleaning animals, comprising a foundation or holder of suitable material to be held in the hand, provided with a slot and intake nozzle connected to the one side of the foundation over the slot and a flexible hose therefrom to a vacuum cleaning device, cleaning members connected to the other side of the foundation, a metal blade secured to the same side of the foundation in the midst of the cleaning devices, a rounded end thereto adapted to rest upon the body of the animal being cleaned, contact members for completing an electrical circuit connected respectively to said blade and said foundation or holder, and electric wires from the said contact blades extending along the flexible hose to the source of electric energy for controlling the power with the application of the cleaning device to the body of the animal.

3. A vacuum cleaning and electric power controlled device for cleaning animals, comprising a foundation or holder of suitable material to be held in the hand, provided with a slot and intake nozzle connected to one side of the foundation over the slot and a flexible hose extending therefrom to a vacuum cleaning device, a series of bristles forming a brush member connected to the other side of the foundation or holder on one side of the slot and spaced therefrom, a series of curry-comb blades secured to the same side of the foundation or holder and upon the other side of the slot, a blade of metal connected to the foundation in the midst of the cleaning devices and along one side of the slot on which the bristles are spaced, and said blade having a rounded free end adapted to rest against the body of the animal being cleaned, a contact blade secured to the aforesaid blade and an electric wire therefrom, a second contact blade co-acting therewith and secured to the under surface of the foundation or holder and an electric wire therefrom, whereby when the rounded end of the blade is brought into contact with the body of the animal to be cleaned, the electric circuit is completed and the source of power set in motion, substantially as described.

1,015,353. GAS-PURIFIER. HORACE ANDREW SMITH, Isabel, Ill. Filed Sept. 25, 1911. Serial No. 651,218. (Cl. 48—137.)

A gas purifier comprising a casing having upper oppositely located inlet and outlet connections, a V-shaped inside partition having a single central drip hole and ar-

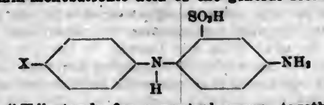
ranged to divide the interior of the casing into an upper separating compartment and a lower water compartment, and an outlet chamber in communication with the outlet



connection and said separating compartment, said outlet chamber including a screened bottom opening and an upright condensing wall lying opposite the inlet connection.

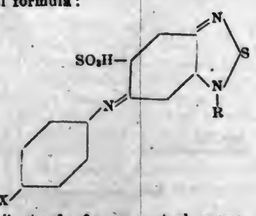
1,015,354. TRISULFONIC ACID OF THE SAFRANIN SERIES AND PROCESS OF MAKING SAME. OTTO SOHST, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Dec. 17, 1910. Serial No. 597,796. (Cl. 8—1.)

1. The process of manufacturing sulfonic acids of the safranin series, which consists in oxidizing p-aminodiphenylamin-monosulfonic acid of the general formula:



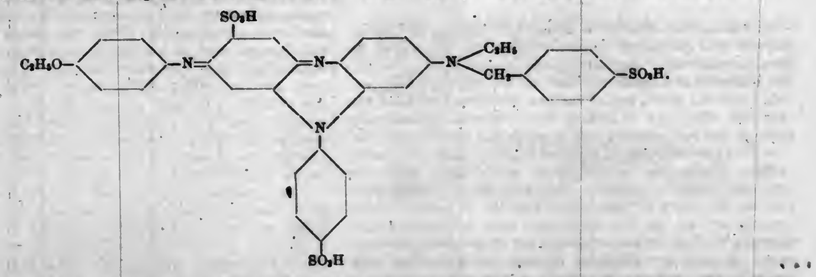
wherein "X" stands for a neutral group, together with the monosulfonic acids of tertiary amins so as to form indamins, and in transforming the latter into sulfonic acids of the safranin series by means of sulfonic acids of primary amins in presence of an oxidizing agent.

2. As new products, sulfonic acids of the safranin series, of the general formula:



wherein "X" stands for a neutral group, "S" for a monosulfonic acid of a tertiary amin combined in para position to the amino group with the indamin nitrogen, and "R" for a phenylsulfonic acid residue; which dyestuffs are dark-blue powders, readily soluble in water with a blue color, dissolving in concentrated sulfuric acid with a green color, which solution, when diluted with water, turns to a blue color, and dyeing wool fibers, in a bath containing a mineral acid, blue tints, leaving the intermixed cotton fibers white.

3. As a new product, the dyestuff of the formula:



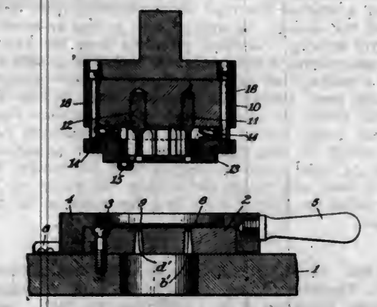
which dyestuff is a dark-blue powder, readily soluble in water with a blue color, dissolving in concentrated sulfuric acid with a green color, which solution, when diluted with water, turns to a blue color, and dyeing wool fibers, in a bath containing a mineral acid, blue tints, leaving the intermixed cotton fibers white.

1,015,355. SHEET-STEEL KEG. CHARLES STOLLBERG, Toledo, Ohio, assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 31, 1908. Serial No. 413,591. (Cl. 220—29.)

1. A sheet metal vessel adapted to retain white lead or other heavy materials, comprising a body having an integral external roll at its upper edge, a stiffening wire within said roll surrounding the body and provided with radially projecting bail ear loops extending outwardly from said roll, said external roll on the body having notches to accommodate the bail ear loops, a countersunk tight friction cover fitting within the mouth of the body and provided with an annular peripheral inverted U-shaped rim snugly engaging and superposed upon said external roll on the body, said U-shaped rim being provided with notches registering with the notches in the roll on the body to accommodate said bail ear loops of the stiffening wire, said U-shaped rim having also integral cover-holding lips located between the notches therein, said lips engaging with and bent around the external roll on the body whereby the external roll on the body is strengthened to better hold and retain the stiffening wire, substantially as specified.

2. A sheet metal vessel comprising a body having an external roll at its upper end, a stiffening wire within said roll surrounding the body and provided with diametrically disposed radially projecting integral bail ear loops, said external roll on the body having notches therein to accommodate the bail ear loops, and a cover fitting within the mouth of the body and provided with an annular peripheral rim, said rim being provided with notches coinciding with the notches in the roll on the body, said rim fitting against and reinforcing said external roll on the body and the stiffening wire at each side of the bail ear, said rim of the cover having integral holding clips clenched under the external roll on the body at points spaced away from the bail ear, substantially as specified.

1,015,356. PERFORATING-MACHINE. ARTHUR C. STONE, Providence, R. I. Filed Mar. 23, 1911. Serial No. 616,534. (Cl. 164—86.)



1. In a perforating machine, in combination, a die-plate provided with dies in number sufficient to produce at one operation a fractional part of the total number of perforations desired, said dies being grouped symmetrically upon said die-plate, and each group being spaced differently from the rest, a punching head provided with punches corresponding to said dies, a work-holder arranged axially with said die-plate and punching head, and means whereby said work-holder may be rotated.

2. In a perforating machine, in combination, a die-plate provided with dies in number sufficient to produce at one operation a fractional part of the total number of perforations desired, said dies being grouped symmetrically upon said die-plate, and each group being spaced differently from the rest, a punching head provided with punches corresponding to said dies, a work-holder arranged axially with said die-plate and punching head, means whereby said work-holder may be rotated, and means for locking said work-holder in position.

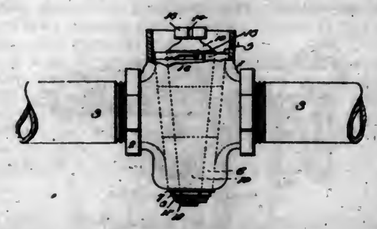
1,015,357. TOBACCO-PIPE CHARGER. ALBERT I. STRAUS, Cincinnati, Ohio. Filed May 1, 1911. Serial No. 624,427. (Cl. 131—59.)

1. A tobacco pipe charger comprising a barrel with an opening in its side and a flange surrounding the opening and adapted to enter the mouth of a tobacco pouch, and a plunger in the barrel and adapted to be reciprocated therein the walls of the plunger, when in its retracted position, closing the opening in the barrel.

2. A tobacco pipe charger comprising a barrel having an opening in its side and a grooved flange around the opening, and a plunger within the barrel fitting against the sides of the barrel and adapted to be reciprocated therein.

3. The combination of a tobacco pipe charger comprising a cylindrical barrel having a flange at its lower end adapted to rest upon top of a tobacco pipe and having in its side an opening surrounded by a flange, and a cylindrical plunger fitting snugly within the cylindrical barrel, having its inner end closed and being adapted to be reciprocated within the barrel to force tobacco from the barrel into a tobacco pipe, and to close the opening in the barrel when in its retracted position.

1,015,358. STOP-COCK. WALTER E. SUBSS, Taylor, Tex., assignor of one-half to Gustav Hamann, Taylor, Tex. Filed May 17, 1911. Serial No. 627,808. (Cl. 137—7.)



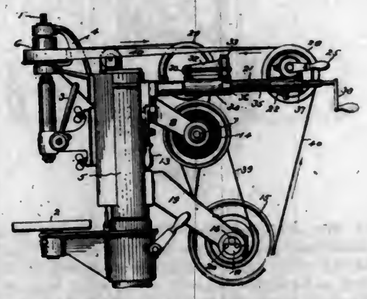
1. A stop-cock comprising a body having at its opposite sides openings, a hollow core journaled in the body and having at its opposite sides openings, said core being provided at its upper end with a lug which extends over the top of the body, the body being provided at its upper end with an incomplete annular flange in the space between the ends of which the said lug is received, a spring secured to the body in the space between the ends of the flange and having a free end portion elevated into the path of movement of the said lug, a core journaled in the first mentioned core and having an opening adapted to register with the openings in the first mentioned core, and means for bringing the opening in the second mentioned core into register with the openings in the first mentioned core, said means also being adapted to depress the spring out of the path of movement of the lug and engage the same, whereby the said cores may be turned in unison.

2. A stop-cock comprising a body having openings at its opposite sides, said body having at its upper end an interrupted annular flange, a spring attached to the body in the space between the ends of the flange and having an elevated free end portion, a core journaled in the body and having openings at its opposite sides, said core being provided at its upper end with a lug which lies in the space between the ends of said flange, the free end of said spring projecting into the path of movement of the said lug, a second core journaled in the first mentioned core and having an opening adapted to register with the openings in the first mentioned core, a head provided upon the second mentioned core, said head having a vertically disposed slot, and a key carrying a spline adapted to enter the slot of the said head, said key having eccentrically positioned lugs which are adapted to receive between them the first mentioned lug, one of the last mentioned lugs being adapted to depress the spring below the path of movement of the first mentioned lug.

3. A stop-cock comprising a body having at its opposite sides openings, said body being provided at its upper end with an incomplete annular flange, a spring mounted upon the body between the ends of the flange and having a free end portion elevated and depressed toward one end of the flange, a hollow core journaled in the body and having openings at its opposite sides adapted to register with the openings in the body, said core having at its upper end a lug which lies in the space between the ends of the flange and into the path of movement of which the said spring normally projects, a second core journaled in the first mentioned core and having an opening adapted to register with the openings in the first mentioned core, said second mentioned core having at its upper end a head provided with a vertically disposed groove, and a key having a central hollow adapted to receive the said head and provided with a spline adapted to enter the groove in the said head, said key having eccentrically positioned

spaced lugs adapted to receive between them the lug upon the first mentioned core and adapted to depress the spring below the path of movement of the first mentioned core, whereby the said cores may be turned in unison.

1,015,359. MECHANISM FOR DRIVING DRILL-SPINDLES. FREDERICK D. TAYLOR, Hartford, Conn., assignor to The Sigourney Tool Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 25, 1910. Serial No. 589,068. (Cl. 74—21.)



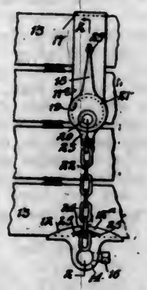
1. The combination with a drill column and a drill spindle supported thereby, of a mechanism for driving the drill spindle comprising a driving shaft supported by the column, a driving pulley and a cone pulley mounted on said shaft, an arbor supported by the column below the driving shaft, a cone pulley turning on said arbor, an endless belt passing around a step of the cone on the driving shaft and a step of the cone on the arbor below, a cone pulley on the drill spindle, a support extending from the back of the drill column, a return idler mounted on and adjustable horizontally along said support, a lead idler mounted on and adjustable vertically at the end of the same support, and an endless belt passing over said idlers and around the pulley on the arbor below the driving shaft and the pulley on the drill spindle.

2. The combination with a drill column and a drill spindle supported thereby, of a mechanism for driving the drill spindle comprising a driving shaft supported by the column, a driving pulley and a cone pulley mounted on said shaft, an arbor eccentrically mounted in bearings supported by the column below the driving shaft, a cone pulley on said arbor, an endless belt passing around a step of the cone on the driving shaft and a step of the cone on the eccentrically mounted arbor below, a cone pulley on the drill spindle, a support extending from the back of the drill column, an idler pulley swiveled upon and adjustable along said support, an idler pulley eccentrically mounted at the end of said support, and an endless belt passing over said idlers and around the pulley on the adjustable arbor below the driving shaft and the pulley on the drill spindle.

3. The combination with a drill column and a drill spindle supported thereby, of a mechanism for driving the drill spindle comprising a driving shaft supported by the column, a driving pulley and a cone pulley mounted on said shaft, an arbor supported by the column below the driving shaft and mounted in eccentric bearings, a cone pulley mounted on said arbor, an endless belt passing around a step of the cone on the driving shaft and a step of the cone on the arbor below, a cone pulley on the drill spindle, a support extending from the back of the drill column, a sleeve adjustable along said support, a screw for adjusting said sleeve along the support, an arm pivotally mounted on said sleeve, an idler pulley carried by said arm, a sleeve located at the end of said support, an eccentric bearing carried by the latter sleeve, an idler pulley mounted on said eccentric, and an endless belt passing over said idlers and around the pulley on the arbor below the driving shaft and the pulley on the drill spindle.

4. The combination with a drill column and a drill spindle supported thereby, of a mechanism for driving the drill spindle comprising a driving shaft supported by the column, a cone mounted on said shaft, an arbor eccentrically mounted on the column below the driving shaft, a cone mounted on said arbor, an endless belt passing around a step of the cone on the driving shaft and a step of the cone on the arbor below, a cone mounted on the drill spindle, a support extending from the back of the drill column, a sleeve movably mounted on said support, a sleeve fixed to said support, a screw supported by said fixed sleeve and engaging and moving said movable sleeve, an arm pivoted on the movable sleeve, an idler pulley carried by said arm, an eccentric bearing carried by said fixed sleeve, an idler pulley supported by said eccentric bearing, and an endless belt passing over said idlers and around the pulley on the arbor below the driving shaft and the pulley on the drill spindle.

1,015,360. VEHICLE-TOP BOW-CLAMP. RALPH THOMPSON, Brookline, Mass., assignor to A. E. Thompson, trustee, Brookline, Mass. Filed Apr. 28, 1911. Serial No. 623,866. (Cl. 21—61.)

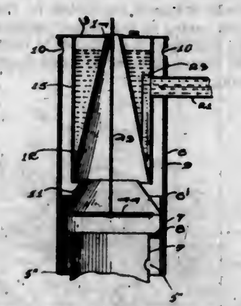


1. A bow clamp comprising a bow-supporting lower jaw adapted to be detachably secured to a fixed supporting member and having a seat for the lower bow and a coupling member at the outer portion of said seat, an upper jaw formed to bear on the upper bow and having a downwardly projecting shank, a depending tension member adjustably connected with said shank and having a plurality of coupling members adapted to interchangeably and detachably engage the coupling member on the lower jaw, and means for exerting tension on said member to press the upper jaw toward the lower jaw.

2. A bow clamp comprising a bow-supporting lower jaw adapted to be detachably secured to a fixed supporting member and having a seat for the lower bow and a coupling member at the outer portion of said seat, an upper jaw formed to bear on the upper bow and having a downwardly projecting shank and an outwardly projecting stud, a lever having an eccentric hub adapted to turn on said stud, a strap surrounding said hub, and a tension member depending from said strap, and provided with a plurality of coupling members adapted to interchangeably and detachably engage the coupling member on the lower jaw, the lever being adjustable to exert tension on the tension member and press the upper jaw toward the lower jaw, and means being provided for locking the lever to the shank in its tension-exerting adjustment.

3. A bow clamp comprising a bow-supporting lower jaw adapted to be detachably secured to a fixed supporting member and having a seat for the lower bow and a coupling member at the outer portion of said seat, an upper jaw formed to bear on the upper bow and having a downwardly projecting shank, an outwardly projecting stud, and an orifice above said stud, a lever having an eccentric hub adapted to turn on said stud and a teat adapted to spring into engagement with said orifice, a strap surrounding said hub, and a tension member depending from said strap and provided with a plurality of coupling members adapted to detachably and interchangeably engage the coupling member on the lower jaw, the lever being adjustable to exert tension on the tension member and press the upper jaw toward the lower jaw, and the lever teat and the shank orifice being adapted to lock the lever in its tension-exerting adjustment.

1,015,361. HEATER FOR INCUBATORS. ARTHUR W. TIBBALS and CARL DWIGHT YOUNG, Delaware, Ohio. Filed Nov. 21, 1910. Serial No. 593,521. (Cl. 237—23.)



In an apparatus of the character described, a cylindrical casing lined with asbestos and having air outlet openings at its upper end and an annular internal flange adjacent to its lower end, a lamp having a metallic chimney with outlet openings adjacent to the upper end thereof and a flange at its upper end, resting on the annular internal flange of the casing, a hood mounted in said casing above said chimney and open at each end, a water tank with vertical corrugated sides depending from the top of said casing and spaced from the sides of the latter, and formed with a vertical funnel open at each end and projecting through said tank and secured at its ends to the top of said casing and to the lower end of said tank, the lower end of the funnel being located above the hood, a vertically movable rod projecting through said funnel and hood above said lamp chimney and having a damper at its lower end above said chimney to close the latter, a heating chamber, hot water circulating pipes located in said chamber and connected with said water tank, and a thermostat in said chamber operatively connected with the damper rod.

1,015,362. CAR-WHEEL MOLD AND METHOD OF MAKING CAR-WHEELS. FREDERICK K. VIAL, Chicago, Ill., assignor to Griffin Wheel Company, a Corporation of Illinois. Filed Jan. 24, 1911. Serial No. 604,370. (Cl. 22—128.)

1. A mold for casting iron car wheels having a chiller around its periphery and formed elsewhere of material of low heat conductivity, said chiller extending around the side of the flange away from the tread.

2. A mold for casting iron car wheels having a chiller around its periphery and formed elsewhere of material of low heat conductivity, said chiller extending across the tread and around the side of the flange away from the tread.

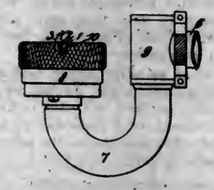
3. A mold for casting iron car wheels having a chiller around its periphery and formed elsewhere of material of low heat conductivity, said chiller extending across the tread and around the side of the wheel away from the flange.

4. A mold for casting iron car wheels having a chiller around its periphery and formed elsewhere of material of low heat conductivity, said chiller comprising a part extending around the tread and contiguous the face of the flange and a separate part extending around the face of the flange away from the tread.

5. A mold for casting iron car wheels having a chiller around its periphery and formed elsewhere of material of low heat conductivity, said chiller extending across the tread and around the side of the flange away from the tread and extending around the side of the wheel away from the flange.

[Claims 6 to 11 not printed in the Gazette.]

1,015,363. NEEDLE-HOLDER FOR THE SOUND-BOXES OF TALKING-MACHINES. CLARENCE VOGT, Berlin, Germany, assignor, by mesne assignments, to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Aug. 24, 1905. Serial No. 275,516. (Cl. 181—11.)



1. The combination with a sound box, of a talking machine, of a stylus bar provided with a socket for supporting a needle therein, one wall of said socket being provided with a slot of less width than the corresponding width of the socket and normally wide enough to permit the insertion and removal of a needle laterally therethrough.

2. The combination with the sound-box of a talking machine, of a needle-holder having oppositely-arranged clamping means for securing the needle and a lateral slot for the lateral insertion of the needle between said clamping means, and a spring arranged on the needle-holder near the slot for pressing the needle into the clamping means.

3. A sound box for talking machines comprising a stylus bar having a socket for holding a stylus and a slot of less width than said socket and extending longitudinally thereof for permitting the lateral insertion and removal of a stylus, and yielding means arranged to engage said stylus outside of said socket for holding said stylus in operative position.

4. A sound box for talking machines, comprising a needle holder socketed at one end, a spring located exteriorly of the socket and acting in a line normal thereto, and a needle movable laterally into and out of the said socket in opposition to the said spring.

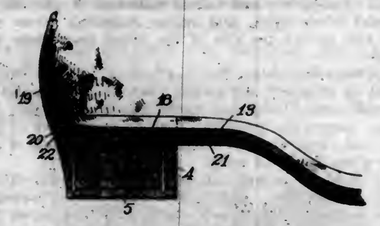
5. A sound box for talking machines, comprising a needle holder socketed at one end, a spring located outside of said socket and extending across the open end thereof, and a needle movable laterally into and out of said socket in opposition to the said spring.

[Claims 6 to 45 not printed in the Gazette.]

1,015,364. BOOT AND SHOE. EDWIN E. WAITE, Worcester, Mass., assignor of one-half to William B. Scofield, Worcester, Mass. Filed July 10, 1911. Serial No. 637,501. (Cl. 36—1.)

1. In a boot or shoe, a split inner sole, a dish shaped metallic heel seat inserted therein and cemented to the inner portion of said inner sole, with the front edge of

said heel seat concave and downwardly turned, and means for drawing the downwardly turned edge of said seat against the outer portion of said inner sole.



2. In a boot or shoe, a split inner sole, a dish shaped metallic heel seat cemented to the inner portion of said inner sole, means for registering said heel seat with the heel portion of said inner sole, and means for attaching said heel seat to the outer portion of said inner sole.

3. In a boot or shoe, a dish shaped metallic heel seat having an outwardly projecting prong adapted to enter the inner sole, an inner sole attached by said prong to the under side of said heel seat, said heel seat having a central opening and a downwardly bent front edge.

4. In a boot or shoe, an inner sole, a dish shaped metallic heel seat, having a central triangular opening and a downwardly projecting triangular prong, with its base arranged transversely to said heel seat, with said prong clenched to the under side of said inner sole and a leather covering for said heel seat.

5. As an article of manufacture, a heel seat consisting of a dish shaped metallic plate, having an inner concave and an outer convex surface, with its front edge concave and downwardly turned, said plate having a central opening, and provided with means for its attachment to the inner sole of a boot or shoe.

1,015,365. SIZE. WILLIAM A. WEELANDS and EUGENE WILLIAMS, Chicago, Ill., assignors to Adams & Elting Company, Chicago, Ill., a Corporation of Illinois. Filed June 11, 1908. Serial No. 437,859. (Cl. 134—23.)

A water size consisting of forty parts of powdered plaster of Paris, thirty parts of powdered glue, one part of powdered alum, and one part of powdered borax, mixed together in a natural state.

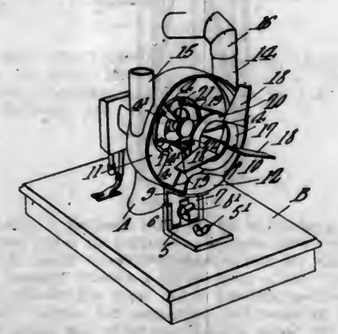
1,015,366. HAT-PIN GUARD. NATHAN WETZEL, Kilbourn, Wis. Filed Feb. 10, 1911. Serial No. 607,863. (Cl. 132—25.)

In a device of the character described, a block adapted to be secured to the inside of a hat, a funnel shaped guide embedded in and supported by said block, and a stud carried by said guide and adapted to project through the wall of the hat, said stud having an opening therethrough adapted to receive a hat pin.

1,015,367. FAN ATTACHMENT FOR SEWING-MACHINES. WILSON J. WHITE, Arkansas City, Kans. Filed Aug. 4, 1911. Serial No. 642,314. (Cl. 230—9.)

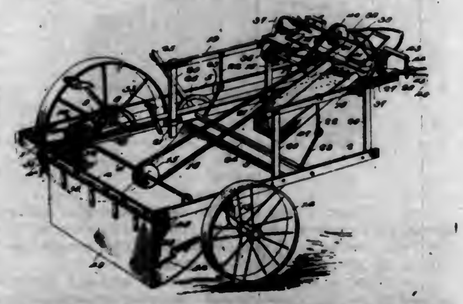
1. The combination with a sewing machine, of a fan attachment therefor, having a fan, means for detachably connecting the same to the fly wheel of the sewing machine, a fan casing having an adjustable air conducting outlet, an adjustable support for the casing to attach the same to the top of the machine, and another fan detachably connected to the first mentioned fan and operable exterior of the casing.

2. The combination with a rotating shaft, of a fan attachment, comprising a flat disk, a series of fan blades connected to one face thereof, a series of clamping arms connected to the other face and adapted to be detachably connected to said rotating member, a casing adapted to surround the said ring and blades and provided with an inlet and an outlet conduit, both of said conduits being disposed at a tangent in the upper portion of the casing, an adjustable conduit connected to one of said conduits for directing the current of air caused by the fan within the chamber to the desired point, two coöperatively connected supporting brackets connected to the fan casing for retaining the casing in the proper relative position to the fan, and an auxiliary fan detachably connected to the flat disk of the first mentioned fan and operable exterior of the fan casing.



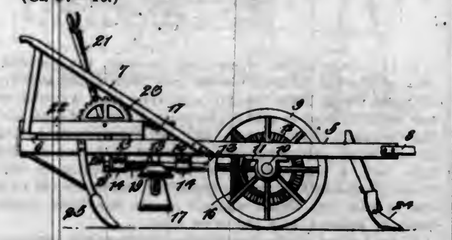
3. The combination with a rotating shaft, of a fan attachment, comprising a flat disk, a series of fan blades connected to one face thereof, a series of clamping arms connected to the other face and adapted to be detachably connected to said rotating member, a casing adapted to surround said disk and blades and provided with an inlet and an outlet conduit, both of said conduits being disposed at a tangent in the upper portion of the casing, an adjustable conduit connected to one of said conduits for directing the current of air caused by the fan within the chamber to the desired point, two coöperatively connected supporting brackets connected to the fan casing for retaining the casing in the proper relative position to the fan, said fan casing being provided with a removable cover having a concentric aperture therein, an annular ring, a series of blades carried thereby, and a series of spring actuated clamping arms carried by said ring and adapted to project through the aperture in the cover of the casing and engage the flat disk to connect the outer blade and ring to the inner disk and blade.

1,015,388. HEADER. SAM P. WHITWORTH, Merkel, Tex. Filed June 16, 1909. Serial No. 502,552. (Cl. 56—131.)



A header comprising a frame, a traction wheel partially supporting the same, a receptacle fixed to the frame and having a downwardly and rearwardly inclined forward side, a supplemental frame adjustably mounted upon the first mentioned frame, means for adjusting the supplemental frame vertically with relation to the first mentioned frame, a cutting apparatus mounted upon the supplemental frame, means for operating the cutting apparatus from the traction wheel, and a chute mounted upon the supplemental frame behind the cutting apparatus and having its delivery end disposed over the inclined side of the receptacle.

1,015,369. COTTON-CHOPPER. JAMES ELI WILLIAMS, Clay, Miss. Filed Oct. 22, 1910. Serial No. 588,530. (Cl. 97—46.)



In a cotton chopper, the combination of a frame having plows and handles, an axle shaft, bearings therefor, supporting wheels and a beveled gear on the axle shaft, a longitudinally movable shaft having chopping elements, bearings for said longitudinally movable shaft, a beveled gear at the front end of said longitudinally movable shaft to engage and disengage that on the axle shaft, a spring acting to normally move the longitudinally movable shaft forwardly and engage its gear with that on the axle shaft, a lever to move said longitudinally movable shaft rearwardly and disengage its gear from that of the axle shaft, the said longitudinally movable shaft being connected to the said lever for rearward movement independently of the lever, and means to lock the lever in adjusted position.

1,015,370. PROCESS OF FORMING PAPER RECEPTACLES. HERBERT S. WILSON, St. Louis, Mo. Filed Mar. 14, 1910. Serial No. 549,199. (Cl. 93—81.)

1. The process of forming a laminated paper tube moisture-proof throughout substantially its entire thickness, which consists in preliminarily giving a strip of paper a tendency to curl up in a plurality of concentric convolutions, then applying thereto a coating of moisture-proof adhesive, then winding said coated paper strip into tubular laminated form on a cylindrical mandrel, and then removing the tube from said mandrel before the adhesive has had an opportunity to set, the tendency of the paper to curl up after removal of the tube from the mandrel and during the setting of the adhesive causing the laminations of the tube to hug one another and the tube to maintain the form and diameter given to it by the mandrel, substantially as described.

2. The process of forming a laminated paper tube which consists in preliminarily giving a strip of paper a tendency to curl up in a plurality of concentric convolutions, then applying thereto an adhesive coating, then winding said coated strip into tubular laminated form on a cylindrical mandrel, and then removing the tube from said mandrel before the adhesive has had an opportunity to set, the tendency of the paper to curl up after removal of the tube from the mandrel and during the setting of the adhesive causing the laminations of the tube to hug one another and the tube to maintain the form and diameter given to it by the mandrel, substantially as described.

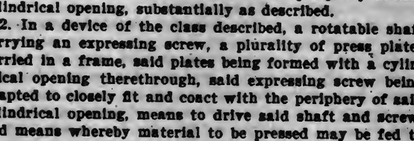
3. The process of forming a moisture-proof laminated paper tube, which consists in curling a strip of paper to give a portion of the same a more acute curvature than that of the remainder of the strip, applying a moisture-proof adhesive to said strip, and then winding the strip into tubular form with the portion of sharper curvature outermost whereby the convolutions are held together in position during the setting of the adhesive which secures them together, substantially as described.

4. The process of forming a laminated paper tube, which consists in curling a portion only of a strip of paper, and winding the strip into tubular form with the uncurled portion innermost, whereby the convolutions are held together in position by the tendency of the inner convolutions to expand and the outer convolutions to contract, substantially as described.

5. The process of forming a laminated paper tube, which consists in curling a portion only of a strip of paper, applying an adhesive to said strip, and winding the strip into tubular form with the uncurled portion innermost, whereby the convolutions are held together in position during the setting of the adhesive securing them together by the tendency of the inner convolutions to expand and the outer convolutions to contract, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,015,371. PRESS. THOMAS G. WOLFE, Oklahoma, Okla. Filed Mar. 25, 1911. Serial No. 616,893. (Cl. 100—48.)



1. In a device of the class described, a rotatable shaft carrying an expressing screw, a plurality of press plates carried in a frame, said plates being formed with a cylindrical opening therethrough, said expressing screw being adapted to closely fit and coact with the periphery of said cylindrical opening, substantially as described.

2. In a device of the class described, a rotatable shaft carrying an expressing screw, a plurality of press plates carried in a frame, said plates being formed with a cylindrical opening therethrough, said expressing screw being adapted to closely fit and coact with the periphery of said cylindrical opening, means to drive said shaft and screw, and means whereby material to be pressed may be fed to said expressing screw at one end thereof.

3. In a device of the class described, a rotatable shaft carrying an expressing screw, a plurality of press plates carried in a frame, said plates being formed with a cylindrical opening therethrough, said expressing screw being adapted to closely fit and coact with the periphery of said cylindrical opening, and movable means coacting with said screw to prevent rotation of the material to be pressed.

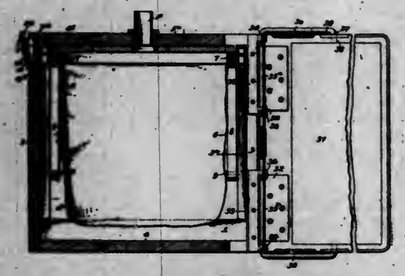
4. In a device of the class described, a rotatable shaft carrying an expressing screw, a plurality of press plates carried in a frame said plates being formed with a cylindrical opening therethrough, said expressing screw being adapted to closely fit and coact with the periphery of said cylindrical opening, the depressions between the turns of said screw gradually decreasing in depth from one end of the screw to the other, whereby the incoming material is pressed to expel the embodied fluid matter, the periphery of said cylindrical opening being provided with small apertures whereby the expressed fluid may be expelled.

5. In a device of the class described, a press-box formed of a series of press plates carried between end frames, said press-box having a pressing chamber comprising a longi-

tudinal cylindrical opening formed therein, an expressing screw formed on a rotatable shaft closely fitting and adapted to coact with the surface of said cylindrical opening, said surface being provided with apertures for the discharge of the expressed fluid, the depressions between the successive threads of said screw decreasing in depth from the supply end to the discharge end, movable blocks adapted to closely fit a depression between the successive threads of said screw, said blocks being connected so as to permit movement, said blocks being guided by a keyway in the upper portion of said pressing chamber whereby said blocks will be moved longitudinally of said press-box upon rotation of said screw and rotative movement of the material to be pressed will be prevented.

[Claims 6 to 15 not printed in the Gazette.]

1,015,372. PNEUMATIC CLEANING-MACHINE. MORRIS S. WRIGHT, Worcester, Mass., assignor to M. S. Wright Company, Worcester, Mass. Filed Nov. 17, 1909. Serial No. 528,618. (Cl. 83—47.)



1. In a dust collector, the combination with a casing, having a dust collecting chamber therein formed with a side opening, means for exhausting the air from the chamber, a filtering dust receiving receptacle located within the chamber and having an unrestricted mouth or open end, a frame for the said open end, a removable wall member for the chamber constituting a closure for the same and for the dust receptacle mouth, and having a relatively small inlet opening communicating with the interior of the receptacle, means for removably connecting the wall to the casing, and means for removably connecting the said receptacle frame to the said wall.

2. In a machine of the character described, the combination of a casing having an open side, a bag within the casing having an open mouth at said open side of the casing, a wall for closing said side having an inlet port, means for pressing the wall against the casing, and means for pressing the bag in an opposite direction against said wall so as to constitute a releasable but closed joint between the wall and chamber and between the wall and bag.

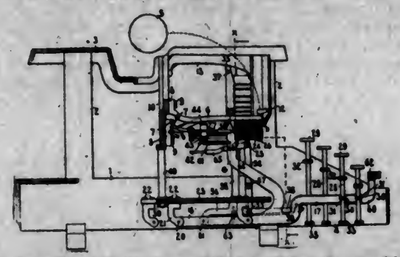
3. In a machine of the character described, the combination of a filtering receiving bag having an open mouth, a wall for closing said opening having an inlet port, a frame for the mouth of the bag, and means for removably holding the bag on said wall comprising a pivoted arm carried by the wall and adapted to engage said frame.

4. In a machine of the character described, the combination of a casing having an opening, a removable wall for said opening, said wall having an opening and a projection within the casing, a filtering receiving bag, a relatively rigid frame for the mouth of the bag, and movable means mounted on said projection of the wall for connecting said frame of the bag to said wall.

5. In a device of the character described, a casing having an opening, a dust receiving receptacle adapted to be inserted through said opening, a frame for the mouth of the receptacle, a removable closure for the opening having a dust inlet, and movable means within the casing for forcing the frame into air tight engagement with the closure.

[Claims 6 and 7 not printed in the Gazette.]

1,015,373. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Oct. 26, 1910. Serial No. 589,148. (Cl. 197—27.)



1. In a front-strike typewriting machine, the combination of a series of front strike type bars, a horizontally disposed frame piece beneath said type bars, a series of key levers pivoted to said frame piece, a series of keys having vertically sliding stems, said key levers each having an upwardly extending arm connected with one of said type bars, a rearwardly extending arm pivoted to said frame piece, and a forwardly extending arm connected with one of said key stems, and all of the key lever pivots being at substantially the same level.

2. In a front strike typewriting machine, the combination of a series of front strike type bars, a horizontally disposed frame piece beneath said type bars, a series of key levers pivoted to the under side of said frame piece, a series of keys having vertically sliding stems, said key levers each having an upwardly extending arm connected with one of said type bars, a rearwardly extending arm pivoted to said frame piece, and a forwardly extending arm connected with one of said key stems, and all of the key lever pivots being at substantially the same level, and said upwardly extending arms coming up in front of said frame piece.

3. In a front strike typewriting machine, the combination of a series of front strike type bars, a series of key levers, and a series of keys having vertically sliding stems, said key levers having upwardly extending arms connected with said type bars and said key levers having also forwardly extending arms connected with said key stems, and the pivots of said key levers being substantially at the same level and approximately at the same level as the points of connection between said key levers and key stems.

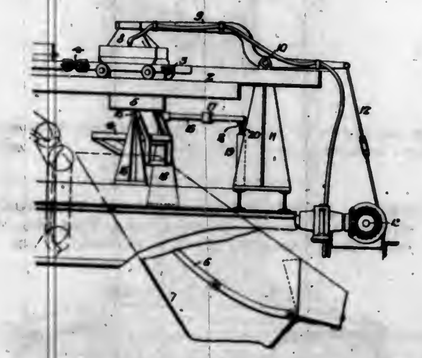
4. In a front strike typewriting machine, the combination of a main frame, a series of front strike type bars, a series of bell-crank key levers connected with said type bars, a type bar segment, a type bar rest, and a support to which said key levers are pivoted, said support, type bar rest and type bar segment being all connected so as to constitute parts of one auxiliary frame, and said auxiliary frame being detachably mounted in said main frame.

5. In a front-strike typewriting machine, the combination of a main frame comprising a top plate, a system of front strike type bars, a system of angled key levers and connections for operating said type bars, and an auxiliary frame detachably mounted in said main frame, said auxiliary frame comprising an upper part secured to said top plate and a lower part connected by posts with said upper part and having said key levers mounted thereon, and said upper part including a segmental support to which said type bars are pivoted and a rest for the free ends of said type bars.

[Claims 6 to 15 not printed in the Gazette.]

1,015,374. DISCHARGE APPARATUS FOR CASTING-MACHINES. HERBERT W. YEAGER, Philadelphia, Pa., assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 1, 1910. Serial No. 564,372. (Cl. 22—1.)

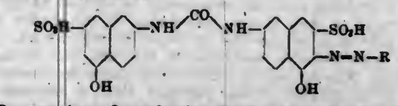
1. The combination in a casting apparatus, of a flask, means for discharging sand and castings from the flask, a hopper, a screen therein for separating the castings from the sand, bearings, a table pivotally mounted on the bearings and under the discharge point of the flask and having a counterbalance weight so that as the castings and sand are discharged from the flask they will drop onto the table and will be discharged by the table onto the screen.



2. The combination in a casting apparatus, of a flask carrier, flasks thereon, means located under the flask at the discharge point for receiving the casting and sand, a pivoted table located in the path of the falling casting, an arm connected to the table, and a spring cushion for cushioning the blow of the arm when the table returns to its normal position after discharging the casting.

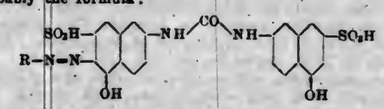
1,015,375. AZO DYE. ARTHUR ZART, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 6, 1911. Serial No. 631,553. (Cl. 8—1.)

1. The herein described new azo dyestuffs having most probably the formula:



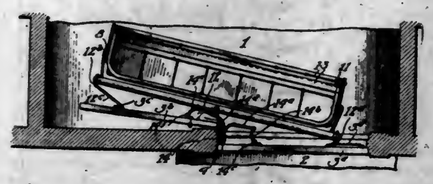
(R meaning 2-arylcarbonylamino-5-naphthol-7-sulfonic acid) which are after being dried and pulverised in the shape of their alkaline salts reddish powders easily soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid an amino-arylcarbonyl-2-amino-5-naphthol-7-sulfonic acid and the asymmetrical urea of 2.6-diamino-5-naphthol-7-sulfonic acid and the 2.5.7-aminonaphthol sulfonic acid; dyeing cotton orange to red shades which can be combined on fiber with diazotized para-nitranilin from orange-red to scarlet shades which are fast to washing and can be discharged to a pure white, substantially as described.

2. The herein described new azo dyestuff having most probably the formula:



(R meaning 2-benzoylamino-5-naphthol-7-sulfonic acid) which is after being dried and pulverized in the shape of its sodium salt a dark reddish powder, soluble in water with an orange color and soluble in concentrated sulfuric acid with a bluish-red color; yielding upon reduction with stannous chlorid and hydrochloric acid 2-para-aminobenzoyl-amino-5-naphthol-7-sulfonic acid and the asymmetrical urea of 2,6-diamino-5-naphthol-7-sulfonic acid and 2.5.7-aminonaphthol sulfonic acid; dyeing cotton orange-red shades, changing into pure yellowish-scarlet by development with diazotized para-nitranilin which are fast to washing and can be discharged to a pure white with hydrosulfite, substantially as described.

1,015,376. WALL OR RECESS BED. ROBERT H. ANDERSON, San Diego, Cal. Filed Aug. 28, 1911. Serial No. 646,322. (Cl. 5—18.)



1. A wall or recess bed, comprising a vertical shaft mounted centrally in a doorway to one side thereof, horizontal arms rigidly mounted on said shaft, a bed frame pivotally mounted on said horizontal arms, and means connected to said bed frame and to said shaft adapted to shift the bed relatively to said pivotal mountings, all substantially as set forth.

2. A wall or recess bed comprising a vertical shaft pivotally mounted on a bearing centrally in the threshold in the one side of a doorway, horizontal projecting arms each provided with a vertical extension rigidly mounted on said shaft, a bed frame pivotally mounted on said vertical extension, doors for closing said doorway, and means connected with said doors and said bed frame adapted to shift the bed edgewise relatively to said doorway, all substantially as set forth.

3. A device of the character described, comprising a door frame in the wall of a receptacle, opposite swinging doors hinged on the same side of said door frame, a vertical shaft pivotally mounted centrally and adjacent to the hinged sides of said doors, horizontal arms rigidly mounted on said shaft, a bed frame pivotally mounted on said horizontal arms, curved lever means connecting with said shaft, with said doors and with said bed frame for shifting said bed frame edgewise, relatively to said doors, in its inward and outward movement in said receptacle, all substantially as set forth.

4. In combination, a door frame, of a receptacle, doors hinged at one side of said door frame, a vertical shaft pivotally mounted centrally and adjacent to the hinged sides of said door-frame, horizontal arms rigidly mounted on said shaft, a bed frame pivotally mounted on said horizontal arms, curved lever means connecting with said shaft, with said doors and with said bed-frame for shifting said bed-frame edgewise relatively to said doors, in its movement into and out of said receptacle, all substantially as set forth.

5. In combination with a receptacle provided with a doorway into said receptacle, of a door hinged at one side of said doorway, a vertical shaft pivotally mounted centrally and adjacent to the hinged side of said door, horizontal arms rigidly mounted on said shaft, a bed frame pivotally mounted on said horizontal arms, means connected with said shaft, with said doors and with said bed-frame for shifting said bed-frame edgewise relatively to said door, in its movements into and out of said receptacle, all substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,015,377. CHANNELING-TOOL. GEORGE W. CARTER, Norway, Me., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 23, 1910. Serial No. 578,560½. (Cl. 12—106.)

1. A tool of the character described comprising a tool head, a knife supported by said head, a guide carried by

the head in coöperative relationship with the knife, and a handle offset from the head substantially in the line of the cutting movement of the knife.

2. A tool of the character described comprising a tool head, a handle projecting from said head, said head having an angular work engaging face, the surfaces of which meet in a ridge that extends across the face transversely of the direction of operative movement of the tool, a knife vertically adjustable in said head with its cutting edge extending through the summit of said ridge, means for holding said knife in adjusted position, an edge guide adjustable along said ridge toward and from said knife, and means for holding said guide in adjusted position.

3. A tool of the character described comprising a tool head, a knife supported in said head, the face of the tool head being cut away behind the cutting edge of the knife to form a clearance space, an edge guiding roll supported by the head for adjustment toward and from said knife in a plane transverse to the direction of operative movement of the tool and a handle rigid with said head and having its median line entering said head at a point in front of said knife and substantially in the plane of the knife.

4. A tool of the character described comprising a tool head, a handle integral therewith but offset from said head in the direction of operative movement of the tool, said head having an angular work engaging face with a rounded ridge extending across it substantially at right angles to the direction of operative movement of the tool, the surfaces of said face sloping away from said ridge to the front and rear edges of the head, said head having a vertical slot formed therein, a channeling knife adjustably positioned in said slot with its cutting edge projecting through the summit of said ridge, the median plane of said handle passing through the cutting edge of said knife, a clamping screw for holding said knife in adjusted position, an edge guiding roll, and a shouldered stud supporting the same, said stud being adjustable toward and from said knife in a slot formed through said head and opening into the face thereof along the summit of said ridge.

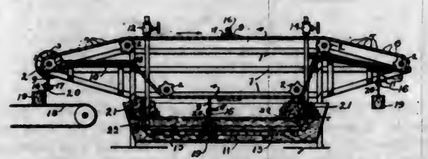
1,015,378. ACETYLENE-GAS GENERATOR. GILES H. COOK, Des Moines, Iowa. Filed Mar. 28, 1910. Serial No. 551,999. (Cl. 48—4.)

1. In an acetylene gas generator, a carbid basket therein, said basket formed with two pairs of legs arranged at right angles to each other, one pair of legs varying in length from the other pair of legs.

2. In an acetylene gas generator, a generating chamber having a flat bottom, a carbid basket in said chamber, said basket having two pairs of legs arranged at right angles to one another, one pair of legs being shorter than the other pair of legs, said carbid basket being seated within the chamber and supported by the legs aforesaid engaging

the flat bottom of the chamber, and the basket being oscillated by movements of the chamber.

1,015,379. MACHINE FOR SCALDING TOMATOES. HARMEN A. DARTING, Glenwood, Iowa. Filed May 10, 1911. Serial No. 626,378. (Cl. 146—14.)



1. In a machine for scalding fruit, an endless carrier, a plurality of fruit baskets dependent from the carrier, a hot-water tank in the line of travel of the baskets, and means normally submerged within the tank for throwing upward therein by steam pressure a mixture of the steam and the hot water into the path of the baskets below the carrier and above the water level in the tank.

2. In a machine for scalding fruit, an endless carrier, a plurality of fruit baskets carried thereby, a tank for hot water in a line of travel of the baskets, and means normally submerged in the tank for throwing up hot water between the carrier and the water level.

3. A scalding machine, comprising an endless carrier, a plurality of fruit baskets transported by the carrier, a hot-water tank in the line of travel of the baskets, a steam pipe normally submerged in the tank and having upwardly directed nozzles in the water under the carrier.

4. In a machine of the described class, a hot-water tank, an endless carrier traveling above the hot water, a plurality of fruit baskets transported by the carrier, and normally submerged steam pipes opening upward in the tank and below the carrier.

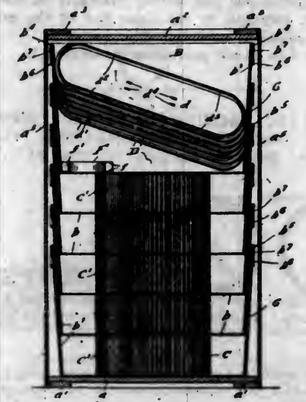
5. In a machine of the described class, a hot-water tank, a carrier, a plurality of fruit baskets transported by the carrier into, through and out of the hot water, and a steam pipe normally submerged in the tank and opening upward in the hot water near the ascending and descending baskets.

[Claim 6 not printed in the Gazette.]

1,015,380. CRATED WASHBOILERS. JOSEPH DISTER, Hamilton, Ohio, assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 18, 1909. Serial No. 484,178. (Cl. 206—65.)

The combination with an external crate, of a plurality of slightly taper body wash boilers nested together one within another within said crate, with their taper bodies mutually embracing and supporting each other, and a plurality of crating devices interposed between the bottoms of adjacent boilers to prevent their wedging together, consisting each of a longitudinally rigid and unyielding corrugated strawboard loop with the corrugations extending perpendicularly to the bottoms of the boilers to take the strain of one boiler against the other, the ends of said loop being fastened together and the edges thereof engaging the

bottoms of adjacent boilers, and a plurality of covers for said boilers placed one on top of another in a transversely



and longitudinally inclined position within the uppermost boiler, substantially as specified.

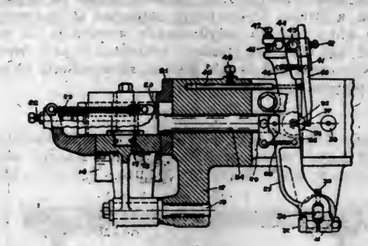
1,015,381. CORNER-BEAD. MARTIN J. DONER, Chicago, Ill., assignor of one-third to Charles G. Gibson and one-third to Charles F. Dynes, Chicago, Ill. Filed Oct. 9, 1911. Serial No. 653,507. (Cl. 72—121.)

1. A corner bead formed from a single piece of sheet metal bent centrally to form a closed hollow head, said head consisting of a tubular outer face and two sides meeting to form a joint, a plurality of spaced apart skeleton wings extending from one side of the head and over-lapping the joint, and a plurality of spaced apart similar wings extending from the other side of the head and likewise over-lapping the joint, the wings of one side being alternately disposed with the wings of the other side of the head, each of said wings terminating in an eye or tongue portion for attachment to the wall, said wings being so arranged that pressure on the head tends to close instead of open the joint.

2. A corner bead formed from a single piece of metal bent centrally to form a closed hollow head, the joint thereof being along the inner edge of the head, a plurality of spaced apart wings extending from one side of the head and overlapping the joint, a second series of similarly arranged wings alternately disposed with reference to the members of the first series and extending from the other side of the head and over-lapping the joint, said sets of wings being angularly disposed relative to each other whereby the pressure on the outer side of the head tends to close the head at its joint.

1,015,382. CUTTING-OFF AND CARRYING MECHANISM FOR HEADING-MACHINES. ERNEST W. DUSTON, Waterbury, Conn., assignor to The Blake and Johnson Company, Waterbury, Conn., a Corporation of Connecticut. Filed Jan. 18, 1911. Serial No. 603,292. (Cl. 10—25.)

1. The combination with a cutter carrier and an actuator therefor provided with a stud, of a pivoted segment having a cam groove to receive said stud, said cam groove being extended to the ends of said segment, and means to oscillate said segment.



2. The combination with a cutter carrier and an actuator therefor provided with a stud, of a pivoted segment having a cam groove to receive said stud, said cam groove being extended to the ends of said segment, guides for said segment having open ends to permit said segment to be swung into and out of said guides, and means to oscillate said segment.

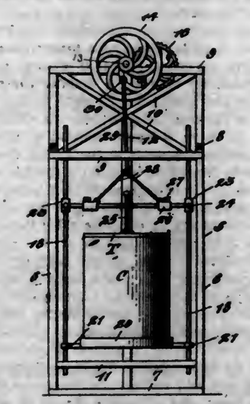
3. The combination with a frame and a die supported by said frame, of mechanism for cutting blanks from stock and delivering the same to said die, said mechanism including a cutter carrying lever, means for adjustably mounting said lever in said frame, and actuating means for said lever including a rod having its end in loose engagement with said lever.

4. The combination with a die, of mechanism for cutting blanks from stock and delivering the same to said die, said mechanism including a stud shaft having a flattened end, a cutter carrying lever having a bifurcated end forming arms embracing the flat end of the stud shaft, the opening between the arms being of greater length than the diameter of the shaft, and a bolt engaging the said arms for adjustably clamping the shaft between them.

5. The combination with a die, of mechanism for cutting blanks from stock and delivering the same to said die, said mechanism including a stud shaft, a cutter carrying lever adjustably mounted on said shaft, and an adjusting screw carried by said lever and engaging said shaft to fix the position of said lever on said shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,015,383. CHURN. JEFFERSON B. DYER and JAMES D. HOBBS, Hanson, Okla. Filed Oct. 7, 1911. Serial No. 653,309. (Cl. 31—18.)



The combination with a churn body, of a fixed main frame, a vertical reciprocatory frame mounted within the main frame comprising spaced parallel side rods, a platform rigidly arranged between the side rods at their lower

ends on which the churn body is supported, a cross bar vertically adjustable upon the upper end portions of said rods, a cover clamping screw carried by the cross rod, operating means mounted in the main frame including a fly wheel, a pitman eccentrically connected at one end to said fly wheel, sleeves longitudinally adjustable on said cross rod, and link rods pivotally connected to said sleeves and loosely connected to said pitman, substantially as and for the purpose specified.

1,015,384. RIBBON MECHANISM FOR TYPE-WRITING MACHINES. WILLIAM R. FOX, Grand Rapids, Mich. Filed Dec. 6, 1910. Serial No. 595,911. (Cl. 197—160.)

1. A ribbon mechanism for typewriters, consisting of the combination of a pair of spools, each having a sheet metal barrel with an open slot at the side, yielding fingers urged against the said barrels with connections to a suitable trip arranged so that the said yielding fingers can enter the respective slots thereof; gear means for driving said spools; a shiftable driving shaft for the said ribbon spools bearing a suitable gear for meshing alternately with the gears to drive the said ribbon spools; and a shifting means with trip actuated from said yielding fingers, as specified.

2. In a ribbon driving and reversing mechanism, the combination with a spring drum of a typewriting machine, of ribbon spools with gears connected to drive the same; a shiftable driving gear to alternately engage the gears to drive said spools; a driving shaft with a flexible joint actuated from the spring drum; means to swing the shaft from side to side; a ratchet wheel supported on said shaft; a bifurcated ratchet pawl with oppositely-pointed engaging teeth embracing the said ratchet wheel to react alternately on opposite sides thereof; means for holding the said pawl yieldingly in the central position; and a trip operated from said ribbon spools for actuating the said double pawl and shifting it from one side to the other on the emptying of the spools of the ribbon for reversing the driving gear for the same.

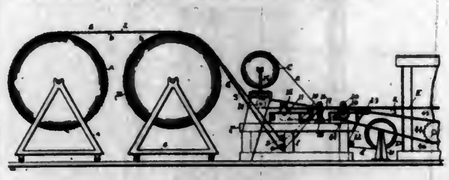
3. In a ribbon driving and reversing mechanism, the combination with a spring drum of a typewriting machine, of vertical shafts carrying the said ribbon spools with horizontal intermediate shafts for driving the same, having beveled gears and also gears to mesh with a gear on a driving shaft; a shifting driving gear to alternately engage the gears to drive the said spools; a driving shaft with a flexible joint actuated from the spring drum; means to swing the shaft from side to side; a ratchet wheel supported on said shaft; a bifurcated ratchet pawl with oppositely-pointed engaging teeth embracing the said ratchet wheel to react alternately on opposite sides thereof; means for holding the said pawl yieldingly in the central position; and a trip finger resting on the body of each of the said spools and coacting with a slot therein for actuating the said double pawl and shifting it from one side to the other on the emptying of the spools of the ribbon for reversing the driving gear for the same.

4. A ribbon spool having a hollow drum containing a narrow slot in its side; and a finger conformed to enter the said narrow slot and resting yieldingly on the body of said spool, the inner end of which finger is pointed and curved inwardly and then tangentially and arranged to enter the slot of the said drum without resistance when the ribbon is unwound, as specified.

5. A ribbon spool having a hollow drum containing a narrow slot in its side; and a finger conformed to enter the said narrow slot and resting yieldingly on the body of said spool, arranged to enter the slot of the said drum when the ribbon is unwound.

[Claims 6 to 10 not printed in the Gazette.]

1,015,385. MACHINE FOR FACING CORRUGATED PAPER. JOHN N. HAHN, Cleveland, Ohio. Filed Sept. 28, 1910. Serial No. 584,215. (Cl. 154—31.)



1. In a machine for facing corrugated paper, a heating chamber and a pair of superimposed belts mounted therein, and a suction device having communicating ducts alined with said belts at their meeting faces and provided with means engaging the same to cut off communication with the interior of the said chamber, and a return pipe from said suction device to said chamber.

2. In a machine for facing corrugated paper, a pair of heat conducting belts, means to operate said belts under tension, means to adjustably fix said belts at predetermined distances apart at their meeting faces, and means to aline and direct a plurality of corrugated strips and facing-sheets between said belts.

3. In a machine for facing corrugated paper, a heating chamber having an exhaust outlet at one side thereof and provided with a valved fresh air intake and a valved exhaust flue, in combination with an air circulating device connected with said duct and heat circulating devices within said chamber.

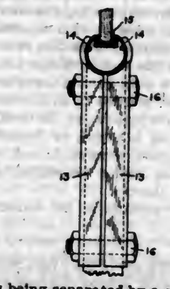
4. In a machine for facing corrugated paper, a dual set of rollers to carry corrugated sheets and a dual set of rolls to carry flat facing sheets, paste applying means for each corrugated sheet and rolls through which said several sheets are brought together one upon the other, in combination with a drying chamber, a pair of endless belts therein adapted to receive both said corrugated sheets with their facings between them, and means to dry the stock comprising suction devices and ducts adapted to cause the air to flow transversely through the corrugations of the stock.

5. In a machine for facing corrugated paper, a closed heating chamber having a pair of superimposed belts to feed and press and finish the product and means to guide two faced corrugated strips one upon the other into the said heating chamber between said belts, in combination with a suction device having open communication with the edges of said belts and the corrugated strips between the same.

[Claims 6 to 8 not printed in the Gazette.]

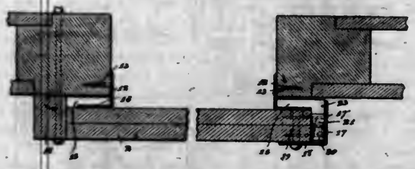
1,015,386. WIND-SHIELD CLAMP. CHARLES H. JOCKMUS, Ansonia, Conn. Filed Dec. 30, 1910. Serial No. 600,044. (Cl. 21—81.)

The combination with a filler-in board having its top edge provided with a longitudinal transversely curved groove, and clamping members secured to opposite sides of said filler-in board in pairs, the upper end of each clamping member being provided with socket portions extending above said filler-in board and provided with internal faces curved on the same arc as the curvature of said groove, the outer edges of said members being provided with longitudinal flanges adapted to fit over the end of said filler-in board, in combination with a wind shield member having a rounded edge portion seated in said groove and mounted between said socket portions, whereby pivotal movement of said shield is permitted, the extremities of the opposite



socket portions being separated by a space to permit pivotal adjustment of said wind shield member.

1,015,387. CAR-DOOR. BELDEN D. JONES, Chicago, Ill. Filed June 15, 1911. Serial No. 633,316. (Cl. 20—26.)



1. The combination with a car body having a car door opening, of a door mounted to move across said opening, a door post at either end of said opening, a door stop at one end thereof, and a weather guard comprising an angle iron secured to the door at its end remote from the stop one flange of said angle iron extending across the vertical edge of the door but spaced away from the latter to form a vertical channel.

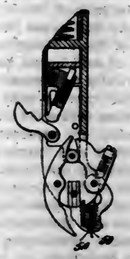
2. The combination with a car body, having a car door opening, of a door mounted to move across said opening, a door post at either end of said opening, a door stop at one end thereof and a weather guard comprising an angle iron one flange of which is secured to the outer face of the door at the end of the latter remote from the stop and the other flange of which extends across the vertical edge of the door and projects beyond the inner face of the latter, said latter flange being spaced away from the vertical edge of the door to form a vertical channel.

3. The combination with a car body, having a car door opening, of a door mounted to move across said opening, a door post at either end of the latter, a door stop at one end thereof and a vertically extending weather guard secured to the end of the door remote from the stop and provided with a flange portion extending across the vertical edge of the door but spaced away from the latter and projecting inwardly beyond the inner face of the door.

4. The combination with a car body, having a car door opening, of a door mounted to move across said opening and an angle iron extending vertically along one edge of the door, one flange of which is secured to the outer face of the door and the other flange extending across said vertical edge but spaced away from the same.

5. The combination with a car body, having a car door opening, of a door mounted to move across said opening, a door post at either end of said opening, a door stop at one end thereof and a weather guard comprising a vertically extending angle iron, one flange of which is secured to the outer face of the door at the end of the latter remote from the stop and the other flange of which extends across the vertical edge of the door and projects some distance beyond the inner face of the latter, said latter flange being spaced away from the said vertical edge to form a weathering channel and means for bracing said latter flange against jamming.

1,015,388. GRIPPER. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1907, Serial No. 400,395. Renewed Aug. 17, 1911. Serial No. 644,713. (Cl. 12—11.1:)



1. In a grippers mechanism, means for separately gripping and pulling a shoe upper and a shoe lining, said mechanism being constructed and arranged to cause the upper to be gripped with greater force than the lining is gripped.

2. In a grippers mechanism, means for separately gripping and pulling a shoe upper and a shoe lining, combined with actuating mechanism constructed and arranged to cause the upper to be gripped harder than the lining is gripped.

3. In a grippers mechanism, means for separately gripping and pulling a shoe upper and a shoe lining, combined with actuating mechanism having provision for adjustment to vary the relative forces with which the upper and lining are gripped.

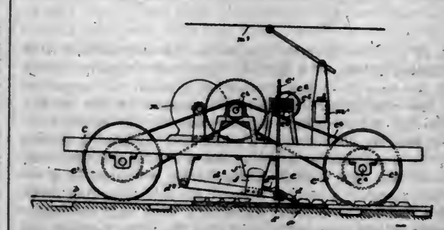
4. In a grippers mechanism, means for gripping a shoe upper and means for gripping a shoe lining, combined with a grippers closing device, a connection between the upper gripping means and said device, and a connection including a yielding element between the closing device and the means for gripping the lining.

5. In a grippers mechanism, means for gripping a shoe upper and means for gripping a shoe lining, combined with a grippers closing device, a connection between the upper gripping means and said device, and a connection including a yielding element between the closing device and the means for gripping the lining, said mechanism having provision for adjusting the relative forces with which the upper and lining are gripped.

[Claims 6 to 23 not printed in the Gazette.]

1,015,389. [WITHDRAWN.]

1,015,390. APPARATUS FOR TURNING PEAT BLOCKS. THOMAS A. MIGHILL, Cambridge, Mass. Filed Mar. 27, 1911. Serial No. 617,059. (Cl. 34—43.)



1. In an apparatus for turning peat blocks, the combination of a block-turning-device comprising a set of inclined fingers to lift the blocks and inclined turning-means at the rear thereof, and means to advance said device to project the forward ends of the fingers beneath the blocks and cause succeeding blocks to push the blocks ahead of

them along on the fingers and inclined turning-means and over the top of said inclined turning-means, permitting them to fall by gravity, substantially as described.

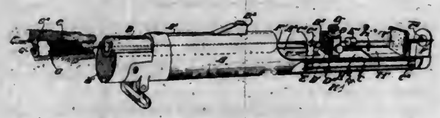
2. In an apparatus for turning peat blocks, the combination of a block-turning-device comprising a set of inclined fingers and an inclined turning board, and means to advance said device to project the forward ends of the fingers beneath the blocks and cause succeeding blocks to push the blocks ahead of them along on the fingers and board and over the top of said board, permitting them to fall by gravity, substantially as described.

3. In an apparatus for turning peat blocks, the combination of a block-turning-device having inclined lifting fingers and turning-means, an adjustable frame bearing said device, means to adjust said frame to different elevations, and means to advance the block-turning-device to project the forward ends of the fingers beneath the blocks and cause succeeding blocks to push the blocks ahead of them along on the fingers and turning-means and over the top of said turning-means, permitting them to fall by gravity, substantially as described.

4. In an apparatus for turning peat-blocks having beveled ends, the combination of a block-turning-device having inclined lifting-fingers and turning-means, arranged with the top edge of the turning-means elevated above the drying-field a distance approximately equal to the length of a block, and means to advance said block-turning-device to project the forward ends of the fingers beneath the blocks and cause succeeding blocks to push the blocks ahead of them over the top of the turning-means, permitting them to fall by gravity and their acute angled corners to strike the bed, substantially as described.

5. An apparatus for turning peat blocks comprising a car adapted to run on rails, a block-turning device on said car arranged crosswise to the line of motion of the car having its forward end adjustable with relation to the surface of a peat-drying bed arranged between said rails so as to pass beneath the peat-blocks arranged on said bed, an inclined portion to receive the picked-up blocks, and permit them to pass upwardly and rearwardly as they are pushed by the blocks subsequently picked up, and a rear edge arranged crosswise to the line of motion of the car from which said raised blocks are dropped rearwardly with a turning motion which causes them to fall to the ground and rest on the reverse side from that on which they rested before being picked up, and means for raising and lowering said block-turning device, substantially as described.

1,015,391. TARGET-PRACTICE APPARATUS. FRANK MITCHELL, Hammersmith, London, England, assignor, by mesne assignments, to Atlantic National Bank, Providence, R. I., a Corporation of Rhode Island. Filed May 26, 1909. Serial No. 498,387. (Cl. 124—15.5.)



1. In a target practice apparatus, the combination with an aiming device of a flexible connector normally in line with the bore thereof, a connection between the connector and the aiming device, a pivotal support on the aiming device for the recording member and a rigid member interrupting the connector at a point near the aiming device.

2. In a miniature target practice apparatus, the combination with an aiming device having a barrel, of a recording member, a pivotal support for said recording member, a flexible connector associated with said recording member in the same axial line with the pivot thereof and passing into the barrel of the aiming device, and a connection between the connector and the aiming device.

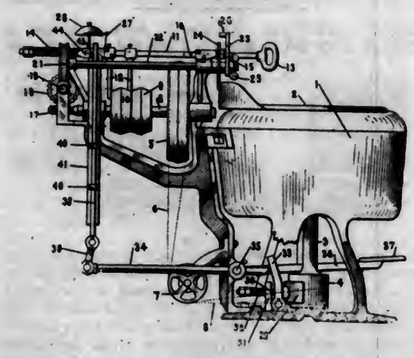
3. In a miniature target practice apparatus, the combination with an aiming device having a barrel, of a dummy cartridge in the breech end thereof, a recording member, a pivotal support for the recording member, a flexible connecting member associated therewith, said connector extending into the barrel of the aiming device, and a connection between said connector and said cartridge.

4. In a target practice apparatus, the combination with an aiming device having a barrel, of a recording apparatus, a flexible connector associated with the recording apparatus and extending into the barrel of the aiming device, a dummy cartridge, and a plug having threaded engagement with said cartridge and secured to said connector.

5. In a target practice apparatus, the combination with an aiming device having a barrel, of recording means, a flexible member associated therewith, and means within the barrel of the aiming device for adjusting the attachment of the connector thereto.

[Claims 6 to 12 not printed in the Gazette.]

1,015,392. ATTACHMENT FOR LAUNDRY-EXTRACTORS. ROBERT MARION MOORE, Galveston, Tex. Filed May 2, 1910. Serial No. 558,934. (Cl. 74—46.)



1. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof, belt guides secured to said shift rod, a spring acting upon said rod tending to hold the belt guides normally opposite to the loose pulley, means adapted to hold the shift rod against the action of said spring with the belt guides opposite to the fast pulley, a revoluble trip lever adapted to contact with the aforesaid means and release the same, mechanism by which a rotation may be communicated to said trip lever from the power shaft, a trip blade secured to the belt shift rod, a rod adapted to undergo vertical displacement provided with a transverse notch, a spring latch adapted to engage in the notch of the aforesaid rod and adapted to be released by the aforesaid trip blade, a brake adapted to retard the operation of the machine, and mechanism for applying said brake adapted to be operated by the falling of the aforesaid vertical rod.

2. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof and provided with a transverse notch, belt guides carried by said rod, a coiled spring upon said rod tending to hold it positioned with the belt guides normally opposite to the loose pulley, a spring latch adapted to enter said notch in the shift rod, holding said rod with the belt guides opposite the fast pulley, a revoluble trip lever adapted to contact with said spring latch and displace the same from the notch, a stationary dial about which said trip lever travels, and a mechanism adapted to impart a rotation of reduced velocity to said lever from the power shaft.

3. In a device of the character described the combination with the driving shaft of a machine of a fast and a loose pulley adjacent upon said rod, a belt shift rod mounted adjacent to said pulleys transversely thereof, said rod being provided with a transverse notch, a pair of belt

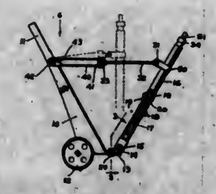
guides carried by said rod, a coiled spring mounted upon said rod tending to hold the same normally in a position such that the belt guides are opposite to the loose pulley, a spring latch adapted to engage said notch to hold the shift rod against the action of said spring in a position such that the belt guides are opposite to the fast pulley, a revoluble trip lever adapted to contact with said spring latch and displace the same from the notch, a dial traveled by said trip lever, mechanism adapted to impart a rotation of reduced velocity from the driving shaft to said trip lever, a brake adapted to retard the operation of the machinery, and a mechanism causing said brake to be set by a displacement of said shift rod from the fast pulley toward the loose one.

4. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof, said rod being provided with a transverse notch, a pair of belt guides carried by said rod, a coiled spring upon said rod tending to hold the same in a position such that the belt guides are opposite to the loose pulley, a spring latch adapted to engage the notch of the shift rod, holding this rod against the action of said spring in a position so that the belt guides are opposite to the fast pulley, a revoluble trip lever adapted to contact with said spring latch and displace the same from said notch, a mechanism adapted to communicate a rotation of reduced velocity from the driving-shaft to said trip-lever, a dial traveled by said trip lever, a brake adapted to retard the operation of the machine, a mechanism adapted to set said brake, a vertical rod having a transverse notch in its upper portion, said rod being adapted to undergo vertical displacement and to set said brake when allowed to drop, a spring latch adapted to engage the notch of said rod, and a trip blade carried by the shift rod adapted to displace said spring latch from the notch.

5. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means for establishing communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to set up or interrupt the communication of rotation when the rod is adjusted longitudinally, a spring acting upon said rod tending to hold it normally in such a position as to interrupt communication of rotation, means adapted to hold the rod against the action of said spring in a position to maintain communication of rotation, a revoluble trip lever adapted to contact with the last named means and release the same, mechanism by which a rotation may be communicated to said trip lever from the power shaft, a trip blade secured to the rod, a rod adapted to undergo vertical displacement provided with a transverse notch, a spring latch adapted to engage in the notch of the aforesaid rod, and adapted to be released by the aforesaid trip blade, a brake adapted to retard the operation of the machine, and mechanism for applying said brake adapted to be operated by the falling of the aforesaid vertical rod.

[Claims 6 to 10 not printed in the Gazette.]

1,015,393. TRUCK ATTACHMENT FOR CARRYING BEEF. EDWARD W. MURPHY, Bridgeport, Conn. Filed July 3, 1911. Serial No. 636,752. (Cl. 21—65.)



1. The combination with a truck comprising a body provided at its upper end with handles and at its lower end with wheels, of a lifting arm pivoted to said body near the lower end thereof and projecting upwardly therefrom, and a pair of telescoping members connecting said arm and body.

2. The combination with a truck comprising a body provided at its upper end with handles and at its lower end with wheels, of a lifting arm pivoted to said body near the lower end thereof and projecting upwardly therefrom, a rod pivoted to said arm, a tube carried by said body and having a cap through which said rod passes, and a nut on said rod within said cap.

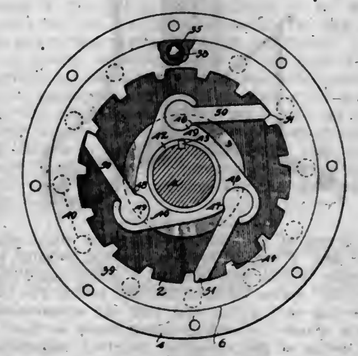
3. The combination with a truck comprising a body provided at its upper end with handles and at its lower end with wheels, of a lifting arm carried by said body near the lower end thereof and projecting upwardly therefrom, and a hook for engaging the object to be lifted and provided with means for loose engagement with said arm.

4. The combination with a truck comprising a body provided at its upper end with handles and at its lower end with wheels, of a lifting arm carried by said body near the lower end thereof and projecting upwardly therefrom, a lifting finger at the upper end of said arm provided with a fixed collar, and a hook coöperating with said finger.

5. The combination with a truck comprising a body provided at its upper end with handles and at its lower end with wheels, of a lifting arm carried by said body near the lower end thereof and projecting upwardly therefrom, a hook having a neck, a collar swiveled on said neck, and an eye pivoted to said collar and coöperating with said arm.

[Claims 6 to 9 not printed in the Gazette.]

1,015,394. CLUTCH-MECHANISM. HERBERT S. MUSTIN, Chicago, Ill., assignor to The Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 6, 1909. Serial No. 531,528. (Cl. 192—20.)



1. In a clutch, the combination of a body part substantially in the form of a cylindrical shell, a gear journaled on and within said shell, yieldable clutch mechanism connecting said gear with said shell, means for confining the gear within the shell, driving means for the shell, and parts to be driven associated with said gear within said shell.

2. In combination, a substantially cylindrical shell, an annular internal gear journaled on and within said shell, means yieldably connecting said gear with said shell to rotate therewith, means for rotating said shell, and mechanism to be driven associated with said gear within said shell.

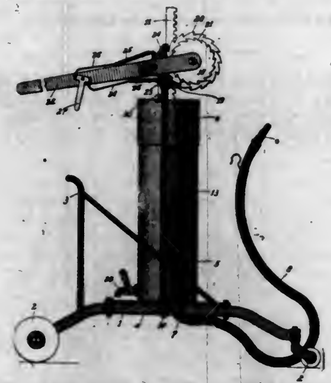
3. In combination, a substantially cylindrical shell having an annular pocket at one end, an annulus in said pocket, a cover engaging the end of the shell adjacent said pocket and forming with said pocket a bearing for said annulus, clutch mechanism connecting said annulus with said shell, said annulus having internal teeth, and a member to be driven mounted within said annulus and having extensions for engaging with said annulus teeth.

4. In combination, a body part substantially in the form of a cylindrical shell, the inner side of said shell having pockets extending substantially parallel with the shell axis, friction clutch pins in said pockets, springs tending to force said pins from said pockets, a gear within the shell adjacent the outlets of said pockets and having grooves for receiving the ends of the pins, a cover engaging one end of the shell to lock the gear within the shell and to hold it against the pin ends, driving means for said shell, and parts to be driven associated with said gear within said shell.

5. In combination, a substantially cylindrical shell having a central annular inner projection provided with pockets extending in the direction of the shell axis, pins in said pockets, compression springs in said pockets tending to force the ends of the pins beyond the pocket outlets, an annular internal gear having notches in one face for receiving the projecting ends of the pins, means for confining the gear within said shell and for holding it adjacent said projection to maintain engagement between the gear and the pins, means for rotating the shell, and mechanism to be driven associated with said gear.

[Claims 6 to 11 not printed in the Gazette.]

1,015,395. GREASE-DISPENSING APPARATUS. THOMAS L. NEWTON, Fresno, Cal. Filed Mar. 21, 1911. Serial No. 615,954. (Cl. 221—78.)



1. A device of the character described comprising a portable base, a vertical cylinder on said portable base, a removable cap on said cylinder, a piston operating in said cylinder, means for operating said piston, and means for removing said piston and said cap simultaneously from said cylinder by said operating means as described.

2. A device of the character described comprising a base, a vertical cylinder on said base, such cylinder having a removable cap, a piston movable in said cylinder, a geared bar on said piston projecting through the top of said cap, vertical bars hinged to said base and carrying a guide, said geared bar being movable through said guide, means for operating said geared bar, an eccentric cam mounted on said guide and adapted to engage said cap, as described.

1,015,396. COFFEE-POT. MARY PARSONS, Manhattan, Kans. Filed Jan. 16, 1911. Serial No. 602,898. (Cl. 53—8.)

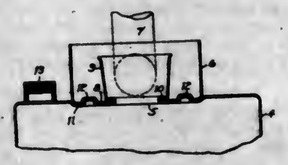
A coffee or tea pot having a spout and an opening in the wall of the pot at the inner side of the spout, a strainer shaped to cover the said opening and wider than the same so that its sides are adapted to bear against the wall of the pot on opposite sides of said opening, and a U-shaped spring comprising a spring wire having its bight secured to the wall of the pot below the said opening, its arms bearing against the sides of and secured at their upper ends to the said strainer and spring coils formed in the arms of the wire at points near the bight, said spring coils acting to keep the strainer normally closed against the wall of the pot and over the opening

and also acting as pivots to enable the strainer to be turned inwardly and downwardly in the pot, to uncover the opening and afford access to the spout.

1,015,397. ROOF-DOOR FOR CARS. EDWARD POSSON, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed May 10, 1907. Serial No. 372,969. (Cl. 105—15.)

In a car, a roof framing comprising transverse members spaced apart the length of each door opening, longitudinal members spaced from the center of the car to leave each door opening unobstructed across the longitudinal center of the car, means for supporting said doors in inclined position to form a hopper, strengthening members attached to said doors at their inner edges, and means upon the transverse members for supporting the ends of said strengthening members.

1,015,398. TUBULAR LANTERN. ALBERT R. PRITCHARD, Rochester, N. Y. Filed Sept. 18, 1911. Serial No. 649,897. (Cl. 240—28.)



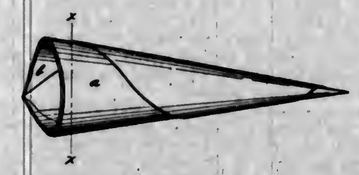
1. A tubular lantern having, in combination, an oil-font with an opening in the top, an air-chamber of greater diameter than said opening and having a bottom-portion lying upon the top of the oil-font and extending inwardly to the edge of said opening, and a burner-cup, the adjacent edges of the oil-font, the air-chamber, and the burner-cup being locked together by a single seam around said opening, and the oil-font and the air-chamber being provided with coöperating projections and recesses to prevent relative rotation of these parts.

2. A tubular lantern having, in combination, an oil-font with an opening in the top and a shallow recess surrounding said opening, an air-chamber of a diameter substantially equal to that of said recess and having a bottom-portion seated in the recess and lying flat upon the top of the oil-font, said bottom-portion extending inwardly to said opening, and a burner-cup with inturned lower edge, the margin of the oil-font at said opening being rolled upwardly and outwardly over the adjacent edges of the air-chamber and the burner-cup so as to join all three of said parts with a single seam, and the oil-font and the air-chamber being provided with coöperating projections and recesses to prevent relative rotation of these parts.

1,015,399. CLIPPER. CHARLES H. REDMAN, Newark, N. J. Filed Mar. 17, 1909. Serial No. 484,041. (Cl. 30—1.)

A clipper comprising a pair of levers having handles thereon, ears on the first lever extending from side to side, a blade fixed to the first lever beneath the ears, a sliding blade having its back edge resting on the ears of the first lever and lying adjacent to the fixed blade and sliding thereon, the back edge of the sliding blade adjacent to the ears having a slot therein which co-acts with the ears to limit the sliding movement of the sliding blade, a pin on the second lever arranged to enter the central portion of the slot in the sliding blade to slide the blade when the levers are operated, a back plate bearing on the sliding blade, a bolt secured in the fixed blade, the sliding blade being slotted to receive the bolt, the bolt also passing through the back plate, a nut on the bolt for regulating the pressure against the back plate, the back plate having sides bearing on the ears, and ears on the back plate, the ears on the first lever being slotted to receive the ears of the back plate.

1,015,400. FOOD-RECEPTACLE. FRANK G. RENAUD, Syracuse, N. Y. Filed May 1, 1911. Serial No. 624,430. (Cl. 127—4.)



1. A food receptacle formed of an edible material having its upper end folded in to form a double edge for the purposes specified.

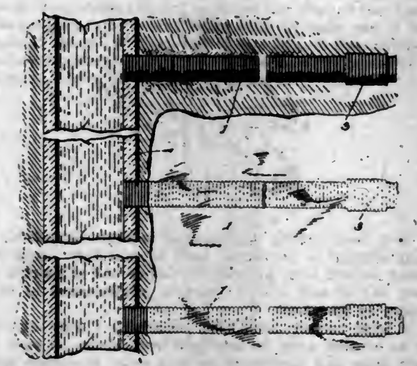
2. A food receptacle formed of a blank of an edible material having one edge folded over on itself and then formed into a conical shape having a double edge opening.

3. A food receptacle formed of a blank of some edible material having one edge folded over on itself and then formed into a conical shape having a double edge opening.

4. A food receptacle having its upper end folded to form a double edge and its lower end wound spirally to form a closed end.

5. A food receptacle formed of a blank of an edible material having one edge folded over on itself and then formed into a conical shape having a double edge opening, and having its lower end closed.

1,015,401. SYSTEM OF SUBIRRIGATION. WILLIAM N. ROBISON, Canyon, Tex. Filed Jan. 24, 1911. Serial No. 604,464. (Cl. 137—66.)



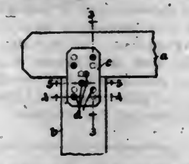
1. A system of subirrigation comprising pipes, each formed of an expansible tube of coiled wire having seams between its coils separable under internal pressure in the pipe, and a water supply main connected with said pipes.

2. A system of sub-irrigation of the kind described comprising a pipe for sub-irrigation formed in sections of elastic coiled wire, the coils of said sections being normally held together and separable under internal pressure in the pipe, said sections of pipe being coupled together.

3. A system of sub-irrigation of the kind described comprising a pipe for sub-irrigation formed in sections of pipe composed of yielding coiled wire having its coils normally closed together and separable under internal pressure in the pipe to form openings for the distribution of water, and a coupling connecting the ends of said pipes, and formed of a short tube of coiled wire.

4. A system of sub-irrigation of the kind described comprising a water supply main formed with openings located at intervals apart, and a number of sub-irrigation pipes, said pies being each connected at one end with an opening in said water supply main and each of said pipes being formed of coiled wire having its coils normally pressed together, and separable under internal pressure in the pipe to form openings for the distribution of water.

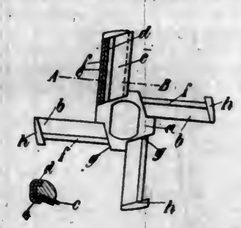
1,015,402. JOINT FOR LEATHER-STRETCHING FRAMES. WILLIAM ROMUNDER, Milwaukee, Wis. Filed July 29, 1910. Serial No. 574,442. (Cl. 20—92.)



1. The combination with two abutting wooden pieces of a sheet-metal joint-plate overlying the abutting edges and resting partly on each; said joint-plate having screw-holes surrounded by a circular series of tangs; and screws passing through said holes and securing the plates to the wood; the metal of said tangs being at a distance from the shanks of said screws.

2. The combination with two abutting wooden pieces of a rectangular sheet-metal joint-plate overlying the abutting edges and partly on each; the sides being parallel or at right angles to the grain of the wood; and means for securing said plate to both pieces; the four corners of said plate being creased obliquely at right angles to form triangular down-turned tangs which bite into the wood and lie obliquely to the grain thereof.

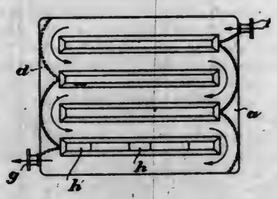
1,015,403. KNIFE FOR MEAT CUTTING AND MINCING MACHINES. ALFRED SCHAARSCHMIDT, Plauen, Germany. Filed Sept. 14, 1911. Serial No. 649,328. (Cl. 17—20.)



1. A meat cutting and mincing machine comprising a body adapted to be rotated, arms on said body, blades secured on said arms by resilient clamps and abutments at each end of said arms to prevent misplacement of said blades as described.

2. Meat cutting mechanism comprising a body adapted to be rotated, arms on said body, two blades on each of said arms and abutments on said arms to engage both ends of said blades for the purpose specified.

1,015,404. HEATING OR COOLING PLATE. SILVIO ANTON SCHEWCZIK, Vienna, Austria-Hungary. Filed May 12, 1909. Serial No. 495,414. (Cl. 34—18.)



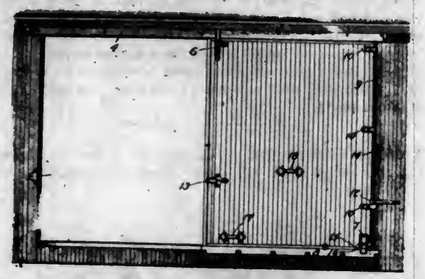
1. In a device of the class described, the combination with a frame, plates secured to each side of said frame forming a closed chamber, one of said plates having transverse depending corrugations, a separating plate on each side of said corrugations, the opposite plates contacting with the opposite ends of alternate corrugations, and steam inlet and outlet ports being provided at opposite ends and on opposite sides of the chamber.

2. In a device of the class described, the combination with a frame, plates secured to each side of said frame forming a closed chamber, one of said plates having transverse depending corrugations, a separating plate on each side of said corrugations, the opposite plates contacting with the opposite ends of alternate corrugations, longitudinal openings at points in which two side plates contact, and steam inlet and outlet ports arranged at opposite ends and on opposite sides of the chamber.

1,015,405. CAR-DOOR. CHARLES A. SCHROYER, Oak Park, Ill. Filed June 22, 1907. Serial No. 380,339. (Cl. 20—23.)

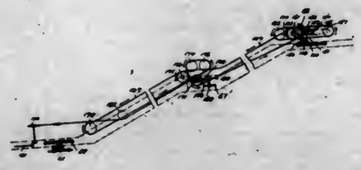
1. A car having a rabbeted door opening, a door, a lower guide track extending from one side of the door opening along the side of the car, a shoe secured to the lower corner of the door, and outer and inner depending lips upon said shoe adapted to engage the outer and inner sides, respectively, of said guide-rack, said outer and inner lips being off-set in the direction of the width of the door, the lower edge of said inner lip being adapted to rest upon the lower edge of the rabbeted door opening and to support the door in such manner that when the door is closed the outer lip will disengage the guide-track while the inner lip still lies behind the same.

2. A car provided with a rabbeted door opening, a door, a lower guide-track, and a shoe attached to the door and provided with lips adapted to engage the guide-track and



with a depending lug adapted to rest upon the lower edge of the door opening and support the door when the lips are disengaged from the guide-track.

1,015,406. CONVEYER. CHARLES D. SEEBERGER, New York, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Filed Feb. 24, 1906, Serial No. 302,760. Renewed Mar. 26, 1910. Serial No. 551,774. (Cl. 104—165.)



1. In an elevator, a series of sections, and a way forming a plurality of conveyer-runs having inclined portions on which the sections travel in ascending and descending lines, the inclined portion of the run for the descending line having an angular portion between adjacent levels.

2. In an elevator, a series of sections, a way having upper and lower inclined runs upon which the sections travel, the lower run having a horizontal portion between adjacent levels.

3. In an elevator, a way extending between two landings at different levels, and having an intermediate horizontal portion, tracks on the way, a carrier consisting of a series of steps traveling on the way, each step having front and rear supporting wheels, the tracks for the front wheels being above those for the rear wheels on the way adjacent the intermediate portion and below the rear-wheel tracks in the intermediate portion.

4. In an elevator, an inclined way extending between levels and having an angular portion therebetween, an endless carrier traveling down the way, and drive mechanism for the carrier at the angular portion of the way.

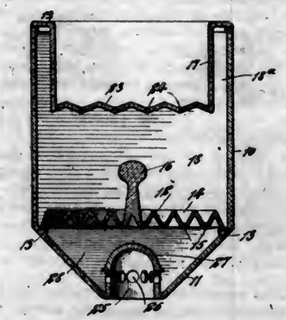
5. In an elevator, an inclined way extending between adjacent levels and having an angular portion therebetween, an endless carrier traveling down the way, and drive mechanism engaging the carrier at the ends of the angular portion of the way.

[Claims 6 to 143 not printed in the Gazette.]

1,015,407. PERCOLATOR. OTTO SELG, New York, N. Y. Filed Aug. 17, 1911. Serial No. 644,637. (Cl. 53—3.)

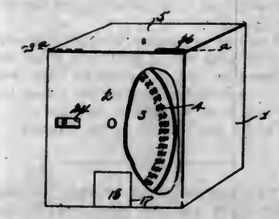
A percolator comprising a casing having a grooved rim, a strainer plate fitted within the casing and extending across the entire width thereof, a perforated cup having a laterally extending flange and a beveled ledge on said flange that engages the rim-groove and has a flare less than the flare of said groove, whereby the ledge clears the groove excepting along the inner edge of the rim to form a liquid

seal, the width of the cup being materially less than the width of the casing whereby the percolating chamber formed between the strainer plate and the bottom of the



cup is extended upwardly to constitute an air space that communicates with the percolating chamber and surrounds the cup.

1,015,408. REGISTERING TOY BANK. FERDINAND STRAUSS, Yonkers, N. Y. Filed Apr. 26, 1911. Serial No. 623,370. (Cl. 235—100.)



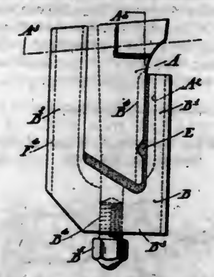
1. A bank comprising a coin receptacle having an opening, a lever pivotally mounted in said receptacle having a slot in alinement with the opening in said receptacle, a pawl on said lever, a rotatable disk, and a retracting spring adapted to contact with said pivotal lever and said disk.

2. A bank comprising a coin receptacle having an opening, a lever pivotally mounted in said receptacle, having a slot in alinement with the opening in said receptacle, a pawl on said lever, a rotatable sheet metal disk, a retracting spring adapted to contact with said pivotal lever and said disk, pawl teeth integral with said sheet metal disk adapted to be engaged by the pawl on said lever, detent teeth also integral with said sheet metal disk and concentric with the pawl teeth, and a detent pawl adapted to engage said detent teeth.

3. A bank comprising a coin receptacle having an opening, a rotatable disk within said receptacle, an operating lever for said disk pivoted at one end thereof to said receptacle and adapted for actuation by a coin, the free end of said lever having a slot in alinement with the opening in said receptacle, the rear end of the slot being positioned relative to the opening in said receptacle to form a stop for the coin, said lever being so pivoted relative to the opening in said receptacle as to permit the dropping of the coin through the opening in the receptacle and through the slot in said lever, when said lever is depressed, and a retracting spring adapted to contact with said lever and said disk.

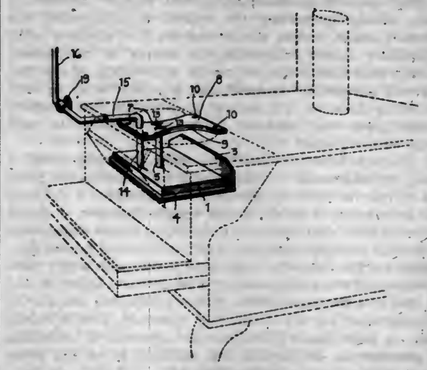
1,015,409. CUTTER-HOLDING MEANS. FREDERICK W. TAYLOR, Philadelphia, Pa. Filed Aug. 25, 1908. Serial No. 450,197. (Cl. 29—105.)

1. In combination a U-shaped cutter holder adapted to be received in a chamber in a saw blade, with one leg in front of the other with respect to the plane of the saw blade, and a cutting tooth secured in said holder between the legs thereof with its outer end terminating in a cutting edge in front of the rear leg of said holder, said rear leg being initially extended to engage and support said cutting tooth along substantially the entire rear edge of the latter and adapted to be ground away with the outer end of the tooth as the latter is sharpened from time to time without materially diminishing the effectiveness of the holder as a support for the cutting tooth held in it.



2. A metal cutting saw comprising a blade having a series of chambers at its periphery, a series of U-shaped cutter holders secured one in each of said chambers with one leg of the holder in front of the other with respect to the plane of the saw blade and cutting teeth secured one in each holder between the legs thereof and each having its outer end terminating in a cutting edge in front of the rear leg of its holder, said rear leg being initially extended to engage and support said cutting tooth at substantially the extreme outer end thereof and adapted to be ground away with the outer end of the tooth as the latter is sharpened from time to time without materially diminishing the effectiveness of the holder as a support for the cutting tooth held in it.

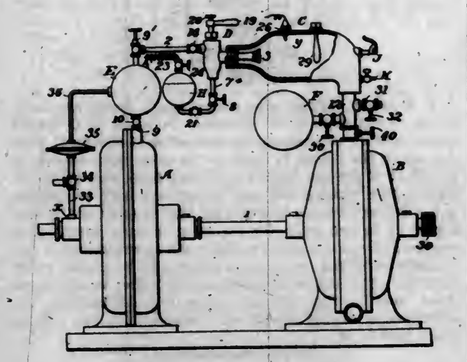
1,015,410. OIL-BURNER. LEMUEL A. THOMAS and ANNANIAS B. BAILEY, Monroe, Ind. Filed Feb. 6, 1911. Serial No. 606,880. (Cl. 158—9.)



1. In an oil burner of the kind described, a plate adapted to be seated in the top of the combustion chamber of a range and having a depending hood, said plate having air inlet passage ways opening into said hood, an oil casing having a longitudinal partition forming a continuous oil passage way, a pipe secured at its lower end to said oil casing and communicating with said oil passage way, a burner head mounted within said hood above the upper end of said pipe, and having gas passage ways adjacent to said air inlet openings in the plate, and an oil supply pipe projecting through and depending from said plate and connected to said oil casing and communicating with said oil passage way therein at a point remote from the end of the pipe leading to the burner.

2. In an oil burner of the kind described, a plate adapted to be fitted in the opening of a combustion chamber of a range and having air inlet openings, a hood depending from said plate with which said air inlet openings communicate, a hollow oil casing, a partition within said casing forming an oil passageway, a pipe having its lower end communicating with one part of said oil passage way and secured to said oil casing, a burner head at the upper end of said pipe and secured to said plate, said burner head having vertical gas passages opening downwardly adjacent to said air inlet openings in the plate, and within said hood, and an oil supply pipe having its outlet end secured to said oil casing and communicating with said oil passage way at a point remote from the end of the pipe carrying the burner head.

1,015,411. MOTOR. SAMUEL J. WEBB, Minden, La. Filed Nov. 14, 1907. Serial No. 402,168. (Cl. 60—4.)



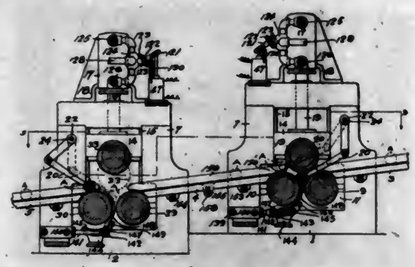
1. An apparatus of the class described comprising a source of compressed air, means for maintaining the pressure of the air below a predetermined amount, a working fluid generating chamber, a fuel supply chamber, a mixer, means connecting the source of compressed air with said mixer, means connecting the fuel chamber with said mixer, means connecting the source of compressed air with said fuel chamber, means connecting said mixer with said generating chamber, and a safety valve on said generating chamber and adapted to maintain the pressure in said generating chamber below the pressure in said source of compressed air.

2. An apparatus of the class described comprising a source of compressed air, means for maintaining the pressure of the air below a predetermined amount, a working fluid generating chamber, a fuel supply chamber, a mixer connected with said generating chamber, means connecting the source of compressed air with said mixer, means connecting the fuel chamber with said mixer, said mixer having means for simultaneously varying the supply of air and fuel in fixed proportions, means connecting the source of compressed air with said fuel chamber, and a safety valve on said generating chamber adapted to maintain the pressure in said generating chamber below the pressure in said source of compressed air.

1,015,412. APPARATUS FOR THE MANUFACTURE OF AXLES. CURT WERCKMEISTER, Haselwood, Pa. Filed Nov. 10, 1909. Serial No. 527,229. (Cl. 80—23.)

1. In rolling apparatus the combination with a cluster of axially operated rolls, of means for moving one of the rolls to and from rolling position in the cluster and mechanism automatically controlled by the motion of said roll to reverse the same and effect each succeeding movement.

2. In rolling apparatus the combination with a cluster of axially operated rolls, of means for moving one of the rolls to and from rolling position in the cluster, mechanism automatically controlled by the motion of said roll to reverse the same and effect each succeeding movement, and means for continuously driving said movable roll.



3. In rolling apparatus the combination with a cluster of axially operated rolls, of means for moving one of the rolls to and from rolling position in the cluster, mechanism automatically controlled by the motion of said roll to reverse the same and effect each succeeding movement, and mechanism set in action by the motion of said movable roll when the same is moved from rolling position to eject the rolled blank.

4. In axial rolling apparatus, a cluster of rolls, means for withdrawing one of said rolls from the cluster, an arm entering between two adjacent rolls to eject the blank when the movable roll is withdrawn, and means for actuating said arm.

5. In axial rolling apparatus, a cluster of rolls, mechanism for withdrawing one of said rolls from rolling position and mechanism set in action by said withdrawing mechanism for positively ejecting the rolled blank when the movable roll is in withdrawn position.

[Claims 6 to 24 not printed in the Gazette.]

1,015,413. WINDOW-SCREEN. MYRON G. WOOD, Hillsdale, Mich. Filed Aug. 23, 1911. Serial No. 645,541. (Cl. 156—39.)

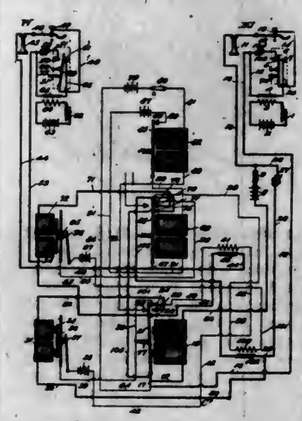
1. In combination with an attaching device having a pair of spaced lugs, a screen roller having a coil spring in one end thereof, the outer end of said coil spring being provided with a transverse bar and disposed on the outer side of said pair of lugs, so that said pair of lugs project into said end of the sprid, the transverse bar of the spring being disposed between the said lugs, the said lugs and spring coacting to form a bearing and support for the said end of the roller.

2. In combination with an attaching device having a projection, a screen roller having a spring at one end thereof, to engage said projection and coact therewith to form a bearing and support for said end of the roller.

3. An attaching strip of the class described provided with a pair of brackets, one of said brackets having a pair of spaced lugs projecting therefrom at right angles thereto, in combination with a roller having a bore at one end, a coil spring in said bore, having its inner end attached to said roller, and provided at its outer end with a bar, the said bar being inserted between said lugs, and a bearing connecting the other end of the roller to the other bracket of the attaching strip.

4. An attaching strip of the class described provided with a pair of integral brackets at its ends bent at right angles thereto, one of said brackets being provided with a pair of spaced lugs integral therewith and struck up therefrom, in combination with a roller mounted in one of said brackets and provided in its opposite end with a coil spring, the outer end of the said spring being engaged with the said spaced lugs and co-acting therewith to form a bearing and support for the corresponding end of the roller.

1,015,414. TELEPHONE REPEATING SYSTEM. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Dec. 20, 1910. Serial No. 598,343. (Cl. 179—171.)



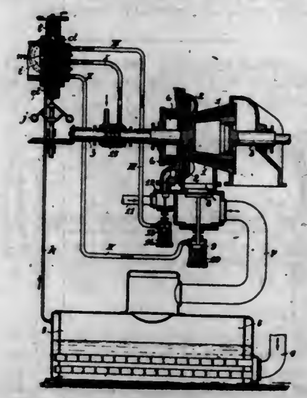
1. In a telephone repeating system, the combination of a sending circuit; a receiving circuit independent of said sending circuit; local circuits comprising induction coils adapted to be inductively associated with each of said sending and receiving circuits at different times; a repeater in one of said local circuits governed by said sending circuit; a repeater in another of said local circuits governed by said receiving circuit when the latter is employed as a sending circuit; and controller circuits associated with and adapted to control at different times each of said sending and receiving circuits, substantially as described.

2. In a telephone repeating system the combination of a sending circuit; a receiving circuit independent of said sending circuit; local circuits adapted to be inductively associated with each of said sending and receiving circuits at different times; controller circuits associated with and adapted to control at different times each of said sending and receiving circuits; a condenser in said sending circuit; an impedance in one of said controller circuits; and manually controlled means for closing said controller circuits, substantially as described.

3. In a telephone repeating system, the combination of a sending circuit comprising a condenser, a repeater, and a magnetically controlled contact; a controller circuit comprising a manually controlled contact; and an impedance; a local circuit controlled by said repeater comprising the primary of an induction coil; a receiving circuit in inductive relation to said primary and comprising a second contact controlled by said magnet, substantially as described.

4. In a telephone repeating system, the combination of independent sending and receiving circuits; independent controllers for governing each of said circuits at different times; local circuits adapted at different times to reproduce a current of the sending circuit in the receiving circuit and vice versa; and a relay governed by one of said controllers for energizing the other controller, substantially as described.

1,015,415. APPARATUS FOR REGULATING TURBINES DRIVEN BY LIVE AND EXHAUST STEAM. OTTO BANNER, Sterbrade, Germany. Filed Nov. 29, 1910. Serial No. 594,664. (Cl. 121—118.)



1. The described apparatus for regulating exhaust steam turbines having a part operated by live steam, comprising in combination a governor, an oil valve adapted to be adjusted by said governor and having a valve-face divided into two separate parts and means to adjust said parts in accordance with the pressure of the exhaust steam in the heat-accumulator, substantially as and for the purpose set forth.

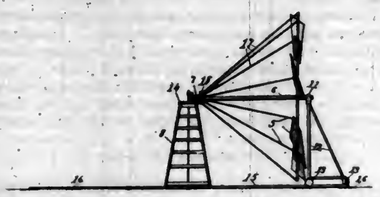
2. In combination with an apparatus for regulating the speed of a turbine operated by both live and exhaust steam, of an oil valve having two operative edges and a separate slide as valve-face for each operative edge of said valve, substantially as and for the purpose set forth.

3. In an apparatus for regulating the speed of a turbine operated by both live and exhaust steam, the combination of an oil valve having a valve-face divided into two parts, a cone adapted to be rotated without moving longitudinally and having two screw surfaces adapted to act on the parts of said valve-face so as to cause them to approach or recede from each other simultaneously, a piston regulator, a heat accumulator adapted to operate said piston regulator, and mechanism connecting said piston regulator with said valve, substantially as and for the purpose set forth.

1,015,416. WIND-WHEEL. JUDSON A. BENNETT, Clovis, N. Mex. Filed Mar. 7, 1911. Serial No. 612,962. (Cl. 170—3.

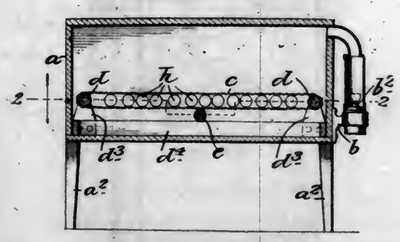
1. A wind wheel mounted on a shaft having a bearing at each end, one of the bearings being journaled on a fixture for horizontal rotation, and the other bearing mounted on a truck provided with wheels; a circular track for the truck wheels to travel upon, and stay braces connecting the periphery of the wind wheel with its own shaft near the center of horizontal rotation.

2. In a wind wheel, a horizontal shaft having a bearing at each end, one of the bearings being journaled on a fixture for horizontal rotation; a truck carrying the other bearing and mounted on wheels; a circular track for the



truck wheels to travel upon; a wind wheel mounted upon the aforesaid shaft between its bearings; and stay braces connecting the periphery of this wind wheel with its own shaft near the center of horizontal revolution.

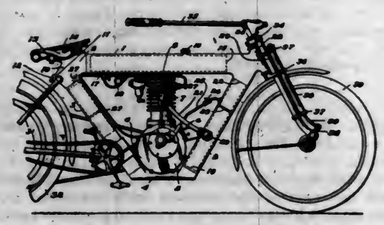
1,015,417. EGG-HATCHING INCUBATOR. JAMES D. BOYD, Arrochar, N. Y. Filed Aug. 26, 1911. Serial No. 646,224. (Cl. 119—44.)



1. An egg holder and turner for incubators, comprising a frame, rollers mounted in connection therewith, and an endless openwork sheet passed around said rollers and between the top and bottom parts of which the eggs are placed, the dimensions and construction being such that the eggs rest on the bottom part of said sheet, while the top part thereof rests on the eggs.

2. An egg holder and turner for incubators, comprising a frame, rollers mounted in connection therewith, and an endless sheet of wire mesh mounted on said rollers and between the top and bottom parts of which the eggs are adapted to be placed, the dimensions and construction being such that when the eggs are placed in position they will rest on the bottom part of said sheet, while the top part thereof will rest on said eggs.

1,015,418. MOTOR-CYCLE FRAME. GEORGE W. BREED, Detroit, Mich., assignor to Detroit Motorcycle Mfg. Co., Detroit, Mich., a Corporation of Michigan. Filed Oct. 29, 1910. Serial No. 589,663. (Cl. 21—90.)



1. In a motor cycle, a substantially triangular frame of tubular members, a motor supported by the frame, a muffler connected to the motor and housed in a depending member of the frame to discharge through the lower end thereof, an oil reservoir in the forward member over the muffler, a fuel tank in the upper member withdrawable through the rear end thereof, and a cap closing said end and forming a saddle support.

2. In a motor cycle, a substantially triangular main frame of tubular members, a cap for the open, united rear ends thereof, a motor on the frame, a muffler for the motor in the forward member discharging through the lower end thereof, an oil reservoir in the forward member above the muffler, a fuel tank in the upper member removable through the rear end thereof, and spark coil and battery removably secured in the rear members.

3. In a motor cycle, a frame of tubular members and a cap hinged to one corner thereof as a cover to the tube ends to give access thereto and forming a saddle support.

1,015,419. FARE-CALCULATOR. HARRY P. C. BROWNE, New York, N. Y. Filed Jan. 26, 1911. Serial No. 604,895. (Cl. 235—84.)

1. An apparatus comprising a fixed, circular scale and two rotatable, concentric, graduated disks, the upper disk being provided with means for indicating the region to be traversed including intersecting lines representing roadways, graduations on said upper disk corresponding to the distances between the roadways running in one direction, graduations on the other disk corresponding to the distances between the roadways crossing the first mentioned roadways, and graduations on said circular scale to indicate fares for the distance traversed, substantially as described.

2. An apparatus comprising three superposed, concentric, graduated disks, one fixed and the other two rotatable, the upper disk being rotatable and provided with means for indicating the region to be traversed including intersecting lines representing roadways, graduations on said upper disk corresponding to the distances between the roadways running in one direction, graduations on another of said disk corresponding to the distances between the roadways crossing the first mentioned roadways, and a disk graduated to indicate fares for the distance traversed, substantially as described.

3. An apparatus comprising three concentric, graduated disks, one fixed and the other two rotatable, the upper disk being rotatable and provided with means for indicating the region to be traversed including intersecting lines representing roadways, graduations on said upper disk corresponding to the distances between the roadways running in one direction, graduations on the second rotatable disk to indicate roadways crossing the other distances between the roadways at right angles, and the third or fixed disk graduated to represent fares for the distance traversed, substantially as described.

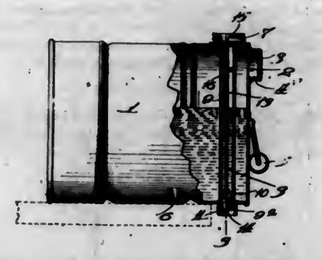
4. An apparatus comprising three superposed, concentric, graduated disks, one fixed and the other two rotatable, with a map of the region to be traversed indicated on the upper disk, including intersecting lines representing roadways, graduations on said upper disk corresponding

to the distances between the roadways running in one direction, graduations on another of said disks corresponding to the distances between the roadways crossing the first mentioned roadways, and a disk graduated to indicate fares for the distance traversed, substantially as described.

5. An apparatus comprising three superposed, concentric, graduated disks, one fixed and the other two rotatable, with a map of the region to be traversed indicated on the upper disk, the said map indicating the roadways crossing each other in said region, with lines indicating imaginary streets, crossing each other at right angles, marked on the map, graduations on said upper disk corresponding to the roadways running in one direction, graduations on another of said disks corresponding to the roadways crossing the first mentioned roadways, and a disk graduated to indicate fares for the distance traversed, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,015,420. LIQUID-RECEPTACLE. THEODORE BUMANN, Litchfield, Ill. Filed Aug. 24, 1908. Serial No. 450,110. (Cl. 221—12.)

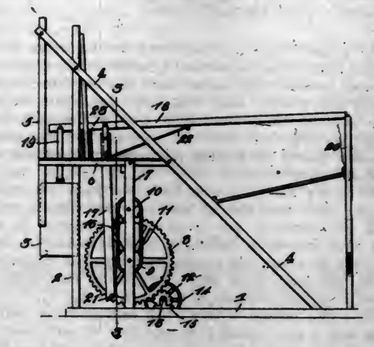


An improved liquid receptacle for filling purposes, comprising the combination with a receptacle having a pair of diametrically opposite twin apertures, of a straight single piece tube having a uniform diameter and inserted bodily through one of said apertures from one side of said receptacle so that the first-inserted end of said tube projects free through the opposite aperture a distance beyond the outer surface of the receptacle, a valve seat fixed within the said projecting end of said tube, an operating rod carrying a valve at one end and inserted through the open end of said tube to place said valve within said valve seat, said rod extending in a straight line upon the interior of said tube from the said valve seat to the opposite end of said tube, and an operating handle on the end of said rod opposite the end which carries the valve, there being an opening in the said tube near the valve seat to permit liquid to pass to the interior of said tube.

1,015,421. MACHINE FOR DRIVING FENCE-POSTS. OTTO BURHOP, Grafton, Wis. Filed Aug. 4, 1911. Serial No. 642,266. (Cl. 61—40.)

1. A machine for driving posts comprising in combination a base, a plurality of uprights disposed on said base, a plurality of gears forming a train and disposed between said uprights, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, means disposed on said gears arranged to lift said arm vertically and outwardly through a portion of their rotary travel, a support secured to the end portion of said lever, said support being mounted on said base.

2. A machine for driving posts comprising in combination a base, a plurality of uprights disposed on said base, a plurality of gears forming a train and disposed between said uprights, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a portion of said guides extending downwardly and attached to said base so as to be reinforced thereby, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, means disposed on said gears arranged to lift said arm vertically and outwardly through a portion of their rotary travel, a support secured to the end portion of said lever, said support being mounted on said base, and braces for reinforcing said guides, said braces and said support.



3. A machine for driving posts comprising in combination, a base, a plurality of uprights disposed on said base, a plurality of gears one being relatively large and engaging with a relatively small gear, which is arranged to be actuated by power or hand so that the first mentioned gear will move at a relatively slow rate of, speed, a projecting arm disposed on the periphery of said large gear, a plurality of sub gears moving in unison with said large gear, one of said sub gears being provided with a cam arm, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, said arm being arranged to be moved upwardly by means of said projecting arm on said large wheel, and to be tripped therefrom by means of said cam arm when the same is in its uppermost position, a support secured to the end portion of said lever, said support being mounted on said base.

4. A machine for driving posts comprising in combination, a base, a plurality of uprights disposed on said base, a plurality of gears one being relatively large and engaging with a relatively small gear which is arranged to be actuated by power or hand, so that the first mentioned gear will move at a relatively slow rate of speed, a projecting arm disposed on the periphery of said large gear, a plurality of sub gears moving in unison with said large gear, one of said sub gears being provided with a cam arm, braces disposed on the upper portion of said uprights, a plurality of guides secured to said braces, a weight movable in said guides, said weight being arranged to drive posts in the ground, a link attached to said weight, a lever attached to said link for lifting the same, an arm for raising said lever, said arm being arranged to be moved upwardly by means of said projecting arm on said large wheel, and to be tripped therefrom by means of said cam arm when the same is in its uppermost position, a support secured to the end portion of said lever, said support being mounted on said base, and resilient means arranged to take up the jar of the lever when the weight has fallen.

1,015,422. COMBINED TIRE AND TRUNK HOLDER FOR AUTOMOBILES. ARCHIBALD U. CAMPBELL, Toledo, Ohio. Filed June 20, 1911. Serial No. 636,001. (Cl. 224—29.)

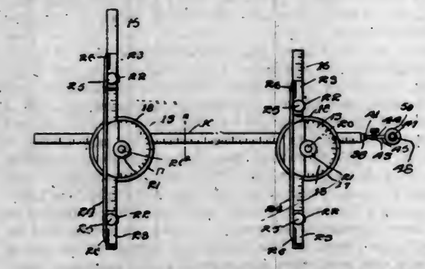
1. In a tire holder, a base-block having a lug rising from the inner side thereof and provided with a laterally projecting socket, an angled lock bar having an end mounted for pivotal and reciprocal movements in said socket and extending outwardly and downwardly from said lug to coöperate with the base and lug to embrace a tire, and means for locking the outer lower end of said bar to the base block.

2. In a tire holder, a base-block having a part rising from the inner side thereof and provided with a socket, a lock bar mounted for reciprocal movements in said socket and projecting outwardly and downwardly therefrom with its lower end turned inwardly, and means carried by the base block and operable to lock said bar against movement relative to the base block.

3. In a tire holder, a base block having a tire seat on its top and a part rising from one side of such seat and provided with a laterally projecting socket, said base block also having a socket in the opposite side thereof from which said part projects, and an angled bar having an end mounted for reciprocal and pivotal movements in said part socket and having an end projected into said base-block socket to coöperate with said block and part to embrace a tire, and means carried by the base block for locking said bar against movement relative to the block.

4. In an apparatus of the class described, a base-block forming a tire rest and having a part rising from the inner side thereof, adjustable telescoping arms rising from the inner side of the base-block and adapted to engage the upper portion of a tire in opposition to said block, an angled lock-bar for coöperating with the base-block to embrace a tire and having one end mounted for reciprocal movements in said base-block part, and means for locking the other end of the lock-bar to the base-block, substantially as described.

1,015,423. DRAFTING INSTRUMENT. GEORGE H. CARDELL, Reno, Nev. Filed Mar. 20, 1911. Serial No. 615,613. (Cl. 33—8.)



1. A drafting instrument comprising an elongated main bar, clamping members longitudinally adjustable on said bar, transverse bars, clamping members through which said transverse bars are longitudinally adjustable, means for pivotally connecting the clamping members and adapted to clamp the same upon the bars, and marking means carried by said transverse bars.

2. A drafting instrument comprising a main bar, transverse bars, clamps on the main bar, means for pivotally and longitudinally adjustably connecting the transverse bars to the clamps, and marking means adjustably connected to said transverse bars.

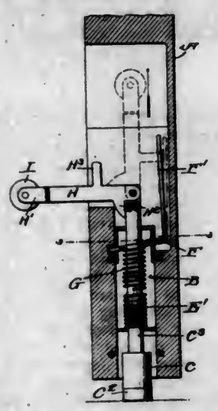
3. A drafting instrument comprising a main bar, clamps longitudinally adjustable thereon, transverse bars, clamps longitudinally adjustable thereon, means for pivotally connecting the clamps of the transverse bars to the clamps of the longitudinal bar, and marking means carried by the transverse bars.

4. A drafting instrument comprising a main bar, clamps longitudinally adjustable thereon, transverse bars pivotally and longitudinally adjustably connected to said clamps, semicircular segments having end flanges, means for adjustably locking said flanges to the transverse bars, clamps carried by the segments, and penetrating means adjustably mounted in and held in radiating relation on said segments by said clamps.

5. A drafting instrument comprising a main bar, transverse bars, clamps adjustable on the main bar, means for pivotally and longitudinally adjustably connecting the transverse bars to the clamps, clamping means longitudinally adjustable on the transverse bars, and scribing segments carried by the last mentioned clamping means.

[Claims 6 and 7 not printed in the Gazette.]

1,015,424. DOOR-STOP. HUGH JEFFERSON CLINE, Arkansas City, Kans. Filed Apr. 10, 1911. Serial No. 620,228. (Cl. 16—83.)



1. A door stop comprising a casing adapted to be mortised within a door, a spring actuated stop member mounted in said casing, a spring frictional clutch member for holding said stop member, and a bumper member carried by said stop member carrying a finger for releasing said clutch member.

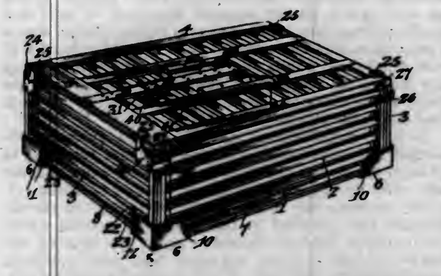
2. In a door stop, the combination with a spring actuated stop member, a clutch member for holding said stop member, and a pivoted member carried by said stop member carrying a finger for throwing said clutch member out of engagement with said stop member.

3. A door stop comprising a spring actuated stop member, a spring frictional clutch member for locking said stop member against the tension of the spring of the stop member, a pivoted bumper member carried by the stop member, and a member carried by the bumper member for engaging the clutch member.

4. The combination with a door provided with a recess in its edge and a slot in its side, of a casing secured within said recess, a spring actuated stop member carried by said casing, a bumper member pivotally mounted in said stop member extending out through the slot of said door, a clutch member for engaging said stop member, said clutch member being actuated by the bumper member when swung into a vertical position.

5. In a door stop, the combination with a casing, of a spring actuated stop member mounted in said casing, a spring actuated frictional clutch member arranged in said casing through which said stop member extends, said clutch member being provided with a vertical extending arm, a pivoted bumper member carried by said stop member, means for holding said bumper member at right-angles to the stop member, a roller bumper carried by the bumper member, and a finger carried by said bumper member for throwing the clutch member out of engagement with the stop member when said bumper member is thrown into a vertical position.

1,015,425. KNOCKDOWN BOX. ROBERT E. L. CROSBY, Jonesboro, Ark., assignor of one-half to A. E. Lockhart, Jonesboro, Ark. Filed Dec. 13, 1910. Serial No. 597,089. (Cl. 217—47.)



1. A knock-down receptacle including a bottom, exterior corner irons having upwardly extending side and end wings and provided with interior bearing recesses, foldable side members having pintles detachably engaged with the recesses, and separable end members detachably interlocked with the corner irons and engaging with the side members when the latter are in a vertical position.

2. A knock-down receptacle including a bottom, exterior corner irons having upwardly extending side and end wings and provided with open bearing recesses and having supports, foldable side members having pintles detachably engaged with the recesses, and separable end members detachably interlocked with the corner irons and engaging with the side members when the latter are in a vertical position, said end members being arranged upon the supports of the corner irons above the pintles of the side members to enable them to fold flat upon the latter when the said side members are folded upon the bottom of the receptacle.

3. A knock-down receptacle including a bottom, exterior corner irons each composed of a bottom plate and vertical side wings, and a support carried by one of the wings and arranged in spaced relation with the bottom plate and having a bearing recess, foldable side members having pintles fitted in the said recesses, separable end members seated upon the supports of the corner irons, and means carried by the corner irons for detachably holding the end members upon the supports.

4. A knock-down receptacle including a bottom, exterior corner irons secured to the bottom and each having side and end wings being provided with spaced horizontal flanges, and a solid integral bearing portion located beneath the said flanges and having a bearing recess, foldable side members having pintles arranged in the bearing recesses of the corner irons, and separable end members having a portion fitted between the said flanges, whereby they are detachably interlocked with the corner irons.

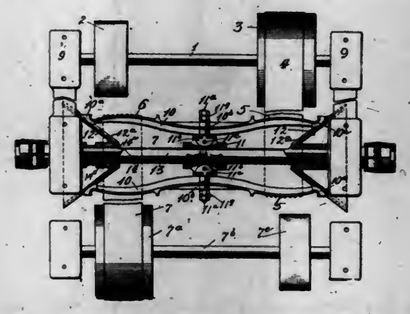
5. A knock-down receptacle including a bottom, exterior corner irons secured to the bottom and each having side and end wings, the end wing being provided with top, bottom and intermediate flanges, the bottom horizontal flange being fitted against the upper face of the bottom of the receptacle, a bearing portion arranged between the intermediate and bottom flanges in spaced relation with the side wing and provided at the bottom with an outer bearing recess, foldable side members having pintles arranged in the bearing recesses and removable through the space between the bearing portion and the side wing, and separable end members seated upon the intermediate flanges and engaged by the top flanges of the corner irons.

[Claims 6 to 13 not printed in the Gazette.]

1,015,426. PROCESS OF PRODUCING FIRE AND WATER PROOF ARTICLES. GEORGE S. DONAHEY, Pittsburg, Kans. Filed Sept. 8, 1908. Serial No. 452,032. (Cl. 106—42.)

The process of producing a fire and water proof article as described consisting in mixing together thoroughly in proportion 25 pounds of coal clay, 60 pounds of coal shale, 10 pounds of sand and 5 pounds of crude petroleum, then molding this mixture into the article desired, and finally baking the same to drive off the volatile constituents, and to burn together the clays and sand, the burning being stopped before the petroleum residua and coke are all burned or evaporated and at a point where a black or japan like coating will be left on the article.

1,015,427. VARIABLE-SPEED PULLEY. NAPOLEON DU BRUL and DAVILA S. DU BRUL, Cincinnati, Ohio. Filed Apr. 13, 1910. Serial No. 555,270. (Cl. 64—8.)



1. An expansible pulley comprising a plurality of intermediately fulcrumed levers, a spreading member for said levers and a resisting member coöperating with the levers on the opposite sides of their fulcrums from the spreading member, and forcing the levers to bear against their spreading member; the fulcrums of said levers comprising radially extending posts having rocking bearings at their inner ends and fitted to said levers at points radially beyond their said rocking bearings.

2. An expansible pulley comprising a plurality of intermediately fulcrumed levers, a spreading member for said levers and a resisting member coöperating with the levers on the opposite sides of their fulcrums from the spreading member, and forcing the levers to bear against their spreading member; the fulcrums of said levers comprising radially extending posts having rocking bearings at their inner ends and fitted to said levers at points radially beyond their said rocking bearings; said levers being radially adjustable upon said fulcrum posts.

3. An expansible pulley comprising a plurality of intermediately fulcrumed levers, a spreading member for said levers and a resisting member coöperating with the levers on the opposite sides of their fulcrums from the spreading member, and forcing the levers to bear against

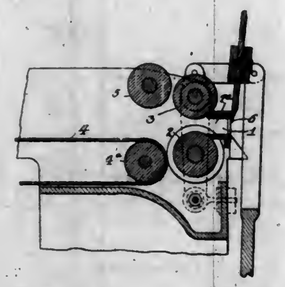
their spreading member; the fulcrums of said levers comprising radially extending posts having rocking bearings at their inner ends and fitted to said levers at points radially beyond their said rocking bearings; said levers being radially adjustable upon said fulcrum posts and said fulcrum posts having means for forcing the levers inward on the posts for the purpose of developing pressure between the ends of the levers and the members upon which they bear.

4. In an expansible pulley comprising a plurality of intermediately fulcrumed levers having in coöperation with their respective ends, a spreading member and a resisting member for holding the levers in bearing upon the spreading member; the fulcruming means for said levers comprising an intermediate fulcrum bearing member and radially extending posts, having bearings upon said fulcrum bearing member, which permit the posts to rock in radial axial planes and affording support for the levers at points radially beyond their rocking bearings.

5. An expansible pulley comprising the levers, the reciprocally acting spreading cones engaging the respective ends of the levers, the intermediate fulcrum member mounted co-axially with the cones, the fulcrum posts pivotally mounted upon the fulcrum member in radial axial planes, bearings in the levers receiving said posts, and adjusting means for pressing the levers radially inward upon the posts to hold the ends of the levers in impingement with the spreading cones.

[Claims 6 to 8 not printed in the Gazette.]

1,015,428. TOBACCO-CUTTING MACHINE. NAPOLEON DU BRUL, Cincinnati, Ohio. Filed Apr. 25, 1910. Serial No. 557,577. (Cl. 131—35.)



1. In a tobacco cutting machine, a feeding mouth, horizontal feeding means in position to contact with the horizontal surface of the body of tobacco and lateral confining and feeding means in position to contact with the vertical surfaces of the body of tobacco, and limit the lateral dimensions of said body to less than the space between the side walls of the feeding mouth cutting area.

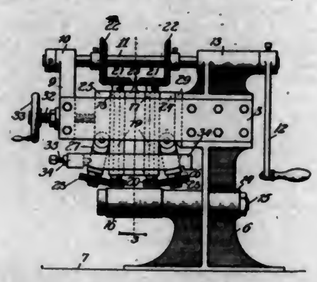
2. In a tobacco cutting machine, a feeding mouth, a feeding roller having flanges removably secured thereto confining the tobacco laterally and rotating with the roll to impart feeding movement to the sides of the body of tobacco, the space between said flanges being less than the space between the side walls of the feeding mouth.

3. In a tobacco cutting machine, a pair of feeding rollers, and flanges on one of said rolls, confining the tobacco laterally and rotating with the roll to impart feeding movement to the sides of the body of tobacco.

4. In a tobacco cutting machine, a feeding mouth and a feeding roll in advance of the mouth having flanges, which rotate with the roll and are spaced apart less than the width of the feeding mouth.

5. In a tobacco cutting machine, the combination of a feeding roll having flanges for confining the tobacco laterally and a feeding mouth, located to receive the tobacco from the roll and recessed to receive the flanges of the roll.

1,015,429. SHEET-METAL-BENDING MACHINE. WILLIAM H. FAHRNEY, Chicago, Ill. Filed Oct. 24, 1911. Serial No. 656,451. (Cl. 153—9.)



1. In a metal-bending machine of the character described, the combination of a standard, bars extending in parallel spaced relation from the standard, vertical shafts rotatably supported between said bars, toothed wheels on said shafts, pivotal members supported on said bars to extend inclinedly relative to said shafts, toothed wheels journaled on said members to extend inclinedly relative to said first-named wheels and coöperate therewith to crimp the flanges of channel-form sheet-metal fed between the teeth of the opposing wheels and thereby curve the work, and means for rotating said shafts.

2. In a metal-bending machine of the character described, the combination of a standard, bars extending in parallel spaced relation from the standard, pairs of inner and outer legs supported in spaced relation to extend vertically between the bars, shafts extending lengthwise through and journaled in the inner legs, toothed wheels on the lower ends of the shafts, means for rotating said shafts, pivotal sections depending from the outer legs, toothed wheels journaled on said sections to incline relatively to and coöperate with said first-named wheels, and means for tightening said inclined wheels against the work.

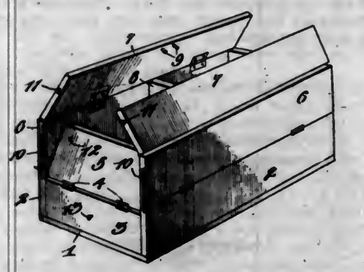
3. In a metal-bending machine of the character described, the combination of a standard, bars extending in parallel spaced relation from the standard, pairs of inner and outer legs confined in spaced relation to extend vertically between the bars, shafts extending lengthwise through and journaled in said inner legs, toothed wheels on the lower ends of the shafts, means for rotating the shafts, pivotal sections depending from the outer legs, toothed wheels journaled on said sections to incline relatively to and coöperate with said first-named wheels, a yoke supported to extend about said legs and sections and be movable lengthwise, and a set-screw working in one end of the yoke against the adjacent pivotal leg-section, for the purpose set forth.

4. In a metal-bending machine of the character described, the combination of a standard, bars extending in parallel spaced relation from the standard, pairs of inner and outer legs with spacers therefor supported to extend vertically between said bars and be movable lengthwise thereof, a bearing at the outer ends of the bars, a clamping-screw working in said bearing against the adjacent outer leg, shafts extending lengthwise through and journaled in said inner legs, toothed wheels on the lower ends of the shafts, means for rotating the shafts, pivotal sections depending from the outer legs, toothed wheels journaled on said sections to incline relatively to and coöperate with said first-named wheels, and means for adjusting said sections toward each other to tighten the wheels thereon against the work, for the purpose set forth.

5. A metal-crimping machine comprising, in combination, a standard having upper and lower shaft-bearings, a work-supporting roller journaled in the lower bearing, a pair of bars extending horizontally in parallel spaced relation from the standard and having a head at their outer ends, a set-screw working in said head, provided

with a shaft-bearing alining with said upper bearing, a shaft journaled in said last-named bearings, pairs of inner and outer legs and spacers therefor extending vertically between said bars and movable lengthwise thereof to be releasably clamped together by said set-screw, shafts extending lengthwise through and journaled in said inner legs and geared to said shaft, toothed wheels on the lower ends of the shafts, pivotal sections depending from the outer legs, toothed wheels journaled on said sections to incline relatively to and coöperate with said first-named wheels, a yoke supported on said legs and sections to extend about them and be movable lengthwise thereon, and a set-screw working in one end of the yoke against the adjacent pivotal section, for the purpose set forth.

1,015,430. FOLDING CRATE. JAMES HENRY FARMER, Jesse, Okla. Filed Feb. 21, 1911. Serial No. 609,921. (Cl. 217—15.)



1. A device of the character described, comprising a receptacle having foldable side and end sections, foldable top sections carried by said side sections, all of said sections being foldable inwardly, hooks carried by the ends of said side sections, studs carried by the ends of said top sections adapted to receive said hooks, and means on said end sections engaging portions of said hooks, whereby said sections will be held in upright position.

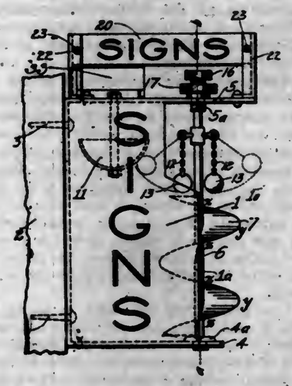
2. A device of the character described, comprising a receptacle having portions of the side and end walls foldable inwardly, top sections hingedly mounted upon the outer ends of the foldable side portions, and also folding inwardly, bracing hooks carried by the ends of the folding side portions, and means on the folding end and top sections adapted to engage portions of said hooks, whereby a single hook is adapted to retain a folding end, side and top section in upright position.

3. A device of the character described, comprising a receptacle having inwardly folding side and end walls, inwardly folding top sections carried by the side sections adapted to rest upon the end walls, hooks carried by the ends of said side sections, studs carried by the ends of the top sections adapted to receive said hooks, and additional hooks carried by the end sections adapted to engage a portion of the aforesaid hooks, whereby all of said folding sections may be held in upright position, by the same bracing means.

1,015,431. ADVERTISING DEVICE. DWIGHT FARNUM, Denver, Colo., assignor of one-half to Clifford M. Tyler, Boston, Mass. Filed Sept. 27, 1909. Serial No. 519,896. (Cl. 40—39.)

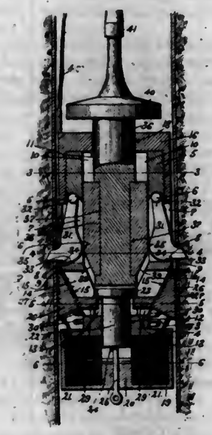
1. In an advertising device, the combination of a helicoid, consisting of one or more approximately complete convolutions, with a shaft suitably supported, and deflectors for directing a current of air against a portion of the helicoid in a direction perpendicular to its axis, for the purpose of rotating the said helicoid as described.

2. In an advertising device, the combination of a helicoid, consisting of one or more approximately complete convolutions, with a shaft suitably supported; a housing with deflectors partly inclosing the said helicoid, and



suitably disposed advertising spaces substantially as specified.

1,015,432. PIPE-PERFORATOR. CLAYTON E. FREDERICKSON, Coalinga, Cal. Filed Oct. 8, 1910. Serial No. 586,107. (Cl. 81—188.)



1. In a device of the class described, a casing, a cutter mounted in said casing, said casing having an opening through which said cutter may be projected, and reciprocable means operating within said casing for forcing said cutter out of said casing, means at the bottom of said casing for sustaining said casing in a well tube and means forming a part of said reciprocable means for impacting said casing when said reciprocable means is reciprocated after said cutter has been forced out of the casing, to cause said cutter to cut a slit.

2. In a device of the class described, a casing, a cutter mounted in said casing, said casing having an opening through which said cutter may be projected, and reciprocable means operating within said casing for forcing said cutter out of said casing, and means for impacting said casing to cause said cutter to cut a slit.

3. In a device of the class described, a casing, a cutter mounted in said casing, said casing having an opening through which said cutter may be projected, and reciprocable means operating within said casing for forcing said

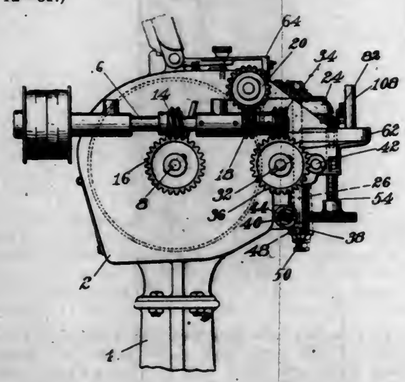
cutter out of said casing, means at the bottom of said casing for sustaining said casing in a well tube, and means governed by said reciprocating means for releasing said sustaining means, and an impacting member carried by said reciprocable means for impacting the casing and thereby forcing said casing downwardly to cause said cutter to slit the well tube.

4. In a well perforating apparatus, a casing, a plunger reciprocable in said casing and projecting through one end of said casing, means for limiting the movement of said plunger out of said casing, a cutter mounted in said casing, said plunger having a groove into which said cutter projects, said plunger having a pocket merging with said groove, in which said cutter may lie when said plunger and casing are extended, said plunger serving to force said cutter out of said casing to perforate the well wall when said plunger is telescoped into said casing, and means for holding said casing in position in the well tube while said cutter is being forced outwardly to penetrate the well tube.

5. In a well perforating apparatus, a casing, a plunger reciprocable in said casing and projecting through one end of said casing, means for limiting the movement of said plunger out of said casing, a cutter mounted in said casing, said plunger having a groove into which said cutter projects, said plunger having a pocket merging with said groove in which said cutter may lie when said plunger and casing are extended, said plunger serving to force said cutter out of said casing to perforate the well wall when said plunger is telescoped into said casing, and gripper devices carried by said casing for engaging the well wall to sustain said casing in position.

[Claims 6 to 11 not printed in the Gazette.]

1,015,433. HEEL-BLACKING MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 29, 1910. Serial No. 574,506. (Cl. 12—31.)



1. A machine of the class described comprising blacking applying means, driven means for conveying blacking to the applying means and provision whereby the delivery of blacking to the applying means is controlled by the work.

2. A machine of the class described comprising a blacking applying device, means including a driven conveying mechanism for delivering the blacking to said device and means for interrupting the delivery of blacking to the applying device when the work is not in position to receive blacking therefrom, said last named means being arranged for operation on the positioning of the work to the applying device to cause the delivery of blacking to be resumed.

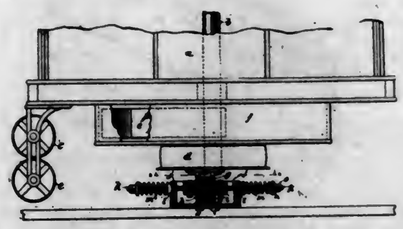
3. A machine of the class described comprising a blacking applying device, mechanism including a conveying roll for delivering blacking to said device and means for controlling the delivery of blacking by the roll to the applying device, said means being controlled in its operation by the work.

4. A machine of the class described comprising, in combination, means for applying blacking to the heel of a shoe, driven means for conveying blacking to the applying means and means for rendering said conveying means inoperative when the heel is not in position to be blacked.

5. A machine of the class described comprising in combination a blacking applying device, mechanism including a conveying roll for delivering blacking thereto, means cooperating with said roll to interrupt the delivery of blacking to the applying device, means for rendering the interupting means inoperative, and means for rendering said interrupting means operative, the last named means being subject to the control of the work.

[Claims 6 to 25 not printed in the Gazette.]

1,015,434. GYRATORY MACHINE. WILLIAM D. GRAY, Milwaukee, Wis. Filed Mar. 11, 1907. Serial No. 361,670. (Cl. 83—38.)



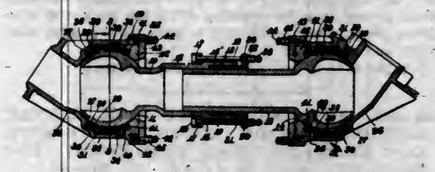
1. In a gyratory machine the combination of an eccentrically weighted shaft journaled therein and having an offset journal approximately in line with the neutral axis of gyration, a box fitting said journal without play and movable transversely to its axis, fixed bearings arranged at intervals around said box at a distance therefrom and provided with oscillatory spring seats, radially disposed rods pivoted at their inner ends to said box, passing loosely through said spring seats and provided on their outer ends with adjustable spring seats, and springs interposed between the opposing spring seats and arranged to yieldingly hold said box normally in line with said neutral axis, substantially as described.

2. In a gyratory machine the combination of an eccentrically weighted shaft journaled therein and having an offset journal approximately in line with the neutral axis of gyration, an end bearing box fitting said journal and movable transversely to its axis, a fixed bearing plate arranged to support said box endwise and provided at intervals around it with bearings, radially disposed rods pivoted at their inner ends to said box and loosely guided in said bearings, spring seats on the outer ends of said rods and springs interposed between said bearings and seats on the outer ends of said rods and adapted to yieldingly hold said box normally in line with said neutral axis, substantially as described.

1,015,435. TRAIN-PIPE CONNECTION. WARREN A. GREENLAW, Melrose, and ROBERT A. JEWETT, Boston, Mass., assignors to The Greenlaw Manufacturing Co., Boston, Mass., a Corporation of Maine. Filed Jan. 25, 1911. Serial No. 604,675. (Cl. 137—88.)

1. In a device of the class described, the combination of a pipe member having a ball end; a pipe section provided with a cup-shaped end adapted to receive said ball; annular packing members in said cup-shaped end; and means interposed between said packing members adapted to force them into contact with the surface of said ball.

2. In a device of the class described, the combination of a pipe member having a ball end; a pipe section provided with a cup-shaped end adapted to receive said ball; annular packing members in said cup-shaped end; and a spring pressed separator interposed between said packing members adapted to force them into contact with the surface of said ball.



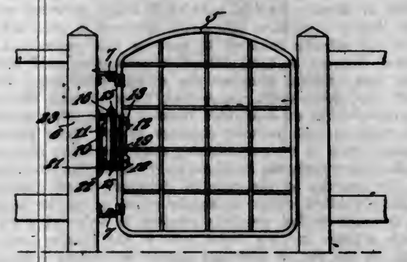
3. In a device of the class described, the combination of a pipe member having a ball end; a pipe section provided with a cup-shaped end adapted to receive said ball; annular packing members in said cup-shaped end; and a spring pressed separator interposed between said packing members adapted to force them into contact with the surface of said ball; said separator including means to prevent the complete separation thereof when removed from said cup-shaped end.

4. In a device of the class described, the combination of a pipe member having a ball end; a pipe section provided with a cup-shaped end adapted to receive said ball; annular packing members in said cup-shaped end; rings bearing against said packing members; centering pins on one ring extending through openings in the other; and springs surrounding said pins.

5. In a device of the class described, the combination of a pipe member having a ball end; a pipe section provided with a cup-shaped end adapted to receive said ball; annular packing members in said cup-shaped end; rings bearing against said packing members; centering pins on one ring extending through openings in the other; springs surrounding said pins; a pair of tubular members on one of said rings; male members on the other ring extending into said tubular members; and means for limiting the movement of said male members in said tubular members.

[Claim 6 not printed in the Gazette.]

1,015,436. GATE-CLOSER. ABRAHAM GUDMUNDSEN, Lehi, Utah. Filed Feb. 23, 1911. Serial No. 610,424. (Cl. 16—9.)

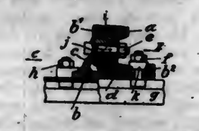


1. In a device of the class described, a casing slotted at its ends, a pin mounted axially in the casing, a spring arranged upon the pin and having its ends projecting through the slots at the ends of the casing and provided each with a hook, and a fixed member with which the projecting ends of the spring are engaged, said ends being upon opposite sides thereof.

2. In a device of the class described, a casing slotted at its ends, the casing being formed of two sections secured together, the sections being constructed to be clamped about the post of a gate, a pin mounted axially in the casing, a spring arranged upon the pin and having oppositely disposed hooked ends projecting through the slots at the ends of the casing, and a fixed member having an outstanding flange provided with two eyes in which the ends of the spring are loosely and oppositely engaged.

3. In a device of the class described, a movable member comprising a casing made of two stamped portions adapted to be clamped together to form two parallel tubular members, one of said members being adapted to be clamped upon a gate; and a fixed member secured to the hinge post, a pin fixedly mounted in said casing, and a spring mounted on said pin and operatively connected to said fixed member.

1,015,437. COMBINED RAIL JOINT AND CHAIR. FRITZ HEINEMANN, Hamburg, Germany. Filed Aug. 11, 1911. Serial No. 643,517. (Cl. 239—6.)



1. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and said chair, and vertical adjusting bolts through said downwardly tapering wedges and said chair.

2. In a combined rail joint and chair the combination with two sleepers, of a chair adapted to rest on said two sleepers, two rail-ends butting against one another, said chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flange of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flange of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and said chair, and vertical adjusting bolts through said downwardly tapering wedges and said chair, also through said sleepers where occurring, and bolts on the side opposite to said vertical bolts for connecting said chair with said sleepers.

3. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and having a rib extending upward to the level of the head of the rails and so shaped as to leave a space of triangular cross section between the outer base flanges and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flange of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and the rib of said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and the rib of said chair, and vertical adjusting bolts through said downwardly tapering wedges and said chair.

4. In a combined rail-joint and chair, the combination with two sleepers, of a chair adapted to rest on said two sleepers, two rail-ends butting against one another, said chair overlapping the base flanges of said rail-ends leaving a space of wedge-shaped cross section along the inner base flange of the rails and having a rib extending upward to the level of the head of the rails and so shaped as to leave a space of triangular cross section between the outer base flanges and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between

the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and the rib of said chair, horizontal adjusting bolts through the stems of said rail-ends said triangular blocks and the rib of said chair, vertical adjusting bolts through said downwardly tapering wedges and said chair, also through said sleepers where occurring, and bolts on the side opposite to said vertical bolts for connecting said chair with said sleepers.

5. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and the side projection of said chair, vertical adjusting bolts through said downwardly tapering wedges and said chair, and wedge shaped plates interposed between the lower sides of the base flanges and the foot of the chair

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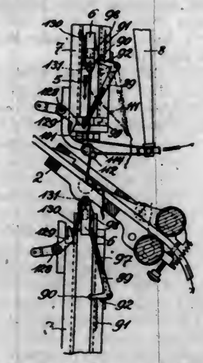
1,015,438. BELT-SEWING MACHINE. PETER HELDMANN, Frankfort-on-the-Main, Germany, assignor to The Corporation of Maschinenfabrik Moenus A. G., Frankfort-on-the-Main, Germany. Filed Sept. 22, 1910. Serial No. 583,202. (Cl. 112—21.)



1. In a device for sewing belts with leather laces, a table, feeding means automatically actuated by said table, automatic devices embodying a resiliency controlled presser foot and a slide having a wedge-shaped face for pressing down the work to secure it in position on the table.

2. In a machine for sewing belts with leather laces, a tilting work table, a needle, feeding means automatically actuated by the tilting of said table, a resilient presser foot, means for automatically operating the same, wedging means for pressing down the work to secure it in position on the table, and means embodying a resilient finger for diverting the lace during the upward movement of the needle.

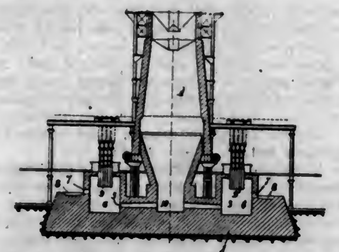
3. In a machine for sewing belts with leather laces, a tilting work table, a needle, feeding means automatically actuated by the tilting of said table, wedging means for pressing down the work to secure it in position on the table, a resilient presser foot, means for automatically operating the same, and means embodying a resilient finger for diverting the lace during the upward movement of the needle, said resilient presser foot constructed to push the lace after each stitch to hold it.

4. In a machine for sewing belts with leather laces, a needle, automatic devices embodying a resilient presser foot for pushing the lace after each stitch and holding it, means embodying a resilient finger for diverting the lace during the upward movement of the needle, a tilting work-table, means automatically actuated by said table to feed the work, and means for tightening the lace.

5. In a machine for sewing belts with leather laces, a tiltably mounted work-table, means automatically actuated by said table for feeding the work, a slide having a wedge-shaped face for pressing down the work and a resilient presser foot constructed to push the lace after each stitch and to hold it.

[Claims 6 to 22 not printed in the Gazette.]

1,015,439. SMELTING-FURNACE WITH ELECTRIC REFINING-HEARTHS CONNECTED THERETO. ALOIS HELFENSTEIN, Vienna, Austria-Hungary. Filed Mar. 8, 1911. Serial No. 613,059. (Cl. 204—64.)

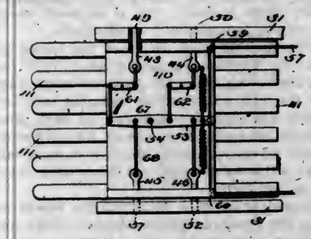


1. A smelting or cupola furnace, comprising a main shaft or furnace hearth, said shaft being provided with lateral extensions, a closed refining chamber in each of said extensions, closed channels extending through said extensions, connecting said shaft and said refining chambers the arrangement being such that the main shaft, connecting channels and refining chambers form an undivided furnace whole, an electrode arranged in each refining chamber at the upper portion thereof, each of the said refining chambers being provided with outflow openings arranged at the upper portion thereof, the hearths of the refining chambers being provided with extensions which outwardly reach up to the height of the said outflow openings adapted to serve as trays for the reception of the metal passing through said openings and also adapted to serve as a rigid outer support for the metal zone of the furnace.

2. A smelting or cupola furnace, comprising a main shaft or furnace hearth, said shaft being provided with two lateral extensions oppositely disposed to each other, a closed refining chamber in each of said extensions, a closed channel in each extension connecting said shaft and each refining chamber, the arrangement being such that the main shaft, connecting channels and refining chambers form an undivided furnace whole, an electrode arranged in each refining chamber at the upper portion thereof, each of the said refining chambers being provided with outflow openings arranged at the upper portion thereof the hearths of the refining chambers being provided with extensions which outwardly reach up to the height of the said outflow openings adapted to serve as a rigid outer support for the metal zone of the furnace, and a tray on the top of said last named extensions arranged beside said outflow openings and adapted to serve for the reception of the metal passing through said openings.

1,015,440. HAY-STACKER. CLARENCE E. HELMICK and WILLIAM E. ADLER, La Grande, Oreg. Filed Dec. 30, 1910. Serial No. 600,141. (Cl. 57—53.)

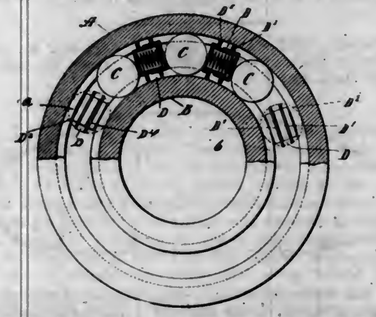
1. In a hay stacker, a derrick arm and means for supporting the latter, a cradle carried by the arm, said cradle comprising a dumping member, a frame, resilient means for supporting said member in a given position with reference to the frame, pivotal means for connecting said member with the frame on both sides of the transverse axis of the member, means for throwing the pivoted devices out of their operative position, on one side of said axis, and a resilient device for returning them to their normal position.



2. In a hay stacker, a derrick arm and means for supporting the latter, a cradle frame carried by the arm, a dumping member within the frame, a lever carried by said member, a plurality of locking bolts connected with one arm of the lever, said bolts being in alinement and located on one side of the transverse axis of the dumping member, and a plurality of bolts connected with the other arm of said lever and disposed on the opposite side of said axis, the bolts last mentioned being released simultaneously.

3. In a hay stacker, a derrick arm and means for supporting the latter, a cradle frame carried by the arm, a dumping member with the frame, a main lever carried by said member, a second lever opposite one arm of the main lever, a plurality of bolts connected with said arm, one of said bolts being directly connected and the other being connected through the medium of the second lever, and a plurality of bolts similarly connected with the other arm of the main lever, on the side of the transverse axis of the dumping member opposite to that on which the first set of bolts is located, the bolts connected with a given arm of the main lever being released simultaneously.

1,015,441. SEPARATOR FOR BALL-BEARINGS. HENRY HESS, Wawa, Pa., assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 13, 1909. Serial No. 477,742. (Cl. 64—59.)

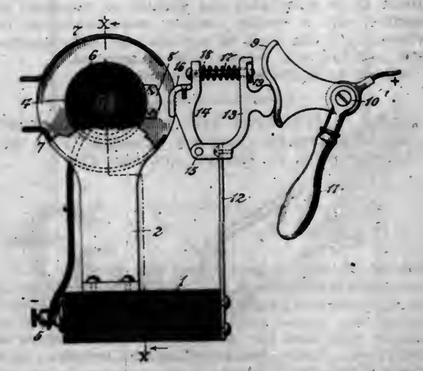


1. A separator for ball bearings, comprising a plurality of telescopic sections and resilient means tending to force the sections apart, each of the sections being formed with a portion to engage in the raceway of the bearing and with its outer or ball-engaging end of smaller size than that of said portion.

2. A separator for ball bearings, comprising a plurality of telescopic sections and resilient means tending to force the sections apart, the said sections being formed with projecting portions located at a distance from the ends of the separator and designed to engage in the raceway of the bearing.

3. A separator for ball bearings, comprising two telescopic sections and resilient means tending to force the sections apart, the said sections being each formed with a projecting disk or flange located at a distance from the ends of the separator and designed to engage in the raceway of the bearing.

1,015,442. CIRCUIT-INTERRUPTER. CLINTON J. HIXSON, East Orange, N. J. Filed Feb. 23, 1907. Serial No. 359,008. (Cl. 175—282.)



1. In an electric circuit interrupting device for relatively high potential circuits two circuit interrupting parts, one of which parts is rigidly sustained upon a fixed standard and the other part is movable and sustained upon a yielding support which normally tends to separate it from the stationary contact; in combination with a rotary part of cam-like or eccentric nature provided with means for rotating it; together with a rigid contacting member operatively connected with the yielding support and adapted to have continuous contact with the surface of the eccentric part, substantially as described.

2. In an electric circuit interrupting device for relatively high potential circuits two circuit interrupting parts, one of which parts is rigidly sustained upon a fixed standard and the other part is movable and sustained upon a yielding support which normally tends to separate it from the stationary contact; in combination with a rotary part of cam-like or eccentric nature provided with means for rotating it; together with a rigid contacting member operatively connected with the yielding support and adapted to have continuous contact with the surface of the eccentric part, the movable part being provided with adjusting means for varying its contact relation with the fixed part, substantially as described.

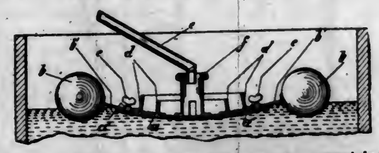
3. Means for breaking an electrical circuit of relatively high potential and great current value, embracing three circuit interrupting parts one of which is stationary and the other two movable, the intermediate part being movable and provided with means for yieldingly holding it always in contact with the other movable part and also provided with adjustable means for varying its distance from the stationary part, said stationary part being of magnetic material and included in the magnetic field of a coil located in direct circuit with the circuit to be interrupted substantially as described.

4. Means for breaking an electrical circuit of relatively high potential and great current value, embracing three circuit interrupting parts, one of which is stationary and the other two movable; one of the movable parts being provided with means for yieldingly holding it always in contact with the other and also provided with adjustable means for varying its distance from the stationary part; said stationary part being of magnetic material and included in the magnetic field of a coil adapted to magnetize it, said coil being connected in direct circuit with the circuit to be interrupted; together with a cooling chamber which surrounds the aforesaid coil and is open on both sides, substantially as described.

5. Means for breaking an electrical circuit of relatively high potential and great current value, embracing three circuit interrupting parts one of which is stationary and the other two movable; the intermediate part being movable and provided with means for yieldingly holding it always in contact with the other movable part, and additional means for varying its distance from the stationary part, which stationary part is of magnetic material and is located in the magnetic field of a coil included in the circuit to be interrupted and adapted to magnetize it; together with a cooling chamber which surrounds the aforesaid coil, the walls of said chamber being provided with radiating ribs, substantially as described.

[Claims 6 not printed in the Gazette.]

1,015,443. APPARATUS FOR MACERATING WORT. ROBERT HOFFMANN, Ortelsburg, Germany. Filed May 5, 1911. Serial No. 625,357. (Cl. 195—25.)



1. An apparatus for macerating wort, comprising in combination, means for conveying the sparging water to and discharging the same closely adjacent to the surface of the wort, and a plate suspended by the wort for receiving said sparging water.

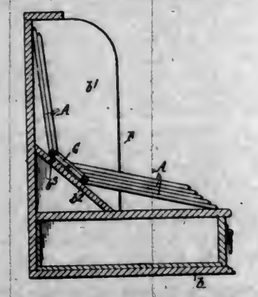
2. An apparatus for macerating wort comprising in combination, means for conveying the sparging water thereto and discharging the same closely adjacent the surface of the wort, and a floating plate by the wort for receiving the sparging water, substantially as described.

3. An apparatus for macerating wort comprising in combination, means conveying the sparging water to and discharging the same closely adjacent the surface of the wort, a plate for receiving the sparging water, and floats on which said plate is suspended.

4. An apparatus for macerating wort comprising in combination, means conveying the sparging water to and discharging the same closely adjacent the surface of the wort, a plate for receiving the wort, and floats suspending said plate below the surface of the wort.

5. An apparatus for macerating wort comprising in combination, means conveying the sparging water to and discharging the same closely adjacent to the surface of the wort, a plate provided with ribs for receiving the wort, and floats adjustably mounted upon said plate for suspending the same below the surface of the wort.

1,015,444. ACCOUNT-FILE. JOHN F. HUBER, Buffalo, N. Y., assignor to Conrad W. Zimmer, Buffalo, N. Y. Filed May 7, 1910. Serial No. 559,896. (Cl. 45—2.)



1. The combination of a series of file leaves provided with means for retaining papers thereon, and links for securing said leaves together to which said leaves are pivoted and which are slidably connected together by the pivotal portions of said leaves, each link connecting two adjacent leaves whereby said leaves can swing relative to each other and also can be adjusted toward and from each other, substantially as set forth.

2. The combination of a series of file leaves provided with means for retaining papers thereon, each leaf having pivots projecting from the opposite edges thereof at one end of the leaf, and links for securing said leaves together which are slidably connected by said pivots and each of which connects the pivots of two adjacent leaves whereby said leaves can swing relative to each other and can also be adjusted toward and from each other, substantially as set forth.

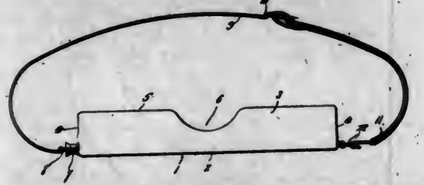
3. The combination of a series of file leaves provided with means for retaining papers thereon, links for securing said leaves together to which said leaves are pivoted and which are slidably connected by the pivotal portions of said leaves, each of said links connecting two adjacent leaves whereby said leaves can swing relative to each other and also can be adjusted toward and from each other, and means for holding said leaves in alinement, substantially as set forth.

4. The combination of a series of file leaves provided with means for retaining papers thereon, each leaf having pivots projecting from the opposite edges thereof at one end of the leaf, links for securing said leaves together which are slidably connected by said pivots and each of which connects the pivots of two adjacent leaves whereby said leaves can swing relative to each other and can also be adjusted toward and from each other, and plates which are adapted to slide relative to each other and which embrace said pivots for holding said leaves in alinement, substantially as set forth.

5. The combination of a series of file leaves provided with means for retaining papers thereon, each leaf having pivots projecting from the opposite edges thereof at one end of the leaf, links for securing said leaves together which are slidably connected by said pivots and each of which connects the pivots of two adjacent leaves whereby said leaves can swing relative to each other and can also be adjusted toward and from each other, and plates which are connected to the outermost leaves and are adapted to slide relative to each other and embrace said pivots for holding said leaves in alinement, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

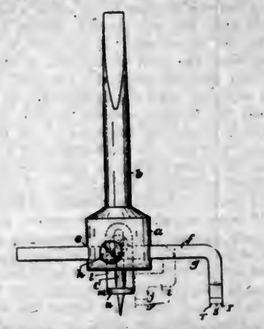
1,015,445. HOT-WATER BOTTLE. GEORGE W. KAUL, Helper, Utah. Filed Dec. 7, 1910. Serial No. 596,109. (Cl. 128—39.)



A hot water bottle comprising a substantially oblong receptacle having a flat side and a transversely grooved side, a pivoting ball connected to one end of the receptacle, a strap connected thereto, and a buckle connected to the opposite end adapted to adjustably receive the strap for attaching either side of the bottle.

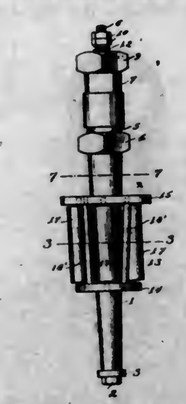
1,015,446. CARPENTER'S BIT. WILLIAM B. KNAPP, Paterson, N. J. Filed Oct. 7, 1909. Serial No. 521,512. (Cl. 145—121.)

The combination of a rotatable stock, a centering device arranged in one end thereof, a tool having a shank-portion and a cutting-portion projecting angularly from the shank-portion, said tool being arranged in the stock with its shank-portion disposed at a right angle to the axis of rotation of the stock and having the end part thereof comprising its cutting-portion bent first downwardly, then inwardly toward the axis of the stock in



a line crossing said axis at right angles and below said end of the stock and then downwardly, substantially as described.

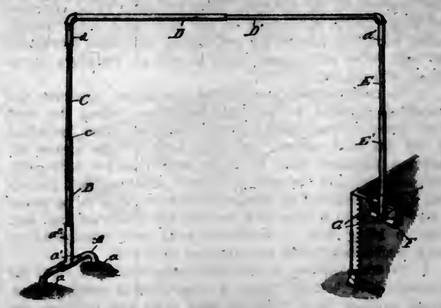
1,015,447. FLUE-EXPANDER. JEROME B. LILLIBRIDGE and ANDREW LILLIBRIDGE, Elk City, Kans., assignors of one-third to A. R. Quigg, Elk City, Kans. Filed May 25, 1909. Serial No. 498,380. (Cl. 153—82.)



In a flue expander, a pair of disks formed with radial disposed slots and centrally disposed openings, rods connecting said disks and located between the slots thereof, a series of rollers having trunnions movable in the slots of the disks, a conical expanding member movable through the central openings of the disks and adapted to contact with the rollers, a stop on one end of said expanding member, the other end of the expanding member being reduced to form a threaded extension and being formed with ratchet teeth, a sleeve disposed on said extension and provided with ratchet teeth to engage the first ratchet teeth, said sleeve having an enlarged bore forming a shoulder, lock nuts threaded on the extension, a spring disposed in the enlarged bore and bearing its inner end against the shoulder of the sleeve and at its outer end against the lock nuts whereby the ratchet teeth of the sleeve are held in normal engagement with the ratchet teeth of the expanding member, and a collar mounted on the sleeve and straddling the ratchet teeth of said sleeve and expanding member.

1,015,448. DISPLAY-RACK. ARMAND S. MADDEN, Chicago, Ill. Filed Dec. 17, 1910. Serial No. 597,751. (Cl. 211—14.)

1. In a display rack the combination with two vertical supporting standards and a horizontal member extending from one to the other of these standards and secured thereto, of a bracket provided with a hook adapted to detachably engage the upper edge of a vertical wall of a trunk, means carried by the hook to engage one of said standards to maintain the same parallel to the wall of the trunk and support the rack firmly in its set up position.



2. In a display rack the combination with two vertical supporting standards composed of shorter telescoping sections, and a horizontal member extending from one to the other of these standards and secured thereto, said horizontal member being composed of two telescoping sections each having a downwardly extending elbow adapted to fit over the end of one of the vertical standards by which the horizontal member is secured to said vertical standards, of a bracket provided with a hook adapted to engage the upper edge of a vertical wall of a trunk, means carried by the hook to engage one of said standards to maintain the same parallel to the wall of the trunk and support the rack firmly in its set up position.

3. In a display rack the combination with two vertical supporting standards and a horizontal member extending from one to the other of said standards and secured thereto, of a bracket provided with a hook adapted to detachably engage the upper edge of a vertical wall of a trunk, a perforated boss carried by the hook adapted to embrace one vertical standard to maintain the same in vertical position, said boss being slidable on the standard to different heights whereby the bracket may be secured to the vertical wall of trunks of different height and the standard maintained parallel to said wall and the rack supported firmly in its set up position.

4. The combination with two vertical standards and a horizontal member extending from one to the other, of a vertical guide embracing one vertical standard to maintain the same in position, and a pair of hooks attached to said guide arranged to hook over the upper edge of a trunk-wall, said guide being removed from the plane of the hooks to permit the rim of the trunk-lid to lie therebetween, whereby the lid may rest on the hooks and hold the guide firmly in position.

1,015,449. VALVE DEVICE FOR HYDRAULICALLY-CONTROLLED SELF-FEEDING PERCUSSIVE APPARATUS. WILHELM MAUSS, Johannesburg, Transvaal. Filed May 5, 1909. Serial No. 494,100. (Cl. 125—10.)

1. In combination, a percussive mechanism including a shell for pressure and checking fluids, a longitudinally reciprocating member dividing said shell into pressure and checking fluid chambers and arranged to be acted upon by said fluids and provided with a cam, means for admitting pressure fluid to operate said member, means for controlling the checking fluid for said member actuated by longitudinal movement of said cam, said last mentioned means including a device for preventing operative movement thereof upon lateral movement of said reciprocating member.

2. In combination, a shell for containing pressure and checking fluids, a reciprocal member dividing the shell into pressure and checking chambers and arranged to be acted upon by said fluids and including a rod provided with a cam surface, means for admitting pressure fluid for driving said member forwardly, valve mechanism for controlling the checking fluid arranged to be operated by longitudinal movement of the cam, said valve mechanism including means for preventing operative movement of said valve mechanism upon lateral or vibratory movement of said rod.

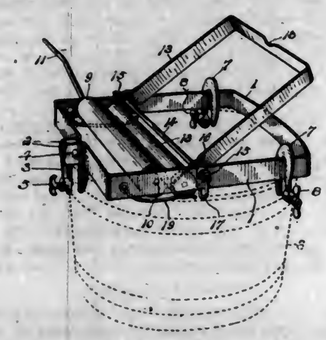
3. In combination, a shell for containing pressure and checking fluids, a reciprocable member dividing the shell into pressure and checking fluid chambers and including a rod for said member provided with a cam, means admitting pressure fluid to drive said member forwardly, valve mechanism for controlling the checking fluid including a valve seating, an expansible stirrup, and valve means carried by said stirrup and bearing upon said seating, said stirrup being free to oscillate about said valve seating, said mechanism being actuated by said cam.

4. In combination, a percussive mechanism, a shell for pressure and checking fluids, a reciprocating member interposed between said fluids in said shell and dividing the same into pressure and checking fluid chambers, said member including a rod having a cam thereon, means admitting pressure fluid to drive said member and means actuated by said cam for controlling the checking fluid.

5. In combination, a percussive mechanism, a shell for pressure and checking fluids, a reciprocable member in said shell and dividing the shell into pressure and checking fluid chambers and projecting therethrough said members having mechanism for controlling egress of the checking fluid, and a piston in said member provided with a rod having a cam for actuating said mechanism, and means for admitting fluid to said pressure chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,015,450. MOP-WRINGER. WILLIAM MCCLOSKEY, Maidstone, Ontario, Canada. Filed Apr. 24, 1911. Serial No. 623,126. (Cl. 15—2.)



1. In a mop wringer, the combination of a frame notched upon its upper edge, clamping means for attaching the frame to the upper edge of a pail, a roll journaled on the frame, a bail, a roll journaled on the bail, said bail having projecting means received in the notches of the frame and forming a bearing member adjacent to the roll and slidable upon the upper edge of the frame and means embracing the sides of the frame and the adjacent arms of the bail for attaching the latter to the frame.

2. In a mop wringer, the combination of a frame, clamping means for attaching the frame to the upper edge of the pail, a roll journaled on the frame, a crank handle for turning the roll, a bail slidably mounted upon the frame and having bearings intermediate its ends upon the frame, a roll journaled upon the lower ends of the bail to be swung by the swinging of the bail on its bearings upward beneath the roll on the frame into contact therewith, said bail being also adapted to swing to a vertical position to serve as a carrying bail, and loops on the bail embracing the sides of the frame to attach the bail thereto.

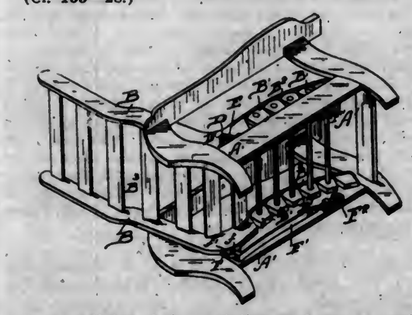
3. In a mop wringer, the combination of a rectangular frame having bearing notches in its sides, a roll journaled on the frame near one end thereof, means for clamping the frame to the upper edge of the pail, a bail, a roll journaled between the ends of the bail, a rod extending across the bail parallel with the roll and having projecting ends engaging with the upper edges of the sides of the frame and the bearing notches therein, and loops on said rood loosely embracing the sides of the frame.

4. In a mop wringer, the combination of a rectangular frame formed of a single strip of metal set on edge with its ends turned outwardly at one end of the frame to form parallel ears, a clamping member pivotally secured between said ears for securing the frame to the upper edge of the pail, clamping members engaging the sides of the frame and adjustable thereon for engaging a pail, a roll journaled on the frame near one end thereof, a crank for turning said roll, a bail, a roll journaled between the ends of the bail, a rod extending across the bail adjacent to the roll and projecting through the sides of the bail to form bearings therefor engaging the upper edges of the sides of the frame, loops on the rod loosely embracing the sides of the bail and frame, and guard members attached to the sides of the frame and extending beneath the rolls near their ends.

1,015,451. SPRING-TIRE FOR VEHICLE-WHEELS. ARCHIBALD B. MCQUEEN, Dunnellon, Fla. Filed Feb. 4, 1911. Serial No. 606,553. (Cl. 152—8.)

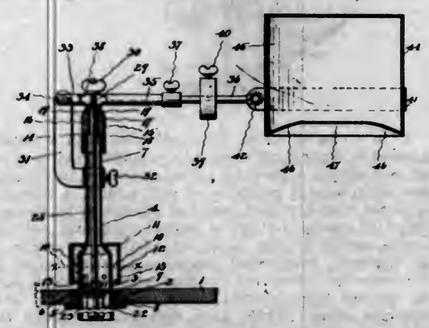
In combination a vehicle wheel rim having outer flanges, a flexible casing, a second casing arranged within the flexible casing and comprising a plurality of metal plates hingedly connected to one another, the metal plates having inner projections, a securing ring for confining the casings to the rim and having outer projections, and conical springs arranged between the securing ring and the outer portion of the inner casing and having their ends fitted to the projections of the said securing ring and the inner casing.

1,015,452. RECLINING-CHAIR. EMIL H. MILNER, Stockbridge, Mich. Filed Feb. 18, 1911. Serial No. 609,345. (Cl. 155—28.)



In a reclining chair, a stationary frame, a combined tilting back and seat frame mounted in the stationary frame, the back and seat merging into each other on a curve at the base of the back, a pair of arms secured to the sides of the stationary frame near the forward end of the latter and projecting toward the rear of the frame and being yieldable bodily from their securing means to their opposite ends, a brake shoe pivotally mounted on the rear end of each arm and adapted to be held normally in engagement with the tilting back and seat frame substantially at the point where the back and seat merge into each other, by the resiliency of the arms, so that upon tilting movement of the back and seat frame the frictional resistance between the back and seat frame at the point where they merge into each other, and the brake shoes arrests movement of the tilting frame and maintains it at the tilting angle desired by the chair occupant.

1,015,453. VALVE. THOMAS P. MOSELEY, Vallejo, Cal. Filed Feb. 24, 1910. Serial No. 545,591. (Cl. 137—104.)



1. In a valve for flush tanks, a casing or pipe provided with a stationary muffler with outlet holes and a movable muffler with an outlet, substantially as described.

2. In a valve for flush tanks, a casing or pipe provided with a stationary muffler with outlet holes and an adjustable muffler on the top of said casing, substantially as described.

3. In a valve for flush tanks, a casing or pipe, provided with a stationary muffler, a valve plug having a stem provided with a movable muffler, said movable muffler controlling the extent of movement of the valve plug by being adjusted on the valve stem, substantially as described.

4. In a valve for flush tanks, a casing or pipe provided with a valve plug and stem and two mufflers provided with water outlets, one of said mufflers controlling the extent of movement of the valve plug and directing the water passing upward through said casing toward the bottom of the flush tank, substantially as described.

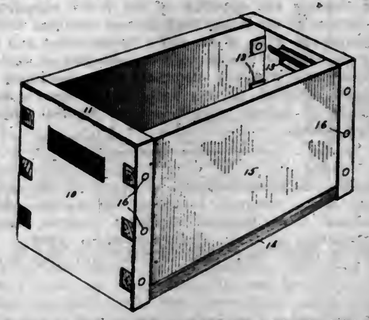
5. In a valve for flush tanks, a casing or pipe provided with outlet holes, a valve plug and stem, a muffler mounted on said casing and surrounding said outlet holes and provided with outlet holes, a muffler mounted on said stem having a bore which fits over the upper end of the casing, said muffler controlling the flow of water from the upper end of the casing and the extent of movement of the valve plug, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,015,454. BOX CONSTRUCTION. PHILIP MUELLER, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Dec. 1, 1910. Serial No. 595,147. (Cl. 217—17.)

1. A box comprising end members and side and bottom walls, said end members having inturned flanges overlapping the extremities of the bottom and side walls and further having inturned tongues spaced from and lying in parallelism with the flanges, the tongues lapping against the inner faces of the side walls to retain the same against the flanges, said side walls resting upon the bottom to hold the same against the flanges.

2. A box comprising end members having inturned flanges about their edges, a bottom resting upon the lower flanges of the members, the sides engaging against the lateral flanges of the members and resting upon the bottom to retain the same upon the lower flanges, the upper edges of the sides engaging beneath the top flanges of the members to hold the sides from upward displacement, and fastening devices engaging through the lateral flanges, and the sides, to secure the end members to the side walls.



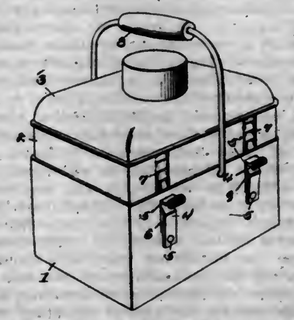
3. In a box having the usual sides with straight edges at its ends, an end member comprising a wall with a continuous or uninterrupted flange extending from end to end at each lateral edge and with spaced tongues inturned from the wall away from the flanges forming therewith confining grooves for the reception of the straight ends of the sides.

4. In a box having the usual sides with straight edges, an end member for supporting the sides and comprising a wall having continuous edge flanges extending across the entire width of the member, the member further having inturned tongues turned away from the flanges and providing therebetween spaces for the extremities of the sides.

5. A box structure having side and end members, each end member comprising a metallic plate having inwardly extending flanges on opposite sides, said flanges being continuous or unbroken from end to end and disposed at substantially right angles to the plane of the plate, the plate being further provided along opposite sides with tongues struck inwardly from the body of the plate, said tongues being spaced from and located in parallelism with the flanges, said side members of the box having their opposite ends respectively located in the spaces between the tongues and the flanges of the end members, and fastening means passing through said flanges, the tongues, and said side members.

[Claim 6 not printed in the Gazette.]

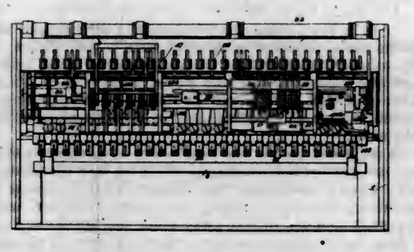
1,015,455. DINNER-BUCKET. WILLIAM T. NEESHAM, Somerset, Colo. Filed May 3, 1911. Serial No. 624,782. (Cl. 220—51.)



A receptacle of the character described comprising upper and lower compartments, said upper compartment tele-

scoping within the lower compartment and having a plurality of vertical series of notches formed in its side walls, said lower compartment having openings in its side walls in line with said notches, leaf springs rigidly fixed at one of their ends to the side walls of the lower compartment and beneath the openings therein, said springs being inwardly inclined intermediate of their ends and disposed through said openings, the free ends of said springs being bent upon themselves and outwardly disposed through the openings of the lower compartment, said springs at the latter bend thereof engaging with the notches in the walls of the inner compartment and forming stops to limit the downward movement of said compartment, and vertically disposed casings arranged upon the inner faces of the side walls of the upper compartment and in spaced relation to the vertical series of notches therein.

1,015,456. CASH-REGISTER. FRANCIS C. OSBORN, Detroit, Mich., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Mar. 6, 1899. Serial No. 707,872. (Cl. 235—2.)



1. In a cash register the combination with a series of keys, of a series of key stops arranged to hold the keys in operated position and constructed to prevent the operation of more than one key at once in the same bank, a rock bar on which said stops are pivotally mounted and means to rock said bar for disengaging the stops from the keys.

2. In a cash register the combination with a registering mechanism, of an operating bar for the same, a cash drawer and means carried by the bar and coöperating with the cash drawer to prevent the opening of the latter until the bar has completed its positive stroke.

3. In a cash register the combination with a register, of a register operating mechanism, turn-to-zero devices for the register normally independent of the operating mechanism and means for coupling the turn-to-zero devices to the operating mechanism whereby a single regular operation of the latter will return the register to zero.

4. In a cash register the combination with register operating segments and means for differentially moving the same, of a series of register disks, transfer pawls, and trip-arms or fingers for said pawls constructed to hold them, when tripped, to engagement with the register disks to prevent overthrow of the latter.

5. In a cash register, the combination of a total adding mechanism, a series of selective keys arranged in banks, a series of tablet rods arranged in banks, a register operating device corresponding to each bank, a primary actuator adapted to operate the said operating devices graduated distances determined by said keys and tablets, a countershaft adjacent to the total adding mechanism, sleeves on the countershaft, connections between the sleeves and the adding mechanism, connections between the register operating devices and said sleeves, a printing device for each register operating device, and connections between the register operating devices and the printing devices, substantially as set forth.

[Claims 6 to 165 not printed in the Gazette.]

1,015,457. DISPLAY-STAND. WILLIAM E. RAGSDALE, Artesia, N. Mex. Filed Oct. 3, 1910. Serial No. 585,133. (Cl. 211—20.)

1. In a display stand, the combination with a spindle adapted to support the stand, of a revoluble head mounted on said spindle, a revoluble column connected to the head and receiving and rotatable on said spindle, a plurality of leaves hinged to said head and adapted to be disposed either in general vertical or general horizontal position, means carried by the leaves for holding the article to be displayed, independent supporting devices hinged to the respective leaves and provided with feet which have an inclined face, vertical guides carried by the said revoluble column which have slots narrower than the width of said feet, the said feet being adapted to slide in the guides and the supporting devices to travel in the said slots, abutments for sustaining the feet when the leaves are in their lowered position, supports carried by the revoluble column adapted to receive and sustain the said feet when the leaves are in raised position, and means on the column adapted to engage the inclined faces of the feet to cause said feet to engage with said supports.

2. In a display stand, the combination with a spindle, of a tubular column telescoping over said spindle, a head to which the column is secured and which is revolubly mounted on the spindle, vertical guides carried by the column and provided in their lower parts with rests or abutments, the column being provided with apertures at higher points which apertures communicate with the guides, leaves hinged to the head, and supporting devices hinged to the leaves and provided with feet which travel in the guides, said feet being adapted to rest upon the abutments in the lower parts of the guides or to pass into the apertures aforesaid to support the leaves in lowered and raised positions, respectively.

1,015,458. DISK ATTACHMENT FOR DRILLS. OTTO G. RIESKE, St. Louis Park, Minn., assignor to Monitor Drill Company, St. Louis Park, Minn., a Corporation of Minnesota. Filed Dec. 27, 1909. Serial No. 534,067. (Cl. 111—18.)

1. A double disk attachment comprising a seed boot having laterally spaced depending downwardly converging legs and converging disks located outside of the said legs and journaled thereto with their converging edges in contact.

2. A double disk attachment, comprising a seed boot having laterally spaced depending legs and converging disks journaled to said legs, the said legs being set under spring tension and having movement serving to maintain engagement between the converging edges of the said disks and to thereby compensate for irregularities in the surfaces thereof and for diminution of the size due to wear.

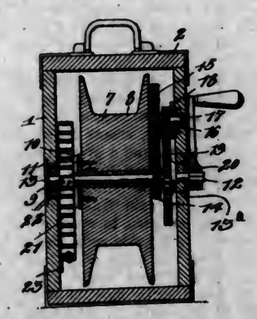
3. A double disk attachment, comprising a seed boot having laterally spaced depending spring legs and converging disks journaled to said legs, the said spring legs having in themselves a normal spring tension serving to maintain engagement between the converging edges of the said disks, and to thereby compensate for irregularities in the surfaces of the said disks and for diminution of the size due to wear.

4. A double disk attachment comprising a seed boot having laterally spaced depending and downwardly converging legs, converging disks located outside of said legs and journaled to the lower portions thereof, with their converging edges in contact, and a seed delivery spout arranged to deliver seed between said disks, in front of the projected axes thereof, but at the rear of the converging edges of said disks.

5. A double disk attachment, comprising a seed boot having laterally spaced depending legs, converging disks located outside of said legs and journaled to the lower portions thereof, with their converging edges in contact, and with the journals of the said disks projecting outward therefrom, and a seed delivery spout arranged to deliver seed into the furrow opened by said disks.

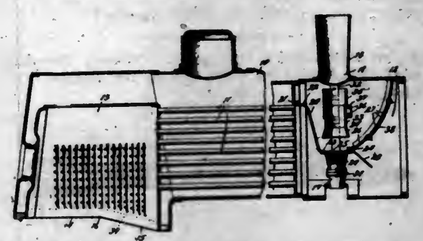
[Claims 6 to 12 not printed in the Gazette.]

1,015,459. CLOTHES-LINE REEL. CHARLES DELOS RIGGLE, McKeesport, Pa. Filed Apr. 24, 1911. Serial No. 623,011. (Cl. 242—102.)



The herein described clothes line reel comprising a box or casing having an opening in one side thereof, a shaft mounted in bearings in opposite sides of the casing and provided with a crank at one end whereby it may be turned, a coil spring having one end connected to the shaft and one end secured to one side of the casing, a gear fast on said shaft, a sleeve mounted for rotation on the shaft and having a pinion secured thereto at one end, a drum mounted on and revoluble with the sleeve, a stub shaft secured to one side of the casing, a gear mounted on said stub shaft engaging the pinion of the sleeve, and a smaller gear also mounted on the stub shaft, revoluble with the last named gear and engaged by the gear on the first named shaft.

1,015,460. DEVICE FOR PRODUCING DRAFT IN ENGINES. JAMES TROTTER, Chicago, Ill., assignor of one-half to Albert J. Hopkins, Aurora, Ill. Filed Aug. 27, 1907. Serial No. 390,327. (Cl. 110—164.)



1. In a device for the purpose described, the combination of a furnace embodying substantially horizontal smoke flues, a smoke box into which said flues discharge, a stack rising from said smoke box, an exhaust nozzle arranged below and in line with said stack, and a partition extending substantially entirely across the smoke box from side to side and inclined downwardly and forwardly from a point above the flues between the back of the smoke box and the stack and crossing a line between the stack and the nozzle at an elevation substantially above the nozzle and having an enlarged passage arranged in direct line with the nozzle and stack whereby the flues will have direct communication therethrough with the stack.

2. The combination of a smoke box provided with a stack, flues discharging into the box, a nozzle within the bottom portion of the box, a partition adjacent the ends of the flues and extending from a point above the flues downwardly in an inclined direction and having at its lower end a forwardly extending portion above the upper end of said nozzle, said forwardly extending portion being provided with an aperture coaxially disposed with the nozzle, and a tubular screen secured at one end around the edge of said aperture and having its other end extending around the upper end of the nozzle.

3. The combination of a smoke box provided with a stack, flues discharging into the box, a nozzle within the bottom portion of the box, a partition adjacent the ends of the flues and extending from a point above the flues downwardly in an inclined direction, said partition having its lower end deflected to extend above the upper end of said nozzle, said lower end being provided with an aperture coaxially disposed with reference to the nozzle, a screen extending transversely across the box and having one edge supported adjacent the apertured portion of the partition, and a tubular screen secured at one end to said lower end of the partition about the edge of said aperture therein and having its other end extending around the upper end of the nozzle.

4. The combination of a smoke box provided with a stack, flues discharging into the box, a nozzle within the bottom portion of the box, a partition adjacent the ends of the flues and extending from a point above the flues downwardly in an inclined direction, said partition having its lower end deflected forwardly to provide a portion extending above the upper end of said nozzle, said portion being provided with an aperture coaxial with the nozzle, an adjustable petticoat pipe coaxially mounted with said stack and nozzle, and a tubular screen secured at one end to the forwardly extending portion of the partition around the edge of said aperture and having its other end secured to said nozzle about the upper end thereof.

5. In a device for the purpose described, the combination of a furnace embodying substantially horizontal smoke flues; a smoke box into which said flues discharge, a stack rising from said smoke box, an exhaust nozzle arranged below and in line with said stack, a partition extending

from a point above the flues between the back of the smoke box and the stack and crossing a line between the stack and the nozzle at an elevation substantially above the nozzle and having an enlarged passage in direct line with the nozzle and stack whereby the flues will have direct communication therethrough with the stack, said partition being otherwise imperforate, and a screen extending from the forward side of the smoke box rearwardly to a point forward of said opening.

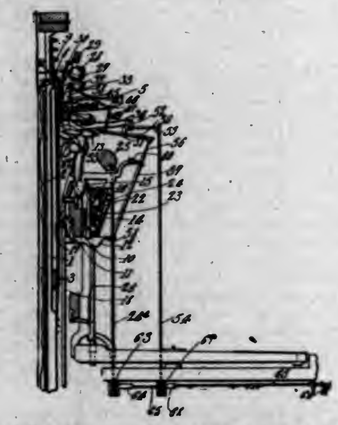
[Claims 6 to 9 not printed in the Gazette.]

1,015,461. SCRAPER. FRANK J. VLCHEK, Cleveland, Ohio. Filed June 26, 1911. Serial No. 635,496. (Cl. 29—95.)

1. A scraping tool having an elongated head with an elongated transverse recess therein, forming two opposite blades which are inclined toward each other and joined at the front end, each blade having opposite cutting edges, all of said cutting edges ending in a point at the front end of the head.

2. A scraping tool having a head with similar opposite blades curved toward each other and united at the front end, each blade having opposite longitudinal cutting edges, said blades being concaved between said edges, and the head being hollow between the blades.

1,015,462. VIOLIN-PIANO. JAMES LUCK WARNER, Girard, Kans. Filed Sept. 8, 1910. Serial No. 581,031. (Cl. 84—46.)



1. A violin piano having a revoluble bowing head, an action connected thereto, a piano action, a string in the path of the bowing head another string in the path of the hammer of the piano action, said piano action including a wippen, means for actuating the wippen, coöperating means for transmitting motion from the wippen to the bowing action, and means for shifting said coöperating means out of operative relation.

2. A violin piano including a bowing head, an action connected thereto, mounted for tilting movement, a piano action, including a wippen, a string in the path of the bowing head of the bowing action, another string in the path of the hammer of the piano action, a longitudinally extensible element said wippen constituting means for actuating the same, a lever movably connected to the bowing action and contacting with said element, a pivotal support for the lever, and means for actuating the support to shift the lever out of engagement with said element.

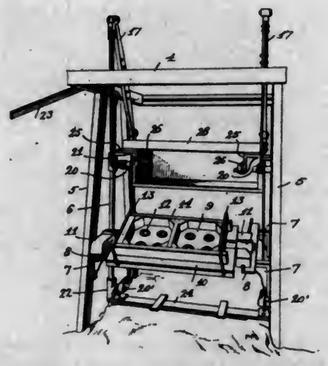
3. A violin piano including a bowing head, an action therefor, a piano action including a wippen, a string in the path of the bowing head, another string in the path of the hammer of the piano action, a lever, a support therefor, a link connection between the lever and bowing action, an element for transmitting motion from the wippen to said lever, and means for shifting the lever support to move the lever out of the path of said element.

4. A violin-piano including a sticker, a revoluble bowing head, an action connected thereto, a string in the path of the bowing head, movable means for transmitting motion from the sticker to the bowing action, and means for shifting said movable means out of engagement with the sticker and without actuating the bowing action.

5. A violin piano including a sounding board, bridges, a string mounted on the bridges, a bar bearing upon the string, another string bearing upon the bar and supported thereby at one side of the first-mentioned string and with one end at a greater distance from the sounding board than said string, and a supplemental pressure bar bearing on the bar supported string.

[Claims 6 to 11 not printed in the Gazette.]

1,015,463. MOLDING-MACHINE. JOHN E. WILCOXEN, South Bend, Ind. Filed Aug. 31, 1911. Serial No. 646,956. (Cl. 22—32.)



1. A machine of the character described, comprising a support, a movable pattern truck thereon, a separable flask comprising a cope and drag, and a pivoted means for simultaneously moving said cope and drag in opposite directions.

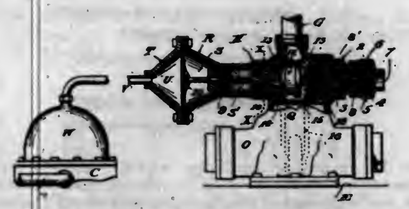
2. A machine of the character described, comprising supports, a rotatable pattern mounted upon trucks which are adapted to engage said supports, a separable flask comprising a cope and drag, means for securing one part of the flask to the pattern, and a pivoted means for simultaneously moving said cope and drag in opposite directions.

3. A machine of the character described, comprising a frame, supports fixed to said frame, trucks carrying a rotatable pattern and adapted to move on said supports, guide-rods, sleeves on said guide rods, means fixed to said sleeves for supporting the parts of a flask comprising a cope and drag, and a pivoted means for simultaneously moving said cope and drag in opposite directions.

4. A machine of the character described, comprising a frame, supports fixed to said frame, trucks carrying a rotatable pattern and adapted to move on said supports, guide rods, sleeves on said guide rods, means fixed to said sleeves for supporting the parts of a flask, means for simultaneously moving said sleeves in opposite directions, said moving means embodying a shaft, walking-beams secured thereto, and links connecting the ends of said walking-beams with said sleeves.

5. A machine of the character described, comprising a frame, supports fixed to said frame, trucks carrying a rotatable pattern and adapted to move on said supports, guide rods, sleeves on said guide rods above and below said supports, means fixed to said sleeves for supporting the cope and drag of a flask, and a pivoted means for simultaneously moving said cope and drag in opposite directions.

1,015,464. WATER-SUPPLY SYSTEM. CHARLES L. WILKINS, Peoria, Ill. Filed Dec. 19, 1910. Serial No. 598,138. (Cl. 137—79.)



1. In combination with a fluid driven motor and means operated thereby to store water under pressure, a device to control the motor and constituting a part of the same and including a valve, there being an inlet port leading to said motor from said device and an exhaust port, means to automatically operate the valve through pressure of the stored water to cause passage of the water through one of the ports, and means in control of said valve to cause the passage of the water through the other of the ports.

2. In combination with a motor operated by fluid pressure for storing water under pressure, of means mounted thereon provided with a port leading to the pressure side of the motor and also having an exhaust port, a valve constantly tending to close one of the ports, and means to move the valve automatically to divert pressure of fluid through the other of said ports due to the pressure being stored.

3. In combination with a motor operated by fluid pressure for use in storing water under pressure, of means mounted thereon provided with a port leading to the pressure side of the motor and having also an exhaust port, a valve to separately control one or the other of said ports, means to automatically move the valve toward and upon one of them, said valve being adapted for movement toward and upon the other of said ports by pressure of the water being stored.

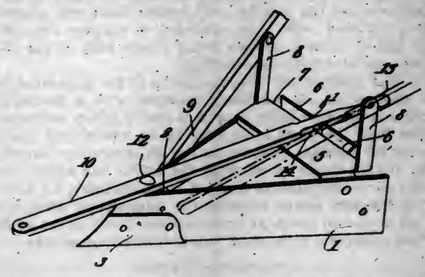
4. In combination, a combined pump for storing water under pressure and a motor to operate the same, and a regulating device mounted on one of them provided with a passage communicating with the motor and with the motor-actuating force, and having a place of discharge, a valve in said passage to interrupt communication with the motor and to close the place of discharge, means constantly tending to hold the valve in position to close said place of discharge, and other means in control of the valve and operated by pressure of the water being stored to move the valve against the force exerted by the last named means.

5. In combination, a pump for storing water under pressure and a motor to operate the same combined in a single structure, a regulating device mounted thereon and forming a part of said structure and provided with a passage to receive water pressure for actuating said motor, said passage communicating with the motor and also with a discharge opening, oppositely disposed valve-seats, a valve adapted to rest upon either seat, means constantly tending to place the valve upon the seat lying in that part of the passage leading to the discharge opening, and other means in control of the valve and operated by pressure of the water being stored to move said valve in opposition to the force exerted by the last named means.

[Claims 6 to 8 not printed in the Gazette.]

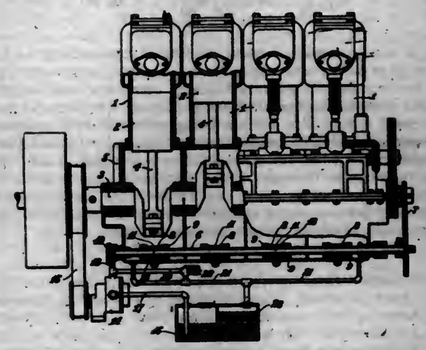
1,015,465. GRADER AND DITCHER. LAWSON M. WILLIAMS, Henry, N. C., assignor of one-half to George M. Chapman, Bostic, N. C. Filed Feb. 14, 1911. Serial No. 608,520. (Cl. 37—5.)

A grader and ditcher, comprising a member made of two converging side boards, a strut interposed between the rear end portions of the side boards for holding the same spaced, said strut being provided with two integral rear flanges projecting upwardly therefrom and providing a central recess, said strut being further provided with two upstanding right angled arms at the rear corners thereof, said arms co-acting with the ends of said flanges to form



two recesses therebetween, and a bar forming a draft bar for regulating the angle at which the grader and ditcher is drawn, said bar being pivoted to the forward end of said side boards and having its rear end extended rearwardly of the strut and adapted to rest in either one of said recesses formed by the flanges of the strut and the upstanding arms.

1,015,466. OILING DEVICE FOR GASOLENE-ENGINES. WILLIAM E. ADAMS, Salem, and WILLIAM J. MURRAY, Beverly, Mass. Filed Oct. 11, 1907. Serial No. 396,873. (Cl. 184—6.)



1. The combination with an open-ended cylinder and a piston working therein, of an oil receptacle provided with an oil discharge orifice, said orifice being located at all times without the cylinder, means for supplying oil to said receptacle under pressure and means operating in timed relation to the movement of the piston to permit a jet of oil to escape intermittently from said orifice into the open end of the cylinder, substantially as described.

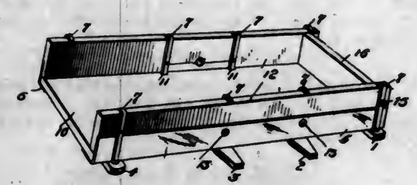
2. The combination with an open ended cylinder and a piston working therein, of a hollow shaft located beyond the open end of the cylinder, a sleeve through which the shaft passes, means for rotating the shaft in timed relation to the movement of the piston, and means for supplying oil to the shaft under pressure, said sleeve and shaft being provided with holes arranged to register and permit a jet of oil to escape into the open end of the cylinder, substantially as described.

3. The combination with a plurality of cylinders and pistons working therein, an oil receptacle extending across the open ends of said cylinders, means for supplying oil thereto under pressure, and means operating in timed relation to the movement of the pistons to cause jets of oil to escape intermittently from said receptacle into the open ends of the cylinders, substantially as described.

4. The combination with the cylinders, pistons, crank shaft and crank casing of a multiple cylinder motor, of a hollow shaft within the casing extending across the open ends of the cylinders, a sleeve beneath each cylinder through which the hollow shaft passes, means for supplying the hollow shaft with oil under pressure, and means for rotating the hollow shaft in timed relation to the movements of the pistons, said hollow shaft and sleeves being provided with holes arranged to register and permit jets of oil to be thrown into the open ends of the cylinders, substantially as described.

5. The combination with the parts of the apparatus to be oiled, of an oil receptacle provided with a discharge orifice, said orifice being located in fixed position and separated from the parts to be oiled by an intervening space, means for creating pressure on the oil, means for controlling the discharge of oil from the orifice and across the space on to the parts to be oiled and mechanism for actuating the said means to cause the intermittent discharge of oil from said orifice at predetermined times to the parts of the apparatus to be oiled, substantially as described.

1,015,467. WAGON-BOTTOM AND METAL FRAME-WORK THEREFOR. ERNEST D. AINSWORTH, Tulare, S. D. Filed May 16, 1911. Serial No. 627,400. (Cl. 21—7.)



In a wagon body, a frame, said frame comprising a plurality of bolsters, angle frames connecting said bolsters, standards carried by said bolsters, certain of said standards passing through said angle frames, a bottom carried by said frame, said bottom being provided with recesses to receive the inner ones of said standards, sides mounted upon said bottom and positioned between said standards, bolts passing through certain of said standards, and through said sides and angles frames, and bolts passing through the remaining standards and through said wagon sides and extending across the wagon body.

1,015,468. COMPOSITION OF MATTER. NICHOLAS F. AVERY, Brockton, Mass., assignor of one-half to Charles Thomas, Brockton, Mass. Filed Nov. 11, 1910. Serial No. 591,913. (Cl. 106—3.)

1. The herein-described composition of matter for manufacturing parts of foot-wear, consisting of reclaimed rubber, 34 pounds, whiting, 15 pounds, litharge 6 pounds, tar 8 pounds, sulfur ½ pound, and leather buffings 17 pounds.

2. The herein-described composition of matter, consisting of reclaimed rubber, litharge, tarry material, sulfur, and leather buffings.

1,015,469. PROCESS OF PRODUCING COPPER, LEAD, OR IRON VANADATE FROM VANADIFEROUS ORES. WARREN F. BLEECKER, Boulder, Colo., assignor, by mesne assignments, to The Rare Metals Mining and Milling Company, a Corporation of Colorado. Filed Apr. 21, 1909. Serial No. 491,341. (Cl. 75—18.)

1. The process of producing metallic vanadate from vanadiferous ores consisting in extracting the vanadium constituents of the ore, by solution and precipitating the vanadium in said solution with a salt of the respective metal.

2. The process of producing metallic vanadate from vanadiferous ores consisting in roasting the vanadiferous ores with a flux adapted to render the vanadium constituents soluble after roasting, leaching the roasted product, neutralizing the solution and precipitating the vanadium in the solution with a salt of the respective metal.

A { a.....Pulverization
b.....Roasting with Flux
Alkali Vanadates
c.....Leaching
Alkali Vanadates or Vanadyl Salts
d.....Neutralization
Neutral Vanadium Solution

B { Precipitation with Copper
Insoluble Copper Vanadate

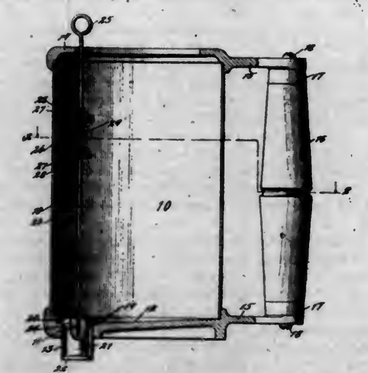
3. The process of producing metallic vanadate from vanadiferous ores, consisting in roasting the vanadiferous ores with sodium chlorid and a fixed alkali, leaching the roasted product, to obtain a vanadium solution and precipitating the vanadium in the solution with a salt of the respective metal.

4. The process of producing metallic vanadate from vanadiferous ores, consisting in roasting the vanadiferous ores with sodium chlorid and potassium hydroxid, leaching the roasted product, to obtain a vanadium solution and precipitating the vanadium in the solution with a salt of the respective metal.

5. The process of producing metallic vanadate from vanadiferous ores, consisting in roasting the vanadiferous ores with a flux adapted to render the vanadium constituents soluble after roasting, leaching the roasted product in water, leaching the residue of the last named step with acid, neutralizing the solutions and precipitating the vanadium in the neutral solution with a salt of the respective metal.

[Claims 6 to 8 not printed in the Gazette.]

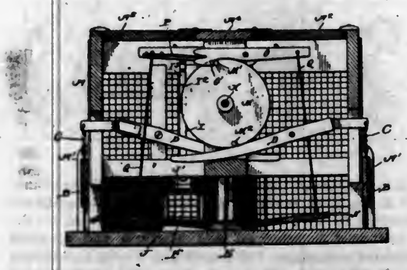
1,015,470. LUBRICATOR-FILLING VESSEL. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Apr. 11, 1907. Serial No. 367,559. (Cl. 221—12.)



1. In a device of the class described, the combination of a receptacle provided with a discharge outlet, a valve for controlling the outlet, a stem for operating the valve, a guide for the stem, a flexible member coöperating with the guide and through which the stem passes, and adapted to bind against the stem and to hold the valve in its adjusted position, and means operatively related to the valve adapted to engage the wall of the outlet and wipe the liquid therefrom to prevent accumulation of liquid discharged into the nozzle beyond the valve seat.

2. In a device of the class described, the combination of a receptacle provided with a discharge outlet, a valve for controlling the outlet, a stem for operating the valve, a guide for the stem, said guide comprising spaced members through which the stem passes, a spring disposed between the members to frictionally engage the stem to hold the valve in any of its adjusted positions and means operatively related to the valve for wiping the fluid from the wall of the outlet to prevent dripping when the valve is closed.

1,015,471. ANIMAL-TRAP. ANTHONY C. BOWSER, Murphysboro, Ill. Filed Dec. 5, 1910. Serial No. 595,689. (Cl. 43—26.)



1. A device of the kind described comprising a main cage having a door at each end, a transparent transverse partition in said cage, auxiliary cages arranged upon opposite sides and adjacent opposite ends of said main cage, the auxiliary cages communicating with the main cage upon opposite sides of said partition, means for closing the doorway of the main cage upon entrance of an animal therein, and means for opening said doorway upon passage of the animal into one of said auxiliary cages.

2. A device of the kind described comprising a main cage, said cage having doorways at each end, a glass partition dividing said cage into two compartments, said partition being arranged between said doorways, slidable doors, said doors being normally elevated, means arranged upon each side of the partition for closing one of said doors upon entering of an animal through either doorway, auxiliary cages detachably connected to the main cage and communicating therewith respectively upon opposite sides of said partition, and means carried by said auxiliary cages for elevating the closed door of the main cage upon passage of an animal from the main cage into either of the auxiliary cages.

3. The combination with a main cage having a sliding door, of an auxiliary cage provided with a run-way having a pivoted drop frame, of a lever mounted within said main cage connected to said door, a spring actuated disk provided with oppositely disposed pins engaging said lever, a pivoted latch co-acting with the pins of said disk, a pivoted tread plate connected to said latch, a pivoted tread plate mounted within the run way of the auxiliary cage, and a latch operated by the last mentioned tread plate co-acting with the pins of said disk, whereby said disk will be operated intermittingly as the animal passes over said tread plates.

1,015,472. URETHROTOME. WILSON W. BREDIN, Denver, Colo. Filed Sept. 6, 1910. Serial No. 580,595. (Cl. 128—28.)

1. A urethrotome comprising a main tube or body member, a guide member connected with the forward extremity of the body member and having a hollow bulb interiorly grooved, slots extending forwardly from the grooves, a guide portion located forward of the slots, and a rod passing through the body member and entering the guide member which is hollow for the purpose, the rod being longitudinally movable and having knives adapted to enter the grooves of the bulb, whereby they are concealed, and also adapted to protrude through the slots of the guide member.

2. A urethrotome having a hollow body member, a forwardly located hollow slotted guide member having a bulb at the rear extremities of the slots, a guide portion extending forward of the slots, the bulb also having interior grooves in alinement with the slots, and a rod passing through the body member, entering the guide member, longitudinally movable, having knives adapted to be concealed in the grooved portion of the bulb and to protrude through the slots of the guide member, which is reduced in size forward of the bulb.

3. A urethrotome having a relatively large hollow body portion, an interiorly grooved hollow bulb at the forward end of the body portion, a reduced hollow slotted portion forward of the bulb, a guide portion forward of the slotted portion, and a rod longitudinally movable in the hollow portions of the instrument and equipped with knives adapted to be concealed within the grooved portion of the bulb and to protrude through the slots forward of the bulb, for the purpose set forth.

4. A urethrotome having a relatively large hollow body portion, an interiorly grooved hollow bulb at the forward end of the body portion, a reduced hollow slotted portion forward of the bulb, a guide portion forward of the slotted portion, and a rod longitudinally movable within the hollow portions of the instrument and equipped with knives adapted to be concealed within the grooved portion of the bulb and to protrude through the slots forward of the bulb, the rod also having a guide feather adapted to enter a slot of the slotted portion, for the purpose set forth.

5. A urethrotome having a relatively large hollow body member, an interiorly grooved bulb at the forward end of the body member, a reduced hollow slotted portion forward of the bulb, the slots being in alinement with the grooves of the bulb, a guide portion located forward of the slotted portion, and a rod adapted to pass through the body member and enter the guide member, the rod having knives adapted to be concealed within the grooved portion of the bulb and to protrude through the slots forward of the bulb, the rod also having a feather located forward of the knives, the bulb being also provided with interiorly located tongues spaced to correspond with the grooves and slots, the spaces between the tongues being adapted to receive the feather on the rod and maintain the knives in alinement with the grooves and slots, substantially as described.

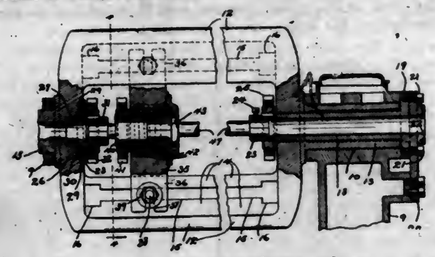
[Claims 6 to 11 not printed in the Gazette.]

1,015,473. MACHINE FOR STRAIGHTENING METAL BARS. LATHAM H. BRIGHTMAN, Lakewood, Ohio. Filed Jan. 16, 1911. Serial No. 602,773. (Cl. 153—57.)

1. In a machine of the character described, the combination of a bed, a flier frame revolubly mounted on said bed, dies rotatably supported in said flier frame and means for holding the dies against rotation on their own axes while the said flier frame is being revolved.

2. In a machine of the character described, the combination of a bed, a flier frame revolubly mounted on said bed, means for revolving said flier frame, brackets supported

on said flier frame, dies journaled in said brackets with their axes parallel with the axis of the flier frame and means carried by said flier frame for preventing the rotation of the dies on their own axes while the said flier frame is being revolved.



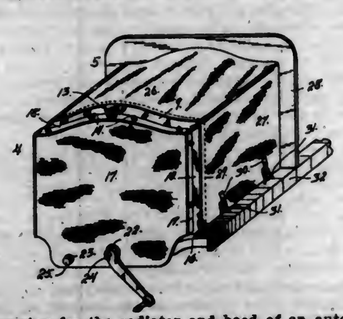
3. In a machine of the character described, the combination of a bed, a flier frame revolubly mounted on said bed, guide dies arranged at each end of said flier frame, a series of brackets mounted on said flier frame, straightening dies journaled in said brackets with their axes parallel with the axis of the flier frame and means carried by said flier frame and adapted to engage with said straightening dies to prevent the rotation of said dies on their own axes while the flier frame is being revolved.

4. In a machine of the character described, the combination of a bed, standards mounted on said bed, a flier frame provided with hollow trunnions journaled in said standards, guide dies arranged at each end of said flier frame, a series of brackets mounted on the flier frame and adjustable longitudinally and transversely thereof, straightening dies rotatably mounted in said brackets and means carried by the flier frame and operatively connected with said straightening dies for holding said straightening dies against rotation on their own axes while the flier frame is being revolved.

5. In a machine of the character described, the combination of a stationary frame, a flier frame having hollow trunnions journaled on said stationary frame, a series of brackets mounted in said flier frame, straightening dies rotatably mounted in said brackets, a gear wheel operatively connected with each die, a shaft rotatably supported on said flier frame, a series of gear wheels secured on said shaft, the gear wheels on said shaft being arranged to mesh with alternate gear wheels connected with the straightening dies and means for revolving said shaft as the flier frame is revolved.

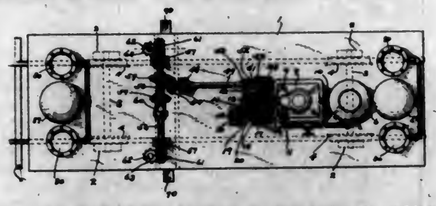
[Claims 6 to 10 not printed in the Gazette.]

1,015,474. COVERING FOR AUTOMOBILE RADIATORS AND HOODS. CALVIN BULLOCK, Denver, Colo. Filed Dec. 12, 1910. Serial No. 596,938. (Cl. 21—90.)



A covering for the radiator and hood of an automobile engine, composed of three members, namely, a body member for covering the hood, a relatively narrow strip for covering the radiator at the top and sides, the body member overlapping the relatively narrow strip, and a third cap member for covering the exposed end of the radiator, the narrow strip being equipped with projections and the rim of the cap being provided with perforations adapted to receive the projections of the relatively narrow strip, and suitable means for securing the said members in place on the protected parts.

1,015,475. TRACK-CONSTRUCTION MACHINE. JAMES BURKE, Cleveland, Ohio. Filed Apr. 29, 1911. Serial No. 624,239. (Cl. 104—16.)



1. In a machine of the character described, the combination of a platform, main trucks secured to said platform and adapted to have traction on a main track of a railroad, cylinders mounted on said platform and provided with pistons and piston rods, auxiliary trucks operatively connected with said piston rods means for supplying an actuating medium to said cylinders so as to force down the piston rods and bring the said auxiliary trucks in contact with an auxiliary track arranged above the main track and lift said platform together with the main trucks secured thereto away from the main track.

2. A machine of the character described comprising a platform, an engine mounted on said platform, a tie handling beam supported from said platform and adapted to move transversely of said platform, means for moving said beam, means for connecting the means for moving the beam with the engine and means arranged on said tie handling beam for engaging the tie.

3. A machine of the character described comprising a platform, trucks secured to said platform, an engine mounted on said platform, driving mechanism for operatively connecting the wheels of the truck at one end of the platform with said engine, a tie handling beam supported from said platform and adapted to move transversely of said platform, means for moving said tie handling beam so as to cause said tie handling beam to extend beyond said platform at either side thereof and means for connecting said engine with said tie handling beam.

4. A machine of the character described comprising a platform, trucks secured to said platform, an engine mounted on said platform, a guideway supported from said platform, rollers mounted in said guideway, a tie handling beam arranged in said guideway on said rollers, means for moving said tie handling beam in and out of said guideway, means for connecting said engine with said means for moving said tie handling beam and means arranged on said tie handling beam for engaging a tie.

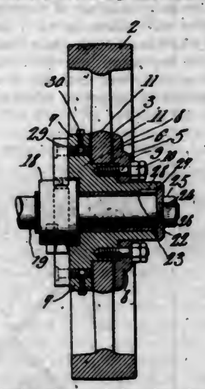
5. A machine of the character described comprising a platform, trucks secured to said platform, an engine mounted on said platform, a guideway supported from said platform, rollers mounted in said guideway, a tie handling beam arranged in said guideway on said rollers, means for moving said tie handling beam in and out of said guideway, means for connecting said engine with said means for moving said tie handling beam and a hook adjustably supported at the end of said tie handling beam and adapted to engage with a tie.

[Claims 6 to 8 not printed in the Gazette.]

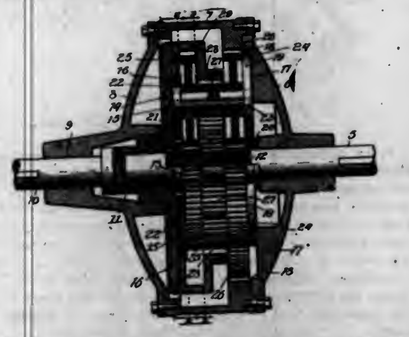
1,015,476. FLY-WHEEL. WILLIAM L. CLOUSE, Tiffin, Ohio, assignor to National Machinery Company, Tiffin, Ohio. Filed Oct. 19, 1910. Serial No. 587,935. (Cl. 74—6.)

The combination with a shaft having an enlargement thereon and a washer secured on the end of the shaft, of a sleeve fitting between the said enlargement and washer and comprising three stepped portions, a fly wheel having a

flat hub arranged on the intermediate portion of the sleeve, a ring fitting on the smallest portion of the sleeve and having an inner recess receiving one end of the intermediate portion of the sleeve, bolts for drawing the ring toward the sleeve, and means for engaging the said sleeve to the said enlargement of the shaft.



1,015,477. SPEED-CHANGING MECHANISM. WILLIAM C. CONANT, Riverside, Ill. Filed Mar. 4, 1911. Serial No. 612,348. (Cl. 74—34.)



1. In speed-changing mechanism, the combination with alining drive and driven members, of planetary gear-mechanism operatively connecting said members together for driving said driven member at a different rate of speed than that at which said drive-member rotates, and additional gear-mechanism operating, in conjunction with said planetary gear-mechanism to balance the forces between the drive and driven members.

2. In speed-changing mechanism, the combination with alining drive and driven members, of planetary gear-mechanism, comprising a stationary gear concentric with the axis upon which said members rotate, a gear connected with said drive-member, a gear connected with said driven member and gears of different diameters connected together and having a common axis of rotation, one of said last-named gears meshing with the gear on one of said members and with said stationary gear, and the other of said last-named gears meshing with the gear on the other of said members, and additional gear-mechanism operating, in conjunction with said planetary gear-mechanism, to balance the entire force exerted between the drive and driven members.

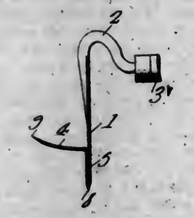
3. In speed-changing mechanism, the combination with alining drive and driven members, of planetary gear-mechanism comprising a stationary gear concentric with the axis upon which said members rotate, a gear connected with said drive-member, a gear connected with said driven member, and sets of gears grouped about said axis, the gears of each set thereof being connected together and having a common axis of rotation, one of the gears of each set thereof meshing with the gear on one of said members and with said stationary gear, and the other of the gears of each set thereof meshing with the gear on the other of said members, and additional gear-mechanism operating, in conjunction with said first-named gear-mechanisms, to balance the forces exerted between said drive and driven members.

4. In speed-changing mechanism, the combination with alining drive and driven members, of planetary gear-mechanism comprising gears connected with said members, a stationary gear concentric with the axis upon which said members rotate, and gears connected together and having a common axis of rotation, one of said last-named gears meshing with the gear on one of said members and with said stationary gear, and the other of said last-named gears meshing with a gear on the other of said members, and means for maintaining said last-named gears in proper intermeshing position with the gears on said drive and driven members and said stationary gear, comprising circular tracks spaced apart and arranged concentric with the axes upon which said members rotate, and rollers bearing against said tracks and connected, and in axial alinement, with said last-named gears.

5. In speed-changing mechanism, the combination with alining drive and driven members, of a gear connected with one of said members, gears connected with the other of said members, a stationary gear concentric with the axis upon which said members rotate, and gears connected together and having a common axis of rotation one of said last-named gears meshing with one of said second-named gears and with said stationary gear, another of said last-named gears meshing with said first-named gear, and the other of said last-named gears meshing with the other of said second-named gears, for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,015,478. HOE. JOSEPH W. CONGER, Sparks, Ga. Filed Jan. 12, 1911. Serial No. 602,252. (Cl. 55—39.)



1. A hoe comprising a main and a supplemental blade, the latter blade being in contact with the outer face of the main blade from the cutting edge to a point adjacent to its median line and thence deflected outward at approximately right angles thereto.

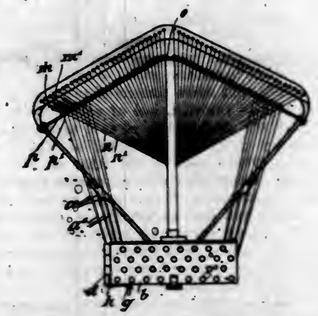
2. A hoe comprising a main and a supplemental blade, the latter being in contact with the outer face of the main blade from the cutting edge to a point adjacent to its median line and thence deflected outward and approximately at right angles thereto and curved upward.

3. A hoe comprising a main and a supplemental blade assembled to provide a digging edge, the supplemental blade being in contact with the outer face of the main blade from the digging edge to a point adjacent its median line and thence deflected outward and upward and sharpened to provide a cutting edge.

1,015,479. MATRIX-SETTING AND LINE-CASTING MACHINE. JULIUS DORNETH, Berlin, Germany, assignor to Typograph G. M. B. H., Berlin, Germany. Filed Oct. 3, 1910. Serial No. 584,961. (Cl. 199—8.)

1. In a matrix setting and line casting machine the combination of a plurality of sets of matrix bars capable of interchangeable use, a guide wire for each bar, a releasing

device for each bar, a wire leading from each releasing device, said wires being arranged in groups containing one wire from each set of matrix bars, an operating pin connected to each releasing wire, said operating pins being arranged in groups to accord with the arrangement of the releasing wires, a key-board having one key for each group of operating pins, and means for shifting said key-board to bring the keys into operative relation with any one of the pins of the said groups.



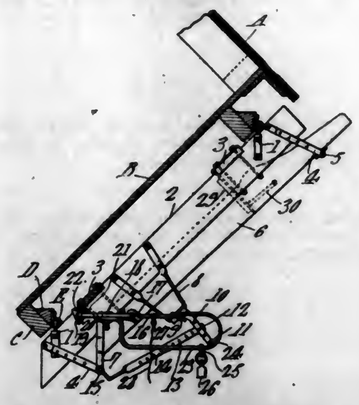
2. In a matrix setting and line casting machine the combination of a plurality of sets of matrix bars capable of interchangeable use, a guide wire for each bar, a releasing device for each bar, a wire leading from each releasing device, said wires being arranged in groups containing one wire from each set of matrix bars, an operating pin connected to each releasing wire, said operating pins being arranged in groups to accord wth the arrangement of the releasing wires, a key-board having one key for each group of operating pins, and shiftable means whereby each key may be put in operative relation with any one of the pins of each group so that the same keys may be used for setting matter from any one of the sets of matrix bars.

3. A matrix setting and line casting machine comprising one set of matrix bars for setting ordinary matter, a supplemental set of matrix bars for setting distinctive matter, a guide wire for each bar, two sets of releasing devices, one set for each set of matrix bars, two sets of releasing wires, one set for each of the sets of releasing devices, two sets of releasing pins, each set being operatively connected to its corresponding set of releasing wires, said releasing pins being arranged in pairs and one pin of each set being in each pair, a key-board having a single operating key for each pair of pins, and means for shifting said key-board to bring each key into operative relation with either one of the pins in the pairs of pins, whereby upon shifting the key-board the same keys may be used to operate either set of releasing pins for setting ordinary matter or for setting distinctive matter.

4. A matrix setting and line casting machine comprising one set of matrix bars for setting ordinary matter, a supplemental set of matrix bars for setting distinctive matter, a guide wire for each bar, two sets of releasing devices, one set for each set of matrix bars, two sets of releasing wires, one set for each of the sets of releasing devices, two sets of releasing pins, each set being operatively connected to its corresponding set of releasing wires, said releasing pins being arranged in pairs and one pin of each set being in each pair, a key-board having a single operating key for each pair of pins, and shiftable means whereby the same key-board may be used to operate either set of releasing pins for setting ordinary matter or for setting distinctive matter.

5. In a matrix setting and line casting machine the combination of two sets of matrix guiding wires arranged alternately whereby one wire of one set will be arranged close to and parallel with the corresponding wire of the other set, two distinctive sets of matrix bars arranged on said wires, a releasing device for each guide wire to permit the matrix bars to pass down the guide wires, a releasing wire for each releasing device, said releasing wires being arranged in pairs, each pair of releasing wires controlling the release of the matrix bars from the adjoining guide wires of each set of matrix bars, a releasing pin connected to each releasing wire, said pins being arranged in pairs to accord with the arrangement of the releasing wires, a key-board having a single key for each pair of releasing pins, and shiftable means whereby each key may be placed in operative relation with either one of the pins of its pair.

1,015,480. INTERCEPTING-CHUTE. JAMES C. DORSEY and WALTER W. DORSEY, Las Animas, Colo., assignors of one-fourth to Raymond Baublits and one-fourth to Martin F. Loub, Las Animas, Colo. Filed Feb. 1, 1911. Serial No. 606,018. (Cl. 73—177.)



1. In apparatus of the class described a supporting structure, a feed device, an intercepting chute mounted for movement relative to the supporting structure and normally removed from the discharge end of the feed device, a catch movably connected to the supporting structure, adjustable means for controlling the movement of the catch in one direction, a locking member, a pivoted connection between said member and the chute, and means for shifting said member to elevate the chute across the discharge end of the feed device and to engage the catch.

2. In apparatus of the class described a supporting structure, a feed device, an intercepting chute mounted for swinging movement relative to the supporting structure and normally removed from the discharge end of the feed device, a catch movably connected to the supporting structure, an adjustable weight for controlling the movement of the catch in one direction, a locking member, a pivoted connection between said member and the chute, means for shifting said member to elevate the chute across the discharge end of the feed device and to engage the catch, said connection constituting means for exerting a lifting action through the locking member and upon the weighted catch when the elevated chute is subjected to a predetermined load, and coöperating means connected to the supporting structure and to the chute for accumulating material within the chute until a predetermined load has been obtained.

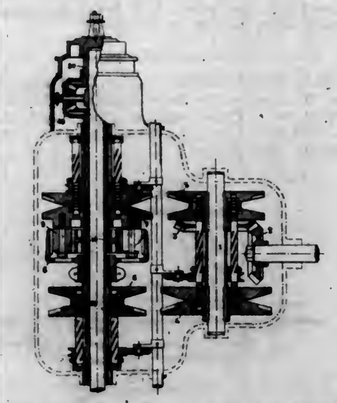
3. Apparatus of the class described including a supporting structure, an intercepting chute suspended therefrom and mounted to swing relative thereto, a weighted catch movably connected to the supporting structure, a member carried by said structure and normally engaging the catch, connections between said member and the chute for supporting the chute in intercepting position while said member is in engagement with the catch, a gate hingedly connected to the supporting structure and hung within the chute, and a link connection between the gate and chute.

4. Apparatus of the class described including a supporting structure, an intercepting chute suspended therefrom and mounted to swing relative thereto, a catch pivotally and adjustably connected to said structure, an adjustable weight for controlling the movement of the catch in one direction, a member connected to said structure and normally engaging the catch, connections between said member and the chute for holding the chute in intercepting position while said member is in normal position, and coöperating means upon the chute and supporting structure for retaining material within the chute, said chute and its connections operating, when subjected to a predetermined load, to actuate the member and elevate the weighted catch to release the chute.

5. Apparatus of the class described including a supporting structure, an intercepting chute suspended therefrom and mounted to swing relative thereto, a catch pivotally and adjustably connected to the supporting structure, a controlling weight adjustably connected to said catch, a member carried by the supporting structure and normally engaging the catch, connections between said member and the chute for supporting the chute in intercepting position while said member is in normal position, said member being movable upwardly to elevate the weighted catch and release the chute when the chute is subjected to a predetermined load, and coöperating means upon the structure and chute for retaining material within the chute.

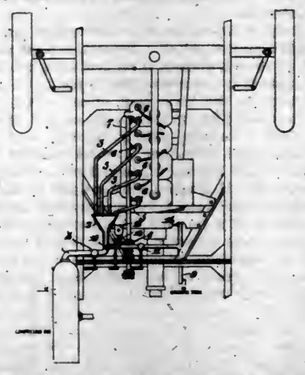
[Claim 6 not printed in the Gazette.]

1,015,481. VARIABLE DIFFERENTIAL SPEED-GEAR. EDMOND DRAULLETTE, Paris, France. Filed Mar. 7, 1908. Serial No. 419,826. (Cl. 74—34.)



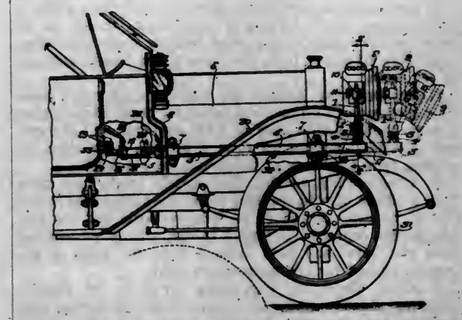
A variable direction and speed device with epicycloidal differential gearing and extensible pulleys comprising in combination: a main-shaft, two extensible pulleys keyed on the main-shaft, the driving gear between said pulleys, a secondary shaft, sleeves loosely mounted upon the said shaft; two other extensible pulleys, a planetary gearing between the last mentioned pulleys and on the secondary shaft, and connecting means between each pair of extensible pulleys, the said planetary gearing being composed of three parts, the annular part connected to one of the pulleys and the satellites connected directly to the fixed check of the other extensible pulley, and the central pinion transmitting the movement, whereby the final or transmitted movement may be changed in speed or in direction or caused to cease by varying the relative speeds of the annular part and of the satellites; the said pulleys, annular part and central pinion being keyed upon the said special sleeves loosely mounted upon the secondary shaft which is driven from the central pinion; substantially as described and for the purpose set forth.

1,015,482. STARTING MECHANISM FOR EXPLOSIVE-ENGINES. ORLANDO DUCKER, Washington, D. C. Filed Oct. 10, 1910. Serial No. 586,348. (Cl. 123—180.)



In engine starting mechanism of the character set forth, the combination of an air tank, a valved pipe connection between the air tank and the cylinder of the engine, a fuel supply pipe leading from the main tank containg the fuel in bulk connecting with the air pipe and adapted to deliver the fuel thereto in a minute jet, and an auxiliary fuel tank connected with the fuel supply pipe.

1,015,483. LAMP ATTACHMENT FOR AUTOMOBILES OR THE LIKE. WILLIAM R. ELWELL, Chicago, Ill., assignor to The Firm of Peirce, Fisher & Clapp, Chicago, Ill. Filed June 2, 1911. Serial No. 630,937. (Cl. 240—61.)



1. In lamp attachments for automobiles and the like, the combination of a suitable support, a head mounted on said support to rotate about a vertical axis, a lamp supporting bracket horizontally pivoted at its lower end to said head, a vertical shaft extending axially through said head and a crank arm on the upper end of said shaft connected to said bracket for tilting the same, substantially as described.

2. In lamp attachments for automobiles and the like, the combination of a suitable support, a head mounted on said support to rotate about a vertical axis, a lamp supporting bracket horizontally pivoted at its lower end to said head, a vertical shaft extending axially through said head and provided with a crank arm at its upper end having a pin and slot connection with said bracket for tilting the same, and means for rotating said head and said shaft, substantially as described.

8. In lamp attachments for automobiles and the like, the combination of a suitable support, a head mounted on said support to rotate about a vertical axis, a forked, lamp supporting bracket comprising connected side arms

horizontally pivoted on said head, a shaft extending axially through said head and having a crank arm at its upper end connected to said forked bracket for tilting the same, and means for rotating said head and said shaft, substantially as described.

4. In lamp attachments for automobiles and the like, the combination of a suitable support, a head mounted on said support to rotate about a vertical axis, a forked, lamp supporting bracket comprising side arms and a connecting cross-bar between the lower ends of said arms, horizontal pivot bolts connecting the lower ends of said arms to said head, a shaft extending axially through said head and between said pivot bolts, and a crank arm on the upper end of said shaft having a pin-and-slot connection with the cross-bar of said bracket, substantially as described.

5. In lamp attachments for automobiles and the like, the combination of a support, a head mounted on said support to rotate upon a vertical axis, a forked lamp-supporting bracket comprising connected side arms horizontally pivoted on said head, a shaft extending axially through said head, a crank arm on the upper end of said shaft connected to said bracket, a sprocket wheel on said head, an idler sprocket on said support, a chain connecting said sprocket wheels, an arm on the lower end of said shaft and a pair of shifter rods connected respectively to said arm and said chain, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,015,484. ELECTRIC-CONDUCTOR DISTRIBUTION. FREDERIC WM. ERICKSON, New York, N. Y. Filed June 24, 1911. Serial No. 635,105. (Cl. 247—4.)

1. A supporting member for electric conductors made of thin resilient metal having a longitudinal trough in its outer face the edges of the metal forming supporting sides, with clips extending from the edges of the trough opening, as set forth.

2. A supporting member for electric conductors made from a ribbon of thin resilient metal the outer edges turned over in opposite directions to form supports and the central portion depressed to form a trough, with clips extending from the edges of the trough, as set forth.

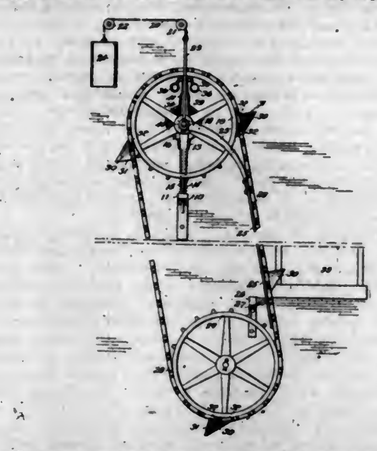
3. A supporting member for electric conductors made from a ribbon of thin resilient metal the outer edges turned over in opposite directions to form supports and the central portion depressed to form a trough, with clips punched from the metal and bent upward from the sides of the trough, as and for the purpose set forth.

4. Angle pieces for supporting members for electric conduits, consisting of right angled portions having supporting edges the ends of which are provided with extension bars, with a trough like interior from the edges of which extend clips, as set forth.

5. Angle pieces for conduits consisting of right angled portions having sides with supporting edges the ends of which are provided with extension bars the space between said sides having a concaved surface, with clips extending from its edges, as set forth.

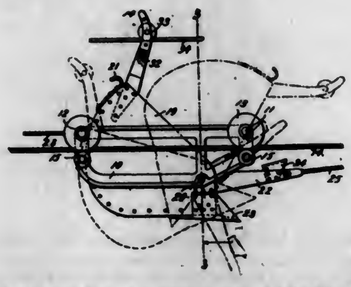
1,015,485. FIRE-ESCAPE. JOHN L. GILLMORE, Everett, Wash. Filed Mar. 10, 1911. Serial No. 613,500. (Cl. 227—10.)

1. A fire escape comprising an endless carrier, a counter-weighted suspension device therefor, said endless carrier comprising sprocket wheels and their shaft, chains passing around said sprocket wheels, and load supporting devices carried by the chains, frame members connected to the shaft of the aforesaid sprocket wheels, and depending therefrom, a stationary support, a roller carried by said support and engageable with the frame members adjacent to their lower ends, a brake member connected to the carrier, a stationary support, and a brake shoe yieldingly mounted on the last-mentioned stationary support.



2. A fire escape comprising an endless carrier, a counterweighted suspension device therefor, a brake member connected to the carrier, a stationary support, a brake shoe yieldingly mounted on said support and adapted to engage the aforesaid brake member, a governing mechanism mounted on the brake shoe and operatively connected to the endless carrier, and a brake shoe operatively connected to the governing mechanism, said brake shoe engaging the aforesaid brake member of the carrier.

1,015,486. EXCAVATOR. ALVAH D. HADSEL, Dorranceton, Pa., assignor to Cable Excavator Company, Philadelphia, Pa., a Copartnership. Filed May 6, 1910, Serial No. 559,788. Renewed July 12, 1911. Serial No. 638,209. (Cl. 37—19.)



1. In an excavator, a cradle, a pair of laterally spaced cables on which said cradle is movably mounted, means to vary the tension on said cables, a scoop pivoted near its front edge in said cradle, means to limit the downward pivotal movement of the scoop in the cradle, means connected to the scoop for the purpose of filling the same and conveying it with the cradle along the supporting cables, and means to cause the scoop to swing upwardly and forwardly with respect to its pivotal connection with the cradle for dumping.

2. In an excavator, the combination of a cradle, means to support the cradle at varying elevations, a scoop carried by the cradle, means carried by the scoop to coöperate with the cradle to limit the downward movement of the scoop, draft means rigidly secured to the scoop and bearing thereto a fixed angular relation with respect to the cutting edge of the scoop, power means connected to said draft means for the purpose of filling the scoop, a tail-piece rigidly secured to another portion of the scoop, and means coöperating with said tail-piece for the purpose of lifting the scoop to dump its contents.

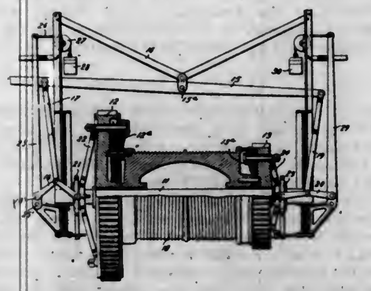
3. In an excavator, the combination of a cradle comprising a pair of side frames and a pair of transverse axles, a pair of supporting cables, means to secure the cradle from displacement on said cables, a scoop pivoted near its front edge on or within said cradle, means connected to the rear portion of the scoop and coöperating with one of said axles to limit the swinging movement of the scoop, draft means connected to the front portion of the scoop, and a tail-piece for dumping purposes connected to the rear portion of the scoop.

4. In an excavator, the combination of a support, a cradle thereon, a scoop pivoted near one end in said cradle, means connected to the other end of the scoop to limit its downward movement in the cradle, a tail-piece rigidly connected to the scoop and extending upwardly therefrom, and means spaced from the cradle supporting means and adapted to coöperate with said tail-piece to cause the scoop to be lifted with respect to the cradle for dumping purposes.

5. In an excavator, the combination of a support, a cradle movable along said support, a scoop pivoted to said cradle, means to limit the downward swinging movement of the scoop with respect to the cradle, and means to dump the scoop while in motion, said dumping means including a rigid member extending upwardly from the scoop and a member spaced from the supporting means and adapted to engage said rigid member and momentarily stop its movement, causing the scoop to swing upwardly with respect to the cradle.

[Claim 6 not printed in the Gazette.]

1,015,487. HOISTING-DRUM. ALVAH D. HADSEL, Dorranceton, Pa., assignor to Cable Excavator Company, Philadelphia, Pa., a Copartnership. Filed May 2, 1910, Serial No. 558,776. Renewed July 12, 1911. Serial No. 638,210. (Cl. 57—83.)



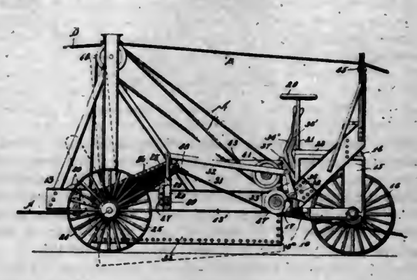
1. In a hoisting machine, the combination of a hoisting drum, a pair of driving gears of different sizes associated therewith, a friction clutch between each of said gears and the drum, controlling devices associated with the clutches whereby the frictional effect of the clutches will be simultaneously controlled in opposite directions, and means whereby the force of either clutch will be determined in accordance with the maximum load thereon.

2. In a hoisting machine, the combination of a hoisting drum, a shaft supporting said drum, a pair of gears mounted upon the shaft at the opposite ends of the drum, a clutch between each gear and the drum, collars mounted slidably upon the shaft adjacent the respective gears, pairs of toggle links connected to the collars, and a lever connected to said pairs of toggle links for simultaneous operation thereof in opposite directions.

3. In a hoisting machine, the combination of a drum, a driving gear therefor, a clutch between said gear and the drum, and means for operating said clutch, said means including a movable abutment and a pair of toggle links one of which is connected to said abutment and the other of which is connected to said clutch.

4. In a hoisting machine, the combination of a drum, a gear, a clutch between the gear and drum, an abutment movable automatically under variable loads, and controlling devices for said clutch operative between said movable abutment and the other features of the clutch.

1,015,488. EXCAVATOR. ALVAH D. HADSEL, Wilkes-Barre, Pa., assignor to Cable Excavator Company, Philadelphia, Pa., a Copartnership. Filed Apr. 29, 1909, Serial No. 492,815. Renewed July 12, 1911. Serial No. 638,211. (Cl. 37—19.)



1. An excavator comprising a frame including an upright, a plurality of pulleys carried by the upright, a scoop mounted within the frame, a pair of pulleys on the rear end of the scoop, means to support each end of the scoop so that it may be elevated independently of any movement of the other end of the scoop, a rope connected to the rear end of the scoop and passing thence over certain of the upright pulleys, thence over the scoop pulleys, and thence over other of the upright pulleys for the purpose of lifting the rear end of the scoop, and another rope serving to hoist the front end of the scoop.

2. In an excavator, the combination of an axle having an eccentric portion, supporting wheels connected to the concentric portion of the axle, a frame connected to the eccentric portion of the axle, a scoop supported at one end on the eccentric portion of the axle within the frame and rotatable on said eccentric portion independently of the frame, the other end of the scoop being supported on the frame, and means to swing the axle about the axis of the wheels for the purpose of raising or lowering the frame and the scoop.

3. In an excavator, the combination of supporting wheels, an axle upon which certain of said wheels are mounted and having a portion eccentric to the axis of the wheels, a frame having members mounted on the eccentric portion of the axle, a scoop swung at one end on the eccentric portion of the axle and supported at its other end on the frame members, means to swing said axle about the axis of the wheels to raise and lower the proximate end of the scoop, and means to raise the opposite end of the scoop.

4. In an excavator, the combination of wheels, an axle on which certain of said wheels are mounted and having an eccentric portion, the eccentric and concentric portions of the axle having shouldered connections, a frame, a scoop mounted within the frame and pivotally connected at its front end to the eccentric portion of the axle, means mounted on the shouldered portions of the axle for controlling the position of the axle and the elevation of that end of the scoop mounted thereon, and means for elevating the rear end of the scoop independently of movement of the front end.

5. In an excavator, the combination of supporting wheels, an axle on which certain of said wheels are

mounted and having a portion eccentric to the axis of

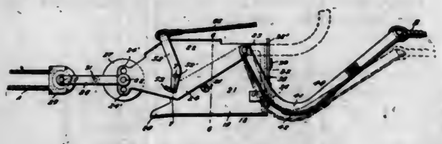
pressure upon the door wings for engaging such gearing

cured to said stock member; a magazine chamber in said

casing carrying electric welding means, the welding points

mounted and having a portion eccentric to the axis of said wheels, a frame, a scoop mounted within the frame and swung at one end on the eccentric portion of the axle, a pair of yokes coöperating with the axle to control the position thereof and thereby the elevation of that end of the scoop swung thereon, interlocking means between the yokes and the frame to maintain the yokes in one position, and means to elevate the opposite end of the scoop.

1,015,489. EXCAVATOR. ALVAH D. HADSEL, Wilkes-Barre, Pa. Filed Sept. 15, 1909, Serial No. 517,849. Renewed July 12, 1911. Serial No. 638,212. (Cl. 37—19.)



1. In an excavator, a scoop comprising a body portion having a forward cutting edge and upwardly extending sides, a hood above the body portion and including sides coöperating with the sides of the body, and a rearwardly extending tail-piece, said body, hood, and tail-piece being pivoted together on a common axis at the top of the scoop and between the front and rear ends thereof.

2. An excavator scoop comprising a body portion having a forward cutting edge and upwardly extending sides, a hood above the body portion including side members extending downwardly and embracing the body side members, a rear door, locking means for the door, a rearwardly extending tail-piece including a shoe, and pivot means pivotally connecting the body, hood, rear door, and tail-piece together on a common axis.

3. An excavator scoop comprising a body, a rear door to close the rear end thereof, means to lock the door closed, draft means to fill the scoop, a rearwardly extending tail-piece, said tail-piece being pivoted to said body on a transverse axis, means to swing the tail-piece on said axis, and means operable by said tail-piece when so swung to unlock said door.

4. An excavator comprising a body, a rear door to close the rear end thereof, locking means for said door comprising a latch slidable bodily vertically of the door and extending entirely across the same, a pair of catches connected to said body to receive the ends of said latch, a rearwardly extending tail-piece pivoted to said body, and means whereby the relative pivotal movement between said body and tail-piece will cause the lifting of said latch to unlock the door.

5. An excavator scoop comprising a body, a door pivoted thereto on a horizontal axis, means to lock the door closed including a latch on the outside of the door and extending transversely entirely across the same, a pair of catches connected to the door to receive the ends of the latch, a pair of extensions extending upward from the latch, and a rearwardly extending tail-piece pivoted to the body, the frame work of the tail-piece being adapted to coöperate with said latch extensions to release the latch when the body and tail-piece are moved relatively upon said pivot.

[Claims 6 and 7 not printed in the Gazette.]

1,015,490. FIREARM. JOHN W. HARRINGTON, Worcester, Mass., assignor to Harrington & Richardson Arms Company, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 31, 1911. Serial No. 618,170. (Cl. 42—7.)

1. In a device of the class described, a frame; a stock member on said frame; a magazine chamber in said stock member; a supplemental stock member adapted to be secured to said stock member; a magazine chamber in said supplemental stock member; and a magazine adapted to have a portion thereof within each of said chambers when said members are joined.

2. In a device of the class described, a frame; a stock member on said frame; a magazine chamber in said stock member; a supplemental stock member adapted to be secured to said stock member, a magazine chamber in said supplemental stock member forming a continuation of the magazine chamber in said stock member when said members are joined, and a magazine adapted to have a portion thereof within each of said chambers.

3. In a device of the class described, a frame; a stock member on said frame; a magazine chamber in said stock member; a supplemental stock member; means for securing said supplemental stock member to the butt end of said stock member to form a continuous grip, a magazine chamber in said supplemental stock member; and a magazine adapted to have a portion thereof within each of said chambers when said members are joined.

4. In a device of the class described, a stock provided with a chamber to receive a magazine; and a magazine adapted to have one portion inserted into said chamber and the remaining portion thereof form a continuation of the side faces of said stock.

5. In a device of the class described, a stock; a chamber in said stock adapted to receive a magazine; and a magazine having one portion adapted to be inserted into said chamber and the remaining portion thereof enlarged to form a continuation of the side faces of said stock.

[Claims 6 to 9 not printed in the Gazette.]

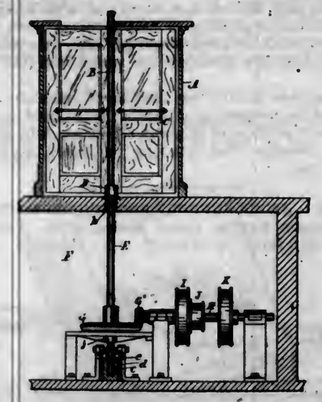
1,015,491. MOTOR-GEARING FOR REVOLVING DOORS. EDWARD C. HAVILAND, New York, N. Y., assignor to Van Kannel Revolving Door Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 14, 1911. Serial No. 614,351. (Cl. 39—99.)

1. In a revolving door having a central spindle with wings attached to be pushed by the passenger, the combination, with such door, of a motor with mechanism having a clutch to rotate the door, and means connected with the door-spindle for throwing the clutch into operation when the door-wings are pressed and the spindle turned at the will of the passenger.

2. In a revolving door having wings, the combination, with such door, of mechanism operated automatically to rotate the door slowly, and mechanism engaged by pressure upon the wings for rotating the door at an increased rate of speed.

3. In a revolving door having wings to be pushed by the passenger, the combination, with such door, of a motor with mechanism connected to the door for automatically rotating the door slowly, and additional mechanism connecting the motor and the door and engaged by pressure upon the wings, for rotating the door at an increased rate of speed.

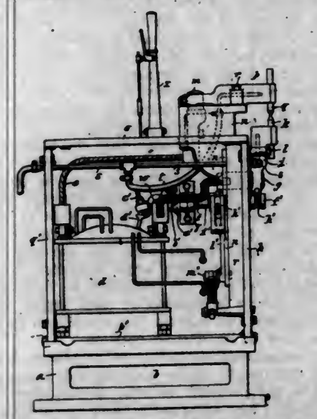
4. In a revolving door having wings to be pushed by the passenger, the combination, with such door, of a motor, a gear-shaft connected thereto and to the door for rotating the door slowly, gearing upon the gear-shaft for rotating the door more rapidly, and a clutch actuated by pressure upon the door wings for engaging such gearing with the gear-shaft.



5. In a revolving door having wings to be pushed by the passenger, the combination, with such door, of a motor, a gear-shaft connected thereto by back-gearing to drive the shaft slowly, such back-gearing having a detachable connection therein, high speed gearing upon the gear-shaft for rotating the door more rapidly, and a clutch actuated by pressure upon the door wings for engaging such high speed gearing with the gear-shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,015,492. ELECTRIC WELDING MACHINE. JOHN ALLEN HEANY, Flint, Mich. Filed Jan. 11, 1911. Serial No. 602,047. (Cl. 219—4.)



1. In an electric welding machine, the combination of a base having a casing seat, and a casing supporting the welding electrodes and mechanism for manipulating the same, said casing having a plurality of external seat-faces angularly disposed with reference to each other, each one of these seat-faces being adapted to be seated upon the base.

2. The combination with a base having a casing seat, and a casing of cubical conformation two or more sides of which are adapted to seat upon the base separately, said casing carrying electric welding means.

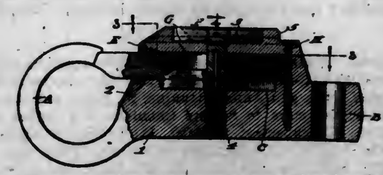
3. The combination with a base having a casing seat, and a casing of cubical conformation two or more sides of which are adapted to seat upon the base separately, said casing carrying electric welding means, the welding points or electrodes being carried at one corner of the casing external thereto.

4. In an electric welding machine, the combination of a casing, a transformer therein, a reciprocating carriage working through an opening in the top of the casing, a terminal *m* extending up through said carriage and insulated therefrom, a terminal *g* extending out through one of the vertical walls of the casing, these two terminals being electrically connected to the transformer, an electrode-carrier fastened on top of the carriage and clamped removably to the upper end of the terminal *m*, and another electrode-carrier fastened to one of the vertical walls of the casing and clamped to the stationary terminal extending therethrough.

5. In combination with an electric welding machine embodying a casing and an inclosed transformer, a stationary terminal connected to the transformer and extending through one of the walls of the casing, an electrode-carrier clamped removably to said terminal and removably fastened to the adjacent wall of the casing, a reciprocating carriage working through an opening in one of the other walls of the casing, means for moving this carriage, a terminal connected to the transformer and mounted on and extending through said carriage and insulated therefrom, and another electrode-carrier removably connected to said terminal and removably fastened to the carriage.

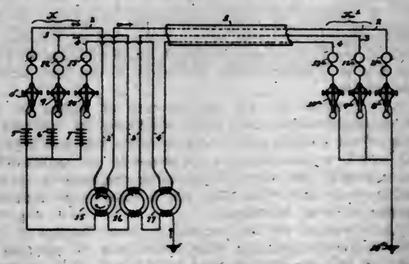
[Claims 6 to 10 not printed in the Gazette.]

1,015,493. CHOKER LOGGING-HOOK. ADRIAN SAMUEL HOWE, Colton, Cal. Filed Feb. 23, 1911. Serial No. 610,437. (Cl. 24—238.)



In a choker logging hook, a body portion terminating at one end in a hook, and having upon one side a recess, a lock member slidable upon said body member and adapted to close the mouth of the hook, and having a cam recess, a cam thrust member normally spring-held in the recess of the body portion but extending in part into the cam recess, and adapted to be withdrawn from the recess of the body portion so as to lie wholly within the cam recess; to permit movement of the lock member, and a cover attached to the body portion and holding said lock member and said cam thrust member in position.

1,015,494. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa. Filed July 3, 1911. Serial No. 636,680. (Cl. 178—45.)



1. In combination with an electric cable comprising a number of lines of transmission, means to neutralize the

inducing effect of one line upon the other line, said means comprising a magnetic core for each of said lines, a coil for each of said cores connected to the lines to be neutralized, a second coil for each of said cores, said second coil connected in the common return of the lines inclosed in said cable.

2. In combination with a number of neighboring lines of transmission inclosed in a cable, a separate and individual anti-inductive device for each of said lines, each of said anti-inductive devices comprising a separate iron core, one coil of said core connected in the line and the second coil of said core connected in the common return.

3. In combination with a series of neighboring lines of transmission inclosed in a cable, a common return for all of said lines, each of said lines provided with a separate anti-inductive device, each of these devices comprising an individual core, one coil thereof connected to one of the lines of transmission and the second coil thereof connected in the common return.

4. In combination with a cable including two or more lines of transmission, each line provided with an artificial line, means to neutralize the inductive effect of one line upon the other, said means comprising for each line a magnetic core and a series of coils for said core, one coil connected to the line of transmission, one coil connected to the artificial line and one coil connected to the common return.

5. Means to neutralize the inductive effect of one line of transmission upon the other line of transmission, said means comprising a common ground for said lines, an inductive device for each of the lines to be neutralized and each of said devices comprising a closed magnetic circuit and two coils therefor, one coil connected to the line to be neutralized and the other coil connected in the common ground.

[Claims 6 and 7 not printed in the Gazette.]

1,015,495. PROCESS OF PRODUCING INDIGO-O-NITROPHENYL-LACTIC ACID KETONES. JOSEPH KOETSCHET, Lyon, and ANDRÉ BARBIER, St. Fons, near Lyon, France, assignors to Société Chimique Des Usines Du Rhône, Anciennement Gilliard, P. Monnet et Cartier, Paris, France, a Corporation of France. Filed Oct. 7, 1910. Serial No. 585,775. (Cl. 23—24.)

1. A process for the manufacture of indigo o-nitrophenyl lactic acid ketones, comprising oxidation of an ortho-nitrophenyl-nitromethane, in presence of acetone.

2. A process for the manufacture of indigo o-nitrophenyl lactic acid ketones, comprising oxidation of an ortho-nitrophenyl-nitromethane, in alkaline solution, in presence of acetone.

1,015,496. MANUFACTURE OF NITROPHENYLNITROMETHANES, THEIR HOMOLOGUES AND DERIVATIVES. JOSEPH KOETSCHET, Lyon, and ANDRÉ BARBIER, St. Fons, near Lyon, France, assignors to Société Chimique Des Usines Du Rhône, Anciennement Gilliard, P. Monnet et Cartier, Paris, France, a Corporation of France. Filed Mar. 4, 1911. Serial No. 612,201. (Cl. 23—24.)

1. A process for the manufacture of bodies of the nitrophenylnitromethane type, consisting in treating a body of the nitrotoluene type with nitric acid and keeping the acid at a concentration not below 40 per cent. during the reaction.

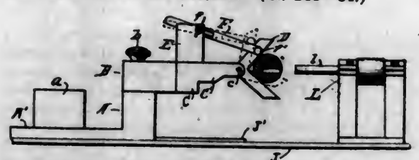
2. A process for the manufacture of bodies of the nitrophenylnitromethane type, consisting in treating a body of the nitrotoluene type with nitric acid and keeping the acid at a concentration not below 40 per cent. during the reaction, the body treated being employed in excess relatively to the nitric acid which enters into reaction, substantially as described.

3. A process for the manufacture of bodies of the nitrophenylnitromethane type, consisting in treating a body of the nitrotoluene type with nitric acid of about 40–90 per cent. strength without pressure, removing the water liberated and maintaining the acid at a strength not below 40 per cent., the body treated being employed in excess relatively to the nitric acid which enters into reaction, substantially as described.

4. A process for the manufacture of ortho-nitro-phenyl nitro-methane, consisting in heating ortho nitro toluene with nitric acid of about 60–80 per cent. strength, without pressure, and removing the water liberated in the reaction.

5. A process for the manufacture of ortho-nitro-phenyl nitromethane, consisting in heating ortho nitrotoluene in excess with nitric acid of about 60–80 per cent. strength, without pressure, and removing the water liberated in the reaction.

1,015,497. STOCK-SUPPORT FOR BORING-MACHINES. CORNELIUS KOSTER, Grand Rapids, Mich. Filed Jan. 22, 1910. Serial No. 539,612. (Cl. 144—84.)



1. An attachment for furniture working machinery consisting of a base made to slide freely on a machine table, a standard connected with said base, a bed pivotally connected with said standard for horizontal adjustment, a bed pivotally connected with the side of the first named bed for vertical rotary adjustment, supporting arms on the last mentioned bed, an angled bed pivotally supported at the ends of said arms and arranged for vertical rotary adjustment at right angles with the vertical rotary adjustment of its supporting bed and arms, and means for holding the several beds to the desired position.

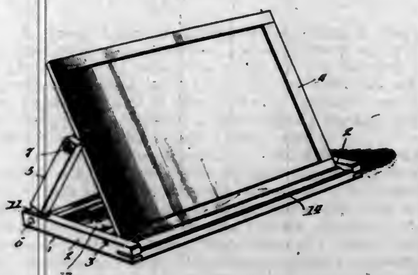
2. In an attachment for furniture machinery, a slidable base, a standard on said base, a bed pivotally secured to the upper surface of said standard for horizontal rotary adjustment, a bed pivotally supported to the side of said first named bed for vertical rotary adjustment at right angles with the movements of the first named bed, supporting arms on said bed, an angled bed pivotally supported on said arms for vertical rotary adjustment at right angles with the supporting bed, gages connected with said angled bed, and means for securing the several beds and gages to the desired positions.

3. In an attachment for furniture machinery, a base slidably secured to the machine bed, a standard on said base, a bed pivotally secured to the upper surface of the standard so that it may be readily adjusted revolubly sidewise, a second bed secured to the side of said bed so that it may be readily made to revolve for vertical adjustment at right angles with the movement of the first named bed, supporting arms extending from said bed, an angled bed pivotally supported on said arms and arranged for rotary adjustment at right angles with said second named bed, an indexed brace arranged to support said angled bed in the desired position.

4. In an attachment for furniture machinery, a base arranged to slide freely on the machine bed, a standard on said base, a bed pivotally secured to the upper surface of the standard and arranged to be given a rotary horizontal adjustment to any desired degree from the horizontal central movement of the base, an index for determining said angle, a bed pivotally secured to the side of said first named bed and arranged to be given vertical rotary adjustment at right angles with the adjustment of the first named bed, and an index to determine the angle of adjustment, arms projecting from said bed, an angled bed pivotally supported on said arms, an indexed segmental brace secured to said bed and connected with the arm to secure said bed to the desired position, and a stop mechanism and a bolt for securing said brace to the desired position.

5. In an attachment for furniture machinery, a base and standard, a bed revolubly adjustable thereon upon a horizontal plane, a second bed pivotally secured to the side of said first named bed and revolubly adjustable thereon upon a vertical plane, arms extending from this bed, a bed pivotally secured to said arms and adjustable upon a vertical plane at right angles with the second named bed, and means for securing said beds to the desired positions and readily determining the desired angles.

1,015,498. FOLDING-DESK BLACKBOARD. EDWARD L. KRAUS, Slatington, Pa. Filed Mar. 1, 1911. Serial No. 611,643. (Cl. 35—15.)



1. A device of the kind described consisting of a base, end pieces having slots at one end secured to said base, a frame pivotally mounted between said end pieces adjacent one end, and arms pivotally mounted in the slots of said end pieces, said arms carrying a tie-rod for clamping said arms against said frame.

2. A device of the kind described comprising a base having end pieces secured thereto, strips secured on said base between said end pieces for forming a compartment, a frame carrying a writing surface pivotally mounted between said end pieces adjacent one end and adapted to close said compartment when folded between said end pieces, arms pivoted upon said end pieces having apertured free ends, and a tie-rod loosely mounted in said apertures having a nut for clamping said arms against said frame for holding said frame in a set-up or closed position.

3. A device of the kind described comprising a base having end pieces secured thereon, strips secured on said base between said end pieces for forming a compartment, a frame carrying a writing surface pivotally mounted on the inner faces of said end pieces adjacent one end and adapted to rest on said strips and close said compartment when folded between said end pieces, arms pivotally mounted upon said end pieces at their opposite ends having apertured free ends, a rod passing through said apertures having a threaded end, and a nut mounted on said threaded end against the side edges of said frame for holding the frame in a set-up or closed position between said arms.

1,015,499. PROCESS OF PRODUCING PULVERULENT AND EASILY-WASHABLE HYDRATES OF ALUMINIUM. NILS ABRAHAM LANGLET, Gottenborg, and ERIK LUDVIG RINMAN, Uppsala, Sweden. Filed May 29, 1908. Serial No. 435,652. (Cl. 23—13.)

1. The process of producing pulverulent and easily washable hydrate of aluminium which consists in introducing an aluminium salt in a finely divided state into a precipitating alkali, substantially as and for the purpose set forth.

2. The process of producing pulverulent and easily washable hydrate of aluminium which consists in introducing an alum-powder into ammonia water, substantially as and for the purpose set forth.

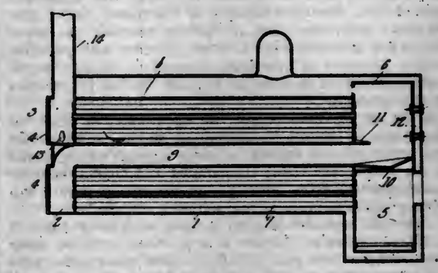
3. The process of producing pulverulent and easily washable hydrate of aluminium which consists in introducing an alum-powder into ammonia water of a concentration of about 25 per cent., and thereafter washing the pulverulent precipitate with dilute ammonia water at ordinary temperature.

1,015,500. TOE CASE, PUFF, OR THE LIKE FOR BOOTS AND SHOES. GEORGE LOOMS, Market Harborough, England. Filed Aug. 4, 1910. Serial No. 575,498. (Cl. 36—77.)

1. A box for the toes of shoes, comprising a piece of non-resilient material and a piece of resilient material united together by adhesive on a transverse line coincident with the summit of the toe, the edge of the resilient material overlapping the edge of the non-resilient material, and the two edges being correspondingly chamfered and forming a smooth joint, both of said pieces being gradually reduced in thickness from the joint portion to their opposite edges.

2. A box for the toes of shoes, composed of a piece of stiff leather and a piece of soft rubber, having overlapping oppositely beveled contacting edges secured together by adhesive material, the joint formed by the overlapping edges lying at approximately the summit of the toe of the shoe and extending transversely thereof.

1,015,501. LOCOMOTIVE-BOILER. WILLIAM MCARTHUR, Tenino, Wash. Filed May 12, 1910. Serial No. 560,940. (Cl. 122—8.)

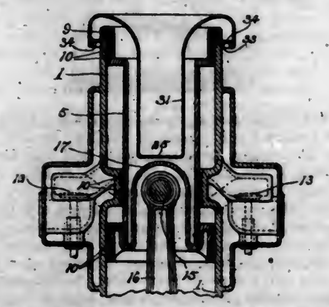


A boiler including a fire box, a combustion chamber thereabove, there being a flame receiving opening in the bottom of the combustion chamber through which communication between the fire box and said combustion chamber is constantly maintained, there being a constantly open air inlet in one wall of the combustion chamber, the bottom of said chamber being arranged to direct unconsumed particles through the bottom opening and back into the fire box, a smoke box, flues connecting the smoke box and the fire box, a single flue connecting the upper portion of the smoke box with the lower portion of the combustion chamber, and flues extending from the upper portion of the combustion chamber to the smoke outlet.

1,015,502. EXPLOSIVE-ENGINE. JOHN W. MEAKER, Detroit, Mich. Filed Sept. 30, 1910. Serial No. 584,684. (Cl. 123—193.)

1. In an explosive engine, an open ended cylinder having an inner annular flange intermediate its ends; a piston open at its outer end and closed at its inner end whose body fits the cylinder flange and whose end portions are enlarged to fit the cylinder body, and a diaphragm of less diameter than the piston bore secured in the cylinder concentrically within the piston near the limit of outward motion of the inner end thereof.

2. In an explosive engine, an open ended cylinder having an inner annular flange between its ends, a piston reciprocable through the flange having an open outer end and a closed inner end both enlarged to fit the cylinder, a jacket forming an air space over the cylinder end with its lower end opening directed toward the lower end of the cylinder, and a diaphragm of less diameter than the piston bore secured in the cylinder concentrically with the piston near the limit of outward motion of the inner end thereof by a tubular extension of the jacket.



3. In an explosive engine, an open ended cylinder having an inner annular flange between its ends, a piston reciprocable through the flange having an open outer end and a closed inner end both enlarged to fit the cylinder, a jacket forming an air space over the cylinder end with its lower end opening directed toward the lower end of the cylinder, a diaphragm of less diameter than the piston bore secured in the cylinder concentrically with the piston near the limit of outward motion of the inner end thereof by a tubular extension of the jacket, and a diaphragm closing the annular opening between the lower end of the jacket and the adjacent cylinder wall provided with a plurality of apertures disposed to direct a maximum quantity of expelled air against the heated portions of the cylinder.

4. In an explosive engine, an open-ended cylinder, an inner, central annular flange therein, an open ended piston and reciprocable in the flange, outer annular enlargements on the piston ends fitting the cylinder and forming annular combustion chambers with the cylinder flange, and a cap closing the inner end of the piston.

5. In an explosive engine, a base, a cylinder open at both ends mounted thereon and provided with an inner annular flange between its ends, an open ended piston having a body that fits the cylinder flange and flanged ends that fit the body of the cylinder and form with the cylinder flange annular explosion chambers, a crank shaft in the base, a cap secured at its rim to the inner end of the piston and provided with a concave body extending well into the piston, a wrist pin secured across the recess of the body and a connecting rod coupling the wrist pin and the crank shaft.

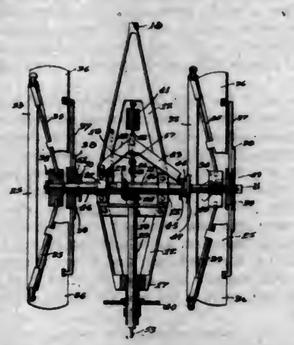
1,015,503. WIRE-FENCE TOOL. PETER H. MERRILL, Pardeeville, Wis., assignor of one-half to Leonard E. Wheeler, Randolph, Wis. Filed Feb. 21, 1911. Serial No. 610,046. (Cl. 140—123.)

A wire working tool comprising a rod bent to form a hook at one end, and a recurved and flattened part beyond the end of the hook, said part having a transverse hole therethrough.

1,015,504. SCREW-WRENCH. PAUL MEYER, Solingen, Germany, assignor of one-half to Max Nolden, Solingen, Germany. Filed Sept. 1, 1910. Serial No. 579,995. (Cl. 81—111.)

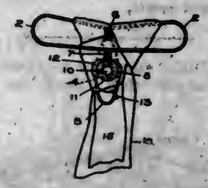
In a screw-wrench of ratchet-like action for six-cornered screw-nuts, in combination, an open key having a recess and consisting of two fixed jaw faces and three integral pivotal jaw faces adapted to engage the nut on five sides, and a projection on said pivotal jaw face member adapted to engage said recess upon the key being in closed position, for the purpose set forth.

1,015,505. WINDMILL. RICHARD D. MOON and HENRY J. HORNE, San Angelo, Tex. Filed Sept. 24, 1909. Serial No. 519,488. (Cl. 170—2.)



In a wind mill a frame, a shaft horizontally journaled upon the frame, a set of spokes fixed to the shaft at each end thereof, blades pivotally attached at their windward edges to the spokes, hubs slidably mounted upon the shaft one adjacent each set of spokes, spokes carried by said hubs and pivotally connected with the leeward edges of the blades, bars slidably mounted upon the shaft and operatively connected with both hubs, to move the same simultaneously in the same direction, toggle arms pivoted together at their inner ends and one pivoted at its outer end to the frame and the other pivotally connected at its outer end with the leeward end portions of said bars, a return spring connected at its upper end with the frame and at its lower end with the link arms, and means for drawing the inner ends of the link arms down against the pull of the spring.

1,015,506. NECKTIE-HOLDER. CHARLES H. OHLY, Summit, N. J. Filed Sept. 7, 1910. Serial No. 580,818. (Cl. 2—84.)

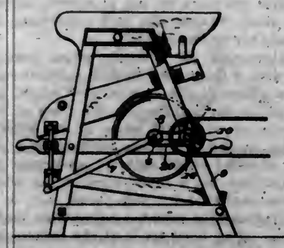


1. A necktie holder, comprising in combination a frame for supporting a tie, said frame having lateral portions adapted to project under the wings of a collar and a downward extending portion, a finger tab arranged flatwise at the rear side of said downward extension, and a rearwardly open attaching socket extending through said extension and tab and clamping them together.

2. A necktie holder comprising a rearwardly opening socket-piece adapted to receive the ball head of a collar-button, said socket-piece having front and rear flanges adapted to clamp toward each other, and a wire bent intermediate of its ends to form a forward downward extension and lateral resilient loops adapted to extend under the wings of a collar and a rear downward extension, the end portions of the wire forming said rear downward extension and the ends of the wire being curled around the said socket-piece and its extremities clamped and inclosed between the front and rear flanges thereof, whereby the said ends and extremities of the wire are firmly connected and at the same time covered and concealed, the holder consisting aside from said socket-piece of an endless piece of wire.

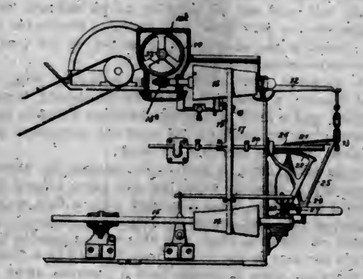
3. A necktie holder comprising a piece of resilient wire bent into two opposite lateral loops adapted to project under the wings of a collar, the upper arms of said loops being twisted together at their junction and the wire formed therebeyond into a depending elongated loop around which a tie can be tied, the lower arms of the said opposite lateral loops being twisted together at their adjacent ends and forming a downward extension lying at the rear of the said depending loop, and a socket-piece around which the ends of the wire forming said rear extension are wrapped, said socket-piece having opposite clamping flanges between which the extremities of said ends are clamped and covered and being open rearwardly to receive the ball-head of a collar button, whereby the said socket-piece provides attaching means and also connects the ends of the wire.

1,015,507. GEARING. JOHN W. PEDIE, Souris, N. D. Filed Apr. 15, 1911. Serial No. 621,506. (Cl. 74—31.)



In a mechanism for converting a machine driven by a hand crank into a machine driven by power, the combination with a gear adapted to be keyed to the driven shaft of the machine, of a housing comprising a dished portion having ears extending therefrom by which the housing is adapted to be secured in position on the machine, a bearing sleeve extending outwardly from the dished portion, a short shaft rotatably mounted in said sleeve, a pulley fast to the outer end of the short shaft adapted to bear against the outer end of the sleeve, a collar mounted on the short shaft within the dished portion, and adapted to bear against the inner face of the dished portion, a gear mounted on the inner end of said short shaft, and a chain adapted to connect the gear on said short shaft to the gear on the driving shaft.

1,015,508. EVENER FOR COTTON-OPENING AND OTHER COTTON-WORKING MACHINES. JAMES CHARLES POTTER, Pawtucket, R. I., assignor to Potter & Johnston Machine Co., Pawtucket, R. I. Filed July 3, 1909. Serial No. 505,878. (Cl. 19—19.)



1. In an evener, the combination of a driving and a driven cone pulley, a feeding means geared to the driven cone pulley, anti-friction bearings for said driven cone pulley, a light, easily shiftable belt connecting the cone pulleys, and automatic means for shifting the belt along the pulleys.

2. In an evener, the combination of a driving and a driven cone pulley, rolls geared to the driven cone pulley, anti-friction bearings for the driven cone pulley and said rolls, a light, easily shiftable belt connecting the cone pulleys, and automatic means for shifting the belt along the cone pulleys.

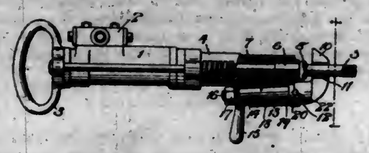
3. In an evener, the combination of a driving and a driven cone pulley, a feed roll geared to the driven cone pulley, anti-friction bearings for said driven cone pulley, a light, easily shiftable belt connecting the cone pulleys, evener plates, connections between the evener plates and the belt for moving the latter along the pulleys, comprising a rock shaft, and bearings for the rock shaft permitting lateral movement of the rock shaft, whereby binding or cramping thereof is prevented, said bearings being located at opposite ends of the shaft, and comprising, each, a stationary and a laterally movable member, one of which is larger than the other and an annular space existing between them.

4. In an evener, the combination of cone pulleys, a belt connecting the pulleys, evener plates, connections between said plates and the belt for shifting the belt along the pulleys, comprising a rock shaft, and bearings for said shaft permitting lateral movement thereof, whereby binding of the shaft in the bearings is prevented, said bearings being located at opposite ends of the shaft, and comprising, each, a stationary and a laterally movable member, one of which is larger than the other and an annular space existing between them.

5. In an evener, the combination of cone pulleys, a belt connecting the pulleys, evener plates, connections between said plates and the belt for shifting the belt along the pulleys, comprising a rock shaft, and ball bearings for said shaft permitting lateral movement thereof, whereby binding of the shaft in the bearings is prevented, said shaft bearings including, each, a ball-engaging member having an end surface that the balls engage.

[Claims 6 to 13 not printed in the Gazette.]

1,015,509. HAMMER-DRILL. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 11, 1909. Serial No. 471,735. (Cl. 125—10.)



1. A hammer drill, a stop piece movably mounted thereon, a drill steel having an abutment fitted to engage said stop piece for limiting the outward movement of the steel when it is not striking its work, said stop piece being movable into and out of position to be engaged by the abutment on the drill steel, and separate means for yieldingly retaining the stop piece in either of its positions against unintentional removal.

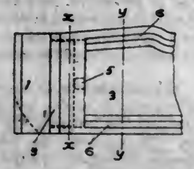
2. A hammer drill, a laterally swinging stop piece hinged thereto, a foot and a handle projecting from the stop piece, and a drill having an abutment fitted to engage said stop piece for limiting the outward movement of the steel when it is not striking its work.

3. A hammer drill, a drill steel having an abutment thereon, and a laterally swinging stop piece hinged to the drill, said stop piece being provided with a foot arranged to be swung into and out of position to be engaged by the abutment on the drill steel, and also with a handle whereby either the foot or the handle may be used as a foot rest when the stop piece is swung into a position away from the drill steel.

4. A hammer drill, a drill steel having an abutment, a hollow casing on the drill and a stop piece having its shank located within said hollow casing, said shank being provided with a laterally extended foot and a handle, said foot being arranged to be brought into and out of the path of the abutment on the steel by the swinging movement of the stop piece.

5. A hammer drill, a drill steel having an abutment, a hollow casing on the drill and a stop piece having its shank located within said hollow casing, said shank being provided with a laterally extended foot and a handle, said foot being arranged to be brought into and out of the path of the abutment on the steel by the swinging movement of the stop piece, and a spring for permitting a limited longitudinal yielding movement of the stop piece.

1,015,510. TIP FOR SUGAR-SEPARATORS. EUGENE ROBERTS and ANGUS H. GIBSON, Lehi, Utah. Filed July 24, 1911. Serial No. 640,334. (Cl. 127—3.)



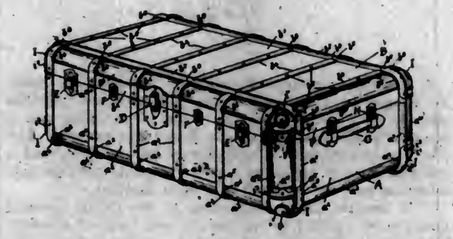
1. A tip for sugar separators comprising an arm, a socket on the end of said arm having closed sides and ends with an open bottom, a vulcanized fibrous tip with a tenon formed integral thereon and adapted to be held by said socket.

2. A tip for sugar separators comprising a member made of fibrous material, a tenon formed integral on said member, and a socket having closed sides and ends and an open bottom and adapted to receive said tenon.

3. In a tip for sugar separators the combination of a socket having closed sides and ends and an open bottom with a rib thereacross adapted to strengthen the sides of the socket, a vulcanized fibrous tip, and a tenon formed integral on said tip and adapted to enter said socket.

4. In a tip for sugar separators the combination of a socket having an open bottom, a vulcanized fibrous tip, and a tenon formed integral on said tip and adapted to be held within said socket.

1,015,511. TRUNK. HERMANN ROMÜNDER, Mishawaka, Ind. Filed Dec. 28, 1908. Serial No. 469,514. (Cl. 190—40.)



1. In a trunk or box, a member which may be a lid or body comprising a middle-plate, four side-plates, four quadrantally curved edge-plates underlapping said middle and side-plates and united thereto, a plurality of transverse girth-straps extending across said middle, side and edge-plates and united thereto, and a plurality of longitudinal bars extending across said middle, side, and edge-plates and united thereto, said longitudinal bars being deeper than said transverse straps and recessed at the points where they cross the latter whereby they are adapted to lie upon the surface of the middle-plate; filling-strips underlying said girth-straps and bars between them and said edge-plates, and convex cap-plates filling the open spaces at the four corners.

2. In a trunk or box, the corner-construction comprising, in conjunction with the three quadrantally rounded edge-plates which meet at the corner and form the box-edges and have their ends truncated so as to leave an open space at the corner-angle, a corner cap-plate closing said open space, and two reinforcing members at right angles passing around adjacent edges of the trunk or box and secured to said edge-plates, the edges of said cap-plate lying between said reinforcing members and said edge-plates.

3. In a trunk or box, the corner-construction comprising, in conjunction with the three quadrantally rounded edge-plates which meet at the corner and form the box-edges and have their ends truncated so as to leave an open space at the corner-edge, a corner cap-plate closing said open space, and two reinforcing members at right angles passing around adjacent edges of the trunk or box and secured to said edge-plates, the edges of said cap-plate lying between said reinforcing members and said edge-plates; the said cap-plate having a raised quadrantal rib opposite the angle between the said reinforcing members and complementary to the latter.

4. The construction for a trunk which comprises, in combination with a trunk-body having rounded edges, projecting corner pieces at the ends of such edges, and reinforcing and protecting members in the form of straps or bars lying parallel with said edges at the sides thereof and projecting beyond said edges, so that said edges are substantially shielded on all sides by projecting parts.

5. A construction for a round-edged trunk which comprises, in combination with side-plates, top or bottom-plate, and quadrantally rounded edge-plates, secured together and leaving an open space at the corners, a spherical-octant-shaped corner-cap plate covering said open space, and having a raised rib on one side of the octant, in combination with reinforcing members covering the edges of the other two sides of the octant and secured to said top and edge-plates through the material of said cap-plate.

[Claim 6 not printed in the Gazette.]

1,015,512. CLOSET-SEAT. WILLIAM E. ROSS and LARS C. JENSEN, Fromberg, Mont. Filed June 27, 1911. Serial No. 635,628. (Cl. 4—18.)

1. The combination with a closet seat, of a flexible mat having sockets, and standards upon the seat fitting at their ends in the sockets and supporting the mat above the seat.

2. The combination with a closet seat, of a flexible mat having sockets, and standards foldably mounted upon the seat and fitting at their ends in the sockets and supporting the mat above the seat.

3. The combination with a closet seat, of a flexible mat having sockets, standards at each side of the seat at the rear thereof, and a standard at the front of the seat, the standards fitting at their ends in the sockets and supporting the mat above the seat.

4. The combination with a closet seat, of a flexible mat having sockets, plates secured upon the seat and having recesses, and a standard pivoted upon each plate and foldable to lie in the respective socket or to upstand from the seat, the said standards fitting at their ends in the sockets in the mat and supporting the said mat above the seat.

5. The combination with a closet seat, of standards pivoted at opposite sides of the seat, the said standards being foldable to lie upon the seat or upstand therefrom, the pivots for the standards being located at the adjacent ends of the standards at opposite sides of the seat, and a mat having sockets receiving the upper ends of the standards.

[Claims 6 and 7 not printed in the Gazette.]

1,015,513. WIRE-TIE. JOHN J. SANDERS, East Grand Forks, Minn. Filed July 6, 1911. Serial No. 637,069. (Cl. 173—313.)

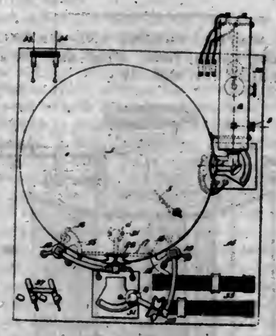
1. A wire tie comprising a section of wire bent in approximately U-form and clamping means carried at the extremities and at the bight portion thereof.

2. A wire tie for attachment to insulators comprising a section of metal bent in U-form and clamps secured to the extremities of the leg portions and to the bight portion thereof, said metal being adapted to be coiled about the insulator by bending the leg portions in opposite directions for attachment of the clamps to a line wire.

1,015,514. FILM-PACK. RICHARD SCHÜTTAUF, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Mar. 31, 1910. Serial No. 552,691. (Cl. 95—22.)

A film pack member consisting of a carrier and a film sheet fixed to this carrier, the film sheet consisting of a transparent backing and a sensitive layer and being so arranged on the carrier, that the said layer immediately faces the carrier.

1,015,515. PHOTOMETER ATTACHMENT. CLAYTON H. SHARP, White Plains, and PRESTON S. MILLAR, New York, N. Y. Filed Feb. 24, 1910. Serial No. 545,615. (Cl. 88—23.)



1. A photometer having an inclosure, and a plurality of independent lamp supporting means which move through a wall of the inclosure, and means to prevent more than one lamp at a time from being introduced into the inclosure.

2. A photometer having an inclosure, and a plurality of independent lamp supporting means which move through a wall of the inclosure, and means to lock the lamp supporting means which is outside the inclosure against introduction into the inclosure when the other lamp supporting means is within the inclosure.

3. A photometer having an inclosure, in combination with two lamp supporting arms swinging through a wall of the inclosure, and means to lock the arm which is outside the inclosure against movement when the other arm is within the inclosure.

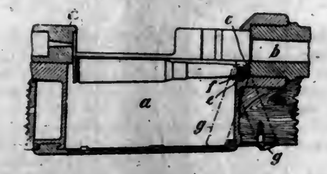
4. A photometer having an inclosure with a single lamp introducing opening therein and a plurality of lamp supporting means, and means to move the lamp supporting means successively into the opening.

5. A photometer, having an inclosure with a single

lamp introducing opening, in combination with a plurality of supporting arms, lamps carried by the arms, and means to successively swing the lamps into the opening.

[Claims 6 to 13 not printed in the Gazette.]

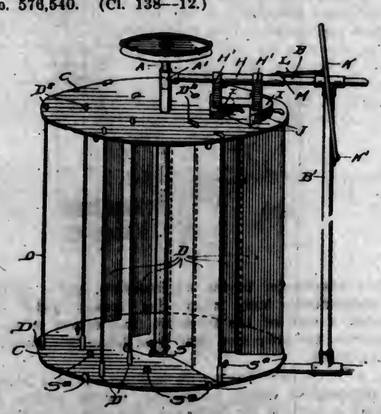
1,015,516. MAGAZINE-RIFLE. CARL AXEL THEODOR SJÖGREN, Stockholm, Sweden, assignor to Aktiebolaget Svenska Vapen-Och Ammunitionsfabriken, Stockholm, Sweden. Filed Dec. 14, 1910. Serial No. 597,217. (Cl. 42—18.)



1. In a magazine-rifle, the combination of a guide surface for the cartridges, means acting to move the same along the said guide surface, and a cylindrical part adapted to be moved in different positions, said part having a cut off portion coinciding, in one position, with the said guide surface and projecting, in another position, above the same so as to form an abutment for the cartridges.

2. In a magazine-rifle, the combination of a guide surface for the cartridges, means acting to move the uppermost cartridge along the side guide surface, and a part adapted to be moved transversely to the longitudinal direction of the rifle into different positions, said part having a recessed portion forming in one position an abutment for the uppermost cartridge but allowing in another position said cartridge to pass through a recess thereof into position for firing.

1,015,517. WATER-CURRENT AND AIR MOTOR. PARKE T. SNYDER, Celina, Ohio. Filed Aug. 10, 1910. Serial No. 576,540. (Cl. 138—12.)



1. A current operated motor comprising a series of blades having pintles projecting from the ends thereof, bearing means in which said pintles are mounted, the corresponding pintles each being bent laterally, a movable member having a convexed edge, and means for throwing the same into or out of the paths of the laterally extending ends of said pintles to cause certain of the blades to feather.

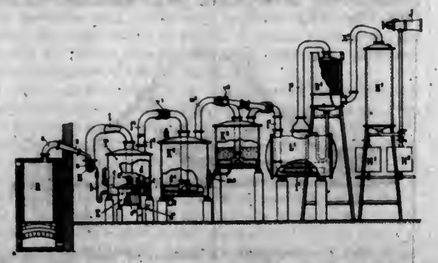
2. A current operated motor comprising a frame havings disks parallel to each other, a series of blades each having a pintle projecting from one of the longitudinal marginal edges thereof and having bearings in said disks, the pintles at corresponding ends of the blades extending through one of the disks and being bent at an angle, a shell movable upon said frame, members fastened to said shell and provided with convexed edges which are adapted to be moved into the paths of said angled ends of the pintles, and means for moving said shell.

1,015,518. ADJUSTABLE FRAMING. JOSEPH STAREN, Chicago, Ill. Filed Nov. 25, 1910. Serial No. 594,092. (Cl. 40—155.)

1. A picture framing comprising four corner pieces, each of said pieces consisting of an ornamental sheet of metal stamping provided with a right angled recess adapted to receive a corner of a picture, a glass front plate and a backing sheet, and spring lips adapted to take over said front plate, there being outwardly extending loops formed in the bottom of said recess parallel with each of the sides of said recess; and a supporting brace adapted to detachably embrace said loops, substantially as described.

2. A picture framing comprising four corner pieces, each of said pieces consisting of an ornamental sheet of metal stamping provided with a right angled recess adapted to receive a corner of a picture, a glass front plate and a backing sheet, and spring lips adapted to take over said front plate, there being outwardly extending loops formed in the bottom of said recess parallel with each of the sides of said recess and inwardly extending tangs adapted to penetrate the backing of a picture; and a supporting brace in substantially U-form having its upper ends angularly formed and provided with hooks adapted to detachably engage said loops, substantially as described.

1,015,519. PROCESS OF DISTILLING WOOD. RUDOLF STROBACH, Prague-Ziskow, Austria-Hungary. Filed May 16, 1908. Serial No. 433,259. (Cl. 203—6.)



1. The herein described process of obtaining acid-free tar and tar-free pyroligneous acid vapors from the gases and vapors evolved during the destructive distillation of wood and like organic substances, which comprises passing said hot gases and vapors while at a suitable and substantially uniform temperature through a suitable bath of hot tar; and maintaining such a quantity of tar in said bath as will cause the condensation and extraction of substantially all of the tar from said hot gases and vapors, but which quantity of tar will be heated to and maintained, solely by the heat of said gases and vapors, at a temperature which precludes the existence of condensed pyroligneous acid in said tar-bath.

2. The herein described process of obtaining acid-free tar and tar-free pyroligneous acid vapors from the gases and vapors evolved during the destructive distillation of wood and like organic substances, which comprises mingling the hot gases and vapors from a plurality of retorts at different stages of distillation; passing said hot mingled gases and vapors through a suitable bath of hot tar; and maintaining such a quantity of tar in said bath as will cause the condensation and extraction of substantially all the air from said hot gases and vapors, but which quantity of tar will be heated to and maintained, solely by the heat of said gases and vapors, at a temperature which precludes the existence of condensed pyroligneous acid in said tar-bath.

3. The herein described process of separating constituents from the gases and vapors evolved during the destructive distillation of wood and like organic substances, which comprises passing said hot gases and vapors through a suitable hot-air bath; maintaining such a quantity of tar in said bath as will cause the condensation and extraction of substantially all of the tar from said hot gases and vapors, but which quantity of tar will be maintained by the heat of said gases and vapors at a temperature which precludes the existence of condensed pyroligneous acid in said tar-bath; and then separately condensing and extracting the remaining condensable constituents.

4. In the distillation of wood and like organic substances, a method of separating various constituents from the hot distillation gases and vapors, which comprises passing the same through a suitable bath maintained by said hot gases and vapors at a sufficient temperature to cause the extraction of substantially all of the tar therefrom, then passing the remaining gases and vapors through a bath maintained thereby at a temperature sufficient to cause the extraction of substantially all of the acid vapors and then condensing the water and the alcoholic vapors.

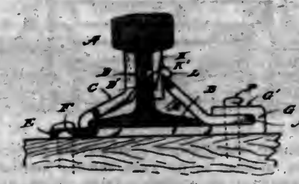
1,015,520. FLY-PAPER HOLDER. HERMAN C. SWENSON, Minneapolis, Minn., assignor of one-fourth to William J. Mendenhall, Minneapolis, Minn. Filed Apr. 26, 1911. Serial No. 623,431. (Cl. 43—22.)

1. In a device adapted to hold sticky fly paper, the combination with a bed plate, of clamping bars coöperating with said bed plate and normally resting thereon, means connecting said clamping bars to said bed plate with freedom for movements to and from operative positions, springs yieldingly holding said clamping bars in their normal positions, and levers for camming said bars into inoperative positions.

2. In a device adapted to hold sticky fly paper, the combination with a bed plate, of angle bar clamps having downwardly projecting barbs on their horizontal flanges that are normally seated in depressions in said bed plate, slot and pin connections connecting the vertical flanges of said clamps to said bed plate with freedom for vertical movements, and springs normally holding said vertical flanges onto said bed plate.

3. In a device adapted to hold sticky fly paper, the combination with a bed plate, of angle bar clamps having downwardly projecting barbs on their horizontal flanges that are normally seated in depressions in said bed plate, slot and pin connections connecting the vertical flanges of said clamps to said bed plate with freedom for vertical movements, springs normally holding said vertical flanges onto said bed plate, and levers for camming said bars into inoperative positions.

1,015,521. RAIL-SPLICE. EVERETT N. TUCKEY, Yates City, Ill. Filed Jan. 16, 1911. Serial No. 602,807. (Cl. 239—6.)



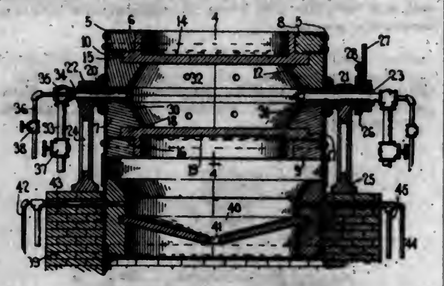
1. In a rail-splice the combination of a base portion to receive and carry a rail and having a part at one side to receive the rail, and having also an overhanging part at the opposite side of the rail spaced from the latter, a wedge adapted to enter between the overhanging part and the rail adapted to hold the rail against the first described part and adapted to be shifted longitudinally, there being a slot in the overhanging part lying substantially at right angles to the rail, the wedge having a series of steps each lying in a different plane but all substantially parallel to the longest measurement of the slot, and a member extending through the slot, one of its sides engaging one of the walls of said slot, its opposite side engaging one of the steps of the wedge.

2. In a rail-splice the combination of a base portion to receive and carry a rail and having a part at one side to receive the rail, and having also an overhanging part at the opposite side of the rail spaced from the latter, a wedge adapted to enter between the overhanging part and the rail adapted to hold the rail against the first described part and adapted to be shifted longitudinally, there being a series of slots in the overhanging part lying at right angles to the rail, there being a series of slots in the wedge corresponding with the first said series and each having one of its walls "stepped", and a member to enter one of the slots of the said part and one of the wedge and adapted to bear upon one of the walls of one and the opposite wall of the other of said slots.

3. The combination in a rail-splice, of a base plate to receive and support the rail and having an upturned portion at one side to engage the vertical portion of said rail, and having its opposite side extending beyond the opposite edge of the rail-base and provided with an upturned portion, a member lying against the vertical portion of the rail at that side, and a longitudinally adjustable wedge interposed between the member and the last named upturned portion, the wedge and the base each having a substantially corresponding slot to receive a tightening member, the slot in the said wedge having an offset portion adapted, in conjunction with the said tightening member and the base, to positively adjust the wedge in the direction of its length.

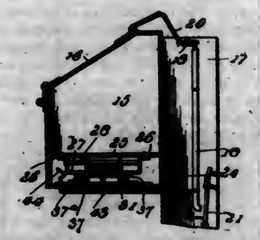
4. The combination in a rail-splice, of a base plate to receive and support the rail and having an upturned portion at one side to engage the vertical portion of said rail, and having its opposite side extending beyond the opposite edge of the rail-base and provided with an upturned portion, a member lying against the vertical portion of the rail at that side, and a longitudinally adjustable wedge interposed between the member and the last named upturned portion, the wedge and the base having substantially corresponding slots to receive a tightening member, the slot in said wedge having a series of offset portions substantially as shown.

1,015,522. POT-FURNACE. ANDREW TUITE, Vincennes, Ind. Filed Oct. 11, 1909. Serial No. 522,042. (Cl. 49—17.)



A pot furnace comprising a shell having a plurality of melting pots included in its wall, tubular journal shafts secured to said shell at opposite points and affording communication with the interior thereof, means for introducing a heating medium through said journal shafts into the interior of the shell, journal brackets supporting said journal shafts respectively, whereby said shell is rotatably mounted, a ratchet wheel fixed on one of said journal shafts, a lever loosely mounted on said journal shaft adjacent the ratchet wheel, and a pawl carried by the lever and operatively engaged with the ratchet wheel for effecting the rotation of the journal shaft and shell when said lever is moved in one direction.

1,015,523. MAIL-BOX SIGNAL. WILLIAM M. ULBRICH, Atlantic, Iowa. Filed June 22, 1910. Serial No. 568,391. (Cl. 177—301.)



1. The combination with a receptacle provided with a lid and a counterpoised platform, of two electrically actuated signals, means for automatically operating said signals upon the opening of the lid and upon the depression of the platform, and means for automatically preventing the depression of the platform when the lid is in open position.

2. The combination with a receptacle provided with a lid and a counterpoised platform, of electrically actuated signals, means for automatically operating said signals upon the opening of the lid and upon the depression of the platform, and means controlled by the lid for holding the platform against a depressing movement when the lid is open, and for releasing the platform to permit it to be depressed upon the movement of the lid to closed position.

3. The combination with a receptacle provided with a lid and a counterpoised platform, of audible and visual signals, electrically actuated means for operating said signals, including electric circuits and separate switches, one of said switches being closed by the opening of the lid and the other closed by the depressing of the platform, and means controlled by the lid for holding the platform against a depressing movement when the lid is open and for releasing the platform to permit it to be depressed upon the movement of the lid to closed position.

4. The combination with a receptacle provided with a lid and a counterpoised platform, of signals, electrically actuated means for operating said signals including separate switches, a switch closing lever, a connection between said lever and lid whereby the opening of the lid will move said lever in a direction to close one of said switches, the other switch being arranged to be closed by the depressing of the platform, and a rod connected to said lever and provided with a stop movable under and into engagement with the platform to prevent the depressing thereof upon the movement of said lever to close its switch.

1,015,524. LOOM-SHUTTLE. ALBERT B. WEISSENBORN, Appleton, Wis. Filed June 11, 1909, Serial No. 501,481. Renewed Dec. 12, 1910. Serial No. 596,970. (Cl. 139—27.)

1. A shuttle having a pivotally mounted bobbin holder adapted to be swung from one position to a reverse position to cause the bobbin to stand in approximately the same relation to the direction of travel of the shuttle at all times.

2. A shuttle, comprising a shuttle body, and a bobbin holder pivotally mounted thereon to have its position reversed with relation to the shuttle body for the different directions of travel of the shuttle.

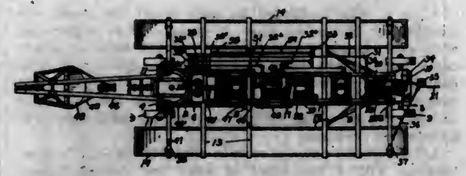
3. A shuttle, comprising a shuttle body, a bobbin holder pivotally mounted thereon with one end heavier than the other and adapted to be swung to reverse its position and place the heavier end thereof at the front of the shuttle in either direction of movement of the shuttle.

4. A shuttle, comprising a shuttle body, a bobbin holder pivotally mounted thereon to have its position reversed to direct the free end of the bobbin to the rear of the shuttle in either direction of movement of the shuttle.

5. A shuttle, comprising a shuttle body, a bobbin holder pivotally mounted thereon with one end heavier than the other, and stops for limiting the pivotal movement of the bobbin holder and holding it in either a position where the weighted end thereof is located at one end of the shuttle or in a position where the weighted end is at the other end of the shuttle.

[Claims 6 to 19 not printed in the Gazette.]

1,015,525. EXCAVATING-MACHINE. CHARLES A. WHIPPLE, Elk River, Minn., assignor to The Gopher Manufacturing Company, a Corporation of South Dakota. Filed Jan. 18, 1909. Serial No. 472,882. (Cl. 37—16.)



1. In an excavating machine, the combination with a frame having carrying wheels, of scows provided one on each side of said machine, means for raising and lowering said carrying wheels to allow the scows to come in contact with the ground or to lift them out of contact with the ground.

2. In an excavating machine, the combination with a frame having forward and rear carrying wheels, and bars projecting laterally on each side of said machine, scows provided beneath said bars and attached thereto, and means for raising and lowering said carrying wheels to lift said scows out of contact with the ground or allow them to come in contact with the ground.

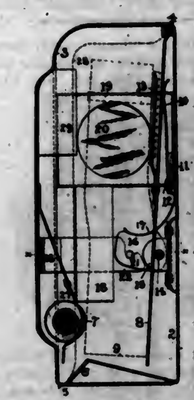
3. In an excavating machine, the combination with an I-beam frame having forward and rear axles and carrying wheels therefor, an I-beam extending transversely of said frame and projecting beyond the same on each side, scows provided under the ends of said I-beams and secured thereto, and means for raising and lowering said axles and carrying wheels.

4. In an excavating machine, the combination with a frame, of scows attached to said frame on each side and extending lengthwise thereof, said scows having upwardly turned ends and capable of supporting the machine in wet or marshy ground, forward and rear axles and carrying wheels provided under said frame between said scows and means for raising and lowering said axles and wheels.

5. In an excavating machine, the combination with a wheeled frame, of scows attached to said frame on each side of the machine, means for raising the carrying wheels to allow the scows to contact with the ground, a drum mounted on the forward portion of said frame, an engine having a driving connection with said drum, a cable wound on said drum, pulleys mounted on said frame in advance of said drum and between which said cable passes, and said cable being adapted to extend forward to an anchoring post, for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,015,526. TOILET-PAPER CABINET. JOHN W. WHITTIER, Rutherford, N. J., assignor to Scott Paper Company, a Corporation of Pennsylvania. Filed Nov. 20, 1908. Serial No. 463,598. (Cl. 211—20.)



1. In a toilet paper cabinet, the combination of a box-shaped case formed of stamped sheet metal, with a lid hinged to the box-shaped case at its upper and rear part and extending over the key operated top and front thereof and provided with side flanges, movable means independent of the lid at each side of the cabinet at a distance from the hinge for locking the lid to the box-shaped case, means for simultaneously operating both of the locking means, a feeding roller carried by the sheet metal lid, a hinged plate having a support for the paper package hinged to the box-shaped case adjacent to its upper end, and spring devices for pressing the plate toward the roller.

2. In a toilet paper cabinet, the combination of a box-shaped case formed of stamped sheet metal, with a lid hinged to the box-shaped case at its upper and rear part and extending over the top and front thereof, and provided with side flanges, means at each side of the cabinet for locking the lid to the box-shaped case, means for simultaneously operating both of the locking means, a feeding roller detachably carried by the sheet metal lid, a spring frame secured to the lid on the inside and having a curved downwardly extending portion for holding the roller to the lid when open and guiding the paper from the roller should it become attached thereto, a hinged plate having a support for the paper package hinged to the box-shaped case adjacent to its upper end, and spring devices for pressing the plate toward the roller.

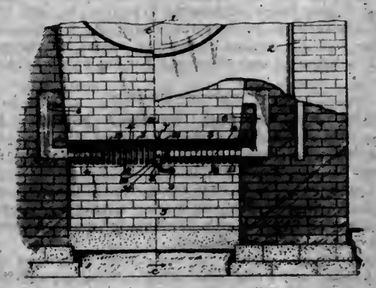
3. In a toilet paper cabinet, the combination of a box-shaped case formed of stamped sheet metal, with a lid hinged to the box shaped case at its upper and rear part and extending over the top and front thereof and provided with side flanges, means at each side of the cabinet for locking the lid to the box-shaped case, means for simultaneously operating both of the locking means, a feeding roller having a plurality of annular grooves at intervals in its length and carried by the sheet metal lid, a spring frame consisting of a plurality of spring arms secured at their upper parts to the lid and having their lower parts curved around the roller and arranged within the annular grooves thereof, a hinged plate having a support for the paper package hinged to the box-shaped case adjacent to its upper end, and spring devices for pressing the plate toward the roller.

4. In a toilet paper cabinet, the combination of a box-shaped case formed of stamped sheet metal having the bottom notched as at 5 and provided with a deflector 6 extending obliquely upward and backward so as to receive and deflect the sheets of paper which are forced downward by the feeding means and by which the paper is guided through the narrow slot formed by the notch 5, with a lid hinged to the box-shaped case at its upper and rear part and extending over the top and front thereof and provided with side flanges, means at each side of the cabinet for locking the lid to the box-shaped case, means for simultaneously operating both of the locking means, a feeding roller having a plurality of annular grooves at intervals in its length and carried by the sheet metal lid, a spring frame consisting of a plurality of spring arms secured at their upper parts to the lid and having their lower parts curved around the roller and arranged within the annular grooves thereof, a cross connection between the flat spring arms whereby both may be raised simultaneously for liberating the roller 5, a hinged plate having a support for the paper package hinged to the box-shaped case adjacent to its upper end, and spring devices for pressing the plate toward the roller.

5. The combination of a box-shaped case, a lid hinged to it at the top and rear, a discharging roller carried by the lid, a spring actuated pressure plate for pressing the paper toward the roller also hinged to the case at its upward and rear portion, and a common hinged axis for the lid and pressure plate upon the box-shaped case the hinged parts of the pressure plate and the lid being arranged at different places in the width of the case.

[Claims 6 to 15 not printed in the Gazette.]

1,015,527. GRATE. EDGAR C. WILEY, Lynchburg, Va. Filed Oct. 4, 1909. Serial No. 520,819. (Cl. 110—74.)



1. A grate bar, comprising in combination, an upper chord; a lower chord; and a connection between said chords provided with a transverse duct.

2. A grate bar comprising an upper chord; a lower chord; and connections between said chords provided with transverse air ducts.

3. A grate bar comprising an upper chord of trapesoidal cross section; a lower chord of narrower cross section; and connections between said chords, provided with ducts transverse to said bars.

4. A grate bar comprising an upper chord of trapesoidal cross section; a lower chord; and connections between said chords of greater transverse width than said chords and having transverse ducts.

5. A grate bar comprising an upper chord; a lower chord; and connections between said chords of greater transverse width than said chords and having transverse ducts.

[Claims 6 to 11 not printed in the Gazette.]

1,015,528. MACHINE FOR TRIMMING AND SHAPING THE SIDE EDGES OF BOARDS. GEORGE E. WILTON, Everett, Wash., assignor to Wilton Patent Cedar Siding Company, Everett, Wash., a Corporation of Washington. Filed Jan. 28, 1911. Serial No. 605,175. (Cl. 144—147.)

1. In a machine for trimming the side edges of boards, a fixed or bed plate, a series of reciprocating knives and means for moving said knives past the bed plate, said knives and bed plate having closely registering cutting edges conforming in outline with the outline which is to be given the board, stops carried by and depending beneath the reciprocating knives, said stops being pivoted and counterweighted, and a bar engaging said stops to move them away from the knives after each cut.

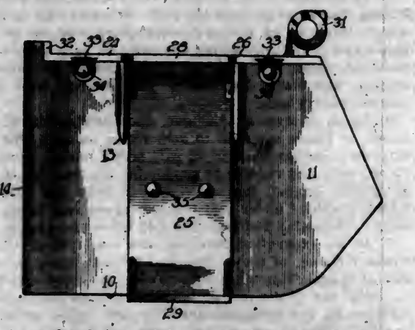
2. In a machine for trimming the side edges of boards, a bed plate, a series of cutting knives and means for moving said knives past the bed plate, said knives and bed plate having cutting edges conforming in outline to each other and to the shape to be given the edge of the boards, a stop movable with the cutting blades, and means for automatically receding said stop after each cut has been completed.

1,015,529. JOURNAL-BOX. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1909. Serial No. 526,158. (Cl. 64—10.)

1. A sectional journal box comprising a pressed steel body section, and a cast yoke section embracing said body section and having two arch bar seats integrally connected together by a pair of standards.

2. A sectional journal box comprising a pressed steel body section, and a cast yoke section embracing said body section and having a top and two arch bar seats integrally connected together by a pair of standards.

3. In a sectional journal box, an integral cast yoke section and a body section surrounded and embraced thereby, said yoke section comprising two arch bar seats and a pair of standards, said arch bar seats being extended to provide four column bolt lugs.

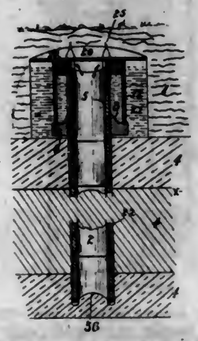


4. A sectional journal box comprising a yoke section having a top, two standards, and two arch bar seats all made integral in one casting, and a body section having a bottom and two sides, said sides being adapted to register with said top, and means for securing said sections together.

5. In a sectional journal box, a section comprising a top, two standards and two arch bar seats all made integral in one casting, a body section made of pressed steel comprising a bottom and two sides, said body section being insertible endwise into place in the yoke section, and means for fastening said sections together.

[Claims 6 and 7 not printed in the Gazette.]

1,015,530. LAND-DRAIN. ERASTUS W. APPELMAN, Clermont, Iowa, assignor to B. F. Blocklinger, trustee. Filed Jan. 11, 1911. Serial No. 602,125. (Cl. 61—9.)



1. In a device of the class described, a drain sunk in the ground, a soil fender around the upper end of the drain and means in connection with the soil fender for causing a tendency toward a vacuum around the soil fender.

2. In a device of the class described, a drain sunk in the ground, a soil fender around the upper end of the drain and extending above said drain, and a cover upon the fender and over the drain, extending out from and beyond the upper edge around said fender.

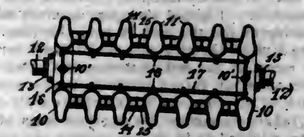
3. In a device of the class described, a drain set in the ground, a tile upon the drain, a soil fender around the tile and means in connection with the soil fender for forming at times a partial vacuum around said fender.

4. In a device of the class described, a drain set in the ground, a tile upon the drain, a soil fender around the tile, and a cover over the tile and upon the top of the soil fender projecting beyond the upper edge around said fender.

5. In a device of the class described, a drain sunk in the ground, a soil fender around the upper end of the drain and extending above the drain, supports engaging the drain upon which the fender rests, and a cover over the drain and upon the soil fender extending beyond and around the upper edge of the fender and when sunk in the earth, adapted to form a partial vacuum beneath the cover around the fender.

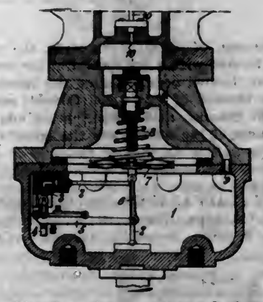
[Claims 6 to 11 not printed in the Gazette.]

1,015,531. RADIATOR. CHARLES F. ARMITAGE, Jamestown, N. Y. Filed June 6, 1910. Serial No. 565,181. (Cl. 237—18.)



A radiator consisting of a plurality of hollow vertical sections, the end sections formed in the shape of a letter O with a solid vertical bar central of the opening in said end sections, the middle section formed in the shape of an inverted letter U, the lower ends of said middle sections each connected by a solid crosswise bar, a nipple connection between said sections at their upper ends and nipple connections at each side at their lower ends, ingress and egress pipe connections on said end sections, lugs on said sections, and rods through said lugs to draw and hold said sections together, substantially as and for the purpose specified.

1,015,532. BEACON-LIGHT. FREDERICK GEORGE ATTWOOD, London, England. Filed Sept. 29, 1910. Serial No. 584,516. (Cl. 67—111.)

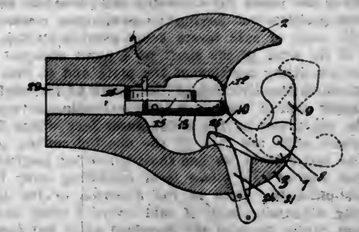


1. The combination of a pressure reducing chamber to which high pressure gas is admitted, an impulse chamber receiving gas at a constant low pressure from the pressure reducing chamber and which impulse chamber is provided with a movable wall, inlet and outlet valves for the impulse chamber, connections between said valves and the movable wall whereby as the latter is vibrated the former are alternately opened and closed, a burner supplied with gas from the impulse chamber, a valve for turning on and shutting off the supply of gas to the burner, means for periodically operating said valve to open and close communication between the impulse chamber and the burner, a clock train for operating said valve-operating means, and connections between the movable wall of the impulse chamber and the clock train for winding the latter and keeping it always wound.

2. The combination with a pressure reducing chamber to which high pressure gas is admitted, an impulse chamber receiving gas at a constant low pressure from the pressure reducing chamber and which impulse chamber is provided with a movable wall, inlet and outlet valves for the impulse chamber, connections between said valves and the movable wall whereby as the latter is vibrated the former are alternately opened and closed, a burner supplied from the impulse chamber, a valve for turning on and shutting off the supply of gas to the burner, means for periodically operating said valve to open and close communication between the burner and the impulse chamber, a clock train for operating said valve-operating means, connections between the movable wall of the impulse chamber and the clock train for winding the latter, and devices for automatically varying the time of opening and closing the valve between the burner and the impulse chamber.

3. The combination of a pressure reducing chamber to which high pressure gas is admitted, an impulse chamber receiving gas at a constant low pressure from the pressure reducing chamber and which impulse chamber is provided with a movable wall, inlet and outlet valves for the impulse chamber, connections between said valves and the movable wall whereby as the latter is vibrated the former are alternately opened and closed, a burner supplied with gas from the impulse chamber, a lantern, connections between the movable wall and the lantern for operating the latter, a valve for turning on and shutting off the supply of gas to the burner, and mechanism operated by the movable wall of the impulse chamber for actuating said valve.

1,015,533. CAR-COUPLING. LANDON BATCHLOR, Lawrenceburg, Ind., assignor of one-half to August D. Cook, Lawrenceburg, Ind. Filed Aug. 15, 1910. Serial No. 577,230. (Cl. 213—7.)



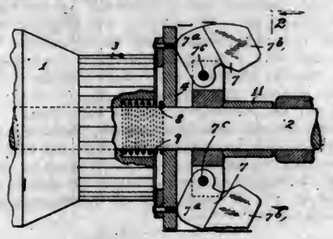
1. In a car coupler, the combination of the drawhead having a bifurcated jaw and a rotating knuckle, of a ball chamber within the drawhead, a ball movable therein, the lateral wall of the ball chamber having a slot therein through which the tail of the knuckle projects, a locking lever, pivoted on a horizontal axis with its center of gravity in front of and below the pivotal point, and provided with claws to engage the ball on opposite sides, and a recess to receive and carry the ball, the upper claw of the locking lever holding the ball within the pathway of the travel of the knuckle hook, and means whereby the knuckle may be rotated when the ball is shifted by the shifting of the locking lever.

2. In a car coupler, the combination of the drawhead having a bifurcated jaw and a rotating knuckle, of a ball chamber within the drawhead, a ball movable therein, the lateral wall of the ball chamber having a slot therein through which the tail of the knuckle projects, a locking lever pivoted on a horizontal axis with its center of gravity in front of and below the pivotal point, and provided with claws to engage the ball on opposite sides, and a recess to receive and carry the ball, a pin loosely mounted in inclined position in a recess in the roof of the ball chamber and bearing upon the locking lever to assist in holding the lever in position to hold the ball within the pathway of the travel of the knuckle hook, and means whereby the knuckle may be rotated when the ball is shifted by the shifting of the locking lever.

1,015,534. ALTERNATING-CURRENT MOTOR. ALONZO C. BELL, Westfield, N. J. Filed Mar. 28, 1910. Serial No. 551,950. (Cl. 172—279.)

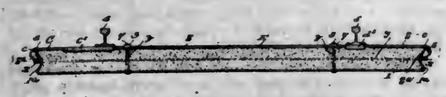
1. In an alternating current moter, the combination of a commutator, a short-circuiting member on the shaft

movable into and out of short-circuiting position relative to the end of the commutator, said member comprising a supporting part movable on the shaft and a ring of sheet metal on the face of the said supporting part next the end of the commutator, said ring having its inner periphery slitted and raised to come in contact with the end of the commutator and having its outer periphery larger in diameter than the commutator, means being provided at said outer periphery for securing the ring to the supporting part, and means for centrifugally operating the short-circuiting member.



2. In an alternating current motor, the combination of the motor shaft, a commutator on said shaft, a short-circuiting plate slidable on the shaft between a non-short-circuiting position away from the commutator, and a short-circuiting position in contact with the commutator, weighted elbow levers for actuating the plate into short-circuiting position but having no permanent connection therewith, each of said levers being pivoted by the end of one of its arms to the shaft at a point adjacent the non-short-circuiting position of the plate and so that the lever pivots in the direction of the length of the shaft,—said pivoted arm of the elbow lever extending outwardly from the shaft and having a flat outer face which is in flat contact with the face of the short-circuiting plate when the latter is in its non-short-circuiting position,—the other arm of said elbow lever extending away from the short-circuiting plate in the direction of the shaft and being weighted,—each of said levers further having an abrupt corner between the described outer flat face of the pivoted arm of the lever and the outer face of the other arm of the lever; and means actuating the short-circuiting plate yieldingly away from its short-circuiting position and toward its non-short-circuiting position.

1,015,535. RAIL TIE AND FASTENING DEVICE. JAMES V. BERGEN, El Paso, Tex. Filed June 1, 1911. Serial No. 630,568. (Cl. 238—3.)

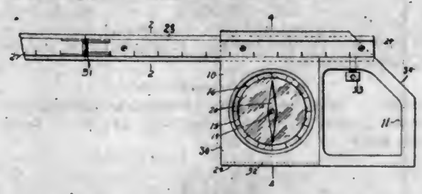


1. In a rail tie and fastening device, a frame comprising a pair of metal strips having end flanges turned inwardly toward each other, means for fastening said end flanges together, a body portion comprised of plastic material molded in said frame, a clamping member comprising a plate adapted to lie on the top of the tie and having a curved flange at one end arranged to engage the end of the frame plate, retaining flanges for engaging the rails, and downwardly extending flanges for engaging the sides of the tie, and means for forcing said retaining flanges into engagement with the rails.

2. In a rail tie and fastening device, a frame comprising a pair of metal strips, said metal strips having their ends bent into a Z-shaped form to provide recesses and flanges, the flanges of one of said strips being secured to the flanges of the other and said pair of strips constituting a frame, a body of plastic material molded in said frame, a clamping member comprising a plate having a curved end flange arranged to enter the recess in one of said frame plates, said clamping member being also provided with upwardly turned retaining flanges for engaging the rails and downwardly turned flanges for engaging the sides of the tie, and a wedge arranged to be driven between the curved end flange of the clamping member and the Z-shaped bend at the end of the frame plate.

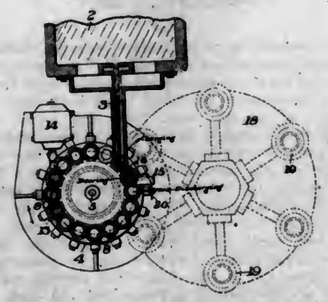
3. In a rail tie and fastening device, a frame comprising a pair of metal strips, said metal strips having their ends bent into a Z-shaped form to provide recesses and flanges, the flanges of one of said strips being secured to the flanges of the other and said pair of strips constituting a frame, a body of plastic material molded in said frame, a pair of oppositely disposed clamping members adapted to lie on the top of the tie, each of said clamping members comprising a plate having a curved end flange arranged to enter the recess at the end of the tie and being also provided with upwardly turned retaining flanges arranged to engage each of the rails and having downwardly extending flanges arranged to engage the opposite sides of the tie, and wedges adapted to be driven between the curved end flanges of the clamps and the Z-shaped ends of the tie for forcing said clamps in opposite directions so as to cause their retaining members to grip the rails.

1,015,536. COMBINED LEVEL AND TRY-SQUARE. JAMES H. BLACKWELL, Rochelle, Tex. Filed June 18, 1909. Serial No. 502,952. (Cl. 73—188.)



In an implement of the class described, the combination with a head formed with a try face at either end and with a longitudinal channel near one edge and opening through one side face thereof, of a two-part foldable scale slidable bodily in said channel, said channel being adapted to receive both parts of the scale when the latter is in folded position.

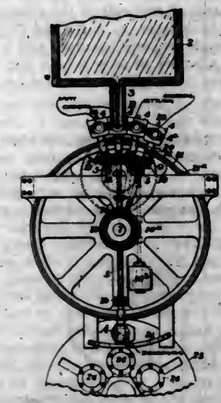
1,015,537. APPARATUS FOR CHARGING GLASS-MOLDS. CHARLES EDWIN BLUE, Wheeling, W. Va. Filed Sept. 9, 1908. Serial No. 452,192. (Cl. 49—5.)



1. An apparatus for charging glass molds, comprising a carrier, a plurality of adjacent open top receptacles on said carrier, the upper surface of the carrier extending from receptacle to receptacle and arranged to form a continuous surface between receptacles, means to continuously move said carrier, means for delivering a continuous stream of molten glass to the receptacles, and a stationary scraper resting on the carrier, said scraper being arranged to scrape the glass from the upper surface of the carrier between adjacent receptacles into one of said receptacles; substantially as described.

2. Apparatus for charging glass molds, comprising a carrier, a plurality of open top receptacles adjacent to each other on said carrier, the upper surface of the carrier extending from receptacle to receptacle and arranged to form a continuous smooth surface between adjacent receptacles, a charging station above said carrier, a discharging station below said carrier, means for continuously moving the carrier and the receptacles past the charging and discharging stations, a stationary scraper resting on the carrier between the charging and discharging stations, said scraper being arranged to scrape the molten glass on the top surafce of the carrier between adjacent molds into the mold which has just passed from under the charging station; substantially as described.

1,015,538. MANUFACTURE OF GLASS. CHARLES EDWIN BLUE, Wheeling, W. Va. Filed Sept. 9, 1908. Serial No. 452,193. (Cl. 49—5.)



1. In apparatus for the manufacture of glass, means for delivering a continuous stream of molten glass, a plurality of supports mounted for separate movement around a common center, and measuring cups or vessels mounted on the supports and arranged to be moved thereby successively into position to receive the glass; substantially as described.

2. In apparatus for the manufacture of glass, means for delivering a continuous stream of molten glass, a plurality of supports mounted for separate movement around a common center, measuring cups or vessels mounted on the supports and arranged to be moved thereby successively into position to receive the glass, together with means for shearing or cutting off the glass between the receptacles on adjacent supports after they have been filled; substantially as described.

3. In apparatus for the manufacture of glass, means for delivering a continuous stream of molten glass, a plurality of supports mounted for separate movement around a common center, measuring cups or vessels mounted on the supports and arranged to be moved thereby successively into position to receive the glass, and means for imparting independent movements to the supports around their common center; substantially as described.

4. In apparatus for the manufacture of glass, means for delivering a continuous stream of molten glass, a plurality of supports mounted for separate movement around a common center, measuring cups or vessels mounted on the supports and arranged to be moved thereby successively into position to receive the glass, and means for separately actuating said supports at different speeds during different portions of their movements around their common center; substantially as described.

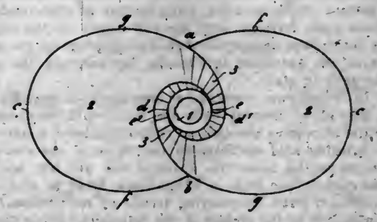
5. In apparatus for the manufacture of glass, means for delivering a continuous stream of molten glass, a plurality of supports mounted for separate movement around a common center, a measuring cup or vessel mounted on each of the supports, means for actuating the supports independently to bring the cups or receptacles successively in position to receive the molten glass, and means for shearing or cutting off the glass between adjacent cups or receptacles after they have been filled; substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,015,539. SLATE-CLEANER. ARMIN BREIDER, Nagyvarad, Austria-Hungary. Filed Nov. 28, 1910. Serial No. 594,564. (Cl. 15—65.)

A slate cleaner comprising in combination, a rigid casing having a closed and an open end, a filling of absorbent material for said casing projecting from the open end thereof, the upper portion of said filling having the greater absorbing capacity, and a cup-shaped cap of permeable material inclosing the said projecting portion of said filling and having its upper margin clenched to engage the said filling.

1,015,540. SCREW-PROPELLER. CARL BÜTOW, Nuremberg, Germany. Filed June 30, 1911. Serial No. 636,212. (Cl. 115—46.)



1. A propeller-blade comprising a sheet of flat material having its lesser end bifurcated, each furcation of said sheet being gradually tapered to a point, and inclosing an aperture of substantially oval shape, the said furcations being adapted to be secured to the nave of a propeller in such relation that while the greater portion of the sheet of material stands perpendicularly to the axis of the nave the pointed end surfaces of the furcations are on planes parallel to said axis.

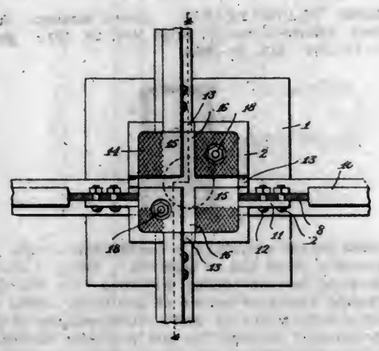
2. A propeller, each blade of which when spread upon a plane has one end bifurcated and incloses an aperture of substantially oval shape, both furcations of each blade being tapered to a point and adapted to be secured to the nave in such a manner that the plane of the furcations is gradually more and more inclined toward the nave and the points of the said furcations lie flat on the nave.

3. A propeller with two or more blades, each blade of which when spread upon a plane has one end bifurcated so as to inclose an aperture of substantially oval shape, each of the furcations being tapered to a point and adapted to be secured to the nave in such a manner that the furcations are more and more inclined toward the nave and the points of the said furcations lie flat on the nave.

4. A propeller with two or more blades, each of which when spread upon a plane has one end bifurcated and incloses an aperture of substantially oval shape, each

furcation of each blade being tapered to a point and adapted to be secured to the nave in such a manner that the generatrix in the middle of each blade and the generatrix in both points of the same blades are at right angles one to another.

1,015,541. RAILWAY-CROSSING. COLUMBUS H. CHRISTIAN, Atlanta, and EARL H. HUTCHESON, Augusta, Ga. Filed July 10, 1911. Serial No. 637,823. (Cl. 104—40.)



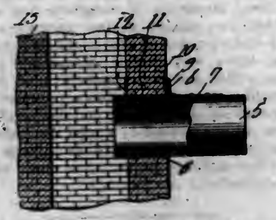
1. In a railway crossing, a base-plate, a seat-box integral with the base-plate provided with a central opening in its bottom and having openings in its side-walls, a flange-block fitted in the seat-box provided with rail-treads on its upper surface, a stud projecting from the under side of the flange-block and fitting in the central opening in the bottom of the seat-box, rails resting at their ends on the base-plate forming with the rail-treads on the flange-block continuous tracks through the openings in the side-walls of the seat-box, and means for securing the ends of the rails in place.

2. In a railway crossing, a base-plate, a seat-box on said base-plate integral with the same with openings in its walls to receive the ends of rails, rails with square-cut ends entering said openings in the walls of the seat-box, spurs projecting from the walls of the seat-box secured to the ends of the rails, a flange-block fitted in said seat box provided with intersecting treads on its face to form continuations of the treads of the rails and having flange-grooves adjacent to the treads, and a stud projecting from the under side of the flange-block and engaging the bottom of the seat-box.

3. In a railway crossing, a base-plate, a seat-box on said base-plate integral with the same with its wall having an opening formed of a groove to receive the base of a rail, a slot extending vertically upward to receive the web of the rail and a recess at the top of the slot to receive the crown of the rail, a rail having its end cut-square across engaging said opening, means for securing the end of the rail to the seat-box, a flange-block seated in said seat-box having intersecting treads on its face to form continuations of the treads of the rails attached to the seat-box, and a stud projecting from the under side of the flange-block into the bottom of the seat-box.

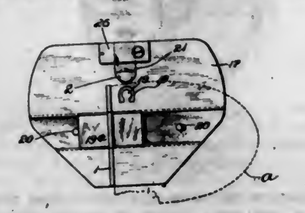
4. In a railway crossing, a base-plate, a seat-box on said base-plate integral with the same with its wall having an opening formed of a horizontal groove to receive the base of the rail, a slot extending vertically upward from the horizontal groove to receive the web of the rail and a recess at the upper end of the vertical slot to receive the crown of the rail, a rail with a square-cut end entering said opening, a spur projecting outwardly from the wall of the seat-box and attached to the rail, and a flange-block seated in said seat-box having intersecting treads on its face to form continuations of the treads of the rails attached to the seat-box.

1,015,542. STOVEPIPE-LOCK. CLYDE F. COLLIER, Lakeville, Ohio, assignor of one-half to John C. Lake, Big Prairie, Ohio. Filed July 27, 1911. Serial No. 640,850. (Cl. 126—318.)



The combination with a chimney having an opening therein, of a member passing through the said opening formed of a strip of metal having angularly bent portions at the ends thereof having inward tensions to engage the outer and inner faces of the wall of the chimney and having a tongue bent back from the outer end thereof, a stove pipe inserted through the said opening, and a lip secured to the stove pipe adapted to pass behind the said tongue to secure the stove pipe against longitudinal movement.

1,015,543. PROTECTOR-SETTING MACHINE. BARTHOLOMEW J. CONLON, Lawrence, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 5, 1901. Serial No. 77,663. (Cl. 1—41.)



1. The combination with a work-support, a gage co-operating with the forward portion of the flank of a heel top-lift, and a breast-gage reversible with relation to the driving-point to enable opposite flanks of a top-lift to be presented respectively at the same driving-point.

2. The combination with a work-support, of a gage co-operating with the forward portion of the flank of a heel top-lift and yielding to the expansion of the stock which results from the setting operation, and a breast-gage reversible with relation to the driving-point to enable opposite flanks of a top-lift to be presented respectively at the same driving-point.

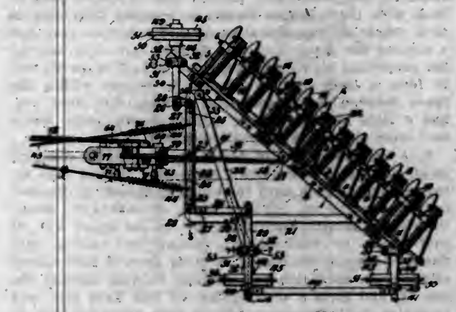
3. The combination with a work-support of a breast-gage movable into reverse relations with respect to the driving-point in such machine to enable opposite flanks of a heel top-lift adjacent the breast thereof to be presented, respectively, at one and the same driving point.

4. In a protector-setting machine, in combination, a work-support, and a gage having opposite surfaces to co-operate alternately with the edge of a heel top-lift, and movable into opposite positions relative to the driving-point to present the said surfaces successively in position with relation to the said driving-point.

5. In a protector-setting machine, in combination, the work-support, and a stop located adjacent the driving-point to engage with the breast of a heel top-lift to locate the angle at one end of the said breast in position to receive a proector, the said stop having reversely disposed working surfaces, and being transversely reversible relative to the driving-point to present the said working surfaces alternately in position for action.

[Claims 6 to 13 not printed in the Gazette.]

1,015,544. DISK PLOW. OSCAR MCGEDDES COX, Plainview, Tex. Filed May 4, 1910. Serial No. 559,278. (Cl. 97—30.)



1. The combination with a supporting frame provided with a diagonally arranged beam and plows carried thereby, of a lever mounted on the frame and arranged to be coupled to a traction engine, a supporting wheel at one end of the diagonal frame and provided with a carrying standard pivotally mounted on the same end of the diagonal beam, a second supporting wheel provided with a carrying standard pivotally mounted on the other end of the beam, the wheels projecting from relatively opposite sides of the beam, a third supporting wheel intermediate of the first named wheels and on the same side of the frame as the second wheel, said third wheel having a carrying standard pivotally mounted on the frame, a lever fast to each standard, a connecting bar between the corresponding ends of the levers of the second and third wheels, the lever of the third wheel extending beyond the standard on the side thereof remote from the portion of the lever connected to the lever of the second wheel, and link connections between the lever mounted on the frame and the levers connected to the standards of the first and third named wheels, the link connection to the lever of the third wheel being to that portion of the lever remote from the portion connected to the lever of the second wheel.

2. The combination with a supporting frame provided with a diagonally arranged beam and plows carried thereby, of a lever mounted on the frame and arranged to be coupled to a traction engine, a supporting wheel at one end of the diagonal frame and provided with a carrying standard pivotally mounted on the same end of the diagonal beam, a second supporting wheel provided with a carrying standard pivotally mounted on the other end of the beam, the wheels projecting from relatively opposite sides of the beam, a third supporting wheel intermediate of the first named wheels and on the same side of the frame as the second wheel, said third wheel having a carrying standard pivotally mounted on the frame, a lever fast to each standard, a connecting bar between the corresponding ends of the levers of the second and third wheels, the lever of the third wheel extending beyond the standard on the side thereof remote from the portion of the lever connected to the lever of the second wheel, and link connections between the lever mounted on the frame and the levers connected to the standards of the first and third named wheels, the link connection to the lever of the third wheel being to that portion of the lever remote from the portion connected to the lever of the second wheel, the mounting for the third wheel together with its standard and lever comprising a movable beam pivotally connected at the end remote from the wheel to the frame and provided with means for holding it in adjusted positions about its pivotal connection with relation to the supporting frame.

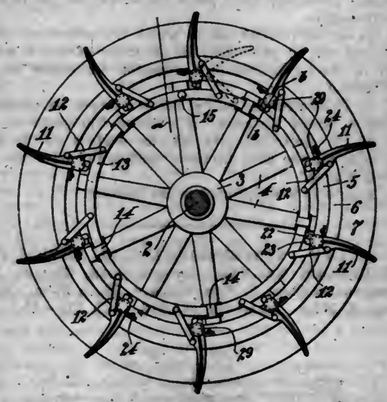
3. The combination of a supporting frame, a lever pivotally mounted thereon and provided with a series of perforations at its ends, a plurality of standards mounted in the supporting frame, and carrying guiding wheels, levers secured to the said standards and provided with series of perforations in their ends, links provided with series of perforations in their ends, and pivot pins inserted through alined perforations in the ends of the links and in the ends of the several levers.

4. The combination of a supporting frame, a gang of plows mounted thereon, a draw bar pivotally secured to the rear side of the frame and projecting through the front side thereof, retaining devices adjustably mounted in the front side of the supporting frame and bearing against opposite sides of the draw bar, a vibratory beam pivoted at one end to one side of the frame and projecting beyond the opposite side thereof, means for securing the said beam at various points of the said opposite side of the frame, standards mounted in the end of the said vibratory beam and in the ends of the rear beam of the supporting frame, guiding wheels carried by the said standards, and connections between the said several standards to simultaneously rotate the same.

5. The combination of a supporting frame, a gang of plows carried thereby and mounted diagonally upon the same, and supporting and guiding wheels at each side of the frame, said wheels being carried by the lower end of a standard, and said standard being passed through an opening of the frame and thereby rotatably mounted and free to move vertically, a cross bar seated in the upper end of each standard and constituting a thrust bearing for the wheel standard, bolts secured to the supporting frame on opposite sides of each standard and passed through each cross bar, and nuts on the ends of the bolts.

[Claims 6 to 12 not printed in the Gazette.]

1,015,545. CREEPING AND ANTISKIDDING DEVICE. WILLIAM S. CRAIG, St. Marys, Ohio. Filed Dec. 7, 1910. Serial No. 596,005. (Cl. 21—64.)

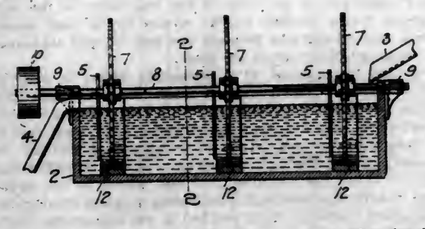


1. In a device of the type specified, the combination with a wheel, of a series of bearings comprising socket members mounted thereon, a corresponding series of bearings comprising hubs with ball portions engaging said socket members, a spur rigidly united to each of said hubs, a pintle projected through axial openings in the socket and hub members and whereon said hub has a rocking and longitudinal movement which enables the spur to have the necessary movement, and means for rocking all of the spurs simultaneously through the movement of the hub members of the bearings, substantially as specified.

2. An automobile wheel having the usual rim supporting a rubber tire, an oscillating ring mounted in bearings on the spokes of said wheel adjacent to said rim, a pin projecting laterally from said ring, socket bearings extending laterally from said rim, a series of spurs having heads provided with ball portions adapted to enter said sockets, said spurs being adapted to be projected beyond the circumference of the tire, a series of links connecting said spurs and said ring, headed pins penetrating the

heads of the spurs and their socket bearings, a resilient member mounted between each of the spurs and pin heads, thereby allowing the spurs to have a flexible lateral movement, a second resilient member engaging each spur head and adapted to hold the spurs in a set position, and means for shifting said ring to rock said spurs in a body to and from operative positions.

1,015,546. ELECTROLYTIC CELL. WILLIAM H. DAVIS, Boulder, Colo., assignor of one-half to George W. Teal, Boulder, Colo. Filed Dec. 14, 1910. Serial No. 597,238. (Cl. 204—15.)



1. In an electrolytic cell, a rotary, permeable, circular electrode, placed transversely to the flow of the electrolyte, and a filler occupying the space between the interior surface of the cell and the peripheral edge of the electrode.

2. In an electrolytic cell, a rotary shaft, and a plurality of permeable electrodes mounted thereon, transversely to the flow of the electrolyte.

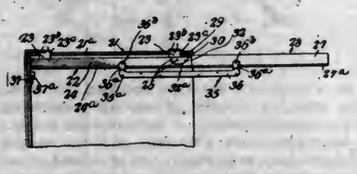
3. In an electrolytic cell, a permeable electrode having a rotary movement in a plane transverse to the flow of the electrolyte.

4. In an electrolytic cell in which the electrolyte flows from one end to the other, an electrode having a movement in the electrolyte in a direction transverse to the flow thereof.

5. In an electrolytic cell, a circular permeable electrode having a rotary movement in a plane transverse to the flow of the electrolyte, the interior surface of the said cell, adjacent the said electrode conforming with the periphery thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,015,547. SUSPENSION-FIXTURE DEVICE FOR WARDROBE-TRUNKS. GEORGE DORN, Chicago, Ill., assignor to Chas. T. Wilt, Chicago, Ill., a Firm. Filed Aug. 3, 1910. Serial No. 575,215. (Cl. 211—16.)



1. A trunk or compartment having an end wall, a suspension device within said trunk and secured to said end wall, said suspension device including a fixed rail and suspension plates rigidly connected to said fixed rail, said suspension plates having straps which project through slots in the end wall of said trunk and are bent in opposite direction down against the outer surface of said end wall and secured thereto.

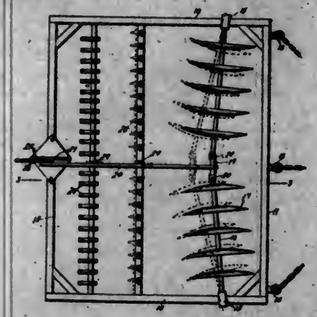
2. A suspension fixture device for a trunk or compartment, embracing a fixed rail comprising flanged bars arranged back to back with their flanges oppositely disposed to form tracks on opposite sides of said rail, means for rigidly securing said fixed rail to the upper wall of said trunk or compartment, means for spacing said flanged bars and for rigidly securing them together in said spaced relation, an extension rail adapted to abut against the end of, and form a prolongation of said fixed rail, said extension rail comprising flanged bars arranged back to back with their flanges turned in opposite directions to form tracks on opposite sides of said extension rail, and a spacing bar separating said flanged bars, said spacing bar projecting beyond the inner end of said extension rail to form a lever member adapted to engage within the space between the flanged bars forming said fixed rail, and a rigid part carried by said fixed rail under which said lever member is adapted to engage.

3. A suspension fixture device for a trunk or compartment, embracing a fixed rail comprising flanged bars arranged back to back with their flanges oppositely disposed to form tracks on opposite sides of said rail, means for rigidly securing said fixed rail to the upper wall of said trunk or compartment, means for spacing said flanged bars and for rigidly securing them in said spaced relation, an extension rail adapted to abut against the end of, and form a prolongation of said fixed rail, said extension rail comprising flanged bars arranged back to back with their flanges turned in opposite directions to form tracks on opposite sides of said extension rail, and a spacing bar separating said flanged bars, said spacing bar projecting beyond the inner end of said extension rail to form a lever member adapted to engage within the space between the flanged bars forming said fixed rail, upper and lower rigid parts carried by said fixed rail between which said lever member is adapted to engage, and interlocking parts carried by said lever member and said fixed rail adapted to prevent said extension rail from being withdrawn longitudinally from said fixed rail.

4. A suspension fixture device for a trunk or compartment embracing a fixed rail comprising flanged bars arranged back to back with their flanges oppositely disposed to form tracks on opposite sides of said rail, means for rigidly securing said fixed rail to the upper wall of said trunk or compartment including a suspension plate located near the forward end of said fixed rail having its lower end secured between the flanged bars comprising said fixed rail, means for rigidly securing said flanged bars in spaced relation, an extension rail adapted to abut against the end of, and to form a prolongation of said fixed rail, said extension rail comprising flanged bars arranged back to back with their flanges turned in opposite directions to form tracks on opposite sides of said extension rail, and a spacing bar projecting beyond the inner end of said extension rail to form a lever member adapted to engage within the space between the flanged bars forming said fixed rail and to engage under the lower end of said suspension plate, and interlocking parts carried by said lever member and said fixed rail adapted to prevent said extension rail from being withdrawn longitudinally from said fixed rail.

5. A suspension fixture device for a trunk or compartment embracing a fixed rail comprising flanged bars arranged back to back with their flanges oppositely disposed to form tracks on opposite sides of said rail, means for rigidly securing said fixed rail to the upper wall of said trunk or compartment, including a suspension plate located near the forward end of said fixed rail having its lower end secured between the flanged bars comprising said fixed rail, means for rigidly securing said flanged bars in spaced relation, an extension rail adapted to abut against the end of, and to form a prolongation of said fixed rail, said extension rail comprising flanged bars arranged back to back with their flanges turned in opposite directions to form tracks on opposite sides of said extension rail, and a spacing bar separating said flanged bars, said spacing bar projecting beyond the inner end of said extension rail to form a lever member adapted to engage within the space between the flanged bars forming said fixed rail, the lower end of said suspension plate and the inner end of said lever member being provided with joint forming, engaging edges, and interlocking parts carried by said lever member and said fixed rail adapted to prevent said extension rail from being withdrawn longitudinally from said fixed rail.

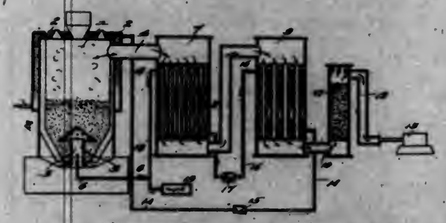
1,015,548. HARROW. ALBERT LEO FLATTUM, Butler, S. D. Filed Mar. 13, 1911, Serial No. 614,086. Renewed Nov. 2, 1911. Serial No. 658,231. (Cl. 55—81.)



1. In a harrow, a frame, hinged bars extending across said frame and having their ends slidably connected to the frame, a tooth bar rotatably mounted on said frame, earth working elements carried by said bars, and adjusting means for simultaneously moving the inner ends of said hinged bars in the direction of the length of the frame, and rotating the tooth bar.

2. In a harrow, a frame, including longitudinally disposed side members, a pair of guides swiveled on said side members, bars each slidably mounted in one of said guides, means to prevent the rotation of said bars in said guides, a link connecting the inner ends of said bars, bearings on said side members, a tooth bar journaled in said bearings, a rock arm on said tooth bar, a latch lever and quadrant, a link connecting said rock arm and latch lever, and a second link connecting the link between the ends of the first mentioned bars and said latch lever.

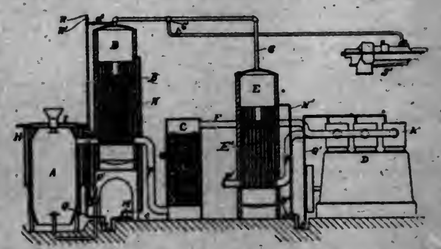
1,015,549. GAS-GENERATING PLANT. HANS FOERSTERLING, Perth Amboy, N. J., assignor to Roessler and Hasslacher Chemical Company, a Corporation of New York. Filed Apr. 6, 1907. Serial No. 366,722. (Cl. 48—67.)



1. In an apparatus for the continuous production of producer gas and steam in excess of the requirements of the producer, a gas producer, a gas chamber in the upper portion thereof, a water-jacket surrounding the upper portion of the gas producer and forming a primary water heater, a boiler adjacent thereto but entirely separate therefrom and adapted to generate steam in excess of the producer requirements, a secondary water heater, an uninterrupted passage-way for the hot gases from the fuel bed to the gas chamber of said producer and from the gas chamber to said boiler, means for conducting gases from said boiler to said secondary water heater, a connection from said water-jacket to said secondary water heater, a connection from the secondary water heater to the boiler, means for returning a portion of said steam to said producer and means for leading off the remainder of said steam.

2. In an apparatus for the continuous production of producer gas and steam in excess of the requirements of the producer, a gas producer, a gas chamber in the upper portion thereof, a water-jacket surrounding the upper portion of the gas producer and lying wholly above the fire zone, said water-jacket comprising a primary water heater, a boiler adjacent thereto but entirely separate therefrom and adapted to generate steam in excess of the producer requirements, a secondary water heater, an uninterrupted passage-way for the hot gases from the fuel bed to the gas chamber of said producer and from the gas chamber to said boiler, means for conducting the gases from said boiler to said secondary water heater, a connection from the water-jacket to said secondary water heater, a connection from the secondary water heater to the boiler, means for returning a portion of said steam to said producer and means for leading off the remainder of said steam.

1,015,550. METHOD OF AND APPARATUS FOR GENERATING GAS, STEAM, AND POWER. HANS FOERSTERLING, Perth Amboy, N. J., assignor to Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Oct. 21, 1909. Serial No. 523,925. (Cl. 60—1.)



1. The method substantially as herein described for the continuous generation of producer gas, steam and power which consists in generating gas from fuel in a producer, preheating water and air by the hot gas so generated without substantially reducing the temperature of said gas, subsequently passing said gas through a boiler separate from the producer and simultaneously cooling said gas and generating steam in said boiler in excess of the requirements of the producer, supplying the preheated water to the boiler, supplying the preheated air to the producer, returning a portion of the steam generated in the boiler to the producer and leading off the remainder.

2. The method substantially as herein described for the continuous generation of producer gas, steam and power which consists in generating gas from fuel in a producer, preheating water and air by the hot gas so generated without substantially reducing the temperature of said gas, subsequently passing said gas in a deflected path through a boiler separate from the producer and simultaneously cooling said gas and generating steam in said boiler in excess of the requirements of the producer, supplying the preheated water to the boiler, supplying the preheated air to the producer, returning a portion of the steam generated in the boiler to the producer and leading off the remainder.

3. The method substantially as herein described for the continuous generation of producer gas, steam and power which consists in generating gas from fuel in a producer, preheating water and air by the hot gas so generated without substantially reducing the temperature of said gas, subsequently passing said gas through a boiler separate from the producer and simultaneously cooling said gas and generating steam in said boiler in excess of the requirements of the producer, supplying the preheated water to the boiler, supplying the preheated air to the producer, returning a portion of the steam generated in the boiler to the producer, leading off the remainder of said steam, burning the cooled gas in a gas engine and utilizing the hot products of said combustion for the further production of steam.

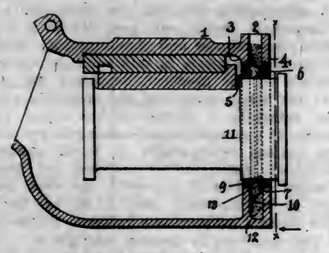
4. The method substantially as herein described for the continuous generation of producer gas, steam and power

which consists in generating gas from fuel in a producer, preheating water and air by the hot gas so generated without substantially reducing the temperature of said gas, subsequently passing said gas through a boiler separate from the producer and simultaneously cooling said gas and generating steam in said boiler in excess of the requirements of the producer, supplying the preheated water to the boiler, supplying the preheated air to the producer, returning a portion of the steam generated in the boiler to the producer, leading off the remainder of said steam, burning the cooled gas in a gas engine, preheating water by the heat from the hot products of said combustion, supplying said preheated water to a second boiler and passing said hot products of combustion through said second boiler for the further production of steam.

5. The method substantially as herein described for the continuous generation of producer gas, steam and power which consists in generating gas from fuel in a producer, preheating water and air by the hot gas so generated without substantially reducing the temperature of said gas, subsequently passing said gas in a deflected path through a boiler separate from the producer and simultaneously cooling said gas and generating steam in said boiler in excess of the requirements of the producer, supplying the preheated water to the boiler, supplying the preheated air to the producer, returning a portion of the steam generated in the boiler to the producer, leading off the remainder of said steam, burning the cooled gas in a gas engine, preheating water by the heat from the hot products of said combustion, supplying said preheated water to a second boiler and passing said hot products of combustion through said second boiler in a deflected path for the further production of steam.

[Claims 6 to 10 not printed in the Gazette.]

1,015,551. DUST-GUARD FOR CAR-AXLE BOXES. HARRY C. GAMAGE, New York, N. Y., assignor to D. P. Company, a Corporation of New Jersey. Filed Apr. 13, 1909. Serial No. 489,708. (Cl. 64—22.)



1. The combination with an axle and a journal box receiving the same, the latter having a dust guard chamber at its outer portion, of a flat resilient plate having a large central opening to receive the axle and weakening the plate intermediate its upper and lower edges to permit buckling of the plate body, and integral resilient flanges curving laterally from the upper and lower edges of the plate and extending continuously from the outer to the inner edges of the plate and engaging the inner wall of the guard chamber, and holding the body of the plate resiliently against the outer wall of the guard chamber, said flanges tending to cause a resilient buckling action of the body of the plate.

2. The combination with an axle and a journal box receiving the same, the latter having a dust guard chamber at its outer portion with the entrance thereto located at the top of the box, of a flat resilient plate disposed in said chamber and having a central opening through which the axle passes, a circumferential flange projecting laterally from the plate at the periphery of said opening, and integral flanges continuous from the outer to the inner edges of the plate and curving laterally and outwardly with respect to the axle opening, but extending inwardly from the upper and lower edges of the plate, and terminating in portions substantially parallel with the plane of the body of the plate, said parallel portions being in yielding contact with the inner wall of the guard chamber while the body of the plate is held in similar yielding contact with the outer wall of said chamber by said flanges, the upper flange aforesaid practically closing the entrance to the guard chamber and said lower flange extending from the body of the plate at the same side as said peripheral flange.

3. A dust guard for car axle boxes, comprising a single resilient plate having a central opening adapted to receive the axle, and integral flanges extending across the upper and lower edges of said plate adapted to cause a buckling action thereof when said guard is placed in position in the car axle box whereby the same is held in position therein.

1,015,552. WATER-METER. ERNEST E. GAMON, Newark, N. J. Original application filed Mar. 3, 1909, Serial No. 481,083. Divided and this application filed Aug. 12, 1909. Serial No. 512,513. (Cl. 73—37.)

1. In a hot water meter, the combination of a turbine and means therefor controlled by the temperature of the water for varying the speed of said turbine, comprising compound blades of materials having different coefficients of expansion fixed at one end to the turbine disk near its outer edge.

2. In a hot water meter, the combination of a turbine, compound blades therefor, the component parts of said blades being differently affected by varying temperatures of the water, whereby the speed of said turbine is varied.

3. In a hot water meter, the combination of a turbine, compound blades therefor, each of said blades being secured at one end only, the other ends being movable to vary the angle of said blades with respect to the radius of the turbine.

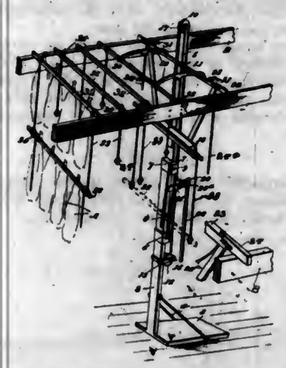
4. In a hot water meter, the combination of a turbine, compound blades therefor made up of materials having different coefficients of expansion, means for securing one end of each of said blades, the other ends being free to move when variations in the temperature of the water cause unequal expansion of the component parts of said blades, whereby the speed of the turbine is varied.

1,015,553. TOBACCO HANGING AND HOISTING APPARATUS. OLUS GATES, Martin, Tenn. Filed Apr. 21, 1910, Serial No. 556,778. Renewed Dec. 12, 1911. Serial No. 665,377. (Cl. 131—21.)

1. A tobacco hoisting device of the character described, comprising a standard, a hoisting rope supported on the standard, a tobacco stick supporting member attached to the free end of the hoisting rope, hooks projecting from the supporting member and adapted to engage a tobacco carrying stick, and a centering device carried upon the upper end of the standard and having downwardly and inwardly inclined sides adapted to engage with the tier beams of a tobacco barn.

2. In a device for hanging tobacco, a standard having a pulley at its upper end, a rope passing over said pulley and carrying a tobacco stick supporting member at its free end, said supporting member being provided with spaced hooks, a centering bar pivoted to the face of the standard below the pulley thereof, and downwardly and inwardly inclined guide bars attached to the ends of said centering bar.

3. A tobacco hanging device comprising a standard mounted on a base and having a pulley at its upper end, a hoisting rope passing over the pulley, a tobacco stick supporting means attached to the free end of the hoisting rope, a centering bar pivoted to the face of the standard below the pulley thereof and having downwardly and inwardly extending guide bars attached to its ends, the extremity of the centering bar being provided with pivoted terminal members.



4. An apparatus of the character described, comprising a base and a standard formed in two sections sliding upon each other, the lower section being hinged to the base, guides on each of said sections slidably engaging the other section, means for raising the upper section relatively to the lower section and holding it from any adjusted position, a pulley on the end of the upper section, a hoisting rope passing over the pulley, a transversely extending tobacco stick supporting member on the free end of the hoisting rope, a centering bar pivoted to the face of the upper section of the standard below the pulley, downwardly and inwardly extending guides on the centering bar, and a latch for holding the centering bar in a horizontal position.

5. The combination with tobacco supporting devices, consisting of a series of transverse supporting sticks and oppositely disposed connecting wires between the supporting sticks, of a hoisting device therefor consisting of a standard formed of upper and lower sections, one vertically adjustable upon the other, a pulley at the upper end of the upper section of the standard, means for engaging the sections with each other in any adjusted position, a windlass mounted on the lower section, a hoisting rope passing over the pulley and connected to the windlass, a tobacco stick supporting member on the free end of the hoisting rope provided with spaced hooks adapted to engage a tobacco supporting stick, and a centering device mounted upon the face of the uppermost section of the standard and having downwardly and inwardly extending guides adapted to engage between the tier beams and a tobacco warehouse.

[Claims 6 to 13 not printed in the Gazette.]

1,015,554. PROCESS FOR HARDENING STEEL CASTINGS. JOHN W. GEBHARD, Muncie, Ind., assignor to Armor Steel & Foundry Company, Chicago, Ill., a Corporation of Arizona. Filed May 15, 1909. Serial No. 496,125. (Cl. 22—189.)

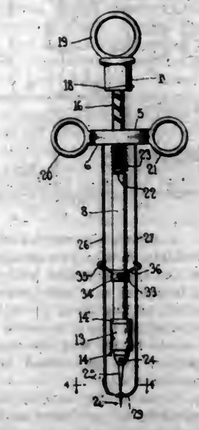
1. In the art of making steel castings, a paste composed of a finely ground manganese, finely ground chrome and a liquid binder adapted to be applied to the face of the mold from which the casting is produced.

2. In the art of making steel castings, a paste composed of finely ground manganese, finely ground chrome and an oily binder adapted to be applied to the face of the mold from which the casting is produced.

3. In the art of making steel castings, a paste composed of finely ground manganese, and finely ground chrome and a vegetable oil binder.

4. In the art of making steel castings, a paste composed of finely ground manganese, finely ground chrome and an oil binder, in substantially the following proportions: Manganese 20 pounds; chrome 8 ounces; oil 5 ounces.

1,015,555. SCREW-DRIVER. MUNSON D. GEE and JAMES A. FIELDS, Mount Olive, Ind. Filed Sept. 24, 1909. Serial No. 519,376. (Cl. 145—52.)



1. The herein described tool comprising a supporting plate, a shaft mounted for longitudinal and also for revoluble movement therein and provided with a tool, holders connected to said plate, a collar connected to said shaft for longitudinal movement therewith and to turn with respect thereto and links pivotally connected to said collar and to said holders for the purpose set forth.

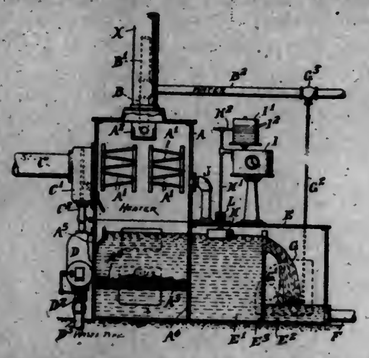
2. The herein described tool comprising a supporting plate, a shaft comprising upper and lower sections, the former mounted in said supporting plate for longitudinal and revoluble movement, said upper section being provided with a spiral groove, an operating sleeve having a pin for engagement with said groove, the lower end of said upper section formed with a ratchet face, a similar ratchet face formed upon the upper face of the lower section, a coupling sleeve for said sections, both of said sections being adapted to rotate in the same direction upon downward pressure upon the operating sleeve, the upper section being capable of independent rotation upon the release of pressure upon said sleeve, a collar connected to the last mentioned shaft, holders connected to the supporting plate, means connecting said collar and holders to contract the same upon longitudinal movement of the upper shaft section.

1,015,556. COMBINATION WATER HEATING AND MEASURING APPARATUS. GEORGE H. GIBSON, Montclair, N. J., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., a Firm. Filed Feb. 1, 1911. Serial No. 605,879. (Cl. 62—31.)

1. In combination, an open water heater comprising a tank and a filter screen located in the lower end thereof, a measuring chamber attached to said tank, a weir dividing said measuring chamber into two compartments, one of which is open to said tank below said screen, and provisions for measuring the flow of water over the weir.

2. In combination a measuring receptacle, a weir located therein and dividing it into two compartments, and an open water heater of the type specified, with a hot water discharge connection to one of said compartments, a service discharge connection leading from the other compartment, means responsive to the rise and fall of the water level in said other compartment for controlling the

admission of water to be heated to said heater, and provisions for measuring the flow of water over the weir.



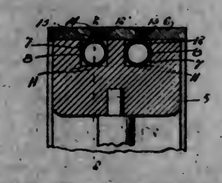
3. In combination, a measuring receptacle, a weir located therein and dividing it into two compartments, an open water heater of the type specified with a hot water discharge connection to one of said compartments, a service discharge connection leading from the other compartment, a steam pressure equalizing connection between the steam space of the water heater and the steam space of the measuring receptacle, and provisions for measuring the flow of water over the weir.

4. In combination, a measuring receptacle, a weir located therein, and dividing it into inlet and outlet compartments, and an open water heater of the type specified with a hot water discharge connection to said inlet compartment and an overflow connection limiting the height of the water level in said heater, a service discharge connection leading from said outlet compartment, said outlet compartment having a water receiving space below the lowermost level of flow over said weir more than sufficient to hold all the water which can accumulate in said inlet compartment and said tank between said last mentioned level and the overflow level of the heater, and provisions for measuring the flow of water over the weir.

5. In combination, a measuring receptacle, a weir located therein, and dividing it into inlet and outlet compartments, and an open water heater of the type specified with a hot water discharge connection to said inlet compartment and an overflow connection limiting the height of the water level in said heater, a discharge connection leading from said outlet compartment, said outlet compartment having a water receiving space below the lowermost level of flow over said weir more than sufficient to hold all the water which can accumulate in said inlet compartment and said tank between said last mentioned level and the overflow level of the heater, means responsive to the rise and fall of the water level in said outlet compartment for controlling the admission of water to be heated to said heater, and provisions for measuring the flow of water over the weir.

[Claims 6 and 7 not printed in the Gazette.]

1,015,557. WHEEL-RIM. HENRY GILLETTE, Belpre, Kans. Filed Aug. 17, 1911. Serial No. 644,562. (Cl. 21—87.)

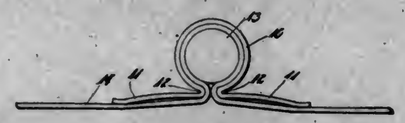


1. A wooden wheel rim having a circumferential groove formed in its outer face, and a continuous pipe constituting an oil reservoir disposed in said groove and formed with a plurality of perforations in its inner face.

2. A wooden wheel rim having a circumferential angular groove formed in its outer face, and a continuous pipe constituting an oil reservoir fitting snugly within the groove and bearing against the side walls thereof, said pipe being formed with a plurality of perforations in its inner face which communicate with the inner portion of the groove and the interior of the pipe.

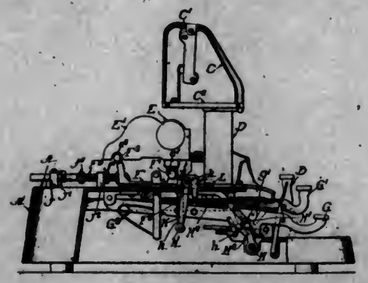
3. A wooden wheel rim having a pair of circumferential grooves formed in its outer face and spaced equidistant from the center line of the rim, and a continuous pipe constituting an oil reservoir disposed in each of said grooves and formed with a plurality of perforations in its inner face.

1,015,558. MEANS FOR ATTACHING CONVEYER-SLATS. GEORGE E. GLISAR, Sawyer, N. D. Filed Aug. 30, 1910. Serial No. 579,769. (Cl. 193—4.)



A flight attachment for conveyer belts comprising a single plate of resilient metal having a tubiform central portion provided with outwardly extending wings curved upwardly intermediate their longitudinal edges and producing outer spring bearing edges, a circular rod disposed between the material of the conveyer confined within the tubiform central portion, substantially as and for the purposes set forth.

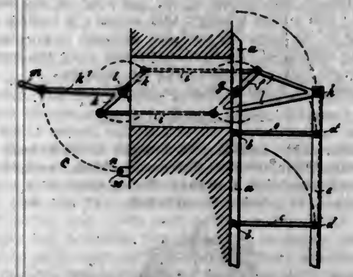
1,015,559. TYPE-WRITING MACHINE. GEORGE J. GRIFFITHS, Woodstock, Ill., assignor to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1910. Serial No. 598,580. (Cl. 197—72.)



1. In a typewriting machine, the combination with a hollow machine base consisting of a horizontal top wall and a marginal side wall, of a paper-carriage, a shift-frame on which the paper-carriage has endwise movement for letter-spacing and which is located above the machine base and movable thereon to bring the paper into either one of a plurality of printing positions, arms located at the opposite ends of the shift-frame, said arms being rigid with the shift-frame and depending through holes in said top wall into the interior of the hollow machine base, and suspension links or hangers pivoted at their lower ends to the lower ends of said depending arms and pivotally connected at their upper ends with the said machine base at or near the top of the same.

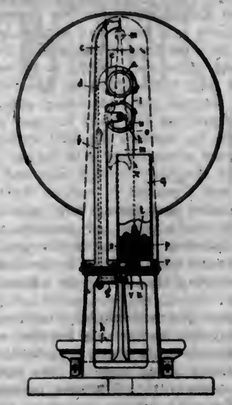
2. In a typewriting machine, the combination with a hollow machine base consisting of a horizontal top wall and a marginal side wall, of a paper-carriage, a shift-frame on which the paper-carriage has endwise movement for letter-spacing and which is located above the machine base and movable thereon to bring the paper into either one of a plurality of printing positions, arms located at the opposite ends of the shift-frame, said arms being rigid with the shift-frame and depending through holes in the said top wall into the interior of the hollow machine base, supporting plates attached to the said top wall of the base, and suspension links or hangers pivoted at their lower ends to the lower ends of said depending arms and at their upper ends to said supporting plates.

1,015,560. FIRE-ESCAPE. ALOIS HANSEL, Lichtenberg, Germany. Filed June 15, 1911. Serial No. 633,413. (Cl. 228—4.)



A fire-escape for buildings, comprising in combination, a fixed side rail on the outer wall of the building near a row of windows, pivotal steps with one end connected at equal distances to said fixed side rail, a movable side rail connected to the other ends of said pivotal steps, a triangular lever fulcrumed on said fixed side rail near the top end thereof and pivotally connected with its outer end to the top end of said movable side rail, pivotal links at one end connected to the inner ends of said triangular lever, a double-armed lever fulcrumed on the inner wall of the building and with its ends connected to the other ends of said pivotal links, an integral handle on said double-armed lever adapted to be operated from within the building and designed when depressed to fold said side rails upon each other and when raised to unfold the same, means to arrest said handle in its depressed position, substantially as and for the purpose set forth.

1,015,561. AUTOMATIC WEIGHING APPARATUS. ERIK G. HEDMAN, Stockholm, Sweden. Filed Feb. 28, 1911. Serial No. 611,432. (Cl. 73—29.)



1. In a weighing apparatus, a load carrying roller, a flexible connector which transmits the pull of the load to the load-carrying roller, a supporting flexible connector along which the load-carrying roller rolls as it is turned by the load, a support for carrying said supporting flexible connector, indicating-mechanism, a roller to actuate said mechanism, a flexible connector attached to the circumference of the load-carrying roller and passing around the periphery of the indicating-mechanism actuating-roller and turning such roller from the load-carrying roller, and means by which the indicating-mechanism actuating-roller is caused to turn back again on the return movement of the load-carrying roller.

2. In a weighing apparatus, a load-carrying roller, a flexible connector which transmits the pull of the load to the load-carrying roller, a supporting flexible connector along which the load-carrying roller rolls as it is turned by the load, a support for carrying said supporting flexible connector, indicating-mechanism, a roller to actuate said mechanism, a flexible connector attached to the circumference of the load-carrying roller and passing around the periphery of the indicating-mechanism actuating-roller and turning such roller from the load-carrying roller, means by which the indicating-mechanism actuating-roller is caused to turn back again on the return movement of the load-carrying roller, and means by which the axis of the indicating-mechanism actuating-roller is maintained in a constant position.

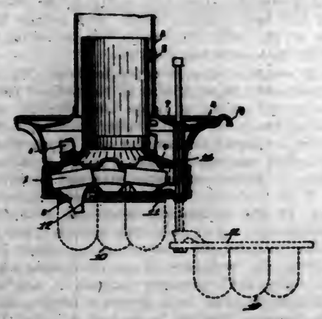
3. In a weighing apparatus, a load-carrying roller, a flexible connector which transmits the pull of the load to a load-carrying roller, a supporting flexible connector along which the load-carrying roller rolls as it is turned by the load, a support for carrying said supporting flexible connector, indicating-mechanism, a roller to actuate said mechanism, a flexible connector attached to the circumference of the load-carrying roller and passing around the periphery of the indicating-mechanism actuating-roller and turning such roller from the load-carrying roller, a second flexible connector and means by which it is suspended from the periphery of the indicating-mechanism actuating-roller, said connector carrying a counter-weight and pulling such roller in a direction tending to revolve it in the opposite direction to that in which it is turned from the load-carrying roller.

4. In a weighing apparatus, a load-carrying roller, a flexible connector which transmits the pull of the load to the load-carrying roller, a supporting flexible connector along which the load-carrying roller rolls as it is turned by the load, a support for carrying said supporting flexible connector, indicating-mechanism, a roller to actuate said mechanism, a flexible connector attached to the circumference of the load-carrying roller and passing around the periphery of the indicating-mechanism actuating-roller and turning such roller from the load carrying roller, a second flexible connector, means by which it is suspended from the periphery of the indicating-mechanism actuating-roller, said connector carrying a counterweight and pulling such roller in a direction tending to revolve it in the opposite direction to that in which it is turned from the load-carrying roller, the pull of the counterweight acting upon the indicating-mechanism actuating-roller at a point farther from the axis of the roller than the point at which the load-carrying roller acts upon the indicating-mechanism actuating-roller and balancing the weight of the latter roller about the point at which the load-carrying roller acts thereupon whereby the axis of the indicating-mechanism actuating-roller tends to remain stationary and the weight of such roller and of the counterweight to be carried entirely by the load carrying roller.

5. In a weighing apparatus, a load-carrying roller, a flexible connector which transmits the pull of the load to the load-carrying roller, a supporting flexible connector along which the load-carrying roller rolls as it is turned by the load, a support for carrying said supporting flexible connector, indicating-mechanism, a roller to actuate said mechanism, a flexible connector attached to the circumference of the load-carrying roller and passing around the periphery of the indicating-mechanism actuating-roller and turning such roller from the load-carrying roller, a second flexible connector, means by which it is suspended from the periphery of the indicating-mechanism actuating-roller said connector carrying a counterweight and pulling such roller in a direction tending to revolve

it in the opposite direction to that in which it is turned from the load-carrying roller, the pull of the counterweight acting upon the indicating-mechanism actuating-roller at a point farther from the axis of the roller than the point at which the load-carrying roller acts upon the indicating-mechanism actuating-roller and balancing the weight of the latter roller about the point at which the load-carrying roller acts thereupon, whereby the axis of the indicating-mechanism actuating-roller tends to remain stationary, and the weight of such roller and of the counterweight to be carried entirely by the load-carrying roller, and a pin which passes through the indicating-mechanism actuating-roller to insure that the axis of such roller will remain in a constant position.

1,015,562. MANTLE-SUPPORT FOR GAS-LAMPS. ALFRED H. HUMPHREY, New York, N. Y. Filed Jan. 18, 1909. Serial No. 472,931. (Cl. 67—108.)



1. In a gas lamp, the combination with a chimney having an outwardly and downwardly projecting flange at its lower end; a plurality of burners grouped about said chimney and arranged through said flange with their tips below the same; separate mantles for said burners; a common support for said mantles; a supporting rod for said mantle support; a sleeve in which said rod is arranged to be vertically adjusted, said rod being provided with a pivot portion at its upper end and a guide portion at its lower end whereby pivotal movement of the mantle support is prevented until it has cleared the burner tips; and a guide to coact with said guide portion of said supporting rod whereby said support is guided to bring the mantles carried thereby into proper operative relation to the burner tips.

2. In a gas lamp, the combination with a chimney having an outwardly and downwardly projecting flange at its lower end; a plurality of burners grouped about said chimney and arranged through said flange with their tips below the same; separate mantles for said burners; a common support for said mantles; a supporting rod for said mantle support; and a sleeve in which said rod is arranged to be vertically adjusted, said rod being provided with a pivot portion at its upper end and a guide portion at its lower end whereby pivotal movement of the mantle support is prevented until it has cleared the burner tips.

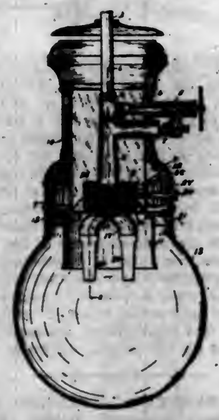
3. In a gas lamp, the combination with a plurality of burners; separate mantles for said burners; a common support for said mantles; a supporting rod for said mantle support, and a sleeve in which said rod is arranged to be vertically and pivotally adjusted, said rod being provided with a guide portion at its lower end whereby pivotal movement of the mantle support is prevented until it has cleared the burner tips, and with a part coacting with the sleeve to pivotally support the rod in its lowered position.

4. In a gas lamp, the combination with a burner; a mantle for said burner; a support for said mantle; a supporting rod for said mantle support; and a sleeve in which said rod is arranged to be vertically adjusted, said rod being provided with a pivot portion at its upper end and with a guide portion at its lower end, said sleeve being adapted to coact with said guide portion whereby pivotal movement of the mantle support is prevented until it has cleared the burner tips.

5. In a gas lamp, the combination with a plurality of burners; separate mantles for said burners; a common support for said mantles; a vertically and pivotally adjustable supporting rod for said mantle support; a means for preventing pivotal movement of said mantle supporting rod until the mantle support has been lowered to clear the burner tips, said means being adapted to be automatically disengaged by the lowering of the mantle support; and means whereby said support is guided when adjusted to its operative position, adapted to prevent the complete raising of the mantle support until the mantles are brought into alinement with the burners.

[Claims 6 to 8 not printed in the Gazette.]

1,015,563. GAS-LAMP. FREDERICK J. HUMPHREY and HUBERT R. HUMPHREY, Kalamazoo, Mich., assignors to General Gas Light Company, Kalamazoo, Mich. Filed Feb. 15, 1911. Serial No. 608,693. (Cl. 67—94.)



1. In a gas lamp, the combination with the gas supply pipe, of a chimney casing; a chimney comprising a horizontally-disposed deflector plate at the lower end of said casing, a flue above said plate and a skirt portion below said plate; an inverted burner comprising a member disposed above said plate and having a barrel-like screen chamber and an inlet tube projecting upwardly from said screen chamber through the said casing, said chamber being open at one end; an end piece for said burner chamber, and a burner tip member disposed within said chimney skirt; a screen mounted on said burner chamber end piece; and a rod arranged through said end piece to engage the same and threaded to engage the inner end of said burner chamber, said casing being provided with an opening through which said rod projects whereby the screen may be inserted or removed through said casing and said chamber end piece clamped in position or released without disassembling the burner or adjustment of the casing.

2. In a gas lamp, the combination of an inverted burner comprising a member having a barrel-like screen chamber and a mixing tube projecting upwardly therefrom, said screen chamber being open at one end and being provided with a plurality of burner passage openings, an end piece for said burner chamber, and a burner passage member having burner passage arms registering with the passage openings of said burner chamber, said arms being provided with burner tips; a screen mounted on said burner chamber end piece; and a rod arranged through said end piece and threaded to engage the inner end of said burner chamber to clamp the said end piece in position.

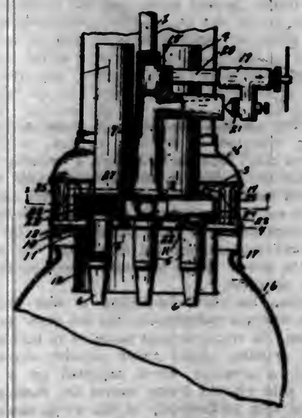
3. In a gas lamp, the combination of an inverted burner comprising a member having a barrel-like screen chamber and a mixing tube projecting upwardly therefrom, said screen chamber being open at one end, an end piece for said burner chamber; a screen mounted on said burner chamber end piece; and a rod arranged through said end piece and threaded to engage the inner end of said burner chamber to clamp the said end piece in position.

4. In a gas lamp, an inverted burner comprising a member having a barrel-like screen chamber and a mixing tube projecting upwardly therefrom, said screen chamber being open at one end and being provided with a plurality of burner passage openings, and a burner passage member having branching burner passage arms registering with the passage openings of said burner chamber mounted on said chamber, said arms being provided with burner tips; a closure for the open end of said screen chamber; and a cylindrical screen adapted to be introduced or removed from said chamber without disassembling the burner.

5. In a gas lamp, the combination with the gas supply pipe, of a chimney provided with a deflector plate at its lower end; an inverted burner comprising a member disposed above said plate and having a barrel-like screen chamber and a mixing tube projecting upwardly and centrally of said chamber, said chamber being provided with a plurality of passage openings; and a burner passage member having burner tips thereon disposed below said plate and secured to said member above said plate by a screw arranged between the tips.

[Claims 6 to 12 not printed in the Gazette.]

1,015,564. GAS-LAMP. FREDERICK J. HUMPHREY and HUBERT R. HUMPHREY, Kalamazoo, Mich., assignors to General Gas Light Company, Kalamazoo, Mich. Filed Feb. 15, 1911. Serial No. 608,694. (Cl. 67—94.)



1. In a gas lamp, the combination with the gas supply pipe, of a chimney casing; a chimney comprising a plurality of discharge flues; a deflector plate at the lower ends of said flues and a skirt portion below said flues, said deflector plate being extended beyond said skirt to provide a chimney flange, said casing being mounted on said flange; a burner comprising a member arranged above said plate and having a mixing tube disposed centrally of said flues, said mixing tube being provided with a laterally-projecting inlet arm at its upper end and with horizontal burner passage arms at its lower end provided with downwardly-projecting discharge nipples; burner tip members arranged below said deflector plate within the skirt portion of said chimney, said tip members being suspended from said passage arms; a gas supply pipe coupling on said burner member provided with an arm projecting laterally through said casing; and a valve therefor provided with a delivery nozzle delivering to the inlet arm of said mixing tube; burner screens; and holders therefor arranged in said passage arms, said holders being adapted to close the outer ends of said arms, said casing having openings therein above said flange through which said screen holders may be inserted or removed without adjustment of the casing or disassembling of the burners.

2. In a gas lamp, the combination with the gas supply pipe, of a chimney casing; a chimney comprising a plurality of discharge flues; a deflector plate at the lower ends of said flues and a skirt portion below said flues, said deflector plate being extended beyond said skirt to provide a chimney flange, said casing being mounted on said flange; a burner comprising a member arranged above said plate and having a mixing tube disposed centrally of said flues, said mixing tube being provided with a laterally-projecting inlet arm at its upper end and with horizontal burner passage arms at its lower ends and provided with downwardly-projecting discharge nipples; burner tip members arranged below said deflector plate within the skirt portion of said chimney, said tip members being suspended from said passage arms; a gas supply pipe coupling on said burner member provided with an arm projecting laterally through said casing; and a valve therefor provided with a delivery nozzle delivering to the inlet arm of said mixing tube; burner screens; and holders therefor arranged in said passage arms, said holders being adapted to close the outer ends of said arms, said casing having openings therein above said flange through which said screen holders may be inserted or removed without adjustment of the casing or disassembling of the burners.

3. In a gas lamp, the combination with the gas supply pipe, of a chimney casing; a chimney comprising a plurality of discharge flues; a deflector plate at the lower ends of said flues and a skirt portion below said flues, said deflector plate being extended beyond said skirt to provide a chimney flange, said casing being mounted on said flange; a burner comprising a member arranged above said plate and having a mixing tube disposed centrally of said flues, said mixing tube being provided with horizontally-disposed burner passage arms at its lower ends; burner tip members arranged below said deflector plate within the skirt portion of said chimney; burner screens; and holders therefor arranged in said passage arms, said holders being adapted to close the outer ends of said arms, said casing having openings therein above said flange through which said screen holders may be inserted or removed without adjustment of the casing or disassembling of the burners.

4. In a gas lamp, the combination with the gas supply pipe, of a chimney casing; a chimney comprising a plurality of discharge flues; a deflector plate at the lower ends of said flues and a skirt portion below said flues, said deflector plate being extended beyond said skirt to provide a chimney flange, said casing being mounted on said flange; a burner comprising a member arranged above said plate and having a mixing tube disposed centrally of said flues, said mixing tube being provided with horizontally-disposed burner passage arms at its lower ends; and burner tip members arranged below said deflector plate within the skirt portion of said chimney.

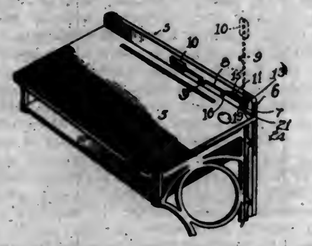
5. In a gas lamp, the combination with the supply pipe, of a chimney casing; a chimney comprising a plurality of chimney flues; a deflector plate at the lower end of said flues and a skirt portion below said plate; a burner member arranged above said plate comprising horizontally-disposed burner passage arms arranged between said flues, and a central mixing tube projecting upwardly from said arms, said arms being open at their outer ends and having downwardly-projecting burner nipples thereon, said deflector plate having openings registering with said nipples; a nozzle adapted to deliver to said mixing tube connected with said gas supply pipe; burner tip members arranged below said deflector plate and suspended from said nipples; and screens arranged in said burner passage arms and removable therefrom through said casing.

[Claims 6 to 13 not printed in the Gazette.]

1,015,565. VISIBLE SIGNAL. JOSEPH C. JAMES, Antioch, Ill. Filed Nov. 8, 1909. Serial No. 526,700. (Cl. 116—31.)

1. The combination of a base, a pivotal supporting stud secured thereto, a signal arm pivoted on said stud, a portion thereof surrounding said stud, and laterally deflected

to form a heel or fulcrum on one side of said stud, a wire guide structure for said arm secured on the base, bent to provide arm-receiving kinks, and a spring member exerting tension on said laterally deflected portion and said heel of said arm constantly to press said arm toward said guide structure.



2. The combination of a suitable base, a guide structure projecting from said base, a pivot structure projecting from said base, a signal arm having a part laterally deflected to provide a fulcrum and mounted for rotation upon said pivot structure, and a spring coil surrounding said pivot structure exerting its tension upon said deflected portion of said arm, constantly to press said signal arm toward the guide.

3. The combination of a suitable base, a curved wire guide secured at its ends to said base, a signal arm provided with an eye a portion of which is laterally deflected to produce a fulcrum heel, a pivotal support therefor connected to said base, and a coil spring surrounding the support exerting pressure upon the deflected portion and heel provided thereby of the pivotal end of the signal arm tending constantly to force the arm into frictional engagement with the guide.

4. The combination of a suitable base, a guide secured thereto defining an arcuate path and terminal position, a signal arm pivotally movable between the base and guide, an eye in the pivoted end of said arm, the free end of which is axially deflected, a pivot for said arm, and a spring coil acting upon the deflected portion of the pivoted end of the arm in line with its pivotal axis to press said arm toward said guide.

5. The combination with a suitable base, of a pivot structure, a signal arm having an eye at its pivot end deflected laterally from the plane of said arm mounted pivotally on said structure, a spring surrounding said pivot structure and acting upon the deflected portion of the pivoted end of the arm to tend laterally to displace the free end of said arm, a curved guide wire mounted on the base at its ends, said guide receiving the arm in frictional contact therewith and providing portions adjacent its ends to limit the arc of movement of the arm.

[Claims 6 and 7 not printed in the Gazette.]

1,015,566. PROCESS OF OBTAINING AND SEPARATING OXYGEN AND NITROGEN FROM THE ATMOSPHERE. GEORG KASZNER, Münster, Germany, assignor to Rheinische Dampfkessel und Maschinen-Fabrik Büttner G. M. B. H., Uerdingen-on-the-Rhine, Germany. Filed May 20, 1911. Serial No. 628,493. (Cl. 23—10.)

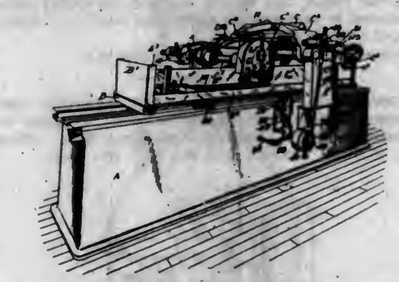
1. In a process for separating and obtaining oxygen and nitrogen from the atmosphere by means of the alternate formation, under the action of air, and decomposition, under the action of steam, of alkaline manganates or permanganates; the addition of a substance capable of combining with the alkaline hydrate freed during the action of the steam, the compound thus formed readily decomposing and yielding the alkaline hydrate on the action of air.

2. In a process for separating and obtaining oxygen and nitrogen from the atmosphere by means of the alternate formation, under the action of air, and decomposition, under the action of steam, of alkaline manganates or permanganates; the addition of substances capable of uniting in the reaction mixture to form a compound capable of combining with the alkaline hydrate freed during the action of the steam, the compound thus formed readily decomposing and yielding the alkaline hydrate on the action of air.

3. In a process for separating and obtaining oxygen and nitrogen from the atmosphere by means of the alternate formation, under the action of air, and decomposition under the action of steam, of alkaline manganates or permanganates; the addition of an alkaline meta-plumbate which is capable of combining with the alkaline hydrate freed during the action of the steam to form alkaline ortho-plumbate which readily decomposes and yields the alkaline hydrate on the action of air.

4. In a process for separating and obtaining oxygen and nitrogen from the atmosphere by means of the alternate formation, under the action of air, and decomposition, under the action of steam, of alkaline manganates or permanganates; the addition of substances capable of uniting in the reacting mixture to form an alkaline meta-plumbate which is capable of combining with the alkaline hydrate, freed during the action of the steam, to form alkaline ortho-plumbate, which readily decomposes and yields the alkaline hydrate on the action of air.

1,015,567. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Nov. 20, 1909. Serial No. 529,151. (Cl. 51—12.)



1. A grinding machine comprising a frame or base, a work-carriage mounted to traverse thereon, a pivoted frame mounted above said work-carriage, a grinding wheel shaft journaled in bearings on said pivoted frame, means for tilting said frame on its pivot to adjust the grinding wheel toward and from the work, an automatic feeding mechanism connected with said means, means for traversing the work-carriage, gearing connecting the several parts with the power shaft, and said power shaft, substantially as set forth.

2. A grinding machine comprising a base provided with suitable bearings and supports for the other parts of the mechanism, the work-carriage mounted to traverse on said base, a grinding wheel frame pivoted above said work-carriage, a grinding wheel mounted on a shaft journaled in said pivoted frame, means for feeding said frame step by step transversely of the work, means for feeding the wheel into the work, means for traversing the work-carriage, gearing connecting the several sets of mechanism with a driving shaft, and said driving shaft, substantially as set forth.

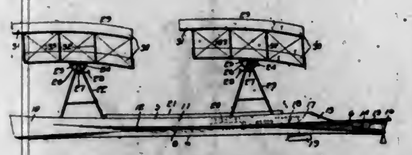
3. A grinding machine comprising a base provided with a track for the work-carriage and appropriate bearings and supports for the other parts of the mechanism, a work-carriage mounted to traverse on said base, a grinding wheel frame pivoted on suitable supports on said base, means for traversing said grinding wheel frame transversely of the work, a grinding wheel with its shaft journaled in said frame, means for feeding said grinding wheel to the work, means operated by the work-carriage for controlling the feed of said wheel, gearing connecting the several sets of mechanism with a driving shaft, and said driving shaft, substantially as set forth.

4. A grinding machine comprising a base provided with suitable bearings and supports for the various parts, a work-carriage mounted to traverse on said base, means for traversing said carriage, a grinding wheel frame pivoted on supports adjacent to said work-carriage, a grinding wheel on a shaft journaled in bearings on one side of the pivot of said frame, a balancing weight on the other side of the pivot of said frame, means for feeding said grinding wheel to the work, means for traversing said grinding wheel across the work, gearing connecting the several sets of mechanism to a driving shaft, and said driving shaft, substantially as set forth.

5. A grinding machine comprising a base provided with suitable bearings and supports for the other parts, a work-carriage mounted to traverse thereon, a pivoted and substantially balanced grinding wheel frame mounted thereon, a grinding wheel carried by said pivoted frame, means for adjusting said wheel in relation to the work and means for moving said wheel transversely of the work, substantially as set forth.

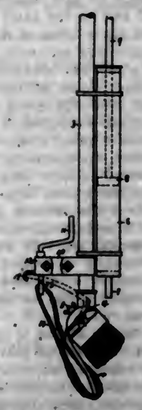
[Claims 6 to 33 not printed in the Gazette.]

1,015,568. AEROBOAT. JOHN C. LANGILLE, Newport, Wash. Filed Sept. 13, 1910. Serial No. 581,772. (Cl. 114—66.5.)



The combination with a motor boat, of supporting frames rising from the motor boat, shafts extending transversely of the motor boat and having their ends pivotally supported by the supporting frames, concavo convex lifting planes fixedly secured on the shafts, gear segments secured to and depending from the under sides of the planes, worm bearing shafts disposed in mesh with the segments and having inwardly extending ends, and means secured on the inwardly extending ends of the worm shafts for rotating the worms to adjust the position of the lifting planes on their pivot shafts.

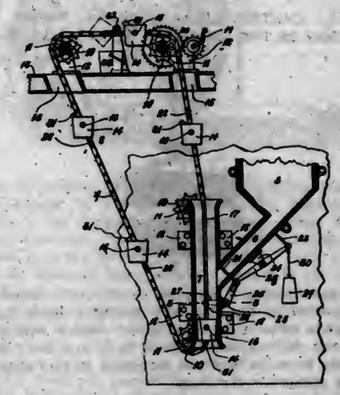
1,015,569. COMBINED SCRUBBER AND MOP. BRYANT LEE, Brenham, Tex. Filed Dec. 12, 1910. Serial No. 596,950. (Cl. 15—44.)



1. In a combined mop and scrubbing brush, a suitable handle, a scrubbing brush secured upon the end thereof, a mop holding stirrup hingedly secured to the brush and resilient means carried by the brush and operating against the stirrup and normally holding the same extended, a hook carried by the handle arranged to engage with the stirrup and hold the same withdrawn, a rotatable loop carried by the handle and a mop carried by the stirrup and loop, and means carried by said handle for rotating said loop.

2. In a combined mop and scrubbing brush, a suitable handle, a scrubbing brush secured to one end thereof, a mop holding stirrup hingedly secured to the brush and resilient means carried by the brush and operating against the stirrup and holding the same extended, a rotatable loop carried by the handle, a mop carried by the stirrup and loop and means for rotating the loop for wringing said mop.

1,015,570. CONVEYING APPARATUS. EDWARD LOCKE, Cliftondale, Mass. Filed Mar. 30, 1911. Serial No. 617,805. (Cl. 193—6.)



1. In an apparatus of the class described, the combination of a tube comprising sections separated from each other to provide slots, a pair of endless chains, buckets connected with said chains, movable through said tube by, said chains, the connections between the buckets and the chains extending through said slots and the buckets approximately closely fitting the tube, and means for supplying charges of material to the buckets while they are in said tube.

2. In an apparatus of the class described, the combination of a tube comprising two sections separated from each other to provide slots, a pair of chains and cross bars connecting said chains, the chains and cross bars constituting a carrier and the chains being movable to cause the cross bars to traverse said slots, swinging buckets supported by said cross bars and movable through and approximately closely fitting said tube, and means for supplying charges of material to the buckets while they are in said tube.

3. In an apparatus of the class described, the combination of a tube comprising sections separated from each other to provide slots, a pair of chains, buckets connected with and movable through said tube by, said chains, the connections between the buckets and the chains extending through said slot and the buckets approximately closely fitting said tube, a chute for delivering material into said tube, a pair of valves for controlling the flow of the material from said chute, and means governed by said chains for effecting the action alternately of said valves.

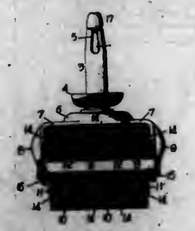
1,015,571. NUT-LOCK. ALLISON M. MACFARLAND, Philadelphia, Pa., assignor to Auto Novelty Company, a Corporation of Delaware. Filed Mar. 9, 1909. Serial No. 482,298. Renewed June 3, 1911. Serial No. 631,069. (Cl. 151—19.)

1. A two piece nut lock comprising a nut having a counterbore eccentric to the opening therein, and a split

nut having a boss eccentric to its opening and fitting the counterbore.

2. In a lock nut, an eccentrically counterbored nut in combination with an eccentrically bossed nut fitting the counterbore and slitted through the heavy side of the boss.

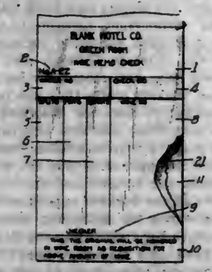
1,015,572. CASTER. WILLIAM MAIER, Buffalo, N. Y. Filed May 28, 1906. Serial No. 319,117. (Cl. 16—75.)



1. A caster having a horn and pintle, and a wheel rotatably mounted in the horn and having a dense body of compressible material, a sheet metal washer within said body of but slightly less diameter than said body having projections from its face and embedded in said body, and retaining plates for the body.

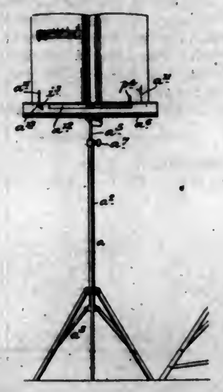
2. A caster having a horn and pintle, and a wheel rotably mounted in the horn and comprising a plurality of felt disks, one or more sheet metal washers intermediate said disks and having transverse teeth adjacent its periphery, these elements being compressed together to embed the faces of the washers in the material of the disks thus highly compressed, and retaining plates for the dense body thus formed.

1,015,573. CHECKING SYSTEM AND CHECK THEREFOR. CHARLES MALLON, Chicago, Ill. Feb. 20, 1911. Serial No. 609,735. (Cl. 11—15.)



A merchandise check, comprising an original sheet and an auditor's duplicate sheet therefor, said sheets having properly designated spaces for identifying the same, appropriately designated spaces for the salesman's identifying mark, and the salesman's individual check number, identifying the order taken by him, and an appropriately designated space for the checker's identifying character, in combination with properly designated spaces in which to indicate the character and quantity of goods ordered, and a certificate upon the original in the form of a requisition indicating that the proper person receiving the check may, upon presenting the same to the stock room, exchange the check for the same character and quantity of goods to replenish his stock to the extent that it is depleted by said order, and a designating mark upon the duplicate sheet indicating that it is the copy or duplicate of the check issued.

1,015,574. SHEET-MUSIC TURNER. PATRICK G. MCCOLLAM, Easton, Conn. Filed July 25, 1911. Serial No. 640,409. (Cl. 84—17.)



1. The combination in a sheet music turner of a stud and a plurality of sleeves concentrically mounted thereon, each of said sleeves being provided at its upper end with a turning arm and each of said sleeves being provided at its lower end and on the same side thereof with a segmental gear, said gears being arranged one above another and increasing in diameter from the bottom gear upwardly, a longitudinally and laterally movable yoke inclosing said stud, said sleeves and said gears and the side arms of which are provided on their inner sides with teeth adapted to operate in connection with said gears, and means for operating said yoke and to turn said sleeves and arms.

2. The combination in a sheet music turner of a stud and a plurality of sleeves concentrically mounted thereon, each of said sleeves being provided at its upper end with a turning arm and each of said sleeves being also provided at its lower end and on the same side thereof with a segmental gear, said gears being of different diameters, a yoke-shaped device inclosing said stud, sleeves and gears and the side arms of which are provided with gear teeth on their inner sides, and means for operating said yoke-shaped device so as to turn said gears, sleeves and arms substantially as shown and described.

3. The combination of a sheet music turner of a stud, and a plurality of sleeves concentrically mounted thereon, said sleeves being provided at their upper ends with turning arms and at their lower ends with spring arm connections adapted to hold the turning arms in a predetermined position, said sleeves being also provided on one side thereof with segmental gears of different diameters, a longitudinally and laterally movable yoke-shaped device inclosing said stud, sleeves and gears, and means for operating said yoke-shaped device so as to operate said gears, sleeves and arms.

4. In a sheet music turner, a stud, a plurality of sleeves concentrically mounted thereon and provided at their upper ends with turning arms and at their lower ends with spring arm connections adapted to hold said turning arms in a predetermined position, said sleeves being also provided on one side thereof with segmental gears of different diameters, a longitudinally and laterally movable yoke-shaped device inclosing said stud, sleeves and gears and

the side arms of which are provided on their inner sides with teeth adapted to engage said gears, means for operating said yoke-shaped device, a tension device for exerting pressure on one side thereof, and a series of switches arranged to change the direction of the operation of said tension device at predetermined times.

5. In a sheet music turner, a stud, a plurality of sleeves concentrically mounted thereon, said sleeves being provided at the tops thereof with turning arms and at the bottoms thereof with spring arm connections adapted to hold said turning arms in a predetermined position, said sleeves being also provided on one side thereof with segmental gears of different diameters, a longitudinally and laterally movable yoke-shaped rack device inclosing said stud, sleeves and gears and adapted to operate in connection with said gears in either direction of its longitudinal movement, and means for operating said rack device, one side of said rack device being also provided on the bottom thereof with a blade adapted to operate in grooves formed in a plate placed beneath said gears to control its lateral movement.

1,015,575. RAZOR. FELIX MEYER, Aix-la-Chapelle, Germany. Filed Apr. 8, 1911. Serial No. 619,718. (Cl. 30—12.)

1. A razor comprising a handle, a blade holder and a resilient connection between the blade holder and handle.

2. A razor comprising a handle, a blade holder and a universally resilient connection between the blade holder and handle.

3. A razor comprising a universally resilient spring handle, and a razor blade secured thereto.

4. A razor comprising a spirally coiled spring handle, and a blade secured thereto.

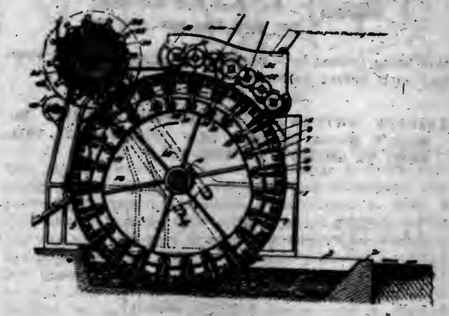
5. A razor having a handle composed of two cylindrical spirally coiled springs of different diameters adjustable one within the other.

[Claim 6 not printed in the Gazette.]

1,015,576. MOLDING-MACHINE. EDGAR D. MISNER, St. Louis, Mo., assignor to The Misner Briquette Machine Company, a Corporation of Missouri. Filed June 20, 1910. Serial No. 567,802. (Cl. 25—79.)

1. In a briquet machine, in combination, an open bottom hopper, a rotary support, a series of oscillating die housings carried by said support, spacing members filling the spaces between said die housings at the periphery of the support to form, in conjunction with the die housings, an approximately smooth surface at such periphery, in passing beneath the open bottom hopper, dies movable in said housings, a rotary series of plungers for coöperating with such die housings, the number of die housings being in excess of the number of plungers, means for positively oscillating the die housings as they approach and leave said plungers to insure proper coöperation of the plungers with each die housing, and means for imparting a continuous rotary motion to said plungers and support.

2. In a briquet machine, in combination, an open bottom hopper, a rotary carrier having spaced apart members at its periphery, die housings journaled in said carrier at points inwardly from its periphery, the outer surfaces of said die housings being normally flush with the outer surfaces of said spaced apart members, forming an approximately unbroken surface in passing beneath the open bottom hopper, dies movable in said housings, a rotary series of plungers for coöperating with such die housings, the number of die housings being in excess of the number of plungers, means for positively oscillating the die housings as they approach and leave said plungers to insure proper coöperation of the plungers with each die housing, and means for imparting a continuous rotary motion to said plungers and support.



3. In a briquet machine, in combination, an open bottom hopper, a rotary carrier having spaced apart members at its periphery, said members being widened at their outer ends, die housings journaled in said carrier at points inwardly from its periphery, the outer surfaces of said die housings being normally flush with the widened ends of said members, to present an approximately unbroken surface in passing beneath the open bottom hopper, dies movable in said housings, a rotary series of plungers for coöperating with such die housings, the number of die housings being in excess of the number of plungers, means for positively oscillating the die housings as they approach and leave said plungers to insure proper coöperation of the plungers with each die housing, and means for imparting a continuous rotary motion to said plungers and support.

4. In a molding machine, in combination, an open bottom hopper, a rotary support, a series of oscillating die-housings, spaced apart disks having connecting cross members at their peripheries, said housings at their outer ends filling the spaces between said members and journaled in said disks, said housings and cross members presenting an approximately unbroken surface in passing beneath said hopper, a rotary series of plungers for coöperating with said die-housings, means for oscillating each die-housing successively as it approaches, while traveling with and in leaving said plungers to insure proper coöperation of the latter with the die housings, and means for rotating said plungers and disks.

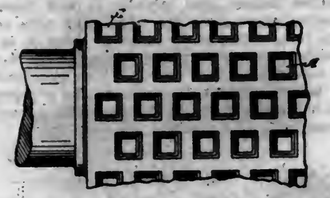
5. In a molding machine, in combination, an open bottom hopper, a rotary mold comprising a series of circularly arranged spaced apart die-housings, carriers for said housings in which they are journaled, spacing members located between said die housings at the outer ends thereof, a rotary series of plungers for coöperating with said die-housings, levers carried by said die-housings, a fixed cam with which said levers engage for changing the position of each die-housing successively as it approaches the plungers to insure proper coöperation of the latter, and means for rotating said plungers and carriers.

[Claims 6 to 11 not printed in the Gazette.]

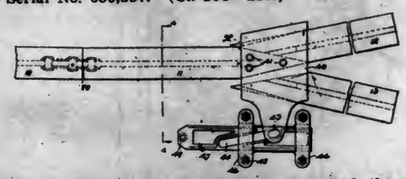
1,015,577. ROLLER FOR SUGAR-CANE MILLS. ROBERT MITCHELL, London, England. Filed Apr. 6, 1910. Serial No. 553,705. (Cl. 100—47.)

1. Rollers for sugar mills provided with a plurality of polygon shaped indentations on the surface, each indentation being formed by a plurality of square cornered steps.

2. Rollers for sugar mills provided with a plurality of polygon shaped indentations on the surface, each indentation being formed by a plurality of square cornered steps and with convex bottom.



1,015,578. SWITCH FOR TROLLEY-TRACKWAYS. EDWARD Y. MOORE, Cleveland, Ohio. Filed Sept. 21, 1911. Serial No. 650,557. (Cl. 104—180.)



1. In a mechanism of the character described, the combination, with an overhead main track and branch tracks, of a movable switch point coöperating with the main track and adapted to coöperate with either of the branches, a member secured to such switch point and resting on top of the branch tracks to support the switch point and extend into one side of one of the branches, a longitudinally movable member suitably guided alongside of the trackway, and a movable connection between said two members consisting of an inclined guide on one member and a shoulder on the other, whereby the movement of the longitudinal member may laterally shift the switch point.

2. In mechanism of the character described, the combination, with a pair of branch tracks, of a switch point having a tapered end projecting between the two and movable to coöperate with the beveled end of either, a plate secured to the switch point and resting on the branch tracks, and a movable member alongside of the trackway and having an inclined guideway with which a shoulder on the plate coacts.

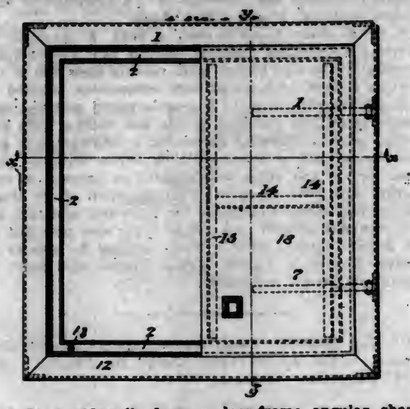
3. The combination, with a pair of I-beams constituting branch trackways, of a movable I-beam switch point adapted to coöperate with either, a movable plate secured to the upper flange of the switch point and resting on the upper flanges of the branch tracks, a longitudinally movable member alongside of the trackway, and an inclined sliding connection between the same and said plate.

4. The combination, with a pair of I-beams constituting branch trackways, said I-beams being tapered on their inner sides adjacent to their ends, of a movable I-beam switch point having a tapered portion extending between the tapered ends of the trackways, a plate secured to the top of the switch point near its end and resting on the tops of the tapered ends of the branches, said plate extending beyond the outer side of one of the branches, and means at such point engaging such plate for shifting the switch point.

5. The combination, with a stationary main trackway and a pair of branch trackways, of a movable switch point connected with the main trackway and adapted to coöperate with either of the branch trackways, all of said parts being of I-beam cross section, plates overlapping the junction of the main track web and the switch point web and secured to the respective webs, and a plate secured to the upper flange of the switch point and extending over and resting upon the top flanges of the branch tracks.

[Claims 6 to 11 not printed in the Gazette.]

1,015,579. SIDEWALK-DOOR. LOGAN WILLARD MULFORD, Philadelphia, Pa., assignor to American Bar Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 1, 1911. Serial No. 647,165. (Cl. 94—8.)



1. In a sidewalk door, a door-frame angular shaped in cross-section, gutters secured by laterally extending flanges to the under sides of the inwardly extending horizontal flanges of the frame and having beads at the upper edges of their outer sides, and a door hinged to the frame and resting upon said beads when closed.

2. In a sidewalk door, a frame 1 of angular shaped cross-section and having the edge 5 of its horizontal flange rounded, gutters 2 of rectangular cross-section and formed with concave portions 6 and beads 4 and flanges 3 secured to the under sides of the horizontal flanges 12, and a door 18 hinged to the frame and resting upon the beads.

3. In a sidewalk door, a frame 1 of L-shaped cross-section and having the edge 5 of its horizontal flange rounded, gutters 2 of rectangular cross-section and formed with concave portions 6 and beads 4 and flanges 3 secured to the under sides of the horizontal flanges 12, a door 18 fitted to have its edges rest upon the beads, and hinge-brackets 7 having straight portions 8 secured to the under side of the door and acutely bent portions 9 hinged beneath the horizontal flanges of the frame.

4. In a sidewalk door, a door frame, a door, and hinge-brackets having straight portions secured to the under side of the door and portions bent at an acute angle and having their ends pivoted at the under side of the frame to form inclined braces for the door, said bent portions spanning the door-frame when the door is opened.

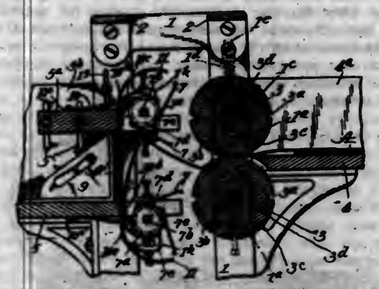
5. In a sidewalk door, a door frame, a door, and hinge-brackets having straight portions secured to the under side of the door to extend nearly across the same and portions bent at an acute angle and having their ends pivoted at the under side of the frame to form inclined braces for the door, said bent portions spanning the door-frame when the door is opened.

1,015,580. PAPER-FOLDER. LEWIS A. NICHOLS, Chicago, Ill. Filed July 10, 1911. Serial No. 637,659. (Cl. 101—43.)

1. In a paper folding machine, in combination with paper-creasing rolls having coöperating creasing blades and blade-receiving cushions; tuckers mounted above and below the path of the paper as it is fed from the rolls and comprising an upper and a lower shaft, said shafts being geared for rotation in the same direction as the rolls respectively, and having rigidly secured to them respectively, outwardly-extending tucker fingers, and a receiving board extending transversely to the path of delivery of the paper from the rolls and to the path of rotation of the tucker fingers.

2. In a paper folding machine, in combination with paper creasing rolls, having coöperating creasing blades

and blade-receiving cushions, tuckers mounted above and below the path of the paper as it is fed from the rolls, and comprising an upper and a lower shaft, said shafts being geared for rotation in the same direction as the rolls, respectively, and having fast on them, respectively, outwardly extending tucker fingers which are flexible in their planes of rotation with the shaft, and a receiving board extending transversely to the path of delivery of the paper from the rolls and to the paths of rotation of the tucker fingers.



3. In a paper folding machine, in combination with paper creasing rolls, having coöperating creasing blades and blade-receiving cushions, tuckers mounted above and below the path of the paper as it is fed from the rolls, and comprising an upper and a lower shaft, said shafts being geared for rotation in the same direction as the rolls, respectively, and having fast on them, respectively, tangentially extending fingers, and a receiving board extending transversely to the path of the delivery of the paper from the rolls and to the paths of rotation of the tucker fingers.

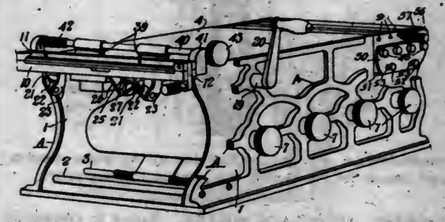
4. In a paper folding machine, in combination with paper creasing rolls, having co-operating creasing blades and blade-receiving cushions, tuckers mounted above and below the path of the paper as it is fed from the rolls, and comprising an upper and a lower shaft provided with outwardly extending tucker fingers and geared for rotation in the same direction as the rolls, respectively, a receiving board mounted transversely to the path of delivery of the paper from the tuckers, stop fingers mounted for movement substantially parallel to the plane of said receiving board and adapted to be intruded by such parallel movement into such path of delivery of the paper, and means for intermittently withdrawing them from said path.

5. In a paper folding machine, in combination with paper creasing rolls, having coöperating creasing blades and blade-receiving cushions, tuckers mounted above and below the path of the paper as it is fed from the rolls, and comprising an upper and a lower shaft provided with collars mounted fast thereon, and having tangentially extending tucker fingers, a receiving board mounted transversely to the path of delivery of the paper from the tuckers, stop fingers mounted for movement substantially parallel to the plane of said receiving board, collars mounted fast on the tucker shafts and provided with radially projecting studs, and lugs extending transversely from the stop fingers in the paths of rotation of said studs.

[Claims 6 and 7 not printed in the Gazette.]

1,015,581. MANIFOLDING DEVICE. FREDERICK C. NICKOL and MILTON C. STERN, Dayton, Ohio, assignors to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 27, 1911. Serial No. 617,076. (Cl. 11—36.)

1. In a device of the character described, the combination, with a writing table, and a paper carriage movably mounted near one edge thereof and having a paper gripping device, of a rack bar operatively connected with said carriage and movable relatively thereto, a gear meshing with said rack bar, and a connection between said rack bar and said gripping device, whereby the first movement of said gear will actuate said gripping device and the further movement of said gear will actuate said carriage.



2. In a device of the character described, the combination, with a writing table, of a carriage movably supported near one edge of said table and comprising two substantially parallel members spaced apart to form a slot between them to receive the paper, a gripping device mounted on one of said members and adapted to enter said slot and engage the paper between said members, a toothed bar operatively connected with and movable relatively to said carriage, an operative connection between said toothed bar and said gripping device, and a toothed actuating member for said toothed bar.

3. In a device of the character described, the combination, with a writing table, and a paper carriage movably mounted near one edge thereof and comprising two members spaced apart to receive a web of paper, and plungers reciprocally mounted on one of said members and coöperating with the other thereof to grip said web of paper, of actuating mechanism to move said carriage away from and toward said table, and a connection between said actuating mechanism and said plungers to cause said actuating mechanism to move said plungers into engagement with said paper before said carriage is moved away from said table and to move the same out of engagement with said paper before said carriage begins its return movement.

4. In a device of the character described, the combination, with a writing table, a paper carriage movably supported near one edge of said table and comprising two members spaced apart to permit the paper to pass between them, plungers reciprocally mounted in one of said members and adapted to enter the space between said members and engage said paper, and a toothed bar operatively connected with said carriage, of an operative connection between said toothed bar and said plungers, whereby said plungers will be actuated prior to the movement of said carriage, and a toothed actuating member engaging said bar.

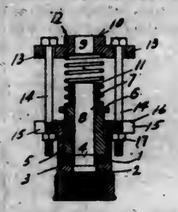
5. In a device of the character described, the combination, with a writing table, a paper carriage movably mounted near one edge of said table, a plunger movably mounted on said carriage to grip the paper thereon, and a crank arm supported by said carriage and connected with said plunger, of a rack bar operatively connected with said carriage and movable relatively thereto, a gear meshing with said rack bar, an operative connection between said rack bar and said crank arm, whereby, the first movement of the gear will actuate the plunger and the further movement thereof will actuate said carriage, and means to rotate said gear.

[Claims 6 to 21 not printed in the Gazette.]

1,015,582. STUFFING-BOX. DANIEL E. NORRIS, Robinson, Ill. Filed May 10, 1910. Serial No. 560,500. (Cl. 121—109.)

In a stuffing box for polished rods for oil wells and the like, the combination of a box body having a packing cavity; a follower in the cavity having an external shoulder thereon; an extension from the shoulder; a follower spring resting on the shoulder and arranged around the

extension, the extension being of sufficient length to extend through the follower spring when the spring is fully

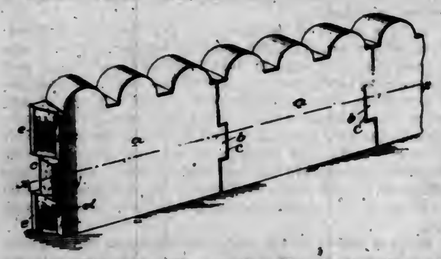


contracted; a yoke for putting the spring under tension; and means for connecting the yoke to the box body.

1,015,583. SHOE-LACE ROLLER. AARON B. OVERHOLT, Constantine, Mich. Filed Mar. 7, 1910. Serial No. 547,918. (Cl. 24—149.)

An eyelet having a base provided on its upper face with a circular convex track, a tubular pivot member, interior to said track, the lower end thereof being rigidly attached within the eyelet hole, a tubular revoluble roller on the pivot member, and having a flat lower end resting on the track, and the elevated oblong cap extending over the roller, an elevated bar having one end attached to one side of the eyelet, and the other end attached to the cap, substantially as set forth.

1,015,584. GARDEN-EDGE TILE. ALBERT EMMANUEL POWELL, Darwen, England. Filed Aug. 20, 1900, Serial No. 515,308. Renewed June 22, 1911. Serial No. 634,791. (Cl. 72—87.)



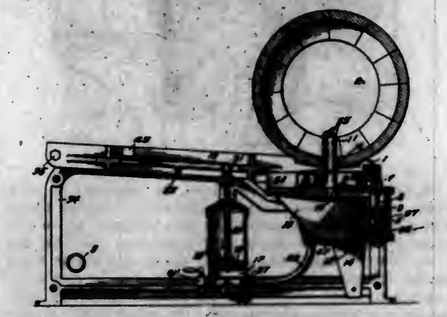
1. A garden edge tile, or the like, having its end edge formed with a lug of approximately half the thickness of the tile and a corresponding recess behind the same and a transversely inclined face, as and for the purpose substantially as described.

2. A tile, for the purposes substantially as described, having its end edge formed with a longitudinally-projecting relatively thin lug forming a recess behind the same, portions of the tile having their side faces beveled off above and below said lug.

3. A tile for the purposes substantially as described, having an end-edge relatively-thin lug intermediate the length of said edge, the edge portions of the tile above and below said lug being transversely beveled and terminating in vertical shoulders.

1,015,585. KEG-RINSER. GEORGE D. PRENTICE, Milwaukee, Wis. Filed Nov. 28, 1910. Serial No. 594,505. (Cl. 141—6.)

1. In a machine for rinsing kegs, the combination of a stationary frame, a nozzle vertically supported from said frame, a water duct leading from a water supply to said nozzle, a frame pivotally supported from said stationary frame, a lever pivotally supported from said pivotally supported frame in close proximity to said nozzle, a water controlling valve located in said duct beneath said lever, said lever being adapted to be actuated by the weight of the keg when placed thereon around said nozzle, and said valve being adapted to be operated by said lever, whereby water is admitted through said nozzle into said keg, means actuated by the pressure of the water from the supply for raising one end of said pivoted frame after the keg is cleansed, a valve for controlling the flow of water to said frame raising means, and means actuated by the keg as it is rolled from the pivoted frame, for opening said last named water controlling valve, whereby the tilting frame is returned to its normal position.



2. In a machine for rinsing kegs, the combination of a spray nozzle, a water duct communicating from the water supply to said nozzle, a water controlling valve located in said duct, a stationary frame, a frame pivotally connected at one end to said stationary frame, a lever pivotally connected to said pivoted frame and adapted to bear at one end upon the protruding stem of said valve, a hydraulic hoist for the pivoted frame, comprising a cylinder and piston, one of the members of said hoist being connected with said stationary frame, and the other member with said pivoted frame, a water duct communicating from said water supply with said hoist, a valve controlling the flow of water through said last named duct, a tilting lever, means connected with said tilting lever for operating said last named valve, whereby as a keg is placed upon said nozzle, said lever will be forced down, said first named valve will be opened, and said keg will be rinsed, automatically raised, and discharged from the machine.

3. In a machine for rinsing kegs, the combination of a spray nozzle, a water duct communicating from the water supply to said nozzle, a water controlling valve located in said duct, a stationary frame, a frame pivotally connected at one end to said stationary frame, a lever pivotally connected at one end to said pivoted frame and adapted to bear at its opposite end upon the protruding stem of said valve, a hydraulic hoist for the pivoted frame, a water duct communicating from said water supply with said hoist, a valve controlling the flow of water through said last named duct, a tilting tank pivotally supported below said nozzle and adapted to be operated by the gravity of the water received from said keg, means for communicating motion from the pivotal support of said tilting tank to said last named valve, whereby as said tilting tank is operated by the gravity of water therein, said last named valve will be opened, said hoist will be actuated, one end of said pivoted frame will be elevated, and said keg will be discharged therefrom.

4. In a machine for rinsing kegs, the combination of a spray nozzle, a water duct communicating from the water supply to said nozzle, a water controlling valve located in said duct, a stationary frame, a frame pivotally

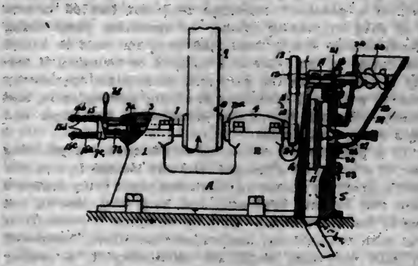
connected at one end to said stationary frame, a lever pivotally connected at one end to said pivoted frame and adapted to bear at its opposite end upon the protruding stem of said valve, a hydraulic hoist for the pivoted frame, a water duct communicating from said water supply with said hoist, a valve controlling the flow of water through said last named duct, a tilting tank pivotally supported below said nozzle and adapted to be operated by the gravity of the water received from said keg, means for communicating motion from the pivotal support of said tilting tank to said last named valve, a duct communicating from said last named valve to said hoist beneath the piston therein, means for communicating motion from said piston to said pivoted frame, whereby as the cylinder of said hoist is filled with water, the front end of said pivoted frame with the keg thereon, will be raised, a link connected at one end to the rear end of said tilting lever and at its opposite end to said stationary frame, said link being adapted as the front end of said pivoted frame is raised to hold the rear end of said tilting lever, whereby its front end is thrown rearwardly with said keg, and the keg is thereby discharged from said frame, means actuated by the keg as it rolls from said pivoted frame for returning said tilting tank to its normal position, and means connected with the tank supporting shaft for reversing the movement of the valve leading to the hoist, whereby the water is permitted to escape from said hoist, and the piston therein is returned to its normal position by the gravity of said pivoted frame.

5. In a machine for rinsing kegs, the combination of a spray nozzle, a water duct communicating from the water supply to said nozzle, a water controlling valve located in said duct, a stationary frame, a frame pivotally connected at one end to said stationary frame, a lever pivotally connected at one end to said pivoted frame and adapted to bear at its opposite end upon the protruding stem of said valve, a hydraulic hoist for the pivoted frame, a water duct communicating from said water supply with said hoist, a valve controlling the flow of water through said last named duct, a tilting tank pivotally supported below said nozzle and adapted to be operated by the gravity of the water received from said keg, means for communicating motion from the pivotal support of said tilting tank to said last named valve, a duct communicating from said last named valve to said hoist beneath the piston therein, means for communicating motion from said piston to said pivoted frame, whereby as the cylinder of said hoist is filled with water, the front end of said pivoted frame with the keg thereon, will be raised, a link connected at one end to the rear end of said tilting lever and at its opposite end to said stationary frame, said link being adapted as the front end of said pivoted frame is raised to hold the rear end of said tilting lever, whereby its front end is thrown rearwardly with said keg, and the keg is thereby discharged from said frame, a two armed lever pivotally supported from said inclinable frame, the upper arm of said lever being located in the path of the keg as it passes over the pivoted frame and its opposite end being connected with said tilting tank, whereby as said keg is discharged from said machine, said two armed lever will be actuated, said tilting tank will be restored to its normal position, and means connected with the tank supporting shaft for reversing the movement of the valve leading to the hoist, whereby the water therein is permittted to escape and the piston is returned to its normal position by the gravity of said pivoted frame.

[Claims 6 and 7 not printed in the Gazette.]

1,015,586. GRINDING-MILL. ROBERT A. REYNOLDS, Detroit, Mich. Filed June 19, 1911. Serial No. 634,110. (Cl. 83—6.)

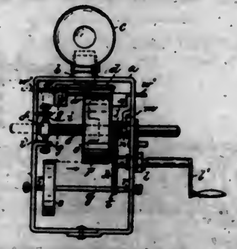
1. In a grinding mill, in combination with a housing, provided with a seat shaped as the zone of the surface of a sphere, a grinding disk held in axially fixed relation thereto, a movable grinding disk, a support for said movable grinding disk provided with a surface shaped as the zone of a surface of a sphere concentric to said first-mentioned sphere and arranged to engage a zonular seat on said housing; bolts engaging said disk support for adjustably securing the same to its seat, substantially as described.



2. In a grinding mill, the combination of a housing, a rotatable disk-carrying head in said housing, a non-rotatable disk, a support therefor, a seat shaped as the zone of a surface of a sphere in said housing for said support, a complementary surface on said support the shape of a zone of a spherical surface in concentric relation with said seat and adapted to engage therewith, and a plurality of adjusting bolts arranged to hold the said support in its seat, substantially as described.

3. A grinding mill having in combination a housing, a rotatable disk support, a shaft for said disk support, movable longitudinally, a thrust block in axial alinement with said shaft provided with a wedge terminal, a wedge shaped abutment block, parallel rods arranged to hold said abutment block, springs interposed between the abutment block and the ends of the parallel rods, means for turning the thrust block and anti-friction members interposed between the shaft and the thrust block, substantially as described.

1,015,587. PHONOGRAPH FOR DOLLS OR OTHER TOYS. HERMAN RINGEL, Newark, N. J. Filed Feb. 12, 1910. Serial No. 543,431. (Cl. 181—7.)



1. In a phonograph, the combination with a supporting frame, a loosely mounted reproducer mounted in the upper part of said supporting frame, of a longitudinally moving operating shaft, a mandrel rigidly secured to said shaft and rotating therewith, and a stationary pivotally supported feed nut, said feed nut being located in the supporting frame for advancing the operating shaft, said shaft being centered by said nut, so that by swinging it laterally it moves with said nut, and means slidably mounted in the upper end of the supporting frame adapted to be acted upon by the sides of the mandrel and to act upon the under side of the reproducer for disengaging the reproducing point from the record while the record is being turned back to the position of starting.

2. In a phonograph, the combination with a reproducer, an operating shaft, mechanism operatively connected with said operating shaft for advancing it, a pivotally supported feed nut for advancing the operating shaft, said shaft being centered by said feed nut, so that by swinging it laterally it moves with said nut and means slidably mounted in the upper end of the supporting frame adapted

to act on the under side of the reproducer for disengaging the reproducing point from the record while the record is being turned back to the position of starting.

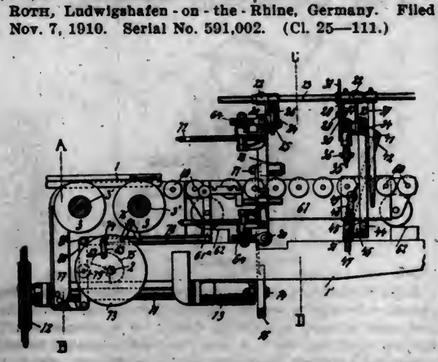
3. In a phonograph, the combination with a supporting frame, of a pivotally arranged feed nut located in one side of said supporting frame, an operating shaft being centered at one end by said feed nut, and held in a slot in the frame at the other end, so that by swinging it laterally it moves with the said nut, mechanism operatively connected with said operating shaft for advancing it, and a loosely mounted reproducer mounted in the upper end of said supporting frame.

4. In a phonograph, the combination with a supporting frame, of a pivotally arranged feed nut located in one side of said supporting frame, an operating shaft being centered at one end by said feed nut, and held in a slot in the frame at the other end, so that by swinging it laterally it moves with the said nut mechanism operatively connected with said operating shaft for advancing it, a loosely mounted reproducer mounted in the upper end of said supporting frame and means yieldingly supported in the upper part of said frame for disengaging the reproducing point from the record while the record is being turned back to the position of starting.

5. In a phonograph, the combination with a supporting frame provided with integral inwardly projecting flanges, a feed nut pivotally located between said flanges, an operating shaft passing through and being longitudinally moved by said nut and capable of being swung laterally with said nut, mechanism operatively connected with said operating shaft for advancing it, a loosely mounted reproducer mounted in the upper part of said supporting frame and a slide bar located in the upper part of said frame, the lower edge of said bar being provided with depending lugs and the upper edge with a beveled portion for disengaging the reproducing point from the record while the record is being turned back to the position of starting.

[Claim 6 not printed in the Gazette.]

1,015,588. AUTOMATIC TILE-MACHINE. JOHANNES ROTH, Ludwigshafen-on-the-Rhine, Germany. Filed Nov. 7, 1910. Serial No. 591,002. (Cl. 25—111.)



1. In an automatic tile-machine, the combination, with the main frame and a main shaft journaled therein, of driving rolls journaled in said frame, a control spindle journaled in said frame geared with said driving rolls, a carriage, carrying guide rolls, movable on said frame, means driven by the control spindle for reciprocating the carriage, the said rolls being designated to carry and be moved by the stream of clay; a figure or curve cutter, a rectilinear cutter, a punching device and a meshing device mounted on said carriage for cutting, punching and marking the stream of clay, a reciprocating cutter-frame mounted on the carriage driving said cutters and said punching and marking devices, and feed mechanism driven by the main shaft driving said cutter-frame and controlled by said control spindle.

2. In an automatic tile-machine, the combination, with the main frame and a main shaft journaled therein, of driving rolls journaled in said frame, a control spindle journaled in said frame geared with said driving rolls, a carriage, carrying guide rolls, movable on said frame, means driven by the control spindle for reciprocating the carriage, the said rolls being designated to carry and be moved by the stream of clay; a figure or curve cutter, a rectilinear cutter, a punching device and a marking device mounted on said carriage for cutting, punching and marking the stream of clay, a reciprocating cutter-frame mounted on the carriage positively driving said cutters and said punching and marking devices, means comprising a cam-member fast on said main shaft for reciprocating said cutter-frame, means mounted on said frame for coacting with said cam-member and preventing the same rotating, and a member secured to the control spindle for disengaging the latter means from the cam-member.

3. In a tile-machine, the combination, with the main frame and a main shaft journaled therein, of driving rolls journaled in the frame, a control spindle journaled in the frame and geared with said driving rolls, a carriage, carrying guide rolls, movable on said frame, means driven by the control spindle for reciprocating the carriage, the said rolls being designated to carry and be moved by the stream of clay, a plurality of devices mounted on said carriage for treating the stream of clay, a sliding frame mounted on the carriage driving said devices, a cam having two oppositely-arranged shoulders fast on said main shaft, a two-armed lever fulcrumed on the main frame having one arm pivotally connected with said sliding frame and the other arm pivotally connected with said cam, a spring-pressed lever fulcrumed on the main frame adapted to coact alternately with the shoulders of said cam and prevent the main shaft rotating, and an arm fast on said control spindle for removing the latter lever from said cam.

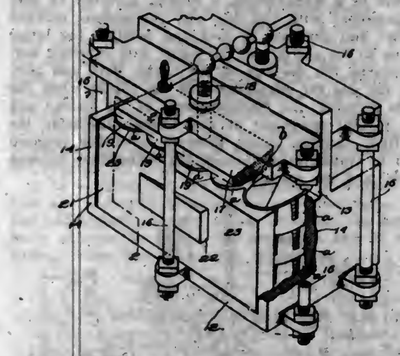
4. In an automatic tile-machine, the combination with a reciprocating carriage having a frame, of a reciprocating cutter-frame arranged transversely of the carriage mounted slidably in said frame, a guide detachably attached to the frame, an axle positively geared with said cutter-frame, a holder for a cutting wire having one end connected with said axle and the other end guided by said guide; a shaft journaled in the former frame, arranged parallel with the cutter-frame, arms secured to said shaft, gearing comprising a link pivotally connected with said arms positively connecting said shaft with the cutter-frame, and a vertically-guided bow carrying one or more tools over the carriage attached to said link.

5. In an automatic tile-machine, the combination with a reciprocating carriage having a frame, of a reciprocating cutter-frame, arranged transversely of the carriage mounted slidable in said frame, a guide detachably attached to the frame, an axle positively geared with said cutter-frame, and a holder for a cutting wire having one end connected with said axle and the other end guided by said guide; a shaft, journaled in the former frame, arranged parallel with the cutter-frame, gearing comprising a link positively connecting said shaft with the cutter-frame, and a vertically-guided member carrying one or more tools over the carriage attached to said link; a second shaft parallel with the former shaft journaled in the frame, means comprising a clutch connecting said shafts, two arms fast on the second shaft, and a vertically-guided bow carrying a lug-cutter under said one or more former tools pivotally attached to said arms.

1,015,589. HEEL BUILDING AND PRESSING MACHINE. CHARLES O. RYBERG, Brockton, Mass. Filed June 14, 1911. Serial No. 633,154. (Cl. 12—48.)

1. A heel-lift-holding tray composed of a connected series of heel molds having heel-shaped walls and bottoms which have convex under faces, the said faces being contracted so that they are adapted to enter the molds of an adjacent tray and form concave heel seats on assemblages of lifts held by the last mentioned tray.

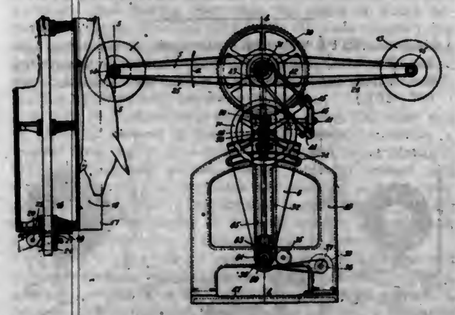
2. A heel-lift-holding tray composed of a connected series of heel molds having heel-shaped walls and bottoms adapted to support lift assemblages in said molds against pressure directed thereon, and to transmit pressure to lift assemblages in an adjacent tray, the wall and bottom of each mold being composed of sections which are adjustable toward and from each other to vary the width of the mold, and are provided with means whereby they may be positively connected to maintain the desired adjustment.



3. A heel-lift-press comprising a bed adapted to support a stack of superimposed heel-lift-holding trays and their contents, and a vertically movable platen opposed to said bed and adapted to exert vertical pressure on said stack, the under side of said platen being provided with a plurality of convex pressing faces adapted to form concave heel seats on a series of heel lift assemblages in said stack.

4. In combination, a heel-lift-press comprising a bed adapted to support a stack of superimposed heel-lift-holding trays and their contents, a vertically movable platen opposed to said bed and adapted to exert vertical pressure on said stack, the under side of said platen being provided with a plurality of convex pressing faces adapted to form concave heel seats on a series of heel lift assemblages in said stack, and a series of lift-holding trays adapted to be stacked on the said bed, each tray being composed of a connected series of heel molds having heel-shaped walls and bottoms which have convex pressing faces, the said faces being contracted so that the faces of each tray are adapted to enter the molds of the tray below it.

1,015,590. CARCASS-SPLITTING MACHINE. WILLIAM A. SAUNDERS, Jamaica Plain, Mass. Filed Apr. 24, 1911. Serial No. 622,865. (Cl. 143—47.)



1. A carcass splitting machine having, in combination, a saw carrier, a plurality of saws journaled on said carrier, a support upon which said carrier is rotatably mounted, a frame upon which said support is pivoted, mechanism adapted to rotate said saw carrier, and mechanism adapted to continuously rotate said saws during the rotation of said carrier.

2. A carcass splitting machine having, in combination, a saw carrier, a plurality of saws journaled on said carrier, a support upon which said carrier is rotatably mounted, a frame upon which said support is pivoted, mechanism adapted to rotate said saw carrier, mechanism adapted to continuously rotate said saws during the rotation of said carrier and manually operable mechanism adapted to rock said support upon its pivot, whereby said saws may be rotated and moved bodily in a predetermined irregular path simultaneously with the rotation of said carrier.

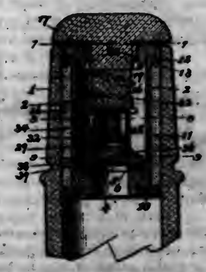
3. A carcass splitting machine having, in combination, a saw carrier forked at opposite ends thereof, saws journaled to rotate between the arms of said forks, respectively, a support upon which said carrier is rotatably mounted, a frame upon which said support is pivoted, mechanism adapted to rotate said saw carrier and mechanism adapted to continuously rotate said saws during the rotation of said carrier.

4. A carcass splitting machine having, in combination, a saw carrier forked at opposite ends thereof, saws journaled to rotate between the arms of said forks, respectively, pulleys adapted to rotate in unison with said saws respectively between the arms of said forks, a support upon which said carrier is rotatably mounted, a shaft concentric with the median axial line of said carrier and journaled to rotate in bearings in said support, a pair of pulleys secured to said shaft, within a recess in said carrier, a frame upon which said support is pivoted, mechanism adapted to rotate said carrier, and mechanism adapted to continuously rotate said shaft during the rotation of said carrier.

5. A carcass splitting machine having, in combination, a saw carrier, a plurality of saws journaled on said carrier, a frame, a pair of supports pivoted upon said frame at opposites respectively of said carrier, a trunnion at each side of said saw carrier rotatably mounted upon said supports respectively, a pair of segmental gears secured to said supports respectively, pinions meshing into said segments respectively, means to manually rotate one of said pinions, and mechanism operatively connecting said manually rotated pinion through the pivotal axis of said supports with the other of said pinions, whereby said supports may be simultaneously rocked upon their pivots.

[Claim 6 not printed in the Gazette.]

1,015,591. NON-REFILLABLE-BOTTLE STOPPER. JOHN L. SELLAR, Baltimore, Md. Filed Feb. 14, 1911. Serial No. 608,565. (Cl. 215—12.)



1. In a non-refillable bottle stopper, the combination of a valve-seat; a valve; a cap having a downward-projecting stud and capable of vertical movement; a spring to depress the cap and stud; an independently-movable case, 25, between the valve and said stud and which bridges the space between said valve and stud when the latter is depressed; a block, 36, within said case, and means also within said case which will eject the block downwardly when the case is in raised position and liquid enters the case.

2. A bottle having in its neck a casing provided with a valve-seat; a valve normally resting upon the seat; a cap member having a downward-projecting stud; a cartridge freely mounted in the casing and unconnected relative

to said cap-member and adapted to co-act with the cap member to hold the valve upon its seat—said cartridge comprising a case having an aperture, 28; a frictional retaining device, 29, mounted in the case; a valve-engaging member, 30, within the case; a normally immutable tablet, 32, but which disintegrates in alcoholic liquor and supported by the said frictional retaining device, and an expansible means, 34, in the case adapted to act to expel from the case the said valve-engaging member upon disintegration of the said tablet.

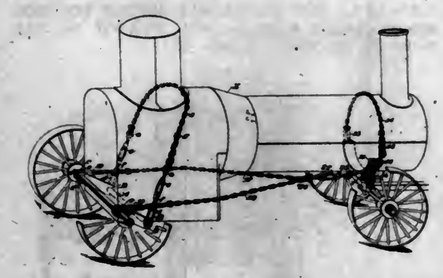
3. A cartridge for non-refillable bottle stoppers, comprising a case having an aperture, 28, to permit the inlet of liquid and provided with legs projecting radially from the case at the top and bottom thereof,—a normally immutable tablet mounted in the case and adapted to automatically disintegrate but not dissolve when in contact with liquor, and a block, 36, loose in the case and to be ejected therefrom when the said normally immutable table disintegrates.

4. The herein-described cartridge for non-refillable bottle stoppers, comprising a case having an aperture, 28, for inlet of liquid; a ring frictionally held in the case; a normally immutable tablet which disintegrates in alcoholic liquors and is normally supported by the said ring; an expansible member, 34, in the case; a block, 36, loose in the case below the said tablet,—the said parts being arranged so that the expansible member will eject the block when the normally immutable tablet disintegrates.

5. In a bottle-stopper the combination with a valve-seat; a valve resting thereon; a cap-member at the top of the bottle mouth; resilient means normally acting to hold said cap-member in depressed position; a freely mounted cartridge case which bridges the space between the said valve and cap-member when the latter is depressed and at such time serving to hold the valve on its seat; and a block within the bottom of the cartridge case and to be ejected therefrom and then serving to hold the valve to its seat when the cap-member has been elevated and an attempt is made to refill the bottle.

[Claim 6 not printed in the Gazette.]

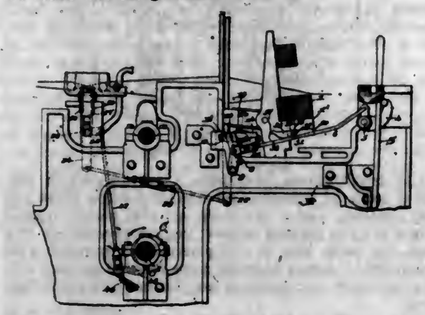
1,015,592. ADJUSTABLE BOILER-MOUNTING. LEONARD DANIEL SHEYOCK, Marietta, Ohio. Filed June 17, 1908. Serial No. 439,032. (Cl. 21—120.)



A boiler mounting comprising front and rear trucks, flexible connections extending from opposite ends of the rear truck along opposite sides of the boiler whereby the boiler is prevented from lateral movement, means for holding the boiler upon the trucks and adjustable means for fastening said flexible connections to the front truck.

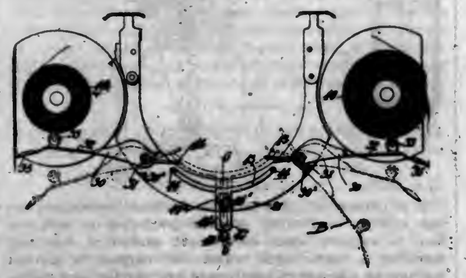
1,015,593. WARP STOP-MOTION FOR LOOMS. WILLIAM H. SPENCER, Waterville, Me., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 21, 1911. Serial No. 615,943. (Cl. 139—92.)

1. In a loom, in combination, a shipper, a knock-off lever therefor, a swinging carrier and a link connecting it with said lever, a dog pivoted on the carrier, the lay, a bunter pivotally mounted thereon to at times coöperate with the dog on the back stroke of the lay and swing the carrier, said bunter normally maintaining a fixed position on and relative to the lay and swinging on its pivot out of operative engagement with the dog after impact thereupon; the swinging movement of the carrier by such coöperation of the dog and bunter operating the knock-off lever to release the shipper, stop-motion detectors, a vibrating feeler to engage and be arrested by a detector released by failure of a warp-thread, a rocking governor in sliding engagement with the dog, and connections between the feeler and governor to rock and position the latter according to the position of the feeler, said governor normally moving the dog out of the bunter path and positioning the dog for engagement by the bunter when the feeler is arrested, the disengagement of the bunter and dog by pivotal movement of the former preventing the feeler from exerting undue pressure upon the released detector by transmission through the connections between the feeler and the governor.



2. In a loom, in combination, a shipper, a knock-off lever therefor, a swinging carrier and a link connecting it with said lever, a dog pivoted on the carrier, the lay, a bunted pivotally mounted on the lay and rearwardly extended therefrom, a stop to limit downward movement of and maintain said bunter normally fixed with relation to the lay and in operative position for temporary engagement with the dog on the backward stroke of the lay, to swing the carrier, the bunter thereafter rising on its pivot out of operative engagement with the dog, the latter having a flat impact face, swinging movement of the carrier acting through the knock-off lever to release the shipper, a rocking governor in engagement with the dog, to move the latter into and out of the normal path of movement of the bunter, and means, including a vibrating member arrested by or through failure of a warp-thread, to rock the governor and move the dog out of the bunter path except when said vibrating member is arrested.

1,015,594. TYPE-WRITER. RICHARD A. SPURGIN, London, England, assignor to The Hammond Typewriter Co. Filed June 30, 1911. Serial No. 636,258. (Cl. 197—151.)



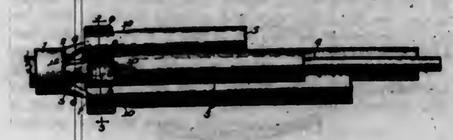
1. In a typewriter, a tension device, comprising a pivoted lever having a friction-roller at one side of the pivot and an extension at the other side of the pivot, a sliding piece adapted to engage the extension and move the tension device out of engagement and against the action of the spring and maintain it in that position.

2. In a typewriter, the combination of pivoted tension devices each having an extension at one end and a friction-roller at the other end, a bridge adapted to engage the extensions of the tension devices, a guide-slot on the bridge, and a manipulating knob for the bridge.

3. In a typewriter, the combination of tension devices, each comprising a pivoted lever with a friction roller at one end and an extension at the other end, and a tension spring for pressing the friction roller normally in one direction, a projection for holding the lever when pressed against the projection maintaining the lever in a fixed position, and a sliding bridge for engaging the ends of the extensions for holding the levers in a fixed position against the pressure of the spring.

4. In a typewriter, the combination, of a fixed projection and a pivoted lever having a friction roller at one end and pressed normally in one direction, the said lever being adapted to engage the projection and to be held thereby when moved over the projection.

1,015,595. AUTOMOBILE-HORN. WILLIAM EDWARD STEPHENS, Chicago, Ill., assignor, by direct and mesne assignments, to Aermore Manufacturing Company, Chicago, Ill. Filed May 8, 1911. Serial No. 625,758. (Cl. 116—19.)



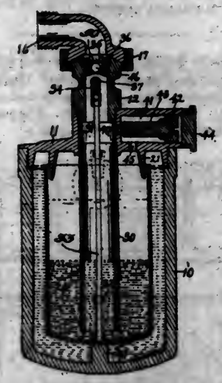
1. A horn comprising a suitable coupling, the outer end of which is reduced in diameter and forms a shoulder, a plurality of studs on the end of said reduced portion, a plurality of cylindrical fluid pressure tubes arranged around a central core having open ends the edges of which engage said studs, cut-away portions in the ends of said tubes adjacent said coupling, and a plurality of nozzles tapped through the shoulder in said coupling tangential to the axis thereof and intersecting the edges of said cut-away portions.

2. A horn comprising a suitable coupling, the outer end of which is reduced in diameter and forms a shoulder, a plurality of studs on the end of said reduced portion, a plurality of cylindrical fluid pressure tubes arranged around a central core having open ends the edges of which engage said studs, cut-away portions in the ends of said tubes adjacent said coupling, and a plurality of nozzles having flattened discharge orifices tapped through the shoulder in said coupling tangential to the axis thereof and intersecting the edges of said cut-away portions.

3. A horn comprising a suitable coupling, the outer end of which is reduced in diameter and forms a shoulder, a central core tapped into said reduced portion, a plurality of cylindrical fluid pressure tubes arranged around said core having open ends adjacent said coupling and cut-away portions therein, and a plurality of nozzles tapped through said shoulder tangential to the axis of said coupling and intersecting the edges of said cut-away portions.

4. A horn comprising a suitable coupling, the outer end of which is reduced in diameter and forms a shoulder, a plurality of studs on the end of said reduced portion, a central core tapped into said reduced portion, a plurality of cylindrical fluid pressure tubes arranged around said core having open ends adjacent said coupling that engage said studs and have cut-away portions in their ends, and a plurality of nozzles tapped through said shoulder tangential to the axis of said coupling and intersecting the edges of said cut-away portions.

1,015,596. VACUUM-VALVE MECHANISM. COLE STICKLE, Indianapolis, Ind., assignor to Open Coil Heater and Purifier Co., Indianapolis, Ind., a Corporation. Filed Dec. 1, 1910. Serial No. 595,138. (Cl. 237—27.)



1. A vacuum valve mechanism for steam heaters and the like including a condensation chamber, an open-top bucket float therein, a conduit extending up through said float and the top of said chamber from a point near the bottom of said float so that the lower end of said conduit may be water sealed, a valve for controlling the outlet from the upper end of said conduit, a passageway leading from the top of said condensation chamber at a point over said float to said conduit at a point below said valve, and a thermal valve for controlling said last-mentioned passageway and arranged so that said passageway will be opened before steam enters the device and will be closed while the device is heated.

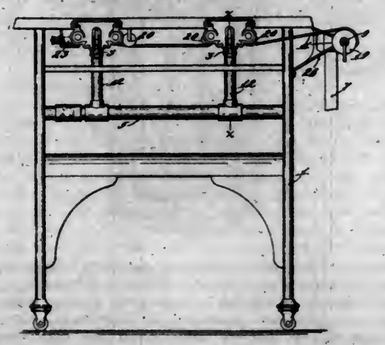
2. A vacuum valve mechanism for steam heaters and the like including a condensation chamber, a bucket float in said chamber, an outlet conduit extending from near the bottom of said bucket float to an outlet above said chamber, a valve for controlling the outlet from said conduit and which is connected with and actuated by said bucket float, a passageway from the upper part of said chamber to said conduit at a point above the bucket float and below the valve in said conduit, and a thermal valve for controlling said chamber whereby said passageway will be opened before steam enters the device and will be closed while the device is heated.

3. A vacuum mechanism for steam heaters and the like including a condensation chamber, a removable top therefor with a central opening, a valve chamber secured to said top and containing an outlet port, a bucket float in said condensation chamber, a tube extending from the opening through the top to a point near the bottom of said float, guides secured to said tube, a valve stem secured to the float and extending up through said tube and guides, a valve on the upper end of said stem for closing the outlet port, a thermal valve, a thermal valve chamber in said top which is threaded, a nut which screws into the threaded portion of said chamber for carrying and adjusting the thermal valve, a port leading from the upper part of the condensation chamber to the thermal valve chamber, and a port leading from the thermal valve chamber to the outlet conduit below the valve at the upper end thereof and in position to be closed by the thermal valve when expanded and opened when said valve is contracted.

4. A vacuum valve mechanism for steam heaters and the like including a condensation chamber, an outlet conduit leading from the lower part of said chamber and provided near its upper end with an outlet port, a valve closing said port on its upper side, a float controlled valve for controlling said outlet on its under side, said valve having V-shaped groove in its upper end arranged so that

when said valve is in closing position there will be a small outlet passageway through the port, substantially as set forth, another passageway leading from said condensation chamber to said outlet, and a thermal valve for controlling said passageway, whereby when said first mentioned valve is closed and said thermal valve is opened air will pass through said V-shaped groove.

1,015,597. GAS-STOVE. JOSEPH STUBBERS, Covington, Ky., assignor to The Incandescent Light & Stove Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 17, 1910, Serial No. 587,498. Renewed Dec. 4, 1911. Serial No. 663,834. (Cl. 158—119.)



1. In a device of the class described, a plurality of burners, a controller for each burner, a gas supply pipe, a service-pipe having communication with each burner, a needle valve for delivering gas from said supply pipe and entraining air into the service-pipe, and transmission mechanism connecting each burner controller to the needle valve enabling the movement of each burner controller in opening or closing to impart a similar opening or closing movement independently to the needle, the amount of movement being determined by the amount of movement of the controller.

2. In a device of the class described, a plurality of burners, a controller for each burner, a gas supply pipe, a service-pipe having communication with each burner, a needle valve for delivering gas from said supply pipe and entraining air into the service-pipe, and transmission mechanism serially connecting each burner controller to the needle vavle enabling the movement of each burner controller in opening or closing to impart a similar opening or closing movement independently to the needle, the amount of movement being determined by the amount of movement of the controller.

3. In a device of the class described, a plurality of burners, a burner controller for each burner, a service-pipe having communication with each burner, a Bunsen element for delivering gas and entraining air into the service-pipe, a gas supply pipe communicating with said Bunsen element, and means adapted to operatively transmit motion independently from each burner controller to the adjustable member of the Bunsen element.

4. In a device of the class described, a plurality of burners, a burner controller for each burner, a service-pipe having communication with each burner, a Bunsen element having a longitudinally adjustable needle valve for delivering gas and entraining air into the service-pipe, a gas supply pipe in communication with said Bunsen element, and means adapted to operatively transmit motion independently from each burner controller to the needle of the Bunsen element.

5. In a device of the class described, a plurality of burners, a burner controller for each burner, a service-pipe having communication with each burner, a screw threaded needle valve for delivering gas and entraining air into the service-pipe, a gas supply pipe, the outlet of which is controlled by said needle valve, a motion transmitting device rotatively connected to the needle for longitudinally adjusting the same, and an actuating member for each controller, adapted to independently operate the motion transmission device to impart to the needle a motion corresponding in direction of opening or closing to the movement of the burner controller, whereby the movement of each burner controller in opening or closing independently opens or closes the needle valve a predetermined amount.

[Claim 6 not printed in the Gazette.]

1,015,598. LIGHT-REFRACTING MATERIAL. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Apr. 25, 1908. Serial No. 429,152. (Cl. 63—8.)

1. As a new article of manufacture, a crystal of silicon carbid, substantially developed in the direction of its optical axis.

2. As a new article of manufacture, a transparent crystal of silicon carbid, substantially developed in the direction of its optical axis.

3. As a new article of manufacture, a transparent crystal of silicon carbid, substantially developed in the direction of its optical axis, having its surface cut and polished to form regular facets.

4. As a new article of manufacture, a transparent crystal of silicon carbid, substantially developed in the direction of its optical axis, having its surface cut and polished to form regular facets, said facets being symmetrical with the optical axis of the crystal.

1,015,599. PNEUMATIC TIRE. GEORGE R. VAUGHAN, Jefferson City, Mo. Filed Dec. 20, 1910. Serial No. 598,354. (Cl. 152—22.)

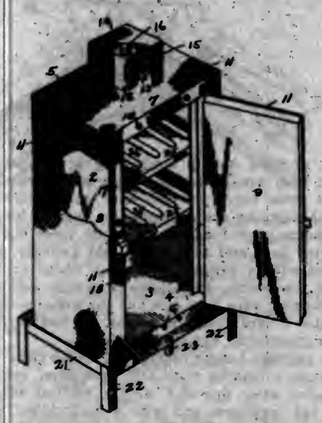
1. A pneumatic tire including a plurality of separate inflatable sections placed end to end, nuts provided in the meeting ends of the sections, a coupling bolt detachably connecting the meeting ends of each pair of adjacent sections and having screw-threaded end portions engaging the nuts, the middle portion of each bolt being angular in cross section to engage with a wrench, and means removably mounted on the intermediate portion of each bolt for filling the space between the sections.

2. A pneumatic tire including a plurality of separate inflatable sections placed end to end, nuts provided in the meeting ends of the sections, and a threaded coupling bolt connecting the meeting ends of each pair of adjacent sections and having screw-threaded end portions engaging with the nuts, the bolt being provided with an angular intermediate portion to engage with a wrench and being formed with a longitudinal passage establishing communication between the interior of the sections.

3. In a pneumatic tire, the combination with the meeting ends of flexible rubber tire sections, of nuts vulcanized in the meeting ends of said sections, hard rubber surrounding each of the nuts to prevent the same from coming into contact with the flexible rubber, and a screw-threaded coupling bolt engaging both nuts to detachably connect the tire sections together.

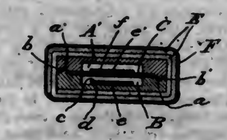
1,015,600. REFRIGERATOR. JOSEPH J. VAUGHN, San Mateo, Cal., assignor to Henry Seller, San Francisco, Cal. Filed June 17, 1911. Serial No. 633,751. (Cl. 62—10.)

1. In a refrigerator having a fabric covering adapted to be maintained in a moistened condition, a receptacle adapted to contain water to moisten said fabric, a cover adapted to inclose said receptacle having an opening in the top thereof, a fabric covering said cover, and a wick attached to said fabric extending through said opening into the water receptacle.



2. In a refrigerator having solid walls covered with a fabric adapted to be maintained in a moistened condition, means for moistening said fabric comprising a water receptacle provided with a drip-cock arranged on top of said refrigerator, and means for cooling the water in said receptacle, comprising a cover of larger dimensions than the receptacle adapted to inclose the receptacle, and having an opening in its top, a fabric covering said cover and a wick attached to said fabric extending through said opening into the water receptacle.

1,015,601. METHOD AND MEANS FOR PRESERVING AND MAILING SPECIMENS. ROBERT L. WATKINS, New York, N. Y. Filed May 16, 1907. Serial No. 373,984. (Cl. 99—8.)



1. The method of preserving microscopical specimens which consists in incasing them between glass in a substantially closed receptacle, wrapping said receptacle in a moisture containing covering, and further wrapping the said receptacle and a moisture containing covering in a non-absorbing casing.

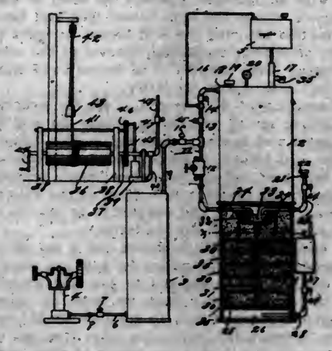
2. The method of preserving microscopical specimens which consists in incasing them between glass in a substantially closed receptacle, surrounding said receptacle with a moist wrapper, and then incasing said receptacle and wrapper in tin foil.

3. The herein described package for preserving and mailing specimens consisting of a substantially closed receptacle adapted to incase a microscopical specimen, a moisture containing wrapper surrounding said receptacle, and a non-absorbent covering inclosing said receptacle and wrapper.

4. The herein described package for preserving and mailing consisting of a substantially closed receptacle, glass covers within said receptacle between which is adapted to be placed a microscopical specimen, a moisture absorbing covering surrounding said receptacle, and a non-absorbing wrapper incasing said receptacle and covering.

5. The heretofore described package consisting of a substantially closed receptacle adapted to contain a microscopical specimen, moistened cotton batting surrounding said receptacle, and tin foil incasing said receptacle and moistened cotton batting, thereby providing a moist atmosphere in and around a substantially closed receptacle and preventing the escape of moisture from the cotton batting by means of said tin foil.

1,015,602. WITHDRAWN. APPARATUS FOR MANUFACTURING CARBURETED GAS. WILLIAM J. WATKINS, Fort Worth, Tex., assignor to O. G. Hurdleston, Fort Worth, Tex. Filed May 15, 1911. Serial No. 627,261. (Cl. 48—117.)



1. Apparatus for generating gas comprising a tank, a series of fiber partitions horizontally disposed in said tank, a central fiber stem engaging all of said partitions, iron borings and pine shavings placed on said partitions, a liquid container in said tank above said partitions, means for introducing liquids for making gas in said container, fiber cords for distributing said liquids from said container, and means for forcing air into said tank.

2. Apparatus for generating gas comprising a tank, a series of fiber partitions horizontally disposed and movable in said tank for distributing gas making liquids to all parts of said tank, a central fiber stem engaging all of said partitions, layers composed of a mixture of pine shavings and iron borings placed on each partition except the upper partition, a composition of gas-making material placed on the upper layer, means for distributing liquid gas making material on the last mentioned mixture, and means for applying air pressure to the contents of said tank.

3. Apparatus for generating gas comprising a tank, a series of fiber partitions horizontally disposed and movable in said tank, a central fiber stem in constant engagement with all of said partitions, gas making materials placed on said partitions, a liquid containing vessel in said tank above said partitions, means for distributing liquids from said vessel to the materials next to said vessel, a compressed air tank and pipes connecting said compressed air tank with said first named tank, and means for introducing gas making liquids into said liquid containing vessel.

4. Apparatus for generating gas comprising a tank, a series of fiber partitions horisontally disposed in said tank, gas making materials placed on said partitions, a liquid containing vessel in said tank above said partitions, means for distributing liquids from said vessel to the contents of said tank below the vessel, a compressed air tank, a pipe connecting said air tank with said gas generating tank, means intercepting said pipe for regulating the air-pressure going into said gas generating tank, means for introducing gas making liquids into said liquid containing vessel, a false bottom in said generating tank perforated and forming a gas chamber in the lower part of said tank, and a purifier connected with said gas chamber.

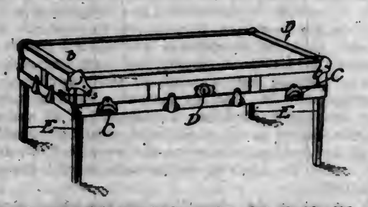
1,015,603. PIN SAFETY-LOCK. SOPHUS J. E. WILHJELM, Brooklyn, N. Y. Filed Mar. 8, 1911. Serial No. 613,026. (Cl. 24—157.)

1. The combination of a brooch, a pin for securing the same, a spring adapted to lock the said pin, said spring being bent in the form of an upwardly curved loop and provided with an aperture to admit the point of the said pin to project within the said formed loop and having a free end portion abutting the said brooch at right angles thereto for preventing accidental removal of the said pin, the said spring being adapted to be moved away from the point of the pin to release the latter.

2. The combination of a brooch, a pin for securing the same, a locking spring adapted to engage the said pin to lock the same and having a free end portion adapted to engage the said brooch to prevent accidental removal of the pin, said free end portion when locked standing at right angles to the brooch and in front of the said pin to protect it against injury and adapted to be bent in under the point of the pin to release the latter.

3. The combination with a brooch and a pin for securing the same, of a locking means for said pin comprising a spring pivoted at its one end to the said brooch, the body of the spring being bent to form an upwardly curved loop and provided with an aperture for the passage of the pin to secure the latter, the other free end of the spring being adapted to abut the brooch at right angles to prevent accidental removal of the pin and also adapted to be bent in under the said hinge or release the pin.

1,015,604. TRUNK. CHARLES T. WILT and ELMER E. WILT, Chicago, Ill., assignors to Chas. T. Wilt, Chicago, Ill., a Firm. Filed Aug. 8, 1910. Serial No. 575,240. (Cl. 190—11.)



A trunk comprising a body and a detachable lid, said lid having a flat top and side and end walls, legs hinged to said lid and adapted to be folded into said lid when the same is attached to the trunk body and to be folded outwardly into an upright position to support the lid when said lid is detached from said trunk, and means for locking said legs in both positions.

1,015,605. GARMENT-HANGER. CHARLES T. WILT and ELMER E. WILT, Chicago, Ill., assignors to Charles T. Wilt and Elmer E. Wilt, Copartners doing business under the firm-name of Chas. T. Wilt, Chicago, Ill. Filed June 15, 1911. Serial No. 633,317. (Cl. 211—13.)

1. A garment hanger comprising a neck-piece, and a pair of fixed arms extending from said neck-piece, each of said arms being provided with an outwardly facing shoulder adjacent said neck-piece and with a longitudinal groove in its upper edge exterior to said shoulder, a pair of hinged arms each having pivotal connection at its inner end with its associated fixed arm at a point adjacent to the said shoulder and provided at its lower edge with a longitudinal flange adapted for engagement with the groove of said fixed arm, and adjustable means for supporting the outer end of each hinged arm at different distances from its associated fixed arm.

2. A garment hanger comprising a neck-piece and a pair of fixed arms extending from said neck-piece, each of said arms being provided with an outwardly facing shoulder adjacent the neck-piece, a pair of hinged arms each having pivotal connection at its inner end with its associated fixed arm adjacent to said shoulder, and being provided with a downwardly facing wedge surface in a part of its length, an adjustable wedge member interposed between each fixed arm and the wedge surface of its associated hinged arm, and means for locking the wedge member in different adjusted positions.

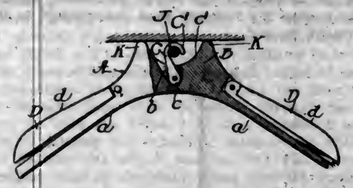
3. A garment hanger comprising a neck-piece, a pair of fixed arms extending from said neck-piece, each of said fixed arms being provided with a vertical shoulder adjacent the neck-piece and with a longitudinal groove in its upper edge extending from a point near its outer end into said shoulder, a pair of hinged arms each having pivotal connection with the shoulder of an associated fixed arm and provided on its lower edge with a longitudinal flange adapted for engagement within the groove of said fixed arm, said flange having a downwardly facing wedge surface in part of its length, and a wedge member slidable in said groove and adapted for engagement with the wedge surface on the flange of said hinged arm.

4. A garment hanger comprising a neck-piece, a pair of fixed arms extending from said neck-piece, each of said fixed arms being provided with a vertical shoulder adjacent the neck-piece and with a longitudinal groove in its upper edge extending from a point near its outer end into said shoulder, a pair of hinged arms each having pivotal connection with the shoulder of an associated fixed arm and provided on its lower edge with a longitudinal flange adapted for engagement within the groove of said fixed arm, said flange having a downwardly facing wedge surface in part of its length, a wedge member slidable in said groove and adapted for engagement with the wedge surface on the flange of said hinged arm, and means for locking said wedge member in position.

5. A garment hanger comprising a neck-piece, a pair of fixed arms extending from said neck-piece, each of said fixed arms being provided with a vertical shoulder adjacent the neck-piece and with a longitudinal groove in its upper edge extending from a point near its outer end into said shoulder, a pair of hinged arms each having pivotal connection with the shoulder of an associated fixed arm and provided on its lower edge with a longitudinal flange adapted for engagement within the groove of said fixed arm, a wedge member slidable in said groove and adapted for engagement with the lower edge of the flange of said hinged arm, and means for moving said wedge member longitudinally in said groove comprising a screw rotatively carried by said fixed arm and threaded longitudinally through said wedge member, and means for holding said screw against longitudinal movement.

1,015,606. GARMENT-HANGER. CHARLES T. WILT and ELMER E. WILT, Chicago, Ill., assignors to Charles T. Wilt and Elmer E. Wilt, Copartners doing business under the firm-name of Chas. T. Wilt, Chicago, Ill. Original application filed June 15, 1911, Serial No. 633,317. Divided and this application filed July 24, 1911. Serial No. 640,089. (Cl. 211—13.)

1. A garment hanger comprising a neck-piece and a pair of arms, a suspension hook connected to said neck-piece, and upright extensions provided on said neck-piece at each side of said suspension hook, the upper ends of said extensions being substantially on a level with the upper end of said hook when said hook is in suspended relation.

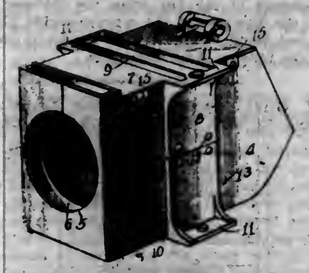


2. A garment hanger comprising a neck-piece and a pair of arms, a suspension hook pivotally connected to said neck-piece, and upright extensions provided on said neck-piece at each side of said suspension hook, the upper ends of said extensions being substantially on a level with the upper end of said hook when said hook is in suspended relation.

3. A garment hanger comprising a neck-piece and a pair of arms, said neck-piece being provided with a concave upper edge, and a hook member pivotally connected to said neck-piece, the end of the hook of said hook member when said hook member is in suspended relation being located at one side of the deepest part of said concavity and being spaced from the upper concave edge of said neck-piece a distance less than the diameter of the fixture from which it is to be suspended.

4. A garment hanger comprising a neck-piece and a pair of arms, said neck-piece being provided with a concave upper edge and with a groove in said upper edge extending parallel to the plane of said hanger, and a hook member pivotally connected to said neck-piece to swing in said groove, the end of the hook of said hook member, when said hook member is in suspended relation, being located at one side of the deepest part of said concavity and being spaced from the upper concave edge of said neck-piece a distance less than the diameter of the fixture from which it is to be suspended.

1,015,607. JOURNAL-BOX. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1909. Serial No. 526,159. (Cl. 64—10.)



1. In a sectional journal box, a yoke section cast in two parts adapted to surround and embrace a body section, one part of said yoke section comprising a top arch bar seat and portions of the standards, the other part comprising the bottom arch bar seat and the complementary portions of the standards, and means for securing the parts together.

2. In a sectional journal box, a pressed steel body section comprising a bottom and two sides, a yoke section comprising a top, two arch bar seats and two standards, said yoke section being cast in two parts adapted to fit together and inclose the body section, and means for fastening the body section and the yoke section together.

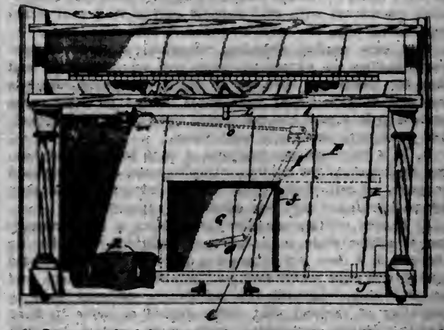
3. In a sectional journal box, a pressed steel body section comprising a bottom and two sides, a yoke section comprising a top, two arch bar seats and two standards, said yoke section being cast in two parts, a portion of the standards being made integral with the upper part of the yoke section and the other portion being integral with the lower part of the yoke section, and means for fastening the yoke section and the body section together.

1,015,608. LEVEL. JOHN ALMGREN, Seattle, Wash. Filed Feb. 17, 1911. Serial No. 609,181. (Cl. 73—71.)

1. A leveling device comprising a board, a cylindrical casing positioned therein, a flange at one end of said casing, a ring secured to said board at the opposite end of said casing, said flange being adjustably connected to said board opposite said ring, said casing having scale flanges extending inwardly from said casing, a pair of standards extending inwardly from one side of said casing and a weighted pointer pivotally mounted in said standards.

2. The combination with a leveling board, of an indicating device therefor, comprising a cylindrical casing, a flange at one end of said casing and adjustably secured to said board, a ring at the opposite end thereof, a pair of standards extending inwardly from one side of said casing, a weighted pointer pivotally mounted in said standards, and scale flanges extending inwardly from said casing, said pointer being adapted for movement over said scale flanges.

1,015,609. DOOR-OPERATING DEVICE FOR MUSICAL INSTRUMENTS. WILLIAM F. BAYER, Buffalo, N. Y., assignor to The Chase & Baker Company, Buffalo, N. Y., a Corporation of New York. Filed Feb. 10, 1910. Serial No. 543,065. (Cl. 84—159.)



1. In a musical instrument, a removable wall or panel having a door-opening, a door applied to said opening, and means mounted wholly on and removable with said panel for opening and closing the door.

2. In a musical instrument, a removable wall or panel having a door-opening, a sliding door applied to said opening, a vertically-swinging lever mounted on said panel and connected with the door, a horizontally-swinging lever also mounted on said panel and accessible from the front side thereof, and means connecting the hand lever with said vertically-swinging lever all of said parts being mounted wholly on said panel.

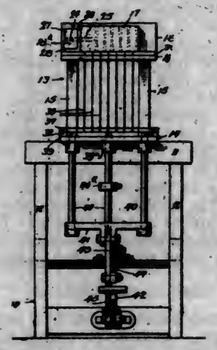
3. A musical instrument having a wall provided with a pedal-opening, a sliding door for said opening, a hand lever mounted on said wall, and connections between said hand lever and said door for operating the door.

4. A musical instrument having a wall provided with a pedal-opening, a sliding door for said opening, a hand

lever mounted on the front side of said wall and extending rearwardly beyond the same, and operating connections between said lever and the door, arranged on the rear side of said wall.

5. A musical instrument having a case provided with a removable panel containing a door-opening, a horizontally-sliding door applied to said opening, a vertically-swinging lever mounted on the rear side of said panel and connected with the door, a horizontally-swinging hand-lever mounted on the upper portion of the panel and having an arm extending rearwardly beyond the same, and a link connecting the rear arm of said hand lever with said vertically-swinging lever.

1,015,610. MACHINE FOR VENTING AND WIRING CORES. JOHN E. BORDEN, Berwyn, Ill., assignor of one-half to Bernard L. Zeller, Chicago, Ill. Filed Apr. 18, 1911. Serial No. 620,782. (Cl. 22—39.)



1. In a machine of the class described, a core box support having a core box gage and end stop, arranged to hold and locate in proper position a core box, having one or more cores contained therein, and wire inserting mechanism associated with said support and having vent wires registering with the cores in the core box.

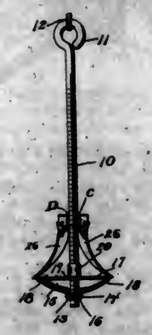
2. A core venting machine, comprising a core box support, having an adjustable gage and an adjustable end stop for locating a core box in position on said core box support, a plurality of vent wires guided to enter cores contained in a core box positioned upon said core support, and vent wire actuating mechanism.

3. In a core venting machine, a core box support having perforations for guiding wires to cores carried by said support, an adjustable gage, and an adjustable end stop for positioning a core box upon said support.

4. A core venting machine, comprising a head consisting of a base plate, a plurality of uprights, extending up therefrom, a core box supporting plate at the top of said uprights, a gage transversely adjustable on said plate, and an end stop longitudinally adjustable on said gage, a plurality of vertical vent wires guided to move in fixed vertical planes registering with cores carried by said plate, and mechanism for inserting said vent wires in unison in cores carried by said plate.

1,015,611. POST-ANCHOR. CLINTON BOWEN, Fostoria, Ohio. Filed July 15, 1910. Serial No. 572,120. (Cl. 189—92.)

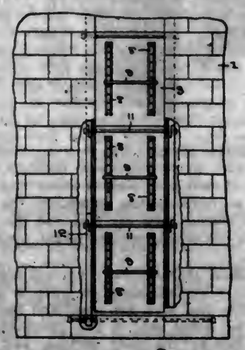
1. A post anchor comprising a concavo-convex plate having a central opening, a diametrical plate secured across the concave side of the first named plate, said diametrical plate having an opening alining with the opening of the first named plate, a threaded rod engaged through the two openings, a confining nut engaged with the rod below the convex side of the first named plate, a sleeve loosely mounted upon the rod and resting upon the diametrical plate, a follower head threaded upon the rod above the sleeve, said follower including a plurality of spaced ears, and fins pivoted at their inner ends between the ears, said fins having arcuate under surfaces arranged to engage against the edge of the concavo-convex plate for outward movement of the fins when the follower head is moved in the direction of the sleeve, said sleeve being arranged to receive the follower head thereagainst to limit the movement thereof.



2. A post anchor including a threaded rod, and a follower head mounted upon the rod, said follower head being formed of a metallic plate bent upon itself to produce spaced side portions and a connecting bight, the space between the side portions being less than the transverse dimension of the threaded rod, said bight having an opening formed therethrough, said opening and the inner faces of the walls being threaded for engagement with the threaded rod.

3. A post anchor comprising a concavo-convex plate having a central opening, a diametrical plate secured across the convex side of the first named plate, said diametrical plate having an opening alining with the opening of the first named plate, a threaded rod engaged through the two openings, means for holding the threaded rod against withdrawal from the openings, said means being engaged with the threaded rod at the convex side of the plate, a follower head threaded upon the rod above the sleeve, said follower including a plurality of spaced ears, and fins pivoted at their inner ends between the ears, said fins having arcuate under surfaces arranged to engage against the edge of the concavo-convex plate, for outward movement of the fins when the follower head is moved in the direction of the concavo-convex plate, said threaded rod being rotatable with respect to said plate to move the follower head thereupon.

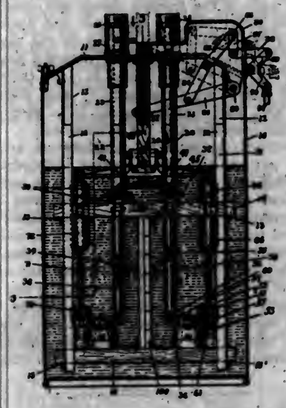
1,015,612. SILO. OLIVER BRUMBAUGH, Louisville, Ohio. Filed Aug. 23, 1910. Serial No. 578,531. (Cl. 72—6.)



3

In a structure of the class described, the combination with a wall formed of hollow sections and having a portion of said sections omitted to form a doorway, the jambs of the doorway being formed solely by the hollow sections, the sections forming the door jambs having recesses in the inner exposed corners thereof of brace rods extending transversely of the doorway and through the ends of the sections forming the door jambs, said rods intersecting said sections substantially at their transverse centers, strips placed end to end within the sections to either side of the doorway and extending the full height of said wall, the lowermost strips projecting below the doorway, the ends of said brace rods extending through the strips, means to hold the brace rods in engagement with the strips, a binding rod extending through the hollow sections forming the sill of the doorway and through the depending ends of the strips, door sections having their edges entered in the recesses in the sections forming the jambs and means to interlock the meeting ends of the door sections.

1,015,613. ELECTRIC SWITCH. GEORGE A. BURNHAM, Saugus, Mass., assignor to S. B. Condit, Jr., Boston, Mass. Filed June 17, 1911. Serial No. 633,698. (Cl. 175—283.)



1. In an electric-switch, an oil-receptacle, stationary and movable main switch-members arranged below but near the top of the body of oil, stationary and movable auxiliary switch-members arranged near the bottom of the body of oil, and means to move the movable switch-members, substantially as described.

2. In an electric-switch, an oil-receptacle having a cover, a short and a long terminal bar extending through the cover of the receptacle and down into the body of oil, the short bar terminating a short distance below the top of the body of oil and the long bar terminating near the bottom of the body of oil, a stationary switch-member connected at one end to the lower end of said short terminal-bar and at the other end to an intermediate part of the long terminal-bar, and another stationary switch-member connected to the lower end of the long terminal-bar, switch members movable into and out of engagement with said stationary switch-members, and means to move them, substantially as described.

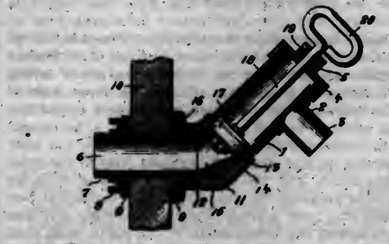
3. In an electric-switch, an oil-receptacle, stationary switch-members, and a movable switch-member therefor, arranged near the top of the body of oil, stationary auxiliary switch-members, and movable switch-members therefor, arranged near the bottom of the body of oil, terminal-bars extending through the cover of the receptacle to which said stationary main switch-members are connected, two of said bars having downward extensions which terminate near the bottom of the body of oil, and conducting-plates connected to the lower ends of said extensions bearing the stationary auxiliary switch-members, substantially as described.

4. In an electric-switch, an oil-receptacle, stationary main switch-members, and a movable switch-member therefor, arranged near the top of the body of oil, stationary auxiliary switch-members and movable switch-members therefor, arranged near the bottom of the body of oil, terminal-bars extending through the cover of the receptacle to which said stationary main switch-members are connected, two of said bars having downward extensions which terminate near the bottom of the body of oil, conducting-plates connected to the lower ends of said extensions bearing the stationary auxiliary switch-members, and blocks supported on a frame connected with the cover to which said conducting-plates are attached, substantially as described.

5. In an electric-switch, an oil receptacle having a cover, a short and a long terminal bar extended through the cover and down into the body of oil and terminating, respectively, a short distance below the top and near the bottom of the body of oil, a stationary main switch-member and a stationary auxiliary switch-member supported by said terminal bars, one below but near the top, and the other near the bottom of the body of oil, and switch-members borne by a cross-head, movable into and out of engagement with said stationary switch-members, substantially as described.

[Claim 6 not printed in the Gazette.]

1,015,614. FAUCET. HENRY GREELEY CORDLEY, Glen Ridge, N. J. Filed Apr. 22, 1909. Serial No. 491,616. (Cl. 137—4.)



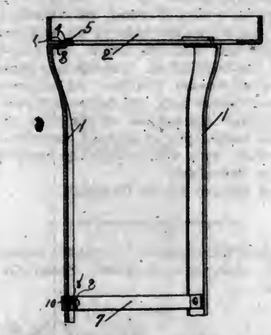
1. In a faucet, a nipple adapted to extend through the wall of a receptacle to thus form a support for a faucet; a body portion; a coupling member interposed between said nipple and said body portion and provided with two recesses disposed at an angle with one another wherein the ends of said nipple and of said body portion are secured, and whereby said body portion may be supported in a position inclining upward from its point of support, and provided also with a valve seat; a valve coöperating with said seat; and a stem for operating said valve, said stem being within and extending longitudinally of said body portion and said body portion having a discharge opening above the level of said valve seat.

2. In a faucet, a nipple adapted to extend through the wall of a receptacle to thereby support the faucet; a body portion; a coupling member interposed between said nipple and said body portion and provided with two recesses disposed at an angle to one another wherein the ends of said nipple and of said body portion are secured, and whereby said body portion will be supported in a position inclining upwardly from its point of support, and provided also with a valve seat formed by the bottom wall of that recess wherein the end of said body member is secured; a valve coöperating with said seat; and means for operating said valve.

3. In a faucet, a body portion; a valve seat; a valve within said body portion and capable of movement longitudinally thereof and adapted to engage said valve seat; a rod to which said valve is secured and by which it may be operated; a cap upon the outer end of said body portion and having a threaded opening of greater diameter than said rod; a threaded member upon the outer end of said rod and adapted to engage the threaded opening in said

cap when the valve is closed, and to be out of engagement with said threaded opening when the valve is opened to its greatest extent, and a discharge spout intermediate said valve seat and said cap, the distance from said valve seat to said discharge spout being greater than the length of said threaded member whereby said valve after having been disengaged from said seat by rotating said rod may be moved longitudinally and without further rotary movement past said discharge spout.

1,015,615. WATER-COOLER STAND. HENRY G. CORDLEY, Glen Ridge, N. J. Filed Aug. 26, 1910. Serial No. 579,071. (Cl. 248—41.)

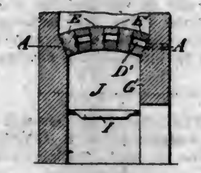


1. A water cooler stand comprising a ring adapted to support a water cooler and vertical sections of which are right-angular in form and the vertical portion of which ring is outermost; a plurality of legs the upper ends of which are bent to provide a vertical portion in contact with the vertical portion of said ring and a horizontal portion in contact with and extending beneath the horizontal portion of said ring and inwardly toward the axial line of the stand, and the horizontal portion of each leg being secured adjacent its inner end to the horizontal portion of said ring; and a brace member connecting said legs with one another, the arrangement of the parts being such that as said brace member is placed in position the horizontal portions of said legs will be forced against the horizontal portions, and the vertical portions thereof against the vertical portion of said ring.

2. A water cooler stand comprising a ring adapted to support a water cooler and the lower surface of which ring lies in a horizontal plane and is of considerable extent in a radial direction, and said ring having a plurality of oblong slots adjacent its inner periphery through which the ends of supporting legs may extend; a plurality of legs the upper ends of which are bent to provide a horizontal portion in contact with and extending beneath the lower surface of said ring and inwardly toward the axial line of the stand, and the horizontal portion of each leg being provided with an offset portion adapted to lie within the slots aforesaid when the stand is assembled; and a brace member connecting said legs with one another, the arrangement of the parts being such that as said brace member is placed in position the horizontal portions of said legs will be forced against the lower surface aforesaid of said ring.

3. A water cooler stand comprising a ring adapted to support a water cooler and vertical sections of which are right-angular in form and the vertical portion of which ring is outermost, and the horizontal portion of said ring having a plurality of oblong slots adjacent its inner periphery through which the ends of supporting legs may extend; a plurality of legs the upper ends of which are bent to provide a vertical portion in contact with the vertical portion of said ring and a horizontal portion in contact with and extending beneath the horizontal portion of said ring and inwardly toward the axial line of the stand, and the horizontal portion of each leg being provided with an offset portion adapted to lie within the slots aforesaid when the stand is assembled; and a brace member connecting said legs with one another, the arrangement of the parts being such that as said brace member is placed in position the horizontal portions of said legs will be forced against the horizontal portions, and the vertical portions thereof against the vertical portion of said ring.

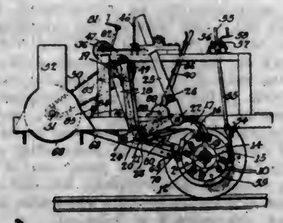
1,015,616. FURNACE. EDWARD CURRAN, Cardiff, England. Filed Jan. 14, 1911. Serial No. 602,724. (Cl. 110—64.)



1. In a furnace, a recuperator brickwork arch interposed in the path of the furnace gases, and consisting of rows of bricks keyed one into the other and disposed longitudinally of the furnace, the bricks in the rows being spaced apart to form both upwardly directed passages in the arch for the combustion gases to pass through and also passages extending longitudinally and transversely through the arch and communicating both with the said combustion gas passages and the atmosphere.

2. In a furnace, a recuperator brickwork arch interposed in the path of the furnace gases and consisting of two alternating rows of bricks which may be imperforate and are placed longitudinally of the furnace, one row comprising bricks which are disposed with respect to each other so as to leave between each pair of opposing ends thereof a vertical space, the said spaces serving as passages for combustion gases to pass through the arch, and the other row comprising an upper and a lower layer of bricks disposed to leave a longitudinal passage intermediate of the layers communicating with the combustion gas passages, the furnace wall having openings communicating with the atmosphere and with the said longitudinal passages.

1,015,617. VARIABLE-SPEED GEARING. HUGH WILLIAM FELLOWS, Los Angeles, Cal., assignor to Fellows Direct Power Transmission Company, Los Angeles, Cal., a Corporation of Arizona. Filed June 23, 1910. Serial No. 568,549. (Cl. 74—53.)



1. In a variable speed gearing, a plurality of intermittent grip devices, means for oscillating the same, means for controlling said intermittent grip devices comprising a toothed arm projecting from each intermittent grip device, a worm engaging said arm, a plurality of sprockets, a chain connecting said sprockets, a plurality of shafts extending slidably through the respective sprockets and turning therewith, and universal joints connecting the worms with the respective shafts.

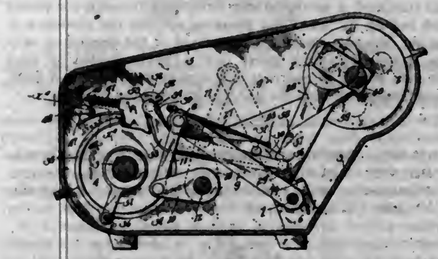
2. In a variable speed gearing, an intermittent grip device, means including a rock frame for oscillating the same, a rack pivoted to the rock frame, a pinion engaging

said rack, a shaft supporting the pinion, a worm gear on the shaft, a worm engaging the worm gear, a friction wheel for rotating the worm, a pair of friction disks, either of which is movable into engagement with the friction wheel for operating the latter and the worm in either direction to move said rack up or down and thereby adjust the rock frame, and means for shifting said disks.

3. In a variable speed gearing, an intermittent grip device, means including a rock frame for oscillating the same, a rack pivoted to the rock frame, a pinion engaging said rack, a shaft supporting the pinion, a worm gear on the shaft, a worm engaging the worm gear, a friction wheel for rotating the worm, a pair of friction disks, either of which is movable into engagement with the friction wheel for operating the latter and the worm in either direction to move said rack up or down and thereby adjust the rock frame, and means for shifting said disks and at the same time locking the rack tightly against the pinion.

4. In a variable speed gearing, an intermittent grip device, means including a rock frame for oscillating the same, a rack pivoted to the rock frame, a pinion engaging said rack, a shaft supporting the pinion, a worm gear on the shaft, a worm engaging the worm gear, a friction wheel for rotating the worm, a pair of friction disks, either of which is movable into engagement with the friction wheel for operating the latter and the worm in either direction to move said rack up or down and thereby adjust the rock frame, means for shifting said disks, an eccentrically journaled bearing in which said worm is journaled, and means for turning said bearing to move said worm out of engagement with said worm gear.

1,015,618. HOISTING-GEARING. HUGH WILLIAM FELLOWS, Los Angeles, Cal. Filed Oct. 13, 1910. Serial No. 586,937. (Cl. 74—53.)



1. A driving shaft operable in either direction, a driven shaft, intermittent grip devices on the driven shaft, means operated by the driving shaft for oscillating said intermittent grip devices, and means operated by the driving shaft in rotating in one direction for causing said intermittent grip devices to engage in rigid relation to the driven shaft in moving through one direction of oscillation and when the driving shaft rotates in the other direction for causing the intermittent grip devices to engage in rigid relation to the driven shaft in moving through their other direction.

2. A driving shaft operable in either direction, a driven shaft, intermittent grip devices on the driven shaft, means operated by the driving shaft for oscillating said intermittent grip devices, and means operated by the driving shaft in turning in one direction to cause the intermittent grip devices to be placed in rigid relation with the driven shaft during their forward stroke and to move freely from the driven shaft when oscillated in their backward stroke, and when the driving shaft rotates in the opposite direction to place the intermittent grip devices in rigid relation to the driven shaft during their backward stroke and in free relation to the driven shaft during their forward stroke.

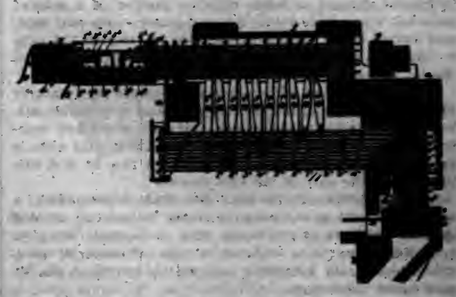
3. A driving shaft operable in either direction, a driven shaft, intermittent grip devices on the driven shaft, means operated by the driving shaft for oscillating said intermittent grip devices, means for causing said intermittent grip devices to engage in rigid relation to the driven shaft in moving through either direction of oscillation according to the direction of rotation of the driving shaft and to move freely from the driven shaft in the other direction of oscillation, and means for placing the intermittent grip devices in free relation to the driven shaft during their stroke in both directions.

4. A driving shaft, a driven shaft, intermittent grip devices on the driven shaft, an adjustable rock frame, radius arms pivoted to the rock frame, ratchet arms pivoted to the radius arms, each ratchet arm connected to an intermittent grip device, pitmen connected to the driving shaft and pivotally connected to the ratchet arms, and means operated by the driving shaft in turning in one direction to cause the intermittent grip devices to be placed in rigid relation with the driven shaft during their forward stroke and to move freely from the driven shaft when oscillated in their backward stroke, and when the driving shaft rotates in the opposite direction to place the intermittent grip devices in rigid relation to the driven shaft during their backward stroke and in free relation to the driven shaft during their forward stroke.

5. A driving shaft, a driven shaft, intermittent grip devices on the driven shaft, an adjustable rock frame, radius arms pivoted to the rock frame, ratchet arms pivoted to the radius arms, each ratchet arm connected to an intermittent grip device, pitmen connected to the driving shaft and pivotally connected to the ratchet arms, a controlling lever pivoted to each pitman, a cam operated by the driving shaft for actuating each controlling lever, a shift bar associated with each ratchet arm and connected to each associated controlling lever, and means operated by the respective shift bars for placing the associated intermittent grip devices in rigid or free relation to the driven shaft according to the direction of rotation of the driving shaft and angular position of the cams thereon.

[Claims 6 to 12 not printed in the Gazette.]

1,015,619. CARD-PUNCHING MACHINE. HERBERT FLEMING, Philadelphia, Pa., assignor to Hardwick & Magee Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 20, 1910. Serial No. 578,132. (Cl. 164—114.)



1. The combination of a repeater card punching machine with an attachment interposed between the repeater and the primary card cylinder and having needles with their opposite ends in different planes, whereby the disposition of the openings and blanks in the repeat card will be different from their disposition in the primary card.

2. The combination of a repeater card punching machine with an attachment interposed between the repeater and the primary card cylinder and having needles acting upon those of the repeater and acted upon by the primary cards, said attachment needles having their opposite ends in different planes, whereby the disposition of the openings and blanks in the repeat card will be different from their disposition in the primary card.

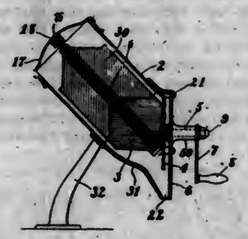
3. The combination of a repeater card punching machine with an attachment having needles disposed in vertical rows guided at one end in independent laterally adjustable bars, whereby different groupings of the vertical rows of needles can be effected.

4. The combination of a repeater card-punching machine with an attachment having needles disposed in vertical rows guided at one end in independent laterally adjustable bars, whereby different groupings of the vertical rows of needles can be effected, in combination with removable separator bars whereby the needle-guiding bars are retained in position after adjustment.

5. The combination of a repeater card-punching machine with an attachment having needles disposed in vertical rows guided at one end in independent laterally adjustable bars, whereby different groupings of the vertical rows of needles can be effected, in combination with removable separator bars whereby the needle-guiding bars are retained in position after adjustment, said separator bars being adapted at top and bottom to grooves in the attachment but being shorter than the distance between the bases of the grooves, whereby they can be removed from engagement therewith.

[Claim 6 not printed in the Gazette.]

1,015,620. SOAP-DISPENSING MACHINE. WILLIAM HADDOW, Ossining, N. Y. Filed Mar. 23, 1908. Serial No. 422,826. (Cl. 146—9.)



1. The combination of a receptacle having a stem therein for the support and free rotation thereon of a cake of material, a rotatable cutter for engagement with said cake, said cutter being located to one side relative to the cake to impart a rotary movement to the cake during the cutting of said cake, and means to rotate the cutter.

2. In combination with a receptacle, means for rotatably supporting a cake of material therein, and a rotatable cutter, said receptacle and cutter being so positioned relatively to each other and to the vertical that said cake is urged by gravity to engagement with the face of said cutter on one side only of the axis thereof.

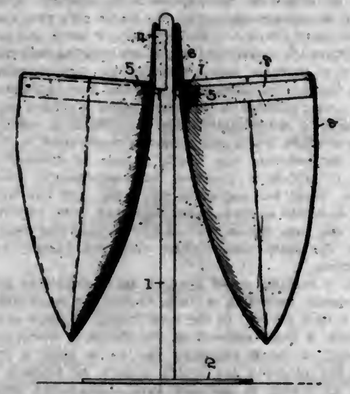
3. In a device of the kind described, a receptacle, a spindle therein, and a rotative cutter at one end of said spindle, the axis of the cutter and the spindle being in non-intersecting lines whereby a cake of material positioned upon said spindle is rotated by the operation of said cutter thereupon.

4. In a machine for dispensing soap or similar articles, a device adapted to receive and support a cake of soap so as to permit a rotary movement thereof, and a rotative cutter positioned at one end of said device and arranged to engage the cake of soap on one side only of its axis of rotation.

5. In a machine for dispensing soap or similar articles, a device adapted to receive and support a cake of soap so as to permit a rotary movement thereof, and a rotative cutter positioned at one end of said device and having its cutting face at an angle with the axis of rotation of the cake of soap positioned in said device and arranged to engage the cake of soap on one side only of its axis of rotation.

[Claims 6 to 10 not printed in the Gazette.]

1,015,621. BAG-HOLDER. LOUIS HANSON, Cottonwood, Idaho. Filed July 13, 1911. Serial No. 638,305. (Cl. 88—26.)



1. In a bag holder the combination with a standard, of a rectangular sleeve slidably mounted on the standard, an inverted U-shaped spring adapted to straddle the upper edge of said sleeve, means to secure said spring upon said sleeve, the inner arm of said sleeve being adapted to press against the standard to hold the sleeve in its adjusted position, a bracket secured to the lower end of the outer arm of said spring and an expansible band removably secured between said outer arm and bracket.

2. In a bag holder the combination with a standard and means to anchor the same, of a sleeve slidably mounted on the standard, a spring tongue extending through the sleeve and having its lower end pressing against the standard, a hanger depending from the upper end of the sleeve and having a bracket at its lower end, a band carried by said bracket, means to contract and expand said band and additional means to hold the band in its adjusted position.

1,015,622. SOUND-REPRODUCER FOR TALKING-MACHINES, TELEPHONES, &c. WILLIAM N. HUNTER, Blanchester, Ohio. Filed June 16, 1910. Serial No. 567,280. (Cl. 181—10.)

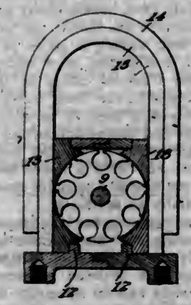
1. In a sound reproducer, the combination with a cap, of a hollow member having one of its ends extended through the cap, said end being closed and the opposite end open, an additional hollow member extending over the first hollow member, means to adjust the second hollow member, the first hollow member having openings therein to admit sound from the cap and the closed end of said first hollow member having a recess therein.

2. In a sound reproducer, the combination with a cap, of a hollow member projecting through said cap, one end of the hollow member being closed and a stud at the opposite end thereof, a wire extending through the hollow member and stud, disks for securing the ends of said wire in said hollow member, and means at the end of the stud to increase or decrease the tension of the wire.

3. In a sound reproducer, the combination with a hollow member having one of its ends closed and a stud at the opposite end of the hollow member, of a wire extending longitudinally through the hollow member and through the stud, a disk at each end of the wire to anchor said ends and means surrounding the stud adapted to direct pressure against one of the disks and regulate the tension of the wire.

4. In a sound reproducer, the combination with a hollow member having a closed end and a stud at its opposite end, of a wire extending through the hollow member and through said stud, a disk at each end of the wire, to which the wire is secured, means to increase the tension of the wire and gaskets between the disks and parts with which they engage to prevent the vibration of the wire affecting said parts.

1,015,623. MAGNETO. SHERMAN L. KELLY, South Bend, Ind. Filed May 5, 1910. Serial No. 559,530. (Cl. 171—209.)



1. A magneto casing in sections with threaded extensions and rabbeted edges, and threaded caps engaging said extensions to hold the sections together.

2. A magneto casing in sections with threaded extensions and rabbeted edges, and threaded caps engaging said extensions to hold the sections together, said extensions having chambers for the reception of ball bearing rings.

3. A magneto casing formed of sections having semi-cylindrical extensions at each end, and caps adapted to inclose said sections and hold the sections together.

4. A magneto casing formed of sections having semi-cylindrical extensions at each end, said extensions forming ball-bearing receiving chambers, and caps adapted to inclose said extensions and hold the sections together.

5. A magneto casing formed of sections each having semi-cylindrical extensions at each end and provided with an internal longitudinal rib which forms an abutment for the pole piece, magnets for binding the pole pieces in place, and caps adapted to inclose said extensions and hold them together.

1,015,624. SASH-FASTENER. GUSTAVE LANGKANS, Utica, N. Y. Filed Sept. 3, 1910. Serial No. 580,373. (Cl. 21—81.)

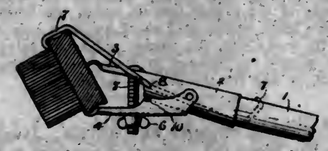
1. In a sash fastener, a recessed member fixed to the sash, a member pivoted to the said fixed member and oppositely recessed, a pin projecting from the sash frame or side post and adapted to revolve in and be grasped by said oppositely disposed recesses and a bell crank pivoted to one member and having one arm screw-threaded and fitted with a winged-nut to press the members together, the other arm adapted to separate the members when the screw-threaded arm is swung away from holding position.

2. In a sash fastener, a recessed member fixed to the sash, a member pivoted to the said fixed member and oppositely recessed, a pin projecting from the sash frame or side post and adapted to revolve in and be grasped by said oppositely disposed recesses and a bell crank pivoted to one member and having one arm screw-threaded and fitted with a winged-nut to press the members together, the other arm adapted to separate the said recessed members when the screw-threaded arm is swung away from holding position and to return the screw-threaded arm to holding position when the recessed members are brought together.

3. In a sash fastener, a recessed member fixed to the sash, a member pivoted to the said fixed member and oppositely recessed, a pin projecting from the sash frame or side post and adapted to revolve in and be grasped by said oppositely disposed recesses and means for pressing the recessed members together and means including a bell crank to separate said recessed members.

4. In a sash fastener, a recessed member fixed to the sash, a member pivoted to the said fixed member and oppositely recessed, a pin projecting from the sash frame or side post and adapted to revolve in and be grasped by said oppositely disposed recesses and means for pressing the recessed members together and separating them including a bell crank adapted to separate the said members and to return the pressing means to operative position when the recessed members are brought toward each other.

1,015,625. IMPLEMENT-HOLDER. SIMEON C. LAWLOR, Chicago, Ill. Filed Nov. 30, 1908. Serial No. 465,337. (Cl. 15—54.)



1. The combination of a clamp comprising a pair of pivotally connected jaws and a bolt engaging and to actuate said jaws, of a hook movably engaging and carried by one of said jaws and independent of the other jaw.

2. In a device of the class described, the combination of jaws pivotally connected together, a bolt connecting said jaws for actuating the same, and a hook pivotally carried by one of the jaws and free to move relative to the jaw carrying the same and relative to the other jaw, said hook being adapted to be operatively manipulated by actuation of the clamping jaws under the action of the bolt connecting the jaws.

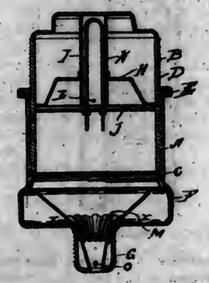
3. In a device of the class described, the combination with a handle, and a clamp carried thereby, said clamp comprising pivotally connected clamping jaws, of a clamping hook pivotally connected to the clamp and formed with means coöperating with the handle for temporarily retaining the hook in an out-of-the-way position.

4. In a device of the class described, the combination with a clamp comprising pivotally connected clamping jaws, of a pair of arms pivotally engaging opposite sides

of the clamp and extending outwardly therefrom and terminating in a hook.

5. In a device of the class described, the combination with a clamp, and a handle therefor, of a clamping hook pivotally connected to the clamp, said hook being constructed and adapted to be sprung past a portion of the handle for being temporarily retained in an out-of-the-way position.

1,015,626. AUTOMATIC GREASE-CUP. JOHN F. LEWIS, Philadelphia, Pa. Filed Oct. 1, 1909. Serial No. 520,494. (Cl. 184—39.)

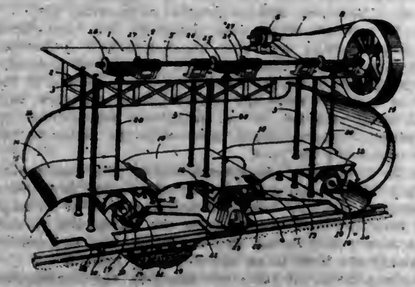


1. A grease cup consisting of a body and an upper portion the latter threaded into the former, a removable cap set in the upper portion, a tube carried by said cap adapted to serve as a stop, a disk, a guide wire secured to said disk and projecting into said tube, means for preventing accidental withdrawal of the guide wire, and a funnel, the spout of which projects into the outlet from the body portion of the cup as specified.

2. In combination with a grease cup of the character described, a saucer shaped cap adapted to be forced into the upper portion of the cup, a tube carried by the cap for determining the position of the latter, a disk, a staple-shaped wire carried by the disk adapted to extend into the tube, a funnel, the sides and spout of which are corrugated said spout projecting into the outlet from the body portion of the cup, as and for the purpose set forth.

3. In combination with a grease cup of the character described, a funnel, the spout of which projects into the outlet of the cup and is secured therein so as to form a space outside of the funnel and its spout, the lower end of said space being closed, said spout having a hole in its side near its lower end, the funnel and spout being corrugated to permit the passage of grease around the outside thereof, as and for the purpose set forth.

1,015,627. UNDERCURRENT SEA-MOTOR. JAMES W. MASTER, San Diego, Cal., assignor of one-third to Solon Bryan, San Diego, Cal. Filed June 16, 1911. Serial No. 633,541. (Cl. 61—49.)



1. In an undercurrent sea motor, the combination with two inclined walls, one of which is superposed above the other, of retaining side walls to direct the flow of a medium upon the superposed wall, an upwardly-extended ing curved end integral with the lower inclined wall to cause the return flow of the medium between the inclined walls, and rotatably-mounted members between the inclined walls arranged to be operated by the flow of the medium, substantially as set forth.

2. In an undercurrent sea motor, the combination with an inclined wall and a superposed similarly inclined wall having a series of chambers formed between said walls, of a rotatably-mounted member in each chamber, and a series of curved blades integral with each of said rotatable members, having their extended edges in close proximity to the said inclined walls to receive the flow of the medium, substantially as set forth.

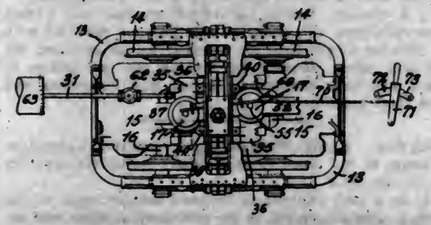
3. In an undercurrent sea motor, the combination with two inclined walls one of which is superposed above the other, of rotatable members mounted between said inclined walls, of curved casing beneath the superposed wall in close proximity to the rotatable members, and supplementary platforms upon the lower inclined wall having a lesser angle of inclination for directing the flow of a medium upon said rotatable members above the horizontal plane of their axes, substantially as set forth.

4. In an undercurrent sea motor, the combination with a lower inclined wall having a series of supplementary platforms of lesser inclination, of a sectional and superposed inclined wall, a curved casing on the underside of each section forming with the lower inclined wall a series of chambers, a rotatable member in each chamber, and a series of uprights and braces supporting the superposed sections in an approximately parallel position with the lower inclined wall and with a space between adjacent sections, to direct the flow of a medium upon said rotatable members, substantially as set forth.

5. In an undercurrent sea motor, the combination with inclined walls forming a series of chambers arranged to extend transversely of the plane of inclination and with communicating passages between consecutive chambers, of confining side walls and an upwardly curved end wall to direct the flow of a medium upon and between the inclined walls, and a rotatable member in each chamber, the chambers being arranged to utilize the flow of the medium from each chamber to actuate the rotatable member in the next successive and lower chamber, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,015,628. CAR-STOPPING DEVICE. ROBERT MAW, Montreal, Quebec, Canada, assignor to Maw Brakes Limited, Montreal, Canada, a Corporation of Canada. Filed Apr. 7, 1909. Serial No. 488,451. (Cl. 188—5.)



1. In a car stopping device, the combination with car trucks, of continuously running air compressors driven from the axles thereof, barrel pistons having valves in the ends of same, crank shafts passing through said compressors and pistons, means for unloading the compressors while the car is running, means for disengaging said unloading means to stop the car, and means for placing a predetermined load on the compressors.

2. In a car stopping device, the combination with a car and trucks, of air compressors geared to the axles thereof, a reservoir connected to the compressors, valves in said compressors, cams carried by said compressors for maintaining the valves open, mechanism for closing said valves to stop the car, and a spring loaded valve between the reservoir and compressors, substantially as described.

3. In a car stopping device, the combination with car trucks, of continuously running air compressors geared to the axles thereof, valves in the covers of said compressors, annular cams carried by said covers, a reservoir connected to the compressor, and a spring loaded valve between the reservoir and the compressors whereby the latter operate against a constant pressure regardless of the reservoir pressure.

4. In a car stopping device, the combination with car trucks, of compressors driven from the axles thereof, having annular valves in the heads thereof, barrel pistons having valves in the ends thereof, crank shafts passing through said compressors and pistons, means connecting said pistons and shafts, and means for maintaining said annular valves open to unload the compressors.

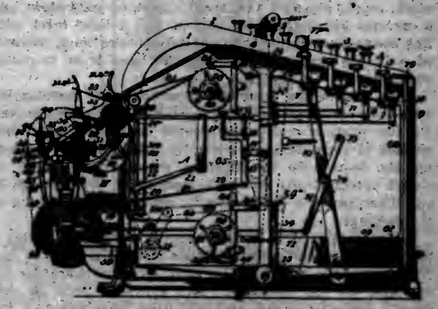
5. In a car stopping device, the combination with car trucks, of compressors driven from the axles thereof having annular suction valves in the heads thereof, barrel pistons, discharge valves in the ends of said pistons, opening thereinto, crank shafts passing through said compressors and pistons, means connecting the pistons and cranks, covers for the compressor heads, annular cams carried by said covers for maintaining the suction valves open, means for operating said cams simultaneously, suction pipes leading into said compressor head covers, a reservoir, a delivery pipe connecting the compressors to the reservoir, and a spring loaded valve in said pipe for maintaining a constant load on the compressors independent of the pressure in the reservoir.

1,015,629. SEPARATOR FOR VACUUM-PANS. GEORGE M. NEWHALL, Philadelphia, Pa. Filed Sept. 2, 1910. Serial No. 580,233. (Cl. 127—18.)

1. The combination with a vacuum pan, having a heating chamber with an outlet, and a separating chamber between the heating chamber and the outlet, of a plurality of annular foraminous walls disposed in said separating chamber, through which vapor from the heating chamber can pass, said walls having their foraminous surfaces successively increasing outwardly in available area for the passage of vapor.

2. In a vacuum pan, the combination of a heating chamber, and means for separating liquid particles from vapor generated in said chamber, said means consisting of a plurality of foraminous screens, whose foraminous surfaces successively increase outwardly in area of passage presented to the vapor as it approaches the outlet whereby the velocity of flow of vapor is reduced, and the vapor is finely divided and the liquid separated from the vapor by capillary attraction at the screens.

1,015,630. COMBINED TYPE-WRITING AND ADDING MACHINE. ENOS S. NEWMAN, Washington, D. C., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 7, 1901. Serial No. 43,379. (Cl. 235—60.)



1. The combination with a commercially operable and complete typewriting machine, and a separate and distinct commercially operable adding machine, of a paper support common to both machines.

2. A combined machine, comprising a typewriting mechanism, and an adding and printing mechanism, having a separate keyboard, in combination with a single paper support common to both machines.

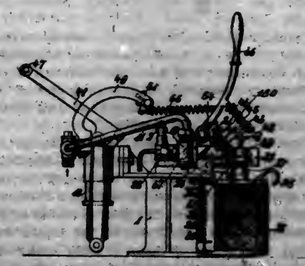
3. A combined machine comprising a commercially operable and complete adding machine, a separate and distinct writing machine, and a single paper supporting carriage adapted to serve both machines.

4. The combination with a commercially operable and complete adding machine, and a separate and distinct writing machine, of means for detachably connecting the two together, and a paper support common to both machines.

5. A combined but separable machine, comprising an operable typewriting mechanism, in combination with a commercially operable adding and printing mechanism separable therefrom and independently operable, and having its printing points in line with that of the typewriting mechanism, and a single paper support for both machines.

[Claims 6 to 92 not printed in the Gazette.]

1,015,631. APPARATUS FOR FILLING BOTTLES. JEAN NIES, Karlsruhe, Germany. Filed Oct. 23, 1909. Serial No. 524,120. (Cl. 226—26.)



1. An apparatus for filling bottles, including a framework, supply pipes for the liquid, valves for said pipes, a basket or guard for the bottles, a carriage supporting said bottles, means comprising a single lever for moving the car-

riage by successive steps to close the basket or guard, and automatically operate the various parts of the filling apparatus proper.

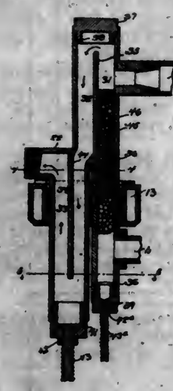
2. An apparatus for filling bottles, including a frame work, supply pipes for the liquid, valves, for said pipes, a basket or guard for the bottles, a carriage supporting said bottles, means comprising a single lever for moving the carriage by successive steps to close the basket or guard, and automatically operate the various parts of the filling apparatus proper, and a syrup pump mounted on the frame, with a lever for operating it.

3. An apparatus for filling bottles, including a framework, supply pipes for the liquid, valves for said pipes, and a carriage supporting said bottles, and a hand lever with link connections to the carriage, said bottles being connected with the supply pipes when the hand lever is pulled over.

4. In the herein described apparatus, the combination with a movable carriage, a framework, a protective basket, the two parts of which are pivoted on vertical axes with springs to keep the same normally open, of links connecting the same with the carriage, whereby said basket is closed automatically on the movement of the carriage in one direction, and automatically opened on the return of the carriage.

5. In an apparatus of the character described, having a bottle carriage and a filling device against which the carriage moves the bottles, and a hand lever for operating the carriage, an air discharge valve provided with an outwardly projecting head, and said hand lever having a finger adapted in the movement of the hand lever to engage the head of the valve and thereby open it.

1,015,632. GAS-GENERATOR. SAMUEL N. NORTH, Rising Sun, Ind. Filed Mar. 8, 1911. Serial No. 613,084. (Cl. 158—58.)



1. The combination with a surrounding burner, of a generator comprising a liquid containing chamber extending through the burner, and a connected series of gas superheating chambers connected to the upper end of the liquid containing chamber and extending back and forth a plurality of times through the burner.

2. The combination with a surrounding burner, of a gas generator comprising a liquid containing chamber extending through the burner, and a connected series of gas superheating chambers extending back and forth a number of times through the burner, the first chamber of the series being connected at its upper end to the liquid containing chamber but the lower portion thereof being separated from the liquid containing chamber by an air space.

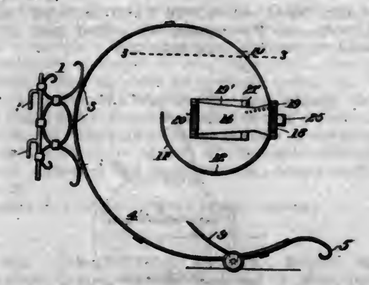
3. A gas generator of the character described, including a liquid fuel chamber connected to a supply source, a gas chamber connected at its upper end to the fuel chamber but separated from the lower portion thereof, a gas chamber extending parallel to the first named gas chamber and connected at its lower end thereto, the upper end of one gas chamber and the upper end of the other gas chamber being connected by a passage, and a burner discharging heat against the walls of the several chambers.

4. A gas generator of the character described, including a substantially annular burner, a liquid fuel chamber connected to a supply source and disposed within the annular burner, a gas chamber connected at its upper end to the fuel chamber but separated from the lower portion thereof by an air space, and a gas chamber extending parallel to the first named gas chamber and connected at its lower end thereto, both of said gas chambers extending through the burner, and a connection between the upper end of one gas chamber and the other gas chamber.

5. A gas generator of the character described, including a substantially annular burner, a liquid fuel chamber connected to a supply source, a gas chamber connected at its upper end to the fuel chamber and extending parallel thereto but separated from the lower portion of the fuel chamber by an air space, a gas chamber extending parallel to the first named gas chamber and connected at its lower end thereto, said last named gas chamber extending partly up the first named gas chamber, an outlet pipe connected to the last gas chamber of the series, the gas chambers being connected to each other by a passage disposed opposite to the outlet pipe, the annular burner surrounding the several chambers and directing heat against the walls thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,015,633. CAR-FENDER. ALOYSIUS POZZI, Trenton, N. J. Filed Oct. 26, 1911. Serial No. 656,852. (Cl. 105—251.)



1. In a car fender, the combination of a suitable support, and a plurality of spring members secured to the support and extending above and below the same, the upper portions of the several spring members extending forwardly in a spiral curve whereby to form a basket.

2. A car fender comprising a plurality of resilient members shaped to form a lower scoop portion and an upper basket portion communicating therewith to receive therefrom bodies taken up thereby.

3. A car fender comprising a scoop, and a rocking retainer hinged to the scoop and having a forwardly projecting portion resting normally on the upper side of the scoop and a rear portion normally projecting upwardly therefrom.

4. A car fender comprising a scoop, and a screened frame hinged upon the same, that portion of the frame in advance of the hinge lying normally upon the scoop and the portion in rear of the hinge normally projecting upward from the scoop.

5. In a car fender, the combination with a fender body, of holding arms hinged to the body at the sides thereof, means to hold said arms normally rearward and close to the body, means on the upper front portion of the body to release said holding means, and means to swing the arms together in advance of the body upon release of said holding means.

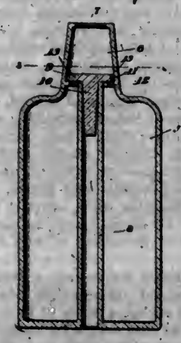
[Claims 6 to 8 not printed in the Gazette.]

1,015,634. CARPET-BEATER. HENRY C. PRESTON and OTHNIEL PRESTON, Hornell, N. Y. Filed Feb. 2, 1911. Serial No. 606,244. (Cl. 15—8.)

1. As a new article of manufacture, the herein described device comprising a handle formed with a socket and a wire loop having its ends inserted in said socket, the handle being further formed with transverse apertures opening into the socket intermediate of the ends of the latter, and a filling formed of fusible metal filling all portions of the socket that are not occupied by the said ends and securing said ends therein, the metal also filling the apertures and thereby producing rivets which are integral with the main portion of the filling, substantially as and for the purpose set forth.

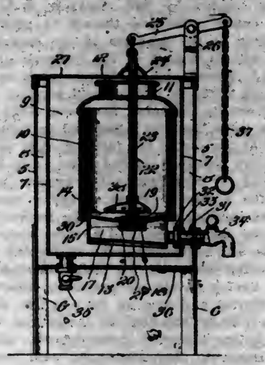
2. A device of the character described, comprising an implement provided with a shank, and a handle formed with a longitudinal socket in which said shank is inserted, the handle being further formed with a transverse aperture opening into the socket intermediate of the ends of the latter, and a filling formed of fusible metal filling all portions of the socket that are not occupied by the shank and securing said shank therein, the metal also filling the aperture and thereby producing a rivet which is integral with the main portion of the filling.

1,015,635. NON-REFILLABLE BOTTLE. COATSWORTH E. RAUSSEAU, Clearwater, Fla., assignor of one-half to Bertram Allen, Clearwater, Fla. Filed Apr. 1, 1911. Serial No. 618,306. (Cl. 215—105.)



A bottle of the class described comprising a body having a contracted neck, a filling tube extending from the bottom of the body within the same and terminating within the neck on a plane parallel with a flange provided within the neck thereof, and a displaceable stopper arranged within the neck having a tapered stem telescoping within the tube acting as a guide.

1,015,636. LIQUID-MEASURING TANK. JOSEPH RIEFF, New York, N. Y. Filed May 16, 1911. Serial No. 627,423. (Cl. 73—160.)



1. A measuring device of the class described, comprising a casing having an air cell extending about the sides and bottom thereof, and also an ice chamber therein, the air cell being formed between the latter and the casing, brackets projecting inwardly from opposite sides of the chamber, a reservoir supported upon said brackets and having independent measuring cells in its bottom, discharge tubes carried by the reservoir and projecting through the casing exteriorly thereof to permit the delivery therefrom of the contents of the measuring cells, an auxiliary bottom formed in the reservoir spaced from the lower end thereof and having a valve seat opening therein, a valve normally closing said opening, and means for raising and lowering the valve.

2. A measuring device of the class described, comprising a casing having an air cell extending about the sides and bottom thereof and also an ice chamber therein, the air cell being formed between the latter and the casing, brackets projecting inwardly from opposite sides of the chamber, a reservoir supported upon said brackets and having independent measuring cells in its bottom, discharge tubes carried by the reservoir and projecting through the casing exteriorly thereof to permit the delivery therefrom of the contents of the measuring cells, an auxiliary bottom formed in the reservoir spaced from the lower end thereof and having a valve seat opening therein, a valve normally closing said opening, means for raising and lowering the valve, abutment rings formed on the discharge tubes, and gaskets interposed between the abutment rings and the casing for forming tight joints therebetween.

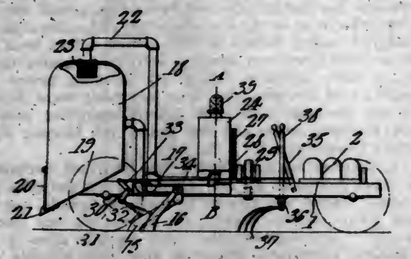
3. A measuring device of the class described, comprising a casing having an air cell extending about the sides and bottom thereof and also an ice chamber therein, the air cell being formed between the latter and the casing, brackets projecting inwardly from opposite sides of the chamber, a reservoir supported upon said brackets and having independent measuring cells in its bottom, discharge tubes carried by the reservoir and projecting through the casing exteriorly thereof to permit the delivery therefrom of the contents of the measuring cells, an auxiliary bottom formed in the reservoir spaced from the lower end thereof and having a valve seat opening therein, a valve normally closing said opening, means for raising and lowering the valve, abutment rings formed on the discharge tubes, gaskets interposed between the abutment rings and the casing for forming tight joints therebetween, and faucets threaded on the outer ends of the said discharge tubes for compressing the gaskets between the casing and the abutment rings.

4. A measuring device of the class described, comprising a casing having an air cell extending about the sides and bottom thereof and also an ice chamber therein, the air cell being formed between the latter and the casing,

brackets projecting inwardly from opposite sides of the chamber, a reservoir supported upon said brackets and having independent measuring cells in its bottom, discharge tubes carried by the reservoir and projecting through the casing exteriorly thereof to permit the delivery therefrom of the contents of the measuring cells, an auxiliary bottom formed in the reservoir spaced from the lower end thereof and having a valve seat opening therein, a valve normally closing said opening, means for raising and lowering the valve, abutment rings formed on the discharge tubes, gaskets interposed between the abutment rings and the casing for forming tight joints therebetween, faucets threaded on the outer ends of the said discharge tubes for compressing the gaskets between the casing and the abutment rings, a spider spanning the opening in the auxiliary bottom in the reservoir, a guide rod rising from said spider, and a valve stem connected with the valve and surrounding the said guide rod.

5. A measuring device of the class described, comprising a casing having an air cell extending about the sides and bottom thereof and also an ice chamber therein, the air cell being formed between the latter and the casing, brackets projecting inwardly from opposite sides of the chamber, a reservoir supported upon said brackets and having independent measuring cells in its bottom, discharge tubes carried by the reservoir and projecting through the casing exteriorly thereof to permit the delivery therefrom of the contents of the measuring cells, an auxiliary bottom formed in the reservoir spaced from the lower end thereof and having a valve seat opening therein, a valve normally closing said opening, means for raising and lowering the valve, abutment rings formed on the discharge tubes, gaskets interposed between the abutment rings and the casing for forming tight joints therebetween, faucets threaded on the outer ends of the said discharge tubes for compressing the gaskets between the casing and the abutment rings, a spider spanning the opening in the auxiliary bottom in the reservoir, a guide rod rising from said spider, a valve stem connected with the valve and surrounding the said guide rod, and removable lids closing the top of the casing and reservoir, respectively.

1,015,637. STREET-CLEANING MACHINE. LE ROY H. ROBY, Fostoria, Ohio. Filed Apr. 28, 1911. Serial No. 623,889. (Cl. 15—17.)



1. A street cleaner including a motor propelled vehicle, suction nozzles disposed in lapped relation and mounted for independent swinging movement about an axis extending transversely of the vehicle, means under the control of the operator for swinging said nozzles toward or away from the surface to be cleaned, a dust collector, a pipe connection between said nozzles and the collector, and means for creating a suction through said nozzles and the dust collector.

2. A street cleaner including a motor propelled vehicle, alining tubes extending transversely of the vehicle, said tubes being independently revoluble, an intermediate tube disposed between and alining with the first mentioned tubes and held against rotation, a dust collector, a pipe connection between said collector and the intermediate tube, a tube communicating with and supported by the intermediate tube and mounted for rotation about its longitudinal axis, suction nozzles connected to and movable with the respective revoluble tubes, means for shifting said nozzles toward or away from the surface to be cleaned, and means for creating a suction through the nozzles and tubes and through the dust collector.

1,015,638. CONTAINER. GEORGE ROGERS, Kilmalcolm, Scotland. Filed Dec. 19, 1910. Serial No. 598,117. (Cl. 211—9.)

The combination in a container, of a bin section, having an open hopper bottom, a drawer section below the hopper, a drawer in the drawer section and below the opening of the hopper, a transverse partition separating the drawer and bin sections and having an opening coincident with the opening in the hopper, a curved guide way, a flexible slide adapted to be moved in the guide-way, a projection on the slide coöperating with a recess in the drawer, a stirring arm mounted within the hopper, a lever on the stirring arm and adapted to be moved by the slide when the drawer is actuated.

1,015,639. TRANSMISSION MECHANISM. ERDIX ROUNDS, Owensboro, Ky., assignor of one-half to Gunther-Wright Machine Company, Owensboro, Ky., a Corporation. Filed Sept. 15, 1910. Serial No. 582,204. (Cl. 74—59.)

1. In a transmission mechanism, a driver and a driven shaft, clutching mechanism mounted intermediate of said shafts for connecting the same, gear mechanism having different speed values connecting said shafts, adapted to transmit motion around said clutching mechanism for an indirect drive, clutching mechanism concentric with said shafts, for connecting said gearing thereto, and means for controlling all of said clutching mechanisms selectively.

2. In a transmission mechanism, coaxially alined driving and driven shafts, friction clutch mechanism mounted thereon for connecting said shafts, gear mechanism having different speed values connecting said shafts adapted to transmit motion around said clutch mechanism for an indirect drive, friction clutch mechanism for each speed value of said gear mechanism, and clutch controlling means slidable within said shafts, provided with a series of clutch engaging cams adapted to selectively engage and operate all of the clutching mechanisms at predetermined limits of movement of said clutch controlling means.

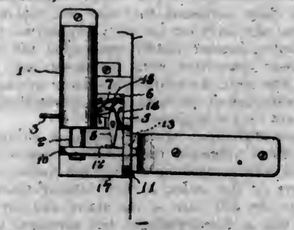
3. In a transmission mechanism, a driving and a driven shaft relatively alined, intermediate transmission mechanism between said shafts, a series of friction clutch mechanisms concentric on said shafts for controlling the driving connections between said shafts and intermediate transmission mechanisms, and a single clutch controlling means for the combined series of clutching mechanisms, for selectively controlling the same.

4. In a transmission mechanism, a driver and a driven shaft, gear mechanism having different speed values connecting said shafts adapted to transmit motion intermediate thereof, a series of friction clutches mounted on

said shafts, for directly connecting said shafts, or said shafts with said gear mechanism, for varying the driving relation between said shafts, means provided with a series of clutch engaging surfaces, for operating a respective clutch or clutches at predetermined limits of its movement for variously controlling the driving connections between said shafts.

5. In a transmission mechanism, a driver and a driven shaft, coacting friction clutch members relatively connected to the abutting ends of said shafts, means for frictionally uniting the same, gear mechanism having different speed values connecting said shafts adapted to transmit motion around said clutch member for an indirect drive, friction clutch members for each speed value of said gear mechanism, a clutch actuating rod provided with a series of clutch engaging surfaces relatively spaced, whereby in its movements, selective control of the clutches is had for producing a variety of forward speeds, reverse and neutral control of the shafts.

1,015,640. LOCK. OSKAR SALLSTROM, Falun, Alberta, Canada. Filed Apr. 11, 1911. Serial No. 620,285. (Cl. 70—102.)



1. In a lock, the combination of a casing, a sliding bolt mounted therein, a finger piece extending from said bolt, a spring normally tending to project the bolt from the casing, a lock member having an opening in which the bolt may engage, a pivoted arm movable transversely to the line of movement of the bolt, a lever pivoted between its ends and connected at one end to said arm, a lug on the lock member engageable with the other end of the lever to release the bolt from the arm, and a spring normally tending to hold the arm in engagement with the bolt.

2. In a lock, the combination of a casing, a sliding bolt mounted therein, a finger piece extending from said bolt, a spring normally tending to project the bolt from the casing, an auxiliary casing, a lever pivoted between its ends and mounted in the auxiliary casing, an arm pivoted to one end of said lever, and movable transversely to the line of movement of the bolt, a spring normally holding the arm in operative position, a second spring bearing against the lever aforesaid and normally tending to hold the arm in engagement with the bolt to retain the same in retracted position, a lock member having an opening therein in which the bolt may engage, a keeper formed on the casing having an opening therein in which the lock member is adapted to enter, and a lug on the lock member engageable with the one end of the lever to withdraw the arm from engagement with the bolt and permit the latter to engage in the opening in said lock member.

1,015,641. COMPOUNDS OF BLOOD OR ITS CONSTITUENTS AND PROCESS OF MAKING SAME. EMIL SCHEITLIN, Basel, Switzerland. Filed May 10, 1911. Serial No. 626,236. (Cl. 167—7.)

1. The hereindescribed process of making compounds of blood and its constituents with aromatic sulfonic-acids, which comprises reacting on blood constituents with an aromatic sulfonic-acid.

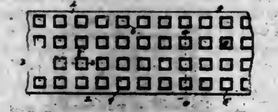
2. The hereindescribed process of making compounds of blood and its constituents with aromatic sulfonic-acids, which comprises reacting on blood constituents with an aqueous solution of guaiacol sulfonic-acid.

3. The herein described double compounds of a blood constituent and an aromatic sulfonic-acid, which are stable, insoluble in water, dilute acids and dissolve slowly in dilute alkalis, and give no characteristic reaction with albumin reagents.

4. The hereindescribed process, which comprises reacting on blood constituents of an inoculated animal with an aromatic sulfonic-acid, separating the precipitate and drying the same below the destructive temperature for the antitoxin.

5. The hereindescribed process, which comprises reacting on blood constituents of an inoculated animal with a guaiacol sulfonic-acid, separating the precipitate and drying the same below the destructive temperature for the antitoxin.

1,015,642. SAFETY-TREAD. HENRY C. SEIPP, Pittsburgh, Pa. Filed June 26, 1911. Serial No. 635,435. (Cl. 20—79.)

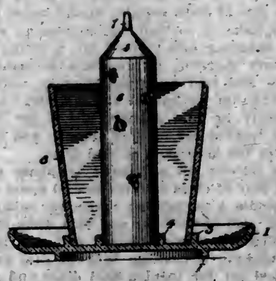


1. As a new article of manufacture, a safety-tread comprising two metal base plates having openings within the same registering with each other, and flanges extending up from said plates and around such openings to form spaces between the same for the reception of a non-slipping material.

2. As a new article of manufacture, a safety-tread comprising two metal base plates having openings within the same registering with each other, and flanges extending up from said plates and around such openings to form spaces between the same for the reception of a non-slipping material, said flanges having their upper edges flush with each other.

3. As a new article of manufacture, a safety-tread comprising two metal base plates having openings within the same registering with each other, and flanges extending up from said plates and around such openings to form spaces between the same for the reception of a non-slipping material, said lower plate having recessed portions connecting with said openings for holding said material.

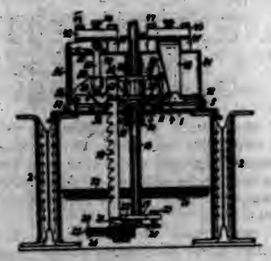
1,015,643. FLY-TRAP. JOHN FRANK SERAFINSKI, Phillipsburg, N. J. Filed Oct. 6, 1911. Serial No. 653,208. (Cl. 43—22.)



1. A fly trap comprising an upright saucer shaped base having a support, a pair of upright annular flanges integral with the upper face of the base and concentric with respect to each other, the outer of the flanges positioned inwardly of the marginal portion of the upper face of the base, a column having its lower end positioned between the inner end of said flanges and having its periphery gummed, and a vertically disposed transparent casing having its lower end positioned against the inner face of the outer of said flanges, said casing surrounding said column, said column projecting above said casing.

2. A fly trap comprising an upright saucer shaped base having a support, a pair of upright annular flanges integral with the upper face of the base and concentric with respect to each other, the outer of the flanges positioned inwardly of the marginal portion of the upper face of the base, a column having its lower end positioned between the inner end of said flanges and having its periphery gummed, and a vertically disposed transparent casing having its lower end positioned against the inner face of the outer of said flanges, said casing surrounding said column, said column projecting above said casing, the outer of said flanges flaring, and said casing flaring.

1,015,644. SELECTOR FOR AUTOMATIC TELEPHONE-EXCHANGES. BERNHARD SETTEGAST, Karlshorst, near Berlin, Germany, assignor to Deutsche Telephonwerke G. M. B. H., Berlin, Germany. Filed May 23, 1910. Serial No. 562,924. (Cl. 179—27.5.)



1. In a selector for automatic telephone exchanges, a spindle, a pair of disks suitably spaced apart and movable on said spindle, a toothed bar connecting said disks, means for moving said toothed bar and said disks longitudinally of said spindle, means for turning said disks and toothed bar on said spindle, and contacts connected with the lowermost of said disks.

2. In a selector for automatic telephone exchanges, a spindle, a pair of disks suitably spaced apart and movable on said spindle, a toothed bar connecting said disks, lifting means for said toothed bar and said disks, a lifting magnet and an armature therefor for actuating said lifting means, means for turning said disks and toothed bar on said spindle, and contacts connected with the lowermost of said disks.

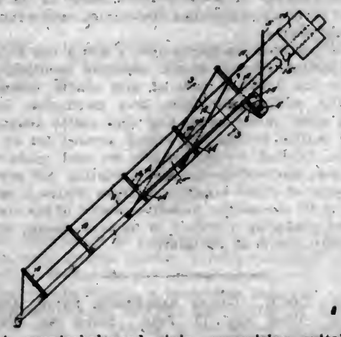
3. In a selector for automatic telephone exchanges, a spindle, a pair of disks suitably spaced apart and movable on said spindle, a toothed bar connecting said disks, a catch for engaging said toothed bar, a lifting magnet and an armature therefor, intermediate mechanism between said catch and said armature whereby said catch may be lifted and said toothed bar and said disks may be moved longitudinally of said spindle, means for turning said disks and toothed bar on said spindle, and contacts connected with the lowermost of said disks.

4. In a selector for automatic telephone exchanges, a spindle, a pair of disks suitably spaced apart and movable on said spindle, a toothed bar connecting said disks, means for moving said toothed bar and said disks longitudinally of said spindle, a turning magnet and an armature therefor, intermediate mechanism between said armature and said toothed bar for turning said disks and said toothed bar on said spindle, and contacts connected with the lowermost of said disks.

5. In a selector for automatic telephone exchanges, a spindle, a pair of disks suitably spaced apart and movable on said spindle, a toothed bar connecting said disks, means for moving said toothed bar and said disks longitudinally of said spindle, a turning magnet and an armature therefor, a member mounted on said spindle engaging said toothed bar, mechanism actuated by said armature for turning said member and said toothed bar on said spindle, and contacts connected with the lowermost of said disks.

[Claims 6 to 44 not printed in the Gazette.]

1,015,645. COUNTERBALANCED STAIR. FREDERICK CHARLES SEYMOUR, Chicago, Ill., assignor to Joseph Halsted Co., Chicago, Ill., a Corporation of Illinois. Filed May 17, 1911. Serial No. 627,745. (Cl. 227—5.)



1. A counterbalanced stair, comprising suitable side bars, with steps arranged therebetween, means loosely engaging the side bars for pivotally supporting the stair, a rigid tubular member rigidly connecting the side bars adjacent their connection with the means for pivotally supporting the stair, a counterbalance bar arranged upon one of the side bars of the stair, and a counterweight positioned on said counterbalanced bar.

2. A counterbalanced stair comprising suitable side bars with steps arranged therebetween, means for supporting said stair comprising a pivot rod loosely engaging the side bars of the stairs, a rigid tubular brace rigidly connected to the side bars of the stairs and surrounding said pivot bar, a counterbalance bar arranged upon one of the side bars of the stairs, and a counterweight mounted on said counterbalanced bar.

3. In a device of the kind described, side bars provided with steps arranged therebetween, with the upper end rigidly connected by a rigid brace member arranged in proximity to the pivotal support, a truss post rigidly secured to said rigid brace member, and a truss rod extending from the free end of said post to the inner side bar, a counterbalance bar carried by the outer side bar and having upon its free end a counterweight arranged thereon, and means for supporting the device in operative position.

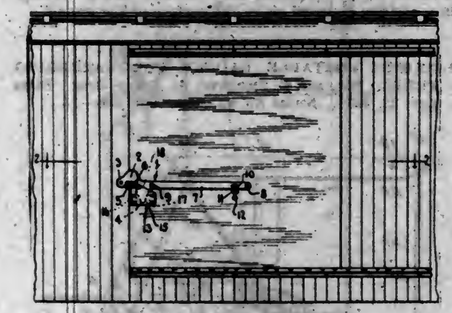
4. In a device of the kind described, side bars provided with steps arranged therebetween, with the upper end rigidly connected by a rigid brace member arranged in proximity to the pivotal support, a truss post rigidly secured to said rigid brace member, and a truss rod extending from the free end of said post to a point near the free end of the inner side bar, a counterbalance bar carried by the outer side bar, above said pivotal support, and having upon its free end a counterweight arranged thereon, a connection between said counterweight and said truss rod and means for supporting the device in operative position.

5. In a device of the kind described, a side bar provided with steps arranged therebetween, a rigid brace member rigidly connecting the side bars at their upper end, truss posts for each side bar rigidly connected to the said rigid brace member, and provided at their free ends with truss rods extending outward and connected to said bars adjacent their free ends, a counterweight bar carried by the outer side bar, and a counterweight adjustably mounted upon the free end of the counterweight bar, and means for supporting the device upon the outer wall of the building.

[Claims 6 to 8 not printed in the Gazette.]

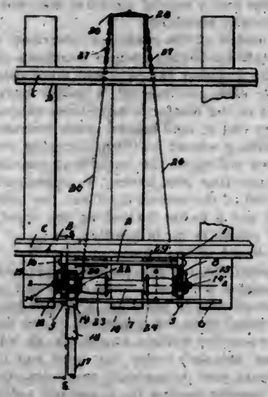
1,015,646. SLIDING-DOOR FASTENER. JOHN H. SIMONTON, Brighton, Tenn. Filed Sept. 7, 1911. Serial No. 648,209. (Cl. 70—102.)

The herein described fastener for sliding doors, the same comprising a keeper secured to the door near its free edge and having a catch; a latch consisting of a substantially straight bar having an ear at one extremity pivoted to the door frame opposite said keeper, a rounded head projecting from one edge and adapted to engage the outer side of the keeper when the door is nearly closed, a



notch in its other edge opposite said head, a projecting nose on this edge with a recess on that face opening into the notch and adapted to engage the catch of the keeper when the bar is swung around its pivot, and a handle at the free end of said bar; and means on the door and bar for locking the latter when its nose engages said keeper.

1,015,647. RAILROAD-TIE PULLER. JESSE R. SMITH, Benton, Ill. Filed May 26, 1911. Serial No. 629,643. (Cl. 104—16.)



1. A tie puller and replacer adapted to be supported adjacent to the outer side of one rail of a railroad track, said device including frame blocks formed with nose pieces adapted to engage and abut upon the outer side of the web of a rail beneath the head of the same, leaving the rail head and the track space intermediate the rails completely unobstructed for the passage of trains while the device is in position for operation.

2. A tie puller and replacer having frame blocks adapted to abut upon a rail web beneath the rail head, said frame blocks being formed with heel extensions, and a supporting bar mounted upon said extensions, said supporting bar having intermediate arched projecting tie engaging portions forming handles.

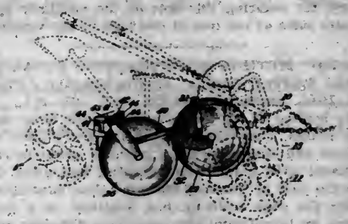
3. A tie puller and replacer having frame blocks adapted to abut upon a rail web between the head and the flange of such rail, said frame blocks being provided with upwardly extending handles and with heel extensions, and a supporting bar mounted upon said extensions and having an arched intermediate portion and projecting end portions forming tie engaging handles.

4. A tie puller and replacer comprising frame blocks adapted to abut exteriorly upon a rail web beneath the head of the rail, said head blocks being provided with heel extensions, and an arched supporting bar mounted upon said extensions, tie rods connecting the frame blocks, a roller supported for rotation in said frame blocks and having ratchet wheels, pawls mounted upon the frame blocks in engagement with said ratchet wheels, a ratchet wheel fixed upon the roller between the frame blocks, a bifurcated head having apertured jaws engaging the roller and straddling the fixed ratchet wheel, said head carrying a pawl engaging said ratchet wheel and an actuating lever, flexible elements connected with the roller, and guide rollers upon one of the tie rods over which said flexible elements are guided.

5. In a machine of the character described, a pair of frame blocks, tie rods connecting the same, one of said tie rods being provided with projecting ends forming lugs, a roller supported for rotation in the blocks, ratchet wheels upon said roller, and pawls pivoted upon the frame blocks to engage said ratchet wheels, said pawls being adapted to be supported upon the lugs formed by the projecting ends of the tie rod when not in engagement with the ratchet wheels.

[Claim 6 not printed in the Gazette.]

1,015,648. TILLING-MACHINE. GEORGE SPALDING, Cleveland, Ohio, assignor to Spalding Plow Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1910. Serial No. 557,034. (Cl. 97—40.)



1. In a tilling machine the combination with a plurality of rotary disks mounted in succession with each disk in advance, higher than, and partly to the land side of the next following disk, and a moldboard mounted adjacent each disk for controlling the discharge of earth plowed by said disks, the moldboards of the respective disks being arranged at different angles.

2. In a tilling machine the combination with a plurality of rotary disks mounted in succession with each disk in advance, higher than, and partly to the land side of the next following disk, and a moldboard mounted adjacent each disk for controlling the discharge of earth plowed by said disks, the moldboard for the front or leading disk being mounted in a substantially horizontal position and approximately in line with the center of the disk, the moldboard of each succeeding disk being supported in a sloping position with the front end near the center of the disk the rear end of said moldboard being elevated.

3. In a tilling machine the combination with a plurality of rotary disks mounted in succession with each disk in advance, higher than and partly to the land side of the next following disk, of a horizontally arranged moldboard for the front disk, and an inclined moldboard for the rear disk.

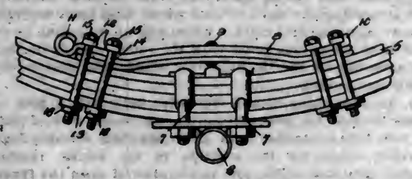
4. In a tilling machine the combination with a plurality of rotary disks mounted in succession with each disk in advance, higher than, and partly to the land side of the next following disk, of a moldboard for the front disk, and a moldboard for the rear disk, the moldboards of the respective disks being arranged at different angles, the moldboard for the rear disk having its rear end above the center of said disk.

5. In a tilling machine the combination with a plurality of rotary disks mounted in succession with each disk in advance, higher than, and partly to the land side

of the next following disk, of a horizontally arranged moldboard for the front disk, and an inclined moldboard for the rear disk arranged with its rear end above the center of said disk.

[Claims 6 and 7 not printed in the Gazette.]

1,015,649. ATTACHMENT FOR VEHICLE-SPRINGS. GEORGE S. SPEYER, Canon City, Colo. Filed Apr. 16, 1910. Serial No. 555,806. (Cl. 21—50.)

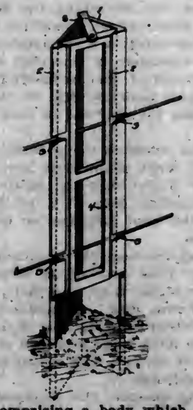


A device for repairing elliptical springs including an auxiliary spring consisting of a plurality of superimposed semi-elliptical leaves of a corresponding length and shorter than the said vehicle spring, the said leaves loosely bearing one upon the other and riveted together at their central portions, the terminal portions of the leaves being normally spaced apart so that when clamped together they form a resilient spring end, the upper of said leaves terminating at one end in an upturned extension and provided at its opposite end with an eye, and means adapted to bear on the upturned extension and passing through the eye for securing the ends of the auxiliary spring on opposite sides of the line of cleavage in the vehicle spring.

1,015,650. METHOD OF EXTRACTING SUGAR-JUICES. CARL STEFFEN, Vienna, Austria-Hungary. Filed Sept. 22, 1910. Serial No. 583,321. (Cl. 127—8.)

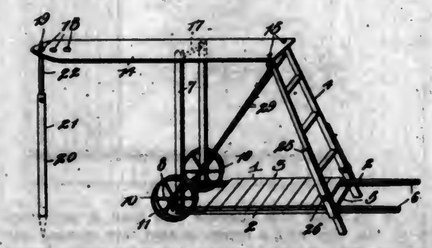
The method of extracting sugar juices from saccharifereous plants, consisting in reducing the plants to small portions and subjecting such portions preliminarily to a treatment with heated raw juice and separating the juice from the pulp by pressing the pulp, then immediately subjecting the pulp while in hot condition to a lixiviating process by introducing the same into diffusing apparatus to which water is supplied and continuing this operation until practically all of sugar has been extracted from the pulp, then heating the juice obtained by lixiviation to a temperature of from 60 to 100° C., and finally using the heated juice obtained by lixiviation for treating fresh supplies of reduced saccharifereous plants.

1,015,651. FENCE-POST. HENRY E. STOLEY, Woodburn, Oreg. Filed Feb. 11, 1911. Serial No. 608,062. (Cl. 39—76.)



A fence post comprising a body which is V-shaped in transverse section and which is provided at its edges with flanges extending from one end of the body and terminating short of the other end thereof, said flanges being provided with transversely disposed notches, a slide in the form of an open frame adapted to fit snugly within the flanges, and means carried by the slide for engagement with the top of the post to hold the lower end of the slide in a position elevated above the surface of the ground.

1,015,652. PORTABLE LADDER FOR GATHERING FRUIT. WILLARD E. SWENGEL, St. Johns, Oreg. Filed Apr. 22, 1911. Serial No. 622,689. (Cl. 228—15.)



1. In a device of the character described, the combination of a platform having upright standards pivoted to one end, said platform comprising two beams having cross boards secured thereto and suitable handles formed on the outer end of the beams, a ladder pivoted at its lower end to said beams, brace rods provided with a forked lower end to engage over an axle disposed through the lower ends of said upright standards, the upper end of said rods having hooks formed thereon to engage in eye screws secured to the ladder and a second platform disposed on said ladder and upright standards.

2. In a device of the character described, the combination of a platform having upright standards pivoted to one end, an axle disposed through said standards and wheels mounted on each end thereof, a ladder having its lower end pivoted to the platform, adjustable extensions secured to the lower end of said ladder, studs provided on the top of said ladder, a second platform engaging over said studs and disposed out upon the upright standards and an adjustable supporting post having its upper end disposed in the outer end of the second platform, the lower end set in the ground and a flange formed on the upper end to keep the second platform up in position,

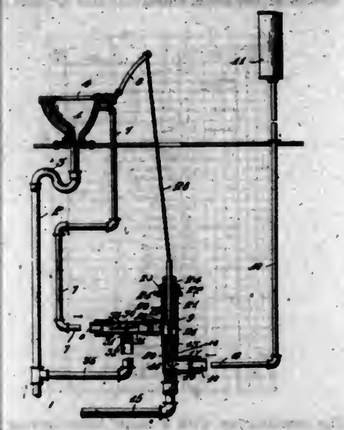
3. In a device of the character described, the combination of a platform, upright standards pivoted to one end, suitable handles provided on the other end, a ladder pivotally mounted on said platform, a second platform having one end engaged upon the upper end of the ladder and disposed out upon the upright standards, an adjustable supporting post disposed under the outer end of the second platform, said post comprising two telescoping members, the lower member having its upper end hollow to receive the lower end of the upper member, and a set screw disposed through the lower member and adapted to engage the upper member to hold the same in any desired position.

1,015,653. FLUSHING SYSTEM FOR CLOSETS. LOUIS SZCZYGLINSKI, Scranton, Pa. Filed Oct. 10, 1910. Serial No. 586,339. (Cl. 137—69.)

1. In combination, a bowl supply pipe, a recessed lug therein, a drain pipe connected to the side of the supply pipe opposite said lug and provided with a valve seat, a lever pivoted intermediate its ends in the supply pipe having one end extended into the recess in the lug and having play therein, and a valve in the drain pipe having its stem projected into the supply pipe and connected to the lever.

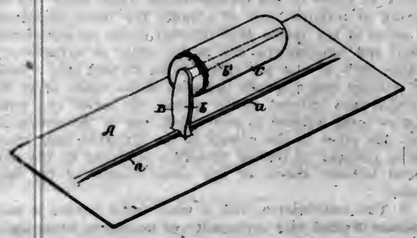
2. In combination a horizontal bowl supply pipe, a lug in the pipe obstructing substantially the upper half thereof, said lug being convexly curved on that side on which water flowing through the pipe impinges and recessed in the opposite side, a flat lever mounted on a horizontal pivot in the pipe and having its longer end upwardly curved and

projected into the recess of the lug with vertical play therein, a drain pipe leading from the bottom side of the supply pipe opposite to the longer end of the lever, a valve



in the drain pipe, and a stem for the valve projecting into the supply pipe and connected to the longer end of the lever.

1,015,654. PROCESS OF MANUFACTURING PLASTERERS' TROWELS. JOSEPH G. THATFORD, Sharon Hill, Pa. Filed July 19, 1910. Serial No. 572,698. (Cl. 76—101.)



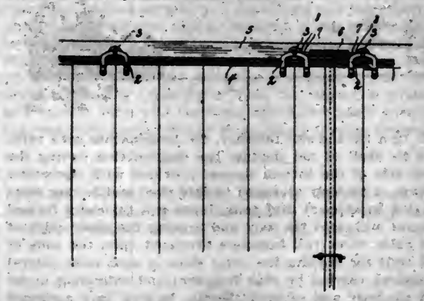
1. The process herein described of manufacturing plasterers' trowels, said process consisting in forming a blank with a rib projecting from one surface, cutting away a portion of the rib to form the shank, and then reducing the body portion of the blank to form the blade of the trowel.

2. The process herein described of manufacturing plasterers' trowels, said process consisting in forming a blank with a rib on one surface thereof, cutting away a portion of the rib at one end of the blank, leaving a central connection with the body portion of the blank, cutting the rib entirely away on the other side of the blank, bending that portion of the rib which remains integral with the blank, then reducing the body portion of the blank to form the blade, and finally shaping the cut away portion of the rib to form the shank.

1,015,655. DOOR-CHECK. CHARLES C. TRAUM, Lanark, Ill. Filed May 15, 1911. Serial No. 627,173. (Cl. 16—46.)

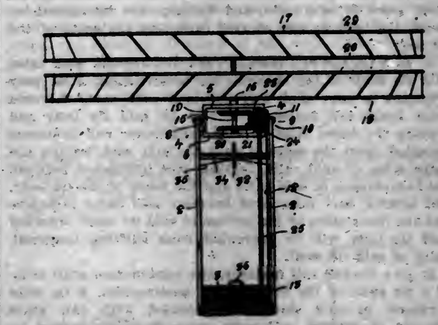
1. In combination, a door frame, a guide rail secured to the frame, a door, rollers supporting said door and adapted to move on said guide rail, and a door check connected to the frame comprising a cylinder, a piston and its rod having a brake shoe at its outer end adapted to engage with a wheel on the door, and a spring located in said cylinder and tending to force the piston toward the outer extremity of said cylinder.

2. In combination, a door frame, a guide rail secured to said frame, doors, rollers supporting said doors and adapted to move on the guide rail, and a door check connected to the frame at a place above the meeting point of the doors and comprising a cylinder, a block in the cylinder intermediate its ends, a bolt for



connecting the check to the frame secured in the block, pistons, their rods having brake shoes at their outer ends adapted to engage with the wheels on the door, and springs on opposite sides of the block normally tending to force the pistons toward the outer extremities of the cylinder.

1,015,656. FLYING-MACHINE. ALBERT VALENTINE, Thurman, Iowa. Filed Apr. 13, 1911. Serial No. 620,773. (Cl. 244—19.)



A flying machine comprising a car, uprights projecting therefrom, an open rectangular frame provided with trunnions journaled in bearings on said uprights to swing in a fore and aft direction, concentric vertical shafts journaled on said frame and carrying superposed bevel gears, a transmission shaft mounted on the frame and carrying a bevel gear meshing with the first-named gears for driving said vertical shafts in opposite directions, superposed propellers mounted upon the vertical shafts above said frame and having blades inclined in opposite directions, a drum fixed to one of said trunnions, means for turning said drum to tilt the frame in one direction or the other, a motor on the car, and gearing between the motor and said transverse shaft.

1,015,657. TIE AND RAIL-FASTENER. FLORYAN WAJDA, Chicago, Ill., assignor of one-half to Mike Dubiak, Chicago, Ill. Filed Nov. 10, 1911. Serial No. 659,626. (Cl. 238—5.)

1. In a tie and rail fastener, the combination with rails, of a tie shell of the channel bar construction having the inner side of the bottom thereof provided with transverse grooves, a tie body arranged in said shell and having seats adapted to support said rails, inner rail fasteners formed integral with said tie body and bracing the inner sides of said rails, outer rail fasteners arranged upon the ends of

said body for bracing the outer sides of said rails, lateral extensions carried by said fasteners and extending under said tie body and secured thereto, and locking bars arranged in the grooves of said tie shell and extending into the base of said outer fasteners.

2. In a tie and rail fastener, the combination with rails, of a tie shell of the channel bar construction having the inner side of the bottom thereof provided with transverse grooves, a tie body arranged in said shell and having seats adapted to support said rails, inner rail fasteners formed integral with said tie body and bracing the inner sides of said rails, outer rail fasteners arranged upon the ends of said body for bracing the outer sides of said rails, lateral extensions carried by said fasteners and extending under said tie body and secured thereto, locking bars arranged in the grooves of said tie shell and extending into the base of said outer fasteners, and locking bars arranged in the rail seats of said tie body and extending into the base flanges of said rails.

3. In a tie and rail fastener, the combination with rails, of a tie shell of the channel bar construction, a tie body arranged in said shell and provided with seats for said rails, inner rail fasteners carried by said tie body and bracing the inner sides of said rails, outer rail fasteners mounted upon the ends of said tie body and bracing the outer sides of said rails, and locking bars interposed between the base flanges of said rails and the seats of the tie body.

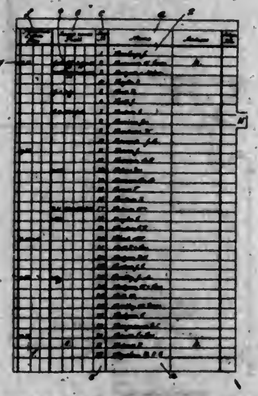
4. In a tie and rail fastener, the combination with rails, of a tie shell of the channel bar construction, a tie body arranged in said shell and provided with seats for said rails, inner rail fasteners carried by said tie body and bracing the inner sides of said rails, outer rail fasteners mounted upon the ends of said tie body and bracing the outer sides of said rails, locking bars interposed between the base flanges of said rails and the seats of the tie body, and locking bars interposed between said outer fasteners and the inner sides of the bottom of said tie shell, whereby said tie body will be prevented from shifting longitudinally of said tie shell.

5. In a tie and rail fastener, the combination with rails, of a tie shell of the channel bar construction, a tie body arranged in said shell and provided with rail seats adapted to support said rails, inner fasteners carried by said tie body for bracing the inner sides of said rails, outer fasteners detachably connected to the ends of said tie body for bracing the outer sides of said rails, tapering tongues carried by said outer fasteners and extending into grooves provided therefor in the ends of said tie body, lateral extensions carried by said outer fasteners and extending under the base of said tie body, and means extending into said outer fasteners for anchoring said tie body relatively to said tie shell.

[Claim 6 not printed in the Gazette.]

1,015,658. BOOK AND LIKE INDEX. JAMES DAVIS WARD, Grange Over Sands, England. Filed Aug. 19, 1911. Serial No. 644,996. (Cl. 11—7.)

1. The combination with a main index having a name column divided into a plurality of numbered name spaces, and a same name trail column divided into a plurality of spaces corresponding to the spaces of the main index and adapted to contain reference characters indicating like names to those entered in the name spaces, of a radix key index comprising a series of key tables, each lettered under an alphabetical head representing the initial letter or syllable of a name, each of said tables being divided into a series of major spaces, and each major space being subdivided into minor spaces the major and minor spaces being lettered to correspond, one to the consonants and the other to the vowels of the alphabet, said spaces being adapted to contain characters referring to the numbered name spaces in the main index.

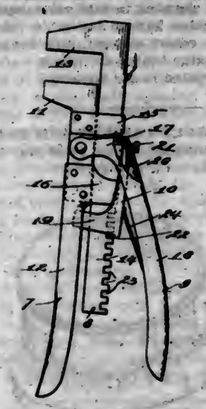


2. The combination with a main index having a name column divided into a plurality of numbered name spaces, and also having in conjunction with said name column a like name trail column divided into a plurality of spaces corresponding to the numbered name spaces and designed to contain reference characters indicating like names to those entered in the corresponding name spaces, and also having a terminal letter key column divided into spaces corresponding to the spaces in the name column and designed for characters referring to names having the same radix as those in the corresponding name space but differing in terminations, of a radix key index comprising a series of key tables, each lettered under an alphabetical head and representing the initial letter or syllable of a name, each of said key tables being divided into a series of lettered major spaces and each major space being subdivided into lettered minor spaces, the major and minor spaces being lettered to correspond, one to the consonants and the other to the vowels of the alphabet, said spaces being adapted to receive numerals referring to the numbered lettered spaces of the name column of the main index.

3. The combination with a main index having a name column divided into a plurality of numbered name spaces also having a like name trail column divided into a plurality of spaces corresponding to the spaces in the name column and designed to contain reference characters indicating like names to those indicated in the corresponding spaces of the name column, said main index also having a like initials column divided into spaces corresponding to the spaces of the name column for entering characters referring to names having like initials to those in the first named name column, a like terminal letter column also divided into spaces corresponding to the spaces of the name column for the entering of names having like terminal letters to those in the name column, and a terminal letter column divided into spaces corresponding to the spaces in the name column for the entering of names having the same radix but differing in terminal letters.

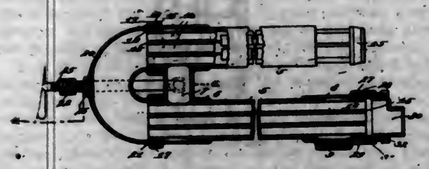
1,015,659. WRENCH. LEO S. WHITEHEAD, Wheeling, W. Va. Filed Sept. 1, 1911. Serial No. 647,227. (Cl. 81—89.)

1. A wrench comprising, in combination, connected fixed and movable members each provided with a jaw and a shank, the shank of the movable member having a series of notches formed in one edge thereof, an operating lever pivoted to the fixed member; a link connection between said lever and the shank of said movable member composed of a yoke slidably fitted on said shank for lateral and longitudinal movement, and a tongue extending from said yoke and attached to said lever, said yoke being provided with a tooth interchangeably engaged in said notches; and a spring associated with said yoke, for yieldingly holding said tooth in such engagement.



2. A wrench comprising, in combination, connected fixed and movable members each provided with a jaw and a shank, the shank of the movable member having a series of notches formed in one edge thereof; an operating bell-crank lever having one arm pivoted to the fixed member and the other coöperating with the shank of that member in producing a pair of handles, the shank of the movable member being interposed between that of said fixed member and the second-named arm of the lever; a connection between said lever and the shank of said movable member for imparting to the latter an endwise movement relative to said fixed member and said lever when the lever is actuated, said connection comprising a yoke slidably fitted on said shank for lateral and longitudinal movement, and a tongue extending from said yoke and pivoted to said lever at the junction of said arms, said yoke being provided with a tooth interchangeably engaged in said notches; and a spring interposed between said lever and the adjacent edge of said shank and bearing against said connection, for normally holding said tooth in such engagement.

1,015,660. LIQUID-COOLING APPARATUS. JOSEPH WILLMANN, Derby, Conn., assignor to Dairy Machinery and Construction Company, Incorporated, Derby, Conn., a Corporation of Connecticut. Filed June 3, 1910, Serial No. 564,800. Renewed Nov. 25, 1911. Serial No. 662,469. (Cl. 62—30.)



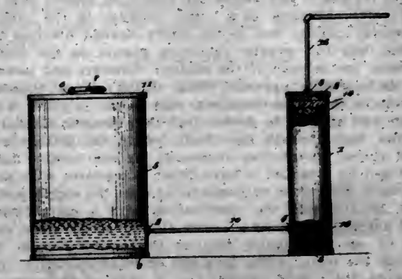
1. In an apparatus of the class described, the combination of a plurality of tubular elements forming fluid passages, a set of relatively small tubes contained in each element, a head having a fluid-tight fit upon said tubes at one end and having a tapered periphery removably fitting within the corresponding tubular element, a gasket interposed between the tapered periphery of said head and the adjacent wall of the surrounding tubular element, and a member having means for forcing it into engagement with said gasket to compress the latter and thereby form a fluid-tight joint between the head, the tubular element and said member.

2. In an apparatus of the class described, the combination of a plurality of tubular elements forming fluid passages, a set of relatively small tubes contained in each element, a head having a fluid-tight fit upon said tubes at each end, said head having a tapered periphery removably fitting within said element, a tapered gasket interposed between the tapered periphery of each head and the adjacent wall of the respective tubular element, a detachable elbow forming a fluid-tight connection between the tubes within adjacent elements and having flanges engaging said gaskets, and means for exerting a pressure upon each elbow to produce compression upon the respective gaskets and thereby form and maintain fluid-tight joints between the respective heads and the surrounding tubular elements.

1,015,661. HAND-WARMER. MASARU B. AKAHORI and MASAHARU MOCHIZUKI, Sacramento, Cal. Filed Aug. 5, 1910. Serial No. 575,772. (Cl. 126—206.)

A device of the class described comprising a rectangular receptacle, the opposing side-walls of said receptacle being stamped to form draft openings, the material stamped from said draft openings being bent upwardly and extended inwardly and occupying the same plane so as to form a grate, the stamped portions of one wall being in alinement with those of the opposite wall and spaced therefrom, said stamped portions adapted to support a heating cartridge on and between their free ends.

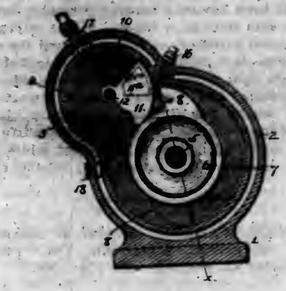
1,015,662. PURIFYING DEVICE FOR HYDROCARBON-FUEL GASOLENE. OTTO AUGUST BENKENDORF, Belen, N. Mex. Filed May 27, 1911. Serial No. 629,770. (Cl. 44—7.)



1. In combination with the supply tank of a system using hydrocarbon fuel, of a casing, a pipe leading from the tank to the casing and opening into the casing above the bottom thereof, a discharge pipe leading from the top of the casing, a filling of calcium carbid in the casing, said filling extending to a point near the top of the casing, and a plurality of felt mats arranged above the carbid between the same, and the top of the casing, and resting on the carbid.

2. A device of the character specified, comprising a casing adapted to be interposed in the supply pipe of a hydrocarbon fuel utilizing system, and provided with an inlet near its bottom and an outlet near its top for connection with the pipe, a filling of calcium carbid in the casing, and a layer of fabric material arranged transversely of the casing between the inlet and the outlet.

1,015,663. MOTOR. JOHN H. BONATEEL, Niagara Falls, N. Y., assignor of one-half to Frank J. Richardson, Niagara Falls, N. Y. Filed Jan. 9, 1906. Serial No. 295,306. (Cl. 123—15.)



1. In a motor, the combination with a casing, of a rotary element in the casing, a central annular web or partition on the rotary element dividing the casing into two chambers, pistons on the rotary element one at each side of the web or partition and at diametrically opposite sides of the rotary element, and pivoted valves actuated positively in one direction by the pistons in passing, to close them, and means for admitting motive fluid behind the valves, said valves constituting, when open, abutments for the fluid discharged behind the pistons.

2. In a motor, the combination with a casing having valve chambers therein, and means for admitting motive fluid to said valve chambers, of a rotary element in the casing, a central annular web or partition on the rotary element dividing the casing into two annular chambers, pistons on the rotary element one in each of said annular chambers and located at diametrically opposite sides of the rotary element, valves pivotally mounted in the valve chambers, projecting into the annular chambers of the casing when open to admit motive fluid from said valve chambers against the pistons and constituting abutments for the fluid which they discharge behind the pistons, and said pistons arranged to strike the valves and momentarily close them.

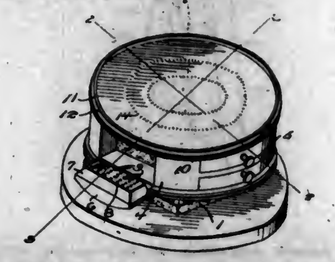
3. In a motor, the combination with a casing having valve chambers, and means for admitting motive fluid to the valve chambers, of a rotary element in the casing, a central annular web on the rotary element dividing the casing into two annular chambers, pistons on the rotary element one in each of the annular chambers and located at diametrically opposite sides of the rotary element, valves in the valve chambers, said valves provided with ports and adapted to project into the casing to discharge motive fluid through said ports behind the pistons and said valves constituting abutments for said motive fluid, and pistons arranged to have direct engagement with said valves to move them to momentarily close the supply ports.

4. In a motor, the combination with a main casing and a valve casing, of a rotary element in the main casing, a central annular web on the rotary element dividing the main casing into two annular chambers, pistons on the rotary element one in each of the annular chambers and located at diametrically opposite sides of the rotary element, a partition in the valve casing alining with the web on the rotary element and dividing the valve casing into two valve chambers, a hinged valve in each valve chamber and adapted to rest against the rotary element and constitute an abutment for fluid, each valve having a port to discharge motive fluid behind a piston on the rotary element, the pistons arranged to engage the valves and move them to close the ports therein, a fluid inlet for each valve chamber, and a fluid outlet in the casing.

5. In a motor, the combination with a main casing, a valve casing communicating therewith, and means for admitting motive fluid to said valve casing, of a rotary element in the main casing, a piston thereon, a hinged valve in the valve casing adapted to project into the main casing and constitute an abutment for fluid, a compression chamber in the valve, an inlet port for said compression chamber, said valve adapted to be moved back into the valve casing by direct action of the piston to compress a charge into the chamber in said valve, said compression chamber in the valve having a port to discharge behind the piston on the rotary element, and means for igniting the compressed charge behind the piston.

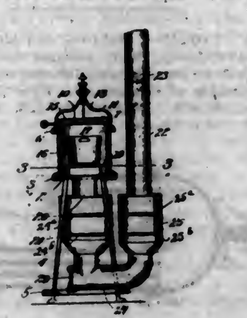
[Claim 6 not printed in the Gazette.]

1,015,664. COMBINED CABINET AND TRAY. WILLIAM BOOTH, East Liverpool, Ohio. Filed May 26, 1911. Serial No. 629,673. (Cl. 45—16.)



A tray especially adapted to be used as a top for a cabinet comprising a circular body having upon its under side and within its rim an annular rib, said body also having upon its under side and within the first mentioned rib a series of annular ribs concentrically positioned with relation to the body and the first mentioned rib, all of the said ribs having their lower edges in the same plane, said body having upon its upper side and within its edge an annular flange, said body also having upon its upper side and within the first mentioned flange a series of annular flanges concentrically positioned with relation to the body and the first mentioned flange and corresponding in number with the number of ribs, the intermediate flanges being provided with ridges and furrows.

1,015,665. FUEL-CONSUMER, HEAT-GENERATOR, AND HEATER. ACHILL WALTER BRAND, Boise, Idaho. Filed Mar. 16, 1908. Serial No. 421,295. (Cl. 126—76.)



1. A heater including in combination, a casing, brackets secured to the lower end thereof and within said casing, a removable fuel pot adapted to rest on said brackets, said fuel pot having closed sides and bottom, a lid located in the casing above the fuel pot having an adjustable opening for directing a draft in a downward direction on the fuel in the fuel pot, a pipe leading from the bottom portion of said casing.

2. A heater including in combination, a casing having an opening located centrally in the bottom thereof, brackets secured within said casing adjacent the opening in the bottom, a removable fuel pot adapted to rest on said brackets, said fuel pot having closed sides and bottom, a vertical pipe leading downward from the opening in said bottom of the casing, means for supporting the casing, a lid for closing the top of the casing, said lid having an adjustable opening for directing a draft in a downward direction on the fuel in said fuel pot.

3. A heater including in combination, a casing, a combustion chamber located therein, a lid or top for closing the upper end of said casing and having an opening therein, a slide for closing said opening, the inner end of said slide being curved, whereby when said slide is closed a slight opening is left between the same and said lid.

4. A heater including in combination, a casing, having an opening in the bottom thereof, a pipe leading from said opening, brackets secured within the casing, a fuel pot carried by said brackets, a lid for closing the upper end of the casing having an opening therein, a slide for closing said opening, the inner end of said slide being curved, whereby when said slide is closed, a slight opening is left between the same and said lid.

5. A heater including in combination, a casing, a fuel pot located in said casing, said fuel pot having a closed bottom and closed sides adjacent said bottom, means for directing a draft in a downward direction upon the fuel in said pot, and a water coil surrounding said fuel pot.

[Claims 6 and 7 not printed in the Gazette.]

1,015,666. MATCH-SCRATCHER. ELLIS M. BROWN, Roanoke, Va. Filed June 21, 1911. Serial No. 634,463. (Cl. 206—36.)

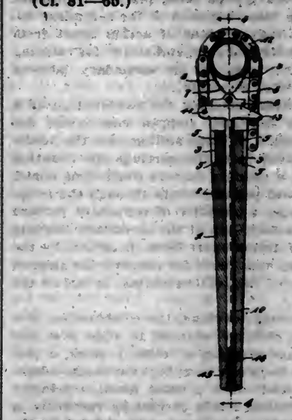
1. A device of the character described comprising a body plate having a friction surface, a spring plate secured to the body plate at one end, a spring clip engaged upon the free end of said spring plate, said plate and clip normally lying upon one face of the body plate, and means formed upon the body plate engaging said clip to prevent outward movement of the free end of the spring plate while permitting of its inward movement.

2. A device of the character described comprising a body plate having a friction surface, the edges of said plate being inwardly turned to form a groove, a spring plate secured to the body plate at one end, and attaching means carried on the free end of said spring plate engaging in the grooves of the body plate to prevent outward movement of the spring plate with relation to said body plate but permitting of its inward movement relative thereto.

3. A device of the character described comprising a body plate having a friction surface, the edges of said plate being inwardly turned to form a groove, a spring plate secured to the body plate at one end, a resilient clip arranged upon the free end of said spring plate and having portions movably engaged in the groove of the body plate to prevent outward movement of the free end of said spring plate under the tension of said clip while permitting of the inward movement thereof.

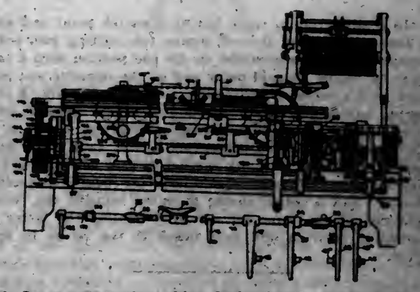
4. A device of the character described comprising a body plate having a friction surface, the edges of said plate being inwardly turned to form a groove, a spring plate arranged upon one face of said body plate and fixed to the same at one end, said spring plate and body plate being normally disposed in parallel planes, a resilient clip arranged upon the unattached end of said spring plate and having a portion inclined with relation thereto between which and said plate the object to which the device is attached is adapted to be inserted, said clip having portions movably disposed in the groove of said body plate whereby outward movement of the free end of the spring plate with relation to the body plate is prevented under the spring tension of said clip when the inward movement of the free end of the spring plate is permitted.

1,015,667. CHAIN PIPE-WRENCH. DE MONT CARYL, Wiscoy, N. Y. Filed Mar. 20, 1911. Serial No. 615,460. (Cl. 81—65.)



The herein described chain pipe wrench comprising a tubular handle, jaws secured to opposite sides thereof and provided with spacing lugs contacting with each other over the end of the handle, a bolt through said lugs and jaws, a shank extending loosely throughout the bore of the handle and having a cross head at its outer end with a nose at one extremity, both extremities of the head projecting laterally beyond said lugs, the jaws projecting longitudinally beyond said lugs and having V-shaped recesses, with teeth therein facing outward, a chain connected with one extremity of said head, led thence past one extremity of the contacting lugs and around the object being gripped by said jaws, and thence past the other extremity of said lugs, and having its links adapted to engage said nose, and a nut threaded on the other end of the shank against the inner end of the handle.

1,015,668. FLAT-BED KNITTING-MACHINE. EDOUARD DUBIED, Couvet, Switzerland, assignor to Edouard Dubied & Cie., Couvet, Switzerland. Filed Mar. 23, 1910. Serial No. 551,048. (Cl. 66—28.)



1. In an automatic racking device for the needle beds of flat bed knitting machines the combination of a primary rotating pattern controlling chain, a plurality of secondary rotating pattern-chains, means for throwing each of the secondary rotating pattern chains into and out of action apart from the others by the primary chain, a rotatable stepped cam, and means for rotating the stepped cam from

each of the secondary pattern chains in one or the other direction.

2. In an automatic racking device for the needle beds of flat bed knitting machines the combination of a primary rotating pattern controlling chain, a plurality of secondary rotating pattern chains, the primary rotating main pattern controlling chain having as many rows of studs as there are secondary rotating pattern chains, each of the secondary rotating pattern chains having a group of studs, the studs of the various groups being placed in different successions, means for throwing each of the secondary rotating pattern chains into and out of action apart from the others, a rotatable stepped cam, and means for rotating the stepped cam from each of the secondary pattern chains in one or the other direction.

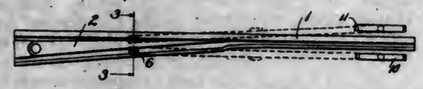
3. In a flat-bed knitting machine the combination of a slidable needle-bed, a rotatable stepped cam wheel for shogging said needle-bed, a carriage sliding over the needle bed, mechanism actuated from the carriage for counting the number of strokes, a primary pattern controlling chain, means for operating said primary chain through the reciprocation of the carriage, a plurality of secondary pattern chains, means for throwing each of the secondary rotating chains into and out of action apart from the others by the primary rotating chain, and means for rotating the stepped cam wheel, from each of the pattern chains, in one or the other direction.

4. In a flat bed knitting machine, the combination of a slidable needle-bed, a carriage adapted to slide over the needle-bed, said carriage carrying a roller, a shaft, a plurality of arms fixed to the shaft carrying cam blocks adapted to coöperate with said roller, a chain drum, a primary rotating pattern controlling chain carried by the drum, a ratchet wheel connected to the drum, a lever fixed to the shaft, and a pawl pivoted to the lever and engaging the ratchet wheel.

5. In a flat bed knitting machine, the combination of a primary chain, a chain drum carrying said primary chain, several rows of alternating high and low studs on said chain, levers extending into the path of these studs, catches for arresting said levers, extensions on said catches reaching into the path of said studs, knock off fingers, and means for transmitting the movement of said levers to said knock off fingers.

[Claims 6 to 8 not printed in the Gazette.]

1,015,669. SWITCH-THROWING MECHANISM. HARRY VICTOR ELMORE, Dayton, Ohio. Filed Aug. 14, 1911. Serial No. 643,877. (Cl. 104—24.)

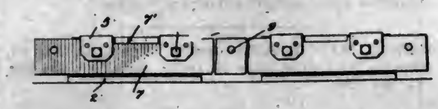


In combination, a track having a switch point and also a recess in the bed thereof, means for shifting said point comprising a lever provided on one end portion with a cam face for riding on said point and on the opposite end portion with a recess, a depressible member comprising a bow spring having its terminals mounted in the recess in said track bed for longitudinal movement therein, the walls of the recess in said bed preventing lateral twisting of said spring, a depending shank carried by said bow spring and receivable by the recess in said lever for rocking movement therein, and a coiled spring mounted beneath the recess terminal of the lever for normally holding the latter in operative position and said shank in the recess in said lever.

1,015,670. BRACKET FOR AUTOMOBILE-LAMPS. BENJAMINE F. ENSLEY and CLARENCE E. ENSLEY, Moulton, Iowa, assignors of one-half to Werter S. Farrar, Lincoln, Nebr., and Leonard M. Clark, Moulton, Iowa. Filed Oct. 27, 1910. Serial No. 589,418. (Cl. 240—62.)

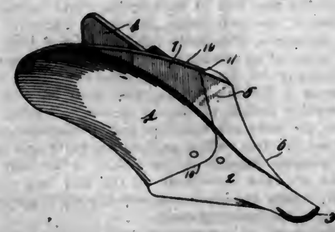
An apparatus for automobile lamps comprising a hollow-bracket with an enlarged upper portion having edge ball bearing sockets therein, the base of said enlarged portion provided with downward projections also having ball bearing sockets therein, a lever having an enlarged inner end mounted over the upper end of the bracket and provided with ball bearing sockets on its under face, said lever having an arm projecting into the bracket and having a plurality of nuts thereon the upper one of which is provided with ball bearing sockets, said nuts adapted to clamp the ball bearing sockets together when the balls are arranged therein and said enlarged inner end of the lever having a bifurcated lamp holder projecting upwardly therefrom.

1,015,671. RAIL-TIE. JACOB C. EVANS, Bellwood, Pa. Filed Sept. 8, 1909. Serial No. 516,673. (Cl. 238—5.)



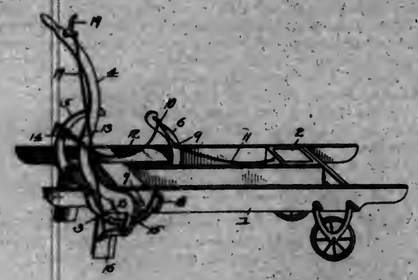
The herein described rail tie comprising a substantially U-shaped member, the base or connecting portion of the member being provided with openings, the sides of the member being also provided with openings, a cushion member comprising rectangular blocks having all of their faces smooth and adapted to be positioned within the U-shaped member adjacent the ends thereof, U-shaped brackets overlying the ends of the cushion members and straddling the sides of the U-shaped members, the sides of the U-shaped member, the off-set arms of the brackets and the cushion member being all provided with a registering opening, a headed member for these openings, the said member having one of its ends provided with an elongated slot, a wedge for the slot, reinforcing members removably connected with the base of the U-shaped member directly below the cushions, and each of said reinforcing members having its longitudinal end bent downwardly to provide feet, all substantially as and for the purpose set forth.

1,015,672. PLOW. FRANCIS LAFAYETTE EZELL, Nashville, Tenn. Filed Apr. 6, 1911. Serial No. 619,301. (Cl. 97—21.)



In a plow, the combination with the mold board having an upright extension, the land side, and the share and its point; of a colter rising from the inner edge of the share with its outer face flush with that of said extension and its front edge receding from the point rearward and upward and sharpened to a cutting edge and its rear edge formed with an upright shoulder, and a brace secured behind said upright extension with its front end projecting into said shoulder, for the purpose set forth.

1,015,673. FODDER BINDER AND TRUCK. WILLIAM A. FORBES, Butler, Ohio. Filed Apr. 24, 1911. Serial No. 623,025. (Cl. 100—31.)

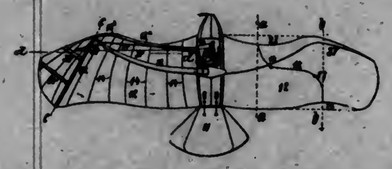


1. A device of the kind described comprising a truck having a twine box, two pivoted arms movable toward each other and adapted to grip a bundle, means for operating said arms, one of the arms having two eyes formed therein and the other arm having a hook thereon, and a pivoted rod adapted to be engaged by said hook, the twine running through the eyes of one arm and being loosely secured to the free end portion of the said rod.

2. In a device of the kind described parallel shafts, a lever for operating one of said shafts, arms fixed upon said shafts, said arms having toothed segment portions meshing with each other, a rod pivoted between said arms, and means carried by one of the arms for engaging said rod and moving it in unison with the arm, one of the arms having eyes through which twine passes, the twine being secured to said rod, as and for the purpose set forth.

3. A device of the kind described comprising a portable truck having a twine box, transverse shafts, arms mounted upon said shafts, said arms having intermeshing segmental portions, one of said arms having a plurality of eyes, and the other arm having a laterally extending hook, a vertically arranged plate with a compound curved upper edge, said plate being arranged upon the truck between the arms, a rod pivoted to said plate and engaged by the hook of the arm, a lever fixed to one of said shafts, said lever having a depending portion, a curved rack bar, a plate pivoted to said extension and engaging said rack, and means for operating said pawl, the twine from said box running through the eyes of one of the arms and being secured to the rod engaged by the other arm, as and for the purpose set forth.

1,015,674. AIRSHIP. KARL LUDWIG WALDEMAR GREST, Munich, Germany. Filed Oct. 22, 1908. Serial No. 459,027. (Cl. 244—12.)



1. In an air ship, the combination of a body adapted to receive an aeronaut, a vertically steering device placed at the rear end, appliances situated in the body for adjusting the vertically steering device, supporting planes fast with said body and parabolically vaulted from front to rear, the arch of said vault following a substantially S-shaped course from a point adjacent the body in the front to a point remote from the body in the rear of each of said planes, substantially as described.

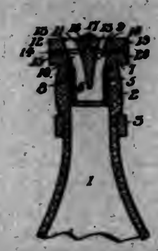
2. In an air ship, the combination of a body adapted to receive an aeronaut, a vertically steering device placed at the rear end, appliances situated in the body for adjusting the vertically steering device, supporting planes fast with said body and parabolically vaulted from front to rear, the arch of said vault following a substantially S-shaped course from a point adjacent the body in the front to a point remote from the body in the rear of each of said planes, in combination with means for altering the twist of the outer extremities of said planes during flight, substantially as and for the purpose specified.

3. In an air ship, the combination of a body adapted to receive an aeronaut, a vertically steering device placed at the rear end, appliances situated in the body for adjusting the vertically steering device, supporting planes fast with said body and parabolically vaulted from front to rear, the arch of said vault following a substantially S-shaped course from a point adjacent the body in the front to a point remote from the body in the rear of each of said planes, in combination with means for altering the twist of the outer extremities of said planes during flight, substantially as and for the purpose specified.

4. In an air ship, the combination of a body adapted to receive an aeronaut, a vertically steering device placed at the rear end, appliances situated in the body for adjusting the vertically steering device, supporting planes fast with said body and parabolically vaulted from front to rear, the arch of said vault following a substantially S-shaped course from a point adjacent the body in the front to a point remote from the body in the rear of each of said planes, said planes being cut out at the points of entry and emergence of said S-shaped course.

5. In an air ship, a pair of supporting planes parabolically vaulted from front to rear, the arch of said vault following in each plane, a substantially S-shaped course from a point adjacent the inner juxtaposed ends of said planes in front to a point spaced outwardly therefrom in the rear.

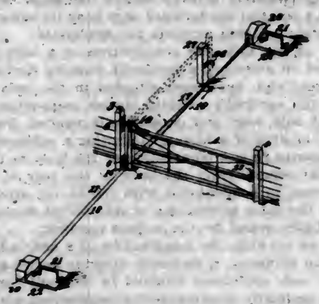
1,015,675. BOTTLE-CLOSURE. PHILLIPPS GERGELY, Monongahela, Pa. Filed Aug. 28, 1911. Serial No. 646,326. (Cl. 215—57.)



A closure for bottles comprising a disk mounted upon the top edge of a bottle neck, a spout integral with and depending from the disk into the bottle neck, the upper portion of said spout flaring outwardly, a gasket interposed between the throat of the bottle and said spout to provide a seal, said gasket depending below said spout, a tapering web integral with and depending from the disk into said spout to provide the latter with a pair of passages, said web terminating at a point above the inner end of the spout, said disk provided with a pair of inclined openings communicating with said passages, said openings extending in opposite directions with respect to each other, a vertically disposed pin integral with the upper face of said disk centrally thereof, a gasket mounted upon said disk and provided with a pair of inclined openings communicating with the openings in the disk, a shutter mounted upon said gasket and surrounding said pin and provided with a pair of inclined openings capable of registering with the openings of the gasket when the

shutter is shifted in one direction, means carried by said pin and engaging with the shutter for maintaining it in position, said shutter provided with diametrically opposed laterally extending lugs to facilitate the shifting thereof.

1,015,676. FARM-GATE. PRENTISS B. GRAHAM, Petaluma, Cal. Filed Jan. 6, 1911. Serial No. 601,211. (Cl. 39—20.)



1. In a gate, the combination of a fixed support, top and bottom brackets thereon, a revoluble disk mounted in the bottom bracket, a vertically disposed rod eccentrically mounted on said disk and extending upward through the top bracket, and a gate having its lower end pivoted on said rod, a link connecting the upper end of the gate to the top bracket, and a crank arm on said rod pivotally connected to said link.

2. In a gate, the combination of a fixed support, top and bottom brackets thereon, a revoluble disk mounted in the bottom bracket, a vertically disposed rod eccentrically mounted on said disk and extending upward through the top bracket, a gate having its lower end pivoted on said rod, a link connecting the upper end of the gate to the top bracket, a crank arm on said rod pivotally connected to said link, and means for oscillating said revoluble disk and rod to actuate said link to cause the gate to open and close.

3. In a gate, the combination of a fixed support, top and bottom brackets thereon, a revoluble disk mounted in the bottom bracket, a vertically disposed rod eccentrically mounted on said disk and extending upward through the top bracket, a gate having its lower end pivoted on said rod, a link connecting the upper end of the gate to the top bracket, a crank arm on said rod pivotally connected to said link, and means for oscillating said revoluble disk and rod to actuate said link to cause the gate to open and close, said means embodying a cross-head on the disk and oppositely extending cables attached to the outer ends of the cross-head and means for operating the cables to oscillate said cross-head.

4. In a gate, the combination of a fixed support, top and bottom brackets thereon, a revoluble disk mounted in the bottom bracket, a vertically disposed rod eccentrically mounted on said disk and extending upward through the top bracket, a gate having its lower end pivoted on said rod, a link connecting the upper end of the gate to the top bracket, a crank arm on said rod pivotally connected to said link, means for oscillating said revoluble disk and rod to actuate said link to cause the gate to open and close, said means embodying a cross-head on the disk and oppositely extending cables attached to the outer ends of the cross-head, and means for operating the cables to oscillate said cross-head, said last named means consisting of a rockable member to which the cables are attached and a bail on the rockable member by which the latter is actuated.

5. In a gate, the combination of a fixed support, top and bottom brackets thereon, a revoluble disk mounted in the bottom bracket, a vertically disposed rod eccentrically mounted on said disk and extending upward through the top bracket, a gate having its lower end pivoted on said rod, a link connecting the upper end of the gate to the top bracket, a crank arm on said rod pivotally connected to said link, means for oscillating said revoluble disk and rod to actuate said link to cause the gate to open and close, said means embodying a cross-head on the disk and oppositely extending cables attached to the outer ends of the cross-head, means for operating the cables to oscillate said cross-head, said last named means consisting of a rockable member to which the cables are attached and a bail on the rockable member by which the latter is actuated, and means on said rockable member for normally retaining the bail in a vertical position.

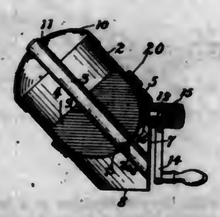
[Claim 6 not printed in the Gazette.]

1,015,677. RAIL-JOINT. JACOB W. GRANT, Hanlin Station, Pa., assignor of one-half to Anna Cora Grant. Hanlin Station, Pa. Filed Oct. 25, 1911. Serial No. 656,637. (Cl. 239—6.)

1. In a rail joint, the combination with rails, of a chair adapted to support the base flanges thereof, angularly disposed supports carried by the longitudinal edges of said chair, straps connecting said supports and providing openings, splice bars bracing said rails and having tongues projecting into said openings, bolts arranged in said supports and having the upper ends thereof engaging the upper edges of said splice bars, and nuts screwed upon said bolts and adapted to hold said bolts in engagement with said splice bars.

2. In a rail joint, the combination with rails, of a chair adapted to support said rails, lugs carried by the ends of said chairs and engaging the base flanges of said rails, angularly disposed supports carried by the longitudinal edges of said supports, straps connecting said supports and providing openings, splice bars bracing the sides of said rails, bosses carried by the upper edges of said splice bars and confronting said supports, bolts arranged in said supports and having the upper ends thereof engaging in said bosses, and nuts screwed upon said bolts for holding said bolts in engagement with said splice bars.

1,015,678. SOAP-DISPENSING MACHINE. WILLIAM HADDOW, Ossining, N. Y. Filed June 26, 1909. Serial No. 504,563. (Cl. 146—11.)



1. The combination of a cylindrical receptacle, an axial stem therein, a disk shaped rotatable cutter having radial teeth mounted for rotation therein, said cutter having its axis in the plane of the axis of the stem of the receptacle but at an angle to said stem axis said cutter adapted for supporting a cake of soap on its inner curved face.

2. The combination of a receptacle having a stem mounted lengthwise therein adapted to support a cake of soap for rotary and longitudinal movements thereon, a dish shaped rotatable cutter having inwardly reaching teeth for feeding, rotating and cutting a soap cake on said stem and means for rotating the cutter.

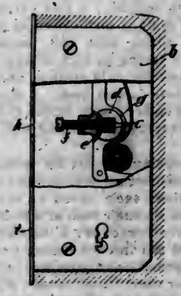
3. The combination of a rotatable dish shaped cutter having teeth on its inner face and a stem for revolubly supporting a cake of material, said stem being mounted in the plane of the axis of said cutter but oblique to said axis.

4. The combination of a rotatable disk shaped cutter having radial teeth and means for supporting a cake of material for feeding said cake tangent to the working face of said cutter at one point and normal to said working face at another point thereof.

5. The combination of a receptacle for a cake of material, a disk shaped rotatable cutter mounted therein, means for supporting the cake of material for free rotation while allowing said cake to be fed by gravity against the inner curved cutting portion of said cutter and on both sides of the axis of said cutter, and means for rotating the cutter.

[Claims 6 and 7 not printed in the Gazette.]

1,015,679. MEANS FOR SECURING DOOR-LATCH HANDLES. FRIEDRICH HAIZMANN, Stuttgart, Germany. Filed May 11, 1911. Serial No. 626,448. (Cl. 70—88.)

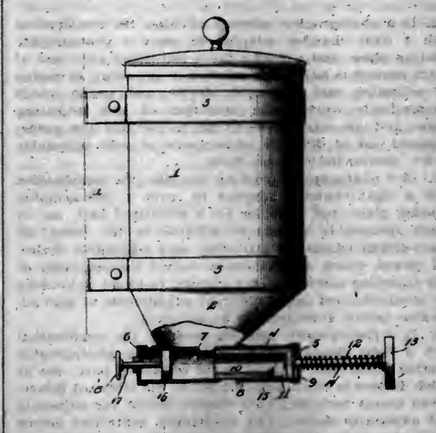


A door latch handle fastening, comprising the roll back the knob shanks arranged in two parts with smooth surfaces lying flat one upon the other, with their ends mutually engaging in the necks of the handles, said shanks being provided with longitudinal slots registering with each other, and a wedge screw carried by the roll back adapted to engage the slots in the shanks, whereby said screw permits longitudinal adjustment of the shanks as well as holds said shanks firmly against the sides of the neck of the handle and the roll back.

1,015,680. LIQUID-DISPENSING MACHINE. WILLIAM G. HOLLINGSWORTH, Sheboygan, Wis. Filed Mar. 30, 1909. Serial No. 486,786. (Cl. 73—104.)

1. A liquid measuring device, comprising a vessel having an outlet at the bottom thereof, a horizontally disposed measuring casing having non-registering inlet and outlet openings, the former communicating with the outlet of the vessel, a valve and measuring plunger normally disposed at one end of the casing at one side of said inlet and above and closing the outlet of the casing, said valve being provided with a longitudinal bore opening at its inlet end through the inner end of the valve and having its discharge end opening through the base of the valve adjacent the outer end of the latter, spring retracted means for sliding said plunger valve inwardly to bring said discharge end of the bore into register with the outlet of the casing, a follower arranged in the casing on the opposite side of said inlet and having an effective range of travel between the contiguous end of the casing and adjacent wall of the inlet, and means for adjusting said follower to vary the effective measuring capacity of the casing.

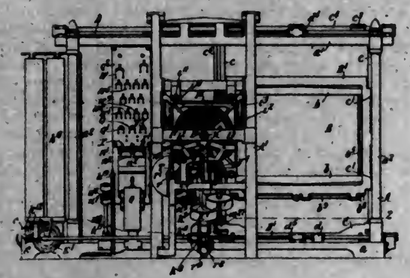
2. A liquid measuring device comprising a vessel having an outlet at the bottom thereof, a horizontally disposed measuring casing having non-registering inlet and outlet openings, the former communicating with the outlet of the vessel, a valve and measuring plunger normally disposed at one end of the casing at one side of said inlet and above and closing the outlet of the casing, said valve being provided with a longitudinal bore opening at its inlet end through the inner end of the valve and having its discharge end opening through the base of the valve adjacent the outer end of the latter, spring retracted means for sliding said plunger valve inwardly to bring said discharge end of the bore into register with the outlet of the casing, a stud carried by the plunger valve and movable in the outlet opening of the casing, said stud being adapted to engage the inner end wall of said opening to limit the opening movement of the plunger valve, a follower arranged in the casing on the opposite side of said inlet and having an effective range of travel between the contiguous end of the casing and adjacent wall of the inlet, and means for adjusting said follower to vary the effective measuring capacity of the casing.



3. A liquid measuring device comprising a vessel having an outlet at the bottom thereof, a measuring casing extending across said outlet and provided in its top with an inlet communicating with said outlet of the vessel and in its bottom with an outlet, the latter being arranged at a point between the inlet and one end of the casing, a plunger valve movable in the said end of the casing, said valve having a longitudinal bore opening at its inlet end through the inner end of the plunger valve and having an outlet at its opposite end opening through the bottom of said plunger valve, spring retracted means for operating the plunger valve, a device arranged within the end of the casing on the opposite side of the casing inlet from the plunger valve and normally spaced from the latter and adjustable between said casing inlet and adjacent end of the casing to vary the effective capacity of the latter, and means for adjusting said device.

4. A liquid measuring device comprising a vessel having an outlet at the bottom thereof, of a horizontally disposed measuring casing having non-registering inlet and outlet openings, the former communicating with the outlet of the vessel, a valve and measuring plunger normally disposed at one end of the casing and wholly at one side of said inlet and above and closing the outlet of the casing, said valve being provided with a longitudinal bore opening at its inlet end through the inner end of the valve and having its discharge end opening through the base of the valve adjacent the outer end of the latter, the opposite end of the casing being screw-threaded to a point adjacent to the inlet thereof, a follower arranged within the threaded portion of the casing and threaded to engage therewith so as to have an effective range of travel between the contiguous end of the casing and adjacent wall of the inlet, and an elongated stem connected with the follower whereby the latter may be adjusted to vary the effective measuring capacity of the casing.

1,015,681. PHOTOGRAPHIC-PRINTING MACHINE. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor of one-half to George Bleistein, Buffalo, N. Y. Filed May 12, 1910. Serial No. 560,968. (Cl. 95—73.)



1. In a photographic printing machine, the combination with a light chamber adapted to carry a photographic printing plate, and a holder for a sensitized part, one of which devices is adjustable relative to the other, of means for adjusting said adjustable device, and means which automatically control the operation of said adjusting means and are adapted to be set to produce any predetermined one of different adjustments of said adjustable device, substantially as set forth.

2. In a photographic printing machine, the combination with a light chamber adapted to carry a photographic printing plate, and a holder for a sensitized part, one of which devices is adjustable relative to the other, of power-driven means for adjusting said adjustable device, and means which automatically control the operation of said adjusting means and are adapted to be set to produce any predetermined one of different adjustments of said adjustable device, substantially as set forth.

3. In a photographic printing machine, the combination with a light chamber adapted to carry a photographic printing plate, and a holder for a sensitized part, one of which devices is adjustable relative to the other, of power-driven means including an electrical clutch for adjusting said adjustable device, and electrically controlled means which automatically control the operation of said adjusting means and are adapted to be set to produce any predetermined one of different adjustments of said adjustable device, substantially as set forth.

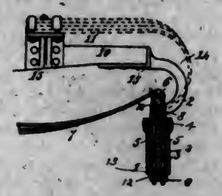
4. In a photographic printing machine, the combination with a holder for a sensitized part, and photographic means for printing on said sensitized part, of driven means for adjusting said holder to place different portions of said sensitized part in position for printing thereon, and means which automatically control the operation of said adjusting means and are adapted to be set to produce any predetermined one of different adjustments of said holder, substantially as set forth.

5. In a photographic printing machine, the combination with a light chamber adapted to carry a photographic printing plate, and a holder for a sensitized part which is adjustable in two directions to place different portions of said sensitized part opposite to the said printing plate, of means for adjusting said holder, and means which automatically control the operation of said adjusting means and are adapted to be set to produce any predetermined one of different adjustments of said holder in each direction of its movement, substantially as set forth.

[Claims 6 to 78 not printed in the Gazette.]

1,015,682. SUSPENSION-SPRING FOR VEHICLES. LOUIS PAUL CONSTANT JULES JACQUET, Neuilly-sur-Seine, near Paris, France, assignor to The J. M. Shock Absorber Company, a Corporation of Pennsylvania. Filed Oct. 21, 1910. Serial No. 588,344. (Cl. 21—97.)

1. In an elastic spring support the combination of a hanger member; a bolt carried by said member; a casing closed at one end with a head through which said bolt passes and open at the other end; a spring in said casing; a U-shaped rod supporting said spring at its open end, and passing through said head near its looped end; a second bolt passing through said looped end; and a vehicle spring carrying said second bolt, substantially as described.



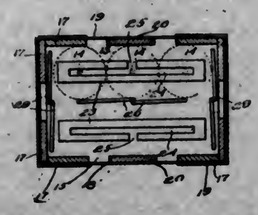
2. In an elastic spring support the combination of a hanger member; a bolt carried by said member; a casing closed at one end with a head provided with an extension through which said bolt passes and open at the other end; a spring in said casing; a U-shaped rod and disk supporting said spring at its open end, and said rod passing through said head and extension near its looped end; a second bolt passing through said looped end leaving a space between said second bolt and extension; and a vehicle spring carrying said second bolt, substantially as described.

3. In an elastic spring support for vehicles, the combination of a hanger member; a bolt carried by said member; a plurality of casings each closed at one end by a head through each of which said bolt passes, and open at their other ends; a spring in each casing; a U-shaped rod in each casing supporting said springs, and passing through said heads near their looped ends; a second bolt passing through the looped ends of each of the U-shaped rods; and a vehicle spring carrying said second bolt, substantially as described.

4. In an elastic spring support for vehicles, the combination of a hanger member; a bolt carried by said member; a plurality of casings each closed at one end by a head having an extension through each of which said bolt passes, and open at their other ends; a helical spring in each casing; a U-shaped rod in each casing provided with nuts supporting said springs, and passing through said heads and extensions near their looped ends; a second bolt passing through the looped ends of each of the U-shaped rods; and a vehicle spring carrying said second bolt, substantially as described.

5. In an elastic spring support the combination of a hanger member; a bolt carried by said member; a casing closed at one end with a head through which said bolt passes; a spring in said casing; rod members supporting said spring, and passing through said head; a yoke attached to said rod members; a second bolt passing through said yoke; and a vehicle spring carrying said second bolt, substantially as described.

1,015,683. SHIPPING-CRATE. NIELS JENSEN, Lincoln, Mass., assignor of one-half to Edwin L. Frye, Lawrence, Mass. Filed May 27, 1911. Serial No. 629,807. (Cl. 217—36.)



1. A crate comprising a bottom, a top, uprights attached to the bottom and top and arranged to form one or more side openings, confining pieces adapted to guard said openings, means being provided for detachably securing said confining pieces to the crate, and inclined longitudinal and transverse tie rods attached at their ends to the bottom and top and arranged in pairs within the crate, the longitudinal tie rods being separated from the sides of the crate by storage spaces and adapted to laterally support articles inserted in said spaces.

2. A crate comprising a bottom, a top, uprights attached to the bottom and top and arranged to form one or more side openings, confining pieces adapted to guard said openings, means being provided for detachably securing said confining pieces to the crate, a pair of oppositely inclined longitudinal tie rods attached at their ends to the bottom and top and arranged in a plane substantially parallel with the sides of the crate, said rods being separated from the sides of the crate by storage spaces and adapted to laterally support articles inserted in said spaces, and two pairs of oppositely inclined transverse tie rods attached at their ends to the bottom and top at opposite ends of said spaces, each pair being arranged in a plane substantially parallel with the ends of the crate.

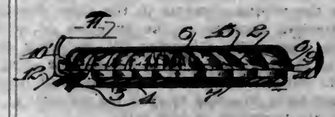
3. A crate comprising a bottom, a top, uprights attached to the bottom and top and arranged to form one or more side openings, confining pieces adapted to guard said openings, means being provided for detachably securing said confining pieces to the crate, and means attached to the bottom and top for positioning articles inserted through said openings.

4. A crate comprising a bottom, a top, uprights attached to the bottom and top and arranged to form one or more side openings, confining pieces adapted to guard said openings, means being provided for detachably securing said confining pieces to the crate, and channeled strips attached to the bottom and top and having slots communicating with their channels, said slots being opposite the side openings.

5. A crate comprising a bottom, a top, said bottom and top being provided with recesses in opposite edges, uprights attached to the bottom and top and arranged to form side openings coinciding with said recesses, metal straps attached to said uprights and coöperating with said recesses to form sockets at the upper and lower ends of the side openings, said straps being provided with orifices, and confining pieces, the ends of which are adapted to enter said sockets, and are provided with spring-pressed pins adapted to engage said orifices and detachably secure the confining pieces in the sockets.

[Claim 6 not printed in the Gazette.]

1,015,684. LIFE-SAVING APPARATUS FOR AVIATORS. CHESTER A. JUDAH, Mill Valley, and HENRY R. SANDER, Oakland, Cal. Filed Apr. 19, 1911. Serial No. 622,052. (Cl. 244—21.)



1. A life saving apparatus for aerial travelers, comprising a parachute having attached to its circumferential edge a series of radially expansible normally restrained sections adapted to automatically open, a harness attached to said parachute and a substantially, flat, sectional, circular casing within which the parachute may be folded under restraint.

2. A life saving apparatus for aerial travelers comprising a parachute having a series of sections of elastic material attached to its circumferential edge and adapted to automatically open to expand the parachute, a harness attached to the parachute, and a substantially flat, sectional, circular casing within which the sections may be folded under restraint, said casing having a device for keeping it closed against the tension of the automatically expansible sections.

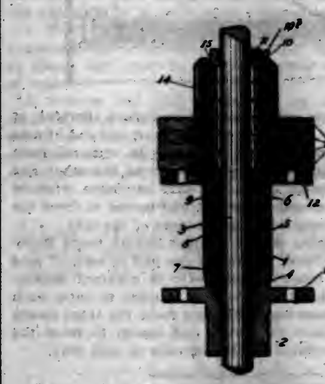
3. A life saving apparatus, for aerial travelers comprising a parachute having a series of radially expansible normally restrained sections attached to the circumferential edge of the parachute, and composed of elastic material whereby the sections are adapted to automatically expand to open the parachute, a harness attached to said parachute, and a substantially flat, sectional, circular casing within which the sections may be folded under restraint, said casing having a device for keeping it closed against the tension of the automatically expansible sections, said device being provided with cords whereby the casing may be opened by the release of the cover device.

4. A life saving apparatus, for aerial travelers comprising a parachute having a series of radially expansible normally restrained sections attached to the circumferential edge of the parachute, and composed of elastic material whereby the sections are adapted to automatically expand to open the parachute, a harness attached to said parachute, and a substantially flat, sectional, circular casing within which the sections may be folded under restraint, said casing having a device for keeping it closed against the tension of the automatically expansible sections, said device being provided with sections whereby the casing may be opened by the release of the cover device, and a resilient lever interposed between the casing sections whereby said sections may be thrown apart when the locking device has been released.

5. An apparatus for saving the lives of aviators, comprising a parachute, automatically radially expanding elastic members attached to the circumferential edge of the parachute, said members being effective to spread open the parachute, and a sectional casing into which the parachute may be packed and by which said resilient members may be restrained against expansion.

[Claims 6 to 9 not printed in the Gazette.]

1,015,685. STUFFING-BOX. EUGENE C. KAHLE, Oil City, Pa. Filed June 3, 1911. Serial No. 631,034. (Cl. 121—109.)



1. A stuffing box having a bore formed therein adapted to receive a rod, compressible packing rings arranged in the bore of said box, and a gland movably mounted upon the end of said box and containing compressible packing mounted upon said rings and adapted to enter said box as the gland descends.

2. A stuffing box having a bore formed therein with one end of said bore enlarged, said enlarged end of said bore having tapering and cylindrical portions, packing rings of various sizes arranged in the enlarged end of and snugly fitting the wall of the bore of said box, said packing rings being compressible, a weighted gland movably mounted upon the upper end of said box, and compressible packing rings arranged in said gland and mounted upon the packing rings in the box and adapted to enter said box as the gland descends.

3. The combination with a rod, of a stuffing box surrounding said rod, compressible packing rings of various sizes arranged in said box, a gravity gland movably mounted upon the upper end of said box and adapted to descend thereon by gravity, and compressible packing rings

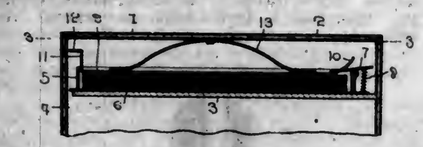
arranged within said gland and mounted upon the packing rings in the box and adapted to be fed into said box as the gland descends.

4. A stuffing box having a bore formed therein with the upper end of said bore enlarged to provide tapering and cylindrical portions, compressible packing rings of various sizes arranged in the enlarged end of the bore of said box, an inverted cup-shaped gland movably mounted upon the outer side of said box and adapted to descend thereon by gravity, circular weighted elements mounted upon the gland for lowering it, and packing rings arranged in said gland and mounted upon the packing rings in the box and adapted to be fed into said box as the gland descends.

5. A stuffing box having a bore formed therein with the upper end of said bore enlarged to provide tapering and cylindrical portions, compressible packing rings of various sizes arranged in the enlarged end of the bore of said box, an inverted cup-shaped gland movably mounted upon the outer side of said box and adapted to descend thereon by gravity, said gland provided with a flanged compressible packing ring arranged in said gland and mounted upon the packing rings, in the box and adapted to be fed into said box as the gland descends, and a plurality of circular weights detachably mounted upon the flange of said gland for lowering the latter, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,015,686. CABINET AND TRAYS THEREFOR. HERMANN L. KARSTEDT, Stony Hill, Mo. Filed July 1, 1911. Serial No. 636,414. (Cl. 45—2.)



1. A combination with a cabinet and trays therefor, of a plate adapted to enter each of said trays, one end of said plate being curved to permit a tray to be removed from said cabinet, a right angular extension at the other end of said plate, a flange carried by said extension whereby the plate may be moved vertically, and means to force the plate into engagement with the contents of the tray.

2. The combination with a cabinet having trays therefor, of a clamping lever pivoted at one end of each of said trays, means for retaining said lever in constant engagement with the contents of the tray, a plate to enter each tray, means for removing said plate from the tray, means for moving the plate vertically, and means to force the plate into engagement with the contents of said tray.

1,015,687. CONCRETE-MIXER. WILLIAM L. KELLER, Kearney, Nebr. Filed Apr. 15, 1910. Serial No. 555,679. (Cl. 83—73.)

1. In a mixing machine, a table, means for rotating the table in one direction to carry the material in said direction, a mixing element co-acting with and extending across the upper face of the table for substantially the entire width thereof and operable to feed the material transversely of said table, and means for rotating the mixing element in a different direction, said table and mixing element co-acting to eject the material at a given point on the periphery of the table.

2. In a mixing machine, a table, means for rotating the table in one direction at a predetermined speed to carry the material in said direction, co-acting mixing elements extending transversely across the upper face of the table for substantially the entire width thereof, said mixing elements being mounted for rotation in the same direction relative to each other and operable to feed the material transversely of the table, and means for rotating the mixing elements at different speeds and in a direction opposite to the direction of rotation of the table, said mixing elements and table co-acting to eject the material at a given point on the periphery of said table.

3. In a mixing machine, a table, means for rotating the table in one direction to carry the material in said direction, a mixing element mounted for rotation in a different direction above the table and provided with spiral blades operable to feed the material transversely of the table, said mixing element being freely movable in a vertical plane toward and from said table, and means for rotating the mixing element at a different rate of speed from that of the table, said mixing element and table co-acting to eject the material at a given point on the periphery of said table.

4. In a mixing machine, a revolving table mounted for rotation in one direction at a predetermined speed for carrying the material in said direction, co-acting mixing elements freely movable in a vertical plane toward and from the table for feeding the material transversely of said table, and means for rotating the mixing elements at different speeds, each greater than that of the table, said table and mixing elements co-acting to eject the material at a given point on the periphery of the table.

5. In a mixing machine, a table mounted for rotation in one direction for carrying the material in said direction, a hopper, co-acting mixing elements extending across the upper face of the table for substantially the entire width thereof and provided with spiral mixing blades operable to feed the material transversely of the table, means for rotating the mixing elements in the same direction, but in a direction opposite to the direction of rotation of the table, means for conveying the materials from the hopper to the mixing blades, and means for spraying the materials during the mixing operation, said mixing elements and table co-acting to eject the material at a given point on the periphery of said table.

[Claims 6 and 7 not printed in the Gazette.]

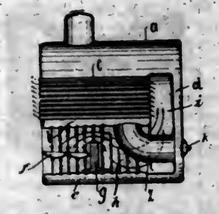
1,015,688. POLISHING COMPOUND. ELMER KELLY, Uniontown, Pa. Filed Sept. 18, 1911. Serial No. 650,031. (Cl. 134—24.)

1. A furniture polish consisting of castor oil, varnish, linseed oil, crude oil, drier, vinegar and carbon oil substantially and for the purpose specified.

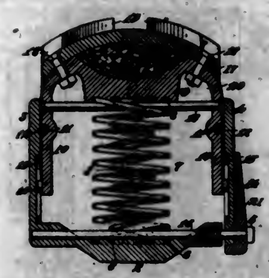
2. A furniture polish consisting of castor oil, one-tenth; varnish, two-tenths; linseed oil, one-tenth; crude oil, 3½ tenths; drier, 1½ tenths; vinegar, ½ tenth; carbon oil, ½ tenth; thoroughly commingled.

1,015,689. MARINE BOILER. EDWARD KING, Zurich, Switzerland. Filed Mar. 11, 1910. Serial No. 548,742. (Cl. 122—150.)

In an internally fired boiler, the combination of a shell providing a tube chamber having a rear vertical and a horizontal bottom wall; a rear water chamber and a bottom water chamber in communication, and said rear chamber communicating with the tube chamber; a plurality of fire tubes secured within the tube chamber; a fire box located intermediate the bottom water chamber and the tube chamber; the walls of said bottom and rear chambers and the tube chamber providing a flue and reversing chamber; a tubular body of relatively large diameter connecting the rear water chamber with the tube chamber, and providing a flame guard for the juncture of the rear and bottom walls of said tube chamber; and a man-hole registering with and providing a man-passageway with said tubular body, substantially as described.



1,015,690. AUTOMOBILE-TIRE. JAMES E. KNAUSS and CHARLES PHINNEY, Healdsburg, Cal. Filed Nov. 7, 1910. Serial No. 590,988. (Cl. 152—38.)



1. A tire comprising a continuous annular felly, a flange integrally formed upon one side of said felly, a sectional flange removably attached to the other side of the felly, a tread member transversely operable between said flanges, concentric resilient members yieldably supporting the tread upon the felly, and means for attaching the resilient members to the rim, said means comprising transversely extending bars passing through opposite ends of said resilient members.

2. A tire and annular felly, having an integral outwardly turned flange upon one side and a corresponding removable flange upon the opposite side, a rim and tread member having parallel, inwardly extending flanges substantially fitting between the felly flanges and having annular grooves or channels with packing rings forming joints between the felly flanges and the rim flanges, whereby the interior chamber is adapted to contain a plastic filling compound, resilient springs of different tension with means for securing their ends respectively to the exterior of the felly member and the interior of the rim member, and securing means comprising transversely extending bars passing through opposite ends of the resilient members.

3. A tire comprising a continuous, annular felly, having outwardly extending parallel flanges, one of which is integral with the felly and the other removable, reinforcements for the removable flange comprising radially disposed ribs having the outer ends contacting with the outer periphery of the flange and the inner ends flanged and bolted to the felly edge, a tread member comprising an arched rim with an annular, concaved peripheral channel, parallel flanges extending inwardly from the felly, the flanges having packing rings to form joints therewith, a resilient support between the felly and said rim, and fillings of plastic material between the tread member and the rim.

4. The combination in a wheel, of a continuous annular felly, outwardly extending flanges upon opposite sides of the felly, a sectional concave rim fitting between said flanges, resilient members and means by which they are fixed and supported between the rim and felly, a tread upon the rim, flexible packing rings between the rim and felly flanges, depressed chambers in the felly flanges, and lugs projecting from the rim into said chambers.

1,015,691. MANUFACTURE OF NITRO-PHENYL NITRO-METHANES, THEIR HOMOLOGUES AND DERIVATIVES. JOSEPH KOETSCHET, Lyon, and ANDRÉ BARBIER, St. Fons, near Lyon, France, assignors to Société Chimique des Usines du Rhône Anciennement Gilliard P. Monnet et Cartier, Paris, France, a Corporation of France. Filed Aug. 17, 1911. Serial No. 644,602. (Cl. 23—24.)

1. Process for the production of bodies of the nitro-phenyl nitro-methane type comprising treatment of a body of the nitrotoluene type in a hot state with nitric acid in the form of vapor.

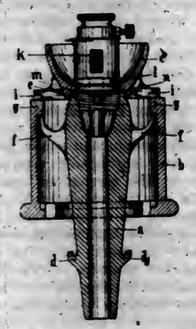
2. Process for the production of bodies of the nitro-phenyl nitro-methane type consisting in treating a body of the nitro-toluene type in a hot state with strong nitric acid in the form of vapor.

3. Process for the production of bodies of the nitro-phenyl nitro-methane type consisting in leading strong nitric acid in the form of vapor into a hot body of the nitro-toluene type and condensing the nitric acid which has not entered into reaction, substantially as described.

4. Process for the production of ortho-nitrophenyl nitro-methane, comprising the leading into ortho-toluene at about 130°–140° C. of strong nitric acid in the form of vapor.

5. Process for the production of ortho-nitrophenyl nitro-methane, consisting in leading into ortho-nitro-toluene at about 130°–140° C. strong nitric acid in the form of vapor and condensing the nitric acid which has not entered into reaction, substantially as described.

1,015,692. INVERTED BURNER. STANISLAW KRAUZE, Warsaw, Russia. Filed Oct. 14, 1910. Serial No. 587,035. (Cl. 67—94.)



1. An inverted burner comprising, in combination with a mixing tube having a threaded socket and a nozzle piece adapted to fit therein, a casing and a deflector, radial arms on said mixing tube, a flange on said casing adapted to be supported by said arms and arms on said deflector adapted to bear on said flange, as and for the purpose set forth.

2. An inverted burner comprising in combination with a mixing tube having a threaded socket and a nozzle piece adapted to fit therein, a casing and a deflector, radial arms on said mixing tube, a flange on said casing adapted to be supported by said arms, arms on said deflector adapted to bear on said flange, a groove in said mixing tube and a tongue on said deflector adapted to enter said groove, as and for the purpose set forth.

3. An inverted burner comprising in combination with a mixing tube having a threaded socket and a nozzle piece adapted to fit therein, a casing and a deflector, radial arms on said mixing tube, a flange on said casing adapted to be supported by said arms, arms on said deflector adapted to bear on said flange, a groove in said mixing tube, a tongue on said deflector adapted to enter said groove, and a flange on said nozzle piece adapted to contact with said deflector, as and for the purpose set forth.

1,015,693. COMBINED CURTAIN AND SHADE HOLDER. JOSEPH FRANK LEMIEUX, New Bedford, Mass. Filed June 14, 1911. Serial No. 633,003. (Cl. 156—24.)

1. In a combined curtain and shade holder, a back corrugated member, a second corrugated member having a slot, and an additional corrugated member disposed for sliding between the first and second corrugated members, a bracket on the third-mentioned member for extending through the slot, and means for holding the second-mentioned member in the direction of the first-mentioned member, and the first-mentioned member against a window frame.

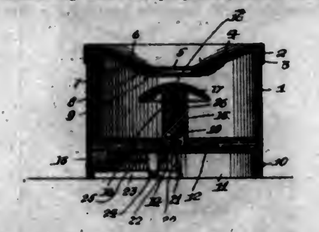
2. In a combined curtain and shade holder a corrugated member, a second member with corrugations fitting the first-mentioned member, and disposed for sliding thereon, a bracket secured to the second-mentioned member, a third member disposed against the second member to form with the first member a guideway for the second member, and adjustable means for holding the first and third members relatively to each other.

3. In a combined curtain and shade holder a member having a slot, a bracket on the member, a second member having an orifice, means disposed through the orifice and the slot for holding the second member on a window casing with the first-mentioned member having the slot in sliding engagement with the second-mentioned member, and means for holding the member having the slot in alinement with the second-mentioned member.

4. In a combined curtain and shade holder, a back corrugated member, two corrugated members having slots adapted to slide on the corrugated surface of the back member, brackets on the members having the slots, a fourth member having an elongated slot and two orifices, an additional corrugated member disposed for sliding between the first and the fourth members, a bracket on the additional corrugated member extending through the elongated slot, and means disposed through the orifice and the first-mentioned slots for holding the third member on a window casing.

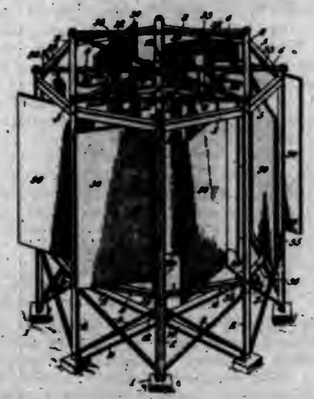
1,015,694. CUSPIDOR. GEZA LENGYEL, Ledford, Ill. Filed May 5, 1911. Serial No. 625,131. (Cl. 4—88.)

A cuspidor comprising a receptacle provided with a mouth piece, the bottom of the receptacle arranged above the lower end thereof and having a centrally disposed opening, a tubular post integral with the upper face of said bottom and surrounding said opening, a depending bearing carried by the lower face of said bottom, a lever pivoted in said bearing at a point between its center and its inner end, a link extending through said opening and having its lower end pivoted to the inner end of the lever, a sleeve extending into and projecting above said post, a



valve carried by the projecting end of the sleeve and adapted to close the mouth piece when the receptacle is tilted or upset, a rod connected to the valve and pivotally connected to the upper end of the link, and a coiled spring interposed between the valve and said bottom and arranged in the post and sleeve.

1,015,695. WIND-WHEEL. JAMES R. LISTON, San Diego, Cal., assignor to Ralph Liston, San Diego, Cal. Filed July 21, 1910. Serial No. 573,131. (Cl. 170—1.)



1. In a wind wheel, a main frame comprising a circular series of upright posts, upper and lower bars connecting the posts, each lower bar being provided with spaced openings, shutters having journal bearings in the upper and lower bars midway of the length thereof, each shutter being of a size to fill the space between two adjacent posts and having the journals intermediately located with respect to the sides of the shutter, and links connected to the lower end of each shutter and adapted to engage either of the openings in the lower horizontal bars on opposite sides of the post to which both bars are connected to hold the shutter in either an open or a closed position.

2. In a wind wheel, a main frame comprising a circular series of upright equally spaced posts and upper and lower bars connecting said posts, a shutter mounted in the upper and lower bars intermediate of the length thereof to turn upon an axis longitudinal of the shutter intermediate of the sides thereof, each shutter being of a size to fill the space between two adjacent posts, and a rotatable member within the circular series of posts and shutters carried thereby and provided with a circular series of upright vanes, said rotatable member being responsive to wind currents directed by the shutters, the shutters being movable to close the spaces between the adjacent posts and to open said spaces with one edge of each shutter closely adjacent to the path traversed by the outer edges of the vanes.

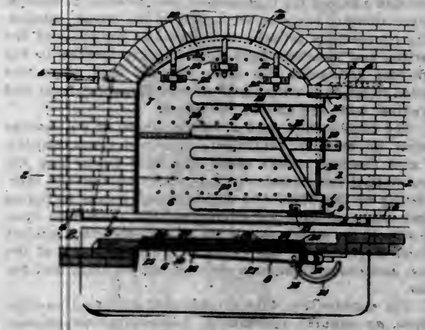
3. The combination of a vertical driving shaft, hubs secured thereto, circular bands supported from the said hubs, vanes arranged against the outer sides of the said bands, and braces having their outer ends secured to the outer portions of the vanes, the inner end of each brace being disposed upon the inner edge of the vane following the vane to which the brace is secured, and securing bolts inserted through the circular bands and the inner ends of the braces and the vanes against which the inner ends of the braces rest.

4. The wind wheel herein described and shown comprising a main frame consisting of vertical posts, braces secured to and extending between the said posts at an near the lower ends of the same, braces extending between the upper ends of the posts, a hub secured to the inner ends of the last mentioned braces, horizontal bars extending between the posts and each provided with an intermediate journal bearing and with sockets near the ends, shutters each having journal pins intermediately located in the respective ends, said shutters being mounted in the journal bearings in the said bars and adapted to close the space between the posts, intersecting bars extending between the lower ends of the post, a bearing supported by the said bars, a vertically disposed driving shaft having its lower end mounted in said bearing and its upper end mounted in the hub secured to the braces at the upper end of the frame, circular bands carried by the said driving shaft, and vanes secured to the outer sides of the said bands.

5. A wind wheel having a rotable member provided with a circular series of vanes and responsive to wind currents, and a surrounding stationary series of wind directing shutters less in number than the vanes of the rotatable series and each shutter being independently adjustable about its central longitudinal axis.

[Claim 6 not printed in the Gazette.]

1,015,696. COKE-OVEN DOOR. RAFFAELO LUCIA, Uniontown, Pa. Filed July 22, 1911. Serial No. 640,006. (Cl. 202—6.)



1. A coke oven door including in combination, a door frame having a base plate, side members formed integral therewith, said base plate projecting beyond the side members and being embedded in the wall of the oven, the upper ends of said side members having laterally projecting portions on which the arch of the oven is adapted to rest, said side members being arranged so as to extend longitudinally of the base plate, and said base plate extending in rear of the side members, whereby said side members may be embedded in the wall of the oven.

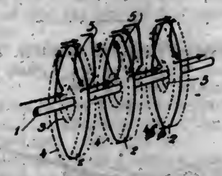
2. A coke oven door including in combination, a door frame having a base plate, side members formed integral therewith, said base plate projecting beyond the side members and being embedded in the wall of the oven, the upper ends of said side members having laterally projecting portions on which the arch of the oven is adapted to rest, said side members being arranged so as to extend longitudinally of the base plate, and said base plate extending in rear of the side members, whereby said side members may be embedded in the wall of the oven, and a door hinged to said door frame and having a line of fire bricks secured thereto.

1,015,697. CIGAR-HOLDER AND ASH-RECEPTACLE. GEORGE C. LYNCH, New York, N. Y. Filed Jan. 6, 1911. Serial No. 601,217. (Cl. 131—51.)

1. As an article of manufacture, a combined cigar holder and ash receptacle, comprising a hollow closed base or pedestal adapted to rest upon a floor and having a door in its under side, a hollow post extending upward from said base to a point within reach of a user, and a cigar holder supported by said post and having an aperture through which ashes, etc., may pass to said post and pedestal.

2. As an article of manufacture, a combined cigar holder and ash receptacle, comprising a hollow closed base or pedestal weighted at its edge and equipped with a door in its under side, a hollow post extending from said base, a cigar holder supported by said post and having an aperture in line with said post, and a match receptacle on said holder.

1,015,698. GAS-ENGINE SILENCER. HIRAM PERCY MAXIM, Hartford, Conn. Filed July 17, 1911. Serial No. 638,815. (Cl. 121—116.)



1. The gas engine muffler comprising a series of partitions provided with central passages and having integral rims and enlarged flanges to coöperate with the rims of the adjacent nested partitions, an inlet to be connected with the engine exhaust and provided with a bridge, a bolt having a conical spreading end coöperating with said bridge, separators arranged between said partitions and provided with plates having central holes to accommodate said bolt and provided with spiral passages on both sides of said plates, said separators having less diameter than said rims and flanges to provide annular gas whirl chambers around said separators, a number of the separators adjacent the discharge end of said muffler being formed of stamped sheet metal and having deflectors arranged be-

tween the several separators between adjacent partitions to give increased muffling action, the surfaces of said spiral separator passages being roughened by a coating of fibrous asbestos and there being a rough coating of fibrous asbestos on the inner surfaces of said annular chambers outside said separators.

2. The gas engine muffler comprising a series of partitions having central passages and provided with integral rims and enlarged flanges to coöperate with the rims of the adjacent nested partitions, an inlet to be connected with the engine exhaust, a bolt connected with said inlet and extending through the muffler, separators between said partitions and provided with plates having central holes to accommodate said bolt and provided with spiral passages on both sides of said plates, said separators having less diameter than said rims and flanges to provide annular gas whirl chambers around said separators, a number of the separators adjacent the discharge end of said muffler being formed of stamped sheet metal and having deflectors arranged between the several separators between adjacent partitions to give increased muffling action, the surfaces of said spiral separator passages being roughened with fibrous material.

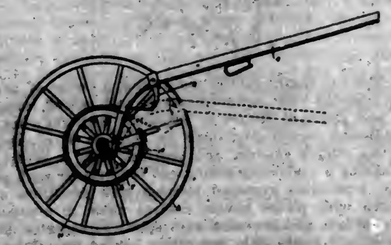
3. The gas engine muffler comprising a series of partitions having central passages and provided with integral rims and enlarged flanges to coöperate with the rims of the adjacent nested partitions, an inlet to be connected with the engine exhaust, a bolt connected with said inlet and extending through the muffler, separators arranged between said partitions and provided with plates having central holes to accommodate said bolt and provided with spiral passages, said separators having less diameter than said rims and flanges to provide annular whirl chambers around said separators, the surfaces of said spiral separator passages being roughened by fibrous coating material.

4. The gas engine muffler comprising a series of partitions having central passages and provided with integral rims and enlarged flanges to coöperate with the rims of the adjacent nested partitions, an inlet to be connected with the engine exhaust, a bolt connected with said inlet and extending through the muffler, separators arranged between said partitions and provided with plates having central holes to accommodate said bolt and provided with spiral passages, said separators having less diameter than said rims and flanges to provide annular whirl chambers around said separators.

5. The gas engine muffler comprising a shell provided with a series of partitions having central passages, separators arranged between said partitions and provided with spiral passages, said separators having less diameter than said shell to provide annular gas whirl chambers around said separators, the surfaces of said spiral separator passages being roughened with fibrous coating material.

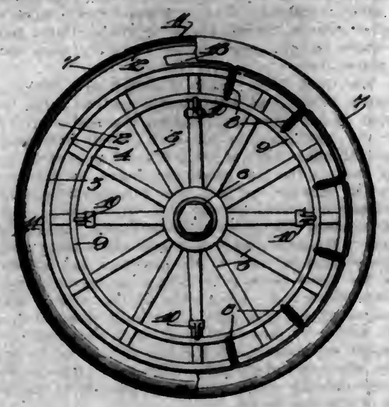
[Claims 6 to 12 not printed in the Gazette.]

1,015,699. HORSE-DETACHING DEVICE. HARRY JOHNSTON MITCHELL, Wilmerding, Pa. Filed Feb. 7, 1910. Serial No. 542,416. (Cl. 21—75.)



In combination, a vehicle having wheels, a brake band wheel on one of said wheels, a brake band clutch on said band wheel, means for holding one end of said band, shafts connected to the other end of said band adapted to tighten said band around said band wheel when said shafts are lowered, a whiffletree on said shafts, pivoted members on said whiffletree adapted to hold trace straps thereto and means for operating said pivoted members.

1,015,700. VEHICLE-WHEEL. ARTHUR MOSSO, Sonoma, and PIETRO GIOVANETTI, San Francisco, Cal. Filed June 26, 1911. Serial No. 635,350. (Cl. 152—32.)



1. The combination in a vehicle wheel, of an annular cushion, an annular, continuous, concaved armor embracing said cushion, means connecting said armor and the wheel so that the former will move circumferentially, independently of the wheel and cushion, said means including a ring mounted for circumferential movement upon each side of the wheel, yokes attached to the wheel and embracing the inner edges of the rings for holding the rings against vertical displacement and concentric with the axis of the wheel, and compensating connections between the edges of the armor.

2. A vehicle wheel, including a hub, spokes and felly, a continuous covering surrounding the periphery of the wheel and adapted for independent circumferential motion, relative thereto, rings on each side of the wheel, compensating connections between the rings and the edges of the covering, and members fixed to the spokes interior to the rings and embracing the inner edge of said rings and adapted to hold the rings against vertical displacement and concentric with the axis of the wheel.

3. The combination with a vehicle wheel, of an annular cushion, an annular, continuous, concaved armor embracing said cushion, means connecting said armor and the wheel so that the former will move circumferentially independently of the wheel and cushion, said means including hanger rings mounted for circumferential movement upon each side of the wheel, means for holding the rings against vertical displacement and concentric with the axis of the wheel, and connections between said hanger rings and the armor.

4. The combination with a vehicle wheel, of an annular cushion, an annular, continuous, concaved armor embracing said cushion, means connecting said armor and the wheel so that the former will move circumferentially independently of the wheel and cushion, said means including hanger rings mounted for circumferential movement upon each side of the wheel, means for holding the rings against vertical displacement and concentric with the axis of the wheel, and connections between said hanger rings and the armor, said connections consisting of resilient links.

1,015,701. COMPOUND FOR EXTERMINATING VERMIN. GUSTAV AUGUSTUS HENRY MULLER, Montreal, Quebec, Canada. Filed Apr. 7, 1911. Serial No. 619,461. (Cl. 167—6.)

1. A compound for exterminating vermin, consisting of a sticky and substantially non-drying mixture of a resinous substance and an oil product, and a luminous substance.

2. A compound for exterminating vermin, consisting of resin and castor oil, and a luminous substance, mixed together.

3. A compound for exterminating vermin, consisting of a sticky and substantially non-drying viscous substance and luminous sulfid of calcium and sulfid of barium, mixed together.

4. A compound for exterminating vermin, consisting of a sticky and substantially non-drying viscous composition and luminous sulfid of calcium, sulfid of barium and a gum varnish, mixed together.

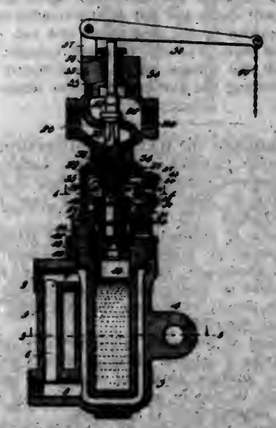
5. A compound for exterminating vermin, consisting of a sticky and substantially non-drying viscous composition, and a luminous substance, mixed together.

[Claim 6 not printed in the Gazette.]

1,015,702. ATTACHMENT FOR FOUNTAIN-PENS. ALFRED NAPOLITANO, Lake Charles, La. Filed Dec. 23, 1910. Serial No. 599,039. (Cl. 24—11.)

The combination with a pen of the described attachment consisting of a thin spring-bar whose body is curved outwardly and provided at its free end with a prong projecting inwardly, and a terminal portion extended beyond said prong and curved outwardly therefrom, in hook form, and rounded on the outer side, the hook being thus spaced from the pen when the prong is in contact therewith, as shown and described.

1,015,703. SAFETY APPARATUS FOR STEAM-BOILERS. HARRY NEVILLE, Los Angeles, Cal., assignor of one-fifth to George H. Goodwin, one-fifth to Daniel P. Kellogg, one-fifth to William F. Merry, and one-fifth to Patrick Sheedy, Los Angeles, Cal. Filed Dec. 8, 1910. Serial No. 596,304. (Cl. 236—6.)



1. A device for the purpose set forth comprising a cylinder having a single port communicating with a steam boiler at the low water level to both admit and discharge water and steam, a cup arranged in said cylinder closed against the same and arranged to be acted upon by both the water and the steam, a heat expansible liquid in the cup, a steam valve and a plunger acted upon by said heat expansible liquid to actuate the valve.

2. A device for the purpose set forth comprising a cylinder having a single port communicating with a steam boiler at the low water level to both admit and discharge water and steam, a cup arranged in said cylinder closed against the same and arranged to be acted upon by both the water and the steam, a heat expansible liquid in the cup, a valve casing threaded in the upper end of the cup, a valve in the casing having a depending stem, a piston casing in the cup below the valve casing, and a piston in said casing above the expansive liquid and engaging the valve stem.

3. A device for the purpose set forth comprising a cylinder having a port to admit steam and water, a cup arranged in said cylinder and closed thereto, said cup having on its upper end an interiorly and exteriorly threaded head, the exteriorly threaded portion of said head engaging the upper end of the cylinder, a heat-responsive element in the cup, a valve casing having an open cage on its lower end, said cage having a threaded engagement with the interiorly threaded end of the cup, a valve arranged in said casing and having a downwardly projecting stem, an adjusting screw in the lower end of said stem, a cylinder having a threaded engagement in the upper end of the cup, and a piston controlled by the heat-responsive element and slidably mounted in said cylinder to engage the adjusting screw in said valve stem whereby to lift said stem and its valve.

4. A device for the purpose set forth comprising a cylinder having a port to admit a heating medium, a cup engaged therein and closed thereto, said cup having an exteriorly and interiorly threaded head engaging the upper end of the cylinder, a heat-responsive element in the cup, a valve casing provided on its lower end with an open cage engaging the interiorly threaded end of the cup, a valve in said valve casing having a downwardly projecting stem provided in its lower extremity with a threaded socket, a regulating screw fitted in said socket, a cylinder secured in the upper end of the cup and projecting into the cage, a stuffing box arranged on the upper end of said cylinder, a piston slidably mounted in said cylinder and stuffing box and controlled by the heat-responsive element, a bushing arranged on the upper end of said piston to engage the regulating screw whereby to lift said stem and valve, an adjustable packing nut in said stuffing box provided with an annular series of notches, and a spring-projected locking pin engaged in said cage and adapted to engage said notches whereby to hold the nut in its adjusted position.

5. A device for the purpose set forth comprising a cylinder adapted to receive a heating medium, a cup arranged therein and closed thereto, a heat-responsive element in said cup, a valve casing connected to the upper end of said cup, a cut off valve arranged in said casing and having a downwardly projecting stem, a cylinder arranged in the upper end of said cup and within the valve casing, a piston slidably mounted in said cylinder in position to engage said stem and controlled by the heat-responsive element, a cap arranged in the upper end of said valve casing, a plunger slidably mounted in said cap and adapted to engage the upper side of said valve, and a manually operable lever pivoted on said cap and bearing upon the upper end of said plunger.

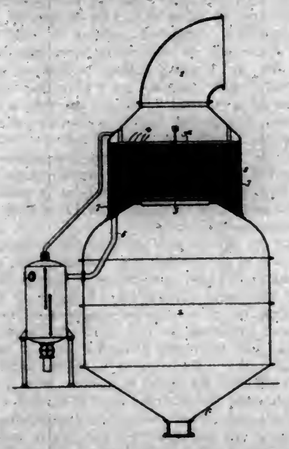
[Claims 6 to 12 not printed in the Gazette.]

1,015,704. SEPARATOR FOR VACUUM-PANS. GEORGE M. NEWHALL, Philadelphia, Pa. Filed Dec. 19, 1910. Serial No. 597,902. (Cl. 127—18.)

1. The combination, with a vacuum pan having a heating chamber with an outlet, a separating chamber between the heating chamber and the outlet and a plurality of screen walls disposed in the separating chamber through which vapor from the heating chamber must pass, of a screen disposed adjacent the wall of said separating chamber and receiving the vaporous body emerging from said plurality of screen walls.

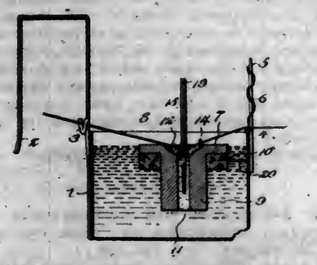
2. The combination, with a vacuum pan having a heating chamber with an outlet, a separating chamber between the heating chamber and the outlet and a plurality of screens disposed in the separating chamber and through which vapor from the heating chamber must pass, of a reticulated or foraminous wall disposed adjacent the wall of said separating chamber and receiving the vaporous body emerging from said screens.

3. The combination of a vacuum pan having a heating chamber with an outlet, a plurality of substantially vertical and substantially cylindrical screen walls interposed between the main body of said chamber and said outlet through which screen walls the vapor must pass, said screens being disposed in a separating chamber, and a screen or layer of wire mesh disposed adjacent the wall of said separating chamber and receiving the vapor passing through said cylindrical screens.



4. The combination of a vacuum pan having a heating chamber, an outlet and a chamber intermediate the heating chamber and outlet, of a reticulated or foraminous wall disposed in said intermediate chamber through which the vapor must pass, and a reticulated or foraminous wall adjacent the wall of the intermediate chamber for contact with the vapor discharging through said internal reticulated wall.

1,015,705. YARN-DAMPENING DEVICE. WILLIAM N. O'NEILL and HARRY PARKER, Jr., Columbus, Ohio. Filed Mar. 14, 1911. Serial No. 614,331. (Cl. 28—7.)



1. A thread moistening or lubricating device comprising a liquid reservoir, and a float arranged within the reservoir to rise and fall with the liquid therein, said float being provided with means for guiding the thread and bringing the same into contact with a portion of the liquid.

2. A thread moistening or lubricating device comprising a liquid reservoir, a float arranged within the reservoir and provided with a well, and a thread guide arranged to conduct the thread in contact with the liquid contained in the well.

3. A thread moistening or lubricating device comprising a liquid reservoir, a float arranged within the reservoir, and provided with a well communicating with the body of liquid below the top thereof, and a thread guide arranged to conduct the thread across the top of the well and into contact with the liquid contained therein.

4. A thread moistening or lubricating device comprising a liquid reservoir, a float arranged within the reservoir and provided with a well, and a thread guide adjustable with relation to the surface of the liquid contained in the well.

5. A thread moistening or lubricating device comprising a liquid reservoir, a float arranged within the reservoir and having a well in its top and a feed passage leading therefrom for the feed of the liquid thereto, and a thread guide having a split eye for the insertion and removal of the thread and adjustable with relation to the surface of the liquid contained in the well.

[Claims 6 to 9 not printed in the Gazette.]

1,015,706. MOLD. WALTER PARKER and LYMAN E. CAMPBELL, Neola, Iowa. Filed Feb. 18, 1911. Serial No. 609,511. (Cl. 25—121.)

A mold comprising a base, sides carried thereby, end pieces removably associated with the sides, each of the said end pieces being provided with a collar having slidably supported therein a threaded sleeve, there being a threaded rod slidably mounted in the sleeve, each sleeve being provided at its inner end with an integral flange having a lug projecting therefrom, the inner end of the rod being provided with an integral flange, the said flanges being adapted to retain in engagement with the said lug a reinforcing rod contained within the mold, the threaded portion of the sleeve being provided with a handled nut adapted to hold the said sleeve within the collar, the threaded portion of the rod being provided with a winged nut adapted to rigidly hold the rod within the sleeve, whereby when the reinforcing member is positioned within the mold and between the said lugs operation of the winged nuts will cause the end of the reinforcing rod to be securely grasped by the said sleeve and rod, operation of the handled nuts, whereby they are brought into engagement with the collars, serving to properly position the said reinforcing rod and hold it under tension within the said mold.

1,015,707. PROCESS OF MAKING PHOSPHORUS TRIOXID. SAMUEL PEACOCK, Chicago, Ill., assignor to The Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed July 12, 1910. Serial No. 571,613. (Cl. 23—1.)

1. The process of producing phosphorus trioxid which consists in mixing an alkaline earth phosphid with an alkaline earth phosphate; heating the mixture to a temperature sufficient to evolve an oxid, the trioxid of phosphorus; and in finally recovering the oxid thus obtained, substantially as described.

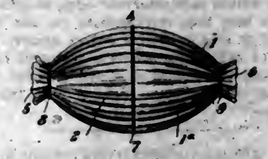
2. The process of producing phosphorus trioxid which consists in mixing a calcium phosphid with a phosphate; in heating the mixture until the trioxid of phosphorus is formed; and in finally suitably recovering the oxid thus obtained, substantially as described.

3. The process of producing phosphorus trioxid which consists in mixing calcium phosphid with substantially three times its equivalent of tri-calcium phosphate; raising the mixture to a red heat; and in recovering the oxid of phosphorus thus obtained, substantially as described.

1,015,708. EGG-CASE. LOUIS AUGUSTE PICHON, Paris, France. Filed Jan. 13, 1911. Serial No. 602,421. (Cl. 229—6.)

1. An egg carton comprising a case corrugated longitudinally on its outer surface and slit longitudinally on one side, and a resilient band encircling the carton.

2. An egg carton comprising a plurality of pockets longitudinally corrugated on the outer surface, the said carton having reduced portions between the pockets said reduced portions being also longitudinally corrugated, and bands passing around said reduced portions.



3. An egg carton comprising a case formed on its outer surface with a plurality of longitudinal corrugations, one end of the case overlapping the opposite end the corrugations of the overlapping ends meshing, a lining on the inside of the case, and a resilient band encircling the case.

4. An egg carton comprising a case formed of corrugated material drawn in at its ends to form reduced necks, one end of the case overlapping the opposite end, the overlapping corrugated ends meshing and forming a seal, bands embracing the reduced necks, and a lining on the inside of the case.

5. An egg carton comprising a resilient casing formed of a single sheet of material and corrugated, the tension of said material being to normally close the case, and means locking the case in closed position.

1,015,709. COIN-CONTROLLED VENDING-MACHINE. SAMUEL D. POLSEN and IRVING ELSON, Bridgeport, Conn. Filed May 19, 1911. Serial No. 628,172. (Cl. 194—30.)

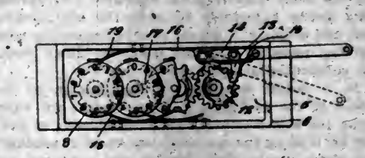
1. In a coin actuated vending machine, the combination of a case containing a package compartment, a coin slot in the case, a movable slide having a coin pocket to register with the coin slot in the case, a weight arranged upon the package while in the compartment and having a forwardly disposed transverse edge, and means for causing the said weight to move forward and its said transverse edge to be projected between the coin slot and coin pocket to close the passage from one to the other after the last package has been discharged.

2. In a coin actuated vending machine, the combination of a case containing a package compartment with longitudinal grooves in its side wall, a coin slot in the case, a movable slide having a coin pocket to register with the coin slot in the case, a vertically slidable weight loosely arranged upon the packages while in the compartment and having fins to slide in the grooves of the side wall and means for causing the said weight to be moved forward between the coin slot and the coin pocket after the last package has been discharged.

3. In a coin actuated vending machine, the combination of a case having a package compartment with grooves adjacent thereto and having inclined lower ends, and a coin slot in the case, a movable slide spaced from the said slot and having coin pockets to register with the coin slot in the case, a weight arranged upon the package and having fins to slide in the grooves and engage the inclined lower ends of the grooves in a way to cause the said weight to move forward between the coin slot and coin pocket after the last package has been discharged in a manner to prevent further coins from being inserted.

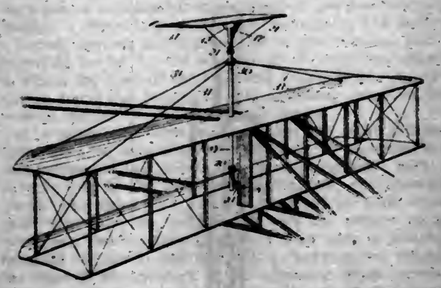
4. In a coin actuated vending machine, the combination with a case having two package compartments and two coin slots in the case, a movable slide having a central hollow push button and a coin pocket in each end portion to register with the coin slots in the case, a spring within the push button to normally hold the slide in its forward position, a bridge piece and post to support the spring, weights movably mounted in the compartments and having a forwardly extended edge, and means to engage the weight and shove its forward edge in between the coin slots and the coin pockets after the last package has been discharged.

1,015,710. SETBACK-COUNTER. SAMUEL WARREN POTTS, New York, N. Y., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Nov. 22, 1910, Serial No. 593,596. Renewed Nov. 13, 1911. Serial No. 660,162. (Cl. 235—144.)



In a resetting counter, the combination with a base-plate, of a series of rotary counter units each unit comprising a spindle set obliquely to the base-plate, a counter dial, a pallet wheel fast with the counter dial and mounted on the spindle, a spur gear mounted on the spindle free of the counter dial and pallet wheel, a pin carried by the spur gear and projecting toward the pallet wheel, and a spring finger carried by the pallet wheel and projecting toward the spur gear and rearwardly of the direction of rotation of the pallet wheel, the counter dial and pallet wheel of each successive unit overlapping those of the preceding unit, an actuator finger carried by the upper face of each overlapping pallet wheel for engaging and actuating the next succeeding pallet wheel, and means for driving the resetting train.

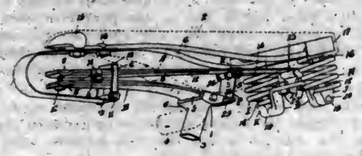
1,015,711. AEROPLANE. PATRICK D. RIORDAN, Arnot, Pa. Filed Feb. 27, 1911. Serial No. 611,056. (Cl. 244—29.)



1. In an aeroplane, a mast erected substantially midships and rotatably mounted, having at the upper end thereof cross arms; an auxiliary plane pivotally mounted on said cross arms; means for rocking said aeroplane on said cross arms; and means for rotating said mast.

2. In an aeroplane, a mast rotatably mounted in the frame of said aeroplane and extended above the framing structure of said aeroplane; an auxiliary plane pivotally mounted on said mast for disposition perpendicular to or parallel with said mast; manually operative means for rocking said auxiliary plane on said mast; and manually operative means for rotating said mast.

1,015,712. SPRING-SUPPORT FOR MOTOR-CYCLE AND OTHER SADDLES. FREDERICK ROBINSON, Chicago, Ill. Filed Apr. 26, 1910. Serial No. 557,674. (Cl. 208—100.)



1. In a shock-absorbing saddle support, the double leaf spring having its two members arranged one above the other, and a connecting means and a spacing means respectively connecting and engaging the said members at different points near their ends, substantially as set forth.

2. In a shock-absorbing saddle-support, the combination of the two separate leaf spring members arranged one above the other and forming a double leaf spring, connecting means adjustably securing the said members together, and means at the rear of said connecting means for adjustably pressing the said members away from each other, substantially as set forth.

3. In a saddle support, the combination of the two members of the double leaf spring, means for adjustably drawing the said members toward each other at one point, means for holding the said members apart at another point, and a check device which limits the springing apart of the said members, substantially as set forth.

4. In a spring saddle-support, the combination of upper and lower leaf springs secured together, depending rockers at the front and rear ends thereof, and meaus for suspending the saddle from said rockers, substantially as set forth.

5. In a spring saddle support, the combination of upper and lower leaf springs secured together at their front ends and separated at their rear ends, depending rockers at the front and rear ends of the springs, means for suspending the saddle from the rockers comprising a U-shaped spring passing around the front end of the leaf springs, and means for regulating the tension of the leaf springs, substantially as set forth.

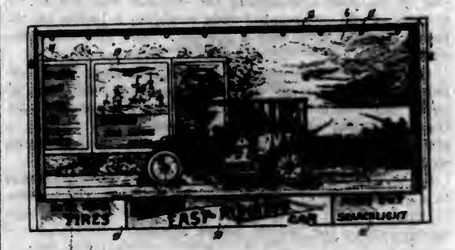
[Claims 6 to 16 not printed in the Gazette.]

1,015,713. SOLDERING-IRON. JAMES E. BOWE, New York, N. Y. Filed June 23, 1909. Serial No. 503,829. (Cl. 158—27.)

1. In a device of the class described, the combination with a fuel reservoir, of a burner connected to said reservoir, a tube within said reservoir, open at each end, means connected to said tube intermediate its end, for conducting the fuel to said burner, a rod slidingly mounted in said rule, and valves on the end of said rod adapted to normally maintain one of the open ends of said tube closed at any one time.

2. In a device of the class described, the combination with a fuel reservoir, of a burner connected to said reservoir, a tube within said reservoir, open at each end, means connected to said tube intermediate its end, for conducting the fuel to said burner, a rod of greater length than the length of said tube, slidingly mounted in said tube, and valves on the end of said rod adapted to normally maintain one of the open ends of said tube closed at any one time.

1,015,714. MECHANICAL ADVERTISING-SIGN. JACOB SAMUELS, New York, N. Y. Filed Sept. 24, 1910. Serial No. 583,602. (Cl. 46—70.)



1. A mechanical advertising sign, comprising a stationary member representing a vehicle and provided with wheels simulating the wheels of a vehicle, a display belt having a scenic representation thereon and movable past said member, the said belt being provided with advertisements, a motor, means for actuating said belt from the motor, a shaft mounted to turn, means for driving said shaft from the motor, and connections between the shaft and the wheels for turning the wheels.

2. A mechanical advertising sign, comprising a housing, rollers mounted therein, a display belt having a scenic representation thereon, the said belt being mounted upon said rollers and adapted to travel as said rollers are turned, a stationary member disposed adjacent to said display belt, and fashioned to represent a vehicle, said member being provided with revoluble wheels fashioned to simulate the wheels of said vehicle, friction wheels upon which the revoluble wheels rest, gearing connected with the shafts of the revoluble wheels for actuating the latter, gearing for turning one of said rollers, and motor mechanism connected with all of said gearing.

3. A mechanical advertising sign, comprising a housing, rollers mounted therein, a display belt having a scenic representation thereon; the said belt being mounted upon said rollers and adapted to travel as said rollers are turned, a stationary member disposed adjacent to said display belt and fashioned to represent a vehicle, the said member being provided with revoluble wheels fashioned to simulate the wheels of said vehicle, friction wheels upon which the revoluble wheels rest, a motor, a driving belt connecting the motor with one of said rollers, a shaft mounted to turn, a driving belt connecting the motor with said shaft, and belts connecting said shaft with the said revoluble wheels.

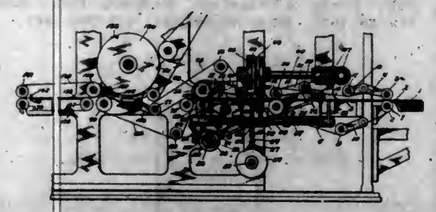
1,015,715. SIGNALING DEVICE. CHARLES A. SCHINDLER, West Hoboken, N. J. Filed Feb. 6, 1911. Serial No. 606,683. (Cl. 240—59.)

1. In combination with a glove, of an electric lamp comprising a substantially flat transparent bulb having apertures whereby it may be attached to the glove, circuit wires connected with the said electric lamp, contacts for the said circuit wires mounted opposite each other on adjacent fingers of the glove, and pairs of detachable members in the said circuit wires for completely disconnecting the electric lamp from the source of electrical energy.

2. In combination with a glove, of an electric lamp comprising a substantially flat transparent bulb having apertures whereby it may be attached to the glove, circuit wires connected with the said electric lamp, contacts for the said circuit wires mounted opposite each

other on adjacent fingers of the glove, and pairs of detachable members in the said circuit wires for completely disconnecting the electric lamp from the source of electrical energy, each member having tabs for pulling the members of a pair apart.

1,015,716. SHEET-HANDLING MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1910. Serial No. 567,101. (Cl. 101—118.)



1. A sheet handling machine including in combination a front registering gage, means for feeding sheets thereto, means for moving an entire registered sheet transversely perpendicularly to the plane of the sheet without disturbing its registry against said front gage, whereby a second sheet may be fed to said gage and thus associated and registered with the first-mentioned sheet, and means for feeding off together said registered and associated sheets unfolded.

2. A sheet handling machine including in combination a front registering gage, means for feeding sheets along a horizontal path into registry with said front gage, means for lifting an entire sheet without moving it out of registering relation with said gage, whereby said feeding means may feed a second sheet into registry with said gage without said sheet contacting with said first-mentioned sheet.

3. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage.

4. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage, and means for feeding the two sheets off together.

5. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage, and means for feeding the two sheets off together unfolded.

[Claims 6 to 28 not printed in the Gazette.]

1,015,717. SUPPORTING DEVICE. MILTON J. SHIMER, Freemansburg, Pa. Filed Sept. 21, 1911. Serial No. 650,550. (Cl. 248—37.)

1. A supporting device for flag poles and other articles, comprising an attaching clamp, a supporting clamp mounted to turn on the said attaching clamp, and a single fastening device for fastening the attaching clamp to a support and for fastening the said attaching clamp to the supporting clamp.

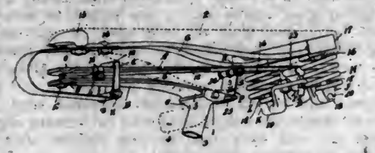
2. A supporting device for flag poles and other articles, comprising a sectional attaching clamp for attachment to a support and provided with a bearing, a supporting clamp made in sections and mounted to turn in the said bearing, and a single fastening device for fastening the attaching clamp in place on the support and for clamping said attaching clamp on the supporting clamp to hold the latter against turning.

3. A supporting device for flag poles and other articles, comprising an attaching clamp made in sections, and having jaws for engagement with a support, and also having a bearing, a supporting clamp made in sections and having a journal portion mounted to turn in said bearing, and a fastening device for the sections of the attaching clamp to clamp the jaws of the attaching clamp to the support and to clamp the bearing of said attaching clamp on the journal portion of said supporting clamp.

4. A supporting device for flag poles and other articles, comprising an attaching clamp formed of two members terminating at one end in jaws for engagement with a support and at the other end in bearings, a supporting clamp comprising two members provided at their outer ends with jaws for engagement with the article to be supported, and terminating at their inner ends in journals mounted to turn in said bearings, a clamping bolt extending through the members of the attaching clamp between the jaws and the said bearings, and a nut on the clamping bolt for drawing the said members together to cause the jaws of the said attaching clamp to clamp the said support, and to move the said bearings into clamping engagement with the journal portions of the supporting clamp, thereby causing the jaws of the supporting clamp to clamp the article to be supported.

5. A supporting device for flag poles and other articles, comprising an attaching clamp made in sections fastened together by a clamping bolt, the attaching clamp being provided on one end with jaws for engagement with a support and provided at the other end with a bearing, a supporting clamp made in sections provided with a journal

1,015,712. SPRING-SUPPORT FOR MOTOR-CYCLE AND OTHER SADDLES. FREDERICK ROBINSON, Chicago, Ill. Filed Apr. 26, 1910. Serial No. 557,674. (Cl. 208—100.)



1. In a shock-absorbing saddle support, the double leaf spring having its two members arranged one above the other, and a connecting means and a spacing means respectively connecting and engaging the said members at different points near their ends, substantially as set forth.

2. In a shock-absorbing saddle-support, the combination of the two separate leaf spring members arranged one above the other and forming a double leaf spring, connecting means adjustably securing the said members together, and means at the rear of said connecting means for adjustably pressing the said members away from each other, substantially as set forth.

3. In a saddle support, the combination of the two members of the double leaf spring, means for adjustably drawing the said members toward each other at one point, means for holding the said members apart at another point, and a check device which limits the springing apart of the said members, substantially as set forth.

4. In a spring saddle support, the combination of upper and lower leaf springs secured together, depending rockers at the front and rear ends thereof, and means for suspending the saddle from said rockers, substantially as set forth.

5. In a spring saddle support, the combination of upper and lower leaf springs secured together at their front ends and separated at their rear ends, depending rockers at the front and rear ends of the springs, means for suspending the saddle from the rockers comprising a U-shaped spring passing around the front end of the leaf springs, and means for regulating the tension of the leaf springs, substantially as set forth.

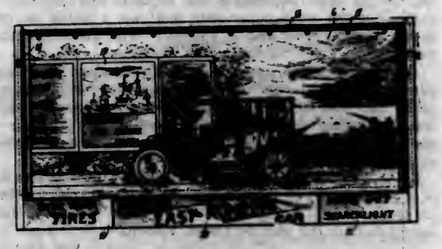
[Claims 6 to 16 not printed in the Gazette.]

1,015,713. SOLDERING-IRON. JAMES E. ROWE, New York, N. Y. Filed June 23, 1909. Serial No. 503,829. (Cl. 158—27.)

1. In a device of the class described, the combination with a fuel reservoir, of a burner connected to said reservoir, a tube within said reservoir, open at each end, means connected to said tube intermediate its end, for conducting the fuel to said burner, a rod slidingly mounted in said rule, and valves on the end of said rod adapted to normally maintain one of the open ends of said tube closed at any one time.

2. In a device of the class described, the combination with a fuel reservoir, of a burner connected to said reservoir, a tube within said reservoir, open at each end, means connected to said tube intermediate its end, for conducting the fuel to said burner, a rod of greater length than the length of said tube, slidingly mounted in said tube, and valves on the end of said rod adapted to normally maintain one of the open ends of said tube closed at any one time.

1,015,714. MECHANICAL ADVERTISING-SIGN. JACOB SAMUELS, New York, N. Y. Filed Sept. 24, 1910. Serial No. 583,602. (Cl. 46—70.)



1. A mechanical advertising sign, comprising a stationary member representing a vehicle and provided with wheels simulating the wheels of a vehicle, a display belt having a scenic representation thereon and movable past said member, the said belt being provided with advertisements, a motor, means for actuating said belt from the motor, a shaft mounted to turn, means for driving said shaft from the motor, and connections between the shaft and the wheels for turning the wheels.

2. A mechanical advertising sign, comprising a housing, rollers mounted therein, a display belt having a scenic representation thereon, the said belt being mounted upon said rollers and adapted to travel as said rollers are turned, a stationary member disposed adjacent to said display belt, and fashioned to represent a vehicle, said member being provided with revoluble wheels fashioned to simulate the wheels of said vehicle, friction wheels upon which the revoluble wheels rest, gearing connected with the shafts of the revoluble wheels for actuating the latter, gearing for turning one of said rollers, and motor mechanism connected with all of said gearing.

3. A mechanical advertising sign, comprising a housing, rollers mounted therein, a display belt having a scenic representation thereon; the said belt being mounted upon said rollers and adapted to travel as said rollers are turned, a stationary member disposed adjacent to said display belt and fashioned to represent a vehicle, the said member being provided with revoluble wheels fashioned to simulate the wheels of said vehicle, friction wheels upon which the revoluble wheels rest, a motor, a driving belt connecting the motor with one of said rollers, a shaft mounted to turn, a driving belt connecting the motor with said shaft, and belts connecting said shaft with the said revoluble wheels.

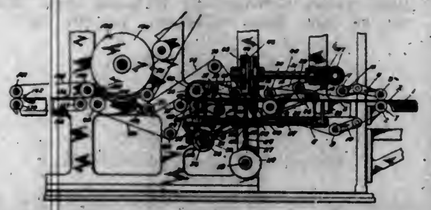
1,015,715. SIGNALING DEVICE. CHARLES A. SCHINDLER, West Hoboken, N. J. Filed Feb. 6, 1911. Serial No. 606,683. (Cl. 240—59.)

1. In combination with a glove, of an electric lamp comprising a substantially flat transparent bulb having apertures whereby it may be attached to the glove, circuit wires connected with the said electric lamp, contacts for the said circuit wires mounted opposite each other on adjacent fingers of the glove, and pairs of detachable members in the said circuit wires for completely disconnecting the electric lamp from the source of electrical energy.

2. In combination with a glove, of an electric lamp comprising a substantially flat transparent bulb having apertures whereby it may be attached to the glove, circuit wires connected with the said electric lamp, contacts for the said circuit wires mounted opposite each

other on adjacent fingers of the glove, and pairs of detachable members in the said circuit wires for completely disconnecting the electric lamp from the source of electrical energy, each member having tabs for pulling the members of a pair apart.

1,015,716. SHEET-HANDLING MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1910. Serial No. 567,101. (Cl. 101—118.)



1. A sheet handling machine including in combination a front registering gage, means for feeding sheets thereto, means for moving an entire registered sheet transversely perpendicularly to the plane of the sheet without disturbing its registry against said front gage, whereby a second sheet may be fed to said gage and thus associated and registered with the first-mentioned sheet, and means for feeding off together said registered and associated sheets unfolded.

2. A sheet handling machine including in combination a front registering gage, means for feeding sheets along a horizontal path into registry with said front gage, means for lifting an entire sheet without moving it out of registering relation with said gage, whereby said feeding means may feed a second sheet into registry with said gage without said sheet contacting with said first-mentioned sheet.

3. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage.

4. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage, and means for feeding the two sheets off together.

5. A sheet handling machine including in combination a front gage, means for feeding sheets along a path into registry with said front gage, means for moving said registered sheet out of said pathway while keeping it in register and for preventing contact between said sheet and a second sheet which is fed along said path into registry with said gage, and means for feeding the two sheets off together unfolded.

[Claims 6 to 28 not printed in the Gazette.]

1,015,717. SUPPORTING DEVICE. MILTON J. SHIMER, Freemansburg, Pa. Filed Sept. 21, 1911. Serial No. 650,550. (Cl. 248—37.)

1. A supporting device for flag poles and other articles, comprising an attaching clamp, a supporting clamp mounted to turn on the said attaching clamp, and a single fastening device for fastening the attaching clamp to a support and for fastening the said attaching clamp to the supporting clamp.

2. A supporting device for flag poles and other articles, comprising a sectional attaching clamp for attachment to a support and provided with a bearing, a supporting clamp made in sections and mounted to turn in the said bearing, and a single fastening device for fastening the attaching clamp in place on the support and for clamping said attaching clamp on the supporting clamp to hold the latter against turning.

3. A supporting device for flag poles and other articles, comprising an attaching clamp made in sections, and having jaws for engagement with a support, and also having a bearing, a supporting clamp made in sections and having a journal portion mounted to turn in said bearing, and a fastening device for the sections of the attaching clamp to clamp the jaws of the attaching clamp to the support and to clamp the bearing of said attaching clamp on the journal portion of said supporting clamp.

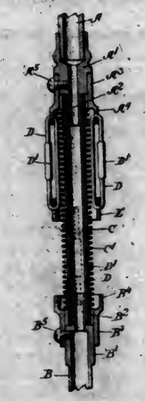
4. A supporting device for flag poles and other articles, comprising an attaching clamp formed of two members terminating at one end in jaws for engagement with a support and at the other end in bearings, a supporting clamp comprising two members provided at their outer ends with jaws for engagement with the article to be supported, and terminating at their inner ends in journals mounted to turn in said bearings, a clamping bolt extending through the members of the attaching clamp between the jaws and the said bearings, and a nut on the clamping bolt for drawing the said members together to cause the jaws of the said attaching clamp to clamp the said support, and to move the said bearings into clamping engagement with the journal portions of the supporting clamp, thereby causing the jaws of the supporting clamp to clamp the article to be supported.

5. A supporting device for flag poles and other articles, comprising an attaching clamp made in sections fastened together by a clamping bolt, the attaching clamp being provided on one end with jaws for engagement with a support and provided at the other end with a bearing, a supporting clamp made in sections provided with a journal

mounted to turn in the said bearing, and jaws for engagement with a flag pole, and means for holding the members of the attaching clamp together when placing the said clamp in position on the support.

[Claim 6 not printed in the Gazette.]

1,015,718. FLEXIBLE CONNECTION. THEODORE SMITH, Chicago, Ill., assignor to Theo. Smith Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 25, 1905. Serial No. 279,942. (Cl. 137—34.)



1. A flexible connection comprising two sections, a flexible pipe connected with the sections, a flexible extension resisting connection between said sections, flexibly connected with both of said sections, and comprising four stiff loops, two pivotally connected at one end to each section, a connecting piece between the sections, the other ends of all of said loops pivotally connected to said connecting piece.

2. A flexible connection comprising two sections, a flexible pipe connected to the ends of said sections, a protecting flexible cover for said pipe, an extension resisting connection between the sections of said pipe and comprising two sets of rigid connecting pieces, one set hinged to each section, the two sets hinged to an intermediate ring, said sections enlarged at their ends so as to provide a space between the inner faces and said flexible cover.

3. A flexible connection comprising two sections, a nipple associated with each section, a flexible pipe having its ends inclosing said nipples, a sleeve connected with each section and inclosing said nipples, two loops of rigid material connected with each of said sleeves, said loops connected to an intermediate ring surrounding the flexible pipe.

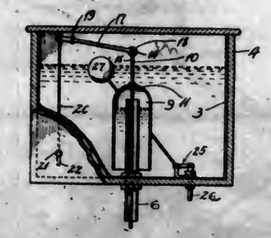
4. A flexible connection comprising two sections, a flexible extension resisting connection between said sections and comprising a plurality of stiff sets of non-elastic looped connecting pieces, one set movably connected to each section, each set movably connected with an intermediate uniting piece.

5. A flexible connection comprising two sections, a flexible extension resisting connection between said sections and comprising a plurality of stiff sets of non-elastic looped connecting pieces, one set movably connected to each section, each set movably connected with an intermediate uniting piece, the adjacent sets being out of alinement.

[Claims 6 to 12 not printed in the Gazette.]

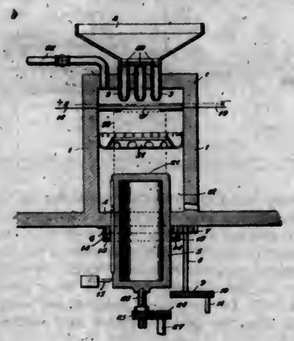
1,015,719. FLUSH DEVICE FOR CLOSETS. EDWARD THIRY and JOHN W. SCHERMERHORN, Pasadena, Cal.; said Schermerhorn assignor to said Thiry. Filed June 27, 1910. Serial No. 568,967. (Cl. 4—5.)

1. In flushing apparatus, in combination, a tank, a flush pipe extending upwardly into the interior of said tank and having a trap at the lower end thereof, a bell mounted in said tank closed at its upper end and opened at its lower end, said bell being disposed over the upper end of said flush pipe, but out of contact therewith, a tube carrying said bell and passing downwardly into the interior of said flush pipe, said tube having its lower mouth disposed within said trap, the lower mouth of said tube being normally sealed by the water in said trap, said tube being open at its upper end, and means for raising said tube so that the lower mouth thereof withdraws from the water in said trap thereby permitting the escape of air through said tube from said flush pipe and from the interior of said bell.



2. In apparatus of the class described, in combination, a tank, a flush pipe extending upwardly into the interior of said tank, said flush pipe having a trap connected with the lower end thereof adapted to contain a water column, a bell open below, closed above and disposed over the mouth of said flush pipe, an air tube passing downwardly through said flush pipe and having its lower mouth normally immersed in the water of said trap, and means for raising the mouth of said air tube above the water in said trap to liberate the air from the interior of said flush pipe and said bell, through said release tube.

1,015,720. PROCESS OF AND APPARATUS FOR MAKING CALCIUM CYANAMID FROM CALCIUM CARBID. FRANK S. WASHBURN, Nashville, Tenn. Filed July 29, 1911. Serial No. 641,364. (Cl. 204—64.)



1. The process of making calcium cyanamid from calcium carbid, which consists in forming said carbid into thin superposed layers in an atmosphere of nitrogen; and subjecting successive layers as fast as they are formed to a temperature sufficient to cause said carbid and nitrogen to react thereby consolidating them into a single mass, substantially as described.

2. The process of making calcium cyanamid from calcium carbid, which consists in feeding said carbid into an atmosphere of nitrogen while forming the same into thin superposed layers; and subjecting successive layers as fast as they are formed to the action of an electrically controlled temperature sufficient to cause said carbid and nitrogen to react while permitting said layers to be fused into a solid cake, substantially as described.

3. The process of making calcium cyanamid from calcium carbid, which consists in feeding said carbid into an atmosphere of nitrogen while forming the same into thin superposed layers; subjecting successive layers as fast as they are formed to the action of an electrically controlled temperature sufficient to cause said carbid and nitrogen to react while permitting said layers to be fused into a solid cake; and gradually removing said cake out of the reacting zone as fast as it is formed, substantially as described.

4. The process of making calcium cyanamid from calcium carbid, which consists in feeding said carbid into an atmosphere of nitrogen while forming the same into thin superposed layers; subjecting successive layers as fast as they are formed to the action of an electrically controlled temperature sufficient to cause said carbid and nitrogen to react while permitting said layers to be fused into a solid cake; lowering said cake out of the reacting zone as it is formed while continuing the feeding action; and finally removing said cake from the influence of said feeding action, substantially as described.

5. In an apparatus for producing calcium cyanamid from calcium carbid, the combination of a suitable support; means for feeding said carbid in thin layers in an atmosphere of nitrogen to said support thereby forming superposed layers; and means for heating said layers to a temperature sufficient to produce calcium cyanamid on said support, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,015,721. LAMP FOR MATCHING COLORS BY ARTIFICIAL LIGHT. MAX WEBERTZ, Bradford, England. Filed May 27, 1911. Serial No. 630,430. (Cl. 240—1.)

1. In a daylight lamp, a lamp casing, a source of light and superposed blue and green light filters.

2. In a daylight lamp, a metallic filament incandescent electric lamp and a light filter consisting of a blue and a green glass the one superposed over the other.

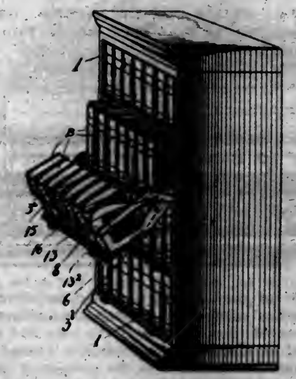
3. In a daylight lamp, a source of light and a light filter consisting of a combination of two superposed glasses the one a royal blue and the other nickel green.

4. In a daylight lamp the combination with a metallic filament incandescent electric lamp of a light filter consisting of two superposed glasses the one colored royal blue and the other colored nickel green.

1,015,722. BOOKCASE OR THE LIKE. JOHN E. BEZOLD, Jersey City, N. J. Filed June 20, 1911. Serial No. 634,318. (Cl. 45—1.)

1. In combination with a case for books, etc., of a bottom or shelf, slidably supported therein and composed of sections arranged behind one another, each section being adapted to support a row or set of the articles stored in the case, lateral members on each section pivotally connected to one another and permitting on the withdrawal of the shelf or bottom of a limited tilting down of the front section and of reaching the rear row of articles, and means adapted on the tilting of the front section of the bottom to engage around the front row or set of articles and support the same.

2. In combination with a case for books, etc., of a bottom or shelf slidably supported therein and composed of sections arranged one behind another, each section being adapted to support a row or set of the articles stored in the case, lateral members on each section pivotally connected to one another and permitting of a limited tilting down of the front section of the said bottom or shelf and a spring actuated member pivoted to said bottom and adapted on the tilting of the front section of the bottom to rise and support the front row or set of articles.



3. In a case for books, etc., a slidable bottom or shelf composed of two pivotally connected sections arranged one behind the other, of which the front section on withdrawal of said bottom or shelf is capable of tilting down, a door for said case capable of moving upward and tilting rearward and means for normally holding the said door in rigid position.

4. In a case for books, etc., a slidable bottom or shelf composed of two sections arranged one behind the other, lateral members on said sections pivotally connected to one another and permitting on the withdrawal of the bottom, of a limited tilting of the front section thereof, a tiltable member connected to said front section and means for normally holding the said member in rigid position.

5. In a case for books, etc., of a slidable bottom or shelf composed of two sections arranged one behind the other, lateral members on said sections pivotally connected to one another and permitting on the withdrawal of the bottom of a limited tilting of the front section thereof, a door connected to said member of the front section so as to be capable of moving vertically and being tilted rearwardly, and means for normally holding the door in rigid position.

[Claims 6 and 7 not printed in the Gazette.]

1,015,723. TOBACCO-PIPE AND CIGAR AND CIGARETTE HOLDER. DON P. BLACKWOOD, Denver, Colo. Filed Mar. 7, 1911. Serial No. 612,850. (Cl. 131—12.)

1. A device of the class described, whose stem is equipped with a plurality of perforations intermediate its extremities, the said perforations being in communication with the air at one extremity and with the longitudinal passage through the said stem at their opposite extremity, and a band adjustably mounted on the stem for closing the perforations against the entrance of air, the said band

being adjustable to close one or more of the perforations, while the remainder of the perforations will be left open, substantially as described.

2. A device whose stem is provided with a plurality of perforations in alinement with each other intermediate its extremities for the introduction of air to the longitudinally disposed passage through the stem, and a band adjustably mounted upon the stem to close one or more of the perforations, substantially as described.

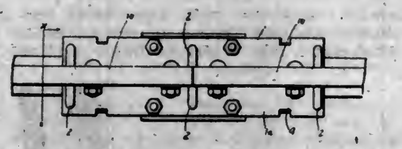
1,015,724. FLOAT FOR DELINTERS. GEORGE L. BLANCHARD, Yoakum, Tex. Filed June 17, 1910. Serial No. 567,526. (Cl. 13—10.)

1. A device of the character described including a rotatably mounted cylindrical body having an abrading surface, a frame mounted to revolve about the body and carrying a number of bars spiraled longitudinally thereof and in opposite directions, adjacent to the surface of the body, means for rotating said frame and body in the same direction and at different rates of speed, a casing for said cylindrical body and frame composed of end members and a front member and means for regulating the position of the front member relative to the said frame and body.

2. A device of the character described including a rotatably mounted cylindrical body having an abrading surface, a frame mounted to revolve about the body and carrying a number of bars spiraled longitudinally thereof and in opposite directions, adjacent to the surface of the body, and means for rotating said frame and body in the same direction and at different rates of speed.

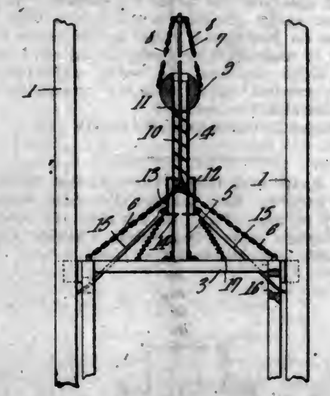
3. A device of the character described including a rotatably mounted cylindrical body having an abrading surface, a frame adjacent to the surface of the body, mounted to revolve about the body and carrying a number of bars spiraled longitudinally thereof and in opposite directions, and also a plurality of bars extending directly longitudinally thereof and means for rotating said frame and body in the same direction and at different rates of speed.

1,015,725. RAIL-JOINT. ADAM BUSA, Anderson, Tex. Filed Apr. 5, 1911. Serial No. 619,045. (Cl. 236—6.)



In a combination in a rail joint, a pair of ties, a pair of rails mounted upon said ties having the ends opposing each other, a pair of fish plates mounted against and secured to the sides of the rails and further secured to said ties, said fish plates having their lower portions extending beyond and overlapping the longitudinal edges of the base of said rails, the extending portions of said fish plates having a wide flat bottom face flush with the lower faces of the bases of the rails, said extended portions of the same length as the length of the fish plates, a transversely extending reinforcing plate positioned between the ties of a width substantially equal to the width of the space between the ties, said reinforcing plate positioned against the lower faces of the bases of the rails and the lower faces of said extended portions of the fish plate, said reinforcing plate at each end provided with a vertically extending flange abutting against the outer edge of an extended portion of a fish plate, and means projecting through the extended portions of said fish plates and said reinforcing plate in proximity to each end thereof for securing the fish plates and reinforcing plate together, reinforcing webs integral with the outer face of each of said fish plates and positioned one at each end and one at the center, and each of said fish plates provided with spike notches over the ties, said webs positioned inwardly of the longitudinal edges of the fish plates.

1,015,726. SAFETY ATTACHMENT FOR ELEVATORS. EDWARD DANBERRY, Wheatland, Ind., assignor of one-third to Harry Blackwell, Wheatland, Ind. Filed June 7, 1911. Serial No. 631,848. (Cl. 187—85.)



1. The combination with a car and supporting means, of a guide rail, a rail engaging element movably connected to the car and normally held out of engagement with a rail, a weight normally held by the car supporting means, a spring for automatically projecting the rail engaging element into engagement with a rail upon the parting of the supporting means, to retard the downward movement of the car, and means adapted to be struck by the weight upon the parting of the supporting means for driving said element into engagement with a rail.

2. The combination with an elevator car, and a supporting cable, of guide rails, a guide carried by the car, rail engaging elements pivotally and slidably connected to the guide, means for normally supporting said elements out of engagement with the guide rails on which the car is mounted, means for automatically projecting said engaging elements into engagement with the guide rails to retard the downward movement of the car upon the parting of the cable, and a weight supported by the cable, said weight constituting means for driving said elements into engagement with the rails when the cable is parted.

3. The combination with an elevator car and a guide member mounted thereon, of a supporting cable, flexible connections between said cable and the car, said cable being extended into the guide member, a slidable element mounted on the guide member and normally supported by said connections, devices connected to and shiftable with said slidable element and normally held thereby retracted into the sides of the car, and means for automatically shifting said slidable element and projecting said devices beyond the car when the cable is parted.

4. The combination with guide rails and a car mounted to slide thereon, of a tubular guide member upstanding from the car, a sleeve slidably mounted upon said guide member, engaging devices pivotally connected to the sleeve and extending beyond opposite portions of the car, a supporting cable, flexible connections between the cable and the car, said connections constituting supports for the sleeve, and means for automatically shifting the sleeve to project said devices into engagement with the rails when the supporting cable is parted.

1,015,727. LUBRICATING-PACKING. WILLIAM H. DRURY, Waltham, Mass., assignor to Joseph S. Stearns and George P. Drury, Waltham, Mass. Filed May 1, 1911. Serial No. 624,476. (Cl. 64—10.)

1. Lubricating packing, consisting of composite yarn part of which is unsized and part of which is sized so as to be springy or wiry from the sizing therein, the said unsized and sized parts being united together into one with the sized part hidden by the unsized part, such composite yarn being in loose and open mass form so that the mass will be porous and readily permeable with lubricant throughout and will be resilient from the springiness or wiriness of the sized part of the yarn in the mass, and the mass being compounded with lubricating material, substantially as set forth.

2. Lubricating packing, consisting of composite yarn part of which is unsized and part of which is sized so as to be springy or wiry from the sizing therein, the said unsized and sized parts being twisted together around each other, such composite yarn being in loose and open mass form so that the mass will be porous and readily permeable with lubricant throughout and will be resilient from the springiness or wiriness of the sized part of the yarn in the mass, and the mass being compounded with lubricating material, substantially as set forth.

3. Lubricating packing, consisting partly of lengths of unsized yarn readily permeable with lubricant and partly of lengths of sized yarn springy or wiry from the sizing therein and uppermeable with lubricant, such lengths of unsized and permeable yarn being intermingled and combined among and with such lengths of sized and unpermeable yarn in loose and open mass form so that the unsized yarn in the mass will be readily permeable with lubricant throughout while the combined mass will be resilient from the springiness or wiriness of the sized yarn in the mass, and the mass being compounded with lubricating material, substantially as set forth.

4. Lubricating packing, consisting of composite yarn part of which is unsized and composed mostly of shredded leather and part of which is sized so as to be springy or wiry from the sizing therein, the said unsized parts being united together into one with the sized part hidden by the unsized part, such composite yarn being in loose and open mass form so that the mass will be porous and readily permeable with lubricant and will be resilient from the springiness or wiriness of the sized part of the yarn in the mass, and the mass being compounded with lubricating material, substantially as set forth.

5. Lubricating packing, consisting of composite yarn part of which is unsized and composed mostly of shredded leather and part of which is sized so as to be springy or wiry from the sizing therein, the said unsized and sized parts being twisted together around each other, such composite yarn being in loose and open mass form so that the mass will be porous and readily permeable with lubricant throughout and will be resilient from the springiness or wiriness of the sized part of the yarn in the mass, and the mass being compounded with lubricating material, substantially as set forth.

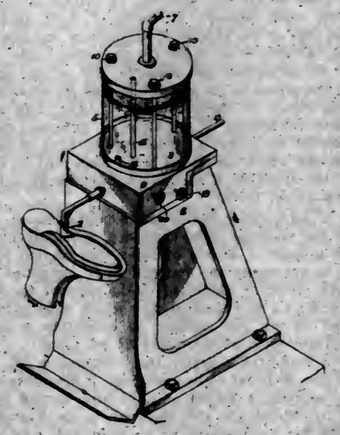
[Claim 6 not printed in the Gazette.]

1,015,728. LIFTING-MAGNET. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed May 12, 1910. Serial No. 561,006. (Cl. 175—21.)

1. A lifting magnet, comprising a frame, a magnetizing winding therein, there being vents leading from the space in which the winding is seated through the frame, and a heat-softening insulating and sealing material in the said vents and the space between the frame and the winding, whereby when the temperature of the compound exceeds a predetermined value a portion of the same with any vapors and gas in the said space may escape and when the temperature declines to the said valve the said material will serve to seal the vents against the entrance of moisture.

2. A lifting magnet, comprising a frame, a magnetizing winding therein, there being outwardly and downwardly inclined vents leading from the space in which the winding is seated through the frame, and a heat-softening insulating and sealing material in the said vents and the space between the frame and the winding, whereby when the temperature of the compound exceeds a predetermined value a portion of the same with any vapors and gas in the said space may escape and when the temperature declines to the said value the said material will harden in the vents and seal the same against the entrance of moisture.

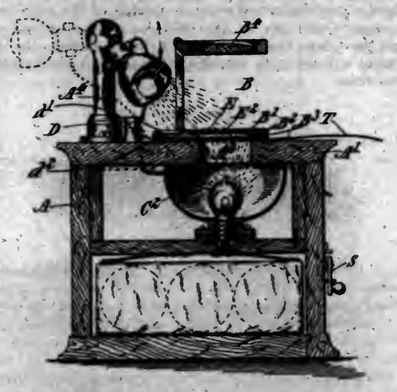
1,015,729. CHANNEL-FLAP OPENER AND MOISTENER. JOHN ELDERKIN, Philadelphia, Pa. Filed Apr. 15, 1907. Serial No. 368,344. (Cl. 12—1.)



1. The combination of a tool having a substantially wedge-shaped end for lifting the channel flap of a shoe sole, said tool being apertured for the passage of liquid and forming a spray nozzle, a source of liquid supply, and means for delivering a supply of air under pressure to discharge said liquid from the nozzle in the form of spray, said nozzle having its substantially wedge-shaped end grooved vertically in line with its aperture to facilitate the spraying action when said nozzle is pressed against the channel flap to raise the same.

2. The combination of a tool shaped to lift the channel flap of shoe soles, said tool having a plurality of diverging apertures for the passage of liquid, a source of liquid supply, and means for discharging liquid from said tool in the form of spray whereby it is directed upon the flap and sole of the shoe.

1,015,730. MEANS FOR TESTING FABRIC. JOHN ROBERT GILL, London, England. Filed Dec. 1, 1910. Serial No. 595,113. (Cl. 88—39.)



1. In a magnifying device the combination of, a support for the material to be examined, a magnifier carried by such support, a source of light also carried by such support, a movable plate containing a plurality of different openings each adapted to isolate a predetermined area of the material under it, the whole apparatus being connected to the one support to constitute a portable self-contained unit, substantially as set forth.

2. In a magnifying device the combination of, a support for the material to be examined having an orifice therein over which the material is placed, a magnifier carried by such support, a source of light carried on the same side of the support to illuminate one side of the material, a source of light on the other side of the support to illuminate the opposite side of the material through the orifice in the support, means for bringing into operation either of these sources of light, and a movable plate containing a plurality of different openings each adapted to isolate a predetermined area of material under it, the whole apparatus being connected to the one support to constitute a portable self-contained unit, substantially as set forth.

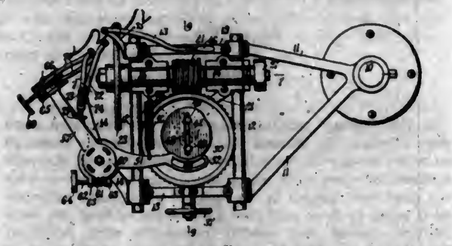
3. In a magnifying device the combination of, a support for the material to be examined, a magnifier carried by such support, a source of light also carried by such support to illuminate the material to be examined, and a hold-down pivotally connected to the support for holding the material to be examined, the whole apparatus being connected to the one support to constitute a portable self-contained unit, substantially as set forth.

4. In a magnifying device the combination of, a support for the material to be examined, a magnifier carried by such support, a source of light also carried by such support to illuminate the material to be examined, a hold-down for the material to be examined, and a plate movably mounted on the hold-down and containing a plurality of different openings each adapted to isolate a predetermined area of the material under it, the whole apparatus being connected to the one support to constitute a portable self-contained unit, substantially as set forth.

5. In a magnifying device the combination of, a support for the material to be examined having in it an orifice over which the material is placed during examination, a magnifier carried by such support, a source of light carried on the same side of the support to illuminate one side of the material, a second source of light situated on the opposite side of the support to illuminate the material through the orifice in the support, means for bringing into action either source of light, a hold-down for the material to be examined, and a plate movably mounted on the hold-down and containing a plurality of different openings each adapted to isolate a predetermined area of material under it, the whole apparatus being connected to the one support to constitute a portable self-contained unit, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,015,731. SAW-GUMMING MACHINE. LAWRENCE GOAD, Jr., Arcata, Cal. Filed Sept. 24, 1910. Serial No. 583,633. (Cl. 76—41.)



1. In a saw gumming machine a frame, a head adapted for moving on the frame, a sharpening member, means by which the sharpening member is carried by the head, two cam members adapted to move relatively to the head, means connected with the head for carrying the cam members, a member on the frame for engaging one of the cam members, a feed finger, and means actuated by the other cam member for operating the feed finger.

2. In a saw gumming machine a frame, a head having a bearing and movable relatively to the frame, a shaft journaled in the bearing, an emery wheel mounted on the shaft, a cam member, gearing by which the shaft is adapted to drive the cam member, a pin for engaging the cam member, and means for supporting the pin on the frame.

3. In a saw gumming machine a frame, a head adapted to travel on the frame and having a bearing, and an arm, a shaft journaled in the bearing, a sharpening member mounted on the shaft, a gear member mounted on the shaft, a gear member meshing with the first mentioned gear member and mounted for rotating on the arm, a cam member secured to the second-mentioned gear member, a pin for engaging the cam member, and means for supporting the pin on the frame.

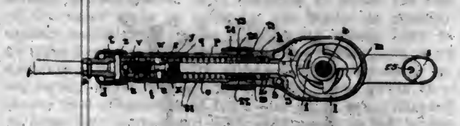
4. In a saw gumming machine a frame, a head having a bearing adapted for moving on the frame, a shaft journaled in the bearing in the head, a sharpening member mounted on the shaft, two cam members, means connected with the head for carrying the cam members, means by which the shaft is adapted to drive the cam members, a member on the frame for engaging one of the cam members, a feed finger, and means actuated by the other cam member for operating the feed finger.

5. In a saw gumming machine a frame, a head adapted to travel on the frame and having a bearing and an arm, a shaft journaled in the bearing, a sharpening member mounted on the shaft, a worm mounted on the shaft, a worm wheel meshing with the worm and mounted for rotating on the arm, a cam member secured to the worm wheel, a pin mounted on a block for engaging the cam member, and means for adjusting the block in position relatively to the frame.

[Claims 6 to 36 not printed in the Gazette.]

1,015,732. PERCUSSIVE TOOL. ARTHUR GEORGE GAICE, Carnoustie, Scotland. Filed Oct. 5, 1909. Serial No. 521,137. (Cl. 125—10.)

1. A percussive tool comprising in combination, a reciprocating tool holder, a guide therefor, a casing secured thereto, a rotary cam within said casing, a member in engagement therewith said cam being adapted to intermittently move the member in a direction away from the tool holder and then to release it suddenly, a spring for returning said member in a direction toward the tool holder, a hammer connected to said member and adapted on the return movement of the latter to strike the tool holder and a tension spring secured to the tool holder and to the hammer, substantially as and for the purpose hereinbefore set forth.



2. A percussive tool comprising in combination, a reciprocating tool holder, a cylindrical guide therefor, a casing secured to said guide and having a handle, a cam within said casing having a plurality of rises, a spindle for said cam, a ring-shaped member surrounding said cam and having a projection adapted to be engaged thereby, a hammer, a rod connecting said hammer and the aforesaid member, a return spring for said hammer and a tension spring connecting said hammer and the aforesaid tool holder, substantially as and for the purpose hereinbefore set forth.

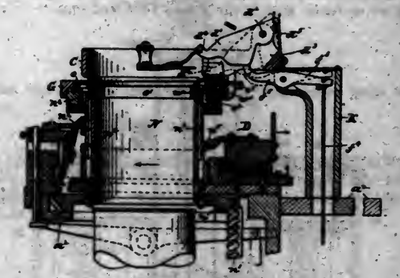
3. A percussive tool comprising in combination, a reciprocating tool holder, a cylindrical guide therefor, a casing secured to said guide and having a handle, a cam within said casing having a plurality of rises, a spindle for said cam, ball bearings for said spindle, a ring-shaped member surrounding said cam and having a projection adapted to be engaged thereby, a hammer within the aforesaid guide, anti-friction devices upon the aforesaid tool holder and upon the hammer, a rod connecting the hammer and the aforesaid member, a return spring surrounding said rod, a tension spring connecting the hammer and the tool holder and means for preventing rotation of the tool holder, substantially as and for the purposes hereinbefore set forth.

4. A percussive tool comprising in combination, a reciprocating tool holder, a cylindrical guide therefor, a casing secured to said guide and having a handle, a cam within said casing having a plurality of rises, a spindle for said cam, a ring-shaped member surrounding said cam and having a projection adapted to be engaged thereby, a hammer, a rod connecting said hammer and the aforesaid member, a return spring surrounding said rod, a tension spring connecting said hammer and the aforesaid tool holder, a pawl adapted to engage the aforesaid member and a lever for enabling the operator to oscillate said pawl for the purpose of temporarily disengaging said member from the cam, substantially as hereinbefore set forth.

5. A percussive tool comprising in combination, a reciprocating tool holder, a cylindrical guide therefor, a casing secured to said guide and having a handle, a cam within said casing having a plurality of rises, a spindle for said cam, a ring shaped member surrounding said cam and having a projection adapted to be engaged thereby, a hammer, a rod connecting said hammer and the aforesaid member, a return spring for said hammer, means for adjusting said return spring, a tension spring connecting said hammer and the aforesaid tool holder, a pawl adapted to engage the aforesaid member and a lever for enabling the operator to oscillate said pawl for the purpose of temporarily disengaging said member from the cam, substantially as hereinbefore set forth.

1,015,733. SINKER-ACTUATING MEANS FOR REVOLUBLE-CYLINDER KNITTING-MACHINES. JOSHUA D. HEMPHILL, Central Falls, R. I. Original application filed Mar. 26, 1906, Serial No. 308,106. Divided and this application filed Feb. 1, 1907, Serial No. 355,236. Renewed Mar. 16, 1909. Serial No. 483,866. (Cl. 66—26.)

1. In a knitting-machine provided with a revoluble knitting-cylinder having needles and sinkers mounted therein, a stationary cap-ring for guiding the sinkers in a concentric path, a normally stationary cam located in said path for successively actuating the sinkers in an endwise direction while they are revolving in unison with the cylinder as in knitting, and means for bodily moving the cam and the sinkers thereon endwise or transversely of the cap-ring.



2. In a knitting-machine of the character described, the combination with a revoluble cylinder and suitably mounted needles and sinkers revoluble in unison therewith, of a stationary sinker-cap-ring for guiding the sinkers in a true path, a sinker-controlling cam mounted in the ring and located in said path whereby the sinkers in passing under and in engagement with it are automatically retracted and advanced with respect to the needles, and means for advancing the cam from its normally stationary working to the inactive position, whereby all the sinkers in the ring are then automatically positioned and free to revolve in either direction with the cylinder in advance of the "topping" operation.

3. A knitting-machine of the character described provided with a non-revoluble cap-ring, a sinker-actuated cam bodily movable transversely of said ring, means for automatically advancing the cam inwardly from its operative position to render inoperative the sinkers thereon, and means for repositioning the cam and the sinkers on it preliminary to knitting.

4. In a knitting-machine of the character described, the combination with a suitably grooved revoluble cylinder, and independently movable needles and sinkers mounted in said grooves, of a non-revoluble recessed cap-ring having the upper end of the cylinder mounted in said recessed portion, a spring-pressed bodily movable cam member so mounted in and supported by said ring and located with respect to the sinker-path, and means for automatically retracting the cam and maintaining it in the corresponding operative position.

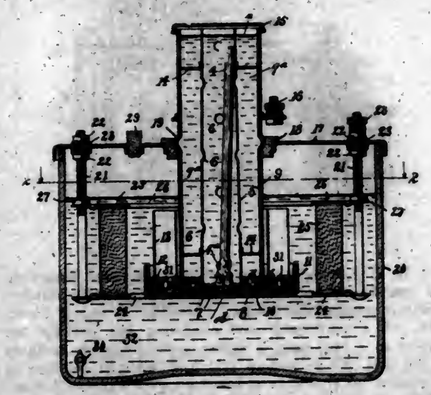
5. In a knitting machine of the character described, the combination with a revolubly mounted cylinder having needles and sinkers movably mounted therein, of a normally stationary sinker-cam arranged to be advanced toward the center of the cylinder, thereby moving the corresponding sinkers prior to the "topping" operation and while the machine is temporarily stopped, a swinging latch-ring, a device connected with said ring for automatically retracting the cam to its limit or sinker-operating position while said ring is being dropped to its normal position over the cylinder in advance of restarting the machine.

[Claims 6 to 10 not printed in the Gazette.]

1,015,734. PRIMARY BATTERY. RALPH V. HEUSER, Waterbury, Conn., assignor to The Roessler & Hasslacher Chemical Co., Perth Amboy, N. J., a Corporation of New York. Filed Sept. 10, 1910. Serial No. 581,439. (Cl. 204—33.)

1. In a battery, a supporting structure for an electrode comprising a perforated copper tube and a vessel in which the tube is contained, the vessel having openings therein through which mercury may be introduced, sodium within said tube, a filling of mercury and oil within the said vessel and tube and a complementary electrode.

2. In a battery the combination of a negative electrode with a vessel, of a cup forming a bottom therefor, a perforated disk for covering the outer part of the cup surrounding the vessel, a tube within the vessel and provided with openings therethrough, a piece of sodium within the tube and forming the positive electrode, and a filling of mercury within the vessel tube and cup.



3. The combination with a jar and cover, of suspending rods attached to the cover, upper and lower annular plates attached to the rods, a cylindrical electrode intermediate the said plates, and a positive element comprising sodium and mercury, suitable vessels for containing the sodium and mercury, which are submerged within a proper electrolyte.

4. In a battery the combination with a negative element of a vertically disposed perforated copper tube, a stick of sodium contained therein, the sodium forming the positive electrode, a cylindrical vessel surrounding the tube, a cup attached to the end of the vessel and forming a bottom for the same and tube, a filling of mercury and oil within the tube, vessel and cup, and means for supporting said parts within a battery jar.

5. A battery electrode comprising an elongated piece of sodium, in combination with a vertically disposed copper tube for supporting the sodium upon its end, a vessel in which the tube and sodium are contained and having openings therein through which mercury is introduced to the vessel and tube, and a filling of mercury within the said vessel and tube.

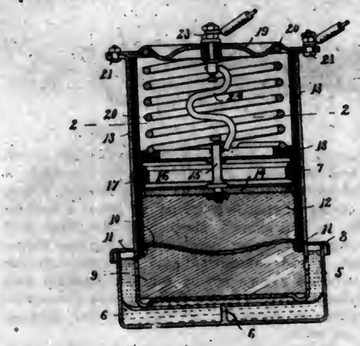
[Claims 6 to 12 not printed in the Gazette.]

1,015,735. PRIMARY BATTERY. RALPH V. HEUSER, Waterbury, Conn., assignor to Roessler & Hasslacher Chemical Co., Perth Amboy, N. J., a Corporation of New York. Filed Apr. 25, 1911. Serial No. 623,169. (Cl. 204—33.)

1. In a battery of the class described the combination with a metallic jar representing the negative electrode, of a layer of suitable material in direct contact with said jar as a depolarizer, of an adjacent upper layer of sodium amalgam representing the positive electrode, a suitable insulation between the two, and terminals connected to each of said electrodes.

2. In a battery of the class described, the combination with a metallic jar representing the negative electrode, of a layer of suitable material in direct contact with said jar as a depolarizer, of an adjacent upper layer of sodium amalgam representing the positive electrode, a suitable insulation between the two, and means for effecting a pressure upon the sodium amalgam while in action.

3. A battery of the class described, the combination with a perforated jar, a pan in which the jar is contained and designed to hold water to penetrate the jar, sodium amalgam within the jar, copper oxid also contained within the said jar, an insulation between the sodium amalgam and copper oxid, and terminals for the sodium amalgam electrode and the metal electrode containing the copper oxid.

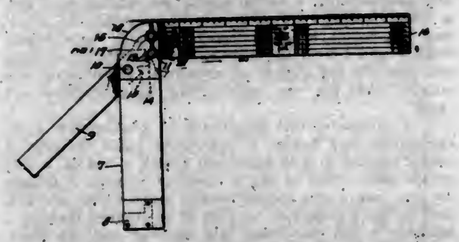


4. In a battery of the class described, the combination of a jar, a filling of copper oxid within the jar, a covering of insulating material thereover, a layer of sodium amalgam contained therein but insulated therefrom, a spring to compress the sodium amalgam in place, and terminals connected with the sodium amalgam electrode and the metal electrode containing the copper oxid.

5. In a battery of the class described, the combination with a jar, a filling of copper oxid within the jar, a covering of insulating material therefor, a layer of sodium amalgam also contained therein, an insulating cylinder within the jar and surrounding the sodium amalgam, a plate covering the sodium amalgam, and a spring bearing upon the plate in contact with the sodium.

[Claims 6 to 8 not printed in the Gazette.]

1,015,736. SQUARE. PARKS D. JONES, Brazil, Ind. Filed June 13, 1911. Serial No. 632,868. (Cl. 73—6.)

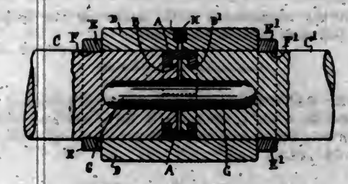


1. A square comprising a stock, a pair of blades pivoted at one end to the stock and having intermeshing teeth of varied pitch-diameters, the blade which has the teeth of smaller pitch-diameter having a tooth of larger pitch-diameter and the other blade having a notch of smaller pitch-diameter than the pitch-diameter of the teeth thereof, the pivoted end of the blade having the teeth of smaller pitch-diameter being arranged to strike the end of the other blade to constrain the blades in position against excessive movement whereby the former blade is at right angles with the stock and the latter is at an acute angle with the stock, and upon the former blade being swung toward the stock the latter blade moves at a slower rate of speed, said tooth and notch being adapted to come into engagement with each other as the blades are swung inward to cause the blades to fold simultaneously against the stock, as and for the purpose set forth.

2. A square comprising a stock, a pair of blades pivoted at one end to the stock and having intermeshing teeth of varied pitch-diameter, the blade which has the teeth of

smallest pitch-diameter having a tooth of larger pitch-diameter and the other blade having a notch of smaller pitch-diameter than the pitch-diameter of the teeth thereof, the pivoted end of the blade having the teeth of smaller pitch-diameter being arranged to strike the end of the other blade to constrain the blades in position against excessive movement whereby the former blade is at right angles with the stock and the latter blade is at an acute angle to the stock, and upon the former blade being swung toward the stock the latter blade moves at a slower rate of speed, said tooth and notch being adapted to come into engagement with each other as the blades are swung inward to cause the blades to fold simultaneously against the stock, the ends of the stock and the former blade being curved about the pivotal point of the said blade as a center, graduations on the curved face of one of the said members, and a coöperating pointer upon the curved face of the other member, as and for the purpose set forth.

1,015,737. DIFFERENTIAL-AXLE DEVICE. RICHARD M. JONES, London, England. Filed Aug. 17, 1911. Serial No. 644,657. (Cl. 105—66.)



1. A differential axle consisting of collars on the ends of the axle, of less diameter than the axle, a divided coupling ring having internal flanges fitting in the grooves behind the collars and a sleeve fitting over the divided coupling ring and the means for holding the retaining sleeve in position longitudinally, consisting of the securing rings shrunk into recesses in the axle.

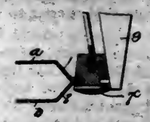
2. In a differential axle, the combination with divided ends of the axle arranged in end to end relation, means revolubly connecting said ends, each end having a normal and uniform diameter extending inwardly from the meeting end portions, a sleeve surrounding the normal diametrical portion of said ends, said end portions having annular recesses adjacent the end of said sleeve, and collars shrunk into said annular recesses to lock the sleeve against endwise movement, substantially as described.

3. In a differential axle, the combination with the divided ends of the axle arranged in end to end relation, each end having a normal and uniform diameter extending inwardly from the end portion, a sleeve surrounding the normal diametrical portions of said ends, said end portions having annular recesses adjacent the end of said sleeve, and collars shrunk into said annular recesses to lock the sleeve against endwise movement, substantially as described.

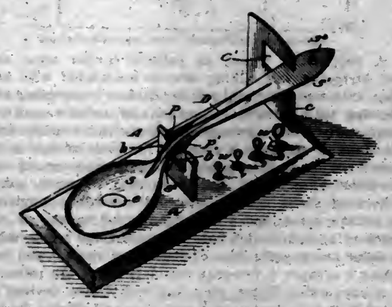
1,015,738. METHOD OF FORMING CONNECTIONS BETWEEN OPPOSED WALLS OF SHEET-METAL RADIATORS. WILLIAM R. KINNEAR, West Pittsburg, Pa. Original application filed Sept. 29, 1903, Serial No. 175,071. Divided and this application filed Dec. 27, 1906. Serial No. 349,705. (Cl. 113—116.)

1. The process of connecting the opposed walls of sheet metal radiators which consists in interlocking the metal of the two walls in an annular inwardly extending joint, and in radially condensing the same to such a degree as to convert the opposed walls of the joint into a substantially homogeneous mass, whereby an absolutely water and steam-proof joint is formed.

2. The process of connecting the opposed walls of sheet metal radiators which consists in forming bosses on said walls, the one with a radially presented annular groove and the other with an annular flange entering said groove, then in radially condensing the metal of the joint to form a substantially homogeneous connection between the opposed walls of the joint, whereby a steam-proof joint is formed.



1,015,739. PORTABLE SELF-CONTAINED WEIGHING AND MEASURING APPARATUS. HERBERT E. MAINE, Providence, R. I. Filed June 20, 1911. Serial No. 634,341. (Cl. 73—3.)



1. In a portable combined weighing and measuring device, the combination with a base adapted to receive a plurality of weights, and having an upright member secured to the base terminating at its upper end in a pivot or fulcrum, of a weigh-lever removably balanced on said fulcrum, said lever having one end perforated to receive a weight, the other end of the lever being adapted to temporarily receive the substance or material to be weighed or measured, and a stop for limiting the upward tilting movement of the lever when the latter is being normally employed.

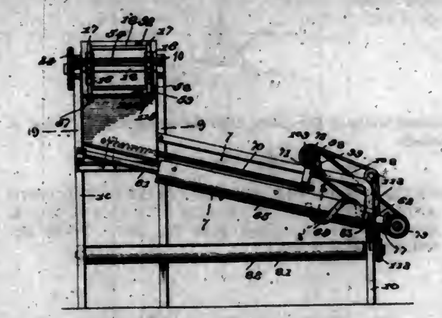
2. In a weighing apparatus of the general character described, the combination of a suitably mounted, horizontally disposed pivot-pin, and a weigh-lever having its arm substantially V-shaped transversely, the beveled sides thereof having V-shaped notches alining with each other, adapted to engage said pivot-pin, whereby the lever is capable of being readily removable bodily from its pivot, and means for limiting the tilting movements up and down of the lever.

3. In a combined weighing and measuring apparatus the combination with a portable base having an upright member terminating at its upper end in a pivot or fulcrum, of the weigh-lever or element D herein described normally and removably balanced on said fulcrum, one end of said lever having a relatively small aperture therein located a predetermined distance from the fulcrum to receive a weight, and having the other or opposite end portion of the lever recessed or bowl-shaped and adapted to receive the material to be weighed or measured, the bottom of the recessed part having a permanent mark or character designating its center.

1,015,740. CORN HUSKING AND SILKING MACHINE. JOHN H. O'HARA, Ithaca, N. Y. Filed Feb. 11, 1911. Serial No. 608,070. (Cl. 130—5.)

1. A supporting frame, an endless carrier upon said frame, stripping and silking devices associated with said carrier, said stripping and silking devices comprising rollers having spirally arranged spurs and sockets upon one

portion and spirally arranged channels and brushes upon the remaining portions, a receiver for each of said stripping and silking devices, and means for conducting ears of corn consecutively from said carrier to said receivers.



2. A supporting frame, an endless carrier upon said frame, stripping and silking devices associated with said carrier, said stripping and silking devices comprising rollers having spirally arranged spurs and sockets upon one portion and spirally arranged channels and brushes upon the remaining portions, a receiver for each of said stripping and silking devices, means for conducting ears of corn consecutively from said carrier to said receivers, guard bars located above said rollers and extending longitudinally of the same, and a plate connected to one of said guard bars and extending into close relations to the adjacent roller at opposite sides of the center thereof and constituting a scraper to prevent the clogging of the rolls.

3. A supporting frame, stripping and silking devices associated with said frame, said stripping and silking devices comprising a pair of rollers, one of the rollers having spirally arranged spurs upon one portion and spirally arranged brushes upon the other portion, and the other roller having spirally arranged sockets to receive the spurs and a spirally arranged channel to receive the brushes, said spurs and sockets co-acting to strip the husks from the ears and the brushes and channel co-acting to remove the silk from the ears.

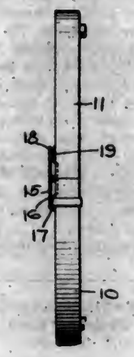
4. In an apparatus of the class described, a hopper for the ears to be stripped, a pair of rollers arranged to receive the ears from the hopper, one of the rollers having spirally arranged spurs upon one portion and spirally arranged brushes upon the other portion, and the other roller having spirally arranged sockets to receive the spurs and a spirally arranged channel to receive the brushes, and a flexible member having a plurality of lateral fingers spaced apart and mounted for movement above said rollers and operating to move the ears longitudinally of the same.

5. In an apparatus of the class described, a hopper for the ears to be stripped, a pair of rollers arranged to receive the ears from the hopper, one of the rollers having spirally arranged spurs upon one portion and spirally arranged brushes upon the other portion, and the other roller having spirally arranged sockets to receive the spurs and a spirally arranged channel to receive the brushes, a flexible member having a plurality of lateral fingers spaced apart and mounted for movement above said rollers and operating to move the ears longitudinally of the same, and a combined guard and scraper partially covering the roller having the sockets.

[Claims 6 and 7 not printed in the Gazette.]

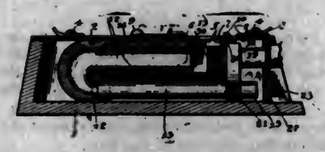
1,015,741. FOLDING TOILET-BOARD. JENNIE L. PARKER, Newberg, Oreg. Filed June 15, 1910. Serial No. 567,020. (Cl. 4—18.)

A portable dry closet attachment comprising a seat ring formed of sections hinged together, protector elements provided with looops at one of their ends encircling and slidably mounted on the ring, said protector elements having their free ends adapted to be passed a number of times around said ring and loop and removably attached to the adjacent portion of the protector, and means on the said



free ends for engagement with means on the loops for holding the protectors in position.

1,015,742. SAD-IRON. PHILIP PFEIL, Milwaukee, Wis., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Feb. 10, 1911. Serial No. 607,821. (Cl. 158—23.2.)

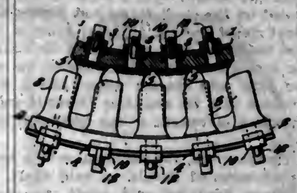


1. A sad-iron comprising a hollow body and a cover-plate therefor, said body having an opening in the rear end thereof, a vapor burner in said body, means for supplying fuel to said burner adapted to be inserted in said opening in operative relation with said burner, said cover plate being provided with an air admission opening, means for controlling the amount of air admitted through said opening, and yieldable automatic means on said cover-plate for engaging and locking said first named means upon insertion thereof in said opening, substantially as described.

2. In a sad-iron, a hollow body having an opening in the rear end thereof, a cover-plate secured to said body, a spring-catch provided on said cover-plate, a vapor burner provided in said body, a vapor conducting tube leading to said burner and secured to said cover-plate, an air and gas mixing chamber in communication with said tube, means for supplying fuel to said mixing chamber adapted to be inserted in said opening in operative relation with said mixing chamber and means for admitting air to said mixing chamber, said spring-catch being adapted to automatically engage said fuel supplying means when inserted in said opening, substantially as described.

3. In a sad-iron, hollow body having an opening in the rear end thereof, a cover-plate secured to said body, a spring-catch provided in said cover-plate, a vapor burner provided in said body, a vapor conducting tube leading to said burner and secured to said cover-plate, an air and gas mixing chamber formed integral with said tube, means for supplying fuel to said mixing chamber adapted to be inserted in said opening and in operative relation with said mixing chamber, and a swinging lid provided over an opening formed in said cover-plate leading to said mixing chamber, said spring-catch being adapted to automatically engage said fuel supplying means when inserted in said opening, substantially as described.

1,015,743. TOOTH-FASTENER FOR THRESHING-MACHINE CONCAVES AND CYLINDERS. ELMER E. ROBERTS, Balko, Okla. Filed June 21, 1911. Serial No. 634,404. (Cl. 130—27.)



A body member having a groove of equal depth throughout and perforations extending from the bottom of said groove, teeth having shanks extending through the apertures, said shanks being provided with slots of equal length, a wedge-shaped washer member placed in the bottom of the groove and having apertures engaging the shanks of the teeth, the slots of which project beyond the inclined face of said washer member, and a wedge-shaped key engaging the slots of the tooth shanks and having an inclined face corresponding with the meeting face of the washer member.

1,015,744. BACK-PEDALING BRAKE AND FREE-WHEEL MECHANISM. ERNST SACHS, Schweinfurt, and MAX MOSSIG, Berlin, Germany. Filed Apr. 13, 1911. Serial No. 620,770. (Cl. 208—87.)

1. In a free wheel and brake apparatus, the combination with a hub, and a sprocket around the hub, of a driving clutch between the hub and the sprocket, a stationary brake ring, a member rotating with the hub and disposed adjacent the brake ring, means for expanding the brake ring against said member, and a connection between said means and the driving clutch.

2. In a free wheel and brake apparatus, the combination with a hub, and a sprocket around the hub, of a driving clutch between the hub and the sprocket, a member rotating with the hub, braking mechanism having radial movement to bear upon said member, and an intermediate connection between the braking mechanism and the driving clutch.

3. In a free wheel and brake apparatus, the combination with a hub, and a sprocket around the hub, of a driving clutch between the hub and the sprocket, a stationary brake ring, a member rotating with the hub and disposed adjacent the brake ring, brake blocks arranged to bear upon said member, a connection between the brake blocks and the driving clutch, and means actuated by said connection to expand the brake ring and press the brake blocks against the rotating member.

4. In a free wheel and brake apparatus, the combination with a hub, and a sprocket thereon, of a driving clutch between the hub and the sprocket, a guide ring extending from the clutch, a member rotating with the hub, brake blocks mounted in said guide ring and arranged to bear upon said rotating member, and means for forcing the brake blocks against said member controlled by the guide ring.

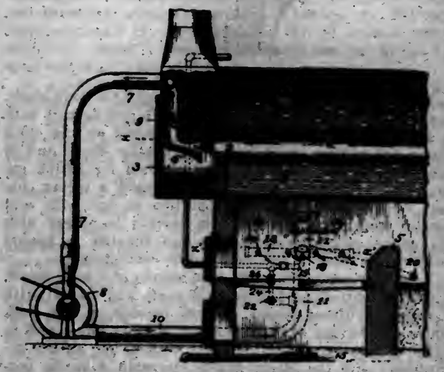
5. In a free wheel and brake mechanism, the combination with a hub, and a sprocket around the hub, of a plurality of clutch rollers between the hub and the sprocket, a guide ring for said rollers, a stationary split brake ring, a plurality of brake blocks mounted loosely in the guide ring to rotate therewith, members rotatable with the hub and disposed adjacent the brake blocks and the brake ring, and devices interposed between the brake blocks and the brake ring to press the same against the rotatable members.

[Claims 6 to 8 not printed in the Gazette.]

1,015,745. METHOD OF MAKING PAMPHLETS OR MAGAZINES. RALPH C. SEYMOUR, Larchmont, N. Y. assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 10, 1909, Serial No. 506,956. Divided and this application filed May 28, 1911. Serial No. 629,010. (Cl. 11—16.)

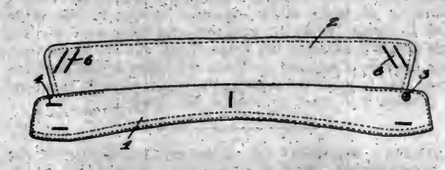
The process of making a pamphlet which comprises associating a plurality of sheets, stitching said associated sheets together, while flat, trimming each of the edges of the associated sheets which are parallel to each other on opposite sides of the stitching at a bevel inclining inwardly from the outer to the inner sheet, folding the stitched and trimmed sheets at said stitching to bring said inner sheet within and said outer sheet without, said bevel being proportioned to present a substantially straight front edge when the two trimmed edges are brought together by the folding.

1,015,746. SMOKE-CONSUMING FURNACE. ROBERT G. SPEER, St. Louis, Mo., assignor to The Robert G. Speer Corporation, St. Louis, Mo. Filed Mar. 13, 1911. Serial No. 614,221. (Cl. 110—49.)



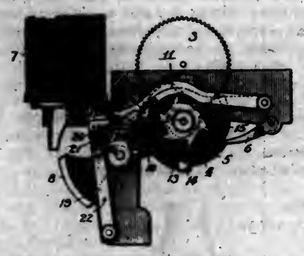
In a steam boiler furnace, the combination of a collecting funnel arranged adjacent to the exit end of the smoke flues and adapted to collect the combustible gases therefrom, a trunk extending therefrom, means for effecting a draft through said trunk, a trunk extending from said means and provided with a vertical branch or trunk located adjacent to a side wall of the furnace, a hopper arranged at the upper end of said vertical trunk and adapted to contain a supply of pulverized coal, a jet nozzle arranged beneath said hopper, an inclined partition arranged intermediate of the hopper and jet nozzle, a discharge means connected at one end to the vertical trunk in line with the aforesaid jet nozzle and at the other end with the interior of the fire chamber, and means for introducing a supply of air into the vertical trunk adjacent to the jet nozzle aforesaid, substantially as set forth.

1,015,747. COLLAR. WILLIAM H. STEVENS, New York, N. Y. Filed Oct. 25, 1910. Serial No. 589,005. (Cl. 2—67.)



A collar of the turn down type having a high neck band of soft material and a correspondingly high flap of soft material, and means upon the inner side of and adjacent each end of the flap, each of said means comprising a loop disposed diagonally of an end of the flap, each loop extending from the lower longitudinal edge of the flap forwardly and upwardly to a point at the front edge substantially medially of the width of the flap, so that the pull of a necktie passing through said loops will tend to draw the front flap portions downwardly as well as toward each other and toward the neck band.

1,015,748. ELECTRIC CLOCK. ALBERT TUERK, Chicago, Ill. Filed Aug. 9, 1909. Serial No. 511,897. (Cl. 58—41.)



1. In an electric clock, the combination of a main shaft, a circuit controlling disk on said shaft and formed with a series of lifting fingers, a lever pivoted on the clock frame and having at its free end a contact finger and in adjacent relation thereto a pawl adapted for lifting engagement with the lifting fingers aforesaid, a spring contact member having an offset portion in line with said contact finger, and a wiper arm moving in unison with the electro-magnetic mechanism and adapted to impart positive movement to the lever and its contact finger.

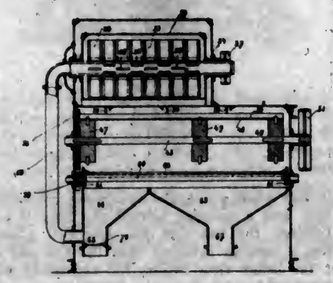
2. In an electric clock, the combination of a main shaft, a circuit controlling disk on said shaft and formed with a series of lifting fingers, a lever pivoted on the clock frame and having at its free end a contact finger and in adjacent relation thereto a pawl adapted for lifting engagement with the lifting fingers aforesaid, a spring contact member having an offset portion in line with said contact finger, a plate of insulating material secured to the rear of said offset portion, and a wiper arm moving in unison with the electro-magnetic mechanism and adapted to impart positive movement to the lever and its contact finger.

3. In an electric clock, the combination of a main shaft, a ratchet disk mounted loosely on said shaft, a spring containing drum fixed on said shaft, an electro-magnet, an oscillating armature, an arm carried by said armature, a pull pawl on said arm having riding engagement with the periphery of the ratchet disk, a stop pin on the ratchet disk, a stop lug on the spring containing drum, and means for periodically energizing the electro-magnet.

4. In an electric clock, the combination of a main shaft, a ratchet disk mounted loosely on said shaft, a spring containing drum fixed on said shaft, an electro-magnet, an oscillating armature, an arm carried by said armature, a pull pawl on said arm having riding engagement with the periphery of the ratchet disk, a circuit controlling disk on said shaft and formed with a series of lifting fingers, a lever pivoted on the clock frame and having at its free end a contact finger and in adjacent relation thereto a pawl adapted for lifting engagement with the lifting fingers aforesaid, a spring contact member having an offset portion in line with said contact finger, and a wiper arm moving in unison with the armature aforesaid and adapted to impart positive movement to the lever and its contact finger.

5. In an electric clock, the combination of a main shaft, a ratchet disk mounted loosely on said shaft, a spring containing drum fixed on said shaft, an electro-magnet, an oscillating armature, an arm carried by said armature, a pull pawl on said arm having riding engagement with the periphery of the ratchet disk, a circuit controlling disk on said shaft and formed with a series of lifting fingers, a lever pivoted on the clock frame and having at its free end a contact finger and in adjacent relation thereto a pawl adapted for lifting engagement with the lifting fingers aforesaid, a spring contact member having an offset portion in line with said contact finger, a plate of insulating material secured to the rear of said offset portion, and a wiper arm moving in unison with the armature aforesaid and adapted to impart positive movement to the lever and its contact finger.

1,015,749. THRESHING-MACHINE. LUDWIG WEINFELD, Budapest, Austria-Hungary. Original application filed Oct. 27, 1910. Serial No. 589,410. Divided and this application filed Oct. 19, 1911. Serial No. 655,581. (Cl. 130—27.)

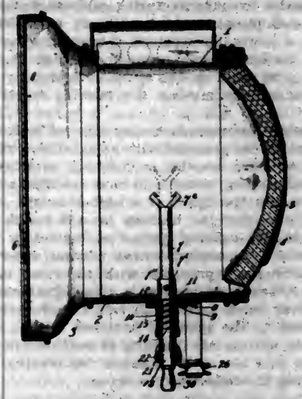


1. Threshing machine comprising the combination of ballistic or hurling devices with means for introducing hard granular materials between the said devices and means for leading the ears of cereals transversely to the jets of the said granular materials, for the purpose described.

2. Threshing machine comprising the combination of ballistic or hurling devices with means for introducing hard granular materials between the said devices, a series of straps arranged on endless ribbons movable transversely to the jets of the said granular materials, a rocking screen for receiving the threshed out ears and hoppers beneath the said rocking screen, for the purpose described.

3. Threshing machine comprising the combination of ballistic or hurling devices with means for introducing hard granular materials between the said devices, a series of straps arranged on endless ribbons movable transversely to the jets of the said granular materials, a rocking screen for receiving the threshed out ears, hoppers beneath the said rocking screen and means connecting the said hoppers with the means for introducing the granular materials for conducting a portion of the threshed out cereal grains to the ballistic or hurling devices, for the purpose described.

1,015,750. HEADLIGHT. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed May 3, 1909. Serial No. 493,460. (Cl. 240—44.)



1. In a lamp of the headlight type, the combination with a headlight casing, of a reflector seated therein, a burner mounted in the casing, self restoring mechanism movably and yieldably supporting said burner in its normal position, means for effecting a bodily shifting of the burner out of its normal position but within the ray field of said reflector, and operative connections extending from said shifting means to a distance from the lamp.

2. In a lamp of the headlight type, the combination with a headlight casing, of a reflector seated therein, a burner mounted in the casing for axial or endwise movement, a spring arranged to hold said burner yieldably in its normal position, operative mechanism for effecting a sudden bodily displacement of the burner against the action of said spring, said operative mechanism extending to a point remote from the lamp.

3. In a lamp, the combination of a casing, a reflector and a burner-housing each mounted in said casing, a burner mounted for endwise movement through said housing and having its tip normally positioned to locate the source of light at the focus of said reflector, and means for effecting a temporary endwise displacement of said burner; said burner being constructed and arranged to automatically return the source of light to the focus of said reflector; substantially as described.

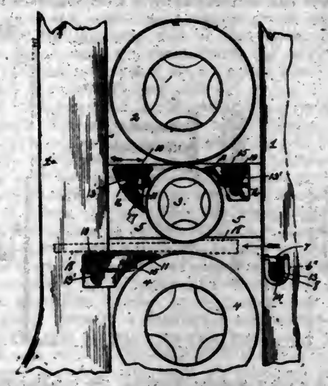
4. In a lamp, the combination of a casing, a reflector and a burner-housing each mounted in said casing, a burner mounted for endwise movement through said housing and having its tip normally positioned to locate the source of light at the focus of said reflector, means for effecting a temporary endwise displacement of said burner, and means for automatically returning said source of light to the focus of said reflector; substantially as described.

5. In a lamp of the headlight type, the combination of a casing, a reflector and a burner-housing each mounted in said casing, a burner mounted for endwise movement through said housing, a spring arranged to hold said burner yieldably and normally with the source of light at the focus of said reflector, and means for effecting a temporary bodily displacement of said burner against the action of said spring; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,015,751. GUIDE-REST BAR FOR ROLLING-MILLS. JENKIN WILLIAMS, Pittsburgh, Pa., assignor of one-fourth to John H. Roney, Ingram, Pa. Filed Sept. 28, 1905. Serial No. 280,530. (Cl. 80—51.)

1. A rolling mill comprising housings, horizontal rolls mounted in said housings, and a guide-rest bar at the front or delivery side of said mill adjustable as a whole toward and away from one of the rolls, the edge of said guide-rest bar adjacent to the roll, extending along and in close proximity but out of contact with the roll, and means for holding said guide rest bar in its adjusted position.



2. A rolling mill comprising housings, horizontal rolls mounted in said housings, and a guide-rest bar at the front or delivery side of the mill adjustable as a whole toward and away from one of the rolls, said guide-rest bar having a nose portion forming the guide part of the bar extending along and projecting toward the roll into close proximity to the surface of said roll but out of contact therewith, and means for holding said guide-rest bar in its adjusted position.

3. In a rolling mill, the combination of a set of horizontal rolls, supporting members for the rolls, guide-rest bars arranged at the delivery and receiving sides of the mill, respectively, and adjustable as a whole toward or away from one of the rolls, the edge of said guide-rest bars adjacent to said rolls forming the guide part thereof, and extending along and projecting toward the roll into close proximity to the surface but out of contact therewith, and means for holding the guide-rest bar in the desired adjusted position.

4. A rolling mill comprising a stand of horizontal rolls mounted in bearings carried in housings, and a guide-rest bar arranged at the front or delivery side of the mill adjustable as a whole toward and away from one of the rolls, said guide-rest bar having a nose portion forming the guide part thereof extending along and projecting toward the roll mounted in said bearings, said guide-rest bar having end wings, the bearings having slots wider than the end wings, and arranged to receive the wings, and liners arranged to hold the guide rest-bar in its adjusted position.

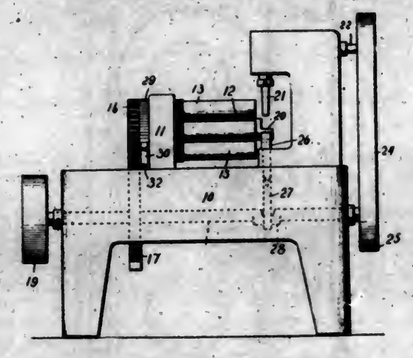
5. In a rolling mill, the combination of a set of horizontal rolls, supporting bearings for the rolls, guide-rest bars arranged at the delivery and receiving sides of the mill, respectively, and adjustable as a whole toward and away from one of the rolls, the edge of each of said guide-rest bars adjacent to the roll extending along and projecting toward said roll into close proximity thereto but out of contact therewith, said guide-rest bars having end wings, and the bearings having slots to receive the wings, and liners arranged to hold the guide-rest bars in their adjusted position.

[Claim 6 not printed in the Gazette.]

1,015,752. WASHER-MAKING MACHINE. MASON G. WORTH, New York, N. Y., assignor to Charles S. Davis, New York, N. Y. Filed Dec. 28, 1910. Serial No. 599,772. (Cl. 153—65.)

1. In a washer making machine, the combination with an intermittently rotated mandrel, of an automatically operated cutting tool disposed at the delivery end thereof and frictional means for retarding the reverse movement of said mandrel.

2. In a washer making machine, the combination with an intermittently rotating mandrel, of means for retarding the reverse movement of said mandrel, and an automatically operated cutting tool disposed at the delivery end thereof and coöperating with a cutting face thereon.



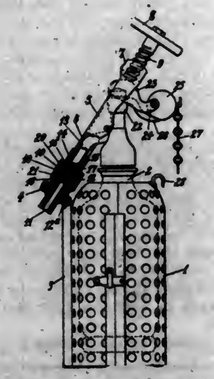
3. In a washer making machine, the combination with a mandrel intermittently rotated in one direction, of adjustable means for allowing said mandrel to rotate in a reverse direction, and an automatically operated cutting tool co-acting with said mandrel.

4. In a washer making machine, the combination with an intermittently rotated mandrel, of an automatically operated cutting tool disposed at the delivery end thereof, and non-positive means for retarding a reverse movement of said mandrel.

5. In a washer making machine, the combination with a mandrel, of means for intermittently driving said mandrel in one direction, and means for allowing a reverse movement of said mandrel when the intermittent driving means is out of operation.

[Claims 6 to 15 not printed in the Gazette.]

1,015,753. DEVICE FOR MANUFACTURING MINERAL WATER. JOHANN BIENZ, Berne, Switzerland. Original application filed Dec. 28, 1910, Serial No. 599,641. Divided and this application filed Mar. 21, 1911. Serial No. 615,973. (Cl. 226—23.)



1. A device for manufacturing mineral water, comprising two members each provided with a bore adapted to be displaced one relative to the other whereby a chamber of variable size is formed in communication with said bores adapted to receive a mineral salt tablet, and means for detachably connecting said device to a bottle.

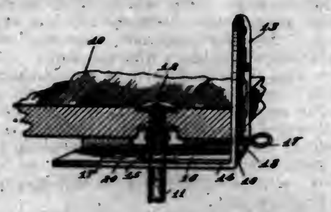
2. A device for manufacturing mineral water, comprising two members each provided with a bore whereby a chamber of variable size is formed in communication with said bores adapted to receive a mineral salt tablet, and means for detachably connecting said device to a bottle, and means for displacing one member relatively to the other thereby breaking up said tablet in said chamber.

3. A device for manufacturing mineral water, comprising a mouth-piece provided with an axial bore and a chamber, a sleeve-like member, a bushing attached thereto, said bushing being movable in said chamber and adapted to be fitted to the spout of a siphon bottle, and means for axially moving the bushing in said mouth-piece.

4. A device for manufacturing mineral water, comprising a mouth-piece provided with an axial bore and a chamber, a sleeve-like member, a bushing attached thereto, said bushing being movable in said chamber and adapted to be fitted to the spout of a siphon bottle, and means for axially moving the bushing in said mouth-piece, and a nozzle in said bushing, projecting beyond its inner end.

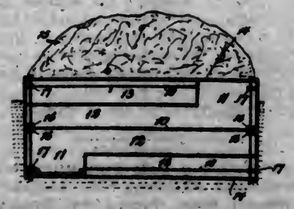
5. A device for manufacturing mineral water, comprising a mouth-piece provided with an axial bore and a chamber, a sleeve-like member, a bushing attached thereto, said bushing being movable in said chamber and adapted to be fitted to the spout of a siphon bottle, and means for axially moving the bushing in said mouth-piece, and means on said sleeve-like member for holding the bottle open during the inflow of the water.

1,015,754. DISCHARGE-VALVE. WILLIAM F. BLAKE, South Bend, Ind. Filed Apr. 2, 1910. Serial No. 553,109. (Cl. 137—21.)



In a device of the class described, an angular plate having an opening in one of its members to receive a flexible tube, a shoulder at one side of said opening, a cut-off rod on the other side of said opening and flexibly connected to the plate, the other member of said plate having an angular slot through which the rod passes, one portion of the slot being adjacent the shoulder to hold the rod in alinement therewith to collapse the tube against the shoulder, and the other portion of said slot being inclined to guide the rod away from the shoulder to release the tube.

1,015,755. INVERTIBLE SCOW. WILLIAM E. COOK, St. George, and DANIEL HOWARD HAYWOOD, New York, N. Y.; Flora G. Haywood executrix of said Daniel Howard Haywood, deceased. Filed Mar. 17, 1911. Serial No. 614,986. (Cl. 114—38.)



1. An invertible scow having a water ballast chamber of greater water carrying capacity upon one side of the central vertical longitudinal plane of the scow than upon the other, when the scow is one way up, and of equal water carrying capacity upon opposite sides of the said central vertical longitudinal plane when the scow is the other way up, whereby water ballast admitted to the said chamber when the scow is one way up will destroy the equilibrium thereof, which water will be redistributed evenly upon either side of the central vertical longitudinal plane of the scow when the scow is the other way up, to restore the equilibrium thereof.

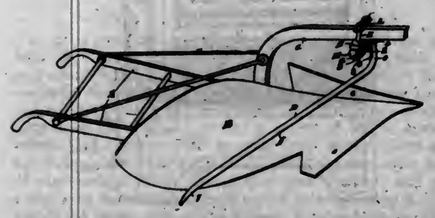
2. An invertible scow having a water chamber therein, the upper portion of which is equally distributed upon opposite sides of a vertical longitudinal plane passing through the center of gravity of the vessel, the lower portion of which is unevenly disposed with respect to such longitudinal central plane, and means for admitting and discharging water to and from the said chamber.

3. An invertible scow having water carrying pockets arranged upon one side of the central longitudinal plane of the scow when the same is either way up, and means for admitting water thereto to destroy the equilibrium of the scow in either position to invert the same, the said scow having an intermediate water carrying portion evenly disposed upon either side of the said central vertical plane for receiving the water from either of the said pockets when the scow is inverted, whereby upon inversion the water will be redistributed evenly across the scow to restore the equilibrium thereof.

4. An invertible scow having a central horisontal partition and water chambers upon either side thereof, each of the said water chambers including a pocket upon one side of the longitudinal vertical plane of the scow, which pocket projects outward in a direction away from the central partition, and means for admitting water to the said pocket in the lower water chamber to destroy the equilibrium of the scow and bring about its inversion, the said water being evenly distributed upon the said horisontal partition, and the equilibrium thus restored when the scow is inverted.

5. An invertible scow having a central horisontal partition, water chambers on either side thereof which include a portion evenly disposed across the scow in proximity to the central partition and a portion unevenly disposed across the scow in proximity to the part thereof away from the partition, whereby that chamber which is at the time beneath the central partition will be adapted to contain more water upon one side of the central vertical longitudinal plane of the scow than upon the other, and means for admitting water to the lower chamber to destroy the equilibrium of the scow to bring about its inversion, and for discharging the water thus admitted from the said chamber when the scow has been inverted and the said chamber is at such time in the portion of the scow which is uppermost.

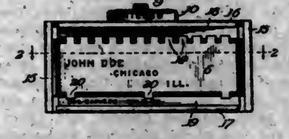
1,015,756. ADJUSTABLE WEED-HOOK FOR PLOWS AND CULTIVATORS. ALEXANDER M. DONALD, Oberon, Manitoba, Canada. Filed Apr. 14, 1910, Serial No. 555,445. Renewed July 11, 1911. Serial No. 638,020. (Cl. 97—33.)



1. In an agricultural implement, of the class described, the combination with the mold board thereof, and the beam, of a weed hook comprising a straight arm positioned to occupy a backward-downward-outward angle in respect to said mold board, so that it will move in a plane substantially parallel to the outer surface of the mold board so as to insure the weeds for the whole width of the furrow, being covered by the same; a horisontally disposed head for said arm which extends at an angle in advance thereof and above the same and with which arm it is connected by a backward-downward extension, means whereby said head is journaled to occupy a position transversely to said beam so that the arm will have the described movement from a point positioned above the landward side of said mold board; a coiled spring mounted on said head, the landward side of said spring extending downward and resting in contact with the said extension, and a stop carried by said beam against which the said extension is normally spring held.

2. In an agricultural implement of the class described, the combination with the mold board thereof, and the beam, of a weed hook comprising a straight arm positioned to occupy a backward-downward-outward angle in respect of said mold board so that it will move in a plane substantially parallel to the outer surface of the mold board so as to insure the weeds for the whole width of the furrow, being covered by the same; a horisontally disposed head, for said arm, which extends at an angle in advance thereof and above the same and with which arm it is connected by a backward-downward extension, a bracket adjustably carried by said beam and disposed transversely thereof; a depending ear carried by each end of the said bracket; the said head being journaled in said ears so that, together with the construction of said arm, the same will have the described movement from a point positioned above the landward side of said mold board; a coiled spring mounted on said head and between said ears, the landward end of said spring extending downward, and resting in contact with the extension of said arm, and a hook integrally formed with the one of said ears positioned above the landward side of said mold board and having the side, facing said mold board, open, the extension of said arm being normally spring held against said stop.

1,015,757. PRINTING DEVICE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 2, 1911. Serial No. 606,075. (Cl. 101—169.)



1. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, and printing characters on the depressed face of the panel, substantially as described.

2. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, and printing characters on the depressed face of the panel and projecting therefrom a distance not exceeding the depth of depression of the panel, substantially as described.

3. A printing plate consisting of an integral sheet metal strip having a panel stamped therein within the edges of the plate, said panel being depressed on one side and elevated on the other side of the plate, the marginal portion of the plate surrounding the panel constituting a spacer projecting beyond the depressed face of the panel, and printing characters stamped in relief on the depressed side of the panel and in intaglio on the elevated side thereof, said printing characters projecting a distance beyond the depressed face of the panel not exceeding the projection of the spacer.

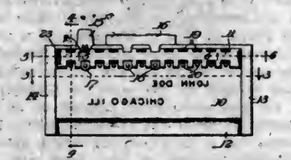
4. A printing plate comprising a sheet metal strip having a type form stamped in relief on one side thereof, and a card-receiving part on the other side of the plate depressed in the plane of the surface of said other side of the plate and lying at one side of the type form, substantially as described.

5. A printing plate comprising a sheet metal strip having a type form stamped in relief on one side thereof, and

a card-receiving part on the other side of the plate depressed below the plane of the surface of said other side of the plate, said card-receiving part being located above the type form and extending lengthwise of the plate, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,015,758. PRINTING DEVICE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1911. Serial No. 638,800. (Cl. 101—169.)



1. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, and printing characters on the depressed face of the panel portions of the plate on the printing side thereof and adjacent to said depressed panel varying in height, substantially as described.

2. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, portions of the plate adjacent to said depressed panel varying in height, and printing characters on the depressed face of the panel projecting therefrom a distance not exceeding the height of the highest portion of the plate, substantially as described.

3. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, portions of the plate extending longitudinally of the panel projecting beyond the depressed face of the panel more than portions of the plate extending transversely of the panel, and printing characters on the depressed face of the panel projecting therefrom a distance not exceeding the projection of said longitudinal portion beyond the depressed face of the panels, substantially as described.

4. A sheet metal printing plate having a substantially rectangular panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, portions of the plate at opposite edges of the panel between the latter and the respective edges of the plate projecting beyond the depressed face of the plate more than the plate portions lying between the other edges of the panel and the other edges of the plate, and printing characters on the depressed face of the panel projecting therefrom a distance not exceeding the projection of the first mentioned plate portions, substantially as described.

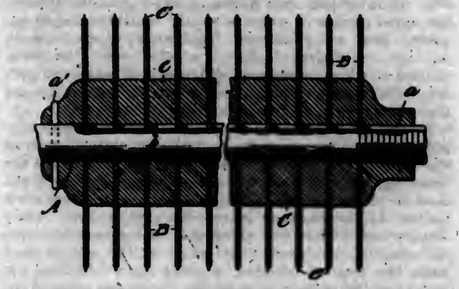
5. A sheet metal printing plate having a panel stamped therein, said panel being depressed in one face of the plate and projected at the opposite face of the plate, and printing characters on the depressed face of the plate, a portion of the plate which projects beyond the depressed face of the panel constituting a depressed card-receiving part on the opposite side of the plate, one end of said card-receiving part having an opening for the insertion and removal of a card, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,015,759. CYLINDER FOR COTTON-GINS. JAMES T. FULLER, Chattanooga, Tenn.; Charles D. Gordon, Chattanooga, Tenn., administrator of said James T. Fuller, deceased, assignor to L. T. Fuller and Mary J. Fuller, Houston, Tex. Filed Apr. 13, 1910. Serial No. 555,264. (Cl. 13—14.)

1. The herein described cylinder for cotton gins having disks of soft metal provided with teeth projecting centrally from the periphery of the same, said teeth being held in the disk by the metal of the disk, each tooth being independently secured and independently removable from the disk.

2. The herein described cylinder for cotton gins provided with disks of soft metal having teeth inserted in and projecting centrally from the periphery of the disk, said teeth being independently secured by the metal of the disk and independently removable from the disk.



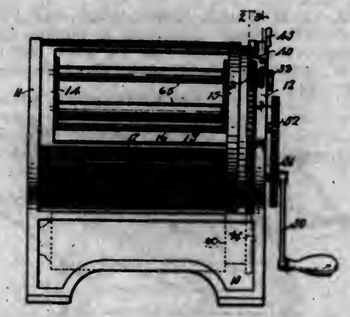
3. In a cylinder of the character described, the combination with a disk having radial holes in its periphery and a concentric groove upon one side connecting with said holes, of teeth inserted and secured in said holes, the said groove giving access to the inner end of each tooth for removing the same.

4. In a cylinder of the character described, the combination with a disk having radial holes drilled in its periphery, and a concentric groove on one side communicating with said holes, of teeth inserted in said holes and each tooth independently secured by the metal of the disk.

5. In a cylinder of the character described, the combination with a disk having radial holes formed in its periphery, and a concentric groove on one side communicating with said holes, of teeth having on one side a shallow notch inserted in said holes and secured in position by having the metal of said disk forced into the notch of said tooth.

[Claim 6 not printed in the Gazette.]

1,015,760. ROTATABLE TYPE-HOLDING MECHANISM. HARRY C. GAMMETER, Bratenahl, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 7, 1904, Serial No. 196,840. Renewed Jan. 23, 1906, Serial No. 297,447. Divided and this application filed Feb. 13, 1911. Serial No. 608,344. (Cl. 101—126.)



1. The combination of a rotatable member, means for holding on the surface thereof parallel lines of individual type, mechanism for giving said member partial rotations to bring successive typeholders into active position, and a handle adapted to give said member a complete rotation.

2. In a machine of the character described, the combination of a rotatable member having means for loosely holding parallel lines of individual type, means for giving said member portions of a rotation successively to bring different typeholders to active position, other means adapted to give said member a greater continuous rotative movement and a typeholder adapted to register with any of the typeholders of said member when the same is in active position.

3. In a machine of the character described, the combination of a rotatable member having means for loosely holding parallel lines of individual type, means for giving said member portions of a rotation successively to bring different typeholders to active position, other means adapted to give said member a greater continuous rotative movement, and means for providing a stationary recess adjacent to the surface of the member at one end for registering a typeholder with it.

4. In a machine of the character described, the combination of a rotatable member having means for carrying on its surface parallel lines of individual type, means for giving partial rotations to said member, other means adapted to give said member a greater continuous rotative movement in either direction, and means for holding said member against accidental displacement.

5. In a machine of the character described, the combination of a rotatable member having means for carrying on its surface parallel lines of individual type, means for giving partial rotations to said member, other means manually engaged and operated to give said member a greater continuous rotative movement, and a spring brake for retarding said member.

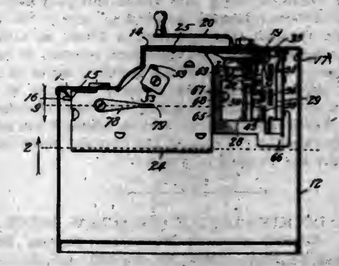
[Claims 6 to 31 not printed in the Gazette.]

1,015,761. RESILIENT WHEEL. MARGARET E. KNIGHT, Framingham, Mass., assignor of one-fourth to Anna F. Davidson and one-fourth to Beatrice M. Davidson, Saratoga Springs, N. Y. Filed Apr. 2, 1910. Serial No. 552,997. (Cl. 152—28.)

1. In a resilient wheel, an axle-box adapted to turn upon the axle, a sleeve closely encompassing the said box and adapted to turn therewith, a coaxial sleeve of large diameter spaced from and encircling the axle-box sleeve and normally concentric therewith, a spoke socket cylinder embracing the coaxial sleeve, a series of spiral springs within said space secured at their inner ends to said axle box sleeve, and a spring retaining ring for the outer ends of said springs fitting within said coaxial sleeve and provided with holes countersunk on its outer surface through which the outer ends of the springs pass and are retained in the countersunk depressions.

2. In a resilient wheel having an axle-box normally free to turn upon the axle, a pair of coaxial sleeves of different diameters encompassing the axle-box and normally free to turn therewith, a spring retaining ring fitting within the outer sleeve, springs interposed between the two sleeves and attached at their ends to the inner sleeve and to the spring retaining ring, a cylinder provided with spoke sockets around the outer sleeve, a disk mounted on and fixed to the axle in position to bear against the inner end of the cylinder, a disk on the axle and bearing against the outer end of the cylinder, and a pair of crank-links, the opposite ends of which are journaled respectively in said inner disk and in the spoke-socket cylinder.

1,015,762. REGISTERING SAVINGS-BANK. EDWARD E. MATSON, Michigan City, Ind., assignor to The National Self-Registering Bank Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 28, 1911. Serial No. 646,508. (Cl. 235—100.)



1. In a device of the character described, a bodily movable coin-chute having a series of openings through its sides and another opening in its inner side, a spring-pressed plate supported to extend along the inner face of the chute and be movable back and forth relative thereto, said plate carrying a finger to register with and enter said other opening for obstructing the passage through the chute, means for moving the chute, and means for retracting said plate to withdraw said finger and open the chute-passage for the discharge of the deposited coin.

2. In a device of the character described, a coin-chute hinged at one end and having a series of openings through its sides and another series of openings in its inner side, a spring-pressed plate hinged at one end to extend along the inner face of the chute and be moved by and relative to the same, said plate having fingers to register with and enter the openings of said other series for obstructing the passage through the chute at different points therein, means for moving the chute, and means for retracting said plate to withdraw said fingers and open the chute-passage for the discharge of the deposited coin.

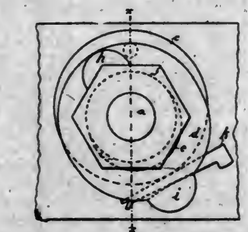
3. In a device of the character described, the combination of a slotted ratchet-wheel provided with an operating handle, an eccentric stud and a stop-lip adjacent to the slot, a coin-chute hinged at one end and having a series of openings through its sides and another series of openings in its inner side, a slotted ear on the chute in which said stud works, a spring-pressed plate hinged at one end to extend along the inner face of the chute and be moved by and relative to the same, and provided with fingers on its free end to register with and enter the openings of said other series for obstructing the passage through the chute at different points therein, and with a finger extending in the path of said stud and a shoulder, a spring-retracted slide-plate having a stop to coöperate with said lip and a stop coöperating with said shoulder, and mechanism having tappets of different lengths, appropriate to the coins of different denominations, respectively, adapted to engage the coins in the chute at said series of openings through the same.

4. In a device of the character described, the combination of a movable coin-chute having means for releasably-arresting coins of different denominations at different points, said chute being provided in its sides with openings corresponding with the positions of the coins, respectively, means for moving the chute to and fro, a bar having at one end tappets of different lengths adapted to engage the coins respectively through said openings, a frame on said bar toward its opposite end, having oblique recesses in its opposing edges, a rack in said frame having

oblique end-tongues movably confined in said recesses, and an adding train adapted to be operated by the rack on said bar, for the purpose set forth.

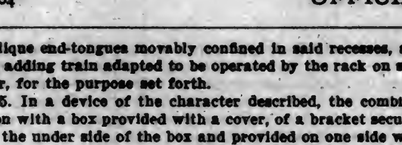
5. In a device of the character described, the combination with a box provided with a cover, of a bracket secured to the under side of the box and provided on one side with an elongated chamber, a coin-chute hinged at one end to an end of said bracket and provided with means for releasably arresting coins of different denominations at different points, said chute being provided in its sides with openings corresponding with the positions of the coins, respectively, means on the box for moving the chute to and fro, a bar reciprocably confined in said chamber and having its outer end connected with said chute and provided with tappets of different lengths adapted to engage the coins respectively through said openings, a frame on said bar toward its opposite end, having oblique recesses in its opposing edges, a rack in said frame having a series of openings and oblique end-tongues movably confined in said recesses, a spring-detent extending into said chamber in the path of said rack-openings, and an adding train adapted to be operated by the rack in the outward movement of said bar, for the purpose set forth.

1,015,763. LOCKING DEVICE FOR SCREW BOLTS AND NUTS. EUGENE ANTOINE PLONCARD, Matana, Egypt. Filed Aug. 29, 1910. Serial No. 579,665. (Cl. 151—64.)



In a locking device for screw bolts and nuts the combination of a washer, having retaining means for preventing turning, with an upper washer having an oval hole for receiving the reduced circular neck of the screw-nut, an upper rear claw for engagement with the corner of the screw nut or bolt head, and a lower front claw adapted to receive between it and the said lower washer a wedge for use in drawing the upper claw tight against the nut or bolt-head.

1,015,764. COMBINED BALE-BREAKER, AUTOMATIC FEEDER, AND OPENER. JAMES CHARLES POTTER, Pawtucket, R. I. Filed Jan. 4, 1911. Serial No. 600,791. (Cl. 19—9.)



1. The combination of two hoppers receiving cotton in succession, a cotton carrier at the bottom of each, a vertically traveling apron situated between the two hoppers, a board movable to and fro in the second hopper, driving mechanism for said apron, means controlling said driving mechanism, a connection between said means and said board, condensing rolls, and means to carry the cotton from the second hopper to the condensing rolls.

2. The combination of two chambers which receive the cotton in succession and constituting a double hopper, means for passing the cotton from one chamber to the other, means for passing the cotton from said last mentioned second chamber, automatic means for controlling the supply of cotton to said second chamber, a beater, and means for causing air to pass through said chambers and toward the beater.

3. The combination of two chambers, means situated between the two chambers for taking cotton from one and delivering it to the other, a feeler in the second chamber for controlling the supply of cotton thereto, means for passing cotton from the second chamber, and an exhaust fan located beyond the two chambers and drawing air therethrough.

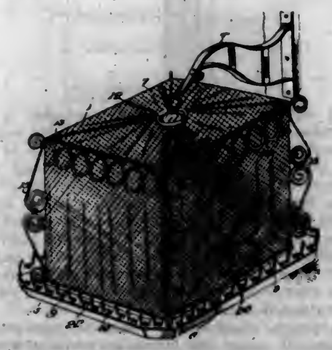
4. The combination of a horizontally traveling cotton-receiving apron, a vertically traveling spiked apron taking cotton from the horizontally traveling apron, a chamber into which the cotton is delivered from the spiked apron, automatically operated driving mechanism for the spiked aprons, controlled by cotton in said chamber, a spiked apron taking cotton from said chamber, a cage receiving cotton from said last named spiked apron, and an exhaust fan communicating with the interior of said cage.

1,015,765. SWIVEL-KNOB SPINDLE. FRANK J. SPRING, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Nov. 29, 1911. Serial No. 662,992. (Cl. 70—16.)

1. In a knob spindle, two identical spindle members each of which is formed with an enlarged, rectangular portion near its inner end, a reduced cylindrical portion at its inner extremity, a longitudinal, screw-threaded opening in said inner end, and a transverse pin aperture, a removable pin for said aperture, a removable and interchangeable screw-threaded body adapted to be secured in either of said members by means of said pin and arranged to connect said spindle members in line.

2. A swivel knob spindle comprising two like members of rectangular cross-section, a removable and interchangeable screw arranged to connect said members in line, a pin to secure said screw in either one of the members against turning independently thereof, an enlarged rectangular portion formed integrally on each member near its inner or meeting end, the inner extremity of each member being reduced in diameter and cylindrical in form.

1,015,766. BIRD-CAGE PROTECTOR. CAROLINE WEISCOPF STONE, Newton Center, Mass. Filed Mar. 8, 1911. Serial No. 613,081. (Cl. 119—17.)



1. The combination with a bird-cage including a suspension device, of a protector fitting over the cage and formed of reticulated material, the top of the protector being provided with an opening to permit the passage of the suspension device, and the lower edge of said protector being provided with reinforcing strips for engagement with the bottom of the cage, loops extending laterally from the side walls of the cage and constituting handles, and a flexible securing element extending beneath the bottom of the cage and engaging said loops.

2. The combination with a bird-cage including a suspension device, of a protector fitting over the cage and having its top provided with an opening to permit the passage of the suspension device and its lower edge resting on the bottom of the cage, reinforcing members secured to the side walls of the protector and provided with loops constituting handles, and a flexible securing element having one end thereof fastened to one of the loops, and its other end extended beneath the bottom of the cage and provided with a terminal hook for engagement with the other loop.

3. The combination with a bird-cage including a suspension device, of a protector fitting over the cage and having its lower end reinforced and its upper end provided with an opening to permit the passage of the suspension device, a reinforcing ring surrounding said opening, reinforcing members bearing against the side walls of the protector at the upper portion thereof, auxiliary reinforcing members extending laterally from the corners of the protector, loops secured to the side walls of the protector and constituting handles, and a flexible securing element having one end thereof fastened to one of the loops and its other end extended beneath the bottom of the cage for engagement with the other loop.

4. The combination with a bird-cage having a suspension device and provided with a bottom having an upstanding flange provided with terminal teeth constituting a guard, of a protector fitting over the cage and having its lower edge resting on the bottom of the cage and spaced from said flange and its upper end provided with an opening to permit the passage of the suspension device, loops secured to the opposite side walls of the protector and constituting handles, and a securing element extending beneath the cage for engagement with said loops.

5. A protector for bird-cages, comprising a body portion adapted to fit over a bird-cage and having its lower end open and its upper portion provided with an opening to permit the passage of the suspension device of said cage, reinforcing members secured to the side walls of the protector and each formed of a single length of wire having its intermediate portion bent to produce a contracted neck, the wire being thence bent to form a series of loops and thence continued downwardly at the rear of the neck and upwardly in engagement with said neck to form a handle.

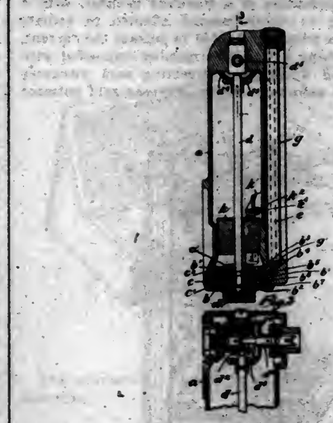
[Claims 6 and 7 not printed in the Gazette.]

1,015,767. TACHOMETER. CURTIS HUSSEY VEEDER, Hartford, Conn., assignor to The Veeder Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed May 1, 1911. Serial No. 624,439. (Cl. 73—123.)

1. In an instrument of the character described, the combination of a common reservoir, a pump comprising a high speed part and a low speed part both communicating with said reservoir, two indicator tubes for high and low speeds respectively and means affording passages whereby said tubes are placed in communication with said pump parts respectively.

2. In an instrument of the character described, the combination of a common reservoir, a pump comprising a high speed part and a low speed part both communicating with said reservoir, two indicator tubes for high and low speeds respectively, means affording passages whereby said tubes are placed in communication with said pump parts respectively, means affording passages whereby said tubes are placed in communication with the reservoir, and a choking device to prevent excessive overflow from the low speed indicator tube.

3. In an instrument of the character described, the combination of a common reservoir, a pump comprising a high speed part and a low speed part both communicating with said reservoir, and having an impeller with a high speed part and a low speed part, two indicator tubes for high and low speeds respectively, and means affording passages whereby said tubes are placed in communication with said pump parts respectively and with the reservoir.



4. In an instrument of the character described, the combination of a common reservoir, a pump comprising a high speed part and a low speed part both communicating with said reservoir and having an impeller with a high speed part and a low speed part, two indicator tubes for high and low speeds respectively, means affording passages whereby said tubes are placed in communication with said pump parts respectively and with the main reservoir, and a choking device interposed in the passage between the low speed part of the pump and the corresponding indicator tube to prevent excessive overflow.

5. In an instrument of the character described, the combination of a common reservoir, a pump comprising a high speed part and a low speed part both communicating with said reservoir and having an impeller with a high speed part and a low speed part, two indicator tubes for high and low speeds respectively, means affording passages whereby said tubes are placed in communication with said pump parts respectively and with the reservoir, and a choking device interposed in the low speed part of the pump and the corresponding indicator tube to prevent excessive overflow, said choking device comprising a threaded plug inserted in the duct between the pump and the indicator tube.

REISSUES.

13,365. METHOD OF AND MECHANISM FOR PRODUCING MUSICAL SOUNDS. GEORGE BREED, Philadelphia, Pa., assignor to The Lyrachord Company, New York, N. Y., a Corporation of New York. Filed Dec. 5, 1911. Serial No. 664,281. Original No. 1,007,265, dated Oct. 31, 1911, Serial No. 519,227. (Cl. 84—131.)

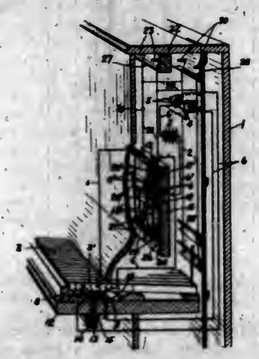
1. The method of producing desired musical sounds which consists in electro-magnetically vibrating a sonorous member, pulsating the exciting current by forced vibrations, and adjusting the forced vibrations to produce the required phase-relation between the magnetic impulses and the vibrations of the sonorous member.

2. The method of producing musical sounds which consists in electro-magnetically actuating vibratory sonorous members and pulsating the respective exciting currents by forced vibrations inducted by the vibrations of the respective sonorous members and having a required phase-relation to the respective magnetic impulses.

3. The method of producing musical sounds which consists in electro-magnetically actuating vibratory sonorous members, and pulsating the respective magnetic forces actuating said sonorous members by forced vibrations independently adjusted to the required phase-relation be-

tween the vibrations of the sonorous members and the respective magnetic impulses.

4. The mechanism for producing musical sounds which comprises the combination of a sonorous member, with a circuit containing an electro-magnet adapted to actuate said member and a pulsator adapted to pulsate the current, and means comprising a vibratory member connected with said pulsator, and a member connecting said vibratory member with said sonorous member, whereby said pulsator is operated.



5. The mechanism for producing musical sounds which comprises the combination of a musical string, with a circuit containing an electro-magnet adapted to actuate said string and a pair of contacts adapted to pulsate the exciting current, a vibratory member connected with one of said contacts, means for regulating the vibratory action of said member, and a flexible connection between said string and member.

6. The mechanism for producing musical sounds which comprises the combination of a musical string, with a circuit containing a current pulsator and an electro-magnet adapted for vibrating said string, a vibratory member connected with and adapted to vibrate a member of said pulsator, a string connecting said member and said musical string, and means for adjusting the vibratory action of said member and thereby regulating the action of said pulsator member.

7. The mechanism for producing musical sounds which comprises the combination of a musical string, with a circuit containing a current pulsator and an electro-magnet adapted for vibrating said string, a string connected with and adapted for vibrating said pulsator, and a string connecting said strings.

8. The mechanism for producing musical sounds which comprises the combination with a musical string, of a circuit containing a pulsator and an electro-magnet for vibrating said musical string, connected with said pulsator a string having means for varying its tension and means for connecting said strings whereby the vibrations of said musical string are communicated to the string connected with said pulsator.

9. The mechanism for producing musical sounds which comprises the combination with a vibrating sonorous member, of a circuit containing a pulsator and an electro-magnet for vibrating said sonorous member, a string connected with and adapted for vibrating said pulsator, means for supporting said string and limiting its section subject to vibration, and means connecting said member and string.

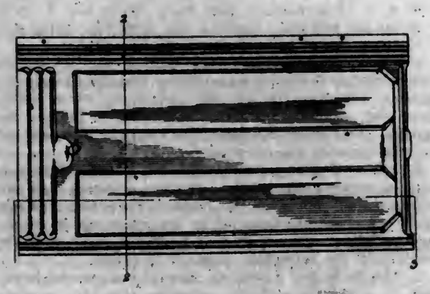
10. The mechanism for producing musical sounds which comprises the combination with a vibrating sonorous member, of a circuit containing a pulsator and an electro-magnet for vibrating said sonorous member, a string connected with and adapted for vibrating said pulsator, soft bridges over which said string is drawn, and means for connecting said sonorous member with said string between said bridges.

11. The mechanism for producing musical sounds which comprises the combination of a musical string, with a circuit containing a current-pulsator and an electro-magnet for vibrating said string, means whereby forced vibrations are communicated from said string to said pulsator, and adjustable means for modifying the vibratory action of said means.

12. The mechanism for producing musical sounds which comprises the combination of a musical string, with a circuit containing a current-pulsator and an electro-magnet for vibrating said string, means whereby forced vibrations are communicated from said string to said pulsator, and an adjustable weight for modifying the vibratory action of said means.

DESIGNS.

42,101. METAL SHINGLE. JOHN E. ANNIS, Chattanooga, Tenn. Filed Sept. 22, 1911. Serial No. 650,863. Term of patent 14 years.

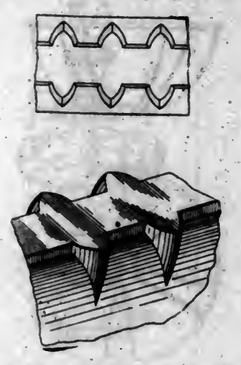


The ornamental design for a metal shingle, as shown.

42,102. COOKING STOVE OR RANGE. ARTHUR K. BECKWITH, Dowagiac, Mich., assignor to The Estate of P. D. Beckwith, Incorporated, Dowagiac, Mich. Filed Oct. 6, 1911. Serial No. 653,291. Term of patent 14 years.

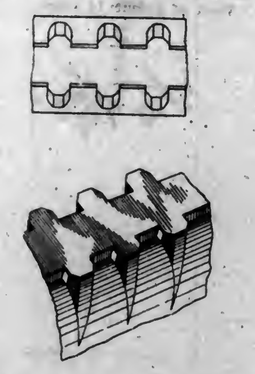
The ornamental design for a cooking stove or range, as shown.

42,103. PNEUMATIC-TIRE TREAD. GEORGE WILLIAM BELDAM, Ealing, England. Filed Apr. 4, 1911. Serial No. 618,937. Term of patent 14 years.



The ornamental design for a pneumatic tire tread substantially as shown.

42,104. PNEUMATIC-TIRE TREAD. GEORGE WILLIAM BELDAM, Ealing, England. Filed Apr. 4, 1911. Serial No. 618,938. Term of patent 14 years.



The ornamental design for a pneumatic tire tread substantially as shown.

42,105. PICTURE-HANGER. ISTVÁN DUCSAY, Canonsburg, Pa. Filed Oct. 14, 1911. Serial No, 654,791. Term of patent 3½ years.

The ornamental design for a picture hanger, as shown.

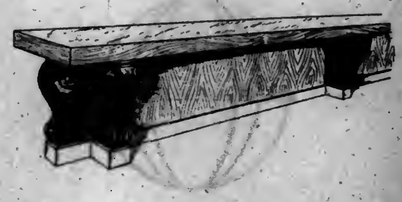
42,106. SHOW-CASE. MORRIS FRIEDMAN, Chicago, Ill. Filed Oct. 6, 1909. Serial No. 521,428. Term of patent 7 years.

The ornamental design for a show-case as shown and described.

42,107. GLOBE OR SHADE. JOHN E. MILLER, Washington, Pa., assignor to Duncan & Miller Glass Company, Washington, Pa., a Corporation of Pennsylvania. Filed Nov. 7, 1911. Serial No. 659,059. Term of patent 14 years.

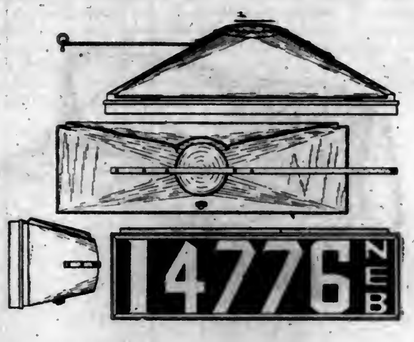
The ornamental design for a globe or shade as shown.

42,108. STORE-COUNTER. JOHN S. MITCHELL and SERENUS M. COLBURN, Minneapolis, Minn., assignors to L. S. Donaldson Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Mar. 2, 1911. Serial No. 611,941. Term of patent 7 years.



The ornamental design for a store counter, as shown.

42,109. NUMBER-DISPLAY CASING. ALEXANDER MUNROE and FAYETTE F. FINK, Omaha, Nebr. Filed Aug. 8, 1911. Serial No. 643,066. Term of patent 7 years.

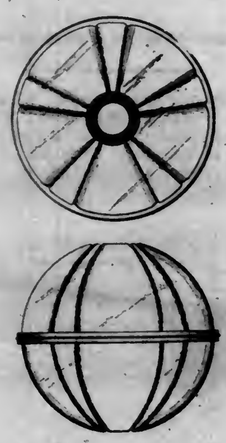


The ornamental design for a number-display casing as shown.

42,110. DISH. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co. Inc., Newark, Ohio, a Corporation of West Virginia. Filed Sept. 2, 1910. Serial No. 580,269. Term of patent 14 years.

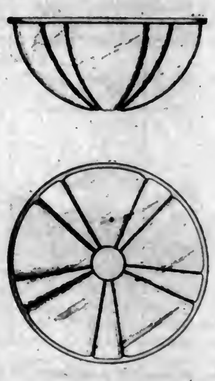
The ornamental design for a dish, as shown and described.

42,111. LAMP-SHADE. HARRY A. SCHNELBACH, Steubenville, Ohio, assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Oct. 2, 1911. Serial No. 652,469. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

42,112. LAMP-SHADE. HARRY A. SCHNELBACH, Steubenville, Ohio, assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Oct. 2, 1911. Serial No. 652,470. Term of patent 7 years.

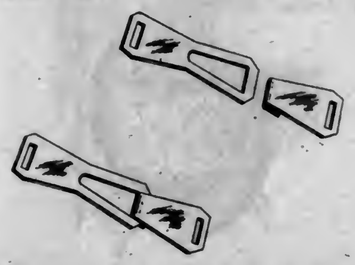


The ornamental design for a lamp shade, as shown.

42,113. DRINKING VESSEL OR SIMILAR ARTICLE. MATTHEW H. SLOAN, Cumberland, Md., assignor to The Potomac Glass Company, Cumberland, Md., a Corporation of Maryland. Filed Sept. 20, 1911. Serial No 650,472. Term of patent 14 years.

The ornamental design for a drinking vessel or similar article, as shown.

42,114. CLASP. HORACE P. STEWART, Grand Rapids, Mich. Filed Sept. 12, 1911. Serial No. 648,974. Term of patent 7 years.



The ornamental design for a clasp, as shown.

42,115. CENTERPIECE FOR TABLES. PAUL SZATHMARY, Clarence, N. Y. Filed Oct. 30, 1911. Serial No. 657,618. Term of patent 3½ years.

The ornamental design for a centerpiece for tables, as shown.

42,116. BADGE. ALBERT C. TURNER, San Francisco, Cal. Filed July 20, 1911. Serial No. 639,665. Term of patent 3½ years.

The ornamental design for a badge as shown.

TRADE-MARKS

PUBLISHED JANUARY 23, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 19,063. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed Apr. 25, 1906.

EL TIGRE

Particular description of goods.—A Cooking Compound Containing Cotton-Seed Oil and Oleostearin.
Claims use since March, 1906.

Ser. No. 35,364. (CLASS 47. WINES.) CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed June 15, 1908.

CERRITO

Particular description of goods.—Sweet Wines of the Haut-Sauterne Type.
Claims use since Aug. 10, 1894.

Ser. No. 45,347. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CHARLES URBAN, London, England. Filed Oct. 15, 1909.

SPIROGRAPH

Particular description of goods.—Kinematographic Apparatus and Photographic Films Bearing Finished Pictures for Use in Connection Therewith.
Claims use since Aug. 7, 1900.

Ser. No. 45,370. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN FORK AND HOE COMPANY, Cleveland, Ohio. Filed Oct. 16, 1909.

LIGHTNING

Particular description of goods.—Agricultural Forks, Hoes, and Rakes for Various Purposes.
Claims use since about the 18th day of August, 1909.

Ser. No. 46,408. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) J. J. SAVILLE & COMPANY, LIMITED, Sheffield, England. Filed Dec. 10, 1909.

"TRIUMPH-SUPERB"

No claim being made to the word "Superb."
Particular description of goods.—Tool-Steel.
Claims use since the 30th day of October, 1909.

Ser. No. 46,584. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) MONOLITH STEEL CO. INC., Washington, D. C. Filed Dec. 17, 1909.

MONOLITH

Particular description of goods.—Iron and Steel Bars and Reticulated or Openwork Metal.
Claims use since Jan. 1, 1907.

Ser. No. 52,702. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE LONG GRATE BAR COMPANY, Buffalo, N. Y. Filed Nov. 10, 1910. Under ten-year proviso.

Long's Alternating Dumping Grate

Particular description of goods.—Furnace and Stove Grates.
Claims use since 1893.

Ser. No. 54,123. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLARD BURDETTE FORCE, New York, N. Y. Filed Jan. 27, 1911.

MAGDEN

Particular description of goods.—A Composition of Matter for Neutralizing the Acid Secretions of the Body and as a Disinfectant for the Teeth.
Claims use since Jan. 1, 1911.

Ser. No. 54,787. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WATERPROOF ENGINEERING COMPANY, Chicago, Ill. Filed Mar. 1, 1911.

WATECO

Particular description of goods.—Waterproofing and Damp-Proofing Paint.
Claims use since Nov. 1, 1910.

Ser. No. 54,954. (CLASS 15. OILS AND GREASES.) INGERSOLL-RAND COMPANY, Phillipsburg, N. J., and New York, N. Y. Filed Mar. 8, 1911.

IRCOIL

Particular description of goods.—Lubricating-Oils.
Claims use since Feb. 1, 1911.

Ser. No. 54,955. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INGERSOLL-RAND COMPANY, Phillipsburg, N. J., and New York, N. Y. Filed Mar. 8, 1911.

BUTTERFLY

Particular description of goods.—Rock-Drills.
Claims use since Oct. 1, 1910.

Ser. No. 55,323. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE NEW JERSEY ASBESTOS CO., Camden, N. J. Filed Mar. 27, 1911. Under ten-year proviso.

"GLADIATOR"

Particular description of goods.—Asbestos Coil and Spiral Packings, Asbestos Packing-Rings, Asbestos Packing-Gaskets, and Asbestos Packing.
Claims use since January, 1889.

Ser. No. 55,751. (CLASS 12. CONSTRUCTION MATERIALS.) THE UNITED GAS IMPROVEMENT COMPANY, Philadelphia, Pa. Filed Apr. 14, 1911.

UGITE

Particular description of goods.—Bituminous Compounds for Use in the Construction and Maintenance of Roads.
Claims use since the fall of 1909.

Ser. No. 56,033. (CLASS 15. OILS AND GREASES.) VACUUM OIL COMPANY, Rochester, N. Y. Filed Apr. 28, 1911.

No claim is made to the words "Motor Car Spirit Vacuum Oil Co. Egypt."
Particular description of goods.—Naphtha, Gasolene, and Benzin.
Claims use since Apr. 13, 1911.

Ser. No. 56,682. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ENTERPRISE MANUFACTURING COMPANY OF PENNSYLVANIA, Philadelphia, Pa. Filed May 29, 1911.

ENTERPRISE

Particular description of goods.—Bone-Mills, Shell-Mills, Corn-Mills, Raisin-Seeders, Grape-Seeders, Meat-Shavers, Vegetable-Slicers, Cheese-Cutters, Juice-Extractors, and Ice-Shredders.
Claims use since 1867.

Ser. No. 56,839. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL OPTICAL CORPORATION, Providence, R. I. Filed June 5, 1911.

UC

Particular description of goods.—Eyeglasses and Eyeglass Mountings or Frames and Parts Thereof.
Claims use since April, 1911.

Ser. No. 56,841. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE L. S. STARRETT CO., Athol, Mass. Filed June 5, 1911. Under ten-year proviso.

STARRETT

Particular description of goods.—Ball-Points, Brad-Sets, Toolmakers' Buttons, Center-Punches, Clamps, Countersinks, Cut-Nippers, Drill-Blocks, Hacksaws and Frames,

Nail-Sets, Pin-Vises, Attachments for Wrench-Jaws for Holding Pipes, Plumb-Bobs, Pliers, Saws, Scrapers, Screw-Drivers, Scribers, Straight-Edges, Tap-Wrenches, Trammels, Vises, and Wrenches.
Claims use since about 1867.

Ser. No. 56,994. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) FRED W. RAUSKOLB, Medford, Mass. Filed June 12, 1911.

Consists of a representation of a raised arm and hammer, as shown in the drawing.
Particular description of goods.—Books and Packages of Gold, Silver, Composition, Aluminum, Schlag Metal, or other Metallic Leaf.
Claims use since 1861.

Ser. No. 57,034. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TEXAS REFINING COMPANY, Greenville, Tex. Filed June 14, 1911.

The picture of the woman is fanciful.
Particular description of goods.—Cooking-Oil Containing Cotton-Seed Oil and Beef-Stearin.
Claims use since May 10, 1911.

Ser. No. 57,132. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ILLINOIS CANNING COMPANY, Hoopeston, Ill. Filed June 17, 1911.

WESTERN BEAUTY

Particular description of goods.—Canned Corn.
Claims use since 1891.

Ser. No. 57,245. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PYRENE MANUFACTURING CO., New York, N. Y. Filed June 22, 1911.

Pyrene

Particular description of goods.—Syringes for Use with Fire-Extinguishing Compounds.
Claims use since Oct. 1, 1907.

Ser. No. 57,423. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GEO. A. ALDEN & CO., Boston, Mass. Filed June 30, 1911.

USSA

Particular description of goods.—Shellac in Gum or Solid Form.
Claims use since May 11, 1911.

Ser. No. 57,561. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAMS PATENT CRUSHER AND PULVERIZER COMPANY, St. Louis, Mo. Filed July 10, 1911.

Particular description of goods.—Grinding-Machines, Shredding-Machines, Disintegrators, Tritulators, Desiccating-Machines, and Parts Thereof.
Claims use since June 1, 1903.

Ser. No. 57,834. (CLASS 12. CONSTRUCTION MATERIALS.) WHITE BROTHERS, San Francisco, Cal. Filed July 26, 1911.

Wybro

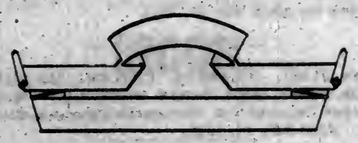
Particular description of goods.—Veneered Panels.
Claims use since June 1, 1911.

Ser. No. 57,843. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WM. H. HAYWARD, Brooklyn, N. Y. Filed July 27, 1911.

ZAS-O

Particular description of goods.—Cleaning-Powder.
Claims use since Nov. 10, 1910.

Ser. No. 57,861. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NEWELL MATHEWS COMPANY, Los Angeles, Cal. Filed July 27, 1911.



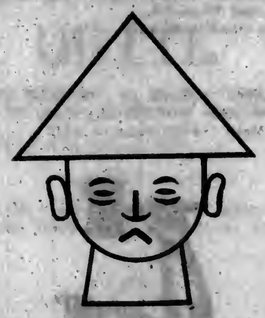
Particular description of goods.—Spike-Tooth Harrows; Spring-Tooth Harrows; Disk Harrows, Disk Plows, Walking Cultivators and Harrows; Furrowers; Alfalfa-Renovators; Cultivator-Steels; Shovel-Plows; Drag-Scrapers; Slip-Scrapers; Fresno-Scrapers; Leveling-Scrapers; Buck-Scrapers; Utah Scrapers; Wheel-Scrapers; Wheel-Plows; Wheel-Harrows; Wheel-Seeders, Wheel-Rakes; and Wheel-Cultivators.
Claims use since 1908.

Ser. No. 57,908. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE NORTH & JUDD MANUFACTURING COMPANY, New Britain, Conn. Filed July 28, 1911.

ANCHORIDE

Particular description of goods.—Oxidising Liquid Coatings for Metal Articles.
Claims use since on or about July 1, 1911.

Ser. No. 57,916. (CLASS 43. THREAD AND YARN.) ARNOLD OTTO MEYER, Hamburg, Germany. Filed July 28, 1911.



Particular description of goods.—Cotton, Wool, Silk, and Hemp Yarn in Hanks, Spools, and Balls, Plain, Mercerized, Glazed, Dyed, Bleached, Unbleached, White and Gray, Yarns for Sewing, Embroidering, Weaving, Netting, Darning, and Crocheting.
Claims use since the 30th day of September, 1908.

Ser. No. 58,035. (CLASS 39. CLOTHING.) THE DEMPSTER & PLACE COMPANY, Gloversville, N. Y. Filed Aug. 4, 1911.

D. & P.

Particular description of goods.—Men's and Women's and Children's Gloves and Mittens.
Claims use since 1886.

Ser. No. 58,200. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) HENRY DANNER, Paris, France. Filed Aug. 14, 1911.

Particular description of goods.—Apparatus for Taking Kinematographic Pictures, Kinematographic Projection Apparatus, Screens for Projections, Projecting-Lanterns, Kinematographic Films, and Packings for Said Films.
Claims use since Dec. 1, 1910.

Ser. No. 58,239. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. P. LARSON, JR. COMPANY, Chicago, Ill. Filed Aug. 17, 1911.

The words "Peptomint" and "Gum" being disclaimed.
Particular description of goods.—Chewing-Gum.
Claims use since July 27, 1911.

Ser. No. 58,314. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CHARLES KOHLER, New York, N. Y. Filed Aug. 22, 1911.

KOC

Particular description of goods.—Pianos and Piano-Players.
Claims use since about 1901.

Ser. No. 58,326. (CLASS 15. OILS AND GREASES.) MAGNOLIA PETROLEUM COMPANY, Galveston and Dallas, Tex. Filed Aug. 22, 1911.

MAGNOLIA

Particular description of goods.—Gasolene.
Claims use since May 1, 1911.

Ser. No. 58,409. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STANDARD OPTICAL COMPANY, Geneva, N. Y. Filed Aug. 26, 1911.

Stoco

Particular description of goods.—Machines for Manufacturing, Finishing, Adjusting, and Testing Lenses and Lens-Mountings for Eyeglasses and Spectacles.
Claims use since about July 1, 1911.

Ser. No. 58,488. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Aug. 31, 1911.

VICO

Particular description of goods.—Lubricating-Oils.
Claims use since July 15, 1911.

Ser. No. 58,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOYD MEDICINE CO., Detroit, Mich. Filed Sept. 8, 1911.

Consisting of a portrait of E. W. Boyd and a facsimile of his signature.

Particular description of goods.—A Remedy for Rheumatism.
Claims use since July 10, 1911.

Ser. No. 58,627. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VITO A. PITTARO, New York, N. Y. Filed Sept. 11, 1911.

Particular description of goods.—Cough Medicines, Blood-Purifiers, Tonic Elixirs, Gonorrhea-Injections, Gonorrhea Mixtures, Tonic Pills and Powders, Kidney Remedies, Rheumatic Liniments, Laxatives, Diarrhea Remedies, Castor-Oil, Cod-Liver-Oil Preparations, Compound Extract Sarsaparilla, Effervescent Magnesia, and Glycerophosphates Compounds.
Claims use since about June 3, 1911.

Ser. No. 58,679. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE E. QUERE, Cleveland, Ohio. Filed Sept. 15, 1911.

ABASCA

Particular description of goods.—Castor-Oil, Witch-Hazel Salve, Compound Syrup of Hypophosphites, Tooth-Powder, and Remedies for Diarrhea, Colds, Corns, and Diseases of the Liver and Kidneys.
Claims use since October, 1901.

Ser. No. 58,724. (CLASS 13. HARDWARE AND PLUMBING, AND STEAM-FITTING SUPPLIES.) CHARLES L. MICHOD, Los Angeles, Cal. Filed Sept. 19, 1911.

CARBO

Particular description of goods.—Steel Fence-Posts and Poles.
Claims use since July 1, 1910.

Ser. No. 58,821. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HOLZAPFELS LIMITED, Newcastle-upon-Tyne, England. Filed Sept. 22, 1911. Under ten-year proviso.

HOLZAPFELS

Particular description of goods.—Anticorrosive and Antifouling Paint, Mixed Paint, and Enamel Paints.
Claims use since May, 1880.

Ser. No. 58,895. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) FRANCIS I. DU PONT, Wilmington, Del. Filed Sept. 28, 1911.

Loxograph

Particular description of goods.—Triangular Rulers.
Claims use since Sept. 6, 1911.

Ser. No. 58,909. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BIRMINGHAM MACARONI COMPANY, Birmingham, Ala. Filed Sept. 28, 1911.

SEMINOLE

Particular description of goods.—Macaroni-Paste.
Claims use since Sept. 6, 1911.

Ser. No. 58,935. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ATLANTA AGRICULTURAL WORKS, Atlanta, Ga. Filed Sept. 29, 1911.

"GEORGIA CRACKER"

Particular description of goods.—Fertilizer-Distributers and Harrows.
Claims use since July, 1909.

Ser. No. 58,937. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ATLANTA AGRICULTURAL WORKS, Atlanta, Ga. Filed Sept. 29, 1911.

E-Z

Particular description of goods.—Cultivators.
Claims use since October, 1908.

Ser. No. 58,963. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PALMER MOTION PICTURE COMPANY, New York, N. Y. Filed Oct. 2, 1911.

Homograf

Particular description of goods.—Moving-Picture Machines.
Claims use since Sept. 15, 1911.

Ser. No. 59,006. (CLASS 15. OILS AND GREASES.) ALFRED G. BELDEN, New York, N. Y. Filed Oct. 6, 1911.

MONARCH

Particular description of goods.—Lubricating Oils and Greases.
Claims use since the autumn of the year 1875.

Ser. No. 59,022. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FULTON-BELL COMPANY, New York, N. Y. Filed Oct. 6, 1911.

CYCLONE

Particular description of goods.—Electric Liquid-Mixing and Electric Liquid-Heating Machines.
Claims use since November, 1910.

Ser. No. 59,036. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KEYSTONE STEEL & WIRE COMPANY, Peoria, Ill. Filed Oct. 7, 1911.

Square Deal

Particular description of goods.—Gates.
Claims use since about Dec. 1, 1906.

Ser. No. 59,037. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KEYSTONE STEEL & WIRE COMPANY, Peoria, Ill. Filed Oct. 7, 1911.

KEYSTONE

Particular description of goods.—Barb-Wire.
Claims use since about Nov. 1, 1908.

Ser. No. 59,039. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KEYSTONE STEEL & WIRE COMPANY, Peoria, Ill. Filed Oct. 7, 1911.

Keystone

Particular description of goods.—Gates.
Claims use since about June 1, 1891.

Ser. No. 59,074. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MOSES H. HARRIS, New York, N. Y. Filed Oct. 9, 1911. Under ten-year proviso.

SUCTION

Particular description of goods.—Clips or Guards for Eyeglasses.
Claims use since the year 1894.

Ser. No. 59,120. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UPLAND CITRUS ASS'N., Upland, Cal. Filed Oct. 12, 1911.

APEX

Particular description of goods.—Oranges.
Claims use since Aug. 19, 1911.

Ser. No. 59,168. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILSON CHEMICAL CO., Council Bluffs, Iowa. Filed Oct. 14, 1911.

Particular description of goods.—A Floor-Sweeping Compound.
Claims use since Apr. 18, 1910.

Ser. No. 59,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. ZIMMERN'S CO., Mobile, Ala. Filed Oct. 14, 1911.

"Z"

The mark being printed in blue.
Particular description of goods.—Stock and Poultry Feed.
Claims use since January, 1909.

Ser. No. 59,179. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Oct. 16, 1911.

Particular description of goods.—Eyeglasses and Spectacles.
Claims use since Sept. 15, 1911.

Ser. No. 59,169. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FRANCIS JOSEPH UNDERWOOD, Jamestown, N. Y. Filed Oct. 16, 1911.

VARSOLVE

Particular description of goods.—A Substitute for Turpentine.
Claims use since Mar. 21, 1911.

Ser. No. 59,253. (CLASS 38. PRINTS AND PUBLICATIONS.) HILL PUBLISHING COMPANY, New York, N. Y. Filed Oct. 20, 1911.

COAL AGE

Particular description of goods.—A Weekly Periodical.
Claims use since Oct. 10, 1911.

Ser. No. 59,281. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. E. BARBOUR COMPANY, LIMITED, St. John, New Brunswick, Canada. Filed Oct. 21, 1911.

Particular description of goods.—Tea.
Claims use since about Dec. 18, 1905.

Ser. No. 59,292. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHARLES TWINING, New York, N. Y. Filed Oct. 23, 1911.

TPOMETER

Particular description of goods.—Type-Writers.
Claims use since Oct. 7, 1911.

Ser. No. 59,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa. Filed Oct. 24, 1911.

Nobetma

Consists of the fanciful word "Nobetma."
Particular description of goods.—Candy.
Claims use since Aug. 21, 1911.

Ser. No. 59,323. (CLASS 47. WINES.) EMPIRE STATE WINE CO., Penn Yan, N. Y. Filed Oct. 24, 1911.

OOM

Particular description of goods.—Sparkling Wine.
Claims use since the 12th day of September, 1911.

Ser. No. 59,324. (CLASS 37. PAPER AND STATIONERY.) MAGNOLIA PAPER CO., Houston, Tex. Filed Oct. 24, 1911.

Canvas Back

Particular description of goods.—Wrapping-Paper.
Claims use since about Jan. 1, 1909.

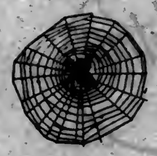
Ser. No. 59,325. (CLASS 37. PAPER AND STATIONERY.) MAGNOLIA PAPER CO., Houston, Tex. Filed Oct. 24, 1911.

HOMESPUN

Particular description of goods.—Wrapping-Paper.
Claims use since Jan. 1, 1910.

Ser. No. 59,326. (CLASS 37. PAPER AND STATIONERY.) MAGNOLIA PAPER CO., Houston, Tex. Filed Oct. 24, 1911.

COBWEB



Particular description of goods.—Wrapping-Paper.
Claims use since about Jan. 1, 1905.

Ser. No. 59,378. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EMPIRE SHELLAC COMPANY, Boston, Mass. Filed Oct. 27, 1911.

ESC
J.E.P.

Particular description of goods.—Varnishes and Varnish-Gums.
Claims use since Jan. 3, 1911.

Ser. No. 59,380. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EMPIRE SHELLAC COMPANY, Boston, Mass. Filed Oct. 27, 1911.

E.S.C.

Particular description of goods.—Varnishes and Varnish-Gums.
Claims use since Jan. 3, 1911.

Ser. No. 59,411. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Oct. 28, 1911.

SEROCO

Particular description of goods.—Mixed Paints.
Claims use since January, 1890.

Ser. No. 59,472. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN FLOUR MILL COMPANY, Davenport, Iowa, and New Prague, Minn. Filed Nov. 1, 1911.

AZAZA
AZAZA
FLOUR

The word "Flour" being disclaimed.
Particular description of goods.—Wheat-Flour.
Claims use since about July 14, 1911.

Ser. No. 59,485. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GIT MFG. CO., Westfield, Mass. Filed Nov. 1, 1911.

GIT

Particular description of goods.—Paste Soap.
Claims use since about Sept. 16, 1909.

Ser. No. 59,496. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH PRICE, Hartford, Conn. Filed Nov. 2, 1911.

CISCOQ

Particular description of goods.—Remedies for Catarrh, Asthma, Hay-Fever, Headache, and Cold.
Claims use since Oct. 19, 1911.

Ser. No. 59,511. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JNO. B. DANIEL, Atlanta, Ga. Filed Nov. 2, 1911.

PHOSCAYA

Particular description of goods.—A Nerve and Blood Tonic.
Claims use since Sept. 1, 1910.

Ser. No. 59,532. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Nov. 3, 1911.

STANDARD OIL COMPANY

No claim is made to the words "Standard Oil Company."
Particular description of goods.—Lubricating-Oils.
Claims use since Oct. 30, 1911.

Ser. No. 59,535. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WABASH CHEMICAL CO., Terre Haute, Ind. Filed Nov. 3, 1911.

WABASH

The right to the exclusive use of the word "Wabash" being disclaimed.
Particular description of goods.—A Non-Poisonous Sheep-Dip, Germicide, Vermicide, and Antiseptic.
Claims use since Oct. 1, 1911.

Ser. No. 59,538. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM A. SCOTT, North Tazewell, Va. Filed Nov. 4, 1911.

WAS-COTT

Particular description of goods.—Ginger-Ale.
Claims use since July 25, 1911.

Ser. No. 59,611. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDEPENDENT SALT CO., Brooklyn, N. Y. Filed Nov. 8, 1911. Under ten-year proviso.

PEERLESS
D.C.F.

Particular description of goods.—Salt.
Claims use since 1891.

Ser. No. 59,652. (CLASS 40. FANCY GOODS, FURNISH-

Ser. No. 59,794. (CLASS 46. FOODS AND INGREDI-

Ser. No. 59,906. (CLASS 46. FOODS AND INGREDI-

Ser. No. 59,652. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SANITARY SKIRT SHIELD CO., Seattle, Wash. Filed Nov. 11, 1911.

Uzette

Particular description of goods.—Dress-Shields.
Claims use since Oct. 28, 1911.

Ser. No. 59,664. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FRANK D. HEALY, New York, N. Y. Filed Nov. 11, 1911.

I.N.S.

Particular description of goods.—Scarf-Pins, Emblem-Buttons, Emblem-Pins, Cuff-Links, Bracelets, Rings, Watch-Charms, Hat-Pins Made of Precious Metal, Brooches, Lapel-Pins, and Tie-Clasps.
Claims use since Oct. 27, 1911.

Ser. No. 59,699. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MUNNING-LOSS CO., Matawan, N. J. Filed Nov. 13, 1911.

"OPTIMUS"

Particular description of goods.—Electric Rheostats, Generators, and Motors.
Claims use since May, 1911.

Ser. No. 59,709. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES C. NIELSON, Kansas City, Mo. Filed Nov. 13, 1911.

HEA-LON

Particular description of goods.—Ointment.
Claims use since July 28, 1911.

Ser. No. 59,732. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. C. LAWRENCE LEATHER CO., Boston, Mass. Filed Nov. 15, 1911.

DURO

Particular description of goods.—Finished Leather.
Claims use since June, 1911.

Ser. No. 59,738. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE WILCOX & WHITE COMPANY, Meriden, Conn. Filed Nov. 15, 1911.

VOLTEM

Particular description of goods.—Perforated Music-Sheets for Mechanical Music-Playing Instruments.
Claims use since July 24, 1911.

Ser. No. 59,771. (CLASS 37. PAPER AND STATIONERY.) KABUS RUBBER COMPANY, New York, N. Y. Filed Nov. 17, 1911.

KOSMOS

Particular description of goods.—Rubber Erasers and Rubber Bands.
Claims use since Oct. 15, 1911.

Ser. No. 59,772. (CLASS 37. PAPER AND STATIONERY.) KABUS RUBBER COMPANY, New York, N. Y. Filed Nov. 17, 1911.

ACME

Particular description of goods.—Rubber Erasers and Rubber Bands.
Claims use since Oct. 15, 1911.

Ser. No. 59,784. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y. Filed Nov. 18, 1911.

Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.
Claims use since June 6, 1911.

Ser. No. 59,791. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAKE REGION PACKING ASSOCIATION, Tavares, Fla. Filed Nov. 18, 1911.

Particular description of goods.—Oranges, Lemons, Grape-Fruit, Tangerines, and Limes.
Claims use since November, 1910.

Ser. No. 59,794. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MCGOWAN BROS. COMPANY, Steubenville, Ohio. Filed Nov. 18, 1911.

The picture shown being a photograph of Frederick William Steuben, deceased.
Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since November, 1904.

Ser. No. 59,850. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIONOS MEDICAL COMPANY, Englewood, Colo. Filed Nov. 22, 1911.

DIONOS

Particular description of goods.—A Remedy for Diseases of the Lungs.
Claims use since Nov. 1, 1911.

Ser. No. 59,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. MCGEE, Baltimore, Md. Filed Nov. 23, 1911.

Particular description of goods.—Raw Oysters.
Claims use since Sept. 1, 1891.

Ser. No. 59,890. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. PETER FAHRNEY & SONS CO., Chicago, Ill. Filed Nov. 23, 1911. Under ten-year proviso.

DR. PETER'S
MAGNETIC BLOOD
VITALIZER

Particular description of goods.—A General Tonic and Blood Remedy.
Claims use since 1889.

Ser. No. 59,894. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS G. DOMAN, New York, N. Y. Filed Nov. 24, 1911.

FINETIA

Particular description of goods.—Cream for the Skin.
Claims use since Oct. 1, 1911.

Ser. No. 59,906. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Nov. 24, 1911.

SUNSET

Particular description of goods.—Biscuits.
Claims use since December, 1908.

Ser. No. 59,907. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Nov. 24, 1911.

Rico

Particular description of goods.—Biscuits.
Claims use since October, 1906.

Ser. No. 59,919. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CONSUMERS COMPANY, Chicago, Ill. Filed Nov. 25, 1911.

Hydrox

Particular description of goods.—Peroxid of Hydrogen.
Claims use since about Jan. 1, 1908.

Ser. No. 59,928. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHESTER KENT & COMPANY, Jersey City, N. J., and Boston, Mass. Filed Nov. 25, 1911.

Saxo

Particular description of goods.—Salve for Skin Affections.
Claims use since Nov. 8, 1911.

Ser. No. 59,968. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. LUTHER J. PENNIMEY, Longmeadow, Mass. Filed Nov. 27, 1911.

Particular description of goods.—Liniment.
Claims use since on or about Feb. 15, 1911.

Ser. No. 59,987. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VITALIS CO., New York, N. Y. Filed Nov. 28, 1911.

AVALAX

Particular description of goods.—A Laxative Remedy.
Claims use since Nov. 11, 1911.

Ser. No. 60,152. (CLASS 48. MALT EXTRACTS AND LIQUORS.) STORZ BREWING CO., Omaha, Nebr. Filed Dec. 9, 1911.

Old Saxon

Particular description of goods.—Beer.
Claims use since Dec. 5, 1911.

Ser. No. 60,254. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JAMESTOWN BREWING COMPANY, Jamestown, N. Y. Filed Dec. 15, 1911.

400

Particular description of goods.—Beer.
Claims use since about Oct. 20, 1911.

Ser. No. 60,264. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) PETER NEWTON, Chicago, Ill. Filed Dec. 15, 1911.

SOUTH SHORE

Particular description of goods.—Cordials.
Claims use since Nov. 21, 1911.

[Vol. 174. No. 4.]

TRADE-MARKS

REGISTERED JANUARY 23, 1912.

85,026. ACETYLENE-BURNERS. AMERICAN LAVA COMPANY, Chattanooga, Tenn.
Filed August 25, 1911. Serial No. 58,393. PUBLISHED OCTOBER 31, 1911.

85,027. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,924. PUBLISHED NOVEMBER 21, 1911.

85,028. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,929. PUBLISHED NOVEMBER 21, 1911.

85,029. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,931. PUBLISHED NOVEMBER 21, 1911.

85,030. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,932. PUBLISHED NOVEMBER 21, 1911.

85,031. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,327. PUBLISHED NOVEMBER 14, 1911.

85,032. MESH-BAGS, VANITY-CASES, CIGARETTE-CASES, BRIC-À-BRAC, PICTURE-FRAMES, TABLE-WARE, HOLLOW WARE, AND FLAT WARE, ALL OF SOLID PRECIOUS METAL. ELIE BELINE, New York, N. Y.
Filed May 26, 1911. Serial No. 56,607. PUBLISHED NOVEMBER 14, 1911.

85,033. TOWELING. BLODGETT, ORDWAY & WEBBER, Boston, Mass.
Filed August 25, 1911. Serial No. 58,398. PUBLISHED NOVEMBER 21, 1911.

85,034. CUT GLASSWARE AND ENGRAVED GLASSWARE. CORONA CUT GLASS COMPANY, Toledo, Ohio.
Filed August 8, 1910. Serial No. 51,305. PUBLISHED APRIL 25, 1911.

85,035. RINGS. TRYNE S. FLEISCHER, New York, N. Y.
Filed February 9, 1911. Serial No. 54,409. PUBLISHED NOVEMBER 21, 1911.

85,036. CIGARS. GERMANN AND COMPANY, LIMITED, Manila, Philippine Islands.
Filed September 12, 1910. Serial No. 51,769. PUBLISHED NOVEMBER 7, 1911.

85,037. CERTAIN GLASSWARE. GILL BROTHERS COMPANY, Steubenville, Ohio.
Filed August 11, 1911. Serial No. 58,147. PUBLISHED NOVEMBER 14, 1911.

85,038. WATCHES AND CLOCKS AND PARTS THEREOF. GUSTAV HÄUSLER, Hanover, Germany.
Filed March 22, 1910. Serial No. 46,597. PUBLISHED NOVEMBER 21, 1911.

85,039. CIGARS. HEINEMAN BROS., Baltimore, Md.
Filed March 17, 1911. Serial No. 55,129. PUBLISHED MAY 30, 1911.

85,040. COFFEE. HULMAN & CO., Terre Haute, Ind.
Filed August 19, 1911. Serial No. 58,281. PUBLISHED NOVEMBER 7, 1911.

85,041. HEATING AND COOKING STOVES, RANGES, AND FURNACES. THE MONITOR STOVE AND RANGE COMPANY, Cincinnati, Ohio.
Filed June 15, 1911. Serial No. 57,056. PUBLISHED NOVEMBER 7, 1911.

85,042. NATURAL SPRING DRINKING-WATER. NATIONAL WATER COMPANY, Waukesha, Wis., and New York, N. Y.
Filed November 18, 1909. Serial No. 45,979. PUBLISHED SEPTEMBER 12, 1911.

85,043. NATURAL SPRING DRINKING-WATER. NATIONAL WATER COMPANY, Waukesha, Wis., and New York, N. Y.
Filed November 18, 1909. Serial No. 45,981. PUBLISHED SEPTEMBER 12, 1911.

85,044. WATER-TUBE BOILERS. RISDON IRON & LOCOMOTIVE WORKS, San Francisco, Cal.
Filed May 22, 1911. Serial No. 56,525. PUBLISHED NOVEMBER 14, 1911.

85,045. COAL, WOOD, GAS, GASOLENE, AND OIL STOVES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed August 25, 1911. Serial No. 58,388. PUBLISHED NOVEMBER 14, 1911.

85,046. GASOLENE-STOVES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed October 7, 1911. Serial No. 59,029. PUBLISHED NOVEMBER 7, 1911.

85,047. CERTAIN DENTAL AND SURGICAL FURNITURE, DENTAL GOLD PLATE, AND DENTAL GOLD SOLDER. LEE S. SMITH & SON CO., Pittsburgh, Pa.
Filed July 31, 1911. Serial No. 57,941. PUBLISHED NOVEMBER 7, 1911.

85,048. CERTAIN SURGICAL BANDAGES AND SURGICAL BELTS. THE SPIRELLA COMPANY, Meadville, Pa.
Filed October 4, 1911. Serial No. 58,990. PUBLISHED NOVEMBER 21, 1911.

85,049. FLY-KILLERS OR HAND DEVICES FOR KILLING FLIES AND OTHER INSECTS. UNITED STATES WIRE MAT COMPANY, Decatur, Ill.
Filed June 23, 1911. Serial No. 57,267. PUBLISHED NOVEMBER 14, 1911.

85,050. MANTLES. WELSBACH COMPANY, Gloucester City, N. J.
Filed October 12, 1911. Serial No. 59,130. PUBLISHED NOVEMBER 7, 1911.

LABELS

REGISTERED JANUARY 23, 1912.

16,113.—*Title:* "E. HARRISON'S CHEWING GUM." (For Chewing-Gum.) ROBERT MCK. ACKERMAN, Binghamton, N. Y. Filed November 16, 1911.

16,114.—*Title:* "GRANITE PREPARED GRANITE." (For Liquid House-Paint.) THE ALLENTOWN MANUFACTURING COMPANY, Allentown, Pa. Filed December 12, 1911.

16,115.—*Title:* "BATH AMONE." (For Toilet Compounds.) AMERICAN AMMONE COMPANY, New York, N. Y. Filed December 1, 1911.

16,116.—*Title:* "EASY JELL." (For Jelly-Powder.) ARCADIA FOOD COMPANY, New York, N. Y. Filed December 6, 1911.

16,117.—*Title:* "NONPAREIL MEDIUM PRESSURE CEMENT." (For Cement.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed December 30, 1911.

16,118.—*Title:* "NONPAREIL LOW PRESSURE CEMENT." (For Cement.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed December 30, 1911.

16,119.—*Title:* "NONPAREIL FINISHING CEMENT." (For Cement.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed December 30, 1911.

16,120.—*Title:* "NONPAREIL HIGH PRESSURE CEMENT." (For Cement.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed December 30, 1911.

16,121.—*Title:* "CERECO." (For Coffee, Cereals, and Chicory.) CHERK-NEAL COFFEE CO., Nashville, Tenn. Filed January 2, 1912.

16,122.—*Title:* "RATTLER BRAND." (For Oranges and Grape-Fruit.) E. R. BRACKETT COMPANY, New York, N. Y. Filed November 9, 1911.

16,123.—*Title:* "A GREAT APPETIZER." (For Granulated Sapsago-Cheese.) H. D. GARDY, Philadelphia, Pa. Filed December 2, 1911.

16,124.—*Title:* "CHARCOAL TOOTH PASTE." (For Tooth-Paste.) WILLIAM H. HANNING, Terre Haute, Ind. Filed December 9, 1911.

16,125.—*Title:* "SUN RISE BRAND." (For Evaporated Skim-Milk.) HIRES CONDENSED MILK COMPANY, Philadelphia, Pa. Filed December 30, 1911.

16,126.—*Title:* "ISLETON CREAMERY BUTTER." (For Butter.) ISLETON BUTTER COMPANY, Isleton, Cal. Filed January 2, 1912.

16,127.—*Title:* "ADELOSA." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,128.—*Title:* "COMPLIMENTS OF THE SEASON." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,129.—*Title:* "BELLE POINT." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,130.—*Title:* "DRA ROSA." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,131.—*Title:* "DON BRAMOS." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,132.—*Title:* "SALVE REY." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,133.—*Title:* "RICABELLA." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,134.—*Title:* "TRES BON." (For Cigars.) JULIUS BIEN COMPANY, New York, N. Y. Filed November 4, 1911.

16,135.—*Title:* "THE FRAMELESS, OR NO-FRAME SCREEN." (For Insect and Window Screens.) FRANCIS M. KING, Sr., Philadelphia, Pa. Filed November 29, 1911.

16,136.—*Title:* "THE FIVE LABEL CIGAR." (For Cigars.) T. F. MARTIN, Rock Island, Ill. Filed June 10, 1911.

16,137.—*Title:* "THE ENLIGHT." (For Tablets.) OSBORN PAPER COMPANY, Marion, Ind. Filed November 24, 1911.

16,138.—*Title:* "FERRO-CHINA-ITALIA." (For Bitters.) RINALDI & GROSSI, New York, N. Y. Filed July 12, 1911.

16,139.—*Title:* "RED ROSE." (For Cigars.) SCHMIDT & CO., New York, N. Y. Filed January 4, 1912.

16,140.—*Title:* "EVAROSA." (For Remedial Tonic for Hair and Scalp.) THE TOILETINE COMPANY, Greenfield, Mass. Filed October 19, 1911.

PRINTS

REGISTERED JANUARY 23, 1912.

2,928.—*Title:* "HE'S COMING TO IT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed December 28, 1911.

2,929.—*Title:* "PRODUCTS THAT HAVE MADE KENTUCKY FAMOUS." (For Iodinized Emulsion and Creosotonic.) THE DAWSON PHARMACAL COMPANY, Dawsonsprings, Ky. Filed December 14, 1911.

2,930.—*Title:* "DRESS STYLES COME AND GO." (For Hooks and Eyes.) PERT BROS., Philadelphia, Pa. Filed December 6, 1911.

2,931.—*Title:* "NEVER WET." (For Waterproofing and Preservative Paste for Leather.) PROVIDENCE OIL COMPANY, Providence, R. I. Filed December 7, 1911.

2,932.—*Title:* "WESSON SNOWDRIFT OIL." (For Wesson Snowdrift Oil.) THE SOUTHERN COTTON OIL CO., New York, N. Y. Filed December 26, 1911.

2,933.—*Title:* "LION COLLARS." (For Collars.) UNITED SHIRT & COLLAR CO., Troy, N. Y. Filed December 30, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

JACKSON COMPANY *v.* ROGERS & THOMPSON.

Decided December 4, 1911.

1. TRADE-MARKS—GOODS OF SAME DESCRIPTIVE PROPERTIES—"COTTON SHEETINGS AND SHIRTINGS" AND "SILK, AND COTTON AND SILK MIXED, PIECE GOODS."

Silk and cotton and silk mixed piece goods *Held* to constitute goods of the same descriptive properties as cotton sheetings and shirtings and cotton piece goods and blankets.

2. SAME—SIMILARITY OF MARKS.

A mark consisting of the representation of a number of owls with outspread wings grouped under the branches of a tree *Held* deceptively similar to a mark consisting of the representation of an owl sitting upon a branch of a tree and the word "Ko' Ko Ko."

APPEAL from Examiner of Interferences.

TRADE-MARK FOR SILK PIECE GOODS AND SILK AND COTTON MIXED PIECE GOODS.

Mr. Frederick P. Fish for Jackson Company.

Mr. Joseph L. Levy and *Mr. A. M. Bunn* for Rogers & Thompson.

MOORE, *Commissioner:*

This is an appeal by Rogers & Thompson from the decision of the Examiner of Interferences sustaining the opposition of the Jackson Company to the registration of appellant's trade-mark.

The present appeal raises two questions—first, as to the similarity of the goods to which the marks of the applicant and opposer are respectively applied, and, second, as to the similarity of the marks themselves.

The marks belonging to the opposer upon which this proceeding is based are shown in registrations Nos. 12,188 and 65,595. These marks are described as used upon cotton sheetings and shirtings and upon cotton piece goods and blankets, more specifically described as bleached, gray, printed, and fancy cotton piece goods and blankets.

The applicant seeks to register the mark for use on silk and cotton and silk mixed piece goods. In my opinion the Examiner of Interferences was right in holding that the goods of the respective parties as thus described are of the same descriptive properties. It is believed that the ordinary purchaser would upon seeing similar marks displayed upon these classes of goods assume that they were produced by the same manufacturer. It is to be noted that applicant itself at first sought to register the mark for cotton piece goods as well as silk piece goods and cotton and silk mixed piece goods. This is very persuasive evidence that the ordinary purchaser might expect these classes of goods to be produced by the same manufacturer.

The marks of the opposer consist of the representation of an owl sitting upon a branch of a tree and having printed thereunder the word "Ko' Ko Ko" in one instance and the words "Ko' Ko Ko Sheetings" in the other. Applicant's mark consists of the representation of a number of owls with outspread wings grouped under the branches of a tree. In each of these marks the representation of the owl is believed to be so prominent as to be the controlling feature—the one which a purchaser would be likely to keep in mind as identifying the manufacturer. The fact that one mark shows a number of owls instead of one and the other differences in detail which exist are not believed to so differentiate the marks as to avoid the likelihood of confusion. I am therefore of the opinion that the Examiner of Interferences was right in sustaining the opposition of the Jackson Company, and his decision is affirmed.

IN RE AERIAL TELEPHONE AND POWER COMPANY.

Decided December 7, 1911.

APPLICATION—RIGHT TO INSPECT—GENERAL ASSIGNMENT DOES NOT GIVE.

An assignment purporting to transfer all right, title, and interest "in and to all improvements, inventions, caveats, franchises, patents and applications for patents pertaining to wireless telephony, wireless telegraphy or wireless power heretofore, now or hereafter owned or filed or in any manner acquired by the said Jahnke," *Held* not such an assignment as would justify the Office in giving the alleged assignee any information as to any particular application filed by J., much less to inform such alleged assignee of all pending applications filed by J. relating to the classes of inventions named.

ON PETITION.

Mr. Frank S. Appleman for Aerial Telephone and Power Company.

Mr. Albert A. Jahnke pro se.

MOORE, *Commissioner:*

This is a petition by the Aerial Telephone and Power Company requesting that the Office have a search made and inform the petitioner of all pend-

ing applications filed by one Jahnke relating to wireless telephony, wireless telegraphy, or wireless power.

In support of this request the petitioner calls attention to the fact that Jahnke has under the order of the court made various assignments of specific applications to the petitioner and one general assignment recorded in liber G 88, page 36, purporting to transfer all right, title, and interest—

in and to all improvements, inventions, caveats, franchises, patents and applications for patents pertaining to wireless telephony, wireless telegraphy or wireless power heretofore, now or hereafter owned or filed or in any manner acquired by the said Jahnke.

This assignment is even more comprehensive and less definite than that referred to by the Circuit Court of Appeals of the Ninth Circuit in the case of *Reagan Vapor Engine Co.* v. *Pacific Gas Engine Co. et al.* (49 Fed. Rep., 68; 1892, C. D., 319) and can be considered as nothing more than an executory contract, as was held by the court in regard to the alleged assignment in the case just referred to. It is not such an assignment as would authorize the Office in giving information as to any particular case pending before it.

Furthermore, it would be obviously impossible to determine with certainty whether a given application fell within the scope of the alleged general assignment. The Office could not, therefore, determine what applications should be included in such a list as the petitioner seeks, even if it were to undertake the task.

The information desired should be sought from the applicant himself.

The petition is denied.

EX PARTE F. R. CHAMBERLAIN COMPANY.

Decided January 3, 1912.

TRADE-MARKS—APPLICATION—PARTICULAR DESCRIPTION OF GOODS.

Where the labels filed with the application defined the goods as "a blend of rock-candy and maple-syrup," *Held* that the particular description of goods in the application "table-syrup" is sufficiently definite.

ON PETITION.

TRADE-MARK FOR TABLE-SYRUP, SAGO, TAPIOCA, AND CORN-STARCH.

Messrs. Small & Small for the applicant.

MOORE, *Commissioner:*

This is a petition from the requirement of the Examiner of Trade-Marks that applicant's particular designation of its goods be amended by substituting for the words "table syrup" the words "*a blend of rock-candy and maple-syrup*," to accord with the reading of the label filed as one of the specimens.

The position of the Examiner is that the words "table syrup" do not particularly describe applicant's goods within the meaning of the act of May 4, 1906, because, while all goods to which that term is applicable doubtless come within a single class of those established by the Office under the act mentioned, the words might be construed to include articles which, in the opinion of the Examiner, are not of the same descriptive properties. He suggests that strained honey might properly be termed a "table-syrup," but is not of the same descriptive properties as maple-syrup, molasses, cane-sugar syrup, etc.

I am of the opinion that the expression used by the applicant defines its goods with sufficient particularity to comply with the statute. Whether it is open to the objection specifically cited by the Examiner is at best problematical. It would seem that all articles which can properly be classed as table-syrups must be considered goods of the same descriptive properties. The expression appears to be fully as specific as those upheld in the case of *ex parte Windhorst & Co.* (164 O. G., 249) and *ex parte Columbia Cotton Oil and Provision Corporation*, (163 O. G., 977.)

The petition is granted.

THE ALEXANDER MILLING CO. *v.* VERNIER.

Decided December 13, 1911.

TRADE-MARKS—SIMILARITY.

A mark consisting of the pictorial representation of a man having a joyful or hilarious expression, with the words "O B Joyful" thereover, *Held* not deceptively similar to a mark consisting of the letters "O B". (*Carmel Wine Co.* v. *California Winery*, 174 O. G., 586, distinguished.)

ON APPEAL.

TRADE-MARK FOR WHEAT-FLOUR.

Mr. Homer C. Underwood for The Alexander Milling Co.

Messrs. Milo B. Stevens & Co. for Vernier.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by The Alexander Milling Co. from a decision of the Examiner of Interferences sustaining a demurrer to the notice of opposition and dismissing the opposition.

The mark sought to be registered consists of the pictorial representation of a man having a joyful and hilarious expression, with the words "O B Joyful" thereover and the word "Flour" thereunder.

The opposition is based upon the grounds that the opposer has long used a mark consisting of the letters "O B," and the record shows that this mark was registered on December 12, 1905, to Matthew Alexander, who, the notice of opposition shows, is one of the parties doing business under the firm-name of The Alexander Milling Co.

The only question raised by the demurrer is whether the marks are so similar as to be likely to cause confusion in the mind of the public and deceive purchasers. The notice of opposition does not allege that there has been actual confusion.

In the recent case of *Carmel Wine Company* v. *California Winery* (decided December 4, 1911, 174 O. G., 586,) the court of appeals considered an application for the cancelation of a mark consisting of a picture of an oriental scene having in the corner thereof the representation of two men bearing a bunch of grapes. The application for cancelation was filed by a party who used as its trade-mark the representation of two men bearing a bunch of grapes. The court stated that—

it goes without saying that no one has a right to incorporate the mark of another as an essential feature of his mark.

In that case there was no particular connection between the representation of the two men bearing the grapes and the remainder of the registrant's mark. The two marks were separate and distinct from each other. In the present case while applicant does show the letters "O B" they are used in such a way as to become a composite part of the mark, so that the significance of the mark as a whole is entirely different from that of the opposer. In other words, in the case above cited the representation of the two men bearing a bunch of grapes might well be the feature of the mark which would identify the goods of the registrant in the minds of the public, whereas in the present case it seems improbable that the goods of the applicant would be known as the "O B" goods.

The likelihood of confusion arising by the contemporaneous use of the marks of the applicant and opposer is believed to be so remote that registration should not be refused. As pointed out by the Examiner of Interferences, the question of likelihood of confusion should not be determined on demurrer if any doubt exists as to the probability of such confusion; but it is not seen in the present case that any testimony could be presented which would materially aid in determining that question.

The decision of the Examiner of Interferences is affirmed.

JOHNSON EDUCATOR FOOD CO. *v.* SYLVANUS SMITH & CO., INC.

Decided January 9, 1912.

1. TRADE-MARKS — NO ABSTRACT PROPERTY RIGHT THEREIN.

It is well settled that there is no abstract property right in trade-marks. The use of a trade-mark by one manufacturer or vender upon an article will not prevent another from adopting the same trade-mark for an article of different descriptive properties.

2. SAME—GOODS OF THE SAME DESCRIPTIVE PROPERTIES.

"In each of the cases to which my attention has been directed or which I have been able to find, registration of a mark was denied an applicant or a defendant was enjoined only where the merchandise was adapted to the same purpose, or the alleged infringing mark was upon merchandise which the plaintiff would in the ordinary expansion of his business eventually include in the output of his concern."

3. SAME — OPPOSITION — LIKELIHOOD OF INJURY NOT SHOWN.

The use of a mark upon fish products *Held* not likely to injure the owner of the same mark as applied to bread, crackers, and similar foodstuffs and an opposition by the latter to the former's registration of the mark dismissed.

APPEAL from Examiner of Interferences.

Messrs. Macleod, Calver, Copeland & Dike for Johnson Educator Food Co.

Mr. O. H. Fowler for Sylvanus Smith & Co., Inc.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences sustaining the notice of opposition filed by the Johnson Educator Food Co. and adjudging that Sylvanus Smith & Co., Inc., is not entitled to register the word "Educator" as a trade-mark for salted, smoked, pickled, and canned fish—to wit, salted codfish, chips of halibut, smoked halibut and herring, pickled bloater, herring, and bloater-mackerel, and canned sardines, shrimps, and clams, in Class 46, Foods and ingredients of foods.

It is alleged in the notice of opposition of the Johnson Educator Food Co. that the trade-mark "Educator" is used by it—

upon the food products hereinafter named, to wit: bread, crackers, biscuits, wafers, rusks, cookies, prepared gluten foods, breakfast cereals, flours, (excepting fine wheat-flour,) meal, crushed grains, selected whole grains, selected rice.

It is further alleged that the use of the trade-mark "Educator" upon fish products, above enumerated, which are placed in boxes or cans, with the labels applied thereto, would be likely to cause confusion in the minds of the public to the damage of the opposer, for the reason that the articles to which the trade-marks are applied are sold in trade to the same wholesale and retail dealers and are so closely allied to each other that purchasers who are familiar with the Johnson Educator Food Co.'s food products are caused to believe that the articles are products of the same manufacturer.

The testimony presented in behalf of the Johnson Educator Food Co. clearly shows that the mark "Educator" was adopted by one Dr. William L. Johnson, a dentist, for crackers which contained ingredients which were, in his opinion, better than those contained in the ordinary commercial crackers on sale at that time. Subsequently the use of the trade-mark "Educator" was extended by Dr. Johnson and his successor in business, the Johnson Educator Food Co., to include the articles above enumerated. It is clearly shown that the goods of the Johnson Educator Food Co. are recognized by purchasers to be of a high class. The goods bearing the trade-mark "Educator" were extensively advertised, and the sale extended throughout the United States and several foreign countries. Hopkins, the general manager of the Johnson Educator Food Co., testifies that during the last three years upward of one hundred thousand dollars have been expended in advertising the "Educator" products of the company.

Sylvanus Smith & Co., Inc., the applicant, first applied the word "Educator" as a trade-mark for fish in July or August, 1908. The goods sold by this company are mostly packed in pasteboard cartons, wooden boxes, glass jars, and tin cans, each of which bears the word "Educator," the use being somewhat similar to that employed by the Johnson Educator Food Co. on its merchandise. The testimony clearly shows, and it is not disputed, that all the packages of Sylvanus Smith & Co., Inc., bear either the words "Packed at Gloucester, Mass., by Sylvanus Smith & Co., Inc.," or "Packed for Sylvanus Smith & Co., Inc."

The story of the adoption of the mark by Sylvanus Smith & Co., Inc., is briefly given by Howard F. Smith, the treasurer of the applicant company, as follows:

X-Q. 60. What conversation did you have with Mr. Merchant in regard to the use of the word "Educator" as a trade-mark for fish at or about the time when you decided to use it?

A. Mr. Merchant and myself looked over the field to find a word under which to put our best products; after

a careful look through a trade-mark journal we found the word "Educator" was not used upon fish and decided to adopt it. Mr. Merchant was in favor of using the word called "Edgewood" or "Wedgewood," I do not remember which; that being too near a trade-mark formerly used by Shute & Merchant Company, we decided on the word "Educator."

It may, in my opinion, be fairly inferred from the testimony that Smith was aware of the use of the trade-mark "Educator" upon crackers at the time the mark was adopted by the applicant. The testimony in behalf of the respective parties upon the question of the likelihood that an ordinary purchaser would be deceived into believing the goods sold by the applicant under the name "Educator" were of the manufacture or selected by the opposer is, as is usual in cases of this character, conflicting. Several of the witnesses in behalf of the opposer state that they have been asked whether the Johnson Educator Food Co. has extended its trade to fish products. It is therefore contended in behalf of the opposer that the public would be led to believe that the merchandise put on the market by the applicant was manufactured by the Johnson Educator Food Co.

It is also shown that benzoate of soda is used as a preservative in some of the packages of fish products. The contention, however, that the merchandise of the opposer would be damaged by the public belief that benzoate of soda is used in the bakery products of the opposer is, in my opinion, entitled to little, if any, weight. It is believed to be generally recognized that fish is of such a character that preservation must be attained by hermetically sealing or by the use of a preservative compound—as, for example, common salt or other chemical having the same effect; but it is incredible that the general public would, upon being advised that benzoate of soda was used in fish products, infer that preservatives of this character were employed in bakery products.

It is well settled that there is no abstract property right in trade-marks. As stated in *Paul on Trade-Marks*, section 18:

> It is property only when appropriated and used to indicate the origin or ownership of a commercial article. The trade-mark has no separate, abstract existence, but is appurtenant to the goods designated. It does not partake of the character or nature of a patent or copyright.

The use of a trade-mark by one manufacturer or vender upon an article will not prevent another manufacturer from adopting the same trade-mark for an article of different descriptive properties. Section 5 of the Trade-Mark Act, which deals with the registration of trade-marks, provides—

> that trade-marks which are identical with a registered or known trade-mark owned and in use by another, and appropriated to merchandise of the same descriptive properties, or which so nearly resemble a registered or known trade-mark owned and in use by another, and appropriated to merchandise of the same descriptive properties, as to be likely to cause confusion or mistake in the mind of the public, or to deceive purchasers, shall not be registered.

It is to be observed that this statute does not prohibit the registration of a trade-mark used by another upon merchandise of different descriptive properties from that of a known or registered mark. Unless, therefore, it is held that the merchandise of the applicant is of substantially the same descriptive properties as that of the opposer the applicant is clearly entitled to registration. As stated by the Court of Appeals of the District of Columbia in the case of *Battle Creek Sanitarium Company, Limited*, v. *Fuller*, (134 O. G., 1299; 30 App. D. C., 411:)

> It is not sufficient for the opponent to say that he believes he would be damaged. He must allege some fact showing an interest in the subject-matter from which damage might be inferred. If he has not used the mark as a trade-mark upon goods of a like description he can suffer no damage from its registration by another. (*Mollhenny's Son* v. *New Iberia Extract of Tabasco Pepper Co.*, C. D., 1908, 325; 133 O. G., 995.)

It is contended in behalf of the opposer that both the goods of the applicant and of the opposer belong to the general class of food products, and counsel for the opposer has in his brief quoted from several decisions of the court *dicta*, which, if read without reference to the facts upon which the decisions are based, would appear to support the opposer's contention. Reference is first made to the case of *Walter Baker & Co., Limited*, v. *Harrison*, (138 O. G., 770; 32 App. D. C., 272,) in which the Court of Appeals of the District of Columbia said:

> Things may be said to possess the same descriptive properties when they can be applied to the same general use.

It may be observed that in that case the merchandise under consideration was coffee, on the one hand, and cocoa and cocoa products, on the other. The court said:

> Coffee and cocoa, when used as beverages, are at once associated as belonging to the class of beverages in general domestic use. They belong to the class of beverages universally used on the table and sold in prepared packages for that purpose.

It is evident from this statement that the decision was based upon the fact that the particular sort of beverage used by the one could be substituted for that used by the other. The statement, therefore, above quoted, as well as the statement also contained in that decision that—

> a mark should be denied, not only when used upon goods of the same descriptive properties as a similar registered mark, but when used on goods belonging to the same general class,

must have been intended to mean goods which might have been used as a substitute for the goods of the registrant, as appears from the following quotation from the same decision:

> Coffee and cocoa are used to a large extent for the same purposes.

In the case of *Church & Dwight* v. *Russ* (99 Fed. Rep., 276) it was said that—

> goods are in the same class whenever the use of a given trade-mark or symbol on both will enable an unscrupulous dealer readily to palm off on an unsuspecting purchaser the goods of the infringer as the goods made by the owner of the trade-mark, or with his authority and consent.

In that case the plaintiff had used his trade-mark upon baking-soda and saleratus only. The defendant's mark was used upon baking-powder. The goods of both parties were adapted to be used for the same purpose.

In the case of *Phoenix Paint & Varnish Company* v. *John T. Lewis & Bros.*, (139 O. G., 990; 32 App. D. C., 285,) referred to by the opposer, the merchandise of one party was paste paints and the other ready-mixed paints. Manifestly both were adapted to the same use.

In the case of the *American Stove Company* v. *The Detroit Stove Works* (134 O. G., 2245; 31 App. D. C., 304) one was a coal-stove and the other a gas-stove. Again manifestly both are of the same descriptive properties.

In the case of *Collins Co.* v. *Oliver Ames & Co., Inc.*, (18 Fed. Rep., 561,) the facts in which are perhaps more closely analogous to those of the present case than any of those above cited, the plaintiff had employed the mark upon edge-tools and had extended its manufacture beyond edge-tools to digging-tools, such as picks and hoes, and had always put the mark "Collins & Co." upon the best quality of its articles. It was held in that case that the fact that it did not before 1856 make a digging-tool, such as shovels, on which in 1856 Ames & Son put the mark "Collins & Co.," does not warrant the conclusion that the mark was not in 1856 the mark of the plaintiff company in respect to shovels. The extension of trade protected in that case was manifestly in the same line—namely, metal or digging tools.

In each of the cases to which my attention has been directed or which I have been able to find registration of a mark was denied an applicant or a defendant was enjoined only where the merchandise was adapted to the same purpose or the alleged infringing mark was upon merchandise which the plaintiff would in the ordinary expansion of his business eventually include in the output of his concern.

The testimony presented in this case clearly shows, and in fact it is within the knowledge of the general public, that bakers do not pack fish. In the present case the merchandise of the respective parties is not such that the one could be substituted for the other. I can see, therefore, no reason to believe that the purchaser of the applicant's fish would be led to believe that the Johnson Educator Food Co. packed fish in connection with the manufacture of its baking products. The preparation of fish, furthermore, is of a character that is so remote from the manufacture of baking products that the natural expansion of business would not include this merchandise.

I am therefore of the opinion that the statements contained in the decisions quoted by counsel for the opposer, when read in connection with the facts upon which the decisions are based, are not susceptible of such a broad intepretation as to be applicable to the present case.

The case of *George et al.* v. *Smith et al.* (52 Fed. Rep., 830) is, in my opinion, more analogous to the present case than any of the decisions cited by the opposer. In that case the plaintiffs were packers of salmon, using the word "Epicure" as a trade-mark therefor. The defendants also used the word "Epicure" upon canned salmon, but contended that they were entitled to this mark for the reason that prior to the adoption by the plaintiffs of the word "Epicure" said defendants had used this mark upon canned tomatoes and peaches. In that case the court said:

> The rights of the parties must be ascertained and measured by the situation as it existed in 1885 when complainants entered the field. Had they the right at that time to use the word "Epicure?" If the defendants had then sought to restrain the complainants' use of the word they would, in all probability, have been promptly dismissed from court with the information that their business as dealers in fruit could not be injured by the use of the term "Epicure" in salmon-packing. No one who has not permanently parted with his wits could purchase a can of salmon supposing he was getting a can of tomatoes. "Epicure" when used, in 1885, by the defendants meant fruit; when used by the complainants it meant salmon. If the complainants' use of the word could not have been enjoined in 1885 their right to it should not be destroyed now. If lawful then it should be protected now. The word was free to the complainants. They were engaged in a distinct line of industry. Its use could not possibly have harmed the defendants. * * *
>
> The reasoning of some of the authorities would indicate that the defendants had a right to use the brand in connection with other fruit and vegetables, analogous to tomatoes and peaches, but to assert that they have the right to use it on all canned goods is carrying the doctrine far beyond any reported case. Beer and nails do not belong to the same class of merchandise because both are sold in kegs. The fact that the defendants have subsequently extended their business so as to include fish and other like articles of food does not avail them, neither would the fact if it existed, that, at the time they adopted the word "Epicure" they intended in the future to embrace these articles.

For the reasons above stated I am clearly of the opinion that there is no such likelihood that the use of the word "Educator" upon fish products will injure the opposer as to warrant the denial of registration of the applicant's trade-mark.

The decision of the Examiner of Interferences is reversed.

DECISIONS OF THE U. S. COURTS

Court of Appeals of the District of Columbia.

IN RE JOHN BRAADLAND, LIMITED.

Decided December 4, 1911.

TRADE-MARKS—SIMILARITY.

A mark consisting of the picture of a bear standing upright, holding a gun, and the words "Teddy Bear Brand," *Held* deceptively similar to a mark consisting of the picture of a bear having one foot resting on a fish, and the words "Pioneer Fishery."

Mr. A. E. Dowell for the appellant.

Mr. R. F. Whitehead for the Commissioner of Patents.

VAN ORSDEL, *J.*:

This is an appeal from a decision of the Commissioner of Patents refusing registration of a trade-mark to be used on canned sardines. The mark consists of the picture of a bear standing upright holding a gun, with a scroll above in which appear the words "Teddy Bear Brand." The whole design is surrounded by an ornamental panel.

Registration was refused in view of certain existing registered marks, the most prominent one, which will be sufficient for this case, being that of the Northwestern Fisheries Company. Its mark consists of the picture of a bear having one foot resting upon a fish, the same being surrounded by ornamental scrolls and surmounted by the words "Pioneer Fishery." It appears that the latter mark has only been used on canned salmon, but the registration includes all kinds of canned fish. The mark could therefore at any time in the future be used upon canned sardines. The fact that the mark has not been used on sardines will not prohibit the owned from so using it at any time. Non-user will not deprive the owner of the protection of the courts.

We agree with the Commissioner that the most striking feature of these marks is the representation of a bear. The superscription "Teddy Bear Brand," instead of constituting a distinguishing characteristic of the mark, emphasizes the picture, which is the predominating feature of both marks. While there is no evidence of confusion, we think the similarity is so great as to cause confusion in the mind of the purchasing public. As was said in *McLean* v. *Fleming*, (96 U. S., 245:)

What degree of resemblance is necessary to constitute an infringement is incapable of exact definition, as applicable to all cases. All that courts of justice can do, in that regard, is to say that no trader can adopt a trade-mark, so resembling that of another trader, as that ordinary purchasers, buying with ordinary caution, are likely to be misled.

We think the likelihood of goods bearing either of these marks becoming known to the purchasing public as goods of the Bear Brand is apparent, especially when the words used on appellant's mark would tend to educate the public in that direction. We must, as best we can, foresee the impression that the purchasing public would get from using goods bearing these marks side by side on the shelves of the trader. As was said in *Wayne County Preserving Co.* v. *Burt Olney Canning Co.*, (32 App. D. C., 279:)

These marks, when appearing on the canned goods of the respective parties, exposed to the public on the shelves of the retailer are so similar as to be likely to cause confusion; and where, as in this case, there is no evidence on that subject except the marks themselves, it is the duty of the court to protect the prior registrant and user from the probability of any such occurrence.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Salant & Salant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,890, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-mark registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JANUARY 30, 1912	1031
PATENT OFFICE PUBLICATIONS	1031
CLASSIFICATION BULLETIN No. 27	1031
DELIVERY OF PATENT	1031
APPLICATIONS UNDER EXAMINATION	1032
PATENTS GRANTED	1032
REISSUES	None.
DESIGNS	1196
TRADE-MARKS—REGISTRATION APPLIED FOR	1197
TRADE-MARKS—REGISTERED	1211
LABELS AND PRINTS	1216
COMMISSIONER'S DECISIONS—	
Ex parte Bach	1217
Ex parte Reisch Brewing Co	1217
Ex parte Porter	1218
Skeith and Burrows v. Trout v. Cleveland	1218
DECISIONS OF THE U. S. COURTS—	
In re Tallmadge	1219
Sanders v. Emerson	1220
ADJUDICATED PATENTS	1221
INTERFERENCE NOTICES	1222

ISSUE OF JANUARY 30, 1912.

Patents	477—No.	1,015,768 to No. 1,016,244, inclusive.
Designs	5—No.	42,117 to No. 42,121, inclusive.
Trade-Marks	162—No.	85,051 to No. 85,212, inclusive.
Labels	9—No.	16,141 to No. 16,149, inclusive.
Prints	8—No.	2,934 to No. 2,941, inclusive.
Reissues	None.	
Total	661	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	....	North Dakota	1	....
Arkansas	....	....	Ohio	31	8
California	18	6	Oklahoma	2	....
Colorado	2	1	Oregon	2	....
Connecticut	9	2	Pennsylvania	40	12
Delaware	3	....	Rhode Island	5	....
Florida	2	1	South Carolina	1	....
Georgia	2	1	South Dakota	2	....
Idaho	1	....	Tennessee	4	1
Illinois	48	17	Texas	5	4
Indiana	7	6	Utah	2	....
Iowa	15	3	Vermont	1	....
Kansas	7	1	Virginia	4	2
Kentucky	2	2	Washington	13	....
Louisiana	2	3	West Virginia	3	....
Maine	3	1	Wisconsin	11	2
Maryland	1	2	Wyoming	....	....
Massachusetts	27	7			
Michigan	6	6	Alaska, District of	....	....
Minnesota	6	....	Arizona Territory	1	....
Mississippi	2	....	Canal Zone	1	....
Missouri	13	9	District of Columbia	6	1
Montana	1	1	Hawaii Territory	....	1
Nebraska	3	1	Philippine Islands	....	....
Nevada	....	....	Porto Rico	....	....
New Hampshire	4	1	U. S. Army	....	....
New Jersey	25	6	U. S. Navy	....	....
New Mexico	1	....			
New York	61	52	Total to citizens of the United States	410	162
North Carolina	2	2			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	3	1	Newfoundland	....	....
Belgium	1	1	New South Wales	2	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	....	1
Canada	7	1	Persia	1	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	1	....
China	....	....	Scotland	....	1
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	....	....	Sweden	1	....
Ecuador	....	....	Switzerland	2	1
England	14	3	Transvaal, South Africa	....	....
France	8	....	Victoria	1	....
Germany	25	8	Western Australia	....	....
India	2	....			
Ireland	....	....	Total to citizens of foreign countries	72	17
Italy	1	....			
Japan	1	....			
Mexico	1	....			

Patent Office Publications.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1911.

The stock of publications, exclusive of printed copies of patents, formerly held for sale by the Patent Office, has been transferred to the Superintendent of Documents, Government Printing Office. Orders for Patent Office publications should NOT be sent to the Patent Office, but to the "Superintendent of Documents," to whom all remittances for such publications should be made payable.

Printed copies of specifications and drawings of patents will be furnished by the Patent Office, as heretofore.

EDWARD B. MOORE,
Commissioner.

Classification Bulletin No. 27.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 24, 1912.

Bulletin No. 27, showing changes in the Classification from July 1 to December 31, 1911, has been published. Copies thereof may be obtained from the Commissioner of Patents for ten cents each.

Delivery of Patent.

RULE 169. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 27, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 29	Dec. 18	451
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 6	Dec. 18	501
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 29	Jan. 15	227
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Dec. 20	Dec. 27	308
167	5. Bookbinding; Harvesters; Jewelry; Music.	Dec. 20	Dec. 16	396
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Dec. 28	Dec. 28	250
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 15	Dec. 12	576
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Dec. 28	Jan. 2	372
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 15	Dec. 18	309
235	10. Carriages and Wagons	Dec. 9	Dec. 9	647
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 5	Dec. 9	356
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 14	Dec. 14	603
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Nov. 23	Dec. 27	429
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 9	Dec. 28	409
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 1	Dec. 1	749
109	16. Telegraphy; Telephony	Dec. 14	Dec. 11	184
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Dec. 27	Dec. 27	285
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 26	Dec. 27	208
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Dec. 11	Dec. 1	470
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 1	Dec. 28	184
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 27	Dec. 27	323

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 3	Dec. 27	357
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 15	Dec. 16	368
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 15	Dec. 15	450
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 27	Jan. 4	205
106	26. Electricity, Generation; Motive Power.	Oct. 2	Oct. 24	464
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 26	Dec. 26	346
65	29. Internal-Combustion Engines	Nov. 15	Nov. 13	879
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 1	Dec. 16	448
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 1	Jan. 10	247
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Dec. 26	Dec. 18	263
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 9	Dec. 28	242
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 16	Dec. 20	436
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 20	Oct. 5	458
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Dec. 21	Dec. 22	736
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Dec. 16	Dec. 18	592
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Nov. 14	Dec. 22	483
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Dec. 6	Dec. 8	585
321	39. Water Distribution	Dec. 2	Nov. 15	484
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 2	Jan. 9	298
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 10	Dec. 18	545
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 18	Nov. 16	605
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 26	Dec. 12	306

Oldest new case, Oct. 2; oldest amended, Oct. 5.

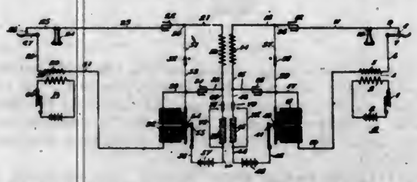
Total number of applications awaiting action 18,114

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 1	Dec. 6	1410
	Designs	Nov. 27	Dec. 16	388
	Labels and Prints	Jan. 18	Jan. 9	72

PATENTS

GRANTED JANUARY 30, 1912.

1,015,768. AUTOMATIC TELEPHONE CIRCUIT AND REPEATER. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Mar. 13, 1911. Serial No. 614,187. (Cl. 179—171.)



1. In a telephone system, the combination of a main line; a pair of condensers in series with said line; a transformer coil in series with said line; a repeater coil in series with said line; a second main line; a repeating circuit joined in shunt to said first named line between said condensers; and a second transformer coil inductively associated with said first mentioned coil and in series with said second main line, substantially as described.

2. In a telephone system, the combination of a main line; a pair of condensers in series with said line; a transformer coil in series with said line between said condensers; a repeater coil in series with said line; a second main line; a repeating circuit provided with an impedance joined in shunt to said first named line between said condensers; and a second transformer coil inductively associated with said first mentioned coil and in series with said second main line, substantially as described.

3. In a telephone system, the combination of a plurality of main lines inductively associated; a repeater in series with each of said lines; a condenser in series with each of said lines; and a repeating circuit joined in shunt with each of said lines; substantially as described.

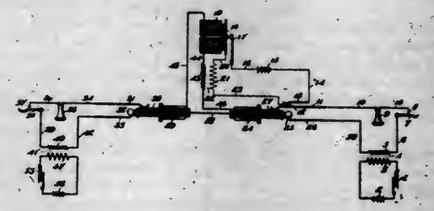
4. In a telephone system, the combination of a plurality of main lines inductively associated; a repeater in series with each of said lines; a pair of condensers in series with each of said lines; and a repeating circuit joined in shunt between said condensers with each of said lines, substantially as described.

5. In a telephone system, the combination of a plurality of main lines inductively associated; a repeater in series with each of said lines; a pair of condensers in series with each of said lines; and a repeating circuit having an impedance joined in shunt with each of said lines, substantially as described.

1,015,769. TELEPHONE CIRCUIT AND REPEATING APPARATUS. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Mar. 13, 1911. Serial No. 614,189. (Cl. 179—171.)

1. In a telephone system, the combination of a plurality of subscribers' stations; an intermediate station; main line circuits between said subscribers' and intermediate stations; a battery and a local circuit including the primary of an induction coil and the variable resistances of an electro-magnetically operated telephone transmitter located at said intermediate station; manually operated means also located at said intermediate station adapted to simultaneously and mechanically close said local circuit and the main lines connecting said stations through the secondary of said induction coil and the coils of said transmitter, substantially as described.

2. In a telephone system, the combination of a plurality of subscribers' stations; an intermediate station; main line circuits between said subscribers' and intermediate stations; a battery and a local circuit including the primary of an induction coil and the variable resistances of an electro-magnetically operated telephone transmitter located at said intermediate station; manually operated means comprising a spring jack and a local circuit contact also located at said intermediate station adapted to simultaneously and mechanically close said local circuit and the main lines connecting said stations through the secondary of said induction coil and the coils of said transmitter, substantially as described.



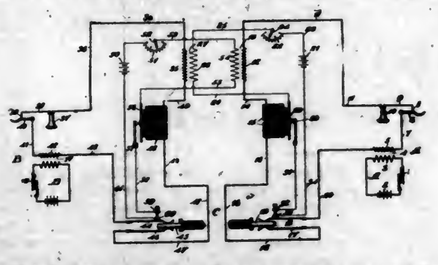
3. In a telephone system, the combination of a plurality of subscribers' stations; an intermediate station; main line circuits between said subscribers' and intermediate stations; a battery and a local circuit including the primary of an induction coil and the variable resistances of an electro-magnetically operated telephone transmitter located at said intermediate station; manually operated means comprising a plurality of spring jacks and plugs electrically connected, and a local circuit contact associated with each of said jacks also located at said intermediate station adapted to simultaneously and mechanically close said local circuit and the main lines connecting said stations through the secondary of said induction coil and the coils of said transmitter, substantially as described.

1,015,770. MULTIPLE REPEATING TELEPHONE SYSTEM. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Mar. 13, 1911. Serial No. 614,190. (Cl. 179—171.)

1. In a telephone system, the combination of independent main line circuits, means for causing currents corresponding to sound waves to traverse one of said circuits; means comprising an electro-magnetically operated transmitter and a load circuit for causing each of said currents to generate a corresponding current in another of said circuits; means for simultaneously mechanically and manually closing said first mentioned main line and local circuits; and means comprising an electro-magnetically operated transmitter and local circuit containing an adjustable resistance for causing each of said generated currents to generate a similar current in said first mentioned circuit, substantially as described.

2. In a telephone system, the combination of a plurality of transmitters and receivers located at different stations; a plurality of independent main line circuits connecting said stations; a plurality of local circuits, one for each main line circuit inductively associated with said main line circuits; switchboards provided with means comprising a spring jack and an associated contact for simultaneously mechanically and manually connecting

each of said main line and its associated local circuits; and an electro magnetic repeater associated with each of



said main line and local circuits so connected, substantially as described.

1,015,771. BRAKE-SHOE. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-fourth to Sydney Stein, Chicago, Ill. Filed Dec. 22, 1910. Serial No. 598,700. (Cl. 188—28.)

1. A brake-shoe comprising a body-member, a continuous spacing lug on the back of said body-member approximately co-extensive longitudinally with the latter, and a fastening lug on the outer side of said spacing lug, substantially as described.

2. A brake-shoe comprising a body-member, a continuous spacing lug on the back of said body-member approximately coextensive both longitudinally and laterally with the latter, and intermediate and end fastening lugs on the outer side of said spacing lug, substantially as described.

3. An interlocking brake-shoe comprising a body-member formed with a locking recess in its face, a spacing lug on its back and a locking lug on the outer side of said spacing lug, substantially as described.

4. An interlocking brake-shoe comprising a body-member formed with intermediate and end-locking recesses in its face, a spacing-lug on its back, and intermediate and end locking lugs on the outer side of said spacing lug, substantially as described.

5. An interlocking brake-shoe comprising a body-member formed with a spacing lug on its back, a locking lug on the outer side of said spacing lug, a recess in its face to receive the spacing lug of another similar shoe, and an additional recess to receive the locking lug of said other similar shoe, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,015,772. THREAD-WAXING DEVICE. FRED ASHWORTH, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 22, 1909. Serial No. 529,373. (Cl. 112—28.)

1. A thread waxing device, having, in combination, a compressible perforated plug to strip the wax from the thread, a split sleeve to receive the plug, an externally threaded socket to receive the sleeve, an internally threaded cap mounted on the socket, and a plug compressor actuated by the cap.

2. A thread waxing device, having, in combination, a compressible perforated plug to strip the wax from the thread, a sleeve to receive the plug, an externally threaded socket to receive the sleeve, an internally threaded cap mounted on the socket, and a plug compressor actuated by the cap.

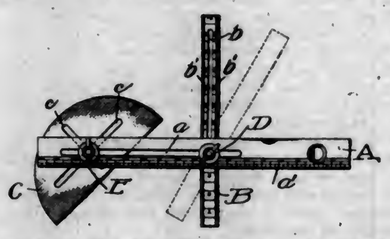
3. A thread waxing device, having, in combination, a compressible perforated plug to strip the wax from the thread, a split sleeve to receive the plug, and means for compressing the plug in the sleeve.

4. A thread waxing device, having, in combination, a compressible perforated plug to strip the wax from the thread, a sleeve to receive the plug, a socket to receive the sleeve, and means engaging the socket for compressing the plug in the sleeve while the sleeve remains stationary.

5. A thread waxing device, having, in combination, a compressible perforated plug to strip the wax from the thread, a sleeve to receive the plug provided with an inwardly projecting flange at its lower end, a socket to receive the sleeve and means for compressing the plug in the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,015,773. CARPENTER'S TOOL. HENRY N. AUGER, Worcester, Mass. Filed Oct. 26, 1911. Serial No. 656,956. (Cl. 73—80.)

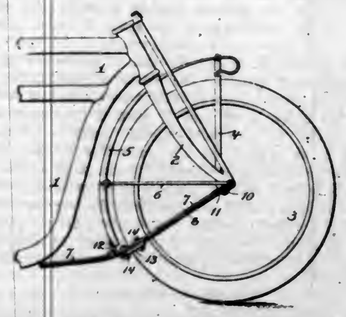


1. In a tool of the class described, the combination of a level having a longitudinal slot therein and provided with a scale along one edge, a movable scale connected with the level through said slot and adapted to be set an angle to the edge of the level, and an angle block connected with the level through said slot and having a straight edge adapted to be set at an angle to the level.

2. In a device of the character described, the combination of a level, a scale adjustable longitudinally and angularly on a level, means for securing the level and scale together in adjusted positions, an angle block having a straight edge and adjustable angularly and along the level toward and from the scale, and means for securing the block and level together in adjusted angular positions.

3. In a device of the character described, the combination of a level having a longitudinal slot from a point near one end to a point near the center thereof, a double edged scale having a longitudinal slot at one end, means extending through both of said slots for securing the level and scale together in adjusted angular positions, a semi-circular angle block having a straight edge and provided with crossing slots, and means extending through the crossing slots and through the slot in the level for securing the angle block to the level in adjusted angular positions.

1,015,774. GUARD FOR VEHICLES. CLAIRE STANTON BARBER, Waterville, Conn. Filed May 22, 1911. Serial No. 628,801. (Cl. 208—151.)

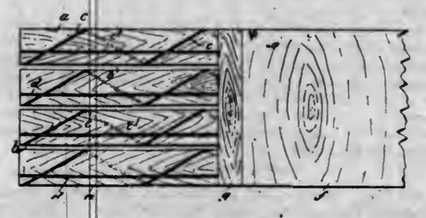


1. A guard for motor cycles comprising an apron provided with an opening for the accommodation of the tire of the front wheel of the machine and having tapering wings projecting forwardly beyond said opening so as to be disposed at respective sides of the wheel and means at the forward ends of said wings for connecting the apron with the front fork of the machine.

2. The combination with the frame and front wheel of a motor cycle, of a guard consisting of an apron having wings disposed at respective sides of the wheel and connected at their forward ends with the frame adjacent to the axle of the front wheel, said apron extending downwardly and rearwardly from said connection with the frame and terminating at its rear end in a plane below that of the engine.

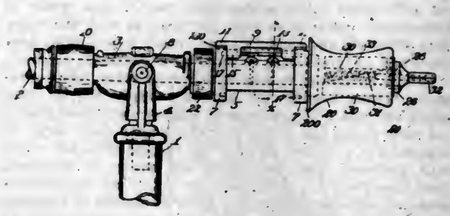
3. The combination with the frame and front wheel of a motor cycle, of a mud guard supported by the frame and partially embracing said front wheel and a lower guard connected with the frame adjacent to the axle of the front wheel and extending rearwardly and downwardly therefrom, said lower guard terminating at its rear end below the plane of the engine of the machine, and means connecting the rear portion of said lower guard with the lower end of the mud guard.

1,015,775. COMPOUND WOODEN PLATE. HEINRICH HERMANN BASSE, Holtensen, Germany. Filed Aug. 10, 1911. Serial No. 643,327. (Cl. 20—91.)



A compound wooden plate comprising a plurality of spaced cross strips having upper and lower intersecting oblique grooves and longitudinal grooves, and covering plates secured to said strips.

1,015,776. POUNDING-UP, LEVELING, OR SMOOTHING ROLL. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 23, 1910. Serial No. 568,463. (Cl. 12—51.)



1. A rotatory tool for treating boots and shoes having, in combination, a body portion, and a plurality of beaters pivoted to said body portion and having their work-engaging faces shaped to present a cylindrical roll when moved inwardly by engagement with the work.

2. A rotatory tool for treating boots and shoes, comprising a body portion, and a plurality of beaters pivoted to said body portion and arranged for outward movement by centrifugal force, the work engaging portions of said beaters being shaped to present a ribbed cylindrical roll when the beaters are moved inwardly by engagement with the work.

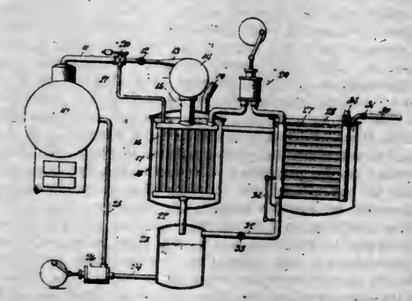
3. A tool for treating boots and shoes comprising a body portion, and beaters having pivotal connection with said body portion at points located below their leading edges and having their work engaging faces shaped to present a cylindrical roll.

4. A tool for treating boots and shoes comprising a body portion, and beaters pivoted to said body portion and having their work engaging faces extended rearwardly from their pivotal connection therewith and shaped to present a cylindrical roll.

5. A tool for treating boots and shoes comprising a body portion, and beaters pivoted to said body portion at points located below their leading edges, said beaters having their work engaging faces shaped to present a cylindrical roll and extended rearwardly from their pivotal connection with said body portion.

[Claims 6 to 8 not printed in the Gazette.]

1,015,777. METHOD OF AND APPARATUS FOR OPERATING TURBINES. CHARLES S. BRADLEY, New York, N. Y. Filed May 25, 1911. Serial No. 629,437. (Cl. 60—4.)



1. The method of operating power turbines, which comprises boiling a substance having a vapor heavier than steam and which at condenser pressures lower than practical with steam has a boiling point higher than water at

screw shaft, a revoluble feed wheel, and a slidable bolt car-

auxiliary air chamber connected with the intermediate

atmospheric pressure, driving the turbine with the vapor thus produced, and condensing the vapor by the evaporation of a condenser fluid at atmospheric pressure.

2. The method of operating power turbines, which comprises boiling a substance having a vapor heavier than steam and which at condenser pressures lower than practical with steam has a boiling point higher than water at atmospheric pressure, driving the turbines with the vapor thus produced, and condensing the vapor by absorbing heat therefrom as latent heat of water at atmospheric pressure.

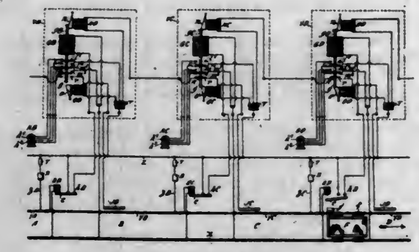
3. The method of operating power turbines, which comprises boiling a substance having a vapor heavier than steam and which at condenser pressures lower than practical with steam has a boiling point higher than water at atmospheric pressure, driving the turbine with the vapor thus produced, and condensing the vapor by absorbing heat therefrom as latent heat of water at atmospheric pressure, while maintaining a material margin of temperature between the working vapor and the boiling water in the condenser.

4. The method of operating power turbines, which comprises vaporizing monochlornaphthalene, driving the turbine therewith, and condensing the spent vapor, in cyclic manner.

5. The method of operating power turbines which comprises driving the turbine with a working fluid of suitable boiling point and condensing the fluid with boiling water.

[Claims 6 to 8 not printed in the Gazette.]

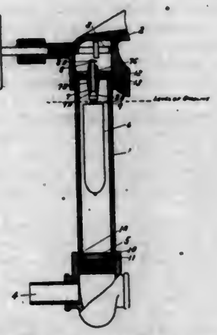
1,015,778. AUTOMATIC ELECTRICAL SIGNALING APPARATUS FOR RAILWAYS. ROBERT PERCY BROUSSON, London, England, assignor to Automatic Electric Block Signalling Company, Limited, London, England. Filed Apr. 21, 1911. Serial No. 622,455. (Cl. 246—36.)



1. An electrically operated, automatically acting, block-signaling system for use on a railway line, consisting in the combination of electrical track-circuits corresponding respectively to the several block-sections of the line; electrically operated signals for commanding the entrance to the respective block-sections; gravity-operated switches for controlling the circuits of the respective signals and capable of occupying three positions alternatively, namely, two extreme positions wherein the corresponding signals are put to "line clear" and "danger" respectively, and an intermediate position wherein said signals are also put to "danger"; solenoids for retaining the respective signal-controlling switches in the position corresponding to "line clear"; electro-magnetic relays interposed in the respective track-circuits, and armatures therefor; switches, controlled by the respective relay-armatures, for normally closing the circuits of the corresponding solenoids; gravity-operated latches for locking the respective signal-controlling switches in the extreme position corresponding to "danger"; electro-magnets and armatures therefor, for withdrawing the respective latches from operative position; gravity-operated stops for arresting the respective signal-controlling switches in the intermediate position; electro-magnets and armatures therefor, for withdrawing the respective stops from operative position; means adapted to coöperate with a train on the latter passing wholly within the respective block-sections, for controlling the circuits of the respective stop-withdrawing electro-magnets; and switches, movable as one with the respective signal-controlling switches, for closing the circuits of the respective latch-withdrawing electro-magnets appertaining to the several singal-controlling switches which are respectively situated at the entrances of the block-sections in rear of the signal-controlling switches with which said switches move as one, substantially as and for the purpose set forth.

2. A multiple-switch instrument for use in the automatic electric block-signaling system specified, consisting in the combination of the vertically extending solenoid core-stem g; the solenoid G for holding said core-stem in the extreme raised position; the latch n, and counterweight n^1 for holding the same in position to prevent the rise of the core-stem g in the extreme lowered position; the electro-magnet N for withdrawing the latch n from operative position; the stop o, and counterweight o^1 for holding the same in position to arrest the fall of the core-stem g at an intermediate position; the electro-magnet O for withdrawing the latch o from operative position; the insulated conductive disks L, M and R carried by the core-stem g; the pairs of electrical spring contacts l^1 and m^1 adapted to be bridged by the respective disks L and M when in the fully raised position; the pairs of electrical spring contacts l^2 and m^2 adapted to be bridged by the respective disks L and M when in both the intermediate and the fully lowered positions; and the pair of electrical spring contacts r adapted to be bridged by the disk R when in the fully lowered position alone, substantially as described.

1,015,779. SAFETY STAND-PIPE FOR GASOLENE-STOVES. GLENN H. BURGESS, St. Louis, Mich. Filed Jan. 4, 1911. Serial No. 600,735. (Cl. 158—38.)

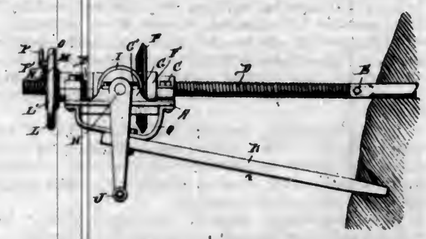


1. The combination with a gasolene burner, of a downwardly projecting stand pipe connected therewith, a valve secured in the upper part of said stand pipe, a glass float in said stand pipe, said float being partially exhausted of air and having no mechanical connection with said valve but adapted to raise and thereby close the valve when the float lifts, and cushioning means carried by said valve and adapted to contact with said float, for the purposes set forth.

2. The combination with a gasolene burner, of a downwardly projecting stand pipe connected therewith, a valve secured in the upper part of said stand pipe, and a glass float in said stand pipe, said valve having means adapted to contact with said float, said float being partially exhausted of air and having no mechanical connection with said valve but adapted to raise and thereby close the valve when the float lifts.

1,015,780. ROCK-DRILL. THOMAS FRANCIS CARROLL, Mount Carmel, Pa. Filed Nov. 17, 1909. Serial No. 528,506. (Cl. 125—10.)

1. A rock drill comprising a screw shaft, a crank shaft, beveled gears carried respectively upon said shafts, and adapted to transmit the motion of the crank shaft to the screw shaft, a revoluble feed wheel, and a slidable bolt carried by said feed wheel and adapted to engage said screw shaft.



2. In a rock drill, the combination with a frame, of a supporting bar for supporting said frame, a screw shaft slidably mounted in said frame, means for driving said screw shaft, and a hand wheel revolubly mounted on said frame, and a slidable bolt carried by said wheel for engaging said screw shaft.

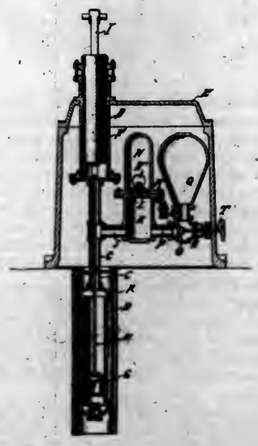
3. In a drill of the kind described, the combination with a main frame provided with bearings, of a screw shaft slidable and rotatably mounted in said bearings, one of said bearings having a sleeve portion, a bushing rotatably mounted upon said sleeve, a hand wheel carried by and keyed to said bushing, a guide bracket carried by said bushing, a bolt slidably mounted in said bracket, a second bracket carried by the hand wheel, a lever carried by the second mentioned bracket, a link connecting said bolt and said lever, and means for driving said screw shaft, the said bolt being adapted to engage the threads of said shaft.

1,015,781. PIANO-BENCH. ANDREW D. CASSIDY, Ottawa, Ill. Filed Aug. 9, 1911. Serial No. 643,168. (Cl. 45—64.)

In a piano bench of the class described, a lid or seat made in two corresponding sections adapted to open outwardly from the center of the bench, music frames attached to the bottom faces of the respective lid or seat sections and a guard for each music frame for holding the music sheets in place when the seat sections are closed, said guard comprising a cross bar extending across the width of the music frame and adapted to assume a vertical position in front of and in spaced relation with the outer end of the frame when the seat section carrying the latter is closed, and adapted to swing down into a position parallel with the bottom of the frame when the lid or seat section is raised, said bar provided at its ends with inwardly and right angular bent extensions bent in turn to form vertical extensions pivoted to opposite side walls of the frame, and weights at the junction of said extensions.

1,015,782. PUMPING APPARATUS. XENOPHON CAVERNO, Kewanee, Ill. Filed July 2, 1910. Serial No. 570,206. (Cl. 103—79.)

1. In a water pumping apparatus, the combination with a pump, of an air admission chamber having a water inlet connected with the outlet of said pump, means for permitting the water level to drop in said chamber in the intervals between the water forcing strokes of the pump, an auxiliary air chamber connected with the intermediate chamber, and a valve controlling communication between said chambers, said intermediate chamber having an outlet located above its water inlet, and an automatically opening valve controlling said outlet.



2. In a water pumping apparatus, the combination with a set of connected pumping cylinders having water actuating members of different fluid displacing capacities, means for actuating said members, an air cushion chamber, an air admission chamber connected with said air cushion chamber by a valved passage and also having an inlet connected to receive water from the pumping cylinders,—said air admission chamber having a valved outlet located above the inlet and also having an air inlet above the connection between the air admission chamber and the air cushion chamber provided with an automatic air admission valve.

3. In a water pumping apparatus, the combination with a set of pumping cylinders provided with a tubular connection, and a set of fluid actuating members in said cylinders of different displacing capacities, of an air admission chamber having a water inlet, connected to said tubular connection at a point between the cylinders, said air admission chamber having a valved air inlet, and also having an outlet located above the water inlet, in a position to first receive air and then water during the forcing stroke of the pump.

4. In a water pumping apparatus, the combination with a set of pumping cylinders arranged to deliver water from one to the other, connected fluid actuating members of different displacing capacities located in the respective cylinders, an air admission chamber, an otherwise closed air chamber, connected with said air cushion admission chamber by a valved passage, automatic air inlet and fluid outlet valves for said air admission chamber, an open discharge connection leading from the upper pumping cylinder to said air admission chamber below the fluid outlet, and means for closing and opening the air chamber valved passage in accordance with the air supply requirements.

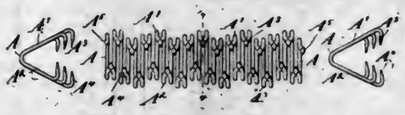
5. In a water pumping apparatus, the combination with a set of pumping cylinders, arranged to deliver water from one to the other, connected fluid actuating members of different fluid displacing capacities, located in the respective cylinders, an air admission chamber, automatic air inlet, and fluid outlet valves for said chambers, another chamber provided with an outlet below its upper wall and having an inlet, connected with the outlet of the air admission chamber, and an open connection between the cylinder having the fluid displacing member of greatest capacity and the air admission chamber below the outlet of said chamber.

[Claim 6 not printed in the Gazette.]

the articles to be treated are supported, one of said con-

the magnet circuit while the core falls toward its pre-

1,015,783. BELT-FASTENER. JOSEPH C. CONN, Boonton, N. J., assignor to J. B. Stone Co., Grand Rapids, Mich., a Corporation of Michigan. Filed Oct. 3, 1910. Serial No. 585,047. (Cl. 24—33.)



1. A plurality of belt hooks of the character set forth formed in connected series from a continuous length of wire having portions to embrace both sides of a belt end, said hooks having arms, the adjacent arms being of different lengths with spurs joining adjacent arms, the outermost spurs constructed to be easily severable.

2. A plurality of belt-hooks comprising connected pairs of upper and lower arms formed from a continuous length of wire having portions to embrace both sides of a belt-end, and a spur formed integral with and joining each arm to the adjacent arm of its pair.

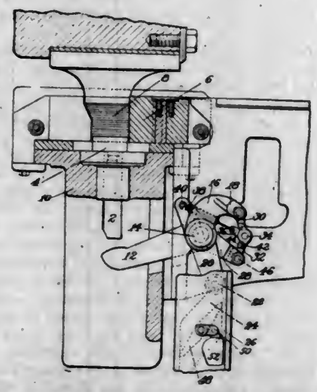
3. A plurality of belt-hooks comprising a connected series of pairs of upper and lower arms formed from a continuous length of wire, and a spur formed integral with and joining each arm to the adjacent arm of its pair, said spurs constructed to be easily severed in dividing the series.

4. A plurality of belt-hooks comprising a connected series of pairs of upper and lower arms formed from a continuous length of wire, a spur formed integral with and joining each arm to the adjacent arm of its pair, and each having a weakened line along which said spur is severable in dividing the series.

5. A plurality of belt-hooks comprising a connected series of pairs of upper and lower arms formed from a continuous length of wire, a spur formed integral with and joining each arm to the adjacent arm of its pair, and each having a weakened line along which said spur is severable in dividing the series, said spur constructed when thus divided to form an engaging point on each end of said adjacent arms.

[Claims 6 to 8 not printed in the Gazette.]

1,015,784. COMPRESSING-MACHINE. FREDERICK ARTHUR COOPER, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 19, 1910. Serial No. 582,702. (Cl. 12—48.)



1. In a compressing machine, the combination of an ejecting member for engaging a blank to be removed, a positively operated device for actuating said ejecting member and normally rigid connecting means between said actuating device and said ejecting member, said connecting means being arranged to yield when subjected to a predetermined excessive pressure and to readjust itself automatically when released from said pressure.

2. In a compressing machine, the combination of an ejecting member for engaging a blank to be removed, a positively operated device for actuating said ejecting member, and means comprising a normally extended toggle connecting said ejecting member and said actuating device, said toggle being breakable under a predetermined pressure.

3. In a compressing machine, the combination of an ejecting plunger, a cam operated lever for actuating said plunger and means connecting said lever and plunger comprising a normally extended toggle, said toggle being breakable under excessive pressure.

4. In a compressing machine, the combination of an ejecting member for engaging a blank to be ejected, a positively operated lever for actuating said ejecting member and connections between said lever and said member, said connections comprising a slightly bent toggle and a spring normally maintaining said toggle in its extended position but permitting said toggle to be broken when excessive resistance is encountered by the ejecting member.

5. In a compressing machine, the combination of an ejecting member for engaging a blank, a positively operated actuating device for actuating said ejecting member and a toggle connecting said ejecting member and actuating device, each element of the toggle being provided with a stop, which stops normally maintain the toggle nearly, but not quite, in a straight line.

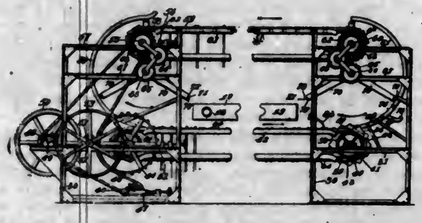
1,015,785. SPRING-WHEEL. JOSEPH CORBIN, Columbus, Ohio. Filed Feb. 23, 1911. Serial No. 610,120. (Cl. 152—28.)

1. The combination in a wheel with a recessed felly and a hub having end flanges, of spring spokes rigidly secured in the recessed felly and extending to alternate sides of the hub and secured to said flanges, a series of spring spokes having their outer ends movably attached in said felly, housings located on each movable spoke, a closed ball bearing cup a. the end of each housing, and a cushion about the movable end of said spokes to receive shocks from the housings.

2. The combination with a wheel having a recessed felly and a hub formed with flaring end flanges, of a series of spring spokes having their outer ends attached to the felly in said recess and extending alternately to opposite sides of the hub, securing means for attaching the inner ends of the spokes to their respective flanges, and a series of perpendicular spring spokes having their outer ends secured in said recess, a housing about each perpendicular spoke attached to the hub, means for attaching the inner end of each perpendicular spoke to its housing, a bearing cup formed at the outer end of each housing and balls therein, a screw cap over each cup, and a cushion attached to the felly to absorb shocks from said housings.

1,015,786. COMBINATION DRYING AND MOISTENING MACHINE. THOMAS M. COYLE, St. Louis, Mo. Filed May 23, 1911. Serial No. 629,077. (Cl. 34—12.)

1. A combination drying and moistening machine comprising an upper conveyer and a lower conveyer on which the articles to be treated are supported, one of said conveyers operating at a speed greater than the other and means for driving the same; means for delivering the articles from one conveyer to the other, a housing in which the conveyers are mounted and a heating device and a moistening device for drying and moistening the articles during their travel on the conveyers, substantially as specified.



2. A device of the class described comprising a suitable frame, an upper and a lower conveyer supported in the frame, a revolving mechanism whereby the articles supported on the conveyers are delivered from one conveyer to the other causing the articles to travel in a continuous circuit, means for operating the conveyers, a housing incasing the entire mechanism and drying and moistening means, substantially as specified.

3. A device of the class described comprising a frame, an upper and a lower conveyer supported in the frame, curved guide frames located at the ends of the frame and in relative position with the ends of the conveyers, delivery arms revolubly mounted in the frame and by which the articles are conveyed from one conveyer to the other, a heater box located in the frame by which heat is directed against the articles traveling on the conveyer, a moistening device by which moisture is admitted to the interior to contact with the articles and a housing incasing the entire mechanism, substantially as specified.

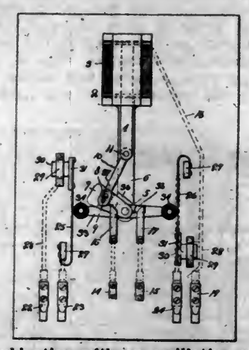
4. A device of the class described comprising a frame, a plurality of conveyers movably mounted in said frame, a plurality of revolving delivery arms positioned in proper relation with the conveyers and by which the articles carried by the conveyers are delivered from the lower conveyer to the upper conveyer and from the upper conveyer to the lower conveyer, suitable guide frames for guiding the articles during their travel from one conveyer to the other, means for properly spacing and lining up the articles before being brought in contact with the delivery arms, and a housing covering the entire operating mechanism, substantially as specified.

5. A device of the class described comprising a frame, a plurality of endless conveyers movably mounted in said frame and on which rods supporting the articles are carried, means for transferring the rods together with the articles from one conveyer to the other, suitable guide frames located at the ends of the conveyer for guiding the rods during their travel from one conveyer to the other, means formed on one set of guide frames for permitting the feeding or discharging of the articles, stops provided for the spacing and lining up of the rods before being delivered to the delivery arms, and a housing incasing the entire mechanism, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,015,787. MAGNET-ACTUATED DEVICE. DAVID H. DARRIN, New York, N. Y. Filed Nov. 14, 1906. Serial No. 343,343. (Cl. 175—281.)

1. The combination with a magnet, a core and an actuated part, of an intermediate momentum device connected to be actuated when the core is lifted for moving said part in both directions, said momentum device controlling contacts for interrupting the magnet circuit after it has acquired sufficient momentum to lift it to its highest point and falling to a different position to restore the magnet circuit while the core falls toward its previous position.



2. The combination with an oscillating momentum device, of a magnet located above said device and having its core connected to oscillate said device alternately in opposite directions when lifted by the magnet, means whereby the movement of said core after acquiring an initial momentum upwardly effects the actuation of said momentum device; means for opening the magnet circuit to permit said core to fall and the momentum device to be oscillated, and means for restoring the magnet circuit.

3. The combination with a pivoted weight, of a magnet having an upwardly movable core, means comprising a lost-motion device whereby said core acquires an initial momentum and causes said weight to be lifted and swung from one side of the pivot to the other, means for energizing the magnet to lift the core, means for deënergizing the magnet to permit the core to fall when the weight throws over, and means for re-setting the magnet circuit when the core comes to rest.

4. The combination with a movable part, of a weighted crank mounted to swing about a pivot and operating said part in opposite directions by its momentum in swinging from one side to the other, a magnet, and a link connecting the armature of the magnet and the crank, the connection permitting an initial movement of the armature independent of said weighted crank.

5. The combination with a movable part, of a weighted crank for actuating said part, a solenoid magnet, actuating connections between the core and the crank, and a pair of contacts in the magnet circuit, one of which is opened and the other closed by said movable part at each throw, and means whereby the crank moves independently of the weighted crank during a portion of its travel.

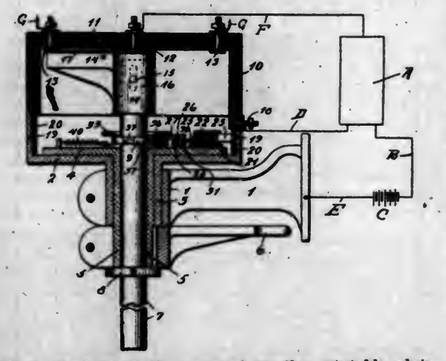
[Claims 6 to 9 not printed in the Gazette.]

1,015,788. SPARK-GENERATOR FOR INTERNAL-COMBUSTION ENGINES. IRA M. DAVIDSON, Neeleyville, Mo., assignor of one-fourth to William B. Davis, Neeleyville, Mo., and one-fourth to Columbus I. Davis, Clinton, Mo. Filed Apr. 25, 1911. Serial No. 623,296. (Cl. 123—168.)

1. A circuit breaker for spark generators comprising a contact post, a spring held contact lever, a wheel rotatably mounted, pawls pivotally secured to said wheel, one of said pawls being adapted to engage the lever to move it into engagement with the contact post, a shaft, and a cam secured to the shaft and engaging the other pawl to actuate the wheel aforesaid.

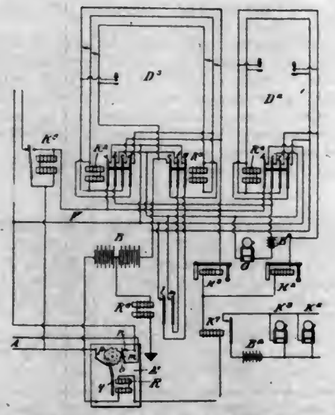
2. A circuit breaker for spark generators consisting of a contact post, a spring held contact lever having its free end provided with a barbed end, a wheel rotatably mounted, pawls pivotally secured to said wheel, one of said pawls being adapted to engage the barbed end of the lever, a shaft, a cam on said shaft and engaging the other pawl on the wheel to rotate the wheel in one direction, and a spring secured to the wheel to return it to its normal position.

3. A circuit breaker for spark generators comprising a casing, a plate rotatably mounted in said casing, a contact ring secured to the side wall of the casing, a plate secured to the rotatable plate aforesaid and insulated therefrom, a spring brush mounted on the last mentioned plate and engaging said contact ring, a contact post mounted on said plate, a spring held contact lever pivotally secured to the rotatable plate and having a barbed



end, a wheel revolubly mounted on the rotatable plate, pawls pivotally secured to said wheel, one of said pawls adapted to engage the barbed end of the lever and move it into engagement with the contact post aforesaid, a shaft journaled on the rotatable plate, a cam on said shaft and adapted to engage the other pawl on the wheel to rotate the wheel in one direction, and a spring secured to the wheel and rotatable plate to return the wheel to its normal position.

1,015,789. FIRE-ALARM SYSTEM. DAVID G. DEE, Rochester, N. Y., assignor to Denio General Electric Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 20, 1911. Serial No. 622,332. (Cl. 179—5.)



1. The combination with a main telephone circuit and a subscriber's circuit, of a closed fire alarm circuit adapted to control the subscriber's circuit, a resistance element included in the fire alarm circuit, an alarm associated with the fire alarm circuit and with the main telephone circuit, and means controlled by shunting the resistance element in the fire alarm circuit for operating the alarm.

2. The combination with a main telephone circuit and a subscriber's circuit, of a signal included in the subscriber's telephone circuit, a closed fire alarm circuit adapted to control the subscriber's circuit, resistance elements included in the fire alarm circuit, an alarm associated with the fire alarm circuit and with the main telephone circuit, and means controlled by shunting one of the resistance elements in the fire alarm circuit for operating the signal in the subscriber's circuit.

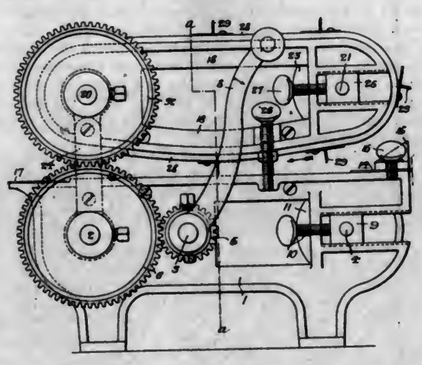
3. The combination with a main telephone circuit and a subscriber's circuit, of a signal included in the subscriber's circuit, a closed fire alarm circuit adapted to control the subscriber's circuit, an alarm associated with the fire alarm circuit and with the main telephone circuit, a resistance element included in the fire alarm circuit, means controlled by a break or ground in the fire alarm circuit for operating the signal in the subscriber's circuit, and means controlled by shunting the resistance in the fire alarm circuit for operating the alarm.

4. The combination with a main telephone circuit and a subscriber's circuit, of a signal included in the subscriber's telephone circuit, a closed fire alarm circuit adapted to control the subscriber's circuit, a plurality of resistance elements included in the fire alarm circuit, an alarm associated with the fire alarm circuit and with the main telephone circuit, means controlled by shunting one of the resistance elements in the fire alarm circuit for operating the signal in the subscriber's circuit, and means controlled by shunting all of the resistance elements in the fire alarm circuit for operating the alarm.

5. The combination with a main telephone circuit and a subscriber's circuit, of a signal included in the subscriber's telephone circuit, a closed fire alarm circuit adapted to control the subscriber's circuit, an alarm associated with the fire alarm circuit and with the main telephone circuit, a resistance element included in the fire alarm circuit, means controlled by a disturbance in the fire alarm circuit for operating the signal in the subscriber's circuit, and means controlled by the shunting of the resistance in the fire alarm circuit for operating the fire alarm.

[Claims 6 to 15 not printed in the Gazette.]

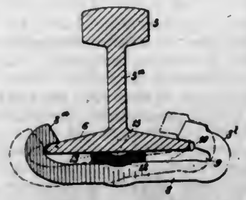
1,015,790. CONFECTIONERY-CUTTING MACHINE. JASPER L. DEEN, Philadelphia, Pa. Filed Nov. 5, 1910. Serial No. 590,815. (Cl. 107—20.)



1. The combination in a confectionery cutting machine of a supporting structure for material to be cut; a belt mounted adjacent thereto; means for driving the belt; a series of widely separated cutter structures independently mounted on the belt so as to be at all times disengaged from each other and placed to coöperate with the supporting structure in dividing a length of material into pieces; each of said cutter structures consisting of a cutting edge substantially at right angles to the adjacent surface of the belt and a portion projecting parallel with the belt in direct engagement therewith; and means for connecting said latter portion of each cutter structure to the belt.

2. The combination in a confectionery cutting machine of a supporting structure; pulleys mounted on said structure; smooth surface belt mounted on said pulleys; a shaft concentric with one of said pulleys; a gear wheel on said shaft; a second shaft also mounted on the supporting structure; a gear fixed thereon and meshing with said first gear; a frame loosely mounted on said second shaft and overhanging the belt; two pulleys on said frame, of which one is mounted on the second shaft; an endless belt on the pulleys; cutters mounted on said belt to coöperate with the smooth surface belt to cut confectionery; and a device for swinging the frame on its supporting shaft to vary the distance of the cutters from the smooth belt.

1,015,791. ANTICREEPING DEVICE FOR RAILS. AUGUST J. DINKLAGE, East Orange, N. J. Filed July 25, 1911. Serial No. 640,392. (Cl. 238—4.)



1. An anticreeping device for railway-rails comprising a shoe arranged to fit over the rail-base, a wedge adapted for insertion between said shoe and said rail-base and coöperating means on said wedge and said shoe for permitting said wedge to rock transversely relatively to said shoe and adjust itself to a position of maximum efficiency.

2. An anticreeping device for railway-rails comprising a shoe arranged to fit over the rail-base, a wedge adapted for insertion between said shoe and said rail-base and a coöperating recess and projection curved in a direction transverse to the rail to fit one within the other and located respectively on said wedge and said shoe for permitting said wedge to rock transversely relatively to said shoe and adjust itself to a position of maximum efficiency.

3. An anticreeping device for railway-rails comprising a shoe arranged to fit over the rail-base and provided with a concave recess, a wedge adapted for insertion between said shoe and said rail-base and a convex projection extending lengthwise of said wedge and adapted to enter said recess and to form therewith a bearing on which said wedge may rock transversely to adjust itself to a position of maximum efficiency.

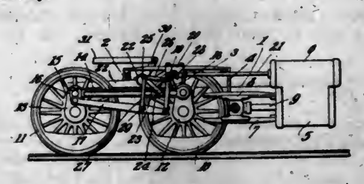
4. An anticreeping device for railway-rails comprising a shoe arranged to fit over the rail-base, and a wedge adapted for insertion between said shoe and said rail base and arranged to engage the rail-base at points spaced from each other transversely of the rail.

5. An anticreeping device for railway-rails comprising a shoe arranged to fit over the rail-base and provided with a concave recess, a wedge arranged for insertion between said shoe and said rail-base and provided with a longitudinally extending recess adjacent to said rail-base and a convex projection extending lengthwise of said wedge and adapted to enter the recess of the shoe.

1,015,792. VALVE-GEAR. OTTO A. DONATH, Sedalia, Mo. Filed Aug. 21, 1911. Serial No. 645,100. (Cl. 121—97.)

1. Valve gearing including a valve cross head, a reversing shaft, a crank arm upon said shaft, a link connected to and actuated by the crank arm, an eccentric rod, a lever pivotally connected to said rod and to the cross head, a link connection between the rod and the link on the crank arm, and a link connection between the lever and said crank arm link.

2. Valve gearing including a valve cross head, a lever pivotally connected thereto an eccentric rod pivotally connected to the lever, a reversing shaft a crank arm thereon, a link connected to the crank arm, and toggle links connecting said link to the lever and eccentric rod respectively.

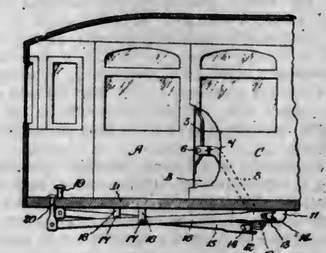


3. The combination with a drive wheel having a crank, of a supplemental crank carried by said first mentioned crank, an eccentric rod connected to and actuated by the supplemental crank, a valve cross head, a lever connecting the rod and cross head, a reversing shaft, a crank arm thereon, a toggle connection between the lever and eccentric rod; and a link connection between the toggle and the crank arm.

4. Valve gearing including a valve cross head, a lever pivotally connected thereto an eccentric rod pivotally connected to the lever, a reversing shaft, a crank arm thereon, a link connected, to the crank arm, toggle links connecting said link to the lever and eccentric rod respectively, levers pivotally connected at one end to the frame of a supporting structure, the other ends of said levers being adapted to bear upon the journal boxes of drive wheels, and bearings upon the levers and engaged by the reversing shaft.

5. The combination with a frame, and drive wheels, of valve gearing including a valve cross head, a lever pivotally connected thereto, an eccentric rod pivotally connected to the lever, levers fulcrumed at one end upon the frame and bearing at their other end upon the journal boxes of the drive wheels, a reversing shaft journaled upon the last mentioned levers, a crank arm thereon, a link connected to the crank arm, and toggle links connecting said link to the lever and eccentric rod respectively.

1,015,793. CAR-DOOR-OPERATING DEVICE. WILLARD C. ELDRIDGE, Chicago, Ill. Filed Apr. 21, 1911. Serial No. 622,546. (Cl. 39—93.)

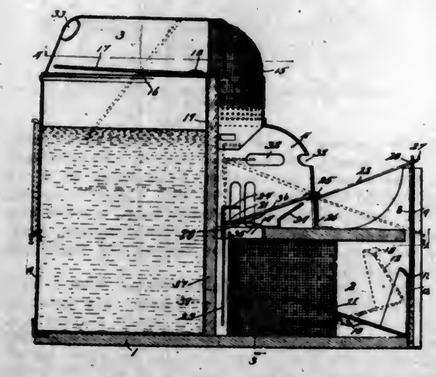


1. The combination with a sliding door, of a vertically swinging lever having its upper end in movable engagement with a portion of said door, a horizontal rock shaft to which the opposite end of said lever is connected, intermediately pivoted levers connected at one of their ends to portions of said rock shaft, and vertically movable members connected to the opposite ends of said levers to actuate the same.

2. The combination with a sliding door, of a vertically swinging lever having its upper end in movable engagement with a portion of said door, a horizontal rock shaft to which the other end of said lever is connected, said rock shaft being provided with oppositely extending cranks,

intermediately pivoted levers having one of their ends slotted for engagement with portion of said shaft cranks, and vertically movable members connected to the opposite ends of said levers to actuate the same.

1,015,794. ANIMAL-TRAP. CARL FIEDLER, Chicago, Ill. Filed Aug. 20, 1909. Serial No. 513,744. (Cl. 43—26.)



1. In an animal trap, the combination of an entrance chamber, an inner chamber spaced therefrom and at a higher elevation, a passageway connecting said chambers, a platform reciprocably mounted in said passageway, a trap door for the entrance chamber and a lever pivoted intermediately of its ends and having its ends operably engaging said platform and trap door respectively.

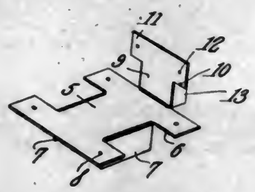
2. In an animal trap, the combination of an entrance chamber, an inner chamber spaced therefrom and at a higher elevation, a passageway connecting said chambers, a platform reciprocably mounted in said passageway, a trap door for the entrance chamber and a lever pivoted intermediately of its ends and having its ends operably engaging said platform and trap door respectively, said platform being provided with means which closes the opening from said entrance chamber into said passageway when the trap door is opened.

3. In an animal trap, the combination of an entrance chamber, a second chamber elevated above the entrance chamber and spaced therefrom, a passageway extending from the entrance chamber to said second chamber, a support reciprocably mounted in said passageway and provided with a platform projecting therefrom across said passageway, said passageway being enlarged intermediately of said chambers, a trap door for said entrance chamber, and a lever pivoted intermediately of its ends and having its ends engaging the trap door and support respectively.

4. In an animal trap, the combination with two chambers with a communicating opening, one of said chambers being provided with a door-way in the outer wall thereof, of a trap-door slidably mounted in said door-way, an oscillating platform normally engaging said trap-door to hold it in open position, a lever pivoted intermediately of its ends, said lever pivotally engaging at one end with said trap-door, and a platform pivotally mounted on the other end of said lever, said platform being thereby adapted to be moved into and out of closing position with reference to said communicating opening.

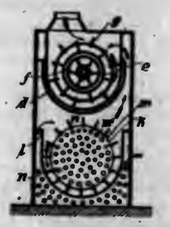
5. In an animal trap, the combination of an entrance chamber, a second chamber elevated above the entrance chamber and spaced therefrom, a passageway extending from the entrance chamber to said second chamber, a support reciprocably mounted in said passageway and provided with a platform projecting therefrom across said passageway, said passageway being enlarged intermediately of said chambers, a trap door for said entrance chamber, and a lever pivoted intermediately of its ends and having its ends engaging the trap door and support respectively, said platform being moved into position to close the opening from the entrance chamber to said passageway when the support is lowered.

1,015,795. WEAR ATTACHMENT FOR WAGONS. BENJAMIN F. GERELDS, Tecumseh, Okla. Filed Oct. 23, 1909. Serial No. 524,255. (Cl. 21—11.)



A wear attachment for wagons adapted to accommodate various bolsters and stakes, comprising a plate of sheet metal having apertures in the corners thereof for securing the plate to the bottom of the wagon box and having a pair of slits in each side, the portions between the slits being bent downward to accommodate and embrace the bolster, the said plate having a right angular extension at one end, the said extension having a slit in each end thereof and apertured in its upper corners for securing the extension to the side of the wagon box, the junction of the extension and the plate being slit inwardly from the ends thereof and the portions of the extension between the slits in its sides and the latter slits being bent outwardly to accommodate and embrace the stake.

1,015,796. DRYING APPARATUS. ALBERT GERLACH, Nordhausen, Germany. Filed July 27, 1911. Serial No. 640,756. (Cl. 34—44.)



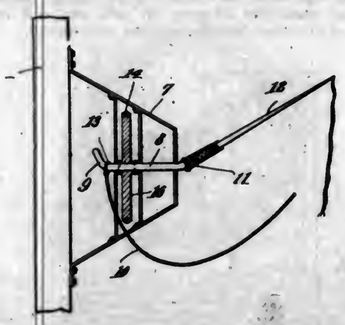
1. In drying apparatus, the combination, with a double-walled trough, of a horizontal, cylindrical stationary heater centrically mounted therein.

2. In drying apparatus, the combination, with a double-walled trough, of a horizontal, cylindrical stationary heater centrically mounted therein, and means rotatable in the heater for spirally conveying material to be dried through the interior of the same.

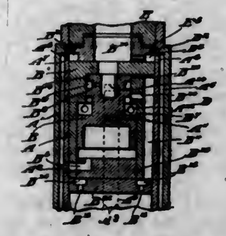
3. In drying apparatus, the combination, with a double-walled trough, of a horizontal, cylindrical stationary heater centrically mounted therein, means rotatable in the heater for conveying material to be dried through the same to one end of the trough, and means rotatable about the heater for conveying the material from the said end of the trough spirally about the outer wall of the said cylinder to the other end of the trough.

1,015,797. STOCK-RELEASING APPARATUS. GIPSON M. GOODNIGHT, Thomasville, N. C. Filed Aug. 15, 1910. Serial No. 577,139. (Cl. 119—110.)

In a stock releasing device, the combination with a stall, of a rotatable shaft mounted therein, bends at the ends of the shaft, a halter having a ring loosely mounted on one of said bends and releasable when said bend is inverted by the rotation of the shaft, a whip socket secured to the other bend of the shaft, a whip mounted in the socket, and means for rotating the shaft.



1,015,798. ENGINE FOR ROCK-DRILLS. BENJAMIN HASTINGS, Barberton, Ohio. Filed May 6, 1909. Serial No. 494,426. (Cl. 121—20.)



1. A drill comprising a piston and an engine barrel interiorly tapered near its rear end, a tapered valve chest containing a controlling valve and fitted to said tapered portion of the barrel.

2. A drill having an engine barrel and a valve chest in the rear end of said barrel, a valve chamber in said chest located eccentrically relative thereto, a fluid conduit in that wall of the chest thickened by the eccentric location of the valve chamber.

3. A drill having an engine barrel and a valve chest in the rear end of said barrel, a valve chamber in said chest located eccentrically relative thereto, and a fluid conduit formed on the face of the exterior wall of the valve chest substantially on that diameter of the valve chest passing through the axis of the valve chamber and on the face farthest removed from the valve chamber.

4. A drill comprising a piston and an engine barrel interiorly tapered near its rear end, a tapered valve chest containing a controlling valve and fitted to said tapered portion of the barrel, and supporting means for the wall of the barrel at the forward end of the valve chest for preventing the pinching in or collapsing of said barrel.

5. A drill having a controlling valve, a conduit communicating with one side of said valve, means for admitting live pressure to said conduit to such extent as to operate the valve, and means for exhausting said conduit and additional means for admitting live pressure to said conduit slowly to assist in the ready operation of the valve substantially as described.

[Claim 6 not printed in the Gazette.]

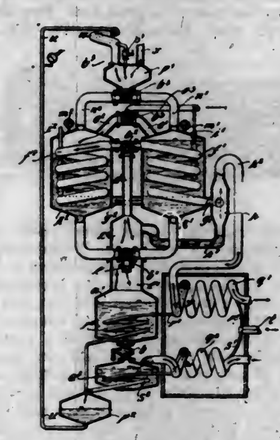
1,015,799. AUXILIARY VEHICLE-SEAT. LOUISA A. HAZEN, Fairfield township, Crawford county, Pa. Filed Nov. 7, 1911. Serial No. 658,977. (Cl. 155—22.)

1. An auxiliary seat including a supporting member and seat arms pivotally connected to said member, said arms being adapted to be folded together, to support a single seat, and to be spread apart to provide a plurality of seat supports.

2. An auxiliary seat for vehicles including a supporting member, means for adjustably connecting said member to the vehicle, independent arms pivotally connected to the supporting member, and seat carriers coöperating respectively with said arms, one of said carriers being of a size to coöperate with both of said arms when folded together.

3. An auxiliary seat for vehicles including independent seat arms, means for supporting said arms in adjusted position with relation to the vehicle, and seat carriers cooperating with said arms, said arms being adapted to be folded to present a single arm, or spread to present a plurality of arms, and one of said carriers being adapted to coöperate with both arms when folded.

1,015,800. PROCESS OF LIQUEFYING AIR AND SEPARATING IT INTO ITS ELEMENTS. ERNST JÄNECKE, Hanover, Germany. Filed Oct. 27, 1909. Serial No. 524,998. (Cl. 62—18.)



A process of liquefying air and separating it into its elements, consisting of liquefying air under pressure by bringing it into indirect thermal contact with a liquid rich in liquid oxygen whereby the said liquid is made to evaporate, then bringing a given quantity of the liquid air so produced into indirect thermal contact with the vapors given off by the liquid rich in oxygen, causing a part of said liquid air to evaporate at less than atmospheric pressure, thus causing a part of the vapors given off by the liquid rich in oxygen to reliquefy, and then adding the part of the liquid air not evaporated and the liquid obtained by the partial condensation of the vapors to the liquid rich in oxygen.

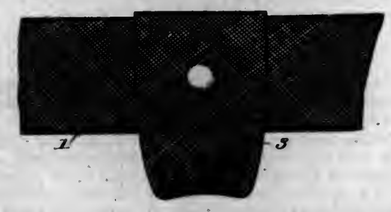
1,015,801. CARTRIDGE-BELT. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Co., Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1910. Serial No. 595,774. (Cl. 139—72.)

1. The improved method of forming a belt having pockets of greater longitudinal extent than the width of the

1,015,805. WATER-WHEEL-GATE RING. JOHN KIN-

1,015,806. VERTICAL CUTTER ATTACHMENT FOR

belt consisting in weaving the belt proper, the pocket-portions lying on the face thereof, and the front and rear walls of the projecting pocket-portion integral, carrying the threads forming said projecting-portions as floating threads between the adjacent pockets, and subsequently cutting off said threads and uniting the walls of the projecting pocket-portions to form the complete pocket.



2. The improved method of weaving a belt having a pocket of greater longitudinal extent than the width of the belt proper, consisting in weaving that portion of the pocket lying on the face of the belt of certain of the threads used in weaving the belt proper, and weaving that portion of the pocket projecting beyond the belt of independent threads not employed in the weaving of the belt proper and pocket portions lying on the face thereof.

1,015,802. HAIR ORNAMENT. CHARLES JUDIS, New York, N. Y., assignor to Nathan Loth, New York, N. Y. Filed Nov. 29, 1910. Serial No. 594,683. (Cl. 132—22.)

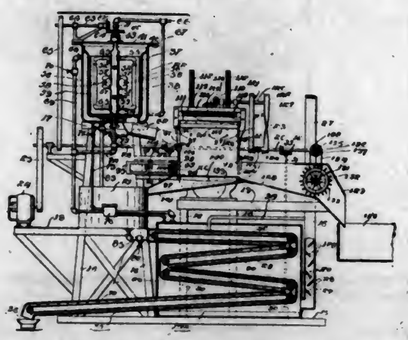
1. In a hair ornament, a base plate, a post at one end thereof provided with a slot, a bar pivotally mounted at the other end of said base plate and arranged to enter said slot, said slot having substantially the same depth as the depth of the bar, a pin fastened in said post, and a locking member pivotally mounted on said pin whereby said locking member is rotatable on said post in a plane substantially parallel to said base plate, said pin being located near the top of said post causing said locking member to stay closed by gravity when in the locking position.

2. In a hair ornament, a base plate, a post at one end thereof provided with a slot, a bar pivotally mounted at the other end of said base plate and arranged to enter said slot, said slot having substantially the same depth as the depth of said bar, a pin fastened in said post, and a locking member pivotally mounted on said pin whereby said locking member is rotatable on said post in a plane substantially parallel to said base plate, said pin being located near the top of said post causing said locking member to stay closed by gravity when in the locking position, said locking member when closed conforming substantially to the periphery of said post.

1,015,803. PULP-MACHINE. WALTER H. JUDSON, Oakland, Cal., assignor to Jesse D. Rice, Oakland, Cal. Filed Apr. 13, 1911. Serial No. 620,811. (Cl. 92—1.)

1. A pulp making machine comprising a digester, a tank, a press, a drain connection between the digester and the tank, a drain connection between the press and the tank, an evaporator, a sinuous casing in said evaporator, liquid agitating means in said casing, a drain connection between said tank and the said casing, and means for supplying steam to the evaporator.

2. A pulp making machine comprising a digester, a press, a tank, drain connections between the digester, the press and the tank, an evaporator, a casing therein, a drain pipe connection between the tank and said casing, and means for supplying steam to the evaporator.



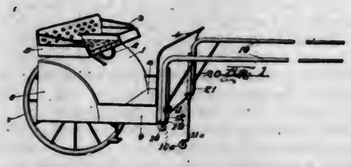
3. A pulp making machine comprising pulp making means, a receiving tank having drain connections with said means for removing the liquid therefrom, an evaporator, means for heating the evaporator, a casing in said evaporator, means for delivering the liquid from the tank to said casing, and means in said casing for agitating the liquid therein.

4. A pulp making machine comprising pulp making means, a tank having drain connections with said means for delivering the pulp making liquid to said tank, an evaporator, a sinuous casing therein, liquid agitating means in said casing, a drain connection between the tank and said casing, and means for supplying heat to said evaporator.

5. A pulp making machine comprising a digester, a press, a tank, means for conveying the pulp liquid from said digester and press to said tank, an evaporator for removing water from said liquid, and means for conveying the liquid from said tank to said evaporator.

[Claims 6 to 17 not printed in the Gazette.]

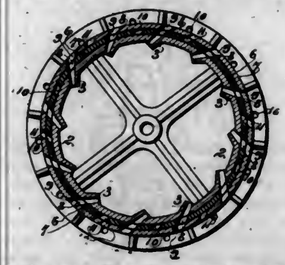
1,015,804. VEHICLE. JAMES E. KERSHAW, Hillsboro, Oreg. Filed Dec. 10, 1910. Serial No. 596,727. (Cl. 21—56.)



1. The combination in a vehicle of a wheel provided with an axle,—a frame journaled to bear thereon,—a vehicle body laterally balanced on said frame,—a compartment pivotally suspended at its rear corner to the frame adjacent each side of the wheel and adapted to swing beneath said body,—and a seat mounted on said body, adapted to be adjusted both laterally and longitudinally, as a counterpoise for the vehicle.

2. The combination in a vehicle of a wheel provided with an axle,— a frame journaled to bear thereon,—a vehicle body laterally balanced on said frame,—a compartment pivotally suspended at its rear corner to the frame adjacent each side of the wheel, and adapted to swing beneath said body,—a spring support secured upon said body,—a seat provided at its under side with a transverse bar,—and means for adjustably securing the seat to said support, whereby it may be adjusted both on the support and on the bar.

1,015,805. WATER-WHEEL-GATE RING. JOHN KINCAID, Vancouver, British Columbia, Canada. Filed May 25, 1911. Serial No. 629,412. (Cl. 138—18.)



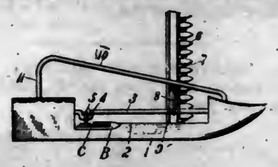
1. A means for controlling the admission of water to the jets of a multiple jet water wheel, said means comprising two rings one rotatably fitting over the jet inlets of the wheel casing and the other over the ring both rings having through apertures corresponding in number and registering with the jet inlets and with them and with one another each ring having interplaced between the aforementioned apertures supplementary apertures distributed around the rings the number of the supplementary apertures in each being a different fraction of the number of jets and registering in pitch with certain of them and means for independently rotating each ring.

2. Means for controlling the admission of water to the jets of a multiple jet water wheel, said means comprising a ring rotatably fitting over the jet inlets of the wheel casing said ring having apertures corresponding in number and pitch with the apertures of the jets so as to register with them and in the interspace between these apertures other apertures in number less than those jet apertures but registering with certain of them, a second ring rotatably fitting on the aforementioned ring and provided with apertures registering with those which correspond in number with the jet apertures and supplementary apertures fractionally less in number than either the jet apertures or the supplementary apertures of the first mentioned ring and registering with certain of them and means for independently rotating each ring.

3. Means for controlling the admission of water to the jets of a multiple jet water wheel, said means comprising two rings one rotatably fitting over the jet inlet of the wheel casing and the other over the ring both rings having through apertures corresponding in number with the jet inlets and registering with them and with one another each ring having interplaced between the aforementioned apertures supplementary apertures distributed around the rings the number of these supplementary apertures in each ring being a different fraction of the number of jets and registering in pitch with certain of them, means for independently rotating each ring said means comprising a segment of rack teeth projecting from the edges of the rings and separate pinions the teeth of which mesh with those of the rack segments and means for independently rotating the pinions.

4. A means for controlling the admission of water to the jets of a multiple jet water wheel, said means comprising a ring rotatably fitting over the jet inlets of the wheel casing said ring having apertures corresponding in number and pitch with the apertures to the jets so as to register with them and in the interspace between these apertures other apertures in number less than those jet apertures but registering with certain of them, a second ring rotatably fitting on the aforementioned ring and provided with apertures registering with those which correspond in number with the jet apertures and supplementary apertures fractionally less in number than either the jet apertures or the supplementary apertures of the first mentioned ring and registering with certain of them, the circumference of the rings being so proportioned to the diameter of the apertures that an interspace is provided between the apertures which is slightly larger than the aperture and means for independently rotating each ring.

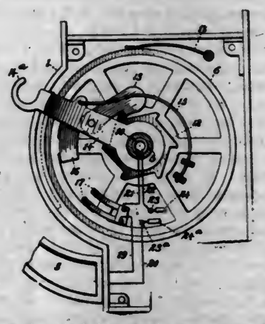
1,015,806. VERTICAL CUTTER ATTACHMENT FOR MOWING-MACHINES. OTTO KLUGE, Golconda, Ill. Filed Nov. 7, 1911.. Serial No. 659,050. (Cl. 56—30.)



1. In a mowing machine, the combination with a horizontal finger bar and a cutter bar mounted for reciprocation thereon, of a longitudinally recessed shoe at the outer end of the finger bar, the corresponding end of the cutter bar working within the recess, said shoe having its inner side straight from end to end, a finger bar upstanding from the bottom of the recess and having its inner face flush with the straight inner side of the shoe, a cutter bar mounted for reciprocation upon said finger bar, a rock shaft extending longitudinally within the recess and having angularly disposed cranks, a pitman connection between one of the cranks and the upstanding cutter bar, and a pitman connection between the other crank and the horizontal cutter bar.

2. In a mowing machine the combination with a horizontal finger bar and a cutter bar mounted for reciprocation thereon, of a shoe at the outer end of said finger bar and having a longitudinal recess within which the end of the cutter bar is adapted to work, a rock shaft extending longitudinally within the recess and having spaced cranks disposed at angles to each other, the inner side of the shoe being straight from end to end, a finger bar upstanding from the bottom of the recess and having one face flush with the straight side of the shoe, a cutter bar mounted to reciprocate on the finger bar, a pitman connection between said cutter bar and one of the cranks, a pitman connection between the other cutter bar and the other crank, and a guard extending over and longitudinally of the recess and outside of the upstanding cutter bar.

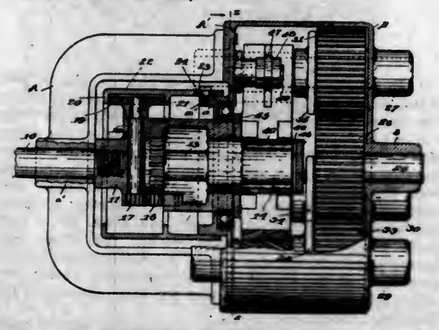
1,015,807. COMBINED CIGAR-LIGHTER AND ADVERTISING-MACHINE. ALBERT J. KOBLER, New York, N. Y. Filed May 5, 1909. Serial No. 494,103. (Cl. 40—28.)



A device of the kind described comprising a casing provided with an opening in its one wall, a transparent cylinder rotatably mounted in said casing and containing advertising matter arranged to be successively brought opposite said opening, an electric lamp secured within said cylinder, a stationary cigar lighter projecting outwardly from said casing and located with said lamp in an electrical circuit, stationary switch members secured to said casing, a ratchet on said cylinder, a lever mounted on said casing to freely swing about the axis of said cylinder, a pawl on said lever adapted for engagement with said ratchet to rotate said cylinder as the lever is oper-

ated and a switch member on said lever adapted to engage said stationary switch members as the lever is operated to rotate the cylinder and close the circuit to energize the cigar lighter and lamp.

1,015,808. VARIABLE-SPEED GEARING. ABRAHAM B. LANDIS, Enfield, Pa. Filed Jan. 17, 1911. Serial No. 603,124. (Cl. 74—57.)



1. In a variable speed gearing, the combination of a driving shaft, a gear casing, a driven shaft journaled in said gear casing in line with said driving shaft, a crank-shaft carried by said driving shaft and mounted eccentrically thereto, means for adjusting said crank-shaft in its bearings to throw the axis of its crank toward or from the axial line of the driving shaft, reciprocating rack-bars arranged to be operated by said crank, counter-shafts arranged to be driven successively by said rack-bars, and gearing connecting said counter-shafts with said driven shaft, substantially as set forth.

2. A variable speed gearing comprising a driving shaft, a gear casing, a driven shaft journaled in line with said driving shaft, a crank on the inner end of said driving shaft, means for adjusting said crank in relation to the axial line of the driving shaft, a gear on the driven shaft, loose gears on said counter-shaft meshing with said gear on said driven shaft, clutch mechanism adapted to lock said loose gears on said countershafts when driven in one direction, and reciprocating rack-bars connected with the crank of said driving shaft to be operated thereby and arranged to operate said counter-shafts successively, substantially as set forth.

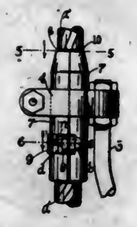
3. A variable speed gearing comprising a driving shaft, a gear casing, a housing on the inner end of said driving shaft, a crank-shaft fixed in eccentric bearings in said housing, means for securing and adjusting said crank-shaft to throw the axis of the crank-pin toward or from the axis of said driving shaft, a driven shaft journaled in said gear casing, a gear on said driven shaft, counter-shafts journaled in said gear casing surrounding said driven shaft, loose gears on said counter-shafts meshing with the gear on said driven shaft, clutch devices for locking said loose gears to said counter-shafts when driven in one direction, rack-bars engaging with the said counter-shafts for oscillating the same, the inner ends of said rack-bars being connected to be operated by the crank carried by said driving shaft, substantially as set forth.

4. A variable speed gearing comprising a driving shaft carrying a variable throw crank-pin, means operated by the driving shaft for varying the throw of said crank, a driven shaft, and gearing intermediate of said driven shaft and said variable throw crank for operatively connecting the driving shaft and driven shaft, substantially as set forth.

5. A variable speed gearing comprising a driving shaft carrying a variable throw crank, means operated by power from said driving shaft for varying the throw of said crank, a driven shaft, and gearing connecting said crank with said driven shaft, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

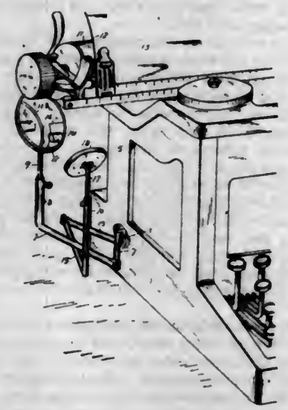
1,015,809. CABLE-CLAMP FOR ELECTRIC-ELEVATOR CIRCUIT-BREAKERS. ALBERT H. LOWE, St. Louis, Mo. Filed Nov. 12, 1909. Serial No. 527,674. (Cl. 172—152.)



1. In combination with an oscillating circuit-breaking lever for electric elevators, provided with a terminal loop, a controlling cable secured at one end to the car and extending through the loop, a protecting clamp on the cable normally fitting loosely within the loop, and means on the clamp positioned below the loop for securing the clamp to the cable.

2. In combination with an oscillating circuit-breaking lever for electric elevators, provided with a terminal loop, a controlling cable secured at one end to the car and extending through the loop, a protecting clamp on the cable normally fitting loosely within the loop, said clamp comprising two sections adapted to jointly envelop the cable and form a sleeve about the same, and means on the respective sections positioned below the loop for securing the sections together and clamping them securely to the cable.

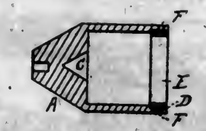
1,015,810. TYPE-WRITING MACHINE. JAMES ROWLEY MACCUE, Cooma, New South Wales, Australia. Filed May 9, 1910. Serial No. 560,119. (Cl. 197—182.)



1. In an attachment for typewriters, in combination, a mirror for reflecting light upon the platen of the machine, a mirror for reflecting an image of the illuminated portion of the platen, a support for said mirrors and adjustable connections between said support and said mirrors.

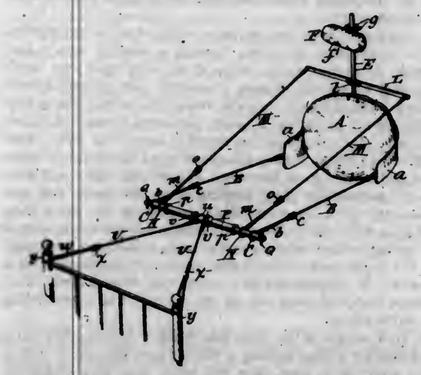
2. In an attachment for typewriters, in combination, a mirror for reflecting light upon the under side of the platen of the machine, a mirror for reflecting an image of the under side of the platen and the work sheet thereon, a support for said mirrors and universally adjustable connections between said support and said mirrors.

1,015,811. CONE-CENTER FOR LATHES. THOMAS H. MACK, Balboa, Canal Zone. Filed Feb. 16, 1911. Serial No. 609,010. (Cl. 82—33.)



In an article of the class described, the combination of a cone center, having a central cylindrical bore open at one end, and having a conical bore at the other end, and having an annular recess on the inner periphery of the open end, a bushing ring, located in said recess and of smaller diameter than that of the cylindrical bore, set screws fastening said ring to said cone center, a center pin spindle, fitting within said ring, and a center pin held by said spindle and adapted to fit the conical bore.

1,015,812. PATIENT-SUPPORTER. CHARLES MADSEN, Buffalo, N. Y. Filed Jan. 14, 1911. Serial No. 602,590. (Cl. 5—43.)



1. A patient supporter comprising a back rest, a cross bar arranged in front of the back rest, flexible members connecting opposite sides of the back rest with opposite ends of said bar and two forwardly diverging flexible members connected at their rear ends with the central part of said rod and adapted to be connected at their front ends with a stationary support.

2. A patient supporter comprising a back rest, a rear cross bar connected with the upper part of said back rest, a front cross bar arranged in front of the back rest, flexible members connecting opposite sides of the back rest with the opposite ends of the front cross bar, and flexible members connecting opposite ends of the rear cross bar with opposite ends of the front cross bar.

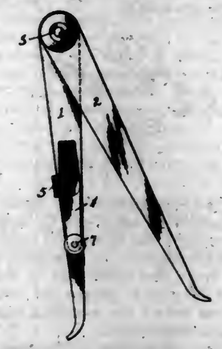
1,015,813. CALIPER ATTACHMENT. WILLIAM M. MAHONEY, Toledo, Ohio. Filed July 31, 1911. Serial No. 641,475. (Cl. 33—25.)

1. The combination with an instrument of the class described, of means carried thereby and operable to laterally adjust the free end portion of one caliper leg relative to the other.

2. The combination with a caliper, of means capable of being attached to a leg thereof and operable to spring the free end portion of one caliper leg laterally relative to the other leg.

3. The combination with a caliper, of a member clamped to one leg thereof, and adjustable means carried by said member and capable of coöperating therewith to effect a lateral springing of one caliper leg relative to the other.

4. The combination with a caliper, of a bar-like member clamped to one of the caliper legs longitudinally thereof, and means coöperating with said member at a distance from the point of attaching of the member to the leg to effect a lateral springing of the free end of such leg relative to the other.



5. The combination with a caliper, of a bar-like member clamped to one of the caliper legs longitudinally thereof, and a screw threading through said member at a distance from the point of clamping thereof to the caliper leg and capable of bearing against the leg to effect a lateral springing of the free end thereof relative to the other leg of the caliper.

[Claim 6 not printed in the Gazette.]

1,015,814. EXPLOSIVE CHARGE FOR ORDNANCE. HUDSON MAXIM, Hopatcong, N. J., assignor to E. I. du Pont de Nemours Powder Company, a Corporation of New Jersey. Filed Feb. 14, 1908. Serial No. 415,961. (Cl. 52—3.)

1. A charge for guns consisting of grains of explosive material commingled with grains of heat-absorbing material progressively decomposable by the heat of combustion of the explosive material and at substantially the same rate as the rate of combustion of the latter.

2. A charge for guns consisting of grains of explosive material commingled with grains formed of a heat-absorbing material and an agglutinating agent, said heat-absorbing material being progressively decomposable by the heat of combustion of the explosive material and at substantially the same rate as the rate of combustion of the latter.

3. A charge for guns consisting of grains of explosive material commingled with grains formed of a heat-absorbing material and an explosive agglutinatng agent, said heat-absorbing material being progressively decomposable by the heat of explosion of the explosive material and at substantially the same rate as the rate of combustion of the latter.

4. A charge for guns consisting of grains of smokeless powder and grains of a heat-absorbing material progressively decomposable by the heat of combustion of the smokeless powder and at substantially the same rate as the rate of combustion of the latter.

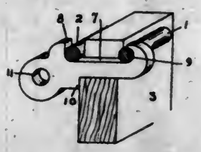
5. A charge for guns consisting of smokeless powder commingled with a heat-absorbing material, said powder and heat-absorbing material each existing as distinct and independent bodies having rates of combustion and decomposition substantially the same.

[Claims 6 to 13 not printed in the Gazette.]

1,015,815. HOOP-FASTENING MEANS FOR SILOS. CHARLES W. MCCLURE, Saginaw, Mich. Filed May 31, 1911. Serial No. 630,514. (Cl. 217—4.)

1. In a silo, the combination with staves having their upper ends slotted, of an inner and an outer hoop, and a connector comprising a bar having its upper edge formed

with a notch, one wall of said notch being upright, the opposite wall of said notch being curved and adapted to receive said inner hoop, the lower edge of said bar formed with a shoulder adapted to engage the outer face of the stave, a guy, and means for attaching said guy to the outer end of said connector.



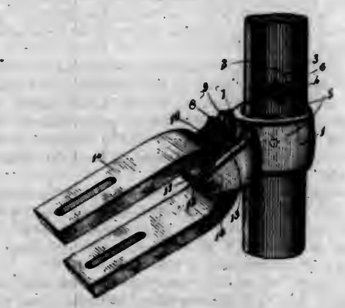
2. In a silo, the combination with staves having their upper ends slotted, of an inner and an outer hoop, and a connector comprising a bar having its upper edge formed with a notch, the extremities of said notch being adapted to receive said hoops, the lower edge of said bar formed with a shoulder adapted to engage the outer face of the stave, a guy, and means for attaching said guy to the outer end of said connector.

3. In a silo, the combination with staves having their upper ends slotted, of an inner and an outer hoop, and a connector comprising a bar having its upper edge formed with a notch adapted to receive said inner and outer hoops respectively, a guy, and means for attaching said guy to the outer end of said connector.

4. In a silo, the combination with staves having their upper ends slotted, of an inner and an outer hoop, and a connector received in said slot, said connector comprising a bar having its upper edge formed with a notch, one wall of said notch being upright, the opposite wall of said notch being formed to receive said inner hoop.

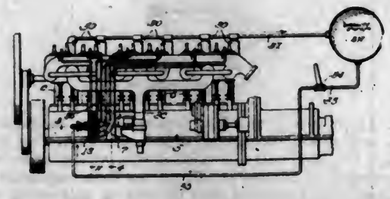
5. In a silo, the combination with staves having their upper ends slotted, of an inner and an outer hoop, and a connector received in said slot, said connector comprising a bar having its upper edge formed with a notch, the extremities of said notch being adapted to receive said hoops, the lower edge of said bar formed with a shoulder adapted to engage the outer face of the stave.

1,015,816. LUG-STRAP CONNECTOR. FRANK MCCOLLUM and ALLEN C. HANNER, Randleman, N. C. Filed Apr. 9, 1910. Serial No. 554,416. (Cl. 139—48.)



A lug strapped connector including a body to receive a picker arm, an ear projecting upwardly from one side of said body, means engaging said ear to secure the body to the picker arm, downwardly inclined arms projecting from said body, a set screw carried by the body to engage the picker arm and arranged between said arms and adjacent the top edge of the body, and a semi-cylindrical bar integral with said arms and in spaced relation with said body, the lower face of said bar projecting below the plane of the lower edge of said body, the length of said bar being greater than the width of said body, substantially as and for the purpose set forth.

1,015,817. ENGINE-STARTER. LEONARD L. MCLARTY, Los Angeles, Cal., assignor of one-half to L. A. Hauser, Los Angeles, Cal. Filed Dec. 12, 1910. Serial No. 596,771. (Cl. 123—181.)



1. In a device of the character described, a distributing valve comprising a casing, a rotary valve within the casing and having a duct therein leading to its periphery, the casing having a plurality of ports with which the valve duct is adapted to register, a valve stem extending from the valve and having a longitudinal duct therein connecting with the valve duct, a stuffing box surrounding the outer end of the valve stem, and a chamber inclosing the end of the valve stem duct and adapted to receive fluid under pressure.

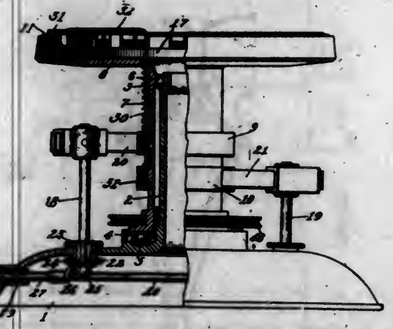
2. In a device of the character described, a distributing valve comprising a casing having a conical valve seat therein, a conical valve adapted to seat upon the valve seat and rotatively engage therewith and provided with a duct leading to its conical face, the casing being provided with a plurality of ports arranged around the conical valve and adapted for registry with the valve duct at different times during the rotation of the valve, a valve stem projecting from the small end of the valve and having a longitudinal duct leading from its outer end and connecting with the valve duct, means on the valve stem engaging with the valve casing to prevent the movement of the conical valve off its conical seat, a member surrounding the outer end of the valve stem and provided with a chamber in communication with the longitudinal duct therein, and a stuffing box on the member and surrounding the valve stem.

3. In a device of the class described, a distributing valve comprising a casing having a conical seat therein, a conical valve adapted to seat upon the valve seat and rotatively engage therewith and provided with a duct leading to its conical face, the casing being provided with a plurality of ports arranged around the conical valve and adapted for registry with the valve duct at different times during the rotation of the valve, a valve shaft projecting from the large end of the valve and through the medium of which the valve may be rotated, a valve stem projecting from the small end of the valve and having a longitudinal duct leading from its outer end and connecting with the valve duct, adjustable means on the valve stem engaging with the valve casing to prevent the movement of the conical valve off its conical seat, a member surrounding the outer end of the valve stem and provided with a chamber in communication with the longitudinal duct therein, and a stuffing box on the member and surrounding the valve stem.

1,015,818. CASTING-MACHINE. JOHN A. MCMANUS, Jr., Lynn, Mass. Filed Oct. 28, 1908. Serial No. 459,864. (Cl. 22—65.)

1. In a casting machine, the combination of a receptacle for the casting material, a suitably shaped mold, means for heating the receptacle, and means automatically set into operation after the material in the receptacle has attained a predetermined temperature for transferring said material from the receptacle into the mold.

2. In a casting machine, the combination of a receptacle for the casting material, a suitably shaped mold to receive said material, electrical means for initially fusing the material in the receptacle and maintaining the material fused during the casting operation, and means for transferring the material from the receptacle into the mold after it has attained the desired temperature.



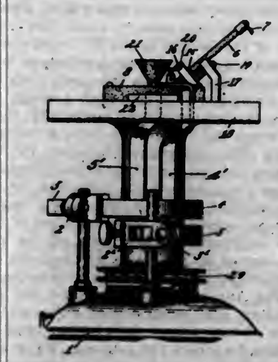
3. In a casting machine, the combination of a receptacle for the casting material, a suitably shaped mold, electrical means for heating the receptacle and the mold, a stationary member, a revolving member supported thereby, and means dependent upon the centrifugal force developed by the revolving member for causing the material in the receptacle to be forced into the mold.

4. In a casting machine, the combination of a receptacle containing casting material, a mold for receiving the material, centrifugal means acting on the material while in the receptacle for forcing the material from the latter into the mold, and means for continuously heating the mold and the receptacle during the casting operation.

5. In a machine for casting inlays, the combination of a receptacle, a suitably shaped mold for receiving material from the receptacle, electrical means for slowly and evenly heating the mold and the receptacle, and centrifugal means for forcing the material from the receptacle into the mold after it has attained the proper state.

[Claims 6 to 24 not printed in the Gazette.]

1,015,819. CASTING-MACHINE. JOHN A. MCMANUS, Jr., Lynn, Mass. Filed Aug. 5, 1910. Serial No. 575,788. (Cl. 22—65.)



1. In a casting machine, the combination of means for movably supporting the material to be cast, means for playing an arc upon the material while the latter moves, and a mold movable simultaneously with said first means to receive melted material from the latter.

2. In a casting machine, the combination of means for rotatably supporting the material to be cast, means for playing an arc upon the material while the latter rotates, and a mold simultaneously rotatable with the first mentioned means to receive melted material from the latter.

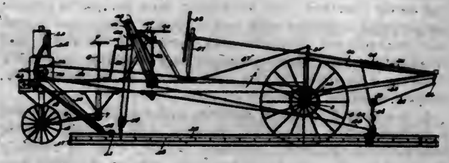
3. In a casting machine, the combination of means for supporting the material to be cast, a second means carried by said first mentioned means for playing an arc upon the material to melt it either while the support for the latter is stationary or moving, and a mold movable simultaneously with the means for melting the material, to receive the latter after it has been subjected to the action of the arc.

4. In a casting machine, the combination of means for movably supporting the material to be cast, means for playing an arc upon the material while the latter moves, a mold movable simultaneously with said first means to receive melted material from the latter, and a means for conserving the heat of the melted material until the casting operation has been completed.

5. In a casting machine, the combination of means for movably supporting the material to be cast, means for playing an arc upon the material while the latter moves, a mold movable simultaneously with said first means to receive melted material from the latter, and a means for conserving the heat of the melted material during its transit into and after it reaches the mold.

[Claims 6 to 15 not printed in the Gazette.]

1,015,820. ROAD-LEVELING DEVICE. NATHANIEL S. MONROE, Arthur, Ill. Filed Mar. 24, 1911. Serial No. 616,715. (Cl. 37—7.)



1. A device of the class described, comprising a wheeled body; angularly disposed forwardly diverged scraper bars arranged at opposite sides of said body; means pivotally connecting the forward ends of said bars with said body, said means being manually adjustable for effecting angular adjustment of said bars relative to the surface acted upon; means pivotally connecting the rearward ends of said bars, said means maintaining said bar ends in spaced relation; means manually operable from said body for effecting elevation of the respective ends of said bars; and means manually operatable from said body for forwardly drawing the rearward ends of said scraper bars to increase the divergency of the forward ends thereof, substantially as described.

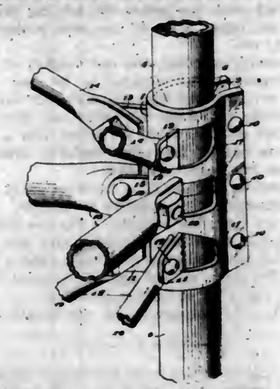
2. In a device of the class described, the combination of a wheeled body; angularly disposed bars arranged at opposite sides of said body; a pivotal connection between the rearward ends of said bars; a pair of links pivotally connecting the forward end of each of said bars with said body, the inner end of one of the links of each of said pair of links being adjustably secured for effecting angular adjustment of the scraper bars relative to the surface acted upon, substantially as described.

3. A device of the class described, comprising a wheeled body; angularly disposed forwardly diverged scraper bars arranged at opposite sides of said body; means pivotally connecting the forward ends of said bars with said body, said means being manually adjustable for effecting angular adjustment of said bars relative to the surface acted upon; means pivotally connecting the rearward ends of said bars, said means maintaining said bar ends in spaced relation; cranes at the forward ends of said body for effecting elevation of the forward ends of the said scraper bars; and manually operatable means for effecting elevation of the rearward ends of said bars, substantially as described.

1,015,821. STEEL TOWER OR DERRICK. LEE C. MOORE, Pittsburgh, Pa. Filed Nov. 1, 1910. Serial No. 590,161. (Cl. 189—20.)

1. A clamp for towers, derricks and the like, comprising a resilient split sleeve having perforated longitudinal flanges for receiving compression bolts, said sleeve being free from interior projections or ribs and having a plural-

ity of ears turned outwardly from the body of the sleeve and providing oppositely disposed apertures therein.



2. A clamp for towers, derricks and the like, comprising a split sleeve having a smooth cylindrical interior surface and being provided with outwardly bent flanges to receive compression members, and sets of longitudinal and alined ears punched out from the body portion of the sleeve and arranged to stand radially thereof and providing oppositely disposed apertures for the insertion of a temporary supporting member.

3. A clamp for towers, derricks and the like, comprising a resilient split cylindrical member, said member having longitudinal oppositely disposed flanges, a set of radially disposed ears punched out from one side of the body portion and bent in one direction, and a second set of radially disposed ears punched out from the other side of the body portion and bent in the opposite direction, the whole being arranged to provide oppositely disposed openings for the insertion of a temporary supporting member, and the flanges and ears being provided with apertures, those of the flanges for receiving compression bolts and those of the ears for clamping girts and braces thereto.

4. A clamp for towers, derricks and the like, comprising a resilient split sleeve having perforated longitudinal flanges and having a smooth interior and being provided with two sets of plural radially arranged ears punched out of the metal of the sleeve and turned radial to the axis thereof, an intermediate pair of said ears being arranged to provide oppositely disposed apertures for the insertion of a temporary supporting member.

5. A tower, derrick and the like, comprising leg sections arranged to directly abut each other at their ends, a clamp surrounding the leg portions and having a smooth interior, said clamp being provided with adjacent flanges perforated for the reception of clamping bolts and being formed of resilient material, a plurality of ears punched and bent outwardly from the body portion of the clamp and providing oppositely disposed openings, and girts and braces connected to the ears.

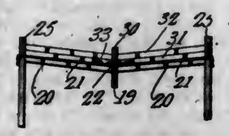
1,015,822. JET-CONDENSER. OTTO HILDEBERT MUELLER, Camberwell, England, assignor to Henry R. Worthington, a Corporation of New Jersey. Filed Dec. 7, 1908. Serial No. 466,259. (Cl. 123—35.)

1. In a water jet condenser, the combination with a condenser cone, of a vertical injection pipe in the upper part of the condenser and terminating in a casing separated from the condenser wall and forming a water chamber, an annular passage connected with the water chamber through which an annular water jet is thrown downward in the condenser cone, a steam inlet above the casing opening into the space about the injection pipe and between the casing and condenser wall, and passages through the casing for the admission of steam from said steam inlet to the space within the annular water jet.

2. The combination with the condenser cone and vertical injection pipe D, of casing E on the lower end of the pipe, having water passages 13, ring F forming with casing E annular water chamber 12 with which said passages 13 connect and annular jet passage e, and vertical steam

passages 14 through the casing E to the interior of the water jet, substantially as described.

1,015,823. CONCENTRATING-TABLE. WILLIAM L. MUENDER, Montford, Wis. Filed Jan. 7, 1911. Serial No. 601,418. (Cl. 83—54.)



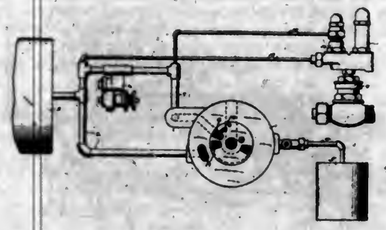
1. In a device of the class described, a casing; a mesh work covering thereon; a riddle upon the casing above the covering, the riddle comprising intersecting ore riffles and gangue skimmers, the skimmers being superposed upon the riffles, the riffles and the skimmers slanting downwardly toward the longitudinal center of the casing, there being openings in the lower edges of the riffles, adjacent the longitudinal center of the casing, to permit the ore to move longitudinally of the casing; means for imparting a longitudinal reciprocation to the casing; and means for supplying fluid under pressure beneath the mesh work covering.

2. In a device of the class described, a casing; a meshwork covering thereon; a riddle carried by the casing, above the covering, the riddle comprising a tail-board and intersecting ore riffles and gangue skimmers, the riffles discharging against the tail-board, and the skimmers being extended across the tail-board, the riffles and the skimmers slanting downwardly toward the longitudinal center of the table; there being openings in the lower edges of the riffles, adjacent the longitudinal center only of the casing; a movable gate carried by the casing adjacent the discharge end of the tail-board and adapted to receive the material from the riffles, the gate being extended but part way across the casing, and being located adjacent the longitudinal center of the casing; the covering being provided with an opening for which the gate constitutes a closure; means for imparting a longitudinal reciprocation to the casing; and means for supplying an air blast beneath the covering.

1,015,824. DUPLEX PRESSURE-CONTROL APPARATUS. HOWARD M. P. MURPHY, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 28, 1907. Serial No. 376,168. (Cl. 188—1.)

1. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, said brake valve being adapted to

control the admission of fluid pressure to the opposite side of said diaphragm.



2. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and on the opposite side to fluid varying with train pipe pressure, said brake valve being adapted to control the admission of fluid from another source to said opposite side of the diaphragm.

3. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and on the opposite side to train pipe pressure, said brake valve having ports for admitting fluid under pressure to said opposite side of the diaphragm.

4. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and on the opposite side to train pipe pressure, said brake valve having ports for admitting fluid at main reservoir pressure to said opposite side of the diaphragm.

5. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and on the opposite side to train pipe pressure, said brake valve having ports for admitting fluid at main reservoir pressure to said opposite side, when said brake valve is in a brake applied position.

[claims 6 to 14 not printed in the Gazette.]

1,015,825. CASH-REGISTER. WILLIAM H. MUZZY, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Jan. 10, 1908. Serial No. 410,142. (Cl. 235—17.)

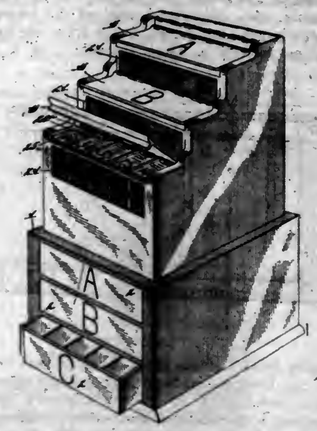
1. In a cash register, the combination with a series of cash receptacles, of a series of corresponding check receptacles, covers for said check receptacles, a series of signals, and means for releasing the proper cash receptacle and operating the proper signal upon the opening of the corresponding check receptacles.

2. In a cash register, the combination with a series of cash receptacles, means for feeding the checks in said receptacles, covers for said receptacles, and means for releasing the cash receptacles controlled by the covers of the check receptacles.

3. In a cash register, the combination with a series of cash receptacles, of a series of check receptacles, pivoted covers for said check receptacles, latches for the cash receptacles, and means for operating the latches from the pivoted covers.

4. In a cash register, the combination with a series of cash receptacles, of a series of check receptacles, covers for the check receptacles, means for releasing the check receptacles by the movements of said covers, and means for holding the covers in their adjusted positions.

5. In a cash register, the combination with a series of cash drawers, of a series of check receptacles, means for feeding checks in said receptacles, covers for the check receptacles, latches for the cash drawers, means for operating the latches upon the opening of the covers, and different signals operated according to the cash drawer opened.



[Claims 6 and 7 not printed in the Gazette.]

1,015,826. GANG-PLOW. ANDREW B. NEUGARDT, Trevorton, Pa. Filed Nov. 28, 1910. Serial No. 594,574. (Cl. 97—30.)

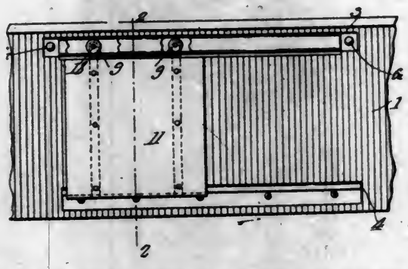
A gang plow such as described consisting of a frame having parallel side members, one of said side members being longer than the other, the said side members being connected by a diagonal member, a diagonal brace parallel with said diagonal member, transversely extending rods between said diagonal brace and the longer side member, plows pivotally connected to said rods, driving wheels mounted between said diagonal brace and the shorter side and diagonal member and arranged back of each plow, and steering wheels mounted on the front end of said frame, substantially as described.

1,015,827. DOOR-HANGER. WILLIAM W. NICODEMUS, Taylorville, Ill. Filed Jan. 28, 1911. Serial No. 605,313. (Cl. 16—7.)

1. In a structure of the class described, the combination with the wall of a car formed with a doorway and above the doorway with a recess extending throughout the width of the doorway and laterally therebeyond, of a track seated in the recess and having a wide roller supporting flange resting upon the bottom wall of the recess and having a right angled depending edge flush with the face of the recess and a narrow roller supporting flange spaced from the first mentioned flange and in a plane therewith, of a door, a hanger upon the door, and rollers of various treads journaled upon the hanger to run the wider one upon the first mentioned flange of the track and the narrower one upon the last mentioned flange thereof.

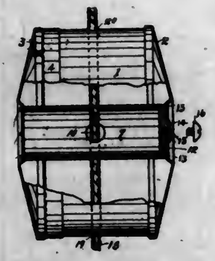
2. In a structure of the class described, the combination with the wall of a car formed with a doorway and

above the doorway with a recess extending throughout the width of the doorway and laterally therebeyond, of a track seated in the recess and having a roller supporting flange resting upon the bottom wall of the recess and a second roller supporting flange spaced from the first mentioned flange and in a plane therewith, of a door, a



hanger made from a single strip of metal bent to form a bar with two brackets made of a double thickness of the metal and terminating in two downwardly projecting door engaging terminals, and two rollers journaled upon opposite sides of the brackets of the hanger to run one upon the first mentioned flange of the track and one upon the last mentioned flange thereof.

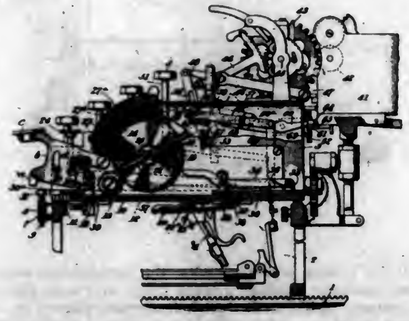
1,015,828. LAMP-CORD ADJUSTER. CLARENCE G. OCHILTREE, Seattle, Wash. Filed Nov. 3, 1910, Serial No. 590,551. Renewed Dec. 4, 1911. Serial No. 663,839. (Cl. 248—10.)



A lamp cord adjuster comprising a cylindrical shell having one of its ends permanently closed, a loose cover upon the opposite end of said shell, openings through said cover, a drum of relatively stiff material, means for securing said drum to said cover, said means including projections from said drum and integral therewith adapted to register with the said openings in said cover and upset or clenched thereto, a washer, projections from said washer, recesses in the circular edge of said drum to receive said last named projections, a shoulder upon said washer, an opening through said closed end of said shell to receive said shoulder, a threaded opening through said shoulder to receive a screw having a head of greater diameter than that of said last named opening, and openings through the sides of said shell and said drum to receive a lamp cord.

1,015,829. TABULATING, BACK-SPACING, AND KEY-CONNECTING MECHANISM. ELMAZAR PARMLY, Jr., Washington, D. C., assignor to Elliott-Fisher Company, Harrisburg, Pa., a Corporation of Delaware. Filed Apr. 10, 1909. Serial No. 489,192. (Cl. 235—59.)

1. The combination with keys and adding mechanism, of means for changing the denominational relation of the keys and adding mechanism, selecting mechanism operative to determine such relation, means for operatively connecting the keys with the adding mechanism, and a connection between the selecting mechanism and the key connecting means.



2. In a combined typewriting and adding machine, the combination with a typewriter including a carriage, keys and printing mechanism, of an adding mechanism normally disconnected from the keys, key connecting mechanism operative to connect the keys and adding mechanism, a tabulating mechanism for arresting the carriage, and a connection between the tabulating mechanism and the key connecting mechanism.

3. The combination with a key-operated recording mechanism, a carriage movable to determine the position of the record on the work sheet, an adding mechanism, means for connecting the keys with the adding mechanism, a stop movable into and out of position to arrest the carriage, and controlling means common to said stop and to the key connecting mechanism.

4. The combination with recording mechanism, keys for operating the same, and a movable carriage, of adding mechanism, key connecting means operative to establish a coöperative relation between the keys and adding mechanism, tabulating mechanism including a movable stop and an operating device for said stop, and means whereby the connection between the keys and adding mechanism is controlled by the stop operating device.

5. The combination with recording mechanism and keys, of an adding mechanism, a carriage movable to change the denominational relation of the keys and adding mechanism, and combined tabulating and key connecting mechanism operative to establish a coöperative relation between the keys and adding mechanism and to select the denominational relation thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,015,830. TOBACCO-BOX. HERBERT PENNEY, Hamilton, Ontario, Canada. Filed Mar. 6, 1911. Serial No. 612,620. (Cl. 206—38.)

1. In a device of the character described, the combination with a receptacle, of a hinged closure for said receptacle, said closure comprising side and top walls, and a knife blade pivoted between said side walls, the top wall of said closure forming a spring, which coacts with said knife blade to maintain it in either open or closed position.

2. In a device of the character described, the combination with a receptacle, of a hinged closure for said receptacle, said closure comprising side and top walls, and a knife blade pivoted between said side walls, the top wall of said closure forming a spring which coacts with said knife blade to maintain it in either open or closed position, the cutting edge of said blade lying toward the top wall of the closure when the blade is in its closed position.

3. In a device of the character described, the combination with a receptacle, of a hinged closure comprising top and side walls, the front end of said closure being open, and a knife blade pivoted between the side walls of the closure adjacent the open end thereof and opening outwardly through said open end, the cutting edge of the blade lying toward the top wall when the blade is in its closed position, the top wall forming a spring which coacts with the blade to maintain said blade in either open or closed position.

1,015,831. HEAT-EXCHANGING DEVICE. EDUARD PIERLOCK and CARL ZÜBLIN, Berlin, Germany. Filed Feb. 27, 1911. Serial No. 611,274. (Cl. 62—32.)

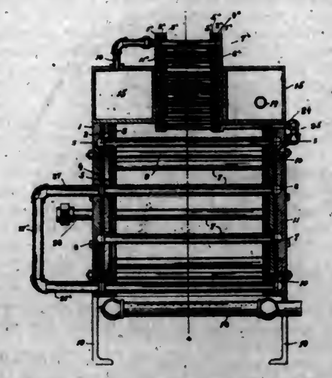
The combination with a fluid conveying pipe of substantially uniform diameter, of diffusing means therefor including a transversely disposed annular wall disposed with its periphery in engagement with the interior of the wall of said conveying pipe, to deflect the peripheral flowing fluid toward the center of said conveying pipe; a member having faces diverging in the direction of current flow and disposed crosswise with respect to said annular wall, whereby the centrally flowing fluid is deflected toward the periphery of said conveying pipe and encountering said centrally deflected fluid to thoroughly diffuse the fluid in said conveying pipe.

1,015,832. PERMUTATION DOOR-LOCK. JOHN PIGNOCCO, La Salle, Ill. Filed Jan. 30, 1911. Serial No. 605,519. (Cl. 70—18.)

1. In a permutation door lock, the combination with a casing, of a rotary reciprocatory knob arbor mounted transversely in said casing, a spring arranged to actuate the same in one direction, a latch and means connected with said arbor for operating the same, an oscillatory lever for locking said latch in locking position, a series of tumblers, a tumbler-carrying lever bearing on said arbor and said first mentioned lever and adapted to move the latter to a position for releasing said latch, a pair of ratchet wheels mounted on said arbor, disks arranged contiguously with said ratchet wheels; pawls carried by said disks for engaging said ratchet wheels for effecting the adjustment of said disks and projections on said disks for actuating said tumblers successively, substantially as described.

2. In a permutation door lock, the combination with a casing, of a rotary reciprocatory knob arbor mounted transversely in said casing, a helical spring surrounding said arbor and adapted to actuate the same in one direction, a latch and means connected with said arbor for operating the same, an oscillatory lever for locking said latch in locking position, a series of tumblers, a tumbler-carrying lever connected with said arbor and said first-named lever and adapted to move the latter to a position for releasing said latch, a pair of ratchet wheels mounted on said arbor, adjustable disks arranged contiguously with said ratchet wheels, pawls carried by said disks for engaging said ratchet wheels for effecting the adjustment of said disks, and projections on said disks for actuating said tumblers successively, substantially as described.

1,015,833. WATER-HEATER. DUMITRU POPA, Canton, Ohio. Filed June 10, 1911. Serial No. 632,334. (Cl. 122—34.)



1. A water heater including end walls composed of three metal plates with intervening rubber sheets, there being registering apertures forming sockets in the two inner metal plates and the rubber sheets and grooves forming ducts in the outer plates communicating with adjacent sockets, and tubes having their ends jointed in the sockets.

2. A water heater including an end wall composed of three metal plates with intervening rubber sheets, there being registering apertures forming sockets in the two inner metal plates and the rubber sheets and grooves forming ducts in the outer plate communicating with adjacent sockets, and tubes having ends jointed in the sockets.

3. A water heater including a case forming a main chamber, a plurality of tubes in the main chamber communicating in series, the case having a side wall and a hollow cover with a flue chamber extending through the cover, a plurality of tubes in the flue chamber, the tubes in each lateral half of the flue chamber communicating in series, a pipe leading into the cavity of the side wall, a communicating pipe between the cavities of the side wall and the cover, communicating pipes between the cavity of the cover and each lateral series of flue tubes, and communicating pipes leading from the flue tubes to the series of main tubes, the main tubes being substantially twice the diameter of the flue tubes.

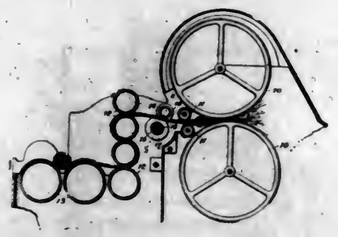
4. A water heater including a case forming a main chamber, a plurality of tubes in the main chamber communicating in series, the case having a side wall and a hollow cover with the flue chamber extending through the cover, a plurality of tubes in the flue chamber, the tubes in each lateral half of the flue chamber communicating in series, a pipe leading into the cavity of the side wall, a communicating pipe between the cavities of the side wall and the cover, communicating pipes between the cavity of the cover and each lateral series of flue tubes, and communicating pipes leading from the flue tubes to the series of main tubes.

5. A water heater including a case forming a main chamber, a plurality of tubes in the main chamber communicating in series, the case having a hollow cover with a flue chamber extending through the cover, a plurality of tubes in the flue chamber, the tubes in each lateral half

of the flue chamber communicating in series, a pipe leading into the cavity of the cover, communicating pipes between the cavity of the cover and each lateral series of flue tubes, and communicating pipes leading from the flue tubes to the series of main tubes, the main tubes being substantially twice the diameter of the flue tubes.

[Claims 6 to 8 not printed in the Gazette.]

1,015,834. OPENER AND LAP-MACHINE. JAMES CHARLES POTTER, Pawtucket, R. I., assignor to Potter & Johnston Machine Co., Pawtucket, R. I. Filed Aug. 2, 1909. Serial No. 510,772. (Cl. 19—8.)



1. In a cotton opener or the like, the combination of lap-forming mechanism and a pair of rolls between which the cotton passes, one of said rolls having circumferential grooves or channels, and the other having ribs entering said grooves or channels.

2. In a cotton opener or the like, the combination of a pair of rolls between which the cotton passes, one of said rolls having circumferential grooves or channels, the other having ribs entering said grooves or channels, and means for revolving said rolls, the peripheral speed of the ribs and bottoms of the grooves or channels being different.

3. In a cotton opener or the like, the combination of lap-forming mechanism and a pair of rolls between which the cotton passes, one of said rolls having circumferential grooves or channels, the other having ribs entering said grooves or channels, and means for transmitting motion to the groove-carrying roll from the other roll.

4. In a cotton opener or the like, the combination of lap-forming mechanism and a pair of rolls between which the cotton passes, one of said rolls having circumferential grooves or channels, the other having ribs entering said grooves or channels, and means for transmitting motion to the groove-carrying roll from the other roll, consisting of portions of the two rolls in peripheral contact distinct from the ribs and grooves.

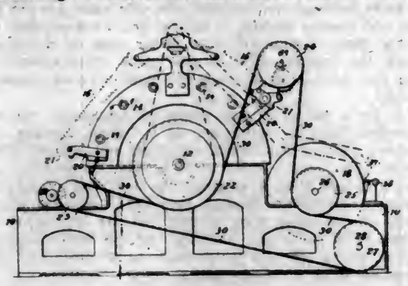
5. In a cotton opener or the like, the combination of a pair of rolls between which the cotton passes, one of said rolls having circumferential grooves or channels, the other having ribs entering said grooves or channels, and means for transmitting motion to the groove-carrying roll from the other roll, consisting of portions of the two rolls in peripheral contact, the bottoms of the grooves being of less diameter than the portions of the groove-carrying roll in contact with the other roll.

[Claim 6 not printed in the Gazette.]

1,015,835. CARDING-MACHINE. JAMES CHARLES POTTER, Pawtucket, R. I. Filed May 11, 1911. Serial No. 626,617. (Cl. 19—3.)

1. A carding machine comprising a revolving roll at the feed end of the machine, a doffer, a driving shaft having a carding cylinder thereon, a series of belt pulleys for the elements mentioned, a single endless belt passing over all said pulleys, a doffer comb and operative driving connections between said belt and said comb.

2. A carding machine comprising a revolving roll at the feed end of the machine, a doffer, flats, a driving shaft having a carding cylinder thereon, a series of belt pulleys for the elements mentioned, a single endless belt passing over all said pulleys, a doffer comb and operative driving connections between said belt and said comb.



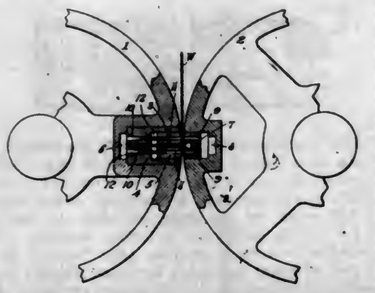
3. A carding machine comprising a licker-in roll, revolving flats, a doffer, a main driving shaft having a carding cylinder thereon, a series of belt pulleys for the elements mentioned, a single endless belt passing over all said pulleys, a doffer comb and operative driving connections between said belt and said comb.

4. A carding machine comprising a licker-in roll, flats, a doffer, a main driving shaft, a series of belt pulleys for the elements mentioned, a single endless belt passing over all said pulleys, a doffer comb, operative driving connections between said belt and said comb, a feed roll, and gear and shaft connections between the doffer and the feed roll.

5. A carding machine comprising a revolving roll at the feed end of the machine, a doffer, flats, a driving shaft, a series of belt pulleys for the elements mentioned, a single endless belt passing over all said pulleys, a doffer comb, means transmitting movement from said belt to said comb and means to reverse the power connection between the flats and the pulley for driving the same.

[Claims 6 to 16 not printed in the Gazette.]

1,015,836. MEANS FOR CONTROLLING AND DIRECTING MOVING SHEETS OR WEBS. GEORGE FRANCIS READ, London, England, assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed May 6, 1910. Serial No. 559,708. (Cl. 164—100.)

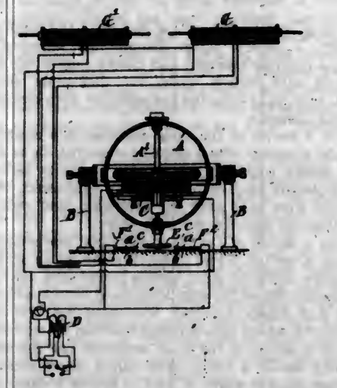


1. The combination with a rotary member past which a web or sheet is led, said member being provided with an air channel having an outlet by which the air is directed against the passing web or sheet, of an air collector mounted on said member, the collector, channel and outlet being in open communication.

2. The combination with a pair of rotary members between which sheets or webs are led, each of said members being provided with an air channel having an outlet by which air is directed against the passing sheets or webs, of an air collector on each member, the collector, channel and outlet being in open communication.

3. The combination with a pair of cutting cylinders provided with cutting devices, said cylinders being formed to provide air channels behind the cutting devices, of air outlets through said cylinders, and an air collector for each cylinder in communication with its channel, said outlets delivering air simultaneously.

1,015,837. AUTOMATIC STABILIZER FOR AEROPLANES AND THE LIKE. PAUL LOUIS ANTOINE REGNARD, Paris, France. Filed Aug. 24, 1910. Serial No. 578,711. (Cl. 244—29.)



1. In an aeroplane, the combination of stabilizing means, electrically operated means for actuating said stabilizing means, contacts on the longitudinal and transverse axis of the aeroplane and a gyroscope rotating in a vertical plane having a vertical projection around which said contacts are arranged, whereby tipping of the aeroplane causes the projection on said gyroscope to bear against said contacts and close the circuit through said electrically operated means to actuate said stabilizing means to right the aeroplane.

2. In an aeroplane, the combination of stabilizing means, electrically operated means for actuating said stabilizing means, four contacts at right angles to each other on the longitudinal and transverse axis of the aeroplane and a gyroscope rotating in a vertical plane having a vertical projection around which said contacts are arranged, whereby tipping of the aeroplane causes the projection on said gyroscope to bear against said contacts and close the circuit through said electrically operated means to actuate said stabilizing means to right the aeroplane.

3. In an aeroplane, the combination of lateral and vertical stabilizing means, solenoids for actuating said stabilizing means, contacts on the longitudinal and transverse axis of the aeroplane, and a gyroscope rotating in a vertical plane having a vertical projection around which said contacts are arranged, whereby tipping of the aeroplane causes the projection on said gyroscope to bear against said contacts and close the circuit through said solenoid to actuate said stabilizing means to right the aeroplane.

1,015,838. MANUFACTURE OF CATTLE FOOD. AUGUSTE ROBERTI, Waremme, Belgium. Filed June 28, 1911. Serial No. 636,818. (Cl. 99—11.)

1. Process for the manufacture of cattle food, which consists in comminuting a suitable absorbent fibrous material, then heating a syrup so as to leave only the quantity of water therein necessary to enable the syrup to become solidified after its subsequent penetration into the cells of the said fibrous material, and then projecting the said heated syrup into contact with said fibrous material so as to cause it to penetrate the cells of the fibrous material, the product becoming dry on cooling to atmospheric temperature, without further desiccation.

2. Process for the manufacture of cattle food, which consists in cutting up, grinding and shredding a suitable absorbent fibrous material, then highly heating a syrup so as to leave only the quantity of water therein strictly necessary to enable the syrup to become solidified after its subsequent penetration into the cells of the said ground fibrous material, and then projecting the said heated syrup in the most finely divided state possible in order to cause it to penetrate the cells of the said fibrous material, the product becoming dry on cooling to atmospheric temperature, without further desiccation.

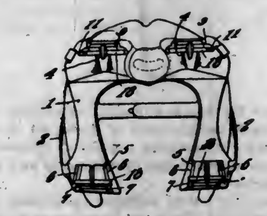
3. Process for the manufacture of cattle food, which consists in cutting up, grinding and shredding a suitable absorbent fibrous material, then highly heating a syrup so as to leave only the quantity of water therein strictly necessary to enable the syrup to become solidified after its subsequent penetration into the cells of the said ground fibruos material, and then projecting the said heated syrup into contact with said fibrous material so as to cause it to become solidly incorporated therewith and solidified within the cells of the fibrous material, the product becoming dry on cooling to atmospheric temperature, without further desiccation.

4. Process for the manufacture of cattle food, which consists in cutting up, grinding and shredding a suitable absorbent fibrous material, then highly heating molasses so as to leave only the quantity of water therein strictly necessary to enable the molasses to become solidified after its subsequent penetration into the cells of the said ground fibrous material, and then projecting the said heated molasses in a finely divided state into contact with said fibrous material in order to cause it to penetrate the cells of the said fibrous material and become solidly incorporated therewith and solidified within the cells of the fibrous material, the product becoming dry on cooling to atmospheric temperature, without further desiccation.

5. Process for the manufacture of cattle food, which consists in cutting up, grinding and shredding straw, then highly heating a syrup so as to leave only the quantity of water therein strictly necessary to enable the syrup to become solidified after its subsequent penetration into the cells of the said ground straw, and then projecting the said heated syrup in a finely divided state into contact with said ground straw so as to cause it to become solidly incorporated therewith and solidified within the cells of the said straw, the product becoming dry on cooling to atmospheric temperature, without further desiccation.

[Claim 6 not printed in the Gazette.]

1,015,839. HORSESHOE-CALK. ANTHONY ROTH, Jr., New Brunswick, N. J. Filed Feb. 8, 1911. Serial No. 607,299. (Cl. 168—35.)

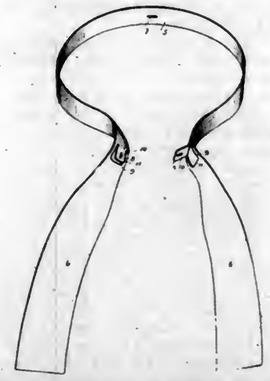


1. The combination with a horse shoe having a series of heel and toe calk receptacles, of calks insertible in said receptacles, each of said calks being reversible and having shoe engaging portions at right angles to each other, a web centrally of the inner face of the calk portions, and coöperative means for engaging said web and the walls of the receptacles to lock the calk in place.

2. The combination with a horse shoe provided with calk receptacles, said calk receptacles each having two opposed flanges forming calk receiving guides, each one of said flanges being provided with a lock receptacle in its for-

ward end, of a calk provided with right angled terminals and a centrally disposed web having an aperture adapted to aline with the lock receptacles of the flanges, and a lock adapted to enter said receptacles and aperture of the web.

1,015,840. NECKTIE. DAVID SAMUELS, Chicago, Ill. Filed Mar. 15, 1911. Serial No. 614,746. (Cl. 2—11.)



A necktie with integral tabs formed from sections of the body portion cut entirely therethrough and located wholly within the marginal edges of the necktie, and having buttonholes provided in said tabs.

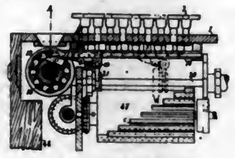
1,015,841. FASTENER FOR BOTTLE-STOPPERS. GUSTAV R. SCHIMMEL, Detroit, Mich. Filed June 16, 1911. Serial No. 633,495 (Cl. 215—20.)

1. A fastener for bottle stoppers comprising a retainer adapted to permit the insertion of a stopper in one direction and a holder comprising a pair of ring-sections disposed below the mouth flange of the bottle and above said retainer, respectively.

2. A fastener for bottle stoppers comprising a stopper retainer perforated to admit the insertion of a stopper and disposed above the mouth flange of a bottle, and a holder comprising a pair of rings in engagement with the underside of said flange and the upper face of said retainer, respectively both rings being connected by a fragile web.

3. The combination with a bottle having a flanged neck, of a stopper retainer consisting of a ring having prongs projecting into said neck and perforated to admit a stopper, a holder made of fragile material and comprising a plurality of rings engaging said flange and retainer and connected by a web, whereby the stopper is prevented from removal without destroying said web.

1,015,842. CALCULATING-MACHINE. HEINRICH DAEMEN-SCHMID, Zurich, Switzerland. Filed Sept. 3, 1909. Serial No. 516,072. (Cl. 235—82.)



1. In a device of the class described the combination of a shaft, a switch wheel displaceably mounted on said shaft, a rotating member, and means connecting said member and said switch wheel for displacing said switch wheel, said means moving tangentially with respect to said rotating member.

2. In a device of the class described the combination of a shaft, a switch wheel slidably mounted on said shaft, a gear, means connecting said gear and said switch wheel for displacing said switch wheel on said shaft, and means coacting with said gear for returning said switch wheel into starting position on said shaft.

3. In a device of the class described the combination of a shaft, a switch wheel slidably mounted on said shaft, a resiliently actuated gear, means connecting said gear and said switch wheel for displacing said switch wheel on said shaft and means coacting with said gear for returning said switch wheel into starting position on said shaft.

4. In a device of the class described the combination of a switch wheel, a shaft, said switch wheel being slidably mounted on said shaft, a gear, a spring holding said gear against rotation, means in connection with said gear for displacing said switch wheel on said shaft, means for releasing said spring and means for returning said switch wheel into a starting position, said last named means putting said spring under tension.

5. In a device of the class described the combination of a switch wheel, a shaft, said switch wheel being slidably mounted on said shaft, a gear, a spiral spring holding said gear against rotation, means in connection with said gear for adjusting said switch wheel on said shaft, means for releasing said spring and means for returning said switch wheel into starting position, said last named means serving simultaneously for rewinding said spring.

[Claims 6 to 24 not printed in the Gazette.]

1,015,843. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Co., Flint, Mich., a Corporation of Michigan. Filed May 1, 1911. Serial No. 624,334. (Cl. 123—169.)

1. In a spark plug, the combination with a bushing, of an insulating member in the bushing comprising an inner member, an outer member abutting the outer end of the inner member, and an intermediate member loosely engaging the inner member at one end and extending across the plane of the abutting ends into engagement with the outer member and holding said members in axial alinement.

2. In a spark plug, the combination with a bushing, of an insulating member in the bushing comprising an inner insulating member, an outer insulating member abutting the outer end of the inner member, said members being formed with an axial chamber in their abutting ends and an axial bore, and an insulating member within said chamber connecting said inner and outer members and an electrode extending through the bore of the inner member and said tubular member.

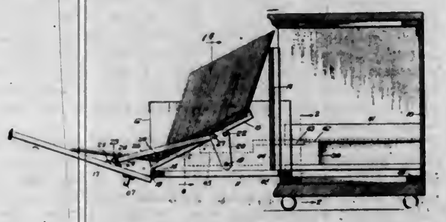
3. In a spark plug, the combination with a bushing, of an insulating member in the bushing comprising an inner insulating member having an axial bore and an annular shoulder to seat within the bushing, an outer insulating member having an annular shoulder and an axial bore, the bores of said members being enlarged at the adjacent ends of said members to form an axial chamber, a tubular insulating member within the said chamber connecting said members to hold the same in axial alinement, an electrode extending through the bores of said members and said tubular member and an annular member within the outer end of the bushing in engagement with the outer end of the inner insulating member to hold the same seated and loosely engaging the shoulder on the outer insulating member.

4. In a spark plug, the combination of a bushing having an internally screwthreaded chamber forming an annular seat, an inner insulating member having an annular shoulder to seat within the bushing and formed with an axial bore, an outer insulating member formed with an annular shoulder and having an axial bore, an externally screwthreaded ring nut to engage the chamber and the upper end of the inner insulating member at its inner end, said ring nut being formed with a shoulder to engage the shoulder on the outer insulating member, and means within the axial bore of the insulating members for yieldingly holding the outer insulating member in engagement with the shoulder on the ring nut.

5. In a spark plug, the combination with a bushing, of an insulating member within the bushing comprising an inner member having an axial bore which is enlarged at the upper end of said members, an outer member formed with an axial bore which is enlarged at the lower end of said member, the enlargements of the bores in the adjacent ends of said members forming an axial chamber, a tubular insulating member in said chamber engaging the bottom thereof in the inner member, a wire extending through the bore of said inner member and said tubular member, and a coiled spring within the chamber between its upper end and the upper end of said tubular member therein.

[Claims 6 and 7 not printed in the Gazette.]

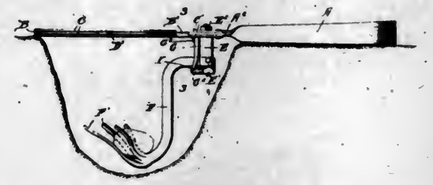
1,015,844. PHONOGRAPH-RECORD CABINET. PETER SCHOLL, Chicago, Ill. Filed May 22, 1911. Serial No. 628,683. (Cl. 211—16.)



1. In a device of the character described, a cabinet open on one side, a sliding structure adapted to be slid into and out of said cabinet, a closure for the cabinet hinged to said structure, a handle on said closure, an envelop-supporting carrier hinged at its front edge to said structure, and means connecting said closure and frame whereby said carrier is inclined and the envelops raised as the structure is withdrawn from the cabinet.

2. In a device of the character described, a cabinet open on one side, a sliding structure comprising a hollow frame, rear and side walls, adapted and arranged to be slid into and out of said cabinet, a closure for the cabinet, hinged at the bottom edge to the front edge of said sliding structure, arms pivoted to the side walls of said sliding structure, connected to a rod underlying the envelop supporting structure, said rod connecting said arms, and links connecting said arms and the closure for raising the rear end of said envelop-supporting structure when said closure is depressed.

1,015,845. ANIMAL-TRAP. BRUCE A. SHAW, Davenport, Iowa. Filed Sept. 13, 1909. Serial No. 517,427. (Cl. 43—27.)



1. In an animal trap, the combination with a bowed spring, of a ring jaw formed of spaced rings provided with necks secured over one end of said spring, a single ring jaw provided with a neck secured to the other end of said spring adapted to fit between the spaced ring jaw, the neck of the single ring jaw being provided with a slot forming a catch, a post mounted on the neck of the double ring jaw, a latch pivotally mounted on said post for engaging said catch, a tripping member mounted on said post provided with a trigger for engaging said latch, and prongs formed on the end of said tripping member.

2. An animal trap comprising a bowed spring, a pair of rings provided with neck portions secured over one end of said spring forming a double ring jaw, a single ring jaw provided with a neck portion secured to the other end of said spring, said single ring jaw being provided with a catch, a post secured on the neck of the double ring jaw provided with a bifurcated upper end, a pronged tripping member pivotally mounted in the bifurcation of said post, a pin extending outwardly from said post, a latch pivotally mounted on said pin adapted to engage the catch of the single ring jaw when said jaws are brought into register with each other, and a trigger formed on said tripping member for engaging said latch.

1,015,846. HEEL. LINUS H. SHAW, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 2, 1908. Serial No. 436,234. (Cl. 36—34.)

1. The combination of a heel comprising a plurality of superposed lifts which taper from one end to the other and a rand extending from end to end of said heel and tapered in the reverse direction.

2. The combination of a heel comprising a plurality of superposed lifts which taper from breast to rear and a rand fastened to the heel seat face and tapering from the rear to the breast of said heel.

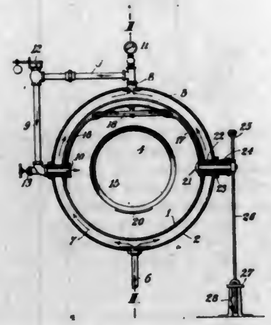
3. The combination with a heel, the thickness of which increases from one end to the other of a rand of substan-

tially uniform width fast to said heel, the thickness of said rand decreasing in a direction opposite to that of the heel.

4. The combination with a heel, the thickness of which decreases from one end to the other, of a rand secured to said heel, the thickness of said rand decreasing in a direction opposite to that of the heel.

5. The combination with a heel, the thickness of which decreases from breast to rear, of a rand secured to said heel, the thickness of the rand decreasing from the rear to breast, and the combined thickness of said heel and rand being greater at the rear than at the breast.

1,015,847. INSIDE CLOSURE FOR AIR, STEAM, OR WATER TIGHT VESSELS. CURTIS W. SHIELDS, New York, N. Y. Filed Sept. 14, 1910. Serial No. 581,954. (Cl. 220—124.)



1. The combination of a vessel adapted to withstand internal pressure and having an opening provided with a seat, an internal closure therefor, a stop to arrest said closure when brought to register with said opening, and means for operating said closure from the pressure side to move it to and from said stop and to and from said seat and to lock it when brought to its seat in pressed engagement therewith.

2. The combination of a vessel adapted to withstand internal pressure and having an opening provided with a seat, an internal closure therefor, a stop to arrest said closure when brought to register with said opening, and means for operating said closure from the pressure side so as to swing it from said stop to completely clear the said opening and to said stop in registering position with said seat, to advance it to said seat in pressed locked position and to withdraw it from said seat.

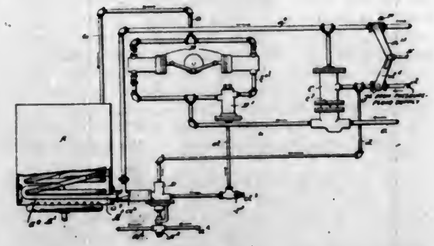
3. The combination of a vessel adapted to withstand internal pressure and having an opening provided with a seat, an internal closure therefor, a stop to arrest said closure when brought to register with said opening, and means passing through the wall of the vessel for operating said closure from the pressure side to move it to and from said stop and to and from said seat and to lock it when brought to its seat in pressed engagement therewith.

4. The combination of a vessel adapted to withstand internal pressure and having an opening provided with a seat, an internal closure therefor, means within said vessel for controlling the movements of said closure to carry it to a sidewise position to completely clear the opening and to return it to the said opening and lock it in closed position, other means without said vessel for operating the said first means, and a third means extending through the wall of said vessel for operatively connecting said first and second means.

5. The combination of a vessel adapted to withstand internal pressure and having an opening provided with a seat, an internal closure therefor, a stop to arrest said closure when brought to register with said opening, means for operating said closure from the pressure side by swinging it to and from said opening about an axle parallel to said closure and advancing it to and withdrawing it from said opening, and means partly extending within said vessel to operate said first means from the outside.

[Claims 6 to 8 not printed in the Gazette.]

1,015,848. REGULATING APPARATUS FOR STEAM-GENERATORS. BENJAMIN F. SILLIMAN, Cleveland, Ohio. Filed Apr. 20, 1908. Serial No. 428,043. (Cl. 122—22.)



1. In apparatus of the character described, the combination of a generator; heating means coöperative therewith; means for regulating the supply of liquid to said generator and of fuel to said heating means, respectively; fluid-pressure actuated means for operating each of said regulating means; means, operating automatically according to the demand for power upon said generator, for controlling the supply of pressure fluid to said fluid-pressure actuated means; and means adapted simultaneously to throttle said generator and control such supply of pressure fluid.

2. In apparatus of the class described, the combination of a generator; heating means coöperative therewith; means for regulating the supply of fuel to said heating means, said regulating means normally tending to cut off such supply; fluid-pressure means adapted to open such supply; and thermostatic means in connection with said generator for controlling the supply of pressure fluid to said last-named means.

3. In apparatus of the class described, the combination of a flasher type generator; heating means coöperative therewith; means for regulating the supply of fuel to said heating means, said regulating means normally tending to cut off such supply; fluid pressure means adapted to open such supply; and thermostatic means, consisting of a portion of the coil of said generator, for controlling the supply of pressure fluid to said last-named means.

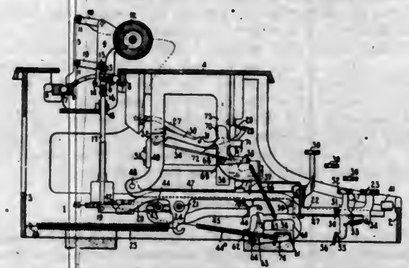
4. In apparatus of the class described, the combination of a flasher type generator; heating means coöperative therewith; means for regulating the supply of fuel to said heating means, said regulating means normally tending to cut off such supply; fluid-pressure means adapted to open such supply; and thermostatic means, consisting of the lower terminal portion of the coil of said generator, for controlling the supply of pressure fluid to said last-named means.

5. In apparatus of the class described, the combination of a generator; heating means coöperative therewith; means for controlling the supply of fuel to said heating means, said controlling means normally tending to cut off such supply; fluid-pressure means adapted to open such supply; and means adapted simultaneously to throttle said generator and control such supply of pressure-fluid.

[Claims 6 to 25 not printed in the Gazette.]

1,015,849. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Yost Writing Machine Company, Ilion N. Y., a Corporation of New York. Filed Dec. 5, 1910. Serial No. 595,625. (Cl. 197—73.)

1. In a typewriting machine, the combination of a platen, printing instrumentalities, printing keys, case shift mechanism for effecting a relative case shift movement between the platen and printing instrumentalities, means for automatically locking the case shifted member in its shifted position, means controlled by an actuation of any of the printing keys for releasing the locked case shift mechanism, and means operable at will for rendering said automatically operating locking means inoperative.



2. In a typewriting machine, the combination of a platen, printing instrumentalities, case shift mechanism for effecting a relative case shift movement between the platen and printing instrumentalities, a letter spacing key, means by which said spacing key is rendered effective to actuate the said shift mechanism, automatically operating means for locking the case shifted member in its shifted position, a universal bar for the letter spacing mechanism, and means whereby said universal bar is rendered effective to release said locking means.

3. In a typewriting machine, the combination of a platen, printing instrumentalities, case shift mechanism for reflecting a relative case shift movement between the platen and printing instrumentalities, automatically operating means for locking the shiftable member in its shifted position, a universal bar for the letter space mechanism, means whereby said universal bar is rendered effective to release said locking means, and means for rendering said locking means inoperative.

4. In a typewriting machine, the combination of a platen, printing instrumentalities, a case shift key lever, means controlled thereby for effecting a relative case shift movement between the platen and printing instrumentalities, an automatically operating latch carried by said key lever, a printing key, means controlled thereby for releasing said latch, and means for rendering said latch inoperative.

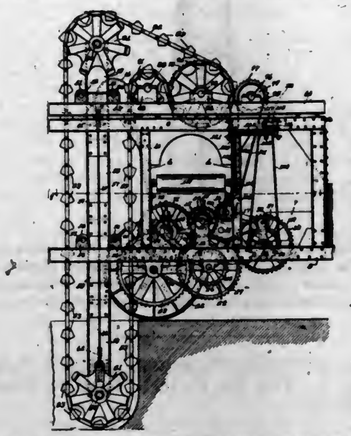
5. In a typewriting machine, the combination of a platen, printing instrumentalities, a case shift key lever, means controlled thereby for effecting a relative case shift movement between the platen and printing instrumentalities, an automatically operating latch carried by said case shift key lever, a printing key, means controlled thereby for releasing said latch, and a separate independently controlled locking latch operable at will to lock and maintain the case shift key lever depressed indefinitely.

[Claims 6 to 17 not printed in the Gazette.]

1,015,850. EXCAVATING-MACHINE. FREDERICK SOMMERS, Chicago, Ill., assignor of two-eighths to Alexander Raczkowski, Chicago, Ill. Filed Nov. 15, 1909. Serial No. 528,129. (Cl. 37—24.)

1. An excavating machine comprising a wheeled main frame; a motor mounted on said frame; a vertically adjustable conveyer frame on said main frame, said conveyer frame consisting of sections composed of two channel members secured together and said sections being secured to each other by means of plates bolted in the channels of said channel members; guides on said main frame for said conveyer frame; a longitudinally extensible endless conveyer on said conveyer frame; digging buckets on said conveyer; and operative connections between said motor and the wheels and conveyer, substantially as described.

2. An excavating machine comprising a wheeled main frame; a motor mounted on said frame; a vertically adjustable conveyer frame on said main frame, said conveyer frame consisting of sections composed of two channel members secured together, and said sections being secured to each other by means of plates bolted in the channels of said channel members; flanged guide rollers on said main



frame and contacting with the sides of said channel members; a longitudinally extensible endless conveyer on said conveyer frame; digging buckets on said conveyer; and operative connections between said motor and the wheels and conveyer, substantially as described.

1,015,851. BURNER FOR INCANDESCENT MANTLES. AARON P. STORRS, Owego, N. Y., assignor to Storrs Mica Company, Owego, N. Y., a Corporation of New York. Filed Aug. 17, 1910. Serial No. 577,547. (Cl. 67—94.)

1. In combination, a Bunsen tube having an enlarged end forming a shoulder in the tube, a burner tip secured in the enlarged end of said tube, and a curved screen located within the enlarged end of said tube and having an upturned rim out of contact with the curved portion of the screen and clamped between the shoulder in the tube and the end of the tip.

2. In combination, a Bunsen tube having an enlarged end forming a shoulder in the tube, a burner tip secured to the enlarged end of said tube, and a plurality of curved screens located within the enlarged end of said tube and each having an upturned rim out of contact with the curved portion of the screen, whereby said upturned rims are clamped one upon another between the shoulder in the tube and said tip.

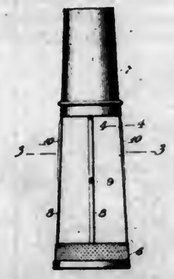
1,015,852. HEADLIGHT-CHIMNEY. AARON P. STORRS, Owego, N. Y., assignor to Storrs Mica Company, Owego, N. Y., a Corporation of New York. Filed Sept. 30, 1910. Serial No. 584,654. (Cl. 240—96.)

1. A chimney, having mica panels, and strips connecting the panels, said strips being formed of a plurality of

pipe pressure for automatically adjusting the pressure ex-

5. In a stop cock device, the combination with a plug

folds, with an additional fold extending outward from the other folds to serve as a guard.



2. A chimney, having panels of mica and strips connecting the panels, said strips having folds to engage the adjoining edges of the mica and hold them overlapping, and an additional fold extending outward to serve as a guard.

1,015,853. EXTENSIBLE GAS-PIPE. GEORGE W. THORN, Chicago, Ill. Filed May 25, 1911. Serial No. 629,474. (Cl. 240—70.)

1. An extensible gas pipe or fixture comprising a stationary inner section and an extensible outer section slidably mounted upon said inner section, a stuffing box at the upper end of the outer section surrounding the inner section, and a transversely-disposed element loosely mounted in and slidable laterally through the lower end of the inner section to limit the outward movement of the outer section, substantially as described.

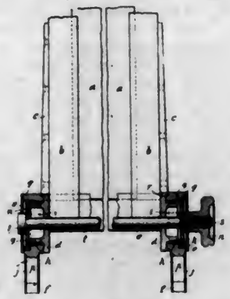
2. An extensible gas pipe or fixture comprising a stationary inner section and an extensible outer section slidably mounted upon said inner section, a stuffing box at the upper end of the outer section surrounding the inner section, a bushing depending from said box within the outer section, and a transversely-disposed element loosely mounted in and slidable laterally through the lower end of the inner section and adapted to be struck by said bushing when the sections are drawn outward.

3. In an extensible gas pipe, the combination with a ceiling pipe, a collar secured thereto and having a clutch element at its lower end, an inner pipe section depending from this collar, and a stop-pin through its lower end; of an outer section having a fixture at its lower end, a collar screwed upon its upper end and having a clutch element, packing within said collar and beyond the upper extremity of this section, and a bushing depending from said packing within the upper end of the outer section and adapted to strike said stop-element when the sections are drawn out.

4. In an extensible gas fixture, the combination with a fixed inner pipe having a stop-element at its lower end, a sliding outer pipe having a fixture at its lower end, and a collar at the upper end of this pipe containing packing closely surrounding the inner pipe; of a casing rigidly connected at its upper end with the inner pipe and loosely depending over said collar and throughout the length of the outer pipe, and a rosette at its lower end.

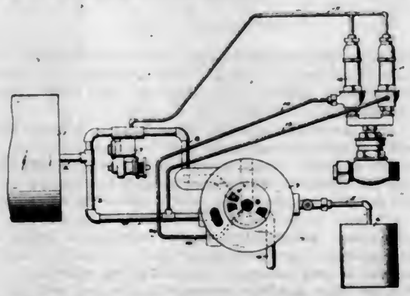
5. In an extensible gas fixture, the combination with a fixed inner pipe having a stop-element at its lower end, a sliding outer pipe having a fixture at its lower end, and a collar at the upper end of this pipe containing packing closely surrounding the inner pipe; of a casing rigidly connected at its upper end with the inner pipe and depending over the outer pipe, and a second and inner casing rigidly connected at its upper end with the upper end of the outer pipe and depending throughout the length of the latter and within the outer casing.

1,015,854. ADJUSTING DEVICE FOR TURNABLE PARTS. CARL TÖNJES, Delmenhorst, Germany. Filed Apr. 18, 1911. Serial No. 621,814. (Cl. 21—81.)



A device of the character described comprising a pair of fixed bearings having coniform bores, a pair of apertured disks engaging the inner sides of the bearings and having tapering circular flanges that diverge from the walls of the bearing-bores, a pair of oppositely movable wedge-shaped friction rings interposed between the bearings and disk flanges, a spindle received by the disk-apertures, means on one end of said spindle for operatively engaging one of said rings, and a nut threaded on the other end of said spindle and adjustably engaging the other ring.

1,015,855. DUPLEX PRESSURE-CONTROL APPARATUS. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 28, 1907. Serial No. 376,166. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a main reservoir, a pressure governor therefor, and a train pipe, of means operating normally according to the degree of train pipe pressure for automatically adjusting the pressure governor to operate at a corresponding relative degree of pressure, and means operated by train pipe pressure for subjecting said pressure governor to a higher degree of pressure than that in the train pipe.

2. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and means for admitting fluid at main reservoir pressure to the opposite side of said diaphragm.

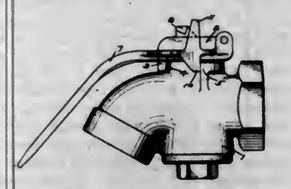
3. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe of a pressure governor having a diaphragm normally subject on one side to main reservoir pressure, and means adapted to admit fluid, varying with train pipe pressure, at one time, and fluid from another source, at another time, to the opposite side of said diaphragm.

4. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and means adapted to admit fluid at train pipe pressure, at one time, and fluid at main reservoir pressure, at another time, to the opposite side of said diaphragm.

5. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to main reservoir pressure, and means governed by the degree of train pipe pressure for admitting fluid at train pipe pressure to the opposite side of said diaphragm, and adapted, when the train pipe pressure is reduced to admit fluid thereto at a higher degree of pressure than that in the train pipe.

[Claims 6 to 16 not printed in the Gazette.]

1,015,856. ANGLE-COCK DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1907. Serial No. 400,183. (Cl. 137—7.)



1. In a stop cock device, the combination with a plug cock or valve, a casing therefor, and a pivoted handle for operating said plug cock, of means for protecting the plug cock from pressure tending to move the same from its seat.

2. In a stop cock device, the combination with a plug cock or valve, a casing therefor, a handle therefor, and means for locking the cock against accidental movement, of means on said handle for protecting said cock from the action of a weight tending to displace the cock from its seat in the casing.

3. In a stop cock device, the combination with a plug cock or valve, and a casing therefor, of a handle device for said cock, comprising a key plate secured to the cock key, a handle pivoted to said key plate, and lugs mounted on the handle and extending outwardly beyond said key plate and cock, to protect the same from the pressure of a weight tending to displace the cock from its seat.

4. In a stop cock device, the combination with a plug cock, a casing therefor, of a handle device for operating said cock, comprising a key plate secured to the cock key, a handle member pivoted to said key plate, stops, and lugs on said handle member for engaging said stops in the open and in the closed positions of the cock, and means on said handle member for preventing the application of pressure on the plug cock and key plate, tending to displace the cock from its normal seat.

5. In a stop cock device, the combination with a plug cock or valve, a casing therefor, and a pivoted handle for operating said plug cock, of means for preventing pressure from acting on the plug cock tending to unseat the same.

[Claim 6 not printed in the Gazette.]

1,015,857. PRODUCTION OF SOLUBLE PROTEIN FROM INSOLUBLE PROTEIN MATTER. SAMUEL ARCHIBALD VASEY, Bromley, England. Filed Sept. 3, 1910. Serial No. 580,456. (Cl. 99—11.)

1. In the process for the preparation of a soluble protein from insoluble protein matter, the steps which comprise dissolving the said protein matter in caustic alkali and subsequently converting any surplus of alkali into phosphates by treatment with a suitable phosphorous compound having an acid reaction, the whole substantially as described.

2. In the process for the preparation of a soluble protein from insoluble protein matter, the steps which comprise dissolving the said protein matter in caustic alkali, subsequently converting any surplus of alkali into phosphates by treatment with phosphoric acid containing phosphate of calcium, and then treating the mixture with an ammonium compound, the whole substantially as described.

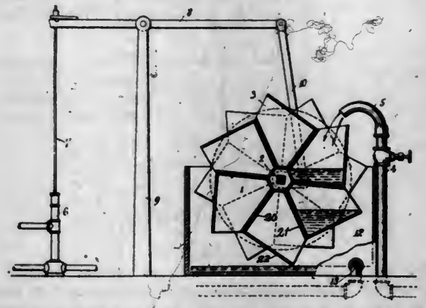
3. In the process for the preparation of a soluble protein from insoluble protein matter, the steps which comprise dissolving the said protein matter in caustic alkali, subsequently converting any surplus of alkali into phosphates by treatment with phosphoric acid containing phosphate of calcium, and then treating the mixture with ammonium carbonate.

4. In the process for the preparation of a soluble protein from insoluble protein matter, the steps which comprise dissolving the said protein matter in caustic alkali, adding a clarifying agent consisting of a salt of an alkali earth metal, converting the said clarifying agent after it has performed its function into an insoluble salt, and subsequently converting any excess of alkali into phosphates by treatment with phosphoric acid containing phosphate of calcium, the whole substantially as described.

5. In the process for the preparation of a soluble protein from insoluble protein matter, the steps which comprise dissolving the said protein matter in caustic alkali, adding a clarifying agent consisting of a suitable salt of calcium, converting the said agent after it has performed its function into an insoluble carbonate by the addition of a suitable compound, and subsequently converting any surplus of alkali into phosphates by treatment with phosphoric acid containing phosphate of calcium, the whole substantially as described.

[Claim 6 not printed in the Gazette.]

1,015,858. WATER-WHEEL. GIULIANO VERDE, Beaumont, Tex. Filed May 18, 1910. Serial No. 561,963. (Cl. 138—3.)

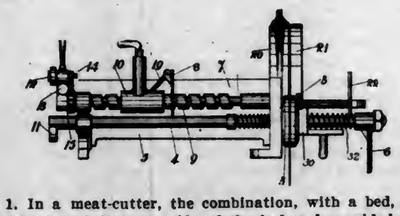


1. A water wheel adapted to be operated by gravity, embodying a circular series of separate buckets arranged to mutually support each other, each bucket formed by substantially radial front and rear walls and a peripheral

wall at substantially right angles to and joining the front radial wall and a central axle on which the wheel is mounted.

2. A water wheel adapted to be operated by gravity, embodying two circular series of buckets, the buckets of one series alternating in radial planes with those of the other series and the buckets of each series being formed by radial walls whereby they mutually support each other in the wheel, there being a peripheral wall extending rearwardly from the front wall of each bucket and a peripheral water entrance between the rear edge of each peripheral wall and the front wall of the next succeeding bucket.

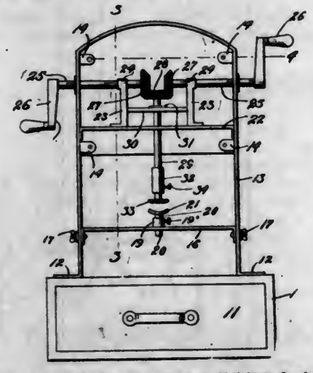
1,015,859. MEAT-CUTTER. WILLIAM WALKER and THOMAS EDWARD HOLLINGS, Morecambe, England, assignors to Morecambe Motor and Engineering Company, Limited, Morecambe, England. Filed Dec. 21, 1908, Serial No. 468,574. Renewed Dec. 16, 1911. Serial No. 666,282. (Cl. 17—24.)



1. In a meat-cutter, the combination, with a bed, of a shaft journaled at one side of the bed and provided with means for revolving it, a scraper-bar secured to the bed, a movable scraper-bar provided at one end with a hub which is slidable on the said shaft, means for guiding the other end of the movable bar, a cutter-blade secured on the said shaft and working between the said scraper-bars, and springs which press the movable scraper-bar toward the stationary scraper-bar.

2. In a meat-cutter, the combination, with a supporting frame provided with a bed-plate, of a cutter-blade which works crosswise of the bed-plate, feed mechanism for advancing the material toward the cutter-blade, a packer-plate for the cut material to abut against, a shaft secured to the packer-plate and slidable in the frame, and a spring-actuated lever pivoted to the frame and bearing frictionally against the said shaft to prevent the packer-plate and its shaft from sliding too freely.

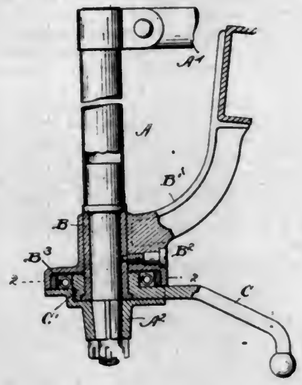
1,015,860. FINGER-NAIL CLEANER. GEORGE WALTHER, Rockville Center, N. Y. Filed June 2, 1911. Serial No. 630,805. (Cl. 30—30.)



1. A finger nail cleaning and polishing device comprising a base, an inverted U-shaped frame mounted on the base, a platform mounted in the upper portion of the frame, supports on said platform, driving shafts journaled in said supports and in the frame, a driven shaft journaled in said platform, an adjustable finger rest in the lower portion of the frame, and a cleaning and polishing tool on the lower end of said driven shaft.

2. A finger nail cleaning and polishing device comprising a base, a frame mounted on the base, driving shafts mounted in the frame, cranks for rotating said shafts, a vertically arranged driven shaft, a tool holder in the lower end of said driven shaft, a vertically adjustable platform in the lower portion of the frame, a finger rest on said platform, and means for adjusting said finger rest independently of the platform.

1,015,861. VIBRATION-ARRESTER FOR AUTOMOBILE STEERING MECHANISM. WORCESTER R. WARNER, Cleveland, Ohio, assignor to Morris S. Towson, Cleveland, Ohio. Filed Apr. 29, 1909. Serial No. 492,868. (Cl. 21—90.)



1. In a steering mechanism for automobiles, a fixed bearing bracket having an annular recess, a steering post rotatably mounted in said bracket, a hub member secured to and rotatable with the post and having an annular recess concentric with the post and a slot extending outwardly in the plane of and from the recess and forming a pair of shoulders, a steering lever having a cam head seated in said recess and an arm passing loosely through the slot between the shoulders, the cam head projecting into the annular recess of the bearing bracket, rollers arranged between the cam portion of the head and the wall of the recess in the annular bearing member and adapted to be jammed between the same to limit the vibratory movement of the lever, and means carried by said hub member and adapted to engage and loosen the rollers when said member is turned by the post.

2. In a steering mechanism for automobiles, a steering post, a bracket supporting the same and having a recessed portion with an annular flange on one side arranged concentrically with respect to the post, an annular hub member secured to and movable with the post and engaging the flange so as to form an annular closed chamber therewith, said member having a pair of shoulders spaced apart, a steering lever having a head with cam surfaces located in said annular chamber about the post and an arm projecting outwardly from the chamber loosely between said shoulders, rollers located between said annular flange and the cam head and adapted to be jammed against the annular bearing surface by the cam head when the steering lever vibrates, and means carried by said member for loosening the rollers so as to permit the post to transmit movement to the lever.

3. In a steering mechanism for automobiles, a steering post, a bracket supporting the same and having a substantially annular recessed portion through which the post extends and a depending annular flange concentric with the post, a hub member mounted on the lower end

of the post and engaging the flange so as to form therewith an annular closed chamber, said member having a recess or depression concentric with the posts and having a substantially radial slot extending outwardly from said recess and forming a pair of shoulders, a steering lever having a cam head located in said chamber and seated in the recess of said member, said lever having an arm projecting outwardly loosely through said slot between the shoulders, spring pressed balls between the cam head of the lever and the depending flange of said bracket, said balls being adapted to be jammed between the cam head and an annular bearing surface within the flange by movement of the arm of the steering lever in said slot, and lugs projecting upwardly from said member and adapted to loosen the balls so that the post may transmit movement to the steering lever.

1,015,862. PROCESS OF PRESERVING WOOD. WILLIAM JAMES WATSON, Ladysmith, British Columbia, Canada. Filed Mar. 3, 1910, Serial No. 547,135. Renewed Nov. 22, 1911. Serial No. 661,849. (Cl. 99—12.)

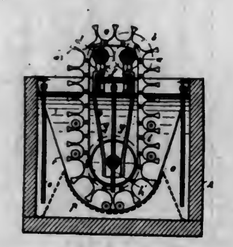
1. A process of preserving wood containing an acid which consists in permeating the wood with a salt of iron that will combine with an acid in the wood to form an acetate of iron.

2. The process of preserving wood containing acid which consists in permeating such wood with a strong solution of carbonate of iron in water containing carbon dioxid.

3. The process of preserving wood containing an acid which consists in exhausting air from the interstices of said wood and substituting therefor a strong solution of carbonate of iron in water containing carbon dioxid.

4. The process of preserving wood containing an acid which consists in exhausting air from the interstices of said wood and substituting therefor a strong solution of carbonate of iron in water containing carbon dioxid under a pressure in excess of that of the atmosphere.

1,015,863. APPARATUS FOR GALVANIZING METAL TUBES, RODS, AND THE LIKE. FEDERICO WERTH, Milan, Italy. Filed July 21, 1910. Serial No. 573,047. (Cl. 204—11.)



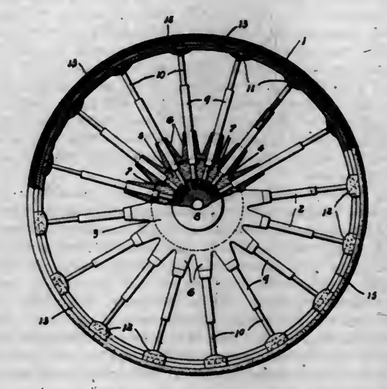
1. In an apparatus for galvanising metal tubes and the like, the combination of a tank having an electrolyte therein; a chain having its lower part passed into the electrolyte and having parts thereof vertically disposed, said chain comprising links having laterally projecting arms having its upper and lower edges concaved; and means for retaining tubes and the like between said arms when the arms project downwardly.

2. In an apparatus for galvanising metal tubes, rods and the like, the combination of a tank containing an electrolyte; pairs of upper sprockets above the electrolyte; lower sprockets in the lower part of the electrolyte; chains passed over one of said pairs and one of said lower sprockets, the part of the chains between the pair and lower sprockets being substantially vertical, said chains comprising links having laterally projecting arms provided with concaved upper and lower edges, said links projecting horizontally where the chain is vertical; and means having a concave part for holding the tubes or

the like between the arms when the links pass under the lower sprockets.

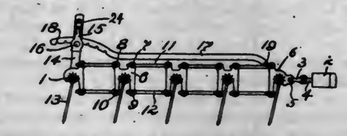
3. In an apparatus for galvanizing metal tubes, rods and the like, the combination of a tank; an electrolyte therein; a frame resting on the tank and provided with parallel alined upper bearings above the electrolyte; intergeared upper shafts in said upper bearings; stub-shafts on said frame at the lower part of the electrolyte; sprocket wheels on said shafts; chains each passed over a sprocket wheel on each of the upper shafts and a sprocket wheel on one of the stub-shafts, part of said chain being vertically disposed, said chains comprising links having laterally projecting arms having concaved upper and lower edges whereby tubes and the like will be held in place by gravity; and means having an arcuate face adapted to hold the tubes between said arms when the arms project downwardly when passing beneath the lower sprockets.

1,015,864. VEHICLE-WHEEL. ALBERT WILLIAMS, St. Louis, Mo. Filed Jan. 7, 1911. Serial No. 601,331. (Cl. 21—87.)



In a vehicle wheel, the combination with a hub of a series of spokes carried by said hub, a head seated on the outer end of each spoke, which head is substantially U-shape in cross section, a sectional rim comprising an inner and outer set of segmental sections, the sections of the inner set being rigidly fixed to alternate heads, and the ends of said inner set of sections being loosely seated in alternate heads, the outer set of which sections overlie and break joints with the inner set of sections and which outer set of sections are fixed to alternate heads with their ends loosely mounted in alternate heads and a solid rubber tire applied to the outer set of segmental sections.

1,015,865. ADJUSTABLE FOLDABLE HARROW. DALTON K. WILSON, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Feb. 27, 1911. Serial No. 611,173. (Cl. 55—76.)



1. In a harrow, the combination with a long swingletree, of a harrow made in a plurality of sections secured thereto independently of each other; each of said sections being constructed of rocking cross-bars provided with harrow-teeth, said cross-bars being pivotally connected by longitudinal rows in pairs of links of which one row is above the bars and the other below, the upper

rows being placed to one side of the adjacent lower rows, and the links of such adjacent upper and lower rows being adapted to swing past each other to permit of closely folding the cross-bars together, said connections being formed to bind and prevent sidewise displacements of said bars relative to each other but permit vertical oscillations of the same, means for simultaneously rocking said bars to a tilted position, and means for flexibly locking all said parts into a braced unitary structure.

2. In a harrow, the combination with a long swingle tree, of a harrow made in a plurality of sections secured thereto independently of each other; each of said sections being constructed of rocking cross-bars provided with harrow-teeth, said cross-bars being pivotally connected by longitudinal rows in pairs of links of which one row is above the bars and the other below, the upper rows being placed to one side of the adjacent lower rows, and the links of such adjacent upper and lower rows being adapted to swing past each other to permit of closely folding the cross-bars together, means for simultaneously rocking said bars to a tilted position, and means for flexibly locking all said parts into a braced unitary structure.

3. A harrow constructed of rocking cross-bars provided with harrow-teeth, each end of each cross-bar having a pair of upwardly-directed and downwardly-directed bearing-lugs, each pair of lugs being alined with the similar pairs of lugs on the other cross-bars to the front and rear thereof with the lugs of each pair in the same longitudinal alinement, links pivotally connecting the upper lugs and links pivotally connecting the lower lugs, the upper lugs being located to one side of the lower lugs, and means for rocking said cross-bars to tilt the teeth thereof backward or forward.

4. A harrow constructed of rocking cross-bars provided with harrow-teeth, each end of each cross-bar having a pair of upwardly-directed and of downwardly-directed bearing lugs, each pair of lugs being alined with the similar pairs of lugs on the other cross-bars to the front and rear thereof with the lugs of each pair in the same longitudinal alinement, links pivotally connecting the upper lugs and links pivotally connecting the lower lugs, the upper lugs being located to one side of the lower lugs, and said links being formed to bind against said lugs to prevent sidewise displacement of said cross-bars relative to one another.

5. A harrow constructed of cross-bars provided with harrow-teeth, each end of each cross-bar having a pair of upwardly-directed and of downwardly-directed bearing-lugs, each pair of lugs being alined with the similar pairs of lugs on the other cross-bars to the front and rear thereof with the lugs of each pair in the same longitudinal alinement, links pivotally connecting the upper lugs and links pivotally connecting the lower lugs, the upper lugs being located to one side of the lower lugs, and means for detachably locking said parts into a self-supporting flexible unitary structure.

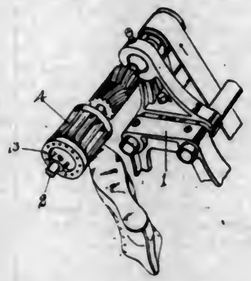
[Claim 6 not printed in the Gazette.]

1,015,866. MACHINE FOR FINISHING BOOTS AND SHOES. FREDERICK L. ALLEY, Fitzroy, near Melbourne, Victoria, Australia, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 2, 1909. Serial No. 520,699. (Cl. 12—51.)

1. In a machine of the class described, a rotatory carrier, and work-engaging members comprising longitudinal rubbing bars, yieldingly mounted therein, said machine having provision for restraining the bars from movement about their own axes.

2. In a machine of the class described, a rotatory carrier, and longitudinally arranged members movably mounted therein, said members having surfaces arranged to engage and rub the work and coöperating guiding means on said carrier and work members to restrain the latter from turning about their own axes.

3. In a machine of the class described, a rotatory carrier, longitudinal rubbing bars arranged for movements therein toward and from the periphery of the carrier, yielding means for actuating said bars and means for holding the bars against tipping movement in the carrier.

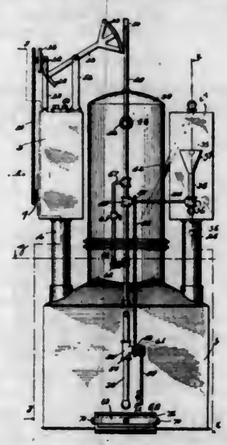


4. In a machine of the class described, a carrier, a plurality of rigid, rubbing bars, longitudinally arranged therein for movements toward and from the work, means for maintaining the bars with a predetermined face constantly outermost, and yielding means acting to move said bars outwardly.

5. In a machine of the class described, a carrier, and work-engaging members yieldingly mounted therein, each of said members being constructed and arranged to apply to the work progressively increasing pressures.

[Claims 6 to 14 not printed in the Gazette.]

1,015,867. ACETYLENE-GAS GENERATOR. LOUIS BADER, Chicago, Ill., assignor, by direct and mesne assignments, of one-third to Martin J. Detmer and one-third to William Bader, Chicago, Ill. Filed Nov. 25, 1910. Serial No. 594,053. (Cl. 48—36.)

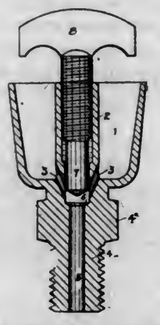


1. In an acetylene gas generator, the combination of a generator; a vent for said generator; a valve controlling said vent; a carbid holder communicating with said generator; means for affording access to said holder; common means for operating said valve and said access means; and means for preventing the removal of said valve operating means except when said valve is open, substantially as described.

2. In an acetylene generator, the combination of a generator; a vent pipe leading from said generator and communicating with the outside atmosphere; a valve controlling the passage through said vent pipe; an overflow pipe for said generator; a valve controlling the passage through said overflow pipe; a carbid holder communicating with said generator; a gasometer; a cleanser interposed between said generator and said gasometer; a pipe communicating with said cleanser for introducing water thereinto; a valve in said pipe; and an operative connection between said last mentioned valve and said before mentioned valves whereby simultaneous operation of said valves is effected, substantially as described.

3. In an acetylene generator, the combination of a generator; a vent pipe leading from said generator and communicating with the outside atmosphere; a valve controlling the passage through said vent pipe; an overflow pipe for said generator; a valve controlling the passage through said overflow pipe; a carbid holder communicating with said generator; a gasometer communicating with said generator; a gas cleanser interposed between said generator and said gasometer; a pipe communicating with said cleanser for introducing water thereinto; a valve in said pipe; an operative connection between said last mentioned valve and said before mentioned valves whereby simultaneous operation of said valves is effected; a threaded plug for giving access to said holder; a weight lever removably mounted on the valve in said overflow pipe and arranged to normally hold said valve in closed position, one end of said lever being arranged to engage said plug; and means for preventing the removal of said lever except when said overflow valve is open, substantially as described.

1,015,868. PRIMING-CUP FOR GASOLENE-ENGINES. JOHN C. BECK, Seattle, Wash., assignor of one-half to Edward E. Bonn, King county, Wash. Filed Dec. 12, 1910. Serial No. 596,896. (Cl. 123—187.)

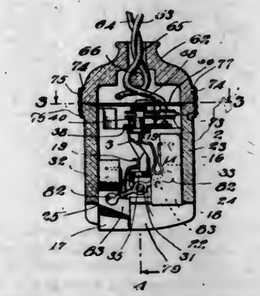


A priming device for gasolene engines comprising an open cup having a tubular stem threaded to fit an opening into the explosion chamber of the engine, an internally threaded tubular extension within said cup the internal diameter of which is greater than that of said tubular stem, whereby a valve seat is formed, a plurality of side openings from the cup into said tubular extension and above said valve seat, a valve plug having its upper end threaded to fit the threaded portion of said tubular extension and its lower end of smaller diameter than the internal diameter of the lower portion of said extension immediately surrounding said plug, whereby an annular cooling chamber is formed around the lower end of the plug, a thumb nut upon the upper end of said valve plug, the movement of which is within the vertical plane of said cup.

1,015,869. MECHANICAL MOVEMENT. TONJES AUGUST CARL BOTH, New York, N. Y., assignor to Ida S. Rosenheim, New York, N. Y. Filed Oct. 10, 1910. Serial No. 586,290. (Cl. 175—293.)

1. An article of manufacture for a pendant switch consisting of a push button provided with an opening and with a substantially V-shaped resilient member having two side members, one side member being provided with a laterally extending finger secured in the opening in the push button, the other member being provided with an operating surface.

2. In a pendant switch the combination of a hollow insulating receptacle adapted to receive and entirely protect the switch mechanism, a support mounted in the receptacle and provided with a bearing for the rocking driven member, a rocking driven member having coöperating inclined surfaces at an angle to the longitudinal axis of the driven member and having a common edge also at an angle to the longitudinal axis of the driven member, a bridge plate provided with an aperture to form the other bearing for the rocking driven member, a movable contact carried by the rocking driven member, fixed contacts with which it coöperates, means to hold the fixed contacts and the bridge piece within the insulating base or receptacle, connected push buttons, a resilient member carried by one of the push buttons and adapted to contact with both inclined surfaces on the driven member to store up energy in the resilient member to rock the driven member.



3. In a pendant switch the combination of a hollow insulating receptacle adapted to receive and entirely protect the switch mechanism, a support mounted in the receptacle and provided with a bearing for the rocking driven member, a rocking driven member having two pairs of coöperating inclined surfaces, each pair having a common meeting edge, a bridge plate provided with an aperture to form the other bearing for the rocking driven member, a movable contact carried by the rocking driven member, fixed contacts with which it coöperates, means to hold the fixed contacts and the bridge piece within the insulating base or receptacle, connected push buttons, and a resilient member connected to each push button, one resilient member to coöperate with each pair of coöperating inclined surfaces on the rocking driven member, a hollow insulating cap, and means to secure the cap to the hollow insulating base.

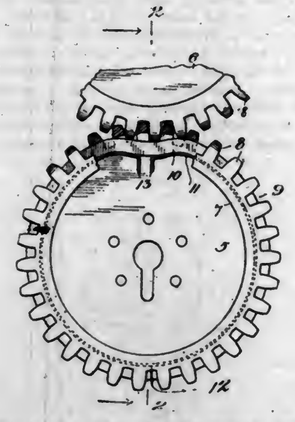
4. In a pendant switch the combination of a rocking member, means to operate it, a movable contact mounted on the rocking member, a binding post provided with a fixed contact and an upwardly extending arm, a second binding post provided with a fixed contact and an upwardly extending slotted arm, and an insulating disk adapted to coöperate with the slot in one binding post and with the upwardly extending arm of the other binding post which is adapted to be bent down over it.

1,015,870. GEAR. ADDI BENJAMIN CADMAN, Beloit, Wis., assignor to Warner Instrument Company, Beloit, Wis., a Corporation of Illinois. Filed Aug. 10, 1911. Serial No. 643,273. (Cl. 74—41.)

1. The combination with a gear having its peripheral portion bent to form an open channel, the teeth of the gear being formed in said bent portion, of a yielding body mounted in said channel to take the bearing contact of the end surfaces of the teeth of an intermeshing gear.

2. The combination with a gear having its peripheral portion bent to form an open channel, the teeth of the gear being formed in said bent portion, of a yielding body mounted in said channel to take the bearing contact of the end surfaces of the teeth of an intermeshing gear and means for retaining said yielding body within said channel.

3. A gear having its peripheral portion bent over to form an open channel, with the teeth thereof formed in said bent over portion, in combination with a split ring seated within said channel and arranged to take the contact of the end surfaces of the teeth of an intermeshing gear.

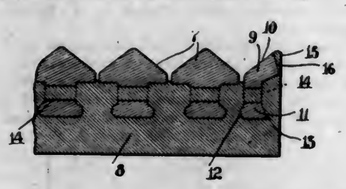


4. A gear having its peripheral portion bent over to form an open channel, with the teeth thereof formed in said bent over portion, in combination with a split ring seated within said channel and arranged to take the contact of the end surfaces of the teeth of an intermeshing gear and means for retaining said split ring in place within said channel.

5. A gear having its peripheral portion bent over to form an open sided channel and having its teeth formed in the bent over portion, in combination with a yielding body located within said channel, a spring ring device for retaining said yielding body in position, the split ends of the retaining ring being bent or deflected.

[Claim 6 not printed in the Gazette.]

1,015,871. CRUSHER-PLATE. FERDINAND MORA CANDA, New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J., a Corporation of New Jersey. Filed Sept. 17, 1908. Serial No. 453,417. (Cl. 83—53.)



1. A crusher plate comprising a series of hard ribs and a softer and tougher cast metal base said ribs comprising intermediate ribs having oblique faces above the cast metal base, and comprising also an edge rib having a single oblique face corresponding approximately to one of the oblique faces of the intermediate ribs, and sloping inward, portions of said intermediate and edge ribs being completely embedded in the cast metal and interlocked therewith.

2. A crusher plate comprising a series of hard ribs and a softer and tougher cast metal base, said ribs comprising intermediate ribs having lower portions embedded in said cast metal and having oblique faces above the cast metal, and comprising also an edge rib consisting of an angle bar, one leg of which is embedded in the cast metal base, the other leg of said angle bar having a face which forms a wearing face.

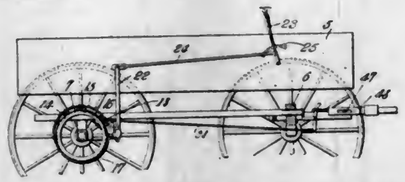
3. A crusher plate comprising a series of hard ribs and a softer and tougher cast metal base, said ribs comprising intermediate ribs having lower portions embedded in said cast metal and having oblique faces above the cast metal, and comprising also an edge rib consisting of an angle bar, one leg of which is embedded in the cast metal base, the other leg of said angle bar having a face which forms a wearing face, one of the lower edges of the rib being sharp to facilitate union of said rib with the cast metal.

4. A crusher plate comprising a series of hard ribs and a softer and tougher cast metal base, said ribs comprising intermediate ribs having lower portions embedded in said cast metal and having oblique faces above the cast metal, and comprising also an edge rib consisting of an angle bar, one leg of which is embedded in the cast metal base, the other leg of said angle bar having a face which forms a wearing face, one of the lower edges of the rib being sharp to facilitate union of said rib with the cast metal and the portion of the rib above said sharp edge being reentrant to effect interlocking of said rib with the cast metal.

5. A crusher plate comprising a series of hard metal ribs and a softer and tougher cast metal base surrounding the lower portions of said ribs, said ribs comprising intermediate ribs provided each with a reduced lower portion of a shape adapted to interlock with the cast metal base and comprising also an edge rib consisting of an angle bar, one leg of which is embedded in the cast metal base and forms a base for said rib set inward from the edge of the plate and so affording room for a considerable body of cast metal outside of the base portion of said rib.

[Claims 6 and 7 not printed in the Gazette.]

1,015,872. VEHICLE-BRAKE. ARBA IRA CARNINE, Fullerton, Cal. Filed Apr. 16, 1910. Serial No. 555,778. (Cl. 21—9.)



1. A brake of the character described, including an oscillatory brake-beam, an oscillatory resiliently mounted retaining member, means intermediate said brake-beam and said retaining member, adapted to be engaged by said retaining member, when said beam is rocked in one direction to elevate said retaining member, means engageable by said retaining member, when the latter is elevated and rocked as indicated, and to operate said beam, and means for actuating said retaining member.

2. A brake of the character described, including an oscillatory brake-beam, an oscillatory resiliently mounted retaining member, means intermediate said brake-beam and said retaining member, adapted to be engaged by said retaining member when said beam is rocked in one direction, to elevate said retaining member, means engageable by said retaining member, when the latter is elevated and rocked as indicated, and to actuate said beam, and a tongue-actuated member having connection with said retaining member and adapted, as the tongue is moved rearwardly, to oscillate said retaining member for rocking said beam.

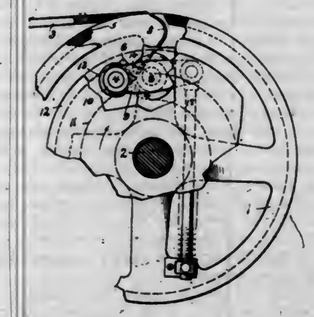
3. A brake of the character described, including an oscillatory brake-beam, an oscillatory resiliently mounted retaining member, means intermediate said brake-beam and said retaining member, adapted to be engaged by said retaining member when said beam is rocked in one direction to elevate said retaining member, means engageable by said retaining member when the latter is elevated and rocked as indicated, and to actuate said beam, a tongue-actuated member having connection with said retaining member and adapted, as the tongue is moved rearwardly, to oscillate said retaining member for rocking said beam and means operatively connected to said beam for its actuation.

4. In a brake of the class described, an oscillatory brake beam, a spring pressed pawl mounted upon the beam for oscillation thereon independently thereof and arranged to have positive engagement with the beam, the beam being provided with a portion engageable by the pawl when the beam is rocked in one direction whereby to raise this pawl, means with which the pawl is adapted to engage when so raised and rocked in one direction, and operate the beam; a tongue-actuated member having connection with the pawl whereby when the said tongue is moved rearwardly, the pawl upon the beam will be oscillated whereby to rock the beam, and hand-operated means operatively connected with the beam whereby the same may be operated.

5. In a brake of the class described, an oscillatory brake beam, a positive clutch member mounted upon the beam for oscillation thereon independently thereof, the clutch being adapted to have positive engagement with the beam, a tongue-actuated member having connection with the member upon the brake beam whereby when the said tongue is moved rearwardly, the member upon the beam will be oscillated whereby to rock the beam, said beam being formed with a portion engageable by the clutch member whereby to support the same out of position for positive engagement with the beam, and manually operable means for operating said beam.

[Claims 6 and 7 not printed in the Gazette.]

1,015,873. GRIPPER MECHANISM FOR PRINTING-MACHINES. ELLIS W. COOPER, New York, N. Y., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed May 18, 1910. Serial No. 561,953. (Cl. 101—115.)



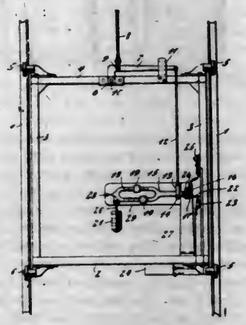
1. In a gripper mechanism, the combination with a cylinder having a gripper gap and a stationary abutment, of an actuator shaft, a gripper shaft, connections between the gripper shaft and the actuator shaft, whereby the movement of the actuator shaft gives the gripper shaft a reciprocating movement, and means rendered operative by the movement of the actuator shaft for rocking the gripper shaft to cause the grippers to clamp the sheet to the stationary abutment.

2. In a gripper mechanism, the combination with a cylinder having a gripper gap and a stationary abutment, of an actuator shaft provided with carrier arms, means for rocking the shaft, a gripper shaft mounted in the arms, and means rendered operative by the movement of the actuator shaft for rocking the gripper shaft to cause the grippers to clamp the sheet to the stationary abutment.

3. In a gripper mechanism, the combination with a cylinder having a gripper gap and a stationary abutment, of an actuator shaft, means for rocking the shaft, carrier arms on the shaft, a gripper shaft mounted in the arms, and gearing rendered operative by the movement of the actuator shaft for rocking the gripper shaft to cause the grippers to clamp the sheet to the stationary abutment.

4. In a gripper mechanism, the combination with a cylinder having a gripper gap and a stationary abutment, of an actuator shaft provided with carrier arms, a cam and connections whereby this shaft is rocked, a gripper shaft mounted in the carrier arms, a gear on the gripper shaft, and a stationary gear with which said gear is in mesh, whereby as the actuator shaft is rocked the gripper shaft is given a combined reciprocating and rocking movement to cause the grippers to clamp the sheet to the stationary abutment.

1,015,874. COMBINED ELEVATOR CAGE AND SCALE. WESLEY MORTIMER CRONK, Jr., White Plains, N. Y. Filed Dec. 8, 1910. Serial No. 596,351. (Cl. 73—3.)



1. In a combined elevator and scale, an elevator car, elevator guide rails between which said car is adapted to run, a supporting elevator cable, a lever pivotally connected to a portion of said car and carried thereby, a scale beam, connections between the free end of said lever and the scale beam carried by said car, and means whereby the supporting elevator cable may be connected to said lever.

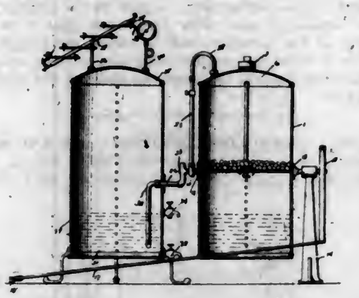
2. In a combined elevator and scale, a car having a platform, a supporting cable, a lever pivotally connected to a portion of said car and carried thereby, the supporting cable being connected to said lever, a member movable by said lever, and scale mechanism coöperating with said member for indicating the weight carried by the entire platform of the car.

3. In combination, a scale comprising an elevator car, the car itself constituting the platform of said scale, a part by which said car may be raised and lowered, a pivotally mounted lever connected to a portion of said car, said lever being carried by said car said part being connected to said lever, and a member movable by said lever coöperating with said scale for indicating the weight carried by said car.

1,015,875. HYDROGEN-GAS GENERATOR. WILLIAM LEONARD DOLBEN, Chicago, Ill. Filed Apr. 16, 1909. Serial No. 490,274. (Cl. 48—114.)

1. In a gas generating apparatus for the inflation of toy balloons, a gas accumulating tank having a supply of water therein, a plurality of spaced valves connected with the accumulating tank, a pressure indicator located on said tank, a series of balloon receiving discharge pipes connected with said tank, series of controlling valves located on said pipes, a conducting pipe communicating with the accumulating tank extending outwardly of the tank, a valve casing connecting with said conducting pipe, a rotary valve movable in said casing, a conducting pipe connected with said valve, a tank connected with said conducting pipe, means for connecting the second tank to the valve casing, a perforated partition for dividing the second tank into two chambers, a supply of decomposable material disposed in one of the chambers, a supply of decomposing material disposed in the second chamber, a shaft

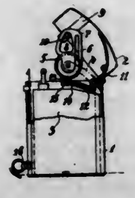
mounted on the outer side of the tank last mentioned, a standard for supporting the shaft, a wheel mounted on the shaft, a belt movable over the wheel for rotating the same, a foot operated plank connected with the belt, and a block for pivotally supporting the plank.



2. In a hydrogen gas generator consisting of a gas generating tank, and a gas cooling and purifying tank, an automatically controlled valve connecting said tanks, said generating tank being pivotally mounted on one side by means of a shaft secured thereto, and a bearing for said shaft, and on the other side by means of said valve, a pulley on said shaft and a means secured to said pulley for oscillating said generating tank.

3. In a hydrogen gas generator consisting of a gas generating tank, and a gas cooling and purifying tank a divisional plate being perforated on one half of its surface dividing said generating tank into two compartments, an automatically controlled valve connecting said tanks, and means for passing gas from the generating tank through a purifying medium contained in said purifying tank.

1,015,876. PYROPHORIC POCKET-LIGHTER. ARTHUR DUBSKY, Vienna, Austria-Hungary. Filed July 27, 1910. Serial No. 574,097. (Cl. 67—8.)



1. A pyrophoric pocket lighter, comprising in combination a receptacle proper, a lid hinged on said receptacle, an arm provided at the upper portion of said receptacle, a strike wheel mounted on said arm, a ratchet wheel provided at one side of said strike wheel, a flat spring like member mounted on the arbor of said strike wheel, said flat spring like member having an aperture, a pawl provided on said member and adapted to engage with the said ratchet wheel, a catcher provided on the lid and adapted to project in said aperture, a bearing, and pyrophoric metal mounted in said bearing, a fuel receptacle fitted in the receptacle proper, a stopper for closing the filling opening of said fuel receptacle and for holding said receptacle in position, means for pressing said pyrophoric metal against the strike wheel and means for closing the lighter and a spring for operating the lid, substantially as described.

2. A pyrophoric pocket lighter, comprising in combination a receptacle proper, a lid hinged on said receptacle, an arm provided at the upper portion of said receptacle, a strike wheel mounted on said arm, said strike wheel consisting of a cap of sheet steel and having its rim finely toothed, a ratchet wheel provided at one side of said strike wheel, a flat spring like member mounted on the arbor of said strike wheel, said flat spring like member having an aperture, a pawl provided on said member and adapted to engage with the said ratchet wheel, an extinguishing cap provided within said lid and constructed of a strip of metal, a catcher constructed by bending off flaps of said extinguisher, and adapted to project in the said aperture, a bearing, and pyrophoric metal mounted in said bearing, a fuel receptacle fitted in the receptacle proper, a stopper for closing the filling opening of said fuel receptacle and for holding said receptacle in position, means for pressing said pyrophoric metal against the strike wheel and means for closing the lighter and a spring for operating the lid, substantially as described.

3. A pyrophoric pocket lighter, comprising in combination a receptacle proper, a lid hinged on said receptacle, an arm provided at the upper portion of said receptacle, a strike wheel mounted on said arm, said strike wheel consisting of a cap of sheet steel and having its rim finely toothed, a ratchet wheel provided at one side of said strike wheel, a flat spring like member mounted on the arbor of said strike wheel, said flat spring like member having an aperture, a pawl provided on said member and adapted to engage with the said ratchet wheel, an extinguishing cap provided within said lid and constructed of a strip of metal, a catcher constructed by bending off flaps of said extinguisher, and adapted to project in the said aperture, a bearing, and pyrophoric metal mounted in the bearing, said bearing having a slot, a fuel receptacle fitted in the receptacle proper, a stopper for closing the filling opening of said fuel receptacle and for holding said receptacle in position, a fork like shaped spring, the prongs of which bear against a pyrophoric metal, and said lug respectively, and means for closing the lighter and a spring for operating the lid, substantially as described.

4. A pyrophoric pocket lighter, comprising in combination a receptacle proper, a lid hinged on said receptacle, an arm provided at the upper portion of said receptacle, a strike wheel mounted on said arm, said strike wheel consisting of a cap of sheet steel and having its rim finely toothed, a ratchet wheel provided at one side of said strike wheel, a flat spring like member mounted on the arbor of said strike wheel, said flat spring like member having an aperture, a pawl provided on said member and adapted to engage with the said ratchet wheel, an extinguishing cap provided within said lid and constructed of a strip of metal, a catcher constructed by bending off flaps of said extinguisher and adapted to project in the said aperture, a bearing, a lug bent off of said bearing, and pyrophoric metal mounted in the bearing, said bearing having a slot, a fuel receptacle fitted in the receptacle proper, a stopper for closing the filling opening of said fuel receptacle and for holding said receptacle in position, a fork like shaped spring, the prongs of which bear against a pyrophoric metal, and said lug respectively, and means for closing the lighter and a spring for operating the lid, substantially as described.

5. A pyrophoric pocket lighter, comprising in combination a receptacle proper, a lid hinged on said receptacle, an arm provided at the upper portion of said receptacle, a strike wheel mounted on said arm, said strike wheel consisting of a cap of sheet steel and having its rim finely toothed, a ratchet wheel provided at one side of said strike wheel, a flat spring like member mounted on the arbor of said strike wheel, said flat spring like member having an aperture, a pawl provided on said member and adapted to engage with the said ratchet wheel, a catcher provided on the lid and adapted to project in said aperture, a bearing, and pyrophoric metal mounted in said bearing, a fuel receptacle fitted in the receptacle proper, a stopper for closing the filling opening of said fuel receptacle and for holding said receptacle in position, means for pressing said pyrophoric metal against the strike wheel and means for closing the lighter and a spring for operating the lid, substantially as described.

1,015,877. COMBINATION-TOOL. SAMUEL W. DU MOUCHEL, Kalamazoo, Mich. Filed May 17, 1909, Serial No. 496,531. (Cl. 73—150.)

1. A combination tool comprising a body consisting of side plates and a pair of interposed spacing plates, the spacing plates being shorter than the side plates and being of substantially one-half the width thereof except their outer ends which are of substantially the width of the side plates, said spacing plates being oppositely disposed, said side plates and spacing plates being provided with centrally registering openings, and a pair of blade-like arms of substantially one-half the width of said side plates and having pivot portions of substantially the width of said side plates disposed between the side plates and the adjacent spacing plate at the inner end of the other spacing plate to fold oppositely between said side plates in front of said spacing plates; and pivots for said arms arranged through said side and spacing plates said pivots being provided with clamping nuts whereby said arms may be secured in their adjusted positions, the rear edges of said arms and at least one of said main body plates being provided with scale indicia, and longitudinally and transversely disposed gage bulbs arranged in registering openings in said side and spacing plates.

2. A combination tool comprising a body consisting of side plates and a pair of interposed spacing plates, the spacing plates being shorter than the side plates and being of substantially one-half the width thereof except their outer ends which are of substantially the width of the side plates, said spacing plates being oppositely disposed, and a pair of blade-like arms of substantially one-half the width of said side plates and having pivot portions of substantially the width of said side plates disposed between the side plates and the adjacent spacing plate at the inner end of the other spacing plate to fold oppositely between said side plates in front of said spacing plates; and pivots for said arms arranged through said side and spacing plates said pivots being provided with clamping nuts whereby said arms may be secured in their adjusted positions, the rear edges of said arms and at least one of said main body plates being provided with scale indicia.

1,015,878. FIRE-ALARM. JOHN ENRIGHT, Cleveland, Ohio. Filed Oct. 20, 1910. Serial No. 588,030. (Cl. 116—11.)

1. In a fire alarm mechanism, the combination of a bed plate having a low coefficient of expansion, a coil of wire of larger coefficient of expansion mounted on the said plate and having one end free, a plurality of inwardly expanding guides for the said wire, a trip held in normal position by the free end of the said wire, an alarm mechanism, a detent therefor, and means communicating between the said trip and the detent, whereby the said trip is released on a predetermined rise in temperature and the said detent disengaged from the alarm mechanism.

2. In a fire alarm mechanism, the combination of a bed plate having a low coefficient of expansion, a coil of wire of larger coefficient of expansion mounted on the said plate and having one end free, a plurality of inwardly expanding guides for the said wire, a swingable arm connected to the free end of the said wire, a trip adapted to rest against the said arm, an alarm mechanism, a detent therefor, and a tension cord attached to the said trip and detent, whereby the slackening of the tension of the said cord, when the said arm is swung and the trip released due to the expansion of the said wire on a predetermined rise in temperature, allows the detent to be disengaged from the alarm mechanism.

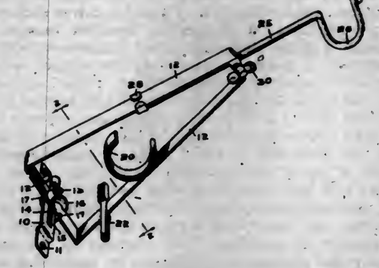
3. In a fire alarm mechanism, the combination of a bed plate having a low coefficient of expansion, a coil of wire of larger coefficient of expansion mounted on the said plate and having one end free, a plurality of inwardly expanding guides for the said wire, a trip held in normal position by the free end of the said wire, an alarm mechanism, a detent therefor, and a tension cord connecting the said trip and detent, whereby the tension of the said cord is slackened and the detent disengaged from the alarm mechanism when the trip is released due to a predetermined rise in temperature.

4. In a fire alarm mechanism, the combination of a bed plate having a low coefficient of expansion, a spiral coil of wire of larger coefficient of expansion mounted on the said plate and having its inner end secured to the said plate and its outer end free, a plurality of inwardly expanding guides for the said wire, an arm pivoted to the plate in an approximately radial position with respect to the said coil, the said free end of the wire being connected to the said arm near its fulcrumed point, a trip adapted to rest against the outer end of said arm, an alarm mechanism, a detent therefor, and a tension cord attached to the said trip and detent, whereby the slackening of the tension of the said cord, when the said arm is swung and the trip released due to the expansion of the said wire on a predetermined rise in temperature, allows the detent to be disengaged from the alarm mechanism.

5. In a fire alarm mechanism, the combination of a bed plate, having a low coefficient of expansion, a coil of wire of larger coefficient of expansion mounted on the said plate having one end free, a plurality of guides for the said coil of wire, and means communicating between the free end of the said wire and an alarm mechanism, whereby the expansion of the said wire is utilized to set the alarm mechanism into action.

[Claims 6 to 10 not printed in the Gazette.]

1,015,879. COMBINED CURTAIN AND SHADE SUPPORT. JOSEPH ESCHER, Indianapolis, Ind. Filed Apr. 13, 1911. Serial No. 620,847. (Cl. 156—24.)



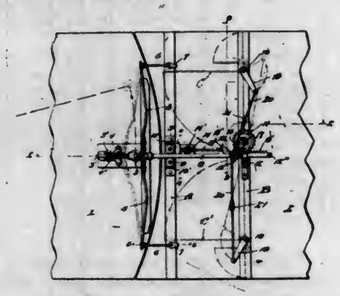
1. A combined curtain and shade support, comprising a base-plate provided with a longitudinal slot, a support adapted to be supported by said base, a guide-plate arranged on the said base, ears bent from the upper and lower edges of said guide-plate to ride on the edges of said base-plate and forming a rest for holding the support in upright position on said base, a screw-bolt secured to said guide-plate and projecting through the longitudinal slot and support, and a nut on said bolt to rigidly clamp said support on said base-plate.

2. A combined curtain and shade support comprising a base-plate provided with a longitudinal slot, a support adapted to be supported by said base, a guide-plate arranged on the said base, ears bent from the upper and lower

edges of said guide-plate to ride on the edges of said base-plate and forming a rest for holding the support in upright position on said base, a screw-bolt secured to said guide-plate and projecting through the longitudinal slot and support, a nut on said bolt to rigidly clamp said support on said base, an extension curtain bracket adjustably mounted on said support, means to hold said extension bracket in alinement with said support, and means for holding the extension bracket in rigid relation with said support.

3. A combined curtain and shade support comprising a base-plate bent to remove the central portion of said plate away from the plane on which the ends of said plate are formed, said plate being provided with a longitudinal slot, a support formed to provide a recess to receive one of the curtain poles, a shade roller bearing mounted on and carried by said support, a guide-plate arranged on said base-plate, ears bent from the upper and lower edges of said guide-plate to ride upon the edges of said base-plate and forming a rest for holding the support in upright position on said base-plate, a screw-bolt secured to said guide-plate and projecting through the longitudinal slot and support, a nut on said bolt to rigidly clamp said support on said base, an extension curtain bracket adjustably mounted on said support, means to hold said extension bracket in alinement with said support, and means for holding said extension bracket in rigid relation with said support.

1,015,880. SAFETY-GATE FOR BRIDGES. CASPER FAUST, Oshkosh, Wis. Filed May 12, 1911. Serial No. 626,671. (Cl. 14—56.)

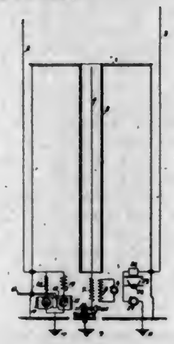


1. In a swinging bridge having a tappet adjacent to its end, and an abutment with which the bridge is adapted to register; the combination of a reciprocative rack-carrying weight-controlled plunger-bar mounted beneath the abutment, a single pinion in meshed engagement with the plunger-bar, a crank-arm carried by the pinion, opposite pivot-posts journaled in the abutment, a gate secured to each post above the abutment, a crank-arm secured to the lower end of each pivot-post, to extend upon opposite sides of a line intersecting the axes of the pinion and pivot-posts, the crank-arm of which pinion is disposed parallel to that of one of the pivot-post crank-arms, pitmen connecting said pivot-post crank-arms and the pinion crank-arm, cam-rails having their outer ends fulcrumed to the abutment, their inner ends being in hinge connection with the plunger-bar arranged to be engaged by the tappet whereby the plunger-bar is actuated in opposition to its weight-control to open the gates incidental to swinging of the bridge to its closed position.

2. A swinging bridge comprising a spring-controlled tappet disposed adjacent to its end, an abutment with which the bridge is adapted to register, a reciprocative rack-carrying plunger, a weight in cable connection with the plunger whereby the same is moved in one direction, a single pinion in meshed engagement with the rack portion of the plunger, a crank-arm carried by the pinion, oppositely disposed pivot-posts journaled in the abutment, a gate in yielding connection with each post, a crank-arm secured to the lower end of each pivot-post, the crank-arms being extended upon opposite sides of a line intersecting the pinion and pivot-post axes, the crank-arm of the aforesaid pinion being disposed parallel to one of the pivot-post crank-arms, pitmen connecting said pivot-post crank-arms and the pinion crank-arm, cam-rails having their inner ends in hinge connection with the plunger-bar, links connecting the outer ends of the cam-rails and abutment, the rails being arranged in the path of travel of the tappet whereby movement of the plunger-rod is effected in opposition to its weight-control to cause the gates to swing open.

3. In a swinging bridge having a tappet disposed adjacent to its end, an abutment with which the bridge is adapted to register, and swinging gates carried by the abutment; the combination of a single pinion in link connection with the gates, a plunger-bar provided with a rack section for engagement with the pinion, a rear guide for the plunger-bar, a bracket through which the forward end of the plunger-bar extends, side rollers carried by the bracket for engagement with the plunger-bar, a bottom roller carried by the bracket upon which said plunger-bar is adapted to travel, curved rails having their inner ends in hinge connection with the plunger-bar, their outer ends being in link connection with the abutment, the rails being arranged in the path of travel of the bridge tappet whereby the plunger is operated in one direction to open the gates, and a weight connected to the plunger, whereby the latter is operated in the opposite direction to close the gates.

1,015,881. MEANS FOR THE TRANSMISSION OF ENERGY BY ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Washington, D. C., assignor to National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 19, 1906. Serial No. 348,660. (Cl. 178—319.)



1. In the art of transmitting intelligence, the combination with a radiating structure for electromagnetic waves, of means to excite the same for radiation of waves representing sound, writing and pictures simultaneously, and a receiving station having means to select the waves of the three kinds and simultaneously reproduce sounds, writing and pictures.

2. The combination with a sending device and a receiving device operated by electromagnetic waves, of means for generating a continuous train of waves and modifying them in groups, representing several kinds of intelligence, and means at the receiving station for selecting the several groups and thereby reproducing several characteristic kinds of intelligence, substantially as described.

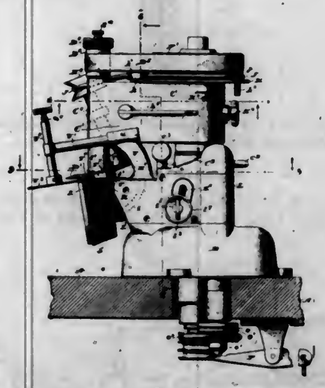
3. In the art of distributing intelligence, the combination of a central station having devices for generating a continuous stream of electromagnetic waves, and modifying them in accordance with speech and handwriting, and a plurality of receiving stations having devices for selecting the said modified waves and reproducing the said speech and writing, substantially as described.

4. In the art of transmitting intelligence, a generating station having a wave emitting device, and generating means associated therewith to effect the emission of a continuous stream of electromagnetic waves, apparatus for modifying said waves in accordance with several forms of the intelligence to be transmitted, and a receiving station having a plurality of receivers, each of which is adapted to respond to the modified waves representing one form of intelligence; substantially as described.

5. Apparatus for transmitting intelligence, comprising a sending antenna, a generator for causing the antenna to emit a continuous stream of electromagnetic waves, a tel-autograph arranged to modify the action of the generator, a receiving station, and a tel-autograph connected in the receiving circuit of the receiving station, and tuned to respond to the modified impulses produced by the tel-autograph at the sending station.

[Claim 6 not printed in the Gazette.]

1,015,882. SKIVING-MACHINE. LOUIS W. G. FLYNT, Rochester, N. Y., assignor to Quentin W. Booth and Irving E. Booth, Rochester, N. Y. Filed Apr. 26, 1906. Serial No. 313,775. (Cl. 69—16.)



1. In a skiving machine, the combination with a rotating disk cutter, and means for driving the same, of a work support having a driving connection with said cutter driving means, and means under the control of the operator for governing the movement of the work support while maintaining uniform movement of the cutter.

2. In a skiving machine, the combination with a rotary cutter, means for driving the same at a high rate of speed, of a tilting work support, means connected with said driving means for driving the work support, and means under the control of the operator for governing the movement of the work support independent of the movement of the cutter.

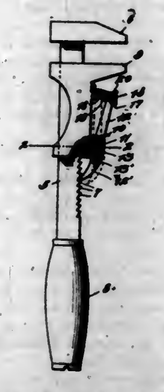
3. In a circular knife skiving machine, the combination with a circular knife, means for driving the same at a high rate of speed, a work support, means connected with said driving means for driving the work support, means under the control of the operator for governing the movement of the work support relative to the movement of the knife, and means for adjusting the knife.

4. In a circular knife skiving machine, the combination with a circular knife and means for driving the same at a high rate of speed, of a tilting work support, means connected with said driving means for driving the work support, means under the control of the operator for governing the movement of the work support independent of the movement of the knife, and means for adjusting the knife to and from the work support.

5. In a circular knife skiving machine, the combination with a circular knife, of means for driving the same at a high rate of speed, of a rotatable work support, means for driving the same connected with said knife driving means, and means for interrupting the movement of the work support independent of and while the knife is continued in its rotation.

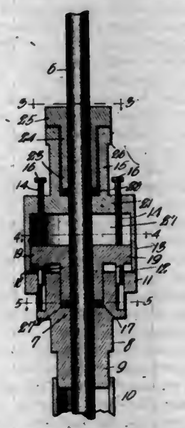
[Claims 6 to 77 not printed in the Gazette.]

1,015,883. WRENCH. JAMES C. GRANGER, Cottonwood, Ala. Filed Oct. 25, 1911. Serial No. 656,568. (Cl. 81—140.)



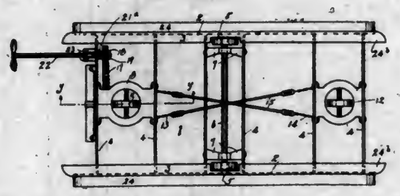
In a wrench the combination with a shank having a stationary jaw on one end and a series or rack teeth on one of its longitudinal edges, an adjustable jaw slidable on said shank, and a dog pivotally mounted on said jaw for engagement with the rack teeth, of a holding cap pivotally mounted on said jaw and having an inclined face for engagement by the end of the locking dog, said cap also having a socket to receive the end of the dog, and a leaf spring fixed at one end to the jaw and bearing upon said cap to hold the same upon the end of the locking dog and retain the latter in its locking position.

1,015,884. DOUBLE PACKING STUFFING-BOX. URBANA A. HAASER, Lawrenceville, Ill. Filed July 24, 1911. Serial No. 640,291. (Cl. 121—109.)



A device of the character described, comprising an upper and a lower member, the lower member having an upper stuffing box and a depending screw-threaded nipple, and the upper member having a lower recess and an upper stuffing box, the said members being adapted to have a piston rod pass therethrough, a gland arranged in the recess of the upper member and adapted to enter the stuffing box in the lower member, jam nuts carried by the upper member adapted to force the said gland into the said stuffing box of the lower member, and a gland for the stuffing box of the upper member.

1,015,885. PORTABLE TURN-TABLE. BENJAMIN K. HALL, Seattle, Wash., assignor of one-fourth to A. F. Eastman, Pierce county, Wash. Filed June 13, 1911. Serial No. 632,827. (Cl. 104—19.)



1. The combination in a portable turn-table of central wheels the axis of rotation of which is at right angles to the longitudinal plane of the turn-table, front and rear wheels of smaller diameter than that of the central wheels, a tongue, connections between said tongue and said front and rear wheels whereby the axis of rotation of said front and rear wheels may be changed with relation to that of said central wheels, and means for holding the turn-table against pivoting upon its central wheels.

2. The combination in a portable turn-table of central wheels the axis of rotation of which is at right angles to the longitudinal plane of the turn-table, frames at either end and revolubly mounted with relation to the turn-table, connections between said frames, wheels revolubly mounted in said frames and of smaller diameter than said central wheels, a tongue having a free vertical and rotative movement with relation to the turn-table, rack and pinion means between one of said frames and said tongue whereby the axis of rotation of said front and rear wheels may be changed with relation to said central wheels, and means for preventing pivoting of the turn-table upon its central wheels.

3. The combination in a portable turn-table of runways flared at either end and having upwardly and inwardly projecting portions, of central wheels the axis of rotation of which is fixed at right angles to the longitudinal plane of the turn-table, frames at either end and revolubly mounted with relation to the turn-table, connections between said frames, wheels revolubly mounted within said frames and of smaller diameter than said central wheels, a tongue having a free vertical and rotary movement with relation to the turn-table, rack and pinion connections between one of said frames and said tongue whereby the axis of rotation of said front and rear wheels may be changed with relation to that of said central wheels, and means for preventing pivoting of the turn-table upon its central wheels.

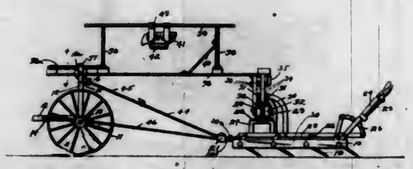
4. The combination in a portable turn-table of inwardly and upwardly converging portions above its runways, central wheels fixed to revolve in the direction of the length of the main frame, frames at either end and revolubly mounted with relation to the main frame, connection between said front and rear frames, wheels revolubly mounted in said last mentioned frames and of smaller diameter than said central wheels, a tongue having a free vertical and a rotative movement with relation to the main frame, rack and pinion connections between one of said front and rear frames and said tongue whereby said front and rear frames may be rotated, friction feet upon the main frame movable into and out of contact with the floor and means for locking said feet in position when pressed against the floor.

1,015,886. BAROMETER. LAURENS HAMMOND, Evanston, Ill. Filed Mar. 6, 1911. Serial No. 612,634. (Cl. 73—4.)

A barometer comprising a transparent tube containing a column of mercury and extending longitudinally in the same direction from end to end, said tube comprising an upper section hermetically closed at its upper end and having its bore of uniform diameter throughout, and a lower section open at its lower end to the atmosphere and

having its bore of a diameter uniform throughout but greater than that of the bore of the upper section.

1,015,887. RIDING-HARROW. JOHN W. HARMON, Creston, Iowa. Filed Dec. 2, 1909. Serial No. 530,993. (Cl. 55—91.)



1. In a device of the class described, the combination of a harrow section, a truck in front of said harrow section, a platform supported at its forward end on said truck and at its rear end on said harrow section, supporting standards rising at each side of the platform, a pair of parallel bars supported longitudinally on said standards, a transverse member suspended from and between said bars and adapted to slide thereon, and a seat supported by said member, whereby the operator may during the operation of the harrow quickly and easily shift his position on said platform along said rods to increase or decrease the downward pressure on said harrow section.

2. In a device of the class described, the combination of a harrow section, a truck in front of said harrow section, a platform supported at its forward end on said truck and at its rear end on said harrow section, supporting standards rising at each side of the platform, a pair of parallel bars supported longitudinally on said standards, a transverse member comprising a central portion and a pair of depending end portions which are adapted to hook over said parallel bars so as to be easily slidable thereon, and a seat secured to said central portion, whereby the operator may during the operation of the harrow quickly and easily shift his position on said platform along said rods to increase or decrease the downward pressure on said harrow section.

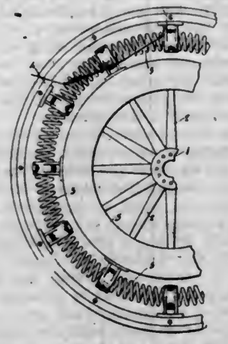
3. In a device of the class described, the combination of a truck, harrow sections connected to the rear of said truck, equalizing bars on the harrow sections, horizontal beams supported by said bars, a pair of uprights connected with said beams at points intermediate between said equalizing bars, a cross-bar carried by said uprights and a seat-supporting platform resting at one end on said truck and at the other end on said cross-bar, whereby the weight of the seat-supporting platform is equally distributed on the harrow sections.

4. In a device of the class described, the combination of a truck, harrow sections, a roller rotatably mounted on the truck, a seat supporting platform mounted at one end on said roller, and at the other on the harrow sections.

5. In a device of the class described, the combination of a truck, harrow sections, means for connecting the truck and harrow sections, a bracket pivotally connected to the truck, a grooved wheel rotatably mounted in said bracket, a platform, means for mounting one end of the platform on said grooved wheel, and an upright equalizing support on the harrow sections supporting one end of the platform.

[Claims 6 to 8 not printed in the Gazette.]

1,015,888. VEHICLE-WHEEL. CHRISTIAN F. HEINSS, Cincinnati, Ohio. Filed Nov. 6, 1911. Serial No. 658,717. (Cl. 152—32.)



1. In a vehicle wheel provided with felly and a floating rim separate from the felly, a series of coiled springs, curved segmentally and arranged circumferentially intermediate the felly and rim, with means for locking together the ends of the springs to prevent creeping, and clamps secured alternately to felly and rim, and projecting radially toward each other for rigidly supporting said springs circumferentially of the coils thereof and free from the felly and rim.

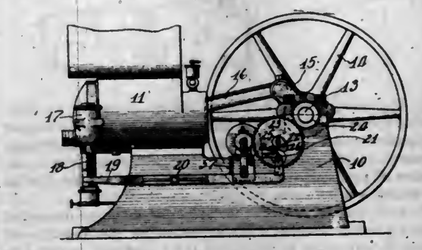
2. In a vehicle wheel provided with felly and a floating rim separate from the felly, a series of coiled springs curved segmentally and arranged circumferentially intermediate the felly and rim, collars located within the abutting ends of said coils, and hooks on the ends of said coils to engage said collars to lock the springs together, and means for rigidly supporting said springs circumferentially of the coils thereof and free from the felly and rim.

3. In a vehicle wheel provided with felly and a floating rim separate from the felly, a series of coiled springs curved segmentally and arranged circumferentially intermediate the felly and rim, with means for locking together the ends of the springs to prevent creeping, and clamps secured alternately to felly and rim and projecting radially toward each other, with spiral ridges on the inner faces of said clamps to hold the coils circumferentially and free from felly and rim.

4. In a vehicle wheel provided with felly and a floating rim separate from the felly, a series of coiled springs curved segmentally and arranged circumferentially intermediate the felly and rim, collars located within the abutting ends of said coils, and hooks on the ends of said coils to engage said collars to lock the springs together, and clamps secured alternately to felly and rim and projecting radially toward each other, with spiral ridges on the inner faces of said clamps to hold the coils circumferentially and free from felly and rim.

5. In a vehicle wheel provided with a felly and a floating rim separate from the felly, a series of coiled springs curved segmentally and arranged circumferentially intermediate the felly and rim, collars located within the abutting ends of said coils, and hooks on the ends of said coils to engage said collars to lock the springs together, and clamps secured alternately to felly and rim and projecting radially toward each other, with means for locking together the ends of the springs to prevent creeping, one member having a base for attachment, and the other member constituting a pressure plate, to hold the coils of the springs rigidly against the collars, with the inner bearing faces of each clamp member provided with corresponding spiral ridges to embrace and hold the coils of the springs circumferentially.

1,015,889. GOVERNOR FOR INTERNAL-COMBUSTION ENGINES. PETER J. HOLM, Eau Claire, Wis.; John H. Holm and Charlotte C. Holm, Eau Claire, Wis., executors of said Peter J. Holm, deceased. Filed Jan. 27, 1911. Serial No. 604,952. (Cl. 123—113.)



1. In a governor for internal combustion engines, a rotary device, a centrifugal weight slidable thereon transversely of the axis of said device, a cam surface on said weight at the center of said device, a slidable rod positioned concentrically within said rotary device and arranged to be directly engaged and moved by said cam surface, and a locking means operable by said rod.

2. A governor for an internal combustion engine having a movable control member, including a latch for holding said member against normal operation, a rotary governor body consisting of a journaled stem and an enlarged casing at one end of said stem, a longitudinally movable rod extending through said stem and operative to move said latch into holding position, and a weight in said casing slidable therein under centrifugal action and having an inclined face operative to directly engage said rod to move it.

3. A governor for an internal combustion engine having a movable control member, including a latch for holding said member against normal operation, a rotary governor body consisting of a journaled stem and an enlarged casing at one end of said stem, a longitudinally movable rod extending through said stem and operative to move said latch into holding position, a weight in said casing slidable therein under centrifugal action and having an inclined face positioned at the center of said casing and adapted to directly engage said rod to move it, and an adjustable spring for resisting the outward movement of said weight.

4. A governor for an internal combustion engine having a movable control member, including a bracket secured to the engine base, a latch lever pivoted to said bracket and operative to engage said control member to hold it against normal operation, an adjustable wear-plate on said latch lever for taking up the wear between it and said movable control member, a governor body consisting of a casing and a stem journaled in said bracket, a longitudinally movable rod extending through said stem into operative relation to said latch lever, an adjustable screw in said lever in line with said rod, a coiled spring normally operative to hold said latch lever in its non-engaging position, a centrifugal weight slidably mounted in said casing and having an inclined face positioned so as to engage one end of said rod and shift it longitudinally against said latch lever when said weight moves outward, and an adjustable spring action between said casing and said weight to resist its outward movement.

5. In a governor for internal combustion engines, a bearing, a governor casing comprising a stem rotatably mounted in said bearing and a housing at one end of said stem, a weight slidable transversely in said housing and adapted to be moved by centrifugal force, an adjustable spring resisting such movement of said weight, a cam face movable with said weight and positioned at the center of said housing, and a rod positioned concentrically within said stem, one end of said rod being arranged to be engaged and moved by said cam face.

[Claims 6 to 8 not printed in the Gazette.]

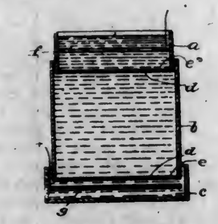
1,015,890. FASTENING DEVICE. ALFRED D. HYDE, Iselin, N. J. Filed Mar. 13, 1911. Serial No. 613,961. (Cl. 85—24.)

1. A fastening device consisting of a shank, a collar having a curved surface, the curved surface being arranged eccentric to the axis of the shank, and a head eccentrically arranged on the collar adapted to extend therefrom in extension of the eccentricity of the collar leaving the side of the shank opposite the extension unobstructed.

2. A fastening device consisting of a screw-threaded shank, a collar eccentrically arranged on the shank, and a head eccentrically arranged on the collar and adapted to project in extension of the collar whereby none of either the shank, collar or head is concentric with another, the head having means thereon to provide for its operation by a tool.

3. A fastening device consisting of a screw-threaded shank, a circular collar arranged eccentrically on the shank, and a rectangular head on the collar and arranged eccentrically thereon in extension of the eccentricity of the collar whereby none of either the shank, collar or head is concentric with another.

1,015,891. PROCESS OF SEPARATING GLUTAMIC ACID AND OTHER PRODUCTS OF HYDROLYSIS OF ALBUMINOUS SUBSTANCES FROM ONE ANOTHER BY ELECTROLYSIS. KIKUNAE IKEDA and SABUROSUKE SUZUKI, Tokyo, Japan. Filed May 2, 1911. Serial No. 624,655. (Cl. 204—1.)



1. The process of separating the products of hydrolysis of albuminous substances into three groups of compounds, which consists in preparing an aqueous solution of the said hydrolytic products, subjecting the said solution of hydrolytic products to electrolysis to separate it into groups collecting at the anode, cathode, and intermediate space, and finally collecting the three groups of compounds formed, the first group consisting of compounds of decidedly basic character, the second group consisting of compounds of pronounced acid character, and the third group consisting of neutral compounds having very weak basic and acid character.

2. The process of separating the products of hydrolysis of albuminous substances into three groups of compounds, which consists in preparing an aqueous solution of the said hydrolytic products, subjecting the said solution of hydrolytic products to electrolysis in a cell divided into three compartments and containing a corrodible anode to separate the solution into groups collecting at the anode, cathode, and intermediate space, and finally collecting the three groups of compounds formed, the first group consisting of compounds of decidedly basic character, the second group consisting of compounds of pronounced acid character and salts of the anode metal, and the third group consisting of neutral compounds having very weak basic and acid character.

3. The process of obtaining glutamic acid from the products of hydrolysis of albuminous substances, which consists in preparing an aqueous solution of the said hydrolytic products, subjecting the said solution of hydrolytic products to electrolysis in a cell divided into three compartments and containing a corrodible anode to separate the solution into groups collecting at the anode, cathode, and intermediate space, collecting the three groups of compounds formed, the first group consisting of compounds of decidedly basic character, the second group consisting of compounds of pronounced acid character and salts of the anode metal, and the third group consisting of neutral compounds having very weak basic and acid character, and finally separating the glutamic acid from the group of compounds of pronounced acid character.

4. The process of obtaining glutamic acid, which consists in hydrolyzing an albuminous substance by heating said albuminous substance with sulfuric acid, filtering the liquid, removing the sulfuric acid and sulfates from the liquid, subjecting the liquid to electrolysis in a cell divided into three compartments and containing a corrodible anode to separate the liquid into groups collecting at the anode, cathode, and intermediate space, collecting the three groups of compounds formed, one of the liquid groups consisting of compounds of pronounced acid character and salts of the anode metal and containing the anodic metal salt of glutamic acid, and finally separating the glutamic acid from said group.

5. The process of obtaining glutamic acid, which consists in hydrolyzing an albuminous substance by heating said albuminous substance with sulfuric acid, filtering the liquid, removing the sulfuric acid and sulfates from the liquid, subjecting the liquid to electrolysis in a cell divided into three compartments and containing a corrodible anode to separate the liquid into groups collecting at the anode, cathode, and intermediate space, collecting the three groups of compounds formed, one of the liquid groups consisting of compounds of pronounced acid character and salts of the anode metal and containing the anodic metal salt of glutamic acid, passing hydrogen sulfid into the liquid, filtering and concentrating the liquid, adding hydrochloric acid thereto, allowing to stand for several days whereby hydrochlorid of glutamic acid is obtained, and finally separating the glutamic acid from said hydrochlorid.

1,015,892. BREAD-PAN. GEORGE F. JEFFERSON, Houston, Tex. Filed Sept. 29, 1911. Serial No. 651,911. (Cl. 53—6.)

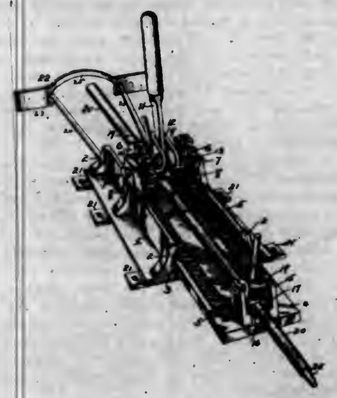
1. A device of the character described including a suitable pan, a detachable covering therefor, a plurality of blades secured to the covering, arranged at a uniform distance apart and projecting within the pan, the end blades extending entirely to the bottom of the pan and the intermediate blades falling short of said bottom and means for securing the covering on the pan.

2. A device of the character described including a suitable pan having a row of vertically extending slots arranged in each side thereof, a covering for said pan, a plurality of blades secured to the covering and arranged at a uniform distance apart and projecting into the pan, a shoulder on each side of each blade, the said shoulders projecting into the corresponding slots on the sides of the pan and means for securing the covering on the pan.

3. A device of the character described, including a suitable pan having a row of vertically extending slots in each side thereof, a covering for said pan, a means for securing the covering on the pan, a plurality of blades secured to the covering and arranged at a uniform distance apart, projecting into the pan and extending entirely across the same, the end blades extending entirely to the bottom of the pan and the intermediate blades falling short of said bottom, a shoulder on each side of each blade, the said shoulders projecting into the corresponding slots on the sides of the pan, and a suitable handle for removing said covering and blades from the pan.

4. A device of the character described including a suitable pan having a row of vertically extending slots in each side thereof, a covering for said pan, means carried by each end of the pan and each end of said covering for securing the covering on the pan, a plurality of blades secured to the covering and arranged a uniform distance apart, projecting into the pan and extending entirely across the same, the end blades extending entirely to the bottom of the pan and the intermediate blades falling short of said bottom, a shoulder on each side of each blade, the said shoulders projecting into the corresponding slots on the sides of the pan, and a suitable handle for removing said covering and blades from the pan.

1,015,893. MACHINE FOR LAYING PIPES. MORRIS H. KEELER, Sabetha, Kans. Filed Oct. 19, 1910. Serial No. 587,967. (Cl. 37—53.)

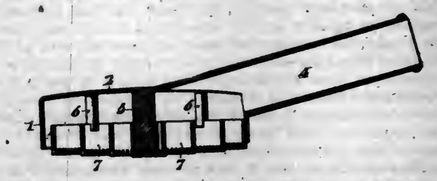


1. In a machine for laying pipes, the combination with a base, a longitudinally movable carriage thereon provided with two rack bars, and with clamping jaws for rigidly clamping a pipe between them and restraining it against endwise movement in either direction with relation to the clamp, of a shaft mounted on the base, gear wheels on the shaft which mesh with the rack bars, two ratchet wheels having their teeth arranged in opposite directions connected with each gear, and pawls connected with the operating lever and adapted to engage the ratchet wheels, and positively move the carriage and pipe in either direction, substantially as set forth.

2. The combination with a base provided with standards, a carriage movable on said base, said carriage provided with two rows of rack teeth, and means for clamping a pipe to said carriage, of a transverse shaft mounted in the standards of the base, pinions on said shaft and meshing with the rack teeth on the carriage, two pairs of ratchet wheels on said shaft and rotatable with said pinions, a lever mounted on the shaft between the pairs of ratchet wheels, and two sets of dogs coöperating with the ratchet wheels of the respective pairs, and all of said dogs disposed to be operable by said lever to turn the pinions in one direction or the other.

3. The combination with a base, a carriage movable thereon, means for securing a pipe to said carriage, and means for moving the carriage, of an arched back brace, and means connecting said arched back brace with the base.

1,015,894. VACUUM-CURRYCOMB. WILLIAM H. KELLER, Philadelphia, Pa. Filed Jan. 16, 1909. Serial No. 472,574. (Cl. 119—84.)

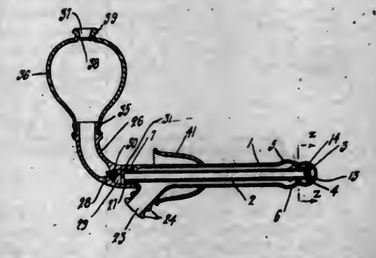


1. A pneumatic curry comb comprising a receptacle, a hollow handle therefor adapted to be connected with a source of suction, currying means including a continuous strip, and spaced members for supporting said continuous strip within said receptacle, so that one edge protrudes from the face of said receptacle, and the other edge thereof is spaced from the top of the receptacle, to form a passage above the strip, so as to permit free communication with the hollow handle.

2. A pneumatic curry comb, comprising a receptacle, a hollow handle therefor adapted to be connected with a source of suction, a currying means including a spiral strip supported within said receptacle, spaced members for supporting said spiral strip in said receptacle with one edge thereof protruding from the face of the receptacle, and the other edge thereof spaced from the top of the receptacle, so as to form a passage above the strip to permit free communication with the hollow handle.

3. A pneumatic curry comb, comprising a receptacle which is circular in cross section, a spiral strip located within said receptacle, and having one edge thereof protruding from said receptacle, posts secured to said receptacle and engaging the other edge of said strip, whereby said strip is supported within the receptacle and spaced from the top of the receptacle, forming a passage to permit free communication at the top of the receptacle to the hollow handle.

1,015,895. VAGINAL SYRINGE. GEORGE J. KELLEY, Attleboro, Mass. Filed Jan. 23, 1911. Serial No. 604,068. (Cl. 128—25.)



1. In a vaginal syringe, the combination of an educt tube provided with openings in its side wall and perforations at its forward end, an induct tube shorter than the educt tube fixed within the latter and provided with perforations in its forward end, a rearwardly-extended discharge tube upon the educt tube, a bulb, a tube carrying the latter and connected with said educt tube, a disk with openings in said bulb-carrying tube, and a valve for

coöperation with said disk and having a base of less di-

front corner of the hammer upon depression of the key

thereof, of an arm rigidly secured to said socket below

of the surface from which the bark is removed, and means

coöperation with said disk and having a base of less diameter than the disk.

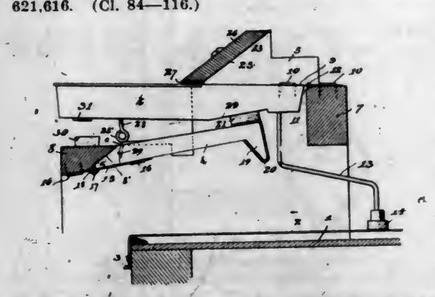
2. In a vaginal syringe, the combination of an educt tube provided with openings in its side wall and perforations at its forward end, an induct tube shorter than the educt tube fixed within the latter and provided with perforations at its forward end, a rearwardly-extended discharge tube upon the educt tube, a bulb, a curved tube carrying the latter and connected with said educt tube, a disk with openings disposed in said curved tube, a valve for coöperation with said disk and having a base of less diameter than the disk, and means within said curved tube forming a chamber and a seat for said valve.

3. In a vaginal syringe, the combination of an educt tube provided with openings in its side wall and perforations at its forward end, an induct tube shorter than the educt tube fixed within the latter and provided with perforations at its forward end, a rearwardly extended discharge tube upon the educt tube, a bulb, a curved tube carrying the latter and connected with said educt tube, a disk with openings disposed in said curved tube, a valve for coöperation with disk and having a base of less diameter than the disk and means within said curved tube, forming a chamber and a seat for said valve, said disk and valve being disposed between said bulb and the discharge tube.

4. In a vaginal syringe, the combination of an educt and an induct tube concentrically disposed with relation to each other, and each provided with perforations upon its forward end, a third tube engaging the educt tube and communicating only with the induct tube, and provided with a valve seat, a valve in said third tube for coöperation with the seat, means within said third tube having peripheral openings, said means being of greater diameter than the base of said valve, and a bulb upon the third tube.

5. In a vaginal syringe, the combination of an educt tube provided with exterior threads upon its rear end portion, an induct tube within the educt tube, a disk upon the ends of the induct and educt tubes provided with openings leading into the induct tube, a discharge tube in the side of the educt tube, a bulb, a connecting tube upon the bulb provided with threads adapted to engage the threads upon the educt tube, a valve seat in said connecting tube, and a valve in the last mentioned tube intermediate the seat and the disk.

1,015,896. KEYED ZITHER. BERNHARD R. KIESSIG, Chicago, Ill., assignor of one-half to Joseph N. Vasey, Brookfield, Chicago, Ill. Filed Apr. 17, 1911. Serial No. 621,616. (Cl. 84—116.)



1. In an action for musical instruments of the class described; the combination of front and rear horizontal supporting bars, a plurality of keys each flexibly hinged to the rear bar by a flat spring strip and extending forwardly and terminating over the front bar, a hammer under each key, a flat spring strip secured to the under side of each hammer at the front end thereof and to the under side of the front bar whereby said hammers are flexibly hinged to the front bar and extend rearwardly below and parallel with the keys, and a stud extending downwardly from each key and engaging with the upper front corner of the hammer upon depression of the key whereby both transverse and longitudinal thrusts is exerted on the hammers upon depression of the keys.

2. In an action for instruments of the class described, the combination of front and rear horizontal supporting bars, keys hinged to the rear bar and extending forwardly and terminating over the front bar and striking against said front bar upon being depressed, hammers below said keys and extending rearwardly from said front bar and parallel with the keys, a flat spring strip secured to the under side of each hammer and to the front bar whereby said hammers are flexibly hinged for vertical swing, the front upper corners of such hammers being slightly rounded, and studs extending downwardly from the keys and engaging with said rounded corners to exert both transverse and longitudinal thrust on the hammers upon depression of the keys.

3. In an action for instruments of the class described, the combination of front and rear horizontal supporting bars, keys hinged to the rear bar and extending forwardly and terminating over the front bar to strike against said front bar upon depression thereof, hammers below said keys and parallel therewith and extending rearwardly from the front bar, a hinge member secured to the under side of each hammer near the front end thereof and secured to the front bar, and studs extending downwardly from the keys, the stud of each key moving about the upper front corner of the associated hammer upon depression of the key whereby both transverse and longitudinal thrust is applied to the hammer to cause downward swing thereof.

4. In an action for musical instruments, the combination of front and rear horizontal supporting bars, keys hinged to the rear supporting bar and extending forwardly and terminating over the front bar to strike against said front bar upon being depressed, hammers parallel with and below said keys and extending rearwardly from the front bar, a strip of spring material secured at one end to the under face of each hammer near the front end thereof and secured to the front supporting bar to flexibly hinge the hammer, a facing of soft material about the upper front corner of each hammer, and a stud extending from each key and moving over said corner when the key is depressed to exert both longitudinal and transverse thrust on the hammer.

5. In an action for instruments of the class described, the combination of front and rear horizontal supporting bars, keys hinged to the rear supporting bar and extending forwardly and terminating over the front bar and impinging against said front bar upon being depressed, hammers parallel with and below said keys and extending rearwardly from the front bar, hinge members connecting with said front bar and with the lower faces of said hammers near the front ends of the hammers, the upper front corners of the hammers being slightly rounded and each having a transverse ridge, and a stud extending from each key for engaging with said ridge and rounded corner upon depression of the key to cause rapid and powerful throw of the hammer.

[Claims 6 to 9 not printed in the Gazette.]

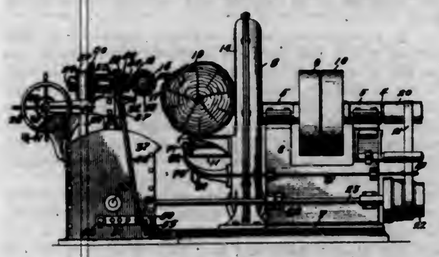
1,015,897. ATTACHMENT FOR INCANDESCENT-LAMP SOCKETS. NATHAN KLEIN, New York, N. Y., assignor, by mesne assignments, to Harvey Hubbell, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 6, 1909, Serial No. 526,529. Renewed Sept. 29, 1911. Serial No. 651,985. (Cl. 240—123.)

1. The combination with an incandescent lamp socket having a switch operating device which passes out through one side thereof, of an arm rigidly secured to said socket and projecting radially therefrom, and a crank lever pivoted to said arm, one part of said crank lever being connected with said switch operating device and the other being provided with a depending member by which it may be operated.

2. The combination with a lamp socket having a switch operating member which passes out through one side thereof, of an arm rigidly secured to said socket below said switch operating member and projecting radially from said socket, a crank lever pivoted to said arm, a

link device connecting one arm of said crank member with said switch operating member and a depending device connected with the other arm of said crank lever.

1,015,898. MACHINE FOR REMOVING BARK FROM LOGS. FRED LIBERT, Green Bay, Wis., assignor of one-third to Arthur Libert and one-third to Alexander Roberts, Green Bay, Wis. Filed May 20, 1910. Serial No. 562,402. (Cl. 144—208.)



1. In a machine for removing bark from logs, the combination of a rotary cutter, a cutter supporting base, a stationary frame connected with said base, an inclinable frame pivotally supported from said stationary frame, rotary spur wheels carried by said inclinable frame adapted to bear against a log and simultaneously revolve and move it longitudinaly forward as the bark is being removed therefrom, means for manually forcing the spur wheels into engagement with the log, and means for automatically changing the inclination of the spur wheels to correspond to logs of different diameter, whereby the log is moved longitudinally more or less rapidly according to the area of the surface from which the bark is removed.

2. In a machine for removing bark from logs, the combination of a rotary cutter, a cutter supporting base, a stationary frame connected with said base, an inclinable frame pivotally supported from said stationary frame, rotary spur wheels carried by said inclinable frame adapted to bear against a log and simultaneously revolve and move it longitudinaly forward as the bark is being removed therefrom, means for manually forcing the spur wheels into engagement with the log, means for automatically changing the inclination of the spur wheels to correspond to logs of different diameter, whereby the log is moved longitudinally more or less rapidly according to the area of the surface from which the bark is removed, and means for manually changing the tilting mechanism of the spur wheels so as to increase or diminish the relative speed of the longitudinal movement of the log to that of its rotation as it is being revolved.

3. In a machine of the class described, the combination of a rotary cutter, a cutter supporting base, a stationary frame connected with said base, an inclinable frame pivotally supported from said stationary frame, rotary spur wheels pivotally supported from said inclinable frame, a tilting rod pivotally connected at its lower end to said frame at a point eccentric to the pivotal support of said inclinable frame and connected at its upper end with said spur wheels, whereby as said inclinable frame is moved forward a greater or less distance corresponding to the diameter of the log, said spur wheels will be automatically tilted at a greater or less angle to such logs.

4. In a machine of the described class, the combination of a rotary cutter, a cutter supporting base, a stationary frame connected with said base, an inclinable frame pivotally supported from said stationary frame, rotary spur wheels pivotally supported from said inclinable frame, a tilting rod pivotally connected at its lower end to said frame at a point eccentric to the pivotal support of said inclinable frame and connected at its upper end with said spur wheels, whereby as said inclinable frame is moved forward a greater or less distance corresponding to the diameter of the log, said spur wheels will be automatically tilted at a greater or less angle to such logs, and means for manually increasing or diminishing the length of said tilting rod.

5. In a machine of the described class, the combination of a rotary cutter, a cutter supporting base, a stationary frame connected with said base, an inclinable frame pivotally supported from said stationary frame, rotary spur wheels pivotally supported from said inclinable frame, a tilting rod pivotally connected at its lower end to said frame at a point eccentric to the pivotal support of said inclinable frame and connected at its upper end with said spur wheels, whereby as said inclinable frame is moved forward a greater or less distance corresponding to the diameter of the log, said spur wheels will be automatically tilted at a greater or less angle to such logs, means for manually increasing or diminishing the length of said tilting rod, and means for changing the pivotal adjustment of said tilting rod to said base.

[Claims 6 and 7 not printed in the Gazette.]

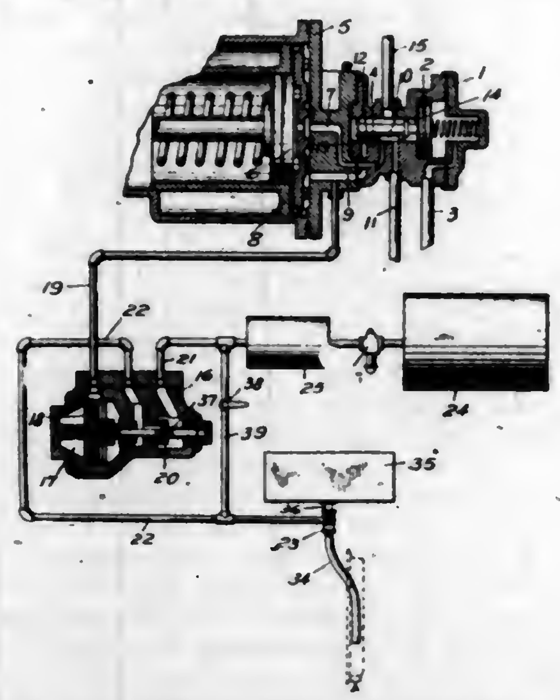
1,015,899. AUTOMATIC TRACK-SANDING DEVICE. FREMONT P. LIVINGSTON, Denver, Colo., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 6, 1910. Serial No. 575,937. (Cl. 105—263.)

1. In a fluid pressure brake, the combination with a valve device adapted upon a sudden reduction in train pipe pressure to effect an emergency application of the brakes, of a pneumatically operated track sander and a valve mechanism operated by air controlled by said valve device for supplying air to said sander.

2. In a fluid pressure brake, the combination with a train pipe and an emergency valve device operated by a sudden reduction in train pipe pressure for effecting an emergency application of the brakes, of a pneumatically operated track sander, a valve for controlling the supply of air to said sander, and a movable abutment operated by fluid pressure supplied by the movement of said emergency valve device to emergency position for actuating said valve.

3. In a fluid pressure brake, the combination with a train pipe, a valve device operating upon a reduction in train pipe pressure for effecting an application of the brake, and a main reservoir from which fluid under pressure is supplied to the brake system, of a track sander, a reservoir adapted to be charged from the main reservoir for supplying air to operate said sander, and means for preventing flow of air from the main reservoir to the sanding reservoir when the pressure in the main reservoir is reduced to a predetermined degree.

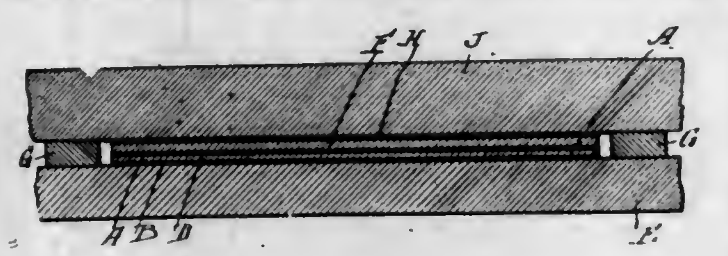
4. In a fluid pressure brake, the combination with a train pipe and an emergency valve device operating upon a reduction in train pipe pressure for effecting an application of the brakes, of a track sander, an air supply valve therefor, and a movable abutment operated by fluid under pressure supplied upon movement of said emergency valve device for actuating said supply valve.



5. In a fluid pressure brake, the combination with a train pipe and an emergency valve device operating upon a reduction in train pipe pressure for effecting an application of the brakes, of a track sander, and a valve mechanism controlled by fluid pressure from said emergency valve device for supplying air to said sander.

[Claim 6 not printed in the Gazette.]

1,015,900. METHOD OF PREPARING PLATES FOR PRINTING. GEORGE H. LUND, Chicago, Ill. Filed Oct. 17, 1910. Serial No. 587,604. (Cl. 101—178.)

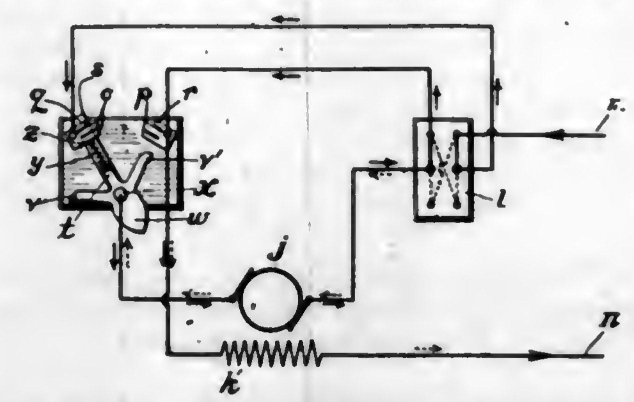


1. The method of preparing plates for printing which consists in supporting said plate face downward on a recessed surface, applying a coating of adhesive material to the back of said plate, then applying a thick coating of a plastic, rapidly hardening material upon the adhesive surface, overlaying said last-named coating with a sheet of paper, and then applying pressure upon said sheet to compress said plastic coating, and maintaining said pressure until said material has become set.

2. The method of preparing plates for printing which consists in supporting said plate face downward upon an irregular supporting surface, applying an adhesive coating to the back of said plate, disposing gages adjacent said plate, applying a coating of a plastic, rapidly hardening material of greater depth than said gages upon the adhesive coated surface, then compressing said coating to a depth equal to said gages, and maintaining said pressure until said coating has become set.

3. A method of preparing plates for printing consisting in placing the printing face of the plate against an apertured surface with those portions of said printing face opposing the apertures in said surface which are to be raised relatively to other portions of said printing face, then disposing upon and securing to the back of the plate a rapidly hardening plastic composition possessing an inelastic and incompressible characteristic when set, then subjecting the composition while plastic to pressure to distort the plate by forcing those portions of the plate which oppose the apertures of said surface into said apertures and simultaneously limiting the compression of the composition to a predetermined thickness to constitute a support for maintaining the printing face of the plate in proper printing plane, and maintaining said pressure upon the composition until the composition sets whereby the plate will be held permanently distorted by the inelastic and incompressible character of the composition when the pressure is removed.

1,015,901. ELECTRICALLY-OPERATED HOISTING APPARATUS. FRANK EDWARD LUTZ, Philadelphia, Pa. Filed July 7, 1910. Serial No. 570,726. (Cl. 172—152.)



1. In an apparatus of the character described, in combination, a trip lever pivoted between its ends and having trip cams at opposite ends, a rotating member, means adapted to be operated by the rotating member and adapted to operate the trip lever, and switch operating mechanism adapted to be engaged and operated by said trip cams.

2. In an apparatus of the character described, in combination, a trip cam having a relatively short face on one side and a relatively long inclined face on the other side, a rotating member, means operated by the rotating member adapted to operate the trip cam in opposite directions, and switch operating mechanism having a double faced cam adapted to be engaged and operated by the long and short faces respectively of the trip cam in opposite directions of movement of the latter.

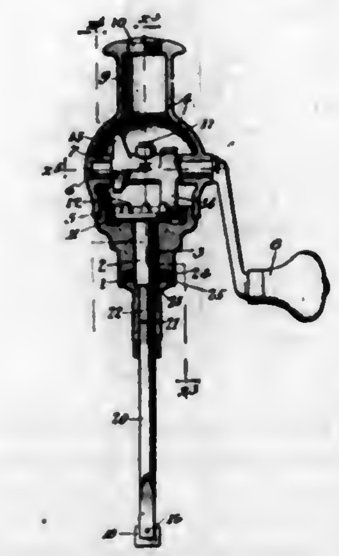
3. In an apparatus of the character described, in combination, a trip lever pivoted between its ends and having trip cams at opposite ends, each trip cam having a long face and a short face, the two long faces being on one side of the lever and the two short faces on the other side of the lever, a rotating member, means adapted to be operated by the rotating member and adapted to operate the trip lever, and switch-operating mechanism adapted to be engaged and operated by said trip cams.

4. In an apparatus of the character described, in combination, a trip lever pivoted between its ends and having trip cams at opposite ends, a rotating member, means adapted to be operated by the rotating member and adapted to operate the trip lever, a bracket adapted to be engaged and operated by said cams, and a switch blade connected with, and adapted to be operated by said bracket.

5. In an apparatus of the character described, in combination, a rotating drum, a shaft rotating with said drum and having a worm, a nut working on said worm, a motor for operating said drum, switch operating mechanism, having two operative positions, for controlling the circuit to the motor, means turnable with the worm and connected with the nut so as to be movable therewith, two trip cams, adapted to be operated by said means, said switch operating mechanism being in line of travel of said trip cams and adapted to be engaged by both trip cams at different points in the rotation of said drum and adapted to be operated by one or the other of said cams dependent upon the direction in which said shaft is rotated.

[Claims 6 to 21 not printed in the Gazette.]

1,015,902. VALVE-GRINDER. NOAH E. MEREDITH, Los Angeles, Cal. Filed Nov. 18, 1911. Serial No. 661,148. (Cl. 51—4.)



1. A valve grinder comprising a frame, a spindle, rotatably mounted in said frame, a driving shaft journaled in the frame at right angles to the axis of the spindle, a wheel on the spindle provided with crown teeth and sets of teeth mounted on the driving shaft to engage the teeth of the crown wheel at opposite sides of the axis of the spindle, the teeth of the respective sets being arranged in different angular positions on the shaft to engage the crown wheel at different times so as to produce alternate forward and backward partial rotation of the crown wheel and spindle, and the teeth of one set being longer than the teeth of the other set and extending farther between the teeth of the crown wheel, to effect a greater angular rotation of the crown wheel by engagement of the longer teeth than is effected by the engagement of the shorter teeth.

2. A valve grinder comprising a frame, a spindle, rotatably mounted in said frame, a driving shaft journaled in the frame at right angles to the axis of the spindle, a wheel on the spindle provided with crown teeth, a sleeve secured to the driving shaft and sets of teeth on said sleeve to engage the teeth of the crown wheel at opposite sides of the axis of the spindle, the teeth of the respective sets being arranged in different angular positions on the shaft to engage the crown wheel at different times so as to produce alternate forward and backward partial rotation of the crown wheel and spindle, and the teeth of one set being longer than the teeth of the other set and extending farther between the teeth of the crown wheel, to effect a greater angular rotation of the crown wheel by engagement of the longer teeth than is effected by the engagement of the shorter teeth.

1,015,903. TOOL-HOLDER. EDWARD LEWIS MILLS, Fitchburg, Mass., and JOHN WALTER WHITFORD, Jersey City, N. J., assignors to Fitchburg Machine Works, Fitchburg, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1911. Serial No. 624,201. (Cl. 29—99.)

1. A tool carrier for metal-working machines, comprising a block having a socket for the tool, said socket having an inclined face, a wedge member arranged to slide on said inclined face and engage the tool to hold it against its seat, said block and wedge member having internal screw threads of different pitch, and an adjusting screw having external screw threads operatively engaging said threads of the block and said wedge member for tightening and releasing said wedge member.

2. A tool carrier for metal-working machines, comprising a block having a socket extending through from front to rear, a tool fitted into one end of said socket, an adjusting screw threaded into the other end of the socket, said tool and screw abutting against each other in end to end relation, and having integral complemental portions adapted to be interengaged to transmit forward and backward movement to the tool, and to permit rotation of the screw.

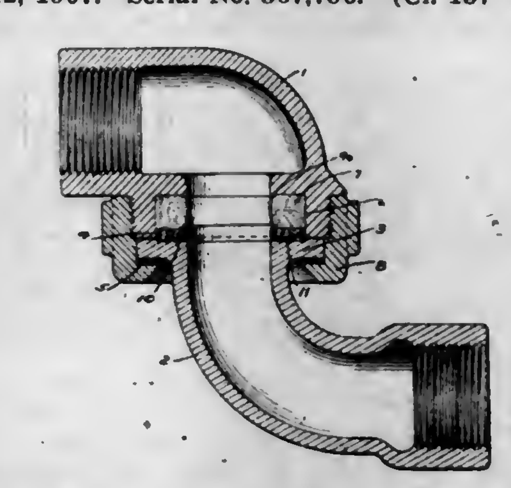
3. A tool carrier for metal-working machines, comprising a block having a socket extending through from front to rear, a tool fitted into one end of said socket, an adjusting screw threaded into the other end of the socket, the inner end of said tool having opposed transverse faces, and the inner end of said screw having means adapted to be interengaged with said faces to position said tool longitudinally, said faces and said means being adapted to permit rotation of said screw.

4. A tool carrier for metal-working machines, comprising a block having a socket extending through from front to rear, a tool fitted in one end of said socket, an adjusting screw threaded in the other end of said socket, means connecting said tool and screw whereby said tool may be advanced and retracted, a collar arranged to turn and slide on the outer end of said screw, said collar having a mark upon its exterior, an index on said block adapted to coöperate with said mark, and means for securing said collar upon the screw.

5. In a metal-working machine, a feed carriage, a tool block mounted on the carriage, one of said members having a groove and the other having a guide considerably less in width than said groove, means carried by one of said members for acting against one side of said guide to draw the tool block laterally against the opposite side of the guide, and a filling piece adapted to be interposed between said means and one side of said guide, or between the opposite side of the guide and the confronting face of the tool block, whereby the block may be secured in different positions with relation to said carriage.

[Claim 6 not printed in the Gazette.]

1,015,904. SWIVEL PIPE-JOINT. NICHOLAS F. NIEDERLANDER and ROBERT E. ADREON, St. Louis, Mo., assignors to Westinghouse Automatic Air & Steam Coupler Company, St. Louis, Mo., a Corporation of Illinois. Filed Apr. 12, 1907. Serial No. 367,756. (Cl. 137—34.)



1. A flexible pipe joint, comprising two coupling members, one having a chamber containing a soft rubber packing ring, and the other having an annular flange, a gland for clamping the parts in position, a bearing washer intermediate the packing ring and flange, and a bearing washer intermediate the flange and gland, said bearing washers being provided with a lubricating material.

2. A flexible pipe joint, comprising two coupling members, one having a chamber containing a soft rubber packing ring, and the other having an annular flange, a bearing washer intermediate the flange and said packing ring, the

bearing washer and said chambered member having annular retaining lips for retaining said packing ring in posi-

face, a collar fitting around the sleeves to lock them together, and inwardly projecting lugs formed on the col-

positions to release the same from engagement with the head member, and a spring member within said casing

port subsequently to the opening of the main exhaust port and for closing the supplementary exhaust port.

bearing washer and said chambered member having annular retaining lips for retaining said packing ring in position, and a gland for clamping the parts in position and compressing said packing ring.

1,015,905. URINAL. HENRY B. NORTHROP, Beverly, Mass. Filed Mar. 27, 1911. Serial No. 617,288. (Cl. 128—51.)

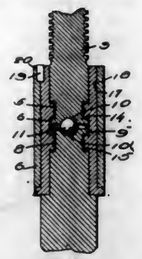
1. A urinal for use of males consisting of an adjustable body-band, a collar or ring and adjustable pelvis-straps held on said body-band, in combination with an inner and an outer water-proof sack, each open at its opposite ends and both at one of their open ends detachably attached to said band-collar and the two spaced from each other, and with a bag or receiver detachably connected to the outer open end of said outer sack.

2. A urinal for use of males consisting of an adjustable body-band, a collar or ring and adjustable pelvis-straps held on said body-band, in combination with an inner and an outer water-proof sack each open at its opposite ends and both at one of their open ends adapted for a detachable and resilient slip-joint with said band-collar and the two spaced from each other, and with a bag or receiver detachably connected to the outer open end of said outer sack.

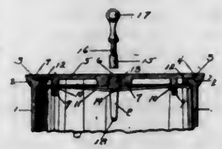
3. A urinal for use of males consisting of an adjustable body-band, a collar or ring and adjustable pelvis-straps held on said body-band, in combination with an inner and an outer water-proof sack each open at its opposite ends and both at one of their open ends detachably secured to said band-collar, and the two spaced from each other, and the inner made of thin sheet elastic and resilient india rubber capable of distortion and crumpling, and with a bag or receiver detachably connected to the outer open end of said outer sack.

1,015,906. SHAFT-COUPLING. JOHN A. A. PAYEN, Scio, Oreg. Filed Feb. 15, 1911. Serial No. 608,771. (Cl. 77—32.)

In a shaft coupling the combination with a rod having a groove formed peripherally therein, of a second rod having a reduced portion providing a shoulder, said latter rod likewise having a groove formed therein, anti-friction means between said rods, a pair of half sleeves each having a flange to rest upon the shoulder of the one rod and having a pair of inwardly projecting ribs formed thereon, said ribs being adapted to fit in the grooves of the two rods and being of slightly less width than said groove, said half sleeves having L-shaped slots formed in their outer face, a collar fitting around the sleeves to lock them together, and inwardly projecting lugs formed on the collar and engaged in the slots, and means for locking the collar and sleeves against relative rotation.



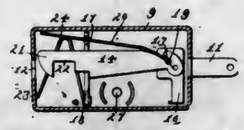
1,015,907. METER-BOX COVER. JAMES PATRICK RYDER, Clarksville, Tenn. Filed June 2, 1911. Serial No. 630,755. (Cl. 137—13.)



1. The combination with a meter box having an inwardly extending flange at its upper edge, of a cover for the box resting on said flange, said cover having a pair of depending guide lugs formed thereon, the lugs being formed with alined slots, a spring member engaged in the slots of the lugs and normally engaging the under face of the flange of the meter box to lock the cover in position, said cover having a central elongated slot formed therein and a guard member of U-shape depending below the slot, and a plug secured centrally on the spring and normally closing the slot in the cover, the guard member serving to limit the downward forcing of the central portion of the spring.

2. A meter box cover, comprising a cover plate formed with depending guides near the edges, a spring extending transversely of the under side of the plate and having its ends engaged in the guides, a central depending guide for limiting the downward movement of the central portion of the spring, the cover plate having a slot formed therein, and a plug secured on the spring and normally closing the slot.

1,015,908. LOCK FOR MAIL-BAGS AND THE LIKE. JAMES SACKETT, Venango, Pa. Filed Apr. 10, 1911. Serial No. 620,072. (Cl. 70—2.)



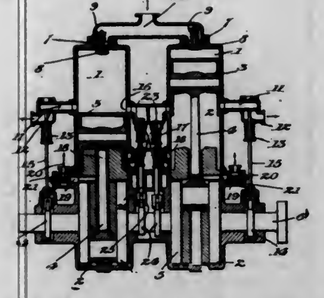
1. In a lock of the class described, the combination with a casing having an opening in one end thereof, latch members pivotally mounted in said casing opposite the end having the opening therein, a spring means normally forcing the free ends of said latches in position beneath the opening in said casing, and a spacing plate for the latches adapted to limit the movement thereof; of a head member adapted to be inserted in said opening and engaged by the latches, a key for forcing said latches out of their effective

positions to release the same from engagement with the head member, and a spring member within said casing disposed immediately below the opening therein, said spring member having one end thereof engaged with said spacing plate and the other bent into engagement with the end of said casing.

2. In a lock of the class described, the combination with a casing having an opening in the end thereof, a pair of latch members pivoted to the rear wall of said casing, a spacing plate on said rear wall having a groove therein through which said latches move, and spring means cooperating with said plate and the latches for forcing the latter normally below the opening in said casing; of a head member adapted for introduction through said opening and for engagement with said latches, a key to force the latches from their normal position and release the same from their engagement with the head member, and a spring positioned in said casing beneath the opening in the top thereof to force said head member from the casing when the latches have been disengaged therefrom.

3. In a lock of the class described, the combination with a casing having an opening in the end thereof, a pair of latch members pivotally mounted on the rear wall of said casing, means to retain the pivoted end of said latches spaced from said rear wall, an additional spacing plate also mounted on said rear wall having a groove therein through which said latches extend, and a leaf spring engaging the lower ends of said latches and resting against one wall of the groove in said plate, said spring forcing said latches normally to the opposite wall in said groove and beneath the opening in said casing; of a head member adapted to be introduced through the opening in said casing to be engaged by said latches, a key for releasing the latches from their engagement with the head member, and a spring having one end thereof in engagement with said spacing plate and the opposite end bent into engagement with the end of said casing, said spring extending immediately below the opening in said casing to force said head member therefrom when released from said levers.

1,015,909. TWO-CYCLE EXPLOSION-MOTOR. HERMANN SCHEIT, Dresden-Strehlen, Germany. Filed July 10, 1907. Serial No. 383,055. (Cl. 123—40.)

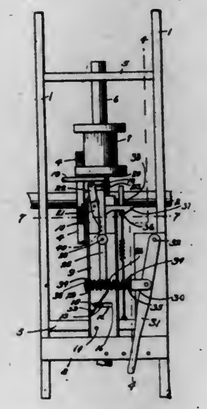


1. In a two-cycle engine, a plurality of units, each having a cylinder and a crank case, an admission port, a main exhaust port and a supplementary exhaust port in each cylinder, a passage connecting the supplementary exhaust port of each cylinder with the crank case of another unit, means for controlling the admission port, means for opening and closing the main exhaust port, and means for opening and closing the supplementary exhaust port subsequently to the closing of the main exhaust port.

2. In a two-cycle engine, a plurality of units, each including a cylinder and a crank case, an admission port and a main exhaust port in each cylinder, a supplementary exhaust port and passage connecting each cylinder to the crank case of another unit, means for controlling the admission port, means for opening and closing the main exhaust port, means for opening the supplementary exhaust port subsequently to the opening of the main exhaust port and for closing the supplementary exhaust port.

3. In a two cycle engine, a plurality of units, each having a cylinder and a crank case, an admission port, a main exhaust port in each cylinder, a passage connecting the supplementary exhaust port of each cylinder with the crank case of another unit, a non-return valve for controlling the admission port, means for opening and closing the air exhaust port, and means for opening and closing the supplementary exhaust port subsequently to the closing of the main exhaust port.

1,015,910. STAMP-MILL. EDMUND SHEFFIELD, Jr., Greenview, Cal. Filed June 28, 1911. Serial No. 634,943. (Cl. 83—57.)



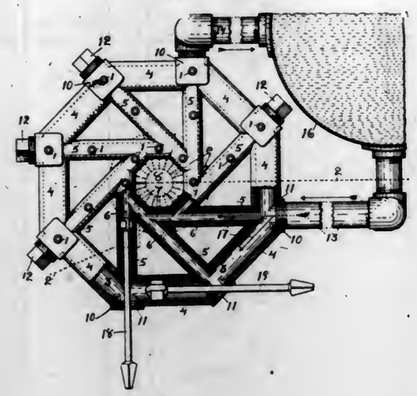
1. In a stamp mill, the combination with a supporting frame, of a reciprocating shaft mounted in the frame, a tappet on the shaft, a rotatable shaft bearing a cam for engaging the tappet, a casing secured in the frame adjacent the reciprocating shaft, a bar slidably mounted in the casing, a curved finger rotatably secured to the upper end of the bar, said bar having a depending portion, means for swinging the finger to interpose the same between the cam and tappet, a bar pivotally connected to the casing and adapted to engage the depending portion to hold the tappet in raised position when the finger is raised by the cam.

2. In a mill, the combination with a frame supporting the stamp shaft which is provided with a tappet, said bar having a depending portion, of a rotating cam member mounted in the frame for engaging the tappet, a casing secured in the frame parallel to the stamp shaft and disposed below the tappet, a bar slidably mounted in the casing, a curved finger rotatably mounted on the bar, a lever for rotating the finger to dispose the same between the cam and tappet, a series of levers for shifting the finger operating lever, a blade spring depending from one of the levers, a locking member mounted in the casing and having a projecting loop engaged by the blade spring, whereby when the bar is raised by the engagement of the cam with the finger carried by the bar the shifting of the levers causes the blade springs to move the locking member under the depending portion of the bar to lock the bar in said raised position and the reverse shifting of the levers through the blade spring causes the locking device to disengage said depending portion.

1,015,911. CLEANABLE WATER-HEATER GRID. MADISON ASA SPEAR, Napa, Cal. Filed Nov. 12, 1910. Serial No. 592,088. (Cl. 126—53.)

1. A water-heater grid, comprising a centrally disposed continuous duct of polygonal plan, radial ducts in

alinement with the sides of said polygonal duct, communicably connected therewith and having threaded openings at their outer ends, a cold-water supply pipe connected in the threaded opening at the outer end of one of said radial ducts, a hot-water discharge pipe connected in the threaded openings at the outer end of another one of said radial ducts, and a closing plug seated in the threaded opening at the outer end of each radial duct not connected with a water pipe.



2. A water-heater grid to support cooking utensils over gas or gasolene burners, comprising an inner field of hollow grate bars arranged to form a central continuous duct of polygonal plan having its sides extended at one end to form outwardly-disposed obliquely radial ducts in alinement with said sides, an outer continuous duct of polygonal plan similar to said central continuous duct and communicably connected at its angle with the outer ends of said radial ducts and having in its exterior walls threaded openings in alinement with its polygonal sides and in alinement with said radial ducts and adapted to receive threaded plugs and the threaded ends of water supply pipes.

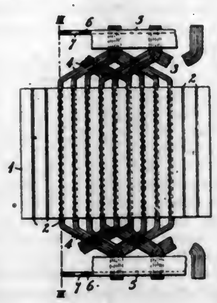
3. A water-heater grid for gas or gasolene stoves, comprising an inner continuous polygonal duct, an outer continuous polygonal duct having on its outer edge at its vertexes threaded openings adapted to receive removable plugs and water-pipe connections, and obliquely-radial ducts having their inner ends communicably connected with said inner polygonal duct at its vertexes and in alinement with its sides and having their outer ends communicably connected with said outer polygonal duct at the inner angles opposite to the threaded openings at the vertexes.

1,015,912. INDUCTION-MOTOR WINDING. CHARLES WILLIAM STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 6, 1911. Serial No. 631,616. (Cl. 172—120.)

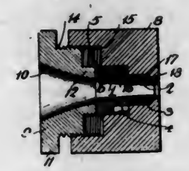
1. A winding for dynamo-electric machines comprising a plurality of diamond shaped coils having their end portions grouped, and end rings having spaced holes through which the coil end groups project.

2. A winding for dynamo-electric machines comprising a plurality of single-turn, short-circuited, diamond shaped coils, having their end portions grouped, and end rings having spaced holes through which the coil end groups project.

3. A winding for dynamo-electric machines comprising a plurality of single-turn short circuited, diamond shaped coils, having their end portions grouped, and end rings which are of L-shape in transverse section and are provided with a plurality of spaced holes, through which the ends of the coils project.



1,015,913. APPARATUS FOR DRAWING WIRE. JOHN STRATTON, Altrincham, and ERNEST ALEXANDER CLAREMONT, Old Trafford, Manchester, England. Filed Jan. 4, 1910. Serial No. 536,430. (Cl. 205—29.)



1. In wire drawing apparatus, a die holder comprising a cap provided with a compressing funnel and a coöperating plug having screw connections with said cap, a die supported by said die holder and having a cylindrical reduced die body adjacent its discharge end, having a slightly tapering aperture provided with a constricted throat adjacent its discharge end and having a tapered die point coöperating with said compressing funnel and having a less angle than said funnel to bring the outer portion of said tapered die point first into engagement with said funnel when said die is forced forward and its throat contracted by the relative compressing movement between said cap and plug, coöperating guiding members formed on said cap and die to maintain them in alinement, said guiding members comprising a guide flange adjacent the rear end of said die and a coöperating guide-hole in said cap and a guiding passage in said cap coöperating with said reduced die body.

2. In wire drawing apparatus, a die holder comprising a cap provided with a compressing funnel and a coöperating plug, a die supported by said die holder and having a substantially uniform reduced section die body adjacent its discharge end, having an aperture provided with a constricted throat adjacent the discharge end of the die and having a tapered die point of less angle than said funnel and coöperating therewith at its outer end and coöperating guiding members formed on said cap and die to maintain them in alinement.

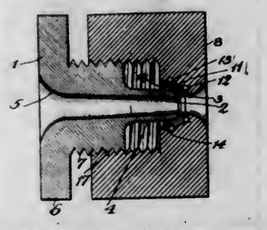
3. In wire drawing apparatus, a die holder comprising a cap provided with a compressing funnel and a coöperating plug, a die supported by said die holder and having a substantially uniform reduced section die body adjacent its discharge end and having a tapered die point at its discharge end for coöperation with said compressing funnel to contract the die throat by the relative compressing movement between said cap and plug and guiding members formed on said cap and die to maintain them in alinement.

4. In wire drawing apparatus, a die holder comprising a plurality of coöperating members, having means to cause a compressing movement between them, one of said members being formed with a compressing funnel, a die supported by said die holder and having a substantially uniform reduced section die body adjacent its discharge end and having a tapered die point coöperating with said compressing funnel during the compressing movement of said die holder and guiding means to maintain said die in alinement with said compressing funnel.

5. In wire drawing apparatus, a die holder comprising a plurality of coöperating members, having means to cause a compressing movement between them, one of said members being provided with a compressing funnel, a die supported by said die holder and having a substantially uniform reduced section end coöperating with said compressing funnel to contract the throat in said die end on the compressing movement of said die holder and guiding means to maintain said die and funnel in alinement.

[Claims 6 to 19 not printed in the Gazette.]

1,015,914. WIRE-DRAWING APPARATUS. JOHN STRATTON, Altrincham, and ERNEST ALEXANDER CLAREMONT, Old Trafford, Manchester, England. Filed Jan. 4, 1910. Serial No. 536,431. (Cl. 205—29.)



1. In wire drawing apparatus, a compound die comprising a plug formed with an integral reduced section die of substantially uniform effective area adjacent its discharge end, a cap provided with a funnel member formed with a compressing funnel and having a screw connection with the rear portion of said plug to hold said die in alinement with said compressing funnel and anti-friction members on which said funnel member is mounted to allow relative rotation between said funnel member and said cap as said die is forced into said compressing funnel during the compressing movement of said die members.

2. In wire drawing apparatus, a compound die comprising a plug formed with an integral reduced section die adjacent its discharge end, a cap provided with a funnel member formed with a compressing funnel and having a screw connection with said plug adjacent its rear end to maintain said die in alinement with said compressing funnel, said funnel being rotatably mounted in said cap to allow the relative rotation between them as said die is forced into said compressing funnel during the compressing movement of the die members.

3. In wire drawing apparatus, a compound die comprising a plug formed with a reduced section die adjacent its discharge end, a cap provided with a relatively movable funnel member formed with a compressing funnel to minimize relative rotation between said die and funnel during the compressing operation, said cap having a screw connection with said plug adjacent its rear end to hold said die in alinement with said compressing funnel.

4. In wire drawing apparatus, a compound die comprising a plug formed with a die having a reduced yieldable section adjacent the die throat and a relatively rotatable cap, said cap and plug being provided with engaging means whereby on their relative rotation they will be given a relative axial adjustment, said cap being provided with a funnel member rotatably mounted with respect thereto to minimize relative rotation between said die and funnel during the compressing operation and formed with a compressing funnel coöperating with said reduced die section to locally compress the same.

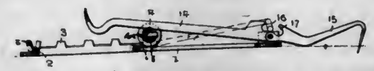
5. In wire drawing apparatus, a compound die comprising a pair of coöperating relatively rotating die members, said die members being provided with engaging means whereby on their relative rotation they will be given relative axial adjustment, one of said die members being provided with a compressing funnel, the coöperating die member being formed with an integral substantially uniform reduced section die adjacent its discharge end and coöperating with said funnel to be locally compressed thereby and means to minimize relative rotation between said die and funnel during the compressing operation.

[Claims 6 to 14 not printed in the Gazette.]

1,015,915. RIFLE-BORE CLEANER. DAVID STRICKLER, Shelby, Ohio, assignor of one-fourth to George Styres, Tiro, Ohio. Filed Feb. 21, 1911. Serial No. 609,866. (Cl. 42—91.)

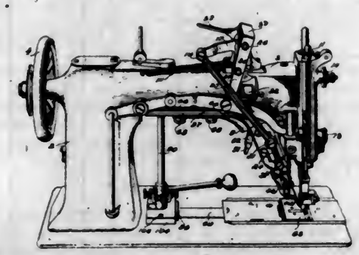
A gun bore cleaner comprising interlocking extension rods, in combination with a cleaning head proper, consisting of a conical, hollow body portion having integral flexible extensions or prongs, the upper end of said conical body being substantially of the same diameter as the bore of the gun, the said conical section being integrally formed with the body portion 3, the latter having a diametrical bore, and a pin provided with a head resting in the hollowed portion of said conical body and connected with the end of the extension rod.

1,015,916. TRAP. GEORGE A. TEEL, Anacortes, Wash. Filed Mar. 4, 1911. Serial No. 612,195. (Cl. 43—21.)



In a trap, the combination with a frame, a cross bar extending transversely of said frame and having end extensions secured within said frame, said cross bar having a cut away portion, a plate adapted to be secured in said cut away portion, a looped spring member mounted on said cross bar and having its ends secured between said cross bar and plate, the inner edge of the end of said frame being upturned, and teeth formed in said upturned edge; of a trigger pivotally mounted at the opposite end of said frame and extending substantially the length thereof, a safety catch pivoted to said frame adjacent to said trigger and extending beyond said frame, said safety catch having its end bent downwardly and pointed, said trigger and safety catch having oppositely arranged notches formed therein, said trigger being adapted to be raised to engage the looped spring member.

1,015,917. SEWING AND TRIMMING MACHINE. CARLYLE W. THOMAS, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 31, 1910. Serial No. 564,096. (Cl. 112—6.)



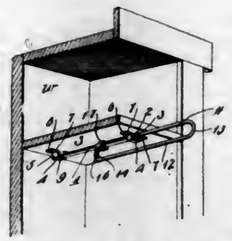
1. In a sewing and under edge trimming machine, a stitch-forming and cloth-feeding mechanism, a trimmer mechanism including a reciprocating trimmer-carrying bar provided with a trimmer-blade, a trimmer-carrying bar frame movably mounted on the sewing machine bracket-arm and in which said trimmer-carrying bar is mounted to move in a direction oblique to the line of needle actuation, a ledger-blade plate movably mounted on the sewing machine bed-plate and provided with a ledger-blade, and connections between said trimmer-carrying bar and ledger-blade plate for simultaneously adjusting said trimmer-carrying bar and ledger-blade plate in directions transverse to the line of seam formation.

2. In a sewing and under edge trimming machine, a stitch-forming and cloth-feeding mechanism, a trimmer mechanism including a reciprocating trimmer-carrying bar provided with a trimmer-blade, a trimmer-carrying bar frame movably mounted on the sewing machine bracket-arm and in which said trimmer-carrying bar is mounted to move in a direction oblique to the line of needle actuation, a ledger-blade plate movably mounted on the sewing machine bed-plate and provided with a ledger-blade, and connections between said trimmer-carrying bar and ledger-blade plate for simultaneously adjusting said trimmer-carrying bar and ledger-blade plate in directions transverse to the line of seam formation, said connections including a hand-lever controlled to predetermine the relationship of the trimming line with respect to the line of seam formation.

3. In a sewing and under edge trimming machine, a stitch-forming and cloth-feeding mechanism, a trimmer mechanism including a reciprocating trimmer-carrying bar provided with a trimmer-blade, a trimmer-carrying bar frame in which said trimmer-carrying bar is mounted to move in a direction oblique to the line of needle actuation, a slide-plate secured to the sewing machine bracket-arm and to which said trimmer-carrying bar frame is secured, a ledger-blade plate provided with a ledger-blade, a slide-plate to which said ledger-blade plate is secured, and a cam-shaft provided with cam members for giving to said slide-plates synchronous movements in directions transverse to the line of seam formation.

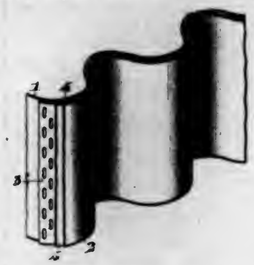
1,015,918. GARMENT-HANGER. JOSEPH WALTERS, Richmond, Va. Filed Aug. 28, 1911. Serial No. 646,400. (Cl. 211—15.)

In a garment hanger, the combination with the supporting member consisting of a flat metallic strip having at its front end an upturned foot with a notch through its extremity, and open brackets securing this strip beneath an overhead support; of a hanger member consisting of a metallic rod bent into a loop whose upper arm slides upon said strip and through said brackets and notch, is notched in its upper side near it rear end, and is undercut at its rear, and whose lower arm is integrally connected by a bend with the front end of the upper arm and its rear end upturned and flattened below said notch; and a runner embracing said flattened end and loosely surrounding said strip and having above the latter a reduced



extension embracing said upper arm and engaging the notch therein.

1,015,919. BITUMINOUS STRUCTURAL MATERIAL. HENRY R. WARDELL, New York, N. Y. Filed Feb. 11, 1911. Serial No. 607,956. (Cl. 154—51.)



A corrugated composite bituminous structural material consisting of an internal layer of hard bituminous cement reinforced by a thin perforated metallic sheet embedded therein having combined with it one or more external protective bituminous sheets.

1,015,920. ANTIFRICTION-BEARING COMPOUND. FREDERICK C. WINKLER, Victoria, British Columbia, Canada. Filed Apr. 6, 1911. Serial No. 619,397. (Cl. 64—19.)

1. As an anti-friction material, powdered or flake graphite bonded with magnesium carbonate cement.

2. As an anti-friction compound, the combination of graphite and magnesium carbonate reduced to a paste with chlorid of magnesia.

3. As an anti-friction composition composed of powdered or flake graphite 50 parts, associated with magnesium carbonate 50 parts and chlorid of magnesia.

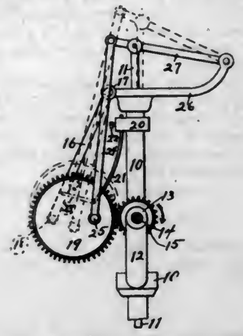
4. An anti-friction composition, consisting of powdered or flake graphite with a fibrous bond and magnesium carbonate cement.

5. An anti-friction composition, consisting of powdered or flake graphite and fibrous asbestos cemented with magnesium carbonate combined with chlorid of magnesia.

[Claim 6 not printed in the Gazette.]

1,015,921. AIR-MOTOR GEAR. CARL J. ZIEBEL, Montezuma, Iowa. Filed Feb. 24, 1911. Serial No. 611,299. (Cl. 74—5.)

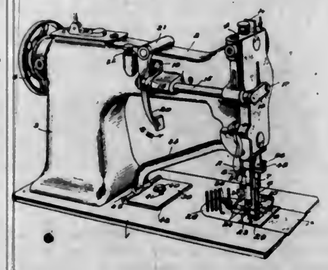
1. In a driving gear, a suitable support, a driven shaft journaled for rotation in said support, a gear concentrically mounted on said shaft, a member mounted for reciprocation, a lever fulcrumed at one end on said support and pivoted intermediate of its ends to said reciprocating member, an arm pivoted at one end to said support, a shaft journaled for rotation in the opposite end of said arm, a gear eccentrically mounted on said latter shaft and meshing with the first gear, yielding pressure devices connecting said support and said arm, and a pitman pivoted at one end to said second gear and at the opposite end to the free end of said lever.



2. In a driving gear, a suitable support, a driven shaft journaled for rotation in said support, a gear intimately associated with said shaft, a member mounted for reciprocation, a lever fulcrumed at one end on said support and pivoted intermediate of its ends to said reciprocating member, an arm pivoted at one end to and depending from said support, a shaft journaled for rotation in the free end portion of said arm, a gear eccentrically mounted on said latter shaft and meshing with the first gear, yielding pressure devices normally acting to hold said gears in mesh, and driving connections between said second gear and said lever.

3. In a driving gear, a tubular support, a driven shaft journaled for rotation in said support, a gear concentrically mounted on said shaft, a member mounted for reciprocation through said tubular support, a lever fulcrumed at one end on said support and pivoted intermediate of its ends to said reciprocating member, an arm pivoted at one end to said support, a shaft journaled for rotation in the free end of said arm, a gear eccentrically mounted on said latter shaft and meshing with the first gear, yielding pressure devices between and connecting said support and the free end of said arm, and a pitman pivoted at one end to said second gear and at the opposite end to the free end of said lever.

1,015,922. SEAM-TRIMMER AND EDGE-BINDER FOR SEWING-MACHINES. WILLIAM R. ABERCROMBIE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 6, 1910. Serial No. 553,766. (Cl. 112—6.)



1. In a trimming and binding mechanism for sewing machines, a binder head having its delivery end formed at an oblique angle to the direction of its length, a trimmer blade, a ledger blade, and means for actuating said trimmer blade including an adjustably-mounted trimmer blade carrier having a fixed line of adjustment in a direction corresponding substantially with the angle given to the delivery end of said binder head.

2. In a trimming and binding mechanism for sewing machines, a binder head provided with a concaved and a convexed braid-guiding surface and having its delivery end formed at an oblique angle of approximately 45 degrees to said guiding surfaces, a trimmer blade, a ledger blade and means for actuating said trimmer blade including an adjustably-mounted trimmer blade carrier having a fixed line of adjustment in a direction corresponding substantially with the angle given to the delivery end of said binder head.

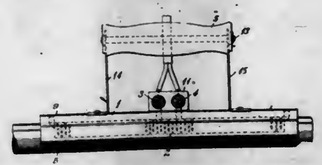
3. In a trimming and binding mechanism for sewing machines, a binder head having its delivery end formed at an oblique angle to the direction of its length, a trimmer blade, a ledger blade and an adjustably-mounted trimmer blade carrier having a fixed line of adjustment in a direction corresponding substantially with the angle given to the delivery end of said binder head, in combination with means for actuating said carrier including constantly-related coacting connections having movements in substantially the same vertical plane as the trimmer blade when the latter is actuated to sever the material.

4. In a trimming and binding mechanism for sewing machines, a binder head having its delivery end formed at an angle to the direction of its length, a trimmer blade, a ledger blade, and means for actuating said trimmer blade including an adjustably-mounted trimmer blade carrier hinged to the bed-plate of the sewing machine and having a fixed line of adjustment in a direction corresponding substantially with the angle given to the delivery end of said binder head.

5. In a trimming and binding mechanism for sewing machines, a binder head having its delivery end formed at an angle to the direction of its length, a trimmer blade, a ledger blade and means for actuating said trimmer blade including an adjustably-mounted trimmer blade carrier hinged to the bed-plate of the sewing machine and having oscillating movements in a vertical plane at substantially right angles to the trimming line and having a fixed line of adjustment in a direction corresponding substantially with the angle given to the delivery end of said binder head.

[Claims 6 to 8 not printed in the Gazette.]

1,015,923. ELECTRIC HEATER FOR PIPE-THAWING. THEODORE ARTMEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1910. Serial No. 566,107. (Cl. 219—22.)



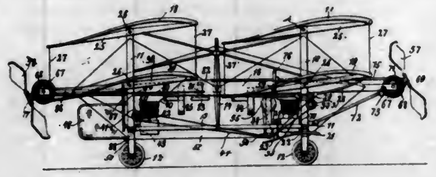
1. A pipe thawing heater comprising two approximately semi-cylindrical concentric metal shells, an insulated resistance element disposed between said shells and having laterally projecting terminals approximately midway of the ends of the shells and a handle secured to the outer shell.

2. A pipe thawing device comprising two approximately semi-cylindrical concentric sheet metal shells, an interposed resistance element having laterally projecting terminals, brackets secured to the outer shell and a handle secured to the outer ends of the brackets substantially parallel to said shells.

3. A pipe thawing device comprising two approximately semi-cylindrical concentric sheet metal shells having their edges welded together and the outer shell having an opening and a projection adjacent thereto, an insulated resistance element disposed between said shells and having

terminals that project through the opening in the outer shell and are secured to and insulated from the projection, brackets secured to the outer shell and a handle secured to said brackets substantially parallel to said shells.

1,015,924. AEROPLANE. JEAN M. ALLEAS, Boston, Mass. Filed May 3, 1911. Serial No. 624,748. (Cl. 244—14.)



In an aeroplane, a supporting frame, pivoted front and rear sustaining planes at the top of said frame, pivoted bottom planes extending from opposite sides of the frame at the front and rear thereof and located beneath the top planes, said top and bottom planes and their pivotal axes being transverse of the direction of flight, a connection between the top and bottom front planes and between the top and bottom rear planes, means for independently tilting the front and rear planes, pivoted stabilizing planes extending from opposite sides of the frame beneath the front bottom planes, said stabilizing planes and their pivotal axes being transverse of the direction of flight, and means for independently tilting the stabilizing planes.

1,015,925. SOLENOID. CARL J. ANDERSON, Chicago, Ill., assignor to J. L. Schureman Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1909. Serial No. 483,839. (Cl. 175—21.)

1. In a solenoid, in combination, a magnetic frame and winding mounted therein, a relatively stationary core and a reciprocating core within said winding, said frame and said cores forming a magnetic circuit, certain of said parts forming the magnetic circuit being constructed to increase the magnet reluctance.

2. In a solenoid, in combination, a magnetic frame and winding mounted therein, a relatively stationary core and a reciprocating core within said winding, said frame and said cores forming a magnetic circuit and one of said parts included in the magnetic circuit, having portions thereof out of complete magnetic contact with one another, to increase the reluctance thereof.

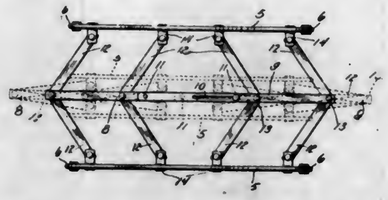
3. In a solenoid, in combination, a winding, a reciprocating core mounted therein, a plug within said winding arranged to be engaged by said core, said plug having portions out of complete magnetic contact with one another to insert a reluctance in the magnetic circuit therethrough.

4. In an alternating current solenoid, the combination with the sliding core, of a yielding plug in the path of movement of said core, said plug being in sections formed of magnetic material, one of which is a core-engaging section, and the sections being out of complete magnetic contact with each other.

5. In an alternating current solenoid, the combination with the sliding core, of a normally yieldingly supported plug in the path of movement of said core, said plug being in sections formed of magnetic material, one of which is a core-engaging section, and the sections being out of complete magnetic contact with each other.

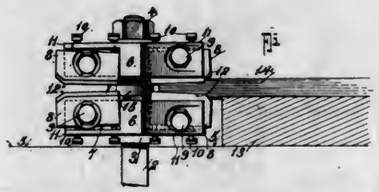
[Claims 6 to 31 not printed in the Gazette.]

1,015,926. DISPLAY-RACK. WALKER G. ANDERSON, Seattle, Wash. Filed Jan. 23, 1911. Serial No. 604,114. (Cl. 211—24.)



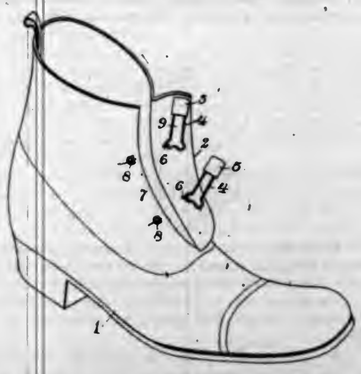
A display rack comprising a pair of vertically disposed parallel frames each formed from a single bar of material and including a longitudinally-extending bottom member having depending ends, upright end members having angular lower ends terminating in the depending ends of said bottom member and forming in connection with said depending ends supporting feet, each of said frames further including a top member merging into the end members and formed with a central depending portion, a plurality of inwardly-extending lugs carried by each of said bottom members, an extensible bar interposed between and parallel with said bottom members, a set of links having their outer ends pivotally connected to the lugs of one bottom member and their inner ends pivotally connected to said bar, and a set of links pivotally connected at their outer ends to the lugs of the other bottom member and at their inner ends to said bars, certain of said links operating in an opposite direction with respect to the other of the links of each set.

1,015,927. CUTTER-HEAD. MARK ARBUTHNOT, Vancouver, British Columbia, Canada. Filed Mar. 25, 1911. Serial No. 616,970. (Cl. 144—198.)



In a cutter head, an arbor, a shoulder on said arbor, two cutter heads fitted on said arbor, one of said cutter heads resting against said shoulder, a nut against which the other cutter head rests for holding said cutter heads on said arbor, and an adjustable distance piece mounted on said arbor between said cutter heads and including two members threaded together, each of said members having a flat end face to abut the respective cutter heads and hold them in position on the arbor.

1,015,928. FASTENING DEVICE FOR SHOES AND THE LIKE. JAMES F. ATWOOD, Claremont, N. H. Filed Apr. 2, 1910. Serial No. 553,154. (Cl. 24—68.)

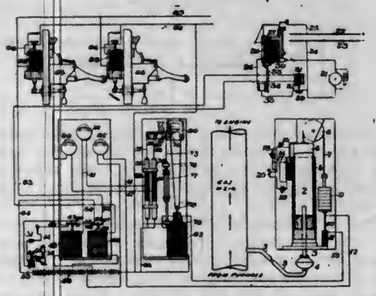


1. The combination with a shoe having the usual opening, of a fastening means for said opening comprising a member located beneath the outermost layer of the material composing the shoe and having a plurality of attaching points, said material having a slot affording access to said member, a member passing through said slot and adapted to be engaged with any of the plurality of points on the first-named member, and a locking device attached to the side of said opening not provided with said members at any of said points, said locking device being adapted to be engaged with the second-named member.

2. The combination with an article having separable sections, of a fastening device therefor having one member attached to one of the separable sections and the other to the opposing separable section, one of the means of attachment comprising a plate formed with a longitudinal slot having a plurality of lateral notches, and a device penetrating said slot and adapted when turned in one direction to freely pass along said slot, but when turned in another direction to enter a pair of said notches and be thereby held in an adjusted position.

3. The combination with an article having separable sections, of a fastening device therefor one of whose members comprises a hook having a laterally flattened stem, and a plate having a longitudinal slot formed with lateral notches in opposing pairs, said hook being movably located within said slot.

1,015,929. METHOD OF AND APPARATUS FOR PREVENTING GAS EXPLOSIONS. GEORGE BAEHR, Ampere, N. J., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 20, 1909. Serial No. 523,708. (Cl. 123—198.)



1. In apparatus of the character described, a gas main or holder arranged to conduct gases from a source of supply to a gas engine, means operated by variations in the gas pressure for stopping the flow of gases and mechanism arranged to break the ignition circuit of a gas engine connected to said gas main when the flow of gases is stopped.

2. In apparatus of the character described, a gas main or holder arranged to conduct gases from a source of supply to a gas engine, means actuated by a change in the gas pressure for controlling the passage of gas through the main, and mechanism arranged to simultaneously indicate approach of the gases to the pressure at which the flow is stopped.

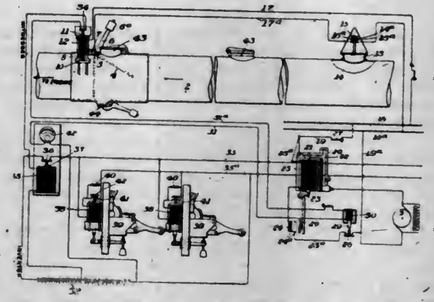
3. In apparatus of the character described, a gas main or holder arranged to conduct gases from a source of supply to a gas engine, means actuated by a change in the gas pressure for controlling the passage of gas through the main and mechanism arranged to indicate simultaneously at a plurality of points approach of the gases to the pressure at which the flow is stopped.

4. In apparatus of the character described, a gas main or holder arranged to conduct gases from a source of supply to a gas engine, means actuated by change in the gas pressure for controlling the passage of gases through the main, and means for actuating a circuit breaker connected to a gas engine driven generator when the flow of gases is stopped.

5. In apparatus of the character described, a gas main or holder arranged to conduct gases from a source of supply to a gas engine, means actuated by a change in the gas pressure for controlling the passage of gases through the main, mechanism arranged to break the ignition circuit of a gas engine connected to said gas main and means for actuating a circuit breaker connected to a gas engine driven generator when the flow of gases is stopped.

[Claim 6 not printed in the Gazette.]

1,015,930. SAFETY DEVICE FOR GAS MAINS AND HOLDERS. GEORGE BAEHR, Ampere, N. J., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 20, 1909. Serial No. 523,709. (Cl. 123—198.)



1. In apparatus of the character described, a gas main for conducting gases to a gas engine, a circuit breaker adapted to operatively complete the circuit leading from a generator connected to said gas engine, a fire door on the gas main arranged to close and prevent flow of gases therethrough, means actuated by a change in pressure in the gas main for closing said door and means adapted to trip said circuit breaker when the fire door is being closed.

2. In apparatus of the character described, a gas main for conducting gases to a gas engine, a circuit breaker adapted to operate to break the ignition circuit leading to said gas engine, a fire door on the gas main arranged to close and prevent flow of gases therethrough, means actuated by a change in pressure in the gas main for closing said door and means adapted to actuate said circuit breaker to break the ignition circuit to the gas engine when the fire door is being closed.

3. In apparatus of the character described, a gas main for conducting gases to a gas engine, a circuit breaker adapted to break the ignition circuit leading to said en-

gine, a fire door on the gas main adapted to close and prevent passage of gases therethrough, means actuated by

1,015,932. PULLING-OVER MACHINE. HARRIE A. BALLARD, Ashland, Mass., assignor to The Boylston Manu-

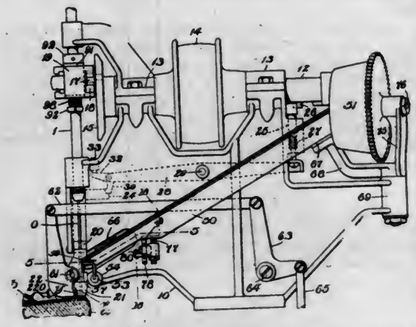
a belt shifter therefor, means for manually moving said shifter to bring the belt either into or out of operative position said means comprising a screw and nut together

nular groove at the inner end of each of the conical portions thereof, and metal reinforcing rings seated in said grooves and projecting beyond the periphery of the

gine, a fire door on the gas main adapted to close and prevent passage of gases therethrough, means actuated by a change in pressure in the said gas main for closing said door, means arranged to break the ignition circuit of the gas engine connected to said gas main and means adapted to stop the rotary washer when said fire door is being closed.

4. In apparatus of the character described, a gas main for conducting gases to a gas engine having a rotary gas washer therein, a fire door on the gas main arranged to close and prevent passage of gases therethrough, means operated by a change in pressure in the gas main for closing said door, and means arranged to stop the gas washer when said fire door is being closed.

1,015,931. MACHINE FOR TACKING SHOES. HARRIE A. BALLARD, Ashland, Mass., assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 28, 1904, Serial No. 190,932. Renewed June 1, 1910. Serial No. 564,454. (Cl. 12—2.)



1. A machine of the character described, comprising fastener-inserting mechanism, bodily movable mechanism for gripping the upper, and means in consequence of which the bodily movement of said gripping mechanism automatically causes the operation of the fastener-inserting mechanism.

2. A machine of the character described, comprising a gripper for engaging the upper of a shoe, power-driven fastener-inserting mechanism controlled by said gripper, and manually actuated means in consequence of which the said gripper is caused to engage said upper.

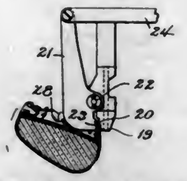
3. A machine of the character described, comprising a normally inactive power-driven fastener-inserting mechanism, tripping mechanism for rendering said fastener-inserting mechanism active, and a bodily movable gripper adapted to be bodily moved by the shoe and to operate said tripping mechanism, to effect the actuation of the fastener-inserting mechanism.

4. A pulling-over machine comprising a frame, a gripper on said frame located so that there is a free space beneath it for the manipulation of the shoe whereby the shoe may be moved when its upper is engaged by the gripper to position the upper upon the last, and fastener-inserting mechanism controlled by the gripper whereby a fastener may be inserted through the upper into the insole to secure the pulled-over portion of the upper to the insole.

5. A pulling-over machine comprising a frame, fastener-inserting mechanism on said frame, and a gripper positioned in front of said fastener-inserting mechanism and having a clear space therebeneath for the manipulation of a shoe, said gripper comprising a movable jaw having a shoulder or abutment against which the innersole may be placed and is adapted to serve as a fulcrum about which the shoe may be rocked at any time while the upper is held between the jaws of the gripper.

[Claims 6 to 12 not printed in the Gazette.]

1,015,932. PULLING-OVER MACHINE. HARRIE A. BALLARD, Ashland, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Aug. 30, 1905, Serial No. 276,399. Renewed June 1, 1910. Serial No. 564,455. (Cl. 12—11.1.)



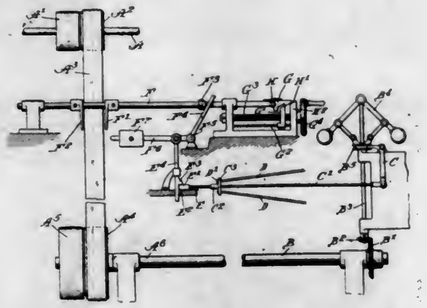
1. A machine of the character described, comprising a frame and gripping means on the frame, including a pair of jaws respectively stationary and movable, an abutment formed on the movable jaw and terminating at the extremity thereof, and means for actuating the movable jaw.

2. A machine of the character described, comprising a frame, and gripping means on the frame including a relatively stationary jaw, a relatively movable member having a gripping jaw adapted to coöperate with said stationary jaw and having an abutment movable to and from said stationary jaw, and upon which the sole of a shoe may be rocked when the upper is held by the gripping jaws.

3. A machine of the character described, comprising a frame, a stationary gripping jaw thereon, an abutment for the work movable toward and from said jaw, and a complemental jaw formed on said abutment and adapted to coöperate with the stationary jaw.

4. A machine of the character described, comprising a pair of jaws for gripping the upper of a shoe, said jaws being respectively stationary and movable, and an abutment on the end of the movable jaw by which said jaw may be forced toward the stationary jaw by pressure of the work on said abutment.

1,015,933. AUTOMATIC BELT-SHIFTER. ERNEST F. BAUER, Ravenna, Ohio. Filed May 6, 1910. Serial No. 559,661. (Cl. 64—4.)



1. The combination with a belt driven machine and belt shifter therefor of manually operative means for moving said belt shifter and means for disconnecting said manually operative means when the belt shifter is at the end of its path.

2. The combination of a belt driven machine and belt shifter therefor, manually operative means for moving said belt into operative position together with automatic means for moving said belt out of operative position and means for disconnecting said manually operative shifting means.

3. The combination of a belt driven shaft, a belt and a belt shifter therefor, means for manually moving said shifter to bring the belt either into or out of operative position said means comprising a screw and nut together with separate means independent of said manually operative means for moving the belt shifter to bring the belt out of operative position.

4. The combination of a belt driven shaft, a belt and a belt shifter therefor, means for manually moving said shifter to bring the belt either into or out of operative position said means comprising a screw and nut together with automatic means independent of said manually operative means for moving the belt shifter to bring the belt out of operative position.

5. The combination with a belt shifter containing a longitudinally movable rod, of a latch upon said rod, a manually operative part in engagement with said latch, means for automatically disengaging said latch from said manually operative part and means for automatically actuating said belt shifter when said latch is out of engagement with said manually operative part.

[Claims 6 to 12 not printed in the Gazette.]

1,015,934. CHRISTMAS-TREE HOLDER. CHARLES A. BLACK, Jr., Hightstown, N. J. Filed Oct. 19, 1911. Serial No. 655,470. (Cl. 248—37.)

1. In a Christmas tree holder, a base anchor, a set of uprights hinged to the said anchor, and a brace member hinged to each of the uprights, each of the said brace members having a prong for anchoring its free end.

2. In a Christmas tree holder formed of rod wire, a base ring having an anchoring prong, a set of upright members hingedly secured at one end to the said base ring, means for sustaining the said upright members to any position of adjustment.

3. In a Christmas tree holder, a base ring having an anchoring prong, a set of upright members hingedly secured to one end of the said base ring, means for sustaining the said upright members to any position of adjustment, each of the said upright members consisting of a U-shaped structure, the end of the arms of which terminate in eye members to receive the said base ring, and the said means for holding the said upright members in their adjusted positions consisting of a brace member hinged to the bend of their respective U-shaped structures.

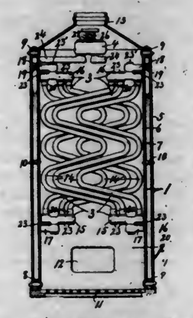
4. As a new article, a Christmas tree holder formed of wire rods and consisting of a base ring having a pendent anchoring prong and a striking head portion for the prong, a series of side sections each consisting of a rod bent upon itself to a ∩ shape, the lower ends of the side arms of which terminate in eyes for fitting on the base ring, and a brace member for each section consisting of a rod having an eye at one end for hingedly connecting with the arch of the ∩ shaped member and having its other end terminating in a penetrating prong.

1,015,935. WELL-BUCKET. WILLIAM H. BLACK, Broken Arrow, Okla. Filed May 27, 1911. Serial No. 629,786. (Cl. 103—35.)

1. A well bucket consisting of a cylindrical body having conical corrugated end portions, said body having an annular groove at the inner end of each of the conical portions thereof, and metal reinforcing rings seated in said grooves and projecting beyond the periphery of the bucket.

2. A well bucket consisting of a single sheet of metal having interlocking means formed upon its longitudinal edges, the ends of said bucket being conically formed and provided with annular grooves at the juncture of said conical end portions with the body of the bucket, and reinforcing rings of circular form in cross section seated in said grooves, said grooves being of a depth sufficient to receive substantially one-half of the rings, said rings projecting beyond the periphery of the body of the bucket, substantially as and for the purpose specified.

1,015,936. STEAM-BOILER. ERNST BOELZNER, Elmira, N. Y. Filed July 22, 1910. Serial No. 573,315. (Cl. 122—28.)

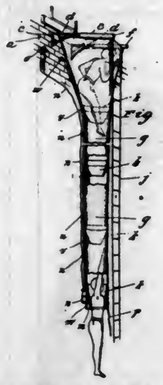


A steam boiler including zig-zag upflow pipes arranged in sets and extending transversely of the boiler and nesting one within the other whereby the bends of one set are opposite the spaces between the laterally-projecting portions of the next adjacent set, superposed headers at opposite sides of and within the boiler, means for connecting opposite ends of certain of said sets to the superposed headers at one side of the boiler, and means for connecting the opposite ends of the other sets to the heads at the other side of the boiler.

1,015,937. LIFE-SAVING APPARATUS. DELIZIO BREVETTI and CARLO FUCCI, New York, N. Y. Filed June 28, 1911. Serial No. 635,760. (Cl. 227—7.)

1. A life-saving apparatus consisting of the combination with a wall; of a pair of arms which project outwardly therefrom; a chute the upper end of which is collapsible; trolleys which travel on said arms and support the collapsible upper end of said chute; and shields for protect-

ing from snow and ice the portions of said arms traversed by said trolleys.



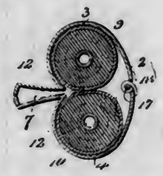
2. A life-saving apparatus having a chute provided with a yielding arrester near its lower end; an electrical signal which is arranged near the upper end of said chute and the circuit of which is controlled by said arrester; said arrester being adapted to be pressed outwardly by the body of a person to close the circuit of said signal.

3. A life-saving apparatus consisting of the combination with a wall; of a pair of arms which project outwardly therefrom; a chute the upper end of which is collapsible; trolleys which travel on the outer portions of said arms and support the collapsible upper end of said chute; and side plates fastened to the inner end portions of said arms for protecting said chute.

4. A life-saving apparatus consisting of the combination with a wall; of a fire-escape landing carried thereby; a pair of arms which project outwardly from said wall; a door which is hinged to said landing and which is arranged to cover the opening or interval between the inner portions of said arms; a chute the upper end of which is collapsible and which is covered by said door, when said chute is not in use; and trolleys which travel on said arms and support the collapsible upper end of said chute.

5. A life-saving apparatus having a chute provided near its lower end with an inner wall and an outer wall; an electrical signal which is arranged near the upper end of said chute and the circuit of which is controlled by said inner wall, which is pressed outwardly by the body of a person to close the circuit of said signal; and means for maintaining the circuit of said signal interrupted; said means being interposed in the path of a person falling through said chute.

1,015,938. RAZOR-STROPPING DEVICE. JAMES B. BROCKHURST, Red Bank, N. J. Filed Sept. 21, 1909. Serial No. 518,774. (Cl. 51—16.)



1. A razor sharpening device including two hinged duplicate half sections forming a case and provided with opposed manually actuatable blade clamping members supported one on each section of the casing and adapted to clamp a blade between the two sections, rolls of yielding elastic material supported in the respective sections and adapted to be forced against each other when the case is closed to flatten the contacting faces of the rolls against each other and against the cutting margin of a blade, and means for rotating the rolls in opposite directions.

2. A razor sharpening device including a case formed of two sections hinged to each other and adapted to be manually pressed together, each section having mounted therein a pressing roll of yielding elastic material, and means on the case whereby the rolls may be rotated in opposite directions, said sections of the case when closed forming a blade clamping means for supporting a blade with its edge between the contacting faces of the closed rolls.

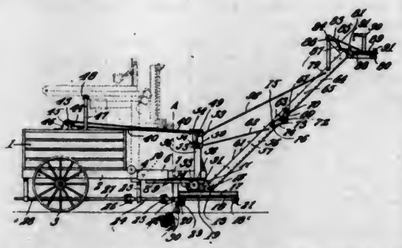
3. A razor sharpening device including oppositely disposed pairs of pressing rolls, each of said rolls being formed of yielding elastic material, means whereby one pair of pressing rolls may be forced toward the other pair to flatten the contacting faces of the rolls into a parallel relation, and means for supporting a double edged blade with its median axis disposed in a plane between the rolls of each pair and with its opposed edges between the opposed pairs of rolls, and means for rotating each roll in opposite directions to the next adjacent roll and in a direction toward the adjacent edge of the blade.

4. A razor sharpening device including oppositely disposed pairs of pressing rolls of yielding elastic material, means whereby one pair of pressing rolls may be forced toward the other pair to flatten their contacting faces into a parallel relation, a blade support extending midway between the rolls of each pair and with its supporting face disposed in a plane between the opposed pairs of rolls, and means for rotating each roll in an opposite direction to the adjacent rolls.

5. A razor sharpening device including a case formed of two sections hinged to each other, each section being provided with a pair of pressing rolls of yielding elastic material, the sections being hinged to each other whereby one section may be forced toward the other to force the pressing rolls of one section into contact with the pressing rolls of the other section, opposed clamping bars, one for each section of the case and extending medially between the pair of rolls of that section, said clamping bars when the case is closed clamping a blade between them and holding the blade with its opposed edges between the opposed pairs of rolls, and means mounted on the case for rotating the rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,015,939. BALE-STACKER. ARTHUR BRUNELLE, North Yakima, Wash. Filed May 1, 1911. Serial No. 624,428. (Cl. 193—14.)



1. The combination with baling apparatus, of a stacker including a foldable elevator mounted to swing laterally relative to the baling mechanism, means for directing bales from said baling mechanism to the elevator, means for holding the elevator, and means for swinging the folded elevator onto the top of the baling mechanism.

2. The combination with baling mechanism, of a stacker including a platform made up of pivotally connected sections, an elevator extending from the platform, and means upon the platform for guiding bales from the baling mechanism to the elevator.

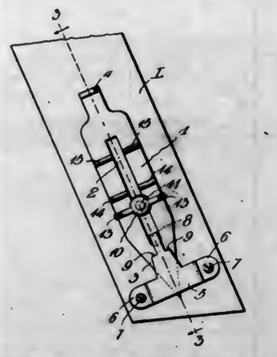
3. The combination with baling mechanism, of a stacker including a platform for receiving bales from the said mechanism, an elevator adjustable relative to and supported by the platform, and revoluble means extending through the platform for directing bales from the baling mechanism to the elevator.

4. The combination with baling mechanism, of a stacker including a platform, an elevator adjustably connected to the platform, means extending through the platform for directing bales into engagement with the elevator, and means for successively tilting the bales into engagement with said directing means upon leaving the baling mechanism.

5. The combination with baling mechanism, of a stacker including a platform, an elevator, revoluble means extending above the platform for directing bales onto the elevator, and means in the path of the bales for successively tilting them from the baling mechanism and onto said revoluble means.

[Claims 6 to 15 not printed in the Gazette.]

1,015,940. LADDER-BRAD. FRANK W. CHICKERING, Hardwick, Vt. Filed Nov. 6, 1911. Serial No. 658,749. (Cl. 228—5.)



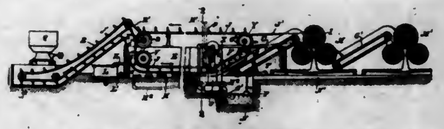
1. The combination with the leg of a ladder; of an extension foot therefor comprising a T-shaped keeper having the opposite ends of its head depressed and secured to said leg and the outer extremity of its shank bent inward into contact therewith, a bolt having a spur at its lower end, a body which slides under said keeper and is longitudinally slotted for the reception of said extremity, and an outturned lip at its upper end; a rib extending transversely across the outer face of said bolt and on opposite sides of its slot, a screw projecting through the ladder leg and outward through the slot in said bolt, and a winged nut on said screw.

2. The combination with the leg of a ladder; of an extension foot therefor comprising a keeper having a T-shaped body whose ends are depressed and secured to the leg and whose shank has lateral shoulders and a tongue between them, the bolt having a spur at its lower end and a longitudinally slotted body moving under said keeper while its slot moves astride said tongue, spaced ribs extending across the face of said bolt on both sides of its slot, a screw projecting through the ladder leg and outward through the slot in said bolt, and a winged nut engaging the threads of said screw, as and for the purpose set forth.

1,015,941. PROCESS FOR THE EXTRACTION OF SACCHARINE SUBSTANCES. CARLOS L. CORCUERA, Guadalajara, Mexico. Filed Dec. 4, 1907. Serial No. 405,017. (Cl. 127—17.)

1. The herein described process of extracting saccharifierous material from plants, which consists in disintegrating the plants and causing them to travel in contact with an extracting liquid while positively heating them, in stages, to a progressively decreasing temperature.

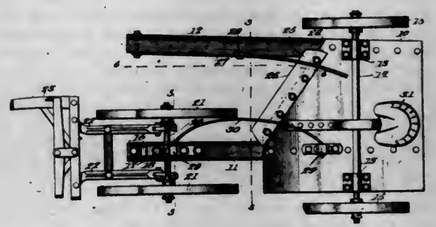
2. The herein described process of extracting saccharifierous material from plants, which consists in disintegrating the plants, and causing them to travel in one direction in contact with a liquid traveling in the opposite direction, the plants, while traveling in contact with such liquid, being heated positively to a progressively decreasing temperature.



3. The herein described process of extrating saccharifierous material from plants, which consists in disintegrating the plants and causing them to travel in contact with an extracting liquid while heating them positively to a gradually decreasing temperature.

4. The herein described process of extracting saccharifierous material from plants, which consists in disintegrating the plants, and causing them to travel in one direction in contact with a liquid traveling in the opposite direction, the plants, while traveling in contact with such liquid, being heated positively to a progressively decreasing temperature, separating such liquid from the treated material, subjecting such remaining material to pressure, and returning the juice extracted by such pressure into contact with the disintegrated plant material.

1,015,942. CORN-HARVESTER. ARTHUR A. DORSEY, Fulton, Kans. Filed Nov. 15, 1910. Serial No. 592,544. (Cl. 56—103.)



A machine of the class described, comprising a platform, a pair of sills fixed to and extending forwardly from the platform in parallel relation to each other, a cutter element mounted at the front edge of the platform between said sills, a rearwardly extending laterally curved guard rail secured to one of said sills, an upright secured to the other of said sills, a second upright secured to said platform parallel to and in longitudinal alinement with the first named upright, and a second guard rail secured to said uprights and bowed in the direction of curvature of the first named guard rail, both of said guard rails coöperating with said cutting element in the manner set forth.

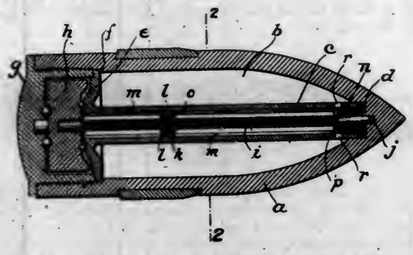
1,015,943. EXPLOSIVE PROJECTILE. FRANCIS I. DU PONT, Wilmington, Del. Filed May 29, 1911. Serial No. 630,009. (Cl. 102—36.)

1. In a projectile, the combination with the shell, of mechanism positioned wholly within the shell and rotatably mounted in bearings therein on an axis coincident with the longitudinal center line of the shell, other mechanism rotatable with the shell and gearing with the first named mechanism, and firing means carried by each of said mechanisms, arranged to function with each other after a pre-determined number of revolutions of the shell around the first named mechanism.

2. In a projectile, the combination with the shell, of a fly-wheel located within the shell and rotatably mounted in bearings therein on the shell's longitudinal axis, members, geared together, partaking respectively of the relative movements of shell and fly-wheel, and priming means car-

1,015,946. MILK-STRAINER AND SUPPORT THERE- | said enlarged upper portion, an annular distributer re-

ried by said members and adapted to function only after a predetermined number of revolutions of the shell around the fly-wheel.



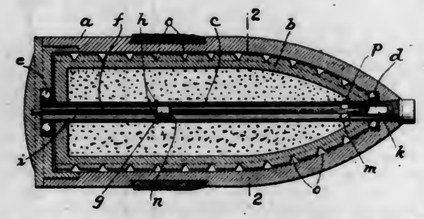
3. In a projectile, the combination with the shell, of a fly-wheel located within the shell and rotatably mounted in bearings therein on the shell's longitudinal axis, members geared together and partaking respectively of the relative movements of shell and fly-wheel, said members including opposing priming faces adapted to slidably contact after a predetermined number of revolutions of the shell around the fly-wheel.

4. In a projectile, the combination with the shell, of a fly-wheel and screw located within the shell and freely revoluble relatively thereto on the shell's longitudinal axis, a nut on the screw movable longitudinally thereof, and priming means carried by said nut and screw respectively and adapted to function after a pre-determined longitudinal movement of the nut along the screw.

5. In a projectile, the combination with the shell, of a fly-wheel and screw located within the shell and freely revoluble relatively thereto on the shell's longitudinal axis, a nut on the screw movable longitudinally thereof, priming material, and means on the screw adapted to arrest said nut and ignite said priming material.

[Claims 6 to 8 not printed in the Gazette.]

1,015,944. EXPLOSIVE PROJECTILE. FRANCIS I. DU PONT, Wilmington, Del. Filed July 7, 1911. Serial No. 637,308. (Cl. 102—36.)



1. In a projectile, the combination with the outer shell, of an internal casing, adapted to contain explosive material, mounted in bearings in the shell so that the rotary motion of the shell is not imparted to the casing, and firing mechanism, controlling the detonation of the explosive material, connected with and actuated by the casing and adapted to operate to detonate the explosive after a predetermined number of revolutions of the shell around the casing.

2. In a projectile, the combination with the outer shell, of an internal casing adapted to contain explosive material, freely rotatable on the longitudinal axis of the shell, means respectively rotatable with the shell and with the casing and geared together, and firing mechanism controlled in its operation by said means.

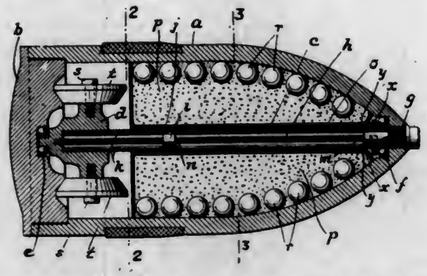
3. In a projectile, the combination with the outer shell, of an internal casing, adapted to contain explosive material, freely rotatable on the longitudinal axis of the shell, mechanism rotatable with the shell and mechanism gearing therewith rotatable with the casing, and firing means carried by each of said mechanisms and arranged to function with each other after a predetermined number of revolutions of the shell around the casing.

4. In a projectile, the combination with the shell, of means positioned wholly within the shell and rotatably mounted therein on the shell's longitudinal axis, other means rotatable with the first named means and gearing with, and movable longitudinally of, the shell, and firing mechanism controlled in its operation by the longitudinally movable means.

5. In a projectile, the combination with the shell, of mechanism positioned wholly within the shell and rotatable therein on the shell's longitudinal axis, a removable plug in the point of the shell, and gearing engaging said mechanism and carried by said plug whereby the plug may be withdrawn and the gearing adjusted, and priming means operable by the gearing.

[Claims 6 to 13 not printed in the Gazette.]

1,015,945. EXPLOSIVE PROJECTILE. FRANCIS I. DU PONT, Wilmington, Del. Filed July 12, 1911. Serial No. 638,058. (Cl. 102—36.)



1. In a projectile, the combination with the shell, of a member within the shell rotatable on an axis at an angle to the longitudinal axis of the shell and also rotatable bodily relatively to the shell on the latter's longitudinal axis, normally inoperative firing means and intermediate mechanism between said firing means and said member operable in the latter's relative bodily movement of rotation to render said firing means operative.

2. In a projectile, the combination with the shell, of mechanism freely rotatable relatively to the longitudinal axis of the shell, mechanism gearing therewith rotatable with the shell, and firing means carried by both said mechanisms arranged to function with each other after a predetermined number of revolutions of the shell around its axis, the first named mechanism including a member rotatable upon an axis at an angle to the shell's axis.

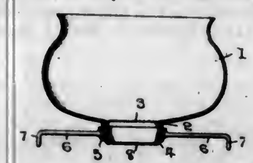
3. In a projectile, the combination with the shell, of mechanism mounted in the shell so as not to partake of its movement of rotations, said mechanism including a member mounted to turn on an axis at an angle to the shell's axis and adapted in the rotation of the shell to be rotated thereby on its own axis, and primer-exploding means controlled in its operation by said mechanism.

4. In a projectile, the combination with the shell, of mechanism rotatable with the shell, mechanism geared therewith and mounted in bearings in the shell so as not to partake of its movement of rotation and including a member rotatable on an axis at an angle to the shell's axis and adapted in the rotation of the shell to be rotated thereby on its own axis, and firing means controlled in its operation by said mechanisms.

5. In a projectile, the combination with the shell, of a member rotatable on an axis at an angle to the longitudinal axis of the shell and also rotatable bodily relatively to the shell on the latter's longitudinal axis and adapted in the rotation of the shell to be rotated thereby on its own axis, normally inoperative firing means, and intermediate mechanism between said member and said firing means, operable in the relative bodily rotation of said member to render said firing means operative.

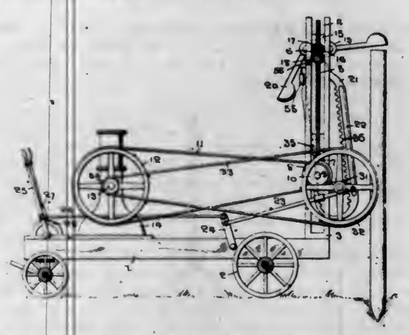
[Claims 6 to 21 not printed in the Gazette.]

1,015,946. MILK-STRAINER AND SUPPORT THEREFOR. HERMANN J. EBNER, Paige, Tex. Filed Sept. 13, 1910. Serial No. 581,755. (Cl. 210—16.)



The combination with a receptacle having an opening in the bottom thereof, a wire gauze extending over said opening, and an annular flange integral with said receptacle and depending from the periphery of said opening, said flange being inclined inwardly; of a rigid band adapted to receive said flange, said band being disposed at an angle coincident to the inclination of said flange, said band and flange being adapted to clamp a cloth across the space surrounded by the flange, and supporting arms extending radially from said band.

1,015,947. FENCE-POST-DRIVING MACHINE. MELVIN T. FITZGERALD, Rock Elm, Wis. Filed Sept. 20, 1910. Serial No. 582,911. (Cl. 61—40.)

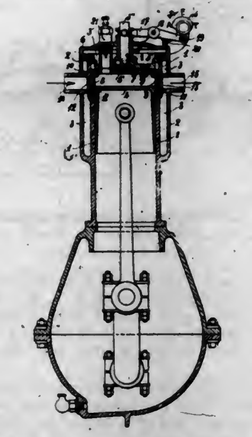


1. A machine of the kind described, comprising a wheeled frame having uprights at one end, a frame slidably mounted in said uprights, a shaft carried by said frame, means for driving said shaft, hammers operated by said shaft, a double rack frame pivotally connected to the slidably mounted frame, a driven pinion adapted to mesh with the rack portions of said rack frame, and a lever for operating said rack frame.

2. In a machine of the kind described, the combination with a wheeled frame having an engine mounted thereon provided with a drive shaft, of a pair of uprights mounted on one end of said frame provided with guide-ways, a frame slidably mounted in said guide-ways, carrying a horizontal shaft provided with a beveled gear, a vertical shaft arranged along side of one of said uprights carrying a beveled gear meshing with said bevel gear, means for driving said vertical shaft from said engine, a double rack frame pivotally connected to the slidably mounted frame, a pinion adapted to engage the rack portions of said frame, means for driving said pinion from said engine, and means for shifting the position of said double rack frame in respect to the pinion.

1,015,948. INTERNAL-COMBUSTION ENGINE. FERNAND FOREST, Suresnes, France. Filed Sept. 20, 1910. Serial No. 582,846. (Cl. 123—188.)

1. In internal combustion engines, in combination, a cylinder comprising an upper portion of larger diameter than the normal bore of the cylinder, said cylinder being provided with inlet and outlet ports communicating with said enlarged upper portion, an annular distributer reciprocatingly mounted within said enlarged upper portion and provided with openings adapted to move into and out of registry with said ports depending upon the position of the distributer relative to the cylinder, means operatively connected to said distributer and actuated by the engine for reciprocating said distributer, and means for protecting said last mentioned means from the effects of the explosion of the gases within the cylinder.



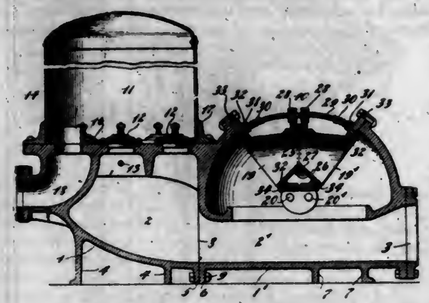
2. In internal combustion engines, in combination, a cylinder comprising an upper portion of larger diameter than the normal bore of the cylinder, said cylinder being provided with inlet and outlet ports communicating with said enlarged upper portion, an annular distributer reciprocatingly mounted within said enlarged upper portion and provided with openings adapted to move into and out of registry with said ports depending upon the position of the distributer relative to the cylinder, a crosshead, means operatively connected with said crosshead and actuated by the engine for reciprocating said distributer, and means positioned within said cylinder to protect said crosshead from the effects of the explosion of the gases within the cylinder.

3. In internal combustion engines, in combination, a cylinder comprising an upper portion of larger diameter than the normal bore of the cylinder, said cylinder being provided with inlet and outlet ports communicating with said enlarged upper portion, an annular distributer reciprocatingly mounted within said enlarged upper portion and provided with openings adapted to move into and out of registry with said ports depending upon the position of the distributer relative to the cylinder, a crosshead, means operatively connected with said crosshead and actuated by the engine for reciprocating said distributer, said cylinder being provided with a head having a groove within which said crosshead is adapted to reciprocate and a cover secured to the inner surface of said head and extending over said groove whereby said crosshead will be protected from the effects of the explosion of the gases within the cylinder.

1,015,949. HYDRAULIC RAM. ALFRED H. FRANCFORT, Jersey City, N. J. Filed Mar. 6, 1911. Serial No. 612,673. (Cl. 103—29.)

1. In a hydraulic ram, a valve comprising a movable element having a passage therein through which liquid may flow, said element having a sloping wall, and a member having an aperture therein in which said element is adapted to move, said member being adapted to co-act with said sloping wall to form a substantially liquid tight closure, and separate, auxiliary means for stopping the flow of fluid through the passage in said movable element.

2. In a hydraulic ram, a valve comprising a plurality of pivotally mounted juxtaposable elements adapted to be swung toward and from each other, one at least of said elements having a fluid passage therein, flow of fluid through said passage being substantially prevented when said elements are in juxtaposition.



3. In a hydraulic ram, a valve comprising a plurality of juxtaposable elements adapted to be moved toward and from each other, one at least of said elements having a fluid passage therein, flow of fluid through said passage being substantially prevented when said elements are in juxtaposition.

4. In a hydraulic ram, a valve comprising a pivotally mounted element having a passage therein through which fluid may flow, and co-acting means for shutting off the flow of fluid through said passage, said means comprising a second pivotally mounted element.

5. In a hydraulic ram, a valve comprising a pivotally mounted element having a passage therein through which fluid may flow, co-acting means for shutting off the flow of fluid through said passage, said means comprising a second pivotally mounted element, and means for substantially preventing shock when said elements are in operation.

[Claims 6 to 13 not printed in the Gazette.]

1,015,950. PROCESS OF TREATING JAPANESE PERSIMMONS, &c. HERBERT C. GORE, Washington, D. C. Filed Sept. 6, 1911. Serial No. 648,006. (Dedicated to the public.) (Cl. 99—8.)

1. In a process for removing the astringency of fruits, consisting in placing the fruit in an air-tight container, then displacing the air in said container by the use of carbon dioxid, substantially as specified.

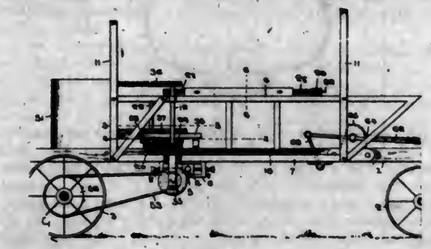
2. In a process for removing the astringency of fruits, consisting in placing the fruits in an air-tight container, keeping the fruits therein and subjecting them to the action of inert gases, substantially as specified.

3. In a process for removing the astringency of fruits, consisting in placing the fruits in an air-tight container, then displacing the air in said container by the use of carbon dioxid, thereby causing the fruits to remain firm, substantially as specified.

1,015,951. TOPPING-MACHINE. JOHN GRAVES and CLARENCE C. REED, Arkansas City, Kans. Filed Apr. 27, 1910. Serial No. 558,037. (Cl. 56—131.)

1. In a topping machine, the combination with a vehicle, of a shaft attached to the side of the vehicle, a block on said shaft, a casting having an opening therein to receive said block, a two-part frame mounted upon said casting, means to adjust the casting and frame longitudinally, means to raise or lower the forward end of the frame, and means on said frame for cutting stalks and conveying the same to the vehicle.

2. In a topping machine, the combination with a vehicle, of a shaft attached to the vehicle, a block on said shaft, a casting having an opening therein to receive said block, a frame mounted upon said casting, means to adjust the casting and frame longitudinally, means to raise or lower the forward end of the frame, shafts rotatably mounted one pair on the forward and one pair on the rearward portion of the frame, sprockets on said shafts, chains for said sprockets, said chains being moved thereby, fingers on said



chains adapted to engage and move the objects passing between the chains, a guide for the fingers of one of said chains, means to drive said shafts, a breaker board positioned in the path of the objects engaged by said chains and guide chains adapted to carry the severed portion of the object to the rear end of the frame.

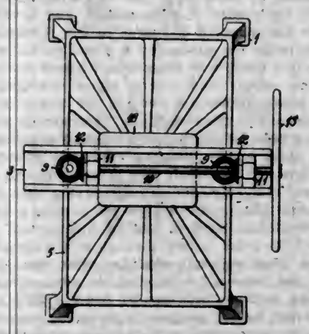
1,015,952. HYPODERMIC SYRINGE. JAMES T. GREELEY, Nashua, N. H., assignor of one-fourth to Luella L. Goold, Pittsburgh, Pa. Filed Mar. 25, 1911. Serial No. 616,934. (Cl. 128—25.)

1. As an article of manufacture, a hypodermic syringe composed of a collapsible capsule charged with liquid and having a collapsible breast at one end and a neck integral with the breast, said capsule, breast and neck being composed of ductile material, and a hypodermic needle inserted in said neck, said needle being of substantially uniform diameter throughout its length, the material forming the neck being compressed around the needle to form a permanent and practically non-renewable connection between the neck and needle.

2. As an article of manufacture, a hypodermic syringe composed of a collapsible capsule charged with liquid and having a breast at one end and a neck integral with the breast, said capsule, breast and neck being composed of ductile material, and a hypodermic needle inserted in said neck, said needle being of substantially uniform diameter throughout its length and provided with a plurality of peripheral grooves, the material forming the neck being compressed around the needle and into said grooves to form a permanent and practically non-renewable connection between the neck and needle.

3. A hypodermic syringe comprising a collapsible capsule charged with liquid, a hypodermic needle having a practically non-renewable connection therewith, the lumen of the needle constituting the outlet of the capsule, and a non-collapsible grip member attached to the syringe and adapted to sustain pressure applied to force the needle through the skin, whereby such pressure is prevented from collapsing or indenting the capsule.

1,015,953. MATRIX-DRYING PRESS. WILLIAM S. HADAWAY, Jr., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1909. Serial No. 493,407. (Cl. 34—16.)



1. A press comprising an electrically heated working-surface plate, an electrically operated working-surface plate and a single means for governing the supply of energy to both members.

2. A press comprising an electrically heated stationary working-surface plate, a mechanically adjustable movable member having a coöperating working-surface plate suspended therefrom, electro-responsive means for actuating said plate and a single switching device for governing the supply of energy to both members.

3. In a press, the combination with a stationary frame, vertical guide projections extending upwardly therefrom, and a cross beam mounted on the projections, of an electrically heated working-surface plate secured to the frame, a suspension plate adjustably depended from the cross beam, a coöperating surface plate connected to the suspension plate by links, and an operating electro-magnet for so separating the movable surface plate and the suspension plate as to move the surface plate into engagement with the electrically heated surface plate.

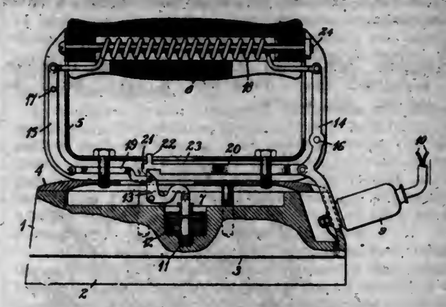
4. A press comprising a movable working-surface plate, an adjustable carriage, toggle links between the carriage and the plate, and electro-responsive means for actuating the toggle links to forcibly separate the plate from the carriage.

5. A press comprising an adjustable carriage, a working-surface plate, an electro-magnet between said members having a pair of similar armatures or cores, and toggle links connecting the plate to the carriage, said armatures or cores being operatively connected to the links.

1,015,954. CUT-OUT FOR ELECTRIC SAD-IRONS. WILLIAM S. HADAWAY, JR., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 25, 1910. Serial No. 568,873. (Cl. 219—25.)

1. In an electric sad iron, the combination with a resistance element, a circuit interrupter, a heat-released latch and a single means for actuating the circuit interrupter and for returning the latch to its normal position.

2. In an electric sad iron, the combination with a resistance element, a body of fusible material adapted to be influenced by the temperature of the iron, a plunger set in said body of fusible material, a latch pivotally secured to the plunger and a circuit interrupter, of a single spring dependent upon the softening of the fusible material for actuating the circuit interrupter and for returning the latch to its normal position.

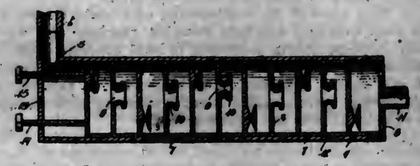


3. In an electric sad iron, the combination with a resistance element, a body of fusible material adapted to be influenced by the temperature of the iron, a plunger set in said body of fusible material, a latch pivotally secured to the plunger, and a circuit interrupter, of a single spring, and two connected mechanisms one of which is actuated by said spring to move the plunger in one direction and to operate the circuit interrupter and the other to move the plunger in the opposite direction.

4. In an electric sad iron, the combination with a resistance element, a body of fusible material adapted to be influenced by the temperature of the iron, a plunger set in said body of fusible material, a latch pivotally secured to the plunger, and a circuit interrupter, of a single spring, and two mechanisms unequally responsive to the action of the spring and serving, respectively, to move the plunger in one direction and actuate the circuit interrupter and to move the plunger in the opposite direction, whereby the heater circuit of the device is interrupted upon the softening of the fusible material and the plunger is restored to its original position.

5. An electric sad iron comprising a body, a handle, a resistance element, a circuit interrupter, a heat-released latch and a single spring in the handle for actuating the circuit interrupter and for returning the latch to its normal position.

1,015,955. MUFFLER. DRAPER D. HELDER, Settlers township, Sioux county, Iowa. Filed June 7, 1911. Serial No. 631,691. (Cl. 121—116.)

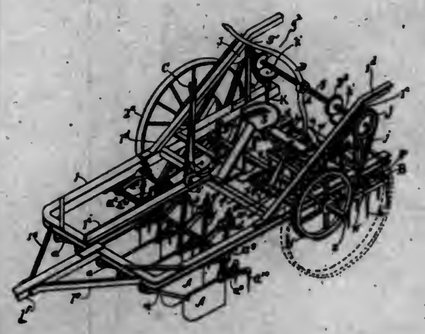


1. A muffler, comprising an inclosing cylinder having cap plates at each end, a plurality of muffler rings mounted within the cylinder and having disk portions having apertures formed therein surrounded by flaring lips, said disk portions having spacing collars formed on their periphery making tight engagement with the inner face of the cylinder and extending in the same direction as the flaring lips of the disks, whereby the edges of the various collars engage the adjacent disks to hold the disks in spaced relation, and clamping members passing through one of the cap plates and engaging the endmost muffler disk for forcing the various muffler rings tightly against each other and securing the same in position.

2. A muffler comprising a casing, muffler rings mounted within the casing and formed with integral collars for engaging the adjacent muffler ring to hold the same in spaced relation, and securing bolts having threaded en-

gagement with the end of the casing and having their inner ends bearing against the end muffler ring, whereby the inward screwing of the bolts forces the rings tightly against each other and secures the same in position within the casing.

1,015,956. WHEELED HARROW. SAMUEL HICKMAN, Springfield, Ohio. Filed Sept. 6, 1911. Serial No. 647,992. (Cl. 55—19.)



1. In combination, a wheeled frame, vertically disposed crank shafts thereon, a harrow, connections between the crank shafts and the harrow, and means for rotating said shafts to impart a gyratory movement to the harrow.

2. In combination, a wheeled frame, vertically disposed crank shafts thereon, a harrow hung on the cranks of said shafts, means for rotating said shafts to impart a gyratory movement to the harrow, and means for raising and lowering the harrow.

3. In a harrow, the combination of a wheeled frame, vertically disposed crank shafts mounted on said frame, gearing actuated from the carrying wheels for rotating said crank shafts, a harrow-frame connected to the cranks on said shafts, whereby gyratory motion is imparted to said harrow-frame and means for raising and lowering the harrow-frame.

4. In a harrow, the combination of a wheeled frame, swinging crank shafts mounted in said frame, gearing actuated from the carrying wheels for rotating said crank shafts, a harrow frame connected to the cranks on said shafts whereby gyratory motion is imparted to said harrow-frame and means for swinging the crank-shafts and harrow-frame to raise and lower the latter.

5. In a harrow, the combination of a main frame, adjustable swinging brackets mounted thereon, and vertically disposed shafts journaled in said brackets; gearing between the said shafts and the supporting wheels, cranks on said shafts, a harrow-frame suspended on said cranks and gyrated thereby and means for swinging said brackets to raise and lower the harrow-frame.

[Claim 6 not printed in the Gazette.]

1,015,957. REFRIGERATING APPARATUS. RUDOLPH M. HUNTER, Philadelphia, Pa. Filed Dec. 31, 1897. Serial No. 664,808. (Cl. 62—12.)

1. The combination of two or more compartments, a radiating device in each compartment, a supply pipe and a return pipe leading to the several compartments and connected with the radiating devices, a tank communicating with the return pipe, a pump between the tank and supply pipe adapted to be used to reduce the pressure in the return pipe, a valved steam pipe connecting with the supply pipe, and means for permitting the pump to discharge outside of the supply pipe.

2. The combination of a compartment on wheels provided with temperature varying coils and supply and return pipes extending the length of said vehicle, and a second compartment on wheels provided with a tank, a pump between the tank and supply pipe adapted to be used to reduce the pressure in the return line, and said pump and tank being respectively connected with the supply and return pipes by flexible pipe couplings between the two compartments on wheels, a valve pipe for supplying steam to the supply pipe and adapted for connection with the tender of a locomotive, and a valve orifice to permit the pump to discharge to the atmosphere.

3. Apparatus for producing a great variation in temperature in a number of independent closed compartments, comprising supply and return pipes, combined with a vacuum pump, means for causing the pump to create a partial vacuum in the return pipe or to supply pressure to the supply pipe for causing a circulating vaporous or fluid medium under widely different conditions of temperature to flow through the supply and return pipes to and from the several compartments without mixing with the air of said compartments, valved pipes for causing a subdivision of the circulating medium and an independent regulated portion of the same to flow through said compartments at the same time without admixing with the atmosphere thereof, and means for varying the temperature of the circulating medium between 32 degrees Fahr. and 212 degrees Fahr. for the purpose of producing a warm or cold temperature as required in the various compartments.

4. The combination of two or more compartments, a radiating device in each compartment, a supply pipe and a return pipe leading to the several compartments and connected with the radiating devices, a tank communicating with the return pipe, a pump between the tank and supply pipe adapted to be used to reduce the pressure in the return pipe, a valved steam pipe connecting with the supply pipe, a valved passage between the return pipe and the pump, and means for permitting the pump to discharge outside of the supply pipe.

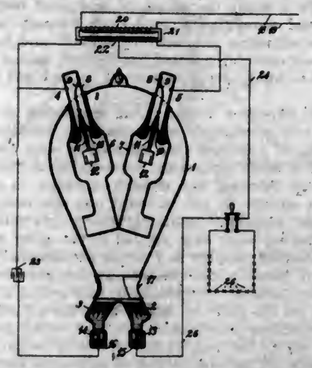
5. Apparatus for producing a great variation in temperatures in a plurality of independent compartments consisting of a separate temperature varying closed receptacle in each compartment, supply and return pipes leading to all of said temperature varying receptacles, circulating devices for causing a reduction of pressure below the pressure of the atmosphere in the return pipe and inducing a flow of the temperature producing medium through the supply pipe and simultaneously into the plurality of independent temperature varying closed receptacles, means for independently regulating the flow of said temperature producing medium into the respective receptacles, and means for varying the temperature of the circulating temperature producing medium between 32 degrees Fahr. and 212 degrees Fahr. for the purpose of producing a cold or warm temperature in the said receptacles to suit the temperature conditions required in the compartments.

1,015,958. MERCURY-CONVERTER. RALPH B. INGRAM, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1908. Serial No. 410,225. (Cl. 176—322.)

1. A current-rectifying device comprising a mercury-containing receptacle of insulating material, and a band of conducting material on the exterior thereof, said band being independent of the circuits of the device.

2. A current-rectifying device comprising an insulating receptacle having mercury-containing protuberances at its lower end, and a continuous band of conducting material encircling the receptacle slightly above the level of the mercury, said band being independent of the circuits of the device.

3. A current-rectifying device comprising a pear-shaped receptacle or bulb having mercury-containing protuberances at its lower and smaller end, a starting circuit connected to one of the protuberances, a direct current-receiving circuit connected to the other protuberance, and a band of conducting material encircling the receptacle slightly above the mercury level, said band being independent of the circuits of the device.

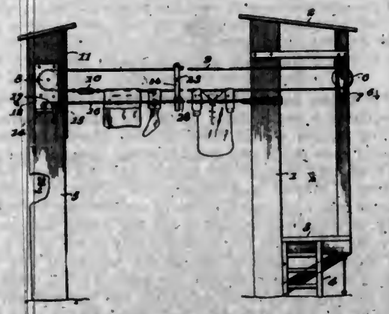


4. A current-rectifying device comprising a pear-shaped glass receptacle or bulb having mercury-containing protuberances at its lower and smaller end, a starting circuit led into one of the protuberances, a uni-directional current-receiving circuit led into the other protuberance, alternating current supply circuits led into the receptacle near its larger end, and a metal band encircling the receptacle near its smaller end, slightly above the normal level of the mercury, and independent of the circuits of the device.

5. A current-rectifying device comprising a mercury-containing receptacle of glass having inwardly extending tubes that form indentations in the walls of the receptacle and are open at their inner extremities, said tubes having enlargements and cross partitions intermediate their ends, metal tubes cemented into the glass tubes outside of the partitions and extending out of the receptacle, and terminal leads of conducting material secured to the inside of the metal tubes provided with coatings or jackets of ruby glass and sealed into the partitions in the glass tubes.

[Claim 6 not printed in the Gazette.]

1,015,959. CLOTHES-DRIER. SAMUEL EDWARD JENKINS, Holcombs Rock, Va. Filed Nov. 24, 1909. Serial No. 529,766. (Cl. 68—3.)



1. A clothes drying apparatus, comprising an endless clothes line, means for operating the same, two parallel wires below the line and plates for guiding the clothes between the wires as the line is moved outwardly.

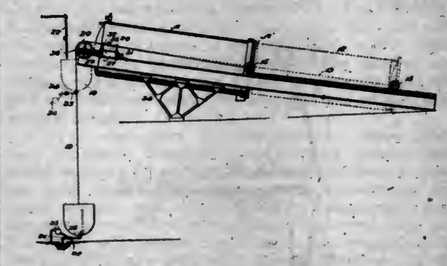
2. A clothes drying apparatus, comprising a movable clothes supporting wire, and two parallel clothes guiding wires below the supporting wire and a bracing device movable with the supporting wire to prevent the guiding wires from overlapping or twisting together.

3. A clothes drying apparatus, comprising two frames or inclosures spaced the proper distance apart, a drum in each frame, an endless clothes supporting line passing around said drum, and two parallel wires connecting the frames below the supporting wire and adapted to hold the clothes therebetween.

4. A clothes drying apparatus, comprising two frames spaced the proper distance apart, a drum in each frame, an endless clothes supporting line passing around the said drums, two drums carried by one frame, two converging plates carried by the other frame, a wire on each of the last named drums in a horizontal alinement and spaced a slight distance apart and extending to the other frame and around the ends of said converging plates.

5. A clothes drying apparatus comprising two frames, drums therein, an endless clothes supporting line passing around said drums, two horizontally spaced parallel guiding wires arranged below the endless line, and a bracing device hung on said line and at its lower end having rollers resting on said two wires and provided with spaced depending arms between which said two parallel wires are arranged.

1,015,960. SLIMES-FILTERING APPARATUS. DAVID J. KELLY, Salt Lake City, Utah. Filed Mar. 3, 1911. Serial No. 611,966. (Cl. 75—86.)



1. In apparatus of the character described, the combination with a tank having an open end, a filter-carrier movable in and out of the tank, and provided with a head adapted to close the open end of the tank, locking mechanism between the head and tank, and a fluid-pressure mechanism for actuating the locking mechanism.

2. In apparatus of the character described, the combination with a tank having an open end, a filter-carrier movable in and out of the tank, and provided with a head adapted to close the open end of the tank, locking mechanism between the head and tank, and a fluid-pressure mechanism for actuating the locking mechanism, said fluid-pressure mechanism including a fluid-pressure cylinder, a piston and a toggle-lever connection between the piston and the locking mechanism.

3. In apparatus of the character described, the combination with a tank having an open end and a filter-carrier operable in and out of the tank and having a head at one end adapted to close the open end of the tank, locking devices between the head and tank and comprising radially disposed levers movable with the head, a fluid-pressure cylinder and a piston operable therein, said cylinder being movable with the head, and a toggle-lever connection actuated by fluid pressure applied to the cylinder and piston and adapted to move the radial levers to lock and unlock the head.

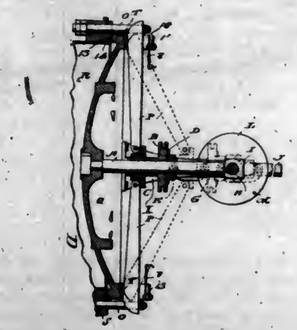
4. In apparatus of the character described, the combination with a tank having an open end, a filter-carrier operable in said tank having a head at one end adapted to form a closure for an open end of the tank, a shaft projecting centrally from the head, a sleeve slidably mounted on the shaft, radially-disposed levers having inner ends pivoted to the sleeve and having outer ends adapted to engage a fixed part of the tank, an intermediate portion of

said levers fulcruming against the head, a second sleeve or collar concentric with said shaft and separated from the first-named sleeve, a double series of toggle levers between the two sleeves, a fluid-pressure cylinder carried by one series of toggle levers, said cylinder having a piston whose rod is connected to the other series of toggle levers, and means for admitting fluid pressure to either end of said cylinder.

5. In apparatus of the character described, the combination with a tank having an open end, a filter-carrier operable in said tank having a head at one end adapted to form a closure for the open end of the tank, a shaft projecting centrally from the head, a sleeve slidably mounted on the shaft, radially-disposed levers having inner ends pivoted to the sleeve and having outer ends adapted to engage a fixed part of the tank, an intermediate portion of said levers fulcruming against the head, a second sleeve or collar concentric with said shaft and separated from the first-named sleeve, a double series of toggle levers between the two sleeves, a tension-adjusting nut on the outer end of the shaft bearing against the second-named sleeve, a fluid-pressure cylinder carried by one series of toggle levers, said cylinder having a piston whose rod is connected to the other series of toggle levers, and means for admitting fluid-pressure to either end of said cylinder.

[Claims 6 to 13 not printed in the Gazette.]

1,015,961. FILTERING APPARATUS. DAVID J. KELLY, Salt Lake City, Utah. Filed Mar. 3, 1911. Serial No. 611,967. (Cl. 220—124.)



1. In an apparatus of the character described, the combination with a tank, a removable head forming a closure therefor, said head having a projecting shaft, and a locking mechanism between the tank and head, said mechanism including a freely lengthwise slidable collar on the shaft and radially arranged locking levers carried thereby, of a toggle-mechanism, and connections between the same and said collar for operating the levers and locking and unlocking the head.

2. In an apparatus of the character described, the combination with a tank, a removable head forming a closure therefor, said head having a shaft projecting outwardly from its center, a collar slidable on said shaft, and locking levers carried by the collar and having outer ends engageable with the tank to lock the head to the tank, of a rotatable shaft supported from the head and toggle connections between the same and said collar whereby the head is locked and unlocked during the rotation of said shaft.

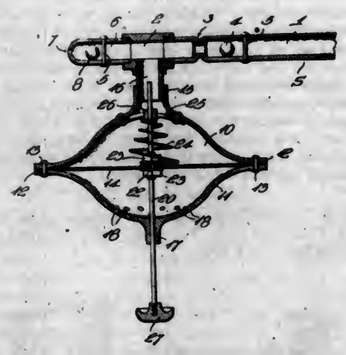
3. In an apparatus of the character described, the combination of a tank, a removable head forming a closure for one end thereof, a shaft projecting centrally from the head, an adjusting nut slidably mounted on the shaft, a collar mounted on the adjusting nut, radially-arranged levers having inner ends pivotally connected to the collar, a toggle-mechanism connected with the adjusting nut and moving the collar in and out on the shaft, and means on the tank engaged by the outer ends of said levers for locking the head to the tank, said levers having intermediate portions to fulcrum against the head.

4. The combination with a tank, a removable head forming a closure for one end thereof, a shaft projecting from the head, an adjusting nut slidable on the shaft, a collar threaded on the nut, radially-arranged levers having inner ends pivoted to the collar, the outer ends of said levers engaging the tank and an intermediate portion of said levers fulcruming against the head for locking the head to the tank, a shaft transverse of said head having crank-arms, and a toggle-link connection between said cranks and the adjusting nut, whereby the nut and its attached collar are moved in and out on the first named shaft during the rotation of the cross-shaft to lock and unlock the head.

5. An improved locking head mechanism for pressure tanks, said mechanism comprising the combination with the tank, of a locking head adapted to close the open end thereof, a shaft projecting centrally from the head, an externally threaded nut slidably mounted on said shaft, a collar carried by the threaded nut and movable therewith and adjustable relatively thereto, radially-arranged levers having inner ends pivoted to the collar and having outer portions adapted to fulcrum against the head, locking bolts fixed to and projecting from the tank and engaged by the outer extremities of said levers, a cross-head slidable on the shaft in unison with the adjusting nut, a shaft extending crosswise of the head, crank arms on the second shaft, and toggle-links pivotally connected to the outer ends of the cranks and to said cross head whereby the adjusting nut is moved in and out on the shaft to lock and unlock the head to the tank.

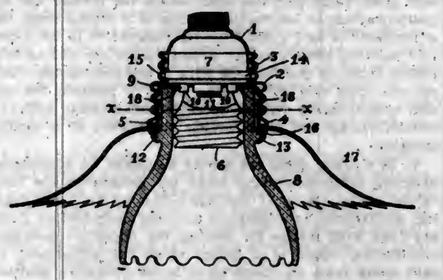
[Claims 6 and 7 not printed in the Gazette.]

1,015,962. PNEUMATIC PUSH-BUTTON AND PUMP. GEORGE A. KENNER, Herrin, and WILLIAM H. MICHAEL and THOMAS J. BURTON, Murphysboro, Ill. Filed Aug. 10, 1911. Serial No. 643,349. (Cl. 230—5.)



The herein described pneumatic push button and pump comprising a casing made up of two cup-shaped members having flanges around their mouths which are disposed toward each other, one member being closed except for a neck opening through its bottom and the other member having a tubular boss through its bottom opposite the axis of said neck and a series of perforations through its body, a bridge secured across the first-named member and carrying a guide in line with the axis of its neck, a flexible diaphragm clamped between the mouths of said members, a stem passing through the center of said diaphragm and movably mounted in said guide and boss and having a knob at its outer extremity, nuts engaging the stem above and below the diaphragm, and a spring coiled around the stem and having one end engaged by one of the nuts and the other end secured to said guide, the spring in its normal condition holding said diaphragm flat but being capable of expansion or contraction by manipulation of said knob.

1,015,963. INCANDESCENT-LAMP SOCKET. PETER KLEBER, Wiesbaden, Germany, assignor of one-half to Henry Zirwas, Yonkers, N. Y. Filed July 12, 1909. Serial No. 507,057. (Cl. 173—362.)



1. In an incandescent lamp socket, a screw-threaded cap, a shell composed of two members, an outer and an inner member, the outer shell member having two screw-threads, the upper one engaging the screw on the cap, in combination with a cup formed of insulating material having fixedly attached thereto the inner screw-threaded shell member engaging the lower thread on the outer shell member, substantially as set forth.

2. In an incandescent lamp socket, a screw-threaded cap, a shell formed in two members, an inner and an outer member, the outer shell member having two screw-threads, the upper thread engaging the screw threaded cap, in combination with an insulated inner shell member engaging the lower thread on the outer shell member, substantially as set forth.

3. In an incandescent lamp socket, the combination of a screw-threaded cap, a shell composed of two separate members, an outer and an inner, the outer shell member provided with two screw-threads, the upper one of which engages the cap thread, in combination with an ornamental safety cup provided with the inner shell member and supported within the lower outer shell screw, substantially as set forth.

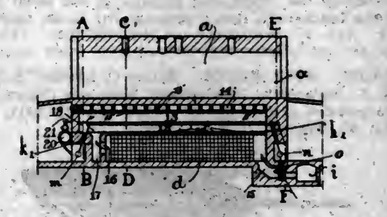
4. In an incandescent lamp socket, the combination of a screw-threaded cap, an insulating base lying within said cap, an outwardly projecting collar on said base, in combination with an outer shell member having an inwardly projecting spring collar engaging the collar on the insulating base, and held firmly within the cup, substantially as set forth.

5. In an incandescent lamp socket, a screw-threaded cap, an insulating base carried therein and having a projecting collar resting against the end of the cap screw, an outer shell member carrying two screw threads, an inwardly projecting spring shoulder formed between the two outer shell screws, said spring shoulder engaging the under portion of the cap collar, in combination with an insulated inner shell thread engaging the under thread of the outer shell member, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,015,964. REGENERATIVE COKE-OVEN. JEAN GERARD KNOS, Essen-Ruhr, Germany. Filed Feb. 11, 1910. Serial No. 543,235. (Cl. 202—9.)

1. In a coking oven, the combination of coking chambers, combustion chambers in the sidewalls thereof, horizontal flues in said sidewalls above said combustion chambers and connected therewith, single regenerators disposed beneath said coking chambers respectively, each comprising a regenerative chamber having an air inlet at one end, a horizontal waste gas flue above said regenerative chamber and connectible at one end with said combustion chamber flues and at the other end with said regenerative chamber, a horizontal hot air feed flue disposed above said regenerative chamber and connectible at one end therewith and means connecting said hot air feed flue with the combustion chambers in opposite sidewalls of a coking chamber, a valve mechanism for alternately shifting said regenerators into connection with said waste gas flues and said air inlet, and means for suplying gas to said combustion chambers.



2. In a coking oven, the combination of coking chambers, combustion chambers in the sidewalls thereof, horizontal flues in said sidewalls above said combustion chambers and connected therewith, single regenerators disposed beneath said coking chambers respectively, each comprising a regenerative chamber having an air inlet at one end, a horizontal waste gas flue above said regenerative chamber and connectible at one end with said combustion chamber flues and at the other end with said regenerative chamber, a horizontal hot air feed flue disposed above said regenerative chamber and connectible at one end therewith and provided with openings in its top and a horizontal distributing chamber disposed above said hot air feed flue and connected therewith by the top openings thereof and provided with lateral channels connected with the combustion chambers of opposite sidewalls of a coking chamber, a valve mechanism for alternately shifting said regenerators into connection with said waste gas flues and said air inlet, and means for supplying gas to said combustion chambers.

3. In a coking oven, the combination of coking chambers, combustion chambers in the sidewalls thereof, horizontal flues in said sidewalls above said combustion chambers and connected therewith, single regenerators disposed beneath said coking chambers respectively, each comprising a regenerative chamber, a horizontal waste gas flue above said regenerative chamber and connectible at one end with said combustion chamber flues and at the other end with said regenerative chamber, a vertical channel connecting one end of said regenerative chamber with said waste gas flue, a horizontal hot air feed flue disposed above said regenerative chamber and connectible at one end therewith and provided with openings in its top, a horizontal distributing chamber disposed above said hot air feed flue and connected therewith by the top openings thereof and provided with lateral channels connected with the combustion chambers of opposite sidewalls of a coking chamber, an air inlet connected with said regenerative chamber, a chimney outlet also connected with said regenerative chamber, a valve mechanism for alternately shifting said regenerators into connection with said waste gas flues and said air inlet, and means for supplying gas to said combustion chambers.

1,015,965. CHAIN. GEORGE A. LAMBERT, Anderson, Ind. Filed Sept. 27, 1909. Serial No. 519,728. (Cl. 59—78.)

1. A chain formed of metal sections flexibly joined together, the end of one section being turned about the end of the adjacent section, non-metallic lining within the turned portion of said first-mentioned section and surrounding said second-mentioned section, and means for securing the turned end of the first-mentioned section and the non-metallic lining together rigidly, substantially as set forth.

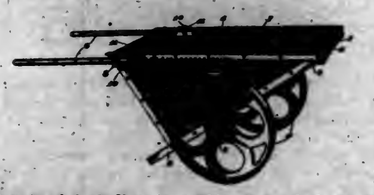
2. A chain composed of relatively long sections formed of metal plate with the ends turned back upon the body of

3. The combination with an alternating current magnet

the movable jaw opposite the toothed face of the fixed jaw,

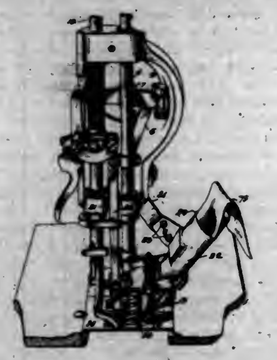
the section or plate to form an eye, metal links pivotally joined to the ends of said metal sections, a non-metallic lining in the eyes at the ends of said metal plates within which the ends of the links are located, and rivets extending through the overlapping portions of the metal plate and the non-metallic lining, substantially as set forth.

1,015,966. SHOP-TRUCK. JAMES C. LARSON, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed July 21, 1911. Serial No. 639,715. (Cl. 21—65.)



A shop truck including, in combination, a body mounted upon wheels, said body including top rails, inverted U-shaped brackets secured to said rails upon opposite sides of said body and provided with openings in their leg portions, handles slidably received by said openings, said handles having laterally turned lip portions at their front ends, said rails having notches therein adapted to receive said lip portions when said handles are extended relative to said body.

1,015,967. STRIP FOLDING AND GUIDING ATTACHMENT FOR SEWING-MACHINES. ALEXANDER LAUBSCHER, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 30, 1911. Serial No. 617,837. (Cl. 112—9.)



1. In a fabric guide for sewing machines, an adjustably-mounted strip-folding guide provided with means for folding the oppositely-arranged longitudinal edges of a facing strip, the adjustment of said guide from its inoperative to its operative position serving to lay a fold across the end of said facing strip, in combination with an adjustably-mounted fold-positioning blade for positioning the end fold of said facing strip in operative relationship with the stitch-forming and cloth-feeding mechanism of the sewing machine.

2. In a fabric guide for sewing machines, a strip-folding guide pivoted upon the bracket arm of the sewing machine, said guide being provided with means for folding the oppositely-arranged longitudinal edges of a facing strip, the adjustment of said guide from its inoperative to its operative position serving to lay a fold across the end of said facing strip, in combination with an adjustably-mounted fold-positioning blade for positioning the end fold of said facing strip in operative relationship with the stitch-forming and cloth-feeding mechanism of the sewing machine.

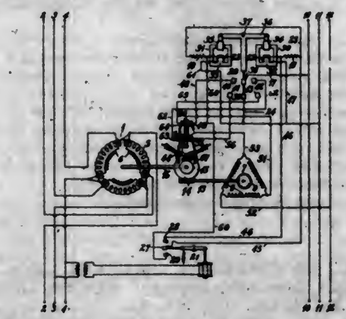
3. In a fabric guide for sewing machines, a strip-folding guide pivoted upon the bracket arm of the sewing machine, said guide being provided with means for folding the oppositely-arranged longitudinal edges of a facing strip, the adjustment of said guide from its inoperative to its operative position serving to lay a fold across the end of said facing strip, in combination with a fold-positioning blade pivoted upon said strip-folding guide to position the end fold of said facing strip in operative relationship with the stitch-forming and cloth-feeding mechanism of a sewing machine.

4. In a fabric guide for sewing machines, an adjustably-mounted fabric-presenting blade for presenting the body fabric to the action of the stitch-forming and cloth-feeding mechanism, an adjustably-mounted strip-folding guide provided with means for folding the oppositely-arranged longitudinal edges of a facing strip, the adjustment of said guide from its inoperative to its operative position serving to lay a fold across the end of said facing strip, in combination with an adjustably-mounted fold-positioning blade for positioning the end fold of said facing strip in operative relationship with said stitch-forming and cloth-feeding mechanism.

5. In a fabric guide for sewing machines, the combination of an adjustable fabric-presenting blade mounted on the bed plate of the sewing machine for presenting a body fabric to the action of the stitch-forming and cloth-feeding mechanism, a strip-folding guide pivoted upon the bracket arm of the sewing machine and provided with means for folding the oppositely-arranged longitudinal edges of a facing strip, the adjustment of said guide from its inoperative to its operative position serving to lay a fold across the end of said facing strip, and a fold-positioning blade pivoted upon said strip-folding guide for positioning the end fold of said facing strip in operative relationship with said stitch-forming and cloth-feeding mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,015,968. ALTERNATING-CURRENT ELECTROMAGNET. EDWIN LEHR, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 2, 1910. Serial No. 546,856. (Cl. 175—21.)



1. The combination with an alternating current electromagnet having normally separated stationary and movable core members and an energizing winding for bringing the members together, of means for maintaining a neutralising influence upon the core members to prevent residual magnetisation thereof while the magnet is out of active service.

2. The combination with an alternating current electromagnet having normally separated stationary and movable core members and an energizing winding for bringing the members together, of means for reducing the current through the winding and preventing the core membe s from sticking together when the magnet is not effective.

3. The combination with an alternating current magnet having normally separated stationary and movable core members and an energizing winding for bringing the members together, of means of maintaining a small current through the winding to overcome the residual magnetization of the core members.

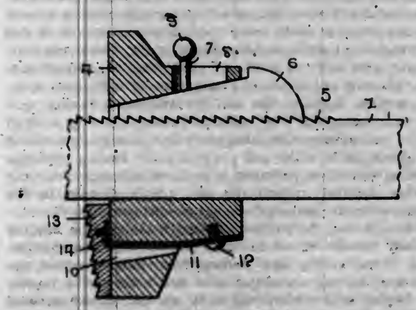
4. The combination with an alternating current electromagnet having normally separated stationary and movable core members and an energizing winding for bringing the members together, of a predetermined amount of resistance to limit the current through the winding and eliminate the tendency of the core members to stick together.

5. The combination with an alternating current electromagnet having normally separated stationary and movable core members and an energizing winding for bringing the members together, of means for inserting resistance or reactance in circuit with the energizing winding to prevent residual magnetization of the core members when the magnet is not effective.

1,015,969. WHEEL-SCOOP. MERRITT L. MCCRARY, Ethan, S. D. Filed Feb. 2, 1911. Serial No. 606,259. (Cl. 37—40.)

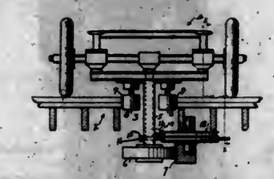
A scoop comprising a body having substantially semi-elliptical sides, an axle attached to the body, supporting wheels journaled upon the axle, handles, metallic strips secured to the handles and projecting beyond the ends thereof, and pivoted upon the axle beyond the outer sides of the supporting wheels, a bar attached to the body and provided with series of perforations, pins carried by the handles and adapted to enter said perforations, a bar pivoted to one of the handles and passing transversely through the other handle and being provided with notches, and a pin carried by the other handle for engaging the notches of the bars to hold said handles relatively to each other.

1,015,970. WRENCH. HARRY W. MELDRUM, East St. Louis, Ill. Filed Feb. 11, 1911. Serial No. 608,011. (Cl. 81—179.)



A wrench comprising a handle portion, a fixed jaw on the handle and having a toothed face, a movable jaw slidable thereon provided with a longitudinal recess substantially parallel therewith, an auxiliary toothed member comprising a wedge shaped block seated loosely on the face of the movable jaw opposite the toothed face of the fixed jaw, and a spring secured to the inner face of the auxiliary toothed member, extending through said longitudinal slot, and attached to the outer surface of the movable jaw.

1,015,971. ROUNDABOUT. FREDERICK MILLER, Los Angeles, Cal. Filed Nov. 1, 1911. Serial No. 658,052. (Cl. 104—111.)



1. In a roundabout, the combination of an endless guideway, conveyances arranged adjacent to said guideway, guides disposed in the guideway and connected with the conveyances, a cable connecting said conveyances together, grooved members carried by and extending longitudinally of the conveyances, a driving pulley, and an endless cable passing through said grooved members and around said pulley, substantially as described.

2. In a roundabout, the combination of an endless guideway, conveyances arranged adjacent to said guideway, rollers disposed in the guideway and connected with the conveyances, grooved members carried by and extending longitudinally of the conveyances, a driving pulley, an endless cable passing through said grooved members and around said pulley, and means to cause said conveyances to travel at a substantially constant distance apart, substantially as described.

3. In a roundabout, the combination of an endless guideway, conveyances arranged adjacent to said guideway, guides disposed in the guideway and connected with the conveyances, a cable connecting said conveyances together, means carried by said conveyances for connecting with said cables, grooved members carried by and extending longitudinally of said conveyances, a driving pulley, an endless cable passing through said grooved members and around said pulley, and sheaves for the cables, substantially as described.

4. In a roundabout, the combination of an endless guideway, conveyances arranged adjacent to said guideway, uprights carried by said conveyances, guides disposed in the guideway and connected with the conveyances, a cable extending between the conveyances and connected with said uprights, a spring and turnbuckle arranged adjacent to the conveyances and joined to said cable, grooved members carried by said conveyers, a driving pulley, an endless cable passing through said grooved members and around said pulley, and sheaves for the cables, substantially as described.

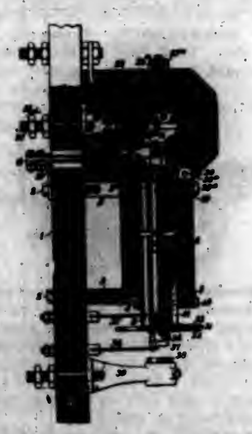
5. In a roundabout, the combination of an endless guideway, conveyances arranged adjacent to said guideway, uprights carried by said conveyances, rollers disposed in the guideway and connected with the conveyances and with the uprights, a cable connecting said conveyances together, grooved members carried by and extending longitudinally of said conveyances, a driving pulley, an endless cable passing through said grooved members and around said pulley, and sheaves for the cables, substantially as described.

[Claim 6 not printed in the Gazette.]

1,015,972. ELECTRIC SWITCH. WILLIAM A. PARIS, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 25, 1905. Serial No. 279,980. (Cl. 175—281.)

1. The combination with two spring-supported contact terminals, a movable core having a contact member to

engage said terminals successively, a solenoid surrounding said core, and a magnetizable solenoid frame having extensions provided with pole pieces in proximity to said contact terminals, and blow-out coils surrounding said pole pieces.



2. The combination with two contact terminals, a movable core having a contact member provided with contact faces that make successive yielding engagement with said contact terminals, a solenoid surrounding said core, and a magnetizable solenoid frame having integral projections provided with pole pieces the faces of which are located adjacent to and on opposite sides of the contact terminals, of blow-out coils surrounding said pole pieces.

3. The combination with two contact terminals, a movable core having a contact member to engage said terminals, a solenoid surrounding said core, and a magnetizable solenoid frame having extensions provided with inwardly-projecting pole pieces the faces of which are adjacent to said contact terminals, of blow-out coils surrounding said pole pieces.

4. The combination with two contact terminals the contact faces of which are offset from each other both laterally and longitudinally, and a longitudinally movable core having a contact member to make successive engagement with said contact terminals, of a solenoid surrounding said core, a magnetizable solenoid frame having integral extensions provided with laterally-projecting pole pieces adjacent to the contact terminals, and blow-out coils surrounding said pole pieces.

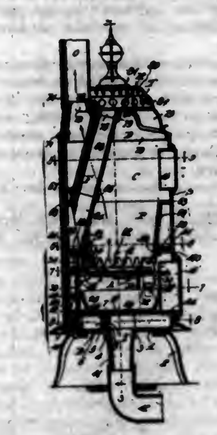
5. The combination with two electrically connected but separately yielding contact terminals, a longitudinal core having a contact member provided with faces adapted to successively engage said contact terminals, and a solenoid surrounding said core, of a magnetizable solenoid frame having extensions provided with pole pieces adjacent to said contact terminals, and blow-out coils to energize said pole pieces.

[Claims 6 to 10 not printed in the Gazette.]

1,015,973. HEATING-STOVE. ELI JACKSON PARKER, Iron City, Tenn. Filed Sept. 30, 1911. Serial No. 652,107. (Cl. 126—67.)

1. In a stove, the combination with the body, an oblique flue extending upward through the body, and a damper for controlling its outlet into the room; of the ash pit and grate, a hollow base, a partition dividing it into two chambers one of which is in constant communication with the fresh air inlet, means for connecting this chamber with said flue and the other with the ash pit beneath the grate, said partition having openings, and a damper controlling said openings.

2. In a stove, the combination with the shell, a fire pot disposed therein so as to leave an annular chamber between them, a flue section formed in one wall of said pot and communicating at its lower end with said chamber, the body, a flue leading from said section upward through the body, and means for controlling the outlet from said flue into the room; of the ash pit, a hollow base, a partition therein dividing it into two chambers, means for placing one of the latter in constant communication with said annular chamber and the other with the ash pit, said partition having openings, and a damper controlling said openings.



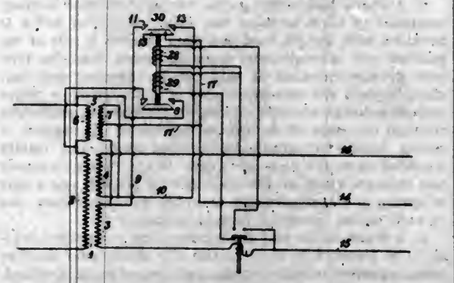
3. In a stove, the combination with the shell, a fire pot disposed therein so as to leave an annular chamber between them, a flue section formed in one wall of said pot and communicating at its lower end with said chamber, and a flue leading from said section upward and having an outlet into the room; of a hollow base having a low fresh air inlet, an ash pit whose wall is spaced from said shell so as to leave a chamber between them and is provided at points with openings, upright webs connecting said wall and the shell and producing two sets of passages whereof only one set communicates with said openings, a plate between the ash pit and base having scallops communicating with all said passages, and a ring around the fire pot closing the passages which communicate with said openings into the ash pit and itself having openings throwing the other passages into communication with the annular chamber around the pot.

4. In a stove, the combination with the shell, a fire pot disposed therein so as to leave an annular chamber between them, and a flue leading from said chamber upward and having an outlet into the room; of a hollow base having a low fresh air inlet, an ash pit whose wall is spaced from said shell so as to leave a chamber between them and is provided at points with openings, upright webs connecting said wall and the shell and producing two sets of passages whereof only one set communicates with said openings, a plate between the ash pit and base having scallops communicating with all said passages, a ring around the fire pot closing the passages which communicate with said openings, into the ash pit and itself having openings throwing the other passages into communication with the annular chamber around the pot, and a damper in the base between its inlet and one set of said passages.

5. In a stove, the combination with the shell, a fire pot disposed therein so as to leave an annular chamber between them, and a flue leading from said chamber upward and having an outlet into the room; of a hollow base having a low fresh air inlet, an ash pit whose wall is spaced from said shell so as to leave a chamber between them and is provided at points with openings, upright webs connecting said wall and the shell and producing two sets of passages whereof only one set communicates with said openings, a plate between the ash pit and base having scallops communicating with all said passages, a ring around the fire pot closing the passages which communicate with said openings, into the ash pit and itself having openings throwing the other passages into communication with the annular chamber around the pot, a partition across said base between its inlet and the set of passages leading to said pit, and a damper in this partition.

[Claims 6 to 16 not printed in the Gazette.]

1,015,974. SYSTEM OF ELECTRICAL DISTRIBUTION. JOHN SEDGWICK PECK, Manchester, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 12, 1909. Serial No. 489,253. (Cl. 171—254.)



1. In a three-wire system of electrical distribution for alternating currents, the combination with a main transformer and an auxiliary transformer having their secondary windings normally connected in series to the main circuit conductors, and the middle point of the secondary winding of the auxiliary transformer being connected to the neutral or balancing conductor of the system of a switch for short-circuiting the said secondary winding of the auxiliary transformer, the movable contact member of which is connected to said middle point and neutral conductor.

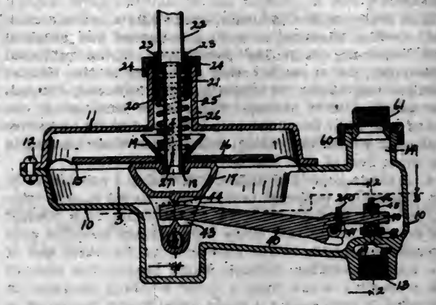
2. In a three-wire system of electrical distribution for alternating currents, the combination with a main transformer having a two-part winding the adjacent terminals of which are provided with contact members and the other terminals of which are connected to the main distributing conductors, and an auxiliary transformer having a winding the ends of which are connected to said adjacent terminals and the middle point of which is connected to a bridging device for said contact terminals and to the balancing conductor of the system.

3. In a three-wire system of electrical distribution, the combination with a main transformer having a two-part secondary winding the adjacent terminals of which are provided with contact members and the other terminals of which are connected to the main distributing conductors, and an auxiliary transformer having the terminals of its secondary winding connected to said adjacent terminals of the main transformer and its middle point connected to the balancing conductor of the main circuit, of means for simultaneously short-circuiting both the primary and the secondary windings of the auxiliary transformer.

4. In a three-wire system of electrical distribution for alternating currents, a main transformer and an auxiliary transformer having their secondary windings normally connected in series to the distributing circuit, and the middle point of the secondary winding of said auxiliary transformer being connected to the neutral or balancing conductor of the system of switches for short-circuiting the windings of the auxiliary transformer, the movable contact member of one of said switches being connected to said middle point and neutral conductor, and means for simultaneously actuating said switches.

5. In a three-wire system of electrical distribution for alternating currents, the combination with a main transformer and an auxiliary transformer having their corresponding windings normally connected together in series relation, and the middle point of the secondary winding of the auxiliary transformer being connected to the neutral or balancing conductor of the system, of means for simultaneously short-circuiting both windings of the auxiliary transformer, one member of said means being permanently connected to said middle point and neutral conductor.

1,015,975. GAS-REGULATOR. ARTHUR L. PICKERING, Anderson, Ind. Filed Nov. 9, 1910. Serial No. 591,429. (Cl. 50—26.)

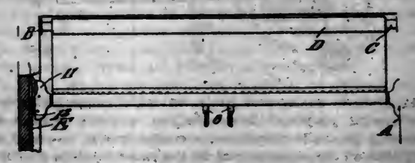


1. A gas regulator including a casing, a diaphragm therein, a plate centrally secured upon the diaphragm, a mercury cup centrally secured to the underside of the diaphragm and provided with inlet and outlet openings adapted to be separated by mercury so as to form a mercury seal, a fixed outlet passageway leading from the top of the casing, a tube leading from the outlet opening of the mercury cup and discharging into said fixed outlet passageway, and a spring tending to force the diaphragm down.

2. A gas regulator including a casing, a diaphragm therein, a plate centrally secured upon the diaphragm, a mercury cup centrally secured to the underside of the diaphragm and provided with inlet and outlet openings adapted to be separated by mercury so as to form a mercury seal, a fixed outlet passageway leading from the top of the casing, a tube leading from the outlet opening of the mercury cup and discharging into said fixed outlet passageway, a spring surrounding said tube and having holes near the lower end thereof, a basin surrounding the lower part of said tube, and a spring surrounding said tube and bearing down upon said basin so as to tend to press the diaphragm.

3. A gas regulator including a casing having an inlet port, a valve for controlling said port, a diaphragm, a lever for controlling said valve said lever having a downwardly inclined projection, a fulcrum pin secured within the casing and projecting between the main portion of said lever and the downwardly inclined projection, and a screw extending between the main portion of said lever in position to engage the fulcrum on the side opposite said projection for holding the lever on said fulcrum pin.

1,015,976. SHADE-HOLDER. AUGUST C. RADER, Upper Montclair, N. J. Filed June 8, 1911. Serial No. 632,029. (Cl. 156—26.)



1. A shade guide and holder, comprising a tubular member, a casing at each end thereof, a fixedly journaled guide wheel mounted therein, a spring actuated member passing through the casing, and a guide wheel pivotally mounted in

the casing and operably connected with the spring actuated member to be projected from and drawn within the casing.

2. A shade guide and holder, comprising a tubular member, a casing at each end thereof, a fixedly journaled wheel mounted therein upon one side of the center thereof, a spring actuated brake rod, one to each casing carried by the tubular member and having its engaging end projecting beyond the outer face of the casing, means for drawing in the brake rod, and a guide wheel pivotally mounted in the casing and operably connected with its respective brake rod, whereby said guide wheel is moved into and out of the casing.

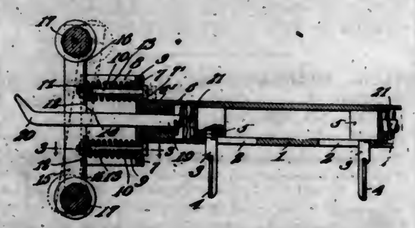
3. A shade guide and holder, comprising a tubular member, a casing mounted at each end thereof and provided with vertically extending portions, a spring projected brake rod, one to each casing journaled in the tubular member and having its engaging end projecting through the casing, a lever pivotally mounted in each casing, one end of said lever being operably connected to its respective brake rod within the casing, and a guide wheel carried in the other end of said casing.

4. A shade guide and holder, comprising a tubular member, two spring projected brake rods mounted in said tubular member, means connected to the inner ends thereof for drawing in the said brake rods, casings provided with laterally projecting wings connected to the outer end of the tubular member through which project the ends of the respective brake rods, a lever pivotally mounted in one wing of each casing, a guide wheel fixedly journaled in the other wing thereof, means for operably connecting said lever to the end of the respective brake rod, and a guide wheel carried by the opposite end of said lever and adapted to be projected without and held within the casing by the operation of the brake rod.

5. The combination with a spring returned shade, and a pair of oppositely disposed toothed racks mounted in a window casing, of a shade guide and holding device therefor, comprising a tubular member, a pair of oppositely projected spring actuated rack engaging rods journaled within said tubular member, means for operating the rods to disengage them from the toothed racks, a casing connected to the opposite ends of said tubular member and disposed to travel within the window casing, a guide wheel carried by each casing, and another guide wheel pivotally mounted in said casing and operably connected to its respective rack engaging rod, whereby the said guide wheel is projected to engage the window casing when the rack engaging rod is disengaged from its respective rack, and is held out of engagement with the window casing when the rack engaging rod is in engagement with its toothed rack.

[Claims 6 to 8 not printed in the Gazette.]

1,015,977. CURTAIN OR SHADE GUIDE. AUGUST C. RADER, Upper Montclair, N. J. Filed June 8, 1911. Serial No. 632,030. (Cl. 156—26.)



1. A shade holder and guide, having a tubular support, two spring projected brake devices mounted therein to normally protrude therefrom, a casing fixedly mounted at each end of the support and in the same relative position to its brake device, a frame mounted in said casing and capable of a tilting movement longitudinally thereof, and a series of guide engaging anti-friction devices carried by each frame and spaced apart.

2. A shade holder and guide, having a tubular support, two spring projected brake devices mounted therein, a casing rigidly mounted at each end of said support and through which said brake device protrudes, a frame mounted in said casing and capable of a longitudinal tilting movement, and a pair of guide engaging anti-frictional devices carried by each frame at its respective ends.

3. A shade holder and guide, having a tubular support, two spring projected brake devices mounted therein, a casing rigidly mounted at each end of said support and through which said brake device protrudes, the casing and brake device remaining in the same relative position, a frame tiltingly mounted in said casing, means for normally exerting a tension to hold said frame in parallel with the casing, and two wheels carried by each frame at its respective terminals.

4. A shade holder and guide, having a tubular support composed of three sections, the center section of which is provided with handle receiving slots therein, a pair of oppositely and concentrically disposed casing engaging friction devices mounted in said tubular support and normally beyond the respective ends of the support, a finger engaging means operably connected thereto and projecting through the slots of the central section of the support, a casing having longitudinally parallel walls and rigidly mounted upon the respective ends of the tubular support and through which said friction devices project, and a pair of spring actuated pivotally mounted guiding frames, one to each casing, mounted in said casings.

5. A shade holder and guide comprising a member adapted to be fastened in the free end of a shade, said member being a central tubular section, and two oppositely extending long tubular sections, said sections being connected together to form a tubular support, an outwardly open casing fixedly carried at each extreme end of the tubular support, spring protruded friction devices mounted in the tubular support and normally projecting through its respective casing centrally thereof, means mounted in the short section of the tubular support for controlling said friction devices, and a spring actuated guiding means tiltingly mounted in each of said casings, said means being of a greater length than its respective casing and having movements in parallel and at various angles to the attaching wall of the casing.

[Claims 6 to 12 not printed in the Gazette.]

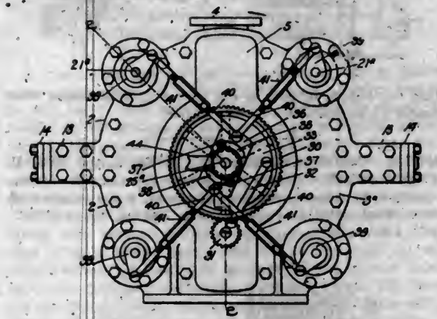
1,015,978. WATCH OR CLOCK SPRING CARRIER. MOSES M. RIGLANDER, New York, N. Y., assignor to Hammel, Riglander & Co., New York, N. Y., a Corporation of New York. Filed Sept. 21, 1911. Serial No. 650,561. (Cl. 206—70.)

1. In an article of the class described, a capsule having a base and flange, a spring coiled within said flange, an aperture formed in the base adjacent to the flange and an enlargement or projection formed at the end of the spring and extending transversely thereof, the lower end of said enlargement passing into said aperture.

2. In an article of the class described, the combination of a capsule having a base and flange, an aperture in the base adjacent the flange and an ejecting disk located within the flange and resting on the base and having an aperture adapted to be alined with the aperture in the base.

1,015,979. ROTARY ENGINE. WILLIAM L. RIPSOM, Denver, Colo. Filed June 27, 1911. Serial No. 635,608. (Cl. 121—71.)

1. In a rotary engine, a casing having an inlet for motive fluid, diametrically opposite abutment-chests, ports at opposite sides of the latter and passages connecting said ports separately with the said inlet, rotary valves disposed to control the flow of fluid through the said passages, a rotor fitted in said casing and having peripheral pockets formed with faces to receive the impact of fluid entering the casing through its ports, abutments slidable in the chests and adapted to enter the pockets in the rotor, and means for the introduction of steam into the chests to drive the abutments in engagement with the rotor, the said valves being alternately arranged to admit fluid into the casing and to exhaust spent fluid from the same.



2. In a rotary engine, a casing having an inlet for motive fluid, diametrically opposite abutment-chests, ports at opposite sides of the latter and passages connecting said ports separately with the said inlet, rotary valves disposed to control the flow of fluid through the said passages, a rotor fitted in said casing and having peripheral pockets formed with faces to receive the impact of fluid entering the casing through its ports, abutments slidable in the chests and adapted to enter the pockets in the rotor, and means for the introduction of steam into the chests, to drive the abutments into engagement with the rotor, the said valves being alternately arranged to admit fluid into the casing and to exhaust spent fluid from the same.

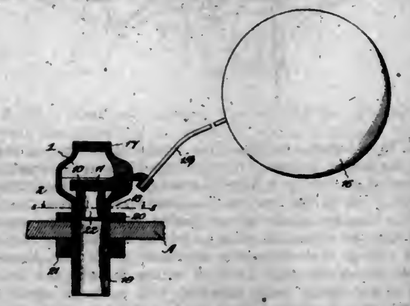
3. In a rotary engine, a casing having an inlet for motive fluid, diametrically opposite abutment-chests, ports at opposite sides of the latter and passages connecting said ports separately with the said inlet, a rotor fitted in the said casing and having peripheral pockets formed with faces to receive the impact of fluid entering the casing through its ports, abutments slidable in the chests and adapted to enter the pockets in the rotor, rotary valves disposed to control the flow of fluid through the said passages and each provided with a peripheral slot in communication with the atmosphere, and means for converting the rotary movement of the rotor into an oscillatory movement of the valves, the said valves being arranged with relation to the orifices of the respective passages alternately to admit fluid to the ports with which the latter are connected and to exhaust fluid from the casing through their peripheral slots.

4. In a rotary engine, a casing having an inlet for motive fluid, diametrically opposite abutment-chests, ports at opposite sides of the latter and passages connecting said ports separately with the said inlet, a rotor fitted in the said casing and having peripheral pockets formed with faces to receive the impact of fluid entering the casing through its ports, abutments slidable in the chests and adapted to enter the pockets in the rotor, rotary valves disposed to control the flow of fluid through the said passages and each provided with a bore open at one of its ends and a radial slot connected with said bore and adapted to register with the orifice of the respective passages, and means for converting the rotary movement of the rotor into an oscillatory movement of the valves, the said valves being disposed with relation to the orifices of the respective passages, alternately to admit fluid to the ports with which the latter are connected and to exhaust fluid from the casing through their bores.

5. In a rotary engine, a casing having an inlet for motive fluid, diametrically opposite abutment-chests, ports at opposite sides of the latter and passages connecting said ports separately with the said inlet, a rotor fitted in the said casing and having peripheral pockets formed with faces to receive the impact of fluid entering the casing through its ports, abutments slidable in the chests and adapted to enter the pockets in the rotor, rotary valves disposed to control the flow of fluid through the said passages, and each provided with a peripheral slot in communication with the atmosphere, the said valves being arranged with relation to the orifices of the respective passages, alternately to admit fluid to the ports with which the latter are connected and to exhaust fluid from the casing through their peripheral slots, means for converting the rotary movement of the rotor into an oscillatory movement of the said valves, and means for reversing the position of the latter with relation to the orifices of the respective passages.

[Claims 6 to 10 not printed in the Gazette.]

1,015,980. TANK-VALVE. CHARLES A. ROBBINS, Dixon, Ill. Filed Mar. 27, 1911. Serial No. 617,075. (Cl. 137—104.)



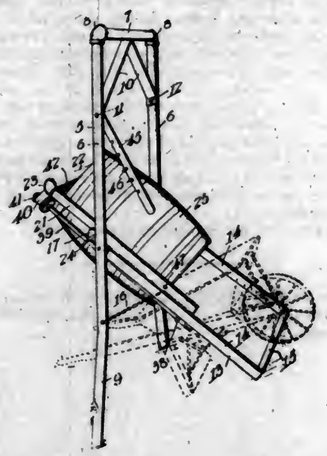
The combination of a valve casing having an inlet and an outlet, and comprising separably connected sections having portions of their contacting edges provided with registering recesses to form an opening from the interior of the casing to the outside thereof, and said contacting edges having registering recesses extending laterally from the first-mentioned recesses; and a valve member having a stem passing through the aforesaid opening, said stem being provided with trunnions which are mounted in the laterally extending recesses, and said valve member having a valve piece within the casing to engage the seat.

1,015,981. CONCRETE-MIXER. CARL E. ROBERTS, Atchison, Kans. Filed Feb. 16, 1911. Serial No. 609,045. (Cl. 83—73.)

1. In a mixing machine, the combination of a folding frame structure comprising a main supporting frame adapted to be set up on one end as legs, a secondary frame pivoted to the main frame and adapted to be swung out therefrom to also form supporting legs, said secondary frame being foldable within the main frame, a receptacle-carrying frame pivotally hung within the main frame, a receptacle, an agitator mechanism carried with said receptacle carrying frame, and means for holding the receptacle-carrying frame at different angles.

2. In a mixing machine, the combination with a supporting frame, a tilting frame pivotally mounted thereon, a receptacle having a bottom arranged within the tilting frame, a rod having one end connected to the tilting frame and having its other end projecting through the bottom and into the receptacle, a sleeve loosely mounted on the rod and rigidly secured to the receptacle, a sprocket wheel rotatably mounted on the rod and fixedly secured to the receptacle, an operating rod supported by the tilting

frame, a sprocket wheel fixedly mounted on the operating rod and arranged in alinement with the first mentioned sprocket wheel, a sprocket chain connecting the said sprocket wheels, and means for actuating the said operating rod.



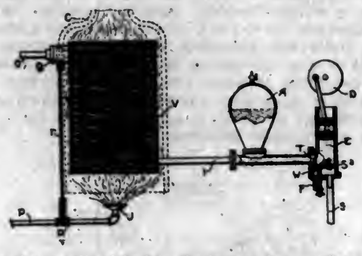
3. In a mixing machine, the combination with a supporting frame, a tilting frame pivotally mounted thereon, a receptacle having a bottom arranged within the tilting frame, a rod having one end connected to the tilting frame, and having its other end projecting through the bottom and into the receptacle, said projecting end being provided with a head, a sleeve loosely mounted on the rod, one end of the sleeve abutting the head of the rod and the other end of the sleeve being provided with a flange which is fixedly secured to the bottom of the receptacle, and means carried by the tilting frame for rotating the receptacle on the rod.

4. In a mixing machine, the combination with a supporting frame, a tilting frame pivotally mounted thereon, a receptacle having a bottom arranged within the tilting frame, a rod having one end connected to the tilting frame, and having its other end projecting through the bottom and into the receptacle, said projecting end being provided with a head, a sleeve loosely mounted on the rod, one end of the sleeve abutting the head of the rod and the other end of the sleeve being provided with a flange which is fixedly secured to the bottom of the receptacle, a sprocket wheel rotatably mounted on the rod and fixedly secured to the receptacle, a bearing block on the rod intermediate the tilting frame and the sprocket wheel, and means carried by the tilting frame and operatively connected to the sprocket wheel for rotating the receptacle.

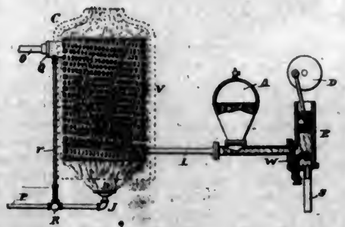
1,015,982. METHOD OF REGULATING AND CONTROLLING THE PRODUCTION OF STEAM. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed Aug. 2, 1897, Serial No. 646,752. Divided and this application filed Nov. 17, 1902. Serial No. 131,642. (Cl. 122—448.)

1. The method of generating vapor which consists in supplying liquid to a generator and fuel to a burner, regulating the supply of liquid to the generator in accordance with the pressure of the vapor generated, and regulating the supply of fuel to the burner in accordance with the temperature of said vapor.

2. The method of generating vapor which consists in supplying liquid to a generator and fuel to a burner, regulating the supply of liquid to the generator in accordance with changes in pressure of the vapor generated, bypassing the excess liquid from the generator, and regulating the supply of fuel to the burner in accordance with changes in temperature of the vapor.



1,015,983. REGULATION AND CONTROL OF STEAM PRODUCTION. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 2, 1897. Serial No. 646,752. (Cl. 122—448.)



1. The combination, of a steam-generator of the flasher type with a regulator for the fuel-supply governed by the temperature of the steam in said generator, and a regulator for the water-supply governed by the pressure of steam in said generator, substantially as and for the purpose specified.

2. The combination of a steam-generator of the flasher type, a burner for heating the same, means for supplying fuel to the burner, means for supplying water to the generator, a thermostatic regulator for governing the fuel-supply which regulator is inclosed in the generator, and a regulator for governing the water-supply which regulator is connected with the generator and operated by the steam-pressure therein, substantially as and for the purpose specified.

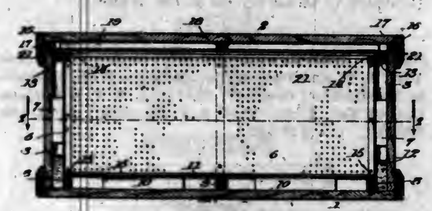
3. The combination of a steam-generator of the flasher type, a source of water-supply, means for forcing the water from the supply to the steam-generator, a hydrocarbon-burner for heating the steam-generator, a source of hydrocarbon supply connected with the burner, a thermostatic regulator and a pressure-regulator connected with the steam-generator, the thermostatic regulator governing the supply of hydrocarbon to the burner and the pressure-regulator governing the supply of water to the boiler, substantially as described.

4. In combination, a flash boiler, a water pump, a regulator for the water supply that is controlled by the pressure of the vapor in the boiler, an air chamber that is connected to the pump and the boiler, a burner, and a regulator for the burner which is governed by the temperature of the vapor in the boiler.

5. In combination, a boiler for generating vapor pressure, a means for delivering fluid thereto, a fire chamber, a means for delivering fuel thereto, and automatic means for regulating the supply of fluid to the boiler and fuel to the fire chamber, the said means acting to correlate the said supplies in accordance with the demands made on the boiler.

[Claim 6 not printed in the Gazette.]

1,015,984. INSECT-PROOF CHEST. GEORGE R. WILSON, Newport News, Va. Filed Apr. 6, 1911. Serial No. 619,294. (Cl. 206—10.)



1. An insect proof chest comprising a casing having corner posts provided with vertical grooves, strips secured to the inner face of said casing, perforated sheets arranged in the grooves of said corner posts bearing against said strips forming a chamber surrounding the inner walls of said casing, an insect repelling substance arranged within said chamber, and detachable strips mounted on said corner posts for closing said chamber.

2. A chest having corner posts arranged therein provided with vertical grooves, strips secured to the inner face of said chest, perforated sheets arranged on said strips extending into said grooves of the corner posts, an insect repelling substance arranged within the chamber formed by said perforated sheets, and cover strips arranged on said corner posts having rabbeted edges to receive the upper edges of said sheets.

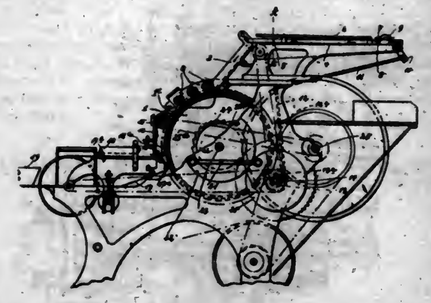
3. An insect proof chest comprising a body and a cover, the inner walls of said body and cover having strips secured thereto, corner posts arranged in said body and provided with vertical grooves in alinement with the outer faces of the strips on the sides and ends of said body, perforated sheets arranged on said strips forming a chamber, the sheets on the sides and ends of said body extending into the grooves of said posts, an insect repelling substance arranged in said chamber formed by said sheets, and cover strips arranged on the corner posts having cut out portions to receive the upper edges of the perforated sheets carried by the sides and ends of the body.

4. An insect proof chest comprising a body and cover therefor, corner posts arranged in the body of said chest provided with vertical grooves, strips arranged at right angles to each other on the inner faces of said body, perforated sheets arranged in the grooves of said posts and resting upon said strips, the bottom of said chest and the top of said cover being provided with strips, perforated sheets arranged on said strips, said strips and posts and perforated sheets forming a chamber entirely surrounding the inner faces of said chest, means for closing the chamber formed by the vertical perforated sheets, and an insect repelling substance arranged in said chambers.

1,015,985. BREAD-ROLL MACHINE. ALFRED ADELT, Breslau, Germany, assignor of one-fifth to Josef Becker and two-fifths to Curt Becker, Breslau, Germany. Filed Apr. 3, 1911. Serial No. 618,735. (Cl. 107—9.)

1. In a bread-roll machine the combination of a drum, means for imparting intermittent rotation to said drum, kneading rollers co-acting with said drum, means for feeding dough between said kneading rollers and drum, a continuously kneading belt positioned so that the dough kneaded by said kneading rollers passes between said kneading belt and drum in contact with both, and a continuously driven stripping belt, part of which leads away from the drum and another part of which is positioned adjacent to the drum near the delivery end of the said kneading belt and moves in the opposite direction to the drum, so that the leading and trailing ends of the dough are rolled together by said belts.

2. In a bread-roll machine the combination of a drum, means for imparting intermittent rotation to said drum, kneading rollers co-acting with said drum, a dough conveying belt, a channel for delivering dough from said conveyer belt to said drum and kneading rollers, a cover hinged above said conveyer belt so that it bears upon dough traveling on said belt to said channel, a continuously kneading belt positioned so that the dough kneaded by said kneading rollers passes between said kneading belt and drum in contact with both, and a continuously driven stripping belt, part of which leads away from the drum and another part of which is positioned adjacent to the drum near delivery end of the said kneading belt and moves in the opposite direction to the drum, so that the leading and trailing ends of the dough are rolled together by said belts.



3. In a bread-roll machine the combination of a drum, means for imparting intermittent rotation to said drum, kneading rollers co-acting with said drum, a dough conveying belt, a channel for delivering dough from said conveyer belt to said drum and kneading rollers, a cover hinged above said conveyer belt, so that it bears upon dough traveling on said belt to said channel, rollers placed in the path of the dough traveling on said conveyer belt toward said cover, said rollers being rotated by the belt in the opposite direction to the latter, means for temporarily removing the last-mentioned rollers from the dough path at intervals, a continuously kneading belt positioned so that the dough kneaded by said kneading rollers passes between said kneading belt and drum in contact with both, and a continuously driven stripping belt, part of which leads away from the drum and another part of which is positioned adjacent to the drum near the delivery end of the said kneading belt and moves in the opposite direction to the drum, so that the leading and trailing ends of the dough are rolled together by said belts.

4. In a bread-roll machine the combination of a drum, means for imparting intermittent rotation to said drum, kneading rollers co-acting with said drum, means for feeding dough between said kneading rollers and drum, a continuously kneading belt positioned so that the dough kneaded by said kneading rollers passes between said kneading belt and drum in contact with both, a continuously driven stripping belt, part of which leads away from the drum and another part of which is positioned adjacent to the drum near the delivery end of the said kneading belt and moves in the opposite direction to the drum, so that the leading and trailing ends of the dough are rolled together by said belts, and a shaping member hinged above said stripping belt where the latter leads away from the drum, so that said member bears by gravity on the rolled dough traveling on said stripping belt.

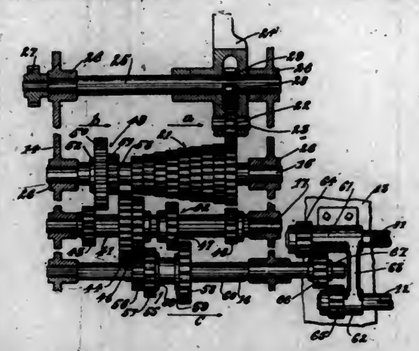
5. In a bread-roll machine the combination of a drum, means for imparting intermittent rotation to said drum, kneading rollers co-acting with said drum, said drum and kneading rollers being coned to form valleys therein and having circular ribs at the centers of said valleys, means for feeding dough between said kneading rollers and drum, a continuously kneading belt positioned so that the dough kneaded by said kneading rollers passes between said kneading belt and drum in contact with both, and a continuously driven stripping belt, part of which leads

adapted to contact with the external periphery of the wick

cessed to fit said ribs and adapted to be raised and lowered

away from the drum and another part of which is positioned adjacent to the drum near the delivery end of the said kneading belt and moves in the opposite direction to the drum, so that the leading and trailing ends of dough are rolled together by said belts.

1,015,986. SPEED-CHANGING MECHANISM. HERBERT L. BEELER, Cincinnati, Ohio, assignor to The John B. Morris Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 25, 1911. Serial No. 651,116. (Cl. 74—58.)



1. In combination, a fixedly positioned countershaft, a plurality of groups of spaced-apart gears thereon, and laterally slidable gear-sleeves between which said fixedly positioned countershaft is operatively located, said laterally slidable gear-sleeves comprising gears arranged for operative connection with said respective plurality of groups of spaced-apart gears.

2. In combination, a fixedly positioned countershaft, a plurality of groups of spaced-apart gears thereon, and laterally slidable gear-sleeves between which said fixedly positioned countershaft is operatively located, said laterally slidable gear-sleeves comprising gears arranged for operative connection with said respective plurality of groups of spaced-apart gears, a nest of diversely-sized gears whose rotary axes are coincident with the rotary axis of one of said gear-sleeves, and a tumbler-gear arranged to mesh the respective gears of said nest of diversely-sized gears.

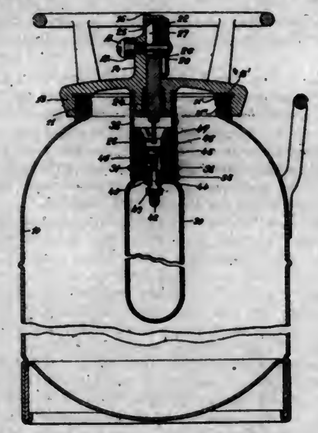
3. In combination, a plurality of intermediate groups of spaced-apart gears having coincident rotary axes, a laterally slidable group of diversely-sized driving gears having selective operative connection with one of said first-named groups, a pair of operated shafts, a gear for each of said shafts, and a pair of slidable gear elements, one of which comprises a plurality of diversely-sized gears having selective operative connection with the other of said first-named groups, and the other of which has selective operative connection with said respective gears for said operated shafts.

4. In combination, a plurality of intermediate groups of spaced-apart gears having coincident rotary axes, a cone-of-gears and a laterally slidable group of diversely-sized driving gears driven by said cone-of-gears, said laterally slidable group of gears having selective operative relation with one of said first-named groups, a pair of operated shafts, a gear for each of said shafts, and a pair of slidable gear elements, one of which comprises a plurality of diversely-sized gears having selective operative relation with the other of said first-named groups, and the other of which has operative relation with said respective gears for said operated shafts.

5. In speed changing mechanism, the combination of a driving shaft, a driven shaft, and a pair of spaced-apart gear-groups, a slidable group of diversely-sized gears rotating with said driving shaft and having selective operative connection with one of said first-named gear-groups and a slidable group of diversely-sized gears rotating with said driven shaft and having selective operative connection with the other of said first-named gear-groups.

[Claims 6 to 18 not printed in the Gazette.]

1,015,987. FIRE-EXTINGUISHER. JOSEPH BIJUR, New York, N. Y., and JOHN M. JOY, Boonton, N. J., assignors to The Durafort Company, New York, N. Y., a Corporation of New York. Filed Nov. 12, 1910. Serial No. 592,010. (Cl. 169—12.)



1. The combination of the tank, cover, and capsule, a perforable seal and a valve for the said capsule, a plunger for piercing said seal and operating the valve, a lever and a cam for operating the plunger, said cam being of shape to lock the plunger against endwise motion when holding the valve open.

2. The combination of the tank, cover, and capsule, a perforable seal and a valve for the said capsule, a plunger for piercing said seal and operating the valve, a lever and a cam for operating the plunger, said cam acting within a recess in the said plunger.

3. The combination of the tank, cover therefor, means for securing a capsule to the cover, a plunger guided in the said cover, a cam set within a recess in the said plunger, a lever for operating the cam and a housing on which the lever is pivoted and which protects the said cam.

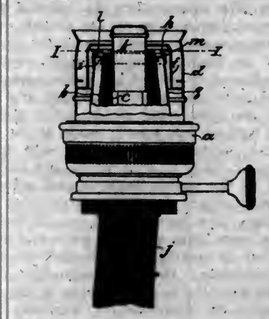
4. The combination of the tank, cover therefor, a sleeve screw-threaded to said cover, a plunger extending through the said cover and within the sleeve, a stuffing-box within the sleeve around said plunger, a capsule having laterally projecting pins, and coöperating slots in said sleeve, and a spring-retaining device therefor for locking the pins in said slots and securing the capsule to the sleeve.

5. An extinguisher having a tank, a cover, a capsule provided with one or more pins with rounded or inclined ends, a sleeve to which the capsule is detachably secured, said sleeve having one or more slots for said pins, and a spring-retaining device for locking the pins in said slots which engages the said inclined end of one of the pins and is thereby adapted to be actuated by said pin under force.

[Claims 6 to 8 not printed in the Gazette.]

1,015,988. ROUND VAPOR-BURNER FOR HEATING AND LIGHTING PURPOSES. CARL BLANKENBURG, Leipzig-Sellershausen, Germany, assignor to Company Hugo Schneider Aktiengesellschaft, Leipzig, Germany. Filed Sept. 16, 1907. Serial No. 393,031. (Cl. 67—38.)

1. A vapor burner comprising an inner and outer wick tube, a vertically adjustable wick between said tubes, a frusto-conical guide for said wick, said guide terminating above the upper edge of said outer wick tube and being adapted to contact with the external periphery of the wick below the upper edge of the wick, and a perforated tubular support for said guide.

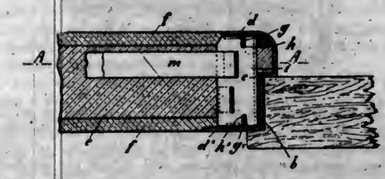


2. A vapor burner comprising an inner and outer wick tube, a vertically adjustable wick between said tubes, a frusto-conical guide for said wick, said guide terminating above the upper edge of said outer wick tube and being adapted to contact with the wick, and a perforated supporting tube having an inwardly turned flange at its upper end carrying said guide, so as to provide an insulating air-space between said tube and outer wick tube and deliver air to the wick between the upper edges of said guide and outer wick tube.

3. A vapor burner comprising an inner and outer wick tube, a wick between said tubes, a frusto-conical guide for said wick above the level of the top of said outer tube, having as a support a perforated tube so that an insulating air space is provided between said guide and said outer wick tube, in which the upward flow of air is throttled and diverted in the flaming portion of said wick, and a ring projecting above the said perforated tube and forming a gage for the wick.

4. A vapor burner having in combination, an outer and an inner wick, a wick between said tubes, a perforated isolator tube disposed around the outer wick tube and through the perforations in which the air for combustion passes, a flange on said perforated tube projecting inwardly and adapted to contact with the outer cylindrical surface of the wick at a point below the upper end of the wick and above the upper end of the outer wick tube and a ring projecting above the level of the said flange and encircling the exposed part of the wick.

1,015,989. DOOR-FRAME. THEODOR BUCHHOLZ, Berlin, Germany, assignor to The Firm of Faconeisen-Walzwerk L. Mannstaedt & Cie., Act. Ges., Kalk, near Cologne, Germany. Filed May 31, 1911. Serial No. 630,473. (Cl. 189—46.)



1. A metallic door frame provided with a pair of vertical ribs, in combination with a bracing cross-bar of solid construction, extending transversely from one jamb of said door frame to the other, recessed in its ends to permit adjusting said bar up or down in said frame on said ribs without separation, thus varying the point at which said frame will be braced.

2. A metal bar of door frame form and U-shape in cross section provided with vertical ribs, in combination with bracing cross-pieces of solid construction, extending transversely from one jamb of said frame to the other, recessed to fit said ribs and adapted to be raised and lowered in said frame while engaging said ribs.

3. In a door-frame consisting of a bar of metal of U-section, bent into door-frame shape and having a continuous rib inside, a cross-piece of U-section having slots engaged by said rib to guide said piece and provided with leaves bearing against the sides of the inside of the said frame.

4. In a door-frame consisting of a bar of metal of U-section, bent into a door frame shape and having a continuous rib inside, a cross-piece of U-section having leaves adapted to bear against the sides of the inside of the frame and slots adapted to receive the ends of holdfasts projecting into the same from the wall intended for receiving the door.

5. In a door frame consisting of a bar of metal of U-section, bent into door frame shape and having a continuous rib inside, an extensible cross-piece of U-section having a slot adapted to receive the end of a holdfast projecting into the same from the wall intended for receiving the door.

1,015,990. PIPE-COUPLING. HORACE W. CLARK, Mattoon, Ill. Filed Jan. 16, 1911. Serial No. 603,025. (Cl. 137—28.)

1. In pipe couplings the combination with a pipe member, a frame rigidly secured near the free end of said pipe member and extending beyond the said end, of another pipe member carrying a shelf near its free end, the said frame of the said first named pipe member being designed to rest upon the said shelf of the second named pipe member in such manner as to permit and maintain the register of the free ends of said pipe members and means for forcing the said pipe members into binding contact with each other.

2. In a pipe coupling the combination with a pipe member, a frame rigidly attached near the free end thereof and projecting beyond the said free end, of another pipe member carrying a shelf near its free end which shelf is adapted to receive the said frame and hold the free ends of the said pipe members in register, and means for forcing the said pipe members into binding contact with each other, consisting of a screw passing laterally through the said frame and engaging the said shelf bearing pipe member.

3. In a pipe coupling the combination with a pipe member and a frame rigidly attached to the free end thereof and projecting beyond the said free end, of another pipe member provided near its end with an elbow, a shelf fitted upon the outer face of the said elbow which shelf is designed to receive the said frame of the first named pipe member and bear the weight thereof and to hold the said pipe members in register with each other, and a screw passing laterally through the said frame and adapted to engage the said shelf bearing pipe member whereby the said pipe members may be driven into binding contact with each other.

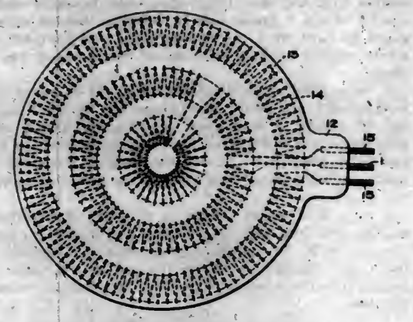
1,015,991. ELECTRIC HEATING-PAD. WALLACE S. CLARK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 28, 1910. Serial No. 584,222. (Cl. 219—46.)

1. An electric heater comprising a resistance conductor embedded in a body of flexible water-proof insulating material.

2. An electric heater comprising a resistance conductor embedded in a body of flexible rubber.

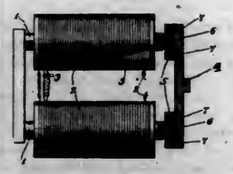
3. An electric heater comprising two sheets of flexible rubber secured together with a resistance conductor embedded between them.

4. An electric heater comprising a resistance conductor embedded between two sheets of rubber which are vulcanized together.



5. An electric heater comprising a support, a resistance conductor wound thereon, and two sheets of rubber one on each side of the support vulcanized together so as to entirely inclose the support.

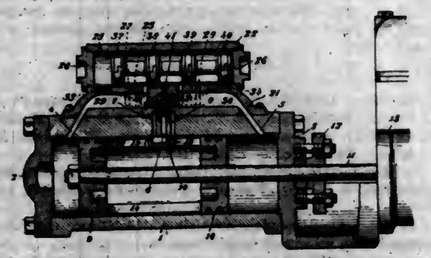
1,015,992. ELECTROMAGNET. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed May 21, 1909. Serial No. 497,448. (Cl. 175—21.)



1. The combination of a slow release magnet having a magnetic engaging surface, an armature for said magnet also having a magnetic engaging surface and a non-magnetic insert intermediate the extremities of the magnetic path of said armature, whereby the wearing of the engaging surface will not affect said insert?

2. The combination of a core and its armature having magnetic engaging surface, a coil for energizing said core and armature, a second coil upon one of the parts closed upon itself for retarding the magnetic changes in said parts and a non-magnetic insert in one of said parts intermediate its engaging surfaces.

1,015,993. STEAM-ENGINE. ELIAS W. CONKELL, Canton, Ohio, assignor of one-fourth to Jacob J. Hein and one-fourth to William A. Hammerly, Canton, Ohio. Filed Feb. 8, 1911. Serial No. 607,254. (Cl. 121—4.)

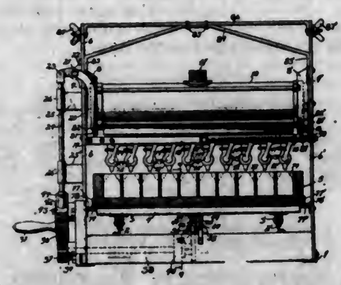


In a device of the character described two engines arranged side by side, each engine having a cylinder, a spaced-headed piston in said cylinder, said cylinder provided with ports for conducting piston-actuating steam into and from said cylinder, said cylinder also provided with auxiliary ports intermediate the heads of said piston, a steam-actuated piston-valve on the outside of said cylinder, said piston-valve connected with the said ports in said cylinder by main steam-conducting passages, said piston-valve adapted to control the piston-actuating steam supply to and from said cylinder through said main passages, means for conducting steam under pressure into said cylinder between the spaced heads of the piston, an auxiliary valve located wholly within said cylinder between the spaced heads of said piston and adapted to be bodily moved by the spaced heads of said piston to open and close said auxiliary ports in said cylinder to control the steam supply from between said spaced heads through said auxiliary ports, said auxiliary ports and said piston-valve connected by auxiliary steam-conducting passages, means for connecting the steam-actuated piston-valve of each engine with the auxiliary ports in the cylinder of the other engine by supplemental, auxiliary steam-conducting passages, means for opening and closing said auxiliary steam-conducting passages, and means for opening and closing said supplemental, auxiliary steam conducting passages.

1,015,994. PROCESS FOR THE MANUFACTURE OF THE FATTY ACIDS FROM THEIR ESTERS. WILHELM CONNSTEIN, Charlottenburg, Germany, assignor to The Firm of Vereinigte Chemische Werke Actiengesellschaft, Charlottenburg, Germany. Filed Dec. 26, 1905. Serial No. 293,214. (Cl. 87—4.)

The process of decomposition of fatty acid esters into their acids and alcohols, said process consisting in subjecting said esters, in the presence of neutral salts of the heavy metals and of acids, to the action of fat decomposing ferments present in oil- or fat-bearing plants in such amount as is insufficient for causing the complete decomposition alone.

1,015,995. BOTTLE-FILLING MACHINE. OREN COOLEY, Toronto, Ontario, Canada, assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Nov. 13, 1908. Serial No. 462,449. (Cl. 226—21.)



1. In a bottle-filling machine, the combination with a movable carrier, of mechanism for moving said carrier to predetermined positions, automatic means for returning said carriage to initial position and means for rendering said moving-mechanism inoperative when the carrier reaches the limit of its stroke to permit the return of said carrier to initial position.

2. In a bottle-filling machine, the combination with a carrier, of mechanism for moving the same, automatically operated means for holding part of said moving mechanism inoperative when the carrier reaches the end of its travel and while the carrier is being returned to initial position, and an appliance for restoring said part to normal position upon the carrier reaching such initial position.

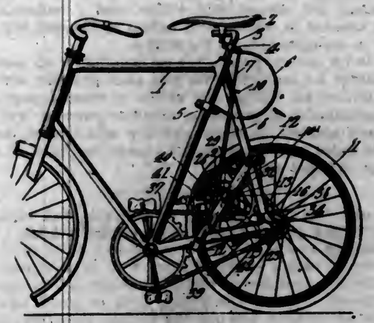
3. In a bottle-filling machine, the combination with a carrier, of apparatus for moving said carrier, mechanisms for locking said carrier in predetermined positions, automatic means for returning the carrier to initial position and appliances for automatically rendering both the locking mechanism and the moving apparatus inoperative during the return movement of the carrier.

4. In a bottle-filling machine, the combination with a carriage, of a ratchet rack connected thereto, a pawl, a spring pressing said pawl against said rack, mechanism for actuating said pawl to transmit motion to said carriage, a latch, an additional spring tending to move said latch in a predetermined direction, an extension from said pawl, a cam connected to said carriage at or near one end thereof to engage said extension to depress the pawl out of contact with said rack when the carriage reaches the limit of its travel to permit the return thereof to initial position, and a device at or near the other end of said carriage to unlock said latch and restore the pawl to operating position when the carriage reaches such initial position.

5. In a bottle-filling machine, the combination with a carriage, of a ratchet rack connected thereto, a push pawl engaging said rack, apparatus for actuating said pawl, a locking rack connected to said carriage, a locking pawl for engaging said last-named rack, and an extension from said push pawl for moving said locking pawl out of locking position.

[Claims 6 to 21 not printed in the Gazette.]

1,015,996. PROPELLING MECHANISM FOR BICYCLES AND THE LIKE. HERBER S. CORBITT, Norfolk, Va. Filed Sept. 12, 1911. Serial No. 648,963. (Cl. 208—23.)



1. A driving attachment for bicycles and the like comprising a power spring, saddle operated means for winding the spring, means for holding said spring at a predetermined tension, a driving element adapted to be operated by the spring when wound above its normal tension, and means for holding said element against rotation during the winding operation.

2. A driving attachment for bicycles and the like comprising a power spring, saddle operated means for winding the spring, adjustable means for holding the spring normally at any predetermined tension, a driving element adapted to be operated by the spring when wound to more than its normal tension, and means for holding said element against rotation during the winding operation.

3. A propelling attachment for bicycles and the like, comprising a base, means for attaching the same to a bicycle frame, a power spring, means operated by the movement of the bicycle seat in one direction relative to the frame, for winding the spring, means for maintaining the spring normally at a predetermined tension, a driving element adapted to be operated by the spring after being wound to more than its normal tension, and means for holding said element against rotation during the winding operation.

4. A propelling attachment for bicycles and the like comprising a nonrotatable shaft, means for securing the same to the frame of a bicycle, a barrel mounted for rotation upon the shaft, a power spring connected at one end to the barrel, a driving element mounted for rotation upon the shaft and connected to the other end of the spring, means for holding said element against rotation in one direction upon the shaft, means operated by the movement of the saddle in one direction for rotating the barrel to wind the spring, means coöperating with the barrel for holding the same against rotation in one direction, said spring constituting means for rotating the driving element subsequent to the winding of the spring to more than a predetermined tension.

5. A propelling attachment for bicycles and the like, comprising a nonrotatable shaft, means for adjustably and detachably connecting it to the frame of a bicycle, a revoluble drive element mounted on the shaft, means for holding said element against rotation in one direction upon the shaft, a power spring connected at one end to said element, a barrel mounted for rotation on the shaft and connected to the other end of the spring, a spring supported saddle post mounted for reciprocation, a gear mounted for rotation upon the barrel in one direction and with the barrel in the opposite direction, a rack engaging the gear, a connection between the rack and saddle post, and means for holding the spring normally at a predetermined tension prior to the winding thereof.

[Claim 6 not printed in the Gazette.]

1,015,997. OIL-BURNER. JOSEPH A. DANIEL, Comanche, Tex. Filed Mar. 18, 1911. Serial No. 615,875. (Cl. 158—28.)

1. In an oil stove, a cylindrical burner comprising upper and lower burner members, the walls of which are provided with coinciding apertures, the said lower burner member having partitions therein with recesses in their upper edges, a trough seated in the recesses and partially supported by the partitions, and means in the lower burner member for supporting one end of the trough, one of the partitions having a port therein for permitting oil to flow from one compartment to the other of the lower burner member.

2. In an oil burner, a bottom burner member having transversely disposed recessed partitions therein, an upper burner member supported on the edges of the first said burner member, the lateral edges of the said members having recesses which coincide to form openings when the burner members are assembled, the bottom burner member projecting forwardly beyond the upper burner member, a trough having a tubular portion intermediate its length seated in the recesses of the partitions, a bowl at the outer end of the trough to receive the oil, and serrated side flanges on the trough extending laterally into proximity with the inner walls of the burner members.

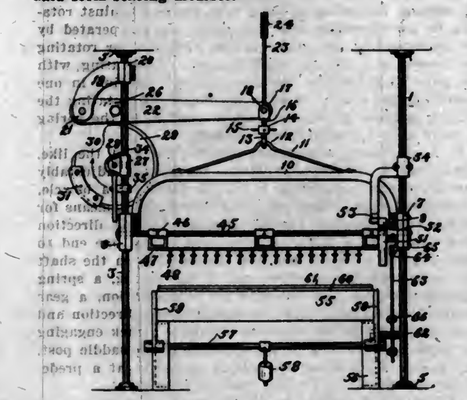
3. In an oil burner, two semi-cylindrical sections having their lateral edges in contact, said edges being recessed to form openings, a trough seated in one of said sections, said trough having a tubular portion intermediate its length, a bowl at its outer end to receive oil, a serrated flange on each of its sides, and a wing on each of said sides.

1,015,998. DIPPING-MACHINE. JOHN W. DRUMMOND, Akron, Ohio. Filed Mar. 24, 1911. Serial No. 616,062. (Cl. 18—24.)

1. A dipping machine comprising a reciprocally-movable form-bearing member, a tank containing a solution

4. In combination with a closet basin, a horizontal re-

constituting a bath into which the forms are adapted to dip, a closure device for said tank and means operative only when said form-bearing member is shifted and arranged to move said closure member to its open or closed position on the approach and recession respectively of said form-bearing member.



2. A dipping machine comprising a reciprocally-movable form-bearing member, a tank containing a solution into which the forms are adapted to dip, a pair of plates constituting a closure device for said tank, and means operative only when said form-bearing member is shifted and arranged to move said plates to their open position on the approach of said member and to return them to their closed position on the recession of said member.

3. A dipping machine comprising a reciprocally-movable form-bearing member, a tank containing a bath into which the forms are adapted to dip, a pair of plates arranged to constitute a closure device for said tank, a pair of rocking-arms connected with said plates, means connected with said rocking-arms operating to move said plates in unison with the movement of said form-bearing member to cause said plates to move to their open position on the approach of said form-bearing member and to move them to their closed position on the recession of said member.

4. A dipping machine comprising a reciprocally-movable form-bearing member, a tank containing a solution constituting a bath into which the forms are adapted to dip, a plate constituting a closure device for said tank, a rocking-arm connected to said plate, a counterbalance for said closure device, and means connected with said form-bearing member and engaging said rocking-arm operating to move said closure member to its open position upon the approach of said form-bearing member and arranged to return said closure device to its closed position on the recession of said member.

5. A dipping machine comprising a reciprocally-movable form-bearing member, a tank containing a solution constituting a bath into which the forms are adapted to dip, a plate constituting a closure device for said tank, an arm supporting said plate, a shaft on which said arm rocks, a counter-weight for said device and means acting in unison with the movements of said form-bearing member to shift said closure member.

[Claims 6 to 13 not printed in the Gazette.]

1,015,999. PENDENT SNAP-SWITCH. FRANK C. DE RAMEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 11, 1910. Serial No. 566,359. (Cl. 175—287.)

1. In an electric switch, the combination of a supporting plate carrying a sleeved bearing, a switch shifter having lips on its periphery and a shaft journaled in said sleeve member, two spring controlled latches alternately engaging with the lips of said shifter, a helical spring carried by said sleeve member and adapted to engage said shifter, and a reciprocating actuator adapted to tension said helical spring and trip the latch in engagement with the shifter.

2. In an electric switch, the combination of a supporting plate having stops and a sleeved bearing, a switch shifter having lips on its periphery and an arm alternately engaging with said stops, a shaft for said shifter journaled in said sleeve member, two spring controlled latches alternately engaging with the lips of said shifter, a helical spring supported by said sleeve member and adapted to engage the arm of said shifter, and a reciprocating actuator having an arm adapted to tension said helical spring and a side projection adapted to trip the latch in engagement with the shifter.

3. In an electric switch, the combination of a supporting plate provided with a sleeved bearing and a circular slot, a switch shifter having lips on its periphery and an arm alternately engaging with the end walls of said slot, a shaft for said shifter journaled in said sleeve member, two latches pivoted on said plate and adapted to alternately engage the lips of said shifter, a spring passing around said shaft and engaging the outer ends of said latches, a helical spring carried by said sleeve member and adapted to engage the arm of said shifter, and a reciprocating shaft adapted to tension said helical spring and trip the latch in engagement with the shifter.

4. In an electric switch, the combination of an oscillating shifter for supporting the pole piece provided with an arm, latches for holding said shifter in extreme positions, a longitudinally reciprocating actuator provided with an arm and adapted to engage and trip said latches, and a double ended spring adapted to engage the arms of said shifter and said actuator.

1,016,000. HINGE. BRANDT V. B. DIXON, New Orleans, La. Filed June 22, 1911. Serial No. 634,706. (Cl. 16—104.)

1. In a hinge, the combination of a leaf carrying a pintle, a second leaf having a curved extension to partially embrace said pintle, and a stem mounted to turn in said second leaf and having a part adapted to interlock frictionally with said extension behind the pintle when the parts are in assembled position, whereby the pintle is held seated in said extension, the separation of the leaves being permitted by a turning movement of the stem.

2. In a hinge, the combination of a leaf carrying a pintle, a second leaf having a curved extension to partially embrace said pintle, said extension having a substantially straight terminal portion arranged to project through and beyond a space between the first named leaf and the pintle, and a stem mounted to turn in said second leaf and carrying means adapted to interlock frictionally with the terminal portion of the extension behind the pintle, to hold the latter detachably seated in said extension.

3. The combination of adjacent but separate members, a hinge leaf applied to one of said members and carrying a pintle spaced from the body of the leaf, said member being mortised behind the pintle, a second hinge leaf applied to the other member and having a curved extension partially embracing the pintle and extending through and beyond the space between the latter and the first named leaf, a stem extending through and mounted to turn in said second leaf and the member to which the latter is applied, and an arm on said stem operating in a mortise in the second member and the mortise in the first member, said arm being arranged to contact with the aforesaid extension beyond the pintle and to be swung from behind the pintle by the turning movement of the stem.

4. As an article of manufacture, a hinge comprising a leaf carrying a pintle spaced from the body thereof, a second leaf having a bowed lip or extension at one edge, said lip or extension being formed to embrace the pintle and having a straight terminal portion to extend through and beyond the space between the pintle and the first named leaf, a stem turnable at one end in said second leaf parallel with said straight terminal portion, and an arm on said stem to interlock frictionally with the adjacent face of said terminal portion of the lip or extension, the stem being provided at one end with a slot, as described.

1,016,001. CLOSET. WALTER EICHELKRAUT, Zehlendorf, near Berlin, Germany. Filed Nov. 14, 1911. Serial No. 660,245. (Cl. 4—18.)

1. In combination with a closet basin, a horizontal rotatable shaft, a plurality of seats carried by said shaft and normally held in a vertical plane, means whereby said seats may be successively moved into the horizontal plane so as to rest on said basin and a chamber through which said seats are adapted to be moved when in vertical position, said chamber containing an antiseptic liquid.

2. In combination with a closet basin, a horizontal rotatable shaft, a plurality of divided seats, arms at each end of said shaft, said arms rotatably carrying the respective portions of said seats, means for normally maintaining said seat portions in vertical position and whereby said seat portions may be successively moved into horizontal position so as to rest on said basin, and a chamber at each side of said basin through which said seat portions are adapted to be moved when in vertical position, said chambers containing an antiseptic liquid.

3. In combination with a closet basin, a horizontal rotatable shaft, a plurality of divided seats, arms at each end of said shaft, said arms rotatably carrying the respective portions of said seats, means for normally maintaining said seat portions in vertical position and whereby said seat portions may be successively moved into horizontal position so as to rest on said basin, and an approximately semicylindrical chamber at each side of said basin and somewhat below said shaft and containing an antiseptic liquid, said seat portions being adapted after use to be moved through said liquid in a vertical position and during the lower part of their movement and being capable of drying during the upper part of their movement ready for re-use.

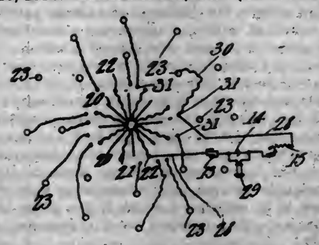
4. In combination with a closet basin, a horizontal rotatable shaft, a plurality of seats carried by said shaft and normally held in a vertical plane, means whereby said seats may be successively moved into the horizontal plane so as to rest on said basin, a chamber through which said seats are adapted to be moved when in vertical position, said chamber containing an antiseptic liquid, and means for heating the liquid in said chamber.

5. In combination with a closet basin, a horizontal rotatable shaft, a plurality of seats carried by said shaft and normally held in vertical plane, means whereby said seats may be successively moved into the horizontal plane so as to rest on said basin, a chamber through which said seats are adapted to be moved when in vertical position, said chamber containing an antiseptic liquid, means for heating the liquid in said chamber, and hinged flaps adapted to prevent the escape of fumes from said chamber while enabling the seats to be moved therethrough.

1,016,002. MUSIC-LEAF TURNER. PETER FOLAN, Clarksburg, W. Va. Filed Apr. 25, 1911. Serial No. 623,134. (Cl. 84—17.)

In a music leaf turner, a piano board, a plurality of superimposed sets of music sheet supporting arms pivotally mounted upon the front side of said board, turning members movably mounted upon the rear side of said board and having the upper ends thereof extending through said board and engaging the arms of each set, a slotted shiftable plate slidably mounted upon the rear side of said board and adapted to actuate said members in one direction and control the operation of said members in the poposite direction, means carried by the rear side of said board and adapted to actuate said members in the opposite direction, and means adapted to shift said board, said means including shafts, cables attached to said board and adapted to wind upon one of said shafts, ratchet wheels carried by the other of said shafts, treadles adapted to intermittently move said ratchet wheels, and a key adapted to alternately fix said ratchet wheels relatively to the shafts thereof.

1,016,003. MEANS FOR TRANSMISSION OF INTELLIGENCE. WILLIAM E. FROW, Lisbon Falls, Me. Filed June 10, 1910. Serial No. 566,236. (Cl. 178—319.)



1. In a system of electrical transmission of intelligence, a receiving station having a receiving instrument, an equal

number of divergent ground connections for both terminals on the receiving instrument, and means for the inclusion of the receiving instrument in circuit with any separated pair of ground connections at said station.

2. In a system of electric transmission of intelligence, a receiving station having a receiving instrument, a centrally located divergent ground for the receiving instrument and other grounds in divergent relation to the first named ground, and connections from both terminals of the receiving instrument adapted to be coupled to the central ground and any of the divergent grounds, respectively.

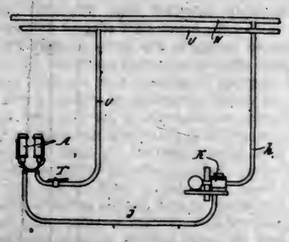
3. In a system of electric transmission of intelligence, a receiving station having a receiving instrument, a centrally located ground for the receiving instrument composed of a divergent series of separate grounds and connections therefrom to accessible terminals, other grounds in separated divergent relation to the first named ground and each also provided with accessible terminals, and connections from both terminals of the receiving instrument adapted to be coupled to the accessible terminals of any chosen member of the central ground and any chosen one of the divergent grounds respectively.

4. A means for the electrical transmission of intelligence below the earth's surface, which consists of transmitting and receiving instruments at separated stations, said receiving station having a centrally located ground composed of divergent separated connections another series of divergent grounds, and connections from both terminals of the receiving instrument adapted to engage any pair of the respective grounds.

5. In a system of electric transmission of intelligence, a receiving station having a receiving instrument, a central ground having radiating members below the earth's surface, other grounds disposed in substantially radial lines from said central ground, and means for connecting the receiving instrument to selected members of the respective grounds.

[Claim 6 not printed in the Gazette.]

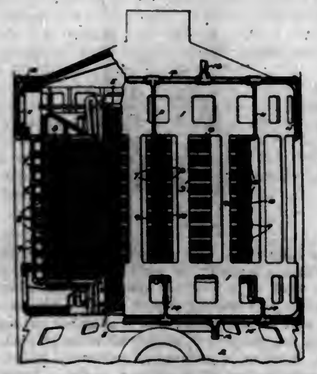
1,016,004. MILKING-MACHINE. CYRIL EDMUND GANE, Normanby, New Zealand. Filed June 8, 1910. Serial No. 565,847. (Cl. 31—101.)



1. A pulsator comprising, a block provided with a vacuum chamber and a teat-cup chamber; a sliding plate adapted to reciprocate on the block and formed with an upwardly curved portion at one end adapted to form a passage between the two chambers at one position of the sliding plate, the flat portion of the sliding plate being adapted to over-lie the chambers at another position thereof and provided with an aperture communicating with the cup chamber in said last named position; pipes for connecting said chambers with the vacuum and teat-cups respectively; means for automatically reciprocating the sliding plate comprising a cylinder connected at its back end with the teat-cup chamber; a valve controlling said connection; a piston in said cylinder; a crank-shaft; a pair of cranks thereon; a rod connecting one crank to the piston; a rod connecting the other crank to the sliding plate, the angle between said cranks being such that when the piston is in outermost position, the plate is in position to connect the chambers; and a governor wheel on said shaft.

2. In a milking machine, the combination of a rigid casing formed with an inwardly projecting ledge around its peripheral face near the upper end thereof; an inflatable lining in said casing, said ledge extending across between the casing and the surface of the lining and thus dividing the space between the lining into an upper and a lower compartment, an opening being provided in the upper compartment; a flange at the upper part of the lining and having a weakened hollowed-out place; a metallic cap screwed over the casing and jamming the lining against the top of the casing; a block provided with a vacuum chamber and a teat-cup chamber; a sliding plate adapted to reciprocate on the block and formed with an upwardly curved portion at one end adapted to form a passage between the two chambers at one position of the sliding plate, the flat portion of the sliding plate being adapted to over-lie the chambers at another position thereof and provided with an aperture communicating with the cup chamber in said last named position; pipes for connecting said chambers with the vacuum and teat-cups respectively; means for automatically reciprocating the sliding plate comprising a cylinder connected at its back end with the teat-cup chamber; a valve controlling said connection; a piston in said cylinder; a crank-shaft; a pair of cranks thereon; a rod connecting one crank to the piston; a rod connecting the other crank to the sliding plate, the angle between said cranks being such that when the piston is in outermost position, the plate is in position to connect the chambers; and a governor wheel on said shaft.

1,016,005. DYNAMO-ELECTRIC MACHINE. HENRY GEISENHÖNER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 11, 1907. Serial No. 401,546. (Cl. 171—252.)

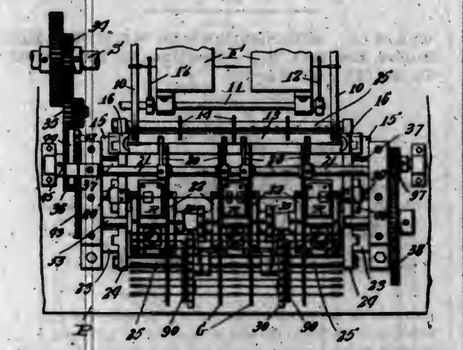


1. Means for cooling a dynamo-electric machine, comprising a stationary core-member built up of bundles of laminations, said bundles of laminations being separated by transverse inclosed ducts, a partition dividing said ducts, said ducts having openings on both sides of said partition, and pipes for conducting a cooling liquid to certain of said openings and away from other of said openings.

2. In a dynamo-electric machine, a stationary core member having laminations, space blocks made in sections and separating said laminations into bundles, each of the sections of the space blocks comprising a back, a raised edge completely about said back having inlet and outlet openings and a cover plate fastened to said edge so as to make the section water tight, said inlet opening being at one end of and said outlet opening at the other end of the section.

3. In a dynamo-electric machine, a stationary core member having laminations, space blocks made in sections and separating said laminations into bundles, each of the sections of the space blocks comprising a back, a raised edge completely about said back and having inlet and outlet openings and a cover plate fastened to said edge so as to make the sections water tight, said inlet opening being at one end of and said outlet opening at the other end of the section, said space blocks having a configuration conforming substantially to that of the laminations.

1,016,006. SOLDERING-MACHINE. WILLIAM H. GIBBS, Clinton, Mass., assignor, by mesne assignments, to Gibbs Heddle Company, Leicester, Mass., a Corporation of Massachusetts. Filed Jan. 25, 1905. Serial No. 242,613. (Cl. 113—59.)



1. A soldering device, comprising a receptacle for melted solder having a delivery opening, and an elevated feed spout adapted to furnish sufficient head to cause molten solder to protrude from said delivery opening in the form of a globule of sufficient size to surround the article to be soldered, said receptacle having a substantially horizontal surface adjacent said delivery opening for retaining the globule.

2. A soldering device, comprising a receptacle for melted solder having a top plate provided with a delivery opening, means for furnishing a head of molten solder communicating with the solder in the receptacle to cause the molten solder at the delivery opening to form a globule, said top plate having a substantially flat surface adjacent said delivery opening to retain the globule, and means for moving wires or the like successively over the delivery opening and submerging them in the globule.

3. In a soldering machine, the combination of means for holding melted solder, a feed mechanism adjacent thereto comprising notched supporting strips, the notches thereof being located on opposite sides of the position in which the solder is held, and a set of fly-fingers for moving successive pieces to be soldered into the notches of the supporting strips.

4. In a soldering machine, the combination of movable means for holding melted solder, supporting strips located on opposite sides of said means, said strips having notches located opposite the position in which the solder is held, and a set of oscillatable fly-fingers for moving successive pieces to be soldered into the notches of said supporting strips.

5. In a soldering machine, the combination of a receptacle for melted solder having a delivery opening which maintains a protruding globule of solder, and a feed mechanism for bringing successive articles into position to be soldered, comprising supporting strips, and a set of fly-fingers for moving successive articles to be soldered into notches of the supporting strips.

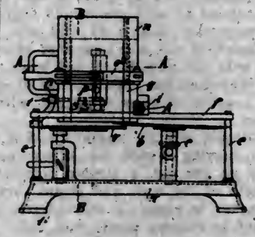
[Claims 6 to 24 not printed in the Gazette.]

1,016,007. HAIR-COMB. FRANCISEK GLOWACKI and STEFAN KRZYZAK, Chicago, Ill. Filed Mar. 20, 1911. Serial No. 615,770. (Cl. 132—25.)

A hair comb comprising a vertically disposed split band capable of being supported by the hair of a person, straps encircling said band for adjustably connecting the ends thereof together thereby permitting of increasing or decreasing the diameter of the band, inwardly curved relatively long narrow resilient arms having the upper portion of their outer faces secured to the inner face of said band at diametrically opposite points, said arms having

their lower portions depending below the band and curving inwardly toward each other, and a curved side comb having the central portion of its outer face secured upon the inner face of each of the arms at the lower terminus thereof, said combs projecting toward each other.

1,016,008. SLICING-MACHINE. FRIEDRICH GRAFF, Witten-on-the-Ruhr, Germany. Filed Nov. 1, 1911. Serial No. 657,912. (Cl. 17—24.)



1. A slicing machine comprising in combination a machine-frame, a circular cutter mounted on said machine-frame and revoluble in a horizontal plane, a horizontally reciprocating carriage on said machine-frame, and a clamping frame vertically adjustable on said carriage and adapted to clamp the piece to be sliced.

2. A slicing machine comprising in combination a machine-frame, a circular cutter mounted on said machine-frame and revoluble in a horizontal plane, a horizontally reciprocating carriage on said machine-frame, and a clamping frame vertically adjustable on said carriage and adapted to clamp the piece to be sliced, said clamping frame comprising a vertical platen vertically adjustable on said carriage, two horizontal toothed bars o, o^1 on said plate and a toothed cross-bar o^2 adjustable on said bars o, o^1.

3. A slicing machine comprising in combination a machine-frame, a circular cutter mounted on said machine-frame and revoluble in a horizontal plane, a horizontally reciprocating carriage on said machine-frame, a clamping frame vertically adjustable on said carriage and adapted to clamp the piece to be sliced, and a vertically adjustable table in front of the circular cutter.

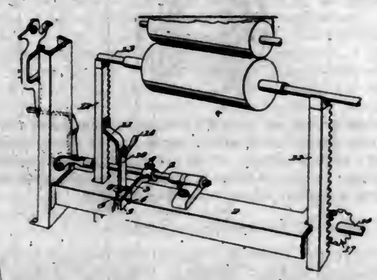
4. A slicing machine comprising in combination a machine-frame, a circular cutter mounted on said machine-frame and revoluble in a horizontal plane, a horizontally reciprocating carriage on said machine-frame, a clamping frame vertically adjustable on said carriage and adapted to clamp the piece to be sliced, said clamping frame comprising a vertical plate n vertically adjustable on said carriage, two horizontal toothed bars o, o^1 on said plate and a toothed cross-bar o^2 adjustable on said bars o, o^1 and a vertically adjustable table in front of the circular cutter.

5. A slicing machine comprising in combination a machine-frame, a circular cutter mounted on said machine-frame and revoluble in a horizontal plane, a horizontally reciprocating carriage on said machine-frame, a clamping frame vertically adjustable on said carriage and adapted to clamp the piece to be sliced, and means for automatically

lowering the clamping frame through a distance equal to the thickness of a slice during each reciprocation of the carriage.

[Claims 6 to 11 not printed in the Gazette.]

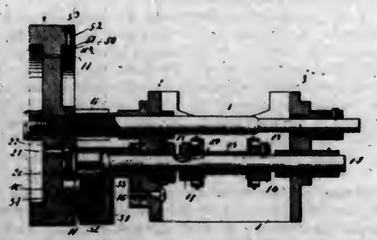
1,016,009. LOOM. JOHN W. HERBERT, Natick, R. I. Filed Aug. 30, 1911. Serial No. 646,589. (Cl. 139—52.)



1. In a loom in combination with vertically moving means for supporting the cloth beam, and the knock-off rod, an arm carried by said means and depending therefrom, a leg removably carried by said arm, an arm secured to the knock-off rod, and a member adjustable along the length of said last named arm and being formed with an upwardly extending web, the top edge of which web is formed with a series of steps to engage with the lower end of said leg.

2. In combination with the knock-off rod of a loom, and the vertically moving means for supporting the cloth beam, an arm on the rod, a stepped element adjustable along the length of the arm, and means carried by said first named means to engage a selected one of the steps of said element to thereby rotate said rod.

1,016,010. DRIVING MECHANISM. JOHN J. HESSE, Boston, Mass. Filed Dec. 24, 1910. Serial No. 599,166. (Cl. 74—41.)



1. A device of the character described, comprising a shaft having a polygonal portion, means for driving the shaft, and cam controlled means coöperating with the polygonal portion of the shaft for intermittently arresting the rotation of the shaft.

2. A device of the character described, comprising a shaft having a polygonal portion, means for driving the shaft, a rotary cam, and means coöperating with the polygonal portion of the shaft and with said rotary cam for intermittently arresting the rotation of the shaft.

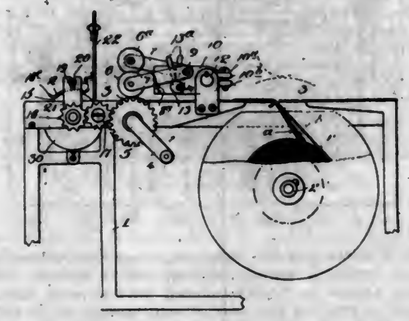
3. A device of the character described, comprising a shaft having a polygonal portion, means for imparting an intermittent rotary motion to the shaft, a rotary cam, and a shoe coöperating with the rotary cam and with the polygonal portion of the shaft for intermittently locking the shaft against rotation.

4. A device of the character described, comprising a shaft having a polygonal portion, means for imparting an intermittently rotary motion to the shaft, a rotary cam, a shoe coöperating with the rotary cam and with the polygonal portion of said shaft for intermittently locking the shaft against rotation, and means for adjusting said shoe to vary its frictional contact with said rotary cam.

5. A device of the character described, comprising a shaft, means for imparting an intermittent rotary motion to the shaft, a rotary cam, and a shoe coöperating with said cam for intermittently locking the shaft against rotation.

[Claims 6 to 16 not printed in the Gazette.]

1,016,011. STRIP-MOISTENING MACHINE. MAX HIMOFF, New York, N. Y. Filed June 10, 1911. Serial No. 632,347. (Cl. 91—14.)



1. The combination of a frame, a feeding roller, a plurality of pressing rollers coacting therewith, means for supporting said pressing rollers to separately coact with said feeding roller, means to at will hold any of the pressing rollers out of coaction with the feeding roller, means to rotate the feeding roller to feed the strip, means to moisten the stripe fed between the rollers, and means to sever such stripe in desired lengths.

2. The combination of a frame, a feeding roller, a plurality of pressing rollers coacting therewith, means for supporting said pressing rollers to separately coact with said feeding roller, eccentrics coacting with the pressing rollers to at will hold them out of contact with the feeding roller, means to moisten the stripe fed between the rollers, and means to sever said stripe in desired lengths.

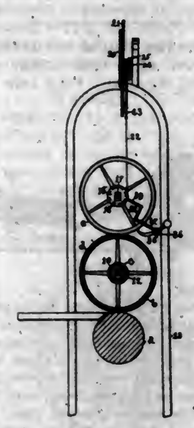
3. The combination of a frame, a feeding roller, a plurality of pressing rollers, brackets adjustably carried on the frame, arms carried by the brackets for supporting the corresponding pressing rollers, eccentrics carried by the brackets and coacting with said arms to at will hold the pressing rollers out of contact with the feeding roller, means to moisten stripe fed between the rollers, and means to sever said stripe into desired lengths.

4. The combination of a frame, a feeding roller, a pressing roller coacting therewith, means to rotate the feeding roller, said feeding roller having a gear, a moistening roller having a gear, and an idle gear meshing with said gears, whereby the feeding roller and the moistening roller rotate in the same direction and a pressing plate over the moistening roller to receive therebetween a strip fed from the feeding roller.

5. The combination of a frame, a feeding roller, a pressing roller coacting therewith, means to rotate the feeding roller said feeding roller having a gear, a moistening roller having a gear, an idle gear meshing with said gears, whereby the feeding roller and the moistening roller rotate in the same direction, and a pressing plate over the moistening roller to receive therebetween a strip fed from the feeding roller, and a cutting device located between the feeding roller and the moistening roller to cut a strip therebetween.

[Claim 6 not printed in the Gazette.]

1,016,012. MACHINE FOR MEASURING SURFACE AREAS. WARREN T. HOLLIS, Boston, Mass. Filed Sept. 23, 1909. Serial No. 519,166. (Cl. 73—63.)



1. In a machine of the character described, in combination, a plurality of measuring wheels rotatable and bodily movable by contact with the object whose surface is being measured and provided on their external circumferences with teeth, toothed devices engaging the external circumferential teeth of said measuring wheels and bodily movable in the same direction with the measuring wheels and rotatable thereby, an indicating device, and means for connecting said indicating device with said toothed devices, substantially as described.

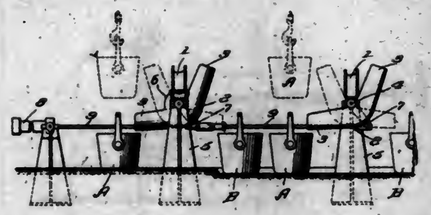
2. In a machine of the character described, in combination, a plurality of measuring wheels rotatable and bodily movable by contact with the object whose surface is being measured and provided with circumferential teeth, bearing hubs or disks provided with slots and upon which said wheels are mounted to turn, a shaft extended through said slots, toothed devices engaging the circumferential teeth of said measuring wheels, bearing hubs or disks provided with slots and upon which said toothed devices are mounted to turn, a shaft extending through the slots in the bearing disks or hubs of the said toothed devices, an indicating device, and means for connecting said indicating device with said toothed devices, substantially as described.

3. In a machine of the character described, in combination, a plurality of measuring wheels rotatable and bodily movable by contact with the object whose surface is being measured and provided with circumferential teeth, bearing disks or hubs upon which said measuring wheels are mounted to turn thereon and to move bodily therewith, a shaft upon which said bearing disks or hubs are supported and bodily movable with relation thereto, toothed devices engaging said circumferential teeth, an indicating device, and means for connecting said toothed devices with said indicating device, substantially as described.

4. In a machine of the character described, in combination, a plurality of rotatable measuring wheels, bearing hubs or disks upon which said wheels turn and are bodily movable therewith, said hubs or disks having elongated slots, a shaft extended through said slots, an indicating device, and means for operatively connecting said indicating device with said measuring wheels, substantially as described.

5. In a machine of the character described, in combination, a plurality of rotatable measuring wheels, bearing hubs or disks upon which said wheels turn and are bodily movable therewith, a shaft extended through openings in said hubs or disks larger than said shaft, an indicating device, and means for operatively connecting said indicating device with said measuring wheels, substantially as described.

1,016,013. DUPLEX SPOUT FOR FURNACES. GEORGE K. HOOPER, Madison, N. J. Filed Dec. 1, 1910. Serial No. 595,129. (Cl. 75—192.)



1. In a mechanism for delivering molten metal from a furnace to the ladle, the combination with a suitable standard, of a double nosed delivery trough journaled in the standard, said trough consisting of two delivery ends oppositely extending in the same vertical plane and arranged at an angle of not more than about 140° and more than 90° to each other and of means to rock the trough from one to the other of two positions, whereby one end of the trough is inclined downwardly to deliver all the metal and the other end is inclined upwardly at a sharp angle to prevent the metal flowing out in the reverse direction and to permit lifting of the ladles past the trough.

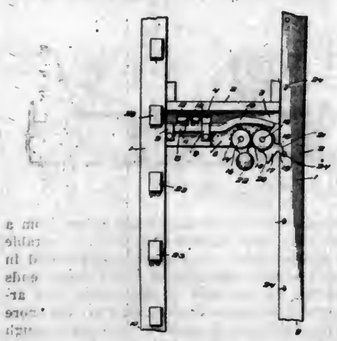
2. In a rocking trough mechanism for delivering molten metal from the furnace to oppositely arranged ladles, the combination with a suitable standard, of a delivery trough journaled thereon and having delivery ends oppositely extending and arranged at such an angle to each other that when one end is inclined downwardly to deliver the metal, the other end will be inclined upwardly to prevent the flow of the metal, said trough being formed on its central front portion to provide a shield for the metal entering from the rear and a stop bar rest secured on the standard forwardly of the baffle, and means to rock the trough.

3. In an apparatus for the delivery of molten metal from furnaces, the combination with a furnace having a plurality of outlets, of a plurality of suitable standards set adjacent to the respective outlets, delivery troughs journaled on the standards, said troughs each being provided with delivery ends oppositely extended and having continuous side walls on the sides to prevent the escape of the metal except through the ends, said troughs being arranged at such an angle to each other that when one end is in the first position inclined downwardly the other end will be inclined upwardly to prevent the metal flowing out from the opposite side, cranks on the trough journals, and a connection between said cranks to communicate the tilting of one trough to the other.

4. A rocking trough mechanism for delivering molten metal from a furnace to oppositely arranged ladles, comprising a suitable standard, a delivery trough journaled thereon and having delivery ends oppositely extending and arranged at such an angle to each other that when one end is inclined downwardly to deliver the metal from said end the other end will be inclined upwardly to prevent the flow of the metal from said second end, means disconnected from the trough to deliver the molten metal into the trough from one side and a shield on the trough on the opposite side to prevent splashing over of the metal being delivered to the trough.

5. A rocking trough mechanism for delivering molten metal from a furnace to oppositely arranged ladles, comprising a suitable standard, a delivery trough journaled thereon and having delivery ends oppositely extending and arranged at such an angle to each other that, when one end is inclined downwardly to deliver the metal from said end, the other end will be inclined upwardly to prevent the flow of the metal from said second end, said trough being provided with practically parallel, continuous side walls extending unbroken from end to end to prevent the escape of metal except through the ends, and a spout disconnected from the trough to deliver the molten metal into the trough over one of the continuous side walls, intermediate of the ends, substantially as described and shown.

1,016,014. SAFETY DEVICE FOR ELEVATORS. GILBERT H. INMAN, Camden, N. J. Filed May 15, 1911. Serial No. 627,121. (Cl. 187—77.)



1. A bolt operating safety mechanism for elevator cars comprising two intermeshing gears, a weighted arm on one gear, devices on the car mounting, and a plate on the other gear adapted to move into and out of engagement with said devices, substantially as described.

2. A bolt operating safety mechanism for elevator cars comprising two intermeshing gears, a weighted arm on one gear, devices on the car mounting, a plate on the other gear adapted to move into and out of engagement with the said devices, blocks on the car mounting, and a sliding bolt adapted to be engaged by said plate and moved into the path of the blocks when said plate is given an abnormal movement by the dropping of the elevator car, substantially as described.

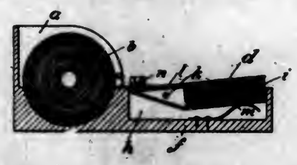
3. A safety device for elevator cars comprising a bar adapted to be secured to an elevator car, a bolt mounted to slide on said bar, blocks fixed to the elevator mounting and into the path of which said bolt is adapted to be moved, a vertical series of pins on the elevator car mounting, two intermeshing gears on said bar, a plate fixed to one of said gears and having three independent shoulders and a cam edge, said cam edge constructed to engage the pins as the elevator car ascends, the intermediate shoulder adapted to engage said pins as the elevator car descends, a weighted arm fixed to the other gear and returning said plate to normal position between the pins during the normal operation of the elevator car, but said arm overcome by a sudden shock as the intermediate shoulder strikes a pin, when the elevator car falls, causing one extreme shoulder to strike the next pin below, and the opposite extreme shoulder to engage the bolt and force the bolt into the path of said blocks, substantially as described.

4. The combination with parallel upright guide bars, and an elevator car movable between them, of a transverse bar secured to the elevator car, a longitudinally movable bolt supported on said last-mentioned bar, intermeshing gears supported on said last-mentioned bar, a weighted arm connected to one gear, a plate on the other gear, blocks fixed to one of the vertical bars, pins on the other vertical bar in the path of movement of said plate, and said plate having shoulders to engage one of said pins and move said bolt only when said elevator car descends at an unusual speed, substantially as described.

5. The combination with parallel upright guide bars, and an elevator car mounted to move between them, of a bolt secured to the elevator car and mounted to slide, intermeshing gears having rotary mounting on the elevator car, a longitudinal series of pins on one of said vertical bars, a longitudinal series of blocks on the other of said vertical bars, a plate fixed to one of said gears and movable into contact with the pins, a weighted arm on the other of said gears controlling the movement of said plate during the normal operation of said elevator car, but overcome by a quick engagement of the plate with one of the pins when the elevator car falls, whereby said plate will strike and move the bolt into position to engage one of the blocks, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,016,015. APPARATUS FOR MOISTENING AND SEPARATING STAMPS AND THE LIKE. LEO KATZENSTEIN, Wiesbaden, Germany. Filed July 26, 1910. Serial No. 573,948. (Cl. 120—75.)

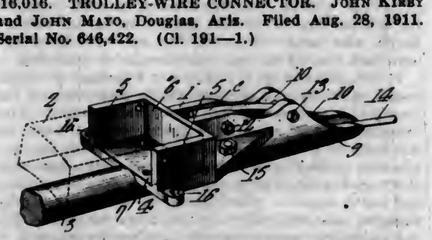


1. In an apparatus for moistening and separating stamps and the like, the combination of a container for a strip of stamps, a two-armed rocking lever arranged in front of the container and over which the stamps may be drawn, an abutment fixed over the rear of the lever and a moistening pad on the outer end of the lever, said rear end being adapted to grasp the stamp between itself and the abutment by the pressure that presses the stamp against the pad to moisten the same, whereby a stamp may be separated.

2. In an apparatus for moistening and separating stamps and the like, the combination of a container for a strip of stamps, a two-armed rocking lever arranged in front of the container and over which the stamps may be drawn, an abutment fixed over the rear of the lever and a moistening pad on the outer end of the lever.

3. In apparatus for moistening and separating stamps and the like from a strip, the combination, with a box for containing a strip of stamps or the like rolled up into a roll, of a two-armed rocking lever arranged longitudinally in front of the box, the front arm of the lever formed as a holder containing a moistening pad, the face of the rear arm of the lever being located in the plane of the top of the pad, and an abutment fixed over the rear arm of the lever.

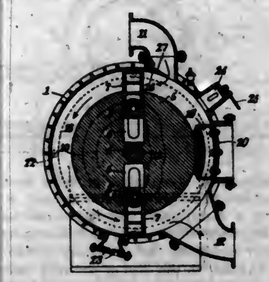
1,016,016. TROLLEY-WIRE CONNECTOR. JOHN KIRBY and JOHN MAYO, Douglas, Ariz. Filed Aug. 28, 1911. Serial No. 646,422. (Cl. 191—1.)



1. A trolley wire connector, comprising two metal members, each of said members having formed integral therewith, a trolley wire receiving lip, a cylindrical socketed boss contiguous with said lips upon the underside of each member, and an open receptacle upon the upper face thereof, a cylindrical trolley wheel guiding rod having its terminals disposed in the socketed bosses of the trolley wire connecting members, and a strip of insulating material rectangular in cross section of a greater width than the rod having its terminals connected within the receptacles of each trolley wire connecting member for retaining the members and rods in relative position.

2. A trolley wire connector, comprising two wire connecting members, each one having a tapered lip with a wire receiving receptacle therein, the inner portion of said lip terminating in a socketed boss, an interiorly and upwardly opening receptacle provided in each member, a cylindrical wheel guiding rod having reduced terminals fitting within the sockets of the bosses and having its circumference aliuing with the circumference of the bosses, said rod extending between the members, and a strip of insulating material rectangular in cross section having its terminals seated within the receptacles of the wire connecting members and holding said members and the rods relatively to each other.

1,016,017. PNEUMATIC PUMP FOR LIFTING GRANULAR MATERIALS. EMILIAN KOLTSCHANOFF, Taganrog, Russia, assignor to Société Staello Frères, E. Koltschanoff & D. Diamantidi, Taganrog, Russia. Filed Oct. 29, 1910. Serial No. 589,765. (Cl. 230—30.)



1. In a pneumatic pump for lifting grain and the like, the combination of a rotary pump provided with a suction-pipe and an outlet-pipe, the former for sucking the grain with the air into the space between vanes of the pump, and the latter for delivering the grain by the compression-action of the pump into the delivery pipe, and an air inlet valve in the space between vanes of the pump.

2. In a pneumatic pump for lifting grain and the like, the combination of a casing provided with a suction-inlet and a discharge-outlet, a rotating drum in said casing provided with radial reciprocating abutments forming a space between vanes for drawing in the grain with the air, and inwardly-opening air-valve near the outlet for admitting air into the space between vanes on the passage of each abutment past the valve.

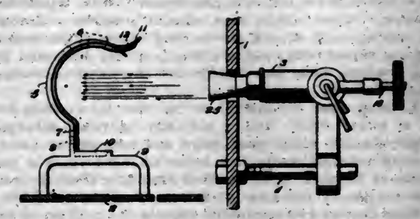
3. In a pneumatic pump for lifting grain and the like, the combination of a rotary pump comprising a casing having a suction-inlet and a discharge-outlet, a drum with radially sliding abutments and a fixed partition in said casing between said inlet and outlet openings and a regulable air-inlet valve between the inlet and the partition.

4. In a pneumatic pump for lifting grain and the like, the combination of a cylindrical casing, provided with inlet and outlet openings less that 180° apart, a rotary drum in said casing and of a smaller diameter than the casing and provided with diametrically opposite radially disposed slots, abutments radially slidable in said slots, a partition secured to said casing between the inlet and outlet openings and substantially contacting the drum, and means for reciprocating the abutments, said casing being provided with a valve-opening substantially diametrically opposite to said inlet opening and an inwardly opening check valve in the valve-opening.

5. In a pneumatic pump for lifting grain and the like, the combination of a cylindrical casing, provided with inlet and outlet openings less than 180° apart, a rotary drum in said casing and of a smaller diameter than the casing and provided with diametrically opposite radially disposed slots, abutments radially slidable in said slots, a partition secured to said casing between the inlet and outlet openings and substantially contacting the drum, and means for reciprocating the abutments, said casing being provided with a valved opening between the partition and the inlet opening and having a manually operated valve-cock therein, said casing being provided also with a valve-opening diametrically opposite to inlet opening and having an inwardly opening check valve therein.

[Claims 6 to 8 not printed in the Gazette.]

1,016,018. OIL-BURNER. ALBERT R. KUNKEL, Palestine, Tex. Filed Mar. 16, 1911. Serial No. 614,881. (Cl. 158—78.)



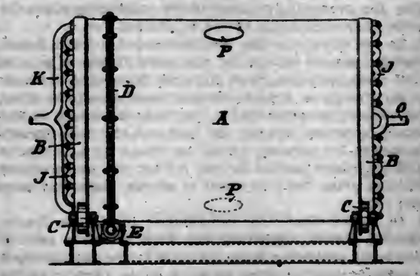
1. In a device of the class described the combination with a burner, of an elongated splash-plate semi-circular in cross section facing said burner with its upper portion overhanging the lower portion, and the upper portion being provided with symmetrically arranged flame openings.

2. In a device of the class described the combination with a burner, of an elongated splash-plate semi-circular in cross section facing said burner with its upper portion overhanging the lower portion, the upper portion being provided with symmetrically arranged flame openings, and a vertical supporting extension from the lower portion provided with flame openings.

3. In a device of the class described the combination with a burner, of an elongated splash-plate semi-circular in cross section facing said burner with its upper portion overhanging the lower portion the upper portion being provided with symmetrically arranged flame openings, a vertical supporting extension from the lower portion provided with flame openings, and a base carrying said extension and provided with an open topped oil receptacle along said extension.

4. In a device of the class described the combination with a burner, of an elongated splash-plate semi-circular in cross section facing said burner with its upper portion overhanging the lower portion, the upper portion being provided with symmetrically arranged flame openings, and a reversely curved upwardly extending guard flange concave in longitudinal section centrally above the line of discharge of said burner and having a flame opening therein.

1,016,019. SUGAR-CRYSTALLIZER. FERNAND LAFEUILLE, Charmes, France. Filed May 10, 1911. Serial No. 626,288. (Cl. 127—9.)



1. In a sugar crystallizer or the like, the combination with a receptacle movable about a horizontal axis, of stirring means within said receptacle and movable therewith, said stirring means being arranged along a spiral line extending from a point near the said axis toward the outer wall of the receptacle.

2. In a sugar crystallizer or the like, the combination with a receptacle movable about a horizontal axis, of tubes extending through said receptacle with their axes parallel to the said horizontal axis and movable with said receptacle, said tubes being arranged along a spiral

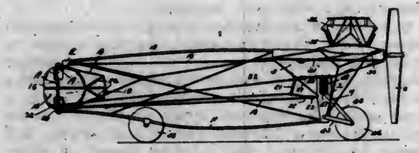
line extending from a point near the said axis toward the outer wall of said receptacle.

3. In a sugar crystallizer or the like, the combination of a rotary drum, and agitating means therein comprising a series of longitudinal tubes adapted to convey a heating or cooling medium, said tubes being connected in serpentine or zigzag fashion longitudinally of the drum and being arranged along an eccentric bow-like line transversely of the drum.

4. In a sugar crystallizer or the like, the combination of a rotary drum, and a plurality of tubes arranged longitudinally within said drum and adapted to convey a liquid medium, said tubes being arranged along a plurality of eccentric bow-like lines extending from the central portion of the drum to the outer or circumferential portion thereof and serving to displace the solution in the drum toward or away from the center of the latter according to the direction in which the drum is rotated.

5. In a sugar crystallizer or the like, the combination of a rotary drum, and a plurality of longitudinally disposed stirring elements within the drum, arranged along spiral lines directed transversely of the drum, one spiral extending into the area defined by another, as described.

1,016,020. AEROPLANE. AUGUST R. LASSEL, Washington, D. C. Filed Nov. 11, 1909. Serial No. 527,544. (Cl. 244—14.)



1. An aeroplane provided with a vertically arranged rudder and a horizontally arranged stabilizing plane intersecting the rudder and formed with a flexible portion, means for turning the rudder about a vertical axis to guide the aeroplane laterally, means for swinging the rudder about a horizontal axis to vary the angle of the stabilizing plane, and means for flexing the stabilizing plane for causing the aeroplane to ascend or descend.

2. An aeroplane provided with a rudder and a stabilizing plane intersecting the rudder and rigid therewith, a portion of the said stabilizing plane projecting beyond the rudder and being flexible, means for turning the rudder about a vertical axis to guide the aeroplane laterally, means for swinging the rudder about a horizontal axis to vary the angle of the stabilizing plane, and means for flexing the projecting portion of the stabilizing plane for causing the aeroplane to ascend or descend.

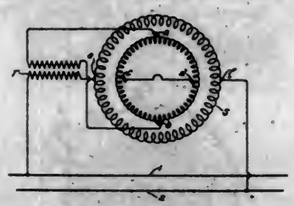
3. In an aeroplane, the combination of a main frame, sustaining planes carried by the main frame, a pair of spaced arms projecting from the main frame and arranged in a vertical plane, a guide member upon one of the arms, a rod slidably mounted within the guide member, a rudder pivotally mounted between the said rod and the opposite arm, means for turning the rudder about its axis, and a stabilising plane carried by the rudder, the angle of the stabilising plane being adjusted by sliding the before mentioned rod.

4. In an aeroplane, the combination of a main frame, sustaining planes carried by the main frame, a pair of spaced arms projecting from the main frame and arranged in a substantially vertical plane, a guide member at the end of one of the arms, a rod slidably mounted within the guide member, a rudder pivotally mounted between the end of the rod and the opposite arm, means for turning the rudder about its axis, a stabilising plane carried by the rudder and formed with a flexible portion, the angle of the stabilising plane being varied by sliding the before mentioned rod, and means for flexing the stabilizing plane.

5. An aeroplane provided with a rudder, a stabilising plane carried by the rudder and formed with a flexible portion, a lever, means actuated by the swinging of the lever for flexing the stabilising plane, a sleeve loosely mounted upon the lever, and means actuated by the sleeve for turning the rudder.

[Claims 6 to 15 not printed in the Gazette.]

1,016,021. ALTERNATING-CURRENT DYNAMO. MARIUS CHARLES ARTHUR LATOUR, Sèvres, France, assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1904. Serial No. 189,739. (Cl. 172—277.)



1. In a single-phase machine, a primary member adapted for connection to a single-phase source, a secondary member having a distributed winding connected at intervals to the segments of a many-part commutator, a set of brushes short-circuiting the secondary winding on a line substantially parallel to the line of primary magnetization, and another set of brushes displaced substantially 90 electrical degrees from the first set of brushes connected in series with the primary winding of the machine.

2. In a single-phase machine, a primary member adapted for connection to a single-phase source, a secondary member having a distributed winding connected at intervals to the segments of a many-part commutator, a set of brushes short-circuiting the secondary winding on a line substantially parallel to the line of primary magnetization, and another set of brushes displaced substantially 90 electrical degrees from the first set of brushes connected through a transformer in series with the primary winding of the machine.

3. In an alternating-current motor, a primary winding adapted to be connected to a source of current, a secondary winding provided with commutator and brushes in inductive relation thereto, a transformer having its primary connected in series with one of said windings, and means for connecting the secondary of said transformer to points on one of said windings intermediate the terminals thereof.

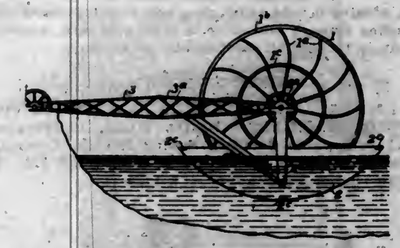
4. In an alternating-current motor, a primary winding adapted to be connected to a source of current, a secondary winding provided with commutator and brushes in inductive relation thereto, a transformer having its primary in series with said primary winding, and means for connecting the secondary of said transformer to points on the secondary winding of the motor intermediate the terminals thereof.

5. In an alternating-current motor, a distributed winding adapted to be connected to a source of single-phase current, a secondary winding having a system of brushes short-circuited on the line of the primary field, and a second system of brushes displaced by ninety electrical degrees from the first system, and a series transformer having its secondary connected to said second system of brushes and its primary connected in series with the primary winding of the motor.

1,016,022. CURRENT OR WAVE MOTOR. HENDRICK W. LUNDQUIST, San Diego, Cal. Filed Mar. 6, 1911. Serial No. 612,658. (Cl. 138—3.)

1. A current or wave motor comprising longitudinally disposed piers spaced apart and diverging toward the current, a shaft pivotally mounted on said piers and extending from one to the other, thrust arms rigidly mounted on said pivotally mounted shaft, a water wheel

revolubly mounted on the extended end of said thrust arms between the same, supports in connection with said thrust arms extending downwardly, connected floats provided with curved lower surfaces pivotally mounted near their lower surfaces to supports and connected together, sheaves in connection with said water wheel, sheaves mounted on said pivotally mounted shaft, cables connecting the sheaves on said water wheel with the ones on said pivotally mounted shaft, another revoluble shaft mounted on said piers connected to the sheaves on said pivotally mounted shaft by means of cables, and means on said floats for holding said floats in position, all substantially as set forth.



2. A current or wave motor comprising longitudinally disposed piers side by side and spaced apart, diverging toward their extended ends, a shaft mounted on said piers, double extended thrust arms rigidly mounted on said shaft, near said piers, a water wheel provided with curved blades, revolubly mounted on the extended ends of said thrust arms, a float provided with a curved lower surface, located adjacent to each of said piers, on each side of said water wheel, extension supports pivotally mounted near the lower surface of said floats and connecting with the extended ends of said thrust arms adapted to support the central portion of the wheel some distance above the floats, sheaves mounted on said water wheel, sheaves mounted on said shaft, cables connecting the same, another shaft mounted on said pier, sheaves mounted on said shaft, cables connecting with those on the other, and another cable adapted to connect with any driven mechanism, all substantially as set forth.

3. A current or wave motor comprising two separate longitudinally disposed piers placed side by side and spaced apart, a shaft pivotally mounted on said piers, a revoluble shaft mounted on said piers, adjacent thereto, double thrust arms braced together rigidly mounted on said pivotally mounted shaft, and extending toward the current of the water, adjacent and parallel to said piers, a water wheel provided with curved blades, and a plurality of annular braces revolubly mounted on the extended ends of said arms, sheaves mounted on said water wheel, floats at each side of said wheel connected together by beams, supports pivotally mounted on said floats, near their lower surfaces, connecting with said extended arms adapted to support the wheel the required distance above said float, double groove sheaves revolubly mounted on said pivotally mounted shaft, cables connecting the sheaves on said water wheel with said double sheaves, sheaves mounted on said revoluble shafts, cables connecting said sheaves on said revoluble shaft with said double sheaves, all substantially as set forth.

4. A current or wave motor, comprising two separate diverging piers, spaced apart side by side, and longitudinally disposed to the direction of the flow of the water, a pivotally mounted shaft connecting one pier with the other, a revoluble shaft mounted on said piers, adjacent thereto, two double thrust arms between said piers, rigidly mounted on said pivotally mounted shaft at one of their ends and extending toward the current of water, a water wheel provided with curved blades, and braced with a plurality of annular braces, revolubly mounted on and between the extended ends of said arms, a support on each of the extended ends of said arms extending downwardly some distance to the braces connecting the extended end of said supports with said arms, floats connected by beams pivotally mounted near their lower surface on the lower extended end of said supports, and said braces, sheaves mounted on said water wheel, double grooved sheaves mounted on said pivotally mounted shaft, a cable connecting the sheaves on said water wheel with the sheaves on said pivotally mounted shaft, cable and sheave means adapted to connect said double sheaves with any driven mechanism, and means between said piers and said floats for holding said wheel centrally between said piers, all substantially as set forth.

5. A current or wave motor comprising two separate piers with portions diverging and spaced apart side by side in line with the flow of the water, a pivotally mounted shaft mounted on said piers, a pair of thrust arms spaced apart and rigidly mounted on said shaft and projecting toward the current or flow, downwardly extending supports mounted on the extended ends of said arms and substantially braced, floats provided with curved lower surfaces in connection with and pivotally mounted on said supports adapted to sustain a wheel, a water wheel horizontally mounted between the extended ends of said pair of arms, double sheaves on said pivotally mounted shaft, sheaves on each side of said wheel, endless cables connecting the sheaves on said wheel with those on said shaft, another shaft revolubly mounted on said piers, and sheaves on said shaft connecting with the double sheaves on said pivotally mounted shaft, and means on said floats for holding said floats in position, all substantially as set forth.

1,016,023. BRACELET AND BANGLE. INEZ MADDOX, Bombay, India. Filed June 8, 1910. Serial No. 565,831. (Cl. 63—1.)

1. In combination, a bracelet provided on one end with a flanged socket-like portion and having at its other end a flanged socket-like portion, facing the first named portion, and having its flange partly cut away, a stud or pin disposed in said last named socket, and a case containing a plurality of articles, having end portions shaped to fit said sockets and an orifice to receive said stud.

2. In combination, a bracelet provided on one end with a flanged socket-like portion and having at its other end a flanged socket-like portion, facing the first named portion, and having its flange partly cut away, and a case containing a plurality of articles having end portions shaped to fit said sockets.

1,016,024. PROCESS OF PRESERVING WOOD. ERNST MARMETSCHKE, Schöpfurth, near Eberswalde, Germany, assignor to Hubertusmühle mit beschränkter Haftung, Schöpfurth, Germany. Filed Dec. 10, 1910. Serial No. 596,712. (Cl. 99—12.)

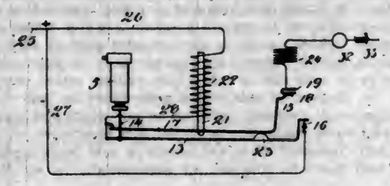
1. A process of preserving wood and other fibrous materials which consists in first injecting a preservative solution into the material at a temperature below that at which the colloidal substances contained therein coagulate and subsequently raising the temperature of the wood above this temperature for the purpose set forth.

2. A process of preserving wood and other fibrous materials which consists in forcing a solution of zinc chlorid

and aluminium sulfate at a temperature of about 55° C. into the material and subsequently raising the temperature of the material to about 70° C. substantially as and for the purpose hereinbefore set forth.

3. A process of preserving wood and the like consisting in subjecting the wood or other material to a vacuum, in a closed vessel, introducing into said vessel an impregnating solution consisting of zinc chlorid and aluminium sulfate at a temperature below the point of coagulation; raising the pressure to saturate the wood or other material and finally releasing the pressure and raising the temperature above the coagulating point, substantially as described.

1,016,025. PRESSURE-CONTROLLING MECHANISM. JOHN S. MCWHIRTER, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 4, 1909. Serial No. 476,129. (Cl. 175—308.)



1. In a pressure controlling mechanism, main and auxiliary contacts, mechanical devices operated by the pressure medium for opening and closing said auxiliary contacts, mechanical connections operated by the opening of the auxiliary contacts for closing the main contacts and electric devices controlled by said auxiliary contacts for completing the closing movement of the main contacts.

2. In a pressure controlling mechanism, a movable member balanced between the pressure medium on one side and a spring pressure on the other side, main and auxiliary contacts, the pressure medium tending to close said auxiliary contacts and the spring pressure tending to close the main contacts, a solenoid arranged, when energized, to retain the main contacts closed, the auxiliary contacts arranged, when closed, to open a short circuit around the solenoid.

3. In a pressure controlling mechanism, a main switch, electrically controlled means for holding said switch closed, and an auxiliary switch movable in response to variations in pressure to either mechanically close the main switch or release the holding means.

4. In a pressure controlling mechanism, a main switch, an electromagnet arranged to be energized by the closing of the main switch to hold said switch closed, and an auxiliary switch movable in response to variations in pressure to either close the main switch or short circuit the electromagnet.

5. In a pressure controlling mechanism, a pivoted main switch biased to open position, an electromagnet for holding said switch closed, a pivoted auxiliary switch movable in response to a decrease in pressure to mechanically close the main switch and in response to an increase in pressure to release the main switch and short circuit the electromagnet.

[Claims 6 and 7 not printed in the Gazette.]

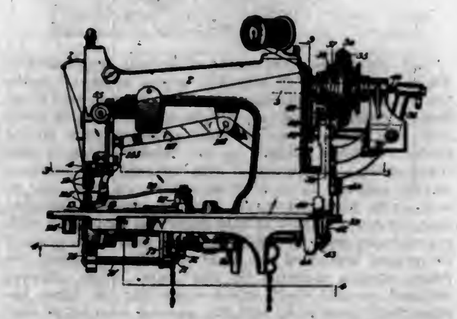
1,016,026. PIPE-TAPPING MEANS. CHARLES W. METCALF, San Diego, Cal. Filed June 11, 1910. Serial No. 566,374. (Cl. 77—42.)

1. A device of the character described, comprising a clamp provided with a threaded hole and adapted to be placed around a main pipe, a relief pipe provided with a cutting end threaded to correspond with the threaded hole in said clamp and adapted to be screwed into said threaded hole and thence through the wall of said main pipe, and a valve means for regulating the flow of liquid from said main pipe through the opening therein, all substantially as set forth.

2. A device of the character described comprising a clamp provided with a threaded hole, a relief pipe equipped with a cutting end adapted to screw in said threaded

hole, a valve in said relief pipe, and a spring thrust rod extending through said valve in said relief pipe, approximately to its end, all substantially as set forth.

1,016,027. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. DANIEL MILLS, Philadelphia, Pa., assignor to Standard Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 19, 1904. Serial No. 194,383. (Cl. 112—33.)



1. In a sewing machine for forming successive groups of stitches with intervening spaces, the combination with the stitch-forming mechanism, of a thread-cutter, a thread-clamp, manually-controlled means operative upon a completion of a group of stitches for operating said thread-clamp to clamp the thread, and automatic means operative during the formation of a group of stitches for operating said thread-clamp to release the thread.

2. In a sewing machine for forming successive groups of stitches with intervening spaces, of a bobbin-thread cutting and clamping device, manually-controlled means operative upon the completion of a group of stitches for operating said device to clamp the thread, and automatic means operative during the formation of a group of stitches for operating said device to release the thread.

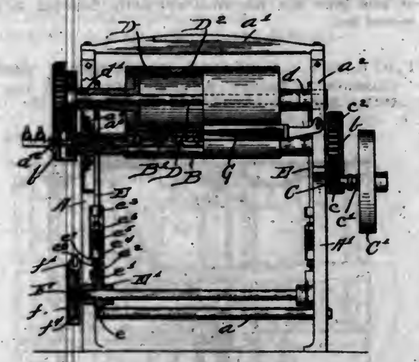
3. In a sewing machine for forming successive groups of stitches with intervening spaces, the combination with a stitch-forming mechanism, of a combined thread cutting and clamping device, manually-controlled means operative upon the completion of a group of stitches for operating said device, and automatic means operative during the formation of a group of stitches for operating said device to release the thread.

4. In a sewing machine for forming successive groups of stitches with intervening spaces, the combination with the stitch-forming mechanism, of a combined thread cutting and clamping device, manually controlled means operative upon the completion of a group of stitches for imparting a working movement to said device, and automatic means operative during the formation of a group of stitches for imparting a return movement to said device, for the purpose set forth.

5. In a sewing machine, the combination with stitch-forming mechanism, of a needle-thread cutter, a bobbin-thread cutter, manually-controlled means for imparting working strokes to both of said cutters and a return stroke to said needle-thread cutter, and automatic means for imparting a return stroke to said bobbin-thread cutter.

[Claims 6 to 35 not printed in the Gazette.]

1,016,028. MANGLE FOR SMALL ARTICLES. SIVERT MOE, Chicago, Ill. Filed Mar. 18, 1909. Serial No. 484,135. (Cl. 68—9.)



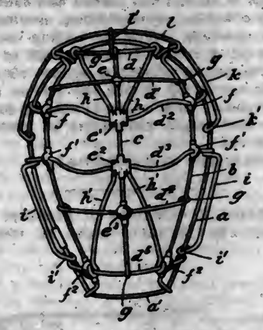
1. In a device of the class described a heated roller, an adjustable roller adapted to contact the same, a chute pivoted below the rollers, a shaft extending longitudinally of the rollers, a mutilated gear on the shaft, an actuating shaft, a worm gear on the actuating shaft meshing with the mutilated gear, a stop carried by the mutilated gear and a plurality of rigid stops adapted to be contacted thereby to limit the adjustment of the adjustable roller.

2. In a device of the class described frame members having recesses on corresponding sides, a plate secured over each recess, a bearing member adjustably engaged in each recess between each plate and frame, a heating roller journaled in said bearing members, an apertured pipe extending axially through the heating roller, a roller adjustable toward and from the heated roller, bars supporting the ends of the adjustable roller, lugs integral with the lower end of each of said bars, a rod extending therethrough, a spring secured on said rod and means adapted to contact one of the lugs on said bar to elevate the adjustable roller.

3. An ironing machine comprising a frame, a heated roller, a roller adjustable toward and from the same, bars supporting the ends of the adjustable roller, a pair of apertured lugs at the lower end of each of the said bars, a rod passing loosely through the apertures in said lugs, a compression spring on the rod between the lugs having one end abutting a shoulder on the rod, and the other end bearing against one of the lugs, adapting the bar to move independently of the rod against spring pressure, a shaft, eccentrics thereon, eccentric straps connected with the rods and engaging around the eccentrics, a mutilated gear on the shaft, an actuating shaft and a worm on the actuating shaft meshing with the mutilated gear.

4. An ironing machine comprising a frame, a heated roller, a roller adjustable toward and from the same, bars supporting the ends of the adjustable roller, a rod loosely connected to each bar, a spring on each rod adapting the bar to move independently of the rod against spring pressure, a shaft extending longitudinally of the rollers, eccentrics thereon, eccentric straps connected with the rods and engaging around the eccentrics, a mutilated gear on the shaft, an actuating shaft, a worm gear on the actuating shaft meshing with the mutilated gear, a stop carried by the mutilated gear and a plurality of rigid stops adapted to be contacted thereby to limit the adjustment of the adjustable roller.

1,016,029. BASE-BALL MASK. DENNIS C. O'SHEA, Chicago, Ill., assignor to A. G. Spalding & Bros., Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 8, 1911. Serial No. 613,012. (Cl. 2—119.)



A baseball mask having a frame composed of a main or side frame, a central frame member, transverse members, and diagonal members secured at one end of each to a transverse member and at the other end of each to another transverse member at its junction with the central member.

1,016,030. WALL-CASE. GRANVILLE E. PALMER, Hartford, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed July 6, 1911. Serial No. 637,146. (Cl. 247—1.)

1. In a wall case, the combination of a casing having cable openings, means for holding one end of said plate away from the bottom of said casing, a slot in said plate having its end adjacent to said means narrower than the end remote therefrom, and a screw passing through said slot and into the bottom of said casing, said screw having a tapered portion engaging the sides of said slot and acting to both secure said clamping plate to said casing and force the openings of said clamping plate out of alinement with said casing openings.

2. In a wall case, the combination of a casing having cable openings in a plurality of sides thereof, a clamping plate having corresponding openings, said clamping plate having a slot narrower at one end than at the other, means adjacent to said narrower end for holding that portion of the plate away from the bottom of the casing, and a screw passing through said clamping plate and entering said casing and having a tapered surface engaging said slot.

3. In a wall case, the combination of a casing having cable openings in its bottom, a clamping plate having openings corresponding therewith, means for holding one end of said clamping plate away from the bottom of said casing, said clamping plate having a slot narrowing toward the end of said clamping plate adjacent to said means, and a screw passing through said slot and into said casing, and having a tapered surface engaging said slot.

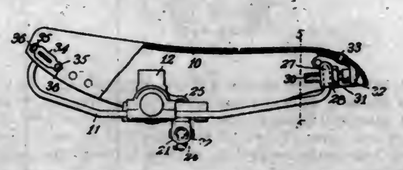
4. In a wall case, the combination of a casing having cable openings in an end and sides thereof, a clamping plate having corresponding openings adjacent to said cable openings, means for holding the portion of the clamping plate remote from said end of the casing away from the bottom of said case, said clamping plate having a slot narrowing toward the portion adjacent to said hold-

ing means, and a screw passing through said slot and into said casing, and having an inclined surface engaging said slot.

5. In a wall case, the combination of a casing having cable openings in an end and bottom and sides thereof, a clamping plate having corresponding openings adjacent to said cable openings, means for holding the portion of the clamping plate remote from said end of the casing away from the bottom of said case, said clamping plate having a slot narrowing toward the portion adjacent to said holding means, and a screw passing through said slot and into said casing, and having an inclined surface engaging said slot.

[Claim 6 not printed in the Gazette.]

1,016,031. SADDLE. CHARLES A. PERSONS, Worcester, Mass. Filed Jan. 28, 1911. Serial No. 605,237. (Cl. 208—63.)



1. In a device of the class described, a seat, a support therefor, and means for attaching said support to a frame comprising, means for gripping each member of the support, means interposed between said support gripping means for gripping the frame, conical projections on one of said means adapted to enter and frictionally clutch corresponding sockets on the other of said means, and means for clamping together the members of said attaching means.

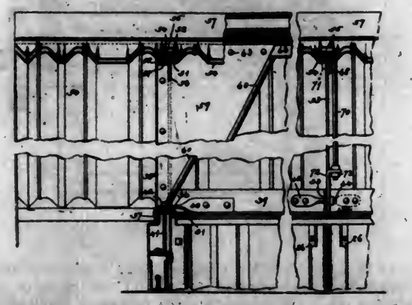
2. In a device of the class described, a seat, a support therefor, and means for attaching said support to a frame comprising, means for gripping each member of the support, means interposed between said support gripping means for gripping the frame, conical projections on each of said support gripping means, conical sockets on said frame gripping means adapted to receive and frictionally clutch the corresponding projections on the support gripping means, and means for clamping said support and said frame gripping means together.

3. In a device of the class described, a seat, a support therefor, and means for attaching said support to a frame rod comprising, plates placed on opposite sides of each member of said support to grip these members, a frame gripping member interposed between said support gripping members, a conical projection on the inner plate of each of said support gripping members, conical sockets on the outer faces of said frame gripping members adapted to frictionally clutch the opposing projections on said support gripping members, and a bolt passing through orifices in said plates and said frame gripping member to clamp said parts together.

4. In a device of the class described, a seat, a support therefor, and means for attaching said support to a frame rod comprising, plates placed on opposite sides of each of the members of said support to grip said support, means for preventing relative rotation of said plates and said members, a frame gripping member interposed between the support gripping members, a conical projection on the inner plate of each of the support gripping members, conical sockets on the outer faces of said frame gripping member adapted to frictionally clutch the projection on the opposing support gripping plate, and a bolt running through all of said plates and the frame gripping member to clamp these parts together.

5. In a device of the class described, a seat; supports therefor fastened to said seat; means for attaching said supports to a frame comprising, means for gripping each of said supports, a frame gripping member interposed between said support gripping means, and a bolt passing through said support gripping means and said frame gripping member to clamp these parts together; orifices in said support gripping means; a tapered end bar having one of its extremities resting in each of these orifices and adapted to be locked therein by the tightening of the clamping bolt; a tapped hole in said bar; an inside and outside threaded pipe having one of its extremities entering said hole, a second tapered end bar having its extremities resting in opposing orifices in said frame gripping member in the manner of the first bar; and a pin having one extremity threaded to enter the free extremity of said pipe and the other extremity fastened to said second bar.

1,016,032. PORTABLE SHEET-METAL HOUSE. CLARENCE D. PRUDEN, Baltimore, Md. Filed July 19, 1911. Serial No. 639,359. (Cl. 189—2.)



1. In a sheet-metal house the combination with a base plate having an up-turned vertical portion, of a plurality of spaced-apart wall sections each having a curled vertical edge; a coupling member having a central web which projects between the spaced-apart curled edges of the wall sections and also having curled edges at each side of the web to telescopically engage the curled edges on the wall sections,—said coupling member also having a vertical slot in its lower edge to receive the up-turned vertical portion of the base plate; a roof sustained above the coupled wall sections and means for securing the roof with respect to the wall sections.

2. In a sheet-metal house the combination with a plurality of spaced-apart wall sections each having a longitudinal engaging device on its vertical edges, of a coupling member interposed between the adjacent wall sections and said coupling member having a central web which projects between the spaced wall sections and also having side hook members on its opposite edges to engage the devices on the edges of the wall sections; a channel plate on the upper edges of both the wall sections and coupling members; means also on the wall sections at opposite sides of the coupling member to secure the channel plate to the wall section; a roof and means for securing the roof to the channel plate.

3. In a sheet-metal house the combination with the base plate, of a plurality of spaced-apart wall sections each having an engaging member on its opposite longitudinal edges; securing plates at the bottom edge of the wall sections to engage the said base plate; a coupling member projecting between and also coacting with the engaging members on the edges of the spaced-apart wall sections; a channel plate on the upper edges of the said wall sections and coupling member; securing plates at the upper edge of the wall sections to engage the channel plate; a roof, and means coacting between the roof and channel plate to secure the former in place.

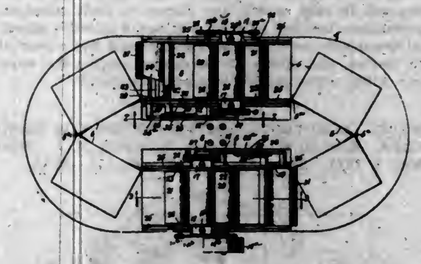
4. In a sheet-metal house the combination with a plurality of wall sections, of a coupling member interposed between and securing the adjacent walls together; a corner union member having a central web to project between the vertical edges of the abutting walls and having oppositely-projecting hooks to engage the outer sides of said wall edges; a saddle plate engaging the web of the corner

member on the inner side of the walls; channel plates on the walls; a roof, and means for securing the roof to the channel plates.

5. In a sheet-metal house the combination with a plurality of spaced-apart wall sections each having locking means on its vertical edges, of a coupling member having a double-walled central web,—and each wall projecting outwardly and laterally and having an engaging hook at each side of said central web to engage the locking means on the edges of adjacent spaced-apart wall sections; a roof, and means for securing the roof with respect to the wall sections and coupling member.

[Claims 6 to 9 not printed in the Gazette.]

1,016,033. PRINTING-PRESS. JOSEPH RAICH, Chicago, Ill. Filed Jan. 7, 1911. Serial No. 601,452. (Cl. 101—148.)



1. In combination with a plurality of form-bearing plates connected together to form an endless train adapted for travel in a plane, a bed-plate on which said train of plates travels, a rotative impression roll adapted for rolling contact with the forms on said plates, horizontally spaced upright guide-plates secured to said bed-plate and adapted for engagement with the lateral edges of said form-bearing plates to guide them in their travel below the impression roll, a supply roll and a rewind roll located respectively in the front and in the rear of said impression roll, adapted to feed a strip of paper to said impression roll, and means for driving said form-bearing plates, said impression roll and said rewind roll at the same rate of speed.

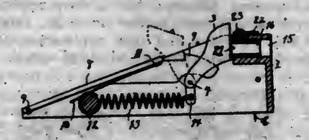
2. In combination with a plurality of form-bearing plates, all arranged in an endless train in the same horizontal plane, each plate being provided at its inner corners with lugs each pivotally connected to a lug of an adjacent plate, a bed-plate on which said train of form-bearing plates travels, a rotative impression roll adapted for rolling contact with the forms on said plates, a supply roll and a rewind roll located respectively in the front and the rear of said impression roll adapted to feed a strip of paper about said impression roll, horizontally spaced upright guide-plates adapted for engagement with the lateral edges of said form-bearing plates to guide them in their travel below the impression roll, and means for driving said form-bearing plates, said impression roll and said rewind roll at the same rate of speed.

3. In combination with a plurality of form-bearing plates connected together to form an endless train traveling in a horizontal plane, a bed-plate on which said endless train of form-bearing plates travels, a rotative impression roll supported above said bed-plate, a rack secured to the bottom of each of said plates, cog-wheels supported by said bed-plate adjacent to said impression roll adapted to engage the racks of said plates in succession, a supply and a rewind roll located respectively in the front and the rear of said impression roll adapted to feed a strip of paper about said impression roll, horizontally spaced upright guide plates adapted for engagement with the lateral edges of said form-bearing plates to guide them in their travel below the impression roll, and means actuating said cog-wheels, said impression roll and said rewind roll to rotate them in timed relation.

4. In combination with a plurality of form-bearing plates connected together to form an endless train traveling in a horizontal plane, a bed-plate on which said train of form-bearing plates travels, a rotative impression roll adapted for rolling contact with the forms on said plates, means providing inclined guide-ways adapted to receive the ends of a supply roll and of a rewind roll located respectively in the front and in the rear of said impression roll, a supply roll and a rewind roll located in said guide-ways adapted to feed a strip of paper about said impression roll, an idle friction roll adapted for engagement with said supply roll, a friction feed roll adapted for engagement with said rewind roll, horizontally spaced upright guide plates adapted for engagement with the lateral edges of said form-bearing plates to guide them in their travel below the impression roll, and means for driving said form-bearing plates, said impression roll and said friction drive roll in timed relation.

5. In a printing press of the class described, in combination with the bed, a plurality of form bearing plates traveling on said bed, a rotative impression roll adapted for engagement with the forms on said plates, and a supply and rewind roll adapted to feed a strip of paper about said impression roll, rollers located on each plate having rolling contact with said bed, a rack formed on the under surface of each plate, cog-wheels supported by the bed adapted to engage the racks of said plates, and antifriction means supported by said bed adapted to engage the under surface of each plate as it is fed under the impression roll.

1,016,034. BURGLAR-ALARM. WILLIAM H. REIFF, Philadelphia, Pa., assignor of one-half to William L. R. Clime, Burlington, N. J. Filed Feb. 25, 1911. Serial No. 610,840. (Cl. 116—42.)

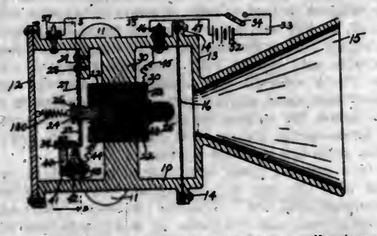


1. In a burglar alarm a casing, the side walls of which are produced wedge shaped, said casing carrying means for holding an alarm device, a hammer provided with a projection at one side and having a heel formed therewith pivoted between the side walls of the casing, a stud formed integral with one of the side walls of the casing, a helical spring, one end thereof fastened to said stud and the other end to the heel of the trigger, a trip plate pivoted between the side walls of the casing adjacent their smallest ends, a flat spring carried by the trip plate engaging the stud for normally holding the trip plate beyond the edges of the side walls, and a trigger formed integral with the free end of the trip plate adapted to engage the projection formed with the hammer for holding said hammer in a retracted position.

2. In a burglar alarm, a casing having wedge shaped side walls, said casing carrying means for holding an alarm device, a hammer pivoted between the side walls of the casing, a projection formed with one side of said hammer providing trigger engagement means, a heel carried by the hammer lying midway between the side walls of the casing, a stud formed integral with one of the side walls of the casing, the free end of said stud abutting the opposite wall, a helical spring, one end thereof fastened to said stud and the other end to the heel of the trigger, a trip plate approximately the same width as the space between the side walls pivoted between said side walls adjacent their smallest ends a flat spring secured to the free end of the trip plate, the free end of said spring engaging the stud for normally holding the trip plate beyond the edges of the side walls and a trigger formed integral with the free end of the trip plate at one edge thereof, projecting

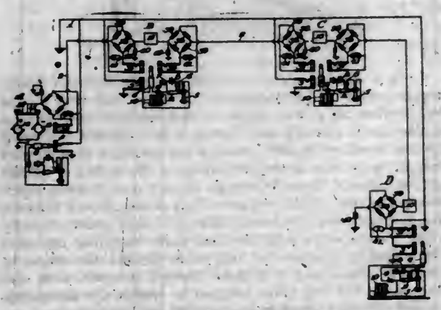
forwardly beneath the projection formed with the hammer, said trigger adapted to engage said projection formed with the hammer for holding said hammer in a retracted position.

1,016,035. SOUND-PRODUCING DEVICE. BENJAMIN P. REMY and FRANK I. REMY, Anderson, Ind., assignors to The Remy Electric Company, Anderson, Ind., a Corporation. Filed July 28, 1910. Serial No. 574,264. (Cl. 177—7.)



A sound producing device including a vibratory diaphragm, an electro-magnet, a plunger armature carrying a striker, and having a lateral projection on its outer end, a spring for holding said armature and striker normally out of engagement with the diaphragm, an electric circuit through the magnet, and a spring contact plate which normally closes the circuit and is provided with a hole through which the armature extends so that when actuated the projection of the armature will engage said spring contact plate to break the circuit.

1,016,036. SIGNALING AND TELEPHONE SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor to Sandwich Electric Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 26, 1908, Serial No. 440,571. Divided and this application filed Feb. 15, 1910. Serial No. 543,969. (Cl. 179—28.)



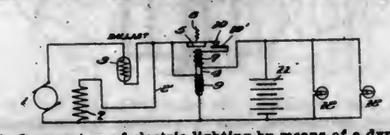
1. A system of the character described comprising a central station and a plurality of substations, a telephone set at each station, a line circuit uniting said stations, to which said telephones are adapted for connection, a second line circuit uniting all of said stations, a selective signal-receiving device including a signal associated with said second line circuit at each station, and means at the central station for selecting and operating the signal of any station independently of said first aforesaid line circuit.

2. A system of the character described comprising a central station and a plurality of substations, two separate line circuits for uniting all of said stations, one line circuit to serve as a talking circuit and the other line circuit to serve as a signaling circuit; a telephone set at each substation for connection to the talking circuit; a selective signal-receiving device including a signal at each substation to notify the operator thereat that he is wanted at the telephone associated with the said station, and means at the central station to selectively operate either selective signal-receiving device and its associated signal independently of the talking circuit.

3. A system of the character described comprising a central station and a plurality of substations, a telephone set at each station, a line circuit uniting said stations, to which said telephones are adapted for connection, a second line circuit uniting all of said stations, means for connecting said telephones to said second line circuit, a selective signal-receiving device including a signal associated with said second line circuit at each station, and means at the central station for selecting and operating the signal of any station independently of said first aforesaid line circuit.

4. A system of the character described comprising a central station and a plurality of substations, a telephone set at each station, a line circuit uniting said stations, to which said telephones are adapted for connection, a second line circuit uniting all of said stations, means for connecting said telephones to said second line circuit, means interposed in said second line circuit to limit telephone conversations between adjacent stations, a selective signal-receiving device associated with said second line circuit at each station, and means at the central station for selectively calling either station over said line circuit.

1,016,037. ELECTRIC-LIGHTING SYSTEM FOR VEHICLES. SAMUEL W. RUSHMORE, Plainfield, N. J. Filed Mar. 8, 1911. Serial No. 613,035. (Cl. 171—313.)



1. In a system of electric lighting by means of a dynamo driven at varying speed, the combination with the dynamo of a storage battery, a circuit of lamps arranged in parallel with the battery, a ballast in series with the dynamo armature and the battery and a shunt coil upon the dynamo having one terminal connected to one terminal of the dynamo and the other terminal connected at a point beyond the ballast, so that excitation of the dynamo shall remain practically constant although the voltage generated by same may vary.

2. A system of electric lighting, comprising a variable speed dynamo, a storage battery, a circuit of lamps, a plurality of means in series with the dynamo and the battery for absorbing, at the maximum speed of said dynamo, the energy in excess of that required to charge the battery and to operate the lamps, means for varying the number of said absorbing means and a shunt coil upon the dynamo having one terminal connected to one terminal of the dynamo and the other terminal connected at a point beyond the absorbing means.

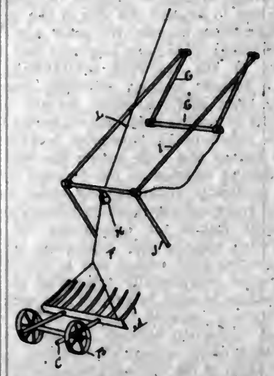
3. A system of electric lighting comprising a variable speed dynamo, a storage battery, a main ballast in series with the dynamo and battery, an auxiliary ballast, a lighting circuit, a switching device adapted to connect the lighting system to the battery and to connect the auxiliary ballast in parallel with the main ballast and a shunt coil on the dynamo having one terminal connected to one terminal of the dynamo and the other terminal connected at a point beyond the two ballasts.

4. In a system for supplying electric lights from a dynamo generator driven at varying speed, a dynamo generator having a shunt field coil and an auxiliary field coil adapted to oppose the shunt coil, a storage battery, a circuit of lamps arranged in parallel with the battery, a ballast in series with the dynamo and with the battery, said shunt field coil having one terminal connected to one terminal of the dynamo and the other terminal connected beyond the ballast, and connections placing the auxiliary coil in parallel with the ballast so that as current through the ballast is increased the current through the auxiliary coil will be increased to oppose the magnetizing effect of the current in the shunt coil.

5. In an electrical system, a dynamo driven at varying speed having a shunt field coil and an auxiliary field coil adapted to oppose the shunt field coil, a supply circuit, a ballast in series with the dynamo and supply circuit, and connections placing the auxiliary field coil in shunt with the ballast, so that, as current through the ballast increases, the current through the auxiliary field coil will be increased to oppose the current in the main shunt field coil.

[Claims 6 to 8 not printed in the Gazette.]

1,016,038. WAGON-LOADER. CHARLES L. SAMP, Chelsea, Mich. Filed Jan. 27, 1911. Serial No. 605,044. (Cl. 214—10.)



1. The combination with a gathering implement, of a frame having a detachable anchoring engagement with the wagon to be loaded and adapted to swing upward over the wagon box, a sheave or pulley carried by said swinging frame, and a hauling cable passing over said sheave and attached to the gathering implement.

2. The combination with a gathering implement, of a swinging frame adapted to embrace and swing over the wagon box, a hauling cable for said gathering implement having a bearing on said swinging frame, and an anchor for the pivot of said swinging frame engaging and fixedly secured by the wheels of the wagon to be loaded.

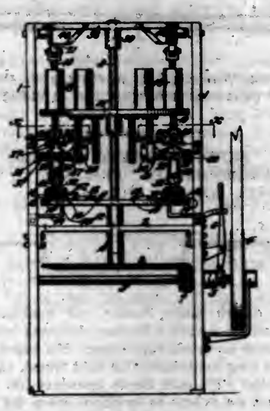
3. The combination with a gathering implement, of a U-shaped frame adapted to embrace the wagon box, and to swing over the same, a second U-shaped frame to the forward ends of which the first frame is pivoted, said second frame having its cross bar arranged in rear of the wheels of the wagon, means for holding the swinging frame normally in inclined position and projecting in rear of the wagon box, and a hauling cable attached to said gathering implement and having a bearing on said swinging frame, for the purpose described.

4. The combination with a gathering implement, of a U-shaped frame having its cross bar engageable with the rear wheels of a wagon and its parallel arms extending forward therefrom, a second U-shaped frame of greater length having its parallel arms pivotally attached to the forward ends of the first U-shaped frame, legs for supporting said second frame normally in inclined position, a sheave carried by said second frame, and a hauling cable attached to said gathering implement and passing over said sheave, for the purpose described.

5. The combination with a slitted frame having guiding handles and a gathering fork, of a hauling cable attached to said frame, a U-shaped frame engageable with the rear wheels of a wagon and having its sides extending forward therefrom, a second U-shaped frame pivotally engaging the forwardly projecting sides of the first frame, legs upon said second frame for holding the same normally in inclined position, and a pulley on said second frame over which said hauling cable passes, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,016,039. CORER FOR TOMATOES AND OTHER VEGETABLES. EZRA H. SAWYER, Vineland, N. J., and MAURICE FELS, Philadelphia, Pa. Filed Sept. 9, 1911. Serial No. 648,476. (Cl. 146—6.)



1. In a device of the character stated, a coring implement composed of a plurality of cutter blades forming segments of a conical shell, means for moving such implement toward and from the articles to be cored, and means for closing and opening such blades during their movement respectively toward and from such article.

2. In a device of the character stated, a coring implement composed of a plurality of cutter blades forming segments of a conical shell, means for automatically moving such implement toward and from the article to be cored, and means for automatically closing and opening such blades during their movement respectively toward and from such article.

3. In a device of the character stated, a coring implement composed of a plurality of cutter blades forming segments of a conical shell, means for automatically moving such implement toward and from the article to be cored, means for automatically closing and opening such blades during their movement toward and from such article, a continuous carrier having receptacles for the articles to be cored and supported to have such receptacles successively register with the coring implement, and means for automatically moving such carrier.

4. In a device of the character stated, a continuous carrier constructed to receive the articles to be cored, means for moving such carrier, arms provided with converging cutter-blades, means for reciprocating such arms toward and from the carrier, and means for moving such arms to bring the cutter blades toward and away from each other during descent and ascent of said arms.

5. In a device of the character stated, a continuous carrier constructed to receive the articles to be cored, means for moving said carrier, arms provided with cams and having converging cutter-blades at their ends, rollers arranged to have said cams bear against them, and means for reciprocating said arms toward and from the carrier, whereby said arms and cutter-blades are closed and opened during descent and ascent of the same.

[Claims 6 to 14 not printed in the Gazette.]

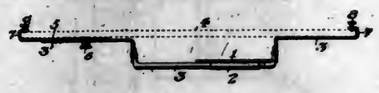
1,016,040. CURTAIN-POLE. CLARA SCHINKE, Pittsburgh, Pa. Filed Sept. 16, 1911. Serial No. 649,667. (Cl. 156—19.)

A curtain pole comprising a pair of segmental shells of semi-cylindrical shape in cross section and one having its cross sectional length greater than the other, said shells abutting to provide a cylindrical body, that shell having a greater cross sectional length cut away at one end to provide in connection with the opposing end of the other shell a longitudinally extending slot for the passage of the upper portion of a curtain, each of said shells provided at

each end with peripheral threads in abutting engagement, forwardly curved pins projecting from the inner face of that shell having the smaller cross sectional length pro-

viding means for coupling a curtain to the cylindrical body, and caps mounted upon the threaded end of said shells.

1,016,041. SKETCH-TABLET HOLDER. ALEXANDER SCOTT, Philadelphia, Pa. Filed Mar. 17, 1910. Serial No. 550,088. (Model.) (Cl. 41—4.)



1. In a sketch tablet holder, the combination with a frame including members having clamping means at their ends arranged to detachably engage the edges of a tablet; of a thumb ring connected with said frame, extending in a plane parallel with said frame members but offset therefrom to such an extent as to afford space for a thumb between said ring and the back of the tablet.

2. In a sketch tablet holder, the combination with a frame including parallel bars having tablet engaging means at their ends and having their middle portions offset with respect to their ends; of a thumb ring longitudinally adjustable on the middle portions of said bars.

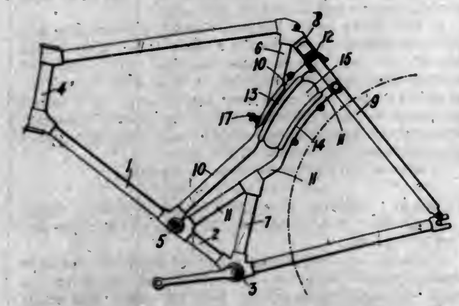
3. In a sketch tablet holder, the combination with a thumb ring; of a frame carried by said ring including parallel bars on which said ring is longitudinally adjustable; said bars including longitudinally extensible sections; means detachably connecting said extensible sections with the other members of said bars; and means on said frame members arranged to detachably clamp a tablet.

4. In a sketch tablet holder, the combination with a thumb ring; of a frame carried by said ring including extensible parallel bars on which said ring is arranged to slide; and, means carried by said bars arranged to detachably clamp a tablet.

5. In a sketch tablet holder, the combination with a frame including members having clamping means at their ends arranged to detachably engage the edges of a tablet; of a thumb ring permanently connected with said frame but adjustable relatively to said clamping means.

[Claim 6 not printed in the Gazette.]

1,016,042. SPRING-FRAME FOR VELOCIPEDES. HENRY ALFRED SHELTON, Northampton, England. Filed Sept. 7, 1911. Serial No. 648,017. (Cl. 208—103.)



1. In spring frames for velocipedes, the combination with a forward substantially triangular structure comprising a steering-head socket and a seat-pillar bracket and a rearward substantially triangular structure comprising a bottom bracket to support the crank axle, and forked members to support the axle of the rear wheel; of a pivotal connection between the lower angle of the forward substantially triangular structure and the forward lower angle of the rearward substantially triangular structure, a telescopic connection between the upper angle of the rearward substantially triangular structure and the upper rearward angle of the forward substantially triangular structure, and means for resiliently distancing the upper angles of the forward and rearward substantially triangular structures.

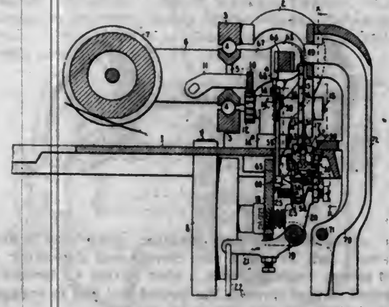
2. In spring frames for velocipedes, the combination with a forward substantially triangular structure comprising a steering-head socket and a seat-pillar bracket, and a rearward substantially triangular structure comprising a bottom bracket to support the crank axle, and forked members to support the axle of the rear wheel; of a pivotal connection between the lower angle of the forward substantially triangular structure and the forward lower angle of the rearward substantially triangular structure, a tubular member extending rearwardly and downwardly from said seat-pillar bracket, an upwardly and forwardly extending guide bar connected to the upper angle of the substantially triangular rearward structure, adapted to engage and slide within the said rearwardly extending tubular member on the forward structure, and means for resiliently distancing the upper angles of the forward and rearward substantially triangular structures.

3. In spring frames for velocipedes, the combination with a forward substantially triangular structure comprising a steering-head socket and a seat-pillar bracket and a rearward substantially triangular structure comprising a bottom bracket to support the crank axle, and forked members to support the axle of the rear wheel; of a pivotal connection between the lower angle of the forward substantially triangular structure and the forward lower angle of the rearward substantially triangular structure, a telescopic connection between the upper angle of the rearward substantially triangular structure and the upper rearward angle of the forward substantially triangular structure, and a pneumatic cushioning device located between the forward and rearward substantially triangular structures adjacent to the said telescopic connection, substantially as set forth.

4. In spring frames for velocipedes, the combination with a forward structure comprising a steering-head socket, an upper horizontal member extending rearwardly from said socket, a rearwardly and downwardly extending member from said steering socket, a bracket at the lower end of said rearwardly and downwardly extending member, a seat-pillar bracket at the rearward end of said horizontal member, a tubular member extending rearwardly and downwardly from said bracket, a member extending between the bracket at the lower end of the rearwardly and downwardly extending member and the lower end of the tubular member, and a rearward structure comprising a bottom bracket, bearings in the said bracket, a crank shaft carried in said bearings, a member extending forwardly and upwardly from said bottom bracket, a bracket on the end of said member, an upwardly and rearwardly inclined member extending from the latter bracket, a lower forked member extending rearwardly from said bottom bracket to carry the axle of the rear wheel, a forked stay extending upwardly from the rear end of said lower forked member and connecting said lower forked member to the rear end of said upwardly and rearwardly inclined member; of a pivotal connection between the bracket on the lower end of the downwardly extending member of the forward structure and the bracket at the end of the member upwardly extending from the bottom bracket of the rearward structure, a telescopic joint between the rearwardly extending tube at the rearward and upper portion of the forward structure and the upper end of said forked stay of the rearward structure, and elastic means located between the upper rearward end of the forward structure and the upper end of the rearward structure adjacent to said telescopic connection, to resiliently distance the said two structures.

5. In spring frames for velocipedes, the combination with a forward structure comprising a steering-head socket, an upper horizontal member extending rearwardly from said socket, a rearwardly and downwardly extending member from said steering socket, a bracket at the lower end of said rearwardly and downwardly extending member, a seat-pillar bracket at the rearward end of said horizontal member, a tubular member extending rearwardly and downwardly from said bracket, a member extending between the bracket at the lower end of the rearwardly and downwardly extending member and the lower end of the tubular member, a downwardly and forwardly inclined member extending from the said seat-pillar bracket and connected to the member extending between the bracket at the lower end of said rearwardly and downwardly extending member and said tubular member, and a rearward structure comprising a bottom bracket, bearings in the said bracket, a crank shaft carried in said bearings, a member extending forwardly and upwardly from said bottom bracket, a bracket on the forward end of said forwardly and upwardly extending member, an upwardly and rearwardly inclined member extending from the latter bracket, a second upwardly and rearwardly inclined member connecting the bottom bracket to the first-mentioned upwardly and rearwardly extending member, a lower forked member extending rearwardly from said bottom bracket to carry the axle of the rear wheel, and a forked stay extending upwardly from the rear end of said lower forked member; of a pivotal connection between the bracket on the lower end of the downwardly extending member of the forward structure and the bracket at the end of the member upwardly extending from the bottom bracket of the rearward structure, a telescopic joint between the rearwardly extending tube at the rearward and upper portion of the forward structure and the upper end of said forked stay of the rearward structure, and elastic means located between the upper rearward end of the forward structure and the upper end of the rearward structure adjacent to said telescopic connection, to resiliently distance the said two structures.

1,016,043. TYPE-WRITING MACHINE. HERBERT H STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 2, 1911. Serial No. 658,139. (Cl. 197—176.)



1. In carriage feeding mechanism for typewriting machines, the combination of a stepping dog, and means for varying automatically the extent of stepping movement of said dog.

2. In carriage feeding mechanism for typewriting machines, the combination of a toothed rack, a stepping dog, a holding dog, and means operating automatically to vary the extent of stepping movement of said stepping dog.

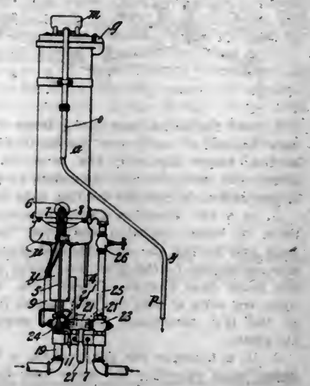
3. In carriage feeding mechanism for typewriting machines, the combination of a stepping dog, stop devices coöperative therewith, and automatic means for varying said stop devices to vary the extent of stepping movement of said dog.

4. In carriage feeding mechanism for typewriting machines, the combination of a rack, a holding dog, a stepping dog provided with a plurality of teeth, one of said teeth normally coöperating with said rack during letter spacing movements, and means operating automatically to cause another of the teeth of said dog to coöperate with said rack.

5. In carriage feeding mechanism for typewriting machines, the combination of a rack, a holding dog, a stepping dog provided with a plurality of teeth, one of said teeth normally coöperating with said rack during letter spacing movements, and means operating automatically at a predetermined point in the travel of the carriage to cause a second tooth of said dog to coöperate with said rack.

[Claims 6 to 34 not printed in the Gazette.]

1,016,044. INSTANTANEOUS HOT-WATER HEATER. THOMAS H. STEPHENSON, Holyoke, Mass. Filed Feb. 25, 1911. Serial No. 610,604. (Cl. 122—250.)



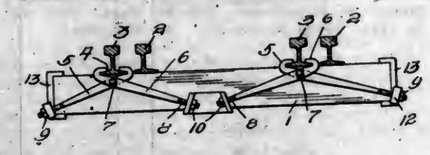
1. In a hot-water heater, the combination with two casing members arranged in concentric relation to each other for providing an annular chamber in which the water to be heated enters the upper end of the casing communicating with a cap member provided with an annular passage-way, a plurality of heating coils arranged within the inner casing and having one end of the coils in communication with the annular passage-way, and their discharge end opening into a second cap member from which the heated water is delivered, a burner attached to the lower end of the annular casing, means for carrying away the water of condensation which may form on the coils and the inside of the inner casing member.

2. In a hot water heater, a plurality of casings spaced from each other, a heater located below the casing, coils located within the heater and having direct communication with the space between the casings, an annular cap member having an opening therethrough and located at the upper ends of the casings to which the discharge ends of the coils are connected, whereby the heated air and products of combustion will flow in direct contact with the cap member and the discharge ends of the coils during their escape, as described.

3. In a hot water heater, the combination with casing members radially spaced from each other to provide an annular space for the incoming cold water to initially heat the same before it enters the heating coils, a chambered member with which the upper outlet end of the annular space communicates, the inlet ends of said heating coils being attached to, and in communication with, the chambered member, the coils extending downward from the chambered member and then upward, a discharge cap-piece with which the outlet ends of the heating coils are connected, and a burner for heating the coils.

4. In a hot water heater, the combination with casing members radially spaced from each other to provide an annular space for the incoming cold water to initially heat the same before it enters the heating coils, a chambered member with which the upper outlet end of the annular space communicates and into which the initially heated water discharges, the inlet ends of said heating coils being attached to, and in communication with, the chambered member, the coils extending downward from the chambered member and then upward, the chambered member having an opening through which the discharge ends of the heating coils extend and the heated products of combustion pass, and a burner for heating the coils, substantially as described.

1,016,045. RAIL-FASTENER. KAZIMIERZ SZTEJNERT, Hazleton, Pa. Filed Nov. 6, 1911. Serial No. 658,630. (Cl. 238—4.)



1. Rail fasteners comprising tongs engaging the outer base flanges of rails and having the ends thereof connected, tongs engaging the inner base flanges of the same rails and pivotally connected to the first mentioned tongs, and tie plates for holding said tongs.

2. In a rail fastener, the combination with a tie and rails, of tongs engaging the outer base flanges of said rails and having the ends thereof connected, tongs pivotally connected to the first mentioned tongs and engaging the inner base flanges of said rails, tie plates arranged upon the ends of said tie, and means for holding the ends of the last mentioned tongs in engagement with said tie plates.

3. In a fastener for guard rails, a tie supporting said rails, tongs engaging the outer base flanges of said rails, a coupling member connecting the ends of said tongs, tongs pivotally connected to the first mentioned tongs beneath said rails and engaging the inner base flanges thereof, tie plates mounted upon the ends of said tie, bars carried by said plates and protruding from the sides thereof, and means for holding the ends of said tongs in engagement with said bars.

1,016,046. PROCESS OF PACKING SARDINES. WILLIAM E. TAYLOR, Eastport, Me., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 4, 1911. Serial No. 652,760. (Cl. 99—8.)

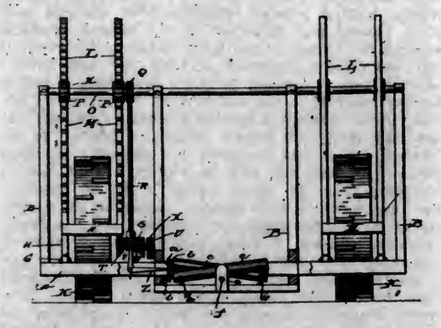
1. The process of preserving fish consisting in pickling, steaming and drying the fish, then placing the fish together with oil in open cans and subjecting the same to an oven heat and covering and sealing the cans while still hot, substantially as specified.

2. The process of preserving fish consisting in pickling, steaming and drying the fish, then placing the fish together with oil in open cans and subjecting the same to an oven heat of not less than 220° Fahrenheit for a long enough period to kill the germs, and sealing the cans while still hot.

1,016,047. PLATFORM-ADJUSTER. JAMES R. TELLER, Stockton, Cal. Filed Apr. 6, 1910. Serial No. 553,819 (Cl. 56—32.)

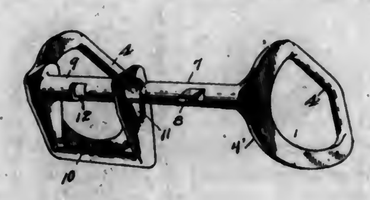
1. In mechanism of the character described, the combination with a frame, of levers pivotally secured thereto, axles secured to the levers intermediate their length, and automatically operated means for moving said levers to adjust the position of the axles with reference to the frame, said means, comprising of a pair of pivoted weighted cylinders having connection with the said levers.

2. In mechanism of the character described, the combination with a frame, of wheels adjustably secured thereto, means for adjusting said wheels, a cylinder pivotally secured to the frame, a ball mounted in the cylinder and adapted to tilt said cylinder on its pivot upon the tipping of the machine, and a clutch connected with the cylinder and adapted to be thrown into engagement by the tilting of the cylinder to cause the operation of the adjusting means.



3. In a machine of the character described, the combination with a frame, of a pair of cylinders pivotally supported thereon, balls located in the cylinders and adapted to normally lie at correspondingly opposite ends of the cylinders, the ball of each cylinder being adapted to shift upon the tipping of the machine to tilt its cylinder, a double face clutch member connected with said cylinders and operated by the tilting of the cylinders, wheels adjustably secured to the frame, and operating mechanism adapted to be connected by the clutch with the shaft to adjust the wheels to restore the equilibrium of the frame.

1,016,048. HARNESS. EARL TIFFANY, Logan, Iowa. Filed Feb. 23, 1911. Serial No. 610,356. (Cl. 54—21.)



1. A separable harness coupling, comprising a slotted sleeve, a bail having a slot therein and depending from said sleeve, combined with a stud having an integral lug adapted to pass through the slotted bail and to engage the slotted sleeve to lock the parts together.

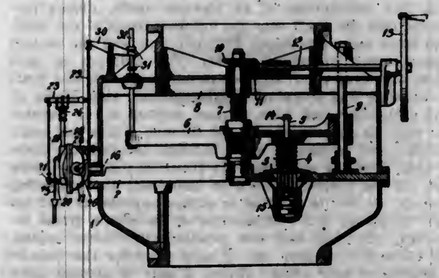
2. A separable harness coupling, comprising a slotted sleeve, a bail having a slot therein and depending from said sleeve, and an integral eye arranged at right angles thereto, combined with a stud having an integral lug adapted to pass through the slotted bail and to engage the slotted sleeve to lock the parts together, and an integral eye arranged at right angles to the stud.

3. The combination with the sleeve and stud members adapted to interlock, each formed with an eye at right angles thereto, and the collar and breast straps attached to said eyes, a pole strap attached to the sleeve, a bail depending from said sleeve, and a belly strap attached to said bail, the said straps holding the bail in a vertical position.

1,016,049. WRENCH. ABRAHAM LINCOLN TRIMBATH, Bellaire, Ohio. Filed June 3, 1911. Serial No. 631,032. (Cl. 81—161.)

A wrench comprising a shank having flat faces with longitudinal grooves and oppositely disposed faces provided with teeth, a fixed jaw carried by the upper end of said shank, a handle detachably mounted upon the lower end of said shank, a gripping jaw slidably mounted upon said shank and formed with straps embracing said shank, a depending L-shaped lug carried by the forward edge of said jaw, a rotatable locking nut having an upper reduced cylindrical end provided with a groove adapted to receive the lug of said jaw, said nut having a vertical bore formed therein with diametrically opposed walls provided with teeth adapted to engage the teeth of said shank and smooth walls adapted to confront the flat faces of said shank, members arranged in said nut between the flat faces of said shank and the smooth walls of the bore of said nut, tongues carried by the inner faces of said members and engaging in the grooves of said shank, teeth carried by the outer sides of said members and having the ends thereof engaging in the teeth of said nut, and a pin carried by one of said members and adapted to engage shoulders provided therefor in the lower end of said nut to limit the rotative movement of said nut.

1,016,050. VALVE. AXEL B. WALLEM, Cynwyd, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership of Pennsylvania. Filed Mar. 8, 1911. Serial No. 613,101. (Cl. 136—9.)



1. The combination of a valve-casing having a passageway therethrough, a valve-member movable in said casing to close and open said passageway, a pipe leading to the casing on one side of said movable member, a controlling valve in said pipe and means for operating said controlling valve in response to changes of the level of the liquid in the casing above said valve-member to maintain the joint between said member and its seat submerged, substantially as set forth.

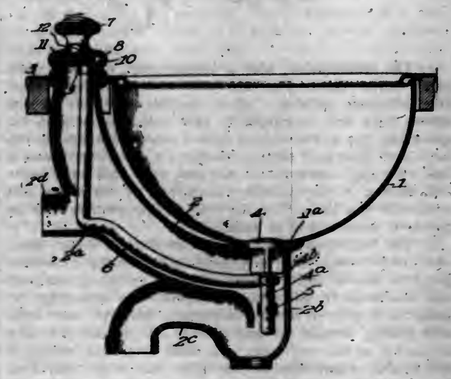
2. The combination of a valve-casing having a passageway therethrough, a valve-member movable in said casing to close and open said passageway, a pipe leading to the casing on one side of said movable member, a controlling valve in said pipe, a float-chamber connected to the casing, a float therein actuating said controlling valve in response to changes of the level of the liquid in the casing above said valve-member to maintain the joint between said member and its seat submerged and an overflow opening leading from said float-chamber, substantially as set forth.

3. The combination of a valve-casing having a passageway therethrough, a valve-member movable in said casing to close and open said passageway, a pipe leading to the casing on one side of said movable member, a controlling valve in said pipe, means for operating said controlling valve in response to changes of the level of the liquid in the casing above said valve-member to maintain the joint between said member and its seat submerged, means operated from outside the casing for moving said valve-member from its seat and means actuated in so moving the movable valve-member for closing said controlling valve, substantially as set forth.

4. The combination of a valve having a movable member, means for supplying water thereto to effect a water-seal, means for raising said member from its seat, and means operated in raising said member from its seat for cutting off said water supply, substantially as set forth.

5. The combination of a valve having a plurality of spring-pressed valve-members therein, means for simultaneously adjusting the tension of the springs of all said members, means for raising said members from their seats, a pipe for carrying water to the valve to effect a water-seal, a controlling valve in said pipe, and means actuated in raising said valve-members from their seats for moving said controlling valve to the closed position, substantially as set forth.

1,016,051. LAVATORY-FIXTURE. EARL G. WATROUS, Chicago, Ill. Filed Mar. 20, 1909. Serial No. 484,722. (Cl. 4—24.)



1. In a lavatory fixture, the combination with a bowl having a drain opening and a vertically movable plug for controlling such opening, of an operating rod connected at its lower end to the plug and fulcrumed to permit oscillation about a vertical axis at its upper end for operating the plug.

2. In a lavatory fixture, the combination with a bowl having a drain opening and a vertically movable plug for controlling such opening, of an operating rod connected at its lower end to the plug and fulcrumed intermediate its length, the upper end of the rod being capable of oscillation about a vertical axis whereby the plug is movable vertically.

3. In a lavatory fixture, the combination with a bowl having a drain opening and with a vertically movable plug for controlling such opening, of an operating rod connected at its lower end to the plug and fulcrumed intermediate its length, the upper end of the rod being capable of oscil-

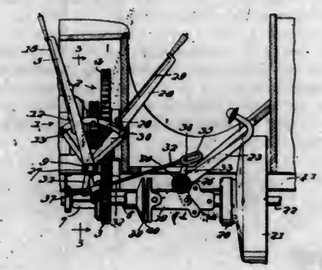
lation about a vertical axis whereby the plug is movable vertically, and means for oscillating the upper end of the rod.

4. In a lavatory fixture, the combination of a bowl having a drain opening and a vertically movable plug for controlling such opening, of an operating rod connected at its lower end to the plug and fulcrumed intermediate its length, the upper end of the rod being capable of oscillation about a vertical axis whereby the plug is movable vertically, and a rotatable hand knob eccentrically connected with the upper end of the rod for oscillating the latter.

5. In a lavatory fixture, the combination with a bowl having a drain opening and with a plug for controlling said opening, of an operating rod comprising a vertical and a transverse member forming a sharp bend at their meeting point, a seat receiving the bend of the rod and forming a fulcrum for the same.

[Claims 6 to 14 not printed in the Gazette.]

1,016,052. CLUTCH MECHANISM. ALBERT C. WEBB, St. Louis, Mo., assignor to The Webb Motor Fire Apparatus Company, St. Louis, Mo., a Corporation of Delaware. Filed July 10, 1911. Serial No. 637,743. (Cl. 192—1.)



1. The combination, with a driving part, a driven part, and a clutch connecting said parts and including a movable shipping member; of a member slidable on the driven part and connected to said shipping member for operating the same; a foot lever; means connecting the foot lever with said sliding member; a hand lever; and a link pivotally connected at one end with said hand lever and having a pin-and-slot connection at its other end with said foot lever, whereby said sliding member may be operated from either of said levers.

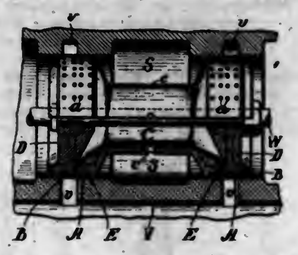
2. The combination, with a driving part, a driven part, and a clutch connecting said parts and including a movable shipping member; of a member slidable on the driven part and connected to said shipping member for operating the same; a foot lever, means connecting the foot lever with said sliding member; a hand lever; and a link pivotally connected at one end with said hand lever and having a lost-motion connection at its other end with said foot lever, whereby said sliding member may be operated from either of said levers.

1,016,053. PISTON-VALVE. EDWIN F. WILLIAMS, Erie, Pa. Filed Sept. 18, 1911. Serial No. 649,881. (Cl. 121—108.)

1. A packing for piston valves or the like, comprising a packing ring, means for introducing live steam behind a limited part only of said ring, and means for relieving steam pressure on the remaining parts of said ring.

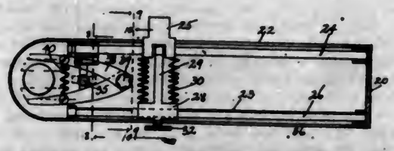
2. A packing for piston valves or the like, comprising a ring having an annular recess behind a limited part thereof, means for introducing live steam into said recess, and openings through the remaining part of the ring to equalize the pressure on both sides thereof.

3. A packing for hollow piston valves or the like, comprising a comparatively wide ring, the valve being provided with an annular recess behind a limited part of said ring, ports connecting said recess with the hollow interior



of the valve, and means to relieve steam pressure on the remaining inner surface of the ring.

1,016,054. ELEVATOR-STOP. REUBEN W. WILSON, Indianapolis, Ind. Filed Feb. 25, .1911. Serial No. 610,852. (Cl. 187—33.)



1. The combination of an elevator shaft, fingers projecting into the shaft near the different floors of the building, there being one finger for each floor and the various fingers being successively offset with relation to each other, an elevator car, a cable extending through said shaft for starting and stopping the elevator car, stop blocks on said cable near each floor, a frame secured to the elevator car with an opening at one end through which said cable extends and horizontal slots through the opposite sides of said frame, a shaft in said frame opposite the outer slot, an arm slidably splined on said shaft and projecting through the slot in position to engage any one of said fingers, according to the adjustment of the arm, a frame for laterally adjusting said arm provided with means extending through the other one of said slots for the manual operation of said sliding frame, a pair of pivoted arms extending on opposite sides of the cable opening in position to engage the stops on the cable, and means on said shaft for controlling the operation of said pivoted arms.

2. The combination of an elevator shaft, fingers projecting into the shaft near the different floors of the building, there being one finger for each floor and the various fingers being successively offset with relation to each other, an elevator car, a cable extending through said shaft for starting and stopping the elevator car, stop blocks on said cable near each floor, a frame secured to the elevator car with an opening at one end through which said cable extends and horizontal slots through the opposite sides of said frame, a shaft in said frame opposite the outer slot, an arm slidably splined on said shaft and projecting through the slot in position to engage any one of said fingers, according to the adjustment of the arm, a frame for laterally adjusting said arm provided with means extending through the other one of said slots for the manual operation of said sliding frame, a pair of pivoted arms extending on opposite sides of the cable opening in position to engage the stops on the cable, a spring tending to draw said pivoted arms toward each other, means for separating said pivoted arms and means actuated by said shaft for disengaging said separating means for said pivoted arms.

3. The combination of an elevator shaft, fingers projecting into the shaft near the different floors of the building, there being one finger for each floor and the various fingers being successively offset with relation to each other, an elevator car, a cable extending through said shaft for starting and stopping the elevator car, stop blocks on said cable near each floor, a frame secured to the elevator car with an opening at one end through which said cable extends and horizontal slots through the opposite sides of said frame, a shaft in said frame opposite the outer slot, an arm slidably splined on said shaft and projecting through the slot in position to engage any one of said fingers according to the adjustment of the arm, a frame for laterally adjusting said arm provided with means extending through the other one of said slots for the manual operation of said sliding frame, a pair of pivoted arms extending on opposite sides of the cable opening in position to engage the stops on the cable, a spring tending to draw said pivoted arms toward each other, an oscillatory rod located between said pivoted arms, pins projecting from said rod adapted to engage said pivoted arms and spread them when the oscillatory rod is turned in one position and to disengage them when the rod is turned in another position, another pin projecting from said rod; and an inclined plate secured to said shaft for engaging said last mentioned pin and turning said rod to a disengaging position, whereby the spring will draw such pivoted arms against the cable.

4. The combination of an elevator shaft, fingers projecting into the shaft near the different floors of the building there being one finger for each floor and the various fingers being successively offset with relation to each other, an elevator car, a cable extending through said shaft for starting and stopping the elevator car, stop blocks on said cable near each floor, a frame secured to the elevator car with an opening at one end through which said cable extends and horizontal slots through the opposite sides of said frame, a shaft in said frame opposite the outer slot, an arm slidably splined on said shaft and projecting through the slot in position to engage any one of said fingers according to the adjustment of the arm, a frame for laterally adjusting said arm provided with means extending through the other one of said slots for the manual operation of said sliding frame, a pair of pivoted arms extending in opposite sides of the cable opening in position to engage the stops on the cable, a spring tending to draw said pivoted arms toward each other, means for separating said pivoted arms, means actuated by said shaft for disengaging said separating means for said pivoted arms, and means for returning the said shaft and arms to their normal position after operation.

1,016,055. REED HOLDER AND PROTECTOR FOR MUSICAL INSTRUMENTS. VICTOR WINQUIST, Rockford, Ill. Filed Sept. 14, 1911. Serial No. 649,376. (Cl. 84—7.)

1. The combination of a mouth piece for musical instruments, a reed therefor, a band encircling the mouth piece, a pad resting on the reed, and adjusting devices connecting the pad and band.

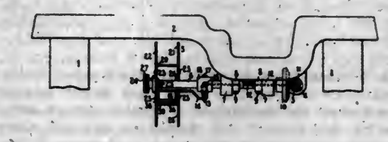
2. The combination of a mouth piece for musical instruments, a reed therefor, a band encircling the mouth piece, a pad resting on the reed, a stud connected to the pad and passing through the band, a thumb wheel loosely supported by the stud and a coil spring connected to the thumb wheel and engaging the band.

3. The combination of a mouth piece for musical instruments, a reed therefor an adjustable band encircling the mouth piece, a pad resting on the reed, and adjusting devices connecting the pad and band.

4. The combination of a mouth piece for musical instruments, a reed therefor, a band for holding the reed in connection with the mouth piece, and a protector pivotally connected to the band and adapted to cover the reed.

5. The combination of a mouth piece for musical instruments, a reed therefor, a band for holding the reed in connection with the mouth piece, a protector pivotally connected to the band and adapted to cover the reed, and lugs extending from the band with which the bail engages.

1,016,056. TYPE-WRITING MACHINE. OSCAR WOODWARD, Montclair, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 24, 1911. Serial No. 622,089. (Cl. 197—160.)



1. A ribbon spool having a hollow core with an opening therein and a detachable bridge piece which covers said opening and which is held in place and maintained on the spool wholly by the ribbon wound on the core.

2. A ribbon spool having a hollow core with an opening therein and a detachable bridge-piece which covers said opening and which is held in place by the ribbon wound on the core, and a spring carried by said bridge-piece on the inner side thereof and contained within the hollow core when the bridge-piece is in place and normally maintained away from the bridge piece.

3. A ribbon spool having a hollow core with an opening therein and a movable bridge-piece adapted to span said opening and to cover and uncover the opening, the bridge-piece being held in place to cover the opening by the ribbon which surrounds the core, and a yielding contact device carried by said bridge piece and extending into the hollow core when the bridge piece is in place and adapted to move away from the axis of the spool.

4. In a typewriting machine, the combination of a ribbon spool having a hollow core with an opening therein; reversing mechanism comprising a reversing device normally contained within the hollow core when the spool is in place on the machine and adapted to move through said opening in the core when the ribbon is fully unwound from the spool; and a detachable bridge-piece adapted to span the opening in the core, which bridge-piece is held in place over said opening wholly by the ribbon wound on the core.

5. In a typewriting machine, the combination of a ribbon spool having a hollow core with an opening therein; reversing mechanism comprising a reversing device normally contained within the hollow core when the spool is in place on the machine and adapted to move through said opening in the core when the ribbon is fully unwound from the spool; a bridge-piece adapted to span the opening in the core, which bridge-piece is held in place over said opening by the ribbon wound on the core; and a yielding contact device carried by said bridge-piece and cooperative with said reversing device.

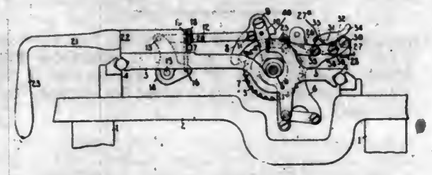
[Claims 6 to 20 not printed in the Gazette.]

1,016,057. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 8, 1909. Serial No. 471,268. (Cl. 197—121.)

1. In a typewriting machine, the combination with a platen and its line spacing wheel, of line spacing mechanism, an independent line-shifter acting upon said line spacing wheel to turn the platen a predetermined distance less than a full line space distance and to maintain the platen in the position to which it has been turned, and arresting means acting on said line shifter as soon as it has turned the platen said predetermined distance.

2. In a typewriting machine, the combination with a platen and its line spacing wheel, of line spacing mechanism, a bodily movable detent whereby said line spacing wheel and platen may be turned a fractional line-space

distance and held set in the position to which it has been turned, and an arresting means operative to arrest said detent as soon as it has turned the platen said fractional line space distance.



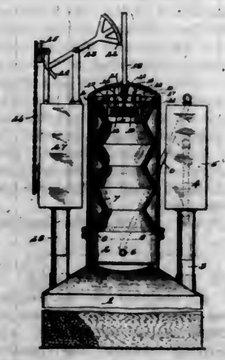
3. In a typewriting machine, the combination with a platen and its line spacing wheel, of a detent co-active with said wheel and mounted on a movable support, means for moving said support and thereby moving said detent and causing movement of the platen, said detent holding the platen set in the position to which it has been moved, and means for arresting said support after the platen has been turned a predetermined extent less than a full line space distance.

4. In a typewriting machine, the combination with a platen and its line spacing wheel, of a movable spring, a detent carried by said spring, and means for moving said spring and detent to cause movement of the platen, said detent holding the platen set in the position to which it has been moved.

5. In a typewriting machine the combination with a platen and its line spacing wheel, of a bodily movable detent co-active with said wheel, means for moving the same to move the platen and hold it set in the position to which it has been moved, and means for limiting said movement to an extent less than a unit of line space distance.

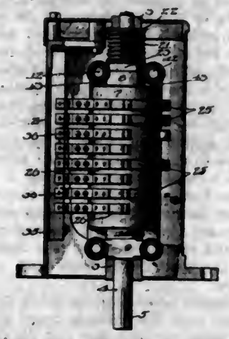
[Claims 6 to 20 not printed in the Gazette.]

1,016,058. GASOMETER. LOUIS BADER, Chicago, Ill., assignor, by direct and mesne assignments, of one-third to William Bader and one-third to Martin J. Detmer, Chicago, Ill. Original application filed Nov. 25, 1910, Serial No. 594,053. Divided and this application filed June 5, 1911. Serial No. 631,273. (Cl. 48—175.)



A gasometer comprising an outer shell and a bellows adapted to be extended by pressure of gas fed to said gasometer; a rack connected to said bellows, said rack being spring held; a relief valve in the head of said bellows arranged to be opened by said rack upon interruption of the movement of said rack; a spring normally holding said valve closed; an arm carried by said valve adapted to contact with the end of said shell to open said valve; and an operative connection with said rack, substantially as described.

1,016,059. MOTOR-CONTROLLING DEVICE. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 14, 1907. Serial No. 362,351. (Cl. 172—170.)



1. The combination with a motor, of electro-magnetically operated and retained means for controlling the direction of operation thereof, and a controller operated by the mechanism driven from the motor for controlling the operation of said electro-magnetic means to periodically change the direction of operation of the motor automatically.

2. The combination with a motor, of electro-magnetic means for controlling the direction of operation thereof, and a controller having a movable member, the direction of movement of which is periodically changed to control the operation of said electro-magnetically operated means to change the direction of operation of the motor automatically, said controller when operated being also adapted to vary the speed of the motor.

3. The combination with a motor, of electro-magnetically operated means for controlling the direction of operation thereof, and a controller having its movable member operating alternately in opposite directions for controlling the speed of the motor and controlling said electro-magnetically operated means to periodically change the direction of operation of the motor automatically.

4. The combination with a motor, of a plurality of separately actuated switches for controlling the direction of current through one of the elements of said motor, and continuously operated means for causing said switches to operate alternately.

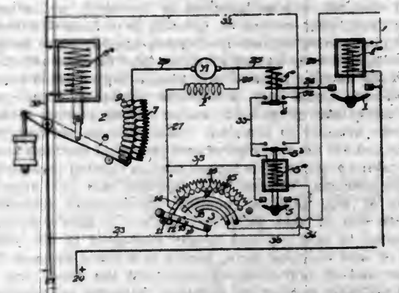
5. The combination with a motor of a plurality of switches for controlling the direction of current through one of the elements thereof, an electro-responsive device for each switch, and a continuously operated movable member for alternately energizing the electro-responsive device of said switches to periodically change the direction of operation of the motor.

[Claims 6 to 20 not printed in the Gazette.]

1,016,060. MOTOR-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 1, 1909. Serial No. 499,423. (Cl. 172—179.)

1. In a controller for electric motors, in combination, means for decreasing the field strength of the motor to increase the speed thereof, and means operable independently of said first mentioned means for automatically increasing the field strength of the motor upon an abnormal increase in the load thereon to cause the motor to operate at a decreased speed.

2. In a controller for electric motors, in combination, a field regulating device adapted to vary the field strength of the motor to increase the speed thereof, means for automatically increasing the field streagth of the motor upon an abnormal increase in the load thereof to cause the motor to operate at a decreased speed, and means necessitating the return of said regulating device toward initial position prior to the acceleration of the motor after the operation of said first mentioned means.



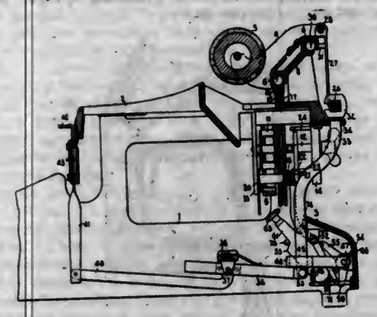
3. In a controller for electric motors, in combination, a resistance adapted to be included in the field circuit of the motor to increase the speed thereof, a plurality of separately actuated controlling means for said resistance, one for automatically removing said resistance from the field circuit upon an abnormal increase in the load on the motor to cause the motor to operate at a decreased speed.

4. In a controller for electric motors, in combination, a variable resistance included in the field circuit of the motor to increase the speed thereof, means for varying said resistance at will; and separately actuated means for automatically short-circuiting said resistance from the field circuit upon an abnormal increase in the load on the motor to cause the motor to operate at a decreased speed.

5. In a controller for electric motors, in combination, a variable resistance, a controlling element adapted to insert said resistance in the field circuit of the motor, means for short-circuiting the resistance included in the field circuit of the motor upon an abnormal increase in the load thereof to cause the motor to operate at a decreased speed, and means necessitating the return of said element to a predetermined position prior to the insertion of said resistance in the field circuit after said first mentioned means has once operated.

[Claims 6 to 12 not printed in the Gazette.]

1,016,061. TYPE-WRITING MACHINE. JOHN H. BARR, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 5, 1910. Serial No. 570,455. (Cl. 197—64.)



1. A retarder for the carriage of a typewriting machine, comprising a helix working in a mass of particles of solid material.

2. A retarder for the carriage of a typewriting machine, comprising a wire bent into a spiral form and working in a mass of particles of solid material.

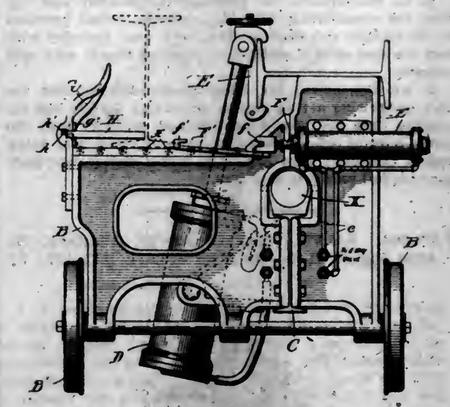
3. A retarder for the carriage of a typewriting machine, comprising a helix working in graphite.

4. A retarder for the carriage of a typewriting machine, comprising a barrel containing a mass of particles of solid material, and a screw working in said material in a direction to force said material toward the bottom of the barrel.

5. In a typewriting machine, the combination of a carriage, a driving spring for said carriage, a rack on said carriage, a gear wheel for transmitting the power of said spring to said rack, a carriage retarder, one or more column stops on said carriage, a series of denominational stops consisting of bars arranged to be pushed upward into engagement with said stops, denominational key levers to which said bars are connected, a universal bar operated by the upward motion of said key levers and denominational stops, a rock shaft on which said universal bar is mounted, and means operated by said rock shaft for throwing said retarder into and out of operative connection with said gear wheel.

[Claims 6 to 21 not printed in the Gazette.]

1,016,062. SHIFTING DEVICE FOR PRESS-FEEDING MECHANISM. WILLIAM P. BETTENDORF, Davenport, Iowa; J. W. Bettendorf administrator of said William P. Bettendorf, deceased. Filed Dec. 18, 1909. Serial No. 533,817. (Cl. 80—48.)



1. In a mechanism of the kind specified, the combination with a suitable support having a transversely disposed irregular supporting surface for the work and means cooperating with said irregular surface for turning the work, of a device disconnected from but adapted to engage the work and move the same laterally on its support.

2. In a machine of the kind specified, the combination with a movable truck having a transversely disposed irregular supporting surface for the work, and means cooperating with said irregular surface for turning the work supported thereon, of a transverse cylinder thereon, and reciprocable means actuated by said cylinder and adapted to engage and move the work laterally on said truck.

3. In a machine of the kind specified, the combination with a suitable support having a transversely disposed irregular supporting surface for the work and means cooperating with said irregular surface for turning the work, of a transversely arranged cylinder, a piston therefor, and means on the outer end of said piston having a jointed depressible member adapted to engage the work, and move it laterally upon its support.

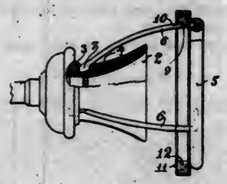
4. In a machine of the kind specified, the combination with a suitable support having a transversely disposed irregular supporting surface for the work and means cooperating with said irregular surface for turning the work, of a transversely arranged cylinder, a piston actuated by said cylinder and having a bifurcated outer end that is

adapted to engage the work and move the same laterally on its support.

5. In a machine of the kind specified, the combination with a suitable support having a transversely disposed irregular supporting surface for the work and means cooperating with said irregular surface for turning the work, of a transversely arranged cylinder, a piston actuated by said cylinder and having its outer end bifurcated and having a pivoted member on its outer end that is adapted to engage the work and move it laterally upon its support.

[Claim 6 not printed in the Gazette.]

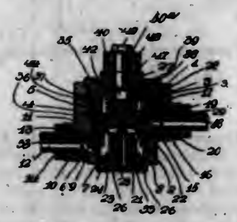
1,016,063. SANITARY ATTACHMENT FOR MOUTHPIECES. LOUIS BLOCK, New York, N. Y., assignor to Leah Elizabeth Block, New York, N. Y. Filed Oct. 16, 1911. Serial No. 655,021. (Cl. 179—185.)



1. In mouthpieces for telephone-transmitters and the like, the combination with the cone-mouthpiece provided at its smaller end with recesses, of a ring provided with legs the free ends of which converge and engage with said recesses.

2. An attachment for telephone-transmitters and the like, comprising a ring having converging flexible legs extending from one side thereof to and engaging with the outer surface of the mouthpiece cone, said legs being jogged externally near said ring, and a disinfectant-holding ring-pad seated in said jogs.

1,016,064. VALVE. GERHARD BROCKE, Allegheny, Pa. Filed Aug. 24, 1910. Serial No. 578,674. (Cl. 137—7.)

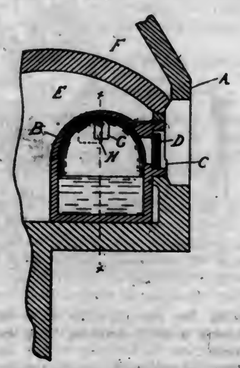


1. A valve of the type described, comprising a body, said body having an equalizing chamber formed therein, said body having an inlet port in communication with said chamber, a plug mounted in the lower end of said body, said plug having an exhaust port formed therein, said plug having oppositely disposed angular ports formed therein, said body having an outlet port formed therein in communication with the angular ports of said plug, a cap mounted in the upper end of said body, a shiftable member mounted upon the top of said plug, said member having grooves formed therein adapted to establish communication between the ports and the exhaust port of said plug, said shiftable member having angular ports formed therein and adapted to establish communication between said chamber and the angular ports of said plug, a coupling piece loosely connected to the top of said shiftable member, a stem rotatably mounted in said cap and loosely connected to the upper end of said coupling piece, and means interposed between the upper end of said coupling piece and the upper end of said shiftable member for normally retaining said member seated upon the upper end of said plug, and the upper end of said coupling piece seated against said cap.

2. A valve of the type described, comprising a body, said body having an equalising chamber formed therein, said body having an inlet port in communication with said chamber, a plug mounted in the lower end of said body, said plug having an exhaust port formed therein, said plug having oppositely disposed angular ports formed therein, said body having an outlet port in communication with the angular ports of said plug, a cap mounted in the upper end of said body, a shiftable member mounted upon the top of said plug, said member having grooves formed therein adapted to establish communication between the ports and the exhaust port of said plug, said shiftable member having angular ports formed therein and adapted to establish communication between said chamber and the angular ports of said plug, a coupling piece loosely connected to the top of said shiftable member, a stem rotatably mounted in said cap and loosely connected to the upper end of said coupling piece, means interposed between the upper end of said coupling piece and the upper end of said shiftable member for normally retaining said member seated upon the upper end of said plug, and the upper end of said coupling piece seated against said cap, means adapted to facilitate the rotation of said stem, and means including adjustable stops for limiting the movement of said stem.

3. A valve of the type described, comprising a body, said body having an equalising chamber formed therein, said body having an inlet port in communication with said chamber, a plug mounted in the lower end of said body, said plug having an exhaust port formed therein, said plug having oppositely disposed angular ports formed therein, said body having an outlet port in communication with the angular ports of said plug, a cap mounted in the upper end of said body, a shiftable member mounted upon the top of said plug, said member having grooves formed therein adapted to establish communication between the ports and the exhaust port of said plug, said shiftable member having angular ports formed therein and adapted to establish communication between said chamber and the angular ports of said plug, a coupling piece loosely connected to the top of said shiftable member, a stem rotatably mounted in said cap and loosely connected to the upper end of said coupling piece, means interposed between the upper end of said coupling piece and the upper end of said shiftable member for normally retaining said member seated upon the upper end of said plug, and the upper end of said coupling piece seated against said cap, means adapted to facilitate the rotation of said stem, and means including adjustable stops for limiting the movement of said stem.

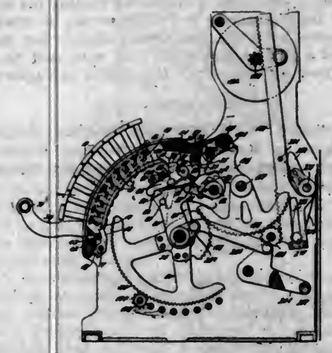
1,016,065. GLASS-POT. WILLIAM K. BROWNLEE, Toledo, Ohio, assignor to The Libby Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 9, 1909. Serial No. 471,491. (Cl. 49—60.)



1. In a pot furnace, the combination with a combustion chamber, of a pot therein having an outwardly-opening mouth or working aperture and a plurality of separated apertures communicating with the combustion chamber, and lids or stoppers for the several apertures for alternatively cutting off all exterior and interior communication.

2. In a pot furnace, the combination with the combustion chamber, of a pot therein, said pot having a mouth opening exteriorly of the combustion chamber and a plurality of apertures for establishing communication between the combustion chamber and the interior of the pot, and closers for said mouth and apertures for alternatively closing said pot from all interior and exterior communication.

1,016,066. CASH-REGISTER. OSCAR F. DAVISSON, Dayton, Ohio, administrator of Thomas Carney, deceased. Filed Feb. 28, 1907. Serial No. 359,948. (Cl. 235—8.)



1. In an accounting machine, the combination with an operating mechanism, and a locking element movable therewith, of a lever normally locking said element, a series of keys, a detent therefor and moved thereby, a lever moved by said detent, a shaft driven by said lever, and means actuated by said shaft for releasing said locking lever and thereby unlocking said operating mechanism.

2. In an accounting machine, the combination with a reciprocatory main operating mechanism, of a plurality of banks of keys, a detent for each bank and moved by any key in the bank, pawls mounted independently of said detents for latching same in adjusted position, a special key having an extension, a bar passing all of the latch pawls and adapted to be reciprocated at will by said key extension to release all of said pawls, and means carried by said operating mechanism for reciprocating said bar to release said pawls at the completion of each operation of said mechanism.

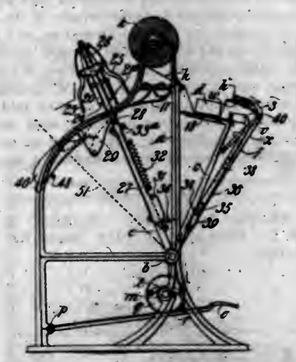
3. In an accounting machine, the combination with an operating mechanism, of a bank of keys, printing devices controlled thereby, means for feeding a slip comprising a roller, a pivoted cam device controlled by the operating mechanism for moving said roller, and a gravity arm for holding the roller in feeding position for the purpose specified.

4. In an accounting machine, the combination with a series of keys, of a series of differentially driven elements, a series of driving elements for driving the differential elements, a series of gear pinions, geared segments forming connections between said gear pinions and the differential elements, a series of indicators, indicator rack bars normally meshing with the gear pinions, and means for swinging the rack bars out of operative engagement with the gear pinions before the differentially driven elements have commenced to operate said gear pinions and then swinging them back into engagement with the pinions after they have been adjusted, so that when said pinions are returned to normal position the rack bars will be moved to set the indicators.

5. In an accounting machine, the combination with a series of keys, of a driving element having a constant excursion of movement at each operation of the machine, a driven element driven by the driving element, a latch intermediate the driven and the driving elements normally ineffective, means intermediate the keys and the latch for causing said latch to become effective when a key is depressed, a projection on the latch adapted to be engaged by the depressed key to stop the driven element and unlatch the driving element therefrom, whereby said driving element may continue its excursion of movement, a second latch for latching the driven element to the depressed key during the said continued movement of the driving element, and a projection on the driving element whereby upon return of said driving element said projection will operate the second latch to unlatch the driven element from the key after which the driven element will be returned to normal position by the driving element.

[Claims 6 to 13 not printed in the Gazette.]

1,016,067. WRAPPING-MACHINE. HERMAN O. FISCHER, Springfield, Mass. Filed Feb. 19, 1909. Serial No. 478,818. (Cl. 93—2.)



1. A wrapping machine including means for supplying a continuous web of wrapping material to the machine, means adapted for coöperation with a package to be wrapped to draw off a length of the web commensurate with the circumference of the specific package and fold it around the package in one direction until the web overlaps the free end thereof, and means for severing the said web at the overlapping portion thereof.

2. A wrapping machine including means for moving a package through the machine, means for supplying a web of wrapping material to the machine, the said web extending across the path of the package and under the said package, means for moving the free end of the web over the package and holding it against the same to partially enwrap the package, the movement of the package serving to carry it against the body of the web to complete the enwrapping thereof, and means for severing the web.

3. A wrapping machine including a package carrier movable through the machine, means for supplying wrapping material to the machine, the said wrapping material extending over the package carrier and under a package placed thereon, and means for moving the free end of the wrapping material over the package and holding it against the same to partially enwrap the package, the movement of the carrier serving to carry the package against the body of the wrapping material to complete the enwrapping of the package.

4. A wrapping machine including a package carrier movable through the machine, means for supplying wrapping material to the machine, the said wrapping material extending over the package carrier and under a package placed thereon, a gripper engaging the free end of the wrapping material, and means for moving the gripper to

oring the free end of the wrapping material over the package and hold it against the same to partially enwrap the package, the movement of the carrier serving to carry the package against the body of the wrapping material to complete the enwrapping of the package.

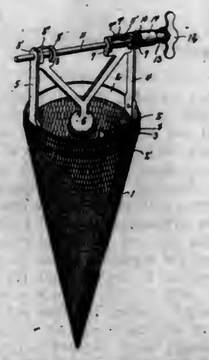
5. In a wrapping machine, means to wrap a piece of paper or the like around a package in one direction, and a device to fold down the top end-flaps of the wrapper against the ends of the package, said flap-folding device including a flexible member held under tension and adapted to bear first on the top of the package and then have a rocking movement over the ends thereof to press the flaps against said ends.

[Claims 6 to 29 not printed in the Gazette.]

1,016,068. PROCESS OF MANUFACTURING BRAKE-SHOE KEYS. WILLIAM D. FORSYTH, Youngstown, Ohio. Filed Oct. 31, 1910. Serial No. 589,966. (Cl. 29—148.)

The process of manufacturing brake-shoe keys which consists in so rolling a bar as to form on one of its surfaces a plurality of consecutive inclines ascending and descending from apexes located at the ends of said inclines, and semi-circular, tapering, longitudinal grooves whose deepest depressions are at the apexes of said inclines; then shearing said bar transversely at the apex of said inclines and again midway between the apexes of said inclines to form key blanks; and then bending blanks so as to give them a predetermined curvature and to form a head at the thick end.

1,016,069. SPARK-ARRESTER. WILLIAM R. HALL, Warner, N. H. Filed Mar. 15, 1911. Serial No. 614,592. (Cl. 110—130.)



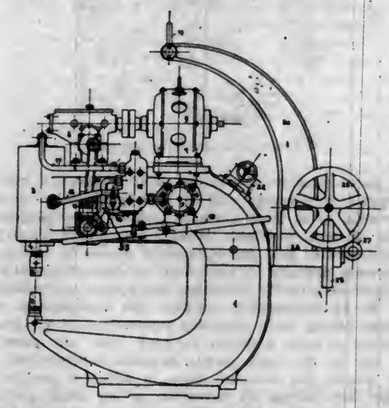
1. In a spark arrester, the combination of a baffle, a spindle, a knocker suspended from said spindle and cooperating with the baffle, journal members supporting the knocker on the spindle, and means on the spindle arranged to interlock with and engage one of the journal members on the knocker, whereby the latter is rendered operable by the spindle, the journal member having recesses permitting longitudinal movement of the spindle to disengage the same from the knocker.

2. In a spark arrester, the combination of a hollow baffle having an open end portion, a spindle supported by said baffle, a knocker comprising members through which said spindle passes, said knocker comprising a ball or weight movable back and forth into and out of engagement with the walls of the baffle, the spindle having means for interlocking it with respect to the knocker whereby the knocker may be operated by the spindle, and resilient means for normally holding the interlocking means in operative relation to the knocker and spindle and facilitating detachment of the spindle from the knocker.

3. In a spark arrester, the combination of a baffle, a spindle associated with said baffle, an agitator coacting with the baffle and comprising journal members mounted on said spindle, and means on the spindle adapted to interlock with a journal of the agitator for causing simultaneous movement of said spindle and agitator, and spring means coacting with the spindle to normally hold the same in a position preventing accidental detachment from the journal member with which it interlocks.

4. In a spark arrester, the combination of a baffle of conical form, a pair of hangers secured to the larger end of the baffle, an agitator coacting with the baffle and comprising journal members, the journal members and hangers having apertures in alinement, a spindle passing through said apertures and formed with an interlocking lug, one of the journal members and hangers having recesses leading from their apertures and through which the lug is adapted to be moved, a handle for turning the spindle to cause the lug thereof to be thrown out of register with the recesses aforesaid, the journal member last mentioned having a portion adapted to abut with said lug to cause simultaneous movement of the spindle and agitator.

1,016,070. PRESS. EMIL HONEGGER, Oerlikon, Switzerland, assignor to Maschinenfabrik Oerlikon, Oerlikon, Switzerland. Filed Oct. 2, 1909. Serial No. 520,668. (Cl. 138—10.)



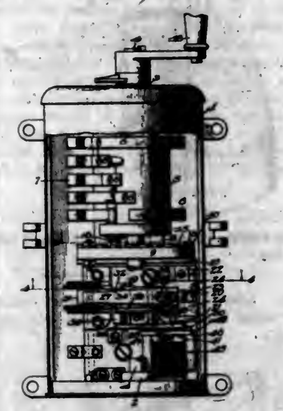
In a portable hydraulic press for riveting, punching, stamping and the like, the combination of a cylinder, plunger, pump, reservoir, and system of connecting pipes adapted to be kept filled with liquid, with an air tight float in said reservoir subject to atmospheric pressure and acting as and for the purpose set forth.

1,016,071. ELECTRIC SWITCH. JOHN T. JANETTE, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 18, 1908. Serial No. 433,420. (Cl. 172—129.)

1. In combination, a switch, a member connected to said switch and movable independently thereof, and an electromagnet adapted to cause said member, when moved, to actuate said switch, said member being effective to operate said switch only while said electromagnet is energized.

2. In combination, a switch tending to stand in open position, a member connected to said switch and movable independently thereof, an electromagnet adapted to cause said member, when moved, to close said switch; said member, when released by said magnet, being adapted to release said switch.

3. In combination, a switch, an operating member therefor adapted to turn upon either of two pivots, said member being arranged to normally turn upon one pivot, and an electromagnet adapted, when energized, to necessitate said member being turned upon the other pivot.

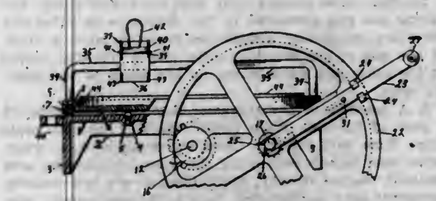


4. In combination, a switch, an operating member therefor having two pivots, said member being arranged to normally turn upon one pivot independently of said switch, and an electromagnet adapted, when energized, to necessitate said member being turned upon the other pivot to actuate said switch.

5. In combination, a switch tending to return to initial position, an operating member therefor having two pivots, said member being arranged to normally turn upon one pivot independently of said switch, an electromagnet adapted, when energized, to necessitate said member being turned upon the other pivot to actuate said switch, said switch being adapted to be released upon deenergization of said magnet.

[Claims 6 to 15 not printed in the Gazette.]

1,016,072. TOOL-SHARPENER. LORENZO JOHNSON, Louisville, Ky. Filed Aug. 3, 1911. Serial No. 642,155. (Cl. 51—7.)



1. In a tool sharpener, a stand, a ball-bearing turntable on said stand, an abrasive disk on said turntable, said stand being provided with a plurality of perforations arranged on opposite sides of the turntable, a support spanning the turntable and removably positioned in said perforations, a tool holder reciprocably mounted on said support, and means for rotating said turntable.

2. In a tool sharpener, a stand, a turntable carrying an abrasive disk mounted thereon, said stand provided with a plurality of perforations on opposite sides of the turntable, a support formed of a single piece of wire, having a horizontal body portion and end portions bent at substantially right angles to the body portion, said end portions being adapted to be readily inserted in the aforesaid perforations, a tool-holder adapted to be reciprocably mounted on said support, and means for rotating the turntable.

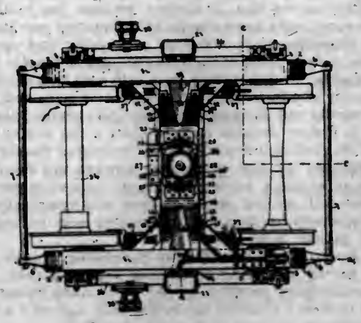
3. In a tool sharpener, a stand, a runway thereon, balls in said runway, a turntable resting on said balls, an abrasive disk on said turntable, an annular rib on said stand, a lip on the turntable overhanging said rib, the top of the stand being provided with a row of perforations on opposite sides of the turntable, a support spanning the turntable and removably positioned in said perforations, a tool holder reciprocably mounted on said support, and means for rotating the turntable.

4. In a tool sharpener, a stand, a runway therein, balls in said runway, a turntable resting on said balls, said table being provided with a cup-like depression adapted to receive an abrasive disk and hold the same by frictional contact, an annular rib on said stand, a lip on the turntable overhanging said rib, and means for rotating said turntable.

5. A stand, a turntable provided with a cup-like depression adapted to receive an abrasive disk, means for rotating the turntable, said stand provided with a row of perforations on each side thereof, an annular rib on the stand, a lip on the turntable adapted to ovehang the rib, a support provided with integral legs and adapted to be removably positioned in said perforations, and a toolholder reciprocably mounted on said support.

[Claims 6 to 9 not printed in the Gazette.]

1,016,073. CAR-TRUCK. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Nov. 17, 1910. Serial No. 592,830. (Cl. 280—239.)



1. A car truck having side frames consisting of H beams cut away at each end below the top flange, and pedestals underlying and fastened to said flange, the under flange of the beam being fastened to brackets extending thereunder from the pedestals.

2. A car truck having side frames consisting of H beams cut away at each end below the top flange and pedestals underlying and fastened to said flange, the pedestals being provided with downwardly inclined extensions to which the ends of the flange are fitted and fastened, and the under flange of the beam being fastened to brackets extending thereunder from the pedestals.

3. A car truck having side frames consisting of H beams cut away at each end below the top flange, pedestals underlying and fastened to said flange and also fastened to the under flange, the pedestals being provided with extension arms which project beyond the truck wheels at each end of the truck, and tie bars extending across the truck and fastened to said arms.

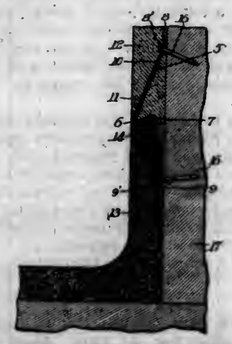
4. A car truck having side frames consisting of H beams cut away at each end below the top flange, pedestals underlying and fastened to said flange and also fastened to the under flange, cross tie bars fastened to extension arms on the pedestals at each end of the truck, and tie bars connecting the inner legs of the pedestals at the sides of the truck.

5. In a car truck, the combination, with the side frames, of a transom joining the side frames at or adjacent the center of the truck, a bolster hung beneath the transom,

and a center plate on the bolster, the transom being provided with an opening over the center plate to permit the passage therethrough of a car body center plate.

[Claims 6 to 10 not printed in the Gazette.]

1,016,074. PLASTER DIVISION-STRIP. GEORGE S. KNAPP, La Grange, Ill. Filed June 3, 1911. Serial No. 631,069. (Cl. 72—125.)



1. A plaster division strip of sheet metal having as its most forward part a nose, formed by folding the strip and constituting the line of division between the front faces of an upper and a lower plaster body, the strip providing one wall extending from said nose backwardly and upwardly to the vertical plane of the rear face of said plaster bodies, and another wall extending from said nose backwardly and upwardly at a lesser angle to a horizontal plane and thence backwardly and downwardly to said rear vertical plane.

2. A plaster division strip of sheet metal having as its most forward part a nose, formed by folding the strip and constituting the line of division between the front faces of an upper and a lower plaster body, said strip providing a lower wall portion extending from said nose backwardly and upwardly to form an overhanging nose to lock said lower plaster body.

3. An article of manufacture comprising a sheet metal strip having base parts in different angular planes, an intermediate part provided by the strip being folded upon itself to form a laterally projecting nose, one wall whereof is perforated whereby to key the plaster.

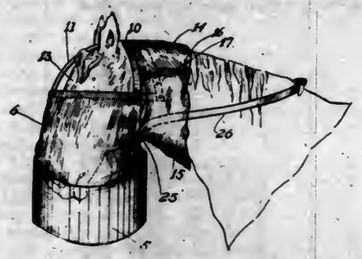
4. An article of manufacture comprising a sheet metal strip having two angularly disposed attaching parts in different planes, one of said parts perforated to provide plaster locking means above the nose, and an intermediate part projecting backwardly and upwardly therefrom to form an overhanging nose to provide plaster locking means below the nose.

5. A plaster division strip of sheet metal having as its most forward part a nose formed by folding the strip and constituting the line of division between the front faces of an upper and a lower plaster body, said strip having an upper wall extending backwardly and upwardly from said nose to the vertical plane of the rear face of said plaster bodies, said wall having perforations near the nose to provide keying means for the overhanging plaster body, and said strip having a lower wall portion extending backwardly and upwardly from the nose at a lesser angle to a horizontal plane to provide an overhanging nose to lock said lower plaster body.

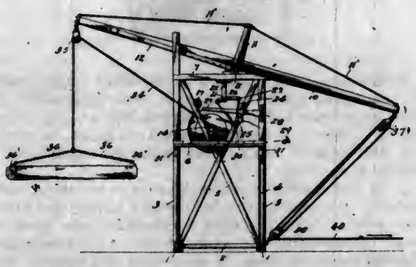
[Claims 6 and 7 not printed in the Gazette.]

1,016,075. FEED-BAG. GEORGE KOWALSKY, McDowell, W. Va. Filed Oct. 18, 1911. Serial No. 655,283. (Cl. 119—65.)

A feed bag comprising a cylindrical wire frame, a piece of fabric mounted upon said frame and providing a receptacle, said fabric extending above said frame to provide a hood having a neck piece and a throat piece adapted to be connected around the neck of a horse, a harness carried by the upper edges of said hood and including an elastic throat strap, and a check rein connected to said hood.



1,016,076. LOG-LOADER. ANDREW LARSON, Duluth, Minn. Filed Apr. 19, 1911. Serial No. 622,060. (Cl. 212—15.)

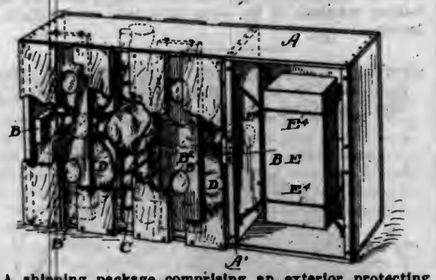


1. A machine of the character described, consisting of a pair of runners, cross bunks therefor, upright posts rising from said runners, cross braces therefor, a transverse cross piece surmounting the posts, a balancing arm pivotally carried thereby, blocks and pulleys secured to said arm at one end and to the cross bunks, a cable connecting said blocks and pulleys whereby said arm may be tilted upon its pivot, a block and pulley secured upon the other end of the arm, a revolving axle carried by the cross braces substantially intermediate their length, a hoisting cable passing over said block and pulley and having one end connected to the article to be lifted and the other end passed around the revolving axle, a brake at one end of the revolving axle, and a recoiling spring at the other end for winding up the slack of the hoisting cable.

2. A machine of the character described, consisting of a pair of runners, cross bunks therefor, upright posts rising from said runners, cross braces therefor, a transverse cross piece surmounting the posts, a balancing arm pivotally carried thereby, connections at one end whereby movement may be imparted from a suitable agency, connections at the other end of said arm whereby the articles to be moved may be raised or lowered, a revolving axle mounted upon the cross braces substantially intermediate their length, revolving drums carried thereby, a cross piece carried by the cross braces, a brake band passing partially around one of said drums, and having one end secured to said cross piece, an inside lever to which the other end of the brake band is secured, an outside lever, connections between the inside and outside levers, a rack in which said outside lever is engaged, and a spring attached to the other of said drums carried by the revolving axle for taking up the slack of the hoisting connections.

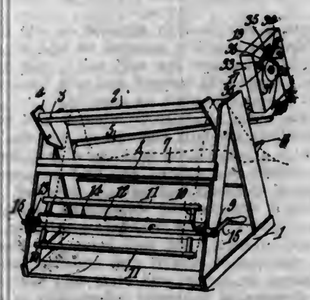
3. In combination with the runners and superstructure, the balancing arm having the top piece, bracing members and pivoted fulcrum, of the pulleys, the cables attached to one end of the arm whereby movement may be imparted thereto from a suitable agency, means attached to the other end of the arm for lifting the logs, and means for winding one of the cables, an axle mounted revolubly upon the superstructure, revolving drums carried by said axle at each end, one of said drums having the brake band passing around its periphery and secured to the small inside lever, said inside lever being connected to the outside brake lever by means of the toggle link, the brake lever being passed through said link, and engaging in the rack secured to one of the cross braces of the structure, the other of said drums having a spring attached thereto and to the cross braces of the structure, for the purpose of taking up the slack of said hoisting cable, and the platform located under the brake lever, upon which the operator stands to direct the loading of the logs.

1,016,077. PACKAGE FOR TUNGSTEN LAMPS. WILFRID LUMLEY, East Conneaut, Ohio, assignor to The Conneaut Company, a Corporation of Ohio. Filed Jan. 27, 1909. Serial No. 474,384. (Cl. 217—54.)



A shipping package comprising an exterior protecting casing, an interior receptacle suspended within said casing by means of elastics tending to restrain the receptacle against movement in all directions, oppositely directed hooks in the casing walls to receive said elastics, and flexible securing devices for adjustably attaching the elastics to the receptacle.

1,016,078. MEASURING AND CALCULATING MACHINE. EUGENE A. LUSTER, Athens, Ga., assignor of one-third to Nora Luster Epting and one-third to Alfred T. Conway, Athens, Ga. Filed Feb. 16, 1910. Serial No. 544,260. (Cl. 235—88.)



1. In a measuring and computing device, a rotatable member having displayed thereon numbers representing quantities and other numbers representing prices, a fixed pointer for the numbers representing quantities, and another pointer for the numbers representing prices movable rotatably and longitudinally into operative relation to any one of such numbers at will.

2. In a measuring and computing device, a rotatable member having displayed thereon numbers representing quantities and other numbers representing prices, a fixed pointer for the numbers representing quantities, and a plurality of other spring held pointers for the numbers representing prices each movable rotatably and longitudinally into operative relation to any one of such numbers at will.

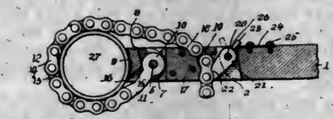
3. In a measuring and computing device, a rotatable member having displayed thereon numbers representing quantities and other numbers representing prices, a fixed pointer for the numbers representing quantities, and another pointer for the numbers representing prices, said last named pointer being slotted longitudinally and provided with a pivot support with relation to which the pointer is movable both longitudinally of the pointer and rotatively with relation to the pivot.

4. In a measuring and computing device, a suitable casing provided with a circular opening and with a sectorial opening leading therefrom in radial relation thereto, a rotatable member within the casing having a series of numbers displayed thereon and visible through the circular opening and through the sectorial opening, a pointer in fixed relation to the casing and in operative relation to the numbers displayed through the circular opening, and another pointer carried by the casing in operative relation to the sectorial opening and movable at will into operative relation to any of the numbers visible through the sectorial opening.

5. In a measuring and computing instrument, a suitable casing provided with a circular opening and another opening leading therefrom in radial relation thereto, a rotatable disk within the casing having a series of numbers visible through the circular opening and other series of numbers visible in predetermined groups through the opening leading from the circular opening on the rotative movement of the disk, a pointer carried by the casing in operative relation to the numbers visible through the circular opening, and another pointer carried by the casing and movable rotatably and longitudinally into operative relation to any part of the opening leading from said circular opening.

[Claim 6 not printed in the Gazette.]

1,016,079. PIPE-WRENCH. JAMES MAHER, East Liverpool, Ohio. Filed June 15, 1911. Serial No. 633,224. (Cl. 81—68.)

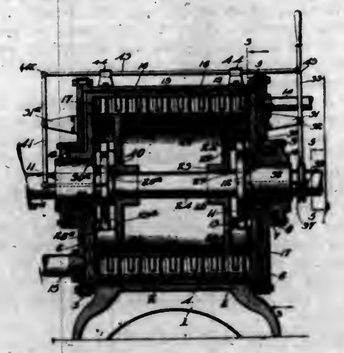


1. A gripping mechanism embodying a lever having a chain connected thereto, and means including a gripping block and a pivoted gripping member adapted to respectively engage opposite edges of said chain, the length of said member between the pivot and the gripping face being greater than the shortest distance between the pivot and the chain, whereby the pulling strain on the chain will chock the gripping member and chain against movement, said member being inclined toward the free end of the chain and free to move pivotally in the opposite direction to release the chock.

2. In a gripping mechanism, a movable jaw having its gripping face substantially continuous from side to side, a chain member, said jaw and member having a common pivotal axis and each movable independently of the other, the chain-member being of less width than the jaw and mounted intermediate the side edges of the jaw, a support for said jaw and member, and means carried by said support for holding the chain in adjusted position, said means including a member pivotally movable into and out of the path of movement of the chain member, the length of said member between the pivot and the gripping face being greater than the shortest distance between the pivot and the chain, whereby the pulling strain on the chain will chock the gripping member and chain against movement, said member being inclined toward the free end of the chain and free to move pivotally in the opposite direction to release the chock.

3. A gripping mechanism comprising a lever having a slot formed therein, a gripping jaw carried by the end of said lever, a chain having one end thereof attached to said lever and the opposite end adapted to extend through the slot of said lever, and a pivoted gripping member adapted to extend into the path of movement of the chain within the lever slot and contact with the edges of the chain to retain the latter against withdrawal movement, said member being inclined toward the free end of the chain and having its pivot point and chain-contacting face on opposite sides of a line extending longitudinally and centrally of the lever, a pivotal movement of the gripping member releasing the chain.

1,016,080. REVERSIBLE STEAM-TURBINE. FREDERICK L. MCCULLOCH, Arcadia, Fla. Filed Dec. 7, 1910. Serial No. 596,160. (Cl. 121—57.)



1. In a fluid driven turbine, the combination of a plurality of rotatably mounted members, one mounted within the other and provided with oppositely arranged impelling surfaces adapted to receive the impact from a fluid supply, a driven shaft, interlocking means carried by the adjacent ends of said rotatable members and said driven shaft, and means operating said interlocking means to hold one of said members against rotation and simultaneously locking another of said members to said shaft, substantially as described.

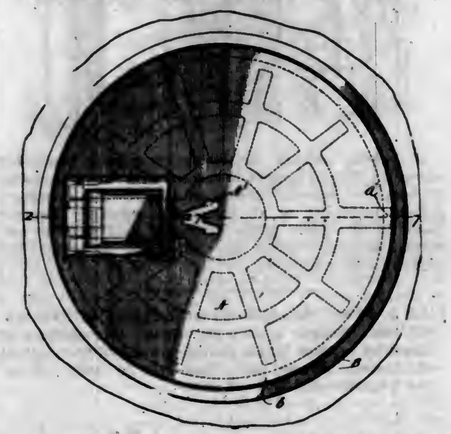
2. In a fluid driven turbine, the combination of a plurality of cylinders provided with oppositely arranged impelling surfaces, a driven shaft, locking lugs carried by said cylinders, a locking member keyed to said shaft but free to move longitudinally thereof and having locking lugs coöperating with one set of lugs on said cylinders, a second locking member keyed against rotary movement but free to slide longitudinally and provided with locking lugs coöperating with another set of locking lugs on said cylinders, and means for simultaneously shifting said locking members, substantially as described.

3. In a fluid driven turbine, the combination of a plurality of rotatably mounted cylinders, one mounted within the other and provided with oppositely disposed inner and outer alternating vanes adapted to receive the impact from the impelling fluid, a driven shaft, and means arranged between the ends of the cylinders for locking one of said cylinders against rotation and interlocking another of said cylinders with said shaft, substantially as described.

4. In a fluid driven turbine, the combination of a plurality of rotatably mounted cylinders one within another and provided with inner and outer oppositely arranged alternating radial vanes adapted to receive the impact from the impelling fluid, the inner cylinder being provided with outwardly projecting lugs at its ends and the outer cylinder being provided with inwardly projecting lugs at its ends, a driven shaft supporting said cylinders, a locking memeber keyed to said shaft and slidably mounted thereon between the lugs at one end of said cylinders, a second locking member slidably mounted but locked against rotation disposed between the lugs at the opposite ends of said cylinders, and means for simultaneously shifting said locking members, substantially as described.

5. In a fluid driven turbine, the combination of a stationary annular casing, a driving shaft extending therethrough, a rotatably supported outer cylinder within said casing, a rotatably supported inner cylinder within said outer cylinder, said cylinders being provided with oppositely arranged impelling surfaces and the outer and inner end faces of said inner and outer cylinders being provided with oppositely disposed projecting lugs, a locking member having radial lugs coöperating with one set of said cylinder lugs, said locking member being keyed to rotate the said shaft while slidable thereon, a second locking member provided with radial lugs coöperating with the set of cylinder lugs at the opposite end of the turbine, said second locking member being fixed against rotation but slidable longitudinally of said shaft, and leverage connections for simultaneously operating said locking members in the same direction, substantially as described.

1,016,081. MANHOLE AND CATCH-BASIN COVER. RICHARD J. MCNULTY, Boston, Mass. Filed Apr. 27, 1911. Serial No. 623,619. (Cl. 94—7.)



1. A plate, a dog pivotally mounted on said plate, one or more tumblers pivotally mounted on said dog, in combination with a support for said plate, said dog being adapted to engage said support and said tumblers being adapted to engage said plate, as described.

2. A plate, a dog pivotally mounted on said plate, one or more tumblers pivotally mounted on said dog, in combination with a support for said plate, said dog having means to engage said support and said tumblers having means adapted to engage said plate, as described.

3. A plate, a dog pivotally mounted on said plate, one or more tumblers pivotally mounted on said dog, in combination with a support for said plate, said dog having means to engage said support and said tumblers having means adapted to engage said plate and said tumblers having a disengaging movement independent of said dog whereby they may be disengaged from said plate and allow said dog to be disengaged from said support.

4. A manhole frame having a flange adapted to support a manhole cover, in combination with said cover, said cover having a lug to engage said flange, said cover also having a lock comprising a dog adapted to engage said flange and a ledge on said cover, and means whereby said dog will normally be held in engaging position and means mounted on said dog and also engaging said ledge to hold said dog from disengagement from said flange and movable to release said dog and allow it to be disengaged from said flange.

5. A manhole frame having a flange adapted to support a manhole cover, in combination with said cover, said cover having a lug to engage said flange, said cover also having a lock comprising a dog adapted to engage said flange, and means movable with relation to said dog and with said dog adapted when in normal position to prevent said dog from disengagement with said flange.

[Claims 6 to 10 not printed in the Gazette.]

1,016,082. OFFSET DEVICE. JAMES E. MILES, Spokane, Wash. Filed Apr. 6, 1911.. Serial No. 619,373. (Cl. 143—111.)

1. In an off-set device, the combination with a carriage having supporting beams, of a pair of gear wheels arranged on the axle of the carriage, a pawl pivotally mounted on each of said beams for engaging and being operated by said gear wheels, and a cam rigidly connected with each of said pawls engaging said beams for moving the beams longitudinally of said axle, one of said cams being designed to move the beams in one direction and the other cam being designed to move the beams in the opposite direction.

2. In an off-set device for saw mills, the combination with a carriage having a pair of beams, of a bracket secured to each of said beams, a shaft pivotally mounted in each of said brackets, a cam rigidly secured to each of said shafts, a pair of gear wheels connected rigidly with the axle of said carriage, said gear wheels being designed to continuously contact with said cams, and a pawl rigidly secured to each of said shafts and arranged to engage said respective gear wheels for being operated thereby whenever the same are reversed, whereby said cams will be operated for shifting the carriage in respect to said gear wheels and the axles connected therewith.

3. In an off-set device for saw mills, the combination with a carriage formed with a plurality of supporting axles and traction means connected therewith, of a pair of gear wheels rigidly secured to one of said axles and rotated thereby, a pivotally mounted pawl arranged to normally slidingly engage the edge of the teeth of said gear wheels, a pair of springs for each of said pawls for holding the same in engagement with said teeth, the sliding engagement of said pawl permitting said gear wheels to rotate as the carriage is moved in one direction without shifting the position of the pawls but causing the pawls to shift their positions when the direction of movement of the carriage is reversed, and a cam connected with each of said pawls for shifting the carriage laterally when the positions of the cams are shifted.

4. In an off-set device, parallel side rails, an axle journaled transversely relative to the side rails, wheels rigidly mounted upon the axle adjacent the side rails and provided with teeth extending parallel to the axis of the axle, shafts journaled upon the side rails adjacent the gear wheels and provided with pawls positioned to engage such gear teeth and cams carried by the shafts in engagement with the gear wheels, such cams being set in opposition.

5. In an off-setting device, parallel side rails, an axle journaled transversely relative to the side rails, wheels carried rigidly upon the axle adjacent the side rails, shafts journaled upon the side rails at right angles to the axle, pawls carried by the shafts extending into engagement with the wheels and proportioned to rotate with the shaft when operated upon by the teeth, and cams carried by the shafts bearing against the opposite faces of said wheels and capable of moving the side rails transversely when such cams are reversed.

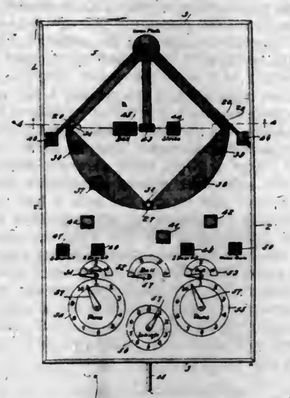
1,016,083. EYE-CAP. HAMILTON MORGAN, San Francisco, Cal. Filed Nov. 6, 1911. Serial No. 658,704. (Cl. 27—2.)

1. An eye-cap having an adhesive exterior.

2. An eye-cap having perforations, an adhesive applied to the exterior of the eye-cap and filling the perforations.

3. An eye-cap of transparent material.

1,016,084. GAME APPARATUS. PHILIP L. MUNKER, New York, N. Y. Filed Oct. 16, 1911. Serial No. 655,061. (Cl. 46—62.)



1. A game apparatus comprising a box having a top on which is pictured a base ball field, a plurality of game pieces representing players and arranged in the positions usually occupied by the players in the field, a series of game pieces representing the plays and scores made by the players, pegs representing base runners and adapted to be placed on the bases, shanks arranged on said game pieces, a spherical operating element adapted to engage said shanks and trip said game pieces, and means whereby said spherical operating element is projected.

2. A game apparatus comprising a box having a top on which is pictured a base ball field, a plurality of game pieces representing players and arranged in the positions usually occupied by the players in the field, a series of game pieces representing the plays and scores made by the players, pegs representing base runners and adapted to be placed on the bases, shanks arranged on said game pieces, a spherical operating element adapted to engage said shanks and trip said game pieces, means whereby said spherical operating element is projected, and a series of dials adapted to register the plays and scores indicated by the game pieces.

3. In a game apparatus, a box having a top on which is pictured a base ball field, a series of partitions arranged in said box below the top to form a plurality of alleys, a spherical operating element adapted to be projected up the box and to roll back through said alleys, a plurality of game pieces representing the players, said pieces being disposed in the positions on the field usually occupied by the players, a strike indicating game piece, a ball indicating game piece, a series of base hits, and home run indicating game pieces, means on said game pieces adapted to project through the cover of the box and into said alleys in position to be engaged by the ball rolling down the latter whereby the game pieces are tripped and the plays and scores thus indicated.

4. A game apparatus comprising a box having a cover on which is pictured a base ball field, a pair of longi-

tudinally disposed partition strips arranged to form an alley, a spring ball projecting plunger arranged in the inner end of said alley, a retracting stem secured to said plunger, a game piece tripping ball adapted to be projected through said alley and into the upper end of the box by said plunger, means to prevent the return of the ball through said alley, stop strips arranged diagonally across the box between said partition strips and the sides of the box, a series of longitudinally disposed parallel partition strips arranged on the opposite sides of said central pair of strips to form a plurality of alleys down which said ball is adapted to roll after being projected into the upper portion of the box, said strips having formed in their inner ends alined passages through which and through the central pair of strips the return ball is adapted to roll back into the central alley, a plurality of game pieces arranged in the field pictured on the top of the box, said game pieces representing the players and the plays and scores made by said players, shanks formed on said game pieces and projecting through the top of the box and into the alleys formed by the partition in the box and adapted to be engaged by the ball rolling back through the alley whereby said game pieces are tripped.

5. In a game apparatus, a box having a top on which is pictured a base ball field, a series of partitions arranged in said box below the top to form a plurality of alleys, a spherical operating element adapted to be projected through said alleys, a filling block arranged in the upper end of the box, said block having a concaved outer edge adapted to receive and return the ball, a ball deflecting block arranged in the center of said concaved edge, deflecting studs arranged in the box near the upper ends of the outer alleys, a plurality of game pieces representing players and indicating plays and scores, said game pieces being arranged on the top of the box, shanks connected with said game pieces and projecting down into the box and into position to be engaged by the ball rolling back down through said alley, and means whereby the scores indicated by said game pieces are recorded.

1,016,085. WATER-ELEVATOR. SAMUEL MUBTA, St. Louis, Mo. Filed Apr. 14, 1911. Serial No. 620,968. (Cl. 162—1.)

1. A liquid elevator comprising a casing having an inlet at its lower end and a valve seat above said inlet; and a vertically movable inner device arranged within said casing, said vertically movable inner device including a check valve adapted to engage the valve seat on said casing.

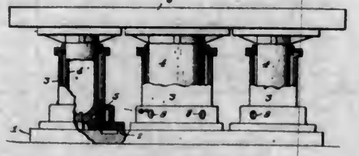
2. A liquid elevator comprising a casing having an inlet at its lower end, a valve seat above said inlet, and an abutment above said valve seat; and a vertically movable inner device arranged within said casing and seated on said abutment to prevent fluid under pressure from passing between the engaging faces of said inner device and the abutment, said inner device including a check valve adapted to engage the valve seat on the casing when the inner device is seated on said abutment.

3. A liquid elevator comprising a casing, having an inlet at its lower end, and an abutment above said inlet, a vertically movable inner device arranged within and adapted to be withdrawn from said casing; said inner device comprising a pipe, an ejector nozzle fixed to said pipe and seating on said abutment, a ported pipe depending from said nozzle, a float operable in said ported pipe, and a check valve carried by said float.

4. A liquid elevator comprising a casing having an inlet in its lower end, a valve seat above said inlet, and an abutment above said valve seat; and a vertically movable inner device arranged within said casing and seated on said abutment, said inner device comprising an ejector nozzle, a discharge pipe leading from said nozzle to the upper end of said casing, and a check valve carried by said ejector adapted to engage said valve seat when said inner device is seated on said abutment.

5. A liquid elevator comprising a casing having an inlet at its lower end, a valve seat above said inlet, and an abutment above said valve seat; and a vertically movable inner device arranged within said casing and seated on said abutment; said inner device comprising an ejector nozzle, a discharge pipe leading from said nozzle to the upper end of said casing, a delivery pipe extending from the interior of said nozzle to a point below said abutment, the last named pipe having inlet openings in its lower end, and a check valve carried by said pipe adapted to engage said valve seat.

1,016,086. JOLTING-MACHINE. WILLIAM C. NORCROSS, Terre Haute, Ind., assignor to Norcross Moulding Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed Dec. 7, 1910. Serial No. 596,164. (Cl. 22—45.)

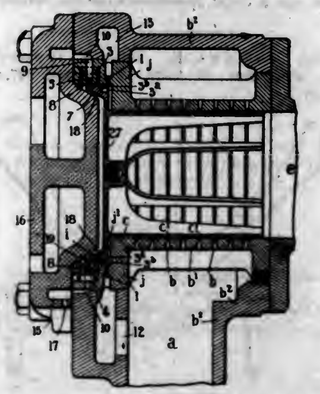


1. A sand molding machine, comprising a base plate, a plurality of upright cylinders rigidly fastened thereto, plungers in said cylinders, a table supported by all of said plungers, and means for supplying compressed air to all of said cylinders, said plungers being of such length that they will strike simultaneously upon said base plate when the table drops.

2. A sand molding machine comprising a base plate, a plurality of upright cylinders secured rigidly thereto, plungers in said cylinders, a table supported by all of said plungers, and means for supplying compressed air to all of said cylinders, said plungers being attached to the table at centers of percussion thereof, and all being adapted to strike simultaneously upon said base plate when the table drops.

3. A sand molding machine, comprising a base plate, a plurality of upright cylinders secured thereto, valved plungers in said cylinders, a table supported by said plungers, means for supplying compressed air to all of said cylinders, and means for cutting out any one or more of said cylinders, said plungers being adapted to strike simultaneously upon said base plate when the table drops.

1,016,087. SOUND-PRODUCING DEVICE. JOHN PELL NORTHEY, Toronto, Ontario, Canada. Filed May 15, 1909. Serial No. 496,175. (Cl. 116—13.)

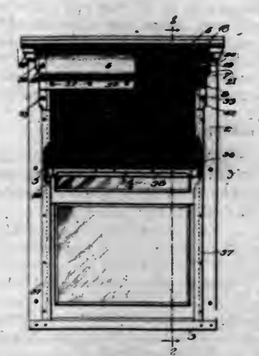


1. A sound producing device comprising a fixed part having orifices and a cylindrically chambered head, adjacent said fixed part, having a double series of ports, connected by horizontal passages, and an intermediate series of exhaust ports for conducting an operating fluid, a cover for said chambered head, a movable part having orifices coacting with said first-mentioned orifices and having a piston operating in said chambered head for reciprocating said movable part, said piston having a peripherally formed annular passage opposite to the cylindrical wall of said chambered head and being provided with communicating radial and horizontal ports, said radial ports opening on the peripheral face of said piston and said horizontal ports opening on the face of said piston adjacent said fixed part, and exhaust passages in said chambered head communicating at one end with said exhaust ports and at their other end with the atmosphere, and means including openings for introducing the operating fluid into said chambered head on the side of the piston having said horizontal ports, whereby the operating pressure fluid for said piston is introduced on one side of said piston, thence conducted to the other side of said piston and finally passes exteriorly of the piston and exhausting to the atmosphere.

2. A sound producing device comprising a fixed part having orifices and a cylindrically chambered head adjacent said fixed part, and having a double series of ports, connected by horizontal passages, and an intermediate series of exhaust ports for conducting a fluid under pressure, a movable tubular part having orifices coacting with said first-mentioned orifices, said tubular part being open at one end and at its other end closed by a wall extending in its own plane beyond said tubular part and terminating in a flanged extension, said wall and flanged extension forming a cup-shaped piston operating in said chambered head and having a peripherally formed annular fluid conducting passage and communicating horizontal and radial ports, said radial ports adapted to communicate with one series of said double series of inlet ports and said horizontal ports being in communication with said chambered head on one side of said piston head, a cover for said chambered head, exhaust passages through the wall of said chambered head communicating with said exhaust ports at one end and with the atmosphere at the other end, and means including openings for introducing the operating fluid into said chambered head on the side of the piston having said horizontal ports.

3. A sound producing device comprising a fixed cylindrical part having surrounding orifices, said fixed cylindrical part being open at one end and at its other end being provided with an annular chambered head of greater diameter than the interior diameter of said cylindrical part, a movable tubular member in said fixed member and having orifices coacting with said first-mentioned orifices, said movable member being open at one end and at its other end provided with a closed wall extending beyond the tubular portion thereof in its own plane and terminating in flanged extensions forming a cup-shaped piston head, the annular wall of said chambered head having a double series of ports, connected by horizontal passages, and intermediate outlet ports therein, and the flanged extension of said piston head having communicating radial and horizontal ports communicating at one end with the interior of said chambered head and at the other end adapted to communicate with one series of said double series of ports, said piston head also having a peripheral passage coacting with said outlet ports and one series of said double series of ports in the wall of said chambered head, means including openings for introducing the operating fluid into said chambered head on the side of the piston having said horizontal ports, and a removable head having a projecting portion entering said cup-shaped piston, the walls of said chambered head and said removable head being provided with exhaust passages leading from said exhaust ports, exteriorly of said piston, to the atmosphere.

1,016,088. WINDOW-SCREEN. JOHN NYE, Montpelier, Ohio. Filed Mar. 22, 1911. Serial No. 616,243. (Cl. 156—39.)



1. A roller screen construction including a casing consisting of a weather guard, end and bottom plates secured thereto, a spring roller journaled in the end plates, a frame provided with recessed projections, the end plates being fastened to the frame and the weather guard having flanges at its ends which interfit the recesses of the projections and a sheet of screen netting connected to the roller and passing therefrom through the space between the bottom plate and the frame.

2. A roller screen construction including a casing consisting of a weather guard, end and bottom plates, a screen frame with which the casing is removably associated and which is adapted for attachment to a window frame, the side bars of the screen frame having openings in their opposed faces, a spring roller journaled in the end plates, a sheet of screen netting connected to the roller and passing therefrom through the space between the bottom plate and the frame, recessed guide strips secured to the side bars of the frame, a bar connected to the free end of the sheet of netting and having end extensions which work in the recesses of the guide strips, a second bar also connected to the free end of the sheet of netting and locking bolts provided at the ends of the second bar for engagement in the openings in the side bars of the frame.

3. A roller screen construction including a casing consisting of a weather guard, end and bottom plates secured thereto, a spring roller journaled in the end plates, a screen frame provided with recessed projections, the end plates being fastened to the frame and the weather guard having flanges at its ends which interfit the recesses

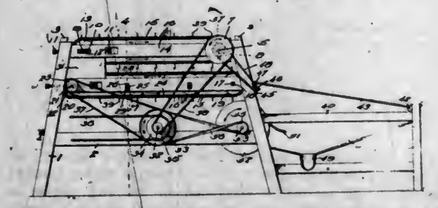
of the projections, the screen frame being adapted for attachment to a window frame, the side bars of the screen frame having openings in their opposed faces, a spring roller journaled in the end plates, a sheet of screen netting connected to the roller and passing therefrom through the space between the bottom plate and the frame, recessed guide strips secured to the side bars of the frame, a bar connected to the free end of the sheet netting and having end extensions which work in the recesses of the guide strips, a second bar also connected to the free end of the sheet of netting and locking bolts provided at the ends of the second bar for engagement in the openings in the side bars of the frame.

4. A roller screen construction including a casing consisting of a weather guard, end and bottom plates, a screen frame with which the casing is removably associated and which is adapted for attachment to a window frame, guide strips associated with the side bars of the screen frame, a sheet of screen netting connected to the roller and passing through the space between the bottom plate and the frame, guide means provided at the free end of the sheet of netting for coöperation with said guide strips, and locking means also provided at the free end of the sheet of netting for coöperation with the side bars of the frame.

5. In a roller screen construction, a frame, a casing secured thereto and including a bottom plate which is spaced from the frame, a spring roller assembled in the casing, guide strips provided in the frame, a sheet of screen netting having at its free end guide means for cooperation with said strips, the sheet of netting passing through the space between the bottom plate and the frame, a bar associated with the other end of said sheet of netting and a link connection between said bar and said roller said link having a sidewise play on the roller and in said bar.

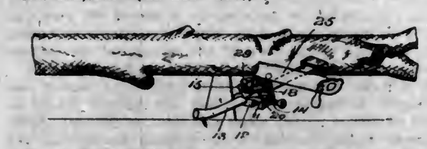
[Claim 6 not printed in the Gazette.]

1,016,089. CORN-SHELLER. SALVADOR ORDÓÑEZ, San Francisco, Cal. Filed Sept. 7, 1911. Serial No. 648,103. (Cl. 130—8.)



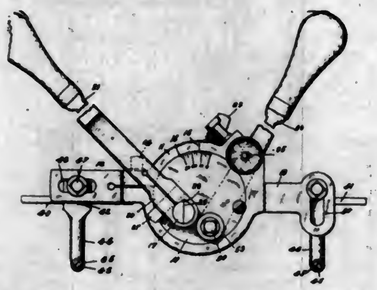
A corn sheller comprising a frame, a pair of upper and lower rollers supported thereby, a belt passing around each pair of rollers, said belts being spaced apart and having confronting surfaces adapted to move in opposite directions, resiliently supported rollers arranged between the lower pair of rollers and adapted to yieldingly support the lower belt, teeth projecting from the belts, a plurality of spaced flexible plates carried by said belts and arranged transversely thereof, said plates being adapted to engage and disengage upon the confronting faces of the belts during their travel in opposite directions, whereby the ears of corn are turned during the shelling operation.

1,016,090. UNDERCUTTING-SAW SUPPORT. JOHN B. PERRY, Meadowdale, Wash. Filed June 7, 1911. Serial No. 631,793. (Cl. 143—163.)



In an undercutting saw support, a frame, means to clamp the frame upon an ax handle, a turn table mounted to rotate upon the frame and provided with an elongated pivot, a tiltable member mounted to swing upon the pivot, screws carried one upon either side of the tiltable member and adapted to control the inclination of such tiltable member, and a roller journaled upon the tiltable member.

1,016,091. SAW-SWAGE. JOHN F. PRIBNOW, Mellen, Wis. Filed Apr. 16, 1908. Serial No. 427,465. (Cl. 76—54.)



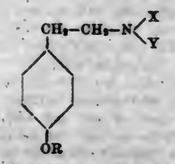
1. In a swage, the combination, with the main body and the swaging members carried thereby, of a member angularly adjustable on said main body, said member carrying a pair of oppositely extending arms, a pair of supporting plates one carried by each of the said arms, means for adjusting one of said plates toward and from the main body, and means for adjusting the other of said plates in a line substantially at right angles to the line of adjustment of the other plate, and a reversible carrying head for said last mentioned plate with the ends of said plate projecting at different distances from the head.

2. In a swage, the combination, with a main body and a swage rotatably mounted therein and having its opposite ends projected beyond the main body, of an operating lever having a pair of arms straddling the main body and engaging the same at both ends of the main body to hold the lever in fixed relation to the main body axially of the swage, said operating arms each having a portion adapted to receive and clamp the adjacent projected ends of the swage, the swage being axially adjustable in said arms.

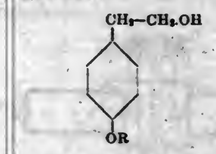
3. In a swage, the combination, with a main body and a swage rotatably mounted therein and having its opposite ends projected beyond the main body, of an operating lever having a pair of arms straddling the main body and engaging the same at both ends of the main body to hold the lever in fixed relation to the main body axially of the swage, said operating arms each having a portion adapted to receive the adjacent projected ends of the swage, the swage being axially and rotatably adjustable in said arms.

1,016,092. PROCESS OF PRODUCING ω-PARA-ALKYLOXYPHENYLETHYLAMINS AND THEIR N-ALKYL DERIVATIVES. GUSTAV REINICKE, Schöneberg, near Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Feb. 13, 1911. Serial No. 608,342. (Cl. 23—24.)

1. The hereinbefore-described process for the production of an ω-para-alkyloxyphenylethylamin of the general formula:



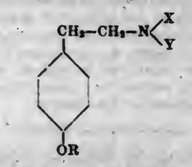
in which formula R means an alkyl group whereas X and Y signify $C_nH_{2n}+1$ groups including hydrogen, which process consists in acting with a suitable halogenizing agent upon a primary para-alkyloxyphenylethyl alcohol of the general formula:



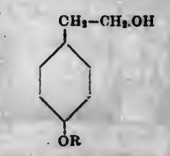
in which formula R means an alkyl group, and treating the ω-para-alkyloxyphenylethyl halid thus obtained with an amino-base of the general formula:

in which formula X and Y means $C_nH_{2n}+1$ groups including hydrogen.

2. The hereinbefore-described process for the production of an ω-para-alkyloxyphenylethylamin of the general formula:



in which formula R means an alkyl group, whereas X and Y signify $C_nH_{2n}+1$ groups' including hydrogen, which process consists in acting with a phosphorus halid upon a primary para-alkyloxphenylethyl alcohol of the general formula:



in which formula R means an alkyl group, and treating the ω-para-alkyloxyphenylethyl halid thus obtained with an amino-base of the general formula:

in which formula X and Y mean $C_nH_{2n}+1$ groups including hydrogen.

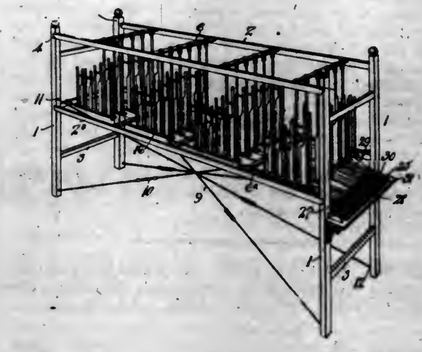
1,016,093. PROCESS FOR CORRUGATING CARD-BOARD. HANS GÜNTHER REINSTEIN, Hanover, Germany. Filed Jan. 27, 1911. Serial No. 605,126. (Cl. 154—33.)

A process for preparing card board consisting in impregnating the card board with oil and corrugating it by means of hot rollers, so that the oil hardens during its passage between the rollers and consolidates the corrugations of the card board, substantially as and for the purpose set forth.

1,016,094. CHIME-PIANO. JAMES RICHMOND, Cleveland, Ohio. Filed Feb. 13, 1911. Serial No. 608,426. (Cl. 84—31.)

1. In a musical instrument, in combination, a frame having a plurality of resonant members flexibly secured thereto, a keyboard carried by said frame and having keys thereon corresponding to said resonant members, and connections between said keys and said resonant members whereby a movement of each key will serve to shake its corresponding resonant member.

2. In a musical instrument, in combination, a supporting frame having a plurality of frames flexibly secured thereto, said frames being provided with chimes, a keyboard carried by said supporting frame and having a plurality of keys corresponding in number to said frames, and connections between each of said keys and its corresponding chime frame whereby a movement of said key will cause a movement of said frame and sound the chimes carried thereby.



3. In a musical instrument, in combination, a supporting frame having a plurality of frames flexibly suspended thereon, said frames being provided with chimes, a keyboard carried by said frame and having a plurality of keys corresponding to said frames and connections between each of said keys and its corresponding chime frame whereby a movement of said key will shake said chime frame and sound the chimes carried thereby.

4. In a musical instrument, in combination, a supporting frame having a plurality of chime-carrying frames flexibly suspended thereon, chimes mounted on said carrying frame, a plurality of keys carried by said supporting frame and corresponding in number to the chime frames, means connecting each key with its corresponding chime frame whereby a movement of said key will shake said frame and rattle the chimes carried thereby, and yielding means connecting said chime frames and said supporting frame for returning said chime-frames to their original position after actuation by said keys.

5. In a musical instrument, the combination, with a supporting frame, of a plurality of carrying frames hung therein in parallel relation to each other and to said supporting frame, resonant members mounted on said carrying frames and adapted to be sounded as said frames are shaken; a key board carried by said supporting frame at the end thereof, means connecting each of said keys with one of said carrying frames for moving the same in the direction of its length, and yielding means opposing such motion and acting to return said carrying frames to their original position after actuation by the keys.

[Claims 6 to 12 not printed in the Gazette.]

1,016,095. SPLICING-SLEEVE. JOHN RIDDELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1910. Serial No. 581,049. (Cl. 173—263.)

1. As an article of manufacture a wire splicing sleeve having a central chamber closed at either end by a beat in portion of the wall of the sleeve blank.

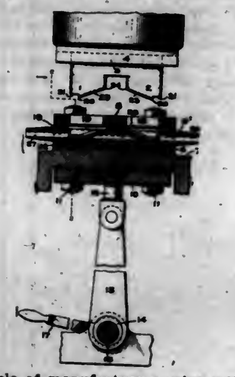
2. As an article of manufacture a wire splicing sleeve

such mass radially from the central portion thereof to

part having transversely disposed bearing surfaces around said openings, and feed conductors having transversely

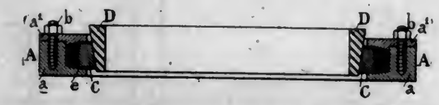
and a burner below the coil, of a valve controlling the

2. As an article of manufacture a wire splicing sleeve having a central chamber closed at either end by a sheared and bent in portion of the sleeve blank.



3. As an article of manufacture a wire splicing sleeve having side slots, and a central chamber with its ends closed by integral tongues.

1,016,096. MANUFACTURE OF RESILIENT TIRES. GEORGE DAUBNEY ROSE, Manchester, England. Filed Oct. 23, 1911. Serial No. 656,264. (Cl. 154—12.)



1. The method of constructing tires and tire covers which consists in building up the tread portion thereof of alternate, substantially annular layers of fabric and thin rubber, and subjecting the tread thus formed to outward pressure in a mold, for causing the rubber to permeate the interstices of the fabric and for compressing the latter to the desired shape, size and dimensions, said layers having gradually increasing widths, inwardly, corresponding to the taper of the side walls of the finished tread, to prevent the application of pressure edgewise upon the fabric.

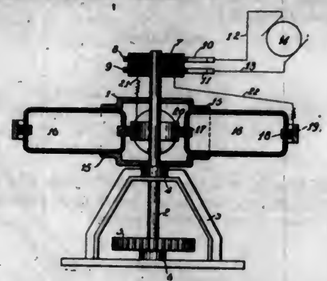
2. The method of constructing tires and tire covers which consists in spirally winding up juxtaposed continuous sheets of fabric and thin rubber to form the tread portion thereof, and subjecting the tread thus formed to outward pressure in a mold, for causing the rubber to permeate the interstices of the fabric and for compressing the latter to the desired shape, size and dimensions, said sheets having gradually increasing widths, inwardly, corresponding to the taper of the side walls of the finished tread, to prevent the application of pressure edgewise upon the fabric.

1,016,097. PROCESS OF PURIFYING ELECTRICALLY-CONDUCTIVE MATERIALS. CHARLES C. RUPRECHT, Cleveland, Ohio. Filed Apr. 20, 1908. Serial No. 428,057. (Cl. 204—19.)

1. The process of purifying electrically conductive materials which consists in reducing the materials to a fluid condition, rotating the fluid mass, and passing an electric current radially through such mass.

2. The process of purifying electrically conductive materials which consists in reducing the same to a fluid condition, rotating the fluid mass to subject the same to centrifugal action and passing through the rotating mass a current in the direction of the exerted centrifugal force.

3. The process of purifying electrically-conductive materials which consists in reducing such materials to a molten or semi-plastic condition, rotating the molten or semi-plastic mass, and passing an electric current through such mass radially from the central portion thereof to the peripheral portion thereof.

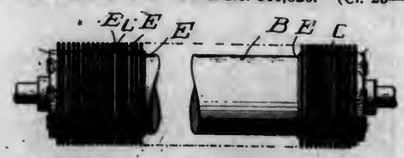


4. The process of purifying electrically-conductive materials, which consists in reducing such materials to a molten or semi-plastic condition, rotating the molten or semi-plastic mass to subject the same to centrifugal action and passing a current radially through such mass.

5. The process of purifying electrically-conductive materials which consists in reducing such materials to a molten or semi-plastic condition and passing an electric current through the molten or semi-plastic mass thus obtained, to drive the impurities toward one of the electrodes by means of which current is passed through such mass.

[Claim 6 not printed in the Gazette.]

1,016,098. METHOD OF MAKING TOOTHED-WIRE-COVERED CYLINDERS. ALLAN C. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed July 26, 1911. Serial No. 640,626. (Cl. 29—23.)



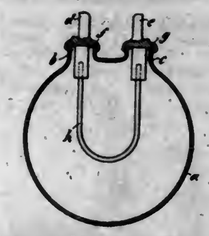
1. The method of making wire covered toothed cylinders which consists in preparing a length of flat wire with teeth along one edge thereof, forming this wire into equal lengths, electric welding the ends of each of the lengths together to form rings, and fixing said rings on the surface of the cylinder.

2. The method of making wire covered toothed cylinders which consists in preparing a long length of flat wire having teeth along one edge thereof, winding said length of wire on a cylinder, cutting the convolutions of wire along a single line at the surface of said cylinder to form a plurality of rings, electric welding the ends of said rings to complete them, and applying them to the surface of another cylinder.

3. The method of making wire covered toothed cylinders which consists in preparing a long length of flat wire having teeth along one edge thereof, winding said length of wire on a cylinder, cutting the convolutions of wire along a single line at the surface of said cylinder to form a plurality of rings, electric welding the ends of said rings to complete them, applying them to the surface of another cylinder having a slightly larger diameter than the cylinder on which they were wound, placing between each two rings a ring of the same inside diameter and without teeth, and providing means for preventing the end rings from sliding on the cylinder.

1,016,099. ELECTRIC INCANDESCENT LAMP. OTTO SCHALLER, Südende, near Berlin, Germany. Filed July 24, 1911. Serial No. 640,215. (Cl. 176—35.)

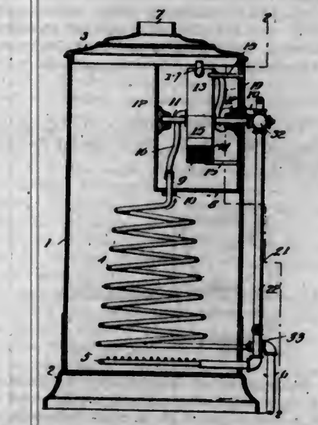
1. In an incandescant electric lamp, a globe having a part provided with openings for the feed conductors, said part having transversely disposed bearing surfaces around said openings, and feed conductors having transversely extending bearing surfaces corresponding to said first named bearing surfaces, said parts being held together solely by atmospheric pressure.



2. An incandescent electric lamp comprising a globe having transversely arranged plain flat surfaces, and feed conductors having corresponding plain flat surfaces, said parts being held together solely by atmospheric pressure.

3. An incandescent electric lamp comprising a globe having transversely arranged plain flat surfaces, feed conductors having corresponding transversely extending bearing surfaces, and a liquid seal interposed between said bearing surfaces, said parts being held together solely by atmospheric pressure.

1,016,100. AUTOMATIC GAS AND DRAIN VALVE. STEAD I. SHAND, Columbia, S. C. Filed July 7, 1910. Serial No. 570,826. (Cl. 126—351.)



1. The combination with the heater comprising a coil and a burner, of an auxiliary burner adjacent to the burner for lighting the same, a pipe supplying the burner and the auxiliary burner, a hand valve controlling the supply to the auxiliary burner, a valve controlling the supply to the burner and arranged between the burners, a supply pipe leading to the lower end of the coil, a valve casing interposed in the pipe and having a drain pipe leading therefrom, a valve in the casing for simultaneously disconnecting the coil from the supply pipe and connecting it with the drain pipe, a shaft near the upper end of the coil, a box having an air vent supported on the shaft, the box extending radially therefrom, the coil connecting with the box, a counterbalance normally holding the box above the shaft, and a connection between the shaft and the valve controlling the supply to the burner for opening the valve when the box is overbalanced by water from the coil.

2. A device of the character specified, comprising in combination with the heater consisting of a water coil and a burner below the coil, of a valve controlling the fuel supply to the burner, an auxiliary burner for lighting the burner interposed in the fuel supply between the source and the valve of the burner, a shaft journaled adjacent to the heater, a box with which the upper end of the coil communicates, said box extending radially from the shaft and having an air vent, a counterbalance for the box, a connection between the shaft and the valve controlling the fuel supply for opening said valve when the shaft is oscillated by the water from the coil filling the box, said box having a discharge opening, a drain pipe leading from the coil, and a valve for simultaneously closing the supply of water to the coil and for connecting said coil with the drain pipe.

3. A device of the character specified, comprising in combination with the heater consisting of a water coil and a burner below the coil, of a valve controlling the fuel supply to the burner, an auxiliary burner for lighting the burner interposed in the fuel supply between the source and the valve of the burner, a shaft journaled adjacent to the heater, a box with which the coil communicates extending radially from the shaft, the box having an air vent, a counterbalance for the box, and a connection between the shaft and the valve controlling the fuel supply for opening said valve when the shaft is oscillated by the water from the coil filling the box, said box having a discharge opening.

4. A device of the character specified, comprising in combination with the heater consisting of a water coil and a burner below the coil, of a valve controlling the fuel supply to the burner, an auxiliary burner for lighting the burner interposed in the fuel supply between the source and the valve of the burner, a shaft journaled adjacent to the heater, a box with which the coil communicates, extending radially from the shaft, the box having an air vent, a counterbalance for the box, and a connection between the shaft and the valve controlling the fuel supply for opening said valve when the shaft is oscillated by the water from the coil filling the box.

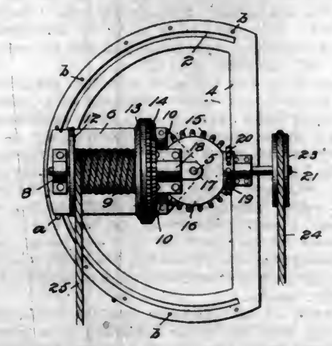
5. In combination with the water coil, and the burner for heating the same, of a shaft journaled near the coil, a box extending radially from the shaft and communicating with the upper end of the coil, said box having a discharge pipe leading therefrom, a counterbalance for normally holding the box above the shaft, a drain for the coil, a valve controlling the supply of water to the coil, means whereby when the valve is closed the coil will be connected with the drain, a valve controlling the fuel supply of the burner, a connection between the shaft and the valve for operating the same when the shaft is oscillated by the filling of the box with water from the coil, an auxiliary burner between the source of supply and the burner for lighting said burner, and a hand operated valve for controlling the supply of fuel to the auxiliary burner.

[Claims 6 to 16 not printed in the Gazette.]

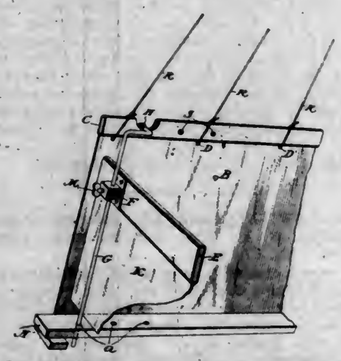
1,016,101. SWIVEL-CAPSTAN. CHARLES SHERWOOD, Friendship, N. Y. Filed Aug. 28, 1911. Serial No. 646,453. (Cl. 57—22.)

In a swivel capstan, a substantially semi-circular skeleton base having a dove-tailed groove in its upper surface extending around near the outer edge of said base, said base being provided with a central integral brace and an integral right angular member connecting the ends of the semi-circular base, a substantially rectangular supporting plate pivotally mounted above the base on a vertically extending shaft at the center of curvature of said base, said supporting plate carrying a downwardly extending dove-tailed tenon adapted to travel in said groove, a vertically extending bracket secured to the outer end of said supporting plate, a vertically extending bracket secured to said plate near the pivot point thereof, said brackets having bearing plates at their upper ends, a reel shaft rotatably mounted in said bearings, said reel shaft being provided with a cable guard near its outer end, a combined cable guard and miter gear fixedly mounted on said reel shaft near the inner end thereof, a horizontally

disposed spur gear wheel mounted on said vertically extending shaft, said spur gear wheel meshing with the said miter gear to operate the reel shaft, a vertically extending bracket secured to the central part of the said right angular member, said bracket being provided with bearings upon its upper end, a horizontally disposed shaft rotatably mounted in said bearings, a vertically disposed spur gear wheel fixedly mounted on the inner end of said horizontally disposed shaft, said spur gear wheel meshing with the said horizontally disposed spur gear wheel for operating the same, a power pulley fixedly secured to the outer end of said horizontally disposed shaft for operating said shaft, and a horizontally disposed bracket fixed to the said vertically extending bracket secured to the supporting plate near the pivot point thereof, the upper end of said vertical shaft being journaled in the said horizontally disposed bracket, and means for holding the said base plate in adjusted position.



1,016,102. COUCH-HAMMOCK. GEORGE F. SISBOWER, East Orange, N. J., assignor to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Oct. 9, 1911. Serial No. 653,712. (Cl. 5—10.)



1. A couch hammock provided with a perforated spreader bar and a perforated end bar, a rod having its lower end entering a perforation in the end bar, the upper end of said rod being bent forwardly and laterally to enter a perforation in the spreader bar, and a back bar adjustably engaging said rod.

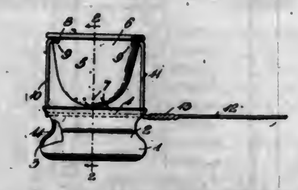
2. A couch-hammock having its spreader-bar and its end frame bar perforated, a rod bent at one end to enter a perforation in the spreader-bar, its other end entering a perforation in the end bar, a back bar slidably engaging said rod, and means for locking said back bar against movement relative to said rod.

3. A couch-hammock having its spreader-bar and end frame-bar perforated, a metal block on its back-bar and a rod entering perforations in the spreader-bar and end-bar respectively to which the hammock-back is adjustably secured.

1,016,103. EYEGLASS-HOLDER. ABNER J. SMITH, Biloxi, Miss. Filed May 11, 1910. Serial No. 560,738. (Cl. 24—86.)

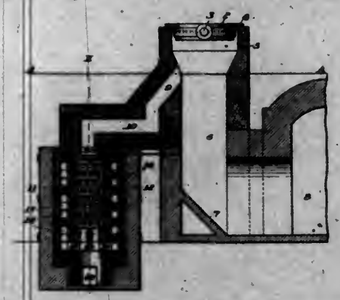
An eye glass holder formed of wire having a portion thereof bent to produce a two strand suspension hook, one of the strands of the hook being extended upwardly to form a vertical strand and thence bent to produce an eye, the material being thence extended across the rear of the vertical strand to form a transverse bar and bent upon itself to produce a second eye, the material after the second eye is formed being continued downwardly and coiled around the base of the suspension hook to produce a loop terminating in a laterally extending keeper, the second strand of the suspension hook being extended upwardly through the loop and thence extended laterally to produce a hump arranged opposite the bill of the hook, the wire after the hump is formed being continued upwardly between the vertical strands and bent to form a third eye, the wire being thence continued downwardly and inwardly and bent to produce a clamping finger extending across and in contact with the transverse bar, the wire after the clamping finger is formed being continued downwardly to form an attaching member for engagement with the keeper.

1,016,104. TEA-STRAINER. HENRY D. SMITH, Middleboro, Mass. Filed Jan. 14, 1909. Serial No. 472,344. (Cl. 210—16.)



In a straining device of the character described, a drip cup having an enlarged circular base portion with curved walls and a contracted neck located intermediate the top and bottom of the cup whereby a trap is formed at the lower portion of the cup, the upper edge of the cup being flared upwardly and outwardly to form an annular flange, the latter having at diametrically opposite points vertical openings, a strainer having at its top an upwardly projecting annular bead and having formed in its side walls at diametrically opposite points beneath said bead openings to receive pivots, a frame formed from a single piece of wire bent to provide a handle looped at one end of the frame, and a spirally twisted intermediate portion, one extremity of said wire being passed upwardly through one of the vertical openings on the flange of the drip cup to provide an upright resilient supporting arm and the other end of said wire being bent around one side of the drip cup beneath its flange and having its extremity projecting upwardly through the other openings in the flange of the drip cup to provide a second vertical resilient supporting arm, the upper extremities of the two arms being bent inwardly at right angles to form pivots which enter the pivot openings of the strainer whereby the latter is mounted to swing, the handle end of the frame being disposed in the plane of said upright arms, whereby when the drip cup is tilted to swing the strainer to operative position over a cup, the bead on the top of the strainer will engage said arms to limit the swinging movement of the strainer.

1,016,105. GLASS-POT FURNACE. HORACE E. SMYTHE, Pittsburgh, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 8, 1910. Serial No. 565,858. (Cl. 49—59.)



1. A glass drawing furnace containing a reversible pot system with a well below the pot, said well having a lateral inlet port in its wall directed toward the pot, a regenerative system arranged to preheat air and burn the same with gas, and a channel directing the products of combustion from said regenerative system to said lateral port; substantially as described.

2. A glass drawing furnace having a reversible pot and a well below the same, the wall of the well having a lateral port directed toward the bottom of the pot, and a recuperative system connected to the opening and arranged to discharge highly heated products of combustion therethrough; substantially as described.

3. A glass drawing furnace having a reversible pot with a well below the same, the wall of the well having a lateral opening directed toward the bottom of the pot, a combustion chamber having an outlet leading to said opening, an air-heating system surrounding the combustion chamber, and a channel leading from the air-heating chamber to the inlet of said combustion chamber, substantially as described.

4. A glass drawing furnace having a reversible pot with a well below the same, the wall of the well having a lateral opening directed toward the bottom of the pot, a recuperator connected with said opening, an air-heating system surrounding the recuperator and arranged to direct preheated air into the inlet of the recuperator, and a gas supply leading to said inlet, substantially as described.

5. A glass drawing furnace having a reversible pot with a well below the same, the wall of the well having a lateral opening, a recuperator arranged to discharge heated products of combustion through said lateral opening toward the bottom of the pot, an air-heating flue surrounding the recuperator and arranged to direct the preheated air into a mixing chamber at the entrance of said recuperator, and a gas supply channel leading to said mixing chamber, substantially as described.

[Claim 6 not printed in the Gazette.]

1,016,106. SAFETY DEVICE FOR DIAMOND-DRILL-ROD COUPLINGS. VICTOR SODERSTROM, Virginia, Minn. Filed Feb. 15, 1911. Serial No. 608,786. (Cl. 166—10.)

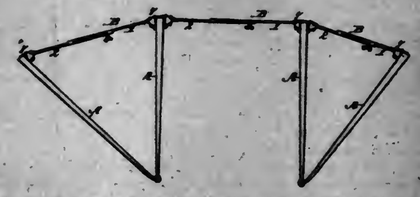
1. The combination, with hollow drill rod sections having threaded ends, of a coupling having nipples threaded to engage said ends and also having a longitudinal passage communicating with the passage through said rods, and means within said coupling passage and normally inactive, but becoming operative to hold said sections together in case of breakage of said coupling.

2. The combination, with hollow drill rod sections, of a hollow coupling uniting them, a bolt passing through said coupling and having a head at one end engaging said coupling and means for connection with a lifting rod at the other end of said coupling, said bolt being normally inactive but becoming operative upon breakage of said coupling for holding said rod sections together.

3. The combination, with hollow drill rod sections, of a hollow coupling uniting their abutting ends, a bolt fitting within said coupling and having a head at one end, an exteriorly threaded sleeve at the other end of said bolt arranged to contact with said coupling, said bolt being normally inactive and said sleeve and head permitting the water to pass freely through said coupling, said bolt becoming operative automatically upon breakage of said coupling for holding said sections together.

4. The combination, with hollow drill rod sections, of a notched coupling uniting said sections and having a passage therethrough, a bolt fitting within said passage and having means at one end engaging said coupling, an exteriorly threaded sleeve at the opposite end of said bolt having lugs to enter the notches in said coupling, said bolt holding said rod sections together in case of breakage of said coupling, and said exteriorly threaded sleeve allowing the application of a tool thereto to lift the lower section in case of breakage above or below a coupling.

1,016,107. BRACE FOR VEHICLE CANOPY-BOWS. AUGUSTUS A. STECKEL, Trenton, N. J. Filed Jan. 5, 1911. Serial No. 600,877. (Cl. 21—62.)



1. As a new and merchantable article of manufacture and sale a brace for setting carriage top bows consisting of a pair of slidably connected sections which in their connected relation constitute a continuous rigid brace bar and a clamp provided at the outer end of each section and comprising a pair of fixed straps, a clamp member hinged to each strap and having an inturned engaging flange, a headed screw stem passed through the clamp members and a wing nut provided on the screw stem for coöperation with the latter to draw the clamp members together.

2. As a new and merchantable article of manufacture

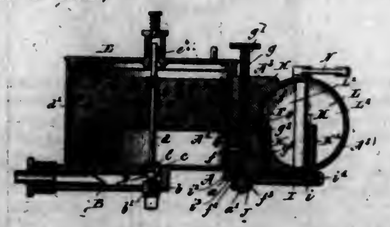
wing-members on opposite sides of its pivotal point with

gears the central blocker head positioned in advance of

1,016,111. PROCESS OF PRESERVING AND HARDEN-

2. As a new and merchantable article of manufacture and sale a brace for setting carriage top bows consisting of a pair of similar sections, each having a dovetail cross section and provided at its inner end with a guide lug embracing the other section, one of the sections having a row of recesses in its inner face, the other section having a screw for engagement in any one of the recesses, and a bow engaging clamp provided at the outer end of each section and comprising a pair of fixed straps, a clamp member hinged to each strap and having an inturned engaging flange, a headed screw stem passed through the clamp members, and a wing nut provided on the screw stem for coöperation with the latter to draw the clamp members together, the clamp member against which the wing nut bears having a slot through which the screw stem passes.

1,016,108. CARBURETER. WILLIAM J. STEINBRENNER, Buffalo, N. Y. Filed Apr. 26, 1909. Serial No. 492,298. (Cl. 48—155.1.)



1. In a carbureter, the combination with a gasolene feed-chamber and means for maintaining the gasolene therein at a constant level, of a carbureting-chamber formed integrally with said gasolene feed-chamber and connected thereto by a neck having a vertical bore and a conical boss at its lower end in which said bore terminates with a lateral extension, said neck having also a passage connecting said bore with the interior of said gasolene feed-chamber, a nozzle-carrier provided with a nozzle extending up into the carbureting-chamber and having a beveled opening through which said conical boss extends and a passage connecting said nozzle with the lateral extension of said vertical bore, means for holding said nozzle-carrier on said conical boss, and means for regulating the flow of gasolene to said nozzle.

2. In a carbureter, the combination with a gasolene feed-chamber, of a carbureting-chamber connected with said gasolene feed-chamber by a neck having a conical-boss at its lower end and a threaded stem on said boss, said neck having also a vertical bore terminating in a right-angled extension opening at the side of said boss and connected with said gasolene feed-chamber by a passage at a point above said right-angled extension, a nozzle-carrier having a head at one end provided with a beveled opening into which said boss fits, a nut threaded onto the threaded stem of said boss to hold said nozzle-carrier on the latter, aspirating-nozzles secured to said nozzle-carrier and extending into said carbureting-chamber, said nozzles being connected with the right-angled extension of said bore through a passage in said carrier, and a needle-valve in said bore for restricting or closing the flow of gasolene to said nozzles.

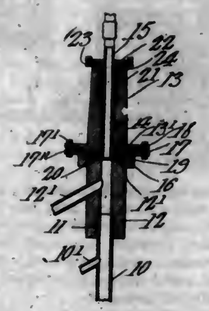
3. In a carbureter, the combination with a gasolene feed-chamber, of a carbureting-chamber connected with said gasolene feed-chamber and having a vertical bore in its wall between said chambers, said bore being connected with said gasolene feed-chamber by a passage, a removable nozzle-carrier having a gasolene passage in connection with said bore, aspirating-nozzles extending up into said carbureting-chamber and secured to said nozzle-carrier, a valve in said carbureting-chamber to control the aspirating effect of the air on said nozzles, and means to regulate the flow of gasolene to said nozzles.

4. A carbureting-chamber comprising a casing having an air inlet and a mixture outlet, a butterfly valve having wing-members on opposite sides of its pivotal point with one of said members at a slight angle to the other, and aspirating-nozzles in operative relation to said valve.

5. A carbureting-chamber comprising a cylindrical casing, a disk-valve pivoted centrally in said casing and having one-half thereof at a slight angle to the other half to provide a slight opening between the edge of said valve and the wall of said casing when said valve is in closed position, and two aspirating-nozzles arranged in a diagonal plane so that when said valve is in closed position one of said nozzles is adjacent the valve at one side of its center and when said valve is open the other nozzle is adjacent said valve at the other side of its center.

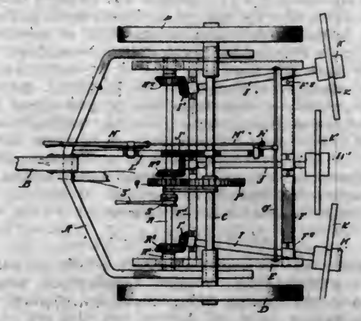
[Claims 6 to 14 not printed in the Gazette.]

1,016,109. SPRAYING DEVICE. STERLING STEPHENS, Bushnell, Fla. Filed Apr. 18, 1911. Serial No. 621,917. (Cl. 137—87.)



In a spraying device, a supporting member formed in two hollow sections, a distributing pipe arranged in the upper of said sections, said pipe being spaced from the same, one end of the lower member being formed with a recess adapted to receive the lower end of the upper member, the lower end of the upper member and the upper end of the lower member being spaced, said distributing pipe extending beyond the lower end of the upper member, a plate supported by said pipe, said plate being formed with a boss arranged to extend within a recess formed in the lower face of the upper member, and balls interposed between both faces of said plate and said members.

1,016,110. THINNING-MACHINE. SAMUEL STONE, Miles City, Mont. Filed May 29, 1911. Serial No. 630,040. (Cl. 97—46.)



1. In a machine of the class described, the combination of a front frame and a rear frame, an axle supporting said frames, longitudinal shafts mounted at each side and the center of the rear frame and provided at their rear ends with blocker heads and at their front ends with

gears the central blocker head positioned in advance of the side blocker heads, said side blocker heads being disposed obliquely to the central blocker head, a transverse shaft mounted on the front end of the rear frame and having gears mounted thereon adapted to mesh with the gears at the front ends of the longitudinal shafts, a pinion mounted on the axle, a pinion loosely mounted on the transverse shaft and meshing with the pinion on the axle, a clutch for throwing said pinions into and out of action, and means for actuating said clutch.

2. In a machine of the class described, the combination of a front frame, and a rear frame, an axle supporting said frames independently, longitudinal shafts mounted at each side and at the center of the rear frame, the side shafts converging forwardly and having bevel gears at their forward ends, and blocker heads at their rear ends carrying thinning knives, a transverse shaft mounted on the front end of the rear frame and carrying bevel gears meshing with the bevel gears on the forward ends of the longitudinal shafts, a pinion on the axle, another pinion loosely mounted on the transverse shaft adapted to engage the pinion on the axle, a clutch for controlling and operating said pinions, a longitudinal beam suspended from the axle and secured at its forward end to the front frame, a quadrant controlled lever mounted on said beam adjacent to the seat of the machine, and means controlled by said lever for elevating or depressing the rear of the rear frame.

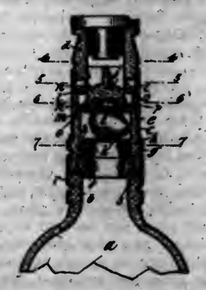
3. In a machine of the class described, the combination of a front and rear frame, an axle independently supporting said frames, longitudinal shafts mounted on the rear frame at each side and at its center, the side shafts converging forwardly and having bevel gears at the front ends, and polygonal blocker heads at their rear ends, detachable resilient thinning knives secured to said heads, a transverse shaft mounted on the front end of the rear frame and having bevel gears meshing with the bevel gears of the longitudinal shafts, a pinion on the axle and a pinion loosely mounted on the transverse shaft and adapted to be operably engaged by a clutch on said transverse shaft, a longitudinal beam secured at its front end to the front frame and suspended from the axle, a quadrant controlled lever pivoted to said beam adjacent to the seat of the machine, a connecting rod pivotally connected to the lower end of said lever, a bell crank lever mounted on the rear end of the beam, a link depending from said bell crank lever, a transverse rod mounted on the rear frame and pivotally suspended from the link, whereby the rear end of the rear frame carrying the blocker heads may be raised or depressed at will.

4. In a machine of the class described having an axle and end wheels, the combination of front and rear frames independently suspended from the axle, the rear frame having downwardly deflected side beams and an end beam connecting the same, caster wheels carried by the deflected rear end of the rear frame, longitudinal shafts mounted on the rear frame at each side and at its center, the side shafts converging forwardly and having bevel gears at their front ends and blocker heads at their rear ends, a bevel gear at the front end of the central shaft, said central shaft also carrying at its rear end a blocker head, detachable and adjustable thinning knives carried by said blocker heads, a transverse shaft mounted on the front end of the rear frame and having bevel gears meshing with the bevel gears of the aforesaid longitudinal shafts, a pinion on the axle and a pinion loosely mounted and operably connected therewith by a clutch mechanism, said pinion adapted to mesh with the pinion on the axle, a longitudinal beam connected at its forward end to the front frame and supported from the axle, a quadrant controlled lever pivoted to said beam adjacent to the seat of the machine, a connecting rod pivotally connected to the lower end of said lever, a bell crank lever mounted on the rear end of the beam and pivotally connected to the aforesaid connecting rod, a link depending from said bell crank lever, a transverse rod mounted on the rear frame and pivotally suspended from the link, whereby the rear end of the rear frame carrying the caster wheels and the blocker heads, may be raised or depressed at will.

1,016,111. PROCESS OF PRESERVING AND HARDENING WOOD. EMILE SUCHER, Versailles, France. Filed Feb. 27, 1911. Serial No. 611,157. (Cl. 99—12.)

The hereindescribed process of hardening and preserving wood which consists in impregnating the wood at one operation with a liquid containing such constituents of saw-dust as are dissolved by the treatment of the saw-dust with a solution of alkaline carbonates, sodium silicate and an antiseptic substance, and allowing the liquid to solidify within the wood.

1,016,112. NON-REFILLABLE BOTTLE. MAURICE SWITZER and JOSEPH D. LACROIX, New York, N. Y. Filed Nov. 7, 1910. Serial No. 591,054. (Cl. 215—62.)



1. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and adapted to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, a weight normally resting upon the upper end of the valve and controlling its movements, and means above the weight for limiting the movements thereof, substantially as described.

2. The combination, in the neck of a bottle, of a valve-seat having an opening, a valve normally closing said opening, a cam-like weight normally resting upon the upper side of the valve, and a socket for the upper end of the weight in which the weight rocks freely with its lower end slidingly engaging the valve in radial lines between the center of the valve and that side of the valve which is uppermost in the tilted position of the bottle.

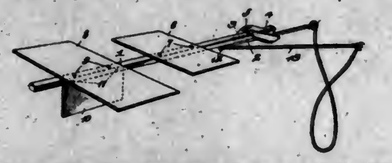
3. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and arranged to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, a cam-like weight normally resting upon the upper side of the valve, and a socket for the upper end of the weight, in which the weight rocks freely with its lower end slidingly engaging the valve in radial lines between the center of the valve and that side of the valve which is uppermost in the tilted position of the bottle.

4. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and adapted to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, a weight normally resting upon the upper end of the valve and controlling its movements, one end of said weight being larger and heavier than the other, and means above the weight, including a socket for the larger end thereof for limiting the movements of the weight, substantially as described.

5. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and adapted to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, a

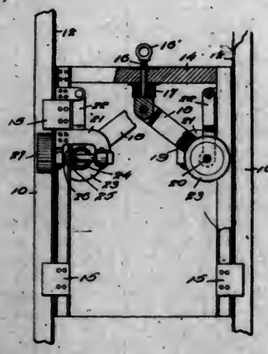
pear-shaped weight normally resting upon the upper end of the valve and controlling its movements, and means above the weight, including a socket for the larger end thereof, for limiting the movements of the weight, substantially as described.

1,016,113. TOY AIRSHIP. FLOYD F. TAYLOR, Gadsden, Ala. Filed Oct. 16, 1911. Serial No. 654,885. (Cl. 244—2.)



In a toy of the class described, a beam, a pair of planes secured to said beam and longitudinally alined thereon, one of said planes being adjacent to one end of said beam, and a secured plane adjacent to the first mentioned plane and relatively small in comparison therewith, a propeller disposed on the other end of said beam and rotatably connected thereto, a rudder or guiding plane disposed under the first mentioned plane and secured to said beam, said rudder being arranged to extend the whole of the transverse length of said plane, and a pin disposed in said beam adjacent to said propeller arranged for receiving the means that propel said toy through the air, substantially as described.

1,016,114. MINE-CARRIAGE AND ELEVATOR AUTOMATIC SAFETY-BRAKE. GERRIT VON DAAM, Scranton, Pa. Filed Mar. 18, 1911. Serial No. 615,247. (Cl. 187—87.)



1. The combination with an elevator car having a supporting elevator rope, of guides for the car and a safety device for said car including gear wheels, a spring for pressing the gear wheels into engagement with the elevator guides upon breaking of the elevator rope, and cam members forced into gripping engagement with the elevator guides by the rotation of the gears caused by the descent of the elevator car.

2. The combination with an elevator car, of a yoke supported by the car, a spring pressed draw bar extending through the transverse bar of said yoke, links pivotally supported by the end portion of said draw bar, a plurality of brackets pivotally supported by the vertical beams of said yoke, shafts supported by said brackets, gears mounted on certain of said shafts, elevator guides formed with rack portions, said gears being adapted to engage the racks formed on the elevator guides, and a plurality of eccentrics secured on the other shafts and arranged to engage the sides of said guides.

3. The combination with an elevator car, of a yoke supported by the car, a spring pressed draw bar, links pivotally supported by said draw bar, a plurality of brackets pivotally supported by said yoke, each of said brackets consisting of a plurality of yokes, shafts passing through the end portions of said yokes, a shaft passing through the central portion, said shafts being geared together, and means carried by said shafts to stop the car.

4. The combination with an elevator car having a supporting elevator rope, of guides therefor having inner rack faces, gear wheels carried by the elevator car and adapted to mesh with the said racks, a spring for pressing the gears into meshing position, connections between the gears and elevator rope for normally holding the gears out of mesh, eccentrics rotatably mounted adjacent the gears, and connections between the gears and the eccentrics for rotating the eccentrics and forcing the same into clamping engagement with the elevator guides upon rotation of the gears.

1,016,115. PROCESS FOR RENDERING VEGETABLE PROTEINS SOLUBLE. HEINRICH WALLAND, Brünn, Austria-Hungary, assignor to Erste Triester Reisschael-Fabriks-Action-Gesellschaft, Trieste, Austria-Hungary. Filed Apr. 21, 1910. Serial No. 556,722. (Cl. 127—73.)

The process of rendering vegetable protein soluble which consists in adding a small quantity of a per-borate to the vegetable protein and subsequently boiling in water

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1,016,116. INTERCHANGEABLE COUNTERBORE. FRANCIS S. WALTERS, Wilkinsburg, Pa., assignor to National Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 11, 1911. Serial No. 602,028. (Cl. 77—66.)

1. In a counterbore or like tool, the combination, with a shank having a threaded axial boss at its forward end and an axial recess opening through said boss, of a removable cutter having an axial perforation adapted for alinement with said recess and a threaded socket adapted to receive said boss, and a pilot having a shank adapted of a size to fit snugly within said cutter perforation whereby said cutter may be centered upon said tool shank.

2. In a counterbore or like tool, the combination, with a shank having a threaded axial boss at its forward end and a conical or flaring portion at the base of said boss and also having an axial recess opening through said boss, of a cutter having a threaded socket adapted to receive said threaded boss, the outer portion of said socket being flared complementarily to the conical portion of said shank and adapted to seat thereon, said cutter also having an axial bore of the same diameter as said recess and adapted to be brought into alinement therewith when said cutter is screwed upon said boss, and a pilot having a shank adapted to pass through and closely fit said bore and to be secured in said recess.

3. In a counterbore, the combination, with a shank having a threaded axial boss at its forward end and a conical or flaring portion at the base of said boss, of a cutter having cutting teeth at its forward end and having at its rearward end an internally threaded axial socket adapted to receive said threaded boss, the outer portion of said socket being flared complementarily to the conical portion of said shank and adapted to seat thereon, the rear end of said cutter being hardened to a less degree than the forward end thereof.

1,016,117. PENCIL-SHARPENER. EDWARD B. WELLES, Windsor, Conn. Filed Jan. 26, 1911. Serial No. 604,860. (Cl. 120—94.)

1. In a pencil sharpener, a pencil holder, a blade movably mounted on said holder, and a pivoted yielding point support extending into said holder and mounted to move in a plane substantially at right angles to the plane of movement of said blade.

2. In a pencil sharpener, a holder, a chuck revolubly mounted in said holder, a spring actuated pivoted support extending into said holder, said support having an outwardly projecting end for moving the same out of the holder.

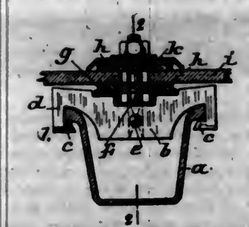
3. A pencil sharpener comprising a holder formed of a blank having a handle portion, a lever pivotally mounted in said handle having a supporting portion extending into said holder, said lever carrying a spring for normally holding said support in said holder.

4. A pencil sharpener comprising a blank bent centrally to form a tubular holder having parallel edges to form a handle, said holder being provided with an elongated opening, a shaving blade movably mounted on said holder, and a yielding support mounted in said handle normally held extended into said holder.

5. A pencil sharpener comprising a holder capable of receiving a sharpening member, and manually operated means for controlling the position of said sharpening member so as to throw the same into engagement with the cutting member of said holder on its return stroke only.

[Claims 6 to 14 not printed in the Gazette.]

1,016,118. GLASS ROOF. ADOLPH WENDLER, Lichtenberg, near Berlin, Germany, assignor to The Firm of D. Hirsch, Lichtenberg, near Berlin, Germany. Filed Dec. 1, 1911. Serial No. 663,357. (Cl. 108—16.)

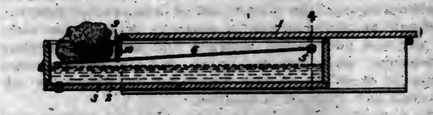


1. In a roof structure of the class described, the combination of a main supporting bar, a clamping bridge spanning said bar comprising two plates having end portions adapted to grip the edges of the said bar, a pivot pin connecting said plates intermediate their ends and extending longitudinally of said bar and means for locking the roof covering to said bridge through the pivot thereof.

2. In a roof structure of the class described, the combination of a flanged U-shaped supporting bar, a clamping bridge comprising two oppositely disposed plates, each having a pendent lug at one end and a hooked lug at the other end to engage the flanges of the supporting bar, a pivot pin connecting said plates intermediate their ends and extending longitudinally of the bar, and means connected to said pivot pin for locking the roof covering to said bridge.

3. In a roof structure of the class described, the combination of a U-shaped supporting bar having outwardly projecting edge flanges, a clamping bridge spanning said bar comprising two symmetrically disposed plates each having a pendent lug at one end and an inturned lug at the other end to engage the edge flanges, a pivot pin connecting said plates intermediate their ends and extending longitudinally of the bar, and a bolt swiveled to said pivot pin for locking the roof covering to said clamping bridge.

1,016,119. SPONGE-DRAWER. CHARLES J. WHITMORE, Bellaire, Ohio, assignor of one-fourth to E. P. Pieper and one-fourth to J. W. Pieper, Wheeling, W. Va. Filed Apr. 6, 1911. Serial No. 619,376. (Cl. 68—11.)



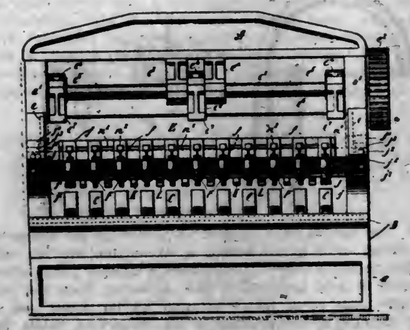
1. The combination with a table, of a drawer-like water receptacle slidably mounted beneath the table top, a sponge support mounted within said receptacle, and a spring interposed between the support and the table top for normally maintaining said support in elevated position.

2. The combination with a table, of a drawer-like water receptacle slidably mounted beneath the table top, a sponge support mounted within said receptacle, a hook fixed in the edge of the table top, and a coil spring connected at one end to said support and attached at its opposite end to said hook.

3. A drawer-like receptacle, a U-shaped member located within said receptacle and having its terminal ends pivoted to the opposite sides of the latter, a foraminous plate carried by the end of said member opposite to the pivotal mounting, and means for normally holding said end elevated.

4. The combination with a table, of a drawer-like receptacle carried by said table, a U-shaped member disposed within said receptacle and having its terminal ends pivotally mounted adjacent to the sides thereof, a wire netting mounted on the free end of said member, and a spring normally maintaining said free end elevated.

1,016,120. MACHINE FOR PUNCHING HOLES IN METAL. HARRY AINSWORTH, Moline, Ill., assignor to Williams, White & Company, a Corporation of Illinois. Filed Apr. 22, 1911. Serial No. 622,842. (Cl. 164—90.)



1. A machine for punching holes in metal, including in combination, the machine frame, a plurality of spaced-apart rows of dies and punches, a reciprocating ram or head carrying and operating the punches in both rows, and an unelastic stripper or hold-down bar of considerable vertical dimension and rigidly held at its ends by said frame, said bar having means for holding the work against the withdrawal of both rows of punches, and said bar located centrally between two rows of punches.

2. A machine for punching holes in metal, including in combination, the machine frame, a plurality of spaced-apart rows of dies and punches, a reciprocating ram or head carrying and operating the punches in both rows, and a stripper or hold-down supported by said frame comprising a single stripper bar having means for holding the work against the withdrawal of both rows of punches, and said stripper bar located centrally between two rows of punches and having forward and rearward stripper extensions.

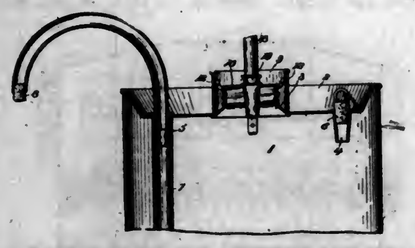
3. A machine for punching holes in metal, including in combination, the machine frame, a plurality of spaced-

apart rows of dies and punches, a reciprocating ram or head carrying and operating the punches in both rows, and a stripper or hold-down supported by said frame comprising a single stripper bar having means for holding the work against the withdrawal of both rows of punches, and said stripper bar located centrally between two rows of punches and having forward and rearward stripper extensions; and each die, punch and stripper extension being of short lengthwise dimension, longitudinally adjustable and clamped in position.

4. A machine for punching holes in metal, including in combination, the machine frame, a plurality of spaced-apart rows of dies and punches, a reciprocating ram or head for operating punches in both rows, and a single stripper or hold-down supported by said frame for holding the work against the withdrawal of both rows of punches, said stripper comprising a stripper bar of considerable vertical dimension located centrally or between two rows of punches, and the underside of the ram being recessed or cut away affording a space in which the stripper bar is accommodated.

5. A machine for punching holes in metal, including in combination, the machine frame, a plurality of spaced-apart rows of dies and punches, a reciprocating ram or head carrying and operating the punches in both rows, gag sockets and gags intermediate the ram and punches, and a single stripper or hold-down supported at its ends by said frame for holding the work against the withdrawal of both rows of punches, said stripper comprising a stripper bar of considerable vertical dimension located centrally or between two rows of punches, and the underside of the ram being recessed or cut away affording a space in which the stripper bar is accommodated.

1,016,121. OIL-CAN. THEOPHILUS W. ALEXANDER, Burlington, Iowa. Filed Aug. 16, 1911. Serial No. 644,455. (Cl. 221—11.)



1. The combination, with a receptacle of the character described, of a filling nozzle, a detachable cap for said nozzle having a perforation therein, a thimble permanently secured in said perforation and depending from the cap, a valve cage permanently attached to the lower end of said thimble and extending in line therewith below the same, said valve cage having ports in its lateral walls, a valve arranged in said valve cage and normally located below said ports, but also adapted to seat above said ports and close the passage through the thimble for the purpose of retaining the air pressure in the can, and a detachable blow pipe fitting said thimble.

2. The combination, with a receptacle of the character described, of a filling nozzle, a detachable cap for said nozzle having a perforation therein, a thimble permanently secured in said perforation and depending from the cap, a valve cage permanently attached to the lower end of said thimble and extending in line therewith below the same, said valve cage having ports in its lateral walls arranged below the plane of the top of the receptacle whereby the air forced into said receptacle has a clear and unobstructed sweep into the same, a valve arranged in said valve cage and normally located below said ports, but also adapted to seat above said ports and close the passage through the thimble for the purpose of retaining the air pressure in the can, and a detachable blow pipe fitting said thimble.

1,016,122. INNER TUBE FOR TIRE-CASINGS. WALTER C. BECKWITH, Fostoria, Ohio. Filed June 6, 1911. Serial No. 631,661. (Cl. 152—10.)

An improved article of manufacture for the purpose described, comprising an annular tubular rubber envelop having an annular rubber partition adjacent its inner side to form an inflatable and deflatable annular air-chamber, a thick wall non-collapsible annular flexible tube located between the partition and the outside of the envelop, the inner periphery of the tube resting against and secured to the partition, and an elastic core filling the space between the tube, the partition and the outside of the envelop.

1,016,123. INK-DISTRIBUTER. ABE E. BERRYESSA, Oakland, Cal. Filed Apr. 19, 1911. Serial No. 622,053. (Cl. 101—79.)

1. The combination of a plurality of distributing rollers and their shafts, equalizing rollers arranged intermediate and above the distributers and bearing upon the surfaces thereof, spindles upon which said equalizing rollers are mounted, having dove-tailed heads at their ends, saddles pivoted to one of the distributer shafts and having loose connections with the other distributer shafts and provided with dove-tailed heads, and set screws working through said saddles and engaging the said spindle heads to lock the same in desired adjustment.

2. An inking apparatus for printing presses including distributers, an equalizing cylinder bearing upon the surface of the distributers, a non-rotatable spindle upon which the cylinder may rotate and reciprocate, a screw loosely mounted on the spindle and provided with end projections, members splined upon the spindles for movement to engage with and disengage from the said screw projections, and means whereby to cause automatic movement to said members.

3. An inking apparatus for printing presses, including distributers, an equalizing cylinder bearing upon the surfaces of the cylinders, a non-rotatable spindle upon which the cylinder may rotate and reciprocate, a screw loosely mounted on the spindle, a nut carried by the cylinder and engaging the screw, means for locking the screw to the spindle to prevent its rotation, collars secured upon the spindle and adapted to prevent longitudinal movement of the screw thereon, and devices for releasing the screw to permit it to revolve in unison in either direction with the cylinder.

4. An inking apparatus for printing presses, including distributers, an equalizing cylinder bearing upon the surfaces of the cylinders, a non-rotatable spindle upon which

the cylinder may rotate and reciprocate, a screw loosely mounted on the spindle, a nut carried by the cylinder and engaging the screw, means for locking the screw to the spindle to prevent its rotation, collars secured upon the spindle and adapted to prevent longitudinal movement of the screw thereon, and devices for releasing the screw to permit it to revolve in unison in either direction with the cylinder, said locking means including bolts adapted to engage dogs on the ends of the screw and facing opposite directions and having inclined faces.

5. An inking apparatus for printing presses, including distributers, an equalizing cylinder bearing upon the surfaces of the cylinders, a non-rotatable spindle upon which the cylinder may rotate and reciprocate, a screw loosely mounted on the spindle, a nut carried by the cylinder and engaging the screw, means for locking the screw to the spindle to prevent its rotation, collars secured upon the spindle and adapted to prevent longitudinal movement of the screw thereon, devices for releasing the screw to permit it to revolve in unison in either direction with the cylinder, said locking means including bolts adapted to engage dogs on the ends of the screw and facing opposite directions and having inclined faces, and elements adapted normally to press the bolts into the path of the dogs.

[Claim 6 not printed in the Gazette.]

1,016,124. JOINT FOR CONDUITS AND THE LIKE. LÉON BILLE, Nogent-sur-Marne, France. Filed Aug. 29, 1910. Serial No. 579,378. (Cl. 137—29.)

1. The method of forming socket pipe joints which consists in forcing a cold malleable metal collar of U-section having the outer surfaces of its walls provided with saw teeth into the socket formed between the confronting ends of the pipe sections, and subsequently forcing a malleable metal filling ring into the space between the walls of said collar, to expand said walls and cause the said teeth to penetrate the adjacent socket walls.

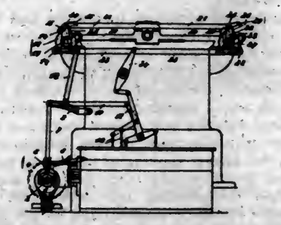
2. The method of forming socket pipe joints which consists in forcing a cold malleable metal collar of U-section having the outer surfaces of its walls provided with washers of elastic material and with saw teeth into the socket formed between the confronting ends of the pipe sections, and subsequently forcing a malleable metal filling ring into the space between the walls of said collar, to expand said walls and cause the said teeth to penetrate the adjacent socket walls.

3. As a new article of manufacture, a malleable metal collar of U-section for sealing pipe joints having the outer surfaces of its walls provided with saw teeth, the space between the walls of said collar being adapted to permanently receive a filler, for expanding said walls, to cause said teeth to penetrate the walls of the pipe sections to be connected.

4. As a new article of manufacture, a malleable metal collar of U-section for sealing pipe joints provided with a lining collar of harder metal having saw teeth connected therewith which are arranged externally of the first-named collar, the space between the walls of said first-named collar being adapted to permanently receive a filler for expanding the same and forcing said teeth to penetrate the walls of the pipe sections to be connected.

1,016,125. SHEET-FEED APPARATUS FOR TYPOGRAPHIC STAMPING-MACHINES. MAX ERICH BLUME, Leipzig-Connewitz, Germany. Filed July 27, 1911. Serial No. 640,906. (Cl. 198—1.)

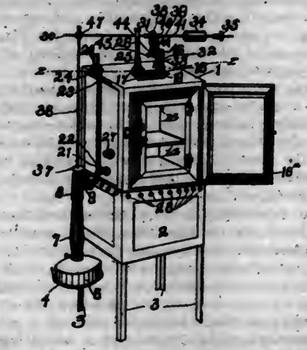
1. Sheet-feed mechanism for a typographic stamping machine, comprising a rotatable sheet supporting cylinder, a carriage for said cylinder, pawl and ratchet mechanism for traversing said carriage, a laterally movable stepped cam for actuating said traversing mechanism with movements varying according to the cam-steps brought into action, pawl and ratchet mechanism for rotating said cylinder, and means for imparting variable movement to the pawl of the second-mentioned pawl and ratchet mechanism.



2. Sheet-feed mechanism for a typographic stamping machine, comprising a rotatable sheet supporting cylinder, a carriage for said cylinder, pawl and ratchet mechanism for traversing said carriage, link motion gear for actuating said pawl and ratchet, a rod for actuating said link motion gear, a laterally movable stepped cam for actuating said rod with movements varying according to the cam-steps brought into action, and means for rotating said cylinder.

3. Sheet-feed mechanism for a typographic stamping machine comprising a rotatable sheet supporting cylinder, a carriage for said cylinder, a screw spindle for traversing said carriage, two ratchet wheels with oppositely directed teeth on said spindle, a lever having a slotted transverse arm, a pawl spindle carried by said lever, two pawls engaged with said pawl spindle so that they can be alternately engaged with said ratchet wheels by rocking the pawl spindle, a rocking lever fixed to said pawl spindle, a block which can be moved to either end of said slotted arm, a rod connected to said block, means connecting said block to said rocking lever, mechanism for actuating said rod, a laterally movable stepped cam for actuating the last-mentioned mechanism with movements varying according to the cam-steps brought into operation, and means for rotating said cylinder.

1,016,126. THERMOSTATIC DRAFT-REGULATOR FOR INCUBATORS OR OTHER PURPOSES. JULIUS BOEKEL, Philadelphia, Pa. Filed June 1, 1911. Serial No. 630,574. (Cl. 236—5.)



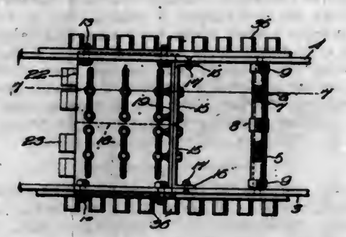
1. In a draft regulator for culture incubators and other apparatus, an upright thermostatic bar adapted to bend laterally under the influence of heat and arranged partly within the incubator, but extending through and above the top of the same, a heater for said incubator, a valve governing the draft thereof, a lever provided with means connecting it to said valve, a part depending from

said lever and a horizontally adjustable part carried by the protruding upper end of said thermostatic bar approximately at right angles to the latter and arranged in proximity to said depending part, in order that the lateral bending of the upper end of said bar under the influence of heat may press the end of said adjustable part against said depending part and thus tilt the latter to regulate the draft.

2. In a regulator for culture incubators and other apparatus, an upright thermostatic bar adapted to bend laterally under the influence of heat and arranged mainly within the incubator, but protruding through the top thereof, an approximately horizontal device attached to the upper end of said bar, a heater for said incubator, a draft-regulating lever for the said heater, having a rigid lug extending downward in front of said horizontal device, in order that the lateral bending of the upper end of said device in that direction may force the said device horizontally against the said lug and thereby tilt the said lever to regulate the draft substantially as set forth.

3. In a regulator for culture incubators and other apparatus, an upright thermostatic bar adapted to bend laterally under the influence of heat and protruding at its upper end through the top of the incubator, a horizontal screw adjustable through the top of said bar, a heater and a lever provided with draft regulating means and with a rigid lug arranged to be struck by said screw for tilting said lever as the upper end of said thermostatic bar bends laterally toward it substantially as set forth.

1,016,127. EXCAVATING-MACHINE. CHALMERS S. BROWN, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed Oct. 2, 1911. Serial No. 652,365. (Cl. 37—17.)



1. In an excavating machine, the combination of a plurality of rotatably mounted rims, means transversely adjustably connecting the rims together, adjustable buckets connecting the rims, means for rotating the rims, and an adjustable guard for preventing the falling of material from the buckets, substantially as described.

2. In an excavating machine, the combination of a plurality of rotatably mounted rims, pairs of right and left hand threaded bolts projecting inwardly from the rims, threaded sleeves connecting each pair of bolts, means for rotating the rims, and transversely adjustable buckets arranged between the rims and connected thereto, substantially as described.

3. In an excavating machine, the combination of a plurality of rotatably mounted rims, means transversely adjustably connecting the rims together, means for rotating the rims, transversely adjustable buckets carried by the rims, each bucket consisting of a pair of side plates connected to the rims and having inturned lower portions, rooters fixed to the inturned lower portions, a pair of back plates connected to the rims, and a butt-strap slidably connecting the lower inturned portions of the side plates and the back plates, substantially as described.

4. In an excavating machine, the combination of a plurality of rims rotatably mounted on pairs of pulleys, means transversely adjustably connecting the rims together, means adjustably connecting the pulleys of each pair, adjustable buckets connecting the rims, and an adjustable guard for preventing the falling of material from the buckets, substantially as described.

5. In an excavating machine, the combination of a pair of frames, pairs of bearings supported by the frames, a pulley carried by each pair, means adjustably connecting each pair of bearings together, a pair of rims rotatably mounted on the pulleys, means transversely adjustably connecting the rims together, means for rotating the rims, transversely adjustable buckets arranged between the rims and connected thereto, and a transversely adjustable guard for preventing the falling of material from the buckets, substantially as described.

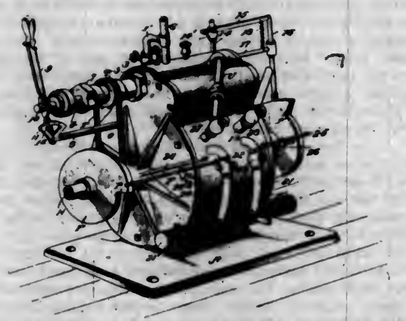
[Claims 6 and 7 not printed in the Gazette.]

1,016,128. ARTIFICIAL-TOOTH PLATE. ALONZO C. BUTTMAN, Grand View, Iowa, assignor of one-half to A. J. Greiner, Louisa county, Iowa. Filed Feb. 20, 1911. Serial No. 609,737. (Cl. 32—4.)

1. A dental plate for the lower jaw comprising a channel-shaped, curved portion to cover the gum, and a soft flexible rubber plate secured to the inner edge thereof and forming the whole interior portion or main body of the plate.

2. A plate for artificial lower jaw teeth, comprising a channel shaped gum-engaging portion adapted to be engaged with the lower gums, said gum-engaging portion having formed in the edge of its inner side a groove, a soft, flexible, plate having its inner edge fitted and secured in said groove, said soft plate decreasing in thickness toward its outer edge and having formed therein a centrally disposed substantially V-shaped notch.

1,016,129. ROTARY ENGINE. CHARLES COMSTOCK, West Stockbridge, Mass. Filed Dec. 28, 1904, Serial No. 238,604. Renewed June 25, 1909. Serial No. 504,387. (Cl. 121—83.)



1. A rotary engine, comprising two or more cylinders, pistons within the cylinder and mounted upon a single shaft, a rotary valve in communication with one of said cylinders, and a pipe communicating with said cylinder at the side and extending up and communicating with the upper end of the other cylinder.

2. A rotary engine, comprising two or more cylinders, pistons within the cylinder and mounted upon a single shaft, a pipe conveying the exhaust steam from one cylinder to the adjoining cylinder, and an automatically-closing valve within said pipes and opened by the exhaust pressure.

3. A rotary engine, comprising two cylinders of different dimensions, pistons within the cylinders, swinging abutments within said cylinders, a rotary valve in communication with the smaller cylinder, a by-pass pipe communicating with the steam supply pipe and passing around the valve, and communicating with the smaller cylinder, and a pipe conveying the exhaust from the smaller cylinder to the larger for operating on the piston therein.

4. A rotary engine, comprising two cylinders, pistons therein, a rotary hollow valve in communication with one of said pistons, and a sliding cut-off within said hollow valve.

5. A rotary engine, comprising two cylinders, pistons therein, a rotary hollow valve in communication with one of said pistons, a chain driven by the piston for rotating the valve at the same rate of speed, and a sliding cut-off within said hollow valve.

[Claims 6 to 34 not printed in the Gazette.]

1,016,130. CARAMEL-MOLD. WILLIAM H. FARRELL, South Bethlehem, Pa. Filed Aug. 22, 1911. Serial No. 645,327. (Cl. 107—19.)

1. A caramel mold adapted to rest upon a supporting surface, said supporting surface forming the bottom of the mold, said mold having a series of receptacles open at their upper and lower ends, and means to bodily lower and raise the mold upon and above the supporting surface.

2. A caramel mold adapted to rest upon a surface which forms the bottom of the mold, said mold having a series of receptacles open at their upper and lower ends, means to bodily lower and raise the mold upon and above the supporting surface, and means removably pivoted to the mold for registering with the receptacles of the mold while elevated and from above for ejecting the hardened caramels from the receptacles.

3. A caramel mold adapted to rest upon a supporting surface which forms the bottom of the mold, said mold having a series of receptacles open at their upper and lower ends, means to bodily lower and raise the mold upon and above the supporting surface, means removably pivoted to the mold for registering with the receptacles of the mold while elevated and from above for ejecting the hardened caramels from the receptacles, a row at a time.

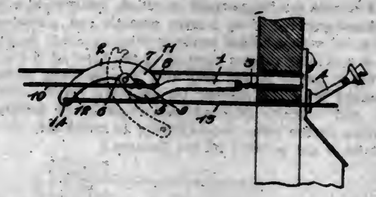
4. The combination with a supporting surface, of a mold having a series of receptacles open at their upper and lower ends and when in lowered position closed by said surface, and means connected to the sides of said mold for engaging said surface and elevating the complete mold to permit air circulation below the mold.

5. The combination with a supporting surface, of a mold having a series of receptacles open at their upper and lower ends and when in lowered position closed by said surface, a plurality of legs pivotally connected to the mold and for movement in unison to permit the mold to rest upon the surface when receiving the semi-liquid caramels, and means for moving the legs in unison to elevate the mold above the surface.

[Claims 6 to 11 not printed in the Gazette.]

1,016,131. TELEPHONE-DISCONNECTOR. CYRUS G. FIELDS, Bucklin, Mo. Filed Aug. 9, 1911. Serial No. 643,121. (Cl. 175—282.)

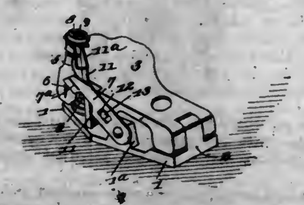
1. The herein described telephone disconnector comprising a member for connection to the phone and having an arm extending from one side thereof, and a hook lever pivotally connected at a point intermediate its ends to the said arm, said hook lever being provided at its inner end with a line wire engaging notch and having an operating cord connected to its outer end, the notched end of the hook lever being held by the tension of the line wire when the latter is engaged therewith in position to keep the line wire eye in engagement with the member and eccentrically to the pivot axis of the hook lever.



2. The herein described telephone disconnector comprising a stem to form a part of a telephone circuit and provided at its outer end with a pair of longitudinally curved fork arms and a longitudinally curved hook lever pivotally mounted at a point intermediate its ends between the outer ends of the fork arms of the stem, said hook lever being provided on its inner end with means to engage a line wire.

3. The herein described telephone disconnector comprising a stem to form a part of a telephone circuit and provided at its outer end with a pair of longitudinally curved fork arms and a longitudinally curved hook lever pivotally mounted at a point intermediate its ends between the outer ends of the fork arms of the stem, said hook lever being provided on its inner end with means to engage a line wire, and an operating cord attached to the outer end of the hook lever.

1,016,132. PEGWOOD-SHARPENER. ADOLPH CLARENCE FISHER, Cedar Rapids, Iowa. Filed Apr. 22, 1911. Serial No. 622,661. (Cl. 120—94.)



1. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide for the article to be sharpened, and a cutter pivoted to the base and having a pivotal connection with the aforesaid lever at a point between its pivot and the guide, whereby when the lever is depressed, the cutter is forced down and makes a downward and longitudinal cut, as described.

2. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide, a circular ratchet applied to the head of the guide and provided interiorly with means for engaging the article to be sharpened, a device adapted for contact with the ratchet for rotating it when the lever is depressed, and a knife arranged for acting on the face of the guide, substantially as described.

3. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and having at its free end a hollow guide for the article to be sharpened, a rotatable circular ratchet applied to the head of the guide and provided interiorly with dogs adapted to engage the said article, a device for rotating the ratchet automatically when the lever is actuated, and a knife adapted to act on the face of the guide, substantially as described.

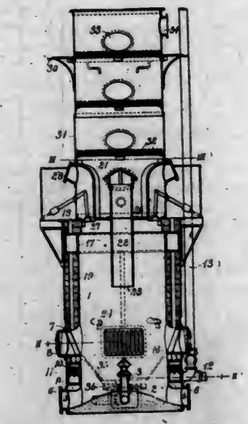
4. A device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and having at its

free end a hollow guide for the article to be sharpened, a rotatable ratchet applied to the head of the guide and provided interiorly with spring dogs for engaging said article, a device for rotating the ratchet automatically, and a knife pivoted and adapted to act on the face of the guide, substantially as described.

5. A device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide for the article to be sharpened, a rotatable ratchet applied to the head of the guide, a spring attached to the base and its upper end arranged in contact with the ratchet for effecting rotation of the same, and a knife pivoted and adapted for automatic operation by the lever, substantially as described.

[Claim 6 not printed in the Gazette.]

1,016,133. GAS-PRODUCER. THOMAS F. FITZSIMMONS, Brooklyn, N. Y. Filed Nov. 30, 1908. Serial No. 465,193. (Cl. 48—63.)



1. In a self-contained vertically-arranged gas-plant, the combination with the generator, of a wet-scrubber superimposed thereon, and a common partition separating the two.

2. In a self-contained vertically-arranged gas-plant, the combination with the generator, of a wet-scrubber superimposed thereon, a common partition separating the two, and the centrally-located take-off carried by said partition and extending from near the midle of said generator and opening into said scrubber above said partition.

3. In a self-contained vertically-arranged gas-plant, the combination with the generator, the superimposed wet-scrubber, and the common partition separating the two, of a feed-device consisting of a compartment located within the contour of said scrubber and having at its bottom a drop valve in the plane of said partition and a closure at the top of said compartment.

4. In a self-contained vertically-arranged gas-plant, the combination with the generator and the wet-scrubber superimposed thereon, of a common partition separating the two and having a central opening and a cut-away portion, a take-off supported within said central opening and extending to about the middle of said generator, and a feed-device located within the contour of said scrubber and registering with said cut-away portion.

5. In a self-contained gas-plant, the combination with the generator, a superimposed wet-scrubber, a common partition separating the two, and a take-off supported by said partition and leading from the middle of the generator to the scrubber, of means for introducing air at the center of the bottom of the incandescent fuel or around the periphery thereof.

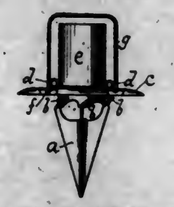
[Claims 6 to 10 not printed in the Gazette.]

1,016,134. BUGGY-EVENER CLEVIS. OLE A. FLADBY and JOHN B. FLADBY, Rutland, N. D. Filed Aug. 25, 1909. Serial No. 514,522. (Cl. 21—78.)

1. The combination, with an evener and swingle tree, of a clevis comprising a strap 4 extending around said swingle tree and having a downwardly extending end that projects beneath the evener and is provided with an opening in vertical alinement with the pivotal point of said swingle tree, the bolt 5 connecting the parts of the strap 4, a plate 8 arranged upon the top of said evener, and the bolt 11 extending through the strap 4 at the under side of the swingle tree, through the plate 8 and the evener and through the free end of the strap 4, substantially as described.

2. The combination, with an evener and swingle tree, of a clevis comprising a strap extending partially around the swingle tree, said clevis having a loop formed therein, the upper portion of said loop being near the free end of said strap, a bolt passing through said free end and through said loop and adapted to draw said strap snugly around the swingle tree, the lower portion of said loop having an end extending backwardly under the evener, and a pivot bolt passing through the lower portion of said strap and through said evener and the end of said loop and pivotally connecting said swingle tree and evener together.

1,016,135. COMBINATION CAN-OPENER AND SPOUT. ANDREW B. FOANS, New York, N. Y. Filed June 8, 1911. Serial No. 631,946. (Cl. 221—23.)

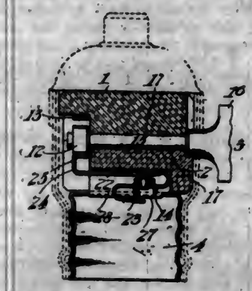


1. A device of the kind described, comprising a spout provided with a flange, a series of cutters extending from the lower portion of the spout arranged in the form of a tapered angular frame with pointed end, curved springy lugs forming a continuation of the upper part of the cutters, adapted in combination with the flange to clamp the device to a can.

2. A device of the kind described, comprising a spout provided with a flange, a cap to rest on the flange and cover the spout, a series of cutters extending from the lower portion of the spout arranged in the form of a tapered angular frame with pointed end, curved springy lugs forming a continuation of and located within the edge of the upper part of the cutters, adapted in combination with the flange to clamp the device to a can.

1,016,136. KEY-SOCKET. EDGAR H. FREEMAN, Trenton, N. J. Filed June 10, 1911. Serial No. 632,506. (Cl. 173—351.)

1. In an electrical key-socket, a body of insulating material provided with a single external annular housing chamber, and in one face thereof with a housing recess in communication with the chamber, line wire terminals arranged in opposite portions of the chamber, and a switch mechanism lying in an intermediate part of the chamber and including a combined center plug contact and snapper spring seated within said recess.



2. In an electrical key-socket, the body, the line wire terminals, and a switch mechanism comprising a rotatable switch block, a switch spring in the electrical circuit, and a combined center plug contact and snapper spring consisting of a redoubled strip of spring metal.

3. In an electrical key-socket, the body, and the switch mechanism comprising a switch contact spring, a rotatable switch block, and a combined center plug contact and snapper spring consisting of a single strip of spring metal redoubled to provide a long and a short spring arm, the long spring arm having at its free end a flat bearing plate yieldingly engaging the switch block, and fastening means for holding the said redoubled strip in place.

1,016,137. WATERPROOFING COMPOUND FOR LEATHER. PEBBLE F. FROST, Silverdale, Wash., assignor to Amanda Frost, Victoria, Canada. Filed June 19, 1911. Serial No. 634,003. (Cl. 134—7.)

A compound, comprising one fourth part oil of tar, one twelfth part melted rubber, two thirds part melted tallow, and a luster giving substance.

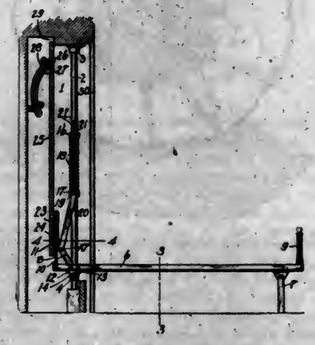
1,016,138. COMBINED ELECTRIC HAIR BRUSH AND COMB. HUGO GERNSBACK, New York, N. Y. Filed Sept. 12, 1911. Serial No. 648,804. (Cl. 174—173.)

1. An electric brush comprising a back having a series of metallic bristles, an induction coil carried by said back, a battery associated therewith, a contact plate carried by the handle of said brush, a housing inclosing said induction coil and battery being provided with a comb receiving socket extending longitudinally thereof being electrically connected to said bristles and induction coil and said contact plate and induction coil being electrically connected to said battery.

2. A brush of the class described provided with a protecting casing having a longitudinally extending comb receiving socket, said casing being capable of being used as a massage element and said longitudinally extending socket being adapted to receive any foreign material that might come in contact with said protecting casing.

3. An electric brush comprising a back having a series of metallic bristles, said back comprising a plurality of sections, an induction coil carried by said back, a battery associated therewith, said induction coil and battery being positioned between said sections of said back, a contact plate carried by the handle of said brush, a housing positioned upon said back and being provided with a comb receiving socket, said housing being electrically connected to said bristles and induction coil, said contact plate and induction coil being electrically connected with said battery, means for regulating the strength of the current passing through said brush, a circuit closing button carried by said handle, a contact spring supporting said button, an insulating plate carried within said handle and supporting a contact stud, and means electrically connecting said contact button and stud whereby a current will be sent through the bristles of said brush.

1,016,139. DISAPPEARING WALL-BED. EDWARD L. GILLESPIE, Seattle, Wash. Filed Mar. 23, 1911. Serial No. 616,533. (Cl. 5—37.)



1. In apparatus of the class described, the combination of a pair of upright posts, a horizontal bar connecting said posts, a bed frame pivotally mounted on said bar, a head board secured to the inner end of the frame, an inclined brace at each side between said head-board and the frame having its connection with said board outwardly offset from the plane of its connection with the frame, a fixed and a movable collar provided on each post, a helical spring interposed between said collars, and link connections between said movable collar and said brace.

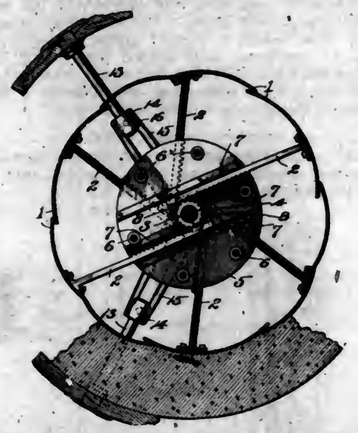
2. In apparatus of the class described, the combination of a pair of upright posts, a horizontal bar connecting said posts, a bed frame pivotally mounted on said bar, a head-board secured to the inner end of the frame, an inclined brace at each side between said head-board and the frame affording a seat for the reception of said bar, a fixed and a movable collar provided on each post, a helical spring interposed between said collars, and link connections between said movable collar and said brace.

3. In apparatus of the class described, the combination of a pair of upright posts, a horizontal bar connecting said posts, a bed frame pivotally mounted on said bar, a head-board secured to the inner end of the frame, an inclined brace at each side between said head-board and said frame and having its connection with said board outwardly offset from the plane of its connection with the frame, a fixed and a movable collar provided on each post, a helical spring interposed between said collars, link connections between said movable collar and said brace, an extension pivotally connected to said head-board, and a panel fixedly secured to said extension.

1,016,140. FORM OR MOLD FOR CONCRETE. JOHN K. GOIN, St. Louis, Mo. Filed Oct. 3, 1910. Serial No. 584,967. (Cl. 25—32.)

1. A form comprising a series of arcuate wall-sections, a shaft, a series of plates loosely mounted on said shaft, a binding device holding said plates in proper position, racks having their outer ends connected to said wall-sections and extending between said plates, pinions mounted on said shaft between said plates in mesh with said racks, guides attached to said plates holding said racks in mesh with said pinions, means for operating said shaft effectively to reduce or enlarge said form, a latch device holding said shaft from backward rotation, arms

swinging from said shaft, and auxiliary sections supported by said arms, substantially as described.



2. A form or mold comprising a series of wall-sections, a shaft, pinions attached to said shaft, plates loosely mounted on said shaft forming spaces in which said pinions are located, a binding device holding said plates in proper adjustment, racks in mesh with said pinions between said plates and having their outer ends attached to said wall-sections, a handle for turning said shaft, a latch device holding said shaft, arms pivoted upon said shaft, rods adjustably connected to said arms, and outer auxiliary sections connected to said rods whereby the thickness of the molded material may be determined, substantially as specified.

3. A form or mold comprising in combination, a series of overlapping wall-sections, a shaft, pinions attached to said shaft, racks meshing with said pinions and having their outer ends connected to said wall-sections, respectively, elements separating said pinions and holding said racks and said pinions from lateral movement, guides supporting and holding said racks in mesh with said pinions, and means for rotating said shaft effectively to form a complete mold wall composed of all or a less number of said wall sections, substantially as specified.

4. The combination with a series of overlapping wall-sections, and a shaft, of pinions attached to said shaft, racks meshing with said pinions and having their outer ends connected to said wall-sections, respectively, elements holding said racks in mesh with said pinions, supporting guides between said elements for said racks, means for rotating said shaft effectively to adjust all of said wall-sections in operative adjustment as required to constitute complete hollow forms or molds of various sizes, or to adjust a less number of said wall-sections in the form of a complete hollow mold, and a latch device effective to hold said shaft and wall-sections in their different adjustments aforesaid, substantially as specified.

5. The combination with a series of overlapping wall-sections, and a shaft, of pinions attached to said shaft, racks meshing with said pinions and having their outer ends rigidly connected to said wall-sections, respectively, elements holding said racks and said pinions from lateral movement, supporting guides holding said racks in mesh with said pinions, means for rotating said shaft effectively to adjust all or a less number of said wall-sections in operative adjustment as required to constitute walls for complete hollow molds of various sizes from a relatively small mold to a relatively large mold, a latch device effective to hold said shaft and wall-sections in their different adjustments, arms swinging from said shaft, and auxiliary sections supported by said arms, substantially as specified.

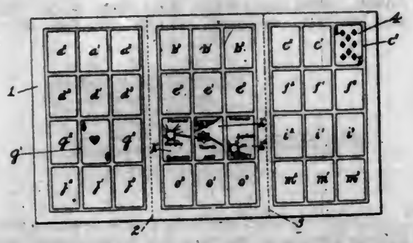
[Claim 6 to 11 not printed in the Gazette.]

1,016,141. RAILROAD-TIE. COLLINS D. GREEN, Roaring Spring, Pa. Filed June 1, 1911. Serial No. 630,577. (Cl. 238—3.)

1. A tie, comprising a pair of side members secured together in parallel spaced apart relation to form a casing, wooden blocks movable into and out of said casing through the ends thereof, and means for securing said blocks in place, said means consisting of plates inserted in the ends of said casing and bearing against the outer ends of said block, U-shaped followers adapted to be inserted in the ends of said casing with their free ends bearing against said plates, and means for securing said followers in place.

2. A tie, comprising a casing composed of a pair of side members formed of channel metal secured together in spaced apart relation with their flanges directed inwardly, wooden blocks movable into and out of said casing through the ends thereof and supported by said flanges, said side members being provided with transversely extending slots adjacent their ends, plates inserted into the ends of said casing and bearing against the outer ends of said blocks, U-shaped followers inserted in the ends of said casing with their ends bearing against said plates, said followers being supported in place by the flanges of the side members, and means for securing said followers in place, said means consisting of T-shaped bolts the ends of the head portion of which are passed through said slots and held in place by laterally directed extensions and the ends of the stems of which are threaded and passed through the bight portion of the followers, and nuts engaged upon the threaded ends of said bolts and bearing against said followers.

1,016,142. GAME. JOHN W. HANLEY, New York, N. Y. Filed Aug. 31, 1910, Serial No. 579,867. Renewed Oct. 2, 1911. Serial No. 652,413. (Cl. 46—25.)



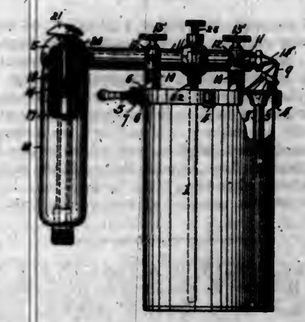
1. A game; comprising a set of individually distinguishable counters, and a chart provided with divisions to receive said counters, said divisions having indicia which in conjunction with given counters, afford predetermined significations to the player; substantially as described.

2. A game; comprising a set of individually distinguishable cards; a chart, having individually distinguishable divisions to receive said cards respectively; and a compilation of reading matter in paragraphs identifiable in correspondence with combinations of the indicia on said cards and divisions; substantially as described.

3. A game; comprising a set of cards containing a plurality of separately graded suits; a game-chart having card-receiving divisions arranged in a series of groups; and a book containing paragraphs of reading matter arranged under a plurality of sub-titles, corresponding to said groups, and identifiable individually with individual cards in said suits respectively; substantially as described.

4. A game; comprising a set of cards containing a plurality of separately graded suits; a game-chart having card-receiving divisions arranged in a series of groups, each group bearing a sign of the zodiac; and a book containing paragraphs of reading matter relating to phases of human life, and means to identify said paragraphs respectively with the conjunction of given cards with given divisions in the play of said game.

1,016,143. AIR-BRUSH. NIELS MARTIN HANSEN, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 3, 1910. Serial No. 590,536. (Cl. 91—45.)



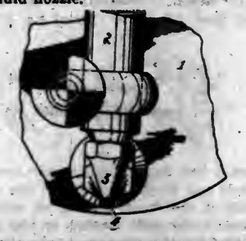
1. In an air brush, a receptacle, a tube extending therein and having a nozzle without the receptacle, an air tube extending across the top of the receptacle and having one end terminating adjacent to said nozzle and its free end extending beyond the side of the receptacle and thence downwardly at the side of the receptacle to form a handle, and means on the top of the receptacle for carrying said tube for adjustment transversely of the receptacle and for swinging adjustment to permit a placing of the handle position of the tube at different angles relative to the receptacle.

2. In an air brush, a receptacle, a tube extending therein and having a nozzle without the receptacle, standards on the top of said receptacle, an air tube mounted in said standards transversely of the top of the receptacle for rotary and longitudinal adjustment relative to the receptacle and having one end terminating adjacent to said nozzle and its other end angled and extending downwardly along the side of the receptacle to form a handle, which is capable of swinging relative to the receptacle when said tube is rotated in said standards, means for clamping the tube in adjusted position and an air valve located within said handle and having its stem projecting axially of the handle through the upper end thereof and terminating in position to be operated by the thumb of a hand grasping the handle.

3. In an air-brush, a receptacle, spraying means carried by the receptacle and having an air-tube extending transversely of one end of the receptacle and having one end projected beyond the side of the receptacle and angled to extend along the side of the receptacle in spaced relation thereto to form a handle, said angled portion being in communication with the source of fluid under pressure, a valve located within the handle portion of said tube and having a stem projecting axially therefrom without the angled portion of the tube and at substantially right-angles to the portion of the tube projecting across the receptacle, and a thumb piece carried by the valve stem without the tube in position to be pressed by the thumb of a hand grasping the handle.

1,016,144. AIR-BRUSH NOZZLE. NIELS M. HANSEN, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed June 2, 1911. Serial No. 630,782. (Cl. 91—45.)

1. In an air brush, a fluid nozzle and a liquid nozzle disposed in intersecting planes with the liquid nozzle inclined in the direction of discharge of the fluid nozzle relative to a plane cutting the fluid nozzle at right angles and having its discharge end terminating in advance of the discharge end of the fluid nozzle in close relation to its plane of discharge, the ends of the discharge orifices of the nozzles being transversely elongated and concentric, with the orifice of the liquid nozzle of greater width than that of the fluid nozzle.



2. In an air brush, a tapered fluid nozzle and a tapered liquid nozzle disposed in intersecting planes with the liquid nozzle inclined in the direction of discharge of the fluid nozzle relative to a plane cutting the fluid nozzle at right angles and having its discharge end terminating in advance of the discharge end of the fluid nozzle in close proximity thereto, the ends of the discharge orifices of said nozzles being transversely elongated with the orifice of the liquid nozzle of greater width than that of the fluid nozzle, and the inner side of the outer end portion of the liquid nozzle being concave in substantially concentric relation to the nozzle orifices to permit a projection of the fluid nozzle into close proximity to the discharge orifice of the liquid nozzle.

1,016,145. PROCESS OF DISINFECTING INCLOSED SPACES. GEORGE HARKER, Petersham, New South Wales, Australia. Original application filed Nov. 5, 1908, Serial No. 461,139. Divided and this application filed Apr. 6, 1911. Serial No. 619,259. (Cl. 167—3.)

1. The process of disinfecting which consists in charging a gas incapable of supporting combustion with a fluid disinfecting agent which, when mixed with air alone, is inflammable, the fluid mixture being constituted in such proportions as to be non-inflammable, and conducting such mixture to the point of use.

2. The process of disinfecting inclosed spaces which consists in charging a gas incapable of supporting combustion with a disinfecting fluid which is normally explosive or inflammable when mixed with air alone, the fluid mixture being constituted in such proportions as to be non-explosive and non-inflammable, and conducting such mixture to the inclosed space to be disinfected.

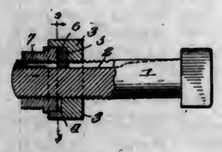
3. The process of disinfecting which consists in charging furnace gases with vapor of carbon bisulfid in such proportions as to form a non-explosive and non-inflammable mixture, and supplying such mixture to the point of use.

4. The process of disinfecting which consists in charging a gas incapable of supporting combustion with vapor of carbon bisulfid, the mixture being constituted in such proportions as to be non-explosive and non-inflammable, and conducting such mixture to the point of use.

1,016,146. NUT-LOCK. ITHAMAR C. HAWES, Sherman, Conn. Filed Mar. 25, 1911. Serial No. 616,911. (Cl. 151—5.)

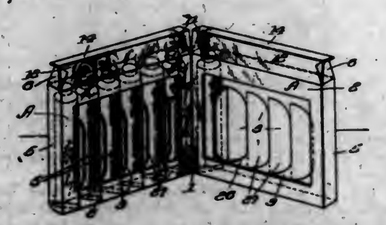
In a nut lock a bolt having an angular terminal, a nut engaging the bolt and having a recess at one end with the wall at the side of the recess having an opening and an under-cut recess in the wall leading to the opening, and a locking member having an angular opening fitting the angular terminal and a finger, the locking member being normally disposed in the recess at the end of the nut, with its finger in the under-cut recess in the wall.

1,016,147. NUT-LOCK. ARTHUR M. HEATH, Artesia, N. Mex. Filed Apr. 22, 1911. Serial No. 622,647. (Cl. 151—5.)



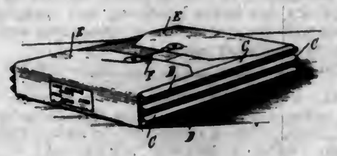
The improved nut-lock formed by the combination with the threaded bolt having a lengthwise V-shaped groove, of a main nut having a circular face recess and also a small interior recess which is segmental in form, a sector-shaped locking device adapted to fit loosely in the corresponding cavity formed when the nut is adjusted with its aforesaid interior recess in registration with the groove of the bolt, and a securing nut also screwed on the bolt and having a circular periphery and adapted to fit loosely in the circular recess of the main nut, whereby the locking device is held in place and entirely concealed and protected, as described.

1,016,148. DISPLAY-BOX. JULIUS G. HEINICKE, Richmond Hill, N. Y. Filed July 26, 1911. Serial No. 640,633. (Cl. 206—44.)



A container for small articles comprising a receptacle having a top opening to admit the articles, a top cover fold for the top opening arranged to fold back from the front of the receptacle and to be opened from the rear, obstructing access to the articles from the front but permitting withdrawal thereof from the rear, said receptacle front having a display opening of a size to exhibit the greater portion of the displayed articles but to prevent withdrawal of the articles therethrough.

1,016,149. SEALED PACKAGE. JOHN WILLIAM HENSON, New York, N. Y. Filed Aug. 2, 1911. Serial No. 641,887. (Cl. 206—46.)



A sealed package, comprising a plurality of connected envelops, each complete in itself and having flaps whereby it may be independently sealed, the connections between said envelops being perforated whereby the envelops may be readily detached with their contents, when desired, certain of said envelops having supplementary flaps adapted to embrace and support the series of envelops in superposed relation, and means to connect the said supplemental flaps around the package, said means being adjustable whereby a tight package may be formed irrespective of the removal of one or more of the envelops.

1,016,150. PRACTICE APPARATUS FOR SMALL-ARMS. HORATIO B. HOLLIFIELD, Washington, D. C. Filed Feb. 17, 1910. Serial No. 544,465. (Cl. 124—15.5.)

1. In recording practice apparatus for small arms, a dummy cartridge similar in size and form to an ordinary service cartridge and provided with a longitudinally movable rod terminating approximately at the forward end of the cartridge and having at the rear end of the cartridge a rounded slightly projecting end, said rod being arranged for transmitting the impact of the firing mechanism to target marking devices extending, forwardly, from the forward end of the cartridge.

2. In practice apparatus for repeating small arms, the combination with a target marking apparatus adapted to extend forward in the barrel, from the cartridge space and provided with a longitudinally sliding member having a rounded end normally yieldingly held in position to project slightly into the path of a cartridge moving transversely into alinement therewith, of a transversely movable dummy cartridge provided with devices for transmitting the impact of the firing pin to said rounded end; whereby said end may be pushed forward slightly as the cartridge moves transversely into position and thus be held in close contact with said impact transmitting devices.

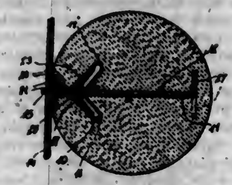
3. The combination with a target holder block, of a rubber face plate provided with means for holding a target slip upon its front face and having its lateral marginal portions secured to said block with the intermediate or body portion unsecured thereto, said plate being thus adapted to carry a target slip on its front face and to hold a second target slip adjustably between said intermediate portion and the block.

4. In recording practice apparatus for small arms, the combination with a suitably supported curved track, of a miniature target holder mounted to move along the concave side of said track, and means for at will causing it to so move.

5. In recording practice apparatus for small arms, the combination with a track curved in an approximately horizontal plane, of a target holder mounted to slide along said track, and means for causing the holder to so slide at a predetermined speed.

[Claims 6 to 12 not printed in the Gazette.]

1,016,151. CEMENT FENCE-POST. JACOB HUBER, Blakesburg, Iowa. Filed May 29, 1911. Serial No. 630,078. (Cl. 39—12.)



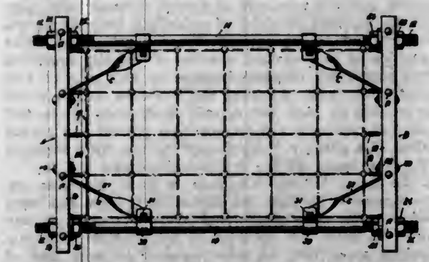
1. A fence post comprising a body, a vertical reinforcing strip embedded in the post, and a holder for fastening devices attached to the strip, said holder comprising a single section of metal bent to form a pair of convergent channels having a restricted receiving portion and rebent edges disposed adjacent to the face of the post.

2. A post reinforcing and fence securing element comprising a vertical strip, and a section of metal bent upon itself to form opposite sides between which the said strip is secured, said sides being rebent to form convergent channels having a restricted entrance portion, the bent portion of the metal receiving the strip serving to deflect the fastening devices into the channels.

3. A post having fastening receiving means consisting of a sheet of metal bent to form a tube having an approximate triangular cross-section, the tube being embedded in the post and having its sides spaced slightly apart at the apex and exposed through a face of the post, the base of the triangular tube being reëntrant.

4. A post having fastening receiving means consisting of a sheet of metal bent to form a tube having an approximate triangular cross-section, the tube being embedded in the post and having its sides spaced slightly apart at the apex and exposed through a face of the post, the base of the triangular tube being reëntrant, and a reinforcing plate secured within the reëntrant base.

1,016,152. BED-SPRING FRAME. LEWIS D. HUNCKER, Ravenna, Nebr. Filed Sept. 19, 1911. Serial No. 650,186. (Cl. 5—69.)



A bed spring frame comprising spaced side members, end members mounted on the side members for longitudinal adjustment of the latter, and braces between the side members and end members, each of said braces comprising a clip slidable on one of the side members, an arm having one end secured between the terminals of said clip by means of a bolt passing through said terminals and said arm and adapted to draw said terminals together to clamp the clip upon the side member and the other end of said arm being disposed against the adjacent side member and secured thereto.

1,016,153. FOLDING EYEGLASSES. EDWIN P. HUTTEN, East Rutherford, N. J., and JOHN MCDOUGALL, New York, N. Y. Filed May 18, 1911. Serial No. 627,898. (Cl. 88—41.)

1. A pair of eye glasses, comprising lenses, frames for holding the lenses, a spring pivotally connected at its ends with the said lens frames, posts integral on the said lens frames and projecting toward each other, and nose clips integral on the said posts and extending transversely, the terminals of the nose clips being free of the lens frames and projecting inwardly, the said spring being of such length and it and the clips being so arranged relative one to the other that the clips pass one another on swinging one lens frame toward the other to fold the said frames one upon the other.

2. A pair of eye glasses, comprising lenses, frames for holding the lenses, a spring pivotally connected at its ends with the said lens frames, posts integral on the said lens frames and projecting toward each other, and nose clips integral on the said posts and extending transversely, the terminals of the nose clips being free of the lens frames and projecting inwardly, the said spring being of such length and it and the clips being so arranged relative one to the other that the clips pass one another on swinging one lens frame toward the other to fold the said frames one upon the other.

3. A pair of eye glasses, comprising lenses, frames for holding the lenses, a spring pivotally connected at its ends with the said lens frames, posts integral on the said lens frames and projecting toward each other, and nose clips integral on the said posts and extending transversely, the inner edges of the nose clips being inclined and the lower terminals of the clips being adjacent the lens frames, the said spring being of such length and it and the clips being so arranged relative one to the other that the clips pass one another on swinging one lens frame toward the other to fold the said frames one upon the other.

4. A pair of eye glasses, comprising lenses, frames for holding the lenses, a spring pivotally connected at its ends with the said lens frames, posts integral on the said lens frames and projecting toward each other, nose clips integral on the said posts and extending transversely, the said spring and clips being arranged to allow the clips to pass one another on swinging one lens frame toward the other to allow the lens frames to turn on their pivots to fold one lens frame on the other, a handle on one of the lens frames and having a guideway for receiving the other lens frame, and a spring catch on the said handle for engagement with the entering lens frame to lock the lens frames in folded position.

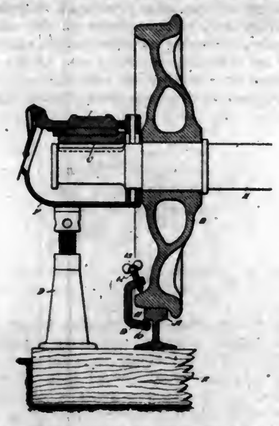
1,016,154. CAR-WHEEL CLAMP. WILLIAM EDGAR IRONS, Wilsoncreek, Wash. Filed Mar. 1, 1911. Serial No. 611,620. (Cl. 57—119.)

1. A car wheel clamp, comprising a U-shaped body the sides whereof are flared; a pricking spur mounted in the end of one of said sides; and a set screw extended through the end of the other of said sides and disposed perpendicular to said side, said screw having a pricking point at the end thereof.

2. A car wheel clamp, comprising a U-shaped body portion having a short and a long side disposed at an angle each from the other; a pricking spur mounted in the end of said long side; and a set screw extended through and thread engaged with the short side, said set screw having a pricking point disposed at the end thereof.

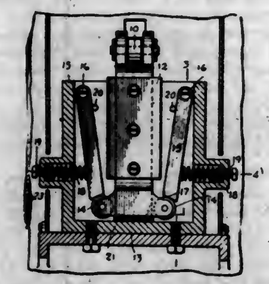
3. In a car wheel clamp, a body portion having flared extensions to rest beneath the head of a railway rail and above the flange of the tread of a railway car wheel; and pricking points mounted adjacent the ends of said extensions disposed each perpendicularly to the extension

in which it is mounted and at an angle to the opposite extension whereby a clamp is formed which may be



driven laterally into gripping relation with the railway rail and car wheel.

1,016,155. COMPENSATOR. ARON JOHNSON, New York, N. Y. Filed Feb. 17, 1911. Serial No. 609,104. (Cl. 113—2.)



1. The combination with a bottle support, of a counterweight for said bottle support, a plurality of rollers on said counterweight, a plurality of pivoted arms engaging said rollers to prevent the movement of said counterweight, and springs for engaging said arms and adapted to hold them in superposed relation with respect to said rollers.

2. The combination with a bottle support, of a counterweight for said support, a pair of rollers extending from opposite sides of said counterweight, a pair of cam levers pivoted adjacent the opposite sides of said counterweight and adapted to engage said rollers so as to prevent the movement of said counterweight, and springs for holding said arms in locking engagement with said rollers.

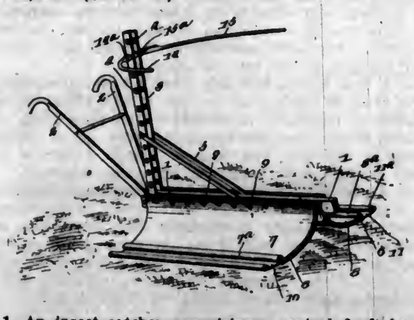
3. The combination with a bottle support, of a counterweight for said support, a pair of rollers extending from opposite sides of said counterweight, a pair of cam levers pivoted adjacent the opposite sides of said counterweight and adapted to engage said rollers so as to prevent the movement of said counterweight, springs for holding said arms in locking engagement with said rollers, and stops for limiting the movement of said arms.

4. The combination with a bottle support, of a counterweight for said support, a pair of rollers extending from opposite sides of said counterweight, a pair of cam levers pivoted adjacent the opposite sides of said counterweight and adapted to engage said rollers so as to prevent the movement of said conuterweight, and means for adjusting the tension on said springs.

5. The combination with a table having an opening therein, of a bottle support slidingly mounted in said opening and having its surface normally on the level with the surface of said table, said bottle support having a cushion in the upper face thereof, and also having means for limiting its upward motion, a lever pivotally connected to said bottle support at one end, a counterweight connected to said lever at the other end, rollers mounted on opposite sides of said counterweight, cam arms pivotally mounted adjacent to the opposite sides of said counterweight and having beveled ends engaging said rollers so as to prevent the movement of said counterweight and said support, springs engaging said arms on opposite sides so as to force said arms inwardly in locking position relative to said rollers, means for limiting the motion of said arms, and screw-bolts for adjusting the tension on said springs.

[Claims 6 and 7 not printed in the Gazette.]

1,016,156. INSECT-CATCHER. JACK JOHNSON, Bolton, Miss., assignor of two-thirds to Herring Brothers, Bolton, Miss., a Firm. Filed Feb. 28, 1911. Serial No. 611,827. (Cl. 43—1.)



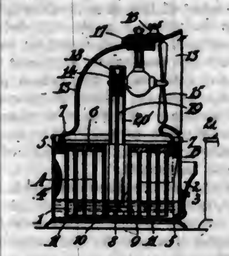
1. An insect catcher comprising a central draft beam, an upright secured at the rear end of said draft beam, said upright consisting of a U-shaped bar having registering openings in its opposite sides, curved arms having flattened portions arranged to extend through said openings, the flattened portions of oppositely extending arms being arranged to engage each other for holding the arms in position on said upright, a series of laterally extending curved supporting members secured on each side of said central draft beam, a curved pan provided with a rolled edge secured on each side of said draft beam above said supporting members, and an auxiliary curved pan having a rolled edge slidably disposed between the lower supports on the draft beam and the first mentioned pan.

2. An insect catcher comprising a draft beam, an upright secured at the rear end of said draft beam and being provided with openings, curved arms having a portion adapted to enter the openings in said upright, laterally extending supporting members secured on each side of said draft beam, a pan secured on each side of said draft beam above said supporting members, and an auxiliary pan slidably disposed between the lower supports on the draft beam and the first-mentioned pans.

1,016,157. AIR COOLER AND PURIFIER. CARL JOST, Bombay, India. Filed Dec. 1, 1910. Serial No. 595,131. (Cl. 98—44.)

1. In an air cooling and purifying device, a vessel, a cellular element of porous material rotatably mounted therein, a bell-mouthed piece mounted upon said cellular element and rotatable therewith, a fan within said bell mouth, a fan motor, and a water raising device operated by said motor, substantially as described.

2. In an air cooling and purifying device, a vessel having an air suction opening therein, a water charging device for said vessel, a cellular element of porous material rotatably mounted within said vessel, a bell-mouthed piece mounted upon said cellular element and rotatable therewith, a fan within said bell mouth, a fan motor, and a water raising device operated by said motor, substantially as described.



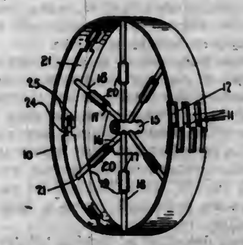
3. In an air cooling device, a tank, a series of vertical partitions of porous material, a porous plate integral with said partitions, a raised outer edge on said plate and an inner edge of less height than said outer edge to form a trough, a bell-mouthed piece mounted upon said plate and outside said outer edge, a fan and motor within said bell mouth, and means operated by said fan motor for supplying water to said trough, substantially as described.

4. In an air cooling device, a tank, a series of vertical partitions of porous material, a porous plate integral with said partitions, a raised outer edge on said plate and an inner edge of less height than said outer edge to form a trough, a bell-mouthed piece mounted upon said plate and outside said outer edge, a fan and motor within said bell mouth, means operated by said fan motor for supplying water to said trough, and means for causing the air forced by said fan to take the longest path between said partitions, substantially as described.

5. In an air cooling and purifying device, a porous cellular element of concentric cylindrical walls, means for causing air to pass therethrough, and a device operated by said means and adapted to supply a cooling liquid to the upper portion of said cellular element.

[Claims 6 and 7 not printed in the Gazette.]

1,016,158. EXPANSION-PULLEY. MILO M. KARR, Doniphan, Nebr. Filed Aug. 9, 1910. Serial No. 576,364. (Cl. 64—8.)



1. In a pulley, a split rim, a hub, a series of extensible spokes having their inner ends held by said hub, and a series of slidably interlocking plates carried by the outer ends of the spokes and bearing against the inner surface of said rim.

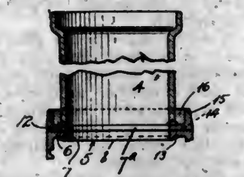
2. In a pulley, a rim comprising a plate of annular form, each end of the plate being provided with slidably interlocking fingers, a hub, a series of extensible spokes having their inner ends held by said hub, and a series of slidably interlocking plates carried by the outer ends of the spokes and bearing against the inner surface of said rim.

3. In a pulley, a rim comprising a plate of annular form, each end of the plate being provided with slidably interlocking fingers, a hub, a series of extensible spokes having their inner ends held by the hub, and a series of interlocking plates carried by the outer ends of the spokes and bearing against and having interlocking engagement with the inner surface of said rim.

4. In a pulley, a split rim, a hub, a series of extensible spokes having their inner ends held by said hub, a series of slidably interlocking plates carried by the outer ends of the spokes and bearing against and having interlocking engagement with the inner suface of said rim.

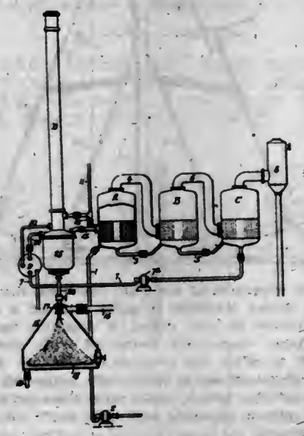
5. In a pulley, a split rim having interlocking fingers formed at the ends thereof, plates disposed against the inner face of the rim and attached to the fingers of each end of said rim by a pin and slot connection, each plate projecting across the other set of fingers, a hub, a series of extensible spokes having their inner ends held by the hub, and a series of interlocking plates carried by the outer ends of the spokes and bearing against and having interlocking engagement with the inner surface of said rim.

1,016,159. IRRIGATING CONNECTION. GEORGE E. KELLAR, Covina, Cal., assignor to Kellar-Thomason Manufacturing Company, Covina, Cal., a Corporation of California. Filed Oct. 29, 1910. Serial No. 589,653. (Cl. 61—46.)



A gate having a plate with an opening through which water may flow, a pipe having its end abutting against said plate adjacent to said opening, said plate having an outwardly projecting flange encircling the end of said pipe and forming an annular space between the end of said pipe and said flange, and a cementitious filler in said annular space securing said plate to said pipe.

1,016,160. EVAPORATING APPARATUS. PAUL KESTNER, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 10, 1911. Serial No. 626,193. (Cl. 127—18.)



1. In an evaporating system, the combination of a plurality of evaporating elements working under increasing vacua; an evaporating element working under pressure; means connecting said elements to conduct concentrated liquid from the element of highest vacuum to the element working under pressure; and means for con-

ducting the vapor from the latter element to the heating compartments of the vacuum elements.

2. An evaporating apparatus comprising means for evaporating liquid under vacuum to a relatively dense consistency; with means for reheating and thereafter filming the dense evaporated liquid to perform a further evaporation.

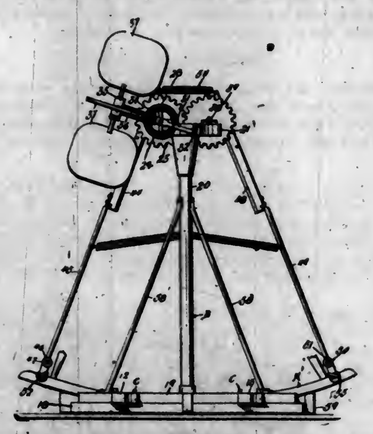
3. An evaporating apparatus comprising a plurality of evaporating elements connected in multiple effect; means for feeding liquid to the first of said elements; an independently heated evaporator; means for transferring concentrated liquid from the last of the evaporating elements to said independently heated evaporator; and means for transmitting the vapor generated in said evaporator to the heating compartment of said first evaporating element.

4. An evaporating apparatus comprising a plurality of evaporating elements connected in multiple effect; means for feeding liquid to the first of said elements; an independently heated evaporator of the film type; means for transferring concentrated liquid from the last of the evaporating elements to said independently heated evaporator; and means for transmitting the vapor evolved in said evaporator to the heating compartment of said first evaporating element.

5. In an evaporating apparatus, a plurality of evaporators connected in multiple effect; an independently heated evaporator adapted to work under pressure; means for connecting said evaporator to receive liquid from the last of said multiple effect evaporators; a receiving chamber connected to the discharge outlet of said pressure evaporator, and means for producing a vacuum within said receiving chamber.

[Claims 6 to 15 not printed in the Gazette.]

1,016,161. FAN ATTACHMENT FOR ROCKING-CHAIRS. ERNEST C. KILLEBREW, Evansville, Ind. Filed June 2, 1911. Serial No. 630,796. (Cl. 230—7.)



1. In an apparatus of the class described, the combination of a frame including a guide rail for a rocker, a shaft journaled on said frame, a rotatable fan carried by the frame operatively connected with one end of said shaft to effect the rotation of the fan, a pair of rack and pinion elements operatively connected to opposite ends of the rocker, and connections between said rack and pinion elements and said shaft for rotating the latter.

2. In an apparatus of the class described, the combination of a frame including a guide rail for a rocker, a shaft journaled on said frame, a rotatable fan carried by the frame operatively connected with one end of said shaft to effect the rotation of the fan, a pair of rack and pinion elements operatively connected to opposite ends of the rocker, whereby the oscillation of the latter will reversely operate the rack and pinion elements, and connections between the rack and pinion elements and said shaft whereby the actuation of the former will effect the continuous rotation of the latter.

3. In an apparatus of the class described, the combination of a frame including a guide rail for a rocker, a shaft journaled on said frame, a rotatable fan carried by the frame operatively connected with one end of said shaft to effect the rotation of the fan, a gear fixed on the other end of said shaft, a second gear journaled on said frame and meshing with the first named gear, and connections between each of said gears and the rocker whereby the oscillation of the latter will effect the continuous rotation of said shaft.

4. In an apparatus of the class described, the combination of a frame including a guide rail for a rocker, a shaft journaled on said frame, connections between said shaft and the rocker whereby the oscillation of the latter will rotate the former, a disk fixed on one end of said shaft, a crown gear mounted on the outer face of said disk, an arm pivoted intermediately in the axis of said disk for movement transversely of the latter, a pinion rotatably mounted on said arm and meshing with said crown gear, a fan rotatably mounted on said arm in spaced relation to the pinion, and a coil spring encircling said arm and having its ends connected to the fan and pinion respectively.

1,016,162. PROCESS OF MAKING BETULIN SUITABLE FOR THE PRODUCTION OF COATING COMPOSITIONS THEREOF. JOHAN ROBERT KÖHLER, Stockholm, Sweden. Filed June 16, 1911. Serial No. 633,582. (Cl. 134—81.)

1. The process described of making betulin suitable for the production of coating compositions thereof which consists in heating the betulin to a temperature considerably above its melting point through such a period of time that it does not precipitate from a hot concentrated solution thereof when the latter is cooled, and that it, when the solvent becomes dry or is removed, grows solid and forms a body of a hard, glassy or lac-like structure.

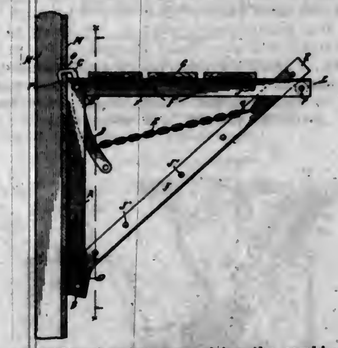
2. The process described of making betulin suitable for the production of coating compositions thereof which consists in heating the betulin in an indifferent gas atmosphere to a temperature considerably above its melting point through such a period of time that it does not precipitate from a hot concentrated solution thereof when the latter is cooled, and that it, when the solvent becomes dry or is removed, grows solid and forms a body of a hard, glassy or lac-like structure.

3. The process described of making betulin suitable for the production of coating compositions thereof which consists in heating the betulin in an indifferent gas atmosphere and at a higher pressure than that of the atmosphere to a temperature considerably above its melting point such a period of time that it does not precipitate from a hot concentrated solution thereof when the latter is cooled, and that it, when the solvent becomes dry or is removed, grows solid and forms a body of a hard, glassy or lac-like structure.

4. The process described of making betulin suitable for the production of coating composition thereof which consists in heating the betulin alone to a temperature considerably above its melting point and then heating it together within a suitable solvent at such a temperature through such a period of time that it does not precipitate from a hot concentrated solution thereof and that it, when the solvent becomes dry or is removed, grows solid and forms a body of a hard, glassy or lac-like structure.

1,016,163. SCAFFOLDING-BRACKET. HENRY E. LOBBEL, Milwaukee, Wis. Filed Apr. 2, 1910. Serial No. 553,001. (Cl. 20—84.)

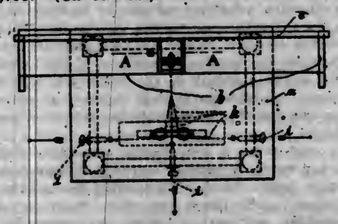
1. A scaffolding bracket comprising the combination of a vertical member composed of a pair of metal angle beams spaced apart and arranged to provide wall flanges and outwardly projecting flanges, a horizontal member composed of metal angle beams spaced apart and arranged to provide outwardly projecting horizontal flanges and downwardly projecting reinforcing flanges, said downwardly projecting flanges being pivotally secured between the outwardly projecting flanges of the vertical member near its upper end, a brace member having a flange in a vertical plane and a laterally extending flange or less length, said flange in a vertical plane being extended at the respective end of the brace member beyond the laterally extending flange, with its lower end pivotally connected between the outwardly extending flanges of the vertical member and adapted to extend at its upper end loosely between the downwardly extending flanges of the horizontal member to a substantial distance above the horizontal member, and a connection between the outer ends of the angle beams of the horizontal member against which the outer edge of the upper end of the brace member may rest when the downwardly extending flanges of the horizontal member are in engagement with the laterally extending flanges of the brace member.



2. A scaffolding bracket, comprising the combination of a vertical member, a horizontal member, a brace member, a hook having a shank pivotally connected with the upper end of the vertical member, and a chain detachably connecting said hook shank below the point of pivotal connection with the diagonal member.

3. A scaffolding bracket, comprising the combination of a vertical member, a horizontal member, a brace member, a hook having a shank pivotally connected with the upper end of the vertical member, and a chain detachably connecting said hook shank below the point of pivotal connection with the diagonal member, said diagonal member having slip joint connection with the horizontal member, and said joint being of such length that the outward movement of the diagonal member in said slip joint will be transmitted through the chain and hook shank to cause the hook to bind upon a supporting surface.

1,016,164. DEVICE FOR PROTECTING THE MEMBERS OF A COURT ASSEMBLY. RUDOLF LUX, Winschelburg, Germany. Filed Mar. 11, 1910. Serial No. 548,755. (Cl. 89—36.)



A device for protecting the members of a court assembly against assassination, comprising a bullet-proof plate hingedly connected to the head of the court table, a slidable vertical rod pivoted to the plate, a helical spring on the rod tending to raise the latter and to turn the plate into vertical, protecting position, a pivoted catch for retaining the plate in horizontal position, a branched cord for operating said catch so as to release the plate, and actuating knobs arranged at the various seats and connected to branches of said cord so that the protecting plate can be released by any of the persons seated around the table, substantially as set forth.

1,016,165. UNDERFRAME FOR CARS. BASIL MAGOR, New York, N. Y. Filed May 15, 1911. Serial No. 627,210. (Cl. 105—76.)

1. A steel underframe for cars having a center-sill, a pair of draft-sills one on each side of the center-sill, and a Z-iron between each draft-sill and the center-sill to secure the one to the other.

2. A steel underframe for cars having an I-beam center-sill, a pair of channel iron draft-sills one on each side of the center-sill, and a Z-iron between each draft-sill and the center-sill and riveted thereto.

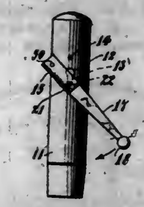
3. A steel underframe for cars having a center-sill, a pair of channel iron draft-sills at each end of the center-sill, and a Z-iron between each draft-sill and the center-sill to secure the one to the other.

4. A steel underframe for cars having a center-sill consisting of an I-beam, a pair of draft-sills one on each side of the I-beam and extending beyond the I-beam at each end thereof, and a Z-iron between each draft-sill and the I-beam to secure the draft-sills to the I-beam.

5. A steel underframe for cars having an I-beam center-sill terminating at points intermediate the ends of the frame, a pair of draft-sills one on each side of the center-sill at each end of the center-sill and continuing the center-sill to the ends of the frame, a Z-iron riveted between each draft sill and the center-sill, and transverse I-beams extending from the inner ends of the draft sills to the sides of the frame.

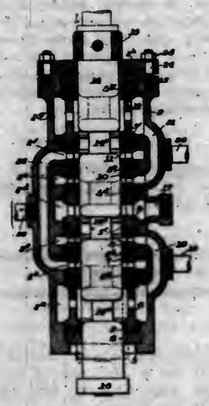
[Claim 6 not printed in the Gazette.]

1,016,166. POCKET-CLIP. MARIUS MARCUCCI, New York, N. Y., assignor to Modern Pen Company, New York, N. Y., a Corporation of West Virginia. Filed Apr. 7, 1911. Serial No. 619,457. (Cl. 24—11.)



The combination with a pen or the like having an opening and a groove leading therefrom, of a clip having a pin headed so as to pass through said opening and be held in the groove, and means on one side of the headed pin to engage the pen, and a spring member on the other side of the headed pin adapted to bear against the pen, whereby in attaching the clip to the pen, the spring member acts to press said means into engagement automatically with the pen and thereafter to retain said means in engagement with the pen.

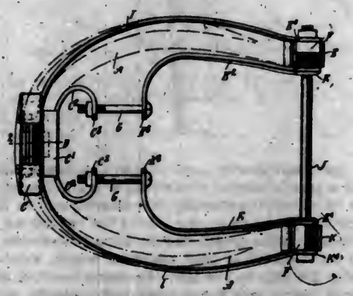
1,016,167. VALVE. JOHN AUSTEN MCCULLOCH, McKeesport, Pa. Filed Nov. 19, 1909. Serial No. 528,860. (Cl. 138—14.)



1. A valve having a main casing provided with fluid ports, a sectional casing within the main casing, said sectional casing being formed of a plurality of members with interposed U-shaped packing rings between said members, there being openings through said members in communication with the fluid ports adjacent thereto, a movable valve member within the sectional casing, and a plurality of piston heads on said valve member, said valve member also having a plurality of reduced portions between the piston heads, the reduced portions being arranged to open communication between adjacent ports in the casing, and the piston heads being arranged to close communication between said ports; substantially as described.

2. A hydraulic valve having a main casing provided with inlet and outlet ports, a sectional casing within the main casing formed of a plurality of members and U-shaped packing rings interposed between said members, said members having openings therethrough and communication with the ports adjacent thereto, and a movable valve member having reduced portions within the sectional casing, the reduced portions being arranged to open communication between the inlet and outlet ports, and the body portions of said valve being arranged to cut off communication between the ports, the packing rings being so disposed with relation to the reduced portions of the valve that the body portions thereof will always enter the rings from the rounded side to prevent cutting the packing rings; substantially as described.

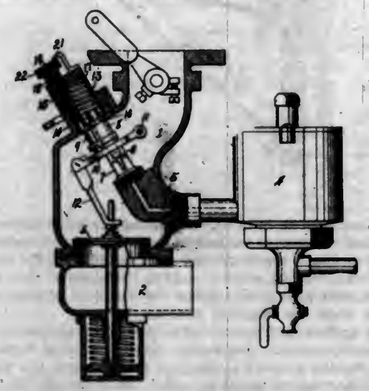
1,016,168. ADJUSTABLE ICE-SHOE. WILLIAM H. MORRIS and HOMER HUDSON, Nashville, Tenn. Filed Sept. 23, 1911. Serial No. 650,959. (Cl. 168—30.)



1. An adjustable ice shoe for horseshoes, comprising auxiliary toe and heel calks, caps carrying the said auxiliary calks and adapted to fit over the calks of the horseshoe, the said caps for the auxiliary toe and heel calks having straps arranged within the opening of the horseshoe, adjustable fastening devices connecting the straps with each other, an adjustable band connected with the caps of the auxiliary heel calks and adapted to extend around the animal's hoof, and a connection between the cap of the auxiliary toe calk and the front of the said band.

2. An adjustable ice shoe for horseshoes, comprising auxiliary toe and heel calks, caps carrying the said auxiliary calks and adapted to fit over the calks of the horseshoe, the said caps for the auxiliary toe and heel calks having straps extending toward each other within the opening of the horseshoe, bolts connecting the ends of the straps with each other, a sectional band attached to the caps of the auxiliary heel calks and adapted to encircle the animal's hoof, a front bolt adjustably connecting the front ends of the sectional band with each other, a rear bolt connecting the rear ends of the sectional band with each other, and a hook on the cap of the auxiliary toe calk and engaging the said front bolt.

1,016,169. CARBURETER. WILLIAM G. NAGEL, Toledo, Ohio, assignor of one-third to Isaac Kinsey and one-third to Frank Collins, Toledo, Ohio. Filed May 22, 1911. Serial No. 628,696. (Cl. 48—154.1.)



1. In a carbureter, a liquid fuel valve, a suction valve, a lever movable by opening movements of the suction valve to impart opening movements to the liquid fuel valve, adjustable means associated with the liquid fuel valve and coacting with the lever to communicate movements from the latter to the former, said means being adjustable both to regulate the minimum opening of the liquid fuel valve and the opening movements thereof, and means without the carbureter operable to adjust said adjustable means to regulate the minimum opening of the liquid fuel valve but permitting free reciprocal movements of the adjustable means with the liquid fuel valve.

2. In a carbureter, a reciprocally movable liquid fuel valve, an air-valve, a member movable by movements of the air-valve, an adjustable connection intermediate the liquid fuel valve and member, means for adjusting said connection to regulate the opening movements of the liquid fuel valve, and means external of the carbureter permitting free reciprocal movements of said liquid fuel valve and connection and operable to regulate the minimum opening of the valve.

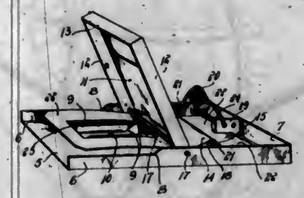
3. In a carbureter, a reciprocally movable liquid fuel valve, an air valve, a member movable by movements of the air valve, means for causing opening movements to be communicated to the liquid fuel valve from movements of said member, said means having a reciprocally movable part which threads into another part thereof and is of irregular form in cross-section for a portion of its length, and an external rotatable adjusting head which permits said reciprocally movable part to have free reciprocal movements relative thereto and is operable to turn such part within the part into which it is threaded, the relative adjusting of said parts effecting an adjustment of the liquid fuel valve relative to the lever.

4. In a carbureter, an air valve, a valve for liquid fuel, means connecting said valves for imparting opening movements from one to the other, said connecting means having parts which are relatively adjustable to regulate the minimum opening movements of the liquid fuel valve, one of said parts having a stem projecting therefrom which is of irregular form in cross-section, and a member external to the carbureter having a socket complemental to said stem within which the latter projects for free reciprocal movements, said member being adapted when rotated to effect a relative adjustment of the parts of said connecting means.

5. In a carbureter, an air valve, a liquid fuel valve, a lever disposed transversely of the fuel valve and movable by the air valve, a member carrying the fuel valve, a part threaded to said member and having contact with the lever, means for revolubly adjusting said part relative to the lever to change its point of contact therewith, and rotatable means which permits said part to have free reciprocal movements and is operable from without the carbureter to turn said part within said member to regulate the minimum opening of the fuel valve.

[Claim 6 not printed in the Gazette.]

1,016,170. ANIMAL-TRAP. JOSEPH OPPERUD, Madison, S. D. Filed Mar. 17, 1910. Serial No. 549,863. (Cl. 43—21.)



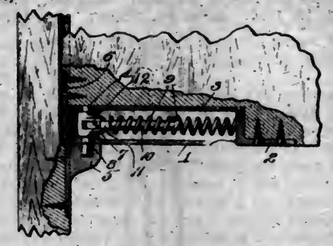
1. An animal trap comprising a base having an inwardly directed support, a trip plate directed downwardly intermediate the ends and poised thereby upon the base and with a cleft bearing around said support and prevented thereby from lateral movement, a striker mounted to swing upon said base, and a spring connected at one end to said inwardly directed support and at the other end to said striker, said striker being adapted to be supported in an elevated position and released for movement to a closed position by operation of the trip plate.

2. An animal trap comprising a base, spaced supports rising from said base, a striker member with a portion extending at an angle to the longitudinal plane thereof, a spring having its terminals bent laterally, one of said spring terminals being connected to the angular projection of the striker and the other spring terminal extending through the base supports and trip means for said striker member, said spring serving to hold said striker in an elevated position and in contact with the trip plate and adapted to move said striker toward the base upon actuation of the trip member.

3. An animal trap comprising a base having an inwardly directed support, a trip plate directed downwardly intermediate its ends and poised thereby upon the base and with a cleft bearing around said support and operating to prevent lateral movement of the plate, a striker having a portion extended at an angle to the longitudinal plane thereof and with perforated ears, and a spring having its terminals bent laterally with one of said spring terminals extending through the perforated ears and the other spring terminal extending through the base supports, said spring holding said striker in an open position when the angular portion is in contact with the trip plate and adapted to move the same to a closed position when the angular portion is raised.

4. An animal trap comprising a base having upturned sides and with an inwardly directed support, a trip plate directed downwardly intermediate the ends and poised thereby upon the base between the sides thereof and with a cleft bearing around the support, a striker mounted to swing between the sides of said base and with downturned edges adapted to engage between the sides of the base and the trip plate, said striker having a portion extending at an angle to the longitudinal plane thereof, a spring connected to said base at one end and at the other end to the striker, said spring holding said striker in an elevated position for release by the trip plate.

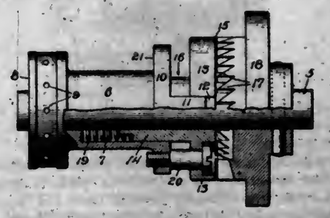
1,016,171. HINGE. BENJAMIN F. OREAR, St. Louis, Mo., assignor of one-half to Oliver H. Quernheim, St. Louis, Mo. Filed Jan. 29, 1910. Serial No. 540,897. (Cl. 16—25.)



1. A hinge comprising a bracket arranged to be attached to the door frame, a hinge pivot member having locking connection with said bracket whereby said pivot member will be held against rotation with respect to said bracket, a housing arranged to be attached to the door and rotatably supported on said pivot member, an arm rigid with said pivot member inside said housing and extending obliquely toward one side of said housing, a single abutment near the end of said arm, an expansion spring in said housing, and an abutment member encircled by said spring, and bearing against the single abutment on said arm, substantially as specified.

2. A hinge comprising a non-revoluble hinge pin, a housing receiving and arranged to turn on said hinge pin, a single arm on said hinge pin within said housing, an expansion spring in said housing, a rod encircled by said spring, and a single bearing part formed on said rod and bearing against the said single arm, substantially as specified.

1,016,172. TYPE-WRITER ESCAPEMENT-CLUTCH. MAX PFAU, Woodstock, Ill., assignor to The Emerson Typewriter Co., Woodstock, Ill., a Corporation of Illinois. Filed Apr. 14, 1911. Serial No. 621,105. (Cl. 197—93.)



1. In a typewriter escapement clutch, the combination of an escapement member, a fixed clutch member, a slidable clutch member, a slot and lug connection between the escapement member and slidable clutch member, said lugs extending in the direction of movement of the movable clutch member, an adjustable headed stem fixedly

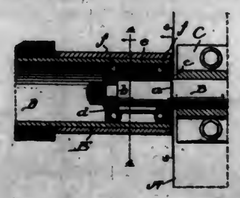
held in the escapement member and slidably mounted in the movable clutch member, said stem serving to prevent disengagement of the slot and lug connection and serving to limit the sliding movement therebetween, substantially as described.

2. In a typewriter escapement clutch, the combination of an escapement member, a sleeve extending therefrom and terminating in a flanged rim, a fixed clutch member, a movable clutch member comprising a sleeve terminating in a flanged rim, the two sleeves telescoping within one another, tension mechanism for holding the flanged rims normally spaced away from one another, a slot and lug connection between said rims, and a headed stem screw-threaded into the escapement sleeve flange and having a sliding abutting engagement with the movable clutch sleeve flange and serving to prevent disengagement of the slot and lug connection, substantially as described.

1,016,173. HOSE-NOZZLE AND SPRAYER. ROSS PORTER and LOUIS KRUEGER, Neodesha, Kans. Filed Sept. 14, 1910. Serial No. 582,047. (Cl. 137—17.)

A hose nozzle, comprising a casing having spraying orifices and with hose coupling means at one end, said end being further provided with an inwardly extending valve seat, a bushing threaded into the opposite end of said casing, a tubular stem threaded through said bushing and with its inner end adapted to engage with said valve seat, a shoulder formed on said stem and adapted to engage the bushing to limit its outward movement, and a valved discharge member secured to the outer end of said stem.

1,016,174. NAPPING-MACHINE DRUM. JOSEPH A. PRARAT and HARRY S. GREENE, Woonsocket, R. I., assignors to Woonsocket Napping Machinery Co., Woonsocket, R. I. Filed July 14, 1910. Serial No. 571,963. (Cl. 26—19.)

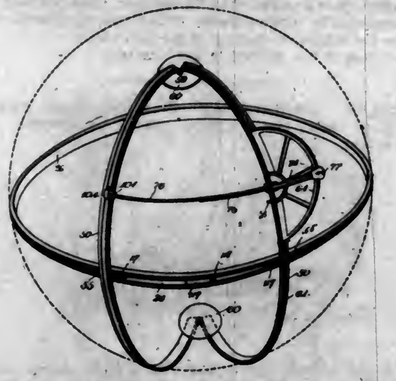


The herein described planetary napping machine drum, consisting essentially of a revoluble head, a spindle fixed to and extending laterally inward from the head, a napping roll arranged entirely at the inner side of the head and supported by and arranged and adapted to turn concentrically to the spindle and provided with means as a collar for engagement with a band that is adapted to turn the roll about its axis incident to revolution of the drum head, and anti-friction means interposed between the spindle and the roll.

1,016,175. TYPE-WRITER CARRIAGE. JOSEPH RABEN, Woodstock, Ill., assignor to Emerson Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Jan. 24, 1911. Serial No. 604,843. (Cl. 197—69.)

In a typewriter carriage, the combination of a rear mounting comprising a trackway movable with the carriage in the form of a bar, having downwardly converging side faces, a trackway fixed with respect to the movements of the carriage, having upwardly converging side faces, rollers intermediate said trackways, each comprising a reduced center portion, and outer beveled head-like portions, said beveled portions engaging the converging faces of said trackways, substantially as described.

1,016,176. APPARATUS FOR NAUTICAL CHARTING AND NAVIGATING. MIGUEL ROCA, New York, N. Y. Filed Sept. 14, 1910. Serial No. 582,023. (Cl. 235—61.)



1. An apparatus for nautical charting and navigating, comprising a solid ring having graduate markings thereon and adapted to aline with the equatorial line of a geographical globe; a plurality of rings slidingly mounted upon said first mentioned ring and perpendicularly extended thereon, said second mentioned rings being provided with graduate markings; and an extensible connecting device slidingly mounted upon both of said ring sections, said device having graduate markings thereon.

2. An apparatus for nautical charting and navigating, comprising a solid ring having graduate markings thereon and adapted to aline with the equatorial line of a geographical globe; a plurality of rings slidably mounted upon said first mentioned ring and perpendicularly extended thereon, said second mentioned rings being provided with graduate markings; an extensible connecting device slidingly mounted upon said ring sections, said device having graduate markings thereon; and locking devices for holding any of the said rings or connecting device in fixed relation each with the other.

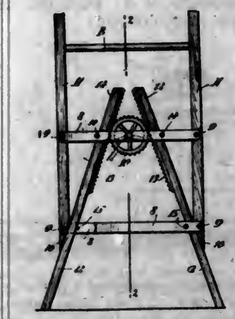
3. An apparatus for nautical charting and navigating, comprising a solid ring having a groove formed therein and having graduate markings thereon adapted to aline with the equatorial line of a geographical globe; a plurality of ring sections slidably mounted upon said ring and pivotally connected each with the other in line with the axis of said ring, said ring sections having graduate markings thereon; and an extensible connecting device slidingly mounted upon said ring sections, said device having graduate markings thereon.

4. An apparatus for nautical charting and navigating, comprising a solid ring having a groove formed therein and having graduate markings thereon adapted to aline with the equatorial line of a geographical globe; a plurality of ring sections slidably mounted upon said ring and pivotally connected each with the other in line with the axis of said ring, said ring sections having graduate markings thereon, an extensible connecting device slidingly mounted upon said ring sections, said device having graduate markings thereon; and locking devices for holding said ring sections in fixed relation to said ring.

5. An apparatus for nautical charting and navigating, comprising a solid ring having formed therein a groove and provided with graduate markings thereon, said markings corresponding with the geographical markings of a map, to indicate the geographical longitudes and divisions thereof; a plurality of ring sections slidingly mounted upon said solid ring and perpendicularly extended thereon, said ring having graduate markings, said markings corresponding with the geographical markings of a map, indicating the parallels of latitude and divisions thereof; and an extensible connecting device slidingly mounted upon said ring sections, said device having graduate markings thereon.

[Claims 6 to 11 not printed in the Gazette.]

1,016,177. LADDER-BASE. WILSON ROGERS, Martha, W. Va. Filed Jan. 18, 1911. Serial No. 603,246. (Cl. 228—5.)



The combination with a ladder having rungs and side bars, the lower ends of said side bars being chamfered to form an inclined surface, of guide members disposed on the bottom most of said rungs; two inclined stilts slidably mounted in said guides to be held thereby in inclined position against said inclined surfaces; racks mounted on said stilts and on the adjacent surfaces thereof; a gear wheel rotatably mounted on one of said rungs, said wheel being meshed with both said racks, and in such manner that the said stilts avoid each other when either is extended across the path of the other.

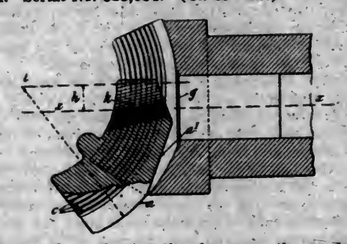
1,016,178. PROCESS FOR TREATING FIBER-YIELDING MATERIALS. CHARLES FRANK SAMMET and JASON LESLIE MERRILL, Washington, D. C. Filed Oct. 27, 1911. Serial No. 657,193. (Dedicated to the public.) (Cl. 92—7.)

1. In a process for segregating fibers or cellulose from fibrous or cellulose containing materials by subjecting the materials to the action of ammonium sulfite, ammonia and steam in a gaseous state, substantially as specified.

2. In a process for segregating fibers or cellulose from fibrous or cellulose containing materials by subjecting the materials to the action of sulfur dioxid, ammonia and steam in a gaseous state, substantially as specified.

3. In a process for segregating fibers or cellulose from fibrous or cellulose containing materials by subjecting the materials to the action under pressure of sulfite dioxid, ammonia and steam in a gaseous state, substantially as specified.

1,016,179. BREECH MECHANISM OF FIREARMS. EUGENE SCHNEIDER, Le Creuzot, France. Filed May 4, 1911. Serial No. 625,054. (Cl. 89—25.)

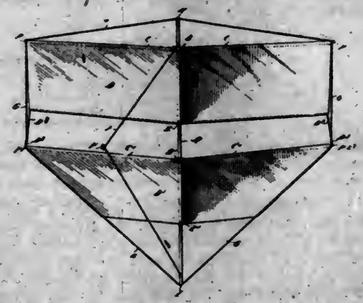


1. In breech mechanism for fire-arms, the combination of a breech, a curved locking shoulder provided therein struck from a center to the rear of the breech and eccentric to the longitudinal axis of the fire-arm, a breech block the front face of which has a flat portion for engagement with the projectile and a curved portion for engagement with a correspondingly curved portion of the breech, and a shoulder on said breech block for engagement with the shoulder in the breech.

2. In breech mechanism for fire-arms, the combination of a breech, a plurality of concentric curved locking shoulders provided therein struck from a center to the rear of the breech and eccentric to the longitudinal axis of the fire-arm, a breech block and corresponding shoulders thereon for engagement with the shoulders in the breech, the front face of said breech block having a flat portion for engagement with the projectile and a curved portion engaging a correspondingly curved portion of the breech.

3. In breech mechanism for fire-arms, the combination of a breech, a plurality of concentric curved locking shoulders provided therein struck from a center to the rear of the breech and eccentric to the longitudinal axis of the fire-arm, a breech block and corresponding shoulders thereon for engagement with the shoulders in the breech, the front face of said breech block having a flat portion for engagement with the projectile and a curved portion engaging a correspondingly curved portion of the breech, said curved portion being concentric with said locking shoulders.

1,016,180. KITE. OTTO SEYDEL, New York, N. Y. Filed Jan. 13, 1911. Serial No. 602,892. (Cl. 244—23.)



1. A kite comprising a back bone, upper and lower cross arms mounted to swing on the said back bone, upper and lower fabric coverings secured at their upper edges on the said cross arms and also secured to the back bone, the lower edge of the upper fabric covering being spaced from the lower cross arms, connections between the lower corners of the upper fabric covering and the lower cross arms, and a cord connected with the free ends of the cross arms and adapted to be removably fastened to the end of the back bone, the lower fabric covering having its side edges converging and attached to the said cord.

2. A kite, comprising a back-bone, cross arms arranged in upper and lower pairs and mounted to swing on the said

back-bone, an operating cord connected with the free ends of the said cross arms and with one end of the back-bone, the said cord being adapted to be removably fastened on the other end of the back-bone, and fabric coverings attached to the corresponding upper and lower cross arms, and cords connecting the lower corners of the upper covering to the free ends of the lower cross arms.

3. A kite, comprising a back-bone, cross arms arranged in upper and lower pairs and mounted to swing on the said back-bone, an operating cord connecting with the free ends of the said cross arms and with one end of the back-bone, the said cord being adapted to be removably fastened on the other end of the back-bone, and fabric coverings attached to the corresponding upper and lower cross arms, and cords connecting the lower corners of the upper covering to the free ends of the lower cross arms, the said lower covering having its outer end attached to the said operating cord.

4. A kite comprising a back bone, bearings secured to the said back bone and extending sidewise and inclined rearwardly, upper and lower cross arms mounted to swing on the said bearings, coverings respectively attached at their upper edges to the said cross arms and also attached at the middle of their lower edges to the said back bone, the said coverings being spaced apart, an operating cord connected with the free ends of the said cross arms and with the lower end of the back bone, a fastening on the upper end of the back bone for removable engagement by the said operating cord, the lower covering having its side edges converging and attached to the converging lower members of the said operating cord, and means for connecting the lower corners of the upper covering to the lower cross arms.

5. A kite, comprising a back-bone, bearings secured to the said back-bone and extending sidewise and inclined rearwardly, upper and lower cross arms mounted to swing in the said bearings, coverings attached to the said cross arms, an operating cord connected with the free ends of the said cross arms and with one end of the back-bone, a fastening on the other end of the back-bone for removable engagement by the said operating cord, and cords on the upper covering for fastening the upper covering to the lower cross arms, the lower covering being fastened to the operating cord.

[Claim 6 not printed in the Gazette.]

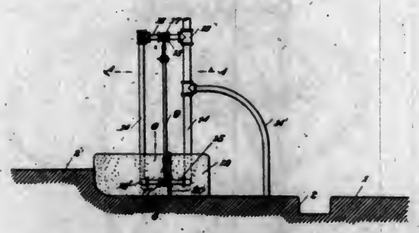
1,016,181. SHOVEL-POINT. HENRY W. SNYDER, Northumberland, Pa. Filed Sept. 13, 1911. Serial No. 649,065. (Cl. 37—16.)

1. The combination of a shovel point and a supporting member, the point being made up of two divergent portions, there being a partition between the said portions, together with a post also extending between the said portions, an opening in each of the said portions intermediate of the end of the partition and the said post, the end of the supporting member being convergent and being provided with a slot, a recess communicating with the slot on each side thereof, the said recesses with the portion of the slot adjacent thereto being adapted to register with the said openings in the divergent portions of the point, together with a tapered locking key engaging the said openings whereby the point is held in position on the supporting member.

2. The combination of a shovel point having diverging portions with a partition positioned between the said portions, and a post also positioned between the two portions and suitably spaced from the end of the partition, together with openings in the said diverging portions registering with each other and being positioned between the end of the partition and the said post, with a supporting member having its forward end converging and provided with a slot adapted to extend around the said partition and post, the side walls of the slot being provided with recesses which register with the openings in the said divergent portions of the point, together with a tapered locking key entering the said openings and passing through the recesses in the supporting member, the lower end of the key being offset whereby it is held in position and the parts are secured.

3. The combination of a shovel point made up of divergent portions with a partition and a post between them, the partition and post being suitably spaced, there being openings in the said divergent portions positioned between the post and the partition with a supporting member having a converging portion, a slot in the said portion, the said post and the said partition being adapted to be entered within the slot when the parts are in normal position, each side of the slot being provided with a recess which registers with the openings in the divergent portions of the point, with a locking key passing through the openings in the slots in order to hold the parts together, the forward end of the supporting member being provided with a pocket and the rear end of the point being provided with a lug adapted to engage therein.

1,016,182. ADJUSTABLE STALL. OSCAR BISHOP STILLMAN, Washingtonville, N. Y. Filed Mar. 30, 1911. Serial No. 617,835. (Cl. 119—27.)



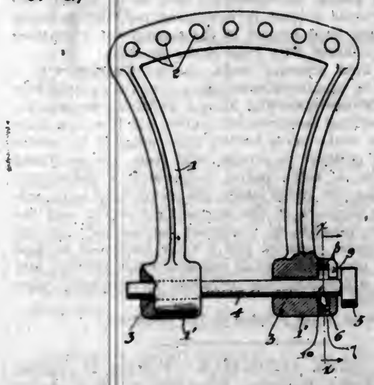
1. An adjustable stall comprising a pair of posts on each side thereof, each pair of posts being longitudinally arranged with respect to the said stall, a cross bar supported adjacent the top and bottom of each pair of said posts, transverse horizontal bars supported by said cross bars in position to permit the head and neck of an animal to pass between the same, and means for securing said transverse horizontal bars in various positions of adjustment with respect to the cross bars to increase or decrease the length of the said cow stall.

2. A stall comprising a pair of posts adjacent each side thereof, each pair of said posts being longitudinally arranged with respect to said stall, a cross bar supported adjacent the top and bottom of each of said pair of posts, transverse horizontal bars carried by said cross bars, means for fastening said transverse bars in various positions of adjustment to increase or decrease the length of the stall, and a rotatable partition carried by the lowermost of said adjustable horizontal bars.

3. A stall comprising a pair of posts adjacent each side, a concrete curb on each side of said stall adjacent the front thereof, the lower ends of said posts being embedded in said concrete, a cross bar carried by each pair of said posts adjacent the upper portions thereof, cross bars arranged upon the inner faces of said curb, transverse horizontal bars supported by the cross bars upon said posts and said curbing in position to allow the head and neck of the animal occupying the stall to pass between them, and means for securing said transverse horisontal bars in various positions of adjustment with respect to the cross bars to increase or decrease the length of said stall.

4. An adjustable stall having a depressed floor, said depressed floor forming a shoulder with the level of the main floor in front thereof, a curb on each side of said stall adjacent the front thereof, a pair of posts adjacent each side of the stall, said posts being placed one behind the other and having their lower ends embedded in the curb, cross-bars carried by the said posts adjacent the upper portion thereof, cross-bars arranged upon the inner faces of said curb, transverse horizontal bars supported by the cross-bars upon said posts and said curbs in position to allow the head and neck of the animal occupying the stall to pass between them, means for securing said transverse horisontal bars in various positions of adjustment to increase or decrease the length of the stall, and a rotatable partition carried by the lowermost of said adjustable horizontal bars, said partition forming with the curbs and the shoulder in front of the stall, a trough to receive the fodder for the animal.

1,016,183. CLEVIS. EUGENE J. SWEENEY, Rockford, Ill. Filed Sept. 22, 1911. Serial No. 650,799. (Cl. 97—4.)



1. The combination with an integrally formed yoke having apertures formed in the extremities thereof, of a locking pin adapted to bridge the opening between said extremities and to fit into said apertures, there being an annular recess formed in the wall of one of said apertures, and a projection on said locking pin adapted to register with said recess and to enter the same after said locking pin is positioned longitudinally in said apertures, substantially as described.

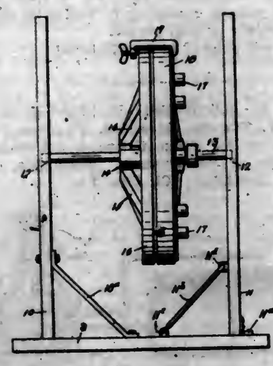
2. The combination with a substantially U-shaped yoke having enlarged extremities, there being cylindrical apertures formed in said extremities and disposed in axial alinement with each other, a cylindrical locking pin adapted to bridge the space between said extremities and to pass through the apertures thereof, there being an annular recess formed in the aperture of one of said extremities, a radial pin formed on said locking pin in such a position as to register with said annular recess after insertion of said locking pin, and a pair of inwardly extending projections provided in said recess between which said radial pin is adapted to be moved, thus forming an angular locking means, substantially as described.

3. The combination with an integrally formed yoke having a plurality of apertures provided in the bent portion thereof, there being cylindrical apertures formed in the free ends of said yoke and disposed in axial alinement with each other, an annular recess extending from the aperture formed in one of said ends, a pair of inwardly projecting points spaced apart from each other and projecting into said recess, there being a longitudinal slot provided diametrically opposite said points and extending through the wall separating said annular recess from the end of said end in which said annular recess is formed, and a locking pin having a radial projection formed thereon for entering said recess and the space between said points, substantially as described.

4. The combination with an integrally formed yoke having a plurality of apertures provided in the bend thereof, there being enlarged extremities provided on the yoke through which cylindrical apertures are formed and disposed in alinement with each other, a cylindrical locking pin having a head at one end and adapted to be passed through said apertures, there being an annular recess leading from the aperture in one of said extremities, a wall separating said recess from one side of said extremity in which the recess is formed, a radial pin provided on the cylindrical portion of said locking pin and adapted to enter said recess, there being a longitudinal slot extending from said recess through said wall providing clearance for said radial pin, and means comprising a pair of points coacting with said pin for locking said radial pin after being turned in said recess, substantially as described.

5. A clevis comprising a yoke having a plurality of holes in the bend thereof, there being enlarged extremities in said yoke provided with alining cylindrical apertures, the aperture formed in one of said extremities being provided with an annular recess, a locking pin adapted to be passed through said apertures and of a length sufficient to project laterally from said extremities, and a radial pin provided on said locking pin adapted to be inserted into said recess, there being a pin clearance slot extending into the latter, and upstanding points in said recess arranged to hold said pin in locked position substantially as described.

1,016,184. WHEEL-FORM. ROY B. THOMPSON, Delmont, Pa. Filed Feb. 18, 1910. Serial No. 544,591. (Cl. 29—89.)



In a device of the kind described, a base, a post rigidly connected to the base, a second post hingedly connected to the base, staples respectively carried by the base and the last mentioned post, and a hook connected at one end to one of the staples and adapted for engagement with the hook staple for supporting the post in an upright position, said post being respectively formed with bearings, a shaft journaled in said bearings, a wheel form carried on said shaft and comprising a central disk, dished spokes radiating from said disk, an annular plate carried on the ends of the spokes, said plate being disposed laterally with reference to the disk by the dishing of said spokes to such an extent that a rim carried on the bars will rest against the plate and lie centrally of a hook carried on the shaft and bearing against the disk, spaced pins projecting from said plate away from said disk and located at a distance from the outer edge of the annular plate, whereby said annular plate constitutes an anvil for lifting purposes, and a clamp adapted for engagement with the plate and the rim to hold the latter against the former.

1,016,185. PROCESS OF PRODUCING A METALLIC DERIVATIVE OF THE ACTIVE PRINCIPLE OF THE SUPRARENAL GLANDS. JOSEPH L. TURNER, Philadelphia, Pa., assignor to The H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1911. Serial No. 643,048. (Cl. 23—24.)

1. The within described process of producing a metallic derivative of the active principle of the suprarenal glands, said process consisting in preparing a fluid extract of said glands, and adding thereto a salt of a metal.

2. The within described process of producing a metallic derivative of the active principle of the suprarenal glands, said process consisting in preparing a fluid extract of said glands, adding thereto a salt of a metal, and precipitating, by means of an alkali, the metallic derivative of the active principle thus formed.

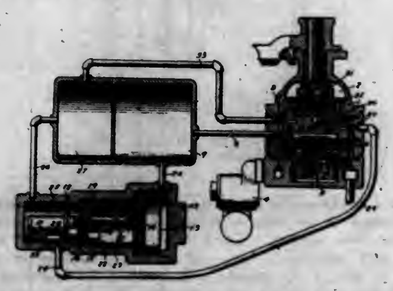
3. The within described process of producing a metallic derivative of the active principle of the suprarenal glands, said process consisting in making a fluid solution of suprarenal capsules, concentrating the said solution by evaporation, treating the concentrated solution with alcohol, adding to the resulting filtrate a salt of a metal, and then adding an alkali to precipitate the thus formed metallic derivative of the active principle.

4. The within described process of producing a metallic derivative of the active principle of the suprarenal glands, said process consisting in making a fluid solution of suprarenal capsules, concentrating the said solution by evaporation, treating the concentrated solution with alcohol, adding to the resulting filtrate a salt of a metal, and then adding an alkali to precipitate the thus formed metallic derivative of the active principle, and washing and drying said precipitate.

5. The within described process of producing metallic derivative of the active principle of the suprarenal glands, said process consisting in adding powdered alum to a fluid extract of said glands.

[Claim 6 not printed in the Gazette.]

1,016,186. ENGINEER'S-BRAKE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 24, 1911. Serial No. 629,197. (Cl. 188—7.)



1. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging fluid from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a constant pressure for controlling the release of air from the equalizing reservoir.

2. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging fluid from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a constant pressure for cutting off the release of air from the equalizing reservoir upon a predetermined reduction in pressure in the equalizing reservoir.

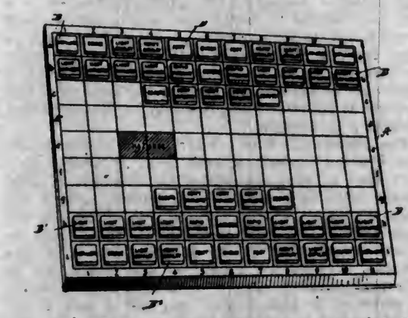
3. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a chamber constantly containing fluid under pressure for limiting the release of air from the equalizing reservoir.

4. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, of a differential piston device comprising a valve for controlling an exhaust outlet from the equalizing reservoir, and a differential piston for operating said valve having two heads, one head subject to equalizing reservoir pressure and the other head subject to the pressure of a chamber constantly charged with fluid under pressure.

5. In a fluid pressure brake, the combination with a train pipe, an equalizing reservoir, an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, and a brake valve having ports adapted in service application position to release fluid from the equalizing reservoir, of a valve device comprising a differential piston having two piston heads, one piston head being subject to the pressure of the equalizing reservoir and the other to the pressure of a chamber continuously charged with fluid under pressure, and a valve controlled by said differential piston for closing communication through said ports upon a predetermined reduction in equalizing reservoir pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,016,187. GAME APPARATUS. VINZENZ M. VACEK, Vienna, Austria-Hungary. Filed Dec. 31, 1910. Serial No. 600,338. (Cl. 46—64.)

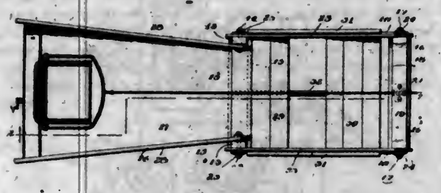


1. A game apparatus comprising a game board divided into a plurality of squares, certain of which are marked to denote hazards, and game pieces comprising the different divisions of an army, certain of which represent artillery, cavalry and infantry movable over the board around the hazards, and certain others of which represent crafts navigable in the air and thus movable over the board and the hazards.

2. A game apparatus comprising a game board divided into a plurality of squares, certain of which are marked to denote hazards, and game pieces comprising the different divisions of an army, certain of which represent artillery, cavalry and infantry movable over the board around the hazards, certain others of the game pieces representing crafts navigable in the air and thus movable over the board and the hazards, and certain others of the game pieces representing bridges adapted to span the hazards and permit of the passage thereover of game pieces of the first mentioned divisions.

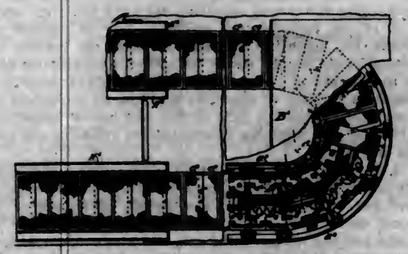
3. A game apparatus, comprising a game board, divided into ninety-nine squares, of which two adjacent squares represent hazards, and two equal sets of game pieces adapted to be moved over the said squares and representing military fighting pieces, each set of game pieces comprising a queen, general, forts, infantry, cavalry, artillery, aerial vessels, rapid fire guns, a scout, and a bridge adapted to span the hazards for the passage of the other game pieces over the said hazards.

1,016,188. PORTABLE LOADING DEVICE. ALBERT VOLLERS, Guide Rock, Nebr. Filed Nov. 13, 1911. Serial No. 660,077. (Cl. 214—10.)



A loader including spaced sills, spaced platforms on said sills, a leg frame centrally pivoted to said sills and foldable thereupon, a second leg frame detachably secured to said sills, inclined braces detachably secured to the first named leg frame and hingedly connected to and adapted to fold upon the second named leg frame and an inclined trough detachably mounted upon the second named leg frame and having its discharge end overlying one of said platforms.

1,016,189. MOVING STAIRWAY. GEORGE A. WHEELER, New York, N. Y. Filed June 23, 1908, Serial No. 439,887. Renewed June 27, 1911. Serial No. 635,649. (Cl. 104—165.)



1. In a moving stairway or the like, a tread for the steps composed of sections pivoted to swing in horizontal planes, substantially as and for the purpose described.

2. In a moving stairway or the like, comprising a guideway consisting of straight and laterally curved portions, a series of step frames with treads composed of sections pivoted to said frames, substantially as described.

3. In a device of the class described, a step comprising a suitable frame with a tread composed of two members pivoted to said frame on vertical axes located centrally of the step frame.

4. In a device of the class described, a step provided with a tread composed of two lapped members pivoted to fold, the one under the other, substantially as described.

5. In a device of the class described, a step comprising a suitable frame and a tread composed of two lapped members, one of said members being attached to a sleeve journaled in a bore in said step frame, and the other of said members being attached to a pin journaled in the sleeve of said first mentioned member.

[Claims 6 to 16 not printed in the Gazette.]

1,016,190. FLIGHT CONVEYER. JOHN F. WHITE, Bloomington, Ill. Filed Dec. 18, 1909. Serial No. 533,829. (Cl. 193—8.)

1. The combination with a conveyer flight provided with an opening therein, of a carrying member for said flight engaging one face of the flight and provided with a rigid projection extending therefrom through the opening in the flight and terminating in a rigid head adapted when the carrying member is in its normal position to overlie the rear face of the flight, said head and the opening in the flight being so formed that when the carrying member is shifted transversely in a plane parallel to the plane of the flight the head will be moved to a position permitting its passage through the opening in the flight.

2. The combination with a conveyer flight, of a carrying member arranged to abut the face of the flight, the adjacent portions of said flight and carrying member being provided one with an irregular shaped opening therein, and the other with a stud arranged to project through said opening and provided with an enlarged head corresponding in shape and size to the shape and size of the opening, said head and opening being out of alinement when the flight and carrying member are in normal position.

3. The combination with a conveyer flight having an irregular shaped opening therethrough, a carrying member provided with a stud adapted to engage said opening and terminating in a head corresponding in shape and size to the shape and size of the opening, said opening and head being out of alinement when the flight and carrying member are in normal position.

4. The combination with a conveyer flight provided with an irregular shaped opening therethrough, a chain link provided with a portion integral therewith adapted to overlie one side of the flight, and a stud projecting from the portion of the link overlying the flight through the opening in the flight and provided with an integral head adapted when the parts are in normal position to engage the opposite face of the flight.

5. The combination with a conveyer flight having an opening therein, of a carrying member for the flight arranged to engage one side of the flight and provided with an integral stud projecting through the opening in the flight and terminating in an enlarged integral head adapted to normally engage the opposite face of the flight, the adjacent portion of said head and flight being provided with coöperating surfaces adapted to draw the flight and carrying member tightly together when the head is turned.

[Claims 6 and 7 not printed in the Gazette.]

1,016,191. FLIGHT CONVEYER. JOHN F. WHITE, Bloomington, Ill. Filed Dec. 18, 1909. Serial No. 533,831. (Cl. 193—8.)

1. The combination with a conveyer flight, of a chain link provided with offset separated portions projecting therefrom said separated portions embracing the edge of the flight and lying upon opposite faces thereof, the adjacent parts of said flight and one of said portions being provided with interfitting parts.

2. The combination with a conveyer flight, of a chain link provided with off-set separated portions projecting therefrom and lying upon opposite faces of the flight, the adjacent portions of said flight and one of the separated portions of the link being provided one with a stud rigidly connected thereto and the other with an opening arranged to engage said stud when the parts are assembled.

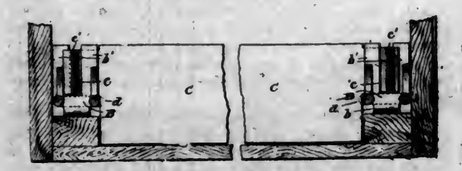
3. The combination with a conveyer flight, provided with an opening therein, of a chain link provided with offset portions projecting therefrom and lying upon opposite faces of said flight, one of said portions being provided with a projection extending therefrom and arranged to engage the opening in the flight.

4. The combination with a conveyer flight, of a chain link provided with portions adapted to abut the edges of said flight at the corner thereof and with arms projecting therefrom and lying upon opposite faces of the flight, the adjacent portions of said flight and one of said arms being provided one with an aperture and the other with a projection extending therefrom and arranged to engage said aperture when the parts are assembled.

5. The combination with a flat conveyer flight, of a chain link provided with portions adapted to abut the edges of said flight at one corner thereof and with a single arm adapted to overlie each face of the flight, said arms being laterally spaced and off-set from each other, and the adjacent portions of one of said arms and the flight being provided with interengaging members separable upon a movement of said link relative to said flight.

[Claims 6 to 8 not printed in the Gazette.]

1,016,192. FLIGHT CONVEYER. JOHN F. WHITE, Bloomington, Ill. Filed Dec. 18, 1909, Serial No. 533,830. Renewed Dec. 11, 1911. Serial No. 665,153. (Cl. 193—8.)



1. The combination with a conveyer flight, of a chain link directly interlocked therewith and separable therefrom upon an abnormal movement of one of said parts relatively to the other, and a link detachably connected to said first mentioned link and fashioned to prevent such abnormal movement of the parts while the links are connected.

2. The combination with a conveyer flight, provided with an opening therein, of a chain link provided with a single arm lying upon each face of the flight, said arms being laterally separated and one of said arms being provided with a projection normally engaging the opening in the flight, whereby the parts are normally interlocked and may be disengaged by an abnormal movement of one of said parts relatively to the other.

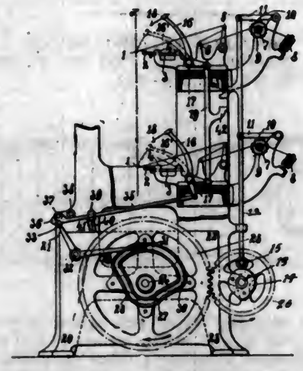
3. The combination with a conveyer flight, of a chain link provided with two laterally separated portions lying one upon each face of said flight, means extending from one of said portions and normally engaging the body of the flight to interlock said link and flight, said means permitting the separation of the parts upon an abnormal relative movement of the link and flight, and means for preventing such abnormal movement of the parts.

4. The combination with a conveyer flight, of a chain link provided with laterally separated portions projecting therefrom and lying upon opposite faces of the conveyer flight, one of said portions and the adjacent portion of said conveyer flight being provided with inter-engaging parts, and means detachably connected to the chain link and overlying the body of the conveyer flight opposite one of the portions projecting from the link to normally prevent relative movement of the link and flight.

5. The combination with a conveyer flight, of a chain link having a hooked portion at one end thereof, a pair of spaced arms projecting upwardly from the body of said link adjacent the hooked end thereof, the outermost arm overlying the body of the conveyer flight, and the innermost arm underlying the body of the flight, and a chain link detachably connected to the hooked portion of said first mentioned link and provided with a portion overlying the body of the conveyer flight to normally prevent separation of the flight and said first mentioned link.

[Claims 6 to 13 not printed in the Gazette.]

1,016,193. EMBROIDERY-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Dec. 17, 1909. Serial No. 533,508. (Cl. 112—7.)



1. In an embroidering machine, sets of needles and means for operating the same, means for braking the needle thread supply, means for applying ornamental cords to the surface of the work, and means for operating the latter means having devices attached thereto for acting upon the braking mechanism.

2. In an embroidering machine, sets of needles and means for operating the same, means for braking the needle thread supply, means for applying ornamental cords to the surface of the work, means for operating the latter means having devices attached thereto for acting upon the braking mechanism, and an automatic jacquard for controlling the means operating the cord applying means.

3. In an embroidering machine, sets of needles and means for operating the same, means for braking the needle thread supply, means for applying ornamental cords to the surface of the work, a device for moving said latter means in and out of operative position, an automatic jacquard for controlling said device and means coöperating with said cord applying mechanism for releasing the braking mechanism.

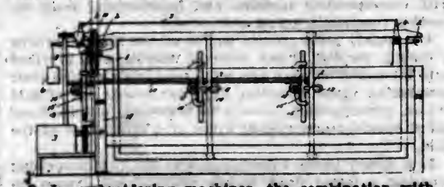
4. In an embroidering machine, a rocking mechanism for applying cords to the surface of the work, a reciprocatory rod attached to said mechanism, an automatic jacquard device, and a connecting rod intermediate the jacquard and the reciprocating rod, and a cam operated lever for moving the said reciprocating rod at predetermined times, said jacquard operating on said reciprocating rod to move the same from its normal connection with said cam operated lever.

5. In an embroidery machine, the combination with sets of needles and means for operating the same, of means for applying ornamental cords to the surface of the work, means for braking the needle thread supply, an automatic jacquard device, means controlled by the latter for operating both the cord applying means and the thread supply braking means and having devices attached thereto for acting upon the braking mechanism.

[Claims 6 to 9 not printed in the Gazette.]

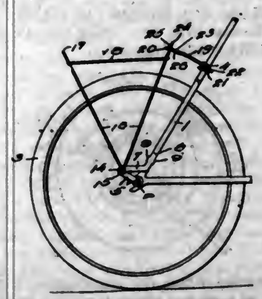
1,016,194. EMBROIDERY-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Mar. 11, 1911. Serial No. 613,856. (Cl. 112—7.)

1. In embroidery machines, the combination with the fabric frame, of a plurality of supporting members on said frame arranged longitudinally thereof, a number of vertically slidable toothed guiding members engaging the said supporting members, a gear for each guiding member meshing with the teeth thereof and a common rack simultaneously meshing with all said gears.



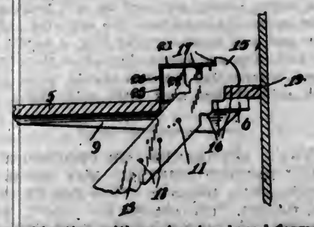
2. In embroidering machines, the combination with a fabric frame, of a plurality of supporting pins on said frame arranged longitudinally thereof, a number of vertically slidable looped guiding members formed with lateral racks and engaging the said supporting pins, a gear for each guiding member meshing with the rack thereof and a common rack simultaneously meshing with all said gears.

1,016,195. BICYCLE-STAND. HUGO W. ZELINSKY, Tacoma, Wash. Filed June 20, 1911. Serial No. 634,213. (Cl. 208—75.)



The combination with the rear fork of a cycle, of an axle spindle mounted therein, a V-shaped plate having one end mounted on the axle, the other end of the plate having a laterally projecting arm resting against an arm of the fork, said projecting arm having rigidly integrally formed inwardly extending tongues spanning the arm of the fork, means for securing said tongues to the fork, a similar plate secured to the other arm of the fork at the opposite end of the axle spindle, pivot pins projecting outwardly from the vertices of the plates, and a combined stand and luggage support having the ends of its arms pivotally secured to the pivot pins.

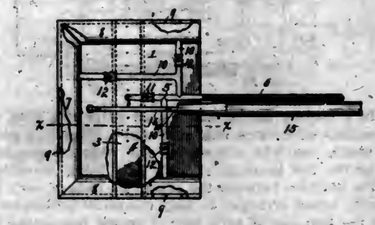
1,016,196. IRONING-BOARD. JEHU W. ALLEN, Winnfield, La. Filed June 13, 1911. Serial No. 632,838. (Cl. 68—10.)



1. In combination with an ironing board formed with a longitudinal slot in its attaching end, of a stand including a top connected to the board at its attaching end, and a pinch lever fulcrumed on the board and having a head projecting through the slot thereof, said head being notched on its opposite edges for respectively engaging the top of the stand and attaching support.

2. An ironing board formed with a longitudinal slot in its attaching end, a pinch lever adjustably fulcrumed on the board, and a stand secured to the board adapted to engage the head of the lever and prevent its swinging when the head and the board are operatively attached, said stand comprising a top, a side and ends, the latter projecting below the bottom edge of the side for engagement with the ironing board.

1,016,197. NOZZLE FOR DISINFECTANT AND WALL-PAPER-REMOVING APPARATUS. JACOB ANDRES, Helena, Ohio. Filed June 12, 1911. Serial No. 632,815. (Cl. 216—8.)



1. A nozzle of the class described comprising a pan-like member having a fluid distributing chamber therein, an auxiliary nozzle carried by said pan-like nozzle along one edge thereof, and means for selectively controlling the admission of fluid to said distributing chamber and auxiliary nozzle from a common source of supply.

2. In an apparatus of the class described, a main pan-like fluid distributing nozzle and an auxiliary nozzle carried by said main nozzle at one edge thereof and having its discharge orifices disposed to direct fluid away from the associated edge of said main nozzle, and means for selectively controlling the admission of a fluid to said nozzles from a common source of supply.

3. In an apparatus of the class described, a main pan-like fluid distributing nozzle having a fluid distributing chamber therein for distributing fluid in a plurality of directions within said nozzle, an auxiliary nozzle carried by the main nozzle along one edge thereof, a conduit leading to said distributing chamber and having connection with a source of fluid supply, a connection between said auxiliary nozzle and conduit, and valves located in said conduit and said latter connection for controlling the admission of fluid to said chamber and auxiliary nozzle, substantially as described.

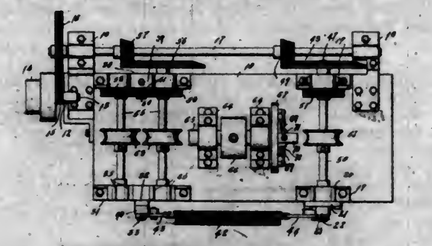
4. In an apparatus of the class described, a main pan-like fluid distributing nozzle, auxiliary nozzles carried by the main nozzle at its forward and side edges and having their discharge orifices arranged to direct fluid adjacent to the associated edge of the main nozzle, and means for selectively controlling the admission of fluid to said main and auxiliary nozzles from a common source of supply.

1,016,198. POLISHING-MACHINE. ERI E. BARNES, Parkers, N. Y. Filed Jan. 5, 1911. Serial No. 600,887. (Cl. 51—5.)

1. In a polishing machine, a polishing head including a disk provided with a centrally disposed opening, a pair of external guides disposed on opposite sides of said opening, a pair of buffers slidable in said guides, a pair of bent levers pivoted at their angles to said plates, each of said levers having one arm extending across the end of one of the guides and connected to a buffer, the other end of the lever extending along the respective guide, and a weight on the last mentioned end of each lever.

2. In a polishing machine, a polishing head including a disk provided with a centrally disposed opening, a pair of external guides disposed on opposite sides of said opening, a pair of buffers slidable in said guides, angle levers pivoted on said disk above and below said guides, the shorter arm of each lever extending over one end of a

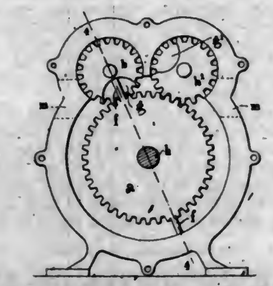
respective guide, links respectively connecting the shorter arms of the levers and the respective buffers, the longer arm of each lever extending along a respective guide and terminating in a weighted end, and stops adjustably mounted on the disk for engagement by the long arms of the levers to limit the outward movement thereof.



3. In a feeding mechanism, spaced pairs of shafts, tilting bearings supporting said shafts at a respective end of each shaft, bearings supporting the remaining ends of said shafts, the bearings of each pair being movable to vary the distance between the supported ends of each pair of shafts, levers arranged to vary the relative distance between the bearings of each pair, a spring connecting said levers and arranged to urge the levers to draw said bearings together, and feeding rollers on said shafts.

4. In a feeding mechanism, spaced pairs of shafts, tilting bearings supporting said shafts at a respective end of each shaft, bearings supporting the remaining ends of said shafts, the bearings of each pair being movable to vary the distance between the supported ends of each pair of shafts, levers arranged to vary the relative distance between the bearings of each pair, a spring connecting said levers and arranged to urge the levers to draw said bearings together, and feeding rollers on said shafts; in combination with a polishing head located between spaced pairs of feeding rollers.

1,016,199. ROTARY PUMP, ROTARY ENGINE, AND THE LIKE. WILLIAM A. BEARD, London, England. Filed Aug. 8, 1910. Serial No. 576,369. (Cl. 103—44.)



1. A rotary pump, rotary engine or the like comprising a casing, a rotary drum therein provided with vanes extending part way across it, another rotary drum provided with corresponding recesses adapted to be engaged by said vanes, and intermeshing teeth extending completely around the peripheries of said drums.

2. A rotary pump, rotary engine or the like comprising a casing, a rotary drum therein provided with vanes extending part way across it, the tops of which are at substantially the same radius from the center as the internal radius of the corresponding part of the casing, another rotary drum provided with corresponding recesses adapted to be engaged by said vanes, and intermeshing teeth extending completely around the peripheries of said drums, the tops of the teeth on the recessed drum being at substantially the same radius as the internal radius of the corresponding part of the casing.

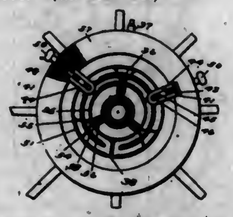
3. A rotary pump, rotary engine or the like comprising a casing, a rotary drum therein provided with vanes extending part way across, another rotary drum provided with corresponding recesses, and intermeshing teeth extending completely across said drums.

4. A rotary pump, rotary engine or the like comprising a casing, toothed drums mounted therein and provided with intermeshing teeth extending completely around their peripheries, vanes extending part way across one of said drums, corresponding recesses in the other, and inlet and outlet openings arranged to allow of a direct flow of the fluid.

5. A rotary pump, rotary engine or the like comprising a casing, a rotary drum therein provided with vanes extending part way across it, a plurality of other rotary drums arranged between and on the same side of the inlet and outlet and provided with corresponding recesses adapted to be engaged by said vanes, and intermeshing teeth extending completely around the peripheries of said drums, the recesses being arranged so that when a vane is in engagement with a recess in one of the recessed drums the teeth on another recessed drum are in engagement with the teeth on the vane drum.

[Claim 6 not printed in the Gazette.]

1,016,200. WHEEL FOR MOTOR-VEHICLES. ABRAHAM T. BEELER, Kansas City, Mo. Filed Oct. 14, 1910. Serial No. 587,076. (Cl. 152—28.)



1. In a cushioned wheel the combination with a fluid expanded tube of a clamp, whose clamping parts yield to the displacement of the inflating fluid in the act of clamping adjacent parts of said tube together.

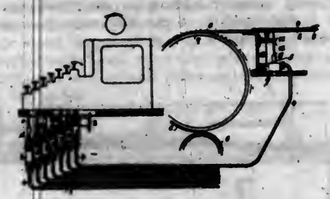
2. In a cushioned wheel the combination with a fluid expanded tube of a clamp for clamping adjacent parts of the tube and dividing said tube into inflated sections, said clamp having a clamping roller adapted to yield to the displacement of the inflating fluid in clamping said adjacent parts of the tube together.

3. In wheels for motor vehicles, an inflation tube having a valved nozzle intermediate its closed outer end portions and the parts of said tube on each side of the line of said nozzle folded together and divided substantially into inflated sections.

4. The combination with the annular spoke-supporting ring and the axle bearing having an annular space between said ring and bearing, ring-guiding disks on said bearing, a sleeve loosely mounted on said bearing, an inflated tube in the space between the opposing surfaces of said sleeve and said spoke-carrying ring, a saddle between said ring and tube, and connecting wires therefor, and a slotted neck constituting the ends of said wires, and a pin connecting said slotted neck with said sleeve on said bearing.

1,016,201. APPARATUS FOR PRODUCING TYPOGRAPHIC RECORD-SHEETS. MAX ERICH BLUME, Leipzig-Connewitz, Germany. Filed July 27, 1911. Serial No. 640,905. (Cl. 164—12.)

1. Apparatus for the purpose set forth comprising a typewriter having type-keys, pneumatically actuated punching devices severally controlled by said type-keys, pneumatically actuated reversible feed mechanism controlled by the keys, for feeding a sheet through the machine in position to be punched by said punching devices, sheet-feeding mechanism actuatable independently of the key action, and means actuated by the second-mentioned sheet-feeding mechanism for reversing the action of the first-mentioned sheet-feeding mechanism.



2. Apparatus for the purpose set forth comprising a typewriter having type-keys, pneumatically actuated punching devices severally controlled by said type-keys, pneumatically actuated reversible feed mechanism controlled by the keys, for feeding a sheet through the machine in position to be punched by said punching devices, an indicator controlled by said punching devices so that it moves proportionately to the widths of the types represented by the actuated type-keys, sheet-feeding mechanism actuatable independently of the key action, and means actuated by the second-mentioned sheet-feeding mechanism for reversing the action of the first-mentioned sheet-feeding mechanism.

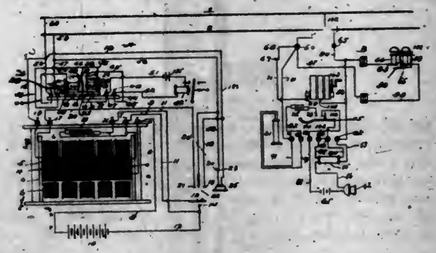
3. Apparatus for the purpose set forth comprising a typewriter having type-keys, motor cylinders normally closed at one end and open at the other end to the atmosphere, pistons in said cylinders, springs thrusting said pistons toward the open ends of said cylinders, punches connected to said pistons, valves severally controlled by said type-keys, pipes severally connecting the closed ends of said cylinders to said valves, suction pipes severally connected to said valves so that the latter can place them in communication with the first-mentioned pipes, pneumatically actuated reversible feed mechanism controlled by the keys, for feeding a sheet through the machine in position to be punched by said punching devices, sheet-feeding mechanism actuatable independently of the key action, and means actuated by the second-mentioned sheet-feeding mechanism for reversing the action of the first-mentioned sheet-feeding mechanism.

4. Apparatus for the purpose set forth comprising a typewriter having type-keys, motor cylinders normally closed at one end and open at the other end to the atmosphere, pistons in said cylinders, springs thrusting said pistons toward the open ends of said cylinders, punches connected to said pistons, valves severally controlled by said type-keys, so that said valves are opened during the latter part of the depression of said keys, pipes severally connecting the closed ends of said cylinders to said valves, suction pipes severally connected to said valves so that the latter can place them in communication with the first-mentioned pipes, pneumatically actuated reversible feed mechanism controlled by the keys, for feeding a sheet through the machine in position to be punched by said punching devices, sheet-feeding mechanism actuatable independently of the key action, and means actuated by the second-mentioned sheet-feeding mechanism for reversing the action of the first-mentioned sheet-feeding mechanism.

5. Apparatus for the purpose set forth comprising a typewriter having type-keys, motor cylinders normally closed at one end and open at the other end to the atmosphere, pistons in said cylinders, springs thrusting said pistons toward the open ends of said cylinders, piston rods projecting from said cylinders and having grooves adapted to admit air at the normally closed cylinder ends when the pistons are moved toward said closed ends, punches connected to said pistons, valves severally controlled by said type-keys, pipes severally connecting the closed ends of said cylinders to said valves, suction pipes severally connected to said valves so that the latter can place them in communication with the first-mentioned pipes, pneumatically actuated reversible feed mechanism controlled by the keys, for feeding a sheet through the machine in position to be punched by said punching devices, sheet-feeding mechanism actuatable independently of the key action, and means actuated by the second-mentioned sheet-feeding mechanism for reversing the action of the first-mentioned sheet-feeding mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,016,202. TELEPHONE AND TELEGRAPH COMBINATION SYSTEM. CLINTON L. BOPP, Hawkeye, Iowa, assignor of one-fourth to Frederick Straate and one-eighth to John Moran, Waukon, Iowa. Filed Mar. 23, 1907. Serial No. 364,030. (Cl. 179—4.)



1. In a composite telephone and telegraph system, the combination with a pair of line wires and a telephone set, of a telegraph set connected with said line wires comprising a polarized relay adapted to suppress the ringing currents from said telephone set, and also the telephone currents from said telephone set, a sounder circuit including the tongue of said polarized relay, whereby the sounder responds to the current waves of one polarity only, means for supplying alternating current for telegraphic purposes, means for controlling the action of said current supplying means.

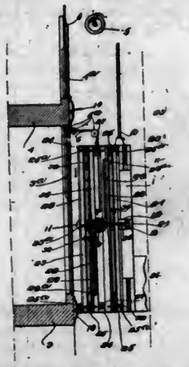
2. In a composite telephone and telegraph system, the combination with a pair of line wires and a telephone set, said telephone set including means for preventing alternating telegraph current from entering the receiver of said telephone set, of a telegraph set connected with said line wires including a polarized relay adapted to suppress the ringing currents and the telephone currents from the telephone set, a sounder circuit including the tongue of said polarized relay, whereby the sounder responds to current waves of one polarity only, an induction coil including a battery for supplying alternating current for telegraphic purposes, and a switch for controlling the action of said induction coil device.

3. In a composite telephone and telegraph system, the combination with a pair of line wires, and a telephone set comprising a transmitter, a receiver, a circuit for said receiver, a circuit for said transmitter, a call bell, and means for preventing telegraph current from entering said receiver, of a telegraph set connected with said line wires, comprising a polarized relay adapted to suppress the ringing currents from the telephone set, and also the telephone currents from said set, a sounder circuit including the tongue of said polarized relay, whereby the sounder responds to the current waves flowing in one direction only, means for supplying alternating current, and means for controlling the action of said current supplying means.

1,016,203. OPTIONAL FULL-AUTOMATIC GATE. FRED W. BOUGHTON, Boston, Mass. Filed Apr. 14, 1910. Serial No. 555,508. (Cl. 187—58.)

1. In an elevator of the character described, a car; a gate; means for raising and lowering the gate operatively connected therewith and arranged in the shaft; means arranged on the car adapted to engage and actuate said first named means and to be thrown into and out of engaging relation thereto; a plunger operatively connected with said last named means and arranged on the car; and a cam arranged in the shaft and adapted to engage and actuate said plunger; substantially as described.

2. In an elevator of the character described, a car; a gate; means for raising and lowering the gate operatively connected therewith and arranged in the shaft; means arranged on the car adapted to engage and actuate said first named means and to be thrown into and out of engaging relation thereto; a plunger operatively connected with said last named means and arranged on the car; and a cam arranged in the shaft and adapted to engage and actuate said plunger; with means for setting said plunger; substantially as described.



3. In an elevator of the character described, a car; a gate; means for raising and lowering said gate operatively connected therewith and comprising a rotary drum mounted in the shaft and furnished with a pinion; laterally movable racks vertically and oppositely disposed in the car adapted to engage and actuate said pinion and to be thrown into and out of engaging relation thereto; a plunger operatively connected with said racks and arranged on the car; and a cam arranged in the shaft and adapted to engage and actuate said plunger; substantially as described.

4. In an elevator of the character described, a car; a gate; means for raising and lowering said gate operatively connected therewith and comprising a rotary drum mounted in the shaft and furnished with a pinion; laterally movable racks vertically and oppositely disposed in the car adapted to engage and actuate said pinion and to be thrown into and out of engaging relation thereto; a plunger operatively connected with said racks and arranged on the car; and a cam arranged in the shaft and adapted to engage and actuate said plunger; with means for setting said plunger; substantially as described.

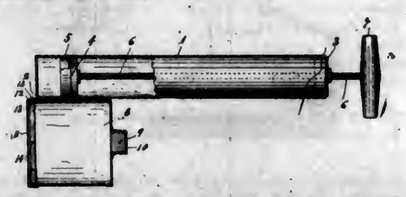
5. In an elevator of the character described, a car; a gate; means for raising and lowering said gate operatively connected therewith and comprising a rotary drum mounted in the shaft and furnished with a pinion and a friction wheel; racks and tracks vertically and oppositely arranged on the car and adapted to engage respectively said pinion and friction wheel; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,016,204. SPRAYING DEVICE. HENRY E. BRANDT, Minneapolis, Minn. Filed Nov. 21, 1910. Serial No. 593,325. (Cl. 137—67.)

1. In a spraying device, a liquid containing tank provided with a flanged head secured thereto and having a circumferentially extended liquid discharge channel formed between the body of said tank and the surrounding flange of said head, and the said channel having communication with the interior of the tank at one point and having a discharge passage located at a distant point.

2. In a spraying device, the combination with a cylinder and piston pump, of a tank secured to the pump cylinder with one end projecting beyond the delivery end of the latter, a head having a flange telescoped with the projecting end of said tank, a liquid delivery channel being formed between the projecting end of said tank and the flange of said head, the said channel having communication with the interior of the said tank and having a discharge passage at its upper portion and the delivery end of said cylinder having an air discharge passage located in the vicinity of the discharge passage of said liquid delivery channel.



3. In a spraying device, the combination with a cylinder and piston pump, of an approximately cylindrical tank secured to the pump cylinder with one end projecting beyond the delivery end of the latter, and a head having a flange telescoped over the projecting end of said tank, an endless liquid delivery channel being formed between the projecting end of said tank and the surrounding flange of said head, the said endless liquid delivery channel having communication with the interior of said tank and provided at its upper portion with a liquid delivery passage, and the said pump cylinder in its delivery end having an air discharge passage located in the vicinity of the discharge passage of said liquid delivery channel.

4. In a spraying device, the combination with a cylinder and piston pump, of an approximately cylindrical tank secured to the cylinder of said pump, the said pump having in its delivery end an air discharge passage, and a flanged head telescoped over the end of said tank, the body of said tank being provided with an inwardly pressed endless groove having communication with the interior of the tank and affording a liquid delivery passage, and the flange of said head having a bulged upper portion with a perforation affording a liquid delivery passage that is located in the vicinity of the air discharge passage of said pump cylinder.

1,016,205. PILOT-HOUSE LIGHT. JOHN H. BUXBAUM, Seattle, Wash. Filed Mar. 23, 1911. Serial No. 616,406. (Cl. 240—2.)

The combination with a binnacle, a compass in the binnacle, and a lamp, of a casing for said lamp comprised of two members detachably connected, together, one of said members being provided centrally of its lower end with a relatively long light-conveying tube of relatively small diameter adapted to be removably inserted through a hole in the binnacle-top for directing the light of the lamp upon a relatively small area of the compass and contiguous of the lubbers-mark thereon.

1,016,206. THREADING-TOOL. JAMES MORTIMER CARPENTER, Pawtucket, R. I. Filed Feb. 17, 1911. Serial No. 609,079. (Cl. 10—128.)

1. A threading tool comprising a frame containing a die, and a guide bar held crosswise adjacent the forward or working face of the die, said guide bar having a plurality of transverse passages of different diameters through it, said passages being arranged in different radial and in different transverse planes, to permit a considerable number of passages to be formed in a comparatively short length of bar, said bar being adjustable both longitudinally and rotatably with respect to said die, to bring any one of said passages into alinement with the bore of the die.

2. A threading tool comprising a frame containing a die, and a guide bar held crosswise adjacent the forward or working face of the die, said guide bar having a plurality of transverse passages of different diameters through it, part of said passages forming a group, the members of which are arranged longitudinally of said bar, and the remainder of said passages forming another group, the members of which are also arranged longitudinally of said bar, the end members of one group being formed adjacent the corresponding end members of the other group, said bar being adjustable both longitudinally and rotatably with respect to said die, whereby any one of said passages can be brought into alinement with the bore of the die.

3. A threading tool comprising a frame containing a die, and a guide bar held cross-wise adjacent the forward or working face of the die, said guide bar having a series of transverse passages of different diameters through it, said passages being arranged in pairs, the axes of the members of each pair intersecting each other, said bar being adjustable longitudinally and rotatably with respect to said die, whereby any one of said passages can be brought into alinement with the bore of the die.

4. A threading tool comprising a frame containing a die, and a guide bar held crosswise adjacent to the forward or working face of the die, said guide bar having a series of transverse passages of different diameters through it, the axes of part of said passages lying in one plane, and the axes of the remainder of said passages lying in another plane, each of the passages in one plane intersecting one of the passages in the other plane, whereby a considerable number of said passages can be formed in a comparatively short length of said bar, said bar being adjustable longitudinally and rotatably with respect to said die, whereby any one of said passages can be brought into alinement with the bore of the die.

1,016,207. TOOL. JAMES CARR, New Haven, Conn., assignor, by mesne assignments, to The Henry G. Thompson & Son Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 30, 1909. Serial No. 525,547. (Cl. 29—100.)

In a tool, the combination with a shank having in one side thereof near one end a transversely-extending recess, one side of which forms an undercut clamping jaw, a cutting member provided with a dove-tailed rim which occupies said recess and engages said jaw, said shank having a bore extending from the recess longitudinally through the same to the opposite end, a clamping member slidably mounted on the bore, a set screw at the opposite end of the shank for engaging the clamping member and forcing it toward the clamping jaw, said shank having a slot which terminates at said opposite end, and a projection extending from the clamping member and entering said slot thereby to hold the clamping member from turning.

1,016,208. TOY. NATHAN D. CASS, Athol, Mass. Filed Oct. 30, 1911. Serial No. 657,649. (Cl. 46—37.)

1. An article of manufacture, combrising a box having a bottom end, a plurality of shelves in the box, a plurality of articles arranged on the shelves, the articles being of a similar shape and having similar surfaces as the original articles for representating the same, a floor foldingly connected to the bottom end of the box, a block fixed to the floor, and a counter carried by the block, substantially as described.

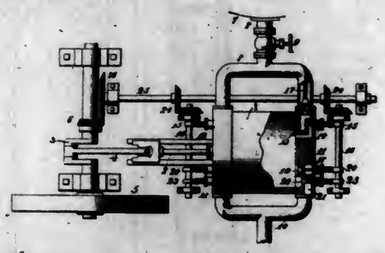
2. An article of manufacture, comprising a box having a bottom end, a plurality of shelves in the bottom end, a plurality of articles arranged on the shelves, the articles being of a similar style as the original articles for representing the same, a floor foldingly connected to the bottom end of the box, a longitudinal counter fixed to the floor, a sign foldingly secured to the top end of the box, and a cover for the box, substantially as described.

1,016,209. IGNITING-TORCH. AUGUSTUS S. P. CHENOT, Belleville, Ill. Filed Sept. 25, 1911. Serial No. 651,152 (Cl. 67—6.)

1. An igniting torch comprising a handle, a key stem and taper tube extending longitudinally from one end of said handle, and a key on the upper end of the key stem, the upper end of said taper tube being disposed beyond the upper end of the key stem and directed toward the latter so as to dispose the ignited end of the taper directly over the gas jet operated upon by the key.

2. An igniting torch comprising a handle, a key stem and taper tube extending longitudinally from one end of said handle, and a key on the upper end of the key stem, the upper portion of said taper tube being bent outwardly and inwardly to direct the upper end thereof toward the key stem so as to dispose the ignited end of the taper directly over the gas jet operated upon by the key.

1,016,210. MEANS FOR CONVERTING VAPOR ENERGY INTO WORK. ELSA J. CHRISTIE, Marion, Iowa. Filed July 14, 1909. Serial No. 507,598. Renewed May 29, 1911. Serial No. 630,122. (Cl. 60—9.)



1. A motor adapted for the use of a mixture of steam and compressed air or neutral gas, comprising a suitable cylinder with a piston mounted to reciprocate therein, one or more heads attached thereto and valves respectively adapted to admit steam and air and to allow for the exhaust of the spent mixture, a valve gear adapted to successively open the air valve on one stroke and the steam valve on the following second stroke thereafter and the exhaust valve for the final emission of the spent mixture on the next stroke, and mechanism adapted to actuate the valves in sequence whereby atmospheric air is compressed in the cylinder and steam is admitted to and commingled with the compressed air to perform the work.

2. In a motor adapted for the use of a mixture of steam and compressed air, the combination of a working cylinder having a reciprocating piston therein, and valves respectively adapted to admit atmospheric air at one stroke and to hold it in the cylinder while undergoing compression on the return stroke, another valve adapted to admit steam at the next succeeding stroke to commingle with the compressed air and final exhaust valve, and means for actuating these respective valves in due time and sequence.

3. In a motor adapted to use steam and compressed air, the combination of a cylinder, a piston working therein, a valve adapted to admit atmospheric air to the cylinder and to hold it until compressed therein, a check valve adapted to admit steam into the compressed air chamber and hold back said compressed air when its pressure exceeds the steam pressure, an exhaust valve to permit the emission of the spent mixture and valve gearing adapted to actuate said valves in proper time and sequence.

4. In a motor adapted to use steam and compressed air, the combination of a cylinder, a piston working therein, an inlet chamber for steam external to the cylinder and adapted to serve as a compression chamber, and valves adapted to respectively admit atmospheric air to the cylinder and to the compression chamber, check against back-pressure to the boiler, to admit steam to the compression chamber and to the cylinder, and to regulate the exhaust of the spent mixture therefrom.

1,016,211. DRAPERY AND GRILLE STRUCTURE. LOUIS B. CHRISTOPHERSON, San Jose, Cal. Filed Dec. 29, 1910. Serial No. 599,868. (Cl. 156—10.)

1. In a decorative hanging, a flexible member having a slit and a non-flexible shape supported in said slit between the walls thereof.

2. In a decorative hanging, a series of flexible members provided with slits, and rigid shapes conforming to and serving to expand the walls of said slits.

3. In a decorative hanging, a series of interwoven flexible members, perforations in each of said members through which other of the members pass, slits in each of said members, and shapes mounted in said slits.

4. In a decorative hanging, a series of interwoven flexible members, perforations in each of said members through which other of the members pass, slits in each of said members adjacent a perforation, and ornamental shapes disposed in said slits.

5. In a decorative hanging, a series of interwoven flexible members, perforations in each of said members through which other of the members pass, slits in each

of said members adjacent a perforation, and ornamental shapes disposed in said slits, said shapes serving to lock said interwoven flexible members together.

[Claims 6 to 9 not printed in the Gazette.]

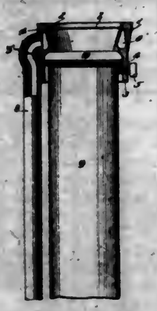
1,016,212. ADVERTISING DEVICE. ANDREW J. CLARK, Dayton, Tenn. Filed July 7, 1911. Serial No. 637,298. (Cl. 124—12.)

1. An advertising device, comprising a pointed projectile, a card or tag, a flexible connection between said projectile and the card or tag, a gun for discharging said projectile and its attached card or tag, said gun having a slotted barrel to permit the card or tag and its attachment to the projectile to pass along outside of the gun while the projectile passes through the barrel, a spring barrel below the projectile barrel, a plunger movable in said spring barrel, and a post carried by said plunger, said post projecting into the projectile barrel and engaging the projectile therein.

2. An advertising device, comprising a card or tag and a projectile, a flexible connection between the card or tag and the projectile, a gun provided with a barrel having an opening to admit the projectile thereinto, a slot leading from the opening to the end of the barrel, a spring barrel located beneath the projectile barrel, a plunger therein projecting into the projectile barrel and extending below the spring barrel, a pivoted dog for engaging the lower end of the plunger, a trigger for operating said dog, a spring for forcing the plunger along the spring barrel, a hand grip sliding along beneath the spring barrel and arranged to move the plunger toward the pivoted dog, and a safety device for the trigger.

3. A gun for use in attaching advertising cards or tags, comprising a projectile barrel having an opening to receive the projectile, and a slot leading from said opening to the end of the barrel, a spring barrel located beneath the projectile barrel and slotted along its upper and lower surfaces, a registering slot in the projectile barrel, a spring in the spring barrel, a plunger acted upon by the spring and projecting into the projectile barrel and below the spring barrel, a pivoted dog arranged to engage the lower end of the plunger, a trigger for releasing the dog, a sliding safety rod beneath the spring barrel arranged to engage the trigger, a spring normally holding the safety rod in engagement with the trigger, and a sliding hand grip adapted to move along the safety rod for the purpose of moving the plunger along the spring barrel and set the spring and to remove the safety rod from engagement with the trigger.

1,016,213. SPARK-ARRESTER. CHARLES F. CLAWSON, Mount Pleasant, Iowa. Filed Feb. 20, 1911. Serial No. 609,714. (Cl. 110—134.)



A spark arrester comprising a stack having an external curved rib on its upper end, a detachable attachment for the stack consisting of a body portion having a downwardly extending annular flange, an inwardly extending curved seat, said flange being slidably mounted over the rib and space from the stack so that the curved seat will rest on the rib, said body also having a flaring ring which extends above the stack and provided with an annular water passage therein which diminishes in size from below upward and merges into an inwardly discharging narrow slit which encircles the inner surface of the upper end of the ring, a set screw inserted through the flange and having its inner end impinging against the stack below the rib, whereby to clamp the attachment to the stack, and a supply pipe communicating with the annular water passage.

1,016,214. NECK-PROTECTOR FOR COATS. FRANK G. CURTIS, St. Paul, Minn., assignor to Leopold A. Guiterman, St. Paul, Minn. Filed Feb. 14, 1910. Serial No. 543,691. (Cl. 2—62.)

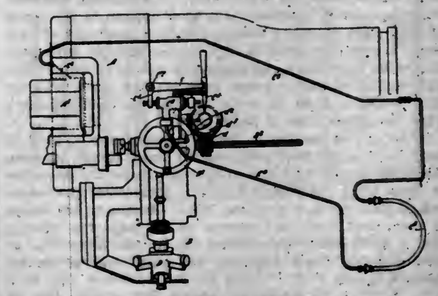
The combination with a coat, of a neck protector comprising a strip of knitted fabric having transverse zones of different tension, the tension of said zones being progressively greater from the edges of the strip to the middle portion thereof, said strip being folded on the medial line of the zone of greatest tension and having zones of equal tension disposed symmetrically on either side of the line of fold, whereby to exert a maximum of uniform tension at the portion immediately contiguous to the neck, said strip being secured to the neck portion of the coat along its unfolded edges, and coöperating fastening means upon the meeting ends of the protector.

1,016,215. ACETYLENE-GAS LAMP. JACKSON DAVIS, Athens, Ill. Filed Feb. 20, 1911. Serial No. 609,804. (Cl. 137—21.)

1. In a device of the character described a water tank, a water feeding tube mounted in the tank with its upper end projecting above the top of the tank and its open lower end below the bottom thereof, having water conducting openings above the bottom of the tank, the upper end above the tank having formed therein a series of notches, a tubular feed valve mounted in the feed pipe having openings adapted to be brought into and out of register with the openings in the feed tube, a head on the upper end of the tubular valve having a tooth adapted to be engaged with the notches in the upper end of the feed tube whereby said valve is held in its adjusted positions, and a water controlling valve arranged in said feed valve.

2. In a device of the character described a water tank, a water feeding tube mounted in the tank, having its lower end projecting through the bottom thereof, and having, above the bottom of the tank, water conducting passages, a tubular valve mounted in said feed tube having passages adapted to be brought into and out of register with the passages in the tube whereby the passage of water from the tank may be regulated, a head arranged on the upper end of the tubular valve having means to indicate the position of the passages in the tubular valve with respect to the passages in the feeding tube, a water controlling valve comprising a cylindrical rod mounted in the tubular valve having oppositely disposed flattened surfaces adapted to be turned into and out of alinement with the passages in the tubular valve to open and close the same, a head on the tube, and means on said head to indicate the position of the flattened surfaces on the rod with respect to the passages in the tubular valve.

1,016,216. HEAVY GUN. ARTHUR TREVOR DAWSON, Westminster, London, and JAMES HORNE, Barrow-in-Furness, England, assignors to Vickers Limited, Westminster, England. Filed Sept. 30, 1911. Serial No. 652,190. (Cl. 89—1.)



1. In air blast gear for ordnance, the combination with the breech actuating mechanism and the slide frame of the gun, of a control valve mounted on the slide frame, controlling mechanism for said valve also mounted on the slide frame, means carried by the slide frame for operating said breech actuating mechanism, and gearing for transmitting movement from said means to the controlling mechanism.

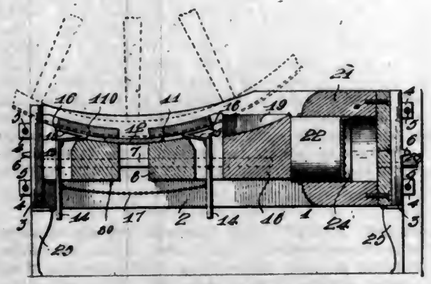
2. In air blast gear for ordnance, the combination with the breech actuating mechanism and the slide frame of the gun, of a control valve mounted on the slide frame, means carried by the slide frame for operating said breech actuating mechanism, a cam mounted on the

slide frame and operated from said means, and means for transmitting movement from the cam to the control valve.

3. In air blast gear for ordnance, the combination with the breech actuating mechanism and the slide frame of the gun, of a control valve mounted on the slide frame, means carried by the slide frame for operating said breech actuating mechanism, a sliding shaft operated by said means, a worm slidably keyed thereon, a worm wheel gearing with said worm and mounted on the slide frame, a cam connected to said worm wheel and lever mechanism for transmitting movement from the cam to the control valve.

4. In air blast gear for ordnance, the combination with the breech actuating mechanism and the slide frame of the gun, of a control valve mounted on the slide frame, means carried by the slide frame for operating said breech actuating mechanism, a sliding shaft operated by said means, a worm slidably keyed thereon, a worm wheel gearing with said worm and mounted on the slide frame, a cam connected to said worm wheel, a two-armed lever pivoted to the slide frame, a projecting stem of the control valve in contact with one arm of said lever, and a hand lever pivoted on the other arm in contact with the cam.

1,016,217. TIRE-SETTER. CHARLES A. DEVERO, Springfield, Ill., assignor to The Keokuk Hydraulic Tire Setter Company. Filed Jan. 12, 1911. Serial No. 602,330. (Cl. 78—59.)



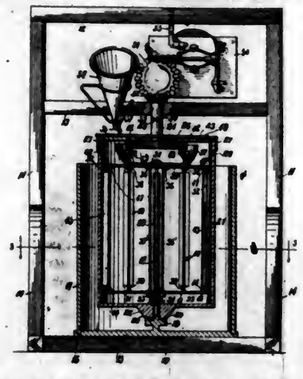
1. In a tire upsetting machine comprising a pair of head blocks, provided with central longitudinal recesses, the combination therewith of a lever pivoted in the recess of each block, a spring mounted on the upper end of each lever, a gripping block in each recess slidable with relation to its head block and supported on one of the springs, and means on each spring engaging its block whereby each gripping block is made to slide on its head block when its spring lever is oscillated.

2. In a tire upsetting machine comprising a pair of head blocks, provided with central longitudinal recesses, the combination therewith of a lever pivoted in the recess of each block, a V-shaped spring secured to the upper end of each lever, a gripping block slidable in the recess of each head block and resting on its respective spring, and a downwardly projecting lug on the outer end of each gripping block engaging the onter end of its respective spring.

1,016,218. CHURN. RAYMOND S. DEVNEY, Glasgow, Ky. Filed Apr. 3, 1911. Serial No. 618,770. (Cl. 31—18.)

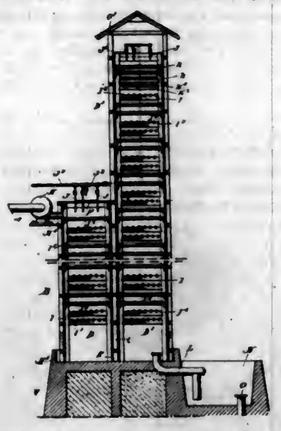
1. The combination in a churn, of a rotary receptacle, a stationary frame within the receptacle, rotary dashers on said frame, said dashers being rotated simultaneously with and in an opposite direction from the rotation of said receptacle, baffles carried by said frame and arranged adjacent to the inner wall of said receptacle, and means for rotating said receptacle.

2. In a churn, a rotary body, a cover therefor, a spindle projecting through said cover and equipped with a gear, a stationary frame within said receptacle, rotary dashers carried by said frame and having pinion connections with said gear, yielding baffles carried by said frame



and arranged adjacent to the inner wall of said receptacle, and means for rotating said receptacle.

1,016,219. APPARATUS FOR ABSORBING HYDROFLUORIC ACID. JOEL JEATHRO DYE, Atlanta, Ga. Filed Feb. 21, 1911. Serial No. 610,112. (Cl. 23—1.)



1. An apparatus of the class described, comprising a base, a shaft on the said base and having two compartments of unequal height and communicating with each other at their lower ends, the shorter compartments being closed at the top and the longer one open, a gas supply connected with the said upper closed end of the shorter compartment, spraying devices in the upper ends of the said compartments, and checker work in the said compartments.

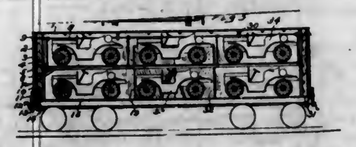
2. An apparatus of the class described, comprising a base, a shaft on the said base and having a partition extending upwardly a distance from the said base to form two compartments of unequal height connected with each other at their lower ends, one of the compartments being closed at the top and the other being open, a gas supply connected with the said upper closed end, spraying devices in the upper ends of the said compartments, checker work in the said compartments, and a perforate arrester in the said upper open end.

3. An apparatus of the class described, comprising a base having a pan at the top, a shaft set on the said base and having a vertical partition reaching to within a distance from the said pan and forming compartments of unequal height connected with each other at their lower ends, the shorter compartments being closed at the top and the longer one open, a gas supply connected with the said upper closed end of the shorter compartment, spraying devices in the upper ends of the said compartments, and checker work held in the said compartments.

4. An apparatus of the class described, comprising a base having a pan at the top, a shaft set on the said base and having a vertical partition reaching to within a distance from the said pan and forming compartments of unequal height connected with each other at their lower ends, one of the compartments being open at the top to form an escape for vapors and the other compartment having its top provided with a door for normally closing the compartment, means for discharging the gases to be condensed into the upper closed end of the latter compartment to cause the gases to travel down in this compartment and up in the other compartment, wooden checker work held in the said compartments, water-spraying devices in the upper ends of the said compartments, and a lattice work in the upper open end of the one compartment.

5. An apparatus of the class described, comprising a base having a pan at the top, a shaft set on the said base and having a vertical partition reaching to within a distance from the said pan and forming compartments of unequal height connected with each other at their lower ends, one of the compartments being open at the top to form an escape for vapors and protected by a roof and the other compartment having its top provided with a door for normally closing this compartment, means for discharging the gases to be condensed into the upper closed end of the latter compartment, to cause the gases to travel down in this compartment and up in the other compartment, wooden checker work held in the said compartments, water-spraying devices in the upper ends of the said compartments, a well, a pipe leading from the said pan into the well, and a water discharge pipe leading from the well to carry off the water and to allow the products of condensation to settle in the well.

1,016,220. RAILWAY FREIGHT-CAR. LEO E. EVENS, Waterloo, Iowa. Filed Oct. 13, 1910. Serial No. 586,905. (Cl. 105—15.)



1. In combination, a freight-car, a movable table therein having longitudinal channels on its upper surface, and means for raising and lowering said table away from or to the floor of the car.

2. In combination, a freight-car, a movable support therein provided with rigid longitudinal channeled bars, and means for adjusting the position of said movable support.

3. In combination, a freight-car, a movable table therein, vertical guideways for said table, cables secured to the upper part of the car and passed under said table, and a rotary shaft, said cables being wound about said shaft to raise said table along said guideways.

4. In combination, a freight-car, a vertically-movable supporting-frame therein, vertical guideways for the ends of said supporting-means, cables fixed at one end and carried under said supporting-means, anti-friction means between said table and said cables, and means for winding up said cables to elevate said supporting-frame along said guideways.

5. In combination, a freight-car, a movable table therein having longitudinal channels in its upper surface, removable adjustable supports for the table adapted to be located thereinunder, and means for raising and lowering said table away from or to the floor of the car.

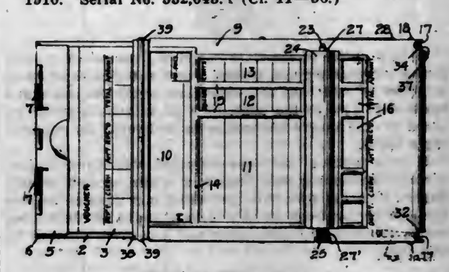
[Claim 6 not printed in the Gazette.]

1,016,221. PUZZLE. PATTERSON GEORGE FERNEY, Sanford, Me. Filed Oct. 3, 1911. Serial No. 652,498. (Cl. 46—41.)

1. A puzzle, comprising a ring and a sectional figure having a body with integral outstretched arms and rigid spaced legs pivoted on the lower end of the said body, the inside diameter of the said ring being larger than the width of the said body and less than the width of the said legs and the outside diameter of the said ring being less than the distance between the outstretched arms.

2. A puzzle, comprising a flat ring and a flat sectional figure representing a person and having a body, integral head, and arms stretched out sidewise and rigid with the said body, a pair of rigidly connected legs stretched out sidewise, and a pivot connecting the junction of the legs with the lower end of the said body, the inside diameter of the said ring being larger than the width of the said body and less than the width of the said legs, and the outside diameter of the said ring being less than the distance between the outstretched arms.

1,016,222. MANIFOLDING-SALES-BOOK HOLDER. NILS F. GARBO, Minneapolis, Minn. Filed Mar. 28, 1910. Serial No. 552,043. (Cl. 11—36.)



1. The combination, in a sales-book-holder with a suitable base, of a cover having openings through which entries may be made upon the exposed sheet of a sales book in said holder, and spring pressed arms pivotally connected to one end of said cover and having pivotal connections with said base on the underside thereof, said arms allowing said cover to adjust itself in parallel relation with said base and accommodating books of different thickness.

2. The combination, in a sales-book-holder with a suitable base, of a cover having openings through which entries may be made upon the exposed sheet of a sales book in said holder, arms pivotally connected at one end to the underside of said base and having upwardly bent portions pivotally connected with said cover, and means yieldingly resisting downward movement of said arms.

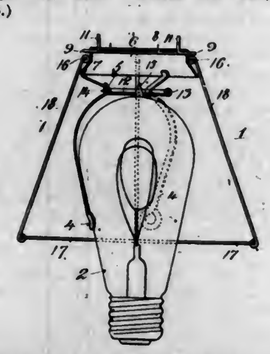
3. The combination, in a sales-book-holder with a suitable base, of a cover having openings through which entries may be made upon the exposed sheet of a sales book in said holder, said base having lugs punched therefrom, spring pressed arms pivoted on said lugs, the ends of said arms projecting beyond the end of said base and pivotally connected with said cover.

4. The combination, in a sales book holder with a suitable base, of a cover having openings through which entries may be made upon the exposed sheet of a sales book in said holder, arms mounted on said base and whereon said cover is pivoted, and said base having a depending flange in the path of said cover, for the purpose specified.

5. A sales book holder comprising a base, a clamp provided at one end of said base wherein the bound end of a sales book is gripped and held, a cover having a pivotal connection at the opposite end of said base and provided with a series of openings through which entries may be made upon the exposed sheet of the sales book, the pivotal connection of said cover with said base allowing said cover to maintain a substantially parallel position with respect to said base, regardless of the thickness of the book, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

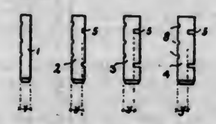
1,016,223. SHADE HOLDER OR GUARD FOR INCANDESCENT LAMPS. WILLIAM IFLAND, New York, N. Y. Filed Apr. 15, 1911. Serial No. 621,182. (Cl. 240—115.)



1. In a device of the class described, a series of fingers, a ring surrounding said fingers, a perforated piece of metal attached to said ring and extending across the same and adapted to receive the point of a glow lamp, a collar secured to said fingers and means on said collar for supporting a shade.

2. In a device of the class described, a series of fingers, a ring surrounding said fingers, a collar secured to said fingers, a spring wire with projecting lugs adapted to pass through perforations in said collar, and a shade-holding means supported by said collar and kept from removal by said lugs.

1,016,224. PRINTER'S TYPE. WILLIAM M. KELLY, New York, N. Y. Original application filed June 29, 1909, Serial No. 505,063. Divided and this application filed Nov. 16, 1910. Serial No. 592,619. (Cl. 101—174.)



1. A plurality of fonts of printer's type of different and various body sizes, nicked so that the remaining "land" is the same in all the various sizes.

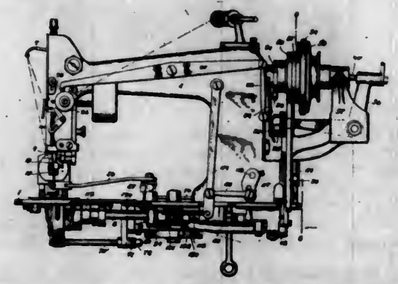
2. A plurality of fonts of printer's type of different or various body sizes, the type of maximum body size and the intermediate sizes between the maximum and the minimum body size being nicked so that the remaining "land" is the same as the minimum body size.

1,016,225. FRAME AND STEERING MECHANISM FOR GRAIN-DRILLS. HENRY L. KEAN, Kensington, Kans. Original application filed Feb. 6, 1911, Serial No. 606,883. Divided and this application filed Apr. 20, 1911. Serial No. 622,285. (Cl. 21—114.)

1. In a machine of the class described, a frame formed from a single piece of metal and bent centrally to form spaced longitudinal sills and a rear end, the sills near their rear ends being upwardly arched, a wheeled axle connected to said arches, the front portions of the sills converging inwardly and having their extremities disposed in engagement and arched and secured together, the extreme ends of the sills being bent in opposite directions to form supports, axles respectively connected to each support, and ground wheels mounted upon said axles.

2. In a machine of the class described, a frame formed from a single piece of metal and bent centrally to form spaced longitudinal sills and a rear end, the sills near their rear ends being upwardly arched, a wheeled axle connected to said arches, the front portions of the sills converging inwardly and having their extremities disposed in engagement and arched and secured together, the extreme ends of the sills being bent in opposite directions to form supports, upwardly extending socket members integral with the supports, spindles mounted within the sockets and provided at their lower ends with laterally extending axles, and ground wheels mounted upon said axles.

1,016,226. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. DANIEL MILLS, Philadelphia, Pa., assignor to Standard Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 23, 1902. Serial No. 108,667. (Cl. 112—33.)



1. In a sewing machine, the combination with stitch-forming mechanism embodying a needle and a bobbin, of an automatic stop-mechanism, a detainer for the needle thread operative to engage the thread beneath the work plate, controlling connections between said needle thread detainer and said stop mechanism, an independently controlled detainer for the bobbin thread, and a thread cutter coöperative with said detainers.

2. In a sewing machine, the combination with stitch-forming mechanism embodying a needle and a bobbin, of an automatic stop mechanism, two independently acting thread detainers for controlling the needle and bobbin threads respectively, the needle thread detainer being operative to engage the thread beneath the work-plate and being controlled by said stop mechanism, and the bobbin thread detainer being operative subsequent to the stopping of the machine and being manually controlled, and a thread cutter coöperative with said detainers.

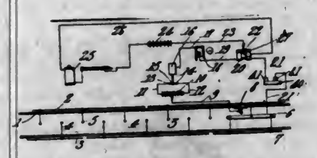
3. In a sewing machine, the combination with stitch-forming mechanism embodying a needle and a bobbin, of an automatic stop mechanism, a needle thread deflector engaging the thread beneath the work plate, controlling connections between said deflector and said stop mechanism, an independently controlled deflector for the bobbin thread, and a thread cutter coöperative with said deflectors.

4. In a sewing machine, the combination with stitch-forming mechanism embodying a needle and a bobbin, of an automatic stop mechanism, two independently acting thread deflectors for controlling the needle and bobbin threads respectively, the needle thread deflector being operative to engage the thread beneath the work-plate and being controlled by said stop-mechanism, and the bobbin thread deflector being operative subsequent to the stopping of the machine and being manually controlled, and a thread cutter coöperative with said deflectors.

5. In a sewing machine, the combination with stitch-forming mechanism embodying a needle and a bobbin, of two independently acting normally inoperative thread detainers for controlling the needle and bobbin thread respectively, the needle thread detainer being operative prior to the stopping of the machine and the bobbin thread detainer being operative subsequent to the stopping of the machine, an automatic detainer-controlling stop mechanism for throwing the needle thread detainer into action, and a thread cutter coöperative with said detainers.

[Claims 8 to 21 not printed in the Gazette.]

1,016,227. SAFETY SYSTEM FOR RAILWAYS. ALFRED MINNICK, Coeur d'Alene, Idaho, assignor to Minnick Automatic Train Controller Company, a Corporation of Utah. Filed Nov. 23, 1910. Serial No. 593,871. (Cl. 246—26.)



1. In a system of train control, two sectional conductors with the meeting ends of the sections of one of the sectional conductors intermediate of the meeting ends of the sections of the other sectional conductor and the sections having exposed contact terminals arranged in line with the contact terminals of one conductor alternating with those of the other.

2. In a system of train control, two sectional conductors with the meeting ends of the sections of one of the sectional conductors intermediate of the meeting ends of the sections of the other sectional conductor, and the sections having exposed contact terminals arranged in line with the contact terminals of one conductor alternating with those of the other, and a continuous conductor co-extensive with the combined sectional conductors.

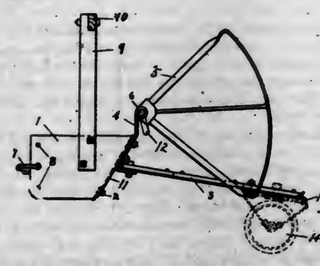
3. In a system of train control, two sectional conductors with the meeting ends of the sections of one of the sectional conductors intermediate of the meeting ends of the sections of the other sectional conductor, and the sections having exposed contact terminals arranged in line with the contact terminals of one conductor alternating with those of the other, a continuous conductor coextensive with the combined sectional conductors, and electrically actuated train controlling means on each train and circuit connections between each train and the continuous and sectional conductor terminals respectively.

4. In a system of train control, two sectional conductors with the meeting ends of the sections of one of the sectional conductors intermediate of the meeting ends of the sections of the other sectional conductor and the sections having exposed contact terminals arranged in line with the contact terminals of one conductor alternating with those of the other, and a train carried contact of a length to bridge adjacent terminals of the overlapping sections of the two sectional conductors.

5. In a system of train control, two sectional conductors along the line of way, a bridging contact for the conductors carried by a train, train controlling means on the train rendered active by the completion of the circuit through one or more of the sections of the sectional conductors, means upon each train for rendering the train-controlling means inactive, and a circuit for actuating the said means, said circuit having terminals, one upon the train, and one along the line of way, said circuit including a train wheel and a traffic rail.

[Claims 6 and 7 not printed in the Gazette.]

1,016,228. SCRAPER AND LEVELER. REX H. O'NEILL, Chicago, Ill. Filed Aug. 12, 1908. Serial No. 448,212. (Cl. 37—5.)



1. A scraper and leveler of the class described, the principal portions of which are formed by bending one or both ends of a rectangular sheet of metal along lines oblique to each other, and oblique to the sides and ends of the said rectangular sheet in such manner that when the sheet is set on its edge after bending, the central portion of it will slant upward and backward, and one or both of the end portions will extend forward, and slant inward and upward, and means by which it may be operatively drawn, in this position.

2. A scraper and leveler comprising a scraper blade, one or both ends of which extend forward and support said blade in operative position, and form connections by means of which the scraper and leveler is drawn, and an operator's platform the front end of which is pivotally attached to the rear side of said blade, and its rear end being supported by the ground, substantially as shown and described.

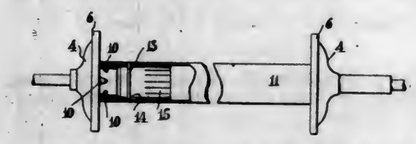
3. In a scraper and leveler, the combination of a scraper blade, means by which it may be drawn in an oblique position allowing dirt and other materials to move toward its rearmost end, an end member attached to the rearmost end of said scraper blade and extending in a forward direction from it, such end member being inclined sidewise in an upward and inward direction causing the pressure of the material being moved, to exert a lifting pressure upon said end member.

4. In a scraper and leveler, the combination of a scraping blade, means for supporting it in operative position, an operator's platform pivotally attached to the rear side of said scraping blade, a rotatable dumping member, or members, attached to said blade and adapted to be rotated by the operator causing the ends of the dumping members to strike the ground at each

side and slightly in advance of the scraping blade and raise it from the ground and then allow said blade to again fall into scraping contact with the ground, and means by which the whole may be operatively drawn.

5. In a scraper and leveler for dirt and other materials, the combination of a scraper blade, means for supporting and drawing said blade in operative position, and rotatable members attached to said scraper blade in position to be thrown into contact with the ground at points located forward from their supports and being adapted to engage the ground and lift said scraper blade as the latter is moved forward, and allow it to fall into the scraping position again after it has passed the points of lifting engagement between said rotatable members and the ground.

1,016,229. MUSIC-SPOOL HEAD. WILLARD S. PAIN and FREDERICK L. WOOD, Meriden, Conn., assignors to Aeolian Company, New York, N. Y., a Corporation of Connecticut. Filed May 2, 1911. Serial No. 624,551. (Cl. 242—69.)



1. In a music spool head, the combination with a disk, of a cup held on the same, said cup having means for engaging a spool bearing and a tube projecting beyond the outer face of the disk, the inner end of said tube resting against the inner surface of the cup, substantially as set forth.

2. In a music spool head, the combination with a disk, of a cup held on the same, said cup having means for engaging a spool bearing and a neck projecting from the outer face of the disk and a tube held on and projecting outwardly beyond said neck, substantially as set forth.

3. In a music spool head, the combination with a disk, of a cup held on the same, said cup having means for engaging a spool bearing and a neck projecting from the outer face of the disk and a tube held on and projecting outwardly beyond said neck, the inner end of said tube resting against the inner surface of said cup, substantially as set forth.

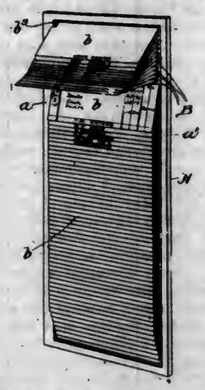
4. In a music spool head, the combination with a disk, of a cup held on the same, said cup having means for engaging a spool bearing and a neck projecting from the outer face of the disk and a tube held on and projecting outwardly beyond said neck, and inwardly projecting parts punched through the neck and tube, substantially as set forth.

5. In a music spool head, the combination with a disk, of a cup held on the same, said cup having means for engaging a spool bearing and a neck projecting from the outer face of the disk and a tube held on and projecting outwardly beyond said neck, the inner end of said tube resting against the inner surface of said cup, and inwardly projecting parts punched through the neck and tube, substantially as set forth.

1,016,230. ADJUSTABLE CARD-INDEX. JAMES H. RAND, Newton, Mass. Filed May 18, 1910. Serial No. 561,948. (Cl. 129—16.)

1. In an adjustable card index, a frame having inwardly extending flanges forming guides, a plurality of removable and interchangeable card-supporting strips, the ends of which are held in said guides, said strips being movable endwise in said guides to permit the removal of any one of said strips without disturbing the others, and cards hinged to said strips and spaced from the ends thereof adjacent to their hinged edges to afford a clearance for the guide flange of the frame.

2. In an adjustable card index, a frame having inwardly extending flanges forming guides, a plurality of removable and interchangeable car-supporting strips, the ends of which are held in said guides, said strips being movable endwise in said guides to permit the removal of any one of said strips without disarranging the others, and cards of substantially the same breadth as the space between said guide flanges, hinged to said strips and provided with recesses in their ends adjacent to said hinged edges, affording a clearance for the guide flange of the frame when the strips are moved endwise.

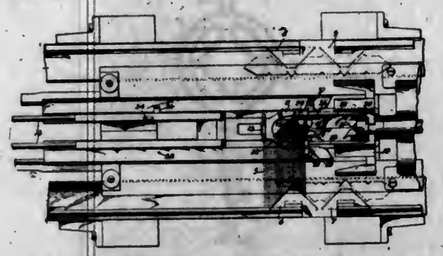


3. In an adjustable card index, a frame having inwardly extending flanges forming guides, a plurality of removable and interchangeable card-supporting strips, the ends of which are held in said guides, and cards hinged to said strips and terminating short of the ends thereof adjacent to the hinged edges leaving the ends of the strip projecting to engage the guide flanges of the frame, said strips and cards being individually removable from the frame without disturbing the others, by withdrawing the ends of said strips endwise from said guide flanges.

1,016,231. CARTRIDGE-BELT. FRANK ROBIE, Ashland, N. H. Filed June 6, 1911. Serial No. 631,529. (Cl. 224—22.)

A cartridge belt, comprising a front and a back bandoleer having cartridge pockets therein, a semi-circular eye centrally fastened to each end of each bandoleer and attached to the same adjacent opposite edges, and a relatively broad elastic band connecting the eye on one end of each bandoleer with the adjacent eye on the end of the other bandoleer, one end of said elastic band being permanently fastened to one of the eyes and looped through the other eye and brought back upon itself and adjustably fastened by means of a clamp, whereby the cartridge belt may be adjusted to fit different wearers, and may be disposed in a diagonal position over either shoulder and under the opposite arm.

1,016,232. STRAIGHT-KNITTING MACHINE. WALTER F. ROLSTON, Rockford, Ill., assignor to Burson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Nov. 4, 1908. Serial No. 461,082. (Cl. 66—12.)



1. In a knitting machine, the combination with a support, of a reciprocatory actuating device thereon, a yarn guide mounted on and carried by the actuating device, said actuating device being capable of movement with respect to the yarn guide, devices movable with the actuating device for securing the yarn guide to different portions of said actuating device, and means for automatically releasing the guide from the actuating device on each reciprocatory stroke of said actuating device.

2. In a knitting machine, the combination with a reciprocatory actuating device, of a bar mounted on the device longitudinally thereof, a reciprocatory yarn guide slidably mounted on the bar, a pair of oppositely disposed spring-pressed latches mounted on the actuating device and having hook portions that detachably engage over the guide to respectively move the same with the actuating device in opposite directions, and means for automatically and alternately operating the latches to release the yarn guide.

3. In a knitting machine, the combination with a reciprocatory actuating device, of a supporting bar mounted thereon longitudinally of its line of movement, a yarn guide slidable on the supporting bar, latches carried by the actuating device and detachably engaging the yarn guide when at the ends of the bar to secure the same against its sliding movement thereon, and trips disposed in the paths of movement of the latches for actuating the same to release the yarn guide.

4. In a knitting machine, the combination with a stationary support, of a reciprocatory actuating device mounted thereon, a supporting bar mounted on the actuating device, and disposed longitudinally of its line of movement, said bar being secured at its ends to the device, a yarn guide having a box slidably mounted on the bar, latches pivotally mounted on the ends of the bars and having hooks that engage the yarn guide, said latches having downturned ends, and yielding stops mounted on the support and disposed in the path of movement of the downturned ends of the latches.

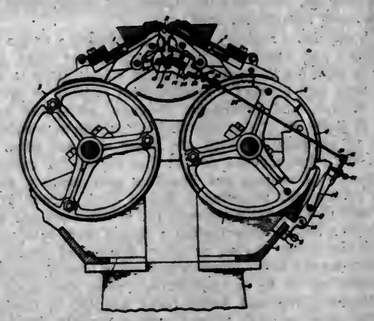
5. In a knitting machine, the combination with an actuating device movable in opposite directions, of a supporting bar carried thereby, a yarn guide slidable on the supporting bar, stops carried by the actuating device and alternately engaging the yarn guide to move it with the actuating device in opposite directions, and means that engages the yarn guide to hold it stationary when disengaged from the stops.

[Claims 6 to 10 not printed in the Gazette.]

1,016,233. KNITTING-MACHINE. WALTER F. ROLSTON, Rockford, Ill., assignor to Burson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed May 6, 1910. Serial No. 559,841. (Cl. 66—9.)

1. In a knitting machine, the combination of means for knitting a stocking, two rollers, means for imparting an intermittent rotary movement to the rollers, pattern devices, and means controlled by the patern devices for permitting the separation of the rollers at one end thereof.

2. In a knitting machine, the combination with knitting and pattern mechanism, of coacting take-up rollers that are relatively movable toward and from each other, and means automatically controlled by said mechanism for effecting their said relative movement.



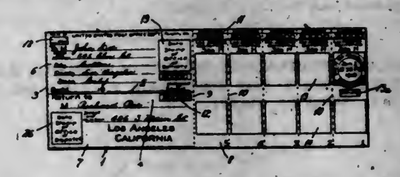
3. In a knitting machine, the combination with knitting and pattern mechanism, of coacting take-up rollers that are relatively movable toward and from each other, a spring for relatively moving them in one direction, and means automatically controlled by the said mechanism for effecting their relative movement in an opposite direction.

4. In a knitting machine, the combination with knitting and pattern mechanism, of coacting take up rollers that are relatively movable toward and from each other, a spring for relatively moving the rollers toward each other, an arm connected to the spring, and a cam rotatable with the mechanism and operating against the arm.

5. In a knitting machine, the combination with the knitting mechanism, of take-up rollers associated therewith, means for rotating the rollers, one of said rollers being movable toward and from the other, a spring for urging the rollers toward said other roller, a swinging arm, a link connected with the arm and with the spring, for moving said spring to relieve the rollers of the tension thereof, a pattern drum, and a cam carried by the pattern drum and operating on the arm to move the same and thereby compress the spring.

[Claims 6 to 8 not printed in the Gazette.]

1,016,234. REGISTRY-RECEIPT FOR MAIL-MATTER. LOUIS V. SPOLLIN, Los Angeles, Cal. Filed Dec. 28, 1909. Serial No. 535,259. (Cl. 11—19.)



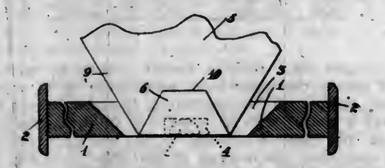
1. A post office registry receipt comprising superimposed sheets, the upper sheet being made up of a card bearing printed matter constituting it a return card and bearing a receipt form in order that it may serve as a receipt, and coupons attached thereto and provided with data indicating the location of the office of origin, the under sheet having like coupons so located that they are in registration with the coupons of the return card and are identically marked, both sets of coupons having appropriate spaces for receiving the stamps of the post office handling the said registry receipt, a space being left beneath the return card for receiving a record card, a record card capable of being placed beneath the return card, the said return and record cards being provided with properly designated spaces for receiving the names and addresses

of the sender and addressee, so located as to be in registration when the cards are superimposed, and a transfer sheet extending over the record card and the coupons of the lower sheet whereby data placed upon the return card and coupons will be transferred to the record card and under coupons, said coupons, return and record cards having common identifying data.

2. A post office registry receipt, comprising a folder having upper and under sheets, the upper sheet being made up of a card bearing printed matter constituting it a return card, and bearing a receipt form capable of serving as a receipt, and detachable coupons, while the under sheet is made up of like detachable coupons so located as to be in registration with the other coupons when the sheets are superimposed and having spaces for receiving the stamps of issuing and handling post-masters, and a blank portion for receiving a record card, a card fitting upon said blank portion beneath the return card and bearing printed matter constituting a record card, said return and record cards having properly designated spaces for receiving names and addresses and other identifying data, so located as to be in registration when the cards are superimposed, the said folder being adapted to receive a transfer sheet so that it may extend beneath the upper sheet of the folder, for transferring data placed upon the return card, and upon any of the coupons, the said return and record cards and coupons being provided with common identifying data.

3. A postoffice registry receipt comprising a card bearing printed matter constituting a record card, and a back sheet having detachable coupons, a super-imposed upper sheet having a card portion bearing printed matter constituting it a return card and bearing a receipt form suitable for constituting it a receipt card, said upper sheet also having detachable coupons so located as to be in registration with the coupons of the back sheet when superposed thereon, the coupons of the upper and lower sheets being arranged in pairs affording originals and duplicates in each pair, appropriately designated blank spaces upon the record and return cards for receiving the names and addresses of the sender and addressee, so located that they will be in registration when the cards are superposed, the several coupons, record and return cards each being provided with common identifying data, the coupons also having properly designated blank spaces for receiving the date and office of origin, and properly designated blank spaces to receive the date and office stamp of the several postmasters, the first coupon when stamped constituting a receipt for the sender while the remaining coupons afford means for indicating the deposit and receipt of registered articles by the several post-masters, and a transfer means interposed between the record card together with the upper coupons and the receipt card and the lower coupons.

1,016,235. PERFORATED-MUSIC-ROLL SPOOL. JOHN WIGAN STARKIE, East Elmhurst, N. Y. Filed Aug. 14, 1911. Serial No. 643,991. (Cl. 242—74.)



The combination with a spool having a longitudinal tapered slot and a recess formed in the sides of the slot as the lesser edge of this slot, of a music sheet having its end tapered and this tapered end doubled over, a locking piece placed within the doubled-over end of the sheet, which locking piece has its inner edge rounded to permit the locking piece to rock on this rounded edge within said recess, substantially as set forth.

1,016,236. COMBINATION GRATE AND BURNER. JOHN A. STEPHENS and WILLIAM J. SHENK, Kansas City, Mo. Filed Jan. 30, 1911. Serial No. 605,566. (Cl. 158—12.)

In a combination grate and burner, a body comprising a hollow plate member, a hollow ring surrounding said plate member, hollow ribs connecting the plate member and ring and forming means of communication between the interiors thereof, one face of the ring and plate member being imperforate and the other face provided with ports having communication with the interiors thereof, a gudgeon extending from one side of the ring, a pipe member on the opposite side of said ring having communication with the interior thereof, and means for supplying fuel to said pipe member, for the purpose set forth.

1,016,237. NUT-LOCK. JOSEPH L. TINNIN, Ripon, Cal. Filed Mar. 29, 1911. Serial No. 617,638. (Cl. 151—29.)

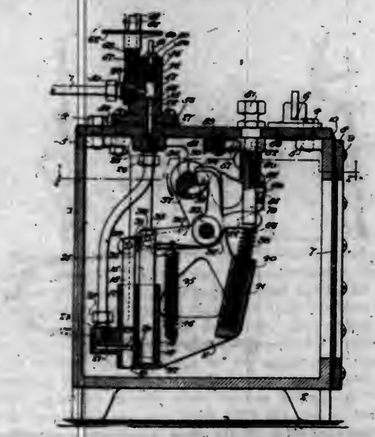
A nut lock comprising a bolt having a longitudinal slot at its outer end, a nut mounted on said bolt, a sleeve mounted on said bolt and having a recess receiving said nut, a cross plate on said sleeve adapted to project into said slot in said bolt and a cotter pin projected through said sleeve, bolt and cross plate as described.

1,016,238. LUBRICATOR. GEORGE TUGWELL, Chicago, Ill. Filed Nov. 5, 1906. Serial No. 341,976. (Cl. 184—27.)

1. In a force feed lubricator, the combination with a pump chamber, of a plunger therein, a reciprocating valve controlling the passage of oil to and from said pump chamber, shifters for said plunger and said valve, springs for actuating said shifters in one direction and cam mechanism for moving said shifters in the opposite direction and for operating said plunger and valve in proper timed relation, substantially as described.

2. In a force feed lubricator, the combination with a pump chamber, of a plunger therein, a reciprocating valve controlling the passage of oil to and from said pump chamber, shifters for said plunger and said valve, springs coöperating with said shifters to effect the inward or forcing movement of said valve and plunger and cam mechanism for effecting the outward or suction movement of said valve and said plunger and for compelling the operation of said parts in proper timed relation, substantially as described.

3. In a force feed lubricator, the combination with the pump chamber, of a plunger therein, a reciprocating valve controlling the passage of oil to and from said pump chamber, shifters for said plunger and said valve, springs for operating said shifters in one direction, cam mechanism for operating said shifters in the opposite direction and an adjustable stop for limiting the movement of said plunger, substantially as described.



4. In a force feed lubricator, the combination with an oil reservoir, of a pump chamber and a valve chamber arranged entirely within said reservoir, said pump chamber being closed at its end and said valve chamber being open and communicating with said reservoir, a plunger in said pump chamber, a reciprocating valve in said valve chamber controlling the flow of oil from said reservoir to said pump chamber and from said pump chamber to a suitable outlet, cam mechanism for effecting the outlet or suction movement of said valve and plunger and springs for effecting the inward or discharging movement of said valves and plunger, substantially as described.

5. In a force feed lubricator, the combination with an oil reservoir, of a pump chamber and a valve chamber arranged entirely within said reservoir, said pump chamber being closed at its end and said valve chamber being open and communicating with said reservoir, a plunger in said pump chamber, a reciprocating valve in said valve chamber controlling the flow of oil from said reservoir to said pump chamber and from said pump chamber to a suitable outlet, cam mechanism for effecting the outlet or suction movement of said valve and plunger, springs for effecting the outward or discharging movement of said valve and plunger, a stop for limiting the throw of said plunger and means operable from the exterior of the reservoir for adjusting said stop, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,016,239. METHOD OF OBTAINING CARBONATE OF SODA. NOAH WRINKLE and ROBERT G. PADDOCK, San Francisco, Cal. Filed Nov. 16, 1911. Serial No. 660,698. (Cl. 23—22.)

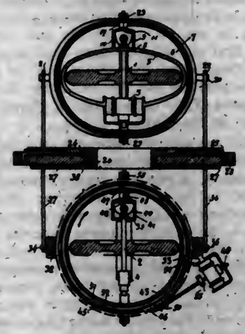
1. A process for obtaining the carbonate of soda from a solution containing sodium carbonate, sodium chlorid, sodium sulfate, sodium bicarbonate and other soluble matter, the sodium carbonate, sodium bicarbonate and sodium sulfate being greater in combined quantity than the sodium chlorid and other soluble matter, which consists in first reducing by solar heat the solution to a specific gravity between 1.14 and 1.30 at 60° Fahrenheit, treating the solution at that density with carbon dioxid to convert the soluble carbonate of soda to sodium bicarbonate insoluble at said density, separating the resulting precipitate from the mother liquor, and melting the precipitate to drive off the carbonate dioxid, carbonating a further quantity of the concentrated solution with the mixture of the products of combustion of the fuel and the carbon dioxid given off by the bicarbonate.

2. A process for obtaining the carbonate of soda from a solution containing sodium carbonate, sodium chlorid, sodium sulfate, sodium bicarbonate and other soluble matter, the sodium carbonate, sodium bicarbonate and sodium sulfate being greater in combined quantity than the sodium chlorid and other soluble matter, which consists in first reducing by solar heat the solution to a specific gravity between 1.14 and 1.30 at 60° Fahrenheit, treating the solution at that density with carbon dioxid to convert the soluble carbonate of soda to sodium bicarbonate insoluble at said density, separating the resulting precipitate from the mother liquor, melting the precipitate to drive off the carbon dioxid, and applying the carbon dioxid driven off by melting to the carbonating of more of the solution.

3. A process for obtaining the carbonate of soda from a solution containing sodium carbonate, sodium chlorid, sodium sulfate, sodium bicarbonate and other soluble salts and organic matter, the sodium carbonate, sodium bicarbonate and sodium sulfate being greater in combined quantity than the sodium chlorid and other soluble matter, which consists in treating the solution at a specific gravity between 1.14 and 1.30 at 60° Fahrenheit, with carbon dioxid to convert the soluble carbonate of soda to sodium bicarbonate insoluble in said solution, separating the resulting precipitate from the mother liquor, subjecting the precipitate to the direct application of the heat and products of combustion in a suitable furnace to effect the oxidation and eliminating of the contaminating organic matter, and converting the sodium bicarbonate to sodium monocarbonate free from objectionable organic matter.

4. A process for obtaining the carbonate of soda from a solution containing sodium carbonate, sodium chlorid, sodium sulfate, sodium bicarbonate and other soluble salts and organic matter, the sodium carbonate, sodium bicarbonate and sodium sulfate being greater in combined quantity than the sodium chlorid and other soluble matter, which consists in treating the solution at a specific gravity between 1.14 and 1.30 at 60° Fahrenheit, with carbon dioxid to convert the soluble carbonate of soda to sodium bicarbonate insoluble at said density, separating the resulting precipitate from the mother liquor, subjecting the precipitate to the direct application of the heat and products of combustion of a gas or oil flame in a suitable furnace, and carbonating a further quantity of the solution with the mixture of the gaseous products of combustion of the fuel and the carbon dioxid given off by the bicarbonate from the furnace.

1,016,240. APPARATUS FOR STEERING MOVING OBJECTS, PARTICULARLY SHIPS AND FLYING-MACHINES. VALERIAN ALEXIEFF, Enseli, Persia. Filed June 2, 1911. Serial No. 630,815. (Cl. 172—282.)



1. Apparatus for steering movable objects more particularly ships and flying machines comprising, in combination, a rudder, an electromotor for actuating said rudder,

a geographical chart, a conducting wire located over said chart, representing the course of the object, electrical contacts capable of moving over said chart in accordance with the movements of the object and adapted to co-operate with said conductor, said contacts being adapted in coöperation with said conductor to transmit electric current in one or the other direction through said electromotor and actuate the rudder.

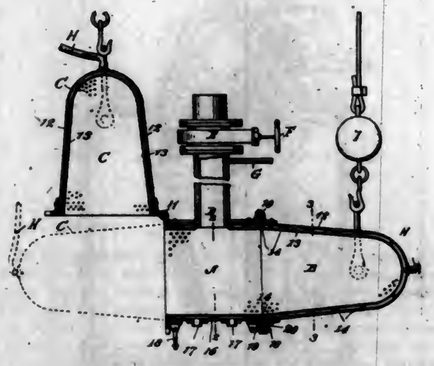
2. Apparatus for steering movable objects more particularly ships and flying machines, comprising, in combination, a rudder, an electromotor for actuating said rudder, a geographical chart, a conducting wire located on the chart, contacts movable over said chart and means for imparting to said contacts vertical, horizontal and rotary movements relatively to said chart in accordance with the movement of the object, said means comprising two gyroscopes the axis of one of which is disposed parallel to the axis of the earth, and the axis of the other is disposed in a plane at right angles to the axis of the first gyroscope, electromagnetic devices adapted to impart the said movements to the said contacts, commutators to control the action of said electromagnetic devices, means for actuating said commutators and a sidereal clock adapted to influence electrically the operation of one of said electromagnetic devices to compensate for the variation of the apparent movement of the axis of one of said gyroscopes due to the rotation of the earth.

3. Apparatus for steering moving objects particularly ships and flying machines, comprising in combination a geographical chart, a rudder, contacts capable of moving over said chart in accordance with the movements of the objects and adapted to cause the actuation of said rudder, electromagnetic devices adapted to impart movement to said contacts, commutators to control the action of said devices, electromotors for operating the commutators, selenium cells in circuit with said motors, screening members, gyroscopes, lamps carried on the spindles of said gyroscopes and adapted to illuminate said cells, and thereby operate the motors, and a sidereal clock adapted to influence the operation of one of said magnetic devices to compensate for the variation of the apparent movement of the axis of one of the gyroscopes due to the rotation of the earth.

4. Apparatus for steering moving objects particularly ships and flying machines, comprising, in combination, a geographical chart, a rudder, contacts capable of moving over said chart in accordance with the movements of the objects and adapted to cause the actuation of said rudder, electromagnetic devices adapted to impart movement to said contacts, motors and commutators by which the said devices are brought into operation, selenium cells in the circuits of said motors, gyroscopes, lamps carried on said gyroscopes and adapted to illuminate said cells, screening members, rings disposed in the planes of the axes of the gyroscopes and carrying said selenium cells, a disk upon which the gyroscopes are mounted, connections for actuating said rings and disk from said motors and a ring actuated by one of said motors and connected with one of said first mentioned rings and a sidereal clock adapted to influence the operation of one of the magnetic devices to compensate for the variation due to the apparent movement of the axis of one of the gyroscopes due to the rotation of the earth.

5. Apparatus for steering movable objects, particularly ships and flying machines, comprising, in combination, a geographical chart, a rudder, contacts movable over said chart, adapted to cause the actuation of said rudder, gyroscopes, motors, commutators and electromagnetic devices adapted to move said contacts over the chart in accordance with the movement of the object, said devices comprising screw spindles operatively connected with said contacts, ratchet wheels having teeth disposed in opposite directions, spring pins engaging in one or the other direction with said teeth and imparting rotation to said spindles, rockers carrying said spring pins, magnets of contant polarity fixed to said rockers and electromagnets adapted to attract the first named magnets and thus actuate said rockers.

1,016,241. SEPARATOR. IRVING BLOUNT, New York, N. Y. Filed May 25, 1911. Serial No. 629,294. (Cl. 87—6.)



1. In an apparatus of the class described, a container having inner and outer walls with a space between, the inner wall being adapted to retain solid matter and to permit liquid to pass to said space, said container having a hingedly secured end portion adapted to be turned into downwardly open position for the discharge of solid matter therefrom.

2. In an apparatus of the class described, a container comprising a fixed section and a section hingedly secured at the end of the fixed section and adapted to be turned into downwardly open position for the discharge of solid matter therefrom, each of said sections having inner and outer walls with a space between, the inner walls being adapted to permit liquid to pass to said space and to retain solid matter, and means through which the container is supplied with material to be treated and with a fluid for treating said material.

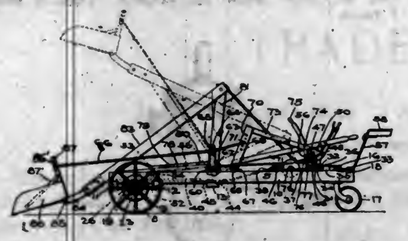
3. In an apparatus of the class described, a container comprising a fixed section and a section hingedly secured at each end of the fixed section and adapted to be turned into downwardly open position for the discharge of solid matter therefrom, each of said sections having inner and outer walls with a space between, the inner walls being adapted to permit liquid to pass to said space and to retain solid matter, and means through which the container is supplied with material to be treated and with a fluid for treating said material.

4. In an apparatus of the class described, a container comprising three complementary sections, one of which is fixed and two of which are hingedly secured at opposite ends of the fixed section and are adapted to be turned into downwardly-open position, said container having inner and outer walls with a space between, and said inner wall being adapted to retain solid matter and to permit liquid to pass to said space, the container also having means through which it is supplied with material to be treated and with a fluid for treating said material.

5. In an apparatus of the class described, a container having a treating chamber adapted to retain solid matter and to permit the flow of liquid therefrom, said container comprising a fixed section, two hollow end sections hingedly secured at their upper ends to opposite sides of the upper portion of the fixed section, means for securing the hinged sections in operative position at the ends of the fixed sections, said means being adapted to release the hinged sections for turning movement and said hinged sections when raised presenting downwardly-open lower ends, means for supplying the container with material to be treated, and means for supplying the container with a fluid for treating said material.

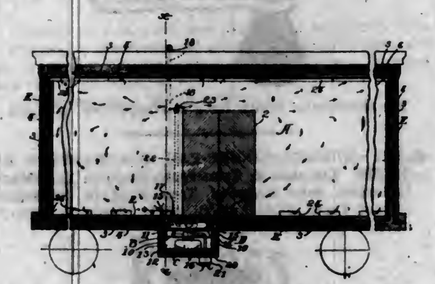
[Claims 6 to 12 not printed in the Gazette.]

1,016,242. LOADER. ELMER BUTTS and ALBERT BUTTS, Peabody, Kans. Filed Sept. 9, 1909. Serial No. 516,928. (Cl. 214—10.)



The combination with a main frame, of supporting wheels therefor, a triangular frame having a vertex on its base pivoted to the main frame and having its hypotenuse extending downward below the base, a shovel pivoted to the lower end of said extension, said shovel having an upwardly projecting arm, connections between the apex of the frame and one of the supporting wheels for drawing the apex downward to raise the shovel, a rock lever mounted on the pivot of the triangular frame, a link connecting the rock lever with the arm of the shovel, a frame pivoted to the main frame, a link connecting one of the arms of said frame with the rock lever, a handle carried by said pivoted frame for shifting the same to rock the lever and thus the shovel, a curved trip lever pivoted to the handle and having a recessed lever end and a U member secured to the main frame for engagement by the recessed end of the curved trip lever to lock the pivot frame and thus the shovel in adjusted position.

1,016,243. HEATER-CAR. CHARLES A. MOORE, St. Paul, Minn., assignor to Moore Patent Car Company, a Corporation of Minnesota. Filed June 8, 1909. Serial No. 500,797. (Cl. 237—3.)



1. In apparatus of the class set forth, a car having a provision chamber, an inclosing chamber disposed below said provision chamber, a heater in said inclosing chamber having an exit for smoke and gases outside of said provision chamber and an inlet for air received from within the car, and a heating drum in said inclosing chamber, arranged to be heated by said heater and having a fresh air inlet from outside and an exit into the upper portion of the provision chamber, said car having air passages in its walls in communication with said provision chamber and said inclosing chamber; whereby a current of fresh warm air passes through the drum and car and vitiated cold air egresses from the car through the heater with the smoke and gases to the outer atmosphere.

2. In apparatus of the class set forth, a car having a provision chamber, an inclosing chamber below said provision chamber, a stove in said inclosing chamber having an air inlet passageway from the inclosing chamber to its burner and an exit for smoke and gases, and an air heating chamber in said inclosing chamber arranged to be heated by said stove having an inlet from the outer atmosphere and an exit to the interior portion of the car, said car having air passages in its walls in communication with said provison chamber and said inclosing chamber; whereby fresh warm air circulates through the heating and provision chambers and cold vitiated air passes to the burner of the stove and escapes to the outer atmosphere.

3. In apparatus of the class set forth, a car having a provision chamber and passages in its walls in communication with said chamber, an inclosing chamber disposed below said provision chamber having upper and lower compartments and vertical down draft passages in its walls in communication with said lower compartment and the passages in the walls of said provision chamber, a heater in the lower compartment of said inclosing chamber having an air inlet from said lower compartment, and an air heating chamber in the upper compartment and arranged to be heated by said heater; said heating chamber being provided with a fresh air inlet and an exit into the upper portion of said provision chamber and said heater with an exit for smoke and gases to the outer atmosphere; whereby fresh warm air is circulated through the heating and provision chambers and cold vitiated air passes from the provision chamber through said passages down to the lower compartment of said inclosing chamber and stove and out with the smoke and gases.

4. In apparatus of the class set forth, a car having a provision chamber, an inclosing chamber carried under the provision chamber, an oil stove in said inclosing chamber having an exit for smoke and gases to the outer atmosphere, and a heating chamber contained in said inclosing chamber and arranged to be heated by said stove, the walls of said inclosing chamber and of said provision chamber having passages forming a communication between the lower portion of said provision chamber and said inclosing chamber, and said heating chamber having an air inlet from the outer atmosphere and an air outlet to the upper portion of the provision chamber; whereby fresh air is heated within the heating chamber and passed into the upper portion of the provision chamber and cold vitiated air is drawn through said passage from the provision chamber down into the stove and out with the smoke and gases.

5. In apparatus of the class set forth, a car having a provision chamber, an inclosing chamber below the provision chamber, a stove within said inclosing chamber and an air heating chamber arranged to be heated by said stove, said car having air passageways in its walls in communication with said provision chamber and said inclosing chamber, said stove having an exit for smoke and gases to the outer atmosphere and said heating chamber having an inlet for fresh air and an exit to the provision chamber; whereby fresh air after being heated within the heating chamber, is circulated through the provision chamber and returned through the air passageways and inclosing chamber to the stove and from thence escapes to the outer atmosphere with the smoke and gases.

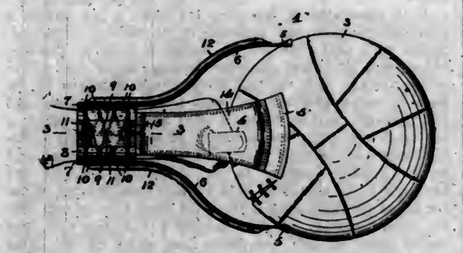
[Claim 6 not printed in the Gazette.]

1,016,244. BOXING DEVICE. GUSTAVUS TROXLER, Newark, N. J., assignor of one-fifth to Frank Sanger and one-fifth to Arthur Decker, Orange, N. J., and one-fifth to Richard Thrush and one-fifth to George Munsick, Newark, N. J. Filed Apr. 19, 1911. Serial No. 621,965. (Cl. 2—196.)

1. A boxing device comprising a hollow pneumatic body, a hand-hold secured to the rear external portion of said pneumatic body and adapted to be grasped by the hand to present said pneumatic body in front of the fist, and means for steadying said pneumatic body in such relation to the fist comprising a cuff-like member or wrist-band, and a plurality of straps extending from said cuff-like member or wrist-band to portions of said pneumatic body outlying from said hand-hold.

3. 9 boxing device comprising a hollow ball-shaped member adapted to be inflated with air, said ball-shaped

member being made from a flexible and resilient material, a substantially non-resilient casing inclosing said ball-shaped member, a hand-hold secured to the rear external portion of said casing and adapted to be grasped by the hand to present said incased hollow ball-shaped member in front of the fist, and means for steadying the same in such relation to the fist.



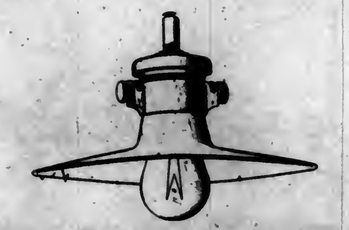
3. A boxing device comprising a hollow ball-shaped member adapted to be inflated with air, said ball-shaped member being made from a flexible and resilient material, a substantially non-resilient casing inclosing said ball-shaped member, a hand-hold secured to the rear external portion of said casing and adapted to be grasped by the hand to present said incased hollow ball-shaped member in front of the fist, and means for steadying the same in such relation to the fist, comprising a cuff-like member or wrist-band, and a plurality of straps extending from said cuff-like member or wrist-band to portions of said casing outlying from said hand-hold.

DESIGNS.

42,117. BREAD-BOARD. TAKVOR BARDEZBANIAN, New York, N. Y. Filed Nov. 23, 1910. Serial No. 593,974. Term of patent 7 years.

The ornamental design for a bread board, as shown.

42,118. ELECTRIC LAMP. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 29, 1910. Serial No. 574,579. Term of patent 7 years.

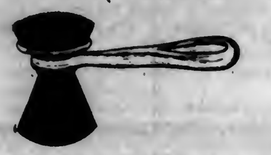


The ornamental design for an electric lamp, as shown.

42,119. MASSAGE DEVICE. CHARLES E. THOMPSON, Troy, N. Y., assignor to Luxury Sales Company, Troy, N. Y., a Corporation of New York. Filed Apr. 19, 1911. Serial No. 622,169. Term of patent 14 years.

The ornamental design for a massage device as shown.

42,120. SHAVING-BRUSH. CHARLES E. THOMPSON, Troy, N. Y., assignor to Luxury Sales Company, Troy, N. Y., a Corporation of New York. Filed Apr. 19, 1911. Serial No. 622,170. Term of patent 14 years.



The ornamental design for a shaving-brush as shown.

42,121. RUBBER FINGER-PAD FOR MASSAGE DEVICES. CHARLES E. THOMPSON, Troy, N. Y., assignor to Luxury Sales Company, Troy, N. Y., a Corporation of New York. Filed Apr. 19, 1911. Serial No. 622,171. Term of patent 14 years.

The ornamental design for a rubber-finger pad for massage devices as shown.

TRADE-MARKS

PUBLISHED JANUARY 30, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 6,137. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY'S CHEMICAL CO., Washington, D. C. Filed May 20, 1905.

Consists of a fanciful bust-portrait of an elderly man.
Particular description of goods.—A Blood-Purifier and Health-Restorative Tablets, Corn and Bunion Plasters, and Headache-Powders.
Claims use since March, 1897.

Ser. No. 30,951. (CLASS 39. CLOTHING.) ELLET-KENDALL SHOE COMPANY, Kansas City, Mo. Filed Nov. 2, 1907. Under ten-year proviso.

Recess

Particular description of goods.—Leather Boots, Shoes, and Leggings.
Claims use since July 1, 1867.

Ser. No. 34,555. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DWINELL-WRIGHT COMPANY, Boston, Mass. Filed May 2, 1908.

CARAJA

Particular description of goods.—Coffee.
Claims use since September, 1903.

Ser. No. 48,016. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HANNOVERSCHE STEINHOLZFABRIK "FAMA" GESELLSCHAFT MIT BESCHRÄNKER HAFTUNG, Hanover, Germany. Filed Feb. 25, 1910.

Fama

Particular description of goods.—Artificial Wood.
Claims use since May 12, 1905.

Ser. No. 48,113. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARTER & HOLMES, Chicago, Ill. Filed Mar. 2, 1910.

"SAN-VELOPE"

Particular description of goods.—Handkerchiefs.
Claims use since on or about Jan. 1, 1910.

Ser. No. 48,360½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KUMAJIRO WAKANA, Tokyo, Japan. Filed Mar. 12, 1910.

Particular description of goods.—Canned Crabs.
Claims use since May 1, 1906.

Ser. No. 50,827. (CLASS 12. CONSTRUCTION MATERIALS.) HEDLEY R. GRAHAM, St. Louis, Mo. Filed July 14, 1910.

ROMANOID

Particular description of goods.—Plastic Flooring and Plastic Flooring Materials Adapted by the Application of Water Thereto to Form a Self-Hardening Plaster Suitable for Application and Use as a Floor-Covering.
Claims use since Mar. 3, 1910.

Ser. No. 53,068. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) U. S. E. M. Co., New York, N. Y. Filed Dec. 1, 1910.

POTENTIOSTAT

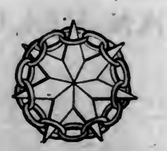
"Potentiostat."
Particular description of goods.—Electrical Bell-Ringers Actuated by Direct Current.
Claims use since Jan. 7, 1910.

Ser. No. 53,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD L. BALDWIN, San Francisco, Cal. Filed Dec. 5, 1910.

Celsade

Particular description of goods.—A Medicine for Headaches, Stomach Trouble, and Nervousness.
Claims use since Nov. 17, 1910.

Ser. No. 53,395. (CLASS 43. THREAD AND YARN.) NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany. Filed Dec. 21, 1910.



Particular description of goods.—Woolen Yarn.
Claims use since Jan. 21, 1904.

Ser. No. 53,943. (CLASS 17. TOBACCO PRODUCTS.) REPUBLIC OF FRANCE, Paris, France. Filed Jan. 18, 1911.

Particular description of goods.—Cigarettes.
Claims use since Aug. 28, 1877.

Ser. No. 54,309. (CLASS 38. PRINTS AND PUBLICATIONS.) BERNARD H. DE HUY, Abilene, Kans. Filed Feb. 4, 1911.

No claim being made to the words "Pro-Tec" and "Always" and the symbol "R."
Particular description of goods.—Labels.
Claims use since October, 1909.

Ser. No. 54,463. (CLASS 17. TOBACCO PRODUCTS.) THE GOVERNOR AND COMPANY OF ADVENTURERS OF ENGLAND TRADING INTO HUDSON'S BAY, Winnipeg, Manitoba, Canada. Filed Feb. 11, 1911. Under ten-year proviso.

Particular description of goods.—Smoking-Tobacco.
Claims use since the year 1890.

Ser. No. 54,729. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ALLMÄNNA SVENSKA ELEKTRISKA AKTIEBOLAGET, Westerås, Sweden. Filed Feb. 24, 1911.

Particular description of goods.—Electric Dynamos, Electric Generators, Electric Motors, Electric Converters, Electric Transformers, Electric Switching Apparatus, Electric Controlling Apparatus, Electric Safety-Fuses, Lightning-Arresters, No-Voltage Relays, Electric-Motor Plows, Electric Locomotives, Electric Cranes, Electric Hoists, Electric Lifts, Electric Elevators, Electric Ore-Separators, Electric Generators Combined with Steam-Engines or Internal-Combustion Engines, Electric Motors Combined with Machine-Tools.
Claims use since November, 1908.

Ser. No. 55,469. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CHICAGO POLISH COMPANY, Chicago, Ill. Filed Apr. 1, 1911.

Particular description of goods.—Metal-Polish.
Claims use since Feb. 1, 1911.

Ser. No. 55,566. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) CARL HIRSCH, New York, N. Y. Filed Apr. 6, 1911.

Black Diamond

Particular description of goods.—Smoking-Pipes.
Claims use since February, 1911.

Ser. No. 55,913. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JAQUES EDWIN BRANDENBERGER, Thaon-les-Vosges, France. Filed Apr. 22, 1911.

KINAR

Particular description of goods.—Dry-Plates, and Paper for Photographic and Kinematographic Use.
Claims use since Feb. 1, 1911.

Ser. No. 56,024. (CLASS 17. TOBACCO PRODUCTS.) JOHN E. SULLIVAN, Harrisonburg, Va. Filed Apr. 28, 1911.

Particular description of goods.—Cigars.
Claims use since Sept. 1, 1909.

Ser. No. 56,411. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HEINRICH HOFFMANN, Gablons, Austria. Filed May 17, 1911.

Consisting of the representation of a peacock-butterfly.
Particular description of goods.—Imitation and Artificial Simulations of Precious Stones Made of Glass.
Claims use since Mar. 11, 1911.

Ser. No. 56,484. (CLASS 12. CONSTRUCTION MATERIALS.) THE ATLAS PORTLAND CEMENT COMPANY, Northampton, Pa. Filed May 10, 1911.

ATLAS

Particular description of goods.—Lime, Hydrated Lime, and Building-Plaster Compositions.
Claims use since on or about Mar. 6, 1909.

Ser. No. 56,488. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD REAVES, Banks, Ark. Filed May 20, 1911.

REAVES

The portrait being a fanciful one. The use of the name "Reaves" on the drawing is not claimed as part of the trade-mark.
Particular description of goods.—A Preparation for Tempering Steel.
Claims use since Jan. 1, 1911.

Ser. No. 56,559. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. FORCHHEIMER & Co., Mobile, Ala. Filed May 24, 1911.

KING COTTON

Particular description of goods.—Wheat-Flour.
Claims use since May 1, 1911.

Ser. No. 56,704. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ERNST PAUL LEHMANN, Brandenburg-on-the-Havel, Germany. Filed May 31, 1911.

HALLO

Particular description of goods.—Sheet-Metal Toys Mounted on Wheels; Sheet-Metal Toys Constructed to Walk; Sheet-Metal Toys Constructed to Climb; Toy Autos; Toy Cycles; Toy Trams; Toy Railways; Toy Locomotives; Toy Airships; Toy Aeroplanes; Toy Propellers; Toy Boats; Toy Ships; Toy Vessels; Toy Tops; Toy Guns; Toy Animals.
Claims use since Mar. 7, 1911.

Ser. No. 57,003. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) HARRY BUDD, Independence, Kans. Filed June 13, 1911.

HOME COMFORT

Particular description of goods.—Clothes-Washing Machines.
Claims use since May 15, 1909.

Ser. No. 57,117. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DIERM-FANSLER GROCER CO., East St. Louis, Ill. Filed June 17, 1911.

CIRCUS

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Salmon, and Canned Hominy.
Claims use since Feb. 21, 1911.

Ser. No. 57,146. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REGINALD C. THOMAS, New York, N. Y. Filed June 17, 1911.

MISk

Particular description of goods.—Cosmetic Cream.
Claims use since June 5, 1911.

Ser. No. 57,207. (CLASS 32. FURNITURE AND UPHOLSTERY.) GUSTAV STICKLEY COMPANY, New York, N. Y. Filed June 21, 1911.

Stickley

Comprising the facsimile-signature of the surname of Gustav Stickley.

Particular description of goods.—Chairs, Tables, Divans, Sideboards, Buffets, Taborets, Umbrella-Stands, Bookcases, Hall-Backs, Piano-Cases, Pillows, and Music-Racks.
Claims use since the 1st of October, 1911.

Ser. No. 57,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNKIRK MACARONI & SUPPLY CO., Dunkirk, N. Y. Filed June 21, 1911.

IMPERIAL

Particular description of goods.—Macaroni, Vermicelli, and Spaghetti.
Claims use since May 24, 1911.

Ser. No. 57,288. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE SANITAS FUNDOSHI COMPANY, Cleveland, Ohio. Filed June 24, 1911.

The ball being red. The words "Sanitas Fundoshi" are hereby disclaimed.
Particular description of goods.—Suspensory Bandages.
Claims use since Jan. 1, 1896.

Ser. No. 57,399. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WIENER MACHINERY CO., New York, N. Y. Filed June 30, 1911.

OWL

Particular description of goods.—Machine-Tools.
Claims use since Jan. 1, 1911.

Ser. No. 57,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 8, 1911.

WHITE FEATHER

Particular description of goods.—A Compound of Corn-Syrup and Granulated-Sugar Syrup.
Claims use since 1908.

Ser. No. 57,606. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) FELTEN & GUILLEAUME CARLSWERK ACTIEN GESELLSCHAFT, Mülheim-on-the-Rhine, Germany. Filed July 13, 1911.

FIG NEPTUNE

Particular description of goods.—Barb-Wire, Wire Trellis, Wire Mats, Wire-Netting, Unions, Cocks, Valves, Wire Fences, Curtain-Rings.
Claims use since 1870.

Ser. No. 57,829. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed July 26, 1911.

Particular description of goods.—Pianos and Organs.
Claims use since on or about the 10th day of January, 1907.

Mozart

Ser. No. 57,940. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN SORLEY, Feilding, New Zealand. Filed Aug. 1, 1911.

YELROS.

Particular description of goods.—Chemical Compositions for Destroying Blight and the Like on Plants.
Claims use since 22d of September, 1910.

Ser. No. 58,010. (CLASS 39. CLOTHING.) SACKMAN BROTHERS COMPANY, New York, N. Y. Filed Aug. 3, 1911.

BULLS EYE

Particular description of goods.—Children's Outer Suits.
Claims use since July 15, 1911.

Ser. No. 58,036. (CLASS 39. CLOTHING.) THE DEMPSTER & PLACE COMPANY, Gloversville, N. Y. Filed Aug. 4, 1911.

Particular description of goods.—Gloves and Mittens.
Claims use since 1886.

Ser. No. 58,167. (CLASS 39. CLOTHING.) E. ROSENHEIM'S SON, New York, N. Y. Filed Aug. 12, 1911.

Particular description of goods.—Children's and Misses' Cloaks and Suits.
Claims use since the year 1880.

Ser. No. 58,252. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK HELFENBERG A. G. VORM. EUGEN DIETRICH, Helfenberg, Germany. Filed Aug. 17, 1911.

Contaenin

Particular description of goods.—A Tapeworm Remedy.
Claims use since June 26, 1911.

Ser. No. 58,279. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPER PRODUCTS COMPANY, St. Louis, Mo. Filed Aug. 19, 1911.

APPCO

Particular description of goods.—Corrugated Paper.
Claims use since July 28, 1911.

Ser. No. 58,319. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BURRTON MILLING COMPANY, Burrton, Kans. Filed Aug. 22, 1911.

No claim is made to the words "Burrton Milling Co.," "Burrton, Kan. U. S. A.," "To the Burrton," and "To the Consumer," appearing on the envelop in the representation.

Particular description of goods.—Wheat-Flour and Cornmeal.

Claims use since May 11, 1911.

Ser. No. 58,386. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN HOFFMANN & SONS CO., Milwaukee, Wis. Filed Aug. 25, 1911.

The picture shown being fanciful.

Particular description of goods.—Blended Coffee.

Claims use since July 12, 1911.

Ser. No. 58,405. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EMIL J. FUNK, Cleveland, Ohio. Filed Aug. 26, 1911.

Particular description of goods.—Dust-Cloths and Broom-Covers.

Claims use since May 1, 1910.

Ser. No. 58,565. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORG DRALLE, Altona, Germany. Filed Sept. 7, 1911. Under ten-year proviso.

BIRCH-WATER

Particular description of goods.—Hair-Water.

Claims use since about the year 1886.

Ser. No. 58,658. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed Sept. 13, 1911.

G. Daimler

"G. Daimler," a facsimile-signature.

Particular description of goods.—Motors, Motor Parts and Armatures, Dynamo-Machines, and Electrical Lifts.

Claims use since Jan. 31, 1911.

Ser. No. 58,696. (CLASS 39. CLOTHING.) ELIZABETH CITY HOSIERY CO., Elizabeth City, N. C. Filed Sept. 16, 1911.

Particular description of goods.—Hosiery.

Claims use since July 1, 1911.

Ser. No. 58,863. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) ANTOINE ASCHÉRI, Neuilly-sur-Seine, France. Filed Sept. 26, 1911.

LE MONSTRE

Particular description of goods.—Pneumatic Tires, Covers, and Smooth or Antiskidding Treads.

Claims use since July 11, 1911.

Ser. No. 58,976. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BABENE MANUFACTURING COMPANY, Dover, Del., and Baltimore, Md. Filed Oct. 3, 1911.

Particular description of goods.—A Medical or Pharmaceutical Preparation for a Remedy for Colic, Diarrhea, and Teething Troubles in Children.

Claims use since June 1, 1909.

Ser. No. 58,978. (CLASS 39. CLOTHING.) REJANE LITKE, New York, N. Y. Filed Oct. 3, 1911.

Particular description of goods.—Corsets.

Claims use since Apr. 15, 1911.

Ser. No. 58,999. (CLASS 39. CLOTHING.) ROBERTS, JOHNSON & RAND SHOE COMPANY, St. Louis, Mo. Filed Oct. 5, 1911.

Particular description of goods.—Leather Boots and Shoes.

Claims use since about July 1, 1894.

Ser. No. 59,101. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Oct. 11, 1911.

MAJOR

Particular description of goods.—Sheathing-Paper.

Claims use since Nov. 6, 1902.

Ser. No. 59,163. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL SEWING MACHINE COMPANY, Belvidere, Ill. Filed Oct. 16, 1911.

"HAPPY DAY"

Particular description of goods.—Laundry Washing-Machines.

Claims use since Oct. 6, 1911.

Ser. No. 59,187. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM C. NOTHERN, Little Rock, Ark. Filed Oct. 16, 1911.

Particular description of goods.—Prepared Stock Food.

Claims use since June 1, 1910.

Ser. No. 59,277. (CLASS 17. TOBACCO PRODUCTS.) GEORGE J. GAMMEL & COMPANY, Buffalo, N. Y. Filed Oct. 21, 1911.

Particular description of goods.—Cigars.

Claims use since Aug. 1, 1911.

Ser. No. 59,283. (CLASS 12. CONSTRUCTION MATERIALS.) WESTERN BRICK COMPANY, Danville, Ill. Filed Oct. 21, 1911.

Cloister

Particular description of goods.—Bricks.

Claims use since Oct. 6, 1911.

Ser. No. 59,389. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

The portrait being that of Hernando De Soto, deceased.

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,390. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

The portrait being that of Hernando De Soto, deceased.

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,391. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,392. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,393. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,394. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,395. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,396. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,397. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,398. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,399. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,400. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark. Filed Oct. 27, 1911.

DE SOTO

Particular description of goods.—Natural Spring-Water.

Claims use since Sept. 20, 1911.

Ser. No. 59,397. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLISH MILLING COMPANY, Seymour, Ind. Filed Oct. 28, 1911.

COLONIAL

Particular description of goods.—Wheat-Flour.
Claims use since 1900.

Ser. No. 59,434. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUSTAV GRETHER, Koblenz, Germany. Filed Oct. 30, 1911.

Malacid

Particular description of goods.—Chemical Preparations for Use in the Destruction of Organisms Injurious to Plants.
Claims use since the 3d of July, 1911.

Ser. No. 59,487. (CLASS 39. CLOTHING.) COLLINS & FAIRBANKS CO., Boston, Mass. Filed Nov. 1, 1911.

CAIDMUIR

Particular description of goods.—Men's and Women's Outer Coats and Wraps.
Claims use since about Sept. 26, 1911.

Ser. No. 59,494. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PETROLEUM PRODUCTS CO., New York, N. Y. Filed Nov. 2, 1911.

PET-PRO-CO

Particular description of goods.—Turpentine Substitutes and Linseed-Oil Substitutes.
Claims use since about Oct. 9, 1911.

Ser. No. 59,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. M. BUDD, Homestead, Fla. Filed Nov. 7, 1911.

Particular description of goods.—A Remedy for Sweaty Feet, Scalded Feet, Ill-Smelling Feet, Tender Feet, Chilblains, and a Deodorizer.
Claims use since Nov. 1, 1911.

Ser. No. 59,600. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HAMMEL RIGLANDER & CO., New York, N. Y. Filed Nov. 7, 1911. Under ten-year proviso.

LANCASTER

Particular description of goods.—Gravers.
Claims use since July 1, 1891.

Ser. No. 59,605. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) YORK NOVELTY CO., York, Pa. Filed Nov. 7, 1911.

MONOPLANE

Particular description of goods.—Children's Sleds.
Claims use since about June 1, 1911.

Ser. No. 59,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN B. COX, Maryville, Mo. Filed Nov. 11, 1911.

The picture being that of myself and my four sons.
Particular description of goods.—An External Remedy for Pneumonia, Bronchitis, Congestion of the Lungs, Typhoid Fever, Rheumatism, Tonsilitis, Diphtheria, and the La Grippe.
Claims use since July 10, 1911.

Ser. No. 59,701. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa. Filed Nov. 13, 1911.

ASCITROS

Particular description of goods.—A Pill, a Remedy for the Treatment of Articular and Muscular Rheumatism, Influenza, Tonsilitis, Megrim, Sciatica, and other Neuralgias.
Claims use since the 1st day of November, 1911.

Ser. No. 59,702. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa. Filed Nov. 13, 1911.

PARITOL

Particular description of goods.—A Pill, a Remedy for Rheumatism, Fever, Neuralgia, Sciatica, Influenza, and Headaches.
Claims use since the 1st day of November, 1911.

Ser. No. 59,706. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. R. SQUIBB & SONS, New York, N. Y. Filed Nov. 13, 1911.

Thoromedin

Particular description of goods.—Chemical and Pharmaceutical Products in Paste, Ointment, and Liquid Form for Use in the Treatment of Skin Diseases and Malignant Tumors.
Claims use since Nov. 9, 1911.

Ser. No. 59,724. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES W. HOLZHAUER, Newark, N. J. Filed Nov. 15, 1911.

Corenzic

Particular description of goods.—Remedies for Grippe and Influenza.
Claims use since Nov. 1, 1911.

Ser. No. 59,790. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MITRED BOX COMPANY, New York, N. Y. Filed Nov. 18, 1911.

Yankee

Particular description of goods.—Children's Dolls.
Claims use since Aug. 20, 1911.

Ser. No. 59,908. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Nov. 24, 1911.

COMIC CUTS

Particular description of goods.—Biscuit.
Claims use since Oct. 11, 1911.

Ser. No. 59,914. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM J. SCHERER, Rochester, N. Y. Filed Nov. 25, 1911.

Particular description of goods.—A Cathartic Powder for Headache, Neuralgia, Rheumatism, Seasickness, Chills and Fever.
Claims use since January, 1890.

Ser. No. 59,920. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CUMMINGS MANUFACTURING COMPANY, Morristown, N. J. Filed Nov. 25, 1911.

Particular description of goods.—Foot-Powder, Foot-Cream, Foot-Lotion, Foot-Bath Tablets.
Claims use since Nov. 13, 1911.

Ser. No. 59,977. (CLASS 15. OILS AND GREASES.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Nov. 28, 1911.

STORK

Particular description of goods.—Refined Oil for Illuminating, Heating, and Power Purposes..
Claims use since Nov. 13, 1911.

Ser. No. 59,995. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y. Filed Nov. 29, 1911.

PARADUROL

Particular description of goods.—A Chemical for Preventing Decomposition, Added to Pastes Used for Cotton or other Textile Printing and to Diazotized Products to be Used in Dyeing.
Claims use since Nov. 3, 1911.

Ser. No. 60,015. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, CO., Baltimore Md., and Coraopolis, Pa. Filed Dec. 1, 1911. Under ten-year proviso.

COLOPHINE

Particular description of goods.—Cylinder and Engine Oil.
Claims use since A. D. 1875.

Ser. No. 60,016. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, CO., Baltimore Md., and Coraopolis, Pa. Filed Dec. 1, 1911.

ENDURO

Particular description of goods.—Cylinder-Oil.
Claims use since A. D. 1909.

Ser. No. 60,018. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, CO., Baltimore Md., and Coraopolis, Pa. Filed Dec. 1, 1911.

ENDUROLINE

Particular description of goods.—Engine-Oil.
Claims use since A. D. 1910.

Ser. No. 60,021. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, CO., Baltimore Md., and Coraopolis, Pa. Filed Dec. 1, 1911.

FLEX

Particular description of goods.—Valve-Oil.
Claims use since A. D. 1903.

Ser. No. 60,052. (CLASS 15. OILS AND GREASES.) LONGMAN & MARTINEZ, New York, N. Y. Filed Dec. 2, 1911.

Particular description of goods.—Illuminating-Oil.
Claims use since the year 1875.

Ser. No. 60,053. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. F. YOUNG & CO., New York, N. Y.; Pittsburgh, Pa., and Boston, Mass. Filed Dec. 2, 1911.

Red Rover

Particular description of goods.—Oranges.
Claims use since Nov. 17, 1911.

Ser. No. 60,056. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) IMPERIAL RUBBER CO., New York, N. Y. Filed Dec. 2, 1911.

RUBBERNITE

Comprising the word "Rubbernite."
Particular description of goods.—Electrical Insulating-Tapes, Paints and Varnishes for Electrical Insulating Purposes, Electrical Insulating Compounds, Switchboard-Mats, Electrical Insulating Mats, Blocks, and other Shapes and Forms of Electrical Insulation, Tubing for Electrical Purposes, Insulated Wire and other Metallic Insulated Conductors of Various Shapes, Insulating-Cloth, Electrical Bushings, and Incandescent Electric Lamps.
Claims use since the year 1905.

Ser. No. 60,070. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN MILK COMPANY, Chicago, Ill. Filed Dec. 4, 1911.

Particular description of goods.—Sweetened Condensed Milk.
Claims use since Nov. 15, 1911.

Ser. No. 60,085. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) STEWART & CLARK MANUFACTURING COMPANY, Chicago, Ill. Filed Dec. 1, 1911.

Stewart

Being a facsimile of the signature of the president and founder of this corporation.
Particular description of goods.—Speed-Indicating Instruments.
Claims use since November, 1906.

Ser. No. 60,132. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 9, 1911.

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,141. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MINOT, HOOPER & CO., New York, N. Y. Filed Dec. 9, 1911.

Particular description of goods.—Woven Cotton Fabrics.
Claims use since 1875.

Ser. No. 60,142. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

BUTTERCUP

Particular description of goods—Biscuit.
Claims use since February, 1883.

Ser. No. 60,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

Cecilia

Particular description of goods.—Biscuit.
Claims use since April 1897.

Ser. No. 60,145. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

CONGRESS

Particular description of goods.—Biscuit.
Claims use since 1876.

Ser. No. 60,148. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

PALMETTO

Particular description of goods.—Biscuit.
Claims use since April, 1900.

Ser. No. 60,154. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VIRGINIA SILK CO., (INCORPORATED,) Richmond, Va. Filed Dec. 9, 1911.

Vasilco

Particular description of goods.—Silk Ribbons.
Claims use since Nov. 10, 1911.

Ser. No. 60,172. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ANDREW MATTEI, Fresno, Cal. Filed Dec. 11, 1911.

ANDELLA

Particular description of goods.—Brandies.
Claims use since Nov. 1, 1911.

Ser. No. 60,180. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE VULCANIZED RUBBER CO., New York, N. Y. Filed Dec. 12, 1911.

Aviator

Particular description of goods.—Rubber Combs.
Claims use since January, 1910.

Ser. No. 60,182. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) C. M. GREY MFG. CO., East Orange, N. J. Filed Dec. 12, 1911.

CMG

Particular description of goods.—Die-Castings.
Claims use since Oct. 20, 1911.

Ser. No. 60,195. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 12, 1911.

A

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,199. (CLASS 15. OILS AND GREASES.) BURKO GREASE CO., Philadelphia, Pa. Filed Dec. 13, 1911.

BURKO

Particular description of goods.—Lubricant-Grease.
Claims use since Oct. 24, 1911.

Ser. No. 60,207. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 13, 1911.

A

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,208. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 13, 1911.

AMERICAN IRON AND STEEL MFG. CO. LEBANON, PA. U.S.A.

No claim being made, however, for the words "American Iron and Steel M'f'g. Co.," "Lebanon, Pa., U. S. A.," or the figure representing a bolt and nut.
Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,210. (CLASS 39. CLOTHING.) H. LOEB & Co., New York, N. Y. Filed Dec. 13, 1911. Under ten-year proviso.

STUTTGARTER

Particular description of goods.—Knit Underwear.
Claims use since 1889.

Ser. No. 60,268. (CLASS 39. CLOTHING.) PEERLESS OVERALL CO., Huntington, W. Va. Filed Dec. 15, 1911.

BLUE JAY

Particular description of goods.—Men's and Boys' Trousers, Coats, Overalls, and Outer Shirts.
Claims use since Nov. 17, 1911.

Ser. No. 60,269. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PRENTISS VISE COMPANY, New York, N. Y. Filed Dec. 15, 1911.

MAGIC

Particular description of goods.—Vises.
Claims use since May, 1911.

Ser. No. 60,413. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JACOB RUPPERT, New York, N. Y. Filed Dec. 22, 1911.

Particular description of goods.—Beer.
Claims use since about Feb. 1, 1911.

TRADE-MARKS

REGISTERED JANUARY 30, 1912.

85,051. SEWING COTTON THREAD IN BALLS. R. F. & J. ALEXANDER & Co., LTD., Neilston, Scotland.
Filed February 18, 1909. Serial No. 40,638. PUBLISHED NOVEMBER 28, 1911.

85,052. MEDICINAL TEA. HUGO ALLENDORFF, Bad Wildungen, Germany.
Filed May 23, 1911. Serial No. 56,544. PUBLISHED NOVEMBER 21, 1911.

85,053. LEATHER BOOTS AND SHOES. ALLEN-FOSTER-WILLETT Co., Lynn, Mass.
Filed August 24, 1911. Serial No. 58,364. PUBLISHED NOVEMBER 21, 1911.

85,054. TOILET POWDER. THE ARTHUR CHEMICAL Co., New Haven, Conn.
Filed October 11, 1911. Serial No. 59,111. PUBLISHED NOVEMBER 21, 1911.

85,055. CORSETS. THE ARTISTS' MODEL CORSET COMPANY, Cleveland, Ohio.
Filed July 5, 1910. Serial No. 50,695. PUBLISHED NOVEMBER 28, 1911.

85,056. CANDY AND CANDIED POPCORN. AUBUCHON-GARNEAU CANDY COMPANY, St. Louis, Mo.
Filed September 18, 1911. Serial No. 58,712. PUBLISHED NOVEMBER 14, 1911.

85,057. POWDERED FORM OF WASHING COMPOUND. RICHARD AUSTIN, Memphis, Tenn.
Filed April 8, 1911. Serial No. 55,614. PUBLISHED OCTOBER 31, 1911.

85,058. CANNED VEGETABLES. CHARLES W. BAKER, Aberdeen, Md.
Filed May 16, 1911. Serial No. 56,393. PUBLISHED NOVEMBER 14, 1911.

85,059. SAUCES AND PREPARATIONS FOR MAKING BOUILLON AND SOUPS. GUSTAV BANTHIEN, Hamburg, Germany.
Filed June 27, 1911. Serial No. 57,328. PUBLISHED NOVEMBER 14, 1911.

85,060. SPARK-PLUGS. THE BIGSBY MANUFACTURING COMPANY, Cleveland, Ohio.
Filed October 21, 1911. Serial No. 59,280. PUBLISHED NOVEMBER 28, 1911.

85,061. CANNED OYSTERS, SHRIMPS, PRAWNS, AND FIGS. BILOXI CANNING CO. OF LOUISIANA, New Orleans, La.
Filed June 26, 1909. Serial No. 43,291. PUBLISHED NOVEMBER 21, 1911.

85,062. WORK AND NEGLIGÉE SHIRTS AND TROUSERS. BIRDSALL BROTHERS Co., Seelyville and Honesdale, Pa.
Filed December 5, 1910. Serial No. 53,141. PUBLISHED NOVEMBER 21, 1911.

85,063. BLENDED COFFEE. RUTGER BLEECKER, New York, N. Y.
Filed May 9, 1911. Serial No. 56,271. PUBLISHED NOVEMBER 14, 1911.

85,064. MEDICINAL PREPARATION. THE BLUFFTON CHEMICAL COMPANY, Bluffton, Ind.
Filed April 1, 1911. Serial No. 55,451. PUBLISHED NOVEMBER 28, 1911.

85,065. SOAP. GEO. BORGFELDT & Co., New York, N. Y.
Filed February 15, 1910. Serial No. 47,829. PUBLISHED NOVEMBER 7, 1911.

85,066. CANDY LOZENGES. C. A. BRIGGS Co., Portland, Me., and Boston, Mass.
Filed May 22, 1911. Serial No. 56,535. PUBLISHED NOVEMBER 14, 1911.

85,067. SUNBONNETS. BROWN AND BISHOP, Bay City, Mich.
Filed July 12, 1910. Serial No. 50,804. PUBLISHED NOVEMBER 28, 1911.

85,068. "JAVELLE WATER," A SOLUTION FOR BLEACHING AND DISINFECTING PURPOSES. CADORETTE BROS. & Co., Lawrence, Mass.
Filed June 14, 1911. Serial No. 57,023. PUBLISHED NOVEMBER 21, 1911.

85,069. LEMONS. CALIFORNIA FRUIT GROWERS. EXCHANGE, Los Angeles, Cal.
Filed January 13, 1909. Serial No. 39,876. PUBLISHED MARCH 29, 1910.

85,070. HAMS, BACON, AND LARD. CARONDELET PACKING COMPANY, St. Louis, Mo.
Filed May 22, 1911. Serial No. 56,517. PUBLISHED NOVEMBER 14, 1911.

85,071. CANNED FRUITS. CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal.
Filed July 23, 1909. Serial No. 43,728. PUBLISHED NOVEMBER 21, 1911.

85,072. CERTAIN FLOURS. F. B. CHAMBERLAIN Co., St. Louis, Mo.
Filed July 29, 1910. Serial No. 51,143. PUBLISHED SEPTEMBER 12, 1911.

85,073. CERTAIN ELECTRICAL APPARATUS. CHAMPION IGNITION COMPANY, Flint, Mich.
Filed March 28, 1910. Serial No. 48,705. PUBLISHED JUNE 21, 1910.

85,074. COLORING FOR FOOD. CHASE & NEELY, Bradford, Pa.
Filed May 31, 1911. Serial No. 56,702. PUBLISHED NOVEMBER 21, 1911.

85,075. SHOE, LEATHER, METAL, AND STOVE POLISH, AND CLEANING COMPOUND. STANLEY CLAGUE, Chicago, Ill., assignor to Yours Truly Company, Chicago, Ill., a Corporation of Illinois.
Filed July 23, 1910. Serial No. 51,021. PUBLISHED NOVEMBER 7, 1911.

85,076. CERTAIN FOODS. STANLEY CLAGUE, Chicago, Ill., assignor to Yours Truly Company, Chicago, Ill., a Corporation of Illinois.
Filed July 23, 1910. Serial No. 51,026. PUBLISHED NOVEMBER 14, 1911.

85,077. COAL. HORACE CLARK & SONS Co., Peoria, Ill.
Filed August 22, 1911. Serial No. 58,332. PUBLISHED NOVEMBER 14, 1911.

85,078. CASH AND EXPENSE BOOKS. WILLIAM H. CLEASBY, Hartford, Conn.
Filed August 28, 1911. Serial No. 58,420. PUBLISHED NOVEMBER 28, 1911.

85,079. ELECTRIC-ARC-LIGHT CARBONS. C. CONRADTY (INHABER PAULINE & EUGEN CONRADTY) FABRIK ELEKTRISCHER U. GALVANISCHER KOHLEN, Nuremberg, Germany.
Filed August 29, 1910. Serial No. 51,598. PUBLISHED NOVEMBER 14, 1911.

85,080. CERTAIN FOODS. CONSERVENFABRIK LENZBURG VORM. HENCKELL & ROTH, Lenzburg, Switzerland.
Filed March 21, 1911. Serial No. 55,277. PUBLISHED NOVEMBER 14, 1911.

85,081. BEER. CONWAY BROS. BREWING & MALTING COMPANY, Troy, N. Y.
Filed October 14, 1911. Serial No. 59,166. PUBLISHED NOVEMBER 28, 1911.

85,082. HARNESS HARDWARE. COVERT MFG. CO., Watervliet, N. Y.
Filed July 29, 1911. Serial No. 57,928. PUBLISHED NOVEMBER 21, 1911.

85,083. REMEDY FOR COUGHS AND COLDS. CRANE MEDICINE CO., Chicago, Ill.
Filed April 1, 1911. Serial No. 55,468. PUBLISHED NOVEMBER 21, 1911.

85,084. CORSETS, CORSET-WAISTS, BRASSIÈRES, AND UNDERWAISTS. THE CROWN CORSET COMPANY, New York, N. Y.
Filed February 4, 1911. Serial No. 54,301. PUBLISHED NOVEMBER 21, 1911.

85,085. COFFEE-SETTLER PREPARED FROM FISH ISINGLASS. CRYSTAL GELATINE COMPANY, Boston, Mass.
Filed August 11, 1911. Serial No. 58,139. PUBLISHED NOVEMBER 14, 1911.

85,086. TOILET, SCOURING, AND CLEANSING SOAP. FREDERICK H. DALAND, New York, N. Y.
Filed September 21, 1911. Serial No. 58,770. PUBLISHED OCTOBER 31, 1911.

85,087. SOLID, POROUS, FRIABLE RESIDUE FROM DISTILLATION OF PETROLEUM. DEREVOISE-ANDERSON COMPANY, New York, N. Y.
Filed June 6, 1910. Serial No. 50,141. PUBLISHED OCTOBER 11, 1910.

85,088. CANNED PRESERVED VEGETABLES. JOSEPH DE POOTER, Lierre, Belgium.
Filed July 27, 1911. Serial No. 57,844. PUBLISHED NOVEMBER 14, 1911.

85,089. LOUSE-EXTERMINATOR. J. C. DINSMORE CO., Kramer, Ind.
Filed October 21, 1911. Serial No. 59,279. PUBLISHED NOVEMBER 21, 1911.

85,090. CRAB-MEAT. HERMAN DUBLER, New York, N. Y.
Filed April 19, 1909. Serial No. 41,879. PUBLISHED JUNE 6, 1911.

85,091. OILS AND PREPARATIONS OF OILS USED FOR TREATMENT OF TEXTILES AND LEATHER. B. P. DUCAS CO., New York, N. Y.
Filed July 15, 1911. Serial No. 57,637. PUBLISHED NOVEMBER 28, 1911.

85,092. WHEAT-FLOUR. THE EATON MILLING & ELEVATOR CO., Eaton, Colo.
Filed September 21, 1911. Serial No. 58,777. PUBLISHED NOVEMBER 14, 1911.

85,093. HORSE FEED. EDWARDS & LOOMIS CO., Chicago, Ill.
Filed May 1, 1911. Serial No. 56,105. PUBLISHED NOVEMBER 21, 1911.

85,094. TOILET PREPARATIONS TO PREVENT CHAFING AND CHAPPING. GODFREY EDWARDS, Liverpool, England.
Filed July 14, 1911. Serial No. 57,621. PUBLISHED NOVEMBER 21, 1911.

85,095. ORANGES, LEMONS, GRAPE-FRUIT, TANGERINES, AND LIMES. ESPERANZA FRUIT CO., Palatka, Fla.
Filed January 4, 1911. Serial No. 53,663. PUBLISHED FEBRUARY 21, 1911.

85,096. MEDICINAL PREPARATION. FAIRCHILD BROS. & FOSTER, New York, N. Y.
Filed June 26, 1911. Serial No. 57,318. PUBLISHED NOVEMBER 21, 1911.

85,097. NASAL AND THROAT REMEDIES. ADELINE R. FARNUM, San Francisco, Cal.
Filed July 22, 1911. Serial No. 57,783. PUBLISHED NOVEMBER 21, 1911.

85,098. COATS, VESTS, TROUSERS, AND OVERCOATS. THE FECHHEIMER KIEFER COMPANY, Cincinnati, Ohio.
Filed August 26, 1909. Serial No. 44,370. PUBLISHED JULY 11, 1911.

85,099. MEDICATED CANDIES. LEIGH L. FINCH, New York, N. Y.
Filed September 27, 1911. Serial No. 58,879. PUBLISHED NOVEMBER 21, 1911.

85,100. FACE-CREAM. JULIA FLEISCHMAN, New York, N. Y.
Filed September 25, 1911. Serial No. 58,838. PUBLISHED NOVEMBER 21, 1911.

85,101. CERTAIN FOODS. THE FOUR CO. INC., Norfolk, Va.
Filed March 22, 1911. Serial No. 55,243. PUBLISHED NOVEMBER 21, 1911.

85,102. LADIES' OUTER GARMENTS. J. J. FRIEDMAN & CO., Dover, N. J.
Filed January 28, 1911. Serial No. 54,156. PUBLISHED NOVEMBER 28, 1911.

85,103. PREPARATIONS FOR THE RELIEF OF FOOT TROUBLES. ARTEMUS LOWELL FRITCH, Oskaloosa, Iowa.
Filed September 23, 1911. Serial No. 58,822. PUBLISHED NOVEMBER 21, 1911.

85,104. VEGETABLE-TANNED LEATHER MADE OF CALF, KIP, AND CATTLE HIDES. A. F. GALLUN & SONS, Milwaukee, Wis.
Filed June 17, 1911. Serial No. 57,124. PUBLISHED OCTOBER 31, 1911.

85,105. COATS, OVERCOATS, AND RAIN-COATS. GARSON-MEYER & CO., Rochester, N. Y.
Filed February 17, 1910. Serial No. 47,874. PUBLISHED NOVEMBER 21, 1911.

85,106. SOAP. THE GLOBE SOAP COMPANY, Cincinnati, Ohio.
Filed December 20, 1909. Serial No. 46,615. PUBLISHED FEBRUARY 22, 1910.

85,107. CANNED FRUITS AND VEGETABLES AND CHEESE. GOLDBERG, BOWEN & CO., San Francisco, Cal.
Filed November 10, 1910. Serial No. 52,695. PUBLISHED NOVEMBER 21, 1911.

85,108. SILK-TREATING SUBSTANCES. TH. GOLDSCHMIDT, Essen-on-the-Ruhr, Germany.
Filed April 18, 1911. Serial No. 55,811. PUBLISHED NOVEMBER 21, 1911.

85,109. LUBRICATING-OIL. THE GREAT WESTERN OIL CO., Cleveland, Ohio.
Filed February 6, 1911. Serial No. 54,334. PUBLISHED NOVEMBER 14, 1911.

85,110. BREAD. EDWIN O. GROVER, New York, N. Y.
Filed September 11, 1911. Serial No. 58,626. PUBLISHED NOVEMBER 21, 1911.

85,111. CANNED FRUITS AND VEGETABLES, CANNED PORK AND BEANS. HAAS-LIEBER GROCERY COMPANY, St. Louis, Mo.
Filed June 26, 1911. Serial No. 57,321. PUBLISHED NOVEMBER 21, 1911.

85,112. MEDICAL PREPARATION IN LIQUID FORM FOR BLOOD DISEASES. LIBBY HAEFNER, Chicago, Ill.
Filed September 18, 1911. Serial No. 58,708. PUBLISHED NOVEMBER 28, 1911.

85,113. CANNED PINEAPPLE. HAWAIIAN PINEAPPLE CO., LTD., Honolulu, Hawaii Ter.
Filed February 28, 1911. Serial No. 54,770. PUBLISHED NOVEMBER 14, 1911.

85,114. REMEDY FOR SKIN DISEASES. HEBERT AND GUIDRY, Houma, La.
Filed September 6, 1910. Serial No. 51,678. PUBLISHED NOVEMBER 28, 1911.

85,115. REFRIGERATORS. HELLRUNG AND GRIMM HOUSE FURNISHING CO., St. Louis, Mo.
Filed October 20, 1911. Serial No. 59,254. PUBLISHED NOVEMBER 21, 1911.

85,116. COATS. HERSHBERG & COMPANY, Rochester, N. Y.
Filed June 26, 1911. Serial No. 57,308. PUBLISHED NOVEMBER 28, 1911.

85,117. THINNER FOR PAINTS AND VARNISHES. HILDRETH VARNISH CO., New York, N. Y.
Filed September 30, 1911. Serial No. 58,944. PUBLISHED NOVEMBER 21, 1911.

85,118. CANNED TOMATOES. HOBBS MFG. CO., Hobbs, Md.
Filed June 20, 1910. Serial No. 50,441. PUBLISHED NOVEMBER 21, 1911.

85,119. CANNED KRAUT AND CANNED BOILED CABBAGE. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,065. PUBLISHED NOVEMBER 21, 1911.

85,120. CANNED CORN. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,069. PUBLISHED NOVEMBER 14, 1911.

85,121. CANNED CORN. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,071. PUBLISHED NOVEMBER 14, 1911.

85,122. CANNED PEAS AND CANNED CORN. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,072. PUBLISHED NOVEMBER 14, 1911.

85,123. CANNED PEAS AND CANNED CORN. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,073. PUBLISHED NOVEMBER 21, 1911.

85,124. CANNED CORN. P. HOHENADEL JR. CANNING COMPANY, Rochelle, Ill.
Filed August 7, 1911. Serial No. 58,074. PUBLISHED NOVEMBER 21, 1911.

85,125. CANNED TOMATOES. THE HOLLAND-COUNCIL COMPANY, INC., Norfolk, Va.
Filed August 25, 1911. Serial No. 58,367. PUBLISHED NOVEMBER 14, 1911.

85,126. METAL CLEANING AND POLISHING COMPOSITIONS. HOUSEHOLD CONVENIENCE COMPANY, LIMITED, Toronto, Ontario, Canada.
Filed May 6, 1910. Serial No. 49,541. PUBLISHED NOVEMBER 7, 1911.

85,127. SOAP. RICHARD HUDNUT, New York, N. Y.
Filed July 18, 1911. Serial No. 57,693. PUBLISHED NOVEMBER 21, 1911.

85,128. EXTRACT OF SOAP. R. S. HUDSON LIMITED, Liverpool, England.
Filed June 5, 1911. Serial No. 56,826. PUBLISHED NOVEMBER 7, 1911.

85,129. SULFATE CELLULOSE. A/S HURUM FABRIKER, Jelöen, Norway.
Filed August 16, 1911. Serial No. 58,226. PUBLISHED NOVEMBER 14, 1911.

85,130. POCKET-BOOKS. JAMESON & METZLER, New York, N. Y.
Filed February 2, 1911. Serial No. 54,267. PUBLISHED NOVEMBER 21, 1911.

85,131. CANDY. FRANZ G. JENSEN, Springfield, Mass.
Filed September 14, 1911. Serial No. 58,663. PUBLISHED NOVEMBER 21, 1911.

85,132. TOILET SOAP. THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio.
Filed September 12, 1911. Serial No. 58,635. PUBLISHED NOVEMBER 21, 1911.

85,133. CERTAIN TOILET PREPARATIONS. THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio.
Filed September 12, 1911. Serial No. 58,636. PUBLISHED NOVEMBER 21, 1911.

85,134. PERFUMES AND TOILET WATER. THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio.
Filed September 12, 1911. Serial No. 58,637. PUBLISHED NOVEMBER 28, 1911.

85,135. MEDICINAL PREPARATION. WALTER D. JONES, Redgranite, Wis.
Filed October 7, 1911. Serial No. 59,046. PUBLISHED NOVEMBER 21, 1911.

85,136. WHEAT-FLOUR. KEHLOR FLOUR MILLS COMPANY, St. Louis, Mo., and East St. Louis, Ill.
Filed December 30, 1910. Serial No. 53,562. PUBLISHED NOVEMBER 21, 1911.

85,137. GERMICIDAL DRESSINGS. KNOX THENARDINE CHEMICAL COMPANY, New York, N. Y.
Filed October 9, 1911. Serial No. 59,082. PUBLISHED NOVEMBER 21, 1911.

85,138. CANNED VEGETABLES. KOKOMO CANNING COMPANY, Kokomo, Ind.
Filed September 21, 1911. Serial No. 58,797. PUBLISHED NOVEMBER 14, 1911.

85,139. CORSETS AND CORSET-PADS. KOPS BROS., New York, N. Y.
Filed August 16, 1911. Serial No. 58,235. PUBLISHED NOVEMBER 28, 1911.

85,140. MEN'S, BOYS', AND CHILDREN'S OUTER CLOTHING. KORNMANN, COHEN & ETTLINGER, New York, N. Y.
Filed June 17, 1911. Serial No. 57,153. PUBLISHED NOVEMBER 28, 1911.

85,141. SUGAR-COATED CATHARTIC PILLS. LANMAN & KEMP, New York, N. Y.
Filed May 27, 1911. Serial No. 56,624. PUBLISHED NOVEMBER 21, 1911.

85,142. LEATHER POWER-TRANSMITTING BELTING. ARCHER C. LAURENCE, New York, N. Y.
Filed April 22, 1911. Serial No. 55,910. PUBLISHED NOVEMBER 14, 1911.

85,143. PEARL TAPIOCA. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 21, 1911. Serial No. 58,766. PUBLISHED NOVEMBER 14, 1911.

85,144. CHILLI SAUCE AND ASSORTED DINNER-NUTS. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 21, 1911. Serial No. 58,767. PUBLISHED NOVEMBER 14, 1911.

85,145. BAKING-POWDER. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 21, 1911. Serial No. 58,768. PUBLISHED NOVEMBER 21, 1911.

85,146. SOUR GHERKINS AND MINT SAUCE. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 28, 1911. Serial No. 58,911. PUBLISHED NOVEMBER 14, 1911.

85,147. FIBER PAPER. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 28, 1911. Serial No. 58,914. PUBLISHED NOVEMBER 28, 1911.

85,148. ASSORTED DINNER-NUTS. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 28, 1911. Serial No. 58,916. PUBLISHED NOVEMBER 14, 1911.

85,149. IMPORTED MACARONI. FRANCIS H. LEGGETT & Co., New York, N. Y.
Filed September 21, 1911. Serial No. 58,765. PUBLISHED NOVEMBER 14, 1911.

85,150. ANTISEPTIC FOR MEDICINAL USE. LAMBERT PHARMACAL COMPANY, St. Louis, Mo.
Filed January 30, 1911. Serial No. 54,170. PUBLISHED NOVEMBER 21, 1911.

85,151. HOSIERY. MANCHESTER HOSIERY MILLS Co., Manchester, Pa.
Filed August 17, 1911. Serial No. 58,251. PUBLISHED NOVEMBER 28, 1911.

85,152. INSECTICIDES. C. J. MARTIN & SONS, Austin, Tex.
Filed September 21, 1911. Serial No. 58,759. PUBLISHED NOVEMBER 21, 1911.

85,153. CERTAIN FOODS. BARTOLO MARTINEZ, San Antonio, Tex.
Filed June 8, 1911. Serial No. 56,900. PUBLISHED NOVEMBER 14, 1911.

85,154. CLOCKS. FRIEDRICH MAUTHE, G. M B. H., Schwenningen-on-the-Neckar, Germany.
Filed November 18, 1909. Serial No. 45,963. PUBLISHED FEBRUARY 21, 1911.

85,155. WHEAT-FLOUR. MICHIGAN MILLING COMPANY, Ann Arbor, Mich.
Filed September 21, 1911. Serial No. 58,756. PUBLISHED NOVEMBER 14, 1911.

85,156. WHEAT-FLOUR. MOSELEY & MOTLEY MILLING Co., Rochester, N. Y.
Filed September 21, 1911. Serial No. 58,762. PUBLISHED NOVEMBER 14, 1911.

85,157. EGG-NOODLES. C. F. MUELLER Co., Jersey, City, N. J.
Filed August 28, 1911. Serial No. 58,425. PUBLISHED NOVEMBER 14, 1911.

85,158. STOCK FOOD. MUTUAL COTTON OIL Co., Tarrant county, Tex.
Filed July 17, 1911. Serial No. 57,680. PUBLISHED NOVEMBER 14, 1911.

85,159. EDIBLE STARCH. NATIONAL STARCH COMPANY, New York, N. Y.
Filed August 18, 1911. Serial No. 58,265. PUBLISHED NOVEMBER 21, 1911.

85,160. COMPOUND BAKING-FLOUR. GEORGE P. P. NICOLAOU, Salisbury, N. C.
Filed July 20, 1911. Serial No. 57,749. PUBLISHED NOVEMBER 21, 1911.

85,161. TOILET SOAP. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,392. PUBLISHED NOVEMBER 14, 1911.

85,162. TOILET SOAP. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,394. PUBLISHED NOVEMBER 14, 1911.

85,163. WOOLEN YARN. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,398. PUBLISHED NOVEMBER 28, 1911.

85,164. SAFETY-MATCHES. THE OHIO MATCH COMPANY, Wadsworth, Ohio.
Filed September 25, 1911. Serial No. 58,848. PUBLISHED NOVEMBER 21, 1911.

85,165. COMPOSITION FOR THE TREATMENT OF LEATHERS, HIDES, AND PELTS. DANIEL O'KEEFE, St. Louis, Mo.
Filed April 15, 1911. Serial No. 55,772. PUBLISHED NOVEMBER 21, 1911.

85,166. SILVER POLISH AND CLEANSER. OLD COLONY CLEANSER COMPANY, Hutchinson, Kans.
Filed August 25, 1911. Serial No. 58,387. PUBLISHED OCTOBER 31, 1911.

85,167. ANTISEPTIC DRESSING. DANIEL C. OSBORN, Honesdale, Pa.
Filed October 6, 1911. Serial No. 59,009. PUBLISHED NOVEMBER 21, 1911.

85,168. CANDY. THE PALLAS CANDY Co., Butte, Mont.
Filed August 29, 1911. Serial No. 58,436. PUBLISHED NOVEMBER 14, 1911.

85,169. REMEDY FOR THE KIDNEYS AND THE LIVER, A DIURETIC. RICHARD J. PARRETT, Elkhart, Ind.
Filed July 2, 1910. Serial No. 50,674. PUBLISHED NOVEMBER 28, 1911.

85,170. INSECTICIDE. ALBERT L. PAUL, New Orleans, La.
Filed October 5, 1911. Serial No. 59,004. PUBLISHED NOVEMBER 21, 1911.

85,171. MANIFOLD CARBON-PAPER AND MANIFOLD CARBON-BOOKS. PEN-CARBON MANIFOLD Co., New York, N. Y.
Filed September 19, 1908. Serial No. 37,497. PUBLISHED NOVEMBER 28, 1911.

85,172. COAL. PITTSBURG-BUFFALO COMPANY, Pittsburgh, Pa.
Filed March 13, 1911. Serial No. 55,033. PUBLISHED NOVEMBER 7, 1911.

85,173. COAL. PITTSBURG-BUFFALO COMPANY, Pittsburgh, Pa.
Filed March 13, 1911. Serial No. 55,034. PUBLISHED NOVEMBER 7, 1911.

85,174. OLIVE-OIL. THE POMPEIAN Co., INCORPORATED, Washington, D. C.
Filed June 15, 1911. Serial No. 57,075. PUBLISHED NOVEMBER 14, 1911.

85,175. MINERAL-WATER SALT. THE POTOSOTE COMPANY, Canton, Ohio.
Filed October 27, 1909. Serial No. 45,576. PUBLISHED NOVEMBER 21, 1911.

85,176. MEDICINAL PREPARATION. WERDEN B. POTTER, Jamaica, N. Y.
Filed September 11, 1911. Serial No. 58,634. PUBLISHED NOVEMBER 21, 1911.

85,177. ENAMELS, VARNISHES, STAINS, FILLERS. PRATT & LAMBERT, INC., Long Island City and Buffalo, N. Y.
Filed October 3, 1911. Serial No. 58,979. PUBLISHED NOVEMBER 21, 1911.

85,178. CLEANING AND POLISHING CLOTHS. THE REDIO COMPANY, LIMITED, London, England.
Filed February 10, 1910. Serial No. 47,711. PUBLISHED JUNE 20, 1911.

85,179. CERTAIN FOODS. JOHN W. RIDER, Scottsburg, Ind.
Filed August 25, 1911. Serial No. 58,369. PUBLISHED NOVEMBER 14, 1911.

85,180. BOYS' OUTER SUITS CONSISTING OF COATS AND TROUSERS. SAMUEL ROSENTHAL & BROS., New York, N. Y.
Filed October 22, 1910. Serial No. 52,380. PUBLISHED NOVEMBER 21, 1911.

85,181. MEDICINAL PREPARATION CONTAINING SALTS. ANDREAS SAXLEHNER, Budapest, Austria-Hungary.
Filed October 3, 1905. Serial No. 13,249. PUBLISHED NOVEMBER 28, 1911.

85,182. RUBBER PACKING FOR MACHINERY. GUSTAVE G. SCHICK, Bronxville and New York, N. Y.
Filed December 28, 1910. Serial No. 53,501. PUBLISHED NOVEMBER 21, 1911.

85,183. BELT-DRESSING. HUTCHISON SCOTT, New York, N. Y.
Filed August 15, 1911. Serial No. 58,209. PUBLISHED NOVEMBER 14, 1911.

85,184. MEDICINAL PREPARATIONS FOR HUMAN AND VETERINARY PURPOSES. SCOTT & GILBERT Co., San Francisco, Cal.
Filed May 25, 1911. Serial No. 56,586. PUBLISHED NOVEMBER 21, 1911.

85,185. WHEAT-FLOUR AND STOCK FOOD. SHANNON & MOTT COMPANY, Des Moines, Iowa.
Filed July 11, 1910. Serial No. 50,785. PUBLISHED NOVEMBER 21, 1911.

85,186. CEREAL BISCUIT. THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y.
Filed May 6, 1911. Serial No. 56,226. PUBLISHED NOVEMBER 14, 1911.

85,187. ALL KINDS OF CANDIES. SINGER BROTHERS, Jersey City, N. J.
Filed November 3, 1909. Serial No. 45,696. PUBLISHED FEBRUARY 1, 1910.

85,188. ROMAN GOLD PAINT. FREDERICK L. SLEEPER, Chicago, Ill.
Filed October 19, 1911. Serial No. 59,238. PUBLISHED NOVEMBER 28, 1911.

85,189. REMEDY FOR GONORRHEA AND GLEET. SMITH CHEMICAL Co., Athens, Ga.
Filed July 27, 1911. Serial No. 57,850. PUBLISHED NOVEMBER 21, 1911.

85,190. EMULSION OF COD-LIVER OIL. THE SMITH-STILWELL Co., Detroit, Mich.
Filed October 17, 1911. Serial No. 59,205. PUBLISHED NOVEMBER 21, 1911.

85,191. LIQUID IRON COMPOUND. SMOOTH-ON MANUFACTURING COMPANY, Jersey City, N. J.
Filed May 27, 1911. Serial No. 56,666. PUBLISHED NOVEMBER 14, 1911.

85,192. CERTAIN TOILET PREPARATIONS. PEARL A. SOURS, Kansas City, Mo.
Filed May 14, 1909. Serial No. 42,409. PUBLISHED NOVEMBER 28, 1911.

85,193. CERTAIN CLOTHING. THE SPIRELLA COMPANY, Meadville, Pa.
Filed October 4, 1911. Serial No. 58,988. PUBLISHED NOVEMBER 28, 1911.

85,194. LUBRICATING-OILS. STANDARD OIL Co. OF NEW YORK, New York, N. Y.
Filed November 26, 1910. Serial No. 52,977. PUBLISHED JANUARY 17, 1911.

85,195. PREPARATION TO BE USED AS A FIRST-COATER OVER CEMENT, CONCRETE, AND OTHER SIMILAR MATERIALS. STANDARD VARNISH WORKS, New York, N. Y.
Filed October 21, 1909. Serial No. 45,455. PUBLISHED NOVEMBER 14, 1911.

85,196. FACE LIQUID USED AS A SEALING COAT OVER METAL OR WOOD PRIMERS. STANDARD VARNISH WORKS, New York, N. Y.
Filed May 12, 1911. Serial No. 56,315. PUBLISHED NOVEMBER 21, 1911.

85,197. REMEDY FOR CATARRH AND COLDS IN HEAD. MARTHA J. STEBBINS, Churchville, N. Y.
Filed September 25, 1911. Serial No. 58,831. PUBLISHED NOVEMBER 21, 1911.

85,198. MUSTARD. STICKNEY & POOR SPICE COMPANY, Boston, Mass.
Filed June 24, 1911. Serial No. 57,290. PUBLISHED NOVEMBER 14, 1911.

85,199. DYSPEPSIA-TABLETS, CALCIUM WAFER COMPOUNDS, CHARCOAL LOZENGES, AND CATARRH-TABLETS. F. A. STUART COMPANY, Marshall, Mich.
Filed April 21, 1908. Serial No. 34,250. PUBLISHED JUNE 30, 1908.

85,200. POSTAL CARDS. FRANK W. SWALLOW POST CARD Co., INC., Exeter, N. H.
Filed May 17, 1911. Serial No. 56,419. PUBLISHED NOVEMBER 21, 1911.

85,201. HOSIERY, PETTICOATS, AND MUSLIN UNDERWEAR. SWENSON BROS. Co., Omaha, Nebr.
Filed September 2, 1911. Serial No. 58,509. PUBLISHED NOVEMBER 21, 1911.

85,202. CLEANSING COMPOUND. SWIFT AND COMPANY, Chicago, Ill.
Filed March 22, 1911. Serial No. 55,234. PUBLISHED OCTOBER 31, 1911.

85,203. SOFT ENAMEL IN VARIOUS COLORS USED AS A FILLER. HOMER W. THOMPSON, New York, N. Y.
Filed April 26, 1911. Serial No. 55,986. PUBLISHED NOVEMBER 21, 1911.

85,204. LAXATIVE REMEDY. TRI-TONE DRUG MANUFACTURING COMPANY, Memphis, Tenn.
Filed August 12, 1911. Serial No. 58,176. PUBLISHED NOVEMBER 7, 1911.

85,205. WHIPS. UNITED STATES WHIP COMPANY, Westfield, Mass.
Filed September 15, 1909. Serial No. 44,710. PUBLISHED NOVEMBER 21, 1911.

85,206. TALCUM POWDERS. A. A. VANTINE & Co., New York, N. Y.
Filed May 9, 1911. Serial No. 56,268. PUBLISHED NOVEMBER 21, 1911.

85,207. TOILET SOAP IN LIQUID AND CAKE FORM. VERO-FORM HYGIENIC COMPANY, Newark, N. J.
Filed August 9, 1911. Serial No. 58,099. PUBLISHED NOVEMBER 21, 1911.

85,208. HAIR-GROWER. LAURA E. WARREN, Cleveland, Ohio.
Filed September 15, 1911. Serial No. 58,689. PUBLISHED NOVEMBER 21, 1911.

85,209. STIFFENING CORDS, BLADES, AND TAPES. THE WARREN FEATHERBONE COMPANY, Three Oaks, Mich.
Filed August 21, 1911. Serial No. 58,304. PUBLISHED NOVEMBER 21, 1911.

85,210. METALLIC PACKINGS. CHARLES WEAR, Boston, Mass.
Filed July 7, 1911. Serial No. 57,527. PUBLISHED NOVEMBER 21, 1911.

85,211. MEN'S, WOMEN'S, AND CHILDREN'S HOSIERY. WEAR KNITTING Co., Tryon, N. C.
Filed October 2, 1911. Serial No. 58,966. PUBLISHED NOVEMBER 28, 1911.

85,212. ELECTRICAL REPEATING RELAYS. WIRELESS SPECIALTY APPARATUS Co., New York, N. Y.
Filed August 6, 1910. Serial No. 51,299. PUBLISHED NOVEMBER 14, 1911.

LABELS

REGISTERED JANUARY 30, 1912.

16,141.—*Title:* "DELAVAN BRAND STERILIZED MODIFIED MILK." (For Sterilized Modified Milk.) DELAVAN CONDENSED MILK COMPANY, Chicago, Ill. Filed January 6, 1912.

16,142.—*Title:* "QUICK SALE." (For Hardware.) GARDNER WIRE COMPANY, Chicago, Ill. Filed November 2, 1911.

16,143.—*Title:* "IDEAL OR PROGRESS." (For Cooking-Oil.) LOUISVILLE COTTON OIL CO., INCORPORATED, Louisville, Ky. Filed May 31, 1911.

16,144.—*Title:* "IDEAL OR PROGRESS." (For Cooking-Oil.) LOUISVILLE COTTON OIL CO., INCORPORATED, Louisville, Ky. Filed May 31, 1911.

16,145.—*Title:* "AVIATION GAME." (For a Game.) LOUGHRAN S. THOMSON, Pittsburgh, Pa. Filed January 8, 1912.

16,146.—*Title:* "EVERLASTING SILO." (For Silos.) MASON CITY BRICK AND TILE COMPANY, Mason City, Iowa. Filed Dec. 4, 1911.

16,147.—*Title:* "DR. POSNER'S HIGH SCHOOL SHOE." (For Shoes.) ABRAHAM POSNER, New York, N. Y. Filed May 12, 1910.

16,148.—*Title:* "POLLY PRUE HOOK AND EYE." (For Hooks and Eyes.) POLLY PRUE HOOK AND EYE COMPANY, Philadelphia, Pa. Filed December 1, 1911.

16,149.—*Title:* "HOLSTEIN." (For Evaporated Milk.) THE VAN CAMP PACKING CO., Indianapolis, Ind. Filed January 2, 1912.

PRINTS

REGISTERED JANUARY 30, 1912.

2,934.—*Title:* "CREAMERY BUTTERINE." (For Oleomargarin.) AMMON & PERSON, Jersey City, N. J. Filed November 29, 1911.

2,935.—*Title:* "BING'S LUCKY PENGUINS." (For Toys.) JOHN BING, New York, N. Y. Filed December 22, 1911.

2,936.—*Title:* "BING'S LUCKY PENGUIN." (For Toys.) JOHN BING, New York, N. Y. Filed December 28, 1911.

2,937.—*Title:* "DELAVAN BRAND STERILIZED MODIFIED MILK." (For Sterilized Modified Milk.) DELAVAN CONDENSED MILK COMPANY, Chicago, Ill. Filed January 6, 1912.

2,938.—*Title:* "HELP WANTED." (For Kronberger's California Compound Eucalyptus Syrup.) ISRAEL B. KRONBERGER, San Rafael, Cal. Filed December 1, 1911.

2,939.—*Title:* "ORIENTAL SPECIAL AUTO OIL." (For Automobile-Oil.) ORIENTAL OIL COMPANY, Dallas, Tex. Filed November 28, 1911.

2,940.—*Title:* "PEPPERMINT BREATH HEARTS." (For Perfumed Candy Tablets.) SCHANDEIN & LIND CO., Philadelphia, Pa. Filed December 2, 1911.

2,941.—*Title:* "VIOLET BREATH HEARTS." (For Perfumed Candy Tablets.) SCHANDEIN & LIND CO., Philadelphia, Pa. Filed December 2, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE BACH.

Decided January 3, 1912.

APPLICATION — ABANDONMENT — LACK OF RESPONSIVE PROSECUTION.

Where the Examiner required a formal change in the introductory phrase of each of the claims and rejected certain of the claims, *Held* that an amendment responding to the formal requirement only as to two of the claims and making no reference to the rejection of one of the claims was not completely responsive and that since no other action was taken within the statutory period the application is abandoned.

ON PETITION.

LOCOMOTIVE.

Mr. Rudolph William Lotz for the applicant.

MOORE, *Commissioner:*

This is a petition from the holding of the Examiner that the application is abandoned for want of responsive action within the year permitted by statute.

On October 18, 1910, the Examiner required a formal change in the introductory phrase of each claim, (of which there were then seven.) He rejected claims 1 and 2 on the ground that they covered the old and well-known combination of a hydrocarbon-motor and gearing driven thereby and rejected claims 4, 6, and 7 upon a patent cited.

The response by applicant complied with the formal requirement in claims 1 and 2 only. It amended claim 2 to eliminate the hydrocarbon-motor as an element, canceled claims 6 and 7, and argued the patentability of claim 4 over the references.

The Examiner urges that the argument as to claim 4 was clearly at variance with the description contained in the specification of the patent cited and was of no value. The applicant admits that he misread the references and that his argument was therefore without force. It is clear, however, that so far as this part of the action is concerned it was sufficient to save the case from abandonment.

The petitioner urges that the rejection of claims 1 and 2 was not an action on the merits, but in the nature of a formal objection to the wording of the claims, because no reference was cited by the Examiner. This position is clearly untenable, for the action was in terms a rejection and the combination of the hydrocarbon-engine and gearing driven thereby is so notoriously old in automobiles that references would hardly be necessary to establish this fact.

It appears, therefore, that applicant's action is deficient in failing to make any response to the formal requirement as to the introductory clause of claims 3, 4, and 5 or to the rejection of claim 1 on the merits and was clearly not such an action as the condition of the case required. Had the Examiner discovered the defect in time he would doubtless have notified the applicant that his action was insufficient; but in waiting until nearly the end of the year to make his response the applicant took the risk of meeting such a situation as has here arisen. It must be held, therefore, that the case was properly held abandoned for want of proper response within the year.

The petition is denied.

EX PARTE REISCH BREWING CO.

Decided January 20, 1912.

TRADE-MARKS—SIMILARITY.

Two trade-marks each of which includes the picture of a peacock with outspread tail *Held* so similar that their contemporaneous use would be liable to cause confusion in the minds of the public.

ON APPEAL.

TRADE-MARK FOR BEER.

Mr. E. G. Siggers for the applicant.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register a trade-mark for beer, consisting of the representation of a top upon which appear the words "Gold Top" and the picture of a peacock with outspread tail.

Registration was refused on the ground that the mark resembled too closely those shown in registrations numbered 29,313 to Thomas Mullen & Co. and 31,318 to Weisbrod and Hess. Each of the marks upon which registration was refused includes the representation of a peacock with tail outspread. One of them also includes the word "Rheingold" and other minor features and the other the representation of a sign-panel upon which the peacock

appears, together with the words "Ye Peacocke Ale," the name of the company, and other descriptive and advertising matter.

In my opinion the representation of the peacock in the applicant's mark and in that of each of the references cited is so prominent and so similar in appearance that the concurrent use of the marks upon goods of the same descriptive properties would be likely to cause confusion in the mind of purchasers. It seems more than likely that in the case of each mark the figure of the peacock would be the feature retained in the mind of the ordinary purchaser as identifying the goods.

In his argument applicant has drawn attention to the registered mark of F. Reisch & Bros., No. 22,288. It claims to be the successor to the rights of the registrant of that mark, and it is pointed out that this registration is earlier than either of those cited against applicant and that it includes, among other features, the representation of a peacock. It is argued that this is evidence not only that applicant has the prior right to the use of the peacock as applied to beer, but that the registrant whose marks are cited against applicant were not, in fact, the originators of their mark. The latter fact, it is contended, brings the case within the ruling of the court in the case of *Nestle and Anglo-Swiss Condensed Milk Company* v. *Walter Baker & Co., Ltd.*, (167 O. G., 765; 37 App. D. C.,) wherein the following statement was made:

> As above noted, appellee copied rather than originated its mark. Indeed, if its contentions in *Walter Baker Co.* v. *Harrison* (32 App. D. C., 272) and in the present case, should be accepted to their full extent, it would be a question whether it ever had any right at all to the mark. Certain it is that not being the originator of the mark it has no right to exclude every one else from using the representation of a woman as a trade-mark upon similar goods, (*Liggett & Myers Tobacco Co.* v. *Finser*, 128 U. S., 182.) conceding for the purposes of this case only that it might have had that right had it been an originator instead of a copier.

That case, however, is clearly distinguishable from the present one. There the mark referred to as not original was copied substantially in its entirety from another source, and the question was as to the similarity of such mark in its entirety to another mark for which application for registration had been made. Here it is not contended by applicant that the marks as shown in the references are not original with the registrants, except as to the representation of the peacock therein; but the registration upon which it depends to show that this is old shows a very different peacock and appears to make no particular point of its use. It embodies several other features quite as prominent, if not more prominent; the peacock is relatively small, its tail is folded, and it is not so disposed as to attract attention.

The question here is not broadly as to the right to the registration of a picture of a peacock as applied to beer, but only whether the particular mark which applicant seeks to register is so like or so similar to marks owned by others as to be likely to cause confusion. It is believed that registration was properly refused.

The decision of the Examiner of Trade-Marks is affirmed.

EX PARTE PORTER.

Decided November 27, 1911.

PATENTABILITY—DESIGN.

A design for a plate for wire fabric *Held* not patentable over a prior design, since the differences therebetween involve no invention so far as the artistic aspect of the plate is concerned.

APPEAL from Examiners-in-Chief.

DESIGN FOR PLATE FOR WIRE FABRIC.

Mr. James Shepard for the applicant.

BILLINGS, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner rejecting the claim for the design shown in applicant's drawing, in view of the patent to Fitch, No. 371,497, October 11, 1887.

The design is for an eye-plate for wire fabric. The reference shows an eye-plate for the same use differing from applicant's in having a hole in the center as well as in the four corners and in having the indents on the sides curved rather than angular. The holes in applicant's plate are also somewhat larger in proportion to the size of the plate than the corresponding ones in the reference.

Whatever function or mechanical advantages, if any, applicant's plate may have over the one shown in the reference, I am clearly of the opinion that the differences, so far as the artistic aspect of the plate is concerned, involve no invention, and the design must therefore be held unpatentable.

The decision of the Examiners-in-Chief is affirmed.

SKEITH AND BURROWS *v.* TROUT *v.* CLEVELAND.

Decided January 11, 1912.

INTERFERENCE — MOTION TO DISSOLVE —SUNDAYS INCLUDED IN THE THIRTY DAYS.

In computing the thirty days which are allowed by the rules for the filing of a motion to dissolve an interference Sundays and holidays are not excluded.

APPEAL on motion.

SAW-LIFT.

Mr. Schuyler Duryee and *Mr. Wallace Greene* for Skeith and Burrows.

Mr. G. F. De Wein for Trout.

Messrs. Dodge & Sons for Cleveland.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences denying a motion by Trout to transmit a motion to dissolve.

The ground upon which the motion is denied transmission is that the motion to transmit was filed late and that no sufficient excuse is given for the failure to file the same during the time allowed.

The thirtieth day after the approval of the preliminary statement fell on Sunday. The motion to transmit was received on the following Monday.

It is contended in behalf of the appellant that the Sundays should be excluded in computing the thirty days, and the counsel for the appellant has in his brief criticised the practice of the Office in not excluding Sundays and holidays in the manner provided for by the rules of the Court of Appeals of the District of Columbia. These criticisms are not

believed to be in point. The provisions of Rule 122 are clear, and this rule has been in force for many years. The period of thirty days is ordinarily ample for the presentation of motions for dissolution. The facts stated in the present case do not show that a motion might not easily have been brought well within the time allowed, nor does it appear that the search was not completed long prior to the date upon which the motion was prepared.

Furthermore, according to the statement of counsel for appellant the motion papers were not mailed from Milwaukee to the Patent Office until one day prior to the expiration of the time allowed, and it would be unlikely that such letter could have been delivered at the Patent Office even if the last day of the period had fallen upon a day when the Office was open for the transaction of business.

Nevertheless, no showing why the preparation of the motion was thus delayed accompanied the motion to dissolve when first presented. I find no error in the decision of the Examiner of Interferences refusing to transmit this motion.

Furthermore, the inspection of the motion to dissolve which it is sought to transmit leads me to the conclusion that this motion is brought for the purpose of delay rather than in good faith.

The motion relies mainly upon references which are cited in the respective applications, the additional reference being taken from a remote art. It is not the practice of the Office to encourage delays in interference proceedings, and applicants seeking to take technical advantages of procedure provided for by the Rules of Practice will be held strictly to the requirements prescribed by such rules.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE TALLMADGE.

Decided December 4, 1911.

1. PATENTABILITY—FUNCTION OF A MACHINE NOT AN INVENTION.

"The patent law authorizes the issuance of a patent to any person who has invented or discovered any new and useful art, and a process may constitute such an art. To constitute such an art, however, it must be capable of producing a beneficial result without the aid of any particular mechanism, for where the process is simply the function or operative effect of a machine it is not an invention, but at most the result of one. (*Corning* v. *Burden*, 15 How., 252; *Westinghouse* v. *Boyden*, 170 U. S., 537–555; *in re White*, 31 App. D. C., 607.)"

2. SAME—METHOD OF ACCOUNTING.

Claims for a "method of accounting" *Held* unpatentable.

Mr. Eugene C. Brown, *Mr. Chas. A. Brown*, and *Mr. L. A. Williams* for the appellant.

Mr. R. F. Whitehead for the Commissioner of Patents.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents refusing the appellant a patent on his alleged invention relating, as he says in his application, to "automatic accounting systems."

The purpose of the applicant, says the Commissioner, is to avoid the possibility of errors in the keeping of double-entry accounts. He points out that in transferring entries from the journal to the ledger in which such accounts are commonly kept, it frequently happens that the debit entry under one account will not be duplicated in the credit entry under the corresponding account, or that one of the double entries will, through inadvertence, be entirely omitted. To overcome this difficulty, he has devised a machine to mechanically register the entries, so constructed that a credit in one account necessarily results in a debit entry of the same amount in some other account. Thus the only volitional acts required of the operator are the indication of the proper accounts for such entries and the fixing of the amount, on the keyboard of the machine.

The issue is stated in twenty-two claims, of which the following are representative:

1. The method of accounting which consists in freely selecting any two out of three or more entry-receiving devices establishing reversed relations between a common actuating means and the respective entry-receiving devices of the selected pair, adjusting the actuating means to determine the magnitude of its actuation, and actuating the entry-receiving devices while automatically maintaining said adjustment and said reversed relations.

10. The method of transmitting entries telegraphically as herein described, by causing actuation of distant entry-receiving mechanisms corresponding to manual set-ups on a set of operating-keyboards, substantially as set forth.

13. The method of accounting which consists in effecting automatically counterbalanced entries in any two out of three or more entry-receiving devices.

19. The method which consists in automatically maintaining a condition of equilibrium in three or more entry-receiving devices, while indefinitely repeating the following series of operations; freely selecting any two of the entry-receiving devices, establishing operative relations with respect to the selected entry-receiving devices, operating the selected entry-receiving devices from a common volitionally-controlled source and simultaneously controlling the operation of automatic mechanism for making a record of the operations of the three or more entry-receiving devices.

The Primary Examiner rejected all the claims upon the ground that they involved "nothing more than the function of the machine," claims for which were then pending. Thereupon reconsideration of the decision was sought and obtained, appellant filing a comprehensive brief in support of his contentions. Upon reconsideration the Examiner adhered to his prior decision. The Examiners-in-Chief, who then passed upon the case, after full consideration sustained the Examiner, closing their opinion as follows:

> The Examiner has rejected the claims as covering nothing more than the functions of a machine. It may be that in form they do not cover precisely the function of the machine but they seem to cover any and all ways of producing the result at which applicant aims and his method is nothing more than selecting and operating the proper parts of a machine to carry out the functions for which the machine is designed. The Examiner states that there seems to be no patentable method set forth in claim 1, which is the claim specifically discussed by him, and, more specifically, no method that can be separated from the particular machine or, of course broadly speaking, its equivalent, and the ground of rejection seems to correspond closely with the facts. As this ground of rejection seems to apply equally well to all of the claims, the action of the Examiner is affirmed.

The case then received further consideration by the Commissioner, who reached the same conclusion, saying:

> I am of the opinion that the claims were properly rejected, since they distinguish from what is old only in setting forth the function or operation of the applicant's machine.

We have given this case very careful consideration but we are nevertheless constrained to sustain the views of the Patent Office tribunals. Before proceeding to a very brief recital of our reasons we deem it necessary to direct attention to the un-

warranted criticism of the Patent Office found in appellant's supplemental brief. Appellant sought and obtained permission to file this brief for the declared purpose of further elucidating the one question involved in the appeal. Instead of adhering to that purpose he has devoted a considerable portion of the thirty-one pages of his supplemental brief to criticism of the Patent Office tribunals. It is needless to say that we regard such criticism as an abuse of the privilege accorded and utterly without bearing upon the question before us.

The patent law authorizes the issuance of a patent to any person who has invented or discovered any new and useful art, and a process may constitute such an art. To constitute such an art, however, it must be capable of producing a beneficial result without the aid of any particular mechanism, for where the process is simply the function or operative effect of a machine it is not an invention, but at most the result of one. *Corning* v. *Burden*, 15 How., 252; *Westinghouse* v. *Boyden*, 170 U. S., 537–555; *in re White*, 31 App. D. C., 607.)

In his application appellant states:

> The invention here presented substitutes the automatic for the human element in all operations subsequent to the initial act of entry, and to that extent eliminates the liability to error, the labor, and the delay inherent in the methods now practiced.

The only element of novelty which appellant is able to point out in these claims is that of—

> establishing reversed relations between a common actuating means and the respective entry-receiving devices of the selected pair.

A debit and credit sheet having been selected it is contended that the placing of them in such a position that a debit and credit entry may be made at the same time by a single operating device constitutes an inventive idea. Debit and credit pages were of course old, and many forms of duplicating devices were known. Surely the idea of placing a piece of carbon-paper between debit and credit pages so that a rubber stamp would make an impression upon each at the same time constitutes no invention; and yet this is the only novel feature of appellant's claims. As is well said by the Examiners-in-Chief—

> it will thus be seen that unless the claim be construed to cover some more definite form of entry-receiving device and a common actuating means, such for instance as two mechanical registers operated by a common operating-bar, the claim would have nothing patentable in it, and if so construed the claim would not cover a proper method as it would clearly be limited to a specific mechanical device such as would be found in applicant's other machine application, where it can be properly claimed.

What is the result achieved by appellant's alleged process? It is nothing more than the making of a simultaneous debit and credit entry. This result, as we have seen, is not patentable. It may well be that the manner in which appellant achieves this result through the operation of his machine is new; in other words, his machine may be patentable but his present claims are not. His machine patent would not, of course, prevent others from reaching the same result in an entirely different way, but the granting of his present application would. Had he really invented a method of simultaneous double-entry bookkeeping he would be entitled to the protection of that invention, but having merely invented a machine by which such a result is attained he is not entitled to a monopoly of more than the machine. A method patent was sustained for a process of making paper bags but, as pointed out by Mr. Justice Brown in the *Westinghouse Case*, (170 U. S., 557,) the process might be performed manually by "the folding of paper in a peculiar way;" in other words, the discovery of a peculiar, novel and useful way of folding constituted the invention.

Without further elaboration we sustain the decision of the Commissioner.

Affirmed.

Court of Appeals of the District of Columbia.

SANDERS *v.* EMERSON.

Decided December 4, 1911.

1. INTERFERENCE—TESTIMONY—OBJECTION TO FORM OF QUESTIONS—DISREGARDED WHERE PRIORITY IS SATISFACTORILY ESTABLISHED.

   Where S. objected to certain questions on the ground that they were leading and to the instructions to other witnesses by counsel for E. not to answer certain questions asked on cross-examination, but these objections were not urged before the Examiner of Interferences or the Examiners-in-Chief, *Held* that as E. had satisfactorily established priority of invention by a preponderance of evidence these objections would not be considered, and, further, that a failure to insist upon these objections before the lower tribunals might well be considered a waiver thereof.

2. SAME—PRIORITY—REDUCTION TO PRACTICE.

   Where the claims call for a sound-record having a record-surface coating of shellac-like record material and the evidence showed that E. made a sound-record having a record-surface of celluloid, *Held* that this was an embodiment of the issue, since in view of the disclosures of both parties the celluloid surface was a "coating" of "shellac-like" material.

3. SAME—SAME—SAME.

   Where E. built a sound-record having the characteristics specified in the issue, which, while it was not a finished commercial article, demonstrated the success of the invention, as it accurately reproduced sound and possessed good wearing qualities, *Held* that this constitutes a reduction to practice of the invention.

Mr. D. P. Wolhaupter and *Mr. Melville Church* for the appellant.

Mr. S. T. Cameron, *Mr. C. A. L. Massie*, *Mr. Reeve Lewis*, and *Mr. W. B. Kerkam* for the appellee.

ROBB, *J.*:

This is an appeal from a decision of the Commissioner of Patents (174 O. G., 831) in an interference proceeding in which priority of invention was awarded Emerson, the senior party.

The invention is narrow in scope and involves an alleged improvement in a sound-record for talking-machines. The issue is expressed in the following counts:

1. A sound-record composed of a body portion containing inferior plastic material unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material, and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere.
2. A sound-record composed of a body portion containing inferior plastic material rendered plastic by heat and unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere.
3. A sound-record composed of a body portion containing inferior plastic material unsuited for a smooth record-surface, a record-surface coating of superior shellac-like record material, and a separating-sheet between said body portion and said coating to which sheet said body portion and coating adhere under heat and pressure.

The idea of constructing the body or base of such a record of a coarse material and the surface of a finer material was not new. (See patent to Lambert, No. 644,223.) The idea of interposing a "separating-sheet between said body portion and said coating" was new, and constitutes the gist of the invention.

The Examiner of Interferences in his opinion reviewed the evidence with care, discussed at length the contentions of the parties, and awarded priority of invention to Emerson. Upon appeal to the Examiners-in-Chief, two members sitting, one member of the Board was of the opinion that the decision of the Examiner should be sustained, while the other member entertained a contrary view. An appeal was then taken to the Commissioner whose decision was, as we have stated, in favor of Emerson.

Upon the taking of Emerson's proof certain objections were noted by Sanders because, as Sanders conceived, some of the questions were leading and because counsel for Emerson instructed witnesses to decline to answer certain questions propounded during cross-examination. These objections, however, so far as the record discloses, were not brought to the attention of either the Examiner of Interferences or the Examiners-in-Chief. Evidently, in the presentation of his case before the Commissioner, Sanders adverted to them, for in closing his opinion the Commissioner says:

> Sanders has criticized the forms of questions and the position taken by counsel for Emerson in advising his client that certain questions need not be answered.
>
> Finding that Emerson had—
>
> satisfactorily established his claim of prior inventorship of the invention in issue by a preponderance of competent evidence,

the Commissioner did not stop to consider these objections. For the same reason, we do not deem it necessary to do so here. Moreover, it well might be held that failure on the part of Sanders to insist upon the objections in the hearings before the two lower tribunals constituted a waiver thereof.

A review of Emerson's evidence leaves no room for doubt that in December, 1903, many months prior to the entry of Sanders into the field, Emerson made a sound-record embodying this invention. We shall not review that evidence since it has been carefully reviewed by the Patent Office. In making this sound-record Emerson used a base or body of inferior material. This idea, as previously suggested, was old. He then cut two sheets of celluloid and two sheets of paper to fit his dies and then covered one side of each sheet of paper with shellac. He then placed in the bottom of the hot die a piece of celluloid, over this a sheet of paper with a shellac surface against the celluloid, then the inferior material of asphaltum and resin, then a sheet of paper with the shellac side up, then the other sheet of celluloid. Over this came the top of the die. Pressure was then applied to the mass and a sound-record produced. While this sound-record was not a finished commercial product, it nevertheless fully demonstrated the success of the invention; in other words, it reproduced sound accurately and possessed good wearing qualities. What remained to be done required no further invention. It was merely a question of mechanical development.

Sanders insists that the above sound-record first constructed by Emerson did not embody the issue. He says that the celluloid surface is not a "coating," does not adhere to the separating-sheet, and that this surface is not "superior shellac-like." These contentions are clearly based upon a misconception of the issue. There is no limitation in the claims as to the manner in which the separating-sheet is to be made to adhere to the material above and below it. The sheet is merely to be between the body portion and the coating and when the record is complete the three must be one. In fact, from an inspection of Sanders's application it appears that he did not contemplate a direct adherence for he speaks of the use of shellac between the two surfaces as a cementing material. His present contention is an afterthought and finds no support either in the applications or in the claims. His second contention has no greater merit. In interpreting these claims we must give them as broad a meaning as their terminology will reasonably permit. (*Miel* v. *Young*, 29 App. D. C., 481; *Lindmark* v. *Hodgkinson*, 31 App. D. C., 612.) Giving the claims such an interpretation we agree with the Patent Office that "coating" as therein used simply means an outer layer or covering and that any surface material which is "shellac-like" responds to the issue. In his application Emerson refers to shellac but says—

> it is obvious that other gums, celluloid, or like material, may be employed in the same way.

Sanders in his application refers to shellac as the best substance for a binder but he is careful not to limit himself to that substance, as later on he refers to this material as "gramophone-record material." The Patent Office has found that celluloid is a shellac-like substance within the meaning of these claims and we are quite content with that finding.

The decision of the Commissioner will therefore be affirmed.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) Claim 1 of the Tesla Patent No. 511,559, claim 1 of the Tesla Patent No. 511,915, and claims 1, 2, and 6 of the Tesla Patent No. 555,190, *Held* valid and infringed. *Century Electric Co.* v. *Westinghouse Electric & Mfg. Co.*, 191 Fed. Rep., 350.

(U. S. C. C. A.) The Tabor and Mumford patent, No. 582,825, the Tabor patent, No. 533,401, and the Tabor and Mumford patent, No. 654,292, all for improvements in molding machinery, construed and *Held* not infringed. *Tabor Mfg. Co.* v. *E. H. Mumford Co.*, 191 Fed. Rep., 166.

(U. S. C. C.) The Sayen patent, No. 594,036, for an improvement in high-vacuum or Roentgen-ray

tubes, claims 2 and 3 *Held* infringed on a motion for preliminary injunction. *Green* v. *Heinz-Wandner X-Ray Tube Co.*, 191 Fed. Rep., 201.

(U. S. C. C. A.) The Perkins patent, No. 626,927, for an incandescent-lamp socket, construed and *Held* not anticipated, valid, and infringed. *Perkins Electric Switch Mfg. Co.* v. *United Electric Const. Co.*, 191 Fed. Rep., 366.

(U. S. C. C. A.) The Sargent patent, No. 665,582, for an electric-lamp socket, construed and *Held* valid and infringed. *E. H. Freeman Electric Co.* v. *General Electric Co.*, 191 Fed. Rep., 168.

(U. S. C. C.) The Wood patent, No. 790,609, for a shaft-hanger, *Held* valid and infringed. *T. B. Wood's Sons Co.* v. *Valley Iron Works*, 191 Fed. Rep., 196.

(U. S. C. C. A.) The White patent, No. 794,064, for pliers for pulling wire-fence staples, construed and *Held* not infringed. *Irvington Mfg. Co.* v. *Utica Drop Forge & Tool Co.*, 191 Fed. Rep., 169.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 11, 1912.

Keystone Nail Co., Inc., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to Hoopes & Townsend, of Philadelphia, Pa., and trade-mark registration No. 49,864, dated February 20, 1906, to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Keystone Nail Co., Inc., was returned signed "Keystone Nail Co., Com. Tr. Co." No evidence of the right to intervene in this interference has been filed by the Keystone Nail Co., Com. Tr. Co., within the time allowed for that purpose.

Notice is therefore hereby given to the said Keystone Nail Co., Inc., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Selant & Selant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,890, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-marks registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JANUARY, 1912.

[Decisions of the United States District Courts are indicated by the letter ᵇ, and of the Court of Appeals of the District of Columbia by a star (*).]

TABLE OF CASES.

	Page.
Aerial Telephone and Power Company. *In re*	1025
Alexander Milling Co., The, v. Vernier	1026
Amigo. *Ex parte*	833
Bach. *Ex parte*	1217
*Carmel Wine Company v. California Winery	586
Dietrick. *Ex parte*	829
Emerson v. Sanders	831
F. R. Chamberlain Company. *Ex parte*	1026
Grosse and French. *Ex parte*	829
Jackson Company v. Rogers & Thompson	1025
*John Bradland, Limited. *In re*	1029
Johnson Educator Food Co. v. Sylvanus Smith & Co., Inc	1027
Kneisly v. Kaisling	830
Madden. *Ex parte*	833
Pope v. McKenzie	583
Porter. *Ex parte*	1218
Reisch Brewing Co. *Ex parte*	1217
Rotter v. Samuelson	584
*Sanders v. Emerson	1220
Skeith and Burrows v. Trout v. Cleveland	1218
Société Anonyme Des Usines Remy. *Ex parte*	585
*Summit City Soap Works, The, v. The Standard Soap Company	587
*Tallmadge. *In re*	1219
Taylor. *Ex parte*	287
ᵇ United States of America v. Patterson	287
Warren Webster & Company. *Ex parte*	287

SUBJECT-MATTER INDEX.

	Page.
Abandonment of application, action only partially responsive will not save from, *ex parte* Bach	1217
Amendment mailed within statutory period not received, *ex parte* Amigo	833
Assignments, general, of all inventions past and future, right to inspect any specific application by assignee not carried by, *in re* Aerial Telephone and Power Company	1025
Claims, unpatentable over prior art, *ex parte* Grosse and French	829
Construction of Rule 68, *ex parte* Dietrick	829
ᵇ Section 4922, Revised Statutes, United States of America v. Patterson	287
Design, patentability over prior art, *ex parte* Madden	833
Ex parte Porter	1218
Interference, bar of public use established only by properly-taken testimony, not by affidavits, Kneisly v. Kaisling	830
Delay in bringing motion to dissolve, compelling reasons for, Rotter v. Samuelson	584
Design unpatentable on reference, no declaration of, *ex parte* Taylor	287
Order to show cause, Rotter v. Samuelson	584
Priority of invention, Pope v. McKenzie	583
Public-use proceedings, use by one party only, Kneisly v. Kaisling	830
Right to make claim, Emerson v. Sanders	831
Invention, state of the art, *ex parte* Grosse and French	829
New claims presented by amendment after final rejection, showing required, *ex parte* Dietrick	829
ᵇ Oath of application, United States of America v. Patterson	287
Patentability, *ex parte* Grosse and French	829
*Function of machine not invention, *in re* Tallmadge	1219
ᵇ Perjury, what constitutes, United States of America v. Patterson	287
Prosecution of applications, *ex parte* Dietrick	829
Lack of responsive action, *ex parte* Bach	1217
Unavoidable delay, *ex parte* Amigo	833
Reduction to practice, commercial practicability not necessary to constitute, Emerson v. Sanders	831
*Testimony, failure to insist upon objections before lower tribunals constitutes waiver, Sanders v. Emerson	1220
*Objection to form of question, Sanders v. Emerson	1220
*Trade-marks, cancelation of registration, Carmel Wine Company v. California Winery	586
Deceptively similar, The Alexander Milling Co. v. Vernier	1026
Jackson Company v. Rogers & Thompson	1025
**In re* John Bradland, Limited	1029
Goods of same descriptive properties, Jackson Company v. Rogers & Thompson	1025
*Incorporation of mark of another as essential feature, Carmel Wine Company v. California Winery	586
Particular description of goods, *ex parte* F. R. Chamberlain Company	1026
*Priority of adoption and use, Carmel Wine Company v. California Winery	586
Property rights in, Johnson Educator Food Co. v. Sylvanus Smith & Co., Inc	1027

	Page.
*Trade-marks, protection of rights of registrant, The Summit City Soap Works v. The Standard Soap Company.	587
*Similarity of marks, The Summit City Soap Works v. The Standard Soap Company	587
Such as to cause confusion to the public, *ex parte* Reisch Brewing Co	1217
Ten-years clause, exclusive use, *ex parte* Société Anonyme Des Usines Remy	585
Trade-marks, the word "Modulation," for steam-heating and ventilating apparatus, refused registration as descriptive term, *ex parte* Warren Webster & Company	287
Use of for goods of different descriptive properties, Johnson Educator Food Co. v. Sylvanus Smith & Co., Inc	1027

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JANUARY, 1912.

[Decisions of the United States District Courts are indicated by the letter ᵇ, and of the Court of Appeals of the District of Columbia by a star (*).]

ABANDONED EXPERIMENTS.

See Reduction to Practice, 2.

ABANDONMENT OF APPLICATIONS.

See Prosecution of Applications, 3.

LACK OF RESPONSIVE PROSECUTION.

Where the Examiner required a formal change in the introductory phrase of each of the claims and rejected certain of the claims, *Held* that an amendment responding to the formal requirement only as to two of the claims and making no reference to the rejection of one of the claims was not completely responsive and that since no other action was taken within the statutory period the application is abandoned. [*Ex parte* Bach, 1217.

ACCESS TO PENDING APPLICATIONS BY ASSIGNEE.

See Assignment.

ACTION BY THE EXAMINER.

See Abandonment of Applications; Prosecution of Applications, 1, 2, 3.

AFFIDAVIT.

See Perjury; Public Use and Sale, 2.

ALLEGATION.

See Prosecution of Applications, 4.

AMENDMENTS.

See Abandonment of Applications; Prosecution of Applications, 2, 3, 4; Trade-Marks, 2.

APPLICATIONS.

See Abandonment of Applications; Assignment; Designs; Perjury; Prosecution of Applications; Trade-Marks, 2, 10.

ASSIGNEE.

See Assignment.

ASSIGNMENT.

APPLICATION—RIGHT TO INSPECT—GENERAL ASSIGNMENT DOES NOT GIVE.

An assignment purporting to transfer all right, title, and interest "in and to all improvements, inventions, caveats, franchises, patents and applications for patents pertaining to wireless telephony, wireless telegraphy or wireless power heretofore, now or hereafter owned or filed or in any manner acquired by the said Jahnke," *Held* not such an assignment as would justify the Office in giving the alleged assignee any information as to any particular application filed by J., much less to inform such alleged assignee of all pending applications filed by J. relating to the classes of inventions named.

[*In re* Aerial Telephone and Power Company, 1025.

ATTORNEYS.

See Prosecution of Applications, 2, 4.

BAR TO PATENT.

See Public Use and Sale.

CANCELATION OF TRADE-MARK REGISTRATION.

See Trade-Marks, 5.

COMMERCIAL SUCCESS.

See Reduction to Practice, 1, 3.

COMMISSIONER OF PATENTS.

See Perjury.

CONCEPTION OF INVENTION.

See Priority of Invention; Reduction to Practice, 2.

CONSTRUCTION OF CLAIMS.

See Reduction to Practice, 3.

1. PATENTABILITY—IRONING-MACHINES.

A claim for an ironing-machine *Held* unpatentable over the prior art, since neither the substitution of gas for steam as the heating medium or placing the gas-burner below the level of the median line of the shoe required invention.

[*Ex parte* Grosse and French, 829.

2. INTERFERENCE—RIGHT TO MAKE THE CLAIM.

Celluloid *Held* to be a "shellac-like" record material within the meaning of the claims and that therefore E. is entitled to make the claims in issue. [Emerson v. Sanders, 831.

3. METHOD OF ACCOUNTING.

Claims for a "method of accounting" *Held* unpatentable.

[**In re* Tallmadge, 1219.

CONSTRUCTION OF RULES.

See Prosecution of Applications, 2, 3.

CONSTRUCTION OF STATUTES.

See Invention; Perjury.

CONSTRUCTION OF TRADE-MARK STATUTES.

See Trade-Marks, 2.

CROSS-EXAMINATION.

See Public Use and Sale, 2; Testimony.

DAMAGES.

See Trade-Marks, 14.

DECEPTIVE MARK.

See Trade-Marks, 2, 3, 5, 6, 9, 11, 15, 16.

DECLARATION OF INTERFERENCE.

See Prosecution of Applications, 1.

DELAY IN BRINGING MOTION TO DISSOLVE INTERFERENCE.

See Motion to Dissolve Interference, 1.

DELAY IN PROSECUTING APPLICATIONS.

See Prosecution of Applications, 4.

DESCRIPTION OF GOODS.

See Trade-Marks, 1, 10, 12.

DESCRIPTIVE TERMS.

See Trade-Marks, 1.

DESIGNS.

See Prosecution of Applications, 1.

1. PATENTABILITY.
A design for a water-closet bowl *Held* not patentable over the prior art, since it possesses no ornamental feature which is patentable over the designs disclosed therein.
[*Ex parte* Madden, 833.

2. SAME.
A design for a plate for wire fabric *Held* not patentable over a prior design, since the differences therebetween involve no invention so far as the artistic aspect of the plate is concerned.
[*Ex parte* Porter, 1218.

DILIGENCE.

See Priority of Invention.

DISCLOSURE OF INVENTION.

See Reduction to Practice, 3.

ESSENTIAL FEATURE.

See Trade-Marks, 3, 4.

EVIDENCE.

See Priority of Invention; Reduction to Practice, 2, 3; Testimony; Trade-Marks, 5.

FINAL REJECTION OF CLAIMS.

See Prosecution of Applications, 2, 3.

FORMER DECISIONS CITED.

See Invention; Prosecution of Applications, 2; Trade-Marks, 2.

FORMER DECISIONS DISTINGUISHED.

See Trade-Marks, 11.

FUNCTION.

See Invention.

GOODS OF SAME DESCRIPTIVE PROPERTIES.

See Trade-Marks, 8, 12, 13, 14.

INFRINGEMENT.

See Trade-Marks, 13.

INTERFERENCE.

See Construction of Claims, 2; Motion to Dissolve Interference; Priority of Invention; Public Use and Sale; Reduction to Practice; Testimony.

INVENTION.

See Construction of Claims, 1; Designs; Reduction to Practice, 4.

PATENTABILITY—FUNCTION OF A MACHINE NOT AN INVENTION.
"The patent law authorizes the issuance of a patent to any person who has invented or discovered any new and useful art, and a process may constitute such an art. To constitute such an art, however, it must be capable of producing a beneficial result without the aid of any particular mechanism, for where the process is simply the function or operative effect of a machine it is not an invention, but at most the result of one. (*Corning* v. *Burden*, 15 How., 252; *Westinghouse* v. *Boyden*, 170 U. S., 537–555; *in re White*, 31 App. D. C., 607.)"
[*In re Tallmadge, 1219.

JUDGMENT ON THE RECORD.

See Motion to Dissolve Interference, 1.

LABELS.

See Trade-Marks, 3, 10.

LEADING QUESTION.

See Testimony.

LIMIT OF TIME.

See Motion to Dissolve Interference; Prosecution of Applications, 3, 4.

MACHINE.

See Invention.

MOTION TO DISSOLVE INTERFERENCE.

1. DELAY IN BRINGING—ORDER TO SHOW CAUSE.
Where a party who is under order to show cause why judgment should not be rendered against him on the record brings a motion to dissolve the interference after the time allowed by the rules, it is incumbent upon him to justify the delay in bringing such motion by reasons which are compelling in their nature. It is not sufficient to merely show that it was not convenient to file the motion within the time or that the matter was delayed by other business which was deemed more pressing. [Rotter v. Samuelson, 584.

2. SUNDAYS INCLUDED IN THE THIRTY DAYS.
In computing the thirty days which are allowed by the rules for the filing of a motion to dissolve an interference Sundays and holidays are not excluded.
[Skeith and Burrows v. Trout v. Cleveland, 1218.

NEW CLAIMS.

See Prosecution of Applications, 2, 3

OATH.

See Perjury.

OBJECTIONS.

See Testimony.

OPPOSITION TO REGISTRATION.

See Trade-Marks, 14.

PATENTABILITY.

See Construction of Claims, 1, 3; Designs; Invention; Prosecution of Applications, 1.

PERJURY.

AFFIDAVIT TO SUPPORT APPLICATION FOR LETTERS PATENT.
An oath, declaration, or affidavit subscribed by an applicant for patent in support of his application is one touching a matter material to an inquiry before the Commissioner of Patents and is such a one upon which perjury may be predicated under section 4392, Revised Statutes of the United States, if the party making the oath or making the declaration or affidavit swore falsely in relation thereto or if at the time of making such oath he did not believe the matter set forth therein to be true.
[*United States of America v. Patterson, 287.

PRIORITY OF ADOPTION AND USE.

See Trade-Marks, 5.

PRIORITY OF INVENTION.

See Construction of Claims, 2; Reduction to Practice, 2, 3, 4; Testimony.

INTERFERENCE.
Priority *Held* properly awarded M., since the evidence fails to establish that P., the junior party, had a conception of the invention prior to M.'s filing date, or if he be assumed to be the first conceiver that he was diligent at the time M. entered the field.
[Pope v. McKenzie, 583.

PROPERTY RIGHTS.

See Trade-Marks, 4, 7, 12.

PROSECUTION OF APPLICATIONS.

See Abandonment of Applications.

1. DECLARATION OF INTERFERENCE.
Where the Examiner held that a design for an automobile-lamp was not patentable in view of the references of record, *Held* that he properly refused to declare an interference with a prior patent for a design for a similar lamp. [*Ex parte* Taylor, 287.

2. PRESENTATION OF CLAIMS AFTER FINAL REJECTION—INSUFFICIENT SHOWING.
Where after a final rejection an amendment was filed directing that the finally-rejected claims be canceled and presenting new claims, *Held* that a statement that neither the applicant nor his attorney had looked for a final rejection and in view of the Examiner's action applicant was willing to take narrower claims was not such a showing as required by Rule 68, (citing *ex parte Willer*, 91 O. G., 1033.) [*Ex parte* Dietrick, 829.

3. ABANDONMENT.
Where within a year from the date of a final rejection an amendment was filed directing that the finally-rejected claims be canceled and adding new claims, which amendment the Examiner refused to enter for lack of sufficient showing under Rule 68, and after the expiration of the year applicant directed that the new claims be canceled, *Held* that no responsive action had been made within the year and that the application was abandoned. [Id.

4. SAME.
An allegation that an amendment was mailed within the statutory period and that the attorney was unaware that such amendment had not been received until he made inquiry of the Office long after the expiration of that period, in view of a letter from his foreign associate, *Held* insufficient to show that the delay in the prosecution of the case was unavoidable. [*Ex parte* Amigo, 833.

PUBLIC USE AND SALE.

1. INTERFERENCE—INSTITUTION OF PUBLIC-USE PROCEEDINGS.
It is not the practice to suspend an interference after the initial stage thereof has been passed in order to investigate the question of public use, especially where the bar, if established, would apply only to the application of one party. [Kneisly v. Kaisling, 830.

2. CAN BE ESTABLISHED ONLY BY PROPERLY-TAKEN TESTIMONY.
The bar of public use can be established only by properly-taken testimony, with the right of cross-examination. Mere affidavits are insufficient. [Id.

PUBLIC-USE PROCEEDINGS.

See Public Use and Sale, 1.

REDUCTION TO PRACTICE.

1. COMMERCIAL PRACTICABILITY NOT NECESSARY.
It is well established that commercial practicability of a device is not necessary to constitute a reduction to practice of the same.
[Emerson v. Sanders, 831.

2. PRIORITY.
Evidence reviewed and *Held* to establish that the work done by E. prior to S.'s conception constituted a reduction to practice and not a mere abandoned experiment and that priority was properly awarded to the former. [Id.

3. SAME.
Where the claims call for a sound-record having a record-surface coating of shellac-like record material and the evidence showed that E. made a sound-record having a record-surface of celluloid, *Held* that this was an embodiment of the issue, since in view of the disclosures of both parties the celluloid surface was a "coating" of "shellac-like" material. [*Sanders v. Emerson, 1220.

4. SAME.
Where E. built a sound-record having the characteristics specified in the issue, which, while it was not a finished commercial article, demonstrated the success of the invention, as it accurately reproduced sound and possessed good wearing qualities, *Held* that this constitutes a reduction to practice of the invention. [*Id.

REFERENCES.

See Prosecution of Applications, 1.

REGISTRABILITY.

See Trade-Marks, 1, 7, 13, 14.

REJECTION OF CLAIMS.

See Abandonment of Applications.

RESPONSIVE ACTION BY THE APPLICANT.

See Abandonment of Applications; Prosecution of Applications, 2, 3.

RIGHT TO MAKE CLAIMS.

See Construction of Claims, 2.

SIMILARITY OF MARKS.

See Trade-Marks, 3, 4, 6, 7, 9, 11, 15, 16.

STATE OF THE ART.

See Construction of Claims, 1; Designs.

SUNDAYS AND HOLIDAYS.

See Motion to Dissolve Interference, 2.

TEN-YEARS CLAUSE.

See Trade-Marks, 2.

TERMINOLOGY.

See Construction of Claims, 2; Reduction to Practice, 3; Trade-Marks, 2.

TESTIMONY.

See Public Use and Sale, 2.

OBJECTION TO FORM OF QUESTIONS—DISREGARDED WHERE PRIORITY IS SATISFACTORILY ESTABLISHED.
Where S. objected to certain questions on the ground that they were leading and to the instructions to other witnesses by counsel for E. not to answer certain questions asked on cross-examination, but these objections were not urged before the Examiner of Interferences or the Examiners-in-Chief, *Held* that as E. had satisfactorily established priority of invention by a preponderance of evidence these objections would not be considered, and, further, that a failure to insist upon these objections before the lower tribunals might well be considered a waiver thereof.
[*Sanders v. Emerson, 1220.

TRADE-MARKS.

1. DESCRIPTIVE—"MODULATION" FOR STEAM-HEATING AND VENTILATING APPARATUS.
The word "Modulation" *Held* descriptive as applied to steam-heating and ventilating apparatus, and hence not registrable as a trade-mark therefor.
[*Ex parte* Warren Webster & Company, 287.

2. APPLICATION—DECLARATION—EXCLUSIVE USE.
A statement that a mark has been in exclusive use for ten years next preceding the passage of the Trade-Mark Act of February 20, 1905, *Held* not sufficient to bring the case under the provisions of that act as amended February 18, 1911, since the original act went into effect April 1, 1905, and the term "passage of the act" refers to that date, (*ex parte Joseph P. Funke Company*, 124 O. G., 2902,) whereas the amendment specifies that the use must have been exclusive for "ten years next preceding February 20, 1905."
[*Ex parte* Société Anonyme Des Usines Remy, 585.

3. SIMILARITY.
A mark consisting of a label containing certain pictorial representations the essential feature of which is stated to be "the representation of a vineyard, a herd of camels and two men bearing a grape" *Held* deceptively similar to a mark consisting of the representation of two men bearing a bunch of grapes in the same manner as in the other mark.
[*Carmel Wine Company *v.* California Winery, 586.

4. SAME—ONE MARK INCLUDING ESSENTIAL FEATURE OF ANOTHER.
"It goes without saying that one has no right to incorporate the mark of another as an essential feature of his mark. Such a practice would lead to no end of confusion and deprive the owner of a mark of the just protection which the law accords him." [*Id.

5. PRIORITY.
Evidence considered and *Held* to establish that appellee adopted and used its mark prior to the earliest date of adoption by appellant and that as the marks are deceptively similar a petition for the cancelation of the registration of appellant's mark was properly sustained. [*Id.

6. SIMILARITY.
A mark consisting of the representation of the head of a mammoth and the word "Mammoth" *Held* not deceptively similar to a mark consisting of the representation of two elephants in the attitude of a mother washing her child used in connection with the words "Rub-No-More-Soap."
[*The Summit City Soap Works *v.* The Standard Soap Company, 587.

7. SAME.
"This court has adopted a strict rule in refusing registration in all cases where the apparent similarity would probably lead to confusion in trade, holding that the field of selection for marks is so broad that no necessity exists for the invasion of one trader upon even the apparent rights of another, and that the broadest protection will be afforded the purchasing, consuming public by the courts." [*Id.

8. GOODS OF SAME DESCRIPTIVE PROPERTIES—"COTTON SHEETINGS AND SHIRTINGS" AND "SILK, AND COTTON AND SILK MIXED, PIECE GOODS."
Silk and cotton and silk mixed piece goods *Held* to constitute goods of the same descriptive properties as cotton sheetings and shirtings and cotton piece goods and blankets.
[Jackson Company *v.* Rogers & Thompson, 1025.

9. SIMILARITY OF MARKS.
A mark consisting of the representation of a number of owls with outspread wings grouped under the branches of a tree *Held* deceptively similar to a mark consisting of the representation of an owl sitting upon a branch of a tree and the word "Ko' Ko Ko." [Id.

10. APPLICATION—PARTICULAR DESCRIPTION OF GOODS.
Where the labels filed with the application defined the goods as "a blend of rock-candy and maple-syrup," *Held* that the particular description of goods in the application "table-syrup" is sufficiently definite. [*Ex parte* F. R. Chamberlain Company, 1026.

11. SIMILARITY.
A mark consisting of the pictorial representation of a man having a joyful or hilarious expression, with the words "O B Joyful" thereover, *Held* not deceptively similar to a mark consisting of the letters "O B". (*Carmel Wine Co.* v. *California Winery*, 174 O. G., 586, distinguished.) [The Alexander Milling Co. *v.* Vernier, 1026.

12. NO ABSTRACT PROPERTY RIGHT THEREIN.
It is well settled that there is no abstract property right in trade-marks. The use of a trade-mark by one manufacturer or vender upon an article will not prevent another from adopting the same trade-mark for an article of different descriptive properties.
[Johnson Educator Food Co. *v.* Sylvanus Smith & Co., Inc., 1027.

13. GOODS OF THE SAME DESCRIPTIVE PROPERTIES.
"In each of the cases to which my attention has been directed or which I have been able to find, registration of a mark was denied an applicant or a defendant was enjoined only where the merchandise was adapted to the same purpose, or the alleged infringing mark was upon merchandise which the plaintiff would in the ordinary expansion of his business eventually include in the output of his concern." [Id.

14. OPPOSITION—LIKELIHOOD OF INJURY NOT SHOWN.
The use of a mark upon fish products *Held* not likely to injure the owner of the same mark as applied to bread, crackers, and similar foodstuffs and an opposition by the latter to the former's registration of the mark dismissed. [Id.

15. SIMILARITY.
A mark consisting of the picture of a bear standing upright, holding a gun, and the words "Teddy Bear Brand," *Held* deceptively similar to a mark consisting of the picture of a bear having one foot resting on a fish, and the words "Pioneer Fishery."
[*In re* John Braadland, Limited, 1029.

16. SAME.
Two trade-marks each of which includes the picture of a peacock with outspread tail *Held* so similar that their contemporaneous use would be liable to cause confusion in the minds of the public.
[*Ex parte* Reisch Brewing Co., 1217.

TRIBUNALS OF THE PATENT OFFICE.

See Testimony.

WAIVER.

See Testimony.

WITNESSES.

See Testimony.

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Pages 1223 – 1228

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1912.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Gaz."=Official Gazette.]

A. G. Spalding & Bros. (See O'Shea, Dennis C., assignor.)
A. G. Spalding & Bros. Manf'g Co. (See Reach, Milton B., assignor.)
A. G. Spalding & Bros. Manf'g Co. (See Reach, Milton B. and W. P., assignors.)
A. J. Ellis, Inc. (See Ellis and Nellis, assignors.)
A. J. Lindemann & Hoverson Co. (See Pfeil, Philip, assignor.)
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Voting-machine key. No 1,013,355; Jan. 2; Sp. p. 590; Gaz. vol. 174; p. 94.
Abbott, Harry F., Jackson, Mich. Fence-post. No. 1,013,578; Jan. 2; Sp. p. 1050; Gaz. vol. 174; p. 169.
Abercrombie, William R., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Seam-trimmer and edge-binder for sewing-machines. No. 1,015,922; Jan. 30; Sp. p. 6222; Gaz. vol. 174; p. 1085.
Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric heater for pipe-thawing. No. 1,015,923; Jan. 30; Sp. p. 6225; Gaz. vol. 174; p. 1085.
Accident Insurance Machine Company, The. (See Meichert, Charles A., assignor.)
Acheson, Edward G., Stamford township, Welland county, Ontario, Canada. Refractory body and making the same. No. 1,014,199; Jan. 9; Sp. p. 2452; Gaz. vol. 174; p. 412.
Acme Hoisting Machinery Company. (See McCune, Frank R., assignor.)
Acme Refrigerating Company. (See Bossé, Adolphe E., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Reinicke, Gustav, assignor.)
Adam, George J., Chicago, Ill. Antiskidding tire. No. 1,014,357; Jan. 9; Sp. p. 2834; Gaz. vol. 174; p. 468.
Adam, George J., Chicago, Ill. Antiskidding device for tires. No. 1,014,358; Jan. 9; Sp. p. 2835; Gaz. vol. 174; p. 469.
Adams & Co., J. D. (See Adams, Joseph D. and R. E., assignors.)
Adams & Elting Company. (See Weelands and Williams, assignors.)
Adams, Joseph D. and R. E., assignors to J. D. Adams & Co., Indianapolis, Ind. Road-grader. No. 1,014,989; Jan. 16; Sp. p. 4239; Gaz. vol. 174; p. 713.
Adams, Joseph W., Pasadena, Cal. Window-sash. No. 1,014,737; Jan. 16; Sp. p. 3669; Gaz. vol. 174; p. 627.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone repeating system. No. 1,015,414; Jan. 23; Sp. p. 5140; Gaz. vol. 174; p. 883.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Automatic telephone circuit and repeater. No. 1,015,768; Jan. 30; Sp. p. 5901; Gaz. vol. 174; p. 1033.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone circuit and repeating apparatus. No. 1,015,769; Jan. 30; Sp. p. 5903; Gaz. vol. 174; p. 1033.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Multiple repeating telephone system. No. 1,015,770; Jan. 30; Sp. p. 5905; Gaz. vol. 174; p. 1033.
Adams, Roy E. (See Adams, Joseph D. and R. E.)
Adams, Thomas D. (See Crossley and Adams.)
Adams, William E., Salem, and W. J. Murray, Beverly, Mass. Oiling device for gasolene-engines. No. 1,015,466; Jan. 23; Sp. p. 5261; Gaz. vol. 174; p. 901.
Adamson, Alexander, Akron, Ohio. Vulcanizer. No. 1,013,716; Jan. 2; Sp. p. 1383; Gaz. vol. 174; p. 217.
Adamson, Charles E., assignor to The Writerpress Company, Buffalo, N. Y. Duplicating-machine. No. 1,015,256; Jan. 16; Sp. p. 4763; Gaz. vol. 174; p. 803.
Addressograph Company. (See Duncan, Joseph S., assignor.)
Adelt, Alfred, assignor of one-fifth to J. Becker and two-fifths to C. Becker, Breslau, Germany. Bread-roll machine. No. 1,015,985; Jan. 30; Sp. p. 6361; Gaz. vol. 174; p. 1107.
Adler, Samuel, Vienna, Austria-Hungary. Safety-razor. No. 1,014,431; Jan. 9; Sp. p. 2981; Gaz. vol. 174; p. 494.
Adler, William E. (See Helmick and Adler.)
Adreon, Robert E. (See Niederlander and Adreon.)
Aeolian Company. (See Pain and Wood, assignors.)
Aermore Manufacturing Company. (See Stephens, William E., assignor.)
Agnew, William, Dayton, Ohio. Lamp. No. 1,013,356; Jan. 2; Sp. p. 597; Gaz. vol. 174; p. 94.
Agrella, M., *et al.* (See Perry, Alfred H., assignor.)
Ahl, Charles A., Salem, N. J. Trackless trolley. No. 1,014,556; Jan. 9; Sp. p. 3197; Gaz. vol. 174; p. 533.
Ahlborn, Theodore, Chicago, Ill., assignor to Waterloo Cement Machinery Corporation, Waterloo, Iowa. Winding-drum. No. 1,014,990; Jan. 16; Sp. p. 4243; Gaz. vol. 174; p. 714.
Ainsworth, Ernest D., Tulare, S. D. Wagon-bottom and metal framework therefor. No. 1,015,467; Jan. 23; Sp. p. 5263; Gaz. vol. 174; p. 902.
Ainsworth, Harry, Moline, Ill., assignor to Williams, White & Company. Machine for punching holes in metal. No. 1,016,120; Jan. 30; Sp. p. 6645; Gaz. vol. 174; p. 1155.
Airhart, Noah S. (See McQuade and Airhart.)
Akahori, Masaru B., and M. Mochizuki, Sacramento, Cal. Hand-warmer. No. 1,015,661; Jan. 23; Sp. p. 5672; Gaz. vol. 174; p. 969.
Aktiebolaget Ljungstroms Ångturbin. (See Ljungström, Birger, assignor.)
Aktiebolaget Svenska Vapen-Och Ammunitionsfabriken. (See Sjögren, Carl A. T., assignor.)
Alball Manufacturing Company. (See Millard, William, assignor.)
Albert, Eugen, Munich, Germany. Etching-machine. No. 1,013,717; Jan. 2; Sp. p. 1386; Gaz. vol. 174; p. 217.
Albright, John G. (See Rowley and Albright.)
Alden, Arthur B. (See Parmenter and Alden.) (Reissue.)
Aldridge, Thomas J. (See Reilly and Aldridge.)
Alexander, Anson C., Penacook, N. H. Automatic brake. No. 1,013,918; Jan. 9; Sp. p. 1845; Gaz. vol. 174; p. 316.
Alexander, Elmer P., Lewistown, Pa. Manufacturing hoes. No. 1,014,432; Jan. 9; Sp. p. 2982; Gaz. vol. 174; p. 494.
Alexander, Jesse, Brooklyn, assignor of one-half to D. N. Thayer, New York, N. Y. Type-writer ribbon mechanism. No. 1,013,095; Jan. 2; Sp. p. 1; Gaz. vol. 174; p. 3.
Alexander, Jesse, Brooklyn, assignor of one-half to D. N. Thayer, New York, N. Y. Type-writer key and type-bar mechanism. No. 1,013,096; Jan. 2; Sp. p. 3; Gaz. vol. 174; p. 3.
Alexander, Jesse, Brooklyn, assignor of one-half to D. N. Thayer, New York, N. Y. Type-writer case-shift mechanism. No. 1,013,264; Jan. 2; Sp. p. 380; Gaz. vol. 174; p. 61.
Alexander, Theophilus W., Burlington, Iowa. Oil-can. No. 1,016,121; Jan. 30; Sp. p. 6648; Gaz. vol. 174; p. 1156.
Alexieff, Valerian, Ensell, Persia. Apparatus for steering moving objects, particularly ships and flying-machines. No. 1,016,240; Jan. 30; Sp. p. 6871; Gaz. vol. 174; p. 1193.
Aliano, Frank S., New York, N. Y. Safety appliance for hand-fed power-presses. No. 1,014,359; Jan. 9; Sp. p. 2439; Gaz. vol. 174; p. 469.
Allan, Thomas M., Toronto, Ontario, Canada. Physical exerciser, straightener, and heightener. No. 1,013,097; Jan. 2; Sp. p. 4; Gaz. vol. 174; p. 4.
Alleas, Jean M., Boston, Mass. Aeroplane. No. 1,015,924; Jan. 30; Sp. p. 6226; Gaz. vol. 174; p. 1086.
Allen, Bertram. (See Rausseau, Coatsworth E., assignor.)
Allen, Daniel M. (See Garner, James M., assignor.)
Allen, Edwin T., Detroit, Mich. Mold for vaults. No. 1,014,360; Jan. 9; Sp. p. 2842; Gaz. vol. 174; p. 470.
Allen, Frank M., Washington, D. C. Machine for testing the life of type-writer ribbons. No. 1,013,832; Jan. 2; Sp. p. 1613; Gaz. vol. 174; p. 258.
Allen, Jehu W., Winnfield, La. Ironing-board. No. 1,016,196; Jan. 30; Sp. p. 6780; Gaz. vol. 174; p. 1179.

Allen, Samuel L., Moorestown, N. J. Self-locking mechanism. No. 1,013,098; Jan. 2; Sp. p. 6; Gaz. vol. 174; p. 4.

Allen, Samuel L., Moorestown, N. J. Self-locking lever. No. 1,013,099; Jan. 2; Sp. p. 9; Gaz. vol. 174; p. 4.

Alles, Henry, Spokane, Wash. Current-motor. No. 1,014,930; Jan. 16; Sp. p. 4114; Gaz. vol. 174; p. 693.

Alley, Frederick L., Fitzroy, near Melbourne, Victoria, Australia, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for finishing boots and shoes. No. 1,015,866; Jan. 30; Sp. p. 6101; Gaz. vol. 174; p. 1064.

Allis-Chalmers Company. (See Lieber, William H., assignor.)

Allison, W. J., *et al.* (See Eyth, Lewis J., assignor.)

Allsop, George. (See Miller and Allsop.)

Almgren, John, Seattle, Wash. Level. No. 1,015,608; Jan. 23; Sp. p. 5553; Gaz. vol. 174; p. 951.

Alsberg, Julius, New York, N. Y. Insulator. No. 1,015,224; Jan. 16; Sp. p. 4086; Gaz. vol. 174; p. 791.

Alvord, Elisha H., Seattle, assignor to H. H. Taber, Tacoma, Wash. Automatic filter-press. (Reissue.) No. 13,351; Jan. 9; Sp. p. 3401; Gaz. vol. 174; p. 560.

Ambler, George A., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Mechanism for actuating work-supports. No. 1,013,833; Jan. 2; Sp. p. 1616; Gaz. vol. 174; p. 258.

Amborn, George, New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-wrench. No. 1,014,931; Jan. 16; Sp. p. 4117; Gaz. vol. 174; p. 693.

Ambrose, Harry T. (See Walter, Edward C., assignor.)

American Bar Lock Company. (See Mulford, Logan W., assignor.)

American Can Company. (See Bucklin, Charles S., assignor.)

American Can Company. (See Dister, Joseph, assignor.)

American Can Company. (See Stollberg, Charles, assignor.)

American Can Company. (See Taylor, William E., assignor.)

American Car and Foundry Company. (See Frame, Robert E., assignor.)

American Car and Foundry Company. (See Ostrander, Allen E., assignor.)

American Car and Foundry Company. (See Voss, William, assignor.)

American Copper Extracting and Refining Company. (See Hess, Henry K., assignor.)

American Cork & Seal Company. (See McDonald, Charles D., assignor.)

American Fog Signal Company. (See Niditch, Isadore, assignor.)

American Graphophone Company. (See Macdonald, Thomas H., assignor.)

American Hardware Corporation, The. (See Voight, Henry G., assignor.)

American Multigraph Company, The. (See Gammeter, Harry C., assignor.)

American Multigraph Company The. (See Pejeau, Albert D., assignor.)

American Paper Products Company. (See Gores, Henry N., assignor.)

American Pin Company. (See Rothwell, Louis S., assignor.)

American Planograph Company. (See Cornwall, George R., assignor.)

American Pneumatic Service Company. (See Fordyce, Edmond A., assignor.)

American Pulverizer Company. (See Roebbel, Frederic W., assignor.)

American Regenerator Company (See Sorge, Adolph, assignor.)

American Stamp and Ticket Vending Machine Company. (See Wolheim, Heinrich, assignor.)

American Steel Foundries. (See Kinne, Edmund P., assignor.)

American Universal Mill Company. (See Grey, Henry, assignor.)

Ames, Oscar H., Coal Hill, assignor of one-half to R. McCalmont, Franklin, Pa. Automobile jack-truck. No. 1,014,991; Jan. 16; Sp. p. 4245; Gaz. vol. 174; p. 714.

Ames, Oscar H., Coal Hill, assignor of one-half to R. McCalmont, Franklin, Pa. Automobile jack-truck. No. 1,014,992; Jan. 16; Sp. p. 4246; Gaz. vol. 174; p. 714.

Amsbary, William N., Los Angeles, Cal. Refrigerator. No. 1,013,468; Jan. 2; Sp. p. 828; Gaz. vol. 174; p. 132.

Anderson, Carl J., assignor to J. L. Schureman Co., Chicago, Ill. Solenoid. No. 1,015,925; Jan. 30; Sp. p. 6228; Gaz. vol. 174; p. 1086.

Anderson, Gustaf M., Waterloo, Iowa. Spacer for liner-plates of centrifugal cream-separators. No. 1,013,834; Jan. 2; Sp. p. 1621; Gaz. vol. 174; p. 259.

Anderson, Harvey, and F. E. Kirby, Kansas City, Kans.; said Kirby assignor to said Anderson. Self-heating sad-iron. No. 1,013,357; Jan. 2; Sp. p. 593; Gaz. vol. 174; p. 94.

Anderson, Harvey S., Dayton, Ohio. Preparing crushed stone. No. 1,013,100; Jan. 2; Sp. p. 11; Gaz. vol. 174; p. 5.

Anderson, Hugo J., Melrose, Mass. Water-skee. No. 1,014,993; Jan. 16; Sp. p. 4248; Gaz. vol. 174; p. 715.

Anderson, James B., Shaler township, Allegheny county, assignor of one-fourth to W. G. Boyle, one-fourth to J. Gehring, and one-fourth to J. Fuerstenberg, Allegheny county, Pa. Gas-burner. No. 1,014,111; Jan. 9; Sp. p. 2286; Gaz. vol. 174; p. 381.

Anderson, James S. and R., Wardner, British Columbia, Canada. Lath. No. 1,014,557; Jan. 9; Sp. p. 3202; Gaz. vol. 174; p. 533.

Anderson, John V., Seattle, Wash. Marline-spike. No. 1,014,200; Jan. 9; Sp. p. 2454; Gaz. vol. 174; p. 412.

Anderson, Robert, Cincinnati, Ohio. Form work for concrete construction. No. 1,014,738; Jan. 16; Sp. p. 3670; Gaz. vol. 174; p. 627.

Anderson, Robert, Cincinnati, Ohio. Beam-form and joist for concrete structures. No. 1,015,279; Jan. 23; Sp. p. 4825; Gaz. vol. 174; p. 837.

Anderson, Robert H., San Diego, Cal. Wall or recess bed. No. 1,015,376; Jan. 23; Sp. p. 5052; Gaz. vol. 174; p. 871.

Anderson, Roy. (See Anderson, James S. and R.)

Anderson, Walker G., Seattle, Wash. Display-rack. No. 1,015,926; Jan. 30; Sp. p. 6232; Gaz. vol. 174; p. 1086.

Anderson, William N., Troy, Idaho. Music-stand. No. 1,013,718; Jan. 2; Sp. p. 1387; Gaz. vol. 174; p. 217.

Andres, Jacob, Helena, Ohio. Nozzle for disinfectant and wall-paper-removing apparatus. No. 1,016,197; Jan. 30; Sp. p. 6782; Gaz. vol. 174; p. 1179.

Andresen, Herman P., assignor to D. J. Evans, Chicago, Ill. Handling, unloading, storing, and reloading plant. No. 1,014,994; Jan. 16; Sp. p. 4250; Gaz. vol. 174; p. 715.

Andrews, Benjamin, Los Angeles, Cal. Oil-well pump. No. 1,013,579; Jan. 2; Sp. p. 1052; Gaz. vol. 174; p. 109.

Andrews, Frank J., Holden, Alberta, Canada. Adjustable cowl for smoke-stacks. No. 1,013,358; Jan. 2; Sp. p. 594; Gaz. vol. 174; p. 95.

Angle, Edward H., New London, Conn. Dental tooth regulating and retaining appliance. No. 1,014,028; Jan. 9; Sp. p. 2102; Gaz. vol. 174; p. 353.

Angle, Edward H., New London, Conn. Dental tooth-regulating appliance. No. 1,014,029; Jan. 9; Sp. p. 2105; Gaz. vol. 174; p. 353.

Angle, Edward H., New London, Conn. Dental tooth-regulating appliance. No. 1,014,030; Jan. 9; Sp. p. 2107; Gaz. vol. 174; p. 353.

Annable Pneumatic Spring Company. (See Annable, Warren W., assignor.)

Annable, Warren W., Grand Rapids, assignor to Annable Pneumatic Spring Company, Detroit, Mich. Vehicle-spring. No. 1,013,855; Jan. 9; Sp. p. 1705; Gaz. vol. 174; p. 295.

Antelotti, Frank J., Norfolk, Va. Foot-lock for printers' galleys. No. 1,015,257; Jan. 16; Sp. p. 4771; Gaz. vol. 174; p. 803.

Antonuccio, Joseph, Oakland, Cal. Burner. No. 1,014,932; Jan. 16; Sp. p. 4120; Gaz. vol. 174; p. 694.

Apfel, Neelie B. (See Apfel, Philip F. and N. B.)

Apfel, Philip F. and N. B., Seattle, Wash. Cement material. No. 1,014,995; Jan. 16; Sp. p. 4264; Gaz. vol. 174; p. 716.

Appel, Moses, Baltimore, Md. Electric furnace. No. 1,013,359; Jan. 2; Sp. p. 597; Gaz. vol. 174; p. 95.

Appelman, Erastus W., Clermont, Iowa, assignor to B. F. Blocklinger, trustee. Land-drain. No. 1,015,530; Jan. 23; Sp. p. 5382; Gaz. vol. 174; p. 922.

Applas, Clarence S., Moline, Ill. Auxiliary vehicle-seat. No. 1,013,265; Jan. 2; Sp. p. 381; Gaz. vol. 174; p. 61.

Applebaugh, Eugene M., Danville, Pa. Brake-head. No. 1,013,101; Jan. 2; Sp. p. 14; Gaz. vol. 174; p. 5.

Applebaugh, Eugene M., Danville, Pa. Brake-beam. No. 1,013,102; Jan. 2; Sp. p. 15; Gaz. vol. 174; p. 5.

Applebaugh, Eugene M., Danville, Pa. Brake-head. No. 1,013,103; Jan. 2; Sp. p. 16; Gaz. vol. 174; p. 5.

Arbuthnot, Mark, Vancouver, British Columbia, Canada. Cutter-head. No. 1,015,927; Jan. 30; Sp. p. 6233; Gaz. vol. 174; p. 1086.

Arend, Francis J., *et al.* (See Berrigan, John J., assignor.)

Armbrust, Charles W., Crystal Lake, assignor of one-fourth to S. Stein, Chicago, Ill. Brake-shoe. No. 1,014,933; Jan. 16; Sp. p. 4121; Gaz. vol. 174; p. 694.

Armbrust, Charles W., Crystal Lake, assignor of one-fourth to S. Stein, Chicago, Ill. Brake-shoe. No. 1,015,771; Jan. 30; Sp. p. 5907; Gaz. vol. 174; p. 1034.

Armitage, Charles F., Jamestown, N. Y. Radiator. No. 1,015,531; Jan. 23; Sp. p. 5384; Gaz. vol. 174; p. 923.

Armor Steel & Foundry Company. (See Gebhard, John W., assignor.)

Armstrong, Charles C., Marysville, Ohio. Globe-holder. No. 1,014,433; Jan. 9; Sp. p. 2984; Gaz. vol. 174; p. 494.

Armstrong, Charles C., Marysville, Ohio. Lawn-sprinkler. No. 1,014,434; Jan. 9; Sp. p. 2986; Gaz. vol. 174; p. 495.

Armstrong Cork Company. (See Jones, Alfred, assignor.)

Armstrong, Marcellus, Corvallis, Oreg. Candy-cutting machine. No. 1,013,634; Jan. 2; Sp. p. 1181; Gaz. vol. 174; p. 188.

Arnett, Anna W., Lawrence, Kans. Educational appliance. No. 1,013,856; Jan. 9; Sp. p. 1706; Gaz. vol. 174; p. 295.

Arnhold, Henry P., and A. P. Witteman, Philadelphia, Pa.; said Arnhold assignor to said Witteman. Crank-shaft lathe. No. 1,015,117; Jan. 16; Sp. p. 4495; Gaz. vol. 174; p. 757.

Arthur, Richard S., Newark, N. J. Surgical instrument. No. 1,014,799; Jan. 16; Sp. p. 3806; Gaz. vol. 174; p. 647.

Ashford, Alfred J., Kinston, N. C. Tank-siphon. No. 1,013,719; Jan. 2; Sp. p. 1389; Gaz. vol. 174; p. 218.

Ashford, Alfred J., Kinston, N. C. Closet-cistern-supply valve. No. 1,013,720; Jan. 2; Sp. p. 1390; Gaz. vol. 174; p. 218.

Ashlock, Henry H., Kansas City, Mo. Aerodrome. No. 1,014,031; Jan. 9; Sp. p. 2108; Gaz. vol. 174; p. 354.

Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for assembling parts of boots and shoes. No. 1,014,631; Jan. 16; Sp. p. 3483; Gaz. vol. 174; p. 591.

Ashworth, Fred, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Thread-waxing device. No. 1,015,772; Jan. 30; Sp. p. 5908; Gaz. vol. 174; p. 1034.

Asmus, William G., Cleveland, Ohio. Thermostatic alarm system. No. 1,015,118; Jan. 16; Sp. p. 4499; Gaz. vol. 174; p. 757.

Asmus, William G., Cleveland, Ohio. Thermostatic circuit-closer. No. 1,015,119; Jan. 16; Sp. p. 4501; Gaz. vol. 174; p. 758.

Asplund, Charles F., assignor of one-half to R. J. Owens, Minneapolis, Minn. Grain-separator. No. 1,013,266; Jan. 2; Sp. p. 383; Gaz. vol. 174; p. 61.

Atkinson, Christopher, Columbia, S. C. Latch. No. 1,013,104; Jan. 2; Sp. p. 16; Gaz. vol. 174; p. 5.

Atkinson, William R., assignor of one-half to J. D. Kilgore, Homestead, Pa. Toy pistol. No. 1,014,739; Jan. 16; Sp. p. 3674; Gaz. vol. 174; p. 627.

Atlanta Utility Works. (See Nash, Walter D., assignor.)

Atlantic National Bank. (See Cummings, Henry H., assignor.)

Atlantic National Bank. (See Mitchell, Frank, assignor.)

Atlas Engine Works. (See McCarty, Norman, assignor.)

Atterbury, James H., Litchfield, Ill. Thermostatic draft-regulator. No. 1,014,032; Jan. 9; Sp. p. 2111; Gaz. vol. 174; p. 354.

Attwood, Frederick G., London, England. Beacon-light. No. 1,015,532; Jan. 23; Sp. p. 5386; Gaz. vol. 174; p. 923.

Atwood, James F., Claremont, N. H. Fastening device for shoes and the like. No. 1,015,928; Jan. 30; Sp. p. 6234; Gaz. vol. 174; p. 1087.

Atwood, Leonard, Philadelphia, Pa., assignor to Tubular Construction Company. Tubular structure and making the same. No. 1,015,120; Jan. 16; Sp. p. 4503; Gaz. vol. 174; p. 758.

Aufiason, Knut, Pelly, Saskatchewan, Canada. Fastener. No. 1,013,460; Jan. 2; Sp. p. 829; Gaz. vol. 174; p. 133.

Auger, Henry N., Worcester, Mass. Carpenter's tool. No. 1,015,773; Jan. 30; Sp. p. 5910; Gaz. vol. 174; p. 1034.

Auger, Philibert, Easthampton, Mass. Amusement-vehicle. No. 1,014,279; Jan. 9; Sp. p. 2645; Gaz. vol. 174; p. 440.

August Brauer Steam Rotary Motor Company. (See Brauer, August, assignor.)

Auld, John, and J. Graham, Glasgow, Scotland. Safety-valve. No. 1,014,435; Jan. 9; Sp. p. 2986; Gaz. vol. 174; p. 495.

Aumann, Louis A., Chicopee, Mass. Slasher. No. 1,014,361; Jan. 9; Sp. p. 2844; Gaz. vol. 174; p. 470.

Austin, Frederick C. (See Bathrick, Charles E., assignor.)

Austin Manufacturing Company, The. (See Mustin, Herbert S., assignor.)

Austin Manufacturing and Supply Company, The. (See Austin, Robert M., assignor.)

Austin, Robert M., assignor to The Austin Manufacturing and Supply Company, Hartford, Conn. Heating appliance. No. 1,013,267; Jan. 2; Sp. p. 386; Gaz. vol. 174; p. 62.

Auto Novelty Company. (See MacFarland, Allison M., assignor.)

Automatic Electric Block Signalling Company. (See Brousson, Robert P., assignor.)

Automatic Packing and Labeling Company. (See Deats, William, assignor.)

Automatic Platen Press Company. (See Beyer, Otto S., assignor.)

Automatic Platen Press Company. (See Morrison, Lewis E., assignor.)

Automatic Platen Press Company, The. (See Pribil, Alexis R., assignor.)

Automatic Refrigerating Company, The. (See Marshall, Albert T., assignor.)

Automatic Steering Company. (See Nelson, August T., assignor.)

Automatic Vacuum Pump Company. (See Sparks and Eddins, assignors.)

Avery, Nicholas F., assignor of one-half to C. Thomas, Brockton, Mass. Composition of matter. No. 1,015,468; Jan. 23; Sp. p. 5264; Gaz. vol. 174; p. 902.

Avery Scale Company. (See Nield, Josiah, assignor.)

Avisus, Leopold, and A. Doll, New York, N. Y. Piano-action. No. 1,014,201; Jan. 9; Sp. p. 2454; Gaz. vol. 174; p. 412.

Axelton, Madel T. and W. C., Graettinger, Iowa. Oil-can. No. 1,013,105; Jan. 2; Sp. p. 17; Gaz. vol. 174; p. 6.

Axelton, William C. (See Axelton, Madel T. and W. C.)

B. L. Marble Chair Company, The. (See Pettibone, Arthur D., assignor.)

Babst, Joseph, assignor to William Schimper & Company, Hoboken, N. J. Holder for pocket-books and the like. No. 1,013,580; Jan. 2; Sp. p. 1054; Gaz. vol. 174; p. 170.

Bacon, Thomas P., and W. A. Gwynn, Santa Rosa, Cal., assignors to Gwynn-Bacon Vulcanizer Co., Inc., St. Louis, Mo. Pressure-closed electric switch. No. 1,015,225; Jan. 16; Sp. p. 4688; Gaz. vol. 174; p. 791.

Bader, Louis, assignor of one-third to M. J. Detmer and one-third to W. Bader, Chicago, Ill. Acetylene-gas generator. No. 1,015,867; Jan. 30; Sp. p. 6103; Gaz. vol. 174; p. 1064.

Bader, Louis, assignor of one-third to W. Bader and one-third to M. J. Detmer, Chicago, Ill. Gasometer. No. 1,016,058; Jan. 30; Sp. p. 6520; Gaz. vol. 174; p. 1134.

Bader, William, *et al.* (See Bader, Louis, assignor.)

Badger Brass Mfg. Co., The. (See Welles, Richard H., assignor.)

Badische Anilin & Soda Fabrik. (See Bosch and Wild, assignors.)

Baechtold, Charles A., Mountainside, N. J., assignor to Lidgerwood Manufacturing Company, New York, N. Y. Car-transferring means. No. 1,013,106; Jan. 2; Sp. p. 18; Gaz. vol. 174; p. 6.

Baehr, George, Ampere, N. J., assignor to National Tube Company, Pittsburgh, Pa. Method of and apparatus for preventing gas explosions. No. 1,015,929; Jan. 30; Sp. p. 6236; Gaz. vol. 174; p. 1087.

Baehr, George, Ampere, N. J., assignor to National Tube Company, Pittsburgh, Pa. Safety device for gas mains and holders. No. 1,015,930; Jan. 30; Sp. p. 6240; Gaz. vol. 174; p. 1087.

Bailey, Annanias B. (See Thomas and Bailey.)

Baird, Edward P., assignor to Baird Manufacturing Company, Chicago, Ill. Telephone toll apparatus. No. 1,015,280; Jan. 23; Sp. p. 4826; Gaz. vol. 174; p. 837.

Baird Machine Company, The. (See Lawrence, Ezra, assignor.)

Baird Manufacturing Company. (See Baird, Edward P., assignor.)

Baird, Myron T., St. Louis, Mo. Lock for motor-boat shafts. No. 1,013,835; Jan. 2; Sp. p. 1622; Gaz. vol. 174; p. 259.

Baker & Baker. (See Langdon, Warren W., assignor.)

Baker, Frederick, Blackheath, and L. Jacobs, assignors to Baker Sewing Machines Trust Limited, London, England. Sewing-machine. No. 1,014,033; Jan. 9; Sp. p. 2113; Gaz. vol. 174; p. 354.

Baker, George, Torrington, Conn. Insulator-knob. No. 1,014,934; Jan. 16; Sp. p. 4122; Gaz. vol. 174; p. 695.

Baker, Lewis T., Pensacola, Fla. Turpentine-gatherer. No. 1,013,107; Jan. 2; Sp. p. 21; Gaz. vol. 174; p. 6.

Baker Sewing Machines Trust Limited. (See Baker and Jacobs, assignors.)

Baker, William V., Richmond Hill, N. Y. Safety-razor. No. 1,013,860; Jan. 2; Sp. p. 599; Gaz. vol. 174; p. 95.

Balderston, Henry L., Philadelphia, Pa. Thermometer. No. 1,014,800; Jan. 16; Sp. p. 3809; Gaz. vol. 174; p. 648.

Baldwin Locomotive Works, The. (See Henderson, George R., assignor.)

Baldwin Locomotive Works, The. (See Hodges, William S., assignor.)

Baldwin, Scott. (See Craun and Baldwin.)

Balkema, Charles E., La Fayette, Ind., assignor to H. H. Bliss, trustee, Washington, D. C. Corn-harvesting machine. No. 1,015,281; Jan. 23; Sp. p. 4831; Gaz. vol. 174; p. 837.

Ball, Albert, assignor to Sullivan Machinery Company, Claremont, N. H. Channeling-machine. No. 1,015,258; Jan. 16; Sp. p. 4772; Gaz. vol. 174; p. 803.

Ball, Charles F., New York, assignor to Ball & Jewell, Brooklyn, N. Y. Feed-hopper. No. 1,014,280; Jan. 9; Sp. p. 2647; Gaz. vol. 174; p. 441.

Ball & Jewell. (See Ball, Charles F., assignor.)

Ballard, Harrie A., Ashland, assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass. Machine for tacking shoes. No. 1,015,931; Jan. 30; Sp. p. 6243; Gaz. vol. 174; p. 1088.

Ballard, Harrie A., Ashland, assignor to The Boylston Manufacturing Company, Boston, Mass. Pulling-over machine. No. 1,015,932; Jan. 30; Sp. p. 6246; Gaz. vol. 174; p. 1088.

Baltimore Gas Appliance and Manufacturing Company, The. (See Longfellow, Martin W., assignor.)

Bane, Nathan. (See Chambers and Bane.)

Banner, Otto, Sterbrade, Germany. Apparatus for regulating turbines driven by live and exhaust steam. No. 1,015,415; Jan. 23; Sp. p. 5143; Gaz. vol. 174; p. 883.

Bannister, Maunsel C. J., Dublin, Ireland. Apparatus for producing blocks or coatings of ice. No. 1,013,470; Jan. 2; Sp. p. 830; Gaz. vol. 174; p. 133.

Banta, Samuel, and B. L. Stowe, assignors to Eureka Fire Hose Manufacturing Company, Jersey City, N. J. Air-purifying inhaler attachment. No. 1,013,722; Jan. 2; Sp. p. 1391; Gaz. vol. 174; p. 218.

Barbeau, Malcolm L., assignor to The S. Howes Company, Silver Creek, N. Y. Scouring-machine. No. 1,013,526; Jan. 2; Sp. p. 951; Gaz. vol. 174; p. 153.

Barber, Claire S., Waterville, Conn. Guard for vehicles. No. 1,015,774; Jan. 30; Sp. p. 5911; Gaz. vol. 174; p. 1035.

Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 1,013,919; Jan. 9; Sp. p. 1847; Gaz. vol. 174; p. 317.

Berrius, Friedrich, Hanover, Germany. Making alkali-

Barber, John C., assignor to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 1,014,362; Jan. 9; Sp. p. 2845; Gaz. vol. 174; p. 470.

Barbey, Camille, Geneva, Switzerland. Starting device for engines. No. 1,013,723; Jan. 2; Sp. p. 1394; Gaz. vol. 174; p. 219.

Barbier, André. (See Koetschet and Barbier.)

Barbour, James, Stamps, Ark., assignor of one-half to W. B. Boggs, Plain Dealing, La. Shingle-making machine. No. 1,013,724; Jan. 2; Sp. p. 1398; Gaz. vol. 174; p. 219.

Bardill, John O., Herculaneum, Mo. Apparatus for separating dross from molten lead. No. 1,013,635; Jan. 2; Sp. p. 1182; Gaz. vol. 174; p. 188.

Barefoot, James L. (See Pickens, Davis A., assignor.)

Barker, Alfred, assignor to J. Barker, Philadelphia, Pa. Hair-drier. No. 1,015,121; Jan. 16; Sp. p. 4505; Gaz. vol. 174; p. 758.

Barker, James. (See Barker, Alfred, assignor.)

Barnard, Davis, Los Angeles, Cal. Feed-nozzle for carbureters. No. 1,014,202; Jan. 9; Sp. p. 2456; Gaz. vol. 174; p. 413.

Barnard and Leas Manufacturing Company. (See Cornwall, John B., assignor.)

Barnes, Eri E., Parkers, N. Y. Polishing-machine. No. 1,016,198; Jan. 30; Sp. p. 6783; Gaz. vol. 174; p. 1179.

Barnum, Thomas E., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Motor-controlling device. No. 1,016,059; Jan. 30; Sp. p. 6521; Gaz. vol. 174; p. 1134.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,016,060; Jan. 30; Sp. p. 6526; Gaz. vol. 174; p. 1134.

Barr, John H., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,013,920; Jan. 9; Sp. p. 1850; Gaz. vol. 174; p. 317.

Barr, John H., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,061; Jan. 30; Sp. p. 6529; Gaz. vol. 174; p. 1135.

Barr, John M., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical apparatus. No. 1,013,108; Jan. 2; Sp. p. 23; Gaz. vol. 174; p. 7.

Barratt, William T., assignor to A. J. and A. Cooper and C. S. Kehoe, Bennington, Vt., executors of Charles Cooper, deceased, Bennington, Vt. Circular-knitting machine. No. 1,013,471; Jan. 2; Sp. p. 832; Gaz. vol. 174; p. 133.

Barrett, Ernest D., and I. B. Wood, New York, N. Y., assignors, by mesne assignments, to said I. B. Wood. Valve mechanism. No. 1,013,725; Jan. 2; Sp. p. 1400; Gaz. vol. 174; p. 220.

Barrett, James G., Hatton, assignor of one-half to F. P. Hutchison, Mena, Ark. Lamp-burner attachment. No. 1,013,921; Jan. 9; Sp. p. 1850; Gaz. vol. 174; p. 318.

Barrett & Lawrence. (See Eaton, Emery W., assignor.)

Barrett, Richard E., Boykins, Va. Whiffletree. No. 1,014,034; Jan. 9; Sp. p. 2122; Gaz. vol. 174; p. 355.

Barringer, Lawrence E., and G. Wright, Schenectady, N. Y., assignors to General Electric Company. Inclosed-fuse indicator. No. 1,014,741; Jan. 16; Sp. p. 3679; Gaz. vol. 174; p. 628.

Barry, Henry, Chicago, Ill. Food-slicer. No. 1,013,361; Jan. 2; Sp. p. 600; Gaz. vol. 174; p. 96.

Barry, Henry, Chicago, Ill. Liquid-filling device. No. 1,014,935; Jan. 16; Sp. p. 4124; Gaz. vol. 174; p. 695.

Barstow, Edwin O., assignor to The Dow Chemical Company, Midland, Mich. Manufacturing arsenate of lead. No. 1,014,742; Jan. 16; Sp. p. 3680; Gaz. vol. 174; p. 628.

Bartlett, Arthur L., Unadilla, N. Y. Cow-tail holder. No. 1,013,362; Jan. 2; Sp. p. 602; Gaz. vol. 174; p. 96.

Bass, Ernest C., and E. S. Hough, London, England. Resilient wheel. No. 1,014,558; Jan. 9; Sp. p. 3203; Gaz. vol. 174; p. 533.

Basse, Heinrich H., Holtensen, Germany. Compound wooden plate. No. 1,015,775; Jan. 30; Sp. p. 5912; Gaz. vol. 174; p. 1035.

Bassett, James E., Oshkosh, Wis. Spark-arrester for cigars. No. 1,014,436; Jan. 9; Sp. p. 2988; Gaz. vol. 174; p. 496.

Bassford, Samuel D., Tooele, Utah. Wagon-box lift. No. 1,014,743; Jan. 16; Sp. p. 3681; Gaz. vol. 174; p. 629.

Bastian, Charles O., London, England. Electric heater. No. 1,014,437; Jan. 9; Sp. p. 2990; Gaz. vol. 174; p. 496.

Bastian, William B., Chicago, Ill., assignor to W. B. Bastian Mfg. Co., Pierre, S. D. Gas water-heater. No. 1,013,581; Jan. 2; Sp. p. 1055; Gaz. vol. 174; p. 170.

Batchlor, Landon, assignor of one-half to A. D. Cook, Lawrenceburg, Ind. Car-coupling. No. 1,015,533; Jan. 23; Sp. p. 5389; Gaz. vol. 174; p. 923.

Bateman Manufacturing Company. (See Willis, Leland, assignor.)

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,013,726; Jan. 2; Sp. p. 1405; Gaz. vol. 174; p. 221.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,014,632; Jan. 16; Sp. p. 3438; Gaz. vol. 174; p. 591.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Pounding-up, leveling, or smoothing roll. No. 1,015,776; Jan. 30; Sp. p. 5912; Gaz. vol. 174; p. 1035.

Bates, William, Santa Barbara, Cal. Beet-harvester. No. 1,013,363; Jan. 2; Sp. p. 603; Gaz. vol. 174; p. 96.

Bates, William W., Sedgwick, Kans. Moving advertising-machine. No. 1,015,122; Jan. 16; Sp. p. 4506; Gaz. vol. 174; p. 759.

Bathrick, Charles E., assignor to F. C. Austin, Chicago, Ill. Machine for mixing concrete and the like. No. 1,013,109; Jan. 2; Sp. p. 27; Gaz. vol. 174; p. 7.

Batrick, Abraham S., Kansas City, Mo. Filing-cabinet. No. 1,013,922; Jan. 9; Sp. p. 1858; Gaz. vol. 174; p. 318.

Baublits, Raymond, *et al.* (See Dorsey, James C. and W. W., assignors.)

Bauer, Ernest F., Ravenna, Ohio. Automatic belt-shifter. No. 1,015,933; Jan. 30; Sp. p. 6248; Gaz. vol. 174; p. 1088.

Bauer, Martin, Cleveland, Ohio. Ladder. No. 1,015,123; Jan. 16; Sp. p. 4508; Gaz. vol. 174; p. 759.

Baumann, Ulrich A., Lucerne, Switzerland. Elastic metal sole. No. 1,013,727; Jan. 2; Sp. p. 1408; Gaz. vol. 174; p. 221.

Baumert, Theodor, Deutsch Lissa, Germany. Oar. No. 1,014,281; Jan. 9; Sp. p. 2648; Gaz. vol. 174; p. 441.

Bavier, Charles S., New York, N. Y. Lubricating device. No. 1,014,744; Jan. 16; Sp. p. 3682; Gaz. vol. 174; p. 629.

Bayer, William F., assignor to The Chase & Baker Company, Buffalo, N. Y. Door-operating device for musical instruments. No. 1,015,609; Jan. 23; Sp. p. 5554; Gaz. vol. 174; p. 951.

Beach, Francis W., Schuylerville, N. Y. Vertically-adjustable case for bottles or the like. No. 1,013,728; Jan. 2; Sp. p. 1408; Gaz. vol. 174; p. 221.

Beal, Asher, Montrose, assignor of one-half to A. R. Murdock, Denver, Colo. Irrigating-ditch controller. No. 1,014,438; Jan. 9; Sp. p. 2992; Gaz. vol. 174; p. 496.

Beale, Carroll, and D. P. Moore, Washington, D. C. Flexible jointed clutch. No. 1,015,259; Jan. 16; Sp. p. 4774; Gaz. vol. 174; p. 804.

Beamisderfer, Joseph A., Jonestown, Pa. Razor-sharpener. No. 1,014,745; Jan. 16; Sp. p. 3684; Gaz. vol. 174; p. 629.

Beard, George M., Lagrange, Ind. Vehicle-jack. No. 1,014,801; Jan. 16; Sp. p. 3810; Gaz. vol. 174; p. 648.

Beard, William A., London, England. Rotary pump, rotary engine, and the like. No. 1,016,199; Jan. 30; Sp. p. 6786; Gaz. vol. 174; p. 1180.

Beatty, Harold. (See Monro and Beatty.)

Beausejour, Reme A., and G. Drubel, assignors to Standard Varnish Works, New York, N. Y. Liquid-coating machine. No. 1,014,282; Jan. 9; Sp. p. 2648; Gaz. vol. 174; p. 441.

Beaver, Wesley, Collinsville, Ill. Clothes-line prop. No. 1,014,688; Jan. 16; Sp. p. 3568; Gaz. vol. 174; p. 610.

Becher, James A., Chicago, Ill. Die stock or head. No. 1,015,282; Jan. 23; Sp. p. 4835; Gaz. vol. 174; p. 838.

Bechtold, Joseph C., Detroit, Mich. Cue-tip holder. No. 1,014,559; Jan. 9; Sp. p. 3206; Gaz. vol. 174; p. 534.

Beck, John C., Seattle, assignor of one-half to E. E. Bonn, King county, Wash. Priming-cup for gasolene-engines. No. 1,015,868; Jan. 30; Sp. p. 6106; Gaz. vol. 174; p. 1065.

Beck, Larkin, Kirtland, N. Mex. Adjustable axle-nut. No. 1,015,124; Jan. 16; Sp. p. 4511; Gaz. vol. 174; p. 760.

Becker, Curt, *et al.* (See Adelt, Alfred, assignor.)

Becker, Ernst and O., Iserlohn, Germany. Electroplating aluminium and its alloys. No. 1,014,560; Jan. 9; Sp. p. 3208; Gaz. vol. 174; p. 534.

Becker, Josef, *et al.* (See Adelt, Alfred, assignor.)

Becker, Otto. (See Becker, Ernst and O.)

Beckwith, Walter C., Fostoria, Ohio. Inner tube for tire-casings. No. 1,016,122; Jan. 30; Sp. p. 6649; Gaz. vol. 174; p. 1156.

Beddoes, Hubert, Philadelphia, Pa. Air-flushing apparatus. No. 1,014,363; Jan. 9; Sp. p. 2848; Gaz. vol. 174; p. 471.

Bedini, Jean, assignor of one-half to F. F. Proctor, Jr., New York, N. Y. Restaurant signaling device. No. 1,013,582; Jan. 2; Sp. p. 1058; Gaz. vol. 174; p. 171.

Beeler, Abraham T., Kansas City, Mo. Wheel for motor-vehicles. No. 1,016,200; Jan. 30; Sp. p. 6788; Gaz. vol. 174; p. 1180.

Beeler, Herbert L., assignor to The John B. Morris Machine Tool Company, Cincinnati, Ohio. Speed-changing mechanism. No. 1,015,986; Jan. 30; Sp. p. 6363; Gaz. vol. 174; p. 1108.

Beemer, Frank, assignor to Standard Roller Bearing Company, Philadelphia, Pa. Holder for metal-ball making. No. 1,014,746; Jan. 16; Sp. p. 3685; Gaz. vol. 174; p. 629.

Beemer, Frank, assignor to Standard Roller Bearing Company, Philadelphia, Pa. Ball-grinding machine. No. 1,014,747; Jan. 16; Sp. p. 3686; Gaz. vol. 174; p. 629.

Beers, Alexander W., Bayonne, N. J. Folding box. No. 1,013,110; Jan. 2; Sp. p. 31; Gaz. vol. 174; p. 8.

Beery, William H., Celina, Ohio. Flying-machine. No. 1,013,268; Jan. 2; Sp. p. 388; Gaz. vol. 174; p. 62.

Bees, William H., assignor to Goetz & Flodin Manufacturing Company, Chicago, Ill. Lock-valve. No. 1,014,203; Jan. 9; Sp. p. 2458; Gaz. vol. 174; p. 413.

Behm, Walther, New York, N. Y. Nozzle for vacuum-cleaners. No. 1,013,364; Jan. 2; Sp. p. 605; Gaz. vol. 174; p. 96.

Behr, Bernhard, Dresden, Germany. Device for adjusting slides in calculating-machines. No. 1,013,981; Jan. 9; Sp. p. 1998; Gaz. vol. 174; p. 338.

Behrens, George E., Ivoryton, Conn., assignor to J. Veit, New York, N. Y. Crucible-furnace. No. 1,013,472; Jan. 2; Sp. p. 838; Gaz. vol. 174; p. 134.

Beintema, Tjebbe D., and D. De Kool, Oskaloosa, Iowa. Automatic motor-controller. No. 1,015,263; Jan. 23; Sp. p. 4830; Gaz. vol. 174; p. 838.

Belk, Robert L., Waxhaw, N. C. Wire-stretcher. No. 1,014,035; Jan. 9; Sp. p. 2124; Gaz. vol. 174; p. 355.

Bell, Alonzo C., Westfield, N. J. Alternating-current motor. No. 1,015,534; Jan. 23; Sp. p. 5390; Gaz. vol. 174; p. 923.

Bell, John D., Arcadia, Kans. Torpedo-placing machine. No. 1,014,561; Jan. 9; Sp. p. 3208; Gaz. vol. 174; p. 534.

Bell, Nina J., (now by marriage Nina J. Litherbury,) Los Angeles, Cal. Foldable wardrobe. No. 1,013,729; Jan. 2; Sp. p. 1411; Gaz. vol. 174; p. 222.

Bell, William H., assignor to O. J. Karsch, New York, N. Y. Automobile-chassis. No. 1,014,562; Jan. 9; Sp. p. 3210; Gaz. vol. 174; p. 534.

Bellet, Ferdinand, Paris, France. Furnace for making ultramarine blues. No. 1,014,680; Jan. 16; Sp. p. 3569; Gaz. vol. 174; p. 610.

Bellingham Brass Mfg. Co. (See Charroin, Frank B., assignor.)

Bellmore, Philip H., Missoula, Mont. Steering-gear for automobiles. No. 1,014,439; Jan. 9; Sp. p. 2993; Gaz. vol. 174; p. 496.

Bemish, John A., Rochester, N. Y. Vacuum-trap. No. 1,013,730; Jan. 2; Sp. p. 1413; Gaz. vol. 174; p. 222.

Bendig, Charles R., Philadelphia, Pa. Hair-pin. No. 1,015,284; Jan. 23; Sp. p. 4839; Gaz. vol. 174; p. 839.

Benham, Elijah B., New London, Conn., assignor to Hydrocarbon Converter Company, New York, N. Y. Vaporizer. No. 1,015,285; Jan. 23; Sp. p. 4841; Gaz. vol. 174; p. 839.

Benjamin Eastwood Company, The. (See Eastwood, James, assignor.)

Benjamin, George H. (See Finck, William C., assignor.)

Benjamin, William H. (See West and Benjamin.)

Benkendorf, Otto A., Belen, N. Mex. Purifying device for hydrocarbon-fuel gasolene. No. 1,015,662; Jan. 23; Sp. p. 5673; Gaz. vol. 174; p. 969.

Benkiser, Carl F. E. A., Strassburg, Germany. Tap or cock. No. 1,013,731; Jan. 2; Sp. p. 1415; Gaz. vol. 174; p. 223.

Benner, Russell E., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,013,923; Jan. 9; Sp. p. 1860; Gaz. vol. 174; p. 318.

Bennett, Arthur E., Garnett, Kans. Adjusting means for trousers. No. 1,015,125; Jan. 16; Sp. p. 4512; Gaz. vol. 174; p. 760.

Bennett, Edward D., Pulaski, N. Y. Reinforced paper-board. No. 1,014,996; Jan. 16; Sp. p. 4265; Gaz. vol. 174; p. 716.

Bennett, Ernest C., New York, N. Y. Artificial denture. No. 1,013,111; Jan. 2; Sp. p. 33; Gaz. vol. 174; p. 8.

Bennett, George L., New York, N. Y. Telephone attachment. No. 1,013,112; Jan. 2; Sp. p. 35; Gaz. vol. 174; p. 8.

Bennett, J. H., *et al.* (See Jameson, Roland L., assignor.)

Bennett, Judson A., Clovis, N. Mex. Wind-wheel. No. 1,015,416; Jan. 23; Sp. p. 5145; Gaz. vol. 174; p. 883.

Bennett, Russell H., Los Angeles, Cal. Map-rack. No. 1,014,861; Jan. 16; Sp. p. 3960; Gaz. vol. 174; p. 670.

Bennett, Stephen S., Chicago, Ill. Gearing for motor-vehicles. No. 1,014,036; Jan. 9; Sp. p. 2125; Gaz. vol. 174; p. 355.

Bennett, William E., Grand Island, Nebr. Harvester-reel and support therefor. No. 1,013,636; Jan. 2; Sp. p. 1185; Gaz. vol. 174; p. 189.

Bennewis, Harry, Philadelphia, Pa. Sign-frame. No. 1,015,126; Jan. 16; Sp. p. 4514; Gaz. vol. 174; p. 760.

Benskin, Joseph, assignor of one-half to I. T. Bridges, Mahomet, Ill. Stove-truck. No. 1,014,440; Jan. 9; Sp. p. 2995; Gaz. vol. 174; p. 497.

Benson, Alfred, Seattle, Wash. Comb. No. 1,014,037; Jan. 9; Sp. p. 2128; Gaz. vol. 174; p. 355.

Benton, Daniel M., Macon, Ga. Combined envelop and letter-sheet packet. No. 1,014,441; Jan. 9; Sp. p. 2995; Gaz. vol. 174; p. 497.

Bentz, John A., Harrisburg, Pa. Music-leaf turner. No. 1,015,127; Jan. 16; Sp. p. 4515; Gaz. vol. 174; p. 760.

Benyo, John, assignor of one-half to J. Slamka, Cudahy, Wis. Marine propulsion. No. 1,013,982; Jan. 9; Sp. p. 2000; Gaz. vol. 174; p. 339.

Benz, Frederick, Jr., Haledon, N. J., assignor to J. Frank, New York, N. Y. Batten structure for narrow-ware looms. No. 1,013,365; Jan. 2; Sp. p. 606; Gaz. vol. 174; p. 97.

Berchelmann, Wilhelm, Vohwinkel, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dye. No. 1,014,204; Jan. 9; Sp. p. 2460; Gaz. vol. 174; p. 414.

Bergdolt, Wilhelm, Leverkusen, near Cologne, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. New dye. No. 1,014,633; Jan. 16; Sp. p. 3445; Gaz. vol. 174; p. 591.

Bergen, James V., El Paso, Tex. Rail tie and fastening device. No. 1,015,535; Jan. 23; Sp. p. 5392; Gaz. vol. 174; p. 924.

Bergius, Friedrich, Hanover, Germany. Making alkali-earth peroxid. No. 1,015,286; Jan. 23; Sp. p. 4843; Gaz. vol. 174; p. 840.

Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft. (See Forchheimer, Philipp, assignor.)

Berliner Siriuslampen Vertriebsgesellschaft m. b. H. (See Weber, Otto, assignor.)

Berndorfer Metallwaaren-Fabrik Arthur Krupp. (See Schieber, Wilhelm, assignor.)

Bernstrom, John, *et al.* (See Berrigan, John J., assignor.)

Berreyesa, Abe E., Oakland, Cal. Ink-distributer. No. 1,016,123; Jan. 30; Sp. p. 6650; Gaz. vol. 174; p. 1156.

Berrigan, John J., Orange, N. J., assignor to F. J. Arend, New York, N. Y., and J. Bernstrom, Stockholm, Sweden. Centrifugal separator. No. 1,013,113; Jan. 2; Sp. p. 39; Gaz. vol. 174; p. 9.

Berry, Benjamin F., St. Louis, Mo. Paper-perforating device. No. 1,014,442; Jan. 9; Sp. p. 2997; Gaz. vol. 174; p. 497.

Berry, John W., assignor to C. S. Hofstetter, Tacoma, Wash. Machine for treating cereals. No. 1,014,748; Jan. 16; Sp. p. 3683; Gaz. vol. 174; p. 630.

Bert, Louis D. (See Rocereto and Bert.)

Bertels, Charles E., Wilkes-Barre, Pa. Making cans. No. 1,013,366; Jan. 2; Sp. p. 606; Gaz. vol. 174; p. 97.

Bettendorf, J. W., administrator. (See Bettendorf, William P.)

Bettendorf, William P., deceased, Davenport, Iowa; J. W. Bettendorf, administrator. Shifting device for press-feeding mechanism. No. 1,016,062; Jan. 30; Sp. p. 6534; Gaz. vol. 174; p. 1135.

Bettin, Emma A., Los Angeles, Cal. Game for musical instruction. No. 1,014,936; Jan. 16; Sp. p. 4127; Gaz. vol. 174; p. 695.

Betz, William G., Chicago Heights, assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill. Pneumatic piano. No. 1,014,364; Jan. 9; Sp. p. 2850; Gaz. vol. 174; p. 471.

Betz, William G., Chicago Heights, assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill. Rewinding device for pneumatic pianos. No. 1,015,128; Jan. 16; Sp. p. 4516; Gaz. vol. 174; p. 761.

Beyer, Otto S., East Rutherford, N. J., assignor to Automatic Platen Press Company, New York, N. Y. Sheet-registering device. No. 1,014,112; Jan. 9; Sp. p. 2289; Gaz. vol. 174; p. 381.

Beymer, Adelbert S., Kansas City, Mo. Cultivator. No. 1,014,038; Jan. 9; Sp. p. 2129; Gaz. vol. 174; p. 356.

Bezold, John E., Jersey City, N. J. Bookcase or the like. No. 1,015,722; Jan. 23; Sp. p. 5801; Gaz. vol. 174; p. 989.

Bielefelder Maschinenfabrik vormals Durkopp & Co. (See Schilling, August, assignor.)

Bienz, Johann, Berne, Switzerland. Device for manufacturing mineral water. No. 1,015,753; Jan. 23; Sp. p. 5865; Gaz. vol. 174; p. 1000.

Bigelow, Frank B., Chicago, Ill. Fire-box grate. No. 1,013,114; Jan. 2; Sp. p. 42; Gaz. vol. 174; p. 9.

Biggs, Thomas C., *et al.* (See Perkins, James D., assignor.)

Bijur, Joseph, New York, N. Y., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa. System of alternating-current regulation. No. 1,014,373; Jan. 9; Sp. p. 2864; Gaz. vol. 174; p. 474.

Bijur, Joseph, New York, N. Y., and J. M. Joy, Boonton, N. J., assignors to The Durafort Company, New York, N. Y. Fire-extinguisher. No. 1,015,987; Jan. 30; Sp. p. 6367; Gaz. vol. 174; p. 1103.

Billé, Léon, Nogent-sur-Marne, France. Joint for conduits and the like. No. 1,016,124; Jan. 30; Sp. p. 6653; Gaz. vol. 174; p. 1157.

Binkley, Frank C., Sycamore, Ill. Gasolene-heated appliance. No. 1,014,113; Jan. 9; Sp. p. 2291; Gaz. vol. 174; p. 382.

Binns, John E., Jr., Nashville, Tenn. Cultivator. No. 1,013,269; Jan. 2; Sp. p. 391; Gaz. vol. 174; p. 63.

Bird, Peter E., Jenkintown, Pa. Sharpening device. No. 1,013,115; Jan. 2; Sp. p. 46; Gaz. vol. 174; p. 9.

Birdsey, Somers Company. (See Doolittle, James E., assignor.)

Bishop, Roscoe F., *et al.* (See Perkins, James D., assignor.)

Bitterlich, Albert, Cassel, Germany. Surgical appliance. No. 1,013,924; Jan. 9; Sp. p. 1872; Gaz. vol. 174; p. 319.

Black, Charles A., Jr., Hightstown, N. J. Christmas-tree holder. No. 1,015,934; Jan. 30; Sp. p. 6250; Gaz. vol. 174; p. 1089.

Black, Frank J. (See Page and Black.)

Black, William H., Broken Arrow, Okla. Well-bucket. No. 1,015,935; Jan. 30; Sp. p. 6251; Gaz. vol. 174; p. 1089.

Blackwell, Harry. (See Danberry, Edward, assignor.)

Blackwell, James H., Rochelle, Tex. Combined level and try-square. No. 1,015,536; Jan. 23; Sp. p. 5394; Gaz. vol. 174; p. 924.

Blackwood, Don P., Denver, Colo. Tobacco-pipe and cigar and cigarette holder. No. 1,015,723; Jan. 23; Sp. p. 5803; Gaz. vol. 174; p. 989.

Blake and Johnson Company, The. (See Duston, Ernest W., assignor.)

Blake, William F., South Bend, Ind. Discharge-valve. No. 1,015,754; Jan. 23; Sp. p. 5867; Gaz. vol. 174; p. 1000.

Boman, Eric, Annandale, Sydney, New South Wales, Aus-

Boyd, Byron H., Louisville, Ky. Garment support or holder. No. 1,013,474; Jan. 2; Sp. p. 840; Gaz. vol.

Briggs, Joseph G., Santa Monica, Cal. Cultivator. No. 1,014,944; Jan. 16; Sp. p. 4148; Gaz. vol. 174; p. 698.

Briggs, Thomas L., Flushing, N. Y., and H. F. Merriam,

Blake, William F., South Bend, Ind. Discharge-valve. No. 1,015,764; Jan. 23; Sp. p. 5867; Gaz. vol. 174; p. 1000.

Blakemore, Benjamin A., Staunton, Va. Lock-tie for mail and other purposes. No. 1,014,937; Jan. 16; Sp. p. 4128; Gaz. vol. 174; p. 695.

Blakeslee, Daniel R. (See Blakeslee, Henry W. and D. R.)

Blakeslee, Henry W., Nowata, Okla., and D. R. Blakeslee, Van Buren, assignors to Marion Machine Foundry & Supply Co., Marion, Ind. Eccentric ring. No. 1,013,367; Jan. 2; Sp. p. 608; Gaz. vol. 174; p. 97.

Blanchard, George L., Yoakum, Tex. Float for delinters. No. 1,015,724; Jan. 23; Sp. p. 5805; Gaz. vol. 174; p. 990.

Blanchard, Martin H., Davisville, Cal. Draft attachment. No. 1,015,260; Jan. 16; Sp. p. 4776; Gaz. vol. 174; p. 804.

Blankenburg, Carl, Leipzig-Sellershausen, assignor to Company Hugo Schneider Aktiengesellschaft, Leipzig, Germany. Round vapor-burner for heating and lighting purposes. No. 1,015,988; Jan. 30; Sp. p. 6389; Gaz. vol. 174; p. 1108.

Bleecker, Warren F., Boulder, Colo., assignor, by mesne assignments, to The Rare Metals Mining and Milling Company. Producing copper, lead, or iron vanadate from vanadiferous ores. No. 1,015,469; Jan. 23; Sp. p. 5265; Gaz. vol. 174; p. 902.

Bleistein, George. (See Huebner, William C., assignor.)

Blickensderfer, George C., Stamford, Conn. Speed-controlling mechanism for revolving doors. No. 1,014,997; Jan. 16; Sp. p. 4266; Gaz. vol. 174; p. 716.

Bliss, Henry H., trustee. (See Balkema, Charles E., assignor.)

Bliss, William L., assignor, by mesne assignments, to The United States Light and Heating Company, New York, N. Y. Driving mechanism for axle-driven dynamos. No. 1,013,925; Jan. 9; Sp. p. 1874; Gaz. vol. 174; p. 319.

Block, Harald E. F. R., Copenhagen, Denmark. Vehicle-brake. No. 1,013,473; Jan. 2; Sp. p. 839; Gaz. vol. 174; p. 134.

Block, Leah E. (See Block, Louis, assignor.)

Block, Louis, assignor to L. E. Block, New York N. Y. Sanitary attachment for mouthpieces. No. 1,016,063; Jan. 30; Sp. p. 6536; Gaz. vol. 174; p. 1136.

Blocklinger, B. F., trustee. (See Appelman, Erastus W., assignor.)

Blom, Pehr M., Abo, Russia, assignor of two-thirds to J. Bruun and one-third to F. Sparks, Toledo, Ohio. Carbureter. No. 1,013,983; Jan. 9; Sp. p. 2001; Gaz. vol. 174; p. 339.

Blomfeldt, Allen A., Chicago, Ill. Air-conditioning device. No. 1,013,368; Jan. 2; Sp. p. 609; Gaz. vol. 174; p. 97.

Blomgren, Nels J. (See Brown, Theodore H., assignor.)

Blount, Irving, New York, N. Y. Separator. No. 1,016,241; Jan. 30; Sp. p. 6876; Gaz. vol. 174; p. 1194.

Blue, Charles E., Wheeling, W. Va. Apparatus for charging glass-molds. No. 1,015,537; Jan. 23; Sp. p. 5395; Gaz. vol. 174; p. 924.

Blue, Charles E., Wheeling, W. Va. Manufacture of glass. No. 1,015,538; Jan. 23; Sp. p. 5396; Gaz. vol. 174; p. 925.

Blum, August C., South Amboy, N. J. Stamping device. No. 1,013,116; Jan. 2; Sp. p. 49; Gaz. vol. 174; p. 10.

Blume, Max E., Leipzig-Connewitz, Germany. Sheet-feed apparatus for typographic stamping-machines. No. 1,016,125; Jan. 30; Sp. p. 6655; Gaz. vol. 174; p. 1157.

Blume, Max E., Leipzig-Connewitz, Germany. Apparatus for producing typographic record-sheets. No. 1,016,201; Jan. 30; Sp. p. 6791; Gaz. vol. 174; p. 1180.

Blume, Wilhelm, Rathenow, Germany. Eyeglasses. No. 1,014,938; Jan. 16; Sp. p. 4130; Gaz. vol. 174; p. 696.

Boche, Otto W., Meriden, Conn. Flying-machine. No. 1,014,802; Jan. 16; Sp. p. 3812; Gaz. vol. 174; p. 648.

Boden, George B. von, and E. F. Ingles, San Francisco, Cal. Oil-burner. No. 1,014,924; Jan. 16; Sp. p. 4106; Gaz. vol. 174; p. 691.

Bodkin, John A., New York, N. Y. Rail-anchor. No. 1,015,129; Jan. 16; Sp. p. 4517; Gaz. vol. 174; p. 761.

Bodmer, Christian. (See Schade and Bodmer.)

Boegen, John E., Berwyn, assignor of one-half to B. L. Zeller, Chicago, Ill. Machine for venting and wiring cores. No. 1,015,610; Jan. 23; Sp. p. 5556; Gaz. vol. 174; p. 952.

Boekel, Julius, Philadelphia, Pa. Thermostatic draft-regulator for incubators or other purposes. No. 1,016,126; Jan. 30; Sp. p. 6657; Gaz. vol. 174; p. 1157.

Boelzner, Ernst, Elmira, N. Y. Steam-boiler. No. 1,015,936; Jan. 30; Sp. p. 6252; Gaz. vol. 174; p. 1089.

Boero, Joseph, Paris, France, assignor to Gardner Crushet Company. Disintegrator. No. 1,013,527; Jan. 2; Sp. p. 953; Gaz. vol. 174; p. 153.

Boggs, W. B. (See Barbour, James, assignor.)

Bohlig, Martin, St. Paul, Minn. Magazine-brush. No. 1,013,369; Jan. 2; Sp. p. 613; Gaz. vol. 174; p. 98.

Bohlin, Samuel K., Gottenborg, Sweden. Photographic plate or film holder and camera adapted to receive the same. No. 1,015,130; Jan. 16; Sp. p. 4519; Gaz. vol. 174; p. 761.

Bohn, Harry G., New York, N. Y. Drafting instrument. No. 1,014,803; Jan. 16; Sp. p. 3814; Gaz. vol. 174; p. 648.

Boling, Samuel M., Oklahoma, assignor of one-half to L. W. Bozarth, Chandler, Okla. Scale-tester. No. 1,013,732; Jan. 2; Sp. p. 1417; Gaz. vol. 174; p. 223.

Boman, Eric, Annandale, Sydney, New South Wales, Australia. Hand attachment serviceable for swimming. No. 1,014,939; Jan. 16; Sp. p. 4130; Gaz. vol. 174; p. 696.

Bond, William A., Lynnfield, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,014,940; Jan. 16; Sp. p. 4132; Gaz. vol. 174; p. 696.

Bone, William A., J. W. Wilson, Leeds, and C. D. McCourt, London, England. Means and apparatus for the generation of steam. No. 1,015,131; Jan. 16; Sp. p. 4521; Gaz. vol. 174; p. 762.

Bone, William A., J. W. Wilson, Leeds, and C. D. McCourt, London, England. Steam generation, feed-water heating, and heating of liquids generally. No. 1,015,261; Jan. 16; Sp. p. 4778; Gaz. vol. 174; p. 804.

Böniger, Melchior, assignor to Chemische Fabrik vormals Sandoz, Basel, Switzerland. Dark-blue monoazo dyestuffs. No. 1,014,039; Jan. 9; Sp. p. 2134; Gaz. vol. 174; p. 350.

Böniger, Melchior, assignor to Chemische Fabrik vormals Sandoz, Basel, Switzerland. Red monoazo dyestuffs. No. 1,014,114; Jan. 9; Sp. p. 2293; Gaz. vol. 174; p. 382.

Bonn, Edward E. (See Beck, John C., assignor.)

Bonsteel, John H., assignor of one-half to F. J. Richardson, Niagara Falls, N. Y. Motor. No. 1,015,663; Jan. 23; Sp. p. 5674; Gaz. vol. 174; p. 970.

Booth, Irving E., *et al.* (See Flynt, Louis W. G., assignor.)

Booth, Quentin W., *et al.* (See Flynt, Louis W. G., assignor.)

Booth, William, East Liverpool, Ohio. Combined cabinet and tray. No. 1,015,664; Jan. 23; Sp. p. 5676; Gaz. vol. 174; p. 970.

Boothe, L. F. (See Holt, George M., assignor.)

Bopp, Clinton L., Hawkeye, assignor of one-fourth to F. Straate and one-eighth to J. Moran, Waukon, Iowa. Telephone and telegraph combination system. No. 1,016,202; Jan. 30; Sp. p. 6796; Gaz. vol. 174; p. 1181.

Borg, Fred, and E. W. Lantz, Hannah, N. D. Snowmobile attachment. No. 1,015,270; Jan. 16; Sp. p. 4798; Gaz. vol. 174; p. 808.

Born, Joseph, assignor to Rockwood Manufacturing Company, Indianapolis, Ind. Friction-wheel. No. 1,013,117; Jan. 2; Sp. p. 52; Gaz. vol. 174; p. 11.

Born, Kurt, Kreuzburg, Germany. Conversations-counter for telephones. No. 1,014,634; Jan. 16; Sp. p. 3446; Gaz. vol. 174; p. 592.

Bosch, Carl, and W. Wild, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making nitrates. No. 1,013,984; Jan. 9; Sp. p. 2004; Gaz. vol. 174; p. 339.

Bosch, Firm of Robert. (See Honold, Rail, and Mumprecht, assignors.)

Bossé, Adolphe E., Pittsburgh, Pa., assignor to Acme Refrigerating Company. Ammonia-generator. No. 1,014,040; Jan. 9; Sp. p. 2135; Gaz. vol. 174; p. 356.

Boston Machine Works Company. (See Marshall, Charles S., assignor.)

Boston Machinery Company. (See Petersen, Anker, assignor.)

Both, Tonjes A. C., assignor to I. S. Rosenheim, New York, N. Y. Mechanical movement and electric-light socket. No. 1,014,443; Jan. 9; Sp. p. 2998; Gaz. vol. 174; p. 497.

Both, Tonjes A. C., assignor to I. S. Rosenheim, New York, N. Y. Mechanical movement. No. 1,015,869; Jan. 30; Sp. p. 6107; Gaz. vol. 174; p. 1065.

Boughton, Fred W., Boston, Mass. Optional full-automatic gate. No. 1,016,203; Jan. 30; Sp. p. 6799; Gaz. vol. 174; p. 1181.

Bounds, Thomas C., Wahalak, Miss. Dispensing apparatus. No. 1,014,115; Jan. 9; Sp. p. 2295; Gaz. vol. 174; p. 382.

Bourgin, Charles N., Newark, N. J. Moving-picture toy. No. 1,014,365; Jan. 9; Sp. p. 2851; Gaz. vol. 174; p. 471.

Bourne, Theodore F., Montclair, N. J. Shield for automobiles. No. 1,014,366; Jan. 9; Sp. p. 2852; Gaz. vol. 174; p. 471.

Bowcock, James B., Kirksville, Mo. Ice-cutting machine. No. 1,013,733; Jan. 2; Sp. p. 1418; Gaz. vol. 174; p. 224.

Bowden, William, McHenry, Miss. Wrench. No. 1,014,563; Jan. 9; Sp. p. 3212; Gaz. vol. 174; p. 535.

Bowen, Clinton, Fostoria, Ohio. Post-anchor. No. 1,015,611; Jan. 23; Sp. p. 5558; Gaz. vol. 174; p. 952.

Bowen, James, Linden, Mich. Bag-filling device. No. 1,014,998; Jan. 16; Sp. p. 4267; Gaz. vol. 174; p. 716.

Bower, George P., Buffalo, N. Y. Valve. No. 1,015,132; Jan. 16; Sp. p. 4523; Gaz. vol. 174; p. 762.

Bowman, A. B. (See Hamilton, William G., assignor.)

Bowman, Frederick G. (See Bowman, William D. and F. G.)

Bowman, William D. and F. G., Glasgow, Scotland. Time-check apparatus. No. 1,015,287; Jan. 23; Sp. p. 4844; Gaz. vol. 174; p. 840.

Bowser, Allen A., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Lubricator-filling vessel. No. 1,015,470; Jan. 23; Sp. p. 5267; Gaz. vol. 174; p. 902.

Bowser, Anthony C., Murphysboro, Ill. Animal-trap. No. 1,015,471; Jan. 23; Sp. p. 5269; Gaz. vol. 174; p. 903.

Boyd, Albert H., Denver, Colo., assignor of one-half to T. M. Hamilton, Helena, Mont. Fuse-cutting machine. No. 1,014,862; Jan. 16; Sp. p. 3961; Gaz. vol. 174; p. 670.

Boyd, Byron H., Louisville, Ky. Garment support or holder. No. 1,013,474; Jan. 2; Sp. p. 840; Gaz. vol. 174; p. 134.

Boyd, James D., Arrochar, N. Y. Egg-hatching incubator. No. 1,015,417; Jan. 23; Sp. p. 5146; Gaz. vol. 174; p. 884.

Boyd, John W., assignor of one-half to H. O. Kremer, Mishawaka, Ind. Fishing-rod support. No. 1,013,734; Jan. 2; Sp. p. 1420; Gaz. vol. 174; p. 224.

Boyd, Moody, Louisville, Ky. Paper-cutter. No. 1,014,041; Jan. 9; Sp. p. 2136; Gaz. vol. 174; p. 357.

Boyer, Joseph, St. Louis, Mo., assignor to Chicago Pneumatic Tool Company. Fluid-pressure compression or holding device. No. 1,013,870; Jan. 2; Sp. p. 615; Gaz. vol. 174; p. 98.

Boyer, Joseph, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, Chicago, Ill. Pneumatic rivet-holder. No. 1,013,871; Jan. 2; Sp. p. 619; Gaz. vol. 174; p. 99.

Boyle, William G., *et al.* (See Anderson, James B., assignor.)

Boylston Manufacturing Company, The. (See Ballard, Harrie A., assignor.)

Bozarth, Frank D. (See Brown, Lewis W., assignor.)

Bozarth, Louis W. (See Boling, Samuel M., assignor.)

Bradley, Charles S., New York, N. Y. Method of and apparatus for operating turbines. No. 1,015,777; Jan. 30; Sp. p. 5914; Gaz. vol. 174; p. 1035.

Brady, Cassius. (See Snead and Brady.)

Brady, John, Fall River, Mass. Clearer and stop-motion for drawing-frames. No. 1,014,042; Jan. 9; Sp. p. 2138; Gaz. vol. 174; p. 357.

Braly, Hugh L., Clarendon, Tex. Oil-burner. No. 1,015,282; Jan. 23; Sp. p. 4849; Gaz. vol. 174; p. 840.

Brand, Achill W., Boise, Idaho. Fuel-consumer, heat-generator, and heater. No. 1,015,665; Jan. 23; Sp. p. 5678; Gaz. vol. 174; p. 970.

Brand, George P., New York, N. Y. Pedal mechanism. No. 1,013,857; Jan. 9; Sp. p. 1708; Gaz. vol. 174; p. 295.

Brand, George P., New York, N. Y. Tracking device. No. 1,014,941; Jan. 16; Sp. p. 4138; Gaz. vol. 174; p. 697.

Brand, George P., New York, N. Y. Tracker device. No. 1,014,942; Jan. 16; Sp. p. 4142; Gaz. vol. 174; p. 697.

Brandes, Herman H., assignor of one-fourth to E. T. Lawrence, Corydon, Ky. Fireplace-heater. No. 1,013,872; Jan. 2; Sp. p. 623; Gaz. vol. 174; p. 99.

Brandhorst, August, Hermann, Mo. Corn-shock loader. No. 1,014,043; Jan. 9; Sp. p. 2139; Gaz. vol. 174; p. 357.

Brandt, Henry E., Minneapolis, Minn. Spraying device. No. 1,016,204; Jan. 30; Sp. p. 6803; Gaz. vol. 174; p. 1182.

Brandt, Noah, New York, N. Y. Screen. No. 1,013,118; Jan. 2; Sp. p. 53; Gaz. vol. 174; p. 11.

Branson, James H. E., Philadelphia, Pa. Door and step operating mechanism for passenger railway-cars. No. 1,014,863; Jan. 16; Sp. p. 3963; Gaz. vol. 174; p. 670.

Branson, Walter J., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Single-phase motor. No. 1,013,119; Jan. 2; Sp. p. 56; Gaz. vol. 174; p. 11.

Brasington, John M., assignor, by mesne assignments, to T. E. & C. S. McCall Co., Bennettsville, S. C. Fertiliser-distributer. No. 1,014,044; Jan. 9; Sp. p. 2143; Gaz. vol. 174; p. 358.

Brassington, Abraham. (See Keller and Brassington.)

Brassington, Charles. (See Keller and Brassington.)

Brauer, August, assignor to August Brauer Steam Rotary Motor Company, Independence, Mo. Rotary motor. No. 1,013,926; Jan. 9; Sp. p. 1876; Gaz. vol. 174; p. 319.

Braun, Rudolf, Manchester, England, assignor to Westinghouse Electric & Manufacturing Company. System of electrical distribution. No. 1,013,270; Jan. 2; Sp. p. 394; Gaz. vol. 174; p. 63.

Brawley, Thomas G., Arcanum, Ohio. Attachment for corrugated roofing. No. 1,015,289; Jan. 23; Sp. p. 4850; Gaz. vol. 174; p. 840.

Bray, Eustace V., assignor of one-half to R. S. Haseltine, Coalinga, Cal. Separator for removing gas from oil or other liquids. No. 1,014,943; Jan. 16; Sp. p. 4146; Gaz. vol. 174; p. 697.

Breckenridge, John G., assignor to The Ridgely Trimmer Company, Springfield, Ohio. Blow-torch. No. 1,013,637; Jan. 2; Sp. p. 1186; Gaz. vol. 174; p. 189.

Bredin, Wilson W., Denver, Colo. Urethrotome. No. 1,015,472; Jan. 23; Sp. p. 5270; Gaz. vol. 174; p. 903.

Breed, George, Philadelphia, Pa., assignor to The Lyrachord Company, New York, N. Y. Method of and mechanism for producing musical sounds. (Reissue.) No. 13,365; Jan. 23; Sp. p. 5896; Gaz. vol. 174; p. 1005.

Breed, George W., assignor to Detroit Motorcycle Mfg. Co., Detroit, Mich. Motor-cycle frame. No. 1,015,418; Jan. 23; Sp. p. 5147; Gaz. vol. 174; p. 884.

Breese, Herbert J., Portland, Oreg. Tire-filling compound. No. 1,015,133; Jan. 16; Sp. p. 4526; Gaz. vol. 174; p. 763.

Breider, Armin, Nagyvarad, Austria-Hungary. Slate-cleaner. No. 1,015,539; Jan. 23; Sp. p. 5400; Gaz. vol. 174; p. 925.

Brenizer, Orson W. (See Brown and Brenizer.)

Brevetti, Delizio, and C. Fucci, New York, N. Y. Life-saving apparatus. No. 1,015,937; Jan. 30; Sp. p. 6255; Gaz. vol. 174; p. 1089.

Bridges, Isaac T. (See Benskin, Joseph, assignor.)

Briggs, Joseph G., Santa Monica, Cal. Cultivator. No. 1,014,944; Jan. 16; Sp. p. 4148; Gaz. vol. 174; p. 698.

Briggs, Thomas L., Flushing, N. Y., and H. F. Merriam, Summit, N. J., assignors to General Chemical Company, New York, N. Y. Making oleum. No. 1,013,638; Jan. 2; Sp. p. 1187; Gaz. vol. 174; p. 190.

Brightman, Latham H., Lakewood, Ohio. Machine for straightening metal bars. No. 1,015,478; Jan. 23; Sp. p. 5274; Gaz. vol. 174; p. 903.

Bristol Company, The. (See Potts, Samuel W., assignor.)

Brocke, Gerhard, Allegheny, Pa. Valve. No. 1,016,004; Jan. 30; Sp. p. 6537; Gaz. vol. 174; p. 1136.

Brockhurst, James B., Red Bank, N. J. Means for feeding and mixing fluids. No. 1,014,945; Jan. 16; Sp. p. 4149; Gaz. vol. 174; p. 698.

Brockhurst, James B., Red Bank, N. J. Razor-stropping device. No. 1,015,938; Jan. 30; Sp. p. 6256; Gaz. vol. 174; p. 1090.

Broderick, John K., St. Louis, Mo. Combined internal-combustion and compressed-air engine. No. 1,013,528; Jan. 2; Sp. p. 955; Gaz. vol. 174; p. 153.

Brodie, Alexander B., Pittsburgh, Pa. Container and dispensing device. No. 1,013,120; Jan. 2; Sp. p. 58; Gaz. vol. 174; p. 12.

Brogan, Michael F., Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Cementing-machine. No. 1,013,735; Jan. 2; Sp. p. 1421; Gaz. vol. 174; p. 224.

Brombacher, Julius, Los Angeles, Cal. Door-operating mechanism. No. 1,014,367; Jan. 9; Sp. p. 2850; Gaz. vol. 174; p. 472.

Brooks, Arthur A., Ashton-upon-Mersey, England. Fluid-operating mechanism. No. 1,013,121; Jan. 2; Sp. p. 60; Gaz. vol. 174; p. 12.

Brooks, Elbert J., Sparta, Wis. Hand-cultivator. No. 1,014,045; Jan. 9; Sp. p. 2146; Gaz. vol. 174; p. 358.

Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Snap-seal. No. 1,013,836; Jan. 2; Sp. p. 1624; Gaz. vol. 174; p. 259.

Broussard, James, Loreauville, La. Bag-filling machine. No. 1,014,444; Jan. 9; Sp. p. 3003; Gaz. vol. 174; p. 498.

Brousson, Robert P., assignor to Automatic Electric Block Signalling Company, Limited, London, England. Automatic electrical signaling apparatus for railways. No. 1,015,778; Jan. 30; Sp. p. 5917; Gaz. vol. 174; p. 1036.

Brouyette, Arnold J., Shadyside, Ohio. Tongs. No. 1,013,122; Jan. 2; Sp. p. 63; Gaz. vol. 174; p. 13.

Brown, Andrew V., Philadelphia, Pa. Eyeglass-mounting. No. 1,014,116; Jan. 9; Sp. p. 2297; Gaz. vol. 174; p. 383.

Brown, Chalmers S., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Excavating-machine. No. 1,016,127; Jan. 30; Sp. p. 6659; Gaz. vol. 174; p. 1158.

Brown, Charles S., and J. C. Hoxie, Utica, N. Y. Heater. No. 1,013,271; Jan. 2; Sp. p. 397; Gaz. vol. 174; p. 64.

Brown, Charles W., and O. W. Brenizer, Philadelphia, Pa. Garment-hanger. No. 1,013,583; Jan. 2; Sp. p. 1060; Gaz. vol. 174; p. 171.

Brown, Daniel V., Philadelphia, Pa. Eyeglass-mounting. No. 1,014,205; Jan. 9; Sp. p. 2461; Gaz. vol. 174; p. 414.

Brown, Ellis M., Roanoke, Va. Match-scratcher. No. 1,015,666; Jan. 23; Sp. p. 5680; Gaz. vol. 174; p. 971.

Brown, Harold W., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric measuring instrument. No. 1,013,123; Jan. 2; Sp. p. 64; Gaz. vol. 174; p. 13.

Brown, Howard, Springfield, Mass. Watermarking device for paper. No. 1,014,635; Jan. 16; Sp. p. 3447; Gaz. vol. 174; p. 592.

Brown, John H., and J. Gouldbourn, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for use in manufacture of boots and shoes. No. 1,014,046; Jan. 9; Sp. p. 2147; Gaz. vol. 174; p. 359.

Brown, John J., Elizabeth, assignor to Wheeler Condenser and Engineering Company, Carteret, N. J. Steam-condensing apparatus. No. 1,014,368; Jan. 9; Sp. p. 2857; Gaz. vol. 174; p. 472.

Brown, John N. D., Anadarko, Okla. Railway road-bed, track, and rail construction. No. 1,013,736; Jan. 2; Sp. p. 1425; Gaz. vol. 174; p. 225.

Brown, Lewis W., Berkley, assignor of one-half to F. D. Bozarth, Williamsburg, Va. Transmission-gear. No. 1,013,737; Jan. 2; Sp. p. 1435; Gaz. vol. 174; p. 225.

Brown, Otis E., Brockton, Mass., assignor to The Singer Manufacturing Company. Presser-foot mechanism for sewing-machines. No. 1,014,283; Jan. 9; Sp. p. 2650; Gaz. vol. 174; p. 441.

Brown, Royl A., Ashland, Ohio. Buckle. No. 1,013,985; Jan. 9; Sp. p. 2005; Gaz. vol. 174; p. 339.

Brown, Theodore H., assignor to N. J. Blomgren, Minneapolis, Minn. Apparatus for molding concrete walls. No. 1,013,475; Jan. 2; Sp. p. 842; Gaz. vol. 174; p. 135.

Brown, William G., New York, N. Y. Package for milk. No. 1,013,639; Jan. 2; Sp. p. 1190; Gaz. vol. 174; p. 190.

Browne, Harry P. C., New York, N. Y. Fare-calculator. No. 1,015,419; Jan. 23; Sp. p. 5148; Gaz. vol. 174; p. 884.

Brownlee, William K., assignor to The Libby Glass Company, Toledo, Ohio. Glass-pot. No. 1,016,005; Jan. 30; Sp. p. 6539; Gaz. vol. 174; p. 1136.

Cabe, Charles, Baltimore, Md. Collar or cuff package. No. 1,015,540; Jan. 23; Sp. p. 5397; Gaz. vol. 174; p. 925.

Carroll, Edward, Kirksville, Mo. Drain-conduit or culvert. No. 1,013,740; Jan. 2; Sp. p. 1437; Gaz. vol. 174; p. 225.

Brück, Fritz, Osnabrück, Germany. Automatic speed-brake for submarine mines. No. 1,014,804; Jan. 16; Sp. p. 3816; Gaz. vol. 174; p. 649.
Brumbaugh, Oliver, Louisville, Ohio. Silo. No. 1,015,612; Jan. 23; Sp. p. 5560; Gaz. vol. 174; p. 952.
Brunelle, Arthur, North Yakima, Wash. Bale-stacker. No. 1,015,939; Jan. 30; Sp. p. 6261; Gaz. vol. 174; p. 1090.
Brunnier, Henry J., Oakland, Cal. Spring-fender for docks. No. 1,013,584; Jan. 2; Sp. p. 1061; Gaz. vol. 174; p. 171.
Brunswick-Balke-Collender Company of New York, The. (See Riddell, Paris J., assignor.)
Brunswick Refrigerating Company, The. (See Whitaker, Richard, assignor.)
Bruun, Jacob, *et al.* (See Blom, Pehr M., assignor.)
Bryan, Barnabas, Washington, D. C. Time-controlled shutter-actuating mechanism. No. 1,015,184; Jan. 16; Sp. p. 4527; Gaz. vol. 174; p. 763.
Bryan, Henry B., Pittsburgh, Pa. Dipper. No. 1,015,185; Jan. 16; Sp. p. 4530; Gaz. vol. 174; p. 763.
Bryan, Solon. (See Master, James W., assignor.)
Bryant, Courtney S., Greene, N. Y. Heating system for incubators. No. 1,015,290; Jan. 23; Sp. p. 4851; Gaz. vol. 174; p. 841.
Bryon, Robert H., Bay Ridge, N. Y., assignor to The J. L. Mott Iron Works. Antiscalding-valve. No. 1,013,640; Jan. 2; Sp. p. 1195; Gaz. vol. 174; p. 190.
Bua, Frank S., Lodi, N. J. Safety-cock. No. 1,014,805; Jan. 16; Sp. p. 3818; Gaz. vol. 174; p. 649.
Buchholz, Theodor, Berlin, assignor to Faconeisen-Walzwerk L. Mannstaedt & Cie., Act. Ges., Kalk, near Cologne, Germany. Door-frame. No. 1,015,989; Jan. 30; Sp. p. 6370; Gaz. vol. 174; p. 1109.
Buck, Oliver R., Hotchkiss, Colo. Sign. No. 1,014,564; Jan. 9; Sp. p. 3214; Gaz. vol. 174; p. 535.
Buck, Vertrude P., assignor to Shawmut Machinery Company, Boston, Mass. Hand-operated cementing-machine. No. 1,014,618; Jan. 9; Sp. p. 3344; Gaz. vol. 174; p. 555.
Buckeye Manufacturing Company, The. (See Lambert, John W., assignor.)
Buckeye Steel Castings Company, The. (See Bush, Samuel P., assignor.)
Buckeye Traction Ditcher Company, The. (See Brown, Chalmers S., assignor.)
Buckham, George T. (See Dawson and Buckham.)
Buckham, George T., Westminster, London, assignor to Vickers Sons & Maxim, Limited, London, England. Elevating and sighting apparatus of field-guns. No. 1,013,585; Jan. 2; Sp. p. 1063; Gaz. vol. 174; p. 172.
Buckham, George T., assignor to Vickers Sons & Maxim Limited, Westminister, England. Elevating and sighting apparatus of field-guns. No. 1,013,837; Jan. 2; Sp. p. 1626; Gaz. vol. 174; p. 260.
Buckingham, Fremont H., assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Scale. No. 1,013,272; Jan. 2; Sp. p. 398; Gaz. vol. 174; p. 64.
Bucklin, Charles S., Baltimore, Md., assignor to American Can Company, New York, N. Y. Can-cap lacquering or coating machine. No. 1,013,858; Jan. 9; Sp. p. 1711; Gaz. vol. 174; p. 296.
Buengers, John P., Racine, Wis. Kite. No. 1,014,369; Jan. 9; Sp. p. 2859; Gaz. vol. 174; p. 473.
Buer, Heinrich C., Bonn, Germany. Butter-flavoring. No. 1,014,690; Jan. 16; Sp. p. 3571; Gaz. vol. 174; p. 611.
Bullock, Calvin, Denver, Colo. Covering for automobile radiators and hoods. No. 1,015,474; Jan. 23; Sp. p. 5277; Gaz. vol. 174; p. 904.
Bulson, Moses L., Glasco, Kans. Oil-burner. No. 1,014,999; Jan. 16; Sp. p. 4270; Gaz. vol. 174; p. 717.
Bumann, Theodore, Litchfield, Ill. Liquid-receptacle. No. 1,015,420; Jan. 23; Sp. p. 5151; Gaz. vol. 174; p. 885.
Burby, John M., Astoria, N. Y. Apparatus for removing impurities from pulped waste papers. No. 1,013,529; Jan. 2; Sp. p. 955; Gaz. vol. 174; p. 154.
Burgart, Philip H., Chicago, Ill. Monkey-wrench. No. 1,014,370; Jan. 9; Sp. p. 2860; Gaz. vol. 174; p. 473.
Burgess, Charles F., Madison, Wis. Alloy for coating with metal. No. 1,014,751; Jan. 16; Sp. p. 3695; Gaz. vol. 174; p. 631.
Burgess, Charles F., Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa. Coating with metal. No. 1,014,749; Jan. 16; Sp. p. 3690; Gaz. vol. 174; p. 630.
Burgess, Charles F., Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa. Coating with metal. No. 1,014,750; Jan. 16; Sp. p. 4693; Gaz. vol. 174; p. 631.
Burgess, Charles F., Madison, Wis., assignor to United States Sherardizing Company, New Castle, Pa. Alloy for coating with metal. No. 1,014,946; Jan. 16; Sp. p. 4154; Gaz. vol. 174; p. 698.
Burgess, Glend H., St. Louis, Mich. Safety stand-pipe for gasolene-stoves. No. 1,015,779; Jan. 30; Sp. p. 5923; Gaz. vol. 174; p. 1036.
Burhop, Otto, Grafton, Wis. Machine for driving fence-posts. No. 1,015,421; Jan. 23; Sp. p. 5153; Gaz. vol. 174; p. 885.
Burhorn, Edwin, Hoboken, N. J. Cooling-tower. No. 1,014,371; Jan. 9; Sp. p. 2862; Gaz. vol. 174; p. 473.
Burke Electric Company. (See Hitner, Harry F., assignor.)
Burke, James, Cleveland, Ohio. Track-construction machine. No. 1,015,475; Jan. 23; Sp. p. 5278; Gaz. vol. 174; p. 904.
Burlingame, George H., San Francisco, Cal. Stock-display case. No. 1,014,947; Jan. 16; Sp. p. 4156; Gaz. vol. 174; p. 699.
Burnham, George A., Saugus, assignor to S. B. Condit, Jr., Boston, Mass. Electric switch. No. 1,015,613; Jan. 23; Sp. p. 5561; Gaz. vol. 174; p. 953.
Burns, David M., W. B. and A. W. Shriver, Ashland, Ohio. Anchor for wire fences and other uses. No. 1,014,806; Jan. 16; Sp. p. 3819; Gaz. vol. 174; p. 650.
Burroughs Adding Machine Company. (See Benner, Russell E., assignor.)
Burroughs Adding Machine Company. (See Harrison, John P., assignor.)
Burroughs Adding Machine Company. (See Mapel, Clarence O., assignor.)
Burroughs Adding Machine Company. (See Newman, Enos S., assignor.)
Burroughs Adding Machine Company. (See Vincent, Jesse G., assignor.)
Burrows, William J., assignor of one-half to W. G. Davis, De Lay, Miss. Cultivator. No. 1,013,476; Jan. 2; Sp. p. 843; Gaz. vol. 174; p. 135.
Burrows, William R., Newark, N. J., assignor to General Electric Company. Machine for making incandescent lamps. No. 1,013,124; Jan. 2; Sp. p. 66; Gaz. vol. 174; p. 13.
Burrows, William R., Newark, N. J., assignor to General Electric Company. Filament-support. No. 1,013,859; Jan. 9; Sp. p. 1714; Gaz. vol. 174; p. 296.
Burson Bros. (See Burson, Harry H., assignor.)
Burson, Harry H., assignor to Burson Bros., Chicago, Ill. Studding for plaster-boards or the like. No. 1,013,738; Jan. 2; Sp. p. 1436; Gaz. vol. 174; p. 225.
Burson Manufacturing Company. (See Bolston, Walter F., assignor.)
Burton, Thomas J. (See Kenner, Michael, and Burton.)
Busa, Adam, Anderson, Tex. Rail-joint. No. 1,015,725; Jan. 23; Sp. p. 5806; Gaz. vol. 174; p. 990.
Buschardt, William F., Baltimore, Md. Crate. No. 1,014,445; Jan. 9; Sp. p. 3006; Gaz. vol. 174; p. 498.
Bush Manufacturing Company, The. (See Bush, Philip M., assignor.)
Bush, Philip M., assignor to The Bush Manufacturing Company, Hartford, Conn. Hinge. No. 1,014,372; Jan. 9; Sp. p. 2863; Gaz. vol. 174; p. 474.
Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Means for securing the journal-box of a car-truck to the truck side frame. No. 1,014,565; Jan. 9; Sp. p. 3215; Gaz. vol. 174; p. 535.
Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-truck. No. 1,014,807; Jan. 16; Sp. p. 3820; Gaz. vol. 174; p. 650.
Busse, Edwin G., and P. B. Harrison, assignors to Chicago Railway Equipment Company, Chicago, Ill. Journal-box lid. No. 1,014,047; Jan. 9; Sp. p. 2160; Gaz. vol. 174; p. 359.
Butler, Edward E. (See Lofton, Butler, and Hunter.)
Butler, James, Philadelphia, Pa. Roll-centering device. No. 1,014,446; Jan. 9; Sp. p. 3007; Gaz. vol. 174; p. 498.
Bütow, Carl, Nuremberg, Germany. Screw-propeller. No. 1,015,540; Jan. 23; Sp. p. 5402; Gaz. vol. 174; p. 925.
Buttman, Alonzo C., Grand View, assignor of one-half to A. J. Greiner, Louisa county, Iowa. Artificial-tooth plate. No. 1,016,128; Jan. 30; Sp. p. 6661; Gaz. vol. 174; p. 1158.
Butts, Albert. (See Butts, Elmer and A.)
Butts, Elmer and A., Peabody, Kans. Loader. No. 1,016,242; Jan. 30; Sp. p. 6878; Gaz. vol. 174; p. 1195.
Buxbaum, John H., Seattle, Wash. Pilot-house light. No. 1,016,205; Jan. 30; Sp. p. 6804; Gaz. vol. 174; p. 1182.
Byam, William W., Chicago, Ill. Wheel. No. 1,013,273; Jan. 2; Sp. p. 401; Gaz. vol. 174; p. 65.
Byers, Harry A., Camden, N. J. Acetylene-gas generator. No. 1,014,048; Jan. 9; Sp. p. 2152; Gaz. vol. 174; p. 359.
Byrd, Britton E., Durham, N. C. Motor-vehicle. No. 1,014,808; Jan. 16; Sp. p. 3822; Gaz. vol. 174; p. 650.
Byrd, David H., Duke, N. C. Pea-dropper. No. 1,014,447; Jan. 9; Sp. p. 3010; Gaz. vol. 174; p. 499.
Byrnes, Clarence P., Sewickley, Pa. Apparatus for breaking in shoes. No. 1,015,291; Jan. 23; Sp. p. 4855; Gaz. vol. 174; p. 841.
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. G. Sargent's Sons Corporation. (See Sargent, Allan C., assignor.)
C. P. Power Company. (See Noyes, Edward P., assignor.)
C. P. Power Company. (See Reeve, Sidney A., assignor.)
C. S. Pierce Skiving Machine Company. (See Parmenter and Alden, assignors.) (Reissue.)
Cabeen, Aaron T., Aledo, Ill. Railway-crossing signal. No. 1,014,117; Jan. 9; Sp. p. 2299; Gaz. vol. 174; p. 383.
Cabel, Austin F., *et al.* (See Stein, Georg V., assignor.)
Cable Excavator Company. (See Hadsel, Alvah D., assignor.)
Cadman, Addi B., assignor to Warner Instrument Company, Beloit, Wis. Gear. No. 1,015,870; Jan. 30; Sp. p. 6111; Gaz. vol. 174; p. 1065.

Cahn, Charles, Baltimore, Md. Collar or cuff package. No. 1,015,000; Jan. 16; Sp. p. 4272; Gaz. vol. 174; p. 717.
Cairncross, Robert L., Chicago, Ill., assignor to A. H. Handlan, Jr., St. Louis, Mo. Ball-holder for lanterns. No. 1,013,530; Jan. 2; Sp. p. 960; Gaz. vol. 174; p. 154.
Calhoun, Joseph C., Holland, Mich. Photographic apparatus. No. 1,015,292; Jan. 23; Sp. p. 4856; Gaz. vol. 174; p. 842.
Call, Henry L., Girard, Kans. Propeller. No. 1,014,619; Jan. 9; Sp. p. 3346; Gaz. vol. 174; p. 555.
Callender, Ward G., assignor of one-third to J. L. Young, Mansfield, Ohio. Shoe-cleaner. No. 1,014,691; Jan. 16; Sp. p. 3572; Gaz. vol. 174; p. 611.
Camden Iron Works. (See Garland, Claude M., assignor.)
Camp, Christian W., Metamora, and J. E. Camp, Washington, Ill. Portable elevator. No. 1,014,448; Jan. 9; Sp. p. 3011; Gaz. vol. 174; p. 499.
Camp, Joseph E. (See Camp, Christian W. and J. E.)
Campbell, Archibald D., Toledo, Ohio. Combined tire and trunk holder for automobiles. No. 1,015,422; Jan. 23; Sp. p. 5155; Gaz. vol. 174; p. 886.
Campbell, Charles H., New York, N. Y. Desiccating milk. No. 1,015,262; Jan. 16; Sp. p. 4785; Gaz. vol. 174; p. 805.
Campbell, Charles S., Atlanta, Ga. Ice-machine. No. 1,014,449; Jan. 9; Sp. p. 3015; Gaz. vol. 174; p. 499.
Campbell, Lyman E. (See Parker and Campbell.)
Campbell, Thomas F., Indianapolis, Ind. Paper-tying apparatus or loose-leaf binder. No. 1,013,125; Jan. 2; Sp. p. 75; Gaz. vol. 174; p. 14.
Canda, Ferdinand E., New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J. Method of and apparatus for producing compound metal ingots. No. 1,013,860; Jan. 9; Sp. p. 1716; Gaz. vol. 174; p. 297.
Canda, Ferdinand M., New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J. Crusher-plate. No. 1,015,871; Jan. 30; Sp. p. 6113; Gaz. vol. 174; p. 1066.
Candland, Arthur C., Provo, Utah. Railway-tie and fastener. No. 1,015,001; Jan. 16; Sp. p. 4273; Gaz. vol. 174; p. 718.
Canton Foundry and Machine Company, The. (See Sients, Albertus O., assignor.)
Cantrelle, William, Lockport, La. Cultivator-blade attachment. No. 1,015,136; Jan. 16; Sp. p. 4530; Gaz. vol. 174; p. 764.
Carberry, James F., Worcester, Mass. Handcuff. No. 1,014,118; Jan. 9; Sp. p. 2301; Gaz. vol. 174; p. 384.
Carborundum Company, The. (See Higgins, Francis W., assignor.)
Carborundum Company, The. (See Tone, Frank J., assignor.)
Cardell, George H., Reno, Nev. Drafting instrument. No. 1,015,423; Jan. 23; Sp. p. 5157; Gaz. vol. 174; p. 886.
Carickhoff, William H., Philadelphia, Pa. Spring adjustment for beds. No. 1,014,374; Jan. 9; Sp. p. 2868; Gaz. vol. 174; p. 474.
Carlson, Axel L., Center City, Minn. Tea and coffee strainer. No. 1,015,293; Jan. 23; Sp. p. 4857; Gaz. vol. 174; p. 842.
Carlson, John F., Des Moines, Iowa. Combination level and plumb. No. 1,013,274; Jan. 2; Sp. p. 403; Gaz. vol. 174; p. 65.
Carlsson, Olof A., Chicago, Ill. Stopper. No. 1,014,450; Jan. 9; Sp. p. 3017; Gaz. vol. 174; p. 500.
Carmany, Charles A., Coatesville, Pa. Curtain-roller. No. 1,013,531; Jan. 2; Sp. p. 961; Gaz. vol. 174; p. 154.
Carmany, Charles A., Coatesville, Pa. Curtain-roller. No. 1,013,532; Jan. 2; Sp. p. 965; Gaz. vol. 174; p. 155.
Carney, Edward, assignor to Eastern Sales Book Company, Glendale, N. Y. Manifolding-pad. No. 1,015,294; Jan. 23; Sp. p. 4858; Gaz. vol. 174; p. 842.
Carney, Thomas, deceased; O. F. Davisson, Dayton, Ohio, administrator. Cash-register. No. 1,016,066; Jan. 30; Sp. p. 6540; Gaz. vol. 174; p. 1137.
Carnine, Arba L., Fullerton, Cal. Vehicle-brake. No. 1,015,872; Jan. 30; Sp. p. 6114; Gaz. vol. 174; p. 1066.
Carpenter, Flora C., administratrix. (See Carpenter, George T.) (Reissue.)
Carpenter, George T., deceased; F. C. Carpenter, executrix, assignor to F. H. Skinner, Chicago, Ill. Dental tool for removing crown-pins. (Reissue.) No. 13,361; Jan. 16; Sp. p. 4817; Gaz. vol. 174; p. 811.
Carpenter, James M., Pawtucket, R. I. Threading-tool. No. 1,016,206; Jan. 30; Sp. p. 6805; Gaz. vol. 174; p. 1182.
Carpenter, John H., and E. O. Hoffman, Columbus, Ohio; said Hoffman assignor to said Carpenter. Baking-machine. No. 1,014,375; Jan. 9; Sp. p. 2869; Gaz. vol. 174; p. 475.
Carpenter, Leck, Stratford, Okla. Horseshoe clipping and bending machine. No. 1,014,451; Jan. 9; Sp. p. 3019; Gaz. vol. 174; p. 500.
Carpenter, Ralph G. (See Goebst and Carpenter.)
Carr, James, assignor, by mesne assignments, to The Henry G. Thompson & Son Company, New Haven, Conn. Tool. No. 1,016,207; Jan. 30; Sp. p. 6808; Gaz. vol. 174; p. 1183.
Carré, Louis, London, England. Treatment of straw, dried grasses, or the like for the production of articles of commerce. No. 1,014,566; Jan. 9; Sp. p. 3217; Gaz. vol. 174; p. 536.
Carrigan, Daniel H., Portland, Me. Harness-pad. No. 1,013,586; Jan. 2; Sp. p. 1065; Gaz. vol. 174; p. 172.
Carroll, Edward, Kirksville, Mo. Drain-conduit or culvert. No. 1,014,636; Jan. 16; Sp. p. 3449; Gaz. vol. 174; p. 592.
Carroll, James R., Bollinger, Tex. Freezer. No. 1,015,002; Jan. 16; Sp. p. 4275; Gaz. vol. 174; p. 718.
Carroll, Thomas F., Mount Carmel, Pa. Rock-drill. No. 1,015,780; Jan. 30; Sp. p. 5924; Gaz. vol. 174; p. 1036.
Carter, George W., Norway, Me., assignor to United Shoe Machinery Company, Paterson, N. J. Channeling-tool. No. 1,015,377; Jan. 23; Sp. p. 5054; Gaz. vol. 174; p. 871.
Cartwright, William J., New York, N. Y. Roller-bearing. No. 1,015,273; Jan. 16; Sp. p. 4804; Gaz. vol. 174; p. 808.
Caryl, De Mont, Wiscoy, N. Y. Chain pipe-wrench. No. 1,015,667; Jan. 23; Sp. p. 5681; Gaz. vol. 174; p. 971.
Case, Archie C., Coalmont, Ind. Machine for sharpening plowshares. No. 1,014,119; Jan. 9; Sp. p. 2302; Gaz. vol. 174; p. 384.
Case, Nettie J., administratrix. (See Case, Willis W.)
Case, Willis W., deceased, Denver, Colo.; N. J. Case, administratrix. Melting-furnace. No. 1,013,838; Jan. 2; Sp. p. 1628; Gaz. vol. 174; p. 260.
Casey, John T., Philadelphia, Pa., assignor to Keystone Lantern Company. Lamp or lantern. No. 1,013,275; Jan. 2; Sp. p. 404; Gaz. vol. 174; p. 65.
Cass, Nathan D., Athol, Mass. Toy. No. 1,016,208; Jan. 30; Sp. p. 6809; Gaz. vol. 174; p. 1183.
Cassidy, Andrew D., Ottawa, Ill. Piano-bench. No. 1,015,781; Jan. 30; Sp. p. 5926; Gaz. vol. 174; p. 1037.
Cavanagh, James, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,013,789; Jan. 2; Sp. p. 1438; Gaz. vol. 174; p. 226.
Caverno, Xenophon, Kewanee, Ill. Pumping apparatus. No. 1,015,782; Jan. 30; Sp. p. 5927; Gaz. vol. 174; p. 1037.
Cazmay, Frank T., *et al.* (See Thomas, George J., assignor.)
Central Tool Company, The. (See Jaques, Fernando O., Jr., assignor.)
Cerri, Nicola, Cleveland, Ohio. Cuff-protector. No. 1,013,126; Jan. 2; Sp. p. 76; Gaz. vol. 174; p. 14.
Chadeloid Chemical Company. (See Dosselman and Neymann, assignors.)
Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)
Chalko, Stanley, New Britain, Conn. Shade-roller and curtain holder. No. 1,013,127; Jan. 2; Sp. p. 77; Gaz. vol. 174; p. 14.
Chalmers-Detroit Motor Company. (See Utz, John G., assignor.)
Chalmers, Robert. (See Gibb, Menzies, and Chalmers.)
Chamberlain, William H., and F. A. Hadley, Worcester, Mass. Floor-jack. No. 1,013,927; Jan. 9; Sp. p. 1879; Gaz. vol. 174; p. 320.
Chambers, Arthur L., and N. Bane, Smithfield, W. Va. Walking-beam. No. 1,013,533; Jan. 2; Sp. p. 968; Gaz. vol. 174; p. 155.
Chambers Brothers Company. (See Chambers, Cyrus, Jr., assignor.)
Chambers, Cyrus, Jr., Overbrook, Pa., assignor to Chambers Brothers Company. Controlling mechanism. No. 1,014,376; Jan. 9; Sp. p. 2871; Gaz. vol. 174; p. 475.
Chambers, John T., New Orleans, La. Plow. No. 1,015,003; Jan. 16; Sp. p. 4277; Gaz. vol. 174; p. 718.
Champion Ignition Co. (See Schmidt, Albert, assignor.)
Chance, Albert B., Centralia, Mo. Attachment for corn-planters. No. 1,014,206; Jan. 9; Sp. p. 2464; Gaz. vol. 174; p. 414.
Chandler, John H., Indian Orchard, Mass. Valve. No. 1,013,861; Jan. 9; Sp. p. 1718; Gaz. vol. 174; p. 297.
Chandonnet, Thomas J., Wanbun, Minn. Lifting mechanism for gang-plows. No. 1,013,740; Jan. 2; Sp. p. 1440; Gaz. vol. 174; p. 226.
Chapin, Allie W. (See Purchas and Chapin.)
Chaplain, George H., Leavenworth, Kans. Steering-gear. No. 1,015,295; Jan. 23; Sp. p. 4860; Gaz. vol. 174; p. 842.
Chapman, George M. (See Williams, Lawson M., assignor.)
Chapman, John M. (See Hudlow and Chapman.)
Chapman, William B., New York, N. Y. Gas-producer. No. 1,015,296; Jan. 23; Sp. p. 4862; Gaz. vol. 174; p. 843.
Chapon, Francis A. M., assignor to Société Francis Chapon & Cie., Paris, France. Cash-register or check-till. No. 1,013,741; Jan. 2; Sp. p. 1441; Gaz. vol. 174; p. 226.
Charley, John J., Malvern, Victoria, Australia. Spring suspension for vehicles. No. 1,013,742; Jan. 2; Sp. p. 1444; Gaz. vol. 174; p. 227.
Charroin, Frank B., South Bellingham, assignor to Bellingham Brass Mfg. Co., Bellingham, Wash. Flush-valve. No. 1,014,637; Jan. 16; Sp. p. 3451; Gaz. vol. 174; p. 593.
Chas. Polacheck & Bro. Co. (See Neuhoefer and Polacheck, assignors.)
Chase & Baker Company, The. (See Bayer, William F., assignor.)
Chase, Frank D. (See Smith, Hunter, assignor.)
Chatillon, Joseph E. L., Hull, Quebec, Canada. Faucet No. 1,015,297; Jan. 23; Sp. p. 4870; Gaz. vol. 174; p. 843.
Chemische Fabrik vormals Sandoz. (See Böniger, Melchior, assignor.)

Cheney, Herbert W., Norwood, Ohio. Floor-surfacing machine. No. 1,013,534; Jan. 2; Sp. p. 970; Gaz. vol. 174; p. 156.
Chenot, Augustus S. P., Belleville, Ill. Igniting-torch. No. 1,016,209; Jan. 30; Sp. p. 6810; Gaz. vol. 174; p. 1183.
Chesapeake Addressing Company, The. (See Hanrahan, John E., assignor.)
Chicago Pneumatic Tool Company. (See Boyer, Joseph, assignor.)
Chicago Railway Equipment Company. (See Busse and Harrison, assignors.)
Chickering, Frank W., Hardwick, Vt. Ladder-brad. No. 1,015,940; Jan. 30; Sp. p. 6265; Gaz. vol. 174; p. 1091.
Chinter, William, Connellsville, Pa. Slat-holder for bedsteads. No. 1,014,452; Jan. 9; Sp. p. 3021; Gaz. vol. 174; p. 501.
Chounard, Philip Pembina, N. D. Road-grader attachment. No. 1,015,004; Jan. 16; Sp. p. 4278; Gaz. vol. 174; p. 718.
Chrestensen, Christian P., Philadelphia, Pa., assignor to The Ridgely Trimmer Company, Springfield, Ohio. Paper-cutter. No. 1,014,567; Jan. 9; Sp. p. 3221; Gaz. vol. 174; p. 536.
Christian, Columbus H., Atlanta, and E. H. Hutcheson, Augusta, Ga. Railway-crossing. No. 1,015,541; Jan. 23; Sp. p. 5403; Gaz. vol. 174; p. 926.
Christiansen, Christian, Kenmare, N. D. Hub for vehicle-wheels. No. 1,013,743; Jan. 2; Sp. p. 1447; Gaz. vol. 174; p. 227.
Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburgh, Pa. Door-operating device for cars. (Reissue.) No. 13,362; Jan. 16; Sp. p. 4818; Gaz. vol. 174; p. 811.
Christie, Elza J., Marion, Iowa. Means for converting vapor energy into work. No. 1,016,210; Jan. 30; Sp. p. 6811; Gaz. vol. 174; p. 1184.
Christmann, John J. (See Pim and Christmann.)
Christmann, Michael, Leadville, Colo. Mechanical movement. No. 1,013,276; Jan. 2; Sp. p. 406; Gaz. vol. 174; p. 66.
Christopherson, Louis B., San Jose, Cal. Drapery and grille structure. No. 1,016,211; Jan. 30; Sp. p. 6813; Gaz. vol. 174; p. 1184.
Chrome Steel Works. (See Canda, Ferdinand E., assignor.)
Chrome Steel Works. (See Canda, Ferdinand M., assignor.)
Church, Albert E., New Britain, Conn. Machine-chuck. No. 1,013,373; Jan. 2; Sp. p. 627; Gaz. vol. 174; p. 99.
Church, Edmund S., Dayton, assignor to The Toledo Computing Scale Company, Toledo, Ohio. Weight-measuring instrument. No. 1,013,641; Jan. 2; Sp. p. 1196; Gaz. vol. 174; p. 191.
Claremont, Ernest A. (See Stratton and Claremont.)
Clark, Andrew J., Dayton, Tenn. Advertising device. No. 1,016,212; Jan. 30; Sp. p. 6815; Gaz. vol. 174; p. 1184.
Clark, Elmer H., Sheldon, Iowa. Attachment for mail-boxes. No. 1,013,128; Jan. 2; Sp. p. 79; Gaz. vol. 174; p. 14.
Clark, Elvira M. (See Davis, John J., assignor.)
Clark, George H., Allston, assignor of one-half to himself, and one-half to A. W. Griffith, Boston, Mass. Shoe. No. 1,013,744; Jan. 2; Sp. p. 1449; Gaz. vol. 174; p. 228.
Clark, Horace W., Mattoon, Ill. Pipe-coupling. No. 1,015,990; Jan. 30; Sp. p. 6372; Gaz. vol. 174; p. 1109.
Clark, John T., New York, N. Y. Apparatus for loading vessels. No. 1,013,928; Jan. 9; Sp. p. 1880; Gaz. vol. 174; p. 320.
Clark, John T., Provo, Utah. Railway-tie and fastener. No. 1,014,948; Jan. 16; Sp. p. 4158; Gaz. vol. 174; p. 699.
Clark, Joseph V., Steubenville, Ohio. Packing. No. 1,013,745; Jan. 2; Sp. p. 1450; Gaz. vol. 174; p. 228.
Clark, Josiah F., and J. F. Dorsey, Thompson, Pa. Attachment for squares. No. 1,014,453; Jan. 9; Sp. p. 3022; Gaz. vol. 174; p. 501.
Clark, Leonard M., *et al.* (See Ensley, Benjamin F. and C. E., assignors.)
Clark, Melville, Chicago, Ill. Step-feed for automatic modifying devices for automatic musical instruments. No. 1,013,802; Jan. 9; Sp. p. 1720; Gaz. vol. 174; p. 298.
Clark, Melville, Chicago, Ill. Interior-player piano. No. 1,014,809; Jan. 16; Sp. p. 3824; Gaz. vol. 174; p. 650.
Clark, Melville, Chicago, Ill. Interior-player piano. No. 1,014,810; Jan. 16; Sp. p. 3826; Gaz. vol. 174; p. 651.
Clark, Melville, Chicago, Ill. Interior-player piano. No. 1,014,811; Jan. 16; Sp. p. 3828; Gaz. vol. 174; p. 651.
Clark, Melville, Chicago, Ill. Interior-player piano. No. 1,014,864; Jan. 16; Sp. p. 3966; Gaz. vol. 174; p. 671.
Clark, Melville, Chicago, Ill. Interior-player piano. No. 1,014,949; Jan. 16; Sp. p. 4159; Gaz. vol. 174; p. 699.
Clark, Robert D., Duquesne, Pa. Safety elevator device. No. 1,015,137; Jan. 16; Sp. p. 4532; Gaz. vol. 174; p. 764.
Clark, Victor E., Grand Rapids, assignor to The Victor Brown Company, Detroit, Mich. Broom. No. 1,015,263; Jan. 16; Sp. p. 4787; Gaz. vol. 174; p. 805.
Clark, Wallace S., Schenectady, N. Y., assignor to General Electric Company. Electric heating-pad. No. 1,015,991; Jan. 30; Sp. p. 6373; Gaz. vol. 174; p. 1109.
Clark, William G., Geelong, Victoria, Australia. Copperizing iron. No. 1,014,454; Jan. 9; Sp. p. 3024; Gaz. vol. 174; p. 501.
Clarke, Frederick F., Franklin, Pa. Tool-holder and securing device for same. No. 1,013,129; Jan. 2; Sp. p. 80; Gaz. vol. 174; p. 14.
Clawson, Charles F., Mount Pleasant, Iowa. Spark-arrester. No. 1,016,213; Jan. 30; Sp. p. 6817; Gaz. vol. 174; p. 1185.
Clay, Harry C., assignor to Reeves & Company, Columbus, Ind. Sparking apparatus for internal-combustion engines. No. 1,015,005; Jan. 16; Sp. p. 4279; Gaz. vol. 174; p. 719.
Cleland, Harry W., Wilkinsburg, assignor to G. B. Griffin, Edgewood Park, Pa. Spring-motor. No. 1,015,298; Jan. 23; Sp. p. 4872; Gaz. vol. 174; p. 844.
Clevenger, Emma M., Muncie, Ind. Window construction. No. 1,014,633; Jan. 16; Sp. p. 3452; Gaz. vol. 174; p. 593.
Clime, William L. R. (See Reiff, William H., assignor.)
Cline, Hugh J., Arkansas City, Kans. Door-stop. No. 1,015,424; Jan. 23; Sp. p. 5158; Gaz. vol. 174; p. 886.
Clouse, William L., assignor to National Machinery Company, Tiffin, Ohio. Fly-wheel. No. 1,015,476; Jan. 23; Sp. p. 5282; Gaz. vol. 174; p. 904.
Clouser, William, Dana, Ind. Corn harvester and husker. No. 1,014,812; Jan. 16; Sp. p. 3831; Gaz. vol. 174; p. 652.
Codero, Ramón F., Rubio, Venezuela. Switch-shield. No. 1,015,138; Jan. 16; Sp. p. 4534; Gaz. vol. 174; p. 764.
Codero, Ramón F., Rubio, Venezuela. Indicator. No. 1,015,139; Jan. 16; Sp. p. 4535; Gaz. vol. 174; p. 765.
Codero, Ramón F., Rubio, Venezuela. Safety device for monoralls. No. 1,015,140; Jan. 16; Sp. p. 4536; Gaz. vol. 174; p. 765.
Cohn, Jacob H., Cleveland, Ohio. Hat block, telescoper, and presser. No. 1,014,813; Jan. 16; Sp. p. 3834; Gaz. vol. 174; p. 652.
Colby, Haidwell S. (See Machol, Morris R., assignor.)
Cole, Llewellyn W., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt. Square. No. 1,013,986; Jan. 9; Sp. p. 2006; Gaz. vol. 174; p. 339.
Cole, Robert C., West Hartford, assignor to The Johns-Pratt Company, Hartford, Conn. Fuse-block contact-post. No. 1,014,950; Jan. 16; Sp. p. 4163; Gaz. vol. 174; p. 700.
Coleman, Clarence W., Westfield, N. J., assignor to The Hall Signal Company. Electromagnet. No. 1,015,992; Jan. 30; Sp. p. 6374; Gaz. vol. 174; p. 1110.
Coleman, Clyde J., New York, N. Y. Refrigerating apparatus. No. 1,014,120; Jan. 9; Sp. p. 2304; Gaz. vol. 174; p. 384.
Colgan, William H., Newton, Mass. Wall-base for electrical switches. No. 1,014,692; Jan. 16; Sp. p. 3573; Gaz. vol. 174; p. 611.
Collier, Clyde F., Lakeville, assignor of one-half to J. C. Lake, Big Prairie, Ohio. Stovepipe-lock. No. 1,015,542; Jan. 23; Sp. p. 5405; Gaz. vol. 174; p. 926.
Collier, Guy B. (See Wales and Collier.)
Collins, Frank, *et al.* (See Nagel, William G., assignor.)
Collins, Wilbur L., assignor to Newark Wagon Company, Newark, N. Y. Dump-wagon. No. 1,013,929; Jan. 9; Sp. p. 1884; Gaz. vol. 174; p. 321.
Colonial Trust Company, The, trustee. (See Green, Jonathan S., assignor.)
Colonial Trust Company, The, trustee. (See Hodgkinson, Francis, assignor.)
Coltharp, Albert S. (See Hazel and Coltharp.)
Colwell, William E., Kincardine, Ontario, Canada. Pneumatic hammer for driving nails. No. 1,014,639; Jan. 16; Sp. p. 3453; Gaz. vol. 174; p. 593.
Company Hugo Schneider Aktiengesellschaft. (See Blankenburg, Carl, assignor.)
Compton, Everett, Earlham, Iowa. Draft-equalizer. No. 1,014,121; Jan. 9; Sp. p. 2309; Gaz. vol. 174; p. 385.
Comstock, Charles, West Stockbridge, Mass. Rotary engine. No. 1,016,129; Jan. 30; Sp. p. 6661; Gaz. vol. 174; p. 1158.
Conant, William C., Riverside, Ill. Speed-changing mechanism. No. 1,015,477; Jan. 23; Sp. p. 5283; Gaz. vol. 174; p. 905.
Condit, S. B., Jr. (See Burnham, George A., assignor.)
Condit, Sears B., Jr., Brookline, Mass. Magnetically-controlled switching apparatus. No. 1,014,455; Jan. 9; Sp. p. 3025; Gaz. vol. 174; p. 502.
Congdon, Charles H., Marshalls Creek, Pa. Chart-display apparatus. No. 1,014,640; Jan. 16; Sp. p. 3458; Gaz. vol. 174; p. 594.
Congear, Joseph W., Sparks, Ga. Hoe. No. 1,015,478; Jan. 23; Sp. p. 5287; Gaz. vol. 174; p. 905.
Conger, Charles W., Indianapolis, Ind. Pattern-machine. No. 1,013,130; Jan. 2; Sp. p. 81; Gaz. vol. 174; p. 15.
Conkell, Elias W., assignor of one-fourth to J. J. Hein and one-fourth to W. A. Hammerly, Canton, Ohio. Steam-engine. No. 1,015,993; Jan. 30; Sp. p. 6375; Gaz. vol. 174; p. 1110.
Conlon, Bartholomew J., Lawrence, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Protector-setting machine. No. 1,015,543; Jan. 23; Sp. p. 5406; Gaz. vol. 174; p. 926.
Conn, Joseph C., Boonton, N. J., assignor to J. B. Stone Co., Grand Rapids, Mich. Belt-fastener. No. 1,015,783; Jan. 30; Sp. p. 5929; Gaz. vol. 174; p. 1038.

Conneaut Company, The. (See Lumley, Wilfrid, assignor.)
Connell, John J. (See Niebling, George W., assignor.)
Conner, Rees P. (See McIntyre and Conner.)
Connstein, Wilhelm, assignor to Vereinigte Chemische Werke Actiengesellschaft, Charlottenburg, Germany. Manufacture of the fatty acids from their esters. No. 1,015,994; Jan. 30; Sp. p. 6379; Gaz. vol. 174; p. 1110.
Conover, Henry S. (See Rothchild and Conover.)
Contos, John, Grand Island, Nebr. Track-adjuster. No. 1,013,987; Jan. 9; Sp. p. 2008; Gaz. vol. 174; p. 340.
Conway, Alfred T., *et al.* (See Luster, Eugene A., assignor.)
Conway, George M., Milwaukee, Wis. Utilizing spent bark or analogous material as a fuel. No. 1,013,988; Jan. 9; Sp. p. 2010; Gaz. vol. 174; p. 340.
Cook, August D. (See Batchlor, Landon, assignor.)
Cook, Giles H., Des Moines, Iowa. Acetylene-gas generator. No. 1,015,378; Jan. 23; Sp. p. 5056; Gaz. vol. 174; p. 872.
Cook Railway Signal Company, The. (See Cook, William J., assignor.)
Cook, William A., South Bend, Ind. Split-ring clutch. No. 1,014,865; Jan. 16; Sp. p. 3970; Gaz. vol. 174; p. 672.
Cook, William E., St. George, and D. H. Haywood, deceased, New York, N. Y.; F. G. Haywood, executrix. Invertible scow. No. 1,015,755; Jan. 23; Sp. p. 5867; Gaz. vol. 174; p. 1000.
Cook, William J., assignor to The Cook Railway Signal Company, Denver, Colo. Railway signaling apparatus. No. 1,014,208; Jan. 9; Sp. p. 2468; Gaz. vol. 174; p. 415.
Cooke, William E., Harvey, N. D. Rotary plow. No. 1,013,587; Jan. 2; Sp. p. 1066; Gaz. vol. 174; p. 172.
Cooley, Oren, Toronto, Ontario, Canada, assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Bottle-filling machine. No. 1,015,995; Jan. 30; Sp. p. 6380; Gaz. vol. 174; p. 1110.
Cooley, William H., Brockport, N. Y. Loose-leaf binder and leaf therefor. No. 1,013,746; Jan. 2; Sp. p. 1451; Gaz. vol. 174; p. 228.
Cooper, Alexander J., *et al.*, executors. (See Barratt, William T., assignor.)
Cooper, Annie, *et al.*, executors. (See Barratt, William T., assignor.)
Cooper, Ellis W., assignor to R. Hoe and Co., New York, N. Y. Gripper mechanism for printing-machines. No. 1,015,873; Jan. 30; Sp. p. 6118; Gaz. vol. 174; p. 1067.
Cooper, Frederick A., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Compressing-machine. No. 1,015,784; Jan. 30; Sp. p. 5931; Gaz. vol. 174; p. 1038.
Cooper, George W., Patten, Me. Attachment for elevated potato-diggers. No. 1,015,299; Jan. 23; Sp. p. 4874; Gaz. vol. 174; p. 844.
Cooper Hewitt Electric Company. (See Hewitt, Peter C., assignor.)
Cope, Elmer E., Dubois, Pa. Lubricator. No. 1,014,568; Jan. 9; Sp. p. 3222; Gaz. vol. 174; p. 536.
Copenhagen, Henry, *et al.* (See Shoemaker, Alvin H., assignor.)
Copithorn, Walter E., Natick, Mass. Detachable rim for pneumatic tires. No. 1,013,374; Jan. 2; Sp. p. 629; Gaz. vol. 174; p. 100.
Corbin, Joseph, Columbus, Ohio. Spring-wheel. No. 1,015,785; Jan. 30; Sp. p. 5933; Gaz. vol. 174; p. 1038.
Corbitt, Hebber S., Norfolk, Va. Propelling mechanism for bicycles and the like. No. 1,015,996; Jan. 30; Sp. p. 6385; Gaz. vol. 174; p. 1111.
Corcuera, Carlos L., Guadalajara, Mexico. Extraction of saccharine substances. No. 1,015,941; Jan. 30; Sp. p. 6266; Gaz. vol. 174; p. 1091.
Cordley, Henry G., Glen Ridge, N. J. Faucet. No. 1,015,614; Jan. 23; Sp. p. 5565; Gaz. vol. 174; p. 953.
Cordley, Henry G., Glen Ridge, N. J. Water-cooler stand. No. 1,015,615; Jan. 23; Sp. p. 5566; Gaz. vol. 174; p. 954.
Corey, Henry F., Marne, Iowa. Guard for swingletrees. No. 1,014,284; Jan. 9; Sp. p. 2653; Gaz. vol. 174; p. 442.
Corn Products Refining Company. (See Jefferies and Spain, assignors.)
Cornbrooks, William A., Moline, Ill., assignor to Williams, White & Company. Apparatus for packing loose material. No. 1,013,277; Jan. 2; Sp. p. 408; Gaz. vol. 174; p. 66.
Cornell, George C., Canton, Pa. Folding box. No. 1,014,951; Jan. 16; Sp. p. 4164; Gaz. vol. 174; p. 700.
Cornwall, George R., Rye, N. Y., assignor to American Pianograph Company, Composing device. No. 1,013,477; Jan. 2; Sp. p. 344; Gaz. vol. 174; p. 135.
Cornwall, John B., assignor to Barnard and Leas Manufacturing Company, Moline, Ill. Grain-drier. No. 1,014,122; Jan. 9; Sp. p. 2311; Gaz. vol. 174; p. 385.
Corrugated Bar Company. (See Lindau, Alfred E., assignor.)
Cotta, Charles, assignor to Cotta Transmission Co., Inc., Rockford, Ill. Change-speed gearing. (Reissue.) No. 13,363; Jan. 16; Sp. p. 4821; Gaz. vol. 174; p. 812.
Cotta Transmission Co. (See Cotta, Charles, assignor.) (Reissue.)
Couch, Royden O., Charleston, W. Va. Trolley-hanger. No. 1,014,569; Jan. 9; Sp. p. 3227; Gaz. vol. 174; p. 537.
Coulter, William, Lorain, Ohio. Boat-lashing device. No. 1,014,123; Jan. 9; Sp. p. 2313; Gaz. vol. 174; p. 386.
Couplin, Levi S., South Greenfield, Mo. Screen. No. 1,014,570; Jan. 9; Sp. p. 3228; Gaz. vol. 174; p. 537.
Courts, Benjamin D., Cincinnati, Ohio. Spring-bed. No. 1,013,642; Jan. 2; Sp. p. 1198; Gaz. vol. 174; p. 191.
Covell, Harry N., New York, N. Y., assignor to Lidgerwood Manufacturing Company. Emergency-brake for hoist-engines. No. 1,013,131; Jan. 2; Sp. p. 82; Gaz. vol. 174; p. 15.
Cowart, Stephen A., assignor of one-half to J. P. Kimmel, Midlothian, Tex. Harrow attachment for cultivators. No. 1,014,124; Jan. 9; Sp. p. 2314; Gaz. vol. 174; p. 386.
Cowgill, Guy H., Hermitage, Tenn. Reel. No. 1,013,588; Jan. 2; Sp. p. 1068; Gaz. vol. 174; p. 173.
Cox, Albert F., Chicago, Ill. Hair-straightening device. No. 1,014,952; Jan. 16; Sp. p. 4165; Gaz. vol. 174; p. 700.
Cox, Clarence E., Fairfax, Mo. Metallic tire. No. 1,014,814; Jan. 16; Sp. p. 3836; Gaz. vol. 174; p. 652.
Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Pipe-bending machine. No. 1,013,839; Jan. 2; Sp. p. 1629; Gaz. vol. 174; p. 261.
Cox, Oscar M., Plainview, Tex. Disk plow. No. 1,015,544; Jan. 23; Sp. p. 5408; Gaz. vol. 174; p. 927.
Cox, Warren R., Cleveland, Ohio. Automatic lock-switch. No. 1,015,300; Jan. 23; Sp. p. 4877; Gaz. vol. 174; p. 845.
Coyle, Thomas M., St. Louis, Mo. Combination drying and moistening machine. No. 1,015,786; Jan. 30; Sp. p. 5934; Gaz. vol. 174; p. 1038.
Craft, Edward B., Hackensack, N. J., assignor to Western Electric Company, New York, N. Y. Harmonic ringer. No. 1,014,125; Jan. 9; Sp. p. 2316; Gaz. vol. 174; p. 386.
Craig, Allen. (See Double and Craig.)
Craig, William S., St. Marys, Ohio. Creeping and anti-skidding device. No. 1,015,545; Jan. 23; Sp. p. 5414; Gaz. vol. 174; p. 927.
Cram, James E. (See Nye and Cram.)
Crandall, Catherine H. (See Crandall, Garrett J., assignor.)
Crandall, Garrett J., assignor to C. H. Crandall, Los Angeles, Cal. Insect-trap. No. 1,015,141; Jan. 16; Sp. p. 4538; Gaz. vol. 174; p. 765.
Crandall, Max E., Lawton, Okla. Automobile spring-wheel. No. 1,015,006; Jan. 16; Sp. p. 4281; Gaz. vol. 174; p. 719.
Craun, James H., and S. Baldwin, Marion, Ind. Amusement device. No. 1,014,571; Jan. 9; Sp. p. 3230; Gaz. vol. 174; p. 538.
Crawford, Franklin, and W. Whiteley, assignors to North & Judd Manufacturing Company, New Britain, Conn. Hinge for coach and automobile bodies. No. 1,013,535; Jan. 2; Sp. p. 975; Gaz. vol. 174; p. 156.
Crewson, Charles C., Kansas City, Mo. Street-car. No. 1,013,376; Jan. 2; Sp. p. 632; Gaz. vol. 174; p. 100.
Crippen, Herbert O., New York, N. Y. Guard-rail for upper berths. No. 1,014,126; Jan. 9; Sp. p. 2317; Gaz. vol. 174; p. 387.
Cripps, William H., New Bethlehem, Pa. Rail connection. No. 1,013,747; Jan. 2; Sp. p. 1452; Gaz. vol. 174; p. 229.
Criswell, David S., Prospect, Pa. Standing valve. No. 1,015,142; Jan. 16; Sp. p. 4540; Gaz. vol. 174; p. 766.
Crocker-Wheeler Company. (See Dunn, Gano, assignor.)
Cromwell, John C., assignor to The Garrett-Cromwell Engineering Company, Cleveland, Ohio. Cover for pitz. No. 1,013,278; Jan. 2; Sp. p. 411; Gaz. vol. 174; p. 66.
Cronin, Matthew T. (See Cox, James F., assignor.)
Cronin, Patrick J., and E. Harrington, Chicago, Ill. Cooling device for electrotype-plates. No. 1,014,641; Jan. 16; Sp. p. 3459; Gaz. vol. 174; p. 594.
Cronk, Charles H., Curtis, Nebr. Folding carrier. No. 1,013,863; Jan. 9; Sp. p. 1723; Gaz. vol. 174; p. 298.
Cronk, Wesley M., Jr., White Plains, N. Y. Combined elevator cage and scale. No. 1,015,874; Jan. 30; Sp. p. 6120; Gaz. vol. 174; p. 1067.
Crosby, Robert E. L., assignor of one-half to A. E. Lockhart, Jonesboro, Ark. Knockdown box. No. 1,015,425; Jan. 23; Sp. p. 5160; Gaz. vol. 174; p. 887.
Crossley, William, and T. D. Adams, West Haven, Conn. Non-refillable bottle. No. 1,014,127; Jan. 9; Sp. p. 2319; Gaz. vol. 174; p. 387.
Crow, Frank W., Clarence, Iowa. Non-refillable bottle. No. 1,014,693; Jan. 16; Sp. p. 3576; Gaz. vol. 174; p. 612.
Crowe, Charles E., Chicago, Ill. Trocar. No. 1,014,128; Jan. 9; Sp. p. 2321; Gaz. vol. 174; p. 387.
Crowe, John. (See Johnson and Crowe.)
Cruse, Arthur R., Philadelphia, Pa. Safety device for gas-holders. No. 1,013,643; Jan. 2; Sp. p. 1199; Gaz. vol. 174; p. 191.
Crutchfield, Oliver, Ottumwa, Iowa. Folding sled. No. 1,013,132; Jan. 2; Sp. p. 85; Gaz. vol. 174; p. 15.
Crystalized Milk Co. (See Roeh, John, assignor.)
Cudia, Ludovico, Greensburg, Pa. Firearm. No. 1,015,226; Jan. 16; Sp. p. 4689; Gaz. vol. 174; p. 792.
Culver, Frederick S., Taunton, Mass. Spinning-machine. No. 1,013,748; Jan. 2; Sp. p. 1453; Gaz. vol. 174; p. 229.
Cummings, George, assignor of one-half to E. M. Lewis, Dayton, Ohio. Cycle-fork. No. 1,014,285; Jan. 9; Sp. p. 2653; Gaz. vol. 174; p. 442.

Cummings, Henry H., Newton, Mass., assignor, by mesne

Davidson, Ira M., assignor of one-fourth to W. B. Davis,
Dean, James H., Chicago, Ill., assignor, by mesne assign-
Dillon, Robert J., Killaloe, Ontario, Canada. Cattle-guard.

Cummings, Henry H., Newton, Mass., assignor, by mesne assignments, to Atlantic National Bank, Providence, R. I. Target-practice apparatus. No. 1,014,620; Jan. 9; Sp. p. 3349; Gaz. vol. 174; p. 556.

Cunniff, Edward A., New Bedford, Mass., assignor to Draper Company. Filling-fork mechanism for looms. No. 1,013,375; Jan. 2; Sp. p. 631; Gaz. vol. 174; p. 100.

Cunningham, John J., Manchester, N. H. Machine for covering rolls with leather. No. 1,013,749; Jan. 2; Sp. p. 1455; Gaz. vol. 174; p. 230.

Curran, Edward, Cardiff, England. Furnace. No. 1,015,616; Jan. 23; Sp. p. 5568; Gaz. vol. 174; p. 954.

Curran, William E., Cardiff, England. Fire-bridge. No. 1,014,377; Jan. 9; Sp. p. 2874; Gaz. vol. 174; p. 475.

Curtis, Frank G., assignor to L. A. Guiterman, St. Paul, Minn. Neck-protector for coats. No. 1,016,214; Jan. 30; Sp. p. 6818; Gaz. vol. 174; p. 1185.

Curtis, Fred W., Hereford, Tex. Tongue-truck for corn-binders. No. 1,014,129; Jan. 9; Sp. p. 2323; Gaz. vol. 174; p. 388.

Cushman, Arthur A., Bristol, R. I. Support for tables and similar articles. No. 1,014,815; Jan. 16; Sp. p. 3837; Gaz. vol. 174; p. 653.

Cutler, Burnam B., assignor of one-half to D. G. Hadsell, Kansas City, Mo. Screen or storm-window hanger. No. 1,014,621; Jan. 9; Sp. p. 3359; Gaz. vol. 174; p. 556.

Cutler, David, Rumford, Me. Paper bag. No. 1,015,007; Jan. 16; Sp. p. 4284; Gaz. vol. 174; p. 720.

Cutler-Hammer Manufacturing Company, The. (See Barnum, Thomas E., assignor.)

Cutler-Hammer Mfg. Co., The. (See Janette, John T., assignor.)

Cutler, Ralph D., and M. F. Owens, assignors to The Hartford Electric Light Company, Hartford, Conn. Electrical distribution. No. 1,014,049; Jan. 9; Sp. p. 2154; Gaz. vol. 174; p. 360.

D. H. Burrell & Company. (See Lane, Frederic A., assignor.)

D. P. Company. (See Gamage, Harry C., assignor.)

D'Artenay, Adolph P., Dixon, Cal. Land-grader. No. 1,013,354; Jan. 2; Sp. p. 589; Gaz. vol. 174; p. 93.

Daam, Gerrit von, Scranton, Pa. Mine-carriage and elevator automatic safety-brake. No. 1,016,114; Jan. 30; Sp. p. 6637; Gaz. vol. 174; p. 1154.

Daemen-Schmid, Heinrich, Zurich, Switzerland. Calculating-machine. No. 1,015,842; Jan. 30; Sp. p. 6050; Gaz. vol. 174; p. 1056.

Daeuble, Frederick W., Buechel, Ky. Reversing frictional driving mechanism. No. 1,013,989; Jan. 9; Sp. p. 2013; Gaz. vol. 174; p. 340.

Dahl, Benjamin, Minneapolis, Minn. Rotary engine. No. 1,014,378; Jan. 9; Sp. p. 2876; Gaz. vol. 174; p. 476.

Daimler Motorengesellschaft. (See Daimler, Paul, assignor.)

Daimler, Paul, assignor to Daimler Motorengesellschaft, Untertürkheim, Germany. Lubricating system. No. 1,013,644; Jan. 2; Sp. p. 1201; Gaz. vol. 174; p. 192.

Dairy Machinery and Construction Company. (See Willmann, Joseph, assignor.)

Dairy Oils Extracting Company. (See Fornander, Alfred, assignor.)

Dairymen's Manufacturing Company. (See Peacock, Edward M., assignor.)

Dallas, Martha C., Kist, Oreg. Garment-fastener. No. 1,015,143; Jan. 16; Sp. p. 4541; Gaz. vol. 174; p. 766.

Dalrymple, David L., Newark, N. J. Pressure-regulating valve. No. 1,013,645; Jan. 2; Sp. p. 1204; Gaz. vol. 174; p. 192.

Dalton, Gilbert, Oglesby, Tex. Quilting-frame. No. 1,014,130; Jan. 9; Sp. p. 2324; Gaz. vol. 174; p. 388.

Daly, Hatch and Buschane. (See Daly, William O., assignor.)

Daly, William O., assignor to Daly, Hatch and Buschane, Mobile, Ala. Blind-slat tip. No. 1,015,144; Jan. 16; Sp. p. 4541; Gaz. vol. 174; p. 766.

Damascus Brake Beam Co., The. (See Pugh, Edward D., assignor.)

Danberry, Edward, assignor of one-third to H. Blackwell, Wheatland, Ind. Safety attachment for elevators. No. 1,015,726; Jan. 23; Sp. p. 5807; Gaz. vol. 174; p. 990.

Daniel, Joseph A., Comanche, Tex. Oil-burner. No. 1,015,997; Jan. 30; Sp. p. 6388; Gaz. vol. 174; p. 1111.

Daniel, Leonard. (See Whisler, Isma S., assignor.)

Danielsen, Wilhelm G., Independence, Mo. Plow. No. 1,014,379; Jan 9; Sp. p. 2879; Gaz. vol. 174; p. 476.

Darlington, Frederick, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of electrical distribution. No. 1,013,133; Jan. 2; Sp. p. 85; Gaz. vol. 174; p. 15.

Darrin, David H., New York, N. Y. Magnet-actuated device. No. 1,015,787; Jan. 30; Sp. p. 5938; Gaz. vol. 174; p. 1039.

Darting, Harmen A., Glenwood, Iowa. Machine for scalding tomatoes. No. 1,015,379; Jan. 23; Sp. p. 5057; Gaz. vol. 174; p. 872.

Daub, Ludwig P., Pforzheim, Germany. Making fusible wire. No. 1,013,864; Jan. 9; Sp. p. 1725; Gaz. vol. 174; p. 298.

Davenport Ice Chipping Machine Company. (See Nelson, John M., assignor.)

Davidson, Anna F., *et al.* (See Knight, Margaret E., assignor.)

Davidson, Beatrice M., *et al.* (See Knight, Margaret E., assignor.)

Davidson, Ira M., assignor of one-fourth to W. B. Davis, Neeleyville, and one-fourth to C. I. Davis, Clinton, Mo. Spark-generator for internal-combustion engines. No. 1,015,788; Jan. 30; Sp. p. 5942; Gaz. vol. 174; p. 1039.

Davidson, Roy C., Fort Blackmore, Va. Welding copper. No. 1,013,134; Jan. 2; Sp. p. 88; Gaz. vol. 174; p. 16.

Davis, Alpha Y., Kansas City, Mo. Vehicle-wheel. No. 1,014,694; Jan. 16; Sp. p. 3577; Gaz. vol. 174; p. 612.

Davis, Charles S. (See Worth, Mason G., assignor.)

Davis, Columbus I., *et al.* (See Davidson, Ira M., assignor.)

Davis, Edward J., Grenloch, N. J. Cultivator. No. 1,014,572; Jan. 9; Sp. p. 3232; Gaz. vol. 174; p. 583.

Davis, Ernest W., Chicago, Ill. Aerial toy. No. 1,014,953; Jan. 16; Sp. p. 4167; Gaz. vol. 174; p. 701.

Davis, Frank E., assignor of one-half to A. Hirshheimer, La Crosse, Wis. Plow. No. 1,015,301; Jan. 23; Sp. p. 4879; Gaz. vol. 174; p. 845.

Davis, Harry S., assignor of one-half to D. E. Knowlton, Buffalo, N. Y. Ammonia-still. No. 1,015,145; Jan. 16; Sp. p. 4543; Gaz. vol. 174; p. 766.

Davis, Ida M. (See Zimdars, Anna, assignor.)

Davis, Jackson, Athens, Ill. Acetylene-gas lamp. No. 1,016,215; Jan. 30; Sp. p. 6819; Gaz vol. 174; p. 1185.

Davis, John J., assignor of one-half to E. M. Clark, Waterville, Conn. Stamp-holder. No. 1,014,380; Jan. 9; Sp. p. 2882; Gaz. vol. 174; p. 477.

Davis, Othman, Gainesville, Tex. Combined smoke-consumer and vaporizer. No. 1,014,573; Jan. 9; Sp. p. 3234; Gaz. vol. 174; p. 538.

Davis, Robert H. (See Fleuss and Davis.)

Davis, Stephen A., Newark, N. J., assignor, by mesne assignments, to Domestic Sewing Machine Company. Sewing-machine tension. No. 1,014,050; Jan. 9; Sp. p. 2156; Gaz. vol. 174; p. 360.

Davis, Walter G. (See Burrows, William J., assignor.)

Davis, Walter M., New York, N. Y. Combined piano-player and talking-machine. No. 1,013,589; Jan. 2; Sp. p. 1070; Gaz. vol. 174; p. 173.

Davis, William B., *et al.* (See Davidson, Ira M., assignor.)

Davis, William H., assignor of one-half to G. W. Teal, Boulder, Colo. Electrolytic cell. No. 1,015,546; Jan. 23; Sp. p. 5416; Gaz. vol. 174; p. 928.

Davis, William R., and J. J. Kain, Maysville, Ky. Collapsible and extensible roof for open-top railway-cars, &c. No. 1,015,146; Jan. 16; Sp. p. 4544; Gaz. vol. 174; p. 767.

Davisson, Oscar F., administrator. (See Carney, Thomas.)

Dawley, Amos J. (See Reynolds, Clark, assignor.)

Dawson, Arthur T., and G. T. Buckham, Westminster, assignors to Vickers Sons & Maxim, Limited, London, England. Semi-automatic and other quick-firing gun. No. 1,015,147; Jan. 16; Sp. p. 4546; Gaz. vol. 174; p. 767.

Dawson, Arthur T., Westminster, London, and J. Horne, Barrow-in-Furness, assignors to Vickers Limited, Westminster, England. Heavy gun. No. 1,016,216; Jan. 30; Sp. p. 6820; Gaz. vol. 174; p. 1185.

Dayton, Reuben C., Rhinelander, Wis. Automatic fire-kindler and alarm. No. 1,013,930; Jan. 9; Sp. p. 1886; Gaz. vol. 174; p. 321.

De Bats, Louis H. J., assignor of one-fourth to A. G. Zehner, one-fourth to F. E. Zehner, and one-fourth to J. C. Milleman, Zellenople, Pa. Hoist for crucible-furnaces. No. 1,013,377; Jan. 2; Sp. p. 636; Gaz. vol. 174; p. 101.

De Clairmont, Adolfo, Toledo, Ohio. Spark-plug tester. No. 1,014,207; Jan. 9; Sp. p. 2467; Gaz. vol. 174; p. 415.

De Forrest, Charles E., Lima, Ohio. Concrete-block machine. No. 1,013,536; Jan. 2; Sp. p. 977; Gaz. vol. 174; p. 156.

De Haven, James, assignor of one-half to W. R. Jennings, Dante, Va. Nut-lock. No. 1,013,866; Jan. 9; Sp. p. 1734; Gaz. vol. 174; p. 299.

De Haven, R. L., *et al.* (See Eyth, Lewis J., assignor.)

De Lisle, Agnes, administratrix. (See De Lisle, Justin.)

De Lisle, Justin, deceased, New York, N. Y.; A. De Lisle, administratrix. Making and packaging butter. No. 1,014,574; Jan. 9; Sp. p. 3236; Gaz. vol. 174; p. 539.

De Long, Charles E., assignor to H. H. Hawley Company, Dallas, Tex. Attachment for lathe head-stocks. No. 1,014,051; Jan. 9; Sp. p. 2159; Gaz. vol. 174; p. 360.

De Prez, Harry W., Shelbyville, Ind. Apparatus for fuming wood. No. 1,015,008; Jan. 16; Sp. p. 4285; Gaz. vol. 174; p. 720.

De Reamer, Frank C., Schenectady, N. Y., assignor to General Electric Company. Incandescent-lamp socket. No. 1,013,135; Jan. 2; Sp. p. 80; Gaz. vol. 174; p. 16.

De Reamer, Frank C., Schenectady, N. Y., assignor to General Electric Company. Pendent snap-switch. No. 1,015,999; Jan. 30; Sp. p. 6392; Gaz. vol. 174; p. 1112.

De Rool, Dick. (See Beintema and De Rool.)

De Veaux, Charles T. (See McPhayden and De Veaux.)

De Vilbiss, Allen, Jr., Toledo, Ohio, assignor to Toledo Computing Scale Company, Newark, N. J. Scale. No. 1,013,590; Jan. 2; Sp. p. 1071; Gaz. vol. 174; p. 173.

De Vilbiss Manufacturing Company, The. (See Hansen, Niels M., assignor.)

Dean, Charles B. (See Dearborn, Richard J., assignor.)

Dean, Harry. (See Turner and Dean.)

Dean, James H., Chicago, Ill., assignor, by mesne assignments, to Empire Voting Machine Company. Voting-machine. No. 1,013,646; Jan. 2; Sp. p. 1207; Gaz. vol. 174; p. 193.

Dean, William W., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone system. No. 1,013,865; Jan. 9; Sp. p. 1726; Gaz. vol. 174; p. 298.

Dearborn, Richard J., Beverly, assignor of one-half to C. B. Dean, Boston, Mass. Knife-sharpener. No. 1,015,148; Jan. 16; Sp. p. 4549; Gaz. vol. 174; p. 767.

Deats, William, Yonkers, N. Y., assignor to Automatic Packing and Labeling Company, Durham, N. C. Automatic weighing mechanism. No. 1,013,136; Jan. 2; Sp. p. 89; Gaz. vol. 174; p. 16.

Debas, Paul, Savoie, assignor to Société des Carbures Metalliques, Paris, France. Alloy. No. 1,014,642; Jan. 16; Sp. p. 3460; Gaz. vol. 174; p. 595.

Decker, Alonzo G., Orangeville, Md., assignor to International Taxameter Company of America, New York, N. Y. Fare-indicator. No. 1,013,279; Jan. 2; Sp. p. 413; Gaz. vol. 174; p. 67.

Decker, Arthur, *et al.* (See Troxler, Gustavus, assignor.)

Dee, David G., assignor to Denio General Electric Company, Rochester, N. Y. Fire-alarm system. No. 1,015,789; Jan. 30; Sp. p. 5944; Gaz. vol. 174; p. 1040.

Deegan, Edward J., New York, N. Y. Mechanism suitable for use at or as part of a damper-regulating apparatus. (Reissue.) No. 13,346; Jan. 2; Sp. p. 1690; Gaz. vol. 174; p. 267.

Defiance Pressed Steel Company, The. (See Klenk, Gottlieb, assignor.)

Degener, Gustave O., assignor to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,013,378; Jan. 2; Sp. p. 638; Gaz. vol. 174; p. 101.

Degeorgis Gaston E. E., St.-Denis, Seine, France. Means for protecting water-gage tubes of steam-boilers. No. 1,014,456; Jan. 9; Sp. p. 3027; Gaz. vol. 174; p. 502.

Del Collado, Francisco. (See Yuste and Del Collado.)

Delahanty, John J. (See Smith, Martin V., assignor.)

Dellwik-Fleischer Wassergas-Gesellschaft m. b. H. (See Dolensky, Eugen, assignor.)

Deluca, Joseph, *et al.* (See Holmes, Gwyllym R., assignor.)

Denio General Electric Company. (See Dee, David G., assignor.)

Denker, Charles T., Chicago, Ill. Exhaust-valve mechanism. No. 1,013,867; Jan. 9; Sp. p. 1734; Gaz. vol. 174; p. 299.

Denmead, John W., Akron, Ohio. Dipping-machine. No. 1,015,998; Jan. 30; Sp. p. 6389; Gaz. vol. 174; p. 1111.

Dennis, Benjamin A., assignor to T. A. McGrath, Providence, R. I. Vehicle-wheel. No. 1,014,131; Jan. 9; Sp. p. 2326; Gaz. vol. 174; p. 388.

Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Front-wheeled truck for vehicles. No. 1,014,209; Jan. 9; Sp. p. 2474; Gaz. vol. 174; p. 416.

Densmore, Floyde, Haines, Alaska. Rail-joint. No. 1,014,605; Jan. 16; Sp. p. 3579; Gaz. vol. 174; p. 612.

Dental Manufacturing Company, The. (See Rowse, John A., assignor.)

Denver Quartz Mill and Crusher Company, The. (See Jennison, Samuel S., assignor.)

Dern, Jasper L., Philadelphia, Pa. Confectionery-cutting machine. No. 1,015,790; Jan. 30; Sp. p. 5947; Gaz. vol. 174; p. 1040.

Derschmidt, Frank E., Ankeny, Iowa. Miner's pick. No. 1,014,575; Jan. 9; Sp. p. 3237; Gaz. vol. 174; p. 539.

Detmer, Martin J., *et al.* (See Bader, Louis, assignor.)

Detroit Motorcycle Mfg. Co. (See Breed, George W., assignor.)

Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), The. (See Sussmann, Heinrich, assignor.)

Deutsche Telephonwerke G. m. b. H. (See Settegast, Bernhard, assignor.)

Deutscher, Herman H., Carrollton, Mo. Farm-gate. No. 1,013,140; Jan. 2; Sp. p. 99; Gaz. vol. 174; p. 18.

Devero, Charles A., Springfield, Ill., assignor to The Keokuk Hydraulic Tire Setter Company. Tire-setter. No. 1,016,217; Jan. 30; Sp. p. 6822; Gaz. vol. 174; p. 1186.

Devney, Raymond S., Glasgow, Ky. Churn. No. 1,016,218; Jan. 30; Sp. p. 6824; Gaz. vol. 174; p. 1186.

Diamand, Bernard, Idaweiche, Oberschlesien, Germany. Tightening casks, barrels, or the like. No. 1,013,137; Jan. 2; Sp. p. 93; Gaz. vol. 174; p. 17.

Diamond Match Company, The. (See Wright, Jacob P., assignor.

Dickerman, William C. (See Handy, Levin G., assignor.)

Dickinson, William N., Jr., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current electric motor. No. 1,014,210; Jan. 9; Sp. p. 2475; Gaz. vol. 174; p. 416.

Dickson, Alexander, Dublin, Ireland. Treatment and utilization of sewage and distillery or brewery wash or waste. No. 1,015,302; Jan. 23; Sp. p. 4882; Gaz. vol. 174; p. 845.

Dillinger, William, Wessington Springs, S. D. Railway-tie and fastener. No. 1,013,138; Jan. 2; Sp. p. 94; Gaz. vol. 174; p. 17.

Dillon, Charles A., assignor to The United Electric Company, Canton, Ohio. Vacuum-cleaner. (Reissue.) No. 13,352; Jan. 9; Sp. p. 3410; Gaz. vol. 174; p. 563.

Dillon, Robert J., Killaloe, Ontario, Canada. Cattle-guard. No. 1,014,696; Jan. 16; Sp. p. 3580; Gaz. vol. 174; p. 612.

Dills, Philip L., Blairsville, Ga. Hook. No. 1,015,149; Jan. 16; Sp. p. 4550; Gaz. vol. 174; p. 767.

Dineen, John, Chicago, Ill. Attachment for fishing-rods. No. 1,015,009; Jan. 16; Sp. p. 4287; Gaz. vol. 174; p. 720.

Dinkins, John M., and F. B. Hays, assignors of fifty-three and one-third one-hundredths to W. L. Taylor, Indianapolis, Ind. Magneto. No. 1,014,622; Jan. 9; Sp. p. 3360; Gaz. vol. 174; p. 556.

Dinklage, August J., East Orange, N. J. Anticreeping device for rails. No. 1,015,791; Jan. 30; Sp. p. 5949; Gaz. vol. 174; p. 1041.

Diplock, Bramah J., Wheatsheaf Wharf, Fulham, England. Road-vehicle. No. 1,014,132; Jan. 9; Sp. p. 2327; Gaz. vol. 174; p. 388.

Dippert, Alfred, Detroit, Mich., assignor to C. W. Dippert, Buffalo, N. Y. Radiator for automobiles and the like. No. 1,014,816; Jan. 16; Sp. p. 3839; Gaz. vol. 174; p. 653.

Dippert, Charles W. (See Dippert, Alfred, assignor.)

Dister, Joseph, Hamilton, Ohio, assignor to American Can Company, New York, N. Y. Crated washboilers. No. 1,016,380; Jan. 23; Sp. p. 5059; Gaz. vol. 174; p. 872.

Dittlinger, Alphons N., St. Louis, Mo. Rotary gasolene-engine. No. 1,013,139; Jan. 2; Sp. p. 96; Gaz. vol. 174; p. 17.

Dixon, Brandt V. B., New Orleans, La. Hinge. No. 1,016,000; Jan. 30; Sp. p. 6394; Gaz. vol. 174; p. 1112.

Dobbertin, Louis, Lake Charles, La. Flying-machine. No. 1,015,150; Jan. 16; Sp. p. 4551; Gaz. vol. 174; p. 768.

Dock, Herman, Westerly, R. I., assignor, by mesne assignments, to A. A. Whitman, New York, N. Y. Piston. No. 1,014,052; Jan. 9; Sp. p. 2162; Gaz. vol. 174; p. 361.

Dodge, Merton L., Olympia, assignor to Print Check Co., Seattle, Wash. Bank-check-printing machine. No. 1,014,954; Jan. 16; Sp. p. 4168; Gaz. vol. 174; p. 701.

Dodge, Zenas U. (See Gainer, Edward E., assignor.)

Doerr, Harry E., assignor to Scullin-Gallagher Iron & Steel Company, St. Louis, Mo. Four-wheel truck. No. 1,015,010; Jan. 16; Sp. p. 4289; Gaz. vol. 174; p. 721.

Dolben, William L., Chicago, Ill. Hydrogen-gas generator. No. 1,015,875; Jan. 30; Sp. p. 6121; Gaz. vol. 174; p. 1067.

Dolensky, Eugen, assignor to Corporation of Dellwik-Fleischer Wassergas-Gesellschaft m. b. H., Frankfort-on-the-Main, Germany. Coupling for pipes and the like. No. 1,014,053; Jan. 9; Sp. p. 2163; Gaz. vol. 174; p. 361.

Doll, Adolph. (See Avisus and Doll.)

Domestic Appliances Company. (See Flynt, Louis W. G., assignor.)

Domestic Sewing Machine Company. (See Davis, Stephen A., assignor.)

Donahey, George S., Pittsburg, Kans. Producing fire and water proof articles. No. 1,015,426; Jan. 23; Sp. p. 5163; Gaz. vol. 174; p. 887.

Donald, Alexander M., Oberon, Manitoba, Canada. Adjustable weed-hook for plows and cultivators. No. 1,015,756; Jan. 23; Sp. p. 5871; Gaz. vol. 174; p. 1001.

Donath, Otto A., Sedalia, Mo. Valve-gear. No. 1,015,792; Jan. 30; Sp. p. 5951; Gaz. vol. 174; p. 1041.

Doner, Martin J., assignor of one-third to C. G. Gibson and one-third to C. F. Dynes, Chicago, Ill. Cornerbead. No. 1,015,881; Jan. 23; Sp. p. 5060; Gaz. vol. 174; p. 873.

Donnelly, John J., Denver, Colo. Aerial vessel. No. 1,014,643; Jan. 16; Sp. p. 3461; Gaz. vol. 174; p. 595.

Donovan, Herbert T., West Webster, N. Y. Paring-machine. No. 1,013,280; Jan. 2; Sp. p. 414; Gaz. vol. 174; p. 67.

Doolittle, James E., assignor to Birdsey, Somers Company, Bridgeport, Conn. Front-clasp cover and stay-pocket for corsets. No. 1,014,697; Jan. 16; Sp. p. 3581; Gaz. vol. 174; p. 613.

Doredant, Theodore C., New Orleans, La. Attachment for cans. No. 1,013,750; Jan. 2; Sp. p. 1459; Gaz. vol. 174; p. 230.

Dormandy, Garry J., Troy, N. Y., assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-machine. No. 1,015,011; Jan. 16; Sp. p. 4290; Gaz. vol. 174; p. 721.

Dorn, George, assignor to C. T. Wilt, Chicago, Ill. Suspension-fixture device for wardrobe-trunks. No. 1,015,547; Jan. 23; Sp. p. 5417; Gaz. vol. 174; p. 928.

Dorneth, Julius, assignor to Typograph G. m. b. H., Berlin, Germany. Matrix-setting and line-casting machine. No. 1,015,479; Jan. 23; Sp. p. 5288; Gaz. vol. 174; p. 905.

Dorsey, Arthur A., Fulton, Kans. Corn-harvester. No. 1,015,942; Jan. 30; Sp. p. 6268; Gaz. vol. 174; p. 1091.

Dorsey, James C. and W. W., assignors of one-fourth to R. Baublits and one-fourth to M. F. Loub, Las Animas, Colo. Intercepting-chute. No. 1,015,480; Jan. 23; Sp. p. 5289; Gaz. vol. 174; p. 906.

Dorsey, John F. (See Clark and Dorsey.)

Dorsey, Walter W. (See Dorsey, James C. and W. W.)

Dosselman, Gustave, and P. Neymann, Chicago, Ill., assignors, by mesne assignments, to Chadeloid Chemical Company, New York, N. Y. Composition for removing surface-finishes. No. 1,014,211; Jan. 9; Sp. p. 2479; Gaz. vol. 174; p. 417.

Doubet, Sylvester, assignor to Wantling Mfg. Co., Peoria, Ill. Drill. No. 1,013,281; Jan. 2; Sp. p. 419; Gaz. vol. 174; p. 67.

Double, Edward, and A. Craig, Los Angeles, Cal. Apparatus for elevating casings. No. 1,014,955; Jan. 16; Sp. p. 4171; Gaz. vol. 174; p. 701.

Dougherty, Thomas F., New York, N. Y. Balcony for fire-ladders. No. 1,013,751; Jan. 2; Sp. p. 1460; Gaz. vol. 174; p. 231.

Dover, Hannah M. (See Starn, George E., assignor.)

Dow Chemical Company, The. (See Barstow, Edwin O., assignor.)

Dow, James L., Manhattan, Kans. Writing-desk. No. 1,013,868; Jan. 9; Sp. p. 1737; Gaz. vol. 174; p. 300.

Drahtpapier G. m. b. H. (See Gueffroy, Hermann, assignor.)

Draper Company. (See Cunniff, Edward A., assignor.)

Draper Company. (See Northrop, Jonas, assignor.)

Draper Company. (See Rhoades, Alonzo E., assignor.)

Draper Company. (See Spencer, William H., assignor.)

Draper Company. (See Stimpson and Rhoades, assignors.)

Drauliette, Edmond, Paris, France. Variable differential speed-gear. No. 1,015,481; Jan. 23; Sp. p. 5291; Gaz. vol. 174; p. 907.

Drubel, Gustav. (See Beausejour and Drubel.)

Drury, George P., *et al.* (See Drury, William H., assignor.)

Drury, William C. (See Drury, William H., assignor.)

Drury, William H., assignor to W. C. Drury, Waltham, Mass. Leather yarn and leather-yarn fabric. No. 1,014,623; Jan. 9; Sp. p. 3364; Gaz. vol. 174; p. 557.

Drury, William H., assignor to J. S. Stearns and G. P. Drury, Waltham, Mass. Lubricating-packing. No. 1,015,727; Jan. 23; Sp. p. 5809; Gaz. vol. 174; p. 991.

Drzymalla, Theodor, Magdeburg, Germany. Two-roll drying apparatus for pulp-like paste. No. 1,014,956; Jan. 16; Sp. p. 4173; Gaz. vol. 174; p. 702.

Du Brul, Davila S. (See Du Brul, Napoleon and D. S.)

Du Brul, Davila S., assignor to The Miller, Du Brul & Peters Mfg. Co., Cincinnati, Ohio. Cigar-cutter. No. 1,014,576; Jan. 9; Sp. p. 3239; Gaz. vol. 174; p. 539.

Du Brul, Napoleon, Cincinnati, Ohio. Tobacco-cutting machine. No. 1,015,428; Jan. 23; Sp. p. 5166; Gaz. vol. 174; p. 888.

Du Brul, Napoleon and D. S., Cincinnati, Ohio. Variable-speed pulley. No. 1,015,427; Jan. 23; Sp. p. 5164; Gaz. vol. 174; p. 887.

Du Mouchel, Samuel W., Kalamazoo, Mich. Combination-tool. No 1,015,877; Jan. 30; Sp. p. 6125; Gaz. vol. 174; p. 1069.

Du Pont, Francis I., Wilmington, Del. Liquid ore separation. No. 1,014,624; Jan. 9; Sp. p. 3367; Gaz. vol. 174; p. 557.

Du Pont, Francis I., Wilmington, Del. Explosive projectile. No. 1,015,943; Jan. 30; Sp. p. 6270; Gaz. vol. 174; p. 1091.

Du Pont, Francis I., Wilmington, Del. Explosive projectile. No. 1,015,944; Jan. 30; Sp. p. 6271; Gaz. vol. 174; p. 1092.

Du Pont, Francis I., Wilmington, Del. Explosive projectile. No. 1,015,945; Jan. 30; Sp. p. 6274; Gaz. vol. 174; p. 1092.

Du Roth, John, Johnstown, Pa. Truck. No. 1,015,152; Jan. 16; Sp. p. 4559; Gaz. vol. 174; p. 768.

Du Val, James E., assignor of one-half to E. A. Lee, Bowie, Tex. Electric switch. No. 1,013,990; Jan. 9; Sp. p. 2016; Gaz. vol. 174; p. 341.

Dubied & Cie., Edouard. (See Dubied, Edouard, assignor.)

Dubied, Edouard, assignor to E. Dubied & Cie., Couvet, Switzerland. Flat-bed knitting-machine. No. 1,015,668; Jan. 23; Sp. p. 5683; Gaz. vol. 174; p. 971.

Dubish, Mike. (See Wajda, Floryan, assignor.)

Dubsky, Arthur, Vienna, Austria-Hungary. Pyrophoric pocket-lighter. No. 1,015,876; Jan. 30; Sp. p. 6123; Gaz. vol. 174; p. 1068.

Ducker, Orlando, Washington, D. C. Starting mechanism for explosive-engines. No. 1,015,482; Jan. 23; Sp. p. 5293; Gaz. vol. 174; p. 907.

Ducker, Orlando, Washington, D. C., assignor of one-fourth to F. E. Lykes, Tampa, Fla. Carbureter. No. 1,014,133; Jan. 9; Sp. p. 2329; Gaz. vol. 174; p. 389.

Dunal, Josef, Racine, Wis. Lock. No. 1,014,577; Jan. 9; Sp. p. 3240; Gaz. vol. 174; p. 540.

Duncan, Hugh, Langside, Glasgow, Scotland. Vehicle-wheel. No. 1,013,282; Jan. 2; Sp. p. 421; Gaz. vol. 174; p. 68.

Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing device. No. 1,015,757; Jan. 23; Sp. p. 5873; Gaz. vol. 174; p. 1001.

Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing device. No. 1,015,758; Jan. 23; Sp. p. 5876; Gaz. vol. 174; p. 1002.

Dunham, Berman S., Detroit, Mich. Railway-crossing. No. 1,015,151; Jan. 16; Sp. p. 4555; Gaz. vol. 174; p. 768.

Dunham, Ernest W., Topeka, Kans. Acetylene-gas generator. No. 1,013,752; Jan. 2; Sp. p. 1462; Gaz. vol. 174; p. 231.

Dunham, Franklin H., Santa Paula, Cal. Method of and apparatus for treating asphaltic oils for the production of asphalt and the recovery of lighter products. No. 1,013,283; Jan. 2; Sp. p. 423; Gaz. vol. 174; p. 68.

Dunham, George C., Cincinnati, Ohio. Washing-machine pounder. No. 1,014,578; Jan. 9; Sp. p. 3242; Gaz. vol. 174; p. 540.

Dunkle, Samuel K., assignor to Safety Foot Guard & Railway Appliance Company, Wheeling, W. Va. Foot-guard. No. 1,014,286; Jan. 9; Sp. p. 2655; Gaz. vol. 174; p. 443.

Dunlap, John A. (See Thurman and Dunlap.)

Dunn, Gano, East Orange, assignor to Crocker-Wheeler Company, Ampere, N. J. Squirrel-cage rotor for electric motors. No. 1,013,753; Jan. 2; Sp. p. 1464; Gaz. vol. 174; p. 231.

Dunn, William R., Easton, Pa. Apparatus for heating furnaces or kilns. No. 1,013,379; Jan. 2; Sp. p. 643; Gaz. vol. 174; p. 102.

Dunn, William R., Easton, Pa. Electrically-controlled bag filling and weighing device. No. 1,013,380; Jan. 2; Sp. p. 645; Gaz. vol. 174; p. 102.

Dunn, William R., Easton, Pa. Bag-holding device. No. 1,013,381; Jan. 2; Sp. p. 647; Gaz. vol. 174; p. 102.

Duplex Envelope & Printing Company. (See Stevens Willis F., assignor.)

Durafort Company, The. (See Bijur and Joy, assignors.)

Duston, Ernest W., assignor to The Blake and Johnson Company, Waterbury, Conn. Cutting-off and carrying mechanism for heading-machines. No. 1,015,382; Jan. 23; Sp. p. 5061; Gaz. vol. 174; p. 873.

Dutcher, Frank, Versailles, Pa. Fiber-case railway signal-torpedo. No. 1,015,153; Jan. 16; Sp. p. 4560; Gaz. vol. 174; p. 769.

Dyar, Perlie A. (See Fellows, Charles F., assignor.)

Dye, Joel J., Atlanta, Ga. Apparatus for absorbing hydrofluoric acid. No. 1,016,219; Jan. 30; Sp. p. 6826; Gaz. vol. 174; p. 1186.

Dyer, Jefferson B., and J. D. Hobbs, Hanson, Okla. Churn. No. 1,015,383; Jan. 23; Sp. p. 5064; Gaz. vol. 174; p. 873.

Dymock, John, Stockport, England. Machine for the manufacture of twine. No. 1,015,154; Jan. 16; Sp. p. 4562; Gaz. vol. 174; p. 769.

Dynes, Charles F., *et al.* (See Doner, Martin J., assignor.)

E. Clemens Horst Company. (See Miller, George E., assignor.)

E. A. Mallory & Sons. (See Starr, John H., assignor.)

E. I. du Pont de Nemours Powder Company. (See Maxim, Hudson, assignor.)

E. I. du Pont de Nemours Powder Company. (See Sokolowski, Ernst, assignor.)

E. J. Brooks & Co. (See Brooks, Winfred M., assignor.)

Eagan, Eugene R., Hubbard, Iowa. Soil-pulverizer. No. 1,015,303; Jan. 23; Sp. p. 4883; Gaz. vol. 174; p. 846.

Eagle Square Manufacturing Company. (See Cole, Llewellyn W., assignor.)

Earnshaw, Joseph C., Germantown, Pa. Door-check. No. 1,014,817; Jan. 16; Sp. p. 3841; Gaz. vol. 174; p. 653.

East, Joseph, Colfax, Wash. Disk harrow. No. 1,013,382; Jan. 2; Sp. p. 649; Gaz. vol. 174; p. 103.

Eastern Sales Book Company. (See Carney, Edward, assignor.)

Eastman, A. F. (See Hall, Benjamin K., assignor.)

Eastwood, Arthur C., Cleveland, Ohio. Lifting-magnet. No. 1,015,728; Jan. 23; Sp. p. 5812; Gaz. vol. 174; p. 991.

Eastwood, Arthur C., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric controller. No. 1,013,754; Jan. 2; Sp. p. 1466; Gaz. vol. 174; p. 232.

Eastwood, Arthur C., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric controller. No. 1,014,625; Jan. 9; Sp. p. 3369; Gaz. vol. 174; p. 557.

Eastwood, James, assignor to The Benjamin Eastwood Company, Paterson, N. J. Gearing. No. 1,014,957; Jan. 16; Sp. p. 4175; Gaz. vol. 174; p. 702.

Eaton, Emery W., assignor to Barrett & Lawrence, Incorporated, Philadelphia, Pa. Hydrochronograph. No. 1,014,134; Jan. 9; Sp. p. 2330; Gaz. vol. 174; p. 389.

Ebbinghaus, Ernst. (See Eifler, Johan G., assignor.)

Ebner, Hermann J., Paige, Tex. Milk-strainer and support therefor. No. 1,015,946; Jan. 30; Sp. p. 6278; Gaz. vol. 174; p. 1093.

Eddins, Edward R. (See Sparks and Eddins.)

Edgington, George F., Jeffersonville, Ind. Attachment for wagon-bodies. No. 1,014,579; Jan. 9; Sp. p. 3244; Gaz. vol. 174; p. 541.

Edison, Karl, assignor of one-half to J. B. Moschenross, New York, N. Y. Electric lamp. No. 1,014,958; Jan. 16; Sp. p. 4176; Gaz. vol. 174; p. 703.

Edison, Thomas A., Llewellyn Park, Orange, N. J. Bearing. No. 1,013,869; Jan. 9; Sp. p. 1738; Gaz. vol. 174; p. 300.

Edison, Thomas A., Llewellyn Park, Orange, N. J. Giant rolls. No. 1,014,818; Jan. 16; Sp. p. 3842; Gaz. vol. 174; p. 653.

Edmund Boehm & Co. (See Rein, Robert, assignor.)

Edmunds & Jones Mfg. Co. (See Jones, William T., assignor.)

Edwards, James B., assignor of one-half to Rowland & Company, Columbia, S. C. Locomotive driving and truck box. No. 1,014,580; Jan. 9; Sp. p. 3246; Gaz. vol. 174; p. 541.

Edwards, Oliver C., Jr., Troy, N. Y. Caisson. No. 1,013,870; Jan. 9; Sp. p. 1738; Gaz. vol. 174; p. 300.

Edwards, Oliver C., Jr., Troy, N. Y. Caisson. No. 1,014,626; Jan. 9; Sp. p. 3372; Gaz. vol. 174; p. 558.

Edwards, William C., Jr., Kansas City, Mo. Means and apparatus for concrete construction. No. 1,013,591; Jan. 2; Sp. p. 1077; Gaz. vol. 174; p. 174.

Edwards, William C., Jr., Kansas City, Mo. Reinforced concrete structure. No. 1,013,592; Jan. 2; Sp. p. 1081; Gaz. vol. 174; p. 174.

Edwin B. Stimpson Company. (See Stimpson, Edwin B., assignor.)

Egler, Joseph, Chicago, Ill. Refrigerator. No. 1,013,478; Jan. 2; Sp. p. 848; Gaz. vol. 174; p. 135.

Egry Register Company, The. (See Nickol and Stern, assignors.)

Ehmling, Alexander, Philadelphia, Pa. Stationery-box. No. 1,014,581; Jan. 9; Sp. p. 3247; Gaz. vol. 174; p. 541.

Ehrmann, Adolph, Eureka, S. D. Submarine boat. No. 1,014,959; Jan. 16; Sp. p. 4178; Gaz. vol. 174; p. 703.

Eichelkraut, Walter, Zehlendorf, near Berlin, Germany. Closet. No. 1,016,001; Jan. 30; Sp. p. 6396; Gaz. vol. 174; p. 1113.

Eichengrün, Arthur, Berlin, Germany. Cellulose acetate composition and making the same. No. 1,015,155; Jan. 16; Sp. p. 4562; Gaz. vol. 174; p. 769.

Eichengrün, Arthur, Berlin, Germany. Plastic similar to celluloid and manufacturing the same. No. 1,015,156; Jan. 16; Sp. p. 4564; Gaz. vol. 174; p. 769.

Eicher, William J., Perryopolis, Pa. Penholder. No. 1,015,157; Jan. 16; Sp. p. 4567; Gaz. vol. 174; p. 770.

Eichholz, Joseph H., St. Louis, Mo. Ball-bearing caster. No. 1,014,582; Jan. 9; Sp. p. 3248; Gaz. vol. 174; p. 542.

Eifler, Johan G., assignor of one-third to E. Ebbinghaus, New York, N. Y. Fireproof floor and ceiling construction. No. 1,013,537; Jan. 2; Sp. p. 979; Gaz. vol. 174; p. 157.

Eisenhardt, William J., Baltimore, Md. Straw-holder. No. 1,014,866; Jan. 16; Sp. p. 3972; Gaz. vol. 174; p. 672.

Eisenhart, William H., York, Pa. Latch-bolt lock. No. 1,014,583; Jan. 9; Sp. p. 3249; Gaz. vol. 174; p. 542.

Eklund, Emil, Pennock, Minn. Whiffletree-detaching device for vehicle-thills. No. 1,014,584; Jan. 9; Sp. p. 3250; Gaz. vol. 174; p. 542.

Ekron, Robert. (See Godfrey, Ekron, and Svebilius.)

Elderkin, John, Philadelphia, Pa. Channel-flap opener and moistener. No. 1,015,729; Jan. 23; Sp. p. 5814; Gaz. vol. 174; p. 991.

Eldridge, Willard C., Chicago, Ill. Car-door-operating device. No. 1,015,793; Jan. 30; Sp. p. 5953; Gaz. vol. 174; p. 1041.

Electric Controller and Manufacturing Company, The. (See Eastwood, Arthur C., assignor.)

Electric Goods Manufacturing Company. (See Lincoln, Edwin S., assignor.)

Electric Storage Battery Company, The. (See Bijur, Joseph, assignor.)

Electric Storage Battery Company, The. (See Rodman, Hugh, assignor.)

Electric Weighing Company. (See Messiter, Edwin H., assignor.)

Elkins, David H. (See Taylor and Elkins.)

Ellersick, Bernard C., St. Louis, Mo. Music-leaf turner. No. 1,013,284; Jan. 2; Sp. p. 425; Gaz. vol. 174; p. 69.

Elliott-Fisher Company. (See Parmly, Eleazer, Jr., assignor.)

Elliott, John C. (See Moore and Elliott.)

Elliott, Ralph W., and J. Jorgenson, Fruitvale, Cal. Weighing-scale. No. 1,013,479; Jan. 2; Sp. p. 849; Gaz. vol. 174; p. 136.

Ellis, Alfred J., and C. E. Nellis, Woodcliff-on-Hudson, N. J., assignors to A. J. Ellis, Inc. Bending-dies. No. 1,013,871; Jan. 9; Sp. p. 1753; Gaz. vol. 174; p. 300.

Ellis, Carleton, Larchmont, N. Y., assignor to Ellis-Foster Company. Floor-oil. No. 1,013,538; Jan. 2; Sp. p. 950; Gaz. vol. 174; p. 157.

Ellis, Carleton, Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Finish-removing process. No. 1,014,752; Jan. 16; Sp. p. 3696; Gaz. vol. 174; p. 631.

Ellis-Foster Company. (See Ellis, Carleton, assignor.)

Ellis, Robert E., Riddrie, Glasgow, Scotland. Resilient wheel. No. 1,014,644; Jan. 16; Sp. p. 3464; Gaz. vol. 174; p. 595.

Elmore, Harry V., Dayton, Ohio. Switch-throwing mechanism. No. 1,015,669; Jan. 23; Sp. p. 5689; Gaz. vol. 174; p. 972.

Elsasser, Carl, Wakefield, Kans. Manure-loader. No. 1,013,755; Jan. 2; Sp. p. 1471; Gaz. vol. 174; p. 232.

Else, Frank W., Oskaloosa, Iowa. Combination school desk and seat. No. 1,013,141; Jan. 2; Sp. p. 101; Gaz. vol. 174; p. 18.

Elson, Irving. (See Polsen and Elson.)

Elwell, William R., assignor to Peirce, Fisher & Clapp, Chicago, Ill. Lamp attachment for automobiles or the like. No. 1,015,483; Jan. 23; Sp. p. 5294; Gaz. vol. 174; p. 907.

Emerson Electric Mfg. Co. (See Schnaus, Charles J., assignor.)

Emerson Typewriter Co., The. (See Pfau, Max, assignor.)

Emerson Typewriter Company. (See Raber, Joseph, assignor.)

Emery, Frederick H., Scranton, Pa. Slate-picker. No. 1,013,647; Jan. 2; Sp. p. 1227; Gaz. vol. 174; p. 193.

Emery, Frederick H., Scranton, Pa. Shaker-picker. No. 1,013,648; Jan. 2; Sp. p. 1228; Gaz. vol. 174; p. 194.

Emil Weissbrod & Sons. (See Walsh, Harriet M., assignor.)

Emmert, Charles S., Chicago, Ill. Binding-machine. No. 1,014,212; Jan. 9; Sp. p. 2481; Gaz. vol. 174; p. 417.

Empire Voting Machine Company. (See Dean, James H., assignor.)

Engberg, Otto, Detroit, Minn. Faucet. No. 1,013,142; Jan. 2; Sp. p. 102; Gaz. vol. 174; p. 18.

English, John C. (See Johnson and English.)

Ennis, Della M. (See Weaver and Ennis.)

Enright, John, Cleveland, Ohio. Fire-alarm. No. 1,015,878; Jan. 30; Sp. p. 6127; Gaz. vol. 174; p. 1069.

Ensley, Benjamin F. and C. E., Moulton, Iowa, assignors of one-half to W. S. Farrar, Lincoln, Nebr., and L. M. Clark, Moulton, Iowa. Bracket for automobile-lamps. No. 1,015,670; Jan. 23; Sp. p. 5690; Gaz. vol. 174; p. 972.

Ensley, Clarence E. (See Ensley, Benjamin F. and C. E.)

Enterprise Manufacturing Company of Pennsylvania, The. (See Yeager, Herbert W., assignor.)

Eppler, Andrew, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Thread-waxing device for sewing-machines. No. 1,015,304; Jan. 23; Sp. p. 4884; Gaz. vol. 174; p. 846.

Epting, Nora L., *et al.* (See Luster, Eugene A., assignor.)

Equilibrator Company. (See Fuerth, William G., assignor.)

Erickson, Frederic W., New York, N. Y. Electric-conductor distribution. No. 1,015,484; Jan. 23; Sp. p. 5296; Gaz. vol. 174; p. 908.

Ericson, Charles J., Salt Lake City, Utah. Locking mechanism for doors. No. 1,014,960; Jan. 16; Sp. p. 4179; Gaz. vol. 174; p. 703.

Erskine, Bernard G., assignor to Novelty Incandescent Lamp Company, Emporium, Pa. Incandescent-electric-lamp leak-tester. No. 1,014,287; Jan. 9; Sp. p. 2657; Gaz. vol. 174; p. 443.

Erste Triester Reisschael-Fabriks-Actien-Gesellschaft. (See Walland, Henrich, assignor.)

Escher, Josef, Indianapolis, Ind. Combined curtain and shade support. No. 1,015,879; Jan. 30; Sp. p. 6120; Gaz. vol. 174; p. 1069.

Esser, Bertram J., Pilot Grove, Mo. Gate. No. 1,014,585; Jan. 9; Sp. p. 3252; Gaz. vol. 174; p. 543.

Essex Manufacturing Company. (See Foster, Roion W., assignor.)

Esty Sprinkler Company. (See Esty, William, assignor.) (Reissue.)

Esty, William, Laconia, N. H., assignor to Esty Sprinkler Company. Automatic fire-extinguisher. (Reissue.) No. 13,347; Jan. 2; Sp. p. 1693; Gaz. vol. 174; p. 268.

Eureka Fire Hose Manufacturing Company. (See Banta and Stowe, assignors.)

Eustis, Thomas E., *et al.* (See Thomas, George J., assignor.)

Evans, David J. (See Andresen, Herman P., assignor.)

Evans, Jacob C., Bellwood, Pa. Rail-tie. No. 1,015,671; Jan. 23; Sp. p. 5691; Gaz. vol. 174; p. 972.

Evans, John W. (See Warren, Thomas W., assignor.)

Evens, Leo E., Waterloo, Iowa. Railway freight-car. No. 1,016,220; Jan. 30; Sp. p. 6828; Gaz. vol. 174; p. 1187.

Excello Products Company. (See Jones, Lemuel I., assignor.)

Eyth, Lewis J., assignor of one-fourth to R. L. De Haven and one-fourth to W. J. Allison, Butler, Pa. Door and operating mechanism therefor. No. 1,015,158; Jan. 16; Sp. p. 4567; Gaz. vol. 174; p. 770.

Ezell, Francis L., Nashville, Tenn. Plow. No. 1,015,672; Jan. 23; Sp. p. 5692; Gaz. vol. 174; p. 972.

F. Wesel Manufacturing Company. (See Weston, Folke W., assignor.)

F. A. Hardy & Company. (See Pixley, Charles H., assignor.)

F. A. Hardy & Company. (See Rogers, George A., assignor.)

Fabry, Fraur C., Berlin, Germany, assignor to The National Cash Register Company, Dayton, Ohio. Columnar-displayer. No. 1,013,991; Jan. 9; Sp. p. 2016; Gaz. vol. 174; p. 341.

Faconeisen-Walzwerk L. Mannstaedt & Cie., Act. Ges. (See Buchholz, Theodor, assignor.)

Fader, Fenwick D., Vancouver, British Columbia, Canada. Meat-slicing-machine support. No. 1,013,756; Jan. 2; Sp. p. 1473; Gaz. vol. 174; p. 232.

Faerber, William, Chicago, Ill. Display-stand. No. 1,013,539; Jan. 2; Sp. p. 981; Gaz. vol. 174; p. 157.

Fahrney, William H., Chicago, Ill. Sheet-metal-bending machine. No. 1,015,429; Jan. 23; Sp. p. 5167; Gaz. vol. 174; p. 888.

Fairchild, Walter H., Chicago, Ill., assignor to The Sefton Manufacturing Company, Anderson, Ind. Paper wrapper. No. 1,013,143; Jan. 2; Sp. p. 104; Gaz. vol. 174; p. 19.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Berchelmann, Wilhelm, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Bergdolt, Wilhelm, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Taub and Hahl, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Zart, Arthur, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Maag, Rudolf, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Sohst, Otto, assignor.)

Farmer, James H., Jesse, Okla. Folding crate. No.

Fischer, Alex, Kensington, London, England. Sound-box

Fordyce, Edmond A., assignor, by mesne assignments, to

Frederick, Joseph M., assignor to Frederick-Ruggles Manu-

Farmer, James H., Jesse, Okla. Folding crate. No. 1,015,430; Jan. 23; Sp. p. 5169; Gaz. vol. 174; p. 889.
Farnum, Dwight, Denver, Colo., assignor of one-half to C. M. Tyler, Boston, Mass. Advertising device. No. 1,015,431; Jan. 23; Sp. p. 5171; Gaz. vol. 174; p. 889.
Farrar, Werter S., *et al.* (See Ensley, Benjamin F. and C. E., assignors.)
Farrell, William H., South Bethlehem, Pa. Caramel-mold. No. 1,016,130; Jan. 30; Sp. p. 6667; Gaz. vol. 174; p. 1159.
Faucette, Karl S., Portland, Oreg. Cutter-head. No. 1,013,540; Jan. 2; Sp. p. 982; Gaz. vol. 174; p. 157.
Faulkner, Herman, Salt Lake City, Utah. Photographic apparatus. No. 1,013,285; Jan. 2; Sp. p. 427; Gaz. vol. 174; p. 69.
Faulkner, Herman, Salt Lake City, Utah. Photographic apparatus. No. 1,013,286; Jan. 2; Sp. p. 440; Gaz. vol. 174; p. 69.
Faust, Casper, Oshkosh, Wis. Safety-gate for bridges. No. 1,015,880; Jan. 30; Sp. p. 6131; Gaz. vol. 174; p. 1070.
Fawkes, Frank G., Chicago, Ill. Advertising novelty. No. 1,014,961; Jan. 16; Sp. p. 4182; Gaz. vol. 174; p. 704.
Federal Electric Company, The. (See Goehst and Carpenter, assignors.)
Feeley, Frank G., assignor to Harmon Machine Company, Watertown, N. Y. Pulp-screen. No. 1,014,288; Jan. 9; Sp. p. 2961; Gaz. vol. 174; p. 444.
Feeney, Patterson G., Sanford, Me. Puzzle. No. 1,016,221; Jan. 30; Sp. p. 6829; Gaz. vol. 174; p. 1187.
Fehér, Mistress Leopold. (See Kriszt, John, assignor.)
Fellows, Allen R., Sioux Falls, S. D. Shock-absorbing hub. No. 1,014,135; Jan. 9; Sp. p. 2332; Gaz. vol. 174; p. 389.
Fellows, Allen R., Sioux Falls, S. D. Shock-absorbing hub. No. 1,014,136; Jan. 9; Sp. p. 2333; Gaz. vol. 174; p. 390.
Fellows, Allen R., Sioux Falls, S. D. Shock-absorbing hub. No. 1,014,137; Jan. 9; Sp. p. 2334; Gaz. vol. 174; p. 390.
Fellows, Charles F., West Chelmsford, assignor of one-half to P. A. Dyar, Boston, Mass. Fruit-picker. No. 1,013,144; Jan. 2; Sp. p. 105; Gaz. vol. 174; p. 19.
Fellows Direct Power Transmission Company. (See Fellows, Hugh W., assignor.)
Fellows, Hugh W., Los Angeles, Cal. Hoisting-gearing. No. 1,015,618; Jan. 23; Sp. p. 5573; Gaz. vol. 174; p. 955.
Fellows, Hugh W., assignor to Fellows Direct Power Transmission Company, Los Angeles, Cal. Variable-speed gearing. No. 1,015,617; Jan. 23; Sp. p. 5569; Gaz. vol. 174; p. 954.
Fellows, Thomas, Los Angeles, Cal. Concrete construction. No. 1,013,480; Jan. 2; Sp. p. 851; Gaz. vol. 174; p. 136.
Fels, Maurice. (See Sawyer and Fels.)
Fenlason, Orin C., Hoquiam, Wash. Machine for use in sorting veneer. No. 1,014,819; Jan. 16; Sp. p. 3847; Gaz. vol. 174; p. 654.
Fennel, Jacob W., Newburgh, N. Y. Letter-stamping machine. No. 1,013,383; Jan. 2; Sp. p. 651; Gaz. vol. 174; p. 103.
Fenner, George P., New London, Conn. Driving mechanism for inking-rollers. No. 1,015,012; Jan. 16; Sp. p. 4292; Gaz. vol. 174; p. 721.
Fentzloff, Wilhelm, Frankfort-on-the-Main, Germany. Deflectometer. No. 1,015,305; Jan. 23; Sp. p. 4888; Gaz. vol. 174; p. 846.
Ferranti, Sebastian Z. de, London, England. Spinning-machine. No. 1,013,872; Jan. 9; Sp. p. 1756; Gaz. vol. 174; p. 301.
Fessenden, Reginald A., Washington, D. C., assignor to National Electric Signaling Company, Pittsburgh, Pa. Means for the transmission of energy by electromagnetic waves. No. 1,015,881; Jan. 30; Sp. p. 6133; Gaz. vol. 174; p. 1070.
Fiedler, Carl, Chicago, Ill. Animal-trap. No. 1,015,794; Jan. 30; Sp. p. 5954; Gaz. vol. 174; p. 1042.
Fields, Cyrus G., Bucklin, Mo. Telephone-disconnector. No. 1,016,131; Jan. 30; Sp. p. 6670; Gaz. vol. 174; p. 1159.
Fields, James A. (See Gee and Fields.)
Finch, Charles M., assignor to Finch Jail Building & Metal Co., San Francisco, Cal. Jail-door-operating device. No. 1,013,481; Jan. 2; Sp. p. 852; Gaz. vol. 174; p. 136.
Finch Jail Building & Metal Co. (See Finch, Charles M., assignor.)
Finck, William C., Elizabeth, N. J., assignor to G. H. Benjamin, New York, N. Y. Apparatus for generating high temperatures. No. 1,013,593; Jan. 2; Sp. p. 1088; Gaz. vol. 174; p. 175.
Findahl, Lawrence E., Sheridan, Wyo. Valve. No. 1,015,159; Jan. 16; Sp. p. 4569; Gaz. vol. 174; p. 770.
Fink, Colin G., Schenectady, N. Y., assignor to General Electric Company. Reduction of silver ores. No. 1,013,931; Jan. 9; Sp. p. 1889; Gaz. vol. 174; p. 321.
Finsten, Victor, Toronto, Ontario, Canada. Garment-pocket. No. 1,013,757; Jan. 2; Sp. p. 1474; Gaz. vol. 174; p. 233.
Firman, William, Ottumwa, Iowa. Drilling-machine post. No. 1,015,160; Jan. 16; Sp. p. 4570; Gaz. vol. 174; p. 770.
Fischer, Alex, Kensington, London, England. Sound-box for talking-machines. No. 1,013,145; Jan. 2; Sp. p. 109; Gaz. vol. 174; p. 19.
Fischer, Alex, West Kensington, London, England. Talking-machine sound-box. No. 1,013,146; Jan. 2; Sp. p. 110; Gaz. vol. 174; p. 20.
Fischer, Herman O., Springfield, Mass. Wrapping-machine. No. 1,016,067; Jan. 30; Sp. p. 6547; Gaz. vol. 174; p. 1137.
Fisher, Abraham C., New York, N. Y., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,013,873; Jan. 9; Sp. p. 1759; Gaz. vol. 174; p. 301.
Fisher, Adolph C., Cedar Rapids, Iowa. Pegwood-sharpener. No. 1,016,132; Jan. 30; Sp. p. 6671; Gaz. vol. 174; p. 1159.
Fisher, Charles, San Francisco, Cal. Wrapper for skeins of thread and needles. No. 1,014,586; Jan. 9; Sp. p. 3253; Gaz. vol. 174; p. 543.
Fisher, Rudolph, and C. A. Young, Portland, Oreg. Bath-cabinet. No. 1,014,587; Jan. 9; Sp. p. 3256; Gaz. vol. 174; p. 543.
Fisher, William J., Sault Ste. Marie, Mich. Combined door-hanger and track. No. 1,015,161; Jan. 16; Sp. p. 4571; Gaz. vol. 174; p. 770.
Fitchburg Machine Works. (See Mills and Whitford, assignors.)
Fitzgerald, Daniel E., assignor of one-half to C. M. Taylor, Shawnee, Okla. Dry closet. No. 1,014,213; Jan. 9; Sp. p. 2483; Gaz. vol. 174; p. 417.
Fitzgerald, Edward A., Highwood, Ill. Electrical signaling device. No. 1,014,588; Jan. 9; Sp. p. 3258; Gaz. vol. 174; p. 544.
Fitzgerald, Melvin T., Rock Elm, Wis. Fence-post-driving machine. No. 1,015,947; Jan. 30; Sp. p 6279; Gaz. vol. 174; p. 1093.
Fitzsimmons, Thomas F., Brooklyn, N. Y. Gas-producer. No. 1,016,133; Jan. 30; Sp. p. 6673; Gaz. vol. 174; p. 1160.
Fladby, John B. (See Fladby, Ole A. and J. B.)
Fladby, Ole A. and J. B., Rutland, N. D. Buggy-evener clevis. No. 1,016,134; Jan. 30; Sp. p. 6676; Gaz. vol. 174; p. 1160.
Flanagan, Liberty K., and C. A. Miller, Moberly, Mo. Flash-light. No. 1,013,287; Jan. 2; Sp. p. 450; Gaz. vol. 174; p. 69.
Flattum, Albert L., Butler, S. D. Harrow. No. 1,015,548; Jan. 23; Sp. p. 5420; Gaz. vol. 174; p. 929.
Fleming, Herbert, assignor to Hardwick & Magee Company, Philadelphia, Pa. Card-punching machine. No. 1,015,619; Jan. 23; Sp. p. 5577; Gaz. vol. 174; p. 955.
Fleming, James R., Scranton, Pa. Axle-box. No. 1,014,214; Jan. 9; Sp. p. 2485; Gaz. vol. 174; p. 418.
Fleming, William A., New York, N. Y. Device for closing pipe ends. No. 1,013,932; Jan. 9; Sp. p. 1891; Gaz. vol. 174; p. 322.
Flentje, Ernst, Cambridge, Mass. Shock-absorber. No. 1,013,384; Jan. 2; Sp. p. 653; Gaz. vol. 174; p. 103.
Fletcher, George W., Mendon, Ill. Ringing and docking instrument. No. 1,015,162; Jan. 16; Sp. p. 4572; Gaz. vol. 174; p. 771.
Fleuss, Henry A., Thatcham, and R. H. Davis, London, England. Breathing appliance. No. 1,013,541; Jan. 2; Sp. p. 984; Gaz. vol. 174; p. 157.
Flynt, Louis W. G., assignor to Domestic Appliances Company, Rochester, N. Y. Vacuum cleaning apparatus. No. 1,013,147; Jan. 2; Sp. p. 112; Gaz. vol. 174; p. 20.
Flynt, Louis W. G., assignor to Q. W. and I. E. Booth, Rochester, N. Y. Skiving-machine. No. 1,015,882; Jan. 30; Sp. p. 6136; Gaz. vol. 174; p. 1071.
Foans, Andrew B., New York, N. Y. Combination can-opener and spout. No. 1,016,135; Jan. 30; Sp. p. 6677; Gaz. vol. 174; p. 1160.
Foersterling, Hans, Perth Amboy, N. J., assignor to Roessler and Hasslacher Chemical Company. Gas-generating plant. No. 1,015,549; Jan. 23; Sp. p. 5422; Gaz. vol. 174; p. 929.
Foersterling, Hans, Perth Amboy, N. J., assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Method of and apparatus for generating gas, steam, and power. No. 1,015,550; Jan. 23; Sp. p. 5423; Gaz. vol. 174; p. 929.
Folan, Peter, Clarksburg, W. Va. Music-leaf turner. No. 1,016,002; Jan. 30; Sp. p. 6397; Gaz. vol. 174; p. 1113.
Folk, Samuel E., Bryan, Ohio. Pump. No. 1,014,289; Jan. 9; Sp. p. 2603; Gaz. vol. 174; p. 444.
Fooks, Frederick E., Baltimore, Md. Device for cutting hair. No. 1,013,874; Jan. 9; Sp. p. 1760; Gaz. vol. 174; p. 301.
Forbes, William A., Butler, Ohio. Fodder binder and truck. No. 1,015,673; Jan. 23; Sp. p. 5603; Gaz. vol. 174; p. 973.
Force, David E., Jersey City, N. J. Combined music stand and holder and carrying-case for the same. No. 1,014,381; Jan. 9; Sp. p. 2883; Gaz. vol. 174; p. 477.
Forchheimer, Philipp, Gratz, Austria-Hungary, assignor to Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft, Berlin, Germany. Tank of large diameter. No. 1,014,054; Jan. 9; Sp. p. 2164; Gaz. vol. 174; p. 362.
Ford, Charles T., Washington, D. C. Cover for service-boxes. No. 1,014,138; Jan. 9; Sp. p. 2335; Gaz. vol. 174; p. 390.
Ford, Edwin H., Hartford City, Ind. Lamp. No. 1,013,542; Jan. 2; Sp. p. 986; Gaz. vol. 174; p. 158.

Fordyce, Edmond A., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass. Pneumatic-despatch-tube apparatus. No. 1,013,148; Jan. 2; Sp. p. 113; Gaz. vol. 174; p. 21.
Forest, Fernand, Sureanes, France. Internal-combustion engine. No. 1,015,948; Jan. 30; Sp. p. 6280; Gaz. vol. 174; p. 1093.
Fornander, Alfred, assignor to Dairy Oils Extracting Company, New York, N. Y. Apparatus for treating milk and other liquids. No. 1,013,594; Jan. 2; Sp. p. 1089; Gaz. vol. 174; p. 175.
Fornander, Alfred, assignor to Dairy Oils Extracting Company, New York, N. Y. Apparatus for treating milk and other liquids. No. 1,013,595; Jan. 2; Sp. p. 1091; Gaz. vol. 174; p. 175.
Forndran, John E., Rock Springs, Wyo. Ladder. No. 1,014,215; Jan. 9; Sp. p. 2487; Gaz. vol. 174; p. 418.
Forquer, Michael J., Greeley, Colo. Garment-display form. No. 1,013,875; Jan. 9; Sp. p. 1761; Gaz. vol. 174; p. 302.
Forrer, Joseph D., Pittsburgh, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Electric motor. No. 1,013,149; Jan. 2; Sp. p. 117; Gaz. vol. 174; p. 21.
Forsyth, William D., Youngstown, Ohio. Manufacturing brake-shoe keys. No. 1,016,068; Jan. 30; Sp. p. 6555; Gaz. vol. 174; p. 1138.
Forsyth, William D., Youngstown, Ohio, assignor of one-half to A. M. Neeper, Pittsburgh, Pa. Making expanded metal. No. 1,015,264; Jan. 16; Sp. p. 4788; Gaz. vol. 174; p. 805.
Fortescue, Charles L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Transformer. No. 1,013,150; Jan. 2; Sp. p. 118; Gaz. vol. 174; p. 21.
Forth, Charles, Boston, Mass. Mixer or beater. No. 1,014,382; Jan. 9; Sp. p. 2885; Gaz. vol. 174; p. 477.
Fosgate, Daniel O., Chicago, Ill. Localizing-stethoscope. No. 1,015,163; Jan. 16; Sp. p. 4574; Gaz. vol. 174; p. 771.
Foster, Frederick E., Milwaukee, Wis. Creasing-iron. No. 1,014,698; Jan. 16; Sp. p. 3582; Gaz. vol. 174; p. 613.
Foster, George M., Manchester, N. H. Loom-temple. No. 1,013,543; Jan. 2; Sp. p. 988; Gaz. vol. 174; p. 158.
Foster, John F., Kansas City, Kans. Ball-bearing. No. 1,013,151; Jan. 2; Sp. p. 119; Gaz. vol. 174; p. 22.
Foster Machine Company. (See McKean, John O., assignor.)
Foster, Rolon W., Needham, Mass., assignor to Essex Manufacturing Company, Kittery, Me., and Lynn, Mass. Foot-cushion. No. 1,013,992; Jan. 9; Sp. p. 2020; Gaz. vol. 174; p. 341.
Fowden, William T., Chester, Pa. Valve. No. 1,015,164; Jan. 16; Sp. p. 4575; Gaz. vol. 174; p. 771.
Fowler, Judson O. (See Greenig and Fowler.)
Fox, Ivan, Media, Pa. Bitless bridle. No. 1,015,165; Jan. 16; Sp. p. 4578; Gaz. vol. 174; p. 772.
Fox, John P., Tampa, Fla., and H. L. Hatcher, Savannah, Ga.; said Hatcher assignor to said Fox. Method of and apparatus for applying protecting-covering to piles. No. 1,013,758; Jan. 2; Sp. p. 1476; Gaz. vol. 174; p. 233.
Fox, Lee O. and O. A., Lewiston, Idaho. Composition butter. No. 1,014,457; Jan. 9; Sp. p. 3028; Gaz. vol. 174; p. 502.
Fox, Oscar A. (See Fox, Lee O. and O. A.)
Fox, William R., Grand Rapids, Mich. Ribbon-spool device for type-writing machines. No. 1,014,062; Jan. 16; Sp. p. 4182; Gaz. vol. 174; p. 704.
Fox, William R., Grand Rapids, Mich. Ribbon mechanism for type-writing machines. No. 1,015,384; Jan. 23; Sp. p. 5065; Gaz. vol. 174; p. 874.
Foyer Brothers & Company, The. (See Foyer, Melvin J., assignor.)
Foyer, Melvin J., assignor to The Foyer Brothers & Company, Toledo, Ohio. Wheel. No. 1,014,055; Jan. 9; Sp. p. 2166; Gaz. vol. 174; p. 362.
Fraizer, Abner, Union City, Ind. Halter. No. 1,015,166; Jan. 16; Sp. p. 4580; Gaz. vol. 174; p. 772.
Frame, Robert E., Chicago, Ill., assignor to American Car and Foundry Company, St. Louis, Mo. End underframe construction for cars. No. 1,014,867; Jan. 16; Sp. p. 3973; Gaz. vol. 174; p. 672.
France, Ray M. (See Rowley and France.)
Francfort, Alfred H., Jersey City, N. J. Hydraulic ram. No. 1,015,940; Jan. 30; Sp. p. 6282; Gaz. vol. 174; p. 1093.
Francis, William T., Danville, Va. Clothes-press. No. 1,015,167; Jan. 16; Sp. p. 4581; Gaz. vol. 174; p. 772.
Frank, Joseph. (See Bens, Frederick, Jr., assignor.)
Frank L. Rouse Company. (See Rouse, Frank L., assignor.)
Frantz Manufacturing Co. (See Frantz, Peter, assignor.)
Frantz, Peter, assignor to Frantz Manufacturing Co., Sterling, Ill. Gate-latch. No. 1,014,290; Jan. 9; Sp. p. 2667; Gaz. vol. 174; p. 444.
Frary, Edward N. and E. A., South Deerfield, Mass. Gas-lighting burner. No. 1,015,306; Jan. 23; Sp. p. 4889; Gaz. vol. 174; p. 847.
Frary, Ernest A. (See Frary, Edward N. and E. A.)
Frazee, Jeremiah S., New York, N. Y. Crushing-rolls. No. 1,014,383; Jan. 9; Sp. p. 2887; Gaz. vol. 174; p. 478.
Frederick, Joseph M., assignor to Frederick-Ruggles Manufacturing Company, Louisville, Ky. Bottling-machine. No. 1,014,963; Jan. 16; Sp. p. 4184; Gaz. vol. 174; p. 704.
Frederick-Ruggles Manufacturing Company. (See Frederick, Joseph M., assignor.)
Frederick, Zelta J., Casper, Wyo. Flat safety-pin. No. 1,013,482; Jan. 2; Sp. p. 855; Gaz. vol. 174; p. 137.
Frederickson, Clayton E., Coalinga, Cal. Pipe-perforator. No. 1,015,432; Jan. 23; Sp. p. 5172; Gaz. vol. 174; p. 889.
Freeman, Edgar H., Trenton, N. J. Key-socket. No. 1,016,136; Jan. 30; Sp. p. 6678; Gaz. vol. 174; p. 1160.
Freeman, Nat H., Boulder, Colo. Apparatus for measuring the evaporation of liquids. No. 1,014,139; Jan. 9; Sp. p. 2337; Gaz. vol. 174; p. 391.
Freidag, William F., assignor to Stover Engine Works, Freeport, Ill. Internal-combustion engine. No. 1,013,759; Jan. 2; Sp. p. 1478; Gaz. vol. 174; p. 233.
French, Alfred W., Piqua, Ohio. Steam-cooker for oil-bearing meal and the like. No. 1,015,013; Jan. 16; Sp. p. 4293; Gaz. vol. 174; p. 722.
Freschi, Alfred, Chicago, Ill. Tire. No. 1,013,596; Jan. 2; Sp. p. 1093; Gaz. vol. 174; p. 176.
Freudenthal, Heinrich. (See Tröbs, Johann F. C. M., assignor.)
Frey, Gustave, New York, N. Y. Clothes-line support. No. 1,014,291; Jan. 9; Sp. p. 2668; Gaz. vol. 174; p. 445.
Fricke, John W. (See Poehlman, Henry E., assignor.)
Frickey, Edward H., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Screen for pulverizers. No. 1,014,384; Jan. 9; Sp. p. 2891; Gaz. vol. 174; p. 478.
Fried, Marcus, Providence, R. I. Baby-carriage. No. 1,014,292; Jan. 9; Sp. p. 2669; Gaz. vol. 174; p. 445.
Fritchman, William P., West Newton, Pa. Trap. No. 1,015,168; Jan. 16; Sp. p. 4583; Gaz. vol. 174; p. 775.
Frost, Amanda. (See Frost, Pebble F., assignor.)
Frost, Charles H., Pasadena, Cal. Making brick. No. 1,014,964; Jan. 16; Sp. p. 4186; Gaz. vol. 174; p. 705.
Frost, Pebble F., Silverdale, Wash., assignor to A. Frost, Victoria, Canada. Waterproofing compound for leather. No. 1,016,137; Jan. 30; Sp. p. 6680; Gaz. vol. 174; p. 1161.
Frow, William E., Lisbon Falls, Me. Means for transmission of intelligence. No. 1,016,003; Jan. 30; Sp. p. 6400; Gaz. vol. 174; p. 1113.
Fry, Archie E., Salem, W. Va. Rail-lock. No. 1,014,589; Jan. 9; Sp. p. 3260; Gaz. vol. 174; p. 544.
Fry, Dock, Charleston, Ark. Well-cleaner. No. 1,013,933; Jan. 9; Sp. p. 1893; Gaz. vol. 174; p. 322.
Fry, William E. (See Jackson and Fry.)
Frye, Edwin L. (See Jensen, Niels, assignor.)
Fucci, Carlo. (See Brevetti and Fucci.)
Fuel Oil Engine Company. (See Murphy, George F., assignor.)
Fuerstenberg, John, *et al.* (See Anderson, James B., assignor.)
Fuerth, William G., assignor to Equilibrator Company, Newark, N. J. Ink. No. 1,013,544; Jan. 2; Sp. p. 989; Gaz. vol. 174; p 159.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,014,820; Jan. 16; Sp. p. 3855; Gaz. vol. 174; p. 654.
Fuller, Frederick H., Camas, Wash., assignor of forty-nine one-hundredths to W. P. Hawley, Oregon City, Oreg. Paper-making machine. No. 1,013,288; Jan. 2; Sp. p. 452; Gaz. vol. 174; p. 70.
Fuller, James T., deceased; C. D. Gordon, Chattanooga, Tenn., administrator, assignor to L. T. and M. J. Fuller, Houston, Tex. Cylinder for cotton-gins. No. 1,015,759; Jan. 23; Sp. p. 5878; Gaz. vol. 174; p. 1002.
Fuller & Johnson Manufacturing Co. (See Winkley, Frank D., assignor.)
Fuller, L. T., *et al.* (See Fuller, James T., assignor.)
Fuller, Mary J., *et al.* (See Fuller, James T., assignor.)
Fulton, John. (See Rice and Fulton.) (Reissue.)
Funaro, Frank, Carona, Kans. Chimney-cap. No. 1,015,169; Jan. 16; Sp. p. 4585; Gaz. vol. 174; p. 775.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-blacking machine. No. 1,015,433; Jan. 23; Sp. p. 5176; Gaz. vol. 174; p. 890.
Gan, Christian P., Bucyrus, Ohio. Pop-valve. No. 1,013,483; Jan. 2; Sp. p. 856; Gaz. vol. 174; p. 137.
Gabriel, Darneville H., Adeline, La. Protector for tires. No. 1,014,458; Jan. 9; Sp. p. 3029; Gaz. vol. 174; p. 502.
Gade, William H., Iowa Falls, Iowa. Excavating-scoop. No. 1,014,293; Jan. 9; Sp. p. 2671; Gaz. vol. 174; p. 445.
Gadomsky, Antony, Tiflis, Russia. Extracting copper from calcined ore or slags. No. 1,014,868; Jan. 16; Sp. p. 3976; Gaz. vol. 174; p. 672.
Gail, Charles H., assignor, by mesne assignments, to The Simmons Manufacturing Company, Kenosha, Wis. Wire fabric. No. 1,014,699; Jan. 16; Sp. p. 3583; Gaz. vol. 174; p. 613.
Gainer, Edward E., assignor to Z. U. Dodge, New York, N. Y. Ice-making apparatus. No. 1,014,140; Jan. 9; Sp. p. 2339; Gaz. vol. 174; p. 391.
Gaiser, Charles A., Toledo, Ohio. Lead-sharpener. No. 1,014,141; Jan. 9; Sp. p. 2341; Gaz. vol. 174; p. 392.

Gale, Ernest L., Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Brake-magnet protective device. No. 1,014,216; Jan. 9; Sp. p. 2480; Gaz. vol. 174; p. 419.

Gallwan, Thomas J. (See Herbin, Frederic L., assignor.)

Gamage, Harry C., New York, N. Y., assignor to D. P. Company. Dust-guard for car-axle boxes. No. 1,015,551; Jan. 23; Sp. p. 5426; Gaz. vol. 174; p. 930.

Gammeter, Harry C., Bratenahl, Ohio. Flying-machine. No. 1,013,152; Jan. 2; Sp. p. 122; Gaz. vol. 174; p. 22.

Gammeter, Harry C., Bratenahl, assignor to The American Multigraph Company, Cleveland, Ohio. Rotatable type-holding mechanism. No. 1,015,760; Jan. 23; Sp. p. 5879; Gaz. vol. 174; p. 1002.

Gamon, Ernest E., Newark, N. J. Water-meter. No. 1,015,552; Jan. 23; Sp. p. 5427; Gaz. vol. 174; p. 930.

Gamper, Otto, Münchwilen, Switzerland. Machine for facilitating the packing of magnetic objects of oblong shape. No. 1,014,869; Jan. 16; Sp. p. 3978; Gaz. vol. 174; p. 673.

Gancher, Abraham I., New York, N. Y. Adding-machine. No. 1,015,307; Jan. 23; Sp. p. 4891; Gaz. vol. 174; p. 847.

Gane, Cyril E., Normanby, New Zealand. Milking-machine. No. 1,016,004; Jan. 30; Sp. p. 6401; Gaz. vol. 174; p. 1114.

Garbo, Nils F., Minneapolis, Minn. Manifolding-sales-book holder. No. 1,016,222; Jan. 30; Sp. p. 6830; Gaz. vol. 174; p. 1187.

Gardner Crusher Company. (See Boero, Joseph, assignor.)

Gardner, Frederic E. (See Gardner, Frederick N. and F. E.)

Gardner, Frederick N. and F. E., assignors of one-third to L. W. Thompson, Beloit, Wis. Disk grinder. No. 1,013,760; Jan. 2; Sp. p. 1480; Gaz. vol. 174; p. 234.

Garland, Claude M., Collingswood, assignor to Camden Iron Works, Camden, N. J. Gas-producer. No. 1,014,385; Jan. 9; Sp. p. 2892; Gaz. vol. 174; p. 478.

Garner, James M., assignor of one-half to D. M. Allen, Columbus Grove, Ohio. Unloading apparatus. No. 1,014,870; Jan. 16; Sp. p. 3981; Gaz. vol. 174; p. 673.

Garrett, Charles B., Minneapolis, Minn. Automatic sprinkler-head. No. 1,013,545; Jan. 2; Sp. p. 991.; Gaz. vol. 174; p. 159.

Garrett-Cromwell Engineering Company, The. (See Cromwell, John C., assignor.)

Garrett, Victor. (See Van Ness, Eugene D., assignor.)

Garrison, Robert T., Princeton, N. J. Trap-cover. No. 1,014,142; Jan. 9; Sp. p. 2342; Gaz. vol. 174; p. 392.

Garvey, Christopher A., St. Louis, Mo. Marking-pot. No. 1,014,294; Jan. 9; Sp. p. 2672; Gaz. vol. 174; p. 446.

Gaskill, Raymond G., Port Deposit, Md. Automobile headlight-turning device. No. 1,014,627; Jan. 9; Sp. p. 3391; Gaz. vol. 174; p. 558.

Gaston, James E., St. Louis, Mo. Flying-machine. No. 1,013,484; Jan. 2; Sp. p. 858; Gaz. vol. 174; p. 138.

Gates, Olus, Martin, Tenn. Tobacco hanging and hoisting apparatus. No. 1,015,553; Jan. 23; Sp. p. 5428; Gaz. vol. 174; p. 930.

Gauermann, Louis. (See Stewart and Gauermann.)

Gaultier, Paul, Versailles, France. Instrument for topographical surveying. No. 1,014,143; Jan. 9; Sp. p. 2343; Gaz. vol. 174; p. 392.

Gaumont, Léon. (See Laudet and Gaumont.)

Gavelack, Joseph, Monongahela, Pa. Cooling and filtering machine. No. 1,013,761; Jan. 2; Sp. p. 1482; Gaz. vol. 174; p. 234.

Gearhart, Joseph E., Clearfield, Pa. Insert-jaws for lathe-chucks. No. 1,013,289; Jan. 2; Sp. p. 453; Gaz. vol. 174; p. 70.

Gebhard, John W., Muncie, Ind., assignor to Armor Steel & Foundry Company, Chicago, Ill. Hardening steel castings. No. 1,015,554; Jan. 23; Sp. p. 5432; Gaz. vol. 174; p. 931.

Gee, Albert, Philadelphia, Pa. Attachment to knitting-machines for ornamenting hosiery. No. 1,014,753; Jan. 16; Sp. p. 3698; Gaz. vol. 174; p. 631.

Gee, Munson D., and J. A. Fields, Mount Olive, Ind. Screw-driver. No. 1,015,555; Jan. 23; Sp. p. 5433; Gaz. vol. 174; p. 931.

Geest, Karl L. W., Munich, Germany. Airship. No. 1,015,674; Jan. 23; Sp. p. 5694; Gaz. vol. 174; p. 973.

Gebring, Joseph, *et al.* (See Anderson, James B., assignor.)

Gehrkens, Edward F., Pittsfield, Mass., assignor to General Electric Company. Alternating-current regulator. No. 1,014,821; Jan. 16; Sp. p. 3856; Gaz. vol. 174; p. 655.

Geisenhöner, Henry, Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,016,005; Jan. 30; Sp. p. 6404; Gaz. vol. 174; p. 1114.

Geisler, Leo W., Jr., New York, N. Y. Treatment of coffee. No. 1,015,271; Jan. 16; Sp. p. 4801; Gaz. vol. 174; p. 808.

General Chemical Company. (See Briggs and Merriam, assignors.)

General Electric Company. (See Barringer and Wright, assignors.)

General Electric Company. (See Burrows, William R., assignor.)

General Electric Company. (See Clark, Wallace S., assignor.)

General Electric Company. (See De Reamer, Frank C., assignor.)

General Electric Company. (See Fink, Colin G., assignor.)

General Electric Company. (See Gehrkens, Edward F., assignor.)

General Electric Company. (See Geisenhöner, Henry, assignor.)

General Electric Company. (See Hand, Daniel, assignor.)

General Electric Company. (See Howell, Fred B., assignor.)

General Electric Company. (See Keller, Huldreich, assignor.)

General Electric Company. (See Key, James F., assignor.)

General Electric Company. (See Krämer, Bernhard, assignor.)

General Electric Company. (See Latour, Marius C. A., assignor.)

General Electric Company. (See Lemp, Hermann, assignor.)

General Electric Company. (See McWhirter, John S., assignor.)

General Electric Company. (See Priest, Edward D., assignor.)

General Electric Company. (See Rice, Richard H., assignor.)

General Electric Company. (See Riddell, John, assignor.)

General Electric Company. (See Samuelson, Frederick, assignor.)

General Electric Company. (See Sargent, Howard R., assignor.)

General Electric Company. (See Schröter, Karl, assignor.)

General Electric Company. (See Skaupy, Franz, assignor.)

General Electric Company. (See Steinmetz, Charles P., assignor.)

General Electric Company. (See Strohbach, Fritz, assignor.)

General Electric Company. (See Suman, Ruppert W., assignor.)

General Electric Company. (See Sutton, William S., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Weintraub, George, assignor.)

General Electric Company. (See Whitney, Willis R., assignor.)

General Electric Company. (See Wilkinson, James, assignor.)

General Fireproofing Company. (See Schaffert, Adolf H., assignor.)

General Fireproofing Company, The. (See White, Herbert E., assignor.)

General Gas Light Company. (See Humphrey, Frederick J. and H. R., assignors.)

Gentry, John H., Greentown, Ind. Valve-gear. No. 1,015,308; Jan. 23; Sp. p. 4894; Gaz. vol. 174; p. 847.

Geoghegan, Stewart A., Baltimore, Md. Dredging channels. No. 1,015,170; Jan. 16; Sp. p. 4586; Gaz. vol. 174; p. 775.

George G. Fox Company. (See MacDonald, Wilson P., assignor.)

George, Thomas J., Englewood, N. J. Building construction. No. 1,013,385; Jan. 2; Sp. p. 655; Gaz. vol. 174; p. 104.

Georges, Henri. (See Valentin, Zerreiss, and Georges.)

Gerald, August P., Jersey City, N. J. Tool for spreading boiler-tubes. No. 1,014,459; Jan. 9; Sp. p. 3029; Gaz. vol. 174; p. 502.

Gerber, Emanuel, Kansas City, Mo. Combined shade-roller and curtain-hanger. No. 1,015,309; Jan. 23; Sp. p. 4895; Gaz. vol. 174; p. 848.

Gereids, Benjamin F., Tecumseh, Okla. Wear attachment for wagons. No. 1,015,795; Jan. 30; Sp. p. 5956; Gaz. vol. 174; p. 1042.

Gergely, Phillipps, Monongahela, Pa. Bottle-closure. No 1,015,675; Jan. 23; Sp. p. 5696; Gaz. vol. 174; p. 973.

Gerlach, Albert, Nordhausen, Germany. Drying apparatus. No. 1,015,796; Jan. 30; Sp. p. 5957; Gaz. vol. 174; p. 1042.

Gernsback, Hugo, New York, N. Y. Combined electric hair brush and comb. No. 1,016,138; Jan. 30; Sp. p. 6680; Gaz. vol. 174; p. 1161.

Gerwig, Frederick H. N., Pittsburgh, Pa. Clay-gun. No. 1,013,153; Jan. 2; Sp. p. 126; Gaz. vol. 174; p. 22.

Gesellschaft Für Drahtlose Telegraphie, m. b. H. (See Rendahl, Ragnar H., assignor.)

Gibb, Alexander, St. Martin's Abbey, T. G. Menzies, North Queensferry, and R. Chalmers, Newport, Scotland. Withdrawing of piles, posts, and the like. No. 1,014,295; Jan. 9; Sp. p. 2674; Gaz. vol. 174; p. 446.

Gibbs, Charles L., Philadelphia, Pa. Dental tool. No. 1,014,056; Jan. 9; Sp. p. 2167; Gaz. vol. 174; p. 362.

Gibbs Heddle Company. (See Gibbs, William H., assignor.)

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Hose-nozzle. No. 1,014,386; Jan. 9; Sp. p. 2804; Gaz. vol. 174; p. 479.

Gibbs, James E., assignor to The Gibbs Manufacturing Company, Covington, Ky. Door-check. No. 1,013,762; Jan. 2; Sp. p. 1486; Gaz. vol. 174; p. 235.

Gibbs Manufacturing Company, The. (See Gibbs, James E., assignor.)

Gibbs, William H., Clinton, assignor, by mesne assignments, to Gibbs Heddle Company, Leicester, Mass. Soldering-machine. No. 1,016,006; Jan. 30; Sp. p. 6405; Gaz. vol. 174; p. 1115.

Gibeau, Alban B., and H. Hadley, Jr., assignors of one-third to C. A. Lamothe, Verdun, Quebec, Canada. Device for spreading material. No. 1,013,546; Jan. 2; Sp. p. 994; Gaz. vol. 174; p. 159.

Gibson, Angus H. (See Roberts and Gibson.)

Gibson, Britt C., Lockhart, S. C. Spindle-bearing. No. 1,014,057; Jan. 9; Sp. p. 2168; Gaz. vol. 174; p. 363.

Gibson, Campbell, assignor of one-half to C. M. Stafford, Mount Sterling, Ky. Clamping device. No. 1,013,763; Jan. 2; Sp. p. 1480; Gaz. vol. 174; p. 235.

Gibson, Charles G., *et al.* (See Doner, Martin J., assignor.)

Gibson, George H., Montclair, N. J., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Water-heating apparatus. No. 1,014,822; Jan. 16; Sp. p. 3860; Gaz. vol. 174; p. 655.

Gibson, George H., Montclair, N. J., assignor to J. S. L Wharton, W. S. Hallowell, and J. C. Jones, Philadelphia, Pa. Combination water heating and measuring apparatus. No. 1,015,556; Jan. 23; Sp. p. 5436; Gaz. vol. 174; p. 931.

Gibson, John W., Muncie, Ind. Railway-bed. No. 1,014,700; Jan. 16; Sp. p. 3584; Gaz. vol. 174; p. 613.

Gilbert, Charles L. (See Komarek, Gustav, assignor.)

Gilbreth, Frank B., Boston, Mass. Apparatus for measuring and feeding materials. No. 1,014,645; Jan. 16; Sp. p. 3465; Gaz. vol. 174; p. 595.

Gilkey, Vern, Los Angeles, Cal. Hurdle. No. 1,013,886; Jan. 2; Sp. p. 657; Gaz. vol. 174; p. 104.

Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Electrically-controlled semaphore. No. 1,013,290; Jan. 2; Sp. p. 454; Gaz. vol. 174; p. 71.

Gill, John R., London, England. Means for testing fabric. No. 1,015,730; Jan. 23; Sp. p. 5816; Gaz. vol. 174; p. 992.

Gillespie, Edward L., Seattle, Wash. Disappearing wall-bed. No. 1,016,139; Jan. 30; Sp. p. 6682; Gaz. vol. 174; p. 1161.

Gillette, Henry, Belpre, Kans. Wheel-rim. No. 1,015,557 Jan. 23; Sp. p. 5445; Gaz. vol. 174; p. 932.

Gillmore, John L., Everett, Wash. Fire-escape. No. 1,015,486; Jan. 23; Sp. p. 5298; Gaz. vol. 174; p. 908.

Gilmore, Charles A., McComb, Miss. Draft-gear. No. 1,014,590; Jan. 9; Sp. p. 3261; Gaz. vol. 174; p. 544.

Gilmore, Frank M., Chicago, Ill., assignor to H. W. Johns-Manville Company. Applying pipe-covering. No. 1,013,291; Jan. 2; Sp. p. 458; Gaz. vol. 174; p. 71.

Giovanetti, Pietro. (See Mosso and Giovanetti.)

Giroux, Louis F., Springfield, Mass. Transparency. No. 1,014,460; Jan. 9; Sp. p. 3032; Gaz. vol. 174; p. 503.

Glauber, Joseph H., Cleveland, Ohio. Self-closing faucet. No. 1,015,310; Jan. 23; Sp. p. 4897; Gaz. vol. 174; p. 848.

Gilsar, George E., Sawyer, N. D. Means for attaching conveyer-slats. No. 1,015,558; Jan. 23; Sp. p. 5448; Gaz. vol. 174; p. 932.

Glowacki, Francisek, and S. Krzyzak, Chicago, Ill. Haircomb. No. 1,016,007; Jan. 30; Sp. p. 6410; Gaz. vol. 174; p. 1115.

Goad, Lawrence, Jr., Arcata, Cal. Saw-gumming machine. No. 1,015,731; Jan. 23; Sp. p. 5818; Gaz. vol. 174; p. 992.

Goble, Ellsworth, Louisville, Ky. Clamp. No. 1,015,171; Jan. 16; Sp. p. 4588; Gaz. vol. 174; p. 774.

Godfrey, Mark, R. Ekron, and H. M. Svebilius, Chicago, Ill.; said Godfrey and Svebilius assignors to said Ekron. Station-indicator. No. 1,013,485; Jan. 2; Sp. p. 863; Gaz. vol. 174; p. 138.

Goehr, Louis, San Francisco, Cal. Merchandise-chute. No. 1,013,292; Jan. 2; Sp. p. 459; Gaz. vol. 174; p. 71.

Goehst, John H., and R. C. Carpenter, assignors to The Federal Electric Company, Chicago, Ill. Power-table for kitchen utensils. No. 1,014,217; Jan. 9; Sp. p. 2494; Gaz. vol. 174; p. 419.

Goetz & Flodin Manufacturing Company. (See Bees, William H., assignor.)

Goewey, James E., Newark, N. J. Expansion-bolt. No. 1,014,144; Jan. 9; Sp. p. 2346; Gaz. vol. 174; p. 392.

Goff, Daniel, Millville, assignor to Goff Gravity Boiler Feed Company, Camden, N. J. Smoke and gas consumer for locomotives. No. 1,014,387; Jan. 9; Sp. p. 2895; Gaz. vol. 174; p. 479.

Goff Gravity Boiler Feed Company. (See Goff, Daniel, assignor.)

Goff, Samuel B., Camden, N. J. Glass-furnace. No. 1,013,486; Jan. 2; Sp. p. 869; Gaz. vol. 174; p. 139.

Goff, Samuel B., Camden, N. J. Furnace. No. 1,015,014; Jan. 16; Sp. p. 4296; Gaz. vol. 174; p. 722.

Goin, John K., St. Louis, Mo. Form or mold for concrete. No. 1,016,140; Jan. 30; Sp. p. 6684; Gaz. vol. 174; p. 1161.

Gold, Edward E., New York, N. Y. Steam-heating system. No. 1,014,296; Jan. 9; Sp. p. 2675; Gaz. vol. 174; p. 446.

Gold, Edward E., New York, N. Y. Steam-hose. No. 1,015,311; Jan. 23; Sp. p. 4901; Gaz. vol. 174; p. 849.

Goldberg, Abraham, New York, N. Y. Garment. No. 1,013,764; Jan. 2; Sp. p. 1490; Gaz. vol. 174; p. 236.

Goldberg, Edward, Malden, Mass. Ventilator for houses. No. 1,014,058; Jan. 9; Sp. p. 2171; Gaz. vol. 174; p. 363.

Golden, Maximilian K., Detroit, Mich. Shock-absorbing device. No. 1,015,015; Jan. 16; Sp. p. 4297; Gaz. vol. 174; p. 722.

Goldsworthy, Ernest J. (See Taliaferro and Goldsworthy.)

Goodnight, Gipson M., Thomasville, N. C. Stock-releasing apparatus. No. 1,015,797; Jan. 30; Sp. p. 5958; Gaz. vol. 174; p. 1042.

Goodwin, Edwin B., Pueblo, Colo. Agitating and grinding mechanism. No. 1,014,871; Jan. 16; Sp. p. 3982; Gaz. vol. 174; p. 673.

Goodwin, George H., *et al.* (See Neville, Harry, assignor.)

Goodyear Tire and Rubber Company, The. (See Hale, James E., assignor.)

Goold, Luella L. (See Greeley, James T., assignor.)

Gopher Manufacturing Company, The. (See Whipple, Charles A., assignor.)

Gordon, Charles D., administrator. (See Fuller, James T.)

Gordon, Clay, *et al.* (See Reed, Homer C., assignor.)

Gore, Herbert C., Washington, D. C. Treating Japanese persimmons, &c. No. 1,015,950; Jan. 30; Sp. p. 6285; Gaz. vol. 174; p. 1094.

Gores, Henry N., assignor to American Paper Products Company, St. Louis, Mo. Junction device for paper boxes. No. 1,014,297; Jan. 9; Sp. p. 2677; Gaz. vol. 174; p. 447.

Gorsuch, Howard F., Sunbury, Ohio. Railway-tie. No. 1,015,172; Jan. 16; Sp. p. 4590; Gaz. vol. 174; p. 774.

Gosling, John W. (See Woodfield, Morris, and Gosling.)

Goss Printing Press Company. (See Seymour, Ralph C., assignor.)

Goss, William F. M., Urbana, Ill. Engine. No. 1,015,016; Jan. 16; Sp. p. 4299; Gaz. vol. 174; p. 723.

Gosselin, William L. (See Townsend and Gosselin.)

Gottlieb, Rudolf, Brünn, Austria-Hungary. Stenciling device. No. 1,013,597; Jan. 2; Sp. p. 1095; Gaz. vol. 174; p. 176.

Gough, Frank A., Brooklyn, N. Y. Dental tooth-regulating appliance. No. 1,013,993; Jan. 9; Sp. p. 2022; Gaz. vol. 174; p. 341.

Gould Coupler Company. (See Maw, Edmund M., assignor.)

Gould, Everett N., Jamestown, N. Y. Metallic door. No. 1,013,934; Jan. 9; Sp. p. 1894; Gaz. vol. 174; p. 322.

Gould Storage Battery Company. (See Van Wagenen, Edward, assignor.)

Gould, William F., Des Moines, Iowa. Balanced valve. No. 1,014,591; Jan. 9; Sp. p. 3262; Gaz. vol. 174; p. 544.

Gould, William F., Des Moines, Iowa. Balanced valve. No. 1,014,592; Jan. 9; Sp. p. 3267; Gaz. vol. 174; p. 545.

Gouldbourn, Joseph. (See Brown and Gouldbourn.)

Goulet, Jules, Brussels, Belgium. Hydrocarbon miner's lamp. No. 1,013,765; Jan. 2; Sp. p. 1491; Gaz. vol. 174; p. 236.

Gracey, Charles B., Coraopolis, Pa. Coupling. No. 1,013,598; Jan. 2; Sp. p. 1097; Gaz. vol. 174; p. 177.

Graff, Friedrich, Witten-on-the-Ruhr, Germany. Slicing-machine. No. 1,016,008; Jan. 30; Sp. p. 6411; Gaz. vol. 174; p. 1115.

Graham, David P., Detroit, assignor of one-half to L. C. Hayden, Tecumseh, Mich. Lock for motor-vehicles. No. 1,014,145; Jan. 9; Sp. p. 2347; Gaz. vol. 174; p. 392.

Graham, John. (See Auld and Graham.)

Graham, Prentiss R., Petaluma, Cal. Farm-gate. No. 1,015,676; Jan. 23; Sp. p. 5697; Gaz. vol. 174; p. 974.

Gramm, Benjamin A., Bowling Green, Ohio. End mounting for vehicle-springs. No. 1,013,547; Jan. 2; Sp. p. 996; Gaz. vol. 174; p. 160.

Grand Rapids Brush Company. (See Page, David P., assignor.)

Granger, James C., Cottonwood, Ala. Wrench. No. 1,015,883; Jan. 30; Sp. p. 6149; Gaz. vol. 174; p. 1071.

Grant, Anna C. (See Grant, Jacob W., assignor.)

Grant, Annie S., West St. John, New Brunswick, Canada. Ventilating glass pane with fly-escapes. No. 1,014,701; Jan. 16; Sp. p. 3587; Gaz. vol. 174; p. 614.

Grant, George W., Bucyrus, Ohio. Dental-chair arm. No. 1,014,702; Jan. 16; Sp. p. 3588; Gaz. vol. 174; p. 614.

Grant, Jacob W., assignor of one-half to A. C. Grant, Hanlin Station, Pa. Rail-joint. No. 1,015,677; Jan. 23; Sp. p. 5700; Gaz. vol. 174; p. 974.

Graves, John, and C. C. Reed, Arkansas City, Kans. Topping-machine. No. 1,015,951; Jan. 30; Sp. p. 6286; Gaz. vol. 174; p. 1094.

Gravity Coal Bin Company. (See Snead and Brady, assignors.)

Gravity Conveyor Company. (See Schwab, Martin C., assignor.)

Gray, Charles F., Sierra Madre, Cal., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,014,298; Jan. 9; Sp. p. 2679; Gaz. vol. 174; p. 447.

Gray, William. (See Taylor, Edward E., assignor.)

Gray, William. (See Taylor and Elkins, assignors.)

Gray, William D., Milwaukee, Wis. Gyratory bolting-machine. No. 1,014,388; Jan. 9; Sp. p. 2898; Gaz. vol. 174; p. 480.

Gray, William D., Milwaukee, Wis. Tubular structure. No. 1,015,312; Jan. 23; Sp. p. 4903; Gaz. vol. 174; p. 849.

Gray, William D., Milwaukee, Wis. Gyratory machine. No. 1,015,434; Jan. 23; Sp. p. 5182; Gaz. vol. 174; p. 890.

Gray, William T., and E. S. Haskin, Vienna, Mo.; said Gray assignor to said Haskin. Grain-cleaning machine. No. 1,015,309; Jan. 23; Sp. p. 4895; Gaz. vol. 174; p. 847.

Guthrie, St. Clair, Jr., Blue Rapids, Kans. Ice-cutting

Gray, William T., and E. S. Haskin, Vienna, Mo.; said Haskin assignor to said Gray. Sawdust-conveyer for circular saws. No. 1,014,872; Jan. 16; Sp. p. 3984; Gaz. vol. 174; p. 674.
Greeley, James T., Nashua, N. H. assignor of one-fourth to L. L. Goold, Pittsburgh, Pa. Hypodermic syringe. No. 1,015,952; Jan. 30; Sp. p. 6289; Gaz. vol. 174; p. 1094.
Greeley, Melvin S., Des Moines, Iowa. Grain-door. No. 1,013,766; Jan. 2; Sp. p. 1495; Gaz. vol. 174; p. 237.
Green, Augustus M., Hamilton, Ill. Tripping attachment for vehicles. No. 1,013,935; Jan. 9; Sp. p. 1895; Gaz. vol. 174; p. 323.
Green, Collins D., Roaring Spring, Pa. Railway-tie. No. 1,016,141; Jan. 30; Sp. p. 6687; Gaz. vol. 174; p. 1162.
Green, Jonathan S., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Turbine-blading. No. 1,015,313; Jan. 23; Sp. p. 4905; Gaz. vol. 174; p. 849.
Greene, Harry S. (See Praray and Greene.)
Greenig, Louis W., and J. O. Fowler, Salt Lake City, Utah. Adjustable skee. No. 1,013,154; Jan. 2; Sp. p. 131; Gaz. vol. 174; p. 23.
Greenlaw Manufacturing Co., The. (See Greenlaw and Jewett, assignors.)
Greenlaw, Warren A., Melrose, and R. A. Jewett, assignors to The Greenlaw Manufacturing Co., Boston, Mass. Train-pipe connection. No. 1,015,435; Jan. 23; Sp. p. 5183; Gaz. vol. 174; p. 890.
Greiner, A. J. (See Buttman, Alonzo C., assignor.)
Grey, Charles M., East Orange, N. J. Making castings. No. 1,013,548; Jan. 2; Sp. p. 996; Gaz. vol. 174; p. 160.
Grey, Henry, assignor to American Universal Mill Company, New York, N. Y. Solid rolled metal I-beam of nine inches and under twelve inches in height. No. 1,013,649; Jan. 2; Sp. p. 1230; Gaz. vol. 174; p. 194.
Grey, Henry, assignor to American Universal Mill Company, New York, N. Y. Solid rolled metal eight-inch I-beam. No. 1,013,650; Jan. 2; Sp. p. 1233; Gaz. vol. 174; p. 194.
Grey, Henry, assignor to American Universal Mill Company, New York, N. Y. Solid rolled metal I-beam of sixteen inches and under twenty-five inches in height. No. 1,013,651; Jan. 2; Sp. p. 1236; Gaz. vol. 174; p. 194.
Grey, Henry, assignor to American Universal Mill Company, New York, N. Y. Solid rolled metal I-beam of twelve inches and under sixteen inches in height. No. 1,013,652; Jan. 2; Sp. p. 1239; Gaz. vol. 174; p. 195.
Grice, Arthur G., Carnoustie, Scotland. Percussive tool. No. 1,015,732; Jan. 23; Sp. p. 5823; Gaz. vol. 174; p. 992.
Grieb, Alfred, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Stitch-forming mechanism. No. 1,013,155; Jan. 2; Sp. p. 132; Gaz. vol. 174; p. 23.
Griffin, G. Brewer. (See Cleland, Harry W., assignor.)
Griffin Wheel Company. (See Vial, Frederick K., assignor.)
Griffith, Albert W. (See Clark, George H., assignor.)
Griffith, Russell B., Rochester, N. Y. Copy-holder. No. 1,014,646; Jan. 16; Sp. p. 3469; Gaz. vol. 174; p. 596.
Griffiths, George J., Woodstock, assignor to The Oliver Typewriter Company, Chicago, Ill. Type-writing machine. No. 1 015,559; Jan. 23; Sp. p. 5447; Gaz. vol. 174; p. 932.
Grindle, William W. (See Sweeny and Grindle.)
Grinnell, Harold D., Pittsfield, Mass. Electric gas-lighter. No. 1,014,461; Jan. 9; Sp. p. 3034; Gaz. vol. 174; p. 503.
Grinnell, Ira L., Detroit, Mich. Piano-player. No. 1,014,059; Jan. 9; Sp. p. 2172; Gaz. vol. 174; p. 363.
Grobl, Mathias A., Chicago, Ill. Lifter-arm. No. 1,015,017; Jan. 16; Sp. p. 4300; Gaz. vol. 174; p. 723.
Groff, Clarence B., Camden, N. J. Ratchet-drill. No. 1,013,653; Jan. 2; Sp. p. 1242; Gaz. vol. 174; p. 195.
Grohmann, Carl L., and I. C. Koehne, assignors to The National Cash Register Company, Dayton, Ohio. Check cash-register. No. 1,014,647; Jan. 16; Sp. p. 3474; Gaz. vol. 174; p. 596.
Grosvenor, William M., Grantwood, N. J. Drying system. No. 1,014,462; Jan. 9; Sp. p. 3035; Gaz. vol. 174; p. 503.
Grove Products Company, The. (See Strong, George H., assignor.)
Grünbaum, Heinrich, New York, N. Y. Fire-escape. No. 1,015,173; Jan. 16; Sp. p. 4591; Gaz. vol. 174; p. 774.
Gruss, Lucien R., Chico, Cal., assignor to The Pneumatic Cushion Company, Inc., Phoenix, Ariz. Pneumatic spring for vehicles. No. 1,013,487; Jan. 2; Sp. p. 871; Gaz. vol. 174; p. 139.
Gudmundsen, Abraham, Lehi, Utah. Gate-closer. No. 1,015,436; Jan. 23; Sp. p. 5185; Gaz. vol. 174; p. 891.
Gueffroy, Hermann, assignor to Drahtpapier G. m. b. H., Berlin, Germany. Machine for producing fabric, paper, or cardboard having an inclosure of crossing threads. No. 1,015,174; Jan. 16; Sp. p. 4593; Gaz. vol. 174; p. 775.
Gulterman, Leopold A. (See Curtis, Frank G., assignor.)
Gulde, Charles F., Beach, N. D. Well-drilling machine. No. 1,013,654; Jan. 2; Sp. p. 1249; Gaz. vol. 174; p. 196.
Gunten, Edward von, Akron, Ohio. Door-check. No. 1,015,222; Jan. 16; Sp. p. 4682; Gaz. vol. 174; p. 790.
Gunther-Wright Machine Company. (See Rounds, Erdix, assignor.)

Guthrie, St. Clair, Jr., Blue Rapids, Kans. Ice-cutting machine. No. 1,014,593; Jan. 9; Sp. p. 3270; Gaz. vol. 174; p. 545.
Gwynn-Bacon Vulcanizer Co. (See Bacon and Gwynn, assignors.)
Gwynn, William A. (See Bacon and Gwynn.)
H. Mueller Manufacturing Company, The. (See Mueller, Philip, assignor.)
H. Mueller Manufacturing Company. (See Mueller and Schuermann, assignors.)
H. H. Hawley Company. (See De Long, Charles E., assignor.)
H. K. Mulford Company, The. (See Turner, Joseph L., assignor.)
H. O. Peck Automobile Wheel Company. (See Reichenbach, George T., assignor.)
H. W. Johns-Manville Company. (See Gilmore, Frank M., assignor.)
Haas, August, Grapeville, Pa. Interlocking-block structure. No. 1,013,156; Jan. 2; Sp. p. 138; Gaz. vol. 174; p. 24.
Haaser, Urbana A., Lawrenceville, Ill. Double packing stuffing-box. No. 1,015,884; Jan. 30; Sp. p. 6150; Gaz. vol. 174; p. 1071.
Hackett, Charles H., and T. W. Morgan, assignors to W. W. Marsh, Waterloo, Iowa. Cream-exit for centrifugal cream-separators. No. 1,015,018; Jan. 16; Sp. p. 4301; Gaz. vol. 174; p. 724.
Hackney, Leslie S. (See Minor, Daniel B., assignor.)
Hadaway, William S., Jr., East Orange, N. J., assignor to Westinghouse Electric & Manufacturing Company. Resistance or heating element. No. 1,013,157; Jan. 2; Sp. p. 139; Gaz. vol. 174; p. 24.
Hadaway, William S., Jr., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company. Matrix-drying press. No. 1,015,953; Jan. 30; Sp. p. 6291; Gaz. vol. 174; p. 1095.
Hadaway, William S., Jr., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company. Cut-out for electric sad-irons. No. 1,015,954; Jan. 30; Sp. p. 6292; Gaz. vol. 174; p. 1095.
Haddow, William, Ossining, N. Y. Soap-dispensing machine. No. 1,015,620; Jan. 23; Sp. p. 5579; Gaz. vol. 174; p. 956.
Haddow, William, Ossining, N. Y. Soap-dispensing machine. No. 1,015,678; Jan. 23; Sp. p. 5701; Gaz. vol. 174; p. 974.
Hadfield, Robert A., Sheffield, England. Making magnetic materials. No. 1,014,218; Jan. 9; Sp. p. 2497; Gaz. vol. 174; p. 420.
Hadley, Frank A. (See Chamberlain and Hadley.)
Hadley, Frederick W., Atlanta, Ga. Means for preventing moisture from entering transformer-tanks. No. 1,013,767; Jan. 2; Sp. p. 1497; Gaz. vol. 174; p. 237.
Hadley, Henry, Jr. (See Gibeau and Hadley.)
Hadsel, Alvah D., Wilkes-Barre, Pa. Excavator. No. 1,015,489; Jan. 23; Sp. p. 5306; Gaz. vol. 174; p. 910.
Hadsel, Alvah D., Dorranceton, assignor to Cable Excavator Company, Philadelphia, Pa. Excavator. No. 1,015,486; Jan. 23; Sp. p. 5299; Gaz. vol. 174; p. 908.
Hadsel, Alvah D., Dorranceton, assignor to Cable Excavator Company, Philadelphia, Pa. Hoisting-drum. No. 1,015,487; Jan. 23; Sp. p. 5302; Gaz. vol. 174; p. 909.
Hadsel, Alvah D., Wilkes-Barre, assignor to Cable Excavator Company, Philadelphia, Pa. Excavator. No. 1,015,488; Jan. 23; Sp. p. 5303; Gaz. vol. 174; p. 909.
Hadsell, Darwin G. (See Cutler, Burnam B., assignor.)
Haff, Erastus E., Amityville, N. Y. Washbasin and bathtub plug. No. 1,014,389; Jan. 9; Sp. p. 2900; Gaz. vol. 174; p. 480.
Hager, Harry, Chicago, Ill. Carton-sealing machine. No. 1,013,768; Jan. 2; Sp. p. 1498; Gaz. vol. 174; p. 237.
Hahl, Hans. (See Taub and Hahl.)
Hahn, August, St. Louis, Mo. Air-inlet for beer-kegs. No. 1,013,158; Jan. 2; Sp. p. 141; Gaz. vol. 174; p. 24.
Hahn, James D. (See Travers, William E., assignor.)
Hahn, John N., Cleveland, Ohio. Machine for facing corrugated paper. No. 1,015,385; Jan. 23; Sp. p. 5069; Gaz. vol. 174; p. 874.
Hahn, William S., Mountain Dale, Oreg. Drag sawing-machine. No. 1,015,175; Jan. 16; Sp. p. 4597; Gaz. vol. 174; p. 775.
Hall, Edward L., Providence, R. I. Waterproof overshoe and legging. No. 1,014,873; Jan. 16; Sp. p. 3984; Gaz. vol. 174; p. 674.
Haines, David E., Battle Creek, Mich. Ratchet-wrench. No. 1,014,463; Jan. 9; Sp. p. 3038; Gaz. vol. 174; p. 504.
Haizmann, Friedrich, Stuttgart, Germany. Means for securing door-latch handles. No. 1,015,679; Jan. 23; Sp. p. 5702; Gaz. vol. 174; p. 975.
Hajdú, Kálmán, Youngstown, Ohio. Combined razor and scissors. No. 1,013,159; Jan. 2; Sp. p. 142; Gaz. vol. 174; p. 25.
Hakins, George B., Norwood, N. Y. Dental cleaning device. No. 1,014,594; Jan. 9; Sp. p. 3273; Gaz. vol. 174; p. 546.
Hale, James E., assignor to The Goodyear Tire and Rubber Company, Akron, Ohio. Vehicle-rim. No. 1,013,387; Jan. 2; Sp. p. 658; Gaz. vol. 174; p. 104.
Hall, Almon. (See Walter, David C., assignor.)

Hall, Benjamin K., Seattle, assignor of one-fourth to A. F. Eastman, Pierce county, Wash. Portable turn-table. No. 1,015,885; Jan. 30; Sp. p. 6151; Gaz. vol. 174; p. 1072.
Hall, Charles T., assignor of one-half to E. J. Smith, Buffalo, N. Y. Card-shuffler. No. 1,014,219; Jan. 9; Sp. p. 2497; Gaz. vol. 174; p. 420.
Hall, Frederick H., Norton Lindsay, England. Reinforced inner tube for pneumatic tires. No. 1,014,464; Jan. 9; Sp. p. 3039; Gaz. vol. 174; p. 504.
Hall, Ina O., Calgary, Alberta, assignor of one-half to H. C. Strange, Bassano, Canada. Device for applying hair-tonics. No. 1,014,465; Jan. 9; Sp. p. 3040; Gaz. vol. 174; p. 504.
Hall, John. (See Jones and Hall.)
Hall, Louis H. (See Hall, William H. and L. H.)
Hall Signal Company, The. (See Coleman, Clarence W., assignor.)
Hall, Thomas, assignor to Ridgway Dynamo & Engine Company, Ridgway, Pa. Valve-gear. No. 1,013,549; Jan. 2; Sp. p. 1000; Gaz. vol. 174; p. 160.
Hall, William H. and L. H., Winlock, Wash. Pot-handle. No. 1,015,176; Jan. 16; Sp. p. 4601; Gaz. vol. 174; p. 775.
Hall, William R., Warner, N. H. Spark-arrester. No. 1,016,069; Jan. 30; Sp. p. 6556; Gaz. vol. 174; p. 1138.
Halsey, Charles W. (See Northall, William H., assignor.)
Halsey Electric Generator Company. (See Halsey, Henry, assignor.)
Halsey, Henry, New York, N. Y., assignor to Halsey Electric Generator Company. Electric battery. No. 1,014,146; Jan. 9; Sp. p. 2348; Gaz. vol. 174; p. 393.
Hamann, Gustav. (See Suess, Walter E., assignor.)
Hamann, Ralph A., Omaha, Nebr. Rectifier. No. 1,014,466; Jan. 9; Sp. p. 3041; Gaz. vol. 174; p. 504.
Hamel, Charles F., assignor to M. Pauken, Toledo, Ohio. Autosled. No. 1,015,019; Jan. 16; Sp. p. 4303; Gaz. vol. 174; p. 724.
Hamfeldt, George K., Kneuttingen, Germany. Charging-car and other receptacle. No. 1,014,467; Jan. 9; Sp. p. 3044; Gaz. vol. 174; p. 505.
Hamilton, Robert G., Tryon, N. C. Evaporating-pan. No. 1,014,468; Jan. 9; Sp. p. 3046; Gaz. vol. 174; p. 505.
Hamilton, Thomas M. (See Boyd, Albert H., assignor.)
Hamilton, Ulysses G., assignor of one-fourth to L. F. Sanguinetti, Peters, Cal. Railway-tie. No. 1,013,655; Jan. 2; Sp. p. 1251; Gaz. vol. 174; p. 196.
Hamilton, William G., assignor of one-fourth to A. B. Bowman, San Diego, Cal. Flying-machine. No. 1,013,840; Jan. 2; Sp. p. 1635; Gaz. vol. 174; p. 261.
Hamlin, Charley W. (See Zaerr and Hamlin.)
Hamlin, Orlo J., *et al.* (See Gill, Edwin R., assignor.)
Hammel, Riglander & Co. (See Riglander, Moses M., assignor.)
Hammer, Otto R., Harlan, Iowa. Paper-bag holder. No. 1,014,390; Jan. 9; Sp. p. 2901; Gaz. vol. 174; p. 480.
Hammerly, William A., *et al.* (See Conkell, Elias W., assignor.)
Hammerstein, Arthur, New York, N. Y. Timing device. No. 1,014,703; Jan. 16; Sp. p. 3589; Gaz. vol. 174; p. 614.
Hammond, Irving L., Lewiston, Me. Valveless-tank siphon. No. 1,013,876; Jan. 9; Sp. p. 1763; Gaz. vol. 174; p. 302.
Hammond, Laurens, Evanston, Ill. Barometer. No. 1,015,886; Jan. 30; Sp. p. 6153; Gaz. vol. 174; p. 1072.
Hammond Typewriter Co., The. (See Spurgin, Richard A., assignor.)
Hand, Daniel, Newark, N. J., assignor to General Electric Company. Incandescent filament. No. 1,013,599; Jan. 2; Sp. p. 1099; Gaz. vol. 174; p. 177.
Hand, Enos A., Chicago, Ill. Slicing-machine. No. 1,014,595; Jan. 9; Sp. p. 3274; Gaz. vol. 174; p. 546.
Handlan, A. H., Jr. (See Cairncross, Robert L., assignor.)
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,994; Jan. 9; Sp. p. 2023; Gaz. vol. 174; p. 342.
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,995; Jan. 9; Sp. p. 2027; Gaz. vol. 174; p. 342.
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,996; Jan. 9; Sp. p. 2030; Gaz. vol. 174; p. 342.
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,997; Jan. 9; Sp. p. 2033; Gaz. vol. 174; p. 343.
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,998; Jan. 9; Sp. p. 2035; Gaz. vol. 174; p. 343.
Handy, Levin G., Rutherford, N. J., assignor to W. C. Dickerman, New York, N. Y. Wheel. No. 1,013,999; Jan. 9; Sp. p. 2039; Gaz. vol. 174; p. 343.
Hanley, John W., New York, N. Y. Game. No. 1,016,142; Jan. 30; Sp. p. 6688; Gaz. vol. 174; p. 1162.
Hanner, Allen C. (See McCollum and Hanner.)
Hanrahan, John E., Baltimore, Md., assignor to The Chesapeake Addressing Company. Type-mold. No. 1,015,020; Jan. 16; Sp. p. 4304; Gaz. vol. 174; p. 724.
Hansel, Alois, Lichtenberg, Germany. Fire-escape. No. 1,015,560; Jan. 23; Sp. p. 5449; Gaz. vol. 174; p. 933.
Hansen, Christian, Chicago, Ill. Potato-planter. No. 1,015,177; Jan. 16; Sp. p. 4602; Gaz. vol. 174; p. 776.
Hansen, Lewis A. (See Petri, John, assignor.)
Hansen, Niels M., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Air-brush. No. 1,016,143; Jan. 30; Sp. p. 6691; Gaz. vol. 174; p. 1163.

Hansen, Niels M., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Air-brush nozzle. No. 1,016,144; Jan. 30; Sp. p. 6692; Gaz. vol. 174; p. 1163.
Hanson, Bennie P., and N. I. Nelson, Elmore, Minn. Tongue construction. No. 1,013,877; Jan. 9; Sp. p. 1764; Gaz. vol. 174; p. 302.
Hanson, Louis, Cottonwood, Idaho. Bag-holder. No. 1,015,621; Jan. 23; Sp. p. 5582; Gaz. vol. 174; p. 956.
Hardie, Robert W., Yonkers, N. Y. Scarf-pin guard. No. 1,015,265; Jan. 16; Sp. p. 4791; Gaz. vol. 174; p. 806.
Hardie, Robert W., Yonkers, N. Y. Scarf-pin guard. No. 1,015,266; Jan. 16; Sp. p. 4792; Gaz. vol. 174; p. 806.
Hardwick & Magee Company. (See Fleming, Herbert, assignor.)
Hare, Charlie M., *et al.* (See Stewart, Robert F., assignor.)
Hariel, Jules, Paris, France. Bag and envelop printing machinery. No. 1,013,160; Jan. 2; Sp. p. 143; Gaz. vol. 174; p. 25.
Harker, George, Petersham, New South Wales, Australia. Disinfecting inclosed spaces. No. 1,016,145; Jan. 30; Sp. p. 6694; Gaz. vol. 174; p. 1163.
Harmon, John W., Creston, Iowa. Riding-harrow. No. 1,015,887; Jan. 30; Sp. p. 6154; Gaz. vol. 174; p. 1072.
Harmon Machine Company. (See Feeley, Frank G., assignor.)
Harrington, Edward. (See Cronin and Harrington.)
Harrington, George H., Cincinnati, Ohio. Instantaneous water-heater. No. 1,015,314; Jan. 23; Sp. p. 4907; Gaz. vol. 174; p. 850.
Harrington, John W., assignor to Harrington & Richardson Arms Company, Worcester, Mass. Firearm. No. 1,015,490; Jan. 23; Sp. p. 5309; Gaz. vol. 174; p. 910.
Harrington, Joseph. (See Poppenhusen and Harrington.)
Harrington & Richardson Arms Company. (See Harrington, John W., assignor.)
Harrington, Robert J., Dalton, Mass. Yarn-evening attachment for spinning-mules. No. 1,014,299; Jan. 9; Sp. p. 2681; Gaz. vol. 174; p. 447.
Harris, Louis E. M. and T. S., Westernport, Md. Blasting device. No. 1,015,021; Jan. 16; Sp. p. 4306; Gaz. vol. 174; p. 724.
Harris, Rhoda C., Pittsburgh, Pa. Tire-protector. No. 1,015,178; Jan. 16; Sp. p. 4605; Gaz. vol. 174; p. 776.
Harris, Thomas S. (See Harris, Louis E. M. and T. S.)
Harrison, John P., Ludlow, Ky., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,015,227; Jan. 16; Sp. p. 4697; Gaz. vol. 174; p. 792.
Harrison, Owen L., Coleta, Ill. Handle for articles of hardware. No. 1,015,022; Jan. 16; Sp. p. 4307; Gaz. vol. 174; p. 725.
Harrison, Philip B. (See Busse and Harrison.)
Harrison Safety Boiler Works. (See Gibson, George H., assignor.)
Harrison Safety Boiler Works. (See Wallem, Axel B., assignor.)
Harsh, John M., Cleveland, Ohio. Water-distilling apparatus. No. 1,013,936; Jan. 9; Sp. p. 1897; Gaz. vol. 174; p. 323.
Hart, Gerald W., West Hartford, assignor to The Hart Manufacturing Company, Hartford, Conn. Multithrow switch. No. 1,014,300; Jan. 9; Sp. p. 2684; Gaz. vol. 174; p. 448.
Hart Manufacturing Company, The. (See Hart, Gerald W., assignor.)
Hart Manufacturing Company, The. (See Palmer, Granville E., assignor.)
Hart, Philip, London, assignor of one-half to L. V. Rogers, Westcliff-on-Sea, England. Advertising apparatus. No. 1,014,469; Jan. 9; Sp. p. 3047; Gaz. vol. 174; p. 505.
Hartford Electric Light Company, The. (See Cutler and Owens, assignors.)
Hartford Machine Screw Company, The. (See Seward, Ernest R., assignor.)
Hartz, Joseph F., *et al.* (See Page, Herbert J., assignor.)
Harvey Hubbell, Incorporated. (See Hubbell, Harvey, assignor.) (Reissue.)
Harvey Hubbell, Incorporated. (See Klein, Nathan, assignor.)
Harvey, Josiah H., Scranton, Pa. Nut-lock. No. 1,013,550; Jan. 2; Sp. p. 1002; Gaz. vol. 174; p. 161.
Harvey, Lindsey, Prentiss, Miss. Combined angle-bar, nut-lock, and rail joint and brace. No. 1,013,488; Jan. 2; Sp. p. 876; Gaz. vol. 174; p. 140.
Haseltine, Richard S. (See Bray, Eustace V., assignor.)
Haskell, Broderick, Franklin, Pa. Making spiral latticed poles or the like. No. 1,013,489; Jan. 2; Sp. p. 877; Gaz. vol. 174; p. 140.
Haskell, Broderick, Franklin, Pa. Machine for making spiral latticed poles or the like. No. 1,013,769; Jan. 2; Sp. p. 1501; Gaz. vol. 174; p. 237.
Haskin, Ernest S. (See Gray and Haskin.)
Hastings, Benjamin, Barberton, Ohio. Engine for rock-drills. No. 1,015,798; Jan. 30; Sp. p. 5959; Gaz. vol. 174; p. 1043.
Hatch, Frank R., Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Bobbin-holding device. No. 1,015,023; Jan. 16; Sp. p. 4309; Gaz. vol. 174; p. 725.
Hatcher, Henry L. (See Fox and Hatcher.)
Hathaway, Charles O., and F. W. Huffaker, Big Timber, Mont. Trace-fastener. No. 1,014,000; Jan. 9; Sp. p. 2041; Gaz. vol. 174; p. 344.

Higginbotham, Toliver S. and E. H., Anson, Tex. Photographic-printing machine. No. 1,013,492; Jan. 2; Sp. p.

Hollingsworth, William G., Sheboygan, Wis. Liquid-dispensing machine. No. 1,015,680; Jan. 23; Sp. p. 5703;

Hathcock, Alius G., San Francisco, Cal. Rotary internal-combustion engine. No. 1,014,596; Jan. 9; Sp. p. 3279; Gaz. vol. 174; p. 546.

Hathcock, Alius G., assignor to Hathcock Mechanical Device Company, San Francisco, Cal. Gaseous-fuel mixer. No. 1,014,391; Jan. 9; Sp. p. 2902; Gaz. vol. 174; p. 480.

Hathcock Mechanical Device Company. (See Hathcock, Alius G., assignor.)

Hatt, Joseph A. H., Brooklyn, N. Y. Color-filter. No. 1,013,937; Jan. 9; Sp. p. 1898; Gaz. vol. 174; p. 323.

Hauser, L. A. (See McLarty, Leonard L., assignor.)

Havens, Morton, Jr., Albany, N. Y. Branch box. No. 1,014,704; Jan. 16; Sp. p. 3592; Gaz. vol. 174; p. 615.

Haviland, Edward C., assignor to Van Kannel Revolving Door Company, New York, N. Y. Motor-gearing for revolving doors. No. 1,015,491; Jan. 23; Sp. p. 5311; Gaz. vol. 174; p. 910.

Hawes, Ithamar C., Sherman, Conn. Nut-lock. No. 1,016,146; Jan. 30; Sp. p. 6696; Gaz. vol. 174; p. 1164.

Hawkes, Frederic W., New York, N. Y. Work-box. No. 1,014,060; Jan. 9; Sp. p. 2174; Gaz. vol. 174; p. 364.

Hawkins, Francis F., Troy, N. Y. Flushing device. No. 1,014,301; Jan. 9; Sp. p. 2686; Gaz. vol. 174; p. 448.

Hawley, Edwin H., Washington, D. C. Sound-producing instrument. No. 1,014,302; Jan. 9; Sp. p. 2689; Gaz. vol. 174; p. 449.

Hawley, Eugene W., Philadelphia, Pa. Garment-supporter for wardrobe-trunks. No. 1,014,392; Jan. 9; Sp. p. 2904; Gaz. vol. 174; p. 481.

Hawley, W. P. (See Fuller, Frederick H., assignor.)

Hayden, Levi C. (See Graham, David P., assignor.)

Hays, Franklin B. (See Dinkins and Hays.)

Haywood, Daniel H. (See Cook and Haywood.)

Haywood, Flora G., executrix. (See Cook and Haywood.)

Hazard, Frank A., assignor to J. T. Kavenaugh, New York, N. Y. Back-stop attachment for paper-feeds. No. 1,014,147; Jan. 9; Sp. p. 2349; Gaz. vol. 174; p. 393.

Hazel, Henry M., and A. S. Coltharp, Tallulah, La. Car-door. No. 1,013,770; Jan. 2; Sp. p. 1504; Gaz. vol. 174; p. 238.

Hazen, Louise A., Fairfield township, Crawford county, Pa. Auxiliary vehicle-seat. No. 1,015,799; Jan. 30; Sp. p. 5962; Gaz. vol. 174; p. 1043.

Heany, John A., Flint, Mich. Electric welding machine. No. 1,015,492; Jan. 23; Sp. p. 5314; Gaz. vol. 174; p. 911.

Heath, Arthur M., Artesia, N. Mex. Nut-lock. No. 1,016,147; Jan. 30; Sp. p. 6697; Gaz. vol. 174; p. 1164.

Hedman, Erik G., Stockholm, Sweden. Automatic weighing apparatus. No. 1,015,561; Jan. 23; Sp. p. 5450; Gaz. vol. 174; p. 933.

Heer, Henry, Ogden, Kans. Plow. No. 1,014,470; Jan. 9; Sp. p. 3048; Gaz. vol. 174; p. 505.

Heilman, John G. (See Ries, Frank, assignor.)

Hein, Jacob J., *et al.* (See Conkell, Elias W., assignor.)

Heinz, Paul, assignor to Ste des Télégraphes Multiplex, (System E. Mercadier,) Paris, France. Monotelephone-relay. No. 1,014,220; Jan. 9; Sp. p. 2502; Gaz. vol. 174; p. 420.

Heinemann, Fritz, Hamburg, Germany. Combined rail joint and chair. No. 1,015,437; Jan. 23; Sp. p. 5187; Gaz. vol. 174; p. 891.

Heinicke, Julius G., Richmond Hill, N. Y. Display-box. No. 1,016,148; Jan. 30; Sp. p. 6698; Gaz. vol. 174; p. 1164.

Heinrich, William, Mosgrove, Pa. Trolley-retainer for dumping-buckets. No. 1,015,179; Jan. 16; Sp. p. 4606; Gaz. vol. 174; p. 777.

Heinss, Christian F., Cincinnati, Ohio. Vehicle-wheel. No. 1,015,888; Jan. 30; Sp. p. 6156; Gaz. vol. 174; p. 1073.

Heitman, C. E., New York, N. Y., assignor to H. Lange, Dorchester, Mass. Fluid-tight expansion-joint. No. 1,015,180; Jan. 16; Sp. p. 4607; Gaz. vol. 174; p. 777.

Helder, Draper D., Settlers township, Sioux county, Iowa. Muffler. No. 1,015,955; Jan. 30; Sp. p. 6294; Gaz. vol. 174; p. 1095.

Heldmann, Peter, assignor to Maschinenfabrik Moenus A. G., Frankfort-on-the-Main, Germany. Belt-sewing machine. No. 1,015,438; Jan. 23; Sp. p. 5188; Gaz. vol. 174; p. 892.

Helfenstein, Alois, Vienna, Austria-Hungary. Smelting-furnace with electric refining-hearths connected thereto. No. 1,015,439; Jan. 23; Sp. p. 5103; Gaz. vol. 174; p. 892.

Hellberg, Pontus, London, England. Slitting and winding mechanism. No. 1,013,400; Jan. 2; Sp. p. 879; Gaz. vol. 174; p. 140.

Heller, Herman S., San Francisco, Cal. Garment-fastener. No. 1,014,148; Jan. 9; Sp. p. 2350; Gaz. vol. 174; p. 393.

Helman, Ralph P., Los Angeles, Cal. Oven. No. 1,014,149; Jan. 9; Sp. p. 2352; Gaz. vol. 174; p. 393.

Helmick, Clarence E., and W. E. Adler, La Grande, Oreg. Hay-stacker. No. 1,015,440; Jan. 23; Sp. p. 5195; Gaz. vol. 174; p. 892.

Hemphill, Joshua D., Central Falls, R. I. Sinker-actuating means for revoluble-cylinder knitting-machines. No. 1,015,733; Jan. 23; Sp. p. 5825; Gaz. vol. 174; p. 993.

Henderson, George R., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Locomotive. No. 1,013,771; Jan. 2; Sp. p. 1506; Gaz. vol. 174; p. 238.

Hendrickson, Frederick V., Kellettville, Pa. Wrench. No. 1,015,181; Jan. 16; Sp. p. 4609; Gaz. vol. 174; p. 777.

Henninger, Friedrich, Deutz, near Cologne, Germany. Reversing mechanism for internal-combustion engines. No. 1,013,491; Jan. 2; Sp. p. 880; Gaz. vol. 174; p. 141.

Henriques, Charles O., Jersey City, N. J. Producing art-plaques. No. 1,014,472; Jan. 9; Sp. p. 3050; Gaz. vol. 174; p. 506.

Henry G. Thompson & Son Company, The. (See Carr, James, assignor.)

Henry, George L., assignor to The Henry Manufacturing Company, New York, N. Y. Starting device for internal-combustion engines. No. 1,015,272; Jan. 16; Sp. p. 4802; Gaz. vol. 174; p. 808.

Henry Manufacturing Company, The. (See Henry, George L., assignor.)

Henry R. Worthington. (See Mueller, Otto H., assignor.)

Henson, John W., New York, N. Y. Sealed package. No. 1,016,149; Jan. 30; Sp. p. 6699; Gaz. vol. 174; p. 1164.

Herbert, John W., Natick, R. I. Loom. No. 1,016,000; Jan. 30; Sp. p. 6413; Gaz. vol. 174; p. 1116.

Herbin, Frederick L., Swampscott, assignor of one-half to T. J. Gallivan, Lynn, Mass. Folding rack. No. 1,015,182; Jan. 16; Sp. p. 4610; Gaz. vol. 174; p. 778.

Hering, Ardo, Philadelphia, Pa. Stand. No. 1,015,183; Jan. 16; Sp. p. 4613; Gaz. vol. 174; p. 778.

Herisse, Emile, New York, N. Y. Depositing-machine. No. 1,014,874; Jan. 16; Sp. p. 3986; Gaz. vol. 174; p. 674.

Hermann, Adalbert, Vienna, Austria-Hungary. Device for making plates of artificial stone. No. 1,014,221; Jan. 9; Sp. p. 2504; Gaz. vol. 174; p. 420.

Hermann, Franziska, East Helena, Mont. Hat-trimming stand. No. 1,014,393; Jan. 9; Sp. p. 2905; Gaz. vol. 174; p. 481.

Herold, Oswald M., Gardner, Mass. Holder for registration-numbers. No. 1,014,471; Jan. 9; Sp. p. 3049; Gaz. vol. 174; p. 506.

Herren, Robert C., Kenton, Ohio. Humidifier. No. 1,013,772; Jan. 2; Sp. p. 1508; Gaz. vol. 174; p. 238.

Herrick, Gerardus P., New York, N. Y. Rotary engine. No. 1,014,150; Jan. 9; Sp. p. 2354; Gaz. vol. 174; p. 394.

Herring Brothers. (See Johnson, Jack, assignor.)

Hertzberg, Harry. (See Low, Hertzberg, and Wohl.)

Hertzberg, Harry. (See Wohl and Hertzberg.)

Heskett, Fred R., Alton, Ill. Carrier for radiators. No. 1,014,303; Jan. 9; Sp. p. 2690; Gaz. vol. 174; p. 449.

Hess-Bright Manufacturing Company, The. (See Hess, Henry, assignor.)

Hess, Henry, Wawa, assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa. Separator for ball-bearings. No. 1,015,441; Jan. 23; Sp. p. 5197; Gaz. vol. 174; p. 893.

Hess, Henry K., Philadelphia, Pa., assignor to American Copper Extracting and Refining Company. Recovering copper from its ores. No. 1,014,061; Jan. 9; Sp. p. 2175; Gaz. vol. 174; p. 364.

Hesse, John J., Boston, Mass. Driving mechanism. No. 1,016,010; Jan. 30; Sp. p. 6414; Gaz. vol. 174; p. 1116.

Hester, William D., Durham, N. C. Spring-wheel. No. 1,013,656; Jan. 2; Sp. p. 1252; Gaz. vol. 174; p. 196.

Hettrich, John, Lincoln, Nebr. Corn-harvester. No. 1,014,473; Jan. 9; Sp. p. 3051; Gaz. vol. 174; p. 506.

Heublein, William A., Wilson, Minn. Hay-rack. No. 1,015,228; Jan. 16; Sp. p. 4705; Gaz. vol. 174; p. 793.

Heuser, Ralph V., Waterbury, Conn., assignor to The Roessler & Hasslacher Chemical Co., Perth Amboy, N. J. Primary battery. No. 1,015,734; Jan. 23; Sp. p. 5829; Gaz. vol. 174; p. 993.

Heuser, Ralph V., Waterbury, Conn., assignor to Roessler & Hasslacher Chemical Co., Perth Amboy, N. J. Primary battery. No. 1,015,735; Jan. 23; Sp. p. 5832; Gaz. vol. 174; p. 994.

Hewitt, Frank E., Toronto, Ontario, Canada. Electric heating element. No. 1,014,875; Jan. 16; Sp. p. 3990; Gaz. vol. 174; p. 675.

Hewitt, George H., Jr., Jersey City, N. J. Game. No. 1,013,161; Jan. 2; Sp. p. 146; Gaz. vol. 174; p. 25.

Hewitt, Peter C., New York, N. Y., assignor to Cooper Hewitt Electric Company. Vapor electric lamp and connection. No. 1,014,705; Jan. 16; Sp. p. 3593; Gaz. vol. 174; p. 615.

Hewitt, Peter C., Ringwood Manor, N. J., assignor to Cooper Hewitt Electric Company. Vapor electric lamp and connection. No. 1,014,965; Jan. 16; Sp. p. 4187; Gaz. vol. 174; p. 705.

Hewlett, Charlotte W., New York, N. Y. Garment-hanger. No. 1,014,597; Jan. 9; Sp. p. 3281; Gaz. vol. 174; p. 547.

Hiatt, William F., Pittsboro, Ind. Lightning-arrester. No. 1,014,876; Jan. 16; Sp. p. 3991; Gaz. vol. 174; p. 675.

Hickman, Samuel, Springfield, Ohio. Wheeled harrow. No. 1,015,956; Jan. 30; Sp. p. 6295; Gaz. vol. 174; p. 1096.

Hicks, Clarence E. (See Hicks, Elmer and C. E.)

Hicks, Elmer and C. E., Montezuma, Iowa. Belt-holder for engines. No. 1,013,388; Jan. 2; Sp. p. 660; Gaz. vol. 174; p. 104.

Hickton, Charles, assignor of one-half to W. P. Smith and one-half to J. P. Newton, Long Eaton, England. Machine-output-indicating device. No. 1,013,389; Jan. 2; Sp. p. 662; Gaz. vol. 174; p. 105.

Higginbotham, Ezekiel H. (See Higginbotham, Tolliver S. and E. H.)

Higginbotham, Tolliver S. and E. H., Anson, Tex. Photographic-printing machine. No. 1,013,492; Jan. 2; Sp. p. 883; Gaz. vol. 174; p. 141.

Higgins, Francis W., assignor to The Carborundum Company, Niagara Falls, N. Y. Making abrasive articles. No. 1,013,657; Jan. 2; Sp. p. 1252; Gaz. vol. 174; p. 197.

High Frequency Ignition Coil Company. (See Seeley, James E., assignor.)

Higley Machine Company. (See Juengst, Charles A., assignor.)

Hildebrand, Fritz. (See Hildebrand, Heinrich, H., and F.)

Hildebrand, Hans. (See Hildebrand, Heinrich, H., and F.)

Hildebrand, Heinrich, H., and F., Berlin, Germany. Vapor-engine. No. 1,013,773; Jan. 2; Sp. p. 1510; Gaz. vol. 174; p. 239.

Hill, Commodore P. (See Tesreau, Sundman, and Hill.)

Hill, James J., St. Paul, Minn. Track-level machine. No. 1,014,648; Jan. 16; Sp. p. 3479; Gaz. vol. 174; p. 596.

Hill, Webster H. (See Montgomery and Hill.)

Hilliard, John D., Jr., and C. E. Parsons, Glens Falls, assignors to J. E. Way, New York, N. Y. Insulator. No. 1,015,229; Jan. 16; Sp. p. 4709; Gaz. vol. 174; p. 793.

Hilton Manufacturing Company. (See Hilton, Roland C., assignor.)

Hilton, Roland C., Quincy, assignor to Hilton Manufacturing Company, Boston, Mass. Safety cranking device. No. 1,013,878; Jan. 9; Sp. p. 1766; Gaz. vol. 174; p. 302.

Himoff, Max, New York, N. Y. Strip-moistening machine. No. 1,016,011; Jan. 30; Sp. p. 6416; Gaz. vol. 174; p. 1116.

Hinsky, Anthony P., Brooklyn, N. Y. Starting device for internal-combustion engines. No. 1,013,203; Jan. 2; Sp. p. 462; Gaz. vol. 174; p. 71.

Hirsch, Firm of D. (See Wendler, Adolph, assignor.)

Hirshheimer, Albert. (See Davis, Frank E., assignor.)

Hist, John, Berea, Ohio. Potato-digger. No. 1,014,394; Jan. 9; Sp. p. 2906; Gaz. vol. 174; p. 481.

Hiteshew, Harvey B., Pittsburgh, Pa. Bath-tub extension. No. 1,013,162; Jan. 2; Sp. p. 149; Gaz. vol. 174; p. 25.

Hitner, Harry F., Pittsburgh, Pa., assignor to Burke Electric Company. Alternating-current motor. No. 1,014,001; Jan. 9; Sp. p. 2043; Gaz. vol. 174; p. 344.

Hixson, Clinton J., East Orange, N. J. Circuit-interrupter. No. 1,015,442; Jan. 23; Sp. p. 5198; Gaz. vol. 174; p. 893.

Hobbs, James D. (See Dyer and Hobbs.)

Hobin, Martin, Philadelphia, Pa., assignor of one-half to W. H. Hobin, Indianapolis, Ind. Fan attachment for rocking-chairs. No. 1,013,879; Jan. 9; Sp. p. 1768; Gaz. vol. 174; p. 303.

Hobin, William H. (See Hobin, Martin, assignor.)

Hodges, William S., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Spring. No. 1,013,774; Jan. 2; Sp. p. 1511; Gaz. vol. 174; p. 239.

Hodgkinson, Francis, Edgewood Park, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Longitudinal adjusting means for turbine-rotors. No. 1,015,315; Jan. 23; Sp. p. 4910; Gaz. vol. 174; p. 850.

Hoey, John, San Francisco, Cal. Couch. No. 1,014,877; Jan. 16; Sp. p. 3993; Gaz. vol. 174; p. 675.

Hoffman, Edgar O. (See Carpenter and Hoffman.)

Hoffman, Israel, New York, N. Y. Receptacle for garbage and waste paper. No. 1,013,775; Jan. 2; Sp. p. 1512; Gaz. vol. 174; p. 240.

Hoffman, Israel, New York, N. Y. Combined cane and tobacco-pipe. No. 1,013,776; Jan. 2; Sp. p. 1513; Gaz. vol. 174; p. 240.

Hoffmann, Robert, Ortelsburg, Germany. Apparatus for macerating wort. No. 1,015,443; Jan. 23; Sp. p. 5200; Gaz. vol. 174; p. 894.

Hofstetter, Christian S. (See Berry, John W., assignor.)

Hogan, James T., Jersey City, N. J., assignor, by mesne assignments, to The Singer Manufacturing Company. Tension device for sewing-machines. No. 1,013,163; Jan. 2; Sp. p. 151; Gaz. vol. 174; p. 26.

Hogan, John L., Jr., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa. Apparatus for wireless signaling. No. 1,014,002; Jan. 9; Sp. p. 2044; Gaz. vol. 174; p. 345.

Holcomb, William A., Pebworth, Ky. Wire-stretching device. No. 1,015,184; Jan. 16; Sp. p. 4614; Gaz. vol. 174; p. 778.

Holladay, Gray C. (See Parker, George, assignor.)

Holland-Letz, Lud, Chicago, Ill., assignor to International Harvester Company. Motor attachment for harvesters. No. 1,014,823; Jan. 16; Sp. p. 3864; Gaz. vol. 174; p. 656.

Holliday, John S., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for governing the passage of cars or vehicles along a railway and the control thereof. No. 1,014,966; Jan. 16; Sp. p. 4188; Gaz. vol. 174; p. 705.

Holliday, William A., Paradise, Tex. Apparatus for administering medicine to live stock. No. 1,014,474; Jan. 9; Sp. p. 3053; Gaz. vol. 174; p. 506.

Hollifield, Horatio B., Washington, D. C. Practice apparatus for small-arms. No. 1,016,150; Jan. 30; Sp. p. 6700; Gaz. vol. 174; p. 1164.

Hollings, Thomas E. (See Walker and Hollings.)

Hollingsworth, William G., Sheboygan, Wis. Liquid-dispensing machine. No. 1,015,680; Jan. 23; Sp. p. 5703; Gaz. vol. 174; p. 975.

Hollis, Warren T., Boston, Mass. Machine for measuring surface areas. No. 1,016,012; Jan. 30; Sp. p. 6419; Gaz. vol. 174; p. 1117.

Holloway, Chester L., Passaic, assignor to Richardson Scale Company, Athenia, N. J. Refuse-receptacle. No. 1,014,475; Jan. 9; Sp. p. 3054; Gaz. vol. 174; p. 507.

Hollowell, William S., *et al.* (See Gibson, George H., assignor.)

Holm, Charlotte C., *et al.*, executors. (See Holm, Peter J.)

Holm, John H., *et al.*, executors. (See Holm, Peter J.)

Holm, Peter J., deceased; J. H. and C. C. Holm, Eau Claire, Wis., executors. Governor for internal-combustion engines. No. 1,015,889; Jan. 30; Sp. p. 6158; Gaz. vol. 174; p. 1073.

Holmes, Gwyllym R., assignor of one-fourth to F. Porto and one-fourth to J. Deluca, Baltimore, Md. Incandescent-lamp filament. No. 1,014,878; Jan. 16; Sp. p. 3994; Gaz. vol. 174; p. 675.

Holt, George M., assignor to L. F. Boothe, Spokane, Wash. Water-elevator. No. 1,014,879; Jan. 16; Sp. p. 3996; Gaz. vol. 174; p. 676.

Holtz, George A., Riverside, Cal. Combined bolt-board and sample-holder. No. 1,014,304; Jan. 9; Sp. p. 2691; Gaz. vol. 174; p. 449.

Home Vacuum Cleaner Company. (See Rubel, Simon L., assignor.)

Honegger, Emil, assignor to Maschinenfabrik, Oerlikon, Oerlikon, Switzerland. Press. No. 1,016,070; Jan. 30; Sp. p. 6558; Gaz. vol. 174; p. 1138.

Honold, Gottlob, Stuttgart, Germany, M. Rail, Paris, France, and P. Mumprecht, Brussels, Belgium, assignors to Firm of R. Bosch, Stuttgart, Germany. Electric ignition system for internal-combustion engines. No. 1,014,824; Jan. 16; Sp. p. 3866; Gaz. vol. 174; p. 656.

Hood, Alexander J., Muscoda, Wis. Counter for platen printing-presses. No. 1,014,476; Jan. 9; Sp. p. 3056; Gaz. vol. 174; p. 507.

Hoofnagle, William T., Glen Ridge, N. J. Apparatus for the electrical treatment of vapors or gases. No. 1,014,151; Jan. 9; Sp. p. 2360; Gaz. vol. 174; p. 394.

Hooper, George K., Madison, N. J. Duplex spout for furnaces. No. 1,016,013; Jan. 30; Sp. p. 6420; Gaz. vol. 174; p. 1117.

Hoopes, Henry R. (See Selah, Howard A., assignor.)

Hopkins, Albert J. (See Trotter, James, assignor.)

Hoppe, Mamie N., Hesperia, Mich. Press. No. 1,014,222; Jan. 9; Sp. p. 2507; Gaz. vol. 174; p. 421.

Horn, Eli, and E. Sherman, Louisville, Ky. Machine for inserting corks in bottles. No. 1,013,493; Jan. 2; Sp. p. 885; Gaz. vol. 174; p. 141.

Horne, Henry J. (See Moon and Horne.)

Horne, James. (See Dawson and Horne.)

Horne, Will R., Glade, Cal. Brush-grubber. No. 1,013,939; Jan. 9; Sp. p. 1802; Gaz. vol. 174; p. 324.

Horton, Jonathan B., Elkin, N. C. Blackboard. No. 1,013,551; Jan. 2; Sp. p. 1004; Gaz. vol. 174; p. 161.

Horton Manufacturing Company, The. (See Tredwell, Charles A., assignor.)

Hough, Edward S. (See Bass and Hough.)

Houghton, Lewis T., Worcester, Mass. Mechanism for reciprocating planer-beds or similar purposes. No. 1,014,706; Jan. 16; Sp. p. 3594; Gaz. vol. 174; p. 616.

Howe, Adrian S., Colton, Cal. Choker logging-hook. No. 1,015,493; Jan. 23; Sp. p. 5317; Gaz. vol. 174; p. 911.

Howell, Edward, *et al.* (See McGill, Charles E., assignor.)

Howell, Fred B., Schenectady, N. Y., assignor to General Electric Company. Electric locomotive. No. 1,014,825; Jan. 16; Sp. p. 3870; Gaz. vol. 174; p. 657.

Hoxie, John C. (See Brown and Hoxie.)

Hoyt, Guy L., New York, assignor to Robert Gair Company, Brooklyn, N. Y. Feed-regulator for fine material. No. 1,014,003; Jan. 9; Sp. p. 2046; Gaz. vol. 174; p. 345.

Hoyt, William E., New York, N. Y. Sad-iron. No. 1,015,185; Jan. 16; Sp. p. 4615; Gaz. vol. 174; p. 779.

Hubbard, Arthur O., Minneapolis, Minn. Wheelbarrow. No. 1,015,024; Jan. 16; Sp. p. 4311; Gaz. vol. 174; p. 725.

Hubbell, Harvey, assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn. Electric-lamp socket. (Reissue.) No. 13,353; Jan. 9; Sp. p. 3413; Gaz. vol. 174; p. 564.

Huber, Charles, *et al.* (See McGill, Charles E., assignor.)

Huber, Jacob, Blakesburg, Iowa. Cement fence-post. No. 1,016,151; Jan. 30; Sp. p. 6703; Gaz. vol. 174; p. 1165.

Huber, John F., assignor to C. W. Zimmer, Buffalo, N. Y. Account-file. No. 1,015,444; Jan. 23; Sp. p. 5201; Gaz. vol. 174; p. 894.

Huber, Lewis W., Brookville, Pa. Nut-lock. No. 1,015,316; Jan. 23; Sp. p. 4912; Gaz. vol. 174; p. 850.

Hubert, Conrad. (See Volkmar, Bernhard, assignor.)

Hubertusmühle mit beschränkter Haftung. (See Marmetschke, Ernst, assignor.)

Hudlow, John W., Minneapolis, and J. M. Chapman, Garden City, Minn. Cream-separator. No. 1,013,164; Jan. 2; Sp. p. 154; Gaz. vol. 174; p. 26.

Hudson, Homer. (See Morris and Hudson.)

Huebner, William C., assignor of one-half to G. Bleistein, Buffalo, N. Y. Photographic-printing machine. No. 1,015,681; Jan. 23; Sp. p. 5705; Gaz. vol. 174; p. 976.

Huenefeld Company, The. (See Huenefeld, Walter E., assignor.)

Huenefeld, Walter E., assignor to The Huenefeld Company, Cincinnati, Ohio. Oven-door. No. 1,013,390; Jan. 2; Sp. p. 668; Gaz. vol. 174; p. 105.
Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Universal joint. No. 1,015,267; Jan. 16; Sp. p. 4793; Gaz. vol. 174; p. 807.
Huffaker, Francis W. (See Hathaway and Huffaker.)
Huggins, Merion J. (See Osland and Huggins.)
Hughes, Harry H., St. Louis, Mo. Producing zinc oxid. No. 1,014,062; Jan. 9; Sp. p. 2177; Gaz. vol. 174; p. 364.
Hull, Joseph V., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y. Closure for bottles, jars, and other receptacles. No. 1,013,391; Jan. 2; Sp. p. 669; Gaz. vol. 174; p. 106.
Hull, Joseph V., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y. Closure for bottles, jars, and other receptacles. No. 1,013,392; Jan. 2; Sp. p. 670; Gaz. vol. 174; p. 106.
Hull, Joseph V., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y. Closure for bottles, jars, and other receptacles. No. 1,013,393; Jan. 2; Sp. p. 673; Gaz. vol. 174; p. 106.
Hull, Joseph V., assignor, by mesne assignments, to Sure Seal Company, Brooklyn, N. Y. Closure for bottles, jars, and other receptacles. No. 1,013,394; Jan. 2; Sp. p. 677; Gaz. vol. 174; p. 107.
Hull, Robert C., Philadelphia, Pa. System of electrical distribution. No. 1,014,395; Jan. 9; Sp. p. 2908; Gaz. vol. 174; p. 482.
Humann, Alex. (See Teisler, Emil, assignor.)
Humel, Frank J., assignor to National Carbon Company, Cleveland, Ohio. Dry cell. No. 1,015,317; Jan. 23; Sp. p. 4913; Gaz. vol. 174; p. 851.
Humfeld, William H., Kansas City, Mo. Vehicle-wheel. No. 1,015,186; Jan. 16; Sp. p. 4617; Gaz. vol. 174; p. 779.
Humiston, John M., Berwyn, Ill. Pole-erecting apparatus. No. 1,014,477; Jan. 9; Sp. p. 3058; Gaz. vol. 174; p. 508.
Humphrey, Alfred H., New York, N. Y. Mantle-support for gas-lamps. No. 1,015,562; Jan. 23; Sp. p. 5453; Gaz. vol. 174; p. 934.
Humphrey, Frederick J. and H. R., assignors to General Gas Light Company, Kalamazoo, Mich. Gas-lamp. No. 1,015,563; Jan. 23; Sp. p. 5455; Gaz. vol. 174; p. 934.
Humphrey, Frederick J. and H. R., assignors to General Gas Light Company, Kalamazoo, Mich. Gas-lamp. No. 1,015,564; Jan. 23; Sp. p. 5457; Gaz. vol. 174; p. 935.
Humphrey, Hubert R. (See Humphrey, Frederick J. and H. R.)
Huncker, Lewis D., Ravenna, Nebr. Bed-spring frame. No. 1,016,152; Jan. 30; Sp. p. 6704; Gaz. vol. 174; p. 1165.
Hunsicker, Edwin S., Norristown, Pa. Trap for wash-stands. No. 1,014,223; Jan. 9; Sp. p. 2508; Gaz. vol. 174; p. 421.
Hunt, George W., New York, N. Y. Pipe-clamp. No. 1,013,165; Jan. 2; Sp. p. 156; Gaz. vol. 174; p. 27.
Hunt, Harry V., Jersey City, N. J. Governor. No. 1,014,754; Jan. 16; Sp. p. 3699; Gaz. vol. 174; p. 631.
Hunt, Louis J., Sandycroft, England. Dynamo-electric machine. (Reissue.) No. 13,354; Jan. 9; Sp. p. 3414; Gaz. vol. 174; p. 564.
Hunt, Ozello R., Chicago, Ill., assignor to The Simmons Mfg. Co., Kenosha, Wis. Mattress and bed spring. No. 1,013,294; Jan. 2; Sp. p. 463; Gaz. vol. 174; p. 72.
Hunter, Benjamin F., Cincinnati, Ohio. Dolly-cabinet. No. 1,014,598; Jan. 9; Sp. p. 3282; Gaz. vol. 174; p. 547.
Hunter, Guy. (See Walker and Hunter.)
Hunter, Rudolph M. (See Lofton, Butler, and Hunter.)
Hunter, Rudolph M., Philadelphia, Pa. Refrigerating apparatus. No. 1,015,957; Jan. 30; Sp. p. 6297; Gaz. vol. 174; p. 1096.
Hunter, William N., Blanchester, Ohio. Sound-reproducer for talking-machines, telephones, &c. No. 1,015,622; Jan. 23; Sp. p. 5583; Gaz. vol. 174; p. 956.
Hurley Hercules Pneumatic Tire Company. (See Shoemaker, Alvin H., assignor.)
Hurley, John W., *et al.* (See Shoemaker, Alvin H., assignor.)
Hussey, John R., Indianapolis, Ind. Sliding-door construction. No. 1,015,025; Jan. 16; Sp. p. 4313; Gaz. vol. 174; p. 726.
Hutches, Benjamin F., Jr., Allendale, N. J. Electromotor. No. 1,013,494; Jan. 2; Sp. p. 887; Gaz. vol. 174; p. 141.
Hutches, Benjamin F., Jr., Allendale, N. J. Speed-regulator for electromotors. No. 1,014,707; Jan. 16; Sp. p. 3597; Gaz. vol. 174; p. 616.
Hutcheson, Earl H. (See Christian and Hutcheson.)
Hutchings, William, Duluth, Minn. Combined iron rest, polisher, and waxer. No. 1,014,478; Jan. 9; Sp. p. 3062; Gaz. vol. 174; p. 508.
Hutchinson, Mackintosh, Toronto, Ontario, Canada. Sawing-machine. No. 1,014,708; Jan. 16; Sp. p. 3599; Gaz. vol. 174; p. 616.
Hutchison, Frank P. (See Barrett, James G., assignor.)
Hutten, Edwin P., East Rutherford, N. J., and J. McDougall, New York, N. Y. Folding eyeglasses. No. 1,016,153; Jan. 30; Sp. p. 6706; Gaz. vol. 174; p. 1165.
Hyde, Alfred D., Iselin, N. J. Fastening device. No. 1,015,890; Jan. 30; Sp. p. 6160; Gaz. vol. 174; p. 1074.
Hyde, Marcus L., Chicago, Ill., assignor to W. D. Ord, Landgraff, W. Va. Dump-car. No. 1,014,396; Jan. 9; Sp. p. 2910; Gaz. vol. 174; p. 482.
Hydrocarbon Converter Company. (See Benham, Elijah B., assignor.)
Hyle, Jacob A., and J. A. Pement, Chicago, Ill. Railway-tie and rail-fastening. No. 1,013,395; Jan. 2; Sp. p. 678; Gaz. vol. 174; p. 107.
Hyman, Aaron, *et al.* (See Page, Herbert J., assignor.)
Ifland, William, New York, N. Y. Shade holder or guard for incandescent lamps. No. 1,016,223; Jan. 30; Sp. p. 6833; Gaz. vol. 174; p. 1188.
Ikeda, Kikunae, and S. Suzuki, Tokyo, Japan. Separating glutamic acid and other products of hydrolysis of albuminous substances from one another by electrolysis. No. 1,015,891; Jan. 30; Sp. p. 6161; Gaz. vol. 174; p. 1074.
Ikelheimer, Israel E. (See McCloud, Michael J., assignor.)
Imlay, William L., Philadelphia, Pa. Apparatus for recovering gold and silver by use of cyanid solutions. No. 1,014,224; Jan. 9; Sp. p. 2509; Gaz. vol. 174; p. 421.
Imler, Albert E., Kalkaska, Mich. Friction driving mechanism. No. 1,014,152; Jan. 9; Sp. p. 2362; Gaz. vol. 174; p. 394.
Improved Equipment Company, The. (See Laird, Wilbur G., assignor.)
Incandescent Light & Stove Company, The. (See Stubbers, Joseph, assignor.)
Indiana Manufacturing Company, The. (See Sharpe, Joseph K., Jr., assignor.)
Ingersoll-Rand Company. (See Prellwitz, William, assignor.)
Ingles, Edwin F. (See Boden and Ingles.)
Ingoldsby Automatic Car Company, The. (See Ingoldsby, Frank S., assignor.)
Ingoldsby, Frank S., assignor to The Ingoldsby Automatic Car Company, St. Louis, Mo. Dump-car. No. 1,013,552; Jan. 2; Sp. p. 1005; Gaz. vol. 174; p. 161.
Ingram, Ralph B., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Lightning-arrester. No. 1,013,166; Jan. 2; Sp. p. 158; Gaz. vol. 174; p. 27.
Ingram, Ralph B., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Mercury-converter. No. 1,015,958; Jan. 30; Sp. p. 6302; Gaz. vol. 174; p. 1096.
Inman, Gilbert H., Camden, N. J. Safety device for elevators. No. 1,016,014; Jan. 30; Sp. p. 6422; Gaz. vol. 174; p. 1118.
International Harvester Company. (See Dennis, Samuel K., assignor.)
International Harvester Company. (See Holland-Letz, Lud, assignor.)
International Harvester Company. (See Larson, James C., assignor.)
International Harvester Company. (See Pearson, Charles, assignor.)
International Steam Pump Company. (See Jennings, Arthur B., assignor.)
International Taxameter Company of America. (See Decker, Alonzo G., assignor.)
Irby, Wiley R., assignor of one-half to J. Moulder, West Middleton, Ind. Fruit-gatherer's and painter's ladder. No. 1,014,063; Jan. 9; Sp. p. 2179; Gaz. vol. 174; p. 365.
Ireland, Morris B., New York, N. Y. Clutch. No. 1,014,826; Jan. 16; Sp. p. 3871; Gaz. vol. 174; p. 657.
Irons, William E., Wilsoncreek, Wash. Car-wheel clamp. No. 1,016,154; Jan. 30; Sp. p. 6707; Gaz. vol. 174; p. 1165.
Irvin, Lesley B., Henegar, Ala. Trace-connector. No. 1,014,709; Jan. 16; Sp. p. 3601; Gaz. vol. 174; p. 617.
Irwin, Chester G., Ardmore, Pa. Bottle-holder. No. 1,014,004; Jan. 9; Sp. p. 2048; Gaz. vol. 174; p. 345.
Iverson, William H., Taylors Falls, Minn., and O. E. Rooth, St. Croix Falls, Wis. Bag-holder. No. 1,014,225; Jan. 9; Sp. p. 2514; Gaz. vol. 174; p. 422.
J. B. Stone Co. (See Conn, Joseph C., assignor.)
J. E. Mergott Company, The. (See Fisher, Abraham C., assignor.)
J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)
J. G. Jackson. (See Jackson, James G., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
J. L. Mott Iron Works, The. (See Bryon, Robert H., assignor.)
J. L. Schureman Co. (See Anderson, Carl J., assignor.)
J. M. Shock Absorber Company, The. (See Jacquet, Louis P. C. J., assignor.)
J. P. Seeburg Piano Company. (See Wiggin, Peter, assignor.)
Jack, Joe F., Los Angeles, Cal. Curing apparatus. No. 1,013,600; Jan. 2; Sp. p. 1100; Gaz. vol. 174; p. 177.
Jackson, Andrew L., Fort Worth, Tex. Cotton-harvesting machine. No. 1,014,880; Jan. 16; Sp. p. 3998; Gaz. vol. 174; p. 676.
Jackson, James G., assignor to J. G. Jackson, Limited, Glasgow, Scotland. Runner for grinding-machines. No. 1,013,777; Jan. 2; Sp. p. 1515; Gaz. vol. 174; p. 240.
Jackson, Ray P., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric-circuit interrupter. No. 1,013,167; Jan. 2; Sp. p. 160; Gaz. vol. 174; p. 27.
Jackson, Wayne, and W. E. Fry, Paola, Kans. Combination-tool. No. 1,015,026; Jan. 16; Sp. p. 4317; Gaz. vol. 174; p. 726.

Jacob, Jacob H., Peoria, Ill. Self-leveling table and chair. No. 1,015,230; Jan. 16; Sp. p. 4711; Gaz. vol. 174; p. 794.
Jacobs, Adolph R., Portland, Oreg. Weatherproof outing-garment. No. 1,015,231; Jan. 16; Sp. p. 4713; Gaz. vol. 174; p. 794.
Jacobs, Arthur L., assignor, by mesne assignments, to J. M. Jacobs, Boston, Mass. Electric-lamp socket. No. 1,013,658; Jan. 2; Sp. p. 1254; Gaz. vol. 174; p. 197.
Jacobs, Charles B., Port Chester, assignor to Murray and Jacobs Manufacturing Company, New York, N. Y. Resistant surface. No. 1,014,967; Jan. 16; Sp. p. 4195; Gaz. vol. 174; p. 706.
Jacobs, Jennie M. (See Jacobs, Arthur L., assignor.)
Jacobs, Lesser. (See Baker and Jacobs.)
Jacoby, Jacob, New York, N. Y. Nursing-waist. No. 1,013,778; Jan. 2; Sp. p. 1516; Gaz. vol. 174; p. 240.
Jacquet, Louis P. C. J., Neuilly-sur-Seine, near Paris, France, assignor to The J. M. Shock Absorber Company. Suspension-spring for vehicles. No. 1,015,682; Jan. 23; Sp. p. 5731; Gaz. vol. 174; p. 976.
James, Joseph C., Antioch, Ill. Visible signal. No. 1,015,585; Jan. 23; Sp. p. 5460; Gaz. vol. 174; p. 935.
Jameson, Roland L., assignor to H. W. Vaughan and J. H. Bennett, Hillsboro, Tex. Ice-cream freezer. No. 1,013,779; Jan. 2; Sp. p. 1517; Gaz. vol. 174; p. 241.
Jamieson, Wilburn W., Jr. (See Storer and Jamieson.)
Jänecke, Ernst, Hanover, Germany. Liquefying air and separating it into its elements. No. 1,015,800; Jan. 30; Sp. p. 5964; Gaz. vol. 174; p. 1043.
Janette, John T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,016,071; Jan. 30; Sp. p. 6559; Gaz. vol. 174; p. 1138.
Jankosky, Thomas, assignor of one-fourth to M. Swiecicki, Philadelphia, Pa. Nut-cracking device. No. 1,013,168; Jan. 2; Sp. p. 163; Gaz. vol. 174; p. 28.
Jankowski, Thomas, assignor of one-fourth to M. Swiecicki, Philadelphia, Pa. Curtain-pole. No. 1,013,169; Jan. 2; Sp. p. 164; Gaz. vol. 174; p. 28.
Jaques, Fernando O., Jr., Cranston, assignor to The Central Tool Company, Providence, R. I. Dental press. No. 1,013,940; Jan. 9; Sp. p. 1903; Gaz. vol. 174; p. 324.
Javins, Harry A., Oakland, Cal., assignor to Javins-McGeehan Manufacturing Company. Wall-bed weights. No. 1,015,318; Jan. 23; Sp. p. 4914; Gaz. vol. 174; p. 851.
Javins-McGeehan Manufacturing Company. (See Javins, Harry A., assignor.)
Jefferies, Fredrick L., Granite City, Ill., and W. Spain, St. Louis, Mo., assignors to Corn Products Refining Company. Apparatus for handling cans and the like. No. 1,015,319; Jan. 23; Sp. p. 4915; Gaz. vol. 174; p. 851.
Jefferies, Fredrick L., Granite City, Ill., and W. Spain, St. Louis, Mo., assignors to Corn Products Refining Company. Capping-machine for cans. No. 1,015,320; Jan. 23; Sp. p. 4918; Gaz. vol. 174; p. 852.
Jefferson, George F., Houston, Tex. Bread-pan. No. 1,015,892; Jan. 30; Sp. p. 6164; Gaz. vol. 174; p. 1074.
Jeffery, Charles T., *et al.*, executors. (See Jeffery, Thomas B.)
Jeffery, Harold W., *et al.*, executors. (See Jeffery, Thomas B.)
Jeffery, Kate E., *et al.*, executors. (See Jeffery, Thomas B.)
Jeffery, Thomas B., deceased, Kenosha, Wis.; K. E., C. T., and H. W. Jeffery, executors. Vehicle-wheel. No. 1,013,295; Jan. 2; Sp. p. 465; Gaz. vol. 174; p. 72.
Jeffrey Manufacturing Company, The. (See Mueller, George H., assignor.)
Jenkins, Samuel E., Holcombs Rock, Va. Clothes-drier. No. 1,015,959; Jan. 30; Sp. p. 6304; Gaz. vol. 174; p. 1097.
Jennings, Arthur B., Hazleton, Pa., assignor to International Steam Pump Company. Pump. No. 1,014,153; Jan. 9; Sp. p. 2365; Gaz. vol. 174; p. 395.
Jennings, Victor H., assignor to Mills Woven Cartridge Belt Co., Worcester, Mass. Cartridge-belt. No. 1,015,801; Jan. 30; Sp. p. 5966; Gaz. vol. 174; p. 1043.
Jennings, William R. (See De Haven, James, assignor.)
Jennison, Samuel S., Cleveland, Ohio, assignor to The Denver Quartz Mill and Crusher Company, Denver, Colo. Quartz-mill. No. 1,014,305; Jan. 9; Sp. p. 2692; Gaz. vol. 174; p. 450.
Jensen, Lars C. (See Ross and Jensen.)
Jensen, Niels, Lincoln, assignor of one-half to E. L. Frye, Lawrence, Mass. Shipping-crate. No. 1,015,683; Jan. 23; Sp. p. 5733; Gaz. vol. 174; p. 976.
Jetté, Homer, Roxton Pond, Quebec, Canada. Door-fastener. No. 1,014,755; Jan. 16; Sp. p. 3702; Gaz. vol. 174; p. 632.
Jetter, Julius, assignor to Victor Talking Machine Company, Camden, N. J. Talking-machine. No. 1,013,170; Jan. 2; Sp. p. 165; Gaz. vol. 174; p. 28.
Jewett, Robert A. (See Greenlaw and Jewett.)
Jockmus, Charles H., Ansonia, Conn. Wind-shield clamp. No. 1,015,386; Jan. 23; Sp. p. 5072; Gaz. vol. 174; p. 874.
John B. Morris Machine Tool Company, The. (See Beeler, Herbert L., assignor.)
Johns-Pratt Company, The. (See Cole, Robert C., assignor.)
Johnson, Aron, New York, N. Y. Compensator. No. 1,016,155; Jan. 30; Sp. p. 6708; Gaz. vol. 174; p. 1166.
Johnson, Benjamin W., Crafton, Pa. Latches for double doors. No. 1,013,553; Jan. 2; Sp. p. 1009; Gaz. vol. 174; p. 162.
Johnson, Eldridge R., Philadelphia, Pa., assignor to Victor Talking Machine Company. Sound-conveying device for talking-machines. No. 1,015,321; Jan. 23; Sp. p. 4921; Gaz. vol. 174; p. 852.
Johnson, Eldridge R., Merion, Pa., and J. C. English, Camden, N. J., assignors to Victor Talking Machine Company. Talking-machine. No. 1,015,322; Jan. 23; Sp. p. 4924; Gaz. vol. 174; p. 852.
Johnson, Harry, Newcastle-under-Lyme, England. Means for gaging or measuring tiles. No. 1,013,396; Jan. 2; Sp. p. 680; Gaz. vol. 174; p. 107.
Johnson, Jack, assignor of two-thirds to Herring Brothers, Bolton, Miss. Insect-catcher. No. 1,016,156; Jan. 30; Sp. p. 6710; Gaz. vol. 174; p. 1166.
Johnson, John S., Fayette, Mich. Culinary device. No. 1,014,479; Jan. 9; Sp. p. 3063; Gaz. vol. 174; p. 508.
Johnson, Lawrence E., and J. Crowe, assignors to Specialty Shoe Machinery & Tool Company, St. Joseph, Mo. Shoe-nailing machine. No. 1,015,323; Jan. 23; Sp. p. 4930; Gaz. vol. 174; p. 853.
Johnson, Lorenzo, Louisville, Ky. Tool-sharpener. No. 1,016,072; Jan. 30; Sp. p. 6562; Gaz. vol. 174; p. 1139.
Johnson, Oliver J., Wheeling, W. Va. Grinding-machine. No. 1,014,306; Jan. 9; Sp. p. 2694; Gaz. vol. 174; p. 450.
Johnson, Oscar, Chicago, Ill. Locomotive-tender. No. 1,013,495; Jan. 2; Sp. p. 889; Gaz. vol. 174; p. 142.
Johnson, Thorwald, Chicago, Ill. Barrel-leveling machine. No. 1,014,756; Jan. 16; Sp. p. 3703; Gaz. vol. 174; p. 632.
Johnson, William O., Washington, D. C. Account-book. No. 1,013,659; Jan. 2; Sp. p. 1256; Gaz. vol. 174; p. 197.
Johnston, Gordon, Fort Riley, Kans. Combined curb and snaffle bit. No. 1,014,881; Jan. 16; Sp. p. 4001; Gaz. vol. 174; p. 676.
Johnston, Harry A. (See Nye and Cram, assignors.)
Joline, James S., and E. H. Wheeler, Long Branch, N. J. Hedge-trimmer. No. 1,014,480; Jan. 9; Sp. p. 3064; Gaz. vol. 174; p. 509.
Jones, Albert T., Salem, Mass. Counter-forming machine. No. 1,014,226; Jan. 9; Sp. p. 2515; Gaz. vol. 174; p. 422.
Jones, Alfred, Lancaster, assignor to Armstrong Cork Company, Pittsburgh, Pa. Machine for making inlaid linoleum. No. 1,014,397; Jan. 9; Sp. p. 2011; Gaz. vol. 174; p. 482.
Jones, Belden D., Chicago, Ill. Car-door. No. 1,015,387; Jan. 23; Sp. p. 5073; Gaz. vol. 174; p. 875.
Jones, Benjamin H., St. Louis, Mo. Assembling-tool. No. 1,013,171; Jan. 2; Sp. p. 167; Gaz. vol. 174; p. 29.
Jones, Benjamin L., Steubenville, Ohio. Metallic shelving. No. 1,013,172; Jan. 2; Sp. p. 168; Gaz. vol. 174; p. 29.
Jones, Charles W., St. Paul, Minn. Instrument-holder. No. 1,014,649; Jan. 16; Sp. p. 3480; Gaz. vol. 174; p. 597.
Jones, Ebenezer, Martins Ferry, Ohio, and J. Hall, Ingram, Pa. Sprocket-wheel for cutting-chains. No. 1,013,173; Jan. 2; Sp. p. 170; Gaz. vol. 174; p. 30.
Jones, Henry T., East Orange, N. J. Preparing resistant material and the product resulting therefrom. No. 1,014,882; Jan. 16; Sp. p. 4003; Gaz. vol. 174; p. 676.
Jones, James H. W., Corydon, Ky. Wire-stretcher. No. 1,013,397; Jan. 2; Sp. p. 681; Gaz. vol. 174; p. 108.
Jones, James T., Brookwood, Ala. Wrench. No. 1,013,174; Jan. 2; Sp. p. 170; Gaz. vol. 174; p. 30.
Jones, John C., *et al.* (See Gibson, George H., assignor.)
Jones, Lemuel I., Youngstown, Ohio, assignor to Excello Products Company, Detroit, Mich. Flushing device for waste-pipes. No. 1,013,175; Jan. 2; Sp. p. 172; Gaz. vol. 174; p. 30.
Jones, Parks D., Brazil, Ind. Square. No. 1,015,736; Jan. 23; Sp. p. 5834; Gaz. vol. 174; p. 994.
Jones, Richard M., London, England. Differential-axle device. No. 1,015,737; Jan. 23; Sp. p. 5835; Gaz. vol. 174; p. 995.
Jones, William T., assignor to Edmunds & Jones Mfg. Co., Detroit, Mich. Adjustable lens for headlight-lamps. No. 1,014,227; Jan. 9; Sp. p. 2532; Gaz. vol. 174; p. 422.
Jorgenson, John. (See Elliott and Jorgenson.)
Joseph Halsted Co. (See Seymour, Frederick C., assignor.)
Jost, Carl, Bombay, India. Air cooler and purifier. No. 1,016,157; Jan. 30; Sp. p. 6712; Gaz. vol. 174; p. 1166.
Jovanovich, Michael, New York, N. Y. Aeroplane. No. 1,013,601; Jan. 2; Sp. p. 1104; Gaz. vol. 174; p. 177.
Joy, John M. (See Bijur and Joy.)
Judah, Chester A., Mill Valley, and H. R. Sander, Oakland, Cal. Life-saving apparatus for aviators. No. 1,015,684; Jan. 23; Sp. p. 5735; Gaz. vol. 174; p. 977.
Judis, Charles, assignor to N. Loth, New York, N. Y. Hair ornament. No. 1,015,802; Jan. 30; Sp. p. 5967; Gaz. vol. 174; p. 1044.
Judson, Walter H., assignor to J. D. Rice, Oakland, Cal. Pulp-machine. No. 1,015,803; Jan. 30; Sp. p. 5968; Gaz. vol. 174; p. 1044.
Juengst, Charles A., assignor to Higley Machine Company, Croton Falls, N. Y. Clutch. No. 1,014,481; Jan. 9; Sp. p. 3066; Gaz. vol. 174; p. 509.
Jungers, John, Cedar Grove, Wis. Heater. No. 1,013,176; Jan. 2; Sp. p. 173; Gaz. vol. 174; p. 30.

Kaestner, Herman, Cudahy, Wis. Bulge-hoop for barrels. No. 1,014,005; Jan. 9; Sp. p. 2049; Gaz. vol. 174; p. 345.

Kahle, Eugene C., Oil City, Pa. Stuffing-box. No. 1,015,685; Jan. 23; Sp. p. 5738; Gaz. vol. 174; p. 977.

Kain, John J. (See Davis and Kain.)

Kaiser, Joseph M., Chicago, Ill. Pocket. No. 1,014,307; Jan. 9; Sp. p. 2697; Gaz. vol. 174; p. 450.

Kaminski, Joseph F., Duluth, Minn. Snow-shoe. No. 1,014,482; Jan. 9; Sp. p. 3067; Gaz. vol. 174; p. 509.

Kampfe, Richard, New York, N. Y. Safety-razor frame. No. 1,013,602; Jan. 2; Sp. p. 1106; Gaz. vol. 174; p. 178.

Kappes, William H. (See Verdin and Kappes.)

Kargau, Theodore, assignor to The Peerless Electric Company, Warren, Ohio. Centrifugal switch for alternating-current motors. No. 1,013,780; Jan. 2; Sp. p. 1519; Gaz. vol. 174; p. 241.

Karle, John D., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Bobbin-winder for sewing-machines. No. 1,014,483; Jan. 9; Sp. p. 3068; Gaz. vol. 174; p. 510.

Karr, Milo M., Doniphan, Nebr. Expansion-pulley. No. 1,016,158; Jan. 30; Sp. p. 6714; Gaz. vol. 174; p. 1167.

Karsch, Oswald J. (See Bell, William H., assignor.)

Karsted, Hermann L., Stony Hill, Mo. Cabinet and trays therefor. No. 1,015,686; Jan. 23; Sp. p. 5740; Gaz. vol. 174; p. 978.

Kaszner, Georg, Münster, Germany, assignor to Rheinische Dampfkessel und Maschinen-Fabrik Büttner G. m. b. H., Uerdingen-on-the-Rhine, Germany. Obtaining and separating oxygen and nitrogen from the atmosphere. No. 1,015,566; Jan. 23; Sp. p. 5462; Gaz. vol. 174; p. 936.

Katzenstein, Leo, Wiesbaden, Germany. Apparatus for moistening and separating stamps and the like. No. 1,016,015; Jan. 30; Sp. p. 6425; Gaz. vol. 174; p. 1118.

Kauffmann Kase Kompany. (See Kauffmann, Lou B., assignor.)

Kauffmann, Lou B., assignor to Kauffmann Kase Kompany, New York, N. Y. Metal-shaping machine. No. 1,015,324; Jan. 23; Sp. p. 4935; Gaz. vol. 174; p. 853.

Kaufman, Gustave, New York, N. Y., and C. Meriwether, Montclair, N. J. Water-conduit. No. 1,013,660; Jan. 2; Sp. p. 1260; Gaz. vol. 174; p. 198.

Kaul, George W., Helper, Utah. Hot-water bottle. No. 1,015,445; Jan. 23; Sp. p. 5204; Gaz. vol. 174; p. 894.

Kaulunskas, Joseph J. V., Philadelphia, Pa. Aerocraft. No. 1,013,851; Jan. 2; Sp. p. 1681; Gaz. vol. 174; p. 266.

Kavenaugh, Joseph T. (See Hazard, Frank A., assignor.)

Kay, George H., Naugatuck, Conn. Combined package and toy. No. 1,013,941; Jan. 9; Sp. p. 1906; Gaz. vol. 174; p. 324.

Kearns, Richard, Mammoth, Pa. Coke-oven door. No. 1,013,177; Jan. 2; Sp. p. 175; Gaz. vol. 174; p. 31.

Keating, George F., Portland, Oreg. Buoy attachment for submarine boats. No. 1,014,308; Jan. 9; Sp. p. 2916; Gaz. vol. 174; p. 483.

Keeler, Morris H., Sabetha, Kans. Machine for laying pipes. No. 1,015,893; Jan. 30; Sp. p. 6166; Gaz. vol. 174; p. 1075.

Keeter, Andrew F., Catoosa, Okla. Corn-planter. No. 1,014,064; Jan. 9; Sp. p. 2183; Gaz. vol. 174; p. 365.

Kehoe, Charles S., *et al.*, executors. (See Barratt, William T., assignor.)

Keily, James E., Canandaigua, N. Y. Scrubbing-board. No. 1,013,661; Jan. 2; Sp. p. 1262; Gaz. vol. 174; p. 198.

Keith, James, London, England. Centrifugal fan. No. 1,015,274; Jan. 16; Sp. p. 4806; Gaz. vol. 174; p. 809.

Keith, John I. (See Long and Keith.)

Kellaher, Dan. (See Over, Ernest, assignor.)

Kellar, George E., assignor to Kellar-Thomason Manufacturing Company, Covina, Cal. Irrigating connection. No. 1,016,159; Jan. 30; Sp. p. 6715; Gaz. vol. 174; p. 1167.

Kellar-Thomason Manufacturing Company. (See Kellar, George E., assignor.)

Keller, Charles F., Lancaster, Ohio. Edge-setting iron for shoes. No. 1,014,006; Jan. 9; Sp. p. 2050; Gaz. vol. 174; p. 346.

Keller, George W., and C. and A. Brassington, Aristes, Pa. Jig. No. 1,014,308; Jan. 9; Sp. p. 2699; Gaz. vol. 174; p. 450.

Keller, Huldreich, Berlin, Germany, assignor to General Electric Company. Condenser system. No. 1,013,178; Jan. 2; Sp. p. 176; Gaz. vol. 174; p. 31.

Keller Mechanical Engraving Company. (See Warman, William A., assignor.)

Keller, Peter, and P. Seiler, assignors to H. Sander, Chicago, Ill. Gas-burner tip. No. 1,015,232; Jan. 16; Sp. p. 4714; Gaz. vol. 174; p. 794.

Keller, William H., Philadelphia, Pa. Vacuum-curry-comb. No. 1,015,894; Jan. 30; Sp. p. 6167; Gaz. vol. 174; p. 1075.

Keller, William L., Kearney, Nebr. Staple-anchor. No. 1,013,398; Jan. 2; Sp. p. 683; Gaz. vol. 174; p. 108.

Keller, William L., Kearney, Nebr. Concrete-mixer. No. 1,015,687; Jan. 23; Sp. p. 5741; Gaz. vol. 174; p. 978.

Kelley, George J., Attleboro, Mass. Vaginal syringe. No. 1,015,895; Jan. 30; Sp. p. 6168; Gaz. vol. 174; p. 1075.

Kellogg, Daniel P., *et al.* (See Neville, Harry, assignor.)

Kellogg, John F., Guthrie, Okla. Syringe. No. 1,014,228; Jan. 9; Sp. p. 2533; Gaz. vol. 174; p. 423.

Kellogg Switchboard & Supply Company. (See Dean, William W., assignor.)

Kellogg Switchboard and Supply Company. (See Smith, Charles H., assignor.)

Kelly, David J., Salt Lake City, Utah. Slimes-filtering apparatus. No. 1,015,960; Jan. 30; Sp. p. 6305; Gaz. vol. 174; p. 1097.

Kelly, David J., Salt Lake City, Utah. Filtering apparatus. No. 1,015,961; Jan. 30; Sp. p. 6311; Gaz. vol. 174; p. 1098.

Kelly, Edward F., Cairo, Ill. Smoke-ring blower. No. 1,013,296; Jan. 2; Sp. p. 467; Gaz. vol. 174; p. 75.

Kelly, Edwin W., assignor to Roentgen Manufacturing Company, Philadelphia, Pa. Automatic plate-changing device. No. 1,015,027; Jan. 16; Sp. p. 4318; Gaz. vol. 174; p. 726.

Kelly, Edwin W., assignor to Roentgen Manufacturing Company, Philadelphia, Pa. X-ray operating-table. No. 1,015,187; Jan. 16; Sp. p. 4618; Gaz. vol. 174; p. 779.

Kelly, Elmer, Uniontown, Pa. Polishing compound. No. 1,015,688; Jan. 23; Sp. p. 5745; Gaz. vol. 174; p. 978.

Kelly, Sherman L., South Bend, Ind. Magneto. No. 1,015,623; Jan. 23; Sp. p. 5585; Gaz. vol. 174; p. 957.

Kelly, Thomas F., Clinton, Iowa. Combined bed and couch. No. 1,014,484; Jan. 9; Sp. p. 3070; Gaz. vol. 174; p. 510.

Kelly, William M., New York, N. Y. Printer's type. No. 1,016,224; Jan. 30; Sp. p. 6834; Gaz. vol. 174; p. 1188.

Kelsey, Orlando, Blackwood, N. J. Air-vent for steam-radiators. No. 1,014,229; Jan. 9; Sp. p. 2535; Gaz. vol. 174; p. 423.

Kendrick, John W., Chicago, Ill. Tie-plate. No. 1,013,179; Jan. 2; Sp. p. 178; Gaz. vol. 174; p. 31.

Kendrick, John W., Chicago, Ill. Railway-tie plate. No. 1,015,325; Jan. 23; Sp. p. 4938; Gaz. vol. 174; p. 854.

Kendrick, Levi J., and J. G. Tunnicliffe, Berkeley, Cal. Amalgamating system. No. 1,013,496; Jan. 2; Sp. p. 893; Gaz. vol. 174; p. 142.

Kenison, Arthur E. (See Thompson, William B., assignor.)

Kennedy, Matthew H., New Brighton borough, Pa. Flash-light device. No. 1,013,399; Jan. 2; Sp. p. 684; Gaz. vol. 174; p. 108.

Kenner, George A., Herrin, W. H. Michael, and T. J. Burton, Murphysboro, Ill. Pneumatic push-button and pump. No. 1,015,962; Jan. 30; Sp p. 6313; Gaz. vol. 174; p. 1098.

Keokuk Hydraulic Tire Setter Company, The. (See Devero, Charles A., assignor.)

Keppeler, Gustav, Darmstadt, and A. Spangenberg, Merzig-on-the-Saar, Germany; said Spangenberg assignor to said Keppeler. Treating clay, kaolin, and ceramic masses. No. 1,013,603; Jan. 2; Sp. p. 1107; Gaz. vol. 174; p. 178.

Kern, Henry L., Kensington, Kans. Frame and steering mechanism for grain-drills. No. 1,016,225; Jan. 30; Sp. p. 6835; Gaz. vol. 174; p. 1188.

Kerr, Charles W., Park City, Mont. Measuring-tape-holding device. No. 1,013,400; Jan. 2; Sp. p. 686; Gaz. vol. 174; p. 109.

Kerr, Harry E., Detroit, Mich. Valve. No. 1,014,230; Jan. 9; Sp. p. 2537; Gaz. vol. 174; p. 424.

Kerr, Henry C., Roanoke, Va. Car-coupling. No. 1,014,485; Jan. 9; Sp. p. 3072; Gaz. vol. 174; p. 510.

Kershaw, James E., Hillsboro, Oreg. Vehicle. No. 1,015,804; Jan. 30; Sp. p. 5972; Gaz. vol. 174; p. 1044.

Kessler, Albert F., Utica, N. Y. Strap-forming machine. No. 1,014,065; Jan. 9; Sp. p. 2184; Gaz. vol. 174; p. 365.

Kessler, Jacob, and J. Weiss, Pittsburgh, Pa. Machine for turning crank-pins. No. 1,015,188; Jan. 16; Sp. p. 4627; Gaz. vol. 174; p. 780.

Kestner Evaporator Company. (See Kestner, Paul, assignor.)

Kestner, Paul, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa. Evaporating apparatus. No. 1,016,160; Jan. 30; Sp. p. 6716; Gaz. vol. 174; p. 1167.

Key, James F., San Francisco, Cal., assignor to General Electric Company. System of forced lubrication. No. 1,013,180; Jan. 2; Sp. p. 179; Gaz. vol. 174; p. 32.

Keyes, Frederick G., Boston, and C. A. Kraus, Newton Highlands, Mass. Seal for fused-silicate containers. No. 1,014,757; Jan. 16; Sp. p. 3707; Gaz. vol. 174; p. 633.

Keystone Lantern Company. (See Casey, John T., assignor.)

Keystone Watch Case Company. (See Perry, Earle S., assignor.)

Kiefer, Karl, Cincinnati, Ohio. Filter. No. 1,015,326; Jan. 23; Sp. p. 4939; Gaz. vol. 174; p. 854.

Kiesel, William F., Jr., Altoona, Pa. Car-truck. No. 1,016,073; Jan. 30; Sp. p. 6564; Gaz. vol. 174; p. 1139.

Kiessig, Bernhard R., Chicago, assignor of one-half to J. N. Vasey, Brookfield, Chicago, Ill. Keyed zither. No. 1,015,896; Jan. 30; Sp. p. 6169; Gaz. vol. 174; p. 1076.

Kievlan, George M., Atchison, Kans. Current-motor. No. 1,014,006; Jan. 9; Sp. p. 2187; Gaz. vol. 174; p. 366.

Kiewicz, John, Hyde Park, Mass. Sewing-machine. No. 1,014,231; Jan. 9; Sp. p. 2538; Gaz. vol. 174; p. 424.

Kilgore, Joseph D. (See Atkinson, William R., assignor.)

Killebrew, Ernest C., Evansville, Ind. Fan attachment for rocking-chairs. No. 1,016,161; Jan. 30; Sp. p. 6719; Gaz. vol. 174; p. 1168.

Killinger, Philip N., Pittsburgh, Pa. Measuring instrument. No. 1,014,232; Jan. 9; Sp. p. 2543; Gaz. vol. 174; p. 425.

Kimmel, J. P. (See Cowart, Stephen A., assignor.)

Kimmel, Wilford W., New Weston, Ohio. Milking-pail attachment. No. 1,015,189; Jan. 16; Sp. p. 4628; Gaz. vol. 174; p. 780.

Kincaid, John, Vancouver, British Columbia, Canada. Water-wheel-gate ring. No. 1,015,805; Jan. 30; Sp. p. 5973; Gaz. vol. 174; p. 1045.

Kindel, Arthur W., Denver, Colo. Apparatus for forming roll-edges on mattresses. No. 1,013,401; Jan. 2; Sp. p. 688; Gaz. vol. 174; p. 109.

King, Dean W., Denver, Colo. Rifle-sight. No. 1,015,233; Jan. 16; Sp. p. 4715; Gaz. vol. 174; p. 794.

King, Edward, Zurich, Switzerland. Marine boiler. No. 1,015,689; Jan. 23; Sp. p. 5746; Gaz. vol. 174; p. 978.

King, Frederick R., Chicago, Ill. Washing-machine or the like. No. 1,014,968; Jan. 16; Sp. p. 4197; Gaz. vol. 174; p. 706.

King, Orrin H., Chicago, Ill., assignor to United States Concentrating Company. Ore-concentrating machine. No. 1,014,827; Jan. 16; Sp. p. 3874; Gaz. vol. 174; p. 657.

King, Otto S., New York, N. Y. Indicator for storage vessels. No. 1,014,486; Jan. 9; Sp. p. 3073; Gaz. vol. 174; p. 511.

King, Samuel C., El Toro, Cal. Page-turning device. No. 1,013,781; Jan. 2; Sp. p. 1520; Gaz. vol. 174; p. 241.

Kingsbury, George W., New York, N. Y. Propeller. No. 1,013,402; Jan. 2; Sp. p. 690; Gaz. vol. 174; p. 109.

Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Car-coupling. No. 1,013,880; Jan. 9; Sp. p. 1770; Gaz. vol. 174; p. 303.

Kinnear, William R., West Pittsburg, Pa. Forming connections between opposed walls of sheet-metal radiators. No. 1,015,738; Jan. 23; Sp. p. 5836; Gaz. vol. 174; p. 995.

Kinsey, Isaac, *et al.* (See Nagel, William G., assignor.)

Kinsley, Allison S., Scranton, Pa. Knife-rack. No. 1,014,487; Jan. 9; Sp. p. 3075; Gaz. vol. 174; p. 511.

Kip, Charlotte B. W., Montclair, N. J. Practice-ball. No. 1,014,233; Jan. 9; Sp. p. 2545; Gaz. vol. 174; p. 425.

Kirby Equipment Company. (See Woodman, George A., assignor.)

Kirby, Frederick E. (See Anderson and Kirby.)

Kirby, John, and J. Mayo, Douglas, Ariz. Trolley-wire connector. No. 1,016,016; Jan. 30; Sp. p. 6426; Gaz. vol. 174; p. 1118.

Kitsee, Isidor, Philadelphia, Pa. Electric transmission of intelligence. No. 1,015,494; Jan. 23; Sp. p. 5318; Gaz. vol. 174; p. 911.

Kitsee, Isidor, assignor of one-half to W. J. Latta, Philadelphia, Pa. Cable duplex repeating system. No. 1,014,488; Jan. 9; Sp. p. 3077; Gaz. vol. 174; p. 511.

Kitselman, Alva L., Muncie, Ind. Wire-weaving machine. No. 1,014,599; Jan. 9; Sp. p. 3282; Gaz. vol. 174; p. 547.

Kitterman, George W., Berwyn, assignor of one-half to M. D. Matteson, Chicago, Ill. Tire. No. 1,014,007; Jan. 9; Sp. p. 2051; Gaz. vol. 174; p. 346.

Klages, August, and H. Vollberg, Salbke, Germany. Making chlorosulfonic acid. No. 1,013,181; Jan. 2; Sp. p. 182; Gaz. vol. 174; p. 32.

Klapbecke, Paul W., Ellicott City, Md. Swimming-shoe. No. 1,013,403; Jan. 2; Sp. p. 692; Gaz. vol. 174; p. 110.

Kleber, Peter, Wiesbaden, Germany, assignor of one-half to H. Zirwas, Yonkers, N. Y. Incandescent-lamp socket. No. 1,015,963; Jan. 30; Sp. p. 6315; Gaz. vol. 174; p. 1099.

Kleckner, Harry T., Shamokin, assignor of one-half to I. Reber, Winfield, Pa. Metallic railway-tie and fastening. No. 1,014,489; Jan. 9; Sp. p. 3080; Gaz. vol. 174; p. 512.

Klees, William F., Scranton, Pa. Radiator. No. 1,014,828; Jan. 16; Sp. p. 3879; Gaz. vol. 174; p. 658.

Klein, Albert S., St. Louis, Mo. Container for the aging of whisky. No. 1,014,883; Jan. 16; Sp. p. 4006; Gaz. vol. 174; p. 677.

Klein, Nathan, New York, N. Y., assignor, by mesne assignments, to Harvey Hubbell, Incorporated, Bridgeport, Conn. Attachment for incandescent-lamp sockets. No. 1,015,897; Jan. 30; Sp. p. 6172; Gaz. vol. 174; p. 1076.

Kleinschmidt, Edward E., New York, N. Y. Electrical relay. No. 1,014,600; Jan. 9; Sp. p. 3294; Gaz. vol. 174; p. 548.

Klenk, Gottlieb, Defiance, Ohio, assignor to The Defiance Pressed Steel Company. Sheet-metal box. No. 1,015,234; Jan. 16; Sp. p. 4716; Gaz. vol. 174; p. 795.

Kline, Alvy W., Oklahoma, Okla. Combination pointer and jointer for stone and brick layers. No. 1,014,650; Jan. 16; Sp. p. 3481; Gaz. vol. 174; p. 597.

Klingler, Victor O., Stayton, Minn. Scale. No. 1,015,190; Jan. 16; Sp. p. 4630; Gaz. vol. 174; p. 780.

Klock, George W., Chillicothe, Tex. Lawn-mower. No. 1,013,182; Jan. 2; Sp. p. 183; Gaz. vol. 174; p. 32.

Klopfer, Friedrich A. Y., Leubnitz, near Dresden, Germany. Production of starch and gluten from wheat-flour. No. 1,013,497; Jan. 2; Sp. p. 895; Gaz. vol. 174; p. 142.

Kluge, Otto, Golconda, Ill. Vertical cutter attachment for mowing-machines. No. 1,015,806; Jan. 30; Sp. p. 5975; Gaz. vol. 174; p. 1045.

Knapp, George S., La Grange, Ill. Plaster division-strip. No. 1,016,074; Jan. 30; Sp. p. 6567; Gaz. vol. 174; p. 1140.

Knapp, William B., Paterson, N. J. Carpenter's bit. No. 1,015,446; Jan. 23; Sp. p. 5205; Gaz. vol. 174; p. 894.

Knauss, James E., and C. Phinney, Healdsburg, Cal. Automobile-tire. No. 1,015,690; Jan. 23; Sp. p. 5747; Gaz. vol. 174; p. 979.

Knauss, John, Indianapolis, Ind. Rifle-bag. No. 1,015,028; Jan. 16; Sp. p. 4322; Gaz. vol. 174; p. 727.

Kneisley, Russell, Carrollton, Mo. Trestle. No. 1,015,191; Jan. 16; Sp. p. 4633; Gaz. vol. 174; p. 781.

Knight, Margaret E., Framingham, Mass., assignor of one-fourth to A. F. Davidson and one-fourth to B. M. Davidson, Saratoga Springs, N. Y. Resilient wheel. No. 1,015,761; Jan. 23; Sp. p. 5884; Gaz. vol. 174; p. 1003.

Knopp, Otto A., Oakland, Cal. Electric-current-measuring instrument. No. 1,015,102; Jan. 16; Sp. p. 4634; Gaz. vol. 174; p. 781.

Knowles, Jesse M. (See Stout and Knowles.)

Knowlson, Annie C., Ann Arbor, Mich. Nostril-expanding device. No. 1,014,758; Jan. 16; Sp. p. 3709; Gaz. vol. 174; p. 633.

Knowlton, Daniel E. (See Davis, Harry S., assignor.)

Knox, Hiram, Livingston, Tex. Hook. No. 1,014,008; Jan. 9; Sp. p. 2053; Gaz. vol. 174; p. 346.

Knox, William H., and H. M. White, Philadelphia, Pa. Warp stop-motion for looms. No. 1,014,399; Jan. 9; Sp. p. 2920; Gaz. vol. 174; p. 483.

Kobler, Albert J., New York, N. Y. Combined cigar-lighter and advertising-machine. No. 1,015,807; Jan. 30; Sp. p. 5976; Gaz. vol. 174; p. 1045.

Koch, Carl, Linden-on-the-Ruhr, Germany. Lamp-ignition device. No. 1,015,193; Jan. 16; Sp. p. 4636; Gaz. vol. 174; p. 782.

Koch, John, New York, N. Y. Mechanical vibrator. No. 1,013,782; Jan. 2; Sp. p. 1521; Gaz. vol. 174; p. 241.

Koehler, Frank G., St. Louis, Mo. Hand-truck. No. 1,014,400; Jan. 9; Sp. p. 2923; Gaz. vol. 174; p. 484.

Koehler, William, Cleveland, Ohio. Reduction of ores. No. 1,013,498; Jan. 2; Sp. p. 896; Gaz. vol. 174; p. 143.

Koehne, Ira C. (See Grohmann and Koehne.)

Koetschet, Joseph, Lyon, and A. Barbier, St. Fons, near Lyon, assignors to Société Chimique Des Usines Du Rhône, Anciennement Gilliard, P. Monnet et Cartier, Paris, France. Producing indigo-o-nitrophenyl-lactic acid ketones. No. 1,015,495; Jan. 23; Sp. p. 5320; Gaz. vol. 174; p. 912.

Koetschet, Joseph, Lyon, and A. Barbier, St. Fons, near Lyon, assignors to Société Chimique Des Usines Du Rhône, Anciennement Gilliard, P. Monnet et Cartier, Paris, France. Manufacture of nitrophenylnitromethanes, their homologues and derivatives. No. 1,015,496; Jan. 23; Sp. p. 5321; Gaz. vol. 174; p. 912.

Koetschet, Joseph, Lyon, and A. Barbier, St. Fons, near Lyon, assignors to Société Chimique des Usines du Rhône, Anciennement Gilliard, P. Monnet et Cartier, Paris, France. Manufacture of nitro-phenyl nitromethanes, their homologues and derivatives. No. 1,015,691; Jan. 23; Sp. p. 5749; Gaz. vol. 174; p. 979.

Köhler, Johan R., Stockholm, Sweden. Making betulin suitable for the production of coating compositions thereof. No. 1,016,162; Jan. 30; Sp. p. 6722; Gaz. vol. 174; p. 1168.

Kohler, Richard O. (See Stacks, Howard R., assignor.)

Köhn, Claus H., Leipzig-Lindenau, assignor of one-half to E. Munster, Leipzig, Germany. Method of and apparatus for vaporizing the volatile constituents of liquids. No. 1,013,881; Jan. 9; Sp. p. 1771; Gaz. vol. 174; p. 304.

Kohn, Max, Cleveland, Ohio. Coat. No. 1,014,651; Jan. 16; Sp. p. 3482; Gaz. vol. 174; p. 597.

Koltschanoff, Emilian, assignor to Société Sfaello Frères, E. Koltschanoff & U. Diamantidi, Taganrog, Russia. Pneumatic pump for lifting granular materials. No. 1,016,017; Jan. 30; Sp. p. 6427; Gaz. vol. 174; p. 1119.

Komarek, Gustav, assignor to C. L. Gilbert, St. Louis, Mo. Car-truck side frame. No. 1,014,067; Jan. 9; Sp. p. 2191; Gaz. vol. 174; p. 366.

Koons, Walter S., Temple, Okla. Adjustable trousers-guard. No. 1,014,009; Jan. 9; Sp. p. 2054; Gaz. vol. 174; p. 346.

Koonts, Elmer R., Richards, Mo. Mechanism for baleying. No. 1,015,327; Jan. 23; Sp. p. 4942; Gaz. vol. 174; p. 855.

Koppers, Heinrich, Essen, Germany. Recovering ammonia from gases. No. 1,013,404; Jan. 2; Sp. p. 694; Gaz. vol. 174; p. 110.

Koppitz, Carl G. (See Townsend and Gosselin, assignors.)

Kopriwa, Emanuel. (See Salstrom, David B., assignor.)

Korns, Clarence C., Covington, Va. Spring-switch. No. 1,013,297; Jan. 2; Sp. p. 470; Gaz. vol. 174; p. 73.

Korper, Simon, New York, N. Y. Safety corn-parer. No. 1,014,154; Jan. 9; Sp. p. 2366; Gaz. vol. 174; p. 395.

Kostenbader, Howard T., assignor of one-half to W. M. Smith, Chapman Quarries, Pa. Spike-puller. No. 1,014,068; Jan. 9; Sp. p. 2193; Gaz. vol. 174; p. 367.

Koster, Cornelius, Grand Rapids, Mich. Stock-support for boring-machines. No. 1,015,497; Jan. 23; Sp. p. 5322; Gaz. vol. 174; p. 912.

Kotts, Frederick A. (See Whetstone, Sylvester S., assignor.)

Kovacs, Dyonis, Rochester, N. Y. Picture. No. 1,014,759; Jan. 16; Sp. p. 3710; Gaz. vol. 174; p. 633.

Kovacs, Josef, Mount Carmel, Pa. Wrench. No. 1,015,194; Jan. 16; Sp. p. 4637; Gaz. vol. 174; p. 782.

Kowalsky, George, McDowell, W. Va. Feed-bag. No. 1,016,075; Jan. 30; Sp. p. 6560; Gaz. vol. 174; p. 1140.

Kramer, Adam T., Bluffton, Minn. Rail-anticreeping device. No. 1,014,155; Jan. 9; Sp. p. 2367; Gaz. vol. 174; p. 395.

Kramer, Andrew A., Kansas City, Kans. Outdoor toilet. No. 1,013,183; Jan. 2; Sp. p. 185; Gaz. vol. 174; p. 33.

Krilmer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Governing mechanism for mixed-pressure turbines. No. 1,013,184; Jan. 2; Sp. p. 186; Gaz. vol. 174; p. 33.

Kramer, Joseph, Eldora, Iowa. Device for opening gates. No. 1,013,185; Jan. 2; Sp. p. 187; Gaz. vol. 174; p. 33.

Kramer, Nicholas, Chicago, Ill. Umbrella-stand. No. 1,013,662; Jan. 2; Sp. p. 1263; Gaz. vol. 174; p. 198.

Kramer, William, Brooklyn Hill, N. Y. Fishing-reel. No. 1,013,942; Jan. 9; Sp. p. 1907; Gaz. vol. 174; p. 325.

Kraus, Charles A. (See Keyes and Kraus.)

Kraus, Edward L., Slatington, Pa. Folding-desk blackboard. No. 1,015,498; Jan. 23; Sp. p. 4524; Gaz. vol. 174; p. 913.

Krauze, Stanislaw, Warsaw, Russia. Inverted burner. No. 1,015,692; Jan. 23; Sp. p. 5750; Gaz. vol. 174; p. 979.

Krell, Albert, assignor to Krell Auto-Grand Piano Co. of America, Connersville, Ind. Panel-operating device. No. 1,015,029; Jan. 16; Sp. p. 4323; Gaz. vol. 174; p. 727.

Krell Auto-Grand Piano Co. of America. (See Krell, Albert, assignor.)

Kremer, Henry O. (See Boyd, John W., assignor.)

Krempel, Christian. (See Singer, Joseph, assignor.)

Kretzschmar, Gustav, Paauilo, Hawaii. Geographical clock. No. 1,015,195; Jan. 16; Sp. p. 4638; Gaz. vol. 174; p. 782.

Kreunen, Garret H., Cedar Grove, Wis. Combined stove and water-heater. No. 1,014,760; Jan. 16; Sp. p. 3712; Gaz. vol. 174; p. 634.

Kriegh, Chancie C., Ossian, Ind. Tool for grinding both fields of bifocal lenses simultaneously. No. 1,015,030; Jan. 16; Sp. p. 4325; Gaz. vol. 174; p. 727.

Kriesel, Gustave F., Minneapolis, Minn. Clutch for cheese-cutters. No. 1,014,652; Jan. 16; Sp. p. 3483; Gaz. vol. 174; p. 597.

Krischer, Nathan A., New York, N. Y. Collar-support. No. 1,013,783; Jan. 2; Sp. p. 1523; Gaz. vol. 174; p. 242.

Kristofferson, Charles L., Spearfish, S. D. Antifraud tobacco-tin. No. 1,013,405; Jan. 2; Sp. p. 695; Gaz. vol. 174; p. 110.

Kriszt, John, assignor to Mistress L. Fehér, (maiden name Helene Csaki,) Budapest, Austria-Hungary. Flat-iron. No. 1,013,663; Jan. 2; Sp. p. 1264; Gaz. vol. 174; p. 199.

Kronenberger, Annie K., New York, assignor of one-half to R. Stewart, Brooklyn, N. Y. Combination-garment. No. 1,014,653; Jan. 16; Sp. p. 3485; Gaz. vol. 174; p. 598.

Kronthal, Louis. (See Minkhoff and Kronthal.)

Kros, Jean G., Essen-Ruhr, Germany. Regenerative coke-oven. No. 1,015,964; Jan. 30; Sp. p. 6317; Gaz. vol. 174; p. 1099.

Krueger, Louis. (See Porter and Krueger.)

Kryshtofovich, Theodore T., St. Louis, Mo. Transmission of electric power. No. 1,015,196; Jan. 16; Sp. p. 4639; Gaz. vol. 174; p. 782.

Krzyzak, Stefan. (See Glowacki and Krzyzak.)

Kuenholdt, Charles, assignor to O. A. Pfeil, Milwaukee, Wis. Burner-shade support. No. 1,013,943; Jan. 9; Sp. p. 1912; Gaz. vol. 174; p. 325.

Kugel, John, Grand Rapids, Mich. Music-rack. No. 1,013,784; Jan. 2; Sp. p. 1524; Gaz. vol. 174; p. 242.

Kuhns, William H., Miamisburg, Ohio. Combined fertilizer-distributer and pulverizer. No. 1,013,298; Jan. 2; Sp. p. 471; Gaz. vol. 174; p. 73.

Kunkel, Albert R., Palestine, Tex. Oil-burner. No. 1,016,018; Jan. 30; Sp. p. 6429; Gaz. vol. 174; p. 1119.

Künzli, Arthur, Leipzig, Germany. Condenser or pump. No. 1,013,499; Jan. 2; Sp. p. 897; Gaz. vol. 174; p. 143.

Kuschel, Frank C. (See Tyler, Charles A., assignor.)

Kwarnstrom, John, New York, N. Y. Hat-holder. No. 1,014,156; Jan. 9; Sp. p. 2369; Gaz. vol. 174; p. 396.

La Chapelle, Euclid L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 1,014,710; Jan. 16; Sp. p. 3602; Gaz. vol. 174; p. 617.

Labonté, Walter, Chicopee, Mass. Self-threading shuttle. No. 1,014,309; Jan. 9; Sp. p. 2700; Gaz. vol. 174; p. 451.

Lacroix, Joseph D. (See Switzer and Lacroix.)

Lacy, Thomas W., Kansas City, Mo. Acetylene-gas generator. No. 1,014,010; Jan. 9; Sp. p. 2055; Gaz. vol. 174; p. 347.

Lafeuille, Fernand, Charmes, France. Sugar-crystallizer. No. 1,016,019; Jan. 30; Sp. p. 6431; Gaz. vol. 174; p. 1119.

Laird, Wilbur G., assignor to The Improved Equipment Company, New York, N. Y. Apparatus for the manufacture of gas. No. 1,014,654; Jan. 16; Sp. p. 3486; Gaz. vol. 174; p. 598.

Lajos, Ferenczy, Easton, Pa. Envelop. No. 1,013,785; Jan. 2; Sp. p. 1525; Gaz. vol. 174; p. 242.

Lake, Christopher J., Bridgeport, Conn. Combined reciprocating rotary engine. No. 1,014,401; Jan. 9; Sp. p. 2925; Gaz. vol. 174; p. 484.

Lake, John C. (See Collier, Clyde F., assignor.)

Lamb, Joseph F., New Britain, Conn. Molder's flask and band. No. 1,014,761; Jan. 16; Sp. p. 3713; Gaz. vol. 174; p. 634.

Lambert, George A., Anderson, Ind. Chain. No. 1,015,965; Jan. 30; Sp. p. 6319; Gaz. vol. 174; p. 1099.

Lambert, John W., Anderson, Ind. Power transmission. No. 1,013,786; Jan. 2; Sp. p. 1526; Gaz. vol. 174; p. 242.

Lambert, John W., assignor to The Buckeye Manufacturing Company, Anderson, Ind. Pedal-locking mechanism. No. 1,014,069; Jan. 9; Sp. p. 2104; Gaz. vol. 174; p. 367.

Lamdin, Herbert C., Egg Harbor City, N. J. Drinking-fountain for fowls. No. 1,014,490; Jan. 9; Sp. p. 3081; Gaz. vol. 174; p. 512.

Lammine, Emil T., Mülheim-on-the-Rhine, Germany. Welded wrought-iron annealing-pot. No. 1,014,491; Jan. 9; Sp. p. 3081; Gaz. vol. 174; p. 512.

Lamothe, Charles A. (See Gibeau and Hadley, assignors.)

Lancaster, George W., Richmond, Va. Telephone cabinet or hood. No. 1,014,492; Jan. 9; Sp. p. 3082; Gaz. vol. 174; p. 512.

Landers, Frary & Clark. (See Warner, Alonzo A., assignor.)

Landine, Peter N., assignor to The Rostand Manufacturing Company, Milford, Conn. Pull-strap. No. 1,014,310; Jan. 9; Sp. p. 2703; Gaz. vol. 174; p. 451.

Landis, Abraham B., Waynesboro, Pa. Change-speed gearing. No. 1,015,031; Jan. 16; Sp. p. 4326; Gaz. vol. 174; p. 727.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,015,567; Jan. 23; Sp. p. 5463; Gaz. vol. 174; p. 936.

Landis, Abraham B., Enfield, Pa. Variable-speed gearing. No. 1,015,808; Jan. 30; Sp. p. 5978; Gaz. vol. 174; p. 1046.

Lane, Frederic A., assignor to D. H. Burrell & Company, Little Falls, N. Y. Teat-cup for milking-machines. No. 1,015,032; Jan. 16; Sp. p. 4330; Gaz. vol. 174; p. 728.

Langdon, Warren W., assignor to Baker & Baker, Walla Walla, Wash. Coal briquet and forming the same. No. 1,015,033; Jan. 16; Sp. p. 4332; Gaz. vol. 174; p. 728.

Lange, Herman. (See Heitman, Charles E., assignor.)

Langille, John C., Newport, Wash. Aeroboat. No. 1,015,568; Jan. 23; Sp. p. 5474; Gaz. vol. 174; p. 937.

Langkans, Gustave, Utica, N. Y. Sash-fastener. No. 1,015,624; Jan. 23; Sp. p. 5586; Gaz. vol. 174; p. 957.

Langlet, Nils A., Gottenborg, and E. L. Rinman, Uppsala, Sweden. Producing pulveruient and easily-washable hydrates of aluminium. No. 1,015,499; Jan. 23; Sp. p. 5325; Gaz. vol. 174; p. 913.

Lann, Turner J., Saline, La. Mowing-machine. No. 1,013,787; Jan. 2; Sp. p. 1527; Gaz. vol. 174; p. 243.

Lantz, Edgar W. (See Borg and Lantz.)

Lapicki, John, De Kalb, Ill. Telephone. No. 1,015,034; Jan. 16; Sp. p. 4338; Gaz. vol. 174; p. 729.

Lape, Benjamin F., Philadelphia, Pa. Tire for vehicle-wheels. No. 1,015,035; Jan. 16; Sp. p. 4339; Gaz. vol. 174; p. 729.

Lare, Benjamin F., Philadelphia, Pa. Vehicle-tire. No. 1,015,036; Jan. 16; Sp. p. 4340; Gaz. vol. 174; p. 729.

Lare, Benjamin F., Philadelphia, Pa. Vehicle-tire. No. 1,015,037; Jan. 16; Sp. p. 4342; Gaz. vol. 174; p. 729.

Lare, Benjamin F., Philadelphia, Pa. Tire. No. 1,015,038; Jan. 16; Sp. p. 4344; Gaz. vol. 174; p. 730.

Larose, Albert, St. Esprit, Quebec, Canada. Tobacco planter. No. 1,014,655; Jan. 16; Sp. p. 3490; Gaz. vo 174; p. 598.

Larrick, James H. (See Rankin and Larrick.)

Larsen, Carl M. L., Chicago, Ill. Level. No. 1,014,402 Jan. 9; Sp. p. 2927; Gaz. vol. 174; p. 485.

Larson, Andrew, Duluth, Minn. Log-loader. No. 1,016,076; Jan. 30; Sp. p. 6570; Gaz. vol. 174; p. 1140.

Larson, David, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Mechanical reversing and accelerating switch. No. 1,014,234; Jan. 9; Sp. p. 2546; Gaz. vol. 174; p. 425.

Larson, James C., Auburn, N Y., assignor to International Harvester Company. Shop-truck. No. 1,015,966; Jan. 30; Sp. p. 6320; Gaz. vol. 174; p. 1100.

Lasance, August, Dayton, Ohio. Steam pressing-bed. No. 1,014,011; Jan. 9; Sp. p. 2057; Gaz. vol. 174; p. 347.

Lasbury, Vincent, Chicago, Ill. Dental tool. No. 1,015,039; Jan. 16; Sp. p. 4345; Gaz. vol. 174; p. 730.

Lasker, William W., Brooklyn, N. Y. Ribbon-spool. No. 1,013,882; Jan. 9; Sp. p. 1772; Gaz. vol. 174; p. 304.

Lassel, August R., Washington, D. C. Aeroplane. No. 1,016,020; Jan. 30; Sp. p. 6433; Gaz. vol. 174; p. 1120.

Latour, Marius C. A., Sèvres, France, assignor to General Electric Company. Alternating-current dynamo. No. 1,016,021; Jan. 30; Sp. p. 6436; Gaz. vol. 174; p. 1120.

Latta, William J. (See Kitsee, Isidor, assignor.)

Laubscher, Alexander, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Strip folding and guiding attachment for sewing-machines. No. 1,015,967; Jan. 30; Sp. p. 6321; Gaz. vol. 174; p. 1100.

Laudet, Georges, and L. Gaumont, assignors to Société des Etablissements Gaumont, Paris, France. Energy-relay. No. 1,014,235; Jan. 9; Sp. p. 2553; Gaz. vol. 174; p. 426.

Laurent, Cyclolightes R. (See McBride, Charles R., assignor.)

Laurich, Joseph, New York, N. Y. Carriage-hinge. No. 1,015,040; Jan. 16; Sp. p. 4348; Gaz. vol. 174; p. 730.

Lauritzen, Albert, Charlotte, and J. F. Nielsen, Greenville, Mich. Potato-digger. No. 1,014,403; Jan. 9; Sp. p. 3084; Gaz. vol. 174; p. 513.

Lavoie, Germain A., Glace Bay, Nova Scotia, Canada. Rotary bookcase. No. 1,013,664; Jan. 2; Sp. p. 1265; Gaz. vol. 174; p. 199.

Lawhon, Laura D., Yellow Pine, La. Cuspidor-cleaner. No. 1,014,236; Jan. 9; Sp. p. 2556; Gaz. vol. 174; p. 426.

Lawlor, Simeon C., Chicago, Ill. Implement-holder. No. 1,015,625; Jan. 23; Sp. p. 5588; Gaz. vol. 174; p. 957.

Lawrence, E. T. (See Brandes, Herman H., assignor.)

Lawrence, Ezra, assignor to The Baird Machine Company, Oakville, Conn. Bottle-carrying handle. No. 1,013,406; Jan. 2; Sp. p. 696; Gaz. vol. 174; p. 110.

Lawrence, Walter H., Harwich Port, Mass. Flying-machine propeller. No. 1,015,197; Jan. 16; Sp. p. 4642; Gaz. vol. 174; p. 783.

Laxton, John W. R., Lynn, Mass. Valve. No. 1,014,070; Jan. 9; Sp. p. 2196; Gaz. vol. 174; p. 367.

Layne, David H., Cove, Oreg. Computing-measure. No. 1,013,883; Jan. 9; Sp. p. 1773; Gaz. vol. 174; p. 304.

Leap, Harry, Camp Meeker, Cal. Resilient wheel. No. 1,014,884; Jan. 16; Sp. p. 4007; Gaz. vol. 174; p. 677.

Lear, John, Kingston-upon-Hull, England. Theater appliance. No. 1,015,041; Jan. 16; Sp. p. 4349; Gaz. vol. 174; p. 731.

Lease, Lyman G., Howland, Ohio. Concrete block and wall. No. 1,013,407; Jan. 2; Sp. p. 698; Gaz. vol. 174; p. 111.

Leask, Henry N., Egremont, England. Dynamometer. No. 1,014,494; Jan. 9; Sp. p. 3086; Gaz. vol. 174; p. 513.

Lechner, Arthur O., assignor to Lechner & Schoenberger Company, Pittsburgh, Pa. Pianoforte. No. 1,013,604; Jan. 2; Sp. p. 1108; Gaz. vol. 174; p. 178.

Lechner & Schoenberger Company. (See Lechner, Arthur O., assignor.)

Leddell, William A., Red Bank, assignor to H. F. Merriam, Summit, N. J. Die-casting apparatus. No. 1,013,665; Jan. 2; Sp. p. 1267; Gaz. vol. 174; p. 199.

Lederle, John P., Chicago, Ill. Making dental inlays. No. 1,013,666; Jan. 2; Sp. p. 1275; Gaz. vol. 174; p. 199.

Lee, Bryant, Brenham, Tex. Combined scrubber and mop. No. 1,015,569; Jan. 23; Sp. p. 5475; Gaz. vol. 174; p. 937.

Lee, Ezra A. (See Du Val, James E., assignor.)

Lee, Harriet, Kansas City, Mo. Garment-fitter for waists. No. 1,014,885; Jan. 16; Sp. p. 4008; Gaz. vol. 174; p. 677.

Lee, Joseph, Brooklyn, N. Y. Screw inserter and remover. No. 1,013,500; Jan. 2; Sp. p. 808; Gaz. vol. 174; p. 143.

Lee, Ulysses G., New York, N. Y., assignor to Montague Mailing Machinery Co. Addressing and printing machine. No. 1,014,762; Jan. 16; Sp. p. 3714; Gaz. vol. 174; p. 634.

Legrand, Paul A., Brussels, Belgium. Sinking, lining, and cementing shafts. No. 1,014,656; Jan. 16; Sp. p. 3493; Gaz. vol. 174; p. 599.

Lehr, Edwin, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Alternating-current electromagnet. No. 1,015,968; Jan. 30; Sp. p. 6325; Gaz. vol. 174; p. 1100.

Leist-Wettler, Paul, Schönenwerd, Switzerland. Fastening device for casements and other hinged shutters. No. 1,013,501; Jan. 2; Sp. p. 899; Gaz. vol. 174; p. 143.

Lemarr, Francis M., Speedwell, Tenn. Plow. No. 1,013,667; Jan. 2; Sp. p. 1276; Gaz. vol. 174; p. 200.

Lemieux, Joseph F., New Bedford, Mass. Combined curtain and shade holder. No. 1,015,693; Jan. 23; Sp. p. 5751; Gaz. vol. 174; p. 980.

Lemon, Frederick C., Milwaukee, Wis. Current-collector for electric cranes. No. 1,014,071; Jan. 9; Sp. p. 2197; Gaz. vol. 174; p. 368.

Lemp, Hermann, Lynn, Mass., assignor, by mesne assignments, to General Electric Company. Automatic regulator for steam-propelled vehicles. No. 1,015,042; Jan. 16; Sp. p. 4350; Gaz. vol. 174; p. 731.

Lemp, Hermann, Lynn, Mass., assignor, by mesne assignments, to General Electric Company. Regulating the production of steam. No. 1,015,043; Jan. 16; Sp. p. 4355; Gaz. vol. 174; p. 731.

Lengyel, Geza, Ledford, Ill. Cuspidor. No. 1,015,694; Jan. 23; Sp. p. 5752; Gaz. vol. 174; p. 980.

Leonard, John M., Marquette, Mich. Switch-throwing mechanism. No. 1,015,044; Jan. 16; Sp. p. 4359; Gaz. vol. 174; p. 731.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Gearing. No. 1,015,235; Jan. 16; Sp. p. 4719; Gaz. vol. 174; p. 795.

Lepper, John G., and W. W. Manville, assignors to The Manville Brothers Company, Waterbury, Conn. Wire-feeding mechanism. No. 1,014,829; Jan. 16; Sp. p. 3880; Gaz. vol. 174; p. 658.

Leveque, Bernard T., assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole and button location marking machine. No. 1,014,657; Jan. 16; Sp. p. 3494; Gaz. vol. 174; p. 599.

Lewen, Henry L., New York, N. Y. Floor and ceiling construction. No. 1,014,157; Jan. 9; Sp. p. 2370; Gaz. vol. 174; p. 396.

Lewis, Elmer M. (See Cummings, George, assignor.)

Lewis, John F., Braddock, Pa. Rail-fastening. No. 1,013,408; Jan. 2; Sp. p. 699; Gaz. vol. 174; p. 111.

Lewis, John F., Philadelphia, Pa. Automatic grease-cup. No. 1,015,626; Jan. 23; Sp. p. 5589; Gaz. vol. 174; p. 958.

Lewis, Samuel W., New York, N. Y. Flushing-valve. No. 1,014,072; Jan. 9; Sp. p. 2109; Gaz. vol. 174; p. 368.

Lewis, Wilfred, Philadelphia, Pa. Forming undercut slots. No. 1,014,658; Jan. 16; Sp. p. 3499; Gaz. vol. 174; p. 599.

Libby Glass Company, The. (See Brownlee, William K., assignor.)

Libert, Arthur, *et al.* (See Libert, Fred, assignor.)

Libert, Fred, assignor of one-third to A. Libert and one-third to A. Roberts, Green Bay, Wis. Machine for removing bark from logs. No. 1,015,898; Jan. 30; Sp. p. 6173; Gaz. vol. 174; p. 1077.

Lidgerwood Manufacturing Company. (See Baechtold, Charles A., assignor.)

Lidgerwood Manufacturing Company. (See Covell, Harry N., assignor.)

Lieber, William H., assignor to Allis-Chalmers Company, Milwaukee, Wis. Lubricating system. No. 1,014,628; Jan. 9; Sp. p. 3394; Gaz. vol. 174; p. 559.

Liebknecht, Otto, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Co., New York, N. Y. Manufacture of glycolic acid. No. 1,013,502; Jan. 2; Sp. p. 901; Gaz. vol. 174; p. 144.

Ligammori, Salvatore, New York, N. Y. Lock. No. 1,014,073; Jan. 9; Sp. p. 2203; Gaz. vol. 174; p. 369.

Lillibridge, Andrew. (See Lillibridge, Jerome B. and A.)

Lillibridge, Jerome B. and A., assignors of one-third to A. R. Quigg, Elk City, Kans. Flue-expander. No. 1,015,447; Jan. 23; Sp. p. 5206; Gaz. vol. 174; p. 895.

Lillie, Samuel M., Philadelphia, Pa. Composition of matter and manufacturing the same. No. 1,014,237; Jan. 9; Sp. p. 2557; Gaz. vol. 174; p. 426.

Lillie, Samuel M., Philadelphia, Pa. Apparatus for converting starch by a continuous operation into derivatives, dextrin, dextrose, &c. No. 1,014,311; Jan. 9; Sp. p. 2704; Gaz. vol. 174; p. 452.

Lincoln, Edwin S., Brookline, Mass., assignor to Electric Goods Manufacturing Company. Magneto-circuit controller. No. 1,015,328; Jan. 23; Sp. p. 4952; Gaz. vol. 174; p. 855.

Lincoln, Paul M., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of electrical distribution. No. 1,013,186; Jan. 2; Sp. p. 188; Gaz. vol. 174; p. 33.

Lincoln, Purd J., Birmingham, Ala. Reciprocating electric motor for drills. No. 1,014,495; Jan. 9; Sp. p. 3087; Gaz. vol. 174; p. 513.

Lindau, Alfred E., assignor to Corrugated Bar Company, St. Louis, Mo. Metal reinforcing and spacing bar. No. 1,014,711; Jan. 16; Sp. p. 3605; Gaz. vol. 174; p. 617.

Lindau, Alfred E., assignor to Corrugated Bar Company, St. Louis, Mo. Metal reinforcing and spacing bar. No. 1,014,712; Jan. 16; Sp. p. 3606; Gaz. vol. 174; p. 618.

Lindquist, Frank W., Winthrop, Minn. Collar and neck-pad support. No. 1,014,074; Jan. 9; Sp. p. 2205; Gaz. vol. 174; p. 369.

Line, George H., Chicago, Ill. Monogram-panel. No. 1,014,312; Jan. 9; Sp. p. 2710; Gaz. vol. 174; p. 452.

Liston, James R., assignor to R. Liston, San Diego, Cal. Wind-wheel. No. 1,015,695; Jan. 23; Sp. p. 5753; Gaz. vol. 174; p. 980.

Liston, Ralph. (See Liston, James R., assignor.)

Litherbury, Nina J. (See Bell, Nina J.)

Litle, Thomas J., Jr., Woodbury, assignor to Welsbach Light Company, Gloucester City, N. J. Globe or shade for incandescent gas-lamps. No. 1,013,668; Jan. 2; Sp. p. 1277; Gaz. vol. 174; p. 200.

Littleton, Henry, Maricopa, Cal. Burner. No. 1,014,496; Jan. 9; Sp. p. 3089; Gaz. vol. 174; p. 513.

Livingston, Fremont P., Denver, Colo., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Automatic track-sanding device. No. 1,015,899; Jan. 30; Sp. p. 6177; Gaz. vol. 174; p. 1077.

Livingston, John W., assignor of one-half to J. Noble, Livingston, Wis. Pneumatic wheel. No. 1,013,554; Jan. 2; Sp. p. 1010; Gaz. vol. 174; p. 162.

Ljungström, Birger, assignor to Aktiebolaget Ljungströms Ångturbin, Stockholm, Sweden. Radial turbine. No. 1,014,659; Jan. 16; Sp. p. 3501; Gaz. vol. 174; p. 600.

Lloyd, Ernest F., Detroit, Mich. Pressure-increaser. No. 1,014,830; Jan. 16; Sp. p. 3885; Gaz. vol. 174; p. 659.

Lobnitz, Fred, Crookston, Scotland. Suction-dredger. No. 1,013,669; Jan. 2; Sp. p. 1279; Gaz. vol. 174; p. 200.

Lochner, David, Woodburn, Ind. Display-cabinet. No. 1,014,158; Jan. 9; Sp. p. 2374; Gaz. vol. 174; p. 397.

Locke, Edward, Cliftondale, Mass. Conveying apparatus. No. 1,015,570; Jan. 23; Sp. p. 5476; Gaz. vol. 174; p. 937.

Lockhart, A. E. (See Crosby, Robert E. L., assignor.)

Locomotive Equipment Company, The. (See Newcomb, Michael P., assignor.)

Loebel, Henry E., Milwaukee, Wis. Scaffolding-bracket. No. 1,016,163; Jan. 30; Sp. p. 6724; Gaz. vol. 174; p. 1168.

Lofgren, John G., Norway, Mich. Door check and closer. No. 1,013,788; Jan. 2; Sp. p. 1529; Gaz. vol. 174; p. 243.

Lofton, Herbert M., E. E. Butler, Chattanooga, Tenn., and R. M. Hunter, Philadelphia, Pa. Pipe-hanger. No. 1,013,187; Jan. 2; Sp. p. 190; Gaz. vol. 174; p. 34.
Logan, Charles, Jr., Yonkers, N. Y. Lock for pianos. No. 1,014,159; Jan. 9; Sp. p. 2375; Gaz. vol. 174; p. 397.
Long, Benton J., and J. I. Keith, Finley, N. D. Fishing-tool. No. 1,015,198; Jan. 16; Sp. p. 4644; Gaz. vol. 174; p. 784.
Long, Charles A., Spokane, Wash. Airship. No. 1,014,763; Jan. 16; Sp. p. 3723; Gaz. vol. 174; p. 634.
Long, Joseph, Evansville, Ind. Kitchen-cabinet. No. 1,014,831; Jan. 16; Sp. p. 3887; Gaz. vol. 174; p. 659.
Long, Matthew T., Helena, Okla., assignor to The Standard Steel Tube Company, Toledo, Ohio. Wheel-hub. No. 1,013,188; Jan. 2; Sp. p. 192; Gaz. vol. 174; p. 34.
Longest, William B., Louisville, Ky. Unit-compartment dumping-body. No. 1,013,789; Jan. 2; Sp. p. 1530; Gaz. vol. 174; p. 243.
Longfellow, Martin W., assignor to The Baltimore Gas Appliance and Manufacturing Company, Baltimore, Md. Gas-range. No. 1,013,790; Jan. 2; Sp. p. 1532; Gaz. vol. 174; p. 243.
Lonsway, John J., Fostoria, Ohio. Corn harvester and shocker. No. 1,014,497; Jan. 9; Sp. p. 3091; Gaz. vol. 174; p. 514.
Looms, George, Market Harborough, England. Toe case, puff, or the like for boots and shoes. No. 1,015,500; Jan. 23; Sp. p. 5326; Gaz. vol. 174; p. 913.
Looram, Matthew M., New York, N. Y. Receptacle. No. 1,014,601; Jan. 9; Sp. p. 3299; Gaz. vol. 174; p. 548.
Loose, George H., San Francisco, Cal. Aeroplane. No. 1,015,045; Jan. 16; Sp. p. 4361; Gaz. vol. 174; p. 732.
Lorimer, John H., Philadelphia, Pa. Vehicle-wheel tire. No. 1,014,075; Jan. 9; Sp. p. 2206; Gaz. vol. 174; p. 369.
Loth, Nathan. (See Judis, Charles, assignor.)
Loub, Martin F., *et al.* (See Dorsey, James C. and W. W., assignors.)
Louvrier, François, Mexico, Mexico. Electric furnace. No. 1,013,189; Jan. 2; Sp. p. 194; Gaz. vol. 174; p. 35.
Love, Dumont, Chicago, Ill. Train-speed computer and indicator. No. 1,014,832; Jan. 16; Sp. p. 3889; Gaz. vol. 174; p. 659.
Lovekin, Luther D., Philadelphia, Pa. Steam-generating boiler. No. 1,014,238; Jan. 9; Sp. p. 2559; Gaz. vol. 174; p. 427.
Lovely, Orien S., Colchester, Ill. Combined currycomb and cleaner. No. 1,014,160; Jan. 9; Sp. p. 2376; Gaz. vol. 174; p. 397.
Lovis, Henry C., New York, N. Y., assignor to Seabury & Johnson. Cuspidor. No. 1,015,046; Jan. 16; Sp. p. 4363; Gaz. vol. 174; p. 732.
Low, Abbot A., trustee. (See Wohl and Hertzberg, assignors.)
Low, Abbot A., Horseshoe, H. Hertzberg, and M. J. Wohl, New York, N. Y., assignors to themselves, trustees. Trimmer and gage for arc-lamps. No. 1,013,409; Jan. 2; Sp. p. 700; Gaz. vol. 174; p. 111.
Low, Archibald N. (See Weir, John, assignor.)
Lowe, Albert H., St. Louis, Mo. Cable-clamp for electric-elevator circuit-breakers. No. 1,015,809; Jan. 30; Sp. p. 5981; Gaz. vol. 174; p. 1046.
Lowe, James, assignor of one-third to J. Pellaxio, San Francisco, Cal. Spring-wheel. No. 1,015,199; Jan. 16; Sp. p. 4645; Gaz. vol. 174; p. 784.
Löwenstein, Leo, Vienna, Austria-Hungary. Making hydrogen peroxid from impure persulfuric-acid solutions. No. 1,013,791; Jan. 2; Sp. p. 1533; Gaz. vol. 174; p. 244.
Luce, Charles J., Niantic, Conn., assignor to The Standard Cotton Compress Company. Cotton-press. No. 1,014,764; Jan. 16; Sp. p. 3729; Gaz. vol. 174; p. 635.
Luce, Charles J., Niantic, Conn., assignor to The Standard Cotton Compress Company. Cotton-press. No. 1,014,765; Jan. 16; Sp. p. 3730; Gaz. vol. 174; p. 635.
Lucia, Raffaelo, Uniontown, Pa. Coke-oven door. No. 1,015,696; Jan. 23; Sp. p. 5756; Gaz. vol. 174; p. 981.
Ludtke, Herman, Ottawa, Ill. Flying-machine. No. 1,014,289; Jan. 9; Sp. p. 2562; Gaz. vol. 174; p. 427.
Luft-Verkehrs-Gesellschaft m. b. H. (See Wankmüller, Romeo, assignor.)
Lumley, Wilfrid, East Conneaut, Ohio, assignor to The Conneaut Company. Package for tungsten-lamps. No. 1,016,077; Jan. 30; Sp. p. 6572; Gaz. vol. 174; p. 1141.
Lund, George H., Chicago, Ill. Preparing plates for printing. No. 1,015,900; Jan. 30; Sp. p. 6179; Gaz. vol. 174; p. 1078.
Lundquist, Hendrick W., San Diego, Cal. Current or wave motor. No. 1,016,022; Jan. 30; Sp. p. 6438; Gaz. vol. 174; p. 1120.
Lung, Aria E., Garrett, Ind. Wire-twister. No. 1,014,498; Jan. 9; Sp. p. 3096; Gaz. vol. 174; p. 514.
Lusse, Joseph. (See Lusse, Robert and J.)
Lusse, Robert and J., Philadelphia, Pa. Roundabout. No. 1,013,792; Jan. 2; Sp. p. 1534; Gaz. vol. 174; p. 244.
Luster, Eugene A., assignor of one-third to N. L. Epting and one-third to A. T. Conway, Athens, Ga. Measuring and calculating machine. No. 1,016,078; Jan. 30; Sp. p. 6573; Gaz. vol. 174; p. 1141.
Lutz, Frank E., Philadelphia, Pa. Electrically-operated hoisting apparatus. No. 1,015,901; Jan. 30; Sp. p. 6181; Gaz. vol. 174; p. 1078.
Lux, Rudolf, Wünschelburg, Germany. Device for protecting the members of a court assembly. No. 1,016,164; Jan. 30; Sp. p. 6725; Gaz. vol. 174; p. 1169.
Lycan, Albert E., Tahoe, Idaho. Aeroplane. No. 1,015,200; Jan. 16; Sp. p. 4647; Gaz. vol. 174; p. 784.
Lyford, Charles D., *et al.*, trustees. (See Nunn, Alfred W., assignor.)
Lykes, Fredrick E. (See Ducker, Orlando, assignor.)
Lynch, Charles D., Detroit, Mich. Flexible staff-holder. No. 1,013,410; Jan. 2; Sp. p. 702; Gaz. vol. 174; p. 112.
Lynch, George C., New York, N. Y. Cigar-holder and ash-receptacle. No. 1,015,697; Jan. 23; Sp. p. 5757; Gaz. vol. 174; p. 981.
Lyon, Alfred B., Indianapolis, Ind. Pantograph. No. 1,014,012; Jan. 9; Sp. p. 2059; Gaz. vol. 174; p. 347.
Lyon & Healy. (See Wiswell, Leslie C., assignor.)
Lyon, Matthew T., Salt Lake City, Utah. Truck for garbage-cans. No. 1,013,605; Jan. 2; Sp. p. 1109; Gaz. vol. 174; p. 178.
Lyrachord Company, The. (See Breed, George, assignor.) (Reissue.)
Lytton, Jarard W., assignor to Lytton Manufacturing Company, Franklin, Va. Bottom blow-valve. No. 1,014,766; Jan. 16; Sp. p. 3732; Gaz. vol. 174; p. 636.
Lytton Manufacturing Company. (See Lytton, Jarard W., assignor.)
M. S. Wright Company. (See Wright, Morris S., assignor.)
Maag, Rudolf, Sindlingen, near Höchst-on-the-Main, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Vat dyestuff and making same. No. 1,015,329; Jan. 23; Sp. p. 4959; Gaz. vol. 174; p. 856.
MacCue, James R., Cooma, New South Wales, Australia. Type-writing machine. No. 1,015,810; Jan. 30; Sp. p. 5983; Gaz. vol. 174; p. 1046.
MacDonald, Wilson P., Toronto, Ontario, Canada, assignor to George G. Fox Company, Boston, Mass. Label. No. 1,013,299; Jan. 2; Sp. p. 474; Gaz. vol. 174; p. 74.
MacFarland, Allison M., Philadelphia, Pa., assignor to Auto Novelty Company. Nut-lock. No. 1,015,571; Jan. 23; Sp. p. 5479; Gaz. vol. 174; p. 937.
MacIndoe, John F., assignor of one-half to L. I. Reichner, Philadelphia, Pa. Mechanical razor-stropping device. No. 1,014,602; Jan. 9; Sp. p. 3301; Gaz. vol. 174; p. 549.
MacKenzie, Fred L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-pulling machine. No. 1,013,944; Jan. 9; Sp. p. 1913; Gaz. vol. 174; p. 825.
MacLean, John, Toledo, Ohio. Vacuum-creating mechanism for dust-collectors. No. 1,013,606; Jan. 2; Sp. p. 1110; Gaz. vol. 174; p. 179.
Macdonald, James, New York, N. Y. Holder for neckties, buttons, pins, and like articles. No. 1,014,499; Jan. 9; Sp. p. 3097; Gaz. vol. 174; p. 514.
Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Sound-box for talking-machines. No. 1,014,240; Jan. 9; Sp. p. 2565; Gaz. vol. 174; p. 428.
Mace, Pliny, Irwin, Pa. Mine-door operator. No. 1,014,886; Jan. 16; Sp. p. 4013; Gaz. vol. 174; p. 678.
Machlet, Adolph W., Elizabeth, N. J. Case-hardening apparatus. No. 1,013,190; Jan. 2; Sp. p. 195; Gaz. vol. 174; p. 35.
Machlet, Adolph W., Elizabeth, N. J. Case-hardening apparatus. No. 1,013,191; Jan. 2; Sp. p. 200; Gaz. vol. 174; p. 35.
Machol, Morris R., Staten Island, assignor of one-fourth to H. S. Colby, New York, N. Y. Furnace. No. 1,013,793; Jan. 2; Sp. p. 1537; Gaz. vol. 174; p. 244.
Mack, Thomas H., Balboa, Canal Zone. Cone-center for lathes. No. 1,015,811; Jan. 30; Sp. p. 5984; Gaz. vol. 174; p. 1047.
Macklind, William R., Mineral Point, Mo. Hydrotrain. No. 1,014,313; Jan. 9; Sp. p. 2711; Gaz. vol. 174; p. 452.
Madden, Armand S., Chicago, Ill. Display-rack. No. 1,015,448; Jan. 23; Sp. p. 5208; Gaz. vol. 174; p. 895.
Maddox, Inez, Bombay, India. Bracelet and bangle. No. 1,016,023; Jan. 30; Sp. p. 6440; Gaz. vol. 174; p. 1121.
Madsen, Charles, Buffalo, N. Y. Patient-supporter. No. 1,015,812; Jan. 30; Sp. p. 5985; Gaz. vol. 174; p. 1047.
Madsen, Charles P., assignor to Pelouze Electric Heater Co., Chicago, Ill. Electrical heater. No. 1,014,161; Jan. 9; Sp. p. 2377; Gaz. vol. 174; p. 397.
Magor, Basil, New York, N. Y. Underframe for cars. No. 1,016,165; Jan. 30; Sp. p. 6726; Gaz. vol. 174; p. 1169.
Maher, James, East Liverpool, Ohio. Pipe-wrench. No. 1,016,079; Jan. 30; Sp. p. 6576; Gaz. vol. 174; p. 1141.
Mahoney, William M., Toledo, Ohio. Caliper attachment. No. 1,015,813; Jn. 30; Sp. p. 5987; Gaz. vol. 174; p. 1047.
Maier, William, Buffalo, N. Y. Caster. No. 1,015,572; Jan. 23; Sp. p. 5480; Gaz. vol. 174; p. 938.
Mailloux, Cyprien O., and H. J. Westover, New York, N. Y. Indicating gas-analyzer. No. 1,014,241; Jan. 9; Sp. p. 2566; Gaz. vol. 174; p. 428.
Main, Fred F., Chicago, Ill., assignor, by mesne assignments, to J. T. Underwood, Brooklyn, N. Y. Combined type-writing and computing machine. No. 1,013,670; Jan. 2; Sp. p. 1281; Gaz. vol. 174; p. 201.

Maine, Herbert E., Providence, R. I. Portable self-contained weighing and measuring apparatus. No. 1,015,739; Jan. 23; Sp. p. 5838; Gaz. vol. 174; p. 995.
Mallam, Guy H., Kansas City, Mo. Paper-creasing machine. No. 1,013,411; Jan. 2; Sp. p. 704; Gaz. vol. 174; p. 112.
Mallon, Charles, Chicago, Ill. Checking system and check therefor. No. 1,015,573; Jan. 23; Sp. p. 5481; Gaz. vol. 174; p. 938.
Mann, Henry N., Chicago, Ill. Machine for applying cover-retaining devices to receptacles. No. 1,015,047; Jan. 16; Sp. p. 4364; Gaz. vol. 174; p. 732.
Manning, Wilbur J. A., Detroit, Mich. Holder for fire-extinguishers. No. 1,015,048; Jan. 16; Sp. p. 4367; Gaz. vol. 174; p. 733.
Manross, David A., assignor of one-half to H. Smith, Franklin, Pa. Pole-derrick. No. 1,015,236; Jan. 16; Sp. p. 4720; Gaz. vol. 174; p. 795.
Mansfield, Kate L., *et al.* (See Mansfield, Lott, assignor.)
Mansfield, Lott, assignor, by mesne assignments, of one-half to K. L. Mansfield, Hingham, and one-half to W. N. Trowbridge, Brookline, Mass. Cream-dipper. No. 1,013,503; Jan. 2; Sp. p. 905; Gaz. vol. 174; p. 144.
Manson, Vance S. (See Sauvage, William H., assignor.)
Manville Brothers Company, The. (See Lepper and Manville, assignors.)
Manville, William W. (See Lepper and Manville.)
Mansel, Adolph W., assignor to Mansel Brothers Company, Buffalo, N. Y. Force-feed lubricator. No. 1,014,403; Jan. 9; Sp. p. 2928; Gaz. vol. 174; p. 485.
Mansel Brothers Company. (See Manzel, Adolph W., assignor.)
Mapel, Clarence O., Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,013,192; Jan. 2; Sp. p. 204; Gaz. vol. 174; p. 36.
Marble, George W., Milwaukee, Wis. Power-transmission device. No. 1,015,049; Jan. 16; Sp. p. 4368; Gaz. vol. 174; p. 733.
March, Charles M., Portland, Me. Sliding and swinging window. No. 1,015,050; Jan. 16; Sp. p. 4371; Gaz. vol. 174; p. 733.
Marchal, Alfred, Crouhans, France. Weft-end support in Northrop looms. No. 1,013,884; Jan. 9; Sp. p. 1774; Gaz. vol. 174; p. 304.
Marchand, Alexis, Bridgeport, Wash. Party-line telephone system. No. 1,013,412; Jan. 2; Sp. p. 705; Gaz. vol. 174; p. 112.
Marcucci, Marius, assignor to Modern Pen Company, New York, N. Y. Pocket-clip. No. 1,016,166; Jan. 30; Sp. p. 6727; Gaz. vol. 174; p. 1169.
Marinelli, Augusto, Loreto, Italy. Table-caster. No. 1,015,201; Jan. 16; Sp. p. 4651; Gaz. vol. 174; p. 785.
Marion Machine Foundry & Supply Co. (See Blakeslee, Henry W. and D. R., assignors.)
Marks, Jacob A., Nevada, Mo. Mattress-rack. No. 1,013,413; Jan. 2; Sp. p. 713; Gaz. vol. 174; p. 113.
Marlow, Daniel W., East Point, Ga. Stove. No. 1,015,330; Jan. 23; Sp. p. 4960; Gaz. vol. 174; p. 856.
Marmetschke, Ernst, Schöpfurth, near Eberswalde, assignor to Hubertusmühle mit beschränkter Haftung, Schöpfurth, Germany. Preserving wood. No. 1,016,024; Jan. 30; Sp. p. 6441; Gaz. vol. 174; p. 1121.
Marquet, Oscar L. (See Pritchard and Potter, assignors.)
Marsh, Wilbur W. (See Hackett and Morgan, assignors.)
Marshall, Albert T., assignor to The Automatic Refrigerating Company, Hartford, Conn. Temperature control of refrigerating-compartments. No. 1,014,833; Jan. 16; Sp. p. 3893; Gaz. vol. 174; p. 660.
Marshall, Charles S., Brockton, assignor to Boston Machine Works Company, Lynn, Mass. Folding-machine. No. 1,013,414; Jan. 2; Sp. p. 714; Gaz. vol. 174; p. 113.
Marshall, George H., New York, N. Y. Soda-calciner. No. 1,014,314; Jan. 9; Sp. p. 2708; Gaz. vol. 174; p. 453.
Marston, Annie V. (See Smith and Marston.)
Martens, Rudolph H., Fairfield, Wash. Sawing-machine. No. 1,014,500; Jan. 9; Sp. p. 3098; Gaz. vol. 174; p. 515.
Martin, Eugene, Soldiers Grove, Wis. Pump. No. 1,013,415; Jan. 2; Sp. p. 721; Gaz. vol. 174; p. 113.
Martin, Frederick E., Bonami, La. Conveyer-chain cleat. No. 1,013,794; Jan. 2; Sp. p. 1538; Gaz. vol. 174; p. 245.
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Total-printing cash-register. No. 1,013,193; Jan. 2; Sp. p. 209; Gaz. vol. 174; p. 36.
Martin, Richard W., Los Angeles, Cal. Sanitary pressure-filter. No. 1,015,051; Jan. 16; Sp. p. 4373; Gaz. vol. 174; p. 734.
Martin, Robert T. J., Elyria, Ohio. Pressed-metal seat. No. 1,014,013; Jan. 9; Sp. p. 2060; Gaz. vol. 174; p. 348.
Maschinenfabrik Moenus A. G. (See Heldmann, Peter, assignor.)
Maschinenfabrik Oerlikon. (See Honegger, Emil, assignor.)
Masgal, John, Worthington, Minn. Cue-tip. No. 1,013,671; Jan. 2; Sp. p. 1286; Gaz. vol. 174; p. 201.
Mason, Albert I., Hood River, Oreg. Box-press. No. 1,015,237; Jan. 16; Sp. p. 4721; Gaz. vol. 174; p. 796.
Massey, Charles F., Chicago, Ill. Molding battery-wells. No. 1,013,416; Jan. 2; Sp. p. 723; Gaz. vol. 174; p. 114.
Master, James W., assignor of one-third to S. Bryan, San Diego, Cal. Undercurrent sea-motor. No. 1,015,627; Jan. 23; Sp. p. 5591; Gaz. vol. 174; p. 958.
Matchell, George, South Pasadena, Cal. Fire, smoke, steam, and air shaft. No. 1,014,969; Jan. 16; Sp. p. 4199; Gaz. vol. 174; p. 707.
Mather, Allan G. (See Vessot and Mather.)
Mathes, George, Bedford, Ind. Gutter. No. 1,013,194; Jan. 2; Sp. p. 218; Gaz. vol. 174; p. 37.
Matson, Edward E., Michigan City, Ind., assignor to The National Self-Registering Bank Co., Chicago, Ill. Registering savings-bank. No. 1,015,762; Jan. 23; Sp. p. 5885; Gaz. vol. 174; p. 1003.
Matteson, Milo D. (See Kitterman, George W., assignor.)
Mauser, Paul, Oberndorf-on-the-Neckar, Germany. Automatic gun. No. 1,014,660; Jan. 16; Sp. p. 3502; Gaz. vol. 174; p. 600.
Mauss, Wilhelm, Johannesburg, Transvaal. Valve device for hydraulically-controlled self-feeding percussive apparatus. No. 1,015,449; Jan. 23; Sp. p. 5209; Gaz. vol. 174; p. 895.
Maw Brakes Limited. (See Maw, Robert, assignor.)
Maw, Edmund M., Depew, assignor to Gould Coupler Company, New York, N. Y. Car-coupling. No. 1,015,052; Jan. 16; Sp. p. 4375; Gaz. vol. 174; p. 734.
Maw, Robert, assignor to Maw Brakes Limited, Montreal, Quebec, Canada. Car-stopping device. No. 1,015,628; Jan. 23; Sp. p. 5594; Gaz. vol. 174; p. 958.
Maxim, Hiram P., Hartford, Conn. Gas-engine silencer. No. 1,015,698; Jan. 23; Sp. p. 5758; Gaz. vol. 174; p. 981.
Maxim, Hudson, Hopatcong, N. J. Automobile torpedo and method of and apparatus for its propulsion. No. 1,014,014; Jan. 9; Sp. p. 2063; Gaz. vol. 174; p. 348.
Maxim, Hudson, Hopatcong, N. J., assignor to E. I. du Pont de Nemours Powder Company. Explosive charge for ordnance. No. 1,015,814; Jan. 30; Sp. p. 5988; Gaz. vol. 174; p. 1047.
May, Augustus, New Orleans, La. Water-cooling attachment for refrigerators. No. 1,013,795; Jan. 2; Sp. p. 1540; Gaz. vol. 174; p. 245.
May, Philomena, Pittsburgh, Pa. Combined sweeper and rake. No. 1,014,404; Jan. 9; Sp. p. 2930; Gaz. vol. 174; p. 486.
Mayer, Godfried J., Buffalo, N. Y. Gasolene feed-chamber. No. 1,015,053; Jan. 16; Sp. p. 4379; Gaz. vol. 174; p. 735.
Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 1,015,388; Jan. 23; Sp. p. 5075; Gaz. vol. 174; p. 875.
Mayo, John. (See Kirby and Mayo.)
Mazurek, Andrzej, Philadelphia, Pa. Curtain-pole. No. 1,014,405; Jan. 9; Sp. p. 2931; Gaz. vol. 174; p. 486.
McArthur, William, Tenino, Wash. Locomotive-boiler. No. 1,015,501; Jan. 23; Sp. p. 5327; Gaz. vol. 174; p. 913.
McBride, Charles R., New York, assignor of one-half to himself, and one-half to C. R. Laurenzi, Brooklyn, N. Y. Tension-anchor for hose-supporters. No. 1,015,054; Jan. 16; Sp. p. 4380; Gaz. vol. 174; p. 735.
McCalmont, Robert. (See Ames, Oscar H., assignor.)
McCann, William B., Omaha, Nebr. Ice-cream freezer. No. 1,013,672; Jan. 2; Sp. p. 1287; Gaz. vol. 174; p. 201.
McCarty, Norman, assignor to Atlas Engine Works, Indianapolis, Ind. Pump. No. 1,014,242; Jan. 9; Sp. p. 2572; Gaz. vol. 174; p. 428.
McChesney, John S., Chicago, Ill. Broom-banding machine. No. 1,014,887; Jan. 16; Sp. p. 4015; Gaz. vol. 174; p. 678.
McClave, Lee S., Peabody, Kans. Spring bicycle-frame. No. 1,014,888; Jan. 16; Sp. p. 4018; Gaz. vol. 174; p. 679.
McClean, Samuel N., Cleveland, Ohio. Vehicle wheel and tire. No. 1,015,238; Jan. 16; Sp. p. 4723; Gaz. vol. 174; p. 796.
McClellan, Stephen, Brooklyn, N. Y. Foldable umbrella. No. 1,013,655; Jan. 2; Sp. p. 1012; Gaz. vol. 174; p. 162.
McCloskey, William, Maidstone, Ontario, Canada. Mop-wringer. No. 1,015,450; Jan. 23; Sp. p. 5211; Gaz. vol. 174; p. 896.
McCloud, Edward H., Columbus, Ohio. Flexible fire-resisting shutter. No. 1,013,945; Jan. 9; Sp. p. 1915; Gaz. vol. 174; p. 326.
McCloud, Edward H., Columbus, Ohio. Fire-resisting curtain. No. 1,014,315; Jan. 9; Sp. p. 2720; Gaz. vol. 174; p. 453.
McCloud, Edward H., Columbus, Ohio. Means for supporting and operating curtain-rollers. No. 1,015,331; Jan. 23; Sp. p. 4962; Gaz. vol. 174; p. 856.
McCloud, Edward H., Columbus, Ohio. Flexible fire-resisting shutter and slat therefor. No. 1,015,332; Jan. 23; Sp. p. 4963; Gaz. vol. 174; p. 856.
McCloud, Michael J., Brooklyn, assignor to I. E. Ikelheimer, New York, N. Y. Valve. No. 1,014,501; Jan. 9; Sp. p. 3100; Gaz. vol. 174; p. 515.
McClure, Charles W., Saginaw, Mich. Hoop-fastening means for silos. No. 1,015,815; Jan. 30; Sp. p. 5991; Gaz. vol. 174; p. 1047.
McCollam, Patrick G., Easton, Conn. Sheet-music turner. No. 1,015,574; Jan. 23; Sp. p. 5483; Gaz. vol. 174; p. 938.

McCollum, Frank, and A. C. Hanner, Randleman, N. C. Lug-strap connector. No. 1,015,816; Jan. 30; Sp. p. 5902; Gaz. vol. 174; p. 1048.
McConnaughy, Walter H., Pittsburgh, Pa. Crumb-collector. No. 1,013,195; Jan. 2; Sp. p. 219; Gaz. vol. 174; p. 37.
McConnell, Franz M., Longview, Tex. Nasal expander. No. 1,014,076; Jan. 9; Sp. p. 2208; Gaz. vol. 174; p. 369.
McConnell, Joseph, Connellsville, Pa. Fluid-pressure motor. No. 1,013,885; Jan. 9; Sp. p. 1776; Gaz. vol. 174; p. 305.
McCormick, Andrew, Chicago Heights, Ill. Rotary engine. No. 1,014,162; Jan. 9; Sp. p. 2381; Gaz. vol. 174; p. 398.
McCormick, Richard P., Jr., Portland, Oreg. Side-dump car. No. 1,014,077; Jan. 9; Sp. p. 2208; Gaz. vol. 174; p. 370.
McCourt, Cyril D. (See Bone, Wilson, and McCourt.)
McCrary, Merritt L., Ethan, S. D. Wheel-scoop. No. 1,015,960; Jan. 30; Sp. p. 6327; Gaz. vol. 174; p. 1101.
McCulloch, Frederick L., Arcadia, Fla. Reversible steam-turbine. No. 1,016,080; Jan. 30; Sp. p. 6579; Gaz. vol. 174; p. 1142.
McCulloch, John A., McKeesport, Pa. Valve. No. 1,016,167; Jan. 30; Sp. p. 6728; Gaz. vol. 174; p. 1170.
McCullough, John E. (See McDonald and McCullough.)
McCune, Frank R., assignor to Acme Hoisting Machinery Company, St. Louis, Mo. Hoisting-tower. No. 1,013,886; Jan. 9; Sp. p. 1780; Gaz. vol. 174; p. 305.
McCurdy, Arthur W., Baddeck, Nova Scotia, Canada. Photographic negative and producing the same. No. 1,014,970; Jan. 16; Sp. p. 4200; Gaz. vol. 174; p. 707.
McDonald, Charles B., and J. E. McCullough, assignors to McDonald Machine Company, Chicago, Ill. Can-testing machine. No. 1,013,796; Jan. 2; Sp. p. 1543; Gaz. vol. 174; p. 245.
McDonald, Charles D., Chicago, Ill., assignor, by mesne assignments, to American Cork & Seal Company, Philadelphia, Pa. Machine for forming seals in metallic caps. No. 1,013,841; Jan. 2; Sp. p. 1637; Gaz. vol. 174; p. 262.
McDonald, Charles D., Chicago, Ill., assignor, by mesne assignments, to American Cork & Seal Company, Philadelphia, Pa. Machine for positioning and securing gaskets within metallic caps. No. 1,013,842; Jan. 2; Sp. p. 1643; Gaz. vol. 174; p. 262.
McDonald, George L., Paragould, Ark. Portable stand. No. 1,014,889; Jan. 16; Sp. p. 4020; Gaz. vol. 174; p. 679.
McDonald, John, Byron, assignor of one-half to R. Muirhead, Orchard Lake, Mich. Gearing. No. 1,015,055; Jan. 16; Sp. p. 4382; Gaz. vol. 174; p. 735.
McDonald Machine Company. (See McDonald and McCullough, assignors.)
McDougall, John. (See Hutten and McDougall.)
McDuff, Daniel R., Bercair, Tex. Collar and necktie holder. No. 1,014,834; Jan. 16; Sp. p. 3894; Gaz. vol. 174; p. 661.
McElroy, James H., Middletown, N. Y. Laying-nest. No. 1,014,316; Jan. 9; Sp. p. 2721; Gaz. vol. 174; p. 453.
McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 1,014,835; Jan. 16; Sp. p. 3895; Gaz. vol. 174; p. 661.
McGahey, Richard, Walla Walla, Wash. Loaded-truck-counting apparatus. No. 1,013,797; Jan. 2; Sp. p. 1546; Gaz. vol. 174; p. 246.
McGarry, D. P. (See Wood, William H., assignor.)
McGill, Charles E., assignor of one-fourth to C. Huber, one-fourth to E. Howell, and one-fourth to C. F. Ruoff, Binghamton, N. Y. Shuttle. No. 1,014,661; Jan. 16; Sp. p. 3504; Gaz. vol. 174; p. 600.
McGrath, Thomas A. (See Dennis, Benjamin A., assignor.)
McGregor, Allan L., Duluth, Minn. Automobile-buffer. No. 1,014,713; Jan. 16; Sp. p. 3608; Gaz. vol. 174; p. 618.
McGuire, James J., St. Louis, Mo. Two-cycle engine. No. 1,014,078; Jan. 9; Sp. p. 2212; Gaz. vol. 174; p. 370.
McHugh, William. (See Shutts and McHugh.)
McIntosh, Thomas, Jenkintown, Pa. Window-blind. No. 1,013,417; Jan. 2; Sp. p. 726; Gaz. vol. 174; p. 114.
McIntyre, Malcolm W., Cincinnati, Ohio, and R. P. Conner, Covington, Ky. Amusement device. No. 1,013,843; Jan. 2; Sp. p. 1656; Gaz. vol. 174; p. 263.
McIntyre, Michael M., assignor to The Perfection Spring Company, Cleveland, Ohio. Vehicle-spring. No. 1,014,406; Jan. 9; Sp. p. 2933; Gaz. vol. 174; p. 486.
McKay, James D., St. John, New Brunswick, assignor of one-half to J. C. Purdy, St. John, Canada. Device for creating a draft through smoke-stacks. No. 1,013,887; Jan. 9; Sp. p. 1781; Gaz. vol. 174; p. 305.
McKay, Jesse M. and R. A., Olathe, Colo. Brick-hook. No. 1,014,079; Jan. 9; Sp. p. 2215; Gaz. vol. 174; p. 371.
McKay, Robert A. (See McKay, Jesse M. and R. A.)
McKean, John O., Westfield, Mass. Headlight for vehicles. No. 1,013,300; Jan. 2; Sp. p. 475; Gaz. vol. 174; p. 74.
McKean, John O., assignor to Foster Machine Company, Westfield, Mass. Winding-machine. No. 1,014,836; Jan. 16; Sp. p. 3904; Gaz. vol. 174; p. 661.
McKeever, Francis S., and H. C. Schuck, Pittsburgh, Pa. Folding shipping crate or box. No. 1,013,196; Jan. 2; Sp. p. 221; Gaz. vol. 174; p. 37.
McKelvey, William W. (See Sherman, McKelvey, and Reilly.)
McLarty, Leonard L., assignor of one-half to L. A. Hauser, Los Angeles, Cal. Engine-starter. No. 1,015,817; Jan. 30; Sp. p. 5993; Gaz. vol. 174; p. 1048.
McLaughlin, Harry W., Aspinwall, Pa. Cue. No. 1,014,502; Jan. 9; Sp. p. 3102; Gaz. vol. 174; p. 515.
McLeod, Harvey W., Quincy, Mass. Swimming appliance. No. 1,014,407; Jan. 9; Sp. p. 2934; Gaz. vol. 174; p. 486.
McLoon, Nelson E., Glencoe, Mo. Limekiln. No. 1,014,015; Jan. 9; Sp. p. 2070; Gaz. vol. 174; p. 348.
McManus, John A., Jr., Lynn, Mass. Casting-machine. No. 1,015,818; Jan. 30; Sp. p. 5995; Gaz. vol. 174; p. 1048.
McManus, John A., Jr., Lynn, Mass. Casting-machine. No. 1,015,819; Jan. 30; Sp. p. 6000; Gaz. vol. 174; p. 1049.
McMullen, Charles F., Fort Lupton, Colo. Grasshopper-destroyer. No. 1,014,890; Jan. 16; Sp. p. 4020; Gaz. vol. 174; p. 679.
McNamara, James J., Baltimore, Md. Garbage-can. No. 1,013,504; Jan. 2; Sp. p. 904; Gaz. vol. 174; p. 144.
McNulty, Richard J., Boston, Mass. Manhole and catch-basin cover. No. 1,016,081; Jan. 30; Sp. p. 6581; Gaz. vol. 174; p. 1142.
McPhayden, John A., and C. T. De Veaux, Chattanooga, Tenn. Making radiators and analogous tubular structures. No. 1,014,603; Jan. 9; Sp. p. 3303; Gaz. vol. 174; p. 549.
McPike, William B., Bowling Green, Mo. Spring-wheel. No. 1,013,946; Jan. 9; Sp. p. 1016; Gaz. vol. 174; p. 326.
McQuade, George, and N. S. Airhart, Trenton, Mo. Lubricator for locomotive-driver flanges. No. 1,013,197; Jan. 2; Sp. p. 222; Gaz. vol. 174; p. 37.
McQueen, Archibald B., Dunnellon, Fla. Spring-tire for vehicle-wheels. No. 1,015,451; Jan. 23; Sp. p. 5212; Gaz. vol. 174; p. 896.
McTurk, Morton H., Philadelphia, Pa. Coal-separator. No. 1,014,080; Jan. 9; Sp. p. 2216; Gaz. vol. 174; p. 371.
McWhirter, John S., New York, N. Y., assignor to General Electric Company. Pressure-controlling mechanism. No. 1,016,025; Jan. 30; Sp. p. 6442; Gaz. vol. 174; p. 1122.
Meadowcroft, Edward E., Hobart, Tasmania, Australia. Style-bar for phonographs. No. 1,013,198; Jan. 2; Sp. p. 223; Gaz. vol. 174; p. 38.
Meahl, Philip J., Bayonne, N. J. Adjustable tracker. No. 1,013,301; Jan. 2; Sp. p. 478; Gaz. vol. 174; p. 75.
Meaker, John W., Detroit, Mich. Explosive-engine. No. 1,015,502; Jan. 23; Sp. p. 5328; Gaz. vol. 174; p. 913.
Medeiros, Manuel G., Irvington, Cal. Rail-fastener. No. 1,014,891; Jan. 16; Sp. p. 4022; Gaz. vol. 174; p. 680.
Meiser, Jesse A., assignor of one-fourth to J. A. Prentice, Eureka, Cal. Photographic-printing apparatus. No. 1,014,767; Jan. 16; Sp. p. 3734; Gaz. vol. 174; p. 636.
Meissner, Otto W., Montreal, Quebec, Canada. Door. No. 1,014,768; Jan. 16; Sp. p. 3741; Gaz. vol. 174; p. 636.
Mekeel, Charles H., Jr., St. Louis county, Mo. Wrench. No. 1,014,714; Jan. 16; Sp. p. 3610; Gaz. vol. 174; p. 618.
Melchert, Charles A., assignor, by mesne assignments, to The Accident Insurance Machine Company, Kansas City, Mo. Coin-controlled vending-machine. No. 1,014,016; Jan. 9; Sp. p. 2071; Gaz. vol. 174; p. 349.
Melchert, Charles A., assignor, by mesne assignments, to The Accident Insurance Machine Company, Kansas City, Mo. Clock-set printing mechanism. No. 1,014,017; Jan. 9; Sp. p. 2079; Gaz. vol. 174; p. 349.
Melchior, Joseph E., Des Moines, Iowa, assignor of one-half to North and Judd Manufacturing Company, New Britain, Conn. Spread-roller. No. 1,014,769; Jan. 16; Sp. p. 3742; Gaz. vol. 174; p. 637.
Meldrum, Harry W., East St. Louis, Ill. Wrench. No. 1,015,970; Jan. 30; Sp. p. 6328; Gaz. vol. 174; p. 1101.
Melinski, Mykolaj, Albert City, Iowa. Trolley-pole. No. 1,013,673; Jan. 2; Sp. p. 1280; Gaz. vol. 174; p. 202.
Melson, George T., Coleman, Fla. Time stock-feeder. No. 1,014,163; Jan. 9; Sp. p. 2383; Gaz. vol. 174; p. 398.
Memmersheim, Werner, Neheim, Germany. Steam-pressure regulator. No. 1,013,199; Jan. 2; Sp. p. 224; Gaz. vol. 174; p. 38.
Mendelsohn, Harry, New York, N. Y. Reversible buffer. No. 1,014,629; Jan. 9; Sp. p. 3396; Gaz. vol. 174; p. 559.
Mendenhall, William J. (See Swenson, Herman C., assignor.)
Menke, Karl H., Portland, Oreg. Water-motor. No. 1,014,164; Jan. 9; Sp. p. 2384; Gaz. vol. 174; p. 399.
Menningen, Joseph F., deceased, West Allis, Wis.; K. Menningen, administratrix. Vacuum-producing apparatus. No. 1,013,200; Jan. 2; Sp. p. 225; Gaz. vol. 174; p. 38.
Menningen, Katherine, administratrix. (See Menningen, Joseph F.)
Meno, Frederick J., Detroit, Mich. Message-carrier for vessels. No. 1,013,607; Jan. 2; Sp. p. 1112; Gaz. vol. 174; p. 179.
Menzies, Robert C., Glens Falls, N. Y. Street-cleaning machine. No. 1,014,165; Jan. 9; Sp. p. 2386; Gaz. vol. 174; p. 399.

Menzies, Thomas G. (See Gibb, Menzies, and Chalmers.)
Mercer, H. J. (See Perkins, Henry, assignor.)
Merckens, Waldemar. (See Smith and Merckens.)
Meredith, Noah E., Los Angeles, Cal. Valve-grinder. No. 1,015,902; Jan. 30; Sp. p. 6187; Gaz. vol. 174; p. 1079.
Mergenthaler Linotype Co. (See Rogers, John R., assignor.)
Meriwether, Coleman. (See Kaufman and Meriwether.)
Merkel, Arthur E., assignor to Schaffner Bros., Cleveland, Ohio. Adjustable garment. No. 1,014,317; Jan. 9; Sp. p. 2726; Gaz. vol. 174; p. 454.
Merrell, Howard E., *et al.* (See Gill, Edwin R., assignor.)
Merriam, Henry F. (See Briggs and Merriam.)
Merriam, Henry F. (See Leddell, William A., assignor.)
Merrill, Henry D., Clinton, Mo. Flood-gate. No. 1,013,608; Jan. 2; Sp. p. 1113; Gaz. vol. 174; p. 179.
Merrill, Jason L. (See Sammet and Merrill.)
Merrill, Peter H., Pardeeville, assignor of one-half to L. E. Wheeler, Randolph, Wis. Wire-fence tool. No. 1,015,503; Jan. 23; Sp. p. 5330; Gaz. vol. 174; p. 914.
Merrill, William H., St. Louis, Mo. Venereal bag. No. 1,014,837; Jan. 16; Sp. p. 3906; Gaz. vol. 174; p. 662.
Merriman, Myron C., Detroit, Mich. Cushion-tire. No. 1,014,318; Jan. 9; Sp. p. 2727; Gaz. vol. 174; p. 454.
Merry, William F., *et al.* (See Neville, Harry, assignor.)
Messer, Vladimir V., Los Angeles, Cal. Reinforced-concrete pipe. No. 1,013,302; Jan. 2; Sp. p. 479; Gaz. vol. 174; p. 75.
Messick, Charles, Hackensack, N. J. I-beam-track-switching device. No. 1,014,503; Jan. 9; Sp. p. 3104; Gaz. vol. 174; p. 515.
Messina, Joseph, New Orleans, La. Flue or draft motor. No. 1,013,708; Jan. 2; Sp. p. 1548; Gaz. vol. 174; p. 246.
Messiter, Edwin H., Brooklyn, N. Y., assignor to Electric Weighing Company, New York, N. Y. Integrating mechanism. No. 1,014,604; Jan. 9; Sp. p. 3305; Gaz. vol. 174; p. 549.
Metcalf, Charles W., San Diego, Cal. Pipe-tapping means. No. 1,016,026; Jan. 30; Sp. p. 6445; Gaz. vol. 174; p. 1122.
Metzger, David, New York, N. Y. Pompon. No. 1,014,408; Jan. 9; Sp. p. 2937; Gaz. vol. 174; p. 487.
Meyer, Felix, Aix-la-Chapelle, Germany. Razor. No. 1,015,575; Jan. 23; Sp. p. 5487; Gaz. vol. 174; p. 939.
Meyer, Ferdinand P., New York, N. Y. Sight-square. No. 1,013,799; Jan. 2; Sp. p. 1549; Gaz. vol. 174; p. 246.
Meyer, Julius. (See Meyer, Willy and J.)
Meyer, Paul, assignor of one-half to M. Nolden, Solingen, Germany. Screw-wrench. No. 1,015,504; Jan. 23; Sp. p. 5331; Gaz. vol. 174; p. 914.
Meyer, Rudolph, New York, N. Y. Hat-pin guard. No. 1,014,838; Jan. 16; Sp. p. 3907; Gaz. vol. 174; p. 662.
Meyer, Willy and J., New York, N. Y., assignors to People of the United States. Apparatus for conducting thoracic operations. No. 1,013,800; Jan. 2; Sp. p. 1551; Gaz. vol. 174; p. 247.
Mezza, Antonio B., Pleasanton, Cal. Rake. No. 1,013,556; Jan. 2; Sp. p. 1014; Gaz. vol. 174; p. 162.
Michael, William H. (See Kenner, Michael, and Burton.)
Michaelson, Adam M., *et al.* (See Michaelson, James M., assignor.)
Michaelson, James M., assignor of one-fourth to J. R. Wertman and three-fourths to A. M. Michaelson, Geneva, N. Y. Combined train-pipe coupling and valve. No. 1,013,418; Jan. 2; Sp. p. 728; Gaz. vol. 174; p. 115.
Michel, Isac, assignor to Michelius G. m. b. H., Frankfort-on-the-Main, Germany. Machine for opening envelops. No. 1,013,201; Jan. 2; Sp. p. 228; Gaz. vol. 174; p. 38.
Michelius G. m. b. H. (See Michel, Isac, assignor.)
Mieden, Adam, Deadwood, Cal. Safety-envelop. No. 1,013,557; Jan. 2; Sp. p. 1014; Gaz. vol. 174; p. 163.
Mielke, Charles F., *et al.* (See Mielke and Sergent, assignors.)
Mielke, Henry W., and G. M. Sergent, assignors of one-fourth to G. F. Slocum and one-fourth to C. F. Mielke, Rochester, N. Y. Spark-arrester. No. 1,014,018; Jan. 9; Sp. p. 2083; Gaz. vol. 174; p. 349.
Michill, Thomas A., Cambridge, Mass. Apparatus for turning peat blocks. No. 1,015,390; Jan. 23; Sp. p. 5079; Gaz. vol. 174; p. 875.
Miles, E. C. (See Whitfield, James F., assignor.)
Miles, James E., Spokane, Wash. Offset device. No. 1,016,082; Jan. 30; Sp. p. 6583; Gaz. vol. 174; p. 1143.
Millar, Preston S. (See Sharp and Millar.)
Millard, William, assignor, by mesne assignments, to Albali Manufacturing Company, New York, N. Y. Vending-machine. No. 1,013,674; Jan. 2; Sp. p. 1290; Gaz. vol. 174; p. 202.
Milleman, Jacob C., *et al.* (See De Bats, Louis H. J., assignor.)
Miller, Charles A. (See Flanagan and Miller.)
Miller, D. D., and D. E. Rowland, Canton, Ohio; said Rowland assignor to said Miller. Trip for hay and other carriers. No. 1,014,019; Jan. 9; Sp. p. 2084; Gaz. vol. 174; p. 350.
Miller, David C., Mount Braddock, Pa. Metallic tie and rail-fastener. No. 1,015,056; Jan. 16; Sp. p. 4385; Gaz. vol. 174; p. 736.
Miller, Du Brul & Peters Mfg. Co., The. (See Du Brul, Davila S., assignor.)
Miller, Edwin H., Los Angeles, Cal. Tape-line spring-scale. No. 1,014,839; Jan. 16; Sp. p. 3908; Gaz. vol. 174; p. 662.
Miller, Frederick, Los Angeles, Cal. Roundabout. No. 1,015,971; Jan. 30; Sp. p. 6329; Gaz. vol. 174; p. 1101.
Miller, George E., Sacramento, assignor to E. Clemens Horst Company, San Francisco, Cal. Hop-cluster stemmer. No. 1,013,505; Jan. 2; Sp. p. 906; Gaz. vol. 174; p. 145.
Miller, Harry A., Los Angeles, Cal. Carburetor attachment. No. 1,014,319; Jan. 9; Sp. p. 2728; Gaz. vol. 174; p. 454.
Miller, Henry, Pekin, Ill. Horse-swing. No. 1,015,239; Jan. 16; Sp. p. 4726; Gaz. vol. 174; p. 797.
Miller, Henry G., Cleveland, Ohio, assignor of one-half to S. S. Newman, Pittsburgh, Pa. Filter system. No. 1,013,419; Jan. 2; Sp. p. 730; Gaz. vol. 174; p. 115.
Miller, Isaac W., St. Louis, Mo. Hanger-rack. No. 1,014,020; Jan. 9; Sp. p. 2086; Gaz. vol. 174; p. 350.
Miller, James B., Rochester, N. Y. Cell-case and blank therefor. No. 1,014,081; Jan. 9; Sp. p. 2218; Gaz. vol. 174; p. 378.
Miller, Sesworth G., Russell, Kans. Pipe-clamp. No. 1,014,504; Jan. 9; Sp. p. 3109; Gaz. vol. 174; p. 516.
Miller, Thomas J., and G. Allsup, Biggs, Oreg. Peach-brushing apparatus. No. 1,013,506; Jan. 2; Sp. p. 908; Gaz. vol. 174; p. 145.
Miller, Thomas S., South Orange, N. J. Apparatus for transferring materials. No. 1,013,420; Jan. 2; Sp. p. 732; Gaz. vol. 174; p. 115.
Miller, Thomas S., South Orange, N. J. Marine transfer. No. 1,015,240; Jan. 16; Sp. p. 4727; Gaz. vol. 174; p. 797.
Miller, William E., Revere, Mass. Amusement apparatus. No. 1,013,202; Jan. 2; Sp. p. 229; Gaz. vol. 174; p. 30.
Miller, William E., Revere, Mass. Amusement apparatus. No. 1,013,203; Jan. 2; Sp. p. 230; Gaz. vol. 174; p. 30.
Millet, Josiah B., Boston, Mass. Phonograph. No. 1,013,421; Jan. 2; Sp. p. 735; Gaz. vol. 174; p. 116.
Mills, Daniel, Philadelphia, Pa., assignor to Standard Sewing Machine Company, Cleveland, Ohio. Thread-cutting mechanism for sewing-machines. No. 1,016,027; Jan. 30; Sp. p. 6446; Gaz. vol. 174; p. 1122.
Mills, Daniel, Philadelphia, Pa., assignor to Standard Sewing Machine Company, Cleveland, Ohio. Thread-cutting mechanism for sewing-machines. No. 1,016,226; Jan. 30; Sp. p. 6836; Gaz. vol. 174; p. 1188.
Mills, Edward L., Fitchburg, Mass., and J. W. Whitford, Jersey City, N. J., assignors to Fitchburg Machine Works, Fitchburg, Mass. Tool-holder. No. 1,015,903; Jan. 30; Sp. p. 6189; Gaz. vol. 174; p. 1079.
Mills, Herbert S., Chicago, Ill. Coin-controlled device for vending-machines. No. 1,014,320; Jan. 9; Sp. p. 2729; Gaz. vol. 174; p. 455.
Mills, Radcliffe B., Philadelphia, Pa. Dyeing-tub. No. 1,014,243; Jan. 9; Sp. p. 2574; Gaz. vol. 174; p. 429.
Mills Woven Cartridge Belt Co. (See Jennings, Victor H., assignor.)
Milner, Emil H., Stockbridge, Mich. Reclining-chair. No. 1,015,452; Jan. 23; Sp. p. 5213; Gaz. vol. 174; p. 896.
Milton, Frederick B., Pittston, Pa. Mucilage-brush holder. No. 1,013,422; Jan. 2; Sp. p. 738; Gaz. vol. 174; p. 116.
Milton, John L., Chicago, Ill. Electrical equipment for automobiles. No. 1,015,275; Jan. 16; Sp. p. 4808; Gaz. vol. 174; p. 809.
Minetty, George A., Davenport, Iowa. Dumping-car. No. 1,013,801; Jan. 2; Sp. p. 1556; Gaz. vol. 174; p. 247.
Minkhoff, Charles L., and L. Kronthal, New York, N. Y. Adjustable hat or cap. No. 1,014,505; Jan. 9; Sp. p. 3111; Gaz. vol. 174; p. 517.
Minnick, Alfred, Coeur d'Alene, Idaho, assignor to Minnick Automatic Train Controller Company. Safety system for railways. No. 1,016,227; Jan. 30; Sp. p. 6843; Gaz. vol. 174; p. 1189.
Minnick Automatic Train Controller Company. (See Minnick, Alfred, assignor.)
Minnis, Paul H., Lansing, Mich. Spring-wheel for vehicles. No. 1,014,409; Jan. 9; Sp. p. 2937; Gaz. vol. 174; p. 487.
Minor, Daniel B., assignor to L. S. Hackney, St. Paul, Minn. Fan. No. 1,014,321; Jan. 9; Sp. p. 2733; Gaz. vol. 174; p. 455.
Mires, John C., Oakland, Cal. Underground conduit for electric railways. No. 1,014,892; Jan. 16; Sp. p. 4023; Gaz. vol. 174; p. 680.
Misner Briquette Machine Company, The. (See Misner, Edgar D., assignor.)
Misner, Edgar D., St. Louis, Mo., assignor to The Misner Briquette Machine Company. Molding-machine. No. 1,015,576; Jan. 23; Sp. p. 5489; Gaz. vol. 174; p. 939.
Mitchell, Abner A., Earleton, Kans. Attachment for cultivators. No. 1,013,675; Jan. 2; Sp. p. 1292; Gaz. vol. 174; p. 203.
Mitchell, Edmund, Old Trap, N. C. Grapple. No. 1,015,057; Jan. 16; Sp. p. 4386; Gaz. vol. 174; p. 736.
Mitchell, Frank, Hammersmith, London, England, assignor, by mesne assignments, to Atlantic National Bank, Providence, R. I. Target-practice apparatus. No. 1,015,391; Jan. 23; Sp. p. 5081; Gaz. vol. 174; p. 876.
Mitchell, Harry J., Wilmerding, Pa. Horse-detaching device. No. 1,015,699; Jan. 23; Sp. p. 5761; Gaz. vol. 174; p. 982.
Mitchell, John F., Topeka, Kans. Cushion-wheel for vehicles. No. 1,014,244; Jan. 9; Sp. p. 2575; Gaz. vol. 174; p. 429.
Mitchell, Robert, London, England. Roller for sugar-cane mills. No. 1,015,577; Jan. 23; Sp. p. 5492; Gaz. vol. 174; p. 980.

Mitchell, William B., Edgbaston, Birmingham, assignor to W. Mitchell (Pens) Limited, Smethwick, near Birmingham, England. Bobbin-carriage and bobbin of lace machinery. No. 1,015,333; Jan. 28; Sp. p. 4964; Gaz. vol. 174; p. 856.

Mitchell, William C., Sydney, Nova Scotia, Canada. Apparatus for handling coke and similar loose material. No. 1,013,676; Jan. 2; Sp. p. 1293; Gaz. vol. 174; p. 203.

Mitchell, William C., Sydney, Nova Scotia, Canada. Steam-separator. No. 1,013,677; Jan. 2; Sp. p. 1301; Gaz. vol. 174; p. 203.

Mlitz, August, Charlottenburg, Germany. Piston lubricating-pump. No. 1,014,840; Jan. 16; Sp. p. 3909; Gaz. vol. 174; p. 663.

Mochisuki, Masaharu. (See Akahori and Mochisuki.)

Modern Pen Company. (See Marcucci, Marius, assignor.)

Moe, Sivert, Chicago, Ill. Mangle for small articles. No. 1,016,028; Jan. 30; Sp. p. 6455; Gaz. vol. 174; p. 1123.

Moeller, Henry, New York, N. Y. Cooling device. No. 1,014,893; Jan. 16; Sp. p. 4025; Gaz. vol. 174; p. 680.

Moffet, Alvus H., Larned, Kans. U-shaped track-fastening. No. 1,014,083; Jan. 9; Sp. p. 2222; Gaz. vol. 174; p. 372.

Moffet, Alvus H., Larned, Kans. Rail-fastening. No. 1,014,084; Jan. 9; Sp. p. 2223; Gaz. vol. 174; p. 372.

Moffet, Alvus H., Larned, Kans. Concrete tie. No. 1,014,085; Jan. 9; Sp. p. 2224; Gaz. vol. 174; p. 373.

Moffet, Alvus H., Larned, Kans. Rail-fastening. No. 1,014,086; Jan. 9; Sp. p. 2225; Gaz. vol. 174; p. 373.

Moffet, Alvus H., Larned, Kans. Rail-fastening. No. 1,014,087; Jan. 9; Sp. p. 2227; Gaz. vol. 174; p. 373.

Moffet, Alvus H., Larned, Kans. Rail-fastening. No. 1,014,088; Jan. 9; Sp. p. 2228; Gaz. vol. 174; p. 373.

Moffet, Alvus H., Larned, Kans. Tie structure. No. 1,014,089; Jan. 9; Sp. p. 2230; Gaz. vol. 174; p. 374.

Moffet, Alvus H., Larned, Kans. Rail-fastening. No. 1,014,090; Jan. 9; Sp. p. 2231; Gaz. vol. 174; p. 374.

Moffet, Alvus H., Larned, Kans. Track-fastening. No. 1,014,166; Jan. 9; Sp. p. 2388; Gaz. vol. 174; p. 399.

Mofitt, Eugenia A., administratrix. (See Moffitt, John R.)

Moffitt, John R., deceased; E. A. Moffitt, administratrix, Denver, Colo. Metallurgical furnace. No. 1,014,971; Jan. 16; Sp. p. 4202; Gaz. vol. 174; p. 707.

Molcar, John J., Forest Park, Ill. Reel. No. 1,014,322; Jan. 9; Sp. p. 2734; Gaz. vol. 174; p. 455.

Moll, Theodore W. (See Moll, William and T. W.)

Moll, William and T. W., Cleveland, Ohio. Steam-trap. No. 1,013,507; Jan. 2; Sp. p. 909; Gaz. vol. 174; p. 145.

Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,013,204; Jan. 2; Sp. p. 231; Gaz. vol. 174; p. 39.

Monarch Typewriter Company, The. (See Richardson, Daniel J., assignor.)

Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)

Monell, Ira F., Boulder, Colo. Ore-concentrator. No. 1,013,205; Jan. 2; Sp. p. 234; Gaz. vol. 174; p. 40.

Moneuse, Alphonse F., New Rochelle, N. Y. Coffee and tea urn. No. 1,015,058; Jan. 16; Sp. p. 4387; Gaz. vol. 174; p. 736.

Monitor Drill Company. (See Rieske, Otto G., assignor.)

Monnot, John F., Paris, France. Electric heater. No. 1,014,662; Jan. 16; Sp. p. 3506; Gaz. vol. 174; p. 601.

Monro, Arthur R., and H. Beatty, Berkeley, Cal. Equilibrium attachment for aeroplanes. No. 1,014,082; Jan. 9; Sp. p. 2219; Gaz. vol. 174; p. 372.

Monroe, Nathaniel S., Arthur, Ill. Road-leveling device. No. 1,015,820; Jan. 30; Sp. p. 6003; Gaz. vol. 174; p. 1049.

Monson, David, Belview, Minn. Wire-fastener. No. 1,014,245; Jan. 9; Sp. p. 2577; Gaz. vol. 174; p. 429.

Montague Mailing Machinery Co. (See Lee, Ulysses G., assignor.)

Montgomery, Robert J., and W. H. Hill, assignors to Sanitax Brush Company, Chicago, Ill. Brush. No. 1,013,558; Jan. 2; Sp. p. 1016; Gaz. vol. 174; p. 163.

Moon, Richard D., and H. J. Horne, San Angelo, Tex. Windmill. No. 1,015,505; Jan. 23; Sp. p. 5331; Gaz. vol. 174; p. 914.

Moore, Alfred M., Malden, and C. M. Moore, Everett, Mass. Shoe-shank stiffener. No. 1,014,894; Jan. 16; Sp. p. 4026; Gaz. vol. 174; p. 681.

Moore, Calvin, Providence, Iowa. Grain-car door. No. 1,014,246; Jan. 9; Sp. p. 2577; Gaz. vol. 174; p. 429.

Moore, Charles A., St. Paul, Minn., assignor to Moore Patent Car Company. Heater-car. No. 1,016,243; Jan. 30; Sp. p. 6880; Gaz. vol. 174; p. 1195.

Moore, Chester M. (See Moore, Alfred M. and C. M.)

Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Company, New York, N. Y. Hand-fire for making joints in vacuum-tube lamps. No. 1,014,247; Jan. 9; Sp. p. 2580; Gaz. vol. 174; p. 430.

Moore, David P. (See Beale and Moore.)

Moore, Edward Y., Cleveland, Ohio. Switch for trolley-trackways. No. 1,015,578; Jan. 23; Sp. p. 5493; Gaz. vol. 174; p. 940.

Moore Electrical Company. (See Moore, Daniel M., assignor.)

Moore, Fred M., and J. C. Elliott, Oldtown, Me. Carding-doffer and constructing same. No. 1,015,202; Jan. 16; Sp. p. 4652; Gaz. vol. 174; p. 785.

Moore, J. Walter, Fort Edward, N. Y. Child's combined carriage and sleigh. No. 1,013,206; Jan. 2; Sp. p. 237; Gaz. vol. 174; p. 40.

Moore, L. M. (See Tudor, James H., assignor.)

Moore, Lee C., Pittsburgh, Pa. Steel tower or derrick. No. 1,015,821; Jan. 30; Sp. p. 6006; Gaz. vol. 174; p. 1049.

Moore Patent Car Company. (See Moore, Charles A., assignor.)

Moore, Robert M., Galveston, Tex. Attachment for laundry-extractors. No. 1,015,392; Jan. 23; Sp. p. 5084; Gaz. vol. 174; p. 876.

Moore, William G., Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio. Molding apparatus. No. 1,013,303; Jan. 2; Sp. p. 481; Gaz. vol. 174; p. 75.

Moran, John, *et al.* (See Bopp, Clinton L., assignor.)

Morecambe Motor and Engineering Company Limited. (See Walker and Hollings, assignors.)

Morehouse, David, Delphos, Ohio. Lubricating device for engines. No. 1,013,678; Jan. 2; Sp. p. 1303; Gaz. vol. 174; p. 204.

Morgan, Alfred E., assignor of one-half to W. A. Morgan, Hartford, Conn. Package-binder. No. 1,014,506; Jan. 9; Sp. p. 3112; Gaz. vol. 174; p. 517.

Morgan Engineering Company, The. (See Taylor, Clarence L., assignor.)

Morgan, Hamilton, San Francisco, Cal. Eye-cap. No. 1,016,083; Jan. 30; Sp. p. 6584; Gaz. vol. 174; p. 1143.

Morgan, Thomas E., Starkweather, N. D. Commode. No. 1,013,802; Jan. 2; Sp. p. 1560; Gaz. vol. 174; p. 248.

Morgan, Thomas W. (See Hackett and Morgan.)

Morgan, William A. (See Morgan, Alfred E., assignor.)

Morgan, William F., Duquesne, Pa. Nut-locking device. No. 1,015,059; Jan. 16; Sp. p. 4389; Gaz. vol. 174; p. 737.

Morgenstern, Oscar L., Philadelphia, Pa. Submerged water-wheel. No. 1,013,508; Jan. 2; Sp. p. 912; Gaz. vol. 174; p. 146.

Morin, Edgar G., Jr., San Francisco, Cal. Lock and mortise gage. No. 1,014,895; Jan. 16; Sp. p. 4028; Gaz. vol. 174; p. 681.

Morrill, Milton D., Washington, D. C. Sectional mold for concrete construction. No. 1,014,630; Jan. 9; Sp. p. 3398; Gaz. vol. 174; p. 559.

Morris, Otto M. (See Woodfield, Morris, and Gosling.)

Morris, William H., and H. Hudson, Nashville, Tenn. Adjustable ice-shoe. No. 1,016,168; Jan. 30; Sp. p. 6730; Gaz. vol. 174; p. 1170.

Morrison, Lewis E., Newark, N. J., assignor to Automatic Platen Press Company, New York, N. Y. Sheet-feeding mechanism. No. 1,014,323; Jan. 9; Sp. p. 2736; Gaz. vol. 174; p. 456.

Morse, Frank H. G., Cambridge, Mass. Box. No. 1,013,207; Jan. 2; Sp. p. 240; Gaz. vol. 174; p. 41.

Morse, Frank V., Minneapolis, Minn. Tone-clarifier for talking-machines. No. 1,014,841; Jan. 16; Sp. p. 3910; Gaz. vol. 174; p. 663.

Moschenross, John B. (See Edison, Karl, assignor.)

Moseley, Thomas P., Vallejo, Cal. Valve. No. 1,015,453; Jan. 23; Sp. p. 5214; Gaz. vol. 174; p. 897.

Mossick, Charles E., Chicago, Ill. Loose-leaf binder. No. 1,015,203; Jan. 16; Sp. p. 4653; Gaz. vol. 174; p. 785.

Mossig, Max. (See Sachs and Mossig.)

Mosso, Arthur, Sonoma, and P. Giovanetti, San Francisco, Cal. Vehicle-wheel. No. 1,015,700; Jan. 23; Sp. p. 5762; Gaz. vol. 174; p. 982.

Mossop, John, Altrincham, England. Musical-instrument case. No. 1,013,423; Jan. 2; Sp. p. 739; Gaz. vol. 174; p. 116.

Moulder, James. (See Irby, Wiley R., assignor.)

Muckenfuss, Anthony M., University, Miss. Method of and apparatus for testing paint. No. 1,014,842; Jan. 16; Sp. p. 3911; Gaz. vol. 174; p. 663.

Mueller, George H., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Lubricating device for conveyer-chains. No. 1,014,248; Jan. 9; Sp. p. 2582; Gaz. vol. 174; p. 431.

Mueller, Otto H., Camberwell, England, assignor to Henry R. Worthington. Jet-condenser. No. 1,015,822; Jan. 30; Sp. p. 6008; Gaz. vol. 174; p. 1050.

Mueller, Philip, assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Box construction. No. 1,015,454; Jan. 23; Sp. p. 5217; Gaz. vol. 174; p. 897.

Mueller, Philip, and A. C. Schuermann, assignors to H. Mueller Manufacturing Company, Decatur, Ill. Sanitary drinking-fountain. No. 1,014,324; Jan. 9; Sp. p. 2738; Gaz. vol. 174; p. 456.

Muender, William L., Montford, Wis. Concentrating-table. No. 1,015,823; Jan. 30; Sp. p. 6009; Gaz. vol. 174; p. 1050.

Muir, Harry C., Rushville, Ind. Cabinet. No. 1,015,060; Jan. 16; Sp. p. 4390; Gaz. vol. 174; p. 737.

Muirhead, Robert. (See McDonald, John, assignor.)

Mulford, Logan W., assignor to American Bar Lock Company, Philadelphia, Pa. Sidewalk-door. No. 1,015,579; Jan. 23; Sp. p. 5495; Gaz. vol. 174; p. 940.

Muller, Gustav A. H., Montreal, Quebec, Canada. Compound for exterminating vermin. No. 1,015,701; Jan. 23; Sp. p. 5764; Gaz. vol. 174; p. 982.

Müller, Henry F., assignor to R. T. Randall & Co., Philadelphia, Pa. Sausage-stuffing machine. No. 1,014,605; Jan. 9; Sp. p. 3312; Gaz. vol. 174; p. 550.

Muller, Richard, Highland Falls, N. Y. Match-box. No. 1,014,167; Jan. 9; Sp. p. 2390; Gaz. vol. 174; p. 400.

Mumma, Ira, Dayton, Ohio. Automatic water-feed acetylene-generator. No. 1,014,715; Jan. 16; Sp. p. 3613; Gaz. vol. 174; p. 619.

Mumprecht, Paul. (See Honold, Rail, and Mumprecht.)

Munker, Philip L., New York, N. Y. Game apparatus. No. 1,016,084; Jan. 30; Sp. p. 6585; Gaz. vol. 174; p. 1143.

Munsick, George, *et al.* (See Troxler, Gustavus, assignor.)

Munson, Maud C., Chicago, Ill. Warming-oven. No. 1,014,325; Jan. 9; Sp. p. 2740; Gaz. vol. 174; p. 457.

Munster, Ernst. (See Köhn, Claus H., assignor.)

Murdock, A. R. (See Beal, Asher, assignor.)

Murdock, George F., Wellsville, Ohio. Lunch-box. No. 1,013,208; Jan. 2; Sp. p. 242; Gaz. vol. 174; p. 41.

Murphy, Edward H., Chicago, Ill. Heat-regulator. No. 1,013,424; Jan. 2; Sp. p. 740; Gaz. vol. 174; p. 117.

Murphy, Edward W., Bridgeport, Conn. Truck attachment for carrying beef. No. 1,015,393; Jan. 23; Sp. p. 5088; Gaz. vol. 174; p. 877.

Murphy, George F., Providence, R. I., assignor to Fuel Oil Engine Company. Gas-engine. No. 1,013,888; Jan. 9; Sp. p. 1782; Gaz. vol. 174; p. 306.

Murphy, Harry A., and J. F. Simpson, Fulwood, Preston, England. Shuttle-threading device. No. 1,013,425; Jan. 2; Sp. p. 742; Gaz. vol. 174; p. 117.

Murphy, Howard M. P., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Duplex pressure-control apparatus. No. 1,015,824; Jan. 30; Sp. p. 6012; Gaz. vol. 174; p. 1050.

Murphy, Peter H., Pittsburgh, Pa. Blow-off valve. No. 1,013,426; Jan. 2; Sp. p. 744; Gaz. vol. 174; p. 117.

Murphy, William, Manchester, assignor to F. Reddaway, Pendleton, England. Machine for weaving tubular goods. No. 1,014,716; Jan. 16; Sp. p. 3618; Gaz. vol. 174; p. 619.

Murray, Esther, assignor to The Resilient Motor Wheel Syndicate Limited, London, England. Spring vehicle-wheel. (Reissue.) No. 13,364; Jan. 16; Sp. p. 4823; Gaz. vol. 174; p. 812.

Murray and Jacobs Manufacturing Company. (See Jacobs, Charles B., assignor.)

Murray, Michael F., Oakland, Cal. Automatic temperature-regulator. No. 1,015,204; Jan. 16; Sp. p. 4654; Gaz. vol. 174; p. 785.

Murray, William J. (See Adams and Murray.)

Murta, Samuel, St. Louis, Mo. Water-elevator. No. 1,016,085; Jan. 30; Sp. p. 6588; Gaz. vol. 174; p. 1144.

Mustin, Herbert S., assignor to The Austin Manufacturing Company, Chicago, Ill. Grass-cutting machine. No. 1,013,209; Jan. 2; Sp. p. 243; Gaz. vol. 174; p. 41.

Mustin, Herbert S., assignor to The Austin Manufacturing Company, Chicago, Ill. Power-driven lawn-mower. No. 1,014,643; Jan. 16; Sp. p. 3508; Gaz. vol. 174; p. 601.

Mustin, Herbert S., assignor to The Austin Manufacturing Company, Chicago, Ill. Clutch mechanism. No. 1,015,394; Jan. 23; Sp. p. 5090; Gaz. vol. 174; p. 877.

Mussy, William H., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,013,210; Jan. 2; Sp. p. 245; Gaz. vol. 174; p. 42

Mussy, William H., assignor to The National Cash Register Company, Dayton, Ohio. Combination type-writing and adding machine. No. 1,013,211; Jan. 2; Sp. p. 250; Gaz. vol. 174; p. 42.

Mussy, William H., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,015,825; Jan. 30; Sp. p. 6014; Gaz. vol. 174; p. 1051.

Myers and Brother, F. E. (See Myers, Philip A., assignor.)

Myers, George M., Toronto, Ohio. Pipe-forming apparatus. No. 1,015,334; Jan. 23; Sp. p. 4967; Gaz. vol. 174; p. 857.

Myers, Hubert A., Goshen, Ind. Hoisting device. No. 1,014,326; Jan. 9; Sp. p. 2741; Gaz. vol. 174; p. 457.

Myers, Hubert A., Goshen, Ind. Hoisting device. No. 1,014,327; Jan. 9; Sp. p. 2744; Gaz. vol. 174; p. 457.

Myers, James R., Fairmont, W. Va. Machine to open the foot of a goblet. No. 1,013,427; Jan. 2; Sp. p. 746; Gaz. vol. 174; p. 118.

Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pump. No. 1,014,664; Jan. 16; Sp. p. 3511; Gaz. vol. 174; p. 601.

Nagel, William G., assignor of one-third to I. Kinsey and one-third to F. Collins, Toledo, Ohio. Carbureter. No. 1,016,169; Jan. 30; Sp. p. 6731; Gaz. vol. 174; p. 1170.

Napolitano, Alfred, Lake Charles, La. Attachment for fountain-pens. No. 1,015,702; Jan. 23; Sp. p. 5765; Gaz. vol. 174; p. 983.

Narraganselt Machine Company. (See Thornley, Albert J., assignor.)

Nash, Walter D., Atlanta, assignor to Atlanta Utility Works, East Point, Ga. Eccentric. No. 1,014,896; Jan. 16; Sp. p. 4030; Gaz. vol. 174; p. 682.

Nathan Manufacturing Company. (See Panhorst, Paul, assignor.)

National Carbon Company. (See Humel, Frank J., assignor.)

National Cash Register Company, The. (See Fabry, Fraur C., assignor.)

National Cash Register Company, The. (See Grohmann and Koehne, assignors.)

National Cash Register Company, The. (See Martin, Haakon A., assignor.)

National Cash Register Company, The. (See Mussy, William H., assignor.)

National Cash Register Company, The. (See Osborn, Francis C., assignor.)

National Dump Car Company. (See Posson, Edward, assignor.)

National Electric Signaling Company. (See Fessenden, Reginald A., assignor.)

National Electric Signaling Company. (See Hogan, John L., Jr., assignor.)

National Machinery Company. (See Clouse, William L., assignor.)

National Malleable Castings Company, The. (See Moore, William G., assignor.)

National Pneumatic Company. (See Rowntree, Harold, assignor.)

National Self-Registering Bank Co., The. (See Matson, Edward E., assignor.)

National Tool Company. (See Walters, Francis S., assignor.)

National Tube Company. (See Baehr, George, assignor.)

National Tube Company. (See Simpson, James, assignor.)

Neckerman, William M., Youngstown, Ohio. Pipe-threading machine. No. 1,013,212; Jan. 2; Sp. p. 255; Gaz. vol. 174; p. 42.

Neeper, Alexander M. (See Forsyth, William D., assignor.)

Neesham, William T., Somerset, Colo. Dinner-bucket. No. 1,015,455; Jan. 23; Sp. p. 5219; Gaz. vol. 174; p. 897.

Neff, Valentin, Glatz, Germany. Apparatus for lighting fires. No. 1,014,665; Jan. 16; Sp. p. 3513; Gaz. vol. 174; p. 602.

Nehr, Herman F., Rutherford, N. J. Candelabrum. No. 1,014,410; Jan. 9; Sp. p. 2939; Gaz. vol. 174; p. 487.

Neil, George E., Cleveland Ohio. Lamp. No. 1,013,947; Jan. 9; Sp. p. 1919; Gaz. vol. 174; p. 326.

Nellis, Charles E. (See Ellis and Nellis.)

Nelson, August T., assignor to Automatic Steering Company, Milwaukee, Wis. Automatic steering device. No. 1,015,061; Jan. 16; Sp. p. 4392; Gaz. vol. 174; p. 737.

Nelson, John M., assignor to Davenport Ice Chipping Machine Company, Davenport, Iowa. Ice-crusher. No. 1,013,509; Jan. 2; Sp. p. 914; Gaz. vol. 174; p. 146.

Nelson, Nels I. (See Hanson and Nelson.)

Neuberger, David M. (See Taylor, Edwin, assignor.)

Neugardt, Andrew B., Trevorton, Pa. Gang-plow. No. 1,015,826; Jan. 30; Sp. p. 6016; Gaz. vol. 174; p. 1051.

Neuhoefer, John, A. and W. Polacheck, assignors to Chas. Polacheck & Bro. Co., Milwaukee, Wis. Electric fixture. No. 1,014,897; Jan. 16; Sp. p. 4032; Gaz. vol. 174; p. 682.

Neville, Harry, assignor of one-fifth to G. H. Goodwin, one-fifth to D. P. Kellogg, one-fifth to W. F. Merry, and one-fifth to P. Sheedy, Los Angeles, Cal. Safety apparatus for steam-boilers. No. 1,015,703; Jan. 23; Sp. p. 5766; Gaz. vol. 174; p. 983.

New Orleans Specialty Co. (See White and Sackett, assignors.)

New York Couch Bed Company. (See Sisbower, George F., assignor.)

Newark Wagon Company. (See Collins, Wilbur L., assignor.)

Newcomb, Michael P., Sandpoint, Idaho, assignor to The Locomotive Equipment Company, Detroit, Mich. Journal-box. No. 1,015,335; Jan. 23; Sp. p. 4968; Gaz. vol. 174; p. 857.

Newhall, George M., Philadelphia, Pa. Separator for vacuum-pans. No. 1,015,629; Jan. 23; Sp. p. 5506; Gaz. vol. 174; p. 959.

Newhall, George M., Philadelphia, Pa. Separator for vacuum-pans. No. 1,015,704; Jan. 23; Sp. p. 5770; Gaz. vol. 174; p. 983.

Newman, Enos S., Washington, D. C., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich. Combined type-writing and adding machine. No. 1,015,630; Jan. 23; Sp. p. 5597; Gaz. vol. 174; p. 959.

Newman, Isidor, New York, N. Y. Cigar-tip cutter. No. 1,013,889; Jan. 9; Sp. p. 1784; Gaz. vol. 174; p. 306.

Newman, S. S. (See Miller, Henry G., assignor.)

Newton, John P., *et al.* (See Hickton, Charles, assignor.)

Newton, Thomas L., Fresno, Cal. Grease-dispensing apparatus. No. 1,015,395; Jan. 23; Sp. p. 5094; Gaz. vol. 174; p. 878.

Ney, Jacob, Canton, Ohio. Merry-go-round. No. 1,014,249; Jan. 9; Sp. p. 2585; Gaz. vol. 174; p. 431.

Neymann, Percy. (See Dosselman and Neymann.)

Nicholas, Marks H. (See Tillotson and Nicholas.)

Nichols, Lewis A., Chicago, Ill. Paper-folder. No. 1,015,580; Jan. 23; Sp. p. 5497; Gaz. vol. 174; p. 940.

Nichols, Thomas F., Ray, Ariz. Solar heater. No. 1,014,972; Jan. 16; Sp. p. 4206; Gaz. vol. 174; p. 708.

Nicholson, George O., Longbeach, Cal. Astigmatic chart. No. 1,013,428; Jan. 2; Sp. p. 747; Gaz. vol. 174; p. 118.

Nickol, Frederick C., and M. C. Stern, assignors to The Egry Register Company, Dayton, Ohio. Manifolding device. No. 1,015,581; Jan. 23; Sp. p. 5500; Gaz. vol. 174; p. 941.

Nicodemus, William W., Taylorville, Ill. Door-hanger. No. 1,015,827; Jan. 30; Sp. p. 6018; Gaz. vol. 174; p. 1051.

Niditch, Isadore, Dorchester, Mass., assignor to American Fog Signal Company, Pittsburgh, Pa. Railway signal-fusee. No. 1,015,062; Jan. 16; Sp. p. 4396; Gaz. vol. 174; p. 738.

Niebling, George W., assignor of one-half to J. J. Connell, Rochester, N. Y. Support. No. 1,014,021; Jan. 9; Sp. p. 2088; Gaz. vol. 174; p. 350.

Niederlander, Nicholas F., and R. E. Adreon, assignors to Westinghouse Automatic Air & Steam Coupler Company, St. Louis, Mo. Swivel pipe-joint. No. 1,015,904; Jan. 30; Sp. p. 6191; Gaz. vol. 174; p. 1079.

Nield, Josiah, assignor to Avery Scale Company, North Milwaukee, Wis. Automatic weighing-machine. No. 1,014,717; Jan. 16; Sp. p. 3619; Gaz. vol. 174; p. 620.

Nielsen, John F. (See Lauritzen and Nielsen.)

Nies, Jean, Karlsruhe, Germany. Apparatus for filling bottles. No. 1,015,631; Jan. 23; Sp. p. 5609; Gaz. vol. 174; p. 959.

Niles-Bement-Pond Company. (See Teas and Reiss, assignors.)

Niles, Edith L., Cincinnati, Ohio. Moving advertisement device. No. 1,015,241; Jan. 16; Sp. p. 4731; Gaz. vol. 174; p. 797.

Nilson, Oliver C., Carthage, Mo. Mixer and stirrer. No. 1,013,803; Jan. 2; Sp. p. 1561; Gaz. vol. 174; p. 248.

Nitzsche, Julius, Wisner, Nebr. Wheel-fender. No. 1,013,804; Jan. 2; Sp. p. 1562; Gaz. vol. 174; p. 248.

Noack, Walter G., Elmhurst, assignor of one-half to W. A. Sage, Hanford, Cal. Self-laying endless track for vehicles. No. 1,014,898; Jan. 16; Sp. p. 4034; Gaz. vol. 174; p. 682.

Noble, John. (See Livingston, John W., assignor.)

Noble, William C. H., Los Angeles, Cal. Hot-air furnace. No. 1,013,304; Jan. 2; Sp. p. 483; Gaz. vol. 174; p. 76.

Nobles, Harrison D., East Hartford, Conn. Grease-filter. No. 1,014,843; Jan. 16; Sp. p. 3914; Gaz. vol. 174; p. 663.

Noel, John A., Cardiff, England. Car-brake. No. 1,015,063; Jan. 16; Sp. p. 4397; Gaz. vol. 174; p. 738.

Nolan, Johnston, Philadelphia, Pa. Valve. No. 1,014,168; Jan. 9; Sp. p. 2391; Gaz. vol. 174; p. 400.

Nolden, Max. (See Meyer, Paul, assignor.)

Norcross Moulding Machine Company. (See Norcross, William C., assignor.)

Norcross, William C., assignor to Norcross Moulding Machine Company, Terre Haute, Ind. Jolting-machine. No. 1,016,086; Jan. 30; Sp. p. 6590; Gaz. vol. 174; p. 1144.

Norden, Mortimer, New York, N. Y. Electric-lamp socket. No. 1,014,169; Jan. 9; Sp. p. 2393; Gaz. vol. 174; p. 401.

Norman, Sterling E., Attleboro, Mass. Rake. No. 1,014,250; Jan. 9; Sp. p. 2588; Gaz. vol. 174; p. 432.

Norris, Daniel E., Robinson, Ill. Stuffing-box. No. 1,015,582; Jan. 23; Sp. p. 5506; Gaz. vol. 174; p. 941.

North Bro's. M'f'g. Co. (See Leopold, George O., assignor.)

North & Judd Manufactnring Company. (See Crawford and Whiteley, assignors.)

North and Judd Manufacturing Company. (See Melchior, Joseph E., assignor.)

North, Raymond F., Glendive, Mont. Sprinkling-machine. No. 1,014,507; Jan. 9; Sp. p. 3113; Gaz. vol. 174; p. 517.

North, Samuel N., Rising Sun, Ind. Gas-generator. No. 1,015,632; Jan. 23; Sp. p. 5612; Gaz. vol. 174; p. 960.

Northall, William H., assignor of one-half to C. W. Halsey, Evansville, Ind. Door-hinge. No. 1,013,948; Jan. 9; Sp. p. 1920; Gaz. vol. 174; p. 327.

Northern Iron Company. (See Ross, Lewis P., assignor.)

Northey, John P., Toronto, Ontario, Canada. Sound-producing device. No. 1,016,087; Jan. 30; Sp. p. 6591; Gaz. vol. 174; p. 1145.

Northrop, Henry B., Beverly, Mass. Urinal. No. 1,015,905; Jan. 30; Sp. p. 6103; Gaz. vol. 174; p. 1080.

Northrop, Jonas, Hopedale, Mass., assignor, by mesne assignments, to Draper Company. Filling-replenishing hopper. No. 1,014,770; Jan. 16; Sp. p. 3743; Gaz. vol. 174; p. 637.

Northrop, Jonas, Hopedale, Mass., assignor, by mesne assignments, to Draper Company. Filling-replenishing loom. No. 1,014,844; Jan. 16; Sp. p. 3915; Gaz. vol. 174; p. 664.

Novelty Incandescent Lamp Company. (See Erskine, Bernard G., assignor.)

Nowak, Adolf A. K., Bous-on-the-Saar, Germany. Rolling-mill. No. 1,013,429; Jan. 2; Sp. p. 748; Gaz. vol. 174; p. 118.

Noyes, Edward P., Winchester, Mass. Fluid-regulator. No. 1,013,214; Jan. 2; Sp. p. 263; Gaz. vol. 174; p. 43.

Noyes, Edward P., Winchester, Mass. Constant-pressure internal-combustion apparatus. No. 1,013,609; Jan. 2; Sp. p. 1116; Gaz. vol. 174; p. 180.

Noyes, Edward P., Winchester, Mass., assignor, by mesne assignments, to C. P. Power Company, Newark, N. J. Fluid-pressure valve. No. 1,013,213; Jan. 2; Sp. p. 257; Gaz. vol. 174; p. 43.

Nunn, Alfred W., *et al.*, trustees. (See Nunn, Alfred W., assignor.)

Nunn, Alfred W., assignor to A. W. Nunn, Cambridge, and C. D. Lyford, Watertown, Mass., trustees. Machine for automatically playing pianos and similar instruments. No. 1,014,606; Jan. 9; Sp. p. 3313; Gaz. vol. 174; p. 550.

Nye, John, Montpelier, Ohio. Window-screen. No. 1,016,088; Jan. 30; Sp. p. 6593; Gaz. vol. 174; p. 1146.

Nye, William E., and J. E. Cram, Highland, Cal., assignors of one-third to H. A. Johnston, Redlands, Cal. Hydrocarbon disk cultivator. No. 1,014,899; Jan. 16; Sp. p. 4035; Gaz. vol. 174; p. 682.

Nygreen, Theodore W., Bellingham, Wash. Safe. No. 1,013,430; Jan. 2; Sp. p. 750; Gaz. vol. 174; p. 118.

O'Brien, Thomas F., Highmore, S. D. Spring-felly automobile-wheel. No. 1,013,949; Jan. 9; Sp. p. 1923; Gaz. vol. 174; p. 327.

O'Connell, Daniel D., New York, N. Y. Automatic releasing-gear. No. 1,013,510; Jan. 2; Sp. p. 915; Gaz. vol. 174; p. 146.

O'Connor, Patrick, Aberdeen, Wash. Combined shingle sawing and jointing machine. No. 1,013,431; Jan. 2; Sp. p. 751; Gaz. vol. 174; p. 119.

O'Hara, John H., Ithaca, N. Y. Corn husking and silking machine. No. 1,015,740; Jan. 23; Sp. p. 5839; Gaz. vol. 174; p. 995.

O'Leary, Humphrey, San Francisco, Cal. Valve. No. 1,013,432; Jan. 2; Sp. p. 757; Gaz. vol. 174; p. 119.

O'Malley, John F., Avoca, Pa. Combination-tool. No. 1,015,205; Jan. 16; Sp. p. 4658; Gaz. vol. 174; p. 786.

O'Neill, Rex H., Chicago, Ill. Scraper and leveler. No. 1,016,228; Jan. 30; Sp. p. 6846; Gaz. vol. 174; p. 1189.

O'Neill, William N., and H. Parker, Jr., Columbus, Ohio. Yarn-dampening device. No. 1,015,705; Jan. 23; Sp. p. 5772; Gaz. vol. 174; p. 984.

O'Rourke, Daniel J. (See Patterson, John F., assignor.)

O'Shea, Dennis C., Chicago, Ill., assignor to A. G. Spalding & Bros., Jersey City, N. J. Base-ball mask. No. 1,016,029; Jan. 30; Sp. p. 6457; Gaz. vol. 174; p. 1123.

Ochiltree, Clarence G., Seattle, Wash. Lamp-cord adjuster. No. 1,015,828; Jan. 30; Sp. p. 6019; Gaz. vol. 174; p. 1052.

Ocumpaugh, Charles H., Rochester, N. Y. Voting-machine. No. 1,013,679; Jan. 2; Sp. p. 1304; Gaz. vol. 174; p. 204.

Ocumpaugh, Charles H., Rochester, N. Y. Voting-machine. No. 1,013,680; Jan. 2; Sp. p. 1320; Gaz. vol. 174; p. 205.

Ocumpaugh, Charles H., Rochester, N. Y. Razor. No. 1,013,805; Jan. 2; Sp. p. 1563; Gaz. vol. 174; p. 248.

Ocumpaugh, Charles H., Rochester, N. Y. Independent-voting device. No. 1,013,853; Jan. 2; Sp. p. 1686; Gaz. vol. 174; p. 266.

Offenbacher, Emil, Nuremberg, Germany. Machine for polishing facets and surfaces. No. 1,013,559; Jan. 2; Sp. p. 1019; Gaz. vol. 174; p. 163.

Ogden, Mancelia E., Newark, N. J. Water-heating device. No. 1,014,170; Jan. 9; Sp. p. 2395; Gaz. vol. 174; p. 401.

Ogg, James, Pahala, Hawaii. Valve. No. 1,013,806; Jan. 2; Sp. p. 1565; Gaz. vol. 174; p. 249.

Oglivy, David J., Cincinnati, Ohio. Recovering the resinous products from roain waste and the like. No. 1,014,411; Jan. 9; Sp. p. 2941; Gaz. vol. 174; p. 488.

Ohio Manufacturing Company, The. (See Price, Edwin F., assignor.)

Ohlson, Carl, Sacramento, Cal. Letter and package mail-box. No. 1,014,508; Jan. 9; Sp. p. 3114; Gaz. vol. 174; p. 517.

Ohly, Charles H., Summit, N. J. Necktie-holder. No. 1,015,506; Jan. 23; Sp. p. 5333; Gaz. vol. 174; p. 915.

Okrassa, Roberto, Antigua, Guatemala. Apparatus for washing coffee and the like. No. 1,013,807; Jan. 2; Sp. p. 1567; Gaz. vol. 174; p. 249.

Oldham, Samuel, Philadelphia, Pa. Vehicle-wheel. No. 1,015,064; Jan. 16; Sp. p. 4306; Gaz. vol. 174; p. 739.

Oldson, Harry N., *et al.* (See Stewart, Robert F., assignor.)

Oliver Typewriter Company, The. (See Griffiths, George J., assignor.)

Olsen, John, Watertown, N. Y. Pulp-screen-plate fastener. No. 1,013,890; Jan. 9; Sp. p. 1785; Gaz. vol. 174; p. 306.

Olson, Charles W., Rainier, Oreg. Conveyer-bucket. No. 1,014,666; Jan. 16; Sp. p. 3514; Gaz. vol. 174; p. 602.

Olson, Gustave R., Plattsmouth, Nebr. Photographic-printing machine. No. 1,013,950; Jan. 9; Sp. p. 1924; Gaz. vol. 174; p. 327.

Open Coil Heater and Purifier Co. (See Stickle, Cole, assignor.)

Opperud, Joseph, Madison, S. D. Animal-trap. No. 1,016,170; Jan. 30; Sp. p. 6734; Gaz. vol. 174; p. 1171.

Ord, Edward O. C., Prescott, Ariz. Dish-washing pan. No. 1,014,509; Jan. 9; Sp. p. 3117; Gaz. vol. 174; p. 518.

Ord, William D. (See Hyde, Marcus L., assignor.)

Ordóñez, Salvador. San Francisco, Cal. Corn-sheller. No. 1,016,089; Jan. 30; Sp. p. 6596; Gaz. vol. 174; p. 1146.

Orear, Benjamin F., assignor of one-half to O. H. Quernheim, St. Louis, Mo. Hinge. No. 1,016,171; Jan. 30; Sp. p. 6736; Gaz. vol. 174; p. 1171.

Orlandi, John, Salisbury, Conn. Miter-clamp. No. 1,015,336; Jan. 23; Sp. p. 4960; Gaz. vol. 174; p. 857.

Orr, Elbert A., Pueblo, Colo. Automatic damper-regulator. No. 1,014,845; Jan. 16; Sp. p. 3921; Gaz. vol. 174; p. 664.

Osborn, Francis C., Detroit, Mich., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,015,456; Jan. 23; Sp. p. 5219; Gaz. vol. 174; p. 898.

Osland, Richard W., Plainfield, N. J., and M. J. Huggins, Brooklyn, N. Y. Lamp-socket. No. 1,013,681; Jan. 2; Sp. p. 1326; Gaz. vol. 174; p. 205.

Ostrander, Allen E., Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo. Anchor for tank-bands. No. 1,014,846; Jan. 16; Sp. p. 3923; Gaz. vol. 174; p. 665.

Otis Elevator Company. (See Dickinson, William N., Jr., assignor.)

Otis Elevator Company. (See Gale, Ernest L., Sr., assignor.)

Otis Elevator Company. (See Larson, David, assignor.)

Otis Elevator Company. (See Rosenqvist, Conrad L., assignor.)

Otis Elevator Company. (See Seeberger, Charles D., assignor.)

Otting, Karl, Ludwigsburg, Germany. Machine for making paper receptacles. No. 1,015,208; Jan. 16; Sp. p. 4795; Gaz. vol. 174; p. 807.

Outcalt, Andrew S., Rockbridge, Wis. Wing for flying-machines. No. 1,013,500; Jan. 2; Sp. p. 1021; Gaz. vol. 174; p. 164.

Over, Ernest, assignor of one-half to D. Kellaher, Portland, Oreg. Nozzle for water-bags. No. 1,014,607; Jan. 9; Sp. p. 3323; Gaz. vol. 174; p. 551.

Overholt, Aaron B., Constantine, Mich. Shoe-lace roller. No. 1,015,583; Jan. 23; Sp. p. 5506; Gaz. vol. 174; p. 942.

Overlander, Jacob A., White Plains, N. Y. Wrench. No. 1,014,251; Jan. 9; Sp. p. 2590; Gaz. vol. 174; p. 432.

Owen, Horace F. (See Trabue and Owen.)

Owen, Walter W., Youngstown, Ohio. Bevel-protractor. No. 1,015,242; Jan. 16; Sp. p. 4733; Gaz. vol. 174; p. 798.

Owens, Jasper C., Los Angeles, Cal. Knife. No. 1,013,844; Jan. 2; Sp. p. 1658; Gaz. vol. 174; p. 263.

Owens, Michael F. (See Cutler and Owens.)

Owens, Robert J. (See Asplund, Charles F., assignor.)

Packard Motor Car Company. (See Huff, Russell, assignor.)

Packard Motor Car Company. (See Schmidt, Charles, assignor.)

Pacziga, Frank, New York, N. Y. Boiler. No. 1,015,065; Jan. 16; Sp. p. 4400; Gaz. vol. 174; p. 739.

Paddock, Robert G. (See Wrinkle and Paddock.)

Page, David P., assignor to Grand Rapids Brush Company, Grand Rapids, Mich. Brush-machine. No. 1,014,973; Jan. 16; Sp. p. 4208; Gaz. vol. 174; p. 708.

Page, Herbert J., assignor of one-fourth to J. F. Hartz and one-fourth to A. Hyman, Hamilton, Canada. Seal-lock. No. 1,013,891; Jan. 9; Sp. p. 1790; Gaz. vol. 174; p. 307.

Page, Robert R., New York, N. Y., and F. J. Black, Philadelphia, Pa. Etching-machine. No. 1,013,892; Jan. 9; Sp. p. 1791; Gaz. vol. 174; p. 807.

Pain, Willard S. and F. L. Wood, Meriden, Conn., assignors to Aeolian Company, New York, N. Y. Music-spool head. No. 1,016,229; Jan. 30; Sp. p. 6848; Gaz. vol. 174; p. 1190.

Palmer, Charles R., Cincinnati, Ohio. Pneumatic spring for vehicles. No. 1,013,808; Jan. 2; Sp. p. 1568; Gaz. vol. 174; p. 250.

Palmer, Granville E., Hartford, Conn. Sealing device. No. 1,014,252; Jan. 9; Sp. p. 2592; Gaz. vol. 174; p. 432.

Palmer, Granville E., assignor to The Hart Manufacturing Company, Hartford, Conn. Wall-case. No. 1,016,030; Jan. 30; Sp. p. 6458; Gaz. vol. 174; p. 1123.

Palmgren, Charles A., Chicago, Ill. Boring and turning bar and bar-holder. No. 1,014,412; Jan. 9; Sp. p. 2943; Gaz. vol. 174; p. 488.

Pancoast, Alvin C., Cleveland, assignor of one-fourth to W. G. Pancoast, East Cleveland, Ohio. Culinary separating-machine. No. 1,015,337; Jan. 23; Sp. p. 4971; Gaz. vol. 174; p. 858.

Pancoast, William G. (See Pancoast, Alvin C., assignor.)

Panhorst, Paul, assignor to Nathan Manufacturing Company, New York, N. Y. Liquid-gage. No. 1,013,809; Jan. 2; Sp. p. 1570; Gaz. vol. 174; p. 250.

Papendry, Joseph N., East Liverpool, Ohio. Armor-plate. No. 1,014,510; Jan. 9; Sp. p. 3118; Gaz. vol. 174; p. 518.

Paragon Sellers Company. (See Pardee, Frank W., assignor.)

Pardee, Frank W., Evanston, Ill., assignor to Paragon Sellers Company, Chicago, Ill. Grounding device for electrical conductors. No. 1,013,305; Jan. 2; Sp. p. 485; Gaz. vol. 174; p. 76.

Paris, William A., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric switch. No. 1,015,972; Jan. 30; Sp. p. 6331; Gaz. vol. 174; p. 1101.

Park, John K., Atlantic City, N. J. Leveling instrument. No. 1,013,593; Jan. 9; Sp. p. 1794; Gaz. vol. 174; p. 308.

Parker, Calvin S., London, Ontario, Canada. Trap. No. 1,015,243; Jan. 16; Sp. p. 4736; Gaz. vol. 174; p. 798.

Parker, Eli J., Iron City, Tenn. Heating-stove. No. 1,015,973; Jan. 30; Sp. p. 6333; Gaz. vol. 174; p. 1102.

Parker, George, assignor of nine-twentieths to G. G. Holladay, Portsmouth, Va. Window-lock. No. 1,014,091; Jan. 9; Sp. p. 2232; Gaz. vol. 174; p. 374.

Parker, George A., Brockton, Mass. Rotary engine. No. 1,013,682; Jan. 2; Sp. p. 1328; Gaz. vol. 174; p. 205.

Parker, Harry, Jr. (See O'Neill and Parker.)

Parker, Howard, Nashua, N. H. Reel-drum or the like. No. 1,015,244; Jan. 16; Sp. p. 4738; Gaz. vol. 174; p. 799.

Parker, Jennie L., Newberg, Oreg. Folding toilet-board. No. 1,015,741; Jan. 23; Sp. p. 5843; Gaz. vol. 174; p. 996.

Parker, Walter, and L. E. Campbell, Neola, Iowa. Mold. No. 1,015,706; Jan. 23; Sp. p. 5774; Gaz. vol. 174; p. 984.

Parks, Edward F., Providence, assignor of one-half to H. J. Waterhouse, Warwick, R. I. Loom harness-heddle. No. 1,014,771; Jan. 16; Sp. p. 3746; Gaz. vol. 174; p. 637.

Parlin and Orendorff Company. (See Parlin, William H., assignor.)

Parlin, William H., assignor to Parlin and Orendorff Company, Canton, Ill. Cultivator. No. 1,013,306; Jan. 2; Sp. p. 487; Gaz. vol. 174; p. 76.

Parmenter, George A., Cambridge, Mass. Life-guard for railway-cars. No. 1,014,667; Jan. 16; Sp. p. 3515; Gaz. vol. 174; p. 602.

Parmenter, William A., and A. B. Alden, assignors to C. S. Pierce Skiving Machine Company, Brockton, Mass. Skiving-machine. (Reissue.) No. 13,355; Jan. 9; Sp. p. 3418; Gaz. vol. 174; p. 565.

Parmly, Eleazar, Jr., Washington D. C., assignor to Elliott-Fisher Company, Harrisburg, Pa. Tabulating, back-spacing, and key-connecting mechanism. No. 1,015,829; Jan. 30; Sp. p. 6020; Gaz. vol. 174; p. 1052.

Parsons, Charles E. (See Hilliard and Parsons.)

Parsons, Isaac H., Kibworth, Harcourt, near Leicester, England. Electrical coupling. No. 1,014,718; Jan. 16; Sp. p. 3627; Gaz. vol. 174; p. 620.

Parsons, Mary, Manhattan, Kans. Coffee-pot. No. 1,015,396; Jan. 23; Sp. p. 5095; Gaz. vol. 174; p. 878.

Parsons, Winslow R., Chicago, Ill. Sewing-machine. No. 1,014,022; Jan. 9; Sp. p. 2090; Gaz. vol. 174; p. 351.

Patric, Charles E., Springfield, Ohio. Planting-machine. No. 1,015,245; Jan. 16; Sp. p. 4738; Gaz. vol. 174; p. 799.

Patterson, F. D., *et al.* (See Reed, Homer C., assignor.)

Patterson, John F., assignor of one-eighth to D. J. O'Rourke, Warren, Ohio. Sprayer. No. 1,013,307; Jan. 2; Sp. p. 489; Gaz. vol. 174; p. 77.

Pauken, Michael. (See Hamel, Charles F., assignor.)

Paukert, Frederick, Regent, N. D. Grain-separator. No. 1,013,433; Jan. 2; Sp. p. 758; Gaz. vol. 174; p. 120.

Paul, Henry, Forreston, Ill. Folding box. No. 1,013,561; Jan. 2; Sp. p. 1022; Gaz. vol. 174; p. 164.

Pay-Within Car Sales Company, The. (See Towle, George C., assignor.)

Payen, John A. A., Scio, Oreg. Shaft-coupling. No. 1,015,806; Jan. 30; Sp. p. 6194; Gaz. vol. 174; p. 1080.

Peacock, Edward M., Jersey City, N. J., assignor to Dairymen's Manufacturing Company, Milk-can. No. 1,013,810; Jan. 2; Sp. p. 1572; Gaz. vol. 174; p. 250.

Peacock, Samuel, Chicago, Ill., assignor to The Southern Electro-Chemical Company, New York, N. Y. Making phosphorus trioxid. No. 1,015,707; Jan. 23; Sp. p. 5775; Gaz. vol. 174; p. 984.

Peaden, William E., Jr., Corbett, Fla. Circular cutter. No. 1,013,845; Jan. 2; Sp. p. 1659; Gaz. vol. 174; p. 263.

Pearson, Charles, Chicago, Ill., assignor to International Harvester Company. Tandem draft connection for harvesters. No. 1,013,894; Jan. 9; Sp. p. 1795; Gaz. vol. 174; p. 308.

Pearson, John, Chicago, Ill. Car-roof. No. 1,013,811; Jan. 2; Sp. p. 1574; Gaz. vol. 174; p. 251.

Pearson, Marshall H., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting-machine. No. 1,013,215; Jan. 2; Sp. p. 266; Gaz. vol. 174; p. 44.

Pearson, Samuel, Kerrville, Tex. Internal-combustion engine. No. 1,014,668; Jan. 16; Sp. p. 3517; Gaz. vol. 174; p. 603.

Pease, Hugh. (See Stump, Ira E., assignor.)

Peaucellier, Max, Paris, France. Electric-lamp socket. No. 1,013,434; Jan. 2; Sp. p. 760; Gaz. vol. 174; p. 120.

Peck, Frank R., Mount Vernon, Mo. Road-machine. No. 1,014,023; Jan. 9; Sp. p. 2093; Gaz. vol. 174; p. 351.

Peck, John S., Manchester, England, assignor to Westinghouse Electric and Manufacturing Company. System of electrical distribution. No. 1,015,974; Jan. 30; Sp. p. 6338; Gaz. vol. 174; p. 1103.

Pedle, John W., Souris, N. D. Gearing. No. 1,015,507; Jan. 23; Sp. p. 5334; Gaz. vol. 174; p. 915.

Pedley, William E., Riverside, Cal. Wall construction for dams or dikes. No. 1,013,610; Jan. 2; Sp. p. 1125; Gaz. vol. 174; p. 180.

Peel, Vance W., Topeka, Kans. Combined latch and handle. No. 1,015,338; Jan. 23; Sp. p. 4974; Gaz. vol. 174; p. 858.

Peerless Electric Company, The. (See Kargau, Theodore, assignor.)

Peirce, Fisher & Clapp. (See Elwell, William R., assignor.)

Pejeau, Albert D., assignor to The American Multigraph Company, Cleveland, Ohio. Paper-feeding device. No. 1,013,308; Jan. 2; Sp. p. 491; Gaz. vol. 174; p. 77.

Pellazio, John. (See Lowe, James, assignor.)

Pelouze Electric Heater Co. (See Madsen, Charles P., assignor.)

Pement, Joseph A. (See Hyle and Pement.)

Pendergast, Frederick W., Cambridge, Mass. Broom. No. 1,015,066; Jan. 16; Sp. p. 4401; Gaz. vol. 174; p. 739.

Penfield, Raymond C., New York, N. Y. Brick-stacking. No. 1,013,683; Jan. 2; Sp. p. 1330; Gaz. vol. 174; p. 206.

Penfield, Raymond C., New York, N. Y. Dry-pan. (Reissue.) No. 13,356; Jan. 9; Sp. p. 3420; Gaz. vol. 174; p. 566.

Penfield, Raymond C., New York, N. Y. Walling and daubing brick-kilns. No. 1,014,901; Jan. 16; Sp. p. 4038; Gaz. vol. 174; p. 683.

Penn, Charles F. (See Rand, Frank P., assignor.)

Penn, Frederick W., Petaluma, Cal. Temperature-controller. No. 1,014,511; Jan. 9; Sp. p. 3119; Gaz. vol. 174; p. 518.

Penney, Harold D., Pelham, and C. A. Weed, New York, N. Y. Mask for automobile-lamps. No. 1,013,895; Jan. 9; Sp. p. 1796; Gaz. vol. 174; p. 308.

Penney, Herbert, Hamilton, Ontario, Canada. Tobacco-box. No. 1,015,830; Jan. 30; Sp. p. 6027; Gaz. vol. 174; p. 1052.

Pennock, Walter I., Philadelphia, Pa. Apparatus for collecting electrical energy. No. 1,014,719; Jan. 16; Sp. p. 3629; Gaz. vol. 174; p. 621.

People of the United States. (See Meyer, Willy and J., assignors.)

Pepper, William A., Smithville, Mo. Fence-post. No. 1,015,206; Jan. 16; Sp. p. 4660; Gaz. vol. 174; p. 786.

Pereyra, Eugene S., Brooklyn, N. Y. Wiring-block. No. 1,014,720; Jan. 16; Sp. p. 3631; Gaz. vol. 174; p. 621.

Perfection Spring Company, The. (See McIntyre, Michael M., assignor.)

Perl, Eva, Sacramento, assignor of one-half to M. Strand, San Francisco, Cal. Salt and pepper cellar. No. 1,014,413; Jan. 9; Sp. p. 2945; Gaz. vol. 174; p. 488.

Perkins, Henry, assignor of one-half to H. J. Mercer, Los Angeles, Cal. Honey-frame. No. 1,014,171; Jan. 9; Sp. p. 2396; Gaz. vol. 174; p. 401.

Perkins, James D., Atlanta, Ga., assignor to T. C. Biggs and R. F. Bishop. Railway-switch. No. 1,014,092; Jan. 9; Sp. p. 2233; Gaz. vol. 174; p. 374.

Perkins, Joseph W., and D. W. Roberts, Youngstown, Ohio. Convertible wrench. No. 1,013,812; Jan. 2; Sp. p. 1576; Gaz. vol. 174; p. 251.

Pernice, Nicola, Atlantic City, N. J. Syringe. No. 1,014,608; Jan. 9; Sp. p. 3324; Gaz. vol. 174; p. 551.

Perry, Alfred H., assignor of twenty one-hundredths to M. E. Scorce, twenty one-hundredths to M. A. Rego, twenty one-hundredths to M. Agrella, San Leandro, ten one-hundredths to F. Ramos, and ten one-hundredths to M. F. Ramos, Hayward, Cal. Hay-press. No. 1,015,207; Jan. 16; Sp. p. 4661; Gaz. vol. 174; p. 787.

Perry, Earle S., Waltham, Mass., assignor to Keystone Watch Case Company. Watch. No. 1,013,806; Jan. 9; Sp. p. 1801; Gaz. vol. 174; p. 309.

Perry, John B., Meadowdale, Wash. Undercutting-saw support. No. 1,016,090; Jan. 30; Sp. p. 6597; Gaz. vol. 174; p. 1146.

Persons, Charles A., Worcester, Mass. Saddle. No. 1,016,031; Jan. 30; Sp. p. 6460; Gaz. vol. 174; p. 1124.

Peters, John. (See Wegner and Peters.)

Peters, Milton C., Omaha, Nebr. Rotary cutter. No. 1,013,611; Jan. 2; Sp. p. 1126; Gaz. vol. 174; p. 180.

Peters, Milton C., Omaha, Nebr. Mixing apparatus. No. 1,013,612; Jan. 2; Sp. p. 1129; Gaz. vol. 174; p. 181.

Peters, Milton C., Omaha, Nebr. Reducing-mill. No. 1,015,246; Jan. 16; Sp. p. 4740; Gaz. vol. 174; p. 799.

Petersen, Anker, Winthrop, assignor to Boston Machinery Company, Boston, Mass. Shuttle-checking device for looms. No. 1,013,217; Jan. 2; Sp. p. 279; Gaz. vol. 174; p. 45.

Petersen, Otto A. A., New Orleans, La. Endless-belt propeller. No. 1,014,512; Jan. 9; Sp. p. 3121; Gaz. vol. 174; p. 519.

Petri, John, assignor of one-half to L. A. Hansen, Liberty, Minn. Rail-joint. No. 1,014,513; Jan. 9; Sp. p. 3122; Gaz. vol. 174; p. 519.

Pettibone, Arthur D., Cleveland, assignor to The B. L. Marble Chair Company, Bedford, Ohio. Base for revolving office-chairs. No. 1,013,813; Jan. 2; Sp. p. 1577; Gaz. vol. 174; p. 251.

Pfahl, Frederick L., Akron, Ohio. Indicator for liquid-containers. No. 1,013,309; Jan. 2; Sp. p. 495; Gaz. vol. 174; p. 78.

Pfatischer, Mathias, Bayonne, N. J. Commutator. No. 1,014,253; Jan. 9; Sp. p. 2594; Gaz. vol. 174; p. 433.

Pfau, Max, assignor to The Emerson Typewriter Co., Woodstock, Ill. Type-writer escapement-clutch. No. 1,016,172; Jan. 30; Sp. p. 6737; Gaz. vol. 174; p. 1171.

Pfautz, Daniel M., assignor to W. H. Tigerman, Philadelphia, Pa. Water-filter. No. 1,013,435; Jan. 2; Sp. p. 761; Gaz. vol. 174; p. 120.

Pfeil, Olga A. (See Kuenholdt, Charles, assignor.)

Pfeil, Philip, assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Sad-iron. No. 1,015,742; Jan. 23; Sp. p. 5844; Gaz. vol. 174; p. 906.

Pfluger, Frank X., Portland, Oreg. Bush-flanger. No. 1,014,902; Jan. 16; Sp. p. 4041; Gaz. vol. 174; p. 683.

Phelps, Bailie T., Natchitoches, La. Adjustable book-support. No. 1,014,974; Jan. 16; Sp. p. 4213; Gaz. vol. 174; p. 709.

Philo, Edgar W., Elmira, N. Y. Fireless brooder. No. 1,013,562; Jan. 2; Sp. p. 1024; Gaz. vol. 174; p. 164.

Philo, Edgar W., Elmira, N. Y. Sectional coop. No. 1,013,563; Jan. 2; Sp. p. 1025; Gaz. vol. 174; p. 164.

Phinney, Charles. (See Knauss and Phinney.)

Pichon, Louis A., Paris, France. Egg-case. No. 1,015,708; Jan. 23; Sp. p. 5776; Gaz. vol. 174; p. 984.

Pickens, Davis A., assignor of one-half to J. L. Barefoot, Mendenhall, Miss. Spring-hub. No. 1,013,436; Jan. 2; Sp. p. 763; Gaz. vol. 174; p. 121.

Pickering, Arthur L., Anderson, Ind. Gas-regulator. No. 1,015,975; Jan. 30; Sp. p. 6330; Gaz. vol. 174; p. 1103.

Pielock, Eduard, and C. Zublin, Berlin, Germany. Heat-exchanging device. No. 1,015,831; Jan. 30; Sp. p. 6028; Gaz. vol. 174; p. 1053.

Pieper, E. P., *et al.* (See Whitmore, Charles J., assignor.)

Pieper, J. W., *et al.* (See Whitmore, Charles J., assignor.)

Pierce, John H., Oakland, Cal. Hydroplane. No. 1,014,514; Jan. 9; Sp. p. 3124; Gaz. vol. 174; p. 520.

Pignocco, John, La Salle, Ill. Permutation door-lock. No. 1,015,832; Jan. 30; Sp. p. 6029; Gaz. vol. 174; p. 1053.

Pilley Packing & Flue Brush Manufacturing Company. (See Rawson and Shultz, assignors.)

Pilliod, James J., Chicago, Ill. Trousers-stretcher. No. 1,014,024; Jan. 9; Sp. p. 2095; Gaz. vol. 174; p. 351.

Pim, Leslie L., and J. J. Christmann, Denver, Colo. Electric ticket-selling device and change-maker. No. 1,014,515; Jan. 9; Sp. p. 3127; Gaz. vol. 174; p. 520.

Pingran Sales Company, The. (See White, Carl H., assignor.)

Pipereaut, Pierre, and A. Vila, Paris, France. Producing pure zinc sulfid and thiosulfates. No. 1,013,511; Jan. 2; Sp. p. 918; Gaz. vol. 174; p. 147.

Pixley, Charles H., Chicago, Ill., assignor to F. A. Hardy & Company. Neutralizing-cell and axis-indicator. No. 1,015,269; Jan. 16; Sp. p. 4797; Gaz. vol. 174; p. 807.

Plath, William A., and H. L. Risedorf, New York, N. Y. Ratchet-tool. No. 1,015,067; Jan. 16; Sp. p. 4402; Gaz. vol. 174; p. 739.

Pledger, William A., Jr., and B. W. Wood, Geneva, Ala. Cotton-chopper. No. 1,013,951; Jan. 9; Sp. p. 1930; Gaz. vol. 174; p. 328.

Ploncard, Eugène A., Matana, Egypt. Locking device for screw bolts and nuts. No. 1,015,763; Jan. 23; Sp. p. 5889; Gaz. vol. 174; p. 1004.

Plowden, Arthur D., Sutherland, Tenn. Sawmill-carriage tester. No. 1,014,847; Jan. 16; Sp. p. 3924; Gaz. vol. 174; p. 665.

Pneumatic Cushion Company, The. (See Gruss, Lucien R., assignor.)

Podlešák, Henry J., Chicago, Ill. Mixture-producing and speed-governing device for gas-engines. No. 1,014,328; Jan. 9; Sp. p. 2746; Gaz. vol. 174; p. 458.

Poehlman, Henry E., assignor of one-half to J. W. Fricke, San Francisco, Cal. Hydrostatic toy. No. 1,014,975; Jan. 16; Sp. p. 4215; Gaz. vol. 174; p. 709.

Polacheck, Arthur. (See Neuhoefer and Polacheck.)

Polacheck, William. (See Neuhoefer and Polacheck.)

Polsen, Samuel D., and I. Elson, Bridgeport, Conn. Coin-controlled vending-machine. No. 1,015,709; Jan. 23; Sp. p. 5777; Gaz. vol. 174; p. 985.

Ponder, Benjamin H., assignor of one-half to J. H. Waters, Camden, Ark. Yarn-cutter. No. 1,015,339; Jan. 23; Sp. p. 4976; Gaz. vol. 174; p. 859.

Pons, Arthur A., New York, N. Y. Rowing-machine. No. 1,013,437; Jan. 2; Sp. p. 764; Gaz. vol. 174; p. 121.

Pons, Arthur A., Brooklyn, N. Y. Refrigerator. No. 1,014,329; Jan. 9; Sp. p. 2755; Gaz. vol. 174; p. 458.

Poole, William E. (See Taylor, Ernest M., assignor.)

Pooley, Edward F., New York, N. Y. Cabinet or holder for disk records and the like. No. 1,014,172; Jan. 9; Sp. p. 2397; Gaz. vol. 174; p. 402.

Popa, Dumitru, Canton, Ohio. Water-heater. No. 1,015,833; Jan. 30; Sp. p. 6033; Gaz. vol. 174; p. 1053.

Popini, Daniel S., Chicago, Ill. Parcel-carrier for motor-cycles. No. 1,013,684; Jan. 2; Sp. p. 1332; Gaz. vol. 174; p. 206.

Popkess, Michael A., Kansas City, Mo. Road-making machine. No. 1,013,512; Jan. 2; Sp. p. 920; Gaz. vol. 174; p. 147.

Poppenhusen, Herman A., Evanston, and J. Harrington, Riverside, Ill. Deflecting-partition for furnaces. No. 1,014,903; Jan. 16; Sp. p. 4044; Gaz. vol. 174; p. 684.

Porter, Ross, and L. Krueger, Neodesha, Kans. Hose-nozzle and sprayer. No. 1,016,173; Jan. 30; Sp. p. 6739; Gaz. vol. 174; p. 1172.

Porto, Frank, *et al.* (See Holmes, Gwyllym R., assignor.)

Posson, Edward, Chicago, Ill. Railway-car. No. 1,013,310; Jan. 2; Sp. p. 497; Gaz. vol. 174; p. 78.

Posson, Edward, Chicago, Ill. Movable bulkhead for refrigerator-cars. No. 1,014,093; Jan. 9; Sp. p. 2235; Gaz. vol. 174; p. 375.

Posson, Edward, Chicago, Ill. Car-roof. No. 1,015,340; Jan. 23; Sp. p. 4977; Gaz. vol. 174; p. 859.

Posson, Edward, assignor to National Dump Car Company, Chicago, Ill. Roof-door for cars. No. 1,015,397; Jan. 23; Sp. p. 5096; Gaz. vol. 174; p. 878.

Post, Frank H., Webb, Iowa. Music-leaf turner. No. 1,014,173; Jan. 9; Sp. p. 2401; Gaz. vol. 174; p. 402.

Post, Henry S., Escanaba, Mich. Handle-attaching device. No. 1,013,438; Jan. 2; Sp. p. 765; Gaz. vol. 174; p. 122.

Potter, George T. (See Pritchard and Potter.)

Potter, James C., Pawtucket, R. I. Combined bale-breaker, automatic feeder, and opener. No. 1,015,764; Jan. 23; Sp. p. 5889; Gaz. vol. 174; p. 1004.

Potter, James C., Pawtucket, R. I. Carding-machine. No. 1,015,835; Jan. 30; Sp. p. 6036; Gaz. vol. 174; p. 1054.

Potter, James C., assignor to Potter & Johnston Machine Co., Pawtucket, R. I. Evener for cotton-opening and other cotton-working machines. No. 1,015,508; Jan. 23; Sp. p. 5336; Gaz. vol. 174; p. 915.

Potter, James C., assignor to Potter & Johnston Machine Co., Pawtucket, R. I. Opener and lap-machine. No. 1,015,834; Jan. 30; Sp. p. 6035; Gaz. vol. 174; p. 1054.

Potter & Johnston Machine Co. (See Potter, James C., assignor.)

Potts, Samuel W., New York, N. Y., assignor to The Bristol Company, Waterbury, Conn. Setback-counter. No. 1,015,710; Jan. 28; Sp. p. 5779; Gaz. vol. 174; p. 985.

Powell, Albert E., Darwen, England. Garden-edge tile. No. 1,015,584; Jan. 23; Sp. p. 5507; Gaz. vol. 174; p. 942.

Powell, Albert M., Worcester, Mass. Metal-planing machine. No. 1,013,439; Jan. 2; Sp. p. 767; Gaz. vol. 174; p. 122.

Pozzi, Aloysius, Trenton, N. J. Car-fender. No. 1,015,633; Jan. 28; Sp. p. 5615; Gaz. vol. 174; p. 960.

Praray, Joseph A., and H. S. Greene, assignors to Woonsocket Napping Machinery Co., Woonsocket, R. I. Napping-machine drum. No. 1,016,174; Jan. 30; Sp. p. 6740; Gaz. vol. 174; p. 1172.

Pratt, Nathaniel P., assignor to Pratt Process Company, Atlanta, Ga. Treatment of phosphates. No. 1,014,254; Jan. 9; Sp. p. 2594; Gaz. vol. 174; p. 433.

Pratt, Nathaniel P., assignor to Pratt Process Company, Decatur, Ga. Treatment of phosphates. No. 1,014,255; Jan. 9; Sp. p. 2596; Gaz. vol. 174; p. 433.

Pratt Process Company. (See Pratt, Nathaniel P., assignor.)

Pratzner, Jules V., New Haven, Conn. Combined tire-holder and trunk. No. 1,013,564; Jan. 2; Sp. p. 1027; Gaz. vol. 174; p. 165.

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Hammer-drill. No. 1,015,509; Jan. 23; Sp. p. 5338; Gaz. vol. 174; p. 916.

Prentice, George D., Milwaukee, Wis. Keg-rinser. No. 1,015,585; Jan. 23; Sp. p. 5508; Gaz. vol. 174; p. 942.

Prentice, John A. (See Meiser, Jesse A., assignor.)

Preston, Henry C. and O., Hornell, N. Y. Carpet-beater. No. 1,015,634; Jan. 23; Sp. p. 5617; Gaz. vol. 174; p. 961.

Preston, Leonard Z., Topeka, Kans. Tilting-gate mechanism. No. 1,014,174; Jan. 9; Sp. p. 2403; Gaz. vol. 174; p. 403.

Preston, Othniel. (See Preston, Henry C. and O.)

Pribil, Alexis R., Detroit, Mich., assignor to The Automatic Platen Press Company, New York, N. Y. Printing-machine. No. 1,014,175; Jan. 9; Sp. p. 2405; Gaz. vol. 174; p. 403.

Pribnow, John F., Mellen, Wis. Saw-swage. No. 1,016,091; Jan. 30; Sp. p. 6598; Gaz. vol. 174; p. 1146.

Price, Edwin F., assignor to The Ohio Manufacturing Company, Upper Sandusky, Ohio. Transmission-gearing. No. 1,013,565; Jan. 2; Sp. p. 1028; Gaz. vol. 174; p. 165.

Price, Joseph H., Fort Worth, Tex. Air-cycle. No. 1,013,952; Jan. 9; Sp. p. 1932; Gaz. vol. 174; p. 328.

Prickett, Cecil, Reeding, Okla. Cotton-chopper. No. 1,015,341; Jan. 23; Sp. p. 4979; Gaz. vol. 174; p. 859.

Priest, Edward D., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,014,904; Jan. 16; Sp. p. 4046; Gaz. vol. 174; p. 684.

Print Check Co. (See Dodge, Merton L., assignor.)

Pritchard, Albert R., Rochester, N. Y. Tubular lantern. No. 1,015,398; Jan. 23; Sp. p. 5097; Gaz. vol. 174; p. 878.

Pritchard, Carl B., Everson, and G. T. Potter, Connellsville, Pa., assignors of one-third to O. L. Marquet, Wellsburg, W. Va. Car-wheel. No. 1,013,513; Jan. 2; Sp. p. 922; Gaz. vol. 174; p. 148.

Proctor, Frederick F., Jr. (See Bedini, Jean, assignor.)

Proctor, William E. (See Trewent and Proctor.)

Pruden, Clarence D., Baltimore, Md. Portable sheet-metal house. No. 1,016,032; Jan. 30; Sp. p. 6462; Gaz. vol. 174; p. 1124.

Pullander, Charles A., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 1,013,216; Jan. 2; Sp. p. 277; Gaz. vol. 174; p. 44.

Pugh, Edward D., assignor to The Damascus Brake Beam Co., Cleveland, Ohio. Adjustable brake-head. No. 1,013,311; Jan. 2; Sp. p. 499; Gaz. vol. 174; p. 78.

Pulit, Joseph, New Haven, Conn. Curtain-pole. No. 1,015,068; Jan. 16; Sp. p. 4403; Gaz. vol. 174; p. 740.

Purchas, Fred A., and A. W. Chapin, McGraw, N. Y.; said Chapin assignor to said Purchas. Egg-case. No. 1,014,414; Jan. 9; Sp. p. 2946; Gaz. vol. 174; p. 489.

Purdy, Jarvis C. (See McKay, James D., assignor.)

Pyzikowski, Walenty, Elizabeth, Pa. Check-valve for cuspidors. No. 1,015,069; Jan. 16; Sp. p. 4405; Gaz. vol. 174; p. 740.

Quernheim, Oliver H. (See Orear, Benjamin F., assignor.)

Quigg, A. R. (See Lillibridge, Jerome B. and A., assignors.)

R. Hoe and Co. (See Cooper, Ellis W., assignor.)

R. Hoe and Co. (See Read, George F., assignor.)

Raber, Joseph, assignor to Emerson Typewriter Company, Woodstock, Ill. Type-writer carriage. No. 1,016,175; Jan. 30; Sp. p. 6741; Gaz. vol. 174; p. 1172.

Raczkowski, Alexander. (See Sommers, Frederick, assignor.)

Rader, August C., Upper Montclair, N. J. Shade-holder. No. 1,015,076; Jan. 30; Sp. p. 6341; Gaz. vol. 174; p. 1103.

Rader, August C., Upper Montclair, N. J. Curtain or shade guide. No. 1,015,977; Jan. 30; Sp. p. 6343; Gaz. vol. 174; p. 1104.

Ragsdale, William E., Artesia, N. Mex. Display-stand. No. 1,015,457; Jan. 23; Sp. p. 5243; Gaz. vol. 174; p. 898.

Raich, Joseph, Chicago, Ill. Printing-press. No. 1,016,033; Jan. 30; Sp. p. 6466; Gaz. vol. 174; p. 1125.

Rains, George M., Grosvenor, Tex. Trapping device. No. 1,014,516; Jan. 9; Sp. p. 3132; Gaz. vol. 174; p. 520.

Rall, Max. (See Honold, Rall, and Mumprecht.)

Ramos, Frank, *et al.* (See Perry, Alfred H., assignor.)

Ramos, M. F., *et al.* (See Perry, Alfred H., assignor.)

Rand, Frank P., assignor of one-half to C. F. Penn, Spokane, Wash. Poison-receptacle. No. 1,013,514; Jan. 2; Sp. p. 923; Gaz. vol. 174; p. 148.

Rand, James H., Newton, Mass. Adjustable card-index. No. 1,016,230; Jan. 30; Sp. p. 6849; Gaz. vol. 174; p. 1190.

Randall & Co., Richard T. (See Müller, Henry F., assignor.)

Randall Telephone Manufacturing Company. (See Adams-Randall, Charles, assignor.)

Rangnow, Otto, Philadelphia, Pa. Device for carrying garments. No. 1,014,905; Jan. 16; Sp. p. 4047; Gaz. vol. 174; p. 684.

Rankin, John R., and J. H. Larrick, La Junta, Colo.; said Larrick assignor to said Rankin. Metallic culvert. No. 1,013,440; Jan. 2; Sp. p. 771; Gaz. vol. 174; p. 122.

Rare Metals Mining and Milling Company, The. (See Bleecker, Warren F., assignor.)

Rasmussen, Martin, Racine, Wis. Hat-pin fastener and guard. No. 1,014,176; Jan. 9; Sp. p. 2406; Gaz. vol. 174; p. 403.

Rasmussen, Martin, Racine, Wis. Door-lock. No. 1,015,070; Jan. 16; Sp. p. 4406; Gaz. vol. 174; p. 740.

Rausseau, Coatsworth E., assignor of one-half to B. Allen, Clearwater, Fla. Non-refillable bottle. No. 1,015,635; Jan. 23; Sp. p. 5618; Gaz. vol. 174; p. 961.

Rawson, Grant I., and L. B. Shultz, assignors to Pilley Packing & Flue Brush Manufacturing Company, St. Louis, Mo. Clip for miners' lamps. No. 1,014,025; Jan. 9; Sp. p. 2095; Gaz. vol. 174; p. 352.

Raymaker, James H. (See Raymaker, Martin and J. H.)

Raymaker, Martin and J. H., Sheboygan, Wis. Engine stop mechanism. No. 1,014,669; Jan. 16; Sp. p. 3521; Gaz. vol. 174; p. 604.

Reach, Milton B., Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co. Exercising apparatus, vaulting-horse. No. 1,013,685; Jan. 2; Sp. p. 1333; Gaz. vol. 174; p. 206.

Reach, Milton B., Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co. Flying or traveling ring. No. 1,013,686; Jan. 2; Sp. p. 1337; Gaz. vol. 174; p. 207.

Reach, Milton B., Springfield, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co. Gymnasium apparatus. No. 1,015,208; Jan. 16; Sp. p. 4663; Gaz. vol. 174; p. 787.

Reach, Milton B. and W. F., Springfield, Mass., assignors to A. G. Spalding & Bros. Manf'g. Co. Gymnasium apparatus with clamping device. No. 1,013,687; Jan. 2; Sp. p. 1338; Gaz. vol. 174; p. 207.

Reach, Robert, Springfield, Mass. Gymnasium rowing apparatus. No. 1,015,071; Jan. 16; Sp. p. 4407; Gaz. vol. 174; p. 741.

Reach, William F. (See Reach, Milton B. and W. F.)

Read, George F., London, England, assignor to R. Hoe and Co., New York, N. Y. Means for controlling and directing moving sheets or webs. No. 1,015,836; Jan. 30; Sp. p. 6041; Gaz. vol. 174; p. 1054.

Reading Hardware Company. (See Spring, Frank J., assignor.)

Reading Standard Company. (See Schaeffer, William G., assignor.)

Reagin, James, Bloomfield, Iowa. Railway. No. 1,013,441; Jan. 2; Sp. p. 773; Gaz. vol. 174; p. 123.

Reber, Irvin. (See Kleckner, Harry T., assignor.)

Rechniewski, Stanislaw, St. Petersburg, Russia. Pneumatic caisson of ferroconcrete. No. 1,014,721; Jan. 16; Sp. p. 3633; Gaz. vol. 174; p. 621.

Reddaway, Frank. (See Murphy, William, assignor.)

Redman, Charles H., Newark, N. J. Clipper. No. 1,015,399; Jan. 23; Sp. p. 5098; Gaz. vol. 174; p. 879.

Redrup, Charles B., Cardiff, England. Piston-rod connection. No. 1,014,517; Jan. 9; Sp. p. 3133; Gaz. vol. 174; p. 521.

Reece Button Hole Machine Company, The. (See Dormandy, Garry J., assignor.)

Reece Button Hole Machine Company, The. (See Leveque, Bernard T., assignor.)

Reed, Clarence C. (See Graves and Reed.)

Reed, Homer C., assignor of one-half to F. D. Patterson and C. Gordon, Greenfield, Ohio. Combination-ladder. No. 1,013,515; Jan. 2; Sp. p. 924; Gaz. vol. 174; p. 148.

Reed, William A., Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Abrading-tool. No. 1,014,094; Jan. 9; Sp. p. 2240; Gaz. vol. 174; p. 375.

Reed, William B., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Induction-motor. No. 1,013,218; Jan. 2; Sp. p. 280; Gaz. vol. 174; p. 45.

Reeve, Sidney A., Worcester, Mass., assignor, by mesne assignments, to C. P. Power Company, Newark, N. J. Apparatus for heating compressed air. No. 1,014,330; Jan. 9; Sp. p. 2756; Gaz. vol. 174; p. 458.
Reeves & Company. (See Clay, Harry C., assignor.)
Regenold, Frederick, Memphis, Tenn. Bale-tie buckle. No. 1,013,442; Jan. 2; Sp. p. 774; Gaz. vol. 174; p. 123.
Regnard, Paul L. A., Paris, France. Automatic stabilizer for aeroplanes and the like. No. 1,015,837; Jan. 30; Sp. p. 6042; Gaz. vol. 174; p. 1055.
Rego, M. A., *et al.* (See Perry, Alfred H., assignor.)
Reichenbach, Frank, Joliet, Ill. Hat-pin-point protector. No. 1,013,814; Jan. 2; Sp. p. 1578; Gaz. vol. 174; p. 251.
Reichenbach, George T., New Castle, Del., assignor to H. O. Peck Automobile Wheel Company, Incorporated, Portland, Oreg. Vehicle wheel-hub. No. 1,014,177; Jan. 9; Sp. p. 2407; Gaz. vol. 174; p. 403.
Reichner, L. Irving. (See MacIndoe, John F., assignor.)
Reid, Joseph G., Atlanta, Ga. Cotton-seed-delinting machine. No. 1,014,518; Jan. 9; Sp. p. 3135; Gaz. vol. 174; p. 521.
Reift, William H., Philadelphia, Pa., assignor of one-half to W. L. R. Clime, Burlington, N. J. Burglar-alarm. No. 1,016,034; Jan. 30; Sp. p. 6469; Gaz. vol. 174; p. 1125.
Reilly, Edgar J. (See Sherman, McKelvey, and Reilly.)
Reilly, Matthew A., and T. J. Aldridge, Rochester, N. Y. Splitting-machine. No. 1,013,897; Jan. 9; Sp. p. 1803; Gaz. vol. 174; p. 309.
Rein, Robert, Schlachtensee, near Berlin, assignor to Edmund Boehm & Co., Berlin, Germany. Coat-hanger. No. 1,014,976; Jan. 16; Sp. p. 4217; Gaz. vol. 174; p. 709.
Reinert, Peter J., Pittsburgh, Pa. Cradle. No. 1,014,848; Jan. 16; Sp. p. 3927; Gaz. vol. 174; p. 665.
Reinicke, Gustav, Schöneberg, near Berlin, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Producing ω-para-alkyloxyphenylethylamins and their n-alkyl derivatives. No. 1,016,092; Jan. 30; Sp. p. 6601; Gaz. vol. 174; p. 1146.
Reinstein, Hans G., Hanover, Germany. Corrugating cardboard. No. 1,016,093; Jan. 30; Sp. p. 6602; Gaz. vol. 174; p. 1147.
Reiss, George T. (See Teas and Reiss.)
Remde, Edward H., Cleveland, Ohio. Window-fastener. No. 1,013,898; Jan. 9; Sp. p. 1804; Gaz. vol. 174; p. 309.
Remington Typewriter Company. (See Woodward, Oscar, assignor.)
Remington Typewriter Company. (See Yaw, Clio B., assignor.)
Remy, Benjamin P. and F. I., assignors to The Remy Electric Company, Anderson, Ind. Sound-producing device. No. 1,016,035; Jan. 30; Sp. p. 6470; Gaz. vol. 174; p. 1126.
Remy Electric Company, The. (See Remy, Benjamin P. and F. I., assignors.)
Remy, Frank I. (See Remy, Benjamin P. and F. I.)
Renaud, Frank G., Syracuse, N. Y. Food-receptacle. No. 1,015,400; Jan. 23; Sp. p. 5099; Gaz. vol. 174; p. 879.
Rendahl, Ragnar H., Stockholm, Sweden, assignor to Gesellschaft Für Drahtlose Telegraphie m. b. H., Berlin, Germany. Means for varying the period of oscillation of two oscillatory circuits. No. 1,014,722; Jan. 16; Sp. p. 3634; Gaz. vol. 174; p. 622.
Renville, Sampson H., Peever, S. D. Neck-yoke end coupling. No. 1,015,247; Jan. 16; Sp. p. 4742; Gaz. vol. 174; p. 800.
Renville, Sampson H., Peever, S. D. Neck-yoke center. No. 1,015,248; Jan. 16; Sp. p. 4743; Gaz. vol. 174; p. 800.
Resch, Casper M., Fowler, Ill. Ironing-table. No. 1,015,072; Jan. 16; Sp. p. 4410; Gaz. vol. 174; p. 741.
Resilient Motor Wheel Syndicate Limited, The. (See Murray, Esther, assignor.) (Reissue.)
Rex Aerial Navigating and Construction Company of New Jersey, The. (See Rex, Cleveland A., assignor.)
Rex, Cleveland A., Amarillo, Tex., assignor to The Rex Aerial Navigating and Construction Company of New Jersey, Phoenix, Ariz. Aerial vehicle. No. 1,013,219; Jan. 2; Sp. p. 283; Gaz. vol. 174; p. 46.
Rexford, Ley P., St. Louis, Mo. Knockdown brooder. No. 1,015,073; Jan. 16; Sp. p. 4411; Gaz. vol. 174; p. 741.
Reynolds, Clark, Boston, Mass., assignor of one-fourth to A. J. Dawley, Wyoming, R. I. Rotary cardboard and paper printing press. No. 1,013,516; Jan. 2; Sp. p. 926; Gaz. vol. 174; p. 149.
Reynolds, Robert A., Detroit, Mich. Grinding-mill. No. 1,015,586; Jan. 23; Sp. p. 5513; Gaz. vol. 174; p. 943.
Rheinische Dampfkessel und Maschinen-Fabrik Büttner G. m. b. H. (See Kaszner, Georg, assignor.)
Rheinische Metallwaaren- und Maschinenfabrik. (See Völler, Karl, assignor.)
Rhett, James M., Beaufort, S. C. Automatic reversing and timing switch for gas-engines. No. 1,014,723; Jan. 16; Sp. p. 3636; Gaz. vol. 174; p. 622.
Rhoades, Alonzo E. (See Stimpson and Rhoades.)
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Supporting means for loom-beams. No. 1,013,443; Jan. 2; Sp. p. 775; Gaz. vol. 174; p. 123.
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Traverse-motion for yarn spinning or twisting apparatus. No. 1,013,846; Jan. 2; Sp. p. 1660; Gaz. vol. 174; p. 263.
Rice, Frederick M., Russell, N. D. Unloading-rack. No. 1,015,074; Jan. 16; Sp. p. 4413; Gaz. vol. 174; p. 742.
Rice, Jesse D. (See Judson, Walter E., assignor.)
Rice, Jonathan W., and J. Fulton, King City, Mo. Anti-twisting draft means for harrows and the like. (Reissue.) No. 13,357; Jan. 9; Sp. p. 3427; Gaz. vol. 174; p. 567.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Centrifugal compressor and pump. No. 1,013,312; Jan. 2; Sp. p. 500; Gaz. vol. 174; p. 79.
Richard, Jules, Paris, France. Stereoscopic camera. No. 1,013,815; Jan. 2; Sp. p. 1579; Gaz. vol. 174; p. 252.
Richardson, Daniel J., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,013,953; Jan. 9; Sp. p. 1934; Gaz. vol. 174; p. 328.
Richardson, Ernest, Beaver Falls, Pa. Oven, refrigerator, and similar receptacle. No. 1,013,313; Jan. 2; Sp. p. 504; Gaz. vol. 174; p. 79.
Richardson, Frank J. (See Bonsteel, John H., assignor.)
Richardson, James, New Castle, Pa. Hinge. No. 1,015,209; Jan. 16; Sp. p. 4664; Gaz. vol. 174; p. 787.
Richardson Scale Company. (See Holloway, Chester L., assignor.)
Richardson, William K., Leavenworth, Kans. Centrifugal water-clarifier. No. 1,014,840; Jan. 16; Sp. p. 3928; Gaz. vol. 174; p. 666.
Richardson, William K., Leavenworth, Kans. Liquid packing. No. 1,014,850; Jan. 16; Sp. p. 3933; Gaz. vol. 174; p. 666.
Richmond, Edwin F., Lake Charles, La. Threshing-machine. No. 1,013,816; Jan. 2; Sp. p. 1581; Gaz. vol. 174; p. 252.
Richmond, James, Cleveland, Ohio. Chime-piano. No. 1,016,094; Jan. 30; Sp. p. 6602; Gaz. vol. 174; p. 1147.
Richter, Friedrich A., Rudolstadt, Germany. Framework of roofs for toy buildings. No. 1,015,842; Jan. 23; Sp. p. 4982; Gaz. vol. 174; p. 860.
Rickman, Robert L., Vancouver, British Columbia, Canada. Method and machine for making cement sewer-pipe. No. 1,013,954; Jan. 9; Sp. p. 1936; Gaz. vol. 174; p. 329.
Riddell, John, Schenectady, N. Y., assignor to General Electric Company. Splicing-sleeve. No. 1,016,095; Jan. 30; Sp. p. 6606; Gaz. vol. 174; p. 1147.
Riddell, Paris J., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y. Bowling-alley ball-returnway. No. 1,013,817; Jan. 2; Sp. p. 1583; Gaz. vol. 174; p. 252.
Ridgely Trimmer Company, The. (See Breckenridge, John G., assignor.)
Ridgely Trimmer Company, The. (See Chrestensen, Christian P., assignor.)
Ridgway Dynamo & Engine Company. (See Hall, Thomas, assignor.)
Ridgway, John J., New York, N. Y. Belt-cleaner. No. 1,013,899; Jan. 9; Sp. p. 1806; Gaz. vol. 174; p. 310.
Rieffel, August, Philadelphia, Pa. Tension device. No. 1,014,256; Jan. 9; Sp. p. 2599; Gaz. vol. 174; p. 433.
Riegler, Lucius, West Hoboken, N. J. Car-coupling. No. 1,013,220; Jan. 2; Sp. p. 293; Gaz. vol. 174; p. 46.
Riepp, Joseph, New York, N. Y. Liquid-measuring tank. No. 1,015,636; Jan. 23; Sp. p. 5620; Gaz. vol. 174; p. 961.
Ries, Frank, assignor of one-half to J. G. Hellman, Tiffin, Ohio. Sharpening-machine. No. 1,015,075; Jan. 16; Sp. p. 4414; Gaz. vol. 174; p. 742.
Rieske, Otto G., assignor to Monitor Drill Company, St. Louis Park, Minn. Disk attachment for drills. No. 1,015,458; Jan. 23; Sp. p. 5244; Gaz. vol. 174; p. 898.
Riexinger, George, Buffalo, N. Y. Mechanical toy. No. 1,015,343; Jan. 23; Sp. p. 4983; Gaz. vol. 174; p. 860.
Riggle, Charles D., McKeesport, Pa. Clothes-line reel. No. 1,015,459; Jan. 23; Sp. p. 5246; Gaz. vol. 174; p. 899.
Riglander, Moses M., assignor to Hammel, Riglander & Co., New York, N. Y. Watch or clock spring carrier. No. 1,015,978; Jan. 30; Sp. p. 6346; Gaz. vol. 174; p. 1104.
Rinehart, Bentley L., Camden, N. J., assignor to Victor Talking Machine Company. Sound-box for talking-machines. No. 1,013,314; Jan. 2; Sp. p. 505; Gaz. vol. 174; p. 80.
Ringe, John C., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Gearing. No. 1,014,772; Jan. 16; Sp. p. 3740; Gaz. vol. 174; p. 638.
Ringel, Herman, Newark, N. J. Phonograph for dolls or other toys. No. 1,015,587; Jan. 23; Sp. p. 5514; Gaz. vol. 174; p. 943.
Rinman, Erik L. (See Langlet and Rinman.)
Riordan, Patrick D., Arnot, Pa. Aeroplane. No. 1,015,711; Jan. 23; Sp. p. 5781; Gaz. vol. 174; p. 985.
Ripsom, William L., Denver, Colo. Rotary engine. No. 1,015,979; Jan. 30; Sp. p. 6348; Gaz. vol. 174; p. 1104.
Risedorf, Harry L. (See Plath and Risedorf.)
Rivett, Edward, Brighton, Mass. Bottoming device for lathe-chucks. No. 1,014,773; Jan. 16; Sp. p. 3750; Gaz. vol. 174; p. 638.
Roach, Harry F., St. Louis, Mo. Rail-joint. No. 1,013,613; Jan. 2; Sp. p. 1133; Gaz. vol. 174; p. 181.
Roach, Harry F., St. Louis, Mo. Rail-joint. No. 1,013,852; Jan. 2; Sp. p. 1683; Gaz. vol. 174; p. 266.
Roach, Harry F., St. Louis, Mo. Mechanism for actuating and locking the movable elements of railway-track structures. No. 1,014,095; Jan. 9; Sp. p. 2243; Gaz. vol. 174; p. 375.
Roake, James, Oregon City, Oreg. Leveling device. No. 1,014,519; Jan. 9; Sp. p. 3137; Gaz. vol. 174; p. 522.

Robbins, Charles A., Dixon, Ill. Tank-valve. No. 1,015,960; Jan. 30; Sp. p. 6351; Gaz. vol. 174; p. 1105.
Robbins, George, Minneapolis, Minn. Multicompartment cabinet. No. 1,013,444; Jan. 2; Sp. p. 777; Gaz. vol. 174; p. 124.
Robbins, George B. (See Sharp, William E., assignor.)
Robbins, George B., and W. E. Sharp, Chicago, Ill. Combination refrigerator, heater, and ventilator car. No. 1,013,517; Jan. 2; Sp. p. 931; Gaz. vol. 174; p. 149.
Robert, Charles, Cedar Rapids, Iowa. Garment-hanger. No. 1,015,076; Jan. 16; Sp. p. 4416; Gaz. vol. 174; p. 742.
Robert G. Speer Corporation, The. (See Speer, Robert G., assignor.)
Robert Gair Company. (See Hoyt, Guy L., assignor.)
Roberti, Auguste, Waremme, Belgium. Manufacture of cattle food. No. 1,015,838; Jan. 30; Sp. p. 6044; Gaz. vol. 174; p. 1055.
Roberts, Alexander, *et al.* (See Libert, Fred, assignor.)
Roberts, Carl E., Atchison, Kans. Concrete-mixer. No. 1,015,081; Jan. 30; Sp. p. 6352; Gaz. vol. 174; p. 1105.
Roberts, Daniel W. (See Perkins and Roberts.)
Roberts, Elmer E., Balko, Okla. Tooth-fastener for threshing-machine concaves and cylinders. No. 1,015,743; Jan. 23; Sp. p. 5646; Gaz. vol. 174; p. 997.
Roberts, Eugene, and A. H. Gibson, Lehi, Utah. Tip for sugar-separators. No. 1,015,510; Jan. 23; Sp. p. 3340; Gaz. vol. 174; p. 916.
Roberts, Fred H., Sterling, Colo. Valve for pressure-pumps. No. 1,014,178; Jan. 9; Sp. p. 2409; Gaz. vol. 174; p. 404.
Roberts, Horace L., New York, N. Y. Presser-foot for pamphlet-stitching machines. No. 1,015,077; Jan. 16; Sp. p. 4417; Gaz. vol. 174; p. 743.
Roberts, Robert M., Anderson, Ind. Carbureter. No. 1,013,955; Jan. 9; Sp. p. 1943; Gaz. vol. 174; p. 329.
Robertson, Archibald, Duluth, Minn. Furnace. No. 1,014,724; Jan. 16; Sp. p. 3640; Gaz. vol. 174; p. 622.
Robeson, Jacob S., Camden, N. J. Pyrites briquet and making same. No. 1,013,614; Jan. 2; Sp. p. 1138; Gaz. vol. 174; p. 181.
Roble, Frank, Ashland, N. H. Cartridge-belt. No. 1,016,231; Jan. 30; Sp. p. 6851; Gaz. vol. 174; p. 1190.
Robins Conveying Belt Company. (See Wents, Jere L., assignor.)
Robinson, Clarence I., West New Brighton, N. Y., assignor to Standard Oil Company, Bayonne, N. J. Utilising acid sludge from refining petroleum. No. 1,014,520; Jan. 9; Sp. p. 3138; Gaz. vol. 174; p. 522.
Robinson, Frank N., Wayland, N. Y. Brake. No. 1,015,078; Jan. 16; Sp. p. 4419; Gaz. vol. 174; p. 743.
Robinson, Frederick, Chicago, Ill. Spring-support for motor-cycle and other saddles. No. 1,015,712; Jan. 23; Sp. p. 5782; Gaz. vol. 174; p. 986.
Robinson, Henry, South Orange, N. J. Polishing-machine. No. 1,015,240; Jan. 16; Sp. p. 4745; Gaz. vol. 174; p. 800.
Robison, William N., Canyon, Tex. System of subirrigation. No. 1,015,401; Jan. 23; Sp. p. 5100; Gaz. vol. 174; p. 879.
Roby, Le Roy H., Fostoria, Ohio. Street-cleaning machine. No. 1,015,637; Jan. 23; Sp. p. 5622; Gaz. vol. 174; p. 962.
Roca, Miguel, New York, N. Y. Apparatus for nautical charting and navigating. No. 1,016,176; Jan. 30; Sp. p. 6742; Gaz. vol. 174; p. 1172.
Rocereto, Mario S., and L. D. Bert, Pittsburgh, Pa. Display-rack. No. 1,015,079; Jan. 16; Sp. p. 4422; Gaz. vol. 174; p. 744.
Rochat, Maurice, New York, N. Y. Propelling device for land and water. No. 1,013,818; Jan. 2; Sp. p. 1585; Gaz. vol. 174; p. 253.
Rockwood, George I., Worcester, Mass. Apparatus for operating alarms or other devices. No. 1,015,080; Jan. 16; Sp. p. 4423; Gaz. vol. 174; p. 744.
Rockwood Manufacturing Company. (See Born, Joseph, assignor.)
Roddy, Isham L., Estes, Tex. Irrigation apparatus. No. 1,014,521; Jan. 9; Sp. p. 3142; Gaz. vol. 174; p. 522.
Rodman, Hugh, Pittsburgh, assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa. Manufacturing electrodes. No. 1,013,445; Jan. 2; Sp. p. 779; Gaz. vol. 174; p. 124.
Roebbel, Frederic W., assignor to American Pulverizer Company, St. Louis, Mo. Rock and clay pulverizer. No. 1,015,844; Jan. 23; Sp. p. 4985; Gaz. vol. 174; p. 860.
Roeh, John, assignor to Crystalized Milk Co., Spokane, Wash. Desiccating milk. No. 1,014,609; Jan. 9; Sp. p. 3325; Gaz. vol. 174; p. 551.
Roelofs, Arthur, Philadelphia, Pa. Machine for clearing hat-bodies. No. 1,013,315; Jan. 2; Sp. p. 507; Gaz. vol. 174; p. 80.
Roentgen Manufacturing Company. (See Kelly, Edwin W., assignor.)
Roessler & Hasslacher Chemical Co., The. (See Heuser, Ralph V., assignor.)
Roessler & Hasslacher Chemical Co. (See Liebknecht, Otto, assignor.)
Roessler and Hassiacher Chemical Company. (See Foersterling, Hans, assignor.)
Rogers, George, Kilmalcolm, Scotland. Container. No. 1,015,638; Jan. 23; Sp. p. 5623; Gaz. vol. 174; p. 962.
Rogers, George A., Chicago, Ill., assignor to F. A. Hardy & Company. Machine for examining and testing the eyes. No. 1,013,316; Jan. 2; Sp. p. 508; Gaz. vol. 174; p. 80.
Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Line-casting machine. No. 1,014,725; Jan. 16; Sp. p. 3642; Gaz. vol. 174; p. 623.
Rogers, Longinus V. (See Hart, Philip, assignor.)
Rogers, William A., Boicourt, Kans. End-gate. No. 1,013,446; Jan. 2; Sp. p. 780; Gaz. vol. 174; p. 125.
Rogers, Wilson, Martha, W. Va. Ladder-base. No. 1,016,177; Jan. 30; Sp. p. 6747; Gaz. vol. 174; p. 1173.
Rogers, Winfield S., Bantam, Conn. Puzzle-padlock. No. 1,013,566; Jan. 2; Sp. p. 1030; Gaz. vol. 174; p. 165.
Rohrer, Ralph A., Altoona, Pa. Exercising device. No. 1,014,774; Jan. 16; Sp. p. 3753; Gaz. vol. 174; p. 638.
Rollin, Charles, Newcastle-upon-Tyne, England. Making amorphous anhydrous barium hydroxid. No. 1,015,345; Jan. 23; Sp. p. 4987; Gaz. vol. 174; p. 861.
Rolston, Walter F., assignor to Burson Manufacturing Company, Rockford, Ill. Straight-knitting machine. No. 1,016,232; Jan. 30; Sp. p. 6852; Gaz. vol. 174; p. 1191.
Rolston, Walter F., assignor to Burson Manufacturing Company, Rockford, Ill. Knitting-machine. No. 1,016,233; Jan. 30; Sp. p. 6854; Gaz. vol. 174; p. 1191.
Romünder, Hermann, Misbawaka, Ind. Trunk. No. 1,015,511; Jan. 23; Sp. p. 5341; Gaz. vol. 174; p. 916.
Romünder, William, Milwaukee, Wis. Joint for leather-stretching frames. No. 1,015,402; Jan. 23; Sp. p. 5101; Gaz. vol. 174; p. 879.
Roney, Alexander B., Chicago, Ill. Faucet. No. 1,014,179; Jan. 9; Sp. p. 2412; Gaz. vol. 174; p. 404.
Roney, John H. (See Williams, Jenkin, assignor.)
Roof, Robert M., Muncie, Ind. Friction-clutch. No. 1,015,250; Jan. 16; Sp. p. 4746; Gaz. vol. 174; p. 800.
Root, Wayland L., Spokane, Wash. Stall. No. 1,013,447; Jan. 2; Sp. p. 782; Gaz. vol. 174; p. 125.
Rooth, Ole E. (See Iverson and Rooth.)
Rorabeck, Claude, Newark, N. J. Gas-producer. No. 1,014,522; Jan. 9; Sp. p. 3143; Gaz. vol. 174; p. 523.
Rosa, Charles, Chicago, Ill. Coffee-urn. No. 1,014,610; Jan. 9; Sp. p. 3328; Gaz. vol. 174; p. 552.
Rose, Cyrus C., Walthill, Nebr. Horse-collar throat. No. 1,013,688; Jan. 2; Sp. p. 1330; Gaz. vol. 174; p. 207.
Rose, George D., Manchester, England. Manufacture of resilient tires. No. 1,016,096; Jan. 30; Sp. p. 6607; Gaz. vol. 174; p. 1148.
Rose, John D., Berkeley, Cal. Burette. No. 1,013,448; Jan. 2; Sp. p. 783; Gaz. vol. 174; p. 125.
Rosenau, Walter W., Germania, Iowa. Loader. No. 1,015,081; Jan. 16; Sp. p. 4425; Gaz. vol. 174; p. 744.
Rosenberg, Heyman, New York, N. Y. Damper. No. 1,013,819; Jan. 2; Sp. p. 1587; Gaz. vol. 174; p. 253.
Rosenbeim, Ida S. (See Both, Tonjes A. C., assignor.)
Rosenqvist, Conrad L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Vibration-absorber for alternating-current-magnet armatures. No. 1,014,257; Jan. 9; Sp. p. 2600; Gaz. vol. 174; p. 433.
Rosenqvist, Nils, Stockholm, Sweden. Milking-machine. No. 1,014,331; Jan. 9; Sp. p. 2750; Gaz. vol. 174; p. 460.
Rosenthal, Philip A., New York, N. Y. Tire-plug. No. 1,014,851; Jan. 16; Sp. p. 3934; Gaz. vol. 174; p. 666.
Ross, Lewis P., Standish, N. Y., assignor of one-half to Northern Iron Company. Kiln-cleaner. No. 1,014,258; Jan. 9; Sp. p. 2601; Gaz. vol. 174; p. 434.
Ross, William E., and L. C. Jensen, Fromberg, Mont. Closet-seat. No. 1,015,512; Jan. 23; Sp. p. 5344; Gaz. vol. 174; p. 917.
Rostand Manufacturing Company, The. (See Landine, Peter N., assignor.)
Roth, Anthony, Jr., New Brunswick, N. J. Horseshoe-calk. No. 1,015,839; Jan. 30; Sp. p. 6046; Gaz. vol. 174; p. 1055.
Roth, Johannes, Ludwigshafen-on-the-Rhine, Germany. Automatic tile-machine. No. 1,015,588; Jan. 23; Sp. p. 5516; Gaz. vol. 174; p. 944.
Rothchild, Joseph, New York, and H. S. Conover, Brooklyn, assignors to The Rothchild Pressure Specialties Company, Canton, N. Y. Disk valve. No. 1,014,775; Jan. 16; Sp. p. 3754; Gaz. vol. 174; p. 630.
Rothchild Pressure Specialties Company, The. (See Rothchild and Conover, assignors.)
Rothwell, Louis S., Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn. Flush-valve body. No. 1,014,259; Jan. 9; Sp. p. 2602; Gaz. vol. 174; p. 434.
Rounds, Erdix, assignor of one-half to Gunther-Wright Machine Company, Owensboro, Ky. Transmission mechanism. No. 1,015,639; Jan. 23; Sp. p. 5625; Gaz. vol. 174; p. 962.
Rouse, Frank L., Somerville, assignor to Frank L. Rouse Company, Inc., Boston, Mass. Detachable heel for shoes. No. 1,013,615; Jan. 2; Sp. p. 1140; Gaz. vol. 174; p. 181.
Roush, Franklin W., Dayton, Ohio. Nursing-bottle holder. No. 1,013,221; Jan. 2; Sp. p. 295; Gaz. vol. 174; p. 46.
Rousseau, Onesime, Detroit, Mich. Sash-holder. No. 1,015,082; Jan. 16; Sp. p. 4427; Gaz. vol. 174; p. 744.
Routt, Edman, Santa Clara, Cal. Automatic safety-switch. No. 1,014,906; Jan. 16; Sp. p. 4049; Gaz. vol. 174; p. 685.

Rowbotham, Walter, Montreal, Quebec, Canada. Explosive-engine. No. 1,014,332; Jan. 9; Sp. p. 2762; Gaz. vol. 174; p. 459.

Rowe, Arthur F., Springfield, Mass. Tailor's appliance. No. 1,015,083; Jan. 16; Sp. p. 4428; Gaz. vol. 174; p. 745.

Rowe, George H., Berwyn, Ill. Plunger device. No. 1,015,064; Jan. 16; Sp. p. 4430; Gaz. vol. 174; p. 745.

Rowe, James E., New York, N. Y. Soldering-iron. No. 1,015,713; Jan. 23; Sp. p. 5785; Gaz. vol. 174; p. 986.

Rowland & Company. (See Edwards, James B., assignor.)

Rowland, David E. (See Miller and Rowland.)

Rowland, Thad H., Oberlin, Ohio. Mausoleum. No. 1,014,096; Jan. 9; Sp. p. 2248; Gaz. vol. 174; p. 376.

Rowley, Thomas J., and R. M. France, Vandergrift, Pa. Bag-holder. No. 1,015,211; Jan. 16; Sp. p. 4667; Gaz. vol. 174; p. 788.

Rowley, Walter J., and J. G. Albright, Pittsburgh, Pa. Wall-paper-cleaner holder. No. 1,015,210; Jan. 16; Sp. p. 4666; Gaz. vol. 174; p. 788.

Rowntree, Harold, Chicago, Ill., assignor to National Pneumatic Company. Electric control mechanism for air-brakes. No. 1,014,852; Jan. 16; Sp. p. 3936; Gaz. vol. 174; p. 667.

Rowntree, Harold, Chicago, Ill., assignor, by mesne assignments, to National Pneumatic Company. Door and step operating mechanism. No. 1,014,907; Jan. 16; Sp. p. 4052; Gaz. vol. 174; p. 685.

Rowse, John A., Newquay, assignor to The Dental Manufacturing Company, Limited, London, England. Hypodermic and similar syringe. No. 1,015,276; Jan. 16; Sp. p. 4813; Gaz. vol. 174; p. 810.

Rubel, Simon L., assignor to Home Vacuum Cleaner Company, Chicago, Ill. Vacuum-cleaner. No. 1,014,776; Jan. 16; Sp. p. 3757; Gaz. vol. 174; p. 639.

Rudolph Wurlitzer Manufacturing Company, The. (See Wanters, Joseph, assignor.)

Ruecking, Frederick H., St. Louis, Mo. Expansion-bolt. No. 1,013,222; Jan. 2; Sp. p. 297; Gaz. vol. 174; p. 47.

Rugh, Harry O., Sandwich, assignor to Sandwich Electric Company, Chicago, Ill. Signaling and telephone system. No. 1,016,036; Jan. 30; Sp. p. 6471; Gaz. vol. 174; p. 1126.

Rumsey, Horace S., St. Louis, Mo. Water-closet. No. 1,013,616; Jan. 2; Sp. p. 1141; Gaz. vol. 174; p. 182.

Ruoff, Charles F., *et al.* (See McGill, Charles E., assignor.)

Rupp, George H., Baltimore, Md. Flue attachment. No. 1,014,097; Jan. 9; Sp. p. 2250; Gaz. vol. 174; p. 376.

Ruprecht, Charles C., Cleveland, Ohio. Purifying electrically-conductive materials. No. 1,016,097; Jan. 30; Sp. p. 6608; Gaz. vol. 174; p. 1148.

Rush, Albert, Columbus, Ohio. Fire-resisting shutter. No. 1,014,611; Jan. 9; Sp. p. 3330; Gaz. vol. 174; p. 552.

Rushing, Clyde M., and A. J. Wheeler, Charleston, Mo. Suction device for corn-shelling machines. No. 1,015,346; Jan. 23; Sp. p. 4989; Gaz. vol. 174; p. 861.

Rushmore, Samuel W., Plainfield, N. J. Electric-lighting system for vehicles. No. 1,016,037; Jan. 30; Sp. p. 6473; Gaz. vol. 174; p. 1126.

Russell, Lillian, New York, N. Y. Dresser-trunk. No. 1,014,853; Jan. 16; Sp. p. 3942; Gaz. vol. 174; p. 667.

Russell, Sidney S., Memphis, Tenn. Air-deflector. No. 1,014,523; Jan. 9; Sp. p. 3146; Gaz. vol. 174; p. 523.

Ruthenburg, Louis, Louisville, Ky. Apparatus for cooling fluids. No. 1,013,449; Jan. 2; Sp. p. 785; Gaz. vol. 174; p. 125.

Ryberg, Charles O., Brockton, Mass. Heel building and pressing machine. No. 1,015,589; Jan. 23; Sp. p. 5519; Gaz. vol. 174; p. 944.

Ryder, James P., Clarksville, Tenn. Meter-box cover. No. 1,015,907; Jan. 30; Sp. p. 6195; Gaz. vol. 174; p. 1080.

S. Howes Company, The. (See Barbeau, Malcolm L., assignor.)

S. F. Bowser & Company. (See Bowser, Allen A., assignor.)

S. F. Bowser & Company. (See Cooley, Oren, assignor.)

Sabourin, Frank H., Newport, Vt. Barrel. No. 1,014,524; Jan. 9; Sp. p. 3147; Gaz. vol. 174; p. 523.

Sachs Company, The. (See Sachs, Joseph, assignor.)

Sachs, Ernst, Schweinfurt, Germany. Free-wheel gear with back-pedaling brake. No. 1,014,180; Jan. 9; Sp. p. 2412; Gaz. vol. 174; p. 405.

Sachs, Ernst, Schweinfurt, Germany. Free-wheeling and back-pedaling gear. No. 1,014,181; Jan. 9; Sp. p. 2415; Gaz. vol. 174; p. 405.

Sachs, Ernst, Schweinfurt, and M. Mossig, Berlin, Germany. Back-pedaling brake and free-wheel mechanism. No. 1,015,744; Jan. 23; Sp. p. 5847; Gaz. vol. 174; p. 997.

Sachs, Joseph, assignor to The Sachs Company, Hartford, Conn. Thermal cut-out. No. 1,014,098; Jan. 9; Sp. p. 2253; Gaz. vol. 174; p. 377.

Sack, Adelheid, widow and heir. (See Sack, Hugo.)

Sack, Hugo, deceased. Dusseldorf, Germany; A. Sack, widow and heir. Producing I-beams. No. 1,013,567; Jan. 2; Sp. p. 1031; Gaz. vol. 174; p. 166.

Sackett, James, Venango, Pa. Lock for mail-bags and the like. No. 1,015,908; Jan. 30; Sp. p. 6196; Gaz. vol. 174; p. 1080.

Sackett, Robert J. (See White and Sackett.)

Sadowski, Ludwik, Baltimore, Md. Envelop-opening device. No. 1,014,415; Jan. 9; Sp. p. 2947; Gaz. vol. 174; p. 480.

Saeger, Otto, Breslau, Germany. Machine for cleaning muffles or zinc-furnaces. No. 1,014,333; Jan. 9; Sp. p. 2765; Gaz. vol. 174; p. 460.

Safety Foot Guard & Railway Appliance Company. (See Dunkle, Samuel K., assignor.)

Sage, William A. (See Noack, Walter G., assignor.)

Salisbury, Everett E., *et al.* (See Tucker, Charles N., assignor.)

Sallstrom, Oskar, Falun, Alberta, Canada. Lock. No. 1,015,640; Jan. 23; Sp. p. 5628; Gaz. vol. 174; p. 963.

Salstrom, Axel F., Paxton, Ill. Collapsible cup or tray. No. 1,015,085; Jan. 16; Sp. p. 4431; Gaz. vol. 174; p. 745.

Salstrom, David B., assignor of one-half to E. Kopriwa, Chicago, Ill. Belt-gearing for carving-machines. No. 1,013,617; Jan. 2; Sp. p. 1142; Gaz. vol. 174; p. 182.

Salstrom, David B., assignor of one-half to E. Kopriwa, Chicago, Ill. Carving-machine. No. 1,013,618; Jan. 2; Sp. p. 1144; Gaz. vol. 174; p. 182.

Salstrom, David B., assignor of one-half to E. Kopriwa, Chicago, Ill. Spindle-bearing. No. 1,013,847; Jan. 2; Sp. p. 1666; Gaz. vol. 174; p. 264.

Salt, Edward W., Birmingham, England. Surgical belt or device for the treatment of movable kidneys and other like purposes. No. 1,013,900; Jan. 9; Sp. p. 1808; Gaz. vol. 174; p. 310.

Sammet, Charles F., and J. L. Merrill, Washington, D. C. Treating fiber-yielding materials. No. 1,016,178; Jan. 30; Sp. p. 6748; Gaz. vol. 174; p. 1173.

Samp, Charles L., Chelsea, Mich. Wagon-loader. No. 1,016,038; Jan. 30; Sp. p. 6477; Gaz. vol. 174; p. 1127.

Samuels, David, Chicago, Ill. Necktie. No. 1,015,840; Jan. 30; Sp. p. 6048; Gaz. vol. 174; p. 1056.

Samuels, Jacob, New York, N. Y. Mechanical advertising-sign. No. 1,015,714; Jan. 23; Sp. p. 5786; Gaz. vol. 174; p. 986.

Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Elastic-fluid turbine. No. 1,013,317; Jan. 2; Sp. p. 512; Gaz. vol. 174; p. 81.

Sanborn Dating Stamp Company. (See Sanborn, Elmer H., assignor.)

Sanborn, Elmer H., assignor to Sanborn Dating Stamp Company, Los Angeles, Cal. Dating-stamp. No. 1,014,260; Jan. 9; Sp. p. 2604; Gaz. vol. 174; p. 434.

Sander, Henry R. (See Judah and Sander.)

Sander, Herman. (See Keller and Seiler, assignors.)

Sanders, Ira B., Fort Worth, Tex. Combination-swing and other articles of furniture. No. 1,013,956; Jan. 9; Sp. p. 1946; Gaz. vol. 174; p. 330.

Sanders, John J., East Grand Forks, Minn. Wire-tie. No. 1,015,513; Jan. 23; Sp. p. 5345; Gaz. vol. 174; p. 917.

Sanderson, Edward S., Waterbury, Conn., assignor, by mesne assignments, to Welsbach Light Company. Gas-burner. No. 1,014,777; Jan. 16; Sp. p. 3758; Gaz. vol. 174; p. 639.

Sandwich Electric Company. (See Rugh, Harry O., assignor.)

Sanger, Frank, *et al.* (See Troxler, Gustavus, assignor.)

Sanguinetti, Louis F. (See Hamilton, Ulysses G., assignor.)

Sanitary Can Company. (See Wegner and Peters, assignors.)

Sanitax Brush Company. (See Montgomery and Hill, assignors.)

Sanner, Harry W., Baltimore, Md. Conveyer. No. 1,015,086; Jan. 16; Sp. p. 4433; Gaz. vol. 174; p. 746.

Sargent, Allan C., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Making toothed-wire-covered cylinders. No. 1,016,098; Jan. 30; Sp. p. 6610; Gaz. vol. 174; p. 1148.

Sargent, Frederick G., Westford, Mass. Detector. No. 1,013,223; Jan. 2; Sp. p. 298; Gaz. vol. 174; p. 47.

Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Electric cut-out. No. 1,014,854; Jan. 16; Sp. p. 3945; Gaz. vol. 174; p. 668.

Sattler, Frederick, Belleville, Ill. Gas-stove. No. 1,013,224; Jan. 2; Sp. p. 300; Gaz. vol. 174; p. 48.

Sattler, Frederick, Belleville, Ill. Gas-stove. No. 1,013,318; Jan. 2; Sp. p. 513; Gaz. vol. 174; p. 81.

Saul, Warren A., Bridgeport, Conn. Railway-tie. No. 1,014,726; Jan. 16; Sp. p. 3644; Gaz. vol. 174; p. 623.

Saunders, William A., Jamaica Plain, Mass. Carcass-splitting machine. No. 1,015,590; Jan. 23; Sp. p. 5521; Gaz. vol. 174; p. 945.

Saurer, Hyppolyt, Arbon, Switzerland. Speed-regulating device for automobiles and the like. (Reissue.) No. 13,348; Jan. 2; Sp. p. 1696; Gaz. vol. 174; p. 268.

Sausser, John M., Osnaburg, Ohio. Door-bolting device. No. 1,013,820; Jan. 2; Sp. p. 1588; Gaz. vol. 174; p. 253.

Sauvage, William H., assignor of one-half to V. S. Manson, New York, N. Y. Safety device for fluid-pressure brake systems. No. 1,013,821; Jan. 2; Sp. p. 1591; Gaz. vol. 174; p. 254.

Sauvan, Charles H., Newark, N. J. Gas-engine. No. 1,013,619; Jan. 2; Sp. p. 1147; Gaz. vol. 174; p. 183.

Sawyer, Ezra H., Vineland, N. J., and M. Fels, Philadelphia, Pa. Corer for tomatoes and other vegetables. No. 1,016,039; Jan. 30; Sp. p. 6478; Gaz. vol. 174; p. 1127.

Sawyer, Walter H., Wichita, Kans. Menu-card holder. No. 1,014,908; Jan. 16; Sp. p. 4056; Gaz. vol. 174; p. 685.

Sawyer, William, Armstrong, British Columbia, Canada. Sash-balancing device. No. 1,014,182; Jan. 9; Sp. p. 2417; Gaz. vol. 174; p. 405.

Scharschmidt, Alfred, Plauen, Germany. Knife for meat cutting and mincing machines. No. 1,015,403; Jan. 23; Sp. p. 5103; Gaz. vol. 174; p. 880.

Schade, Edmund A., and C. Bodmer, assignors to The Stanley Rule & Level Company, New Britain, Conn. Miter-box. No. 1,013,319; Jan. 2; Sp. p. 516; Gaz. vol. 174; p. 81.

Schaeffer, William G., assignor to Reading Standard Company, Reading, Pa. Oil-feed mechanism. No. 1,014,855; Jan. 16; Sp. p. 3946; Gaz. vol. 174; p. 668.

Schaffert, Adolf H., assignor to General Fireproofing Company, Youngstown, Ohio. Metal structure for doors and analogous uses. No. 1,015,212; Jan. 16; Sp. p. 4668; Gaz. vol. 174; p. 788.

Schaffner Bros. (See Merkel, Arthur E., assignor.)

Schaller, Otto, Südende, near Berlin, Germany. Electric incandescent lamp. No. 1,016,099; Jan. 30; Sp. p. 6611; Gaz. vol. 174; p. 1148.

Scheit, Hermann, Dresden-Strehlen, Germany. Two-cycle explosion-motor. No. 1,015,909; Jan. 30; Sp. p. 6198; Gaz. vol. 174; p. 1081.

Scheitlin, Emil, Basel, Switzerland. Compounds of blood or its constituents and making same. No. 1,015,641; Jan. 23; Sp. p. 5629; Gaz. vol. 174; p. 963.

Schenk, Charles, Chicago, Ill. Cake-mixer. No. 1,014,909; Jan. 16; Sp. p. 4057; Gaz. vol. 174; p. 686.

Schermerhorn, John W. (See Thiry and Schermerhorn.)

Schewczik, Silvio A., Vienna, Austria-Hungary. Heating or cooling plate. No. 1,015,404; Jan. 23; Sp. p. 5104; Gaz. vol. 174; p. 880.

Schieber, Wilhelm, Vienna, assignor to Berndorfer Metallwaaren-Fabrik Arthur Krupp, Berndorf, Austria-Hungary. Welding copper or nickel and copper or nickel alloy. No. 1,013,620; Jan. 2; Sp. p. 1149; Gaz. vol. 174; p. 183.

Schildhauer, Edward, Culebra, Canal Zone. Towing system for canals. No. 1,013,901; Jan. 9; Sp. p. 1809; Gaz. vol. 174; p. 210.

Schilling, August, assignor to Bielefelder Maschinenfabrik vormals Dürkopp & Co., Bielefeld, Germany. Cage-ring for ball-bearings. No. 1,013,518; Jan. 2; Sp. p. 936; Gaz. vol. 174; p. 150.

Schimmel, Gustav F., Detroit, Mich. Fastener for bottle-stoppers. No. 1,015,841; Jan. 30; Sp. p. 6049; Gaz. vol. 174; p. 1056.

Schindler, Charles A., West Hoboken, N. J. Signaling device. No. 1,015,715; Jan. 23; Sp. p. 5787; Gaz. vol. 174; p. 986.

Schinke, Clara, Pittsburgh, Pa. Curtain-pole. No. 1,016,040; Jan. 30; Sp. p. 6481; Gaz. vol. 174; p. 1127.

Schlotter, Georg A., assignor to Schlotter-Propeller-Patentverwertungs-Gesellschaft mit beschränkter Haftung, Dresden, Germany. Ship-propeller. (Reissue.) No. 13,349; Jan. 2; Sp. p. 1699; Gaz. vol. 174; p. 268.

Schlotter-Propeller-Patentverwertungs-Gesellschaft mit beschränkter Haftung. (See Schlotter, Georg A., assignor.) (Reissue.)

Schlueter, Ferdinand, Jr. (See Schlueter, Karl M. and F.)

Schlueter, Karl M. and F., Jr., New York, N. Y. Gage for alining printing-plates. No. 1,013,821; Jan. 2; Sp. p. 1150; Gaz. vol. 174; p. 183.

Schmidt, Albert, assignor to Champion Ignition Co., Flint, Mich. Spark-plug. No. 1,015,843; Jan. 30; Sp. p. 6056; Gaz. vol. 174; p. 1056.

Schmidt, Charles, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Transmission-gearing for motor-vehicles. No. 1,013,450; Jan. 2; Sp. p. 786; Gaz. vol. 174; p. 126.

Schmidt, David H., Stewartsville, Mo. Fly-trap. No. 1,013,320; Jan. 2; Sp. p. 516; Gaz. vol. 174; p. 82.

Schmidt, Frederick W. (See Wild, Günther P., assignor.)

Schmidt, Gottfried, Hazleton, Pa. Air-pump. No. 1,015,067; Jan. 16; Sp. p. 4434; Gaz. vol. 174; p. 746.

Schmitt, Frederick F., Philadelphia, Pa. Mattress. No. 1,014,261; Jan. 9; Sp. p. 2606; Gaz. vol. 174; p. 434.

Schnaus, Charles J., assignor to Emerson Electric Mfg. Co., St. Louis, Mo. Friction-hinge. No. 1,015,847; Jan. 23; Sp. p. 4991; Gaz. vol. 174; p. 861.

Schneider, Alfred, Rockville, Conn. Woven-wire fence. No. 1,014,525; Jan. 9; Sp. p. 3148; Gaz. vol. 174; p. 523.

Schneider, Eugène, Le Creuzot, France. Percussion-fuse. No. 1,014,183; Jan. 9; Sp. p. 2419; Gaz. vol. 174; p. 406.

Schneider, Eugene, Le Creuzot, France. Breech mechanism of firearms. No. 1,016,179; Jan. 30; Sp. p. 6749; Gaz. vol. 174; p. 1173.

Schneider, Magdalena, Jersey City, N. J. Hat-pin guard. No. 1,013,957; Jan. 9; Sp. p. 1948; Gaz. vol. 174; p. 330.

Schock, Gustav, New York, N. Y. Food product. No. 1,014,099; Jan. 9; Sp. p. 2258; Gaz. vol. 174; p. 377.

Schofield, George, Brooklyn, N. Y. Hat-brim-stretching machine. No. 1,013,321; Jan. 2; Sp. p. 518; Gaz. vol. 174; p. 82.

Scholl, Peter, Chicago, Ill. Phonograph-record cabinet. No. 1,015,844; Jan. 30; Sp. p. 6058; Gaz. vol. 174; p. 1057.

Schoonmaker, James M., Jr., Pittsburgh, Pa. Motor fire-engine. No. 1,013,622; Jan. 2; Sp. p. 1152; Gaz. vol. 174; p. 183.

Schopflocher, Siegfried, Montreal, Quebec, Canada. Light-reflector. No. 1,015,348; Jan. 23; Sp. p. 4992; Gaz. vol. 174; p. 862.

Schraeder, Frank J., Jr., Chicago, Ill. Conveying system. No. 1,014,727; Jan. 16; Sp. p. 3645; Gaz. vol. 174; p. 623.

Schraeder, Frank J., Jr., Chicago, Ill. Conveying system. No. 1,015,251; Jan. 16; Sp. p. 4749; Gaz. vol. 174; p. 801.

Schram, Alexander L., Hillsboro, Ill. Forming hollow glass articles. No. 1,013,451; Jan. 2; Sp. p. 788; Gaz. vol. 174; p. 126.

Schram, Alexander L., Hillsboro, Ill. Apparatus for forming hollow glass articles. No. 1,013,452; Jan. 2; Sp. p. 790; Gaz. vol. 174; p. 126.

Schroeder, Origenus J., Larned, Kans. Railway-joint. No. 1,013,689; Jan. 2; Sp. p. 1340; Gaz. vol. 174; p. 208.

Schröter, Karl, Berlin, Germany, assignor to General Electric Company. Shaping and mounting filaments. No. 1,013,958; Jan. 9; Sp. p. 1949; Gaz. vol. 174; p. 330.

Schroyer, Charles A., Oak Park, Ill. Car-door. No. 1,015,405; Jan. 23; Sp. p. 5105; Gaz. vol. 174; p. 880.

Schuck, Henry C. (See McKeever and Schuck.)

Schuermann, Anton C. (See Mueller and Schuermann.)

Schug, John B., Detroit, Mich. Mechanism for charging storage batteries. No. 1,013,959; Jan. 9; Sp. p. 1951; Gaz. vol. 174; p. 331.

Schulte, William H., Trenton, N. J. Valve control for flush-tanks. No. 1,013,225; Jan. 2; Sp. p. 302; Gaz. vol. 174; p. 48.

Schuls, Richard, Berlin, Germany. Water-tube boiler. No. 1,015,349; Jan. 23; Sp. p. 4993; Gaz. vol. 174; p. 862.

Schumacher, Frederick J., San Francisco, Cal. Ventilator. No. 1,013,322; Jan. 2; Sp. p. 522; Gaz. vol. 174; p. 82.

Schüttauf, Richard, assignor to Firm of C. Zeiss, Jena, Germany. Film-pack. No. 1,015,514; Jan. 23; Sp. p. 5347; Gaz. vol. 174; p. 917.

Schwab, Martin C., Chicago, Ill., assignor to Gravity Conveyor Company. Spiral blade for gravity-conveyers. No. 1,014,262; Jan. 9; Sp. p. 2607; Gaz. vol. 174; p. 435.

Schwaller, Frank F., St. Louis, Mo. Bedstead. No. 1,014,670; Jan. 16; Sp. p. 3522; Gaz. vol. 174; p. 604.

Schwartz, Harry, New York, N. Y. Cigar. No. 1,013,226; Jan. 2; Sp. p. 303; Gaz. vol. 174; p. 48.

Schweikert, William, Brooklyn, N. Y. Building structure. No. 1,014,416; Jan. 9; Sp. p. 2949; Gaz. vol. 174; p. 489.

Scofield, William B. (See Waite, Edwin E., assignor.)

Scorce, M. E., *et al.* (See Perry, Alfred H., assignor.)

Scott, Alexander, Philadelphia, Pa. Sketch-tablet holder. No. 1,016,041; Jan. 30; Sp. p. 6482; Gaz. vol. 174; p. 1126.

Scott, Charles F., Pittsburgh, Pa., assignor to Westinghouse Lamp Company. Mounting tungsten filaments. No. 1,013,227; Jan. 2; Sp. p. 304; Gaz. vol. 174; p. 48.

Scott Paper Company. (See Whittier, John W., assignor.)

Scott & Williams. (See Williams, Louis N. D., assignor.)

Scullin-Gallagher Iron & Steel Company. (See Doerr, Harry E., assignor.)

Seabury & Johnson. (See Lovis, Henry C., assignor.)

Seagrave, Frederic S., Detroit, Mich. Water-tower. No. 1,013,323; Jan. 2; Sp. p. 523; Gaz. vol. 174; p. 83.

Seddens, Charles, Eastwood, Ohio. Railway-tie. No. 1,014,526; Jan. 9; Sp. p. 3149; Gaz. vol. 174; p. 524.

Seeberger, Charles D., New York, N. Y., assignor to Otis Elevator Company. Conveyer. No. 1,014,100; Jan. 9; Sp. p. 2261; Gaz. vol. 174; p. 377.

Seeberger, Charles D., New York, N. Y., assignor to Otis Elevator Company. Elevator. No. 1,014,856; Jan. 16; Sp. p. 3947; Gaz. vol. 174; p. 668.

Seeberger, Charles D., New York, N. Y., assignor to Otis Elevator Company. Conveyer. No. 1,015,406; Jan. 23; Sp. p. 5106; Gaz. vol. 174; p. 880.

Seeley, James E., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal. Means for producing high-tension discharges. No. 1,015,088; Jan. 16; Sp. p. 4435; Gaz. vol. 174; p. 746.

Seeley, James E., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal. Ignition system. No. 1,015,089; Jan. 16; Sp. p. 4439; Gaz. vol. 174; p. 747.

Seelig, Augustus R., Plantsville, Conn. Screw-driver. No. 1,014,417; Jan. 9; Sp. p. 2951; Gaz. vol. 174; p. 490.

Seelig, William L., St. Louis, Mo. Cash-fare-receipt form. No. 1,014,334; Jan. 9; Sp. p. 2766; Gaz. vol. 174; p. 460.

Sefton Manufacturing Company, The. (See Fairchild, Walter H., assignor.)

Seidel, Adolph H., assignor to The Toledo Machine & Tool Company, Toledo, Ohio. Drawing-press. No. 1,013,902; Jan. 9; Sp. p. 1816; Gaz. vol. 174; p. 311.

Seifert, George, Northampton, Pa. Flying-machine. No. 1,014,857; Jan. 16; Sp. p. 3952; Gaz. vol. 174; p. 668.

Seiler, Philipp. (See Keller and Seiler.)

Seipp, Henry C., Pittsburgh, Pa. Safety-tread. No. 1,015,642; Jan. 23; Sp. p. 5630; Gaz. vol. 174; p. 963.

Selah, Howard A., Philadelphia, assignor to H. R. Hoopes, West Chester, Pa. Valve. No. 1,014,263; Jan. 9; Sp. p. 2608; Gaz. vol. 174; p. 435.

Selchow & Righter Company. (See Stranders, Julien, assignor.)

Selg, Otto, New York, N. Y. Percolator. No. 1,015,407; Jan. 23; Sp. p. 5125; Gaz. vol. 174; p. 880.

Sellar, John L., Baltimore, Md. Non-refillable-bottle stopper. No. 1,015,591; Jan. 23; Sp. p. 5524; Gaz. vol. 174; p. 945.

Seller, Henry. (See Vaughn, Joseph J., assignor.)

Serafinski, John F., Phillipsburg, N. J. Fly-trap. No. 1,015,643; Jan. 23; Sp. p. 5631; Gaz. vol. 174; p. 963.

Sergent, George M. (See Mielke and Sergent.)

Settegast, Bernhard, Karlshorst, near Berlin, assignor to Deutsche Telephonwerke G. m. b. H., Berlin, Germany. Selector for automatic telephone-exchanges. No. 1,015,644; Jan. 23; Sp. p. 5632; Gaz. vol. 174; p. 964.

Seward, Ernest R., assignor to The Hartford Machine Screw Company, Hartford, Conn. Mechanical movement. No. 1,014,184; Jan. 9; Sp. p. 2421; Gaz. vol. 174; p. 406.

Seydel, Otto, New York, N. Y. Kite. No. 1,016,180; Jan. 30; Sp. p. 6751; Gaz. vol. 174; p. 1173.

Seymour, Frederick C., assignor to Joseph Halsted Co., Chicago, Ill. Counterbalanced stair. No. 1,015,645; Jan. 23; Sp. p. 5643; Gaz. vol. 174; p. 964.

Seymour, John S., Whitney Point, N. Y. Metallic railway. No. 1,013,960; Jan. 9; Sp. p. 1952; Gaz. vol. 174; p. 331.

Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill. Sheet-handling machine. No. 1,015,716; Jan. 23; Sp. p. 5789; Gaz. vol. 174; p. 987.

Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill. Making pamphlets or magazines. No. 1,015,745; Jan. 23; Sp. p. 5860; Gaz. vol. 174; p. 997.

Shand, Stead I., Columbia, S. C. Automatic gas and drain valve. No. 1,016,100; Jan. 30; Sp. p. 6613; Gaz. vol. 174; p. 1149.

Shands, James S., Gainesville, Fla. Bracket for turpentine-cups. No. 1,015,213; Jan. 16; Sp. p. 4669; Gaz. vol. 174; p. 788.

Sharit, Benjamin M., Morris, Ala. Device to prevent cows from kicking. No. 1,014,910; Jan. 16; Sp. p. 4058; Gaz. vol. 174; p. 608.

Sharp, Clayton H., White Plains, and P. S. Millar, New York, N. Y. Photometer attachment. No. 1,015,515; Jan. 23; Sp. p. 5347; Gaz. vol. 174; p. 917.

Sharp, William E. (See Robbins and Sharp.)

Sharp, William E., Chicago, assignor of one-half to G. B. Robbins, Hinsdale, Ill. Heater. No. 1,013,822; Jan. 2; Sp. p. 1595; Gaz. vol. 174; p. 254.

Sharpe, Joseph K., Jr., Indianapolis, Ind. Preserving fodder. No. 1,013,568; Jan. 2; Sp. p. 1033; Gaz. vol. 174; p. 166.

Sharpe, Joseph K., Jr., assignor to The Indiana Manufacturing Company, Indianapolis, Ind. Pneumatic stacker. No. 1,014,778; Jan. 16; Sp. p. 3760; Gaz. vol. 174; p. 640.

Sharpe, Joseph K., Jr., assignor to The Indiana Manufacturing Company, Indianapolis, Ind. Pneumatic stacker. No. 1,014,779; Jan. 16; Sp. p. 3762; Gaz. vol. 174; p. 640.

Sharples, David T., West Chester, Pa. Milking apparatus. No. 1,014,671; Jan. 16; Sp. p. 3524; Gaz. vol. 174; p. 604.

Shaw, Bruce A., Davenport, Iowa. Animal-trap. No. 1,015,845; Jan. 30; Sp. p. 6060; Gaz. vol. 174; p. 1057.

Shaw, Linus H., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel. No. 1,015,846; Jan. 30; Sp. p. 6062; Gaz. vol. 174; p. 1057.

Shaw, Tracy N., Rockford, Ill. Cutting-machine. No. 1,013,903; Jan. 9; Sp. p. 1818; Gaz. vol. 174; p. 311.

Shawmut Machinery Company. (See Buck, Vertrude P., assignor.)

Sheaffer, John E., Washington, D. C., assignor to Sheaffer-Marion Company, of the District of Columbia. Fireless cooker. No. 1,014,911; Jan. 16; Sp. p. 4059; Gaz. vol. 174; p. 686.

Sheaffer-Marion Company, of the District of Columbia. (See Sheaffer, John E., assignor.)

Sheedy, Patrick, *et al.* (See Neville, Harry, assignor.)

Sheffield, Edmund, Jr., Greenview, Cal. Stamp-mill. No. 1,015,910; Jan. 30; Sp. p. 6200; Gaz. vol. 174; p. 1031.

Sheldon, Edgar H., Chicago, Ill. Ice cutting or shaving device. No. 1,013,823; Jan. 2; Sp. p. 1599; Gaz. vol. 174; p. 255.

Shelton, Henry A., Northampton, England. Spring-frame for velocipedes. No. 1,016,042; Jan. 30; Sp. p. 6483; Gaz. vol. 174; p. 1126.

Shenk, William J. (See Stephens and Shenk.)

Shepard, Charles H., New York, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,014,335; Jan. 9; Sp. p. 2767; Gaz. vol. 174; p. 460.

Shepard, Charles H., New York, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,014,336; Jan. 9; Sp. p. 2777; Gaz. vol. 174; p. 461.

Shepard, William T., Le Mars, Iowa. Wheat food and preparing the same. No. 1,013,453; Jan. 2; Sp. p. 792; Gaz. vol. 174; p. 127.

Sheras, Morris, Chicago, Ill. Seal-press. No. 1,013,228; Jan. 2; Sp. p. 307; Gaz. vol. 174; p. 49.

Sherbondy, William E., Cleveland, Ohio. Grease-gun. No. 1,013,454; Jan. 2; Sp. p. 794; Gaz. vol. 174; p. 127.

Sherman, Elmore. (See Horn and Sherman.)

Sherman, Erwin C., W. W. McKelvey, and E. J. Reilly, assignors to The William B. Pollock Company, Youngstown, Ohio. Dumping-car. No. 1,014,612; Jan. 9; Sp. p. 3331; Gaz. vol. 174; p. 552

Sherman, John C., Brookline, Mass. Musical record. No. 1,013,519; Jan. 2; Sp. p. 937; Gaz. vol. 174; p. 150.

Sherman, Louis A., Detroit, Mich. Priming-fluid tank. No. 1,013,324; Jan. 2; Sp. p. 527; Gaz. vol. 174; p. 83.

Sherwood, Charles, Friendship, N. Y. Swivel-capstan. No. 1,016,101; Jan. 30; Sp. p. 6617; Gaz. vol. 174; p. 1149.

Shewry, William M., Chicago, Ill. Collar. No. 1,014,527; Jan. 9; Sp. p. 3151; Gaz. vol. 174; p. 524.

Shields, Curtis W., New York, N. Y. Inside closure for air, steam, or water tight vessels. No. 1,015,847; Jan. 30; Sp. p. 6063; Gaz. vol. 174; p. 1058.

Shields, James A., Atlanta, Ga. Apparatus for treating snap-bolts. No. 1,013,690; Jan. 2; Sp. p. 1342; Gaz. vol. 174; p. 208.

Shields, James A., Atlanta, Ga. Treating snap-bolts of cotton. No. 1,013,691; Jan. 2; Sp. p. 1344; Gaz. vol. 174; p. 209.

Shimer, Milton J., Freemansburg, Pa. Supporting device. No. 1,015,717; Jan. 23; Sp. p. 5704; Gaz. vol. 174; p. 987.

Shockey, Willis G., Chicago, Ill. Massage-machine. No. 1,013,824; Jan. 2; Sp. p. 1601; Gaz. vol. 174; p. 255.

Shoemaker, Alvin H., assignor of one-eighth to C. H. Yoeckel, Seattle, Wash., three-eighths to J. W. Hurley, and one-half to H. Copenhagen, Portland, Oreg. Protective covering for pneumatic tires. No. 1,014,613; Jan. 9; Sp. p. 3336; Gaz. vol. 174; p. 553.

Shoemaker, Alvin H., assignor, by mesne assignments, to Hurley Hercules Pneumatic Tire Company, Portland, Oreg. Tread for pneumatic tires. No. 1,014,912; Jan. 16; Sp. p. 4060; Gaz. vol. 174; p. 687.

Short, Albert E. (See Short, Horace L., A. E., and H. O.)

Short, Horace L., A. E., and H. O. Battersea Park, London, England. Aeroplane. No. 1,015,090; Jan. 16; Sp. p. 4442; Gaz. vol. 174; p. 747.

Short, Hugh O. (See Short, Horace L., A. E., and H. O.)

Shrader, B. L. (See Weller, Nicholas, assignor.)

Shriver, Albert W. (See Burns and Shriver.)

Shriver, William B. (See Burns and Shriver.)

Shryock, Leonard D., Marietta, Ohio. Adjustable boiler-mounting. No. 1,015,592; Jan. 23; Sp. p. 5527; Gaz. vol. 174; p. 946.

Shultz, Llewellyn B. (See Rawson and Shultz.)

Shuman, Frank, Philadelphia, Pa. Utilizing waste heat of distillation. No. 1,014,418; Jan. 9; Sp. p. 2954; Gaz. vol. 174; p. 490.

Shutts, Samuel B., and W. McHugh, Joliet, Ill. Safety device for blast-furnaces. No. 1,013,961; Jan. 9; Sp. p. 1956; Gaz. vol. 174; p. 331.

Sibole, Percy L., Swissvale, Pa. Electric switch. No. 1,013,560; Jan. 2; Sp. p. 1034; Gaz. vol. 174; p. 166.

Sigourney Tool Company, The. (See Taylor, Frederick D., assignor.)

Sikes, Rufus N., Burleson, Tex. Stalk-cutter. No. 1,014,337; Jan. 9; Sp. p. 2790; Gaz. vol. 174; p. 461.

Silliman, Benjamin F., Cleveland, Ohio. Regulating apparatus for steam-generators. No. 1,015,848; Jan. 30; Sp. p. 6065; Gaz. vol. 174; p. 1058.

Silver, James W., Salt Lake City, Utah. Acetylene-gas generator. No. 1,013,520; Jan. 2; Sp. p. 938; Gaz. vol. 174; p. 150.

Silverman, Wulf, New York, N. Y. Letter-holder and envelop-opener. No. 1,014,338; Jan. 9; Sp. p. 2792; Gaz. vol. 174; p. 462.

Simmons Manufacturing Company, The. (See Gall, Charles H., assignor.)

Simmons Mfg. Co., The. (See Hunt, Ozello R., assignor.)

Simonton, John H., Brighton, Tenn. Sliding-door fastener. No. 1,015,646; Jan. 23; Sp. p. 5645; Gaz. vol. 174; p. 964.

Simpson, James, McKeesport, assignor to National Tube Company, Pittsburgh, Pa. Transfer mechanism for hot-beds. No. 1,015,350; Jan. 23; Sp. p. 4996; Gaz. vol. 174; p. 862.

Simpson, Joseph F. (See Murphy and Simpson.)

Simpson, William S., London, England. Apparatus for melting and mixing metals in vacuums. No. 1,015,091; Jan. 16; Sp. p. 4444; Gaz. vol. 174; p. 748.

Siner, John H., Pimento, Ind. Feed-bucket holder. No. 1,014,264; Jan. 9; Sp. p. 2610; Gaz. vol. 174; p. 435.

Singer, Joseph, assignor of one-half to C. Krempel, Los Angeles, Cal. Compensating lug for shotguns. No. 1,014,913; Jan. 16; Sp. p. 4061; Gaz. vol. 174; p. 687.

Singer Manufacturing Company, The. (See Abercrombie, William R., assignor.)

Singer Manufacturing Company, The. (See Brown, Otis E., assignor.)

Singer Manufacturing Company, The. (See Gray, Charles F., assignor.)

Singer Manufacturing Company, The. (See Grieb, Alfred, assignor.)

Singer Manufacturing Company, The. (See Hogan, James T., assignor.)

Singer Manufacturing Company, The. (See Karle, John D., assignor.)

Singer Manufacturing Company, The. (See Laubscher, Alexander, assignor.)

Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)

Singer Manufacturing Company, The. (See Ringe, John C., assignor.)

Singer Manufacturing Company, The. (See Thomas, Carlyle W., assignor.)

Singer Manufacturing Company, The. (See Wood, Alfred R., assignor.)

Sisbower, George F., East Orange, N. J., assignor to New York Couch Bed Company, New York, N. Y. Couch-hammock. No. 1,016,102; Jan. 30; Sp. p. 6618; Gaz. vol. 174; p. 1150.

Sisler, Charles C., Mineola, Tex. Oil-cloth rack. No. 1,014,528; Jan. 9; Sp. p. 3152; Gaz. vol. 174; p. 524.

Sisty, Warren, Surprise, Nebr. Trace-carrier. No. 1,013,455; Jan. 2; Sp. p. 796; Gaz. vol. 174; p. 128.

Sjögren, Carl A. T., assignor to Aktiebolaget Svenska Vapen-Och Ammunitionsfabriken, Stockholm, Sweden. Magazine-rifle. No. 1,015,516; Jan. 23; Sp. p. 5351; Gaz. vol. 174; p. 918.

Sjöström, John G., Jönköping, Sweden. Match-splint-parallelizing machine. No. 1,014,914; Jan. 16; Sp. p. 4063; Gaz. vol. 174; p. 687.

Skahen, Patrick D., Syracuse, N. Y. Burial-case. (Reissue.) No. 13,350; Jan. 2; Sp. p. 1701; Gaz. vol. 174; p. 209.

Skaupy, Franz, Berlin, Germany, assignor to General Electric Company. Filament connection. No. 1,013,962; Jan. 9; Sp. p. 1958; Gaz. vol. 174; p. 332.

Skelly, John S., Monongahela, Pa. Mine-car wheel. No. 1,015,351; Jan. 23; Sp. p. 4998; Gaz. vol. 174; p. 863.

Skinner, Frank H. (See Carpenter, George T., assignor.) (Reissue.)

Slamka, John. (See Benyo, John, assignor.)

Slentz, Albertus O., assignor to The Canton Foundry and Machine Company, Canton, Ohio. Turn-table. No. 1,013,456; Jan. 2; Sp. p. 797; Gaz. vol. 174; p. 128.

Slevin, James J., New York, N. Y. Electric switch attachment for vacuum cleaning devices. No. 1,015,352; Jan. 23; Sp. p. 5000; Gaz. vol. 174; p. 863.

Slocum, George F., *et al.* (See Mielke and Sergent, assignors.)

Slusser, James F., Jackson, Idaho. Stopper-extractor. No. 1,014,520; Jan. 9; Sp. p. 3154; Gaz. vol. 174; p. 525.

Smith, Abner J., Biloxi, Miss. Eyeglass-holder. No. 1,016,103; Jan. 30; Sp. p. 6619; Gaz. vol. 174; p. 1150.

Smith, Albert C., Albion, Ill. Side-board and wagon-body clamp. No. 1,014,339; Jan. 9; Sp. p. 2793; Gaz. vol. 174; p. 462.

Smith, Arthur W., New York, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,014,340; Jan. 9; Sp. p. 2794; Gaz. vol. 174; p. 462.

Smith, Arthur W., New York, assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine. No. 1,015,849; Jan. 30; Sp. p. 6070; Gaz. vol. 174; p. 1058.

Smith, Aurelius, Indianapolis, Ind. Artificially-strengthened paper. No. 1,014,341; Jan. 9; Sp. p. 2799; Gaz. vol. 174; p. 463.

Smith, Benjamin S., Manly, near Sydney, New South Wales, Australia. Apparatus for the wet dressing of sulfid ores. No. 1,014,977; Jan. 16; Sp. p. 4218; Gaz. vol. 174; p. 710.

Smith, Charles E., Oak Lawn, R. I. Clutch mechanism. No. 1,013,457; Jan. 2; Sp. p. 799; Gaz. vol. 174; p. 128.

Smith, Charles H., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Spool-head. No. 1,014,780; Jan. 16; Sp. p. 3764; Gaz. vol. 174; p. 640.

Smith, Charles S., Providence, R. I. Narrow fabric for suspender members. No. 1,013,602; Jan. 2; Sp. p. 1346; Gaz. vol. 174; p. 209.

Smith, Edward B., and A. V. Marston, East Bridgewater, Mass. Cooking utensil. No. 1,014,342; Jan. 9; Sp. p. 2801; Gaz. vol. 174; p. 463.

Smith, Edward J. (See Hall, Charles T., assignor.)

Smith, Edward P., Pittston, Pa. Measuring and dispensing device. No. 1,014,343; Jan. 9; Sp. p. 2802; Gaz. vol. 174; p. 463.

Smith, Edwin B., Fremont, Ohio. Apparatus for controlling the condition of closed receptacles. No. 1,013,963; Jan. 9; Sp. p. 1959; Gaz. vol. 174; p. 332.

Smith, Floyd W., Englewood, Ohio. Powder-receptacle. No. 1,013,325; Jan. 2; Sp. p. 528; Gaz. vol. 174; p. 83.

Smith, Frank L., Dayton, Ohio. Shoe-heel. No. 1,013,623; Jan. 2; Sp. p. 1156; Gaz. vol. 174; p. 184.

Smith, Harry. (See Manross, David A., assignor.)

Smith, Henry D., Middleboro, Mass. Tea-strainer. No. 1,016,104; Jan. 30; Sp. p. 6620; Gaz. vol. 174; p. 1150.

Smith, Henry J., Johannesburg, Transvaal. Gripping or clamping device. No. 1,014,781; Jan. 16; Sp. p. 3766; Gaz. vol. 174; p. 641.

Smith, Horace A., Isabel, Ill. Gas-purifier. No. 1,015,353; Jan. 23; Sp. p. 5002; Gaz. vol. 174; p. 863.

Smith, Hunter, assignor of two-thirds to F. D. Chase, Berkeley, Cal. Superheater. No. 1,014,530; Jan. 9; Sp. p. 3155; Gaz. vol. 174; p. 525.

Smith, J. Clyde, Chicago, Ill. Piano-case. No. 1,013,326; Jan. 2; Sp. p. 529; Gaz. vol. 174; p. 84.

Smith, Jesse R., Benton, Ill. Railway-tie puller. No. 1,015,647; Jan. 23; Sp. p. 5647; Gaz. vol. 174; p. 965.

Smith, John C., Gridley, Cal. Lamp burner and globe. No. 1,014,531; Jan. 9; Sp. p. 3156; Gaz. vol. 174; p. 525.

Smith, John H., Zurich, Switzerland, and W. Merckens, Mülhausen, Germany. Bleach-out process of color photography. No. 1,013,458; Jan. 2; Sp. p. 800; Gaz. vol. 174; p. 128.

Smith, Martin V., assignor of one-half to J. J. Delahanty, Hartford, Conn. Piston. No. 1,014,782; Jan. 16; Sp. p. 3767; Gaz. vol. 174; p. 641.

Smith Premier Typewriter Company, The. (See Barr, John H., assignor.)

Smith, Rose, Cleveland, Ohio. Electric heater. No. 1,013,327; Jan. 2; Sp. p. 530; Gaz. vol. 174; p. 84.

Smith, Rudolph C., Yonkers, N. Y. Calculating-scale. No. 1,014,344; Jan. 9; Sp. p. 2804; Gaz. vol. 174; p. 464.

Smith, Theodore, assignor to Theo. Smith Manufacturing Company, Chicago, Ill. Flexible connection. No. 1,015,718; Jan. 23; Sp. p. 5795; Gaz. vol. 174; p. 988.

Smith, William M. (See Kostenbader, Howard T., assignor.)

Smith, William P., *et al.* (See Hickton, Charles, assignor.)

Smythe, Horace E., assignor to Window Glass Machine Company, Pittsburgh, Pa. Glass-pot furnace. No. 1,016,105; Jan. 30; Sp. p. 6621; Gaz. vol. 174; p. 1151.

Snead, John M., and C. Brady, Chicago, Ill., assignors to Gravity Coal Bin Company. Dumping-trestle. No. 1,013,229; Jan. 2; Sp. p. 309; Gaz. vol. 174; p. 49.

Snook, Abram H., and C. O. Tripp, Winfield, Kans. Tongue-truck. No. 1,014,872; Jan. 16; Sp. p. 3528; Gaz. vol. 174; p. 605.

Snyder, Henry W., Northumberland, Pa. Shovel-point. No. 1,016,181; Jan. 30; Sp. p. 6753; Gaz. vol. 174; p. 1174.

Snyder, Parke T., Celina, Ohio. Water-current and air motor. No. 1,015,517; Jan. 23; Sp. p. 5352; Gaz. vol. 174; p. 918.

Société Chimique Des Usines Du Rhône. Anciennement Gilliard, P. Monnet et Cartier. (See Koetschet and Barbier, assignors.)

Société des Carbures Metalliques. (See Debas, Paul, assignor.)

Société des Etablissements Gaumont. (See Laudet and Gaumont, assignors.)

Société Francis Chapon & Cie. (See Chapon, Francis R. M., assignor.)

Société Sfiello Frères E. Koltschanoff & U. Diamantidi. (See Koltschanoff, Emilian, assignor.)

Soderstrom, Victor, Virginia, Minn. Safety device for diamond-drill-rod couplings. No. 1,016,106; Jan. 30; Sp. p. 6623; Gaz. vol. 174; p. 1151.

Sohst, Otto, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Trisulfonic acid of the safranin series and making same. No. 1,015,354; Jan. 23; Sp. p. 5003; Gaz. vol. 174; p. 864.

Sokolowski, Ernst, Hamburg, Germany, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Loading charge for bursting shells for guns, torpedo-heads, maratime mines, and the like. No. 1,015,214; Jan. 16; Sp. p. 4670; Gaz. vol. 174; p. 789.

Sokolowski, Ernst, Hamburg, Germany, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Projectile-loading for scattering charges. No. 1,015,215; Jan. 16; Sp. p. 4671; Gaz. vol. 174; p. 789.

Sommerhof, William A., Erie, Pa. Metal pipe-foot with wooden jacket for organ-pipes. No. 1,013,570; Jan. 2; Sp. p. 1036; Gaz. vol. 174; p. 167.

Sommers, Frederick, assignor of two-eighths to A. Raczkowski, Chicago, Ill. Excavating-machine. No. 1,015,850; Jan. 30; Sp. p. 6076; Gaz. vol. 174; p. 1059.

Sondheim, Lewis H., New York, N. Y. Producing mouthpieces on cigarettes. No. 1,013,825; Jan. 2; Sp. p. 1603; Gaz. vol. 174; p. 255.

Sorge, Adolph, St. Joseph, Mich., assignor to American Regenerator Company, New York, N. Y. Steam-regeneration. No. 1,015,277; Jan. 16; Sp. p. 4813; Gaz. vol. 174; p. 810.

Souther, Benjamin F., Berkeley, Cal. Music-leaf turner. No. 1,015,092; Jan. 16; Sp. p. 4446; Gaz. vol. 174; p. 748.

Southern Electro-Chemical Company, The. (See Peacock, Samuel, assignor.)

Spain, William. (See Jefferies and Spain.)

Spalding, George, Cleveland, Ohio, assignor to Spalding Plow Company, Pittsburgh, Pa. Tilling-machine. No. 1,015,648; Jan. 23; Sp. p. 5649; Gaz. vol. 174; p. 965.

Spalding Plow Company. (See Spalding, George, assignor.)

Spangenberg, Albert. (See Keppeler and Spangenberg.)

Sparks, Frank, *et al.* (See Blom, Pehr M., assignor.)

Sparks, James L., and E. R. Eddins, assignors to Automatic Vacuum Pump Company, St. Louis, Mo. Steam-heating system. No. 1,013,328; Jan. 2; Sp. p. 531; Gaz. vol. 174; p. 84.

Sparling, Sylvester, Evanston, Ill. Automatic fire-extinguishing system. No. 1,014,185; Jan. 9; Sp. p. 2423; Gaz. vol. 174; p. 407.

Spear, Madison A., Napa, Cal. Cleanable water-heater grid. No. 1,015,911; Jan. 30; Sp. p. 6202; Gaz. vol. 174; p. 1081.

Specialty Shoe Machinery & Tool Company. (See Johnson and Crowe, assignors.)

Speer, Robert G., assignor to The Robert G. Speer Corporation, St. Louis, Mo. Smoke-consuming furnace. No. 1,015,746; Jan. 23; Sp. p. 5852; Gaz. vol. 174; p. 997.

Spencer, William H., Waterville, Me., assignor to Draper Company, Hopedale, Mass. Warp stop-motion for looms. No. 1,015,593; Jan. 23; Sp. p. 5529; Gaz. vol. 174; p. 946.

Spoilin, Louis V., Los Angeles, Cal. Registry-receipt for mail-matter. No. 1,016,234; Jan. 30; Sp. p. 6858; Gaz. vol. 174; p. 1191.

Spreyer, George S., Canon City, Colo. Attachment for vehicle-springs. No. 1,015,649; Jan. 23; Sp. p. 5661; Gaz. vol. 174; p. 966.

Spring, Frank J., assignor to Reading Hardware Company, Reading, Pa. Swivel-knob spindle. No. 1,015,765; Jan. 23; Sp. p. 5891; Gaz. vol. 174; p. 1004.

Spurgin, Richard A., London, England, assignor to The Hammond Typewriter Co. Type-writer. No. 1,015,594; Jan. 23; Sp. p. 5531; Gaz. vol. 174; p. 946.

Sramek, Jacob, Bryan, Tex. Plow. No. 1,014,265; Jan. 9; Sp. p. 2612; Gaz. vol. 174; p. 435.

St. Clair, Joseph, Philadelphia, Pa. Temporary-burial vault. No. 1,014,614; Jan. 9; Sp. p. 3337; Gaz. vol. 174; p. 553.

Stacks, Howard R., Glenside, assignor of one-half to R. O. Kohler, Catasauqua, Pa. Rock and ore crusher. No. 1,014,532; Jan. 9; Sp. p. 3157; Gaz. vol. 174; p. 525.

Stafford, C. M. (See Gibson, Campbell, assignor.)

Standard Car Truck Company. (See Barber, John C., assignor.)

Standard Computing Scale Company. (See Buckingham, Fremont H., assignor.)

Standard Cotton Compress Company, The. (See Luce, Charles J., assignor.)

Standard Oil Company. (See Robinson, Clarence I., assignor.)

Standard Roller Bearing Company. (See Beemer, Frank, assignor.)

Standard Sewing Machine Company. (See Mills, Daniel, assignor.)

Standard Steel Car Company. (See Christianson, Andrew, assignor.) (Reissue.)

Standard Steel Tube Company, The. (See Long, Matthew T., assignor.)

Standard Varnish Works. (See Beausejour and Drubel, assignors.)

Stanley Rule & Level Company, The. (See Schade and Bodmer, assignors.)

Star Seal Company. (See Winter, Charles, assignor.)

Staren, Joseph, Chicago, Ill. Adjustable framing. No. 1,015,518; Jan. 23; Sp. p. 5354; Gaz. vol. 174; p. 918.

Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Induction-motor winding. No. 1,015,912; Jan. 30; Sp. p. 6204; Gaz. vol. 174; p. 1082.

Starkie, John W., East Elmhurst, N. Y. Perforated-music-roll spool. No. 1,016,235; Jan. 30; Sp. p. 6859; Gaz. vol. 174; p. 1192.

Starn, George E., Camden, assignor to H. M. Dover, Palmyra, N. J. Vehicle-tire. No. 1,014,345; Jan. 9; Sp. p. 2808; Gaz. vol. 174; p. 464.

Starr, John H., assignor to E. A. Mallory & Sons, Danbury, Conn. Hat-nap-raising machine. No. 1,014,419; Jan. 9; Sp. p. 2956; Gaz. vol. 174; p. 490.

Staunton, Gray, Evanston, Ill. Vacuum packing apparatus. No. 1,013,230; Jan. 2; Sp. p. 311; Gaz. vol. 174; p. 49.

Sté des Télégraphes Multiplex, (System E. Mercadier.) (See Heina, Paul, assignor.)

Stearns, Joseph S., *et al.* (See Drury, William H., assignor.)

Stearns, Sarah R., Huntington Beach, Cal. Trunk. No. 1,013,231; Jan. 2; Sp. p. 314; Gaz. vol. 174; p. 50.

Steckel, Augustus A., Trenton, N. J. Brace for vehicle canopy-bows. No. 1,016,107; Jan. 30; Sp. p. 6624; Gaz. vol. 174; p. 1151.

Steel, James. Little Falls, N. J. Type-setting machine. No. 1,013,624; Jan. 2; Sp. p. 1157; Gaz. vol. 174; p. 184.

Steel, Leonard R., Cleveland, Ohio. Milk-can. No. 1,013,693; Jan. 2; Sp. p. 1347; Gaz. vol. 174; p. 209.

Steel, Leonard R., Cleveland, Ohio. Glass-lined can. No. 1,013,694; Jan. 2; Sp. p. 1348; Gaz. vol. 174; p. 209.

Steel, Leonard R., Cleveland, Ohio. Pin-lock. No. 1,014,915; Jan. 16; Sp. p. 4068; Gaz. vol. 174; p. 688.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,013,964; Jan. 9; Sp. p. 1961; Gaz. vol. 174; p. 332.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,014,673; Jan. 16; Sp. p. 3529; Gaz. vol. 174; p. 605.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,014,783; Jan. 16; Sp. p. 3769; Gaz. vol. 174; p. 641.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,043; Jan. 30; Sp. p. 6486; Gaz. vol. 174; p. 1129.

Steffen, Carl, Vienna, Austria-Hungary. Extracting sugar-juices. No. 1,015,650; Jan. 23; Sp. p. 5652; Gaz. vol. 174; p. 966.

Stegeman, John D., Alameda, Cal. Lumber-jack. No. 1,013,826; Jan. 2; Sp. p. 1605; Gaz. vol. 174; p. 256.

Steger & Sons Piano Manufacturing Company. (See Betz, William G., assignor.)

Steiger, Walter V., Bridgeport, Conn. Friction-clutch. No. 1,013,848; Jan. 2; Sp. p. 1668; Gaz. vol. 174; p. 264.

Stein, Georg V., assignor of one-third to A. F. Cabel, Washington, and one-third to H. Weill, Indianapolis, Ind. Spring-wheel. No. 1,014,533; Jan. 9; Sp. p. 3158; Gaz. vol. 174; p. 526.

Stein, Sydney. (See Armbrust, Charles W., assignor.)

Steinbrenner, William J., Buffalo, N. Y. Carbureter. No. 1,016,108; Jan. 30; Sp. p. 6627; Gaz. vol. 174; p. 1152.

Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Filament-support for incandescent lamps. No. 1,013,965; Jan. 9; Sp. p. 1962; Gaz. vol. 174; p. 332.

Stendal, Astor M., Brainerd, Minn. Trousers-stretcher. No. 1,015,093; Jan. 16; Sp. p. 4449; Gaz. vol. 174; p. 748.

Stephan, Valentine. (See Wilson, Andrew J., assignor.)

Stephens, John A., and W. J. Shenk, Kansas City, Mo. Combination grate and burner. No. 1,016,236; Jan. 30; Sp. p. 6960; Gaz. vol. 174; p. 1192.

Stephens, Sterling, Bushnell, Fla. Spraying device. No. 1,016,109; Jan. 30; Sp. p. 6629; Gaz. vol. 174; p. 1152.

Stephens, William E., assignor to Aermore Manufacturing Company, Chicago, Ill. Automobile-horn. No. 1,015,596; Jan. 23; Sp. p. 5533; Gaz. vol. 174; p. 947.

Stephenson, Thomas H., Holyoke, Mass. Instantaneous hot-water heater. No. 1,016,044; Jan. 30; Sp. p. 6493; Gaz. vol. 174; p. 1129.

Stern, Milton C. (See Nickol and Stern.)

Stevens, Arthur L., New York, N. Y., assignor to C. B. Tewksbury, Boston, Mass. Machine for making tags. No. 1,014,916; Jan. 16; Sp. p. 4069; Gaz. vol. 174; p. 688.

Stevens, John L., South Bend, Wash. Miter-box. No. 1,014,674; Jan. 16; Sp. p. 3540; Gaz. vol. 174; p. 605.

Stevens, William H., New York, N. Y. Collar. No. 1,015,747; Jan. 23; Sp. p. 5853; Gaz. vol. 174; p. 998.

Stevens, Willis F., assignor to Duplex Envelope & Printing Company, Richmond, Va. Envelop. No. 1,013,571; Jan. 2; Sp. p. 1037; Gaz. vol. 174; p. 167.

Stevenson, Bertha, Gloucester, Mass. Lunch-counter. No. 1,014,186; Jan. 9; Sp. p. 2426; Gaz. vol. 174; p. 407.

Stevenson, Clarence M., Los Angeles, Cal. Device for measuring interpupilary distance. No. 1,014,917; Jan. 16; Sp. p. 4075; Gaz. vol. 174; p. 688.

Stewart, Lawson B., Rimersburg, Pa. Roundabout. No. 1,014,846; Jan. 9; Sp. p. 2810; Gaz. vol. 174; p. 464.

Stewart, Robert. (See Kronenberger, Annie K., assignor.)

Stewart, Robert F., Omaha, assignor of one-half to C. M. Hare and one-half to H. N. Oldson, Grand Island, Nebr. Mechanical stoker. No. 1,014,534; Jan. 9; Sp. p. 3159; Gaz. vol. 174; p. 526.

Stewart, William G., and L. Gauermann, Philadelphia, Pa. Combined cabinet and printer for toilet-paper. No. 1,014,026; Jan. 9; Sp. p. 2097; Gaz. vol. 174; p. 352.

Stickle, Cole, assignor to Open Coil Heater and Purifier Co., Indianapolis, Ind. Vacuum-valve mechanism. No. 1,015,596; Jan. 23; Sp. p. 5534; Gaz. vol. 174; p. 947.

Stift, Carl, Honolulu, Hawaii. Lock-cock. No. 1,015,094; Jan. 16; Sp. p. 4451; Gaz. vol. 174; p. 749.

Still, William J., Southall, England. Internal-combustion engine. No. 1,015,216; Jan. 16; Sp. p. 4672; Gaz. vol. 174; p. 789.

Still, William J., Southall, England. Internal-combustion engine. No. 1,015,217; Jan. 16; Sp. p. 4675; Gaz. vol. 174; p. 789.

Stillman, Oscar B., Washingtonville, N. Y. Adjustable stall. No. 1,016,182; Jan. 30; Sp. p. 6754; Gaz. vol. 174; p. 1174.

Stilwell-Wilson Telephone Company. (See Wilson, David H., assignor.)

Stimpson, Edwin B., New York, N. Y., assignor to Edwin B. Stimpson Company. Rivet. No. 1,013,625; Jan. 2; Sp. p. 1159; Gaz. vol. 174; p. 184.

Stimpson, Wallace I., and A. E. Rhoades, assignors to Draper Company, Hopedale, Mass. Warp stop-motion for looms. No. 1,013,966; Jan. 9; Sp. p. 1964; Gaz. vol. 174; p. 333.

Stine, Peter, Congo, Ohio. Safety elevator device. No. 1,013,232; Jan. 2; Sp. p. 315; Gaz. vol. 174; p. 50.

Stock, Robert, New York, N. Y. Spring-wheel. No. 1,014,858; Jan. 16; Sp. p. 3955; Gaz. vol. 174; p. 669.

Stocker, Georg, Hanau, Germany. Automatic cartridge-exploding device. No. 1,013,967; Jan. 9; Sp. p. 1967; Gaz. vol. 174; p. 333.

Stoley, Henry E., Woodburn, Oreg. Fence-post. No. 1,015,651; Jan. 23; Sp. p. 5654; Gaz. vol. 174; p. 966.

Stollberg, Charles, Toledo, Ohio, assignor to American Can Company, New York, N. Y. Sheet-steel keg. No. 1,015,355; Jan. 23; Sp. p. 5005; Gaz. vol. 174; p. 864.

Stone, Arthur C., Providence, R. I. Perforating-machine. No. 1,015,366; Jan. 23; Sp. p. 5007; Gaz. vol. 174; p. 865.

Stone, Caroline W., Newton Center, Mass. Bird-cage protector. No. 1,015,766; Jan. 23; Sp. p. 5892; Gaz. vol. 174; p. 1004.

Stone, Samuel, Miles City, Mont. Thinning-machine. No. 1,016,110; Jan. 30; Sp. p. 6631; Gaz. vol. 174; p. 1152.

Stone, Stuart R., New York, N. Y. Electric indicator system. No. 1,013,904; Jan. 9; Sp. p. 1820; Gaz. vol. 174; p. 312.

Storer, Harry F., and W. W. Jamieson, Jr., Central City, Ky. Cut-off. No. 1,013,695; Jan. 2; Sp. p. 1350; Gaz. vol. 174; p. 210.

Storrs, Aaron P., assignor to Storrs Mica Company, Owego, N. Y. Burner for incandescent mantles. No. 1,015,851; Jan. 30; Sp. p. 6079; Gaz. vol. 174; p. 1059.

Storrs, Aaron P., assignor to Storrs Mica Company, Owego, N. Y. Headlight-chimney. No. 1,015,852; Jan. 30; Sp. p. 6080; Gaz. vol. 174; p. 1059.

Storrs Mica Company. (See Storrs, Aaron P., assignor.)

Stout, Edward, and J. M. Knowles, Stockport, Iowa. Chicken-coop. No. 1,013,233; Jan. 2; Sp. p. 316; Gaz. vol. 174; p. 50.

Stout, Isaac R., Medicine Lodge, Kans. Pump. No. 1,014,675; Jan. 16; Sp. p. 3542; Gaz. vol. 174; p. 606.

Stover Engine Works. (See Freidag, William F., assignor.)

Stowe, Benjamin L. (See Banta and Stowe.)

Straate, Frederick, *et al.* (See Bopp, Clinton L., assignor.)

Strand, Henry, Cleveland, Ohio. Hot-air heater. No. 1,014,347; Jan. 9; Sp. p. 2812; Gaz. vol. 174; p. 465.

Strand, Magnus. (See Perl, Eva, assignor.)

Stranders, Julien, New York, N. Y., assignor to Selchow & Righter Company. Jumping-ring game. No. 1,013,827; Jan. 2; Sp. p. 1606; Gaz. vol. 174; p. 256.

Strange, Henry C. (See Hall, Ina O., assignor.)

Stratton, John, Altrincham, and E. A. Claremont, Old Trafford, Manchester, England. Apparatus for drawing wire. No. 1,015,913; Jan. 30; Sp. p. 6204; Gaz. vol. 174; p. 1082.

Stratton, John, Altrincham, and E. A. Claremont, Old Trafford, Manchester, England. Wire-drawing apparatus. No. 1,015,914; Jan. 30; Sp. p. 6208; Gaz. vol. 174; p. 1083.

Straubel, Frederick L. G., Green Bay, Wis. Vertical filing-drawer. No. 1,013,234; Jan. 2; Sp. p. 319; Gaz. vol. 174; p. 51.

Straus, Albert I., Cincinnati, Ohio. Tobacco-pipe charger. No. 1,015,357; Jan. 23; Sp. p. 5008; Gaz. vol. 174; p. 865.

Strauss, Ferdinand, Yonkers, N. Y. Registering toy bank. No. 1,015,408; Jan. 23; Sp. p. 5126; Gaz. vol. 174; p. 881.

Strecker-Aufermann, Hans, Munich, Germany. Preparing printing-plates in a grained manner. No. 1,014,740; Jan. 16; Sp. p. 3676; Gaz. vol. 174; p. 628.

Streeter, Roy R., Big Rapids, Mich. Sample-holder attachment for stock-boards. No. 1,014,420; Jan. 9; Sp. p. 2958; Gaz. vol. 174; p. 491.

Streit, Albert W. (See Streit, Anton and A. W.)

Streit, Anton and A. W., Cincinnati, Ohio. Gas-stove. No. 1,014,421; Jan. 9; Sp. p. 2960; Gaz. vol. 174; p. 491.

Strickler, David, Shelby, assignor of one-fourth to G. Styres, Tiro, Ohio. Rifle-bore cleaner. No. 1,015,915; Jan. 30; Sp. p. 6211; Gaz. vol. 174; p. 1083.

Strobach, Rudolf, Prague-Ziskow, Austria-Hungary. Distilling wood. No. 1,015,519; Jan. 23; Sp. p. 5356; Gaz. vol. 174; p. 918.

Strohbach, Fritz, Charlottenburg, Germany, assignor to General Electric Company. Centrifugal pump or compressor. No. 1,013,329; Jan. 2; Sp. p. 535; Gaz. vol. 174; p. 85.

Strong, Frederick F., St. Petersburg, Fla. Apparatus for dissecting pulpy and fibrous plants. No. 1,013,235; Jan. 2; Sp. p. 320; Gaz. vol. 174; p. 51.

Strong, George H., assignor to The Grove Products Company, Warwick, N. Y. Horse and cattle food. No. 1,013,696; Jan. 2; Sp. p. 1351; Gaz. vol. 174; p. 210.

Stuart, William E., San Francisco, Cal. Compressed-air pump. No. 1,014,422; Jan. 9; Sp. p. 2961; Gaz. vol. 174; p. 491.

Stubbers, Joseph, Covington, Ky., assignor to The Incandescent Light & Stove Company, Cincinnati, Ohio. Gas-stove. No. 1,015,597; Jan. 23; Sp. p. 5536; Gaz. vol. 174; p. 948.

Stuck, David S., Cocolamus, Pa. Vehicle-brake. No. 1,014,978; Jan. 16; Sp. p. 4221; Gaz. vol. 174; p. 710.

Stump, Ira E., Cleveland, assignor of one-half to H. Pease, Lakewood, Ohio. Signal-horn. No. 1,013,905; Jan. 9; Sp. p. 1823; Gaz. vol. 174; p. 312.

Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)

Sturtevant, Thomas J. (See Sturtevant, Thomas L. and T. J.)

Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Crusher. No. 1,013,459; Jan. 2; Sp. p. 802; Gaz. vol. 174; p. 129.

Stutler, Abraham H., West Union, W. Va. Door-closer. No. 1,014,266; Jan. 9; Sp. p. 2614; Gaz. vol. 174; p. 436.

Styles, William C., Bowdon, Ga. Pillow-sham holder. No. 1,013,697; Jan. 2; Sp. p. 1351; Gaz. vol. 174; p. 210.

Styres, George. (See Strickler, David, assignor.)

Subers, Lawrence A., Cleveland, Ohio. Belting. No. 1,014,918; Jan. 16; Sp. p. 4078; Gaz. vol. 174; p. 689.

Sucher, Emile, Versailles, France. Preserving and hardening wood. No. 1,016,111; Jan. 30; Sp. p. 6632; Gaz. vol. 174; p. 1153.

Suess, Walter E., assignor of one-half to G. Hamann, Taylor, Tex. Stop-cock. No. 1,015,358; Jan. 23; Sp. p. 5009; Gaz. vol. 174; p. 865.

Sullivan Machinery Company. (See Ball, Albert, assignor.)

Suman, Ruppert W., Newark, N. J., assignor to General Electric Company. Shaping filaments. No. 1,013,572; Jan. 2; Sp. p. 1039; Gaz. vol. 174; p. 167.

Summers, Leland L., Chicago, Ill. Preparing nitrogenous compounds. No. 1,013,460; Jan. 2; Sp. p. 804; Gaz. vol. 174; p. 129.

Sundman, Lars F. (See Tesreau, Sundman, and Hill.)

Sure Seal Company. (See Hull, Joseph V., assignor.)

Sussmann, Heinrich, assignor to The Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany. Automatic valve-controlled gas lighter and extinguisher. No. 1,014,267; Jan. 9; Sp. p. 2815; Gaz. vol. 174; p. 436.

Sutton, William S., Madison, Wis., assignor, by mesne assignments, to General Electric Company. Positive oiling device for bearings. No. 1,015,095; Jan. 16; Sp. p. 4452; Gaz. vol. 174; p. 749.

Suzuki, Saburosuke. (See Ikeda and Suzuki.)

Svebilius, Henry M. (See Godfrey, Ekron, and Svebilius.)

Swanson, Otto, Chicago, Ill. Reversible railway-frog and connection. No. 1,015,218; Jan. 16; Sp. p. 4676; Gaz. vol. 174; p. 789.

Sweeney, Dennis E., Indianapolis, Ind. Davenport. No. 1,014,535; Jan. 9; Sp. p. 3162; Gaz. vol. 174; p. 526.

Sweeney, Eugene J., Rockford, Ill. Clevis. No. 1,016,183; Jan. 30; Sp. p. 6756; Gaz. vol. 174; p. 1175.

Sweeny, Jared S., and W. W. Grindle, Decatur, Ill. Feed-water heater. No. 1,014,919; Jan. 16; Sp. p. 4079; Gaz. vol. 174; p. 689.

Swengel, Willard E., St. Johns, Oreg. Portable ladder for gathering fruit. No. 1,015,652; Jan. 23; Sp. p. 5655; Gaz. vol. 174; p. 966.

Swenson, Herman C., assignor of one-fourth to W. J. Mendenhall, Minneapolis, Minn. Fly-paper holder. No. 1,015,520; Jan. 23; Sp. p. 5358; Gaz. vol. 174; p. 919.

Swenson, Luther L., Ottumwa, Iowa. Nut-lock. No. 1,013,521; Jan. 2; Sp. p. 940; Gaz. vol. 174; p. 154.

Swiecicki, Michael. (See Jankosky, Thomas, assignor.)

Switzer, Maurice, and J. D. Lacroix, New York, N. Y. Non-refillable bottle. No. 1,016,112; Jan. 30; Sp. p. 6633; Gaz. vol. 174; p. 1153.

Sykes, Alfred, Huddersfield, England. Percussive drill, hammer, or like percussive tool or machine. No. 1,014,979; Jan. 16; Sp. p. 4222; Gaz. vol. 174; p. 710.

Sykes, Edwin, Huddersfield, England. Yarn-tension device. No. 1,014,980; Jan. 16; Sp. p. 4225; Gaz. vol. 174; p. 711.

Sykes, Edwin, Huddersfield, England. Yarn or like winding machine. No. 1,014,981; Jan. 16; Sp. p. 4226; Gaz. vol. 174; p. 711.

Symons, Edgar B., Milwaukee, Wis. Crushing-machine. No. 1,013,626; Jan. 2; Sp. p. 1160; Gaz. vol. 174; p. 184.

Szafran, Kazimer, Philadelphia, Pa. Car-coupling. No. 1,013,906; Jan. 9; Sp. p. 1825; Gaz. vol. 174; p. 312.

Szczyglinski, Louis, Scranton, Pa. Flushing system for closets. No. 1,015,653; Jan. 23; Sp. p. 5656; Gaz. vol. 174; p. 966.

Szekely, Mary, Lackawanna, N. Y. Hat-pin retainer. No. 1,014,423; Jan. 9; Sp. p. 2964; Gaz. vol. 174; p. 402.

Sztejnert, Kazimiers, Hazleton, Pa. Rail-fastener. No. 1,016,045; Jan. 30; Sp. p. 6496; Gaz. vol. 174; p. 1130.

T. E. & C. S. McCall Co. (See Brasington, John M., assignor.)

Taber, Herschel H. (See Alvord, Elisha H., assignor.) (Reissue.)

Tabulo, Louis, London, England. Block or hoisting-gear. No. 1,014,728; Jan. 16; Sp. p. 3649; Gaz. vol. 174; p. 624.

Tait, Leroy E., Red Cloud, Nebr. Spark-indicator. No. 1,015,096; Jan. 16; Sp. p. 4454; Gaz. vol. 174; p. 749.

Takahashi, Minosaku, Harlowton, Mont. Vessel-closure. No. 1,014,536; Jan. 9; Sp. p. 3163; Gaz. vol. 174; p. 527.

Taliaferro, Edward E., and E. J. Goldsworthy, Colorado Springs, Colo. Cigar-holder. No. 1,013,236; Jan. 2; Sp. p. 324; Gaz. vol. 174; p. 51.

Tanner, Perry E. (See Warden, William F., assignor.)

Tashjian, Armen H., Portland, Me. Frame for reinforced concrete structures. No. 1,013,698; Jan. 2; Sp. p. 1353; Gaz. vol. 174; p. 210.

Tate, James E., Middleton, Ga. Fountain tooth-brush. No. 1,014,784; Jan. 16; Sp. p. 3778; Gaz. vol. 174; p. 642.

Taub, Ludwig, and H. Hahl, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Glycol ester of benzoic acid. No. 1,014,859; Jan. 16; Sp. p. 3957; Gaz. vol. 174; p. 669.

Taylor, Charles M. (See Fitzgerald, Daniel E., assignor.)

Taylor, Clarence L., assignor to The Morgan Engineering Company, Alliance, Ohio. Three-high-roll mill. No. 1,014,676; Jan. 16; Sp. p. 3547; Gaz. vol. 174; p. 607.

Taylor, Edward E., Chelsea, assignor to W. Gray, Amesbury, Mass. Lamp. No. 1,015,219; Jan. 16; Sp. p. 4678; Gaz. vol. 174; p. 789.

Taylor, Edward E., and D. H. Elkins, assignors to W. Gray, Amesbury, Mass. Switch. No. 1,015,097; Jan. 16; Sp. p. 4456; Gaz. vol. 174; p. 750.

Taylor, Edwin, Farmingdale, assignor to D. M. Neuberger, New York, N. Y. Engine. No. 1,013,907; Jan. 9; Sp. p. 1825; Gaz. vol. 174; p. 312.

Taylor, Ernest M., assignor of one-third to W. E. Poole, Petersburg, Va. Car-replacer. No. 1,015,098; Jan. 16; Sp. p. 4458; Gaz. vol. 174; p. 750.

Taylor, Floyd F., Gadsden, Ala. Toy airship. No. 1,016,113; Jan. 30; Sp. p. 6635; Gaz. vol. 174; p. 1154.

Taylor, Frank L., Rushford, N. Y. Winding and measuring machine. No. 1,013,461; Jan. 2; Sp. p. 808; Gaz. vol. 174; p. 129.

Taylor, Frederick D., assignor to The Sigourney Tool Company, Hartford, Conn. Mechanism for driving drill-spindles. No. 1,015,359; Jan. 23; Sp. p. 5011; Gaz. vol. 174; p. 868.

Taylor, Frederick W., Philadelphia, Pa. Cutter-holding means. No. 1,015,409; Jan. 23; Sp. p. 5128; Gaz. vol. 174; p. 881.

Taylor, Harold D., Bishophill, York, England. Short-base range-finder. No. 1,013,849; Jan. 2; Sp. p. 1669; Gaz. vol. 174; p. 265.

Taylor, Howard D., Reading, Pa. Steam-boiler superheater. No. 1,013,968; Jan. 9; Sp. p. 1968; Gaz. vol. 174; p. 334.

Taylor, Richard S., and G. W. Woodruff, Gracemont, Okla. Sectional door for grain-cars. No. 1,013,237; Jan. 2; Sp. p. 325; Gaz. vol. 174; p. 52.

Taylor, William E., Eastport, Me., assignor to American Can Company, New York, N. Y. Packing sardines. No. 1,016,046; Jan. 30; Sp. p. 6497; Gaz. vol. 174; p. 1130.

Taylor, William L. (See Dinkins and Hays, assignors.)

Teal, George W. (See Davis, William H., assignor.)

Teas, Daniel H., New Haven, Conn., and G. T. Reiss, Hamilton, Ohio, assignors to Niles-Bement-Pond Company, Jersey City, N. J. Lathe-driver. No. 1,013,908; Jan. 9; Sp. p. 1828; Gaz. vol. 174; p. 313.

Tedder, Morgan C., Simms, Tex. Cotton-chopper. No. 1,013,969; Jan. 9; Sp. p. 1969; Gaz. vol. 174; p. 334.

Teel, George A., Anacortes, Wash. Trap. No. 1,015,916; Jan. 30; Sp. p. 6213; Gaz. vol. 174; p. 1083.

Teisler, Emil, assignor of one-half to A. Humann, Dohna, Germany. Making sodium-aluminum fluorid. No. 1,015,220; Jan. 16; Sp. p. 4680; Gaz. vol. 174; p. 790.

Teller, James R., Stockton, Cal. Platform-adjuster. No. 1,016,047; Jan. 30; Sp. p. 6497; Gaz. vol. 174; p. 1130.

Tesreau, Robert E., L. F. Sundman, and C. P. Hill, Doe Run, Mo. Rail-joint. No. 1,014,101; Jan. 9; Sp. p. 2267; Gaz. vol. 174; p. 377.

Tetrault, Edward O., Hartford, Conn. Package-reacher. No. 1,014,785; Jan. 16; Sp. p. 3780; Gaz. vol. 174; p. 642.

Tewksbury, Charles B. (See Stevens, Arthur L., assignor.)

Tewksbury, Charles B., Boston, Mass. Distributing apparatus. No. 1,014,786; Jan. 16; Sp. p. 3781; Gaz. vol. 174; p. 642.

Thatford, Joseph G., Sharon Hill, Pa. Manufacturing plasterers' trowels. No. 1,015,654; Jan. 23; Sp. p. 5658; Gaz. vol. 174; p. 967.

Thayer, D. N. (See Alexander, Jesse, assignor.)

Theo. Smith Manufacturing Company. (See Smith, Theodore, assignor.)

Thiry, Edward, and J. W. Schermerhorn, Pasadena, Cal.; said Schermerhorn assignor to said Thiry. Flush device for closets. No. 1,015,719; Jan. 23; Sp. p. 5797; Gaz. vol. 174; p. 988.

Thomas, Carlyle W., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing and trimming machine. No. 1,015,917; Jan. 30; Sp. p. 6214; Gaz. vol. 174; p. 1084.

Thomas, Charles. (See Avery, Nicholas F., assignor.)

Thomas, George J., Watertown, assignor of twenty-four one-hundredths to himself, fifty-one one-hundredths to T. E. Eustis, and twenty-five one-hundredths to F. T. Cassmay, Newton, Mass. Nipple-holder. No. 1,014,920; Jan. 16; Sp. p. 4083; Gaz. vol. 174; p. 690.

Thomas, Harvey S., Fort Thomas, Ky. Stilt. No. 1,013,828; Jan. 2; Sp. p. 1609; Gaz. vol. 174; p. 257.

Thomas, Lemuel A., and A. B. Bailey, Monroe, Ind. Oil-burner. No. 1,015,410; Jan. 23; Sp. p. 5130; Gaz. vol. 174; p. 881.

Thomas, Walter, Vancouver, British Columbia, Canada. Open grate. No. 1,013,330; Jan. 2; Sp. p. 537; Gaz. vol. 174; p. 85.

Thompson, A. E., trustee. (See Thompson, Ralph, assignor.)

Thompson, Charles E., Troy, N. Y. Lather-brush. No. 1,013,238; Jan. 2; Sp. p. 327; Gaz. vol. 174; p. 52.

Thompson, Louis W. (See Gardner, Frederick N. and F. E., assignors.)

Thompson, Ralph, assignor to A. E. Thompson, trustee, Brookline, Mass. Vehicle-top bow-clamp. No. 1,015,360; Jan. 23; Sp. p. 5013; Gaz. vol. 174; p. 866.

Thompson, Roy B., Belmont, Pa. Wheel-form. No. 1,016,184; Jan. 30; Sp. p. 6758; Gaz. vol. 174; p. 1175.

Thompson, Seth B., Jersey City, N. J. Auger for boring reversed-taper holes. No. 1,013,970; Jan. 9; Sp. p. 1971; Gaz. vol. 174; p. 334.

Thompson, William B., assignor of one-half to A. E. Kennon, North Conway, N. H. Combined transmitter and receiver. No. 1,014,268; Jan. 9; Sp. p. 2616; Gaz. vol. 174; p. 436.

Thompson, William L., Highmore, S. D. Insect-trap. No. 1,013,699; Jan. 2; Sp. p. 1354; Gaz. vol. 174; p. 211.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Regulating and controlling the production of steam. No. 1,015,982; Jan. 30; Sp. p. 6355; Gaz. vol. 174; p. 1106.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Regulation and control of steam production. No. 1,015,983; Jan. 30; Sp. p. 6357; Gaz. vol. 174; p. 1106.

Thormeyer, Franz E., Hamburg, Germany. Device for controlling the synchronism of two motors. No. 1,013,331; Jan. 2; Sp. p. 539; Gaz. vol. 174; p. 86.

Thorn, George W., Chicago, Ill. Extensible gas-pipe. No. 1,015,853; Jan. 30; Sp. p. 6081; Gaz. vol. 174; p. 1060.

Thorn, William, Arnaudville, La. Harrow. No. 1,013,462; Jan. 2; Sp. p. 815; Gaz. vol. 174; p. 130.

Thornley, Albert J., assignor to Narragansett Machine Company, Pawtucket, R. I. Vaulting-bar. No. 1,013,829; Jan. 2; Sp. p. 1610; Gaz. vol. 174; p. 257.

Thrush, Richard, *et al.* (See Troxler, Gustavus, assignor.)

Thullin, Martin, Ephraim, Utah. Electric appliance. No. 1,014,537; Jan. 9; Sp. p. 3164; Gaz. vol. 174; p. 527.

Thurman, John S., and J. A. Dunlap, St. Louis, Mo.; said Dunlap assignor to said Thurman. Vacuum-controller for pneumatic cleaning apparatus. No. 1,014,729; Jan. 16; Sp. p. 3650; Gaz. vol. 174; p. 624.

Tibbals, Arthur W., and C. D. Young, Delaware, Ohio. Heater for incubators. No. 1,015,361; Jan. 23; Sp. p. 5015; Gaz. vol. 174; p. 867.

Tichborne, Walter F. C., Pelham, N. Y. Sheet adjuster and guide for printing-presses. No. 1,014,269; Jan. 9; Sp. p. 2617; Gaz. vol. 174; p. 437.

Tierney, John W., Upper Norwood, England. Apparatus for hammering the heels of boots and shoes. No. 1,013,971; Jan. 9; Sp. p. 1973; Gaz. vol. 174; p. 334.

Tiffany, Earl, Logan, Iowa. Harness. No. 1,016,048; Jan. 30; Sp. p. 6499; Gaz. vol. 174; p. 1130.

Tigerman, William H. (See Pfautz, Daniel M., assignor.)

Tillotson, George L., and M. H. Nicholas, Portland, Oreg. Gage-cock. No. 1,014,538; Jan. 9; Sp. p. 3165; Gaz. vol. 174; p. 527.

Timmis, Walter S., New York, N. Y. Junction-box. No. 1,013,972; Jan. 9; Sp. p. 1977; Gaz. vol. 174; p. 335.

Tinnin, Joseph L., Ripon, Cal. Nut-lock. No. 1,016,237; Jan. 30; Sp. p. 6860; Gaz. vol. 174; p. 1192.

Titus, Richard, Bowling Green, Ohio. Spring-winder. No. 1,013,239; Jan. 2; Sp. p. 328; Gaz. vol. 174; p. 52.

Todd, George W., Omaha, Nebr. Artificial tooth. No. 1,014,348; Jan. 9; Sp. p. 2813; Gaz. vol. 174; p. 465.

Toledo Computing Scale Company, The. (See Church, Edmund S., assignor.)

Toledo Computing Scale Company. (See De Vilbiss, Allen, Jr., assignor.)

Toledo Machine & Tool Company, The. (See Seidel, Adolph H., assignor.)

Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Silicon carbid. No. 1,013,700; Jan. 2; Sp. p. 1356; Gaz. vol. 174; p. 211.

Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Manufacture of silicon carbid. No. 1,013,701; Jan. 2; Sp. p. 1357; Gaz. vol. 174; p. 211.

Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Light-refracting material. No. 1,015,598; Jan. 23; Sp. p. 5538; Gaz. vol. 174; p. 948.

Tonini, August, Grandview, Ind. Feed-box. No. 1,015,221; Jan. 16; Sp. p. 4681; Gaz. vol. 174; p. 790.

Tönjes, Carl, Delmenhorst, Germany. Adjusting device for turnable parts. No. 1,015,854; Jan. 30; Sp. p. 6083; Gaz. vol. 174; p. 1060.

Torossian, Bedros R., West Hoboken, N. J. Water-closet. No. 1,014,787; Jan. 16; Sp. p. 3784; Gaz. vol. 174; p. 643.

Torrance, William, Abbnott, Saskatchewan, Canada. Sod-cutter. No. 1,013,332; Jan. 2; Sp. p. 541; Gaz. vol. 174; p. 86.

Tower, Edward, Salem, Mass. Lifter for stove-lids. No. 1,014,788; Jan. 16; Sp. p. 3785; Gaz. vol. 174; p. 643.

Towery, Wylye G. Alamogordo, N. Mex. Carriage-whip. No. 1,013,240; Jan. 2; Sp. p. 331; Gaz. vol. 174; p. 53.

Towle, George C., Dayton, Ohio, assignor to The Pay-Within Car Sales Company, Philadelphia, Pa. Prepayment-street-car door. No. 1,015,252; Jan. 16; Sp. p. 4757; Gaz. vol. 174; p. 801.

Townsend, William W., and W. L. Gosselin, Rutland, Vt., assignors to C. G. Koppitz, Youngstown, Ohio. Boot and shoe clamping device. No. 1,013,627; Jan. 2; Sp. p. 1165; Gaz. vol. 174; p. 185.

Towson, Morris S. (See Warner, Worcester R., assignor.)

Tozier, Charles C., Skowhegan, Me. Automatic cut-off for boiler-feeders. No. 1,013,463; Jan. 2; Sp. p. 816; Gaz. vol. 174; p. 130.

Trabue, Luther, Girard, Ill. Block-dropping mechanism for baling-presses. No. 1,013,628; Jan. 2; Sp. p. 1167; Gaz. vol. 174; p. 185.

Trabue, Luther, Girard, Ill. Baling-press. No. 1,014,615; Jan. 9; Sp. p. 3338; Gaz. vol. 174; p. 554.

Trabue, Luther, and H. F. Owen, Delaware, Ohio. Hay-press. No. 1,013,464; Jan. 2; Sp. p. 819; Gaz. vol. 174; p. 131.

Traum, Charles C., Lanark, Ill. Door-check. No. 1,015,655; Jan. 23; Sp. p. 5659; Gaz. vol. 174; p. 967.

Travers, William E., assignor of one-fourth to J. D. Hahn, Oakland, Cal. Revolving razor. No. 1,014,187; Jan. 9; Sp. p. 2428; Gaz. vol. 174; p. 407.

Treat, Francis H., Cleveland, Ohio. Furnace-feeding apparatus. No. 1,014,789; Jan. 16; Sp. p. 3786; Gaz. vol. 174; p. 643.

Tredwell, Charles A., assignor to The Horton Manufacturing Company, Bristol, Conn. Fishing-rod. No. 1,013,333; Jan. 2; Sp. p. 542; Gaz. vol. 174; p. 86.

Trewent, Francis J., and W. E. Proctor, London, England. Apparatus for ejecting ashes and other refuse from ships. No. 1,014,921; Jan. 16; Sp. p. 4085; Gaz. vol. 174; p. 690.

Trimbath, Abraham L., Bellaire, Ohio. Wrench. No. 1,016,049; Jan. 30; Sp. p. 6500; Gaz. vol. 174; p. 1131.

Tripp, Claude O. (See Snook and Tripp.)

Trisler, Samuel E., Dayton, Ohio. Radiator. No. 1,013,973; Jan. 9; Sp. p. 1978; Gaz. vol. 174; p. 335.

Triumph Voting Machine Company. (See Abbott, Charles C., assignor.)

Tröbs, Johann F. C. M., Harburg-on-the-Elbe, assignor to H. Freudenthal, Hamburg, Germany. Superphosphate-chamber and means for emptying same. No. 1,013,334; Jan. 2; Sp. p. 544; Gaz. vol. 174; p. 87.

Troeger, John W., La Grange, Ill. Method of and apparatus for forming roof-shingles. No. 1,014,424; Jan. 9; Sp. p. 2965; Gaz. vol. 174; p. 492.

Trojan, Frank, New Bedford, Mass. Hat-pin-point protector. No. 1,015,099; Jan. 16; Sp. p. 4461; Gaz. vol. 174; p. 751.

Tropenas, Alexandre, Montelimar, France, assignor to Tropenas Converter Company, New York, N. Y. Converter. No. 1,013,702; Jan. 2; Sp. p. 1358; Gaz. vol. 174; p. 211.

Tropenas Converter Company. (See Tropenas, Alexandre, assignor.)

Trotter, James, Chicago, assignor of one-half to A. J. Hopkins, Aurora, Ill. Device for producing draft in engines. No. 1,015,460; Jan. 23; Sp. p. 5248; Gaz. vol. 174; p. 893.

Trowbridge, Winthrop N., *et al.* (See Mansfield, Lott, assignor.)

Troxler, Gustavus, Newark, assignor of one-fifth to F. Sanger, one-fifth to A. Decker, Orange, one-fifth to R. Thrums, and one-fifth to C. Munsick, Newark, N. J. Boxing device. No. 1,016,244; Jan. 30; Sp. p. 6862; Gaz. vol. 174; p. 1195.

Tschernitz, Hans. (See Urchniak and Werhnjak, assignors.)

Tubular Construction Company. (See Atwood, Leonard, assignor.)

Tucker, Charles N., Pawtucket, R. I., assignor of one-third to J. A. Tucker, Walpole, Mass., and one-third to E. E. Salisbury, Providence, R. I. Picker-check. No. 1,013,335; Jan. 2; Sp. p. 547; Gaz. vol. 174; p. 87.

Tucker, James A., *et al.* (See Tucker, Charles N., assignor.)

Tuckey, Everett N., Yates City, Ill. Rail-splice. No. 1,015,521; Jan. 23; Sp. p. 5350; Gaz. vol. 174; p. 919.

Tudor, James H., assignor of one-fourth to L. M. Moore, Lexington, Ky. Mail-delivering apparatus. No. 1,013,703; Jan. 2; Sp. p. 1359; Gaz. vol. 174; p. 212.

Tuerk, Albert, Chicago, Ill. Electric clock. No. 1,015,748; Jan. 23; Sp. p. 5854; Gaz. vol. 174; p. 998.

Tugwell, George, Chicago, Ill. Lubricator. No. 1,016,238; Jan. 30; Sp. p. 6861; Gaz. vol. 174; p. 1192.

Tuite, Andrew, Vincennes, Ind. Pot-furnace. No. 1,015,522; Jan. 23; Sp. p. 5361; Gaz. vol. 174; p. 920.

Tunnicliffe, Jesse G. (See Kendrick and Tunnicliffe.)

Turner, Joseph, and H. Dean, Huddersfield, England. Manufacture of black coloring-matters. No. 1,014,982; Jan. 16; Sp. p. 4229; Gaz. vol. 174; p. 712.

Turner, Joseph, and H. Dean, Huddersfield, England. Manufacture of black coloring-matters. No. 1,014,983; Jan. 16; Sp. p. 4229; Gaz. vol. 174; p. 712.

Turner, Joseph, and H. Dean, Huddersfield, England. Manufacture of black coloring-matters. No. 1,014,984; Jan. 16; Sp. p. 4230; Gaz. vol. 174; p. 712.

Turner, Joseph L., assignor to The H. K. Mulford Company, Philadelphia, Pa. Producing a metallic derivative of the active principle of the suprarenal glands. No. 1,016,185; Jan. 30; Sp. p. 6759; Gaz. vol. 174; p. 1176.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Duplex pressure-control apparatus. No. 1,015,855; Jan. 30; Sp. p. 6084; Gaz. vol. 174; p. 1060.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Angle-cock device. No. 1,015,856; Jan. 30; Sp. p. 6087; Gaz. vol. 174; p. 1061.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Engineer's brake-valve device. No. 1,016,186; Jan. 30; Sp. p. 6760; Gaz. vol. 174; p. 1176.

Tutwiler, Thomas H., Memphis, Tenn. Passenger-car. No. 1,015,100; Jan. 16; Sp. p. 4462; Gaz. vol. 174; p. 751.

Tyden, Emil, Hastings, Mich. Glue-heater. No. 1,013,336; Jan. 2; Sp. p. 548; Gaz. vol. 174; p. 87.

Tyler, Charles A., assignor of one-half to F. C. Kunchel, Wilkes-Barre, Pa. Apparatus for removing surplus starch from starched articles. No. 1,013,337; Jan. 2; Sp. p. 549; Gaz. vol. 174; p. 88.

Tyler, Clifford M. (See Farnam, Dwight, assignor.)

Typograph G. m. b. H. (See Dornath, Julius, assignor.)

Ulbrich, William M., Atlantic, Iowa. Mail-box signal. No. 1,015,623; Jan. 23; Sp. p. 5963; Gaz. vol. 174; p. 920.

Ulrichs, Ernst, Elberfeld, assignor to Wülfing, Dahl and Company, A. G., Barmen, Germany. Manufacture of lakes. No. 1,014,539; Jan. 9; Sp. p. 3167; Gaz. vol. 174; p. 527.

Underwood Computing Machine Company. (See Degener, Gustave O., assignor.)

Underwood, John T. (See Main, Fred F., assignor.)

Union Switch & Signal Company, The. (See Holliday, John S., assignor.)

Union Typewriter Company. (See Shepard, Charles H., assignor.)

Union Typewriter Company. (See Smith, Arthur W., assignor.)

United Electric Company, The. (See Dillon, Charles A., assignor.) (Reissue.)

United Shoe Machinery Company. (See Alley, Frederick L., assignor.)

United Shoe Machinery Company. (See Ambler, George A., assignor.)

United Shoe Machinery Company. (See Ashton, Orrell, assignor.)

United Shoe Machinery Company. (See Ashworth, Fred, assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Bond, William A., assignor.)

United Shoe Machinery Company. (See Brogan, Michael F., assignor.)

United Shoe Machinery Company. (See Brown and Goodspeed, assignors.)

United Shoe Machinery Company. (See Carter, George W., assignor.)

United Shoe Machinery Company. (See Cavanagh, James, Jr., assignor.)

United Shoe Machinery Company. (See Conlon, Bartholomew J., assignor.)

United Shoe Machinery Company. (See Cooper, Frederick A., assignor.)

United Shoe Machinery Company. (See Eppler, Andrew, assignor.)

United Shoe Machinery Company. (See Furber, Frederick M., assignor.)

United Shoe Machinery Company. (See Hatch, Frank R., assignor.)

United Shoe Machinery Company. (See La Chapelle, Euclid I., assignor.)

United Shoe Machinery Company. (See MacKenzie, Fred L., assignor.)

United Shoe Machinery Company. (See Mayo, Benjamin F., assignor.)

United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)

United Shoe Machinery Company. (See Pearson, Marshall H., assignor.)

United Shoe Machinery Company. (See Reed, William A., assignor.)

United Shoe Machinery Company. (See Shaw, Linus H., assignor.)

United Shoe Machinery Company. (See Wiggin, Joseph M., assignor.)

United Shoe Machinery Company. (See Winkley, Erastus E., assignor.)

United States Concentrating Company. (See King, Orrin H., assignor.)

United States Light and Heating Company, The. (See Bliss, William L., assignor.)

United States Sherardizing Company. (See Burgess, Charles F., assignor.)

Urchniak, Rudolph, and G. Werhnjak, assignors of one-third to H. Tschernitz, Milwaukee, Wis. Fire-alarm. No. 1,014,922; Jan. 16; Sp. p. 4091; Gaz. vol. 174; p. 690.

Utz, John G., assignor to Chalmers-Detroit Motor Company, Detroit, Mich. Explosion-engine. No. 1,014,270; Jan. 9; Sp. p. 2621; Gaz. vol. 174; p. 437.

Utz, John G., assignor to Chalmers-Detroit Motor Company, Detroit, Mich. Explosion-engine. No. 1,015,101; Jan. 16; Sp. p. 4463; Gaz. vol. 174; p. 751.

Vaccarezza, John B., Spring Lake, N. J. Fusible link. No. 1,014,677; Jan. 16; Sp. p. 3551; Gaz. vol. 174; p. 607.

Vacek, Vinzens M., Vienna, Austria-Hungary. Game apparatus. No. 1,016,187; Jan. 30; Sp. p. 6763; Gaz. vol. 174; p. 1176.

Valentin, Auguste, J. Zerreiss, and H. Georges, Puteaux, France. Printing-machine. No. 1,014,923; Jan. 16; Sp. p. 4093; Gaz. vol. 174; p. 691.

Valentine, Albert, Thurman, Iowa. Flying-machine. No. 1,015,656; Jan. 23; Sp. p. 5660; Gaz. vol. 174; p. 967.

Valloppi, Eugene, Scranton, Pa. Throttle-valve. No. 1,013,242; Jan. 2; Sp. p. 333; Gaz. vol. 174; p. 53.

Van Brunt, Willard A., Horicon, Wis. Grain-tube for seeding-machines. No. 1,013,338; Jan. 2; Sp. p. 550; Gaz. vol. 174; p. 88.

Van Etten, Frank C., Davenport, Iowa. Insulator. No. 1,013,241; Jan. 2; Sp. p. 332; Gaz. vol. 174; p. 53.

Van Hoevenberg, Henry Lake Placid, N. Y. Steeplechase-puzzle. No. 1,013,522; Jan. 2; Sp. p. 941; Gaz. vol. 174; p. 151.

Van Kannel Revolving Door Company. (See Haviland, Edward C., assignor.)

Van Ness, Eugene D., Hoboken, N. J., assignor to V. Garrett, New York, N. Y. Automatic sprinkler system. No. 1,014,349; Jan. 9; Sp. p. 2814; Gaz. vol. 174; p. 466.

Van Pelt, Milner, Sabina, Ohio. Wagon. No. 1,014,540; Jan. 9; Sp. p. 3168; Gaz. vol. 174; p. 527.

Van Wagenen, Edward, New York, N. Y., assignor to Gould Storage Battery Company. Battery-charge indicator. No. 1,013,465; Jan. 2; Sp. p. 820; Gaz. vol. 174; p. 131.

Van Zandt, Luther H., Fort Worth, Tex. Semaphore. No. 1,014,985; Jan. 16; Sp. p. 4231; Gaz. vol. 174; p. 712.

Vandenboesche, Peter F., Harrison township, Macomb county, Mich. Shotgun-barrel. No. 1,013,974; Jan. 9; Sp. p. 1981; Gaz. vol. 174; p. 335.

Vasey, Joseph N. (See Kiessig, Bernhard R., assignor.)
Vasey, Samuel A., Bromley, England. Production of soluble protein from insoluble protein matter. No. 1,015,857; Jan. 30; Sp. p. 6088; Gaz. vol. 174; p. 1061.
Vaughan, George R., Jefferson City, Mo. Pneumatic tire. No. 1,015,599; Jan. 23; Sp. p. 5540; Gaz. vol. 174; p. 948.
Vaughan, H. W., *et al.* (See Jameson, Roland L., assignor.)
Vaughn, Joseph J., San Mateo, assignor to H. Seller, San Francisco, Cal. Refrigerator. No. 1,015,600; Jan. 23; Sp. p. 5542; Gaz. vol. 174; p. 948.
Vaught, James P., and C. M. Walker, Kellerman, Ala. Rail-brace. No. 1,015,102; Jan. 16; Sp. p. 4466; Gaz. vol. 174; p. 752.
Veach, Richard S., Walton, Ky. Mail-bag catcher. No. 1,014,678; Jan. 16; Sp. p. 3553; Gaz. vol. 174; p. 607.
Veeder, Curtis H., assignor to The Veeder Manufacturing Company, Hartford, Conn. Tachometer. No. 1,015,767; Jan. 23; Sp. p. 5894; Gaz. vol. 174; p. 1005.
Veeder Manufacturing Company, The. (See Veeder, Curtis H., assignor.)
Veit, Josef. (See Behrens, George E., assignor.)
Vendegriff, John W., Atlanta, Ga. Means for opening envelops. No. 1,013,909; Jan. 9; Sp. p. 1830; Gaz. vol. 174; p. 313.
Verde, Giuliano, Beaumont, Tex. Water-wheel. No. 1,015,858; Jan. 30; Sp. p. 6090; Gaz. vol. 174; p. 1061.
Verdin, Aloie N., and W. H. Kappes, Glendale, assignors to Verdin, Kappes & Verdin, Cincinnati, Ohio. Inclinable punching-press. No. 1,013,339; Jan. 2; Sp. p. 551; Gaz. vol. 174; p. 88.
Verdin, Kappes & Verdin. (See Verdin and Kappes, assignors.)
Vereinigte Chemische Werke Actiengesellschaft. (See Connstein, Wilhelm, assignor.)
Vessot, Charles H., and A. G. Mather, Ottawa, Ontario, Canada. Flax-pulling machine. No. 1,013,975; Jan. 9; Sp. p. 1982; Gaz. vol. 174; p. 336.
Vial, Frederick K., Chicago, Ill., assignor to Griffin Wheel Company. Car-wheel mold and making car-wheels. No. 1,015,362; Jan. 23; Sp. p. 5017; Gaz. vol. 174; p. 867.
Vickers Limited. (See Dawson and Horne, assignors.)
Vickers Sons & Maxim. (See Buckham, George T., assignor.)
Vickers Sons & Maxim. (See Dawson and Buckham, assignors.)
Victor Brown Company, The. (See Clark, Victor E., assignor.)
Victor Talking Machine Company. (See Jetter, Julius, assignor.)
Victor Talking Machine Company. (See Johnson, Eldridge R., assignor.)
Victor Talking Machine Company. (See Johnson and English, assignors.)
Victor Talking Machine Company. (See Rinehart, Bentley L., assignor.)
Victor Talking Machine Company. (See Vogt, Clarence, assignor.)
Viering, Frederick W., Davis, W. Va. Apparatus for transporting logs. No. 1,015,103; Jan. 16; Sp. p. 4467; Gaz. vol. 174; p. 752.
Vila, Antony. (See Pipereaut and Vila.)
Vincent, Jesse G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,013,910; Jan. 9; Sp. p. 1831; Gaz. vol. 174; p. 313.
Vichek, Frank J., Cleveland, Ohio. Scraper. No. 1,015,461; Jan. 23; Sp. p. 5251; Gaz. vol. 174; p. 900.
Vogt, Clarence, Berlin, Germany, assignor, by mesne assignments, to Victor Talking Machine Company, Camden, N. J. Needle-holder for the sound-boxes of talking-machines. No. 1,015,363; Jan. 23; Sp. p. 5019; Gaz. vol. 174; p. 867.
Vohs, Frank G., St. Louis, Mo. Airship. No. 1,013,523; Jan. 2; Sp. p. 945; Gaz. vol. 174; p. 151.
Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,013,524; Jan. 2; Sp. p. 946; Gaz. vol. 174; p. 152.
Volkmar, Bernhard, assignor, by mesne assignments, to C. Hubert, New York, N. Y. Protective casing. No. 1,013,850; Jan. 2; Sp. p. 1679; Gaz. vol. 174; p. 265.
Vollberg, Hermann. (See Klages and Vollberg.)
Völler, Karl, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Gun-carriage. No. 1,013,704; Jan. 2; Sp. p. 1361; Gaz. vol. 174; p. 212.
Vollers, Albert, Guide Rock, Nebr. Portable loading device. No. 1,016,188; Jan. 30; Sp. p. 6764; Gaz. vol. 174; p. 1177.
Volz, Simon, Milwaukee, Wis. Hinge. No. 1,014,790; Jan. 16; Sp. p. 3788; Gaz. vol. 174; p. 644.
Volz, Simon, Milwaukee, Wis. Rack-holder. No. 1,015,278; Jan. 16; Sp. p. 4816; Gaz. vol. 174; p. 810.
Voorhees, Wilson R., Perth Amboy, N. J. Carbureter. No. 1,014,138; Jan. 9; Sp. p. 2429; Gaz. vol. 174; p. 408.
Vorhies, Leroy, Yoder, Colo. Power-transmission device. No. 1,014,102; Jan. 9; Sp. p. 2268; Gaz. vol. 174; p. 378.
Voss, William, Wilmington, Del., assignor to American Car and Foundry Company, St. Louis, Mo. Passenger-car underframe. No. 1,014,791; Jan. 16; Sp. p. 3789; Gaz. vol. 174; p. 644.
Voss, William H., Davenport, Iowa. Mechanical movement. No. 1,013,629; Jan. 2; Sp. p. 1171; Gaz. vol. 174; p. 186.
Voyles, Thomas J., Poolville, Tex. Coffee-pot. No. 1,013,340; Jan. 2; Sp. p. 553; Gaz. vol. 174; p. 89.
W. B. Bastian Mfg. Co. (See Bastian, William B., assignor.)
W. D. Allen Manufacturing Company. (See Gibbs, Henry, assignor.)
Wadlington, David M., Goree, Tex. Elevating-truck. No. 1,015,104; Jan. 16; Sp. p. 4470; Gaz. vol. 174; p. 753.
Wadsworth, William, Wichita, Kans. Carrier for bottles. No. 1,013,705; Jan. 2; Sp. p. 1362; Gaz. vol. 174; p. 212.
Wagner, Emanuel F., New York, N. Y. Color-study device. (Reissue.) No. 13,358; Jan. 9; Sp. p. 3428; Gaz. vol. 174; p. 567.
Wagner, Johannes E. von, Oakmont, Pa. Operating device for window-louvers. No. 1,014,679; Jan. 16; Sp. p. 3555; Gaz. vol. 174; p. 608.
Waite, Edwin E., assignor of one-half to W. B. Scofield, Worcester, Mass. Boot and shoe. No. 1,015,364; Jan. 23; Sp. p. 5026; Gaz. vol. 174; p. 867.
Waits, Charles A., Rouseville, Pa. Deep-well pump. No. 1,014,271; Jan. 9; Sp. p. 2622; Gaz. vol. 174; p. 437.
Waits, Charles A., Rouseville, Pa. Wall-packer for oil-wells. No. 1,014,272; Jan. 9; Sp. p. 2624; Gaz. vol. 174; p. 438.
Wajda, Floryan, assignor of one-half to M. Dubiah, Chicago, Ill. Tie and rail-fastener. No. 1,015,657; Jan. 23; Sp. p. 5662; Gaz. vol. 174; p. 967.
Wakefield, Ralph A., Sacramento, Cal. Automatic gravity pivot-headlight. No. 1,013,706; Jan. 2; Sp. p. 1363; Gaz. vol. 174; p. 213.
Waldron, Edward B, Paterson, N. J. Detonating-alarm device. No. 1,014,702; Jan. 16; Sp. p. 3793; Gaz. vol. 174; p. 644.
Waldschmidt, Henry, Benson, Ill. Draft-bar attachment for harrows. No. 1,013,573; Jan. 2; Sp. p. 1041; Gaz. vol. 174; p. 168.
Wales, Nathaniel B., Boston, Mass., and G. B. Collier, Kinderhook, N. Y.; said Wales assignor to said Collier. Turbine. No. 1,014,350; Jan. 9; Sp. p. 2817; Gaz. vol. 174; p. 466.
Walker, Columbus M. (See Vaught and Walker.)
Walker, Oakley S., Worcester, Mass. Magnetic chuck. No. 1,013,574; Jan. 2; Sp. p. 1043; Gaz. vol. 174; p. 168.
Walker, Samuel F., and G. Hunter, Bozeman, Mont. Spring-wheel. No. 1,014,541; Jan. 9; Sp. p. 3170; Gaz. vol. 174; p. 528.
Walker, William, and T. E. Hollings, assignors to Morecambe Motor and Engineering Company Limited, Morecambe, England. Meat-cutter. No. 1,015,859; Jan. 30; Sp. p. 6091; Gaz. vol. 174; p. 1062.
Walker, William R., New York, N. Y. Manufacture of steel. No. 1,014,425; Jan. 9; Sp. p. 2969; Gaz. vol. 174; p. 492.
Wallace, Charles, Denver, Colo., assignor to The Wallace-Owings Machinery and Supply Company. Quarts-mill. No. 1,014,273; Jan. 9; Sp. p. 2625; Gaz. vol. 174; p. 438.
Wallace-Owings Machinery and Supply Company, The. (See Wallace, Charles, assignor.)
Walland, Heinrich, Brünn, assignor to Erste Triester Reisschael-Fabriks-Actien-Gesellschaft, Trieste, Austria-Hungary. Rendering vegetable proteins soluble. No. 1,016,115; Jan. 30; Sp. p. 6638; Gaz. vol. 174; p. 1154.
Wallbaum, Reinhold, Charlottenburg, Germany. Hydrocarbon emulsion. No. 1,014,103; Jan. 9; Sp. p. 2270; Gaz. vol. 174; p. 378.
Wallem, Axel B., Cynwyd, assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Valve. No. 1,016,050; Jan. 30; Sp. p. 6501; Gaz. vol. 174; p. 1131.
Wallick, Ben S., Springfield, Ill. Apparatus for displaying and vending postal cards. No. 1,013,976; Jan. 9; Sp. p. 1985; Gaz. vol. 174; p. 336.
Wallwork, Samuel, Summerville, Pa. Dumping-car. No. 1,013,341; Jan. 2; Sp. p. 556; Gaz. vol. 174; p. 89.
Walquist, Andrew N., Seattle, Wash. Tailor's measure. No. 1,014,542; Jan. 9; Sp. p. 3172; Gaz. vol. 174; p. 528.
Walsh, Arthur Q., New York, N. Y. Cigarette-case. No. 1,014,543; Jan. 9; Sp. p. 3173; Gaz. vol. 174; p. 529.
Walsh, Harriet M., Sandy Hook, Conn., assignor to Emil Weissbrod & Sons, Incorporated, Greenfield, Mass. Combination pocket-book. No. 1,014,104; Jan. 9; Sp. p. 2272; Gaz. vol. 174; p. 378.
Walter, David C., assignor of one-half to A. Hall, Toledo, Ohio. Pneumatic carpet-sweeper. No. 1,014,027; Jan. 9; Sp. p. 2100; Gaz. vol. 174; p. 353.
Walter, Edward C., New York, N. Y., assignor to H. T. Ambrose, Orange, N. J. Calculator. No. 1,013,243; Jan. 2; Sp. p. 334; Gaz. vol. 174; p. 53.
Walters, Francis S., Wilkinsburg, Pa., assignor to National Tool Company, Cleveland, Ohio. Interchangeable counterbore. No. 1,016,116; Jan. 30; Sp. p. 6639; Gaz. vol. 174; p. 1154.
Walters, Joseph, Richmond, Va. Garment-hanger. No. 1,015,918; Jan. 30; Sp. p. 6217; Gaz. vol. 174; p. 1084.
Walther, George, Rockville Center, N. Y. Finger-nail cleaner. No. 1,015,860; Jan. 30; Sp. p. 6092; Gaz. vol. 174; p. 1062.

Walton, William G., Ferriday, La. Extension car-step. No. 1,014,544; Jan. 9; Sp. p. 3174; Gaz. vol. 174; p. 529.
Wankmüller, Romeo, assignor to Luft-Verkehrs-Gesellschaft m. b. H., Berlin, Germany. Means for signaling from airships and the like. No. 1,013,342; Jan. 2; Sp. p. 558; Gaz. vol. 174; p. 89.
Wantling Mfg. Co. (See Doubet, Sylvester, assignor.)
Ward, James D., Grange Over Sands, England. Book and like index. No. 1,015,653; Jan. 23; Sp. p. 5663; Gaz. vol. 174; p. 968.
Wardell, Henry E., New York, N. Y. Bituminous structural material. No. 1,015,919; Jan. 30; Sp. p. 6218; Gaz. vol. 174; p. 1084.
Warden, William F., assignor to P. E. Tanner, Akron, Ohio. Gage-inspecting device. No. 1,015,223; Jan. 16; Sp. p. 4654; Gaz. vol. 174; p. 701.
Ware, Alfred J., Seattle, Wash. Printing-machine. No. 1,014,986; Jan. 16; Sp. p. 4232; Gaz. vol. 174; p. 712.
Warman, William A., New York, assignor to Keller Mechanical Engraving Company, Brooklyn, N. Y. Engraving-machine. No. 1,013,343; Jan. 2; Sp. p. 559; Gaz. vol. 174; p. 90.
Warner, Alonzo A., assignor to Landers, Frary & Clark, New Britain, Conn. Roller-retaining device. No. 1,014,680; Jan. 16; Sp. p. 3556; Gaz. vol. 174; p. 608.
Warner Instrument Company. (See Cadman, Addi B., assignor.)
Warner, James L., Girard, Kans. Violin-piano. No. 1,015,462; Jan. 23; Sp. p. 5252; Gaz. vol. 174; p. 900.
Warner, Worcester R., assignor to M. S. Towson, Cleveland, Ohio. Vibration-arrester for automobile steering mechanism. No. 1,015,861; Jan. 30; Sp. p. 6093; Gaz. vol. 174; p. 1062.
Warren, Charles, Rockford, Ill. Autopneumatic playing device for musical instruments. No. 1,014,545; Jan. 9; Sp. p. 3176; Gaz. vol. 174; p. 529.
Warren, Thomas W., assignor one-fourth to J. W. Evans, Point Marion, Pa. Display-rack. No. 1,014,426; Jan. 9; Sp. p. 2970; Gaz. vol. 174; p. 492.
Warren, Thomas W., assignor of one-fourth to J. W. Evans, Point Marion, Pa. Bottle-stopper. No. 1,014,427; Jan. 9; Sp. p. 2971; Gaz. vol. 174; p. 493.
Washburn, Frank S., Nashville, Tenn. Process of and apparatus for making calcium cyanamid from calcium carbid. No. 1,015,720; Jan. 23; Sp. p. 5798; Gaz. vol. 174; p. 988.
Washburne, James V., Fulton, N. Y. Eraser. No. 1,013,575; Jan. 2; Sp. p. 1046; Gaz. vol. 174; p. 168.
Waterhouse, Herman J. (See Parks, Edward F., assignor.)
Waterloo Cement Machinery Company. (See Ahlborn, Theodore, assignor.)
Waters, James H. (See Ponder, Benjamin H., assignor.)
Watkins, Robert L., New York, N. Y. Method and means for preserving and mailing specimens. No. 1,015,001; Jan. 23; Sp. p. 5543; Gaz. vol. 174; p. 949.
Watrous, Earl G., Chicago, Ill. Lavatory-fixture. No. 1,016,051; Jan. 30; Sp. p. 6503; Gaz. vol. 174; p. 1131.
Watson, Clem L., McAlester, Okla. Preserving green corn on the cob. No. 1,013,244; Jan. 2; Sp. p. 339; Gaz. vol. 174; p. 54.
Watson, Edgar D., assignor of one-half to S. Watson, San Francisco, Cal. Timing attachment for camera-shutters. No. 1,013,525; Jan. 2; Sp. p. 949; Gaz. vol. 174; p. 152.
Watson, James, Wilmington, Del. Dumping-wagon. No. 1,015,105; Jan. 16; Sp. p. 4471; Gaz. vol. 174; p. 753.
Watson, Sydney. (See Watson, Edgar D., assignor.)
Watson, William H., Riverdale, Nebr. Poultry-feeder. No. 1,013,707; Jan. 2; Sp. p. 1365; Gaz. vol. 174; p. 213.
Watson, William J., Ladysmith, British Columbia, Canada. Preserving wood. No. 1,015,862; Jan. 30; Sp. p. 6095; Gaz. vol. 174; p. 1063.
Watt, George H., assignor to Watt Motor Company, Detroit, Mich. Controlling device for explosive-engines. No. 1,013,245; Jan. 2; Sp. p. 341; Gaz. vol. 174; p. 54.
Watt Motor Company. (See Watt, George H., assignor.)
Watterson, Walter J., Strawn, Ill. Railway-tie. No. 1,014,351; Jan. 9; Sp. p. 2819; Gaz. vol. 174; p. 466.
Wauters, Joseph, Scranton, Pa., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Tuning device for self-playing musical instruments. No. 1,014,925; Jan. 16; Sp. p. 4107; Gaz. vol. 174; p. 692.
Way, J. E. (See Hilliard and Parsons, assignors.)
Way, John W., Edgeworth, Pa. Vane for propeller-wheels. No. 1,014,730; Jan. 16; Sp. p. 3654; Gaz. vol. 174; p. 624.
Way, John W., Edgeworth, Pa. Aeroplane. No. 1,014,731; Jan. 16; Sp. p. 3655; Gaz. vol. 174; p. 625.
Weaver, Theodore, and D. M. Ennis, Cleveland, Ohio. Medicating-dilator. No. 1,015,253; Jan. 16; Sp. p. 4758; Gaz. vol. 174; p. 802.
Webb, Albert C., assignor to The Webb Motor Fire Apparatus Company, St. Louis, Mo. Clutch mechanism. No. 1,016,052; Jan. 30; Sp. p. 6505; Gaz. vol. 174; p. 1132.
Webb Motor Fire Apparatus Company, The. (See Webb, Albert C., assignor.)
Webb, Samuel J., Minden, La. Motor. No. 1,015,411; Jan. 23; Sp. p. 5131; Gaz. vol. 174; p. 882.
Weber, George, Mount Vernon, N. Y. Spike. No. 1,015,106; Jan. 16; Sp. p. 4474; Gaz. vol. 174; p. 753.
Weber, Herman, Colorado Springs, Colo. Tool for centering sprockets upon vehicle-wheels. No. 1,013,911; Jan. 9; Sp. p. 1836; Gaz. vol. 174; p. 314.
Weber, Otto, Heinickendorf, near Berlin, assignor to Berliner Siriuslampen Vertriebsgesellschaft m. b. H., Berlin, Germany. Supporting incandescent electric lamps and reflectors. No. 1,014,681; Jan. 16; Sp. p. 3557; Gaz. vol. 174; p. 608.
Weed, Chester A. (See Penney and Weed.)
Weelands, William A., and E. Williams, assignors to Adams & Elting Company, Chicago, Ill. Size. No. 1,015,365; Jan. 23; Sp. p. 5027; Gaz. vol. 174; p. 868.
Weerts, Max, Bradford, England. Lamp for matching colors by artificial light. No. 1,015,721; Jan. 23; Sp. p. 5800; Gaz. vol. 174; p. 989.
Wegner, Fred, and J. Peters, assignors to Sanitary Can Company, Fairport, N. Y. Automatic feed device for can-heads or other articles. No. 1,013,344; Jan. 2; Sp. p. 571; Gaz. vol. 174; p. 90.
Welland, Alfred, Reading, Pa. Carbureter. No. 1,013,708; Jan. 2; Sp. p. 1366; Gaz. vol. 174; p. 213.
Weller, Nicholas, assignor of one-half to B. L. Shrader, Fort Collins, Colo. Gang-plow. No. 1,014,987; Jan. 16; Sp. p. 4236; Gaz. vol. 174; p. 713.
Wells, Harry, *et al.* (See Stein, Georg V., assignor.)
Welmer, Rudolph, Sheboygan, Wis. Receptacle-closure and cup. No. 1,013,830; Jan. 2; Sp. p. 1611; Gaz. vol. 174; p. 257.
Weinfeld, Ludwig, Vienna, Austria-Hungary. Threshing-machine. No. 1,014,189; Jan. 9; Sp. p. 2433; Gaz. vol. 174; p. 408.
Weinfeld, Ludwig, Budapest, Austria-Hungary. Threshing-machine. No. 1,015,749; Jan. 23; Sp. p. 5857; Gaz. vol. 174; p. 998.
Weintraub, George, Lynn, Mass., assignor to General Electric Company. Obtaining titanic oxid. No. 1,014,793; Jan. 16; Sp. p. 3795; Gaz. vol. 174; p. 645.
Weir, John, Scotstown, assignor of one-half to A. N. Low, Patrick, Scotland. Hatchway-cover. No. 1,013,912; Jan. 9; Sp. p. 1837; Gaz. vol. 174; p. 314.
Weirbach, Henry T., Allentown, Pa. Cutter-head. No. 1,014,794; Jan. 16; Sp. p. 3796; Gaz. vol. 174; p. 645.
Weiss, John. (See Kessler and Weiss.)
Weissenborn, Albert B., Appleton, Wis. Loom-shuttle. No. 1,015,524; Jan. 23; Sp. p. 5367; Gaz. vol. 174; p. 920.
Weld, Carley G., North Chatham, Mass. Carboreter. No. 1,014,682; Jan. 16; Sp. p. 3558; Gaz. vol. 174; p. 609.
Welles, Edward B., Windsor, Conn. Pencil-sharpener. No. 1,016,117; Jan. 30; Sp. p. 6640; Gaz. vol. 174; p. 1154.
Welles, Richard H., assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Headlight. No. 1,015,750; Jan. 23; Sp. p. 5858; Gaz. vol. 174; p. 999.
Welsbach Light Company. (See Litle, Thomas J., Jr., assignor.)
Welsbach Light Company. (See Sanderson, Edward S., assignor.)
Welsh, John G., San Diego, Cal. Stair-carpet fastener. No. 1,013,345; Jan. 2; Sp. p. 573; Gaz. vol. 174; p. 91.
Welton, William H. H., Akron, Ohio. Switch-point lock. No. 1,013,978; Jan. 9; Sp. p. 1991; Gaz. vol. 174; p. 37.
Wemer, John, New York, N. Y. Iodin solution. No. 1,013,913; Jan. 9; Sp. p. 1838; Gaz. vol. 174; p. 315.
Wenborne, Charles A., Chicago, Ill. Dry-kiln. No. 1,014,190; Jan. 9; Sp. p. 2436; Gaz. vol. 174; p. 409.
Wendler, Adolph, assignor to Firm of D. Hirsch Lichtenberg, near Berlin, Germany. Glass roof. No. 1,016,118; Jan. 30; Sp. p. 6643; Gaz. vol. 174; p. 1155.
Wenthe, Herman H., Chicago, Ill. Seal-press. No. 1,014,105; Jan. 9; Sp. p. 2274; Gaz. vol. 174; p. 379.
Wentz, Jere L., Passaic, N. J., assignor to Robins Conveying Belt Company. Belt conveyer. No. 1,014,106; Jan. 9; Sp. p. 2276; Gaz. vol. 174; p. 379.
Werckmeister, Curt, Hazelwood, Pa. Apparatus for the manufacture of axles. No. 1,015,412; Jan. 23; Sp. p. 5132; Gaz. vol. 174; p. 882.
Werhnjak, George. (See Urchniak and Werhnjek.)
Wermerskirchen, Anthony W., Chicago, Ill. Sample-case. No. 1,013,576; Jan. 2; Sp. p. 1047; Gaz. vol. 174; p. 169.
Werth, Federico, Milan, Italy. Apparatus for galvanising metal tubes, rods, and the like. No. 1,015,863; Jan. 30; Sp. p. 6096; Gaz. vol. 174; p. 1063.
Wertman, J. R., *et al.* (See Michaelson, James M., assignor.)
West, Augustus A., New York, N. Y., and W. H. Benjamin, Newark, N. J. Hair-puffer. No. 1,013,346; Jan. 2; Sp. p. 574; Gaz. vol. 174; p. 91.
West, James W., Des Moines, Iowa. Ice-cream-cone machine. No. 1,014,274; Jan. 9; Sp. p. 2627; Gaz. vol. 174; p. 438.
Western Electric Company. (See Craft, Edward B., assignor.)
Westervelt, Benjamin F., New York, N. Y. Magazine-binder. No. 1,014,926; Jan. 16; Sp. p. 4109; Gaz. vol. 174; p. 692.
Westinghouse Air Brake Company, The. (See Livingston, Fremont P., assignor.)
Westinghouse Air Brake Company, The. (See Murphy, Howard P., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)

Westinghouse Air & Steam Coupler Company. (See Niederlander and Adreon, assignors.)
Westinghouse Electric and Manufacturing Company. (See Abtmeier, Theodore, assignor.)
Westinghouse Electric & Manufacturing Company. (See Barr, John M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Branson, Walter J., assignor.)
Westinghouse Electric & Manufacturing Company. (See Braun, Rudolf, assignor.)
Westinghouse Electric & Manufacturing Company. (See Brown, Harold W., assignor.)
Westinghouse Electric & Manufacturing Company. (See Darlington, Frederick, assignor.)
Westinghouse Electric & Manufacturing Company. (See Forrer, Joseph D., assignor.)
Westinghouse Electric & Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Hadaway, William S., Jr., assignor.)
Westinghouse Electric & Manufacturing Company. (See Ingram, Ralph E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lehr, Edwin, assignor.)
Westinghouse Electric & Manufacturing Company. (See Lincoln, Paul M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Paris, William A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Peck, John S., assignor.)
Westinghouse Electric & Manufacturing Company. (See Pallander, Charles A., assignor.)
Westinghouse Electric & Manufacturing Company. (See Reed, William E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Starker, Charles W., assignor.)
Westinghouse, George, Pittsburgh, Pa. Turbine-blade. No. 1,014,683; Jan. 16; Sp. p. 3561; Gaz. vol. 174; p. 609.
Westinghouse Lamp Company. (See Scott, Charles F., assignor.)
Weston, Folke W., New York, assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y. Clamp. No. 1,014,352; Jan 9; Sp. p. 2821; Gaz. vol. 174; p. 467.
Westover, Henry J. (See Mailloux and Westover.)
Wetzel, Nathan, Kilbourn, Wis. Hat-pin guard. No. 1,015,366; Jan. 23; Sp. p. 5029; Gaz. vol. 174; p. 868.
Wetzel, Wilbur H., Kansas City, Mo. Reel-support. No. 1,013,347; Jan. 2; Sp. p. 575; Gaz. vol. 174; p. 91.
Weygand, Heinrich, Hattingen-Ruhr, Germany. Joint and connection for crossed or abutting parts. No. 1,014,684; Jan. 16; Sp. p. 3562; Gaz. vol. 174; p. 609.
Whalton, Hilary F., Key West, Fla. Sparking apparatus. No. 1,013,466; Jan. 2; Sp. p. 823; Gaz. vol. 174; p. 131.
Wharton, Joseph S. L., *et al.* (See Gibson, George H., assignor.)
Wheat, Alfred H., Horseheads, N. Y. Grain-sprouter. No. 1,013,831; Jan. 2; Sp. p. 1612; Gaz. vol. 174; p. 258.
Wheeler, Albert J. (See Rushing and Wheeler.)
Wheeler Condenser and Engineering Company. (See Brown, John J., assignor.)
Wheeler, Earl A., Bakersfield, Cal. Oil-well pump. No. 1,013,246; Jan. 2; Sp. p. 344; Gaz. vol. 174; p. 55.
Wheeler, Edwin H. (See Joline and Wheeler.)
Wheeler, Frank, Orange, Cal. Vehicle-spring. No. 1,013,577; Jan. 2; Sp. p. 1040; Gaz. vol. 174; p. 169.
Wheeler, George A., New York, N. Y. Moving stairway. No. 1,016,189; Jan. 30; Sp. p. 6765; Gaz. vol. 174; p. 1177.
Wheeler, Leonard E. (See Merrill, Peter H., assignor.)
Wheeler, Walter O., Worcester, Mass. Steam-pump. No. 1,014,795; Jan. 16; Sp. p. 3798; Gaz. vol. 174; p. 645.
Wheelock, Edwin M., Minneapolis, Minn. Traction-engine gearing. No. 1,013,977; Jan. 9; Sp. p. 1989; Gaz. vol. 174; p. 336.
Whetstone, Sylvester S., assignor of one-half to F. A. Kotts, Toledo, Ohio. Tooth-facing-attaching device. No. 1,014,428; Jan. 9; Sp. p. 2972; Gaz. vol. 174; p. 493.
Whipple, Charles A., Elk River, Minn., assignor to The Gopher Manufacturing Company. Excavating-machine. No. 1,015,525; Jan. 23; Sp. p. 5370; Gaz. vol. 174; p. 920.
Whisler, Isma S., assignor of one-half to L. Daniel, Newcastle, Ind. Clutch device. No. 1,015,254; Jan. 16; Sp. p. 4759; Gaz. vol. 174; p. 802.
Whitaker, Richard, assignor to The Brunswick Refrigerating Company, New Brunswick, N. J. Gas-pump. No. 1,013,345; Jan. 2; Sp. p. 576; Gaz. vol. 174; p. 92.
White, Carl H., assignor to The Piogran Sales Company, Denver, Colo. Take-down pocket-knife. No. 1,014,927; Jan. 16; Sp. p. 4110; Gaz. vol. 174; p. 692.
White, Harry M. (See Knox and White.)
White, Herbert E., assignor to The General Fireproofing Company, Youngstown, Ohio. Self-furring metallic lath. No. 1,014,616; Jan. 9; Sp. p. 3341; Gaz. vol. 174; p. 554.
White, Herbert E., assignor to The General Fireproofing Company, Youngstown, Ohio. Making expanded-metal structures. No. 1,014,617; Jan. 9; Sp. p. 3342; Gaz. vol. 174; p. 554.
White, John F., Bloomington, Ill. Flight conveyer. No. 1,016,190; Jan. 30; Sp. p. 6769; Gaz. vol. 174; p. 1177.
White, John F., Bloomington, Ill. Flight conveyer. No. 1,016,191; Jan. 30; Sp. p. 6771; Gaz. vol. 174; p. 1177.
White, John F., Bloomington, Ill. Flight conveyer. No. 1,016,192; Jan. 30; Sp. p. 6773; Gaz. vol. 174; p. 1178.
White, Louis M., and R. J. Sackett, assignors to New Orleans Specialty Co., New Orleans, La. Game apparatus. No. 1,013,709; Jan. 2; Sp. p. 1369; Gaz. vol. 174; p. 214.
White, Wilson J., Arkansas City, Kans. Fan attachment for sewing-machines. No. 1,015,367; Jan. 23; Sp. p. 5030; Gaz. vol. 174; p. 868.
Whitehead, Leo S., Wheeling, W. Va. Wrench. No. 1,015,650; Jan. 23; Sp. p. 5088; Gaz. vol. 174; p. 908.
Whiteley, William. (See Crawford and Whiteley.)
Whitfield, James F., assignor to E. C. Miles, San Francisco, Cal. Moving-picture apparatus. No. 1,015,107; Jan. 16; Sp. p. 4475; Gaz. vol. 174; p. 754.
Whitford, John W. (See Mills and Whitford.)
Whitman, Alfred A. (See Deck, Herman, assignor.)
Whitmore, Charles J., Bellaire, Ohio, assignor of one-fourth to E. P. Pieper and one-fourth to J. W. Pieper, Wheeling, W. Va. Sponge-drawer. No. 1,016,119; Jan. 30; Sp. p. 6644; Gaz. vol. 174; p. 1155.
Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Attaching filaments to leading-in wires. No. 1,013,914; Jan. 9; Sp. p. 1839; Gaz. vol. 174; p. 315.
Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Metal-filament lamp. No. 1,013,915; Jan. 9; Sp. p. 1840; Gaz. vol. 174; p. 315.
Whittier, John W., Rutherford, N. J., assignor to Scott Paper Company. Toilet-paper cabinet. No. 1,015,520; Jan. 23; Sp. p. 5373; Gaz. vol. 174; p. 921.
Whitty, John J., Newport, R. I. Collar for piston-rings. No. 1,013,349; Jan. 2; Sp. p. 578; Gaz. vol. 174; p. 92.
Whitworth, Sam P., Merkel, Tex. Header. No. 1,015,368; Jan. 23; Sp. p. 5031; Gaz. vol. 174; p. 868.
Wich, Ferdinand J., Baltimore, Md. Life-preserver. No. 1,014,546; Jan. 9; Sp. p. 3190; Gaz. vol. 174; p. 530.
Widder, Vincenz, Riedlingen, Germany. Cultivator. No. 1,013,710; Jan. 2; Sp. p. 1370; Gaz. vol. 174; p. 214.
Wieder, Henry G., London, England. Sound reproducing and recording instrument. No. 1,013,247; Jan. 2; Sp. p. 346; Gaz. vol. 174; p. 55.
Wiesner, Moritz, assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Filing-receptacle. No. 1,013,630; Jan. 2; Sp. p. 1172; Gaz. vol. 174; p. 186.
Wiggen, Peter, assignor to J. P. Seeburg Piano Company, Chicago, Ill. Magazine-slot for coin-operated musical instruments. No. 1,014,107; Jan. 9; Sp. p. 2280; Gaz. vol. 174; p. 380.
Wiggin, Joseph M., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,014,853; Jan. 9; Sp. p. 2823; Gaz. vol. 174; p. 467.
Wiggins, Edgar S., Paris, Tenn. Adjustable clamping-support for spectacles and the like. No. 1,013,711; Jan. 2; Sp. p. 1372; Gaz. vol. 174; p. 215.
Wikschtröm, Jakob, Dusseldorf, Germany. Machine for making wire nails and pins. No. 1,014,732; Jan. 16; Sp. p. 3657; Gaz. vol. 174; p. 625.
Wilcoxen, John E., South Bend, Ind. Molding-machine. No. 1,015,403; Jan. 23; Sp. p. 5255; Gaz. vol. 174; p. 900.
Wild, Günther P., assignor to F. W. Schmidt, Philadelphia, Pa. Thermostat. No. 1,013,854; Jan. 2; Sp. p. 1668; Gaz. vol. 174; p. 266.
Wild, Paul C., Rochester, N. Y. Electric coupling. No. 1,014,108; Jan. 9; Sp. p. 2282; Gaz. vol. 174; p. 380.
Wild, Wilhelm. (See Bosch and Wild.)
Wilds, John L., Darlington, S. C. Winding-machine. No. 1,014,860; Jan. 16; Sp. p. 3957; Gaz. vol. 174; p. 669.
Wiley, Edgar C., Lynchburg, Va. Grate. No. 1,015,527; Jan. 23; Sp. p. 5377; Gaz. vol. 174; p. 921.
Wilhelm, Dee W., assignor of one-half to J. H. Williams, De Leon, Tex. Wagon or vehicle tongue support. No. 1,014,928; Jan. 16; Sp. p. 4111; Gaz. vol. 174; p. 692.
Wilhjelm, Sophus J. E., Brooklyn, N. Y. Pin safety-lock. No. 1,015,603; Jan. 23; Sp. p. 5546; Gaz. vol. 174; p. 950.
Wilkins, Charles L., Peoria, Ill. Water-supply system. No. 1,015,464; Jan. 23; Sp. p. 5256; Gaz. vol. 174; p. 901.
Wilkinson, James, Providence, R. I., assignor to General Electric Company. Centrifugal pump. No. 1,013,248; Jan. 2; Sp. p. 349; Gaz. vol. 174; p. 55.
William B. Pollock Company, The. (See Sherman, McKelvey, and Reilly, assignors.)
William Galloway Company. (See Wilson, Dalton K., assignor.)
William Mitchell (Pens) Limited. (See Mitchell, William B., assignor.)
William Schimper & Company. (See Babst, Joseph, assignor.)
Williams, Albert, St. Louis, Mo. Vehicle-wheel. No. 1,015,864; Jan. 30; Sp. p. 6098; Gaz. vol. 174; p. 1063.
Williams, Alfred D., Glassport, Pa. Tie and rail-fastener. No. 1,013,712; Jan. 2; Sp. p. 1374; Gaz. vol. 174; p. 215.
Williams, Arthur F., assignor to Williams Patent Crusher and Pulveriser Company, St. Louis, Mo. Pulveriser. No. 1,014,191; Jan. 9; Sp. p. 2440; Gaz. vol. 174, p. 409.

Williams, Edwin F., Erie, Pa. Piston-valve. No. 1,016,053; Jan. 30; Sp. p. 6507; Gaz. vol. 174; p. 1132.
Williams, Eugene. (See Weelands and Williams.)
Williams Foundry and Machine Company, The. (See Williams, John K., assignor.)
Williams, James E., Clay, Miss. Cotton-chopper. No. 1,015,560; Jan. 23; Sp. p. 5033; Gaz. vol. 174; p. 899.
Williams, Joakin, Pittsburgh, assignor of one-fourth to J. H. Roney, Ingram, Pa. Guide-rest bar for rolling-mills. No. 1,015,751; Jan. 23; Sp. p. 5860; Gaz. vol. 174; p. 999.
Williams, John H. (See Wilhelm, Dee W., assignor.)
Williams, John K., assignor of one-half to The Williams Foundry and Machine Company, Akron, Ohio. Quick-opening door for vulcanizers. No. 1,014,192; Jan. 9; Sp. p. 2441; Gaz. vol. 174; p. 410.
Williams, Lawson M., Henry, assignor of one-half to G. M. Chapman, Bestie, N. C. Grader and ditcher. No. 1,015,465; Jan. 23; Sp. p. 5260; Gaz. vol. 174; p. 901.
Williams, Louis N. D., Ogonts, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J. Knitting-machine needle. No. 1,015,108; Jan. 16; Sp. p. 4478; Gaz. vol. 174; p. 754.
Williams, Louis N. D., Ogonts, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J. Knitting-machine needle. No. 1,015,109; Jan. 16; Sp. p. 4480; Gaz. vol. 174; p. 756.
Williams, Milton P., assignor to Williams Patent Crusher and Pulveriser Company, St. Louis, Mo. Dust-deflector for pulveriser-machines. No. 1,014,193; Jan. 9; Sp. p. 2443; Gaz. vol. 174; p. 410.
Williams Patent Crusher & Pulveriser Company. (See Frickey, Edward H., assignor.)
Williams Patent Crusher and Pulverizer Company. (See Williams, Arthur F., assignor.)
Williams Patent Crusher and Pulveriser Company. (See Williams, Milton P., assignor.)
Williams, Peter K., Columbus, Ohio. Buttonhole-marking machine. No. 1,014,275; Jan. 9; Sp p. 2630; Gaz. vol. 174; p. 430.
Williams, Sylvester M., San Francisco, Cal. Aeroplane. No. 1,014,194; Jan. 9; Sp. p. 2444; Gaz. vol. 174; p. 410.
Williams, White & Company. (See Ainsworth, Harry, assignor.)
Williams, White & Company. (See Cornbrooks, William A., assignor.)
Williamson, Gust, Bangor, Me. Propelling mechanism. No. 1,014,195; Jan. 9; Sp. p. 2447; Gaz. vol. 174; p. 411.
Williamson, John B., Louisville, Ky. Cartridge-belt. No. 1,014,196; Jan. 9; Sp. p. 2450; Gaz. vol. 174; p. 411.
Willis, Franklin W., Roanoke, Va. Level-rod. No. 1,014,547; Jan. 9; Sp. p. 3181; Gaz. vol. 174; p. 530.
Willis, James B., Ann Arbor, Mich. Toaster. No. 1,014,548; Jan. 9; Sp. p. 3183; Gaz. vol. 174; p. 530.
Willis, Leland, assignor to Bateman Manufacturing Company, Grenloch, N. J. Attachment for potato-diggers. No. 1,015,110; Jan. 16; Sp. p. 4482; Gaz. vol. 174; p. 755.
Willis, Prior F., St. Louis, Mo. Acetylene-gas generator. No. 1,013,249; Jan. 2; Sp. p. 350; Gaz. vol. 174; p. 56.
Willmann, Joseph, assignor to Dairy Machinery and Construction Company, Inc., Derby, Conn. Liquid-cooling apparatus. No. 1,015,600; Jan. 23; Sp. p. 5670; Gaz. vol. 174; p. 909.
Wilms, Hermann, East Pittsburgh, Pa. Street-indicator for cars. No. 1,015,111; Jan. 16; Sp. p. 4484; Gaz. vol. 174; p. 755.
Wilson, Andrew D., Riverside, Wash. Fire-escape. No. 1,014,685; Jan. 16; Sp. p. 3564; Gaz. vol. 174; p. 610.
Wilson, Andrew J., assignor of one-half to V. Stephan, Cleveland, Ohio. Toy. No. 1,013,350; Jan. 2; Sp. p. 580; Gaz. vol. 174; p. 92.
Wilson, Dalton K., assignor to William Galloway Company, Waterloo, Iowa. Adjustable foldable harrow. No. 1,015,865; Jan. 30; Sp. p. 6099; Gaz. vol. 174; p. 1063.
Wilson, David H., Chicago, Ill., assignor, by mesne assignments, to Stilwell-Wilson Telephone Company, New York, N. Y. Telephone apparatus. No. 1,015,255; Jan. 16; Sp. p. 4761; Gaz. vol. 174; p. 802.
Wilson, Frederick A., Brooklyn, N. Y. Register and ventilator. No. 1,013,631; Jan. 2; Sp. p. 1174; Gaz. vol. 174; p. 187.
Wilson, George R., Newport News, Va. Insect-proof chest. No. 1,015,984; Jan. 30; Sp. p. 6359; Gaz. vol. 174; p. 1107.
Wilson, Henry B., Birmingham, Ala. Automatic starter for tank-filling apparatus. No. 1,013,713; Jan. 2; Sp. p. 1376; Gaz. vol. 174; p. 215.
Wilson, Herbert S., St. Louis, Mo. Forming paper receptacles. No. 1,015,370; Jan. 23; Sp. p. 5034; Gaz. vol. 174; p. 869.
Wilson, James W. (See Bone, Wilson, and McCourt.)
Wilson, John, Victoria, British Columbia, Canada. Incandescent lamp. No. 1,014,686; Jan. 16; Sp. p. 3565; Gaz. vol. 174; p. 610.
Wilson, John M., Lottie, La. Drain-tile. No. 1,014,549; Jan. 9; Sp. p. 3184; Gaz. vol. 174; p. 531.
Wilson, Paul, Maynard, Mass. Expansion-comb. No. 1,013,714; Jan. 2; Sp. p. 1379; Gaz. vol. 174; p. 216.
Wilson, Reuben W., Indianapolis, Ind. Elevator-stop. No. 1,016,054; Jan. 30; Sp. p. 6508; Gaz. vol. 174; p. 1132.
Wilson, Tom, Chicago, Ill. Drum-rod support. No. 1,014,109; Jan. 9; Sp. p. 2283; Gaz. vol. 174; p. 380.
Wilson, Walter J., Pittsburgh, Pa. Insulator-pin. No. 1,013,250; Jan. 2; Sp. p. 353; Gaz. vol. 174; p. 56.
Wilson, Weiada A., North Yakima, Wash. Combined roller and ditcher. No. 1,014,733; Jan. 16; Sp. p. 3662; Gaz. vol. 174; p. 625.
Wilt, Charles T. and E. E., assignors to Chas. T. Wilt, Chicago, Ill. Trunk. No. 1,015,604; Jan. 23; Sp. p. 5548; Gaz. vol. 174; p. 950.
Wilt, Charles T. and E. E., assignors to Chas. T. Wilt, Chicago, Ill. Garment-hanger. No. 1,015,605; Jan. 23; Sp. p. 5549; Gaz. vol. 174; p. 950.
Wilt, Charles T. and E. E., assignors to Chas. T. Wilt, Chicago, Ill. Garment-hanger. No. 1,015,606; Jan. 23; Sp. p. 5551; Gaz. vol. 174; p. 950.
Wilt, Chas. T. (See Dorn, George, assignor.)
Wilt, Elmer E. (See Wilt, Charles T. and E. E.)
Wilt, Firm of Chas. T. (See Wilt, Charles T. and E. E., assignors.)
Wilton, George E., assignor to Wilton Patent Cedar Siding Company, Everett, Wash. Machine for trimming and shaping the side edges of boards. No. 1,015,528; Jan. 23; Sp. p. 5379; Gaz. vol. 174; p. 922.
Wilton Patent Cedar Siding Company. (See Wilton, George E., assignor.)
Windhoff, Hans, Berlin-Schöneberg, Germany. Roller-skid for railway-cars and similar vehicles. No. 1,014,197; Jan. 9; Sp. p. 2451; Gaz. vol. 174; p. 412.
Window Glass Machine Company. (See Smythe, Horace E., assignor.)
Winkler, Frederick C., Victoria, British Columbia, Canada. Antifriction-bearing compound. No. 1,015,920; Jan. 30; Sp. p. 6220; Gaz. vol. 174; p. 1084.
Winkler, Joseph F., Dollar Bay, Mich. Animal-trap. No. 1,014,550; Jan. 9; Sp. p. 3185; Gaz. vol. 174; p. 531.
Winkley, Erastus E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-jack. No. 1,015,112; Jan. 16; Sp. p. 4486; Gaz. vol. 174; p. 755.
Winkley, Frank D., assignor to Fuller & Johnson Manufacturing Co., Madison, Wis. Carbureter. No. 1,014,988; Jan. 16; Sp. p. 4238; Gaz. vol. 174; p. 718.
Winquist, Victor, Rockford, Ill. Reed holder and protector for musical instruments. No. 1,016,055; Jan. 30; Sp. p. 6511; Gaz. vol. 174; p. 1133.
Winter, August E., Franklin, Pa. Tire. No. 1,015,113; Jan. 16; Sp. p. 4488; Gaz. vol. 174; p. 756.
Winter, Charles, Woodbury, N. J., assignor to Star Seal Company. Machine for applying bottle-seals. No. 1,013,351; Jan. 2; Sp. p. 581; Gaz. vol. 174; p. 92.
Winter, William, Indianapolis, Ind. Safety-razor. No. 1,015,114; Jan. 16; Sp. p. 4489; Gaz. vol. 174; p. 756.
Winton, Alexander, Cleveland, Ohio. Carbureter. No. 1,014,551; Jan. 9; Sp. p. 3186; Gaz. vol. 174; p. 531.
Wirt, Henry E., Lewiston, Minn. Lightning-arrester and test device. No. 1,014,796; Jan. 16; Sp. p. 3800; Gaz. vol. 174; p. 646.
Wirtz, Luis, Edgbaston, Birmingham, England. Clutch. No. 1,013,979; Jan. 9; Sp. p. 1993; Gaz. vol. 174; p. 337.
Wiswell, Leslie C., assignor to Lyon & Healy, Chicago, Ill. Record-disk holder. No. 1,013,916; Jan. 9; Sp. p. 1841; Gaz. vol. 174; p. 315.
Witteman, Adam P. (See Arnhold and Witteman.)
Witten, William S., Chicago, Ill. Dump-cart. No. 1,014,734; Jan. 16; Sp. p. 3664; Gaz. vol. 174; p. 626.
Witthoefft, Charles H., assignor to Witthoefft Collapsible Concrete Forms Company, St. Louis, Mo. Mold for making hollow concrete columns. No. 1,013,251; Jan. 2; Sp. p. 355; Gaz. vol. 174; p. 56.
Witthoefft, Charles H., assignor to Witthoefft Collapsible Concrete Forms Company, St. Louis, Mo. Form and mold for making concrete buildings. No. 1,013,632; Jan. 2; Sp. p. 1176; Gaz. vol. 174; p. 187.
Witthoefft Collapsible Concrete Forms Company. (See Witthoefft, Charles H., assignor.)
Wohl, Maurice J. (See Low, Hertzberg, and Wohl.)
Wohl, Maurice J., New York, and H. Hertzberg, Brooklyn, N. Y., assignors to A. A. Low, Horseshoe, M. J. Wohl, New York, and H. Hertzberg, Brooklyn, N. Y., trustees. Arc-lamp construction. No. 1,013,352; Jan. 2; Sp. p. 582; Gaz. vol. 174; p. 93.
Wolfe, John W., Shenandoah, Iowa. Air-craft. No. 1,014,276; Jan. 9; Sp. p. 2632; Gaz. vol. 174; p. 439.
Wolfe, Thomas G., Oklahoma, Okla. Press. No. 1,015,371; Jan. 23; Sp. p. 5037; Gaz. vol. 174; p. 869.
Wollheim, Heinrich, Berlin, Germany, assignor to American Stamp and Ticket Vending Machine Company, New York, N. Y. Printing-roll. No. 1,014,110; Jan. 9; Sp. p. 2285; Gaz. vol. 174; p. 381.
Wolper, Isaac, New York, N. Y. Auxiliary pilot for railway-trains. No. 1,014,552; Jan. 9; Sp. p. 3188; Gaz. vol. 174; p. 531.
Wood, Alfred R., Troy, N. Y., assignor, by mesne assignments, to The Singer Manufacturing Company, Elizabeth, N. J. Thread-trimming mechanism for sewing-machines. No. 1,013,252; Jan. 2; Sp. p. 356; Gaz. vol. 174; p. 57.
Wood, Benajah W. (See Pledger and Wood.)
Wood, Frederick L. (See Pain and Wood.)
Wood, Frederick W., Mayer, Ariz. Case for disk records. No. 1,014,929; Jan. 16; Sp. p. 4112; Gaz. vol. 174; p. 693.
Wood, Irving B. (See Barrett and Wood.)

Wood, Myron G., Hillsdale, Mich. Window-screen. No. 1,015,413; Jan. 23; Sp. p. 5138; Gaz. vol. 174; p. 682.
Wood, William H., assignor to D. P. McGarry, Rochester, N. Y. Instep-arch support. No. 1,014,687; Jan. 16; Sp. p. 3567; Gaz. vol. 174; p. 610.
Wood, Winfield, Denver, Colo. Electric time-switch. No. 1,014,277; Jan. 9; Sp. p. 2634; Gaz. vol. 174; p. 440.
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution. No. 1,014,354; Jan. 9; Sp. p. 2827; Gaz. vol. 174; p. 467.
Woodbridge, Joseph L., Philadelphia, Pa. Electrical system of distribution. No. 1,014,355; Jan. 9; Sp. p. 2830; Gaz. vol. 174; p. 467.
Woodfield, Otis B., O. M. Morris, and J. W. Gosling, Spring Lake Beach, N. J. Headlight for automobiles. No. 1,014,429; Jan. 9; Sp. p. 2972; Gaz. vol. 174; p. 493.
Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box. No. 1,015,529; Jan. 23; Sp. p. 5381; Gaz. vol. 174; p. 922.
Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box. No. 1,015,607; Jan. 23; Sp. p. 5552; Gaz. vol. 174; p. 951.
Woodruff, George W. (See Taylor and Woodruff.)
Woodward, Oscar, Montclair, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,056; Jan. 30; Sp. p. 6512; Gaz. vol. 174; p. 1133.
Woodworth, Margaret J., Elba, Nebr. Cooking utensil. No. 1,013,253; Jan. 2; Sp. p. 358; Gaz. vol. 174; p. 57.
Woonsocket Napping Machinery Co. (See Praray and Greene, assignors.)
Worrest, Alfred H., Lancaster, Pa. Single-trigger mechanism for double-barrel guns. No. 1,013,254; Jan. 2; Sp. p. 359; Gaz. vol. 174; p. 57.
Worrest, Alfred H., Lancaster, Pa. Counterweighted single trigger for double-barrel guns. No. 1,013,255; Jan. 2; Sp. p. 362; Gaz. vol. 174; p. 58.
Worth, Mason G., assignor to C. S. Davis, New York, N. Y. Washer-making machine. No. 1,015,752; Jan. 23; Sp. p. 5862; Gaz. vol. 174; p. 999.
Wortham, Elliott S., Chicago, Ill. Concrete pipe. No. 1,014,735; Jan. 16; Sp. p. 3667; Gaz. vol. 174; p. 626.
Woruda, Hans, Vienna, Austria-Hungary. Rail-joint. No. 1,013,256; Jan. 2; Sp. p. 364; Gaz. vol. 174; p. 58.
Wright, Gilbert. (See Barringer and Wright.)
Wright, Jacob P., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Box-filling machine. No. 1,014,356; Jan. 9; Sp. p. 2832; Gaz. vol. 174; p. 468.
Wright, Morris S., assignor to M. S. Wright Company, Worcester, Mass. Pneumatic cleaning-machine. No. 1,015,372; Jan. 23; Sp. p. 5042; Gaz. vol. 174; p. 870.
Wrinkle, Noah, and R. G. Paddock, San Francisco, Cal. Obtaining carbonate of soda. No. 1,016,239; Jan. 30; Sp. p. 6869; Gaz. vol. 174; p. 1193.
Writerpress Company, The. (See Adamson, Charles M., assignor.)
Wilfing, Dahl and Company. (See Ulrichs, Ernst, assignor.)
Wurtz, Elmer A., Barberton, Ohio. Steam generator and regulator for turbines. No. 1,014,797; Jan. 16; Sp. p. 3802; Gaz. vol. 174; p. 646.
Wygodsky, Leon, New York, N. Y. Means for operating oil-engines. No. 1,015,115; Jan. 16; Sp. p. 4490; Gaz. vol. 174; p. 756.
Wylie, Chester L., Valley City, N. D. Grain-separator. No. 1,013,257; Jan. 2; Sp. p. 365; Gaz. vol. 174; p. 58.
Wysong, Olmedo C., Greensboro, N. C. Belt sandpapering-machine. No. 1,013,980; Jan. 9; Sp. p. 1996; Gaz. vol. 174; p. 338.
Wyton, James W., New York, N. Y. Expansion pipe-joint. No. 1,013,258; Jan. 2; Sp. p. 367; Gaz. vol. 174; p. 59.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,015,373; Jan. 23; Sp. p. 5045; Gaz. vol. 174; p. 870.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,057; Jan. 30; Sp. p. 6517; Gaz. vol. 174; p. 1133.
Yawman & Erbe Manufacturing Company. (See Wiesner, Moritz, assignor.)
Yawman & Erbe Manufacturing Company. (See Yawman, Philip H., assignor.)
Yawman, Philip H., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Partition or guide for files. No. 1,013,633; Jan. 2; Sp. p. 1179; Gaz. vol. 174; p. 188.
Ybarra, Samuel, St. Louis, Mo. Explosive-engine. No. 1,015,116; Jan. 16; Sp. p. 4494; Gaz. vol. 174; p. 757.
Yeager, Herbert W., assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa. Discharge apparatus for casting-machines. No. 1,015,374; Jan. 23; Sp. p. 5050; Gaz. vol. 174; p. 870.
Yetts, Frank L., New York, N. Y. Pneumatic valve-action. No. 1,013,259; Jan. 2; Sp. p. 368; Gaz. vol. 174; p. 59.
Yoeckel, Carl H., *et al.* (See Shoemaker, Alvin H., assignor.)
Yost Writing Machine Company. (See Smith, Arthur W., assignor.)
Young, Carl D. (See Tibbals and Young.)
Young, Charles A. (See Fisher and Young.)
Young, Charles A., Enon, Ohio. Repeating firearm. No. 1,013,353; Jan. 2; Sp. p. 583; Gaz. vol. 174; p. 93.
Young, John L. (See Callender, Ward G., assignor.)
Young, Leonard A., Detroit, Mich. Reinforced-rim spring construction. No. 1,014,736; Jan. 16; Sp. p. 3668; Gaz. vol. 174; p. 626.
Young, Maimie I., Kearney, Nebr. Dough-raising device. No. 1,013,260; Jan. 2; Sp. p. 370; Gaz. vol. 174; p. 59.
Yuste, Eloy C., and F. Del Collado, Mexico, Mexico. Receptacle for bandage-rolls, gauze, and cotton-wool. No. 1,013,715; Jan. 2; Sp. p. 1382; Gaz. vol. 174; p. 216.
Zaerr, Byron L., Chicago, Ill., and C. W. Hamlin, Los Angeles, Cal. Coin-controlled stamp or ticket vending machine. No. 1,014,278; Jan. 9; Sp. p. 2639; Gaz. vol. 174; p. 440.
Zahn, Robert, Plauen, Germany. Jacquard mechanism for embroidering-machines. No. 1,013,261; Jan. 2; Sp. p. 371; Gaz. vol. 174; p. 59.
Zahn, Robert, Plauen, Germany. Pantograph embroidering-machine. No. 1,013,467; Jan. 2; Sp. p. 825; Gaz. vol. 174; p. 131.
Zahn, Robert, Plauen, Germany. Embroidery-machine. No. 1,016,193; Jan. 30; Sp. p. 6776; Gaz. vol. 174; p. 1178.
Zahn, Robert, Plauen, Germany. Embroidery-machine. No. 1,016,194; Jan. 30; Sp. p. 6778; Gaz. vol. 174; p. 1178.
Zart, Arthur, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 1,015,375; Jan. 23; Sp. p. 5051; Gaz. vol. 174; p. 871.
Zehner, Alfred G., *et al.* (See De Bats, Louis H. J., assignor.)
Zehner, F. Edwin, *et al.* (See De Bats, Louis H. J., assignor.)
Zeiss, Firm of Carl. (See Schüttauf, Richard, assignor.)
Zelinsky, Hugo W., Tacoma, Wash. Bicycle-stand. No. 1,016,195; Jan. 30; Sp. p. 6779; Gaz. vol. 174; p. 1179.
Zeller, Bernard L. (See Boegen, John E., assignor.)
Zellers, Claude M., St. Louis Mo. Automobile-top. No. 1,014,553; Jan. 9; Sp. p. 3192; Gaz. vol. 174; p. 532.
Zent, Otto, Little River, Kans. Trestle. No. 1,014,554; Jan. 9; Sp. p. 3194; Gaz. vol. 174; p. 532.
Zerreiss, Jean. (See Valentin, Zerreiss, and Georges.)
Zimdars, Anna, assignor of one-half to I. M. Davis, San Francisco, Cal. Game apparatus. No. 1,014,555; Jan. 9; Sp. p. 3196; Gaz. vol. 174; p. 532.
Zimmer, Conrad W. (See Huber, John F., assignor.)
Zint, George, Wapakoneta, Ohio. Bell-ringing machine. No. 1,013,262; Jan. 2; Sp. p. 373; Gaz. vol. 174; p. 60.
Zirbel, Carl J., Montezuma, Iowa. Air-motor gear. No. 1,015,921; Jan. 30; Sp. p. 6221; Gaz. vol. 174; p. 1084.
Zirwas, Henry. (See Kleber, Peter, assignor.)
Zublin, Carl. (See Pleiock and Zublin.)
Zuelzer, Georg, Berlin-Charlottenburg, Germany. Non-toxic suprarenal preparation. No. 1,014,198; Jan. 9; Sp. p. 2453; Gaz. vol. 174; p. 412.
Zuggó, Károly, South Lorain, Ohio. Aeroplane. No. 1,014,430; Jan. 9; Sp. p. 2978; Gaz. vol. 174; p. 494.
Zuzuly, Gustav, Pullman, Ill. Scraping-tool. No. 1,014,798; Jan. 16; Sp. p. 3805; Gaz. vol. 174; p. 647.
Zwinz, Franz, Vienna, Austria-Hungary. Winding apparatus for paper, cloth, or the like. No. 1,013,917; Jan. 9; Sp. p. 1842; Gaz. vol. 174; p. 316.
Zysset, Ernst, Wädenswil, Switzerland. Culinary-utensil cover. No. 1,013,263; Jan. 2; Sp. p. 379; Gaz. vol. 174; p. 61.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
Adams & Westlake Company, The. (See Hamm and Newbold, assignors.)
Annis, John E., Chattanooga, Tenn. Metal shingle. No. 42,101; Jan. 23; Gaz. vol. 174; p. 1006.
Ashley, Frank M., New York, N. Y. Inkstand. No. 42,077; Jan. 9; Gaz. vol. 174; p. 569.
Baldwin, Carlisle H., assignor to The Corbin Cabinet Lock Company, New Britain, Conn. Mail-box. No. 42,095; Jan. 16; Gaz. vol. 174; p. 813.
Bandlow, Henry E., Chicago, Ill. Lamp. No. 42,078; Jan. 9; Gaz. vol. 174; p. 569.
Bardesbanian, Takvor, New York, N. Y. Bread-board. No. 42,117; Jan. 30; Gaz. vol. 174; p. 1196.
Barker, Alfred. (See Barker, James, A., and J. P.)
Barker, James, A., and J. P., assignors to said James Barker, Philadelphia, Pa. Chair-arm. No. 42,096; Jan. 16; Gaz. vol. 174; p. 813.
Barker, Joseph P. (See Barker, James, A., and J. P.)
Barmore, Nathaniel L., Chicago, Ill. Name-plate for burial-caskets. No. 42,079; Jan. 9; Gaz. vol. 174; p. 569.
Beckwith, Arthur K., assignor to the Estate of P. D. Beckwith, Incorporated, Dowagiac, Mich. Cooking stove or range. No. 42,102; Jan. 23; Gaz. vol. 174; p. 1006.
Beldam, George W., Ealing, England. Pneumatic-tire tread. Nos. 42,103–4; Jan. 23; Gaz. vol. 174; p. 1007.
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Electric lamp. No. 42,118; Jan. 30; Gaz. vol. 174; p. 1196.
Brooker, Leo N., St. Paul, Minn. Fraternal emblem. No. 42,080; Jan. 9; Gaz. vol. 174; p. 569.
Caldwell, Eugene S., Philadelphia, Pa. Thermostatic valve. No. 42,081; Jan. 9; Gaz. vol. 174; p. 569.
Colburn, Serenus M. (See Mitchell and Colburn.)
Corbin Cabinet Lock Company, The. (See Baldwin, Carlisle H., assignor.)
Delson, Alexander C., Chicago, Ill. Neck or chest protector. No. 42,082; Jan. 9; Gaz. vol. 174; p. 570.
Doddridge, James M. and W. I., Milton, Ind. Lining for graves. No. 42,097; Jan. 16; Gaz. vol. 174; p. 813.
Doddridge, Wilbur I. (See Doddridge, James M. and W. I.)
Ducsay, István, Canonsburg, Pa. Picture-hanger. No. 42,105; Jan. 23; Gaz. vol. 174; p. 1007.
Duncan & Miller Glass Company. (See Miller, John E., assignor.)
Farr, Ernest W., *et al.* (See Perrine, William E., assignor.)
Fink, Fayette F. (See Munroe and Fink.)
Friedman, Morris, Chicago, Ill. Show-case. No. 42,106; Jan. 23; Gaz. vol. 174; p. 1007.
Fritchle Automobile & Battery Co., The. (See Fritchle, Oliver P., assignor.)
Fritchle, Oliver P., assignor to The Fritchle Automobile & Battery Co., Denver, Colo. Automobile-body. No. 42,073; Jan. 2; Gaz. vol. 174; p. 270.
Girl, Christian, *et al.* (See Perrine, William E., assignor.)
Haley, Reuben, Beaver, Pa., assignor to Jefferson Glass Company, Follansbee, W. Va. Lamp-shade. Nos. 42,098–9; Jan. 16; Gaz. vol. 174; pp. 813–14.
Hamm, William S., Hubbard Woods, and R. M. Newbold, assignors to The Adams & Westlake Company, Chicago, Ill. Automobile-lamp. No. 42,083; Jan. 9; Gaz. vol. 174; p. 570.
Hughes, William, Taunton, Mass. Eyelet. No. 42,100; Jan. 16; Gaz. vol. 174; p. 814.
International Silver Co. (See Pretat, Frederick E., assignor.)
International Silver Co. (See Strohhaker, Gustave, assignor.)
Jefferson Glass Company. (See Haley, Reuben, assignor.)
Jefferson Glass Co. (See Schnelbach, Harry A., assignor.)
Johnsen, Max, Olympia, Wash. Egg-cup. No. 42,084; Jan. 9; Gaz. vol. 174; p. 570.
Joy, Henry B., assignor to Packard Motor Car Company, Detroit, Mich. Vehicle-body. No. 42,074; Jan. 2; Gaz. vol. 174; p. 270.
Juergens, Hans P., Chicago, Ill. Badge or button. No. 42,085; Jan. 9; Gaz. vol. 174; p. 570.
L. S. Donaldson Company. (See Mitchell and Colburn, assignors.)
Lane, William H., and J. P. Ledger, Leominster, Mass. Barrette. No. 42,086; Jan. 9; Gaz. vol. 174; p. 570.
Ledger, John P. (See Lane and Ledger.)
Luxury Sales Company. (See Thompson, Charles E., assignor.)
Miller, John E., assignor to Duncan & Miller Glass Company, Washington, Pa. Globe or shade. No. 42,107; Jan. 23; Gaz. vol. 174; p. 1007.
Mitchell, John S., and S. M. Colburn, assignors to L. S. Donaldson Company, Minneapolis, Minn. Store-counter. No. 42,108; Jan. 23; Gaz. vol. 174; p. 1007.
Munroe, Alexander, and F. F. Fink, Omaha, Nebr. Number-display casing. No. 42,109; Jan. 23; Gaz. vol. 174; p. 1008.
Neff, August E., Chicago, Ill. Portière. No. 42,087; Jan. 9; Gaz. vol. 174; p. 571.
Nelson, Charles, assignor to S. Sternau & Company, New York, N. Y. Coffee-percolator. No. 42,088; Jan. 9; Gaz. vol. 174; p. 571.
Newbold, Roger M. (See Hamm and Newbold.)
Newton, Leon W., Boston, Mass. Chair. No. 42,089; Jan. 9; Gaz. vol. 174; p. 571.
P. D. Beckwith, Incorporated. (See Beckwith, Arthur K., assignor.)
Packard Motor Car Company. (See Joy, Henry B., assignor.)
Perrine, William E., assignor of one-third to C. Girl, Cleveland, and one-third to E. W. Farr, Cleveland Heights, Ohio. Vehicle wheel-anchorage device. No. 42,090; Jan. 9; Gaz. vol. 174; p. 571.
Potomac Glass Company, The. (See Sloan, Matthew H., assignor.)
Pretat, Frederick E., Waterbury, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. (Reissue.) No. 13,359; Jan. 9; Gaz. vol. 174; p. 568.
Richeson, Richard S., St. Louis, Mo. Vehicle-body. No. 42,075; Jan. 2; Gaz. vol. 174; p. 270.
Rubes, Ernest, Brooklyn, N. Y. Automobile-horn. No. 42,091; Jan. 9; Gaz. vol. 174; p. 572.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Inc., Newark, Ohio. Dish. No. 42,110; Jan. 23; Gaz. vol. 174; p. 1008.
Sargent & Company. (See Stevens, William E., assignor.)
Schnelbach, Harry A., Steubenville, Ohio, assignor to Jefferson Glass Company, Follansbee, W. Va. Lamp-shade. Nos. 42,111–12; Jan. 23; Gaz. vol. 174 p. 1008.
Shunk, Harry O., Denver, Colo. Cigar and cigarette holder. No. 42,092; Jan. 9; Gaz. vol. 174; p. 572.
Sloan, Matthew H., assignor to The Potomac Glass Company, Cumberland, Md. Drinking vessel or similar article. No. 42,113; Jan. 23; Gaz. vol. 174; p. 1008.
Sternau & Co., S. (See Nelson, Charles, assignor.)
Stevens, William E., assignor to Sargent & Company, New Haven, Conn. Casket-trimming. No. 42,093; Jan. 9; Gaz. vol. 174; p. 572.
Stewart, Horace P., Grand Rapids, Mich. Clasp. No. 42,114; Jan. 23; Gaz. vol. 174; p. 1008.
Stone, Elmer B., New Britain, Conn. Key. No. 42,094; Jan. 9; Gaz. vol. 174; p. 572.
Strohhaker, Gustave, Wallingford, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. (Reissue.) No. 13,360; Jan. 9; Gaz. vol. 174; p. 568.
Szathmary, Paul, Clarence, N. Y. Centerpiece for tables. No. 42,115; Jan. 23; Gaz. vol. 174; p. 1009.
Thompson, Charles E., assignor to Luxury Sales Company, Troy, N. Y. Massage device. No. 42,119; Jan. 30; Gaz. vol. 174; p. 1196.
Thompson, Charles E., assignor to Luxury Sales Company, Troy, N. Y. Shaving-brush. No. 42,120; Jan. 30; Gaz. vol. 174; p. 1196.
Thompson, Charles E., assignor to Luxury Sales Company, Troy, N. Y. Rubber finger-pad for massage devices. No. 42,121; Jan. 30; Gaz. vol. 174; p. 1196.
Turner, Albert C., San Francisco, Cal. Badge. No. 42,116; Jan. 23; Gaz. vol. 174; p. 1009.
Vandiver, Leslie A., Chicago, Ill. Show-case. No. 42,076; Jan. 2; Gaz. vol. 174; p. 270.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. A. Vantine & Co., New York, N. Y. Talcum powders. No. 85,206; Jan. 30; Gaz. vol. 174; p. 1215.

A/S Hurum Fabriker, Jelöen, Norway. Sulfate cellulose. No. 85,129; Jan. 30; Gaz. vol. 174; p. 1213.

Ackerman-Stewart Drug Co., Palatka, Fla. Condition-powders. No. 84,923; Jan. 16; Gaz. vol. 174; p. 823.

Adie, Andrew, Newton, Mass. Worsted and merino yarn. No. 84,711; Jan. 2; Gaz. vol. 174; p. 283.

Aeolian Company, Meriden, Conn.; Garwood, N. J., and New York, N. Y. Automatic piano-players and music for the same. No. 84,796; Jan. 9; Gaz. vol. 174; p. 579.

Alfred Nelson Company, New York, N. Y. Sporting coats, vests, trousers, knickerbockers, &c. No. 84,913; Jan. 9; Gaz. vol. 174; p. 582.

Allen-Foster-Willett Co., Lynn, Mass. Leather boots and shoes. No. 85,053; Jan. 30; Gaz. vol. 174; p. 1211.

Allendorff, Hugo, Bad Wildungen, Germany. Medicinal tea. No. 85,062; Jan. 30; Gaz. vol. 174; p. 1211.

American Glue Company, Boston, Mass. Glue. Nos. 84,712–19; Jan. 2; Gaz. vol. 174; p. 283.

American Graphophone Company, Bridgeport, Conn. Talking-machines. No. 84,714; Jan. 2; Gaz. vol. 174; p. 283.

American Hominy Company, Indianapolis, Ind. Certain foods and stock feed. No. 84,797; Jan. 9; Gaz. vol. 174; p. 579.

American Lava Company, Chattanooga, Tenn. Acetylene-burners. No. 85,026; Jan. 23; Gaz. vol. 174; p. 1023.

American Luxfer Prism Company of Illinois, Chicago, Ill. Vault-lights and prismatic glass. No. 84,798; Jan. 9; Gaz. vol. 174; p. 579.

American Molasses Co., New York, N. Y. Molasses. No. 84,799; Jan. 9; Gaz. vol. 174; p. 579.

American Prepared Food Co., South Bend, Ind. Certain foods. No. 84,800; Jan. 9; Gaz. vol. 174; p. 579.

American Thread Company, The, Jersey City, N. J. Spool-cotton, sewing-cotton, thread, and cotton yarn. Nos. 84,801–2; Jan. 9; Gaz. vol. 174; p. 579.

American Writing Paper Company, Holyoke, Mass. Writing-paper. Nos. 84,803–5; Jan. 9; Gaz. vol. 174; p. 579.

American Writing Paper Company, Holyoke, Mass. Writing-paper. Nos. 85,027–31; Jan. 23; Gaz. vol. 174; p. 1023.

Amory, Charles W., *et al.* (See Amoskeag Manufacturing Company, assignor.)

Amory, William, *et al.* (See Amoskeag Manufacturing Company, assignor.)

Amoskeag Manufacturing Company, assignor to F. P. Carpenter, T. J. Coolidge, T. J. Coolidge, Jr., Manchester, N. H., C. W. Amory, W. Amory, P. Dexter, G. A. Gardner, Boston, T. Parsons, Mattapoisett, F. C. Dumaine, Concord, G. Wigglesworth, Milton, G. L. Stone, Brookline, and G. V. Meyer, Hamilton, Mass. Cotton piece goods. No. 84,924; Jan. 16; Gaz. vol. 174; p. 823.

Anciens Établissements Pieper S^te. A^ne., Herstal, near Liege, Belgium. Pistols, rifles, guns, and cartridges. No. 84,806; Jan. 9; Gaz. vol. 174; p. 579.

Andrew Jergens Co., The, New York, N. Y., and Cincinnati, Ohio. Toilet water, face-powder, and perfumes. No. 84,970; Jan. 16; Gaz. vol. 174; p. 824.

Andrew Jergens Co., The, New York, N. Y., and Cincinnati, Ohio. Toilet soap. No. 85,132; Jan. 30; Gaz. vol. 174; p. 1213.

Andrew Jergens Co., The, New York, N. Y., and Cincinnati, Ohio. Certain toilet preparations. No. 85,133; Jan. 30; Gaz. vol. 174; p. 1213.

Andrew Jergens Co., The, New York, N. Y., and Cincinnati, Ohio. Perfumes and toilet water. No. 85,134; Jan. 30; Gaz. vol. 174; p. 1213.

Andrews & Company, O. E., Jersey City, N. J. Flavoring extracts and powdered cocoa. No. 84,925; Jan. 16; Gaz. vol. 174; p. 823.

Anglo-American Pharmaceutical Company Ltd., Croydon, England, and New York, N. Y. Liniment. No. 84,926; Jan. 16; Gaz. vol. 174; p. 823.

Antholine Manufacturing Co., The, Hutchinson, Kans. Ointments. No. 84,894; Jan. 9; Gaz. vol. 174; p. 581.

Armac Motor Co., Chicago, Ill. Motor-cycles. No. 84,928; Jan. 16; Gaz. vol. 174; p. 823.

Arthur Chemical Co., The, New Haven, Conn. Toilet-powder. No. 85,054; Jan. 30; Gaz. vol. 174; p. 1211.

Artists' Model Corset Company, The, Cleveland, Ohio. Corsets. No. 85,055; Jan. 30; Gaz. vol. 174; p. 1211.

Atwater Company, J. H., Providence, R. I. Files for papers and books. No. 84,927; Jan. 16; Gaz. vol. 174; p. 823.

Aubry Sisters, New York, N. Y. Cold and greaseless creams. No. 84,715; Jan. 2; Gaz. vol. 174; p. 283.

Aubuchon-Garneau Candy Company, St. Louis, Mo. Candy and candied popcorn. No. 85,066; Jan. 30; Gaz. vol. 174; p. 1211.

Austin, Richard, Memphis, Tenn. Washing compound. No. 85,057; Jan. 30; Gaz. vol. 174; p. 1211.

Azone Manufacturing Company, Kingman, Kans. Hair-tonic and remedies for certain diseases. No. 84,716; Jan. 2; Gaz. vol. 174; p. 283.

B. O. Wright & Cote, New York, N. Y. Umbrellas. No. 84,024; Jan. 16; Gaz. vol. 174; p. 826.

B. P. Ducas Co., New York, N. Y. Chemical and laundry starches. No. 84,731; Jan. 2; Gaz. vol. 174; p. 283.

B. P. Ducas Co., New York, N. Y. Oils for treatment of textiles and leather. No. 85,091; Jan. 30; Gaz. vol. 174; p. 1212.

Baker, Charles W., Aberdeen, Md. Canned vegetables. No. 85,058; Jan. 30; Gaz. vol. 174; p. 1211.

Baldwin Refrigerator Co., The, Burlington, Vt. Refrigerators and ice-boxes. No. 84,929; Jan. 16; Gaz. vol. 174; p. 823.

Banthien, Gustav, Hamburg, Germany. Sauces and preparations for making bouillon and soups. No. 85,059; Jan. 30; Gaz. vol. 174; p. 1211.

Barbour, John E., Lake View, N. J. Thread. Nos. 84,807–8; Jan. 9; Gaz. vol. 174; p. 579.

Barrett Manufacturing Company, New York, N. Y. Waterproof sheathing and building papers. No. 84,717; Jan. 2; Gaz. vol. 174; p. 283.

Bauer & Cie., Berlin, Germany. Disinfecting means for mouth and throat. Nos. 84,896–7; Jan. 9; Gaz. vol. 174; p. 582.

Bayerson Oil Works, Erie, Pa. Core-makers' oils. No. 84,718; Jan. 2; Gaz. vol. 174; p. 283.

Bedford-Pittman Company, Philadelphia, Pa. Leather shoes. No. 84,719; Jan. 2; Gaz. vol. 174; p. 283.

Beline, Ellie, New York, N. Y. Mesh bags, vanity and cigarette cases, bric-à-brac, &c. No. 85,032; Jan. 23; Gaz. vol. 174; p. 1023.

Bernheim, Samuel, Paris, France. Preparation having a basis of horse-meat juice. No. 84,930; Jan. 16; Gaz. vol. 174; p. 823.

Bigsby Manufacturing Company, The, Cleveland, Ohio. Spark-plugs. No. 85,060; Jan. 30; Gaz. vol. 174; p. 1211.

Biloxi Canning Co. of Louisiana, New Orleans, La. Canned oysters, shrimps, &c. No. 85,061; Jan. 30; Gaz. vol. 174; p. 1211.

Birdsall Brothers Co., Seelyville and Honesdale, Pa. Shirts and trousers. No. 85,062; Jan. 30; Gaz. vol. 174; p. 1211.

Bland, Thomas, Waterbury, Conn. Veterinary balling and powder gun. No. 84,720; Jan. 2; Gaz. vol. 174; p. 283.

Bleecher, Rutger, New York, N. Y. Blended coffee. No. 85,063; Jan. 30; Gaz. vol. 174; p. 1211.

Blodgett, Ordway & Webber, Boston, Mass. Toweling. No. 84,721; Jan. 2; Gaz. vol. 174; p. 283.

Blodgett, Ordway & Webber, Boston, Mass. Toweling. No. 85,033; Jan. 23; Gaz. vol. 174; p. 1023.

Bluffton Chemical Company, The, Bluffton, Ind. Medicinal preparation. No. 85,064; Jan. 30; Gaz. vol. 174; p. 1211.

Boston Gore and Web Manufacturing Company, Boston, Mass. Elastic webbing. No. 84,931; Jan. 16; Gaz. vol. 174; p. 823.

Brass Goods M'f'g Co., Brooklyn, N. Y. Water-filters. No. 84,722; Jan. 2; Gaz. vol. 174; p. 283.

Brennig, Aimée C., New York, N. Y. Cigarettes. No. 84,723; Jan. 2; Gaz. vol. 174; p. 283.

Brogon Mills, Anderson, S. C. Cotton dometts and flannels. No. 84,932; Jan. 16; Gaz. vol. 174; p. 823.

Brown, Albert E., Mobile, Ala. Remedy for malaria. No. 84,724; Jan. 2; Gaz. vol. 174; p. 283.

Brown and Bishop, Bay City, Mich. Sunbonnets. No. 85,067; Jan. 30; Gaz. vol. 174; p. 1211.

Bürger, Johannes, Wernigerode-on-the-Harz, Germany. Cardiac medicaments. No. 84,933; Jan. 16; Gaz. vol. 174; p. 823.

Burgess Sulphite Fibre Company, Berlin, N. H. Caustic soda. No. 84,725; Jan. 2; Gaz. vol. 174; p. 283.

Burk, Fried & Company, Baltimore, Md. Men's clothes. No. 84,898; Jan. 9; Gaz. vol. 174; p. 582.

C. A. Briggs Co., Portland, Me., and Boston, Mass. Candy lozenges. No. 85,066; Jan. 30; Gaz. vol. 174; p. 1211.

C. F. Mueller Co., Jersey City, N. J. Egg-noodles. No. 85,157; Jan. 30; Gaz. vol. 174; p. 1214.

Cadorette Bros. & Co., Lawrence, Mass. Javelle water. No. 85,068; Jan. 30; Gaz. vol. 174; p. 1211.

California Fruit Canners Association, San Francisco, Cal. Canned fruits and vegetables. No. 84,813; Jan. 9; Gaz. vol. 174; p. 579.

California Fruit Growers Exchange, Los Angeles, Cal. Lemons. No. 85,069; Jan. 30; Gaz. vol. 174; p. 1211.

Canvas Decoy Co., Union City, Tenn. Waterproof fabrics. No. 84,934; Jan. 16; Gaz. vol. 174; p. 823.
Carondelet Packing Company, St. Louis, Mo. Hams, bacon, and lard. No. 85,070; Jan. 30; Gaz. vol. 174; p. 1211.
Carpenter, Frank, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Carter, Webster & Co., Baltimore, Md. Hosiery. No. 84,935; Jan. 16; Gaz. vol. 174; p. 823.
Centerville Brewing Company, Cleveland, Wis. Beer. No. 84,936; Jan. 16; Gaz. vol. 174; p. 823.
Central California Canneries, San Francisco, Cal. Canned fruits. No. 85,071; Jan. 30; Gaz. vol. 174; p. 1211.
Chaloner, John A., Cobham, Va. Quarterly newspaper. No. 84,814; Jan. 9; Gaz. vol. 174; p. 579.
Champion Ignition Company, Flint, Mich. Certain electrical apparatus. No. 85,073; Jan. 30; Gaz. vol. 174; p. 1211.
Charter Oak Citrus Assn., Charter Oak, Cal. Oranges and lemons. No. 84,937; Jan. 16; Gaz. vol. 174; p. 823.
Chas. W. Bauermeister Company, Terre Haute, Ind. Certain foods. No. 84,810; Jan. 9; Gaz. vol. 174; p. 579.
Chase & Neely, Bradford, Pa. Food-coloring. No. 85,074; Jan. 30; Gaz. vol. 174; p. 1211.
Chattanooga Medicine Co., Chattanooga, Tenn. Medicine for female diseases. No. 84,899; Jan. 9; Gaz. vol. 174; p. 582.
Chattanooga Medicine Co., Chattanooga, Tenn. Liver medicine. No. 84,900; Jan. 9; Gaz. vol. 174; p. 582.
Chicago Consolidated Bottling Company, The, Chicago, Ill. Ginger-ale. No. 84,815; Jan. 9; Gaz. vol. 174; p. 579.
Chicago Retort & Fire Brick Co., Chicago, Ill. Fire-brick. No. 84,816; Jan. 9; Gaz. vol. 174; p. 579.
Christensen, Christian, Gayville, S. D. Remedy for foul and chilled broods among bees. No. 84,938; Jan. 16; Gaz. vol. 174; p. 823.
Clague, Stanley, assignor to Yours Truly Company, Chicago, Ill. Shoe, leather, metal, and stove polish, washing-powder, &c. No. 85,075; Jan. 30; Gaz. vol. 174; p. 1211.
Clague, Stanley, assignor to Yours Truly Company, Chicago, Ill. Certain foods. No. 85,076; Jan. 30; Gaz. vol. 174; p. 1211.
Clay & Abraham, Liverpool, England. Obtundents. No. 84,939; Jan. 16; Gaz. vol. 174; p. 823.
Cleasby, William H., Hartford, Conn. Cash and expense books. No. 85,078; Jan. 30; Gaz. vol. 174; p. 1211.
Cochrane Manufacturing Co., Dedham, Mass. Handkerchiefs. No. 84,940; Jan. 16; Gaz. vol. 174; p. 823.
Columbian Rope Co., Auburn, N. Y. Manila and sisal rope. No. 84,727; Jan. 2; Gaz. vol. 174; p. 283.
Columbus Brick and Terra Cotta Co., The, Columbus, Ohio. Brick. No. 84,941; Jan. 16; Gaz. vol. 174; p. 823.
Conradty (Inhaber Pauline & Eugen Conradty) Fabrik elektrischer u. galvanischer Kohlen, C., Nuremberg, Germany. Electric-arc-light carbons. No. 85,079; Jan. 30; Gaz. vol. 174; p. 1211.
Conservenfabrik Lensburg vorm. Henckell & Roth, Lensburg, Switzerland. Certain foods. No. 85,080; Jan. 30; Gaz. vol. 174; p. 1212.
Conway Bros. Brewing & Malting Company, Troy, N. Y. Beer. No. 85,081; Jan. 30; Gaz. vol. 174; p. 1212.
Coolidge, T. Jefferson, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Coolidge, T. Jefferson, Jr., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Corona Cut Glass Company, Toledo, Ohio. Cut and engraved glassware. No. 85,034; Jan. 23; Gaz. vol. 174; p. 1023
Covert Mfg. Co., Watervliet, N. Y. Harness hardware. No. 85,082; Jan. 30; Gaz. vol. 174; p. 1212.
Crane Medicine Co., Chicago, Ill. Remedy for coughs and colds. No. 85,083; Jan. 30; Gaz. vol. 174; p. 1212.
Crosse & Blackwell, Limited, London, England. Pickles and malt vinegar. No. 84,942; Jan. 16; Gaz. vol. 174; p. 823.
Crown Corset Company, New York, N. Y. Corsets, corset-waists, brassières, and underwaists. No. 85,084; Jan. 30; Gaz. vol. 174; p. 1212.
Crystal Gelatine Company, Boston, Mass. Coffee-settler. No. 85,085; Jan. 30; Gaz. vol. 174; p. 1212.
Cumberland Mfg. Co., Nashville, Tenn. Flavoring extracts and spices. No. 84,817; Jan. 9; Gaz. vol. 174; p. 579.
Curtis Publishing Company, Philadelphia, Pa. Weekly journal. No. 84,728; Jan. 2; Gaz. vol. 174; p. 283.
Cusimano, Jacob, New Orleans, La. Tomato paste. No. 84,818; Jan. 9; Gaz. vol. 174; p. 579.
Daland, Frederick H., New York, N. Y. Soap. No. 85,086; Jan. 30; Gaz. vol. 174; p. 1212.
De Cernea, Albert, New York, N. Y. Blankets. No. 84,943; Jan. 16; Gaz. vol. 174; p. 823.
De Pooter, Joseph, Lierre, Belgium. Canned vegetables. No. 85,088; Jan. 30; Gaz. vol. 174; p. 1212.
Descon Brown Manufacturing Company, Montgomery, Ala. Beverage and syrup for making same. No. 84,821; Jan. 9; Gaz. vol. 174; p. 579.
Debevoise-Anderson Company, New York, N. Y. Solid, porous, friable residue from distillation of petroleum. No. 85,087; Jan. 30; Gaz. vol. 174; p. 1212.
Dencolo Chemical Company, Denver, Colo. Mouth-wash and tooth paste and powder. No. 84,901; Jan. 9; Gaz. vol. 174; p. 582.
Denise, R. D., Kansas City, Mo. Hair-tonics. No. 84,729; Jan. 2; Gaz. vol. 174; p. 283.
Dexter, Philip, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Diamond Rubber Co., The, Akron, Ohio. Rubber and rubber and fabric boots and shoes. No. 84,822; Jan. 9; Gaz. vol. 174; p. 579.
Dieckerhoff, Raffloer & Company, New York, N. Y. Thread for fine needlework. No. 84,823; Jan. 9; Gaz. vol. 174; p. 579.
Dinges, William F., Baltimore, Md. Remedy for corns, bunions, and callous spots. No. 84,944; Jan. 16; Gaz. vol. 174; p. 823.
Dinsmore Co., J. C., Kramer, Ind. Louse-exterminator. No. 85,089; Jan. 30; Gaz. vol. 174; p. 1212.
Dodge Publishing Company, New York, N. Y. Calendars. Nos. 84,945–6; Jan. 16; Gaz. vol. 174; p. 823.
Drucker, August E., San Francisco, Cal. Tooth-powder. No. 84,730; Jan. 2; Gaz. vol. 174; p. 283.
Dubler, Herman, New York, N. Y. Crab-meat. No. 85,090; Jan. 30; Gaz. vol. 174; p. 1212.
Duckman, Moses, Brooklyn, N. Y. Remedy for epilepsy. No. 84,732; Jan. 2; Gaz. vol. 174; p. 283.
Dumaine, Frederic C., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Dunham, Edward C., Dunham, La. Remedy for syphilis, gonorrhea, and gleet. No. 84,947; Jan. 16; Gaz. vol. 174; p. 823.
E. Sutro & Son Company, Philadelphia, Pa. Hosiery. No. 85,018; Jan. 16; Gaz. vol. 174; p. 825.
E. E. Taylor Co., Boston, Mass. Leather boots and shoes. No. 84,768; Jan. 2; Gaz. vol. 174; p. 284.
Eaton Milling & Elevator Co., The, Eaton, Colo. Wheat-flour. No. 85,092; Jan. 30; Gaz. vol. 174; p. 1212.
Edwards, Godfrey, Liverpool, England. Toilet preparations to prevent chafing and chapping. No. 85,094; Jan. 30; Gaz. vol. 174; p. 1212.
Edwards & Loomis Co., Chicago, Ill. Horse feed. No. 85,093; Jan. 30; Gaz. vol. 174; p. 1212.
Edwin C. Burt Company, Brooklyn, N. Y. Boots, shoes, and slippers. No. 84,726; Jan. 2; Gaz. vol. 174; p. 283.
Eisenstadt Manufacturing Company, St. Louis, Mo. Watches, clocks, watch and clock movements and cases. No. 84,733; Jan. 2; Gaz. vol. 174; p. 283.
Elizabeth Chemical Company, The, Brooklyn, N. Y. Salve and certain toilet preparations. No. 84,734; Jan. 2; Gaz. vol. 174; p. 283.
Ellenbogen & Sons, M. H., Paterson, N. J., and New York, N. Y. Shirts. No. 84,948; Jan. 16; Gaz. vol. 174; p. 823.
Ellerbe, Alexander C., Florence, S. C. Hair-tonic. No. 84,902; Jan. 9; Gaz. vol. 174; p. 582.
Empire Bottle & Supply Company, New York, N. Y. Glass bottles. No. 84,824; Jan. 9; Gaz. vol. 174; p. 579.
Equity Watch Company, Boston, Mass. Watch-movements, watches, and parts thereof. No. 84,735; Jan. 2; Gaz. vol. 174; p. 283.
Esperanza Fruit Co., Palatka, Fla. Oranges, lemons, grape-fruit, tangerines, and limes. No. 85,095; Jan. 30; Gaz. vol. 174; p. 1212.
Estes, Llewellyn W., Washington, D. C. Remedy used as a blood-purifier and liver-regulator. No. 84,949; Jan. 16; Gaz. vol. 174; p. 823.
Eureka Study System. (See Todd, John T., assignor.)
F. A. Stuart Company, Marshall, Mich. Dyspepsia-tablets, calcium wafer compounds, charcoal lozenges, &c. No. 85,199; Jan. 30; Gaz. vol. 174; p. 1215.
F. B. Chamberlain Co., St. Louis, Mo. Certain flours. No. 85,072; Jan. 30; Gaz. vol. 174; p. 1211.
F. O. Hilliker Co., Syracuse, N. Y. Spraying device. No. 84,742; Jan. 2; Gaz. vol. 174; p. 284.
Fairchild Bros. & Foster, New York, N. Y. Medicinal preparation. No. 85,096; Jan. 30; Gaz. vol. 174; p. 1212.
Farmers' Cotton Oil & Fertilizer Co., Huntsville, Ala. Fertilizer. No. 84,950; Jan. 16; Gaz. vol. 174; p. 823.
Farnum, Adeline R., San Francisco, Cal. Nasal and throat remedies. No. 85,097; Jan. 30; Gaz. vol. 174; p. 1212.
Fechheimer Kiefer Company, The, Cincinnati, Ohio. Coats, vests, trousers, and overcoats. No. 85,098; Jan. 30; Gaz. vol. 174; p. 1212.
Feeders' Supply Company, Kansas City, Mo. Stock feed. No. 84,951; Jan. 16; Gaz. vol. 174; p. 824.
Finch, Leigh L., New York, N. Y. Medicated candies. No. 85,099; Jan. 30; Gaz. vol. 174; p. 1212.
Firth-Sterling Steel Company, McKeesport, Pa. Tool-steel. No. 84,736; Jan. 2; Gaz. vol. 174; p. 283.
Fleischer, Tryne S., New York, N. Y. Rings. No. 85,035; Jan. 23; Gaz. vol. 174; p. 1023.
Fleischman, Julia, New York, N. Y. Face-cream. No. 85,100; Jan. 30; Gaz. vol. 174; p. 1212.
Four Co.; Inc., The, Norfolk, Va. Certain foods. No. 85,101; Jan. 30; Gaz. vol. 174; p. 1212.
Francis H. Leggett & Co., New York, N. Y. Pearl tapioca. No. 85,143; Jan. 30; Gaz. vol. 174; p. 1213.
Francis H. Leggett & Co., New York, N. Y. Chilli sauce and assorted nuts. No. 85,144; Jan. 30; Gaz. vol. 174; p. 1213.
Francis H. Leggett & Co., New York, N. Y. Baking-powder. No. 85,145; Jan. 30; Gaz. vol. 174; p. 1213.
Francis H. Leggett & Co., New York, N. Y. Sour gherkins and mint sauce. No. 85,146; Jan. 30; Gaz. vol. 174; p. 1213.
Francis H. Leggett & Co., New York, N. Y. Fiber paper. No. 85,147; Jan. 30; Gaz. vol. 174; p. 1213.

Francis H. Leggett & Co., New York, N. Y. Assorted dinner-nuts. No. 85,148; Jan. 30; Gaz. vol. 174; p. 1213.
Francis H. Leggett & Co., New York, N. Y. Imported macaroni. No. 85,149; Jan. 30; Gaz. vol. 174; p. 1214.
Franco-American Food Company, The, Jersey City, N. J. Certain foods. No. 84,825; Jan. 9; Gaz. vol. 174; p. 579.
Frank W. Swallow Post Card Co., Inc., Exeter, N. H. Postal cards. No. 85,200; Jan. 30; Gaz. vol. 174; p. 1215.
Friedman & Co., J. J., Dover, N. J. Ladies' outer garments. No. 85,102; Jan. 30; Gaz. vol. 174; p. 1212.
Friedrich Mauthe, G. m. b. H., Schwenningen-on-the-Neckar, Germany. Clocks. No. 85,154; Jan. 30; Gaz. vol. 174; p. 1214.
Fritch, Artemus L., Oskaloosa, Iowa. Preparations for the relief of foot troubles. No. 85,103; Jan. 30; Gaz. vol. 174; p. 1212.
Fuller, Burton J., Denver, Colo. Remedies for headache. No. 84,952; Jan. 16; Gaz. vol. 174; p. 824.
Galban & Co. Inc., New York, N. Y., and Habana, Cuba. Imitation lard. No. 84,826; Jan. 9; Gaz. vol. 174; p. 580.
Galban & Co. Inc., New York, N. Y., and Habana, Cuba. Wheat-flour. No. 84,953; Jan. 16; Gaz. vol. 174; p. 824.
Gallun & Sons, A. F., Milwaukee, Wis. Leather. No. 85,104; Jan. 30; Gaz. vol. 174; p. 1212.
Garantol-Gesellschaft mit beschränkter Haftung, Dresden, Germany. Egg-preserving compound. No. 84,954; Jan. 16; Gaz. vol. 174; p. 824.
Gardner, George A., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Garner Print Works & Bleachery, Wappingers Falls, N. Y. Cambrics, sheeting, shirting, muslin, &c. No. 84,903; Jan. 9; Gaz. vol. 174; p. 582.
Garrels & Börner, Hamburg, Germany. Soy-bean oil. No. 84,955; Jan. 16; Gaz. vol. 174; p. 824.
Garson-Meyer & Co., Rochester, N. Y. Coats, overcoats, and rain-coats. No. 85,105; Jan. 30; Gaz. vol. 174; p. 1212.
Gaube, Ernest W., Cleveland, Ohio. Remedy for pains and aches. No. 84,904; Jan. 9; Gaz. vol. 174; p. 582.
Geo. Borgfeldt & Co., New York, N. Y. Soap. No. 85,065; Jan. 30; Gaz. vol. 174; p. 1211.
Gerke, Robert H., Marietta, Ohio. Certain medicine. No. 84,956; Jan. 16; Gaz. vol. 174; p. 824.
Germann and Company, Limited, Manila, Philippine Islands. Cigars. No. 85,036; Jan. 23; Gaz. vol. 174; p. 1023.
Gill Brothers Company, Steubenville, Ohio. Certain glassware. No. 85,037; Jan. 23; Gaz. vol. 174; p. 1023.
Globe Soap Company, The, Cincinnati, Ohio. Soap. No. 85,106; Jan. 30; Gaz. vol. 174; p. 1212.
Goldberg, Bowen & Co., San Francisco, Cal. Canned fruits and vegetables and cheese. No. 85,107; Jan. 30; Gaz. vol. 174; p. 1212.
Goldschmidt, Th., Essen-on-the-Ruhr, Germany. Silk-treating substances. No. 85,108; Jan. 30; Gaz. vol. 174; p. 1212.
Goldstein, Leo C., New York, N. Y. Tea for coughs and colds and tablets for stomach troubles. No. 84,737; Jan. 2; Gaz. vol. 174; p. 283.
Gossett, R. A., Atlanta, Ga. Remedy for catarrh. No. 84,738; Jan. 2; Gaz. vol. 174; p. 283.
Gourock Ropework Co. Ltd., Port Glasgow, Scotland. Linen and hemp piece goods. No. 84,957; Jan. 16; Gaz. vol. 174; p. 824.
Grand Bay Land Company, The, Grand Bay, Ala.; Chicago, Ill., and Scranton, Pa. Monthly magazine. No. 84,905; Jan. 9; Gaz. vol. 174; p. 582.
Great Western Oil Co., The, Cleveland, Ohio. Lubricating-oil. No. 85,109; Jan. 30; Gaz. vol. 174; p. 1212.
Greenberger & Company, E., New York, N. Y. Furniture. No. 84,739; Jan. 2; Gaz. vol. 174; p. 283.
Greenberger & Company, E., New York, N. Y. Furniture. No. 84,958; Jan. 16; Gaz. vol. 174; p. 824.
Griffith-White Chemical Co., Pensacola, Fla. Liver-tonic. No. 84,906; Jan. 9; Gaz. vol. 174; p. 582.
Griswold, Alfred H., New York, N. Y. Remedies for constipation. No. 84,959; Jan. 16; Gaz. vol. 174; p. 824.
Grover, Edwin O., New York, N. Y. Bread. No. 85,110; Jan. 30; Gaz. vol. 174; p. 1212.
H. W. Johns-Manville Co., New York, N. Y. Asbestos pipe-covering. No. 84,833; Jan. 9; Gaz. vol. 174; p. 580.
H. W. Johns-Manville Company, New York, N. Y. Felts for lining or filling walls, &c. No. 84,971; Jan. 16; Gaz. vol. 174; p. 824.
Haas-Lieber Grocery Company, St. Louis, Mo. Canned fruits, vegetables, and pork and beans. No. 85,111; Jan. 30; Gaz. vol. 174; p. 1212.
Habicht, Braun & Co., New York, N. Y., and Chicago, Ill. Figs. No. 84,907; Jan. 9; Gaz. vol. 174; p. 582.
Haefner, Libby, Chicago, Ill. Medical preparation for blood diseases. No. 85,112; Jan. 30; Gaz. vol. 174; p. 1212.
Hagendorff, Gerhard, Jersey City, N. J. Cream-cheese. No. 84,960; Jan. 16; Gaz. vol. 174; p. 824.
Halpern, Michael, New York, N. Y. Pills, face-cream, liniment, salves, &c. No. 84,908; Jan. 9; Gaz. vol. 174; p. 582.
Hampton Drug Co., Carterville, Ill. Remedy for sore throat and mouth and a veterinary medicine. No. 84,741; Jan. 2; Gaz. vol. 174; p. 284.
Hamton & Co., New York, N. Y. Certain detergents and polishing materials. No. 84,740; Jan. 2; Gaz. vol. 174; p. 284.
Harris Suspender Company, New York, N. Y. Garment-supporters. No. 84,827; Jan. 9; Gaz. vol. 174; p. 580.
Hatheway, Margaret L., Cambridge, Mass. Leather shoes. No. 84,828; Jan. 9; Gaz. vol. 174; p. 250.
Häusler, Gustav, Hanover, Germany. Watches and clocks and parts thereof. No. 85,038; Jan. 23; Gaz. vol. 174; p. 1023.
Hawaiian Pineapple Co., Ltd., Honolulu, Hawaii. Canned pineapple. No. 84,829; Jan. 9; Gaz. vol. 174; p. 580.
Hawaiian Pineapple Co., Ltd., Honolulu, Hawaii. Canned pineapple. No. 85,113; Jan. 30; Gaz. vol. 174; p. 1212.
Hayes Duster Company, New York, N. Y. Dusters. No. 84,961; Jan. 16; Gaz. vol. 174; p. 824.
Hebert and Guidry, Houma, La. Remedy for skin diseases. No. 85,114; Jan. 30; Gaz. vol. 174; p. 1213.
Heineman Bros., Baltimore, Md. Cigars. No. 85,039; Jan. 23; Gaz. vol. 174; p. 1023.
Hellrung and Grimm House Furnishing Co., St. Louis, Mo. Refrigerators. No. 85,115; Jan. 30; Gaz. vol. 174; p. 1213.
Hercules Waterproof Cement Company, Buffalo, N. Y. Compound for waterproofing and strengthening cement. No. 84,962; Jan. 16; Gaz. vol. 174; p. 824.
Herman, Jacob A., New York, N. Y. Dresses, skirts, and petticoats. No. 84,963; Jan. 16; Gaz. vol. 174; p. 824.
Herzberg & Company, Rochester, N. Y. Coats. No. 85,116; Jan. 30; Gaz. vol. 174; p. 1213.
Heyman, Abraham, New York, N. Y. Explosives. No. 84,964; Jan. 16; Gaz. vol. 174; p. 824.
Hildreth Varnish Co., New York, N. Y. Thinner for paints and varnishes. No. 85,117; Jan. 30; Gaz. vol. 174; p. 1213.
Hires Turner Glass Co., Philadelphia, Pa. Mirror and plate glass. No. 84,830; Jan. 9; Gaz. vol. 174; p. 580.
Hobbs Mfg. Co., Hobbs, Md. Canned tomatoes. No. 85,118; Jan. 30; Gaz. vol. 174; p. 1213.
Holland-Council Company, Inc., Norfolk, Va. Canned tomatoes. No. 85,125; Jan. 30; Gaz. vol. 174; p. 1213.
Hooker Electrochemical Company, Niagara Falls, N. Y. Caustic soda, bleaching-powder, and sulfur chlorid. No. 84,909; Jan. 9; Gaz. vol. 174; p. 582.
Hoosier Manufacturing Company, Newcastle, Ind. Cabinets, cupboards, closets, and tables. No. 84,831; Jan. 9; Gaz. vol. 174; p. 580.
Horace Clark & Sons Co., Peoria, Ill. Coal. No. 85,077; Jan. 30; Gaz. vol. 174; p. 1211.
Household Convenience Company, Limited, Toronto, Canada. Metal cleaning and polishing compositions. No. 85,126; Jan. 30; Gaz. vol. 174; p. 1213.
Hubbell, Ray, Northville, N. Y. Brass binding for linoleum. No. 84,743; Jan. 2; Gaz. vol. 174; p. 284.
Hudgins, Ernest F., Columbia, S. C. Chill and fever tonic. No. 84,965; Jan. 16; Gaz. vol. 174; p. 824.
Hudson's, New York, N. Y. Candy. No. 84,966; Jan. 16; Gaz. vol. 174; p. 824.
Hulman & Co., Terre Haute, Ind. Cigars. No. 84,744; Jan. 2; Gaz. vol. 174; p. 284.
Hulman & Co., Terre Haute, Ind. Coffee. No. 85,040; Jan. 23; Gaz. vol. 174; p. 1023.
I. O. U. Company, New York, N. Y. Trading-coupons. No. 84,747; Jan. 2; Gaz. vol. 174; p. 284.
Illinois Canning Company, The, Hoopeston, Ill. Canned corn. No. 84,967; Jan. 16; Gaz. vol. 174; p. 824.
Ink, Harry H., Canton, Ohio. Remedy for ailments of the mouth and throat. No. 84,746; Jan. 2; Gaz. vol. 174; p. 284.
Ipswich Mills, Boston, Mass. Hosiery. No. 84,968; Jan. 16; Gaz. vol. 174; p. 824.
J. D. Bourdeau Co., Detroit, Mich. Laxative cereal food. No. 84,812; Jan. 9; Gaz. vol. 174; p. 579.
James Dawson & Son Ld., Boultham, Lincoln, England. Cotton and balata belting. No. 84,820; Jan. 9; Gaz. vol. 174; p. 579.
James Walker and Company Limited. (See Walker & Co., James, assignor.)
James, William T., Chicago, Ill. Medicaments for the skin. No. 84,969; Jan. 16; Gaz. vol. 174; p. 824.
Jameson & Metsler, New York, N. Y. Pocket-books. No. 85,130; Jan. 30; Gaz. vol. 174; p. 1213.
Janney, Semple, Hill & Co., Minneapolis, Minn. Certain hardware, cooking utensils, and wire-cloth. No. 84,748; Jan. 2; Gaz. vol. 174; p. 284.
Jensen, Frans G., Springfield, Mass. Candy. No. 85,131; Jan. 30; Gaz. vol. 174; p. 1213.
Johnson, Henry E., Grand Junction, Colo. Remedies for asthma, hay-fever, croup, &c. No. 84,778; Jan. 2; Gaz. vol. 174; p. 285.
Jones, Walter D., Redgranite, Wis. Medicinal preparation. No. 85,135; Jan. 30; Gaz. vol. 174; p. 1213.
Kehlor Flour Mills Company, St. Louis, Mo., and East St. Louis, Ill. Wheat-flour. No. 85,136; Jan. 30; Gaz. vol. 174; p. 1213.
Kelloggs & Miller, Amsterdam, N. Y. Oil-cake and oil-meal. No. 84,834; Jan. 9; Gaz. vol. 174; p. 580.
Kemper Mill & Elevator Company, Kansas City, Mo. Wheat-flour. No. 84,835; Jan. 9; Gaz. vol. 174; p. 580.
Kentucky Refining Co., Louisville, Ky. Cotton-seed oil. Nos. 84,972–3; Jan. 16; Gaz. vol. 174; p. 824.
Ketcham, O. W., Crum Lynne, Pa. Terra-cotta tiles. No. 84,836; Jan. 9; Gaz. vol. 174; p. 580.

Kibiger, Edward C., Fort Wayne, Ind. Liniment. No. 84,910; Jan. 9; Gaz. vol. 174; p. 582.
King Milling Co., Lowell, Mich. Wheat-flour. No. 84,974; Jan. 16; Gaz. vol. 174; p. 824.
Kiwassa Lithia Spring Co. Inc., Richmond, Va. Ginger-ale. No. 84,975; Jan. 16; Gaz. vol. 174; p. 824.
Klopfer, Friedrich A. V., Dresden-Leubnitz, Germany. Tonic. No. 84,780; Jan. 2; Gaz. vol. 174; p. 285.
Knickerbocker Case Company, Chicago, Ill. Sample cases and bags. No. 84,781; Jan. 2; Gaz. vol. 174; p. 285.
Knox Thenardine Chemical Company, New York, N. Y. Germicidal dressings. No. 85,137; Jan. 30; Gaz. vol. 174; p. 1213.
Kokomo Canning Company, Kokomo, Ind. Canned vegetables. No. 85,138; Jan. 30; Gaz. vol. 174; p. 1213.
Kops Bros., New York, N. Y. Corsets and corset-pads. No. 85,139; Jan. 30; Gaz. vol. 174; p. 1213.
Kornmann, Cohen & Ettlinger, New York, N. Y. Men's, boys' and children's outer clothing. No. 85,140; Jan. 30; Gaz. vol. 174; p. 1213.
Kral & Co., Wm., Astoria, N. Y. Pearl buttons. No. 84,976; Jan. 16; Gaz. vol. 174; p. 824.
Kulman, Oscar S., Savannah, Ga. Brooms. No. 84,977; Jan. 16; Gaz. vol. 174; p. 824.
Kuppenheimer & Co., B., Chicago, Ill. Canvas. No. 84,837; Jan. 9; Gaz. vol. 174; p. 580.
La Domus Co., The, Freeport, Ill. Salve. No. 84,978; Jan. 16; Gaz. vol. 174; p. 824.
Lambert Pharmacal Company, St. Louis, Mo. Antiseptic. No. 85,150; Jan. 30; Gaz. vol. 174; p. 1214.
Lamplugh, William, Levallois-Perret, France. Automobile-hoods. No. 84,979; Jan. 16; Gaz. vol. 174; p. 824.
Lanman & Kemp, New York, N. Y. Cathartic pills. No. 85,141; Jan. 30; Gaz. vol. 174; p. 1213.
Laurence, Archer C., New York, N. Y. Leather power-transmitting belting. No. 85,142; Jan. 30; Gaz. vol. 174; p. 1213.
Levan and Sons, W. G., Reading, Pa. Hats and caps. No. 84,980; Jan. 16; Gaz. vol. 174; p. 824.
Lexington Flouring Mills, Lexington, Mo. Wheat-flour. No. 84,838; Jan. 9; Gaz. vol. 174; p. 580.
Life Publishing Company, New York, N. Y. Weekly publication. No. 84,981; Jan. 16; Gaz. vol. 174; p. 824.
Lincoln Waterproof Cloth Company, The, Boundbrook, N. J. Waterproof roofing. No. 84,982; Jan. 16; Gaz. vol. 174; p. 824.
Lippincott, G. A., Philadelphia, Pa. Buttons. No. 84,839; Jan. 9; Gaz. vol. 174; p. 580.
Loubeque, Henry J., New York, N. Y. Hair-tonic. No. 84,782; Jan. 2; Gaz. vol. 174; p. 285.
Lowry Coffee Co., Philadelphia, Pa. Blended coffee and tea. No. 84,840; Jan. 9; Gaz. vol. 174; p. 580.
Lunn & Sweet Shoe Co., Auburn, Me. Leather boots and shoes. No. 84,841; Jan. 9; Gaz. vol. 174; p. 580.
M. A. Hunt Company, The, Cincinnati, Ohio. Mattresses and spring-beds. No. 84,745; Jan. 2; Gaz. vol. 174; p. 284.
M. T. Stevens & Sons Company, North Andover, Mass. Worsted, woolen, and part-woolen piece goods. Nos. 84,763–4; Jan. 2; Gaz. vol. 174; p. 284.
Maine Manufacturing Company, Nashua, N. H. Refrigerators. No. 84,983; Jan. 16; Gaz. vol. 174; p. 824.
Manchester Hosiery Mills Co., Manchester, Pa. Hosiery. No. 85,151; Jan. 30; Gaz. vol. 174; p. 1214.
Manganiello, Tony, New York, N. Y. Hair-tonic. No. 84,783; Jan. 2; Gaz. vol. 174; p. 285.
Manine Medicine Company, Inc., The, St. Louis, Mo. Medicinal preparation. No. 85,784; Jan. 2; Gaz. vol. 174; p. 285.
Martin & Sons, C. J., Austin, Tex. Insecticides. No. 85,152; Jan. 30; Gaz. vol. 174; p. 1214.
Martinez, Bartolo, San Antonio, Tex. Certain food. No. 85,153; Jan. 30; Gaz. vol. 174; p. 1214.
Matienzo-Sainz Company, Newburgh, N. Y. Tonic. No. 84,984; Jan. 16; Gaz. vol. 174; p. 824.
McAfee, Frank C., Moberly, Mo. Horse food. No. 84,842; Jan. 9; Gaz. vol. 174; p. 580.
McCaffery, John P., Moline, Ill. Insecticides. No. 84,785; Jan. 2; Gaz. vol. 174; p. 285.
McCawley & Co., Baltimore, Md. Work-shirts, overalls, and rompers. No. 84,786; Jan. 2; Gaz. vol. 174; p. 285.
McNeil & Higgins Company, Chicago, Ill. Certain foods. No. 84,843; Jan. 9; Gaz. vol. 174; p. 580.
Merrell-Soule Co., Syracuse, N. Y. Milk-powder. No. 84,844; Jan. 9; Gaz. vol. 174; p. 580.
Meyer, George V., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Michigan Milling Company, Ann Arbor, Mich. Wheat-flour. No. 85,155; Jan. 30; Gaz. vol. 174; p. 1214.
Miller & Sons Co., Philadelphia, Pa. Hosiery. No. 84,787; Jan. 2; Gaz. vol. 174; p. 285.
Mills, Giles A., Girard, Kans. Remedies for piles and skin diseases. No. 84,788; Jan. 2; Gaz. vol. 174; p. 285.
Mission Cereal Company, Minneapolis, Minn. Cereal compound used in the preparation of a beverage. No. 84,845; Jan. 9; Gaz. vol. 174; p. 580.
Moland's Sons, William, Philadelphia, Pa. Preparation of pork. No. 84,846; Jan. 9; Gaz. vol. 174; p. 580.
Monitor Stove and Range Company, The, Cincinnati, Ohio. Stoves, ranges, and furnaces. No. 85,041; Jan. 23; Gaz. vol. 174; p. 1023.
Montana Flour Mills Co., Harlowton, Mont. Wheat-flour. Nos. 84,847–8; Jan. 9; Gaz. vol. 174; p. 580.
Monument Mills, Housatonic, Mass., and New York, N. Y. Bedspreads and counterpanes. No. 84,985; Jan. 16; Gaz. vol. 174; p. 824.
Morgan, Ernest V., Cleveland, Ohio. Fire-resisting cement. No. 84,986; Jan. 16; Gaz. vol. 174; p. 825.
Morris, Katie, Beaumont, Cal. Remedy for catarrh. No. 84,987; Jan. 16; Gaz. vol. 174; p. 825.
Moseley & Motley Milling Co., The, Rochester, N. Y. Wheat-flour. No. 84,988; Jan. 16; Gaz. vol. 174; p. 825.
Moseley & Motley Milling Co., Rochester, N. Y. Wheat-flour. No. 85,156; Jan. 30; Gaz. vol. 174; p. 1214.
Mutual Cotton Oil Co., Fort Worth, Tex. Stock food. No. 85,158; Jan. 30; Gaz. vol. 174; p. 1214.
Nalley Grocery Co., Austin, Tex. Canned vegetables and fruits. No. 84,989; Jan. 16; Gaz. vol. 174; p. 825.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 84,840–50; Jan. 9; Gaz. vol. 174; p. 580.
National Exterminating Co., New York, N. Y. Vermin-exterminating preparations. No. 84,911; Jan. 9; Gaz. vol. 174; p. 582.
National Starch Company, Jersey City, N. J., and New York, N. Y. Corn-starch. No. 84,851; Jan. 9; Gaz. vol. 174; p. 580.
National Starch Company, New York, N. Y. Edible starch. No. 84,852; Jan. 9; Gaz. vol. 174; p. 580.
National Starch Company, New York, N. Y. Starch. No. 84,912; Jan. 9; Gaz. vol. 174; p. 582.
National Starch Company, New York, N. Y. Edible starch. No. 85,159; Jan. 30; Gaz. vol. 174; p. 1214.
National Tube Flavor Co., Newark, N. Y. Certain toilet preparations and food-coloring compounds. No. 84,789; Jan. 2; Gaz. vol. 174; p. 285.
National Utilization Co., Norfolk, Va. Tankage. No. 84,790; Jan. 2; Gaz. vol. 174; p. 285.
National Water Company, Waukesha, Wis., and New York, N. Y. Natural spring drinking-water. Nos. 85,042–3; Jan. 23; Gaz. vol. 174; p. 1023.
New England Laboratory Company, Lynn, Mass. Cold-cream. No. 84,791; Jan. 2; Gaz. vol. 174; p. 285.
New York Herald Company, The, New York, N. Y. Pictures and illustrations. Nos. 84,853–60; Jan. 9; Gaz. vol. 174; pp. 580–1.
New York Herald Company, New York, N. Y. Pictures and illustrations. Nos. 84,991–2; Jan. 16; Gaz. vol. 174; p. 825.
Newark Packing Company, Newark, N. J. Smoked beef and bacon. No. 84,990; Jan. 16; Gaz. vol. 174; p. 825.
Nicolaou, George P. P., Salisbury, N. C. Compound baking-flour. No. 85,160; Jan. 30; Gaz. vol. 174; p. 1214.
Niven, Maxim, New York, N. Y. Olive-oil food products. No. 84,993; Jan. 16; Gaz. vol. 174; p. 825.
Noble, Frank W., Southwick, Mass. Popcorn. No. 84,870; Jan. 9; Gaz. vol. 174; p. 581.
Nonbreakable Toy Co., New York, N. Y. Toys. No. 84,792; Jan. 2; Gaz. vol. 174; p. 285.
Noncarpicine Company, The, Pierre, S. D., and Chicago, Ill. Remedy for headache, neuralgia, &c. No. 84,994; Jan. 16; Gaz. vol. 174; p. 825.
Nonotuck Silk Company, The, Florence and Boston, Mass. Silk thread, machine-twist, &c. No. 84,871; Jan. 9; Gaz. vol. 174; p. 581.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Delmenhorst, Germany. Woolen yarn. No. 84,995; Jan. 16; Gaz. vol. 174; p. 825.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Woolen yarn. Nos. 84,996–7; Jan. 16; Gaz. vol. 174; p. 825.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Toilet soap. Nos. 85,161–2; Jan. 30; Gaz. vol. 174; p. 1214.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Woolen yarn. No. 85,163; Jan. 30; Gaz. vol. 174; p. 1214.
O'Keefe, Daniel, St. Louis, Mo. Composition for the treatment of leathers, hides, and pelts. No. 85,165; Jan. 30; Gaz. vol. 174; p. 1214.
Ohio Match Company, The, Wadsworth, Ohio. Safety-matches. No. 85,164; Jan. 30; Gaz. vol. 174; p. 1214.
Old Colony Cleanser Company, Hutchinson, Kans. Silver polish and cleanser. No. 85,166; Jan. 30; Gaz. vol. 174; p. 1214.
Osborn, Daniel C., Honesdale, Pa. Antiseptic dressing. No. 85,167; Jan. 30; Gaz. vol. 174; p. 1214.
Otto Kampfe Mfg. Co., Newark, N. J. Animal-traps. No. 84,779; Jan. 2; Gaz. vol. 174; p. 285.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned kraut and boiled cabbage. No. 85,119; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned corn. Nos. 85,120–1; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned peas and corn. Nos. 85,122–3; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned corn. No. 85,124; Jan. 30; Gaz. vol. 174; p. 1213.
Pahl'sche Gummi- und Asbest-Gesellschaft mit beschränkter Haftung, Dusseldorf-Rath, Germany. Certain jointing material, clap valves, hose, belting, and packing. No. 84,872; Jan. 9; Gaz. vol. 174; p. 581.
Pallas Candy Co., The, Butte, Mont. Candy. No. 85,168; Jan. 30; Gaz. vol. 174; p. 1214.
Palmer, Nathalie T., Middletown, Conn. Fans for personal use. No. 84,998; Jan. 16; Gaz. vol. 174; p. 825.

Paramount Knitting Company, Chicago, Ill. Hosiery. No. 84,914; Jan. 9; Gaz. vol. 174; p. 582.
Parrett, Richard J., Elkhart, Ind. Remedy for the kidneys and liver. No. 85,169; Jan. 30; Gaz. vol. 174; p. 1214.
Parsons, Theophilus, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Paul, Albert L., New Orleans, La. Insecticide. No. 85,170; Jan. 30; Gaz. vol. 174; p. 1214.
Paul F. Beich Company, Bloomington, Ill. Confections and chocolates. No. 84,811; Jan. 9; Gaz. vol. 174; p. 579.
Pen-Carbon Manifold Co., New York, N. Y. Manifold carbon paper and books. No. 85,171; Jan. 30; Gaz. vol. 174; p. 1214.
Penn Bros. Mfg. Co., Danville, Va. Suspenders. No. 84,873; Jan. 9; Gaz. vol. 174; p. 581.
Petillo, Diomede, New York, N. Y. Remedy for diseases of the blood. No. 84,793; Jan. 2; Gaz. vol. 174; p. 285.
Petteway & Powell, Freeman, Fla. Remedy for syphilis. No. 84,794; Jan. 2; Gaz. vol. 174; p. 285.
Pfeifer & Co., S., New Orleans, La. Butter. No. 84,999; Jan. 16; Gaz. vol. 174; p. 825.
Pioneer Cereal Company, Akron, Ohio. Certain grain foods. No. 84,874; Jan. 9; Gaz. vol. 174; p. 581.
Pittsburg-Buffalo Company, Pittsburgh, Pa. Coal. Nos. 85,172–3; Jan. 30; Gaz. vol. 174; p. 1214.
Pittsburgh Dry Goods Company, The, Pittsburgh, Pa. Hosiery. No. 85,025; Jan. 16; Gaz. vol. 174; p. 826.
Pompeian Co., Incorporated, The, Washington, D. C. Olive-oil. No. 85,174; Jan. 30; Gaz. vol. 174; p. 1214.
Potosote Company, The, Canton, Ohio. Mineral-water salt. No. 85,175; Jan. 30; Gaz. vol. 174; p. 1214.
Potter, Werden B., Jamaica, N. Y. Medicinal preparations. No. 85,176; Jan. 30; Gaz. vol. 174; p. 1214.
Pratt & Lambert, Inc., Long Island City and Buffalo, N. Y. Enamels, varnishes, stains, and fillers. No. 85,177; Jan. 30; Gaz. vol. 174; p. 1214.
Progress Auto Tire Trunk Mfg. Co., Philadelphia, Pa. Trunks, suit-cases, and portfolios. No. 85,000; Jan. 16; Gaz. vol. 174; p. 825.
Purr Puss Co., The, South Framingham, Mass. Cat-tonic. No. 84,795; Jan. 2; Gaz. vol. 174; p. 285.
Quackenbush, Walter, New York, N. Y. Monthly magazine. No. 84,875; Jan. 9; Gaz. vol. 174; p. 581.
Queen Mfg. Co., The, Cincinnati, Ohio. Ladies' outer skirts. No. 85,001; Jan. 16; Gaz. vol. 174; p. 825.
Quere, Theodore, Cleveland, Ohio. Artificial mineral water. No. 85,002; Jan. 16; Gaz. vol. 174; p. 825.
R. F. & J. Alexander & Co. Ltd., Neilston, Scotland. Sewing cotton thread in balls. No. 85,051; Jan. 30; Gaz. vol. 174; p. 1211.
R. S. Hudson, Limited, Liverpool, England. Extract of soap. No. 85,128; Jan. 30; Gaz. vol. 174; p. 1213.
Raventós, Manuel, San Sadurní de Noya, Spain. Effervescent wines. No. 84,751; Jan. 2; Gaz. vol. 174; p. 284.
Redlo Company, Limited, The, London, England. Cleaning and polishing cloths. No. 85,178; Jan. 30; Gaz. vol. 174; p. 1214.
Regal Shoe Company Inc., assignor to Regal Shoe Company, Boston, Mass. Leather boots and shoes. No. 85,003; Jan. 16; Gaz. vol. 174; p. 825.
Reiss Bros. & Co., Chicago, Ill. Tobacco-pipes. Nos. 85,004–5; Jan. 16; Gaz. vol. 174; p. 825.
Revêtements Josz Société Anonyme, Koekelberg-Brussels, Belgium. Metallic coverings for walls and ceilings. No. 84,752; Jan. 2; Gaz. vol. 174; p. 284.
Richard Hudnut, New York, N. Y. Soap. No. 85,127; Jan. 30; Gaz. vol. 174; p. 1213.
Rider, John W., Scottsburg, Ind. Certain foods. No. 85,179; Jan. 30; Gaz. vol. 174; p. 1214.
Risdon Iron & Locomotive Works, San Francisco, Cal. Water-tube boilers. No. 85,044; Jan. 23; Gaz. vol. 174; p. 1023.
Roberts & Co., Thomas, Philadelphia, Pa. Canned vegetables. No. 84,876; Jan. 9; Gaz. vol. 174; p. 581.
Roberts, Herbert F., Wilmington, Mass. Candles. No. 85,006; Jan. 16; Gaz. vol. 174; p. 825.
Rock-A-Water Chemical Company, The, Denver, Colo. Remedies for obesity, dyspepsia, and indigestion. No. 84,915; Jan. 9; Gaz. vol. 174; p. 582.
Rose Spring Bed Company, Memphis, Tenn. Mattresses. No. 84,753; Jan. 2; Gaz. vol. 174; p. 284.
Rosenthal & Bros., Samuel, New York, N. Y. Boys' outer suits. No. 85,180; Jan. 30; Gaz. vol. 174; p. 1214.
Rostenberg, Jacob, White Plains, N. Y. Bonnets, hats, and caps. No. 85,007; Jan. 16; Gaz. vol. 174; p. 825.
Rotkowitz Bros., New York, N. Y. Face powder and cream, hair tonic and dye. No. 84,754; Jan. 2; Gaz. vol. 74; p. 284.
Royal Baking Powder Company, Jersey City, N. J., and New York, N. Y. Soda for cooking. No. 84,916; Jan. 9; Gaz. vol. 174; p. 582.
Rubens & Marble, Chicago, Ill. Knitted undershirts. Nos. 85,008–10; Jan. 16; Gaz. vol. 174; p. 825.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Musical strings. No. 84,774; Jan. 2; Gaz. vol. 174; p. 285.
Rueb & Co., Edward, Chicago, Ill. Butter and eggs. No. 84,877; Jan. 9; Gaz. vol. 174; p. 581.
Salamander Grate Bar Co., New York, N. Y. Grates. No. 84,755; Jan. 2; Gaz. vol. 174; p. 284.
Samery & Wants, Lowville, N. Y. Medicine for all abrasions of the skin. No. 84,917; Jan. 9; Gaz. vol. 174; p. 582.
San Telmo Cigar Mfg. Co., Detroit, Mich. Cigars. No. 84,756; Jan. 2; Gaz. vol. 174; p. 284.
Saxlehner, Firm of Andreas, Budapest, Austria-Hungary. Medicinal preparation containing salts. No. 85,181; Jan. 30; Gaz. vol. 174; p. 1214.
Schick, Gustave G., Bronxville and New York, N. Y. Rubber packing for machinery. No. 85,182; Jan. 30; Gaz. vol. 174; p. 1214.
Schultz, Carl, Trinidad, Colo. Remedies for genito-urinary diseases. No. 85,011; Jan. 16; Gaz. vol. 174; p. 825.
Schwanhausser late Grossberger & Kurz, Nuremberg, Germany. Lead and colored pencils. No. 84,878; Jan. 9; Gaz. vol. 174; p. 581.
Scott & Gilbert Co., San Francisco, Cal. Certain foods. No. 84,879; Jan. 9; Gaz. vol. 174; p. 581.
Scott & Gilbert Co., San Francisco, Cal. Medicinal preparation for human and veterinary purposes. No. 85,184; Jan. 30; Gaz. vol. 174; p. 1215.
Scott, Hutchison, New York, N. Y. Belt-dressing. No. 85,183; Jan. 30; Gaz. vol. 174; p. 1215.
Sears, Roebuck and Co., Chicago, Ill. Stoves. No. 85,045; Jan. 23; Gaz. vol. 174; p. 1023.
Sears, Roebuck and Co., Chicago, Ill. Gasolene-stoves. No. 85,046; Jan. 23; Gaz. vol. 174; p. 1023.
Seat Brothers, Hugo, Okla. Remedy for consumption. No. 84,757; Jan. 2; Gaz. vol. 174; p. 284.
Seneca Chain Company, The, Kent, Ohio. Saddlery and harness hardware. No. 85,012; Jan. 16; Gaz. vol. 174; p. 825.
Shaffer, Knuland, Boston, Mass. Washcloths, towels, and bath-mats. No. 84,880; Jan. 9; Gaz. vol. 174; p. 581.
Shannon & Mott Company, Des Moines, Iowa. Wheat-flour. No. 85,013; Jan. 16; Gaz. vol. 174; p. 825.
Shannon & Mott Company, Des Moines, Iowa. Wheat-flour and stock food. No. 85,185; Jan. 30; Gaz. vol. 174; p. 1215.
Shoenfeld, Bernard, New York, N. Y. Shirt-waists. No. 84,918; Jan. 9; Gaz. vol. 174; p. 582.
Shredded Wheat Company, The, Niagara Falls, N. Y. Cereal biscuit. No. 85,186; Jan. 30; Gaz. vol. 174; p. 1215.
Sidney and Smith, London, England. Game. No. 85,014; Jan. 16; Gaz. vol. 174; p. 825.
Singer Brothers, Jersey City, N. J. All kinds of candies. No. 85,187; Jan. 30; Gaz. vol. 174; p. 1215.
Skinner, Harry A., New York, N. Y. Certain toilet preparations. No. 85,015; Jan. 16; Gaz. vol. 174; p. 825.
Sleeper, Frederick L., Chicago, Ill. Roman gold paint. No. 85,188; Jan. 30; Gaz. vol. 174; p. 1215.
Smith Chemical Co., Athens, Ga. Remedy for gonorrhea and gleet. No. 85,189; Jan. 30; Gaz. vol. 174; p. 1215.
Smith & Son Co., Lee S., Pittsburgh, Pa. Dental and surgical cabinets, operating-stools, &c. No. 85,047; Jan. 23; Gaz. vol. 174; p. 1023.
Smith-Stilwell Co., The, Detroit, Mich. Emulsion of cod-liver oil. No. 85,190; Jan. 30; Gaz. vol. 174; p. 1215.
Smooth-On Manufacturing Company, Jersey City, N. J. Liquid iron compound. No. 85,191; Jan. 30; Gaz. vol. 174; p. 1215.
Snow-Man Products Co., Escanaba, Mich. Chewing-gum. No. 85,016; Jan. 16; Gaz. vol. 174; p. 825.
Sökeland Gebr., Wandsbek, near Hamburg, Germany. Canned fruits. No. 84,882; Jan. 9; Gaz. vol. 174; p. 581.
Soulis & Sulis, Newton, Mass. Teas. No. 84,883; Jan. 9; Gaz. vol. 174; p. 581.
Sours, Pearl A., Kansas City, Mo. Certain toilet preparations. No. 85,192; Jan. 30; Gaz. vol. 174; p. 1215.
Southern California Fish Company, Los Angeles, Cal. Canned fish. No. 85,017; Jan. 16; Gaz. vol. 174; p. 825.
Spirella Company, The, Meadville, Pa. Surgical bandages, surgical, sanitary, and abdominal belts. No. 85,048; Jan. 23; Gaz. vol. 174; p. 1023.
Spirella Company, The, Meadville, Pa. Certain clothing. No. 85,193; Jan. 30; Gaz. vol. 174; p. 1215.
Spool Cotton Company, Newark, N. J., and New York, N. Y. Cotton thread and yarn. Nos. 84,758–60; Jan. 2; Gaz. vol. 174; p. 284.
St. Amant, Lucy, Baton Rouge, La. Remedies for skin and blood diseases, cuts, and wounds. No. 84,761; Jan. 2; Gaz. vol. 174; p. 284.
Standard Oil Company of New York, New York, N. Y. Lubricating-oils. No. 85,194; Jan. 30; Gaz. vol. 174; p. 1215.
Standard Varnish Works, New York, N. Y. Coater for cement, concrete, &c. No. 85,195; Jan. 30; Gaz. vol. 174; p. 1215.
Standard Varnish Works, New York, N. Y. Face liquid for use as a sealing coat over metal or wood primers. No. 85,196; Jan. 30; Gaz. vol. 174; p. 1215.
Stebbins, Martha J., Churchville, N. Y. Scalp-tonic. No. 84,919; Jan. 9; Gaz. vol. 174; p. 582.
Stebbins, Martha J., Churchville, N. Y. Remedy for catarrh and colds in head. No. 85,197; Jan. 30; Gaz. vol. 174; p. 1215.
Stevens, Bessie E., Chicago, Ill. Blood-purifier and tonic. No. 84,762; Jan. 2; Gaz. vol. 174; p. 284.
Stickney & Poor Spice Company, Boston, Mass. Mustard. No. 85,198; Jan. 30; Gaz. vol. 174; p. 1215.
Stockwell-Haley Co., Los Angeles, Cal. Mattresses. No. 84,765; Jan. 2; Gaz. vol. 174; p. 284.

Kibler, Edward C., Fort Wayne, Ind. Liniment. No. 84,910; Jan. 9; Gaz. vol. 174; p. 582.
King Milling Co., Lowell, Mich. Wheat-flour. No. 84,974; Jan. 16; Gaz. vol. 174; p. 824.
Kiwassa Lithia Spring Co. Inc., Richmond, Va. Ginger-ale. No. 84,975; Jan. 16; Gaz. vol. 174; p. 824.
Klopfer, Friedrich A. V., Dresden-Leubnitz, Germany. Tonic. No. 84,780; Jan. 2; Gaz. vol. 174; p. 285.
Knickerbocker Case Company, Chicago, Ill. Sample cases and bags. No. 84,781; Jan. 2; Gaz. vol. 174; p. 285.
Knox Thenardine Chemical Company, New York, N. Y. Germicidal dressings. No. 85,137; Jan. 30; Gaz. vol. 174; p. 1213.
Kokomo Canning Company, Kokomo, Ind. Canned vegetables. No. 85,138; Jan. 30; Gaz. vol. 174; p. 1213.
Kops Bros., New York, N. Y. Corsets and corset-pads. No. 85,139; Jan. 30; Gaz. vol. 174; p. 1213.
Kornmann, Cohen & Ettlinger, New York, N. Y. Men's, boys' and children's outer clothing. No. 85,140; Jan. 30; Gaz. vol. 174; p. 1213.
Kral & Co., Wm., Astoria, N. Y. Pearl buttons. No. 84,976; Jan. 16; Gaz. vol. 174; p. 824.
Kulman, Oscar S., Savannah, Ga. Brooms. No. 84,977; Jan. 16; Gaz. vol. 174; p. 824.
Kuppenheimer & Co., B., Chicago, Ill. Canvas. No. 84,837; Jan. 9; Gaz. vol. 174; p. 580.
La Domus Co., The, Freeport, Ill. Salve. No. 84,978; Jan. 16; Gaz. vol. 174; p. 824.
Lambert Pharmacal Company, St. Louis, Mo. Antiseptic. No. 85,150; Jan. 30; Gaz. vol. 174; p. 1214.
Lamplugh, William, Levallois-Perret, France. Automobile-hoods. No. 84,979; Jan. 16; Gaz. vol. 174; p. 824.
Lanman & Kemp, New York, N. Y. Cathartic pills. No. 85,141; Jan. 30; Gaz. vol. 174; p. 1213.
Laurence, Archer C., New York, N. Y. Leather power-transmitting belting. No. 85,142; Jan. 30; Gaz. vol. 174; p. 1213.
Levan and Sons, W. G., Reading, Pa. Hats and caps. No. 84,980; Jan. 16; Gaz. vol. 174; p. 824.
Lexington Flouring Mills, Lexington, Mo. Wheat-flour. No. 84,838; Jan. 9; Gaz. vol. 174; p. 580.
Life Publishing Company, New York, N. Y. Weekly publication. No. 84,981; Jan. 16; Gaz. vol. 174; p. 824.
Lincoln Waterproof Cloth Company, The, Boundbrook, N. J. Waterproof roofing. No. 84,982; Jan. 16; Gaz. vol. 174; p. 824.
Lippincott, G. A., Philadelphia, Pa. Buttons. No. 84,839; Jan. 9; Gaz. vol. 174; p. 580.
Loubeque, Henry J., New York, N. Y. Hair-tonic. No. 84,782; Jan. 2; Gaz. vol. 174; p. 285.
Lowry Coffee Co., Philadelphia, Pa. Blended coffee and tea. No. 84,840; Jan. 9; Gaz. vol. 174; p. 580.
Lunn & Sweet Shoe Co., Auburn, Me. Leather boots and shoes. No. 84,841; Jan. 9; Gaz. vol. 174; p. 580.
M. A. Hunt Company, The, Cincinnati, Ohio. Mattresses and spring-beds. No. 84,745; Jan. 2; Gaz. vol. 174; p. 284.
M. T. Stevens & Sons Company, North Andover, Mass. Worsted, woolen, and part-woolen piece goods. Nos. 84,763–4; Jan. 2; Gaz. vol. 174; p. 284.
Maine Manufacturing Company, Nashua, N. H. Refrigerators. No. 84,983; Jan. 16; Gaz. vol. 174; p. 824.
Manchester Hosiery Mills Co., Manchester, Pa. Hosiery. No. 85,151; Jan. 30; Gaz. vol. 174; p. 1214.
Manganiello, Tony, New York, N. Y. Hair-tonic. No. 84,783; Jan. 2; Gaz. vol. 174; p. 285.
Manine Medicine Company, Inc., The, St. Louis, Mo. Medicinal preparation. No. 85,784; Jan. 2; Gaz. vol. 174; p. 285.
Martin & Sons, C. J., Austin, Tex. Insecticides. No. 85,152; Jan. 30; Gaz. vol. 174; p. 1214.
Martinez, Bartolo, San Antonio, Tex. Certain food. No. 85,153; Jan. 30; Gaz. vol. 174; p. 1214.
Matienzo-Sains Company, Newburgh, N. Y. Tonic. No. 84,984; Jan. 16; Gaz. vol. 174; p. 824.
McAfee, Frank C., Moberly, Mo. Horse food. No. 84,842; Jnn. 9; Gaz. vol. 174; p. 580.
McCaffery, John P., Moline, Ill. Insecticides. No. 84,785; Jan. 2; Gaz. vol. 174; p. 285.
McCawley & Co., Baltimore, Md. Work-shirts, overalls, and rompers. No. 84,786; Jan. 2; Gaz. vol. 174; p. 285.
McNeil & Higgins Company, Chicago, Ill. Certain foods. No. 84,843; Jan. 9; Gaz. vol. 174; p. 580.
Merrell-Soule Co., Syracuse, N. Y. Milk-powder. No. 84,844; Jan. 9; Gaz. vol. 174; p. 580.
Meyer, George V., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Michigan Milling Company, Ann Arbor, Mich. Wheat-flour. No. 85,155; Jan. 30; Gaz. vol. 174; p. 1214.
Miller & Sons Co., Philadelphia, Pa. Hosiery. No. 84,787; Jan. 2; Gaz. vol. 174; p. 285.
Mills, Giles A., Girard, Kans. Remedies for piles and skin diseases. No. 84,788; Jan. 2; Gaz. vol. 174; p. 285.
Mission Cereal Company, Minneapolis, Minn. Cereal compound used in the preparation of a beverage. No. 84,845; Jan. 9; Gaz. vol. 174; p. 580.
Moland's Sons, William, Philadelphia, Pa. Preparation of pork. No. 84,846; Jan. 9; Gaz. vol. 174; p. 580.
Monitor Stove and Range Company, The, Cincinnati, Ohio. Stoves, ranges, and furnaces. No. 85,041; Jan. 23; Gaz. vol. 174; p. 1023.
Montana Flour Mills Co., Harlowton, Mont. Wheat-flour. Nos. 84,847–8; Jan. 9; Gaz. vol. 174; p. 580.
Monument Mills, Housatonic, Mass., and New York, N. Y. Bedspreads and counterpanes. No. 84,985; Jan. 16; Gaz. vol. 174; p. 824.
Morgan, Ernest V., Cleveland, Ohio. Fire-resisting cement. No. 84,986; Jan. 16; Gaz. vol. 174; p. 825.
Morris, Katie, Beaumont, Cal. Remedy for catarrh. No. 84,987; Jan. 16; Gaz. vol. 174; p. 825.
Moseley & Motley Milling Co., The, Rochester, N. Y. Wheat-flour. No. 84,988; Jan. 16; Gaz. vol. 174; p. 825.
Moseley & Motley Milling Co., Rochester, N. Y. Wheat-flour. No. 85,156; Jan. 30; Gaz. vol. 174; p. 1214.
Mutual Cotton Oil Co., Fort Worth, Tex. Stock food. No. 85,158; Jan. 30; Gaz. vol. 174; p. 1214.
Nalley Grocery Co., Austin, Tex. Canned vegetables and fruits. No. 84,989; Jan. 16; Gaz. vol. 174; p. 825.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 84,940–50; Jan. 9; Gaz. vol. 174; p. 580.
National Exterminating Co., New York, N. Y. Vermin-exterminating preparations. No. 84,911; Jan. 9; Gaz. vol. 174; p. 582.
National Starch Company, Jersey City, N. J., and New York, N. Y. Corn-starch. No. 84,851; Jan. 9; Gaz. vol. 174; p. 580.
National Starch Company, New York, N. Y. Edible starch. No. 84,852; Jan. 9; Gaz. vol. 174; p. 580.
National Starch Company, New York, N. Y. Starch. No. 84,912; Jan. 9; Gaz. vol. 174; p. 582.
National Starch Company, New York, N. Y. Edible starch. No. 85,159; Jan. 30; Gaz. vol. 174; p. 1214.
National Tube Flavor Co., Newark, N. Y. Certain toilet preparations and food-coloring compounds. No. 84,789; Jan. 2; Gaz. vol. 174; p. 285.
National Utilization Co., Norfolk, Va. Tankage. No. 84,790; Jan. 2; Gaz. vol. 174; p. 285.
National Water Company, Waukesha, Wis., and New York, N. Y. Natural spring drinking-water. Nos. 85,042–3; Jan. 23; Gaz. vol. 174; p. 1023.
New England Laboratory Company, Lynn, Mass. Cold-cream. No. 84,791; Jan. 2; Gaz. vol. 174; p. 285.
New York Herald Company, The, New York, N. Y. Pictures and illustrations. Nos. 84,853–69; Jan. 9; Gaz. vol. 174; pp. 580–1.
New York Herald Company, New York, N. Y. Pictures and illustrations. Nos. 84,991–2; Jan. 16; Gaz. vol. 174; p. 825.
Newark Packing Company, Newark, N. J. Smoked beef and bacon. No. 84,990; Jan. 16; Gaz. vol. 174; p. 825.
Nicolaou, George P. P., Salisbury, N. C. Compound baking-flour. No. 85,160; Jan. 30; Gaz. vol. 174; p. 1214.
Nivea, Maxim, New York, N. Y. Olive-oil food products. No. 84,993; Jan. 16; Gaz. vol. 174; p. 825.
Noble, Frank W., Southwick, Mass. Popcorn. No. 84,870; Jan. 9; Gaz. vol. 174; p. 581.
Nonbreakable Toy Co., New York, N. Y. Toys. No. 84,792; Jan. 2; Gaz. vol. 174; p. 285.
Noncarpicine Company, The, Pierre, S. D., and Chicago, Ill. Remedy for headache, neuralgia, &c. No. 84,994; Jan. 16; Gaz. vol. 174; p. 825.
Nonotuck Silk Company, The, Florence and Boston, Mass. Silk thread, machine-twist, &c. No. 84,871; Jan. 9; Gaz. vol. 174; p. 581.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Delmenhorst, Germany. Woolen yarn. No. 84,995; Jan. 16; Gaz. vol. 174; p. 825.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Woolen yarn. Nos. 84,996–7; Jan. 16; Gaz. vol. 174; p. 825.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Toilet soap. Nos. 85,161–2; Jan. 30; Gaz. vol. 174; p. 1214.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Woolen yarn. No. 85,163; Jan. 30; Gaz. vol. 174; p. 1214.
O'Keefe, Daniel, St. Louis, Mo. Composition for the treatment of leathers, hides, and pelts. No. 85,165; Jan. 30; Gaz. vol. 174; p. 1214.
Ohio Match Company, The, Wadsworth, Ohio. Safety-matches. No. 85,164; Jan. 30; Gaz. vol. 174; p. 1214.
Old Colony Cleanser Company, Hutchinson, Kans. Silver polish and cleanser. No. 85,166; Jan. 30; Gaz. vol. 174; p. 1214.
Osborn, Daniel C., Honesdale, Pa. Antiseptic dressing. No. 85,167; Jan. 30; Gaz. vol. 174; p. 1214.
Otto Kampfe Mfg. Co., Newark, N. J. Animal-traps. No. 84,779; Jan. 2; Gaz. vol. 174; p. 285.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned kraut and boiled cabbage. No. 85,119; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned corn. Nos. 85,120–1; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned peas and corn. Nos. 85,122–3; Jan. 30; Gaz. vol. 174; p. 1213.
P. Hohenadel Jr. Canning Company, Rochelle, Ill. Canned corn. No. 85,124; Jan. 30; Gaz. vol. 174; p. 1213.
Pahl'sche Gummi- und Asbest-Gesellschaft mit beschränkter Haftung, Dusseldorf-Rath, Germany. Certain jointing material, clap valves, hose, belting, and packing. No. 84,872; Jan. 9; Gaz. vol. 174; p. 581.
Pallas Candy Co., The, Butte, Mont. Candy. No. 85,168; Jan. 30; Gaz. vol. 174; p. 1214.
Palmer, Nathalie T., Middletown, Conn. Fans for personal use. No. 84,998; Jan. 16; Gaz. vol. 174; p. 825.

Paramount Knitting Company, Chicago, Ill. Hosiery. No. 84,914; Jan. 9; Gaz. vol. 174; p. 582.
Parrett, Richard J., Elkhart, Ind. Remedy for the kidneys and liver. No. 85,169; Jan. 30; Gaz. vol. 174; p. 1214.
Parsons, Theophilus, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Paul, Albert L., New Orleans, La. Insecticide. No. 85,170; Jan. 30; Gaz. vol. 174; p. 1214.
Paul F. Beich Company, Bloomington, Ill. Confections and chocolates. No. 84,811; Jan. 9; Gaz. vol. 174; p. 579.
Pen-Carbon Manifold Co., New York, N. Y. Manifold carbon paper and books. No. 85,171; Jan. 30; Gaz. vol. 174; p. 1214.
Penn Bros. Mfg. Co., Danville, Va. Suspenders. No. 84,873; Jan. 9; Gaz. vol. 174; p. 581.
Petillo, Diomede, New York, N. Y. Remedy for diseases of the blood. No. 84,793; Jan. 2; Gaz. vol. 174; p. 285.
Petteway & Powell, Freeman, Fla. Remedy for syphilis. No. 84,794; Jan. 2; Gaz. vol. 174; p. 285.
Pfeifer & Co., S., New Orleans, La. Butter. No. 84,999; Jan. 16; Gaz. vol. 174; p. 825.
Pioneer Cereal Company, Akron, Ohio. Certain grain foods. No. 84,874; Jan. 9; Gaz. vol. 174; p. 581.
Pittsburg-Buffalo Company, Pittsburgh, Pa. Coal. Nos. 85,172–3; Jan. 30; Gaz. vol. 174; p. 1214.
Pittsburgh Dry Goods Company, The, Pittsburgh, Pa. Hosiery. No. 85,025; Jan. 16; Gaz. vol. 174; p. 826.
Pompeian Co., Incorporated, The, Washington, D. C. Olive-oil. No. 85,174; Jan. 30; Gaz. vol. 174; p. 1214.
Potosote Company, The, Canton, Ohio. Mineral-water salt. No. 85,175; Jan. 30; Gaz. vol. 174; p. 1214.
Potter, Werden B., Jamaica, N. Y. Medicinal preparations. No. 85,176; Jan. 30; Gaz. vol. 174; p. 1214.
Pratt & Lambert, Inc., Long Island City and Buffalo, N. Y. Enamels, varnishes, stains, and fillers. No. 85,177; Jan. 30; Gaz. vol. 174; p. 1214.
Progress Auto Tire Trunk Mfg. Co., Philadelphia, Pa. Trunks, suit-cases, and portfolios. No. 85,000; Jan. 16; Gaz. vol. 174; p. 825.
Purr Puss Co., The, South Framingham, Mass. Cat-tonic. No. 84,795; Jan. 2; Gaz. vol. 174; p. 285.
Quackenbush, Walter, New York, N. Y. Monthly magazine. No. 84,875; Jan. 9; Gaz. vol. 174; 581.
Queen Mfg. Co., The, Cincinnati, Ohio. Ladies' outer skirts. No. 85,001; Jan. 16; Gaz. vol. 174; p. 825.
Quere, Theodore, Cleveland, Ohio. Artificial mineral water. No. 85,002; Jan. 16; Gaz. vol. 174; p. 825.
R. F. & J. Alexander & Co. Ltd., Neilston, Scotland. Sewing cotton thread in balls. No. 85,051; Jan. 30; Gaz. vol. 174; p. 1211.
R. S. Hudson, Limited, Liverpool, England. Extract of soap. No. 85,128; Jan. 30; Gaz. vol. 174; p. 1213.
Raventós, Manuel, San Sadurní de Noya, Spain. Effervescent wines. No. 84,751; Jan. 2; Gaz. vol. 174; p. 284.
Redlo Company, Limited, The, London, England. Cleaning and polishing cloths. No. 85,178; Jan. 30; Gaz. vol. 174; p. 1214.
Regal Shoe Company Inc., assignor to Regal Shoe Company, Boston, Mass. Leather boots and shoes. No. 85,003; Jan. 16; Gaz. vol. 174; p. 825.
Reiss Bros. & Co., Chicago, Ill. Tobacco-pipes. Nos. 85,004–5; Jan. 16; Gaz. vol. 174; p. 825.
Revêtements Josz Société Anonyme, Koekelberg-Brussels, Belgium. Metallic coverings for walls and ceilings. No. 84,752; Jan. 2; Gaz. vol. 174; p. 284.
Richard Hudnut, New York, N. Y. Soap. No. 85,127; Jan. 30; Gaz. vol. 174; p. 1213.
Rider, John W., Scottsburg, Ind. Certain foods. No. 85,179; Jan. 30; Gaz. vol. 174; p. 1214.
Risdon Iron & Locomotive Works, San Francisco, Cal. Water-tube boilers. No. 85,044; Jan. 23; Gaz. vol. 174; p. 1023.
Roberts & Co., Thomas, Philadelphia, Pa. Canned vegetables. No. 84,876; Jan. 9; Gaz. vol. 174; p. 581.
Roberts, Herbert F., Wilmington, Mass. Candles. No. 85,006; Jan. 16; Gaz. vol. 174; p. 825.
Rock-A-Water Chemical Company, The, Denver, Colo. Remedies for obesity, dyspepsia, and indigestion. No. 84,915; Jan. 9; Gaz. vol. 174; p. 582.
Rose Spring Bed Company, Memphis, Tenn. Mattresses. No. 84,753; Jan. 2; Gaz. vol. 174; p. 284.
Rosenthal & Bros., Samuel, New York, N. Y. Boys' outer suits. No. 85,180; Jan. 30; Gaz. vol. 174; p. 1214.
Rostenberg, Jacob, White Plains, N. Y. Bonnets, hats, and caps. No. 85,007; Jan. 16; Gaz. vol. 174; p. 825.
Rotkowitz Bros., New York, N. Y. Face powder and cream, hair tonic and dye. No. 84,754; Jan. 2; Gaz. vol. 74; p. 284.
Royal Baking Powder Company, Jersey City, N. J., and New York, N. Y. Soda for cooking. No. 84,916; Jan. 9; Gaz. vol. 174; p. 582.
Rubens & Marble, Chicago, Ill. Knitted undershirts. Nos. 85,008–10; Jan. 16; Gaz. vol. 174; p. 825.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Musical strings. No. 84,774; Jan. 2; Gaz. vol. 174; p. 285.
Rueb & Co., Edward, Chicago, Ill. Butter and eggs. No. 84,877; Jan. 9; Gaz. vol. 174; p. 581.
Salamander Grate Bar Co., New York, N. Y. Grates. No. 84,755; Jan. 2; Gaz. vol. 174; p. 284.
Samery & Wants, Lowville, N. Y. Medicine for all abrasions of the skin. No. 84,017; Jan. 9; Gaz. vol. 174; p. 582.
San Telmo Cigar Mfg. Co., Detroit, Mich. Cigars. No. 84,756; Jan. 2; Gaz. vol. 174; p. 284.
Saxlehner, Firm of Andreas, Budapest, Austria-Hungary. Medicinal preparation containing salts. No. 85,181; Jan. 30; Gaz. vol. 174; p. 1214.
Schick, Gustave G., Bronxville and New York, N. Y. Rubber packing for machinery. No. 85,182; Jan. 30; Gaz. vol. 174; p. 1214.
Schultz, Carl, Trinidad, Colo. Remedies for genito-urinary diseases. No. 85,011; Jan. 16; Gaz. vol. 174; p. 825.
Schwanhausser late Grossberger & Kurz, Nuremberg, Germany. Lead and colored pencils. No. 84,878; Jan. 9; Gaz. vol. 174; p. 581.
Scott & Gilbert Co., San Francisco, Cal. Certain foods. No. 84,879; Jan. 9; Gaz. vol. 174; p. 581.
Scott & Gilbert Co., San Francisco, Cal. Medicinal preparation for human and veterinary purposes. No. 85,184; Jan. 30; Gaz. vol. 174; p. 1215.
Scott, Hutchison, New York, N. Y. Belt-dressing. No. 85,185; Jan. 30; Gaz. vol. 174; p. 1215.
Sears, Roebuck and Co., Chicago, Ill. Stoves. No. 85,045; Jan. 23; Gaz. vol. 174; p. 1023.
Sears, Roebuck and Co., Chicago, Ill. Gasolene-stoves. No. 85,046; Jan. 23; Gaz. vol. 174; p. 1023.
Seat Brothers, Hugo, Okla. Remedy for consumption. No. 84,757; Jan. 2; Gaz. vol. 174; p. 284.
Seneca Chain Company, The, Kent, Ohio. Saddlery and harness hardware. No. 85,012; Jan. 16; Gaz. vol. 174; p. 825.
Shaffer, Knuland, Boston, Mass. Washcloths, towels, and bath-mats. No. 84,880; Jan. 9; Gaz. vol. 174; p. 581.
Shannon & Mott Company, Des Moines, Iowa. Wheat-flour. No. 85,013; Jan. 16; Gaz. vol. 174; p. 825.
Shannon & Mott Company, Des Moines, Iowa. Wheat-flour and stock food. No. 85,185; Jan. 30; Gaz. vol. 174; p. 1215.
Shoenfeld, Bernard, New York, N. Y. Shirt-waists. No. 84,918; Jan. 9; Gaz. vol. 174; p. 582.
Shredded Wheat Company, The, Niagara Falls, N. Y. Cereal biscuit. No. 85,186; Jan. 30; Gaz. vol. 174; p. 1215.
Sidney and Smith, London, England. Game. No. 85,014; Jan. 16; Gaz. vol. 174; p. 825.
Singer Brothers, Jersey City, N. J. All kinds of candies. No. 85,187; Jan. 30; Gaz. vol. 174; p. 1215.
Skinner, Harry A., New York, N. Y. Certain toilet preparations. No. 85,015; Jan. 16; Gaz. vol. 174; p. 825.
Sleeper, Frederick L., Chicago, Ill. Roman gold paint. No. 85,188; Jan. 30; Gaz. vol. 174; p. 1215.
Smith Chemical Co., Athens, Ga. Remedy for gonorrhea and gleet. No. 85,189; Jan. 30; Gaz. vol. 174; p. 1215.
Smith & Son Co., Lee S., Pittsburgh, Pa. Dental and surgical cabinets, operating-stools, &c. No. 85,047; Jan. 23; Gaz. vol. 174; p. 1023.
Smith-Stillwell Co., The, Detroit, Mich. Emulsion of cod-liver oil. No. 85,190; Jan. 30; Gaz. vol. 174; p. 1215.
Smooth-On Manufacturing Company, Jersey City, N. J. Liquid iron compound. No. 85,191; Jan. 30; Gaz. vol. 174; p. 1215.
Snow-Man Products Co., Escanaba, Mich. Chewing-gum. No. 85,016; Jan. 16; Gaz. vol. 174; p. 825.
Sökeland Gebr., Wandsbek, near Hamburg, Germany. Canned fruits. No. 84,882; Jan. 9; Gaz. vol. 174; p. 581.
Soulis & Sulis, Newton, Mass. Teas. No. 84,883; Jan. 9; Gaz. vol. 174; p. 581.
Sours, Pearl A., Kansas City, Mo. Certain toilet preparations. No. 85,192; Jan. 30; Gaz. vol. 174; p. 1215.
Southern California Fish Company, Los Angeles, Cal. Canned fish. No. 85,017; Jan. 16; Gaz. vol. 174; p. 825.
Spirella Company, The, Meadville, Pa. Surgical bandages, surgical, sanitary, and abdominal belts. No. 85,048; Jan. 23; Gaz. vol. 174; p. 1023.
Spirella Company, The, Meadville, Pa. Certain clothing. No. 85,193; Jan. 30; Gaz. vol. 174; p. 1215.
Spool Cotton Company, Newark, N. J., and New York, N. Y. Cotton thread and yarn. Nos. 84,758–60; Jan. 2; Gaz. vol. 174; p. 284.
St. Amant, Lucy, Baton Rouge, La. Remedies for skin and blood diseases, cuts, and wounds. No. 84,761; Jan. 2; Gaz. vol. 174; p. 284.
Standard Oil Company of New York, New York, N. Y. Lubricating-oils. No. 85,194; Jan. 30; Gaz. vol. 174; p. 1215.
Standard Varnish Works, New York, N. Y. Coater for cement, concrete, &c. No. 85,195; Jan. 30; Gaz. vol. 174; p. 1215.
Standard Varnish Works, New York, N. Y. Face liquid for use as a sealing coat over metal or wood primers. No. 85,196; Jan. 30; Gaz. vol. 174; p. 1215.
Stebbins, Martha J., Churchville, N. Y. Scalp-tonic. No. 84,919; Jan. 9; Gaz. vol. 174; p. 582.
Stebbins, Martha J., Churchville, N. Y. Remedy for catarrh and colds in head. No. 85,197; Jan. 30; Gaz. vol. 174; p. 1215.
Stevens, Bessie E., Chicago, Ill. Blood-purifier and tonic. No. 84,762; Jan. 2; Gaz. vol. 174; p. 284.
Stickney & Poor Spice Company, Boston, Mass. Mustard. No. 85,198; Jan. 30; Gaz. vol. 174; p. 1215.
Stockwell-Haley Co., Los Angeles, Cal. Mattresses. No. 84,765; Jan. 2; Gaz. vol. 174; p. 284.

Stone, Galen L., *et al.* (See Amoskeag Manufacturing Company, assignor.)
Street, Daniel B., Washington, D. C. Medicinal tablets. No. 84,920; Jan. 9; Gaz. vol. 174; p. 582.
Strobbeck, Charles W., New York, N. Y. Leather boots and shoes. No. 84,884; Jan. 9; Gaz. vol. 174; p. 581.
Sullivan System, The, Inc., New York, N. Y. Catalogues of merchandise. No. 84,885; Jan. 9; Gaz. vol. 174; p. 581.
Superia Cigar Manufacturing Co., Detroit, Mich. Cigars, cheroots, and little cigars. No. 84,766; Jan. 2; Gaz. vol. 174; p. 284.
Swenson Bros. Co., Omaha, Nebr. Hosiery, petticoats, and muslin underwear. No. 85,201; Jan. 30; Gaz. vol. 174; p. 1215.
Swift and Company, Chicago, Ill. Cleansing compound. No. 85,202; Jan. 30; Gaz. vol. 174; p. 1215.
T. M. Sinclair & Co., Limited, Cedar Rapids, Iowa. Certain foods. No. 84,881; Jan. 9; Gaz. vol. 174; p. 581.
Taylor, Alexander, New York, N. Y. Foot and basket balls. No. 84,767; Jan. 2; Gaz. vol. 174; p. 284.
Theo. H. Davies & Company, Ltd., Honolulu, Hawaii. Canned pineapple. No. 84,819; Jan. 9; Gaz. vol. 174; p. 579.
Thomas B. Jeffery Company, The, Kenosha, Wis. Automobiles. Nos. 84,749–50; Jan. 2; Gaz. vol. 174; p. 284.
Thomas B. Jeffery Company, The, Kenosha, Wis. Automobiles. Nos. 84,776–7; Jan. 2; Gaz. vol. 174; p. 285.
Thompson, Homer W., New York, N. Y. Soft enamel in various colors used as a filler. No. 85,203; Jan. 30; Gaz. vol. 174; p. 1215.
Todd, John T., assignor to Eureka Study System, Springfield, Ill. Card games. No. 84,769; Jan. 2; Gaz. vol. 174; p. 284.
Tom Wilson Manufacturing Company, The, New York, N. Y. Chewing-gum. No. 84,893; Jan. 9; Gaz. vol. 174; p. 581.
Tootal Broadhurst Lee Company, Limited, Manchester, England. Cotton handkerchiefs. No. 84,886; Jan. 9; Gaz. vol. 174; p. 581.
Tootle, Wheeler & Motter Mer. Co., assignor to Wheeler and Motter Mercantile Company, St. Joseph, Mo. Cotton flannels. No. 84,887; Jan. 9; Gaz. vol. 174; p. 581.
Tri-Tone Drug Manufacturing Company, Memphis, Tenn. Laxative remedy. No. 85,204; Jan. 30; Gaz. vol. 174; p. 1215.
Ulmann & Co., Bernhard, New York, N. Y. Yarn. No. 85,019; Jan. 16; Gaz. vol. 174; p. 825.
Underwood, Walter H., Hutchinson, Kans. Dried fruits and cheese. No. 85,020; Jan. 16; Gaz. vol. 174; p. 825.
Union Dairy Company, St. Louis, Mo. Milk. No. 84,888; Jan. 9; Gaz. vol. 174; p. 581.
United Drug Co., Boston, Mass. Candy. No. 84,889; Jan. 9; Gaz. vol. 174; p. 581.
United States Chrome Sole Company, Chicago, Ill. Leather hoof-pads. No. 84,921; Jan. 9; Gaz. vol. 174; p. 582.
United States Whip Company, Westfield, Mass. Whips. No. 85,205; Jan. 30; Gaz. vol. 174; p. 1215.
United States Wire Mat Company, Decatur, Ill. Fly-killers. No. 85,049; Jan. 23; Gaz. vol. 174; p. 1023.
Vero-Form Hygienic Company, Newark, N. J. Toilet soap. No. 85,207; Jan. 30; Gaz. vol. 174; p. 1215.
Vogue Company, The, New York, N. Y. Semimonthly magazine. No. 84,770; Jan. 2; Gaz. vol. 174; p. 284.
Von Duprin Fire Exit Latch Company, Indianapolis, Ind. Locks and latches. No. 85,021; Jan. 16; Gaz. vol. 174; p. 825.
Walker & Co., James, assignor to James Walker and Company Limited, London, England. Machinery packing. No. 84,890; Jan. 9; Gaz. vol. 174; p. 581.
Warner Remedy Company, Chicago, Ill. Veterinary remedy. No. 84,771; Jan. 2; Gaz. vol. 174; p. 284.
Warren Featherbone Company, Three Oaks, Mich. Stiffening cords, blades, and tapes. No. 85,209; Jan. 30; Gaz. vol. 174; p. 1215.
Warren, Laura E., Cleveland, Ohio. Hair-grower. No. 85,208; Jan. 30; Gaz. vol. 174; p. 1215.
Waxman, Percy, New York, N. Y. Monthly magazine. No. 84,891; Jan. 9; Gaz. vol. 174; p. 581.
Wear, Charles, Boston, Mass. Metallic packings. No. 85,210; Jan. 30; Gaz. vol. 174; p. 1215.
Wear Knitting Co., Tryon, N. C. Hosiery. No. 85,211; Jan. 30; Gaz. vol. 174; p. 1215.
Welsbach Company, Gloucester City, N. J. Mantles. No. 85,050; Jan. 23; Gaz. vol. 174; p. 1023.
West Disinfecting Company, New York, N. Y. Disinfecting fluid. No. 84,772; Jan. 2; Gaz. vol. 174; p. 284.
Western Grocer Company, Marshalltown, Iowa. Certain foods. No. 84,892; Jan. 9; Gaz. vol. 174; p. 581.
Wheeler and Motter Mercantile Company. (See Tootle, Wheeler & Motter Mer. Co., assignor.)
White Rats Actors' Union of America, New York, N. Y. Weekly periodicals. No. 84,773; Jan. 2; Gaz. vol. 174; p. 285.
Wigglesworth, George, *et al.* (See Amoskeag Manufacturing Company, assignor.)
Wil-Mar Bottling Co., The, Baltimore, Md. Certain flavored soda. No. 85,023; Jan. 16; Gaz. vol. 174; p. 826.
Wilkening, Gustav, Crete, Ill. Adhesive for mending leaks. No. 85,022; Jan. 16; Gaz. vol. 174; p. 826.
William L. Barrell Co., New York, N. Y.; Boston and Lawrence, Mass.; Chicago, Ill., and St. Louis, Mo. Duck. No. 84,809; Jan. 9; Gaz. vol. 174; p. 579.
William L. Barrell Co., New York, N. Y.; Boston and Lawrence, Mass.; Chicago, Ill., and St. Louis, Mo. Duck. No. 84,895; Jan. 9; Gaz. vol. 174; p. 582.
Wireless Specialty Apparatus Co., New York, N. Y. Electrical repeating relays. No. 85,212; Jan. 30; Gaz. vol. 174; p. 1215.
Wm. H. Horstmann Company, Philadelphia, Pa. Artificial-silk yarn. No. 84,882; Jan. 9; Gaz. vol. 174; p. 580.
Wulding, Firm of Johann A., Berlin, Germany. Disinfectant and astringent remedy. No. 84,922; Jan. 9; Gaz. vol. 174; p. 582.
Yawman & Erbe Manufacturing Co., Rochester, N. Y. Paper-files. No. 84,775; Jan. 2; Gaz. vol. 174; p. 285.
Yours Truly Company. (See Clague, Stanley, assignor.)

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Ackerman, Robert M., Binghamton, N. Y. "E. Harrison's Chewing Gum." (For Chewing-Gum.) No. 16,113; Jan. 23; Gaz. vol. 174; p. 1024.
Allentown Manufacturing Company, The, Allentown, Pa. "Granite Prepared Paint." (For Liquid House-Paint.) No. 16,114; Jan. 23; Gaz. vol. 174; p. 1024.
American Ammone Company, New York, N. Y. "Bath Amone." (For Toilet Compounds.) No. 16,115; Jan. 23; Gaz. vol. 174; p. 1024.
Arcadia Food Company, New York, N. Y. "Easy Jell." (For Jelly-Powder.) No. 16,116; Jan. 23; Gaz. vol. 174; p. 1024.
Armstrong Cork Company, Pittsburgh, Pa. "Nonpareil Medium Pressure Cement." (For Cement.) No. 16,117; Jan. 23; Gaz. vol. 174; p. 1024.
Armstrong Cork Company, Pittsburgh, Pa. "Nonpareil Low Pressure Cement." (For Cement.) No. 16,118; Jan. 23; Gaz. vol. 174; p. 1024.
Armstrong Cork Company, Pittsburgh, Pa. "Nonpareil Finishing Cement." (For Cement.) No. 16,119; Jan. 23; Gaz. vol. 174; p. 1024.
Armstrong Cork Company, Pittsburgh, Pa. "Nonpareil High Pressure Cement." (For Cement.) No. 16,120; Jan. 23; Gaz. vol. 174; p. 1024.
Bentley, George G., Chateaugay, N. Y. "Bentley's Louse Killer." (For Preparation to Relieve All Kinds of Animals from Vermin.) No. 16,105; Jan. 16; Gaz. vol. 174; p. 827.
C. B. Henschel Mfg. Co., Milwaukee, Wis. "La Vadura." (For Cigars.) No. 16,106; Jan. 16; Gaz. vol. 174; p. 827.
Cheek-Neal Coffee Co., Nashville, Tenn. "Cereco." (For Coffee, Cereals, and Chicory.) No. 16,121; Jan. 23; Gaz. vol. 174; p. 1024.
D. P. Harris Hardware Co., New York, N. Y. "Princeton." (For Bicycles.) No. 16,103; Jan. 2; Gaz. vol. 174; p. 286.
Delavan Condensed Milk Company, Chicago, Ill. "Delavan Brand Sterilized Modified Milk." (For Sterilized Modified Milk.) No. 16,141; Jan. 30; Gaz. vol. 174; p. 1216.
E. R. Brackett Company, New York, N. Y. "Rattler Brand." (For Oranges and Grape-Fruit.) No. 16,122; Jan 23; Gaz. vol. 174; p. 1024.
Farley Candy Company, Chicago, Ill. "Sugar Plums." (For Candy and Confections.) No. 16,104; Jan. 2; Gaz. vol. 174; p. 286.
Gardner Wire Company, Chicago, Ill. "Quick Sale." (For Hardware.) No. 16,142; Jan. 30; Gaz. vol. 174; p. 1216.
Gardy, H. D., Philadelphia, Pa. "A Great Appetizer." (For Granulated Sapsago-Cheese.) No. 16,123; Jan. 23; Gaz. vol. 174; p. 1024.
Hanning, William H., Terre Haute, Ind. "Char Coal Tooth Paste." (For Tooth-Paste.) No. 16,124; Jan. 23; Gaz. vol. 174; p. 1024.
Hires Condensed Milk Company, Philadelphia, Pa. "Sun Rise Bread." (For Evaporated Skim-Milk.) No. 16,125; Jan. 23; Gaz. vol. 174; p. 1024.
Isleton Butter Company, Isleton, Cal. "Isleton Creamery Butter." (For Butter.) No. 16,126; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Adelosa." (For Cigars.) No. 16,127; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Compliments of the Season." (For Cigars.) No. 16,128; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Belle Point." (For Cigars.) No. 16,129; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Dea Rosa." (For Cigars.) No. 16,130; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Don Brazos." (For Cigars.) No. 16,131; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Salve Rey." (For Cigars.) No. 16,132; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Ricabella." (For Cigars.) No. 16,133; Jan. 23; Gaz. vol. 174; p. 1024.
Julius Bien Company, New York, N. Y. "Tres Bon." (For Cigars.) No. 16,134; Jan. 23; Gaz. vol. 174; p. 1024.
King, Francis M., Sr., Philadelphia, Pa. "The Frameless, or No-Frame Screen." (For Insect and Window Screens.) No. 16,135; Jan. 23; Gaz. vol. 174; p. 1024.
Louisville Cotton Oil Co., Incorporated, Louisville, Ky. "Ideal or Progress." (For Cooking-Oil.) Nos. 16,143–4; Jan. 30; Gaz. vol. 174; p. 1216.
Martin, T. F., Rock Island, Ill. "The Five Label Cigars." (For Cigars.) No. 16,136; Jan. 23; Gaz. vol. 174; p. 1024.
Mason City Brick and Tile Company, Mason City, Iowa. "Everlasting Silo." (For Silos.) No. 16,146; Jan. 30; Gaz. vol. 174; p. 1216.
Osborn Paper Company, Marion, Ind. "The Enlight." (For Tablets.) No. 16,137; Jan. 23; Gaz. vol. 174; p. 1024.
Peabody & Co., Henry W., New York, N. Y. "Havakan." (For Canned Crab-Meat.) No. 16,107; Jan. 16; Gaz. vol. 174; p. 827.
Polly Prue Hook and Eye Company, Philadelphia, Pa. "Polly Prue Hook and Eye." (For Hooks and Eyes.) No. 16,148; Jan. 30; Gaz. vol. 174; p. 1216.
Posner, Abraham, New York, N. Y. "Dr. Posner's High School Shoe." (For Shoes.) No. 16,147; Jan. 30; Gaz. vol. 174; p. 1216.
Richmond Hosiery Mills, Rossville, Ga., and Chattanooga, Tenn. "Papoose." (For Hosiery.) No. 16,108; Jan. 16; Gaz. vol. 174; p. 827.
Rinaldi & Grossi, New York, N. Y. "Ferro-China-Italia." (For Bitters.) No. 16,138; Jan. 23; Gaz. vol. 174; p. 1024.
Schlichting, Albert T., Newark, N. J. "Slick-Shine Furniture Polish." (For Furniture-Polish.) No. 16,109; Jan. 16; Gaz. vol. 174; p. 827.
Schlichting, Albert T., Newark, N. J. "Magic Bar Top Oil." (For Bar-Top Oil.) No. 16,110; Jan. 16; Gaz. vol. 174; p. 827.
Schlichting, Albert T., Newark, N. J. "Slick-Shine Liquid Metal Polish." (For Liquid Metal-Polish.) No. 16,111; Jan. 16; Gaz. vol. 174; p. 827.
Schmidt & Co., New York, N. Y. "Victor Cousin." (For Cigars.) No. 16,112; Jan. 16; Gaz. vol. 174; p. 827.
Schmidt & Co., New York, N. Y. "Red Rose." (For Cigars.) No. 16,139; Jan. 23; Gaz. vol. 174; p. 1024.
Thomson, Loughran S., Pittsburgh, Pa. "Aviation Game." (For a Game.) No. 16,145; Jan. 30; Gaz. vol. 174; p. 1216.
Toiletine Company, The, Greenfield, Mass. "Evarosa." (For Remedial Tonic for Hair and Scalp.) No. 16,140; Jan. 23; Gaz. vol. 174; p. 1024.
Van Camp Packing Co., The, Indianapolis, Ind. "Holstein." (For Evaporated Milk.) No. 16,149; Jan. 30; Gaz. vol. 174; p. 1216.

PRINTS.

Ammon & Person, Jersey City, N. J. "Creamery Butterine." (For Oleomargarin.) No. 2,934; Jan. 30; Gaz. vol. 174; p. 1216.

Bing, John, New York, N. Y. "Bing's Lucky Penguins." (For Toys.) No. 2,935; Jan. 30; Gaz. vol. 174; p. 1216.

Bing, John, New York, N. Y. "Bing's Lucky Penguin." (For Toys.) No. 2,936; Jan. 30; Gaz. vol. 174; p. 1216.

Cream of Wheat Co., Minneapolis, Minn. "He's Coming To It." (For Wheat Breakfast Food.) No. 2,928; Jan. 23; Gaz. vol. 174; p. 1024.

Dawson Pharmacal Company, The, Dawsonsprings, Ky. "Products that have made Kentucky Famous." (For Iodinized Emulsion and Creosotonic.) No. 2,929; Jan. 23; Gaz. vol. 174; p. 1024.

Delavan Condensed Milk Company, Chicago, Ill. "Delavan Brand Sterilized Modified Milk." (For Sterilized Modified Milk.) No. 2,937; Jan. 30; Gaz. vol. 174; p. 1216.

Kronberger, Israel B., San Rafael, Cal. "Help Wanted." (For Kronberger's California Compound Eucalyptus Syrup.) No. 2,938; Jan. 30; Gaz. vol. 174; p. 1216.

New Home Sewing Machine Co., The, Orange, Mass. "The New Home Sewing Machine Co." (For Sewing-Machines.) No. 2,925; Jan. 2; Gaz. vol. 174; p. 286.

Oriental Oil Company, Dallas, Tex. "Oriental Special Auto Oil." (For Automobile Oil.) No. 2,927; Jan. 30; Gaz. vol. 174; p. 1216.

Peet Bros., Philadelphia, Pa. "Dress Styles Come and Go." (For Hooks and Eyes.) No. 2,930; Jan. 23; Gaz. vol. 174; p. 1024.

Pellegrini, Alfred, New York, N. Y. "Fravolio." (For Toilet Cream.) No. 2,926; Jan. 16; Gaz. vol. 174; p. 827.

Providence Oil Company, Providence, R. I. "Never Wet." (For Waterproofing and Preservative Paste for Leather.) No. 2,931; Jan. 23; Gaz. vol. 174; p. 1024.

Schandein & Lind Co., Philadelphia, Pa. "Peppermint Breath Hearts." (For Perfumed Candy Tablets.) No. 2,940; Jan. 30; Gaz. vol. 174; p. 1216.

Schandein & Lind Co., Philadelphia, Pa. "Violet Breath Hearts." (For Perfumed Candy Tablets.) No. 2,941; Jan. 30; Gaz. vol. 174; p. 1216.

Southern Cotton Oil Co., The, New York, N. Y. "Wesson Snowdrift Oil." (For Wesson Snowdrift Oil.) No. 2,932; Jan. 23; Gaz. vol. 174; p. 1024.

United Shirt & Collar Co., Troy, N. Y. "Lion Collars." (For Collars.) No. 2,933; Jan. 23; Gaz. vol. 174; p. 1024.

Utah Lumber Company, Salt Lake City, Utah. "Alligator Hide Roofing." (For Composition Roofing.) No. 2,927; Jan. 16; Gaz. vol. 174; p. 827.

DISCLAIMERS.

Herman, Reinhold, Crafton, Pa.; disclaimer filed by patentee. Printing apparatus. No. 777,096; disclaimer filed Dec. 28, 1911; Gaz. vol. 174; p. 588.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1912.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

Abrading tool. W. A. Reed. No. 1,014,094; Jan. 9; Sp. p. 2240; Gaz. vol. 174; p. 375.

Abrasive articles, Making. F. W. Higgins. No. 1,013,657; Jan. 2; Sp. p. 1253; Gaz. vol. 174; p. 197.

Acetylene generator, Automatic water-feed. I. Mumma. No. 1,014,715; Jan. 16; Sp. p. 3613; Gaz. vol. 174; p. 619.

Acid and other products of hydrolysis of albuminous substances from one another by electrolysis, Separating glutamic. K. Ikeda and S. Suzuki. No. 1,015,891; Jan. 30; Sp. p. 6161; Gaz. vol. 174; p. 1074.

Acid, Apparatus for absorbing hydrofluoric. J. J. Dye. No. 1,016,219; Jan. 30; Sp. p. 6826; Gaz. vol. 174; p. 1186.

Acid, Glycol ester of benzoic. L. Taub and H. Hahl. No. 1,014,859; Jan. 16; Sp. p. 3957; Gaz. vol. 174; p. 669.

Acid ketones, Producing indigo-o-nitrophenyl-lactic. J. Koetschet and A. Barbier. No. 1,015,495; Jan. 23; Sp. p. 5320; Gaz. vol. 174; p. 912.

Acid, Making chlorosulfonic. A. Klages and H. Vollberg. No. 1,013,181; Jan. 2; Sp. p. 182; Gaz. vol. 174; p. 32.

Acid, Manufacture of glycolic. O. Liebknecht. No. 1,013,502; Jan. 2; Sp. p. 901; Gaz. vol. 174; p. 144.

Acid of the safranin series and making same, Trisulfonic. O. Sohst. No. 1,015,854; Jan. 23; Sp. p. 5003; Gaz. vol. 174; p. 864.

Acids from their esters, Manufacture of fatty. W. Connstein. No. 1,015,994; Jan. 30; Sp. p. 6379; Gaz. vol. 174; p. 1110.

Adding and listing machine. J. G. Vincent. No. 1,013,910; Jan. 9; Sp. p. 1831; Gaz. vol. 174; p. 313.

Adding and listing machine. R. E. Benner. No. 1,013,923; Jan. 9; Sp. p. 1860; Gaz. vol. 174; p. 318.

Adding-machine. C. O. Mapel. No. 1,013,192; Jan. 2; Sp. p. 204; Gaz. vol. 174; p. 36.

Adding-machine. J. P. Harrison. No. 1,015,227; Jan. 16; Sp. p. 4097; Gaz. vol. 174; p. 792.

Adding-machine. A. I. Gancher. No. 1,015,307; Jan. 23; Sp. p. 4801; Gaz. vol. 174; p. 847.

Addressing and printing machine. U. G. Lee. No. 1,014,762; Jan. 16; Sp. p. 3714; Gaz. vol. 174; p. 634.

Advertisement device, Moving. E. L. Niles. No. 1,015,241; Jan. 16; Sp. p. 4731; Gaz. vol. 174; p. 797.

Advertising apparatus. P. Hart. No. 1,014,469; Jan. 9; Sp. p. 3047; Gaz. vol. 174; p. 505.

Advertising device. D. Farnum. No. 1,015,431; Jan. 23; Sp. p. 5171; Gaz. vol. 174; p. 889.

Advertising device. A. J. Clark. No. 1,016,212; Jan. 30; Sp. p. 6815; Gaz. vol. 174; p. 1184.

Advertising machine, Moving. W. W. Bates. No. 1,015,122; Jan. 16; Sp. p. 4506; Gaz. vol. 174; p. 759.

Advertising novelty. F. G. Fawkes. No. 1,014,961; Jan. 16; Sp. p. 4182; Gaz. vol. 174; p. 704.

Aerial vehicle. C. A. Rex. No. 1,013,219; Jan. 2; Sp. p. 283; Gaz. vol. 174; p. 46.

Aerial vessel. J. J. Donnelly. No. 1,014,643; Jan. 16; Sp. p. 3461; Gaz. vol. 174; p. 595.

Aeroboat. J. C. Langlile. No. 1,015,568; Jan. 23; Sp. p. 5474; Gaz. vol. 174; p. 937.

Aerocraft. J. J. V. Kaulyneskas. No. 1,013,851; Jan. 2; Sp. p. 1681; Gaz. vol. 174; p. 266.

Aerodrome. H. H. Ashlock. No. 1,014,031; Jan. 9; Sp. p. 2108; Gaz. vol. 174; p. 354.

Aeroplane. M. Jovanovich. No. 1,013,601; Jan. 2; Sp. p. 1104; Gaz. vol. 174; p. 177.

Aeroplane. S. M. Williams. No. 1,014,194; Jan. 9; Sp. p. 2444; Gaz. vol. 174; p. 410.

Aeroplane. K. Zuggo. No. 1,014,430; Jan. 9; Sp. p. 2978; Gaz. vol. 174; p. 494.

Aeroplane. J. W. Way. No. 1,014,731; Jan. 16; Sp. p. 3655; Gaz. vol. 174; p. 625.

Aeroplane. G. H. Loose. No. 1,015,045; Jan. 16; Sp. p. 4361; Gaz. vol. 174; p. 732.

Aeroplane. H. L., A. E., and H. O. Short. No. 1,015,090; Jan. 16; Sp. p. 4442; Gaz. vol. 174; p. 747.

Aeroplane. A. B. Lycan. No. 1,015,200; Jan. 16; Sp. p. 4647; Gaz. vol. 174; p. 784.

Aeroplane. P. D. Riordan. No. 1,015,711; Jan. 23; Sp. p. 5781; Gaz. vol. 174; p. 985.

Aeroplane. J. M. Alleas. No. 1,015,924; Jan. 30; Sp. p. 6226; Gaz. vol. 174; p. 1086.

Aeroplane. A. R. Lassel. No. 1,016,020; Jan. 30; Sp. p. 6433; Gaz. vol. 174; p. 1120.

Aeroplanes, &c., Automatic stabilizer for. P. L. A. Regnard. No. 1,015,837; Jan. 30; Sp. p. 6042; Gaz. vol. 174; p. 1055.

Aeroplanes, Equilibrium attachment for. A. R. Monro and H. Beatty. No. 1,014,082; Jan. 9; Sp. p. 2219; Gaz. vol. 174; p. 372.

Agitating and grinding mechanism. E. B. Goodwin. No. 1,014,871; Jan. 16; Sp. p. 3982; Gaz. vol. 174; p. 673.

Air and separating it into its elements, Liquefying. E. Jänecke. No. 1,015,800; Jan. 30; Sp. p. 5964; Gaz. vol. 174; p. 1043.

Air-brakes, Electric control mechanism for. H. Rowntree. No. 1,014,852; Jan. 16; Sp. p. 3936; Gaz. vol. 174; p. 667.

Air-conditioning device. A. A. Blomfeldt. No. 1,013,368; Jan. 2; Sp. p. 600; Gaz. vol. 174; p. 97.

Air cooler and purifier. C. Jost. No. 1,016,157; Jan. 30; Sp. p. 6712; Gaz. vol. 174; p. 1166.

Air-craft. J. W. Wolfe. No. 1,014,276; Jan. 9; Sp. p. 2632; Gaz. vol. 174; p. 439.

Air-deflector. S. S. Russell. No. 1,014,523; Jan. 9; Sp. p. 3146; Gaz. vol. 174; p. 523.

Air-heating apparatus, Compressed-. S. A. Reeve. No. 1,014,350; Jan. 9; Sp. p. 2756; Gaz. vol. 174; p. 468.

Air-motor gear. C. J. Zirbel. No. 1,015,921; Jan. 30; Sp. p. 6221; Gaz. vol. 174; p. 1084.

Airship. F. G. Vohs. No. 1,013,523; Jan. 2; Sp. p. 945; Gaz. vol. 174; p. 151.

Airship. C. A. Long. No. 1,014,763; Jan. 16; Sp. p. 3723; Gaz. vol. 174; p. 634.

Airship. K. L. W. Geest. No. 1,015,674; Jan. 23; Sp. p. 5694; Gaz. vol. 174; p. 973.

Alarm: *See* Burglar-alarm; Fire-alarm.

Alarm device, Detonating-. E. B. Waldron. No. 1,014,702; Jan. 16; Sp. p. 3793; Gaz. vol. 174; p. 644.

Alarm system, Thermostatic. W. G. Asmus. No. 1,015,118; Jan. 16; Sp. p. 4499; Gaz. vol. 174; p. 757.

Alarms or other devices, Apparatus for operating. G. I. Rockwood. No. 1,015,080; Jan. 16; Sp. p. 4423; Gaz. vol. 174; p. 744.

Alloy. P. Debas. No. 1,014,642; Jan. 16; Sp. p. 3460; Gaz. vol. 174; p. 595.

Alloy for coating with metal. C. F. Burgess. No. 1,014,751; Jan. 16; Sp. p. 3695; Gaz. vol. 174; p. 631.

Alloy for coating with metal. C. F. Burgess. No. 1,014,946; Jan. 16; Sp. p. 4154; Gaz. vol. 174; p. 698.

Aluminium, Producing pulverulent and easily-washable hydrates of. N. A. Langlet and E. L. Rinman. No. 1,015,499; Jan. 23; Sp. p. 5325; Gaz. vol. 174; p. 913.

Amalgamating system. L. J. Kendrick and J. G. Tunnicliffe. No. 1,013,496; Jan. 2; Sp. p. 893; Gaz. vol. 174; p. 142.

Ammonia from gases, Recovering. H. Koppers. No. 1,013,404; Jan. 2; Sp. p. 694; Gaz. vol. 174; p. 110.

Ammonia-generator. A. E. Bossé. No. 1,014,040; Jan. 9; Sp. p. 2135; Gaz. vol. 174; p. 356.

Amorphous anhydrous barium hydroxid, Making. C. Rollin. No. 1,015,345; Jan. 23; Sp. p. 4987; Gaz. vol. 174; p. 861.

Amusement apparatus. W. E. Miller. No. 1,013,202; Jan. 2; Sp. p. 220; Gaz. vol. 174; p. 39.

Amusement apparatus. W. E. Miller. No. 1,013,203; Jan. 2; Sp. p. 230; Gaz. vol. 174; p. 39.

Amusement device. M. W. McIntyre and R. P. Conner. No. 1,013,843; Jan. 2; Sp. p. 1656; Gaz. vol. 174; p. 263.

Amusement device. J. H. Craun and S. Baldwin. No. 1,014,571; Jan. 9; Sp. p. 3230; Gaz. vol. 174; p. 538.

Angle-bar, nut-lock, and rail joint and brace, Combined. L. Harvey. No. 1,013,488; Jan. 2; Sp. p. 876; Gaz. vol. 174; p. 140.

Animal-trap. J. F. Winkler. No. 1,014,550; Jan. 9; Sp. p. 3185; Gaz. vol. 174; p. 531.

Animal-trap. A. C. Bowser. No. 1,015,471; Jan. 23; Sp. p. 5260; Gaz. vol. 174; p. 903.

Animal-trap. C. Fiedler. No. 1,015,794; Jan. 30; Sp. p. 5954; Gaz. vol. 174; p. 1042.

Animal-trap. B. A. Shaw. No. 1,015,845; Jan. 30; Sp. p. 6060; Gaz. vol. 174; p. 1057.
Animal-trap. J. Opperud. No. 1,016,170; Jan. 30; Sp. p. 6734; Gaz. vol. 174; p. 1171.
Annealing-pot, Welded wrought-iron. E. T. Lammine. No. 1,014,491; Jan. 9; Sp. p. 3081; Gaz. vol. 174; p. 512.
Armatures, Vibration-absorber for alternating-current-magnet. C. L. Rosenqvist. No. 1,014,257; Jan. 9; Sp. p. 2600; Gaz. vol. 174; p. 433.
Armor-plate. J. N. Papendry. No. 1,014,510; Jan. 9; Sp. p. 3118; Gaz. vol. 174; p. 518.
Art-plaques, Producing. C. O. Henriques. No. 1,014,472; Jan. 9; Sp. p. 3050; Gaz. vol. 174; p. 506.
Auger for boring reversed-taper holes. S. B. Thompson. No. 1,013,970; Jan. 9; Sp. p. 1971; Gaz. vol. 174; p. 334.
Automatic brake. A. C. Alexander. No. 1,013,918; Jan. 9; Sp. p. 1845; Gaz. vol. 174; p. 316.
Automatic gate, Optional full-. F. W. Boughton. No. 1,016,203; Jan. 30; Sp. p. 6799; Gaz. vol. 174; p. 1181.
Automobile-buffer. A. L. McGregor. No. 1,014,713; Jan. 16; Sp. p. 3608; Gaz. vol. 174; p. 618.
Automobile-chassis. W. H. Bell. No. 1,014,562; Jan. 9; Sp. p. 3210; Gaz. vol. 174; p. 584.
Automobile radiator and hood covering. C. Bullock. No. 1,015,474; Jan. 23; Sp. p. 5277; Gaz. vol. 174; p. 904.
Automobile-shield. T. F. Bourne. No. 1,014,366; Jan. 9; Sp. p. 2852; Gaz. vol. 174; p. 471.
Automobile spring-wheel. M. E. Crandall. No. 1,015,006; Jan. 16; Sp. p. 4281; Gaz. vol. 174; p. 719.
Automobile steering-gear. P. H. Bellmore. No. 1,014,439; Jan. 9; Sp. p. 2993; Gaz. vol. 174; p. 496.
Automobile steering mechanism, Vibration-arrester for. W. R. Warner. No. 1,015,861; Jan. 30; Sp. p. 6093; Gaz. vol. 174; p. 1062.
Automobile-top. C. M. Zellers. No. 1,014,553; Jan. 9; Sp. p. 3192; Gaz. vol. 174; p. 532.
Automobile-wheel, Spring-felly. T. F. O'Brien. No. 1,013,949; Jan. 9; Sp. p. 1923; Gaz. vol. 174; p. 327.
Automobiles, Electrical equipment for. J. L. Milton. No. 1,015,275; Jan. 16; Sp. p. 4808; Gaz. vol. 174; p. 809.
Autosled. C. F. Hamel. No. 1,015,019; Jan. 16; Sp. p. 4303; Gaz. vol. 174; p. 724.
Axle-box. J. R. Fleming. No. 1,014,214; Jan. 9; Sp. p. 2485; Gaz. vol. 174; p. 418.
Axle-box dust-guard, Car-. H. C. Gamage. No. 1,015,551; Jan. 23; Sp. p. 5426; Gaz. vol. 174; p. 930.
Axle device, Differential-. R. M. Jones. No. 1,015,737; Jan. 23; Sp. p. 5835; Gaz. vol. 174; p. 995.
Axles, Apparatus for the manufacture of. C. Werckmeister. No. 1,015,412; Jan. 23; Sp. p. 5132; Gaz. vol. 174; p. 882.
Backboard. J. B. Horton. No. 1,013,551; Jan. 2; Sp. p. 1004; Gaz. vol. 174; p. 161.
Bag: *See* Bifle-bag; Feed-bag; Paper bag; Venereal bag.
Bag-fastener. A. C. Fisher. No. 1,013,873; Jan. 9; Sp. p. 1750; Gaz. vol. 174; p. 301.
Bag-fastener. F. A. Fuller. No. 1,014,820; Jan. 16; Sp. p. 3855; Gaz. vol. 174; p. 654.
Bag filling and weighing device, Electrically-controlled W. R. Dunn. No. 1,013,380; Jan. 2; Sp. p. 645; Gaz. vol. 174; p. 102.
Bag-filling device. J. Bowen. No. 1,014,998; Jan. 16; Sp. p. 4267; Gaz. vol. 174; p. 716.
Bag-filling machine. J. Broussard. No. 1,014,444; Jan. 9; Sp. p. 3003; Gaz. vol. 174; p. 498.
Bag-holder. W. H. Iverson and O. E. Rooth. No. 1,014,225; Jan. 9; Sp. p. 2514; Gaz. vol. 174; p. 422.
Bag-holder. T. J. Rowley and R. M. France. No. 1,015,211; Jan. 16; Sp. p. 4667; Gaz. vol. 174; p. 788.
Bag-holder. L. Hanson. No. 1,015,621; Jan. 23; Sp. p. 5582; Gaz. vol. 174; p. 956.
Bag-holding device. W. R. Dunn. No. 1,013,381; Jan. 2; Sp. p. 647; Gaz. vol. 174; p. 102.
Baking-machine. J. H. Carpenter and E. O. Hoffman. No. 1,014,375; Jan. 9; Sp. p. 2869; Gaz. vol. 174; p. 475.
Bale-breaker, automatic feeder, and opener, Combined. J. C. Potter. No. 1,015,764; Jan. 23; Sp. p. 5889; Gaz. vol. 174; p. 1004.
Bale-tying mechanism. E. R. Koontz. No. 1,015,327; Jan. 23; Sp. p. 4942; Gaz. vol. 174; p. 855.
Baling-press. L. Trabue. No. 1,014,615; Jan. 9; Sp. p. 3338; Gaz. vol. 174; p. 554.
Baling-presses, Block-dropping mechanism for. L. Trabue. No. 1,013,628; Jan. 2; Sp. p. 1167; Gaz. vol. 174; p. 185.
Ball: *See* Practice-ball.
Bandage-rolls, gauze, and cotton-wool, Receptacle for. E. C. Yuste and F. Del Collado. No. 1,013,715; Jan. 2; Sp. p. 1382; Gaz. vol. 174; p. 216.
Bank, Registering savings-. E. E. Matson. No. 1,015,762; Jan. 23; Sp. p. 5885; Gaz. vol. 174; p. 1002.
Bar: *See* Angle-bar; Phonograph style-bar; Reinforcing and spacing bar; Rolling-mill guide-rest bar; Vaulting-bar.
Bark from logs, Machine for removing. F. Libert. No. 1,015,808; Jan. 30; Sp. p. 6173; Gaz. vol. 174; p. 1077.
Barometer. L. Hammond. No. 1,015,886; Jan. 30; Sp. p. 6153; Gaz. vol. 174; p. 1072.
Barrel. F. H. Sabourin. No. 1,014,524; Jan. 9; Sp. p. 3147; Gaz. vol. 174; p. 523.
Barrel-leveling machine. T. Johnson. No. 1,014,756; Jan. 16; Sp. p. 3703; Gaz. vol. 174; p. 632.
Bath-cabinet. R. Fisher and C. A. Young. No. 1,014,587; Jan. 9; Sp. p. 3256; Gaz. vol. 174; p. 543.
Bath-tub extension. H. B. Hiteshew. No. 1,013,162; Jan. 2; Sp. p. 149; Gaz. vol. 174; p. 25.
Battery: *See* Electric battery; Primary battery.
Battery-charge indicator. E. Van Wagenen. No. 1,013,465; Jan. 2; Sp. p. 820; Gaz. vol. 174; p. 131.
Battery-charging mechanism, Storage-. J. B. Schug. No. 1,013,959; Jan. 9; Sp. p. 1951; Gaz. vol. 174; p. 331.
Battery-wells, Molding. C. F. Massey. No. 1,013,416; Jan. 2; Sp. p. 723; Gaz. vol. 174; p. 114.
Beacon-light. F. G. Attwood. No. 1,015,532; Jan. 23; Sp. p. 5386; Gaz. vol. 174; p. 923.
Bearing. T. A. Edison. No. 1,013,869; Jan. 9; Sp. p. 1735; Gaz. vol. 174; p. 300.
Bearing, Ball-. J. F. Foster. No. 1,013,151; Jan. 2; Sp. p. 119; Gaz. vol. 174; p. 22.
Bearing compound, Antifriction-. F. C. Winkler. No. 1,015,920; Jan. 30; Sp. p. 6220; Gaz. vol. 174; p. 1084.
Bearing, Roller-. W. J. Cartwright. No. 1,015,273; Jan. 16; Sp. p. 4804; Gaz. vol. 174; p. 808.
Bearing, Spindle-. D. B. Salstrom. No. 1,013,847; Jan. 2; Sp. p. 1666; Gaz. vol. 174; p. 264.
Bearing, Spindle-. B. C. Gibson. No. 1,014,057; Jan. 9; Sp. p. 2168; Gaz. vol. 174; p. 363.
Bearings, Cage-ring for ball-. A. Schilling. No. 1,013,518; Jan. 2; Sp. p. 936; Gaz. vol. 174; p. 150.
Bearings, Separator for ball-. H. Hess. No. 1,015,441; Jan. 23; Sp. p. 5197; Gaz. vol. 174; p. 893.
Bed and couch, Combined. T. F. Kelly. No. 1,014,484; Jan. 9; Sp. p. 3070; Gaz. vol. 174; p. 510.
Bed, Disappearing wall-. E. L. Gillespie. No. 1,016,139; Jan. 30; Sp. p. 6682; Gaz. vol. 174; p. 1161.
Bed, Spring-. B. D. Courts. No. 1,013,642; Jan. 2; Sp. p. 1198; Gaz. vol. 174; p. 191.
Bed-spring adjustment. W. H. Carickhoff. No. 1,014,374; Jan. 9; Sp. p. 2868; Gaz. vol. 174; p. 474.
Bed-spring frame. L. D. Huncker. No. 1,016,152; Jan. 30; Sp. p. 6704; Gaz. vol. 174; p. 1165.
Bed. Wall or recess. R. H. Anderson. No. 1,015,376; Jan. 23; Sp. p. 5052; Gaz. vol. 174; p. 871.
Bed weights, Wall-. H. A. Javins. No. 1,015,318; Jan. 23; Sp. p. 4914; Gaz. vol. 174; p. 851.
Bedstead. F. F. Schwaller. No. 1,014,670; Jan. 16; Sp. p. 3522; Gaz. vol. 174; p. 604.
Bedstead-slat holder. W. Chinter. No. 1,014,452; Jan. 9; Sp. p. 3021; Gaz. vol. 174; p. 501.
Bell-ringing machine. G. Zint. No. 1,013,262; Jan. 2; Sp. p. 373; Gaz. vol. 174; p. 60.
Belt-cleaner. J. J. Ridgway. No. 1,013,899; Jan. 9; Sp. p. 1806; Gaz. vol. 174; p. 310.
Belt-fastener. J. C. Conn. No. 1,015,783; Jan. 30; Sp. p. 5929; Gaz. vol. 174; p. 1038.
Belt-holder, Engine. E. and C. E. Hicks. No. 1,013,388; Jan. 2; Sp. p. 660; Gaz. vol. 174; p. 104.
Belt sandpapering-machine. O. C. Wysong. No. 1,013,980; Jan. 9; Sp. p. 1996; Gaz. vol. 174; p. 338.
Belt-shifter, Automatic. E. F. Bauer. No. 1,015,933; Jan. 30; Sp. p. 6248; Gaz. vol. 174; p. 1088.
Belting. L. A. Subers. No. 1,014,918; Jan. 16; Sp. p. 4078; Gaz. vol. 174; p. 689.
Bench: *See* Plano-bench.
Bending-dies. A. J. Ellis and C. E. Nellis. No. 1,013,871; Jan. 9; Sp. p. 1753; Gaz. vol. 174; p. 300.
Berth guard-rail, Upper-. H. O. Crippen. No. 1,014,126; Jan. 9; Sp. p. 2317; Gaz. vol. 174; p. 387.
Betulin suitable for the production of coating compositions thereof, Making. J. R. Köhler. No. 1,016,162; Jan. 30; Sp. p. 6722; Gaz. vol. 174; p. 1168.
Bicycle-frame, Spring. L. S. McClave. No. 1,014,888; Jan. 16; Sp. p. 4018; Gaz. vol. 174; p. 679.
Bicycle-stand. H. W. Zelinsky. No. 1,016,195; Jan. 30; Sp. p. 6779; Gaz. vol. 174; p. 1170.
Bicycles and the like, Propelling mechanism for. H. S. Corbitt. No. 1,015,996; Jan. 30; Sp. p. 6385; Gaz. vol. 174; p. 1111.
Bifle-bag. J. Knauss. No. 1,015,028; Jan. 16; Sp. p. 4322; Gaz. vol. 174; p. 727.
Binder and leaf therefor, Loose-leaf. W. H. Cooley. No. 1,013,746; Jan. 2; Sp. p. 1451; Gaz. vol. 174; p. 228.
Binder, Loose-leaf. C. E. Mossick. No. 1,015,203; Jan. 16; Sp. p. 4653; Gaz. vol. 174; p. 785.
Binder, Magazine-. B. F. Westervelt. No. 1,014,026; Jan. 16; Sp. p. 4109; Gaz. vol. 174; p. 692.
Binding-machine. C. S. Emmert. No. 1,014,212; Jan. 9; Sp. p. 2481; Gaz. vol. 174; p. 417.
Bird-cage protector. C. W. Stone. No. 1,015,766; Jan. 23; Sp. p. 5802; Gaz. vol. 174; p. 1004.
Bit: *See* Carpenter's bit; Curb and snaffle bit.
Blackboard, Folding-desk. E. L. Kraus. No. 1,015,498; Jan. 23; Sp. p. 5324; Gaz. vol. 174; p. 913.
Blacking machine, Heel-. F. M. Furber. No. 1,015,433; Jan. 23; Sp. p. 5176; Gaz. vol. 174; p. 890.
Blasting device. L. E. M. and T. S. Harris. No. 1,015,021; Jan. 16; Sp. p. 4306; Gaz. vol. 174; p. 724.
Blind-slat tip. W. O. Daly. No. 1,015,144; Jan. 16; Sp. p. 4541; Gaz. vol. 174; p. 766.
Blind, Window-. T. McIntosh. No. 1,013,417; Jan. 2; Sp. p. 726; Gaz. vol. 174; p. 114.
Block: *See* Concrete block; Wiring-block.
Block or hoisting-gear. L. Tabulo. No. 1,014,728; Jan. 16; Sp. p. 3640; Gaz. vol. 174; p. 624.
Block structure, Interlocking-. A. Hass. No. 1,013,156; Jan. 2; Sp. p. 138; Gaz. vol. 174; p. 24.

Blood or its constituents and making same, Compounds of. E. Scheitlin. No. 1,015,641; Jan. 23; Sp. p. 5629; Gaz. vol. 174; p. 965.
Board: *See* Backboard; Bolt-board; Cardboard; Ironing-board; Paper-board; Scrubbing-board; Toilet-board.
Board-edge trimming and shaping machine. G. E. Wilton. No. 1,015,528; Jan. 23; Sp. p. 5379; Gaz. vol. 174; p. 922.
Boat-lashing device. W. Coulter. No. 1,014,123; Jan. 9; Sp. p. 2313; Gaz. vol. 174; p. 386.
Boat-shaft lock, Motor-. M. T. Baird. No. 1,013,835; Jan. 2; Sp. p. 1622; Gaz. vol. 174; p. 259.
Boat, Submarine. A. Ehrmann. No. 1,014,959; Jan. 16; Sp. p. 4178; Gaz. vol. 174; p. 703.
Boats, Buoy attachment for submarine. G. F. Keating. No. 1,014,398; Jan. 9; Sp. p. 2916; Gaz. vol. 174; p. 483.
Bobbin-holding device. F. R. Hatch. No. 1,015,023; Jan. 16; Sp. p. 4300; Gaz. vol. 174; p. 725.
Boiler: *See* Locomotive-boiler; Marine boiler; Steam-boiler; Steam-generating boiler; Water-tube boiler.
Boiler. F. Paczkza. No. 1,015,065; Jan. 16; Sp. p. 4400; Gaz. vol. 174; p. 739.
Boiler-mounting, Adjustable. L. D. Shryock. No. 1,015,502; Jan. 23; Sp. p. 5527; Gaz. vol. 174; p. 946.
Boiler safety apparatus, Steam-. H. Neville. No. 1,015,703; Jan. 23; Sp. p. 5766; Gaz. vol. 174; p. 983.
Boiler superheater, Steam-. H. D. Taylor. No. 1,013,968; Jan. 9; Sp. p. 1968; Gaz. vol. 174; p. 334.
Boiler-tubes, Tool for spreading. A. P. Gerald. No. 1,014,459; Jan. 9; Sp. p. 3029; Gaz. vol. 174; p. 502.
Boilers, Means for protecting water-gage tubes of steam-. G. E. E. Degeorgis. No. 1,014,456; Jan. 9; Sp. p. 3027; Gaz. vol. 174; p. 502.
Bolt: *See* Expansion-bolt.
Bolt-board and sample-holder, Combined. G. A. Holtz. No. 1,014,304; Jan. 9; Sp. p. 2691; Gaz. vol. 174; p. 449.
Bolting-machine, Gyratory. W. D. Gray. No. 1,014,388; Jan. 9; Sp. p. 2898; Gaz. vol. 174; p. 480.
Book, Account-. W. O. Johnson. No. 1,013,659; Jan. 2; Sp. p. 1256; Gaz. vol. 174; p. 197.
Book holder, Manifolding-sales-. N. F. Garbo. No. 1,016,222; Jan. 30; Sp. p. 6830; Gaz. vol. 174; p. 1187.
Book-support, Adjustable. B. T. Phelps. No. 1,014,974; Jan. 16; Sp. p. 4213; Gaz. vol. 174; p. 709.
Bookcase or the like. J. E. Bezold. No. 1,015,722; Jan. 23; Sp. p. 5801; Gaz. vol. 174; p. 980.
Bookcase, Rotary. G. A. Lavoie. No. 1,013,664; Jan. 2; Sp. p. 1265; Gaz. vol. 174; p. 199.
Boot and shoe. E. E. Waite. No. 1,015,364; Jan. 23; Sp. p. 5026; Gaz. vol. 174; p. 867.
Boot and shoe clamping device. W. W. Townsend and W. L. Gosselin. No. 1,013,627; Jan. 2; Sp. p. 1165; Gaz. vol. 174; p. 185.
Boot and shoe finishing machine. F. L. Alley. No. 1,015,866; Jan. 30; Sp. p. 6101; Gaz. vol. 174; p. 1064.
Boot and shoe toe case, puff, or the like. G. Looms. No. 1,015,500; Jan. 23; Sp. p. 5326; Gaz. vol. 174; p. 913.
Boots and shoes, Machine for assembling parts of. O. Ashton. No. 1,014,631; Jan. 16; Sp. p. 3433; Gaz. vol. 174; p. 591.
Boots and shoes, Machine for use in manufacture of. J. H. Brown and J. Gouldbourn. No. 1,014,046; Jan. 9; Sp. p. 2147; Gaz. vol. 174; p. 359.
Boring and turning bar and bar-holder. C. A. Palmgren. No. 1,014,412; Jan. 9; Sp. p. 2943; Gaz. vol. 174; p. 488.
Boring-machine stock-support. C. Koster. No. 1,015,497; Jan. 23; Sp. p. 5322; Gaz. vol. 174; p. 912.
Bottle-carrier. W. Wadsworth. No. 1,013,705; Jan. 2; Sp. p. 1362; Gaz. vol. 174; p. 212.
Bottle-carrying handle. E. Lawrence. No. 1,013,406; Jan. 2; Sp. p. 696; Gaz. vol. 174; p. 110.
Bottle-closure. P. Gergely. No. 1,015,675; Jan. 23; Sp. p. 5606; Gaz. vol. 174; p. 973.
Bottle-filling apparatus. J. Nies. No. 1,015,631; Jan. 23; Sp. p. 5609; Gaz. vol. 174; p. 950.
Bottle-filling machine. O. Cooley. No. 1,015,995; Jan. 30; Sp. p. 6380; Gaz. vol. 174; p. 1110.
Bottle-holder. C. G. Irwin. No. 1,014,004; Jan. 9; Sp. p. 2048; Gaz. vol. 174; p. 345.
Bottle holder, Nursing-. F. W. Roush. No. 1,013,221; Jan. 2; Sp. p. 295; Gaz. vol. 174; p. 46.
Bottle, Hot-water. G. W. Kaul. No. 1,015,445; Jan. 23; Sp. p. 5204; Gaz. vol. 174; p. 894.
Bottle, Non-refillable. W. Crossley and T. D. Adams. No. 1,014,127; Jan. 9; Sp. p. 2319; Gaz. vol. 174; p. 387.
Bottle, Non-refillable. F. W. Crow. No. 1,014,693; Jan. 16; Sp. p. 3576; Gaz. vol. 174; p. 612.
Bottle, Non-refillable. C. E. Rausseau. No. 1,015,635; Jan. 23; Sp. p. 5618; Gaz. vol. 174; p. 961.
Bottle, Non-refillable. M. Switzer and J. D. Lacroix. No. 1,016,112; Jan. 30; Sp. p. 6633; Gaz. vol. 174; p. 1153.
Bottle-stopper. T. W. Warren. No. 1,014,427; Jan. 9; Sp. p. 2971; Gaz. vol. 174; p. 493.
Bottle-stopper fastener. G. R. Schimmel. No. 1,015,841; Jan. 30; Sp. p. 6049; Gaz. vol. 174; p. 1056.
Bottle stopper, Non-refillable-. J. L. Sellar. No. 1,015,501; Jan. 23; Sp. p. 5524; Gaz. vol. 174; p. 945.
Bottles, jars, &c., Closure for. J. V. Hull. No. 1,013,391; Jan. 2; Sp. p. 669; Gaz. vol. 174; p. 106.
Bottles, jars, &c., Closure for. J. V. Hull. No. 1,013,392; Jan. 2; Sp. p. 670; Gaz. vol. 174; p. 106.
Bottles, jars, &c., Closure for. J. V. Hull. No. 1,013,393; Jan. 2; Sp. p. 673; Gaz. vol. 174; p. 106.
Bottles, jars, &c., Closure for. J. V. Hull. No. 1,013,394; Jan. 2; Sp. p. 677; Gaz. vol. 174; p. 107.
Bottles or the like, Vertically-adjustable case for. F. W. Beach. No. 1,013,728; Jan. 2; Sp. p. 1408; Gaz. vol. 174; p. 221.
Bottling-machine. J. M. Frederick. No. 1,014,963; Jan. 16; Sp. p. 4184; Gaz. vol. 174; p. 704.
Bowling-alley ball-returnway. P. J. Riddell. No. 1,013,817; Jan. 2; Sp. p. 1583; Gaz. vol. 174; p. 252.
Box: *See* Axle-box; Branch box; Display-box; Feed-box; Folding box; Junction-box; Knockdown box; Lunch-box; Mail-box; Match-box; Miter-box; Sheet-metal box; Stationery-box; Stuffing-box; Talking-machine box; Talking-machine sound-box; Tobacco-box; Work-box.
Box. F. H. G. Morse. No. 1,013,207; Jan. 2; Sp. p. 240; Gaz. vol. 174; p. 41.
Box construction. P. Mueller. No. 1,015,454; Jan. 23; Sp. p. 5217; Gaz. vol. 174; p. 897.
Box-filling machine. J. P. Wright. No. 1,014,356; Jan. 9; Sp. p. 2832; Gaz. vol. 174; p. 468.
Box-press. A. I. Mason. No. 1,015,237; Jan. 16; Sp. p. 4721; Gaz. vol. 174; p. 796.
Boxing device. G. Troxler. No. 1,016,244; Jan. 30; Sp. p. 6882; Gaz. vol. 174; p. 1194.
Brace: *See* Rail-brace.
Bracelet and bangle. I. Maddox. No. 1,016,023; Jan. 30; Sp. p. 6440; Gaz. vol. 174; p. 1121.
Bracket: *See* Lamp-bracket; Scaffolding-bracket; Turpentine-cup bracket.
Brake: *See* Automatic brake; Car-brake; Emergency-brake; Safety-brake; Vehicle-brake.
Brake. F. N. Robinson. No. 1,015,078; Jan. 16; Sp. p. 4419; Gaz. vol. 174; p. 743.
Brake and free-wheel mechanism, Back-pedaling. E. Sachs and M. Mossig. No. 1,015,744; Jan. 23; Sp. p. 5847; Gaz. vol. 174; p. 997.
Brake-beam. E. M. Applebaugh. No. 1,013,102; Jan. 2; Sp. p. 15; Gaz. vol. 174; p. 5.
Brake-head. E. M. Applebaugh. No. 1,013,101; Jan. 2; Sp. p. 14; Gaz. vol. 174; p. 5.
Brake-head. E. M. Applebaugh. No. 1,013,103; Jan. 2; Sp. p. 16; Gaz. vol. 174; p. 5.
Brake-head, Adjustable. E. D. Pugh. No. 1,013,311; Jan. 2; Sp. p. 499; Gaz. vol. 174; p. 78.
Brake-shoe. C. W. Armbrust. No. 1,014,933; Jan. 16; Sp. p. 4121; Gaz. vol. 174; p. 694.
Brake-shoe. C. W. Armbrust. No. 1,015,771; Jan. 30; Sp. p. 5907; Gaz. vol. 174; p. 1034.
Brake-shoe keys, Manufacturing. W. D. Forsyth. No. 1,016,068; Jan. 30; Sp. p. 6555; Gaz. vol. 174; p. 1138.
Brake systems, Safety device for fluid-pressure. W. H. Sauvage. No. 1,013,821; Jan. 2; Sp. p. 1591; Gaz. vol. 174; p. 254.
Branch box. M. Havens, Jr. No. 1,014,704; Jan. 16; Sp. p. 3592; Gaz. vol. 174; p. 615.
Bread-pan. G. F. Jefferson. No. 1,015,892; Jan. 30; Sp. p. 6164; Gaz. vol. 174; p. 1074.
Bread-roll machine. A. Adelt. No. 1,015,985; Jan. 30; Sp. p. 6361; Gaz. vol. 174; p. 1107.
Breathing appliance. H. A. Fleuss and R. H. Davis. No. 1,013,541; Jan. 2; Sp. p. 984; Gaz. vol. 174; p. 157.
Brick-hook. J. M. and R. A. McKay. No. 1,014,079; Jan. 9; Sp. p. 2215; Gaz. vol. 174; p. 371.
Brick-kiln, Walling and daubing. E. C. Penfield. No. 1,014,901; Jan. 16; Sp. p. 4038; Gaz. vol. 174; p. 683.
Brick, Making. C. H. Frost. No. 1,014,964; Jan. 16; Sp. p. 4186; Gaz. vol. 174; p. 705.
Brick-stacking. R. C. Penfield. No. 1,013,683; Jan. 2; Sp. p. 1330; Gaz. vol. 174; p. 206.
Bridge-gate, Safety. C. Faust. No. 1,015,880; Jan. 30; Sp. p. 6131; Gaz. vol. 174; p. 1070.
Bridle, Bitless. I. Fox. No. 1,015,165; Jan. 16; Sp. p. 4578; Gaz. vol. 174; p. 772.
Brooder, Fireless. E. W. Philo. No. 1,013,562; Jan. 2; Sp. p. 1024; Gaz. vol. 174; p. 164.
Brooder, Knockdown. L. P. Rexford. No. 1,015,078; Jan. 16; Sp. p. 4411; Gaz. vol. 174; p. 741.
Broom. F. W. Pendergast. No. 1,015,066; Jan. 16; Sp. p. 4401; Gaz. vol. 174; p. 739.
Broom. V. E. Clark. No. 1,015,263; Jan. 16; Sp. p. 4787; Gaz. vol. 174; p. 805.
Broom-banding machine. J. S. McChesney. No. 1,014,887; Jan. 16; Sp. p. 4015; Gaz. vol. 174; p. 678.
Brush. R. J. Montgomery and W. H. Hill. No. 1,013,558; Jan. 2; Sp. p. 1016; Gaz. vol. 174; p. 163.
Brush, Air-. N. M. Hansen. No. 1,016,143; Jan. 30; Sp. p. 6691; Gaz. vol. 174; p. 1163.
Brush and comb, Combined electric hair. H. Gernsback. No. 1,016,138; Jan. 30; Sp. p. 6680; Gaz. vol. 174; p. 1161.
Brush, Fountain tooth-. J. E. Tate. No. 1,014,784; Jan. 16; Sp. p. 3778; Gaz. vol. 174; p. 642.
Brush holder, Mucilage-. F. B. Milton. No. 1,013,422; Jan. 2; Sp. p. 738; Gaz. vol. 174; p. 116.
Brush, Lather-. C. E. Thompson. No. 1,013,238; Jan. 2; Sp. p. 327; Gaz. vol. 174; p. 52.
Brush-machine. D. P. Page. No. 1,014,973; Jan. 16; Sp. p. 4208; Gaz. vol. 174; p. 708.
Brush, Magazine-. M. Bohlig. No. 1,013,869; Jan. 2; Sp. p. 613; Gaz. vol. 174; p. 98.
Brush nozzle, Air-. N. M. Hansen. No. 1,016,144; Jan. 30; Sp. p. 6692; Gaz. vol. 174; p. 1163.

Bucket, Dinner-. W. T. Needham. No. 1,015,455; Jan. 23; Sp. p. 5219; Gaz. vol. 174; p. 897.
Bucket holder, Feed-. J. H. Siner. No. 1,014,264; Jan. 9; Sp. p. 2610; Gaz. vol. 174; p. 435.
Bucket, Well-. W. H. Black. No. 1,015,935; Jan. 30; Sp. p. 6251; Gaz. vol. 174; p. 1089.
Buckets, Trolley-retainer for dumping-. W. Heinrich. No. 1,015,179; Jan. 16; Sp. p. 4606; Gaz. vol. 174; p. 777.
Buckle. R. A. Brown. No. 1,013,085; Jan. 9; Sp. p. 2005; Gaz. vol. 174; p. 339.
Buckle, Bale-tie. F. Regenold. No. 1,013,442; Jan. 2; Sp. p. 774; Gaz. vol. 174; p. 123.
Buffer, Reversible. H. Mendelsohn. No. 1,014,629; Jan. 9; Sp. p. 3396; Gaz. vol. 174; p. 559.
Buffing-machine. A. Bates. No. 1,013,726; Jan. 2; Sp. p. 1405; Gaz. vol. 174; p. 221.
Building construction. T. J. George. No. 1,013,385; Jan. 2; Sp. p. 655; Gaz. vol. 174; p. 104.
Building structure. W. Schweikert. No. 1,014,416; Jan. 9; Sp. p. 2949; Gaz. vol. 174; p. 480.
Bulge-hoop for barrels. H. Kaestner. No. 1,014,005; Jan. 9; Sp. p. 2040; Gaz. vol. 174; p. 345.
Burette. J. D. Rose. No. 1,013,448; Jan. 2; Sp. p. 783; Gaz. vol. 174; p. 125.
Burglar-alarm. W. H. Relf. No. 1,016,034; Jan. 30; Sp. p. 6469; Gaz. vol. 174; p. 1125.
Burial-case. P. D. Skahen. (Reissue.) No. 13,350; Jan. 2; Sp. p. 1701; Gaz. vol. 174; p. 269.
Burner: *See* Gas-burner; Gas-lighting burner; Incandescent-mantle burner; Inverted burner; Lamp-burner; Oil-burner; Vapor-burner.
Burner. H. Littleton. No. 1,014,496; Jan. 9; Sp. p. 3089; Gaz. vol. 174; p. 513.
Burner. J. Antonuccio. No. 1,014,932; Jan. 16; Sp. p. 4120; Gaz. vol. 174; p. 694.
Burner-shade support. C. Kuenholdt. No. 1,013,043; Jan. 9; Sp. p. 1912; Gaz. vol. 174; p. 325.
Bush-flanger. F. X. Pfluger. No. 1,014,002; Jan. 16; Sp. p. 4041; Gaz. vol. 174; p. 683.
Butter, Composition. L. O. and O. A. Fox. No. 1,014,457; Jan. 9; Sp. p. 3028; Gaz. vol. 174; p. 502.
Butter-flavoring. H. C. Buer. No. 1,014,690; Jan. 16; Sp. p. 3571; Gaz. vol. 174; p. 611.
Butter, Making and packaging. J. De Lisle. No. 1,014,574; Jan. 9; Sp. p. 3236; Gaz. vol. 174; p. 539.
Buttonhole and button location marking machine. B. T. Levesque. No. 1,014,657; Jan. 16; Sp. p. 3494; Gaz. vol. 174; p. 599.
Buttonhole-machine. G. J. Dormandy. No. 1,015,011; Jan. 16; Sp. p. 4290; Gaz. vol. 174; p. 721.
Buttonhole-marking machine. P. K. Williams. No. 1,014,275; Jan. 9; Sp. p. 2630; Gaz. vol. 174; p. 439.
Cabinet. H. C. Muir. No. 1,015,060; Jan. 16; Sp. p. 4390; Gaz. vol. 174; p. 737.
Cabinet and printer for toilet-paper, Combined. W. G. Stewart and L. Gauermann. No. 1,014,026; Jan. 9; Sp. p. 2097; Gaz. vol. 174; p. 352.
Cabinet and tray, Combined. W. Booth. No. 1,015,664; Jan. 23; Sp. p. 5676; Gaz. vol. 174; p. 970.
Cabinet and trays therefor. H. L. Karstedt. No. 1,015,686; Jan. 23; Sp. p. 5740; Gaz. vol. 174; p. 978.
Cabinet, Dolly-. B. F. Hunter. No. 1,014,598; Jan. 9; Sp. p. 3282; Gaz. vol. 174; p. 547.
Cabinet, Kitchen-. J. Long. No. 1,014,831; Jan. 16; Sp. p. 3887; Gaz. vol. 174; p. 659.
Cabinet, Multicompartment. G. Robbins. No. 1,013,444; Jan. 2; Sp. p. 777; Gaz. vol. 174; p. 124.
Cabinet or holder for disk records and the like. E. F. Pooley. No. 1,014,172; Jan. 9; Sp. p. 2397; Gaz. vol. 174; p. 402.
Cabinet, Toilet-paper. J. W. Whittier. No. 1,015,526; Jan. 23; Sp. p. 5373; Gaz. vol. 174; p. 921.
Cable duplex repeating system. I. Kitsee. No. 1,014,488; Jan. 9; Sp. p. 3077; Gaz. vol. 174; p. 511.
Calsson. O. C. Edwards, Jr. No. 1,013,370; Jan. 9; Sp. p. 1738; Gaz. vol. 174; p. 300.
Calsson. O. C. Edwards, Jr. No. 1,014,626; Jan. 9; Sp. p. 3372; Gaz. vol. 174; p. 558.
Calsson of ferroconcrete, Pneumatic. S. Rechnlewski. No. 1,014,721; Jan. 16; Sp. p. 3638; Gaz. vol. 174; p. 621.
Cake-mixer. C. Schenk. No. 1,014,909; Jan. 16; Sp. p. 4057; Gaz. vol. 174; p. 686.
Calcium cyanamid from calcium carbid, Process of and apparatus for making. F. S. Washburn. No. 1,015,720; Jan. 23; Sp. p. 5798; Gaz. vol. 174; p. 988.
Calculating-machine. H. Daemen-Schmid. No. 1,015,842; Jan. 30; Sp. p. 6050; Gaz. vol. 174; p. 1056.
Calculating-machines, Device for adjusting slides in. B. Behr. No. 1,013,981; Jan. 9; Sp. p. 1999; Gaz. vol. 174; p. 388.
Calculator. E. C. Walter. No. 1,013,243; Jan. 2; Sp. p. 334; Gaz. vol. 174; p. 63.
Calculator, Fare-. H. P. C. Browne. No. 1,015,419; Jan. 23; Sp. p. 5148; Gaz. vol. 174; p. 884.
Caliper attachment. W. M. Mahoney. No. 1,015,813; Jan. 30; Sp. p. 5987; Gaz. vol. 174; p. 1047.
Camera-shutters, Timing attachment for. E. D. Watson. No. 1,013,525; Jan. 2; Sp. p. 949; Gaz. vol. 174; p. 152.
Camera, Stereoscopic. J. Richard. No. 1,013,815; Jan. 2; Sp. p. 1579; Gaz. vol. 174; p. 252.
Can: *See* Garbage-can; Glass-lined can; Milk-can; Oil-can.
Can attachment. T. C. Doredant. No. 1,013,750; Jan. 2; Sp. p. 1459; Gaz. vol. 174; p. 230.
Can-cap lacquering or coating machine. C. S. Buckle. No. 1,013,858; Jan. 9; Sp. p. 1711; Gaz. vol. 174; p. 296.
Can-capping machine. F. L. Jefferies and W. Spain. No. 1,015,320; Jan. 23; Sp. p. 4918; Gaz. vol. 174; p. 862.
Can-heads or other articles, Automatic feed device for. F. Wegner and J. Peters. No. 1,013,244; Jan. 2; Sp. p. 571; Gaz. vol. 174; p. 90.
Can-opener and spout, Combination. A. B. Foans. No. 1,016,135; Jan. 30; Sp. p. 6677; Gaz. vol. 174; p. 1160.
Can-testing machine. C. B. McDonald and J. E. McCullough. No. 1,013,796; Jan. 2; Sp. p. 1543; Gaz. vol. 174; p. 245.
Cans and the like, Apparatus for handling. F. L. Jefferies and W. Spain. No. 1,015,319; Jan. 23; Sp. p. 4915; Gaz. vol. 174; p. 851.
Cans, Making. C. E. Bertels. No. 1,013,366; Jan. 2; Sp. p. 606; Gaz. vol. 174; p. 97.
Candelabrum. H. F. Nehr. No. 1,014,410; Jan. 9; Sp. p. 2930; Gaz. vol. 174; p. 487.
Candy-cutting machine. M. Armstrong. No. 1,013,634; Jan. 2; Sp. p. 1181; Gaz. vol. 174; p. 188.
Cane and tobacco-pipe, Combined. I. Hoffman. No. 1,013,776; Jan. 2; Sp. p. 1513; Gaz. vol. 174; p. 240.
Cane-mill roller, Sugar-. R. Mitchell. No. 1,015,577; Jan. 23; Sp. p. 5492; Gaz. vol. 174; p. 939.
Capstan, Swivel-. C. Sherwood. No. 1,016,101; Jan. 30; Sp. p. 6617; Gaz. vol. 174; p. 1149.
Car and other receptacle, Charging-. G. K. Hamfeldt. No. 1,014,467; Jan. 9; Sp. p. 3044; Gaz. vol. 174; p. 505.
Car-brake. J. A. Noel. No. 1,015,063; Jan. 16; Sp. p. 4397; Gaz. vol. 174; p. 738.
Car-coupling. L. Riegler. No. 1,013,220; Jan. 2; Sp. p. 293; Gaz. vol. 174; p. 46.
Car-coupling. E. P. Kinne. No. 1,013,880; Jan. 9; Sp. p. 1770; Gaz. vol. 174; p. 303.
Car-coupling. K. Szafran. No. 1,013,906; Jan. 9; Sp. p. 1825; Gaz. vol. 174; p. 312.
Car-coupling. H. C. Kerr. No. 1,014,485; Jan. 9; Sp. p. 3072; Gaz. vol. 174; p. 510.
Car-coupling. E. M. Maw. No. 1,015,052; Jan. 16; Sp. p. 4375; Gaz. vol. 174; p. 734.
Car-coupling. L. Batchlor. No. 1,015,533; Jan. 23; Sp. p. 5389; Gaz. vol. 174; p. 923.
Car-door. H. M. Hasel and A. S. Coltharp. No. 1,013,770; Jan. 2; Sp. p. 1504; Gaz. vol. 174; p. 238.
Car-door. B. D. Jones. No. 1,015,387; Jan. 23; Sp. p. 5073; Gaz. vol. 174; p. 875.
Car-door. C. A. Schroyer. No. 1,015,405; Jan. 23; Sp. p. 5105; Gaz. vol. 174; p. 880.
Car door and step operating mechanism, Passenger-railway-. J. H. E. Branson. No. 1,014,863; Jan. 16; Sp. p. 3963; Gaz. vol. 174; p. 670.
Car door, Grain-. C. Moore. No. 1,014,246; Jan. 9; Sp. p. 2577; Gaz. vol. 174; p. 429.
Car-door-operating device. A. Christianson. (Reissue.) No. 13,362; Jan. 16; Sp. p. 4818; Gaz. vol. 174; p. 811.
Car-door-operating device. W. C. Eldridge. No. 1,015,793; Jan. 30; Sp. p. 5953; Gaz. vol. 174; p. 1041.
Car door, Prepayment-street-. G. C. Towle. No. 1,015,252; Jan. 16; Sp. p. 4757; Gaz. vol. 174; p. 801.
Car, Dump-. F. S. Ingoldsby. No. 1,013,552; Jan. 2; Sp. p. 1005; Gaz. vol. 174; p. 161.
Car, Dump-. M. L. Hyde. No. 1,014,396; Jan. 9; Sp. p. 2910; Gaz. vol. 174; p. 482.
Car, Dumping-. S. Wallwork. No. 1,013,341; Jan. 2; Sp. p. 556; Gaz. vol. 174; p. 89.
Car, Dumping-. G. A. Minetty. No. 1,013,801; Jan. 2; Sp. p. 1556; Gaz. vol. 174; p. 247.
Car, Dumping-. E. C. Sherman, W. W. McKelvey, and E. J. Reilly. No. 1,014,612; Jan. 9; Sp. p. 3331; Gaz. vol. 174; p. 553.
Car end underframe construction. R. E. Frame. No. 1,014,807; Jan. 16; Sp. p. 3973; Gaz. vol. 174; p. 672.
Car-fender. A. Pozzi. No. 1,015,633; Jan. 23; Sp. p. 5615; Gaz. vol. 174; p. 960.
Car, Heater-. C. A. Moore. No. 1,016,243; Jan. 30; Sp. p. 6880; Gaz. vol. 174; p. 1195.
Car, Passenger-. T. H. Tutwiler. No. 1,015,100; Jan. 16; Sp. p. 4462; Gaz. vol. 174; p. 751.
Car, Railway-. E. Posson. No. 1,013,310; Jan. 2; Sp. p. 407; Gaz. vol. 174; p. 78.
Car, Railway freight-. L. E. Evens. No. 1,016,220; Jan. 30; Sp. p. 6828; Gaz. vol. 174; p. 1187.
Car-replacer. E. M. Taylor. No. 1,015,098; Jan. 16; Sp. p. 4458; Gaz. vol. 174; p. 750.
Car-roof. J. Pearson. No. 1,013,811; Jan. 2; Sp. p. 1574; Gaz. vol. 174; p. 251.
Car-roof. E. Posson. No. 1,015,340; Jan. 23; Sp. p. 4977; Gaz. vol. 174; p. 859.
Car-roof door. E. Posson. No. 1,015,397; Jan. 23; Sp. p. 5096; Gaz. vol. 174; p. 878.
Car, Side-dump. R. P. McCormick, Jr. No. 1,014,077; Jan. 9; Sp. p. 2208; Gaz. vol. 174; p. 370.
Car-step, Extension. W. G. Walton. No. 1,014,544; Jan. 9; Sp. p. 3174; Gaz. vol. 174; p. 520.
Car-stopping device. R. Maw. No. 1,015,628; Jan. 23; Sp. p. 5594; Gaz. vol. 174; p. 958.
Car, Street-. C. C. Crewson. No. 1,013,376; Jan. 2; Sp. p. 632; Gaz. vol. 174; p. 100.
Car street-indicator. H. Wilms. No. 1,015,111; Jan. 16; Sp. p. 4484; Gaz. vol. 174; p. 755.
Car-transferring means. C. A. Baechtold. No. 1,013,106; Jan. 2; Sp. p. 16; Gaz. vol. 174; p. 6.

Car-underframe. B. Mager. No. 1,016,165; Jan. 30; Sp. p. 6726; Gaz. vol. 174; p. 1169.
Car underframe, Passenger-. W. Voss. No. 1,014,791; Jan. 16; Sp. p. 3780; Gaz. vol. 174; p. 644.
Car-wheel. C. E. Pritchard and G. T. Potter. No. 1,013,513; Jan. 2; Sp. p. 922; Gaz. vol. 174; p. 148.
Car-wheel clamp. W. E. Irons. No. 1,016,154; Jan. 30; Sp. p. 6707; Gaz. vol. 174; p. 1165.
Car wheel, Mine-. J. S. Skelly. No. 1,015,351; Jan. 23; Sp. p. 4998; Gaz. vol. 174; p. 863.
Car-wheel mold and making car-wheels. F. K. Vial. No. 1,015,362; Jan. 23; Sp. p. 5017; Gaz. vol. 174; p. 867.
Cars and similar vehicles, Roller-skid for railway-. H. Windhoff. No. 1,014,197; Jan. 9; Sp. p. 2451; Gaz. vol. 174; p. 412.
Cars, &c., Collapsible and extensible roof for open-top railway-. W. R. Davis and J. J. Kain. No. 1,015,146; Jan. 16; Sp. p. 4544; Gaz. vol. 174; p. 767.
Cars, Life-guard for railway-. G. A. Parmenter. No. 1,014,607; Jan. 16; Sp. p. 3515; Gaz. vol. 174; p. 602.
Cars or vehicles along a railway and the control thereof, Apparatus for governing the passage of. J. S. Holliday. No. 1,014,966; Jan. 16; Sp. p. 4188; Gaz. vol. 174; p. 705.
Cars, Sectional door for grain-. R. S. Taylor and G. W. Woodruff. No. 1,013,237; Jan. 2; Sp. p. 325; Gaz. vol. 174; p. 52.
Caramel-mold. W. H. Farrell. No. 1,016,130; Jan. 30; Sp. p. 6667; Gaz. vol. 174; p. 1159.
Carbureter. A. Weiland. No. 1,013,708; Jan. 2; Sp. p. 1366; Gaz. vol. 174; p. 213.
Carbureter. R. M. Roberts. No. 1,013,955; Jan. 9; Sp. p. 1943; Gaz. vol. 174; p. 329.
Carbureter. P. M. Blom. No. 1,013,983; Jan. 9; Sp. p. 2001; Gaz. vol. 174; p. 339.
Carbureter. O. Ducker. No. 1,014,133; Jan. 9; Sp. p. 2329; Gaz. vol. 174; p. 389.
Carbureter. W. R. Voorhees. No. 1,014,188; Jan. 9; Sp. p. 2429; Gaz. vol. 174; p. 408.
Carbureter. A. Winton. No. 1,014,551; Jan. 9; Sp. p. 3186; Gaz. vol. 174; p. 531.
Carbureter. C. G. Weld. No. 1,014,682; Jan. 16; Sp. p. 3558; Gaz. vol. 174; p. 609.
Carbureter. F. D. Winkley. No. 1,014,988; Jan. 16; Sp. p. 4238; Gaz. vol. 174; p. 713.
Carbureter. W. J. Steinbrenner. No. 1,016,108; Jan. 30; Sp. p. 6626; Gaz. vol. 174; p. 1152.
Carbureter. W. G. Nagel. No. 1,016,169; Jan. 30; Sp. p. 6731; Gaz. vol. 174; p. 1170.
Carbureter attachment. H. A. Miller. No. 1,014,319; Jan. 9; Sp. p. 2728; Gaz. vol. 174; p. 454.
Carbureter feed-nozzle. D. Barnard. No. 1,014,202; Jan. 9; Sp. p. 2456; Gaz. vol. 174; p. 413.
Carcass-splitting machine. W. A. Saunders. No. 1,015,590; Jan. 23; Sp. p. 5521; Gaz. vol. 174; p. 945.
Card-punching machine. H. Fleming. No. 1,015,619; Jan. 23; Sp. p. 5577; Gaz. vol. 174; p. 955.
Card-shuffler. C. T. Hall. No. 1,014,219; Jan. 9; Sp. p. 2497; Gaz. vol. 174; p. 420.
Cardboard, Corrugating. H. G. Reinstein. No. 1,016,093; Jan. 30; Sp. p. 6602; Gaz. vol. 174; p. 1147.
Carding-doffer and constructing same. F. M. Moore and J. C. Elliott. No. 1,015,202; Jan. 16; Sp. p. 4652; Gaz. vol. 174; p. 785.
Carding-machine. J. C. Potter. No. 1,015,835; Jan. 30; Sp. p. 6036; Gaz. vol. 174; p. 1054.
Carpenter's bit. W. B. Knapp. No. 1,015,446; Jan. 23; Sp. p. 5205; Gaz. vol. 174; p. 894.
Carpenter's tool. H. N. Auger. No. 1,015,773; Jan. 30; Sp. p. 5910; Gaz. vol. 174; p. 1034.
Carpet-beater. H. C. and O. Preston. No. 1,015,634; Jan. 23; Sp. p. 5617; Gaz. vol. 174; p. 961.
Carpet fastener, Stair-. J. G. Welsh. No. 1,013,345; Jan. 2; Sp. p. 573; Gaz. vol. 174; p. 91.
Carpet-sweeper, Pneumatic. D. C. Walter. No. 1,014,027; Jan. 9; Sp. p. 2100; Gaz. vol. 174; p. 353.
Carriage and sleigh, Child's combined. J. W. Moore. No. 1,013,206; Jan. 2; Sp. p. 237; Gaz. vol. 174; p. 40.
Carriage, Baby-. M. Fried. No. 1,014,292; Jan. 9; Sp. p. 2669; Gaz. vol. 174; p. 445.
Carrier: *See* Bottle-carrier; Folding carrier; Radiator-carrier; Trace-carrier; Watch or clock spring carrier.
Carrier trip, Hay and other. D. D. Miller and D. E. Rowland. No. 1,014,019; Jan. 9; Sp. p. 2084; Gaz. vol. 174; p. 350.
Cart, Dump-. W. S. Witten. No. 1,014,734; Jan. 16; Sp. p. 3664; Gaz. vol. 174; p. 626.
Cartridge-belt. J. B. Williamson. No. 1,014,196; Jan. 9; Sp. p. 2450; Gaz. vol. 174; p. 411.
Cartridge-belt. V. H. Jennings. No. 1,015,901; Jan. 30; Sp. p. 6066; Gaz. vol. 174; p. 1043.
Cartridge-belt. F. Roble. No. 1,016,231; Jan. 30; Sp. p. 6851; Gaz. vol. 174; p. 1190.
Cartridge-exploding device, Automatic. G. Stocker. No. 1,013,967; Jan. 9; Sp. p. 1967; Gaz. vol. 174; p. 333.
Carving-machine. D. B. Salstrom. No. 1,013,618; Jan. 2; Sp. p. 1144; Gaz. vol. 174; p. 182.
Carving-machine belt-gearing. D. B. Salstrom. No. 1,013,617; Jan. 2; Sp. p. 1142; Gaz. vol. 174; p. 182.
Case: *See* Bookcase; Boot and shoe toe case; Burial-case; Cell-case; Cigarette-case; Display-case; Egg-case; Musical-instrument case; Piano-case; Record-case; Sample-case; Wall-case.
Case-hardening apparatus. A. W. Machlet. No. 1,013,190; Jan. 2; Sp. p. 195; Gaz. vol. 174; p. 35.
Case-hardening apparatus. A. W. Machlet. No. 1,013,191; Jan. 2; Sp. p. 200; Gaz. vol. 174; p. 35.
Casements and other hinged shutters, Fastening device for. P. Leist-Wettler. No. 1,013,501; Jan. 2; Sp. p. 899; Gaz. vol. 174; p. 143.
Casing, Protective. B. Volkmar. No. 1,013,850; Jan. 2; Sp. p. 1679; Gaz. vol. 174; p. 265.
Casings, Apparatus for elevating. E. Double and A. Craig. No. 1,014,955; Jan. 16; Sp. p. 4171; Gaz. vol. 174; p. 701.
Cash-register. W. H. Muzzy. No. 1,013,210; Jan. 2; Sp. p. 245; Gaz. vol. 174; p. 42.
Cash-register. F. C. Osborn. No. 1,015,456; Jan. 23; Sp. p. 5219; Gaz. vol. 174; p. 898.
Cash-register. W. H. Muzzy. No. 1,015,825; Jan. 30; Sp. p. 6014; Gaz. vol. 174; p. 1051.
Cash-register. T. Carney. No. 1,016,066; Jan. 30; Sp. p. 6540; Gaz. vol. 174; p. 1137.
Cash-register, Check. C. L. Grohmann and I. C. Koehne. No. 1,014,647; Jan. 16; Sp. p. 3474; Gaz. vol. 174; p. 596.
Cash-register or check-till. F. A. M. Chapon. No. 1,013,741; Jan. 2; Sp. p. 1441; Gaz. vol. 174; p. 226.
Cash-register, Total-printing. H. A. Martin. No. 1,013,193; Jan. 2; Sp. p. 209; Gaz. vol. 174; p. 36.
Casks, barrels, or the like, Tightening. B. Diamand. No. 1,013,137; Jan. 2; Sp. p. 93; Gaz. vol. 174; p. 17.
Caster. W. Maier. No. 1,015,572; Jan. 23; Sp. p. 5480; Gaz. vol. 174; p. 938.
Caster, Ball-bearing. J. H. Eichholz. No. 1,014,582; Jan. 9; Sp. p. 3248; Gaz. vol. 174; p. 542.
Caster, Table-. A. Marinelli. No. 1,015,201; Jan. 16; Sp. p. 4651; Gaz. vol. 174; p. 785.
Casting apparatus, Die-. W. A. Leddell. No. 1,013,665; Jan. 2; Sp. p. 1267; Gaz. vol. 174; p. 199.
Casting-machine. J. A. McManus, Jr. No. 1,015,818; Jan. 30; Sp. p. 5995; Gaz. vol. 174; p. 1048.
Casting-machine. J. A. McManus, Jr. No. 1,015,819; Jan. 30; Sp. p. 6000; Gaz. vol. 174; p. 1049.
Casting-machine discharge apparatus. H. W. Yeager. No. 1,015,374; Jan. 23; Sp. p. 5050; Gaz. vol. 174; p. 870.
Castings, Hardening steel. J. W. Gebhard. No. 1,015,554; Jan. 23; Sp. p. 5432; Gaz. vol. 174; p. 931.
Castings, Making. C. M. Grey. No. 1,013,548; Jan. 2; Sp. p. 906; Gaz. vol. 174; p. 160.
Cattle-guard. R. J. Dillon. No. 1,014,696; Jan. 16; Sp. p. 3580; Gaz. vol. 174; p. 612.
Cell-case and blank therefor. J. B. Miller. No. 1,014,061; Jan. 9; Sp. p. 2218; Gaz. vol. 174; p. 371.
Celluloid and manufacturing the same, Plastic similar to. A. Eichengrün. No. 1,015,156; Jan. 16; Sp. p. 4564; Gaz. vol. 174; p. 760.
Cellulose acetate composition and making the same. A. Eichengrün. No. 1,015,155; Jan. 16; Sp. p. 4562; Gaz. vol. 174; p. 760.
Cement material. P. F. and N. B. Apfel. No. 1,014,995; Jan. 16; Sp. p. 4264; Gaz. vol. 174; p. 716.
Cement sewer-pipe, Method and machine for making. R. L. Rickman. No. 1,013,954; Jan. 9; Sp. p. 1936; Gaz. vol. 174; p. 329.
Cementing-machine. M. F. Brogan. No. 1,013,735; Jan. 2; Sp. p. 1421; Gaz. vol. 174; p. 224.
Cementing-machine, Hand-operated. V. P. Buck. No. 1,014,618; Jan. 9; Sp. p. 3344; Gaz. vol. 174; p. 555.
Centrifugal separator. J. J. Berrigan. No. 1,013,113; Jan. 2; Sp. p. 39; Gaz. vol. 174; p. 9.
Cereal-treating machine. J. W. Berry. No. 1,014,748; Jan. 16; Sp. p. 3688; Gaz. vol. 174; p. 630.
Chain. G. A. Lambert. No. 1,015,965; Jan. 30; Sp. p. 6319; Gaz. vol. 174; p. 1099.
Chain cleat, Conveyer-. F. E. Martin. No. 1,013,794; Jan. 2; Sp. p. 1538; Gaz. vol. 174; p. 245.
Chain-lubricating device, Conveyer-. G. H. Mueller. No. 1,014,248; Jan. 9; Sp. p. 2582; Gaz. vol. 174; p. 431.
Chair: *See* Reclining-chair.
Chair base, Revolving-office-. A. D. Pettibone. No. 1,013,813; Jan. 2; Sp. p. 1577; Gaz. vol. 174; p. 251.
Chair fan attachment, Rocking-. M. Hobin. No. 1,013,879; Jan. 9; Sp. p. 1768; Gaz. vol. 174; p. 308.
Chair fan attachment, Rocking-. E. C. Killebrew. No. 1,016,161; Jan. 30; Sp. p. 6719; Gaz. vol. 174; p. 1168.
Channel-flap opener and moistener. J. Elderkin. No. 1,015,729; Jan. 23; Sp. p. 5814; Gaz. vol. 174; p. 991.
Channeling-machine. A. Ball. No. 1,015,258; Jan. 16; Sp. p. 4772; Gaz. vol. 174; p. 803.
Channeling-tool. G. W. Carter. No. 1,015,377; Jan. 23; Sp. p. 5054; Gaz. vol. 174; p. 871.
Chart, Astigmatic. G. O. Nicholson. No. 1,013,423; Jan. 2; Sp. p. 747; Gaz. vol. 174; p. 118.
Charting and navigating apparatus, Nautical. M. Rees. No. 1,016,176; Jan. 30; Sp. p. 6742; Gaz. vol. 174; p. 1172.
Checking system and check therefor. C. Mallon. No. 1,015,573; Jan. 23; Sp. p. 5481; Gaz. vol. 174; p. 938.
Chest: *See* Insect-proof chest.
Chimney-cap. F. Punaro. No. 1,015,169; Jan. 16; Sp. p. 4585; Gaz. vol. 174; p. 773.
Chopper: *See* Cotton-chopper.
Christmas-tree holder. C. A. Black, Jr. No. 1,015,984; Jan. 30; Sp. p. 6250; Gaz. vol. 174; p. 1089.
Chuck-bottoming device, Lathe-. E. Rivett. No. 1,014,778; Jan. 16; Sp. p. 3750; Gaz. vol. 174; p. 638.
Chuck, Machine-. A. E. Church. No. 1,013,873; Jan. 2; Sp. p. 627; Gaz. vol. 174; p. 268.

Chuck, Magnetic. O. S. Walker. No. 1,013,574; Jan. 2; Sp. p. 1043; Gaz. vol. 174; p. 166.
Chucks, Insert-jaws for lathe. J. E. Gearhart. No. 1,013,289; Jan. 2; Sp. p. 453; Gaz. vol. 174; p. 70.
Churn. J. B. Dyer and J. D. Hobbs. No. 1,015,583; Jan. 23; Sp. p. 5064; Gaz. vol. 174; p. 873.
Churn. R. S. Devney. No. 1,016,218; Jan. 30; Sp. p. 6824; Gaz. vol. 174; p. 1186.
Chute, Intercepting-. J. C. and W. W. Dorsey. No. 1,015,480; Jan. 23; Sp. p. 5289; Gaz. vol. 174; p. 906.
Chute, Merchandise-. L. Goehr. No. 1,013,292; Jan. 2; Sp. p. 459; Gaz. vol. 174; p. 71.
Cigar. H. Schwartz. No. 1,013,226; Jan. 2; Sp. p. 303; Gaz. vol. 174; p. 48.
Cigar-cutter. D. S. Du Brul. No. 1,014,576; Jan. 9; Sp. p. 3239; Gaz. vol. 174; p. 530.
Cigar-holder. E. E. Tallaferro and E. J. Goldsworthy. No. 1,013,236; Jan. 2; Sp. p. 324; Gaz. vol. 174; p. 51.
Cigar-holder and ash-receptacle. G. C. Lynch. No. 1,015,697; Jan. 23; Sp. p. 5757; Gaz. vol. 174; p. 981.
Cigar-lighter and advertising-machine, Combined. A. J. Kobler. No. 1,015,807; Jan. 30; Sp. p. 5976; Gaz. vol. 174; p. 1045.
Cigar-tip cutter. I. Newman. No. 1,013,889; Jan. 9; Sp. p. 1784; Gaz. vol. 174; p. 306.
Cigars, Spark-arrester for. J. E. Bassett. No. 1,014,436; Jan. 9; Sp. p. 2988; Gaz. vol. 174; p. 496.
Cigarette-case. A. Q. Walsh. No. 1,014,543; Jan. 9; Sp. p. 3173; Gaz. vol. 174; p. 529.
Cigarette-mouthpieces, Producing. L. H. Sondheim. No. 1,013,825; Jan. 2; Sp. p. 1603; Gaz. vol. 174; p. 255.
Circuit-closer, Thermostatic. W. G. Asmus. No. 1,015,119; Jan. 16; Sp. p. 4501; Gaz. vol. 174; p. 758.
Circuit controller, Magneto-. E. S. Lincoln. No. 1,015,328; Jan. 23; Sp. p. 4952; Gaz. vol. 174; p. 855.
Circuit-interrupter. C. J. Hixson. No. 1,015,442; Jan. 23; Sp. p. 5198; Gaz. vol. 174; p. 893.
Circuits, Means for varying the period of oscillation of two oscillatory. R. H. Rendahl. No. 1,014,722; Jan. 16; Sp. p. 3634; Gaz. vol. 174; p. 622.
Circular cutter. W. E. Peaden, Jr. No. 1,013,845; Jan. 2; Sp. p. 1659; Gaz. vol. 174; p. 263.
Clamp: *See* Car-wheel clamp; Miter-clamp; Pipe-clamp; Side-board and wagon-body clamp; Vehicle-top bow-clamp; Wind-shield clamp.
Clamp. F. W. Weston. No. 1,014,352; Jan. 9; Sp. p. 2821; Gaz. vol. 174; p. 467.
Clamp. E. Goble. No. 1,015,171; Jan. 16; Sp. p. 4588; Gaz. vol. 174; p. 774.
Clamping device. C. Gibson. No. 1,013,763; Jan. 2; Sp. p. 1489; Gaz. vol. 174; p. 235.
Clay, kaolin, and ceramic masses, Treating. G. Keppeler and A. Spangenberg. No. 1,013,603; Jan. 2; Sp. p. 1107; Gaz. vol. 174; p. 178.
Cleaner: *See* Belt-cleaner; Cuspidor-cleaner; Finger-nail cleaner; Kiln-cleaner; Rifle-bore cleaner; Shoe-cleaner; Slate-cleaner; Vacuum-cleaner; Well-cleaner.
Cleaner nozzle, Vacuum-. W. Behm. No. 1,013,364; Jan. 2; Sp. p. 605; Gaz. vol. 174; p. 96.
Clevis. E. J. Sweeney. No. 1,016,183; Jan. 30; Sp. p. 6756; Gaz. vol. 174; p. 1175.
Clevis, Buggy-evener. O. A. and J. B. Fladby. No. 1,016,134; Jan. 30; Sp. p. 6676; Gaz. vol. 174; p. 1160.
Clip: *See* Lamp-clip; Pocket-clip.
Clipper. C. H. Redman. No. 1,015,399; Jan. 23; Sp. p. 5098; Gaz. vol. 174; p. 879.
Clock, Electric. A. Tuerk. No. 1,015,748; Jan. 23; Sp. p. 5884; Gaz. vol. 174; p. 998.
Clock, Geographical. G. Kretzschmar. No. 1,015,195; Jan. 16; Sp. p. 4638; Gaz. vol. 174; p. 782.
Closet: *See* Dry closet; Water-closet.
Closet. W. Eichelkraut. No. 1,016,001; Jan. 30; Sp. p. 6396; Gaz. vol. 174; p. 1113.
Closet-cistern-supply valve. A. J. Ashford. No. 1,013,720; Jan. 2; Sp. p. 1390; Gaz. vol. 174; p. 218.
Closet-seat. W. E. Ross and L. C. Jensen. No. 1,015,512; Jan. 23; Sp. p. 5344; Gaz. vol. 174; p. 917.
Clothes-drier. S. E. Jenkins. No. 1,015,959; Jan. 30; Sp. p. 6304; Gaz. vol. 174; p. 1097.
Clothes-line prop. W. Beaver. No. 1,014,688; Jan. 16; Sp. p. 3568; Gaz. vol. 174; p. 610.
Clothes-line reel. C. D. Riggle. No. 1,015,459; Jan. 23; Sp. p. 5246; Gaz. vol. 174; p. 890.
Clothes-line support. G. Frey. No. 1,014,291; Jan. 9; Sp. p. 2668; Gaz. vol. 174; p. 445.
Clothes-press. W. T. Francis. No. 1,015,167; Jan. 16; Sp. p. 4581; Gaz. vol. 174; p. 772.
Clutch. L. Wirtz. No. 1,013,979; Jan. 9; Sp. p. 1993; Gaz. vol. 174; p. 337.
Clutch. C. A. Juengst. No. 1,014,481; Jan. 9; Sp. p. 3066; Gaz. vol. 174; p. 509.
Clutch. M. B. Ireland. No. 1,014,826; Jan. 16; Sp. p. 3871; Gaz. vol. 174; p. 657.
Clutch device. I. S. Whisler. No. 1,015,254; Jan. 16; Sp. p. 4759; Gaz. vol. 174; p. 802.
Clutch, Flexible jointed. C. Beale and D. P. Moore. No. 1,015,250; Jan. 16; Sp. p. 4774; Gaz. vol. 174; p. 804.
Clutch for cheese-cutters. G. F. Kriesel. No. 1,014,652; Jan. 16; Sp. p. 3483; Gaz. vol. 174; p. 597.
Clutch, Friction-. W. V. Steiger. No. 1,013,848; Jan. 2; Sp. p. 1668; Gaz. vol. 174; p. 264.
Clutch, Friction-. R. M. Roof. No. 1,015,250; Jan. 16; Sp. p. 4746; Gaz. vol. 174; p. 800.
Clutch mechanism. C. E. Smith. No. 1,013,457; Jan. 2; Sp. p. 799; Gaz. vol. 174; p. 128.
Clutch mechanism. H. S. Mustin. No. 1,015,394; Jan. 23; Sp. p. 5090; Gaz. vol. 174; p. 877.
Clutch mechanism. A. C. Webb. No. 1,016,052; Jan. 30; Sp. p. 6505; Gaz. vol. 174; p. 1132.
Clutch, Split-ring. W. A. Cook. No. 1,014,865; Jan. 16; Sp. p. 3970; Gaz. vol. 174; p. 672.
Coal briquet and forming the same. W. W. Langdon. No. 1,015,033; Jan. 16; Sp. p. 4332; Gaz. vol. 174; p. 728.
Coal-separator. M. H. McTurk. No. 1,014,080; Jan. 9; Sp. p. 2216; Gaz. vol. 174; p. 371.
Coat. M. Kohn. No. 1,014,651; Jan. 16; Sp. p. 3482; Gaz. vol. 174; p. 597.
Coat-hanger. R. Rein. No. 1,014,976; Jan. 16; Sp. p. 4217; Gaz. vol. 174; p. 709.
Coating machine, Liquid-. R. A. Beausejour and G. Drubel. No. 1,014,282; Jan. 9; Sp. p. 2640; Gaz. vol. 174; p. 441.
Coating with metal. C. F. Burgess. No. 1,014,749; Jan. 16; Sp. p. 3690; Gaz. vol. 174; p. 630.
Coating with metal. C. F. Burgess. No. 1,014,750; Jan. 16; Sp. p. 3693; Gaz. vol. 174; p. 631.
Cock device, Angle-. W. V. Turner. No. 1,015,856; Jan. 30; Sp. p. 6087; Gaz. vol. 174; p. 1061.
Cock, Gage-. G. L. Tillotson and M. H. Nicholas. No. 1,014,538; Jan. 9; Sp. p. 3165; Gaz. vol. 174; p. 527.
Cock, Lock-. C. Stift. No. 1,015,004; Jan. 16; Sp. p. 4451; Gaz. vol. 174; p. 749.
Cock, Safety-. F. S. Bun. No. 1,014,805; Jan. 16; Sp. p. 3818; Gaz. vol. 174; p. 649.
Cock, Stop-. W. E. Sucss. No. 1,015,358; Jan. 23; Sp. p. 5000; Gaz. vol. 174; p. 865.
Coffee and the like, Apparatus for washing. R. Okrassa. No. 1,013,807; Jan. 2; Sp. p. 1567; Gaz. vol. 174; p. 249.
Coke-oven, Regenerative. J. G. Kros. No. 1,015,964; Jan. 30; Sp. p. 6317; Gaz. vol. 174; p. 1099.
Coffee-pot. T. J. Voyles. No. 1,013,340; Jan. 2; Sp. p. 555; Gaz. vol. 174; p. 89.
Coffee-pot. M. Parsons. No. 1,015,396; Jan. 23; Sp. p. 5095; Gaz. vol. 174; p. 873.
Coffee, Treatment of. L. W. Geisler, Jr. No. 1,015,271; Jan. 16; Sp. p. 4801; Gaz. vol. 174; p. 808.
Coke and similar loose material, Apparatus for handling. W. C. Mitchell. No. 1,013,676; Jan. 2; Sp. p. 1298; Gaz. vol. 174; p. 203.
Coke-oven door. R. Kearns. No. 1,013,177; Jan. 2; Sp. p. 175; Gaz. vol. 174; p. 31.
Coke-oven door. R. Lucia. No. 1,015,696; Jan. 23; Sp. p. 5756; Gaz. vol. 174; p. 981.
Collapsible cup or tray. A. F. Salstrom. No. 1,015,085; Jan. 16; Sp. p. 4431; Gaz. vol. 174; p. 745.
Collar. W. M. Shewry. No. 1,014,527; Jan. 9; Sp. p. 3151; Gaz. vol. 174; p. 524.
Collar. W. H. Stevens. No. 1,015,747; Jan. 23; Sp. p. 5853; Gaz. vol. 174; p. 998.
Collar and neck-pad support. F. W. Lindquist. No. 1,014,074; Jan. 9; Sp. p. 2205; Gaz. vol. 174; p. 369.
Collar and necktie holder. D. R. McDuff. No. 1,014,834; Jan. 16; Sp. p. 3894; Gaz. vol. 174; p. 661.
Collar or cuff package. C. Cahn. No. 1,015,000; Jan. 16; Sp. p. 4272; Gaz. vol. 174; p. 717.
Collar-support. N. A. Krischer. No. 1,013,783; Jan. 2; Sp. p. 1525; Gaz. vol. 174; p. 242.
Collar throat, Horse-. C. C. Rose. No. 1,013,688; Jan. 2; Sp. p. 1839; Gaz. vol. 174; p. 207.
Color-study device. E. F. Wagner. (Reissue.) No. 13,358; Jan. 9; Sp. p. 8428; Gaz. vol. 174; p. 567.
Coloring-matters, Manufacture of black. J. Turner and H. Dean. No. 1,014,982; Jan. 16; Sp. p. 4229; Gaz. vol. 174; p. 712.
Coloring-matters, Manufacture of black. J. Turner and H. Dean. No. 1,014,983; Jan. 16; Sp. p. 4229; Gaz. vol. 174; p. 712.
Coloring-matters, Manufacture of black. J. Turner and H. Dean. No. 1,014,984; Jan. 16; Sp. p. 4230; Gaz. vol. 174; p. 712.
Comb: *See* Currycomb; Expansion-comb; Hair-comb.
Comb. A. Benson. No. 1,014,037; Jan. 9; Sp. p. 2128; Gaz. vol. 174; p. 355.
Commode. T. E. Morgan. No. 1,013,802; Jan. 2; Sp. p. 1560; Gaz. vol. 174; p. 248.
Commutator. M. Pfatischer. No. 1,014,253; Jan. 9; Sp. p. 2594; Gaz. vol. 174; p. 433.
Compensator. A. Johnson. No. 1,016,155; Jan. 30; Sp. p. 6708; Gaz. vol. 174; p. 1166.
Composing device. G. R. Cornwall. No. 1,013,477; Jan. 2; Sp. p. 844; Gaz. vol. 174; p. 135.
Composition of matter. N. F. Avery. No. 1,015,468; Jan. 23; Sp. p. 5264; Gaz. vol. 174; p. 902.
Composition of matter and manufacturing the same. S. M. Lillie. No. 1,014,237; Jan. 9; Sp. p. 2557; Gaz. vol. 174; p. 426.
Compressing-machine. F. A. Cooper. No. 1,015,784; Jan. 30; Sp. p. 5931; Gaz. vol. 174; p. 1038.
Compressor and pump, Centrifugal. R. H. Rice. No. 1,013,312; Jan. 2; Sp. p. 500; Gaz. vol. 174; p. 79.
Computing-machine. G. O. Degener. No. 1,013,878; Jan. 2; Sp. p. 638; Gaz. vol. 174; p. 101.
Concentrating-table. W. L. Muender. No. 1,015,823; Jan. 30; Sp. p. 6009; Gaz. vol. 174; p. 1050.
Concrete and the like mixing machine. C. E. Bathrick. No. 1,013,109; Jan. 2; Sp. p. 27; Gaz. vol. 174; p. 7.
Concrete block and wall. L. G. Lease. No. 1,013,407; Jan. 2; Sp. p. 698; Gaz. vol. 174; p. 111.

Concrete-block machine. C. E. De Forrest. No. 1,013,536; Jan. 2; Sp. p. 977; Gaz. vol. 174; p. 156.
Concrete-building form and mold. C. H. Witthoefft. No. 1,013,632; Jan. 2; Sp. p. 1176; Gaz. vol. 174; p. 187.
Concrete columns, Mold for making hollow. C. H. Witthoefft. No. 1,013,251; Jan. 2; Sp. p. 355; Gaz. vol. 174; p. 56.
Concrete construction. T. Fellows. No. 1,013,480; Jan. 2; Sp. p. 851; Gaz. vol. 174; p. 136.
Concrete construction, Form work for. R. Anderson. No. 1,014,738; Jan. 16; Sp. p. 3670; Gaz. vol. 174; p. 627.
Concrete construction, Means and apparatus for. W. C. Edwards, Jr. No. 1,013,591; Jan. 2; Sp. p. 1077; Gaz. vol. 174; p. 174.
Concrete construction, Sectional mold for. M. D. Morrill. No. 1,014,630; Jan. 9; Sp. p. 3398; Gaz. vol. 174; p. 559.
Concrete form or mold. J. K. Goin. No. 1,016,140; Jan. 30; Sp. p. 6684; Gaz. vol. 174; p. 1161.
Concrete-mixer. W. L. Keller. No. 1,015,687; Jan. 23; Sp. p. 5741; Gaz. vol. 174; p. 978.
Concrete-mixer. C. E. Roberts. No. 1,015,981; Jan. 30; Sp. p. 6352; Gaz. vol. 174; p. 1105.
Concrete pipe. E. S. Wortham. No. 1,014,735; Jan. 16; Sp. p. 3667; Gaz. vol. 174; p. 626.
Concrete pipe, Reinforced-. V. V. Messer. No. 1,013,302; Jan. 2; Sp. p. 479; Gaz. vol. 174; p. 75.
Concrete structure, Reinforced. W. C. Edwards, Jr. No. 1,013,592; Jan. 2; Sp. p. 1081; Gaz. vol. 174; p. 174.
Concrete structures, Beam form and joist for. R. Anderson. No. 1,015,279; Jan. 23; Sp. p. 4825; Gaz. vol. 174; p. 837.
Concrete structures, Frame for reinforced. A. H. Tashjian. No. 1,013,698; Jan. 2; Sp. p. 1353; Gaz. vol. 174; p. 210.
Concrete tie. A. H. Moffet. No. 1,014,085; Jan. 9; Sp. p. 2224; Gaz. vol. 174; p. 375.
Concrete-wall-molding apparatus. T. H. Brown. No. 1,013,475; Jan. 2; Sp. p. 842; Gaz. vol. 174; p. 135.
Condenser, Jet-. O. H. Mueller. No. 1,015,822; Jan. 30; Sp. p. 6008; Gaz. vol. 174; p. 1050.
Condenser or pump. A. Künzli. No. 1,013,499; Jan. 2; Sp. p. 897; Gaz. vol. 174; p. 143.
Condenser system. H. Keller. No. 1,013,178; Jan. 2; Sp. p. 176; Gaz. vol. 174; p. 31.
Condensing apparatus, Steam-. J. J. Brown. No. 1,014,368; Jan. 9; Sp. p. 2857; Gaz. vol. 174; p. 472.
Conductive materials, Purifying electrically-. C. C. Ruprecht. No. 1,016,097; Jan. 30; Sp. p. 6608; Gaz. vol. 174; p. 1148.
Conduit and like joint, L. Billé. No. 1,016,124; Jan. 30; Sp. p. 6653; Gaz. vol. 174; p. 1157.
Conduit or culvert, Drain-. E. Carroll. No. 1,014,636; Jan. 16; Sp. p. 3449; Gaz. vol. 174; p. 592.
Conduit, Water-. G. Kaufman and C. Meriwether. No. 1,013,660; Jan. 2; Sp. p. 1260; Gaz. vol. 174; p. 198.
Confectionery-cutting machine. J. L. Dern. No. 1,015,790; Jan. 30; Sp. p. 5947; Gaz. vol. 174; p. 1040.
Connection, Flexible. T. Smith. No. 1,015,718; Jan. 23; Sp. p. 5795; Gaz. vol. 174; p. 988.
Container. G. Rogers. No. 1,015,638; Jan. 23; Sp. p. 5623; Gaz. vol. 174; p. 962.
Container and dispensing device. A. B. Brodie. No. 1,013,120; Jan. 2; Sp. p. 58; Gaz. vol. 174; p. 12.
Controlling mechanism. C. Chambers, Jr. No. 1,014,376; Jan. 9; Sp. p. 2871; Gaz. vol. 174; p. 475.
Converter. A. Tropenas. No. 1,013,702; Jan. 2; Sp. p. 1358; Gaz. vol. 174; p. 211.
Convertible wrench. J. W. Perkins and D. W. Roberts. No. 1,013,812; Jan. 2; Sp. p. 1576; Gaz. vol. 174; p. 251.
Conveyer. C. D. Seeberger. No. 1,014,100; Jan. 9; Sp. p. 2261; Gaz. vol. 174; p. 377.
Conveyer. H. W. Sanner. No. 1,015,086; Jan. 16; Sp. p. 4433; Gaz. vol. 174; p. 746.
Conveyer. C. D. Seeberger. No. 1,015,406; Jan. 23; Sp. p. 5106; Gaz. vol. 174; p. 880.
Conveyer Belt. J. L. Wentz. No. 1,014,106; Jan. 9; Sp. p. 2276; Gaz. vol. 174; p. 379.
Conveyer-bucket. C. W. Olson. No. 1,014,666; Jan. 16; Sp. p. 3514; Gaz. vol. 174; p. 602.
Conveyer Flight. J. F. White. No. 1,016,190; Jan. 30; Sp. p. 6760; Gaz. vol. 174; p. 1177.
Conveyer Flight. J. F. White. No. 1,016,191; Jan. 30; Sp. p. 6771; Gaz. vol. 174; p. 1177.
Conveyer Flight. J. F. White. No. 1,016,192; Jan. 30; Sp. p. 6773; Gaz. vol. 174; p. 1178.
Conveyer-slats, Means for attaching. G. E. Gilsar. No. 1,015,558; Jan. 23; Sp. p. 5446; Gaz. vol. 174; p. 932.
Conveyers, Spiral blade for gravity-. M. C. Schwab. No. 1,014,262; Jan. 9; Sp. p. 2607; Gaz. vol. 174; p. 435.
Conveying apparatus. E. Locke. No. 1,015,570; Jan. 23; Sp. p. 5470; Gaz. vol. 174; p. 937.
Conveying system. F. J. Schraeder, Jr. No. 1,014,727; Jan. 16; Sp. p. 3645; Gaz. vol. 174; p. 623.
Conveying system. F. J. Schraeder, Jr. No. 1,015,251; Jan. 16; Sp. p. 4749; Gaz. vol. 174; p. 801.
Cooker, Fireless. J. E. Sheaffer. No. 1,014,911; Jan. 16; Sp. p. 4059; Gaz. vol. 174; p. 686.
Cooker for oil-bearing meal and the like, Steam-. A. W. French. No. 1,015,013; Jan. 16; Sp. p. 4293; Gaz. vol. 174; p. 722.
Cooking utensil. M. J. Woodworth. No. 1,013,253; Jan. 2; Sp. p. 358; Gaz. vol. 174; p. 57.
Cooking utensil. E. B. Smith and A. V. Marston. No. 1,014,342; Jan. 9; Sp. p. 2801; Gaz. vol. 174; p. 463.
Cooler: *See* Air-cooler.
Cooling and filtering machine. J. Gavelack. No. 1,013,761; Jan. 2; Sp. p. 1482; Gaz. vol. 174; p. 234.
Cooling device. H. Moeller. No. 1,014,893; Jan. 16; Sp. p. 4025; Gaz. vol. 174; p. 680.
Cooling-tower. E. Burhorn. No. 1,014,371; Jan. 9; Sp. p. 2862; Gaz. vol. 174; p. 473.
Coop, Chicken-. E. Stout and J. M. Knowles. No. 1,013,233; Jan. 2; Sp. p. 316; Gaz. vol. 174; p. 50.
Coop, Sectional. E. W. Philo. No. 1,013,563; Jan. 2; Sp. p. 1025; Gaz. vol. 174; p. 164.
Copper from calcined ore or slags, Extracting. A. Gadomsky. No. 1,014,868; Jan. 16; Sp. p. 3976; Gaz. vol. 174; p. 672.
Copper from its ores, Recovering. H. K. Hess. No. 1,014,061; Jan. 9; Sp. p. 2175; Gaz. vol. 174; p. 364.
Copper, lead, or iron vanadate from vanadiferous ores, Producing. W. F. Bleecker. No. 1,015,469; Jan. 23; Sp. p. 5265; Gaz. vol. 174; p. 902.
Copy-holder. R. B. Griffith. No. 1,014,646; Jan. 16; Sp. p. 3469; Gaz. vol. 174; p. 596.
Core venting and wiring machine. J. E. Boegen. No. 1,015,610; Jan. 23; Sp. p. 5556; Gaz. vol. 174; p. 952.
Corer for tomatoes and other vegetables. E. H. Sawyer and M. Fels. No. 1,016,030; Jan. 30; Sp. p. 6478; Gaz. vol. 174; p. 1127.
Corks in bottles, Machine for inserting. E. Horn and E. Sherman. No. 1,013,493; Jan. 2; Sp. p. 885; Gaz. vol. 174; p. 141.
Corn husking and silking machine. J. H. O'Hara. No. 1,015,740; Jan. 23; Sp. p. 5839; Gaz. vol. 174; p. 995.
Corn on the cob, Preserving green. C. L. Watson. No. 1,013,244; Jan. 2; Sp. p. 339; Gaz. vol. 174; p. 54.
Corn-parer, Safety. S. Korper. No. 1,014,154; Jan. 9; Sp. p. 2366; Gaz. vol. 174; p. 395.
Corn-sheller. S. Ordóñez. No. 1,016,089; Jan. 30; Sp. p. 6596; Gaz. vol. 174; p. 1146.
Corn-shelling machines, Suction device for. C. M. Rushing and A. J. Wheeler. No. 1,015,346; Jan. 23; Sp. p. 4989; Gaz. vol. 174; p. 861.
Corn-shock loader. A. Brandhorst. No. 1,014,043; Jan. 9; Sp. p. 2139; Gaz. vol. 174; p. 357.
Corner-bead. M. J. Doner. No. 1,015,381; Jan. 23; Sp. p. 5060; Gaz. vol. 174; p. 873.
Corsets, Front-clasp cover and stay-pocket for. J. E. Doolittle. No. 1,014,697; Jan. 16; Sp. p. 3581; Gaz. vol. 174; p. 613.
Cotton-chopper. W. A. Pledger, Jr., and B. W. Wood. No. 1,013,951; Jan. 9; Sp. p. 1930; Gaz. vol. 174; p. 328.
Cotton-chopper. M. C. Tedder. No. 1,013,969; Jan. 9; Sp. p. 1969; Gaz. vol. 174; p. 334.
Cotton-chopper. C. Prickett. No. 1,015,341; Jan. 23; Sp. p. 4979; Gaz. vol. 174; p. 859.
Cotton-chopper. J. E. Williams. No. 1,015,369; Jan. 23; Sp. p. 5083; Gaz. vol. 174; p. 869.
Cotton-gin cylinder. J. T. Fuller. No. 1,015,759; Jan. 23; Sp. p. 5878; Gaz. vol. 174; p. 1002.
Cotton-opening and other cotton-working machines, Evener for. J. C. Potter. No. 1,015,508; Jan. 23; Sp. p. 5336; Gaz. vol. 174; p. 915.
Cotton-press. C. J. Luce. No. 1,014,764; Jan. 16; Sp. p. 3729; Gaz. vol. 174; p. 635.
Cotton-press. C. J. Luce. No. 1,014,765; Jan. 16; Sp. p. 3730; Gaz. vol. 174; p. 635.
Couch. J. Hoey. No. 1,014,877; Jan. 16; Sp. p. 3993; Gaz. vol. 174; p. 675.
Counter-forming machine. A. F. Jones. No. 1,014,226; Jan. 9; Sp. p. 2515; Gaz. vol. 174; p. 422.
Counter, Lunch-. B. Stevenson. No. 1,014,186; Jan. 9; Sp. p. 2426; Gaz. vol. 174; p. 407.
Counter, Setback-. S. W. Potts. No. 1,015,710; Jan. 23; Sp. p. 5779; Gaz. vol. 174; p. 985.
Counterbore, Interchangeable. F. S. Walters. No. 1,016,116; Jan. 30; Sp. p. 6639; Gaz. vol. 174; p. 1154.
Counting apparatus, Loaded-truck-. R. McGahey. No. 1,013,797; Jan. 2; Sp. p. 1546; Gaz. vol. 174; p. 246.
Coupling: *See* Car-coupling; Electric coupling; Electrical coupling; Pipe-coupling; Pipe and like coupling; Shaft-coupling; Yoke-end coupling.
Coupling. C. B. Gracey. No. 1,013,598; Jan. 2; Sp. p. 1097; Gaz. vol. 174; p. 177.
Cover-retaining devices to receptacles, Machine for applying. H. N. Mann. No. 1,015,047; Jan. 16; Sp. p. 4364; Gaz. vol. 174; p. 732.
Cow-tail holder. A. L. Bartlett. No. 1,013,362; Jan. 2; Sp. p. 602; Gaz. vol. 174; p. 96.
Cows from kicking, Device to prevent. B. M. Sharit. No. 1,014,910; Jan. 16; Sp. p. 4059; Gaz. vol. 174; p. 686.
Cradle. P. J. Reinert. No. 1,014,848; Jan. 16; Sp. p. 3927; Gaz. vol. 174; p. 665.
Crank-pin-turning machine. J. Kessler and J. Weiss. No. 1,015,188; Jan. 16; Sp. p. 4627; Gaz. vol. 174; p. 780.
Cranking device, Safety. R. C. Hilton. No. 1,013,878; Jan. 9; Sp. p. 1766; Gaz. vol. 174; p. 302.
Crate. W. F. Buschardt. No. 1,014,445; Jan. 9; Sp. p. 3006; Gaz. vol. 174; p. 498.
Crate, Folding. J. H. Farmer. No. 1,015,430; Jan. 23; Sp. p. 5169; Gaz. vol. 174; p. 889.
Crate or box, Folding shipping. F. S. McKeever and H. C. Schuck. No. 1,013,196; Jan. 2; Sp. p. 221; Gaz. vol. 174; p. 37.
Crate, Shipping-. N. Jensen. No. 1,015,683; Jan. 23; Sp. p. 5733; Gaz. vol. 174; p. 976.

Cream-dipper. L. Mansfield. No. 1,013,508; Jan. 2; Sp. p. 903; Gaz. vol. 174; p. 144.
Cream-separator. J. W. Hudlow and J. M. Chapman. No. 1,013,164; Jan. 2; Sp. p. 154; Gaz. vol. 174; p. 26.
Cream-separators, Cream-exit for centrifugal. C. H. Hackett and T. W. Morgan. No. 1,015,018; Jan. 16; Sp. p. 4301; Gaz. vol. 174; p. 724.
Cream-separators, Spacer for liner-plates of centrifugal. G. M. Anderson. No. 1,013,834; Jan. 2; Sp. p. 1621; Gaz. vol. 174; p. 259.
Creasing-iron. F. E. Foster. No. 1,014,698; Jan. 16; Sp. p. 3582; Gaz. vol. 174; p. 613.
Creeping and antiskidding device. W. S. Craig. No. 1,015,545; Jan. 23; Sp. p. 5414; Gaz. vol. 174; p. 927.
Crucible-furnace. G. E. Behrens. No. 1,013,472; Jan. 2; Sp. p. 838; Gaz. vol. 174; p. 134.
Crumb-collector. W. H. McConnaughy. No. 1,013,195; Jan. 2; Sp. p. 219; Gaz. vol. 174; p. 37.
Crusher: *See* Ice-crusher.
Crusher. T. L. and T. J. Sturtevant. No. 1,013,459; Jan. 2; Sp. p. 802; Gaz. vol. 174; p. 129.
Crusher-plate. F. M. Canda. No. 1,015,871; Jan. 30; Sp. p. 6113; Gaz. vol. 174; p. 1066.
Crushing-machine. E. B. Symons. No. 1,013,626; Jan. 2; Sp. p. 1160; Gaz. vol. 174; p. 184.
Crushing-rolls. J. S. Frazee. No. 1,014,383; Jan. 9; Sp. p. 2887; Gaz. vol. 174; p. 478.
Cue. H. W. McLaughlin. No. 1,014,502; Jan. 9; Sp. p. 3102; Gaz. vol. 174; p. 515.
Cue-tip. J. Masgai. No. 1,013,671; Jan. 2; Sp. p. 1286; Gaz. vol. 174; p. 201.
Cue-tip holder. J. C. Bechtold. No. 1,014,559; Jan. 9; Sp. p. 3200; Gaz. vol. 174; p. 534.
Cuff-protector. N. Cerri. No. 1,013,126; Jan. 2; Sp. p. 76; Gaz. vol. 174; p. 14.
Culinary device. J. S. Johnson. No. 1,014,479; Jan. 9; Sp. p. 3063; Gaz. vol. 174; p. 508.
Culinary separating-machine. A. C. Pancoast. No. 1,015,337; Jan. 23; Sp. p. 4971; Gaz. vol. 174; p. 858.
Culinary-utensil cover. E. Zysset. No. 1,013,263; Jan. 2; Sp. p. 379; Gaz. vol. 174; p. 61.
Cultivator. J. E. Binns, Jr. No. 1,013,260; Jan. 2; Sp. p. 391; Gaz. vol. 174; p. 63.
Cultivator. W. H. Parlin. No. 1,013,306; Jan. 2; Sp. p. 487; Gaz. vol. 174; p. 76.
Cultivator. W. J. Burrows. No. 1,013,476; Jan. 2; Sp. p. 843; Gaz. vol. 174; p. 135.
Cultivator. V. Widder. No. 1,013,710; Jan. 2; Sp. p. 1370; Gaz. vol. 174; p. 214.
Cultivator. A. S. Beymer. No. 1,014,038; Jan. 9; Sp. p. 2129; Gaz. vol. 174; p. 356.
Cultivator. E. J. Brooks. No. 1,014,045; Jan. 9; Sp. p. 2146; Gaz. vol. 174; p. 358.
Cultivator. E. J. Davis. No. 1,014,572; Jan. 9; Sp. p. 3232; Gaz. vol. 174; p. 538.
Cultivator. J. G. Briggs. No. 1,014,944; Jan. 16; Sp. p. 4148; Gaz. vol. 174; p. 698.
Cultivator attachment. A. A. Mitchell. No. 1,013,675; Jan. 2; Sp. p. 1292; Gaz. vol. 174; p. 203.
Cultivator-blade attachment. W. Cantrelle. No. 1,015,136; Jan. 16; Sp. p. 4530; Gaz. vol. 174; p. 764.
Cultivator harrow attachment. S. A. Cowart. No. 1,014,124; Jan. 9; Sp. p. 2314; Gaz. vol. 174; p. 386.
Cultivator, Hydrocarbon disk. W. E. Nye and J. E. Cram. No. 1,014,899; Jan. 16; Sp. p. 4035; Gaz. vol. 174; p. 682.
Culvert, Metallic. J. R. Rankin and J. H. Larrick. No. 1,013,440; Jan. 2; Sp. p. 771; Gaz. vol. 174; p. 122.
Cup: *See* Collapsible cup; Engine priming-cup; Grease-cup; Milking-machine teat-cup.
Curb and snaffle bit, Combined. G. Johnston. No. 1,014,881; Jan. 16; Sp. p. 4001; Gaz. vol. 174; p. 676.
Curing apparatus. J. F. Jack. No. 1,013,600; Jan. 2; Sp. p. 1100; Gaz. vol. 174; p. 177.
Current-motor. G. M. Klevlan. No. 1,014,066; Jan. 9; Sp. p. 2187; Gaz. vol. 174; p. 306.
Current-motor. H. Alles. No. 1,014,930; Jan. 16; Sp. p. 4114; Gaz. vol. 174; p. 698.
Current motor, Alternating-. H. F. Hitner. No. 1,014,001; Jan. 9; Sp. p. 2043; Gaz. vol. 174; p. 344.
Current motor, Alternating-. A. C. Bell. No. 1,015,534; Jan. 23; Sp. p. 5300; Gaz. vol. 174; p. 923.
Current or wave motor, H. W. Lundquist. No. 1,016,022; Jan. 30; Sp. p. 6438; Gaz. vol. 174; p. 1120.
Current regulation, System of alternating-. J. Bijur. No. 1,014,373; Jan. 9; Sp. p. 2864; Gaz. vol. 174; p. 474.
Current regulator, Alternating-. E. F. Gehrkens. No. 1,014,821; Jan. 16; Sp. p. 3850; Gaz. vol. 174; p. 655.
Currycomb and cleaner, Combined. O. S. Lovely. No. 1,014,160; Jan. 9; Sp. p. 2376; Gaz. vol. 174; p. 397.
Currycomb, Vacuum-. W. H. Keller. No. 1,015,804; Jan. 30; Sp. p. 6167; Gaz. vol. 174; p. 1075.
Curtain and shade holder, Combined. J. F. Lemieux. No. 1,015,093; Jan. 23; Sp. p. 5751; Gaz. vol. 174; p. 980.
Curtain and shade support. J. Escher. No. 1,015,879; Jan. 30; Sp. p. 6129; Gaz. vol. 174; p. 1069.
Curtain or shade guide. A. C. Bader. No. 1,015,977; Jan. 30; Sp. p. 6343; Gaz. vol. 174; p. 1104.
Curtain-pole. T. Jankowski. No. 1,013,169; Jan. 2; Sp. p. 164; Gaz. vol. 174; p. 28.
Curtain-pole. A. Mazurek. No. 1,014,405; Jan. 9; Sp. p. 2031; Gaz. vol. 174; p. 486.
Curtain-pole. J. Pulit. No. 1,015,068; Jan. 16; Sp. p. 4403; Gaz. vol. 174; p. 740.
Curtain-pole. C. Schinke. No. 1,016,040; Jan. 30; Sp. p. 6481; Gaz. vol. 174; p. 1127.
Curtain-roller. C. A. Carmany. No. 1,013,531; Jan. 2; Sp. p. 961; Gaz. vol. 174; p. 154.
Curtain-roller. C. A. Carmany. No. 1,013,532; Jan. 2; Sp. p. 965; Gaz. vol. 174; p. 155.
Curtain-rollers, Means for supporting and operating. E. H. McCloud. No. 1,015,331; Jan. 23; Sp. p. 4962; Gaz. vol. 174; p. 856.
Cushion: *See* Foot-cushion.
Cushion-wheel, Vehicle. J. F. Mitchell. No. 1,014,244; Jan. 9; Sp. p. 2575; Gaz. vol. 174; p. 429.
Cuspidor. H. C. Lovis. No. 1,015,046; Jan. 16; Sp. p. 4363; Gaz. vol. 174; p. 732.
Cuspidor. G. Lengyel. No. 1,015,094; Jan. 23; Sp. p. 5752; Gaz. vol. 174; p. 980.
Cuspidor-cleaner. L. D. Lawhon. No. 1,014,236; Jan. 9; Sp. p. 2556; Gaz. vol. 174; p. 426.
Cuspidors, Check-valve for. W. Pyzikowski. No. 1,015,060; Jan. 16; Sp. p. 4405; Gaz. vol. 174; p. 740.
Cut-off. H. F. Storer and W. W. Jamieson, Jr. No. 1,013,695; Jan. 2; Sp. p. 1350; Gaz. vol. 174; p. 210.
Cutter: *See* Cigar-cutter; Cigar-tip cutter; Circular cutter; Meat-cutter; Paper-cutter; Rotary cutter; Sod-cutter; Stalk-cutter; Yarn-cutter.
Cutter-head. K. S. Faucette. No. 1,013,540; Jan. 2; Sp. p. 982; Gaz. vol. 174; p. 157.
Cutter-head. H. T. Weirbach. No. 1,014,794; Jan. 16; Sp. p. 3796; Gaz. vol. 174; p. 645.
Cutter-head. M. Arbuthnot. No. 1,015,927; Jan. 30; Sp. p. 6233; Gaz. vol. 174; p. 1086.
Cutter-holding means. F. W. Taylor. No. 1,015,409; Jan. 23; Sp. p. 5128; Gaz. vol. 174; p. 881.
Cutting and folding machine. H. M. Barber. No. 1,013,919; Jan. 9; Sp. p. 1847; Gaz. vol. 174; p. 317.
Cutting-machine. T. N. Shaw. No. 1,013,903; Jan. 9; Sp. p. 1818; Gaz. vol. 174; p. 311.
Cycle, Air-. J. H. Price. No. 1,013,952; Jan. 9; Sp. p. 1932; Gaz. vol. 174; p. 328.
Cycle and other saddles, Spring-support for motor-. F. Robinson. No. 1,015,712; Jan. 23; Sp. p. 5782; Gaz. vol. 174; p. 986.
Cycle-fork. G. Cummings. No. 1,014,285; Jan. 9; Sp. p. 2653; Gaz. vol. 174; p. 442.
Cycle frame, Motor-. G. W. Breed. No. 1,015,418; Jan. 23; Sp. p. 5147; Gaz. vol. 174; p. 884.
Cycles, Parcel-carrier for motor-. D. S. Popini. No. 1,013,684; Jan. 2; Sp. p. 1332; Gaz. vol. 174; p. 206.
Cylinders, Making toothed-wire-covered. A. C. Sargent. No. 1,016,098; Jan. 30; Sp. p. 6610; Gaz. vol. 174; p. 1148.
Damper. H. Rosenberg. No. 1,013,810; Jan. 2; Sp. p. 1587; Gaz. vol. 174; p. 253.
Damper-regulating apparatus. E. J. Deegan. (Reissue.) No. 13,346; Jan. 2; Sp. p. 1690; Gaz. vol. 174; p. 267.
Damper-regulator, Automatic. E. A. Orr. No. 1,014,845; Jan. 16; Sp. p. 3921; Gaz. vol. 174; p. 664.
Dams or dikes, Wall construction for. W. E. Pedley. No. 1,013,610; Jan. 2; Sp. p. 1125; Gaz. vol. 174; p. 180.
Davenport. D. E. Sweeney. No. 1,014,535; Jan. 9; Sp. p. 3162; Gaz. vol. 174; p. 526.
Dedectometer. W. Fentzloff. No. 1,015,305; Jan. 23; Sp. p. 4888; Gaz. vol. 174; p. 846.
Deflaters, Float for. G. L. Blanchard. No. 1,015,724; Jan. 23; Sp. p. 5805; Gaz. vol. 174; p. 990.
Dental-chair arm. G. W. Grant. No. 1,014,702; Jan. 16; Sp. p. 3588; Gaz. vol. 174; p. 614.
Dental cleaning device. G. B. Hakins. No. 1,014,594; Jan. 9; Sp. p. 3273; Gaz. vol. 174; p. 546.
Dental inlays, Making. J. P. Lederle. No. 1,013,666; Jan. 2; Sp. p. 1275; Gaz. vol. 174; p. 199.
Dental press. F. O. Jaques, Jr. No. 1,013,940; Jan. 9; Sp. p. 1903; Gaz. vol. 174; p. 324.
Dental tool. C. L. Gibbs. No. 1,014,056; Jan. 9; Sp. p. 2167; Gaz. vol. 174; p. 362.
Dental tool. V. Lasbury. No. 1,015,039; Jan. 16; Sp. p. 4346; Gaz. vol. 174; p. 730.
Dental tool for removing crown-pins. G. T. Carpenter. (Reissue.) No. 13,361; Jan. 16; Sp. p. 4817; Gaz. vol. 174; p. 811.
Dental tooth regulating and retaining appliance. E. H. Angle. No. 1,014,028; Jan. 9; Sp. p. 2102; Gaz. vol. 174; p. 353.
Dental tooth-regulating appliance. F. A. Gough. No. 1,013,993; Jan. 9; Sp. p. 2022; Gaz. vol. 174; p. 341.
Dental tooth-regulating appliance. E. H. Angle. No. 1,014,029; Jan. 9; Sp. p. 2105; Gaz. vol. 174; p. 353.
Dental tooth-regulating appliance. E. H. Angle. No. 1,014,030; Jan. 9; Sp. p. 2107; Gaz. vol. 174; p. 353.
Denture, Artificial. E. C. Bennett. No. 1,013,111; Jan. 2; Sp. p. 33; Gaz. vol. 174; p. 8.
Depositing-machine. E. Herisse. No. 1,014,874; Jan. 16; Sp. p. 3986; Gaz. vol. 174; p. 674.
Derrick, Pole-. D. A. Manross. No. 1,015,236; Jan. 16; Sp. p. 4720; Gaz. vol. 174; p. 795.
Desk and seat, Combination school. F. W. Else. No. 1,013,141; Jan. 2; Sp. p. 101; Gaz. vol. 174; p. 18.
Desk, Writing-. J. L. Dow. No. 1,013,868; Jan. 9; Sp. p. 1737; Gaz. vol. 174; p. 300.
Detector. F. G. Sargent. No. 1,013,223; Jan. 2; Sp. p. 298; Gaz. vol. 174; p. 47.

Die stock or head. J. A. Becher. No. 1,015,282; Jan. 23; Sp. p. 4835; Gaz. vol. 174; p. 838.
Digger: *See* Potato-digger.
Dilator, Medicating-. T. Weaver and D. M. Ennis. No. 1,015,253; Jan. 16; Sp. p. 4758; Gaz. vol. 174; p. 802.
Dipper. H. B. Bryan. No. 1,015,135; Jan. 16; Sp. p. 4530; Gaz. vol. 174; p. 763.
Dipping-machine. J. W. Denmead. No. 1,015,998; Jan. 30; Sp. p. 6339; Gaz. vol. 174; p. 1111.
Dish-washing pan. E. O. C. Ord. No. 1,014,509; Jan. 9; Sp. p. 3117; Gaz. vol. 174; p. 518.
Disinfecting inclosed spaces. G. Harker. No. 1,016,145; Jan. 30; Sp. p. 6694; Gaz. vol. 174; p. 1163.
Disintegrator. J. Boero. No. 1,013,527; Jan. 2; Sp. p. 955; Gaz. vol. 174; p. 153.
Dispensing apparatus. T. C. Bounds. No. 1,014,115; Jan. 9; Sp. p. 2295; Gaz. vol. 174; p. 382.
Display apparatus. C. H. Congdon. No. 1,014,640; Jan. 16; Sp. p. 3458; Gaz. vol. 174; p. 594.
Display-box. J. G. Heinicke. No. 1,016,148; Jan. 30; Sp. p. 6698; Gaz. vol. 174; p. 1164.
Display-cabinet. D. Lochner. No. 1,014,158; Jan. 9; Sp. p. 2374; Gaz. vol. 174; p. 397.
Display case, Stock-. G. H. Burlingame. No. 1,014,947; Jan. 16; Sp. p. 4150; Gaz. vol. 174; p. 699.
Display-rack. T. W. Warren. No. 1,014,426; Jan. 9; Sp. p. 2970; Gaz. vol. 174; p. 492.
Display-rack. M. S. Rocereto and L. D. Bert. No. 1,015,078; Jan. 16; Sp. p. 4422; Gaz. vol. 174; p. 744.
Display-rack. A. S. Madden. No. 1,015,448; Jan. 23; Sp. p. 5208; Gaz. vol. 174; p. 895.
Display-rack. W. G. Anderson. No. 1,015,926; Jan. 30; Sp. p. 6232; Gaz. vol. 174; p. 1086.
Display-stand. W. Faerber. No. 1,013,539; Jan. 2; Sp. p. 981; Gaz. vol. 174; p. 157.
Display-stand. W. E. Ragsdale. No. 1,015,457; Jan. 23; Sp. p. 5243; Gaz. vol. 174; p. 896.
Displayer, Coin-. F. C. Fabry. No. 1,013,991; Jan. 9; Sp. p. 2016; Gaz. vol. 174; p. 341.
Displaying and vending apparatus, Postal-card. B. S. Wallick. No. 1,013,976; Jan. 9; Sp. p. 1985; Gaz. vol. 174; p. 336.
Distilling apparatus, Water-. J. M. Harsh. No. 1,013,936; Jan. 9; Sp. p. 1897; Gaz. vol. 174; p. 323.
Distilling wood. R. Strobach. No. 1,015,519; Jan. 23; Sp. p. 5356; Gaz. vol. 174; p. 918.
Distributing apparatus. C. B. Tewksbury. No. 1,014,786; Jan. 16; Sp. p. 3781; Gaz. vol. 174; p. 642.
Door. O. W. Meissner. No. 1,014,768; Jan. 16; Sp. p. 3741; Gaz. vol. 174; p. 636.
Door and operating mechanism therefor. L. J. Eyth. No. 1,015,158; Jan. 16; Sp. p. 4567; Gaz. vol. 174; p. 770.
Door and step operating mechanism. H. Rowntree. No. 1,014,907; Jan. 16; Sp. p. 4052; Gaz. vol. 174; p. 685.
Door-bolting device. J. M. Sausser. No. 1,013,820; Jan. 2; Sp. p. 1588; Gaz. vol. 174; p. 253.
Door-check. J. E. Gibbs. No. 1,013,762; Jan. 2; Sp. p. 1486; Gaz. vol. 174; p. 235.
Door-check. J. C. Earnshaw. No. 1,014,817; Jan. 16; Sp. p. 3841; Gaz. vol. 174; p. 653.
Door-check. E. von Gunten. No. 1,015,222; Jan. 16; Sp. p. 4682; Gaz. vol. 174; p. 790.
Door-check. C. C. Traum. No. 1,015,655; Jan. 23; Sp. p. 5659; Gaz. vol. 174; p. 967.
Door check and closer. J. G. Lofgren. No. 1,013,788; Jan. 2; Sp. p. 1529; Gaz. vol. 174; p. 243.
Door-closer. A. H. Stutler. No. 1,014,266; Jan. 9; Sp. p. 2614; Gaz. vol. 174; p. 436.
Door construction, Sliding-. J. R. Hussey. No. 1,015,025; Jan. 16; Sp. p. 4313; Gaz. vol. 174; p. 726.
Door-fastener. H. Jetté. No. 1,014,756; Jan. 16; Sp. p. 3702; Gaz. vol. 174; p. 632.
Door fastener, Sliding-. J. H. Simonton. No. 1,015,646; Jan. 23; Sp. p. 5645; Gaz. vol. 174; p. 964.
Door-frame. T. Buchholz. No. 1,015,989; Jan. 30; Sp. p. 6370; Gaz. vol. 174; p. 1109.
Door, Grain-. M. S. Greeley. No. 1,013,766; Jan. 2; Sp. p. 1495; Gaz. vol. 174; p. 237.
Door-hanger. W. W. Nicodemus. No. 1,015,827; Jan. 30; Sp. p. 6018; Gaz. vol. 174; p. 1051.
Door-hanger and track, Combined. W. J. Fisher. No. 1,015,161; Jan. 16; Sp. p. 4571; Gaz. vol. 174; p. 770.
Door-lock. M. Rasmussen. No. 1,015,070; Jan. 16; Sp. p. 4406; Gaz. vol. 174; p. 740.
Door-lock, Permutation. J. Pignocco. No. 1,015,832; Jan. 30; Sp. p. 6029; Gaz. vol. 174; p. 1053.
Door-locking mechanism. C. J. Ericson. No. 1,014,960; Jan. 16; Sp. p. 4170; Gaz. vol. 174; p. 703.
Door, Metallic. E. N. Gould. No. 1,013,934; Jan. 9; Sp. p. 1894; Gaz. vol. 174; p. 322.
Door motor-gearing, Revolving-. E. C. Haviland. No. 1,015,491; Jan. 23; Sp. p. 5311; Gaz. vol. 174; p. 910.
Door-operating device, Jail-. C. M. Finch. No. 1,013,481; Jan. 2; Sp. p. 852; Gaz. vol. 174; p. 136.
Door-operating mechanism. J. Brombacher. No. 1,014,367; Jan. 9; Sp. p. 2856; Gaz. vol. 174; p. 472.
Door, Sidewalk-. L. W. Mulford. No. 1,015,579; Jan. 23; Sp. p. 5495; Gaz. vol. 174; p. 940.
Door-stop. H. J. Cline. No. 1,015,424; Jan. 23; Sp. p. 5158; Gaz. vol. 174; p. 886.
Doors and analogous uses, Metal structure for. A. H. Schaffert. No. 1,015,212; Jan. 16; Sp. p. 4668; Gaz. vol. 174; p. 788.
Doors, Speed-controlling mechanism for revolving. G. C. Blickensderfer. No. 1,014,997; Jan. 16; Sp. p. 4206; Gaz. vol. 174; p. 716.
Dough-raising device. M. I. Young. No. 1,013,260; Jan. 2; Sp. p. 376; Gaz. vol. 174; p. 59.
Draft attachment. M. H. Blanchard. No. 1,015,260; Jan. 16; Sp. p. 4776; Gaz. vol. 174; p. 804.
Draft-equalizer. E. Compton. No. 1,014,121; Jan. 9; Sp. p. 2309; Gaz. vol. 174; p. 385.
Draft-gear. C. A. Gilmore. No. 1,014,590; Jan. 9; Sp. p. 3261; Gaz. vol. 174; p. 544.
Draft-regulator for incubators or other purposes, Thermostatic. J. Boekel. No. 1,016,126; Jan. 30; Sp. p. 6657; Gaz. vol. 174; p. 1157.
Draft-regulator, Thermostatic. J. H. Atterbury. No. 1,014,032; Jan. 9; Sp. p. 2111; Gaz. vol. 174; p. 354.
Draft through smoke-stacks, Device for creating a. J. D. McKay. No. 1,013,887; Jan. 9; Sp. p. 1781; Gaz. vol. 174; p. 305.
Drafting instrument. H. G. Bohn. No. 1,014,803; Jan. 16; Sp. p. 3814; Gaz. vol. 174; p. 648.
Drafting instrument. G. H. Cardell. No. 1,015,423; Jan. 23; Sp. p. 5157; Gaz. vol. 174; p. 886.
Drain, Land-. E. W. Appelman. No. 1,015,530; Jan. 23; Sp. p. 5382; Gaz. vol. 174; p. 922.
Drapery and grille structure. L. B. Christopherson. No. 1,016,211; Jan. 30; Sp. p. 6813; Gaz. vol. 174; p. 1184.
Drawer, Sponge-. C. J. Whitmore. No. 1,016,119; Jan. 30; Sp. p. 6644; Gaz. vol. 174; p. 1155.
Drawer, Vertical-filing. F. L. G. Straubel. No. 1,013,234; Jan. 2; Sp. p. 319; Gaz. vol. 174; p. 51.
Drawing-frames, Clearer and stop-motion for. J. Brady. No. 1,014,042; Jan. 9; Sp. p. 2138; Gaz. vol. 174; p. 357.
Drawing-press. A. H. Seidel. No. 1,013,902; Jan. 9; Sp. p. 1816; Gaz. vol. 174; p. 311.
Dredger, Suction-. F. Lobnitz. No. 1,013,669; Jan. 2; Sp. p. 1279; Gaz. vol. 174; p. 200.
Dredging channels. S. A. Geoghegan. No. 1,015,170; Jan. 16; Sp. p. 4586; Gaz. vol. 174; p. 773.
Drier: *See* Clothes-drier; Grain-drier; Hair-drier.
Dry cell. F. J. Humel. No. 1,015,317; Jan. 23; Sp. p. 4913; Gaz. vol. 174; p. 851.
Dry closet. D. E. Fitzgerald. No. 1,014,213; Jan. 9; Sp. p. 2483; Gaz. vol. 174; p. 417.
Dry-kiln. C. A. Wenborne. No. 1,014,190; Jan. 9; Sp. p. 2436; Gaz. vol. 174; p. 409.
Dry-pan. R. C. Penfield. (Reissue.) No. 13,356; Jan. 9; Sp. p. 3420; Gaz. vol. 174; p. 566.
Drying and moistening machine, Combination. T. M. Coyle. No. 1,015,786; Jan. 30; Sp. p. 5934; Gaz. vol. 174; p. 1038.
Drying apparatus. A. Gerlach. No. 1,015,796; Jan. 30; Sp. p. 5957; Gaz. vol. 174; p. 1042.
Drying apparatus for pulp-like paste, Two-roll. T. Dreymalla. No. 1,014,956; Jan. 16; Sp. p. 4173; Gaz. vol. 174; p. 702.
Drying system. W. M. Grosvenor. No. 1,014,462; Jan. 9; Sp. p. 3035; Gaz. vol. 174; p. 503.
Drill: *See* Hammer-drill; Percussive drill; Ratchet-drill; Rock-drill.
Drill. S. Doubet. No. 1,013,281; Jan. 2; Sp. p. 419; Gaz. vol. 174; p. 67.
Drill disk attachment. O. G. Rieske. No. 1,015,458; Jan. 23; Sp. p. 5244; Gaz. vol. 174; p. 898.
Drill-rod couplings, Safety device for diamond-. V. Soderstrom. No. 1,016,106; Jan. 30; Sp. p. 6623; Gaz. vol. 174; p. 1151.
Drilling-machine post. W. Firman. No. 1,015,160; Jan. 16; Sp. p. 4570; Gaz. vol. 174; p. 770.
Drinking-fountain for fowls. H. C. Lamdin. No. 1,014,490; Jan. 9; Sp. p. 3081; Gaz. vol. 174; p. 512.
Drinking-fountain, Sanitary. P. Mueller and A. C. Schuermann. No. 1,014,324; Jan. 9; Sp. p. 2738; Gaz. vol. 174; p. 456.
Driving mechanism. J. J. Hesse. No. 1,016,010; Jan. 30; Sp. p. 6414; Gaz. vol. 174; p. 1116.
Driving mechanism, Friction. A. E. Imler. No. 1,014,152; Jan. 9; Sp. p. 2362; Gaz. vol. 174; p. 394.
Driving mechanism, Reversing frictional. F. W. Daeuble. No. 1,013,980; Jan. 9; Sp. p. 2013; Gaz. vol. 174; p. 340.
Dropper: *See* Pea-dropper.
Drum-rod support. T. Wilson. No. 1,014,109; Jan. 9; Sp. p. 2283; Gaz. vol. 174; p. 380.
Dumping-body, Unit-compartment. W. B. Longest. No. 1,013,789; Jan. 2; Sp. p. 1530; Gaz. vol. 174; p. 243.
Duplicating-machine. C. E. Adamson. No. 1,015,256; Jan. 16; Sp. p. 4763; Gaz. vol. 174; p. 803.
Dust-collectors, Vacuum-creating mechanism for. J. MacLean. No. 1,013,606; Jan. 2; Sp. p. 1110; Gaz. vol. 174; p. 179.
Dye. W. Berchelmann. No. 1,014,204; Jan. 9; Sp. p. 2460; Gaz. vol. 174; p. 414.
Dye, Azo. A. Zart. No. 1,015,375; Jan. 23; Sp. p. 5051; Gaz. vol. 174; p. 871.
Dye, New. W. Bergdolt. No. 1,014,633; Jan. 16; Sp. p. 3445; Gaz. vol. 174; p. 591.
Dyeing-tub. R. B. Mills. No. 1,014,243; Jan. 9; Sp. p. 2574; Gaz. vol. 174; p. 429.
Dyestuffs and making same, Vat. R. Maag. No. 1,015,329; Jan. 23; Sp. p. 4959; Gaz. vol. 174; p. 856.
Dyestuffs, Dark-blue monoazo. M. Böniger. No. 1,014,630; Jan. 9; Sp. p. 2134; Gaz. vol. 174; p. 356.

Dyestuffs, Red monoazo. M. Böniger. No. 1,014,114; Jan. 9; Sp. p. 2293; Gaz. vol. 174; p. 382.
Dynamo, Alternating-current. M. C. A. Latour. No. 1,016,021; Jan. 30; Sp. p. 6436; Gaz. vol. 174; p. 1120.
Dynamos, Driving mechanism for axle-driven. W. L. Bliss. No. 1,013,925; Jan. 9; Sp. p. 1874; Gaz. vol. 174; p. 310.
Dynamometer. H. N. Leask. No. 1,014,494; Jan. 9; Sp. p. 3086; Gaz. vol. 174; p. 513.
Eccentric. W. D. Nash. No. 1,014,896; Jan. 16; Sp. p. 4030; Gaz. vol. 174; p. 682.
Eccentric ring. H. W. and D. R. Blakeslee. No. 1,013,367; Jan. 2; Sp. p. 608; Gaz. vol. 174; p. 97.
Educational appliance. A. W. Arnett. No. 1,013,856; Jan. 9; Sp. p. 1706; Gaz. vol. 174; p. 295.
Egg-case. F. A. Purchas and A. W. Chapin. No. 1,014,414; Jan. 9; Sp. p. 2946; Gaz. vol. 174; p. 489.
Egg-case. L. A. Pichon. No. 1,015,708; Jan. 23; Sp. p. 5776; Gaz. vol. 174; p. 984.
Electric appliance. M. O'Thulin. No. 1,014,537; Jan. 9; Sp. p. 3164; Gaz. vol. 174; p. 527.
Electric battery. H. Halsey. No. 1,014,146; Jan. 9; Sp. p. 2348; Gaz. vol. 174; p. 393.
Electric-circuit interrupter. R. P. Jackson. No. 1,013,167; Jan. 2; Sp. p. 160; Gaz. vol. 174; p. 27.
Electric-conductor distribution. F. W. Erickson. No. 1,015,484; Jan. 23; Sp. p. 5296; Gaz. vol. 174; p. 908.
Electric controller. A. C. Eastwood. No. 1,013,754; Jan. 2; Sp. p. 1466; Gaz. vol. 174; p. 232.
Electric controller. A. C. Eastwood. No. 1,014,625; Jan. 9; Sp. p. 3369; Gaz. vol. 174; p. 557.
Electric coupling. P. C. Wild. No. 1,014,108; Jan. 9; Sp. p. 2282; Gaz. vol. 174; p. 380.
Electric cranes, Current-collector for. F. C. Lemon. No. 1,014,071; Jan. 9; Sp. p. 2197; Gaz. vol. 174; p. 368.
Electric cut-out. H. R. Sargent. No. 1,014,854; Jan. 16; Sp. p. 3945; Gaz. vol. 174; p. 668.
Electric fixture. J. Neuhoefer, A. and W. Polascheck. No. 1,014,897; Jan. 16; Sp. p. 4032; Gaz. vol. 174; p. 682.
Electric furnace. F. Louvrier. No. 1,013,189; Jan. 2; Sp. p. 194; Gaz. vol. 174; p. 35.
Electric furnace. M. Appel. No. 1,013,359; Jan. 2; Sp. p. 597; Gaz. vol. 174; p. 95.
Electric heater. R. Smith. No. 1,013,327; Jan. 2; Sp. p. 530; Gaz. vol. 174; p. 84.
Electric heater. C. O. Bastian. No. 1,014,437; Jan. 9; Sp. p. 2990; Gaz. vol. 174; p. 496.
Electric heater. J. F. Monnot. No. 1,014,662; Jan. 16; Sp. p. 3506; Gaz. vol. 174; p. 601.
Electric indicator system. S. R. Stone. No. 1,013,904; Jan. 9; Sp. p. 1820; Gaz. vol. 174; p. 312.
Electric-lighting system for vehicles. S. W. Rushmore. No. 1,016,037; Jan. 30; Sp. p. 6473; Gaz. vol. 174; p. 1126.
Electric machine, Dynamo-. C. A. Pallander. No. 1,013,216; Jan. 2; Sp. p. 277; Gaz. vol. 174; p. 44.
Electric machine, Dynamo-. E. D. Priest. No. 1,014,904; Jan. 16; Sp. p. 4046; Gaz. vol. 174; p. 684.
Electric machine, Dynamo-. L. J. Hunt. (Reissue.) No. 13,854; Jan. 9; Sp. p. 3414; Gaz. vol. 174; p. 564.
Electric machine, Dynamo-. H. Geisenhöner. No. 1,016,005; Jan. 30; Sp. p. 6404; Gaz. vol. 174; p. 1114.
Electric motor. J. D. Forrer. No. 1,013,149; Jan. 2; Sp. p. 117; Gaz. vol. 174; p. 21.
Electric motor, Alternating-current. W. N. Dickinson, Jr. No. 1,014,210; Jan. 9; Sp. p. 2475; Gaz. vol. 174; p. 415.
Electric motor for drills, Reciprocating. P. J. Lincoln. No. 1,014,495; Jan. 9; Sp. p. 3087; Gaz. vol. 174; p. 518.
Electric power, Transmission of. T. T. Kryshtofovich. No. 1,015,196; Jan. 16; Sp. p. 4639; Gaz. vol. 174; p. 782.
Electric rad-irons, Cut-out for. W. S. Hadaway, Jr. No. 1,015,954; Jan. 30; Sp. p. 6292; Gaz. vol. 174; p. 1095.
Electric switch. P. L. Sibole. No. 1,013,569; Jan. 2; Sp. p. 1054; Gaz. vol. 174; p. 166.
Electric switch. J. E. Du Val. No. 1,013,990; Jan. 9; Sp. p. 2016; Gaz. vol. 174; p. 341.
Electric switch. G. A. Burnham. No. 1,015,613; Jan. 23; Sp. p. 5561; Gaz. vol. 174; p. 953.
Electric switch. W. A. Paris. No. 1,015,972; Jan. 30; Sp. p. 6331; Gaz. vol. 174; p. 1101.
Electric switch. J. T. Janette. No. 1,016,071; Jan. 30; Sp. p. 6559; Gaz. vol. 174; p. 1138.
Electric switch, Pressure-closed. T. P. Bacon and W. A. Gwynn. No. 1,015,225; Jan. 16; Sp. p. 4688; Gaz. vol. 174; p. 791.
Electric time-switch. W. Wood. No. 1,014,277; Jan. 9; Sp. p. 2634; Gaz. vol. 174; p. 440.
Electrical apparatus. J. M. Barr. No. 1,013,108; Jan. 2; Sp. p. 23; Gaz. vol. 174; p. 7.
Electrical conductors, Grounding device for. F. W. Pardee. No. 1,013,305; Jan. 2; Sp. p. 485; Gaz. vol. 174; p. 76.
Electrical coupling. I. H. Parsons. No. 1,014,718; Jan. 16; Sp. p. 3627; Gaz. vol. 174; p. 620.
Electrical distribution. R. D. Cutler and M. F. Owens. No. 1,014,049; Jan. 9; Sp. p. 2154; Gaz. vol. 174; p. 360.
Electrical distribution system. F. Darlington. No. 1,013,133; Jan. 2; Sp. p. 85; Gaz. vol. 174; p. 15.
Electrical distribution system. P. M. Lincoln. No. 1,013,186; Jan. 2; Sp. p. 188; Gaz. vol. 174; p. 33.
Electrical distribution system. R. Braun. No. 1,013,270; Jan. 2; Sp. p. 394; Gaz. vol. 174; p. 63.
Electrical distribution system. J. L. Woodbridge. No. 1,014,354; Jan. 9; Sp. p. 2827; Gaz. vol. 174; p. 467.
Electrical distribution system. J. L. Woodbridge. No. 1,014,355; Jan. 9; Sp. p. 2830; Gaz. vol. 174; p. 468.
Electrical distribution system. R. C. Hull. No. 1,014,395; Jan. 9; Sp. p. 2908; Gaz. vol. 174; p. 482.
Electrical distribution system. J. S. Peck. No. 1,015,974; Jan. 30; Sp. p. 6338; Gaz. vol. 174; p. 1103.
Electrical energy, Apparatus for collecting. W. I. Pennock. No. 1,014,719; Jan. 16; Sp. p. 3629; Gaz. vol. 174; p. 621.
Electrical heater. C. P. Madsen. No. 1,014,161; Jan. 9; Sp. p. 2377; Gaz. vol. 174; p. 397.
Electrical switches, Wall-base for. W. H. Colgan. No. 1,014,692; Jan. 16; Sp. p. 3573; Gaz. vol. 174; p. 611.
Electrical treatment of vapors or gases, Apparatus for the. W. T. Hoofnagle. No. 1,014,151; Jan. 9; Sp. p. 2360; Gaz. vol. 174; p. 394.
Electrodes, Manufacturing. H. Rodman. No. 1,013,445; Jan. 2; Sp. p. 779; Gaz. vol. 174; p. 124.
Electrolytic cell. W. H. Davis. No. 1,015,546; Jan. 23; Sp. p. 5416; Gaz. vol. 174; p. 928.
Electromagnet. C. W. Coleman. No. 1,015,902; Jan. 30; Sp. p. 6374; Gaz. vol. 174; p. 1110.
Electromagnet, Alternating-current. E. Lehr. No. 1,015,968; Jan. 30; Sp. p. 6325; Gaz. vol. 174; p. 1100.
Electromotor. B. F. Hutches, Jr. No. 1,013,494; Jan. 2; Sp. p. 887; Gaz. vol. 174; p. 141.
Electroplating aluminium and its alloys. E. and O. Becker. No. 1,014,560; Jan. 9; Sp. p. 3208; Gaz. vol. 174; p. 534.
Electrotype-plates, Cooling device for. P. J. Cronin and E. Harrington. No. 1,014,641; Jan. 16; Sp. p. 3459; Gaz. vol. 174; p. 594.
Elevator: *See* Portable elevator; Water-elevator.
Elevator. C. D. Seeberger. No. 1,014,856; Jan. 16; Sp. p. 3947; Gaz. vol. 174; p. 668.
Elevator cage and scale. Combined. W. M. Cronk, Jr. No. 1,015,874; Jan. 30; Sp. p. 6120; Gaz. vol. 174; p. 1067.
Elevator circuit-breakers. Cable-clamp for electric-. A. H. Lowe. No. 1,015,809; Jan. 30; Sp. p. 5981; Gaz. vol. 174; p. 1046.
Elevator device, Safety. P. Stine. No. 1,013,232; Jan. 2; Sp. p. 315; Gaz. vol. 174; p. 50.
Elevator device, Safety. R. D. Clark. No. 1,015,137; Jan. 16; Sp. p. 4532; Gaz. vol. 174; p. 764.
Elevator safety attachment. E. Danberry. No. 1,015,726; Jan. 23; Sp. p. 5807; Gaz. vol. 174; p. 990.
Elevator safety device. G. H. Inman. No. 1,016,014; Jan. 30; Sp. p. 6422; Gaz. vol. 174; p. 1118.
Elevator-stop. R. W. Wilson. No. 1,016,054; Jan. 30; Sp. p. 6508; Gaz. vol. 174; p. 1132.
Embroidering - machine, Pantograph. R. Zahn. No. 1,013,467; Jan. 2; Sp. p. 825; Gaz. vol. 174; p. 131.
Embroidering-machines, Jacquard mechanism for. R. Zahn. No. 1,013,261; Jan. 2; Sp. p. 371; Gaz. vol. 174; p. 59.
Embroidery-machine. R. Zahn. No. 1,016,193; Jan. 30; Sp. p. 6776; Gaz. vol. 174; p. 1178.
Embroidery-machine. R. Zahn. No. 1,016,194; Jan. 30; Sp. p. 6778; Gaz. vol. 174; p. 1178.
Emergency-brake for hoist-engines. H. N. Covell. No. 1,013,131; Jan. 2; Sp. p. 82; Gaz. vol. 174; p. 15.
Emulsion, Hydrocarbon. R. Wallbaum. No. 1,014,103; Jan. 9; Sp. p. 2270; Gaz. vol. 174; p. 378.
End-gate. W. A. Rogers. No. 1,015,446; Jan. 2; Sp. p. 780; Gaz. vol. 174; p. 125.
Energy by electromagnetic waves, Means for the transmission of. R. A. Fessenden. No. 1,015,881; Jan. 30; Sp. p. 6133; Gaz. vol. 174; p. 1070.
Engine: *See* Explosion-engine; Explosive-engine; Fire-engine; Gas-engine; Internal-combustion engine; Internal-combustion and compressed-air engine; Rock-drill engine; Rotary engine; Rotary gasolene-engine; Rotary internal-combustion engine; Steam-engine; Two-cycle engine; Vapor-engine.
Engine. E. Taylor. No. 1,013,907; Jan. 9; Sp. p. 1825; Gaz. vol. 174; p. 312.
Engine. W. F. M. Goss. No. 1,015,016; Jan. 16; Sp. p. 4209; Gaz. vol. 174; p. 723.
Engine-controlling device, Explosive-. G. H. Watt. No. 1,013,245; Jan. 2; Sp. p. 341; Gaz. vol. 174; p. 54.
Engine gearing, Traction-. E. M. Wheelock. No. 1,013,977; Jan. 9; Sp. p. 1989; Gaz. vol. 174; p. 336.
Engine-lubricating device. D. Morehouse. No. 1,014,678; Jan. 2; Sp. p. 1303; Gaz. vol. 174; p. 204.
Engine-operating means, Oil-. L. Wygodsky. No. 1,015,115; Jan. 16; Sp. p. 4490; Gaz. vol. 174; p. 756.
Engine priming-cup, Gasolene-. J. C. Beck. No. 1,015,863; Jan. 30; Sp. p. 6106; Gaz. vol. 174; p. 1065.
Engine-reversing mechanism, Internal-combustion-. F. Henninger. No. 1,013,491; Jan. 2; Sp. p. 880; Gaz. vol. 174; p. 141.
Engine silencer, Gas-. H. P. Maxim. No. 1,015,698; Jan. 23; Sp. p. 5758; Gaz. vol. 174; p. 981.
Engine sparking apparatus, Internal-combustion-. H. C. Clay. No. 1,015,005; Jan. 16; Sp. p. 4279; Gaz. vol. 174; p. 719.
Engine-starter. L. L. McLarty. No. 1,015,817; Jan. 30; Sp. p. 5993; Gaz. vol. 174; p. 1048.
Engine-starting device. C. Barbey. No. 1,013,723; Jan. 2; Sp. p. 1304; Gaz. vol. 174; p. 219.
Engine-starting device, Internal-combustion-. A. P. Hinsky. No. 1,013,293; Jan. 2; Sp. p. 462; Gaz. vol. 174; p. 71.

Engine-starting device, Internal-combustion-. G. L. Henry. No. 1,015,272; Jan. 16; Sp. p. 4802; Gaz. vol. 174; p. 806.
Engine-starting mechanism, Explosive-. O. Ducker. No. 1,015,482; Jan. 23; Sp. p. 5293; Gaz. vol. 174; p. 907.
Engine stop mechanism. M. and J. H. Raymaker. No. 1,014,600; Jan. 16; Sp. p. 3521; Gaz. vol. 174; p. 604.
Engines, Automatic reversing and timing switch for gas-. J. M. Rhett. No. 1,014,723; Jan. 16; Sp. p. 3636; Gaz. vol. 174; p. 622.
Engines, Device for producing draft in. J. Trotter. No. 1,015,460; Jan. 23; Sp. p. 5248; Gaz. vol. 174; p. 899.
Engines, Electric ignition system for internal-combustion. G. Honold, M. Rall, and P. Mumprecht. No. 1,014,824; Jan. 16; Sp. p. 3866; Gaz. vol. 174; p. 656.
Engines, Mixture-producing and speed-governing device for gas. H. J. Podlešák. No. 1,014,328; Jan. 9; Sp. p. 2746; Gaz. vol. 174; p. 458.
Engines, Spark-generator for internal-combustion. I. M. Davidson. No. 1,015,788; Jan. 30; Sp. p. 5942; Gaz. vol. 174; p. 1039.
Engraving-machine. W. A. Warman. No. 1,013,843; Jan. 2; Sp. p. 559; Gaz. vol. 174; p. 90.
Envelop. W. F. Stevens. No. 1,013,571; Jan. 2; Sp. p. 1037; Gaz. vol. 174; p. 167.
Envelop. F. Lajos. No. 1,013,785; Jan. 2; Sp. p. 1525; Gaz. vol. 174; p. 242.
Envelop and letter-sheet packet, Combined. D. M. Benton. No. 1,014,441; Jan. 9; Sp. p. 2995; Gaz. vol. 174; p. 497.
Envelop-opening device. L. Sadowski. No. 1,014,415; Jan. 9; Sp. p. 2947; Gaz. vol. 174; p. 489.
Envelop-opening machine. I. Michel. No. 1,013,201; Jan. 2; Sp. p. 228; Gaz. vol. 174; p. 38.
Envelop-opening means. J. W. Vendegriff. No. 1,013,909; Jan. 9; Sp. p. 1830; Gaz. vol. 174; p. 313.
Envelop, Safety-. A. Mieden. No. 1,013,557; Jan. 2; Sp. p. 1014; Gaz. vol. 174; p. 163.
Eraser. J. V. Washburne. No. 1,013,575; Jan. 2; Sp. p. 1046; Gaz. vol. 174; p. 166.
Etching-machine. E. Albert. No. 1,013,717; Jan. 2; Sp. p. 1386; Gaz. vol. 174; p. 217.
Etching-machine. R. R. Page and F. J. Black. No. 1,013,892; Jan. 9; Sp. p. 1791; Gaz. vol. 174; p. 307.
Evaporating apparatus. P. Kestner. No. 1,016,160; Jan. 30; Sp. p. 6716; Gaz. vol. 174; p. 1167.
Evaporating-pan. R. G. Hamilton. No. 1,014,468; Jan. 9; Sp. p. 3046; Gaz. vol. 174; p. 505.
Excavating-machine. C. A. Whipple. No. 1,015,525; Jan. 23; Sp. p. 5370; Gaz. vol. 174; p. 920.
Excavating-machine. F. Somers. No. 1,015,850; Jan. 30; Sp. p. 6076; Gaz. vol. 174; p. 1059.
Excavating-machine. C. S. Brown. No. 1,016,127; Jan. 30; Sp. p. 6659; Gaz. vol. 174; p. 1158.
Excavating-scoop. W. H. Gade. No. 1,014,293; Jan. 9; Sp. p. 2671; Gaz. vol. 174; p. 445.
Excavator. A. D. Hadsel. No. 1,015,486; Jan. 23; Sp. p. 5299; Gaz. vol. 174; p. 908.
Excavator. A. D. Hadsel. No. 1,015,488; Jan. 23; Sp. p. 5303; Gaz. vol. 174; p. 909.
Excavator. A. D. Hadsel. No. 1,015,489; Jan. 23; Sp. p. 5306; Gaz. vol. 174; p. 910.
Exerciser, straightener, and heightener, Physical. T. M. Allan. No. 1,013,097; Jan. 2; Sp. p. 4; Gaz. vol. 174; p. 4.
Exercising apparatus, Vaulting-horse. M. B. Reach. No. 1,013,685; Jan. 2; Sp. p. 1333; Gaz. vol. 174; p. 206.
Exercising device. R. A. Rohrer. No. 1,014,774; Jan. 16; Sp. p. 3753; Gaz. vol. 174; p. 638.
Expansion-bolt. F. H. Ruecking. No. 1,013,222; Jan. 2; Sp. p. 297; Gaz. vol. 174; p. 47.
Expansion-bolt. J. E. Geesey. No. 1,014,144; Jan. 9; Sp. p. 2346; Gaz. vol. 174; p. 392.
Expansion-comb. P. Wilson. No. 1,013,714; Jan. 2; Sp. p. 1370; Gaz. vol. 174; p. 216.
Expansion-joint, Fluid-tight. C. B. Heitman. No. 1,015,180; Jan. 16; Sp. p. 4607; Gaz. vol. 174; p. 777.
Explosion-engine. J. G. Utz. No. 1,014,270; Jan. 9; Sp. p. 2621; Gaz. vol. 174; p. 437.
Explosion-engine. J. G. Utz. No. 1,015,101; Jan. 16; Sp. p. 4463; Gaz. vol. 174; p. 751.
Explosion-motor, Two-cycle. H. Scheit. No. 1,015,909; Jan. 30; Sp. p. 6198; Gaz. vol. 174; p. 1081.
Explosive-engine. W. Rowbotham. No. 1,014,382; Jan. 9; Sp. p. 2762; Gaz. vol. 174; p. 469.
Explosive-engine. S. Ybarra. No. 1,015,116; Jan. 16; Sp. p. 4494; Gaz. vol. 174; p. 757.
Explosive-engine. J. W. Meaker. No. 1,015,502; Jan. 23; Sp. p. 5328; Gaz. vol. 174; p. 913.
Extractor: *See* Stopper-extractor.
Eye-cap. H. Morgan. No. 1,016,083; Jan. 30; Sp. p. 6584; Gaz. vol. 174; p. 1143.
Eye examining and testing machine. G. A. Rogers. No. 1,013,816; Jan. 2; Sp. p. 508; Gaz. vol. 174; p. 80.
Eyeglass-holder. A. J. Smith. No. 1,016,103; Jan. 30; Sp. p. 6619; Gaz. vol. 174; p. 1150.
Eyeglass-mounting. A. V. Brown. No. 1,014,116; Jan. 9; Sp. p. 2297; Gaz. vol. 174; p. 383.
Eyeglass-mounting. D. V. Brown. No. 1,014,205; Jan. 9; Sp. p. 2461; Gaz. vol. 174; p. 414.
Eyeglasses. W. Blume. No. 1,014,938; Jan. 16; Sp. p. 4130; Gaz. vol. 174; p. 696.
Eyeglasses, Folding. R. P. Hutten and J. McDougall. No. 1,016,153; Jan. 30; Sp. p. 6706; Gaz. vol. 174; p. 1165.
Eyeleting-machine. M. H. Pearson. No. 1,013,215; Jan. 2; Sp. p. 266; Gaz. vol. 174; p. 44.
Fabric: *See* Wire fabric.
Fabric, paper, or cardboard having an inclosure of crossing threads, Machine for producing. H. Gueffroy. No. 1,015,174; Jan. 16; Sp. p. 4598; Gaz. vol. 174; p. 775.
Fabric-testing means. J. R. Gill. No. 1,015,730; Jan. 23; Sp. p. 5816; Gaz. vol. 174; p. 992.
Fan. D. B. Minor. No. 1,014,321; Jan. 9; Sp. p. 2733; Gaz. vol. 174; p. 455.
Fan, Centrifugal. J. Keith. No. 1,015,274; Jan. 16; Sp. p. 4806; Gaz. vol. 174; p. 809.
Fare-indicator. A. G. Decker. No. 1,013,279; Jan. 2; Sp. p. 413; Gaz. vol. 174; p. 67.
Fare-receipt form, Cash-. W. L. Seelig. No. 1,014,334; Jan. 9; Sp. p. 2766; Gaz. vol. 174; p. 460.
Farm-gate. H. H. Deutscher. No. 1,013,140; Jan. 2; Sp. p. 99; Gaz. vol. 174; p. 18.
Farm-gate. P. R. Graham. No. 1,015,676; Jan. 23; Sp. p. 5697; Gaz. vol. 174; p. 974.
Fastener. K. Aufinson. No. 1,013,469; Jan. 2; Sp. p. 829; Gaz. vol. 174; p. 133.
Fastening device. A. D. Hyde. No. 1,015,890; Jan. 30; Sp. p. 6160; Gaz. vol. 174; p. 1074.
Fastening-inserting machine. W. A. Bond. No. 1,014,940; Jan. 16; Sp. p. 4132; Gaz. vol. 174; p. 696.
Faucet. O. Engberg. No. 1,013,142; Jan. 2; Sp. p. 102; Gaz. vol. 174; p. 18.
Faucet. A. B. Honey. No. 1,014,179; Jan. 9; Sp. p. 2412; Gaz. vol. 174; p. 404.
Faucet. J. E. L. Chatillon. No. 1,015,297; Jan. 23; Sp. p. 4870; Gaz. vol. 174; p. 843.
Faucet. H. G. Cordley. No. 1,015,614; Jan. 23; Sp. p. 5565; Gaz. vol. 174; p. 953.
Faucet, Self-closing. J. H. Glauber. No. 1,015,310; Jan. 23; Sp. p. 4897; Gaz. vol. 174; p. 848.
Feed-bag. G. Kowalsky. No. 1,016,075; Jan. 30; Sp. p. 6569; Gaz. vol. 174; p. 1140.
Feed-box. A. Tonini. No. 1,015,221; Jan. 16; Sp. p. 4681; Gaz. vol. 174; p. 790.
Feed-regulator for fine material. G. L. Hoyt. No. 1,014,003; Jan. 9; Sp. p. 2046; Gaz. vol. 174; p. 345.
Feed-water heater. J. S. Sweeny and W. W. Grindle. No. 1,014,919; Jan. 16; Sp. p. 4079; Gaz. vol. 174; p. 689.
Feeder, Poultry-. W. H. Watson. No. 1,013,707; Jan. 2; Sp. p. 1365; Gaz. vol. 174; p. 213.
Feeder, Time stock-. G. T. Nelson. No. 1,014,163; Jan. 9; Sp. p. 2383; Gaz. vol. 174; p. 398.
Feeders, Automatic cut-off for boiler-. C. C. Tozier. No. 1,013,463; Jan. 2; Sp. p. 816; Gaz. vol. 174; p. 130.
Fence-post. H. F. Abbott. No. 1,013,578; Jan. 2; Sp. p. 1050; Gaz. vol. 174; p. 169.
Fence-post. W. A. Pepper. No. 1,015,206; Jan. 16; Sp. p. 4660; Gaz. vol. 174; p. 786.
Fence-post. H. E. Stoley. No. 1,015,651; Jan. 23; Sp. p. 5654; Gaz. vol. 174; p. 966.
Fence-post, Cement. J. Huber. No. 1,016,151; Jan. 30; Sp. p. 6703; Gaz. vol. 174; p. 1165.
Fence-post-driving machine. O. Burbop. No. 1,015,421; Jan. 23; Sp. p. 5153; Gaz. vol. 174; p. 885.
Fence-post-driving machine. M. T. Fitzgerald. No. 1,015,947; Jan. 30; Sp. p. 6279; Gaz. vol. 174; p. 1093.
Fence tool, Wire-. P. H. Merrill. No. 1,015,508; Jan. 23; Sp. p. 5330; Gaz. vol. 174; p. 914.
Fence, Woven-wire. A. Schneider. No. 1,014,525; Jan. 9; Sp. p. 3148; Gaz. vol. 174; p. 523.
Fences and other uses, Anchor for wire. D. M. Burns, W. B. and A. W. Shriver. No. 1,014,806; Jan. 16; Sp. p. 3819; Gaz. vol. 174; p. 650.
Fender: *See* Car-fender; Spring-fender; Wheel-fender.
Fertiliser-distributer. J. M. Brasington. No. 1,014,044; Jan. 9; Sp. p. 2143; Gaz. vol. 174; p. 358.
Fertiliser-distributer and pulveriser, Combined. W. H. Kuhns. No. 1,013,298; Jan. 2; Sp. p. 471; Gaz. vol. 174; p. 73.
Fiber-yielding materials, Treating. C. F. Sammet and J. L. Merrill. No. 1,016,178; Jan. 30; Sp. p. 6743; Gaz. vol. 174; p. 1173.
Filament connection. F. Skaupy. No. 1,013,962; Jan. 9; Sp. p. 1958; Gaz. vol. 174; p. 332.
Filament, Incandescent. D. Hand. No. 1,013,599; Jan. 2; Sp. p. 1099; Gaz. vol. 174; p. 177.
Filament, Incandescent-lamp. G. R. Holmes. No. 1,014,878; Jan. 16; Sp. p. 3994; Gaz. vol. 174; p. 675.
Filament-support. W. H. Burrows. No. 1,013,859; Jan. 9; Sp. p. 1714; Gaz. vol. 174; p. 296.
Filaments, Mounting tungsten. C. F. Scott. No. 1,013,227; Jan. 2; Sp. p. 304; Gaz. vol. 174; p. 48.
Filaments, Shaping. R. W. Human. No. 1,013,572; Jan. 2; Sp. p. 1059; Gaz. vol. 174; p. 167.
Filaments, Shaping and mounting. K. Schröter. No. 1,013,958; Jan. 9; Sp. p. 1949; Gaz. vol. 174; p. 330.
File, Account-. J. F. Huber. No. 1,015,444; Jan. 23; Sp. p. 5201; Gaz. vol. 174; p. 894.
Files, Partition or guide for. P. H. Yawman. No. 1,013,533; Jan. 2; Sp. p. 1179; Gaz. vol. 174; p. 183.
Filing-cabinet. A. S. Batrick. No. 1,013,922; Jan. 9; Sp. p. 1858; Gaz. vol. 174; p. 318.
Filing-receptacle. M. Wiesner. No. 1,013,630; Jan. 2; Sp. p. 1172; Gaz. vol. 174; p. 186.
Film-pack. R. Schüttauf. No. 1,015,514; Jan. 23; Sp. p. 5347; Gaz. vol. 174; p. 917.
Filter. K. Kiefer. No. 1,015,326; Jan. 23; Sp. p. 4989; Gaz. vol. 174; p. 854.

Filter, Color-. J. A. H. Hatt. No. 1,013,937; Jan. 9; Sp. p. 1898; Gaz. vol. 174; p. 323.
Filter, Grease-. H. D. Nobles. No. 1,014,843; Jan. 16; Sp. p. 3914; Gaz. vol. 174; p. 663.
Filter-press, Automatic. E. H. Alvord. (Reissue.) No. 13,351; Jan. 9; Sp. p. 3401; Gaz. vol. 174; p. 560.
Filter, Sanitary pressure-. R. W. Martin. No. 1,015,051; Jan. 16; Sp. p. 4373; Gaz. vol. 174; p. 734.
Filter system. H. G. Miller. No. 1,013,419; Jan. 2; Sp. p. 730; Gaz. vol. 174; p. 115.
Filter, Water-. D. M. Pfautz. No. 1,013,435; Jan. 2; Sp. p. 761; Gaz. vol. 174; p. 120.
Filtering apparatus. D. J. Kelly. No. 1,015,961; Jan. 30; Sp. p. 6311; Gaz. vol. 174; p. 1098.
Filtering apparatus, Slimes-. D. J. Kelly. No. 1,015,960; Jan. 30; Sp. p. 6305; Gaz. vol. 174; p. 1097.
Finger-nail cleaner. G. Walther. No. 1,015,860; Jan. 30; Sp. p. 6092; Gaz. vol. 174; p. 1062.
Finish-removing process. C. Ellis. No. 1,014,752; Jan. 16; Sp. p. 3696; Gaz. vol. 174; p. 631.
Finishes, Composition for removing surface-. G. Dosselman and P. Neymann. No. 1,014,211; Jan. 9; Sp. p. 2479; Gaz. vol. 174; p. 417.
Fire-alarm. R. Urchiniak and G. Werhnjak. No. 1,014,022; Jan. 16; Sp. p. 4091; Gaz. vol. 174; p. 690.
Fire-alarm. J. Enright. No. 1,015,878; Jan. 30; Sp. p. 6127; Gaz. vol. 174; p. 1060.
Fire-alarm system. D. G. Dee. No. 1,015,780; Jan. 30; Sp. p. 5044; Gaz. vol. 174; p. 1040.
Fire and water proof articles, Producing. G. S. Donahey. No. 1,013,426; Jan. 23; Sp. p. 5163; Gaz. vol. 174; p. 887.
Fire-bridge. W. E. Curran. No. 1,014,377; Jan. 9; Sp. p. 2874; Gaz. vol. 174; p. 475.
Fire-engine, Motor. J. M. Schoonmaker, Jr. No. 1,013,622; Jan. 2; Sp. p. 1152; Gaz. vol. 174; p. 183.
Fire-escape. A. D. Wilson. No. 1,014,685; Jan. 16; Sp. p. 3564; Gaz. vol. 174; p. 610.
Fire-escape. H. Grünbaum. No. 1,015,173; Jan. 16; Sp. p. 4591; Gaz. vol. 174; p. 774.
Fire-escape. J. L. Gillmore. No. 1,015,485; Jan. 23; Sp. p. 5298; Gaz. vol. 174; p. 908.
Fire-escape. A. Hansel. No. 1,015,560; Jan. 23; Sp. p. 5449; Gaz. vol. 174; p. 933.
Fire-extinguisher. J. Bijur and J. M. Joy. No. 1,015,987; Jan. 30; Sp. p. 6367; Gaz. vol. 174; p. 1108.
Fire-extinguisher, Automatic. W. Esty. (Reissue.) No. 13,347; Jan. 2; Sp. p. 1695; Gaz. vol. 174; p. 269.
Fire-extinguisher holder. W. J. A. Manning. No. 1,015,948; Jan. 16; Sp. p. 4367; Gaz. vol. 174; p. 733.
Fire-extinguishing system, Antomatic. S. Sparling. No. 1,014,185; Jan. 9; Sp. p. 2423; Gaz. vol. 174; p. 407.
Fire-kindler and alarm, Automatic. R. C. Dayton. No. 1,013,980; Jan. 9; Sp. p. 1886; Gaz. vol. 174; p. 321.
Fire-lighting apparatus. V. Neff. No. 1,014,665; Jan. 16; Sp. p. 3513; Gaz. vol. 174; p. 602.
Fire-resisting curtain. E. H. McCloud. No. 1,014,315; Jan. 9; Sp. p. 2720; Gaz. vol. 174; p. 453.
Fire-resisting shutter. A. Rush. No. 1,014,611; Jan. 9; Sp. p. 3330; Gaz. vol. 174; p. 552.
Fire-resisting shutter and slat therefor, Flexible. E. H. McCloud. No. 1,015,332; Jan. 23; Sp. p. 4963; Gaz. vol. 174; p. 856.
Fire-resisting shutter, Flexible. E. H. McCloud. No. 1,013,945; Jan. 9; Sp. p. 1915; Gaz. vol. 174; p. 326.
Fire, smoke, steam, and air shaft. G. Matchell. No. 1,014,969; Jan. 16; Sp. p. 4199; Gaz. vol. 174; p. 707.
Firearm. L. Cudia. No. 1,015,226; Jan. 16; Sp. p. 4689; Gaz. vol. 174; p. 792.
Firearm. J. W. Harrington. No. 1,015,490; Jan. 23; Sp. p. 5309; Gaz. vol. 174; p. 910.
Firearm, Repeating. C. A. Young. No. 1,013,353; Jan. 2; Sp. p. 583; Gaz. vol. 174; p. 93.
Firearms, Breech mechanism of. E. Schneider. No. 1,016,179; Jan. 30; Sp. p. 6749; Gaz. vol. 174; p. 1173.
Fireplace-heater. H. H. Brandes. No. 1,013,372; Jan. 2; Sp. p. 623; Gaz. vol. 174; p. 99.
Fireproof floor and ceiling construction. J. G. Elfer. No. 1,013,537; Jan. 2; Sp. p. 979; Gaz. vol. 174; p. 157.
Fishing-reel. W. Kramer. No. 1,013,942; Jan. 9; Sp. p. 1907; Gaz. vol. 174; p. 325.
Fishing-rod. C. A. Tredwell. No. 1,013,333; Jan. 2; Sp. p. 542; Gaz. vol. 174; p. 86.
Fishing-rod attachment. J. Dineen. No. 1,015,009; Jan. 16; Sp. p. 4287; Gaz. vol. 174; p. 720.
Fishing-rod support. J. W. Boyd. No. 1,013,734; Jan. 2; Sp. p. 1420; Gaz. vol. 174; p. 224.
Fishing-tool. B. J. Long and J. I. Keith. No. 1,015,198; Jan. 16; Sp. p. 4644; Gaz. vol. 174; p. 784.
Flash-light. L. K. Flanagan and C. A. Miller. No. 1,013,287; Jan. 2; Sp. p. 450; Gaz. vol. 174; p. 69.
Flash-light device. M. H. Kennedy. No. 1,013,390; Jan. 2; Sp. p. 664; Gaz. vol. 174; p. 108.
Flask: *See* Molder's flask.
Flat-iron. J. Kriesat. No. 1,013,663; Jan. 2; Sp. p. 1264; Gaz. vol. 174; p. 199.
Flax-pulling machine. C. H. Vessot and A. G. Mather. No. 1,013,975; Jan. 9; Sp. p. 1982; Gaz. vol. 174; p. 336.
Flood-gate. H. D. Merrill. No. 1,013,608; Jan. 2; Sp. p. 1113; Gaz. vol. 174; p. 179.
Floor and ceiling construction. H. L. Lewen. No. 1,014,157; Jan. 9; Sp. p. 2370; Gaz. vol. 174; p. 396.
Floor-jack. W. H. Chamberlain and F. A. Hadley. No. 1,013,927; Jan. 9; Sp. p. 1879; Gaz. vol. 174; p. 320.
Floor-surfacing machine. H. W. Cheney. No. 1,013,584; Jan. 2; Sp. p. 970; Gaz. vol. 174; p. 156.
Flue attachment. G. H. Rupp. No. 1,014,097; Jan. 9; Sp. p. 2250; Gaz. vol. 174; p. 376.
Flue-expander. J. B. and A. Lillibridge. No. 1,015,447; Jan. 23; Sp. p. 5200; Gaz. vol. 174; p. 895.
Flue or draft motor. J. Messina. No. 1,013,798; Jan. 2; Sp. p. 1548; Gaz. vol. 174; p. 246.
Fluid-cooling apparatus. L. Ruthenburg. No. 1,013,449; Jan. 2; Sp. p. 785; Gaz. vol. 174; p. 125.
Fluid-operating mechanism. A. A. Brooks. No. 1,013,121; Jan. 2; Sp. p. 60; Gaz. vol. 174; p. 12.
Fluid-pressure compression or holding device. J. Boyer. No. 1,013,370; Jan. 2; Sp. p. 615; Gaz. vol. 174; p. 98.
Fluid-pressure motor. J. McConnell. No. 1,013,885; Jan. 9; Sp. p. 1776; Gaz. vol. 174; p. 305.
Fluid-regulator. E. P. Noyes. No. 1,013,214; Jan. 2; Sp. p. 203; Gaz. vol. 174; p. 43.
Fluid tank, Priming-. L. A. Sherman. No. 1,013,324; Jan. 2; Sp. p. 527; Gaz. vol. 174; p. 83.
Fluids, Means for feeding and mixing. J. B. Brockhurst. No. 1,014,045; Jan. 16; Sp. p. 4140; Gaz. vol. 174; p. 698.
Flush device for closets. E. Thiry and J. W. Schermerhorn. No. 1,015,719; Jan. 23; Sp. p. 5797; Gaz. vol. 174; p. 968.
Flush-tank valve control. W. H. Schulte. No. 1,013,225; Jan. 2; Sp. p. 302; Gaz. vol. 174; p. 48.
Flushing apparatus, Air-. H. Beddoes. No. 1,014,363; Jan. 9; Sp. p. 2843; Gaz. vol. 174; p. 471.
Flushing device for waste-pipes. L. I. Jones. No. 1,013,175; Jan 2; Sp. p. 172; Gaz. vol. 174; p. 30.
Flushing-machine. F. F. Hawkins. No. 1,014,301; Jan. 9; Sp. p. 2686; Gaz. vol. 174; p. 448.
Flushing system for closets. L. Szczyglinski. No. 1,015,653; Jan. 23; Sp. p. 5656; Gaz. vol. 174; p. 966.
Fly-paper holder. H. C. Swenson. No. 1,015,520; Jan. 23; Sp. p. 5358; Gaz. vol. 174; p. 919.
Fly-trap. D. H. Schmidt. No. 1,013,320; Jan. 2; Sp. p. 516; Gaz. vol. 174; p. 82.
Fly-trap. J. F. Serafinski. No. 1,015,643; Jan. 23; Sp. p. 5631; Gaz. vol. 174; p. 963.
Fly-wheel. W. L. Clouse. No. 1,015,476; Jan. 23; Sp. p. 5282; Gaz. vol. 174; p. 904.
Flying-machine. H. C. Gammeter. No. 1,013,152; Jan. 2; Sp. p. 122; Gaz. vol. 174; p. 22.
Flying-machine. W. H. Beery. No. 1,013,268; Jan. 2; Sp. p. 388; Gaz. vol. 174; p. 62.
Flying-machine. J. E. Gaston. No. 1,013,484; Jan. 2; Sp. p. 858; Gaz. vol. 174; p. 138.
Flying-machine. W. G. Hamilton. No. 1,013,840; Jan. 2; Sp. p. 1635; Gaz. vol. 174; p. 261.
Flying-machine. H. Ludtke. No. 1,014,239; Jan. 9; Sp. p. 2562; Gaz. vol. 174; p. 427.
Flying-machine. O. W. Boche. No. 1,014,802; Jan. 16; Sp. p. 3812; Gaz. vol. 174; p. 648.
Flying-machine. G. Seifert. No. 1,014,857; Jan. 16; Sp. p. 3952; Gaz. vol. 174; p. 668.
Flying-machine. L. Dobbertin. No. 1,015,150; Jan. 16; Sp. p. 4551; Gaz. vol. 174; p. 768.
Flying-machine. A. Valentine. No. 1,015,656; Jan. 23; Sp. p. 5660; Gaz. vol. 174; p. 967.
Flying-machine propeller. W. H. Lawrence. No. 1,015,197; Jan. 16; Sp. p. 4642; Gaz. vol. 174; p. 783.
Flying-machine wing. A. S. Outcalt. No. 1,013,560; Jan. 2; Sp. p. 1021; Gaz. vol. 174; p. 164.
Flying or traveling ring. M. B. Reach. No. 1,013,686; Jan. 2; Sp. p. 1337; Gaz. vol. 174; p. 207.
Fodder binder and truck. W. A. Forbes. No. 1,015,673; Jan. 23; Sp. p. 5693; Gaz. vol. 174; p. 973.
Fodder, Preserving. J. K. Sharpe, Jr. No. 1,013,568; Jan. 2; Sp. p. 1033; Gaz. vol. 174; p. 166.
Folding box. A. W. Beers. No. 1,013,110; Jan. 2; Sp. p. 31; Gaz. vol. 174; p. 8.
Folding box. H. Paul. No. 1,013,561; Jan. 2; Sp. p. 1022; Gaz. vol. 174; p. 164.
Folding box. G. C. Cornell. No. 1,014,951; Jan. 16; Sp. p. 4164; Gaz. vol. 174; p. 700.
Folding carrier. C. H. Cronk. No. 1,013,863; Jan. 9; Sp. p. 1723; Gaz. vol. 174; p. 298.
Folding-machine. C. S. Marshall. No. 1,013,414; Jan. 2; Sp. p. 714; Gaz. vol. 174; p. 113.
Folding rack. F. L. Herbin. No. 1,015,182; Jan. 16; Sp. p. 4610; Gaz. vol. 174; p. 778.
Food and preparing the same, Wheat. W. T. Shepard. No. 1,013,453; Jan. 2; Sp. p. 792; Gaz. vol. 174; p. 127.
Food, Horse and cattle. G. H. Strong. No. 1,013,696; Jan. 2; Sp. p. 1351; Gaz. vol. 174; p. 210.
Food, Manufacture of cattle. A. Robertti. No. 1,015,838; Jan. 30; Sp. p. 6044; Gaz. vol. 174; p. 1055.
Food product. G. Schock. No. 1,014,090; Jan. 9; Sp. p. 2258; Gaz. vol. 174; p. 377.
Food-receptacle. F. G. Renaud. No. 1,015,400; Jan. 23; Sp. p. 5099; Gaz. vol. 174; p. 879.
Foot-cushion. R. W. Foster. No. 1,013,902; Jan. 9; Sp. p. 2020; Gaz. vol. 174; p. 341.
Foot-guard. S. K. Dunkle. No. 1,014,286; Jan. 9; Sp. p. 2655; Gaz. vol. 174; p. 443.
Force-feed lubricator. A. W. Manzel. No. 1,014,403; Jan. 9; Sp. p. 2928; Gaz. vol. 174; p. 485.
Fork: *See* Cycle-fork.
Form, Garment-display. M. J. Forquer. No. 1,013,875; Jan. 9; Sp. p. 1781; Gaz. vol. 174; p. 302.
Fountain: *See* Drinking-fountain.

Frame: *See* Bed-spring frame; Bicycle-frame; Cycle-frame; Door-frame; Grain-drill frame; Honey-frame; Quilting-frame; Razor-frame; Sign-frame; Truck side frame; Velocipede spring-frame.
Framing, Adjustable. J. Staren. No. 1,015,518; Jan. 23; Sp. p. 5354; Gaz. vol. 174; p. 918.
Freezer. J. R. Carroll. No. 1,015,002; Jan. 16; Sp. p. 4275; Gaz. vol. 174; p. 718.
Friction-wheel. J. Born. No. 1,013,117; Jan. 2; Sp. p. 52; Gaz. vol. 174; p. 11.
Fruit-picker. C. F. Fellows. No. 1,013,144; Jan. 2; Sp. p. 105; Gaz. vol. 174; p. 19.
Fuel-consumer, heat-generator, and heater. A. W. Brand. No. 1,015,665; Jan. 23; Sp. p. 5678; Gaz. vol. 174; p. 970.
Fuel, Utilizing spent bark or analogous material as a. G. M. Conway. No. 1,013,988; Jan. 9; Sp. p. 2010; Gaz. vol. 174; p. 340.
Furnace: *See* Crucible-furnace; Electric furnace; Glass-furnace; Glass-pot furnace; Hot-air furnace; Melting-furnace; Metallurgical furnace; Pot-furnace; Smelting-furnace; Smoke-consuming furnace.
Furnace, M. E. Machol. No. 1,013,798; Jan. 2; Sp. p. 1537; Gaz. vol. 174; p. 244.
Furnace, A. Robertson. No. 1,014,724; Jan. 16; Sp. p. 3640; Gaz. vol. 174; p. 622.
Furnace, S. B. Goff. No. 1,015,014; Jan. 16; Sp. p. 4296; Gaz. vol. 174; p. 722.
Furnace, E. Curran. No. 1,015,616; Jan. 23; Sp. p. 5568; Gaz. vol. 174; p. 954.
Furnace feeding apparatus. F. H. Treat. No. 1,014,789; Jan. 16; Sp. p. 3786; Gaz. vol. 174; p. 643.
Furnace for making ultramarine blues. F. Bellet. No. 1,014,689; Jan. 16; Sp. p. 3569; Gaz. vol. 174; p. 610.
Furnace hoist, Crucible-. L. H. J. De Bats. No. 1,013,377; Jan. 2; Sp. p. 636; Gaz. vol. 174; p. 101.
Furnace safety device, Blast-. S. B. Shutts and W. McHugh. No. 1,013,961; Jan. 9; Sp. p. 1956; Gaz. vol. 174; p. 331.
Furnaces, Duplex spout for. G. K. Hooper. No. 1,016,013; Jan. 30; Sp. p. 6420; Gaz. vol. 174; p. 1117.
Furnaces, Machine for cleaning muffles of zinc-. O. Saeger. No. 1,014,333; Jan. 9; Sp. p. 2765; Gaz. vol. 174; p. 460.
Furnaces or kilns, Apparatus for heating. W. R. Dunn. No. 1,013,379; Jan. 2; Sp. p. 643; Gaz. vol. 174; p. 102.
Furnaces, Reflecting-partition for. H. A. Poppenhusen and J. Harrington. No. 1,014,903; Jan. 16; Sp. p. 4044; Gaz. vol. 174; p. 684.
Fuse-block contact-post. R. C. Cole. No. 1,014,950; Jan. 16; Sp. p. 4163; Gaz. vol. 174; p. 700.
Fuse-cutting machine. A. H. Boyd. No. 1,014,862; Jan. 16; Sp. p. 3961; Gaz. vol. 174; p. 670.
Fuse indicator, Inclosed-. L. E. Barringer and G. Wright. No. 1,014,741; Jan. 16; Sp. p. 3679; Gaz. vol. 174; p. 628.
Fuse, Percussion-. E. Schneider. No. 1,014,183; Jan. 9; Sp. p. 2419; Gaz. vol. 174; p. 406.
Gage: *See* Liquid-gage; Lock and mortise gage; Printing-plate-mining gage.
Gage-inspecting device. W. F. Warden. No. 1,015,223; Jan. 16; Sp. p. 4684; Gaz. vol. 174; p. 791.
Game. G. H. Hewitt, Jr. No. 1,013,161; Jan. 2; Sp. p. 146; Gaz. vol. 174; p. 25.
Game. J. W. Hanley. No. 1,016,142; Jan. 30; Sp. p. 6688; Gaz. vol. 174; p. 1162.
Game apparatus. L. M. White and R. J. Sackett. No. 1,013,709; Jan. 2; Sp. p. 1369; Gaz. vol. 174; p. 214.
Game apparatus. A. Zimdars. No. 1,014,555; Jan. 9; Sp. p. 3196; Gaz. vol. 174; p. 532.
Game apparatus. P. L. Munker. No. 1,016,084; Jan. 30; Sp. p. 6585; Gaz. vol. 174; p. 1143.
Game apparatus. V. M. Vacek. No. 1,016,187; Jan. 30; Sp. p. 6763; Gaz. vol. 174; p. 1176.
Game, Jumping-ring. J. Stranders. No. 1,013,827; Jan. 2; Sp. p. 1606; Gaz. vol. 174; p. 256.
Garbage and waste-paper receptacle. I. Hoffman. No. 1,013,775; Jan. 2; Sp. p. 1512; Gaz. vol. 174; p. 240.
Garbage-can. J. J. McNamara. No. 1,013,504; Jan. 2; Sp. p. 904; Gaz. vol. 174; p. 144.
Garment. A. Goldberg. No. 1,013,764; Jan. 2; Sp. p. 1490; Gaz. vol. 174; p. 236.
Garment, Adjustable. A. E. Merkel. No. 1,014,817; Jan. 9; Sp. p. 2726; Gaz. vol. 174; p. 454.
Garment-carrying device. O. Rangnow. No. 1,014,905; Jan. 16; Sp. p. 4047; Gaz. vol. 174; p. 684.
Garment, Combination-. A. K. Kronenberger. No. 1,014,653; Jan. 16; Sp. p. 3485; Gaz. vol. 174; p. 598.
Garment-fastener. H. S. Heller. No. 1,014,148; Jan. 9; Sp. p. 2350; Gaz. vol. 174; p. 393.
Garment-fastener. M. C. Dallas. No. 1,015,143; Jan. 16; Sp. p. 4541; Gaz. vol. 174; p. 766.
Garment-fitter for waists. H. Lee. No. 1,014,885; Jan. 16; Sp. p. 4008; Gaz. vol. 174; p. 677.
Garment-hanger. C. W. Brown and O. W. Breniser. No. 1,013,583; Jan. 2; Sp. p. 1060; Gaz. vol. 174; p. 171.
Garment-hanger. C. W. Hewlett. No. 1,014,507; Jan. 9; Sp. p. 3281; Gaz. vol. 174; p. 547.
Garment-hanger. C. Robert. No. 1,015,076; Jan. 16; Sp. p. 4416; Gaz. vol. 174; p. 742.
Garment-hanger. C. T. and E. E. Wilt. No. 1,015,605; Jan. 23; Sp. p. 5549; Gaz. vol. 174; p. 950.
Garment-hanger. C. T. and E. E. Wilt. No. 1,015,606; Jan. 23; Sp. p. 5551; Gaz. vol. 174; p. 950.
Garment-hanger. J. Walters. No. 1,015,918; Jan. 30; Sp. p. 6217; Gaz. vol. 174; p. 1084.
Garment support or holder. B. H. Boyd. No. 1,013,474; Jan. 2; Sp. p. 840; Gaz. vol. 174; p. 134.
Garment, Weatherproof outing-. A. R. Jacobs. No. 1,015,221; Jan. 16; Sp. p. 4713; Gaz. vol. 174; p. 794.
Gas-analyzer, Indicating. C. O. Mailloux and H. J. Westover. No. 1,014,241; Jan. 9; Sp. p. 2506; Gaz. vol. 174; p. 428.
Gas, Apparatus for the manufacture of. W. G. Laird. No. 1,014,654; Jan. 16; Sp. p. 3486; Gaz. vol. 174; p. 598.
Gas-burner. J. B. Anderson. No. 1,014,111; Jan. 9; Sp. p. 2286; Gaz. vol. 174; p. 381.
Gas-burner. E. S. Sanderson. No. 1,014,777; Jan. 16; Sp. p. 3758; Gaz. vol. 174; p. 639.
Gas-burner tip. P. Keller and P. Seiler. No. 1,015,282; Jan. 16; Sp. p. 4714; Gaz. vol. 174; p. 794.
Gas-engine. C. H. Sauvan. No. 1,013,019; Jan. 2; Sp. p. 1147; Gaz. vol. 174; p. 183.
Gas-engine. G. F. Murphy. No. 1,013,888; Jan. 9; Sp. p. 1782; Gaz. vol. 174; p. 306.
Gas explosions, Method of and apparatus for preventing. G. Baehr. No. 1,015,920; Jan. 30; Sp. p. 6236; Gaz. vol. 174; p. 1087.
Gas from oil or other liquids, Separator for removing. E. V. Bray. No. 1,014,943; Jan. 16; Sp. p. 4146; Gaz. vol. 174; p. 697.
Gas-generating plant. H. Foersterling. No. 1,015,549; Jan. 23; Sp. p. 5422; Gaz. vol. 174; p. 929.
Gas-generator. S. N. North. No. 1,015,632; Jan. 23; Sp. p. 5612; Gaz. vol. 174; p. 960.
Gas generator, Acetylene-. P. F. Willis. No. 1,013,249; Jan. 2; Sp. p. 350; Gaz. vol. 174; p. 56.
Gas generator, Acetylene-. J. W. Silver. No. 1,013,520; Jan. 2; Sp. p. 938; Gaz. vol. 174; p. 150.
Gas generator, Acetylene-. E. W. Dunham. No. 1,013,752; Jan. 2; Sp. p. 1462; Gaz. vol. 174; p. 231.
Gas generator, Acetylene-. T. W. Lacy. No. 1,014,010; Jan. 9; Sp. p. 2055; Gaz. vol. 174; p. 347.
Gas generator, Acetylene-. H. A. Byers. No. 1,014,046; Jan. 9; Sp. p. 2152; Gaz. vol. 174; p. 359.
Gas generator, Acetylene-. G. H. Cook. No. 1,015,378; Jan. 23; Sp. p. 5056; Gaz. vol. 174; p. 872.
Gas generator, Acetylene-. L. Bader. No. 1,015,867; Jan. 30; Sp. p. 6103; Gaz. vol. 174; p. 1064.
Gas generator, Hydrogen-. W. L. Dolben. No. 1,015,875; Jan. 30; Sp. p. 6121; Gaz. vol. 174; p. 1067.
Gas-holder safety device. A. R. Cruse. No. 1,013,643; Jan. 2; Sp. p. 1199; Gaz. vol. 174; p. 191.
Gas lighter and extinguisher, Automatic valve-controlled. H. Sussmann. No. 1,014,267; Jan. 9; Sp. p. 2615; Gaz. vol. 174; p. 436.
Gas-lighter, Electric. H. D. Grinnell. No. 1,014,461; Jan. 9; Sp. p. 3034; Gaz. vol. 174; p. 503.
Gas-lighting burner. E. N. and E. A. Frary. No. 1,015,306; Jan. 23; Sp. p. 4889; Gaz. vol. 174; p. 847.
Gas mains and holders, Safety device for. G. Baehr. No. 1,015,930; Jan. 30; Sp. p. 6240; Gaz. vol. 174; p. 1087.
Gas-pipe, Extensible. G. W. Thorn. No. 1,015,853; Jan. 30; Sp. p. 6081; Gaz. vol. 174; p. 1060.
Gas-producer. C. M. Garland. No. 1,014,385; Jan. 9; Sp. p. 2892; Gaz. vol. 174; p. 478.
Gas-producer. C. Rorabeck. No. 1,014,522; Jan. 9; Sp. p. 3143; Gaz. vol. 174; p. 523.
Gas-producer. W. B. Chapman. No. 1,015,296; Jan. 23; Sp. p. 4862; Gaz. vol. 174; p. 843.
Gas-producer. T. F. Fitzsimmons. No. 1,016,138; Jan. 30; Sp. p. 6673; Gaz. vol. 174; p. 1160.
Gas-purifier. H. A. Smith. No. 1,015,353; Jan. 23; Sp. p. 5002; Gaz. vol. 174; p. 863.
Gas-regulator. A. L. Pickering. No. 1,015,975; Jan. 30; Sp. p. 6339; Gaz. vol. 174; p. 1103.
Gas, steam, and power, Method of and apparatus for generating. H. Foersterling. No. 1,015,550; Jan. 23; Sp. p. 5423; Gaz. vol. 174; p. 929.
Gaseous-fuel mixer. A. G. Hathcock. No. 1,014,391; Jan. 9; Sp. p. 2902; Gaz. vol. 174; p. 480.
Gaskets within metallic caps, Machine for positioning and securing. C. D. McDonald. No. 1,013,842; Jan. 2; Sp. p. 1643; Gaz. vol. 174; p. 262.
Gasolene feed-chamber. G. J. Mayer. No. 1,015,053; Jan. 16; Sp. p. 4379; Gaz. vol. 174; p. 735.
Gasolene-heated appliance. F. C. Binkley. No. 1,014,112; Jan. 9; Sp. p. 2291; Gaz. vol. 174; p. 382.
Gasolene, Purifying device for hydrocarbon-fuel. O. A. Beukendorf. No. 1,015,662; Jan. 23; Sp. p. 5673; Gaz. vol. 174; p. 969.
Gasometer. L. Bader. No. 1,016,058; Jan. 30; Sp. p. 6520; Gaz. vol. 174; p. 1134.
Gate: *See* Automatic gate; Bridge-gate; End-gate; Farm-gate; Flood-gate.
Gate. B. J. Esser. No. 1,014,585; Jan. 9; Sp. p. 3252; Gaz. vol. 174; p. 543.
Gate-closer. A. Gudmundsen. No. 1,015,486; Jan. 23; Sp. p. 5185; Gaz. vol. 174; p. 901.
Gate mechanism, Tilting-. L. Z. Preston. No. 1,014,174; Jan. 9; Sp. p. 2403; Gaz. vol. 174; p. 403.
Gate-opening device. J. Kramer. No. 1,013,185; Jan. 2; Sp. p. 187; Gaz. vol. 174; p. 33.
Gear. A. B. Cadman. No. 1,015,870; Jan. 30; Sp. p. 6111; Gaz. vol. 174; p. 1065.
Gear, Automatic reversing-. D. D. O'Connell. No. 1,013,510; Jan. 2; Sp. p. 915; Gaz. vol. 174; p. 146.

Gear, Free-wheeling back-pedaling. E. Sachs. No. 1,014,181; Jan. 9; Sp. p. 2415; Gaz. vol. 174; p. 405.
Gear, Transmission-. L. W. Brown. No. 1,013,737; Jan. 2; Sp. p. 1435; Gaz. vol. 174; p. 225.
Gear, Variable differential speed-. E. Draullette. No. 1,015,481; Jan. 23; Sp. p. 5291; Gaz. vol. 174; p. 907.
Gear with back-pedaling brake, Free-wheel. E. Sachs. No. 1,014,180; Jan. 9; Sp. p. 2412; Gaz. vol. 174; p. 405.
Gearing. J. C. Binge. No. 1,014,772; Jan. 16; Sp. p. 3749; Gaz. vol. 174; p. 638.
Gearing. J. Eastwood. No. 1,014,957; Jan. 16; Sp. p. 4175; Gaz. vol. 174; p. 702.
Gearing. J. McDonald. No. 1,015,055; Jan. 16; Sp. p. 4382; Gaz. vol. 174; p. 735.
Gearing. G. O. Leopold. No. 1,015,235; Jan. 16; Sp. p. 4719; Gaz. vol. 174; p. 795.
Gearing. J. W. Pedle. No. 1,015,507; Jan. 23; Sp. p. 5334; Gaz. vol. 174; p. 915.
Gearing, Change-speed. A. B. Landis. No. 1,015,031; Jan. 16; Sp. p. 4326; Gaz. vol. 174; p. 727.
Gearing, Change-speed. C. Cotta. (Reissue.) No. 13,363; Jan. 16; Sp. p. 4821; Gaz. vol. 174; p. 812.
Gearing, Hoisting-. H. W. Fellows. No. 1,015,618; Jan. 23; Sp. p. 5573; Gaz. vol. 174; p. 955.
Gearing, Transmission-. E. F. Price. No. 1,013,565; Jan. 2; Sp. p. 1028; Gaz. vol. 174; p. 165.
Gearing, Variable-speed. H. W. Fellows. No. 1,015,617; Jan. 23; Sp. p. 5569; Gaz. vol. 174; p. 954.
Gearing, Variable-speed. A. B. Landis. No. 1,015,808; Jan. 30; Sp. p. 5978; Gaz. vol. 174; p. 1046.
Generator: *See* Acetylene-generator; Ammonia-generator; Gas-generator.
Glass articles, Apparatus for forming hollow. A. L. Schram. No. 1,013,452; Jan. 2; Sp. p. 790; Gaz. vol. 174; p. 126.
Glass articles, Forming hollow. A. L. Schram. No. 1,013,451; Jan. 2; Sp. p. 788; Gaz. vol. 174; p. 126.
Glass-furnace. S. B. Ioff. No. 1,013,486; Jan. 2; Sp. p. 869; Gaz. vol. 174; p. 139.
Glass-lined can. L. R. Steel. No. 1,013,694; Jan. 2; Sp. p. 1348; Gaz. vol. 174; p. 209.
Glass, Manufacture of. C. E. Blue. No. 1,015,538; Jan. 23; Sp. p. 5396; Gaz. vol. 174; p. 925.
Glass-mold-charging apparatus. C. E. Blue. No. 1,015,537; Jan. 23; Sp. p. 5395; Gaz. vol. 174; p. 924.
Glass pane with fly-escapes, Ventilating. A. S. Grant. No. 1,014,701; Jan. 16; Sp. p. 3587; Gaz. vol. 174; p. 614.
Glass-pot. W. K. Brownlee. No. 1,016,065; Jan. 30; Sp. p. 6539; Gaz. vol. 174; p. 1136.
Glass-pot furnace. H. E. Smythe. No. 1,016,105; Jan. 30; Sp. p. 6621; Gaz. vol. 174; p. 1151.
Glass roof. A. Wendler. No. 1,016,118; Jan. 30; Sp. p. 6643; Gaz. vol. 174; p. 1155.
Globe-holder. C. C. Armstrong. No. 1,014,433; Jan. 9; Sp. p. 2984; Gaz. vol. 174; p. 494.
Glue-heater. E. Tyden. No. 1,013,336; Jan. 2; Sp. p. 548; Gaz. vol. 174; p. 87.
Goblet, Machine to open the foot of a. J. R. Myers. No. 1,013,427; Jan. 2; Sp. p. 746; Gaz. vol. 174; p. 118.
Gold and silver by use of cyanid solutions, Apparatus for recovering. W. L. Imlay. No. 1,014,224; Jan. 9; Sp. p. 2500; Gaz. vol. 174; p. 421.
Governor. H. V. Hunt. No. 1,014,754; Jan. 16; Sp. p. 3690; Gaz. vol. 174; p. 631.
Governor, Internal-combustion-engine. P. J. Holm. No. 1,015,889; Jan. 30; Sp. p. 6158; Gaz. vol. 174; p. 1073.
Grader and ditcher. L. M. Williams. No. 1,015,465; Jan. 23; Sp. p. 5260; Gaz. vol. 174; p. 901.
Grader attachment, Road-. P. Chounard. No. 1,015,004; Jan. 16; Sp. p. 4278; Gaz. vol. 174; p. 718.
Grader, Land-. A. P. D'Artenay. No. 1,013,354; Jan. 2; Sp. p. 589; Gaz. vol. 174; p. 93.
Grader, Road-. J. D. and R. E. Adams. No. 1,014,989; Jan. 16; Sp. p. 4239; Gaz. vol. 174; p. 713.
Grain-drier. J. B. Cornwall. No. 1,014,122; Jan. 9; Sp. p. 2311; Gaz. vol. 174; p. 385.
Grain-drill frame and steering mechanism. H. L. Kern. No. 1,016,225; Jan. 30; Sp. p. 6835; Gaz. vol. 174; p. 1188.
Grain-separator. C. L. Wylie. No. 1,013,257; Jan. 2; Sp. p. 365; Gaz. vol. 174; p. 58.
Grain-separator. C. F. Asplund. No. 1,013,266; Jan. 2; Sp. p. 383; Gaz. vol. 174; p. 61.
Grain-separator. F. Paukert. No. 1,013,433; Jan. 2; Sp. p. 758; Gaz. vol. 174; p. 120.
Grain-sprouter. A. H. Wheat. No. 1,013,831; Jan. 2; Sp. p. 1612; Gaz. vol. 174; p. 258.
Grapple. E. Mitchell. No. 1,015,057; Jan. 16; Sp. p. 4386; Gaz. vol. 174; p. 736.
Grass-cutting machine. H. S. Mustin. No. 1,013,209; Jan. 2; Sp. p. 243; Gaz. vol. 174; p. 41.
Grasshopper-destroyer. C. F. McMullen. No. 1,014,890; Jan. 16; Sp. p. 4020; Gaz. vol. 174; p. 679.
Grate. E. C. Wiley. No. 1,015,527; Jan. 23; Sp. p. 5377; Gaz. vol. 174; p. 921.
Grate and burner, Combination. J. A. Stephens and W. J. Shenk. No. 1,016,236; Jan. 30; Sp. p. 6860; Gaz. vol. 174; p. 1192.
Grate, Fire-box. F. B. Bigelow. No. 1,013,114; Jan. 2; Sp. p. 42; Gaz. vol. 174; p. 9.
Grate, Open. W. Thomas. No. 1,013,330; Jan. 2; Sp. p. 537; Gaz. vol. 174; p. 85.
Grease-cup, Automatic. J. F. Lewis. No. 1,015,626; Jan. 23; Sp. p. 5589; Gaz. vol. 174; p. 958.
Grease-dispensing apparatus. T. L. Newton. No. 1,015,395; Jan. 23; Sp. p. 5094; Gaz. vol. 174; p. 878.
Grinder, Disk. F. N. and F. E. Gardner. No. 1,013,760; Jan. 2; Sp. p. 1480; Gaz. vol. 174; p. 234.
Grinding-machine. O. J. Johnson. No. 1,014,306; Jan. 9; Sp. p. 2694; Gaz. vol. 174; p. 450.
Grinding-machine. A. B. Landis. No. 1,015,567; Jan. 23; Sp. p. 5463; Gaz. vol. 174; p. 936.
Grinding machine, Ball-. F. Beemer. No. 1,014,747; Jan. 16; Sp. p. 3686; Gaz. vol. 174; p. 629.
Grinding-machine runner. J. G. Jackson. No. 1,013,777; Jan. 2; Sp. p. 1515; Gaz. vol. 174; p. 240.
Grinding-mill. R. A. Reynolds. No. 1,015,586; Jan. 23; Sp. p. 5513; Gaz. vol. 174; p. 943.
Gripper. E. I. La Chapelle. No. 1,014,710; Jan. 16; Sp. p. 3602; Gaz. vol. 174; p. 617.
Gripper. R. F. McFeely. No. 1,014,835; Jan. 16; Sp. p. 3895; Gaz. vol. 174; p. 661.
Gripper. B. F. Mayo. No. 1,015,388; Jan. 23; Sp. p. 5075; Gaz. vol. 174; p. 875.
Gripping or clamping device. H. J. Smith. No. 1,014,781; Jan. 16; Sp. p. 3766; Gaz. vol. 174; p. 641.
Grubber, Brush-. W. R. Horne. No. 1,013,930; Jan 9; Sp. p. 1902; Gaz. vol. 174; p. 324.
Gun, Automatic. P. Mauser. No. 1,014,660; Jan. 16; Sp. p. 3502; Gaz. vol. 174; p. 600.
Gun-carriage. K. Völler. No. 1,013,704; Jan. 2; Sp. p. 1361; Gaz. vol. 174; p. 212.
Gun, Clay-. F. H. N. Gerwig. No. 1,013,153; Jan. 2; Sp. p. 126; Gaz. vol. 174; p. 22.
Gun elevating and sighting apparatus, Field-. G. T. Buckham. No. 1,013,585; Jan. 2; Sp. p. 1063; Gaz. vol. 174; p. 172.
Gun elevating and sighting apparatus, Field-. G. T. Buckham. No. 1,013,837; Jan. 2; Sp. p. 1626; Gaz. vol. 174; p. 260.
Gun, Grease-. W. E. Sherbondy. No. 1,013,454; Jan. 2; Sp. p. 794; Gaz. vol. 174; p. 127.
Gun, Heavy. A. T. Dawson and J. Horne. No. 1,016,216; Jan. 30; Sp. p. 6820; Gaz. vol. 174; p. 1185.
Gun, Semi-automatic and other quick-firing. A. T. Dawson and G. T. Buckham. No. 1,015,147; Jan. 16; Sp. p. 4546; Gaz. vol. 174; p. 767.
Guns, Counterweighted single trigger for double-barrel. A. H. Worrest. No. 1,013,255; Jan. 2; Sp. p. 362; Gaz. vol. 174; p. 58.
Guns, Single-trigger mechanism for double-barrel. A. H. Worrest. No. 1,013,254; Jan. 2; Sp. p. 359; Gaz. vol. 174; p. 57.
Gutter. G. Mathes. No. 1,013,194; Jan. 2; Sp. p. 218; Gaz. vol. 174; p. 37.
Gymnasium apparatus. M. B. Reach. No. 1,015,208; Jan. 16; Sp. p. 4663; Gaz. vol. 174; p. 787.
Gymnasium apparatus with clamping device. M. B. and W. F. Reach. No. 1,013,687; Jan. 2; Sp. p. 1338; Gaz. vol. 174; p. 207.
Gyratory machine. W. D. Gray. No. 1,015,434; Jan. 23; Sp. p. 5182; Gaz. vol. 174; p. 890.
Hair-comb. F. Glowacki and S. Kryzyak. No. 1,016,007; Jan. 30; Sp. p. 6410; Gaz. vol. 174; p. 1115.
Hair-cutting device. F. E. Fooks. No. 1,013,874; Jan. 9; Sp. p. 1760; Gaz. vol. 174; p. 301.
Hair-drier. A. Barker. No. 1,015,121; Jan. 16; Sp. p. 4505; Gaz. vol. 174; p. 758.
Hair ornament. C. Judis. No. 1,015,802; Jan. 30; Sp. p. 5967; Gaz. vol. 174; p. 1044.
Hair-pin. C. R. Bendig. No. 1,015,284; Jan. 23; Sp. p. 4839; Gaz. vol. 174; p. 839.
Hair-puffer. A. A. West and W. H. Benjamin. No. 1,013,346; Jan. 2; Sp. p. 574; Gaz. vol. 174; p. 91.
Hair-straightening device. A. F. Cox. No. 1,014,952; Jan. 16; Sp. p. 4165; Gaz. vol. 174; p. 700.
Hair-tonics, Device for applying. I. O. Hall. No. 1,014,465; Jan. 9; Sp. p. 3040; Gaz. vol. 174; p. 504.
Halter. A. Fraizer. No. 1,015,186; Jan. 16; Sp. p. 4580; Gaz. vol. 174; p. 772.
Hammer-drill. W. Prellwitz. No. 1,015,509; Jan. 23; Sp. p. 5338; Gaz. vol. 174; p. 916.
Hammer for driving nails, Pneumatic. W. E. Colwell. No. 1,014,630; Jan. 16; Sp. p. 3453; Gaz. vol. 174; p. 593.
Hammock, Couch-. G. F. Sisbower. No. 1,016,102; Jan. 30; Sp. p. 6618; Gaz. vol. 174; p. 1150.
Handcuff. J. F. Carberry. No. 1,014,118; Jan. 9; Sp. p. 2301; Gaz. vol. 174; p. 384.
Hand-warmer. M. B. Akahori and M. Mochizuki. No. 1,015,661; Jan. 23; Sp. p. 5672; Gaz. vol. 174; p. 969.
Handle: *See* Bottle-carrying handle; Pot-handle.
Handle-attaching device. H. S. Post. No. 1,013,438; Jan. 2; Sp. p. 765; Gaz. vol. 174; p. 122.
Handle for articles of hardware. O. L. Harrison. No. 1,015,022; Jan. 16; Sp. p. 4307; Gaz. vol. 174; p. 725.
Handling, unloading, storing, and reloading plant. H. P. Andresen. No. 1,014,994; Jan. 16; Sp. p. 4250; Gaz. vol. 174; p. 715.
Hanger: *See* Coat-hanger; Door-hanger; Garment-hanger; Pipe-hanger; Trolley-hanger.
Hanger-rack. I. W. Miller. No. 1,014,020; Jan. 9; Sp. p. 2086; Gaz. vol. 174; p. 350.
Harmonic ringer. E. B. Craft. No. 1,014,125; Jan. 9; Sp. p. 2316; Gaz. vol. 174; p. 386.
Harness. E. Tiffany. No. 1,016,048; Jan. 30; Sp. p. 6499; Gaz. vol. 174; p. 1130.

Harness-pad. D. H. Carrigan. No. 1,013,586; Jan. 2; Sp. p. 1065; Gaz. vol. 174; p. 172.
Harrow. W. Thorn. No. 1,013,462; Jan. 2; Sp. p. 815; Gaz. vol. 174; p. 130.
Harrow. A. L. Flattum. No. 1,015,548; Jan. 23; Sp. p. 5420; Gaz. vol. 174; p. 929.
Harrow, Adjustable foldable. D. K. Wilson. No. 1,015,865; Jan. 30; Sp. p. 6099; Gaz. vol. 174; p. 1063.
Harrow, Disk. J. East. No. 1,013,382; Jan. 2; Sp. p. 649; Gaz. vol. 174; p. 103.
Harrow-draft-bar attachment. H. Waldschmidt. No. 1,013,573; Jan. 2; Sp. p. 1041; Gaz. vol. 174; p. 166.
Harrow, Riding-. J. W. Harmon. No. 1,015,887; Jan. 30; Sp. p. 6154; Gaz. vol. 174; p. 1072.
Harrow, Wheeled. S. Hickman. No. 1,015,956; Jan. 30; Sp. p. 6295; Gaz. vol. 174; p. 1096.
Harrows and the like, Antitwisting draft means for. J. W. Rice and J. Fulton. (Reissue.) No. 13,357; Jan. 9; Sp. p. 3427; Gaz. vol. 174; p. 567.
Harvester and husker, Corn. W. Clouser. No. 1,014,812; Jan. 16; Sp. p. 3831; Gaz. vol. 174; p. 652.
Harvester and shocker, Corn. J. J. Lonsway. No. 1,014,497; Jan. 9; Sp. p. 3091; Gaz. vol. 174; p. 514.
Harvester, Beet-. W. Bates. No. 1,013,363; Jan. 2; Sp. p. 603; Gaz. vol. 174; p. 96.
Harvester, Corn-. J. Hettrich. No. 1,014,473; Jan. 9; Sp. p. 3051; Gaz. vol. 174; p. 506.
Harvester, Corn-. A. A. Dorsey. No. 1,015,942; Jan. 30; Sp. p. 6268; Gaz. vol. 174; p. 1091.
Harvester motor attachment. L. Holland-Letz. No. 1,014,823; Jan. 16; Sp. p. 3864; Gaz. vol. 174; p. 656.
Harvester-reel and support therefor. W. E. Bennett. No. 1,013,636; Jan. 2; Sp. p. 1185; Gaz. vol. 174; p. 180.
Harvesters, Tandem draft connection for. C. Pearson. No. 1,013,804; Jan. 9; Sp. p. 1795; Gaz. vol. 174; p. 308.
Harvesting machine, Corn-. C. E. Balkema. No. 1,015,281; Jan. 23; Sp. p. 4831; Gaz. vol. 174; p. 837.
Harvesting machine, Cotton-. A. L. Jackson. No. 1,014,880; Jan. 16; Sp. p. 3908; Gaz. vol. 174; p. 676.
Hat block, telescoper, and presser. J. H. Conn. No. 1,014,813; Jan. 16; Sp. p. 3834; Gaz. vol. 174; p. 652.
Hat-body-clearing machine. A. Roelofs. No. 1,013,315; Jan. 2; Sp. p. 507; Gaz. vol. 174; p. 80.
Hat-brim-stretching machine. G. Schofield. No. 1,013,321; Jan. 2; Sp. p. 518; Gaz. vol. 174; p. 82.
Hat-holder. J. Kwarnstrom. No. 1,014,156; Jan. 9; Sp. p. 2369; Gaz. vol. 174; p. 396.
Hat-nap-raising machine. J. H. Starr. No. 1,014,419; Jan. 9; Sp. p. 2956; Gaz. vol. 174; p. 490.
Hat or cap, Adjustable. C. I. Minkhoff and L. Kronthal. No. 1,014,505; Jan. 9; Sp. p. 3111; Gaz. vol. 174; p. 517.
Hat-pin fastener and guard. M. Rasmussen. No. 1,014,176; Jan. 9; Sp. p. 2406; Gaz. vol. 174; p. 403.
Hat-pin guard. M. Schneider. No. 1,013,957; Jan. 9; Sp. p. 1948; Gaz. vol. 174; p. 330.
Hat-pin guard. R. Meyer. No. 1,014,838; Jan. 16; Sp. p. 3907; Gaz. vol. 174; p. 662.
Hat-pin guard. N. Wetzel. No. 1,015,366; Jan. 23; Sp. p. 5029; Gaz. vol. 174; p. 868.
Hat-pin-point protector. F. Reichenbach. No. 1,013,814; Jan. 2; Sp. p. 1578; Gaz. vol. 174; p. 257.
Hat-pin-point protector. F. Trojan. No. 1,015,099; Jan. 16; Sp. p. 4461; Gaz. vol. 174; p. 751.
Hat-pin retainer. M. Szekely. No. 1,014,423; Jan. 9; Sp. p. 2964; Gaz. vol. 174; p. 492.
Hat-trimming stand. F. Hermann. No. 1,014,393; Jan. 9; Sp. p. 2905; Gaz. vol. 174; p. 481.
Hatchway-cover. J. Weir. No. 1,013,912; Jan. 9; Sp. p. 1837; Gaz. vol. 174; p. 314.
Hay-press. L. Trabue and H. F. Owen. No. 1,013,464; Jan. 2; Sp. p. 819; Gaz. vol. 174; p. 131.
Hay-press. A. H. Perry. No. 1,015,207; Jan. 16; Sp. p. 4661; Gaz. vol. 174; p. 787.
Hay-rack. W. A. Heublein. No. 1,015,228; Jan. 16; Sp. p. 4705; Gaz. vol. 174; p. 793.
Header. S. P. Whitworth. No. 1,015,368; Jan. 23; Sp. p. 5031; Gaz. vol. 174; p. 868.
Heading-machines, Cutting-off and carrying mechanism for. E. W. Duston. No. 1,015,382; Jan. 23; Sp. p. 5061; Gaz. vol. 174; p. 873.
Headlight. R. H. Welles. No. 1,015,750; Jan. 23; Sp. p. 5858; Gaz. vol. 174; p. 999.
Headlight, Automatic gravity pivot-. R. A. Wakefield. No. 1,013,706; Jan. 2; Sp. p. 1363; Gaz. vol. 174; p. 213.
Headlight, Automobile-. O. B. Woodfield, O. M. Morris, and J. W. Gosling. No. 1,014,420; Jan. 9; Sp. p. 2972; Gaz. vol. 174; p. 493.
Headlight-chimney. A. P. Storrs. No. 1,015,852; Jan. 30; Sp. p. 6090; Gaz. vol. 174; p. 1059.
Headlight-turning device, Automobile. R. G. Gaskill. No. 1,014,627; Jan. 9; Sp. p. 3391; Gaz. vol. 174; p. 558.
Headlight, Vehicle-. J. O. McKean. No. 1,013,300; Jan. 2; Sp. p. 475; Gaz. vol. 174; p. 74.
Heat-exchanging device. E. Pielock and C. Zübiln. No. 1,015,831; Jan. 30; Sp. p. 6028; Gaz. vol. 174; p. 1053.
Heat of distillation, Utilizing waste. F. Shuman. No. 1,014,418; Jan. 9; Sp. p. 2954; Gaz. vol. 174; p. 490.
Heat-regulator. E. H. Murphy. No. 1,013,424; Jan. 2; Sp. p. 740; Gaz. vol. 174; p. 117.
Heater: *See* Electric heater; Electrical heater; Feed-water heater; Fireplace-heater; Glue-heater; Hot-air heater; Hot-water heater; Incubator-heater; Solar heater; Water-heater.
Heater. J. Jungers. No. 1,013,176; Jan. 2; Sp. p. 173; Gaz. vol. 174; p. 30.
Heater. C. S. Brown and J. C. Hoxie. No. 1,013,271; Jan. 2; Sp. p. 397; Gaz. vol. 174; p. 64.
Heater. W. E. Sharp. No. 1,013,822; Jan. 2; Sp. p. 1595; Gaz. vol. 174; p. 254.
Heating appliance. R. M. Austin. No. 1,013,267; Jan. 2; Sp. p. 386; Gaz. vol. 174; p. 62.
Heating element, Electric. F. E. Hewitt. No. 1,014,875; Jan. 16; Sp. p. 3990; Gaz. vol. 174; p. 675.
Heating or cooling plate. S. A. Schewczik. No. 1,015,404; Jan. 23; Sp. p. 5104; Gaz. vol. 174; p. 880.
Heating-pad, Electric. W. S. Clark. No. 1,015,991; Jan. 30; Sp. p. 6373; Gaz. vol. 174; p. 1109.
Heating system, Steam-. J. L. Sparks and E. R. Eddins. No. 1,013,328; Jan. 2; Sp. p. 531; Gaz. vol. 174; p. 84.
Heating system, Steam-. E. E. Gold. No. 1,014,296; Jan. 9; Sp. p. 2675; Gaz. vol. 174; p. 446.
Hedge-trimmer. J. S. Joline and E. H. Wheeler. No. 1,014,480; Jan. 9; Sp. p. 3064; Gaz. vol. 174; p. 509.
Heel. L. H. Shaw. No. 1,015,846; Jan. 30; Sp. p. 6062; Gaz. vol. 174; p. 1057.
Heel building and pressing machine. C. O. Ryberg. No. 1,015,580; Jan. 23; Sp. p. 5519; Gaz. vol. 174; p. 944.
Heel for shoes, Detachable. F. L. Rouse. No. 1,013,615; Jan. 2; Sp. p. 1140; Gaz. vol. 174; p. 181.
Heel, Shoe-. F. L. Smith. No. 1,013,623; Jan. 2; Sp. p. 1156; Gaz. vol. 174; p. 184.
Heels of boots and shoes, Apparatus for hammering the. J. W. Tierney. No. 1,013,071; Jan. 9; Sp. p. 1973; Gaz. vol. 174; p. 334.
High-tension discharges, Means for producing. J. E. Seeley. No. 1,015,088; Jan. 16; Sp. p. 4435; Gaz. vol. 174; p. 746.
Hinge. P. M. Bush. No. 1,014,372; Jan. 9; Sp. p. 2863; Gaz. vol. 174; p. 474.
Hinge. S. Volz. No. 1,014,790; Jan. 16; Sp. p. 3788; Gaz. vol. 174; p. 644.
Hinge. J. Richardson. No. 1,015,209; Jan. 16; Sp. p. 4664; Gaz. vol. 174; p. 787.
Hinge. B. V. B. Dixon. No. 1,016,000; Jan. 30; Sp. p. 6394; Gaz. vol. 174; p. 1112.
Hinge. B. F. Orear. No. 1,016,171; Jan. 30; Sp. p. 6736; Gaz. vol. 174; p. 1171.
Hinge, Carriage-. J. Laurich. No. 1,015,040; Jan. 16; Sp. p. 4348; Gaz. vol. 174; p. 730.
Hinge, Door-. W. H. Northall. No. 1,013,948; Jan. 9; Sp. p. 1920; Gaz. vol. 174; p. 327.
Hinge for coach and automobile bodies. F. Crawford and W. Whiteley. No. 1,013,535; Jan. 2; Sp. p. 975; Gaz. vol. 174; p. 156.
Hinge, Friction-. C. J. Schnaus. No. 1,015,347; Jan. 23; Sp. p. 4991; Gaz. vol. 174; p. 861.
Hoe. J. W. Congear. No. 1,015,478; Jan. 23; Sp. p. 5287; Gaz. vol. 174; p. 905.
Hoes, Manufacturing. E. P. Alexander. No. 1,014,432; Jan. 9; Sp. p. 2982; Gaz. vol. 174; p. 494.
Holsting apparatus, Electrically-operated. F. E. Lutz. No. 1,015,901; Jan. 30; Sp. p. 6181; Gaz. vol. 174; p. 1078.
Hoisting device. H. A. Myers. No. 1,014,326; Jan. 9; Sp. p. 2741; Gaz. vol. 174; p. 457.
Hoisting device. H. A. Myers. No. 1,014,327; Jan. 9; Sp. p. 2744; Gaz. vol. 174; p. 457.
Hoisting-drum. A. D. Hadsel. No. 1,015,487; Jan. 23; Sp. p. 5302; Gaz. vol. 174; p. 909.
Hoisting-tower. F. R. McCune. No. 1,013,886; Jan. 9; Sp. p. 1780; Gaz. vol. 174; p. 305.
Honey-frame. H. Perkins. No. 1,014,171; Jan. 9; Sp. p. 2396; Gaz. vol. 174; p. 401.
Hook: *See* Brick-hook; Logging-hook.
Hook. H. Knox. No. 1,014,008; Jan. 9; Sp. p. 2053; Gaz. vol. 174; p. 346.
Hook. P. L. Dills. No. 1,015,149; Jan. 16; Sp. p. 4550; Gaz. vol. 174; p. 761.
Hoop: *See* Bulge-hoop.
Hop-cluster stemmer. G. E. Miller. No. 1,013,505; Jan. 2; Sp. p. 906; Gaz. vol. 174; p. 145.
Hopper, Feed-. C. F. Ball. No. 1,014,280; Jan. 9; Sp. p. 2647; Gaz. vol. 174; p. 441.
Hopper, Filling-replenishing. J. Northrop. No. 1,014,770; Jan. 16; Sp. p. 3743; Gaz. vol. 174; p. 637.
Horn, Automobile-. W. E. Stephens. No. 1,015,595; Jan. 23; Sp. p. 5533; Gaz. vol. 174; p. 947.
Horn, Signal-. I. E. Stump. No. 1,013,905; Jan. 9; Sp. p. 1823; Gaz. vol. 174; p. 312.
Horse-detaching device. H. J. Mitchell. No. 1,015,699; Jan. 23; Sp. p. 5761; Gaz. vol. 174; p. 982.
Horseshoe-calk. A. Roth, Jr. No. 1,015,839; Jan. 30; Sp. p. 6046; Gaz. vol. 174; p. 1055.
Horseshoe clipping and bending machine. L. Carpenter. No. 1,014,451; Jan. 9; Sp. p. 3019; Gaz. vol. 174; p. 500.
Hose-nozzle. H. Gibbs. No. 1,014,386; Jan. 9; Sp. p. 2894; Gaz. vol. 174; p. 479.
Hose-nozzle and sprayer. R. Porter and L. Krueger. No. 1,016,173; Jan. 30; Sp. p. 6780; Gaz. vol. 174; p. 1172.
Hose, Steam-. E. E. Gold. No. 1,015,311; Jan. 23; Sp. p. 4901; Gaz. vol. 174; p. 849.
Hose-supporters, Tension-anchor for. C. R. McBride. No. 1,015,054; Jan. 16; Sp. p. 4380; Gaz. vol. 174; p. 735.
Hot-air furnace. W. C. H. Noble. No. 1,013,304; Jan. 2; Sp. p. 483; Gaz. vol. 174; p. 76.

Hot-air heater. H. Strand. No. 1,014,347; Jan. 9; Sp. p. 2812; Gaz. vol. 174; p. 465.
Hot-water heater, Instantaneous. T. H. Stephenson. No. 1,016,044; Jan. 30; Sp. p. 6493; Gaz. vol. 174; p. 1129.
Hotbeds, Transfer mechanism for. J. Simpson. No. 1,015,350; Jan. 23; Sp. p. 4996; Gaz. vol. 174; p. 862.
House: *See* Sheet-metal house.
House-ventilator. E. Goldberg. No. 1,014,058; Jan. 9; Sp. p. 2171; Gaz. vol. 174; p. 363.
Hub, Shock-absorbing. A. R. Fellows. No. 1,014,135; Jan. 9; Sp. p. 2332; Gaz. vol. 174; p. 389.
Hub, Shock-absorbing. A. R. Fellows. No. 1,014,136; Jan. 9; Sp. p. 2333; Gaz. vol. 174; p. 390.
Hub, Shock-absorbing. A. R. Fellows. No. 1,014,137; Jan. 9; Sp. p. 2334; Gaz. vol. 174; p. 390.
Hub, Spring-. D. A. Pickens. No. 1,013,436; Jan. 2; Sp. p. 763; Gaz. vol. 174; p. 121.
Hub, Vehicle wheel-. C. Christiansen. No. 1,013,743; Jan. 2; Sp. p. 1447; Gaz. vol. 174; p. 227.
Hub, Vehicle wheel-. G. T. Reichenbach. No. 1,014,177; Jan. 9; Sp. p. 2407; Gaz. vol. 174; p. 403.
Hub, Wheel-. M. T. Long. No. 1,013,188; Jan. 2; Sp. p. 192; Gaz. vol. 174; p. 34.
Humidifier. R. C. Herren. No. 1,013,772; Jan. 2; Sp. p. 1508; Gaz. vol. 174; p. 238.
Hurdle. V. Gilkey. No. 1,013,386; Jan. 2; Sp. p. 657; Gaz. vol. 174; p. 104.
Hydrochronograph. E. W. Eaton. No. 1,014,134; Jan. 9; Sp. p. 2330; Gaz. vol. 174; p. 389.
Hydrogen peroxid from impure persulfuric-acid solutions, Making. L. Löwenstein. No. 1,013,791; Jan. 2; Sp. p. 1533; Gaz. vol. 174; p. 244.
Hydroplane. J. H. Pierce. No. 1,014,514; Jan. 9; Sp. p. 3124; Gaz. vol. 174; p. 520.
Hydrotrain. W. R. Macklind. No. 1,014,318; Jan. 9; Sp. p. 2711; Gaz. vol. 174; p. 452.
I-beam of nine inches and under twelve inches in height, Solid rolled metal. H. Grey. No. 1,013,649; Jan. 2; Sp. p. 1230; Gaz. vol. 174; p. 194.
I-beam of sixteen inches and under twenty-five inches in height, Solid rolled metal. H. Grey. No. 1,013,651; Jan. 2; Sp. p. 1236; Gaz. vol. 174; p. 194.
I-beam of twelve inches and under sixteen inches in height, Solid rolled metal. H. Grey. No. 1,013,652; Jan. 2; Sp. p. 1239; Gaz. vol. 174; p. 195.
I-beam, Solid rolled metal eight-inch. H. Grey. No. 1,013,650; Jan. 2; Sp. p. 1233; Gaz. vol. 174; p. 194.
I-beams, Producing. H. Sack. No. 1,013,567; Jan. 2; Sp. p. 1031; Gaz. vol. 174; p. 166.
Ice, Apparatus for producing blocks or coatings of. M. C. J. Bannister. No. 1,013,470; Jan. 2; Sp. p. 830; Gaz. vol. 174; p. 133.
Ice-cream-cone machine. J. W. West. No. 1,014,274; Jan. 9; Sp. p. 2627; Gaz. vol. 174; p. 438.
Ice-cream freezer. W. B. McCann. No. 1,013,672; Jan. 2; Sp. p. 1287; Gaz. vol. 174; p. 201.
Ice-cream freezer. R. L. Jameson. No. 1,013,779; Jan. 2; Sp. p. 1517; Gaz. vol. 174; p. 241.
Ice-crusher. J. M. Nelson. No. 1,013,509; Jan. 2; Sp. p. 914; Gaz. vol. 174; p. 146.
Ice-cutting machine. J. B. Bowcock. No. 1,013,783; Jan. 2; Sp. p. 1418; Gaz. vol. 174; p. 224.
Ice-cutting machine. S. Guthrie, Jr. No. 1,014,593; Jan. 9; Sp. p. 3270; Gaz. vol. 174; p. 545.
Ice cutting or shaving device. E. H. Sheldon. No. 1,013,823; Jan. 2; Sp. p. 1599; Gaz. vol. 174; p. 255.
Ice-machine. C. S. Campbell. No. 1,014,449; Jan. 9; Sp. p. 3015; Gaz. vol. 174; p. 499.
Ice-making apparatus. E. E. Gainer. No. 1,014,140; Jan. 9; Sp. p. 2339; Gaz. vol. 174; p. 391.
Ignition system. J. E. Seeley. No. 1,015,089; Jan. 16; Sp. p. 4439; Gaz. vol. 174; p. 747.
Implement-holder. S. C. Lawlor. No. 1,015,625; Jan. 23; Sp. p. 5588; Gaz. vol. 174; p. 957.
Incandescent-mantle burner. A. P. Storrs. No. 1,015,851; Jan. 30; Sp. p. 6079; Gaz. vol. 174; p. 1059.
Incubator, Egg-hatching. J. D. Boyd. No. 1,015,417; Jan. 23; Sp. p. 5146; Gaz. vol. 174; p. 884.
Incubator-heater. A. W. Tibbals and C. D. Young. No. 1,015,361; Jan. 23; Sp. p. 5015; Gaz. vol. 174; p. 867.
Incubator-heating system. C. S. Bryant. No. 1,015,290; Jan. 23; Sp. p. 4851; Gaz. vol. 174; p. 841.
Index, Adjustable card-. J. H. Rand. No. 1,016,230; Jan. 30; Sp. p. 6849; Gaz. vol. 174; p. 1190.
Index, Book and like. J. D. Ward. No. 1,015,658; Jan. 23; Sp. p. 5663; Gaz. vol. 174; p. 968.
Indicator: *See* Battery-charge indicator; Car street-indicator; Fare-indicator; Fuse-indicator; Liquid-container indicator; Spark-indicator; Station-indicator; Storage-vessel indicator.
Indicator. R. F. Codero. No. 1,015,139; Jan. 16; Sp. p. 4535; Gaz. vol. 174; p. 765.
Induction-motor. W. E. Reed. No. 1,013,218; Jan. 2; Sp. p. 280; Gaz. vol. 174; p. 45.
Ingots, Method of and apparatus for producing compound metal. F. E. Canda. No. 1,013,860; Jan. 9; Sp. p. 1716; Gaz. vol. 174; p. 297.
Inhaler attachment, Air-purifying. S. Banta and B. L. Stowe. No. 1,013,722; Jan. 2; Sp. p. 1391; Gaz. vol. 174; p. 218.
Ink. W. G. Fuerth. No. 1,013,544; Jan. 2; Sp. p. 989; Gaz. vol. 174; p. 159.
Ink-distributer. A. E. Berreyesa. No. 1,016,123; Jan. 30; Sp. p. 6650; Gaz. vol. 174; p. 1156.
Inking-rollers, Driving mechanism for. G. P. Fenner. No. 1,015,012; Jan. 16; Sp. p. 4292; Gaz. vol. 174; p. 721.
Insect-catcher. J. Johnson. No. 1,016,156; Jan. 30; Sp. p. 6710; Gaz. vol. 174; p. 1166.
Insect-proof chest. G. R. Wilson. No. 1,015,984; Jan. 30; Sp. p. 6359; Gaz. vol. 174; p. 1107.
Insect-trap. W. L. Thompson. No. 1,013,699; Jan. 2; Sp. p. 1354; Gaz. vol. 174; p. 211.
Insect-trap. G. J. Crandall. No. 1,015,141; Jan. 16; Sp. p. 4538; Gaz. vol. 174; p. 765.
Instep-arch support. W. H. Wood. No. 1,014,687; Jan. 16; Sp. p. 3567; Gaz. vol. 174; p. 610.
Instrument-holder. C. W. Jones. No. 1,014,649; Jan. 16; Sp. p. 3480; Gaz. vol. 174; p. 597.
Insulator. F. C. Van Etten. No. 1,013,241; Jan. 2; Sp. p. 332; Gaz. vol. 174; p. 53.
Insulator. J. Alsberg. No. 1,015,224; Jan. 16; Sp. p. 4686; Gaz. vol. 174; p. 791.
Insulator. J. D. Hilliard, Jr., and C. E. Parsons. No. 1,015,229; Jan. 16; Sp. p. 4709; Gaz. vol. 174; p. 793.
Insulator-knob. G. Baker. No. 1,014,934; Jan. 16; Sp. p. 4122; Gaz. vol. 174; p. 695.
Insulator-pin. W. J. Wilson. No. 1,013,250; Jan. 2; Sp. p. 353; Gaz. vol. 174; p. 56.
Integrating mechanism. E. H. Messiter. No. 1,014,604; Jan. 9; Sp. p. 3305; Gaz. vol. 174; p. 549.
Internal-combustion and compressed-air engine, Combined. J. K. Broderick. No. 1,013,528; Jan. 2; Sp. p. 955; Gaz. vol. 174; p. 153.
Internal-combustion apparatus, Constant-pressure. E. P. Noyes. No. 1,013,609; Jan. 2; Sp. p. 1116; Gaz. vol. 174; p. 180.
Internal-combustion engine. W. F. Freidag. No. 1,013,759; Jan. 2; Sp. p. 1448; Gaz. vol. 174; p. 233.
Internal-combustion engine. S. Pearson. No. 1,014,668; Jan. 16; Sp. p. 3517; Gaz. vol. 174; p. 603.
Internal-combustion engine. W. J. Still. No. 1,015,216; Jan. 16; Sp. p. 4672; Gaz. vol. 174; p. 789.
Internal-combustion engine. W. J. Still. No. 1,015,217; Jan. 16; Sp. p. 4675; Gaz. vol. 174; p. 789.
Internal-combustion engine. F. Forest. No. 1,015,948; Jan. 30; Sp. p. 6280; Gaz. vol. 174; p. 1093.
Inverted burner. S. Krauze. No. 1,015,692; Jan. 23; Sp. p. 5750; Gaz. vol. 174; p. 979.
Iodin solution. J. Wemer. No. 1,013,918; Jan. 9; Sp. p. 1838; Gaz. vol. 174; p. 315.
Iron: *See* Creasing-iron; Flat-iron; Sad-iron; Soldering-iron.
Iron, Copperizing. W. G. Clark. No. 1,014,454; Jan. 9; Sp. p. 3024; Gaz. vol. 174; p. 501.
Iron rest, polisher, and waxer, Combined. W. Hutchings. No. 1,014,478; Jan. 9; Sp. p. 3062; Gaz. vol. 174; p. 508.
Ironing-board. J. W. Allen. No. 1,016,196; Jan. 30; Sp. p. 6780; Gaz. vol. 174; p. 1179.
Ironing-table. C. M. Resch. No. 1,015,072; Jan. 16; Sp. p. 4410; Gaz. vol. 174; p. 741.
Irrigating connection. G. E. Kellar. No. 1,016,159; Jan. 30; Sp. p. 6715; Gaz. vol. 174; p. 1167.
Irrigating-ditch controller. A. Beal. No. 1,014,438; Jan. 9; Sp. p. 2992; Gaz. vol. 174; p. 496.
Irrigation apparatus. I. L. Roddy. No. 1,014,521; Jan. 9; Sp. p. 3142; Gaz. vol. 174; p. 532.
Jack: *See* Floor-jack; Lumber-jack; Shoe-jack; Vehicle-jack.
Jig. G. W. Keller, C. and A. Brassington. No. 1,014,308; Jan. 9; Sp. p. 2699; Gaz. vol. 174; p. 450.
Joint: *See* Conduit and like joint; Expansion-joint; Pipe-joint; Rail-joint; Universal joint.
Joint and connection for crossed or abutting parts. H. Weygand. No. 1,014,684; Jan. 16; Sp. p. 3562; Gaz. vol. 174; p. 609.
Jolting-machine. W. C. Norcross. No. 1,016,086; Jan. 30; Sp. p. 6590; Gaz. vol. 174; p. 1144.
Journal-box. M. P. Newcomb. No. 1,015,335; Jan. 23; Sp. p. 4968; Gaz. vol. 174; p. 857.
Journal-box. G. A. Woodman. No. 1,015,529; Jan. 23; Sp. p. 5381; Gaz. vol. 174; p. 922.
Journal-box. G. A. Woodman. No. 1,015,607; Jan. 23; Sp. p. 5552; Gaz. vol. 174; p. 951.
Journal-box lid. E. G. Busse and P. B. Harrison. No. 1,014,047; Jan. 9; Sp. p. 2150; Gaz. vol. 174; p. 359.
Journal-box of a car-truck to the truck side frame, Means for securing the. S. P. Bush. No. 1,014,565; Jan. 9; Sp. p. 3215; Gaz. vol. 174; p. 535.
Junction-box. W. S. Timmis. No. 1,013,972; Jan. 9; Sp. p. 1977; Gaz. vol. 174; p. 335.
Keg-rinser. G. D. Prentice. No. 1,015,585; Jan. 23; Sp. p. 5508; Gaz. vol. 174; p. 942.
Keg, Sheet-steel. C. Stollberg. No. 1,015,355; Jan. 23; Sp. p. 5005; Gaz. vol. 174; p. 864.
Kegs, Air-inlet for beer-. A. Hahn. No. 1,013,158; Jan. 2; Sp. p. 141; Gaz. vol. 174; p. 24.
Key: *See* Type-writer key; Voting-machine key.
Key-socket. E. H. Freeman. No. 1,016,136; Jan. 30; Sp. p. 6678; Gaz. vol. 174; p. 1160.
Kiln: *See* Brick-kiln; Dry-kiln; Limekiln.
Kiln-cleaner. L. P. Ross. No. 1,014,258; Jan. 9; Sp. p. 2601; Gaz. vol. 174; p. 434.
Kite. J. P. Buengers. No. 1,014,369; Jan. 9; Sp. p. 2859; Gaz. vol. 174; p. 473.
Kite. O. Seydel. No. 1,016,180; Jan. 30; Sp. p. 6751; Gaz. vol. 174; p. 1173.

Knife: *See* Meat cutting and mincing machine knife; Pocket-knife.
Knife. J. C. Owens. No. 1,013,844; Jan. 2; Sp. p. 1658; Gaz. vol. 174; p. 263.
Knife-rack. A. S. Kinsley. No. 1,014,487; Jan. 9; Sp. p. 3075; Gaz. vol. 174; p. 511.
Knitting-machine. W. F. Rolston. No. 1,016,283; Jan. 30; Sp. p. 6854; Gaz. vol. 174; p. 1191.
Knitting machine, Circular-. W. T. Barratt. No. 1,013,471; Jan. 2; Sp. p. 832; Gaz. vol. 174; p. 133.
Knitting-machine, Flat-bed. E. Dubied. No. 1,015,668; Jan. 23; Sp. p. 5683; Gaz. vol. 174; p. 971.
Knitting-machine needle. L. N. D. Williams. No. 1,015,108; Jan. 16; Sp. p. 4478; Gaz. vol. 174; p. 754.
Knitting-machine needle. L. N. D. Williams. No. 1,015,109; Jan. 16; Sp. p. 4480; Gaz. vol. 174; p. 754.
Knitting machine, Straight-. W. F. Rolston. No. 1,016,282; Jan. 30; Sp. p. 6852; Gaz. vol. 174; p. 1191.
Knitting-machines for ornamenting hosiery, Attachment to. A. Gee. No. 1,014,753; Jan. 16; Sp. p. 3698; Gaz. vol. 174; p. 631.
Knitting-machines, Sinker-actuating means for revoluble-cylinder. J. D. Hemphill. No. 1,015,733; Jan. 23; Sp. p. 5825; Gaz. vol. 174; p. 993.
Knob spindle, Swivel-. F. J. Spring. No. 1,015,765; Jan. 23; Sp. p. 5891; Gaz. vol. 174; p. 1004.
Knockdown box. R. E. L. Crosby. No. 1,015,425; Jan. 23; Sp. p. 5160; Gaz. vol. 174; p. 887.
Label. W. P. MacDonald. No. 1,013,299; Jan. 2; Sp. p. 474; Gaz. vol. 174; p. 74.
Lace machinery, Bobbin-carriage and bobbin of.- W. B. Mitchell. No. 1,015,333; Jan. 23; Sp. p. 4964; Gaz. vol. 174; p. 856.
Lace roller, Shoe-. A. B. Overholt. No. 1,015,583; Jan. 23; Sp. p. 5506; Gaz. vol. 174; p. 942.
Ladder. J. E. Forndran. No. 1,014,215; Jan. 9; Sp. p. 2487; Gaz. vol. 174; p. 418.
Ladder. M. Bauer. No. 1,015,123; Jan. 16; Sp. p. 4508; Gaz. vol. 174; p. 759.
Ladder-base. W. Rogers. No. 1,016,177; Jan. 30; Sp. p. 6747; Gaz. vol. 174; p. 1173.
Ladder-brad. F. W. Chickering. No. 1,015,940; Jan. 30; Sp. p. 6265; Gaz. vol. 174; p. 1091.
Ladder, Combination-. H. C. Reed. No. 1,013,515; Jan. 2; Sp. p. 924; Gaz. vol. 174; p. 148.
Ladder for gathering fruit, Portable. W. E. Swengel. No. 1,015,652; Jan. 23; Sp. p. 5655; Gaz. vol. 174; p. 966.
Ladder, Fruit-gatherer's and painter's. W. R. Irby. No. 1,014,063; Jan. 9; Sp. p. 2179; Gaz. vol. 174; p. 365.
Ladders, Balcony for fire-. T. F. Dougherty. No. 1,013,751; Jan. 2; Sp. p. 1460; Gaz. vol. 174; p. 231.
Lakes, Manufacture of. E. Ulrichs. No. 1,014,539; Jan. 9; Sp. p. 3167; Gaz. vol. 174; p. 527.
Lamp. W. Agnew. No. 1,013,356; Jan. 2; Sp. p. 591; Gaz. vol. 174; p. 94.
Lamp. E. H. Ford. No. 1,013,542; Jan. 2; Sp. p. 986; Gaz. vol. 174; p. 158.
Lamp. G. E. Neil. No. 1,013,947; Jan. 9; Sp. p. 1919; Gaz. vol. 174; p. 326.
Lamp. E. E. Taylor. No. 1,015,219; Jan. 16; Sp. p. 4678; Gaz. vol. 174; p. 789.
Lamp, Acetylene-gas. J. Davis. No. 1,016,215; Jan. 30; Sp. p. 6819; Gaz. vol. 174; p. 1185.
Lamp and connection, Vapor electric. P. C. Hewitt. No. 1,014,705; Jan. 16; Sp. p. 3593; Gaz. vol. 174; p. 615.
Lamp and connection, Vapor electric. P. C. Hewitt. No. 1,014,965; Jan. 16; Sp. p. 4187; Gaz. vol. 174; p. 705.
Lamp attachment for automobiles or the like. W. R. Elwell. No. 1,015,483; Jan. 23; Sp. p. 5294; Gaz. vol. 174; p. 907.
Lamp-bracket, Automobile. B. F and C. E. Ensley. No. 1,015,670; Jan. 23; Sp. p. 5690; Gaz. vol. 174; p. 972.
Lamp burner and globe. J. C. Smith. No. 1,014,531; Jan. 9; Sp. p. 3156; Gaz. vol. 174; p. 525.
Lamp-burner attachment. J. G. Barrett. No. 1,013,921; Jan. 9; Sp. p. 1856; Gaz. vol. 174; p. 318.
Lamp clip, Miner's-. G. I. Rawson and L. B. Shultz. No. 1,014,025; Jan. 9; Sp. p. 2095; Gaz. vol. 174; p. 352.
Lamp construction, Arc-. M. J. Wohl and H. Hertzberg. No. 1,013,352; Jan. 2; Sp. p. 582; Gaz. vol. 174; p. 93.
Lamp-cord adjuster. C. G. Ochiltree. No. 1,015,828; Jan. 30; Sp. p. 6019; Gaz. vol. 174; p. 1052.
Lamp, Electric. K. Edison. No. 1,014,958; Jan. 16; Sp. p. 4176; Gaz. vol. 174; p. 703.
Lamp, Electric incandescent. O. Schaller. No. 1,016,009; Jan. 30; Sp. p. 6611; Gaz. vol. 174; p. 1148.
Lamp for matching colors by artificial light. M. Weertz. No. 1,015,721; Jan. 23; Sp. p. 5800; Gaz. vol. 174; p. 989.
Lamp, Gas-. F. J. and H. R. Humphrey. No. 1,015,563; Jan. 23; Sp. p. 5455; Gaz. vol. 174; p. 934.
Lamp, Gas-. F. J. and H. R. Humphrey. No. 1,015,564; Jan. 23; Sp. p. 5457; Gaz. vol. 174; p. 935.
Lamp globe or shade, Incandescent-gas-. T. J. Litle, Jr. No. 1,013,668; Jan. 2; Sp. p. 1277; Gaz. vol. 174; p. 200.
Lamp, Hydrocarbon miner's. J. Goulet. No. 1,013,765; Jan. 2; Sp. p. 1491; Gaz. vol. 174; p. 236.
Lamp-ignition device. C. Koch. No. 1,015,193; Jan. 16; Sp. p. 4636; Gaz. vol. 174; p. 782.
Lamp, Incandescent. J. Wilson. No. 1,014,686; Jan. 16; Sp. p. 3565; Gaz. vol. 174; p. 610.
Lamp leak-tester, Incandescent-electric-. B. G. Erskine. No. 1,014,287; Jan. 9; Sp. p. 2657; Gaz. vol. 174; p. 443.
Lamp-making machine, Incandescent-. W. R. Burrows. No. 1,013,124; Jan. 2; Sp. p. 66; Gaz. vol. 174; p. 13.
Lamp, Metal-filament. W. R. Whitney. No. 1,013,915; Jan. 9; Sp. p. 1840; Gaz. vol. 174; p. 315.
Lamp or lantern. J. T. Casey. No. 1,013,275; Jan. 2; Sp. p. 404; Gaz. vol. 174; p. 65.
Lamp package, Tungsten-. W. Lumley. No. 1,016,077; Jan. 30; Sp. p. 6572; Gaz. vol. 174; p. 1141.
Lamp-shade holder or guard, Incandescent-. W. Ifland. No. 1,016,223; Jan. 30; Sp. p. 6833; Gaz. vol. 174; p. 1188.
Lamp-socket. R. W. Osland and M. J. Huggins. No. 1,013,681; Jan. 2; Sp. p. 1326; Gaz. vol. 174; p. 205.
Lamp socket, Electric-. M. Peaucellier. No. 1,013,434; Jan. 2; Sp. p. 760; Gaz. vol. 174; p. 120.
Lamp socket, Electric-. A. L. Jacobs. No. 1,013,658; Jan. 2; Sp. p. 1254; Gaz. vol. 174; p. 197.
Lamp socket, Electric-. M. Norden. No. 1,014,169; Jan. 9; Sp. p. 2393; Gaz. vol. 174; p. 401.
Lamp socket, Electric-. H. Hubbell. (Reissue.) No. 13,353; Jan. 9; Sp. p. 3413; Gaz. vol. 174; p. 564.
Lamp socket, Incandescent-. F. C. De Reamer. No. 1,013,135; Jan. 2; Sp. p. 89; Gaz. vol. 174; p. 16.
Lamp socket, Incandescent-. P. Kleber. No. 1,015,963; Jan. 30; Sp. p. 6315; Gaz. vol. 174; p. 1099.
Lamp sockets, Attachment for incandescent-. N. Klein. No. 1,015,897; Jan. 30; Sp. p. 6172; Gaz. vol. 174; p. 1076.
Lamp trimmer and gage, Arc-. A. A. Low, H. Hertzberg, and M. J. Wohl. No. 1,013,409; Jan. 2; Sp. p. 700; Gaz. vol. 174; p. 111.
Lamps, Adjustable lens for headlight-. W. T. Jones. No. 1,014,227; Jan. 9; Sp. p. 2532; Gaz. vol. 174; p. 422.
Lamps and reflectors, Supporting incandescent electric. O. Weber. No. 1,014,681; Jan. 16; Sp. p. 3557; Gaz. vol. 174; p. 608.
Lamps, Filament-support for incandescent. C. P. Steinmetz. No. 1,013,965; Jan. 9; Sp. p. 1962; Gaz. vol. 174; p. 332.
Lamps, Hand-fire for making joints in vacuum-tube. D. M. Moore. No. 1,014,247; Jan. 9; Sp. p. 2580; Gaz. vol. 174; p. 430.
Lamps, Mantle-support for gas-. A. H. Humphrey. No. 1,015,562; Jan. 23; Sp. p. 5453; Gaz. vol. 174; p. 934.
Lamps, Mask for automobile-. H. D. Penney and C. A. Weed. No. 1,013,895; Jan. 9; Sp. p. 1796; Gaz. vol. 174; p. 308.
Lantern bail-holder. R. L. Cairncross. No. 1,013,530; Jan. 2; Sp. p. 960; Gaz. vol. 174; p. 154.
Lantern, Tubular. A. R. Pritchard. No. 1,015,398; Jan. 23; Sp. p. 5097; Gaz. vol. 174; p. 878.
Lasting-machine. A. Bates. No. 1,014,632; Jan. 16; Sp. p. 3438; Gaz. vol. 174; p. 591.
Latch. C. Atkinson. No. 1,013,104; Jan. 2; Sp. p. 16; Gaz. vol. 174; p. 5.
Latch and handle, Combined. V. W. Peel. No. 1,015,338; Jan. 23; Sp. p. 4974; Gaz. vol. 174; p. 858.
Latch-bolt lock. W. H. Eisenhart. No. 1,014,583; Jan. 9; Sp. p. 3249; Gaz. vol. 174; p. 542.
Latch, Gate-. P. Frantz. No. 1,014,290; Jan. 9; Sp. p. 2667; Gaz. vol. 174; p. 444.
Latch handles, Means for securing door-. F. Halzmann. No. 1,015,679; Jan. 23; Sp. p. 5702; Gaz. vol. 174; p. 975.
Latches for double doors. B. W. Johnson. No. 1,013,553; Jan. 2; Sp. p. 1009; Gaz. vol. 174; p. 162.
Lath. J. S. and R. Anderson. No. 1,014,557; Jan. 9; Sp. p. 3202; Gaz. vol. 174; p. 533.
Lath, Self-furring metallic. H. E. White. No. 1,014,616; Jan. 9; Sp. p. 3341; Gaz. vol. 174; p. 554.
Lathe cone-center. T. H. Mack. No. 1,015,811; Jan. 30; Sp. p. 5984; Gaz. vol. 174; p. 1047.
Lathe, Crank-shaft. H. P. Arnhold and A. P. Witteman. No. 1,015,117; Jan. 16; Sp. p. 4495; Gaz. vol. 174; p. 757.
Lathe-driver. D. H. Teas and G. T. Reiss. No. 1,013,908; Jan. 9; Sp. p. 1828; Gaz. vol. 174; p. 313.
Lathe head-stocks, Attachment for. C. E. De Long. No. 1,014,051; Jan. 9; Sp. p. 2159; Gaz. vol. 174; p. 360.
Laundry-extractors, Attachment for. R. M. Moore. No. 1,015,392; Jan. 23; Sp. p. 5084; Gaz. vol. 174; p. 876.
Lavatory-fixture. E. G. Watrous. No. 1,016,051; Jan. 30; Sp. p. 6503; Gaz. vol. 174; p. 1131.
Lawn-sprinkler. C. C. Armstrong. No. 1,014,434; Jan. 9; Sp. p. 2986; Gaz. vol. 174; p. 495.
Lead, Apparatus for separating dross from molten. J. O. Bardill. No. 1,013,635; Jan. 2; Sp. p. 1182; Gaz. vol. 174; p. 188.
Lead, Manufacturing arsenate of. E. O. Barstow. No. 1,014,742; Jan. 16; Sp. p. 3680; Gaz. vol. 174; p. 628.
Lead-sharpener. C. A. Gaiser. No. 1,014,141; Jan. 9; Sp. p. 2341; Gaz. vol. 174; p. 392.
Leather-stretching-frame joint. W. Romünder. No. 1,015,402; Jan. 23; Sp. p. 5101; Gaz. vol. 174; p. 879.
Leather-waterproofing compound. P. F. Frost. No. 1,016,137; Jan. 30; Sp. p. 6680; Gaz. vol. 174; p. 1161.
Leather yarn and leather-yarn fabric. W. H. Drury. No. 1,014,623; Jan. 9; Sp. p. 3364; Gaz. vol. 174; p. 557.
Lenses simultaneously, Tool for grinding both fields of bifocal. C. C. Kriegh. No. 1,015,030; Jan. 16; Sp. p. 4325; Gaz. vol. 174; p. 727.
Letter-holder and envelop-opener. W. Silverman. No. 1,014,338; Jan. 9; Sp. p. 2792; Gaz. vol. 174; p. 462.
Level. C. M. L. Larsen. No. 1,014,402; Jan. 9; Sp. p. 2927; Gaz. vol. 174; p. 485.
Level. J. Almgren. No. 1,015,608; Jan. 23; Sp. p. 5553; Gaz. vol. 174; p. 951.

Level and plumb, Combination. J. F. Carlson. No. 1,013,274; Jan. 2; Sp. p. 403; Gaz. vol. 174; p. 65.
Level and try-square, Combined. J. H. Blackwell. No. 1,015,536; Jan. 23; Sp. p. 5394; Gaz. vol. 174; p. 924.
Level-rod. F. W. Willis. No. 1,014,547; Jan. 9; Sp. p. 3181; Gaz. vol. 174; p. 530.
Leveling device. J. Roake. No. 1,014,519; Jan. 9; Sp. p. 3137; Gaz. vol. 174; p. 522.
Leveling instrument. J. K. Park. No. 1,013,803; Jan. 9; Sp. p. 1794; Gaz. vol. 174; p. 308.
Lever, Self-locking. S. L. Allen. No. 1,013,099; Jan. 2; Sp. p. 9; Gaz. vol. 174; p. 4.
Life-preserver. F. J. Wich. No. 1,014,546; Jan. 9; Sp. p. 3180; Gaz. vol. 174; p. 530.
Life-saving apparatus. D. Brevetti and C. Fucci. No. 1,015,937; Jan. 30; Sp. p. 6255; Gaz. vol. 174; p. 1089.
Life-saving apparatus for aviators. C. A. Judah and H. R. Sander. No. 1,015,684; Jan. 23; Sp. p. 5735; Gaz. vol. 174; p. 977.
Lifter: *See* Stove-lid lifter.
Lifter-arm. M. A. Grobl. No. 1,015,017; Jan. 16; Sp. p. 4300; Gaz. vol. 174; p. 723.
Light: *See* Beacon-light; Flash-light; Pilot-house light.
Light-refracting material. F. J. Tone. No. 1,015,598; Jan. 23; Sp. p. 5538; Gaz. vol. 174; p. 948.
Lighter, Pyrophoric pocket-. A. Dubsky. No. 1,015,876; Jan. 30; Sp. p. 6123; Gaz. vol. 174; p. 1068.
Lightning-arrester. R. B. Ingram. No. 1,013,166; Jan. 2; Sp. p. 158; Gaz. vol. 174; p. 27.
Lightning-arrester. W. F. Hiatt. No. 1,014,876; Jan. 16; Sp. p. 3991; Gaz. vol. 174; p. 675.
Lightning-arrester and test device. H. E. Wirt. No. 1,014,796; Jan. 16; Sp. p. 3800; Gaz. vol. 174; p. 646.
Limekiln. N. E. McLoon. No. 1,014,015; Jan. 9; Sp. p. 2070; Gaz. vol. 174; p. 348.
Line-casting machine. J. R. Rogers. No. 1,014,725; Jan. 16; Sp. p. 3642; Gaz. vol. 174; p. 623.
Link, Fusible. J. B. Vaccarezza. No. 1,014,677; Jan. 16; Sp. p. 3551; Gaz. vol. 174; p. 607.
Linoleum. Machine for making inlaid. A. Jones. No. 1,014,307; Jan. 9; Sp. p. 2911; Gaz. vol. 174; p. 482.
Liquid-container indicator. F. L. Pfahl. No. 1,013,309; Jan. 2; Sp. p. 495; Gaz. vol. 174; p. 78.
Liquid-cooling apparatus. J. Willmann. No. 1,015,660; Jan. 23; Sp. p. 5670; Gaz. vol. 174; p. 969.
Liquid-dispensing machine. W. G. Hollingsworth. No. 1,015,680; Jan. 23; Sp. p. 5703; Gaz. vol. 174; p. 975.
Liquid-filling device. H. Barry. No. 1,014,935; Jan. 16; Sp. p. 4124; Gaz. vol. 174; p. 695.
Liquid-gage. P. Panhorst. No. 1,013,809; Jan. 2; Sp. p. 1570; Gaz. vol. 174; p. 250.
Loader. W. W. Rosenau. No. 1,015,081; Jan. 16; Sp. p. 4425; Gaz. vol. 174; p. 744.
Loader. E. and A. Butts. No. 1,016,242; Jan. 30; Sp. p. 6878; Gaz. vol. 174; p. 1194.
Loading device, Portable. A. Vollers. No. 1,016,188; Jan. 30; Sp. p. 6764; Gaz. vol. 174; p. 1177.
Lock: *See* Boat-shaft lock; Door-lock; Latch-bolt lock; Nut-lock; Piano-lock; Pin-lock; Pin safety-lock; Rail-lock; Seal-lock; Stovepipe-lock; Switch-point lock; Vehicle-lock; Window-lock.
Lock. H. G. Voight. No. 1,013,524; Jan. 2; Sp. p. 946; Gaz. vol. 174; p. 152.
Lock. S. Ligammori. No. 1,014,073; Jan. 9; Sp. p. 2203; Gaz. vol. 174; p. 369.
Lock. J. Dunal. No. 1,014,577; Jan. 9; Sp. p. 3240; Gaz. vol. 174; p. 540.
Lock. O. Sallstrom. No. 1,015,640; Jan. 23; Sp. p. 5628; Gaz. vol. 174; p. 963.
Lock and mortise gage. E. G. Morin, Jr. No. 1,014,805; Jan. 16; Sp. p. 4028; Gaz. vol. 174; p. 681.
Lock for mail-bags, &c. J. Sackett. No. 1,015,908; Jan. 30; Sp. p. 6196; Gaz. vol. 174; p. 1080.
Lock-switch, Automatic. W. R. Cox. No. 1,015,300; Jan. 23; Sp. p. 4877; Gaz. vol. 174; p. 845.
Lock-tie for mail and other purposes. B. A. Blakemore. No. 1,014,037; Jan. 16; Sp. p. 4128; Gaz. vol. 174; p. 695.
Locomotive. G. R. Henderson. No. 1,013,771; Jan. 2; Sp. p. 1506; Gaz. vol. 174; p. 238.
Locomotive-boiler. W. McArthur. No. 1,015,501; Jan. 23; Sp. p. 5327; Gaz. vol. 174; p. 913.
Locomotive-driver-flange lubricator. G. McQuade and N. S. Airhart. No. 1,013,197; Jan. 2; Sp. p. 222; Gaz. vol. 174; p. 37.
Locomotive driving and truck box. J. B. Edwards. No. 1,014,580; Jan. 9; Sp. p. 3246; Gaz. vol. 174; p. 541.
Locomotive, Electric. F. B. Howell. No. 1,014,825; Jan. 16; Sp. p. 3870; Gaz. vol. 174; p. 657.
Locomotive-tender. O. Johnson. No. 1,013,495; Jan. 2; Sp. p. 880; Gaz. vol. 174; p. 142.
Log-loader. A. Larson. No. 1,016,076; Jan. 30; Sp. p. 6570; Gaz. vol. 174; p. 1140.
Log-transporting apparatus. F. W. Viering. No. 1,015,103; Jan. 16; Sp. p. 4467; Gaz. vol. 174; p. 752.
Logging-hook, Choker. A. S. Howe. No. 1,015,493; Jan. 23; Sp. p. 5317; Gaz. vol. 174; p. 911.
Loom. J. W. Herbert. No. 1,016,000; Jan. 30; Sp. p. 6413; Gaz. vol. 174; p. 1116.
Loom-beams, Supporting means for. A. E. Rhoades. No. 1,013,443; Jan. 2; Sp. p. 775; Gaz. vol. 174; p. 123.
Loom filling-fork mechanism. E. A. Cunniff. No. 1,013,375; Jan. 2; Sp. p. 631; Gaz. vol. 174; p. 100.
Loom, Filling-replenishing. J. Northrop. No. 1,014,844; Jan. 16; Sp. p. 3915; Gaz. vol. 174; p. 664.
Loom harness-heddle. E. F. Parks. No. 1,014,771; Jan. 16; Sp. p. 3746; Gaz. vol. 174; p. 637.
Loom-shuttle. A. B. Welsenborn. No. 1,015,524; Jan. 23; Sp. p. 5367; Gaz. vol. 174; p. 920.
Loom shuttle-checking device. A. Petersen. No. 1,013,217; Jan. 2; Sp. p. 279; Gaz. vol. 174; p. 45.
Loom-temple. G. M. Foster. No. 1,013,543; Jan. 2; Sp. p. 988; Gaz. vol. 174; p. 158.
Loom warp stop-motion. W. I. Stimpson and A. E. Rhoades. No. 1,013,966; Jan. 9; Sp. p. 1964; Gaz. vol. 174; p. 333.
Loom warp stop-motion. W. H. Knox and H. M. White. No. 1,014,390; Jan. 9; Sp. p. 2920; Gaz. vol. 174; p. 483.
Loom warp-stop motion. W. H. Spencer. No. 1,015,593; Jan. 23; Sp. p. 5529; Gaz. vol. 174; p. 946.
Looms, Batten structure for narrow-ware. F. Benz, Jr. No. 1,013,365; Jan. 2; Sp. p. 606; Gaz. vol. 174; p. 97.
Looms, Weft-end support in Northrop. A. Marchal. No. 1,013,884; Jan. 9; Sp. p. 1774; Gaz. vol. 174; p. 304.
Lubricating device. C. S. Bavier. No. 1,014,744; Jan. 16; Sp. p. 3682; Gaz. vol. 174; p. 629.
Lubricating system. P. Daimler. No. 1,013,644; Jan. 2; Sp. p. 1201; Gaz. vol. 174; p. 102.
Lubricating system. W. H. Lieber. No. 1,014,628; Jan. 9; Sp. p. 3394; Gaz. vol. 174; p. 559.
Lubrication system, Forced-. J. F. Key. No. 1,013,180; Jan. 2; Sp. p. 179; Gaz. vol. 174; p. 32.
Lubricator: *See* Force-feed lubricator.
Lubricator. E. E. Cope. No. 1,014,568; Jan. 9; Sp. p. 3222; Gaz. vol. 174; p. 536.
Lubricator. G. Tugwell. No. 1,016,238; Jan. 30; Sp. p. 6861; Gaz. vol. 174; p. 1192.
Lubricator-filling vessel. A. A. Bowser. No. 1,015,470; Jan. 23; Sp. p. 5267; Gaz. vol. 174; p. 902.
Lug-strap connector. F. McCollum and A. C. Hanner. No. 1,015,816; Jan. 30; Sp. p. 5992; Gaz. vol. 174; p. 1048.
Lumber-jack. J. D. Stegeman. No. 1,013,826; Jan. 2; Sp. p. 1605; Gaz. vol. 174; p. 256.
Lunch-box. G. F. Murdock. No. 1,013,208; Jan. 2; Sp. p. 242; Gaz. vol. 174; p. 41.
Machine-output-indicating device. C. Hickton. No. 1,013,300; Jan. 2; Sp. p. 662; Gaz. vol. 174; p. 105.
Magnet-actuated device. D. H. Darrin. No. 1,015,787; Jan. 30; Sp. p. 5938; Gaz. vol. 174; p. 1039.
Magnet Lifting-. A. C. Eastwood. No. 1,015,728; Jan. 23; Sp. p. 5812; Gaz. vol. 174; p. 991.
Magnet protective device, Brake-. E. L. Gale, Sr. No. 1,014,216; Jan. 9; Sp. p. 2489; Gaz. vol. 174; p. 419.
Magnetic materials, Making. R. A. Hadfield. No. 1,014,218; Jan. 9; Sp. p. 2497; Gaz. vol. 174; p. 420.
Magnetic objects of oblong shape, Machine for facilitating the packing of. O. Gamper. No. 1,014,869; Jan. 16; Sp. p. 3978; Gaz. vol. 174; p. 673.
Magneto. J. M. Dinkins and F. B. Hays. No. 1,014,622; Jan. 9; Sp. p. 3360; Gaz. vol. 174; p. 556.
Magneto. S. L. Kelly. No. 1,015,623; Jan. 23; Sp. p. 5585; Gaz. vol. 174; p. 957.
Mail-bag catcher. R. S. Veach. No. 1,014,678; Jan. 16; Sp. p. 3553; Gaz. vol. 174; p. 607.
Mail-box attachment. E. H. Clark. No. 1,013,128; Jan. 2; Sp. p. 79; Gaz. vol. 174; p. 14.
Mail-box, Letter and package. C. Ohlson. No. 1,014,508; Jan. 9; Sp. p. 3114; Gaz. vol. 174; p. 517.
Mail-box signal. W. M. Ulbrich. No. 1,015,523; Jan. 23; Sp. p. 5363; Gaz. vol. 174; p. 920.
Mail-delivering apparatus. J. H. Tudor. No. 1,013,703; Jan. 2; Sp. p. 1359; Gaz. vol. 174; p. 212.
Mail-matter registry-receipt. L. V. Spollin. No. 1,016,234; Jan. 30; Sp. p. 6856; Gaz. vol. 174; p. 1191.
Mangle for small articles. S. Moe. No. 1,016,028; Jan. 30; Sp. p. 6455; Gaz. vol. 174; p. 1123.
Manhole and catch-basin cover. R. J. McNulty. No. 1,016,081; Jan. 30; Sp. p. 6581; Gaz. vol. 174; p. 1142.
Manifolding device. F. C. Nickol and M. C. Stern. No. 1,015,581; Jan. 23; Sp. p. 5500; Gaz. vol. 174; p. 941.
Manifolding-pad. E. Carney. No. 1,015,204; Jan. 23; Sp. p. 4858; Gaz. vol. 174; p. 842.
Manure-loader. C. Elsasser. No. 1,013,755; Jan. 2; Sp. p. 1471; Gaz. vol. 174; p. 232.
Map-rack. R. H. Bennett. No. 1,014,861; Jan. 16; Sp. p. 3960; Gaz. vol. 174; p. 670.
Marine boiler. E. King. No. 1,015,689; Jan. 23; Sp. p. 5746; Gaz. vol. 174; p. 978.
Marine transfer. T. S. Miller. No. 1,015,240; Jan. 16; Sp. p. 4727; Gaz. vol. 174; p. 797.
Marking-pot. C. A. Garvey. No. 1,014,294; Jan. 9; Sp. p. 2672; Gaz. vol. 174; p. 446.
Marline-spike. J. V. Anderson. No. 1,014,200; Jan. 9; Sp. p. 2454; Gaz. vol. 174; p. 412.
Mask, Base-ball. D. C. O'Shea. No. 1,016,020; Jan. 30; Sp. p. 6457; Gaz. vol. 174; p. 1123.
Massage-machine. W. G. Shockey. No. 1,013,824; Jan. 2; Sp. p. 1601; Gaz. vol. 174; p. 255.
Match-box. R. Muller. No. 1,014,167; Jan. 9; Sp. p. 2390; Gaz. vol. 174; p. 400.
Match-scratcher. E. M. Brown. No. 1,015,666; Jan. 23; Sp. p. 5680; Gaz. vol. 174; p. 971.
Match-splint-parallelizing machine. J. G. Sjöström. No. 1,014,914; Jan. 16; Sp. p. 4063; Gaz. vol. 174; p. 687.
Matrix-drying press. W. S. Hadaway, Jr. No. 1,015,953; Jan. 30; Sp. p. 6291; Gaz. vol. 174; p. 1095.
Matrix-setting and line-casting-machine. J. Dorneth. No. 1,015,479; Jan. 23; Sp. p. 5288; Gaz. vol. 174; p. 905.

Mattress. F. F. Schmitt. No. 1,014,261; Jan. 9; Sp. p. 2606; Gaz. vol. 174; p. 434.
Mattress and bed spring. O. R. Hunt. No. 1,013,294; Jan. 2; Sp. p. 463; Gaz. vol. 174; p. 72.
Mattress-rack. J. A. Marks. No. 1,013,413; Jan. 2; Sp. p. 713; Gaz. vol. 174; p. 118.
Mattress roll edges, Apparatus for forming. A. W. Kindel. No. 1,013,401; Jan. 2; Sp. p. 688; Gaz. vol. 174; p. 109.
Mausoleum. T. H. Rowland. No. 1,014,006; Jan. 9; Sp. p. 2248; Gaz. vol. 174; p. 376.
Measure, Computing-. D. H. Layne. No. 1,013,883; Jan. 9; Sp. p. 1773; Gaz. vol. 174; p. 304.
Measure, Tailor's. A. N. Walquist. No. 1,014,542; Jan. 9; Sp. p. 3172; Gaz. vol. 174; p. 528.
Measuring and calculating machine. E. A. Luster. No. 1,016,078; Jan. 30; Sp. p. 6573; Gaz. vol. 174; p. 1141.
Measuring and dispensing device. E. P. Smith. No. 1,014,343; Jan. 9; Sp. p. 2802; Gaz. vol. 174; p. 468.
Measuring and feeding materials, Apparatus for. F. B. Gilbreth. No. 1,014,645; Jan. 16; Sp. p. 3465; Gaz. vol. 174; p. 595.
Measuring instrument. P. N. Killinger. No. 1,014,232; Jan. 9; Sp. p. 2543; Gaz. vol. 174; p. 425.
Measuring instrument, Electric. H. W. Brown. No. 1,013,123; Jan. 2; Sp. p. 64; Gaz. vol. 174; p. 13.
Measuring instrument, Electric-current-. O. A. Knopp. No. 1,015,192; Jan. 16; Sp. p. 4634; Gaz. vol. 174; p. 781.
Measuring instrument, Weight-. E. S. Church. No. 1,013,641; Jan. 2; Sp. p. 1196; Gaz. vol. 174; p. 101.
Measuring interpupilary distance, Device for. C. M. Stevenson. No. 1,014,917; Jan. 16; Sp. p. 4075; Gaz. vol. 174; p. 688.
Measuring surface areas, Machine for. W. T. Hollis. No. 1,016,012; Jan. 30; Sp. p. 6419; Gaz. vol. 174; p. 1117.
Measuring tank, Liquid-. J. Riepp. No. 1,015,636; Jan. 23; Sp. p. 5620; Gaz. vol. 174; p. 961.
Measuring-tape-holding device. C. W. Kerr. No. 1,013,400; Jan. 2; Sp. p. 686; Gaz. vol. 174; p. 109.
Measuring the evaporation of liquids, Apparatus for. N. H. Freeman. No. 1,014,139; Jan. 9; Sp. p. 2337; Gaz. vol. 174; p. 391.
Meat-cutter. W. Walker and T. E. Hollings. No. 1,015,859; Jan. 30; Sp. p. 6001; Gaz. vol. 174; p. 1062.
Meat cutting and mincing machine knife. A. Schaarschmidt. No. 1,015,403; Jan. 23; Sp. p. 5103; Gaz. vol. 174; p. 880.
Mechanical movement. M. Christmann. No. 1,013,276; Jan. 2; Sp. p. 406; Gaz. vol. 174; p. 66.
Mechanical movement. W. H. Voss. No. 1,013,629; Jan. 2; Sp. p. 1171; Gaz. vol. 174; p. 186.
Mechanical movement. E. R. Seward. No. 1,014,184; Jan. 9; Sp. p. 2421; Gaz. vol. 174; p. 406.
Mechanical movement. T. A. C. Both. No. 1,015,860; Jan. 30; Sp. p. 6107; Gaz. vol. 174; p. 1065.
Mechanical movement and electric-light socket. T. A. C. Both. No. 1,014,443; Jan. 9; Sp. p. 2998; Gaz. vol. 174; p. 497.
Medicine to live stock, Apparatus for administering. W. A. Holliday. No. 1,014,474; Jan. 9; Sp. p. 3053; Gaz. vol. 174; p. 506.
Melting-furnace. W. W. Case. No. 1,013,838; Jan. 2; Sp. p. 1628; Gaz. vol. 174; p. 260.
Menu-card holder. W. H. Sawyer. No. 1,014,908; Jan. 16; Sp. p. 4056; Gaz. vol. 174; p. 685.
Mercury-converter. R. B. Ingram. No. 1,015,958; Jan. 30; Sp. p. 6302; Gaz. vol. 174; p. 1096.
Merry-go-round. J. Ney. No. 1,014,249; Jan. 9; Sp. p. 2585; Gaz. vol. 174; p. 431.
Metal-ball making, Holder for. F. Deemer. No. 1,014,746; Jan. 16; Sp. p. 3685; Gaz. vol. 174; p. 629.
Metal-bar-straightening machine. L. H. Brightman. No. 1,015,473; Jan. 23; Sp. p. 5274; Gaz. vol. 174; p. 903.
Metal, Making expanded. W. D. Forsyth. No. 1,015,264; Jan. 16; Sp. p. 4788; Gaz. vol. 174; p. 805.
Metal seat, Pressed-. R. T. J. Martin. No. 1,014,013; Jan. 9; Sp. p. 2060; Gaz. vol. 174; p. 348.
Metal-shaping machine. L. B. Kauffmann. No. 1,015,324; Jan. 23; Sp. p. 4935; Gaz. vol. 174; p. 853.
Metal structures, Making expanded-. H. E. White. No. 1,014,617; Jan. 9; Sp. p. 3342; Gaz. vol. 174; p. 554.
Metal tubes, rods, &c., Apparatus for galvanizing. F. Werth. No. 1,015,863; Jan. 30; Sp. p. 6006; Gaz. vol. 174; p. 1063.
Metals in vacuums, Apparatus for melting and mixing. W. S. Simpson. No. 1,015,091; Jan. 16; Sp. p. 4444; Gaz. vol. 174; p. 748.
Metallic tie and rail-fastener. D. C. Miller. No. 1,015,056; Jan. 16; Sp. p. 4385; Gaz. vol. 174; p. 736.
Metallurgical furnace. J. R. Moffitt. No. 1,014,971; Jan. 16; Sp. p. 4202; Gaz. vol. 174; p. 707.
Meter: *See* Water-meter.
Meter-box cover. J. P. Ryder. No. 1,015,907; Jan. 30; Sp. p. 6195; Gaz. vol. 174; p. 1080.
Milk and other liquids, Apparatus for treating. A. Fornander. No. 1,013,504; Jan. 2; Sp. p. 1089; Gaz. vol. 174; p. 175.
Milk and other liquids, Apparatus for treating. A. Fornander. No. 1,013,505; Jan. 2; Sp. p. 1091; Gaz. vol. 174; p. 175.
Milk-can. L. R. Steel. No. 1,013,693; Jan. 2; Sp. p. 1347; Gaz. vol. 174; p. 209.
Milk-can. E. M. Peacock. No. 1,013,810; Jan. 2; Sp. p. 1572; Gaz. vol. 174; p. 250.
Milk, Desiccating. J. Roen. No. 1,014,609; Jan. 9; Sp. p. 3325; Gaz. vol. 174; p. 551.
Milk, Desiccating. C. H. Campbell. No. 1,015,262; Jan. 16; Sp. p. 4785; Gaz. vol. 174; p. 805.
Milk-package. W. G. Brown. No. 1,013,639; Jan. 2; Sp. p. 1190; Gaz. vol. 174; p. 190.
Milking apparatus. D. T. Sharples. No. 1,014,671; Jan. 16; Sp. p. 3524; Gaz. vol. 174; p. 604.
Milking-machine. N. Rosengvist. No. 1,014,331; Jan. 9; Sp. p. 2759; Gaz. vol. 174; p. 459.
Milking-machine. C. E. Gane. No. 1,016,004; Jan. 30; Sp. p. 6401; Gaz. vol. 174; p. 1114.
Milking-machine teat-cup. F. A. Lane. No. 1,015,032; Jan. 16; Sp. p. 4330; Gaz. vol. 174; p. 728.
Mill: *See* Grinding-mill; Quartz-mill; Reducing-mill; Rolling-mill; Stamp-mill; Three-high-roll mill; Windmill.
Mine-door operator. P. Mace. No. 1,014,886; Jan 16; Sp. p. 4013; Gaz. vol. 174; p. 678.
Mines, Automatic speed-brake for submarine. F. Brück. No. 1,014,804; Jan. 16; Sp. p. 3816; Gaz. vol. 174; p. 649.
Miter-box. E. A. Schade and C. Bodmer. No. 1,013,319; Jan. 2; Sp. p. 516; Gaz. vol. 174; p. 81.
Miter-box. J. L. Stevens. No. 1,014,674; Jan. 16; Sp. p. 3540; Gaz. vol. 174; p. 605.
Miter-clamp. J. Orlandi. No. 1,015,336; Jan. 23; Sp. p. 4969; Gaz. vol. 174; p. 857.
Mixer: *See* Cake-mixer; Concrete-mixer; Gaseous-fuel mixer.
Mixer and stirrer. O. C. Nilson. No. 1,013,803; Jan. 2; Sp. p. 1561; Gaz. vol. 174; p. 248.
Mixer or beater. C. Forth. No. 1,014,382; Jan. 9; Sp. p. 2885; Gaz. vol. 174; p. 477.
Mixing apparatus. M. C. Peters. No. 1,013,612; Jan. 2; Sp. p. 1120; Gaz. vol. 174; p. 181.
Moistening and separating stamps and the like, Apparatus for. L. Katzenstein. No. 1,016,015; Jan. 30; Sp. p. 6425; Gaz. vol. 174; p. 1118.
Moistening machine, Strip-. M. Himoff. No. 1,016,011; Jan. 30; Sp. p. 6416; Gaz. vol. 174; p. 1116.
Mold: *See* Car-wheel mold; Caramel-mold; Type-mold; Vault-mold.
Mold. W. Parker and L. E. Campbell. No. 1,015,706; Jan. 23; Sp. p. 5774; Gaz. vol. 174; p. 984.
Molder's flask and band. J. F. Lamb. No. 1,014,761; Jan. 16; Sp. p. 3713; Gaz. vol. 174; p. 634.
Molding apparatus. W. G. Moore. No. 1,013,303; Jan. 2; Sp. p. 481; Gaz. vol. 174; p. 75.
Molding-machine. J. E. Wilcoxen. No. 1,015,463; Jan. 23; Sp. p. 5255; Gaz. vol. 174; p. 900.
Molding-machine. E. D. Misner. No. 1,015,576; Jan. 23; Sp. p. 5489; Gaz. vol. 174; p. 939.
Monkey-wrench. P. H. Burgart. No. 1,014,370; Jan. 9; Sp. p. 2860; Gaz. vol. 174; p. 473.
Monogram-panel. G. H. Line. No. 1,014,312; Jan. 9; Sp. p. 2710; Gaz. vol. 174; p. 452.
Monorail safety device. R. F. Codero. No. 1,015,140; Jan. 16; Sp. p. 4536; Gaz. vol. 174; p. 765.
Mop-wringer. W. McCloskey. No. 1,015,450; Jan. 23; Sp. p. 5211; Gaz. vol. 174; p. 896.
Motor: *See* Current-motor; Current or wave motor; Electric motor; Explosion-motor; Flue or draft motor; Fluid-pressure motor; Induction-motor; Rotary motor; Sea-motor; Single-phase motor; Spring-motor; Water-motor.
Motor. S. J. Webb. No. 1,015,411; Jan. 23; Sp. p. 5131; Gaz. vol. 174; p. 882.
Motor. J. H. Bonsteel. No. 1,015,663; Jan. 23; Sp. p. 5674; Gaz. vol. 174; p. 970.
Motor-controller. T. E. Barnum. No. 1,016,060; Jan. 30; Sp. p. 6526; Gaz. vol. 174; p. 1134.
Motor-controller, Automatic. T. D. Beintema and D. De Rooi. No. 1,015,283; Jan. 23; Sp. p. 4836; Gaz. vol. 174; p. 838.
Motor-controlling device. T. E. Barnum. No. 1,016,059; Jan. 30; Sp. p. 6521; Gaz. vol. 174; p. 1134.
Motor winding, Induction-. C. W. Starker. No. 1,015,912; Jan. 30; Sp. p. 6204; Gaz. vol. 174; p. 1082.
Motors, Centrifugal switch for alternating-current. T. Kargau. No. 1,013,780; Jan. 2; Sp. p. 1519; Gaz. vol. 174; p. 241.
Motors, Device for controlling the synchronism of two. F. E. Thormeyer. No. 1,013,331; Jan. 2; Sp. p. 530; Gaz. vol. 174; p. 86.
Motors, Squirrel-cage rotor for electric. G. Dunn. No. 1,013,753; Jan. 2; Sp. p. 1464; Gaz. vol. 174; p. 231.
Mouthpiece sanitary attachment. L. Block. No. 1,016,063; Jan. 30; Sp. p. 6536; Gaz. vol. 174; p. 1136.
Mower, Lawn-. G. W. Klock. No. 1,013,182; Jan. 2; Sp. p. 183; Gaz. vol. 174; p. 32.
Mower, Power-driven lawn-. H. S. Mustin. No. 1,014,663; Jan. 16; Sp. p. 3505; Gaz. vol. 174; p. 601.
Mowing-machine. T. J. Lann. No. 1,013,787; Jan. 2; Sp. p. 1527; Gaz. vol. 174; p. 243.
Mowing-machines, Vertical cutter attachment for. O. Kluge. No. 1,015,806; Jan. 30; Sp. p. 5975; Gaz. vol. 174; p. 1045.
Muffler. D. D. Helder. No. 1,015,955; Jan. 30; Sp. p. 6294; Gaz. vol. 174; p. 1095.
Multithrow switch. G. W. Hart. No. 1,014,300; Jan. 9; Sp. p. 2684; Gaz. vol. 174; p. 448.
Music-leaf turner. B. C. Ellerslck. No. 1,013,284; Jan. 2; Sp. p. 425; Gaz. vol. 174; p. 69.

Music-leaf turner. F. H. Post. No. 1,014,173; Jan. 9; Sp. p. 2401; Gaz. vol. 174; p. 402.
Music-leaf turner. B. F. Boutner. No. 1,015,092; Jan. 16; Sp. p. 4446; Gaz. vol. 174; p. 748.
Music-leaf turner. J. A. Bentz. No. 1,015,127; Jan. 16; Sp. p. 4515; Gaz. vol. 174; p. 760.
Music-leaf turner. P. Folan. No. 1,016,002; Jan. 30; Sp. p. 6397; Gaz. vol. 174; p. 1112.
Music-rack. J. Kugel. No. 1,013,784; Jan. 2; Sp. p. 1524; Gaz. vol. 174; p. 242.
Music-roll spool, Perforated-. J. W. Starkie. No. 1,016,235; Jan. 30; Sp. p. 6859; Gaz. vol. 174; p. 1192.
Music-spool head. W. S. Pain and F. L. Wood. No. 1,016,229; Jan. 30; Sp. p. 6848; Gaz. vol. 174; p. 1190.
Music-stand. W. N. Anderson. No. 1,013,718; Jan. 2; Sp. p. 1387; Gaz. vol. 174; p. 217.
Music stand and holder and carrying-case for the same, Combined. D. E. Force. No. 1,014,381; Jan. 9; Sp. p. 2883; Gaz. vol. 174; p. 477.
Music turner, Sheet-. P. G. McCollam. No. 1,015,574; Jan. 23; Sp. p. 5483; Gaz. vol. 174; p. 934.
Musical instruction, Game for. E. A. Bettin. No. 1,014,936; Jan. 16; Sp. p. 4127; Gaz. vol. 174; p. 695.
Musical-instrument case. J. Mosmop. No. 1,013,423; Jan. 2; Sp. p. 739; Gaz. vol. 174; p. 116.
Musical-instrument door-operating device. W. F. Bayer. No. 1,015,609; Jan. 23; Sp. p. 5554; Gaz. vol. 174; p. 951.
Musical-instrument reed holder and protector. V. Winquist. No. 1,016,055; Jan. 30; Sp. p. 6511; Gaz. vol. 174; p. 1133.
Musical instruments, Autopneumatic playing device for. C. Warren. No. 1,014,545; Jan. 9; Sp. p. 3176; Gaz. vol. 174; p. 529.
Musical instruments, Magazine-slot for coin-operated. P. Wiggen. No. 1,014,107; Jan. 9; Sp. p. 2280; Gaz. vol. 174; p. 380.
Musical instruments, Step-feed for automatic modifying devices for automatic. M. Clark. No. 1,013,862; Jan. 9; Sp. p. 1720; Gaz. vol. 174; p. 298.
Musical instruments, Tuning device for self-playing. J. Wauters. No. 1,014,925; Jan. 16; Sp. p. 4107; Gaz. vol. 174; p. 692.
Musical record. J. C. Sherman. No. 1,013,519; Jan. 2; Sp. p. 937; Gaz. vol. 174; p. 150.
Musical sounds, Method of and mechanism for producing. G. Breed. (Reissue.) No. 13,365; Jan. 23; Sp. p. 5896; Gaz. vol. 174; p. 1005.
Nails and pins, Machine for making wire. J. Wikschtröm. No. 1,014,732; Jan. 16; Sp. p. 3657; Gaz. vol. 174; p. 625.
Napping-machine drum. J. A. Praray and H. S. Greene. No. 1,016,174; Jan. 30; Sp. p. 6740; Gaz. vol. 174; p. 1172.
Nasal expander. F. M. McConnell. No. 1,014,076; Jan. 9; Sp. p. 2208; Gaz. vol. 174; p. 369.
Neck-protector for coats. F. G. Curtis. No. 1,016,214; Jan. 30; Sp. p. 6818; Gaz. vol. 174; p. 1185.
Necktie. D. Samuels. No. 1,015,840; Jan. 30; Sp. p. 6048; Gaz. vol. 174; p. 1056.
Necktie-holder. C. H. Ohly. No. 1,015,506; Jan. 23; Sp. p. 5333; Gaz. vol. 174; p. 915.
Neckties, buttons, pins, &c., Holder for. J. Macdonald. No. 1,014,499; Jan. 9; Sp. p. 3097; Gaz. vol. 174; p. 514.
Nest, Laying-. J. H. McElroy. No. 1,014,316; Jan. 9; Sp. p. 2721; Gaz. vol. 174; p. 453.
Neutralizing-cell and axis-indicator. C. H. Pixley. No. 1,015,260; Jan. 16; Sp. p. 4797; Gaz. vol. 174; p. 807.
Nipple-holder. G. J. Thomas. No. 1,014,920; Jan. 16; Sp. p. 4083; Gaz. vol. 174; p. 690.
Nitrates, Making. C. Bosch and W. Wild. No. 1,013,984; Jan. 9; Sp. p. 2004; Gaz. vol. 174; p. 339.
Nitro-phenyl nitro-methanes, their homologues and derivatives, Manufacture of. J. Koetschet and A. Barbier. No. 1,015,496; Jan. 23; Sp. p. 5321; Gaz. vol. 174; p. 912.
Nitro-phenyl nitro-methanes, their homologues and derivatives, Manufacture of. J. Koetschet and A. Barbier. No. 1,015,691; Jan. 23; Sp. p. 5749; Gaz. vol. 174; p. 970.
Nitrogenous compounds, Preparing. L. L. Summers. No. 1,013,490; Jan. 2; Sp. p. 804; Gaz. vol. 174; p. 129.
Non-toxic suprarenal preparation. G. Zuelser. No. 1,014,198; Jan. 9; Sp. p. 2452; Gaz. vol. 174; p. 412.
Nostril-expanding device. A. C. Knowlson. No. 1,014,758; Jan. 16; Sp. p. 3709; Gaz. vol. 174; p. 633.
Nozzle for disinfectant and wall-paper-removing apparatus. J. Andres. No. 1,016,197; Jan. 30; Sp. p. 6782; Gaz. vol. 174; p. 1179.
Nut. Adjustable axle-. L. Beck. No. 1,015,124; Jan. 16; Sp. p. 4511; Gaz. vol. 174; p. 760.
Nut-cracking device. T. Jankosky. No. 1,013,168; Jan. 2; Sp. p. 163; Gaz. vol. 174; p. 28.
Nut-lock. L. L. Swenson. No. 1,013,521; Jan. 2; Sp. p. 940; Gaz. vol. 174; p. 151.
Nut-lock. J. H. Harvey. No. 1,013,550; Jan. 2; Sp. p. 1002; Gaz. vol. 174; p. 161.
Nut-lock. J. De Haven. No. 1,013,866; Jan. 9; Sp. p. 1734; Gaz. vol. 174; p. 299.
Nut-lock. L. W. Huber. No. 1,015,316; Jan. 23; Sp. p. 4912; Gaz. vol. 174; p. 850.
Nut-lock. A. M. MacFarland. No. 1,015,571; Jan. 23; Sp. p. 5479; Gaz. vol. 174; p. 937.
Nut-lock. I. C. Hawes. No. 1,016,146; Jan. 30; Sp. p. 6696; Gaz. vol. 174; p. 1164.
Nut-lock. A. M. Heath. No. 1,016,147; Jan. 30; Sp. p. 6697; Gaz. vol. 174; p. 1164.
Nut-lock. J. L. Tinnin. No. 1,016,237; Jan. 30; Sp. p. 6860; Gaz. vol. 174; p. 1192.
Nut-locking device. W. F. Morgan. No. 1,015,059; Jan. 16; Sp. p. 4389; Gaz. vol. 174; p. 737.
Oar. T. Baumert. No. 1,014,281; Jan. 9; Sp. p. 2648; Gaz. vol. 174; p. 441.
Offset device. J. E. Miles. No. 1,016,082; Jan. 30; Sp. p. 6563; Gaz. vol. 174; p. 1143.
Oil-burner. G. B. Von Boden and E. F. Ingles. No. 1,014,924; Jan. 16; Sp. p. 4106; Gaz. vol. 174; p. 691.
Oil-burner. M. L. Bulson. No. 1,014,999; Jan. 16; Sp. p. 4270; Gaz. vol. 174; p. 717.
Oil-burner. H. L. Braly. No. 1,015,288; Jan. 23; Sp. p. 4849; Gaz. vol. 174; p. 840.
Oil-burner. L. A. Thomas and A. B. Bailey. No. 1,015,410; Jan. 23; Sp. p. 5130; Gaz. vol. 174; p. 881.
Oil-burner. J. A. Daniel. No. 1,015,907; Jan. 30; Sp. p. 6388; Gaz. vol. 174; p. 1111.
Oil-burner. A. R. Kunkel. No. 1,016,018; Jan. 30; Sp. p. 6429; Gaz. vol. 174; p. 1119.
Oil-can. M. T. and W. C. Axelton. No. 1,013,105; Jan. 2; Sp. p. 17; Gaz. vol. 174; p. 6.
Oil-can. T. W. Alexander. No. 1,016,121; Jan. 30; Sp. p. 6648; Gaz. vol. 174; p. 1156.
Oil-cloth rack. C. C. Sisler. No. 1,014,528; Jan. 9; Sp. p. 3152; Gaz. vol. 174; p. 524.
Oil-feed mechanism. W. G. Schaeffer. No. 1,014,855; Jan. 16; Sp. p. 3946; Gaz. vol. 174; p. 668.
Oil, Floor-. C. Ellis. No. 1,013,538; Jan. 2; Sp. p. 980; Gaz. vol. 174; p. 157.
Oils for the production of asphalt and the recovery of lighter products, Method of and apparatus for treating asphaltic. F. H. Dunham. No. 1,013,283; Jan. 2; Sp. p. 423; Gaz. vol. 174; p. 68.
Oiling device for bearings, Positive. W. S. Sutton. No. 1,015,095; Jan. 16; Sp. p. 4452; Gaz. vol. 174; p. 749.
Oiling device, Gasolene-engine-. W. E. Adams and W. J. Murray. No. 1,015,466; Jan. 23; Sp. p. 5261; Gaz. vol. 174; p. 901.
Oleum, Making. T. L. Briggs and H. F. Merriam. No. 1,013,638; Jan. 2; Sp. p. 1187; Gaz. vol. 174; p. 190.
ω-para-alkyloxyphenylethylamins and their n-alkyl derivatives, Producing. G. Reinicke. No. 1,016,092; Jan. 30; Sp. p. 6601; Gaz. vol. 174; p. 1146.
Opener and lap-machine. J. C. Potter. No. 1,015,834; Jan. 30; Sp. p. 6035; Gaz. vol. 174; p. 1054.
Operating-table, X-ray. E. W. Kelly. No. 1,015,187; Jan. 16; Sp. p. 4618; Gaz. vol. 174; p. 779.
Ordnance explosive charge. H. Maxim. No. 1,015,814; Jan. 30; Sp. p. 5988; Gaz. vol. 174; p. 1047.
Ore-concentrating machine. O. H. King. No. 1,014,327; Jan. 16; Sp. p. 3874; Gaz. vol. 174; p. 657.
Ore-concentrator. I. F. Monell. No. 1,013,205; Jan. 2; Sp. p. 234; Gaz. vol. 174; p. 40.
Ore separation, Liquid. F. I. Du Pont. No. 1,014,624; Jan. 9; Sp. p. 3367; Gaz. vol. 174; p. 557.
Ores, Apparatus for the wet dressing of sulfid. B. S. Smith. No. 1,014,977; Jan. 16; Sp. p. 4218; Gaz. vol. 174; p. 710.
Ores, Reduction of. W. Koehler. No. 1,013,498; Jan. 2; Sp. p. 896; Gaz. vol. 174; p. 143.
Organ-pipes, Metal pipe-foot with wooden jacket for. W. A. Sommerhof. No. 1,013,570; Jan. 2; Sp. p. 1036; Gaz. vol. 174; p. 167.
Oven, R. P. Helman. No. 1,014,149; Jan. 9; Sp. p. 2352; Gaz. vol. 174; p. 393.
Oven-door. W. E. Huenefeld. No. 1,013,390; Jan. 2; Sp. p. 668; Gaz. vol. 174; p. 105.
Oven, refrigerator, and similar receptacle. E. Richardson. No. 1,013,313; Jan. 2; Sp. p. 504; Gaz. vol. 174; p. 79.
Oven, Warming-. M. C. Munson. No. 1,014,325; Jan. 9; Sp. p. 2740; Gaz. vol. 174; p. 457.
Overshoe and legging, Waterproof. E. L. Hall. No. 1,014,873; Jan. 16; Sp. p. 3984; Gaz. vol. 174; p. 674.
Oxid, Obtaining titanic. G. Weintraub. No. 1,014,793; Jan. 16; Sp. p. 3795; Gaz. vol. 174; p. 645.
Oxygen and nitrogen from the atmosphere, Obtaining and separating. G. Kassner. No. 1,015,566; Jan. 23; Sp. p. 5462; Gaz. vol. 174; p. 936.
Package and toy, Combined. G. H. Kay. No. 1,013,941; Jan. 9; Sp. p. 1906; Gaz. vol. 174; p. 324.
Package-binder. A. E. Morgan. No. 1,014,506; Jan. 9; Sp. p. 3112; Gaz. vol. 174; p. 517.
Package-reacher. E. O. Tetrault. No. 1,014,785; Jan. 16; Sp. p. 3780; Gaz. vol. 174; p. 642.
Package, Sealed. J. W. Henson. No. 1,016,149; Jan. 30; Sp. p. 6699; Gaz. vol. 174; p. 1164.
Packing. J. V. Clark. No. 1,013,745; Jan. 2; Sp. p. 1450; Gaz. vol. 174; p. 226.
Packing apparatus, Vacuum. G. Staunton. No. 1,013,230; Jan. 2; Sp. p. 311; Gaz. vol. 174; p. 49.
Packing, Liquid. W. K. Richardson. No. 1,014,850; Jan. 16; Sp. p. 3933; Gaz. vol. 174; p. 666.
Packing loose material. Apparatus for. W. A. Cornbrooks. No. 1,013,277; Jan. 2; Sp. p. 408; Gaz. vol. 174; p. 66.
Packing, Lubricating-. W. H. Drury. No. 1,015,727; Jan. 23; Sp. p. 5809; Gaz. vol. 174; p. 991.
Pad: *See* Harness-pad; Heating-pad; Manifolding-pad.
Padlock, Puzzle-. W. S. Rogers. No. 1,013,566; Jan. 2; Sp. p. 1030; Gaz. vol. 174; p. 165.
Page-turning device. S. C. King. No. 1,013,781; Jan. 2; Sp. p. 1520; Gaz. vol. 174; p. 241.

Pail attachment, Milking-. W. W. Kimmel. No. 1,015,189; Jan. 16; Sp. p. 4628; Gaz. vol. 174; p. 780.
Paint-testing method and apparatus. A. M. Muckenfuss. No. 1,014,842; Jan. 16; Sp. p. 3911; Gaz. vol. 174; p. 663.
Pamphlets or magazines, Making. B. C. Seymour. No. 1,015,745; Jan. 23; Sp. p. 5850; Gaz. vol. 174; p. 997.
Pan: *See* Bread-pan; Dish-washing pan; Evaporating-pan.
Panel-operating device. A. Krall. No. 1,015,029; Jan. 16; Sp. p. 4323; Gaz. vol. 174; p. 727.
Pantograph. A. B. Lyon. No. 1,014,012; Jan. 9; Sp. p. 2059; Gaz. vol. 174; p. 347.
Paper, Artificially-strengthened. A. Smith. No. 1,014,841; Jan. 9; Sp. p. 2790; Gaz. vol. 174; p. 463.
Paper-bag. D. Cutler. No. 1,015,007; Jan. 16; Sp. p. 4284; Gaz. vol. 174; p. 720.
Paper-bag holder. O. R. Hammer. No. 1,014,300; Jan. 9; Sp. p. 2901; Gaz. vol. 174; p. 480.
Paper-board, Reinforced. E. D. Bennett. No. 1,014,996; Jan. 16; Sp. p. 4263; Gaz. vol. 174; p. 716.
Paper-box junction device. H. N. Gores. No. 1,014,297; Jan. 9; Sp. p. 2677; Gaz. vol. 174; p. 447.
Paper-cleaner holder, Wall-. W. J. Rowley and J. G. Albright. No. 1,015,210; Jan. 16; Sp. p. 4666; Gaz. vol. 174; p. 788.
Paper-creasing machine. G. H. Mallam. No. 1,013,411; Jan. 2; Sp. p. 704; Gaz. vol. 174; p. 112.
Paper-cutter. M. Boyd. No. 1,014,041; Jan. 9; Sp. p. 2136; Gaz. vol. 174; p. 357.
Paper-cutter. C. P. Christensen. No. 1,014,567; Jan. 9; Sp. p. 3221; Gaz. vol. 174; p. 536.
Paper-facing machine, Corrugated-. J. N. Hahn. No. 1,015,385; Jan. 23; Sp. p. 5069; Gaz. vol. 174; p. 874.
Paper-feeding device. A. D. Pejeau. No. 1,013,808; Jan. 2; Sp. p. 491; Gaz. vol. 174; p. 77.
Paper-feeds, Back-stop attachment for. F. A. Hazard. No. 1,014,147; Jan. 9; Sp. p. 2349; Gaz. vol. 174; p. 393.
Paper-folder. L. A. Nichols. No. 1,015,580; Jan. 23; Sp. p. 5497; Gaz. vol. 174; p. 940.
Paper-making machine. F. H. Fuller. No. 1,013,288; Jan. 2; Sp. p. 452; Gaz. vol. 174; p. 70.
Paper-perforating device. B. F. Berry. No. 1,014,442; Jan. 9; Sp. p. 2997; Gaz. vol. 174; p. 497.
Paper receptacles, Forming. H. S. Wilson. No. 1,015,370; Jan. 23; Sp. p. 5034; Gaz. vol. 174; p. 860.
Paper receptacles, Machine for making. K. Otting. No. 1,015,268; Jan. 16; Sp. p. 4795; Gaz. vol. 174; p. 807.
Paper-tying apparatus or loose-leaf binder. T. F. Campbell. No. 1,013,125; Jan. 2; Sp. p. 75; Gaz. vol. 174; p. 14.
Paper-watermarking device. H. Brown. No. 1,014,635; Jan. 16; Sp. p. 3447; Gaz. vol. 174; p. 592.
Paper wrapper. W. H. Fairchild. No. 1,013,143; Jan. 2; Sp. p. 104; Gaz. vol. 174; p. 10.
Papers, Apparatus for removing impurities from pulped waste. J. M. Burby. No. 1,013,529; Jan. 2; Sp. p. 958; Gaz. vol. 174; p. 154.
Paring-machine. H. T. Donovan. No. 1,013,280; Jan. 2; Sp. p. 414; Gaz. vol. 174; p. 67.
Patient-supporter. C. Madsen. No. 1,015,812; Jan. 30; Sp. p. 5985; Gaz. vol. 174; p. 1047.
Pattern-machine. C. W. Conger. No. 1,013,130; Jan. 2; Sp. p. 81; Gaz. vol. 174; p. 15.
Pen-dropper. D. H. Byrd. No. 1,014,447; Jan. 9; Sp. p. 3010; Gaz. vol. 174; p. 499.
Peach-brushing apparatus. T. J. Miller and G. Allsup. No. 1,013,606; Jan. 2; Sp. p. 908; Gaz. vol. 174; p. 145.
Peat-block-turning apparatus. T. A. Mighill. No. 1,015,890; Jan. 23; Sp. p. 5079; Gaz. vol. 174; p. 875.
Pedal-locking mechanism. J. W. Lambert. No. 1,014,069; Jan. 9; Sp. p. 2194; Gaz. vol. 174; p. 369.
Pedal mechanism. G. P. Brand. No. 1,013,857; Jan. 9; Sp. p. 1708; Gaz. vol. 174; p. 295.
Pegwood-sharpener. A. C. Fisher. No. 1,016,182; Jan. 30; Sp. p. 6671; Gaz. vol. 174; p. 1159.
Pen attachment, Fountain-. A. Napolitano. No. 1,015,702; Jan. 23; Sp. p. 5765; Gaz. vol. 174; p. 983.
Penholder. W. J. Eicher. No. 1,015,157; Jan. 16; Sp. p. 4567; Gaz. vol. 174; p. 770.
Pencil-sharpener. E. B. Welles. No. 1,016,117; Jan. 30; Sp. p. 6640; Gaz. vol. 174; p. 1154.
Percolator. O. Selg. No. 1,015,407; Jan. 23; Sp. p. 5125; Gaz. vol. 174; p. 880.
Percussive apparatus, Valve device for hydraulically-controlled self-feeding. W. Mause. No. 1,015,449; Jan. 23; Sp. p. 5209; Gaz. vol. 174; p. 895.
Percussive drill, hammer, or like percussive tool or machine. A. Sykes. No. 1,014,979; Jan. 16; Sp. p. 4222; Gaz. vol. 174; p. 710.
Percussive tool. A. G. Grice. No. 1,015,732; Jan. 23; Sp. p. 5823; Gaz. vol. 174; p. 992.
Perforating-machine. A. C. Stone. No. 1,015,356; Jan. 23; Sp. p. 5007; Gaz. vol. 174; p. 865.
Peroxid, Making alkali-earth. F. Bergius. No. 1,015,286; Jan. 23; Sp. p. 4843; Gaz. vol. 174; p. 840.
Persimmons, &c., Treating Japanese. H. C. Gore. No. 1,015,950; Jan. 30; Sp. p. 6285; Gaz. vol. 174; p. 1094.
Petroleum, Utilising acid sludge from refining. C. I. Robinson. No. 1,014,520; Jan. 9; Sp. p. 3138; Gaz. vol. 174; p. 522.
Phonograph. J. B. Millet. No. 1,013,421; Jan. 2; Sp. p. 735; Gaz. vol. 174; p. 116.
Phonograph-record cabinet. P. Scholl. No. 1,015,844; Jan. 30; Sp. p. 6058; Gaz. vol. 174; p. 1057.
Phonograph style-bar. M. E. Meadowcroft. No. 1,013,198; Jan. 2; Sp. p. 223; Gaz. vol. 174; p. 58.
Phosphates, Treatment of. N. P. Pratt. No. 1,014,254; Jan. 9; Sp. p. 2594; Gaz. vol. 174; p. 433.
Phosphates, Treatment of. N. P. Pratt. No. 1,014,255; Jan. 9; Sp. p. 2596; Gaz. vol. 174; p. 433.
Phosphorus trioxid, Making. S. Peacock. No. 1,015,707; Jan. 23; Sp. p. 5775; Gaz. vol. 174; p. 984.
Photographic apparatus. H. Faulkner. No. 1,013,285; Jan. 2; Sp. p. 427; Gaz. vol. 174; p. 69.
Photographic apparatus. H. Faulkner. No. 1,013,286; Jan. 2; Sp. p. 440; Gaz. vol. 174; p. 69.
Photographic apparatus. J. C. Calhoun. No. 1,015,293; Jan. 23; Sp. p. 4856; Gaz. vol. 174; p. 842.
Photographic negative and producing the same. A. W. McCurdy. No. 1,014,970; Jan. 16; Sp. p. 4200; Gaz. vol. 174; p. 707.
Photographic plate or film holder and camera adapted to receive the same. S. K. Bohlin. No. 1,015,130; Jan. 16; Sp. p. 4519; Gaz. vol. 174; p. 761.
Photographic-printing apparatus. J. A. Meiser. No. 1,014,767; Jan. 16; Sp. p. 3734; Gaz. vol. 174; p. 636.
Photographic-printing machine. T. S. and E. H. Higginbotham. No. 1,013,492; Jan. 2; Sp. p. 883; Gaz. vol. 174; p. 141.
Photographic-printing machine. G. R. Olson. No. 1,013,950; Jan. 9; Sp. p. 1924; Gaz. vol. 174; p. 327.
Photographic-printing machine. W. C. Huebner. No. 1,015,681; Jan. 23; Sp. p. 5705; Gaz. vol. 174; p. 976.
Photography, Bleach-out process of color. J. H. Smith and W. Merckens. No. 1,013,458; Jan. 2; Sp. p. 800; Gaz. vol. 174; p. 128.
Photometer attachment. C. H. Sharp and P. S. Millar. No. 1,015,515; Jan. 23; Sp. p. 5347; Gaz. vol. 174; p. 917.
Piano-action. L. Avisus and A. Doll. No. 1,014,201; Jan. 9; Sp. p. 2454; Gaz. vol. 174; p. 412.
Piano-bench. A. D. Cassidy. No. 1,015,781; Jan. 30; Sp. p. 5926; Gaz. vol. 174; p. 1037.
Piano-case. J. C. Smith. No. 1,013,526; Jan. 2; Sp. p. 529; Gaz. vol. 174; p. 84.
Piano, Chime-. J. Richmond. No. 1,016,094; Jan. 30; Sp. p. 6602; Gaz. vol. 174; p. 1147.
Piano, Interior-player. M. Clark. No. 1,014,809; Jan. 16; Sp. p. 3824; Gaz. vol. 174; p. 650.
Piano, Interior-player. M. Clark. No. 1,014,810; Jan. 16; Sp. p. 3826; Gaz. vol. 174; p. 651.
Piano, Interior-player. M. Clark. No. 1,014,811; Jan. 16; Sp. p. 3828; Gaz. vol. 174; p. 651.
Piano, Interior-player. M. Clark. No. 1,014,864; Jan. 16; Sp. p. 3960; Gaz. vol. 174; p. 671.
Piano, Interior-player. M. Clark. No. 1,014,949; Jan. 16; Sp. p. 4159; Gaz. vol. 174; p. 699.
Piano-lock. C. Logan, Jr. No. 1,014,159; Jan. 9; Sp. p. 2375; Gaz. vol. 174; p. 397.
Piano-player. I. L. Grinnell. No. 1,014,050; Jan. 9; Sp. p. 2172; Gaz. vol. 174; p. 363.
Piano-player and talking-machine, Combined. W. M. Davis. No. 1,013,589; Jan. 2; Sp. p. 1070; Gaz. vol. 174; p. 173.
Piano, Pneumatic. W. G. Betz. No. 1,014,364; Jan. 9; Sp. p. 2850; Gaz. vol. 174; p. 471.
Piano, Violin-. J. L. Warner. No. 1,015,402; Jan. 23; Sp. p. 5262; Gaz. vol. 174; p. 900.
Pianos and similar instruments, Machine for automatically playing. A. W. Nunn. No. 1,014,606; Jan. 9; Sp. p. 3313; Gaz. vol. 174; p. 550.
Pianos, Rewinding device for pneumatic. W. G. Betz. No. 1,015,128; Jan. 16; Sp. p. 4516; Gaz. vol. 174; p. 761.
Pianoforte. A. O. Lechner. No. 1,013,604; Jan. 2; Sp. p. 1108; Gaz. vol. 174; p. 178.
Pick, Miner's. F. E. Derschmidt. No. 1,014,575; Jan. 9; Sp. p. 3237; Gaz. vol. 174; p. 539.
Picker: *See* Fruit-picker; Shaker-picker; Slate-picker.
Picker-check. C. N. Tucker. No. 1,013,335; Jan. 2; Sp. p. 547; Gaz. vol. 174; p. 87.
Picture. D. Kovacs. No. 1,014,759; Jan. 16; Sp. p. 3710; Gaz. vol. 174; p. 633.
Picture apparatus, Moving-. J. F. Whitfield. No. 1,015,107; Jan. 16; Sp. p. 4475; Gaz. vol. 174; p. 754.
Piles, Method of and apparatus for applying protecting-covering to. J. P. Fox and H. L. Hatcher. No. 1,013,758; Jan. 2; Sp. p. 1476; Gaz. vol. 174; p. 233.
Piles, posts, and the like, Withdrawing of. A. Gibb, T. G. Menzies, and R. Chalmers. No. 1,014,295; Jan. 9; Sp. p. 2674; Gaz. vol. 174; p. 446.
Pillow-sham holder. W. C. Styles. No. 1,013,697; Jan. 2; Sp. p. 1351; Gaz. vol. 174; p. 210.
Pilot-house light. J. H. Buxbaum. No. 1,016,205; Jan. 30; Sp. p. 6804; Gaz. vol. 174; p. 1182.
Pin: *See* Hair-pin; Insulator-pin; Safety-pin.
Pin-lock. L. R. Steel. No. 1,014,915; Jan. 16; Sp. p. 4068; Gaz. vol. 174; p. 688.
Pin safety-lock. S. J. E. Wilhjelm. No. 1,015,603; Jan. 23; Sp. p. 5546; Gaz. vol. 174; p. 950.
Pipe: *See* Concrete pipe; Gas-pipe; Tobacco-pipe.
Pipe and like coupling. E. Dolensky. No. 1,014,053; Jan. 9; Sp. p. 2163; Gaz. vol. 174; p. 361.
Pipe-bending machine. J. F. Cox. No. 1,013,839; Jan. 2; Sp. p. 1629; Gaz. vol. 174; p. 261.

Pipe-clamp. G. W. Hunt. No. 1,013,165; Jan. 2; Sp. p. 156; Gaz. vol. 174; p. 27.
Pipe-clamp. S. G. Miller. No. 1,014,504; Jan. 9; Sp. p. 3109; Gaz. vol. 174; p. 516.
Pipe connection, Train-. W. A. Greenlaw and R. A. Jewett. No. 1,015,435; Jan. 23; Sp. p. 5183; Gaz. vol. 174; p. 890.
Pipe-coupling. H. W. Clark. No. 1,015,990; Jan. 30; Sp. p. 6372; Gaz. vol. 174; p. 1109.
Pipe coupling and valve, Combined train-. J. M. Michaelson. No. 1,013,418; Jan. 2; Sp. p. 728; Gaz. vol. 174; p. 115.
Pipe-covering, Applying. F. M. Gilmore. No. 1,013,291; Jan. 2; Sp. p. 458; Gaz. vol. 174; p. 71.
Pipe-end-closing device. W. A. Fleming. No. 1,013,932; Jan. 9; Sp. p. 1891; Gaz. vol. 174; p. 322.
Pipe-forming apparatus. G. M. Myers. No. 1,015,334; Jan. 23; Sp. p. 4967; Gaz. vol. 174; p. 857.
Pipe-hanger. H. M. Lofton, E. E. Butler, and R. M. Hunter. No. 1,013,187; Jan. 2; Sp. p. 190; Gaz. vol. 174; p. 34.
Pipe-joint, Expansion. J. W. Wyton. No. 1,013,258; Jan. 2; Sp. p. 367; Gaz. vol. 174; p. 59.
Pipe-joint, Swivel. N. F. Niederlander and R. E. Adreon. No. 1,015,904; Jan. 30; Sp. p. 6191; Gaz. vol. 174; p. 1079.
Pipe-laying machine. M. H. Keeler. No. 1,015,893; Jan. 30; Sp. p. 6166; Gaz. vol. 174; p. 1075.
Pipe-perforator. C. E. Frederickson. No. 1,015,432; Jan. 23; Sp. p. 5172; Gaz. vol. 174; p. 889.
Pipe-tapping means. C. W. Metcalf. No. 1,016,026; Jan. 30; Sp. p. 6445; Gaz. vol. 174; p. 1122.
Pipe-thawing, Electric heater for. T. Abtmeyer. No. 1,015,923; Jan. 30; Sp. p. 6225; Gaz. vol. 174; p. 1085.
Pipe-threading machine. W. M. Neckerman. No. 1,013,212; Jan. 2; Sp. p. 255; Gaz. vol. 174; p. 42.
Pipe-wrench. J. Maher. No. 1,016,079; Jan. 30; Sp. p. 6576; Gaz. vol. 174; p. 1141.
Pipe-wrench, Chain. G. Amborn. No. 1,014,931; Jan. 16; Sp. p. 4117; Gaz. vol. 174; p. 693.
Pipe-wrench, Chain. D. Caryl. No. 1,015,667; Jan. 23; Sp. p. 5681; Gaz. vol. 174; p. 971.
Piston. H. Dock. No. 1,014,052; Jan. 9; Sp. p. 2162; Gaz. vol. 174; p. 361.
Piston. M. V. Smith. No. 1,014,782; Jan. 16; Sp. p. 3767; Gaz. vol. 174; p. 641.
Piston-ring collar. J. J. Whitty. No. 1,013,349; Jan. 2; Sp. p. 578; Gaz. vol. 174; p. 92.
Piston-rod connection. C. B. Redrup. No. 1,014,517; Jan. 9; Sp. p. 3133; Gaz. vol. 174; p. 521.
Pit-cover. J. C. Cromwell. No. 1,013,278; Jan. 2; Sp. p. 411; Gaz. vol. 174; p. 66.
Planer-beds or similar purposes, Mechanism for reciprocating. L. T. Houghton. No. 1,014,706; Jan. 16; Sp. p. 3504; Gaz. vol. 174; p. 616.
Planing machine, Metal-. A. M. Powell. No. 1,013,439; Jan. 2; Sp. p. 767; Gaz. vol. 174; p. 122.
Planter attachment, Corn-. A. B. Chance. No. 1,014,206; Jan. 9; Sp. p. 2464; Gaz. vol. 174; p. 414.
Planter, Corn-. A. F. Keeter. No. 1,014,064; Jan. 9; Sp. p. 2183; Gaz. vol. 174; p. 365.
Planter, Potato-. C. Hansen. No. 1,015,177; Jan. 16; Sp. p. 4602; Gaz. vol. 174; p. 776.
Planter, Tobacco-. A. Larose. No. 1,014,655; Jan. 16; Sp. p. 3490; Gaz. vol. 174; p. 598.
Planting-machine. C. E. Patric. No. 1,015,245; Jan. 16; Sp. p. 4738; Gaz. vol. 174; p. 799.
Plants, Apparatus for dissecting pulpy and fibrous. F. F. Strong. No. 1,013,235; Jan. 2; Sp. p. 320; Gaz. vol. 174; p. 51.
Plaster division-strip. G. S. Knapp. No. 1,016,074; Jan. 30; Sp. p. 6567; Gaz. vol. 174; p. 1140.
Plate-changing device, Automatic. E. W. Kelly. No. 1,015,027; Jan. 16; Sp. p. 4318; Gaz. vol. 174; p. 726.
Platform-adjuster. J. R. Teller. No. 1,016,047; Jan. 30; Sp. p. 6497; Gaz. vol. 174; p. 1130.
Plow. F. M. Lemarr. No. 1,013,667; Jan. 2; Sp. p. 1276; Gaz. vol. 174; p. 200.
Plow. J. Sramek. No. 1,014,265; Jan. 9; Sp. p. 2612; Gaz. vol. 174; p. 435.
Plow. W. G. Danielsen. No. 1,014,379; Jan. 9; Sp. p. 2879; Gaz. vol. 174; p. 476.
Plow. H. Heer. No. 1,014,470; Jan. 9; Sp. p. 3048; Gaz. vol. 174; p. 505.
Plow. J. T. Chambers. No. 1,015,003; Jan. 16; Sp. p. 4277; Gaz. vol. 174; p. 718.
Plow. F. E. Davis. No. 1,015,301; Jan. 23; Sp. p. 4879; Gaz. vol. 174; p. 845.
Plow. F. L. Ezell. No. 1,015,672; Jan. 23; Sp. p. 5692; Gaz. vol. 174; p. 972.
Plow, Disk. O. M. Cox. No. 1,015,544; Jan. 23; Sp. p. 5408; Gaz. vol. 174; p. 927.
Plow, Gang-. N. Weller. No. 1,014,987; Jan. 16; Sp. p. 4236; Gaz. vol. 174; p. 713.
Plow, Gang-. A. B. Neugardt. No. 1,015,826; Jan. 30; Sp. p. 6016; Gaz. vol. 174; p. 1051.
Plow-lifting mechanism, Gang-. T. J. Chandonnet. No. 1,013,740; Jan. 2; Sp. p. 1440; Gaz. vol. 174; p. 226.
Plow, Rotary. W. E. Cooke. No. 1,013,587; Jan. 2; Sp. p. 1066; Gaz. vol. 174; p. 172.
Plows and cultivators, Adjustable weed-hook for. A. M. Donald. No. 1,015,756; Jan. 23; Sp. p. 5871; Gaz. vol. 174; p. 1001.
Plunger device. G. H. Rowe. No. 1,015,084; Jan. 16; Sp. p. 4430; Gaz. vol. 174; p. 745.
Pneumatic cleaning apparatus, Vacuum-controller for. J. S. Thurman and J. A. Dunlap. No. 1,014,720; Jan. 16; Sp. p. 3650; Gaz. vol. 174; p. 624.
Pneumatic cleaning-machine. M. S. Wright. No. 1,015,372; Jan. 23; Sp. p. 5042; Gaz. vol. 174; p. 870.
Pneumatic-despatch-tube apparatus. E. A. Fordyce. No. 1,013,148; Jan. 2; Sp. p. 113; Gaz. vol. 174; p. 21.
Pneumatic wheel. J. W. Livingston. No. 1,013,554; Jan. 2; Sp. p. 1010; Gaz. vol. 174; p. 162.
Pocket. J. M. Kaiser. No. 1,014,307; Jan. 9; Sp. p. 2697; Gaz. vol. 174; p. 450.
Pocket-book, Combination. H. M. Walsh. No. 1,014,104; Jan. 9; Sp. p. 2272; Gaz. vol. 174; p. 378.
Pocket-books and the like, Holder for. J. Babst. No. 1,013,580; Jan. 2; Sp. p. 1054; Gaz. vol. 174; p. 170.
Pocket-clip. M. Marcucci. No. 1,016,166; Jan. 30; Sp. p. 6727; Gaz. vol. 174; p. 1169.
Pocket, Garment-. V. Finsten. No. 1,013,757; Jan. 2; Sp. p. 1474; Gaz. vol. 174; p. 233.
Pocket-knife, Take-down. C. H. White. No. 1,014,927; Jan. 16; Sp. p. 4110; Gaz. vol. 174; p. 692.
Poison-receptacle. F. P. Rand. No. 1,013,514; Jan. 2; Sp. p. 923; Gaz. vol. 174; p. 148.
Pole-erecting apparatus. J. M. Humiston. No. 1,014,477; Jan. 9; Sp. p. 3058; Gaz. vol. 174; p. 508.
Poles or the like, Machine for making spiral latticed. B. Haskell. No. 1,013,769; Jan. 2; Sp. p. 1501; Gaz. vol. 174; p. 237.
Poles or the like, Making spiral latticed. B. Haskell. No. 1,013,489; Jan. 2; Sp. p. 877; Gaz. vol. 174; p. 140.
Polishing compound. E. Kelly. No. 1,015,688; Jan. 23; Sp. p. 5745; Gaz. vol. 174; p. 978.
Polishing facets and surfaces, Machine for. E. Offenbacher. No. 1,013,550; Jan. 2; Sp. p. 1019; Gaz. vol. 174; p. 163.
Polishing-machine. H. Robinson. No. 1,015,249; Jan. 16; Sp. p. 4745; Gaz. vol. 174; p. 800.
Polishing-machine. E. E. Barnes. No. 1,016,198; Jan. 30; Sp. p. 6783; Gaz. vol. 174; p. 1179.
Pompon. D. Metzger. No. 1,014,408; Jan. 9; Sp. p. 2937; Gaz. vol. 174; p. 487.
Portable elevator. C. W. and J. E. Camp. No. 1,014,448; Jan. 9; Sp. p. 3011; Gaz. vol. 174; p. 499.
Portable stand. G. L. McDonald. No. 1,014,889; Jan. 16; Sp. p. 4020; Gaz. vol. 174; p. 679.
Post: *See* Drilling-machine post; Fence-post; Fuse-block contact-post.
Post-anchor. C. Bowen. No. 1,015,611; Jan. 23; Sp. p. 5558; Gaz. vol. 174; p. 952.
Pot: *See* Annealing-pot; Coffee-pot; Glass-pot; Marking-pot.
Pot-furnace. A. Tuite. No. 1,015,522; Jan. 23; Sp. p. 5361; Gaz. vol. 174; p. 920.
Pot-handle. W. H. and L. H. Hall. No. 1,015,176; Jan. 16; Sp. p. 4601; Gaz. vol. 174; p. 775.
Potato-digger. J. Hist. No. 1,014,394; Jan. 9; Sp. p. 2906; Gaz. vol. 174; p. 481.
Potato-digger. A. Lauritzen and J. F. Nielsen. No. 1,014,493; Jan. 9; Sp. p. 3084; Gaz. vol. 174; p. 513.
Potato-digger attachment. L. Willis. No. 1,015,110; Jan. 16; Sp. p. 4482; Gaz. vol. 174; p. 755.
Potato-diggers, Attachment for elevated. G. W. Cooper. No. 1,015,299; Jan. 23; Sp. p. 4874; Gaz. vol. 174; p. 844.
Pounding-up, leveling, or smoothing roll. A. Bates. No. 1,015,776; Jan. 30; Sp. p. 5912; Gaz. vol. 174; p. 1035.
Powder-receptacle. F. W. Smith. No. 1,013,325; Jan. 2; Sp. p. 528; Gaz. vol. 174; p. 83.
Power-presses, Safety appliance for hand-fed. F. S. Aliano. No. 1,014,359; Jan. 9; Sp. p. 2830; Gaz. vol. 174; p. 469.
Power-table for kitchen utensils. J. H. Goehst and R. G. Carpenter. No. 1,014,217; Jan. 9; Sp. p. 2494; Gaz. vol. 174; p. 419.
Power transmission. J. W. Lambert. No. 1,013,786; Jan. 2; Sp. p. 1526; Gaz. vol. 174; p. 242.
Power-transmission device. L. Vorhies. No. 1,014,102; Jan. 9; Sp. p. 2268; Gaz. vol. 174; p. 378.
Power-transmission device. G. W. Marble. No. 1,015,049; Jan. 16; Sp. p. 4368; Gaz. vol. 174; p. 733.
Practice-ball. C. B. W. Kip. No. 1,014,233; Jan. 9; Sp. p. 2545; Gaz. vol. 174; p. 425.
Press: *See* Baling-press; Box-press; Clothes-press; Cotton-press; Dental press; Drawing-press; Hay-press; Matrix-drying press; Printing-press; Punching-press; Seal-press.
Press. M. N. Hoppe. No. 1,014,222; Jan. 9; Sp. p. 2507; Gaz. vol. 174; p. 421.
Press. T. G. Wolfe. No. 1,015,371; Jan. 23; Sp. p. 5037; Gaz. vol. 174; p. 869.
Press. E. Honegger. No. 1,016,070; Jan. 30; Sp. p. 6558; Gaz. vol. 174; p. 1138.
Press-feeding-mechanism shifting device. W. P. Bettendorf. No. 1,016,062; Jan. 30; Sp. p. 6534; Gaz. vol. 174; p. 1135.
Pressing-bed, Steam. A. Lasance. No. 1,014,011; Jan. 9; Sp. p. 2057; Gaz. vol. 174; p. 347.
Pressure-control apparatus, Duplex. H. M. P. Murphy. No. 1,015,824; Jan. 30; Sp. p. 6012; Gaz. vol. 174; p. 1050.
Pressure-control apparatus, Duplex. W. V. Turner. No. 1,015,855; Jan. 30; Sp. p. 6084; Gaz. vol. 174; p. 1060.

Pressure-controlling mechanism. J. S. McWhirter. No. 1,016,025; Jan. 30; Sp. p. 6442; Gaz. vol. 174; p. 1122.
Pressure-increaser. E. F. Lloyd. No. 1,014,830; Jan. 16; Sp. p. 3885; Gaz. vol. 174; p. 659.
Pressure regulator, Steam-. W. Memmersheim. No. 1,013,199; Jan. 2; Sp. p. 224; Gaz. vol. 174; p. 38.
Primary battery. R. V. Heuser. No. 1,015,734; Jan. 23; Sp. p. 5829; Gaz. vol. 174; p. 993.
Primary battery. R. V. Heuser. No. 1,015,735; Jan. 23; Sp. p. 5832; Gaz. vol. 174; p. 994.
Printers' galleys, Foot-lock for. F. J. Antelottl. No. 1,015,257; Jan. 16; Sp. p. 4771; Gaz. vol. 174; p. 803.
Printing device. J. S. Duncan. No. 1,015,757; Jan. 23; Sp. p. 5873; Gaz. vol. 174; p. 1001.
Printing device. J. S. Duncan. No. 1,015,758; Jan. 23; Sp. p. 5876; Gaz. vol. 174; p. 1002.
Printing-machine. A. R. Pribil. No. 1,014,175; Jan. 9; Sp. p. 2405; Gaz. vol. 174; p. 403.
Printing-machine. A. Valentin, J. Zerreiss, and H. Georges. No. 1,014,923; Jan. 16; Sp. p. 4093; Gaz. vol. 174; p. 691.
Printing-machine. A. J. Ware. No. 1,014,986; Jan. 16; Sp. p. 4232; Gaz. vol. 174; p. 712.
Printing machine, Bank-check-. M. L. Dodge. No. 1,014,954; Jan. 16; Sp. p. 4168; Gaz. vol. 174; p. 701.
Printing-machine gripper mechanism. E. W. Cooper. No. 1,015,873; Jan. 30; Sp. p. 6118; Gaz. vol. 174; p. 1067.
Printing machinery, Bag and envelop. J. Hariel. No. 1,013,160; Jan. 2; Sp. p. 143; Gaz. vol. 174; p. 25.
Printing mechanism, Clock-set. C. A. Meichert. No. 1,014,017; Jan. 9; Sp. p. 2079; Gaz. vol. 174; p. 349.
Printing-plate-aligning gage. K. M. and F. Schlueter, Jr. No. 1,013,621; Jan. 2; Sp. p. 1150; Gaz. vol. 174; p. 183.
Printing-plates in a grained manner, Preparing. H. Strecker-Aufermann. No. 1,014,740; Jan. 16; Sp. p. 3676; Gaz. vol. 174; p. 628.
Printing-plates, Preparing. G. H. Lund. No. 1,015,900; Jan. 30; Sp. p. 6179; Gaz. vol. 174; p. 1078.
Printing-press. J. Raich. No. 1,016,033; Jan. 30; Sp. p. 6466; Gaz. vol. 174; p. 1125.
Printing-press counter, Platen-. A. J. Hood. No. 1,014,476; Jan. 9; Sp. p. 3056; Gaz. vol. 174; p. 507.
Printing press, Rotary cardboard and paper. C. Reynolds. No. 1,013,516; Jan. 2; Sp. p. 926; Gaz. vol. 174; p. 149.
Printing-presses, Sheet adjuster and guide for. W. F. C. Tichborne. No. 1,014,260; Jan. 9; Sp. p. 2617; Gaz. vol. 174; p. 437.
Printing-roll. H. Wollheim. No. 1,014,110; Jan. 9; Sp. p. 2285; Gaz. vol. 174; p. 381.
Projectile, Explosive. F. I. Du Pont. No. 1,015,943; Jan. 30; Sp. p. 6270; Gaz. vol. 174; p. 1091.
Projectile, Explosive. F. I. Du Pont. No. 1,015,944; Jan. 30; Sp. p. 6271; Gaz. vol. 174; p. 1092.
Projectile, Explosive. F. I. Du Pont. No. 1,015,945; Jan. 30; Sp. p. 6274; Gaz. vol. 174; p. 1092.
Projectile-loading for scattering charges. E. Sokolowski. No. 1,015,215; Jan. 16; Sp. p. 4671; Gaz. vol. 174; p. 789.
Propeller. G. W. Kingsbury. No. 1,013,402; Jan. 2; Sp. p. 690; Gaz. vol. 174; p. 109.
Propeller. H. L. Call. No. 1,014,619; Jan. 9; Sp. p. 3346; Gaz. vol. 174; p. 555.
Propeller, Endless-belt. O. A. A. Petersen. No. 1,014,512; Jan. 9; Sp. p. 3121; Gaz. vol. 174; p. 519.
Propeller, Screw-. C. Bütow. No. 1,015,540; Jan. 23; Sp. p. 5402; Gaz. vol. 174; p. 925.
Propeller, Ship-. G. A. Schlotter. (Reissue.) No. 13,349; Jan. 2; Sp. p. 1699; Gaz. vol. 174; p. 268.
Propeller-wheels, Vane for. J. W. Way. No. 1,014,730; Jan. 16; Sp. p. 3654; Gaz. vol. 174; p. 624.
Propelling device for land and water. M. Rochat. No. 1,013,818; Jan. 2; Sp. p. 1585; Gaz. vol. 174; p. 253.
Propelling mechanism. G. Williamson. No. 1,014,195; Jan. 9; Sp. p. 2447; Gaz. vol. 174; p. 411.
Propulsion, Marine. J. Benyo. No. 1,013,982; Jan. 9; Sp. p. 2000; Gaz. vol. 174; p. 339.
Protecting the members of a court assembly, Device for. R. Lux. No. 1,016,164; Jan. 30; Sp. p. 6725; Gaz. vol. 174; p. 1169.
Protector-setting machine. B. J. Conlon. No. 1,015,543; Jan. 23; Sp. p. 5406; Gaz. vol. 174; p. 926.
Protein from insoluble protein matter, Production of. S. A. Vasey. No. 1,015,857; Jan. 30; Sp. p. 6088; Gaz. vol. 174; p. 1061.
Proteins soluble, Rendering vegetable. H. Walland. No. 1,016,115; Jan. 30; Sp. p. 6638; Gaz. vol. 174; p. 1154.
Protractor, Bevel-. W. W. Owen. No. 1,015,242; Jan. 16; Sp. p. 4733; Gaz. vol. 174; p. 798.
Pull-strap. P. N. Landine. No. 1,014,310; Jan. 9; Sp. p. 2705; Gaz. vol. 174; p. 451.
Puller: *See* Railway-tie puller; Spike-puller.
Pulling-over machine. H. A. Ballard. No. 1,015,932; Jan. 30; Sp. p. 6246; Gaz. vol. 174; p. 1088.
Pulley, Expansion-. M. M. Karr. No. 1,016,158; Jan. 30; Sp. p. 6714; Gaz. vol. 174; p. 1167.
Pulley, Variable-speed. N. and D. S. Du Brul. No. 1,015,427; Jan. 23; Sp. p. 5164; Gaz. vol. 174; p. 887.
Pulp-machine. W. H. Judson. No. 1,015,803; Jan. 30; Sp. p. 5968; Gaz. vol. 174; p. 1044.
Pulp-screen. F. G. Feeley. No. 1,014,288; Jan. 9; Sp. p. 2661; Gaz. vol. 174; p. 444.
Pulp-screen-plate fastener. J. Olsen. No. 1,013,890; Jan. 9; Sp. p. 1785; Gaz. vol. 174; p. 306.
Pulverizer. A. F. Williams. No. 1,014,191; Jan. 9; Sp. p. 2440; Gaz. vol. 174; p. 409.
Pulverizer-machines, Dust-deflector for. M. F. Williams. No. 1,014,193; Jan. 9; Sp. p. 2443; Gaz. vol. 174; p. 410.
Pulverizer, Rock and clay. F. W. Roebbel. No. 1,015,344; Jan. 23; Sp. p. 4985; Gaz. vol. 174; p. 860.
Pulverizer-screen. B. H. Frickey. No. 1,014,884; Jan. 9; Sp. p. 2891; Gaz. vol. 174; p. 473.
Pulverizer, Soil-. E. R. Eagan. No. 1,015,303; Jan. 23; Sp. p. 4883; Gaz. vol. 174; p. 846.
Pump. E. Martin. No. 1,013,415; Jan. 2; Sp. p. 721; Gaz. vol. 174; p. 113.
Pump. A. B. Jennings. No. 1,014,153; Jan. 9; Sp. p. 2365; Gaz. vol. 174; p. 395.
Pump. N. McCarty. No. 1,014,242; Jan. 9; Sp. p. 2672; Gaz. vol. 174; p. 428.
Pump. S. E. Folk. No. 1,014,289; Jan. 9; Sp. p. 2663; Gaz. vol. 174; p. 444.
Pump. P. A. Myers. No. 1,014,664; Jan. 16; Sp. p. 3511; Gaz. vol. 174; p. 601.
Pump. I. R. Stout. No. 1,014,675; Jan. 16; Sp. p. 3542; Gaz. vol. 174; p. 606.
Pump, Air-. G. Schmidt. No. 1,015,087; Jan. 16; Sp. p. 4434; Gaz. vol. 174; p. 746.
Pump, Centrifugal. J. Wilkinson. No. 1,013,248; Jan. 2; Sp. p. 340; Gaz. vol. 174; p. 55.
Pump, Compressed-air. W. E. Stuart. No. 1,014,422; Jan. 9; Sp. p. 2981; Gaz. vol. 174; p. 491.
Pump, Deep-well. C. A. Waltz. No. 1,014,271; Jan. 9; Sp. p. 2622; Gaz. vol. 174; p. 437.
Pump for lifting granular materials, Pneumatic. E. Koltschanoff. No. 1,016,017; Jan. 30; Sp. p. 6427; Gaz. vol. 174; p. 1119.
Pump, Gas-. R. Whitaker. No. 1,013,348; Jan. 2; Sp. p. 576; Gaz. vol. 174; p. 92.
Pump, Oil-well. E. A. Wheeler. No. 1,013,246; Jan. 2; Sp. p. 344; Gaz. vol. 174; p. 55.
Pump, Oil-well. B. Andrews. No. 1,013,579; Jan. 2; Sp. p. 1052; Gaz. vol. 174; p. 169.
Pump or compressor, Centrifugal. F. Strohbach. No. 1,013,329; Jan. 2; Sp. p. 535; Gaz. vol. 174; p. 85.
Pump, Piston lubricating-. A. Miltz. No. 1,014,840; Jan. 16; Sp. p. 3909; Gaz. vol. 174; p. 663.
Pump, rotary engine, and the like, Rotary. W. A. Beard. No. 1,016,199; Jan. 30; Sp. p. 6786; Gaz. vol. 174; p. 1180.
Pump, Steam-. W. O. Wheeler. No. 1,014,795; Jan. 16; Sp. p. 3798; Gaz. vol. 174; p. 645.
Pump valve, Pressure-. F. H. Roberts. No. 1,014,178; Jan. 9; Sp. p. 2409; Gaz. vol. 174; p. 404.
Pumping apparatus. X. Caverno. No. 1,015,782; Jan. 30; Sp. p. 5927; Gaz. vol. 174; p. 1037.
Punching holes in metal, Machine for. H. Ainsworth. No. 1,016,120; Jan. 30; Sp. p. 6645; Gaz. vol. 174; p. 1155.
Punching-press, Inclinable. A. N. Verdin and W. H. Kappes. No. 1,013,339; Jan. 2; Sp. p. 551; Gaz. vol. 174; p. 88.
Push-button and pump, Pneumatic. G. A. Kenner, W. H. Michael, and T. J. Burton. No. 1,015,962; Jan. 30; Sp. p. 6313; Gaz. vol. 174; p. 1098.
Puzzle. P. G. Feeney. No. 1,016,221; Jan. 30; Sp. p. 6829; Gaz. vol. 174; p. 1187.
Puzzle, Steeplechase-. H. Van Hoevenberg. No. 1,013,522; Jan. 2; Sp. p. 941; Gaz. vol. 174; p. 151.
Pyrites briquet and making same. J. S. Robeson. No. 1,013,614; Jan. 2; Sp. p. 1138; Gaz. vol. 174; p. 181.
Quartz-mill. C. Wallace. No. 1,014,273; Jan. 9; Sp. p. 2625; Gaz. vol. 174; p. 438.
Quartz-mill. S. S. Jennison. No. 1,014,305; Jan. 9; Sp. p. 2692; Gaz. vol. 174; p. 450.
Quilting-frame. G. Dalton. No. 1,014,130; Jan. 9; Sp. p. 2324; Gaz. vol. 174; p. 388.
Rack: *See* Display-rack; Folding rack; Hanger-rack; Hay-rack; Knife-rack; Map-rack; Mattress-rack; Music-rack; Oil-cloth rack; Unloading-rack.
Rack-holder. S. Volz. No. 1,015,278; Jan. 16; Sp. p. 4816; Gaz. vol. 174; p. 810.
Radiator. S. E. Trisler. No. 1,013,973; Jan. 9; Sp. p. 1973; Gaz. vol. 174; p. 335.
Radiator. W. F. Klees. No. 1,014,828; Jan. 16; Sp. p. 3879; Gaz. vol. 174; p. 658.
Radiator. C. F. Armitage. No. 1,015,531; Jan. 23; Sp. p. 5384; Gaz. vol. 174; p. 923.
Radiator-carrier. F. R. Heskett. No. 1,014,303; Jan. 9; Sp. p. 2690; Gaz. vol. 174; p. 449.
Radiator for automobiles and the like. A. Dippert. No. 1,014,816; Jan. 16; Sp. p. 3839; Gaz. vol. 174; p. 653.
Radiators, Air-vent for steam-. O. Kelsey. No. 1,014,220; Jan. 9; Sp. p. 2535; Gaz. vol. 174; p. 423.
Radiators and analogous tubular structures, Making. J. A. McPhayden and C. T. De Veaux. No. 1,014,603; Jan. 9; Sp. p. 3303; Gaz. vol. 174; p. 549.
Radiators, Forming connections between opposed walls of sheet-metal. W. R. Kinnear. No. 1,015,738; Jan. 23; Sp. p. 5836; Gaz. vol. 174; p. 995.
Rail-anchor. J. A. Bodkin. No. 1,015,129; Jan. 16; Sp. p. 4517; Gaz. vol. 174; p. 761.
Rail-anticreeping device. A. T. Kramer. No. 1,014,155; Jan. 9; Sp. p. 2367; Gaz. vol. 174; p. 395.
Rail-brace. J. P. Vaught and C. M. Walker. No. 1,015,102; Jan. 16; Sp. p. 4466; Gaz. vol. 174; p. 752.
Rail connection. W. H. Cripps. No. 1,013,747; Jan. 2; Sp. p. 1452; Gaz. vol. 174; p. 229.

Rail-fastener. M. G. Medeiros. No. 1,014,891; Jan. 16; Sp. p. 4022; Gaz. vol. 174; p. 680.
Rail-fastener. K. Satejnert. No. 1,016,045; Jan. 30; Sp. p. 6496; Gaz. vol. 174; p. 1130.
Rail-fastening. J. F. Lewis. No. 1,013,408; Jan. 2; Sp. p. 699; Gaz. vol. 174; p. 111.
Rail-fastening. A. H. Moffet. No. 1,014,084; Jan. 9; Sp. p. 2223; Gaz. vol. 174; p. 372.
Rail-fastening. A. H. Moffet. No. 1,014,086; Jan. 9; Sp. p. 2225; Gaz. vol. 174; p. 373.
Rail-fastening. A. H. Moffet. No. 1,014,087; Jan. 9; Sp. p. 2227; Gaz. vol. 174; p. 373.
Rail-fastening. A. H. Moffet. No. 1,014,088; Jan. 9; Sp. p. 2228; Gaz. vol. 174; p. 373.
Rail-fastening. A. H. Moffet. No. 1,014,090; Jan. 9; Sp. p. 2231; Gaz. vol. 174; p. 374.
Rail-joint. H. Woruda. No. 1,013,256; Jan. 2; Sp. p. 304; Gaz. vol. 174; p. 58.
Rail-joint. H. F. Roach. No. 1,013,618; Jan. 2; Sp. p. 1133; Gaz. vol. 174; p. 181.
Rail-joint. H. F. Roach. No. 1,013,852; Jan. 2; Sp. p. 1683; Gaz. vol. 174; p. 266.
Rail-joint. R. E. Tesreau, L. F. Sundman, and C. P. Hill. No. 1,014,101; Jan. 9; Sp. p. 2267; Gaz. vol. 174; p. 377.
Rail-joint. J. Petri. No. 1,014,513; Jan. 9; Sp. p. 3122; Gaz. vol. 174; p. 519.
Rail-joint. F. Densmore. No. 1,014,095; Jan. 16; Sp. p. 3579; Gaz. vol. 174; p. 612.
Rail-joint. J. W. Grant. No. 1,015,677; Jan. 23; Sp. p. 5700; Gaz. vol. 174; p. 974.
Rail-joint. A. Busa. No. 1,015,725; Jan. 23; Sp. p. 5806; Gaz. vol. 174; p. 990.
Rail joint and chair, Combined. F. Heinemann. No. 1,015,437; Jan. 23; Sp. p. 5187; Gaz. vol. 174; p. 891.
Rail-lock. A. E. Fry. No. 1,014,589; Jan. 9; Sp. p. 3260; Gaz. vol. 174; p. 544.
Rail-splice. E. N. Tuckey. No. 1,015,521; Jan. 23; Sp. p. 5359; Gaz. vol. 174; p. 919.
Rail-tie. J. C. Evans. No. 1,015,671; Jan. 23; Sp. p. 5691; Gaz. vol. 174; p. 972.
Rail tie and fastening device. J. V. Bergen. No. 1,015,535; Jan. 23; Sp. p. 5392; Gaz. vol. 174; p. 924.
Rails, Anticreeping device for. A. J. Dinklage. No. 1,015,791; Jan. 30; Sp. p. 5949; Gaz. vol. 174; p. 1041.
Railway. J. Reagin. No. 1,013,441; Jan. 2; Sp. p. 773; Gaz. vol. 174; p. 123.
Railway-bed. J. W. Gibson. No. 1,014,700; Jan. 16; Sp. p. 3584; Gaz. vol. 174; p. 613.
Railway-crossing. B. S. Dunham. No. 1,015,151; Jan. 16; Sp. p. 4555; Gaz. vol. 174; p. 768.
Railway-crossing. C. H. Christian and E. H. Hutcheson. No. 1,015,541; Jan. 23; Sp. p. 5403; Gaz. vol. 174; p. 926.
Railway-crossing signal. A. T. Cabeen. No. 1,014,117; Jan. 9; Sp. p. 2290; Gaz. vol. 174; p. 383.
Railway-frog and connection, Reversible. O. Swanson. No. 1,015,218; Jan. 16; Sp. p. 4676; Gaz. vol. 174; p. 789.
Railway-joint. O. J. Schroeder. No. 1,013,689; Jan. 2; Sp. p. 1340; Gaz. vol. 174; p. 208.
Railway, Metallic. J. S. Seymour. No. 1,013,960; Jan. 9; Sp. p. 1952; Gaz. vol. 174; p. 331.
Railway road-bed, track, and rail construction. J. N. D. Brown. No. 1,013,736; Jan. 2; Sp. p. 1425; Gaz. vol. 174; p. 225.
Railway safety system. A. Minnick. No. 1,016,227; Jan. 30; Sp. p. 6843; Gaz. vol. 174; p. 1189.
Railway signal-fusee. I. Niditch. No. 1,015,062; Jan. 16; Sp. p. 4396; Gaz. vol. 174; p. 738.
Railway signaling apparatus. W. J. Cook. No. 1,014,208; Jan. 9; Sp. p. 2468; Gaz. vol. 174; p. 415.
Railway signaling apparatus, Automatic electrical. R. P. Brousson. No. 1,015,778; Jan. 30; Sp. p. 5917; Gaz. vol. 174; p. 1036.
Railway-switch. J. D. Perkins. No. 1,014,092; Jan. 9; Sp. p. 2233; Gaz. vol. 174; p. 374.
Railway-tie. U. G. Hamilton. No. 1,013,655; Jan. 2; Sp. p. 1251; Gaz. vol. 174; p. 100.
Railway-tie. W. J. Watterson. No. 1,014,351; Jan. 9; Sp. p. 2819; Gaz. vol. 174; p. 466.
Railway-tie. C. Seddens. No. 1,014,526; Jan. 9; Sp. p. 3149; Gaz. vol. 174; p. 524.
Railway-tie. W. A. Saul. No. 1,014,726; Jan. 16; Sp. p. 3644; Gaz. vol. 174; p. 623.
Railway-tie. H. F. Gorsuch. No. 1,015,172; Jan. 16; Sp. p. 4590; Gaz. vol. 174; p. 774.
Railway-tie. C. D. Green. No. 1,016,141; Jan. 30; Sp. p. 6687; Gaz. vol. 174; p. 1162.
Railway-tie and fastener. W. Dillinger. No. 1,013,138; Jan. 2; Sp. p. 94; Gaz. vol. 174; p. 17.
Railway-tie and fastener. J. T. Clark. No. 1,014,948; Jan. 16; Sp. p. 4158; Gaz. vol. 174; p. 699.
Railway-tie and fastener. A. C. Candland. No. 1,015,001; Jan. 16; Sp. p. 4273; Gaz. vol. 174; p. 718.
Railway-tie and fastening, Metallic. H. T. Kleckner. No. 1,014,489; Jan. 9; Sp. p. 3080; Gaz. vol. 174; p. 512.
Railway-tie and rail-fastening. J. A. Hyle and J. A. Pement. No. 1,013,395; Jan. 2; Sp. p. 678; Gaz. vol. 174; p. 107.
Railway-tie plate. J. W. Kendrick. No. 1,015,325; Jan. 23; Sp. p. 4938; Gaz. vol. 174; p. 854.
Railway-tie puller. J. R. Smith. No. 1,015,647; Jan. 23; Sp. p. 5647; Gaz. vol. 174; p. 965.
Railway-track structures, Mechanism for actuating and locking the movable elements of. H. F. Roach. No. 1,014,095; Jan. 9; Sp. p. 2243; Gaz. vol. 174; p. 376.
Railway-trains, Auxiliary pilot for. I. Wolper. No. 1,014,552; Jan. 9; Sp. p. 3188; Gaz. vol. 174; p. 531.
Railways, Underground conduit for electric. J. C. Mires. No. 1,014,892; Jan. 16; Sp. p. 4023; Gaz. vol. 174; p. 680.
Rake. A. B. Mesa. No. 1,013,556; Jan. 2; Sp. p. 1014; Gaz. vol. 174; p. 162.
Rake. S. B. Norman. No. 1,014,250; Jan. 9; Sp. p. 2588; Gaz. vol. 174; p. 432.
Ram, Hydraulic. A. H. Francfort. No. 1,015,949; Jan. 30; Sp. p. 6282; Gaz. vol. 174; p. 1003.
Range-finder, Short-base. H. D. Taylor. No. 1,013,849; Jan. 2; Sp. p. 1669; Gaz. vol. 174; p. 265.
Range, Gas-. M. W. Longfellow. No. 1,013,790; Jan. 2; Sp. p. 1532; Gaz. vol. 174; p. 248.
Ratchet-drill. C. B. Groff. No. 1,013,653; Jan. 2; Sp. p. 1242; Gaz. vol. 174; p. 195.
Ratchet-tool. W. A. Plath and H. L. Risedorf. No. 1,015,067; Jan. 16; Sp. p. 4402; Gaz. vol. 174; p. 739.
Ratchet-wrench. D. E. Haines. No. 1,014,463; Jan. 9; Sp. p. 3038; Gaz. vol. 174; p. 504.
Razor. C. H. Ocumpaugh. No. 1,013,805; Jan. 2; Sp. p. 1563; Gaz. vol. 174; p. 248.
Razor. F. Meyer. No. 1,015,575; Jan. 23; Sp. p. 5487; Gaz. vol. 174; p. 939.
Razor and scissors, Combined. K. Hajdú. No. 1,013,159; Jan. 2; Sp. p. 142; Gaz. vol. 174; p. 25.
Razor frame, Safety-. R. Kampfe. No. 1,013,602; Jan. 2; Sp. p. 1106; Gaz. vol. 174; p. 178.
Razor, Revolving. W. E. Travers. No. 1,014,187; Jan. 9; Sp. p. 2428; Gaz. vol. 174; p. 407.
Razor, Safety-. W. V. Baker. No. 1,013,360; Jan. 2; Sp. p. 590; Gaz. vol. 174; p. 95.
Razor, Safety-. S. Adler. No. 1,014,431; Jan. 9; Sp. p. 2981; Gaz. vol. 174; p. 494.
Razor, Safety-. W. Winter. No. 1,015,114; Jan. 16; Sp. p. 4489; Gaz. vol. 174; p. 756.
Razor-stropping device. J. B. Brockhurst. No. 1,015,938; Jan. 30; Sp. p. 6256; Gaz. vol. 174; p. 1090.
Razor-stropping device, Mechanical. J. F. MacIndoe. No. 1,014,602; Jan. 9; Sp. p. 3301; Gaz. vol. 174; p. 549.
Receptacle. M. M. Looram. No. 1,014,601; Jan. 9; Sp. p. 3299; Gaz. vol. 174; p. 548.
Receptacle-closure and cup. R. Welmer. No. 1,013,830; Jan. 2; Sp. p. 1611; Gaz. vol. 174; p. 257.
Receptacle, Liquid-. T. Bumann. No. 1,015,420; Jan. 23; Sp. p. 5151; Gaz. vol. 174; p. 885.
Receptacles, Apparatus for controlling the condition of closed. E. B. Smith. No. 1,013,963; Jan. 9; Sp. p. 1959; Gaz. vol. 174; p. 332.
Reclining-chair. E. H. Milner. No. 1,015,452; Jan. 23; Sp. p. 5213; Gaz. vol. 174; p. 896.
Record case, Disk-. F. W. Wood. No. 1,014,929; Jan. 16; Sp. p. 4112; Gaz. vol. 174; p. 693.
Record-disk holder. L. C. Wiswell. No. 1,013,916; Jan. 9; Sp. p. 1841; Gaz. vol. 174; p. 315.
Rectifier. R. A. Hamann. No. 1,014,466; Jan. 9; Sp. p. 3041; Gaz. vol. 174; p. 504.
Reducing-mill. M. C. Peters. No. 1,015,246; Jan. 16; Sp. p. 4740; Gaz. vol. 174; p. 799.
Reel: *See* Clothes-line reel; Fishing-reel; Harvester-reel.
Reel. G. H. Cowgill. No. 1,013,588; Jan. 2; Sp. p. 1068; Gaz. vol. 174; p. 173.
Reel. J. J. Molcar. No. 1,014,322; Jan. 9; Sp. p. 2734; Gaz. vol. 174; p. 455.
Reel-drum or the like. H. Parker. No. 1,015,244; Jan. 16; Sp. p. 4738; Gaz. vol. 174; p. 799.
Reel-support. W. H. Wetzel. No. 1,013,347; Jan. 2; Sp. p. 575; Gaz. vol. 174; p. 91.
Reflector, Light-. S. Schopflocher. No. 1,015,348; Jan. 23; Sp. p. 4992; Gaz. vol. 174; p. 862.
Refractory body and making the same. E. G. Acheson. No. 1,014,190; Jan. 9; Sp. p. 2452; Gaz. vol. 174; p. 412.
Refrigerating apparatus. C. J. Coleman. No. 1,014,120; Jan. 9; Sp. p. 2304; Gaz. vol. 174; p. 384.
Refrigerating apparatus. R. M. Hunter. No. 1,015,957; Jan. 30; Sp. p. 6297; Gaz. vol. 174; p. 1090.
Refrigerating-compartments, Temperature control of. A. T. Marshall. No. 1,014,833; Jan. 16; Sp. p. 3893; Gaz. vol. 174; p. 660.
Refrigerator. W. N. Amsbary. No. 1,013,468; Jan. 2; Sp. p. 828; Gaz. vol. 174; p. 132.
Refrigerator. J. Egler. No. 1,013,478; Jan. 2; Sp. p. 848; Gaz. vol. 174; p. 135.
Refrigerator. A. A. Pons. No. 1,014,329; Jan. 9; Sp. p. 2755; Gaz. vol. 174; p. 458.
Refrigerator. J. J. Vaughn. No. 1,015,600; Jan. 23; Sp. p. 5542; Gaz. vol. 174; p. 948.
Refrigerator-cars, Movable bulkhead for. E. Posson. No. 1,014,093; Jan. 9; Sp. p. 2235; Gaz. vol. 174; p. 375.
Refrigerator, heater, and ventilator car, Combination. G. B. Robbins and W. E. Sharp. No. 1,013,517; Jan. 2; Sp. p. 931; Gaz. vol. 174; p. 149.
Refrigerator water-cooling attachment. A. May. No. 1,013,795; Jan. 2; Sp. p. 1540; Gaz. vol. 174; p. 245.
Refuse-receptacle. C. L. Holloway. No. 1,014,475; Jan. 9; Sp. p. 3054; Gaz. vol. 174; p. 507.
Register: *See* Cash-register.

Register and ventilator. F. A. Wilson. No. 1,013,631; Jan. 2; Sp. p. 1174; Gaz. vol. 174; p. 187.
Registration-numbers, Holder for. O. M. Herold. No. 1,014,471; Jan. 9; Sp. p. 3049; Gaz. vol. 174; p. 506.
Regulator: *See* Current-regulator; Damper-regulator; Draft-regulator; Feed-regulator; Fluid-regulator; Gas-regulator; Heat-regulator; Pressure-regulator; Speed-regulator; Temperature-regulator.
Reinforcing and spacing bar, Metal. A. E. Lindau. No. 1,014,711; Jan. 16; Sp. p. 3605; Gaz. vol. 174; p. 617.
Reinforcing and spacing bar, Metal. A. E. Lindau. No. 1,014,712; Jan. 16; Sp. p. 3606; Gaz. vol. 174; p. 618.
Relay, Electrical. E. E. Kleinschmidt. No. 1,014,600; Jan. 9; Sp. p. 3294; Gaz. vol. 174; p. 548.
Relay, Energy-. G. Laudet and L. Gaumont. No. 1,014,235; Jan. 9; Sp. p. 2553; Gaz. vol. 174; p. 426.
Relay, Monotelephone-. P. Heina. No. 1,014,220; Jan. 9; Sp. p. 2502; Gaz. vol. 174; p. 420.
Resilient wheel. E. C. Bass and E. S. Hough. No. 1,014,558; Jan. 9; Sp. p. 3203; Gaz. vol. 174; p. 533.
Resilient wheel. R. E. Ellis. No. 1,014,644; Jan. 16; Sp. p. 3464; Gaz. vol. 174; p. 595.
Resilient wheel. H. Leap. No. 1,014,884; Jan. 16; Sp. p. 4007; Gaz. vol. 174; p. 677.
Resilient wheel. M. E. Knight. No. 1,015,761; Jan. 23; Sp. p. 5884; Gaz. vol. 174; p. 1003.
Resinous products from rosin waste and the like, Recovering the. D. J. Ogilvy. No. 1,014,411; Jan. 9; Sp. p. 2941; Gaz. vol. 174; p. 488.
Resistance or heating element. W. S. Hadaway, Jr. No. 1,013,157; Jan. 2; Sp. p. 139; Gaz. vol. 174; p. 24.
Resistant material and the product resulting therefrom, Preparing. H. T. Jones. No. 1,014,882; Jan. 16; Sp. p. 4003; Gaz. vol. 174; p. 676.
Resistant surface. C. B. Jacobs. No. 1,014,967; Jan. 16; Sp. p. 4195; Gaz. vol. 174; p. 706.
Reversing and accelerating switch, Mechanical. D. Larson. No. 1,014,234; Jan. 9; Sp. p. 2546; Gaz. vol. 174; p. 425.
Rifle-bore cleaner. D. Strickler. No. 1,015,915; Jan. 30; Sp. p. 6211; Gaz. vol. 174; p. 1083.
Ride, Magazine-. C. A. T. Sögren. No. 1,015,516; Jan. 23; Sp. p. 5351; Gaz. vol. 174; p. 918.
Rifle-sight. D. W. King. No. 1,015,283; Jan. 16; Sp. p. 4715; Gaz. vol. 174; p. 794.
Rings: *See* Eccentric ring; Flying or traveling ring; Water-wheel-gate ring.
Ringing and docking instrument. G. W. Fletcher. No. 1,015,162; Jan. 16; Sp. p. 4572; Gaz. vol. 174; p. 771.
Rivet. E. B. Stimpson. No. 1,013,625; Jan. 2; Sp. p. 1159; Gaz. vol. 174; p. 184.
Rivet-holder, Pneumatic. J. Boyer. No. 1,013,371; Jan. 2; Sp. p. 619; Gaz. vol. 174; p. 99.
Road-leveling device. N. S. Monroe. No. 1,015,320; Jan. 30; Sp. p. 6003; Gaz. vol. 174; p. 1049.
Road-machine. F. B. Peck. No. 1,014,023; Jan. 9; Sp. p. 2093; Gaz. vol. 174; p. 351.
Road-making machine. M. A. Popkess. No. 1,013,512; Jan. 2; Sp. p. 920; Gaz. vol. 174; p. 147.
Rock and ore crusher. H. R. Stacks. No. 1,014,532; Jan. 9; Sp. p. 3157; Gaz. vol. 174; p. 525.
Rock-drill. T. F. Carroll. No. 1,015,780; Jan. 30; Sp. p. 5924; Gaz. vol. 174; p. 1036.
Rock-drill engine. B. Hastings. No. 1,015,798; Jan. 30; Sp. p. 5959; Gaz. vol. 174; p. 1043.
Rod: *See* Fishing-rod; Level-rod.
Roll-centering device. J. Butler. No. 1,014,446; Jan. 9; Sp. p. 3007; Gaz. vol. 174; p. 498.
Rolls, Giant. T. A. Edison. No. 1,014,818; Jan. 16; Sp. p. 3842; Gaz. vol. 174; p. 653.
Rolls with leather, Machine for covering. J. J. Cunningham. No. 1,013,740; Jan. 2; Sp. p. 1455; Gaz. vol. 174; p. 230.
Roller: *See* Cane-mill roller; Curtain-roller; Lace-roller; Shade-roller; Spread-roller.
Roller and ditcher, Combined. W. A. Wilson. No. 1,014,733; Jan. 16; Sp. p. 3662; Gaz. vol. 174; p. 625.
Roller-retaining device. A. A. Warner. No. 1,014,680; Jan. 16; Sp. p. 3556; Gaz. vol. 174; p. 608.
Rolling-mill. A. K. Nowak. No. 1,013,429; Jan. 2; Sp. p. 748; Gaz. vol. 174; p. 118.
Rolling-mill guide-rest bar. J. Williams. No. 1,015,751; Jan. 23; Sp. p. 5860; Gaz. vol. 174; p. 999.
Roofing, Attachment for corrugated. T. G. Brawley. No. 1,015,289; Jan. 23; Sp. p. 4850; Gaz. vol. 174; p. 840.
Rotary cutter. M. C. Peters. No. 1,013,611; Jan. 2; Sp. p. 1126; Gaz. vol. 174; p. 180.
Rotary engine. G. A. Parker. No. 1,013,682; Jan. 2; Sp. p. 1328; Gaz. vol. 174; p. 205.
Rotary engine. G. P. Herrick. No. 1,014,150; Jan. 9; Sp. p. 2354; Gaz. vol. 174; p. 394.
Rotary engine. A. McCormick. No. 1,014,162; Jan. 9; Sp. p. 2391; Gaz. vol. 174; p. 398.
Rotary engine. B. Dahl. No. 1,014,378; Jan. 9; Sp. p. 2876; Gaz. vol. 174; p. 476.
Rotary engine. W. L. Ripsom. No. 1,015,979; Jan. 30; Sp. p. 6348; Gaz. vol. 174; p. 1104.
Rotary engine. C. Comstock. No. 1,016,129; Jan. 30; Sp. p. 6661; Gaz. vol. 174; p. 1158.
Rotary engine, Combined reciprocating. C. J. Lake. No. 1,014,401; Jan. 9; Sp. p. 2925; Gaz. vol. 174; p. 484.
Rotary gasolene-engine. A. N. Dittlinger. No. 1,013,139; Jan. 2; Sp. p. 96; Gaz. vol. 174; p. 17.
Rotary internal-combustion engine. A. G. Hathcock. No. 1,014,596; Jan. 9; Sp. p. 3279; Gaz. vol. 174; p. 546.
Rotary motor. A. Brauer. No. 1,013,926; Jan. 9; Sp. p. 1876; Gaz. vol. 174; p. 319.
Roundabout. R. and J. Lusse. No. 1,013,792; Jan. 2; Sp. p. 1534; Gaz. vol. 174; p. 244.
Roundabout. L. B. Stewart. No. 1,014,846; Jan. 9; Sp. p. 2810; Gaz. vol. 174; p. 464.
Roundabout. F. Miller. No. 1,015,971; Jan. 30; Sp. p. 6329; Gaz. vol. 174; p. 1101.
Rowing apparatus, Gymnasium. R. Reach. No. 1,015,071; Jan. 16; Sp. p. 4407; Gaz. vol. 174; p. 741.
Rowing-machine. A. A. Pons. No. 1,013,437; Jan. 2; Sp. p. 764; Gaz. vol. 174; p. 121.
Saccharine substances, Extraction of. C. L. Corcuera. No. 1,015,941; Jan. 30; Sp. p. 6266; Gaz. vol. 174; p. 1091.
Sad-iron. W. E. Hoyt. No. 1,015,185; Jan. 16; Sp. p. 4615; Gaz. vol. 174; p. 779.
Sad-iron. P. Pfeil. No. 1,015,742; Jan. 23; Sp. p. 5844; Gaz. vol. 174; p. 996.
Sad-iron, Self-heating. H. Anderson and F. E. Kirby. No. 1,013,357; Jan. 2; Sp. p. 593; Gaz. vol. 174; p. 94.
Saddle. C. A. Persons. No. 1,016,031; Jan. 30; Sp. p. 6460; Gaz. vol. 174; p. 1124.
Safe. T. W. Nygreen. No. 1,013,430; Jan. 2; Sp. p. 750; Gaz. vol. 174; p. 118.
Safety-brake, Mine-carriage and elevator automatic. G. von Daam. No. 1,016,114; Jan. 30; Sp. p. 6637; Gaz. vol. 174; p. 1154.
Safety-pin, Flat. Z. J. Frederick. No. 1,013,482; Jan. 2; Sp. p. 855; Gaz. vol. 174; p. 137.
Safety-switch, Automatic. E. Routt. No. 1,014,906; Jan. 16; Sp. p. 4049; Gaz. vol. 174; p. 685.
Salt and pepper cellar. E. Perl. No. 1,014,413; Jan. 9; Sp. p. 2945; Gaz. vol. 174; p. 488.
Sample-case. A. W. Wermerskirchen. No. 1,013,576; Jan. 2; Sp. p. 1047; Gaz. vol. 174; p. 169.
Sardines, Packing. W. E. Taylor. No. 1,016,046; Jan. 30; Sp. p. 6497; Gaz. vol. 174; p. 1130.
Sash-balancing device. W. Sawyer. No. 1,014,182; Jan. 9; Sp. p. 2417; Gaz. vol. 174; p. 405.
Sash-fastener. G. Langkans. No. 1,015,624; Jan. 23; Sp. p. 5586; Gaz. vol. 174; p. 957.
Sash-holder. O. Rousseau. No. 1,015,082; Jan. 16; Sp. p. 4427; Gaz. vol. 174; p. 744.
Sash, Window-. J. W. Adams. No. 1,014,737; Jan. 16; Sp. p. 3669; Gaz. vol. 174; p. 627.
Sausage-stuffing machine. H. F. Müller. No. 1,014,605; Jan. 9; Sp. p. 3312; Gaz. vol. 174; p. 550.
Saw-gumming machine. L. Goad, Jr. No. 1,015,731; Jan. 23; Sp. p. 5818; Gaz. vol. 174; p. 992.
Saw support, Undercutting-. J. B. Perry. No. 1,016,090; Jan. 30; Sp. p. 6597; Gaz. vol. 174; p. 1146.
Saw-swage. J. F. Pribonow. No. 1,016,091; Jan. 30; Sp. p. 6598; Gaz. vol. 174; p. 1146.
Sawing and jointing machine, Combined shingle. P. O'Connor. No. 1,013,481; Jan. 2; Sp. p. 751; Gaz. vol. 174; p. 119.
Sawing-machine. R. H. Martens. No. 1,014,500; Jan. 9; Sp. p. 3098; Gaz. vol. 174; p. 515.
Sawing-machine. M. Hutchinson. No. 1,014,708; Jan. 16; Sp. p. 3599; Gaz. vol. 174; p. 616.
Sawing-machine, Drag. W. S. Hahn. No. 1,015,175; Jan. 16; Sp. p. 4597; Gaz. vol. 174; p. 775.
Sawdust-conveyer for circular saws. W. T. Gray and E. S. Haskin. No. 1,014,872; Jan. 16; Sp. p. 3984; Gaz. vol. 174; p. 674.
Sawmill-carriage tester. A. D. Plowden. No. 1,014,847; Jan. 16; Sp. p. 3924; Gaz. vol. 174; p. 665.
Scaffolding-bracket. H. E. Loebel. No. 1,016,163; Jan. 30; Sp. p. 6724; Gaz. vol. 174; p. 1168.
Scale. F. H. Buckingham. No. 1,013,272; Jan. 2; Sp. p. 398; Gaz. vol. 174; p. 64.
Scale. A. De Vilbiss, Jr. No. 1,013,590; Jan. 2; Sp. p. 1071; Gaz. vol. 174; p. 173.
Scale. V. O. Klingler. No. 1,015,190; Jan. 16; Sp. p. 4630; Gaz. vol. 174; p. 780.
Scale, Calculating-. R. C. Smith. No. 1,014,344; Jan. 9; Sp. p. 2804; Gaz. vol. 174; p. 464.
Scale, Tape-line spring-. E. H. Miller. No. 1,014,889; Jan. 16; Sp. p. 3908; Gaz. vol. 174; p. 662.
Scale-tester. S. M. Boling. No. 1,013,732; Jan. 2; Sp. p. 1417; Gaz. vol. 174; p. 223.
Scale, Weighing-. R. W. Elliott and J. Jorgenson. No. 1,013,479; Jan. 2; Sp. p. 849; Gaz. vol. 174; p. 136.
Scarf-pin guard. R. W. Hardie. No. 1,015,265; Jan. 16; Sp. p. 4791; Gaz. vol. 174; p. 806.
Scarf-pin guard. R. W. Hardie. No. 1,015,266; Jan. 16; Sp. p. 4792; Gaz. vol. 174; p. 806.
Scoop, Wheel-. M. L. McCrary. No. 1,015,969; Jan. 30; Sp. p. 6327; Gaz. vol. 174; p. 1101.
Scouring-machine. M. L. Barbeau. No. 1,013,526; Jan. 2; Sp. p. 951; Gaz. vol. 174; p. 153.
Scow, Invertible. W. E. Cook and D. H. Haywood. No. 1,015,755; Jan. 23; Sp. p. 5867; Gaz. vol. 174; p. 1000.
Scraper. F. J. Vichek. No. 1,015,461; Jan. 23; Sp. p. 5251; Gaz. vol. 174; p. 900.
Scraper and leveler. R. H. O'Neill. No. 1,016,228; Jan. 30; Sp. p. 6846; Gaz. vol. 174; p. 1180.
Scraping-tool. G. Zusuly. No. 1,014,798; Jan. 16; Sp. p. 3805; Gaz. vol. 174; p. 647.
Screen: *See* Pulp-screen; Pulverizer-screen; Window-screen.
Screen. N. Brandt. No. 1,013,118; Jan. 2; Sp. p. 53; Gaz. vol. 174; p. 11.

Screen. L. S. Couplin. No. 1,014,570; Jan. 9; Sp. p. 3228; Gaz. vol. 174; p. 537.
Screw bolts and nuts, Locking device for. E. A. Ploncard. No. 1,015,763; Jan. 23; Sp. p. 5889; Gaz. vol. 174; p. 1004.
Screw-driver. A. R. Seelig. No. 1,014,417; Jan. 9; Sp. p. 2951; Gaz. vol. 174; p. 490.
Screw-driver. M. D. Gee and J. A. Fields. No. 1,015,555; Jan. 23; Sp. p. 5433; Gaz. vol. 174; p. 931.
Screw inserter and remover. J. Lee. No. 1,013,500; Jan. 2; Sp. p. 898; Gaz. vol. 174; p. 143.
Screw-wrench. P. Meyer. No. 1,015,504; Jan. 23; Sp. p. 5331; Gaz. vol. 174; p. 914.
Scrubber and mop, Combined. B. Lee. No. 1,015,569; Jan. 23; Sp. p. 5475; Gaz. vol. 174; p. 937.
Scrubbing-board. J. E. Kelly. No. 1,013,601; Jan. 2; Sp. p. 1262; Gaz. vol. 174; p. 198.
Sea-motor, Undercurrent. J. W. Master. No. 1,015,627; Jan. 23; Sp. p. 5591; Gaz. vol. 174; p. 958.
Seal for fused-silicate containers. F. G. Keyes and C. A. Kraus. No. 1,014,757; Jan. 16; Sp. p. 3707; Gaz. vol. 174; p. 633.
Seal-lock. H. J. Page. No. 1,013,891; Jan. 9; Sp. p. 1790; Gaz. vol. 174; p. 307.
Seal-press. M. Sheraz. No. 1,013,228; Jan. 2; Sp. p. 307; Gaz. vol. 174; p. 49.
Seal-press. H. H. Wenthe. No. 1,014,105; Jan. 9; Sp. p. 2274; Gaz. vol. 174; p. 379.
Seal, Snap-. W. M. Brooks. No. 1,013,836; Jan. 2; Sp. p. 1624; Gaz. vol. 174; p. 259.
Seals in metallic caps, Machine for forming. C. D. McDonald. No. 1,013,841; Jan. 2; Sp. p. 1637; Gaz. vol. 174; p. 262.
Seals, Machine for applying bottle-. C. Winter. No. 1,013,351; Jan. 2; Sp. p. 581; Gaz. vol. 174; p. 92.
Sealing device. G. E. Palmer. No. 1,014,252; Jan. 9; Sp. p. 2592; Gaz. vol. 174; p. 432.
Sealing machine, Carton-. H. Hager. No. 1,013,768; Jan. 2; Sp. p. 1498; Gaz. vol. 174; p. 237.
Seat: *See* Closet-seat; Metal seat; Vehicle-seat.
Seed-delinting machine, Cotton-. J. G. Reid. No. 1,014,518; Jan. 9; Sp. p. 3135; Gaz. vol. 174; p. 521.
Seeding-machine grain-tube. W. A. Van Brunt. No. 1,013,338; Jan. 2; Sp. p. 550; Gaz. vol. 174; p. 88.
Self-leveling table and chair. J. H. Jacob. No. 1,015,230; Jan. 16; Sp. p. 4711; Gaz. vol. 174; p. 794.
Self-locking mechanism. S. L. Allen. No. 1,013,098; Jan. 2; Sp. p. 6; Gaz. vol. 174; p. 4.
Selling device and charge-maker, Electric ticket-. L. L. Pim and J. J. Christmann. No. 1,014,515; Jan. 9; Sp. p. 3127; Gaz. vol. 174; p. 520.
Semaphore. L. H. Van Zandt. No. 1,014,985; Jan. 16; Sp. p. 4231; Gaz. vol. 174; p. 712.
Semaphore, Electrically-controlled. E. R. Gill. No. 1,013,290; Jan. 2; Sp. p. 454; Gaz. vol. 174; p. 71.
Separator: *See* Centrifugal separator; Coal-separator; Cream-separator; Grain-separator; Steam-separator; Vacuum-pan separator.
Separator. I. Blount. No. 1,016,241; Jan. 30; Sp. p. 6876; Gaz. vol. 174; p. 1194.
Service-box cover. C. T. Ford. No. 1,014,138; Jan. 9; Sp. p. 2335; Gaz. vol. 174; p. 390.
Sewage and distillery or brewery wash or waste, Treatment and utilization of. A. Dickson. No. 1,015,302; Jan. 23; Sp. p. 4882; Gaz. vol. 174; p. 845.
Sewing and trimming machine. C. W. Thomas. No. 1,015,917; Jan. 30; Sp. p. 6214; Gaz. vol. 174; p. 1084.
Sewing-machine. G. E. Molyneux. No. 1,013,204; Jan. 2; Sp. p. 231; Gaz. vol. 174; p. 39.
Sewing-machine. W. R. Parsons. No. 1,014,022; Jan. 9; Sp. p. 2090; Gaz. vol. 174; p. 351.
Sewing-machine. F. Baker and L. Jacobs. No. 1,014,033; Jan. 9; Sp. p. 2113; Gaz. vol. 174; p. 354.
Sewing-machine. J. Kiewicz. No. 1,014,231; Jan. 9; Sp. p. 2538; Gaz. vol. 174; p. 424.
Sewing machine, Belt-. P. Heldmann. No. 1,015,438; Jan. 23; Sp. p. 5188; Gaz. vol. 174; p. 892.
Sewing-machine bobbin-winder. J. D. Karle. No. 1,014,483; Jan. 9; Sp. p. 3068; Gaz. vol. 174; p. 510.
Sewing-machine fan attachment. W. J. White. No. 1,015,367; Jan. 23; Sp. p. 5030; Gaz. vol. 174; p. 868.
Sewing-machine feeding mechanism. C. F. Gray. No. 1,014,298; Jan. 9; Sp. p. 2679; Gaz. vol. 174; p. 447.
Sewing-machine presser-foot mechanism. O. E. Brown. No. 1,014,283; Jan. 9; Sp. p. 2650; Gaz. vol. 174; p. 441.
Sewing-machine seam-trimmer and edge-binder. W. R. Abercrombie. No. 1,015,922; Jan. 30; Sp. p. 6222; Gaz. vol. 174; p. 1085.
Sewing-machine strip folding and guiding attachment. A. Laubscher. No. 1,015,967; Jan. 30; Sp. p. 6321; Gaz. vol. 174; p. 1100.
Sewing-machine tension. S. A. Davis. No. 1,014,050; Jan. 9; Sp. p. 2156; Gaz. vol. 174; p. 360.
Sewing-machine tension device. J. T. Hogan. No. 1,013,163; Jan. 2; Sp. p. 151; Gaz. vol. 174; p. 26.
Sewing-machine thread-cutting mechanism. D. Mills. No. 1,016,226; Jan. 30; Sp. p. 6836; Gaz. vol. 174; p. 1188.
Sewing-machine thread-cutting mechanism. D. Mills. No. 1,016,027; Jan. 30; Sp. p. 6446; Gaz. vol. 174; p. 1122.
Sewing-machine thread-trimming mechanism. A. R. Wood. No. 1,013,252; Jan. 2; Sp. p. 356; Gaz. vol. 174; p. 57.
Sewing-machine thread-waxing device. A. Eppler. No. 1,015,304; Jan. 23; Sp. p. 4884; Gaz. vol. 174; p. 846.
Shade-holder. A. C. Rader. No. 1,015,976; Jan. 30; Sp. p. 6341; Gaz. vol. 174; p. 1103.
Shade-roller and curtain-hanger, Combined. E. Gerber. No. 1,015,300; Jan. 23; Sp. p. 4895; Gaz. vol. 174; p. 848.
Shade-roller and curtain holder. S. Chalko. No. 1,013,127; Jan. 2; Sp. p. 77; Gaz. vol. 174; p. 14.
Shaft-coupling. J. A. A. Payen. No. 1,015,906; Jan. 30; Sp. p. 6194; Gaz. vol. 174; p. 1080.
Shafts, Sinking, lining, and cementing. P. A. Legrand. No. 1,014,656; Jan. 16; Sp. p. 3493; Gaz. vol. 174; p. 599.
Shaker-picker. F. H. Emery. No. 1,013,648; Jan. 2; Sp. p. 1228; Gaz. vol. 174; p. 194.
Sharpener, Knife-. R. J. Dearborn. No. 1,015,148; Jan. 16; Sp. p. 4540; Gaz. vol. 174; p. 767.
Sharpener, Razor-. J. A. Beamisderfer. No. 1,014,745; Jan. 16; Sp. p. 3684; Gaz. vol. 174; p. 629.
Sharpener, Tool-. L. Johnson. No. 1,016,072; Jan. 30; Sp. p. 6562; Gaz. vol. 174; p. 1139.
Sharpening device. P. E. Bird. No. 1,013,115; Jan. 2; Sp. p. 46; Gaz. vol. 174; p. 9.
Sharpening-machine. F. Ries. No. 1,015,075; Jan. 16; Sp. p. 4414; Gaz. vol. 174; p. 742.
Sharpening plowshares, Machine for. A. C. Case. No. 1,014,119; Jan. 9; Sp. p. 2302; Gaz. vol. 174; p. 384.
Sheet-feeding mechanism. L. E. Morrison. No. 1,014,323; Jan. 9; Sp. p. 2736; Gaz. vol. 174; p. 456.
Sheet-handling machine. R. C. Seymour. No. 1,015,716; Jan. 23; Sp. p. 5789; Gaz. vol. 174; p. 987.
Sheet-metal-bending machine. W. H. Fahrney. No. 1,015,429; Jan. 23; Sp. p. 5167; Gaz. vol. 174; p. 888.
Sheet-metal box. G. Klenk. No. 1,015,234; Jan. 16; Sp. p. 4716; Gaz. vol. 174; p. 795.
Sheet-metal house, Portable. C. D. Pruden. No. 1,016,032; Jan. 30; Sp. p. 6462; Gaz. vol. 174; p. 1124.
Sheet-registering device. O. S. Beyer. No. 1,014,112; Jan. 9; Sp. p. 2289; Gaz. vol. 174; p. 381.
Sheets or webs, Means for controlling and directing moving. G. F. Read. No. 1,015,836; Jan. 30; Sp. p. 6041; Gaz. vol. 174; p. 1054.
Shells for guns, torpedo-heads, maritime mines, and the like, Loading charge for bursting. E. Sokolowski. No. 1,015,214; Jan. 16; Sp. p. 4670; Gaz. vol. 174; p. 789.
Shelving, Metallic. B. L. Jones. No. 1,013,172; Jan. 2; Sp. p. 168; Gaz. vol. 174; p. 29.
Shingle-making machine. J. Barbour. No. 1,013,724; Jan. 2; Sp. p. 1398; Gaz. vol. 174; p. 219.
Shingles, Method and apparatus for forming roofing-. J. W. Troeger. No. 1,014,424; Jan. 9; Sp. p. 2965; Gaz. vol. 174; p. 492.
Ships, Apparatus for ejecting ashes and other refuse from. F. J. Trewent and W. E. Proctor. No. 1,014,021; Jan. 16; Sp. p. 4085; Gaz. vol. 174; p. 690.
Shock-absorber. E. Flentje. No. 1,013,384; Jan. 2; Sp. p. 653; Gaz. vol. 174; p. 103.
Shock-absorbing device. M. K. Golden. No. 1,015,015; Jan. 16; Sp. p. 4297; Gaz. vol. 174; p. 722.
Shoe. J. Cavanagh, Jr. No. 1,013,739; Jan. 2; Sp. p. 1438; Gaz. vol. 174; p. 226.
Shoe. G. H. Clark. No. 1,013,744; Jan. 2; Sp. p. 1449; Gaz. vol. 174; p. 228.
Shoe, Adjustable ice-. W. H. Morris and H. Hudson. No. 1,016,168; Jan. 30; Sp. p. 6730; Gaz. vol. 174; p. 1170.
Shoe-cleaner. W. G. Callender. No. 1,014,691; Jan. 16; Sp. p. 3572; Gaz. vol. 174; p. 611.
Shoe-jack. E. E. Winkley. No. 1,015,112; Jan. 16; Sp. p. 4486; Gaz. vol. 174; p. 755.
Shoe-nailing machine. L. E. Johnson and J. Crowe. No. 1,015,328; Jan. 23; Sp. p. 4930; Gaz. vol. 174; p. 853.
Shoe-shank stiffener. A. M. and C. M. Moore. No. 1,014,804; Jan. 16; Sp. p. 4026; Gaz. vol. 174; p. 681.
Shoe, Snow-. J. F. Kaminski. No. 1,014,482; Jan. 9; Sp. p. 3067; Gaz. vol. 174; p. 509.
Shoe, Swimming-. P. W. Klaphecke. No. 1,013,403; Jan. 2; Sp. p. 692; Gaz. vol. 174; p. 110.
Shoe-tacking machine. H. A. Ballard. No. 1,015,031; Jan. 30; Sp. p. 6243; Gaz. vol. 174; p. 1088.
Shoes, Apparatus for breaking in. C. P. Byrnes. No. 1,015,291; Jan. 23; Sp. p. 4855; Gaz. vol. 174; p. 841.
Shoes, Edge-setting iron for. C. F. Keller. No. 1,014,006; Jan. 9; Sp. p. 2050; Gaz. vol. 174; p. 346.
Shoes, &c., Fastening device for. J. F. Atwood. No. 1,015,928; Jan. 30; Sp. p. 6234; Gaz. vol. 174; p. 1087.
Shotgun-barrel. P. F. Vandenbossche. No. 1,013,974; Jan. 9; Sp. p. 1981; Gaz. vol. 174; p. 335.
Shotguns, Compensating lug for. J. Singer. No. 1,014,913; Jan. 16; Sp. p. 4061; Gaz. vol. 174; p. 687.
Shovel-point. H. W. Snyder. No. 1,016,181; Jan. 30; Sp. p. 6753; Gaz. vol. 174; p. 1174.
Shutter-actuating mechanism, Time-controlled. B. Bryan. No. 1,015,134; Jan. 16; Sp. p. 4527; Gaz. vol. 174; p. 763.
Shuttle. C. E. McGill. No. 1,014,661; Jan. 16; Sp. p. 3504; Gaz. vol. 174; p. 600.
Shuttle, Self-threading. W. Labonté. No. 1,014,309; Jan. 9; Sp. p. 2700; Gaz. vol. 174; p. 451.
Shuttle-threading device. H. A. Murphy and J. F. Simpson. No. 1,013,425; Jan. 2; Sp. p. 742; Gaz. vol. 174; p. 117.
Side-board and wagon-body clamp. A. C. Smith. No. 1,014,339; Jan. 9; Sp. p. 2793; Gaz. vol. 174; p. 462.

Sign. O. R. Buck. No. 1,014,564; Jan. 9; Sp. p. 3214; Gaz. vol. 174; p. 535.
Sign-frame. H. Bennewis. No. 1,015,126; Jan. 16; Sp. p. 4514; Gaz. vol. 174; p. 760.
Sign, Mechanical advertising-. J. Samuels. No. 1,015,714; Jan. 23; Sp. p. 5786; Gaz. vol. 174; p. 986.
Signal: *See* Mail-box signal; Railway-crossing signal; Visible signal.
Signaling and telephone system. H. O. Rugh. No. 1,016,036; Jan. 30; Sp. p. 6471; Gaz. vol. 174; p. 1126.
Signaling apparatus, Wireless. J. L. Hogan, Jr. No. 1,014,002; Jan. 9; Sp. p. 2044; Gaz. vol. 174; p. 345.
Signaling device. C. A. Schindler. No. 1,015,715; Jan. 23; Sp. p. 5787; Gaz. vol. 174; p. 986.
Signaling device, Electrical. E. A. Fitzgerald. No. 1,014,588; Jan. 9; Sp. p. 3258; Gaz. vol. 174; p. 544.
Signaling device, Restaurant. J. Bedini. No. 1,013,582; Jan. 2; Sp. p. 1058; Gaz. vol. 174; p. 171.
Signaling from airships and the like, Means for. R. Wankmüller. No. 1,013,342; Jan. 2; Sp. p. 558; Gaz. vol. 174; p. 89.
Silicon carbid. F. J. Tone. No. 1,013,700; Jan. 2; Sp. p. 1356; Gaz. vol. 174; p. 211.
Silicon carbid, Manufacture of. F. J. Tone. No. 1,013,701; Jan. 2; Sp. p. 1357; Gaz. vol. 174; p. 211.
Silo. O. Brumbaugh. No. 1,015,612; Jan. 23; Sp. p. 5560; Gaz. vol. 174; p. 952.
Silo-hoop-fastening means. C. W. McClure. No. 1,015,815; Jan. 30; Sp. p. 5991; Gaz. vol. 174; p. 1047.
Silver ores, Reduction of. C. G. Fink. No. 1,013,931; Jan. 9; Sp. p. 1889; Gaz. vol. 174; p. 321.
Single-phase motor. W. J. Branson. No. 1,013,119; Jan. 2; Sp. p. 56; Gaz. vol. 174; p. 11.
Siphon, Tank-. A. J. Ashton. No. 1,013,719; Jan. 2; Sp. p. 1389; Gaz. vol. 174; p. 218.
Siphon, Valveless-tank. I. L. Hammond. No. 1,013,876; Jan. 9; Sp. p. 1763; Gaz. vol. 174; p. 302.
Size. W. A. Weelands and E. Williams. No. 1,015,365; Jan. 23; Sp. p. 5027; Gaz. vol. 174; p. 868.
Skee, Adjustable. L. W. Greenig and J. O. Fowler. No. 1,013,154; Jan. 2; Sp. p. 131; Gaz. vol. 174; p. 23.
Skee, Water-. H. J. Anderson. No. 1,014,093; Jan. 16; Sp. p. 4248; Gaz. vol. 174; p. 715.
Skiving-machine. W. A. Parmenter and A. B. Alden. (Reissue.) No. 13,355; Jan. 9; Sp. p. 3418; Gaz. vol. 174; p. 565.
Skiving-machine. L. W. G. Flynt. No. 1,015,882; Jan. 30; Sp. p. 6136; Gaz. vol. 174; p. 1071.
Slasher. L. A. Aumann. No. 1,014,361; Jan. 9; Sp. p. 2844; Gaz. vol. 174; p. 470.
Slate-cleaner. A. Breider. No. 1,015,539; Jan. 23; Sp. p. 5400; Gaz. vol. 174; p. 925.
Slate-picker. F. H. Emery. No. 1,013,647; Jan. 2; Sp. p. 1227; Gaz. vol. 174; p. 193.
Sled, Folding. O. Crutchfield. No. 1,013,132; Jan. 2; Sp. p. 85; Gaz. vol. 174; p. 15.
Sleeve, Splicing-. J. Riddell. No. 1,016,005; Jan. 30; Sp. p. 6606; Gaz. vol. 174; p. 1147.
Slicer, Food-. H. Barry. No. 1,013,361; Jan. 2; Sp. p. 600; Gaz. vol. 174; p. 96.
Slicing-machine. E. A. Hand. No. 1,014,595; Jan. 9; Sp. p. 3274; Gaz. vol. 174; p. 546.
Slicing-machine. F. Graff. No. 1,016,008; Jan. 30; Sp. p. 6411; Gaz. vol. 174; p. 1115.
Slicing-machine support, Meat-. F. D. Fader. No. 1,013,756; Jan. 2; Sp. p. 1473; Gaz. vol. 174; p. 232.
Slitting and winding mechanism. P. Hellberg. No. 1,013,490; Jan. 2; Sp. p. 879; Gaz. vol. 174; p. 140.
Slots, Forming undercut. W. Lewis. No. 1,014,658; Jan. 16; Sp. p. 3499; Gaz. vol. 174; p. 599.
Small-arms, Practice apparatus for. H. B. Hollifield. No. 1,016,150; Jan. 30; Sp. p. 6700; Gaz. vol. 174; p. 1164.
Smelting-furnace with electric refining-hearths connected thereto. A. Helfenstein. No. 1,015,439; Jan. 23; Sp. p. 5193; Gaz. vol. 174; p. 892.
Smoke and gas consumer for locomotives. D. Goff. No. 1,014,587; Jan. 9; Sp. p. 2895; Gaz. vol. 174; p. 479.
Smoke-consumer and vaporizer, Combined. O. Davis. No. 1,014,573; Jan. 9; Sp. p. 3234; Gaz. vol. 174; p. 538.
Smoke-consuming furnace. R. G. Speer. No. 1,015,746; Jan. 23; Sp. p. 5852; Gaz. vol. 174; p. 997.
Smoke-ring blower. E. F. Kelly. No. 1,013,296; Jan. 2; Sp. p. 467; Gaz. vol. 174; p. 73.
Smokestacks, Adjustable cowl for. F. J. Andrews. No. 1,013,858; Jan. 2; Sp. p. 594; Gaz. vol. 174; p. 95.
Snap-bolts, Apparatus for treating. J. A. Shields. No. 1,013,800; Jan. 2; Sp. p. 1342; Gaz. vol. 174; p. 208.
Snap-bolts of cotton, Treating. J. A. Shields. No. 1,013,801; Jan. 2; Sp. p. 1344; Gaz. vol. 174; p. 209.
Snap-switch, Pendent. F. C. De Reamer. No. 1,015,999; Jan. 30; Sp. p. 6392; Gaz. vol. 174; p. 1112.
Snowmobile attachment. F. Borg and E. W. Lantz. No. 1,015,270; Jan. 16; Sp. p. 4798; Gaz. vol. 174; p. 808.
Soap-dispensing machine. W. Haddow. No. 1,015,620; Jan. 23; Sp. p. 5579; Gaz. vol. 174; p. 956.
Soap-dispensing machine. W. Haddow. No. 1,015,678; Jan. 23; Sp. p. 5701; Gaz. vol. 174; p. 974.
Sod-cutter. W. Torrance. No. 1,013,332; Jan. 2; Sp. p. 541; Gaz. vol. 174; p. 86.
Soda-calciner. G. H. Marshall. No. 1,014,314; Jan. 9; Sp. p. 2718; Gaz. vol. 174; p. 453.
Soda, Obtaining carbonate of. N. Wrinkle and R. G. Paddock. No. 1,016,239; Jan. 30; Sp. p. 6869; Gaz. vol. 174; p. 1193.
Sodium-aluminum fluorid, Making. E. Teisler. No. 1,015,220; Jan. 16; Sp. p. 4680; Gaz. vol. 174; p. 790.
Solar heater. T. F. Nichols. No. 1,014,972; Jan. 16; Sp. p. 4206; Gaz. vol. 174; p. 708.
Soldering-iron. J. E. Bowe. No. 1,015,713; Jan. 23; Sp. p. 5785; Gaz. vol. 174; p. 986.
Soldering-machine. W. H. Gibbs. No. 1,016,006; Jan. 30; Sp. p. 6405; Gaz. vol. 174; p. 1115.
Sole, Elastic metal. U. A. Baumann. No. 1,013,727; Jan. 2; Sp. p. 1408; Gaz. vol. 174; p. 221.
Solenoid. C. J. Anderson. No. 1,015,925; Jan. 30; Sp. p. 6228; Gaz. vol. 174; p. 1086.
Sound-producing device. B. P. and F. I. Remy. No. 1,016,035; Jan. 30; Sp. p. 6470; Gaz. vol. 174; p. 1126.
Sound-producing device. J. P. Northey. No. 1,016,087; Jan. 30; Sp. p. 6591; Gaz. vol. 174; p. 1145.
Sound-producing instrument. E. H. Hawley. No. 1,014,302; Jan. 9; Sp. p. 2689; Gaz. vol. 174; p. 449.
Sound reproducing and recording instrument. H. G. Wieder. No. 1,013,247; Jan. 2; Sp. p. 346; Gaz. vol. 174; p. 55.
Spark-arrester. H. W. Mielke and G. M. Sergent. No. 1,014,018; Jan. 9; Sp. p. 2083; Gaz. vol. 174; p. 349.
Spark-arrester. W. R. Hall. No. 1,016,069; Jan. 30; Sp. p. 6556; Gaz. vol. 174; p. 1138.
Spark-arrester. C. F. Clawson. No. 1,016,213; Jan. 30; Sp. p. 6817; Gaz. vol. 174; p. 1185.
Spark-indicator. L. E. Talt. No. 1,015,096; Jan. 16; Sp. p. 4454; Gaz. vol. 174; p. 749.
Spark-plug. A. Schmidt. No. 1,015,843; Jan. 30; Sp. p. 6056; Gaz. vol. 174; p. 1056.
Spark-plug tester. A. De Clairmont. No. 1,014,207; Jan. 9; Sp. p. 2467; Gaz. vol. 174; p. 415.
Sparking apparatus. H. F. Whalton. No. 1,013,466; Jan. 2; Sp. p. 823; Gaz. vol. 174; p. 131.
Specimens, Method and means for preserving and mailing. R. L. Watkins. No. 1,015,601; Jan. 23; Sp. p. 5543; Gaz. vol. 174; p. 949.
Spectacles and the like, Adjustable clamping-support for. E. S. Wiggins. No. 1,013,711; Jan. 2; Sp. p. 1372; Gaz. vol. 174; p. 215.
Speed-changing mechanism. W. C. Conant. No. 1,015,477; Jan. 23; Sp. p. 5283; Gaz. vol. 174; p. 905.
Speed-changing mechanism. H. L. Beeler. No. 1,015,986; Jan. 30; Sp. p. 6363; Gaz. vol. 174; p. 1108.
Speed computer and indicator, Train-. D. Love. No. 1,014,832; Jan. 16; Sp. p. 3880; Gaz. vol. 174; p. 659.
Speed-regulating device for automobiles and the like. H. Saurer. (Reissue.) No. 13,348; Jan. 2; Sp. p. 1696; Gaz. vol. 174; p. 268.
Speed-regulator for electromotors. B. F. Hutches, Jr. No. 1,014,707; Jan. 16; Sp. p. 3597; Gaz. vol. 174; p. 616.
Spike. G. Weber. No. 1,015,106; Jan. 16; Sp. p. 4474; Gaz. vol. 174; p. 753.
Spike-puller. H. T. Kostenbader. No. 1,014,068; Jan. 9; Sp. p. 2193; Gaz. vol. 174; p. 367.
Spindle: *See* Bearing-spindle; Knob-spindle.
Spindle-driving mechanism, Drill-. F. D. Taylor. No. 1,015,359; Jan. 23; Sp. p. 5011; Gaz. vol. 174; p. 866.
Spinning-machine. F. S. Culver. No. 1,013,748; Jan. 2; Sp. p. 1453; Gaz. vol. 174; p. 229.
Spinning-machine. S. Z. de Ferranti. No. 1,013,872; Jan. 9; Sp. p. 1756; Gaz. vol. 174; p. 301.
Spinning-mules, Yarn-evening attachment for. R. J. Harrington. No. 1,014,299; Jan. 9; Sp. p. 2681; Gaz. vol. 174; p. 447.
Spinning or twisting apparatus, Traverse-motion for yarn. A. E. Rhoades. No. 1,013,846; Jan. 2; Sp. p. 1660; Gaz. vol. 174; p. 263.
Splitting-machine. M. A. Reilly and T. J. Aldridge. No. 1,013,897; Jan. 9; Sp. p. 1803; Gaz. vol. 174; p. 309.
Spool-head. C. H. Smith. No. 1,014,780; Jan. 16; Sp. p. 3764; Gaz. vol. 174; p. 640.
Spool, Ribbon-. W. W. Lasker. No. 1,013,882; Jan. 9; Sp. p. 1772; Gaz. vol. 174; p. 304.
Sprayer. J. F. Patterson. No. 1,013,307; Jan. 2; Sp. p. 489; Gaz. vol. 174; p. 77.
Spraying device. S. Stephens. No. 1,016,109; Jan. 30; Sp. p. 6629; Gaz. vol. 174; p. 1152.
Spraying device. H. E. Brandt. No. 1,016,204; Jan. 30; Sp. p. 6803; Gaz. vol. 174; p. 1182.
Spread-roller. J. E. Melchior. No. 1,014,769; Jan. 16; Sp. p. 3742; Gaz. vol. 174; p. 637.
Spreading device, Material-. A. B. Gibeau and H. Hadley, Jr. No. 1,013,546; Jan. 2; Sp. p. 994; Gaz. vol. 174; p. 159.
Spring: *See* Bed-spring; Vehicle-spring; Vehicle suspension-spring.
Spring. W. S. Hodges. No. 1,013,774; Jan. 2; Sp. p. 1511; Gaz. vol. 174; p. 239.
Spring attachment, Vehicle. G. S. Spreyer. No. 1,015,649; Jan. 23; Sp. p. 5661; Gaz. vol. 174; p. 966.
Spring construction, Reinforced-rim. L. A. Young. No. 1,014,736; Jan. 16; Sp. p. 3668; Gaz. vol. 174; p. 626.
Spring-fender for docks. H. J. Brunnier. No. 1,013,584; Jan. 2; Sp. p. 1061; Gaz. vol. 174; p. 171.
Spring-motor. H. W. Cleland. No. 1,015,298; Jan. 23; Sp. p. 4872; Gaz. vol. 174; p. 844.
Spring-switch. C. C. Korns. No. 1,013,297; Jan. 2; Sp. p. 470; Gaz. vol. 174; p. 73.
Spring-wheel. W. D. Hester. No. 1,013,656; Jan. 2; Sp. p. 1252; Gaz. vol. 174; p. 196.

Talking-machine sound-conveying device. E. R. Johnson.

Spring-wheel. W. B. McPike. No. 1,013,946; Jan. 9; Sp. p. 1916; Gaz. vol. 174; p. 326.
Spring-wheel. G. V. Stein. No. 1,014,533; Jan. 9; Sp. p. 3158; Gaz. vol. 174; p. 526.
Spring-wheel. S. F. Walker and G. Hunter. No. 1,014,541; Jan. 9; Sp. p. 3170; Gaz. vol. 174; p. 528.
Spring-wheel. R. Stock. No. 1,014,858; Jan. 16; Sp. p. 3955; Gaz. vol. 174; p. 669.
Spring-wheel. J. Lowe. No. 1,015,199; Jan. 16; Sp. p. 4645; Gaz. vol. 174; p. 784.
Spring-wheel. J. Corbin. No. 1,015,785; Jan. 30; Sp. p. 5933; Gaz. vol. 174; p. 1038.
Spring-wheel, Vehicle. P. H. Minnis. No. 1,014,409; Jan. 9; Sp. p. 2937; Gaz. vol. 174; p. 487.
Spring-winder. R. Titus. No. 1,013,239; Jan. 2; Sp. p. 328; Gaz. vol. 174; p. 52.
Springs, End mounting for vehicle-. B. A. Gramm. No. 1,013,547; Jan. 2; Sp. p. 996; Gaz. vol. 174; p. 160.
Sprinkler: *See* Lawn-sprinkler.
Sprinkler-head, Automatic. C. B. Garrett. No. 1,013,545; Jan. 2; Sp. p. 991; Gaz. vol. 174; p. 159.
Sprinkler system, Automatic. E. D. Van Ness. No. 1,014,349; Jan. 9; Sp. p. 2814; Gaz. vol. 174; p. 466.
Sprinkling-machine. R. F. North. No. 1,014,507; Jan. 9; Sp. p. 3113; Gaz. vol. 174; p. 517.
Sprocket-wheel for cutting-chains. E. Jones and J. Hall. No. 1,013,173; Jan. 2; Sp. p. 170; Gaz. vol. 174; p. 30.
Square. L. W. Cole. No. 1,013,986; Jan. 9; Sp. p. 2006; Gaz. vol. 174; p. 339.
Square. P. D. Jones. No. 1,015,736; Jan. 23; Sp. p. 5834; Gaz. vol. 174; p. 994.
Square, Sight-. F. P. Meyer. No. 1,013,799; Jan. 2; Sp. p. 1549; Gaz. vol. 174; p. 246.
Squares, Attachment for. J. F. Clark and G. F. Dorsey. No. 1,014,453; Jan. 9; Sp. p. 3022; Gaz. vol. 174; p. 501.
Stacker, Bale-. A. Brunelle. No. 1,015,939; Jan. 30; Sp. p. 6261; Gaz. vol. 174; p. 1090.
Stacker, Hay-. C. E. Helmick and W. E. Adler. No. 1,015,440; Jan. 23; Sp. p. 5195; Gaz. vol. 174; p. 892.
Stacker, Pneumatic. J. K. Sharpe, Jr. No. 1,014,778; Jan. 16; Sp. p. 3760; Gaz. vol. 174; p. 640.
Stacker, Pneumatic. J. K. Sharpe, Jr. No. 1,014,779; Jan. 16; Sp. p. 3762; Gaz. vol. 174; p. 640.
Staff-holder, Flexible. C. D. Lynch. No. 1,013,410; Jan. 2; Sp. p. 702; Gaz. vol. 174; p. 112.
Stair, Counterbalanced. F. C. Seymour. No. 1,015,645; Jan. 23; Sp. p. 5643; Gaz. vol. 174; p. 964.
Stairway, Moving. G. A. Wheeler. No. 1,016,189; Jan. 30; Sp. p. 6765; Gaz. vol. 174; p. 1177.
Stalk-cutter. R. N. Sikes. No. 1,014,337; Jan. 9; Sp. p. 2790; Gaz. vol. 174; p. 461.
Stall. W. L. Root. No. 1,013,447; Jan. 2; Sp. p. 782; Gaz. vol. 174; p. 125.
Stall, Adjustable. O. B. Stillman. No. 1,016,182; Jan. 30; Sp. p. 6754; Gaz. vol. 174; p. 1174.
Stamp, Dating-. E. H. Sanborn. No. 1,014,260; Jan. 9; Sp. p. 2604; Gaz. vol. 174; p. 434.
Stamp-holder. J. J. Davis. No. 1,014,380; Jan. 9; Sp. p. 2882; Gaz. vol. 174; p. 477.
Stamp-mill. E. Sheffield, Jr. No. 1,015,910; Jan. 30; Sp. p. 6200; Gaz. vol. 174; p. 1081.
Stamping device. A. C. Blum. No. 1,013,116; Jan. 2; Sp. p. 40; Gaz. vol. 174; p. 10.
Stamping machine, Letter-. J. W. Fennel. No. 1,013,383; Jan. 2; Sp. p. 651; Gaz. vol. 174; p. 103.
Stamping-machines, Sheet-feed apparatus for typographic. M. E. Blume. No. 1,016,125; Jan. 30; Sp. p. 6655; Gaz. vol. 174; p. 1157.
Stand: *See* Bicycle-stand; Display-stand; Hat-trimming stand; Music-stand; Portable stand; Umbrella-stand; Water-cooler stand.
Stand. A. Hering. No. 1,015,183; Jan. 16; Sp. p. 4618; Gaz. vol. 174; p. 778.
Staple-anchor. W. L. Keller. No. 1,013,398; Jan. 2; Sp. p. 683; Gaz. vol. 174; p. 108.
Starch and gluten from wheat-flour, Production of. F. A. V. Klopfer. No. 1,013,497; Jan. 2; Sp. p. 895; Gaz. vol. 174; p. 142.
Starch by a continuous operation into derivatives, dextrin, dextrose, &c., Apparatus for converting. S. M. Lillie. No. 1,014,311; Jan. 9; Sp. p. 2704; Gaz. vol. 174; p. 452.
Starch from starched articles, Apparatus for removing surplus. C. A. Tyler. No. 1,013,337; Jan. 2; Sp. p. 549; Gaz. vol. 174; p. 88.
Station-indicator. M. Godfrey, R. Ekron, and H. M. Svebilius. No. 1,013,485; Jan. 2; Sp. p. 863; Gaz. vol. 174; p. 138.
Stationery-box. A. Ehmling. No. 1,014,581; Jan. 9; Sp. p. 3247; Gaz. vol. 174; p. 541.
Steam-boiler. E. Boelzner. No. 1,015,936; Jan. 30; Sp. p. 6252; Gaz. vol. 174; p. 1089.
Steam-engine. E. W. Conkell. No. 1,015,993; Jan. 30; Sp. p. 6375; Gaz. vol. 174; p. 1110.
Steam-generating boiler. L. D. Lovekin. No. 1,014,238; Jan. 9; Sp. p. 2559; Gaz. vol. 174; p. 427.
Steam generation, feed-water heating, and heating of liquids generally. W. A. Bone, J. W. Wilson, and C. D. McCourt. No. 1,015,261; Jan. 16; Sp. p. 4778; Gaz. vol. 174; p. 804.
Steam-generator-regulating apparatus. B. F. Silliman. No. 1,015,848; Jan. 30; Sp. p. 6065; Gaz. vol. 174; p. 1058.
Steam, Means and apparatus for the generation of. W. A. Bone, J. W. Wilson, and C. D. McCourt. No. 1,015,131; Jan. 16; Sp. p. 4521; Gaz. vol. 174; p. 762.
Steam production, Regulating and controlling. E. Thomson. No. 1,015,982; Jan. 30; Sp. p. 6355; Gaz. vol. 174; p. 1106.
Steam production, Regulation and control of. E. Thomson. No. 1,015,983; Jan. 30; Sp. p. 6357; Gaz. vol. 174; p. 1106.
Steam regeneration. A. Sorge. No. 1,015,277; Jan. 16; Sp. p. 4818; Gaz. vol. 174; p. 810.
Steam, Regulating the production of. H. Lemp. No. 1,015,048; Jan. 16; Sp. p. 4355; Gaz. vol. 174; p. 731.
Steam-separator. W. C. Mitchell. No. 1,013,677; Jan. 2; Sp. p. 1301; Gaz. vol. 174; p. 203.
Steam-trap. W. and T. W. Moll. No. 1,013,507; Jan. 2; Sp. p. 909; Gaz. vol. 174; p. 145.
Steel, Manufacture of. W. R. Walker. No. 1,014,425; Jan. 9; Sp. p. 2969; Gaz. vol. 174; p. 492.
Steering device, Automatic. A. T. Nelson. No. 1,015,061; Jan. 16; Sp. p. 4392; Gaz. vol. 174; p. 737.
Steering-gear. G. H. Chaplain. No. 1,015,295; Jan. 23; Sp. p. 4860; Gaz. vol. 174; p. 842.
Steering moving objects, particularly ships and flying-machines, Apparatus for. V. Alexieff. No. 1,016,240; Jan. 30; Sp. p. 6871; Gaz. vol. 174; p. 1193.
Stenceling device. R. Gottlieb. No. 1,013,597; Jan. 2; Sp. p. 1095; Gaz. vol. 174; p. 176.
Stethoscope, Localizing-. D. O. Fosgate. No. 1,015,163; Jan. 16; Sp. p. 4574; Gaz. vol. 174; p. 771.
Still, Ammonia-. H. S. Davis. No. 1,015,145; Jan. 16; Sp. p. 4543; Gaz. vol. 174; p. 766.
Stilt. H. S. Thomas. No. 1,013,828; Jan. 2; Sp. p. 1609; Gaz. vol. 174; p. 257.
Stitch-forming mechanism. A. Grieb. No. 1,013,155; Jan. 2; Sp. p. 132; Gaz. vol. 174; p. 23.
Stitching machines, Presser-foot for pamphlet-. H. L. Roberts. No. 1,015,077; Jan. 16; Sp. p. 4417; Gaz. vol. 174; p. 743.
Stock-boards, Sample-holder attachment for. R. R. Streeter. No. 1,014,420; Jan. 9; Sp. p. 2958; Gaz. vol. 174; p. 491.
Stock-releasing apparatus. G. M. Goodnight. No. 1,015,797; Jan. 30; Sp. p. 5958; Gaz. vol. 174; p. 1042.
Stoker, Mechanical. R. F. Stewart. No. 1,014,534; Jan. 9; Sp. p. 3159; Gaz. vol. 174; p. 526.
Stone and brick layers, Combination pointer and jointer for. A. W. Kline. No. 1,014,650; Jan. 16; Sp. p. 3481; Gaz. vol. 174; p. 597.
Stone, Device for making plates of artificial. A. Hermann. No. 1,014,221; Jan. 9; Sp. p. 2504; Gaz. vol. 174; p. 420.
Stone, Preparing crushed. H. S. Anderson. No. 1,013,100; Jan. 2; Sp. p. 11; Gaz. vol. 174; p. 5.
Stopper: *See* Bottle-stopper.
Stopper. O. A. Carlsson. No. 1,014,450; Jan. 9; Sp. p. 3017; Gaz. vol. 174; p. 500.
Stopper-extractor. J. F. Slusser. No. 1,014,529; Jan. 9; Sp. p. 3154; Gaz. vol. 174; p. 525.
Storage-vessel indicator. O. S. King. No. 1,014,486; Jan. 9; Sp. p. 3073; Gaz. vol. 174; p. 511.
Stove. D. W. Marlow. No. 1,015,330; Jan. 23; Sp. p. 4960; Gaz. vol. 174; p. 856.
Stove and water-heater, Combined. G. H. Kreunen. No. 1,014,760; Jan. 16; Sp. p. 3712; Gaz. vol. 174; p. 634.
Stove, Gas-. F. Sattler. No. 1,013,224; Jan. 2; Sp. p. 300; Gaz. vol. 174; p. 48.
Stove, Gas-. F. Sattler. No. 1,013,318; Jan. 2; Sp. p. 513; Gaz. vol. 174; p. 81.
Stove, Gas-. A. and A. W. Streit. No. 1,014,421; Jan. 9; Sp. p. 2960; Gaz. vol. 174; p. 491.
Stove, Gas-. J. Stubbers. No. 1,015,597; Jan. 23; Sp. p. 5536; Gaz. vol. 174; p. 948.
Stove, Heating-. E. J. Parker. No. 1,015,973; Jan. 30; Sp. p. 6333; Gaz. vol. 174; p. 1102.
Stove-lid lifter. E. Tower. No. 1,014,788; Jan. 16; Sp. p. 3785; Gaz. vol. 174; p. 643.
Stoves, Safety stand-pipe for gasolene-. G. H. Burgess. No. 1,015,779; Jan. 30; Sp. p. 5923; Gaz. vol. 174; p. 1036.
Stovepipe-lock. C. F. Collier. No. 1,015,542; Jan. 23; Sp. p. 5405; Gaz. vol. 174; p. 926.
Strainer and support therefor, Milk-. H. J. Ebner. No. 1,015,946; Jan. 30; Sp. p. 6278; Gaz. vol. 174; p. 1093.
Strap: *See* Pull-strap.
Strap-forming machine. A. F. Kessler. No. 1,014,065; Jan. 9; Sp. p. 2184; Gaz. vol. 174; p. 365.
Straw, dried grasses, or the like for the production of articles of commerce, Treatment of. L. Carré. No. 1,014,566; Jan. 9; Sp. p. 3217; Gaz. vol. 174; p. 536.
Straw-holder. W. J. Eisenhardt. No. 1,014,866; Jan. 16; Sp. p. 3972; Gaz. vol. 174; p. 672.
Street-cleaning machine. R. C. Menzies. No. 1,014,165; Jan. 9; Sp. p. 2386; Gaz. vol. 174; p. 399.
Street-cleaning machine. L. H. Roby. No. 1,015,637; Jan. 23; Sp. p. 5622; Gaz. vol. 174; p. 962.
Structural material, Bituminous. H. R. Wardell. No. 1,015,919; Jan. 30; Sp. p. 6218; Gaz. vol. 174; p. 1084.
Studding for plaster-boards or the like. H. H. Burson. No. 1,013,738; Jan. 2; Sp. p. 1436; Gaz. vol. 174; p. 225.
Stuffing-box. D. E. Norris. No. 1,015,582; Jan. 23; Sp. p. 5506; Gaz. vol. 174; p. 941.
Stuffing-box. E. C. Kahle. No. 1,015,685; Jan. 23; Sp. p. 5738; Gaz. vol. 174; p. 977.
Stuffing-box, Double packing. U. A. Haaser. No. 1,015,884; Jan. 30; Sp. p. 6150; Gaz. vol. 174; p. 1071.
Subirrigation system. W. N. Robison. No. 1,015,401; Jan. 23; Sp. p. 5100; Gaz. vol. 174; p. 879.
Sugar-crystallizer. F. Lafeuille. No. 1,016,019; Jan. 30; Sp. p. 6431; Gaz. vol. 174; p. 1110.

Sugar-juices, Extracting. C. Steffen. No. 1,015,650; Jan. 23; Sp. p. 5652; Gaz. vol. 174; p. 966.
Sugar-separator tip. E. Roberts and A. H. Gibson. No. 1,015,510; Jan. 23; Sp. p. 5340; Gaz. vol. 174; p. 916.
Superheater. H. Smith. No. 1,014,530; Jan. 9; Sp. p. 3155; Gaz. vol. 174; p. 525.
Superphosphate-chamber and means for emptying the same. J. F. C. M. Tröba. No. 1,013,334; Jan. 2; Sp. p. 544; Gaz. vol. 174; p. 87.
Support. G. W. Niebling. No. 1,014,021; Jan. 9; Sp. p. 2088; Gaz. vol. 174; p. 350.
Supporting device. M. J. Shimer. No. 1,015,717; Jan. 23; Sp. p. 5794; Gaz. vol. 174; p. 987.
Suprarenal glands, Producing a metallic derivative of the active principle of the. J. L. Turner. No. 1,016,185; Jan. 30; Sp. p. 6760; Gaz. vol. 174; p. 1176.
Surgical appliance. A. Bitterlich. No. 1,013,924; Jan. 9; Sp. p. 1872; Gaz. vol. 174; p. 319.
Surgical belt or device for the treatment of movable kidneys and other like purposes. E. W. Salt. No. 1,013,900; Jan. 9; Sp. p. 1808; Gaz. vol. 174; p. 310.
Surgical instrument. R. S. Arthur. No. 1,014,799; Jan. 16; Sp. p. 3806; Gaz. vol. 174; p. 647.
Surveying instrument, Topographical. P. Gaultier. No. 1,014,148; Jan. 9; Sp. p. 2343; Gaz. vol. 174; p. 392.
Suspender members, Narrow fabric for. C. S. Smith. No. 1,013,692; Jan. 2; Sp. p. 1346; Gaz. vol. 174; p. 209.
Sweeper and rake, Combined. P. May. No. 1,014,404; Jan. 9; Sp. p. 2930; Gaz. vol. 174; p. 486.
Swimming appliance. H. W. McLeod. No. 1,014,407; Jan. 9; Sp. p. 2934; Gaz. vol. 174; p. 486.
Swimming, Hand attachment serviceable for. E. Boman. No. 1,014,939; Jan. 16; Sp. p. 4130; Gaz. vol. 174; p. 696.
Swing and other articles of furniture, Combination-. I. B. Sanders. No. 1,013,956; Jan. 9; Sp. p. 1946; Gaz. vol. 174; p. 330.
Swing, Horse-. H. Miller. No. 1,015,239; Jan. 16; Sp. p. 4726; Gaz. vol. 174; p. 797.
Swingletree-guard. H. F. Corey. No. 1,014,284; Jan. 9; Sp. p. 2653; Gaz. vol. 174; p. 442.
Switch: *See* Electric switch; Electric time-switch; Lock-switch; Multithrow switch; Railway-switch; Safety-switch; Snap-switch; Spring-switch; Trolley-trackway switch.
Switch. B. E. Taylor and D. H. Elkins. No. 1,015,097; Jan. 16; Sp. p. 4456; Gaz. vol. 174; p. 750.
Switch-point lock. W. H. H. Welton. No. 1,013,978; Jan. 9; Sp. p. 1991; Gaz. vol. 174; p. 337.
Switch-shield. R. F. Codero. No. 1,015,138; Jan. 16; Sp. p. 4534; Gaz. vol. 174; p. 764.
Switch-throwing mechanism. J. M. Leonard. No. 1,015,044; Jan. 16; Sp. p. 4359; Gaz. vol. 174; p. 731.
Switch-throwing mechanism. H. V. Elmore. No. 1,015,669; Jan. 23; Sp. p. 5689; Gaz. vol. 174; p. 972.
Switching apparatus, Magnetically-controlled. S. B. Condit, Jr. No. 1,014,455; Jan. 9; Sp. p. 3025; Gaz. vol. 174; p. 502.
Switching device, I-beam-track-. C. Messick. No. 1,014,503; Jan. 9; Sp. p. 3104; Gaz. vol. 174; p. 515.
Syringe. J. F. Kellogg. No. 1,014,228; Jan. 9; Sp. p. 2533; Gaz. vol. 174; p. 423.
Syringe. N. Pernice. No. 1,014,608; Jan. 9; Sp. p. 3324; Gaz. vol. 174; p. 551.
Syringe, Hypodermic. J. T. Greeley. No. 1,015,952; Jan. 30; Sp. p. 6289; Gaz. vol. 174; p. 1094.
Syringe, Hypodermic and similar. J. A. Rowse. No. 1,015,276; Jan. 16; Sp. p. 4813; Gaz. vol. 174; p. 810.
Syringe, Vaginal. G. J. Kelley. No. 1,015,895; Jan. 30; Sp. p. 6168; Gaz. vol. 174; p. 1075.
Table: *See* Concentrating-table; Ironing-table; Operating-table; Power-table; Self-leveling table; Turn-table.
Tables and similar articles, Support for. A. A. Cushman. No. 1,014,815; Jan. 16; Sp. p. 3837; Gaz. vol. 174; p. 653.
Tablet holder, Sketch-. A. Scott. No. 1,016,041; Jan. 30; Sp. p. 6482; Gaz. vol. 174; p. 1128.
Tabulating, back-spacing, and key-connecting mechanism. E. Parmly, Jr. No. 1,015,829; Jan. 30; Sp. p. 6020; Gaz. vol. 174; p. 1052.
Tachometer. C. H. Veeder. No. 1,015,767; Jan. 23; Sp. p. 5894; Gaz. vol. 174; p. 1005.
Tack-pulling machine. F. L. MacKenzie. No. 1,013,944; Jan. 9; Sp. p. 1913; Gaz. vol. 174; p. 325.
Tag-making machine. A. L. Stevens. No. 1,014,916; Jan. 16; Sp. p. 4069; Gaz. vol. 174; p. 688.
Tailor's appliance. A. F. Rowe. No. 1,015,083; Jan. 16; Sp. p. 4428; Gaz. vol. 174; p. 745.
Talking-machine. J. Jetter. No. 1,013,170; Jan. 2; Sp. p. 165; Gaz. vol. 174; p. 28.
Talking-machine. E. R. Johnson and J. C. English. No. 1,015,322; Jan. 23; Sp. p. 4924; Gaz. vol. 174; p. 852.
Talking-machine sound-box. A. Fischer. No. 1,013,145; Jan. 2; Sp. p. 109; Gaz. vol. 174; p. 19.
Talking-machine sound-box. A. Fischer. No. 1,013,146; Jan. 2; Sp. p. 110; Gaz. vol. 174; p. 20.
Talking-machine sound-box. B. L. Rinehart. No. 1,013,314; Jan. 2; Sp. p. 505; Gaz. vol. 174; p. 80.
Talking-machine sound-box. T. H. Macdonald. No. 1,014,240; Jan. 9; Sp. p. 2565; Gaz. vol. 174; p. 428.
Talking-machine sound-boxes, Needle-holder for. C. Vogt. No. 1,015,363; Jan. 23; Sp. p. 5019; Gaz. vol. 174; p. 867.
Talking-machine sound-conveying device. E. R. Johnson. No. 1,015,321; Jan. 23; Sp. p. 4921; Gaz. vol. 174; p. 852.
Talking-machine tone-clarifier. F. V. Morse. No. 1,014,841; Jan. 16; Sp. p. 3910; Gaz. vol. 174; p. 663.
Talking-machines, telephones, &c., Sound-reproducer for. W. N. Hunter. No. 1,015,622; Jan. 23; Sp. p. 5583; Gaz. vol. 174; p. 956.
Tank: *See* Measuring-tank.
Tank-bands, Anchor for. A. E. Ostrander. No. 1,014,846; Jan. 16; Sp. p. 3923; Gaz. vol. 174; p. 665.
Tank-filling apparatus, Automatic starter for. H. B. Wilson. No. 1,013,713; Jan. 2; Sp. p. 1376; Gaz. vol. 174; p. 215.
Tank of large diameter. P. Forchheimer. No. 1,014,054; Jan. 9; Sp. p. 2164; Gaz. vol. 174; p. 362.
Tanks, Means for preventing moisture from entering transformer-. F. W. Hadley. No. 1,013,767; Jan. 2; Sp. p. 1497; Gaz. vol. 174; p. 237.
Tap or cock. C. F. E. A. Benkiser. No. 1,013,731; Jan. 2; Sp. p. 1415; Gaz. vol. 174; p. 223.
Target-practice apparatus. H. H. Cummings. No. 1,014,620; Jan. 9; Sp. p. 3349; Gaz. vol. 174; p. 556.
Target-practice apparatus. F. Mitchell. No. 1,015,391; Jan. 23; Sp. p. 5081; Gaz. vol. 174; p. 876.
Tea and coffee strainer. A. L. Carlson. No. 1,015,293; Jan. 23; Sp. p. 4857; Gaz. vol. 174; p. 842.
Tea-strainer. H. D. Smith. No. 1,016,104; Jan. 30; Sp. p. 6620; Gaz. vol. 174; p. 1150.
Telephone. J. Lapicki. No. 1,015,034; Jan. 16; Sp. p. 4338; Gaz. vol. 174; p. 729.
Telephone and telegraph combination system. C. L. Bopp. No. 1,016,202; Jan. 30; Sp. p. 6796; Gaz. vol. 174; p. 1181.
Telephone apparatus. D. H. Wilson. No. 1,015,255; Jan. 16; Sp. p. 4761; Gaz. vol. 174; p. 802.
Telephone attachment. G. L. Bennett. No. 1,013,112; Jan. 2; Sp. p. 35; Gaz. vol. 174; p. 8.
Telephone cabinet or hood. G. W. Lancaster. No. 1,014,492; Jan. 9; Sp. p. 3082; Gaz. vol. 174; p. 512.
Telephone circuit and repeater, Automatic. C. Adams-Randall. No. 1,015,768; Jan. 30; Sp. p. 5901; Gaz. vol. 174; p. 1033.
Telephone circuit and repeating apparatus. C. Adams-Randall. No. 1,015,769; Jan. 30; Sp. p. 5903; Gaz. vol. 174; p. 1033.
Telephone-disconnector. C. G. Fields. No. 1,016,131; Jan. 30; Sp. p. 6670; Gaz. vol. 174; p. 1159.
Telephone-exchanges, Selector for automatic. B. Settegast. No. 1,015,644; Jan. 23; Sp. p. 5632; Gaz. vol. 174; p. 964.
Telephone repeating system. C. Adams-Randall. No. 1,015,414; Jan. 23; Sp. p. 5140; Gaz. vol. 174; p. 883.
Telephone system. W. W. Dean. No. 1,013,865; Jan. 9; Sp. p. 1726; Gaz. vol. 174; p. 298.
Telephone system, Multiple repeating. C. Adams-Randall. No. 1,015,770; Jan. 30; Sp. p. 5905; Gaz. vol. 174; p. 1033.
Telephone system, Party-line-. A. Marchand. No. 1,013,412; Jan. 2; Sp. p. 705; Gaz. vol. 174; p. 112.
Telephone toll apparatus. E. P. Baird. No. 1,015,280; Jan. 23; Sp. p. 4826; Gaz. vol. 174; p. 837.
Telephones, Conversations-counter for. K. Born. No. 1,014,634; Jan. 16; Sp. p. 3446; Gaz. vol. 174; p. 592.
Temperature-controller. F. W. Penn. No. 1,014,511; Jan. 9; Sp. p. 3119; Gaz. vol. 174; p. 518.
Temperature-generating apparatus, High-. W. C. Finck. No. 1,013,593; Jan. 2; Sp. p. 1088; Gaz. vol. 174; p. 173.
Temperature-regulator, Automatic. M. F. Murray. No. 1,015,204; Jan. 16; Sp. p. 4654; Gaz. vol. 174; p. 785.
Tension device. A. Rieffel. No. 1,014,256; Jan. 9; Sp. p. 2599; Gaz. vol. 174; p. 433.
Theater appliance. J. Lear. No. 1,015,041; Jan. 16; Sp. p. 4349; Gaz. vol. 174; p. 731.
Thermal cut-out. J. Sachs. No. 1,014,098; Jan. 9; Sp. p. 2253; Gaz. vol. 174; p. 377.
Thermometer. H. L. Balderston. No. 1,014,800; Jan. 16; Sp. p. 3809; Gaz. vol. 174; p. 648.
Thermostat. G. P. Wild. No. 1,013,854; Jan. 2; Sp. p. 1688; Gaz. vol. 174; p. 266.
Thinning-machine. S. Stone. No. 1,016,110; Jan. 30; Sp. p. 6631; Gaz. vol. 174; p. 1152.
Thoracic operations, Apparatus for conducting. W. and J. Meyer. No. 1,013,800; Jan. 2; Sp. p. 1551; Gaz. vol 174; p. 247.
Thread-waxing device. F. Ashworth. No. 1,015,772; Jan. 30; Sp. p. 5908; Gaz. vol. 174; p. 1034.
Threading-tool. J. M. Carpenter. No. 1,016,206; Jan. 30; Sp. p. 6805; Gaz. vol. 174; p. 1182.
Three-high-roll mill. C. L. Taylor. No. 1,014,676; Jan. 16; Sp. p. 3547; Gaz. vol. 174; p. 607.
Threshing-machine. E. F. Richmond. No. 1,013,816; Jan. 2; Sp. p. 1581; Gaz. vol. 174; p. 252.
Threshing-machine. L. Weinfeld. No. 1,014,189; Jan. 9; Sp. p. 2433; Gaz. vol. 174; p. 408.
Threshing-machine. L. Weinfeld. No. 1,015,749; Jan. 23; Sp. p. 5857; Gaz. vol. 174; p. 998.
Threshing-machine concaves and cylinders, Tooth-fastener for. E. E. Roberts. No. 1,015,743; Jan. 23; Sp. p. 5846; Gaz. vol. 174; p. 997.
Tie: *See* Concrete tie; Lock-tie; Metallic tie; Rail-tie; Railway-tie; Wire-tie.

Tacking. N. B. Wales and G. B. Collier. No. 1,014,350;

Tie and rail-fastener. A. D. Williams. No. 1,013,712; Jan. 2: Sp. p. 1374; Gaz. vol. 174; p. 215.
Tie and rail-fastener. F. Wajda. No. 1,015,657; Jan. 23; Sp. p. 5662; Gaz. vol. 174; p. 967.
Tie-plate. J. W. Kendrick. No. 1,013,179; Jan. 2; Sp. p. 178; Gaz. vol. 174; p. 31.
Tie structure. A. H. Moffet. No. 1,014,089; Jan. 9; Sp. p. 2230; Gaz. vol. 174; p. 374.
Tile, Drain-. J. M. Wilson. No. 1,014,549; Jan. 9; Sp. p. 3184; Gaz. vol. 174; p. 531.
Tile gaging or measuring means. H. Johnson. No. 1,013,396; Jan. 2; Sp. p. 680; Gaz. vol. 174; p. 107.
Tile, Garden-edge. A. E. Powell. No. 1,015,584; Jan. 23; Sp. p. 5507; Gaz. vol. 174; p. 942.
Tile-machine, Automatic. J. Roth. No. 1,015,588; Jan. 23; Sp. p. 5516; Gaz. vol. 174; p. 944.
Tilling-machine. G. Spalding. No. 1,015,648; Jan. 23; Sp. p. 5649; Gaz. vol. 174; p. 965.
Time-check apparatus. W. D. and F. G. Bowman. No. 1,015,287; Jan. 23; Sp. p. 4844; Gaz. vol. 174; p. 840.
Timing device. A. Hammerstein. No. 1,014,703; Jan. 16; Sp. p. 3589; Gaz. vol. 174; p. 614.
Tire. A. Freschi. No. 1,013,596; Jan. 2; Sp. p. 1093; Gaz. vol. 174; p. 176.
Tire. G. W. Kitterman. No. 1,014,007; Jan. 9; Sp. p. 2051; Gaz. vol. 174; p. 346.
Tire. B. F. Lare. No. 1,015,038; Jan. 16; Sp. p. 4344; Gaz. vol. 174; p. 730.
Tire. A. E. Winter. No. 1,015,113; Jan. 16; Sp. p. 4488; Gaz. vol. 174; p. 756.
Tire and trunk holder, Combined automobile. A. U. Campbell. No. 1,015,422; Jan. 23; Sp. p. 5155; Gaz. vol. 174; p. 886.
Tire, Antiskidding. G. J. Adam. No. 1,014,357; Jan. 9; Sp. p. 2834; Gaz. vol. 174; p. 468.
Tire antiskidding device. G. J. Adam. No. 1,014,358; Jan. 9; Sp. p. 2835; Gaz. vol. 174; p. 469.
Tire, Automobile-. J. E. Knauss and C. Phinney. No. 1,015,690; Jan. 23; Sp. p. 5747; Gaz. vol. 174; p. 979.
Tire-casing inner tube. W. C. Beckwith. No. 1,016,122; Jan. 30; Sp. p. 6649; Gaz. vol. 174; p. 1156.
Tire, cushion-. M. C. Merriman. No. 1,014,318; Jan. 9; Sp. p. 2727; Gaz. vol. 174; p. 454.
Tire-filling compound. H. J. Breeze. No. 1,015,133; Jan. 16; Sp. p. 4526; Gaz. vol. 174; p. 763.
Tire for vehicle-wheels. Spring-. A. B. McQueen. No. 1,015,451; Jan. 23; Sp. p. 5212; Gaz. vol. 174; p. 896.
Tire-holder and trunk, Combined. J. V. Pratzner. No. 1,013,564; Jan. 2; Sp. p. 1027; Gaz. vol. 174; p. 165.
Tire, Metallic. C. E. Cox. No. 1,014,814; Jan. 16; Sp. p. 3836; Gaz. vol. 174; p. 653.
Tire-plug. P. A. Rosenthal. No. 1,014,851; Jan. 16; Sp. p. 3934; Gaz. vol. 174; p. 666.
Tire, Pneumatic. G. R. Vaughan. No. 1,015,599; Jan. 23; Sp. p. 5540; Gaz. vol. 174; p. 948.
Tire protective covering, Pneumatic-. A. H. Shoemaker. No. 1,014,613; Jan. 9; Sp. p. 3336; Gaz. vol. 174; p. 553.
Tire-protector. D. H. Gabriel. No. 1,014,458; Jan. 9; Sp. p. 3029; Gaz. vol. 174; p. 502.
Tire-protector. R. C. Harris. No. 1,015,178; Jan. 16; Sp. p. 4605; Gaz. vol. 174; p. 776.
Tire-setter. C. A. Devero. No. 1,016,217; Jan. 30; Sp. p. 6822; Gaz. vol. 174; p. 1186.
Tire tread, Pneumatic-. A. H. Shoemaker. No. 1,014,912; Jan. 16; Sp. p. 4060; Gaz. vol. 174; p. 687.
Tire, Vehicle-. G. E. Starn. No. 1,014,345; Jan. 9; Sp. p. 2808; Gaz. vol. 174; p. 464.
Tire, Vehicle-. B. F. Lare. No. 1,015,036; Jan. 16; Sp. p. 4340; Gaz. vol. 174; p. 729.
Tire, Vehicle-. B. F. Lare. No. 1,015,037; Jan. 16; Sp. p. 4342; Gaz. vol. 174; p. 729.
Tire, Vehicle wheel-. J. H. Lorimer. No. 1,014,075; Jan. 9; Sp. p. 2206; Gaz. vol. 174; p. 369.
Tire, Vehicle wheel-. B. F. Lare. No. 1,015,035; Jan. 16; Sp. p. 4339; Gaz. vol. 174; p. 729.
Tires, Detachable rim for pneumatic. W. E. Copithorn. No. 1,013,374; Jan. 2; Sp. p. 629; Gaz. vol. 174; p. 100.
Tires, Manufacture of resilient. G. D. Rose. No. 1,016,096; Jan. 30; Sp. p. 6607; Gaz. vol. 174; p. 1148.
Tires, Reinforced inner tube for pneumatic. F. H. Hall. No. 1,014,464; Jan. 9; Sp. p. 3039; Gaz. vol. 174; p. 504.
Toaster. J. B. Willis. No. 1,014,548; Jan. 9; Sp. p. 3183; Gaz. vol. 174; p. 530.
Tobacco-box. H. Penney. No. 1,015,830; Jan. 30; Sp. p. 6027; Gaz. vol. 174; p. 1052.
Tobacco-cutting machine. N. Du Brul. No. 1,015,428; Jan. 23; Sp. p. 5166; Gaz. vol. 174; p. 888.
Tobacco hanging and hoisting apparatus. O. Gates. No. 1,015,553; Jan. 23; Sp. p. 5428; Gaz. vol. 174; p. 930.
Tobacco-pipe and cigar and cigarette holder. D. P. Blackwood. No. 1,015,723; Jan. 23; Sp. p. 5803; Gaz. vol. 174; p. 989.
Tobacco-pipe charger. A. I. Straus. No. 1,015,357; Jan. 23; Sp. p. 5008; Gaz. vol. 174; p. 865.
Tobacco-tin, Antifraud. C. L. Kristofferson. No. 1,013,405; Jan. 2; Sp. p. 695; Gaz. vol. 174; p. 110.
Toilet-board, Folding. J. L. Parker. No. 1,015,741; Jan. 23; Sp. p. 5843; Gaz. vol. 174; p. 996.
Toilet, Outdoor. A. A. Kramer. No. 1,013,183; Jan. 2; Sp. p. 185; Gaz. vol. 174; p. 33.
Tomato-scalding machine. H. A. Darting. No. 1,015,379; Jan. 23; Sp. p. 5057; Gaz. vol. 174; p. 872.
Tongs. A. J. Brouyette. No. 1,013,122; Jan. 2; Sp. p. 63; Gaz. vol. 174; p. 13.
Tongue construction. B. P. Hanson and N. I. Nelson. No. 1,013,877; Jan. 9; Sp. p. 1764; Gaz. vol. 174; p. 302.
Tongue support, Wagon or vehicle. D. W. Wilhelm. No. 1,014,928; Jan. 16; Sp. p. 4111; Gaz. vol. 174; p. 692.
Tool. J. Carr. No. 1,016,207; Jan. 30; Sp. p. 6808; Gaz. vol. 174; p. 1183.
Tool, Assembling-. B. H. Jones. No. 1,013,171; Jan. 2; Sp. p. 167; Gaz. vol. 174; p. 29.
Tool, Combination-. W. Jackson and W. E. Fry. No. 1,015,026; Jan. 16; Sp. p. 4317; Gaz. vol. 174; p. 726.
Tool, Combination-. J. F. O'Malley. No. 1,015,205; Jan. 16; Sp. p. 4658; Gaz. vol. 174; p. 786.
Tool, Combination-. S. W. Du Mouchel. No. 1,015,877; Jan. 30; Sp. p. 6125; Gaz. vol. 174; p. 1069.
Tool-holder. E. L. Mills and J. W. Whitford. No. 1,015,903; Jan. 30; Sp. p. 6180; Gaz. vol. 174; p. 1079.
Tool-holder and securing device for same. F. F. Clarke. No. 1,013,129; Jan. 2; Sp. p. 80; Gaz. vol. 174; p. 14.
Tooth, Artificial. G. W. Todd. No. 1,014,348; Jan. 9; Sp. p. 2813; Gaz. vol. 174; p. 465.
Tooth-facing-attaching device. S. S. Whetstone. No. 1,014,428; Jan. 9; Sp. p. 2972; Gaz. vol. 174; p. 498.
Tooth plate, Artificial-. A. C. Buttman. No. 1,016,128; Jan. 30; Sp. p. 6661; Gaz. vol. 174; p. 1158.
Topping-machine. J. Graves and C. C. Reed. No. 1,015,951; Jan. 30; Sp. p. 6286; Gaz. vol. 174; p. 1094.
Torch, Blow-. J. G. Breckenridge. No. 1,013,637; Jan. 2; Sp. p. 1186; Gaz. vol. 174; p. 189.
Torch, Igniting-. A. S. P. Chenot. No. 1,016,209; Jan. 30; Sp. p. 6810; Gaz. vol. 174; p. 1183.
Torpedo and method of and apparatus for its propulsion, Automobile. H. Maxim. No. 1,014,014; Jan. 9; Sp. p. 2063; Gaz. vol. 174; p. 348.
Torpedo, Fiber-case railway signal-. F. Dutcher. No. 1,015,153; Jan. 16; Sp. p. 4560; Gaz. vol. 174; p. 769.
Torpedo-placing machine. J. D. Bell. No. 1,014,561; Jan. 9; Sp. p. 3208; Gaz. vol. 174; p. 534.
Tower or derrick, Steel. L. C. Moore. No. 1,015,821; Jan. 30; Sp. p. 6006; Gaz. vol. 174; p. 1049.
Towing system for canals. E. Schildhauer. No. 1,013,901; Jan. 9; Sp. p. 1809; Gaz. vol. 174; p. 310.
Toy. A. J. Wilson. No. 1,013,350; Jan. 2; Sp. p. 580; Gaz. vol. 174; p. 92.
Toy. N. D. Cass. No. 1,016,208; Jan. 30; Sp. p. 6809; Gaz. vol. 174; p. 1183.
Toy, Aerial. E. W. Davis. No. 1,014,953; Jan. 16; Sp. p. 4167; Gaz. vol. 174; p. 701.
Toy airship. F. F. Taylor. No. 1,016,113; Jan. 30; Sp. p. 6635; Gaz. vol. 174; p. 1154.
Toy bank, Registering. F. Strauss. No. 1,015,408; Jan. 23; Sp. p. 5126; Gaz. vol. 174; p. 881.
Toy buildings, Framework of roofs for. F. A. Richter. No. 1,015,342; Jan. 23; Sp. p. 4982; Gaz. vol. 174; p. 860.
Toy, Hydrostatic. H. E. Poehlman. No. 1,014,976; Jan. 16; Sp. p. 4215; Gaz. vol. 174; p. 709.
Toy, Mechanical. G. Riexinger. No. 1,015,343; Jan. 23; Sp. p. 4983; Gaz. vol. 174; p. 860.
Toy, Moving-picture. C. N. Bourgin. No. 1,014,365; Jan. 9; Sp. p. 2851; Gaz. vol. 174; p. 471.
Toy phonograph. H. Ringel. No. 1,015,587; Jan. 23; Sp. p. 5514; Gaz. vol. 174; p. 943.
Toy pistol. W. R. Atkinson. No. 1,014,739; Jan. 16; Sp. p. 3674; Gaz. vol. 174; p. 627.
Trace-carrier. W. Sisty. No. 1,013,455; Jan. 2; Sp. p. 796; Gaz. vol. 174; p. 128.
Trace-connector. L. B. Irvin. No. 1,014,709; Jan. 16; Sp. p. 3601; Gaz. vol. 174; p. 617.
Trace-fastener. C. O. Hathaway and F. W. Huffaker. No. 1,014,000; Jan. 9; Sp. p. 2041; Gaz. vol. 174; p. 344.
Track-adjuster. J. Contos. No. 1,013,987; Jan. 9; Sp. p. 2008; Gaz. vol. 174; p. 340.
Track-construction machine. J. Burke. No. 1,015,475; Jan. 23; Sp. p. 5278; Gaz. vol. 174; p. 904.
Track-fastening. A. H. Moffet. No. 1,014,166; Jan. 9; Sp. p. 2388; Gaz. vol. 174; p. 399.
Track-fastening, U-shaped. A. H. Moffet. No. 1,014,083; Jan. 9; Sp. p. 2222; Gaz. vol. 174; p. 372.
Track for vehicles, Self-laying endless. W. G. Noack. No. 1,014,898; Jan. 16; Sp. p. 4034; Gaz. vol. 174; p. 682.
Track-level machine. J. J. Hill. No. 1,014,648; Jan. 16; Sp. p. 3479; Gaz. vol. 174; p. 596.
Track-sanding device, Automatic. F. P. Livingston. No. 1,015,899; Jan. 30; Sp. p. 6177; Gaz. vol. 174; p. 1077.
Tracker, Adjustable. P. J. Meahl. No. 1,013,301; Jan. 2; Sp. p. 478; Gaz. vol. 174; p. 75.
Tracker device. G. P. Brand. No. 1,014,942; Jan. 16; Sp. p. 4142; Gaz. vol. 174; p. 697.
Tracking device. G. P. Brand. No. 1,014,941; Jan. 16; Sp. p. 4138; Gaz. vol. 174; p. 697.
Transferring apparatus, Material-. T. S. Miller. No. 1,013,420; Jan. 2; Sp. p. 732; Gaz. vol. 174; p. 115.
Transformer. C. L. Fortescue. No. 1,013,150; Jan. 2; Sp. p. 118; Gaz. vol. 174; p. 21.
Transmission mechaniam. E. Rounds. No. 1,015,639; Jan. 23; Sp. p. 5625; Gaz. vol. 174; p. 962.
Transmission of intelligence, Electric. I. Kitsee. No. 1,015,494; Jan. 23; Sp. p. 5318; Gaz. vol. 174; p. 911.
Transmission of intelligence, Means for. W. E. Frow. No. 1,016,003; Jan. 30; Sp. p. 6400; Gaz. vol. 174; p. 1113.

Transmitter and receiver, Combined. W. B. Thompson. No. 1,014,268; Jan. 9; Sp. p. 2616; Gaz. vol. 174; p. 436.
Transparency. L. F. Giroux. No. 1,014,460; Jan. 9; Sp. p. 3032; Gaz. vol. 174; p. 503.
Trap: See Animal-trap; Fly-trap; Insect-trap; Steam-trap; Vacuum-trap; Washstand-trap.
Trap. W. P. Fritchman. No. 1,015,168; Jan. 16; Sp. p. 4583; Gaz. vol. 174; p. 773.
Trap. C. S. Parker. No. 1,015,243; Jan. 16; Sp. p. 4736; Gaz. vol. 174; p. 798.
Trap. G. A. Teel. No. 1,015,916; Jan. 30; Sp. p. 6213; Gaz. vol. 174; p. 1083.
Trap-cover. R. T. Garrison. No. 1,014,142; Jan. 9; Sp. p. 2342; Gaz. vol. 174; p. 302.
Trapping device. G. M. Rains. No. 1,014,516; Jan. 9; Sp. p. 3132; Gaz. vol. 174; p. 520.
Tread, Safety-. H. C. Seipp. No. 1,015,642; Jan. 23; Sp. p. 5630; Gaz. vol. 174; p. 963.
Trestle. O. Zent. No. 1,014,554; Jan. 9; Sp. p. 3194; Gaz. vol. 174; p. 532.
Trestle. R. Knelsley. No. 1,015,191; Jan. 16; Sp. p. 4633; Gaz. vol. 174; p. 781.
Trestle, Dumping-. J. M. Snead and C. Brady. No. 1,013,229; Jan. 2; Sp. p. 309; Gaz. vol. 174; p. 49.
Trimmer: See Hedge-trimmer; Lamp-trimmer; Sewing-machine seam-trimmer.
Trocar. C. E. Crowe. No. 1,014,128; Jan. 9; Sp. p. 2321; Gaz. vol. 174; p. 387.
Trolley-hanger. R. O. Couch. No. 1,014,569; Jan. 9; Sp. p. 3227; Gaz. vol. 174; p. 537.
Trolley-pole. M. Mellnski. No. 1,013,673; Jan. 2; Sp. p. 1289; Gaz. vol. 174; p. 202.
Trolley, Trackless. C. A. Abl. No. 1,014,536; Jan. 9; Sp. p. 3197; Gaz. vol. 174; p. 533.
Trolley-trackway switch. E. Y. Moore. No. 1,015,578; Jan. 23; Sp. p. 5493; Gaz. vol. 174; p. 940.
Trolley-wire connector. J. Kirby and J. Mayo. No. 1,016,016; Jan. 30; Sp. p. 6426; Gaz. vol. 174; p. 1115.
Trousers-adjusting means. A. E. Bennett. No. 1,015,125; Jan. 16; Sp. p. 4512; Gaz. vol. 174; p. 760.
Trousers-guard, Adjustable. W. S. Koons. No. 1,014,009; Jan. 9; Sp. p. 2054; Gaz. vol. 174; p. 346.
Trousers-stretcher. J. J. Pilliod. No. 1,014,024; Jan. 9; Sp. p. 2095; Gaz. vol. 174; p. 351.
Trousers-stretcher. A. M. Stendal. No. 1,015,093; Jan. 16; Sp. p. 4449; Gaz. vol. 174; p. 748.
Trowels, Manufacturing plasterers'. J. G. Thatford. No. 1,015,654; Jan. 23; Sp. p. 5658; Gaz. vol. 174; p. 967.
Truck. J. Du Roth. No. 1,015,152; Jan. 16; Sp. p. 4559; Gaz. vol. 174; p. 768.
Truck attachment for carrying beef. E. W. Murphy. No. 1,015,303; Jan. 23; Sp. p. 5088; Gaz. vol. 174; p. 877.
Truck, Automobile jack-. O. H. Ames. No. 1,014,991; Jan. 16; Sp. p. 4245; Gaz. vol. 174; p. 714.
Truck, Automobile jack-. O. H. Ames. No. 1,014,992; Jan. 16; Sp. p. 4246; Gaz. vol. 174; p. 714.
Truck, Car-. J. C. Barber. No. 1,014,862; Jan. 9; Sp. p. 2845; Gaz. vol. 174; p. 470.
Truck, Car-. S. P. Bush. No. 1,014,807; Jan. 16; Sp. p. 3820; Gaz. vol. 174; p. 650.
Truck, Car-. W. F. Kiesel, Jr. No. 1,016,073; Jan. 30; Sp. p. 6564; Gaz. vol. 174; p. 1139.
Truck, Elevating-. D. M. Wadlington. No. 1,015,104; Jan. 16; Sp. p. 4470; Gaz. vol. 174; p. 753.
Truck for corn-binders, Tongue-. F. W. Curtis. No. 1,014,129; Jan. 9; Sp. p. 2323; Gaz. vol. 174; p. 388.
Truck for garbage-cans. M. T. Lyon. No. 1,013,605; Jan. 2; Sp. p. 1100; Gaz. vol. 174; p. 178.
Truck for vehicles, Front-wheeled. S. K. Dennis. No. 1,014,209; Jan. 9; Sp. p. 2474; Gaz. vol. 174; p. 416.
Truck, Four-wheel. H. E. Doerr. No. 1,015,010; Jan. 16; Sp. p. 4289; Gaz. vol. 174; p. 721.
Truck, Hand-. F. G. Koehler. No. 1,014,400; Jan. 9; Sp. p. 2923; Gaz. vol. 174; p. 484.
Truck, Shop-. J. C. Larson. No. 1,015,966; Jan. 30; Sp. p. 6320; Gaz. vol. 174; p. 1100.
Truck side frame, Car-. G. Komarek. No. 1,014,067; Jan. 9; Sp. p. 2191; Gaz. vol. 174; p. 366.
Truck, Stove-. J. Benskin. No. 1,014,440; Jan. 9; Sp. p. 2995; Gaz. vol. 174; p. 497.
Truck, Tongue-. A. H. Snook and C. O. Tripp. No. 1,014,672; Jan. 16; Sp. p. 3528; Gaz. vol. 174; p. 605.
Trunk. S. R. Stearns. No. 1,013,231; Jan. 2; Sp. p. 314; Gaz. vol. 174; p. 50.
Trunk. H. Romünder. No. 1,015,511; Jan. 23; Sp. p. 5341; Gaz. vol. 174; p. 916.
Trunk. C. T. and E. E. Wilt. No. 1,015,604; Jan. 23; Sp. p. 5548; Gaz. vol. 174; p. 950.
Trunk, Dresser-. L. Russell. No. 1,014,853; Jan. 16; Sp. p. 3942; Gaz. vol. 174; p. 667.
Trunk suspension-fixture device, Wardrobe-. G. Dorn. No. 1,015,847; Jan. 23; Sp. p. 5417; Gaz. vol. 174; p. 928.
Trunks, Garment-supporter for wardrobe-. E. W. Hawley. No. 1,014,392; Jan. 9; Sp. p. 2904; Gaz. vol. 174; p. 481.
Tub: See Dyeing-tub.
Tube: See Seeding-machine grain-tube; Tire-casing inner tube.
Tubular structure. W. D. Gray. No. 1,015,312; Jan. 23; Sp. p. 4903; Gaz. vol. 174; p. 849.
Tubular structure and making the same. L. Atwood. No. 1,015,120; Jan. 16; Sp. p. 4503; Gaz. vol. 174; p. 758.
Turbine. N. B. Wales and G. B. Collier. No. 1,014,350; Jan. 9; Sp. p. 2817; Gaz. vol. 174; p. 466.
Turbine-blade. G. Westinghouse. No. 1,014,683; Jan. 16; Sp. p. 3561; Gaz. vol. 174; p. 609.
Turbine-blading. J. S. Green. No. 1,015,313; Jan. 23; Sp. p. 4905; Gaz. vol. 174; p. 849.
Turbine, Elastic-fluid. F. Samuelson. No. 1,013,317; Jan. 2; Sp. p. 512; Gaz. vol. 174; p. 61.
Turbine governing mechanism, Mixed-pressure-. B. Krämer. No. 1,013,184; Jan. 2; Sp. p. 186; Gaz. vol. 174; p. 33.
Turbine-operating method and apparatus. C. S. Bradley. No. 1,015,777; Jan. 30; Sp. p. 5914; Gaz. vol. 174; p. 1035.
Turbine, Radial. B. Ljungström. No. 1,014,659; Jan. 16; Sp. p. 3501; Gaz. vol. 174; p. 600.
Turbine, Reversible steam-. F. L. McCulloch. No. 1,016,080; Jan. 30; Sp. p. 6579; Gaz. vol. 174; p. 1142.
Turbine-rotors, Longitudinal adjusting means for. F. Hodgkinson. No. 1,015,315; Jan. 23; Sp. p. 4910; Gaz. vol. 174; p. 850.
Turbines, Apparatus for regulating steam-. O. Banner. No. 1,015,415; Jan. 23; Sp. p. 5143; Gaz. vol. 174; p. 883.
Turbines, Steam generator and regulator for. E. A. Wurtz. No. 1,014,797; Jan. 16; Sp. p. 3802; Gaz. vol. 174; p. 646.
Turn-table. A. O. Slentz. No. 1,013,456; Jan. 2; Sp. p. 797; Gaz. vol. 174; p. 128.
Turn-table, Portable. B. K. Hall. No. 1,015,885; Jan. 30; Sp. p. 6151; Gaz. vol. 174; p. 1072.
Turnable parts, Adjusting device for. C. Tönjes. No. 1,015,854; Jan. 30; Sp. p. 6083; Gaz. vol. 174; p. 1060.
Turpentine-cup bracket. J. S. Shands. No. 1,015,213; Jan. 16; Sp. p. 4669; Gaz. vol. 174; p. 788.
Turpentine-gatherer. L. T. Baker. No. 1,013,107; Jan. 2; Sp. p. 21; Gaz. vol. 174; p. 6.
Twine, Machine for the manufacture of. J. Dymock. No. 1,015,154; Jan. 16; Sp. p. 4562; Gaz. vol. 174; p. 769.
Two-cycle engine. J. J. McGuire. No. 1,014,078; Jan. 9; Sp. p. 2212; Gaz. vol. 174; p. 370.
Type-holding mechanism, Rotatable. H. C. Gammeter. No. 1,015,760; Jan. 23; Sp. p. 5879; Gaz. vol. 174; p. 1002.
Type-mold. J. E. Hanrahan. No. 1,015,020; Jan. 16; Sp. p. 4304; Gaz. vol. 174; p. 724.
Type, Printer's. W. M. Kelly. No. 1,016,224; Jan. 30; Sp. p. 6834; Gaz. vol. 174; p. 1188.
Type-setting machine. J. Steel. No. 1,013,624; Jan. 2; Sp. p. 1157; Gaz. vol. 174; p. 184.
Type-writer. R. A. Spurgin. No. 1,015,594; Jan. 23; Sp. p. 5531; Gaz. vol. 174; p. 946.
Type-writer carriage. J. Raber. No. 1,016,175; Jan. 30; Sp. p. 6741; Gaz. vol. 174; p. 1172.
Type-writer case-shift mechanism. J. Alexander. No. 1,013,264; Jan. 2; Sp. p. 380; Gaz. vol. 174; p. 61.
Type-writer escapement-clutch. M. Pfau. No. 1,016,172; Jan. 30; Sp. p. 6737; Gaz. vol. 174; p. 1171.
Type-writer key and type-bar mechanism. J. Alexander. No. 1,013,096; Jan. 2; Sp. p. 8; Gaz. vol. 174; p. 3.
Type-writer ribbon mechanism. J. Alexander. No. 1,013,095; Jan. 2; Sp. p. 1; Gaz. vol. 174; p. 3.
Type-writer ribbons, Machine for testing the life of. F. M. Allen. No. 1,013,832; Jan. 2; Sp. p. 1613; Gaz. vol. 174; p. 258.
Type-writing and adding machine, Combination. W. H. Muzzy. No. 1,013,211; Jan. 2; Sp. p. 250; Gaz. vol. 174; p. 42.
Type-writing and adding machine, Combined. E. S. Newman. No. 1,015,630; Jan. 23; Sp. p. 5597; Gaz. vol. 174; p. 959.
Type-writing and computing machine, Combined. F. F. Main. No. 1,013,670; Jan. 2; Sp. p. 1281; Gaz. vol. 174; p. 201.
Type-writing machine. J. H. Barr. No. 1,013,720; Jan. 9; Sp. p. 1850; Gaz. vol. 174; p. 317.
Type-writing machine. D. J. Richardson. No. 1,013,953; Jan. 9; Sp. p. 1934; Gaz. vol. 174; p. 328.
Type-writing machine. H. H. Steele. No. 1,013,964; Jan. 9; Sp. p. 1061; Gaz. vol. 174; p. 332.
Type-writing machine. C. H. Shepard. No. 1,014,335; Jan. 9; Sp. p. 2767; Gaz. vol. 174; p. 460.
Type-writing machine. C. H. Shepard. No. 1,014,336; Jan. 9; Sp. p. 2777; Gaz. vol. 174; p. 461.
Type-writing machine. A. W. Smith. No. 1,014,340; Jan. 9; Sp. p. 2794; Gaz. vol. 174; p. 462.
Type-writing machine. H. H. Steele. No. 1,014,673; Jan. 16; Sp. p. 3529; Gaz. vol. 174; p. 605.
Type-writing machine. H. H. Steele. No. 1,014,783; Jan. 16; Sp. p. 3760; Gaz. vol. 174; p. 641.
Type-writing machine. C. B. Yaw. No. 1,015,373; Jan. 23; Sp. p. 5045; Gaz. vol. 174; p. 870.
Type-writing machine. G. J. Griffiths. No. 1,015,559; Jan. 23; Sp. p. 5447; Gaz. vol. 174; p. 932.
Type-writing machine. J. R. MacCue. No. 1,015,810; Jan. 30; Sp. p. 5983; Gaz. vol. 174; p. 1046.
Type-writing machine. A. W. Smith. No. 1,015,849; Jan. 30; Sp. p. 6070; Gaz. vol. 174; p. 1058.
Type-writing machine. H. H. Steele. No. 1,016,043; Jan. 30; Sp. p. 6486; Gaz. vol. 174; p. 1120.
Type-writing machine. O. Woodward. No. 1,016,056; Jan. 30; Sp. p. 6512; Gaz. vol. 174; p. 1133.
Type-writing machine. C. B. Yaw. No. 1,016,057; Jan. 30; Sp. p. 6517; Gaz. vol. 174; p. 1133.

Type-writing machine. J. H. Barr. No. 1,016,061; Jan. 30; Sp. p. 6529; Gaz. vol. 174; p. 1135.
Type-writing-machine ribbon mechanism. W. R. Fox. No. 1,015,384; Jan. 23; Sp. p. 5065; Gaz. vol. 174; p. 874.
Type-writing-machine ribbon-spool device. W. R. Fox. No. 1,014,962; Jan. 16; Sp. p. 4182; Gaz. vol. 174; p. 704.
Typographic record-sheets, Apparatus for producing. M. E. Blume. No. 1,016,201; Jan. 30; Sp. p. 6791; Gaz. vol. 174; p. 1180.
Umbrella, Foldable. S. McClellan. No. 1,013,555; Jan. 2; Sp. p. 1012; Gaz. vol. 174; p. 162.
Umbrella-stand. N. Kramer. No. 1,013,662; Jan. 2; Sp. p. 1263; Gaz. vol. 174; p. 198.
Universal joint. R. Huff. No. 1,015,267; Jan. 16; Sp. p. 4793; Gaz. vol. 174; p. 807.
Unloading apparatus. J. M. Garner. No. 1,014,870; Jan. 16; Sp. p. 3981; Gaz. vol. 174; p. 673.
Unloading-rack. F. M. Rice. No. 1,015,074; Jan. 16; Sp. p. 4413; Gaz. vol. 174; p. 742.
Urethrotome. W. W. Bredin. No. 1,015,472; Jan. 23; Sp. p. 5270; Gaz. vol. 174; p. 903.
Urinal. H. B. Northrop. No. 1,015,905; Jan. 30; Sp. p. 6193; Gaz. vol. 174; p. 1080.
Urn, Coffee-. C. Rosa. No. 1,014,610; Jan. 9; Sp. p. 3328; Gaz. vol. 174; p. 552.
Urn, Coffee and tea. A. F. Moneuse. No. 1,015,058; Jan. 16; Sp. p. 4387; Gaz. vol. 174; p. 736.
Vacuum-cleaner. C. A. Dillon. (Reissue.) No. 13,352; Jan. 9; Sp. p. 3410; Gaz. vol. 174; p. 563.
Vacuum-cleaner. S. L. Rubel. No. 1,014,776; Jan. 16; Sp. p. 3757; Gaz. vol. 174; p. 639.
Vacuum cleaning apparatus. L. W. G. Flynt. No. 1,013,147; Jan. 2; Sp. p. 112; Gaz. vol. 174; p. 20.
Vacuum cleaning devices, Electric switch attachment for. J. J. Slevin. No. 1,015,352; Jan. 23; Sp. p. 5000; Gaz. vol. 174; p. 863.
Vacuum-pan separator. G. M. Newhall. No. 1,015,629; Jan. 23; Sp. p. 5596; Gaz. vol. 174; p. 959.
Vacuum-pan separator. G. M. Newhall. No. 1,015,704; Jan. 23; Sp. p. 5770; Gaz. vol. 174; p. 983.
Vacuum-producing apparatus. J. F. Menningen. No. 1,013,200; Jan. 2; Sp. p. 225; Gaz. vol. 174; p. 38.
Vacuum-trap. J. A. Bemish. No. 1,013,730; Jan. 2; Sp. p. 1413; Gaz. vol. 174; p. 222.
Valve. H. O'Leary. No. 1,013,432; Jan. 2; Sp. p. 757; Gaz. vol. 174; p. 119.
Valve. J. Ogg. No. 1,013,806; Jan. 2; Sp. p. 1565; Gaz. vol. 174; p. 249.
Valve. J. H. Chandler. No. 1,013,861; Jan. 9; Sp. p. 1718; Gaz. vol. 174; p. 297.
Valve. J. W. R. Laxton. No. 1,014,070; Jan. 9; Sp. p. 2196; Gaz. vol. 174; p. 367.
Valve. J. Nolan. No. 1,014,168; Jan. 9; Sp. p. 2391; Gaz. vol. 174; p. 400.
Valve. H. E. Kerr. No. 1,014,230; Jan. 9; Sp. p. 2537; Gaz. vol. 174; p. 424.
Valve. H. A. Selah. No. 1,014,263; Jan. 9; Sp. p. 2608; Gaz. vol. 174; p. 435.
Valve. M. J. McCloud. No. 1,014,501; Jan. 9; Sp. p. 3100; Gaz. vol. 174; p. 515.
Valve. G. P. Bower. No. 1,015,132; Jan. 16; Sp. p. 4523; Gaz. vol. 174; p. 762.
Valve. L. E. Findahl. No. 1,015,159; Jan. 16; Sp. p. 4569; Gaz. vol. 174; p. 770.
Valve. W. T. Fowden. No. 1,015,164; Jan. 16; Sp. p. 4575; Gaz. vol. 174; p. 771.
Valve. T. P. Moseley. No. 1,015,453; Jan. 23; Sp. p. 5214; Gaz. vol. 174; p. 897.
Valve. A. B. Wallem. No. 1,016,050; Jan. 30; Sp. p. 6501; Gaz. vol. 174; p. 1131.
Valve. G. Brocke. No. 1,016,064; Jan. 30; Sp. p. 6537; Gaz. vol. 174; p. 1136.
Valve. J. A. McCulloch. No. 1,016,167; Jan. 30; Sp. p. 6728; Gaz. vol. 174; p. 1170.
Valve-action, Pneumatic. F. L. Yetts. No. 1,013,259; Jan. 2; Sp. p. 368; Gaz. vol. 174; p. 59.
Valve, Anticalding-. R. H. Bryon. No. 1,013,640; Jan. 2; Sp. p. 1195; Gaz. vol. 174; p. 190.
Valve, Automatic gas and drain. S. I. Shand. No. 1,016,100; Jan. 30; Sp. p. 6613; Gaz. vol. 174; p. 1149.
Valve, Balanced. W. F. Gould. No. 1,014,591; Jan. 9; Sp. p. 3262; Gaz. vol. 174; p. 544.
Valve, Balanced. W. F. Gould. No. 1,014,592; Jan. 9; Sp. p. 3267; Gaz. vol. 174; p. 545.
Valve, Blow-off. P. H. Murphy. No. 1,013,426; Jan. 2; Sp. p. 744; Gaz. vol. 174; p. 117.
Valve body, Flush-. L. S. Rothwell. No. 1,014,259; Jan. 9; Sp. p. 2602; Gaz. vol. 174; p. 434.
Valve, Bottom blow-. J. W. Lytton. No. 1,014,766; Jan. 16; Sp. p. 3732; Gaz. vol. 174; p. 636.
Valve device, Engineer's-brake-. W. V. Turner. No. 1,016,186; Jan. 30; Sp. p. 6760; Gaz. vol. 174; p. 1176.
Valve, Discharge-. W. F. Blake. No. 1,015,764; Jan. 23; Sp. p. 5867; Gaz. vol. 174; p. 1000.
Valve, Disk. J. Rothchild and H. S. Conover. No. 1,014,775; Jan. 16; Sp. p. 3754; Gaz. vol. 174; p. 639.
Valve, Fluid-pressure. E. P. Noyes. No. 1,013,213; Jan. 2; Sp. p. 257; Gaz. vol. 174; p. 43.
Valve, Flush-. F. B. Charroin. No. 1,014,637; Jan. 16; Sp. p. 3451; Gaz. vol. 174; p. 593.
Valve, Flushing-. S. W. Lewis. No. 1,014,072; Jan. 9; Sp. p. 2109; Gaz. vol. 174; p. 368.
Valve-gear. T. Hall. No. 1,013,549; Jan. 2; Sp. p. 1000; Gaz. vol. 174; p. 160.
Valve-gear. J. H. Gentry. No. 1,015,308; Jan. 23; Sp. p. 4894; Gaz. vol. 174; p. 847.
Valve-gear. O. A. Douath. No. 1,015,792; Jan. 30; Sp. p. 5961; Gaz. vol. 174; p. 1041.
Valve-grinder. N. E. Meredith. No. 1,015,902; Jan. 30; Sp. p. 6187; Gaz. vol. 174; p. 1079.
Valve, Lock-. W. H. Beee. No. 1,014,203; Jan. 9; Sp. p. 2458; Gaz. vol. 174; p. 413.
Valve mechanism. E. D. Barrett and I. B. Wood. No. 1,013,725; Jan. 2; Sp. p. 1400; Gaz. vol. 174; p. 220.
Valve mechanism, Exhaust-. C. T. Denker. No. 1,013,867; Jan. 9; Sp. p. 1734; Gaz. vol. 174; p. 299.
Valve mechanism, Vacuum-. C. Stickle. No. 1,015,596; Jan. 23; Sp. p. 5534; Gaz. vol. 174; p. 947.
Valve, Piston-. E. F. Williams. No. 1,016,053; Jan. 30; Sp. p. 6507; Gaz. vol. 174; p. 1132.
Valve, Pop-. C. P. Gea. No. 1,013,483; Jan. 2; Sp. p. 856; Gaz. vol. 174; p. 137.
Valve, Pressure-regulating. D. L. Dalrymple. No. 1,013,645; Jan. 2; Sp. p. 1204; Gaz. vol. 174; p. 192.
Valve, Safety-. J. Auld and J. Graham. No. 1,014,435; Jan. 9; Sp. p. 2936; Gaz. vol. 174; p. 495.
Valve, Standing. D. S. Criswell. No. 1,015,142; Jan. 16; Sp. p. 4540; Gaz. vol. 174; p. 766.
Valve, Tank-. C. A. Robbins. No. 1,015,980; Jan. 30; Sp. p. 6351; Gaz. vol. 174; p. 1105.
Valve, Throttle-. E. Valloppi. No. 1,013,242; Jan. 2; Sp. p. 333; Gaz. vol. 174; p. 53.
Vapor-burner for heating and lighting, Round. C. Blankenburg. No. 1,015,988; Jan. 30; Sp. p. 6369; Gaz. vol. 174; p. 1108.
Vapor energy into work, Means for converting. E. J. Christie. No. 1,016,210; Jan. 30; Sp. p. 6811; Gaz. vol. 174; p. 1184.
Vapor-engine. H., H., and F. Hildebrand. No. 1,013,773; Jan. 2; Sp. p. 1516; Gaz. vol. 174; p. 239.
Vaporiser. E. B. Benham. No. 1,015,285; Jan. 23; Sp. p. 4841; Gaz. vol. 174; p. 839.
Vaporising the volatile constituents of liquids, Method of and apparatus for. C. H. Köhn. No. 1,013,881; Jan. 9; Sp. p. 1771; Gaz. vol. 174; p. 304.
Vault-mold. E. T. Allen. No. 1,014,360; Jan. 9; Sp. p. 2842; Gaz. vol. 174; p. 470.
Vault, Temporary-burial. J. St. Clair. No. 1,014,614; Jan. 9; Sp. p. 3337; Gaz. vol. 174; p. 553.
Vaulting-bar. A. J. Thornley. No. 1,013,829; Jan. 2; Sp. p. 1610; Gaz. vol. 174; p. 257.
Vehicle. J. E. Kershaw. No. 1,015,804; Jan. 30; Sp. p. 5972; Gaz. vol. 174; p. 1044.
Vehicle, Amusement-. P. Auger. No. 1,014,279; Jan. 9; Sp. p. 2645; Gaz. vol. 174; p. 440.
Vehicle-brake. H. E. F. R. Block. No. 1,013,473; Jan. 2; Sp. p. 839; Gaz. vol. 174; p. 134.
Vehicle-brake. D. S. Stuck. No. 1,014,978; Jan. 16; Sp. p. 4221; Gaz. vol. 174; p. 710.
Vehicle-brake. A. I. Carnine. No. 1,015,872; Jan. 30; Sp. p. 6114; Gaz. vol. 174; p. 1066.
Vehicle canopy-bows, Brace for. A. A. Steckel. No. 1,016,107; Jan. 30; Sp. p. 6624; Gaz. vol. 174; p. 1151.
Vehicle gearing, Motor-. S. S. Bennett. No. 1,014,036; Jan. 9; Sp. p. 2125; Gaz. vol. 174; p. 355.
Vehicle-guard. C. S. Barber. No. 1,015,774; Jan. 30; Sp. p. 5911; Gaz. vol. 174; p. 1035.
Vehicle-jack. G. M. Beard. No. 1,014,801; Jan. 16; Sp. p. 3810; Gaz. vol. 174; p. 648.
Vehicle lock, Motor-. D. P. Graham. No. 1,014,145; Jan. 9; Sp. p. 2847; Gaz. vol. 174; p. 392.
Vehicle, Motor-. B. E. Byrd. No. 1,014,808; Jan. 16; Sp. p. 3822; Gaz. vol. 174; p. 650.
Vehicle-rim. J. E. Hale. No. 1,013,387; Jan. 2; Sp. p. 658; Gaz. vol. 174; p. 104.
Vehicle, Road-. B. J. Diplock. No. 1,014,132; Jan. 9; Sp. p. 2327; Gaz. vol. 174; p. 388.
Vehicle-seat, Auxiliary. C. S. Applas. No. 1,013,265; Jan. 2; Sp. p. 381; Gaz. vol. 174; p. 61.
Vehicle-seat, Auxiliary. L. A. Hazen. No. 1,015,799; Jan. 30; Sp. p. 5962; Gaz. vol. 174; p. 1043.
Vehicle-spring. F. Wheeler. No. 1,013,577; Jan. 2; Sp. p. 1049; Gaz. vol. 174; p. 169.
Vehicle-spring. W. W. Annable. No. 1,013,855; Jan. 9; Sp. p. 1705; Gaz. vol. 174; p. 295.
Vehicle-spring. M. M. McIntyre. No. 1,014,406; Jan. 9; Sp. p. 2933; Gaz. vol. 174; p. 486.
Vehicle-spring, Pneumatic. L. R. Gruss. No. 1,013,487; Jan. 2; Sp. p. 871; Gaz. vol. 174; p. 139.
Vehicle-spring, Pneumatic. C. R. Palmer. No. 1,013,808; Jan. 2; Sp. p. 1568; Gaz. vol. 174; p. 250.
Vehicle spring suspension. J. J. Charley. No. 1,013,742; Jan. 2; Sp. p. 1444; Gaz. vol. 174; p. 227.
Vehicle suspension-spring. L. P. C. J. Jacquet. No. 1,015,682; Jan. 23; Sp. p. 5731; Gaz. vol. 174; p. 976.
Vehicle-top bow-clamp. R. Thompson. No. 1,015,360; Jan. 23; Sp. p. 5013; Gaz. vol. 174; p. 866.
Vehicle-tripping attachment. A. M. Green. No. 1,013,935; Jan. 9; Sp. p. 1895; Gaz. vol. 174; p. 323.
Vehicle-wheel. H. Duncan. No. 1,013,282; Jan. 2; Sp. p. 421; Gaz. vol. 174; p. 68.
Vehicle-wheel. T. B. Jeffery. No. 1,013,295; Jan. 2; Sp. p. 465; Gaz. vol. 174; p. 72.
Vehicle-wheel. B. A. Dennis. No. 1,014,131; Jan. 9; Sp. p. 2326; Gaz. vol. 174; p. 386.
Vehicle-wheel. A. Y. Davis. No. 1,014,694; Jan. 16; Sp. p. 3577; Gaz. vol. 174; p. 612.
Vehicle-wheel. S. Oldham. No. 1,015,064; Jan. 16; Sp. p. 4398; Gaz. vol. 174; p. 739.

Vehicle-wheel. W. H. Humfeld. No. 1,015,186; Jan. 16; Sp. p. 4617; Gaz. vol. 174; p. 779.
Vehicle-wheel. A. Mosso and P. Giovanetti. No. 1,015,700; Jan. 23; Sp. p. 5762; Gaz. vol. 174; p. 982.
Vehicle-wheel. A. Williams. No. 1,015,864; Jan. 30; Sp. p. 6099; Gaz. vol. 174; p. 1063.
Vehicle-wheel. C. F. Heinss. No. 1,015,888; Jan. 30; Sp. p. 6156; Gaz. vol. 174; p. 1073.
Vehicle wheel and tire. S. N. McClean. No. 1,015,238; Jan. 16; Sp. p. 4723; Gaz. vol. 174; p. 796.
Vehicle wheel, Motor-. A. T. Beeler. No. 1,016,200; Jan. 30; Sp. p. 6788; Gaz. vol. 174; p. 1180.
Vehicle-wheel, Spring. E. Murray. (Reissue.) No. 13,364; Jan. 16; Sp. p. 4823; Gaz. vol. 174; p. 812.
Vehicles, Automatic regulator for steam-propelled. H. Lemp. No. 1,015,042; Jan. 16; Sp. p. 4350; Gaz. vol. 174; p. 731.
Vehicles, Transmission-gearing for motor-. C. Schmidt. No. 1,013,450; Jan. 2; Sp. p. 786; Gaz. vol. 174; p. 126.
Velocipede spring-frame. H. A. Shelton. No. 1,016,042; Jan. 30; Sp. p. 6483; Gaz. vol. 174; p. 1122.
Vending-machine. W. Millard. No. 1,013,674; Jan. 2; Sp. p. 1290; Gaz. vol. 174; p. 202.
Vending-machine, Coin-controlled. C. A. Melchert. No. 1,014,016; Jan. 9; Sp. p. 2071; Gaz. vol. 174; p. 349.
Vending-machine, Coin-controlled. S. D. Polsen and I. Elson. No. 1,015,709; Jan. 23; Sp. p. 5777; Gaz. vol. 174; p. 985.
Vending-machine coin-controlled device. H. S. Mills. No. 1,014,320; Jan. 9; Sp. p. 2729; Gaz. vol. 174; p. 455.
Vending machine, Coin-controlled stamp or ticket. B. L. Zaerr and C. W. Hamlin. No. 1,014,273; Jan. 9; Sp. p. 2639; Gaz. vol. 174; p. 440.
Veneer-sorting machine. O. C. Fenlason. No. 1,014,819; Jan. 16; Sp. p. 3847; Gaz. vol. 174; p. 654.
Venereal bag. W. H. Merrill. No. 1,014,537; Jan. 16; Sp. p. 3908; Gaz. vol. 174; p. 662.
Ventilator; *See* House-ventilator.
Ventilator. F. J. Schumacher. No. 1,013,822; Jan. 2; Sp. p. 522; Gaz. vol. 174; p. 82.
Vermin-exterminating compound. G. A. H. Muller. No. 1,015,701; Jan. 23; Sp. p. 5764; Gaz. vol. 174; p. 982.
Vessel-closure. M. Takahashi. No. 1,014,536; Jan. 9; Sp. p. 3163; Gaz. vol. 174; p. 527.
Vessel-loading apparatus. J. T. Clark. No. 1,013,928; Jan. 9; Sp. p. 1880; Gaz. vol. 174; p. 320.
Vessels, Inside closure for air, steam, or water tight. C. W. Shields. No. 1,015,847; Jan. 30; Sp. p. 6063; Gaz. vol. 174; p. 1058.
Vessels, Message-carrier for. F. J. Meno. No. 1,013,607; Jan. 2; Sp. p. 1112; Gaz. vol. 174; p. 179.
Vibrator, Mechanical. J. Koch. No. 1,013,782; Jan. 2; Sp. p. 1521; Gaz. vol. 174; p. 241.
Visible signal. J. C. James. No. 1,015,565; Jan. 23; Sp. p. 5460; Gaz. vol. 174; p. 935.
Voting device, Independent-. C. H. Ocumpaugh. No. 1,013,883; Jan. 2; Sp. p. 1686; Gaz. vol. 174; p. 266.
Voting-machine. J. H. Dean. No. 1,013,646; Jan. 2; Sp. p. 1207; Gaz. vol. 174; p. 193.
Voting-machine. C. H. Ocumpaugh. No. 1,013,679; Jan. 2; Sp. p. 1304; Gaz. vol. 174; p. 204.
Voting-machine. C. H. Ocumpaugh. No. 1,013,680; Jan. 2; Sp. p. 1320; Gaz. vol. 174; p. 205.
Voting-machine key. C. C. Abbott. No. 1,013,355; Jan. 2; Sp. p. 590; Gaz. vol. 174; p. 94.
Vulcanizer. A. Adamson. No. 1,013,716; Jan. 2; Sp. p. 1383; Gaz. vol. 174; p. 217.
Vulcanizer, Quick-opening door for. J. K. Williams. No. 1,014,192; Jan. 9; Sp. p. 2441; Gaz. vol. 174; p. 410.
Wagon. M. Van Pelt. No. 1,014,540; Jan. 9; Sp. p. 3168; Gaz. vol. 174; p. 527.
Wagon-body attachment. G. F. Edgington. No. 1,014,579; Jan. 9; Sp. p. 3244; Gaz. vol. 174; p. 541.
Wagon-bottom and metal framework therefor. E. D. Ainsworth. No. 1,015,467; Jan. 23; Sp. p. 5263; Gaz. vol. 174; p. 902.
Wagon-box lift. S. D. Bassford. No. 1,014,748; Jan. 16; Sp. p. 3681; Gaz. vol. 174; p. 629.
Wagon, Dump-. W. L. Collins. No. 1,013,929; Jan. 9; Sp. p. 1884; Gaz. vol. 174; p. 321.
Wagon, Dumping-. J. Watson. No. 1,015,105; Jan. 16; Sp. p. 4471; Gaz. vol. 174; p. 753.
Wagon-loader. C. L. Samp. No. 1,016,038; Jan. 30; Sp. p. 6477; Gaz. vol. 174; p. 1127.
Wagons, Wear attachment for. B. F. Gerelds. No. 1,015,795; Jan. 30; Sp. p. 5956; Gaz. vol. 174; p. 1042.
Waist, Nursing-. J. Jacoby. No. 1,013,778; Jan. 2; Sp. p. 1516; Gaz. vol. 174; p. 240.
Walking-beam. A. L. Chambers and N. Bane. No. 1,013,533; Jan. 2; Sp. p. 968; Gaz. vol. 174; p. 155.
Wall-case. G. E. Palmer. No. 1,016,030; Jan. 30; Sp. p. 6458; Gaz. vol. 174; p. 1123.
Wardrobe, Foldable. N. J. Bell. (now by marriage N. J. Litherbury.) No. 1,013,729; Jan. 2; Sp. p. 1411; Gaz. vol. 174; p. 222.
Washbasin and bath-tub plug. E. E. Haff. No. 1,014,389; Jan. 9; Sp. p. 2900; Gaz. vol. 174; p. 480.
Washboilers, Crated. J. Dister. No. 1,015,380; Jan. 23; Sp. p. 5059; Gaz. vol. 174; p. 872.
Washer-making machine. M. G. Worth. No. 1,015,752; Jan. 23; Sp. p. 5862; Gaz. vol. 174; p. 999.
Washing-machine or the like. F. E. King. No. 1,014,968; Jan. 16; Sp. p. 4197; Gaz. vol. 174; p. 706.
Washing-machine pounder. G. C. Dunham. No. 1,014,578; Jan. 9; Sp. p. 3242; Gaz. vol. 174; p. 578.
Washstand-trap. E. S. Hunsicker. No. 1,014,223; Jan. 9; Sp. p. 2508; Gaz. vol. 174; p. 421.
Watch. E. E. Perry. No. 1,013,896; Jan. 9; Sp. p. 1801; Gaz. vol. 174; p. 309.
Watch or clock spring carrier. M. M. Riglander. No. 1,015,978; Jan. 30; Sp. p. 6346; Gaz. vol. 174; p. 1104.
Water-bag nozzle. E. Over. No. 1,014,607; Jan. 9; Sp. p. 3323; Gaz. vol. 174; p. 551.
Water-clarifier, Centrifugal. W. K. Richardson. No. 1,014,849; Jan. 16; Sp. p. 3928; Gaz. vol. 174; p. 668.
Water-closet. H. S. Rumsey. No. 1,013,616; Jan. 2; Sp. p. 1141; Gaz. vol. 174; p. 182.
Water-closet. B. E. Toroosian. No. 1,014,787; Jan. 16; Sp. p. 3784; Gaz. vol. 174; p. 643.
Water-cooler stand. H. G. Cordley. No. 1,015,615; Jan. 23; Sp. p. 5566; Gaz. vol. 174; p. 954.
Water-current and air motor. P. T. Snyder. No. 1,015,517; Jan. 23; Sp. p. 5352; Gaz. vol. 174; p. 918.
Water, Device for manufacturing mineral. J. Bleas. No. 1,015,753; Jan. 23; Sp. p. 5865; Gaz. vol. 174; p. 1000.
Water-elevator. G. M. Holt. No. 1,014,879; Jan. 16; Sp. p. 3996; Gaz. vol. 174; p. 676.
Water-elevator. S. Murta. No. 1,016,085; Jan. 30; Sp. p. 6568; Gaz. vol. 174; p. 1144.
Water-heater. D. Popa. No. 1,015,833; Jan. 30; Sp. p. 6038; Gaz. vol. 174; p. 1058.
Water-heater, Gas. W. B. Bastian. No. 1,013,581; Jan. 2; Sp. p. 1055; Gaz. vol. 174; p. 170.
Water-heater grid, Cleanable. M. A. Spear. No. 1,015,911; Jan. 30; Sp. p. 6202; Gaz. vol. 174; p. 1081.
Water-heater, Instantaneous. G. H. Harrington. No. 1,015,314; Jan. 23; Sp. p. 4907; Gaz. vol. 174; p. 850.
Water heating and measuring apparatus, Combination. G. H. Gibson. No. 1,015,556; Jan. 23; Sp. p. 5436; Gaz. vol. 174; p. 931.
Water-heating apparatus. G. H. Gibson. No. 1,014,822; Jan. 16; Sp. p. 3860; Gaz. vol. 174; p. 655.
Water-heating device. M. R. Ogden. No. 1,014,170; Jan. 9; Sp. p. 2395; Gaz. vol. 174; p. 401.
Water-meter. E. E. Gamon. No. 1,015,553; Jan. 23; Sp. p. 5427; Gaz. vol. 174; p. 930.
Water-motor. K. H. Menke. No. 1,014,164; Jan. 9; Sp. p. 2384; Gaz. vol. 174; p. 399.
Water-supply system. C. L. Wilkins. No. 1,015,464; Jan. 23; Sp. p. 5256; Gaz. vol. 174; p. 901.
Water-tower. F. S. Seagrave. No. 1,013,323; Jan. 2; Sp. p. 523; Gaz. vol. 174; p. 83.
Water-tube boiler. R. Schulz. No. 1,015,349; Jan. 23; Sp. p. 4993; Gaz. vol. 174; p. 862.
Water-wheel. G. Verde. No. 1,015,858; Jan. 30; Sp. p. 6090; Gaz. vol. 174; p. 1061.
Water-wheel-gate ring. J. Kincaid. No. 1,015,805; Jan. 30; Sp. p. 5973; Gaz. vol. 174; p. 1045.
Water-wheel, Submerged. O. L. Morgenstern. No. 1,013,508; Jan. 2; Sp. p. 912; Gaz. vol. 174; p. 146.
Weaving tubular goods, Machine for. W. Murphy. No. 1,014,716; Jan. 16; Sp. p. 3618; Gaz. vol. 174; p. 619.
Weighing and measuring apparatus, Portable self-contained. H. E. Maine. No. 1,015,739; Jan. 23; Sp. p. 5838; Gaz. vol. 174; p. 995.
Weighing apparatus, Automatic. E. G. Hedman. No. 1,015,561; Jan. 23; Sp. p. 5450; Gaz. vol. 174; p. 933.
Weighing-machine, Automatic. J. Nield. No. 1,014,717; Jan. 16; Sp. p. 3619; Gaz. vol. 174; p. 620.
Weighing mechanism, Automatic. W. Deats. No. 1,013,136; Jan. 2; Sp. p. 89; Gaz. vol. 174; p. 16.
Welding copper. R. C. Davidson. No. 1,013,134; Jan. 2; Sp. p. 88; Gaz. vol. 174; p. 16.
Welding copper or nickel and copper or nickel alloy. W. Schieber. No. 1,013,620; Jan. 2; Sp. p. 1149; Gaz. vol. 174; p. 183.
Welding machine, Electric. J. A. Heany. No. 1,015,492; Jan. 23; Sp. p. 5314; Gaz. vol. 174; p. 911.
Well-cleaner. D. Fry. No. 1,013,933; Jan. 9; Sp. p. 1893; Gaz. vol. 174; p. 322.
Well-drilling machine. C. F. Gulde. No. 1,013,654; Jan. 2; Sp. p. 1240; Gaz. vol. 174; p. 196.
Wells, Wall-packer for oil-. C. A. Waltz. No. 1,014,272; Jan. 9; Sp. p. 2624; Gaz. vol. 174; p. 438.
Wheel: *See* Automobile-wheel; Automobile spring-wheel; Car-wheel; Cushion-wheel; Fly-wheel; Friction-wheel; Pneumatic wheel; Resilient wheel; Spring-wheel; Sprocket-wheel; Vehicle-wheel; Water-wheel; Wind-wheel.
Wheel. W. W. Byam. No. 1,013,278; Jan. 2; Sp. p. 401; Gaz. vol. 174; p. 65.
Wheel. L. G. Handy. No. 1,013,994; Jan. 9; Sp. p. 2023; Gaz. vol. 174; p. 342.
Wheel. L. G. Handy. No. 1,013,995; Jan. 9; Sp. p. 2027; Gaz. vol. 174; p. 342.
Wheel. L. G. Handy. No. 1,013,996; Jan. 9; Sp. p. 2030; Gaz. vol. 174; p. 342.
Wheel. L. G. Handy. No. 1,013,997; Jan. 9; Sp. p. 2033; Gaz. vol. 174; p. 343.
Wheel. L. G. Handy. No. 1,013,998; Jan. 9; Sp. p. 2035; Gaz. vol. 174; p. 343.
Wheel. L. G. Handy. No. 1,013,999; Jan. 9; Sp. p. 2039; Gaz. vol. 174; p. 343.
Wheel. M. J. Feyer. No. 1,014,055; Jan. 9; Sp. p. 2166; Gaz. vol. 174; p. 362.
Wheel-fender. J. Nitzsche. No. 1,013,804; Jan. 2; Sp. p. 1562; Gaz. vol. 174; p. 248.
Wheel-form. R. B. Thompson. No. 1,016,184; Jan. 30; Sp. p. 6758; Gaz. vol. 174; p. 1175.

Wheel-rim. H. Gillette. No. 1,015,557; Jan. 28; Sp. p. 5445; Gaz. vol. 174: p. 982.
Wheels, Tool for centering sprockets upon vehicle-. H. Weber. No. 1,013,911; Jan. 9; Sp. p. 1836; Gaz. vol. 174; p. 314.
Wheelbarrow. A. O. Hubbard. No. 1,015,024; Jan. 16; Sp. p. 4311; Gaz. vol. 174; p. 725.
Whiffletree. B. E. Barrett. No. 1,014,084; Jan. 9; Sp. p. 2122; Gaz. vol. 174; p. 355.
Whiffletree-detaching device for vehicle-thills. E. Eklund. No. 1,014,584; Jan. 9; Sp. p. 3250; Gaz. vol. 174; p. 542.
Whip, Carriage-. W. G. Towery. No. 1,013,240; Jan. 2; Sp. p. 331; Gaz. vol. 174; p. 53.
Whisky, Container for the aging of. A. S. Klein. No. 1,014,883; Jan. 16; Sp. p. 4006; Gaz. vol. 174; p. 677.
Wind-shield clamp. C. H. Jockmus. No. 1,015,386; Jan. 23; Sp. p. 5072; Gaz. vol. 174; p. 874.
Wind-wheel. J. A. Bennett. No. 1,015,416; Jan. 23; Sp. p. 5145; Gaz. vol. 174; p. 883.
Wind-wheel. J. E. Liston. No. 1,015,695; Jan. 23; Sp. p. 5763; Gaz. vol. 174; p. 980.
Windmill. R. D. Moon and H. J. Horne. No. 1,015,505; Jan. 23; Sp. p. 5331; Gaz. vol. 174; p. 914.
Winding and measuring machine. F. L. Taylor. No. 1,013,461; Jan. 2; Sp. p. 808; Gaz. vol. 174; p. 129.
Winding apparatus for paper, cloth, or the like. F. Zwins. No. 1,013,917; Jan. 9; Sp. p. 1842; Gaz. vol. 174; p. 316.
Winding-drum. T. Ahlborn. No. 1,014,990; Jan. 16; Sp. p. 4243; Gaz. vol. 174; p. 714.
Winding-machine. J. O. McKean. No. 1,014,836; Jan. 16; Sp. p. 3904; Gaz. vol. 174; p. 661.
Winding-machine. J. L. Wilds. No. 1,014,860; Jan. 16; Sp. p. 3957; Gaz. vol. 174; p. 669.
Winding machine, Yarn or like. E. Sykes. No. 1,014,981; Jan. 16; Sp. p. 4226; Gaz. vol. 174; p. 711.
Window construction. E. M. Clevenger. No. 1,014,638; Jan. 16; Sp. p. 3452; Gaz. vol. 174; p. 593.
Window-fastener. E. H. Remde. No. 1,013,898; Jan. 9; Sp. p. 1804; Gaz. vol. 174; p. 309.
Window hanger, Screen or storm-. B. B. Cutler. No. 1,014,621; Jan. 9; Sp. p. 3350; Gaz. vol. 174; p. 556.
Window-lock. G. Parker. No. 1,014,091; Jan. 9; Sp. p. 2232; Gaz. vol. 174; p. 374.
Window-louvers, Operating device for. J. E. von Wagner. No. 1,014,679; Jan. 16; Sp. p. 3555; Gaz. vol. 174; p. 608.
Window-screen. M. G. Wood. No. 1,015,413; Jan. 23; Sp. p. 5138; Gaz. vol. 174; p. 882.
Window-screen. J. Nye. No. 1,016,088; Jan. 30; Sp. p. 6593; Gaz. vol. 174; p. 1145.
Window, Sliding and swinging. C. M. March. No. 1,015,050; Jan. 16; Sp. p. 4371; Gaz. vol. 174; p. 733.
Wire-drawing apparatus. J. Stratton and E. A. Claremont. No. 1,015,913; Jan. 30; Sp. p. 6204; Gaz. vol. 174; p. 1082.
Wire-drawing apparatus. J. Stratton and E. A. Claremont. No. 1,015,914; Jan. 30; Sp. p. 6208; Gaz. vol. 174; p. 1083.
Wire fabric. C. H. Gall. No. 1,014,099; Jan. 16; Sp. p. 3583; Gaz. vol. 174; p. 613.
Wire-fastener. D. Monson. No. 1,014,245; Jan. 9; Sp. p. 2577; Gaz. vol. 174; p. 429.
Wire-feeding mechanism. J. G. Lepper and W. W. Manville. No. 1,014,829; Jan. 16; Sp. p. 3880; Gaz. vol. 174; p. 658.
Wire, Making fusible. L. P. Daub. No. 1,013,864; Jan. 9; Sp. p. 1725; Gaz. vol. 174; p. 298.
Wire-stretcher. J. H. W. Jones. No. 1,013,397; Jan. 2; Sp. p. 681; Gaz. vol. 174; p. 108.
Wire-stretcher. R. L. Belk. No. 1,014,085; Jan. 9; Sp. p. 2124; Gaz. vol. 174; p. 355.
Wire-stretching device. W. A. Holcomb. No. 1,015,184; Jan. 16; Sp. p. 4614; Gaz. vol. 174; p. 778.
Wire-tie. J. J. Sanders. No. 1,015,513; Jan. 23; Sp. p. 5345; Gaz. vol. 174; p. 917.
Wire-twister. A. E. Lung. No. 1,014,498; Jan. 9; Sp. p. 3096; Gaz. vol. 174; p. 514.
Wire-weaving machine. A. L. Kitselman. No. 1,014,599; Jan. 9; Sp. p. 3282; Gaz. vol. 174; p. 547.
Wires, Attaching filaments to leading-in. W. R. Whitney. No. 1,013,914; Jan. 9; Sp. p. 1839; Gaz. vol. 174; p. 315.
Wiring-block. E. S. Pereyra. No. 1,014,720; Jan. 16; Sp. p. 3631; Gaz. vol. 174; p. 621.
Wood-fuming apparatus. H. W. De Pree. No. 1,015,008; Jan. 16; Sp. p. 4235; Gaz. vol. 174; p. 720.
Wood, Preserving. W. J. Watson. No. 1,015,862; Jan. 30; Sp. p. 6095; Gaz. vol. 174; p. 1063.
Wood, Preserving. E. Marmetschke. No. 1,016,024; Jan. 30; Sp. p. 6441; Gaz. vol. 174; p. 1121.
Wood, Preserving and hardening. E. Sucher. No. 1,016,111; Jan. 30; Sp. p. 6632; Gaz. vol. 174; p. 1153.
Wooden plate, Compound. H. H. Basse. No. 1,015,775; Jan. 30; Sp. p. 5912; Gaz. vol. 174; p. 1035.
Work-box. F. W. Hawkes. No. 1,014,060; Jan. 9; Sp. p. 2174; Gaz. vol. 174; p. 364.
Work-support. J. M. Wiggin. No. 1,014,353; Jan. 9; Sp. p. 2828; Gaz. vol. 174; p. 467.
Work-support-actuating mechanism. G. A. Ambler. No. 1,013,833; Jan. 2; Sp. p. 1616; Gaz. vol. 174; p. 258.
Wort-macerating apparatus. R. Hoffmann. No. 1,015,443; Jan. 23; Sp. p. 5200; Gaz. vol. 174; p. 894.
Wrapper for skeins of thread and needles. C. Fisher. No. 1,014,586; Jan. 9; Sp. p. 3253; Gaz. vol. 174; p. 543.
Wrapping-machine. H. O. Fischer. No. 1,016,067; Jan. 30; Sp. p. 6547; Gaz. vol. 174; p. 1137.
Wrench: *See* Convertible wrench; Monkey-wrench; Pipe-wrench; Ratchet-wrench; Screw-wrench.
Wrench. J. T. Jones. No. 1,013,174; Jan. 2; Sp. p. 170; Gaz. vol. 174; p. 30.
Wrench. J. A. Overlander. No. 1,014,251; Jan. 9; Sp. p. 2500; Gaz. vol. 174; p. 432.
Wrench. W. Bowden. No. 1,014,563; Jan. 9; Sp. p. 3212; Gaz. vol. 174; p. 535.
Wrench. C. H. Mekeel, Jr. No. 1,014,714; Jan. 16; Sp. p. 3610; Gaz. vol. 174; p. 618.
Wrench. F. V. Hendrickson. No. 1,015,181; Jan. 16; Sp. p. 4609; Gaz. vol. 174; p. 777.
Wrench. J. Kovacs. No. 1,015,194; Jan. 16; Sp. p. 4637; Gaz. vol. 174; p. 782.
Wrench. L. S. Whitehead. No. 1,015,659; Jan. 23; Sp. p. 5668; Gaz. vol. 174; p. 968.
Wrench. J. C. Granger. No. 1,015,883; Jan. 30; Sp. p. 6149; Gaz. vol. 174; p. 1071.
Wrench. H. W. Meldrum. No. 1,015,970; Jan. 30; Sp. p. 6328; Gaz. vol. 174; p. 1101.
Wrench. A. L. Trimbath. No. 1,016,049; Jan. 30; Sp. p. 6500; Gaz. vol. 174; p. 1131.
Wringer: *See* Mop-wringer.
Yarn-cutter. B. H. Ponder. No. 1,015,339; Jan. 23; Sp. p. 4976; Gaz. vol. 174; p. 859.
Yarn-dampening device. W. H. O'Neill and H. Parker, Jr. No. 1,015,705; Jan. 23; Sp. p. 5772; Gaz. vol. 174; p. 984.
Yarn-tension device. E. Sykes. No. 1,014,980; Jan. 16; Sp. p. 4225; Gaz. vol. 174; p. 711.
Yoke center, Neck-. S. H. Renville. No. 1,015,248; Jan. 16; Sp. p. 4743; Gaz. vol. 174; p. 800.
Yoke end coupling, Neck-. S. H. Renville. No. 1,015,247; Jan. 16; Sp. p. 4742; Gaz. vol. 174; p. 800.
Zither, Keyed. B. R. Kiessig. No. 1,015,896; Jan. 30; Sp. p. 6169; Gaz. vol. 174; p. 1076.
Zinc oxid, Producing. H. H. Hughes. No. 1,014,062; Jan. 9; Sp. p. 2177; Gaz. vol. 174; p 364.
Zinc sulfid and thiosulfates, Producing pure. P. Pipereaut and A. Vila. No. 1,013,511; Jan. 2; Sp. p. 918; Gaz. vol. 174; p. 147.

ALPHABETICAL LIST OF DESIGNS.

Automobile-body. O. P. Fritchle. No. 42,073; Jan. 2; Gaz. vol. 174; p. 270.
Automobile-horn. E. Rubes. No. 42,091; Jan. 9; Gaz. vol. 174; p. 572.
Badge. A. C. Turner. No. 42,116; Jan. 23; Gaz. vol. 174; p. 1009.
Badge or button. H. J. Juergens. No. 42,085; Jan. 9; Gaz. vol. 174; p. 570.
Barretts. W. H. Lane and J. P. Ledger. No. 42,086; Jan. 9; Gaz. vol. 174; p. 570.
Bread-board. T. Bardesbanian. No. 42,117; Jan. 30; Gaz. vol. 174; p. 1196.
Brush, Shaving-. C. E. Thompson. No. 42,120; Jan. 30; Gaz. vol. 174; p. 1196.
Casket name-plate, Burial-. N. L. Barmore. No. 42,079; Jan. 9; Gaz. vol. 174; p. 569.
Casket-trimming. W. E. Stevens. No. 42,093; Jan. 9; Gaz. vol. 174; p. 572.
Chair. L. W. Newton. No. 42,089; Jan. 9; Gaz. vol. 174; p. 571.
Chair-arm. J. A., and J. P. Barker. No. 42,092; Jan. 16; Gaz. vol. 174; p. 813.
Cigar and cigarette holder. H. O. Shunk. No. 42,092; Jan. 9; Gaz. vol. 174; p. 572.
Clasp. H. P. Stewart. No. 42,114; Jan. 23; Gaz. vol. 174; p. 1008.
Dish. J. Senford. No. 42,110; Jan. 23; Gaz. vol. 174; p. 1008.
Display casing, Number-. A. Munroe and F. F. Fink. No. 42,109; Jan. 23; Gaz. vol. 174; p. 1008.
Drinking vessel or similar article. M. H. Sloan. No. 42,113; Jan. 23; Gaz. vol. 174; p. 1008.
Egg-cup. M. Johnsen. No. 42,084; Jan. 9; Gaz. vol. 174; p. 570.
Emblem, Fraternal. L. N. Brooker. No. 42,080; Jan. 9; Gaz. vol. 174; p. 569.
Eyelet. W. Hughes. No. 42,100; Jan. 16; Gaz. vol. 174; p. 814.
Globe or shade. J. E. Miller. No. 42,107; Jan. 23; Gaz. vol. 174; p. 1007.
Grave-lining. J. M. and W. I. Doddridge. No. 42,097; Jan. 16; Gaz. vol. 174; p. 813.
Inkstand. F. M. Ashley. No. 42,077; Jan. 9; Gaz. vol. 174; p. 569.
Key. E. B. Stone. No. 42,094; Jan. 9; Gaz. vol. 174; p. 572.
Lamp. H. E. Bandlow. No. 42,078; Jan. 9; Gaz. vol. 174; p. 569.
Lamp, Automobile-. W. S. Hamm and R. M. Newbold. No. 42,083; Jan. 9; Gaz. vol. 174; p. 570.
Lamp, Electric. R. B. Benjamin. No. 42,118; Jan. 30; Gaz. vol. 174; p. 1196.
Lamp-shade. R. Haley. Nos. 42,098–9; Jan. 16; Gaz. vol. 174; pp. 813–14.
Lamp-shade. H. A. Schnelbach. Nos. 42,111–12; Jan. 23; Gaz. vol. 174; p. 1008.
Mail-box. C. H. Baldwin. No. 42,095; Jan. 16; Gaz. vol. 174; p. 813.
Massage device. C. E. Thompson. No. 42,119; Jan. 30; Gaz. vol. 174; p. 1196.
Massage devices, Rubber finger-pad for. C. E. Thompson. No. 42,121; Jan. 30; Gaz. vol. 174; p. 1196.
Neck or chest protector. A. C. Delson. No. 42,082; Jan. 9; Gaz. vol. 174; p. 570.
Percolator, Coffee-. C. Nelson. No. 42,088; Jan. 9; Gaz. vol. 174; p. 571.
Picture-hanger. L. Ducsay. No. 42,105; Jan. 23; Gaz. vol. 174; p. 1007.
Portière. A. E. Neff. No. 42,087; Jan. 9; Gaz. vol. 174; p. 571.
Shingle, Metal. J. E. Annis. No. 42,101; Jan. 23; Gaz. vol. 174; p. 1006.
Show-case. L. A. Vandivir. No. 42,076; Jan. 2; Gaz. vol. 174; p. 270.
Show-case. M. Friedman. No. 42,106; Jan. 23; Gaz. vol. 174; p. 1007.
Spoon, fork, or similar article. F. E. Pretat. (Reissue.) No. 13,359; Jan. 9; Gaz. vol. 174; p. 568.
Spoon, fork, or similar article. G. Strohhaker. (Reissue.) No. 13,360; Jan. 9; Gaz. vol. 174; p. 568.
Store-counter. J. S. Mitchell and S. M. Colburn. No. 42,108; Jan. 23; Gaz. vol. 174; p. 1007.
Stove or range, Cooking. A. K. Beckwith. No. 42,102; Jan. 23; Gaz. vol. 174; p. 1006.
Table-centerpiece. P. Szathmary. No. 42,115; Jan. 23; Gaz. vol. 174; p. 1009.
Tire tread, Pneumatic-. G. W. Beldam. Nos. 42,103–4; Jan. 23; Gaz. vol. 174; p. 1007.
Valve, Thermostatic. E. S. Caldwell. No. 42,081; Jan. 9; Gaz. vol. 174; p. 569.
Vehicle-body. H. B. Joy. No. 42,074; Jan. 2; Gaz. vol. 174; p. 270.
Vehicle-body. R. S. Richeson. No. 42,075; Jan. 2; Gaz. vol. 174; p. 270.
Wheel anchorage device, Vehicle-. W. E. Perrine. No. 42,090; Jan. 9; Gaz. vol. 174; p. 571.

ALPHABETICAL LIST OF TRADE-MARKS.

Acetylene burners. American Lava Company. No. 85,026; Jan. 23; Gaz. vol. 174; p. 1023.
Adhesive for mending leaks. G. Wilkening. No. 85,022; Jan. 16; Gaz. vol. 174; p. 826.
Ale, Ginger-. The Chicago Consolidated Bottling Company. No. 84,815; Jan. 9; Gaz. vol. 174; p. 579.
Ale, Ginger-. Kiwassa Lithia Spring Co. No. 84,975; Jan. 16; Gaz. vol. 174; p. 824.
Animal-traps. Otto Kampfe Mfg. Co. No. 84,779; Jan. 2; Gaz. vol. 174; p. 285.
Antiseptic. Lambert Pharmacal Company. No. 85,150; Jan. 30; Gaz. vol. 174; p. 1214.
Antiseptic dressing. D. C. Osborn. No. 85,167; Jan. 30; Gaz. vol. 174; p. 1214.
Automobile-hoods. W. Lamplugh. No. 84,979; Jan. 16; Gaz. vol. 174; p. 824.
Automobiles. The Thomas B. Jeffery Company. Nos. 84,776-7; Jan. 2; Gaz. vol. 174; p. 285.
Automobiles, Six-passenger torpedo-body. The Thomas B. Jeffery Company. No. 84,749; Jan. 2; Gaz. vol. 174; p. 284.
Automobiles, Six-passenger touring-body. The Thomas B. Jeffery Company. No. 84,750; Jan. 2; Gaz. vol. 174; p. 284.
Bags, vanity and cigarette cases, bric-à-brac, &c., Mesh. E. Beline. No. 85,032; Jan. 23; Gaz. vol. 174; p. 1023.
Baking-powder. Francis H. Leggett & Co. No. 85,145; Jan. 30; Gaz. vol. 174; p. 1213.
Balls, Foot and basket. A. Taylor. No. 84,767; Jan. 2; Gaz. vol. 174; p. 284.
Bedspreads and counterpanes. Monument Mills. No. 84,985; Jan. 16; Gaz. vol. 174; p. 824.
Beef and bacon, Smoked. Newark Packing Company. No. 84,990; Jan. 16; Gaz. vol. 174; p. 825.
Beer. Centerville Brewing Company. No. 84,936; Jan. 16; Gaz. vol. 174; p. 823.
Beer. Conway Bros. Brewing & Malting Company. No. 85,081; Jan. 30; Gaz. vol. 174; p. 1212.
Belt-dressing. H. Scott. No. 85,188; Jan. 30; Gaz. vol. 174; p. 1215.
Belting, Cotton and balata. James Dawson & Son. No. 84,820; Jan. 9; Gaz. vol. 174; p. 579.
Belting, Leather power-transmitting. A. C. Laurence. No. 85,142; Jan. 30; Gaz. vol. 174; p. 1213.
Beverage and syrup for making same. Deacon Brown Manufacturing Company. No. 84,821; Jan. 9; Gaz. vol. 174; p. 579.
Biscuit. National Biscuit Company. Nos. 84,849-50; Jan. 9; Gaz. vol. 174; p. 580.
Biscuit, Cereal. The Shredded Wheat Company. No. 85,186; Jan. 30; Gaz. vol. 174; p. 1215.
Blankets. A. De Cernea. No. 84,943; Jan. 16; Gaz. vol. 174; p. 823.
Blood-purifier and tonic. B. E. Stevens. No. 84,762; Jan. 2; Gaz. vol. 174; p. 284.
Boilers, Water-tube. Risdon Iron & Locomotive Works. No. 85,044; Jan. 23; Gaz. vol. 174; p. 1023.
Bonnets, hats, and caps. J. Rostenberg. No. 85,007; Jan. 16; Gaz. vol. 174; p. 825.
Books, Cash and expense. W. H. Cleasby. No. 85,078; Jan. 30; Gaz. vol. 174; p. 1211.
Boots and shoes, Leather. E. E. Taylor Co. No. 84,768; Jan. 2; Gaz. vol. 174; p. 284.
Boots and shoes, Leather. Lunn & Sweet Shoe Co. No. 84,841; Jan. 9; Gaz. vol. 174; p. 580.
Boots and shoes, Leather. C. W. Strohbeck. No. 84,884; Jan. 9; Gaz. vol. 174; p. 581.
Boots and shoes, Leather. Regal Shoe Company. No. 85,003; Jan. 16; Gaz. vol. 174; p. 825.
Boots and shoes, Leather. Allen-Foster-Willett Co. No. 85,053; Jan. 30; Gaz. vol. 174; p. 1211.
Boots, shoes, and slippers. Edwin C. Burt Company. No. 84,726; Jan. 2; Gaz. vol. 174; p. 283.
Bottles, Glass. Empire Bottle & Supply Company. No. 84,824; Jan. 9; Gaz. vol. 174; p. 579.
Bread. E. O. Grover. No. 85,110; Jan. 30; Gaz. vol. 174; p. 1212.
Brick. The Columbus Brick and Terra Cotta Co. No. 84,941; Jan. 16; Gaz. vol. 174; p. 823.
Brick, Fire-. Chicago Retort & Fire Brick Co. No. 84,816; Jan. 9; Gaz. vol. 174; p. 579.
Brooms. O. S. Kulman. No. 84,977; Jan. 16; Gaz. vol. 174; p. 824.
Butter. S. Pfeifer & Co. No. 84,999; Jan. 16; Gaz. vol. 174; p. 825.
Butter and eggs. E. Rueb & Co. No. 84,877; Jan. 9; Gaz. vol. 174; p. 581.
Buttons. G. A. Lippincott. No. 84,839; Jan. 9; Gaz. vol. 174; p. 580.
Buttons, Pearl. W. Kral & Co. No. 84,976; Jan. 16; Gaz. vol. 174; p. 824.
Cabinets, cupboards, closets, and tables. Hoosier Manufacturing Company. No. 84,831; Jan. 9; Gaz. vol. 174; p. 580.
Calendars. Dodge Publishing Company. Nos. 84,945-6; Jan. 16; Gaz. vol. 174; p. 823.
Cambrics, sheeting, shirting, muslin, &c. Garner Print Works & Bleachery. No. 84,903; Jan. 9; Gaz. vol. 174; p. 582.
Candles. H. F. Roberts. No. 85,006; Jan. 16; Gaz. vol. 174; p. 825.
Candles. Singer Brothers. No. 85,187; Jan. 30; Gaz. vol. 174; p. 1215.
Candy. United Drug Co. No. 84,889; Jan. 9; Gaz. vol. 174; p. 581.
Candy. Hudson's. No. 84,966; Jan. 16; Gaz. vol. 174; p. 824.
Candy. F. G. Jensen. No. 85,131; Jan. 30; Gaz. vol. 174; p. 1213.
Candy. The Pallas Candy Co. No. 85,168; Jan. 30; Gaz. vol. 174; p. 1214.
Candy and candied popcorn. Aubuchon-Garneau Candy Company. No. 85,056; Jan. 30; Gaz. vol. 174; p. 1211.
Candy lozenges. C. A. Briggs Co. No. 85,066; Jan. 30; Gaz. vol. 174; p. 1211.
Canned corn. The Illinois Canning Company. No. 84,967; Jan. 16; Gaz. vol. 174; p. 824.
Canned corn. P. Hohenadel Jr. Canning Company. Nos. 85,120-1; Jan. 30; Gaz. vol. 174; p. 1213.
Canned corn. P. Hohenadel Jr. Canning Company. No. 85,124; Jan. 30; Gaz. vol. 174; p. 1213.
Canned fish. Southern California Fish Company. No. 85,017; Jan. 16; Gaz. vol. 174; p. 825.
Canned fruits. Söskeland Gebr. No. 84,882; Jan. 9; Gaz. vol. 174; p. 581.
Canned fruits. Central California Canneries. No. 85,071; Jan. 30; Gaz. vol. 174; p. 1211.
Canned fruits and vegetables. California Fruit Canners Association. No. 84,813; Jan. 9; Gaz. vol. 174; p. 579.
Canned fruits and vegetables and cheese. Goldberg, Bowen & Co. No. 85,107; Jan. 30; Gaz. vol. 174; p. 1212.
Canned fruits, vegetables, and pork and beans. Haas-Lieber Grocery Company. No. 85,111; Jan. 30; Gaz. vol. 174; p. 1212.
Canned kraut and boiled cabbage. P. Hohenadel Jr. Canning Company. No. 85,119; Jan. 30; Gaz. vol. 174; p. 1213.
Canned oysters, shrimps, &c. Biloxi Canning Co. of Louisiana. No. 85,061; Jan. 30; Gaz. vol. 174; p. 1211.
Canned peas and corn. P. Hohenadel Jr. Canning Company. Nos. 85,122-3; Jan. 30; Gaz. vol. 174; p. 1213.
Canned pineapple. Theo. H. Davies & Company. No. 84,819; Jan. 9; Gaz. vol. 174; p. 579.
Canned pineapple. Hawaiian Pineapple Co. No. 85,113; Jan. 30; Gaz. vol. 174; p. 1212.
Canned pineapples. Hawaiian Pineapple Co. No. 84,829; Jan. 9; Gaz. vol. 174; p. 580.
Canned tomatoes. Hobbs Mfg. Co. No. 85,118; Jan. 30; Gaz. vol. 174; p. 1213.
Canned tomatoes. The Holland-Council Company. No. 85,125; Jan. 30; Gaz. vol. 174; p. 1213.
Canned vegetables. T. Roberts & Co. No. 84,876; Jan. 9; Gaz. vol. 174; p. 581.
Canned vegetables. C. W. Baker. No. 85,058; Jan. 30; Gaz. vol. 174; p. 1211.
Canned vegetables. J. De Pooter. No. 85,088; Jan. 30; Gaz. vol. 174; p. 1212.
Canned vegetables. Kokomo Canning Company. No. 85,138; Jan. 30; Gaz. vol. 174; p. 1213.
Canned vegetables and fruits. Nalley Grocery Co. No. 84,989; Jan. 16; Gaz. vol. 174; p. 825.
Canvas. B. Kuppenheimer & Co. No. 84,837; Jan. 9; Gaz. vol. 174; p. 580.
Catalogues of merchandise. The Sullivan System. No. 84,885; Jan. 9; Gaz. vol. 174; p. 581.
Cement, concrete, &c., Coater for. Standard Varnish Works. No. 85,195; Jan. 30; Gaz. vol. 174; p. 1215.
Cement, Fire-resisting. E. V. Morgan. No. 84,986; Jan. 16; Gaz. vol. 174; p. 825.
Cement, Waterproofing and strengthening for. Hercules Waterproof Cement Company. No. 84,962; Jan. 16; Gaz. vol. 174; p. 824.
Cereal compound used in the preparation of a beverage. Mission Cereal Company. No. 84,845; Jan. 9; Gaz. vol. 174; p. 580.
Cheese, Cream-. G. Hagendorff. No. 84,960; Jan. 16; Gaz. vol. 174; p. 824.
Chilli sauce and assorted nuts. Francis H. Leggett & Co. No. 85,144; Jan. 30; Gaz. vol. 174; p. 1213.
Cigarettes. A. C. Brennig. No. 84,723; Jan. 2; Gaz. vol. 174; p. 283.

Cigars. Hulman & Co. No. 84,744; Jan. 2; Gaz. vol. 174; p. 284.
Cigars. San Telmo Cigar Mfg. Co. No. 84,756; Jan. 2; Gaz. vol. 174; p. 284.
Cigars. Germann and Company. No. 85,036; Jan. 23; Gaz. vol. 174; p. 1023.
Cigars. Heineman Bros. No. 85,039; Jan. 23; Gaz. vol. 174; p. 1023.
Cigars, cheroots, and little cigars. Superia Cigar Manufacturing Co. No. 84,766; Jan. 2; Gaz. vol. 174; p. 284.
Cleaning and polishing cloths. The Redio Company. No. 85,178; Jan. 30; Gaz. vol. 174; p. 1214.
Cleansing compound. Swift and Company. No. 85,202; Jan. 30; Gaz. vol. 174; p. 1215.
Clocks. Friedrich Mauthe, G. m. b. H. No. 85,154; Jan. 30; Gaz. vol. 174; p. 1214.
Clothes, Men's. Burk, Fried & Company. No. 84,898; Jan. 9; Gaz. vol. 174; p. 582.
Clothing and house-coats, Sporting. Alfred Nelson Company. No. 84,913; Jan. 9; Gaz. vol. 174; p. 582.
Clothing, Certain. The Spirella Company. No. 85,193; Jan. 30; Gaz. vol. 174; p. 1215.
Clothing, Men's, boys', and children's outer. Karnmann, Cohen & Ettlinger. No. 85,140; Jan. 30; Gaz. vol. 174; p. 1213.
Coal. Horace Clark & Sons Co. No. 85,077; Jan. 30; Gaz. vol. 174; p. 1211.
Coal. Pittsburg-Buffalo Company. Nos. 85,172–3; Jan. 30; Gaz. vol. 174; p. 1214.
Coats. Hershberg & Company. No. 85,116; Jan. 30; Gaz. vol. 174; p. 1213.
Coats, overcoats, and rain-coats. Garson-Meyer & Co. No. 85,105; Jan. 30; Gaz. vol. 174; p. 1212.
Coats, vests, trousers, and overcoats. The Fechheimer Kiefer Company. No. 85,098; Jan. 30; Gaz. vol. 174; p. 1212.
Coffee. Hulman & Co. No. 85,040; Jan. 23; Gaz. vol. 174; p. 1023.
Coffee and tea, Blended. Lowry Coffee Co. No. 84,840; Jan. 9; Gaz. vol. 174; p. 580.
Coffee, Blended. R. Bleecker. No. 85,063; Jan. 30; Gaz. vol. 174; p. 1211.
Coffee-settler. Crystal Gelatine Company. No. 85,085; Jan. 30; Gaz. vol. 174; p. 1212.
Confections and chocolates. Paul F. Beich Company. No 84,811; Jan. 9; Gaz. vol. 174; p. 579.
Corn-starch. National Starch Company. No. 84,851; Jan. 9; Gaz. vol. 174; p. 580.
Corsets. Artists' Model Corset Company. No. 85,055; Jan. 30; Gaz. vol. 174; p. 1211.
Corsets and corset-pads. Kops Bros. No. 85,139; Jan. 30; Gaz. vol. 174; p. 1213.
Corsets, corset-waists, brassières, and underwaists. The Crown Corset Company. No. 85,084; Jan. 30; Gaz. vol. 174; p. 1212.
Cotton dometts and flannels. Brogon Mills. No. 84,932; Jan. 16; Gaz. vol. 174; p. 823.
Cotton piece goods. Amoskeag Manufacturing Company. No. 84,924; Jan. 16; Gaz. vol. 174; p. 823.
Coupons, Trading-. The I. O. U. Company. No. 84,747; Jan. 2; Gaz. vol. 174; p. 284.
Crab-meat. H. Dubier. No. 85,090; Jan. 30; Gaz. vol. 174; p. 1212.
Cream, Cold-. New England Laboratory Company. No. 84,791; Jan. 2; Gaz. vol. 174; p. 285.
Cream, Face-. J. Fleischman. No. 85,100; Jan. 30; Gaz. vol. 174; p. 1212.
Creams, Cold and greaseless. Aubry Sisters. No. 84,715; Jan. 2; Gaz. vol. 174; p. 283.
Cycles, Motor-. Armac Motor Co. No. 84,928; Jan. 16; Gaz. vol. 174; p. 823.
Dental and surgical cabinets, operating-stools, &c. L. S. Smith & Son Co. No. 85,047; Jan. 23; Gaz. vol. 174; p. 1023.
Detergents and polishing materials, Certain. Hamilton Co. No. 84,740; Jan. 2; Gaz. vol. 174; p. 284.
Disinfectant and astringent remedy. J. A. Wilding. No. 84,922; Jan. 9; Gaz. vol. 174; p. 582.
Disinfecting fluid. West Disinfecting Company. No. 84,772; Jan. 2; Gaz. vol. 174; p. 284.
Disinfecting means for mouth and throat. Bauer & Cie. Nos. 84,896–7; Jan. 9; Gaz. vol. 174; p. 582.
Dresses, skirts, and petticoats. J. A. Herman. No. 84,963; Jan. 16; Gaz. vol. 174; p. 824.
Duck. William L. Barrell Co. No. 84,809; Jan. 9; Gaz. vol. 174; p. 579.
Duck. William L. Barrell Co. No. 84,895; Jan. 9; Gaz. vol. 174; p. 582.
Dusters. Hayes Duster Company. No. 84,961; Jan. 16; Gaz. vol. 174; p. 824.
Egg-preserving compound. Garantol-Gesellschaft mit beschränkter Haftung. No. 84,954; Jan. 16; Gaz. vol. 174; p. 824.
Elastic webbing. Boston Gore and Web Manufacturing Company. No. 84,931; Jan. 16; Gaz. vol. 174; p. 823.
Electric-arc-light carbons. C. Conradty (Inhaber Pauline & Eugen Conradty) Fabrik elektrischer u. galvanischer Kohlen. No. 85,079; Jan. 30; Gaz. vol. 174; p. 1211.
Electrical apparatus, Certain. Champion Ignition Company. No. 85,073; Jan. 30; Gaz. vol. 174; p. 1211.
Electrical repeating relays. Wireless Specialty Apparatus Co. No. 85,212; Jan. 30; Gaz. vol. 174; p. 1215.
Emulsion of cod-liver oil. The Smith-Stilwell Co. No. 85,190; Jan. 30; Gaz. vol. 174; p. 1215.
Enamel in various colors used as a filler, Soft. H. W. Thompson. No. 85,203; Jan. 30; Gaz. vol. 174; p. 1215.
Enamels, varnishes, stains, and fillers. Pratt & Lambert. No. 85,177; Jan. 30; Gaz. vol. 174; p. 1214.
Explosives. A. Heyman. No. 84,964; Jan. 16; Gaz. vol. 174; p. 824.
Fans for personal use. N. T. Palmer. No. 84,908; Jan. 16; Gaz. vol. 174; p. 825.
Feed, Horse. Edwards & Loomis Co. No. 85,093; Jan. 30; Gaz. vol. 174; p. 1212.
Feed, Stock. Feeders' Supply Company. No. 84,951; Jan. 16; Gaz. vol. 174; p. 824.
Felts for lining or filling walls, &c. H. W. Johns-Manville Company. No. 84,971; Jan. 16; Gaz. vol. 174; p. 824.
Fertilizer. Farmers' Cotton Oil & Fertilizer Co. No. 84,950; Jan. 16; Gaz. vol. 174; p. 823.
Figs. Habicht, Braun & Co. No. 84,907; Jan. 9; Gaz. vol. 174; p. 582.
Files for papers and books. J. H. Atwater Company. No. 84,927; Jan. 16; Gaz. vol. 174; p. 823.
Files, Paper-. Yawman & Erbe Manufacturing Co. No. 84,775; Jan. 2; Gaz. vol. 174; p. 285.
Filters, Water-. Brass Goods M'f'g. Co. No. 84,722; Jan. 2; Gaz. vol. 174; p. 283.
Flannels, Cotton. Tootle, Wheeler & Motter Mer. Co. No. 84,887; Jan. 9; Gaz. vol. 174; p. 581.
Flavoring extracts and spices. Cumberland Mfg. Co. No. 84,817; Jan. 9; Gaz. vol. 174; p. 579.
Flavoring extracts, ice-cream preparation, &c. O. E. Andrews & Company. No. 84,925; Jan. 16; Gaz. vol. 174; p. 823.
Flour and stock food, Wheat-. Shannon & Mott Company. No. 85,185; Jan. 30; Gaz. vol. 174; p. 1215.
Flour, Compound baking-. G. P. P. Nicolaou. No. 85,160; Jan. 30; Gaz. vol. 174; p. 1214.
Flour, Wheat-. Kemper Mill & Elevator Company. No. 84,835; Jan. 9; Gaz. vol. 174; p. 580.
Flour, Wheat-. Lexington Flouring Mills. No. 84,838; Jan. 9; Gaz. vol. 174; p. 580.
Flour, Wheat-. Montana Flour Mills Co. Nos. 84,847–8; Jan. 9; Gaz. vol. 174; p. 580.
Flour, Wheat-. Galban & Co. No. 84,953; Jan. 16; Gaz. vol. 174; p. 824.
Flour, Wheat-. King Milling Co. No. 84,974; Jan. 16; Gaz. vol. 174; p. 824.
Flour, Wheat-. Moseley & Motley Milling Co. No. 84,988; Jan. 16; Gaz. vol. 174; p. 825.
Flour, Wheat-. Shannon & Mott Company. No. 85,013; Jan. 16; Gaz. vol. 174; p. 825.
Flour, Wheat-. The Eaton Milling & Elevator Co. No. 85,002; Jan. 30; Gaz. vol. 174; p. 1212.
Flour, Wheat-. Kehlor Flour Mills Company. No. 85,136; Jan. 30; Gaz. vol. 174; p. 1213.
Flour, Wheat-. Michigan Milling Company. No. 85,155; Jan. 30; Gaz. vol. 174; p. 1214.
Flour, Wheat-. Moseley & Motley Milling Co. No. 85,156; Jan. 30; Gaz. vol. 174; p. 1214.
Flours, Certain. F. B. Chamberlain Co. No. 85,072; Jan. 30; Gaz. vol. 174; p. 1211.
Fly-killers. United States Wire Mat Company. No. 85,049; Jan. 23; Gaz. vol. 174; p. 1023.
Food-coloring. Chase & Neely. No. 85,074; Jan. 30; Gaz. vol. 174; p. 1211.
Food, Horse. F. C. McAfee. No. 84,842; Jan. 9; Gaz. vol. 174; p. 580.
Food, Laxative cereal. J. D. Bourdeau Co. No. 84,812; Jan. 9; Gaz. vol. 174; p. 579.
Food products, Olive-oil. M. Niven. No. 84,993; Jan. 16; Gaz. vol. 174; p. 825.
Food, Stock. Mutual Cotton Oil Co. No. 85,158; Jan. 30; Gaz. vol. 174; p. 1214.
Foods and stock feed, Certain. American Hominy Company. No. 84,797; Jan. 9; Gaz. vol. 174; p. 579.
Foods, Certain. The American Prepared Food Co. No. 84,800; Jan. 9; Gaz. vol. 174; p. 579.
Foods, Certain. Chas. W. Bauermeister Company. No. 84,810; Jan. 9; Gaz. vol. 174; p. 579.
Foods, Certain. The Franco-American Food Company. No. 84,825; Jan. 9; Gaz. vol. 174; p. 579.
Foods, Certain. McNeil & Higgins Company. No. 84,843; Jan. 9; Gaz. vol. 174; p. 580.
Foods, Certain. Scott & Gilbert Co. No. 84,879; Jan. 9; Gaz. vol. 174; p. 581.
Foods, Certain. T. M. Sinclair & Co. No. 84,881; Jan. 9; Gaz. vol. 174; p. 581.
Foods, Certain. Western Grocer Company. No. 84,892; Jan. 9; Gaz. vol. 174; p. 581.
Foods, Certain. S. Clague. No. 85,076; Jan. 30; Gaz. vol. 174; p. 1211.
Foods, Certain. Conservenfabrik Lenzburg vorm. Henckell & Roth. No. 85,080; Jan. 30; Gaz. vol. 174; p. 1212.
Foods, Certain. The Four Co. No. 85,101; Jan. 30; Gaz. vol. 174; p. 1212.
Foods, Certain. B. Martinez. No. 85,153; Jan. 30; Gaz. vol. 174; p. 1214.
Foods, Certain. J. W. Rider. No. 85,179; Jan. 30; Gaz. vol. 174; p. 1214.
Foods, Certain grain. The Pioneer Cereal Company. No. 84,874; Jan. 9; Gaz. vol. 174; p. 581.
Fruits and cheese, Dried. W. H. Underwood. No. 85,020; Jan. 16; Gaz. vol. 174; p. 825.
Furniture. E. Greenberger & Company. No. 84,739; Jan. 2; Gaz. vol. 174; p. 283.
Furniture. E. Greenberger & Company. No. 84,955; Jan. 16; Gaz. vol. 174; p. 824.

Game. Sidney and Smith. No. 85,014; Jan. 16; Gaz. vol. 174; p. 825.
Games, Card. J. T. Todd. No. 84,709; Jan. 2; Gaz. vol. 174; p. 284.
Garment-supporters. Harris Suspender Company. No. 84,837; Jan. 9; Gaz. vol. 174; p. 580.
Garments, Ladies' outer. J. J. Friedman & Co. No. 85,102; Jan. 30; Gaz. vol. 174; p. 1212.
Germicidal dressings. Knox Thenardine Chemical Company. No. 85,137; Jan. 30; Gaz. vol. 174; p. 1213.
Gherkins and mint sauce, Sour. Francis H. Leggett & Co. No. 85,146; Jan. 30; Gaz. vol. 174; p. 1213.
Glass, Mirror and plate. Hires Turner Glass Co. No. 84,830; Jan. 9; Gaz. vol. 174; p. 580.
Glassware, Certain. Gill Brothers Company. No. 85,037; Jan. 23; Gaz. vol. 174; p. 1023.
Glassware, Cut and engraved. Corona Cut Glass Company. No. 85,034; Jan. 23; Gaz. vol. 174; p. 1023.
Glue. American Glue Company. Nos. 84,712–18; Jan. 2; Gaz. vol. 174; p. 283.
Grates. Salamander Grate Bar Co. No. 84,755; Jan. 2; Gaz. vol. 174; p. 284.
Gum, Chewing-. The Tom Wilson Manufacturing Company. No. 84,893; Jan. 9; Gaz. vol. 174; p. 581.
Gum, Chewing-. Snow-Man Products Co. No. 85,016; Jan. 16; Gaz. vol. 174; p. 825.
Hair-grower. L. E. Warren. No. 85,208; Jan. 30; Gaz. vol. 174; p. 1215.
Hair-tonic. H. J. Loubeque. No. 84,782; Jan. 2; Gaz. vol. 174; p. 285.
Hair-tonic. T. Manganiello. No. 84,783; Jan. 2; Gaz. vol. 174; p. 285.
Hair-tonic. A. C. Ellerbe. No. 84,902; Jan. 9; Gaz. vol. 174; p. 582.
Hair-tonic and remedies for hay-fever, catarrh, &c. Azone Manufacturing Company. No. 84,716; Jan. 2; Gaz. vol. 174; p. 283.
Hair-tonics. R. D. Denise. No. 84,729; Jan. 2; Gaz. vol. 174; p. 283.
Hams, bacon, and lard. Carondelet Packing Company. No. 85,070; Jan. 30; Gaz. vol. 174; p. 1211.
Handkerchiefs. Cochrane Manufacturing Co. No. 84,940; Jan. 16; Gaz. vol. 174; p. 823.
Handkerchiefs, Cotton. Tootal Broadhurst Lee Company. No. 84,886; Jan. 9; Gaz. vol. 174; p. 581.
Hardware, cooking utensils, and wire-cloth, Certain. Janney, Semple, Hill & Co. No. 84,748; Jan. 2; Gaz. vol. 174; p. 284.
Hardware, Harness. Covert Mfg. Co. No. 85,082; Jan. 30; Gaz. vol. 174; p. 1212.
Hardware, Saddlery and harness. The Seneca Chain Company. No. 85,012; Jan. 16; Gaz. vol. 174; p. 825.
Hats and caps. W. G. Leyan and Sons. No. 84,980; Jan. 16; Gaz. vol. 174; p. 824.
Hoof-pads, Leather. United States Chrome Sole Company. No. 84,921; Jan. 9; Gaz. vol. 174; p. 582.
Hosiery. Miller & Sons Co. No. 84,787; Jan. 2; Gaz. vol. 174; p. 285.
Hosiery. Paramount Knitting Company. No. 84,914; Jan. 9; Gaz. vol. 174; p. 582.
Hosiery. Carter, Webster & Co. No. 84,935; Jan. 16; Gaz. vol. 174; p. 823.
Hosiery. Ipswich Mills. No. 84,968; Jan. 16; Gaz. vol. 174; p. 824.
Hosiery. E. Sutro & Son Company. No. 85,018; Jan. 16; Gaz. vol. 174; p. 825.
Hosiery. The Pittsburgh Dry Goods Company. No. 85,025; Jan. 16; Gaz. vol. 174; p. 826.
Hosiery. Manchester Hosiery Mills Co. No. 85,151; Jan. 30; Gaz. vol. 174; p. 1214.
Hosiery. Wear Knitting Co. No. 85,211; Jan. 30; Gaz. vol. 174; p. 1215.
Hosiery, petticoats, and muslin underwear. Swenson Bros. Co. No. 85,201; Jan. 30; Gaz. vol. 174; p. 1215.
Insecticide. A. L. Paul. No. 85,170; Jan. 30; Gaz. vol. 174; p. 1214.
Insecticides. J. P. McCaffery. No. 84,785; Jan. 2; Gaz. vol. 174; p. 285.
Insecticides. C. J. Martin & Sons. No. 85,152; Jan. 30; Gaz. vol. 174; p. 1214.
Iron compound, Liquid. Smooth-On Manufacturing Company. No. 85,191; Jan. 30; Gaz. vol. 174; p. 1215.
Javelle water. Cadorette Bros. & Co. No. 85,068; Jan. 30; Gaz. vol. 174; p. 1211.
Jointing material, clap-valves, hose, belting, and packing, Certain. Pahl'sche Gummi- und Asbest-Gesellschaft mit beschränkter Haftung. No. 84,872; Jan. 9; Gaz. vol. 174; p. 581.
Journal, Weekly. Curtis Publishing Company. No. 84,728; Jan. 2; Gaz. vol. 174; p. 283.
Knitted undershirts. Rubens & Marble. Nos. 85,008–10; Jan. 16; Gaz. vol. 174; p. 825.
Lard, Imitation. Galban & Co. No. 84,826; Jan. 9; Gaz. vol. 174; p. 580.
Leather. A. F. Gallun & Sons. No. 85,104; Jan. 30; Gaz. vol. 174; p. 1212.
Leathers, hides, and pelts, Composition for the treatment of. D. O'Keefe. No. 85,165; Jan. 30; Gaz. vol. 174; p. 1214.
Lemons. California Fruit Growers Exchange. No. 85,069; Jan. 30; Gaz. vol. 174; p. 1211.
Linen and hemp piece goods. The Gourock Ropework Co. No. 84,967; Jan. 16; Gaz. vol. 174; p. 824.
Liniment. E. C. Kilbiger. No. 84,910; Jan. 9; Gaz. vol. 174; p. 582.
Liniment. Anglo-American Pharmaceutical Company. No. 84,926; Jan. 16; Gaz. vol. 174; p. 823.
Linoleum, Brass binding for. R. Hubbell. No. 84,748; Jan. 2; Gaz. vol. 174; p. 284.
Lock and latch. Von Duprin Fire Exit Latch Company. No. 85,021; Jan. 16; Gaz. vol. 174; p. 825.
Louse-exterminator. J. C. Dinsmore Co. No. 85,089; Jan. 30; Gaz. vol. 174; p. 1212.
Macaroni, Imported. Francis H. Leggett & Co. No. 85,149; Jan. 30; Gaz. vol. 174; p. 1214.
Magazine, Monthly. W. Quackenbush. No. 84,875; Jan. 9; Gaz. vol. 174; p. 581.
Magazine, Monthly. P. Waxman. No. 84,891; Jan. 9; Gaz. vol. 174; p. 581.
Magazine, Monthly. The Grand Bay Land Company. No. 84,905; Jan. 9; Gaz. vol. 174; p. 582.
Magazine, Semimonthly. The Vogue Company. No. 84,770; Jan. 2; Gaz. vol. 174; p. 284.
Mantles. Welsbach Company. No. 85,050; Jan. 23; Gaz. vol. 174; p. 1023.
Matches, Safety-. The Ohio Match Company. No. 85,164; Jan. 30; Gaz. vol. 174; p. 1214.
Mattresses. Rose Spring Bed Company. No. 84,753; Jan. 2; Gaz. vol. 174; p. 284.
Mattresses. Stockwell-Haley Co. No. 84,765; Jan. 2; Gaz. vol. 174; p. 284.
Mattresses and spring-beds. The M. A. Hunt Company. No. 84,745; Jan. 2; Gaz. vol. 174; p. 284.
Meat juice, Preparation having a basis of horse-. S. Bernheim. No. 84,930; Jan. 16; Gaz. vol. 174; p. 823.
Medical preparation for blood diseases. L. Haefner. No. 85,112; Jan. 30; Gaz. vol. 174; p. 1212.
Medicaments, Cardiac. J. Bürger. No. 84,933; Jan. 16; Gaz. vol. 174; p. 823.
Medicaments for the skin. W. T. James. No. 84,969; Jan. 16; Gaz. vol. 174; p. 824.
Medicated candies. L. L. Finch. No. 85,099; Jan. 30; Gaz. vol. 174; p. 1212.
Medicinal preparation. The Manine Medicine Company. No. 84,784; Jan. 2; Gaz. vol. 174; p. 285.
Medicinal preparation. The Bluffton Chemical Company. No. 85,064; Jan. 30; Gaz. vol. 174; p. 1211.
Medicinal preparation. Fairchild Bros. & Foster. No. 85,096; Jan. 30; Gaz. vol. 174; p. 1212.
Medicinal preparation. W. D. Jones. No. 85,135; Jan. 30; Gaz. vol. 174; p. 1213.
Medicinal preparation. W. B. Potter. No. 85,176; Jan. 30; Gaz. vol. 174; p. 1214.
Medicinal preparations. Scott & Gilbert Co. No. 85,184; Jan. 30; Gaz. vol. 174; p. 1215.
Medicinal preparation containing salts. A. Saxlehner. No. 85,181; Jan. 30; Gaz. vol. 174; p. 1214.
Medicinal tablets. D. B. Street. No. 84,920; Jan. 9; Gaz. vol. 174; p. 582.
Medicinal tea. H. Allendorff. No. 85,052; Jan. 30; Gaz. vol. 174; p. 1211.
Medicine, Certain. R. H. Gerke. No. 84,956; Jan. 16; Gaz. vol. 174; p. 824.
Medicine for all abrasions of the skin. Samery & Wantz. No. 84,017; Jan. 9; Gaz. vol. 174; p. 582.
Medicine for female diseases. Chattanooga Medicine Co. No. 84,899; Jan. 9; Gaz. vol. 174; p. 582.
Medicine, Liver. Chattanooga Medicine Co. No. 84,900; Jan. 9; Gaz. vol. 174; p. 582.
Metal cleaning and polishing compositions. Household Convenience Company. No. 85,126; Jan. 30; Gaz. vol. 174; p. 1213.
Metal or wood primers, Face liquid for use as a sealing coat over. Standard Varnish Works. No. 85,196; Jan. 30; Gaz. vol. 174; p. 1215.
Milk. Union Dairy Company. No. 84,888; Jan. 9; Gaz. vol. 174; p. 581.
Milk-powder. Merrell-Soule Co. No. 84,844; Jan. 9; Gaz. vol. 174; p. 580.
Molasses. American Molasses Co. No. 84,799; Jan. 9; Gaz. vol. 174; p. 579.
Mouth-wash and tooth paste and powder. The Dencolo Chemical Company. No. 84,901; Jan. 9; Gaz. vol. 174; p. 582.
Musical strings. The Rudolph Wurlitzer Co. No. 84,774; Jan. 2; Gaz. vol. 174; p. 285.
Mustard. Stickney & Poor Spice Company. No. 85,198; Jan. 30; Gaz. vol. 174; p. 1215.
Newspaper, Quarterly. J. A. Chaloner. No. 84,814; Jan. 9; Gaz. vol. 174; p. 579.
Noodles, Egg-. C. F. Mueller Co. No. 85,157; Jan. 30; Gaz. vol. 174; p. 1214.
Nuts, Assorted dinner-. Francis H. Leggett & Co. No. 85,148; Jan. 30; Gaz. vol. 174; p. 1213.
Obtundents. Clay & Abraham. No. 84,939; Jan. 16; Gaz. vol. 174; p. 823.
Oil-cake and oil-meal. Kellogg & Miller. No. 84,834; Jan. 9; Gaz. vol. 174; p. 580.
Oil, Cotton-seed. Kentucky Refining Co. Nos. 84,972–3; Jan. 16; Gaz. vol. 174; p. 824.
Oil, Lubricating-. The Great Western Oil Co. No. 85,109; Jan. 30; Gaz. vol. 174; p. 1212.
Oil, Olive-. The Pompeian Co. No. 85,174; Jan. 30; Gaz. vol. 174; p. 1214.
Oil, Soy-bean. Garrels & Börner. No. 84,955; Jan. 16; Gaz. vol. 174; p. 824.

Oils for making casting core-molds. Bayerson Oil Works. No. 84,718; Jan. 2; Gaz. vol. 174; p. 283.
Oils for treatment of textiles and leather. B. P. Ducas Co. No. 85,091; Jan. 30; Gaz. vol. 174; p. 1212.
Oils, Lubricating. Standard Oil Co. of New York. No. 85,194; Jan. 30; Gaz. vol. 174; p. 1215.
Ointments. The Antboline Manufacturing Co. No. 84,804; Jan. 9; Gaz. vol. 174; p. 581.
Oranges and lemons. Charter Oak Citrus Assn. No. 84,937; Jan. 16; Gaz. vol. 174; p. 823.
Oranges, grape-fruit, lemons, &c. Esperanza Fruit Co. No. 85,095; Jan. 30; Gaz. vol. 174; p. 1212.
Packing for machinery, Rubber. G. G. Schick. No. 85,182; Jan. 30; Gaz. vol. 174; p. 1214.
Packing, Machinery. J. Walker & Co. No. 84,890; Jan. 9; Gaz. vol. 174; p. 581.
Packings, Metallic. C. Wear. No. 85,210; Jan. 30; Gaz. vol. 174; p. 1215.
Paint and varnish thinner. Hildreth Varnish Co. No. 85,117; Jan. 30; Gaz. vol. 174; p. 1213.
Paint, Roman gold. F. L. Sleeper. No. 85,188; Jan. 30; Gaz. vol. 174; p. 1215.
Paper and books, Manifold carbon. Pen-Carbon Manifold Co. No. 85,171; Jan. 30; Gaz. vol. 174; p. 1214.
Paper, Fiber. Francis H. Leggett & Co. No. 85,147; Jan. 30; Gaz. vol. 174; p. 1213.
Paper, Writing. American Writing Paper Company. Nos. 84,903–5; Jan. 9; Gaz. vol. 174; p. 579.
Paper, Writing. American Writing Paper Company. Nos. 85,027–30; Jan. 23; Gaz. vol. 174; p. 1023.
Paper, writing and printing. American Writing Paper Company. No. 85,031; Jan. 23; Gaz. vol. 174; p. 1023.
Papers, Waterproof sheathing and building. Barrett Mfg. Company. No. 84,717; Jan. 2; Gaz. vol. 174; p. 283.
Pencils, Lead and colored. Schwarnhausser late Gromberger & Kurz. No. 84,878; Jan. 9; Gaz. vol. 174; p. 581.
Perfumes and toilet water. The Andrew Jergens Co. No. 85,134; Jan. 30; Gaz. vol. 174; p. 1213.
Periodicals, Weekly. White Rats Actors' Union of America. No. 84,773; Jan. 2; Gaz. vol. 174; p. 285.
Petroleum, Residue from distillation of. Derevoise-Anderson Company. No. 85,087; Jan. 30; Gaz. vol. 174; p. 1212.
Piano-players and music for the same. Aeolian Company. No. 84,796; Jan. 9; Gaz. vol. 174; p. 579.
Pickles and malt vinegar. Crosse & Blackwell. No. 84,942; Jan. 16; Gaz. vol. 174; p. 823.
Pictures and illustrations published serially. The New York Herald Company. Nos. 84,853–69; Jan. 9; Gaz. vol. 174; pp. 580–1.
Pictures and illustrations published serially. The New York Herald Company. Nos. 84,991–2; Jan. 16; Gaz. vol. 174; p. 825.
Pills, Cathartic. Lanman & Kemp. No. 85,141; Jan. 30; Gaz. vol. 174; p. 1213.
Pills, face-cream, liniment, salves, &c. M. Halpern. No. 84,908; Jan. 9; Gaz. vol. 174; p. 582.
Pipe-covering, Asbestos. H. W. Johns-Manville Co. No. 84,833; Jan. 9; Gaz. vol. 174; p. 580.
Pipes, Tobacco. Reiss Bros. & Co. Nos. 85,004–5; Jan. 16; Gaz. vol. 174; p. 825.
Pistols, rifles, guns, and cartridges. Anciens Établissements Pieper S^te. A^ne. No. 84,806; Jan. 9; Gaz. vol. 174; p. 579.
Pocket-books. Jameson & Metzler. No. 85,130; Jan. 30; Gaz. vol. 174; p. 1213.
Popcorn. F. W. Noble. No. 84,870; Jan. 9; Gaz. vol. 174; p. 581.
Pork preparation. W. Moland's Sons. No. 84,846; Jan. 9; Gaz. vol. 174; p. 580.
Postal cards. Frank W. Swallow Post Card Co. No. 85,200; Jan. 30; Gaz. vol. 174; p. 1215.
Powder and cream, hair tonic and dye, Face. Rotkowitz Bros. No. 84,754; Jan. 2; Gaz. vol. 174; p. 284.
Powder, Toilet. Arthur Chemical Co. No. 85,054; Jan. 30; Gaz. vol. 174; p. 1211.
Powder, Tooth. A. E. Drucker. No. 84,730; Jan. 2; Gaz. vol. 174; p. 283.
Powders, Condition. Ackerman-Stewart Drug Co. No. 84,923; Jan. 16; Gaz. vol. 174; p. 823.
Powders, Talcum. A. A. Vantine & Co. No. 85,206; Jan. 30; Gaz. vol. 174; p. 1215.
Preparations for the relief of foot troubles. A. L. Fritch. No. 85,103; Jan. 30; Gaz. vol. 174; p. 1212.
Publication, Weekly. Life Publishing Company. No. 84,981; Jan. 16; Gaz. vol. 174; p. 824.
Refrigerators. Maine Manufacturing Company. No. 84,983; Jan. 16; Gaz. vol. 174; p. 824.
Refrigerators. Hellrung and Grimm House Furnishing Co. No. 85,115; Jan. 30; Gaz. vol. 174; p. 1213.
Refrigerators and ice-boxes. The Baldwin Refrigerator Co. No. 84,929; Jan. 16; Gaz. vol. 174; p. 823.
Remedies for asthma, hay-fever, catarrh, croup, and colds. H. E. Johnson. No. 84,778; Jan. 2; Gaz. vol. 174; p. 285.
Remedies for constipation. A. H. Griswold. No. 84,959; Jan. 16; Gaz. vol. 174; p. 824.
Remedies for genito-urinary diseases. C. Schultz. No. 85,011; Jan. 16; Gaz. vol. 174; p. 825.
Remedies for headache. B. J. Fuller. No. 84,952; Jan. 16; Gaz. vol. 174; p. 824.
Remedies for obesity, dyspepsia, and indigestion. The Rock-A-Water Chemical Company. No. 84,915; Jan. 9; Gaz. vol. 174; p. 582.
Remedies for piles and skin diseases. G. A. Mills. No. 84,788; Jan. 2; Gaz. vol. 174; p. 285.
Remedies for skin and blood diseases, cuts, and wounds. L. St. Amant. No. 84,761; Jan. 2; Gaz. vol. 174; p. 284.
Remedies, Nasal and throat. A. R. Farnum. No. 85,097; Jan. 30; Gaz. vol. 174; p. 1212.
Remedy for ailments of the mouth and throat. H. H. Ink. No. 84,746; Jan. 2; Gaz. vol. 174; p. 284.
Remedy for catarrh. R. A. Gossett. No. 84,738; Jan. 2; Gaz. vol. 174; p. 283.
Remedy for catarrh. K. Morris. No. 84,987; Jan. 16; Gaz. vol. 174; p. 825.
Remedy for catarrh and colds in the head. M. J. Stebbins. No. 85,197; Jan. 30; Gaz. vol. 174; p. 1215.
Remedy for consumption. Seat Brothers. No. 84,757; Jan. 2; Gaz. vol. 174; p. 284.
Remedy for corns, bunions, and callous spots. W. F. Dinges. No. 84,944; Jan. 16; Gaz. vol. 174; p. 823.
Remedy for coughs and colds. Crane Medicine Co. No. 85,083; Jan. 30; Gaz. vol. 174; p. 1212.
Remedy for diseases of the blood. D. Petillo. No. 84,793; Jan. 2; Gaz. vol. 174; p. 285.
Remedy for epilepsy. M. Duckman. No. 84,732; Jan. 2; Gaz. vol. 174; p. 283.
Remedy for foul and chilled broods among bees. C. Christensen. No. 84,938; Jan. 16; Gaz. vol. 174; p. 823.
Remedy for gonorrhea and gleet. Smith Chemical Co. No. 85,189; Jan. 30; Gaz. vol. 174; p. 1215.
Remedy for headache, neuralgia, &c. The Noncarpicine Company. No. 84,904; Jan. 16; Gaz. vol. 174; p. 825.
Remedy for malaria. A. E. Brown. No. 84,724; Jan. 2; Gaz. vol. 174; p. 283.
Remedy for pains and aches, rheumatism, neuralgia, &c. E. W. Gaube. No. 84,904; Jan. 9; Gaz. vol. 174; p. 582.
Remedy for skin diseases. Hebert and Guidry. No. 85,114; Jan. 30; Gaz. vol. 174; p. 1213.
Remedy for sore throat and mouth and veterinary medicine. Hampton Drug Co. No. 84,741; Jan. 2; Gaz. vol. 174; p. 284.
Remedy for syphilis. Petteway & Powell. No. 84,794; Jan. 2; Gaz. vol. 174; p. 285.
Remedy for syphilis, gonorrhea, and gleet. E. C. Dunham. No. 84,947; Jan. 16; Gaz. vol. 174; p. 823.
Remedy for the kidneys and liver. R. J. Parrett. No. 85,109; Jan. 30; Gaz. vol. 174; p. 1214.
Remedy, Laxative. Tri-Tone Drug Manufacturing Company. No. 85,204; Jan. 30; Gaz. vol. 174; p. 1215.
Remedy used as a blood-purifier and liver-regulator. L. W. Estes. No. 84,949; Jan. 16; Gaz. vol. 174; p. 823.
Remedy, Veterinary. Warren Remedy Company. No. 84,771; Jan. 2; Gaz. vol. 174; p. 284.
Rings. T. S. Fleischer. No. 85,035; Jan. 23; Gaz. vol. 174; p. 1023.
Roofing, Waterproof. The Lincoln Waterproof Cloth Company. No. 84,982; Jan. 16; Gaz. vol. 174; p. 824.
Rope, Manila and sisal. Columbian Rope Co. No. 84,727; Jan. 2; Gaz. vol. 174; p. 283.
Rubber and rubber and fabric boots and shoes. The Diamond Rubber Co. No. 84,822; Jan. 9; Gaz. vol. 174; p. 579.
Salt, Mineral-water. The Potosote Company. No. 85,175; Jan. 30; Gaz. vol. 174; p. 1214.
Salve. The La Domus Co. No. 84,978; Jan. 16; Gaz. vol. 174; p. 824.
Salve and certain toilet preparations. The Elisabeth Chemical Company. No. 84,734; Jan. 2; Gaz. vol. 174; p. 283.
Sample cases and bags. The Knickerbocker Case Company. No. 84,781; Jan. 2; Gaz. vol. 174; p. 285.
Sauces and preparations for making bouillon and soups. G. Banthien. No. 85,059; Jan. 30; Gaz. vol. 174; p. 1211.
Scalp-tonic. M. J. Stebbins. No. 84,910; Jan. 9; Gaz. vol. 174; p. 582.
Shirt-waists. B. Shoenfeld. No. 84,918; Jan. 9; Gaz. vol. 174; p. 582.
Shirts. M. H. Ellenbogen & Sons. No. 84,948; Jan. 16; Gaz. vol. 174; p. 823.
Shirts and trousers. Birdsall Brothers Co. No. 85,062; Jan. 30; Gaz. vol. 174; p. 1211.
Shirts, overalls, and rompers, Work. McCawley & Co. No. 84,786; Jan. 2; Gaz. vol. 174; p. 285.
Shoe, leather, metal, and stove polish, and cleaning compound. S. Clague. No. 85,075; Jan. 30; Gaz. vol. 174; p. 1211.
Shoes, Leather. Bedford-Pittman Company. No. 84,719; Jan. 2; Gaz. vol. 174; p. 283.
Shoes, Leather. M. L. Hatheway. No. 84,828; Jan. 9; Gaz. vol. 174; p. 580.
Silk-treating substances. T. Goldschmidt. No. 85,108; Jan. 30; Gaz. vol. 174; p. 1212.
Silver polish and cleanser. Old Colony Cleanser Company. No. 85,166; Jan. 30; Gaz. vol. 174; p. 1214.
Skirts, Ladies' outer. The Queen Mfg. Co. No. 85,001; Jan. 16; Gaz. vol. 174; p. 825.
Soap. Geo. Borgfeldt & Co. No. 85,065; Jan. 30; Gaz. vol. 174; p. 1211.
Soap. F. H. Daland. No. 85,086; Jan. 30; Gaz. vol. 174; p. 1212.
Soap. The Globe Soap Company. No. 85,106; Jan. 30; Gaz. vol. 174; p. 1212.
Soap. Richard Hudnut. No. 85,127; Jan. 30; Gaz. vol. 174; p. 1213.

Soap, Extract of. R. S. Hudson, Limited. No. 85,128; Jan. 30; Gaz. vol. 174; p. 1213.
Soap, Toilet. The Andrew Jergens Co. No. 85,132; Jan. 30; Gaz. vol. 174; p. 1213.
Soap, Toilet. Norddeutsche Wollkämmerei & Kammgarnspinnerei. Nos. 85,161–2; Jan. 30; Gaz. vol. 174; p. 1214.
Soap, Toilet. Vero-Form Hygienic Company. No. 85,207; Jan. 30; Gaz. vol. 174; p. 1215.
Soda, bleaching-powder, and sulfur chlorid, Caustic. Hooker Electrochemical Company. No. 84,909; Jan. 9; Gaz. vol. 174; p. 582.
Soda, Caustic. Burgess Sulphite Fibre Company. No. 84,725; Jan. 2; Gaz. vol. 174; p. 283.
Soda, Certain flavored. The Wil-Mar Bottling Co. No. 85,023; Jan. 16; Gaz. vol. 174; p. 826.
Soda for cooking. Royal Baking Powder Company. No. 84,916; Jan. 9; Gaz. vol. 174; p. 582.
Spark-plugs. The Bigsby Manufacturing Company. No. 85,060; Jan. 30; Gaz. vol. 174; p. 1211.
Spool-cotton, sewing-cotton, thread, and cotton yarn. American Thread Company. Nos. 84,801–2; Jan. 9; Gaz. vol. 174; p. 579.
Spraying device. F. O. Hilliker Co. No. 84,742; Jan. 2; Gaz. vol. 174; p. 284.
Starch. National Starch Company. No. 84,912; Jan. 9; Gaz. vol. 174; p. 582.
Starch, Edible. National Starch Company. No. 84,852; Jan. 9; Gaz. vol. 174; p. 580.
Starch, Edible. National Starch Company. No. 85,159; Jan. 30; Gaz. vol. 174; p. 1214.
Starches, Laundry and chemical. B. P. Ducas Co. No. 84,731; Jan. 2; Gaz. vol. 174; p. 283.
Steel, Tool. Firth-Sterling Steel Company. No. 84,736; Jan. 2; Gaz. vol. 174; p. 283.
Stiffening cords, blades, and tapes. The Warren Featherbone Company. No. 85,209; Jan. 30; Gaz. vol. 174; p. 1215.
Stoves. Sears, Roebuck and Co. No. 85,045; Jan. 23; Gaz. vol. 174; p. 1023.
Stoves, Gasolene. Sears, Roebuck and Co. No. 85,046; Jan. 23; Gaz. vol. 174; p. 1023.
Stoves, ranges, and furnaces. The Monitor Stove and Range Company. No. 85,041; Jan. 23; Gaz. vol. 174; p. 1023.
Suits, Boys' outer. S. Rosenthal & Bros. No. 85,180; Jan. 30; Gaz. vol. 174; p. 1214.
Sulfate cellulose. A/S Hurum Fabriker. No. 85,129; Jan. 30; Gaz. vol. 174; p. 1213.
Sunbonnets. Brown and Bishop. No. 85,067; Jan. 30; Gaz. vol. 174; p. 1211.
Surgical bandages, surgical, sanitary, and abdominal belts. The Spirella Company. No. 85,048; Jan. 23; Gaz. vol. 174; p. 1023.
Suspenders. Penn Bros. Mfg. Co. No. 84,873; Jan. 9; Gaz. vol. 174; p. 581.
Tablets, calcium wafer compounds, &c., Dyspepsia and catarrh. F. A. Stuart Company. No. 85,199; Jan. 30; Gaz. vol. 174; p. 1215.
Talking-machines and parts thereof. American Graphophone Company. No. 84,714; Jan. 2; Gaz. vol. 174; p. 283.
Tankage. The National Utilization Co. No. 84,790; Jan. 2; Gaz. vol. 174; p. 285.
Tapioca, Pearl. Francis H. Leggett & Co. No. 85,143; Jan. 30; Gaz. vol. 174; p. 1213.
Tea for coughs and colds and tablets for stomach troubles. L. C. Goldstein. No. 84,737; Jan. 2; Gaz. vol. 174; p. 283.
Teas. Soulis & Sulis. No. 84,883; Jan. 9; Gaz. vol. 174; p. 581.
Thread. J. B. Barbour. Nos. 84,807–8; Jan. 9; Gaz. vol. 174; p. 579.
Thread. Dieckerhoff, Raffloer & Company. No. 84,823; Jan. 9; Gaz. vol. 174; p. 579.
Thread and yarn, Cotton. The Spool Cotton Company. Nos. 84,758–60; Jan. 2; Gaz. vol. 174; p. 284.
Thread in balls, Cotton. R. F. & J. Alexander & Co. No. 85,051; Jan. 30; Gaz. vol. 174; p. 1211.
Thread, machine-twist, &c., Silk. The Nonotuck Silk Company. No. 84,871; Jan. 9; Gaz. vol. 174; p. 581.
Tiles, Terra-cotta. O. W. Ketcham. No. 84,836; Jan. 9; Gaz. vol. 174; p. 580.
Toilet preparations and food-coloring compounds, Certain. National Tube Flavor Co. No. 84,789; Jan. 2; Gaz. vol. 174; p. 285.
Toilet preparations, Certain. H. A. Skinner. No. 85,015; Jan. 16; Gaz. vol. 174; p. 825.
Toilet preparations, Certain. The Andrew Jergens Co. No. 85,133; Jan. 30; Gaz. vol. 174; p. 1213.
Toilet preparations, Certain. P. A. Sours. No. 85,192; Jan. 30; Gaz. vol. 174; p. 1215.
Toilet preparations to prevent chafing and chapping. G. Edwards. No. 85,094; Jan. 30; Gaz. vol. 174; p. 1212.
Toilet water, face-powder, and perfumes. The Andrew Jergens Co. No. 84,970; Jan. 16; Gaz. vol. 174; p. 824.
Tomato paste. J. Cusimano. No. 84,818; Jan. 9; Gaz. vol. 174; p. 579.
Tonic. F. A. V. Klopfer. No. 84,780; Jan. 2; Gaz. vol. 174; p. 285.
Tonic. Matienzo-Sains Company. No. 84,984; Jan. 16; Gaz. vol. 174; p. 824.
Tonic, Cat. The Purr Puss Co. No. 84,795; Jan. 2; Gaz. vol. 174; p. 285.
Tonic, Chill and fever. E. F. Hudgins. No. 84,965; Jan. 16; Gaz. vol. 174; p. 824.
Tonic, Liver. Griffith-White Chemical Co. No. 84,906; Jan. 9; Gaz. vol. 174; p. 582.
Toweling. Blodgett, Ordway & Webber. No. 84,721; Jan. 2; Gaz. vol. 174; p. 283.
Toweling. Blodgett, Ordway & Webber. No. 85,033; Jan. 23; Gaz. vol. 174; p. 1023.
Toys. Nonbreakable Toy Co. No. 84,792; Jan. 2; Gaz. vol. 174; p. 285.
Trunks, suit-cases, and portfolios. Progress Auto Tire Trunk Mfg. Co. No. 85,000; Jan. 16; Gaz. vol. 174; p. 825.
Umbrellas. B. O. Wright & Cole. No. 85,024; Jan. 16; Gaz. vol. 174; p. 826.
Vault-lights and prismatic glass. American Luxfer Prism Company of Illinois. No. 84,798; Jan. 9; Gaz. vol. 174; p. 579.
Vermin-exterminating preparations. National Exterminating Co. No. 84,911; Jan. 9; Gaz. vol. 174; p. 582.
Veterinary balling and powder gun. T. Bland. No. 84,720; Jan. 2; Gaz. vol. 174; p. 283.
Wall and ceiling coverings. Revêtements Joss Société Anonyme. No. 84,752; Jan. 2; Gaz. vol. 174; p. 284.
Washcloths, towels, and bath-mats. K. Shaffer. No. 84,880; Jan. 9; Gaz. vol. 174; p. 581.
Washing compound. R. Austin. No. 85,057; Jan. 30; Gaz. vol. 174; p. 1211.
Watch-movements, watches, and parts thereof. Equity Watch Company. No. 84,735; Jan. 2; Gaz. vol. 174; p. 283.
Watches and clocks and parts thereof. G. Häusler. No. 85,038; Jan. 23; Gaz. vol. 174; p. 1023.
Watches, clocks, watch and clock movements and cases. Eisenstadt Manufacturing Company. No. 84,733; Jan. 2; Gaz. vol. 174; p. 283.
Water, Artificial mineral. T. E. Quere. No. 85,002; Jan. 16; Gaz. vol. 174; p. 825.
Water, Natural spring drinking. National Water Company. Nos. 85,042–3; Jan. 23; Gaz. vol. 174; p. 1023.
Waterproof fabrics. Canvas Decoy Co. No. 84,934; Jan. 16; Gaz. vol. 172; p. 823.
Whips. United States Whip Company. No. 85,205; Jan. 30; Gaz. vol. 174; p. 1215.
Wine, Effervescent. M. Raventós. No. 84,751; Jan. 2; Gaz. vol. 174; p. 284.
Worsted, woolen, and part-woolen piece goods. M. T. Stevens & Sons Company. Nos. 84,763–4; Jan. 2; Gaz. vol. 174; p. 284.
Yarn. B. Ulmann & Co. No. 85,019; Jan. 16; Gaz. vol. 174; p. 825.
Yarn, Artificial-silk skein. Wm. H. Horstmann Company. No. 84,832; Jan. 9; Gaz. vol. 174; p. 580.
Yarn, Woolen. Norddeutsche Wollkämmerei & Kammgarnspinnerei. Nos. 84,995–7; Jan. 16; Gaz. vol. 174; p. 826.
Yarn, Woolen. Norddeutsche Wollkämmerei & Kammgarnspinnerei. No. 85,163; Jan. 30; Gaz. vol. 174; p. 1214.
Yarn, Worsted and merino. A. Adie. No. 84,711; Jan. 2; Gaz. vol. 174; p. 283.

ALPHABETICAL LIST OF LABELS.

"A Great Appetizer." (For Granulated Sapsago-Cheese.) H. D. Gardy. No. 16,123; Jan. 23; Gaz. vol. 174; p. 1024.

"Adelosa." (For Cigars.) Julius Bien Company. No. 16,127; Jan. 23; Gaz. vol. 174; p. 1024.

"Aviation Game." (For a Game.) L. S. Thomson. No. 16,145; Jan. 30; Gaz. vol. 174; p. 1216.

"Bath Amone." (For Toilet Compounds.) American Ammone Company. No. 16,115; Jan. 23; Gaz. vol. 174; p. 1024.

"Belle Point." (For Cigars.) Julius Bien Company. No. 16,129; Jan. 23; Gaz. vol. 174; p. 1024.

"Bentley's Louse Killer." (For Preparation to Relieve All Kinds of Animals from Vermin.) G. G. Bentley. No. 16,105; Jan. 16; Gaz. vol. 174; p. 827.

"Char Coal Tooth Paste." (For Tooth-Paste.) W. H. Hanning. No. 16,124; Jan. 23; Gaz. vol. 174; p. 1024.

"Compliments of the Season." (For Cigars.) Julius Bien Company. No. 16,128; Jan. 23; Gaz. vol. 174; p. 1024.

"Creco." (For Coffee, Cereals, and Chicory.) Cheek-Neal Coffee Co. No. 16,121; Jan. 23; Gaz. vol. 174; p. 1024.

"Dea Rosa." (For Cigars.) Julius Bien Company. No. 16,130; Jan. 23; Gaz. vol. 174; p. 1024.

"Delavan Brand Sterilized Modified Milk." (For Sterilized Modified Milk.) Delavan Condensed Milk Company. No. 16,141; Jan. 30; Gaz. vol. 174; p. 1216.

"Don Brazos." (For Cigars.) Julius Bien Company. No. 16,2[illegible]; Jan. 23; Gaz. vol. 174; p. 1024.

"Dr. Posner's High School Shoe." (For Shoes.) A. Posner. No. 16,147; Jan. 30; Gaz. vol. 174; p. 1216.

"E. Harrison's Chewing Gum." (For Chewing-Gum.) R. M. Ackerman. No. 16,113; Jan. 23; Gaz. vol. 174; p. 1024.

"Easy Jell." (For Jelly-Powder.) Arcadia Food Company. No. 16,116; Jan. 23; Gaz. vol. 174; p. 1024.

"Evarosa." (For Remedial Tonic for Hair and Scalp.) The Tolletine Company. No. 16,140; Jan. 23; Gaz. vol. 174; p. 1024.

"Everlasting S[illegible]" (For Silos.) Mason City Brick and Tile Compan[illegible]. No. 16,146; Jan. 30; Gaz. vol. 174; p. 1216.

"Ferro-China-Italia." (For Bitters.) Rinaldi & Grossi. No. 16,138; Jan. 23; Gaz. vol. 174; p. 1024.

"Granite Prepared Paint." (For Liquid House-Paint.) The Allentown Manufacturing Company. No. 16,114; Jan. 23; Gaz. vol. 174; p. 1024.

"Havakan." (For Canned Crab-Meat.) H. W. Peabody & Co. No. 16,107; Jan. 16; Gaz. vol. 174; p. 827.

"Holstein." (For Evaporated Milk.) The Van Camp Packing Co. No. 16,149; Jan. 30; Gaz. vol. 174; p. 1216.

"Ideal or Progress." (For Cooking-Oil.) Louisville Cotton Oil Co. Nos. 16,143–4; Jan. 30; Gaz. vol. 174; p. 1216.

"Isleton Creamery Butter." (For Butter.) Isleton Butter Company. No. 16,126; Jan. 23; Gaz. vol. 174; p. 1024.

"La Vadura." (For Cigars.) C. B. Hemschel Mfg. Co. No. 16,106; Jan. 16; Gaz. vol. 174; p. 827.

"Magic Bar Top Oil." (For Bar-Top Oil.) A. T. Schlichting. No. 16,110; Jan. 16; Gaz. vol. 174; p. 827.

"Nonpareil Finishing Cement." (For Cement.) Armstrong Cork Company. No. 16,119; Jan. 23; Gaz. vol. 174; p. 1024.

"Nonpareil High Pressure Cement." (For Cement.) Armstrong Cork Company. No. 16,120; Jan. 23; Gaz. vol. 174; p. 1024.

"Nonpareil Low Pressure Cement." (For Cement.) Armstrong Cork Company. No. 16,118; Jan. 23; Gaz. vol. 174; p. 1024.

"Nonpareil Medium Pressure Cement." (For Cement.) Armstrong Cork Company. No. 16,117; Jan. 23; Gaz. vol. 174; p. 1024.

"Papoose." (For Hosiery.) Richmond Hosiery Mills. No. 16,108; Jan. 16; Gaz. vol. 174; p. 827.

"Polly Prue Hook and Eye." (For Hooks and Eyes.) Polly Prue Hook and Eye Company. No. 16,148; Jan. 30; Gaz. vol. 174; p. 1216.

"Princeton." (For Bicycles.) D. P. Harris Hardware Co. No. 16,103; Jan. 2; Gaz. vol. 174; p. 286.

"Quick Sale." (For Hardware.) Gardner Wire Company. No. 16,142; Jan. 30; Gaz. vol. 174; p. 1216.

"Rattler Brand." (For Oranges and Grape-Fruit.) E. R. Brackett Company. No. 16,122; Jan. 23; Gaz. vol. 174; p. 1024.

"Red Rose." (For Cigars.) Schmidt & Co. No. 16,135 Jan. 23; Gaz. vol. 174; p. 1024.

"Ricabella." (For Cigars.) Julius Bien Company. No. 16,133; Jan. 23; Gaz. vol. 174; p. 1024.

"Salve Rey." (For Cigars.) Julius Bien Company. No. 16,132; Jan. 23; Gaz. vol. 174; p. 1024.

"Slick-Shine Furniture Polish." (For Furniture-Polish.) A. T. Schlichting. No. 16,109; Jan. 16; Gaz. vol. 174; p. 827.

"Slick-Shine Liquid Metal Polish." (For Liquid Metal-Polish.) A. T. Schlichting. No. 16,111; Jan. 16; Gaz. vol. 174; p. 827.

"Sugar Pluma." (For Candy and Confections.) Farley Candy Co. No. 16,104; Jan. 2; Gaz. vol. 174; p. 286.

"Sun Rise Brand." (For Evaporated Skim-Milk.) Hires Condensed Milk Company. No. 16,125; Jan. 23; Gaz. vol. 174; p. 1024.

"The Enlight." (For Tablets.) Osborn Paper Company. No. 16,137; Jan. 23; Gaz. vol. 174; p. 1024.

"The Five Label Cigar." (For Cigars.) T. F. Martin. No. 16,136; Jan. 23; Gaz. vol. 174; p. 1024.

"The Frameless, or No-Frame Screen." (For Insect or Window Screens.) F. M. King, Sr. No. 16,135; Jan. 23; Gaz. vol. 174; p. 1024.

"Tres Bon." (For Cigars.) Julius Bien Company. No. 16,134; Jan. 23; Gaz. vol. 174; p. 1024.

"Victor Cousin." (For Cigars.) Schmidt & Co. No. 16,112; Jan. 16; Gaz. vol. 174; p. 827.

PRINTS.

"Alligator Hide Roofing." (For Composition Roofing.) Utah Lumber Company. No. 2,927; Jan. 16; Gaz. vol. 174; p. 827.

"Bing's Lucky Penguin." (For Toys.) J. Bing. No. 2,936; Jan. 30; Gaz. vol. 174; p. 1216.

"Bing's Lucky Penguins." (For Toys.) J. Bing. No. 2,935; Jan. 30; Gaz. vol. 174; p. 1216.

"Creamery Butterine." (For Oleomargarin.) Ammon & Person. No. 2,934; Jan. 30; Gaz. vol. 174; p. 1216.

"Delavan Brand Sterilized Modified Milk." (For Sterilized Modified Milk.) Delavan Condensed Milk Company. No. 2,937; Jan. 30; Gaz. vol. 174; p. 1216.

"Dress Styles Come and Go." (For Hooks and Eyes.) Peet Bros. No. 2,930; Jan. 23; Gaz. vol. 174; p. 1024.

"Fravolio." (For Toilet Cream.) A. Pellegrini. No. 2,926; Jan. 16; Gaz. vol. 174; p. 827.

"Help Wanted." (For Kronberger's California Compound Eucalyptus Syrup.) I. B. Kronberger. No. 2,938; Jan. 30; Gaz. vol. 174; p. 1216.

"He's Coming To It." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,928; Jan. 23; Gaz. vol. 174; p. 1024.

"Lion Collars." (For Collars.) United Shirt & Collar Co. No. 2,933; Jan. 23; Gaz. vol. 174; p. 1024.

"Never Wet." (For Waterproofing and Preservative Paste for Leather.) Providence Oil Company. No. 2,931; Jan. 23; Gaz. vol. 174; p. 1024.

"Oriental Special Auto Oil." (For Automobile Oil.) Oriental Oil Company. No. 2,939; Jan. 30; Gaz. vol. 174; p. 1216.

"Peppermint Breath Hearts." (For Perfumed Candy Tablets.) Schandein & Lind Co. No. 2,940; Jan. 30; Gaz. vol. 174; p. 1216.

"Products that have made Kentucky Famous." (For Iodinized Emulsion and Creosotonic.) The Dawson Pharmacal Company. No. 2,929; Jan. 23; Gaz. vol. 174; p. 1024.

"The New Home Sewing Machine Co." (For Sewing Machines.) The New Home Sewing Machine Co. No. 2,925; Jan. 2; Gaz. vol. 174; p. 286.

"Violet Breath Hearts." (For Perfumed Candy Tablets.) Schandein & Lind Co. No. 2,941; Jan. 30; Gaz. vol. 174; p. 1216.

"Wesson Snowdrift Oil." (For Wesson Snowdrift Oil.) The Southern Cotton Oil Co. No. 2,932; Jan. 23; Gaz. vol. 174; p. 1024.

DISCLAIMERS.

Printing apparatus. R. Herman. No. 777,096; date of patent Dec. 13, 1904; disclaimer filed Dec. 28, 1911; Gaz. vol. 174; p. 588.

OFFICIAL GAZETTE

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UNITED STATES PATENT OFFICE.

VOLUME CLXXV.

FEBRUARY,

1912.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1912

ERRATA.

1,016,266, page 25, fifth claim, line 10, strike out the words "detent means" and insert the word *devices*, and same line strike out the word "devices" and insert the words *detent means*.

1,016,340, page 37, fourth claim, line 2, before the word "its" insert the preposition *of*, and same line after the word "ends" strike out the preposition "of."

1,016,577, page 119, second claim, strike out the last five lines of the claim and insert the words *cylinder at opposite points thereof in the plane of said shaft and piston rod and taking over said eccentrics, said cylinder being ported near its ends and movable on said heads by said eccentric rods, and said heads being fastened to the lower portion of said frame.*

1,017,163, page 357, strike out all after the number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,017,738, page 584, in heading, strike out assignment.

1,017,798, page 610, in heading, assignment, residence of assignee, for "Boston, Mass.," read *Paterson, N. J.*

1,017,864, page 675, in heading, name of patentee, for "Aubry H. Martin" read *Aubrey H. Martin.*

1,018,242, page 765, in claim, line 3, after the word "suitable" insert the word *material.*

1,018,230, page 794, second claim, line 2, before the word "from" insert the word *derived*, and same claim, line 4, after the word "inorganic" insert the word *alkaline.*

1,018,239, page 794, in heading, name of patentee, for "Aubry H. Martin" read *Aubrey H. Martin.*

1,018,783, page 981, in heading, assignment, residence of assignee, for Brooklyn, New York, read *New York, N. Y.*

12,376, reissue, page 1065, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, February 6, 13, 20, 27	3, 273, 557, 851
TRADE-MARKS PUBLISHED AND REGISTERED, February 6, 13, 20, 27	245, 525, 825, 1079
LABELS AND PRINTS REGISTERED, February 6, 13, 20, 27	263, 540, 842, 1096
DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS, February 6, 13, 20, 27	265, 541, 843, 1097
INDEX TO DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS	1103
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	1

ANNOUNCEMENTS.

		Page.
APPLICATIONS—		
	Access to pending	271
	Condition of pending	2, 272, 556, 850
DISCLAIMERS—		
	Adamson, Charles E	847
	Cummer, Franklin David	847
	Rosenberger, Andrew F	271
DRAWINGS—		
	Notice relative to prints of	849
INTERFERENCE NOTICES—		
	Bloomer, William J	270, 554
	Empire Cure Company	553, 848, 1102
	Flaccus & Elliott Co., The	553, 848, 1102
	Harvey Manufacturing Co	553, 847, 1101
	Hoopes & Townsend	270, 554, 848, 1102
	Hutchens, Howe & Withington	1101
	Keystone Nail Co., Inc	270, 554, 848, 1102
	Louis Kuhlmann & Bro	847, 1101
	Mir, Gabriel Codina	1101
	Moreda, Pedro	847, 1101
	Peninsular Trading and Fishing Co	270, 554
	Scollay Meat Packing Company	269, 553, 848, 1102
	Silicon Wall Plaster and Manufacturing Company	847, 1101
	Spencer, Shepherd	270, 554, 848, 1102
	Wm. D. Cleveland & Co	270, 553, 848, 1102
MANUSCRIPT COPIES—		
	Instructions relative to ordering	1
NOTARIES PUBLIC—		
	Amended laws relative to	555
PATENTS—		
	List of adjudicated	269, 553, 847, 1101
REMITTANCES TO THE PATENT OFFICE		849
REPORT OF COMMISSIONER OF PATENTS TO CONGRESS, CALENDAR YEAR 1911		541
SPECIFICATIONS AND AMENDMENTS—		
	Preparation of for printing	555

Patents Nos. 1,016,245 to 1,016,924.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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CONTENTS.

	Page.
Issue of February 6, 1912	1
Important Information	1
Applications Under Examination	2
Patents Granted	3
Reissues	237
Designs	238
Trade-Marks—Registration Applied for	245
Trade-Marks—Registered	259
Trade-Marks Canceled	262
Labels and Prints	263
Commissioner's Decisions—	
Ex parte Poulson	265
Ex parte Naylor	266
Bettendorf v. O'Connor	266
Decisions of the U. S. Courts—	
Johnson Educator Food Company v. Sylvanus Smith & Co., Inc	268
Midgley v. Ward	269
Adjudicated Patents	269
Interference Notices	269

ISSUE OF FEBRUARY 6, 1912.

Patents	680—No.	1,016,245 to No.	1,016,924, inclusive.
Designs	39—No.	42,122 to No.	42,160, inclusive.
Trade-Marks	98—No.	85,213 to No.	85,310, inclusive.
Labels	25—No.	16,150 to No.	16,174, inclusive.
Prints	11—No.	2,942 to No.	2,952, inclusive.
Reissues	1—No.	13,366.	
Total	854		

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California	20	8	Oklahoma	4	.....
Colorado	11	1	Oregon	5	.....
Connecticut	22	11	Pennsylvania	80	5
Delaware	3	.....	Rhode Island	5	1
Florida	3	.....	South Carolina	.....	.....
Georgia	10	1	South Dakota	3	.....
Idaho	1	.....	Tennessee	4	.....
Illinois	52	15	Texas	9	2
Indiana	10	1	Utah	1	.....
Iowa	12	.....	Vermont	1	.....
Kansas	6	.....	Virginia	4	.....
Kentucky	6	1	Washington	6	2
Louisiana	3	.....	West Virginia	5	4
Maine	9	1	Wisconsin	16	4
Maryland	8	2	Wyoming	.....	.....
Massachusetts	32	8			
Michigan	24	3	Alaska, District of	.....	.....
Minnesota	10	2	Arizona Territory	.....	.....
Mississippi	3	1	District of Columbia	4	.....
Missouri	25	2	Hawaii Territory	.....	.....
Montana	4	1	Philippine Islands	1	.....
Nebraska	5	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	31	6			
New Mexico	2	.....	Total to citizens of the United States	685	120
New York	106	28			
North Carolina	4	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Netherlands	.....	.....
Argentina	.....	.....	Newfoundland	.....	.....
Austria-Hungary	3	.....	New South Wales	1	.....
Belgium	1	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Queensland	1	.....
Canada	7	.....	Roumania	.....	.....
Cape Colony	.....	.....	Russia	1	.....
Chile	.....	.....	Scotland	2	.....
China	.....	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	.....	1
Cuba	1	.....	Sweden	2	.....
Denmark	.....	.....	Switzerland	5	.....
Ecuador	.....	.....	Transvaal, South Africa	1	.....
England	20	2	Victoria	.....	.....
France	9	1	Western Australia	.....	.....
Germany	27	10			
India	1	.....	Total to citizens of foreign countries	84	14
Ireland	1	.....			
Italy	1	.....			
Japan	.....	.....			

Important Information.

In ordering manuscript copies much time will be saved if the order states specifically what is desired, viz:

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Original application. (Facsimile petition, specification, oath, and drawings at present time.)

Specification as originally filed. (As received in Office.)

Specification as amended. (With amendments entered.)

Specification as allowed. (As passed by the Examiner for issue.)

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APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 5, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 2	Dec. 18	461
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 6	Dec. 18	529
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Jan. 4	Jan. 22	211
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Jan. 2	Jan. 3	300
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 3	Dec. 20	410
313	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 4	Jan. 4	265
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 25	Dec. 19	528
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 4	Jan. 2	318
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Dec. 28	Jan. 4	287
235	10. Carriages and Wagons	Dec. 9	Dec. 20	634
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button-Eyelet and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 5	Dec. 12	364
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 26	Dec. 19	581
220	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Dec. 9	Jan. 3	422
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 15	Jan. 2	373
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 7	Dec. 12	751
109	16. Telegraphy; Telephony	Jan. 1	Dec. 29	176
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 4	Jan. 3	253
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 2	Jan. 3	286
266	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 3	Dec. 28	457
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 4	Jan. 2	143
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 3	Jan. 3	315

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 3	Dec. 30	325
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 20	Dec. 20	380
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Dec. 22	Dec. 23	452
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 3	Jan. 9	173
106	26. Electricity, Generation; Motive Power.	Oct. 4	Oct. 26	475
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 5	Jan. 4	344
65	28. Internal-Combustion Engines	Nov. 17	Nov. 17	868
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 6	Jan. 3	450
153	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 1	Jan. 20	245
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Ghue.	Dec. 28	Dec. 28	287
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 22	Jan. 5	252
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 26	Dec. 28	416
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Dec. 26	Dec. 18	453
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 2	Jan. 4	706
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Dec. 29	Dec. 20	590
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Nov. 15	Jan. 2	484
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Dec. 13	Dec. 11	561
321	39. Water-Distribution	Dec. 12	Nov. 29	495
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 3	Jan. 20	208
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 17	Dec. 21	555
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 22	Nov. 16	538
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 5	Dec. 12	287

Oldest new case, Oct. 4; oldest amended, Oct. 26.

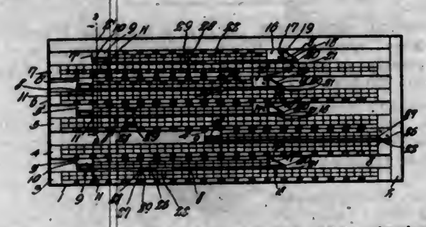
Total number of applications awaiting action 17,794

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 9	Dec. 20	1246
	Designs	Dec. 1	Dec. 28	333
	Labels and Prints	Jan. 27	Jan. 24	49

PATENTS

GRANTED FEBRUARY 6, 1912.

1,016,245. MATHEMATICAL COMPUTER AND REGISTER. ELISHA ATTAWAY, Morrow, La. Filed July 24, 1911. Serial No. 640,184. (Cl. 235—70.)

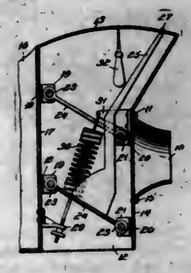


1. In a mathematical computer and register, having a receptacle, two stationary bars disposed longitudinally therewithin and providing a space dove-tailed in cross section, the lower of said bars being provided upon its outer face with a graduated scale, a bar of lesser width than the dove-tailed space and of a shorter length than the first two bars slidably mounted within the space therebetween, guiding means carried at the respective ends thereof to retain said sliding bar within the space, a pointer carried by one end thereof projecting above the scale of the lower stationary bar, said sliding bar being provided with equal graduations to the lower bar, and a sliding poise disposed between the sliding bar and lower stationary bar, and provided with oppositely disposed pointers adapted to simultaneously indicate the graduations upon the respective scales of the lower stationary bar and the sliding bar.

2. In a mathematical computer and register, a receptacle, two stationary bars disposed longitudinally therewithin and providing a space dove-tailed in cross section, the lower of said bars being provided upon its outer face with a graduated scale, a bar of lesser width than the dove-tailed space and of a shorter length than the first two bars slidably mounted within the space therebetween, a plate at each end of said sliding bar for engaging the lower stationary bar to retain the sliding bar within the dove-tailed space, said sliding bar being narrower than said space and providing a dove-tailed in cross section space parallel with the sliding bar and between said plates, a pointer carried at one end of the sliding bar to project above the scale of the lower stationary bar, said sliding bar being provided with similar graduations to the lower bar, and a sliding poise dove-tailed in cross section mounted for sliding movement in the reduced dove-tailed space between the sliding bar and lower stationary bar, said sliding poise having at one end oppositely disposed pointers to simultaneously indicate graduations upon the respective scales of the lower stationary bar and the sliding bar.

1,016,246. AUTOMATIC WEIGHING-SCOOP. HARRY AULT and CLEMENS SWITALSKI, Portsmouth, Ohio. Filed Mar. 11, 1911. Serial No. 613,937. (Cl. 73—46.)

1. In a scoop of the class described, a scoop body having spaced alining lugs on the rear end thereof in normal alinement with the said scoop body, a casing fixed to the handle and normally abutting against the rear end of the scoop body, links pivotally connected with the lugs and the said casing, brackets fixed to the scoop and casing, respectively, a spring fixedly connected to one bracket and adjustably connected to the other bracket, a scale formed on the casing, and a pointer hand fixed to one link and projecting exteriorly of the casing to coöperate with the scale when traversing the same on the lowering of the scoop body.



2. In a scoop of the class described, a scoop body having spaced alining lugs on the rear end thereof in normal alinement with the said scoop body, a casing fixed to the handle and normally abutting against the rear end of the scoop body, links pivotally connected with the lugs and the said casing, brackets fixed to the scoop and casing, respectively, a spring fixedly connected to one bracket and adjustably connected to the other bracket, a scale formed on the casing, a pointer hand fixed to one link and projecting exteriorly of the casing to coöperate with the scale when traversing the same on the lowering of the scoop body, and a weighted pointer pivoted to one side wall of the casing and adapted to be maintained perpendicular irrespective of the angle of incidence of the casing.

3. In a scoop of the class described, a scoop body having spaced alining lugs on the rear end thereof in normal alinement with the said scoop body, a casing fixed to the handle and normally abutting against the rear end of the scoop body, links pivotally connected with the lugs and the said casing, brackets fixed to the scoop and casing, respectively, a spring fixedly connected to one bracket and adjustably connected to the other bracket, a scale formed on the casing, a pointer hand fixed to one link and projecting exteriorly of the casing to coöperate with the scale when traversing the same on the lowering of the scoop body, a weighted pointer pivoted to one side wall of the casing and adapted to be maintained perpendicular irrespective of the angle of incidence of the casing, and means for limiting the swinging movement of said body.

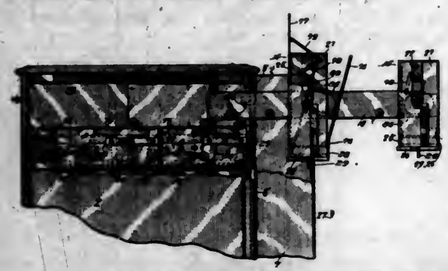
4. The combination with a scoop body, of a casing normally abutting against the rear wall of the said body and having a longitudinal slot in its top, a handle fixed to the casing at the rear thereof, links pivotally connected with the rear wall of the scoop body and the said casing, a pointer fixed to one link and traversible in said slot in the casing, and expansion means arranged within the casing and connected with the latter and the scoop body, whereby said body will be normally maintained in contact with the said casing and in alinement with the handle.

5. The combination with a scoop body, of a casing normally abutting against the rear wall of the said body and having a longitudinal slot in its top, a handle fixed to the casing at the rear thereof, links pivotally connected with the rear wall of the scoop body and the

said casing, a pointer fixed to one link and traversible in said slot in the casing, expansion means arranged within the casing and connected with the latter and the scoop body, whereby said body will be normally maintained in contact with the said casing and in alinement with the handle, and means for adjusting the expansion means.

[Claim 6 not printed in the Gazette.]

1,016,247. FILING-CABINET. ISAAC FRANCIS BURTON, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Jan. 9, 1911. Serial No. 601,567. (Cl. 129—43.)



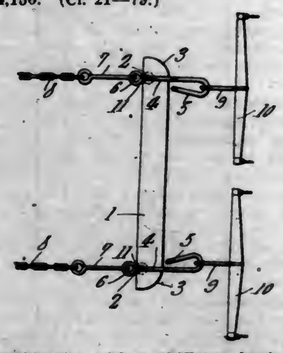
1. In a filing cabinet, a receptacle provided with a plurality of closures, a guard extending inwardly from one of said closures and a connection between said guard and the remaining of said closures, said connection operating to open the remaining of said closures when one of said closures is actuated.

2. In a filing cabinet, a receptacle provided with a plurality of closures, a guard extending inwardly from one of said closures, and a series of links connecting said guard and the remaining of said closures, said links operating to open the remaining of said closures when one of said closures is actuated.

3. In a filing cabinet, a receptacle provided with a plurality of closures, a guard extending inwardly from one of said closures, and a connection between said guard and the remaining of said closures, comprising a link and a bell crank lever, said connection operating the remaining of said closures when one of said closures is actuated.

4. In a filing cabinet, a receptacle provided with a plurality of closures, guards extending inwardly from the sides of one of said closures, and a yielding connection between each of said guards and the remaining of said closures, said connections operating to open the remaining of said closures when one of said closures is actuated.

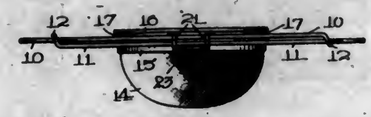
1,016,248. WHIFFLETREE-HOOK. ALLEN S. CHENOWETH, Stilesville, Ind. Filed Jan. 23, 1911. Serial No. 604,150. (Cl. 21—79.)



1. In combination with a whiffletree having at its rear edge a rearwardly open recess, the opposite end being rounded at its corner, of a hook formed from a single rod having an open shank, the rod being formed into a bill at one end of the shank and an extremity of the rod passing through an eye at the corner of the shank and formed into an eye behind the rear side of the shank, the rod of the hook fitting in the recess of the whiffletree so that the shank of the hook surrounds the whiffletree and has its hook extending from the opposite side to the recess.

2. A whiffletree hook formed from a single rod having an open shank, the rod being formed into a bill at one end of the shank and an extremity of the rod passing through an eye at the corner of the shank and formed into an eye behind the rear side of the shank.

1,016,249. STRAINER. ALFRED L. COMTOIS, Worcester, Mass., assignor to Woods-Sherwood Company, a Corporation of Massachusetts. Filed Oct. 9, 1911. Serial No. 653,534. (Cl. 210—16.)



1. As an article of manufacture, a strainer comprising an extension frame and the strainer having a wire extending around the upper part thereof and provided with integral projections for receiving and guiding the extension frame.

2. As an article of manufacture, a strainer comprising an extension frame and a strainer having a pair of opposite guides for the extension frame, each of said guides being formed of a piece of wire having two members spaced apart through which the frame passes, said members being connected by an integral cross piece.

3. As an article of manufacture, a strainer comprising a frame and a strainer having a pair of opposite guides for the frame, each of said guides being formed of a piece of wire having two members spaced apart through which the frame passes, said members being connected by an integral cross piece, said cross piece engaging the wall of the strainer and conforming to the shape thereof.

4. As an article of manufacture, a strainer body having a top band and a wire member connected therewith and provided with a cross piece below the top of the strainer and engaging the outer wall thereof, and two members extending outwardly from the ends of said cross piece and then upwardly substantially to the top of the strainer and then inwardly parallel with each other.

5. As an article of manufacture, a strainer having a metal band and a wire member provided with a cross piece below the top of the band and engaging the outer wall thereof, two members extending outwardly from the end of said cross piece and then upwardly substantially to the top of the band and then inwardly parallel with each other, said members diverging from each other and extending around the band near the top and being secured thereto solely by contact with the band.

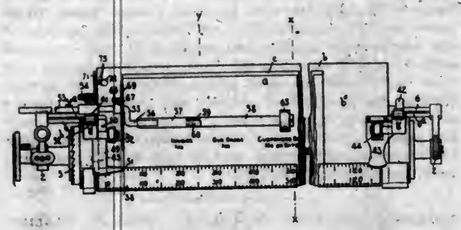
[Claims 6 and 7 not printed in the Gazette.]

1,016,250. TYPE-WRITING MACHINE. THOMAS J. COO, Toronto, Ontario, Canada, assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 21, 1907. Serial No. 398,425. (Cl. 197—128.)

1. In a typewriting machine, the combination of a paper finger, two side edge guides, and an adjustable support which carries said paper finger and guides.

2. In a typewriting machine, the combination of a platen, a paper finger, an adjustable support therefor, a side edge guide at the back of the platen, and a side edge guide at the front of the platen, both of the guides being carried by and adjustable with said support.

3. In a typewriting machine, the combination of a platen, a paper finger, an adjustable support therefor, a side edge guide at the back of the platen, a side edge guide at the front of the platen, both of the guides being carried by and adjustable with said support, and means for affording an adjustment of each of said guides relatively to the support.

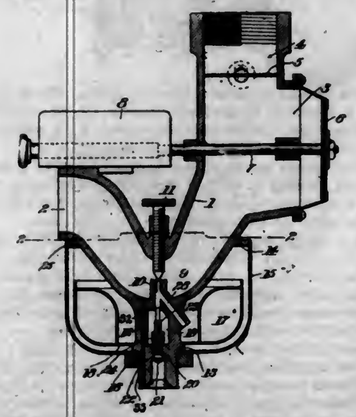


4. In a typewriting machine, the combination of a platen; a paper finger; a margin feed roller; two side edge guides; and a support adjustable longitudinally of the platen and on which said paper finger, margin feed roller and guides are carried.

5. In a typewriting machine, the combination of a platen; a paper finger; a margin feed roller; a side edge guide at the front of the platen; a side edge guide at the rear of the platen; and a support adjustable longitudinally of the platen and by which said paper finger, margin feed roller and guides are carried.

[Claims 6 to 38 not printed in the Gazette.]

1,016,251. CARBURETER. JAMES M. DAYTON, Torrington, Conn., assignor to Excelsior Needle Company, Torrington, Conn., a Corporation of Connecticut. Filed Nov. 2, 1909. Serial No. 525,942. (Cl. 48—155.1.)



1. A carbureter including in combination, a main casing having an air passage therethrough, a downwardly projecting sleeve carried by said main casing having an opening extending centrally through the sleeve, a float chamber surrounding said sleeve, a valve for controlling the fuel supplied to the float chamber, said valve having a stem sliding in the opening in said sleeve, a fuel-delivering nozzle directly above said sleeve and projecting into said air passage, said sleeve having an opening leading from the central opening to the float chamber, and a needle valve for controlling the supply from said nozzle.

2. A carbureter including in combination, a main casing having a U-shaped air passage, a downwardly projecting sleeve carried by said main casing and having an opening extending therethrough, a float chamber connected to said sleeve and surrounding the same, a valve for controlling the fuel supplied to the float chamber, said valve having a stem sliding in the opening in said sleeve, a fuel-delivering nozzle directly above said sleeve and projecting into said U-shaped air passage, said sleeve having an inclined opening extending from said central opening to the float chamber and connecting with said central opening adjacent the nozzle, and a needle valve for controlling the supply from said nozzle.

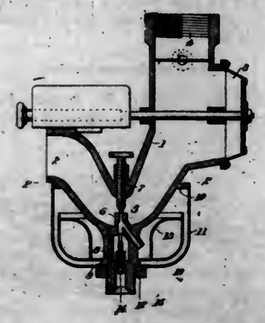
3. A carbureter including in combination a main casing having an air passage therethrough, a downwardly projecting sleeve, a supply valve located in said sleeve, a float surrounding said sleeve, said sleeve having a transverse opening therethrough, across which the stem of the valve extends, a cross bar extending through said opening and attached to said float, said cross bar having a threaded connection with the stem of said valve and a fuel delivering nozzle in line with said sleeve and projecting into said air passage, said fuel delivering nozzle and said sleeve having an opening leading to the float chamber.

4. A carbureter including in combination, a main casing having an air passage therethrough, a downwardly projecting sleeve, a supply valve located in said sleeve, a float surrounding said sleeve, said sleeve having a transverse opening therethrough, across which the stem of the valve extends, a cross bar extending through said opening and attached to said float, a threaded boss formed on said cross bar into which the stem of the valve is threaded and a fuel delivering nozzle in line with said sleeve and projecting into said air passage, said fuel delivering nozzle and said sleeve having an opening leading to the float chamber.

5. A carbureter including in combination, a main casing having an air passage therethrough, a float chamber, a fuel nozzle having a passage leading to said float chamber, a float having a central opening therethrough, an inwardly projecting flange carried by said float, a cross bar secured to said flange, a horizontally split nut mounted on the cross bar, a valve for controlling the supply to the float chamber, the stem of said valve being threaded into said split nut, whereby the same may be adjusted and frictionally held in adjusted position.

[Claim 6 not printed in the Gazette.]

1,016,252. CARBURETER. JAMES M. DAYTON, Torrington, Conn., assignor to Excelsior Needle Company, Torrington, Conn., a Corporation of Connecticut. Original application filed Nov. 2, 1909, Serial No. 525,942. Divided and this application filed Jan. 6, 1910. Serial No. 536,689. (Cl. 116—31.)



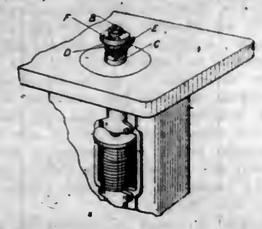
1. A carbureter including in combination, a metal casing forming a fuel chamber, a float operated valve for controlling the supply of fuel to said chamber, a fuel nozzle, gaging means located within said casing adjacent said fuel nozzle for determining the proper level of fuel therein, and means whereby the gaging device may be rendered visible from the outside of the casing.

2. A carbureter including in combination, a metal casing forming a fuel chamber, consisting of a bowl and a

cover for said bowl, a fuel nozzle located centrally of said casing, a float operated valve for controlling the supply of fuel to said chamber, gaging means located in said casing adjacent said nozzle, and means whereby the gaging device may be rendered visible from the outside of the float chamber.

3. A carbureter including in combination, a metal casing forming a fuel chamber, consisting of a bowl and a cover for said bowl, a fuel nozzle located centrally of said casing, a float operated valve for controlling the supply of fuel to said chamber, a gage pin located in said casing adjacent the nozzle for determining the normal height of the liquid fuel, said cover having an opening therein above said gage pin, and a cap for closing said opening.

1,016,253. SHAPER-MACHINE. NORTON M. DENEGAR, Hudson, N. Y. Filed Nov. 18, 1911. Serial No. 660,060. (Cl. 144—218.)

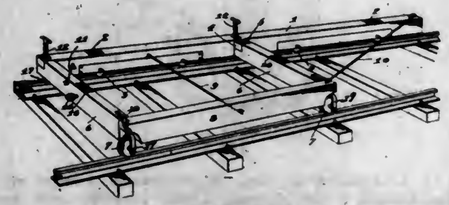


1. In a shaping machine a counter-balance consisting of a collar adapted to be mounted upon the spindle above the cutter, holes in the top surface of the counter-balancing collar adapted to receive weights and weights of different sizes adapted to occupy said holes.

2. In a shaping machine a counter-balance consisting of a collar adapted to be mounted upon the spindle above the cutter, holes in the upper surface of said counter-balancing collar adapted to receive weights, weights of different sizes adapted to occupy said holes, a cutter-knife and means for holding said cutter-knife upon said spindle.

3. In a shaping machine a spindle, collars mounted upon said spindle adapted to hold a cutter-knife, a cutter-knife mounted upon said spindle between said holding collars, a counter-balancing collar mounted upon said spindle above the holding collars, holes in the upper surface of said counter-balancing collar adapted to receive weights, weights of different sizes adapted to occupy the holes in said counter-balancing collar whereby the weight of the single knife may be held between said holding collars and balance by the weights in said counter-balancing collar, substantially as described.

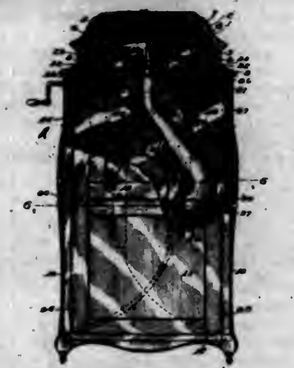
1,016,254. LEVEL. FRANK W. DODDS, Fort Morgan, Colo. Filed Mar. 28, 1911. Serial No. 617,487. (Cl. 73—67.)



1. In a track surfacing device, a longitudinal member mounted upon wheels to engage the track, spirit levels mounted thereon in proximity to each extremity thereof and a definite distance apart having scales indicating the difference in level for that distance, transverse members attached to the front and middle portion of the longitudinal member having wheels mounted upon their free ends to engage the track, spirit levels mounted centrally of each transverse member, and adjustable elevating means at the forward and middle portions of the longitudinal member.

2. A knock down track surfacing device, comprising a longitudinal member mounted on wheels to engage one track and having spirit levels with graduated scales to indicate the difference of level in known terms, transverse members engaging the front and middle portions of the longitudinal member and provided at their free ends with wheels for engaging the other track and having upon their central portion spirit levels, elevating bolts passing through the longitudinal member and transverse members at their points of connection, a second longitudinal member joining the free ends of the transverse member over the wheels carried thereby, and tie rods bracing the framework and securing it in place.

1,016,255. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Feb. 20, 1909. Serial No. 479,105. (Cl. 181—3.)



1. In a talking machine, the combination with a cabinet having a plurality of openings therein, of an amplifier in said cabinet and adjustable to register with any one of said openings.

2. In a talking machine, the combination with a cabinet having an opening in each of two sides respectively thereof, of an amplifier adjustably fixed in said cabinet to register with either of said openings.

3. In a talking machine, the combination with a cabinet having a vertically elongated aperture in the side thereof, of an amplifier in said cabinet opening adjacent said aperture, said amplifier comprising comparatively rigid means forming the upper and lower edges thereof and vertical sounding-boards forming the sides thereof.

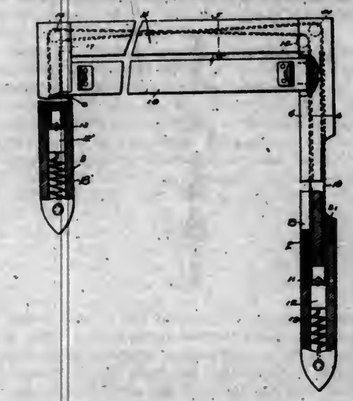
4 In a talking machine, the combination with a cabinet, of an amplifier depending from one end therein, said cabinet being provided with a plurality of openings spaced at substantially equal distances from said end of the amplifier, and means to secure the mouth of the amplifier rigidly adjacent any one of said openings.

5. In a talking machine, the combination with sound reproducing mechanism, of a sound amplifier comprising a plurality of vertical sounding-boards, each having one edge curved from end to end, rigidly secured in spaced relationship at said edges, and means for admitting sound waves between said boards, said boards diminishing in thickness outwardly from said edges respectively.

[Claims 6 to 23 not printed in the Gazette.]

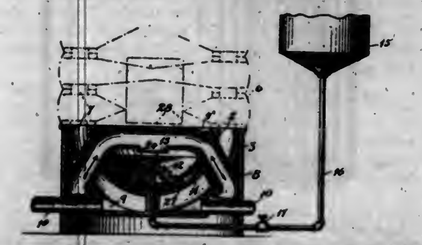
1,016,256. WINDOW-SHADE ADJUSTER. ALBERT HENRY FECHNER and WILLIAM FECHNER, Goliad, Tex. Filed Nov. 15, 1909. Serial No. 528,238. (Cl. 156—27.)

In a vertically adjustable shade hanger, a frame-work adapted to be secured to a window or other casing, said frame-work comprising vertical members having longitudinal grooves therein, the grooves in each member being arranged perpendicular to one another, one groove in each member being formed in the inner side thereof, an endless chain adapted to be passed through the grooves in the vertical members and across at the upper ends from



one member to the other, a cross-bar secured to said chain and adapted to move vertically in grooves of said vertical members, a plurality of fixtures carried by said cross-bar to receive a shade roller and tensioning means for said endless chain slidable vertically in said vertical members.

1,016,257. HOT-BLAST LIQUID AND GASEOUS FUEL BURNER. ARTHUR W. FEES, Blair, Nebr. Filed Jan. 12, 1911. Serial No. 602,235. (Cl. 122—23.)



1. A liquid or gaseous fuel burner, comprising an uncapped open-topped hemispherical fire-box or fire-bowl having an outwardly turned rim to form a suspension flange, a vertical cylindrical casing disposed to seat said flange and suspend said fire-bowl within said cylindrical casing, a still air insulation and heating-chamber around and beneath said fire-bowl inside of said casing, and a fuel supply pipe disposed through said heating-chamber and having a terminal jet in said fire-bowl.

2. A liquid or gaseous fuel burner, comprising an uncapped fire-box or fire-bowl open at the top and having an outwardly projecting suspension flange at the rim, an outer casing having a top edge disposed to engage said flange to support said fire-box and inclose a still air insulation and heating-chamber around and thereunder, a generating-pan in said fire-box, and a liquid fuel supply pipe disposed through said heating-chamber and the wall of said fire-box and terminated by a jet in said generating-pan.

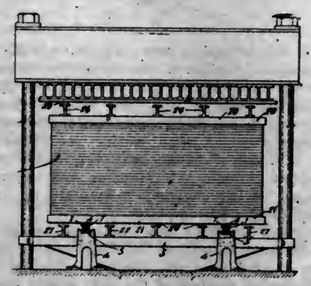
3. A liquid or gaseous fuel burner, comprising a hemispherical fire-box or bowl having an outwardly disposed annular flange at its rim, a vertical cylindrical casing of greater height than said fire-bowl to seat said annular flange on its top edge, suspend the fire-bowl within the cylindrical casing and form a still air insulation and heating chamber around and thereunder, a generating-pan disposed within and spaced above the bottom of said bowl, and a fuel supply pipe disposed through said still air heating chamber and upwardly through the bottom of said bowl and having a terminal jet in said generating-pan.

4. A liquid or gaseous fuel burner, comprising an uncapped open-topped fire-bowl having a double wall consisting of inner and outer bowls disposed concentrically apart to form a space therebetween and having common to both bowls a connecting rim of greater outer diameter to form an annular outwardly projecting flange at the top of the outer bowl and having openings through said rim into said space between the bowls adapted to connect said intervening space with the water-space of a superimposed boiler, a casing to form a supporting seat for said annular flange, a still air insulating and heating chamber within said casing and around and beneath the fire-bowl, and a fuel supply pipe disposed through said still air insulation and heating chamber and double wall and having a terminal jet in the fire-bowl.

5. A liquid or gaseous fuel burner, comprising an uncapped open-topped fire-bowl adapted to be communicably connected with the heat chamber of a boiler and having double walls consisting of an inner bowl and a larger like-shaped outer bowl disposed concentrically with space between to form a water-chamber in said walls, a rim common to both bowls and projected annularly to form a suspension flange at the top of the outer bowl and having vertical openings to communicably connect said water-chamber with the water-space of said connected boiler, a tapped opening through the base of said outer bowl to communicably connect the end of a return water pipe with the bottom of said water-chamber, a casing to seat said suspension flange and suspend said fire-bowl within said casing, a still air insulating and heating chamber inclosed around and beneath said fire-bowl by said casing, and a fuel supply pipe disposed through said heating chamber and through said water-chamber and having a terminal jet in said fire-bowl.

[Claims 6 to 13 not printed in the Gazette.]

1,016,258. VENEER-PRESS FOR MANUFACTURERS OF WOODWORKING MATERIAL. CHARLES E. FRANCIS, Cincinnati, Ohio. Filed June 2, 1911. Serial No. 630,931. (Cl. 144—281.)



1. In a veneer press, the combination with the platen, of fixed supports at the front and the rear of the press, a track loosely mounted on said supports and extending across the platen, said track members being of a length to be extended beyond the platen to carry the clamped bundle partially beyond the press.

2. In a veneer press, the combination with the platen, of fixed supports at the front and the rear of the press, a track loosely mounted on said supports and extending across the platen, normally out of contact therewith, clamp beams for the retaining clamps of greater height than the track members, said track members being of a length to be extended beyond the platen to carry the clamped bundle partially beyond the press.

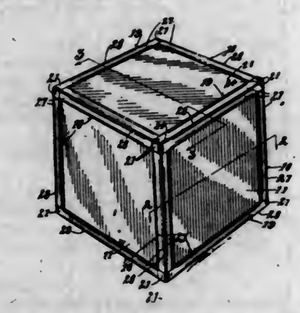
3. In a veneer press, the combination with the platen, of fixed supports at the front and the rear of the press, a track loosely mounted on said supports and extending across the platen, said track members being of a length to be extended beyond the platen to carry the clamped bundle partially beyond the press, with means for lowering the fixed supports for the track at the rear to lower the load.

4. In a veneer press, the combination with the platen, of fixed supports at the front and the rear of the press, a track loosely mounted on said supports and extending across the platen, normally out of contact therewith, clamp beams for the retaining clamps of greater height than the track members, said track members being of a length to be extended beyond the platen to carry the clamped bundle partially beyond the press, with means for lowering the fixed supports for the track at the rear to lower the load.

5. In a veneer press, the combination with the platen, of fixed supports at the front and the rear of the press, a track loosely mounted on said supports and extending across the platen, said track members being of a length to be extended beyond the platen to carry the clamped bundle partially beyond the press, said rear supports comprising a fixed base portion and a vertically movable upright portion, and means normally to support said upright portion and adapted to be withdrawn to lower the load.

[Claims 6 to 9 not printed in the Gazette.]

1,016,259. METALLIC SHIPPING-CASE. CLARENCE N. FREY, Cincinnati, Ohio. Filed Sept. 22, 1911. Serial No. 650,781. (Cl. 220—17.)

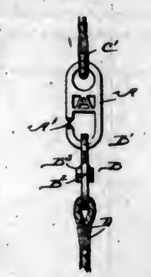


1. A metallic shipping case comprising walls provided with return-bend flanges at the respective edges thereof which are shorter than the edges on which they are located for forming recesses at the ends of said flanges, said flanges having flange-receiving channels thereunder, and corner-strips provided with mating return-bend flanges for said first-named flanges received under said first-named flanges through said recesses, said mating return-bend flanges having channels thereunder in which said first-named flanges are received.

2. A metallic shipping case comprising walls provided with return-bend flanges at the respective edges thereof which are shorter than the edges on which they are located for forming recesses at the ends of said flanges, said flanges having flange-receiving channels thereunder, and corner-strips provided with mating return-bend flanges for said first-named flanges received under said first-named flanges through said recesses, said mating return-bend flanges having channels thereunder in which said first-named flanges are received, and said corner-strips embracing locking corner-strips having end-tongues arranged for being bent into the longitudinal projections of other corner-strips.

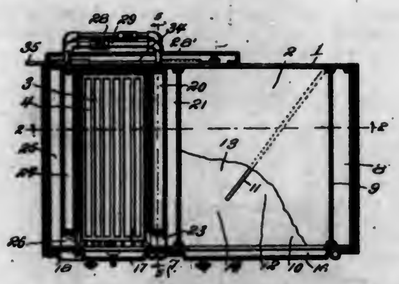
1,016,260. HOOK FOR SIGNAL DEVICES. PAUL FUCHS, Baltimore, Md. Filed June 5, 1906. Serial No. 320,293. (Cl. 24—201.)

In a hook for a signal device, the combination with a coupling member adapted to be carried by the signal comprising an oval shaped plate having an opening for securing the signal, and a semi-oval shaped opening having its side walls split, the edges of said split being beveled forming four-sided pointed ends, of a coupling member adapted to be carried by the halyard formed of two semi-circular shaped plates pivotally connected together pro-



vided with openings, the wall of one of said plates being split, the edges being beveled to form four sided pointed ends adapted to be interlocked together when turned at right angles to each other the faces of one member being adapted to pass the faces of the other member in a plurality of directions.

1,016,261. COMBINED COOKING AND HEATING STOVE OR RANGE. JOHN C. GALLAGHER and HUGH P. GARVEY, Philadelphia, Pa. Filed Mar. 1, 1911. Serial No. 611,635. (Cl. 126—5.)



1. A heater comprising a body, a fire-box therein, a vertical flue at one side of said fire-box, said flue having an outlet at its rear end and being in communication at its front end with the fire-box through a vertical series of lateral ports extending the full depth of said flue, a heating chamber subjected to the heat from the fire-box and from the smoke and gases passing through the flue, and a damper controlling said outlet.

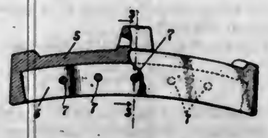
2. A heater comprising a body, a fire-box therein, a vertical flue at one side of said fire-box, said flue having an outlet at its rear end and being in communication at its front end with the fire-box through a series of lateral ports extending the full depth of said flue, a heating chamber formed between the fire-box and flue, and a damper controlling said outlet.

3. A heater comprising a body, a fire-box therein, heating chambers at opposite sides of the fire-box, vertical flues associated therewith and communicating with the fire-box, a third heating chamber, a coöperating flue associated therewith and communicating with the fire-box, said flues being provided with outlets, dampers controlling said outlets, and means for simultaneously adjusting the dampers to close the outlets of the two first-named flues and open the outlet of the third-named flue, and vice versa.

4. A heater comprising a body, a fire-box therein, heating chambers at opposite sides of the fire-box, vertical flues associated therewith and communicating at their forward ends with the fire-box through lateral ports, a third heating chamber between one of the first-named heating chambers and its associated flue and one of the walls of the body, a coöperating flue about said third heating chamber and communicating with the fire-box, said flues having outlets at their rear ends, dampers controlling said outlets, and means for simultaneously adjusting the dampers to close the outlets of the two first-named flues and open the outlet of the third-named flue, and vice versa.

5. A heater comprising a body, a fire-box therein, heating chambers at opposite sides of the fire-box, vertical flues associated therewith and communicating at their forward ends with the fire-box through lateral ports, a third heating chamber between one of the first-named heating chambers and its associated flue and one of the walls of the body, a coöperating flue about said third heating chamber and communicating with the fire-box, said flues having outlets at their rear ends, a sliding rod, dampers connected with the rod and adapted for simultaneously opening and closing the outlets of the two first-named flues, a pivoted lever operated by the rod, and a damper operated by said lever to open and close the outlet of the third-named flue when the outlets of the two first-named flues are respectively closed and opened.

1,016,262. BRAKE-SHOE. JOSEPH D. GALLAGHER, Glen Ridge, N. J., assignor to Edward H. Fallows, trustee, New York, N. Y. Filed May 27, 1911. Serial No. 629,792. (Cl. 188—27.)



1. A brake shoe comprising a body portion formed from cast iron containing sulfur and silicon in sufficient quantities to impart hardness to said body portion in excess of the hardness possessed by cast iron alone; and an insert in the form of a ribbon formed from a relatively soft metal, and bent to provide a plurality of segments, said ribbon being embedded in said body portion.

2. A brake shoe comprising a body portion formed from cast iron containing about .4% of sulfur, and about 1.75% of silicon; and an insert in the form of a ribbon formed from wrought iron and bent to provide a plurality of segments, said ribbon being embedded in said body portion.

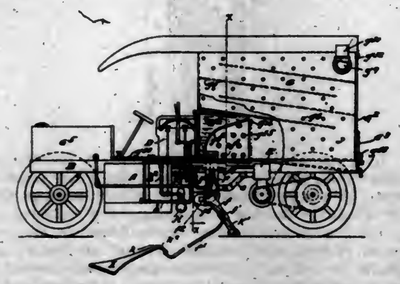
3. A brake shoe comprising a body portion formed from cast iron containing quantities of sulfur and silicon sufficient to impart hardness to said body portion in excess of the hardness of cast iron in which said substances are absent, said body portion having an insert formed from wrought metal embedded therein.

4. A brake shoe comprising a body portion formed from cast iron containing sulfur and silicon in sufficient quantities to impart hardness to said body portion in excess of the hardness possessed by cast iron alone, and an insert formed from a relatively soft metal and embedded in said body portion.

5. A brake shoe comprising a body portion formed from cast iron containing about .4% of sulfur, and about 1.75% of silicon, and an insert formed from wrought iron embedded in said body portion.

1,016,263. VACUUM-CLEANER. JOHN H. GREEN, Springfield, Ill. Filed Mar. 22, 1905. Serial No. 251,536. (Cl. 15—60.)

1. In an apparatus of the class described, the combination of a propellible vehicle, a steam engine connected to propel said vehicle, a boiler connected to supply steam to said steam engine, a dirt receptacle mounted on said vehicle, a vacuum cylinder mounted on said vehicle and having a sterilizing chamber in communication with the interior of said dirt receptacle, a renovator in communication with the sterilizing chamber of said vacuum cylinder, a nozzle within the sterilizing chamber of said vacuum cylinder and connected to convey exhaust steam from said engine into the sterilizing chamber of said vacuum cylinder, a feed-water heater in communication with said boiler and acted upon by the exhaust steam from the engine passing through said nozzle and said vacuum cylinder, and condensers within said dirt receptacle adapted to condense said exhaust steam to moisten the dirt discharged into said dirt receptacle from said vacuum cylinder coincidently with the heating of the feed-water by the same steam.



2. In a self-propelling apparatus of the class described, the combination of a propellible vehicle, an engine mounted on and connected to propel the vehicle, a boiler mounted on the vehicle and connected to supply steam to said engine, a dirt receptacle mounted on the vehicle and equipped with a feed-water heater and condensers and connected to supply water to said boiler, a water tank mounted on the vehicle and connected to supply water to the feed-water heater, a vacuum cylinder mounted on the vehicle and having a sterilizing chamber communicating with the interior of said dirt receptacle, a renovator in communication with the sterilizing chamber of said vacuum cylinder, controllable means for supplying live steam from said boiler to the sterilizing chamber of said vacuum cylinder when the engine is at rest, and means for supplying exhaust steam from said engine to the sterilizing chamber of said vacuum cylinder when the engine is running.

3. In an apparatus of the class described, the combination of an engine, a vacuum cylinder in operative relation to said engine and having a sterilizing chamber, a renovator communicating with the sterilizing chamber of said vacuum cylinder, a nozzle connected to conduct exhaust gases from said engine into the sterilizing chamber of said vacuum cylinder, means for supplying water to be vaporized within said nozzle, a dirt receptacle in communication with said vacuum cylinder and condensers within said dirt receptacle effective to condense the vapor induced by the water vaporized within said nozzle.

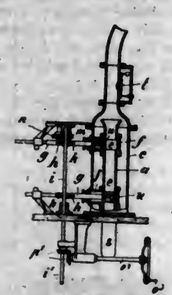
1,016,264. SENDING AND DELIVERY STATION FOR PNEUMATIC-DESPATCH-TUBE APPARATUS. KARL ANTON GUTKNECHT, Hamburg, Germany. Filed Aug. 4, 1909. Serial No. 511,155. (Cl. 243—19.)

1. In a pneumatic despatch apparatus, a fixed terminal, alternately movable gates normally closing the terminal and spaced therefrom at both ends, a casing surrounding the terminal and adapted to guide the air around the terminal in the direction of the latter when said terminal is closed.

2. In a pneumatic despatch tube apparatus a terminal, gates to normally close the terminal at both ends, rods attached to the gates and provided with rack teeth on both sides, vertical shafts on both sides of the rods and provided with rack segments adapted to engage the racks on the gate-rods alternately, to first open and close the upper gate and then to open and close the lower gate.

3. In a pneumatic despatch apparatus, a transmission conduit having enlarged portions, terminals of smaller diameter than said enlarged portions fixed in the latter

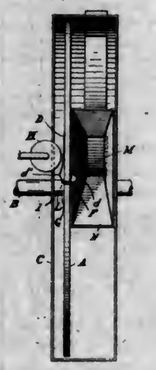
gates intermediate the ends of said terminals normally closing both ends of the latter, and means to open and close said gates in succession.



4. In a pneumatic despatch apparatus, a transmission conduit having an enlarged portion at each end, a sending terminal of smaller diameter than the enlarged portions fixed in one of the latter and adapted to communicate with the conduit, a delivery terminal fixed in the other enlarged portion, said delivery terminal adapted to communicate at one end with the conduit and having its other end extending through the latter, gates intermediate the ends of said terminals normally closing both ends of the latter, and means to open and close said gates in succession.

5. In a pneumatic despatch apparatus, a transmission tube having an enlarged portion at each end, a sending terminal of smaller diameter than the enlarged portions fixed concentrically in one of the latter and adapted to communicate with the conduit, a delivery terminal fixed in the other enlarged portion, said delivery terminal adapted to communicate at one end with the tube and having its other end extending through the latter, gates intermediate the ends of said terminals normally closing both ends of the latter, and means to open and close said gates in succession.

1,016,265. POTATO-PLANTER. WILLIAM A. HALL, Sr., Pardeeville, Wis. Filed Mar. 16, 1911. Serial No. 614,882. (Cl. 111—27.)



1. In a seed planter, the combination of a revoluble carrier, a spring clamping hook carried thereby, and adapted to clamp a seed against the carrier, a catch carried by the carrier and engaging the hook to hold the same in open position, means to disengage the catch, and means to release the hook from the seed.

2. In a seed planter, the combination of a revoluble carrier, a spring hook carried thereby, and adapted to clamp a seed against the carrier, a catch carried by the carrier and engaging the hook to hold the same in partly open position, means to disengage the catch, and means to press the hook to full open position, to release the seed.

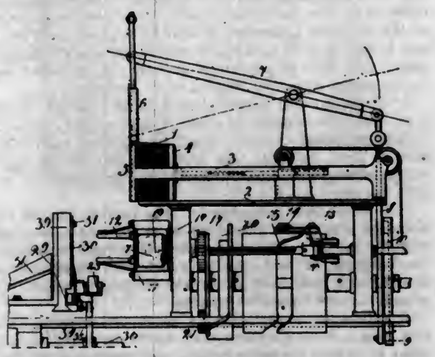
3. In a seed planter, the combination of a revoluble carrier, a spring hook carried thereby and adapted to clamp a seed against the carrier, said hook having a notch, a spring catch mounted on the carrier and engaging in the notch to hold the hook in partly open position, means to release the catch from the notch, and means to fully open the hook to release the seed therefrom.

4. In a seed planter, the combination of a trough, a disk revoluble therein, a spring clamping member carried by the disk and adapted to clamp a seed, a catch carried by the disk and engaging said member to hold the same in partly open position, means in the trough engageable with the catch to release the same from the clamping member at a point during the lower part of its revolution, to pick up the seed, and means to open the clamping member at a point in the upper part of its revolution, to drop the seed.

5. In a seed planter, the combination of a trough, a disk revoluble therein, upper and lower projections in the trough, a spring hook carried by the disk and adapted to clamp a seed against the side thereof, said hook having a notch, and a spring catch carried by the disk and normally engaging in said notch and holding the hook in partly open position, the projections being located to strike the catch and release the same from the notch, and means to fully open the hook at a certain point in the revolution of the disk.

[Claims 6 to 8 not printed in the Gazette.]

1,016,266. MACHINE FOR MAKING PAPER BOXES. RICHARD HÖGFELDT, Dusseldorf, Germany. Filed Sept. 29, 1909. Serial No. 520,125. (Cl. 93—40.)



1. In a machine of the character described, a rotative frame, an axially slidable core rotatable in unison with the frame and adapted to advance a box blank having side-forming flaps into the frame for folding said flaps against the core, and means for applying a covering strip to the flaps while being held to said core.

2. In a machine of the character described, a rotative frame, an axially slidable core rotatable in unison with the frame and adapted to advance a box blank having side-forming flaps into the frame for upturning said flaps, means on the frame for holding the upturned flaps against the core, and means for applying a covering strip to said flaps.

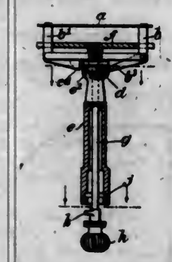
3. In a machine of the character described, a rotative frame, an axially slidable core rotatable in unison with the frame and adapted to advance a box blank having side-forming flaps into the frame for upturning said flaps, fingers on the frame adapted to hold the upturned flaps against the core, and means for applying a covering strip to said flaps.

4. In a machine of the character described, a rotative frame, an axially slidable core rotatable in unison with the frame and adapted to advance a box blank having side-forming flaps into the frame for upturning said flaps and thereby folding the blank into box form, fingers on the frame for holding the upturned flaps against the core, means for applying a covering strip to the flaps, said strip projecting beyond the box bottom, and means for folding said projecting strip portion against said bottom.

5. In a machine of the character described, a rotative frame, an axially slidable core rotatable in unison with the frame and adapted to advance a box blank having side-forming flaps into the frame for upturning said flaps and thereby folding the blank into box form, fingers on the frame for holding the upturned flaps against the core, means for applying a covering strip to the flaps, said strip projecting beyond the open top of the box, and means for folding said projecting strip portion around said open top.

[Claims 6 to 11 not printed in the Gazette.]

1,016,267. RAZOR. HAROLD EDWARD SHERWIN HOLT, Farnborough, England. Filed Aug. 10, 1909. Serial No. 512,173. (Cl. 30—12.)

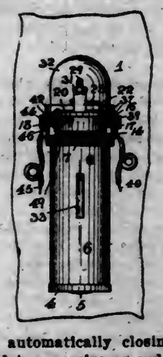


1. A safety razor comprising a blade having openings near its ends, a blade holder having substantially parallel arms projecting from the ends thereof and engaging the openings in the blade, one of said arms being pivoted to the blade holder and having an inwardly extending portion, said blade holder having a central threaded opening, a handle having a portion screwing into said threaded opening and having an annular shoulder bearing against the end of said inwardly extending portion of the movable arm, a guard guided by said parallel arms, and means for moving the guard toward and from the blade.

2. A safety razor comprising a blade having openings near its ends, a blade holder having substantially parallel arms projecting from the ends thereof and engaging the openings in the blade, one of said arms being pivoted to the blade holder and having an inwardly extending portion, said blade holder having a central threaded opening, a handle having a portion screwing into said threaded opening and having an annular shoulder bearing against the end of said inwardly extending portion of the movable arm, a guard guided by said parallel arms, said handle having an axial passage therethrough, a rod connected to the guard and extending through said passage, means at the outer end of the handle for moving the rod longitudinally of the handle, and means carried by the handle for locking the rod in place.

3. A safety razor comprising a blade holder having substantially parallel arms at the ends thereof, a blade having openings engaged by said arms, a tubular handle connected to said blade holder, a guard slidable on said arms toward and from the blade, a stem secured to the guard and extending through the tubular handle, and means for locking the stem against longitudinal movement within the handle.

1,016,268. CIRCUIT-CONTROLLING DEVICE. WILLIAM B. HUGHES, Newark, N. J. Filed Jan. 20, 1911. Serial No. 603,697. (Cl. 177—302.)



1. A device for automatically closing an electric circuit when subjected to excessive or sudden heat, comprising a hollow body providing an air-chamber, a diaphragm-member connected at one end of said body and in communication with said air-chamber, normally separated contact-devices arranged above said body and electrically connected in an alarm or other electric circuit, means operated by said diaphragm-member for closing said normally separated contact devices, and means for compensating the normal fluctuations of air-pressure in said air-chamber caused by normal fluctuations of temperature, and a closure-member provided with a bulge at the bottom of said hollow body for quickly compressing the air in said air-chamber, to operate said diaphragm-member, substantially as and for the purposes set forth.

2. A device for automatically closing an electric circuit when subjected to excessive or sudden heat, comprising a hollow body providing an air-chamber, a diaphragm-member connected at one end of said body and in communication with said air-chamber, a receiving socket in the upper end of said body above said diaphragm-member, an insulator-block supported by said receiving-socket, a contact-plate, a spring-arm carrying a contact-piece connected with said contact-plate, an adjustable contact-point supported above said spring-arm, a pivot-stud connected with said insulator-block and electrically connected with said adjustable contact-point, a second pivot-stud connected with said insulator-block and electrically connected with said contact plate and its spring-arm, a pair of spring-brackets engaging said pivot-studs in supporting relation, said spring-brackets being electrically insulated one from the other, but in electrical contact with their respective pivot-studs, means for connecting said spring-brackets in an alarm or other circuit, and means coöperating with said diaphragm-member for closing the contact of said spring-arm with said contact-point, substantially as and for the purposes set forth.

3. A device for automatically closing an electric circuit when subjected to excessive or sudden heat, comprising a hollow body providing an air-chamber, a diaphragm-member connected at one end of said body and in communication with said air-chamber, a receiving socket in the upper end of said body above said diaphragm-member, an insulator-block supported by said receiving socket, a contact-plate, a spring-arm carrying a contact-piece connected with said contact-plate, an adjustable contact-point supported above said spring-arm, a pivot-stud connected with said insulator-block and electrically connected with said adjustable contact-point, a second pivot-stud connected with said insulator-block and electrically connected with said contact-plate and its spring arm, a pair of spring-brackets engaging said pivot-studs in supporting relation, said spring-brackets being electrically insulated one from the other, but in electrical contact with their respective pivot-studs, means for connecting said spring-brackets in an alarm or other

circuit, means coöperating with said diaphragm-member for closing the contact of said spring-arm with said contact-point, and an air-vent pipe connected with said hollow body and in communication with said air-chamber for compensating the normal fluctuations of air pressure in said air-chamber, substantially as and for the purposes set forth.

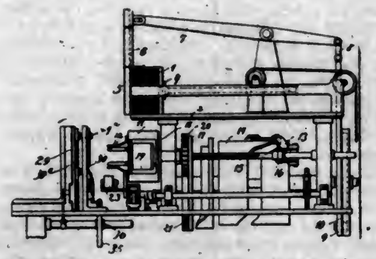
4. A device for automatically closing an electric circuit when subjected to excessive or sudden heat, comprising a hollow body providing an air-chamber, a diaphragm-member connected at one end of said body and in communication with said air-chamber, a receiving socket in the upper end of said body above said diaphragm-members, an insulator-block supported by said receiving socket, a contact-plate, a spring-arm carrying a contact-piece connected with said contact-plate, an adjustable contact-point supported above said spring-arm, a pivot-stud connected with said insulator-block and electrically connected with said adjustable contact-point, a second pivot-stud connected with said insulator-block and electrically connected with said contact-plate and its spring-arm, a pair of spring-brackets engaging said pivot-studs in supporting relation, said spring-brackets being electrically insulated one from the other, but in electrical contact with their respective pivot-studs, means for connecting said spring-brackets in an alarm or other circuit, means coöperating with said diaphragm-member for closing the contact of said spring-arm with said contact-point, and an air-vent pipe connected with said hollow body and in communication with said air-chamber for compensating the normal fluctuations of air-pressure in said air-chamber, and a closure-member provided with a bulge at the bottom of said hollow body for quickly compressing the air in said air-chamber to operate said diaphragm-member, substantially as and for the purposes set forth.

5. A device for automatically closing an electrical circuit when subjected to excessive or sudden heat, comprising a hollow body providing an air-chamber, a diaphragm-member connected at one end of said body and in communication with said air-chamber, a receiving socket in the upper end of said body above said diaphragm-member, an insulator-block supported by said receiving socket, a contact-plate, a spring-arm carrying a contact-piece connected with said contact-plate, an adjustable contact-point supported above said spring-arm, a pivot-stud connected with said insulator-block and electrically connected with said adjustable contact-point, a second pivot-stud connected with said insulator-block and electrically connected with said contact-plate and its spring-arm, a pair of spring-brackets engaging said pivot-studs in supporting relation, said spring-brackets being electrically insulated one from the other, but in electrical contact with their respective pivot-studs, means for connecting said spring-brackets in an alarm or other circuit, means coöperating with said diaphragm-member for closing the contact of said spring-arm with said contact-point, comprising a diaphragm-disk in contact with said diaphragm-member, a rod or stem extending upwardly therefrom and through a bearing-portion with which said receiving socket is provided and a hole or opening with which said insulator block is provided, the upper end of said rod or stem being in contact with said spring-arm of said contact-plate, substantially as and for the purposes set forth.

[Claims 6 to 13 not printed in the Gazette.]

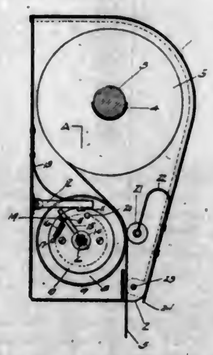
1,016,269. MACHINE FOR MAKING PASTEBOARD BOXES. EMIL JAGENBERG, Dusseldorf, Germany. Filed June 13, 1911. Serial No. 632,858. (Cl. 93—40.)

1. In a machine of the character described, means for providing a box with a covering strip that projects beyond the bottom and top thereof, a first folding device adapted to fold said strip over the box bottom, a slide, yond the bottom and top thereof, a first folding device on said slide adapted to fold the strip over the box top, a plunger for projecting the folded strip into the box, and means for actuating and retracting the second named folding device prior to the arrival of the slide opposite the plunger.



2. In a machine of the character described, means for providing a box with a covering strip that projects beyond the bottom and top thereof, a first folding device adapted to fold said strip over the box bottom, a slide, means for actuating the same, a second spring-influenced folding device on the slide adapted to fold the strip over the box top, a plunger for projecting the folded strip into the box, and abutments located intermediate the first folding device and the plunger for actuating the second folding device, said abutments clearing said second folding device and causing the same to be retracted through its spring control prior to the arrival of the slide opposite the plunger.

1,016,270. PAPER-HOLDER. ALBERT W. JOHNSON, Cleveland, Ohio. Filed Mar. 20, 1911. Serial No. 615,589. (Cl. 211—29.)



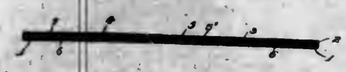
1. In a device of the character described, the combination of a suitable support, a roller secured thereto, a disk secured to said roller and provided with a notch in its periphery, a pawl normally engaging said notch, an arm adapted, on movement, to disengage said pawl from said notch, and means connecting said arm and said disk and adapted, upon disengagement of said pawl from said notch, to impart a rotative movement to said roller.

2. In a device of the character described, the combination of a casing, a roller secured therein, a disk secured to said roller and provided with a notch in its periphery, a pawl normally engaging said notch, an arm adapted, on movement, to disengage said pawl from said notch, means connecting said arm and said disk and adapted, upon disengagement of said pawl from said notch, to impart a rotative movement to said roller, and means outside of the casing for moving said arm.

3. In a device of the character described, the combination of a casing, a rotatable shaft journaled therein and provided with a handle exteriorly of the casing, a roller loose on said shaft, a disk fixed to said roller and provided with a notch in its periphery, a pawl bearing on the periphery of said disk and adapted to engage said notch, an arm secured to said shaft and adapted to lift said pawl from said notch, and a spring secured to said arm and to said disk.

4. In a device of the character described the combination of a casing, a rotatable shaft journaled therein and provided with a handle exteriorly of the casing, a first roller loose on said shaft and having a friction surface, a second roller bearing against the first roller, a disk fixed to said first roller and provided with a notch in its periphery, a pawl bearing on the periphery of said disk and adapted to engage said notch, an arm secured to said shaft and adapted to lift said pawl from said notch, and a spring secured to said arm and to said disk.

1,016,271. RECORD FOR TALKING-MACHINES. ELDRIDGE R. JOHNSON, Merion, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Aug. 30, 1904. Serial No. 222,686. (Cl. 181—17.)

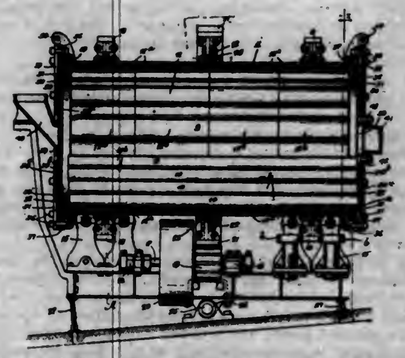


1. A record for a sound recording and reproducing machine comprising a sheet metal disk having two concentric depressions, the one being annular in shape located adjacent the periphery, and the other occupying the central portion of the disk and having a flat inner surface provided with a central aperture, and record material secured within said annular depression, the said disk having the part thereof between the said concentric portions formed into a ring substantially rectangular in cross section, having its outer face substantially flush with the surface of the record material, said ring being open upon one side.

2. A record for a sound recording and reproducing machine, comprising a sheet metal disk having an annular depression located adjacent to the periphery of the same, and record material secured within said annular depression, the said disk having the part thereof adjacent to the inner side of said depression formed into a rib substantially rectangular in cross section, having its outer face substantially flush with the surface of said record material, said rib being open on one side.

3. A record for a sound recording and reproducing machine comprising a sheet metal disk having an annular depression located adjacent to the periphery of the same, and record material secured within said annular depression, said disk having the part thereof adjacent to the inner side of said depression formed into a rib substantially rectangular in cross section and open on one side.

1,016,272. GRINDING-MILL. ERNEST C. JOHNSON, Hill City, S. D. Filed Oct. 24, 1910. Serial No. 588,763. (Cl. 83—9.)



1. A grinding-mill comprising a drum having a continuously undulating interior surface extending from end to end thereof, elongated grinding-rods of a length substantially equal to that of said drum loosely disposed therein in superimposed strata, said surface being formed to rotate and bodily shift the rods relatively to one another as said drum is rotated, and mechanism for rotating said drum.

2. A grinding-mill comprising a drum, mechanism for rotating the drum, elongated grinding-rods loosely disposed therein, and means carried by said drum for causing the grinding-bars to move longitudinally relatively to one another.

3. A grinding-mill comprising a drum having an undulating periphery, mechanism for rotating the drum, elongated grinding rods loosely disposed therein, and on the undulating periphery, and means carried by said drum for causing the rods to move longitudinally relatively to one another.

4. A grinding-mill comprising a drum, mechanism for rotating the drum, a series of elongated grinding-rods loosely disposed therein, a head at one end of the drum, and means on the head for causing said rods to move longitudinally relatively to one another.

5. A grinding-mill comprising a drum, mechanism for rotating the drum, a series of elongated grinding-rods loosely disposed therein, a head at one end of the drum, and comprising a lining, and means on the lining for causing said rods to move longitudinally relatively to one another.

[Claims 6 to 25 not printed in the Gazette.]

1,016,273. MEANS FOR HOLDING INSERTS IN PLACE IN MOLDS. HARRY JONES, Suffern, N. Y., assignor to Edward H. Fallows, New York, N. Y. Filed Oct. 23, 1911. Serial No. 656,324. (Cl. 22—124.)

1. The combination with a foundry flask within which a mold is formed, of a supporting member embedded in the sand in said flask; and an element supported by said supporting member and adapted to support an insert in position within the mold to be embedded in the article produced during the process of casting, said supporting member and insert being independent of one another.

2. The combination with a foundry flask within which a mold is formed, of a supporting member supported from said flask and embedded in the sand therein; and an element supported by said supporting member and adapted to support an insert in position within the mold to be embedded in the article produced during the process of casting, said supporting member and insert being independent of one another.

3. In combination, a section of a multiple part mold having a supporting member embedded therein and which member terminates adjacent a surface of said section with which molten metal contacts when the mold is used; and an element associated with said supporting member and adapted to hold an insert in position to be embedded in the article formed in the completed mold.

4. The combination with a foundry flask within which a mold is formed, of a metallic supporting member embedded in the sand in said flask; and a non metallic element supported by said supporting member and adapted to support a metallic insert in position within the mold to be embedded in the article produced during the process of casting, said supporting member and insert being independent of one another.

5. The combination with a foundry flask within which a mold is formed, of a metallic supporting member supported from said flask and embedded in the sand therein; and a non-metallic element supported by said supporting member and adapted to support a metallic insert in posi-

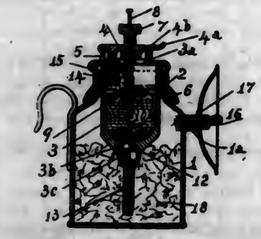
tion within the mold to be embedded in the article produced during the process of casting, said supporting member and insert being independent of one another.

[Claims 6 to 15 not printed in the Gazette.]

1,016,274. MUSIC-CLIP. THOMAS JUST, Hartford, Conn. Filed Nov. 22, 1909. Serial No. 529,243. (Cl. 24—66.)

A holder including two blades composed of flexible material and pivotally united, said pivot being arranged to separate the blades at the heel to permit initial engagement at the points, and means between the pivot and points for forcing the blades together.

1,016,275. ACETYLENE-LAMP. HENRY KRAST, Springfield, Ill. Filed July 15, 1910. Serial No. 572,126. (Cl. 48—27.)



1. The combination of a carbid box, a reservoir connected with the carbid box, a springy distributer communicating with the interior of the reservoir and adapted to extend downward into the mass of carbid within the carbid box and extensible to break incrustation accumulating on said distributer and a rod connected with the lower part of the distributer and extending upward through the lamp and depressible from outside the lamp to expand the distributer.

2. The combination of a carbid box, a reservoir connected with the carbid box, a coiled springy distributer communicating with the interior of the reservoir and adapted to permit water to seep between the coils of said distributer, a valve between the reservoir and the distributer and a stem connected with the valve and the distributer and operable from outside the lamp to control the supply of water from the reservoir to said distributer and to expand said distributer to break incrustation.

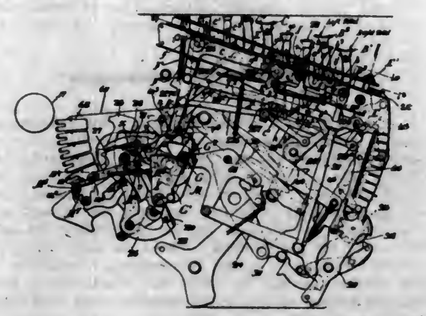
3. The combination of a carbid box, a reservoir connected with the carbid box, a springy coiled distributer communicating with the interior of the reservoir and adapted to permit water to seep between the coils of said distributer, a valve controlling the supply of water to the interior of the distributer, and valve-controlling means connected with the valve and the distributer and operable from outside the lamp to control the supply of water from the reservoir to the interior of said distributer and to control said coiled distributer to vary the flow of water between the coils thereof to correspond to the opening of the valve.

4. In combination with a carbid box and a reservoir supplying water thereto, a coiled extensible distributer intercommunicating with the reservoir and the carbid box, and an extender connected with the distributer and operable from outside the lamp to expand the distributer to break incrustation on the distributer to increase the flow of water from the reservoir into the carbid box.

5. In combination with a carbid box and a reservoir supplying water thereto, a feed-tube intercommunicating with the reservoir and the carbid box and extensible to break incrustation forming on said feed-tube, a slidable rod connected with the tube, and a slidable pin extending upwardly through the lamp and engaging on the end of said rod.

[Claims 6 and 7 not printed in the Gazette.]

1,016,276. ADDING AND LISTING MACHINE. WILLIAM J. KILPATRICK, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 29, 1909. Serial No. 499,210. (Cl. 235—60.)



1. In a machine of the character described, the combination of accumulating mechanism; printing devices cooperatively related for the automatic filling in of ciphers; means for suspending such coöperative action at will at a predetermined point; and totaling means sectionally operable to print totals independently of each other on opposite sides of such point.

2. In a machine of the character described, the combination of accumulating mechanism; printing devices cooperatively related for the automatic filling in of ciphers; means for suspending such coöperative action at will at a predetermined point, totaling means sectionally operable to print totals independently of each other on opposite sides of such point; and manipulative means normally preventing such independent printing of totals but adjustable to permit the same and suspend the coöperative action of printing devices.

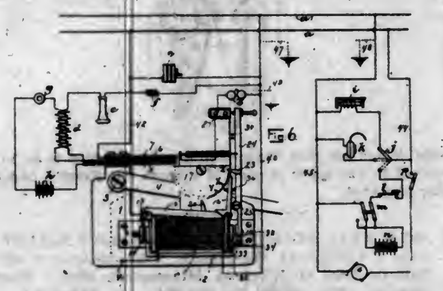
3. In a machine of the character described, the combination of accumulating mechanism; type-carriers; hammers; latches restraining the latter and coöperatively related for cipher-printing, with coupling devices between certain latches; means for disconnecting the coupling devices; and totaling means sectionally operable to print totals independently of each other on opposite sides of such point of disconnection.

4. In a machine of the character described, the combination of accumulating mechanism; type-carriers; hammers; latches restraining the latter and coöperatively related for cipher-printing, with coupling devices between certain latches; totaling means sectionally operable to print totals independently of each other on opposite sides of the said coupling devices; and manipulative means normally preventing such independent printing of totals but adjustable to permit the same and disconnect the latch-coupling devices.

5. In a machine of the character described, the combination of accumulating mechanism; printing devices cooperatively related for the automatic filling in of ciphers; means for suspending such coöperative action at will at a predetermined point; and totaling means sectionally operable to print totals independently of each other on opposite sides of such point, said latter means comprising separately depressible keys.

[Claims 6 to 62 not printed in the Gazette.]

1,016,277. LOCK-OUT DEVICE FOR PARTY-TELEPHONES. DANIEL W. KNEISLY, Dayton, Ohio, assignor to The Dayton Telephone Lockout Mfg. Co., Dayton, Ohio, a Corporation of Ohio. Filed Feb. 20, 1908. Serial No. 416,900. (Cl. 179—31.)



1. In a device of the character described, the combination with lockout mechanism of means controlling the ringing circuit and receiver hook and comprising an oscillating segmental plate having a series of recesses therein, said recesses being greater in number than the number of instruments on the line, the initial recess of said series being adapted to maintain the lockout mechanism in such position as to release the receiver hook while maintaining the ringing circuit in open condition and one of said recesses being of greater depth than the others and adapted when engaged to permit the closure of said ringing circuit and simultaneously release the hook, a means for operating said controlling mechanism, substantially as described.

2. In a device of the character described, the combination with means for locking the receiver hook in inoperative position, of controlling means therefor comprising an oscillating segmental plate having a series of recesses therein of different depths, a pivoted lever adjacent to said segmental plate and having a tooth adapted to enter the recesses at different depths in said segmental plate thereby controlling the position of said lever, and means for operating said mechanism and means controlled by said lever adapted to release the receiver hook when said tooth enters the top notches, subetantially as described.

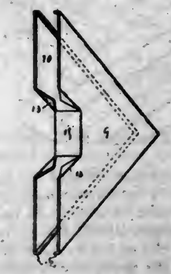
3. In a device of the character described, the combination with circuit make and break mechanism of means controlling the receiver hook and ringing circuit the same comprising a pivoted oscillatory plate having a series of recesses in the edge thereof, one of said recesses being of greater depth than the other recesses, a second recess of less depth than the first mentioned recess and of greater depth than the remaining recesses, and means for oscillating said plate means engaging the recesses of said plate and when in engagement with the first mentioned recess adapted to cause the release of said hook and the closure of the ringing circuit but when engaged by the second mentioned recess adapted to release only said hook while maintaining the ringing circuit open, substantially as and for the purpose specified.

4. In a device of the character described, the combination with means for rendering the receiver hook inoperative of means controlling same and comprising an oscillating segmental plate, a series of controlled teeth of different depths in the edge of said segmental plate, an additional series of detent teeth also in the edge of said segmental plate a detent adapted to engage said detent teeth to limit the movement of the segmental plate and a pawl engaging the variable depth control teeth for oscillating said segmental plate both said detent and pawl being carried on a common lever, subetantially as and for the purpose specified.

5. In a device of the character described, the combination with circuit make and break mechanism of an oscillating segmental plate having a series of teeth in the edge thereof, a lever, a pawl carried by said lever adapted to engage said teeth and oscillate said plate, a magnet for operating said lever, a detent pivotally supported on said lever and engaging said segmental plate to prevent said plate from moving a greater distance than the space of one tooth at each movement of said lever, substantially as described.

[Claims 6 to 41 not printed in the Gazette.]

1,016,278. CORNER-PIECE FOR FRAMES. JOHN L. KUNTZ, Omaha, Nebr. Filed Aug. 19, 1911. Serial No. 644,994. (Cl. 20—92.)



1. In combination with the horizontal and vertical strips of a frame, said strips being formed with channels in their sides, a corner piece comprising a metallic sheet incised and bent to form substantially parallel side plates with outer and inner terminal flanges, and a bridge connecting the side plates; said corner piece adapted to have d mounting with its side plates embracing the sides of the frame strips, its outer terminal flanges being seated in the channels, its inner flanges engaging the inner faces of the strips, said bridge spanning the space adjacent to the terminals diagonally between the inner faces of said frame strips.

2. In combination with the angularly disposed strips of a frame, said strips having grooves formed in their sides, a corner piece therefor consisting of substantially parallel, adjacent, triangular plates integrally connected by a bridge member and provided with outer and inner inturned flanges; said corner piece adapted to be disposed with its triangular plates embracing the sides of the frame strips, its outer flanges being seated in said grooves, its inner flanges engaging the inner faces of said strips, said bridge member extending diagonally between and having its ends bearing upon the inner faces of said frame strips.

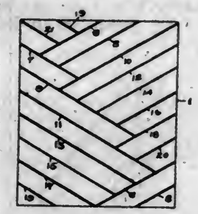
3. In combination with the horizontal and vertical strips of a frame, a corner piece comprising a metallic sheet incised and bent to form side plates with wings and with outer and inner transverse flanges and a connected bridge-member; said corner piece adapted to have a mounting with its side plates embracing the sides of the frame strips, its outer transverse flanges being seated in the sides between the inner and outer faces of the strips, its inner flanges engaging the inner faces of said strips, said bridge-member extending diagonally between with its free ends engaging the inner faces of said strips, the wings of said plates extending outwardly of the bridge-member for engagement with the sides of the frame strips.

4. In combination with the horizontal and vertical strips of a frame, a corner piece therefor comprising a metallic sheet incised and bent to form triangular plates for a seating upon the sides of said strips, and a transverse brace for spanning the space between and near the junction of the inner faces of said strips, said side plates having wings extending outwardly of the brace for engagement with the sides of said strips.

5. In combination with the horizontal and vertical strips of a frame, a corner piece therefor, comprising a metallic sheet incised and bent to form triangular side plates with

terminal wings and a transverse bridge; said side plates adapted to have seatings upon the sides of the strips to dispose said bridge adjacent to the junction and between the inner faces of said strips, said wings projecting outwardly of the bridge for engagement with the sides of said strips.

1,016,279. CYLINDER FOR LEATHER-SHAVING MACHINES. CHARLES A. LOUGEE, Newark, N. J. Filed Feb. 17, 1911. Serial No. 609,119. (Cl. 149—16.)



1. The hereindescribed cylinder for leather shaving machines, comprising a cylindrical body portion having sets of helical grooves each of which sets extends clear around the cylinder circumferentially, the grooves of each set extending from one end of the cylinder helically toward the other set and in the opposite direction around the body portion therefrom, all the grooves of each set terminating short of one end of the cylinder and each meeting a groove of the other set, said meeting points lying in a series of circumferential lines distributed lengthwise of the cylinder equi-distant from each other and said circumferential lines being symmetrically arranged with reference to a transverse plane of the cylinder midway of its ends with a plurality of said circumferential lines on each side of said plane, whereby a distribution of meeting points and a balancing of end thrust is insured, and blades mounted in said grooves.

2. The hereindescribed cylinder for leather-shaving machines, comprising a cylindrical body portion having sets of helical grooves each of which sets extends clear around the cylinder circumferentially, the grooves of each set extending from one end of the cylinder helically toward the other set and in the opposite direction around the body portion therefrom, all the grooves of each set terminating short of one end of the cylinder and each meeting a groove of the other set, said meeting points lying in a series of circumferential lines distributed lengthwise of the cylinder equi-distant from each other and sufficiently numerous so that the number of meeting points in any one is less than half the number of grooves in a set and the numbers of grooves between each two circumferential lines are nearly equal, and blades mounted in said grooves.

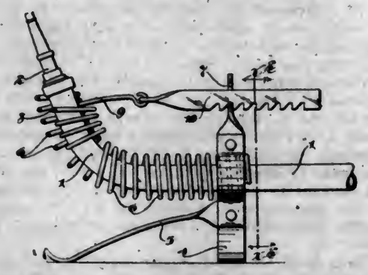
3. The hereindescribed cylinder for leather-shaving machines, comprising a cylindrical body portion having sets of grooves each of which sets extends clear around the cylinder circumferentially, the grooves of said sets extending one from each end of the cylinder helically toward the other end in opposite directions around the body portion, each set of grooves comprising grooves of different lengths the longest of which extends to the last groove of the other set before the opposite end of the cylinder would be reached if said longest groove were continued and the shortest of which extends to the longest groove of the other set, and blades mounted in said grooves as set forth.

1,016,280. HAME ATTACHMENT. FRED L. LOWREY, Houlton, Me. Filed Apr. 11, 1911. Serial No. 620,327. (Cl. 54—25.)

In combination with a hame top and the knob on one extremity thereof, a detachable ring securing member comprising a strap, said strap comprising a body portion and a tongue portion, the body portion being provided with an elongated opening near the base of the tongue, and a relatively square opening in the opposite extremity thereof, a retaining strip riveted to the central portion of the body, said retaining strip adapted to support a ring, and the

said detachable ring supporting member adapted to be attached to the upper portion of a hame top directly under the said knob.

1,016,281. ADJUSTABLE HOSE-NOZZLE HOLDER. CARL J. LUNDQUIST, Minneapolis, Minn., assignor of one-half to Erick O. Wistrand, Minneapolis, Minn. Filed Aug. 17, 1911. Serial No. 644,484. (Cl. 248—29.)



1. A holder of the kind described, comprising a supporting bracket, a coiled spring through which the hose may be passed, and means for holding the said spring in different adjustments, substantially as described.

2. A holder of the kind described, comprising a supporting bracket, a coiled spring secured to the said bracket at one end, and through which the hose is adapted to be passed, and an adjustable connection between the free end of said coiled spring and the said supporting bracket, whereby the hose and its nozzle may be held in its different adjustments, substantially as described.

3. In a holder of the kind described, the combination with a supporting bracket, of a coiled spring attached thereto at one end, and means for adjusting the free end of said coiled spring, comprising a notched bar having interlocking engagement with a part of said bracket.

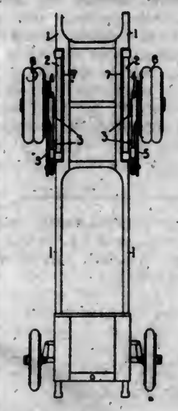
4. A holder of the kind described, comprising a supporting bracket, a spring secured to said supporting bracket, means for attaching the hose to said spring, and means for holding said spring in different adjustments to vary the position of the nozzle, substantially as described.

5. In a holder of the kind described, the combination with a supporting bracket, of a coiled spring attached thereto at one end, a gripping coil intermeshed with the free end of said coiled spring, and a notched bar connected to said gripping coil and having interlocking engagement with a portion of said bracket.

[Claims 6 and 7 not printed in the Gazette.]

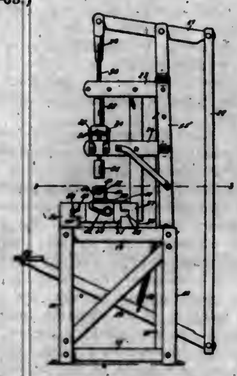
1,016,282. MOTOR-CAR FRAME. HEINRICH MAYER, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed June 9, 1910. Serial No. 566,018. (Cl. 21—10.)

In a motor-car, the combination with a frame comprising two longitudinal side bars and several cross bars, of a rear axle, two rear springs rigidly connected intermediate their length with said rear axle and connected at their free ends with the two side bars of said frame, and two rear wheels turnable on the ends of said rear axle, the two side bars of said frame being inwardly bent for the length of said two rear springs so as to form two recesses



for same and to bring the springs into line with the remaining portions of the side bars.

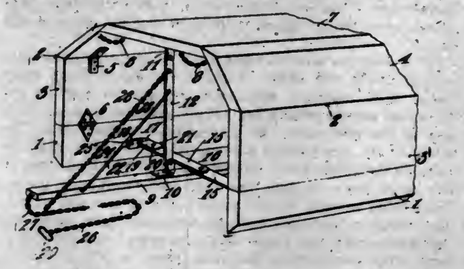
1,016,283. BORING-MACHINE. ROBERT LEE MCDANIEL, Camden, Miss. Filed Feb. 18, 1910. Serial No. 544,719. (Cl. 77—63.)



In a machine of the class described, a base, a work support mounted on the base, a work carrier pivotally mounted on said work support, whereby said carrier may be moved to an inclined position with respect to said support, a lever pivoted to said carrier and movable in a plane extending longitudinally of the latter, an arm on said lever having a portion thereof bent to overlie said carrier for engaging the work and detachably locking same to the carrier when said lever is moved in one direction, a hook pivoted to the work support for engaging said lever and locking same against movement in the opposite direction to release the arm from engagement with the work, and a boring and drilling mechanism mounted on the base and disposed above the carrier.

1,016,284. COLLAPSIBLE FORM. HERREMAN O. MEEK and CURTIS E. BRADBURN, Garden City, Kans. Filed Dec. 1, 1910. Serial No. 595,076. (Cl. 25—32.)

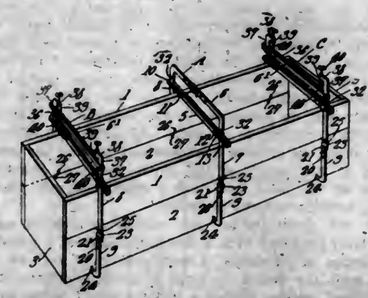
1. In a device of the class described, a collapsible form; a collapsing member movable within and longitudinally of the form, the collapsing member being adapted to rest upon a common support with the form; oppositely extended links pivotally uniting the collapsing member with the sides of the form; spaced links pivotally uniting the collapsing member with the top of the form; a locking device connecting one of the last named links with the collapsing member to uphold the top of the form; and a crotch line, one of the branches of which is connected with the collapsing member, the other branch thereof being connected with the link to which the locking device is applied.



2. In a device of the class described, a collapsible, open-bottomed form including shoulders; skew backs hinged to the lower edges of the shoulders; a key board disposed between the upper edges of the shoulders; a collapsing member movable within the form and adapted to rest upon a common support with the form; oppositely extended links pivoted at their adjacent ends to the collapsing member, and at their remote ends pivoted to the skew backs; spaced links pivoted to the collapsing member and to the key board; and flexible elements connecting the key board with the shoulders; the collapsing member being longitudinally movable, to fold the skew backs inwardly, and to move the key board downwardly, whereby the weight of the key board will fall upon the flexible members, thereby moving the upper portions of the shoulders into overlapping relation above the key board.

3. In a device of the class described, a collapsible form including shoulders; skew backs hinged to the shoulders; a key board disposed between the shoulders; flexible elements uniting the key board with the shoulders; a collapsing member movable within the form and adapted to rest upon a common support with the form; oppositely extending links pivoted at their adjacent ends to the collapsing member, and at their remote ends pivoted to the skew backs; spaced links pivoted to the collapsing member and to the key board; a locking device engaging one of the last named links to uphold the board; and a crotch line having one of its branches attached to the collapsing member, the other branch of the crotch line being secured to the link which is provided with the locking device.

1,016,285. CONCRETE-MOLD. HERREMAN O. MEEK, Garden City, Kans. Filed Jan. 21, 1911. Serial No. 603,913. (Cl. 25—121.)



1. A concrete mold comprising a form; side pieces extended along the sides of the form, and having their upper ends pivotally connected, across the top of the form; an arched cross piece having its bend engaged with one of the side pieces, its free ends extending along the other of the side pieces; a connecting element in the

free ends of the cross piece, to bind the free ends of the cross piece against the last mentioned side piece; there being a notch in the outer edge of said side piece, into which the connecting element is adapted to move, when the cross piece is slid longitudinally of the side pieces, and in the direction of its length, the registering of the connecting element in the notch permitting the side pieces to be swung apart, thereby to free the sides of the form.

2. A concrete mold comprising a form; side pieces extended along the sides of the form and having their upper ends pivotally connected, across the top of the form; an arched cross piece having its bend engaged with one of the side pieces, its free ends extending along the other of the side pieces; a connecting element in the free ends of the cross piece, adapted to bind the free ends of the cross piece against the last mentioned side piece; there being notches in the outer edges of the side pieces, into which notches the bend of the cross piece, upon the one hand, and the connecting element, upon the other hand, may move, when the cross piece is slid longitudinally of the side pieces, and in the direction of its length.

3. A concrete mold comprising a form; side pieces extended along the sides of the form, and having their upper ends turned to overhang the upper edges of the form; screws threaded into the turned portions of the side pieces, and adapted to bear against the upper edges of the form; an upper cross piece adjustably connecting the side pieces; and a lower cross piece adjustably connecting the side pieces, below the upper cross piece, the lower cross piece being of arched construction, and having its bend engaged with one of the side pieces; a connecting element uniting the free ends of the lower cross piece, to bind the same against the other side piece; there being a notch in the outer edge of said side piece, which the connecting element is adapted to enter, when the lower cross piece is elevated, thereby permitting the side pieces to be swung apart, to free the sides of the form.

1,016,286. SCREW-STOPPER FOR BOTTLES AND OTHER RECEPTACLES. JOHN NIGHTINGALE and JOHN SACKETT, Charlton, England. Filed Jan. 9, 1911. Serial No. 601,594. (Cl. 215—52.)

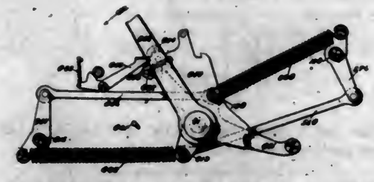
1. A one piece rubber stopper for bottles comprising an integral body provided with a threaded shank of a relatively high degree of hardness, a conical neck having a diameter exceeding the greatest diameter of the shank thereby forming a shouldered bottle closing portion and a peripheral bottle-closing portion, the said neck being relatively soft as compared to the shank, and a head or top portion having a diameter exceeding the diameter of the shank to provide a shouldered portion for closing the top of the mouth of the bottle, the said shouldered portion of the head being of a relatively soft yielding nature, substantially as described.

2. A one piece stopper for bottles comprising an integral body provided with a threaded shank of a relatively high degree of hardness, a neck relatively soft as compared with the shank to form a closing portion, and a top or head portion having a relatively soft bottle closing portion, substantially as described.

3. A one piece rubber stopper for bottles comprising an integral body provided with a threaded shank of a relatively high degree of hardness, a neck relatively soft with respect to the shank and having angularly disposed bottle closing portions, and a top or head portion of a relatively high degree of hardness and having a soft yielding bottle closing portion, substantially as described.

4. A one-piece rubber stopper for bottles comprising an integral body provided with a threaded shank of a relatively high degree of hardness, a head of a relatively high degree of hardness and having a relatively soft bottle-closing portion, and a plurality of relatively soft bottle-closing portions angularly disposed with respect to the soft-closing portion of the head and with respect to each other and arranged in successive order from the threaded portion to the head whereby one supplements the other in effecting closure of the mouth of the bottle.

1,016,287. HANDLE MECHANISM. NATHAN W. PERKINS, Jr., East Orange, N. J. Filed Oct. 24, 1910, Serial No. 588,760. Renewed July 7, 1911. Serial No. 637,325. (Cl. 235—62.)



1. In a snap operating mechanism, the combination with a movable member, of an actuable operating device movable in relation thereto, latching means for holding the aforesaid movable member in normal position adapted to be tripped on the movement of the actuable operating device, and spring means interposed between the operating device and movable member which is adapted to be tensioned by the movement of the operating device and acts to restore the movable member and operating device to normal position.

2. In a snap operating mechanism, the combination with a movable member, of an actuable operating device movable in relation thereto, latching means for holding the aforesaid movable member in normal position adapted to be tripped on the movement of the actuable operating device, pivoted levers, links connecting said levers to the movable member aforesaid, and springs connecting the levers to the operating device, whereby the springs are tensioned by the movement of the operating device.

3. In a snap operating mechanism, the combination with a movable member, of an actuable operating device movable in relation thereto, latching means for holding the aforesaid movable member in normal position adapted to be tripped on the movement of the actuable operating device, pivoted levers each having a long and a short arm, links connecting the long arms of said levers to the movable member, and springs connecting the short arms of said levers to said operating device, whereby the springs are tensioned by the movement of the operating device.

4. In a snap operating mechanism, the combination with a pivoted power transmitting member, of a pivoted handle movable in relation thereto, latching means for holding the said member in normal position adapted to be tripped on the movement of the handle, and a spring operating device operatively connected to the handle and to the power transmitting member on opposite sides of the pivot thereof which is adapted to be tensioned by the movement of the operating device.

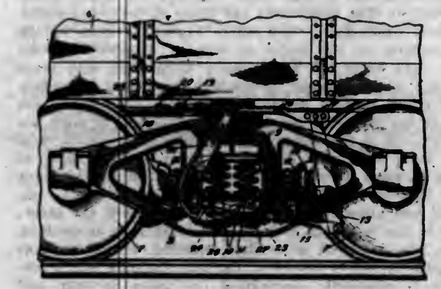
5. In a snap operating mechanism, the combination with a pivoted power transmitting member, of a pivoted handle movable in relation thereto, latching means for holding the said member in normal position adapted to be tripped on the movement of the handle, pivoted levers, springs connecting said levers to the handle on opposite sides of the fulcrum thereof, and links connecting the levers to the power transmitting member on opposite sides of its fulcrum, said springs being adapted to be tensioned by the movement of the operating device.

[Claims 6 to 8 not printed in the Gazette.]

1,016,288. IRONING-BOARD. ERNST FRITZ PFUND, Leipzig-Eutritzsch, Germany. Filed July 6, 1909. Serial No. 506,190. (Cl. 68—1.)

An improved ironing board comprising in combination the ironing board proper which is of any convenient form, an eye projecting from the lower surface of said board and a vertical lug of band iron having a hole in its lower end also projecting from the lower surface of said board and a support having a cavity for the reception of the said eye and a vertical slot extending downwardly from its upper surface, said slot being designed to receive the lug vertically projecting from the board a horizontal boring extending from the lower end of said vertical slot to the outer surface of the support, a spring bolt in said cavity which engages with said eye of the board and a pin in said horizontal boring which enters the hole of the vertical lug, substantially as described and shown and for the purpose set forth.

1,016,289. VARIABLE-LOAD BRAKE MECHANISM. WILLARD G. RANSOM, Davenport, Iowa. Filed Apr. 7, 1911. Serial No. 619,486. (Cl. 188—43.)



1. A variable load brake for cars, comprising a car truck having side frames, brake shoes carried by said truck, means for moving said shoes toward and from the car wheels, said means including a lever, connections from said lever to the actuating power and to said shoes, and means whereby said lever operates as a simple lever or as a compound lever, depending upon the weight of the load upon said car truck.

2. A variable load brake for cars, comprising a car truck having side frames, brake shoes carried by said truck, means for moving said shoes toward and from the car wheels, said means including a lever, a weight-lifting lever connected at its upper end to one end of said lever, a connection from said lever at another point thereon to the actuating power and a connection at a point intermediate of the two to said brake shoes, means whereby when the actuating force is applied the movement of the upper end of said weight-lifting lever depends upon the weight of the load upon said car truck, and a stop against which the opposite end of said first-mentioned lever is adapted to bear when the upper end of said weight-lifting lever has been moved through a predetermined distance.

3. A variable load brake for cars, comprising a car truck having side frames, brake shoes carried by said truck, means for moving said shoes toward and from the car wheels, said means including a lever, connections from said lever to the actuating power and to said shoes, and means whereby said lever operates under three forces under certain load conditions, and under four forces under other load conditions.

4. A variable load brake for cars comprising a car truck having side frames, brake shoes carried by said truck, means for moving said shoes toward and from the car wheels, said means including a lever, connections from said lever to the actuating power and to said shoes, and means whereby said lever operates under a limited number of forces under heavy load conditions, and under an increased number of forces under light load conditions.

5. A variable load brake for cars comprising a car truck having side frames, brake shoes carried by said truck, means for moving said shoes toward and from the car wheels, said means including a lever, connections from said lever to the actuating power and to said shoes, and means whereby said lever operates under a varying number of forces as determined by load conditions.

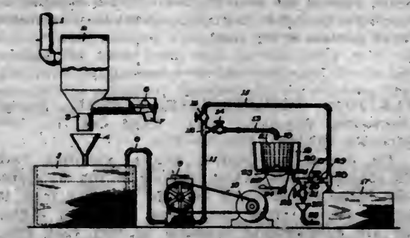
[Claims 6 to 18 not printed in the Gazette.]

1,016,290. GAS-PURIFIER. RICHARD ROBINSON, Pittsburgh, Pa. Filed Mar. 23, 1911. Serial No. 616,329. (Cl. 75—30.)

1. The combination with a furnace and draft stack, of an inclined flue intermediate of said furnace and stack; a plurality of fluid retaining vats arranged in spaced relationship in the bottom of said flue; inclined surfaces connecting said vats; a receiving well below the stack; means for supplying fluid to the said well; an agitator element positioned in each vat and well; an overflow orifice; and means for setting up a spray or shower of fluid within the flue.

2. An angularly disposed flue intermediate of a heating chamber and draft stack; a plurality of fluid retaining receptacles in the bottom of said flue; a receiving well below the stack; means for furnishing a continuous flow of fluid to said well and receptacles; means for furnishing a shower or spray of fluid in the flue; an agitating element in each receptacle; an over-flow orifice; and means, communicating with each receptacle through the walls of the flue, for removing the contents of said receptacles.

1,016,291. PROCESS OF TREATING BREWERS' SLOPS. CLINTON S. ROBISON, Chicago, Ill. Filed Nov. 1, 1909. Serial No. 525,626. (Cl. 99—5.)

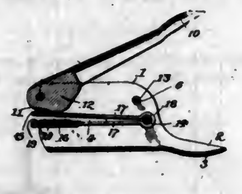


1. The herein described process which comprises in first drawing the fluid portion from brewers' slops, and subjecting said fluid portion to centrifugal action, thereby removing the insoluble solid material held in suspension in said fluid portion.

2. The herein described process which consists in first drawing the fluid portion from brewers' slops, subjecting said fluid portion to centrifugal action to remove the insoluble solid material held in suspension, and drying the solid material so removed.

3. The herein described process which comprises first drawing the fluid portion from brewers' slops, and immediately subjecting said fluid portion alone to centrifugal action, thereby removing the insoluble solid material held in suspension in said fluid portion.

1,016,292. DIE-PRESS. ALFRED W. ROOVERS, Brooklyn, N. Y. Filed Nov. 9, 1909. Serial No. 527,093. (Cl. 101—56.)



1. The combination of actuating means; coöperating die faces each formed in sheet metal; a connecting guiding member formed integral with one die and attached to the other die, the said guiding member having a narrowed resilient portion bent upon itself to form a loop and to bring the dies into proximity; and a pin engaging said loop to retain the guiding member in proper relation with the actuating means.

2. A die press comprising a frame; actuating means mounted therein; a pair of dies actuated by said means; a resilient connection between the dies comprising a strip of sheet metal bent upon itself and adapted to be guided by the frame; and a pin engaging said resilient portion and the frame.

3. A die press comprising a frame composed of sheet metal slotted and folded upon itself to form side plates; a cam lever pivoted in said frame; a pair of die carriers mounted in the slots of the frame so as to be actuated by the cam lever; a connecting resilient portion formed integrally with said carrier and guided by the side plates of the frame; a retaining pin in the frame engaging said resilient connecting portion; a die impressed in one carrier; and a second die formed in sheet material and attached to the other carrier.

4. In a die press, the combination of a frame consisting of a piece of sheet material provided with two slots and bent upon itself to form side plates spaced apart and to bring said slots into alinement; a die actuating lever pivoted in the frame; a resilient die carrier consisting of two head portions connected by a narrowed portion bent upon itself to bring the head portions into proximity, the die carrier being inserted in the frame with its narrowed portion confined between the side plates and the head portions in the slots and beneath the actuating lever; a pin engaging the die carrier to hold it in position; and die faces carried by the head portions of the carrier.

1,016,293. DECAFFEINATED COFFEE. NATHAN ROSEWATER, Cleveland, Ohio. Filed Oct. 17, 1907. Serial No. 397,804. (Cl. 99—11.)

1. The process of treating natural unbroken beans which contain caffein, which consists in the maceration of said beans in hot water only, in removing from the resultant extract those extractives (including caffein) which are substantially insoluble in very cold water, and in restoring to the beans in altered positional relations but in unaltered chemical composition all of those said extractives which are soluble in very cold water.

2. The process of treating natural unbroken beans which contain caffein, which consists in macerating said beans in hot water only; in segregating the resultant extract and the beans; in drying the latter; in evaporating the said extract to dryness; in forming a cold water solution of so much of the residue as will dissolve in very cold water; in causing the dried beans to absorb this cold water extract; and in finally drying said beans.

3. As a new article of manufacture, green denuded unbroken beans of the sort which originally contained caffein, but from which has been removed a large proportion of such of the constituents of said beans as are soluble in hot water, and which contain, in altered positional relation but in unaltered chemical composition, all of those ingredients which are not only soluble in hot water but are also soluble in very cold water.

1,016,294. DECAFFEINATED COFFEE. NATHAN ROSEWATER, Cleveland, Ohio. Filed Mar. 29, 1911. Serial No. 617,681. (Cl. 99—11.)

1. The described process of purifying vegetable beans containing caffein and other xanthin alkaloids, which consists in first macerating said beans in very cold water to form a cold water extract of those constituents of the beans which will be dissolved in very cold water; second, in subsequently macerating said beans in hot water to form hot water extract of such remaining constituents of the beans as will dissolve in hot water; and in then restoring said cold water extractives to said beans in altered positional relations but in unaltered chemical condition.

2. The described process of treating vegetable beans containing caffein and other xanthin alkaloids, which consists in first macerating the beans in very cold water, thereby producing a cold water extract of such of the ingredients of the beans as will be dissolved by said very cold water; in subsequently macerating said beans in hot water, thereby producing an extract of caffein and other xanthin alkaloids and such other substances remaining in the beans as will be dissolved by such hot water, and in continuing the hot water macerations until the beans have been denuded of their external skin; in concentrating the cold water extract; in drying the beans and immersing them in said concentrating cold water extract and allowing the dried beans to absorb the same; and in finally drying said beans, substantially as specified.

3. The described process of treating vegetable beans containing caffein and other xanthin alkaloids, which consists in repeatedly macerating the beans in very cold water, thereby producing cold water extracts of such of the ingredients of the beans as will be dissolved by very cold water; in subsequently repeatedly macerating the said beans in hot water, thereby producing extracts of caffein and other xanthin alkaloids and such other substances remaining in the beans which will dissolve in hot water, and in continuing this hot water maceration until the beans have been denuded of their external skin; in drying the beans; in concentrating some of the first produced cold water extracts to about the consistency of honey; in immersing the dried bean in this concentrated cold water extract, whereby the same will be absorbed into and upon the beans; and in finally drying said beans, substantially as specified.

4. As a new product (article of manufacture) whole vegetable beans which have been denuded of their outer cover skin and from which much of the extractives soluble in both cold wates and in hot water have been removed, and to which the extractives soluble in very cold water only have been restored in unaltered chemical condition,—said extractives being absorbed into and deposited upon the denuded surface of said beans to form a sealing glaze.

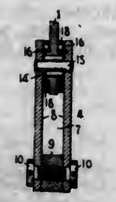
1,016,295. DYE OR STAIN. LOUIS N. SAHM, New York, N. Y. Filed Nov. 4, 1911. Serial No. 658,522. (Cl. 8—6.)

A dyeing or staining compound comprising alcohol, acetic acid, tannin, shellac and coloring matter, as described and in approximately the proportions stated.

1,016,296. BOLT-HOLDER. JOSEPH A. SCHLEHR, Chicago, Ill. Filed Oct. 17, 1910. Serial No. 587,469. (Cl. 81—53.)

A wrench comprising pivotally connected members, which are provided with gripping jaws having transversely disposed teeth, the working face of one jaw being concaved and terminating in a V-shaped end, forming two teeth, the working face of the other jaw being substantially flat and terminating in a single centrally disposed tooth at its end forming oppositely positioned contacting shoulders, whereby an object may be firmly gripped between the teeth upon the receiving outer ends of the jaws.

1,016,297. TYPE-WRITING MACHINE. ROBIE SEIDELINGER, Wilmington, Del., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 18, 1909. Serial No. 518,429. (Cl. 197—39.)



1. In a typewriting machine, the combination of a type bar, a hanger therefor having parallel arms, a support to which said hanger is secured, a series of substantially cylindrical bearing rollers between said hanger arms, a suitable support on the hanger for said cylindrical rollers so that the rollers support the type bar in its pivotal movement, and circularly arranged anti-friction balls interposed between the type bar and hanger arms, which balls receive the lateral thrust of the type bar, the rollers being arranged in a circular series within and concentric with the said series of balls.

2. In a typewriting machine, the combination of a type bar, a hanger therefor having parallel arms, a support to which said hanger is secured, a series of substantially cylindrical bearing rollers between said hanger arms, a suitable support on the hanger for said cylindrical rollers, so that the rollers support the type bar in its pivotal movement, and anti-friction balls interposed between said type bar and hanger arms and situated on opposite sides of the type bar, said anti-friction balls bearing against the hanger arms and receiving the lateral thrust of the type bar.

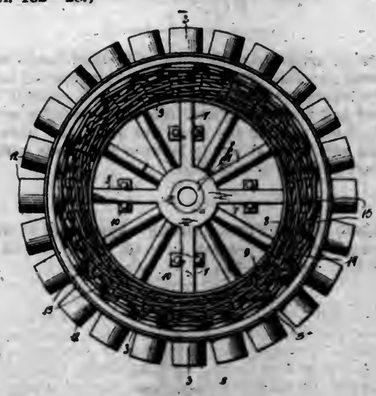
3. In a typewriting machine, the combination of a hanger, a type bar, one of said parts being bifurcated to receive the other, a pivot pin which unites the type bar and hanger, a series of cylindrical bearing rollers which bear against said pin and on which the type bar receives its support in its pivotal movement, and anti-friction rollers which are interposed between and bear against the type bar and hanger and which only receive the lateral thrust of the bar.

4. In a typewriting machine, the combination of a type bar, a hanger, one of said type bar and hanger members having parallel arms, a pivot pin carried by said parallel arms, a series of cylindrical bearing rollers surrounding said pin and interposed between it and the other of said members, and anti-friction balls which are interposed between and bear against the type bar and hanger and take the lateral thrust of the type bar.

5. In a typewriting machine, the combination of a type bar, a bifurcated hanger in which the type bar is received, cylindrical bearing rollers between the type bar and hanger and on which the type bar is wholly supported for pivotal movement, and anti-friction balls which are interposed between and bear against the arms of the hanger and the type bar and receive only the lateral thrust of the type bar.

[Claims 6 to 21 not printed in the Gazette.]

1,016,298. SPRING-WHEEL. LOUIS P. SIEVERS, Larchwood, Iowa. Filed June 1, 1911. Serial No. 630,622. (Cl. 152—28.)

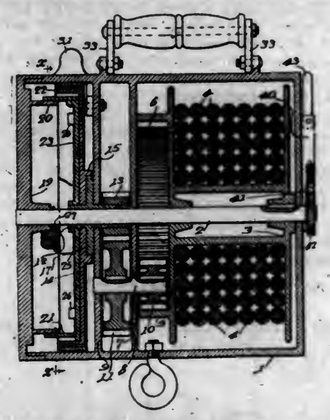


In a spring wheel the combination with a hub having spokes radiating therefrom, a rim supported and spaced from the hub by said spokes, a pair of parallel rows of openings formed in said rim and being arranged in staggered relation, a pair of members having radial arms provided with oppositely disposed ears, inner rims formed integral with the outer ends of said arms, outwardly projecting lugs formed upon the outer face of the inner rims and being arranged in staggered relation, plugs slidably mounted in the openings formed in the outer rim and positioned directly over the lugs upon the inner rims, said plugs being provided with flanges, coil springs placed between said rims and having their upper terminals resting against said flanges and their lower terminals resting against the inner rims, said springs being held against accidental displacement by the lugs, and means passing through the oppositely disposed ears for clamping the pair of members to certain of the spokes.

1,016,299. FIRE-ESCAPE. EMERY SNYDER, Springfield, Ohio. Filed Apr. 12, 1909. Serial No. 489,299. (Cl. 227—34.)

In a fire escape, a main frame comprising end members, a shaft journaled in said end members, a drum rigidly secured to said shaft, a line secured at one end to said drum and wrapped about the same, an annular flange rigidly secured to one of said members and extending inwardly therefrom, a sleeve loosely mounted on said shaft, a geared

connection between said sleeve and said drum, a disk mounted on said sleeve, a clutch connecting said disk with said sleeve to cause said disk to rotate in unison with said drum in one direction, a lever loosely mounted on said shaft and extending on the opposite sides thereof, a brake-band extending about said flange and rigidly secured at one end to said disk and secured at its other end to one end of



said lever, arms pivotally mounted at their outer end on said disk at points removed from the center thereof, extending substantially parallel to said lever on opposite sides thereof and terminating near said shaft, weights secured to the inner ends of the respective arms, and links connecting said arms at points between their ends with the adjacent portions of said lever.

1,016,300. FURNITURE-CASTER. FERDINAND W. STARR, Springfield, Ohio. Filed Oct. 10, 1910. Serial No. 586,191. (Cl. 16—73.)

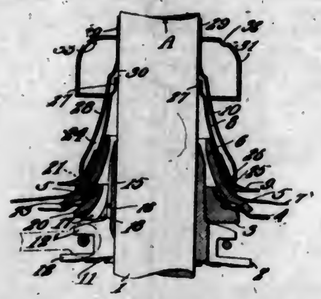
1. A furniture caster, comprising a tubular socket provided with an attaching rim carrying bearing pins, bearing disks journaled on said pins, said disks projecting beyond the inner periphery of said tubular socket, and a caster stem having a race-way receiving the projecting portions of said disks and retaining said stem in said socket.

2. In a furniture caster, a wall provided with a socket and a base, bearing disks horizontally journaled beneath said base and projecting within the mouth of said socket, and a caster stem having a circumferential groove receiving the projecting portions of said disks whereby said stem is retained in said socket.

1,016,301. UMBRELLA. BIRDWELL E. SUTLIVE, Keokuk, Iowa. Filed Mar. 20, 1911. Serial No. 615,079. (Cl. 135—28.)

1. In an umbrella, a notch; and a washer surrounding and resting upon the notch, the inner face of the washer having a series of longitudinal ribs, defining channels affording a drainage between the washer and the notch.

2. In an umbrella, a staff; a notch secured to the staff; a washer surrounding and resting upon the notch, the inner face of the washer having a series of longitudinal ribs, defining channels affording a drainage between the washer and the notch; and a cap upon the staff, having an outlet opening adapted to discharge the water which drains between the washer and the notch.



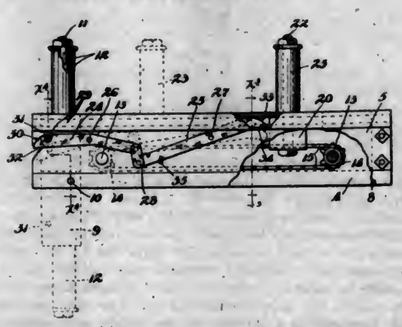
3. In an umbrella, a supporting structure including a notch; a spacing disk upon the supporting structure; and an annular member superposed upon the disk, the annular member having a longitudinal channel in its inner face, permitting drainage between the annular member and the disk.

4. In an umbrella, a supporting structure including a notch; a spacing disk upon the supporting structure; a ring resting upon the disk; and an annular member supported upon the ring, the annular member having a longitudinal channel in its inner face, permitting a drainage between the annular member and the ring.

5. In an umbrella, a supporting structure including a notch; a spacing disk upheld by the supporting structure; and an annular member supported upon the disk, the annular member having longitudinal channels in its inner face, permitting a drainage between the annular member and the disk.

[Claims 6 to 8 not printed in the Gazette.]

1,016,302. BELT GUIDING AND SHIFTING DEVICE. LAURIS L. THOMPSON, Austin, Minn. Filed Mar. 9, 1911. Serial No. 613,361. (Cl. 64—4.)



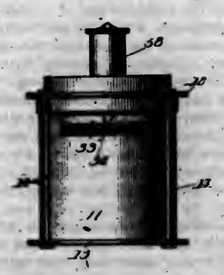
1. In a device of the kind described, the combination with a guide, of a pair of rollers mounted on said guide and arranged, one for sliding movement and the other for swinging movement, means for moving said sliding roller including sprocket wheels and a sprocket chain, a lock for said swinging roller, and means operated by said sliding roller for releasing said lock, substantially as described.

2. In a device of the kind described, the combination with a guide, of a pair of rollers mounted on said guide and arranged, one for sliding movement and the other for swinging movement, means for moving said sliding roller including sprocket wheels and a sprocket chain, a gravity actuated lock for said swinging roller, and means operated by said sliding roller for releasing said lock, substantially as described.

3. In a device of the kind described, the combination with a guide, of a pair of rollers mounted on said guide and arranged, one for sliding movement and the other for swinging movement, means for moving said sliding roller including sprocket wheels and a sprocket chain, a gravity actuated lock for holding said swinging roller in an operative position, and means operated by said sliding roller for releasing said lock, substantially as described.

4. In a device of the kind described, the combination with a guide, of a pair of rollers mounted on said guide and arranged, one for sliding movement and the other for swinging movement, said swinging roller having a latch lug, means for moving said sliding roller including sprocket wheels and a sprocket chain, a lock for said swinging roller including a pair of intermediately pivoted levers, the outer end of one of said levers terminating in a latch having a cam nose for engagement with said latch lug, and the outer end of the other of said levers terminating in a cam arranged to be operated on by said sliding roller for releasing said latch, and a link connecting the inner ends of said levers, said levers being held in operative positions under the action of gravity, substantially as described.

1,016,303. ELECTRIC MEASURING INSTRUMENT. CHESTER H. THORDARSON, Chicago, Ill. Filed June 27, 1910. Serial No. 569,045. (Cl. 171—95.)



1. An electric measuring instrument comprising an electromagnet, said magnet having two outer poles of like sign, a meter indicator arm and two inner poles of like sign but dissimilar to the outer poles, a pivoted, double-arm, balanced member for actuating the meter indicator arm arranged to swing about the center of the inner poles of the magnet toward the two outer poles thereof, said inner poles being arranged adjacent to and generally parallel with, and of the same magnetic sign as the swinging member.

2. An electric measuring instrument comprising an electro-magnet embracing two diametrically opposed members and an intermediate member, and an electro-magnetic coil, the intermediate member constituting a pole of one sign of the magnet and the outer members constituting poles of the opposite polarity of said magnet, the intermediate member being provided with a two-arm fixed plate, and a balanced, double-arm, swinging vane pivoted between the outer members and of the same magnetic sign as said plate, for actuating the meter indicator arm, the arms of the vane being adapted to vibrate between the arms of said two-arm plate and the outer members.

3. An electric measuring instrument comprising a frame having magnetically connected, diametrically disposed side members and a central member, a coil surrounding the central member, the central member constituting a pole of one sign of a magnet and the side members the poles of opposite sign of said magnet, pole plates fixed to the frame adjacent to the side members, a two-arm pole plate fixed to the central member, a swinging, double-arm vane pivoted on the axis of the central member for actuating the meter arm and of the same magnetic sign as said central member, the arms of which vibrate between the arms of the fixed plate of the central member and the fixed plates of the side members.

4. An electric measuring instrument comprising a frame having magnetically connected, diametrically disposed side members and a central, tubular member, a coil surrounding the central member, the central member constituting the pole of one sign of a magnet and the side members constituting poles of opposite sign of said magnet, a rotatively mounted shaft extending upwardly through the central tubular member, a double-arm vane fixed to the upper end of said shaft, a two-arm plate fixed to the central tubular member and normally adjacent to and of the same magnetic sign as said vane, and an indicator arm carried by said shaft.

5. An electric measuring instrument comprising a frame having magnetically connected, diametrically disposed side members and a central, tubular member, a coil surrounding the central member, the central member constituting the pole of one sign of a magnet and the side members constituting poles of opposite sign of said magnet, a shaft extending through said central member, spring arms fixed to the frame and carrying bearings in which the ends of the shaft are rotatively mounted, a two-arm plate fixed to the central, tubular member, a double-arm vane fixed to the upper end of said shaft, said vane being arranged in crosswise relation to said two-arm plate and of the same magnetic sign as said plate and normally adjacent thereto, the arms of said vane being swingable between the arms of said two-arm plate and the side members.

[Claims 6 to 13 not printed in the Gazette.]

1,016,304. BRACELET. GEORGE H. TILFORD, Providence, R. I., assignor to Tilford Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 6, 1911. Serial No. 653,267. (Cl. 63—11.)

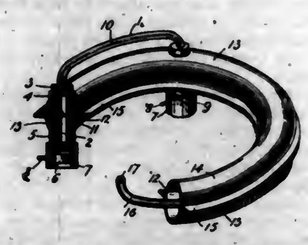
1. A bracelet of the character described having abutting ends, said ends being adapted to separate laterally in opening the bracelet, a locking tongue operatively secured to and normally protruding from one of said ends to engage the opposite bracelet end to normally hold the two in line, and a spring for pressing said tongue outwardly and permitting it to readily withdraw when coming in contact with the arm of the wearer.

2. A one piece bracelet formed of flat stock with both its edges rolled inwardly forming a channel on its inner surface said bracelet having abutting ends adapted to separate laterally in opening the bracelet, a casing secured in the channel portion of one of its abutting ends, a tongue held to move endwise in said casing, the outer end of said tongue normally extending beyond the bracelet end in which it is held, a forwardly extending lip on said casing for supporting the extending end of said tongue, and a spring in said casing for pressing said tongue outward and permitting it to readily withdraw when coming in contact with the arm of the wearer.

1,016,305. APPARATUS FOR THE DETECTION OF DANGEROUS GASES. FREDERICK JAMES TURQUAND and WILLIAM EDWIN GRAY, London, England. Filed Nov. 4, 1910. Serial No. 590,670. (Cl. 73—51.)

1. A device for indicating the diffusive action of gases, comprising a closed chamber, a porous septum or diaphragm arranged in the walls of said chamber, the interior of the latter having communication with the exterior atmosphere only through said porous septum, a device having communication with said chamber for indicating the pressure of gas within the latter, a cover for said porous septum consisting of material impervious to gases, a sleeve

or socket in which said cover is adapted to move, said sleeve or socket being provided with a slotted opening in its wall, and a pin attached to said cover and projecting through said slotted opening to allow of said cover being moved toward and from said porous septum, said slotted opening further serving for the admission of gas so that it may pass through said porous septum.



2. A device for indicating the diffusive action of gases, comprising a closed chamber, a porous septum or diaphragm arranged in the walls of said chamber, the interior of the latter having communication with the exterior atmosphere only through said porous septum, a transparent tube communicating with said chamber said tube having a movable body of liquid therein for indicating the pressure of gas within said chamber, a cover for said porous septum consisting of material impervious to gases, a sleeve or socket in which said cover is adapted to move, said sleeve or socket being provided with a slotted opening in its wall, and a pin attached to said cover and projecting through said slotted opening to allow of said cover being movable toward and from said porous septum, said slotted opening further serving for the admission of gas so that it may pass through said porous septum.

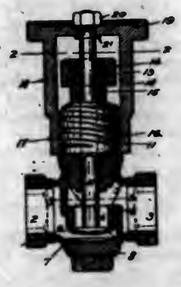
3. A device for indicating the diffusive action of gases, comprising a closed chamber, a porous septum or diaphragm arranged in the walls of said chamber, the interior of the latter having communication with the exterior atmosphere only through said porous septum, a device having communication with said chamber for indicating the pressure of gas within the latter, means for covering or uncovering said porous septum to prevent or allow the passage of gas therethrough, a second closed chamber adapted to contain fresh air or other gas arranged adjacent said first named closed chamber, and a second porous septum or diaphragm arranged in the walls of said first named closed chamber affording communication between said two closed chambers.

4. A device for indicating the diffusive action of gases, comprising a closed chamber, a porous septum or diaphragm arranged in the walls of said chamber, the interior of the latter having communication with the exterior atmosphere only through said porous septum, a device having communication with said chamber for indicating the pressure of gas within the latter, means for covering or uncovering said porous septum to prevent or allow the passage of gas therethrough, a second closed chamber adapted to contain fresh air or other gas arranged adjacent said first named closed chamber, and a second porous septum or diaphragm arranged in the walls of said first named closed chamber affording communication between said two closed chambers, and means for regulating the pressure of the gas within said second named closed chamber.

5. A device for indicating the diffusive action of gases, comprising a closed chamber, a porous septum or diaphragm arranged in the walls of said chamber, the interior of the latter having communication with the exterior atmosphere only through said porous septum, a transparent tube communicating with said chamber having a movable body of liquid therein for indicating the pressure of gas within said chamber, a cover for said porous septum consisting of material impervious to gases said cover serving, when in operative position, to prevent the passage of gas through said porous septum, a second closed chamber adapted to contain fresh air or other gas arranged adjacent said first named closed chamber, and a second porous septum or diaphragm arranged in the walls of said first named closed chamber affording communication between said two closed chambers.

[Claims 6 to 19 not printed in the Gazette.]

1,016,306. GLOBE-VALVE. WILLIAM VIAL, Swissvale, Pa., assignor of one-third to William D. Berry, New Brighton, Pa., and one-third to John Vial, Braddock, Pa. Filed July 26, 1910. Serial No. 573,924. (Cl. 137—4.)



1. In a valve the combination of a body provided with a passage therethrough, a seat in said body, an externally threaded projection on the body and having no connection with said seat, a valve coöperating with the seat and provided with a stem extending through an opening in said externally threaded projection, a stuffing box on said projection, an internally threaded ring directly engaging the externally threaded projection, and an operating member located above said stuffing box and connected to said ring and operatively connected to said valve stem in a manner to leave the stuffing box accessible.

2. In a valve the combination of a body provided with a passage therethrough, a valve seat in said body, a valve coöperating with said seat and provided with a stem, a bonnet threaded into said body and provided with an opening therethrough and with a stuffing box through which said valve stem projects, said bonnet being independent of the valve seat and threaded externally, an internally threaded ring directly engaging the external threads on said bonnet, a hand wheel located above said stuffing box and having the valve stem connected centrally thereto, and members connecting said hand wheel and ring and leaving the stuffing box accessible.

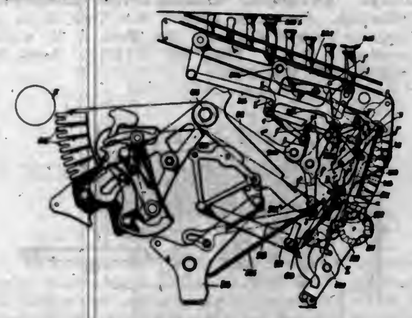
3. In a valve, the combination of a body provided with a passage therethrough, a valve seat in said body, a valve coöperating with said seat and provided with a stem, a bonnet threaded into said body independently of the valve seat and provided with an opening and with a stuffing box through which said valve stem projects, said bonnet being provided with coarse square external threads, a ring provided with coarse square internal threads coöperating with the external threads on the bonnet, a hand wheel located above said stuffing box and having the valve stem connected centrally thereto, and members connecting said hand wheel and ring in a manner to leave the stuffing box accessible.

1,016,307. MONOAZO DYESTUFF AND PROCESS OF MAKING SAME. HERMANN WAGNER and JOSEF EBER, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 1, 1911. Serial No. 630,580. (Cl. 8—1.)

1. The herein described process of manufacturing a monoazo dyestuff especially suitable for preparing violet color-lakes, which consists in combining 1-diazonaphthalene-2-sulfonic acid with 2-naphthol-3-carboxylic acid.

2. As a new product, the dyestuff obtained by combining 1-diazonaphthalene-2-sulfonic acid with 2-naphthol-3-carboxylic acid, being a dark-red powder insoluble in alcohol, the aqueous solution of which is of a red color and its solution in concentrated sulfuric acid of a violet-blue color, the free acid of the dyestuff separating from the latter solution on addition of water in the form of a blue precipitate.

1,016,308. ADDING AND LISTING MACHINE. CHARLES H. WALKER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 29, 1909. Serial No. 499,116. (Cl. 235—60.)



1. In a machine of the character described, the combination with adding wheels, actuators therefor, type carriers connected to the actuators, transfer or carrying mechanism controlling movement of actuators relative to type carriers, and totaling means controlling actuators and type carriers for setting the latter by reverse rotation of the adding wheels when actuators are abnormal relative to type carriers; of means to compensate for movements of actuators back to normal in operation of the type carriers under control of the totaling means, for the purpose set forth.

2. In a machine of the character described, the combination with adding wheels, actuators therefor, type carriers connected to the carriers, transfer or carrying mechanism controlling movement of actuators relative to type carriers and comprising detent means tripped by the adding wheels, means for resetting said detent means, and sub-totaling means controlling actuators and type carriers for setting the latter by reverse rotation of the adding wheels when actuators are abnormal relative to type carriers; of means to compensate for movements of actuators back to normal in operation of the type carriers under control of the sub-totaling means, and means for disabling the transfer resetting means by the sub-totaling means.

3. In a machine of the character described, the combination with adding wheels, actuators therefor, type carriers connected to the actuators, transfer or carrying mechanism controlling movement of actuators relative to type carriers and comprising means tripped by the adding wheels, means for resetting said detent means, and totaling and subtotaling means controlling actuators and type carriers for setting the latter by reverse rotation of the adding wheels when actuators are abnormal relative to type carriers; of means to compensate for movements of actuators back to normal in operation of the type carriers under control of the totaling and sub-totaling means, and means for disabling the transfer resetting means by the sub-totaling means.

4. In a machine of the character described, the combination of adding pinions, actuating racks therefor, type carriers having lost-motion connection with said racks, transfer devices normally preventing full movement of the racks with the carriers in an adding direction, and totaling devices normally limiting movement of the carriers in the opposite direction independently of the racks.

5. In a machine of the character described, the combination of adding pinions, actuating racks therefor, type carriers having lost-motion connection with said racks, transfer devices normally preventing full movement of the racks with the carriers in an adding direction and comprising detent means tripped by the adding wheels, totaling devices normally limiting movement of the carriers in the opposite direction independently of the racks, means for stopping the pinions at zero when turned backward, and resetting detent means for said transfer devices.

[Claims 6 to 30 not printed in the Gazette.]

1,016,309. METALLIC TIE. WILLIS F. WALKER, Alburtis, Pa. Filed Mar. 10, 1911. Serial No. 613,587. (Cl. 238—3.)

1. A railway tie including a body having an apertured web, opposed rail fastening devices straddling the body and adjustable angularly relative to each other, and means carried by the terminals of the respective fastening devices for engaging opposite portions of a rail on the tie.

2. The combination with a metallic tie body having a transverse opening therein, of an angularly adjustable rail fastening member within the opening and straddling the body and a rail engaging device connected to the end portions of and adjustable with said member.

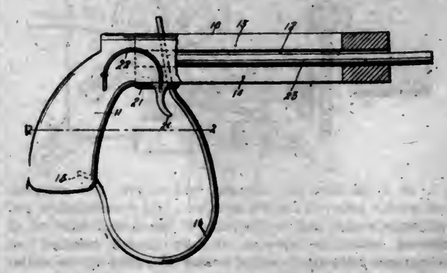
3. A railway tie including a body having a longitudinal web and longitudinal flanges along the top of the web, an angularly adjustable rail fastening member extending through the web and straddling said flanges, and means upon the terminals of said member for engaging one side portion of a rail.

4. A railway tie including a body having a web and longitudinally extending flanges along the top of the web, a rail fastening member mounted for rotation within and extending transversely of the web, said member including an intermediate bearing portion and diverging arms extending from said portion, and a device adjustably engaging and adjustable with the arms for engaging one side of a rail upon the tie.

5. The combination with a tie body having a transverse opening therein, of a member upon said tie for engaging one side portion of a rail, and a rail fastening member within the tie, said member including an intermediate portion mounted for rotation within the opening in the tie, and diverging means for adjustably engaging the said rail engaging member.

[Claims 6 to 11 not printed in the Gazette.]

1,016,310. TOY PISTOL. JOHN WILCOX, Nisbet, N. D. Filed May 24, 1910. Serial No. 563,193. (Cl. 124—12.)



A toy pistol including a stock and a barrel having a longitudinal bore and with a longitudinal slot communicating with the bore, a resilient firing member formed from a single piece if spring wire one end of which is movable through the slot and within the bore and the other end of which is curved downwardly and forwardly and then upwardly and rearwardly and secured in the forward portion of the butt of the stock, a trigger including a pivoted arm swinging transversely of the path of the

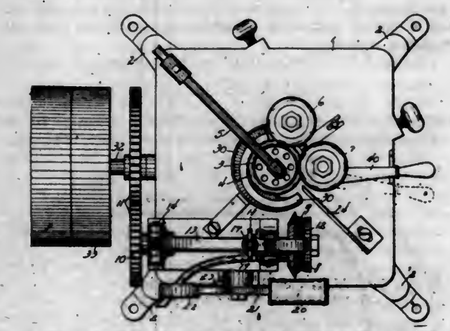
firing member and extending at an angle toward the muzzle end of the barrel, said arm having a catch lug near its free end engaging the firing member, whereby the force of the firing member is exerted to maintain the arm in its position, a keeper for said trigger, and means for normally holding said trigger in locking position, said means consisting of a bowed spring having one end passed downwardly through the pivoted arm and its other end secured to the side of the stock in such a manner that the spring bears against the stock throughout its length.

1,016,311. TACHOMETRIC TELESCOPE. HEINRICH WILD, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Oct. 27, 1910. Serial No. 589,384. (Cl. 88—32.)

1. In a tachometric telescope, an objective, a tachometric pair of marks and a lens shiftably fitted between the objective and the said pair of marks, the distance from the lens to the pair of marks and that from the lens to the image, which is projected by the objective, of that point in which the apex of the tachometric angle lies, being about the same; when the lens is set for very distant objects, and the greater of these two distances being not more than three times the smaller one, when the lens is set for the nearest objects.

2. In a tachometric telescope, an objective, a tachometric pair of marks and a lens shiftably fitted between the objective and the said pair of marks, the apex of the tachometric angle lying in the objective, the distance from the lens to the pair of marks and that from the lens to the objective being about the same, when the lens is set for very distant objects, and the greater of these two distances being not more than three times the smaller one, when the lens is set for the nearest objects.

1,016,312. FOLD-COLLAR-SHAPING MACHINE. EDWIN H. WORTHINGTON, Troy, N. Y., assignor to Albert E. Grant, Troy, N. Y. Filed July 29, 1903. Serial No. 167,396. (Cl. 68—9.)

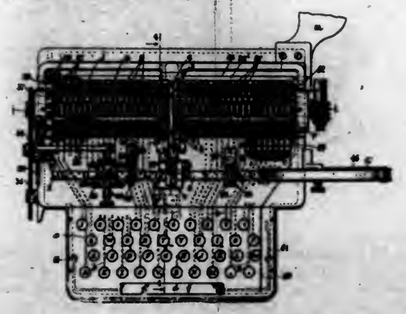


1. In a machine for shaping fold-collars, the combination with a grooved heated member; and a moistening pad yieldingly supported in the path of the folded edge of an inserted collar in advance of said heated member; of mechanism adapted to enter within the fold of the collar for forcing the folded edge of said collar to the bottom of said groove and against said pad.

2. In a machine for shaping fold-collars, the combination with a grooved heated member; a yielding support; and a moistening pad mounted upon said yielding support in the path of the folded edge of the collar in advance of said heated member; of mechanism for forcing the folded edge of an inserted collar to the bottom of said groove and against said pad.

3. In a machine for shaping fold-collars, the combination with a rotary roll having a peripheral groove; and a dampening pad yieldingly supported in advance of said roll; of a disk rotatory in the plane of the roll-groove adapted to force the folded edge of an inserted collar to the bottom of said groove and against said pad; a support for said disk movable toward and from said roll; and yielding mechanism for forcing said support and disk toward the roll.

1,016,313. KEYBOARD TELEGRAPHIC-TAPE PERFORATOR. GEORGE A. ARNOLD, New York, N. Y., assignor to Telepost Company, New York, N. Y., a Corporation of Maine. Filed May 3, 1910. Serial No. 559,232. (Cl. 164—112.)



1. A perforating machine, comprising a key-board having character bearing key-levers, a shaft continuously rotated when the machine is in use, a puncturing device common to all of the key levers, means for operating it, and separate means for and mechanically controlled by each of the key-levers for imparting motion from the continuously rotating shaft to the puncturing device operating means as each key-lever is manipulated, and adapted to complete their functions upon the key levers being released after initial depression.

2. A perforating machine, comprising a key-board having character bearing key-levers, a shaft continuously rotated when the machine is in use, a puncturing device common to all of the key levers, means for operating it, separate means for the key levers, each provided with a plurality of actuating devices selectively arranged, and means for and mechanically controlled by each of the key-levers for imparting activity to its actuating device and thereby impart motion from the continuously rotating shaft to the puncturing device operating means as each key-lever is manipulated.

3. A perforating machine, comprising a key-board having character bearing key-levers, a shaft continuously rotated when the machine is in use, a puncturing device including two punches common to all of the key levers, means for operating it, and means for and mechanically controlled by each of the key-levers to impart activity to the puncturing device operating means and thereby cause the continuously rotating shaft to fully actuate the puncturing device operating means as each key-lever is initially manipulated.

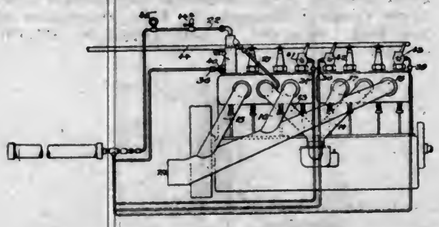
4. A perforating machine, comprising a key-board having character bearing key-levers, a shaft continuously rotated when the machine is in use, a puncturing device including two punches, means for operating it, and means provided with a set of actuating devices for each of the punches selectively arranged, for and controlled by each of the key-levers for imparting motion from the continuously rotating shaft to the puncturing device operating means as each key-lever is manipulated.

5. A perforating machine, comprising a key-board having character bearing key-levers, a shaft continuously rotated when the machine is in use, a puncturing device, means for operating it, disks concentrically arranged on the shaft, one for each key-lever and each provided with a selected number and arrangement of punch actuating

devices and means for individually connecting the disk to the shaft, each of said disks and its shaft connecting means being controlled by and normally held inactive by its key-lever and made active when its key-lever is manipulated.

[Claims 6 to 23 not printed in the Gazette.]

1,016,314. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ERLE K. BAKER, Chicago, Ill. Filed Feb. 8, 1910. Serial No. 542,703. (Cl. 123—180.)

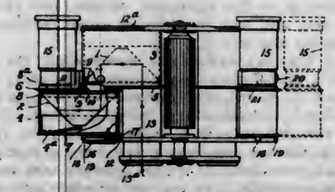


1. In a mechanism for starting an internal combustion engine, a compressor adapted to be driven by the engine, the suction pipe of the compressor connected to the carbureter of the engine, a plurality of reservoirs for storing gas under pressure, a connection from the compressor to the reservoirs, a connection from each reservoir to a cylinder of the engine and a valve in each connection between the reservoir and the cylinder, substantially as described.

2. In a mechanism for starting an internal combustion engine, a compressor having its suction pipe suitably connected to the carbureter of the engine, a plurality of reservoirs for storing gas under pressure, and a connection from each reservoir to a cylinder of the engine, substantially as described.

3. In a mechanism for starting an internal combustion engine, a compressor adapted to be driven by the engine, and having its suction pipe suitably connected to the carbureter of the engine, a plurality of reservoirs for storing gas under pressure, a connection from the compressor to each reservoir, and a connection from each reservoir to a cylinder of the engine, substantially as described.

1,016,315. PRISMATIC TELESCOPE, THEATER AND FIELD GLASS. JOHN HENRY BARTON, London, England. Filed Mar. 14, 1911. Serial No. 614,384. (Cl. 88—3.)



1. Prismatic telescopes, theatre or field glasses, comprising in combination an objective and an eyepiece, and an erecting system comprising a pair of right angle prisms, each of which is arranged to produce a double reflection of a beam of light, said prisms being pivotally mounted with respect to one another along an axis coincident with the path of a beam of light from one prism to the other.

2. Prismatic telescopes, theater or field glasses, comprising in combination an objective and an eyepiece, and an erecting system comprising a pair of right angle prisms, each of which is arranged to produce a double reflection of a beam of light, a casing for each of said prisms, said casings being pivotally mounted with respect to one another along an axis coincident with the path of a beam of light from one prism to the other, and said eyepiece being mounted upon one of said casings and said objective upon the other.

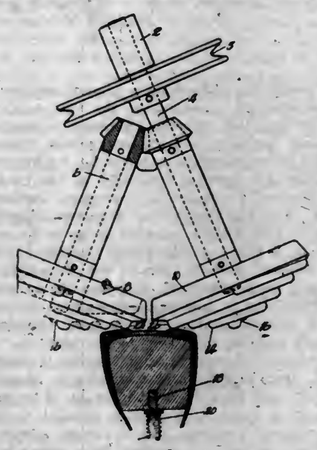
3. Prismatic telescopes, theater or field glasses, comprising in combination a pair of objectives and a pair of eyepieces, and a pair of erecting systems each comprising a pair of right angle prisms, each prism of each erecting system being arranged to produce a double reflection of a beam of light, one of said objectives, eyepieces, and erecting systems being adjustable laterally with respect to the other.

4. Prismatic telescopes, theater or field glasses, comprising in combination a pair of objectives and a pair of eyepieces, and a pair of erecting systems each comprising a pair of right angle prisms, each prism of each erecting system being arranged to produce a double reflection of a beam of light, said prisms of each system being pivotally mounted with respect to one another along an axis coincident with the path of a beam of light from one prism to the other, one of said objectives, eyepieces, and erecting systems being adjustable laterally with respect to the other.

5. Prismatic telescopes, theater or field glasses, comprising in combination an objective and an eyepiece, an erecting system consisting of two right angle prisms each of which is arranged to produce a double reflection of a beam of light, disposed between said objective and eyepiece, and separate cases rotatably connected together and wherein said prisms are respectively mounted, whereby the prisms can be turned into position at right angles to each other for use and out of this position for carriage, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,016,316. SHOE-BEATING MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 9, 1911. Serial No. 601,578. (Cl. 12—51.)



1. A shoe shaping machine, having, in combination, two rotary disks, arranged edge to edge, and provided on their ends with reversely inclined spiral ribs extending one or more times around their axes.

2. A shoe shaping machine, having, in combination, a pair of disks arranged edge to edge for movement about relatively stationary axes that are inclined toward one another, and having on their ends beveled working faces comprising reversely inclined spiral ribs extending one or more times around their axes.

3. A shoe shaping machine, having, in combination, a pair of disks provided on their ends with convex working

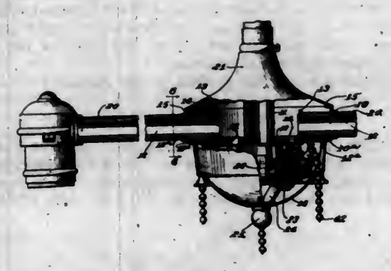
faces, and arranged to turn on axes that are inclined toward one another to present in the same plane that portion of the working surface which is intermediate between the axes of the two disks.

4. A shoe shaping machine, having, in combination, a pair of disks having on their end faces rigid beating surfaces, rotated by means of a beveled gear connection about relatively stationary axes that are inclined toward one another for presenting in the same plane that portion of the working surface which is intermediate between the axes of the two disks, each of the said beating surfaces comprising a spiral rib extending from adjacent to the center a plurality of times around the axis substantially to the periphery.

5. A shoe shaping machine, having, in combination, disks rotating about relatively stationary axes, and having on their ends reversely inclined spiral ribs extending one or more times around their axes to work the upper materials inwardly from the two sides of a last bottom at the same time, one rib serving to brace the shoe against lateral displacement by the action of the other rib.

[Claims 6 to 11 not printed in the Gazette.]

1,016,317. ELECTROLIER. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 27, 1909. Serial No. 535,162. (Cl. 240—78.)



1. An electrolier comprising a support member adapted to be connected to a conduit or the like, a plurality of lamp-socket-carrying members hingedly connected with said support member, and spacing means, insertible between said socket-carrying members for maintaining them in a determinate position relatively to one another.

2. An electrolier comprising a support member, a plurality of lamp-socket-carrying members hingedly connected with said support member so as to be capable of swinging in a plane substantially parallel to the plane of said support member, means for releasably locking one of said socket-carrying members in a determinate position relatively to said support member, and means for releasably locking said socket carrying members in a determinate position relatively to one another.

3. An electrolier comprising a support member, a plurality of lamp-socket-carrying members hingedly connected with said support member so as to be capable of swinging in a plane substantially parallel to the plane of said support member, and a casing adapted to be placed over said support member, said casing having recess for receiving said lamp-socket-carrying members.

4. An electrolier comprising a support member, a plurality of lamp-socket-carrying members hingedly connected to said support members so as to be capable of swinging in a plane substantially parallel to the plane of said support member, means for locking one of said socket-carrying members in a determinate position relatively to said support member, and a casing adapted to inclose said support member, said casing having a plurality of recesses for receiving said lamp-socket-carrying members and thereby maintaining them in a determinate position relatively to one another.

5. An electrolier comprising a support member, a plurality of lamp-socket-carrying members hingedly connected with said support member so as to be capable of swinging in a plane substantially parallel to the plane of said support member, and a casing adapted to be placed over said support member, and spacing means, insertible between said socket-carrying members, for maintaining them in a determinate position relatively to one another.

1,016,318. TYPE-WRITING MACHINE. CHARLES J. BOND, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 3, 1903. Serial No. 175,576. (Cl. 197—39.)

1. In a type bar and hanger construction, the combination of a bifurcated hanger, a type bar, having an eye which is received within the bifurcated portion of the hanger, a solid removable grooved hub that is received within said eye and which has threaded connections, a screw that coöperates with the threaded connection of the hub and connects the hub and bifurcated portion together, and anti-friction rollers between the eye and the grooved hub.

2. In a type bar and hanger construction, the combination of a hanger and a type bar, one of said parts having an eye and the other being bifurcated to receive the eye, a removable hub that is received within said eye, headed screws that pass from opposite directions and take into a threaded opening in the hub to connect the hub and bifurcated portion together, and anti-friction rollers between said eye and hub.

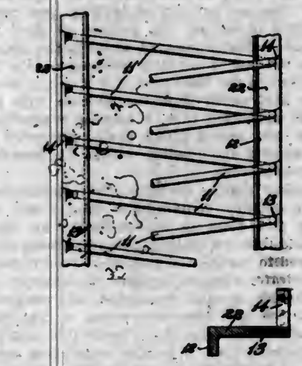
3. In a type bar and hanger construction, the combination of a hanger and a type bar, one of said parts having an eye and the other being bifurcated to receive the eye, said eye having a threaded portion, a roller bearing having a threaded connection with the eye, a single piece hub connected to the bifurcated portion and extending through said eye, and anti-friction rollers between said roller bearing and hub.

4. In a type bar and hanger construction, the combination of a hanger and a type bar, one of said parts having an eye and the other being bifurcated to receive the eye and embrace it on both sides, said eye having an internal threaded portion, threaded rings that coöperate with the internal threads in the eye and form a ball race, a single piece hub, anti-friction balls or rollers between said ball race on the rings and the hub, and means which pass axially through said rings and connect the said hub and bifurcated portion.

5. In a type bar and hanger construction, the combination of a hanger and a type bar, one of said parts having an eye and the other being bifurcated to receive the eye, said eye having an internal threaded portion, externally threaded rings that coöperate with the internal threads in the eye and which are adapted to be contained therein and to form a ball race, a single piece hub, anti-friction balls or rollers between said ball race on the rings and the hub, and means which pass axially through said rings and connect said hub and bifurcated portion.

[Claims 6 to 27 not printed in the Gazette.]

1,016,319. SPACING DEVICE FOR REINFORCING-RODS IN CONCRETE STRUCTURES. WILLIAM H. BURK, St. Louis, Mo., assignor to Corrugated Bar Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 25, 1911. Serial No. 604,686. (Cl. 72—122.)



1. A spacing device for structural members comprising a longitudinal metal strip having a part projecting from one edge thereof at an angle to the plane of the strip and notches in the other edge thereof, and prongs having a length greater than their width adjacent said notches and projecting from said strip in an opposite direction to the part projecting from the other edge of the strip, the lateral width of said prongs being not greater than the thickness of the part projecting from the opposite edge of the strip.

2. A spacing device for metal reinforce comprising an angle-bar having spaced notches along the edge of a flange and flexible prongs integral with the flange and adjacent the notches, said prongs projecting at an angle to the plane of said flange, and lying in a plane parallel to the other flange and on the side of the first named flange away from the other flange of the angle-bar, the length and lateral width of the prongs being not greater than the width and thickness respectively of the opposite flange, whereby substantially a Z-shape section is formed.

1,016,320. METHOD OF HERMETICALLY SEALING ELECTRICAL CONDUCTORS THROUGH OR INTO HARD VITREOUS SUBSTANCES. GEORGE BARNHILL BURNSIDE, Renfrew, Scotland. Filed Apr. 29, 1911. Serial No. 624,234. (Cl. 49—78.)

1. A method of hermetically sealing electrical conductors through or into vitreous substances which consists in first heating the vitreous substance, which surrounds the electrical conductor and with it forms the seal, until perfect cohesion has been effected between the vitreous substance and the conductor and then allowing the vitreous substance to cool to about a dull red heat whereafter the seal is suddenly cooled or put through a process of hardening, the vitreous substance being thus fixed around the electrical conductor.

2. A method of hermetically sealing electrical conductors through or into vitreous substances which consists in first heating the vitrous substance, which surrounds the electrical conductor and with it forms the seal, until perfect cohesion has been effected between the vitreous substance and the conductor and then allowing the vitreous substance to cool to about a dull red heat, whereafter the seal is suddenly cooled or put through a process of hardening by immersing it into an oleaginous substance the vitreous substance being thus fixed around the electrical conductor.

1,016,321. WATCH. WALTER BUSZEK and THEOPHILE SOKOLOWSKI, St. Louis, Mo. Filed June 8, 1911. Serial No. 631,969. (Cl. 58—57.)

1. A watch having a main set of works, and a supplemental set of works independently arranged therein and adapted to be separately removed therefrom, a main stem winding mechanism, means whereby said main winding mechanism is connected with the individual winding mechanism of either of said sets of works, and means whereby said main stem winding mechanism is connected with the hand setting mechanism of the main set of works.

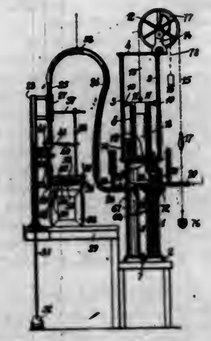
2. A watch having a main and a supplemental set of works, either of which may be removed and the watch used with the remaining set of works, a key winding mechanism arranged on each of said sets of works; a main stem winding mechanism, means whereby said main stem winding mechanism may be connected with the individual winding mechanism of either of said sets of works, and means whereby said main stem winding mechanism is connected with the hand setting mechanism of the main set of works.

3. A watch having a main and a supplemental set of works, and comprising a frame consisting of front gear plates for each of said sets of works, a rear main gear supporting plate removably secured to the main front gear plate and adapted to support the gears of the main set of works, a rear supplemental gear supporting plate removably secured to said front supplemental plate and adapted to support the gears of the supplemental set of works whereby either of said sets of works may be removed and the other set left remaining in operative position, spring winding gears operatively connected to the main spring of said main and supplemental sets of works, a main stem winding mechanism, means to operatively connect said stem winding mechanism with the winding gears of either said main or supplemental sets of works, and means whereby said sets of works may be key wound.

4. A watch having independent main and supplemental sets of works, a front main gear supporting plate for each of said sets of works, a rear supporting plate for said main set of works, means to removably secure said plate to the main front plate, a rear supplemental gear supporting plate adapted to co-act with the front supplemental plate to support the gears of said supplemental set of works, a spring winding gear fixedly mounted on the spring winding shaft of the main set of works, a similar gear fixedly mounted on the spring winding shaft of the supplemental set of works, a gear shifting plate pivotally mounted on said main front plate, a gear ring revolubly mounted on said shifting plate, idle pinions mounted on the opposite ends of said shifting plate and engaged with said gear ring, means whereby the shifting plate is actuated to bring one or the other of said pinions into engagement with the winding gears of either the main or supplemental works, a stem winding mechanism comprising a revolubly mounted stem operated gear engaged with the teeth of said gear ring, and a stem adapted to be connected with said gear whereby the latter is revolved in the proper direction for turning said gear ring.

5. A watch of the character described having a main and a supplemental set of works, either of which may be removed and the watch used with the remaining set of works, a main spring winding mechanism connected with each of said works, winding gears connected to said springs, a stem winding mechanism adapted to be connected with the main spring winding mechanism of either of said sets of works, said stem winding mechanism comprising a sleeve revolubly mounted in the watch, said sleeve having a rectangular bore, a spur gear revolubly mounted on the inner end of said sleeve, clutch teeth formed on said gear, a rectangular shaft slidably mounted in said sleeve and adapted to be revolved thereby, a combined clutch member and crown gear having a sliding and operative engagement with said shaft, a train of gears connected with the arbors of the hands of the main set of works, means whereby said combined clutch member and crown gear is shifted on said shaft to engage the crown gear with said train of gears or the clutch member thereon with the clutch teeth on said spur gear thereby connecting said gear with the shaft or connecting the shaft with the train of hand setting gears, a gear shifting plate pivotally mounted on the front plate of the main works, a gear ring revolubly mounted on said shifting plate, idle pinions mounted on the opposite ends of said shifting plate and engaged with said gear ring, a spring to engage said shifting plate and thereby normally hold one of said idle gears in engagement with the winding gear of the spring of the main set of works, and a pivotally mounted lever adapted to be actuated to swing said shifting plate thereby disengaging the idle gear on one end thereof from the winding gear spring of the main works, and to engage the idle pinion on the opposite end of said plate with the spring winding gear of the supplemental set of works.

1,016,322. TESTING-MACHINE. MARSHALL CORNINE, New York, N. Y. Filed Oct. 2, 1908. Serial No. 455,931. (Cl. 73—51.)



1. The combination of two fluid holders, a passage for the fluid leading from one fluid holder to the other, an index gage connected to the first holder, an index gage connected to the second holder, each indicating the quantity of fluid which has passed its respective holder, an automatic valve controlling the passage from one holder to the other and a valve trip connected with the valve and with a movable part of the fluid holder and adapted as described to operate said valve when one of said index gages has moved a given distance.

2. In a meter testing device, a movably suspended inlet tube, adapted to be connected to a source of supply and to the inlet of the meter, a platform adapted to support the meter, a treadle located below said platform and in a position easy of access to the foot of the tester and a supporting member connected to the inlet tube and extending below the platform and there connected to said treadle; whereby the adjustment of the said inlet tube to the height of the meter may be readily accomplished by foot power at the same time that its horizontal adjustment may be accomplished by hand power, all substantially as set forth.

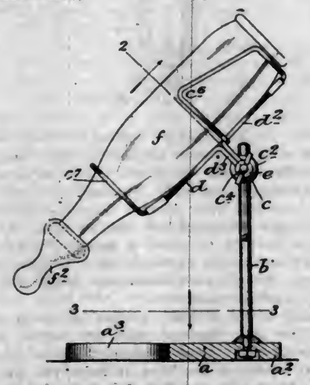
3. In a meter testing machine, the combination of a fluid holding cylinder, containing a tube, a bell adapted to move up and down in said cylinder, an inlet pipe leading to said tube, an outlet pipe leading from said tube, valves adapted to control the passage of fluid through said pipes, an indicator adapted to mark the quantity of fluid within the bell, a movably suspended tube adapted to be connected to the inlet pipe of a meter, a connection between the said outlet from the cylinder tube and the said movable suspended tube, a member supporting some part of said tube, and a lifting device connected to said supporting member and adapted to raise the movable part of said suspended tube.

4. In a meter testing machine, the combination of a fluid holding cylinder containing a tube, a bell adapted to move up and down in said cylinder, an inlet pipe leading to said tube, an outlet pipe leading from said tube, valves adapted to control the passage of fluid through said pipes, an indicator adapted to mark the quantity of fluid within the bell, a movably suspended tube adapted to be connected to the inlet pipe of a meter, a connection between the said outlet from the cylinder tube and the said movable suspended tube, a member supporting some part of said tube, a lifting device connected to said supporting member and adapted to raise the movable part of the said suspended tube, an automatic valve controlling the passage to the meter and a trip adapted to be operated by the movable part of the meter, which trip in one position holds open the said automatic valve and in another position permits it to close.

5. In a meter testing machine, the combination of a fluid holding cylinder containing a tube, a bell adapted to move up and down in said cylinder, an inlet pipe leading to said tube, an outlet pipe leading from said tube, valves adapted to control the passage of fluid through said pipes, an indicator adapted to mark the quantity of fluid within the bell, a movably suspended tube adapted to be connected to the inlet pipe of a meter, a connection between the said outlet from the cylinder tube and the said movable suspended tube, a member supporting some part of said tube, a lifting device connected to said supporting member and adapted to raise the movable part of the said suspended tube, an automatic valve controlling the passage to the meter and a trip adapted to be operated by the meter indicating devices, which trip in one position holds open the said automatic valve and in another position permits it to close.

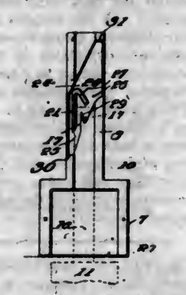
[Claim 6 not printed in the Gazette.]

1,016,323. BOTTLE-HOLDER. ELLIOTT DIXON, Bacup, England. Filed May 17, 1911. Serial No. 627,679. (Cl. 215—116.)



A bottle holder comprising a standard, an arm adjustable thereon and comprisng in its construction a head portion and a rod, a bottle holding frame provided with downwardly directed arms rotatably connected with said rod, a sleeve mounted on said rod between said arms, and a set nut mounted on the free end of said rod.

1,016,324. ADJUSTABLE BALL-CASTER. PATRICK T. DUNN, Cedar Rapids, Iowa. Filed Mar. 21, 1911. Serial No. 616,001. (Cl. 16—165.)



1. A device of the class described including a casing, the interior wall of which is provided with upper and lower shoulders, there being spaced oppositely disposed stop fingers arranged between said shoulders, a shank slidably mounted within the casing, a caster carried by the shank, and a pin extending laterally from the shank for engagement with the shoulders, said pin being also movable into engagement with the stop fingers.

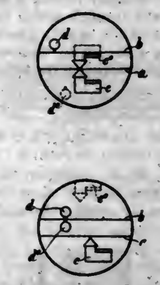
2. A device of the class described including a casing, the interior wall of which is provided with a depression defining upper and lower shoulders and having spaced oppositely disposed stop fingers arranged between said shoulders, there being a spiral groove formed in the casing and communicating with the depression, a shank mounted for sliding movement within the casing, a caster carried by said shank, and a pin extending laterally from the shank for engagement with said shoulders, said pin being also movable into engagement with the stop fingers.

3. A device of the class described including a casing, the inner wall of which is provided with upper and lower shoulders, a rib extending laterally from the inner wall of the casing and forming a stop finger, a second stop finger arranged opposite the first stop finger, a shank slidably mounted within the casing and provided with a caster, and a pin extending laterally from the shank for engagement with the upper and lower shoulders, said pin being also movable in to engagement with the stop fingers.

4. A device of the class described including a casing, the inner wall of which is provided with a depression defining upper and lower shoulders, there being a groove formed in the casing and communicating with said depression, a stop finger arranged within the depression, a vertical rib having its upper end extended downwardly over and above the stop finger to form a second stop finger, a shank slidably mounted within the casing, a caster carried by the shank, and a pin extending laterally from said shank and adapted to engage one of the stop fingers when the caster is elevated above a support and to engage the other stop finger when a weight is supported by the caster, said pin being movable into engagement with the lower shoulder to permit the shank to slide vertically within the casing and allow the pin to bear against the upper shoulder.

1,016,325. TELEMETER. OTTO EPPENSTEIN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Jan. 7, 1911. Serial No. 601,480. (Cl. 88—3.)

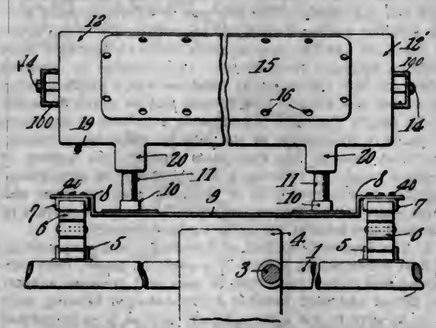
1. The combination, with a coincidence telemeter of the type presenting one image erect and the other image inverted in the direction perpendicular to the base line and having the inverted image inclosed by the erect image and separated from it by boundary lines parallel to the base line, of means for moving the locus of coincidence from one boundary line to the other by varying the position of the two images relatively to each other in the direction perpendicular to the base line, this means differing in the range of motion from such as are used for correcting the locus of coincidence.



2. The combination, with a coincidence telemeter of the type presenting one image erect and the other image inverted in the direction perpendicular to the base line and having the inverted image inclosed by the erect image and separated from it by boundary lines parallel to the base line, of means for moving the locus of coincidence from one boundary line to the other by varying the position of the two images relatively to each other in the direction perpendicular to the base line, this means differing in the range of motion from such as are used for correcting the locus of coincidence and comprising two stops limiting the movement of the said locus to the distance between the two boundary lines.

3. The combination, with a coincidence telemeter of the type presenting one image erect and the other image inverted in the direction perpendicular to the base line and having the inverted image inclosed by the erect image and separated from it by boundary lines parallel to the base line, of means for moving the locus of coincidence from one boundary line to the other by varying the position of the two images relatively to each other in the direction perpendicular to the base line, this means differing in the range of motion from such as are used for correcting the locus of coincidence and comprising two stops limiting the movement of the said locus to the distance between the two boundary lines and adapted to be adjusted conjointly.

1,016,326. RESILIENT CUSHION FOR REAR AXLES. JEW GARLICK, Paterson, N. J., assignor of one-half to Harry U. Garlick, Paterson, N. J. Filed Jan. 25, 1910. Serial No. 540,007. (Cl. 21—50.)



The combination with a vehicle axle and a vehicle frame, of a horizontal cylinder disposed above, and parallel to the axle, the cylinder being of sufficient length to extend entirely across the vehicle; means upon the ends of the

2. In an apparatus of the class described, a shift bar,

2. The combination with a locking member and a tum-

cylinder for engaging opposite side members of the frame; the cylinder having spaced, depending sleeves; standards mounted to slide in the sleeves and having heads disposed within the cylinder, transversely of the same, the heads being concavo-convex, to conform to the inner surface of the cylinder; means for connecting the standards with the axle; an inflatable bag in the cylinder, and fitting in the concaved heads; the cylinder having a substantially vertical opening in its side, through which the bag may be inserted, from one end of the vehicle; and a closure for the opening, the closure being freely removable, without disturbing the connections between the cylinder, the axle and the frame.

1,016,327. ART OF MANUFACTURING PAPER BOTTLES OR CONTAINING VESSELS. EDWIN T. GREENFIELD, Kiamesha, N. Y., assignor to Greenfield Paper Bottle Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 14, 1908. Serial No. 467,372. (Cl. 93—39.)

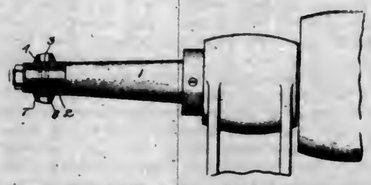
1. The described method of forming a bottle, consisting in first constructing a tube of a sheet of paper, then subjecting one end of such tube to pressure against the throat and neck parts of a bottle-shaped forming mold so as to give to the same a throat and neck conformation of like form, with a plurality of folds of surplus material located radially therearound; then folding the surplus material into plaits extending in the direction of the length of the mold by the application of further pressure; then securing a cup-shaped bottom to the lower or open end of the body part by indenting a concentric bead between the two parts through the agency of pressure, and finally securing a strengthening ring to the outer end of the neck in the same manner.

2. The described method of forming a bottle from paper or like pliable material, consisting in (1) constructing a tube from a sheet thereof; (2) subjecting one end of such tube to compression about one end of a forming mold having a throat and neck until the paper partakes of the shape of the mold and the surplus material is formed into folds radially disposed therearound; (3) forming or shaping said folds into box-plaits by pressure which plaits overlap the throat and neck as first formed and lie in the direction of the length thereof; (4) securing a bottom of cup form or shape to the bottom of the tube by indenting a concentric bead between the two parts through the agency of pressure; and (5) securing a double or duplex strengthening ring to the outer end of the neck with its inner and outer walls located respectively within the inner surface of the neck and around the outer surface thereof.

3. The described method of forming a bottle, consisting in first constructing a tube of a sheet of paper, then subjecting one end of such tube to heat and pressure against the throat and neck parts of a bottle-shaped forming mold so as to give to the same a throat and neck conformation of like form, with a plurality of folds of surplus material located radially therearound; then folding the surplus material into plaits extending in the direction of the length of the mold by the application of further heat and pressure; then securing a cup-shaped bottom to the lower or open end of the body part by indenting a concentric bead between the two parts through the agency of heat and pressure, and finally securing a strengthening ring to the outer end of the neck in the same manner.

4. The described method of forming a bottle from paper or like pliable material, consisting in (1) constructing a tube from a sheet thereof; (2) subjecting one end of such tube to compression and heat about one end of a forming mold having a throat and neck until the paper partakes of the shape of the mold and the surplus material is formed into folds radially disposed therearound; (3) forming or shaping said folds into box-plaits by heat and pressure, which plaits overlap the throat and neck as first formed and lie in the direction of the length thereof; (4) securing a bottom of cup form or shape to the bottom of the tube by indenting a concentric bead between the two parts through the agency of heat and pressure; and (5) securing a double or duplex strengthening ring to the outer end of the neck with its inner and outer walls located respectively within the inner surface of the neck and around the outer surface thereof.

1,016,328. TACK-PULLING MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 14, 1909. Serial No. 489,853. (Cl. 12—16.)



1. A tack pulling machine, having, in combination, a rotary tool provided with a tack pulling blade extending crosswise of its periphery and constructed to engage and pull tacks, and a work supporting guard arranged at one end of the tool and mounted to permit rotation of the tool independently of the guard, substantially as described.

2. A tack pulling machine, having, in combination, a rotary tool provided with a tack pulling blade constructed to engage and pull tacks, and a relatively rotatable work supporting guard arranged at one end of the tool, substantially as described.

3. A tack pulling machine, having, in combination, a rotary tool provided with a tack pulling blade constructed to engage and pull tacks and a relatively rotatable guard mounted concentrically with and at one end of the tool, substantially as described.

4. A tack pulling machine, having, in combination, a rotary tool provided with a tack pulling blade constructed to engage and pull tacks, and two relatively rotatable guards mounted concentrically with and at opposite ends of the tool, substantially as described.

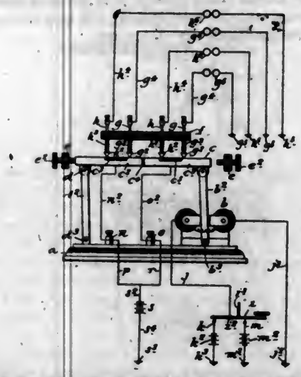
5. A tack pulling machine, having, in combination, a frusto-conical rotary tool having a tack pulling blade extending crosswise of its periphery and constructed to engage and pull tacks, and a guard at the larger end of the tool, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,016,329. MULTIPLE-CIRCUIT CONTROLLER. CHARLES K. JONES, New York, N. Y. Filed June 18, 1910. Serial No. 567,623. (Cl. 175—281.)

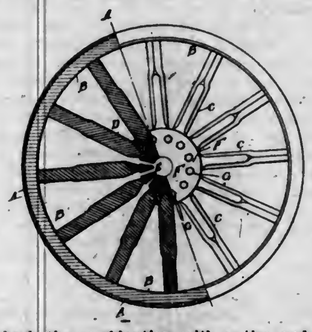
1. In an apparatus of the class described, a shift bar and a polarized relay for moving said shift bar in opposite directions, said shift bar being composed of separate insulated conductors and being provided with a contact bearing surface in which are placed insulators, and a plurality of contact devices normally bearing on said surface.

2. In an apparatus of the class described, a shift bar, and means for moving said shift bar longitudinally in opposite directions, said shift bar being composed of separate insulated conductors and being provided with a contact bearing surface in which are placed insulators, and a plurality of contact devices normally bearing on said surface.



3. In an apparatus of the class described, a shift bar movable longitudinally in opposite directions, said shift bar being composed of separate insulated conductors and having a contact bearing surface in which are placed insulators, an insulating support parallel with said shift bar, and contact devices mounted in and movable through said support and adapted to bear on said surface.

1,016,330. VEHICLE-WHEEL. EDWARD BRICE KILLEN, London, England. Filed Jan. 5, 1909. Serial No. 470,885. (Cl. 21—69.)



In a wheel, the combination with a tire and felly, of spokes terminating at their inner ends in a double arrow head, the adjacent inner ends being spaced apart, and arrow head shaped wedges constructed to fill the spaces between the inner ends of the spokes and interlock with the double arrow heads of the adjacent spokes.

1,016,331. COMBINATION-LOCK. JAMES O. KINGSLAND, Sr., Brooklyn, N. Y. Filed Sept. 7, 1910. Serial No. 580,833. (Cl. 70—53.)

1. The combination with a locking member and a tumbler engaging the same, of movable tumbler-actuating means adapted when moved in one direction to disengage the tumbler from the locking member, and a shield interposed between the tumbler actuating means and the tumbler and normally preventing the movement of said actuating means toward the tumbler but permitting said movement when the actuating member has been moved into a predetermined relation with the shield.

2. The combination with a locking member and a tumbler engaging the same, of a rotatable tumbler actuator axially movable toward the tumbler to disengage it from the locking member, and a shield interposed between the locking member and the actuator normally preventing the axial movement of said actuator but permitting the movement when the rotatable member has been rotated into a predetermined position with relation to the shield.

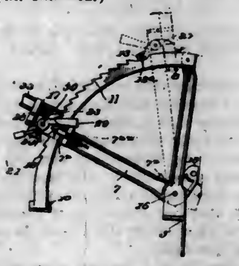
3. The combination with a locking member and a tumbler engaging the same, of a rotatable and axially movable tumbler actuator movable toward the tumbler to disengage it from the locking member, and a shield interposed between the locking member and the tumbler actuator normally preventing the axial movement of said actuator, the shield and tumbler actuator being provided with coacting pins and openings adapted to register with each other and preventing the axial movement of the tumbler actuator into engagement with the tumbler unless the pins and openings register.

4. The combination with a locking member and a tumbler engaging the same, of a tumbler actuator comprising a plurality of coöperating disks movable together toward or from the tumbler to disengage the latter from the locking member and rotatable independently of each other, and a shield interposed between the actuator and the tumbler having an opening registering with the end of said tumbler and normally preventing the axial movement of said disks but permitting said movement when the disks have been rotated into certain predetermined relation with regard to said shield.

5. The combination with a locking member and a tumbler engaging the same, of a tumbler-actuating means including a plurality of independently rotatable disks, said disks being movable together toward the tumbler to disengage the latter from the locking member, and a shield interposed between the tumbler and the tumbler-actuating means and having an opening registering with said tumbler, said shield normally preventing the axial movement of said tumbler-actuating means, the shield and rotatable disks constituting the actuating means being provided with coacting pins and openings adapted to register with each other, the pins preventing the axial movement of the tumbler-actuating means unless the pins and openings in the shield are in register.

[Claims 6 to 14 not printed in the Gazette.]

1,016,332. CAR-BRAKE. AUGUSTUS FREDERICK KLASING, San Antonio, Tex. Filed July 14, 1911. Serial No. 638,546. (Cl. 188—42.)



1. In a brake operating mechanism, the combination of a segment provided with oppositely disposed ratchet teeth, a pivoted operating lever, a pawl provided with opposite operative ends, pivoted to the operating lever and, a

loosely pivoted weight to set the pawl to cause one or the other of its operative ends to engage with one of the respective oppositely disposed teeth.

2. In a brake operating mechanism, the combination of a segment provided with oppositely disposed teeth, a pivoted operating lever, a pawl having opposite operative ends and pivoted to the operating lever, a lug on said pawl, a weighted lever having a lug to coöperate with the lug on the pawl to set the operative end in position to engage the teeth, a perforated ear on the pawl, and a perforated ear on the operating handle, said ears being positioned to register when the pawl is set to hold the brakes of a car, whereby a lock may be employed to lock the pawl and the operating lever.

3. In a brake operating mechanism, the combination of a segment provided with a series of ratchet teeth, a tooth oppositely disposed to the series of ratchet teeth, a pivoted operating lever, a pawl pivoted to the operating lever and provided with opposite operative ends to coöperate with the teeth, a lug on the pawl, a pivoted weighted lever having a lug to coöperate with the lug on the pawl to set the operative ends thereof with reference to the teeth, whereby when the weighted lever is in one position one operative end of the pawl will engage one of the series of ratchet teeth to hold the brakes of a car in set position, and whereby when said weighted lever is thrown in the opposite direction the opposite operative end of said pawl will be in position to engage the oppositely disposed tooth on the segment.

4. In a brake mechanism, the combination of a segmental bar provided with oppositely disposed teeth, a pivoted operating lever formed with a perforated ear beyond the plane of the teeth, a pawl pivoted to the operating lever and having oppositely disposed operative ends, an ear formed on the pawl and adapted to register with the ear on the operating handle when the pawl is set to lock the brakes, a lug formed on the pawl, a weighted lever formed with a lug to coöperate with the lug on the pawl to set the operative ends of the latter to coöperate with the teeth, a bail on the operative handle, an extension handle passing through the bail, and a bail on the extension handle which embraces the operative handle.

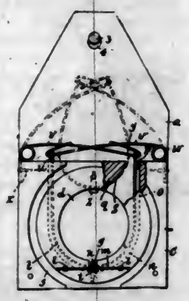
5. In a brake operating mechanism, the combination of a standard provided with a bracket at its lower end and a perforated lug above the bracket, said lug being spaced from the standard, a segmental bar projecting from the upper end of the standard and provided with oppositely disposed teeth on its edge, flanges at the end of the segmental bar, an angular lever pivoted in the space formed between the standard and the lug, a pawl pivoted to the operating lever, said pawl having oppositely disposed operative ends to coöperate with the oppositely disposed teeth, a lug on the pawl, a weighted lever having a lug which coöperates with the lug on the pawl to rock the latter, a bail on the angular lever, an extension lever fitting in the bail, and a bail on the extension lever through which the angular lever passes.

[Claims 6 to 9 not printed in the Gazette.]

1,016,333. ANIMAL-TRAP. WILLIAM B. KNAPP, Paterson, N. J. Filed Aug. 24, 1909. Serial No. 514,359. (Cl. 43—27.)

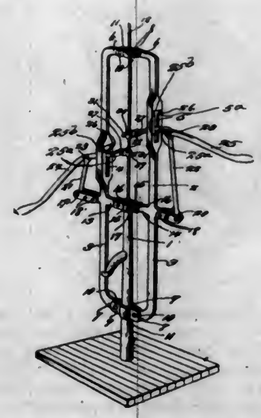
1. In an animal trap, the combination of a supporting member having a passage therethrough, a spring-actuated part movable across said passage and normally standing at one side of the same, said passage having a slot at its other side, and a trip mechanism adapted to hold the said part at said other side of the passage and having the part thereof engageable with said spring-actuated part concealed in the slot and another part thereof projecting in position to be engaged by the animal in said passage, substantially as described.

2. The combination of a support comprising two substantially flat blocks secured face to face, one of said blocks extending higher than the other, said blocks having alined orifices forming a passage in said member, upwardly acting crossing springs secured to and extending over the second-named block, said second-named block having in the face thereof adjoining the higher block a recess surrounding the orifice in said second-named block, a U-shaped member arranged with its lower portion in said recess and having its extremities extending upwardly through the second-named block and respectively attached to the ends of said springs, and a trip mechanism arranged in said member at the lower side of said passage and normally restraining said member against the upward pull of said springs, substantially as described.



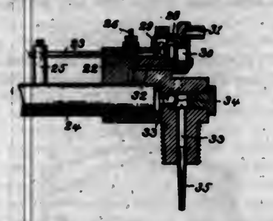
3. The combination of a supporting member having a passage therethrough and a continuous groove surrounding said passage, a cylindrical bait-holding member having one end closed and the other end open and received by said groove, a spring-actuated part movable across said passage and normally standing at one side of the same, and a trip mechanism engageable with said part to hold the same at the other side of said passage, substantially as described.

1,016,334. PUMP-ROD LIFTER. NICK KRAMER, Charleston, Kans. Filed Mar. 29, 1911. Serial No. 617,760. (Cl. 166—7.)



A pump rod lifter comprising an elongated frame to be clamped to the pump, the frame comprising side bars having openings therein and provided with cross arms, links pivoted to the outer ends of the cross arms, levers pivoted to the outer ends of the links and extending through the openings of the side bars, collars pivoted to the inner ends of the levers to loosely surround the pump rod, the collars adapted to be thrown on angles to grip the rod for moving the same, the openings terminating at the upper portions into enlarged openings for receiving enlarged parts of the levers, the enlarged parts of the levers having lugs to engage behind the walls of the openings, for holding the levers against being operated.

1,016,335. INTERNAL-COMBUSTION ENGINE. ALVARO S. KROTZ, Chicago, Ill. Filed Feb. 19, 1910. Serial No. 544,849. (Cl. 123—130.)



1. A combined fuel and air feeding pump for internal combustion engines comprising, a primary and secondary piston connected for simultaneous reciprocation, a pump casing formed with primary and secondary piston chambers for said pistons, an air supply pipe having connection with the outlet passage from the secondary piston chamber and with the inlet passage to the primary piston chamber, a liquid fuel pipe connected with the inlet port of the secondary piston chamber, and an outlet casing having connection with the outlet port of the primary piston chamber and with the explosion chamber of the engine, and means for imparting reciprocation to said pistons, substantially as set forth.

2. A combined fuel and air feeding pump for internal combustion engines comprising, a primary and secondary piston connected for simultaneous reciprocation, a pump casing formed with primary and secondary piston chambers for said pistons, an air supply pipe having connection with the outlet passage from the secondary piston chamber and with the inlet passage to the primary piston chamber, a liquid fuel pipe connected with the inlet port of the secondary piston chamber, an outlet casing having connection with the outlet port of the primary piston chamber and with the explosion chamber of the engine, means for preheating the air passing through the aforesaid air supply pipe, and means for imparting reciprocation to said pistons, substantially as set forth.

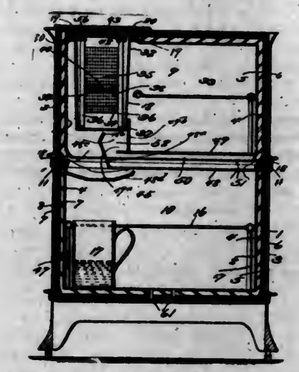
3. A combined fuel and air feeding pump for internal combustion engines comprising a primary and secondary piston, a cross-head connecting said pistons together for simultaneous reciprocation, a pump casing formed with primary and secondary piston chambers for said pistons, an air supply pipe having connection with the outlet passage of the secondary piston chamber and with the inlet passage to the primary piston chamber, a liquid fuel pipe connected with the inlet port of the secondary piston chamber, an outlet casing having connection with the outlet port of the primary piston chamber and with the explosion chamber of the engine, and means for imparting reciprocation to said pistons, substantially as described.

4. A combined fuel and air feeding pump for internal combustion engines comprising a primary and secondary piston, a cross-head connecting said pistons together for simultaneous reciprocation, a pump casing formed with primary and secondary piston chambers for said pistons, an air supply pipe having connection with the outlet passage of the secondary piston chamber and with the inlet passage to the primary piston chamber, a liquid fuel pipe connected with the inlet port of the secondary piston chamber, an outlet casing having connection with the outlet port of the primary piston chamber and with the explosion chamber of the engine, means for preheating the air passing through the aforesaid air supply pipe, and means for imparting reciprocation to said pistons, substantially as described.

5. A combined fuel and air feeding pump for internal combustion engines comprising, a primary and secondary piston connected for simultaneous reciprocation, a pump casing formed with primary and secondary piston chambers for said pistons, a chambered casing carried by the pump casing and having connection with an air supply and with the outlet port of the secondary piston chamber an inlet port of the primary piston chamber, a liquid fuel pipe connected with the inlet port of the secondary piston chamber, an outlet casing having connection with the outlet port of the primary piston chamber and with the explosion chamber of the engine, and means for imparting reciprocation to said pistons, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,016,336. REFRIGERATOR. BENOVILL A. KUHNS, Wilmington, Del. Filed Jan. 26, 1911. Serial No. 604,750. (Cl. 62—10.)



1. A refrigerator comprising an upper and lower section having interengaging connections, said sections having compartments, including inner and outer walls and an intermediate wall, said inner and intermediate walls having an air space between them, the intermediate wall and inner wall having strips struck therefrom to hold the inner wall spaced apart from the intermediate wall, said upper section having two horizontal parallel partitions with a space between them constituting a passageway whereby air may circulate from one compartment to the other.

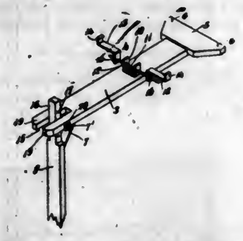
2. In a device as set forth, an ice supporting rectangular basket, comprising corner posts connected by parallel connecting bars, and including a removable perforated false bottom adapted to be supported upon the bars, said corner posts terminating at their lower extremities into coils constituting feet, while their upper extremities are set inwardly and provided with apertures, and U shaped handles having their ends looped in the apertures, whereby the basket may be lifted bodily from the ice-box.

3. A refrigerator comprising upper and lower sections having interengaging connections therebetween and provided with non-communicative air spaces, the upper section having a compartment, an ice-box extending thereinto at one end of the compartment, the compartment of the upper section having a bottom extending partially under the ice-box, the bottom having a portion extending at right angles thereto disposed adjacent to the side of the box, the upper section having a second bottom below the first bottom, thus providing an air space between the bottoms in communication with the air space of the upper section, the second bottom having a flange arranged substantially at an obtuse angle thereto and beyond the end of the first bottom, the flange of the second bottom having a supplemental flange disposed at an obtuse angle to the first flange, and a drip tray arranged the box, the upper section having a second bottom and below the ice-box, the tray being held in position by the interengaging connections, the air space of the upper section, the air space between the two bottoms and the compartments of the upper and lower sections being in communication.

1,016,337. IRONING-BOARD ATTACHMENT. GEORGE C. LACHTROP, Cincinnati, Ohio. Filed Jan. 12, 1911. Serial No. 602,149. (Cl. 68—10.)

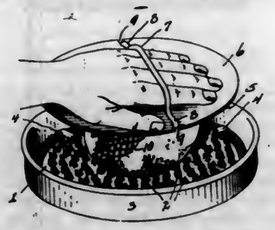
1. An ironing board attachment comprising a horizontally disposed clamping lever, adjustable clamping jaws

thereon for detachably clamping said lever to an ironing board, and a supporting leg adjustably pivoted to the end of said horizontal lever.



2. An ironing board attachment comprising a horizontally disposed clamping lever, adjustable clamping jaws thereon having serrated claws adapted to enter the edges of an ironing board, and a supporting leg pivoted to said horizontal lever.

1,016,338. SCARIFYING DEVICE FOR FRUITS AND VEGETABLES. JOSEPH G. LANNOYE, Detroit, Mich. Filed June 12, 1911. Serial No. 632,652. (Cl. 146—15.)



1. In a device for the purpose described, a pair of plates provided with cutting teeth, an imperforate support for one of the plates, the other plate being formed of a single, disk-shaped, piece of metal and being movable in all directions when in operative relation with the first named plate, and a handle by means of which said other plate may be manipulated.

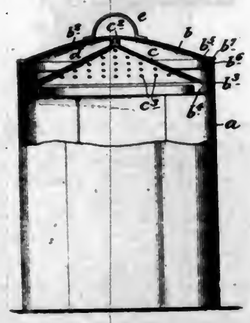
2. In a device for the purpose described, a flat plate, a support therefor, a flat plate adapted to rest upon a fruit or vegetable, said plate being movable in all directions when in operative relation with the supported plate, both of said plates having cutting teeth, and a handle for moving the movable plate whereby said fruit or vegetable may be rolled between the plates.

3. In a device for the purpose described, a pair of scarifying plates each having cutting teeth, an imperforate pan for the support of one of the plates, said supported plate having laterally extending lugs or projections integrally formed therewith for positioning it in the pan, the other plate being unsupported and free to move in all directions when in operative relation with the supported plate, and a handle for manipulating the movable plate.

4. In a scarifying device for fruits or vegetables, a pair of scarifying plates, one of said plates being fixed and the other being unsupported and movable in all directions when in operative position with the fixed plate, and each of said plates being provided with triangular cutting teeth raised from the material of the plate in groups surrounding the apertures in the plate from which they are raised.

5. In a scarifying device for fruits and vegetables, a pair of scarifying plates, one of said plates being fixed and the other movable and each being provided with triangular cutting teeth raised from the material of the plate, an imperforate pan for the support of the fixed plate, said movable plate being unsupported and free to move in all directions when in operative relation with the fixed plate, an imperforate plate forming a backing for the movable plate, said imperforate plate and movable plate having correspondingly positioned, marginal notches, and a clamping handle engaging in said notches and adapted to detachably secure the two plates together.

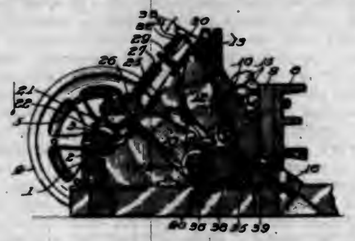
1,016,339. COOKING UTENSIL. IDA LARSON, Brooklyn, N. Y. Filed Nov. 1, 1911. Serial No. 657,929. (Cl. 53—1.)



1. A closure device for cooking vessels, comprising a cap having a depending skirt or rim portion adapted to closely fit in the top of the vessel and provided at the bottom thereof with an inner annular receptacle which opens upwardly, and a perforated conical attachment secured within said cap centrally of the top thereof and the rim of which extends downwardly and outwardly over said receptacle.

2. A closure device for cooking vessels, comprising a cap having a detachable depending skirt or rim portion adapted to closely fit in the top of the vessel and provided at the bottom thereof with an inner annular receptacle which opens upwardly, and a perforated conical attachment detachably secured within said cap centrally of the top thereof and the rim of which extends downwardly and outwardly over said receptacle.

1,016,340. STONE CRUSHING OR PULVERIZING MACHINE. ROBERT EUBANK LEIGHTON, Kingston, N. Y. Filed Jan. 31, 1910. Serial No. 540,978. (Cl. 83—53.)



1. In a machine of the class described, the combination with a pivoted crushing member, of a pivoted lever, means to oscillate said lever, means connecting said lever to actuate said crushing member when oscillated, separate means each carried by said lever and crushing member tending to separate the free end of said lever and the pivoted end of said crushing member, and to draw together the free end of said crushing member and pivoted end of said lever.

2. In a machine of the class described, the combination with a pivoted lever fulcrumed intermediate of its ends, of a crushing member pivoted intermediate of its ends, means connecting one end of the crushing member and the adjacent end of said lever, and tending to separate them, and separate means tending to draw the respective opposite ends of said member and lever together.

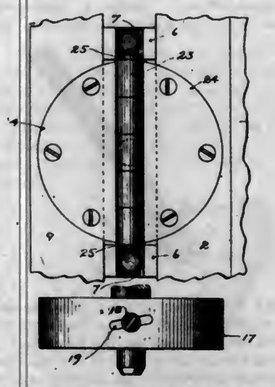
3. In a machine of the class described, the combination with a pivoted lever fulcrumed intermediate of its ends, of a crushing member pivoted intermediate of its ends, a spring disposed between one end of said crushing member and one end of said lever tending to separate said ends, and a spring disposed between the opposite ends of said member and lever tending to draw said ends together.

4. A machine of the class described, comprising a crushing member pivoted intermediate its ends, of a lever operative to actuate said crushing member, means connecting said crushing member and lever to effect the actuation of said crushing member, said crushing member and said lever being each pivoted intermediate of their ends, a compression spring interposed between one end of said lever and one end of said crushing member, means operative to vary the pressure of said spring, a spring interposed between the other ends of said member and lever tending to draw said ends together, and means arranged to vary the tension of said spring.

5. In a machine of the class described, the combination with a movable crushing member and a lever of the second class for imparting motion to said crushing member, of means arranged to actuate said lever, and means arranged to prevent lost motion comprising resilient means interposed between, and connecting said movable member and said lever.

[Claims 6 to 19 not printed in the Gazette.]

1,016,341. METHOD OF APPLYING HINGES. ANDREW S. LOWDEN, Concord, Mass. Filed Apr. 21, 1911. Serial No. 622,443. (Cl. 144—27.)



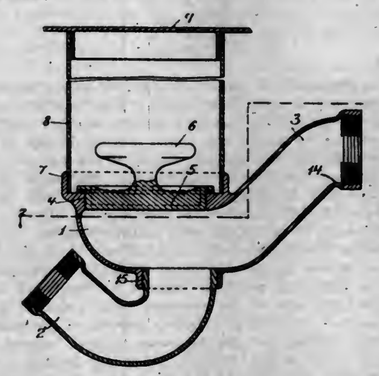
1. The method of applying a hinge to the parts to be connected thereby which consists; firstly, in securing the said parts in such position that the prospective bottoms of the hinge seats to be formed in said parts and which are to be engaged by the radial faces of the hinge wings or flaps lie in the same plane; secondly, in simultaneously excavating both said hinge seats by a cutting tool rotating upon an axis perpendicular to said plate; and finally in securing within the said hinge seats a hinge having flaps conforming in outline to the outline of the cut made by the said tool on a plane perpendicular to its axis.

2. The method of applying a hinge to the parts to be connected thereby which consists; firstly, in securing the said parts in such position that the prospective bottoms of the hinge seats to be formed in said parts and which are to be engaged by the radial faces of the hinge wings or flaps lie in the same plane; secondly, in simultaneously excavating both said hinge seats by a cutting tool rotating upon an axis fixed with reference to said parts and perpendicular to said plane; and finally, in securing within the said hinge seats a hinge having flaps conforming in outline to the outline of the cut made by said tool on a plane perpendicular to its axis.

3. The method of applying a hinge to the parts to be connected thereby which consists; firstly, in securing the said parts in such position that the prospective bottoms of the hinge seats be formed in the said parts and which are to be engaged by the radial faces of the hinge wings or flaps lie in the same plane; secondly, in simultaneously excavating in the said parts, by the single application of a cutting tool rotating on a fixed axis perpendicular to said plane, hinge seats which constitute segments of the circular cut excavated by said rotating tool; and finally, securing within the hinge seats a hinge having the free edges of the portions of its flaps which are designed to be secured in said hinge seats of a segmental outline conforming to that of the hinge seats.

4. The method of applying a hinge to the parts to be connected thereby which consists; firstly, in securing the said parts in such position that the prospective bottoms of the hinge seats to be formed in said parts and which are to be engaged by the radial faces of the hinge wings or flaps lie in the same plane, said parts having a separating block interposed between the same at the point of hinge attachment, said block embodying tool centering means adapted to position the said excavating tool, and further embodying hinge alining means adapted to engage the hinge and to position the hinge pin of the same substantially in coincidence with the axis about which the parts are to swing; secondly, in simultaneously excavating in the said parts, by the single application of a cutting tool rotating on a fixed axis perpendicular to said plane, hinge seats which constitute segments of the circular cut excavated by said rotating tool; and finally, securing within the hinge seats a hinge having the free edges of the portion of its flaps which are designed to be secured in said hinge seats of a segmental outline conforming to that of the hinge seats.

1,016,342. BATH-TRAP. PETER F. LYONS, Boston, Mass., assignor of one-half to C. H. Cronin, Boston, Mass. Filed Mar. 10, 1910. Serial No. 548,492. (Cl. 182—12.)



1. A bath trap comprising a generally circular or bowl-shaped shallow body having an outlet pipe at one side, the diameter of which is substantially as great as the depth of the body, and an inlet pipe curved to form a downward sealing loop connected to the bottom wall of the trap between the outlet and the center thereof, whereby the parts of the trap more remote from the inlet are enabled to form a reservoir withholding a quantity of water sufficient to refill the sealing loop when the latter is emptied by siphonage, without requiring valve means.

2. A trap consisting of a body having an outlet at one side and being substantially equal in depth to the width of the outlet, said body having an opening in its bottom extending from the side in which the outlet is located toward the center, and being of less diameter than the width of the body, an internally threaded lip projecting downward from the bottom of the body around such opening, and a U-shaped inlet pipe having on one end

a projecting external thread screwed into said lip, said inlet pipe and body being free from abutments, whereby the inlet may be turned swivelly with respect to the body.

3. A trap comprising a shallow body portion having an opening in its top wall of nearly as great diameter as the width of the body, and a flange surrounding the opening, a plug detachably contained in the opening having a smooth under surface flush with the top inner surface of the trap, an outlet at the side of the trap rising to a height above the bottom of the plug and below the top of the flange, whereby the plug is secured by the water flowing through the trap and can be removed to permit insertion of a cleaning instrument without causing the trap to overflow, and the flange being sufficiently low to enable such cleaning instrument to be pushed into the outlet.

4. A trap comprising a shallow body having an opening in its top wall of nearly as great diameter as the width of the body, and having a flange surrounding the opening, a plug detachably contained in the opening, an inlet opening into the bottom of the trap, an outlet at the side of the trap rising to a height above the bottom of the plug and below the top of the flange, and a can detachably screwed into said flange surrounding the plug and having a removable cover at its upper end.

1,016,343. SAFETY-TRIMMER FOR CORNS AND CALLI. JOHN A. MAKARHOF, Chicago, Ill., assignor, by direct and mesne assignments, of forty-nine one-hundredths to Fred R. Belt and fifty-one one-hundredths to George A. Baird, Chicago, Ill. Filed Apr. 5, 1911. Serial No. 619,070. (Cl. 30—12.)

1. A device of the character described, including clamping members, a blade held between said members, a fulcrum bearing for the members located between the front and rear of the blade, and means located in rear of said fulcrum bearing for relatively tilting of the members upon the fulcrum bearing to separate the rear ends of the members and to swing together the front ends of the members to clamp the blade therebetween adjacent the cutting edge of the blade, said means engaging the rear portion of the blade to hold it against one of the members.

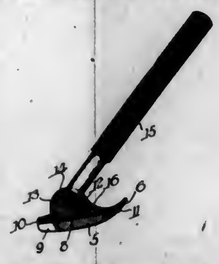
2. A device of the character described comprising a pair of clamping members adapted to receive a blade therebetween, one of the members being provided at its rear with an opening to expose a portion of the blade, a fulcrum bearing for the members located between the front and rear of the members, and means carried by said one member and working in the opening thereof for engagement with that portion of the blade exposed by the opening to clamp the blade against the other member and to effect relative tilting of the members upon the fulcrum bearing to swing together the front ends of the members and clamp the same upon the blade adjacent its cutting edge.

3. A device of the character described, comprising clamping members, a blade held between said members, a fulcrum bearing for the members located between the front and rear of the members, and a swinging handle for manipulating the device terminating in a cam located in rear of the fulcrum bearing, pivoted upon one of the members and bearing against the blade to hold it against the other member and to separate the rear ends of the members and swing together the front ends of the members to clamp the blade therebetween adjacent the cutting edge of the blade.

4. A device of the character described comprising a pair of clamping members adapted to receive a blade therebetween, one of the members being provided at its rear with an opening to expose a portion of the blade, a fulcrum bearing for the members located between the front and rear of the members, and a handle for manipulating the device terminating in a cam pivoted in the opening in the said one member for engagement with that portion of the blade exposed by the opening to clamp the blade against the other member and to effect tilting of the members upon the fulcrum bearing to separate the rear ends of the members and to swing together the front end of the members and clamp the same upon the blade adjacent its cutting edge.

5. A device of the character described, comprising a pair of clamping members, a fulcrum bearing for the members located between the front and rear of said members, and a handle for the device provided at one end with an elbow terminating in a cam having its axis disposed transversely of the device and pivotally mounted upon one of the members and operating to relatively tilt the members upon the fulcrum bearing to separate the rear ends of the members and to swing together the front ends of the members to clamp a blade between them adjacent the cutting edge of the blade, said handle being disposed at an acute angle to the members and extending in front thereof in the clamped position of the handle, substantially as described.

1,016,344. SAFETY-RAZOR. JOHN A. MAKARHOF, Chicago, Ill., assignor, by direct and mesne assignments, of forty-nine one-hundredths to F. R. Belt and fifty-one one-hundredths to George A. Baird, Chicago, Ill. Filed Apr. 20, 1911. Serial No. 622,203. (Cl. 30—12.)



1. A safety razor comprising a base member provided with a seat having one side open, a rotatable cam mounted upon the base member between the front and rear thereof and extending from side to side of the base member with its axis disposed parallel to the cutting edge of the razor blade, the periphery of the cam working through the open side of the seat in position to engage the blade and press the same against the back of the seat, and a handle for manipulating the device carried by the cam, substantially as described.

2. A safety razor comprising a base member provided with a seat having an open side, a guard extending across the front of the seat, ears upon the body at opposite sides of the seat, a cylindrical clamping member having its axis disposed in substantial parallelism with the guard and its ends eccentrically mounted in the ears, the periphery of the clamping member working through the open side of the seat in position to press a blade and hold the same against the back of the seat, and a handle for manipulating the device carried by the clamping member, substantially as described.

3. A safety razor comprising a base member provided with a seat having one side open, a rotatable cam mounted upon the base member between the front and rear thereof and extending from side to side of the base member with its axis disposed parallel to the cutting edge of the razor blade, the periphery of the cam working through the open side of the seat in position to engage the blade and press the same against the back of the seat, and a handle for manipulating the device carried by the cam, and a brace member movable with the clamping member and disposed in position to lie against the blade between the clamping member and the cutting edge of the blades to prevent vibration of said cutting edge, substantially as described.

4. A safety razor comprising a base member provided with a seat having an open side, a guard extending across the front of the seat, ears upon the body at opposite sides of the seat, a cylindrical clamping member having its axis disposed in substantial parallelism with the guard and its ends eccentrically mounted in the ears, the periphery of the clamping member working through the open side of the seat in position to press a blade and hold the same against the back of the seat, a handle for manipulating the device carried by the clamping member, and a brace member movable with the clamping member and disposed in position to lie against the blade between the clamping member and the cutting edge of the blade to prevent vibration of said cutting edge, substantially as described.

5. A safety razor comprising a base member provided with a seat having an open side, a guard extending across the front of the seat, a rotatable cam mounted upon the base member between the front and rear thereof and extending from side to side of the base member with its axis disposed substantially parallel with the guard, the periphery of the cam working through the open side of the seat in position to engage a blade and press the same against the back of the seat, and a handle for manipulating the razor carried by the cam, said handle being disposed at an acute angle with respect to the forward portion of the base member and extending in front of the guard in the clamped position of the handle, substantially as described.

1,016,345. BRICK, TILE, OR ANALOGOUS ARTICLE AND THE PROCESS OF MAKING SAME. ANDREW MALINOVSZKY, Toledo, Ohio, assignor, by direct and mesne assignments, of one-fourth to John H. Taylor, Schenectady, N. Y., and three-fourths to The Sanitary Brick Company, Schenectady, N. Y., a Corporation of New York. Filed Apr. 19, 1910. Serial No. 556,345. (Cl. 106—11.)

1. An article of the class described, composed of a compound obtained by heating together silica calcium oxid and pegmatite.

2. An article of the class described, composed of a compound obtained by heating together silicious sand, calcium oxid and pegmatite, the sand forming a major portion of the entire mass and a substantial portion of the same being finely crushed.

3. An article of the class described, composed of a compound obtained by heating together silicious sand, calcium oxid, calcined magnesia silicate and pegmatite, the sand forming at least 60% and the pegmatite at least 10% of the entire mass.

4. An article of the class described, composed of a compound obtained by heating together silicious sand, calcium oxid, pegmatite, and calcined magnesia silicate, the sand constituting a major portion of the compound.

5. An article of the class described, composed of a compound obtained by heating together silicious sand, calcium oxid, calcined and ground serpentine rock, alumina and pegmatite, the sand forming at least 60% of the entire mass and the serpentine rock in sufficient quantity to form a binder.

[Claims 6 to 18 not printed in the Gazette.]

1,016,346. HEAT-CONSERVING APPARATUS. REUEL T. MARKER, Philadelphia, Pa. Filed June 4, 1909. Serial No. 500,132. (Cl. 62—10.)

1. In an article of the class described, an inclosure forming a vacuum chamber having the walls thereof provided with inwardly extending stiffening ribs and bosses projecting from said ribs and holding said walls spaced apart.

2. In an article of the class described, an inclosure forming a vacuum chamber having the walls thereof provided with inwardly extending stiffening ribs, bosses projecting from said ribs and holding said walls spaced apart and heat insulating material inserted between the ends of said bosses and the contacting portion of the opposite wall.

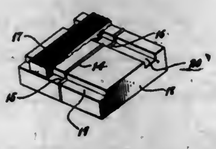
3. In an article of the class described, an inclosure forming a vacuum chamber having the walls thereof provided with inwardly extending stiffening ribs, bosses projecting from said ribs and holding said walls spaced apart, and washers of heat insulating material concaved to fit on the ends of said bosses inserted between said ends and the contacting part of the opposite wall.

4. In an article of the class described, an inclosure forming a vacuum chamber having the walls thereof provided with inwardly extending stiffening ribs and registering bosses projecting from said ribs and holding said walls spaced apart.

5. In an article of the class described, an inclosure forming a vacuum chamber having the walls thereof provided with inwardly extending stiffening ribs, registering bosses projecting from said ribs and holding said walls spaced apart and heat insulating washers having concaved surfaces to fit on the ends of said bosses inserted between the ends of said registering bosses.

[Claims 6 to 13 not printed in the Gazette.]

1,016,347. STEREOTYPE-PLATE CUTTER. FREDERICK J. MATTCH, Middletown, Conn. Filed Dec. 27, 1909, Serial No. 535,174. Renewed Dec. 21, 1911. Serial No. 667,211. (Cl. 164—158.)



1. A stereotype plate cutter comprising a pair of scoring knives, the scoring edges of which are opposite each other, one of said knives having its scoring edge interrupted and the scoring edge of the other being straight one of said knives being movably mounted.

2. A stereotype plate cutter comprising a pair of scoring knives, the scoring edges of which are opposite each other, one of said knives having its scoring edge interrupted

the scoring edge of the other being straight and one of said knives being movably mounted combined with means for positively preventing the scoring edge of the movable knife coming into contact with the scoring edge of the companion knife.

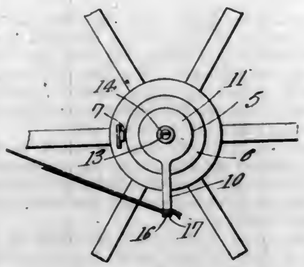
3. A stereotype plate cutter comprising complemental scoring knives, the scoring edges of which are opposite each other, one of the knives having an interrupted portion having a cutting part the scoring edge of the other knife being straight.

4. A stereotype plate cutter comprising a stereotype-plate-supporting-anvil, and a scoring knife in coöperative relation with said anvil recessed to receive the ribs of the plate on said anvil, a second scoring knife, the scoring edge of which is opposite the scoring edge of the first mentioned knife, the bottoms of the recesses of the latter having rib scoring portions in parallelism with the scoring edge of the second knife, and means for operating said second knife.

5. A stereotype-plate cutter comprising an anvil in sections, a knife clamped between the sections of said anvil, the anvil and knife having registering recesses to receive the ribs of the stereotype plate and a second knife, the cutting edge of which is opposite the cutting edge of the other knife, the bottoms of the recesses of the first knife having straight cutting portions in parallelism with the cutting edge of the second knife.

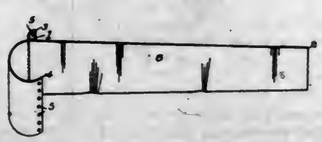
[Claim 6 not printed in the Gazette.]

1,016,348. HITCHING DEVICE. JAMES T. MCCLENDON and FRED H. MCCLENDON, Lufkin, Tex. Filed Apr. 8, 1911. Serial No. 619,832. (Cl. 21—136.)



The combination with a vehicle hub of a rein hitching device removably attached over the outer end thereof and thereto, and having a slip-on cap, a notched stud axially located upon the cap, an arm rotatably fitted to the stud and having an inwardly laterally projecting portion arranged for the engagement therewith of harness reins, and a dog carried by the arm and coöperating with the notched stud to hold the arm for rotation in one direction with the hub cap.

1,016,349. PATCH FOR PNEUMATIC TIRES. CLARKE W. MCKEE, San Diego, Cal. Filed Mar. 9, 1911. Serial No. 613,219. (Cl. 152—26.)



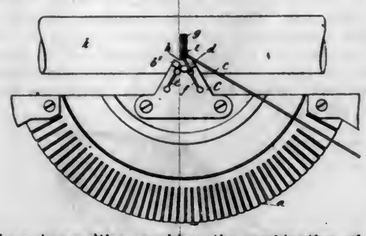
A patch for pneumatic tires comprising a band of practically non-elastic material tapered toward the one end, the other end thereof being provided with a short flap adapted for lacing and another longer flap similarly adapted and of sufficient length when used in connection with said short flap to reach around the inner inflated tube, and means for lacing the two edges of the said flaps together, all substantially as set forth.

1,016,350. BRICK FOR METALLURGIC FURNACES. WILLIAM N. MCKNIGHT and ROBERT H. YOUNGMAN, Pittsburgh, Pa., assignors to Harbison-Walker Refractories Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1910. Serial No. 548,710. (Cl. 75—113.)

1. As a new article of manufacture, a refractory brick for metallurgic furnaces, comprising a main body-portion of a refractory material, and an added smaller body portion of a thickness not less than one-fourth of an inch and forming the exposed face of the brick of a refractory material less subject to chemical action than the said main body-portion.

2. As a new article of manufacture, a refractory brick for metallurgic furnaces, comprising a main body-portion of a refractory material, and an added smaller body portion of a thickness not less than one-fourth of an inch and forming the exposed face of the brick united to the main body-portion by a fused joint.

1,016,351. TYPE-WRITING MACHINE. GUSTAV MEZ, Berlin, Germany. Filed Mar. 25, 1911. Serial No. 616,822. (Cl. 197—43.)



1. In a typewriting machine, the combination of type-bars having type-heads, guide lugs, and guides coöperating with said lugs, the guide lugs of individual type-bars being deflected at an obtuse angle from the respective type-heads.

2. In a typewriting machine, the combination of type-bars having type-heads, guide-lugs and guides for said type-bars, the guide-lugs of individual type bars being deflected at an obtuse angle from the type-head and at an acute angle from the type-bar; substantially as described.

3. In a typewriting machine, the combination of deflected type-bars having type-heads, guide-lugs and guides for said type-bars, the guide-lugs of individual type-bars being deflected, and both points of deflection of the guide-lugs being below that of the type-bars themselves.

4. In a typewriting machine, the combiantion of deflected type-bars having type-heads, guide-lugs and guides for said type-bars, the guide-lugs of individual type-bars being deflected, and both points of deflection of the guide-lug and of the type-bar being beyond said guides.

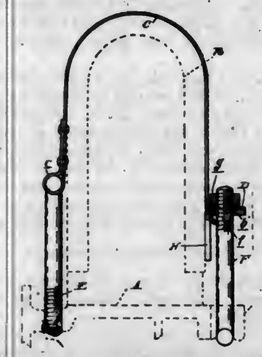
5. In a typewriting machine, means for guiding the type-bars in their forward stroke, consisting of a guide-plate having a plurality of guide-slots forming an angle with each other, in combination with a series of type-bars having type-heads provided with guide-lugs, some of which are adapted to engage with one of said slots and some of which are adapted to engage with another of said slots.

[Claims 6 to 12 not printed in the Gazette.]

1,016,352. PHOSPHATE AND THE METHOD OF MAKING SAME. CHARLES NICHOLAS MERIWETHER, Clarksville, Tenn. Filed July 9, 1908. Serial No. 442,757. (Cl. 71—7.)

As a new article of manufacture, a fertilizer consisting of phosphatic material having an excess of lime, an alkaline substance and magnesia fused together and reduced to a powdered condition.

1,016,353. HOLDER. MATHEW B. MORGAN, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 28, 1910. Serial No. 599,781. (Cl. 171—76.)



1. The combination with a support, of an arched holder connected at one end thereto and provided at its opposite end with a lateral seat, and a retainer engaging the seat and having a detachable engagement with the support.

2. The combination with a support, of an arched holder connected thereto at one end, a braced seat upon its opposite end, and a retainer engaging the seat and support.

3. The combination with a support, of a strap connected at one end thereto and having its opposite end apertured and offset to form a seat, an angle brace for the offset portion projecting beyond the latter to engage the article to be retained, and a bolt engaging the seat and having a detachable engagement with the support.

4. The combination with a support, of an arched holder in the form of a band or strap having one end slotted near its extremity and folded, forming transversely alining bearings, and its opposite end offset outwardly, a T-bolt engaging the alining bearings and connecting the strap with the support, an angle plate reinforcing and forming a brace for the offset end, and a T-bolt extending through the braced end of the strap having a detachable connection with the support.

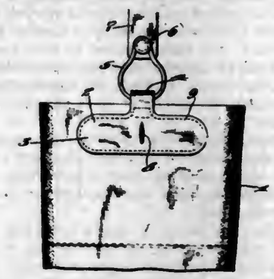
5. The combination with a support, of an arched holder connected at one end thereto and provided at its opposite end with a lateral seat, an angle brace reinforcing said lateral seat and a retainer engaging the seat and having a detachable engagement with the support.

[Claims 6 and 7 not printed in the Gazette.]

1,016,354. STOCKING. FLORIAN E. MUNICH, Philadelphia, Pa. Filed Nov. 18, 1911. Serial No. 660,960. (Cl. 2—23.)

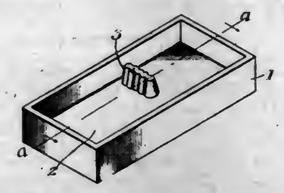
1. As a new article of manufacture, a stocking, flexible members located against the inner and outer faces of the stocking at its upper end, tongues on said members projected over the upper edge of the stocking and overlapping, a metal loop through which said tongues project, and a line of stitching through said members, tongues and stockings, substantially as described.

2. As a new article of manufacture, a stocking, flexible members located against the inner and outer faces of the stocking at its upper end, tongues on said members projected over the upper edge of the stocking and overlapping, a metal loop through which said tongues project, a line of stitching through said members, tongues and



stockings, and said members and stocking having a button hole therein, substantially as described.

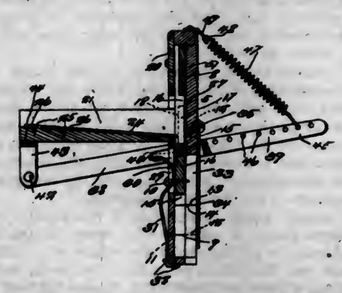
1,016,355. IRON FURNITURE. CHARLES R. MURRAY, Chicago, Ill. Filed July 23, 1908. Serial No. 445,016. (Cl. 101—50.)



1. A device of the class specified adapted for insertion and removal from a printer's chase or form of type matter, so as to act as furniture therefor, comprising a rectangular box-like structure having a transverse level floor for dividing said structure into two substantially equal rectangular chambers, and projections having a corrugated contour in each said chamber extending from said level floor forming members for manually engaging said device to place it in position or remove it, all of said device being formed integrally of the same material.

2. A device of the class described comprising a rectangular box-like structure having a transverse floor, and also having projections on opposite sides of the floor, forming members for engaging the device to place it in position and remove it therefrom.

1,016,356. AUTOMATIC FEEDING DEVICE FOR LINOTYPE-MACHINES. HARVEY E. NELSON, Petaluma, Cal. Filed Oct. 18, 1911. Serial No. 655,396. (Cl. 22—80.)



1. In a linotype feeder, a casing having a slide chamber, a slide having an opening therein adapted to feed type metal slugs one at a time to the melting pot, means for operating the slide at uniform intervals, and means

adapted to automatically extend into the opening to discharge each slug when the slide is operated.

2. In a linotype feeder, a casing having a slide chamber, a slide having an opening therein having a removable plate adapted to be substituted by a similar plate of different thickness, the slide adapted to feed linotype slugs one at the time at uniform intervals, means for operating the slide, and means adapted to automatically extend into the opening to discharge each slug when the slide is operated.

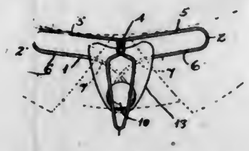
3. In a linotype feeder, a casing having a slide chamber, a slide therein having an opening to receive a type metal slug, means for moving the slide downwardly, and means extensibly extending into the opening for automatically discharging the slug.

4. In a linotype feeder, a casing having a slide chamber, a slide therein having an opening, the casing having a bracket chute, adjustable members therein adapted to permit different size slugs to pass through the chamber, and means for operating the slide.

5. In a linotype feeder, a casing having a slide chamber, a slide therein having an opening, the casing having a bracket chute, adjustable members therein adapted to permit different size slugs to pass through the chamber, and means for operating the slide, and means for discharging the slug from the opening.

[Claims 6 to 11 not printed in the Gazette.]

1,016,357. NECKTIE-HOLDER. CHARLES H. OHLY, Summit, N. J. Filed Mar. 27, 1911. Serial No. 617,013. (Cl. 2—84.)

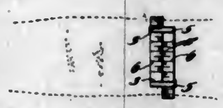


1. A necktie holder comprising a rearwardly opening socket-piece adapted to receive the ball-head of a collar button, said socket-piece having front and rear laterally projecting portions and an intermediate neck, and a wire frame having lateral loops adapted to project under the wings of a collar and front and rear downward extensions, the front extension constituting a flexible form for knotting a tie upon and the rear extension comprising resilient arm constituting continuations of the lower sides of the lateral loops curved downward across each other each to the opposite side of the neck of the socket-piece from its loop and curled around said neck, the convexity of each arm being toward the opposite loop and said arms being free from each other so as to bend from said socket-piece each independent of the other, said laterally projecting portions of the socket-piece holding the arms so curled around the neck of the socket-piece between themselves, whereby said arms are connected to each other, the socket-piece is connected to the wire frame and an attaching means provided.

2. A necktie holder comprising a wire frame having lateral loops adapted to project under the wings of a collar and front and rear downward extensions, the front extension constituting a tie form and the rear extension being formed of the ends of the wire and providing attaching means, and a shield mounted upon the front side of said rear extension and projecting over the said extension to lie between it and the front extension.

3. A necktie holder comprising a rearwardly opening socket-piece having a neck, a wire frame having lateral loops adapted to project under the wings of a collar and front and rear downward extensions, the front extension constituting a form for knotting a tie and the rear extension comprising resilient arms bent downward from the lower sides of the lateral loops and curled around the neck of said socket-piece, and a shield apertured to receive said neck of the socket-piece, and lying between the head of the socket-piece and said arms, said shield projecting over the said arms and adapted to cover the entire portions thereof which are exposed by the collar.

1,016,358. RING-GAGE. FERDINAND T. PLACK, Harrisburg, Pa. Filed Sept. 19, 1911. Serial No. 650,275. (Cl. 73—147.)

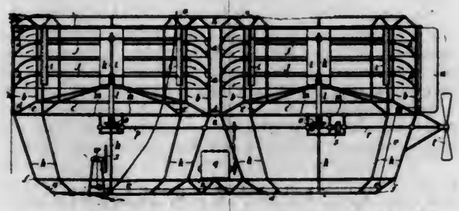


1. A ring gage comprising two strips located one inside of the other, and straps secured to the ends of said strips and projected between said strips, substantially as described.

2. A ring gage comprising two strips located one inside of the other, and straps secured to the ends of said strips and projected between said strips, enlargements on the outer faces of said straps, substantially as described.

3. A ring gage comprising two strips located one inside of the other, straps secured to the ends of said strips and projected between said strips, enlargements on the outer faces of said straps, and scales on said strips registering with said enlargements, substantially as described.

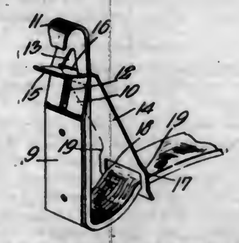
1,016,359. AIRSHIP. JAMES ROBERTSON PORTER, London, England. Filed Oct. 2, 1909. Serial No. 520,657. (Cl. 244—13.)



1. An airship having, in combination, a plurality of superposed non-rotary annular deflecting surfaces having a common axis, and a centrifugal propeller mounted centrally to force the air drawn from the underside against and between said deflecting surfaces.

2. An airship having, in combination, a series of non-rotary annular deflecting surfaces having a common axis, means for drawing the air from below the machine and forcing it against the deflecting surfaces, which in turn deflect it downward and cause the machine to rise, and a screw propeller for driving the machine forward.

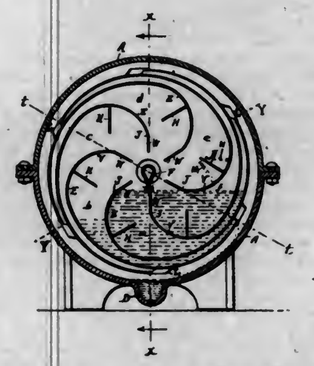
1,016,360. HARNESS-SNAP. JULIUS C. PROEBSTEL, Portland, Oreg. Filed Aug. 23, 1911. Serial No. 645,524. (Cl. 24—242.)



1. A harness snap, including a hook-ended body-member adapted to have a hitching member attached thereto, and a hook-ended tongue-member pivoted at its hook-ended portion within said body-member and adapted to receive the hitching member, said body-member being extended in combination of the shank of its hook to cause its hitching member attaching portion to stand parallel with, and be spaced off from the opposite portion of said tongue-member, said tongue-member having its hitching member receiving-end oppositely extended and terminated in alinement with and abutting against said body-member.

2. A harness snap, including a hook-ended body member adapted to have a hitching member attached thereto, said body member having an approximately triangular slot and a rectangular slot forming an extension of the aforesaid slot, and a tongue-member having a deflected approximately triangular end-portion opposed to the hook-ended portion of said body-member, said tongue-member also having opposed lateral notches at the base of its triangular portion to laterally receive the body-member and allow of the passage of said tongue-member, said body-member being extended, in continuation of the shank of its hook to cause it to stand parallel with, and be spaced off from the opposite portion of said tongue-member, said tongue-member having a deflected slotted end portion for the passage therethrough of said hitching member, said slotted end-portion terminating in alinement with and abutting against said body-member.

1,016,361. LIQUID-METER. JOHN V. REDFIELD, Grosse Pointe Farms, and JOHN T. BORDLEY, Detroit, Mich. Filed Dec. 31, 1910. Serial No. 600,298. (Cl. 73—37.)



1. In a liquid meter, in combination with a tubular axle having a radially arranged discharge terminal, a revoluble drum having a plane end portion and interior partition members having concaved faces spaced at their inner ends from said discharge terminal portion, and constituting with their outer ends a substantially circular periphery for the drum, the chambers thus constituted being of tapering contour with their smaller discharge ends at the periphery of the drum, baffle plates projecting into the several chambers from the concave faces of the partition walls, whereby the water normally falling into each chamber from said discharge terminal may be temporarily deflected, and baffle plates arranged about the periphery of the drum, adjacent the discharge ends of the several chambers, whereby the rotative effect on the drum as a whole due to the unintended escape of steam through said terminal and the several chambers is counteracted, substantially as described.

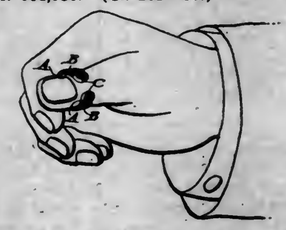
2. A liquid meter, comprising a revoluble drum having plane end portions, a plurality of partly radially extending and partly curved interior walls, the outer curved portion of each of which form a part of the periphery of the drum, the interiorly located part of each chamber being larger than its outer end portion, a baffle plate rising from the concave face of each chamber wall adjacent its broadest portion and extending a portion of the distance spacing its supporting wall from the convex face of the adjacent wall, in the direction of that point therein where the curved portion joins the truly radial portion, and an inlet terminal member arranged axially with respect to the drum, whereby water is conducted to the interior thereof and is intercepted and somewhat deflected in its fall into one of the chambers of the drum by the baffle plate therein, substantially as described.

3. A liquid meter, comprising a drum, having plane end portions, partition members partly radial and partly curved in their extent therewithin dividing the interior of the drum into a plurality of tapering compartments, the outer end of each partition wall constituting a part of the curved outer face of the drum, each partition wall being spaced from those adjacent on either side to form an outlet aperture for one of the chambers, and baffle plates projecting into the wide portion of each chamber from the concave face of its wall toward the outer end of the radial portion of the next partition wall in position to receive the impact of some of the water entering the chamber, and an axially arranged inlet pipe whereby water may be successively introduced into the several chambers as the drum rotates, substantially as described.

4. In a liquid meter, in combination with a plurality of compartments arranged about a common center, and with the outer portions of the partition walls thereof constituting a substantially circular periphery therefor, the inner portion of each compartment having substantially radially arranged walls and the space included between the outer portions of said walls gradually narrowing as the periphery of the compartment is approached, a baffle plate projecting into each compartment from the concaved partition wall thereof in a direction perpendicular to a line tangent to a curved portion of the partition wall thereof adjacent the outer end of the radially arranged portion, and means for introducing a supply of water along the common axis of rotation of said compartments and for filling the same successively as the structure of the assembled compartments revolves, each baffle plate receiving the impact of the water first entering its compartment and deflecting the same in its fall, substantially as described.

5. In a liquid meter, in combination with a tubular central member provided with a discharge aperture, a drum member rotatable thereabout, said drum having a plurality of interior partitions whereby a corresponding number of scroll-shaped chambers are formed, each of said partitions being spaced from the axial center of the drum with its portion next adjacent thereto normally radially arranged though inclinable from its normally true radial position, and a baffle plate projecting from the concave face of each partition wall toward the outer end of the radial portion of the next adjacent partition wall, adapted to receive and partially counteract the impact of water falling into its chamber from the discharge aperture of said central member, substantially as described.

1,016,362. DEVICE FOR FACILITATING COUNTING OF MONEY, DEALING CARDS, TURNING LEAVES, &c. GEORGE H. RIVES, New York, N. Y. Filed June 4, 1909, Serial No. 500,052. Renewed Dec. 5, 1911. Serial No. 664,080. (Cl. 101—36.)



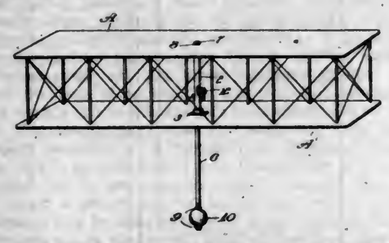
1. A device of the character stated composed of a body applicable to a thumb or finger, a frictional facing piece on the exterior of said body following the contour thereof, and means on the ends of said body integral with the same and turned back from said ends on said piece to close the ends of said body and fixedly embrace the ends and sides

of the ends of said piece and retain the latter in position on said body.

2. A device of the character stated composed of a body applicable to a thumb or finger, a frictional facing piece on the exterior of said body following the contour thereof, and means on the ends of said body integral with said ends and turned back from the latter over and clenched on the ends of said piece to close the ends of said body and cover said ends and fixedly retain the piece in position.

3. A device of the character stated comprising a body applicable to a thumb or finger, a frictional facing piece on the exterior of said body following the contour thereof, and clenching-members for said piece turned back from the ends of said body over the ends of said piece to retain fixedly the piece in place on the body.

1,016,363. MEANS FOR MAINTAINING EQUILIBRIUM OF AIRSHIPS AND THE LIKE. JOHN L. ROCHE, Chicago, Ill., assignor of one-fourth to Louis W. Felt, Chicago, Ill. Filed Sept. 17, 1909. Serial No. 518,157. (Cl. 244—31.)



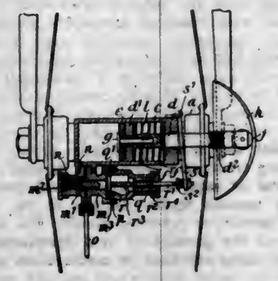
1. An aeroplane comprising upper and lower planes, a pair of parallel rods connecting the front and rear edges of each of said planes, a plate carried by each pair of rods mediate their ends, rectangular sockets projecting from the opposing faces of said plates, a rectangular-shaped tubular member having its ends secured to said sockets, and an equilibrator consisting of an elongated rigid member rectangular in cross section slidably mounted in said tubular member and extending below said lower plane.

2. An aeroplane comprising upper and lower planes, a pair of parallel rods connecting the front and rear edges of each of said planes, a plate carried by each pair of rods mediate their ends, rectangular sockets projecting from the opposing faces of said plates, a rectangular-shaped tubular member having its ends secured to said sockets, an equilibrator consisting of an elongated rigid member rectangular in cross section slidably mounted in said tubular member and extending below said lower plane, and means for adjusting the length of said equilibrator below said plane.

3. An aeroplane comprising upper and lower planes, a pair of parallel rods connecting the front and rear edges of each of said planes, a plate carried by each pair of rods mediate their ends, rectangular sockets projecting from the opposing faces of said plates, a rectangular-shaped tubular member having its ends secured to said sockets, an equilibrator consisting of an elongated rod rectangular in cross section slidably mounted in said tubular member and extending below said lower plane and having a rack on one side thereof, and a manually operated gear engaging and actuating said rack.

1,016,364. MEANS FOR AUTOMATICALLY INFLATING TIRES OF VEHICLE-WHEELS WHILE IN MOTION. JOHN INSHAW RODWAY and JAMES ESSON, Johannesburg, Transvaal. Filed Dec. 2, 1910. Serial No. 595,204. (Cl. 152—11.)

1. In a device of the character described, the combination with a pump including a barrel and a piston rod, of means for reciprocating the piston rod, a clutch lever having an aperture through which the piston rod is adapted to slide, and means to cant said clutch lever whereby the sides of the aperture therein will engage the piston when the latter is retired within the barrel and lock the pump against operation.

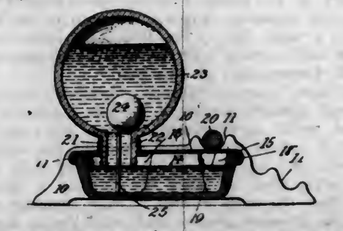


2. In a device of the character described, the combination with a pump including a barrel and a piston rod having its projecting end of enlarged diameter and a portion thereof roughened, of a cam for reciprocating the piston rod, a pivotally mounted clutch lever provided with an aperture through which the piston rod is adapted to slide when the clutch lever is substantially at right angles with the piston rod, and automatically operated means to cant said clutch lever whereby the sides of the aperture therein will engage the roughened enlarged portion of the piston rod when the latter is retired within the barrel and lock the pump against operation.

3. In a device of the character described, the combination with a pump adapted to deliver fluid under pressure to a pneumatic tire said pump including a barrel and a piston rod reciprocable therein, of means for reciprocating said piston rod, a pivotally mounted clutch lever provided with an aperture through which the piston rod is adapted to slide, a chamber interposed between the pump barrel and the pneumatic tire, and a rod adapted to be moved outwardly from said chamber when the pressure in the tire exceeds a predetermined amount, said rod having one end connected to one end of the clutch lever whereby the latter may be canted and the sides of the aperture therein caused to engage said piston rod when the latter is retired within the pump barrel and lock the pump against operation.

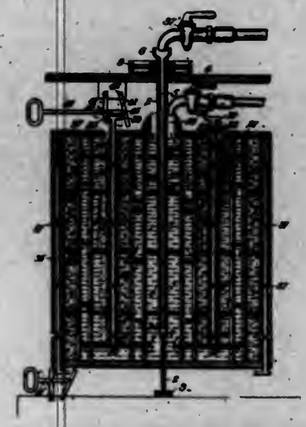
4. In a device of the character described, the combination with a pump adapted to deliver fluid under pressure to a pneumatic tire said pump including a barrel and a piston rod having its projecting end of enlarged diameter, of means for reciprocating the piston rod in the pump barrel, a pivotally mounted clutch lever provided with an aperture through which the piston rod is adapted to slide when the clutch lever is substantially at right angles with the piston rod, a chamber interposed between the pump and the tire and communicating with both thereof, a socket secured to the chamber, a rod reciprocable in said socket and having one end thereof operatively connected with one end of said clutch lever, and a flexible diaphragm at the other end of said rod and adapted to be acted on by pressure from within said chamber.

1,016,365. INKSTAND. IRVIN ROSENFELD, New York, N. Y. Filed Oct. 25, 1910. Serial No. 588,947. (Cl. 120—59.)



An ink well comprising a frame having a depending well provided with a circular rear section, a communicating central duct and a forward dip, a cover removably secured to the frame and having a rear aperture above the rear well section and a front aperture above the dip, a sleeve on the cover around the rear aperture, and an ink fountain having a depending neck that engages the sleeve.

1,016,366. LIQUID-SEPARATOR. GEORGE E. SANFORD, Chicago, Ill., assignor, by mesne assignments, to Sanford Clarifying and Separating Company, a Corporation of Delaware. Filed July 27, 1909. Serial No. 509,927. (Cl. 127—20.)



1. In a centrifugal separator, an inner and an outer drum, sets of shelves between the inner and outer drums, sets of shelves within the inner drum, and means whereby the drums may be rotated, the shelves within the inner drum and the shelves between the inner and outer drums being arranged to effect a deposit of the heavier impurities at the peripheries of the drums and the lighter impurities at the axis thereof and perimt of the escape of the clairfied liquid from between said deposited impurities.

2. In a centrifugal separator, an inner and an outer drum, the drums being mounted to rotate together, shelves between the inner and outer drums, and shelves within the inner drum, the shelves being arranged whereby upon rotation of the drums the impurities will be deposited and retained between the shelves and the clarified liquid permitted to escape from the drums.

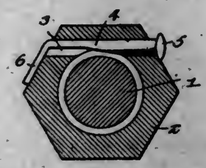
3. In a centrifugal machine, an inner and an outer drum, the drums being mounted for rotation, two sets of shelves arranged between the drums and two sets of shelves arranged within the inner drum, one set of shelves in the space between the drums and one set of shelves in the inner drum being adapted to retain the heavier impurities of the liquid and the other set of shelves between the drums and within the inner drum being adapted to retain the lighter impurities of the liquid.

4. In a centrifugal machine, a rotatable drum, two sets of shelves in the drum, one set of shelves arranged to retain the heavier impurities of the liquid and the other set of shelves being arranged to retain the lighter impurities of the liquid during rotation of the drum, and another set of shelves coöperating with the aforesaid shelves to retard and divide the flow of liquid between said other sets of shelves.

5. In a centrifugal separator, an inner and an outer drum, the drums being mounted for rotation together, two sets of shelves arranged between the drums, two sets of shelves arranged within the inner drum, one set of shelves in the space between the drums being arranged to retain the heavier impurities, and the other sets of shelves between the drums being arranged to retain the lighter impurities, one set of shelves in the inner drum being adapted to retain the heavier impurities and one set therein being adapted to retain the lighter impurities, and a set of shelves coöperating with each of the aforesaid two sets of shelves to arrest and divide the current to give the impurities in the liquid an initial movement in the direction in which they are to be deposited.

[Claims 6 to 24 not printed in the Gazette.]

1,016,367. NUT-LOCK. PAUL C. SCHMIDT, Detroit, Mich. Filed May 10, 1911. Serial No. 626,192. (Cl. 151—26.)



In combination with a threaded bolt and a nut for the bolt, said nut being formed with an opening arranged at a tangent to the bore of the nut and partially intersecting the said bore, a locking pin being constructed of suitable material and comprising a body portion having a reduced extension, said pin when inserted within the bore adapted to have its body spread or divided by the threads of the bolt, and the reduced extremity of the pin adapted to be bent against one of the faces of the nut.

1,016,368. PERCUSSION-FUSE FOR EXPLOSIVE PROJECTILES. EUGENE SCHNEIDER, Le Creuzot, France. Filed Aug. 17, 1911. Serial No. 644,638. (Cl. 102—39.)

1. In combination, a fuse casing, a plunger, a striker mounted on one of said parts and a priming on the other, a plurality of segments engaging said plunger and movable therefrom under the influence of centrifugal force, and a spring-pressed locking element encircling said plunger and holding said segments in engagement with said plunger in one position and out of engagement with said plunger in another position.

2. In combination, a fuse casing, a plunger, a striker mounted on one of said parts and a priming on the other, a plurality of segments engaging said plunger and movable therefrom under the influence of centrifugal force, and a movable spring-pressed locking element encircling said plunger and holding said segments in engagement with said plunger in one position and out of engagement with said plunger in another position.

3. In combination, a fuse casing, a plunger, a striker mounted on one of said parts and a priming on the other, a plurality of segments engaging said plunger and movable therefrom under the influence of centrifugal force, and a spring-pressed movable locking ring holding said segments in engagement with said plunger in one position and out of engagement with said plunger in another position.

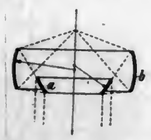
4. In combination, a fuse casing, a plunger, a striker mounted on one of said parts and a priming on the other, a plurality of spring-pressed segments engaging said plunger and movable therefrom under the influence of centrifugal force, and a spring-pressed movable locking ring engaging said segments.

5. In combination, a fuse casing, a plunger, a striker mounted on one of said parts and a priming on the other, a plurality of segments engaging said plunger and movable therefrom under the influence of centrifugal force, a

shoulder provided on each segment, and a locking ring associated with said segments and provided with a projection which engages the shoulders on the segments.

[Claims 6 to 18 not printed in the Gazette.]

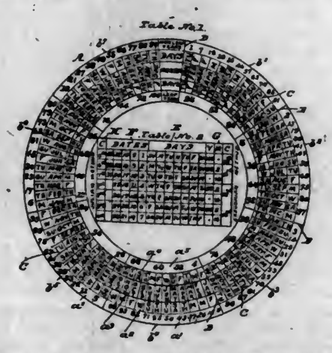
1,016,369. COLLECTIVE SYSTEM. HENRY SIEDENTOPF, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Feb. 13, 1911. Serial No. 608,334. (Cl. 88—39.)



1. Collective system consisting of two reflecting bodies, one of which presents a convex and the other a concave reflecting zone and which are disposed the one behind the other with an angular opening zero on the side of the mirror having the convex zone, the spherical radius of the concave zone being at least 1.45 and at most 1.57 times as great as the spherical radius of the convex zone.

2. Collective system consisting of two lenses, one of which presents a convex totally reflecting zone and the other a concave silvered reflecting zone and which are disposed the one behind the other with an angular opening zero on the side of the lens having the convex zone, the spherical radius of the concave zone being at least 1.45 and at most 1.57 times as great as the spherical radius of the convex zone.

1,016,370. PERPETUAL CALENDAR. NARAIN SINGH, Dhalleke, India. Filed May 2, 1911. Serial No. 624,534. (Cl. 40—123.)



1. A perpetual calendar, embodying a table divided into sections each of which contains in order, the names of the calendar months, the name of one day of the week opposite each month name and alongside the day of the week, figures designating the years in which each month is begun by the day of the week next to the displayed name of such month.

2. A perpetual calendar, divided into sections, each of which contains in their order the names of the calendar month, on each side of each of said names, the name of one day of a week, thus constituting two sets of week days, and on one side of one set of the week day names, numbers indicating the non-leap years in which the respective months contained in said sections begin with the corresponding week days of the first set, and on the opposite side of the second set of week day names, the leap years in which the respective months begin with the week days of the second set.

3. A perpetual calendar, embodying a table divided into sections, each of which contains in order, the names of the calendar months, the name of one day of the week, and alongside of the day the week figures designating the years in which each month has begun by the day of the week next to the table name of such month in combination with another table which embodies three sections the second of these sections being divided into compartments containing in serial order the days of the month from 1 up to 31, the first of these last named compartments containing the abbreviations for the days of the week and the third of these sections being divided into three columns designating the centuries and provided with indicia for determining the day of the week of any day of the month of any century.

4. A perpetual calendar, embodying a table, including four sections, the first of these sections being provided with compartments containing the abbreviations for the days of the week, the second of these sections being divided into compartments containing in serial order the days of the month, from 1 up to 31, the third of these sections being divided into three columns, designating the centuries and the manner of locating the day of the week of any day of the month of any century under the Gregorian method, and the fourth section comprising a column designating centuries and the manner of locating the day of the week or any day of the month of said centuries in the Julian calendar combined with means for determining the day of the week of the first day of the month of a given year.

1,016,371. ADVERTISING APPARATUS. JOSEPH J. SLEEPER, Moores, Pa., assignor to Utility Advertising Company, Camden, N. J. Filed Oct. 29, 1909. Serial No. 525,348. (Cl. 40—97.)

1. In advertising apparatus, an endless carrier having its travel path on lines spaced from each other, a display card frame carried by and movable with the carrier, the point of carrier support being approximately midway of the length of the frame, guide channels positioned at the side of the frame opposite the carrier for supporting the frame against lateral swaying, said channels being of a length less than the length of the travel path, and normally-stationary means located within the travel path and capable of acting as a shifting element for positively repositioning the frame in its proper path upon termination of its movement through the unsupported travel zone.

2. In advertising apparatus, an endless carrier, a display card frame carried by and movable with the carrier throughout its travel path, the point of carrier support being approximately midway of the length of the frame, and means positioned on the opposite side of the frame from the carrier for preventing swaying movement of the frame during a major portion of its travel, the frame being unsupported laterally in either direction at said opposite edge against swaying during the remaining portion of its travel, and means located within the travel path and capable of acting as a shifting element for repositioning said opposite edge of the frame in its proper path upon the termination of its movement through the unsupported travel zone.

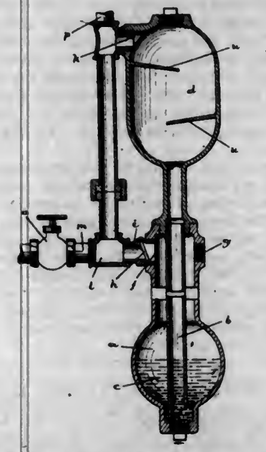
3. In an advertising apparatus, an endless carrier, a display card frame, supported by and movable with said carrier, a roller mounted at the side of said frame opposite the carrier, said roller and the connecting point of the frame and carrier being located in axial alinement substantially midway of the length of the frame, a guide channel for said roller having one of its walls projecting into the path of pivotal movement of the frame, the other wall of the channel being positioned without such pivotal path, said latter wall being of a length less than the length of the travel path of the carrier whereby said frame will be unsupported against swaying movement during a predetermined portion of the frame travel, and means for repositioning said roller in its channel upon the termination of its movement through the unsupported travel zone.

4. In advertising apparatus, an endless carrier having its travel path on lines spaced from each other, a display card frame carried by and movable with the carrier throughout its travel path, the point of carrier support being approximately midway of the length of the frame, guide channels for supporting the edge of the frame opposite the point of carrier support, said channels being interrupted in the direction of the length thereof to provide a travel zone within which said opposite frame edge is free to sway laterally, and a switching element positioned and operative within said zone and normally obstructing the travel path formed by the channels for shifting said unsupported edge into the succeeding guide-channel.

5. In advertising apparatus, the combination with an endless traveling carrier, and spaced rotatable members for controlling the travel path of the carrier, of a display card frame carried by and movable with said carrier, means for normally supporting the edge of said frame opposite the point of carrier support against swaying movements intermediate said rotatable members, said means terminating adjacent said members whereby said edge of the frame will be unsupported when adjacent said members to form a travel zone within which said edge is free to sway, and a positioning element for the frame located within the travel zone and operative successively on the frame before and after the passing of the latter around a rotatable member in its path of travel, said element being capable of acting as a shifting element for the frame.

[Claims 6 and 7 not printed in the Gazette.]

1,016,372. PRESSURE-GOVERNOR FOR HEATING SYSTEMS. GRANT SMITH, Toronto, Ontario, Canada. Filed June 7, 1909. Serial No. 500,545. (Cl. 237—15.)

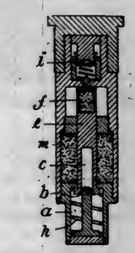


1. The hereinbefore described device for governing pressure in a heating system, comprising a sealing chamber containing a sealing agent and having a port above the sealing agent for connection with a circulating pipe of a heating system, and a port separate from the first mentioned port for the feed of the heating agent into the sealing chamber above the sealing agent, a relief pipe, one end of which is contained in the sealing chamber and sealed by the sealing agent below the level of the ports, a separating chamber connected with the other end of the relief pipe and having a port, a by-pass pipe connected with the port of the separating chamber and with the second mentioned port of the sealing chamber, and a check valve pivoted within the by-pass pipe to permit of the flow of the heating agent from the by-pass pipe into the sealing chamber, and to prevent the flow of the heating agent and sealing agent from the sealing chamber into the by-pass pipe.

2. The hereinbefore described device for governing pressure in a heating system comprising a sealing chamber containing a sealing agent and having a port above the sealing agent for connection with a circulating pipe of a heating system, and a port separate from the first mentioned port for the feed of the heating agent into the sealing chamber above the sealing agent, a relief pipe, one end of which is contained in the sealing chamber and sealed by the sealing agent below the level of the ports, a separating chamber connected with the other end of the relief pipe and having a port, a by-pass pipe for connection with an expansion chamber connected with the port of the separating chamber and with the second mentioned port of the sealing chamber, a check valve pivoted within the by-pass pipe permitting of the flow of the heating agent from the by-pass pipe into the sealing chamber above the sealing agent and preventing the flow of the sealing agent and heating agent from the sealing chamber into the by-pass pipe, and a connection for the by-pass pipe adapted to communicate with the water main.

3. The hereinbefore described device for governing pressure in a heating system, comprising a sealing chamber containing a sealing agent and having a port above the sealing agent for connection with a circulating pipe of a heating system, and a port separate from the first mentioned port for the feed of the heating agent into the sealing chamber above the sealing agent, a relief pipe, one end of which is contained in the sealing chamber and sealed by the sealing agent below the level of the ports, a separating chamber connected with the other end of the relief pipe and having a port, a by-pass pipe for connection with an expansion chamber connected with the port of the separating chamber and with the second mentioned port of the sealing chamber, a check valve pivoted within the by-pass pipe permitting of the flow of the heating agent from the by-pass pipe into the sealing chamber above the sealing agent and preventing the flow of the sealing agent and heating agent from the sealing chamber into the by-pass pipe, a connection for the by-pass pipe adapted to communicate with the water main, and inclined baffle plates one superposed above the other in the separating chamber.

1,016,373. FUSE FOR HIGH-EXPLOSIVE SHELLS. RAGNAR SOHLMAN, HENRIK NORDENFELT, and HUGO MORÉN, Bofors, Sweden. Filed Sept. 1, 1910. Serial No. 580,091. (Cl. 102—39.)

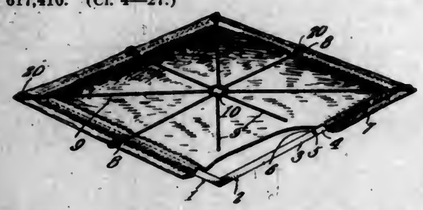


1. In percussion base fuses for shells, the combination with a fixed detonator charge and a movable primer charge which is normally positioned in a strong chamber behind and separate from the detonator charge, of an inertia operated member and a spring positioned behind the same adapted to be compressed by the movement of said member during the acceleration of the projectile, said movement of said member operatively connecting it with the movable primer charge, whereby the latter will be moved forward in active position by said spring.

2. In percussion base fuses for shells, the combination with a fixed detonator charge and a movable primer charge which is normally positioned in a strong chamber be-

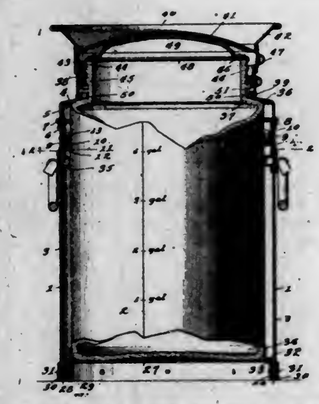
hind and separate from the detonator charge, of an inertia operated member adapted to be operatively connected to the movable primer charge during the acceleration of the projectile, a spring positioned behind said member, and a safety device normally shutting off communication between the percussion cap and the primer charge, said safety device being released by the return movement of said spring.

1,016,374. PORTABLE BATH-MAT. JAMES F. SPENCE, Washington, D. C. Filed Mar. 28, 1911. Serial No. 617,410. (Cl. 4—27.)



A device of the class described comprising a frame fashioned from straight disconnected members, each member consisting of terminally hinged elements, each of which elements is of triangular cross section; a covering adapted to be superposed upon the frame; flexible members secured at their ends to the covering, adjacent the periphery of the covering; and a ring through which all of the flexible members are looped to slide freely.

1,016,375. MILK-CAN. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 22, 1911. Serial No. 616,065. (Cl. 215—3.)

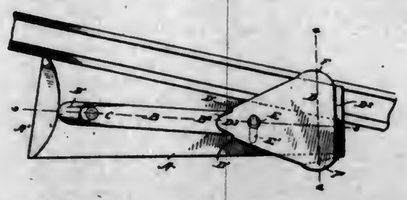


1. A can including a lower section, an upper section, means carried by the lower section, means carried by the upper section and adapted to have an interlocking engagement with the said first-named means on the rotation of the upper section with relation to the lower section, a stop on the lower section, means carried by the upper section for engagement with said stop to prevent the rotation of the upper section in one direction, and means on the lower section for engagement with said last means to prevent the rotation of the upper section in the reverse direction.

2. A can comprising upper and lower sections adapted for relative rotation and detachably fitted together, a pivoted member on the upper section, a stop on the lower section disposed in the path of the pivoted member to limit the movement thereof in one direction and movable means on the lower section for engaging the pivoted member to hold the same operatively positioned with respect to said stop.

3. A can including upper and lower sections fitted together for relative rotation and detachably connected with each other, a stop on the lower section, a pivoted member on the upper section having a portion movable in the path of the stop, and a rotatable member on the upper section adapted for frictional locking engagement with said pivoted member.

1,016,376. CAR-REPLACER. MARTIN L. STROTHER, Tonopah, Nev., assignor of one-half to William Vorlaufer, Tonopah, Nev. Filed Sept. 28, 1910. Serial No. 584,264. (Cl. 104—162.)



1. A car replacer comprising a base having a flat top and an inclined portion, a guide rail pivotally mounted upon the inclined portion, and a plate pivotally mounted upon the flat top portion, said plate being adapted to co-act with the guide rail and being capable of movement transversely upon said top portion.

2. A car replacer comprising a base having a flat top terminating in an inclined portion and provided with spurs on its bottom, a guide rail pivotally mounted on said base and a rail plate pivotally and adjustably mounted on said base, said rail plate being provided with means for securing the same to a track rail.

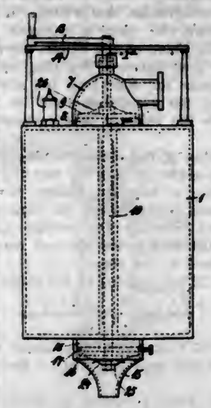
3. A car replacer comprising a base provided with a pivotally mounted guide rail having a notched end, a rail plate pivotally and adjustably mounted on said base, said rail plate extending into the notch of said guide rail.

4. A car replacer comprising a base having a flat top and an inclined end portion leading to said top, a guide rail pivotally mounted on said base, having a beveled end, said guide rail being provided with a notch, a wedge-shaped rail plate pivotally and adjustably mounted on said top and extending into the notch of the guide rail, and depending members carried by said rail plate for securing the latter to a track rail.

5. A car replacer comprising a base provided with spurs for holding the same in position on the ties adjacent the rail, said base being of less height at one end than at the other, a guide rail pivotally mounted on said base having a notch at one end, a wedge shaped rail plate pivotally and adjustably mounted on the highest portion of said base and extending into said notch, said rail plate being provided with shoulders, and depending members carried by said rail plate adapted to engage the rail of the track for securing said rail plate to the track rail.

1,016,377. MEASURING APPARATUS FOR LIQUIDS. GUSTAF TEODOR SUNDELIN, Robertsfors, Sweden. Filed Feb. 20, 1911. Serial No. 609,706. (Cl. 73—162.)

1. In an apparatus for measuring liquids the combination of a plurality of chambers of different sizes, a fixed disk on the top of said chambers, a common top inlet valve, rotatable on said fixed disk and coöperating therewith and a common bottom outlet valve, a crank and a spindle common to the said valves for rotating the same, the top valve being provided with a plurality of passages arranged in such manner, that one of the chambers is shut off at its top from the main conduit while the other chambers are being filled, and the bottom valve being also provided with a plurality of passages and with an automatic cut-off-device arranged in such manner, that the shutting off is effected when the crank is rotated in one direction, forward, but when the crank is then rotated in the opposite direction, backward, the chamber, which is closed at its top, will be opened at its bottom and emptied.



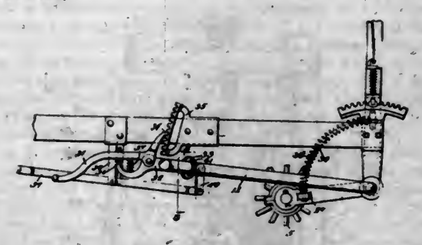
2. In an apparatus for measuring liquids, the combination of a vessel comprising a plurality of chambers of different sizes, a fixed disk on top of said vessel, an inlet valve at the top of the said vessel and consisting of a disk movable on said fixed disk and fixed to a rotatable spindle provided with a crank, the said valve covering passages and tubes, forming continuations of said passages in the respective chambers, and provided with passages which, when the valve is rotated to a certain position, coincide with the said passages, except one of them which remains closed, and an outlet valve at the bottom of the said vessel, which valve has a spindle common to the upper valve and consists of two disks provided with passages and rotatable with relation to each other through a certain angle, but partaking in the rotary motion of the spindle, and which, when rotated in one direction, as the crank has been moved forward, have their passages shut off, but which, when rotated in the opposite direction, as the crank has been moved backward into a position determined by the chamber, which is to be emptied, open the outlet of the said chamber, which is simultaneously shut off at its top.

3. In an apparatus for measuring liquids, the combination of a vessel divided by radial partition walls into a plurality of chambers of different sizes and having an upper inlet valve common to the said chambers for the filling of the chambers simultaneously except one chamber which is shut off during the filling operation, a bottom outlet valve provided with an automatic cut-off device and a spindle common to the upper valve, for the emptying of the chambers individually, and a stationary, circular scale at the top of the vessel and a crank on the said spindle to be shifted according to the scale, the said scale being arranged in such manner that the crank can be moved into the position which is necessary for the desired chamber being emptied.

4. In an apparatus for measuring liquids, the combination of a vessel divided into a plurality of chambers of different sizes, an inlet valve at the top of the said vessel and an outlet valve at the bottom of the same, the said valves having a common spindle extending through the vessel and provided with a crank to be adjusted according to a scale located at the top of the vessel, springy catches (13) permitting the crank to be rotated in one direction for an unlimited distance but in the opposite direction only to the next catch, the said valves being so arranged that, when the crank is rotated into the position last mentioned, all chambers, except one, are open at their top, for being filled from the main conduit, but are shut off at their bottom, so that when the crank is moved forward and then backward into the former position the lower valve of the chamber, which is shut off at its top, is opened.

5. In an apparatus for measuring liquids, the combination of a vessel divided into a plurality of chambers of different sizes, each of which is provided at its top with an air valve, which is normally open but closed automatically by the liquid raising the movable valve body when the chamber has been filled, an inlet valve at the top of the vessel, adapted to cut off communication with any one of the chambers and simultaneously establish communication with all the other chambers, and an outlet valve at the bottom of same, the said valves having a common spindle and a crank and arranged in such manner that one chamber only can be emptied and the other chambers are filled simultaneously, the said vessel being provided with a scale for adjusting the crank into the right position according to the quantity of the liquid to be tapped.

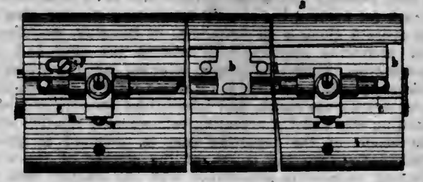
1,016,378. PLOW. SAMUEL H. TINSMAN, St. Joseph, Mo. Filed Nov. 15, 1909. Serial No. 528,194. (Cl. 97—58.)



1. The combination of an implement, a frame, a rack mounted on said frame, a bail crank axle upon which said implement is mounted, foot-operated means for lowering said implement, comprising an arm mounted fixedly on the swinging bail portion of said crank axle, a rack engaging lever pivotally mounted on said arm, said arm adapted to be operated to lower said implement.

2. The combination of an implement, a frame, a rack rigid therewith, a bail crank axle upon which said implement is mounted, an arm mounted fixedly on the swinging bail portion of said crank axle, a foot-operated depressing lever pivotally mounted on said arm and adapted to engage said rack when the implement is in raised position, and also adapted to engage the end of said arm when the lever is depressed.

1,016,379. WOODWORKING-MACHINE. ALEXANDRE VICTOR, Lyon, France, assignor to La Société Ribayron & Victor, Lyon, France. Filed Sept. 23, 1910. Serial No. 583,425. (Cl. 144—230.)

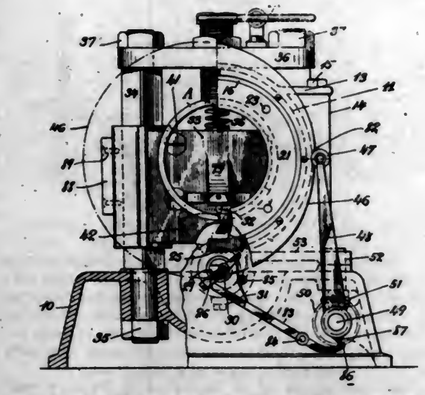


1. A cutter head formed with a longitudinal groove, one side of which groove is straight and parallel to the axis of said head and the other side inclined thereto, the bottom of said groove having a slot formed therein adjacent its straight side, a cutter blade within said groove and slot and bearing against the continuous straight side thereof, a wedge block longitudinally movable in said groove, and resilient means in the bottom of said slot for elevating and temporarily supporting the cutter blade when the wedge block is loosened, said wedge block adapt-

ed to move longitudinally in said groove for clamping the cutter blade between itself and the straight side of the groove.

2. A cutter head formed with a longitudinal groove, one side of which groove is straight and parallel to the axis of said head and the other side inclined thereto, a cutter blade being on the straight side of said groove, a wedge block longitudinally movable in said groove, and resilient means in the bottom of said groove adjacent its parallel side for elevating and temporarily supporting the cutter blade when the wedge block is loosened, said cutter head and wedge block being provided with registering slots for the insertion of a lever by means of which said wedge block may be moved longitudinally in opposite directions to clamp and unclamp the cutter blade.

1,016,380. MACHINE FOR MAKING PACKING-RINGS. ROBERT B. WASSON, Cranford, N. J. Filed Sept. 28, 1910. Serial No. 584,291. (Cl. 78—26.)



1. A machine for producing metal packing rings which exert circumferentially uniform radial spring pressure under working conditions, comprising, in combination, a chuck for holding the ring, a compacting member adapted to operate along a circumference of the ring, mechanism for producing relative feed between the ring and the compacting member, a tripping cam for actuating the compacting member, a controlling cam, and means whereby the controlling cam predeterminedly varies the actuation of the compacting member by the actuating cam in accordance with the relative feed between the ring and the member.

2. A machine for producing metal packing rings which exert circumferentially uniform radial spring pressure, under working conditions, comprising, in combination, a chuck for holding the ring, a compacting member adapted to operate along a circumference of the ring, mechanism for producing relative feed between the ring and the compacting member, a tapered tripping cam for actuating the compacting member, a rotatable controlling cam connected with the chuck, and connections between said controlling cam and the actuating cam whereby relative axial movement of the actuating cam is produced to predeterminedly vary the length of the strokes of the compacting member in accordance with the relative feed between the ring and the member.

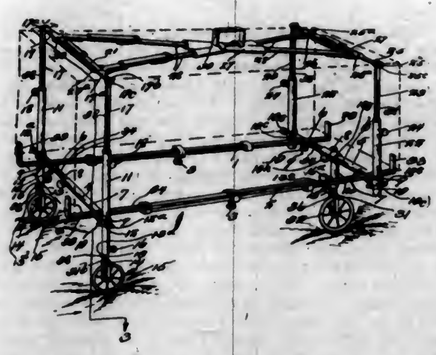
3. A machine for producing metal packing rings which exert circumferentially uniform radial spring pressure under working conditions, comprising, in combination, a chuck for holding the ring, a compacting member adapted to operate along the circumference of the ring, mechanism for producing relative feed between the ring and the compacting member, a cam and means whereby the cam predeterminedly varies the energy required by the compacting member in accordance with the relative feed between the ring and the member.

4. A machine for producing metal packing rings which exert circumferentially uniform radial spring pressure under working conditions, comprising, in combination, a chuck for holding the ring, a hammer reciprocable in right lines in the plane of the chuck, mechanism for producing relative feed between the ring and the hammer, a cam, and means for operating the cam for predeterminedly varying the energy acquired by the hammer in accordance with the relative feed between the ring and the hammer.

5. In a machine of the character described, the combination of a ring-holder, means for rotating the ring-holder to feed the ring, a hammer, means for actuating the same, and connections between the ring-holder and said actuating means whereby the energy imparted to the hammer is varied in a predetermined manner in accordance with the feed of the ring.

[Claims 6 to 22 not printed in the Gazette.]

1,016,381. LUGGAGE-CARRIER. JOHN ALLEN WATSON, Peru, Ind. Filed Sept. 11, 1911. Serial No. 648,709. (Cl. 21—65.)



1. In combination, two part longitudinal and transverse bars, means for holding the parts in adjusted positions, the transverse bars having vertical adjustable wheels, one of the wheels having a swiveled connection with relation to one of the transverse bars, the transverse bars having portions extending upwardly from their ends, members received by the portions, and provided with means, to which transverse and diagonally disposed straps are connected.

2. In combination, two part longitudinal and transverse bars, means for holding the parts in adjusted positions, the transverse bars having vertical adjustable wheels, one of the wheels having a swiveled connection with relation to one of the transverse bars, the transverse bars having portions extending upwardly from their ends, members received by the portions, and provided with means, to which transverse and diagonally disposed straps are connected, the longitudinal bars having loops through which the transverse bars pass, means penetrating the loops of the longitudinal bars for holding the transverse bars in adjusted positions, the outer ends of the longitudinal bars terminating into right angled upwardly extending portions, between which the commodity is arranged.

1,016,382. VALVE FOR INTERMINGLING AND CONTROLLING FLUIDS. ARTHUR W. WEEDEN, Somerville, Mass. Filed Nov. 21, 1910. Serial No. 593,468. (Cl. 137—26.)

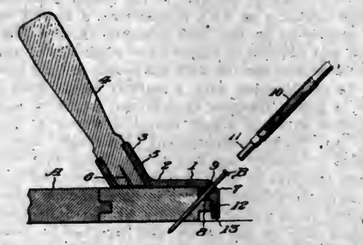
1. The combination, in a mixing valve, of a body having inlet ports and a discharge outlet; a plug mounted in said body with capacity for angular rotation and longitudinal movement therein, valve openings formed in said plug and adapted to simultaneously register in maximum relation with said inlet ports in one of the angular positions of the plug in said body, said openings extending part way around the surface of the plug in opposite directions from said registering portions, said plug having a projecting end, a handle engaging said projecting end and adapted to angularly rotate said plug, said handle embodying a curved bearing surface, a bushing longitudinally fixed with reference to the valve body and rotating with the plug, said bushing being engaged by the said bearing surface, and a pivot pin connecting said handle to said projecting end said pin being eccentrically located with respect to said bearing surface.

2. The combination in a mixing valve, of a valve body having a plurality of inlet ports and a discharge outlet; a plug angularly rotatable and longitudinally movable in said valve body, said plug having a plurality of plug openings adapted to register with said inlet ports in the course of the rotation of the plug in the body, and thereby to establish communication between said ports and said outlet, said openings embodying portions simultaneously registering with their coöperating inlet ports in one of the positions of rotation of the plug, said plug openings being circumferentially extended partly around the plug in opposite directions from said registering portions, means for angularly rotating said valve, and means for longitudinally shifting the plug in the valve body irrespective of its angular position therein.

3. The combination, in a mixing valve, of a valve body having a plurality of inlet ports and a discharge outlet; a plug mounted in said body with capacity for angular rotation and longitudinal movement therein, valve openings formed in said plug and having portions adapted to simultaneously register in maximum relation with said inlet ports in one of the angular positions of the plug in said body, said openings extending part way around the surface of the plug in opposite directions from said registering portions, said plug having a projecting end, a handle engaging said projecting end and adapted to angularly rotate said plug, said handle embodying a curved bearing surface, a bushing longitudinally fixed with reference to the valve body and rotating with the plug, said bushing being engaged by the said bearing surface, and a pivot pin connecting said handle to said projecting end said pin being eccentrically located with respect to said bearing surface.

4. The combination, in a mixing valve, of a valve body having a plurality of inlet ports and a discharge outlet, a plug mounted in said body with capacity for angular rotation and longitudinal movement therein, valve openings formed in said plug and having portions adapted to simultaneously register in maximum relation with said inlet ports in one of the angular positions of the plug in the said body, said openings extending part way around the surface of the plug in opposite directions from said registering portions, said plug having a projecting end, a handle attached to said projecting end by a pivot pin, said handle being angularly non-rotatable with respect to said plug, but being adapted to swing about said pin in a plane extending longitudinally with respect to said plug, said handle having a curved rib formed thereon, a bushing longitudinally fixed with reference to the valve body and adapted to rotate with the plug, a groove formed in said bushing and engaged by said rib, said pin being eccentrically located with respect to said bearing surface whereby a swinging movement of the handle about the pin causes a longitudinal movement of the plug in the valve body.

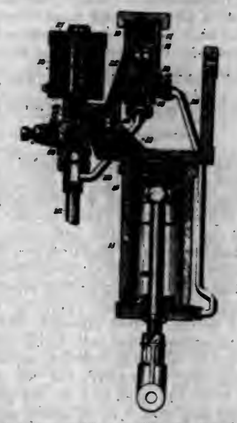
1,016,383. COMBINED FLOOR-SET, NAIL-SET, AND NAIL-SHIELD. WILLIAM T. WELLMAN, Lawrence, Kans. Filed Feb. 21, 1911. Serial No. 609,915. (Cl. 145—1.)



1. A floor set comprising a plate including a major horizontally disposed portion, a handle secured to said portion, a substantially V-rib on the underside of the plate adapted to fit against the upper face of the tongue of the flooring, the said plate having a beveled striking surface, the rib having a nail-guiding passage therein which opens at its outer end onto the said striking surface, and a depending setting face formed integral with the rib and adapted to be extended against the outer edge of the tongue of the flooring.

2. A floor set comprising a horizontally disposed plate, a socket formed integral with said plate and at the rear thereof and at an obtuse angle thereto, a V-rib formed integral with said plate on its under surface and at the forward edge thereof, a depending setting face formed integral with the rib and adapted to engage the outer edge of the tongue of the flooring, a beveled striking surface formed on the upper surface of said plate and in advance of said V-rib, and a handle fitting said socket.

1,016,384. RAILWAY-SIGNAL. WALTER P. ALLEN, Ardmore, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 4, 1911. Serial No. 606,545. (Cl. 246—38.)



1. In combination with a railway signal device, a cylinder and a piston having relative movement, one of which is operatively connected with the signal device, a source of fluid pressure, an electro-magnetically controlled valve device adapted to connect one side of the piston with the source of fluid pressure or with the atmosphere, and means controlled by fluid pressure for connecting the other side of the piston with the source of fluid pressure or with the atmosphere according to whether the first mentioned side of the piston is connected with atmosphere or with the fluid pressure.

2. In combination with a railway signal device, a cylinder, a piston movable therein, and which is operatively connected with the signal device, a source of fluid pressure, an electro-magnetically controlled valve device adapted to connect one side of the piston with the source of fluid pressure or with atmosphere, a second valve device controlled by the fluid pressure on said side of the piston and adapted to connect the other side of the piston with the atmosphere or with the source of fluid pressure.

3. In combination with a railway signal device, a cylinder, a piston movable therein and which is operatively connected with the signal device, a source of fluid pressure, an electro-magnetically controlled valve device adapted to connect one side of the piston with the source of fluid pressure or with atmosphere according to whether the valve-controlling magnet is energized or deënergized, a second valve device controlled by the fluid pressure on the said side of the piston and adapted to connect the other side of the piston with the atmosphere or with the source of fluid pressure according to whether the first mentioned side of the piston is connected with the source of fluid pressure or with the atmosphere.

4. In combination with a railway signal device, a cylinder, a piston movable therein and which is operatively conected with the signal device, a source of fluid pressure, an electro-magnetically controlled valve device adapted to connect one side of the piston with the source of fluid pressure or with atmosphere according to whether the valve-controlling magnet is energized or deënergized, a second valve device held normally in such position as to connect the other side of the piston with the source of fluid pressure, and a movable member operatively connected with said second valve device and in communication with the first mentioned side of the piston and adapted when acted upon by fluid pressure to operate the second valve device to connect the second mentioned side of the piston with atmosphere.

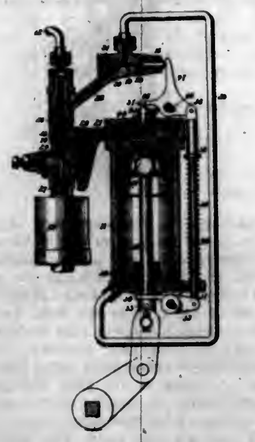
5. In combination with a railway signal device, a cylinder, a piston movable therein and operatively connected with the signal device, a source of fluid pressure, an electro-magnetically controlled valve device for admitting the fluid pressure to one side of the piston, a second valve device biased to such position as to disconnect the other side of the piston from the source of fluid pressure, and normally held in position to connect said other side with the source of fluid pressure, and means controlled by the pressure of the fluid on the first mentioned side of the piston for permitting the second valve device to disconnect the other side of the piston from the source of fluid pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,016,385. RAILWAY-SIGNAL. WALTER P. ALLEN, Ardmore, Pa., and JOHN P. COLEMAN, New York, N. Y., assignors to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 4, 1911. Serial No. 606,628. (Cl. 246—38.)

1. In combination with a signal device biased to one position of indication, a fluid pressure mechanism comprising a cylinder and a piston having relative movement and one of which is operatively connected with the said signal device, a source of fluid pressure, means for admitting said fluid pressure to one side of the piston whereby the signal device is moved to another position of indication against the force of gravity, and for cutting off the fluid pressure from the said side of the piston whereby the signal device may return to its biased position of indication, means operative upon a reduction of the fluid pressure on the said side of the piston below a predetermined point for admitting fluid pressure from the said source to the other side of the piston to move the signal device to its biased position of indication and means for cutting off the fluid pressure from the second mentioned side of the piston when the signal device reaches its biased position.

2. In combination with a signal device biased to one position of indication, a cylinder, a piston movable therein and operatively connected with said signal device, a source of fluid pressure, means for admitting said fluid pressure to one end of the cylinder whereby the signal is moved to another position of indication, and for opening the same end of the cylinder to the atmosphere whereby the signal device is free to return to its biased position, a member responsive to variations in the fluid pressure in the said end of the cylinder, mechanism controlled by the said member and arranged to admit fluid pressure from the said source to the other end of the cylinder when the pressure on the member falls below a given point, and means for rendering said mechanism inoperative when the signal device reaches its biased position of indication.



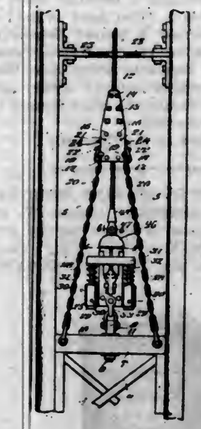
3. In combination with a signal device biased to one position of indication, a cylinder, a piston movable therein and operatively connected with said signal device, a source of fluid pressure, means for admitting said fluid pressure to one end of the cylinder whereby the signal device is moved to another position of indication, means for opening the said end of the cylinder to the atmosphere whereby the signal device is free to return to its biased position of indication, a mechanism for admitting the said pressure to the other end of the cylinder when the fluid pressure in the first mentioned end falls below a given point, and means for rendering said mechanism inoperative when the signal reaches its biased position of indication whereby the fluid pressure is cut off.

4. In combination with a signal device biased to one position of indication, a cylinder, a piston movable therein and operatively connected with said signal device, a source of fluid pressure, means for admitting said fluid pressure to one end of the cylinder whereby the signal device is moved to another position of indication against the force of gravity, means for opening the said end of the cylinder to the atmosphere whereby the signal device is free to return by gravity to its biased position of indication, a member adapted to respond to variations in the pressure of the fluid in the said end of the cylinder, a normally closed valve for controlling the admission of said fluid pressure to the other end of the cylinder, and mechanism interposed between the said member and the said valve for opening the valve to admit the said fluid pressure to the said other end of the cylinder when the pressure on the member falls below a given point.

5. In combination with a signal device biased to one position of indication, a cylinder, a piston movable therein and operatively connected with said signal device, a source of fluid pressure, means for admitting said fluid pressure to one end of the cylinder whereby the signal is moved to another position of indication, means for opening the same end of the cylinder to the atmosphere whereby the signal device is free to return by gravity to its biased position, a member adapted to respond to variations in the pressure of the fluid in the said end of the cylinder, a normally closed valve for controlling the admission of said fluid pressure to the other end of the cylinder, mechanism interposed between the said member and the said valve for opening the valve to admit the said fluid pressure to the second mentioned end of the cylinder when the pressure on the member falls below a given point, and means operatively connected with the signal device for rendering the said mechanism inoperative when the signal device reaches its biased position of indication whereby the fluid pressure is cut off.

[Claims 6 to 10 not printed in the Gazette.]

1,016,386. CABLE-RELEASING DEVICE. WILLIAM BALL, Wilkes-Barre, Pa. Filed Mar. 22, 1911. Serial No. 616,147. (Cl. 187—72.)



1. The combination with a lift, of a hoisting cable therefor, anchoring mechanism connected with the cable and said lift, stationary means arranged within a shaft within which the lift travels and in the path of movement of the anchoring mechanism to simultaneously release the cable from the anchoring mechanism and to lock the latter to the said stationary means to prevent the falling of the lift, and bridle chains connected with the lift and automatically released by said stationary means prior to its engagement with the anchoring mechanism.

2. The combination with a lift, of a hoisting cable therefor, anchoring mechanism connected with the cable and said lift, stationary means arranged within a shaft in which the lift travels and in the path of movement of the anchoring mechanism to simultaneously release the cable from the anchoring mechanism and lock the latter to the said stationary means to prevent the falling of the lift, clamping means carried by the cable, and bridle chains connected with the lift and detachably engaged with the clamping means for their automatic release therefrom by the stationary means.

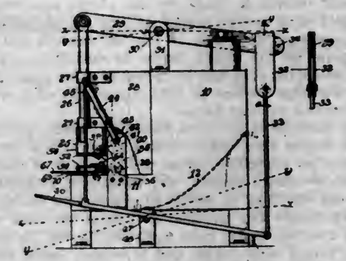
3. The combination with a lift, of a hoisting cable therefor, coupling means connected with the lift and the said cable, stationary means arranged within a shaft within which the lift travels and in the path of movement of said coupling means for releasing the same, means carried by said coupling means and engageable by said stationary means to lock the said coupling means to the stationary means, clamping means arranged on the cable above the coupling means, and flexible connections between the lift and the clamping means and automatically releasable therefrom prior to the locking engagement of the coupling means with the stationary means.

4. The combination with a lift, of a hoisting cable therefor, coupling means connected with the lift and the said cable, stationary means arranged within a shaft in which the lift travels and in the path of movement of the said means for releasing the same, means carried by the said coupling means and engageable by the said stationary means to lock the said coupling means to the stationary means, means for simultaneously releasing the cable from the coupling means on the locking thereof with the stationary means, bridle chains carried by the lift, and means on the cable for normal attachment of the bridle chains therewith and adapted to be primarily released from the said chains prior to the engagement of the coupling means with the stationary means.

5. The combination with a lift, of stationary means arranged within the shaft within which the lift travels, a hoisting cable, separable coupling mechanism carried by the cable and the said lift for connecting the same and engageable with the said stationary means for the uncoupling thereof, means on the cable spaced from the said coupling mechanism, flexible connections between the lift and the said last-named means and releasable when the latter is engaged with the stationary means prior to the uncoupling of the coupling mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,016,387. CEMENTING AND SNIPPING MACHINE. JOSEPH W. BARNA, Chicago, Ill., assignor of one-half to Boston Machine Works Company, Lynn, Mass., a Corporation of Massachusetts. Filed July 15, 1908, Serial No. 443,579. Renewed Nov. 10, 1911. Serial No. 659,641. (Cl. 12—54.)



1. In a device if the class described, a tank having an opening, a yielding wiper in the opening, a movable wiper adapted to be moved to and from the first wiper, and means to operate the movable wiper.

2. In a device of the class described, a tank having an opening, a yielding wiper in the opening, a movable wiper adapted to be moved to and from the first wiper, a snipper and means to operate the snipper and the movable wiper.

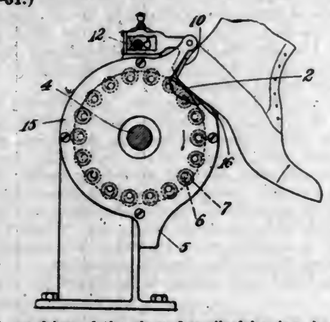
3. In a device of the class described, a tank having an opening, a yielding wiper in the opening, a movable wiper adapted to be moved to and from the first wiper, a snipper, a lever, and connections between the lever and the snipper and movable wiper to successively operate the snipper and wiper.

4. In a device of the class described, a tank having an opening, a yielding wiper in the opening, a movable wiper adapted to be moved to and from the first wiper, a snipper, a rock shaft having a finger to operate the snipper, a wiper-lever, and an operating lever connected to the rock-shaft and wiper-lever to successively operate them.

5. In a device of the class described, a tank having an opening, a yielding wiper in the opening, a movable wiper adapted to be moved to and from the first wiper, a snipper having a movable jaw, a rock-shaft having a finger to operate the jaw, an operating lever, and connections between the operating lever and snipper and movable wiper.

[Claims 6 to 26 not printed in the Gazette.]

1,016,388. SHOE-BEATING MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 14, 1910. Serial No. 566,731. (Cl. 12—51.)



1. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, a bar extending across the periphery of the rotary beater to sustain the work for the action of both beaters simultaneously.

2. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, and means arranged relatively to the two beaters and in the same plane as the rotary beater to constitute a fulcrum about which the shoe may be rocked to force against either beater the edge portion of that face of the shoe which is being treated by that beater.

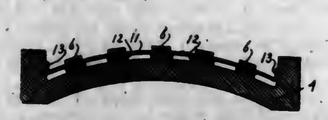
3. A machine of the class described having, in combination, a rotary shoe beater and a shoe bottom rest comprising a bar extending across the periphery of the beater in close proximity thereto and forming a fulcrum about which the shoe may be rocked to concentrate the action of the beater upon the marginal portion of the shoe bottom.

4. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, and a bar extending across the periphery of the rotary beater in position to guide the shoe in its presentation to the side beater without necessarily engaging with the bottom beater.

5. A machine of the class described having, in combination, a rotary shoe beater and means forming a backrest for the shoe, and a rest for the bottom of the shoe which extends across the periphery of the rotary beater in position for use simultaneously with the back rest in positioning the shoe for the action thereon of the bottom beater.

[Claim 6 not printed in the Gazette.]

1,016,389. EXPANDED-METAL CHAPLET. PERCY H. BATTEN, Chicago, Ill., assignor to Edward H. Fallows, New York, N. Y. Filed Nov. 3, 1911. Serial No. 658,366. (Cl. 22—116.)



1. A foraminous member adapted to engage an insert to be embedded in the cast metal body portion of an article as the same is formed, and to engage also an inner adjacent wall of the mold in which said article is cast, to thereby form a chaplet for holding the insert in place during the casting operation.

2. A chaplet for holding a metallic insert in position within a metal mold, the same comprising a foraminous member in engagement with said insert and which member extends to and engages the inner surface of the mold.

3. The combination with an insert to be embedded in a cast metal article as the same is formed, of a foraminous member in engagement with said insert and extending beyond the same a distance sufficient to engage the inner surface of the mold in which the article is formed.

4. A chaplet for holding a metallic insert of a brake shoe in position within a metal mold as fluid metal from which the shoe is formed is poured thereinto, the same comprising a foraminous member formed from expanded metal and which member engages said insert and extends to and contacts with the inner surface of the mold.

5. A chaplet for holding a metallic insert of a brake shoe in position within a metal mold as fluid metal from which the shoe is formed is poured thereinto, the same comprising a foraminous member formed from expanded metal and having a recess in which said insert is contained, and which member extends beyond said insert a distance sufficient to engage the inner surface of the mold in which the shoe is formed.

[Claim 6 not printed in the Gazette.]

1,016,390. METHOD OF MAKING REMOVABLE END CLOSURES FOR VESSELS. GEORGE W. BEADLE, Bayonne, N. J., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Mar. 18, 1911. Serial No. 615,421. (Cl. 93—36.)

1. The method of making removable end closures for cartons consisting in dishing a disk by a drawing operation and providing an annular and relatively deep flexible apron; then drawing inwardly by a spinning operation the body of the disk into a fold parallel with the apron to provide a substantially rigid flange; and finally forming in the apron of the disk, by a rolling operation a locking element for the closure, substantially as described.

2. The method of making removable end closures for cartons consisting in dishing a disk by a drawing operation and providing an annular and relatively deep flexible apron; drawing inwardly by a spinning operation the body of the disk into a fold parallel with and of less depth than the apron to provide a substantially rigid flange; and finally forming in the apron of the disk, by a rolling operation, an inwardly disposed locking bead for the closure, substantially as described.

3. The method of making removable end closures for cartons consisting in dishing a disk by a drawing operation to provide an annular and relatively deep flexible apron; drawing inwardly by a spinning operation the body of the disk into a fold parallel with and of less depth than the apron to provide a rigid flange of double thickness, and providing an annular groove intermediate said apron and flange to receive the open end wall of the carton; and finally forming, by a rolling operation, a bead in the apron adjacent the marginal edge thereof, to provide a locking element for the closure, substantially as described.

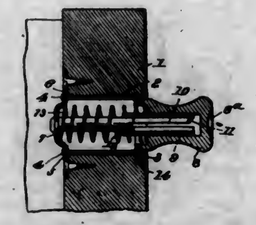
4. The method of making a removable end closure for cartons consisting in dishing a disk by a drawing operation to provide an annular and relatively deep flexible apron; forming from the body of the disk by a spinning operation, a rigid flange of closely fitting double thickness, disposed parallel to and of less depth than the apron, and providing an element to enfold the pouring rim of the carton, and with the edge of the enfolding portion lying substantially flush with the surface of the disk; and finally, by a rolling operation, forming a bead in the apron for locking the closure to the carton, substantially as described.

1,016,391. PROTECTOR FOR INCANDESCENT MANTLES. MAX BENDIX, Cologne, Germany. Filed Jan. 11, 1910. Serial No. 537,527. (Cl. 67—98.)

1. A mantle supporting ring and mantle for incandescent lighting secured to said supporting ring, in combination with a removable band of sheet material placed around the mantle at the portion in contact with the ring, said band extending beyond the ring.

2. A mantle supporting ring and mantle for incandescent lighting secured to said supporting ring, in combination with a removable flat, stiffening band of paper placed around the mantle at the portion in contact with the ring, said band extending beyond the ring.

1,016,392. DRAWER-KNOB. REAMIE S. BOUDROT, Newton, Mass. Filed Mar. 30, 1911. Serial No. 618,035. (Cl. 16—10.)



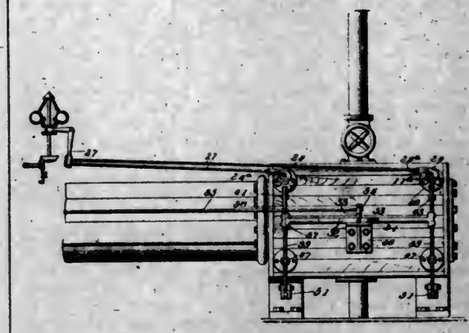
1. As a new article of manufacture, the herein described disappearing draw knob, comprising a tubular casing, a back plate secured thereto, a stem projecting into the casing from the back plate and provided with a transverse pin, a finger-piece mounted to slide on the stem and provided with a sleeve having a slot accommodating the pin, the sleeve being also formed with a recess communicating with the outer end of the slot and designed to accommodate the pin upon the initial and a partial rotary movement of the finger-piece, and an expansion spring encircling the sleeve and stem and pressing outwardly upon the finger-piece.

2. As a new article of manufacture, the herein described disappearing knob, comprising a stem, a support therefor, the stem being provided with a transverse pin, a finger-piece provided with a sleeve adapted for insertion over the pin and formed with slots accommodating said pin and closed at their inner ends and terminating at their outer ends in notched recesses, and a spring bearing against said finger-piece and tending to move it outwardly.

3. As a new article of manufacture, the herein described disappearing knob, comprising a stem provided with a transverse pin, a support for the stem, a knob provided with a rearwardly opening bore, a sleeve secured in said bore and provided with a longitudinally extending slot accommodating said pin, the inner end of the slot being closed and the outer end opening into a transversely extending wall designed to accommodate the pin upon the inward and a partial rotary movement of the finger-piece, and a spring bearing against said finger-piece and tending to move it outwardly.

4. As a new article of manufacture, the herein described disappearing drawer knob comprising a tubular casing formed at its outer end with a flange, a back plate secured to the opposite end of the casing and provided with a forwardly projecting stem disposed centrally of the casing, the stem being provided with a pin, a finger-piece provided with a sleeve mounted to slide on the stem and formed with a longitudinally extending slot accommodating said pin, the slot being closed at its inner end and opening at its outer end into a transversely extending wall, and an expansion spring encircling the sleeve and stem, and bearing upon the back plate and finger-piece, the finger-piece being formed at its inner end with a socket receiving one end of the spring.

1,016,393. VALVE MECHANISM FOR STEAM-ENGINES. FRED V. BROADAWAY, Hubbard, Tex. Filed June 27, 1910. Serial No. 569,112. (Cl. 121—103.)



1. The combination with a steam cylinder having an inlet port, of an inlet valve controlling the passage of steam through said port, a reciprocating valve stem, an oscillating member operatively connected to the engine, a latch device normally connecting the oscillating member with the valve stem but disengageable therefrom to release the valve stem and permit the valve to be moved independently of the member, said latch device comprising a detent extending longitudinally of the valve stem and pivoted at its middle to the oscillating member, a governor, a sleeve loosely surrounding the valve stem and having a hooked extension extending over the free end of the detent and engageable therewith when the sleeve is rotated upon the valve stem, and a connection between the governor and the sleeve whereby the hooked extension may be rotated into or out of engagement with the free end of the latch device.

2. The combination with a steam cylinder having an inlet port, of a reciprocating valve controlling the passage of steam through said port, a valve stem, a reciprocating member operatively connected to the engine, a valve stem connected to the valve and provided with a recess on one side, said recess having an inclined bottom and an end wall at right angles to the axis of the stem, a latch pivoted to the reciprocating member and having a head at one end adapted to engage in the recess of the valve stem, the other end of said latch extending beyond its pivotal point, a governor, a sleeve mounted on the valve stem, an arm extending radially outward from the sleeve and then bent at an acute angle and extending over the projecting end of the latch, and a connection between the end of the arm and the governor, whereby the sleeve may be turned to bring the arm into engagement with the projecting end of the latch when the governor is moved in one direction to thereby release the connection between the reciprocating member and the valve stem.

3. The combination with a steam cylinder having oppositely disposed inlet ports on one side, and oppositely disposed exhaust ports on the other side, of recipro-

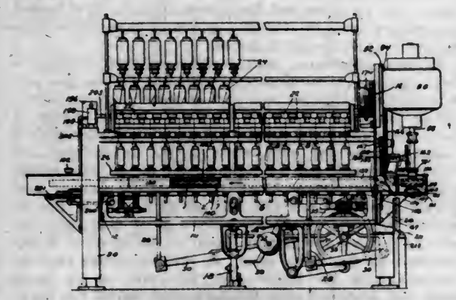
cating valves controlling the passage of steam through said ports, a rocker arm operatively connected to the engine for a reciprocatory movement, oppositely disposed levers connecting opposite ends of the rocker arm with the exhaust valves, oppositely disposed levers connecting opposite ends of the rocker arm with the inlet valves, valve stems on the inlet valves having recesses therein, latching devices mounted on the ends of the levers and normally engaging the valve stems of the inlet valves, a governor, means connected to the governor for disengaging the latching devices from the valve stems, vacuum dash-pots, and connections from said dash-pots to the inlet valves and acting to move the inlet valves to a closed position when the inlet valves are released from their engagement with the levers.

4. The combination with a steam cylinder having an inlet port, of an inlet valve controlling the passage of steam therethrough and having a valve stem, an oscillating member operatively connected to the engine, a latch device normally connecting the oscillating member with the valve stem but disengageable therefrom to release the same and permit an independent movement of the valve, a governor, a member surrounding the valve stem and having oppositely projecting hooked extensions partially surrounding the valve stem, said extensions being respectively engageable with the latch device to release it when the sleeve is rotated in either direction upon the valve stem, and a connection between the governor and said sleeve acting to rotate the sleeve when the governor is moved beyond a predetermined point in either direction.

5. The combination with a steam cylinder having an inlet port, of an inlet valve controlling the passage of steam therethrough and having a valve stem, an oscillating member bifurcated at its end to loosely embrace the valve stem, a latch pivotally mounted upon the bifurcated end of the oscillating member and normally engaging the valve stem but disengageable therefrom, a governor, a sleeve loosely surrounding the valve stem and having an extension normally projecting over the latch device and engageable therewith when the sleeve is rotated upon the valve stem, and a connection between the governor and the sleeve.

[Claims 6 to 11 not printed in the Gazette.]

1,016,394. TEXTILE APPARATUS. HENRY L. BROWN, New York, N. Y., assignor to Brown Spin-Wright Company, New York, N. Y., a Corporation of New York. Filed Jan. 31, 1911. Serial No. 605,822. (Cl. 118—24.)



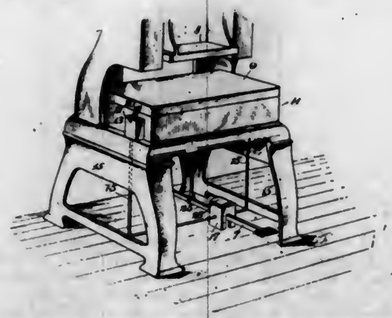
1. Apparatus for treatment of fibrous materials and filaments, such as for spinning cotton; said apparatus comprising a multiplicity of rotatable spindles to receive and treat said materials, and an endless flexible, metal band, flat throughout its length, and geared with said spindles to drive them positively.

2. Apparatus of the class described, for treating fibrous materials and filaments; said apparatus comprising a plurality of spindles provided respectively with actuating members comprising each a plurality of peripheral actuating projections; a support for said spindles; and a metallic band provided with means to engage said projections successively, and to be engaged progressively with successive portions of each actuating projection, said progressive engagement with each projection continuing until engagement has been initiated with a succeeding projection on the same actuating member, to rotate said spindles positively; substantially as described.

3. Apparatus of the class described for treating fibrous materials and filaments; said apparatus comprising a plurality of spindles; a support therefor; a metal band constructed and arranged to operate said spindles positively; actuating means on said band; and means to surround said band, spindles and actuating means at the region of operative engagement therebetween to prevent escape of lubricant, and also to prevent injury to operatives by escape of said band in the event of accidental displacement thereof; substantially as described.

4. Apparatus of the class described; said apparatus comprising a plurality of spindles, and members on, and to rotate with, said spindles, said members being provided respectively with peripheral teeth; a support for said spindles; a metal band, flat throughout its length, constructed and arranged to engage said teeth positively and progressively, to rotate said spindles; and means to lubricate said operating parts; substantially as described.

1,016,395. SAFETY-CLUTCH FOR POWER-PRESSES, PAPER-CUTTERS, &c. LYMAN H. BROWN, Hartford, Conn. Filed Apr. 4, 1911. Serial No. 618,788. (Cl. 164—107.)



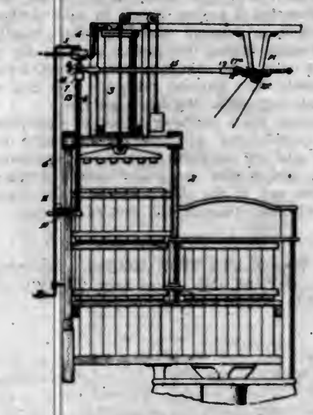
1. A safety clutch for power press, comprising a clutch controlling lever; a plurality of latches holdingly engaging said lever; and pneumatically operated means disposed for operation at separated stations for removing said latches singly from the path of said lever.

2. A safety clutch for power press, comprising a clutch controlling lever; a plurality of latches adapted to engage the said lever in holding relation; a plurality of plungers one engaging each of said latches; and a plurality of pneumatically actuated mechanisms for moving said plungers to thrust said latches from the path of said lever.

3. A safety clutch for power press, comprising a clutch controlling lever; a plurality of latches pivotally mounted to engage in holding relation said lever, said latches having lateral extensions; a plurality of movable plungers disposed to move against said extensions; and a plurality of transmission devices fixedly mounted on the frame of the press at separated stations and operatively connected with said plungers to move the same to rock the said lever.

4. A safety clutch for power press, comprising a clutch controlling lever; a plurality of latches pivotally mounted to engage in holding relation said lever, said latches having lateral extensions; a plurality of movable plungers disposed to move against said extensions; and a plurality of pneumatic bulbs and pipes connected therewith to move said plungers against said extensions.

1,016,396. TRAMPER FOR COTTON-PRESSES. NIMROD W. L. BROWN, Marietta, Ga. Filed Mar. 1, 1911. Serial No. 611,710. (Cl. 121—97.)



1. In a tramper for cotton presses operated by a fluid pressure cylinder, the combination with a valve for regulating the fluid pressure in the cylinder, of mechanism for actuating said valve, the same comprising a rotatable shaft, and means operated by said shaft and connected to said valve for traversing the latter from one extreme position to the other, said means including a resilient device for holding the valve a predetermined time in one of its extreme positions.

2. In a tramper for cotton presses operated by a fluid pressure cylinder, the combination with a valve for regulating the fluid pressure in the cylinder, of mechanism for actuating said valve, the same comprising a rotatable shaft, and means operated by said shaft and connected to the said valve for traversing the same from one extreme position to the other, said means including a divided resilient device to hold said valve in said positions for predetermined periods of time.

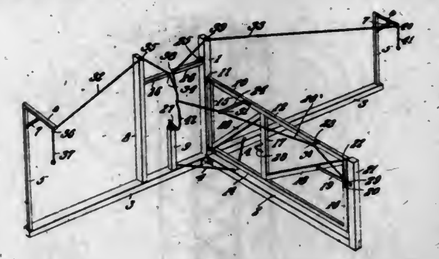
3. In a tramper for cotton presses operated by a fluid pressure cylinder, the combination with a valve for regulating the fluid pressure in the cylinder, of mechanism for actuating said valve, the same comprising a rotatable shaft, and means operated by said shaft and connected to said valve for traversing the same from one extreme position to the other, said means including a divided resilient device to hold said valve in one of the aforesaid positions a predetermined period and in the other position for a shorter period.

4. In a tramper for cotton presses operated by a fluid pressure cylinder, the combination with a compressed fluid inlet and exhaust valve, a rotatable shaft and means operated by said shaft and connected with said valve stem for automatically traversing said valve from one extreme position to the other, said means including a resilient device for holding the valve a predetermined time in one of its extreme positions, and a separate resilient device for holding the valve in the opposite extreme position.

5. In a tramper for cotton presses operated by a fluid pressure cylinder, the combination with a valve for regulating the fluid pressure in the cylinder, of mechanism for actuating said valve, the same comprising a valve stem and means on said stem for manually actuating said valve, a rotatable shaft, and means operated by said shaft and detachably connected to the valve stem for automatically traversing said valve from one extreme position to the other, said means including a device having a divided resilience for holding the valve in both of the aforesaid positions during predetermined periods of time.

[Claims 6 to 16 not printed in the Gazette.]

1,016,397. GATE. CHARLIE E. BUCKHALT, Enterprise, Ala. Filed Apr. 22, 1911. Serial No. 622,835. (Cl. 39—14.)



1. In a device of the class described, a supporting structure; a gate hinged thereto; a latch upon the gate, adapted to hold the gate in closed position; a pivotally mounted arm upon the gate; a resilient arm upon the gate; a latch upon the supporting structure adapted to engage the gate to hold the same in open position; operating members hinged to the supporting structure, and projecting in a common plane therefrom; a flexible member secured to the gate-carried latch, the pivoted arm on the gate, and to the spring arm on the gate, the flexible member being connected with the latch which is carried by the supporting structure; the said flexible member having branches connected with the operating members, the said branches extended in opposite directions, upon both sides of the gate.

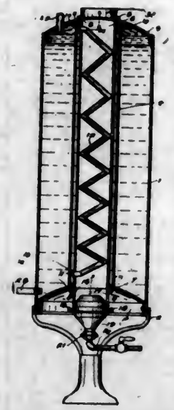
2. A device of the class described comprising a supporting structure; a gate hinged thereto; a latch upon the gate adapted to hold the gate in closed position; a latch upon the supporting structure, adapted to hold the gate in open position; an outstanding arm upon the gate, adapted to protrude beyond the supporting structure, when the gate is in open position; operating members hingedly connected with the supporting structure, and projecting toward each other; a flexible member secured to the gate-carried latch, to the latch which is upon the supporting structure, and to the arm, said flexible member having branches connected with the operating members, and extended in opposite directions upon both sides of the gate.

3. In a device of the class described, a gate; a latch pivoted thereto, and adapted to hold the gate in closed position; a spring arm carried by the gate; a latch mounted upon the supporting structure, and adapted to hold the gate in open position; an operating member hinged to the supporting structure; and a flexible member secured to both latches and to the arm; and to the operating member, said flexible member being carried laterally over the supporting structure, to one side of the gate.

4. In a device of the class described, a supporting structure; a gate hinged thereto; a latch upon the gate, adapted to hold the gate in closed position; a latch upon the supporting structure, adapted to hold the gate in open position; an operating member hinged to the supporting structure for vertical swinging movement; and a flexible element connected with both latches and with the operating member, the flexible element being carried laterally to one side of the gate.

5. In a device of the class described, a supporting structure; a gate hinged thereto; a latch pivoted upon the gate, and adapted to hold the gate in closed position; an arm pivoted to the gate; a spring arm upon the gate; a latch upon the supporting structure, adapted to engage the gate to hold the gate in open position; a vertically swinging operating member carried by the supporting structure; and a flexible element connected with both latches and with both arms and with the operating member, said flexible element being carried laterally, to one side of the gate.

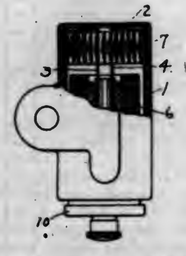
1,016,398. COMBINATION BOILER AND BURNER. DAVID BURROUGHS, Oakland, Cal. Filed Feb. 21, 1911. Serial No. 609,978. (Cl. 122—250.)



1. A boiler comprising a water chamber, a heating chamber positioned within said water chamber, a casing surrounding said heating chamber and provided with openings in its upper and lower portions, a heating coil positioned in said heating chamber and having its inlet and outlet ends positioned in alinement with said openings, and means for heating said heating chamber.

2. A boiler comprising a water chamber, a heating chamber, a casing surrounding said heating chamber and positioned in spaced relation thereto to provide a space between said chamber and casing, said casing being provided with means for admitting the passage of water from said water chamber into the space between said heating chamber and said casing, a coil within said heating chamber having its inlet and outlet positioned adjacent said water passage means, and means for heating said heating chamber.

1,016,399. IGNITION DEVICE. JOHN F. CAVANAGH, Providence, R. I., assignor of three-fourths to Lindsley and Allen Electric Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 12, 1911. Serial No. 620,622. (Cl. 171—122.)



1. A combined spark coil and condenser mounting comprising in combination a coil having a primary and secondary winding, and a condenser, the leads from the condenser extending through the coil within the outer convolutions of the coil windings.

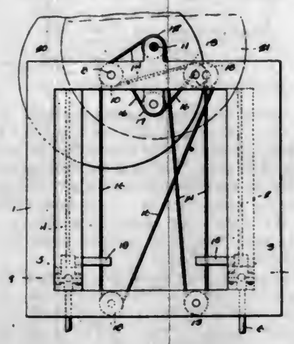
2. A combined spark coil and condenser mounting comprising in combination a coil having a core and a condenser, the leads from the condenser extending through the core of the coil.

3. A combined spark coil and condenser mounting comprising in combination a coil having a primary and secondary winding, and a condenser, the leads from the condenser extending through the body thereof and through the coil within the outer convolutions of the coil windings.

4. A combined coil and condenser mounting comprising in combination a casing, a coil in said casing, said coil comprising a primary and secondary winding, a condenser snugly fitting the casing at the end of the coil, and the leads from said condenser extending through the coil substantially parallel with its axis and within the outer convolutions of the coil windings.

5. A combined spark coil and condenser mounting comprising in combination a cylindrical casing, a coil in said casing, said coil comprising a primary and secondary winding, a disk-shaped condenser snugly fitting the casing at the end of the coil, and the leads from said condenser extending through the core of the coil.

1,016,400. WAVE AND TIDE MOTOR. FREDERICK D. CHAPPELL, Oakland, Cal. Filed Sept. 23, 1910. Serial No. 583,499. (Cl. 61—51.)



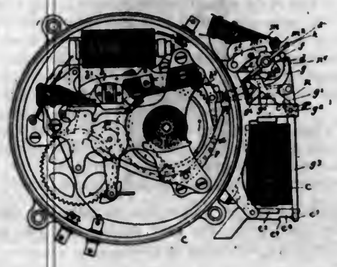
1. In a wave motor, a frame having guide ways and adapted to be supported in a body of water in a vertical position, heads slidable on said guide ways, rods connected with said heads, floats carried by said rods, a drive shaft journaled on said frame, pulleys journaled on said frame, an endless belt movable over said pulleys and resilient gripping jaws carried by said heads and adapted to bit into said belt when said heads are moved downwardly.

2. In a wave motor, a frame provided with vertical guide ways and adapted to be secured to vertical supports, heads slidable on said guide ways, rods connected with said heads, a float connected with said rods, a power shaft journaled on said frame and provided with spaced pulleys, a second power shaft journaled on said frame and provided with spaced pulleys, pulleys mounted on said frame in alinement with said pulleys, endless belts trained over said pulleys and converging resilient gripping jaws arranged on said heads and adapted to grip said endless belts in moving downwardly.

1,016,401. AUXILIARIZED FIRE-ALARM BOX. FREDERICK W. COLE, Newton, Mass., assignor to The Gamewell Fire-Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Mar. 9, 1909. Serial No. 482,374. (Cl. 178—50.)

1. In an auxiliary fire-alarm box the combination of a signaling-train, auxiliary actuating-mechanism therefor having a detent, an electro-magnet adapted to be operated by the auxiliary-circuit, its armature and armature-lever, a spring-actuated let-off arranged to be engaged by said detent and adapted to engage said armature-lever, and means operated by the auxiliary actuating-mechanism for restoring said let-off, substantially as described.

2. In an auxiliary fire-alarm box, the combination of a signaling-train, auxiliary actuating-mechanism therefor having a detent, an electro-magnet adapted to be operated by the auxiliary-circuit, its armature and armature-lever, and a spring-actuated let-off arranged to be engaged by said detent and adapted to engage said armature-lever and having a finger, and a cam operated by the auxiliary actuating-mechanism which engages said finger and restores the let-off, substantially as described.



3. In an auxiliary fire-alarm box, the combination of a signaling-train, an auxiliary actuating-mechanism comprising a shaft bearing a detent, a spring for turning said shaft a partial revolution, a pivotally supported member having a finger adapted to be engaged by said detent and having a long extension, a spring for moving said member, an electro-magnet, an armature, and armature-lever arranged to be engaged by said extension, and means operated by said shaft during said partial revolution for releasing said train, substantially as described.

4. In an auxiliary fire-alarm box, the combination of a signaling-train, an auxiliary actuating-mechanism comprising a shaft bearing a detent and a cam, a spring for turning said shaft a partial revolution, a winding-device for turning said shaft in the same direction to complete said revolution, a pivotally supported spring-actuated member having two fingers, one adapted to be engaged by said detent to hold the shaft and the other adapted to be engaged by said cam to restore said member, an electro-magnet, an armature and armature-lever, an extension on said member adapted to engage said armature-lever, and means operated by said shaft during the first part of its revolution to release the train, substantially as described.

5. In an auxiliary fire-alarm box, the combination of a signaling-train having a locking-lever, an actuating-lever for said locking-lever, a pivotally supported member having a finger, a link connecting said actuating-lever with said member, spring-operated mechanism including a cam for engaging said finger to move said member, and an electro-magnet controlling the operation of said spring-operated mechanism, substantially as described.

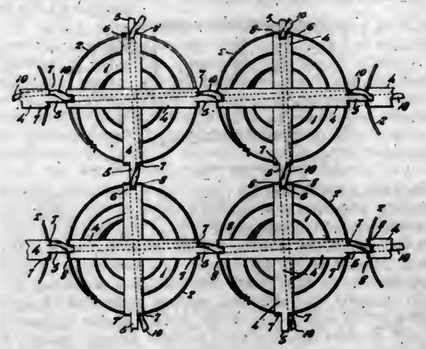
[Claims 6 to 16 not printed in the Gazette.]

1,016,402. SPRING-BED. BENJAMIN D. COURTS, Cincinnati, Ohio. Filed May 1, 1911. Serial No. 624,328. (Cl. 5—29.)

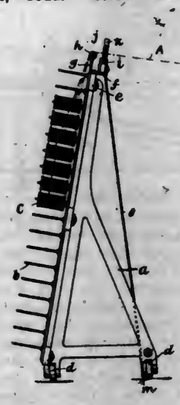
1. In a spring-bed, a spring-structure comprising a plurality of spirals and a multiple of flat sheet-metal strips, each of the latter having at its opposite ends a pair of spaced loops or eyes bent or hooked over the wire of the end-coils of said spirals and a tongue or extension projecting centrally from one end of the strip and also having an eye or loop at its outer end adapted to engage or hook over the wire of the end-coils of the adjacent spiral.

2. In a spring-bed, a spring-structure comprising vertical spirals having end-coils, cross-stays made of flat sheet-metal strips having separated or spaced loops or eyes at the opposite ends of each strip and hooked over or engaging the wire of said end-coils and a tongue extending centrally from one end of said strip and having a loop or eye adapted to engage the wire of the end-coil in the adjacent spring and thereby form a hinge-connection.

3. In a spring-bed, a spring-structure comprising vertical spirals arranged in suitable rows, cross-stays made of flat sheet-metal strips each attached at opposite ends to the end-coil of its particular spiral, openings in said sheet-metal strips and tapes of soft textile fabric interlaced or wound around said flat metal strips, whereby mufflers and cushions are provided between said flat metal strips and the spirals.



1,016,403. CREEL. JOHN P. CRONIN, Paterson, N. J. Filed July 24, 1911. Serial No. 640,071. (Cl. 242—131.)

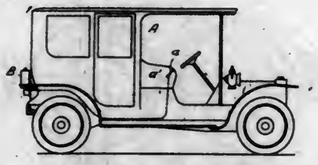


1. In combination, with a creel and a supporting roller thereof, a reed member and a thread supporting member arranged in the creel and one being movable therein substantially in the direction of the length of the reed dents, and means, connecting said movable member with the roller, for transmitting movement to the movable member from the roller upon movement of the creel, substantially as described.

2. In combination, with a creel and two supporting rollers therefor, a reed member and a thread supporting member arranged in the creel and one being movable therein substantially in the direction of the length of the reed dents, a connecting rod pivotally connecting said rollers, and a plurality of pitmen pivotally connecting the connecting rod and said movable member, substantially as described.

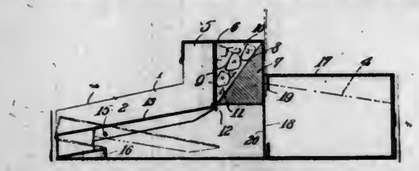
3. In combination, with a creel and a supporting roller thereof, a plurality of brackets carried by the creel and having apertured upstanding arms alined with each other and upstanding forks also alined with each other, a guide-bar received in the apertures of said arms, a reed vertically movable in said forks, and means, connecting the reed with the roller, for transmitting movement to the reed from the roller upon movement of the creel, substantially as described.

1,016,404. DIRECTION-INDICATOR FOR VEHICLES. CHRISTOPHER O'NEILL CROWLEY and HENRY ALFRED LAMB, London, England. Filed Mar. 1, 1910. Serial No. 546,720. (Cl. 116—31.)



Apparatus for indicating variations in the movement of a vehicle, comprising, in combination, a casing having an aperture, vertical guides fitted within the casing, a plurality of indicating devices wholly contained within the casing, pivoted levers for moving said indicating devices independently in said guides into the same indicating position opposite the aperture, springs connected to said pivoted levers and to the casing, flexible means connected to said pivoted levers, stops on said flexible means, a rock shaft, lever devices secured to said rock shaft and adapted to be operated by said stops, and bell operating mechanism in operative relation with said lever devices.

1,016,405. TRAP. JULIUS F. FERGUSON, Ypsilanti, Mich., assignor of one-half to Morris S. Hall, Ypsilanti, Mich. Filed Apr. 13, 1909. Serial No. 489,654. (Cl. 43—24.)



In a trap, the combination with continuous sides and bottom forming a runway of uniform width, a block interposed between the upper portions of the sides at a middle point and having a beveled upper face, and screens extending over said beveled face and between the sides and coöperating therewith to form a bait holding compartment, and a cage removably mounted within the runway between the block and one end of the sides, said cage having an inlet opening adjacent the block and a closure for the opening, of a platform pivotally mounted in the runway between the screens and the other end of the sides, that portion of the platform between the pivot and the adjacent end of the sides being formed thereunder with a weight holding portion, a weight carried by said portion, a flange depending from said portion and supported adjacent the bottom of the runway, said flange constituting means for preventing the escape of rodents under the weight.

1,016,406. SAP-GATHERER. JULIUS M. HARRISON, Cora, Fla. Filed Apr. 10, 1911. Serial No. 620,120. (Cl. 47—40.)

1. A sap gatherer comprising a segmental sheet metal apron constructed with a substantially disposed horizontal portion provided with a spout inclined outwardly and upwardly of a tree having a pocket, the horizontal portion terminating at each end into upwardly extending portions having means adapted to be secured in end kerfs of the pocket, the horizontal portion having means adapted to be extended into and secured in the central portion of the pocket of the tree.

2. A sap gatherer comprising a segmental sheet metal apron constructed with a substantially disposed horizontal portion provided with a spout inclined outwardly and upwardly of a tree having a pocket, the horizontal portion terminating at each end into upwardly extending portions having flanges adapted to be secured in kerfs at each end of the pocket of a tree, the flanges having tri-angular shaped ears engaging the corners of the pocket, the horizontal portion having a central elongated flange adapted

to be extended into the pocket and embedded in the tree, and means penetrating the first flanges and the central flange for securing the apron in place.

1,016,407. PROCESS OF HARDENING AND WATER-PROOFING ANIMAL SKINS. KARL HARTMANN, Berlin, Germany. Filed Aug. 5, 1911. Serial No. 642,460. (Cl. 149—1.)

The process of hardening and waterproofing animal skins, after removal of hair and flesh, by treating same in a bath of amyl acetate and acetone, then applying to the skin a solution of celluloid in amyl acetate and acetone, and then treating same in an alcoholic solution of shellac.

1,016,408. PIANO-ACTION. ALFRED HICKS, St John's Wood, England. Filed July 31, 1907. Serial No. 386,460. (Cl. 84—26.)

1. In a piano, the combination with a key and a hammer, of a sticker resting on the key and engaging the hammer, a three-armed throw-off lever pivotally hung in rear of the sticker and having upwardly, downwardly, and rearwardly extending arms, a link having its upper end pivoted to the extremity of the upwardly extending arm of the throw-off lever and its lower end pivoted directly on the rear side of the sticker, a regulating screw mounted in the sticker below the said link and arranged to bear against the depending arm of the throw-off lever, and a damper-spoon erected on the rearwardly extending arm of the throw-off lever.

2. In a piano, the combination with a key and a hammer, of a sticker resting on the key and engaging the hammer, a throw-off lever pivoted to a fixed part of the piano and hung on the sticker and provided with an arm adapted to release the sticker from the hammer, a fly pivotally mounted on the sticker and connected to the throw-off lever and means arranged between the fly and sticker and adapted to yieldingly separate the said fly and sticker.

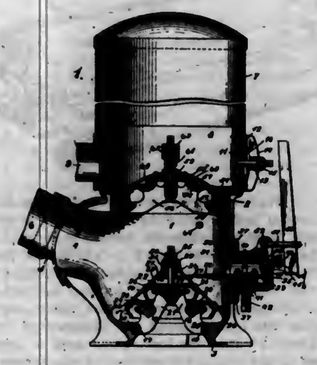
3. In a piano, the combination with a key and a hammer, of a sticker resting on the key and engaging the hammer, a throw-off lever pivotally hung in rear of the sticker, a link connecting said lever with the sticker, a fly pivotally mounted on the front of the sticker, a flexible connection between the fly and said link, and means for holding the fly normally from the sticker.

4. In a piano, the combination with a key and a hammer, of a sticker resting on the key and engaging the hammer, a throw-off lever pivotally hung in rear of the sticker, a link connecting the throw-off lever and the sticker, a fly pivotally mounted on the sticker, a spring arranged between the fly and the sticker, and a flexible cord connecting the upper end of the fly and the link.

5. In a piano, the combination with a key and a hammer, of a sticker resting on the key and engaging the hammer, means for disengaging the sticker from the hammer, a fly pivotally mounted on the sticker and connected to a fixed part of the piano and thereby retained in operative relation to the sticker, and means arranged between the fly and sticker and bearing on the said sticker to hold the same normally in engagement with the hammer.

[Claims 6 and 7 not printed in the Gazette.]

1,016,409. HYDRAULIC RAM. STERLING B. HILL, CLIMIE E. HILL, and WILLIAM R. HILL, Seattle, Wash. Filed Feb. 11, 1911, Serial No. 608,077. Renewed Dec. 23, 1911. Serial No. 667,548. (Cl. 103—29.)



1. In a hydraulic ram, a casing provided with upper and lower oppositely arranged discharge and waste openings, a valve for controlling the discharge opening, a valve for controlling the waste opening, a spring tending to unseat the second named valve, and means disposed in the line of flow of supply and adapted for discharging material from said casing in addition to the discharge and waste openings for the purpose of starting the ram.

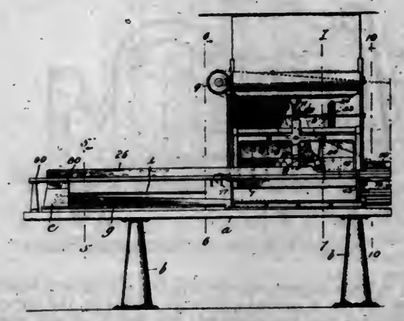
2. In a hydraulic ram, a casing provided with discharge and waste openings, valves for controlling the passage of material through such openings, and a valve disposed in the line of flow of supply and adapted when unseated to discharge material from said casing in addition to the discharge passing through the two named openings.

3. In a hydraulic ram, a casing provided with discharge and waste openings, a valve for controlling the discharge opening, a valve for controlling the waste opening, said casing being provided with a third opening in addition to the two named openings and disposed in the line of flow of supply, a valve for controlling the third named opening, and manually operated means to move the last named valve.

4. In a hydraulic ram, a casing provided with discharge and waste openings, a valve for controlling the discharge opening, a valve for controlling the waste opening, an auxiliary casing having communication and connected with said casing, a leaf-spring disposed within the auxiliary casing and extending into the first named casing for engagement with the waste valve for normally holding the same unseated, and movable means engaging the wall of the auxiliary casing for changing the tension of the leaf-spring.

5. In a hydraulic ram, a casing provided with discharge and waste openings, a valve for controlling the discharge opening, a valve for controlling the waste opening, an auxiliary casing having communication and connected with said casing, said auxiliary casing being provided internally thereof with a shoulder, a leaf-spring disposed within the auxiliary casing and extending therefrom to be positioned in the first named casing to have connection with the waste valve, said leaf-spring having one end thereof disposed below and in engagement with said shoulder, and a bolt longitudinally movably mounted through the auxiliary casing to engage the leaf-spring for changing the tension thereof upon the rotation of said bolt.

1,016,410. CIGARETTE-MACHINE. WILLIAM S. IRBY, Mexico, Philippine Islands. Filed Aug. 12, 1908. Serial No. 448,227. (Cl. 131—5.)



1. In a cigarette machine, the combination of a hopper, means substantially closing the bottom of said hopper and operating to continuously feed tobacco from the bottom thereof in excess of the quantity required for each tobacco core, measuring means for receiving the proper quantity of tobacco for each core, means for conducting off the excess tobacco, and means for forming a tobacco core, said measuring means operating adjacent said hopper and movable to convey and deliver a measured quantity of tobacco to said core forming means, substantially as described.

2. In a cigarette machine, the combination of a hopper having its bottom substantially closed by a rotating feeder for continuously discharging tobacco therefrom, means for conducting off the excess of tobacco, means for forming a tobacco core and a chute leading thereto, a carrier for receiving a measured quantity of tobacco, and means for operating said carrier between said hopper and chute for delivering a measured charge of tobacco to said core forming means, substantially as described.

3. In a cigarette machine, the combination of a hopper having its bottom substantially closed by a revolving brush for continuously discharging tobacco therefrom, means for conducting off the excess of tobacco, tobacco core forming means, a support provided with a discharge opening leading to said core forming means, a carrier open at the top and bottom for receiving a measured quantity of tobacco and slidably mounted on said support, said support forming a closed bottom for said carrier during a portion of its travel, and means for reciprocating said carrier on said support between said hopper and discharge opening, substantially as described.

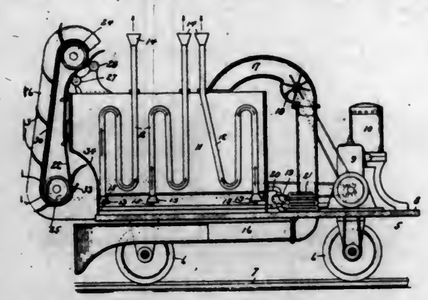
4. In a cigarette machine, the combination of tobacco core forming means, a chute leading thereto, a hopper, a revolving brush substantially closing the bottom of said hopper and discharging the tobacco continuously therefrom, a flat support having an opening delivering into

said chute, a carrier open at the top and bottom and mounted on said flat support, and means for reciprocating said carrier between said hopper and chute, substantially as described.

5. In a cigarette machine, the combination of a plunger and die, operating means for reciprocating said plunger, and automatic means for feeding a measured quantity of tobacco between said plunger and said die, said operating means being arranged to withdraw said plunger from said die momentarily during the feeding therebetween of a measured quantity of tobacco, to then operate said plunger to compress the tobacco between the plunger and die, and to then slightly withdraw said plunger leaving it still in engagement with said die, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,016,411. TRACK-CLEANER. LOUIS ISAACS, Louisville, Ky. Filed Apr. 21, 1911. Serial No. 622,488. (Cl. 104—38.)



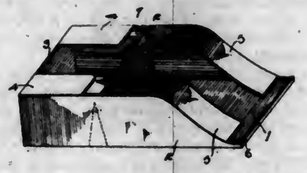
1. A track cleaner comprising a car, a receptacle mounted on the car, a suction apparatus carried by the car and discharging into the receptacle, the mouth of said apparatus being located beneath the front end of the car, and an endless conveyer discharging into the receptacle separate from the suction apparatus and having its lower end located above the mouth of the suction apparatus and in close proximity thereto.

2. A track cleaner comprising a car, a receptacle mounted on the car, a conveyer located in front of the receptacle and discharging thereinto, the rear run of the conveyer traveling in close proximity to the front wall of the receptacle, said conveyer comprising an endless belt and pivoted scoops carried thereby, means for folding the scoops against the belt during their travel along the said wall of the receptacle, and means for holding the scoops in carrying position when they clear said wall.

3. A track cleaner comprising a car, a receptacle mounted on the car, a conveyer located in front of the receptacle and discharging thereinto, the rear run of the conveyer traveling in close proximity to the front wall of the receptacle, said conveyer comprising an endless belt and pivoted scoops carried thereby, rollers located above the receptacle behind the rear run of the belt and in close proximity thereto in the path of the scoops for folding the same against the belt to clear the said wall of the receptacle, and means for holding the scoops in carrying position when they pass said wall.

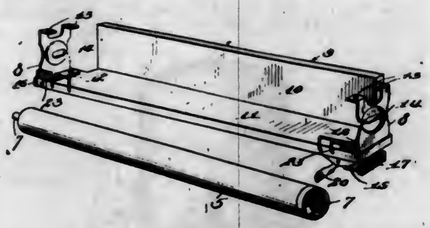
4. A track cleaner comprising a car, a receptacle mounted on the car, a conveyer located in front of the receptacle and discharging thereinto, the rear run of the conveyer traveling in close proximity to the front wall of the receptacle, said conveyer comprising an endless belt and pivoted scoops carried thereby, means for folding the scoops against the belt during their travel along the said wall of the receptacle, guide channels extending along the front run of the belt and partly around the top and bottom portions thereof, crank arms on the scoops, and pins on the crank arms, said pins traveling in the channels for holding the scoops in carrying position.

1,016,412. MATCH-BOX. FREDERICK CHESTERTON JARVIS, Oakland, Cal. Filed Apr. 15, 1911. Serial No. 621,387. (Cl. 206—28.)



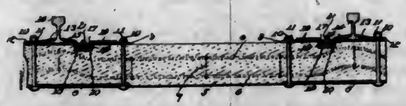
A device of the character described comprising a receptacle, sides for said receptacle having sloping forward edges, a flange formed at the forward end of the bottom of said receptacle, a plurality of spaced overhanging flanges extending from the sides of said receptacle, and a partition provided with laterally projecting feet mounted in said receptacle intermediate its length and in alinement with the spaces between said flanges.

1,016,413. ROLLER WINDOW-SCREEN. CHARLES KEMPTHORNE JENKINS, South Butte, Mont. Filed July 5, 1910. Serial No. 570,286. (Cl. 156—39.)



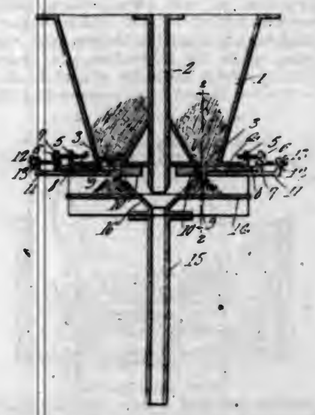
In a roller window screen an L shaped casing including a vertical and a horizontal wall, a roller and a section of screen fabric connected thereto, brackets secured at the ends of the horizontal wall and in which the trunnions of the roller are journaled, the brackets being arranged adjacent the vertical wall and having inturned apertured lugs at their free ends, friction shoes carried by the casing at the ends thereof for engagement with the adjacent faces of the window frame and a transverse bar secured to the free edge portion of the screen fabric, the bar having brackets whereby it may be attached to a sash rail.

1,016,414. RAILWAY-TIE. WILLIAM H. JONES, Hudson, Colo. Filed Apr. 21, 1911. Serial No. 622,515. (Cl. 238—4.)



The combination with a railway tie having a top transverse groove, of a rail fastening comprising a plate extending transversely beneath the rail to form a seat therefor, and projecting from opposite sides theerof, said plate being bent over at one of its ends to form an integral rail-holding clip adapted to engage the corresponding side of the rail, and said plate on the other side of the rail being provided with an opening which registers with the aforesaid groove; a rail-holding clip engageable with the other side of the rail, said last-mentioned clip seating on the plate and having a downward bend through the aforesaid opening and beneath the plane of the bottom of the plate into the transverse groove; a key passing transversely under the plate on opposite sides of the groove, and across the top of the bent portion of the clip; and fastening devices passing through the ends of the plate into the tie, one of said fastening devices passing through the bent-over portion of the plate.

1,016,415. SAND-BLAST DEVICE. ALBERT JORN, Jr., Waukegan, Ill. Filed May 12, 1911. Serial No. 626,811. (Cl. 51—12.)



1. In a sand blast machine, a nozzle, a table at one side of the upper portion of the nozzle, said table having an inclined portion, means for piling sand upon the table and adjacent said inclined portion, and means for directing an air blast into the nozzle.

2. In a sand blast machine a nozzle, a table adjacent thereto and having an inclined portion, means for directing sand onto the table to form a pile extending throughout the length of the nozzle, and means for varying the position of the pile relative to the nozzle.

3. A sand blast machine including a nozzle, a table having an inclined portion for directing sand into the nozzle, a sand container, and means for directing sand from the container to the table to pile the sand in a predetermined position on the table.

4. A sand blast machine including a nozzle, a table having an inclined portion for directing sand into the nozzle, a sand container having an outlet above the table, means for opening and closing the outlet, and means adjacent the outlet for directing sand onto the table at a predetermined distance from the inclined portion thereof, and means for directing an air blast past the table and into the nozzle.

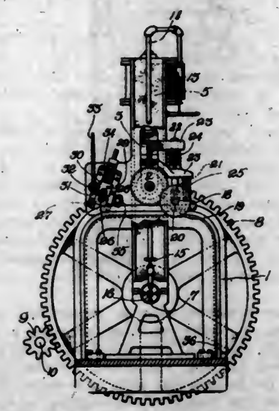
5. A sand blast machine including a nozzle, a table having an inclined portion for directing sand into the nozzle, said table extending throughout the length of the nozzle, a sand container having an outlet above the table, a valve for controlling the passage of sand from the container, and adjustable means shiftable relative to the outlet for directing sand upon the table at a predetermined distance from the inclined portion to form a pile extending throughout the length of the nozzle, and an air passage alining with the nozzle and extending above the table, there being a space between said passage and the inclined portion of the table.

[Claims 6 and 7 not printed in the Gazette.]

1,016,416. MACHINE FOR FORMING SEAT-BODIES. MINAS H. KASHIAN, Amesbury, Mass. Filed Jan. 14, 1909. Serial No. 472,183. (Cl. 153—46.)

1. In a machine for shaping sheet metal, a form, a cooperating shaping member, means for supporting the latter yieldingly with relation to the form, means for relatively moving said shaping member and form in metal-shaping relation to each other, and means including a cylinder and piston operated by fluid pressure for bringing said shaping member and form forcibly but yieldingly together when shaping the sheet metal.

2. In a machine for shaping sheet metal, a form, a cooperating shaping member, means for supporting the latter yieldingly with relation to the form, means for relatively moving said shaping member and form in metal-shaping relation to each other, an auxiliary frictional shaper adjacent said shaping device and mounted on said yielding means for supporting the shaper in dragging engagement with the metal being shaped by the shaping device, and independently yielding means operatively engaged with said frictional shaper.



3. In a machine for shaping sheet metal, a fixed irregular form, a coöperating shaping member, means for supporting the latter yieldingly with relation to the form, means for moving said shaping member about said form in metal-shaping relation to each other, and a sheet metal positioning device adjacent said shaping device containing means for guiding the sides and edge of the sheet metal into place between said form and shaping device as the sheet metal is being shaped.

4. In a machine of the kind described, a form for cooperating in the bending of sheet metal and determining its shape, a shaping device for pressing the sheet metal to the shape of said form, an auxiliary frictional shaper adjacent said shaping device held in dragging engagement with a portion only of the surface of the metal being shaped for defining and rendering the given shape of said portion more clear and accurate, and controllable mechanism for moving said shaping mechanism with varying pressure toward the form and away from it.

5. In a machine of the kind described, a form for cooperating in the bending of sheet metal and determining its shape, a shaping device for pressing the sheet metal to the shape of said form, an auxiliary frictional shaper adjacent said shaping device held in dragging engagement with the metal being shaped for defining and rendering the given shape more clear and accurate at a bend in the form, and a rotary plate located coöperate with an edge of said form in simultaneously producing, in conjunction with the aforesaid shaping mechanism, a sharp bend lengthwise of the metal being shaped, and mechanism for relatively moving said shaping mechanism with relation to the metal and form.

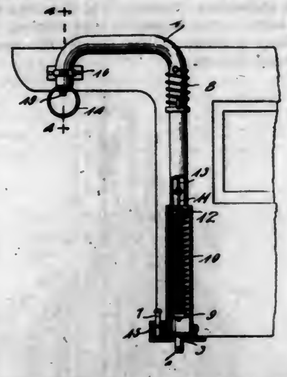
[Claims 6 to 15 not printed in the Gazette.]

1,016,417. SAFETY-CRANE. WILLIAM F. KLAUS, Louisville, Ky. Filed Oct. 23, 1911. Serial No. 656,251. (Cl. 105—82.)

1. The combination with a locomotive cab, of a safety crane mounted therein and having a laterally extending arm, removable means for holding said crane against turning, means for removing said holding means, and means for turning said crane operable on the release of said holding means.

2. In a safety crane, the combination of a supporting structure, a hollow crane revolubly mounted thereon, cooperating elements for holding said crane against turning,

one of said elements being carried by said crane, means mounted on said crane and connected with the other holding element operable by a pull exerted thereon to disengage said element from the element on the crane, and means for automatically turning said crane on the release of said holding element.



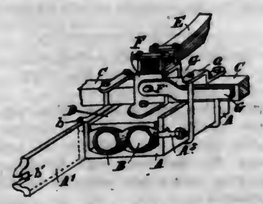
3. The combination with a supporting structure a safety crane revolubly mounted thereon, a spring for turning said crane in one direction, a spring pressed catch carried by said supporting structure, means on said crane for engagement with said catch to hold said crane against the tension of said spring, and means carried by the crane for engagement with said catch and operable by a pull thereon for releasing said catch.

4. The combination with a supporting structure, of a tubular goose neck crane revolubly mounted thereon, a spring cushioned plunger mounted in said crane, means for turning said crane in one direction, means for holding said crane against turning, said holding means being connected with said plunger, and means connected with the plunger and disposed in position to be grasped and a pull exerted thereon, whereby the plunger is elevated against its cushioning spring and the crane holding means released.

5. The combination with a supporting structure, a ratchet fixed thereto and having a centrally disposed bearing, a tubular crane having a journal mounted in said bearing, a pawl on said crane arranged to engage the teeth of said ratchet, said ratchet having an aperture therein, an apertured lug extending laterally from said crane and adapted to register with the aperture in said ratchet when the crane is in normal position, a locking pin insertible in said apertures, a plunger and disposed within said crane, and means connected with said plunger operable by a pull exerted thereon for releasing the crane, said pin dropping into the aperture in said ratchet when the crane swings outward, thereby locking said crane in outswung position.

[Claims 6 and 7 not printed in the Gazette.]

1,016,418. PNEUMATIC SUSPENSION FOR VEHICLES. WILLIAM KNEEN, London, England. Filed July 9, 1910. Serial No. 571,193. (Cl. 21—50.



1. A vehicle including an axle, a spring, a casing suspended under said axle by means of clips and clip bolts, an air containing cushion in said casing, a vertically reciprocable cover on said cushion and having a guide for said axle secured thereon, said guide constituting a support for said spring, an arm secured to said guide and pivoted to said axle, one of said clips having an upwardly bent portion for allowing relative movement of said arm.

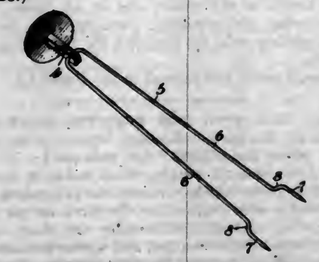
2. A vehicle including air-containing cushions, tubular connections between said air-containing cushions, casings receiving certain of said air-containing cushions, resilient members secured to said vehicle, means for suspending said casings from the vehicle axle, closures for said casings, means for suspending said closures from said resilient members, and arms pivoted to said vehicle axle and connected to said closure suspending means.

1,016,419. WEATHER-STRIP. LEVI KNOTT, Altoona, Pa. Filed Oct. 26, 1910. Serial No. 589,171. (Cl. 20—68.)

1. In combination with a door, an operating bar connected directly to one side of the door for longitudinal movement of the bar, a spring to move the bar to project one end thereof from one side of the door when the latter is open, rollers carried by the bar and projecting above the same; a weather strip applied directly to the same side of the door and having a longitudinal channel in the side next the door to receive and incase the bar and provided in the upper side of its channel with recesses to clear the rollers and cam surfaces at the sides of the recesses to coact with the rollers and cause the latter, when moved by the bar, to raise the weather strip, and means connecting the combined weather strip and casing directly to the door for vertical movement of the said combined weather strip and casing.

2. In combination with a door, an operating bar connected directly to one side of the door for longitudinal movement of the bar, a spring to project one end of the bar beyond one side of the door when the latter is open, and a weather strip also applied directly to the same side of the door independently of the operating bar and for vertical movement, said weather strip having a longitudinal channel in the side next the door in which the bar is located, so that the weather strip also, in itself, constitutes a casing for the bar, said weather strip and bar having co-acting means to cause the combined weather strip and casing to be raised when the bar is projected and to be lowered when the bar is retracted.

1,016,420. HAT-PIN. OTTO KORNDORFER, New York, N. Y. Filed July 12, 1911. Serial No. 638,089. (Cl. 132—25.)



1. A hat pin comprising two substantially parallel flexible prongs, each prong being provided at its free end with a perforating point and near the free end with a prong-spreading shoulder for the purpose described.

2. A hat pin comprising two integrally formed substantially parallel flexible prongs provided at their free ends with perforating points, each prong being offset outwardly near its pointed end, relatively to the other prong, the offset portion being substantially parallel to the general axis of the prong for the purposes described.

1,016,421. DETACHABLE HANDLE FOR BOTTLES. FREDERICK LANDAU, Troy, N. Y. Filed May 10, 1911. Serial No. 626,239. (Cl. 215—1.)

1. In a device of the class described, and in combination, a grasp; a support to engage the body of a bottle; and clamping mechanism adapted to engage the neck of the bottle, said clamping mechanism consisting of an operating lever-member and a pair of clamp-members, one of said members comprising in part a wire spring-coil.

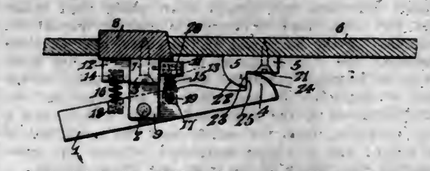
2. In a device of the class described, and in combination, a grasp; a loop to receive the body of a bottle; a clamping yoke connected directly to the grasp adapted to receive the neck of the bottle; a clamping spring-coil adapted to engage the neck of the bottle in coöperation with said yoke; and an operating lever pivotally connected with the ends of said coil and the ends of said yoke.

3. In a device of the class described, and in combination, a wire loop adapted to receive the body of a bottle; a grasp formed by the twisted-together branches of said wire; a yoke formed by the ends of said wire adapted to receive the neck of the bottle; a clamping spring coil adapted to engage the neck of the bottle in coöperation with said yoke; and an operating lever pivotally connected with the ends of said coil and the ends of said yoke.

4. In a device of the class described, and in combination, a grasp; self-adjusting means for clamping said grasp upon the neck of a bottle; and a loop connected with said grasp and adapted to receive the body of the bottle, said loop having at its front side an inwardly inclined bend adapted to engage bottles of smaller diameter than said loop.

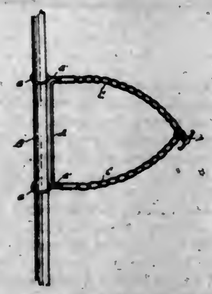
1,016,422. LATCH FOR SLIDING DOORS. BERTRAN LAURITSEN, Twin Brooks, S. D. Filed Apr. 13, 1911. Serial No. 620,918. (Cl. 70—102.)

1. A latch for sliding doors including a support, a latch member pivoted at an intermediate point to form front and rear arms, the front arm being provided with an engaging portion or head, a relatively long rear spring mounted on the support and engaging the rear arm of latch member for forcing the front arm inwardly, and a short front spring secured to the support and to the front arm of the latch member and constituting a yieldable stop for the front arm and cushioning the same, whereby the latch member is yieldably supported in its normal position, said front spring also supplementing the action of the rear spring when the front arm is forced outwardly beyond its normal position.



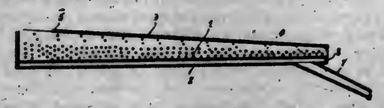
2. A latch for sliding doors including a supporting bracket having spaced ears and provided in advance and in rear of the same with seats, a latch member pivoted at an intermediate point between the ears to form front and rear arms and provided at its front arm with an engaging head, a relatively long spring mounted on the rear seat and interposed between the same and the rear arm of the latch member, and a short front spring secured to the front seat and to the front arm of the lever and forming a yieldable stop for the front arm and cushioning the same, whereby the latch member is yieldably supported in its normal position, said front spring also supplementing the action of the rear spring when the front arm is moved outwardly beyond its normal position.

1,016,423. CATTLE-TIE. FRANK H. LEATHERS, Wind, Me. Filed Aug. 1, 1910. Serial No. 574,780. (Cl. 119—119.)



A cattle-tie consisting of the combination of a rigid spreader having eyes at each end adapted to fit loosely upon a stanchion and loops between said spreader and said eyes adapted to receive the end links of a tie chain, said spreader, said eyes and said loops being formed integral and rigid; a stanchion adapted to fit loosely within said eyes; and a tie chain adapted to have its end links received and held in said loops, said end links being elongated to admit of being passed over the eyes at the end of the spreader and engage the loop.

1,016,424. GRAIN-CLEANER. EDWARD M. LOVELAND, Lignite, N. D. Filed Apr. 8, 1910. Serial No. 554,222. (Cl. 130—15.)

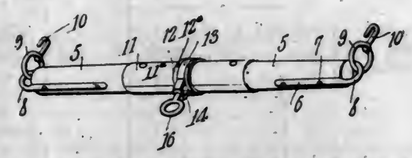


1. A portable grain cleaning device comprising a foraminous tapering trough, a tapering trough-shaped casing, spacing members interposed between the upper side edges of the trough and the casing, and connecting members extending through said trough, casing and spacing members, the trough and the casing being thereby held spaced in concentric relation throughout to constitute a double chute over which grain and siftings may be passed.

2. In a portable grain cleaning device, a tapering elongated trough constituting a chute, the same comprising an interior screen and exterior casing, the same being suitably connected and spaced apart along their upper edges and maintained in concentric relation throughout, a closure for the large end of the chute, a cross piece connecting the side edges of the chute near its large end, a lid hingedly connected with one side edge of the chute, a closure for the space between the screen and the casing adjacent to the small end of the trough, and a spout extending from the casing near the small end of the latter; and a hopper supported between the cross piece and the closure at the large end of the trough.

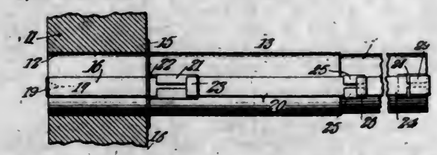
3. A portable grain cleaning device comprising an imperforate tapering elongated trough-shaped outer casing having an outlet near its small end, a screen supported within and in concentric relation to the outer casing, said screen having an outlet at its small end, a lid of closure for the screen, and a hopper supported adjacent to the large end of the screen to discharge directly upon the latter, said screen and casing constituting a double chute for the passage of grain and siftings.

1,016,425. WHIFFLETREE. FERDINAND A. LUBRECHT, Pine City, Minn. Filed Mar. 24, 1910. Serial No. 551,309. (Cl. 21—78.)



In a whiffletree, the combination with a wooden cylindrical body, straps secured to the extremities thereof, eyes secured to the said straps, and hooks loosely engaging said eyes; of a sleeve comprising two semi-cylindrical members loosely embracing said body at the center of its length and meeting each other edge to edge, means for securing them thereto, two spaced collars of sufficient diameter to pass over the straps surrounding and inclosing the sleeve members, means for securing them thereon, a metallic eye of sufficient diameter to pass over the straps loosely mounted around the sleeve between said collars, and having an offsetting loop, and an eye having a head within said loop and swivelly connected with said loop.

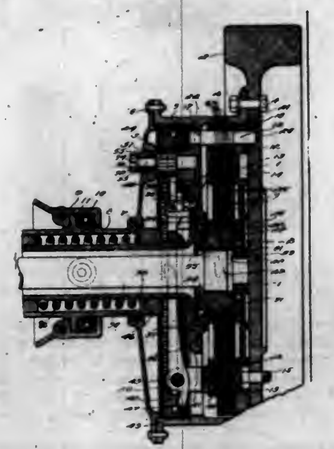
1,016,426. STOVEPIPE-FASTENER. JOE F. MCILVAINE, Lebanon, Mo. Filed June 14, 1910. Serial No. 566,831. (Cl. 126—318.)



1. A device of the class described comprising a strip having a portion adapted to be bent up to engage one side of the wall of a chimney and an adjacent portion adapted to be bent up to engage over the end edge of a pipe section to be held in the chimney, and a strip having wings bent over into overlapped engagement with the first strip, the second strip also having outstanding lugs arranged to engage against the said wall of the chimney, the end of the first mentioned strip being bent over the ends of the wings upon the second strip and overlapping the said wings, whereby to hold the lugs of the second strip in engagement with the chimney wall.

2. A device of the class described comprising a strip having a portion adapted to be bent up to engage one side of the wall of a chimney and an adjacent portion adapted to be bent up to engage over the end edge of a pipe section to be held in the chimney, and a second strip slit inwardly from its side edges and having its portions to one side of the slit bent over into overlapped engagement with the first said strip, the portions of the second mentioned strip to the other side of the slit being bent to outstand from the said second strip and being arranged to engage against the said wall of the chimney, the end of the first mentioned strip being bent over the ends of the said over bent portions of the second strip, whereby to hold the lugs thereof in engagement with the chimney wall.

1,016,427. CLUTCH FOR AUTOMOBILES AND THE LIKE. ALFRED B. MORSE, South Easton, Mass. Filed Nov. 16, 1909. Serial No. 528,348. (Cl. 192—10.)



1. In a clutch of the kind described, coöperating clutch members, actuating means for bringing said members together in clutched relation, means for relatively adjusting said actuating means with reference to the clutch members, a casing for the aforesaid mechanism, external operating means for the internal actuating means, and separate external operating means for said internal adjusting means, said two operating means having connections to the actuating and adjusting means respectively extending with a close bearing fit through the casing.

2. A clutch of the kind described, comprising coöperating clutch members, actuating means for bringing said members together in clutched relation, means for adjusting said actuating means with reference to the clutch members, and an inclosing casing for the aforesaid mechanism closed oil tight against the centrifugal escape of oil from said mechanism, external operating means for said internal actuating means and external operating means for said internal adjusting means having connections to the actuating and adjusting means respectively extending through the casing with a close bearing fit therewith.

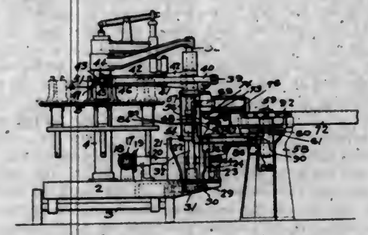
3. In a clutch of the kind described, coöperating clutch members, actuating means for bringing said members together in clutched relation, means for adjusting said actuating means relative to the clutch members, including a rotary part, a casing inclosing the aforesaid mechanism, external operating means for the internal actuating means, and a shaft extending from said rotary part through said casing for operating said clutch-adjusting means.

4. A clutch of the kind described, comprising coöperating clutch members, actuating means for bringing said members together in clutched relation, means for adjusting said actuating means relative to the clutch members, including a rotary part, an inclosing casing for the aforesaid mechanism, closed oil-tight against the centrifugal escape of oil from said mechanism, external operating means for said internal actuating means, and a shaft extending from said rotary part through said casing for operating said clutch-adjusting means, said casing having an oil-tight bearing for said shaft.

5. A clutch of the kind described, comprising coöperating clutch members, actuating means for bringing said members together in clutched relation, means for adjusting said actuating means relative to the clutch members, including a rotary part, an inclosing casing for the aforesaid mechanism, closed oil-tight against the centrifugal escape of oil from said mechanism, external operating means for said internal actuating means, and a wrench shaft extending from said rotary part through said casing in position to receive a wrench at its outer end, said casing having an oil-tight bearing for said shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,016,428. APPARATUS FOR HANDLING GLASSWARE. VERGIL MULHOLLAND, Edgewood, Pa., assignor to Heyl & Patterson, Inc., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 24, 1908. Serial No. 440,202. (Cl. 49—47.)



1. In apparatus for handling glassware, the combination of a mold or other receptacle, a conveyer adjacent to same, a ware support in close proximity to said conveyer, means for transferring the ware from said mold to said support, said support being separate from said transferring means, and means operated by the movement of the conveyer for transferring the ware from said support to said conveyer.

2. In apparatus for handling glassware, the combination of a mold or other receptacle, a conveyer adjacent to same, a ware support in close proximity to said conveyer, means for transferring the ware from said mold to said support, and a swinging frame in position with reference to said support to move the ware from said support onto said conveyer.

3. In apparatus for handling glassware, the combination of a mold or other receptacle, a conveyer adjacent to same, a ware support in close proximity to said conveyer, means for transferring the ware from said mold to said support, a swinging frame extending over said support, and a cam adapted to engage said frame.

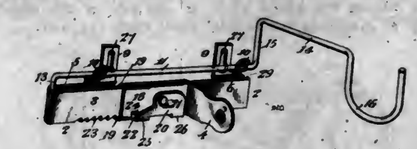
4. In apparatus for handling glassware, the combination of a mold or other receptacle, a conveyer adjacent to same, a ware support in close proximity to said conveyer, means for transferring the ware from said mold to said support, a swinging frame extending over said support, and a rotary cam adapted to engage said frame.

5. In apparatus for handling glassware, the combination of a mold or other receptacle, a conveyer adjacent to same, a ware support in close proximity to said conveyer, means for transferring the ware from said mold to said support, a spring actuated swinging frame extending over said support, and a rotary cam adapted to engage said frame.

[Claims 6 to 13 not printed in the Gazette.]

1,016,429. SHADE AND CURTAIN HANGER. DANIEL G. MUNDAY, McAdoo, Pa. Filed Sept. 17, 1910. Serial No. 582,560. (Cl. 156—23.)

1. A device of the class described including a support constructed of a strip of metal bent at opposite points to provide a horizontal guide, the end portions of the metal being extended inwardly and upwardly and spaced from the rear face of the guide, and provided with upwardly projecting clamps composed of jaws which are disposed above the support, one of the jaws of each clamp being constructed to form an attaching portion in attaching the support in place, a window shade bracket mounted to slide along the guide between the clamps, and a curtain pole supporting member having an arm held above the support at spaced points by the jaws of said clamps.



2. A device of the class described including a support constructed of a strip of metal bent at opposite points to provide a horizontal guide, the end portions of the metal being extended inwardly and spaced from the rear face of the guide and provided with projecting clamps composed of jaws, one of the jaws of each clamp being arranged to form an attaching portion, a window shade bracket mounted to slide along the guide, and a curtain pole supporting member having an arm supported at spaced points by the clamps and slidable in the same and provided with a terminal projecting portion extending into the space between the horizontal guide and one of the terminal portions of the metal and held by the same.

3. A device of the class described consisting of a strip of metal bent at opposite points to provide a horizontal guide, the end portions of the metal being extended inwardly at the rear face of the guide and provided with integral upwardly projecting portions split to form a pair of jaws, one of the jaws of each of the said projecting portions being bent outwardly and the other jaw constituting an attaching portion, a window shade bracket mounted to slide along the guide, and a curtain pole supporting member having an arm supported at spaced points by the said upwardly projecting portions and clamped by the jaws thereof.

4. In combination with the support forming a horizontal guide, a window shade bracket mounted to slide along the guide, clamps extending upwardly from the support, and a curtain pole supporting member detachably engaged at an intermediate point by the said clamps and held thereby above the support, one end of the member being bent downwardly and engaged in the guide, while the other end is shaped to constitute a support for a curtain pole.

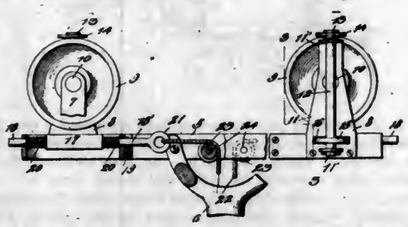
5. A device of the class described including a support consisting of a strip of metal bent at opposite points to form a horizontal guide, the end portions of the metal being extended inwardly and spaced from the rear face of the guide and provided with projecting portions extended above the guide and having jaws, a window shade bracket mounted to slide along the guide, and a curtain pole supporting member composed of an outwardly extending supporting arm, and a transversely disposed attaching arm slidably arranged between and supported at spaced points by the said jaws and provided with a depending portion extending into the space between the guide and one of the said inwardly bent end portions of the metal.

[Claims 6 to 11 not printed in the Gazette.]

1,016,430. TROLLEY-HARP. FRANK E. MURPHY, Lincoln, Ill. Filed Feb. 27, 1911. Serial No. 611,011. (Cl. 191—37.)

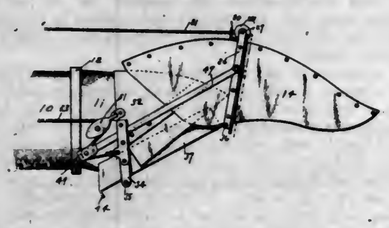
1. A trolley harp comprising an elongated rectangular frame, supports rigidly fixed upon said frame, a trolley wheel revolubly mounted in said supports, a guard device comprising a rod rotatably mounted upon one of

the supports, a wheel rotatable upon the upper end of the rod and normally disposed in a horizontal plane above the trolley wire, said frame and the support having an opening therein, a toothed sector plate rigidly fixed to said rod and extending through said opening, a spring held longitudinally movable rack bar mounted between the parallel sides of the frame and engaged with the teeth of the sector plate, a guide roller mounted between the side bars of the frame, and an operating cord passing over said roller and connected to one end of the rack bar whereby said bar may be moved to rotate said rod and dispose the guard wheel at one side of the trolley wire to disengage the trolley wheel from the wire.



2. A trolley harp comprising a rectangular frame, supports rigidly fixed to the side bars of said frame, a trolley wheel revolubly mounted in said supports, the upper and lower ends of one of said supports being disposed at right angles and transverse with relation to the frame to form bearings, a guard device comprising a rod rotatably mounted in said bearings, a wheel rotatable upon the upper end of the rod and normally disposed in a horizontal plane over the trolley wire, a toothed sector rigidly fixed to said rod, one side of the frame having an opening therein through which said sector extends, a cross bar connecting the longitudinal side bars of the frame, a spring held rack bar slidably mounted in said connecting bar and in one end of the frame, the teeth of said rack bar having engagement with the teeth of the sector, a pulley mounted between the side bars of the frame, and an operating cord passing over said pulley and connected to one end of said rack bar.

1,016,431. HOOD FOR PNEUMATIC STACKERS. GEORGE B. NELSON, Redfield, Iowa. Filed Nov. 14, 1907. Serial No. 402,084. (Cl. 193—21.)



1. In a device of the class described, a collar adapted to be connected with a conveyer pipe, a deflector member pivotally and slidingly connected with said collar and comprising a series of tines normally arranged in the path of the air blast passing through the conveyer pipe and designed to permit air to pass through and to deflect the straw or other material passing through the collar downwardly, and means for adjustably supporting the deflector member in various positions for regulating the quantity of the air current that may go through the tines and also for regulating the angle of discharge of the material passing through the conveyer pipe, for the purposes stated.

2. In a device of the class described, a collar adapted to be connected with a conveyer pipe, a swinging portion pivoted to the collar, a series of tines in the swinging portion for deflecting the substance passing through the collar downwardly as the blast of air which carries the substance passes through the tines, and a slidingly mounted deflector adjacent to the tines designed to regulate the draft of air through them.

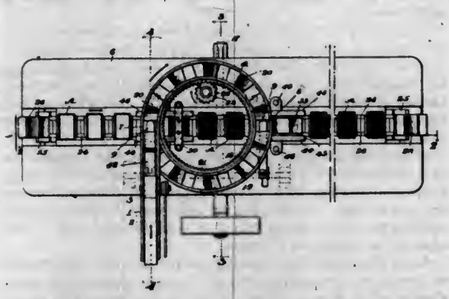
3. In a device of the class described, a collar adapted to be connected with a conveyer pipe, a swinging portion pivoted to the collar, a series of tines in the swinging portion for deflecting the substance passing through the collar downwardly as the blast of air which carries the substance passes through the tines, a slidingly mounted deflector adjacent to the tines, designed to regulate the draft of air through them, and means for adjusting the swinging portion and maintaining it in various positions of adjustment.

4. In a device of the class described, a collar adapted to be connected with a conveyer pipe, a swinging portion pivoted to the collar, a series of tines in the swinging portion for deflecting the substance passing through the collar downwardly as the blast of air which carries the substance passes through the tines, a slidingly mounted deflector adjacent to the tines, designed to regulate the draft of air through them, and means for normally maintaining the deflector in a closed position over the tines.

5. In a device of the class described, a collar adapted to be connected with a conveyer pipe, a swinging portion pivoted to the collar, a series of tines in the swinging portion for deflecting the substance passing through the collar downwardly as the blast of air which carries the substance passes through the tines, a slidingly mounted deflector adjacent to the tines, designed to regulate the draft of air through them, means for normally maintaining the deflector in a closed position over the tines, and means for adjusting the swinging portion and maintaining it in various positions of adjustment.

[Claims 6 to 24 not printed in the Gazette.]

1,016,432. MACHINE FOR PACKING MATCHES. JOHN R. NOLAN, New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1911. Serial No. 628,822. (Cl. 144—61.)



1. In a machine for packing matches, the combination with a plurality of discharge stations, of means for receiving matches in bulk and in substantial parallelism with each other and for impelling approximate quantities thereof from one station to another and endwise-reversing the matches during their travel, whereby the matches preparatory to their discharge lie at one station with their heads extending in one direction and at another station with their heads extending in the opposite direction, and means for feeding box trays to the discharge stations successively.

2. In a machine for packing matches, the combination with two discharge stations, of means for feeding box trays to said stations successively, a series of chambers for receiving matches in bulk and supporting them in substantial parallelism, and means for impelling said chambers from one station to another through a path which effects the endwise reversal of the matches during their travel, whereby the matches preparatory to their discharge lie at one station with their heads extending in one direction and at the other station with their heads extending in the opposite direction.

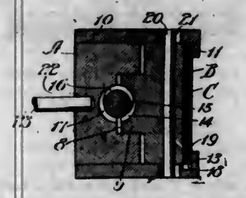
3. In a machine for packing matches, the combination with two discharge stations, of means for feeding box trays to said stations successively, and means for feeding matches in bulk and in substantial parallelism in a rotary path over and across the said stations, whereby the matches preparatory to their discharge lie at one station with their heads extending in one direction and at the other station with their heads extending in the opposite direction.

4. In a machine for packing matches, the combination with two discharge stations, of means for intermittently impelling box trays to said stations, a match receiver comprising a series of division chambers mounted to travel in a rotary path over and across said stations, means for intermittently rotating the said receiver whereby its chambers are brought progressively to said stations, and means for feeding matches in bulk and in substantial parallelism to each other to said receiver.

5. In a machine for packing matches, the combination with two discharge stations, of means for intermittently impelling box trays to said stations, a match receiver comprising a series of division chambers mounted to travel in a rotary path over and across said sections, means for intermittently rotating said receiver whereby its chambers are brought progressively to said stations, and means for continuously feeding matches in bulk and in substantial parallelism to each other to said receiver in a path substantially tangential to the receiver.

[Claims 6 to 12 not printed in the Gazette.]

1,016,433. MATRIX-HOLDER. PHILIP G. NUERNBERGER and GEORGE RETTIG, Jr., Chicago, Ill., assignors to Universal Type Making Machine Company, Chicago, Ill., a Corporation of Delaware. Filed Sept. 13, 1909. Serial No. 517,451. (Cl. 22—8.)



1. A matrix-holder, consisting of two members one stationary and the other movable and loosely locked together, the companion top and bottom plates rigidly secured to the stationary member and extending past the face of the movable member, said plates having flanged ends which overlap the movable member but spaced apart therefrom in providing a recess for the insertion of a matrix, and means for exerting a retaining pressure on said matrix.

2. A matrix-holder, consisting of two members, one member having a recess formed therein, and the second member provided with a rib loosely engaging said recess, the companion plates rigidly secured to one of said members and having flanged ends overlapping the face of the other member, and means for the manually imparting a forward and back movement to one of said members.

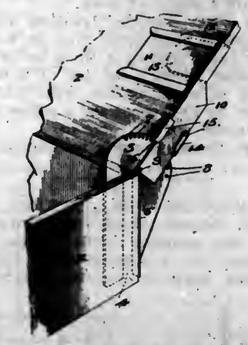
3. A matrix-holder, comprising a stationary member a movable member, the companion plates rigidly secured to the stationary member, and provided on their free ends with clamping flanges which overhang the face of the movable member, and a cam-shaft for moving said movable member into a clamping position.

4. A matrix-holder, comprising a stationary member, a movable member, a manipulating shaft, halved in said members and having a cam-piece mounted thereon which is adapted to move said movable member into a clamping position when said shaft is turned.

5. A matrix-holder, comprising a stationary member, a movable member, the companion top and bottom plates rigidly secured to the stationary member and provided with elongated apertures, a pin inserted through the movable member and having its respective ends loosely engage said apertures in preventing a lateral movement of said latter member.

[Claim 6 not printed in the Gazette.]

1,016,434. COMBINED BOX-LID AND LABEL HOLDER. MATTHEW M. O'MEARA and THOMAS W. LEAHY, Superior, Wis. Filed Nov. 16, 1911. Serial No. 660,721. (Cl. 217—61.)



In a device of the character set forth, the combination with a flat bifurcated clamp adapted to be positioned in the corner of the box, against the end thereof and straddling the rear wall thereof, said clamp having an upwardly extending part provided with a plurality of notches, a lid holder having a flat brace pivoted to the upwardly extending part of the clamp and swinging alongside of and parallel to it, said lid holder also having front and rear members adapted to embrace the edge of the lid, one of which is provided with means for holding a label, and a catch slidably embracing the brace the edge of the catch being adapted to engage with any of the notches aforesaid to hold the lid holder in different positions of adjustment.

1,016,435. RENOVATING AND DISINFECTING DEVICE. EDWIN E. OVERHOLT, Washington, D. C., assignor to Modern Compressed Air Cleaning Company, Washington, D. C., a Corporation of the District of Columbia. Filed May 24, 1902. Serial No. 108,815. (Cl. 15—60.)

1. In a device of the character described, a body having a broad working face adapted to fit upon the work in broadside engagement therewith, and provided with an outlet at a material distance from all margins of said working face, said face being unperforated between said outlet and its margins.

2. In a device of the character described, a body adapted to rest upon the carpet and provided with a steam outlet opening in direct contact therewith; and means for imparting to any given portion of the fabric a continuous preliminary heating for a material length of time before it is reached by the approaching outlet, and for continuing said heating process for a material length of time after it has been passed by the outlet.

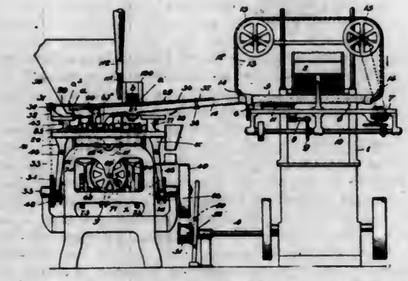
3. In a device of the character described, a body adapted to move over the surface of a carpet and provided with an outlet opening in direct contact therewith; and means directly surrounding said outlet for directing the current of steam forwardly and rearwardly over the surface of the carpet for a material distance from said outlet, said means holding the entire bulk of said escaping current in closest contact with the carpet and unmixed with the surrounding air.

4. A device of the character described, having a plate fitting in broadside engagement with the work and having an outlet opening in direct contact therewith; and a steam chamber on top of said plate, said chamber being in communication with said opening and having an inlet in communication with a supply of steam.

5. A device of the character described, having a plate fitting in broadside engagement with the work and provided with an outlet opening in direct contact therewith; a steam chamber covering the top of said plate, said chamber being in communication with said outlet and having an inlet for live steam; and a hollow wall between said steam chamber and the outer air.

[Claims 6 to 10 not printed in the Gazette.]

1,016,436. MACHINE FOR PACKING MATCHES. CHARLES H. PALMER, Akron, and MICHAEL PARIDON, Barberton, Ohio, assignors to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 24, 1909. Serial No. 485,469. (Cl. 93—6.)



1. In a machine for packing matches, the combination with means for feeding matches in bulk in substantial parallelism with each other to different points of discharge, and with their heads pointing in the same direction, of means for feeding box trays along one course, and in the same direction, to one point of discharge and then along another course, and in an opposite direction, to the other point of discharge, and for partially turning the trays in a horizontal plane during their change from one course of travel to the other.

2. In a machine for packing matches, the combination with means for feeding matches in bulk in substantial parallelism with each other to different points of discharge, and with their heads pointing in the same direction, of a conveyer for match receptacles mounted to travel in a continuous horizontal path adjacent the respective points of discharge whereby the receptacles are moved along one course, and in the same direction, to one point of discharge, and then partially turned and moved along another course, and in an opposite direction, to the other point of discharge.

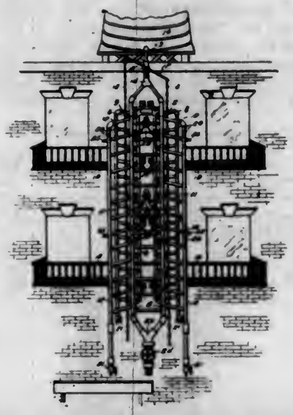
3. In a machine for packing matches, a trough-like hopper having bottom openings at different points in its length, and having its mouth or receiving part horizontally in advance of said openings, means for feeding matches along the bottom of said hopper and above the openings thereof, and means whereby box trays are fed to one opening of the hopper, moved laterally beyond the hopper and partially turned, and then returned to the hopper and presented to another opening thereof.

4. In a machine for packing matches, an inclined trough-like hopper having bottom openings at different points in its length, and having its mouth or receiving part horizontally in advance of said openings, means for progressively feeding matches in parallelism along the said hopper and above the openings thereof, and means for feeding box trays progressively in opposite directions transversely of the hopper and beneath the openings thereof, whereby each tray receives the matches first from one opening and then from another opening.

5. In a machine for packing matches, an inclined trough-like hopper having bottom openings at different points in its length, and having its mouth or receiving part horizontally in advance of said openings, means for progressively feeding matches in parallelism along the said hopper and above the openings thereof, and a box-tray conveyer traveling in opposite directions transversely of and below said hopper and beneath the openings thereof, whereby the trays are fed to the openings successively to receive matches first from one opening and then from another opening.

[Claims 6 to 61 not printed in the Gazette.]

1,016,437. FIRE-ESCAPE. ABRAHAM PERLMAN, New York, N. Y., assignor to A. Perlman Iron Works, New York, N. Y., a Corporation of New York. Filed Apr. 25, 1911. Serial No. 623,268. (Cl. 228—1.)



1. In a fire escape, a series of ladders formed of pipes disposed to provide two main ladders, a front ladder, and two side ladders for each main ladder, the side ladders being disposed at an obtuse angle to the main ladders, one side ladder of each main ladder being accessible from either the main ladder or the front ladder.

2. In a fire escape, a series of ladders comprising two main ladders and two side ladders for each main ladder, the side ladders for each main ladder being disposed at an obtuse angle to the main ladders, the rounds of the front ladder being interspaced relatively to the planes of the rounds of the side ladders.

1,016,438. DOOR-HANGER. ABRAHAM PERLMAN, New York, N. Y., assignor to Star Ball Bearing Door Hanger Company, New York, N. Y., a Corporation of New York. Filed July 7, 1911. Serial No. 637,381. (Cl. 16—91.)

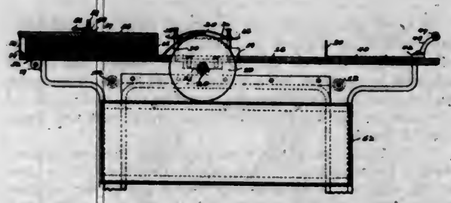
1. In a door hanger, a supporting member, a carrier suspended therefrom and shiftable longitudinally of the supporting element, said carrier comprising side plates and an intermediate spacing plate all connected together, the spacing plate being of less width than the side plates to form a guide groove between the latter, a shiftable bar having its upper portion received in said groove, balls mounted in said bar between the upper and lower edges of the bar and projecting on opposite sides of the bar, a track on which said balls travel, said track having a guide groove for the lower portion of said bar, and hanger arms suspended from said carrier.

2. In a door hanger, a supporting member, a track supported thereby and comprising two side plates and an intermediate spacing plate of less width than the side plates forming a groove between the latter, a carrier comprising an inner and an outer plate and an intermediate spacing plate of less width than the side plates forming a groove between the latter, a longitudinally-shiftable bar having its upper and lower edges received in the grooves of said carrier and track respectively, anti-friction balls mounted in said bar between the edges thereof and traveling on the side plates of said track and carrier respectively, and hanger arms carried by said carrier.

3. In a door hanger, a supporting member, a track provided with a guide groove in its upper face, a carrier disposed above the track and provided with a groove in its lower face, a shiftable bar having its upper portion received in the groove of the carrier and its lower portion received in the groove of the track, anti-friction balls mounted in said bar between its upper and lower edges and projecting beyond the sides thereof, said balls traveling on the track and being engaged by the lower edge of the carrier, and hanger arms depending from said carrier.

4. In a door hanger, a supporting member, a track supported thereby and provided with a guide groove, a carrier formed of an inner and an outer plate and an intermediate spacing plate of less width than the inner and outer plates forming a groove between the latter, a longitudinally-shiftable bar having its upper portion received in said groove and its lower portion received in the groove of the track, anti-friction balls mounted in said bar and projecting beyond the sides thereof, said balls engaging the track and being engaged by the lower edges of the side plates of the carrier, hanger arms suspended from the carrier, and means holding the carrier against vertical movement during its longitudinal travel.

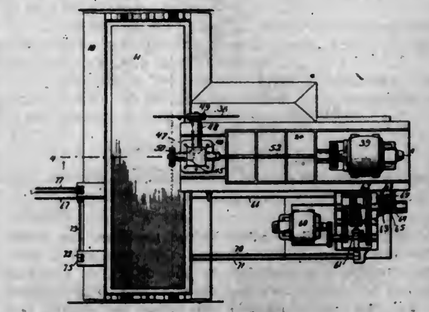
1,016,439. WAFER-CUTTING MACHINE. FRANK M. PETERS, Chicago, Ill. Filed Nov. 25, 1905. Serial No. 289,121. (Cl. 146—12.)



1. In a device of the character described, the combination of a table having a series of spaced longitudinal slots in its top, a plurality of spaced disk cutters mounted beneath said table top and projecting through said slots, means for driving said cutters, a longitudinal guiding groove extending substantially the full length of the table top, a bar adapted to reciprocate in said groove, a fixed stop extending over said guiding groove, a coöperating stop attached to said bar, a transverse bar attached to said guiding bar extending transversely of the table top and also adapted to coöperate with said fixed stop, a handle attached to said transverse bar, a plurality of forwardly extending feeding fingers attached to said transverse bar, a plurality of shouldered posts projecting from said table top, a shield over said cutters normally resting on said shoulders, springs pressing said shield against said shoulders and a series of strips attached to said shield disposed between said cutters and adapted to rest upon the upper surface of the material operated upon to prevent displacement thereof, substantially as described.

2. In a device of the character described, the combination of a longitudinally slotted table having its upper surface depressed at its delivery end, a series of spaced disk cutters mounted to revolve through the slots of said table, means for driving said cutters, a series of reciprocating feed fingers slidably mounted on said table and adapted to push the material operated upon against and between said cutters, and a removable receptacle seated in said depressed end portion of said table and having an open end toward said cutters, the inner surface of the bottom wall of said receptacle being flush with the upper surface of said table and said fingers serving to push the strips of cut material without obstruction into the open end of said receptacle, substantially as described.

1,016,440. STONE-SAWING MACHINE. EDSON T. POLLARD, Rutland, Vt. Filed Oct. 28, 1910. Serial No. 589,575. (Cl. 125—18.)



1. In a stone sawing machine, a movable platen, a saw carriage movable transversely of said platen, saw driving shafts mounted in the same horizontal plane upon said carriage and disposed at right angles to each other, and means for driving either said platen or carriage forward, said driving means being adapted to be shifted from one to the other by a single lever.

2. In a stone sawing machine, a movable platen, a saw carriage movable transversely thereof, a driving shaft extending longitudinally of said carriage and provided with a saw connection at its outer end, a counter-shaft extending at an angle from said driving shaft and geared thereto, said shafts being mounted in the same horizontal plane, a support upon which said carriage is mounted, collars mounted upon said support, raising shafts extending through said collars, and means for rotating said collars.

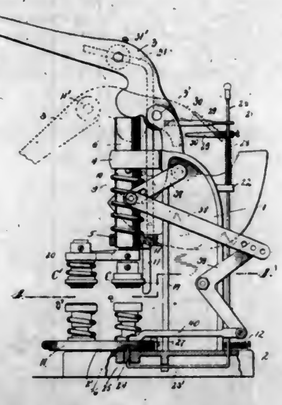
3. In a stone sawing machine, a movable platen, a saw carriage movable transversely thereof, a driving shaft extending longitudinally of said carriage and provided with a saw connection at its other end, a counter-shaft extending at an angle from said driving shaft and geared thereto, a support upon which said carriage is mounted, collars mounted in said support, raising shafts extending through said collars, means for rotating said collars, a base beneath said support upon which said shafts are mounted, and an extension from said support slidably disposed in said base.

4. In a stone sawing machine, a movable platen, a saw carriage movable transversely thereof, saw driving shafts mounted upon said carriage in the same horizontal plane, a support beneath said carriage, depending sleeves at the opposite ends of said carriage, a base adapted to slidably receive said sleeves, threaded shafts carried by said base, collars mounted upon said support to engage said shafts, and means for rotating said collars.

5. In a stone sawing machine, a movable platen, a saw carriage movable transversely thereof, a motor and saw driving shaft upon said carriage, a support beneath said carriage, depending sleeves at the opposite ends of said carriage, a base adapted to slidably receive said sleeves, threaded shafts carried by said base, collars mounted upon said support to engage said shaft, and means for rotating said collars.

[Claim 6 not printed in the Gazette.]

1,016,441. BUTTON-MAKING MACHINE. WILLIAM RENSCHAK, New York, N. Y. Filed Dec. 9, 1910. Serial No. 596,416. (Cl. 79—5.)



1. In the herein described button machine, the combination with a vertically swinging cam lever and a vertically movable rod operated by the latter, of a spring actuated base plate, two dies thereon, two counter pieces for said dies carried by said rod, means for holding said base plate in such position that during the first depression of the said rod said dies will register with the corresponding counter pieces, and means for releasing the said base plate so that under the action of its spring it will adjust itself to bring only one of the dies into register with the counter piece of the other die to coöperate with the same during the second depression of the said rod.

2. In the herein described button machine, the combination with a vertically swinging cam lever and a vertically movable rod operated by the latter, of a spring actuated base plate, two dies thereon, two counter pieces for said dies carried by said rod, means for holding said base plate in such position that during the first depression of said rod said dies will register with the corresponding counter pieces, means for releasing the said base plate so that under the action of its spring it will adjust itself to bring only one of the dies into register with the counter piece of the other die to coöperate with the same during the second depression of the said rod, and means for returning the said base plate into the position in which the two dies register with the corresponding counter pieces.

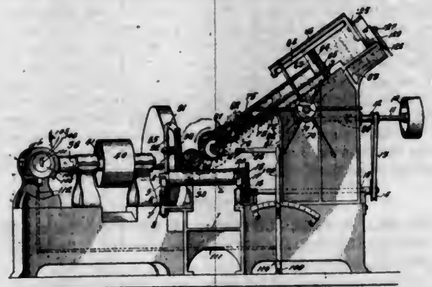
3. In the herein described button machine, the combination with a vertically swinging cam lever and a vertically movable rod operated by the latter, of a spring actuated centrally pivoted base plate, two dies thereon, two counter pieces for said dies carried by said rod, means for holding said base plate in such position that during the first depression of the said rod said dies will register with the corresponding counter pieces, and means for releasing the said base plate so that under the action of its spring it will adjust itself to bring only one of the dies into register with the counter pieces of the other die to coöperate with the same during the second depression of the said rod.

4. In the herein described button machine, the combination with a vertically swinging cam lever and a vertically movable rod operated by the latter, of a centrally pivoted base plate, a torsion medium acting on the periphery of said base plate, two dies thereon, two counter pieces for said dies carried by said rod, means for holding said base plate in such position that during the first depression of the said rod said dies will register with the corresponding counter pieces, and means for releasing the said base plate so that under the action of said torsion medium it will adjust itself to bring only one of the dies into register with the counter pieces of the other die to coöperate with the same during the second depression of the said rod.

5. In the herein described button machine, the combination with a stationary base, a vertically swinging cam lever and a vertically movable rod operated by the latter, of a base plate centrally pivoted in said stationary base, a spring secured to said stationary base and engaging the said pivoted base plate near the periphery thereof, two dies on said base plate, two counter pieces for said dies carried by said rod, means for holding said base plate in such position that during the first depression of the said rod said dies will register with the corresponding counter pieces, and means for releasing the said base plate so that under the action of said spring it will adjust itself to bring only one of the dies into register with the counter pieces of the other die to coöperate with the same during the second depression of the said rod.

[Claims 6 to 12 not printed in the Gazette.]

1,016,442. LOG PEELING AND TRIMMING MACHINE. ALEXANDER ROBERTS and ARTHUR LIBERT, Green Bay, Wis. Filed Oct. 17, 1910. Serial No. 587,434. (Cl. 144—208.)



1. In a machine of the described class, the combination with a log support, of a rotating bark remover operative at one side of said support, a rotary log turner adapted to receive a log between it and the bark remover, and means for automatically varying the inclination of the axis of the log turner in accordance with the diameter of the log.

2. In a machine of the described class, the combination with a log support, of a rotating bark remover operative at one side of said support, a rotary log turner adapted to receive a log between it and the bark remover, and means for tilting the log turner upon the axis of its rotation, said rotary log turner being movable toward and from the bark remover, and said tilting means being arranged to progressively swing the axis of its rotation toward a horizontal position as it recedes from said bark remover.

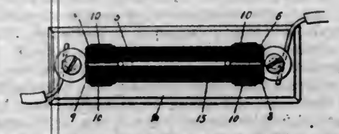
3. The combination with a log support, of a rotary bark remover, operative at one side of the log, a rotary log turner provided with a spiked periphery, an inclined shaft supporting said turner, a mounting for said shaft movable longitudinally with the shaft to cause the turner to approach and recede from the mark remover, an arm projecting upwardly from said supporting shaft, and a guide way in which said arm engages, said guide way being formed to oscillate said shaft about its central axis when the shaft is adjusted longitudinally, together with means for rotating said turner.

4. In a machine of the described class, the combination of a rotary bark remover, a set of log supporting rollers, resilient supporting devices for each end of each of said log supporting rollers, and a rotary log turning device.

5. In a machine of the described class, the combination of a rotary bark remover, a set of log supporting members, resilient supporting devices for each of said log supporting members, and a rotary log turning device, said rotary log turning device being inclinable upon its axis of rotation and having means for automatically changing its inclination in proportion to the diameter of the log, said device being provided with spikes and being adapted to rotate and advance the log along said supports.

[Claims 6 and 7 not printed in the Gazette.]

1,016,443. JACKET FOR SAFETY-FUSES. CAROLINE N. SACHS, Hartford, Conn., assignor to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 11, 1904. Serial No. 197,654. Renewed Dec. 8, 1911. Serial No. 664,652. (Cl. 175—273.)



1. An integral fuse jacket provided with a multiplicity of gas dispersing cavities.

2. A fuse casing comprising a tube having the wall thereof made of a solid piece of insulating material having pores therein to receive the gas formed by the blowing of the fuse, when the fuse blows, to prevent the casing from being disrupted by such gas.

3. An inclosing jacket for a safety fuse, comprising an integral cellular gas dispersing structure surrounding the fuse strip.

4. An inclosing jacket for a safety fuse, comprising an integral cellular gas dispersing structure surrounding the fuse strip, and an external envelop for the jacket.

5. In a safety fuse, the combination with the fuse strip, of an integral jacket of cellular gas dispersing structure.

[Claims 6 to 8 not printed in the Gazette.]

1,016,444. CHEST-PROTECTOR. EMIL C. R. SCHMIDT, Rochester, N. Y. Filed Mar. 9, 1911. Serial No. 613,250. (Cl. 2—59.)

1. A chest protector of the character described, comprised of a multiple ply apron having a deep neck notch, and a narrow neck band of less thickness than the apron which neck-band is secured to the apron at the neck notch and terminates at the ends of the neck-notch.

2. A chest protector of the character described comprised of a multiple ply apron having a deep neck-notch, a narrow neck-band of less thickness than the apron, said neck band secured to the apron at the neck-notch, and terminating at the ends of the neck-notch, and a curved neck strap adjustably secured to the apron at one side of the neck notch and detachably connected therewith at the other side of the neck-notch.

1,016,445. PAINT AND VARNISH REMOVER. CHRISTIAN M. EDWARD SCHROEDER, New York, N. Y. Filed June 8, 1907, Serial No. 377,860. Renewed Dec. 5, 1911. Serial No. 664,081. (Cl. 87—5.)

1. A process for the manufacture of a paint and varnish remover which consists in dissolving a salt in water and adding thereto a volatile solvent for the coating, the volatile solvent containing an ingredient which will cause the salt to gelatinize.

2. A composition for removing surface coatings comprising water, a volatile solvent for the coating, and a body which consists of a salt which is soluble in water and substantially insoluble in the volatile solvent, the salt being in a gelatinous condition.

3. A composition for removing paint and varnish, comprising water, alcohol, benzol, and a body, the latter consisting of a salt in a gelatinous state.

4. A composition for removing paint and varnish, comprising water, alcohol, benzol, and a body consisting of a water soluble salt in a gelatinous condition.

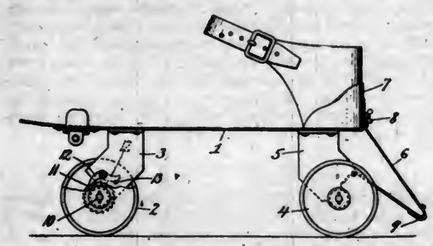
1,016,446. FLOOR-DRESSING TOOL. WALKER AUGUSTUS SCOTT, Evansville, Ind. Filed June 4, 1910. Serial No. 565,027. (Cl. 145—47.)

In a floor dressing mechanism, a substantial weight-carrying wheeled frame, in combination with a tool holder having an elongated flat bearing face, and a blade projecting below said face intermediate its ends and at a substantial distance from each end, said weight-carrying frame being pivoted to said holder at its forward end near the lower corner so that the said frame may be tilted up to elevate its wheels from the floor and bring its weight upon said bearing face of the tool holder, said bearing face forming a shoe upon which the machine travels and which carries the greater portion of the weight of the machine, said holder acting as a gage for the blade and determining its depth of cut according to the adjustment of the blade through the said bearing face, while confining the cut to substantially the plane of said bearing face, the blade being mounted in and carried by said holder, whereby the relation of said blade to the tool holder is unaffected by the tilting of the frame on the tool holder.

1,016,447. ROLLER-SKATE. JAMES H. SHEAHAN, Freeport, Ill. Filed Apr. 28, 1910. Serial No. 558,135. (Cl. 46—51.)

1. A roller skate comprising a frame, front and rear wheels connected therewith, a loop at the rear of the frame having its ends connected at two separate points, the middle portion of the loop adapted to engage the sur-

face upon which the skate is supported when the frame is tilted about the rear wheels.

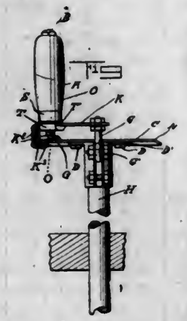


2. A roller skate comprising a frame, front and rear wheels connected therewith, a loop at the rear of the frame having its ends connected at two separated points, the middle portion of the loop adapted to engage the surface upon which the skate is supported when the frame is tilted about the rear wheels, said loop adjustably connected with the frame so that its position may be varied.

3. A roller skate comprising a frame, front and rear wheels associated therewith, a projecting part associated with the rear wheels and adapted to engage the surface upon which the wheels are supported when the frame is tilted about the rear wheels and means associated with the front wheels for preventing backward rotation thereof.

4. A roller skate comprising a frame, front and rear wheels connected therewith, safety devices associated with said front and rear wheels and adapted to reduce the liability of the skate to move forward or backward from under the user, and means for rendering said safety devices inoperative when desired.

1,016,448. CONTROLLER ATTACHMENT FOR LEVERS. DAVID C. SMITH, Fort Worth, Tex. Filed May 9, 1911. Serial No. 626,109. (Cl. 74—5.)

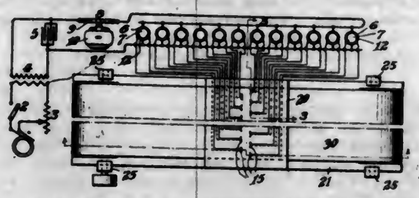


1. A controlling device for levers comprising a clamp for attachment to a lever, a disk fitted to the clamping member, a yoke pivotally mounted upon the clamping member and adapted to engage the disk, a handle having a threaded portion, a plate swiveled to the end of the screw and bearing against the disk, and a nut upon the screw and adapted to bear against the yoke as the handle is turned.

2. A controlling device for levers comprising a clamp for attachment to a lever, a disk fitted to the clamping member, a yoke pivotally connected to the clamping member and disk, a handle, a screw carried thereby, a plate in which an unthreaded end of the screw is swiveled and which plate is adapted to bear against the disk, a nut through which the screw passes, said nut engaging the arms of the yoke and between which arms said screw passes.

3. A controlling device for levers comprising a clamping member adapted to receive the end of a lever, an eye bolt pivotally connected to said clamping member, a disk fastened to the clamping member, a yoke pivotally mounted upon said eye bolt and having arms engaging the edge of the disk, a handle, a screw carried by the latter and passing between said arms, a plate in which an unthreaded end of the screw is swiveled and adapted to contact with the upper face of the disk, a nut having a threaded aperture for the reception of said screw, the face of the nut recessed to receive said arms.

1,016,449. ELECTRICAL APPARATUS FOR DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Jan. 7, 1911. Serial No. 601,283. (Cl. 175—311.)



1. In an apparatus for destroying insects, their eggs, larvæ or pupæ, the combination of groups of electrically independent electrodes arranged in opposite relation with respect to each other and the electrodes in said groups being disposed in pairs in independent circuits, means for causing electric discharges between the said oppositely disposed electrodes and means for supporting such insects, their eggs, larvæ or pupæ between the said electrodes whereby the said insects may be destroyed.

2. In an apparatus for destroying insects, their eggs, larvæ or pupæ, the combination of means for producing high frequency electrical oscillations, thereby causing electric discharges, the said means including groups of two or more electrodes or terminals arranged in opposite relation to each other, those in each group being electrically independent of each other and in independent circuits, and means consisting of non-conducting material for conveying the said insects, their eggs, larvæ or pupæ across and through the field of said oscillations.

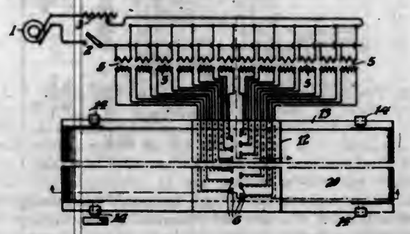
3. In an apparatus for destroying the insects, their eggs, larvæ or pupæ which infest various articles as set forth, the combination of two separate groups of electrodes arranged in opposite relation with respect to each other, the electrodes in each group being arranged in staggered relation with respect to each other and those in each group being electrically independent of each other and being situated in separate and independent circuits, and means for causing electric discharges between the said electrodes for destroying the insects, their eggs, larvæ or pupæ which may be placed between the same.

4. In an apparatus for destroying the insects, their eggs, larvæ or pupæ which may infest various articles as set forth, the combination of a plurality of groups of electrically-independent electrodes arranged in a plurality of independent circuits and in opposite relation with respect to each other, the electrodes in one group being arranged in staggered relation with respect to each other, means for causing electrical discharges between the said groups of independent electrodes, and means for supporting the said articles between the said electrodes whereby the insects, their eggs, larvæ or pupæ which may be therein or thereon may be subjected to the action of the said discharges and destroyed.

5. In an apparatus for destroying the insects, their eggs, larvæ or pupæ which may infest various articles as set forth, the combination of a plurality of groups of electrically independent electrodes arranged in a plurality of independent circuits in opposite relation with respect to each other, the electrodes in one group being arranged in staggered relation with respect to each other, means for causing electrical discharges between the said groups of independent electrodes, and means consisting of a non-conductor of electricity for supporting said articles between the said electrodes whereby the insects, their eggs, larvæ or pupæ which may be therein or thereon may be subjected to the action of the said discharges and destroyed.

[Claims 6 to 17 not printed in the Gazette.]

1,016,450. APPARATUS FOR DESTROYING INSECTS BY MEANS OF ELECTRICITY. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Jan. 7, 1911. Serial No. 601,284. (Cl. 175—311.)



1. In an apparatus of the character described, the combination of a source of alternating electric current, transformers the primary coils of which are connected thereto, electrodes or terminals connected to the opposite ends of the secondary coils of said transformers, the said electrodes or terminals being arranged in electrically independent pairs and in oppositely disposed groups and the electrodes or terminals in each group being situated in rows in staggered relation with respect to each other, and means consisting of non-conductive material for supporting articles or objects between the said electrodes or terminals whereby the electrical discharges between the said electrodes may pass through said articles and objects and destroy any insects, their eggs, larvæ or pupæ which may be therein or thereon.

2. In apparatus of the character described, the combination of a source of electric current, a plurality of transformers of small capacity, a plurality of independent electrodes arranged in groups oppositely disposed with respect to each other and respectively having connection with said transformers, and means for supporting articles between said groups of electrodes.

3. In apparatus of the character described, the combination of a source of alternating electric current, a plurality of transformers of small capacity, a plurality of oppositely arranged electrodes connected to said transformers, the said electrodes being arranged in electrically independent pairs and each pair having connection with a different transformer, and means for supporting articles between said electrodes.

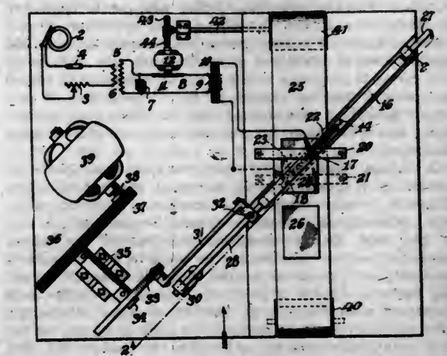
4. In apparatus of the character described, the combination of a source of alternating electric current, a plurality of transformers of small capacity, a plurality of electrodes in oppositely arranged groups having connection in electrically independent pairs with said transformers, the electrodes in each group being in staggered relation with respect to each other, and means for supporting articles between said groups of electrodes.

1,016,451. ELECTRICAL APPARATUS FOR DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Mar. 13, 1911. Serial No. 614,181. Cl. 175—311.)

1. In an apparatus of the character described, the combination of a source of electrical energy, terminals having operative connection therewith between which terminals electrical discharges take place and one at least of which terminals is movable, and means between said terminals for supporting articles to be treated.

2. In an apparatus of the character described, the combination of a source of electrical energy, synchronously movable terminals having operative connection therewith, and means between said terminals for supporting articles to be treated.

3. In an apparatus of the character described, the combination of a source of electrical energy, terminals having operative connection therewith, means for causing movement of the said terminals, and means between the said terminals for supporting articles to be treated for the purpose of destroying the insects, eggs, larvæ or pupæ with which the said articles may be infested.

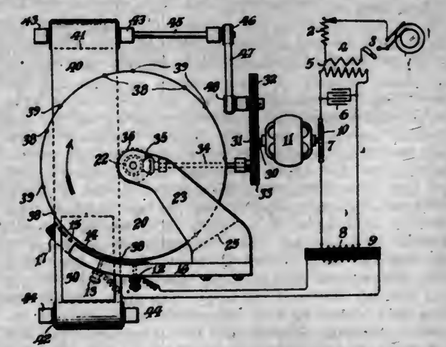


4. In an apparatus of the character described, the combination of a source of electrical energy, terminals having operative connection therewith, means for causing reciprocating movement of the said terminals, and means for supporting articles between the said terminals and subjecting the same to the action of the electrical discharges between the said terminals whereby the insects, eggs, larvæ or pupæ with which the said articles may be infested, may be destroyed.

5. In an apparatus of the character described, the combination of a source of electrical energy, terminals having operative connection therewith, means for causing reciprocating movement of the said terminals, a conveyer extending between the said terminals and arranged at an acute angle to the plane of movement of the said terminals, whereby articles placed upon the said conveyer are moved between the said terminals at an acute angle to the plane of movement thereof, whereby the insects, eggs, larvæ or pupæ which may infest the said articles may be destroyed.

[Claims 6 to 13 not printed in the Gazette.]

1,016,452. ELECTRICAL APPARATUS FOR DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Mar. 13, 1911. Serial No. 614,182. (Cl. 175—311.)



1. In an apparatus of the character described, the combination of a source of electrical energy, rotatable members carrying a plurality of terminals which terminals have operative connection successively with the said source of electrical energy, means for supporting an

article between the said terminals, whereby the insects, eggs, larvæ or pupæ, which may infest the same may be destroyed.

2. In an apparatus of the character described, the combination of a source of electrical energy, rotatable members, means for causing rotation of the said members, a plurality of terminals supported on the said members, the said terminals being adapted to be moved successively past and in proximity to members of conducting material having operative connection with the said source of electrical energy, means for supporting and conveying articles between the said terminals, whereby the said articles are subjected to the action of electrical discharges between the said terminals, the insects, eggs, larvæ or pupæ in the said articles being thereby destroyed.

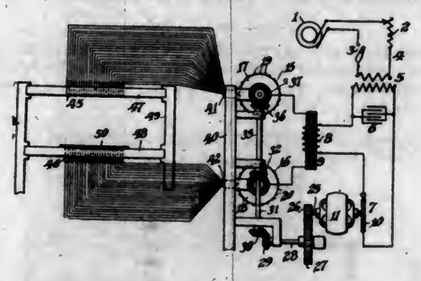
3. In an apparatus of the character described, the combination of a source of electrical energy, oppositely disposed circular members of insulating material carrying a plurality of terminals, means for causing rotation of the said circular members, members of conducting material located adjacent to the edges of the respective rotatable circular members, the said members of conducting material having operative connection with the said source of electrical energy whereby electrical discharges take place successively between the said terminals on the said rotatable members, and means for supporting and conveying articles between the said terminals at one side of the axis of rotation of the said rotatable members, whereby the said articles are subjected to the action of the electrical discharges between the said terminals and the insects, their eggs, larvæ or pupæ, which may infest the said articles, being thereby destroyed.

4. In an apparatus of the character described, the combination of a source of electrical energy, oppositely disposed circular rotatable members of insulating material, which members are provided with terminals secured at intervals to their peripheries, means for causing rotation of the said rotatable members, relatively short members of conducting material located adjacent to the peripheries of the said circular members and having connection with said source of electrical energy, the said conducting members being concentric with the said rotatable members, the said conducting members overlapping each other but one of them being located forwardly of the other so that the electrical discharges between the terminals which may be located adjacent to the said conducting members will take effect at an acute angle to a plane parallel to the planes of the said circular members, and means for conveying articles to be treated between the said circular members and the terminals carried thereby, the said means extending between the said circular members and at one side of the axis of rotation of said members.

5. In an apparatus of the character described, the combination of a source of alternating electric current, a Tesla coil having connection with the said source, oppositely disposed circular members of insulating material having terminals secured at intervals to their peripheries, supports of insulating material for the said circular members, means for causing revolution of the said members, segments of conducting material located adjacent to the peripheries of and being concentric with the said circular members, the forward portion of one of the said segments extending over the rear portion of the other of said segments, supports of insulating material for the said segments which segments are connected to the opposite ends of the secondary of the said Tesla coil, whereby the said segments are electrically charged and whereby electrical discharges take place between the terminals which may be oppositely disposed with respect to the said segments, and means for supporting and conveying articles to be treated between the said terminals carried by the said circular members whereby the insects, eggs, larvæ or pupæ which may infest the said articles are destroyed.

[Claim 6 not printed in the Gazette.]

1,016,453. ELECTRICAL APPARATUS FOR DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Mar. 13, 1911. Serial No. 614,183. (Cl. 175—311.)



1. In an apparatus of the character described, the combination of a source of electrical energy, groups of oppositely disposed terminals, means for successively connecting the said terminals in the said groups with the said source of electrical energy, and means for supporting articles between the said groups of terminals whereby they may be subjected to the action of the electrical discharges between the said terminals.

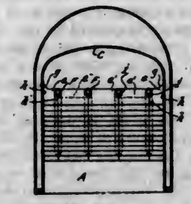
2. In an apparatus of the character described, the combination of a source of electrical energy, groups of oppositely disposed terminals, means for successively connecting the terminals in the respective groups with the said source of electrical energy, and means consisting of insulating material for supporting articles between the said groups of terminals, whereby the said articles may be subjected to the action of the electrical discharges between the said terminals.

3. In an apparatus of the character described, the combination of a source of electrical energy, a plurality of terminals arranged in oppositely disposed groups, the said terminals being supported by members of insulating material, synchronously rotating members having projections thereon spirally arranged around the said cylinders and being connected together by means of an electric conductor, contact members interposed between the said cylinders and the said terminals and having connection with the said terminals, the said projections on the said cylinders successively contacting with or being brought successively in proximity to the said contact members, and means for connecting the said projections on the said cylinders to the source of electrical energy.

4. In an apparatus of the character described, the combination of a source of alternating electric current, synchronously rotating cylinders each having a conducting member extending spirally partially around the same, the said conducting members being provided with projections at frequent intervals, means for connecting the said conducting members to the said source of alternating electric current, terminals arranged in oppositely disposed groups, and means for successively operatively connecting the said terminals to the said projections.

5. In an apparatus of the character described, the combination of a source of alternating electric current, rotatable cylinders, conducting members extending part way around the said cylinders, projections of conducting material connected at intervals to the said conducting members, the circumferential distance between the first and the last of the said projections upon the respective conducting members being equal to the circumferential distance between any other two adjacent projections, terminals arranged in oppositely disposed groups, said terminals being insulated from each other, the said projections being brought successively into operative relation to the respective terminals of the groups, and insulating means for supporting articles between the said groups of terminals.

1,016,454. FIRE-BRICK ARCH FOR LOCOMOTIVE FIRE-BOXES. ENOCH P. STEVENS, Morgan Park, Ill. Filed Nov. 7, 1910. Serial No. 591,018. (Cl. 110—98.)



1. A locomotive fire box having water tubes extending from the front to the back walls thereof, in combination with an arch consisting of fire bricks respectively provided with recesses in the ends which come adjacent to said tubes, said recesses corresponding in shape with said tubes and chamfered at one end to permit the turning of the bricks into position on the tubes, and some of said bricks made of a given thickness and the remaining ones of a less thickness, to obtain recesses on the under side of the arch built up therefrom.

2. A locomotive fire box having water tubes extending from the front to the back walls thereof, in combination with an arch consisting of fire bricks respectively provided with recesses in the ends which come adjacent to said tubes, said recesses corresponding in shape with said tubes and chamfered at one end to permit the turning of the bricks into position on the tubes, and some of said bricks made of a given thickness and the remaining ones of a less thickness, to obtain recesses on the under side of the arch built up therefrom, and non-combustible material in the spaces in said arch which are made by the chamfering of the ends of the recesses.

3. The combination of a locomotive fire box and water tubes extending from the front to the back walls thereof, with a fire brick arch consisting of a plurality of rows of bricks from the front wall of the fire box toward the back wall, and each of said rows consisting of a plurality of bricks, said fire bricks respectively provided with recesses in the ends thereof which come adjacent to said tubes, said recesses corresponding in shape with said tubes and chamfered at one end to permit the turning of the bricks into position on the tubes, and non-combustible material in the spaces in said arch which are made by the chamfering of the end of the recesses.

1,016,455. LOCK. ELMER B. STONE, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed May 29, 1911. Serial No. 630,092. (Cl. 70—108.)

1. A lock case having a recess, lock mechanism located within the case and including a member located and movable in said recess in the operation of the lock, the surface of one of said parts (member or wall of the recess) being formed to provide a number of small bearing surfaces for the movable member against the wall of said recess to prevent the member from becoming inoperative by reason of corrosion.

2. A lock case having a recess, lock mechanism located within the case and including a member located and movable in said recess in the operation of the lock, the surface of said movable member being formed to provide a number of small bearing surfaces for said movable member against the wall of said recess to prevent the member from becoming inoperative by reason of corrosion.

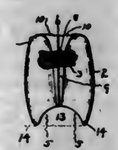
3. A lock case having a recess, lock mechanism located within the case and including a member located and movable in said recess in the normal operation of the lock mechanism, the surface between said parts being formed to provide narrow ridges forming bearing surfaces for the movable member against the wall of said recess to prevent the member from becoming inoperative by reason of corrosion.

4. A lock case having a recess for a cylinder, lock mechanism located within the case and including a cylinder located and movable in said recess in the operation of the lock, the surface of said cylinder being formed to provide narrow bearings for said cylinder against the wall of its recess to prevent the cylinder from becoming inoperative by reason of corrosion.

5. A lock case having a recess for a shackle, lock mechanism located within the case and including a shackle located and movable in said recess in the operation of the lock, the surface of said shackle being formed to provide narrow bearings for said shackle against the wall of its recess to prevent the shackle from becoming inoperative by reason of corrosion.

[Claims 6 to 9 not printed in the Gazette.]

1,016,456. ARTIFICIAL TOOTH. GEORGE W. TODD, Omaha, Nebr. Filed Nov. 8, 1911. Serial No. 659,085. (Cl. 32—9.)



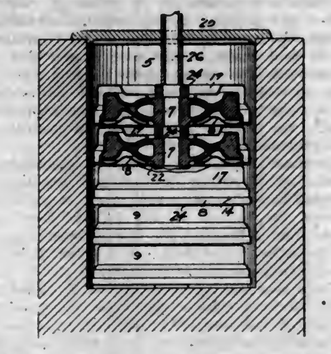
1. An artificial tooth, comprising a porcelain front portion, a porcelain rear portion, each being formed with a concaved base and provided on one of its faces with a metallic lining, said front and rear portions being disposed adjacent to each other with their metallic linings in contact, their concaved bases forming a single arcuate wall.

2. An artificial tooth, comprising a front non-metallic part, a rear non-metallic part, each being reduced to provide a recess in its base and a ledge opening upon its crown; a metallic part disposed between and secured to said non-metallic parts and provided with a head in engagement with said ledges, said recesses forming an arch-shaped bearing wall extending between the front and rear non-metallic parts and opening upon the sides thereof.

3. An artificial tooth comprising a front porcelain part, a rear porcelain part, each having a substantially flat inner wall and reduced to provide a recess in its base, a ledge opening upon its crown and facets between its base and ledge at the terminals of its flat inner wall; a metallic part disposed between the inner walls and secured to the front and rear porcelain parts and provided with a head and with flanges for engagement, respectively, with the ledges and said facets; said recesses forming an arch-shaped bearing wall extending between the front and rear porcelain parts and opening upon the sides thereof.

4. An artificial tooth, comprising adjacent front and rear non-metallic portions formed with concaved bases; a metallic portion provided with flanges, said metallic portion being disposed between and secured to said front and rear portions with its flanges engaging the sides thereof, the concaved bases forming an arch-shaped wall opening at the sides of the non-metallic portions, outwardly of said metallic portion.

1,016,457. METHOD OF TREATING CAR-WHEELS. ROBERT C. TOTTEN, Pittsburgh, Pa. Filed June 10, 1909. Serial No. 501,424. (Cl. 148—19.)



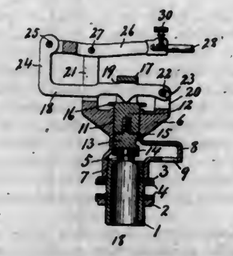
1. The method of preventing the uneven shrinkage in chilled car wheels, consisting in protecting the rim and web portions of the wheel from the atmosphere after its removal from the mold while still hot, exposing the hub portion to the atmosphere, and transferring the said wheel under such conditions to the annealing pit.

2. The method of preventing the uneven shrinkage in chilled car wheels, consisting in inclosing the rim and web portions of the wheel with a protecting covering after the removal of the wheel from the mold while still hot, leaving the hub or hotter portion exposed, and transferring the wheel to the annealing pit.

3. The method of preventing the uneven shinkage in chilled car wheels, consisting in inclosing the rim and web portions of the newly made wheel after removal from the mold and while hot, with a protecting covering, leaving the hub portion exposed, depositing the wheel so inclosed within the annealing pit with the hub portions coinciding and forming communication with the atmosphere through the passage formed by the openings in said hub portions resting one upon the other.

4. The method of preventing the uneven shrinkage in chilled car wheels, consisting in inclosing the outer portions of the wheel with a protecting covering after removal from the mold while hot, leaving the central portion exposed, depositing the wheel so inclosed within a closed annealing pit and carrying off the heat from the central portion of said wheel to the atmosphere.

1,016,458. BALL-COCK. LESLIE UNCKLESS, Eastwood, N. Y., assignor to Century Sanitary Manufacturing Company, Eastwood, N. Y., a Corporation of New York. Filed Mar. 6, 1911. Serial No. 612,508. (Cl. 137—104.)

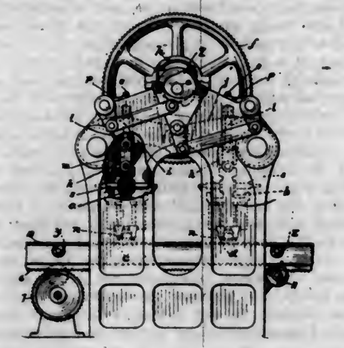


1. A ball cock comprising a valve-case having an inlet and an outlet, a valve for the inlet, arms projecting upwardly unequal distances from the valve-case at opposite sides of the valve, a fulcrum-pin on the shorter arm, a float lever fulcrumed intermediate its ends on the long arm and extending over the valve toward the short arm, and an additional lever having one end provided with an open-sided bearing engaging said fulcrum-pin and its other end provided with an upwardly projecting offset rigid therewith and pivoted to the adjacent end of the float lever, the intermediate portion of said additional lever being operatively connected to the valve.

2. A ball cock comprising a valve-case having an inlet and an outlet and also provided with a cylindrical valve-opening co-axial with the inlet and extending through the upper side of the casing, a valve in said opening having a transverse slot, arms of unequal length projecting upwardly from said casing at opposite sides of the valve, a fulcrum pin on the shorter arm, a lever passed loosely through and engaging the lower and upper walls of the slot and having one end furcated and engaged with the fulcrum pin and its other end extended beyond the longer arm and provided with an upwardly projecting offset rigid therewith, and a float lever fulcrumed on the longer arm and pivoted to said offset.

3. A ball cock comprising a valve-case, a valve movable therein, bearing pins on the casing at opposite sides of the valve, and levers fulcrumed on said pins and pivoted directly to each other, one of said levers having an open-ended slot receiving its bearing pin.

1,016,459. MULTIPLE PUNCH. LARS H. VOLD, Westville, Pa., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 20, 1911. Serial No. 634,272. (Cl. 164—114.)



1. In a multiple punching machine, in combination, a plurality of punch bars, each extending transversely to the path of the stock carrier across the punching machine, and located one behind the other longitudinally to the path of the stock carrier, punches in alinement with each other on each punch bar, each punch being independently adjusted along its punch bar, means to simultaneously reciprocate said punch bars, and means to independently and automatically control the operation of each punch.

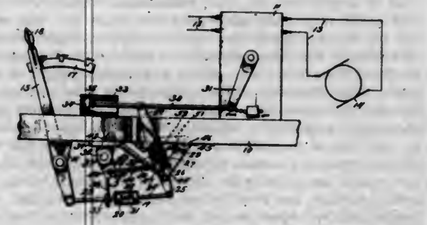
2. In a multiple punching machine, in combination, a plurality of punch bars, each extending transversely to the path of the stock carrier across the punching machine, and located one behind the other longitudinally to the path of the stock carrier, punches in linear alinement with each other on each punch bar, each punch being independently adjusted along its punch bar, means to simultaneously reciprocate said punch bars, and means to independently and automatically control the operation of each punch.

3. In a multiple punching machine, in combination, a plurality of punch bars each extending transversely to the path of the stock carrier across the punching machine, and located one behind the other longitudinally to the path of the stock carrier, a plurality of rows of punches for each punch bar, the punches of each row being in alinement with each other and the successive rows being located one behind the other, each punch being independently adjusted along its punch bar, means to simultaneously reciprocate said punch bars, and means to independently and automatically control the operation of each punch.

4. In a multiple punching machine, in combination, a plurality of punch bars each extending transversely to the path of the stock carrier across the punching machine, and located one behind the other longitudinally to the path of the stock carrier, a plurality of rows of punches for each punch bar, the punches of each row being in alinement with each other and the successive rows being located one behind the other, each punch being independently adjusted along its punch bar, means to simultaneously reciprocate said punch bars, and means to independently and automatically control the operation of each punch.

5. In a multiple punching machine, in combination, a plurality of rows of punches, each row extending transversely to the path of the stock carrier across the punching machine, and successive rows located one behind the other longitudinally to the path of the stock carrier, each punch being independently adjustable transversely of the machine, means to simultaneously reciprocate said punch bars, and means to independently and automatically control the operation of each punch.

1,016,460. STARTING MECHANISM FOR ELECTRIC MOTORS. JOSEPH J. WALSER, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 11, 1909, Serial No. 522,128. Divided and this application filed July 30, 1910. Serial No. 574,605. (Cl. 172—179.)



1. In combination, a motor, a controller therefor, a lever, connections between said lever and said controller whereby a partial stroke of said lever moves said controller simultaneously into slow speed position, said connections including a spring interposed between said lever and said controller and adapted to be compressed by the further movement of said lever and by its resiliency to move said controller into high speed position, means for preventing the operation of said spring to move said controller into high speed position until just before said lever reaches the limit of its stroke, and means acting against said spring to cause said controller to be shifted gradually by said spring to high speed position.

2. In combination, a motor, a controller therefor, an intermediate lever by the movement of which said controller is moved into high speed position, a hand-lever, resilient connections between said two levers, a catch adapted to prevent the stroke of said intermediate lever to move said controller into high speed position, and means actuated near the end of the stroke of said hand-lever to release said catch.

3. In combination, a motor, a controller therefor, an intermediate lever by the movement of which said controller is moved into high speed position, a rod pivotally connected to said intermediate lever, a cylinder secured thereto, a second rod slidably mounted in said cylinder, a compression spring interposed between said rods in said cylinder, a hand-lever to which said second rod is pivotally connected, a spring-seated catch adapted to prevent the stroke of said intermediate lever to move said controller into high speed position, and means carried by said second-named rod adapted near the end of the stroke of said hand-lever to release said catch.

4. In combination, a motor, a controller therefor, an intermediate lever by the movement of which said controller is moved into high speed position, a hand-lever, resilient connections between said two levers, a bell-crank lever adapted to catch and hold said intermediate lever against turning to move said controller into high speed position, a spring tending to hold said bell-crank lever in engagement with said intermediate lever, and means actuated near the end of the stroke of said hand-lever to release said catch from said intermediate lever.

1,016,461. GATE-VALVE. ALEXANDER WATSON, Beachmont, Mass., assignor to Byron C. Leavitt, trustee, Duxbury, Mass. Filed Sept. 27, 1911. Serial No. 651,484. (Cl. 137—5).

1. In a valve, a casing provided with a cylindrical valve-seat, a cylindrical gate valve loosely fitting in the casing, the body of said cylindrical gate valve being hollow, and the sides provided with opposite inclined slots, a valve carrier within the hollow valve having arms projecting through said slots into guides on the interior of the valve casing, said guides, and externally manipulable means to raise and lower the carrier for the purposes herein stated.

2. In a valve, a casing having a main chamber cylindrical in general contour, a valve seat, a portion of the interior surface of said chamber having a smaller radius than the remaining portions, parallel ridges on either side of said chamber the tops of the ridges being substantially in the same cylindrical surface as the said valve seat portion, a smooth flat seat at the bottom of the main chamber having a circumference substantially coincident with the valve-seat cylindrical surface, a cylindrical gate valve, having a face to fit the said valve and portion of the casing surface, the said valve having its maximum radius at said face, the body of the valve being hollow and its sides provided with inclined slots, a valve carrier within the hollow valve having arms projecting through said slots into guides on the interior of the valve casing, said guides, and externally manipulable means to raise and lower the carrier for the purposes herein stated.

3. In a valve, a casing having a cylindrical valve seat at one side, a hollow cylindrical gate valve loosely fitting in the casing and having a projecting sector on which is the seating surface, to fit said valve seat, the rear of the valve being smaller in radius to afford clearance, and the sides thereof provided with opposite inclined slots, a valve carrier within the hollow valve having arms projecting through said slots into guides on the interior of the valve casing, said guides and externally manipulable means to raise and lower the carrier for the purposes herein stated.

4. In a valve, a casing having a cylindrical hollow seat at one side, a hollow cylindrical gate valve loosely fitting in the casing and having a projecting sector on which is

the seating surface, to fit said valve seat, the rear of the valve being smaller in radius to afford clearance, and the sides thereof provided with opposite inclined slots, a valve carrier consisting of a nut having two projecting arms, said nut within the valve, and the arms projecting through said slots into guides on the interior of the casing, said guides, and a threaded valve stem engaging said nut, to raise and lower the carrier for the purposes herein stated.

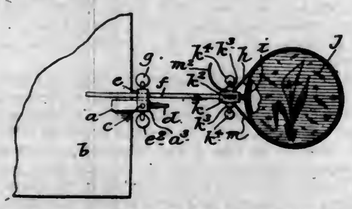
1,016,462. PRESSER-FOOT FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y. Filed June 7, 1909. Serial No. 500,657. (Cl. 112—13.)

1. A presser-foot comprising a socket-portion, a shank-portion journaled on the socket-portion so as to swing on and relatively thereto, and a foot-portion journaled on said shank-portion so as to swing on and relatively thereto at a right-angle to the direction of swing of the shank-portion, substantially as described.

2. A presser-foot comprising a socket-portion, a shank journaled on a horizontal pivot extending from front to rear of the socket-portion, said shank having a depending leg extending at a right-angle thereto, and a foot-portion journaled on the said depending leg so as to swing on and relatively thereto.

3. A presser-foot comprising a socket-portion, a shank journaled on a horizontal pivot extending from front to rear of the socket-portion and having a pair of depending legs arranged in parallelism, each of said legs having journaled on it a foot-portion whereby the latter may swing on and relatively to said leg.

1,016,463. EMBROIDERY-WORK HOLDER. JACOB R. WILKINS, Yonkers, N. Y. Filed May 26, 1911. Serial No. 629,733. (Cl. 45—24.)

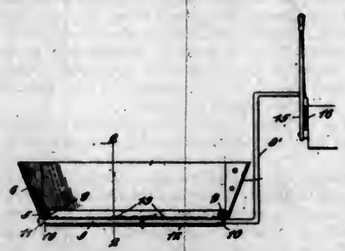


1. An embroidery work holder provided with a member with which is connected a block or head, and a flexible band one end of which is secured in one side of said block or head and the other end of which is adjustable in the other side thereof, said band being adapted to be passed around a circular work piece or head which is adapted to bear on said member.

2. An embroidery work holder provided with an arm, a block or head adjustable on said arm, and a flexible band one end of which is secured in one side of said block or head and the other end of which is adjustable therein, said band being adapted to be passed around a circular work piece or head which is adapted to bear on the end of said arm.

1,016,464. LOCOMOTIVE ASH-PAN. CHARLES H. WILLIS, Tifton, Ga. Filed July 5, 1911. Serial No. 636,843. (Cl. 110—167.)

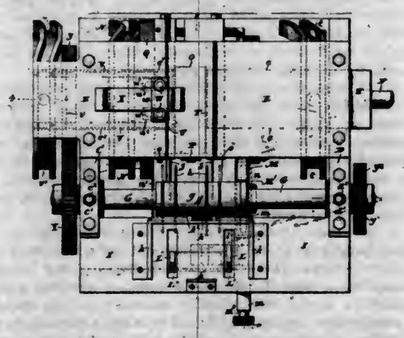
1. A locomotive ash pan comprising end and side walls, a bottom plate pivotally mounted on said end walls for transverse tilting movement, the end and side edges of said bottom plate on one side of its pivot closely engaging with the adjacent lower edges of the walls of the pan, the longitudinal edge portion of said plate on the opposite side of its pivot extending beneath and beyond the lower edge of the adjacent side wall of the pan, and means carried by said plate and engaging the lower edge of said wall whereby the bottom plate on one side of its pivot is spaced at its ends from the end walls of the pan to provide openings at the ends of the pan and permit of a free ingress of air thereto.



2. A locomotive ash pan comprising side and end walls, a bottom plate mounted upon the end walls for transverse tilting movement, operating means therefor, one of the longitudinal edges of said plate extending beyond the side wall of the frame, and a longitudinal rod secured upon the upper surface of said plate and engaging with the lower edge of said side wall to space said plate on one side of its center and at its ends from the end walls of the frame, whereby air inlet openings are provided at the ends of the pan.

3. A locomotive ash pan comprising inclined side and end walls, a bottom plate mounted upon the end walls for transverse tilting movement, operating means therefor including a rod longitudinally arranged upon and secured to the bottom plate, one of the longitudinal edges of said plate being disposed within the opposed side wall of the frame, the other longitudinal edge of the bottom plate extending beyond the opposite side wall, means carried by said plate to maintain the ends thereof, on one side of its center, in spaced relation to the end walls of the pan when the plate is in its closed position whereby air inlet openings are provided at the ends of the pan, and means secured upon one of said side walls to limit the opening movement of the pan.

1,016,465. MACHINE FOR FORMING BOX-SHUCKS. JACOB P. WRIGHT, Akron, Ohio, assignor to The Diamond Match Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 17, 1902, Serial No. 90,175. Renewed Nov. 7, 1911. Serial No. 659,057. (Cl. 93—49.)



1. In a machine for forming box shucks, the combination with scoring mechanism, of folding mechanism in juxtaposition thereto to receive the blanks as the latter leave the scoring mechanism, means associated with said folding mechanism for displacing therefrom the completely-folded blank, and means intermediate the folding and scoring mechanisms and actuated by said displacing means for transferring the blanks from the scoring mechanism to the folding mechanism.

2. In a machine for forming box shucks, the combination with a chute for blanks, of scoring mechanism, folding mechanism in juxtaposition to the scoring mechanism to receive the blanks as the latter leave the scoring mechanism, means for feeding the blanks from said chute to the scoring mechanism, means associated with said folding mechanism for displacing therefrom the completely-folded blank, and means intermediate the folding and scoring mechanisms and carried by said displacing means for transferring the blanks from the scoring mechanism to the folding mechanism.

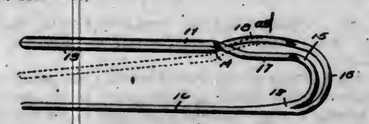
3. In a machine for forming box shucks, the combination with a chute for blanks, of scoring mechanism, folding mechanism, means acting upon the blanks in the chute for feeding a blank from said chute to said scoring mechanism, means associated with said folding mechanism for displacing therefrom the completely-folded blank, and means intermediate the folding and scoring mechanisms and actuated by said displacing means for transferring the blanks from the scoring mechanism to the folding mechanism.

4. In a machine for forming box shucks, the combination with a chute for blanks, of scoring mechanism, means for feeding a blank from said chute to said scoring mechanism, folding mechanism, and guides extending from the folding mechanism to a point adjacent to the chute and beyond the scoring mechanism, whereby the blank is guided from the chute to the folding mechanism, said guides, scoring mechanism and the bottom of said chute being in coincident planes to permit the blank passing in a horizontal line from the chute to the folding mechanism.

5. In a machine for forming box parts, the combination with a chute for the blanks, and means for feeding a blank from said chute, of folding mechanism to which the blank is delivered including a stationary member and a member movable in relation thereto, hooked bars for supporting the blank in its passage from the chute to the folding mechanism and which engage the blank to present the latter to the folding mechanism, a support for said bars movable in relation to the movable member of the folding mechanism and acting upon the completely-folded blank to displace the same from said movable member, and means for operating the movable parts.

[Claims 6 to 31 not printed in the Gazette.]

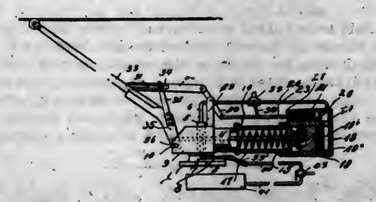
1,016,466. HAIR-FASTENER. OLIVER H. ARNOLD, Wilmington, N. C. Filed July 12, 1911. Serial No. 638,117. (Cl. 132—22.)



The hereindescribed hair fastener comprising a pair of prongs connected together in a loop, and an auxiliary flexible prong having one portion thereof in contact normally with the inner face of one of said first mentioned prongs and thence bent laterally and outwardly therefrom and curved around the loop connecting the first mentioned prongs and spaced therefrom, substantially as set forth.

1,016,467. TROLLEY-RETRIEVER. WILLIAM ASHCRAFT, Grandin, Mo. Filed Oct. 15, 1908. Serial No. 457,926. (Cl. 191—35.)

1. A trolley retriever comprising a base, a trolley pole supported on the base, an arm on the trolley pole, a slotted link, a lateral pin on said arm, operable in the slot of said link, a lever pivotally connected to said slotted link, means for supporting said lever, a piston rod pivoted to said lever, a piston mounted on said rod, a valve connected to be operated by said rod, and a compressed air conduit controlled by said valve, means for supplying compressed air to said conduit, a cylinder inclosing said piston and connected to receive air from said conduit, a second cylinder continuously communicating with said first-mentioned cylinder, a piston movable within said second cylinder, a rod connected with said trolley pole, a spring embracing said rod, abutments on said rod and cylinder for said spring, the piston in said second cylinder being operable by compressed air to move said rod to lower said pole, said spring being operable to elevate the pole when the compressed air is exhausted from said second cylinder.

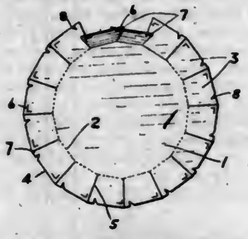


2. A trolley retriever comprising a supporting structure, a trolley pole pivotally connected to said structure and having an arm extending laterally therefrom, a lever fulcrumed intermediately of its ends on said structure, a link pivotally connected with one end of said lever and having a sliding connection with said arm, means for limiting the movement of said link and arm in opposite directions relative to each other, a rod connected with the other end of said lever, a valve controlled by the movement of said rod, means connecting said valve and rod whereby the valve is opened and closed by the movement of the rod in opposite directions, compressed air operated means for lowering the pole when said valve is opened, and resilient means for elevating and supporting said pole.

3. A trolley pole retriever comprising a supporting structure, a trolley pole pivotally connected to said structure, a cylinder mounted on said structure, a piston in said cylinder, a rod connected at one end to said pole with its other end extending into said cylinder and provided with an abutment, a coiled spring on said rod within said cylinder arranged between the abutment of said rod and the rear end of the cylinder, means for supplying compressed air to said cylinder in front of said piston to force the piston into engagement with said rod to move it rearward and thereby lower the pole, resilient means for cushioning the lowering movement of the pole and for elevating it when said lowering means is disengaged from said rod, and means for controlling the air supply to said cylinder, said means being connected with said pole and operable on the rising of the pole beyond a predetermined point to admit air to said cylinder and to exhaust it on the lowering of the pole beyond a predetermined point.

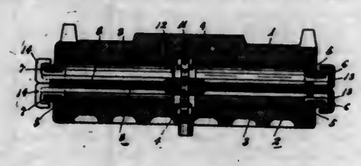
4. A trolley retriever comprising a supporting structure, a trolley pole pivotally connected to said structure, a cylinder mounted on said structure, a piston in said cylinder, means for limiting the rearward stroke of said piston, a rod connected at one end to said pole and having its free end extending into said cylinder into the path of movement of said piston and adapted to be engaged and moved by said piston, an abutment on said rod, a coiled spring on said rod with one end engaging said abutment and its other end engaging the rear end of said cylinder, a compressed air conduit opening into said cylinder in front of said piston, a three-way valve in said conduit, valve actuating means connected with said pole and operable by the raising of the pole beyond a predetermined point, and means operable by the air supply to hold said valve in open position.

1,016,468. PAIL-TRAY. EDWARD L. BAILEY, Philadelphia, Pa., assignor to Brown & Bailey Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 29, 1911. Serial No. 630,058. (Cl. 229—21.)



A pail tray having a polygonal bottom and side sections integrally formed therewith and divided by lines diverging from the center of the bottom, each of said sections having near one side edge an angular slot, and at the other edge an outwardly expanded lug formed by a notch in the outer edge of the section, the lug of each section interlocking with the adjacent slot of another section.

1,016,469. ROLLER-BEARING. JOHN C. BARBER, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 15, 1911. Serial No. 621,240. (Cl. 64—64.)



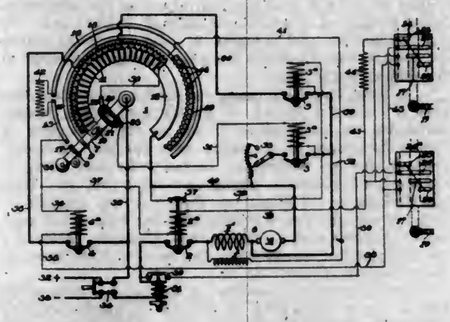
1. The combination with upper and lower bearing plates and interposed rollers, of a roller spacing cage made up of separately formed but rigidly connected sections, one having interlocked engagement with the upper bearing plate, and the other, with the lower bearing plate, and the said interlocking engagements permitting traveling movements of said bearing plates in respect to each other and in respect to said cage and rollers, but holding the said parts against separation.

2. The combination with upper and lower roller bearing plates and interposed rollers, of a roller spacing cage made up of two plates normally connected flatwise together, one of the said cage plates having hook-like retaining lugs engageable with one of the said bearing plates, the other of said cage plates having hook-like retaining lugs engageable with the other bearing plate, the said parts being thus held against separation but with freedom for traveling movements in respect to each other.

3. The combination with upper and lower roller bearing plates provided at their inner and outer edges with projecting retaining flanges, of rollers interposed between said bearing plates, and a roller spacing cage made up of two flat plates normally connected by rivets, one of the said cage plates having inner and outer hook-like retaining lugs coöperating with the retaining flanges of one of the said bearing plates, and the other of said cage plates having inner and outer hook-like lugs coöperating with the retaining flanges of the other bearing plate.

1,016,470. MOTOR-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 1, 1909. Serial No. 499,421. (Cl. 172—179.)

1. In a controller for electric motors in combination, a plurality of devices for starting the motor under different potential conditions, and common controlling means for said devices.



2. In a controller for electric motors, in combination, a plurality of devices for starting the motor under different potential conditions, and one or more controlling devices, each adapted to control the operation of all of said starting devices.

3. In a controller for operating an electric motor at a relatively slow speed in combination, a resistance, a switch for closing the motor circuit with said resistance included therein and a second switch adapted to be operated to remove a portion of said resistance to start the motor upon failure of said first mentioned switch to start the motor, said second mentioned switch being automatically caused to reinsert said portion of said resistance.

4. In a controller for operating an electric motor at a relatively slow speed in combination, a switch for closing the motor circuit, a variable resistance, a controlling element adapted to be set to include a predetermined amount of said resistance in the motor circuit upon closure of said first mentioned switch, and a second switch adapted to be operated to temporarily remove a portion of said resistance to start the motor upon failure of said first mentioned switch to start the motor.

5. In a controller for operating an electric motor at a relatively slow speed in combination, a resistance, a switch for closing the motor circuit with said resistance included therein, a second switch for removing a portion of said resistance to start the motor upon failure of said first mentioned switch to start the motor, and a controlling device for causing operation of one or both of said switches at will, said controlling device tending to cause said second mentioned switch to reinsert said portion of said resistance.

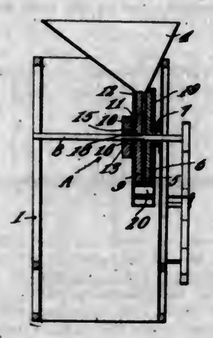
[Claims 6 to 13 not printed in the Gazette.]

1,016,471. CORN-SHELLER. CHARLES BOZILE, Manawa, Wis. Filed Mar. 24, 1911. Serial No. 616,623. (Cl. 130—7.)

1. In a machine of the class described, the combination of a pair of disks having opposed active faces, one of the disks having a rotary movement relative to the other, and one of the disks being provided with a plurality of ribs on the active face thereof for directing the material between the disks inward, thus subjecting the material to reciprocatory radial movements.

2. In a machine of the class described, the combination with a housing and a rotary shaft passing therethrough, of a rotating disk mounted upon the said shaft and inclosed within the said housing, and a fixed disk mounted within the housing having the active face thereof opposing that of the rotary disk, one of the said disks having a plurality of arcuate ribs projecting therefrom around its periphery, the convex sides of the ribs being disposed inwardly whereby the material fed between the said disks is subjected to an agitated grinding action between the said ribs.

3. In a machine of the class described, the combination with a hopper whose spout forms a housing, a rotary shaft through the latter, and a rotating disk mounted upon said shaft and inclosed within said housing; of a fixed disk also mounted within said housing, the active face of this disk opposing that of the rotary disk and having around



its periphery a plurality of arcuate ribs projecting therefrom, the convex sides of the ribs being disposed inwardly and the ends thereof being spaced apart, one of the spaces between the ends of the ribs being disposed toward the hopper to receive the material, whereby the material is confined within the ribs and subjected to an agitated grinding action therebetween.

1,016,472. TIRE. TRACY V. BUCKWALTER, Altoona, Pa. Filed Apr. 29, 1910. Serial No. 558,436. (Cl. 152—1.)

A tire comprising a resilient body and an open-work reinforcing metal band embedded therein, said band comprising a wire hoop and a plurality of cross wires of smaller gage welded exteriorly to the hoop, substantially as described for the purpose set forth.

1,016,473. APPARATUS FOR CLEANING WIRE. ROBERT WILLIAM BURGESS and ALEXANDER CLARK, Govan, Scotland. Filed Aug. 27, 1910. Serial No. 579,231. (Cl. 148—42.)

1. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, laterally projecting arms on the body and rollers on the arms.

2. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, arms on the body and means for adjusting the same.

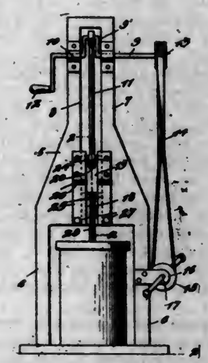
3. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft and having radial slots therein, arms projecting laterally from each side of the body, and screw means working in the slots for adjusting certain of the arms.

4. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, fixed arms projecting laterally from each side of the body, movable arms projecting laterally from each side of the body, rollers on the arms and means for adjusting the movable arms.

5. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft and having radial slots therein, fixed arms projecting laterally from each side of the body, movable arms sliding in said slots and projecting laterally from each side of the body, rollers on the arms and means for adjusting the movable arms.

[Claims 6 and 7 not printed in the Gazette.]

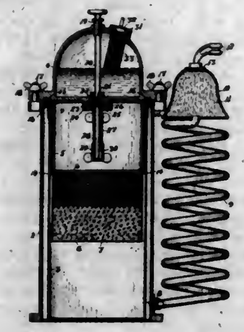
1,016,474. CHURN. THOMAS P. CALLICOTT, Prescott, Ark. Filed June 5, 1911. Serial No. 631,251. (Cl. 31—30.)



1. The combination with a frame having a vertical guide-way, of a reciprocating piston and operating means therefor mounted in the frame, block sections arranged upon each other and movable in said guide-way, said pitman being pivotally connected at one end to said block sections, retaining bars secured upon the frame and extending over the guide-way at opposite sides thereof and engaging upon the opposite longitudinal edges of one of the block sections, said bars each including a stationary section and a movable section hinged to the stationary section, and screws carried by said movable retaining bar sections whereby the same may be rigidly secured to the frame.

2. The combination with a frame, of a reciprocatory pitman and operating means therefor, said frame having a guide-way, block sections slidable in said guide-way and pivotally connected to said pitman, one of said block sections having its opposite longitudinal edges rabbeted, said sections being arranged upon each other and provided in their opposed faces with recesses to receive the end of a dasher shank, retaining bars secured upon the frame and extending upon the rabbeted edges of said block sections, said bars each including a stationary section and a movable section hinged to the stationary section, and means for rigidly securing the movable retaining bar sections to the frame.

1,016,475. ACETYLENE-GAS GENERATOR. JOSEPH CORROYER, Oakland, Cal. Filed Nov. 10, 1910. Serial No. 591,610. (Cl. 48—27.)



1. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending therethrough mounted on said tank; a plug having a narrow central opening secured in said aperture and a wall projecting downwardly in said tank; a drip cylinder having a closed lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder, and said cylinder having a side opening above its base; a rod resting loosely in said cylinder; a screen resting loosely in said chamber and a disk resting on said screen.

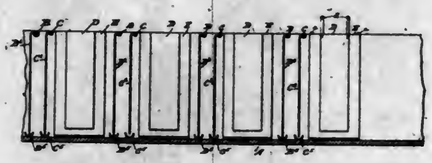
2. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending therethrough mounted on said tank, a plug having a narrow central opening secured in said aperture and a wall projecting downwardly in said tank, a drip cylinder having an open lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder; a cap secured removably on the lower end of said cylinder and having a side opening above the base thereof; a rod resting loosely in said cylinder; a screen resting loosely in said chamber and a leather disk resting on said screen.

3. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending therethrough mounted on said tank; a plug having a narrow central opening secured in said aperture, and having a wall projecting upwardly in said chamber containing a valve seat, and a wall projecting downwardly in said tank, a valve stem turnably mounted in the roof of said dome and engageable with said valve seat, a drip cylinder having an open lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder, a cap secured removably on the lower end of said cylinder and having a side opening above the base thereof; a rod resting loosely in said cylinder, a screen resting loosely in said chamber and a disk resting on said screen.

1,016,476. PURIFICATION OF GASES. FREDERICK GARDNER COTTRELL, Berkeley, Cal., assignor to International Precipitation Company, San Francisco, Cal., a Corporation of California. Filed Feb. 26, 1909, Serial No. 480,243. Renewed July 1, 1911. Serial No. 636,514. (Cl. 75—30.)

1. The improvement in the art of purifying gases which consists in repeatedly forming a cloud of non-gaseous particles of innoxious material in said gases and removing each such cloud of particles together with the noxious impurities absorbed from the gas by its particles, before the formation of the next-succeeding cloud in the same mass of gas.

2. The improvement in the art of purifying gases which consists in repeatedly forming a cloud of non-gaseous particles of innoxious material in said gases, and removing, by electric charges, each such cloud of particles together with the noxious impurities absorbed from the gas by its particles, before the formation of the next succeeding cloud in the same mass of gas.



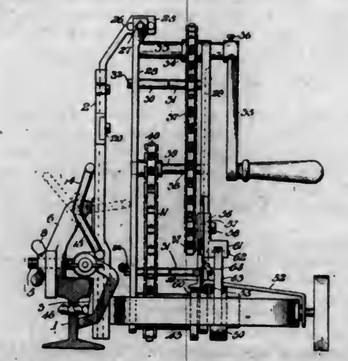
3. The process of purifying the gases going to the contact mass in the manufacture of sulfur trioxid by the contact method which consists in repeatedly forming a cloud of non-gaseous particles of innoxious material in said gases and removing each such cloud of particles together with the noxious impurities absorbed from the gas by its particles before the formation of the next succeeding cloud in the same mass of gas.

4. The process of purifying the gases going to the contact mass in the manufacture of sulfur trioxid by the contact method which consists in repeatedly forming a cloud of non-gaseous particles of innoxious material in said gases and removing each such cloud of particles together with the noxious impurities absorbed from the gas by its particles by the application of electric charges before the formation of the next succeeding cloud in the same mass of gas.

5. That step in the purification of the gases going to the contact mass in the manufacture of sulfur trioxid by the contact method which consists in producing in said gases at a suitable temperature a cloud of suspended particles of sulfuric acid after said gases have been freed from substantially all sulfuric acid and other suspended particles which they may have previously contained, and thereby absorbing by said particles noxious impurities still contained in said gases.

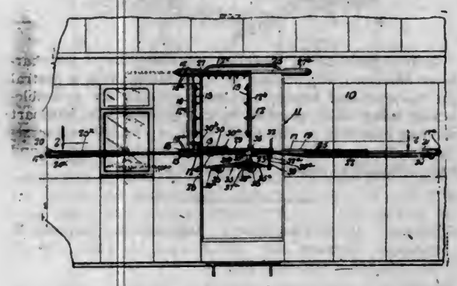
[Claims 6 to 11 not printed in the Gazette.]

1,016,477. COMBINED RAIL DRILL AND CLAMP. CHARLES J. COULTER, Hammond, Ind. Filed Mar. 7, 1910. Serial No. 547,812. (Cl. 77—11.)



A device of the character described comprising the combination with an upright channel beam, of a one-piece frame vertically adjustable therein, means to secure and hold said frame in an adjusted position, there being a horizontal series of holes through the top portion of said frame, a bolt adapted to be secured in any one of said holes, a swinging frame depending from the said bolt and a portable drill carried by said frame.

1,016,478. RAILWAY MAIL CATCHING AND DELIVERING APPARATUS. FREDERICK E. COYNE and JOHN W. ESKHOLME, Chicago, Ill., assignors to Sebree Mail Exchanging Device Co., Carrollton, Ky., a Corporation of Delaware. Filed Aug. 3, 1911. Serial No. 642,066. (Cl. 105—231.)



1. In a device of the character described, in combination with a car provided with a door opening, a rod extending horizontally across said door opening and being secured to the car side, a second horizontal rod secured to said car side near the top of said door opening, vertically alined blocks, one mounted on each of said rods, a net-carrying frame hinged to said blocks and being adapted to close against said rods, an operating lever adapted to swing in a horizontal plane into said car and having pivotal connection to one of said horizontal rods at a point near the hinged connection of said net-carrying frame, and a link pivotally connected at one end to said operating lever near the pivotal connection of said lever with said rod and at its other end to the said net-carrying frame near its hinged connection, the pivotal connection of the operating lever with said rod being located between the hinged connection of said frame and the pivotal connection of said link to said operating lever when the said frame is in closed position.

2. In a device of the character described, in combination with a car provided with a door opening, a rod extending horizontally across said door opening and being secured to the car side, a second horizontal rod secured to said car side near the top of said door opening, vertically alined blocks, one mounted on each of said rods, a net-carrying frame hinged to said blocks and being adapted to close against said rods, an operating lever adapted to swing in a horizontal plane into said car and having pivotal connection to said lower horizontal rod at a point near the hinged connection of said net-carrying frame, a link pivotally connected at one end to said operating lever near the pivotal connection of said lever with said rod and at its other end to the said net-carrying frame near its hinged connection, the pivotal connection of said lever to said rod being spaced from the axis of the hinged connection of said frame in proportion to the length of said link so that when said frame is in closed position the lever will extend substantially parallel thereto, and means carried by said frame adapted to lock said frame and lever together in closed position.

3. In a device of the character described, in combination with a car provided with a door opening, a rod extending horizontally across said door opening and being secured to the car side, a second horizontal rod secured to said car side near the top of said door opening, vertically alined blocks, one mounted on each of said rods, a net-carrying frame hinged to said blocks and being adapted to close against said rods, an operating lever adapted to swing in a horizontal plane into said car and having detachable pivotal connection to said lower horizontal rod at a point near the hinged connection of said net-carrying frame, a suitable, reversible link pivotally connected at one end to said operating lever near the pivotal connection of said lever with said rod and at its other end to the said net-carrying frame near its hinged connection, the pivotal connection of said lever to said rod being spaced from the axis of the hinged connection of said frame in proportion to the length of said link so that when said frame is in closed position the lever will extend substantially parallel thereto, a part carried by said lever adapted to engage said lower rod and limit the outward movement of said lever, and means carried by said frame adapted to lock said frame and lever together in closed position.

4. In a device of the character described, in combination with a car provided with a door opening, a rod extending horizontally across said door opening and being secured to the car side, a second horizontal rod secured to said car side near the top of said door opening, vertically alined blocks, one mounted on each of said rods, a net-carrying frame hinged to said blocks adapted to close against said rods, a sliding block on said lower rod remote from said door opening, a link having pivotal connection at one end with said frame at a point near its free side, and at the other end with said sliding block, a bar capable of horizontal swinging movement located below said frame and having rotative connection therewith, an auxiliary link connecting said bar with said first-named link and depending hooks carried by said bar.

5. In a device of the character described, in combination with a car provided with a door opening, a rod extending horizontally across said door opening and being secured to the car side, a second horizontal rod secured to said car side near the top of said door opening, vertically alined blocks, one mounted on each of said rods, a net-carrying frame hinged to said blocks and being adapted to close against said rods, an operating lever adapted to swing in a horizontal plane into said car and having detachable pivotal connection to one of said horizontal rods at a point near the hinged connection of said net-carrying frame, and a detachable, reversible link pivotally connected at one end to said operating lever near the pivotal connection of said lever with said rod and at its other end to the said net-carrying frame near its hinged connection, the pivotal connection of said lever to said rod being spaced from the axis of the hinged connection of said frame in proportion to the length of said link so that when said frame is in closed position the lever will extend substantially parallel thereto.

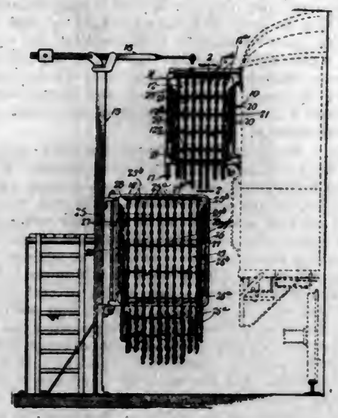
1,016,479. RAILWAY MAIL CATCHING AND DELIVERING APPARATUS. FREDERICK E. COYNE, SAMUEL G. TAYLOR, Jr., and JOHN W. ESKHOLME, Chicago, Ill., assignors to Sebree Mail Exchanging Device Co., Carrollton, Ky., a Corporation of Delaware. Filed Aug. 3, 1911. Serial No. 642,067. (Cl. 105—231.)

1. In a device of the class described, in combination with an open frame, a net supported thereby comprising a plurality of chain lengths arranged in two sets, the chain lengths of one set extending at an angle to and intersecting the chain lengths of the other set, and the links of one set of chain lengths at the points of intersection extending loosely through the links of the other set.

2. In a device of the class described, in combination with an open frame, a net supported thereby comprising a plurality of chain lengths arranged in two sets, the chain lengths of each set being parallel and those of the one set extending in substantially vertical lines and those of the other set extending in substantially horizontal lines, the links of one set of chain lengths at the points of intersection extending loosely through the links of the other set.

3. In a device of the class described, in combination with an open frame, a net supported thereby comprising a plurality of chain lengths arranged in two sets, the

chain lengths of each set being substantially parallel, and one set of chain lengths extending in horizontal lines and the other set, in vertical lines, the chain lengths of one set intersecting the chain lengths of the other set, and the links of the set of horizontal chain lengths at the points of intersection extending loosely through the links of the other set.



4. In a device of the class described, in combination with an open frame, a net supported thereby comprising a plurality of chain lengths arranged in two sets, the chains of each set being substantially parallel, and one set of chain lengths extending in horizontal lines and the other set in vertical lines, the chain lengths of one set intersecting the chain lengths of the other set, and the links of the set of horizontal chain lengths at the points of intersection extending loosely through the links of the other set, each link of the vertical set of chain lengths through which a link of the horizontal set extends having its side members bent inwardly to prevent the adjacent links of the horizontal chain lengths from passing between said lateral members.

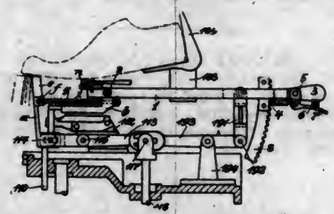
5. In a device of the class described, in combination with an upright open frame, a net comprising a plurality of chain lengths arranged in two sets and secured at their ends to said frame, the chain lengths of one set extending in substantially vertical lines and the chain lengths of the other set extending in substantially horizontal lines, and the chain lengths of the horizontal set nearer the lower part of said frame being longer than those nearer the upper part of said frame and the chain lengths of the vertical set nearer the vertical median line of said frame being longer than the chain lengths nearer the vertical sides of said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,016,480. PULLING-OVER MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. RUDOLF ERNST CRAIN, Oberursel, Germany, assignor to Maschinenfabrik Moenus A. G., Frankfort-on-the-Main, Germany, a Corporation. Filed Oct. 19, 1911. Serial No. 655,566. (Cl. 12—4.)

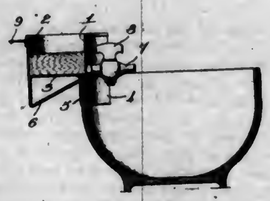
1. In a pulling-over machine a last support of the character described, comprising in combination with a central bar toe and heel supports carried by said bar, a double-armed hand lever pivoted to the central bar, ball-part carriers attached to the hand lever, and means for locking the said hand lever in position.

2. In a pulling-over machine a last support of the character described, comprising in combination with a central bar toe and heel supports carried by said bar, a double-armed hand lever pivoted to the central bar, ball-part carriers attached to the hand lever and adapted to slide vertically in the central bar, links connecting the ball-part carriers and central bar, and means for locking the said hand lever in position.



3. In a pulling-over machine a last support of the character described, comprising in combination with a central bar toe and heel supports carried by said bar, a double-armed hand lever pivoted to the central bar, ball-part carriers attached to the hand lever, a toothed sector secured to the central bar, and a catch mounted on the hand lever adapted to engage the toothed sector.

1,016,481. MAYONNAISE-OIL DROPPER. SAMUEL E. CREASEY, Sanford, Me. Filed Apr. 11, 1910. Serial No. 554,759. (Cl. 65—45.)

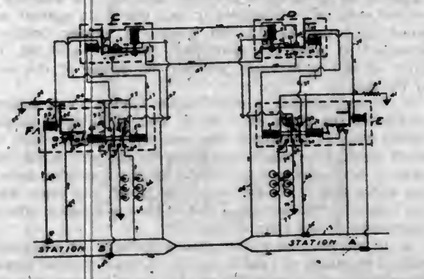


1. A mayonnaise oil dropper comprising a reservoir provided with depending flanges adapted to grip the rim of a bowl and support the reservoir thereon, a spigot projecting from said reservoir over the bowl, and a leg depending from said reservoir to form with said flanges supports for maintaining said reservoir level when detached from the bowl and placed upon a table or other flat surface.

2. A mayonnaise oil dropper comprising a reservoir having its front wall cylindrical and extending below the reservoir to form a cylindrical depending flange, a second concentric, depending, cylindrical flange secured to the reservoir and adapted together with the first-mentioned flange to receive and grip the rim of a bowl and support the reservoir thereon, a spigot projecting from said reservoir over the bowl, and a leg depending from said reservoir to form with said flanges supports for maintaining said reservoir level when detached from the bowl and placed upon a table or other flat surface.

1,016,482. COMBINED RELAY, TARGET-SETTING, AND RETURN-CALL-CIRCUIT-CLOSING DEVICE. EDWARD R. CUNNINGHAM, Des Moines, Iowa, assignor of one-third to E. B. Bieghler and one-third to Frank C. Tate, Des Moines, Iowa. Filed Sept. 7, 1909. Serial No. 516,611. (Cl. 246—36.)

The combination with a trolley line, of a normally open ground connection leading from said trolley line and including a magnet, a circuit controlling switch controlled by said magnet, a normally open grounded connection from said wire controlled by said switch and including a solenoid, spaced signals, a third ground connection from the trolley wire including said spaced signals and a circuit closer, a core for said solenoid controlling said last mentioned circuit closer, a second solenoid included in the signal circuit and connected with said circuit controlling switch to open the same when energised, a shunt around said solenoid closed by the opening of said circuit controlling switch and restoring means comprising a normally open grounded connection including a magnet closed by the passage of a car, a circuit closer

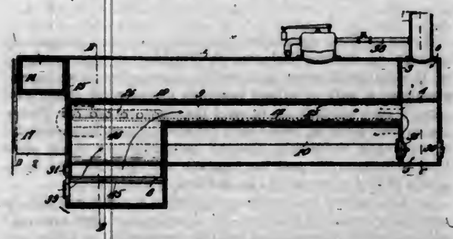


controlled by said magnet, a normally open grounded connection from the wire including a solenoid and adapted for closure by said circuit closer, the core of said solenoid being connected in alinement with the core of the first mentioned solenoid.

1,016,483. APPARATUS FOR PRODUCING RUBBER-COATED BLANKS. WILLIAM W. DUNCAN and NELSON E. TOUSLEY, Watertown, Mass., assignors to Hood Rubber Co., Boston, Mass. Filed Sept. 16, 1909. Serial No. 518,092. (Cl. 91—14.)

An apparatus for producing rubber coated linings, comprising a fabric feeding device, a device for producing a film of rubber, means for causing said film of rubber to be pressed upon the fabric at portions only thereof, to cause the rubber to adhere to the fabric and means for simultaneously with said pressure severing the adhering portions.

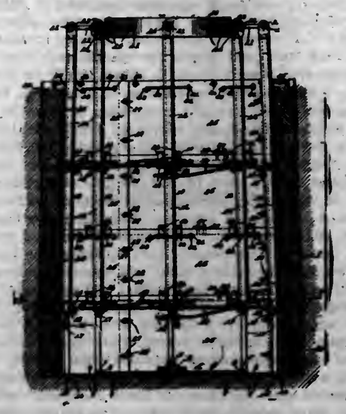
1,016,484. BOILER. WILLIAM JEFFERSON ELLIS, Andrews, N. C., assignor of one-third to Thomas Cover, Jr., Philadelphia, Pa., and one-third to Samuel E. Cover, Andrews, N. C. Filed June 17, 1911. Serial No. 633,780. (Cl. 122—149.)



1. In a boiler furnace, the combination with a boiler having a grate, a central fire flue arranged on its under side next to the grate, and provided with an opening extending the entire length of the grate through which fire gases enter the fire flue and travel to the rear of the boiler, and lower internal lateral flues through which the fire gases are conveyed from the rear to the front of the boiler, and thence pass to the rear of the boiler and escape.

2. In a boiler furnace, a boiler provided with a grate and a central fire flue arranged on its under side next to the grate and provided with an opening extending the entire length of the latter, lower internal lateral flues extending to the front of the boiler to convey the fire gases from the rear to the front thereof, a fire box at the rear of the boiler for receiving the gases from the central flue and for directing them to the lateral flues, a front smoke box for receiving the gases from the lateral flues, and upper lateral flues to receive the gases and return them to the rear of the boiler.

1,016,485. FORM FOR CONCRETE CONSTRUCTION. JOHN ELSMERE, Battle Creek, Mich. Filed Aug. 12, 1910. Serial No. 576,835. (Cl. 25—124.)



1. In a form for the concrete construction of a manhole, the combination of a base comprised of a plurality of radially disposed detachably connected longitudinally adjustable bars, a plurality of substantially verticaly disposed spaced uprights supported upon said base, each of said uprights comprising a plurality of detachably connected telescoping sections, the lowermost section of said uprights being held against relative horizontal movement in said base bars, longitudinally adjustable braces extending between diametrically opposed uprights intermediate their extremities, each of said braces being provided with a turn buckle, radially adjustable means connecting the upper extremities of said uprights, a sectional inner form-wall bearing against the outer sides of said uprights, and a sectional outer form-wall spaced from said inner form-wall, substantially as described.

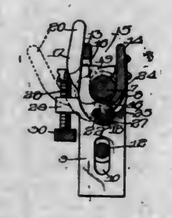
2. In a form for the concrete construction of a man-hole, the combination of a base comprised of a plurality of radially disposed detachably connected longitudinally adjustable flat bars, a plurality of substantially vertically disposed spaced uprights supported upon said base, each of said uprights comprising a plurality of detachably connected telescoping sections, the lowermost sections of said uprights being held against relative horizontal movement in said base, longitudinally adjustable braces extending between diametrically opposed uprights intermediate their extremities, each of said braces being provided with a turn buckle, radially adjustable means connecting the upper extremities of said uprights, an inner form-wall bearing against the outer sides of said uprights, said wall being comprised of a series of superimposed rows of detachably connected sections, a detachable connection between said sections and said uprights whereby outer movement of said sections is prevented, a sectional outer form-wall, and means for spacing said outer form-wall from said inner form-wall, substantially as described.

3. In a form for the concrete construction of a man-hole, the combination of a base member comprised of a plurality of radially disposed detachably connected longitudinally adjustable bars, a plurality of substantially vertically disposed uprights supported upon said bars adjacent the outer extremities thereof, each of said uprights comprising a plurality of detachably connected telescoping sections, the lowermost sections of said uprights being pro-

vided with pivotal joints permitting of inward or outward swinging of the upper end portions of said uprights, the lower extremities of said uprights being held against relative horizontal movement in said base bars, longitudinally adjustable braces extending between diametrically opposed uprights and connected with inwardly projecting eyes provided at intervals upon said uprights intermediate their extremities, each of said braces being provided with a turn buckle, radially adjustable bracing means connecting the upper extremities of said uprights, an inner form-wall comprised of a series of superimposed rows of detachably connecting sections bearing against the outer sides of said uprights and releasably connected thereto, an outer sectional form-wall, and means for spacing said outer form-wall from said inner form-wall, substantially as described.

4. In a form for the construction of a manhole, the combination of a base member comprising a plurality of radially disposed detachably connected longitudinal and adjustable bars, a plurality of substantially vertically disposed uprights supported upon said bars adjacent the outer extremities thereof, each of said uprights comprising a plurality of detachably connected telescoping sections, the lowermost sections of said uprights being provided with pivotal joints permitting of inward or outward swinging of the upper end portions of said uprights, the lower extremities of said uprights being held against relative movement in said base bars, longitudinal and adjustable braces extending between diametrically opposed uprights and connected with inwardly projecting eyes provided at intervals upon said uprights intermediate their extremities, each of said braces being provided with a turn buckle, radially adjustable bracing means connecting the upper extremities of said uprights, an inner form-wall comprised of a series of superimposed rows of detachably connected sections bearing against the outer sides of said uprights and releasably connected thereto, the upper of said sections overlapping the lower and provided with inwardly projecting hooks engaging the upper edge of the corresponding lower section, an outer sectional form-wall, and means for spacing said outer form-wall from said inner form-wall, substantially as described.

1,016,486. ROLLER-SOCKET FOR PRINTING-PRESS ROLLERS. WILLIAM EVENSEN, Chicago, Ill., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1908. Serial No. 462,488. (Cl. 64—10.)



1. In combination, a roller-holder having a slot adapted to receive the shaft of a roller, a pivoted locking lever having a rigid arm adapted to be projected over said shaft when the latter is in operative position in said slot, the pivot of said lever being between the planes of the sides of the slot and having means adapted to be actuated by the moving of the roller-shaft into operative position in the slot to automatically move said arm into locking position.

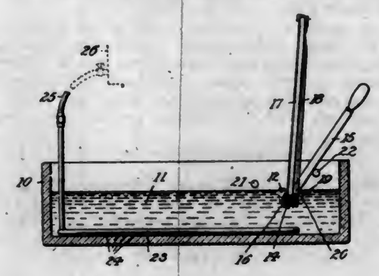
2. In combination, a roller-holder having a slot adapted to receive the shaft of a roller, a pivoted lever having a rigid arm adapted to be projected over the shaft when the latter is in operative position in said slot and acting to lock the same against outward movement, the pivot of said lever being in line with said slot and near the vertical plane of the center thereof, said lever also carrying means adapted by the movement of the roller-shaft into operative position to automatically move said arm into locking position.

3. A roller-holder having a slot adapted to receive the shaft of a roller and a pivoted locking device having an arm extending under and supporting the shaft when the latter is in inoperative position, and an arm adapted to extend over and automatically lock the shaft against outward movement in the slot when the locking device is actuated to move the shaft into operative position, the pivot of the lever being between the planes of the sides of the slot.

4. In combination, a roller-holder having a slot adapted to receive the shaft of a roller, and an integral locking device adapted to extend over and automatically lock the shaft against outward movement in the slot when said shaft is in operative position and having a member extending under said shaft and operating to lift the shaft when the latter is released, the pivot of the lever being between the planes of the sides of the slot.

5. In combination, a roller-holder having a slot adapted to receive the shaft of a roller, and an integral pivoted locking lever having a bar extending under the shaft and operating to lift the shaft when the latter is released, and means adapted to extend over and automatically lock the shaft against outward movement in the slot when said shaft is in operative position, the pivot of the lever being between the planes of the sides of the slot.

1,016,487. ETCHING APPARATUS. JAMES S. FREER, Rutherford, N. J. Filed Sept. 22, 1910. Serial No. 583,165. (Cl. 41—9.)

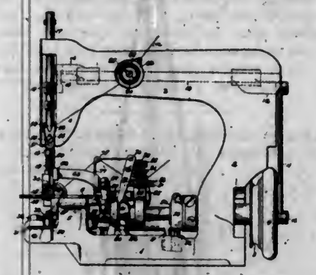


1. An etching apparatus comprising a tank adapted to contain an etching bath, an air distributing pipe arranged at the bottom thereof and having a plurality of air egress openings, a pair of alined bearings in the tank above said pipe, a rock-shaft hung in said bearings, means for clamping a work plate to said shaft, manually operable means for turning the shaft and thereby swinging the work plate into a horizontal position beneath the level of the bath, and a stop for checking the descent of said plate.

2. An etching apparatus comprising a tank adapted to contain an etching bath, an air distributing pipe arranged at the bottom thereof and having a plurality of air egress openings, a pair of alined bearings in the tank above said pipe, a rock shaft hung in said bearings, a holder clamped to the rock shaft and having a hook shaped end that is adapted to engage a work plate, manually operable means for turning the shaft and thereby swinging the work plate into a horizontal position beneath the level of the bath, and a stop for checking the descent of said plate.

3. An etching apparatus comprising a tank adapted to contain an etching bath, an air distributing pipe arranged at the bottom thereof and having a plurality of air egress openings, a pair of alined bearings in the tank above said pipe and below the bath level, a rock shaft hung in said bearings, means for clamping a work plate to said shaft, a hand lever on the shaft, and a pair of stops adapted to be engaged by the lever and to thereby sustain the work plate either in a horizontal or a substantially upright position.

1,016,488. OVERSEAMING SEWING-MACHINE. ALFRED GRIEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 28, 1910. Serial No. 569,291. (Cl. 112—24.)



1. In an overseaming sewing machine, the combination with a reciprocating needle, of thread-carriers mounted on parallel fulcra of which one is fixed and the other is movable and both are inclined to the needle path, whereby one of said thread-carriers is adapted to take thread-loops from and the other to present thread-loops to the needle adjacent different extreme positions of the latter, actuating means for imparting to one of said thread-carriers both bodily and oscillating movements upon the movable fulcrum, and an operative connection between said thread-carriers whereby said actuating means are caused to impart to the other of said thread-carriers operative movements upon the fixed fulcrum.

2. In an overseaming sewing machine, the combination with a reciprocating needle, of an eyed looper and a non-thread-carrying looper, one being adapted to seize thread-loops from the needle in one position of the same and the other to take thread-loops therefrom and to present thread-loops to the needle in a different position of the latter, a fixed fulcrum upon which said eyed looper is mounted for operative movement, a movable fulcrum upon which said non-thread-carrying looper has both bodily and oscillatory movements in a plane parallel with that of the eyed looper movements, an operative connection between said eyed and non-thread-carrying looper whereby operative movements of the one are derived from the other, and actuating means for the non-thread-carrying looper.

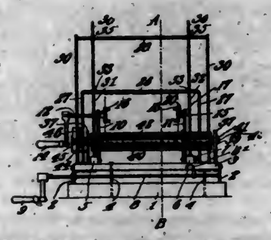
3. In an overseaming sewing machine, the combination with a reciprocating needle, of a non-thread-carrying looper adapted to seize thread-loops from the needle, an eyed looper adapted to seize thread-loops from the non-thread-carrying looper and to present loops of its own thread for passage of the needle, a fixed fulcrum upon which said eyed looper is mounted for operative movement, a movable fulcrum upon which said non-thread-carrying looper has both bodily and oscillatory movements in a plane parallel with that of said eyed looper, an operative connection between said eyed and non-thread-carrying loopers whereby operative movements of the one are derived from the other, and actuating means for the non-thread-carrying looper.

4. In an overseaming sewing machine, the combination with a work-support and a reciprocating needle, of a looper adapted to present thread-loops for passage of the needle, a fixed fulcrum disposed at one side of the work-support and upon which said looper is mounted for movement in a circular path, a barbed looper adapted to seize thread-loops from the needle and present them for engagement by the first-named looper, a movable fulcrum sustained at the same side of the work-support as the fixed fulcrum and upon which the barbed looper is mounted for movement in a path crossing that of the other looper and extending from the loop-seizing point upon one side of the fabric to a position at the other side of the fabric beyond the extreme loop-presenting position of the other looper, and means for actuating the said loopers in the production of overseam stitches.

5. In an overseaming sewing machine, the combination with a reciprocating needle, of two loopers whereby thread-loops may be respectively taken from and presented to the needle adjacent extreme positions of the latter, of a fixed fulcrum upon which one of said loopers is mounted, a rock-lever mounted upon a fixed fulcrum, means for imparting rocking movements to the same, a fulcrum for the other looper carried by said rock-lever, and a pivotal connection between said loopers.

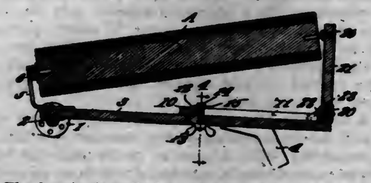
[Claims 6 to 8 not printed in the Gazette.]

1,016,489. RIBBON-HOLDER. ANTHONY B. GRIEP, Aurora, Mo. Filed June 15, 1911. Serial No. 633,299. (Cl. 242—61.)



A dry-goods winder comprising a support; vertically spaced racks carried by the support; braces connected adjacent their upper ends with both racks, the extremities of the braces upstanding above the uppermost rack to provide guide fingers, one of the braces being connected with the support; a cross piece slidable upon the support, and with which the other brace is connected; devices rotatably carried by the support and by the cross piece, to engage the core upon which the material is to be wound; means for advancing and retracting the cross piece, to accommodate goods of different widths; yieldably co-acting rollers carried by the support, and disposed below the lowermost rack; a measuring device operatively connected with one of said rollers, the racks and the rollers being adapted to engage the material prior to the winding of the same upon the core.

1,016,490. TRUCK. CHARLES MCCORD GRIGG, Joplin, Mo. Filed Mar. 16, 1911. Serial No. 614,850. (Cl. 21—65.)



1. The herein described truck comprising a body having wheels and handles, a bracket rising from its lower end and having a pin projecting upward over the body, an adjustable member lying upon the body and having a longitudinal slot, a bolt passing through said body and slot and having a head above the latter, a wing nut on the lower end of said bolt beneath said body, and an upright rising from the upper end of said adjustable member and having a pin projecting toward the other pin.

2. The herein described truck comprising a body having wheels and handles, a bracket rising from its lower end and having a pin projecting upward over the body, an adjustable member lying upon the body and having a longitudinal slot, a bolt passing through said body and slot and having a head above the latter, a wing nut on the lower end of said bolt beneath said body, an upright rising from the upper end of said adjustable member and having a pin projecting toward the other pin, hinges connecting said upright with the upper end of said adjustable member, eyes in the sides of said upright, and hooks pivotally connected with the edges of said member and detachably engaging said eyes.

1,016,491. SMOKE AND SPARK DESTROYER. GEORGE HAZEL GUILD, Chicago, Ill., assignor of one-half to Oscar Ratcliff, Chicago, Ill. Filed Jan. 30, 1911. Serial No. 605,516. (Cl. 110—242.)

In an apparatus of the class described, the combination with a locomotive stack, of a hollow perforated member oblong in plan and adapted to spray steam, the ends of said member fitting said stack and the sides thereof being heart-shaped in cross section and transversing said stack, said ends being provided with perforations in their inner sides and said sides being provided with perforations in both sides; and clips securing the ends of said member to the stack, substantially as described.

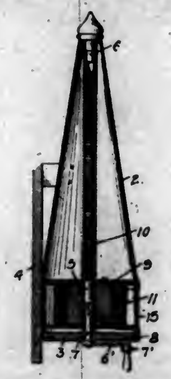
1,016,492. CIGAR-CASE. SELIM W. GUNN, Feeding Hills, Mass., assignor of one-half to Homer Flower, Feeding Hills, Mass. Filed July 18, 1910. Serial No. 572,576. (Cl. 131—30.)

1. A flask shaped container comprising two half shells, one shell having a bottom and a neck for co-action with said remaining shell, hinges to connect said two shells, means to lock said shells together, a pliable section secured to the inner face of each shell to form two cigar receiving pockets, a stopper removable within said neck, a wire carried by said stopper, and a water absorbing member carried by said wire.

2. A flask shaped container comprising two half shells, one shell having a bottom and a neck for co-action with said remaining shell, hinges to secure said two shells, means to lock said shells together, a pliable section secured to the inner face of each shell, to form two cigar receiving pockets, a stopper removable within said neck, a wire carried by said stopper, a water absorbing medium carried by said wire, and a shield within said shell having said neck positioned below said absorbing medium, all arranged substantially as and for the purpose set forth.

1,016,493. CLOTHES-LINE REEL. LESLIE S. HACKNEY, St. Paul, Minn. Filed Dec. 14, 1908. Serial No. 467,358. (Cl. 242—102.)

A clothes line reel comprising a drum, a conical casing vertically mounted thereon, a shaft having bearings in the head of said drum and the apex of said casing, a spool mounted on the lower end of said shaft within said drum, the wall of said drum having an opening through which the clothes line is drawn, a comparatively long spiral spring coiled on said shaft within said cone-shaped casing and attached at one end of said spool, and at its other end to the apex of said casing, the unwinding of the clothes line from said spool putting said spring under tension, and a crank mounted on the lower end of said shaft beneath the drum, and having a locking means and adapted to take up the slack in the line when it is strung for use, substantially as described.



1,016,494. TENSION AND TAKE-UP MECHANISM FOR FILLING-CARRIERS OF LOOMS. ROBERT A. HAMMOND, Sandwich, and SYDNEY E. TAFT, South Framingham, Mass.; said Taft assignor to Massachusetts Belting Company, a Corporation of New Jersey. Filed Feb. 5, 1908. Serial No. 414,345. (Cl. 139—46.)

1. In a loom, a reel for the filling, a carrier upon which said reel is journaled, guide-rolls supported on said carrier, and a take-up lever pivotally supported on said carrier, concentric with said reel, whereby the tension on said filling thread may be regulated.

2. In a loom, a reel for the filling, a carrier upon which said reel is journaled, a pair of guide-rolls, an auxiliary guide-roll for said filling supported on said carrier, and a take-up lever pivotally supported on said carrier concentric with said reel and adapted to engage said filling between said pair of guide-rolls and said auxiliary guide-roll.

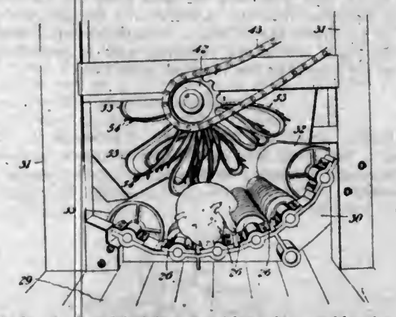
3. In a loom, a reel for the filling, a carrier upon which said reel is journaled, guide-rolls is supported on said carrier, a take-up lever pivotally supported on said carrier concentric with said reel, and a spring connected to said lever, whereby the tension on said filling may be regulated.

4. In a loom, a reel for the filling, a carrier upon which said reel is journaled, a pair of guide-rolls for said filling supported on said carrier, a tension roll, an arm pivotally supported on said carrier upon which said tension roll is journaled, and a take-up lever pivotally supported on said carrier concentric with said reel and adapted to engage said filling between said pair of rolls and said tension roll.

5. In a loom, a reel for the filling, a carrier upon which said reel is journaled, a pair of guide rolls for said filling supported on said carrier, a tension roll, an arm pivotally supported on said carrier upon which said tension roll is journaled, a friction roll against which said tension roll is adapted to press said filling, and a take-up lever pivotally supported on said carrier concentric with said reel and adapted to engage said filling between said pair of rolls and said tension roll.

[Claims 6 to 9 not printed in the Gazette.]

1,016,495. CARCASS-DEHAIRING MECHANISM. ALFRED HANNAFORD, Chicago, Ill. Filed May 13, 1909. Serial No. 495,595. (Cl. 17—11.)



1. In a hog-dehairing machine, in combination: a power-driven rotating shaft having beaters borne thereon; and coöperatively power-driven and rotarily-acting conveyer-mechanism adapted to freely and completely support the carcass and at the same time roll it laterally and advance it longitudinally while presenting it to the simultaneous dehairing-action of the scraper-mechanism, said carcass being free of any grappling to the advancing means; said conveyer-mechanism including a plurality of mutually parallel and similarly rotating conveyer-rollers which are disposed in a segment-formed group concave to the beater shaft, and whose respective axes of rotation are substantially parallel to the foresaid beater-shaft and extend in the direction in which the carcass is advanced; substantially as specified.

2. In a hog-dehairing machine, in combination: a power-driven rotating shaft having beaters borne thereon; and coöperatively power-driven and rotarily-acting conveyer-mechanism adapted to freely and completely support the carcass and at the same time roll it laterally and advance it longitudinally while presenting it to the simultaneous dehairing-action of the scraper-mechanism, said carcass being free of any grappling to the advancing means; said conveyer-mechanism including a plurality of mutually parallel and similarly rotating conveyer-rollers; disposed in a segment-formed group concave to the beater shaft; and said beater-shaft being disposed in a position substantially horisontal and paralleling the face of said conveyer-mechanism upon which such carcass is so rolled, and extending in the direction in which the carcass is advanced; substantially as specified.

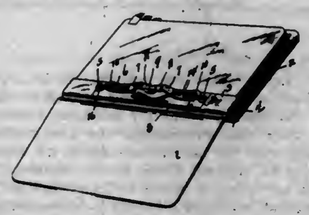
3. In a hog-dehairing machine, in combination: a power-driven rotating shaft having beaters borne thereon; and coöperatively power-driven and spirally-acting conveyer-mechanism adapted to freely and completely support the carcass and at the same time roll it laterally and advance it longitudinally while presenting it to the simultaneous dehairing-action of the scraper-mechanism, said carcass being free of any grappling to the advancing means; said conveyer-mechanism including a plurality of mutually parallel and similarly rotating conveyer-rollers, which are disposed in a segment-formed group concave to the beater shaft, and whose respective axes of rotation are substantially parallel to the aforesaid beater-shaft and extend in the direction in which the carcass is advanced; substantially as specified.

4. In a hog-dehairing machine, in combination: a power-driven rotating shaft having beaters borne thereon; and coöperatively power-driven and rotarily-acting conveyer-mechanism adapted to freely and completely support the carcass and at the same time roll it laterally and advance it longitudinally while presenting it to the simultaneous dehairing-action of the scraper-mechanism, said carcass being free of any grappling to the advancing means; said conveyer-mechanism including a plurality of mutually parallel and similarly rotating conveyer-rollers whose respective axes of rotation are substantially parallel to the aforesaid beater-shaft and extend in the direction in which the carcass is advanced, said gang of rollers being disposed in a segment-formed group whose angular center is substantially to one side of a plane projected downward from the axis of rotation of the beater-shaft; substantially as specified.

5. In a hog-dehairing machine, in combination: a power-driven rotating shaft having beaters borne thereon; and coöperatively power-driven and rotarily-acting conveyer-mechanism adapted to freely and completely support the carcass and at the same time roll it laterally and advance it longitudinally while presenting it to the simultaneous dehairing-action of the scraper-mechanism, said carcass being free of any grappling to the advancing means; said conveyer-mechanism including a plurality of mutually parallel and similarly rotating conveyer-rollers whose respective axes of rotation are substantially parallel to the aforesaid beater-shaft and extend in the direction in which the carcass is advanced, said gang of rollers being disposed in a segment-formed group whose angular center is advanced, in the direction of the sweep of the beaters, substantially forward of a plane projecting downward from the axis of rotation of the beater-shaft; substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,016,496. LOOSE-LEAF BINDER. ALFRED E. HARLING and GEORGE B. DOBBIN, Detroit, Mich. Filed June 27, 1911. Serial No. 635,648. (Cl. 129—41.)



1. The combination with covers, each cover having a plate hingedly secured thereto provided with apertures, of a thong passing through said apertures, a lever pivotally secured to one of the plates, one end of the thong being connected to the lever and the opposite end being prevented from withdrawal through its respective aperture, and a stop on said plate against which the free end of the lever engages when in the "closed" position.

2. The combination with covers, each cover having a binding strip hingedly secured thereto provided with apertures, of a thong passing through said apertures, levers pivotally secured to one of the strips, the ends of the thong being adjustably connected to the levers, and a stop on said strip limiting the "closing" movement of the levers.

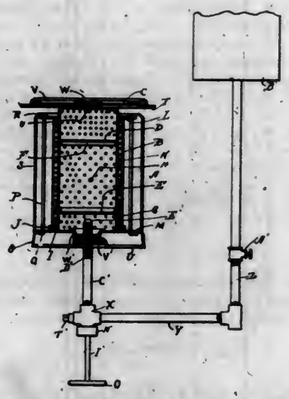
3. The combination with covers, each of said covers having an apertured plate flexibly secured thereto, of a thong passing through said apertures, a pair of levers pivotally secured to one of the plates, the thong being secured to the levers and the levers pivoted forward of a line passing through the centers of the apertures, and a stop on the plate having a laterally projecting portion beneath which the free ends of the levers engage when in the "closed" position.

4. The combination with covers, each of said covers having an apertured plate flexibly secured thereto, of a thong or binding cord passing through said apertures, a pair of levers pivotally secured to one of the plates an end of the thong being adjustably secured to each lever and both levers being pivoted to one side of a line passing through the centres of the apertures, and a stop on the plate limiting the "closing" movement of the levers.

5. A device of the character described comprising a pair of binding plates provided with apertures, a cover hingedly secured to each plate, a pair of levers pivotally secured to one of the plates between the apertures therein and to one side of a line passing through the centers of said apertures, a binding cord passing through the apertures in both plates an end of which is adjustably secured to each lever, and a stop limiting the closing movement of the levers.

[Claims 6 to 8 not printed in the Gazette.].

1,016,497. VAPOR-BURNER. SAMUEL HEATH, Philadelphia, Pa. Filed Nov. 9, 1910. Serial No. 591,426. (Cl. 158—66.)

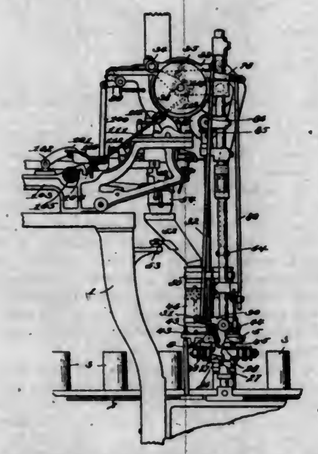


1. In a vapor burner the combination of a perforated casing closed at the top, a second perforated casing surrounding the former, means for fastening them together, an open work ring surrounding the first named casing and resting upon the last named casing, an imperforated ring having an external flange resting against the lower end of the surrounding casing and surrounding the inner casing, an open work plate having a downwardly extending flange, means for holding the open work plate and the open work ring in position, an imperforated casing surrounding the first named casings and resting upon the open work plate, a damper plate mounted upon the inner perforated casing, a damper pivoted upon said damper plate, a vaporizer, and means for attaching the body of the burner thereto.

2. In a vapor burner a combination of a perforated casing closed at the top, a second perforated casing surrounding the former, means for fastening them together, an open work ring surrounding the first named casing and resting upon the last named casing, an imperforated ring having an external flange resting against the lower end of the surrounding casing and surrounding the inner casing, an open work plate having a downwardly extending flange, means for holding the open work plate and the open work ring in position, an imperforated casing surrounding the first named casings and resting upon the open work plate, a damper plate mounted upon the inner perforated casing, a damper pivoted upon said damper plate, a vaporizer, an open work frame having a hub formed therewith, said hub being in a plane above the frame, said hub being threaded upon the vaporizer and means for holding a combustible liquid whereby the vaporizor may be heated.

3. In a vapor burner, a combination of a perforated casing closed at the top, a second perforated casing surrounding the former, means for fastening them together, an open work ring surrounding the first named casing and resting upon the last named casing, an imperforated ring having an external flange resting against the lower end of the surrounding casing and surrounding the inner casing, an open work plate having a downwardly extending flange, means for holding the open work plate and the open work ring in position, an imperforated casing surrounding the first named casings and resting upon the open work plate, a damper plate mounted upon the inner perforated casing, a damper pivoted upon said damper plate, a vaporizer, an open work frame having a hub formed therewith, said hub being in a plane above the frame, said hub being threaded upon the vaporizer, a cup threaded upon the vaporizer and resting upon the hub of the frame for holding a combustible liquid whereby the upper end of the vaporizer may be heated, and means for supplying the vaporizer with fuel.

1,016,498. PACKING-MACHINE. FREDERICK J. HEYBACH, Baltimore, Md., assignor to American Automatic Machinery Company, Savannah, Ga., a Corporation of Georgia. Filed Jan. 23, 1911. Serial No. 604,224. (Cl. 100—57.)



1. A packing machine of the class described comprising feeding means for the material to be packed, packing means, a hopper to receive and pack the material, said hopper and the packing and feeding means being relatively shiftable to position said hopper alternately in coöperative relation with the feeding and packing means, and a relatively shiftable valve member coöperative with the hopper during the packing of the material therein.

2. A packing machine of the class described comprising feeding means for the material to be packed, packing means, a plurality of hoppers to receive and pack the material, said hoppers and the packing and feeding means being relatively shiftable to position each hopper alternately in coöperative relation with the feeding and packing means, means for positioning a receptacle to receive the packed material, and a member coöperative with each hopper during the packing of the material therein.

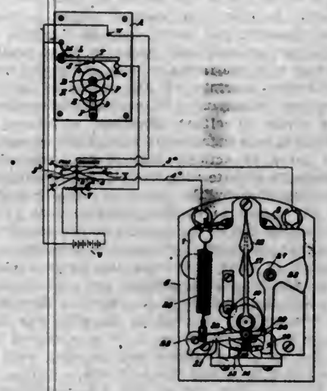
3. A packing machine comprising feeding means for the material to be packed, packing means, a plurality of hoppers to receive and pack the material, said hoppers being reversible with respect to the feeding and packing means whereby one hopper will be in position to receive a charge of material from the feeding means and another hopper will be in position to pack a charge of material under the action of the packing means, and means for confining the material in each hopper during the packing of such material therein.

4. A packing machine comprising feeding means for the material to be packed, packing means, a pair of hoppers to receive and pack the material, said hoppers being supported rotatably whereby the position of the hoppers relatively to the feeding and packing means may be reversed, means for positioning a receptacle to receive the packed material, and means for causing packing of the material within each hopper before said material is introduced into the receptacle.

5. A packing machine comprising feeding means for the material to be packed, a packing plunger, a plurality of hoppers to receive and pack the material, means for shifting the hoppers relatively to the feeding means and packing plunger to position the hoppers alternately in coöperative relation with the feeding means and plunger, means to close the bottom of each hopper, and means for operating the plunger to pack the material in each hopper while its bottom is closed and as it is positioned in coöperative relation with the plunger.

[Claims 6 to 29 not printed in the Gazette.]

1,016,499. ELECTRIC-CLOCK SYSTEM. ROBERT D. HICKOX, Atlanta, Ga. Filed Mar. 7, 1911. Serial No. 612,960. (Cl. 58—24.)

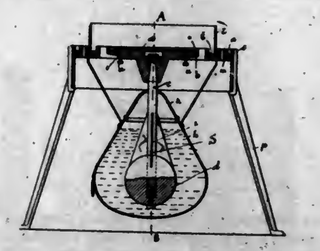


1. In an electric clock system, the combination of primary and secondary clocks in a single circuit, a pole changer operated by the primary clock, in the circuit between said clocks, a magnet in said circuit, means controlled by impulses of one polarity in said magnet to operate the hands of the secondary clock to indicate time, and means controlled by impulses of opposite polarity in said magnet to set the hands of the secondary clock.

2. In an electric clock system, the combination of primary and secondary clocks in circuit, a pole changer in said circuit, means automatically actuated by the master clock to operate the pole changer at definite times and reverse the polarity of the current in the circuit, a magnet in said circuit, means controlled by impulses of one polarity in said magnet to operate the hands of the secondary clock to indicate time, and means controlled by impulses of opposite polarity in said magnet to set the hands of the secondary clock.

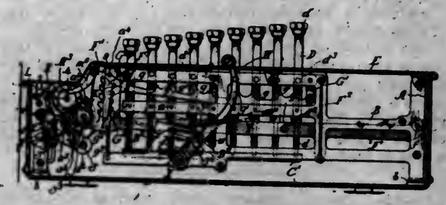
1,016,500. ARTIFICIAL HORIZON FOR SHIPS OR THE LIKE. WILHELM HINZ, Antwerp, Belgium. Filed Apr. 1, 1911. Serial No. 618,374. (Cl. 88—11.)

1. An artificial horizon, comprising a gimbal-mounted mirror formed with a pendulum and a gimbal-mounted liquid receptacle in which said pendulum oscillates, so arranged that the center of gravity of the mirror system and that of the receptacle coincide.



2. An artificial horizon, comprising a gimbal-mounted mirror formed with a pendulum and a gimbal mounted liquid receptacle in which said pendulum oscillates, so arranged that the gimbal-supports of both the mirror and receptacle are located concentrically on the same level, and the center of gravity of the mirror system and that of the receptacle coincide.

1,016,501. ADDING-MACHINE. ALLEN A. HORTON, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 18, 1911. Serial No. 621,872. (Cl. 235—82.)



1. In a machine of the character described, the combination with a lever and depressible keys for differentially operating the same; of a stop member for the lever; and means for moving said stop member in opposite directions by adjacent keys to position it for engagement with the lever to stop the latter at different degrees of movement.

2. In a machine of the character described, the combination with a lever and depressible keys for differentially operating the same; of a stop member for the lever and a bar connected to said stop member and movable oppositely by adjacent keys to position the stop member for engagement with the lever to stop the latter at different degrees of movement.

3. In a machine of the character described, the combination with a lever and depressible keys for differentially operating the same; of a stop member for the lever; a bar connected to said stop member and movable oppositely by adjacent keys to position the stop member for engagement with the lever to stop the latter at different degrees of movement; and means for normally holding said bar in a neutral position.

4. In a machine of the character described, the combination with adding mechanism and operating keys therefor; of stop members one having confronting series of shoulders and the other adapted for engagement with said shoulders and one such member being movable oppositely by different keys and the other member being differentially driven by the keys in operating the adding mechanism.

5. In a machine of the character described the combination of an actuating lever having confronting series of stop shoulders; keys for differentially actuating said lever; and a stop member movable oppositely by different keys to engage a shoulder of one series or the other.

[Claims 6 to 32 not printed in the Gazette.]

ing comprising an inner lining of felt and a covering of

1,016,507. METHOD OF SHAPING HOLLOW METAL

1,016,502. BOLT-OPERATOR. EMILE HOYAUX, McDonald, Pa. Filed June 17, 1911. Serial No. 633,680. (Cl. 70—120.)

1. The combination with a locking bolt and a pair of spaced pulleys, of a continuous chain attached to said bolt and passing over and supported between said pulleys, and means for depressing the chain between the pulleys to open the bolt.

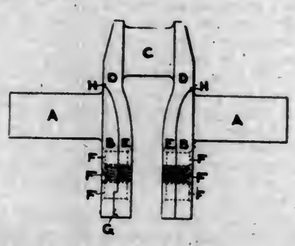
2. The combination with a pair of locking bolts and a continuous chain attached thereto, of a pair of spaced pulleys forming rotatable supports and means for depressing said chain between the pulleys.

3. The combination with a pair of locking bolts, guide pulleys and spaced pulleys forming rotatable supports, of a continuous yieldable chain attached to said bolts, and a pivoted panel for depressing said chain between the spaced pulleys to open the bolts.

1,016,503. PRODUCING RAW DEHYDRATED IRISH POTATOES. EDGAR B. HUTCHINS, Jr., Waukesha, Wis., assignor to American Dehydrating Co., Waukesha, Wis. Filed June 7, 1909. Serial No. 500,577. (Cl. 99—5.)

The method of treating raw, Irish potatoes so that they can be kept indefinitely, which consists in peeling and slicing them and immediately thereafter placing them in a vacuum drier filled with an inert gas, drawing off said gas and, at the same time, the moisture of the potatoes, and packaging the latter before any moisture can have access to them.

1,016,504. CRANK-SHAFT FOR STEAM-ENGINES. HENRY ALFRED IVATT, Doncaster, England. Filed Jan. 20, 1909. Serial No. 473,377. (Cl. 74—5.)



In a crank shaft, the combination of shaft sections having extended cheeks thereon on the side opposite the crank pin and locking projections formed thereon, a crank section intermediate between each pair of shaft sections and having corresponding extended cheeks on the side opposite the crank pin, fastening means for securing adjacent pairs of extended cheeks together to form a double coupling and counter-balance for each crank, the said counter-balance couplings being so arranged that one end of each coupling projects beyond the edge of the adjacent coupling so as to allow for the manipulation of the fastening means.

1,016,505. PORTABLE-PLATFORM WAGON-JACK. ROBERT J. JONES, Barneston, Nebr. Filed Mar. 9, 1911. Serial No. 613,439. (Cl. 214—12.)

1. In an apparatus of the character described, a platform adapted to raise and lower the forward end of a wagon, a tiltably-mounted frame adapted to guide said platform in its travel, and means for raising and lowering said platform, consisting of a screw tiltable with the platform, means for rotating said screw in either direction, an internally threaded cross-head fixed to one end of the frame and adapted to travel up and down on said screw, and a suitably guided cable secured to opposite ends of the platform.

2. In an apparatus of the character described, a platform adapted to raise and lower the forward end of a wagon, a tiltable frame for guiding said platform in its travel, means for securing said frame in tilted position, a screw tiltable with the frame to raise and lower the platform, gearing to drive said screw in either direction, and means actuated by the screw to throw said gearing to inoperative position when the platform reaches the end of its upward or downward movement.

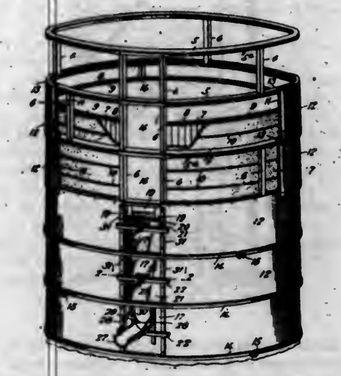
3. In an apparatus of the character described, a platform adapted to raise and lower a wagon, a frame to guide said platform and which may be tilted to either side, means for securing said frame in tilted position, a screw tiltable with the frame to raise and lower the platform, adjustable bearings on the frame to carry said screw, gearing embodying two opposite drive-wheels to drive the screw in either direction, a rotary clutch adapted to slide into engagement with either of said drive-wheels, a lever to actuate said clutch, manually-controlled means to actuate said lever, and automatic means primarily controlled by the screw to actuate said lever to throw the clutch to neutral position when the platform reaches the end of its upward or downward stroke.

4. In an apparatus of the character described, a platform adapted to raise and lower the forward end of a wagon, an adjustable frame adapted to be tilted to either side and guide the platform in its travel, a tiltable screw centrally arranged at one end of the platform and the frame to raise said platform, a cable attached to the opposite end of the platform and running over guide pulleys to assist in raising the platform, a pair of cables attached to the lower end of the first-mentioned cable and extending upward at opposite sides of the screw, means carried by the platform to which the upper ends of said cables are attached, and a spreader at the lower end of said cables to prevent the same from contacting with the screw during movement of the platform.

5. An apparatus of the character described, consisting of a platform adapted to raise and lower the forward end of a wagon, a frame adapted to be tilted to either side and guide the platform in its travel, means including a screw to simultaneously raise both ends of said platform, a bearing in which one end of said screw is journaled, said bearing having trunnions so that it may tilt with the frame, an adjustable bearing in which the opposite end of the screw is journaled, and means for locking said adjustable bearing in any of its adjusted positions.

1,016,506. SILO. EDWARD KRETCHMER, Council Bluffs, Iowa. Filed Apr. 8, 1911. Serial No. 619,759. (Cl. 20—1.4.)

1. In a silo, a frame comprising a plurality of laminated annular members, a plurality of vertical spacing members extending between said annular members, an inner covering for said frame, and an outer covering for said frame, said inner covering comprising an inner lining of felt and a covering of wood, and said outer covering comprising an inner lining of felt and a covering of metal, said metal covering being made up of a plurality of sheets, each sheet having its upper edge inwardly flanged, said inwardly flanged portion engaging the laminated annular member.



2. In a device of the character described, the combination with a framework, comprising a plurality of annular members and a plurality of vertical members spacing said annular members from each other, and a covering for said framework comprising a plurality of metallic sheets, each of said sheets being inwardly flanged at its upper edge, said inwardly flanged portion overlapping and resting upon the adjacent annular member.

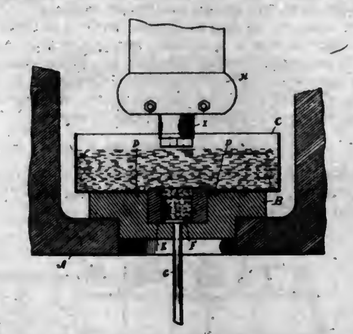
3. In a device of the character described, the combination with a framework, comprising a plurality of annular members and a plurality of vertical members spacing said annular members from each other, and a covering for said framework comprising a plurality of metallic sheets, each of said sheets being inwardly flanged at its upper edge, said inwardly flanged portion overlapping and resting upon the adjacent annular member, and the lower edge of each of said sheets overhanging the upper edge of the next lower sheet.

4. In a device of the character described, the combination with a framework, comprising a plurality of annular members and a plurality of vertical members spacing said annular members from each other, a covering for said framework comprising a plurality of metallic sheets, each of said sheets being inwardly flanged at its upper edge, said inwardly flanged portion overlapping and resting upon the adjacent annular member, and the lower edge of each of said sheets overhanging the upper edge of the next lower sheet, and an inner lining of felt made up of a plurality of horizontally disposed strips, the lower edge of each of said strips lying between the overlapping portions of said plates.

5. In a device of the character described, the combination with a framework, comprising a plurality of annular members and a plurality of vertical members spacing said annular members from each other, a covering for said framework comprising a plurality of metallic sheets, each of said sheets being inwardly flanged at its upper edge, said inwardly flanged portion overlapping and resting upon the adjacent annular member, and the lower edge of each of said sheets overhanging the upper edge of the next lower sheet, an inner lining of felt made up of a plurality of horizontally disposed strips, the lower edge of each of said strips lying between the overlapping portions of said plates, and a plurality of metallic bands, one located over each of said annular members and adapted to bind the abutting portions of the metallic sheets thereagainst.

[Claims 6 to 8 not printed in the Gazette.]

1,016,507. METHOD OF SHAPING HOLLOW METAL ARTICLES. JOHN F. LEWIS, Philadelphia, Pa. Filed Mar. 26, 1910 Serial No. 551,709. (Cl. 113—51.)



1. The method of forming hollow articles consisting of filling a hollow article with a liquid, inverting the same and seating its open end upon a surface thereby closing said opening and shortening said article by pressure upon the closed end.

2. The method of forming hollow articles consisting of seating and closing the open end of a hollow article in a vessel filled with a liquid, so that said hollow article is filled with a liquid and foreshortening said article, causing its side walls to expand.

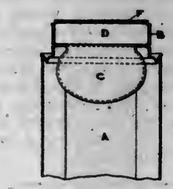
3. The method of forming hollow articles consisting of submerging and inverting the same in a liquid, seating and closing the open end of said article and shortening said article by pressure upon the closed end.

4. The method of forming hollow articles consisting of submerging and inverting the same in a liquid, seating said article in a die so that the liquid will be retained in said article and shortening the article by pressure on the closed end.

5. The herein described method of forming hollow articles, consisting of filling a hollow article with liquid and seating said article filled with a liquid, in an inverted position in a die, said die closing the open end of the article and shortening said article by pressure on the closed end until the side walls of said articles conform to the shape of the die.

[Claims 6 to 8 not printed in the Gazette.]

1,016,508. JAR, BOTTLE, CANISTER, OR LIKE VESSEL FOR HOLDING SWEETMEATS, AND STOPPER THEREFOR. JOHN MACKINTOSH, Halifax, England. Filed Apr. 5, 1911. Serial No. 619,180. (Cl. 220—90.)



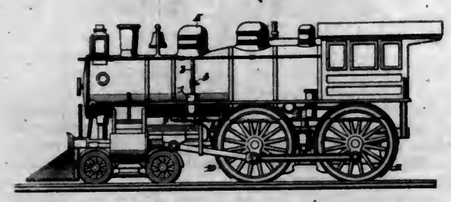
1. A canister having a bulbiform stopper adapted to contain and display the material from the canister and detachable closing means for the stopper, said closing means comprising a sleeve surrounding the base of the stopper and a secondary stopper having screw threaded engagement with the sleeve and adapted to form the bottom of the bulbiform portion.

2. A canister having a bulbiform stopper adapted to contain and display the material from the canister and detachable closing means for the stopper, said closing means comprising a sleeve surrounding the base of the

stopper and a secondary stopper having screw threaded engagement with the sleeve and adapted to form the bottom of the bulbiform portion and a rubber ring between the first and second mentioned stoppers.

3. A canister having a stopper with a bulbiform display chamber and a relatively large mouth at the bottom, said chamber being adapted to receive samples, a sleeve connected to the stopper and adapted to fit the mouth of a canister and closing means for the stopper having detachable connection with the sleeve.

1,016,509. SAND-FEEDING DEVICE. WILLIAM H. MATTHEWS, Jr., Philadelphia, Pa. Filed May 11, 1911. Serial No. 626,528. (Cl. 105—60.)



1. A sand-distributing device including in combination, a vertical casing having a receiving inlet and a discharging outlet, and a separating screen within said casing having vertical walls with vertical slots formed therein.

2. A sand-distributing device including in combination, a vertical casing having a receiving inlet and a discharge outlet, a separating screen located within the casing and spaced from the side walls thereof, said screen having vertical slots formed therein.

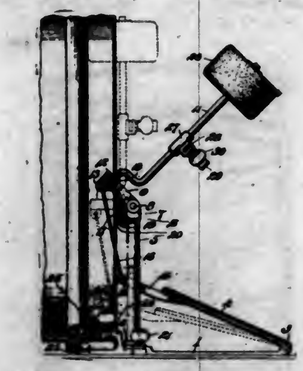
3. A sand-distributing device including in combination, a vertical casing having an inlet at its upper end located centrally thereof, outlets at its lower end located at the sides thereof, a separating screen located within the casing and spaced from the side walls thereof, said screen having vertical slots formed therein, and means whereby said screen may be removed from the casing.

4. A sand-distributing device including in combination, a vertical casing having an inlet at its upper end located centrally thereof, outlets at its lower end located at the sides thereof, said casing having a central opening in the bottom thereof, a screen of slightly smaller area in cross section than said casing and fitting said opening in the bottom of the casing, said screen having a bottom adapted to engage the bottom of the casing, and means for locking said bottom to the bottom of the casing, said screen having vertical slots formed therein.

5. A sanding device including in combination, a vertical casing, an inlet pipe leading to the casing at the upper end thereof, and centrally thereof, a valve in said inlet pipe, outlet pipes at the lower end of said casing at the sides thereof, said casing having an opening in its bottom, a screen adapted to fit within said opening and extending to the upper wall of the casing, vertical slots formed in said screen, said screen having a bottom adapted to engage the bottom of the casing, locking bolts for holding the screen in the casing, and a handle for removing the screen from the casing.

1,016,510. FOOT-OPERATED BASS-DRUM AND CYMBAL BEATER. JULIUS A. MEYER, St. Louis, Mo. Filed Apr. 10, 1911. Serial No. 620,167. (Cl. 84—10.)

1. The improved drum and cymbal beater, comprising a single post having an integral one-piece body provided with a slot beneath said body and a fork above said body, a base to which the lower end of said post is attached, a treadle having an arm which projects through the slot in said post, a beater-rod arm 9 mounted in the said fork at the upper end of said post, a beater-rod projecting from said arm, a beater-ball carried by said beater-rod, a lug 20 projecting from said post beneath said beater-rod arm, a spring interposed between said lug and said beater-rod arm, and means for connecting said treadle arm to said beater-rod arm.



2. A drum or cymbal beating device adapted to be detachably clamped to a drum-hoop, and comprising a suitable body having clamping-arms which overhang a portion of said body to form a hoop-receiving space, a spring-jaw of flexible material located within said hoop-receiving space in contact with said clamping-arms and adapted to conform itself to the curvature of the drum-hoop, fastening means for permanently but loosely attaching said spring-jaw to said clamping arms, and suitable screws for forcing said spring-jaw into contact with the drum-hoop.

1,016,511. SANDPAPER-DRUM. HARRISON J. MITCHELL, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed July 5, 1910. Serial No. 570,364. (Cl. 51—1.)

1. In a device of the class described, the combination of a longitudinally-grooved shell, an abutment in said shell, a clamping member in said shell, means for moving said clamping member toward said abutment to clamp the edge of a sheet of abraiding material between said parts, and means for retaining the edges of said sheet, during adjustment, in contact with said abutment and said clamping member.

2. In a device of the class described, the combination of a shell having a longitudinal groove in its periphery, abraiding material wrapped around said shell, means for retaining the edges of the abraiding material in said groove, a tightening shaft passing through said shell, a bearing spring attached to and projecting from said shaft, and means for rotating said shaft thereby bringing the bearing spring into contact with the abrading material and tightening the same, substantially as described.

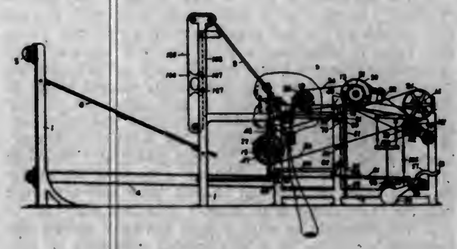
3. In a device of the class described, the combination of a shell having a longitudinal groove in its periphery, abraiding material wrapped around said shell, means for retaining the edges of the abraiding material in said groove, a tightening shaft passing through said shell, a bearing spring attached to and projecting from said shaft, and resilient means for rotating said shaft thereby bringing the bearing spring into contact with the abrading material and tightening the same, substantially as described.

4. In a device of the class described, the combination of a cylindrical drum having a longitudinal groove in its periphery, abrading material inclosing said drum, abutment members located inside of the periphery of the drum and adjacent to said longitudinal groove, spring clip members adapted to engage said abutment members and thereby retain the edges of said abrasive material in position, and means for actuating said spring clip members, substantially as described.

5. In a device of the class described, the combination of a cylindrical drum having a longitudinal groove in its periphery, abrasive material inclosing said drum; a pair of abutment members adjacent to said groove, a clamping shaft within said drum, spring clip members mounted on said clamping shaft and adapted to engage said abutment members thereby holding opposite edges of the abrading material in contact with said abutment members, and means for rotating said clamping shaft, thereby causing engagement and disengagement of the clip members from said abutment members, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,016,512. PILE-CUTTING MACHINE. ARTHUR MORTON, Warwick, R. I., assignor to Crompton Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 15, 1907. Serial No. 368,329. (Cl. 26—9.)



1. In a pile cutting machine, the combination of a positively driven feed roll and a drag roll adapted to be rotated by the fabric and arranged with relation to said feed roll so that the fabric travels directly from said drag roll to said feed roll in an inclined direction and without any intermediate tension device.

2. In a pile cutting machine, the combination of a positively driven feed roll, a drag roll adapted to be rotated by the fabric and arranged with relation to said feed roll so that the fabric travels directly from said drag roll to said feed roll in an inclined direction and without any intermediate tension device, and means for retarding said drag roll to put tension on the fabric between said rolls.

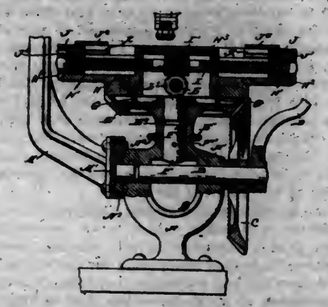
3. In a pile cutting machine, the combination of a positively driven feed roll, a drag roll adapted to be rotated by the fabric and arranged with relation to said feed roll, so that the fabric travels directly from said drag roll to said feed roll in an inclined direction and without an intermediate tension device, and means for frictionally retarding said drag roll.

4. In a pile-cutting machine, the combination of a positively driven feed-roll, a drag-roll adapted to be rotated by the fabric, and rotary means for frictionally retarding said drag-roll to put a tension on the fabric between said rolls.

5. In a pile-cutting machine, the combination of a positively driven feed-roll, a drag-roll adapted to be rotated by the fabric, and rotary means for applying tension to the fabric between said rolls without any substantial slipping of the feed-roll with relation to said fabric.

[Claims 6 to 70 not printed in the Gazette.]

1,016,513. CAN-OPENER. MICHAEL P. NEWCOMB, Sandpoint, Idaho. Filed Oct. 26, 1909. Serial No. 524,619. (Cl. 30—3.)



1. In a device of the kind described, a combination with a rotatable can holding table, said table being provided with radial grooves, of plates provided with jaw portions having depending lugs extending into the grooves of the table, a shaft having oppositely threaded end portions, said portions working respectively in said lugs, a central worm formed on said shaft, and a worm gear meshing with said central worm, as and for the purpose set forth.

2. In a can opener, a rotatable table centrally cut out, said table having lateral extensions diametrically opposite each other, said extensions having vertical end and side members, a shaft journaled in the end members of said extensions, the sides of the extensions being undercut to form guide ways, plates slidably held in said guide ways, inwardly projecting V-shaped jaws carried by said plates, the said table being grooved radially and along the central longitudinal line of said lateral extensions the shaft above mentioned resting in said grooves, said shaft having oppositely threaded portions, lugs carried by the plates and adapted to travel in said grooves, said shaft passing through said lugs, a central worm upon the shaft, said worm being arranged in the central opening of the table, a worm gear meshing with said central worm, and a can supporting portion mounted upon the table and covering said central portion, as and for the purpose set forth.

1,016,514. SHOCK-ABSORBER. FREDERIK NIELSEN, Boston, Mass. Filed Oct. 15, 1910. Serial No. 587,203. (Cl. 21—105.)

1. A shock absorber comprising coöperative elements forming a chamber, one of said elements having a flow passage for the escape of a cushioning fluid from said chamber, and a valve for controlling said flow passage, said valve being balanced as to gravity whereby it is automatically opened and closed as the result of vertical movement of said elements.

2. A shock absorber comprising coöperative elements forming a chamber, one of said elements having a flow passage for the escape of a cushioning fluid from said cham-

ber, a valve for controlling said flow passage, a weight for moving the valve in one direction, and spring tension means for counteracting said weight, said weight being arranged to cause said valve to open and close automatically as the result of vertical movement of said elements.

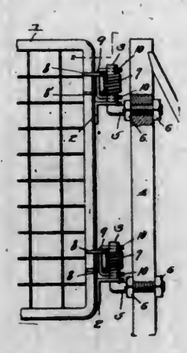
3. A shock absorber comprising a casing having a closed chamber, coactive relatively movable elements therein for acting upon a cushioning fluid, said elements dividing said chamber into two smaller chambers, one of said elements having a passage in open communication with both of said smaller chambers, a spring-actuated valve for controlling the flow through said passage, and a weight attached to said valve to balance the same, whereby the valve is opened and closed by movement of the casing.

4. A shock absorber comprising relatively movable elements forming a chamber, said elements being adapted to act upon a fluid in said chamber with varying pressure, one of said elements having an opening for the escape of fluid from said chamber, and a member projecting from the other of said elements so as to move into and entirely out of said opening to control the flow therethrough, said member having a tapering portion the larger end of which is toward said opening, the coöperative wall of said opening being relatively short to enable the larger end of said tapering portion to pass entirely through and beyond it.

5. A shock absorber comprising a casing having a closed cylindric chamber, two relatively movable members therein dividing said chamber into two smaller chambers, one of said members being fixed to the casing and the other being mounted to oscillate therein to act upon a fluid in one or the other of said smaller chambers, one of said members having a concentric flow passage through which the fluid may pass from one to the other of said smaller chambers, a valve seat at one end of said flow passage, an arcuate member affixed to the other of said members and arranged concentrically so as to move into and out of said passage, a valve arranged to slide on said arcuate member, said valve being adapted to coact with said valve seat, and spring tension means for seating said valve.

[Claims 6 to 9 not printed in the Gazette.]

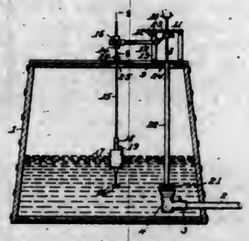
1,016,515. SPRING-HINGE. WILLIS C. NOLTE, Dazey, N. D., assignor to Spring Gate Hinge Company, Dazey, N. D., a Corporation of North Dakota. Filed July 29, 1911. Serial No. 641,315. (Cl. 16—25.)



1. A spring hinge including a pintle, a support for the pintle, a swinging closure hinged upon the pintle, a coil spring slipped upon the pintle and having the ends thereof extended laterally so as to bear against opposite sides of the swinging closure, and a spring retaining yoke carried by the pintle and projecting from one side thereof, the said spring being received between the arms of the yoke and being thereby supported out of engagement with the swinging closure, while the cross bar of the yoke is positioned between the two ends of the spring so as to form a stop for engagement with either end of the spring when the gate is opened.

2. A spring hinge including a pintle having openings therein, a swinging closure hinged upon the pintle, a coil spring arranged upon the pintle and having the ends thereof extended into engagement with opposite sides of the swinging closure, and a spring retaining yoke removably applied to the pintle receiving the spring between the arms thereof so as to support the spring, the said arms of the yoke extending through the openings of the pintle, while the cross bar of the yoke is received between the two ends of the spring so as to form a stop for engagement with either end of the spring when the gate is opened.

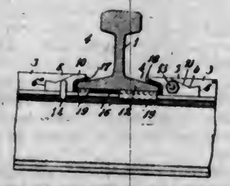
1,016,516. AUTOMATIC CUT-OFF FOR TANKS. WILLIAM P. NORRIS, Sistersville, W. Va. Filed Dec. 9, 1910. Serial No. 596,514. (Cl. 137—68.)



1. The combination with a tank having a service-pipe extended thereinto, of a valve-casing connected to said pipe, a valve-seat in said casing, a valve, a rod from which said valve is suspended, a lever pivotally mounted over said tank, adjustable means whereby said rod is suspended from the point of said lever, a straining element seated in the top of said valve casing, a tube connected to said straining element and loosely embracing the valve-rod, said tube extending to the top of the tank, said tank-top having a lid-closed opening through which said tube and straining element may be removed, a float-rod adjustably mounted upon the butt-end of said lever and extending into the tank, and a float slidable upon said float-rod.

2. The combination with a tank having a service-pipe extended thereinto, of a valve-casing connected to said pipe, a valve-seat in said casing, a valve, a rod from which said valve is suspended, a lever pivotally mounted over said tank, adjustable means whereby said rod is suspended from the point of said lever, a float rod adjustably mounted upon the opposite end of said lever and extending into the tank, a hollow float slidable on said float-rod within the tank, and removable means for preventing foreign matter from entering the tank with the fluid, said means comprising a strainer seated within the top of said valve-casing, and a tube to which said strainer is connected, said tube extending to the top of the tank.

1,016,517. RAILROAD-TIE. LOUIS C. PARKER, Vale Summit, Md., assignor of one-half to William A. Parker, Pittsburgh, Pa. Filed Apr. 27, 1911. Serial No. 623,622. (Cl. 238—5.)



1. A rail supporting and fastening structure comprising a tie having on its upper surface projections spaced apart to receive a rail, each of said projections being under-cut to form a recess the rear wall of which is at an angle to the central vertical plane of the rail to be clamped, and

the under faces of the overhanging projections being inclined upwardly in the direction toward the rail and also being at an angle to the central vertical plane of the rail, and a wedge adapted to be inserted in each of said recesses, said wedge at its inner edge having a shoulder adapted to engage the edge of the rail base and an inclined lip adapted to overhang the rail base, and having its outer edge tapered to engage the rear wall of the recess and its top surface tapered on an angle to the central vertical plane of the rail, whereby when said wedge is forced into said recess it exerts a pressure inwardly against the edge of the base of the rail and downwardly against the top face of the base of the rail.

2. A rail supporting and fastening structure comprising a tie having on its upper surface projections spaced apart to receive a rail, each of said projections being under-cut to form a recess the rear wall of which is at an angle to the central vertical plane of the rail to be clamped, and the under face of the overhanging projections being inclined upwardly in the direction toward the rail and also being at an angle to the central vertical plane of the rail, and a pair of wedges adapted to be oppositely inserted in said recess, each wedge at its inner edge having a shoulder adapted to engage the edge of the rail base and an inclined lip adapted to overhang the rail base, and having its outer edge tapered to engage the rear wall of the recess and its top surface tapered on an angle to the central vertical plane of the rail, whereby when said wedges are forced into said recesses they exert a pressure inwardly against the edge of the base of the rail and downwardly against the top face of the base of the rail.

3. A rail supporting and fastening structure comprising a tie having a rib projecting from its upper surface and being cut away at intervals to provide rail receiving spaces having overhanging projections, the rear walls of the spaces being vertical and at an angle to the central vertical plane of the rail to be clamped and the under faces of the overhanging projections being inclined with reference to the horizontal plane and being beveled with reference to the vertical central plane of the rail to be clamped, and a pair of wedges adapted to fit the walls of the undercut rail receiving spaces and each provided at its inner edge with a shoulder adapted to abut against the edge of the rail base and with a beveled lip overhanging the rail base, whereby when said wedges are forced into said rail receiving spaces they provide inward and downward pressure against the base of the rail.

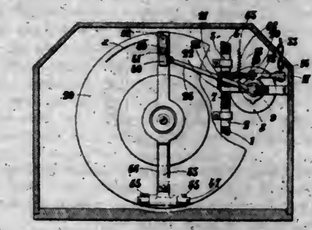
4. A rail-supporting and fastening structure comprising a tie provided with overhanging top projections spaced apart to receive a rail between them and having beveled inner faces, bevel faced wedges interposed between the base flange of a rail and said bevel faces, metal faced insulating plates interposed between the rail flanges and the tie and between said flanges and the wedges, and locking devices for the wedges.

5. A rail-supporting and fastening structure comprising a tie having a top rib cut away to form a rail-receiving space having overhanging sides, the inner faces of which are beveled and substantially parallel, insulating plates having downwardly turned ends to engage the edges of the tie and upwardly and inwardly turned sides to fit around the edges of the base flanges of a rail, wedges adapted to fit between the insulating plates and the overhanging sides of said rail-receiving space, and means for fastening the wedges in their locking positions.

[Claims 6 to 9 not printed in the Gazette.]

1,016,518. TAXIMETER. RICHARD GEORGES POPP, Paris, France, assignor to The Société Générale Des Compteurs De Voitures (Taximètres,) Paris, France, a Corporation of France. Filed Apr. 20, 1909. Serial No. 491,085. (Cl. 235—30.)

1. The combination with a taximeter having means to indicate the conditions under which the vehicle is operated, of means to mount a recording element, and a single means coacting with said indicating means to record automatically on such recording element the adjustment of said indicating means and the distance traveled by the vehicle.



2. The combination with a taximeter having flag mechanism, of a checking attachment coacting with said flag mechanism, having continuously rotated means to support a record disk, and embodying a single means to record on such disk, by a continuous line running at different distances from the center of the disk, the different positions of the flag, and to record the distance traveled by the vehicle by short marks extending laterally from such continuous line.

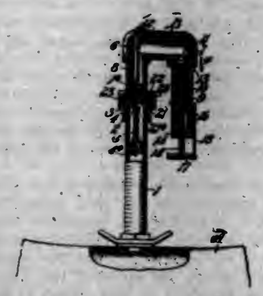
3. The combination with a taximeter having flag mechanism, of a checking attachment coacting with said mechanism embodying means to mount a record disk, a single marker coacting with such disk, and means to effect automatically different movements of the marker to indicate the adjustment of the flag and the distance traveled by the vehicle, respectively.

4. The combination with a taximeter having flag mechanism, of a checking attachment for the taximeter coacting with said mechanism and comprising means to rotate a record disk, and a single means to record automatically on such disk the adjustment of the flag mechanism and the distance traveled by the vehicle.

5. The combination with a taximeter having flag mechanism, of a checking attachment for said taximeter comprising clock mechanism to rotate a record disk, a marker to bear against such disk, means to move the marker with respect to the disk to thereby record the distance traveled by the vehicle, and other means coacting with the flag mechanism, to move the marker with respect to the disk to record the adjustment of the flag mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,016,519. PRESSURE-REGULATING DEVICE. GEORGE E. PREDOCK and CHARLES E. ANDERSON, St. Louis, Mo. Filed Dec. 13, 1910. Serial No. 597,147. (Cl. 152—12.)



A pressure-regulating device for pneumatic tires consisting of a substantially inverted U-shaped member adapted to be arranged in the vertical plane in which the tire lies with one of its legs in alinement with the valve-carrying member of the tire, means arranged in said leg for holding the valve of said valve-carrying member unseated, a wall extending across the other leg of said inverted U-shaped member in which a port is formed, an outwardly opening valve for closing said port, and a spring arranged under said valve for holding it seated.

1,016,520. PLAY-RING. ERNEST RICHARD RABEL, Wash-

relieved, the force of the returning water is caused to

mally disconnected from the engine and operative for moving the piston outward to a predetermined position,

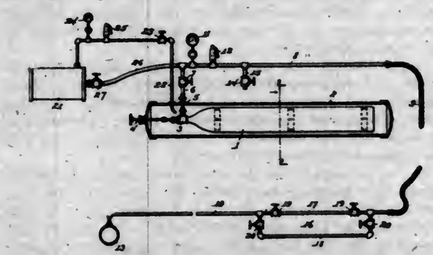
4. A fuse strip consisting of a rolled band of metal, terminals soldered to the ends and between the convolu-

1,016,520. PLAY-RING. ERNEST RICHARD RABEL, Washington, D. C. Filed Oct. 5, 1911. Serial No. 652,976. (Cl. 46—65.)

1. A play-ring, comprising an annulus having insignia on its face, and a set loosely applied to it and through which the annulus may be turned to present the insignia to view while the set remains stationary.

2. A play-ring, comprising an annulus having insignia on its face, and a set having a suitable number of loops engaging the annulus transversely and loosely, so that when the ring is applied to the finger of one's hand, the contact of the loop with the finger will hold the set stationary and the annulus may be turned about the finger through the loop to present the insignia to view relatively to the set.

1,016,521. FLUSHING APPARATUS FOR WATER-PIPES. GEORGE W. REDEKER, Wheeling, W. Va. Filed Dec. 8, 1910. Serial No. 596,344. (Cl. 137—70.)



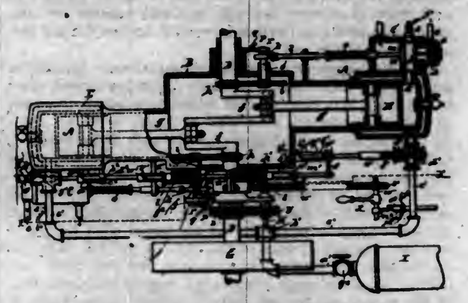
1. Apparatus for flushing house-service water pipes, comprising a tank containing gas under high pressure, a pipe leading from said tank and adapted to be connected to a service pipe, a valve-closed drain pipe connected to the first mentioned pipe, means for introducing an abrading material in the service pipe, means whereby water is permitted to pass around the abrading material in one direction, and means whereby the last mentioned means is closed.

2. Apparatus for flushing house-service water pipes, comprising a tank containing gas under high pressure, means for connecting said tank to a service pipe, means for introducing an abrading material in the service pipe, a by-pass pipe through which water is permitted to pass around the abrading material in one direction, and means whereby the water may be caused to act upon said material for forcing the latter in the opposite direction.

3. Apparatus for flushing house-service water pipes, comprising a high-pressure gas tank, means for connecting said tank to a service-pipe, means for directing gas from said tank into said pipe to produce a violent impact with the water in the latter, means for cutting off the gas-supply, and means for allowing the water and extraneous matter dislodged by said impact to escape from said pipe.

4. Apparatus for flushing house-service water pipes, comprising a high-pressure gas tank, means for connecting said tank to a service-pipe, means for directing gas from said tank into said pipe for delivering a violent shock to the column of water in the latter, means for cutting off the gas-supply to allow the water to rush back through said pipe, means for introducing an abrading material into said pipe, means associated with the last mentioned means whereby, when the gas pressure in the pipe is relieved, the force of the returning water is caused to act upon said abrading material, moving the latter through said pipe, and means for allowing the returning water and dislodged extraneous matter to escape from said pipe.

1,016,522. STARTING DEVICE FOR EXPLOSIVE-ENGINES. FRANK REYNOLDS, Syracuse, N. Y. Filed Nov. 9, 1904. Serial No. 231,971. (Cl. 123—180.)



1. In an engine of the class described, the combination with the cylinder, piston and igniter, of a manually controlled starting-device comprising a reservoir for storing explosive-mixture under pressure and connected to the cylinder, a normally closed valve operative for admitting the explosive-mixture into the cylinder, a mechanism for moving the piston to a predetermined position and including means adapted to throw said mechanism out of connection with the engine to allow the piston to remain at rest in said position, means for opening said valve at will while the piston is at rest, and means controlled by the piston moving mechanism for effecting the ignition of the admitted mixture as set forth.

2. In an engine of the class described, the combination with the cylinder, piston and shaft, of a manually controlled starting-device comprising mechanism for turning the shaft to move the piston and including means adapted to automatically throw said mechanism out of operative connection with the shaft when the piston reaches a predetermined position allowing the piston to remain at rest, a reservoir for storing fluid under compression, a passage leading from said reservoir to the cylinder and provided with a normally closed valve, and means actuated by the shaft-turning mechanism for opening said valve when said mechanism is thrown out of connection with the shaft, whereby the fluid is admitted to the cylinder as set forth.

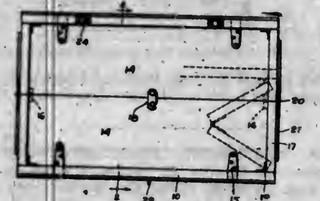
3. In an engine of the class described, the combination with the cylinder, its piston and exhaust means, of a manually controlled starting-device comprising a mechanism for moving the piston to a predetermined position, a reservoir for storing fluid under compression and connected to the cylinder, a normally closed valve operative for admitting the fluid into the cylinder, a brake, and means actuated by the aforesaid mechanism for applying said brake to the engine during the admission of the fluid as and for the purpose set forth.

4. In an explosive-engine, the combination with the cylinder, piston, igniter and exhaust-means, of a manually controlled starting-device comprising means for moving the piston to a predetermined position, a reservoir for storing explosive-mixture under compression, a pipe leading from said reservoir to the cylinder, a normally closed valve in said pipe, a mechanism operative for opening and closing said valve while the piston is in said position, a brake, means controlled by said valve-operating mechanism for applying the brake to the engine during the operation of said valve, and means controlling the aforesaid igniter as set forth.

5. In an explosive-engine, the combination with the cylinder, piston, igniter and exhaust-means, of a manually operated starting-device comprising mechanism normally disconnected from the engine and operative for moving the piston outward to a predetermined position, a relief-valve opened by said mechanism during said movement of the piston, a reservoir for storing explosive-mixture under compression, a pipe leading from said reservoir to the cylinder, a valve controlling the discharge of mixture from the reservoir into the cylinder, means opening the latter valve subsequent to the positioning of the piston and closing of the relief-valve, and means controlling the igniter, as set forth.

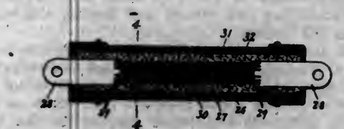
[Claims 6 to 28 not printed in the Gazette.]

1,016,523. FOLDING CRATE. MICHAEL RINNER, Fairfield, Conn. Filed July 5, 1911. Serial No. 637,024. (Cl. 217—15.)



A folding crate comprising sides having central openings, coverings for said openings secured to the outer faces of said sides, inwardly folding ends each comprising two members hinged respectively to said sides and to each other, a bottom comprising two independent members hinged respectively to said sides at the lower edges of said openings, said end members being adapted when swung upwardly to fold into said openings and when swung downwardly to engage said ends and prevent inward folding thereof, blocks carried by said end members for supporting said bottom members, a catch for detachably securing said bottom members together, a cover comprising a part hinged to one of said sides and a second part hinged to said first named part and adapted to fold downwardly over the other of said sides, means for securing said last named part of said cover to said last named side, and a handle secured to said first named part of said cover, substantially as described.

1,016,524. ELECTRIC SAFETY-FUSE. CAROLINE, N. SACHS, Hartford, Conn., assignor to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 16, 1905. Serial No. 241,169. (Cl. 175—273.)



1. The combination in electrical fuses, of a fuse strip consisting of a band of metal disposed in a roll having insulating material between its convolutions, and connecting members fused to and between the convolutions of the opposite ends of the roll for connecting it to circuit terminals.

2. A cut-out for electric circuits, comprising a sheet of thin metal disposed in superposed layers separated by insulating material, and means soldered to and between the ends of said layers for connecting the said ends of the sheet in circuit.

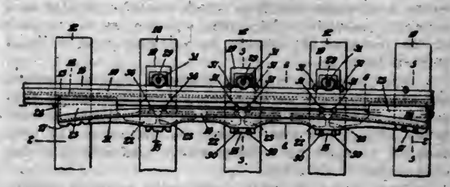
3. The combination in electrical fuses, of a fuse strip consisting of a band of metal disposed in a roll having insulating material between the convolutions, conducting members joined by fusion to and between the convolutions of the opposite ends of the roll, and a casing inclosing the fuse and connected to the said members for connection with circuit terminals.

4. A fuse strip consisting of a rolled band of metal, terminals soldered to the ends and between the convolutions of the roll to carry the current longitudinally of the roll, the said roll having an area of cross section which is smaller at a point between the ends of the roll than at the said ends.

5. A fuse comprising a sheet of metal and a sheet of insulating material forming a roll with the insulating material separating the plies of the metal sheet, terminals extending from the ends of the metal roll and joined to and between the plies thereof by fusion, and finely divided insulating material surrounding the roll.

[Claims 6 to 11 not printed in the Gazette.]

1,016,525. RAILROAD STRUCTURE. NEIL E. SALSICH, Harrisburg, Pa. Filed Sept. 23, 1911. Serial No. 650,923. (Cl. 230—17.)



1. In a railroad structure, spaced cross ties; a main rail; a guard rail extending adjacent the main rail and having alternating hollow and solid portions, the bottoms of the hollow portions being in the plane of the tops of the ties and the bottoms of the solid portions being above the plane of the tops of the ties, said guard rail having integral base portions resting on ties and extending beneath the main rail from the hollow portions of the guard rail; and means for securing said rails to said ties.

2. In a railroad structure, spaced cross ties; a main rail; a guard rail extending adjacent the main rail and having integral base portions resting upon the ties and extending beneath the main rail, the lowermost bottom face of the guard rail being in the plane of and resting on the tops of the ties and rising from said plane above the spaces between the ties and forming arches extending longitudinally of the rail; and means for securing said rails to said ties.

3. In a railroad structure, spaced cross ties; a main rail; a guard rail extending adjacent the main rail and having alternating hollow and solid portions and having ribs extending transversely across the hollow portions, said guard rail having integral base portions resting on ties and extending beneath the main rail from the hollow portions of the guard rail; and means for securing said rails to said ties.

4. In a railroad structure, spaced cross ties; a main rail; a guard rail extending adjacent the main rail and having an integral base portion intermediate of its ends resting on a tie and extending beneath and supporting the main rail, said guard rail having integral end base portions resting on ties and having their bottom faces substantially in the plane of the bottom of the main rail and the top of the first named base portion; and means for securing said rails to said ties.

5. In a railroad structure, spaced cross ties; a main rail; a guard rail extending adjacent the main rail and having an integral base portion intermediate of its ends resting on a tie and extending beneath and supporting the main rail, said guard rail having integral end base portions resting on ties and having their bottom faces substantially in the plane of the bottom of the main rail and the top of the first named base portion, said guard rail having integral parts extending over the base of the main rail above the ties supporting said end base portions; and means for securing said rails to said ties.

[Claims 6 to 9 not printed in the Gazette.]

1,016,526. PROCESS OF REMOVING IMPURITIES FROM IMPURE ALUMINOUS MATERIAL AND PRODUCING NITROGEN COMPOUNDS THEREFROM. OTTOKAR SERPEK, Zurich, Switzerland. Filed May 12, 1910. Serial No. 560,917. (Cl. 23—13.)

1. The process of removing impurities from impure aluminous material containing silica and producing nitrogen compounds therefrom which comprises mixing such aluminous material with carbon and heating the mixture in the presence of nitrogen to a temperature substantially below that of the electric arc.

2. The process of removing impurities from impure aluminous material containing silica and producing nitrogen compounds therefrom which comprises mixing such aluminous material with carbon and heating the mixture in the presence of nitrogen to a temperature not exceeding 1800° C.

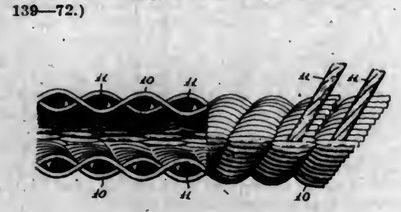
3. The process of removing impurities from impure aluminous material containing silica and producing nitrogen compounds therefrom which comprises mixing such aluminous material with carbon and heating the mixture in the presence of nitrogen to a temperature of about 1600 to 1800° C.

4. The process of treating aluminous material containing impurities capable of forming volatile nitrogen compounds which comprises mixing such aluminous material with carbon and heating the mixture in the presence of nitrogen to a temperature substantially below that of the electric arc.

5. The process of treating aluminous material containing impurities capable of forming volatile nitrogen compounds which comprises mixing such aluminous material with carbon and heating the mixture in the presence of nitrogen to a temperature not exceeding 1800° C.

[Claim 6 not printed in the Gazette.]

1,016,527. TUBULAR FABRIC. CHARLES S. SMITH, Providence, R. I., assignor to Chernack Manufacturing Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Aug. 1, 1911. Serial No. 641,816. (Cl. 139—72.)

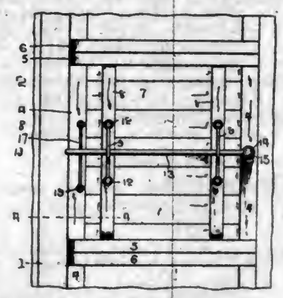


1. A tubular fabric comprising longitudinal strands, and a helical twisted strand substantially circular in cross section closely interwoven with the longitudinal strands, said helical strand being composed of thin paper, the twisting of the thin material rendering it thick and comparatively hard and stiff, and capable of providing the necessary rigidity without an additional outer wall or shell.

2. A tubular fabric adapted for use as a conduit for electric conductors, said fabric comprising longitudinal and helical strands, the latter being of hard-twisted paper, the said longitudinal and helical strands being tightly interwoven whereby a strong tube having a wall of a single thickness is provided.

1,016,528. SILO. LEONARD P. SWOVELAND, Bourbon, Ind. Filed May 11, 1911. Serial No. 626,459. (Cl. 20—1.4.)

In a silo, a door carrying resilient gripping members, said door being flush with the wall of the silo, a locking bar carried by the door-frame of said silo, a resilient latch member carried by said door-frame opposite the point at which said bar is attached, said gripping members and said resilient latch member being adapted to receive said



locking bar to hold the door in closed position, and means for securing said latch bar to said door-frame.

1,016,529. ANTISEPTIC INSTRUMENT-CASE. EARL A. TEETS and HARVEY V. VARNER, Clarksburg, W. Va. Filed Sept. 26, 1910. Serial No. 583,789. (Cl. 73—52.)

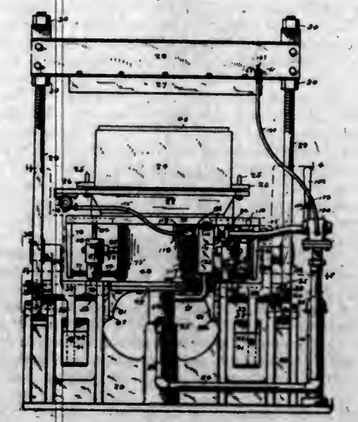
1. An antiseptic instrument case comprising a tube formed of impervious material which can be antiseptically treated, said tube being permanently closed at its lower end and of greater depth than the instrument to be received, a support for the instrument in the bottom of the tube, a coiled spring pressing upwardly on said support and of such length as to lift the instrument to project above the upper end of the tube, and a cover engaging the upper end of the tube, sealing the same, and being independent of the instrument and arranged to engage the upper end thereof and depress the same to compress the spring.

2. An antiseptic instrument case comprising a tube formed of impervious material which can be antiseptically treated, said tube being permanently closed at its lower end and of greater depth than the instrument to be received, a perforated cup-shaped support for the instrument in the bottom of the tube, a coiled spring pressing upwardly on said support and of such length as to lift the instrument to project above the upper end of the tube, and a cover threaded onto the upper end of the tube, sealing the same, and being independent of the instrument and arranged to engage the upper end thereof and depress the same to compress the spring.

3. An antiseptic instrument case, comprising a non-frangible outer tube and a vitreous inner tube, both open at their upper ends and closed at their inner ends and of greater depth than the instrument to be received, a support for the instrument in the bottom of the inner tube, a coiled spring pressing upwardly on said support and of such length as to lift the instrument to project above the upper ends of said tubes, and a cover engaging the upper end of the outer tube, pressing against and sealing the upper end of the inner tube, and independent of the instrument and arranged to engage the upper end thereof and depress the same to compress the spring.

4. An antiseptic instrument case comprising a glass tube permanently closed at its lower end and open at its upper end and of greater depth than the instrument to be received, a non-frangible outer protecting casing inclosing said glass tube, and provided with a side opening therethrough, said inner tube projecting slightly above the upper end of said outer tube, a support for the instrument in the bottom of the inner tube, a coiled spring pressing upwardly on said support and of such length as to lift the instrument to project above the upper ends of said tubes, and a cover engaging the upper end of the outer tube, pressing against and sealing the upper end of the inner tube and independent of the instrument and arranged to engage the upper end thereof and depress the same to compress the spring.

1,016,530. POWER MOLDING-MACHINE. CHARLES EDWIN A. THOMPSON, Bridgeport, Conn., assignor to The Bridgeport Foundry and Machine Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 12, 1908. Serial No. 467,218. (Cl. 22—44.)



1. In a machine of the character described, the combination with a flask frame and lifting cylinders, of two-part lifting pins, one part of each pin being socketed in the flask frame and air connections whereby said cylinders and pins are raised to lift a flask from the flask frame.

2. In a machine of the character described, the combination with a fixed frame for carrying a flask while ramming, of lifting cylinders and two-part lifting pins and air connections whereby said cylinders and pins are raised to lift the flask from the flask frame.

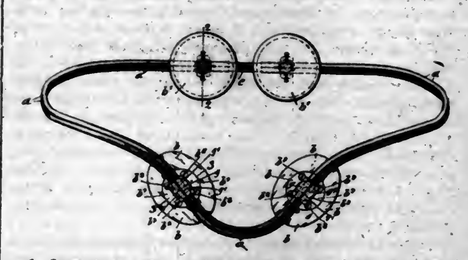
3. In a machine of the character described, the combination with a table and an independent flask frame resting thereon, of a flask and laterally adjustable lifting mechanism therefor partly supported by and moving independently of the flask frame.

4. In a machine of the character described, the combination with a table and an independent flask frame resting thereon, of a pattern plate resting on the flask frame, a flask also resting on the flask frame and laterally adjustable lifting mechanism for the flask, partly supported by the flask frame, whereby the flask is raised away from the flask frame and the pattern plate.

5. In a machine of the character described, the combination with a table having slots, a flask frame, laterally adjustable lifting cylinders and air connections whereby said cylinders are raised, of lifting pins comprising two parts in alinement, the upper parts of said pins being socketed in the flask frame and the lower parts rigidly secured to the lifting cylinders and extending through the slots in the table, substantially as described, for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

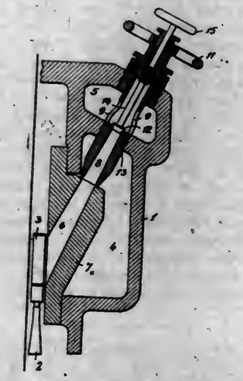
1,016,531. TRUSS FOR RUPTURES. EDWARD VOLKMER, New York, N. Y. Filed Mar. 29, 1910. Serial No. 552,174. (Cl. 128—26.)



1. In a truss, the combination of a support formed of two similarly-bent parallel wires continuously soldered together, rear sleeves having openings receiving the support and carrying buttons, a strap connecting said buttons, pads on said sleeves, shanks at the front of the support having openings of oblong cross-section receiving the support, pads on said shanks, and means for clamping said shanks upon said support in the direction of the transverse plane of both wires of the same.

2. In a truss, the combination of a support formed of two similarly-bent parallel wires continuously soldered together, rear sleeves having openings of oblong cross-section receiving the support, and carrying buttons, a strap connecting said buttons, pads on said sleeves, shanks at the front of the support having openings of oblong cross-section receiving the support, pads on said shanks, means for clamping said rear sleeves upon said support in the direction of the transverse plane of both wires of the same, and means for clamping said shanks upon said support in the direction of the transverse plane of both wires of the same.

1,016,532. ELASTIC-FLUID TURBINE. CARL RICHARD WALLER, Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 20, 1910. Serial No. 556,519. (Cl. 121—57.)



1. In an elastic fluid turbine, the combination of a high pressure chest, a low pressure chest, a rotor, a low pressure nozzle arranged to conduct low pressure working fluid from the low pressure chest to the rotor, and a high pressure nozzle in line with the low pressure nozzle and arranged to project high pressure working fluid from the high pressure chest into the bore of the low pressure nozzle, the bore of said low pressure nozzle of such diameter and form that it constitutes substantially a continuation of the high pressure nozzle, as to expansion of the working fluid discharged into it by the high pressure nozzle, the two nozzles together forming a combined high

pressure nozzle adapted to expand the high pressure working fluid to a low terminal pressure.

2. In an elastic fluid turbine, the combination of a high pressure chest, a low pressure chest, a rotor, a low pressure nozzle arranged to conduct low pressure working fluid from the low pressure cheat to the rotor, and a high pressure nozzle in line with the low pressure nozzle and arranged to project high pressure working fluid from the high pressure chest into the bore of the low pressure nozzle, said low pressure nozzle forming substantially a continuation of the high pressure nozzle and at its mouth being devoid of reverse flare adapted to produce injector action, the two together forming a combined high pressure nozzle adapted to expand the high pressure working fluid to a low terminal pressure.

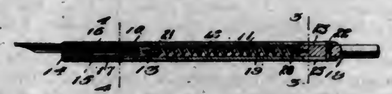
3. In an elastic fluid turbine, the combination of a high pressure chest, a low pressure chest, a rotor, a low pressure nozzle arranged to conduct low pressure working fluid from the low pressure chest to the rotor, and a high pressure nozzle in line with the low pressure nozzle and arranged to project high pressure working fluid from the high pressure chest into the bore of the low pressure nozzle, said low pressure nozzle forming substantially a continuation of the high pressure nozzle, the two together forming a combined high pressure nozzle adapted to expand the high pressure working fluid to a low terminal pressure, said high pressure nozzle movable toward and from the low pressure nozzle, and means for so moving it.

4. In an elastic fluid turbine, the combination of a high pressure chest, a low pressure chest, a rotor, a low pressure nozzle arranged to conduct low pressure working fluid from the low pressure chest to the rotor, a high pressure nozzle in line with the low pressure nozzle and arranged to project high pressure working fluid from the high pressure chest into the bore of the low pressure nozzle, said high pressure nozzle arranged to move longitudinally from a position in which its discharge end engages with the receiving end of the low pressure nozzle to a position in which a considerable distance separates the adjacent ends of the two nozzles, whereby said high pressure nozzle forms a valve for the low pressure nozzle, and means for so moving said high pressure nozzle.

5. In an elastic fluid turbine, the combination of a high pressure chest, a low pressure chest, a rotor, a low pressure nozzle arranged to conduct low pressure working fluid from the low pressure chest to the rotor, a high pressure nozzle in line with the low pressure nozzle and arranged to project high pressure working fluid from the high pressure chest into the bore of the low pressure nozzle, said high pressure nozzle arranged to move longitudinally from a position in which its discharge end engages with the receiving end of the low pressure nozzle to a position in which a considerable distance separates the adjacent ends of the two nozzles, whereby said high pressure nozzle forms a valve for the low pressure nozzle, means for so moving said high pressure nozzle, and an axial shut-off valve for the high pressure nozzle, carried thereby and adapted at will to open or close the bore of said high pressure nozzle.

[Claims 6 and 7 not printed in the Gazette.]

1,016,533. EJECTING-PENHOLDER. SAMUEL KELLOGG WILLSON, Dwight, Mass. Filed Dec. 6, 1907. Serial No. 405,377. (Cl. 120—101.)



A penholder having a tubular stock, a coil spring slidably arranged within the stock, a spring jaw ejector plug within the end of the stock, and engaging therewith to clamp a pen nib, said ejector plug being secured at its inner end to one end of the spring, and an operating plunger slidably held within the other end of the stock and secured to the other end of the spring, whereby when the plunger is pushed into the stock the spring will be compressed against the resistance of the ejector plug, and subsequently overcome said resistance and expand to force the plug from the stock sufficiently to release the nib.

1,016,534. SPRING-WHEEL. HARMON E. WIREBAUGH, Canton, Ohio. Filed Oct. 24, 1910. Serial No. 588,610. (Cl. 152—47.)

1. A spring wheel comprising a hub, two spaced hub plates concentrically connected to said hub, said plates provided adjacent their circumferential edges with screw threaded spoke attaching apertures, screw threaded bushings arranged in said spoke attaching apertures and having screw threaded projecting portions extending beyond the outer limits of said spoke attaching apertures, spoke blocks arranged intermediate the hub plates, each spoke block provided with oppositely disposed, alined studs mounted in the bushings of oppositely disposed spoke attaching apertures, said blocks being adapted to oscillate with reference to said hub plates, said spoke blocks provided with radially disposed spoke apertures, spokes longitudinally slidably arranged in said spoke apertures, the inner ends of said spokes extending beyond said spoke blocks toward said hub, said spoke blocks also provided with inner annular recesses opening from said spoke apertures, dust washers arranged in said recesses and adapted to slidably engage said spokes, the outer end of each spoke block provided with a cap adjustably connected to said block, a dust washer held in place against the spoke by said cap, dust caps arranged on said screw threaded projecting portions of said bushings, one of said caps for each spoke block provided with a grease cup, the stud of said spoke block provided with a grease conducting channel extending to the spoke aperture in said spoke block and providing communication between said spoke aperture and said grease cup, wear plates concentrically arranged upon the inner sides of said hub plates between said hub and said spoke blocks, a coiled compression spring arranged upon each spoke between its spoke block and its inner end, spring caps arranged on said spoke, each cap having an annular spring-retaining flange, head blocks arranged upon the inner ends of said spokes, means for adjusting said head blocks with reference to said spokes, said head blocks provided with cups, steel balls in said cups adapted to engage said wear plates, a felly and rim, and said spokes pivotally connected at their outer ends to said felly.

2. A spring wheel comprising a hub, two spaced hub plates concentrically connected to said hub, spoke blocks arranged intermediate the hub plates, each spoke block provided with oppositely disposed, alined studs journaled in bearings in said hub plates, said spoke blocks provided with radially disposed spoke apertures, spokes longitudinally slidably arranged in said spoke apertures, the inner ends of said spokes extending beyond said spoke apertures toward said hub, said spoke blocks also provided with inner annular recesses opening from said spoke apertures, dust washers arranged in said recesses and adapted to slidably engage said spokes, the outer end of each spoke block provided with a cap adjustably connected to said block, a dust washer held in place against the spoke by said cap, wear plates concentrically arranged upon the inner sides of said hub plates between said hub and said spoke blocks, a coiled compression spring arranged upon each spoke between its spoke block and its inner end, spring caps arranged on said spoke, each cap having an annular spring retaining flange adapted to hold said coiled spring in place upon said spoke and adjustable head blocks on the inner ends of said spokes adapted to be adjusted to increase the tension of said coiled springs, and steel balls held by said head blocks and engaging said wear plates, a felly and rim, and said spokes pivotally connected at their outer ends to said felly.

3. A spring wheel comprising a hub, spaced hub plates concentrically connected to said hub, spoke blocks arranged intermediate the hub plates, each spoke block provided with oppositely disposed, alined studs journaled in bearings in said hub plates, said spoke blocks provided with radially disposed spoke apertures, spokes longitudinally slidably arranged in said spoke apertures, the inner ends of said spokes extending beyond said spoke apertures toward said hub, the outer end of each spoke block provided with a dust washer held in place against the spoke, wear plates concentrically arranged upon the inner sides of said hub plates between said hub and said spoke blocks, a coiled compression spring arranged upon each spoke between its spoke block and its inner end, spring caps arranged on said spoke, each cap having an annular spring-retaining flange adapted to hold said coiled spring in place upon said spoke and adjustable head blocks on the inner ends of said spokes adapted to be adjusted to increase the tension of said coiled springs, and steel balls held by said head blocks and engaging said wear plates, a felly and rim, and said spokes pivotally connected at their outer ends to said felly.

1,016,535. DEVICE FOR TRANSMITTING POWER. EDWARD M. WOODWARD, Worcester, Mass. Filed Oct. 29, 1908. Serial No. 460,037. (Cl. 74—21.)

1. A power transmitting device, comprising a driving pulley and two pairs of tight and loose driven pulleys, a separate belt connecting said driving pulley with each pair of said tight and loose pulleys, a single shipping means, with a separate connection between each belt and said means, arranged to ship both of said belts simultaneously, or each belt independently without movement of the other belt as desired.

2. A power transmitting device, comprising a driving pulley and two pairs of tight and loose driven pulleys, a separate belt connecting said driving pulley with each pair of said tight and loose pulleys, a single rod for shipping said belts, and separate means for connecting and disconnecting at will each belt with said shipping rod, each of said connecting means arranged to be operated to cause the shipping of said belt without change in the position of the other.

3. A power transmitting device, comprising a driving pulley and two pairs of tight and loose driven pulleys, a separate belt connecting said driving pulley with each pair of said tight and loose pulleys, an independent belt eye for each belt, a supporting rod arranged to support said belt eyes, each independent belt eye arranged to be operatively connected and disconnected at will with said rod, and means for holding the disconnected belt eye from movement.

4. A power transmitting device, comprising a driving pulley and two pairs of tight and loose driven pulleys, a separate belt connecting said driving pulley with each pair of said tight and loose pulleys, a common shipping mechanism for said belts, with a separate connection for each belt, with said mechanism arranged to be operated at will, whereby each belt is transferred from one pulley to the other of a single pair of driven pulleys by said shipping mechanism as desired irrespective of the position of the other belt.

5. The combination with two pairs of tight and loose pulleys having a common axis and having belt connections for each pair, of a fixed rod parallel with the axis of said pulleys, belt eyes for each of said belt connections capable of sliding on said rod, a shipper rod, and means for connecting each of said belt eyes alternately with said fixed rod or said shipper rod at will.

[Claims 6 to 10 not printed in the Gazette.]

1,016,536. ADJUSTABLE CREAM-EXIT FOR CENTRIFUGAL CREAM-SEPARATORS. GUSTAF M. ANDERSON, Waterloo, Iowa. Original application filed June 16, 1909, Serial No. 502,505. Divided and this application filed Apr. 17, 1911. Serial No. 621,519. (Cl. 127—20.)

1. In a cream outlet for a separator bowl, the combination of two channels for the issuing cream, of which one channel is wider radially than the other from the axis of the bowl, and a movable dam located partly in the large and partly in the small channel adapted to variably cut off the flow of cream at the communicating parts of said channels.

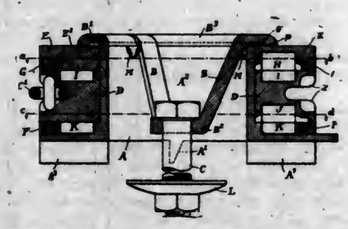
2. In a cream outlet for a separator bowl, the combination of two channels for the issuing cream, of which the entrance channel is wider than the other channel in a plane extending radially from the axis of the bowl, and said entrance channel emptying into the other channel, and a movable dam located partly in the wider and partly in the narrower channel adapted to variably control the dilution of the cream passing thereby.

3. In a cream outlet for a separator bowl, the combination of two communicating channels for the issuing cream of which the inner or entrance channel is the wider radially from the axis of the bowl, the outer limits of the inner walls of both being the same but the inner limit of the entrance or larger channel approaching more closely the axis of the bowl than the inner limit of the other

channel, and a movable dam located partly within the larger and within the smaller channel at their place of communication.

4. In a centrifugal cream separator bowl provided with an inlet for the full milk and an outlet for the skimmed milk, an adjustable outlet for the separated cream, consisting of a tube in said bowl with its open inner end in communication with the cream zone from the inner limit of the later outwardly, said tube having a contracted portion with its open end delivering through the bowl and the contracted portion having its inner wall which is nearest the axis of the bowl spaced away from the said innermost limit of the cream zone, said bowl having an orifice in communication with the said tube at the place of contraction, and a radially-movable plug within said orifice adapted to vary the width of the latter radially at the place of its contraction.

1,016,537. PAWL-AND-RATCHET MECHANISM. CIPRIANO ANDRADE, Jr., New York, N. Y. Original application filed May 4, 1910, Serial No. 559,384. Divided and this application filed June 23, 1910. Serial No. 568,582. (Cl. 74—16.)



1. In windlasses, a horizontal pawl having a trunnion, the lower surface of the trunnion being flat, the axis of said pawl being substantially parallel to a line radial to the axis of rotation of the windlass sheave.

2. In windlasses, a horizontal pawl having a trunnion, the lower surface of said trunnion being flat, and the upper surface and sides of said trunnion being rounded, the axis of said pawl being substantially parallel to a line radial to the axis of rotation of the windlass sheave.

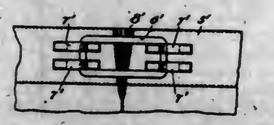
3. In windlasses, a pawl having, in combination, trunnions at its leading end, and a trip lug; the trunnion on the side of the trip lug being materially longer than the trip lug.

4. In windlasses, a pawl having, in combination, trunnions at its leading end, and a trip lug near its following end; the trunnion on the side of the trip lug being materially longer than the trip lug.

5. In windlasses, a pawl having, in combination, trunnions at its leading end, and a trip lug at its following end; the trunnion on the side of the trip lug being materially longer than the trip lug.

[Claims 6 to 45 not printed in the Gazette.]

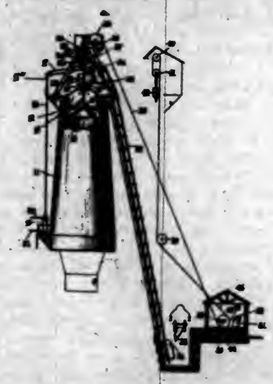
1,016,538. GARMENT. FRED N. ASHWORTH, Somerville, Mass. Filed Mar. 15, 1909. Serial No. 483,340. (Cl. 2—143.)



1. The combination with a garment, of an endless elastic band extending throughout along and substantially parallel with the surface of said garment, and a plurality of tapes each of which extends across said band and has both of its ends secured to said garment.

2. The combination with a garment, of an endless elastic band extending throughout along and substantially parallel with the surface of said garment, and a plurality of tapes arranged in pairs extending across said band, each of said tapes having both of its ends secured to said garment.

1,016,539. APPARATUS FOR CHARGING FURNACES. DAVID BAKER, Philadelphia, Pa. Filed June 16, 1911. Serial No. 633,550. (Cl. 75—115.)



1. An apparatus for charging furnaces comprising in combination a bell for opening and closing the furnace mouth, a skip or car for carrying material to the furnace mouth, a motor for causing travel of the skip, and automatic means operated in harmony with the skip movements for causing operation of said bell.

2. An apparatus for charging furnaces comprising in combination a bell for opening and closing the furnace mouth, a skip or car for carrying material to the furnace mouth, a motor for causing travel of the skip, and automatic means operated by said motor for causing operation of said bell.

3. An apparatus for charging furnaces comprising in combination a lower bell for opening and closing the furnace mouth, an upper bell, a skip or car for carrying material to the furnace mouth, a motor for causing travel of the skip, and automatic means operated in harmony with the skip movements for causing operations of said upper and lower bells in harmony with each other, substantially as described.

4. An apparatus for charging furnaces comprising in combination a lower bell for opening and closing the furnace mouth, an upper bell, a skip or car for carrying material to the furnace mouth, a moter for causing travel of the skip, and automatic means operated in harmony with the skip movements for causing operations of said upper bell and for causing operation of said lower bell after a given number of operations of the upper bell.

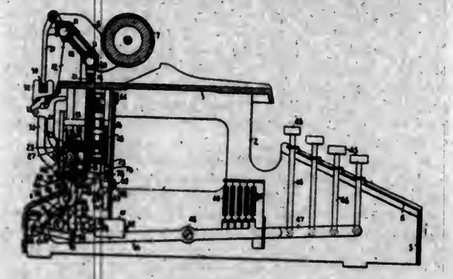
5. An apparatus for charging furnaces comprising in combination a bell for opening and closing the furnace mouth, a skip or car for carrying loads of material to the furnace mouth, a motor for causing travel of the skip, and automatic means actuated by said motor for causing opening of said bell after a given number of skip loads have been received upon it.

[Claims 6 to 18 not printed in the Gazette.]

1,016,540. TYPE-WRITING MACHINE. JOHN H. BARR, Syracuse, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Aug. 26, 1911. Serial No. 646,164. (Cl. 197—64.)

1. A retarder for the carriage of a typewriting machine comprising a vibratory device and a strap and eccentric, the eccentric and the coöperating strap being arranged between the vibratory device and the carriage.

2. A retarder for the carriage of a typewriting machine comprising a pendulum and a strap and eccentric, the eccentric with its coöperating strap being arranged between the carriage and the pendulum.



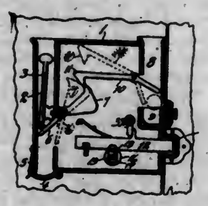
3. A retarder for the carriage of a typewriting machine comprising a vibratory device, frictional devices, and connections including a flexible device between said frictional devices and said vibratory device, said frictional devices engaging independently of said flexible device.

4. A retarder for the carriage of a typewriting machine comprising a vibratory device, frictional devices, and means including a spring connecting said frictional devices and said vibratory device, said frictional devices engaging with each other independently of said spring.

5. A retarder for the carriage of a typewriting machine comprising a pendulum, frictional devices, and connections including a flexible arm between said pendulum and said frictional devices, said frictional devices engaging independently of said flexible arm.

[Claims 6 to 17 not printed in the Gazette.]

1,016,541. LOCKING DEVICE. WALLIE R. BOONE and CHESTER A. WATSON, Crews, Tex., assignors of one-third to Lee P. Gandy, Crews, Tex. Filed June 8, 1911. Serial No. 631,984. (Cl. 70—73.)

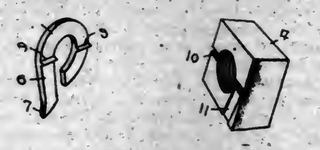


1. In a check controlled apparatus, a casing, a key adapted to enter the casing and provided with a passage, a spring fastening member secured in the casing in position to receive the end of the key and provided with key engaging parts, and a releasing device adapted to enter the passage of the key.

2. In a check controlled apparatus, a casing having a pocket, a grapple secured in the pocket and provided with key engaging members, a releasing member arranged in the grapple, a key having a passage and provided with a circumferential groove located to receive the members of the grapple, and a plunger adapted to pass through the passage of the key.

3. In a check controlled apparatus, a casing having a key-hole and a pocket opposite the key-hole, a spring grapple secured in the pocket and directed toward the key-hole of the casing, a spring pressed disk mounted in the grapple, opposed lugs provided on the grapple, a key having a beveled end and provided with a circumferential groove adjacent the said end, said key also having a central longitudinal passage extending therethrough, and plunger adapted to pass through the passage of the key, the lugs of the grapple being in the path of the beveled end of the key, the disk being in the path of the plunger.

1,016,542. NUT-LOCK. CORNELIUS L. BOUHAN, Cameron, Mo. Filed July 13, 1911. Serial No. 638,818. (Cl. 151—38.)



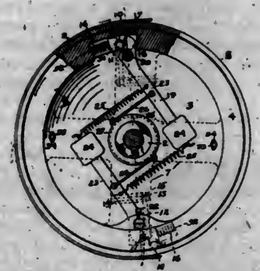
1. In a nut lock the combination with a bolt, and a nut coöperating therewith, of a split washer having means to engage the nut and rotate therewith, one of the split ends of the washer having an extension adapted to engage and bear against a portion of a contiguous fish plate at each revolution of the washer.

2. In a nut lock the combination with a bolt, and a nut coöperating therewith, of a split washer, one of the split ends terminating in an extension, said extension being positioned a distance from the other split end of the washer to permit resilient movement of the extension and means on the washer adapted to engage the nut and cause the washer to rotate with the nut, the free end of said extension having a prong adapted to drag over and engage parts of a contiguous fish plate when the washer is rotated.

3. In a nut lock the combination with a bolt, and a nut coöperating therewith, said nut having slots and a recess in its inner face, of a split washer having projections adapted to engage the slots in the nut, one split end of the washer having an extension spaced a distance from the other split end, the lower end of said extension being tapered to form a prong, said prong being adapted to drag over and engage a contiguous fish plate as the washer and nut are rotated, said extension alining with the recess in the nut.

4. In a nut lock the combination with a bolt and a nut coöperating with the bolt, said nut having slots and a recess in its inner face, of a split washer having projections thereon adapted to engage said slots, one of said split ends having an extension adapted to register with the recess in the nut, the free end of the extension having a prong adapted to engage parts of a contiguous fish plate and drag thereover when the washer is rotated.

1,016,543. GOVERNOR FOR GAS OR OTHER ENGINES. JOHN F. BAIDOSS, Alameda, Cal. Filed Dec. 3, 1907, Serial No. 404,906. Renewed Aug. 24, 1911. Serial No. 645,722. (Cl. 121—112.)



1. In combination, a shaft, a fly wheel thereon, means for controlling the transference of energy, a driven wheel loose on the shaft and adapted to transmit power to a load, a lever carried by the fly wheel, a weight on the end

of said lever, a cam finger carried by the driven wheel, and engaging an arm of said lever, a spring arranged to press said cam finger against said arm to oppose the outward movement of the weight due to centrifugal force, and a connection from said lever to said controlling means, whereby the inward or outward movement of said lever correspondingly moves said controlling means, substantially as described.

2. In combination, a shaft, a fly wheel thereon, means for controlling the transference of energy, a driven wheel loose on the shaft and adapted to transmit power to a load, a pair of governor levers pivoted upon said fly wheel, weights on said levers, cam fingers engaging short arms of said levers, and pivotally mounted on said driven wheel, means for pressing said cam fingers against said short arms, and connections from said levers to said controlling means to operate the latter by the movement of the former, substantially as described.

3. In combination, a shaft, a fly wheel thereon, means for controlling the transference of energy, a driven wheel loose on the shaft and adapted to transmit power to a load, having a flange coaxial with the fly wheel, weights movable to and from the axis of the fly wheel, an operative connection between said fly wheel and driven wheel, whereby the axial distance of said weights varies with the relative angular position of the driven wheel and fly wheel, and an operative connection between said weights and controlling means whereby the latter is operated by the movement of the former to and from said axis, substantially as described.

4. In combination, a shaft, a fly wheel thereon, diametrically opposite recesses therein, means for controlling the transference of energy, a driven wheel loose on the shaft and adapted to transmit power to a load, cam shafts pivoted on said driven wheel, and cam fingers thereon in said recesses, governor levers pivoted upon said flywheel having short arms in said recesses engaged by said cam fingers, said cam shafts also having arms extending therefrom, springs operating to move said arms, and operative connections between said governor levers and said controlling means, substantially as described.

5. Means for regulating automatically with the load on a motor the supply of motor-operating fluid to said motor, comprising a shaft, a device for varying the amount of operating fluid supplied to said motor, a lever-support secured to the shaft, a lever pivoted on said support, an operative connection between said lever and device, a weight on an end of said lever, a rotor having an operative connection with the motor load, a device movably carried by said rotor and engaging an arm of said lever, and a spring pressing said device against said arm in a direction opposite to that of the centrifugal movement of the weighted end of the lever from the shaft, the surface of the device contacting with said arm being convexly curved.

1,016,544. HOLDER FOR CEMENTING SOLES. GEORGE E. BRITTAIN, Haverhill, Mass., assignor to Irving L. Keith, Haverhill, Mass. Filed Oct. 30, 1911. Serial No. 657,466. (Cl. 12—1.)

1. A holder for cemented soles comprising a base-plate having a sole-supporting face, a pair of coiled springs mounted at opposite sides of said face and held by their resilience, in vertical position to form horizontal guiding and holding devices for the soles, and a strap connected to the free ends of said springs, substantially as described.

2. A holder for cemented soles and skived taps comprising a base-plate having a concave sole-supporting face extending upwardly toward the end thereof, to hold the skived portion against the sole, and means to press a stack of soles onto said face, substantially as described.

3. A holder for cemented soles and skived taps comprising a base-plate having a concave sole-supporting face extending upwardly from the middle portion toward each end thereof, and means on said plate to press a stack of soles onto each concave end-portion thereof, substantially as described.

4. A holder for cemented soles and skived taps, comprising a base-plate having a sole-supporting face thereon, said face having a flat portion and an upwardly inclined portion leading from said flat portion to the end of the plate, and a yelding clampng means at opposte sdes of sad face and extendng thereover for pressng a stack of soles onto said face, substantially as described.

5. A holder for cemented soles and skived taps comprising a base-plate having a concave sole-supporting face extending upwardly toward the end thereof, a pair of vertically extending longitudinally extensible springs mounted on said plate at opposite sides of the middle portion of said face and a strap for connecting the free ends of said springs, substantially as described.

1,016,545. MECHANICAL MOVEMENT. CYRUS C. BULTMAN, Cleveland, Ohio. Filed Sept. 1, 1909. Serial No. 515,564. (Cl. 74—36.)

1. A device of the character described, comprising a rotatable driven member provided with radial projections, a rotatable driving member in peripheral contact with the driven member, the axes of said members being in angular relation to each other, the periphery of the driving member including three relatively angularly disposed surfaces, the two extreme surfaces being respectively adapted to contact with two adjacent projections, and the intermediate surface being of concave form, and said driving member having a groove connecting said two extreme surfaces and adapted on rotation of said member to engage one of said projections and thereby impart a rotative movement to the driven member.

2. A device of the character described, comprising a rotatable driven member provided with radial projections, a rotatable driving member in peripheral contact with the driven member, the axes of said members being in angular relation to each other, the periphery of the driving member including three relatively angularly disposed surfaces, the two extreme surfaces being respectively adapted to contact with two adjacent projections, and the intermediate surface being of concave form, and said driving member having a groove connecting said two extreme surfaces and adapted on rotation of said member to engage one of said projections and thereby impart a rotative movement to the driven member, the driving member being also provided with a tongue-like extension associated with said groove and adapted to assist in engaging said projections.

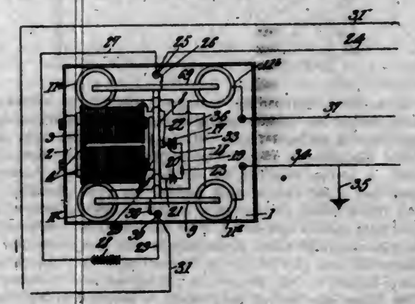
3. A device of the character described, comprising a rotatable driven disk provided with radial projections, and a rotatable driving disk in peripheral contact with the driven disk, the axes of said disks being in angular relation to each other, the periphery of the driving disk comprising three relatively angularly disposed surfaces, the upper and lower peripheral surfaces being respectively adapted to contact with each of two adjacent projections, and the intermediate surface corresponding in its conformation with the periphery of the driven disk, said driving disk having a groove across its edge adapted, on rotation of said disk, to engage one of said projections and thereby impart a rotative movement to the driven disk.

4. A device of the character described, comprising a rotatable driven disk provided with radial projections, and a rotatable driving disk in peripheral contact with the driven disk, the axes of said disks being in angular relation to each other, the periphery of the driving disk comprising three relatively angularly disposed surfaces, the upper and lower peripheral surfaces being adapted to contact with each of two adjacent projections, and the intermediate surface corresponding in its conformation with the periphery of the driven disk, said driving disk having a groove of helical form across its edge adapted, on rotation of said disk, to engage one of said projections and thereby impart a rotative movement to the driven disk, the driving disk being provided with a tongue-like extension associated with said groove and adapted to assist in engaging said projection.

5. A device of the character described, comprising a rotatable driven member provided with projections, a rotatable driving member being adapted to engage the projections on said driven member and to periodically impart a rotative movement to the latter, and resilient means on said driving member coöperating with such projections to prevent vibration.

[Claims 6 to 9 not printed in the Gazette.]

1,016,546. TELEPHONE RINGING APPARATUS. WILLIAM E. BUTLER, David City, Nebr. Filed Apr. 30, 1910. Serial No. 558,597. (Cl. 171—253.)



1. In a system such as described, a mercury terminal cup provided with a division wall dividing the cup into adjacent mercury compartments; and displacement means, at times out of contact with the mercury, but adapted to enter the mercury, within the cup, for causing the overflow of the mercury with relation to the division wall.

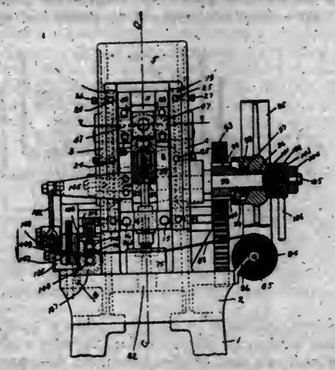
2. In a system such as described, a source of direct current; a plurality of mercury cups diagonally connected in pairs; means for alternately coupling opposite ones of the cups of each pair to the respective terminals of said source of current; and a source of current, independent of the first named source, for actuating said means.

3. In a system such as described, a mercury cup having a compartment for mercury within and spaced from the walls of the cup and communicating with the space between the compartment and the walls of the cup, said compartment being of greater height than the walls of the cup.

4. In a system such as described, a mercury cup; a conducting finger adapted to dip into said cup; and an insulating element upon the finger, having a cavity adapted to receive the mercury from the cup.

1,016,547. MACHINE FOR STAMPING AND FORMING SHEET-METAL ARTICLES. MICHAEL F. CAHILL, Boston, Mass. Filed Jan. 10, 1910. Serial No. 537,215. (Cl. 113—42.)

1. In combination, a reciprocating frame, carrying a punching die, a rocking lever for operating said frame, a flanged eccentric for operating said lever, rolls carried by said lever engaging the inner and outer surfaces of the flange of said eccentric and an eccentric sleeve for adjusting said rolls, substantially as described.



2. In combination, a tubular punching die, a lever for operating it, a plunger die operating through said tubular die, a lever for operating it, a bail for connecting said plunger die to said lever and a threaded adjustable stud carried by said lever and bearing upon the head of the plunger die, substantially as described.

3. In combination, a reciprocating frame carrying a punching die, a rocking lever for operating said frame, a flanged eccentric for operating said lever, rolls carried by said lever engaging the inner and outer surfaces of the flange of said eccentric, an eccentric sleeve for adjusting said rolls, and means for lubricating the flange.

4. In combination, a reciprocating frame carrying a punching die, a rocking lever for operating said frame, a plunger die arranged to reciprocate through said punching die, a rocking lever for operating said plunger die, rolls carried by said levers, and flanged eccentrics, the inner and outer surfaces of which are engaged by said rolls to operate said dies in timed relation to each other, substantially as described.

5. A machine for stamping and forming articles from sheet metal, having, in combination, a punching die, a forming die arranged to reciprocate through the punching die, and means including two continuously rotating eccentrics for reciprocating the dies in timed relation so that the punching and forming dies simultaneously move toward the work, the punching die operates to cut a blank from the work and then stops, and the forming die continues its movement to shape the blank cut out by the punching die, substantially as described.

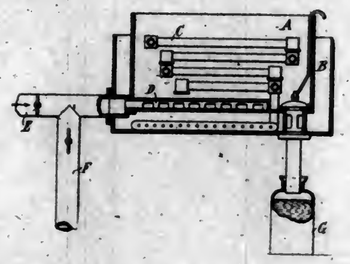
[Claims 6 to 9 not printed in the Gazette.]

1,016,548. MILK PRODUCT AND PROCESS. CHARLES H. CAMPBELL, New York, N. Y., and PEARL T. CAMPBELL, Hackensack, N. J. Filed Jan. 2, 1906. Serial No. 294,174. (Cl. 99—5.)

1. The process of treating milk to obtain a product with a reduced proportion of sugar, which consists in removing at least a portion of the cream, concentrating the remaining milk to about one-fourth of its original volume and at a temperature below the coagulating point of albumen, cooling it to precipitate a portion of the sugar, removing the precipitated sugar and then heating the mass to a temperature above the coagulating point of albumen and below about 210 degrees F. to stiffen and whiten it, and restoring cream to the product.

2. In the treatment of milk to obtain a product with a reduced portion of sugar, concentrating the milk at a temperature below the coagulating point of albumen, separating out only a portion of the sugar, and then heating the mass to a temperature above the coagulating point of albumen to stiffen and whiten it.

3. In the treatment of milk to obtain a product with a reduced portion of sugar, concentrating the milk at a temperature below the coagulating point of albumen, separating out only a portion of the sugar, and then heating it to a temperature above the coagulating point of albumen and below 210 degrees F. to stiffen and whiten it.



4. In the treatment of milk to obtain a product with a reduced portion of sugar, heating the milk and blowing air therethrough until it is concentrated to approximately one-fourth of its original volume, the temperature of the milk being maintained below the coagulating point of albumen, cooling it to precipitate a portion of the sugar, and decanting the milk to separate it from the sugar.

5. In the treatment of milk to obtain a product with a reduced portion of sugar, concentrating the milk at a temperature below the coagulating point of albumen, separating out a portion of the sugar and then heating it to a temperature above the coagulating point of albumen to stiffen and whiten it, and adding cream.

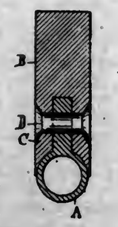
[Claims 6 and 7 not printed in the Gazette.]

1,016,549. IRON-NICKEL-COPPER ALLOY. GUILLIAM H. CLAMER, Philadelphia, Pa. Filed Aug. 19, 1909. Serial No. 513,537. (Cl. 75—1.)

1. A homogeneous iron-nickel-copper alloy comprising nickel 25 to 50 per centum, copper 5 to 20 per centum, iron 30 to 70 per centum, and carbon and which is free from hard metallic nodules.

2. A homogeneous iron-nickel-copper alloy comprising nickel 25 to 50 per centum, copper 5 to 20 per centum, iron 30 to 70 per centum and which is free from hard metallic nodules.

1,016,550. ICE-CUTTING APPARATUS. FREDERICK B. CLARK, Philadelphia, Pa., assignor to Sarah Annie Weston, Arden, N. C. Filed Mar. 19, 1910. Serial No. 550,385. (Cl. 62—6.)

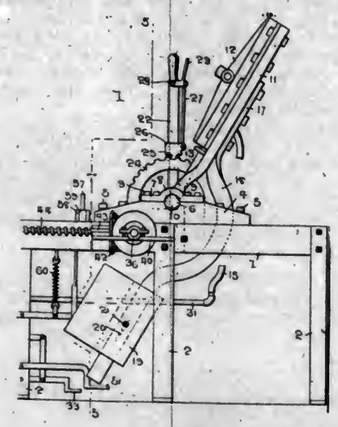


1. A steam tube for an ice cutter of the type described having a longitudinal securing fin, in combination with a backing plate grooved on one edge to receive said tube and recessed to receive said securing fin, and means for securing said fin to the backing plate.

2. A cutting blade of an ice cutter of the type described, having a cutting tube and a longitudinal securing fin therefor, in combination with a backing plate recessed to receive said fin and means in combination with said fin for uniting said tube and backing plate together.

3. A steam tube for an ice cutter of the type described, having a longitudinal securing fin, in combination with a backing plate and securing means passing through said fin and backing plate to hold said tube in position.

1,016,551. DRILL-SHARPENING MACHINE. JAMES W. COYLE, Carterville, Mo., assignor of one-half to W. A. Cristy, Joplin, Mo. Filed Feb. 28, 1911. Serial No. 611,497. (Cl. 76—5.)



1. A drill sharpening machine comprising a framework, means for supporting said framework, shaft mountings carried by said framework, a shaft mounted in said shaft mountings, a cylinder supported upon the said shaft, a piston working within said cylinder, a hammer upon the other end of said piston, an anvil mounted in said frame below the hammer, counterbalancing and shock absorbing means connected with said cylinder, said counterbalancing and shock absorbing means being adapted to counterbalance the weight of the cylinder and absorb the shock caused by the strokes of the piston and hammer, a lever upon one end of said shaft, a sleeve slidable upon said lever, a rack mounted upon said framework adjacent said lever, said sleeve adapted for engagement with said rack, means for disengaging said sleeve from said rack, said lever being adapted to be swung in reverse directions when the sleeve is disengaged from the rack to adjust the angle of the piston carrying the hammer in respect to the upper surface of the anvil, said anvil being adapted to receive thereupon the heated end of a tool to be sharpened, said hammer being adapted to strike upon the heated end of the tool to sharpen the latter, means for operating said piston to cause it to strike upon said tool, a rest for the opposite end of said tool, and means for adjusting said rest longitudinally of the framework.

2. A drill sharpening machine comprising a frame work, an anvil carried thereby, means carried by said frame work for holding a tool against said anvil, a transverse shaft carried by said frame work, parallel bars rigidly secured to said shaft, a cylinder mounted on said bars, a piston in said cylinder, a hammer connected thereto, a bar having a bifurcated end secured to said parallel bars, a counterbalancing weight carried by the other end of said bar, means carried by said shaft for adjusting said cylinder relative to said anvil, and means for operating said hammer.

3. A tool sharpening machine comprising a frame work, supporting means therefor, an anvil carried by said frame work and adapted to receive one end of a tool, a reciprocating carriage for supporting the opposite end of said tool, pivot jaws for gripping the shank of said tool, said pivot jaws being positioned near said anvil, links connecting said jaws, a connecting arm pivoted to said links, means carried by said frame work supporting means pivoted to said connecting arm for operating said jaws, and tool sharpening means carried by said frame work.

1,016,552. METHOD OF MAKING SHIRTS. ARTHUR J. CUMMOCK, New York, N. Y. Original application filed July 27, 1906, Serial No. 328,128. Divided and this application filed June 9, 1910. Serial No. 566,019. (Cl. 2—41.)

1. The method of making a garment having portions of similar and dissimilar contour by first cutting on a blank the top edges of said garment such that the edge portions of dissimilar contour will lie initially in the same plane and thereafter folding the blank along lines corresponding with the sides of the garment to bring portions of one contour in a different plane from portions of a different contour, substantially as specified.

2. The method of forming garments from a blank by one cutting and one folding operation, comprising first cutting the top edges of the garment having a plurality of dissimilar neck portions, one projecting at a different height from the other, and parts of different neck portions lying in the same plane one with the other and then folding the blank to bring the dissimilar neck portions in different planes such that one portion is superposed upon the other.

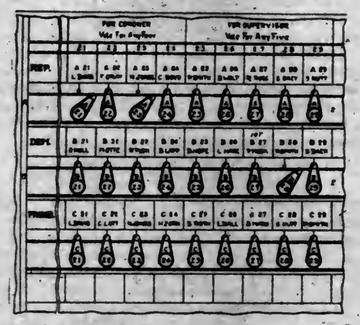
3. The method of making garments having portions of similar and dissimilar contour by first cutting on a tubular web the top edges of said garment such that there will be edges of dissimilar contour on each layer and thereafter folding the web along lines corresponding with the selvages thereof to make the garment ready for sewing, substantially as specified.

1,016,553. VOTING-MACHINE. WILLIAM H. DANA, Dayton, Ohio, assignor to Leopold Rauh, Dayton, Ohio. Filed May 27, 1910. Serial No. 563,770. (Cl. 233—54.)

1. In a voting machine, in combination with a series of voting levers and a series of primary interlocking devices to prevent the actuation of more than a predetermined number of voting levers, a supplemental pair of sliding blocks for each selected lever, and connecting plates to connect together the pairs of blocks whereby only a single pair of blocks can be actuated in any group of selected sliding voting levers.

2. In a voting machine, in combination with a series of voting levers and a series of primary interlocking devices to prevent the actuation of more than a predetermined number of voting levers, a pair of supplemental sliding blocks, one for each selected lever, with a pin on the voting lever to engage the supplemental block and separate the same, and means to connect together the pairs of blocks of any group of sliding levers without interference with the intermediate interlocking devices.

3. In a voting machine, in combination with a series of voting levers and a series of primary interlocking sliding blocks for each office row, and guide bars to hold the blocks, of supplemental sliding blocks, one for each selected voting lever and slotted connection for each set of supplemental sliding blocks, with the guide bars to permit separation a predetermined distance, with pins on the voting levers to engage the supplemental sliding blocks and separate same the predetermined distance, and connecting devices to connect together one of each set of supplemental blocks whereby the actuation of any set of supplemental blocks will prevent the actuation of any other voting levers of the selected group.

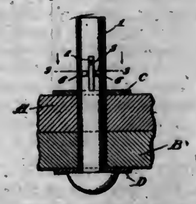


4. In a voting machine, in combination with a series of voting levers and a series of primary interlocking devices to prevent the actuation of more than a predetermined number of voting levers, a supplemental interlocking device for selected voting levers comprising a pair of interlocking plates, for each selected lever, one plate provided with actuating member slidingly mounted thereon, and connection therefor with the selected voting lever whereby the actuation of the sliding member will spread the plates a predetermined distance.

5. In a voting machine, in combination with a series of voting levers and a series of primary interlocking devices to prevent the actuation of more than a predetermined number of voting levers, a supplemental interlocking device for selected voting levers comprising a pair of interlocking plates, for each selected lever, one plate provided with an actuating member slidingly mounted thereon, a slot in the sliding member and a pin on the voting levers engaging said slot whereby the actuation of the voting lever will shift said sliding member to spread the plates a predetermined distance.

[Claim 6 not printed in the Gazette.]

1,016,554. BOLT-LOCK. ELMER E. DAVENPORT, Baraboo, Wis., assignor of one-half to Merwin R. Davenport, Baraboo, Wis. Filed July 15, 1911. Serial No. 638,783. (Cl. 85—5.)



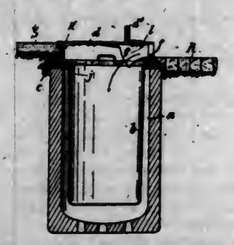
1. The combination with a bolt provided with an aperture; of a lock for said bolt comprising a wedge key fitting within said aperture; and a pin overlying one end of said key and secured to said bolt, substantially as described.

2. The combination with a bolt provided with an aperture; of a lock for said bolt comprising a wedge key fitting within said aperture; and a U-shaped pin fitting closely against the sides and end of the key and having its ends passing through said aperture and bent around the sides of said bolt, substantially as described.

1,016,555. TOOTH. LOYD DAVIS, Nauvoo, Ill. Filed May 1, 1911. Serial No. 624,360. (Cl. 32—12.)

An artificial tooth having its occlusal surface provided with an anchoring seat of truncated cone shape, and a bridge having an integral anchor cast into the seat and corresponding in contour thereto.

1,016,556. STREET-REFUSE COLLECTOR. HERMANN DÖRING, Berlin, Germany. Filed May 31, 1911. Serial No. 630,401. (Cl. 182—10.)

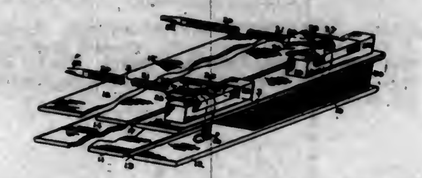


1. In a street refuse collector, the combination with a vessel open at the top and adapted to be embedded in the soil, of a frame on the upper edge of said vessel made to flush with the side-walk and having an inner shoulder and an aperture in the side in line with the border-stones, the bottom of the aperture being made to flush with the road, a large cover part adapted to cover the greater portion of said frame, a small cover part hinged to said large cover part and adapted to open and to close the aperture of said frame, and a receptacle for refuse adapted to be inserted into said vessel and to rest with its upper edge on the inner shoulder of said frame.

2. In a street refuse collector, the combination with a vessel open at the top and adapted to be embedded in the soil, of a frame on the upper edge of said vessel made to flush with the side-walk and having an inner shoulder and an aperture in the side in line with the border-stones, the bottom of the aperture being made to flush with the road, a receptacle for refuse adapted to be inserted into said vessel and to rest with its upper edge on the inner shoulder of said frame, a large cover part hinged to said frame and adapted to cover its greater portion, a guide fastened to the underside of said large cover part and adapted to conduct the refuse from the road into said receptacle, and a small cover part hinged to said large cover part and adapted to open and to close the aperture of said frame.

1,016,557. LOOSE-LEAF BINDER. WILLIAM FAIRCHILD, Albany, N. Y., assignor to William C. Martineau and Clarence R. Martineau, Albany, N. Y. Filed Feb. 24, 1911. Serial No. 610,588. (Cl. 129—12.)

1. A retaining device for a loose-leaf binder having upper and lower clamping portions, comprising a flexible stem secured to one of said clamping portions; and locking means rigidly secured to the other of said clamping portions with which said stem is adapted to be manually engaged for holding the latter in bent position with its free end substantially at a right angle with its leaf engaging portion.



2. A retaining device for a loose-leaf binder having upper and lower clamping portions, comprising a flexible, resilient stem secured to said lower clamping portion; and locking means rigidly secured to said upper clamping portion with which said stem is adapted to be manually engaged for holding the latter in bent position with its free end substantially at a right angle with its leaf-engaging portion.

3. A retaining device for a loose-leaf binder comprising a flexible stem, and locking means for detachably holding said stem in bent position, said stem being engageable with said locking means by being first bent in a vertical and afterward in a substantially horizontal plane.

4. A retaining device for a loose-leaf binder having upper and lower clamping portions, comprising a flexible, extensible stem consisting of a spirally coiled, resilient wire secured to said lower clamping portion; and locking means rigidly secured to said upper clamping portion with which said stem is adapted to be manually engaged for holding the latter in bent position with its lower leaf-engaging portion slightly extended.

5. A retaining device for a loose-leaf binder having upper and lower clamping portions, comprising a flexible stem consisting of a spirally coiled, resilient wire secured to said lower clamping portion; and locking means rigidly secured to and above said upper clamping portion with which said stem is adapted to be manually engaged for holding the latter in bent position with its free end above and substantially parallel with said upper clamping portion.

[Claims 6 to 12 not printed in the Gazette.]

1,016,558. PNEUMATIC ATTACHMENT FOR VEHICLE-WHEELS. HERMAN GARRISON, Chicago, Ill. Filed Feb. 13, 1911. Serial No. 608,293. (Cl. 152—28.)

1. An attachment of the character described consisting of a pneumatic tire of the ordinary construction fitted to the rim of the wheel, and an expansible pneumatic mounted on the wheel in communication with said tire and between the hub and rim of the wheel, said pneumatic comprising a pair of spaced apart plates, a flexible construction extending between the respective edges of said plates, and means to press one of said plates toward the other.

2. An attachment of the character described consisting of a pneumatic tire of the ordinary construction fitted to the rim of a wheel, and an expansible pneumatic in communication with said tire, said pneumatic consisting of a pair of spaced apart plates mounted on the wheel and approximately parallel to the plane of the rim, means flexibly connecting said plates at their edges, and means to press one of said plates toward the other.

3. An attachment of the character described consisting of a pneumatic tire applied to the rim of a wheel, and an expansible pneumatic mounted on the wheel in communication with said tire and between the hub and rim of the wheel, said pneumatic comprising a pair of spaced apart plates, means flexibly connecting said plates at their edges, and means to press one of said plates toward the other.

4. An attachment of the character described consisting of a pneumatic tire applied to the rim of a wheel, and an expansible pneumatic mounted on the wheel in communication with said tire and between the hub and rim of the wheel, said pneumatic comprising a circular plate having a central opening to receive and engage the hub of the wheel and secured at its outer portion to the rim of the wheel, a movable tension disk located on one side of said plate, and means flexibly connecting said plate and disk at their outer and inner portions thereby forming an air chamber.

5. An attachment of the character described consisting of a pneumatic tire applied to the rim of a wheel, and an expansible pneumatic mounted on the wheel in communication with said tire and between the hub and rim of the wheel, said pneumatic comprising a circular plate having a central opening to receive and engage the hub of the wheel and secured at its outer portion to the rim of the wheel, a spring pressed movable disk located on one side of said plate, means flexibly connecting said plate and disk at their outer and inner portions thereby forming an air chamber, and a valved nipple communicating with said chamber.

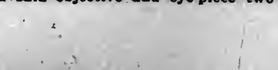
1,016,559. FLUE TURNING AND BEADING TOOL. JOHN FRANCIS GERO, Newark, Ohio. Filed Apr. 10, 1911. Serial No. 620,060. (Cl. 81—79.)

1. A tool for turning and beading a flue, comprising a shank portion, a central portion integral with said shank portion, a working end integral with said central portion opposite said shank portion, said working portion having opposite converging beveled sides and opposite parallel straight sides at right angles to said beveled sides, one of said straight sides being shorter than the opposite straight side, said working portion having a flue-engaging end with which said sides connect, said flue-engaging end having a semicircular flue-receiving recess, an outwardly curved flue entering portion connecting with said semicircular recess and the long straight side of said working end, and a short straight portion for said engaging end connecting with the semicircular recess and with the short straight side, said straight portion being at an angle to said short straight side.

2. A tool for turning and beading a flue comprising a shank portion, a central portion integral with said shank portion, a working end integral with said central portion opposite said shank portion, said working portion having opposite converging beveled sides and opposite parallel straight sides at right angles to said beveled sides, one of said straight sides being shorter than the opposite straight side, said working portion having a flue-engaging end with which said sides connect, said flue-engaging end having a semicircular flue receiving recess, and an outwardly curved flue entering portion connecting with said semicircular recess and the long straight side of the working end, said short straight edge being at a great angle to the said short side.

3. A flue turning and beading tool having a flue engaging end of rectangular form in cross section, the end having a nick thereacross the narrow way to receive a small portion of the end of a flue, said nick being adapted to receive therein a portion of the end of a flue of any diameter for swaging or turning and beading the end of the flue, the tool being adapted to be moved around the edge of the flue during the operation of turning and beading the end thereof, and a central portion integral with the end of the tool and having a shank projecting therefrom for connection with suitable power for driving the end of the tool against the edge of the flue, the power being concentrated and applied to a small portion of the end of the flue resting within the nick in the end of the tool.

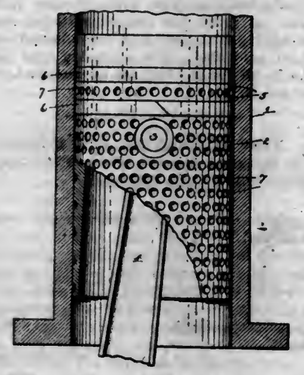
1,016,560. ARMOR-PLATE AND OTHER STEEL ARTICLE. FEDERICO GIOLITTI, Rome, Italy, assignor to Societa Anonima Italiano Gio Ansaldo Armstrong & Co., Genoa, Italy, a Company incorporated in Italy. Original application filed Sept. 6, 1906, Serial No. 333,408. Divided and this application filed Oct. 10, 1907. Serial No. 396,864. (Cl. 148—40.)



1. A steel plate or other article having on one or more surfaces a zone of considerable thickness throughout which is diffused a characteristic metallic steel component not contained in the other part of the article, the said metallic component being graded from a maximum inwardly to a minimum, such zone having a less proportion of carbon than in the other portion of the article.

2. A ternary steel plate or other article having on one or more surfaces a quatenary zone of considerable thickness throughout which is diffused a characteristic metallic steel component not contained in the other part of the article, the said metallic component being graded from a maximum inwardly to a minimum, such zone having a less proportion of carbon than in the other portion of the article.

1,016,561. PLUNGER AND CYLINDER PACKING. PETER GRABLER, Cleveland, Ohio. Filed June 2, 1909. Serial No. 499,741. (Cl. 121—108.)

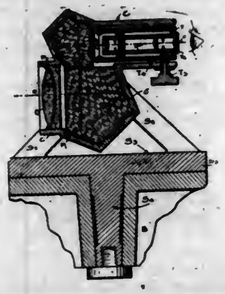


In combination, a cylinder, and a plunger having its bearing surface provided with a plurality of transversely isolated pockets.

1,016,562. PRISMATIC TELESCOPE. GRAVES GRIFFITH, San Francisco, Cal. Filed June 6, 1911. Serial No. 631,560. (Cl. 88—3.)

1. In a prismatic telescope, an objective adapted to receive rays of light from a distant point and to cause convergence thereof, a magnifying eye-piece for said rays, and between said objective and eye-piece two prisms of

optical square form rigidly secured in relation to one another in an invert-reverse order.

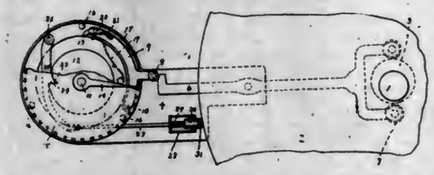


2. In a prismatic telescope, an objective, two prisms of pentagonal, or optical square, form, the second prism of which, with regard to the first, is positioned in an invert-reverse order, a tube, a cross-wire supported thereby, means for moving this tube with regard to the objective, a tube movable within the aforesaid tube, and a shell for said elements, all for the purpose described and as set forth.

3. In a prismatic telescope, an objective, two prisms of the pentagonal, or optical square, form, the second prism of which is positioned with regard to the first in an invert-reverse order, a tube, a cross-wire supported thereby, a tube within the first-named tube, ocular lenses carried by the second tube, means for moving the first mentioned tube with reference to the objective, the second-mentioned tube being movable with reference to the cross-wire, a shell provided with trunnions, a graduated casing or support for said shell, for the purpose and substantially as set forth.

4. In a prismatic telescope, an objective, two prisms of the pentagonal or optical square form, the second prism of which is positioned in an invert-reverse order with reference to the first, a tube, a cross-wire, carried thereby, a tube within the first-named tube, ocular lenses carried by said second-named tube, means for moving the first-mentioned tube with reference to the objective, the second mentioned tube being movable with reference to the cross-wire, a shell carrying the before-mentioned optical elements and having trunnions and a graduated arc, and a mounting for said shell, said mounting also carrying a graduated arc, all for the purpose as described and in the manner as set forth.

1,016,563. STOP MECHANISM FOR PHONOGRAPHS. OSCAR W. HARTUNG, Detroit, Mich. Filed Apr. 5, 1911. Serial No. 619,187. (Cl. 181—3.)



1. In a stop mechanism for sound reproducing instruments, the combination of a notched disk, a lever mounted adjacent thereto and having a tooth adapted to enter the notch, a brake rod connected to said lever, a spring to move the rod to braking position when permitted by the disk, a graduated dial, a pointer movable over the dial to position the notched disk, and means actuated by the sound reproducing instrument to revolve said disk.

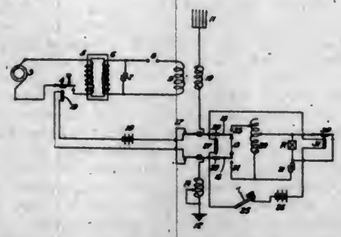
2. In a stop mechanism for sound reproducing instruments, the combination of a disk provided with a notch, a lever mounted adjacent thereto and having a tooth adapted to ride on the periphery of the disk and to enter the notch, a brake rod connected at one end to said lever, a guide for the other end of the rod, and a spring to press the end of the rod against the table of the sound reproducing instrument when permitted by the notched disk, and means connected to said table for turning said disk.

3. In a stop mechanism for sound reproducing instruments, the combination of a disk provided with a notch, a lever mounted adjacent thereto and having a tooth adapted to ride on the periphery of the disk and to enter the notch, a brake rod connected at one end to said lever, a guide for the other end of the rod, and a spring to press the end of the rod against the table of the sound reproducing instrument when permitted by the notched disk, means connected to said table for turning said disk, a graduated dial, and a pointer connected to said disk and movable over the dial to indicate the number of revolutions of the table desired.

4. In a stop mechanism for sound reproducing instruments, the combination of a vertical revoluble shaft, an indicator at the upper end thereof, a disk having a notch in its periphery and a toothed wheel secured to said shaft below the indicator, an arm and pawl to actuate the toothed wheel, disk and indicator, an operating lever engaging the arm and actuated by the mechanism of the sound reproducing instrument, a lever pivoted adjacent the disk and having a tooth adapted to enter said notch, a rod connected to the free end of the lever and having an enlarged end adapted to act as a brake for the mechanism of the instrument, and a spring to move the brake to operating position.

5. In a stop mechanism, for the tables of sound reproducing instruments, the combination of a spring pressed brake for said table, a lever connected thereto, a notched disk engaging said lever and normally holding the brake inoperative, means comprising an indicator for positioning said disk, and means actuated by the driving mechanism of the table for revolving said disk.

1,016,564. BREAK-KEY. JOHN L. HOGAN, Jr., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 9, 1910. Serial No. 581,333. (Cl. 178—319.)



1. The combination with a sending circuit and a receiving oscillating circuit and an antenna associated with both said circuits, of a break key adapted to entirely isolate the receiving circuit from the antenna from ground and afterward close the sending circuit, whereby the antenna is energized, substantially as described.

2. In wireless telegraph apparatus, the combination with a sending circuit and a sending key, of a receiving apparatus and a switch operated by the sending key to cut off the receiving oscillation circuit from both the radiator and the ground before connecting the radiator with the sending circuit.

3. A break key for wireless telegraph apparatus which includes sending and receiving circuits, comprising a switch and means controlled thereby operating to first isolate the receiving circuit by short-circuiting its antenna and ground connections, then to complete the antenna circuit and then to close the sending circuit, all in one motion, substantially as described.

4. A switching device for wireless telegraphy apparatus including sending and receiving oscillation circuits, said device adapted at one end to alternately connect and disconnect the receiving oscillation circuit both with the antenna and the ground and the other end of said device adapted to close the sending control circuit after disconnecting the antenna and ground from the receiving oscillation circuit, substantially as described.

5. The combination with a source of power, an oscillatory sending circuit and a grounded antenna connected therewith, of an oscillating receiving circuit, a sending key and a switch adapted to connect the receiving circuit with the antenna in one position, and in another position to completely isolate the receiving circuit from the antenna and from the ground and afterward complete the sending circuit, substantially as described.

[Claim 6 not printed in the Gazette.]

1,016,565. KNOCKDOWN OVEN. WALTER E. HUENEFELD, Cincinnati, Ohio, assignor to The Huenefeld Company, Cincinnati, Ohio. Filed Oct. 3, 1910. Serial No. 585,126. (Cl. 126—275.)

1. A knockdown oven, comprising a top member having a front flange, the free edge of said flange having a lip forming projecting lugs at the ends of said front flange, end members having interlocking connection with the top member and provided with front flanges having their upper ends disposed between the front flange of the top member and the projecting lugs thereon, and a back member having interlocking connection with the end members.

2. A knockdown oven comprising a top member having a front flange, end members having interlocking connection with said top member and provided with bottom flanges and with front flanges, a back member having interlocking connection with the end members, and provided with a bottom flange, a front sheet or strip secured to the front flanges of the end members and provided with a bottom flange secured to the bottom flanges of the end members, and a door hinged to said front sheet or strip and cooperating with the front flanges of the top and end members to close the front of the oven.

1,016,566. OVEN-DOOR. WALTER E. HUENEFELD, Cincinnati, Ohio, assignor to The Huenefeld Company, Cincinnati, Ohio. Filed Jan. 23, 1911. Serial No. 604,233. (Cl. 126—200.)

1. In an oven door, the combination with a frame sheet and a lining sheet, both having openings for a panel, said frame sheet provided at diametrically opposite edges with off-set flanges, and a glass panel seated against said off-set flanges, of a removable retaining strip coöperating with one of said off-set flanges of the frame sheet to hold the glass panel in place, said retaining strip comprising a strip of metal bent to form a flattened bead member and two members projecting from the bead member, one member of said retaining strip entering between the frame and lining sheets, another member of said strip disposed to form a yielding abutment for an edge of the glass panel, and the remaining member of said strip bearing with yielding pressure against the inner face of the glass panel near an edge thereof.

2. In an oven door, the combination with a frame sheet provided at diametrically opposite edges with off-set inwardly projecting flanges, and a lining sheet for the door having an opening in line with the opening of which said inwardly projecting flanges constitute the side edges, of removable retaining means for a glass panel, said retaining means consisting of a sheet metal strip bent between its ends to form a flattened bead and having a member at one side of said bead disposed between the lining and frame sheets and said strip having an inwardly projecting member at the opposite side of said bead disposed approximately parallel with the adjacent inwardly projecting off-set flange of the frame sheet, and a glass panel seated against said inwardly projecting off-set flange of the frame sheet and engaged by the inwardly projecting member of the retaining strip, the flattened bead of said retaining strip disposed to form an abutment for the side edge of the glass panel.

1,016,567. SPRING-ARMATURE RELAY. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 28, 1910. Serial No. 551,958. (Cl. 178—304.)

1. A relay comprising a core, an energizing winding about said core, a pole piece secured to one end of said core, and extending at right angles therefrom, an integral flexible spring armature secured at one end to said pole piece, a contact carried at the free end of said spring armature, a second pole piece secured to the other end of said core and extending at right angles therefrom, a second contact registering with the contact on said armature, the said second pole piece being adapted when the relay is energized to attract the free end of the said armature, whereby there is a coöperation between said contacts, substantially as described.

2. A relay comprising a core, an energising winding about said core, a pole piece secured to one end of said core, an integral flexible spring armature secured at one end to said pole piece and lying in a plane parallel to the axis of said core, a contact carried at the free end of said spring, a second pole piece secured to the other end of said core, a second contact registering with the contact on said armature, the said second pole piece being adapted when the relay is energised to attract the free end of the said armature whereby there is a co-operation between said contacts, substantially as described.

3. A relay comprising a core, an energising winding about said core, a pole piece secured to one end of said core, a second pole piece secured to the other end of said core, a heel iron secured at one end to the first mentioned pole piece and having a free end terminating at a point adjacent to said second pole piece, an integral flexible spring armature secured at one end to said first mentioned pole piece and having a free end extending between the free end of said heel iron and the pole piece

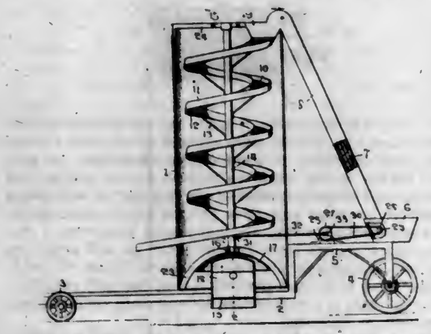
adjacent thereto, the said second pole piece being adapted when the relay is energized to attract the free end of the said armature, substantially as described.

4. A relay comprising a core, an energizing winding about said core, a pole piece secured to one end of said core, a second pole piece secured to the other end of said core, a heel iron secured at one end to the first mentioned pole piece and having a free end terminating at a point adjacent to said second pole piece, an integral flexible spring armature secured at one end to said first mentioned pole piece and having a free end extending between the free end of said heel iron and the pole piece adjacent thereto, a contact carried at the free end of said spring armature, a second contact registering with the contact on said armature, the said second pole piece being adapted when the relay is energized to attract the free end of the said armature, whereby there is a coöperation between said contacts, substantially as described.

5. A relay comprising a core, an energizing winding about said core, a pole piece secured to one end of said core, a second pole piece secured to the other end of said core, said pole pieces extending at right angles to the axis of said core, a heel iron secured at one end to the first mentioned pole piece and having a free end terminating at a point adjacent to said second pole piece, an integral flexible spring armature secured at one end to said first mentioned pole piece and having a free end extending between the free end of said heel iron and the pole piece adjacent thereto, said heel piece being included in a magnetic circuit when said relay is energized and adapted to conduct lines of force from said magnetic circuit to said spring armature, whereby said armature is attracted to said second pole piece, substantially as described.

[Claim 6 not printed in the Gazette.]

1,016,568. DRIER. WILLIAM LANDES, Canton, Kans. Filed Aug. 17, 1911. Serial No. 644,540. (Cl. 34—42.)

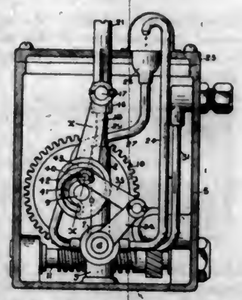


1. A drying apparatus comprising a cylinder, a central post within the cylinder, brackets extending from the central post, a spiral sieve resting upon the brackets outwardly of the central post and a spaced distance from the inner wall of the cylinder, means for dropping the material to be dried upon the sieve, means for warming the air within the cylinder, and means for rocking the central post in opposite directions to oscillate the sieve with the material thereupon.

2. A drying apparatus comprising a cylinder having a closed lower end and an open upper end, a central post within the cylinder, said post being mounted for rotation in opposite directions, a sieve within the cylinder, means carried by the post for supporting the sieve outwardly of said post and inwardly of the inner wall of the cylinder, means carried by the cylinder for supporting the opposite ends of the post, means for delivering material to be dried upon the sieve, means for rotating the post in opposite directions to oscillate the sieve, means for heating the material delivered upon the sieve, and means for operating the material delivering means.

3. A drier comprising a cylinder, a shaft within the cylinder, a heat compartment at the lower end of the cylinder, a spiral sieve within the cylinder, said sieve being supported around the shaft, a deflector below the sieve and above the heat compartment for deflecting and distributing the heat emanating from the heat compartment, an elevator for delivering material to be dried upon the upper end of the sieve, means for supporting the cylinder and the elevator for transportation, and means for operating the elevator and rotating the shaft in opposite directions to oscillate the sieve and cause the material thereon to move downwardly to the lower end of said sieve.

1,016,569. LUBRICATOR. JOSEPH P. LAVIGNE, Detroit, Mich. Filed Apr. 23, 1910. Serial No. 557,146. (Cl. 184—34.)



1. In a force feed lubricator, a pump cylinder and feed cylinder in parallel relation, a sight feed connection between the outlet port of the pump cylinder and the inlet port of the feed cylinder, plungers for the cylinders, a yoke coupling the plungers to reciprocate together, an oscillatory valve journaled transversely in the cylinders and adapted to alternately connect the inlet and outlet ports of the cylinders with the cylinder interiors, a shaft, eccentrics on the shaft, eccentric rods thereon whose outer ends support and reciprocate the yoke, studs on the eccentrics, rock arms on the valve and links connecting the studs and arms, the operating members being so arranged that the plungers are substantially in mid-stroke when the valve is nearing the limit of its throw.

2. In a force feed lubricator, a pump cylinder and feed cylinder in parallel relation, a sight feed connection between the outlet port of the pump cylinder and the inlet port of the feed cylinder, plungers for the cylinders, a yoke coupling the plungers to reciprocate together, an oscillatory valve journaled transversely in the cylinders and adapted to alternately connect the inlet and outlet ports of the cylinders with the cylinder interiors, eccentrics on the shaft, eccentric rods thereon whose outer ends support and reciprocate the yoke, studs on the eccentrics, rock arms on the valve, and links connecting the studs and arms, the operating members being so arranged that the plungers are substantially in mid-stroke when the valve is nearing the limit of its throw, and are temporarily at rest at each end of their stroke.

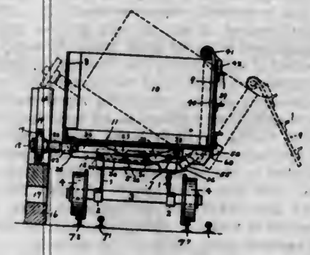
3. In a force feed lubricator, a reservoir casing, a series of pump cylinders and feed cylinders disposed in pairs across the casing base, the end pairs being secured on the base and the intermediate pairs being supported by an oscillatory valve journaled transversely in all the cylinders and adapted to connect either the inlet or the outlet port of each cylinder with the cylinder interior, a shaft journaled on the end pairs of cylinders parallel to the valve, eccentrics on the shaft, eccentric rods thereon, a yoke supported and reciprocated by the eccentric rods and adapted to simultaneously move the plungers, rock arms on the valve and links pivoted at one end to the arms and at the other to studs on the eccentrics, the parts being so arranged that the plungers are at substantially mid-stroke when the valve is approaching the limit of its throw.

4. In a force feed lubricator, a reservoir casing, a series of pump cylinders and feed cylinders disposed in pairs across the casing base, the end pairs being secured on the base and the intermediate pairs being supported by an oscillatory valve journaled transversely in all the cylinders and adapted to connect either the inlet or the outlet port of each cylinder with the cylinder interior, a shaft journaled on the end pairs of cylinders parallel to the valve, eccentrics on the shaft, eccentric rods thereon, an apertured yoke supported and reciprocated by the eccentric rods through which the plungers extend, stops on the plungers below the yoke, stops on the plungers above the yoke, those on the pump cylinders being adjustable to vary the plunger stroke, rock arms on the valve, disks secured on the shaft, studs engaging the disks, and links pivoted at one end to the arms and at the other to the studs, the parts being so arranged that the plungers are at substantially mid-stroke when the valve is approaching the limit of its throw, and the stops being so disposed that the plungers are temporarily at rest at the ends of their strokes.

5. In a force feed lubricator, a pump cylinder and feed cylinder in parallel relation, a vented sight feed connection between the outlet port of the pump cylinder and the inlet port of the feed cylinder, plungers for the cylinders, a yoke coupling the plungers to reciprocate together, an oscillatory valve journaled transversely in the cylinders and adapted to alternately connect the inlet and outlet ports of the cylinders with the cylinder interiors, eccentrics secured on the shaft, eccentric rods thereon whose outer ends support and reciprocate the yoke, disks secured on the shaft, studs movably secured on the disks and adapted to shift through an arc of 180 degrees on reversal of the shaft, rock arms on the valve and links connecting the studs and arms, the operating members being so arranged that the plungers are substantially in mid-stroke when the valve is nearing the limit of its throw.

[Claim 6 not printed in the Gazette.]

1,016,570. DUMP-CAR. CHARLES L. LAWTON, Hancock, Mich. Filed June 2, 1911. Serial No. 630,864. (Cl. 214—1.)



1. In a dump-car, the combination with the frame, axles, and wheels, of cross-beams mounted on the frame, pivots carried thereby, a car body, cross beams on the lower side of the body and formed with holes to receive the pivots, a heavy bar slidable on the lower side of the body, and having a wheel on its outer end, and links connecting the bar, the main frame and the body whereby the bar is caused to move longitudinally outward when the body is turned about its pivots.

2. In a dump-car, the combination with the frame, axles and wheels, of a body comprising bottom, stationary and movable sides and ends, cross bars connected to the bottom and frame, pivots connecting the cross bars near one side of the body, a slidable bar mounted transversely to the bottom of the car, a wheel on its outer end, links connected to the inner end of said bar, to the edge of the car and to the frame on the opposite side from the pivots, and to each other, whereby the bar is caused to slide outward as the body is turned on its pivots to keep the wheels on the bar in substantially the same vertical line.

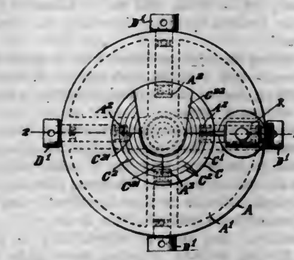
3. In a dump-car, the combination of the frame, axles and wheels, a body comprising bottom, stationary and movable sides and ends, cross bars extending upward from the frame and downward from the bottom, pins connecting said cross bars near one side of the body, a slidable bar mounted transversely of the bottom of the car near the middle, a wheel at the end opposite the pivots, a set of links connected to the side of the body near said wheel, a second set of links connected to the side of the frame adjacent said wheel and joined intermediate their ends to the ends of the first set of links, and a third set of links connecting to the free ends of the links of the second set and to the inner end of said bar, the proportions of the links being such that when the car body is tilted on its pivots, the bar will slide outward and the wheel move up in a substantially vertical line.

4. In a dump-car, the combination of a frame, axles and wheels, of a car body pivoted at one side to said frame and having the side next the pivots adapted to swing open, a bar transversely slidable beneath the body, and connections between the bar, frame and body so proportioned that when the side of the body is swung upward, the outer end of the bar moves up in a substantially vertical line.

5. In a dump-car, the combination of a frame comprising longitudinal and cross bars, a car-floor, cross bars connected to the lower side of said floor, pivots connecting the two sets of cross bars at one side of the frame, a slidable bar mounted transversely of said floor, an engaging member on the outer end thereof, and a series of links connected to the bar, to the car floor, to the frame, and to each other, whereby the bar is caused to slide outwardly as the floor turns on its pivots to keep the outer end of the bar in substantially the same vertical line.

[Claim 6 not printed in the Gazette.]

1,016,571. FARRIERY IMPLEMENT. SAUNDERS LEWIS, Jr., Philadelphia, Pa. Filed Oct. 16, 1909. Serial No. 522,940. (Cl. 73—151.)



1. In a farriery implement, the combination of a member adapted to engage the bottom of a horse's hoof, and a support on which said member is adjustably mounted to permit the inclination of the member to the support to be varied, said support being provided with a guide for a tool for marking a hoof engaging said member.

2. In a farriery implement, the combination of a member adapted to engage the bottom of a horse's hoof, a support on which said member is adjustably mounted to permit the inclination of the member to the support to be varied, a scribing tool, and means carried by said support for guiding said scribing tool in its movement about a horse's hoof engaging said member.

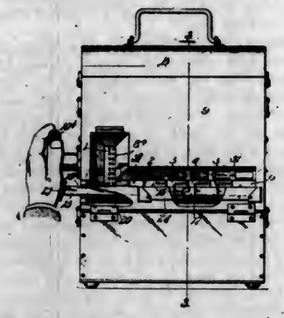
3. In a farriery implement, the combination of a member adapted to engage the bottom of a horse's hoof, a support to which the member is connected by a universal joint, and means for locking the member and support together in any desired adjustment.

4. In a farriery implement, the combination of a member adapted to engage the bottom of a horse's hoof, a support to which the member is connected by a universal joint, and adjustable devices extending between the member and support for holding the member rigid with respect to the support in different adjustments of the member relative to the support.

5. In a farriery implement, the combination of a member adapted to engage the bottom of a horse's hoof, a support to which the member is connected by a universal joint, and bolts mounted in said support and adjustable into positions in which they engage the member and hold it rigid with respect to the support in different adjustments of the member relative to the support.

[Claims 6 to 16 not printed in the Gazette.]

1,016,572. CALCULATING-MACHINE. NIM R. LONG, Troy, Mo. Filed Jan. 13, 1911. Serial No. 602,466. (Cl. 235—87.)



1. A calculating machine provided with a number table, means for moving said table, a spring-actuated decimal bar that coöperates with said table, and means for retaining said bar in adjusted position.

2. A calculating machine provided with a reciprocating decimal bar, yielding means for moving said bar in one direction, a stop which holds said bar in adjusted position, and means for holding said bar normally in engagement with said stop.

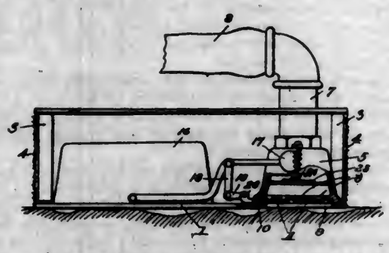
3. A calculating machine provided with a shiftable decimal bar, a device that retains said bar in adjusted position, and yielding means for normally holding said bar in engagement with said device.

4. A calculating machine provided with a decimal bar that is adapted to be shifted into different positions, means for automatically retaining said bar in adjusted position, and means for restoring said bar to normal position, or moving it in a reverse direction to that in which it was shifted, when it is released from said retaining means.

5. A calculating machine provided with a shiftable decimal bar having notches, a spring that tends to move said bar in one direction, a stop that coöperates with the notches in said bar, and yielding means for normally holding said bar in engagement with said stop.

[Claims 6 to 13 not printed in the Gazette.]

1,016,573. AUTOMATIC VALVE FOR MINE-PUMPS. WILLIAM F. MADDOX, Linton, Ind. Filed Aug. 7, 1911. Serial No. 642,682. (Cl. 103—61.)

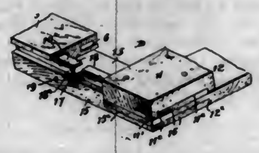


1. In a device of the class described, a water-chest formed with openings in its bottom, a valve-plate slidably disposed against the under side of the bottom of the water-chest and formed with openings arranged to register with the openings in the said bottom of the water-chest, a pipe leading from the water-chest, and a float having connection with the valve-plate and arranged to move the plate to position with the openings thereon out of register with the openings in the bottom of the water-chest, when lowered.

2. In a device of the class described, a water-chest having an opening in its bottom, a valve-plate slidably disposed against the bottom of the water-chest and having an opening arranged to register with the first mentioned opening, a pipe leading from the said chest, a shaft, a float supported thereon and arranged to rock the shaft upon rise or fall, and connection between the shaft and the valve plate for moving the latter when the shaft is lowered.

3. In a device of the class described, a water-chest, the chest being formed with an opening in its bottom, a valve-plate disposed against the under side of said water-chest and formed with an opening arranged to register with the first mentioned openings, a spring connected to the said water-chest and to the valve-plate and holding the valve-plate against the said bottom of the water-chest, and a float having operative connection with the valve-plate.

1,016,574. WINDOW-SCREEN. BURTON R. MCCOLLOM, Fenton, Mich., assignor to The A. J. Phillips Company, Fenton, Mich., a Corporation of Michigan. Filed June 28, 1910. Serial No. 569,412. (Cl. 156—38.)



1. An extensible screen comprising frame sections, one of said sections having a groove in its upper edge and the other section having a groove in its side spaced from its edge, and a metallic strip substantially L-shaped in cross section secured in one of said grooves and having a loose engagement with the other groove whereby the sections are slidably interlocked, and whereby the edges of the strip are inclosed and protected by the surrounding walls.

2. An extensible screen comprising frame sections, one of said sections having a groove in its upper edge and the other section having a groove in its side spaced from its edge, and a metallic strip substantially L-shaped in cross section secured in one of said grooves and having a loose engagement with the other groove whereby the sections are slidably interlocked, the angled strip when in place being co-extensive with one of said sections and positioned below the exposed outer edges of the sections.

3. In an extensible screen, the combination of wood frame sections, one section having a groove in its upper and lower edges intermediate the opposite surfaces of said sections, and a second section having a metallic strip secured to the upper and lower sides of the said second section at a point spaced from the edges thereof and co-extensive therewith, and said metallic strips having an angled flange extending longitudinally thereof throughout its length and loosely fitting the grooves of the first mentioned section.

1,016,575. SLIDE FOR MOTION-PICTURE MACHINES. HANS A. MEINHARDT, Pittsfield, Mass., assignor of one-half to Thomas J. Urell, Pittsfield, Mass. Filed Sept. 12, 1911. Serial No. 648,862. (Cl. 88—26.)

1. A slide for moving picture machines, comprising a transparent plate, a clock dial represented thereon, an arbor carried by the plate and centered within the dial, an hour hand mounted on the arbor in front of the plate, a transparent rotatable disk carried by the arbor back of the plate, and an opaque minute hand represented on the disk.

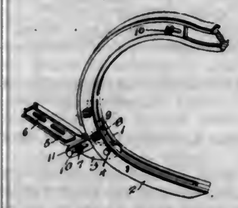
2. A slide for moving picture machines, comprising a transparent plate having a finger notch and a dial represented on the plate in proximity to said notch, an arbor carried by the plate and centered within the dial, a transparent rotatable disk carried by the arbor back of the plate, said disk being partly exposed through said notch, and an opaque hand represented on the disk.

3. A slide for moving picture machines comprising a transparent plate having a finger notch, a dial and display matter represented on the plate, an arbor carried by the plate and centered within the dial, an hour hand mounted on the arbor in front of the plate, a transparent rotatable disk carried by the arbor back of the plate, said disk being partly exposed through said notch, and an opaque minute hand represented on the disk.

4. A slide for moving picture machines, comprising a transparent plate having a dial represented thereon, a transparent disk rotatably secured to the plate and having a first hand represented thereon, said disk projecting beyond the plate edge so as to be manually accessible, and a manually accessible second hand rotatably secured to the plate.

5. A slide for moving picture machines, comprising a transparent plate having a dial represented thereon, a transparent disk rotatably secured to one side of the plate and having a minute hand represented thereon, said disk projecting beyond the plate edge so as to be manually accessible, and a manually accessible hour hand pivoted to the other side of the slide.

1,016,576. HANDLE-MOUNT. WILLIAM A. PARKER, Atlanta, Ga. Filed Aug. 1, 1911. Serial No. 641,838. (Cl. 97—26.)



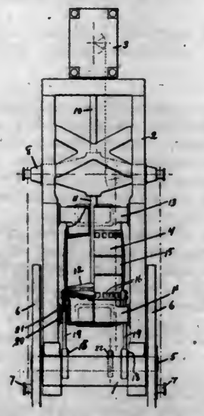
1. In combination with a standard having spaced side bars, a handle mount comprising a lug pivoted between the bars, a brace pivoted between the bars at a point above the handle lug, and a bolt and slot connection between the said brace and the intermediate portion of the lug.

2. In combination with a standard having spaced side bars, a handle mount comprising a lug pivoted between the side bars and reducing in transverse width from a point between its ends toward its upper end, a brace pivoted between the side bars of the standard above the lug, and a bolt and slot connection between the brace and the lug at a point between the ends of the lug.

3. In combination with a standard having spaced side bars, a handle mount comprising a lug pivoted between the bars, said lug having at its upper portion and at its opposite sides channels and having elongated slots which connect said channels, handles received at their lower ends within the channels, securing bolts passing transversely through the handles and the slots, a brace pivoted between the side bars at a point above the lug, and bolt and slot connection between the brace and the intermediate portion of the lug.

4. In combination with a standard having spaced side bars, a handle lug pivoted between the side bars, a brace pivoted between the side bars at a point above the handle lug and having at its rear portion branches which straddle the intermediate portion of the handle lug, said branches having elongated slots, and a securing bolt passing through said slots in the handle lug.

1,016,577. BLOWING-ENGINE. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Nov. 2, 1907. Serial No. 400,353. (Cl. 230—34.)



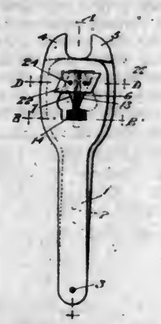
1. The combination with a steam cylinder, a vertical frame supporting said cylinder, a piston in said cylinder, a piston rod connected to said piston, a second piston on said rod below said first piston, a blowing cylinder for said second piston, a long crosshead connected to said piston rod between said cylinders, a shaft intersecting the axis of the cylinders and located adjacent said blowing cylinder and remote from said crosshead, cranks on said shaft, connecting rods connnecting said crosshead and said cranks, eccentrics on said shaft, and eccentric rods connected directly to said blowing cylinder at opposite points thereof in the plane of said shaft and piston rod and taking over said eccentrics, said cylinder being ported near its ends and movable on said frame and said eccentric rod connections to said blowing cylinder being in the plane of the axis of the cylinders and the axis of said shaft.

2. The combination with a steam cylinder, a frame supporting said cylinder, a piston in said cylinder, a rod connected to said piston, a second piston on said rod, a blowing cylinder for said second piston, heads for said blowing cylinder, said blowing cylinder and heads being housed within said frame, a crosshead connected to said rod between said cylinders, a shaft between which and said crosshead said blowing cylinder is located, said crosshead being connected to said shaft, eccentrics on said shaft, eccentric rods connected directly to said blowing cylinder and taking over said eccentrics, said cylinder being ported near its ends at opposite points thereof in the plane of said shaft and piston and movable on said heads by said eccentric rods, and said heads being fastened to the lower portion of said frame.

1,016,578. WRENCH. CHARLES E. PETERSON, New York, N. Y. Filed Nov. 21, 1911. Serial No. 661,593. (Cl. 81—112.)

1. A wrench comprising two overlapping combined jaw and handle members hinged together and having slots

crossing each other, a block fitted to slide in said slots and a longitudinally arranged thumb screw having a screw-threaded engagement with the block for moving it along said slots to open and close the jaws.

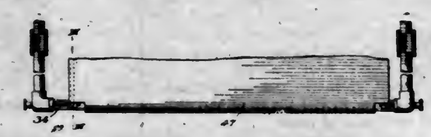


2. A wrench comprising two overlapping combined jaw and handle members hinged together and having slots crossing each other, a block fitted to slide in said slots, a longitudinally arranged thumb screw having a screw-threaded engagement with the block for moving it along said slots and means for preventing longitudinal movement of said thumb screw.

3. A wrench comprising two overlapping combined jaw and handle members hinged together and having slots crossing each other, a block fitted to slide in said slots, a longitudinally arranged thumb screw having a screw-threaded engagement with the block for moving it along said slots and side plate carried by the block overlapping the walls of their respective slots.

4. A wrench comprising two overlapping jaw and handle members hinged together and having cam slots crossing each other, a double cam block fitted to slide in said slots and a thumb screw engaging said block and having an enlargement forming a thumb piece and a plain extension, said overlapping members having recesses for receiving the enlargement and the end extension of the thumb screw.

1,016,579. FABRIC-TIGHTENER FOR BED-BOTTOMS AND THE LIKE. WALTER A. POULNOT, New York, N. Y. Filed Sept. 3, 1910. Serial No. 580,302. (Cl. 5—69.)



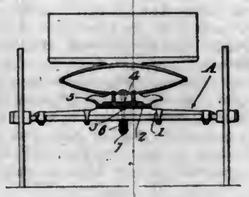
1. A device of the character described comprising sectional side members, means for connecting the adjacent ends of the sections of the side members, adjustable end members connecting the side members, slides longitudinally adjustable in the ends of the side members, means for adjusting the slides, rods connecting oppositely disposed slides, said rods being composed of adjustably connected sections, and a flexible bed bottom having its sides attached to the side members and its ends attached to the rods.

2. A device of the character described comprising sectional side members, ferrules connecting adjacent ends of the side sections, one section of each side being provided with a screw extension, a slide carried by the adjacent section and engaged by said screw, end members connecting the side members, said end members being composed of adjustably connected sections, slides movable in the ends of the side members, means for adjusting said slides, rods connecting oppositely disposed slides, said rods being composed of adjustably connected sections, and a bed bottom having its sides attached to the side members and its ends attached to the end rods.

3. A device of the character described comprising side members formed of adjustably connected sections, end members connecting the side members and formed of adjustably connected sections, transverse rods having their ends adjustably connected to the ends of the side members, said rods being formed of adjustably connected sections, and a bed bottom attached to the side members and the transverse rods.

4. A device of the character described comprising side members having slotted ends, end members connecting the side members, said end members being formed of adjustably connected sections, slides adjustable in the slotted ends of the side members, means for adjusting the slides, said slides being provided with sockets, transverse rods having downturned ends for engaging the sockets of oppositely disposed slides, said rods being formed of adjustably connected sections, and a bed bottom attached to the side members and rods.

1,016,580. FIFTH-WHEEL FOR VEHICLES. EDWARD PRYOR, Baltimore, Md. Filed Sept. 5, 1911. Serial No. 647,493. (Cl. 21—24.)



1. A fifth wheel for vehicles comprising two plates adapted to be slidably secured together one above the other, the upper plate being provided with radial projections extending from the under side thereof, and adapted to register with radial depressions provided in the lower plate.

2. A fifth wheel for vehicles comprising two plates adapted to be slidably secured together, one above the other, the upper plate being provided with a plurality of radial projections extending from the under side thereof, equidistantly spaced apart, and adapted to register with a like number of radial depressions similarly spaced apart provided in the said lower plate.

3. A fifth wheel for vehicles comprising two plates, a bolt securing the plates together one above the other, a plurality of radial projections extending from the under side of the upper plate, and adapted to engage with a like number of radial depressions provided in the lower plate, and a spring secured around the lower end of the said bolt forming a flexible connection between the said plates.

4. A fifth wheel for vehicles comprising two plates, flexible means for securing the plates together, one above the other, the upper plate having a plurality of radial projections extending from the underside thereof, equidistantly spaced apart, the lower plate having a like number of radial depressions provided therein and similarly spaced apart, the said projections on the upper plate adapted to register in the depressions in the lower plate and secure the plates in locked position.

1,016,581. CULVERT. JULIUS H. SCHLAFLY, Canton, Ohio, assignor to The Canton Culvert Company, Canton, Ohio, a Corporation of Ohio. Filed Nov. 8, 1911. Serial No. 659,160½. (Cl. 61—9.)

1. A culvert comprising complementary sections having outstanding, abutting, seam flanges and a sheet metal clip fastening said flanges together.

2. A culvert comprising complementary sections having lateral, outstanding, abutting, seam flanges, and a sheet metal clip arranged between said flanges and having integral tangs bent over said flanges to fasten the sections together.

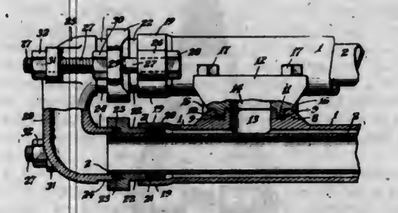
3. A culvert comprising complementary sections having outstanding, abutting, seam flanges and a sheet metal clip formed of integral, reversely disposed channel portions adapted to receive said flanges, parts of said channel portions being adapted to be bent over said flanges for holding said sections together.

4. A culvert comprising complementary sections having seam flanges and a sheet metal clip comprising a body portion and integral inner and outer tangs, said sections arranged with the body portion of said clip interposed between said seam flanges, and said outer tangs bent over said flanges to hold said sections together.

5. A culvert comprising complementary sheet metal sections having lateral, outstanding seam flanges, a clip formed of sheet metal constituting integral inner and outer tangs and a body portion, said body portion arranged intermediate said flanges, said inner tangs engaging the inner surfaces of said sections adjacent said flanges and said outer tangs bent over the edges of said flanges.

[Claim 6 not printed in the Gazette.]

1,016,582. DOUBLE-PIPE CONDENSER. LEOPOLD C. SCHNEIDER, Philadelphia, Pa., assignor to The Philadelphia Pipe Bending Company, a Corporation of New Jersey. Filed Sept. 22, 1910. Serial No. 583,154. (Cl. 62—6.)



1. In apparatus of the class described, an exterior pipe, and a flange coupling having an opening communicating with the interior of said pipe, said flange coupling welded to said pipe, the end of said pipe being expanded, said expanded end having a greater internal diameter than the internal diameter of said pipe.

2. In apparatus of the class described, an exterior pipe, a coupling welded on said pipe and having an opening communicating with the interior of said pipe through an opening in the side of said pipe, an internal pipe within said external pipe, a gland joint between said external and internal pipes beyond said coupling, a bend forming communication with the interior of said internal pipe, and a second gland joint between said internal pipe and said bend.

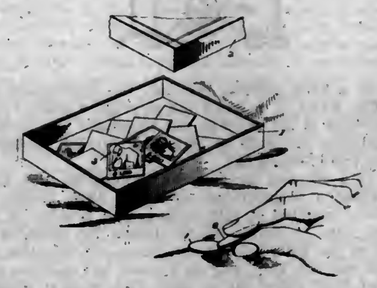
3. In apparatus of the class described, an exterior pipe, a flange coupling having an opening communicating with the interior of said pipe, said flange coupling welded to said pipe, the end of said pipe being expanded, said expanded end having a greater internal diameter than the internal diameter of said pipe, and a ring within said expanded end.

4. In apparatus of the class described, an exterior pipe, a coupling welded on said pipe and having an opening communicating with the interior of said pipe through an opening in the side of said pipe, an internal pipe within said external pipe, a bend communicating with the interior of said internal pipe, and a unitary double gland beyond said coupling forming joints between said external and internal pipes and said internal pipe and said bend.

5. In apparatus of the class described, an exterior pipe, a flange coupling having an opening communicating with the interior of said pipe, said flange coupling welded to said pipe, the end of said pipe being expanded, said expanded end having a greater internal diameter than the internal diameter of said pipe, and a ring within said expanded end, said expanded end shrunken upon said ring.

[Claims 6 to 20 not printed in the Gazette.]

1,016,583. GAME. NORMAN C. SHATZER, Zullinger, Pa. Filed June 6, 1911. Serial No. 631,654. (Cl. 46—59.)



1. In game apparatus of the class described, a plurality of flat sided game pieces representing animals having game values indicated thereon, and a disk designed to be projected onto a pile of the said game pieces.

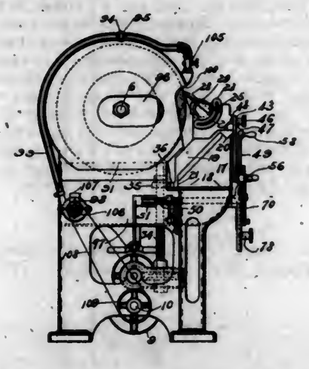
2. In game apparatus of the class described, a plurality of flat sided game pieces representing the animals having game values indicated thereon, and a disk designed to be projected onto a pile of the said game pieces, the disk being of a diameter less than the width of any of the game pieces.

3. In game apparatus of the class described, a plurality of flat sided game pieces representing animals having game values, other flat sided pieces indicating fines, and a disk designed to be projected onto a pile of both said pieces.

1,016,584. SHEET-METAL WORK. CHARLES P. SHEPHERD and EDWIN S. CONRAD, Grand Rapids, Mich. Filed Jan. 14, 1911. Serial No. 602,735. (Cl. 29—187.)

A sheet metal tube having a longitudinal seam and provided with a recess in one edge having diverging opposite walls, a wedge projecting into the recess, said recess having concave bottom portions at the respective sides of the wedge, and projections on the other edge having convex ends of the same curvature as the concave portions of the recesses and adapted to completely fill the recesses, when forced into the same and spread apart by the wedge.

1,016,585. GRINDING-MACHINE. PETER A. SOLEM, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed June 9, 1910. Serial No. 566,126. (Cl. 51—7.)



1. In a knife grinding machine, the combination of a grinding wheel, a reciprocating carriage, a knife holding bar pivoted in the carriage and adjustable into positions for grinding the knife on both sides without resetting it on the knife holding bar.

2. In a grinding machine the combination of a grinding wheel, a reciprocating carriage, a knife holding bar pivotally mounted in said carriage and adapted to hold either plain or slotted knives, means for clamping the knife on the knife holding bar, means for adjusting said bar so that the knife may be brought into position to be ground from either one or both sides without changing its position on the knife holding bar, substantially as described.

3. In a grinding machine the combination of a grinding wheel, a movable support therefor, a stationary cover for the wheel, a reciprocating carriage, a knife holding bar having a knife holding face arranged adjacent to the grinding wheel and adapted to hold either plain or slotted knives, clamps covering the said knife holding face of said bar for clamping the knife, means for adjusting said bar so that the knife may be brought into position to be ground on one or both sides without changing its position on the knife holding bar, substantially as described.

4. In a grinding machine the combination of a grinding wheel, a movable support therefor, a reciprocating carriage, a knife holding bar pivotally mounted in the carriage, a knife holding face arranged adjacent to the grinding wheel and adapted to hold either plain or slotted knives, clamps covering said knife holding face for clamping the knife, means for adjusting said bar so that the knife may be ground from either one or both sides without changing its position on said knife holding bar, means for automatically feeding the grinding wheel toward the knife and means for automatically stopping the feed at a predetermined point, substantially as described.

1,016,586. MOWING-MACHINE. JEAN SULLIGER, Geneva, Switzerland. Filed Aug. 5, 1909. Serial No. 511,471. (Cl. 56—78.)

1. Cutting mechanism for mowing machines comprising upper and lower cutter bars, guide fingers for one of said bars carried by the other bar, a slide carried by one of said bars, means engaging said slide for reciprocating said bar, and means operated by said bar for reciprocating the other bar.

2. Cutting mechanism for mowing machines comprising upper and lower cutter bars, supporting shoes therefor guide fingers for one of said bars carried by the other bar, a slide carried by one of said bars, a drive shaft provided with a crank engaging said slide to reciprocate said bar, a lever supported by one of said shoes adjacent one end of the last mentioned bar and connected with the latter, and connections between said lever and the end of the other bar.

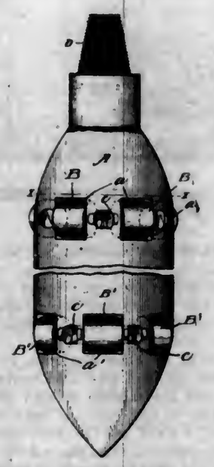
3. Cutting mechanism for mowing machines comprising upper and lower cutter bars, supporting shoes therefor guide fingers for one of said bars carried by the other bar, means for reciprocating one of said bars, a lever pivotally supported by one of said shoes, and slides carried by each bar and operatively connected with the opposite ends of said lever.

4. Cutting mechanism for mowing machines comprising upper and lower cutter bars, guide fingers for one of said bars carried by the other bar, guide bars carried by one of said cutter bars, a slide mounted between said guide bars, a crank shaft connected to said slide, and means operated by said cutter bar for actuating the other cutter bar.

5. Cutting mechanism for mowing machines comprising upper and lower cutter bars, guide fingers for one of said bars carried by the other bar, guide bars carried by one of said cutter bars, a slide mounted between said guide bars, a crank shaft connected to said slide, a projection carried by the other cutter bar and provided with guide arms, a slide mounted between said guide arms, and a lever engaging said slide and operatively connected with the other bar.

[Claim 6 not printed in the Gazette.]

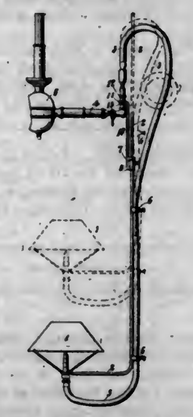
1,016,587. MANDREL. JAMES W. SWARTZLANDER, Coalinga, Cal. Filed Apr. 27, 1910. Serial No. 558,013. (Cl. 153—32.)



1. A mandrel for straightening interior indentations in pipes sunk in oil wells, comprising a main body provided with a plurality of series of rollers mounted in the sides of the main body adjacent to each end thereof, and so disposed with relation to each other that the rollers of one series shall be opposite the spaces between the rollers in another series, said main body being tapered at the ends to facilitate the operation of reciprocating the mandrel in the pipe sections, and being provided with means for securing said main body to a reciprocating part, operating within the pipe sections.

2. A mandrel for stratightening interior indentations in pipes sunk in oil wells, comprising a main body provided with a plurality of series of rollers mounted in the sides of the main body, adjacent to each end thereof, and so disposed with relation to each other that the rollers of one series shall be opposite the spaces between the rollers in another series, and being provided with means for securing said main body to a reciprocating part, whereby when in operation in a pipe section the axis of the mandrel is maintained coincident with the axis of the pipe section, without any extraneous support, and the operation of the device is not affected by any lateral movement of the part by which it is reciprocated.

1,016,588. ADJUSTABLE HANGING LAMP. WILLIAM H. SWIFT, New York, N. Y. Filed Sept. 3, 1909. Serial No. 516,138. (Cl. 240—68.)

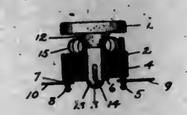


1. The combination with a gas fixture, comprising a supply pipe and a pillar, of a support comprising a barrel arranged between said pipe and pillar and having a passage for the gas therethrough, a depending arm movably secured to said barrel having brackets thereon, a hollow lamp supporting tube movably mounted in said brackets, a flexible gas supply connection between the pillar and the tube and means for holding the tube in its adjusted position.

2. The combination with a gas fixture comprising a supply pipe and a pillar, of a support comprising a barrel having two extensions integral therewith, secured to said pipe and pillar between the same and having a passage for the gas therethrough, a depending rod movably mounted in said extensions, means for securing said rod in its adjusted position in said extensions, a bracket movably mounted on said rod comprising a sleeve and two extensions, means for holding said bracket in its adjusted position on said rod, a lamp supporting tube movably mounted in said extensions, means for holding the tube in its adjusted position with respect to said bracket, and a flexible gas supply connection between the pillar and said tube.

1,016,589. PUSH-BUTTON. HENRY C. THOMSON, Boston, Mass., assignor to Electric Goods Manufacturing Company, a Corporation of Maine. Filed May 21, 1910. Serial No. 562,679. (Cl. 177—10.)

1. An electric circuit closer comprising essentially a base block, a contact member in electrical connection with one terminal of an electric circuit, a second contact member electrically insulated with respect to the first contact member and in electrical connection with the second terminal of said circuit, a distortible conducting member, a member movable with respect to said base block, said movable member being adapted to secure said distortible member in its assembled relation in the circuit closer and in one of its positions to locate the same adjacent to but normally out of contact with said first contact member, and means, rendered operative by the movement of said movable member into another position to distort said distortible member, and thereby to cause the same to electrically engage said first contact member, said distortible member and said second contact member being in electrical connection through the movable member in such other position.



2. An electric circuit closer comprising essentially a base block, a plunger having an electrically conductive surface, longitudinally movable with respect to said base block, a contact member carried on said base block and forming one terminal of an electric circuit, a second contact member carried on said base block and forming the second terminal of said electric circuit, said second contact member having a portion adapted to electrically engage the surface of said plunger, an annular distortible conducting member encircling said plunger and engaging said surface, said annular member being positioned by said plunger adjacent to said first contact member, but in its normal undistorted condition out of contact therewith, and means rendered operative by the longitudinal movement of the plunger to diametrically enlarge said annular member so as to bring the same into electrical engagement with said first contact member.

3. An electric circuit closer comprising essentially a base block, an electrically conductive plunger longitudinally movable in said base block and embodying a tapered portion, a contact member carried on said base block and forming one terminal of an electric circuit, a second contact member carried on said base block forming the second terminal of said electric circuit, said second contact member having a portion in electric engagement with said plunger, a diametrically enlargeable conducting member normally contracted upon the plunger adjacent the smaller end of the tapered portion of the same, said member in such contracted condition being positioned by said plunger so as to lie adjacent to but out of contact with said first contact member, the longitudinal movement of the plunger being adapted to produce a diametrical enlargement of said conducting member whereby it is caused to engage with said first contact member.

4. An electric circuit closer comprising essentially a base block, an electrically conductive plunger longitudinally movable in said block and embodying a tapered portion, a contact member carried on said base block and forming one terminal of an electric circuit, a second contact member carried on said base block and forming the second terminal of said electric circuit; said second contact member having a portion in electric engagement with said plunger, a resilient diametrically expansible conducting ring supported by the base block and normally contracted about the plunger adjacent the smaller end of the tapered portion of the same, said ring in such contracted condition being positioned by the plunger so as to lie adjacent to, but out of contact with, said first contact member, the longitudinal movement of the plunger being adapted to produce a diametrical expansion of said ring sufficient to bring the same into engagement with said first contact member.

1,016,590. TRIMMING MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Original application filed July 13, 1909, Serial No. 507,368. Divided and this application filed Dec. 29, 1910. Serial No. 599,796. (Cl. 112—6.)

1. The combination in a trimming mechanism, of a ledger-blade, a vibratory arm, a trimmer-blade carried by

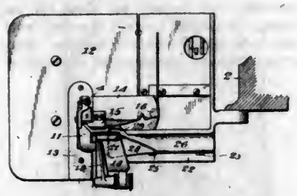
said arm at a right-angle thereto, a diverter extending

1,016,592. BUFFER-BEAM. CHARLES T. WESTLAKE,

tudinally disposed slot provided with a lateral branch ter-

the chamber with continuous circular flanges arranged to

said arm at a right-angle thereto, a diverter extending along the length of the arm and of the blade, thus providing a guard portion coöperating with said trimmer-blade and a receiving portion coöperating with said arm for receiving the trimming of the work.



2. In combination, a trimming mechanism including a vibratory blade, a diverter attached to the vibratory blade, and means whereby the trimmer and the diverter may be thrown into and out of action at the will of the operator during the running of the machine and without disturbing the action of the latter.

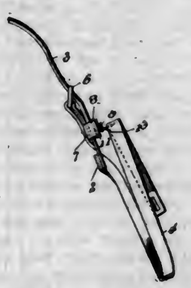
3. In combination, a trimming device, a diverter for the trimmed edge of the material comprising a horizontally disposed plate terminating in an upturned portion and an overhanging guard, and means whereby the diverter may be vibrated so as to cause the said trimmed edge to be carried away from the trimming device.

4. In combination, a trimming mechanism, a horizontally arranged diverter, a shunt-guide, having a ledge, and means for vibrating the diverter whereby the trimming of the work will be caused to travel laterally away from the trimming mechanism, into coöperation with the shunt-guide and over the ledge thereof.

5. In combination, a trimming device, a diverter for the trimmed edge of the material, and means whereby the diverter may be thrown into and out of operative position at the will of the operator during the running of the machine and without disturbing the action of the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,016,591. TRACE-HANGER. HENRY W. WELLS, Clements, Cal. Filed Nov. 26, 1910. Serial No. 594,357. (Cl. 54—56.)



A hanger adapted to be applied to a harness keeper comprising a member formed from a single sheet of material having a flat back portion with a flange located at one end thereof and disposed at a right angle to said back portion, the other end of the back portion merging into a hook back which extends down along the back portion and converges toward the same, the hook back portion merging into a hook bill which extends up along the back portion of the hook and converges toward the same, the said hook of which the said back and bill portions are components terminating at a point between the upper and lower ends of the back portion of the hanger and being spaced from the flange formed at the end thereof.

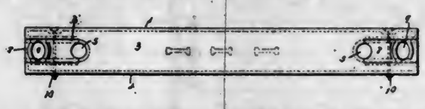
1,016,592. BUFFER-BEAM. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Davis Locomotive Wheel Company, a Corporation of Delaware. Filed Sept. 2, 1911. Serial No. 647,371. (Cl. 105—17.)

1. A buffer beam having a wall formed integral therewith for attachment of a draw bar pocket, said wall being in advance of the front wall of the buffer beam, and connected thereto by means of reinforcing webs which webs are so disposed as to provide free open spaces between the sides and lower portion of the wall and the front face of the buffer beam.

2. A buffer beam having an integral wall in advance of its front wall, said advance wall extending below the front wall of the buffer beam and having reinforcing webs connected to the front and bottom walls of the buffer beam.

3. A buffer beam having a wall spaced from its front wall and connected to said front wall by vertically and horizontally disposed webs, said spaced wall being of greater width than the front wall of the buffer beam.

1,016,593. BUFFER-BEAM. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Davis Locomotive Wheel Company, a Corporation of Delaware. Filed Sept. 2, 1911. Serial No. 647,372. (Cl. 105—76.)



1. A buffer beam having passages formed therein for accommodating the movement of a piston rod and a removable filler block forming one wall of the passage.

2. A buffer beam having a recess at or near its end, said recess opening outwardly and a filler block for closing said recess.

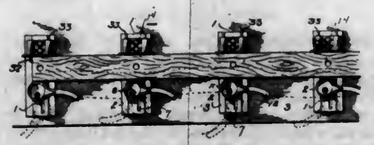
3. A buffer beam having a laterally opening recess with longitudinally disposed ribs on its top and bottom walls and a filler block for closing the outer end of said recess, said filler block having longitudinally disposed grooves in its top and bottom walls for receiving said ribs.

4. A buffer beam having a laterally opening recess with longitudinally disposed ribs on its top and bottom walls, a filler block for closing the outer end of said recess, said filler block having longitudinally disposed grooves in its top and bottom walls for receiving said ribs and a removable fastening device for said filler block.

5. A buffer beam having a removable block at its end and a pole pocket formed in said block.

[Claims 6 and 7 not printed in the Gazette.]

1,016,594. CLAMP AND GAGE. JOHN J. WOODMAN, Springfield, Ohio, assignor of one-half to Carl Backus, Springfield, Ohio, and one-half to Frank L. Walker, Dayton, Ohio. Filed Mar. 25, 1908. Serial No. 423,103. (Cl. 144—84.)



1. In a device of the character described, a stationary main frame, upon which the work is adapted to rest and having in the work supporting surface thereof a longi-

tudinally disposed slot provided with a lateral branch terminating at a point back of the line of intersection of the branch and main slot, and an eccentrically pivoted clamping member operating in a plane parallel with the work supporting surface both revolubly movable about its pivotal connection and slidingly movable in conjunction with its pivotal connection within the limits of the said slot and the branch thereof.

2. In a device of the character described, a stationary main frame, forming a support for the work and having in the work supporting surface thereof a slot provided with a lateral branch extending angularly therefrom, a revoluble eccentrically pivoted clamping member, a pivoted stud therefor engaging in the slot and projecting perpendicular to the supporting surface of the main frame, the clamping member and the pivotal stud thereof being free to slide to and from operative position within the limits of the slot and the lateral branch thereof.

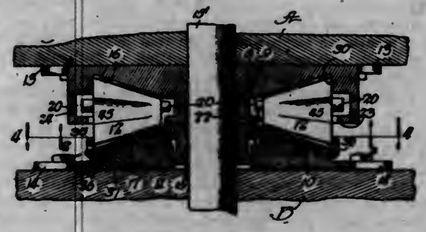
3. In a clamping device as described, a main frame member, an adjustable clamping member, a stationary gage member on said main frame, a depressible plunger projecting beyond the working face of the gage member and forming an end stop for the work, substantially as specified.

4. In a clamping device as described, a main frame member, an adjustable clamping member, a stationary gage member, a casing on said gage member, a bushing in said casing and forming a bearing for a depressible plunger, a spring within said casing tending to project said plunger beyond the working face of said gage member, substantially as specified.

5. The combination with a table or support, of a plurality of clamp devices adjustably secured thereon, whereby the said devices may be alined, each clamping device including an adjustable gage member adapted to determine the lateral location of the work, depressible plungers projecting from the working face of said gage members any one of which may be selected to determine the longitudinal location of the work, and eccentrically pivoted clamping members, said clamping members being adjustable to and from the work independent of their eccentric clamping movement.

[Claims 6 and 7 not printed in the Gazette.]

1,016,595. CENTER-BEARING FOR RAILWAY-CARS. EDWIN S. WOODS, Chicago, Ill. Filed Apr. 24, 1909. Serial No. 491,889. (Cl. 64—65.)



1. An antifriction bearing comprising upper and lower bearing members and interposed antifriction elements, one of the members being provided with integral, oppositely projecting, continuous or unbroken circular flanges adapted to confine the antifriction elements in said bearing member, and spaced at such distance apart as to permit the antifriction elements to be passed between the flanges and behind the same, when twisted at an angle to the normal radial position thereof, and one of said anti-friction elements being provided with a clearance notch to permit it to be passed between the flanges after the other antifriction elements are assembled in the bearing member.

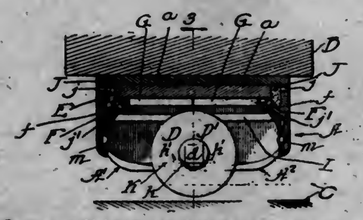
2. An antifriction center bearing comprising upper and lower bearing members, and a circular series of interposed antifriction elements, one of said members being provided with a chamber to partially receive said antifriction elements and provided also at the inner and outer sides of the chamber with continuous circular flanges arranged to confine the antifriction elements in said chamber, said inner and outer flanges being spaced at such distance apart, relatively to the length of the antifriction elements, as to permit the latter to be inserted between the flanges into said chamber when twisted at an angle to the normal radial position thereof, and one of said antifriction elements being provided with a clearance notch to permit it to be passed between the flanges after the other antifriction elements are assembled in the bearing member.

3. An antifriction bearing comprising upper and lower bearing members, and interposed antifriction elements, one of said members being provided at its inner and outer sides with flanges which extend toward each other for engagement with the ends of the antifriction elements to confine them in said member, said inner and outer flanges being spaced at such distances apart, relatively to the length of the antifriction elements, as to permit the latter to be inserted between the flanges and behind the same when twisted at an angle to the normal position thereof, and one of said antifriction elements being provided with a clearance notch to permit it to be passed between the flanges after the other antifriction elements are assembled in the bearing member.

4. An antifriction bearing comprising upper and lower bearing members, and an interposed series of annularly arranged antifriction elements adapted to rotate on an axis radial to the centers of the bearing members, and having flattened side faces which converge toward said centers of the bearing members, one of said bearing members being provided with inner and outer integral, continuous, circular flanges which engage the ends of the antifriction elements to confine them in said flanged member.

5. An antifriction center bearing comprising upper and lower, relatively rotative bearing members, and an interposed circular series of antifriction elements, the upper bearing member being provided with a hub which enters a central opening in the lower bearing member, and the lower bearing member comprising a bearing plate having a spherical under side and a support therefor having a complemental spherical upper side, whereby said plate is capable of universal lateral shifting movement on said support, and inner and outer continuous, integral circular confining flanges for the antifriction elements, the inner confining flange being formed on said hub.

1,016,596. ANTIFRICTION-BEARING. EDWIN S. WOODS, Chicago, Ill. Filed Sept. 15, 1909. Serial No. 517,800. (Cl. 64—64.)



1. In an antifriction bearing, in combination with an antifriction member, a suspension chamber comprising sections dividing said chamber transversely, said sections having inclosing top walls and being provided with laterally extending, vertical abutting lugs with means for securing said lugs together, inwardly extending lugs formed on the inner walls of said chamber sections, and a bearing member located and upheld between said lugs and the tops of said chamber sections.

2. In an antifriction bearing, in combination with an antifriction member, a suspension chamber comprising sections dividing said chamber transversely, said sections having inclosing top-walls, inwardly extending lugs formed on the inner walls of said chamber sections, and a bearing member located and upheld between said lugs and the tops of said chamber sections.

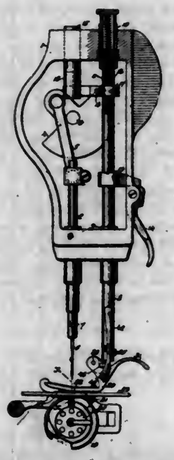
3. In an antifriction bearing, in combination with an antifriction member, a suspension chamber comprising sections dividing said chamber transversely, said sections having inclosing top walls, a bearing member underlying said top walls, and lugs located within said chamber adapted to engage the sides and ends of said bearing member to retain it in place.

4. In an antifriction bearing, in combination with an antifriction member, a suspension chamber comprising sections dividing said chamber transversely, said sections having inclosing top walls, a bearing member underlying said top walls, and means for supporting said bearing member in place.

5. In an antifriction bearing, the combination with an antifriction member, a suspension chamber for said antifriction member provided with curved walls, a bearing plate located above said antifriction member, and oil storage chambers located at the ends of said suspension chamber.

[Claims 6 to 14 not printed in the Gazette.]

1,016,597. SEWING-MACHINE CLOTH-PRESSER. WILLIAM R. ABERCROMBIE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 17, 1908. Serial No. 467,961. (Cl. 112—13.)



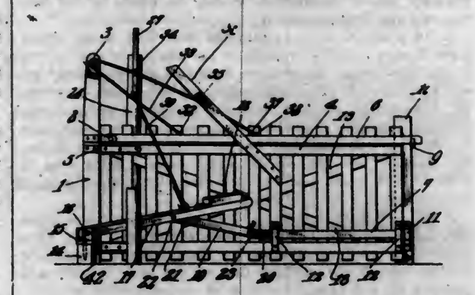
1. In a combination cloth-presser for plain stitching and gathering, a spring-actuated presser-bar, a bracket carried by said bar and provided with divergently arranged straight cloth-engaging surfaces located on opposite sides of the line of needle-actuation, and means for securing said cloth-presser against accidental adjustment.

2. In a combination cloth-presser for plain stitching and gathering, a spring-actuated presser-bar, a bracket carried by said bar and provided with divergently arranged straight cloth-engaging surfaces, a catch-lever for registering one of said surfaces in operative relationship with the material being acted upon, and a resistance member for registering the other of said surfaces in like relationship with said material.

3. In a combination cloth-presser for plain stitching and gathering, a spring-actuated presser-bar, a bracket carried by said bar and provided with a directly connected hand-lever and with divergently arranged straight cloth-engaging surfaces, and means including a catch-lever for securing said cloth-presser against accidental adjustment.

4. In a combination cloth-presser for plain stitching and gathering, a spring-actuated presser-bar, a bracket carried by said bar and provided with an integrally formed hand-lever and with divergently arranged straight cloth-engaging surfaces, and means including a catch-lever for securing said cloth-presser against accidental adjustment.

1,016,598. GATE. HARRY ALLEN, Bagdad, Ky. Filed Sept. 21, 1910. Serial No. 583,078. (Cl. 39—14.)



1. In combination with a hinged gate, a lever pivoted at the side thereof and arranged to swing toward and away from the gate, a shock absorbing means located in the path of movement of the lever, a latch slidably mounted upon the gate, and an inflexible member pivotally connected with the gate and the latch and also pivotally connected with the lever, and means for swinging the lever.

2. In combination with a hinged gate, a lever pivoted at the side thereof and arranged to swing toward and away from the same, a latch slidably mounted upon the gate, an inflexible member operatively connecting the lever with the latch and the gate, means for swinging the lever, another latch pivotally located at the upper portion of the gate and means operatively connecting the last mentioned latch with the means for swinging the lever.

3. In combination with a hinged gate, a lever pivoted at the side thereof and arranged to swing toward and away from the gate, means operatively connecting said lever with the gate to swing the gate as the lever swings, a latch pivoted at the upper portion of the gate, a bar carried by the upper portion of the gate, a pulley journaled upon said bar, a post located at the end of the gate, a pulley journaled upon said post, a cable attached at its ends to said latch and trained around said pulleys, levers fulcrumed at the opposite sides of the gate, cable sections connecting the inner ends of the last said levers with the first mentioned lever, one of the said levers carrying an eye which receives the upper portion of the said cable which is attached to the said latch.

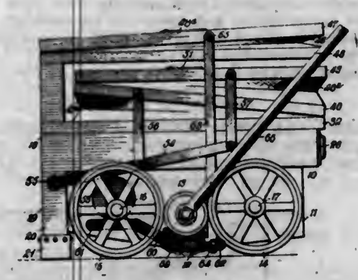
4. In combination with a hinged gate, a lever pivoted at the side thereof and arranged to swing toward and away from the same, two latches mounted upon the gate one of which is slidably mounted and the other of which is adapted to swing upwardly with relation thereto, a link connecting the lever with said slidable latch, another latch operably connected to the lever, and a connection between said last mentioned operating lever and said swinging latch.

1,016,599. RAZOR-STROP. PETER H. ALPP, New York, N. Y. Filed Aug. 12, 1911. Serial No. 643,697. (Cl. 51—16.)

1. A stropping device for razor-blades, comprising a rotary spring-actuated roller, a strop applied at one end to said roller and provided with a handle at the outer end, a supporting frame for said roller and strop provided with forwardly-extending brackets, guide-rollers for the strop supported on said brackets, said guide-rollers being located one near the inner and the other near the outer end of the brackets, a blade-holder pivoted to the front-ends of said brackets, and means interposed between the inner guide-roller and the blade-holder for oscillating the latter from one side to the other by the forward and backward motion of the strop.

2. A stropping device for razor-blades, comprising a rotary spring-actuated roller, a strop applied at one end to said roller, a supporting-frame for said roller and strop provided with forwardly-extending brackets pivoted to the frame, guide-rollers for the strop supported respectively near the inner and outer ends of said brackets, a blade-holder fulcrumed to the front-ends of said brackets, a crank-arm on the shaft of the inner guide-roller and a rack and pinion-connection between said guide-roller and the blade-holder for oscillating the latter from one side to the other by the forward or backward motion of the strop.

1,016,600. VACUUM-CLEANER. EUGENE W. APPLEGATE, Hoboken, N. J., assignor to Applegate Sanitary Vacuum Sweeper Co., a Corporation of New Jersey. Filed July 10, 1909. Serial No. 506,873. (Cl. 230—2.)



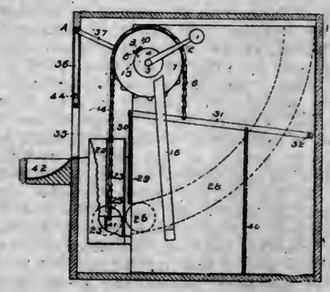
1. A device of the character described, including a vacuum chamber, means for carrying said device, a suction conduit at one end of said vacuum chamber, a plurality of bellows, the movable member of one of said bellows being connected at one end to the fixed top member of said vacuum chamber, the movable member of a second bellows being connected at its opposite end to the movable member of the last referred to bellows, and means for actuating said bellows comprising a plurality of links connected to said bellows respectively, a lever pivotally connected to said links and the frame of the device and receiving movement from said carrying means.

2. A device of the character described, including a vacuum chamber, a suction conduit fixed to one end of said vacuum chamber, carrying means for the device, a plurality of bellows, the movable member of one of said bellows being connected at one end to the fixed or top member of said vacuum chamber, the movable member of the second bellows having its opposite end connected to one end of the movable member of the last referred to bellows, an additional fixed member, the movable member of the third bellows having one end connected to said additional fixed member, said vacuum chamber having a plurality of valved openings communicating with said bellows, and actuating means for said bellows comprising a plurality of links connected to said bellows respectively, a lever pivotally connected to said links and the frame of the device and receiving movement from said carrying means.

3. A device of the character described, including a vacuum chamber, having a suction conduit at one end thereof, means for carrying said device, a plurality of bellows, the movable member of one of said bellows being connected at one end to the fixed top member of said vacuum chamber, the movable member of the second bellows having its opposite end connected to the movable member of the last referred to bellows, an additional fixed member, and the third bellows having its movable member connected to said additional fixed member, said vacuum chamber having a plurality of valved openings communicating with said bellows, a plurality of links connected to said bellows respectively, a lever connected to two of said links, a lever for actuating said third link, said levers receiving their movement from said carrying means.

4. A device of the character described, including a vacuum chamber, having a suction conduit at one end, carrying means for said device, a plurality of bellows, the movable member of one of said bellows having one end connected to the fixed top member of said vacuum chamber; the movable member of the second bellows having its opposite end connected to the movable member of the last referred to bellows, an additional fixed member, the movable member of the third bellows being connected at one end to said additional fixed member, said vacuum chamber having a plurality of valved openings, a series of links connected to said bellows, a lever connected to two of said links, a lever connected to the third link, and a cam actuated from said carrying means, said cam engaging said levers.

1,016,601. ATTACHMENT FOR COOLING AND VENDING MACHINES. GEORGE T. BAILEY, Colorado Springs, Colo. Filed Mar. 30, 1911. Serial No. 617,884. (Cl. 211—8.)



1. In an attachment for cooling and vending machines, a supply magazine in the form of an inclined chute provided to contain cylindrically formed packages, a delivering elevator from said magazine, an automatic shut off between said magazine and said elevator, a rotary mechanism for lifting, by means of chains, said elevator and operating said shut off, a shutter or door at the delivery outlet for said packages and automatically opening and closing at the desired time by a pitman connection with said rotary mechanism, in combination with an operating crank secured to a driving shaft and turning with said rotary mechanism, substantially as set forth and for the purposes specified.

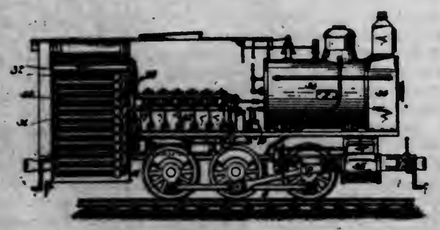
2. In an attachment for cooling and vending machines, having the combination of a plurality of cooling machines arranged side by side in a common case and operated by a common lever from the side of the case, integral with a crank shaft each separate cooling machine being provided with an individual separate supply magazine, each cooling and vending machine being individually alike, an automatic feed shut off, consisting of a drop shutter connected at its top by means of upright arms 30, with lifting levers 31, operated by means of shutter chains 6, extending over the operating machinery to be rotated by means of the said driving shaft, a delivering elevator to receive packages to be vended from said drop shutter, to said elevator from a provided supply magazine in said cabinet, and means for operating same by said crank, all substantially as set forth.

3. In an attachment for cooling and vending machines, an inclined chute provided as a magazine to contain the packages to be vended, an elevator mechanism provided to receive said packages from the outlet of said chute and to elevate them to the delivery window of the vending machine, a shut off shutter provided to operate between the outlet to said chute and the receiving part of said elevator and provided to close the outlet of said chute when said elevator is not in position to receive packages therefrom, lifting chains provided to operate said elevator and said shut off shutter at the proper time, sprocket wheels above said elevator and said shut off, provided to carry sprocket chains to raise and operate said elevator and said shut off, in combination with means to operate said sprocket wheels by the operator turning a crank, substantially as set forth.

4. In an attachment for vending machines an elevator having its floor longitudinally horizontal and raised at its edge nearest the magazine and over which the package to be vended is received, and having vertical guide grooves in the upright end walls at either end of said floor provided to receive guide rods vertically attached to the sides of the elevator shaft walls, lifting sprocket chains attached to said elevator and having operating mechanism above same connected with sprocket wheels to receive said chains, an obstructing shutter constructed and operated so as to pass down between the receiving side of said elevator and the magazine from which the said elevator receives its packages and to be lifted from between said elevator and said magazine to allow the packages one at a time to enter said elevator, substantially as set forth and for the purposes specified.

5. An attachment for cooling and vending machines, comprising an inclined chute provided to be used as a magazine for packages to be vended, a mechanically operated obstructing shutter at the outlet of said chute provided to obstruct the outlet of said chute when it is not desired to allow a package to pass through said outlet, an elevator mechanically operated to drop below the outlet of said chute to receive therefrom one of the packages to be vended and to raise the received package to the delivery window of said vending machine, and having a floor in said elevator inclined downwardly and outwardly toward the said delivery window provided to allow said package to roll against the door to said delivery window, a door in said delivery window and means for operating same automatically, to allow said package to roll out of said vending machine to within reach of the purchaser, substantially as set forth and for the purposes specified.

1,016,602. LOCOMOTIVE OR SELF-PROPELLED VEHICLE FOR USE UPON RAILWAYS. CHARLES WHITING BAKER, Montclair, N. J. Filed Aug. 13, 1909. Serial No. 512,666. (Cl. 105—17.)



1. A locomotive having thereon an air-compressor and a multi-cylinder internal-combustion engine driving said compressor, said engine and compressor being combined in one machine having the air and gas cylinders tandem and adapted to operate at high speed, the compressed air being delivered to a storage tank and drawn therefrom to supply the propelling cylinders of the locomotive.

2. A locomotive having thereon an air-compressor and a multi-cylinder internal-combustion engine combined to form one machine with air and gas cylinders tandem, a storage tank for the compressed air, propelling cylinders adapted to use the compressed air, and a heater utilizing the exhaust gases from the engine to heat the air before its entry to the cylinders.

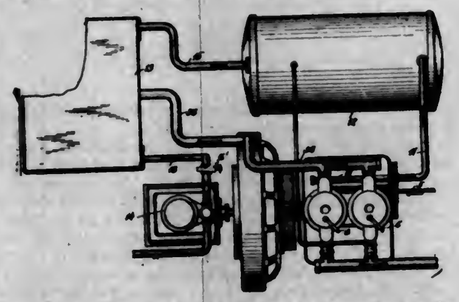
3. A locomotive having thereon an air-compressor and an internal-combustion engine combined in one machine, with air and gas cylinders tandem and such relative proportions as to produce a large volume of air at low pressure, a heater utilizing the exhaust gases from the engine to heat the compressed air, and cylinders adapted to use the low-pressure compressed air to propel the locomotive.

4. A locomotive propelled by compressed air produced on the locomotive itself by an air-compressor and internal-combustion engine combined in one machine, proportioned to produce a large volume of air at low pressure, a heater utilizing the exhaust gases from the engine to heat the air after the compression, and propelling cylinders arranged to work the compressed air at long points of cut-off only.

5. A locomotive propelled by compressed air produced on the locomotive itself, said locomotive having mounted upon it propelling cylinders, a multicylinder air compressor and an internal combustion engine with air and gas cylinders tandem, a storage tank for the compressed air, means for delivering the compressed air from said tank to the propelling cylinders, means for varying the output of compressed air from the compressor in proportion to its consumption by the propelling cylinders, said means comprising valves upon the inlet pipes to the air and gas cylinders, and means for automatically opening and closing said valves according to variations in pressure in the storage tank.

[Claims 6 to 11 not printed in the Gazette.]

1,016,603. COMBINED INTERNAL-COMBUSTION ENGINE AND COMPRESSED-AIR ENGINE. CHARLES WHITING BAKER, Montclair, N. J. Filed Mar. 10, 1910. Serial No. 548,367. (Cl. 123—6.)



1. The combination of an internal-combustion engine having air-compressing cylinders arranged tandem with the engine cylinders but absorbing a part only of its power, a reservoir to which the air from the compressing cylinders is directly piped, a reciprocating compressed air engine drawing its supply from the reservoir and driving the same shaft as the internal-combustion engine, and a heater separated from the engine in which the exhaust gas from the internal-combustion engine imparts heat to the compressed air in its passage from the reservoir to the air engine.

2. The combination of an internal-combustion engine, an air-compressor driven by it and absorbing a part only of its power, a reservoir for the compressed air, means for cooling the idle face of the engine's piston and the cylinder by a water spray or splash, with means for delivery of the hot water and steam generated into the reservoir, and an auxiliary engine driven by compressed air and steam from the reservoir.

3. The combination of an internal-combustion engine, an air-compressor driven by it and absorbing a part only of its power, a reservoir for the compressed air, means for cooling the idle face of the engine's piston and the cylinder by a water spray or splash, with means for delivery of the hot water and steam generated into the reservoir, an auxiliary engine driven by compressed air and steam from the reservoir, and a heater through which the steam and compressed air pass on their way from the reservoir to the engine.

4. The combination of an internal-combustion engine, an air-compressor driven by it and absorbing a part only of its power, a reservoir for the compressed air, means for cooling the idle face of the engine's piston and the cylinder by a water spray or splash, with means for delivery of the hot water and steam generated into the reservoir, an auxiliary engine driven by compressed air and steam from the reservoir, and a heater utilizing the exhaust gases of the internal-combustion engine through which the steam and compressed air pass on their way from the reservoir to the engine.

5. In an internal-combustion engine, means for cooling the cylinder and piston and utilizing the heat so obtained, consisting of a water jacket on the head and upper part of the engine cylinder, a pipe delivering a limited amount of water from said jacket space against the idle face of the piston and the cylinder walls, a pipe delivering the hot water and steam generated to a heater utilizing the exhaust gases from the engine, and an auxiliary engine in which the steam passing from the heater forms the working fluid.

[Claims 6 to 8 not printed in the Gazette.]

1,016,604. ANTHRACENE DYE AND PROCESS OF MAKING SAME. OSCAR BALLY, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Dec. 14, 1909. Serial No. 533,106. (Cl. 8—1.)

1. The process of producing coloring matter of the anthracene series by condensing with an amino compound of the anthraquinone series a halogenated ketone of a constitution corresponding to the formula

Hl—R—CO—R—Hl,

where Hl represents halogen and R represents a hydrocarbon radical.

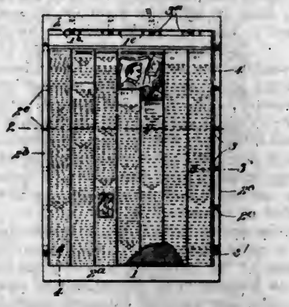
2. The process of producing coloring matter of the anthracene series by condensing 4.4'-dichlor-benzophenone with 1-amino-anthraquinone.

3. As new articles of manufacture the coloring matters of the anthracene series which can be obtained by condensing a halogenated ketone with an amino compound of the anthraquinone series, which coloring matters consist when dry of dark powders, are soluble in concentrated sulfuric acid with a violet to brown to green color and in fuming sulfuric acid with a green to blue color, and yield from brown to red solutions in nitrobenzene, and which dye cotton from the vat red to violet shades and which are soluble in boiling nitrobenzene to the extent of about one part, or more, per thousand.

4. As a new article of manufacture the coloring matter of the anthracene series which can be obtained by condensing 4.4'-dichlor-benzophenone with 1-amino-anthraquinone, which coloring matter consists when dry of a dark powder; it is soluble in concentrated sulfuric acid with an olive-green color and in fuming sulfuric acid with a bright green color, it is easily soluble in nitrobenzene yielding a yellowish-red solution, and it dyes cotton from a vat pure bluish red shades.

1,016,605. CHASE FOR HOLDING COMPOSED FORMS OF TYPE. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Oct. 24, 1910. Serial No. 588,810. (Cl. 101—25.)

1. A chase consisting of a rectangular frame having side members narrower than the end members and provided with transverse screw-threaded holes, a plane-surfaced metal plate underlying the said frame and rigidly connected to the side and end members thereof to prevent lateral distortion thereof, and concealed screws engaging the threaded holes in the side and end members and adapted to lock the type placed in the chase, substantially as described.



2. A chase for newspaper printing presses consisting of a rectangular frame having end and side bars, the side bars being approximately half as wide as the margin spaces between adjacent impressions on the paper, said bars being provided with transverse threaded holes; a plane-surfaced metal plate underlying said frame and rigidly connected thereto so as to brace the bars against lateral distortion thereof; and screws concealed in the threaded openings of the said bars, and adapted to be projected inwardly in the chase to lock the type therein, substantially as described.

3. A chase consisting of a rectangular metal frame having side members narrower than the end members and provided with transverse screw-threaded holes in said members; a plane-surfaced metal plate underlying the said frame and rigidly connected to the side and end members, and bonding the latter so as to prevent lateral distortion thereof, and concealed screws engaging the threaded holes in the side and end members and adapted to engage the locking bars for the type in the chase, substantially as described.

4. The herein described chase for newspaper printing presses, consisting of a rectangular frame having end and side bars, the side bars being narrower than the end bars and approximately half as wide as the margins between adjacent impressions on the paper, said bars being provided with transverse threaded holes; a plane-surfaced metal bottom plate underlying said frame and rigidly connected thereto so as to brace the bars against lateral distortion; and concealed bolts in the threaded openings of the said bars adapted to be projected inwardly in the chase and engage the side-lock bars of the type therein, substantially as described.

1,016,606. ENGINEER'S TELESCOPE. CHRISTIAN L. BERGER, Boston, Mass. Filed Nov. 16, 1909. Serial No. 528,325. (Cl. 88—32.)

1. A measuring telescope, comprising an object lens and an ocular mounted in operative relation for producing a usual magnified inverted image, and a re-inverting prism of relatively small size mounted between said ocular and the eye of the observer in the optical axis for erecting the image inverted by said lenses.

2. The combination with a measuring telescope having an object lens and an ocular arranged to produce an inverted image, of a roof prism of relatively small size removably mounted on the ocular end of the telescope next to the eye of the observer for erecting the image, said roof prism extending in the optical axis.

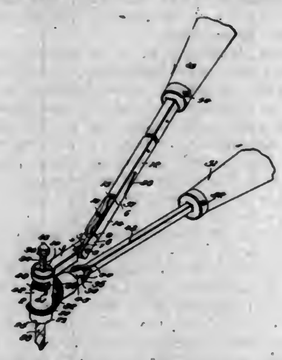
3. A measuring telescope, comprising an object lens at its outer end, cross wires adjacent its inner end with an

unobstructed passage for the rays of light from the object lens directly to said cross wires, an astronomical eye-piece back of said cross-wires adapted for coöperation with said object lens to produce an inverted image, and a roof prism back of said eye piece as an auxiliary part thereof next to the eye of the observer for erecting the image.

4. The combination with a measuring telescope and its lenses, having a projecting flange at the eye-piece end of the telescope, of an apertured plate provided with an eccentrically pivoted securing ring fitting said flange, and a roof prism removably secured to said plate, having a securing flange adapted also to fit said projecting flange of the telescope whereby said prism may be mounted at the will of the operator either on said plate or directly on the eye-piece end of the telescope.

5. The combination with a measuring telescope and its lenses, of a plate pivotally mounted eccentrically on the eye-piece end of the telescope, a roof prism mounted on said plate in position to be turned on said eccentric pivot into axial alinement with the telescope when desired, and a total reflecting prism also mounted on said plate in position to be turned on said eccentric pivot into axial alinement with the telescope when desired.

1,016,607. ACTUATING-HOLDER FOR SMALL TOOLS. JOHAN E. BOOMAN, Brooklyn, N. Y. Filed Apr. 4, 1911. Serial No. 618,949. (Cl. 81—57.)



1. An implement including a tool holding head, an arm projecting from the head, a sectional handle, one of the sections being pivoted to said arm, the other section being pivoted to the first named section for movement in a plane at right angles to the plane of movement of the first named section, and means for holding the sections of the handle in their adjusted position.

2. An implement of the character described including a rotatable tool holder, a head in which the tool holder is mounted, means for rotating the holder, and a sectional handle bar having an angularly adjustable connection to the head, the sections of the handle bar being angularly adjustable relative to each other, and means for holding the sections of the handle bar in any adjusted position.

3. An implement of the character described including a tool supporting head having an arm projecting radially therefrom, the arm being cut away on one face, a handle bar made in two sections, one of said sections being cut away and fitting against the cutaway portion of the arm and being pivoted thereto, the opposite end of said section being cut away, the second named section of the handle bar being cut away at one end to fit against the cutaway portion of the first named section and being pivoted thereto, and a longitudinally movable sleeve mounted on the handle bar and movable over the coacting ends of the two sections to hold the sections in alinement with each other.

4. An implement of the character described including a tubular head, a tubular tool holder rotatably mounted in said head, a handle bar extending radially from the head and formed with sections angularly adjustable with relation to each other and to the head, a driving shaft, means for rotating the tool holder, and flexible means connecting the driving shaft to the means for rotating the tool holder.

5. An implement of the character described including a tubular head, a rotatable tool holder mounted in the head, gearing mounted on the head for rotating the tool holder relatively to the head, a handle bar extending radially from the head, a driving shaft flexibly connected to the gearing for rotating the tool holder, and shiftable means for locking the holder from rotation independent of the head when in one position but shiftable to permit the holder to rotate independently of the head under the impulse of the driving shaft.

[Claims 6 to 15 not printed in the Gazette.]

1,016,608. SHOEMAKER'S TOOL. PETER CARETTI, Connellsville, Pa. Filed Nov. 24, 1911. Serial No. 662,233. (Cl. 12—115.)

1. In a heel shave, a pair of handles connected by a bridge, a curved guard arranged below the bridge having a bolt upstanding therefrom and passing through the bridge, a nut on the said bolt and constrained against longitudinal movement in the said bridge, and a curved blade connected at its extremities to the handles in rear of the guard.

2. In a heel shave, a pair of handles connected by a front bridge and a curved rear supplemental bridge spaced from the former bridge, a curved guard arranged below the former bridge and having a bolt upstanding therefrom and passing through the former bridge, a nut on the said bolt and constrained against longitudinal movement in the former bridge, and a curved blade connected at its extremities to the handles between the guard and the supplemental bridge.

3. In a heel shave, a pair of handles connected by a front bridge and a curved rear supplemental bridge spaced from the former bridge, a curved guard arranged below the former bridge and having a bolt upstanding therefrom and passing through the former bridge, a nut on the said bolt and constrained against longitudinal movement in the former bridge, a curved blade connected at its extremities to the handles between the guard and the supplemental bridge, the said guard, blade and supplemental bridge being dropped below the handles and having a common gentle convex curve at the bottom extending from one of the handles and forming a corner therewith, then into an abrupt convex curve toward the other handle, and terminating in a gentle concave curve merging into the last mentioned handle.

1,016,609. AEROPLANE. FRANK COSBY CARPENTER and FLOYD SMITH CARPENTER, Louisville, Ky. Filed Feb. 28, 1911. Serial No. 611,472. (Cl. 244—12.)

1. In an aeroplane, a composite plane structure comprising central planes having a downwardly concave dihedral angle of about 90° and outer planes joining the inner planes to form downwardly convex dihedral angles of about 105°.

2. In an aeroplane, a supporting plane comprising triangular middle plane sections joined to form a dihedral angle of about 90° with their smallest plane angles coming together at the bow and side planes joining the central planes to form downwardly convex dihedral angles of about 105°.

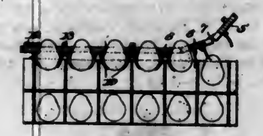
3. In an aeroplane, a supporting plane having the plan form of an isosceles triangle and composed of minor plane sections joining to form two downwardly convex dihedral angles and an upwardly convex dihedral angle.

4. In an aeroplane, a supporting plane having the plan form of an isosceles triangle and composed of minor plane sections joining to form two downwardly convex dihedral angles and an intermediate upwardly convex dihedral angle.

5. In an aeroplane, a supporting plane having the plan form of an isosceles triangle and composed of minor plane sections joining to form two downwardly convex dihedral angles of about 90° and an upwardly dihedral angle of about 105°.

[Claims 6 to 9 not printed in the Gazette.]

1,016,610. EGG-TESTER. JOSEPH CARR, Lamont, Okla., assignor of one-half to Amos G. Pollard, Lamont, Okla. Filed June 30, 1911. Serial No. 636,308. (Cl. 99—6.)



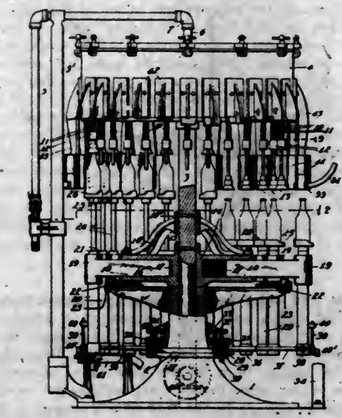
1. An egg tester, including a tray, provided with openings for the eggs and with clips designed to hold the eggs in said openings, the tray being constructed in sections movably connected together, and the clips being connected to the respective sections, whereby the movement of the strips will spread the clips apart and release the eggs, and means for holding said strips in rigid relation to each other.

2. An egg tester, including a tray constructed of strips hingedly connected together, means for holding said strips in rigid relation to each other, as against swinging movement, said means being arranged for manual release, the tray being formed with openings for the eggs, and spring clips connected to the respective strips at said openings and projecting from one face thereof, whereby a swinging movement of the strips relative to each other will spread apart the clips and release the eggs.

3. In an egg tester, a tray constructed in a plurality of strips hingedly connected together along their abutting edges, the strips being formed at said edges with registering recesses constituting egg receiving openings, spring clips connected to the respective strips at the recesses thereof, and projecting from one face of the tray, the clips embodying bowed cross bars and attaching arms, and stay rods arranged for engagement with the strips and adapted to hold the same in rigid relation with each other.

4. An egg tester, embodying a stand provided with a reflector, a tray arranged for detachable support upon the stand in operative juxtaposition to the reflector, the tray being constructed of a plurality of hingedly connected sections and formed with egg receiving openings, spring clips secured to the tray and projecting from one face thereof on opposite sides of said openings, the clips being connected to the respective strips, whereby a hinge movement of the strips relative to each other in one direction will spread apart the clips to release the eggs, stay rods pivotally connected to the face of the tray opposite to the clips and arranged to swing laterally over the face of the tray to which they are connected, and keepers secured to sundry of said strips and designed for engagement by said stay rods.

1,016,611. BOTTLE FILLING AND CAPPING MACHINE. HENRY J. CHILTON, Chicago, Ill. Filed June 24, 1908, Serial No. 440,092. Renewed June 9, 1911. Serial No. 632,230. (Cl. 226—28.)



1. In a bottle handling apparatus, the combination with a rotary main frame, filling mechanism carried by said main frame and having delivery tubes, bottle holding members carried by said main frame and normally in alinement with said delivery tubes, capping members carried by said main frame and arranged concentrically with said bottle holding members, means for shifting one of said members into alinement with the other in order to cap the bottles, and means for successively reciprocating the bottles into operative engagement with the filling and sealing devices.

2. In a bottle handling apparatus, the combination with a rotary main frame, of filling devices carried thereby, sealing mechanism carried by said main frame, bottle holders likewise carried by said frame and normally out of alinement with said sealing mechanism, means for shifting one of said mechanisms into alinement with the other, and means for successively reciprocating the bottles into operative engagement with the filling devices and sealing mechanism.

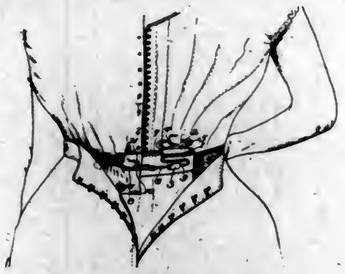
3. In a bottle handling apparatus, the combination with a rotary main frame, of bottle holders extending around said frame, filling mechanism operatively associated with said bottle holders, sealing devices associated with said main frame, and normally out of alinement with said row of bottle holders, and means for bringing said bottle holders and sealing devices into alinement and means for operating said parts in properly timed relation to automatically and successively fill and seal the bottles.

4. In a bottle handling apparatus, the combination with a rotary main frame, of a row of bottle holders extending around said main frame, filling mechanism operatively associated with said bottle holders, sealing devices normally out of alinement with said row of bottle holders, means for bringing said bottle holders and sealing mechanism into alinement, and mechanism for successively reciprocating the bottles into operative engagement with the filling and sealing mechanisms.

5. In a bottle handling apparatus, the combination with a rotary main frame, of filling devices provided with downwardly extending delivery tubes, bottle holders carried by said main frame and normally in alinement with said tubes, sealing mechanism carried by said main frame and normally out of alinement with the bottle holders, means whereby said bottle holders and sealing mechanism are brought into alinement, and mechanism for successively and automatically reciprocating the bottles into operative engagement with the filling and sealing mechanisms.

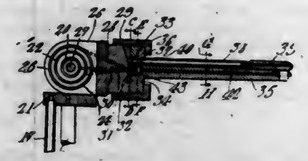
[Claims 6 to 8 not printed in the Gazette.]

1,016,612. WAIST AND SKIRT HOLDER. EVA M. CLEWELL, Canton, Ohio. Filed Oct. 20, 1910. Serial No. 588,088. (Cl. 241—7.)



A waist and skirt holder comprising supporting members spaced apart and each formed of a single piece with the side edges converging and the narrow terminal thus produced bent into an outwardly directed hook adapted to engage in a button hole in a garment, and the upper wider edge turned over outwardly to form a lip adapted to engage in the fold of a garment, a fastening device adapted to engage with a supporting garment and connected to each of said supporting members, and a clip device including resilient side members spaced apart and extending in parallel relations, one of said side members engaging beneath the lips and locking the garment fold therein, and the other side member engaging in the hooks and locking the button hole containing portion of the garment.

1,016,613. TORCH. HARLON A. CLIFFORD, Jersey City, N. J. Filed Jan. 31, 1911. Serial No. 605,741. (Cl. 158—109.)



1. In a device of the class described, a handle including a head having annular grooves in one of its faces, and pipes connected with the head, each pipe communicating with a groove to form oxygen and gas conduits; a burner support having annular grooves in one of its faces, registering with the grooves of the head; means for binding the head and the burner-support together for relative angular movement and to hold the grooves of the head and of the burner-support in registration; and a burner carried by the burner-support, the burner having separate bores, each bore communicating with a registering pair of the grooves.

2. In a device of the class described, a burner-support; a burner including a primary nozzle and a secondary nozzle removably secured to the primary nozzle; means for removably securing the burner to the burner-support; a handle with which the burner-support is pivotally connected; and means for conveying fluid through the handle to the nozzles, irrespective of the relative positions of the burner-support and the handle.

3. In a device of the class described, a burner-support; a burner removably secured thereto, the burner including a primary nozzle and a secondary nozzle removably secured to the primary nozzle, the secondary nozzle including a removable tip; a handle pivotally connected with the burner-support, there being separate fluid conduits and an independent conduit, all leading through the handle and through the burner-support, the separate conduits communicating with the primary nozzle and the independent conduit communicating with the secondary nozzle, there being registering annular grooves in the burner-support and in the handle, constituting parts of the conduits, whereby the continuity of the conduits will be maintained, irrespective of the relative positions of the handle and the burner-support.

4. In a device of the class described, a burner including a primary nozzle having a lateral flange and a longitudinal groove, and a secondary nozzle fitting in the groove and removably engaged with the flange, the secondary nozzle including a removable tip; a burner-support; means for securing the flange to the burner-support; and independent conduits in the burner-support, each of which communicates with the bore of one nozzle.

5. In a device of the class described, a nozzle provided with a bore terminally enlarged to form a mixing chamber; and a plug removably seated in the mixing chamber and having diagonally disposed grooves in its side face, extended upon the end face of the plug within the mixing chamber, there being an opening in the interior of the plug, communicating with the mixing chamber.

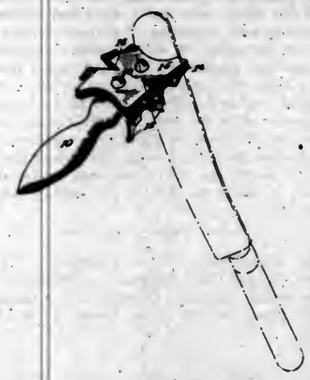
[Claims 6 and 7 not printed in the Gazette.]

1,016,614. COMBINED HIP-REDUCER AND HOSE-SUPPORTER. MARY E. GARDNER DARRAH, New York, N. Y., assignor to Le Papillon Corset Co., New York, N. Y., a Corporation of New York. Filed May 31, 1911. Serial No. 630,493. (Cl. 2—73.)

As a new article of manufacture, a binder for maintaining the shape of the hips, comprising a garment adjusted to depend from the waist and conform to the body in the hip-plane, said garment embodying a plurality of sections secured together at their sides, suitable ribs for strengthening, and tapering tongues depending from the front, one at each side of the vertical center thereof, and tapering tongues forming part of the side sections, and inserts located between said front and side tongues, the garment so formed having clasping means at the front, opened in the back and adapted to be adjusted supplementarily with respect to the hip-portion of a corset, means for connecting the adjacent edges of the back independently of the corset, and straps attached to each of the depending tongues, said straps adapted for engaging the stockings, whereby said straps will serve to hold up the stockings and maintain the garment down upon the hips.

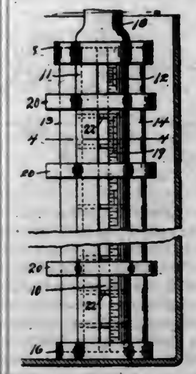
1,016,615. SHARPENING IMPLEMENT. GEORGE B. N. DOW and RICHARD E. WALSH, Manchester, N. H. Filed Oct. 4, 1911. Serial No. 652,680. (Cl. 76—86.)

In a device of the character described, the combination with a handle, of a curved plate partially surrounding one end of the handle and provided with a pair of screw openings, a pair of similarly shaped clamping plates provided on each edge with a V-shaped notch and with screw openings extending through the body of the plates, a pair of rectangular sharpening blades extending across each other and located between the plates, and screws



extending through the openings in the three plates and into the body of the handle, for the purpose described.

1,016,616. INDICATOR-GAGE. JEROME E. EMERSON, Lockport, N. Y. Filed Mar. 2, 1911. Serial No. 611,867. (Cl. 73—120.)



1. An implement of the class described comprising a casing formed in two parts divided longitudinally with their confronting edges spaced apart, a tubular member of transparent material open at the ends and located within said casing, a compressible tubular member connected to said transparent tubular member at one end, and a plurality of indicators adjustable relative to said casing longitudinally of said tubular member.

2. An implement of the class described comprising a casing formed in two parts divided longitudinally with their confronting edges spaced apart, a tubular member of transparent material open at the ends and located within said casing, a yieldable packing between said tube and casing members at one end, a section of hose between said casing members and tube at the other ends, and clamp members secured to said casing members at the ends and uniting the same to the tubular member.

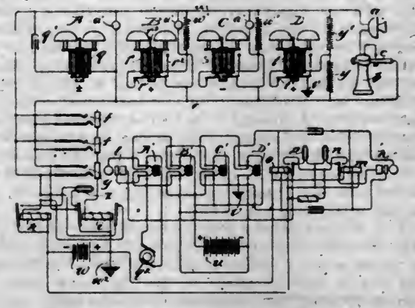
3. An implement of the class described comprising a casing formed in two parts divided longitudinally with their confronting edges spaced apart, a tubular member of transparent material open at the ends and located within said casing, a yieldable packing between said tube and casing members at one end, a section of hose between said casing members and tube at the other ends, clamp members secured to said casing members at the ends and uniting the same to the tubular member, and a plurality of indicators adjustable upon said casing members.

4. An implement of the class described comprising a casing formed in two parts divided longitudinally with their confronting edges spaced apart, lateral webs upon said casing members, a tubular member of transparent material open at its ends and located within said casing, a section of hose connected to said tubular member, and clamp members secured to said casing members at the ends and uniting the same to the tubular member.

5. An implement of the class described comprising a casing formed in two parts divided longitudinally with their confronting edges spaced apart, lateral webs upon said casing members, a tubular member of transparent material open at its ends and located within said casing, a section of hose connected to said tubular member, clamp members secured to said casing members at the ends and uniting the same to the tubular member, and a plurality of indicators adjustable upon said casing members.

[Claims 6 and 7 not printed in the Gazette.]

1,016,617. TELEPHONE SYSTEM. WILLIAM A. FRICKE, Chicago, Ill., assignor to Monarch Telephone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 10, 1909. Serial No. 495,104. (Cl. 179—86.)



1. A common battery telephone exchange system including a telephone line extending from two telephone stations to an exchange; a conductor of high resistance in bridge of the line at each telephone station; polarized signal receivers in said high resistance conductors that are responsive to uni-directional current of opposite polarity; switching mechanism at the exchange for effecting the passage of uni-directional current over the line in different directions suited to the signal receiver that is to be operated; signaling apparatus and a source of current at the exchange adapted for inclusion in circuit with the line, the exchange signaling apparatus being prevented from operating by the high resistance conductors at the aforesaid stations; and a conductor of low resistance at each of said stations governed by the switch hooks thereat and opened when the switch hooks support the telephone receivers and closed when the switch hooks are free of the telephone receivers to shunt the high resistance bridge conductors and thereby occasion the operation of said exchange signaling apparatus.

2. A common battery telephone exchange system including a telephone line extending from two telephone stations to an exchange; a conductor of high resistance in bridge of the line at each telephone station; polarized signal receivers in said high resistance conductors that are responsive to uni-directional current of opposite polarity; switching mechanism at the exchange for effecting the passage of uni-directional current over the line in different directions suited to the signal receiver that is to be operated; a third telephone station to which the telephone line extends; a high resistance bridge conductor at this third telephone station; a grounded connection from an intermediate portion of this high resistance conductor; a signal receiver included in this grounded connection; means at the exchange for including a source of signaling current in grounded circuit with the signal re-

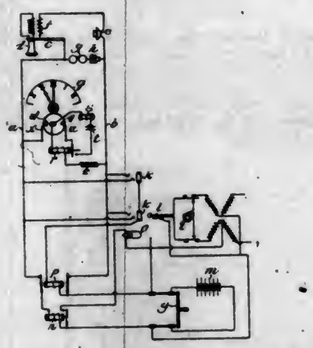
ceiver at the third station; signaling apparatus and a source of current at the exchange adapted for inclusion in circuit with the line, the exchange signaling apparatus being prevented from operating by the high resistance conductors at the aforesaid stations; and a conductor of low resistance at each of said stations governed by the switch hooks thereat and opened when the switch hooks support the telephone receivers and closed when the switch hooks are free of the telephone receivers to shunt the high resistance bridge conductors and thereby occasion the operation of said exchange signaling apparatus.

3. A common battery telephone exchange system including a telephone line extending from a telephone station to an exchange; a conductor of high resistance in bridge of the line at the telephone station; a signal receiver in said high resistance conductor; a second telephone station to which the telephone line extends; a high resistance bridge conductor at this second telephone station; a grounded connection from an intermediate portion of this high resistance conductor; a signal receiver included in this grounded connection; means at the exchange for including a source of signaling current in grounded circuit with the signal receiver at the second station and a source of signaling current in metallic circuit with the signal receiver at the first station; signaling apparatus and a source of current at the exchange adapted for inclusion in circuit with the line, the exchange signaling apparatus being prevented from operating by the high resistance conductors at the aforesaid stations; and a conductor of low resistance at each of said stations governed by the switch hooks thereat and opened when the switch hooks support the telephone receivers and closed when the switch hooks are free of the telephone receivers to shunt the high resistance bridge conductors and thereby occasion the operation of said exchange signaling apparatus.

4. A common battery telephone exchange system including a telephone line extending from two telephone stations to an exchange; a conductor of high resistance in bridge of the line at each telephone station; polarized signal receivers in said high resistance conductors that are responsive to uni-directional current of opposite polarity; the signal receivers at the aforesaid stations being included in circuit with switches that are provided with means for normally closing these signal receiver circuits and which switches are operated by the signal receivers to open the signal receiver circuits; switching mechanism at the exchange for effecting the passage of uni-directional current over the line in different directions suited to the signal receiver that is to be operated; signaling apparatus and a source of current at the exchange adapted for inclusion in circuit with the line, the exchange signaling apparatus being prevented from operating by the high resistance conductors at the aforesaid stations; and a conductor of low resistance at each of said stations governed by the switch hooks thereat and opened when the switch hooks support the telephone receivers and closed when the switch hooks are free of the telephone receivers to shunt the high resistance bridge conductors and thereby occasion the operation of said exchange signaling apparatus.

5. A common battery telephone exchange system including a telephone line extending from two telephone stations to an exchange; a conductor of high resistance in bridge of the line at each telephone station; polarized signal receivers in said high resistance conductors that are responsive to uni-directional current of opposite polarity, the signal receivers at the aforesaid stations being included in circuit with switches that are provided with means for normally closing these signal receiver circuits and which switches are operated by the signal receivers to open the signal receiver circuits; switching mechanism at the exchange for effecting the passage of uni-directional current over the line in different directions suited to the signal receiver that is to be operated; a third telephone station to which the telephone line extends; a high resistance bridge conductor at this third telephone station; a grounded connection from an intermediate portion of this high resistance conductor; a signal receiver included in this grounded connection; means at the exchange for including a source of signaling current in grounded circuit with the signal receiver at the third station; signaling apparatus and a source of current at the exchange adapted for inclusion in circuit with the line, the exchange signaling apparatus being prevented from operating by the high resistance conductors at the aforesaid stations; and a conductor of low resistance at each of said stations governed by the switch hooks thereat and opened when the switch hooks support the telephone receivers and closed when the switch hooks are free of the telephone receivers to shunt the high resistance bridge conductors and thereby occasion the operation of said exchange signaling apparatus.

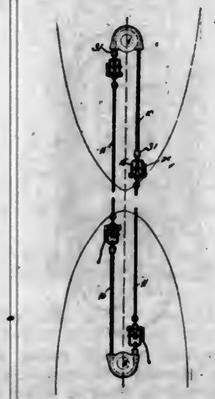
1,016,618. SYNCHRONIZING SYSTEM. WILLIAM A. FRICKE, Chicago, Ill., assignor to Monarch Telephone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 17, 1910. Serial No. 587,583. (Cl. 58—35.)



A synchronizing system including an indicating device that is to be synchronized; a main synchronizing circuit including a source of current normally connected between its sides; a switch located at the station of the indicating device and included in the main synchronizing circuit, the closure and separation of the contacts of this switch being governed by the indicating device; a magnet or relay included in the main synchronizing circuit at the station of the indicating device; a master synchronizing device for changing the condition of the main synchronizing circuit to effect the operation of said magnet when the contacts of the aforesaid switch are in engagement; synchronizing mechanism at the station of the indicating device, this synchronizing mechanism including an electro-magnet for operating it, this second magnet having a local synchronizing circuit; and switching mechanism for governing said local synchronizing circuit; and governed in turn by the indicating device and the first aforesaid magnet, the switch which is operated by the indicating device to take part in governing the main synchronizing circuit and the portion of the switching mechanism operated by the indicating device for taking part in the control of the local synchronizing circuit having individual contacts that are so related that the contacts of the switch that takes part in governing the main synchronizing circuit are engaged and separated respectively before and after the engagement and separation of the contacts of the said switching mechanism portion that takes part in controlling the local synchronizing circuit.

1,016,619. TOWING APPARATUS. LOUIS VICTOR WILLIAM FROGER, Lorient, France. Filed Mar. 29, 1909. Serial No. 486,298. (Cl. 114—235.)

1. A towing apparatus for marine vessels comprising a cable in four parts, readily attachable and detachable connectors connecting said four parts into an endless cable, the cable being arranged with two of its parts extending between the towing boat and the towed boat symmetrically, and each of the other two parts of the cable being looped around fastening means on one of the boats and movable freely about said fastening means, thus tending to equilibrate the strains.



2. Towing apparatus for marine vessels comprising four ropes, a shackle attached to each end of each of two of these ropes, a bent link attached to each end of each of the other two of these ropes, an arm carried by each shackle bolt and adapted to engage a bent link, a socket mounted on an axle adapted to rotate and carried by the shackle, the said socket being adapted to receive the said arm and to liberate it when the said axle is turned through an angle.

3. Towing apparatus for marine vessels comprising four ropes, a shackle attached to each end of each of two of these ropes, a bent link attached to each end of each of the other two of these ropes, an arm carried by each shackle bolt and adapted to engage a bent link, a socket mounted on an axle adapted to rotate and carried by the shackle, the said socket being adapted to receive the said arm and to liberate it when the said axle is turned through an angle, a chain wheel keyed on the said axle, and a chain adapted to operate the said chain wheel.

4. Towing apparatus for marine vessels comprising four ropes, a shackle attached to each end of each of two of these ropes, a bent link attached to each end of each of the other two of these ropes, an arm carried by each shackle bolt and adapted to engage a bent link, a socket mounted on an axle adapted to rotate and carried by the shackle, the said socket being adapted to receive the said arm and to liberate it when the said axle is turned through an angle, a chain wheel keyed on the said axle, a chain adapted to operate the said chain wheel, an eye having a pulley groove in which the said chain slides, and a cord stretched between fixed points parallel to the said towing ropes and in a plane above that containing said ropes, on which cord the said eye is adapted to slide.

5. A towing apparatus for marine vessels comprising four ropes connected together by readily attachable and detachable shackles to form an endless cable, a pulley fixed to each vessel, two of the said four parts passing around the sheaves of the said pulleys.

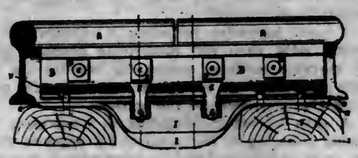
[Claims 6 to 15 not printed in the Gazette.]

1,016,620. PIPE-COUPLING. JOHN GAPP, Scranton, Pa. Filed July 6, 1910. Serial No. 570,645. (Cl. 137—28.)

1. A coupling including a member having an annular enlargement at each end, there being an annular shoulder outstanding from the outer face of one of the enlargements, a nipple, a coupling ring interiorly screw threaded for engagement with the nipple, said ring having an interior annular groove and being slidable onto the reduced portion of the coupling member, a sectional guide ring insertible between said reduced portion and the coupling ring and expansible into the groove in the coupling ring, one edge of said guide ring being substantially flush with one end of the coupling ring, the internal diameter of the guide ring when expanded being substantially equal to the external diameter of the shouldered annular enlargement, and said expanded ring being movable onto the annular enlargement and against the annular shoulder, and yielding means removably mounted in the guide ring for holding it seated in the groove.

2. A coupling including a member having an annular enlargement at one end, there being an annular shoulder outstanding from the outer face of the enlargement, a nipple, a coupling ring interiorly screw threaded for engagement with the nipple, said ring having an interior annular groove and being slidable onto the enlargement, a sectional guide ring insertible between the coupling ring and the member at a point removed from the enlargement, said ring being expansible into the groove in the coupling ring and movable with said ring onto the enlargement, said enlargement constituting means for holding the expansible ring within the groove, said shoulder constituting an abutment for the guide ring.

1,016,621. MEANS OF FORMING JOINTS IN RAILS. HORATIO G. GILLMOR, Bath, Me. Filed Mar. 12, 1906. Serial No. 305,688. (Cl. 239—6.)



1. A self-locking clamp constructed with a body, an arm overturned at an acute angle to said body, and a part carried by said body, adapted automatically to lock said clamp when driven into position by engaging with surfaces of an object in connection with which said clamp may be used, substantially as described.

2. An automatically locking clamp comprising; two jaws, of unequal length, adapted to engage with surfaces of other bodies to exert pressure thereon; the longer of the said jaws being provided with means adapted, automatically, to engage, when the said clamp is forced into position, with surfaces of a body, in connection with which the clamp may be used, in such manner as to lock the said clamp in position, for substantially the purposes set forth.

3. An automatically locking clamp formed of resilient material comprising two jaws formed at an acute angle one to the other, one of the said jaws being provided with means adapted, automatically, to engage when the said clamp is forced into position, with surfaces of a body in connection with which the clamp may be used, in such manner as to lock the said clamp in position, for substantially the purposes set forth.

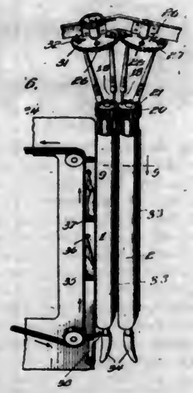
4. An automatically locking clamp, formed in resilient materials; comprising two jaws, of unequal length, adapted to engage with surfaces of other bodies to exert pressure thereon; the longer of the said jaws being provided with means adapted to automatically engage, when the

said clamp is forced into position, with surfaces of a body, in connection with which the said clamp may be used to lock the same in position, for substantially the purposes set forth.

5. A rail joint, including, in combination with the rails a fish bar, and an automatically locking clamp adapted to bear upon the fish bar at one side of the rails, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,016,622. CORN-HARVESTER. ADOLPH P. GUBRUD, Hudson, S. D. Filed Aug. 18, 1909. Serial No. 513,491. (Cl. 5—113.)



1. A corn harvester, including a coöperating pair of snapping rolls, each roll comprising opposite longitudinally movable sections and an antifriction bearing supporting the sections, and means for moving the sections relatively to each other.

2. A corn harvester including a coöperating pair of snapping rolls, each roll comprising opposite longitudinally movable sections, means for moving the sections of each roll relative to each other, and means for adjusting said relative movement of the sections.

3. A corn harvester, including a coöperating pair of snapping rolls, each roll comprising opposite longitudinally movable sections and an antifriction bearing supporting the sections, means for moving the sections relatively to each other, and a snapping bar carried by each roll.

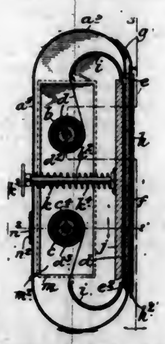
4. Snapping rolls for corn harvesters, connected for simultaneous rotation, each of said rolls comprising oppositely longitudinally movable sections, the meeting lines of the sections of each roll forming V-shaped depressions, and a snapping bar carried by each roll to coöperate with the depression of the opposing roll.

5. Snapping rolls for corn harvesters, connected for simultaneous rotation, each of said rolls comprising oppositely longitudinally movable sections, the meeting lines of the sections of each roll forming depressions, and a snapping bar carried by each roll to coöperate with the depression of the opposing roll.

[Claims 6 to 12 not printed in the Gazette.]

1,016,623. PHOTOGRAPHIC-PRINTING DEVICE. HARRY HALLER, Jr., Ilion, N. Y. Filed Sept. 6, 1911. Serial No. 647,891. (Cl. 95—77.)

1. In a photographic printing device, a casing the front of which is provided with an opening adapted to receive a negative and in front of which is a movable opaque member and back of which is a presser plate, two spindles mounted in the opposite end portions of said casing and having bearings in one side thereof only and extending approximately across said casing and provided with removable roller sleeves on one of which a printed strip is adapted to be wound, and with the other of which said printing strip is adapted to be connected, the side of said casing opposite that in which the spindles are mounted being also provided with an opening through which said sleeves and strip may be passed, and means for closing the same.



2. In a photographic printing device, a casing the front of which is provided with an opening adapted to receive a negative and in front of which is a movable opaque member, and back of which is a presser plate provided with a handle rod which passes backwardly through the back of said casing and on which is mounted a spring which bears on said presser plate, said casing being also provided in the opposite end portions thereof with spindles having bearings in one side of said casing only, and which extend approximately across said casing and on which are mounted removable roller sleeves, the side of the casing opposite that in which the spindles are mounted being provided with an opening, and means for closing the same, and one of said spindles being provided with a crank.

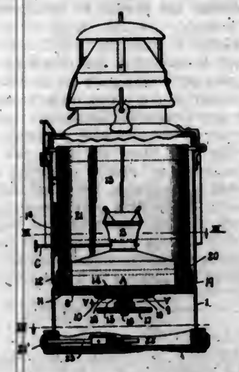
3. In a photographic printing device, a casing one side of which is provided with an opening adapted to receive a negative and in front of which is a movable opaque member and back of which is a presser plate, said casing being also provided in the opposite end portions thereof and adjacent to the opposite ends of the presser plate with curved guides, and said casing being also provided backwardly of the presser plate and in the opposite end portions thereof with two spindles which are mounted in one side of said casing only, and which extend approximately across said casing and which are provided with removable roller sleeves on one of which a printing strip is adapted to be wound and with the other of which the printing strip is adapted to be connected, said strip being also adapted to be passed around said guides and in front of the presser plate.

1,016,624. SIGNAL-LAMP. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed May 20, 1911. Serial No. 628,358. (Cl. 240—22.)

1. In a signal lamp, a shell provided with a plurality of lenses, a shield carrier rotatable in said shell, a shield carried by said shield carrier adapted to obstruct the egress of rays of light through any of said lenses, and a font loosely mounted on said shield carrier and held from rotation by said shell.

2. In a signal lamp, a shell provided with a plurality of lenses, a shield carrier rotatable in said shell, a shield carried by said shield carrier adapted to obstruct the egress of rays of light through any of said lenses, and a font loosely mounted on said shield carrier, the font being provided with a burner having a wick raising rod extending through said shell and holding the font from rotation with the shield carrier.

3. In a signal lamp, a shell provided with a plurality of lenses, a bottom plate in said shell above its lower edge, a shield carrier rotatable above said bottom plate, a shield extending upwardly from said carrier, and a font loosely mounted on said carrier and held from rotation by said shell.



4. In a signal lamp, a shell provided with a plurality of lenses, a bottom plate in said shell above its lower edge, a shield carrier rotatable above said bottom plate, a shield extending upwardly from said carrier, means extending downwardly from said carrier through said bottom plate by which said carrier may be rotated, and a font loosely mounted on said carrier and held from rotation by said shell.

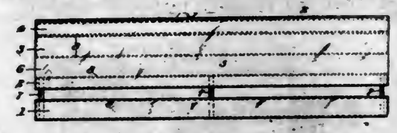
5. In a signal lamp, a shell provided with a plurality of lenses, a bottom plate in said shell above its lower edge, a shield carrier rotatable above said bottom plate provided with a font receiving pocket member, a shield extending upwardly from said carrier, means extending downwardly from said carrier through said bottom plate by which said carrier may be rotated, and a font loosely mounted in said pocket member and held from rotation by said shell.

[Claims 6 to 8 not printed in the Gazette.]

1,016,625. COMBINED UNDERSHIRT AND SUSPENSORY. THOMAS S. HARPER, Kings Park, N. Y. Filed Aug. 5, 1909. Serial No. 511,470. (Cl. 128—38.)

An undershirt having the lower margin of its front severed and the edges of the material drawn together to form a permanent upwardly widening pocket, in one piece with the front of the shirt, the bottom of the pocket extending out at right angles to the shirt and adapted to receive the scrotum, said pocket having a reinforced opening adjacent to the bottom of the pocket to accommodate the penis, and pairs of tapes, the tapes of each pair being vertically spaced from each other, said tapes being attached to the undershirt above the uppermost portion of the pocket at the intersection of the waist line of the shirt with the upwardly and laterally extending side margins of the pocket, where said pocket merges into the general plane of the shirt, said tapes being thereby located at the intersection of the waist line of the wearer with the lines of the groin, said tapes being adapted, by reason of their being vertically spaced from each other, to be tied and thereby exert an upward pull upon the lateral margins of the pocket.

1,016,626. COMBINATION BIAS, BINDING, AND HEM FOLDER. MARY MACON HARRIS, Hazlehurst, Miss. Filed May 3, 1911. Serial No. 624,864. (Cl. 223—15.)



1. A device of the character described comprising a plurality of flexibly connected folder members and a holder member spaced apart from said folder member, adapted to clamp the work in position upon the folder members and constitute a guide about which the folder members may be turned.

2. A device of the character described comprising a series of strip-like members, flexible connections between some of the members, a fabric connection between two of the members, said connection being approximately equal in width to one of the members connected by it and extending the length thereof, and a holder strip-like member of similar width adapted to rest upon said fabric connection between the members joined by the same.

3. A device of the character described comprising a plurality of stiff strips, a textile covering and coupling extending over and connecting said strips, the covering being stitched along the edges of the strips and two of the strips spaced apart, and another similar strip adapted to rest upon said textile covering between the said spaced strips.

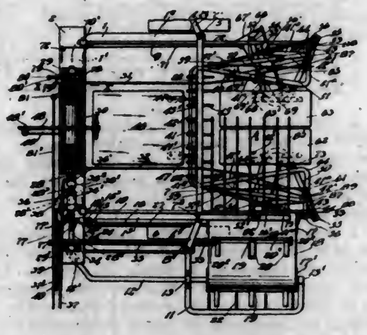
1,016,627. SHIPPING-PACKAGE FOR LOBSTERS. FRED B. HIGGINS, Boothbay Harbor, Me., assignor to Fred B. Higgins Co., Boothbay Harbor, Me., a Corporation of Maine. Filed July 14, 1910. Serial No. 571,925. (Cl. 62—10.)

A shipping package of live lobsters comprising a container, a central tapered ice core, a plurality of layers of lobsters surrounding and laid about said core and spaced apart by a suitable packing, whereby as the ice core diminishes and the layers of lobsters settle, said lobsters will still continue to be held snugly against relative movement.

1,016,628. GRAIN-SHOCKING MACHINE. JAMES HOMAN, Grandview, Manitoba, Canada. Filed Apr. 16, 1910. Serial No. 555,781. (Cl. 56—121.)

1. In a shocking machine, the combination with a main frame carried by suitable supporting wheels and having an open end, of a basket frame pivotally mounted at the open end of the main frame, similar gates pivotally secured to the basket frame and adapted to close the bottom thereof in the sheaf receiving position of the basket, sets of bars

uniting the gates to the basket frame, knuckle joints in said bars whereby the gates are locked in the sheaf receiving position, means adapted to break the knuckle joints to release the gates when the basket is turned to the depositing position, fingers dependent from the basket frame and closing the forward sides thereof, means for automatically releasing the basket frame to swing the same about its pivot by gravity into shock delivering position and means adapted to raise the basket when the shock is delivered, as and for the purpose specified.



2. In a shocking machine the combination with a main frame carried by suitable supporting wheels and having an open end, of an open basket frame pivotally mounted in arms carried by the main frame and at the open end thereof, similar opposing V-shaped gates pivotally secured to the basket frame and adapted to close the bottom of the basket when in the sheaf receiving position, said gates having each a portion extending beyond their pivotal points, sets of bars uniting the latter extending portions to the basket frame, a knuckle joint in said bars adapted to lock the gates in the sheaf receiving position, means carried by the main frame engageable with the knuckle joints when the basket is passed to the shock depositing position, means for automatically releasing the basket frame to swing the same about its pivot by gravity into shock delivering position, and fingers dependent from the basket frame and closing the forward side thereof, as and for the purpose specified.

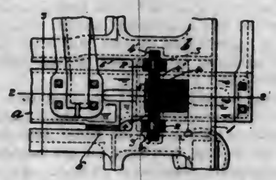
3. In a shocking machine the combination with a main frame carried by suitable supporting wheels and having an open end, of a basket frame formed from interconnected tubular members, such frame being pivotally carried by the main frame within its open end, similar opposing V-shaped gates pivotally secured to the bottom of the basket frame and having arms extending beyond their pivotal points, sets of connecting bars passing between the arms aforesaid and the basket frame, knuckle joints in said bars adapted to lock the gates in the closed position, means carried by the main frame adapted to engage with and break the knuckle joints when the basket is turned, dependent fingers secured to the basket frame and adapted to close the forward side thereof when the basket is in receiving position, means for automatically releasing the basket frame to swing the same about its pivot by gravity to shock delivering position, and means adapted to raise the basket to the receiving position and to close the gates when the basket is raised, as and for the purpose specified.

4. In a shocking machine the combination with a main frame carried by suitable supporting wheels and having an open end, of an open basket frame pivotally carried by the main frame at the open end thereof, similar opposing gates pivotally secured to the basket frame at the bottom thereof said gates having each an arm extending beyond its pivotal point, sets of bars connecting the arms aforesaid with the basket frame, knuckle joints in said bars adapted to retain the gates in their closed position, trip bars carried by the main frame and engageable with the knuckle joints when the basket is swung to the shock depositing position thereby releasing the gates to move backwardly with the shock, dependent fingers carried by the basket frame and closing the forward side thereof when the basket is in receiving position, means for automatically releasing the basket to swing the same about its pivot by gravity into the shock delivering position, and means designed to raise the basket and close the gates when the shock is delivered, and heading plates carried by the gates, as and for the purpose specified.

5. The combination with the main frame, of a sheaf receiving and shock forming basket carried by the main frame, releasable gates pivotally secured to the basket frame and adapted to close the open end thereof when in the receiving position, similar opposing heading plates pivotally secured to the gates, levers carried by the gates and connected to the heading plates, and means for actuating the levers to cause the plates to bear against the heads of the sheaves when the basket is turned to shock delivering position, as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,016,629. CAR-TRUCK. CLARENCE H. HOWARD and HARRY M. PFLAGER, St. Louis, Mo., assignors to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 5, 1911. Serial No. 625,394. (Cl. 105—248.)



1. In a car truck, the combination of a cast frame comprising side members and transom members, said transom members having a horizontally disposed connecting web adjacent said side frame member, a bolster, a supporting stirrup for said bolster extending up through openings in said horizontal web, and a removable pivot pin seated in recesses in the upper surface of said web. said pin passing through the upper end of said stirrup.

2. The combination of a cast truck frame comprising an end member and transom members, of a horizontally disposed web between said transom members adjacent the said side member, said web being reinforced by vertical strengthening ribs and having openings between said ribs and said transom members, a stirrup extending through said openings, and a pivot pin arranged above said web and passing through eyes in the upper ends of said supporting members.

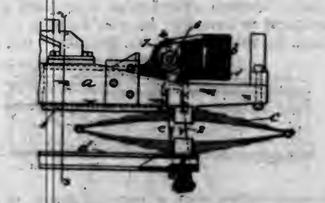
3. The combination of a cast truck frame comprising a side member and transom members, said transom members being reinforced by a horizontally disposed web adjacent the side member, and said web being reinforced by vertically disposed ribs arranged substantially parallel to said transom members, openings in said web and recesses on each side of said openings, a stirrup, and a pivot pin passing through eyes in said stirrup and seated in said recesses.

4. The combination of a cast truck frame comprising a side member and transom members, a horizontally disposed web provided with openings therein, said web having recesses on each side of said opening, a stirrup passing through said openings, and a pivot pin passing through eyes in the upper ends of said stirrup and seated in said recesses, said pivot pin being prevented, by the ends of said recesses, from moving longitudinally.

5. The combination of a cast truck frame comprising a side member and transom members, a horizontally disposed web provided with openings therein, said web having recesses on each side of said opening, a stirrup passing through said openings, a pivot pin passing through eyes in the upper ends of said stirrup and seated in said recesses, said pivot pin being prevented, by the ends of said recesses, from moving longitudinally, and means for preventing the rotation of said pivot pin in said recesses.

[Claims 6 to 8 not printed in the Gazette.]

1,016,630. CAR-TRUCK. CLARENCE H. HOWARD and HARRY M. PFLAGER, St. Louis, Mo., assignors to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 5, 1911. Serial No. 625,395. (Cl. 105—248.)



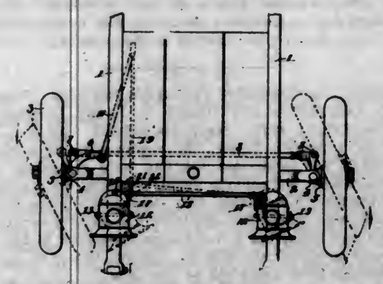
1. In a car truck the combination of a truck frame, a bolster, a hanger with bolts adapted to pass through the eyes thereof, and bearings for the bolts extending downwardly from the truck frame, said bearings being located above the horizontal plane of the bolster.

2. In a car truck the combination of a truck frame and its transoms, of a hood member forming a connection between said transoms adjacent the side member of said truck frame, and hanger supports depending from said hood member.

3. In a car truck the combination of a truck frame and its transoms, of a hood connection between said transoms adjacent the side member of said frame, lugs extending from said hood connection and transoms, a hanger whose pivot eyes are arranged between said lugs, and removable bolts passing through said lugs and said hanger eyes, said truck frame having an opening adjacent the nuts on said bolts whereby access may be had thereto, and a bolster supported by said hanger, said bolster being below the plane of said bolts.

4. In a car truck, the combination of a truck frame having transoms, a bolster, a bolster hanger, a member connecting the transoms above the bolster, and lugs on said member above the horizontal area of the bolster for supporting the bolster hanger.

1,016,631. ATTACHMENT FOR AUTOMOBILES. FREDERICK A. HOWARD, Chester, Pa. Filed Nov. 18, 1910. Serial No. 593,008. (Cl. 240—62.)



1. In an automobile, the chassis, and steering mechanism, in combination with a lamp bracket having a vertical stem, a bracket on said chassis, said stem being rotatably, mounted in said bracket, an arm on said stem, a rod connecting said steering mechanism and said arm and a link pivotally connected to said chassis and said arm, substantially as described.

2. In an automobile, the chassis and steering mechanism, in combination with a bracket on said chassis, a lamp bracket having a vertical stem rotatably mounted in said bracket, an arm slidably and rotatably connected with said stem, a rod connecting said arm and said steering mechanism and a link pivotally connected to said frame and also connected to said arm at the pivotal point between said arm and said rod, substantially as described.

1,016,632. SPRINKLER FOR SPRAYING AREAS OF DEFINITE SHAPE. GEORGE HIGGINS HUNTER, Redlands, Cal. Filed Sept. 3, 1910. Serial No. 580,437. (Cl. 137—83.)

1. A sprinkler having a chamber with inlet thereinto, and a top formed in perforated radial step-like facets of different angles.

2. A sprinkler having a chamber with inlet thereinto, and a top formed in perforated facets of different angles, the perforations being more densely arranged in the shorter than in the longer facets.

3. A sprinkler having a cruciform pyramidal top and provided with perforations sparsely arranged at the corners and increasingly denser toward the middle of its sides.

4. A sprinkler having a stepped top provided with perforations arranged symmetrically at various altitudes in the steps and around an apex, said steps being radially arranged.

5. A sprinkler having a stepped top provided with perforations arranged symmetrically at various altitudes in the steps around an apex; the arrangement of the perforations on diametrically opposite sides of the apex being alike upon each step as to altitudes and distances from the apex, said steps being radially arranged.

[Claims 6 to 11 not printed in the Gazette.]

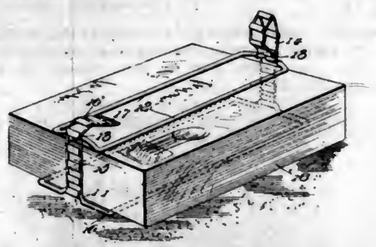
1,016,633. BED-SPRING. LEE JEFFERSON, Bigfork, Mont. Filed May 16, 1911. Serial No. 672,483. (Cl. 5—67.)

A bed-spring comprising corner members each having a movable closure, tensioning shafts revolubly mounted in the corner members, the said shafts having intermeshing gears thereon disposed in the corner members, means on the covers of the said corner members for engaging the gears to hold the shafts against rotation, the said shafts being arranged in parallel pairs, and a spring bottom including wires having their end portions secured to the said shafts.

1,016,634. DOCUMENT-FILE. ALEX B. JOHNSON and CHARLES L. JOHNSON, Baker, Oreg. Filed July 14, 1910. Serial No. 571,980. (Cl. 24—17.)

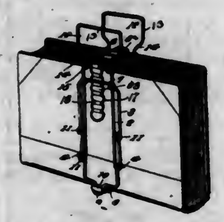
1. A file holder comprising a frame including spaced sides and connecting ends, said ends being vertically offset at their intermediate portions to form loops, a second frame including spaced sides and ends, the ends of the last mentioned frame being bowed upwardly and offset at their intermediate portions to form loops projecting outwardly in the direction of the length of the frame, connecion between the loops at one end of the frames, an

adjustable connection between the loops at the other end of the frames, the latter connection comprising a chain having one of its end links permanently attached to the said loop of the first mentioned frame and its other links interchangeably engageable over the said loop of the second mentioned frame.



2. A file holder comprising a frame including spaced sides and connecting ends, the said ends being vertically offset at their intermediate portions to form loops, a second frame including spaced sides and connecting ends, the ends of the last mentioned frame being bowed upwardly and offset at their intermediate portions to form outwardly projecting loops; adjustable connection between the loops at one end of the frames, and adjustable connection between the loops at the other end of the frames, the sides of the first mentioned frame being spaced apart a greater distance than the sides of the second mentioned frame.

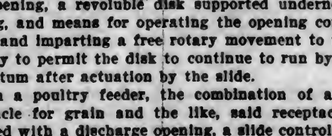
1,016,635. BOOK-HOLDER. ALEX B. JOHNSON and CHARLES L. JOHNSON, Baker, Oreg. Filed Dec. 8, 1910. Serial No. 596,389. (Cl. 224—50.)



1. A device of the character described, including oppositely disposed side members, each comprising a rectangular frame and a U-shaped frame operatively engaging with the rectangular frame and adapted to be longitudinally shifted therealong to contact or expand the frame, handles hingedly attached to the U-shaped frame, means for holding each U-shaped frame in its adjusted relation to the corresponding rectangular frame, a chain composed of rectangular links connecting one end of each of the rectangular frames to the like end of the other rectangular frame, a hook formed upon one of the rectangular frames adapted to engage any one of the links of said chain, a chain attached to the opposite end of one of the rectangular frames, and a hook formed upon the like end of the other rectangular frame and adapted to engage any one of the links of said chain.

2. A device of the character described, including opposed side members, each composed of two sections, one of said sections being rectangular in form and having oppositely disposed eyes formed at one end extending transversely to the sides of the section, the side bars of said frame being also formed with a plurality of spaced eyes extending parallel to the side bars, the other section comprising a U-shaped frame, the extremities of which are angularly bent to engage the eyes on the side bars of the rectangular frame, the legs of said U-shaped frame passing through the first named eyes on the rectangular frame, a chain composed of rectangular links and connecting the like ends of both of said frames to each other, a hook formed at the end of one of the frames adjacent to said chain, said hook being adapted to engage with any one of the links of the chain, a chain attached to one of the U-shaped frames, a hook formed upon the end of the other U-shaped frame and adapted to engage any one of the links of the last named chain, and oppositely disposed handles hingedly connected to the U-shaped frames.

1,016,636. CATTLE-GUARD. VICTOR E. KENT, Johnson City, Tenn., assignor of one-third to Richard F. Brewer and one-third to James A. Martin, Johnson City, Tenn. Filed Aug. 29, 1911. Serial No. 646,699. (Cl. 39—42.)



1. The combination with a railroad track, of a cattle guard embodying toothed guard sections flexibly mounted to oscillate between some of the ties, and toothed stationary guard sections mounted on other of said cross ties and provided with oppositely disposed plates extending downwardly in the direction of the flexibly mounted sections.

2. The combination with a railroad track, of a cattle guard including oscillating toothed sections flexibly mounted between some of the ties beneath the track rails, toothed, relatively stationary sections mounted on the ties, inclined plates extending downwardly from the fixed sections toward the flexibly mounted sections, and rods secured to the ties near the outer ends thereof from which are suspended said flexibly mounted sections.

3. The combination with a railroad track, of a cattle guard comprising a plurality of fixed toothed members secured to the cross ties of the track, and flexibly mounted toothed members suspended between the cross ties of the track and beneath the rails thereof.

4. The combination with a railroad track, of a cattle guard including a plurality of fixed guard sections, provided with teeth and secured to the upper face of the ties between strips triangular in cross section secured to the ties, said strips having downwardly extending lateral faces, and flexibly mounted guard members suspended between the ties and extending beneath the track rails.

5. The combination with a railroad track, of a cattle guard embodying a plurality of relatively stationary and movable guard sections extending transversely of the track and disposed in different planes, each movable guard section being provided with a plurality of rigidly mounted teeth adapted to move in unison with said movable section.

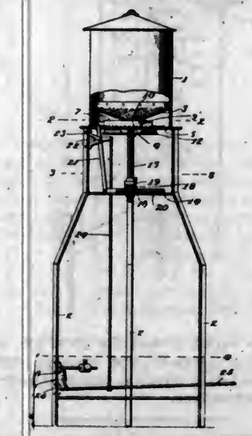
[Claims 6 and 7 not printed in the Gazette.]

1,016,637. AUTOMATIC POULTRY-FEEDER. WILLIAM A. KRAXBERGER and HENRY J. LAKES, Dalton, Mo. Filed Feb. 11, 1911. Serial No. 608,066. (Cl. 119—70.)

1. In a poultry feeder, the combination of a storage receptacle for grain and the like, said receptacle being provided with a discharge opening, means for controlling said opening, a revoluble disk supported underneath the opening, and means for operating the opening controlling means and imparting a free rotary movement to the disk, whereby to permit the disk to continue to run by its own momentum after actuation by the slide.

2. In a poultry feeder, the combination of a storage receptacle for grain and the like, said receptacle being provided with a discharge opening, a slide controlling said opening, a revoluble disk supported underneath the opening, and means for simultaneously operating said slide and imparting a free rotatable movement to the disk, whereby to permit the disk to continue to run by its own momentum after actuation by the slide.

3. A poultry feeder, embodying a storage receptacle for grain or the like, the receptacle being provided with a discharge opening, a feed slide operating underneath the opening, a revoluble disk mounted underneath the slide and adapted to receive the material therefrom, a shaft on which the disk is mounted, a pinion mounted on said shaft and arranged for a clutch connection therewith, a rack bar meshing with said pinion, a lever connected to the slide and to the rack bar for the simultaneous reciprocation of the two, and means for moving said lever.



4. A poultry feeder, embodying a storage receptacle for grain or the like, the receptacle being provided with a discharge opening, a feed slide operating underneath the opening, a revoluble disk mounted underneath the slide and adapted to receive the material therefrom, a shaft on which the disk is mounted, a pinion mounted on said shaft and arranged for a clutch connection therewith, a rack bar meshing with said pinion, a lever connected to the slide and to the rack bar for the simultaneous reciprocation of the two, a tilting platform, a support therefor, and a link rod connection between said lever and platform.

1,016,638. VAT DYE AND PROCESS OF MAKING SAME. AUGUST LEOPOLD LASKA, Offenbach-on-the-Main, Germany, assignor to Chemische Fabrik Griesheim Elektron, Frankfort-on-the-Main, Germany, a Corporation. Filed May 4, 1911. Serial No. 624,999. (Cl. 8—1.)

1. The process of manufacturing vat dyestuffs consisting in acting with oxidising agents upon ortho-aminoazo dyestuffs of the general formula:

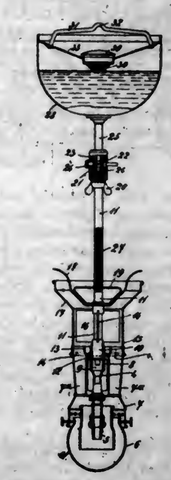
$$A\text{–}\overset{(\beta)}{N}\text{=}\overset{(\alpha)}{N}\text{–}\overset{(\beta)}{R}.NH_2,$$

wherein A means an anthraquinone radical and R a naphthalin radical.

2. As a new article of manufacture the vat dyestuffs obtained by oxidation of the azo dyestuff from β-diazoanthraquinone and β-naphthylamin, which dyestuff dissolves in concentrated sulfuric acid with brownish-orange, to red-brown color, being precipitated from this solution in shape of yellow flakes by addition of water, yielding with alkaline hydrosulfite solution a brown-violet vat, from which cotton is dyed dark-brown violet shades, which by oxidation are turned into yellow ones.

1,016,639. VAPOR LAMP AND BURNER. EDUARD LAUTERBACH and JOSEF LAUTERBACH, Berlin, Germany. Filed Jan. 28, 1909. Serial No. 474,735. (Cl. 67—50.)

1. In an inverted incandescent vapor lamp, the combination of a burner tube having a mixing chamber, a nozzle opening into said mixing chamber, a vaporizer connected at its lower end to said nozzle and arranged substantially vertically and coaxially with said burner tube, a fuel supply pipe connected to said vaporizer, a fuel controlling valve intermediate said pipe and vaporizer, a casing surrounding said mixing chamber so as to form an air admission chamber, a chimney for the burned gases surrounding said casing and extending upwardly so as to surround the lower part of said vaporizer, and a deflecting plate of inverted substantially frusto-conical form arranged above the open end of said chimney and carried by the vaporizer at an intermediate point of its length so as to protect the upper part of the vaporizer from the heat of the burned gases.



2. In combination, a vapor burner, a vaporising tube leading to said burner, a chimney surrounding said vaporizer for part of its length at the end nearest to the burner, a deflecting plate supported from said vaporizer tube at the point where it passes out from the chimney, and an air-channel past said deflector plate for cooling the upper part of said vaporising tube.

3. An inverted incandescent vapor lamp comprising, a liquid fuel reservoir, a vaporising pipe attachable to said reservoir, a chimney extension at the lower end of said vaporizer pipe and removable therewith, and a lamp globe burner tube, and chimney removable in one piece and supported from said chimney extension so that the burner tube registers with the lower end of the vaporizer tube.

4. In combination, a liquid fuel reservoir, a vaporising tube connected to said reservoir, a nozzle fixed to the lower end of said tube, a burner tube into the upper end of which said nozzle freely passes, a chimney casing in which said burner is concentrically supported, a chimney extension above said casing forming a heating chamber around the lower end of said vaporising tube, and means for connecting said chimney casing to the lower end of said chimney extension and simultaneously holding the nozzle within the upper end of the burner tube.

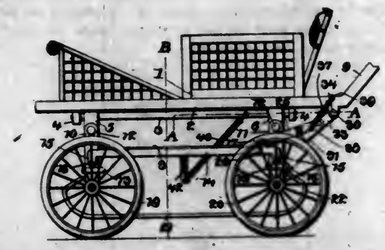
5. An inverted incandescent vapor lamp comprising a burner tube, a vertically-arranged vaporizer having a nozzle at its lower end opening into said burner tube, a liquid fuel supply pipe connected to the upper end of said vaporizer, an air inlet to said vaporizer, and means whereby said vaporizer may be connected either to said pipe or to said air inlet.

[Claims 6 and 7 not printed in the Gazette.]

1,016,640. COMBINED CART AND SLED. ELMER F. LIND, St. Paul, Minn. Filed Feb. 14, 1911. Serial No. 608,504. (Cl. 21—96.)

1. A vehicle having pivotally mounted wheel supporting elements movable angularly in vertical planes, in com-

bination with an operating and locking lever including a cross bar and crank arms, links pivotally connected to the wheel supporting members and to the crank arms of said lever and disposed in the path of movement of the locking lever, and a spring drawing upwardly on the locking lever and serving, when the wheels are lowered, to hold the locking lever with its cross bar in contact with the said links.



2. In combination with a vehicle body and pivotally mounted wheel supporting elements movable angularly in vertical planes, a locking lever including a cross bar and crank arms, the said crank arms being pivotally connected to the body, a spring connected to the body and also connected to the locking lever at a point to one side of the pivotal axis thereof and links pivotally connected to the wheel supporting members and to the inner sides of the crank arms of the locking lever so that when the locking lever is moved to lower the wheel supporting elements the spring acts to engage the cross bar of the locking lever with the links and co-acts with the locking lever and links to lock the wheel supporting elements in such position.

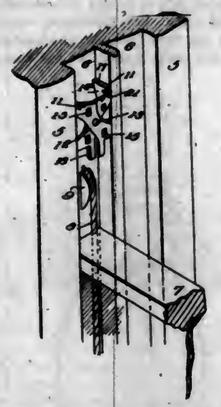
3. In combination with a vehicle body, wheel supporting elements connected thereto for angular movement in vertical planes, a locking lever pivotally connected to the body, a link pivotally connected to the wheel supporting elements and also to the lever at a point to one side of the fulcrum of the lever so that the lever and the link form a toggle connection between the body and the wheel supporting elements, said lever and link being constructed for mutual engagement to limit the movement of the lever in one direction and a spring connected to the lever and serving, when the same is in opened position, to hold the same in engaged relation with the link.

1,016,641. ADJUSTABLE SHADE-ROLLER BRACKET. CHARLES MASON, Boston, Mass., assignor of one-half to Philander J. Holmes, Carver, Mass. Filed Dec. 10, 1910. Serial No. 596,647. (Cl. 156—24.)

1. The combination with a window frame having sash cords and provided with sash receiving channels, of brackets fitted within the channels in front of the sash cords and provided with means for supporting a shade roller, each bracket including pivotally united plates having their free ends bearing against the adjacent walls of the channels, and springs encircling the pivotal axes of the plates of the brackets and having their opposite ends secured to the free ends of said plates for normally forcing the latter into engagement with the walls of the channels.

2. A supporting bracket for shade rollers including pivotally united members provided with depending finger pieces and having their free ends bent to form laterally extending flanges, there being openings formed in said members for the reception of the trunnions of a shade roller, and a spring having its intermediate portion encircling the pivotal axis of said members and its opposite ends secured to the free ends of the members for forcing the flanges into engagement with a support.

3. A supporting bracket for shade rollers including pivotally united members, each formed from a single strip of flat metal having its longitudinal edges bent to produce angularly disposed flanges, the metal at said flanges being bent laterally to produce serrated lips, there being openings formed in said members and perforations arranged near some of the openings, the lower end of each member being bent to produce a depending finger piece, a disk secured to the pivot pin, and a coil spring having its inter-



mediate portion coiled around the pivot pin between the disk and the rear faces of said members and its opposite ends provided with terminal fingers extending through the adjacent perforations.

1,016,642. LUBRICATOR. FRANK S. OLIVER, Popham Beach, Me. Filed July 24, 1911. Serial No. 640,279. (Cl. 184—38.)

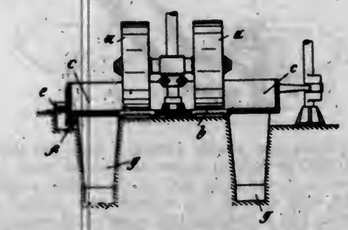
A lubricator comprising a cup, a cover having a yoke integral therewith, a piston having a rod extending through said cover and yoke and provided with means between the cover and yoke for feeding a lubricant, a valve seat on the lower face of the piston, a passage through the piston rod, a valve engaging said valve seat and a rod extending through the passage in the valve seat and means for automatically closing the valve.

1,016,643. PLOW-STOCK. WILLIAM A. PARKER, Atlanta, Ga., assignor of one-half to J. B. Hardin and one-fourth to William D. Paden, Atlanta, Ga. Filed May 26, 1911. Serial No. 629,671. (Cl. 97—2.)

1. A stock comprising a beam having an arcuate rear portion provided at its opposite sides with outstanding beads, a standard consisting of spaced side bars having arcuate portions which fit snugly against the opposite sides of the arcuate portion of the beam and which fit snugly within the beads and lie slidably adjustable therebetween, and bolt and slot securing connection between the arcuate portions of the beam and standard.

2. A stock comprising a beam having a rear arcuate portion provided with outstanding beads, a standard composed of spaced side bars having arcuate portions which snugly fit against the sides of the arcuate portion of the beam and which snugly fit between the beads and lie slidably detachable therebetween, the arcuate portion of the beam having at its rear end an elongated slot, and the forward portions of the side bars of the standard having elongated slots, and securing bolts carried by the beam and standard respectively and passing through said slots.

1,016,644. PUG-MILL. FRANZ PECKELSEN, Dinslaken, Germany. Filed Apr. 20, 1911. Serial No. 622,349. (Cl. 83—45.)



1. A pug mill comprising an annular grinding path, a plurality of revoluble rollers adapted to engage the same, a casing provided with a perforated portion surrounding said grinding path, and an arm pivoted to said casing, said arm being adapted to be reciprocated whereby the casing and perforated portion may receive a reciprocating motion.

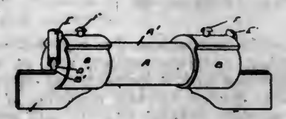
2. A pug mill comprising a grinding path, a plurality of revoluble rollers adapted to travel upon the same in an annular direction, a movable casing provided with screening plates surrounding said grinding path and an arm pivoted at one end to said casing and at its other end to an eccentric upon a driving shaft, whereby the casing is reciprocated.

1,016,645. MINER'S LAMP. WILLIAM E. PINKNEY, Scarbro, W. Va. Filed Mar. 7, 1911. Serial No. 612,757. (Cl. 220—76.)

1. A miner's lamp comprising a body portion having an opening, the top of the body portion being provided with an upstanding flange surrounding said opening, the metal forming the flange being bent laterally to produce an eye and thence extended inwardly and downwardly in spaced relation to the inner face of the flange to form a spring lip, a cover having a corresponding eye, a loop extending through said eyes and forming the hinge of the cover, said cover being adapted to engage and depress the spring lip when the cover is moved to closed position.

2. A miner's lamp comprising a body portion having an opening formed in the top thereof, the upper portion of the lamp being provided with an upstanding flange surrounding the opening, the metal constituting the flange being projected laterally beyond said flange and bent upon itself to form an eye and thence extended downwardly, within the opening and in spaced relation to the inner face of the flange to form a depending spring lip, a cover having a depending enlargement and provided with an eye, a loop extending through said eyes and forming the pivotal axis of the cover, the enlargement on the cover being adapted to engage and depress the spring lip when the cover is moved to closed position.

1,016,646. ELECTRIC CARTRIDGE-FUSE. FREDERICK WILLIAM AUGUST SCHNEIDER, Toronto, Ontario, Canada. Filed June 6, 1911. Serial No. 631,601. (Cl. 175—273.)



1. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs and detachable means for holding the fuse in contact with the plugs as and for the purpose specified.

2. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the caps provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuses and means for holding the detachable plugs in place as and for the purpose specified.

3. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuse, and end lips projecting beyond the wall of the cap, and means for holding the detachable plugs in place, as and for the purpose specified.

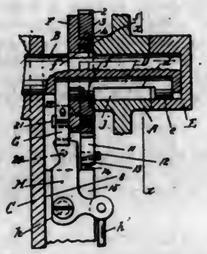
4. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuse, and end lips projecting beyond the wall of the cap, and set screws for holding the detachable plugs in place as specified.

1,016,647. CLUTCH MECHANISM. CHARLES SEITZ, Albany, N. Y. Filed Apr. 11, 1911. Serial No. 620,508. (Cl. 192—6.)

1. In a clutch mechanism, the combination, with a driving member, a driven member, and an oscillatory clutch-key provided with a spring-pressed operating arm and adapted to connect the said members; of a pivoted stop normally engaging with the said arm and adapted to be moved to release it and to arrest it at the same point of the revolution of the driven member, and auxiliary stop mechanism operatively connected with the said driven member and adapted to be operated at will to actuate the said arm and thereby disconnect the said members at intermediate points of the revolution of the driven member.

2. In a clutch mechanism, the combination, with a driving member, a driven member, and an oscillatory clutch-key provided with a spring-pressed operating arm

and adapted to connect the said members; of a pivoted stop normally engaging with the said arm and adapted to be moved to release it and to arrest it at the same point of the revolution of the driven member, a stop-wheel normally revolving with the driven member and provided with a projection for actuating the said arm, a spring-pressed stop-pawl for arresting the motion of the stop-wheel, and means for normally holding the said stop-pawl out of engagement with the stop-wheel.



3. In a clutch mechanism, the combination, with a driving member, a driven member, and an oscillatory clutch-key provided with a spring-pressed operating arm and adapted to connect the said members; of a pivoted stop which normally engages with the said arm, a stop-wheel normally revolving with the driven member and provided with a projection for actuating the said arm, a spring-pressed stop-pawl for arresting the motion of the stop-wheel, and a catch for holding the stop-pawl out of engagement with the stop-wheel, said catch being adapted to be operated by the pivoted stop after said stop has been moved to release the said arm.

4. The combination, with a driving member, a driven member, and an oscillatory clutch-key provided with a spring-pressed operating arm and adapted to connect the said members; of a plate secured to the driven member and provided with a slot, a stop-wheel mounted concentric with the said plate and provided with a stop-pin which works in the said slot and which is adapted to actuate the said arm, a spring-pressed stop-pawl for arresting the motion of the stop-wheel, and means for normally holding the said stop-pawl out of engagement with the stop-wheel.

5. In a clutch mechanism, the combination, with a driving member, a driven member, and an oscillatory clutch-key provided with a spring-pressed operating arm and adapted to connect the said members; of a stop-wheel normally revolving with the driven member and provided with a projection for actuating the said arm, a spring-pressed stop-pawl for arresting the motion of the stop-wheel, a spring-actuated retaining-catch for holding the stop-pawl out of engagement with the stop-wheel, and means for retracting the said stop-pawl out of engagement with the stop-wheel and into engagement with the said catch.

[Claim 6 not printed in the Gazette.]

1,016,648. DISINFECTANT OR INSECTICIDE CONTAINER. GEORGE D. SNELL, Denver, Colo. Filed June 20, 1911. Serial No. 634,278. (Cl. 167—3.)

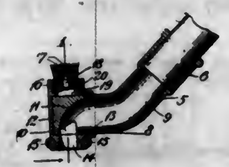
1. A disinfectant cartridge or container, comprising a hollow cylinder having its opposite extremities equipped with shallow closures, whose free edges are flared outwardly, the container being filled with an absorbent material saturated with a disinfectant, substantially as described.

2. An insecticide cartridge having a perforated wall, and removable caps or covers whose free edges are flared outwardly, applied to its opposite extremities, substantially as described.

3. A disinfectant cartridge having perforated walls, the opposite extremities being equipped with closures, forming relatively shallow liquid receptacles when the device is made to rest on either end thereof, and the said

closures having their free extremities flared outwardly, for the purpose set forth.

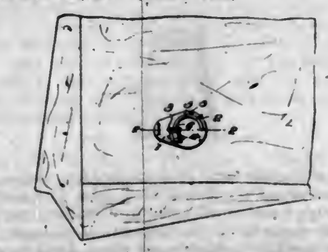
1,016,649. CLEANING-TOOL. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed June 9, 1908. Serial No. 437,529. (Cl. 15—60.)



1. A cleaning tool handle having a bent end with an opening therefrom located at one side of the axial center of said bent end, the main part of the handle projecting away from said axis on the opposite side thereof from said opening, and a cleaning tool mounted to rotate upon the axis of said bent end and having a plural number of cleaning faces each with an opening to register with said opening in the handle.

2. A cleaning tool handle having its end arranged at an angle to the main part and having a passage therein and an inlet opening and a long cleaning tool having oppositely disposed working faces extending lengthwise of the tool and arranged on opposite sides of the axis of said angular end, said tool being swiveled upon the end of the handle upon an axis extending crosswise of the tool and between said working faces each of which has a mouth adapted to be brought into communication with said inlet on bringing either working face into working position.

1,016,650. LOCK FOR GARMENT-POCKETS. EDWIN E. SQUIRE, Black Diamond, Cal. Filed Apr. 7, 1911. Serial No. 619,628. (Cl. 2—151.)

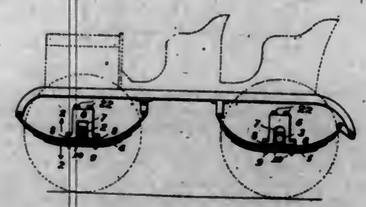


1. The combination with a garment provided with a pocket having an outer lining and an inner lining, the

latter being formed with an opening extending therethrough, of a plate secured to the inner side of the garment and formed with a slot registering with said opening and provided with a keeper at one side of said slot, an eye secured to the outer lining of the pocket and projecting inwardly therefrom and adapted to extend through said slot, and a latch pivotally connected to the plate and having a relatively free end adapted to extend across the slot through the eye and into the keeper.

2. The combination with a garment provided with a pocket having an outer lining and an inner lining, the latter being formed with an opening extending therethrough, of a plate secured to the inner side of the garment and formed with a slot registering with said opening and provided with a keeper at one side of said slot, an eye secured to the outer lining of the pocket and projecting inwardly therefrom and adapted to extend through said slot, and a latch pivotally connected to the plate and having a relatively free end adapted to extend across the slot through the eye and into the keeper, the plate being formed with a protuberance past which the latch is adapted to snap, for the purpose specified.

1,016,651. PNEUMATIC SPRING. WILLIAM H. STAATS, Colonie, N. Y. Filed Apr. 22, 1910. Serial No. 557,049. (Cl. 21—50.)



1. The combination with a vehicle frame, an axle, and a leaf spring having its ends attached to the frame, of a casing, open at its lower end, mounted on the upper side of the spring and having in opposite side walls slots that extend to the lower edge of such walls and through which the axle passes, a compression plate mounted on the axle within said casing and having depending guides bearing against adjacent walls of the casing, and a pneumatic cushion arranged within the casing between the top thereof and said compression plate.

2. The combination with an axle and vehicle body spring, of a shock absorber or cushioning apparatus comprising a casing including two telescopic members connected respectively to the axle and spring, a pneumatic cushion arranged between said members and a disk, having upturned outwardly flaring flanges, arranged within the casing and receiving the lower portion of the cushion, the upper edges of said disk flanges bearing against the inner face of the casing, substantially as and for the purpose described.

3. The combination with a vehicle axle, a casing having its lower end open and provided in opposite side walls with slots through which the axle extends, a leaf spring extending beneath and securely attached to flanges at the lower end of said casing, a compression plate secured on the axle and inclosed by the side walls of the casing, a disk on said plate having its edges bent upwardly and yieldingly bearing against the inner faces of the walls of the casing, and a pneumatic cushion having its lower end seated within the resilient flanges on said disk and its upper end bearing against the top of the casing.

1,016,652. PUBLIC DRINKING-FOUNTAIN. GEORGE B. STACK, Sacramento, Cal. Filed June 16, 1911. Serial No. 633,544. (Cl. 137—11.)

In a public drinking fountain the combination of a water supply pipe, a tubular mouth piece connection secured to the delivery end of the supply pipe, the ends of said connection being interiorly threaded, a tubular valve seat having exterior threads engaging the threads in the mouth piece connection adjacent to the water supply pipe, the interior of said valve seat also being threaded, a hollow valve having exterior threads engaging the threads in the interior of the valve seat and also provided with laterally extending openings, the upper end of the valve

being closed and provided with a groove to receive an implement for turning it, and a tubular mouth piece having exterior threads engaging the threads on the interior of the other end of the mouth piece connection, the orifice of said mouth piece being restricted and serving to limit the thickness of the implement used to adjust the valve plug aforesaid.

1,016,653. BRACKET-SUPPORT FOR VEHICLE-TOPS. ANDREW G. STEINBRENNER, Cleveland, Ohio. Filed Mar. 16, 1910. Serial No. 549,589. (Cl. 21—62.)

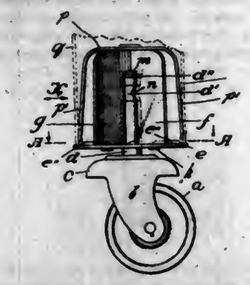
In supports for vehicle tops, a bracket arm adapted to be rigidly affixed to a vehicle body and having a body portion with a substantially right angled outwardly curved elbow near its base, said arm provided with a transverse sleeve shaped socket 4 in its upper end at substantially right angles to its base and a recess a on its inside next beneath said socket and open thereto, a spring pressed catch 5 and a pivot 8 therefor in said recess and a spring behind said catch adapted to throw the same upward into said socket, in combination with a vehicle top support C having an inward projection 9 on its inside fitting in said socket and provided with a notch on its under side engaged by said catch, said catch being adapted to be engaged below its pivot to be depressed and thus disengage said projection 9 and permit the top to be removed.

1,016,654. CASTER. FRANK E. THOMPSON, Corry, Pa., assignor to Corry Castor Company, Corry, Pa., a Corporation of Pennsylvania. Filed Nov. 11, 1911. Serial No. 659,675. (Cl. 16—76.)

1. A pintle-retainer for casters having a base-plate; a centering-plate the bottom edge of which extends centrally across said base-plate and has a bearing upon the pintle; and spring-arms carried by said centering-plate and arranged to engage the inner wall of the tubular leg of the bed.

2. A pintle-retainer for casters comprising a base-plate; a pair of centering-plates the bottom edges of which extend centrally across said base-plate and one of which has

a bearing upon the pintle; and spring-arms carried by one of said centering-plates and arranged to engage the inner wall of the tubular leg of the bed.



3. A pintle-retainer for casters having a base-plate formed with a hole for the passage of the pintle; a centering-plate the bottom edge of which extends centrally across said base-plate and is formed with a recess which lies above the hole in the base-plate; and spring-arms carried by said centering-plate and arranged to engage the inner wall of the tubular leg of the bed; said centering-plate having a bearing upon the pintle.

4. A pintle-retainer for casters comprising a base-plate formed with a hole for the passage of the pintle; a pair of centering-plates the bottom edges of which extend centrally across said base-plate and are formed with recesses which lie above the hole in said base-plate and one of which has a bearing upon the pintle; and spring-arms which are carried by one of said centering-plates and which are arranged to engage the tubular wall of the leg of the bed.

5. A pintle-retainer for casters comprising a base-plate; a pair of centering-plates the bottom edges of which extend centrally across said base-plate and are interlocked and one of which has a bearing upon the pintle; and spring-arms carried by one of said centering-plates and arranged to engage the inner wall of the tubular leg of the bed and to work in recesses of which said centering-plates form walls.

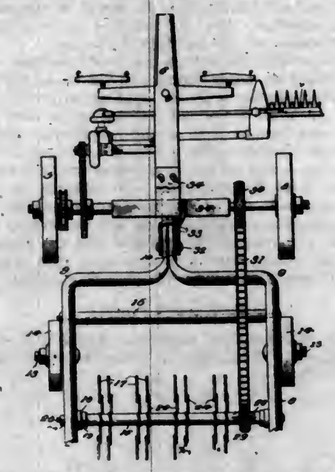
[Claim 6 not printed in the Gazette.]

1,016,655. TEDDER ATTACHMENT FOR MOWING-MACHINES. CHARLES L. TISCH, Beach Haven, Pa. Filed Feb. 28, 1911. Serial No. 611,499. (Cl. 56—28.)

1. The combination with a mowing machine, of a wheeled truck including spaced side bars having their forward ends bent inwardly and united to form a draft tongue, a hollow shaft journaled between the side bars at the rear end of the truck, a plurality of spring tedder teeth carried by the hollow shaft, a pivotal connection between the draft tongue and mowing machine, and a lever mounted on said mowing machine and operatively connected with the draft tongue of the truck for elevating the rear end thereof.

2. The combination with a mowing machine, of a wheeled truck pivotally connected with the mowing machine, a hollow shaft journaled on the truck, a plurality of spring teeth extending transversely through the shaft, a locking rod entirely housed within said shaft and bearing against the adjacent portions of the teeth, and a lever connected with the front end of the truck for elevating the rear end thereof.

3. The combination with a mowing machine, of a wheeled truck including spaced side bars having their forward ends bent to produce a draft tongue for pivotal connection with the mowing machine, a hollow shaft journaled between the side bars at the rear end of the truck and provided with spaced openings, spring teeth, each formed of a single piece of wire having its intermediate portion passed through the adjacent openings and its opposite ends extended beyond the hollow shaft, a locking rod housed within the shaft and bearing against the intermediate portion of the wire constituting each tooth for pressing said wire laterally in contact with the interior wall of the hollow shaft, and an operating lever connected with the draft tongue for raising and lowering the rear end of the truck.

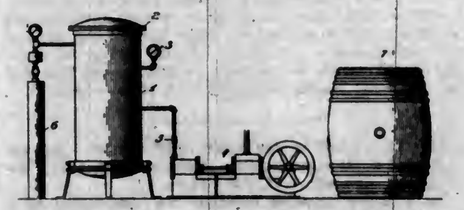


4. The combination with a mowing machine, of a wheeled truck pivotally connected with said mowing machine and including spaced side bars, a hollow shaft journaled in said side bars at the rear of the truck and provided with spaced openings, spring teeth mounted on the shaft and each formed of a single length of wire having its intermediate portion passed through the adjacent openings and extended laterally on opposite sides of the shaft, a locking rod extended through the side bars of the truck and having one end thereof threaded and its intermediate portion housed within the hollow shaft and bearing against the intermediate portions of the wire constituting the teeth for forcing the wire in contact with the interior wall of the hollow shaft, and a nut engaging the threaded end of the rod.

5. The combination with a mowing machine, of a wheeled truck pivotally connected with the mowing machine and including spaced side bars having openings formed therein and provided with inwardly extending collars, a hollow shaft journaled in said openings, sleeves engaging the collars and provided with anti-friction balls bearing against the hollow shaft, a plurality of spring teeth carried by the shaft, and a lever operatively connected with the pivoted end of the truck for raising and lowering the free end thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,016,656. PROCESS OF CURING MEAT. CHARLES B. TRESCOTT, Indianapolis, Ind., assignor of one-half to Joseph Allerdice, Indianapolis, Ind. Filed Sept. 19, 1911. Serial No. 650,081. (Cl. 99—8.)



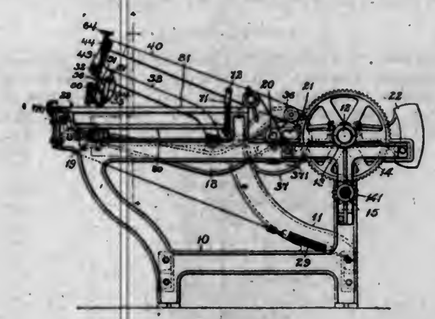
1. The process of curing meat for the purpose set forth, which consists in driving out its contained air and supplanting such air with carbonic acid gas, and subjecting the meat so treated to the action of salt.

2. The process of curing meat for the purpose set forth, which consists in driving out its contained air and supplanting such air with carbonic acid gas, and subjecting the meat so treated to the action of relatively-weak brine.

3. The process of curing meat for the purpose set forth, which consists in confining it against the access of air, pumping out the air in and about the meat supplanting said air with carbonic acid gas, and subjecting the meat so treated to the action of salt.

4. The process of curing meat for the purpose set forth, which consists in confining it against the access of air, pumping out the air in and about the meat supplanting said air with carbonic acid gas, transferring the meat so treated into a relatively-weak brine, and maintaining the brine under subjection to a temperature above that which promotes fermentation (about 40° F.) until the meat is cured.

1,016,657. STAKING OR PERCHING MACHINE. WILLIAM B. TURNER, Melrose, Mass., assignor to The Turner Tanning Machinery Company, Peabody, Mass., a Corporation of Maine. Filed Feb. 15, 1905, Serial No. 245,708. Renewed Aug. 28, 1911. Serial No. 646,415. (Cl. 149—20.)



1. In a staking or perching machine, two staking members, one consisting of a rigid flat metallic blade over which the skin may be folded, and the other consisting of a flat pad whose face is complemental to the face of the blade, said pad being formed of a backing, a cushion of yielding material and a flexible weaf-resisting cover therefor, and mechanism for causing said members automatically to move into and out of overlapping position, substantially as set forth.

2. In a staking or perching machine, a blade with an edge over which the skin may be folded, a clamp having a face for clamping the skin against the face of the blade, and a parallel link connection for yieldingly supporting said clamp to permit it to move rearwardly away from said blade, without varying the relation of the faces of the blade and the clamp.

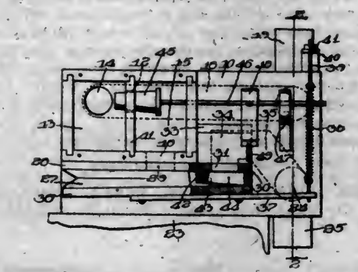
3. In a staking or perching machine, a blade with an edge over which the skin may be folded, a clamp having a face for clamping the skin against the face of the blade, a parallel link connection for yieldingly supporting said clamp to permit it to move rearwardly away from said blade without varying the relation of the faces of the clamp and the blade, and means for moving the clamp into parallelism with and overlapping said blade, and operating them while in parallelism.

4. In a staking or perching machine, staking members, jaws for said members, a rotary crank for reciprocating said jaws pivoted directly to one of them, and means on and rigidly secured to said crank for relatively moving said jaws to open and close said members.

5. In a staking or perching machine, staking members, jaws for said members, a rotary crank for reciprocating said jaws and pivoted directly to one of them, and a cam rigidly secured on said crank and rotatable therewith to move said jaws toward and from each other to open and close said staking members.

[Claims 6 to 17 not printed in the Gazette.]

1,016,658. CONTROLLER FOR PNEUMATIC MOTORS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Sept. 21, 1908. Serial No. 454,100. (Cl. 230—36.)



1. A controller for pneumatic motors, comprising a suction chamber having a plurality of compartments, one of which is provided with an inlet and the other with an outlet opening, said compartments having a communicating passage, means for controlling said passage, a pneumatic having an opening communicating with the outlet and a hinged member for controlling the outlet opening, means adjacent the hinge and with which the movable member coöperates to vary the size of the said outlet, from one point to a point directly opposite and means whereby the air may be exhausted from the said pneumatic to actuate the movable member thereof.

2. A controller for pneumatic motors, comprising a suction chamber having a plurality of compartments, one of which is provided with an inlet and the other with an outlet opening, said compartments having a communicating passage, means for controlling the said passage, a pneumatic having an opening communicating with the outlet and a hinged member for controlling the said outlet opening, means adjacent the hinge and with which the movable member coöperates to vary the size of the said outlet, from one point to a point directly opposite and means for moving the said member away from the opening, said member being adapted to be moved toward the outlet opening against the tension of the last said means by air pressure.

3. A controller for pneumatic motors comprising a suction chamber having a plurality of compartments, one of which is provided with an inlet and the other with an outlet opening, said compartments having a communicating passage, means for controlling said passage, a pneumatic having a fixed and a movable member, said outlet having communication with the pneumatic and said pneumatic having an outlet extending through the fixed member, and means whereby the air may be exhausted from the pneumatic, to adjust the movable member of the pneumatic toward the fixed member to gradually vary the size of the outlet of the pneumatic from one point to a point directly opposite and to cause said member to form a closure for the said outlet.

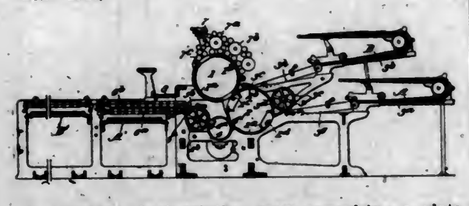
4. A controller for pneumatic motors comprising a suction chamber having a plurality of compartments, one of which is provided with an inlet and the other with an outlet opening, said compartments having a communicating passage, means for controlling said passage, a pneumatic having a fixed and a movable member, said outlet having communication with the pneumatic and said pneumatic having an outlet extending through the fixed member, means whereby the air may be exhausted from the pneumatic, to adjust the movable member of the pneumatic toward the fixed member to gradually vary the size of the outlet of the pneumatic from one point to

a point directly opposite and to cause said member to form a closure for the said outlet, and means for moving the movable member in the opposite direction to open the said outlet.

5. A controller for pneumatic motors comprising a suction chamber having a plurality of compartments, one of which is provided with an inlet and the other with an outlet opening, said compartments having a communicating passage, means for controlling said passage, a pneumatic having a fixed and a movable member, said outlet having communication with the pneumatic and said pneumatic having an outlet opening through the fixed member, a valve seat within the pneumatic and surrounding the outlet opening, means whereby said pneumatic may be exhausted to cause the movable member to gradually engage the valve seat in a direction from one point to a point directly opposite and serve as a closure for the outlet, and means for moving said member away from the seat to open the outlet.

[Claims 6 to 11 not printed in the Gazette.]

1,016,659. PRINTING-PRESS. BURT F. UPHAM, Evanston, Ill. Filed Mar. 3, 1911. Serial No. 612,138. (Cl. 101—122.)



1. A rotary sheet printing press comprising a plate cylinder having a plurality of printing surfaces, an impression cylinder beside and below the axis of the plate cylinder and having a plurality of impression surfaces each adapted to co-act with one related printing surface on the plate-cylinder, a plurality of feed tables each adapted to deliver sheets to one related impression surface of the impression cylinder; a transfer cylinder adapted to take all the sheets from the impression cylinder, a delivery cylinder adapted to take all the sheets from the transfer cylinder, two receiving tables, and delivery mechanism whereby the sheets fed from the separate tables may be delivered to separate receiving tables.

2. A rotary sheet printing press comprising a plate cylinder having diametrically opposed printing surfaces, an impression cylinder beside and below the axis of the plate cylinder and having diametrically opposed impression surfaces respectively adapted to co-act with a related printing surface on the plate cylinder; two feed tables respectively adapted to deliver sheets to the related impression surface of the impression cylinder, a transfer cylinder adapted to take all the sheets from the impression cylinder, a delivery cylinder adapted to take all the sheets from the transfer cylinder, two receiving tables, and mechanism whereby alternate sheets may be transferred from the delivery cylinder to different receiving tables.

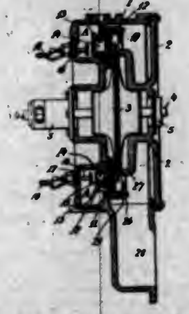
3. In a rotary sheet printing press, a plate cylinder having a plurality of printing surfaces, an impression cylinder beside and below the axis of the plate cylinder and having a plurality of impression surfaces each adapted to co-act with a related printing surface on the plate cylinder; a plurality of feed tables respectively adapted to deliver sheets to the related impression surface of the impression cylinder; a collecting cylinder below and to one side of the axis of the plate cylinder, means for transferring all the sheets from the impression cylinder to the collecting cylinder, a plurality of delivery mechanisms adapted to deliver sheets on separate tables, and means whereby the sheets may be directed from the collecting cylinder to the same table or to separate tables.

4. In a rotary sheet printing press, a plate cylinder having diametrically opposed printing surfaces, an impression cylinder beside and below the axis of the plate cylinder having diametrically opposed impression surfaces respectively adapted to co-act with a related printing surface on the plate cylinder; two feed tables respectively adapted to deliver sheets to a related impression surface of the impression cylinder; a collecting cylinder below and to one side of the axis of the plate cylinder, means for transferring all the sheets from the impression cylinder to the collecting cylinder, a pair of delivery mechanisms adapted to deliver sheets on separate tables, and means whereby successive sheets may be directed from the collecting cylinder to separate tables, or whereby the sheets may be collected and directed to one table.

5. A rotary sheet printing press comprising a plate cylinder having diametrically opposed printing surfaces, an impression cylinder beside and below the axis of the plate cylinder and having diametrically opposed impression surfaces respectively adapted to co-act with a related printing surface on the plate cylinder; two automatic feed tables respectively adapted to deliver sheets to the related impression surface of the impression cylinder, a transfer cylinder adapted to take all the sheets from the impression cylinder, a delivery cylinder adapted to take all the sheets from the transfer cylinder, two receiving tables, and mechanism whereby alternate sheets may be transferred from the delivery cylinder to different receiving tables, or all the sheets may be delivered to one table.

[Claims 6 to 13 not printed in the Gazette.]

1,016,660. ELASTIC-FLUID TURBINE. CARL RICHARD WALLER, Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 14, 1910. Serial No. 581,962. (Cl. 121—57.)



1. An elastic fluid turbine comprising in combination a casing having within it a steam chest and a rotor chamber and provided, between said chest and chamber, with a projecting flange, and a nozzle ring secured to said flange and separating said chest and chamber, and having a hollow boss projecting into said steam chest, the interior of said boss divided into a plurality of secondary steam chests, nozzles extending from said secondary steam chests to said rotor chamber, and means connecting said secondary steam chests and main steam chest.

2. An elastic fluid turbine comprising in combination a casing having within it a steam chest and a rotor chamber, and a nozzle ring within said casing separating said steam chest and rotor chamber, and having an interior space constituting one or more secondary steam chests, said ring provided with a plurality of nozzle holes opening from said steam chest or chests and adapted to receive nozzles, the opposite peripheral wall of said ring being provided with openings substantially in line with said nozzle holes.

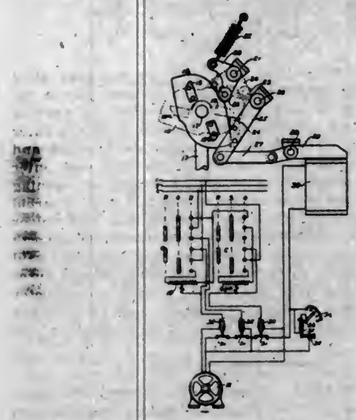
3. An elastic fluid turbine comprising in combination a casing having within it a steam chest and a rotor chamber, and a nozzle ring within said casing separating said steam chest and rotor chamber, and projecting into the steam chest and having within it an interior space constituting one or more secondary steam chests, said ring provided with nozzle holes opening from its interior space and adapted to receive nozzles, and the peripheral wall of said ring being provided with openings substantially in line with said nozzle holes.

4. A nozzle ring for elastic fluid turbines, comprising a hollow ring, provided with nozzle holes opening from its interior space and adapted to receive nozzles, the outer wall of said ring, opposite said nozzle holes, being stepped, and being provided, in said steps, with openings substantially in line with said nozzle holes.

5. A nozzle ring for elastic fluid turbines, comprising a hollow ring adapted for interposition between a steam chest and rotor chamber, and having stepped surfaces on opposite lateral walls of its hollow interior, the stepped surfaces of one said wall provided with nozzle holes adapted to receive nozzles, the stepped surfaces of the opposite wall having holes each substantially in line with one of the nozzle holes of the opposite wall.

[Claim 6 not printed in the Gazette.]

1,016,661. CIRCUIT-CONTROLLING APPARATUS. NATHAN WILKINSON, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed June 27, 1910. Serial No. 569,017. (Cl. 172—179.)



1. In a controller, a controller drum normally movable always in the same direction and having off, starting, and running positions, said drum being biased backward to off position when it is in a starting position and forward to off position when it is in running position, a magnet on the terminals of which is impressed a voltage varying substantially in proportion to the voltage of the supply circuit, means operative while such magnet is energized for preventing the aforesaid bias from being effective when the controller is in running position, a thermostatic switch in the circuit of said magnet, said thermostatic switch being normally closed and arranged to open upon being heated, a switch controlling the heating of said thermostat, and means for operating said last mentioned switch upon an overload.

2. In a controller, a controller drum normally movable always in the same direction and having off, starting, and running positions, said drum being biased backward to off position when it is in starting position and forward to off position when it is in running position, a magnet on the terminals of which is impressed a voltage varying substantially in proportion to the voltage of the supply circuit, means operative while such magnet is energized for preventing the aforesaid bias from being effective when the controller is in running position, and means for de-energising said magnet upon the continuance of an overload for a predetermined time.

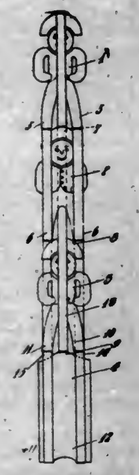
3. In a controller, a controller drum normally movable always in the same direction and having off, starting, and running positions, said drum being biased backward to off position when it is in starting position and forward to off position when it is in running position, a magnet on the terminals of which is impressed a voltage varying substantially in proportion to the voltage of the supply circuit, means operative while such magnet is energized for preventing the aforesaid bias from being effective when the controller is in running position, a thermal time limit device arranged when heated to cause the de-energization of said magnet, and means for heating said thermal device during the continuance of an overload.

4. In a controller, a movable member which when in running position is biased to off position, a no-voltage magnet for normally preventing said bias from being effective, a thermostat having a heating circuit and controlling said no-voltage magnet, and means for energising the heating circuit of said thermostat upon an overload.

5. In a controller, a movable member which when in running position is biased to off position, a no-voltage magnet for preventing such bias from being effective; a thermal device controlling said no-voltage magnet, and means for heating said thermal device only during the continuance of an overload.

[Claims 6 to 32 not printed in the Gazette.]

1,016,662. TOY. CHARLES W. WILSON, Edgewood, Ill. Filed Apr. 12, 1909, Serial No. 489,383. Renewed Oct. 23, 1911. Serial No. 656,219. (Cl. 46—40.)

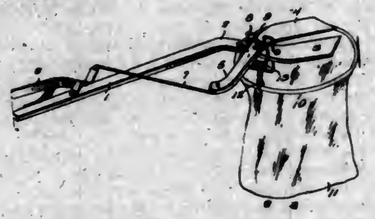


In a tumbling toy, a series of blocks the larger portion of the blocks having rounded heads and spaced legs, a central tape secured to the lower block at its upper end, engaging alternate sides of the intermediate blocks and secured to the upper end of the upper block, said tape crossing the intermediate blocks and being secured to the said blocks at the upper ends thereof, and tapes on each side of the central tape, said tapes having their lower ends secured to the lower end of the lower block and their upper ends secured to the leg terminals of the upper blocks, said tapes crossing the intermediate blocks and engaging with alternate sides of said intermediate blocks and being secured to the leg terminals of said intermediate blocks.

1,016,663. FRUIT-PICKER. JOHN H. WYATT, Rocky Ford, Colo., assignor of one-fourth to Walker Haley and one-fourth to Clay Haley, Rocky Ford, Colo. Filed June 29, 1911. Serial No. 636,046. (Cl. 56—99.)

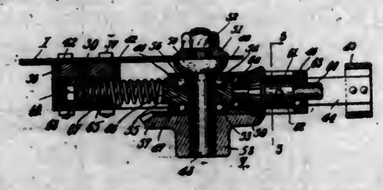
1. A gatherer comprising a staff, a blade carried thereby, a blade pivoted to the staff, brackets fixed to the staff at the opposite sides of the point of pivotal connection between the blades, and a pouch frame located be-

low the blades and having a loop which loosely receives the brackets.



2. A gatherer comprising a staff, a blade carried thereby, a blade pivoted to the staff, means for swinging the pivoted blade, brackets attached to the staff and having intermediate inwardly disposed sections located at the opposite sides of the point of pivotal connection between the blades, and a pouch frame having a loop which is loosely received within the inwardly disposed portions of the said brackets.

1,016,664. CHAIN SAW. BERTON L. BAILEY, Portland, Oreg. Filed Jan. 4, 1911. Serial No. 600,759. (Cl. 143—32.)



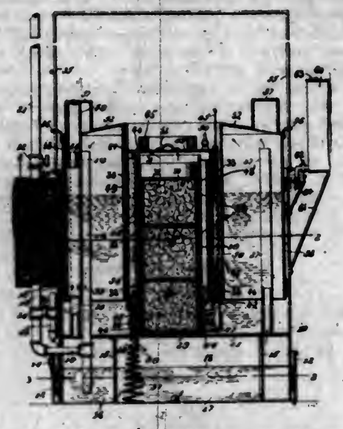
1. A chain saw machine having a chain edge, a block at one end thereof, guides extending from the block, a gear case movable between the guides, a spring interposed between the block and the gear case, mechanism carried by the gear case for operating the chain edge, and means for adjusting the tension of the spring.

2. A chain saw machine having a chain edge, a block mounted at one end of the saw blade and having guide members connected therewith, a gear case slidable between said guide members, operating mechanism mounted within said gear case, a sprocket wheel connected with said operating mechanism for driving the saw edge, a spring interposed between said gear case and said block, and a screw plug mounted in said block for changing the tension of said spring.

1,016,665. ACETYLENE-GAS GENERATOR. ARTHUR L. BLACK, Jacksonville, Ill. Filed Nov. 1, 1910. Serial No. 590,199. (Cl. 48—8.)

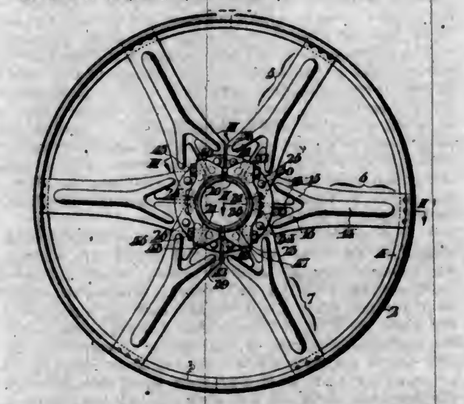
1. In an acetylene gas generator, a shell divided into upper and lower sections, a holder in the upper section, carbid receivers in said holder, a hood bearing over said holder, a gasometer within said upper section, means for providing communication between said hood and said lower section, means for providing communication between said lower section and said gasometer, a valve operative to close the communicating means between the holder and lower section, means operative by said hood to hold said valve open, and discharging means leading from said gasometer.

2. In an acetylene gas generator, an inclosing shell divided into an upper and a lower section with the lower section divided into two compartments, a gasometer and a holder within the upper shell section, a carbid receptacle within the holder, means for supplying water to said holder and gasometer and operating to flood the carbid receptacle, a hood bearing over said holder, a conductor leading from within said hood and into one of the compartments of said lower shell section, a spring controlled valve operating to yieldably close said conductor, a rod connected to said valve and extending into the path of said hood to hold the valve normally open, a gasometer within said shell, another conductor leading from said compartment of the lower shell section and into the gasometer, and a service pipe leading from the gasometer.



3. In an acetylene gas generator, an inclosing shell divided into an upper and a lower section, means for supplying water to said upper shell section, an annular gasometer in said upper shell section and including outer and inner walls, a holder in said upper shell section and extending into the space defined by the inner and outer walls of the gasometer, said holder having an opening slightly below the normal water line in the shell, a carbid receptacle in said holder, a hood bearing over said holder and the carbid receptacle therein and removable through the gasometer, a conductor between said hood and said lower shell section, another conductor between said lower shell section and said gasometer, a service conductor leading from said gasometer, a supply tank, and means whereby the normal water level is maintained in the tank.

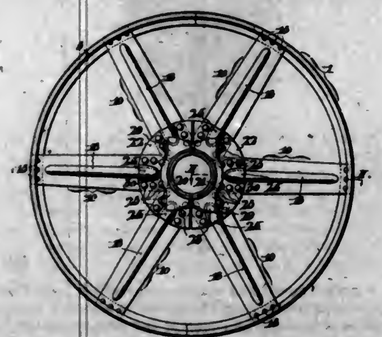
1,016,666. PULLEY. RUSSELL H. BOWEN, Palmyra, N. J., and ALLAN WALKER, Philadelphia, Pa., assignors to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1911. Serial No. 616,767. (Cl. 64—18.)



1. In a pulley, the combination with a rim; a hub-shell; and hub-rings provided with radially projecting flanges; of a plurality of spokes, each comprising a pair of spoke-pieces, said spoke-pieces being provided with internally protruding corrugations at the region adjacent to the opposed faces of the hub-ring flanges, and with an externally-protruding corrugation along the portion between the outer periphery of said flanges and the inner periphery of the rim; and means for securing the inner extremities of the spoke-pieces to the hub-ring flanges.

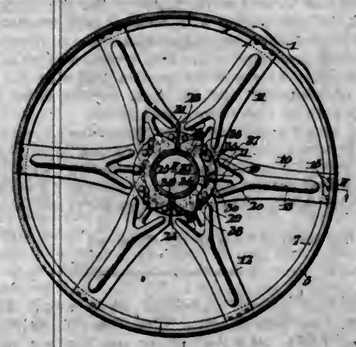
2. In a pulley, the combination with a rim; a hub-shell; and hub-ring portions provided with radially projecting flanges; of a plurality of spokes, each comprising a pair of spoke-pieces widened at their inner ends; said spoke-pieces being provided with internally protruding corrugations at the region adjacent to the opposed faces of the hub-ring flanges, and with externally protruding corrugations extending longitudinally with the spoke-pieces and bifurcated at the wide inner end portions thereof.

1,016,667. PULLEY. CHARLES A. BRINLEY, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 16, 1911. Serial No. 614,768. (Cl. 64—18.)



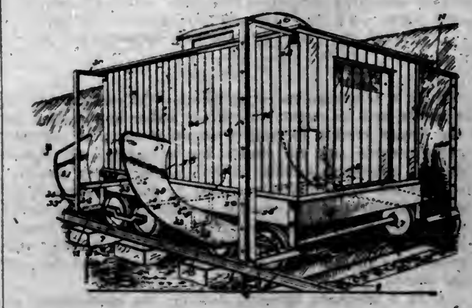
In a pulley, the combination with a rim; of a plurality of spokes, each comprising a pair of spoke-pieces, converging at their outer extremities to a point of attachment to the rim; each of said spoke-pieces being provided with a longitudinal corrugation extending to a point near its inner extremity; a hub-shell; hub-rings carried by said shell, said hub-rings respectively comprising a band portion adapted for attachment to the shell and a flange having pockets adapted to receive the inner extremities of the corrugations upon the spoke-pieces; and means for securing the spoke-pieces to the rim and to the hub-rings respectively.

1,016,668. PULLEY. CHARLES A. BRINLEY, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1911. Serial No. 616,343. (Cl. 64—18.)



In a pulley, the combination with a rim; of a plurality of spokes, each comprising a pair of spoke-pieces converging at their outer extremities to a point of attachment to the rim and being extended laterally at their inner extremities; each of said spoke-pieces being provided with a longitudinal corrugation, bifurcated at the region of lateral extension of the spoke-piece, and with an intermediate longitudinal corrugation prolonged beyond the bifurcations; the inner extremities of said spoke-pieces overlapping the inner ends of the adjacent spoke-pieces; a hub-shell; hub-rings respectively comprising a band portion adapted for attachment to the hub-shell, and a flange provided with radial pockets adapted to receive the inner ends of the prolonged corrugations of the spoke-pieces; and means for securing the spoke-pieces to the hub-rings and to the rim respectively.

1,016,669. SNOW-PLOW. JOHN BUFFEHR, Robinson, Colo. Filed Feb. 18, 1911. Serial No. 609,505. (Cl. 104—51.)



1. A device of the class described including a truck, a cutting blade extending laterally from the truck at one end thereof, a rear plow disposed at the other end of the truck, and a front plow pivotally mounted on said truck between the cutting blade and the rear plow.

2. A device of the class described including a truck, a cutting blade extending laterally from the front of the truck, a movable plow disposed at the rear of said truck and adapted to throw the snow across the track at the rear of the truck, and a front plow arranged between the cutting blade and rear plow and pivotally mounted on said truck.

3. A device of the class described including a truck, frames extending laterally from the opposite sides of the truck at the rear end thereof, and plows pivotally mounted in said frames and having their inner ends deflected laterally for throwing the snow transversely across the track at the rear end of the truck.

4. A device of the class described including a truck, frames extending laterally from opposite sides of the truck at the front end thereof, horizontally disposed cutting blades detachably secured to said frames, and plows pivotally mounted on the truck rearwardly of the frames.

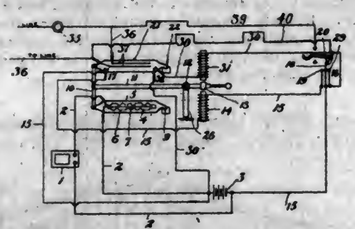
5. A device of the class described including a truck, front and rear frames extending laterally from the sides of the truck at the opposite ends thereof, cutting blades detachably secured to said frames, rear plows carried by the rear frames, movable front plows pivotally mounted on the truck between the front and rear frames, and means for raising and lowering both sets of plows.

[Claims 6 to 12 not printed in the Gazette.]

1,016,670. LISTENING-DETECTOR FOR TELEPHONE-LINES. ERNEST BURGENER, Wellesley, and CHRISTIAN BURGENER, Linwood, Ontario, Canada. Filed Jan. 3 1911. Serial No. 600,532. (Cl. 179—28.)

1. In a telephone listening detector the combination of a buzzer and its circuit; a contact maker and breaker in the buzzer circuit forming a signal device; an electro-motor device and its circuit for actuating the signal device; a telephone hook; and a starting switch in the circuit of the motor device actuated by the telephone hook on the removal of the receiver.

2. In a telephone listening detector the combination of a buzzer and its circuit; a contact maker and breaker in the buzzer circuit forming a signal device; an electro-motor device and its circuit for actuating the signal device; a telephone hook; and a starting switch in the circuit of the motor device actuated by the telephone hook on the removal of the receiver; and means arranged to maintain a break in the buzzer circuit as soon as the signal has been sounded.



3. In a telephone listening detector the combination of a buzzer and its circuit; a contact maker and breaker in the buzzer circuit forming a signal device; an electro-motor device and its circuit for actuating the signal device; a telephone hook; a starting switch in the circuit of the motor device actuated by the telephone hook on the removal of the receiver; means arranged to maintain a break in the buzzer circuit as soon as the signal has been sounded; and means whereby the return of the receiver to the hook causes a second actuation of the signal device.

4. In a telephone listening detector the combination of a buzzer and its circuit; a contact maker and breaker in the buzzer circuit forming a signal device; an electro-motor device and its circuit for actuating the signal device of the motor device actuated by the telephone hook on the removal of the receiver; and means for automatically breaking the electro-motor circuit as soon as the signal device has been sufficiently actuated to cause the giving of a signal.

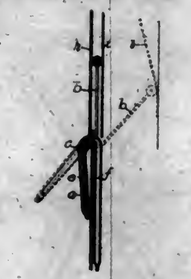
5. In a telephone listening detector the combination of a buzzer and its circuit; a contact maker and breaker in the buzzer circuit forming a signal device; an electro-motor device and its circuit for actuating the signal device; a telephone hook; a starting switch in the circuit of the motor device actuated by the telephone hook on the removal of the receiver; a second electro-motor device and circuit adapted to actuate the signal device; and a starting switch in the circuit of the second electro-motor device actuated by the telephone hook on the replacing of the receiver on the hook.

[Claims 6 to 9 not printed in the Gazette.]

1,016,671. ANIMAL-TRAP. HARRY T. BUTLER, Butler, Pa. Filed Sept. 16, 1911. Serial No. 649,642. (Cl. 43—21.)

An animal trap comprising a base board having a centrally disposed recess in its upper face near its rear edge, a live bait cage secured in said recess and projecting upon the top of the board, a trap board of the same area as the base board, said trap board hinged to the rear edge of the base board and arranged over the latter, said trap board provided with a centrally disposed opening near its rear edge, a closed housing carried by and registering with the opening provided in said trap board and capable of inclosing said bait cage when the trap board is lowered, means carried by the forward portion of the trap board to constitute a receptacle adapted to contain weights, a prop attached to the forward edge of the base board and inclining outwardly therefrom, an outwardly inclined pin projecting from the forward edge of said trap board, said pin engaging said prop to maintain the trap board elevated at an inclination with respect to the base board, and a shiftable fork interposed between said boards and provided with a slot having the end walls thereof engaging with said pin and prop and constituting means when shifted by an animal for separating the pin and the prop whereby the trap board is lowered upon the base board.

1,016,672. POCKET GUARD AND ALARM. JOHN T. COWLES, Chicago, Ill. Filed May 5, 1909. Serial No. 494,018. (Cl. 2—151.)



1. A pocket guard and alarm comprising a wire bent into an upper and lower loop, the lower of which is secured to the inside of the flap or cover of the pocket and the upper of which extends above the pocket adjacent to the body, and a pivot or hinge of a length to extend across the pocket and beyond the sides thereof upon which the two portions may be turned, whereby the lifting of the flap projects the upper loop of the device against the body and gives the alarm.

2. A pocket guard and alarm comprising a wire bent to form a lower portion and an upper portion and a hinge or axis member secured thereto between said portions said hinged member being adapted to be secured to a garment adjacent to a pocket therein.

3. A pocket guard and alarm comprising a wire bent to form a lower portion and an upper portion, and a hinge or axis member secured thereto between said portions, said hinge member being adapted to be secured to a garment adjacent to and extending across the mouth of a pocket therein.

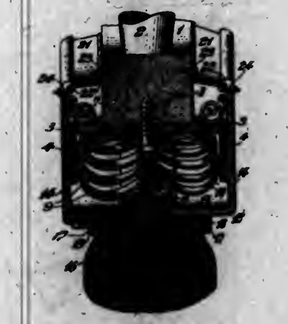
4. A pocket guard and alarm comprising a wire forming an axis and secured to the inside of the flap or cover of a pocket, in combination with another wire twisted around said axis to form a bearing and having a projecting lower loop and a projecting upper loop arranged to be secured to a garment, with the lower portion inside of the flap or cover of the pocket and the upper portion in an approximately parallel plane above said pocket.

5. A pocket guard and alarm comprising a comparatively straight wire forming an axis and having its two ends bent back upon themselves, in combination with another wire twisted around said axis just inside of the bent ends and projecting in the form of loops above and below such axis.

[Claim 6 not printed in the Gazette.]

1,016,673. VEHICLE-WHEEL. WILLIAM J. CUNNINGHAM, Philadelphia, Pa. Filed Dec. 16, 1910. Serial No. 597,632. (Cl. 152—28.)

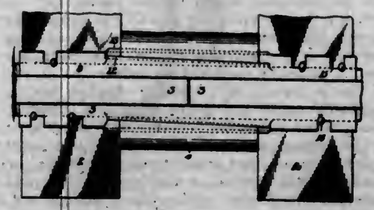
1. In a device of the character stated, a rim, a channel member carried thereby, a series of spring members seated in and connected with said channel member, the ends of said members interfitting and depressed to form a seat, a tread member, a frame carrying said tread member, a lug on said frame located in said seat, said channel guiding said frame in its movement and serving as a stop therefor, resilient means for connecting said frame and rim and resilient strips connected with said rim and the sides of said frame.



2. In a device of the character stated, a rim, a channel member secured to said rim, a frame having telescopic connection with said channel member, a tread on said frame, a circumferential lug carried by said frame, and two series of oppositely disposed springs mounted on said channel member, each series consisting of a plurality of spring strips and each strip describing one curve and the free end reversely curved to form a seat in which said lug is seated.

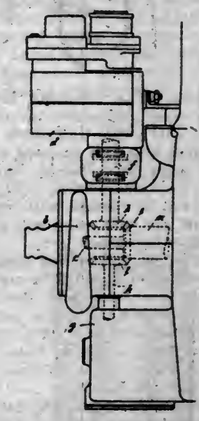
3. In a device of the character stated, a rim, a channel member carried thereby, a series of spring members seated in and connected with said channel member, each describing one curve and the ends of said members interfiting and reversely curved to form a seat, a tread member, a frame carrying said tread member, a lug on said frame carried in said seat, said channel guiding said frame in its movement and serving as a stop therefor, and resilient strips connected with said rim and the sides of said frame.

1,016,674. RAIL-JOINT. JOHN CUSICK, Sharon, Pa. Filed Sept. 6, 1911. Serial No. 647,884. (Cl. 239—6.)



In a rail joint, the combination with a pair of ties and a pair of rails mounted thereon, of a chair positioned against the lower faces of the bases of said rails and arranged between said ties, said chair projecting from the longitudinal edges of said bases, vertically disposed and longitudinally extending enlargements integral with the projecting portions of said chair and spaced from the longitudinal edges of said bases, the inner face of each of said enlargements provided with an upper and a lower outwardly beveled tapered portion, the lower beveled portions of said enlargements providing pockets, the beveled portions of one enlargement disposed in an opposite direction with respect to the beveled portions of the other enlargements, splice bars positioned against said rails and provided at their lower portions with flanges, said flanges having tapered beveled portions and tongues of less length than the length of the splice bars, said tongues engaging in said pockets and the beveled portions of the flanges engaging the lower beveled portions of the enlargements whereby the enlargements and flanges are connected together and the rails maintained in supported position, the beveled portion and tongue of one flange disposed in an opposite direction with respect to the beveled portion and tongue of the other flange, said splice bars projecting beyond the ends of said enlargements and upon said ties, and means engaging the projecting ends of the bars and said ties for maintaining the bars from shifting longitudinally.

1,016,675. EXPLOSION-MOTOR. PAUL DAIMLER, Cannstatt, Germany, assignor to Daimler Motoren Gesellschaft, Unterturkheim, Germany, a Firm. Filed June 13, 1911. Serial No. 632,881. (Cl. 123—195.)



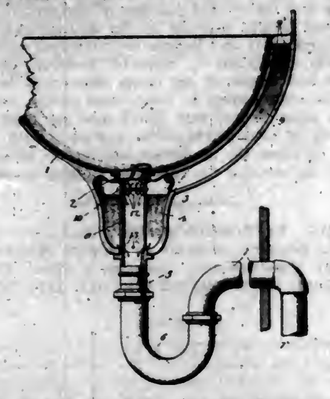
1. In combination with an explosion motor, a sparking device, a cooling water pump and an oil pump, each arranged at one end of the motor and one above another, and means whereby said sparking device, water-pump and oil-pump may be mutually and directly driven from the motor shaft.

2. In combination with an explosion motor, a sparking device, a cooling water pump and an oil pump, each arranged at one end of the motor and one above another, said water pump being arranged with its driving spindle in axial alinement with the motor shaft, and means whereby said sparking device, water-pump and oil-pump may be mutually and directly driven from the motor shaft.

3. In combination with an explosion motor,—a sparking device, a cooling water pump and an oil pump, each arranged at one end of the motor and one above another, said water pump being arranged with its driving spindle in axial alinement with the motor shaft, and the said sparking device and oil-pump and the driving spindles thereof being arranged vertically, and means whereby said sparking device, water-pump and oil-pump may be mutually and directly driven from the motor shaft.

4. In combination with an explosion motor, a sparking device, a cooling water pump and an oil-pump, each arranged at one end of the motor and one above another, said water pump being arranged with its driving spindle in axial alinement with the motor shaft, and the said sparking device and oil-pump and the driving spindles thereof being arranged vertically, gearing intermediate the spindle of said water-pump and the spindles of said oil-pump and sparking device and means for coupling the spindle of the water pump with the motor shaft.

1,016,676. PRIMER FOR SEWER-SEALS. ALBERT C. DALE, Longbeach, Cal., assignor of one-half to E. H. Barmore, Los Angeles, Cal. Filed Jan. 31, 1911. Serial No. 605,777. (Cl. 182—12.)



1. The combination of a plumbing fixture provided with an outlet, a sewer connection including a seal, a chamber below the said outlet and above the said seal, means for conducting into said chamber all of the outflow through said outlet, said chamber having restricted communication at its lower portion, with said seal, so that the chamber will be charged with water from the outlet of said fixture and said water will gradually drain into the seal to prime the same.

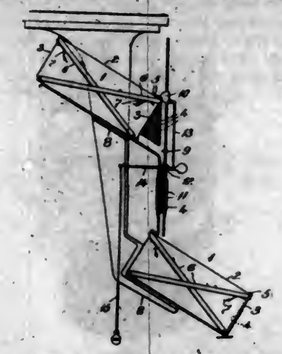
2. The combination of a plumbing fixture having an outlet, a sewer connection including a seal, a tube connecting said sewer connection with the outlet of the fixture, said tube having a transverse partition, and a chamber communicating with said tube above and below said partition to receive a supply of water from the said outlet and to allow water to run off from said chamber through said tube into the seal.

3. The combination with a plumbing fixture having an outlet, a chamber below said outlet, a sewer connection including a seal, a tube extending within said chamber and communicating at its lower end with the sewer connection above said seal, said tube having a transverse partition and being provided with openings above said partition and below said partition, said openings being of sufficient capacity to allow a rapid outflow from said outlet into said chamber and from said chamber into said tube, and said tube having openings establishing restricted communication from the lower part of said chamber to said seal, whereby the said chamber is charged with water from the outlet of the fitting and said water is allowed to gradually drain into the seal after the rapid outflow through the upper openings ceases.

4. The combination of a plumbing fixture provided with an outlet, a sewer connection including a seal, a chamber below said outlet and above said seal, a tubular member connecting at its lower end with the sewer connection and extending upwardly within said chamber, the upper end of said tubular member being obstructed to prevent direct downflow of fluid thereinto from said outlet, and said chamber connecting with the outlet to receive all the water therefrom and connecting with the upper portion of said tubular member to discharge water thereinto, and having restricted communication from its lower portion into said tubular member to allow water to drain from the chamber into said tubular member.

1,016,677. DISPLAY DEVICE. JOSEPH M. DANNHEISER, New York, N. Y. Filed Jan. 16, 1911. Serial No. 602,809. (Cl. 40—78.)

1. In a system of exhibiting display devices, a guide, means for supporting and exhibiting a display device in said guide, a releasing device associated with said guide, a removable magazine containing display devices, a latch on said magazine adapted to normally prevent the display devices from moving out thereof, which when the magazine is properly positioned becomes operatively associated with the releasing device, and means for operating the releasing device whereby the display devices are caused to move out of the magazine onto the supporting device.



2. In a system of exhibiting display devices, a guide, means for supporting and exhibiting a display device in said guide, a releasing device associated with said guide, a removable, double ended and reversible magazine containing display devices, oppositely disposed latches on said magazine adapted to normally prevent the display devices from moving out of either end thereof, a bracket on which the magazine can be supported with either end adjacent to the releasing device, and whereby when the magazine is so supported the latch on that end of the magazine which is adjacent to the releasing device becomes operatively associated therewith, and means for operating the releasing device whereby the display devices are caused to move out of the magazine onto the supporting device.

3. In a system of exhibiting display devices, interchangeable upper and lower open ended magazines, display devices in said upper magazine, a guide interposed between the two magazines, means for supporting and exhibiting a display device in said guide, a releasing device associated with said guide, a latch on the upper magazine adapted to normally prevent the display devices from moving out thereof, which, when the upper magazine is properly positioned, becomes operatively associated with the releasing means on the guide, and means for operating the releasing device and the supporting means, whereby the display devices are caused to drop bodily from the upper magazine to the supporting device and from the latter to the lower magazine.

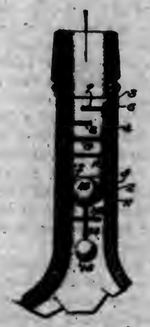
4. In a system of exhibiting display devices, interchangeable upper and lower magazines, display devices in said upper magazine, a guide interposed between the two magazines, means for supporting and exhibiting a display device in said guide, a releasing device associated with said guide, latches on said magazine adapted to normally prevent display devices from moving out thereof, whereby when either magazine is properly positioned with respect to the releasing devices, the latch of such magazine becomes operatively associated with the releasing device of the guide, and means for operating the releasing device to cause the display devices to move bodily from the upper magazine to the supporting device.

1,016,678. HAT-PIN-POINT PROTECTOR. GEORGE F. DILLON, McKees Rocks, Pa. Filed Aug. 30, 1911. Serial No. 646,925. (Cl. 24—155.)

A hat pin point protector formed of a single piece of resilient material bent to provide a relatively large C shaped member with the arms thereof provided with apertures for the passage of the pin, the aperture of one arm being normally out of alinement with the aperture of the other arm whereby the walls of said openings will have a binding action upon the pin to retain the protector upon the pin, said protector further including a triangularly shaped member having one of its arms integral with one of the arms of the C shaped member and the other of

its arms having a free terminus positioned in proximity to that arm with which the triangularly shaped member is integral, that arm of the triangularly shaped member having the free terminus adapted to have its inner face engaged for a portion of its length by the pointed end of the pin to increase the binding action.

1,016,679. NON-REFILLABLE BOTTLE. WALTER H. EASTLACK, Merchantville, N. J. Filed May 31, 1911. Serial No. 630,461. (Cl. 215—65.)

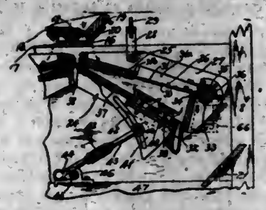


In a non-refillable bottle, a bottle, a baffle-carrying shell fitting tightly the interior wall of the neck thereof, an outturned resilient flange on the upper part of said shell adapted to interlock with said wall, and a bifurcation on the lower end of said shell, one section of said bifurcation extending outwardly comprising a resilient flange which is adapted to interlock with said wall, and the other section thereof extending inwardly comprising a conical valve seat, and a gravitating valve on said seat.

1,016,680. DRY CONCENTRATOR. CLARENCE W. EDGAR, Los Angeles, Cal. Filed Sept. 26, 1910. Serial No. 583,732. (Cl. 83—54.)

1. A dry concentrator having an inclined screen down which the raw material may descend, a roller at the lower edge of said screen, means for rotating said roller so as to carry away the concentrates, and means for directing the gangue over said roller.

2. A dry concentrator having a jig with an inclined face down which the raw material descends, a horizontal roller disposed at the lower edge of said face and having flutes adapted to carry away the concentrates, means for rotating said roller, and means adjacent to said roller for guiding away the gangue.



3. A jig having an inclined screen, means for forcing air upwardly through said screen, a transversely disposed roller at the lower edge of said screen having pockets in the surface thereof, means for rotating said roller so as to carry away the concentrates collecting in said pockets, and a guard shield on the upper side of said roller adapted to direct the gangue over the same.

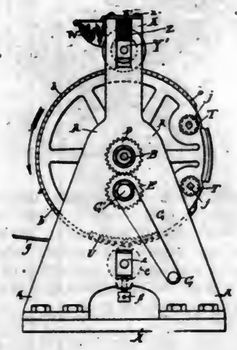
1,016,681. ACETYLENE-GENERATOR. LOUIS FALLOT, Paris, France. Filed Apr. 13, 1908. Serial No. 426,906. (Cl. 48—22.)

An acetylene generator comprising a closed vessel adapted to contain a body of liquid and also to hold gas under pressure, an inner closed receptacle in said vessel having its lower end provided with a small opening below the normal level of the liquid, a removable container in said receptacle having its lower end adapted to admit liquid but supported above the normal level of the liquid in the vessel, a tube communicating with the inner receptacle, a pipe connecting the upper end of said vessel with said tube, valves in said tube and pipe, a delivery pipe connected with said tube between said valves, and means whereby pneumatic pressure may be brought to bear upon the surface of the liquid in said vessel to force it up into said receptacle and container.

1,016,682. ROTARY PRINTING-MACHINE. BENJAMIN OTTO FANSLOW, Los Angeles, Cal., assignor, by mesne assignments, to John F. Mahlstedt, Los Angeles, Cal. Filed Apr. 26, 1907. Serial No. 370,498. (Cl. 101—126.)

1. In a machine for printing imitation typewritten letters and the like in which various portions of each letter are printed by a single impression, the combination

with a rotatable drum, of means carried by a portion of the periphery of said drum for securing a portion of a form thereon, means for feeding an ink ribbon over said form-carrying portion, a second form-carrying portion located on the periphery of the drum between the ends of the first-mentioned form-carrying portion, inking means for supplying ink to the second mentioned form-carrying portion and impression means coöperating with said form.



2. In a machine for printing imitation typewritten letters and the like in which various portions of each letter are printed by a single impression, the combination with a rotatable drum, means carried by a portion of the periphery of said drum for securing a portion of a form thereon, a pair of ribbon spools located in the drum at each end of said form-carrying portion whereby an inking ribbon may be fed over said form-carrying portion, a second form-carrying portion located on the periphery of the drum between the ends of the first mentioned form-carrying portion, inking means for supplying ink to the second mentioned form-carrying portion and impression means coöperating with said form.

3. In a machine for printing imitation typewritten letters and the like in which various portions of each letter are printed by a single impression, the combination with a rotatable drum, of means carried by a portion of the periphery of the drum for securing a portion of a form thereon, said drum being provided with a depression adjacent each end of said form-carrying portion, a ribbon spool mounted in each depression whereby an ink ribbon may be fed over said form-carrying portion, a second form-carrying portion located on the periphery of the drum between the ends of the first mentioned form-carrying portion, inking means for supplying ink to the second mentioned form-carrying portion and impression means coöperating with said form.

4. In a machine for printing imitation typewritten letters and the like in which various portions of each letter are printed by a single impression, the combination with a rotatable drum, of a plurality of bars mounted on the periphery of the drum and extending parallel to each other and to the axis of the drum, said bars being adapted to hold type in the periphery of the drum to form a portion of a form, means for feeding an ink ribbon over said type, a second form-carrying portion located on the periphery of the drum between the ends of the first mentioned form-carrying portion, inking means for supplying ink to the second mentioned form-carrying portion and impression means coöperating with said form.

5. In a machine for printing imitation typewritten letters and the like in which various portions of each letter are printed by a single impression, the combination with a rotatable drum, of means for securing a form on the periphery of said drum, a pair of ribbon spools mounted in the drum and adapted to feed an ink ribbon over said form, a pair of gears, one mounted on the end of each ribbon spool and adapted for movement toward and away from the spool, a stationary rack adapted to be engaged by the gears when in one of their positions of movement but not in the other position, and impression means coöperating with said form.

1,016,683. PASSENGER-CAR. LOUIS E. FISCHER, Danville, Ill., assignor to Willis C. Dunbar, Philadelphia, Pa. Filed Dec. 11, 1908. Serial No. 466,950. (Cl. 105—205.)

1. A passenger car normally closed at its rear end and comprising a passengers' section an operator's station, a passage adjacent to and separated from said operator's station and normally closed against movement in one direction, and a passage adjacent to the first-mentioned passage and normally closed against movement in the opposite direction.

2. A passenger car comprising a passengers' section, a motive power operator's station at the forward end of said car, a passage adjacent to and separated from said motive power operator's station, means for normally closing said passage against movement in one direction, operating mechanism for said means operable from said motive power operator's station, and a passage adjacent to the first-mentioned passage and normally closed against movement in the opposite direction.

3. In a passenger car having a normally closed rear end, a platform at the forward end, an operator's station located on said platform, an entrance passage adjacent to said operator's station and between said operator's station and the egress passage and normally closed against movement in one direction, and an egress passage adjacent to the entrance passage and normally closed against movement in one direction.

4. A passenger car comprising a passenger section normally closed at one end and provided with a smoking compartment, a motive power operator's station, contiguous passages for opposite movement from passenger section to car exterior, both of said passages being separated from but one thereof being contiguous to said operator's station.

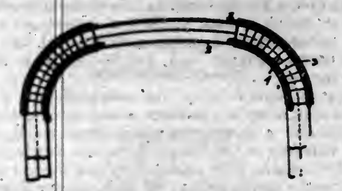
5. A passenger car provided at one end only with motive power controlling apparatus and entrance and exit, the other end having a normally closed exit under control of the operator of said power controlling apparatus.

[Claims 6 to 13 not printed in the Gazette.]

1,016,684. PROCESS FOR BENDING WOOD. FRED J. FISHER, Detroit, Mich. Filed Jan. 10, 1910. Serial No. 537,121. (Cl. 144—309.)

The process of bending rails intended for companion use at angles in which the fiber is placed under relatively great tearing stresses, which comprises arranging the rails so that adjacent faces register, placing them in an insheathing strap, affording a bending stress in the plane common to all the rails, the said strap protecting and

shaping the outlying faces of the rails under stress and the abutting faces of the rails, protecting the fibers of



one another and shaping one another intimately for said companion usage, substantially as described.

1,016,685. WRINGER. HERMAN J. FREDERICK, Pittsburgh, Pa. Filed Mar. 20, 1911. Serial No. 615,713. (Cl. 68—32.)

1. A wringer comprising end walls, longitudinal shafts journaled in said walls, bearings supported by said shafts and adapted to be shifted in unison, rollers revolubly mounted in said bearings, and a towel support connecting said end walls and adapted to support a towel between said rollers.

2. A wringer comprising end walls, longitudinal shafts journaled in said walls, bearings supported by said shafts and adapted to be shifted in unison, rollers revolubly mounted in said bearings, a towel support connecting said end walls and adapted to support a towel between said rollers, means carried by one of said bearings and adapted to revolve the roller thereof, means carried by one of said end walls and adapted to shift said bearings in unison, and a sprinkler adjustably supported above said rollers.

3. A wringer comprising a support including a pair of end walls and a deflector connecting said walls at the rear thereof, longitudinal shafts journaled in and projecting from said end walls, two pairs of shiftable bearings mounted upon the projecting ends of said shaft and adapted to be moved in unison, said bearings projecting above the end walls, a roller revolubly supported by each pair of bearings above the end walls, means carried by one of the bearings of one pair for revolving the roller carried by said pair, means carried by the bearings of the other pair for forcing the roller carried thereby into yielding engagement with the other roller, and a support connecting said end walls at the top thereof and adapted to extend up between said rollers for supporting a towel.

4. A wringer comprising a support including a pair of end walls and a deflector connecting said walls at the rear thereof, longitudinal shafts journaled in and projecting from said end walls, two pairs of shiftable bearings mounted upon the projecting ends of said shaft and adapted to be moved in unison, said bearings projecting above the end walls, a roller revolubly supported by each pair of bearings above the end walls, means carried by one of the bearings of one pair for revolving the roller carried by said pair, means carried by the bearings of the other pair for forcing the roller carried thereby into yielding engagement with the other roller, a support connecting said end walls at the top thereof and adapted to extend up between said rollers for supporting a towel, each of said bearings having its lower portion provided with teeth, the teeth of one bearing meshing with the teeth of the other bearing, and means carried by one of said end walls and provided with teeth adapted to engage in the teeth of one of said bearings, said means when shifted in one direction moving said rollers away from each other and when shifted in the other direction moving said rollers toward each other.

5. A wringer comprising a support including a pair of end walls and a deflector connecting said walls at the rear thereof, longitudinal shafts journaled in and projecting from said end walls, two pairs of shiftable bearings mounted upon the projecting ends of said shaft and adapted to be moved in unison, said bearings projecting above the end walls, a roller revolubly supported by each pair of bearings above the ends walls, means carried by one of the bearings of one pair for revolving the roller carried by said pair, means carried by the bearings of the other pair for forcing the roller carried thereby into yielding engagement with the other roller, a support connecting said end walls at the top thereof and adapted to extend up between said rollers for supporting a towel, each of said bearings having its lower portion provided with teeth, the teeth of one bearing meshing with the teeth of the other bearing, means carried by one of said end walls and provided with teeth adapted to engage in the teeth of one of said bearings, said means when shifted in one direction moving said rollers away from each other and when shifted in the other direction moving said rollers toward each other, and a sprinkler adjustably held over said rollers.

1,016,686. TYPE-WRITING MACHINE. JOHN H. GARDEN, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 19, 1911. Serial No. 634,079. (Cl. 197—142.)

1. In a typewriting machine, the combination with a platen and a paper shelf at the introductory side thereof, of a rod on said shelf, a carrier splined on said rod, a gage hinged to said carrier, and a spring pressing said gage against the shelf.

2. In a typewriting machine, the combination with a platen and a paper shelf at the introductory side thereof, of a rail extending along said shelf, a carrier mounted to travel on said rail to permit adjustment therealong and being secured against transverse movement, means to hold the carrier yieldingly against said rail to prevent accidental displacement, a gage secured pivotally to said carrier, and a spring pressing said gage against the shelf.

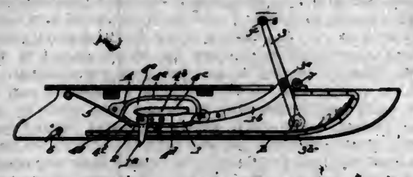
3. In a typewriting machine, the combination with a platen and a paper shelf at the introductory side thereof, of a rail extending along said shelf, a carrier mounted to travel on said rail to permit adjustment therealong, a gage secured pivotally to said carrier, and a spring pressing said gage against the shelf; the under side of said gage being out of contact with said shelf.

4. In a typewriting machine, the combination with a platen and a paper shelf at the introductory side thereof, of a rail extending along said shelf, a carrier mounted to travel on said rail, and a gage secured pivotally to said carrier to adapt it to proper disposition on the shelf.

5. In a typewriting machine, the combination with a platen and a paper shelf at the introductory side thereof, of a rail extending along said shelf, a carrier mounted to travel on said rail, a gage secured pivotally to said carrier to adapt it to proper disposition on the shelf and a spring pressing said gage against the shelf to prevent accidental lifting or displacement.

[Claims 6 to 9 not printed in the Gazette.]

1,016,687. ICE-MOTOR. ALBERT GAUB, Chicago, Ill., assignor of one-fourth to Frederick Grub, Chicago, Ill. Filed Jan. 12, 1911. Serial No. 602,186. (Cl. 21—47.)



1. An ice motor comprising a runner adapted for sliding upon a road surface; a rod provided at one end with a spur and a roller; a cam track for the roller comprising an upper and a lower track, said upper track being positioned for guiding the spur out of engagement with the road surface, said lower track being positioned for guiding the spur in engagement with the road surface; a curved track connecting the forward ends of the upper and lower tracks, and sloped downward from its connection with the lower track; a curved track connecting the rear ends of the lower and upper tracks, the lower portion of said curved track being pivoted for swinging upward and forward toward the upper track; a spring positioned to cause such swinging movement of the pivoted track, and means for reciprocating the dog.

2. An ice motor comprising a runner adapted for sliding upon a road surface, a dog mounted for reciprocation upon the runner; a cam track for guiding the dog in engagement with the road surface during its movement in one direction, and for guiding said dog out of engagement with the road surface during its movement in the opposite direction; an actuating lever; a rod operatively connecting the dog with said lever, the lever being fulcrumed at its lower end, the rod being disengageably connected to the lever at a point between the ends of the lever, and an auxiliary fulcrum positioned for supporting the lever at said point between its ends, the fulcrumed end of the lever being adapted for connection with the rod.

3. In combination with a sled having a pair of runners adapted for sliding upon a road surface; a dog mounted for reciprocation upon each runner; cam tracks for guiding the dogs in engagement with the road surface during their movement in one direction, and for guiding said dogs out of engagement with the road surface during their movement in the opposite direction; an actuating lever operatively connected with each dog, said levers being exactly similar and mounted for movement in parallel planes; a tubular handle on each lever, and a rod adapted to be inserted through said handles for connecting them for simultaneous operation.

1,016,688. WATCHMAN'S CLOCK. FRANKLIN HARDINGE, Chicago, Ill., assignor to Hardinge Brothers, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1910. Serial No. 567,554. (Cl. 234—39.)

1. In a watchman's clock, the combination of record receiving means, and a recording mechanism comprising a positively actuated member having a yielding pivotal support at one end.

2. In a watchman's clock, the combination of record receiving means, a recording mechanism comprising a member for receiving a printing or embossing device, an actuating device positively engaging one end of such member, and a spring support for the other end of such member.

3. In a watchman's clock, the combination of a record receiving dial, a key for printing or embossing a character upon such dial, a member adapted to receive and support the key normally out of contact with the dial, and a cam for positively engaging such member to force the key against the dial.

4. In a watchman's clock, the combination of a record receiving dial, a key for printing or embossing a character upon such dial, a member adapted to receive and support the key normally out of contact with the dial, a cam for positively engaging such member to force the key against the dial, and a spring support for such member adapted to permit yielding engagement between the key and the dial.

5. In a watchman's clock, the combination of a record receiving dial, a key for printing or embossing a character upon such dial, a member adapted to receive and support the key normally out of contact with the dial, a cam for positively engaging such member to force the key against the dial, and a spring support for such member adapted to permit yielding engagement between the key and the dial such spring support serving to return the member to its normal position when released from the cam.

[Claims 6 to 14 not printed in the Gazette.]

1,016,689. ANNULAR METALLIC PACKING. JAMES HORTON, Munhall, and THOMAS W. KEEN, Swissvale, Pa. Filed Jan. 4, 1911. Serial No. 600,701. (Cl. 121—108.)

1. A packing device for piston heads having an annular groove on each end thereof, a split packing ring seated in each groove, a sectional clamping ring seated in each of said grooves for clamping the rings against the walls of the grooves, there being ports leading outwardly through the walls of the piston heads from the grooves, said ports being arranged to permit fluid pressure to act upon the clamping ring to force them in a longitudinal direction to clamp the packing rings against the walls of the grooves to prevent expansion of the packing rings by fluid pressure, each of said clamping rings being arranged to be acted upon by the fluid pressure when the piston is moved in one direction and free from the action of the fluid pressure during its movement in the other direction and means for preventing radial movement of the clamping ring section; substantially as described.

2. A packing device for fluid pressure cylinders having an annular groove, a split packing ring seated in said groove, a sectional clamping ring seated within said groove, there being ports from said groove to admit fluid pressure to the side of the clamping ring to clamp the packing ring against the wall of the groove to prevent expansion of the packing ring by fluid pressure, and means for preventing the expansion of the clamping ring by the fluid pressure; substantially as described.

3. A packing device for piston heads, having an annular groove, a split packing ring seated in said groove, an annular flange extending over a portion of said groove, and a sectional clamping ring seated within said groove under said flange, there being ports through the side of the piston head to admit fluid pressure to the side of the clamping ring to clamp the packing ring against the wall of the groove to prevent expansion of the packing ring by the fluid pressure; substantially as described.

1,016,690. RAILWAY-TIE AND FASTENING MEANS THEREFOR. JACOB A. HYLE, Chicago, Ill., assignor of one-half to Joseph A. Pement, Chicago, Ill. Filed July 3, 1911. Serial No. 636,795. (Cl. 238—5.)

1. A metallic railway tie made of substantially the same dimensions throughout its length, said tie having a series of transverse internally projecting ribs, and being provided at its lower portion or base with a series of recessed or slotted portions, and upwardly extended portions constituting locking projections for the filling of the tie.

2. A metallic railway tie, a solid filling therein, a series of transversely arranged and internally projecting ribs formed on the tie, the upper portion of the tie being provided with a plurality of rivets, the latter having their upper and lower head portions provided with a vertical face, and a curved bolt having a flattened upper portion resting in alinement with each vertical face of the rivet, substantially as described.

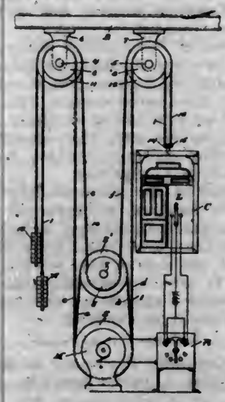
3. A metallic railway tie, a solid filling within said tie, a series of slotted portions at the base thereof, a plurality of vertical faced rivets secured to the upper surface of the said tie, and a plurality of openings in said upper surface of the tie to receive a curved bolt, each curved bolt having a flattened upper portion resting in alinement with each vertical face of the rivet, substantially as described.

4. A metallic railway tie, a solid filling within said tie, a series of slotted portions located at each side of the base of said tie, at intervals throughout its length, and a series of upturned portions for forming a locking means for said filling at intervals throughout the length of the tie.

5. A metallic railway tie, a solid filling within said tie, rivets provided with a vertical face portion attached thereto, curved bolts each having a flattened upper portion, openings in the upper surface of the tie to receive said curved bolts, and a base portion provided with terminal inwardly and upwardly projecting portions forming a locking medium for the solid filling of the tie.

[Claims 6 to 9 not printed in the Gazette.]

1,016,691. ROPE-DRIVE ELEVATOR. JOHN D. IHLDER, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 6, 1906. Serial No. 333,428. (Cl. 187—20.)



1. In frictional driving apparatus, the combination with a motor and a driving sheave, of a tension sheave adapted to rotate about a fixed axis and in substantially the same plane as the driving sheave, a load carrying device, a power transmitting means, and means for counteracting the normal strain of the power transmitting means on said sheaves.

2. In frictional driving apparatus, the combination with a frictional driving sheave, of an additional sheave approximately in the same plane as said driving sheave and arranged to rotate upon a fixed axis, a load carrying device, power transmitting means, and means for relieving the normal strain on said additional sheave due to the power transmitting means.

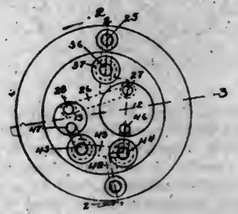
3. The combination with a frictional driving apparatus comprising two stationary sheaves on different axes, of a load carrying device, power transmitting means, a counterweight, a flexible connection between said load carrying device and counterweight independent of said power transmitting means and associated with said driving apparatus to relieve the strain of the power transmitting means thereon.

4. The combination with a motor, motor controlling means, a driving sheave and a tension sheave, said sheaves having separate axes of rotation, of power transmitting means, a load carrying device, a counterweight, and a flexible connection between the car and counterweight independent of said power transmitting means and associated with the tension sheave to relieve the strain of the power transmitting means on the bearings both of said tension sheave and said driving sheave.

5. The combination with frictional driving apparatus, of a load-carrying device, a counterweight, a flexible driving member secured at one end to the load-carrying device and at the other end to said counterweight, said driving member being also associated with the frictional driving apparatus, an additional counterweight, and a connection between said additional counterweight and the load-carrying device, said connection being associated with a part of said frictional driving apparatus.

[Claims 6 to 10 not printed in the Gazette.]

1,016,692. HYDRAULIC JACK. FRANK I. JOYCE, Dayton, Ohio. Filed July 6, 1910. Serial No. 570,665. (Cl. 138—9.)



1. In an hydraulic jack, a ram cylinder with ram, a pump block outside the ram cylinder provided with a plurality of plunger chambers, a cistern for the pump liquid, a passageway from the cistern to each plunger chamber and a discharge passage to the ram cylinder from each plunger chamber, with suction and discharge valves for said passageways to and from the plunger chamber, the suction valves provided with parallel stems extending upward into the space above the pump block, a cam shaft with double headed cam to engage said suction valve stems alternately to hold either of the pumps out of action.

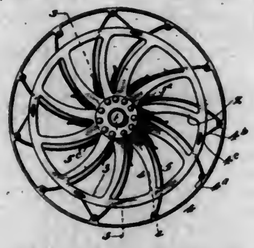
2. In an hydraulic jack, a ram cylinder with rim, a pump block outside the ram cylinder provided with a plurality of plunger chambers, a cistern for the pump liquid, a passageway from the cistern to each plunger chamber and a discharge passage to the ram cylinder with branches from each plunger chamber, with suction and discharge valves for said passageways to and from the plunger chambers, a passageway from said discharge passage beyond both the discharge valves into the cistern with a valve to close said passageway having a stem pro-

jecting above the pump block and a lever to depress said stem to open the valve to trip the jack.

3. In an hydraulic jack, a ram cylinder with ram, a pump block outside the ram cylinder provided with a plurality of plunger chambers, a cistern for the pump liquid, a passageway from the cistern to each plunger chamber and a discharge passage to the ram cylinder from each plunger chamber, with suction and discharge valves for said passageways to and from the plunger chamber, a passageway from the discharge passage beyond both the discharge valves into the cistern with a valve to close said passageway and a lever to positively open said valve to trip the jack.

4. In an hydraulic jack, a ram cylinder with ram, a pump block outside the ram cylinder provided with a plurality of plunger chambers, a cistern for the pump liquid, a passageway from the cistern to each plunger chamber and a discharge passage to the ram cylinder from each plunger chamber, with suction and discharge valves for said passageways to and from the plunger chamber, the suction valves provided with parallel stems extended upward into the space above the pump block, a passageway from said discharge passageway beyond the discharge valves into the cistern with an emergency valve to close said passageway having a stem projecting above the pump block, a cam shaft with a double headed cam to engage the suction valve stems, and with a trip lever to engage the emergency valve stem whereby the pumps may be thrown out of action and the jack tripped by the actuation of the cam shaft.

1,016,693. SPRING-WHEEL. HENRY C. KELLER, Bondville, Ill. Filed Jan. 29, 1910. Serial No. 540,743. (Cl. 152—51.)



1. In a vehicle-wheel, a hub, a series of spokes arranged in pairs and secured thereto, a pair of spoke rims to each of which a spoke of each pair is secured at its outer end, a tire-rim of diameter larger than the spoke-rims, and resilient-members pivoted to said tire-rim and to the hub, said resilient-members being of greater width for a portion of their length than the space between each pair of the aforementioned spokes, whereby the latter constitute elongated abutments to limit the flexure of said resilient-members.

2. In a vehicle-wheel, a hub, a series of spokes arranged in pairs and secured thereto, a pair of spoke rims to each of which a spoke of each pair is secured at its outer end, said spoke rims being spaced apart, a tire-rim of diameter larger than the spoke-rims, and resilient-members pivoted to said tire-rim and to the hub, said resilient-members being of greater width for a portion of their length than the space between each pair of the aforementioned spokes, whereby the latter constitute elongated abutments to limit the flexure of said resilient-members.

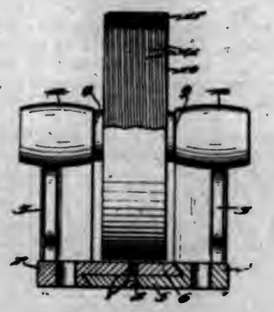
3. In a vehicle-wheel, a hub, a series of spokes arranged in pairs and secured thereto, a pair of spoke-rims to each of which a spoke of each pair is secured at its outer end, a tire-rim of diameter larger than the spoke-rims, and tangentially-arranged resilient-members pivoted to said tire-rim and to the hub, said resilient-members being of greater width for a portion of their length than the space between each pair of the aforementioned spokes, whereby the latter constitute elongated abutments to limit the flexure of said resilient-members.

4. In a vehicle-wheel, a hub, tangentially-arranged spokes secured thereto, a plurality of spaced spoke-rims to which said spokes are secured at their outer portions, a single tire-rim encircling the spoke-rims and lying in a plane between said spaced rims, and tangentially-disposed flexible members secured to said hub and to said tire-rim and lying between said spoke-rims the space between each pair of said spokes being less than the width of a portion of each of the flexible members, whereby the spokes constitute elongated limit-abutments to control the flexure of said members.

5. In a vehicle-wheel, a hub, tangentially-arranged spokes secured thereto, a plurality of spaced spoke-rims to which said spokes are secured at their outer portions, a single tire-rim encircling the spoke-rims and lying in a plane between said spaced rims, tangentially-disposed resilient-members secured to said hub and to said tire-rim and lying between said spoke-rims, said resilient-members being of greater width for a portion of their length than the space between each pair of the aforementioned spokes whereby the latter constitute elongated abutments to limit the flexture of said resilient-members, and pivot-members embraced by the ends of said resilient-members and mounted in said tire-rim.

[Claims 6 and 7 not printed in the Gazette.]

1,016,694. SECTIONAL INTERLOCKING BRACKET. JOHN E. KELLY, Philadelphia, Pa. Filed Sept. 20, 1910, Serial No. 582,815. Renewed Dec. 26, 1911. Serial No. 667,961. (Cl. 64—10.)



1. In a bracket of the character described, the combination of two members, standards on the members, bearings on the standards, the base portions of the members having flat and bevel ended sections disposed one above the other, and devices securing said sections together, substantially as described.

2. In a bracket of the character described, the combination of two members, standards on the members, bearings on the standards, the base portions of the members having flat and bevel ended sections disposed one above the other, said sections having registering openings, the openings in one member being screw-threaded, and screws in said registering openings clamping the sections together, substantially as described.

3. In a bracket of the character described, the combination of two members, standards on the members, bearings on the standards, the base portions of the members having flat and bevel ended sections disposed one above the other, the ends of said sections being beveled or inclined to fit into corresponding shaped recesses in the opposite members, and devices securing said sections together, substantially as described.

1,016,695. PISTOL-STOCK. JOHN S. KIMMEL, Saco, Mont. Filed May 1, 1911. Serial No. 624,514. (Cl. 42—72.)

1. The herein described foldable carbine stock for pistols comprising a pair of members pivotally connected together, one of the said members having a pair of oppositely disposed locking openings, the other member being provided with a locking stud for engagement with either of said openings to lock the members of the stock together either when in folded, extended or opened position.

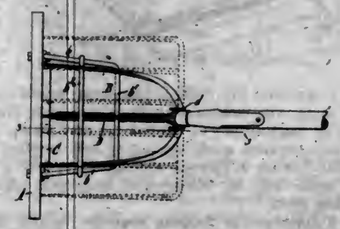
2. The herein described foldable carbine stock for pistols comprising a pair of members pivotally connected together, one of the said members having a pair of oppositely disposed locking openings, the other member being provided with a locking stud for engagement with either of said openings to lock the members of the stock together either when in folded, extended or opened position, and a spring to operate the said stud.

3. The herein described foldable carbine stock for pistols comprising an outer member and an inner member pivotally connected together, the pivotal axis being parallel with the vertical plane of the stock, the outer member having a longitudinal opening therein to receive the inner member when the stock is folded, the inner member being provided with an upper bar and a lower bar which are respectively provided at their inner ends with a hook to engage a staple at the butt of a pistol and a fork to engage the pistol grip.

4. The herein described foldable carbine stock for pistols comprising an outer member and an inner member pivotally connected together, the pivotal axis being parallel with the vertical plane of the stock, the outer member having a longitudinal opening therein to receive the inner member when the stock is folded, the said inner bar being provided at its inner end with means for engaging a pistol and locking the stock thereto.

5. The herein described foldable stock for pistols comprising an outer member having an upper bar, a lower bar and a curved shoulder piece connecting their outer ends together and forming the butt of the stock; an inner member comprising an upper bar, a lower bar and a cross bar connecting them and disposed at a point intermediate their ends, the outer ends of the bars of the inner member being pivotally connected to those of the bars of the outer member so that the inner member may be folded within the outer member or extended outwardly therefrom in line therewith, and means to secure the members of the stock together both in folded and in extended position, the said inner member of the stock being provided with means to secure the same to a pistol.

1,016,696. SCRAPER FOR FORKS. JAMES T. MACK, Buffalo, N. Y. Filed Nov. 21, 1911. Serial No. 661,495. (Cl. 55—2.)



1. A detachable scraper for forks and similar implements comprising a scraper blade and means for detachably securing said scraper blade to the fork consisting of outer, intermediate and inner bearing members between which the tines of the fork are adapted to be inserted and with which they are adapted to engage, means for securing said bearing members to said scraper blade, and means for detachably holding said tines in engagement with said bearing members, substantially as set forth.

2. A detachable scraper for forks comprising a scraper blade, an attaching device secured to said blade and having spaced bearing portions between which the tines of the fork are adapted to be inserted, means on said blade adapted to engage the end portions of the tines to prevent the tines from being swung out of engagement with said bearing portions, and means for detachably holding said fork in engagement with said attaching device, substantially as set forth.

3. A detachable scraper for forks comprising a scraper blade, an attaching device secured to said blade and having spaced bearing portions between which the tines of the fork are adapted to be inserted, and supporting legs for said bearing portions which are adapted to engage said tines and prevent lateral movement of said fork relative to said blade, a bearing member secured to said blade and adapted to engage the end portions of the tines, and means for detachably holding said fork in engagement with said attaching device, substantially as set forth.

4. A detachable scraper for forks comprising a scraper blade, a substantially U-shaped attaching device secured to said blade and having outer and intermediate cross-bars between which the tines of the fork are adapted to be inserted, means secured to said scraper blade and adapted to engage the end portions of said tines to prevent said tines from being swung out of engagement with said cross-bars, and means for detachably holding said fork in engagement with said attaching device, substantially as set forth.

5. A detachable scraper for forks comprising a scraper blade, a substantially U-shaped attaching device secured to said blade and having outer and intermediate cross-bars between which the tines of the fork are adapted to be inserted, and supporting legs which are adapted to engage the outermost tines inserted between said cross-bars to prevent lateral movement of the fork relative to the scraper blade, a bearing member secured to the scraper blade and adapted to engage the end portions of the tines to prevent them from being swung out of engagement with said cross-bars, and a spring secured at one end to said blade and having a detachable connection at its opposite end which is adapted to engage the fork for holding it in position in said attaching device, substantially as set forth.

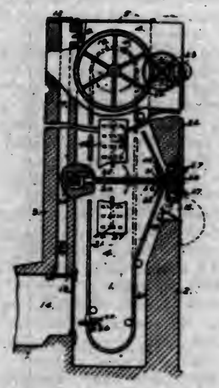
1,016,697. LADY'S HAT-PIN. WILLIAM I. MACOMBER, Providence, R. I. Filed Apr. 13, 1911. Serial No. 620,848. (Cl. 24—155.)

1. In a lady's hat-pin, comprising a tubular member; a tapering pin-point whose larger end is pivotally connected to one end of said tubular member and provided with a conical aperture; an operating rod having a conical end to seat within the aperture of said pin-point; means to hold the rod in engagement with the aperture of said pin-point when the latter is extended in alinement with said tubular member and to permit the release movement of said pin-point in order that the latter may be swung along side of the hat.

2. In a lady's hat-pin, comprising a tubular member having a bifurcated end; a solid tapering pin-point whose large end is pivotally connected to the bifurcated end of said member and provided with a conical aperture; a sleeve made fast upon the other end of said member and said sleeve having a screw-threaded portion and provided with slotted openings; a rod within the tubular member having a conical end to fit within the aperture of said

pin-point; a member secured on the other end of said rod and having finger-branches projecting through the openings of said sleeve; a hub secured to the pin-head and provided with a screw-threaded opening to engage the threaded portion of said sleeve, and an expanding coil spring interposed between the said hub and the said last mentioned member.

1,016,698. SMOKE-HOUSE. EDWARD T. MALLOY, Hamilton, Ohio. Filed Apr. 1, 1908. Serial No. 424,504. (Cl. 34—12.)



1. A smoke house comprising a curing chamber, a supplemental heating chamber supported within the curing chamber, and separate means for heating said respective chambers.

2. A smoke house comprising a curing chamber, a furnace communicating therewith, a heating chamber inclosed within the curing chamber, gas burners therein, and pipe connections therewith from a source of fuel without the curing chamber.

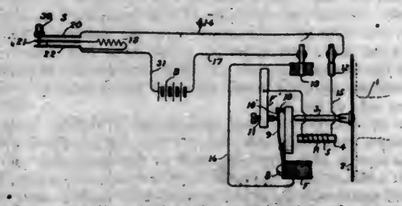
3. A smoke house comprising a curing chamber, an endless carrier therein, a heating chamber supported within the curing chamber, gas burners therein and pipe connections for supplying gas to said burners from without the curing chamber.

4. A smoke house comprising a depending endless carrier, rotative supporting bars mounted thereon in pairs, and means for simultaneously locking or unlocking each pair of bars in relation to their rotative movement.

5. The combination of driven wheels mounted at fixed points, an endless carrier depending therefrom, rotative supporting bars suspended in pairs from the carrier and provided with radial pins, and lever mechanism for locking each pair of bars from rotating.

[Claims 6 and 7 not printed in the Gazette.]

1,016,699. SIGNALING DEVICE. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 3, 1910. Serial No. 585,005. (Cl. 177—7.)



1. In a signaling device, the combination of an amplifying horn, a sound producing device associated therewith, means adapted to cause said device to sound a signal, a second device adapted to alter the action of said means upon said first named device whereby the same may be actuated to sound a second and different signal, and means common to said first named means and said second device controlling said first named means and said second device.

2. In a signaling device, the combination of an amplifying horn, a vibratile member associated therewith, means adapted to cause said member to vibrate to sound a signal, a device associated with said means adapted to alter the action of said means upon said member whereby the same may be actuated to sound a second and different signal, and means common to said first named means and said device for controlling said first named means and said device.

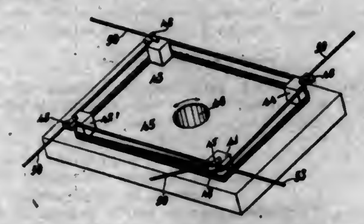
3. In a signaling device, the combination of an amplifying horn, a vibratile member associated therewith, electrically controlled means adapted to cause said member to vibrate to sound a signal, means to alter the action of said electrically controlled means upon said member whereby the same may be vibrated to sound a second and different signal, and means common to said electrically controlled means and said modifying means for controlling said electrically controlled means and said modifying means.

4. In a signaling device, the combination of an amplifying horn, a vibratile member associated therewith, an electromagnet adapted to cause said member to sound a signal, a circuit containing a source of current over which said magnet is energized, means in said circuit for changing the strength of current from said source, whereby the action of said magnet on said member is altered, so that the same produces a second and different signal, and a circuit controller common to said electromagnet and said means for closing a circuit through said magnet and said means and for eliminating said means from said circuit.

5. In a signaling device, the combination of a vibratile member, an electromagnet to vibrate said member to cause said member to produce a signal, a circuit over which said means is energized, a source of current, a current reducting device in said circuit and means for jointly controlling said circuit and for eliminating said current reducing means from said circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,016,700. COIL-FORMING MACHINE. ANTHONY L. MCHUGH, Cincinnati, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 27, 1907. Serial No. 364,842. (Cl. 153—46.)



1. In a machine for forming edgewise wound coils of metallic strip, the combination of a rotatable frame, a plurality of bending blocks carried by said frame, and a grooved anti-buckling guide carried by each bending block, each guide having a limited movement relative to said bending block and an independent movement about an axis within itself.

2. In a machine for forming edgewise wound coils of metallic strip, the combination of a rotatable table, a plurality of bending blocks carried by said table and having bending surfaces the elements of which are straight lines parallel to the axis of rotation of the table, and an anti-buckling guide carried by each bending block, said guide being grooved to receive the metallic strip, being movable at right angles to the elements of the bending surfaces of the bending blocks to produce bending of the strip, and being independently movable about an axis within itself to allow insertion and removal of the strip.

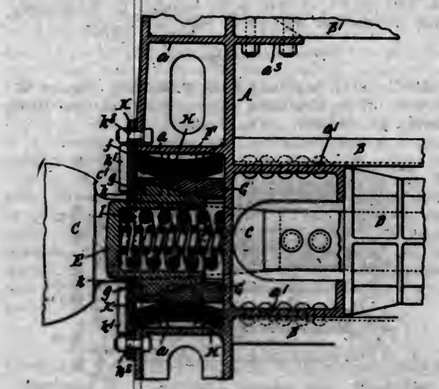
3. In a machine for forming edgewise wound coils of metallic strip, the combination of a rotatable table, a plurality of bending blocks carried by said table, said bending blocks having substantially cylindrical bending surfaces, and an anti-buckling guide associated with each bending block and movable about the axis of the bending surface of said block to produce bending of the strip, said guides being rectangularly grooved to prevent buckling of the strip and each having a portion of one flange of its groove cut away and being movable about an axis within itself to bring the cut-away portion of its flange in suitable position to allow insertion and removal of the strip.

4. In a machine for forming edgewise wound coils of metallic strip, the combination of a rotatable table, a plurality of bending blocks mounted on said table, said bending blocks having cylindrical bending surfaces, and an anti-buckling guide associated with each bending block and grooved to fit the strip, a part of the flange of such groove being cut away, each of said guides being movable about the axis of the bending surface of the coöperating bending block to produce bending of the strip and movable in the same plane otherwise than about such axis to bring the cut-away portion of the flange into suitable position to allow insertion and removal of the strip.

5. In a machine for forming edgewise wound coils of metallic strip, the combination of a rotatable table, a plurality of bending blocks carried thereby, the bending surfaces of said bending blocks being parts of cylinders, and an anti-buckling bending guide associated with each bending block and grooved to fit the strip, each of said guides being movable about the axis of the bending surface of the coöperating bending block to produce bending of the strip and independently movable about another axis to allow insertion and removal of the strip.

[Claims 6 to 11 not printed in the Gazette.]

1,016,701. CAR BUFFER AND END SILL. THOMAS L. MCKEEN, Easton, Pa. Filed Apr. 12, 1909. Serial No. 489,271. (Cl. 213—39.)



1. The combination with a car having a hollow metal end sill, of a coupler having a drawbar extending under the end sill and a part projecting upwardly in front of the end sill, a draft gear for said coupler, a buffer head arranged in said hollow end sill in rear of said projection on the coupler and adapted to be moved inwardly by the upwardly projecting part of said coupler, and friction resistance devices arranged in said hollow end sill at opposite sides of said buffer head and exerting pressure laterally against said buffer head to resist the inward movement thereof, substantially as set forth.

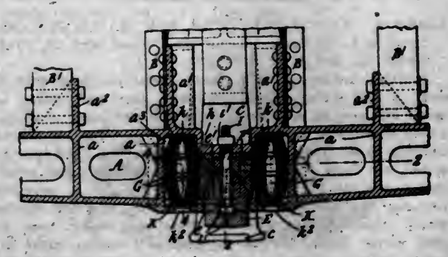
2. The combination in a car with a hollow metal end sill, of a coupler having a drawbar extending under the end sill and a part projecting upwardly in front of the end sill, a draft gear for said coupler, a hollow buffer head arranged in said hollow end sill and projecting out of the same in position to be engaged and moved inwardly by said projection on the coupler after an initial movement of said coupler, friction resistance devices arranged in said end sill at opposite sides of said buffer head, and a release spring for said buffer located in the hollow buffer head substantially as set forth.

3. The combination in a car with a hollow metal end sill, of a coupler having a drawbar extending under the hollow end sill and a part projecting upwardly in front of the end sill, a draft gear for said coupler, a buffer head arranged in said hollow end sill in rear of said projection on the coupler and adapted to be moved inwardly by the upwardly projecting part of said coupler, wedges on the opposite sides of said buffer head, laterally movable friction blocks in said end sill bearing against said wedges, leaf springs in said end sill which bear against the outer sides of said friction blocks and press said friction blocks against said wedges, and a coil release spring for said buffer, substantially as set forth.

4. The combination in a car with a hollow metal end sill, of a coupler having a drawbar extending under the hollow end sill, and a part projecting upwardly in front of the end sill, a draft gear for said coupler, a hollow buffer head arranged in said hollow end sill and projecting out of the same in position to be engaged and moved inwardly by said projection on the coupler, said buffer head having wedge faces on its opposite sides, laterally movable friction blocks in said hollow end sill which bear against the wedge faces of said buffer head, springs in said end sill which press said friction blocks against said wedge faces, and a release spring for said buffer located in said hollow buffer head, substantially as set forth.

5. In a car, the combination of a metal end sill provided centrally with a buffer chamber having an opening in its outer wall, a coupler, a draft gear for said coupler, a buffer head arranged in said buffer chamber and adapted to be forced inwardly by the coupler, resistance devices arranged in said buffer chamber at opposite sides of said buffer head, and means for closing said opening of the buffer chamber at opposite sides of the buffer head and retaining the buffer head and resistance devices in said chamber, substantially as set forth.

1,016,702. CAR BUFFING DEVICE. THOMAS L. MCKEEN, Easton, Pa. Filed Aug. 9, 1909. Serial No. 511,879. (Cl. 213—39.)



1. In a buffing device for cars, the combination with a drawbar, and an end sill having a hollow portion above the drawbar forming a buffer chamber, of a wedge adapted to be moved inwardly in said chamber by the drawbar, friction blocks in said chamber on opposite sides of said wedge and adapted to be moved laterally by the wedge, springs in said chamber on opposite sides of said friction blocks for opposing the movement of said friction blocks, and a device extending rearwardly from

said wedge through said chamber for retaining the wedge and friction blocks in place, substantially as set forth.

2. In a buffing device for cars, the combination with a drawbar, and a hollow member above the drawbar forming a buffer chamber, of a wedge adapted to be moved inwardly in said chamber by the drawbar and consisting of separate halves, friction blocks in said chamber on opposite sides of said wedge and adapted to be moved laterally by the wedge, springs in said chamber on opposite sides of said friction blocks for opposing the movement of said friction blocks, and a bolt which is held between the halves of said wedge and retains the wedge and friction blocks in place in said chamber, substantially as set forth.

3. In a buffing device for cars, the combination with a drawbar, and a hollow member above the drawbar forming a buffer chamber and having an opening in the front wall thereof, of a wedge adapted to be moved inwardly in said chamber by the drawbar and adapted to be removed through said opening, friction blocks in said chamber on opposite sides of said wedge and adapted to be moved laterally by the wedge, and springs in said chamber for opposing the movement of said friction blocks and each comprising a set of bowed spring plates which extend lengthwise with respect to the direction of movement of the wedge and are held from endwise movement in said buffer chamber; and a retaining device for said wedge and friction blocks extending from said wedge rearwardly between said friction blocks, substantially as set forth.

4. In a buffing device for cars, the combination with a drawbar, and an end sill having a hollow portion above the drawbar forming a buffer chamber which is contracted in width at its middle, of a wedge adapted to be moved inwardly in said chamber by the drawbar, friction blocks arranged at opposite sides of said wedge in the contracted middle portion of said chamber and adapted to be moved laterally by the wedge, and bowed leaf springs arranged in the wide end portions of said chamber with their convex sides bearing against said friction blocks for opposing the movement of said friction blocks, substantially as set forth.

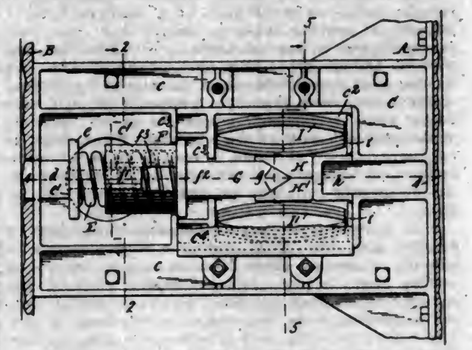
5. In a buffing device for cars, the combination with a drawbar, and a hollow member above the drawbar forming a buffer chamber, of a wedge adapted to be moved inwardly in said chamber by the drawbar, friction blocks in said chamber on opposite sides of said wedge and adapted to be moved laterally by the wedge, leaf springs arranged in said chamber at opposite sides of said friction blocks for opposing the movement of said friction blocks, and a plate at one end of each of said springs which covers an opening in the outer wall of said chamber and which is movable to uncover said opening to afford access to the spring, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,016,703. FRICTION-BUFFER FOR RAILWAY-CARS. THOMAS L. MCKEEN, Easton, Pa. Filed May 23, 1910. Serial No. 562,957. (Cl. 213—39.)

1. The combination of a buffer head provided with a stem, a coil spring surrounding said stem and acting to resist the inward movement of said buffer head, a wedge which is movable longitudinally of the car, friction blocks adapted to be moved laterally by said wedge, leaf springs which are held from longitudinal movement and resist the movement of said friction blocks, and a movable follower located between said wedge and said coil spring which transmits the pressure from said buffer head to said wedge independently of said coil spring after an initial movement of the buffer head and which limits the compression of both said coil and said leaf springs, substantially as set forth.

2. The combination of a buffer head provided with a stem, a support, a coil spring surrounding said stem and acting to resist the inward movement of said buffer head, a wedge which is movable longitudinally of the car, friction blocks located at opposite sides of said wedge and adapted to be moved laterally by the wedge, leaf springs which are arranged between said friction blocks and the side walls of said support and resist the lateral movement of the friction blocks, and a movable follower located between said wedge and coil spring which transmits pressure from said buffer head to said wedge independently of said coil spring after an initial movement

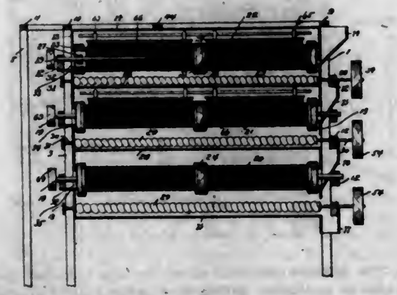


of said buffer head, said follower having a part which is engaged by a part carried by said stem for limiting the compression of said coil spring, and a stop on said support which said follower strikes to limit the compression of said leaf springs, substantially as set forth.

1,016,704. DIAPHRAGM. FRANK B. MEECH, New York, N. Y. Filed Oct. 4, 1910. Serial No. 585,278. (Cl. 181—11.)

A diaphragm for sound recording and reproducing apparatus comprising a disk or plate of natural cork permanently cemented to a similar disk or plate of natural cork, said plates of cork being adapted to transversely stiffen one another throughout their entire area.

1,016,705. FLOUR BOLTER OR DRESSER. EMERY W. MIHOK, West Hammond, Ill. Filed Sept. 30, 1910. Serial No. 584,665. (Cl. 83—39.)



In a bolting machine, a housing provided with a series of superposed compartments, an oscillatory sieve arranged in each of said compartments, a brush arranged in the upper portion of each of the upper compartments and engaging the sieves in said compartments during the oscillation of the sieves, oscillatory shafts having said sieves fixed thereto and moving therewith, annular members fixed to one end of said shafts, an oscillatory annular member of greater diameter than the members carried by said shafts, a driving connection between said member of greater diameter and said members of smaller diameter whereby the shafts will be oscillated and the greater portion of the sieves will be carried into engagement with the brushes during the oscillation of the shafts, a pitman having one end connected to the outer side of said enlarged annular member for oscillating it, and means for driving said pitman.

1,016,706. TOKEN, CHARM, OR POCKET-PIECE. EDWARD L. MORRIS, Boston, Mass. Filed June 10, 1907. Serial No. 378,063. (Cl. 63—21.)

1. A token, charm, or pocket-piece, comprising primarily a substantially flat body adapted to receive inscription or ornamentation, and having an unyieldable portion and a yieldable portion opposite to each other, said body containing an opening in part in said unyieldable and in part in said yieldable portion; and opposed pivots integral with said body and projecting into said opening; in combination with a bead-like or lump-like secondary body adapted to be mounted upon the pivot of said unyieldable or more stable first named portion and upon the pivot of said yieldable portion, which latter pivot is forced by manipulation to engage said bead-like or lump-like secondary body.

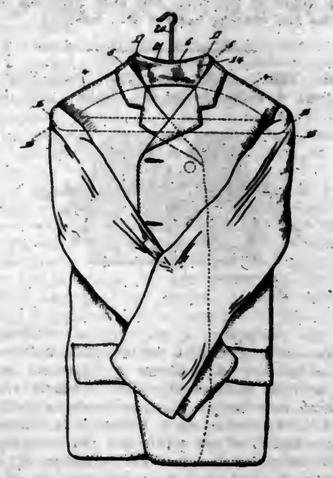
2. A token or emblem comprising a substantially flat body portion having one or more plain surfaces for the reception of inscriptions, and a secondary bead-like or lump-like thicker portion constituting in itself an emblem, the flat body portion being constructed with an opening into which extend pivots for securing the secondary portion, to be held exposed freely to view therein, one of the said pivots being formed on a yieldable arm or arms so that it may be forced by pressure to form connection with the secondary portion.

3. A token or emblem comprising a substantially flat body portion having one or more plain surfaces for the reception of inscriptions, and a secondary bead-like or lump-like thicker portion, to be held largely visible in an opening in the flat body portion, the said flat body portion being constructed with two openings adjacent one to the other, forming by their proximity to each other a yieldable pivot bearing arm or arms between the two said openings; and one of the openings serving the purpose of a suspension-opening, and the other that of a bead-holding opening.

4. In a token or emblem having a substantially flat body portion and a secondary thicker portion suspended in an opening therein by means of pivots, a sidewise elongated suspension-opening adjacent to the first named opening, said elongated opening formed with an upwardly or outwardly extending ring-notch and opposite said ring-notch a notch for receiving a tool for forcing one of the pivots, substantially as shown.

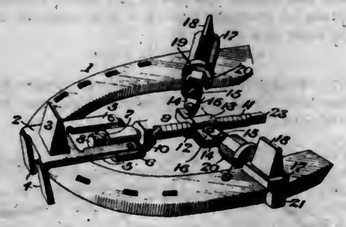
1,016,707. COAT-HANGER FOR WARDROBE-TRUNKS. FREDERIC H. PARKHURST, Bangor, Me. Filed Apr. 1, 1905. Serial No. 253,238. (Cl. 211—13.)

1. In a coat hanger for packing coats and similar garments in a wardrobe trunk without creasing, a thin flat body portion presenting the two garment-supporting sides 4 which terminate at their upper ends in dished or upwardly-curved collar-distending and supporting portions 5, which portions are more widely separated than the supported portions of the collar when in natural position on the wearer, whereby when the coat is placed on the hanger, the front of the coat is raised and held in such position that it will lie perfectly flat and can be pressed against the back of the coat in the trunk without wrinkling.



2. In a coat hanger for packing coats and similar garments without creasing, a body portion of substantially hollow triangular form made of thin flat sheet material, the base of the triangle comprising a brace bar for the garment supporting sides 4, said sides 4 first curving outwardly from the base portion and terminating at their upper ends in dished or upwardly and oppositely curved portions 5, said curved portions 5 being convergent and lying far enough apart to constitute a collar distender or support, that part of the hanger between the extremities 17 of the curved portions 5 being deeply dished or cut down to receive a supporting hook or similar fastening device, the aforesaid garment supporting sides terminating at their lower extremities in edges 15, said edges running substantially at right angles to the sides 4, the body of the triangle at the points of intersection of the edges 15 with the exterior edges of the sides 4 and the exterior edge of the aforesaid brace bar being beveled and rounded to eliminate all sharp points and yet preserve the proper angular relations between the sides 4 and the edges 15.

1,016,708. CALK ATTACHMENT FOR HORSESHOES. ROBERT PATON, Cynwyd, Pa. Filed Oct. 6, 1911. Serial No. 653,184. (Cl. 168—30.)

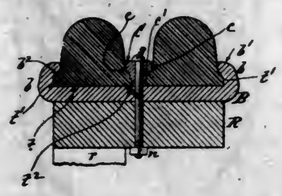


1. In a calk attachment for horseshoes, a toe-plate provided with a toe-clip and a toe-calk, a screw rotatably connected to said plate, a yoke having a longitudinal threaded bore for said screw, screw-arms pivoted to said yoke and having heel-clips and heel-calks at their outer ends, and clamping nuts upon said arms.

2. In a calk attachment for horseshoes, a toe-plate provided with a toe-clip and a toe-calk, a screw rotatably connected to said plate, a yoke having a longitudinal

threaded bore for said screw, screw-arms pivoted to said yoke and having heel-clips and heel-calks at their outer ends, washers upon said arms and adapted to bear against the inner edges of the shoe, and nuts threaded upon the screw-arms and bearing against said washers.

1,016,709. TIRE. JOHN J. PATTON, New York, N. Y. Filed Sept. 6, 1910. Serial No. 580,641. (Cl. 152—6.)

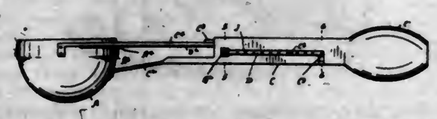


In a tire comprising a plurality of continuous-base treads, the combination with the base plate B, formed with the circumferential side flanges *b*, retaining shoulders *b'*, and inclined surfaces b^2, elastic resilient treads T, formed with base flanges *t'*, t^2, inclined surfaces t^3, and shoulders t^4, of a wedge cap C, formed with the shoulders *c*, *c*, and wedge *c'*, of less depth than the tread flanges t^2, and screw bolts securing the said wedge cap C, in position against the said tread flanges t^2, but out of contact with the base plate B, substantially in the manner and for the purpose set forth.

1,016,710. NUT-LOCK. BENJAMIN F. PURVIANCE, Brookpark, Minn., assignor of one-half to Byron J. Kelsey, Brookpark, Minn. Filed Apr. 13, 1911. Serial No. 620,921. (Cl. 151—52.)

A nut lock, comprising a washer provided with a bolt opening and with an arcuate periphery, the washer being incised from its periphery inward, the incisions crossing each other within the periphery of the washer, whereby an angular prong is formed within the marginal portion of the washer, and a section of the marginal portion at the point of the prong is removed leaving an open space, said washer having its marginal portion at the sides of said space and beyond the end of the prong distorted out of the plane of its middle portion, said marginal portion having a blunt end.

1,016,711. SCOOPING DEVICE. DAVID HENRY ROLLER, Muncie, Ind. Filed Jan. 24, 1911. Serial No. 604,371. (Cl. 107—48.)



1. The combination of a receptacle, a handle member, a cutter to move across the opening in said receptacle and having a stem, a scraper to traverse the internal face of the receptacle, a journaled shaft arranged longitudinally of the handle member and having its front end secured to one end of the scraper, a cross head carried slidingly but held against rotation on the said shaft and adapted to loosely engage the stem of the cutter, an arm connected to the cross head, a coil spring between the cross head and the handle member to urge the cutter to extended position and to urge the shaft in a rotative direction.

2. The combination of a receptacle, a hollow handle having a slot in its top and a second slot in its side the rear end of said slot being turned at a right angle, a cutter to move across the opening of said receptacle and having a stem to move on the interior of said handle there being an offset near the end of said stem, a stud near the said offset its upper end to engage the first named slot and its lower end to form a head, a scraper to traverse the internal surface of the receptacle, a journaled shaft arranged longitudinally of the handle and having its front end secured to the end of the scraper a cross head carried slidingly but held against rotative movement on said shaft and adapted to work between the offset in the stem and the head of said stud, an arm connected to the cross head and adapted to move slidingly in the last named slot in the handle, a coil spring having its one end connected to the cross head and its other end connected to the handle.

3. In a device of the kind described, a receptacle having a thickened rim provided with an angular edge, a semiannular slot in said rim, a semiannular recess on the internal face of the other side of said rim, a ring shaped cutter to move through said slot and to project into said recess, a handle member for said receptacle, means carried by the handle and having connections with the cutter whereby the cutter may be operated to extended and retracted positions.

4. In a device of the kind described, a receptacle having a thickened rim provided with an angular edge, a semiannular slot in said rim, a semiannular recess on the internal face of the other side of said rim, a ring shaped cutter to move through the said slot and to project into said recess, a handle member for said receptacle, a scraper to traverse the internal surface of the receptacle its ends being pivoted in the walls of said recess at locations underneath the plane of the cutter, means carried by the handle and having connections with the cutter and the scraper whereby the cutter and the scraper may be operated substantially as described.

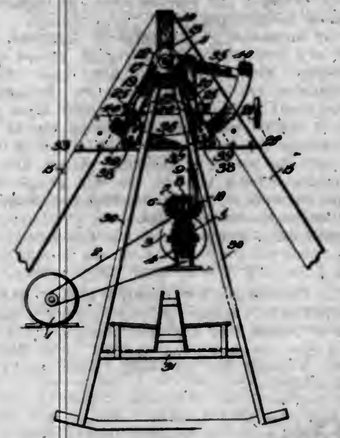
5. In a device of the kind described, the combination of a hemispherical receptacle, a semiannular slot in the rim thereof, a semiannular recess on the internal face of the other side of said rim, a ring shaped cutter to move through the said slot and to project into the said recess, a handle member for the said receptacle, connections between the handle and the receptacle including a guide-member for said cutter, a scraper to traverse the internal surface of the receptacle, means carried by the handle and having connections with the cutter and the scraper whereby the cutter and the scraper may be operated.

1,016,712. SWING. GEORGE W. SCHILLING, Philadelphia, Pa. Filed Sept. 7, 1909. Serial No. 516,550. (Cl. 155—35.)

1. In a device of the character described, a shaft suitably mounted, members loosely mounted thereon, a swing having the arms thereof rigidly connected with said members, devices carried by said shaft, supporting said members, and having frictional engagement therewith, means for rocking said shaft, means for automatically increasing the angle through which the swing vibrates, and a friction device with which the arms of the swing co-act to automatically retard the movement thereof at predetermined times during its travel.

2. In a device of the character described, a shaft suitably mounted, members loosely mounted thereon, a swing having the arms thereof rigidly connected with said members, devices carried by said shaft, supporting said members, and having frictional engagement therewith, means for rocking said shaft, and means carried by the friction devices on said shaft for increasing the angle through which the same vibrates when the latter attains a predetermined height.

3. In a device of the character described, a shaft suitably mounted, members loosely mounted thereon, a swing having the arms thereof rigidly connected with said members, devices carried by said shaft, supporting said members, and having frictional engagement therewith, means for rocking said shaft, and spring pressed plungers carried by said friction devices for increasing the angle through which the same vibrates when the latter attains a predetermined height.



4. In a device of the character described, a shaft suitably mounted, members loosely mounted thereon, a swing having the arms thereof rigidly connected with said members, devices carried by said shaft, supporting said members, and having frictional engagement therewith, means for rocking said shaft, an arm loosely mounted on said shaft, stationary means frictionally engaging said arm, and stops carried by said arm co-acting with the swing arms to automatically retard the movement of the swing.

5. In a device of the character described, a shaft suitably mounted, members loosely mounted thereon, a swing having the arms thereof rigidly connected with said members, means for automatically increasing the angle through which the swing vibrates, devices carried by said shaft, supporting said members, and having frictional engagement therewith, means for rocking said shaft, an arm loosely mounted on said shaft, stationary means frictionally engaging said arm, stops carried by said arm and co-acting with the swing arms to automatically retard the movement of the swing, a friction disk carried by said shaft, a manually actuated friction member adapted to co-act with said disk, and yielding means for normally maintaining said friction member in inoperative position.

[Claims 6 to 16 not printed in the Gazette.]

1,016,713. WINDOW-VENTILATING APPLIANCE. RICHARD SCHIMEK, New York, N. Y. Filed Oct. 25, 1911. Serial No. 656,653. (Cl. 98—31.)

1. In a ventilator, a screen, a plurality of arcuate channels adapted to receive air passed through said screen, the exhaust openings of said channels being oppositely disposed, a chamber into which said channels deliver and a second screen through which the air from said chamber may pass.

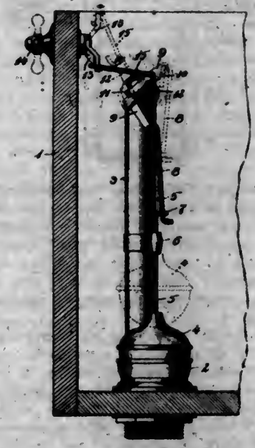
2. In a ventilator, a screen, a plurality of channels adapted to receive air passed through said screen, the exhaust openings of said channels being oppositely disposed, a chamber into which said channels deliver and a second screen through which the air from said chamber may pass.

3. A window ventilator comprising a plurality of channels, a chamber into which said channels open, the exhaust openings of said channels into said chamber being oppositely disposed, whereby currents of air passing simultaneously therethrough tend to neutralize each other, a screen through which the air from said chamber may pass, and means for regulating the flow of air therethrough.

4. A window ventilator comprising a plurality of channels, a chamber into which said channels open, the exhaust openings of said channels into said chamber being oppositely disposed, whereby air currents passing simultaneously therethrough tend to neutralize each other, and a screen through which the air from said chamber may pass, the mouths of said channels being directed to pass currents of incoming air across said screen and parallel thereto.

5. A window ventilator comprising a plurality of channels, a chamber into which said channels open, the exhaust openings of said channels into said chamber being oppositely disposed, whereby air currents passing simultaneously therethrough tend to neutralize each other, a screen through which the air from said chamber may pass, the mouth of said channels being directed to pass currents of incoming air across said screen and parallel thereto, and receptacles into which dust separated from said incoming air may be deposited.

1,016,714. FLUSHING-VALVE-OPERATING MECHANISM. WILLIAM H. SCHULTE, Trenton, N. J. Filed Nov. 15, 1910. Serial No. 592,467. (Cl. 4—5.)

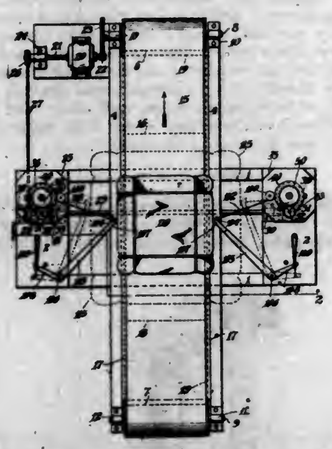


In an apparatus of the character described, a tank, an outlet, a valve therefor, an overflow pipe, means for operating the valve comprising an operating member mounted on the tank, a lever arm at one side of said overflow pipe, said lever arm having a crooked extension at its rear end partially embracing said pipe, a pivotal connection for said arm engaging said arm on one side of said pipe and the crooked extension on the other side of said pipe, a second arm mounted on the first mentioned arm at an angle thereto and adjustable toward and from the pivoted portion thereof, means whereby the first mentioned arm may be connected to a valve, and means whereby the second mentioned arm may be connected to said operating device.

1,016,715. PROCESS OF TREATING METAL SHEETS OR PLATES. HARRY E. SHELDON, Pittsburgh, Pa. Filed Mar. 21, 1905. Serial No. 251,297. (Cl. 148—41.)

The process of treating metals, which consists in pickling the same, feeding them through a scrubber, and then drying them, smoothing and buffing the dried metal, and as a final step in the molecular distribution of the metal subjecting it to a traveling line of pressure and simultaneously heating one surface as the line travels, and subjecting it to another traveling line of pressure and simultaneously heating the other surface as the line travels.

1,016,716. ELECTRICAL APPARATUS FOR DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Aug. 22, 1911. Serial No. 654,406. (Cl. 175—311.)



1. In an electrical apparatus for destroying insects, their eggs, larvæ or pupæ, the combination of separate sources of electrical energy, a plurality of pairs of groups of electrodes, oppositely disposed with respect to each other and means for electrically connecting successively each pair of opposed electrodes in each pair of opposed groups with a pre-determined one of said sources of electrical energy.

2. In an electrical apparatus for destroying insects, their eggs, larvæ or pupæ, the combination of separate sources of high tension electrical energy, a plurality of groups of contacts oppositely disposed with respect to each other, means for connecting the said separate sources of electrical energy to said opposed groups of contacts, a plurality of groups of electrodes interposed between the said plurality of groups of oppositely disposed contacts, and means for successively electrically connecting the said electrodes of the several groups to the contacts in the groups with which the said groups of electrodes are respectively associated.

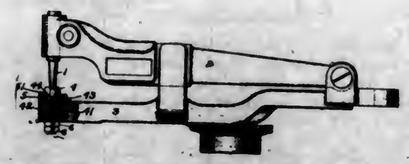
3. In an apparatus of the character described, the combination of a source of electrical energy, groups of oppositely disposed electrodes, means for supporting the said electrodes pivotally in yielding position, means for successively connecting the said terminals in the said groups with the said source of electrical energy and means for supporting articles between the said groups of electrodes whereby they may be subjected to the action of the electrical discharges between the said electrodes.

4. In an apparatus of the character described, the combination of a source of electrical energy, groups of oppositely disposed electrodes, means for yieldingly supporting the said electrodes, means for successively electrically connecting the said electrodes of the respective groups with the said source of electrical energy and means for supporting articles between the said groups of electrodes, the said electrodes yielding to permit articles of different and varying sizes and configurations to be placed between the same.

5. In an apparatus of the character described, a combination of a source of electrical energy, groups of oppositely disposed electrodes, pivoted arms upon which the said electrodes are carried, means for actuating the said arms about their pivots to hold their inner ends in position to contact with the article being treated, means for successively connecting the said electrodes in the said groups with the source of electrical energy, and means for conveying articles between the said groups of electrodes and in contact with the yielding arms upon which the said electrodes are supported.

[Claims 6 and 7 not printed in the Gazette.]

1,016,717. PUNCHING MECHANISM FOR EYELETING-MACHINES, &c. ROBERT B. SMITH, Quincy, Mass., assignor to United Shoe Machinery Company, a Corporation of New Jersey. Filed Apr. 16, 1901; Serial No. 56,247. Renewed Oct. 27, 1903. Serial No. 178,789. (Cl. 164—23.)



1. In combination, the punch, the hard metal cutting-block against the face of which the punch effects the cutting of the material being punched, and the yielding backing by which the said cutting-block is sustained entirely during the punching operation, substantially as described.

2. In combination, the punch, the hard cutting-block with the face of which the punch coöperates in effecting the cutting of the material being punched, the support having the socket, the yielding backing within the said socket by which the said cutting-block is sustained during the punching operation, and means for preventing displacement of the cutting-block from the socket, substantially as described.

3. In combination, the punch, the cutting-block, the support having the socket, the yielding backing within the socket, the nuts applied to the stem of the cutting-block, and means for holding the cutting-block from turning, substantially as described.

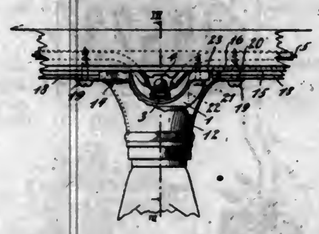
4. In combination, the punch, the oblong cutting-block, having the threaded stem, the support having the socket and shaped to fit the said cutting-block to prevent turning thereof, the yielding backing within the socket, and the nuts applied to the said stem, substantially as described.

5. In combination, the punch, the hard metal cutting-block, and a yielding backing for one of said parts which sustains the same entirely during the punching operation and gives or yields when the punch or cutter and the surface of the cutting-block make contact with each other at the conclusion of the working stroke.

[Claims 6 to 10 not printed in the Gazette.]

1,016,718. LAMP-RECEPTACLE. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed Feb. 27, 1911. Serial No. 611,053. (Cl. 173—342.)

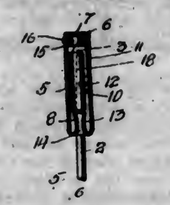
1. In a lamp receptacle adapted to be mounted upon a conductive-lead-inclosing molding or conduit, an insulating lamp-supporting base, conductive elements carried by said base for placing a lamp carried by said base in circuit with the leads in said molding, a metal housing for said base, said housing comprising laterally projecting ears, and flanges projecting substantially at right angles to said ears, and means for securing the latter to the lead-covering parts of said molding or conduit.



2. In a lamp receptacle adapted to be mounted upon a conductive-lead-inclosing molding having a cover strip, an insulating lamp-supporting base, conductive elements carried by said base for placing a lamp, when positioned thereupon, in circuit with the leads in said molding, a metal housing for said base, said housing being adapted to cover the end of a molding cover-strip, and having means for substantially preventing said end from splitting when the housing is secured thereto.

3. A lamp receptacle adapted to be mounted upon a covered molding, conduit or the like, comprising a metal housing, and electrically conductive lamp-engaging parts therein, the base of said housing having oppositely disposed projections thereon adapted to engage surfaces of said molding or conduit, and laterally projecting attachment ears adapted to cover the ends of the molding or conduit covers.

1,016,719. HAT-PIN. STEPHEN STRANSKY, West Philadelphia, Pa. Filed Oct. 2, 1911. Serial No. 652,309. (Cl. 24—155.)



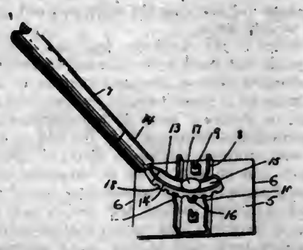
In a hatpin, a head, pins carried thereby and arranged in parallelism, a head detachably mounted upon the pointed ends of said pins, a casing arranged within said head, a pivoted spring pressed closure arranged in said casing and coöperating therewith in engaging said pins, and a corrugated member arranged within said casing to coöperate with said closure in retaining said detachable head upon said pins.

1,016,720. FLOOR-SCRAPER. FRANK J. VONDRACEK, Cedar Rapids, Iowa. Filed Aug. 16, 1911. Serial No. 644,364. (Cl. 145—47.)

1. A scraper comprising a blade and a handle, a channel member secured transversely of said blade member, a longitudinally-slotted tang secured to said handle, and means coöperating therewith for adjusting said tang upon said channel member at different angles.

2. A scraper comprising a handle and a blade, a trough-shaped member equal in length to the breadth of said blade and secured transversely upon one face of the latter, opposite alining curved projections centrally positioned upon the sides of said trough-shaped member, and means for securing said handle in an adjusted position upon said curved portions.

3. A scraper comprising a handle and a blade, a trough-shaped member equal in length to the breadth of said blade and secured transversely upon one face of the latter, opposite alining curved projections centrally positioned upon the sides of said trough-shaped member, a toothed tang secured in one end of said handle and provided with a longitudinal slot through substantially the entire length thereof, and means including a member projecting through said slot adapted for adjustably positioning said tang upon said rounded portions.

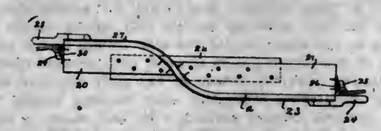


4. A scraper comprising a handle and a blade, a trough-shaped member equal in length to the breadth of said blade and secured transversely upon one face of the latter, opposite alining curved projections centrally positioned upon the sides of said trough-shaped member, a toothed tang secured in one end of said handle and provided with a longitudinal slot through substantially the entire length thereof, said tang being curved its entire length, equally-spaced-apart teeth provided upon the convex side of said tang, said blade and trough member provided with alining perforations therethrough, and a bolt member positioned through said slot and said alining perforations.

5. A scraper comprising a handle and a blade, a trough-shaped member equal in length to the breadth of said blade and secured transversely upon one face of the latter, opposite alining curved projections centrally positioned upon the sides of said trough-shaped member, a toothed tang secured in one end of said handle and provided with a longitudinal slot through substantially the entire length thereof, said tang being curved its entire length, equally-spaced-apart teeth provided upon the convex side of said tang, said blade and trough member provided with alining perforations therethrough, a bolt member positioned through said slot and said alining perforations and adapted for seating said teeth upon said rounded portions, an oblong washer of varying widths and a winged set nut positioned upon the outer free end of said bolt and adapted for securing the parts in locked arrangement.

[Claim 6 not printed in the Gazette.]

1,016,721. WOOD-BENDING DEVICE. SANFORD E. WALKE, Amesbury, Mass. Filed May 7, 1910. Serial No. 560,014. (Cl. 144—266.)



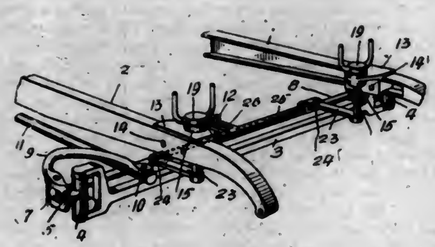
1. In a device of the character described, a plate rigid in its own plane and flexible transversely thereto having a series of retaining devices arranged thereon in a line of distortion lying in a plane parallel to that of said plate and adapted to receive a strip of wood having a predetermined curvature corresponding to the line of distortion formed by said retaining devices, a stop arranged on said plate at each end of said series, a wedge adapted to be inserted between the end of the strip held by said retaining devices and one of said stops and a form having a predetermined curved surface adapted to receive

said plate and means for securing the strip of wood carried by said plate to said form.

2. In a device of the character described, a plate rigid in its own plane and flexible transversely thereto having a series of retaining devices arranged thereon in a line of distortion lying in a plane parallel to that of said plate and adapted to receive a strip of wood having a predetermined curvature corresponding to the line of distortion formed by said retaining devices, and a form having a predetermined curved surface adapted to receive said plate and means for securing the strip of wood carried by said plate to said form.

3. In a device of the character described, a plate rigid in its own plane and flexible transversely thereto having a series of retaining devices arranged thereon in a line of distortion lying in a plane parallel to that of said plate and adapted to receive a strip of wood having a predetermined curvature corresponding to the line of distortion formed by said retaining devices, a stop arranged on said plate at each end of said series of retaining devices, a wedge adapted to be inserted between the end of the strip held by said retaining devices and one of said stops, a form having a predetermined curved surface formed by a series of spaced bars, said surface being adapted to receive said flexible plate and means extending up between said bars and adapted to engage the strip of wood carried by said plate.

1,016,722. DIRIGIBLE LAMP FOR AUTOMOBILES. ROBERT H. WALLACE, New Brighton, Pa. Filed July 8, 1911. Serial No. 637,510. (Cl. 240—62.)



1. In a lamp shifting mechanism for automobiles, a pair of brackets abutting against and provided with means extending in the inner face of the side frames of the automobile at the forward ends thereof, each of said brackets including a top plate bearing upon the top of the frame and projecting inwardly from the frame, the inwardly extending portion of said plate having the free terminus thereof formed with a boss constituting a bearing, and shiftable lamp holders carrying shafts extending through said bearings.

2. In a lamp shifting mechanism for automobiles, a pair of brackets abutting against and having means extending in the inner face of the side frames of the automobile at the forward ends thereof, each bracket further including an inwardly extending top plate provided with a boss constituting a bearing, said bearings having the upper portions thereof formed with ball races, a lamp holder opposing each of said bearings and having a ball race in its lower face, anti-friction balls mounted in said race, and a pair of shiftable shafts extending up through said bearings and connected to the lamp holders.

1,016,723. AUTOMOBILE TAG-HOLDER. WILLIAM B. WEST, Philadelphia, Pa. Filed Apr. 5, 1911. Serial No. 619,066. (Cl. 40—10.)

A support for automobile number plates comprising a channeled standard, an arm of channel section carried thereby, a plurality of resilient means one of which is connected with the standard and the other with the arm and both adapted to engage a number plate and hold said

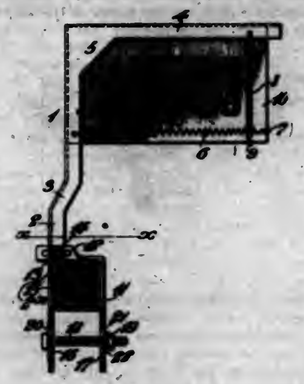
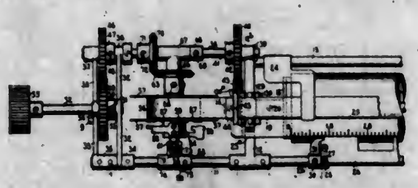


plate in said channel members, and means to secure said support to an automobile frame.

1,016,724. TYPE-WRITING MACHINE. JOHN A. ZELLERS, New York, N. Y., and GEORGE T. PRICE, West Orange, N. J., assignors to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 20, 1911. Serial No. 603,609. (Cl. 197—153.)



1. In a front-strike typewriting machine, the combination of a platen, a platen frame provided with ribbon spool supports, ribbon spools on said supports and carrying a single ribbon, devices on said platen frame for guiding a plurality of plies of the ribbon lengthwise of the platen and over the printing point thereon, and means operating automatically to feed said plies of ribbon over said devices.

2. In a typewriting machine, the combination of a platen, a platen frame comprising integral supports, ribbon spools on said supports, said ribbon spools carrying a single ribbon, means for guiding a plurality of plies of said ribbon in parallelism lengthwise of the platen and to and from the spools, and normally operative feeding mechanism for feeding said plies over said means.

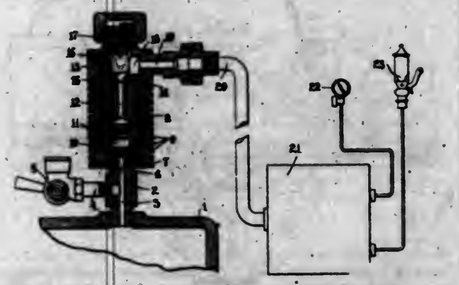
3. In a typewriting machine, the combination of a platen, a platen frame, a pair of ribbon spools mounted on said platen frame and carrying a single ribbon, means mounted independently of said ribbon spools for guiding a plurality of ribbon plies in parallelism lengthwise of the platen so as to cover normally the printing line, and normally operative feeding mechanism for advancing said plies lengthwise over said means.

4. In a typewriting machine, the combination of a platen, a platen frame, a pair of ribbon spools mounted on said platen frame, means for automatically feeding the ribbon between said ribbon spools, means for reversing the direction of ribbon feed, and means for guiding and maintaining a plurality of plies of said ribbon lengthwise of the platen and covering the printing line thereon.

5. In a typewriting machine, the combination of a platen, a platen frame, means for line spacing the platen, ribbon spools on said platen frame carrying a single ribbon, connections between said line spacing mechanism and said ribbon spools, reversing devices connected with said ribbon spools, and means for guiding a plurality of plies of said ribbon lengthwise of the platen and over the printing line thereon.

[Claims 6 to 30 not printed in the Gazette.]

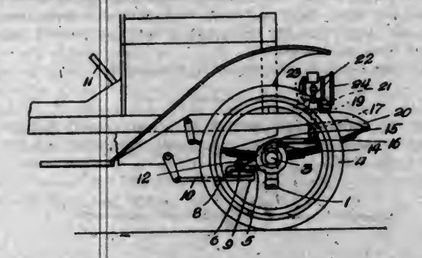
1,016,725. WHISTLE-VALVE ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. ROBERT C. ADAMS, Wilton, Conn. Filed Nov. 20, 1908. Serial No. 463,525. (Cl. 123—198.)



1. A whistle attachment for an internal combustion engine, comprising a hollow metal plug adapted to be connected to the combustion chamber, a blow-off valve connected with said plug, a body part of metal having radially arranged projections to afford increased heat radiation capacity to cool the gases as they pass through said body portion, and having two enlarged chambers at each end and a passage connecting said chambers, a thimble fitted in the cavity adjacent said plug provided with a plurality of wire gauze partitions, a conical valve located in the outer cavity of said body and coöperating with a conical valve seat, a hollow plug communicating with the latter cavity, and a pipe leading therefrom.

2. A whistle attachment for an internal combustion engine comprising a hollow metal plug adapted to be connected to the combustion chamber, a blow-off valve connected with said plug, connections between said plug and the storage tank, wire gauze partitions interposed in said connections for preventing back fire, means surrounding said gauze partitions for promoting heat radiation, and a check valve appropriately located in the attachment.

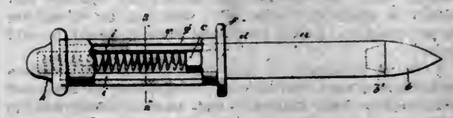
1,016,726. LAMP-ADJUSTING MECHANISM. JOSEPH ANDZIK, Dayton, Ohio. Filed Sept. 22, 1911. Serial No. 650,670. (Cl. 240—62.)



1. A combination with a steering mechanism of a motor vehicle, of a vertically disposed shiftable shaft actuated by said mechanism, a holder fixed to and movable with said shaft, oppositely disposed angle-shaped arms movably mounted in the upper portion of said holder and adapted to support a lamp, and a weight arranged within the holder and connected to said arms for normally maintaining the arms vertically.

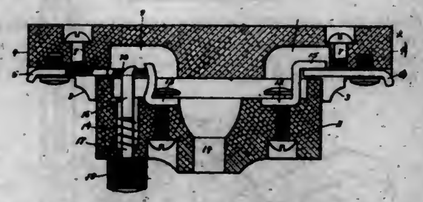
2. A combination with a steering mechanism of a motor vehicle, of brackets carried by the frame of the vehicle, shiftable shafts mounted in said brackets and actuated by said mechanism, a holder mounted upon each of the brackets and connected to a shaft and shiftable with the latter, a pair of oppositely disposed angle-shaped arms movably mounted in the upper end of each of said holders and extending thereinto and capable of supporting a lamp, and a weight suspended in each of the holders by a pair of said arms for normally maintaining these latter vertically.

1,016,727. STAGE-DAGGER. JOHN EDWARD BANNER, Mount Airy, N. C. Filed Jan. 21, 1911. Serial No. 603,957. (Cl. 46—70.)



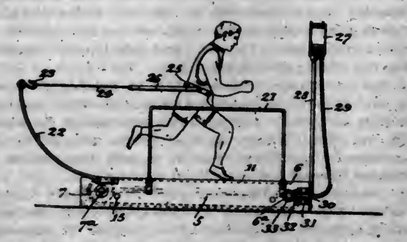
A stage weapon of the dagger or stiletto type, consisting of a handle, a blade and means for normally projecting it and allowing it at all time to recede back its full length into the handle, said blade being provided with a flexible and bendable tip or point having normally the shape of a continuation of the blade.

1,016,728. ELECTRICAL FITTING. HARRY C. BARBER, North Haven, Conn., assignor to The New Haven Electrical Mfg. Co., North Haven, Conn., a Corporation. Filed July 26, 1911. Serial No. 640,628. (Cl. 173—329.)



The combination with a base, of terminals connected to opposite sides thereof, said base formed with recesses above the inner ends of the terminals, one of said terminals formed with a slot, a rosette having two binding posts connected therewith, one of said binding posts formed with an outwardly projecting finger to engage with the inner end of one of the terminals, and a vertically movable spring latch also mounted in the rosette adjacent to the other binding post and adapted to pass through the slot in the slotted terminal, whereby the rosette will be interlocked with the base.

1,016,729. APPARATUS FOR ATHLETIC AND THEATRICAL PURPOSES. TIMOTHY R. BARRETT, Bordentown, N. J. Filed Feb. 28, 1911. Serial No. 611,495. (Cl. 46—69.)



1. In an apparatus of the class described, a frame, path-supporting barrels rotatable in said frame, a noise-deadening covering for said barrels, and an endless path

contacting with said noise-deadening coverings of the barrels.

2. In an apparatus of the class described, a frame, a plurality of barrels mounted therein, a noise-deadening covering for each barrel, an endless path supported by said barrels and contacting with said noise-deadening coverings, and means separate from the barrels and positioned between them for supporting the upper lead of said endless path against sagging.

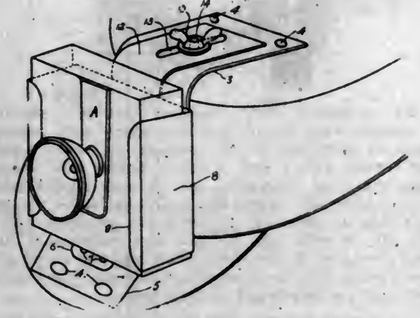
3. In an apparatus of the class described, a main frame, rotatable barrels supported therein, jackets composed of noise-deadening material secured on said barrels and spaced relative to each other, flexible belts engaging frictionally with the barrels, said belts being retained and guided by edgewise contact with said jackets, an endless apron attached to said belts, and slats fastened to said apron.

4. In an apparatus of the class described, an endless path comprising a plurality of belts, an apron composed of noise-deadening material, and slats attached to the belts and the apron, combined with a frame, and a plurality of barrels for supporting the endless path.

5. In an apparatus of the class described, a frame, a plurality of barrels therein, flexible belts engaging frictionally with said barrels, an endless apron attached to said belts, said apron being composed of noise-deadening material, slats attached to said apron and the flexible belts, and a plurality of series of rollers supported between the leads of the endless apron, said rollers contacting frictionally with the upper lead of said endless apron and positioned between the flexible belts.

[Claims 6 to 8 not printed in the Gazette.]

1,016,730. LAMP-BRACKET. CHARLES B. BARTLEY, Pittsburgh, Pa., assignor of one-half to George F. Rylands, Charleroi, Pa. Filed Sept. 26, 1911. Serial No. 651,425. (Cl. 240—60.)



1. In a lamp holder, the combination with a cap, of an insulating bracket secured to the cap, and a lamp supporting holder and casing mounted on the bracket and electrically insulated from the cap.

2. In a lamp holder, the combination with a cap, of an insulating bracket secured to the cap, and a lamp supporting holder and casing mounted on the bracket and adjustably secured thereto, and electrically insulated from the cap by said bracket.

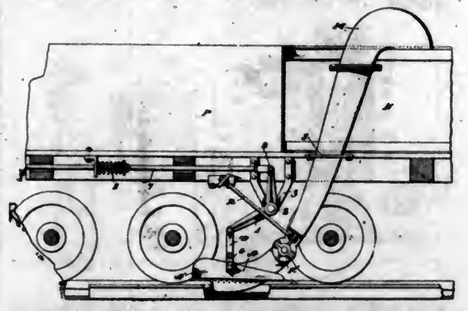
3. As an article of manufacture, a bracket for a storage battery lamp comprsing a base portion of insulating material shaped to conform and adapted to be secured to a cap, and a lamp supporting holder adapted to carry a storage battery lamp mounted on said base portion and insulated thereby, substantially as set forth.

4. As an article of manufacture, a bracket for a storage battery lamp comprising a base portion of insulating material shaped to conform and adapted to be secured to a cap, and a lamp supporting holder adapted to carry a storage battery lamp mounted on said base portion and insulated thereby, and having means for adjustably securing it thereto, substantially as set forth.

5. A lamp holder for storage battery lamps consisting of a bracket fixedly secured to a cap, and a lamp holder having a receiving case, a lower flexible securing tongue attached to the base of said bracket and an upper rearwardly extending tongue adjustably secured to the upper portion of said bracket, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,016,731. TENDER-SCOOP. STEPHEN BENNIS and JOHN GILLEN KEPPEL, New York, N. Y. Filed Oct. 11, 1911. Serial No. 654,154. (Cl. 103—51.)



1. In a tender scoop, the combination with a suitable supporting frame, of a dipper having a forwardly-projecting chamber above the inlet which will prevent the splash or spray from discharging upon the roadway, bridge, or trestle, while the scoop is in operation.

2. In a tender scoop, the combination with a suitable supporting frame, of a dipper formed with forwardly and laterally projecting communicating chambers located above the inlet of the dipper which will prevent the splash or spray from discharging upon the roadway, bridge, or trestle while the scoop is in operation.

3. In a tender scoop, the combination with a suitable supporting frame, of a dipper formed with forwardly and laterally projecting communicating chambers located above the inlet of the dipper, said chambers decreasing in height toward the rear, and having a discharge outlet at the rear of the dipper located over the trough.

4. In a tender scoop, the combination with a suitable support, of a dipper formed with a projecting chamber, side chambers and side flanges all located above the inlet of the dipper, said chambers communicating and having a common outlet at the rear of the dipper.

5. In a tender scoop, a dipper having an inlet which leads to a discharge conduit or tube, and provided with a chamber which projects forward of the inlet and side chambers on either side thereof, said chambers located above the inlet with a flange wall partially separating said chambers from the inlet, and a centrally located rear outlet from said chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,016,732. MAGNETIC NEEDLE. CHRISTIAN L. BERGER, Boston, Mass. Filed Oct. 30, 1909. Serial No. 525,527. (Cl. 73—125.)

1. A magnetic needle for scientific instruments, having a twisted form adjacent its ends.

2. A magnetic needle for scientific instruments, having a plurality of transverse twists therein.

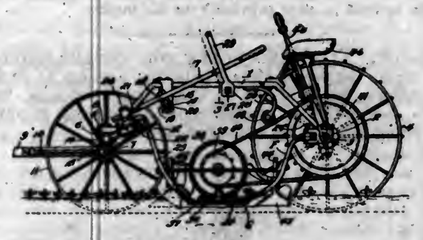
3. A magnetic needle for scientific instruments, having a plurality of twists of different pitches adjacent each end.

4. A magnetic needle for scientific instruments, having an enlarged surface area adjacent each end provided by means of a relatively fine twist.

5. A magnetic needle for scientific instruments, having an enlarged surface area adjacent each end provided by means of a twist and a laterally extended flat end-portion.

[Claims 6 and 7 not printed in the Gazette.]

1,016,733. COTTON CHOPPER AND CULTIVATOR. HENRY C. BICKERS, Batesville, Ark. Filed May 13, 1911. Serial No. 626,889. (Cl. 97—45.)



1. In a machine of the character described, a frame structure including front and rear axles and a bolster supported upon the front axle, a guide rail having arms provided with sleeves journaled upon the bolster, an auxiliary tool carrying frame equipped with guide rollers engaging the guide rail, said frame being movably connected with the rear axle, and means for effecting adjustment of the tool carrying frame.

2. In a device of the character described, a frame structure including front and rear axles and a bolster supported upon the front axle, a guide rail having arms pivotally engaging the bolster, a laterally adjustable frame equipped with rollers engaging the guide rail, said frame being also movably connected with the rear axle, means for effecting adjustment of the frame, and a cotton chopping device carried by the frame.

3. In a machine of the character described, a frame structure including front and rear axles and a bolster supported upon the front axle, a guide rail having arms pivotally engaging the bolster, a downwardly arched cutter carrying frame comprising side members and a front cross bar, a sleeve mounted upon the rear axle with which the side bars of the cutter carrying frame are pivotally connected, grooved rollers upon the front cross bar engaging the guide rail, a universally movable lever supported upon the main frame, and an eye member rising from the front cross bar of the cutter carrying frame and engaged by said lever.

4. In a machine of the character described, a main frame structure including front and rear axles, a bolster supported upon the front axle, side members having sleeves engaging the rear axle, and a front cross bar supported upon the bolster and associated with the side members, a guide rail having arms pivotally engaging the bolster, a sleeve supported upon the rear axle, a cutter carrying frame including side members pivotally connected with said sleeve and a front cross bar, grooved rollers upon said cross bar engaging the guide rail, and lever means for effecting lateral and vertical adjustment of the front end of the cutter carrying frame.

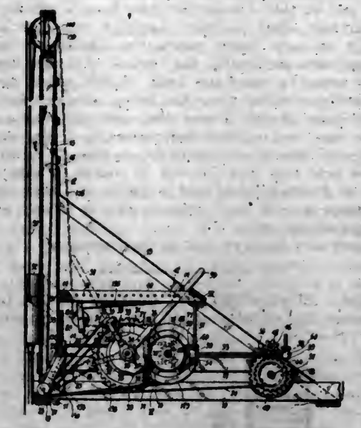
1,016,734. BRUSH. IDA BING, New York, N. Y. Filed Apr. 2, 1910. Serial No. 553,020. (Cl. 43—1.)

1. In a tool of the class described, a handle having transverse cuts in the end thereof, a holding member having an opening and adapted to engage one of said cuts and means for securing the same therein and wires or bristles through said opening in said holding member and adapted to set within the end of said handle, and means for binding the combination in position.

2. In a tool of the class described, a handle provided with cuts in the end thereof, a cleat adapted to engage one of said cuts, wires or bristles adapted to penetrate

said cleat and engage the other of said cuts and a binder to retain said wires or bristles in said other of said cuts.

1,016,735. DRILLING-MACHINE. JOHN NORTH BRATTAIN, Davidson, N. C. Filed Sept. 19, 1911. Serial No. 650,211. (Cl. 166—3.)



1. The combination with a tool lifting and releasing cable having a loop, of a drive shaft, a fixed ratchet disk thereon having a peripheral notch, a cam disk loosely mounted on said shaft, means for holding said cam disk stationary, the edge of said cam disk being cut away and terminating in an outwardly extending cam surface, a rock arm having said shaft as an axis of rotation, a pawl on said rock arm adapted to engage in said notch, said pawl being adapted to be directed by said cam surface out of said notch, and means on said rock arm adapted to loosely engage the bight of said loop.

2. The combination with a tool lifting and releasing cable having a loop, of a drive shaft, a fixed ratchet disk thereon having a peripheral notch, a cam disk loosely mounted on said shaft, means for holding said cam disk stationary, the edge of said cam disk being cut away to about the depth of said notch, the unmutilated portion of the edge being substantially flush with the edge of said ratchet disk, said cut away portion merging into said unmutilated portion in a cam surface, a rock arm having said shaft as an axis of rotation, a pawl on said rock arm adapted to engage in said notch and to be directed out of said notch by said cam surface, and means on said rock arm adapted to loosely engage the bight of said loop.

3. The combination with a tool lifting and releasing cable having a loop, of a drive shaft, a ratchet disk fixed thereon having a notch, a cam disk loosely mounted on

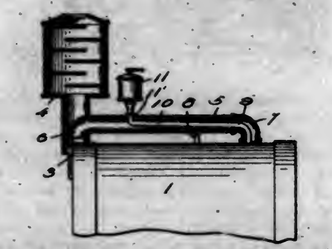
said shaft, means for holding said cam disk stationary, hubs disposed on the outer faces of said ratchet disk and said cam disk, a rock arm straddling both of said disks and loosely mounted on said hubs, a pivoted pawl on said rock arm adapted to engage in said notch, the edge of said cam adapted to engage in said notch, the edge of said cam disk being cut away to receive said pawl and terminating in an outwardly directed cam surface adapted to move said pawl out of said notch, and means on said rock arm adapted to loosely engage the bight of said loop.

4. The combination with a tool lifting and releasing cable having a loop, of a drive shaft, a fixed ratchet disk thereon having a notch, a cam disk loosely mounted on said shaft, an adjusting lever carried by said cam disk adapted to hold said cam disk stationary in any adjusted position on said shaft, the edge of said cam disk being cut away and terminating in an outwardly extending cam surface, a rock arm having said shaft as an axis of rotation, a pawl on said rock arm adapted to engage in said notch and to be directed out of said notch by said cam surface, and means on said rock arm adapted to loosely engage the bight of said loop.

5. The combination of a derrick, a drive shaft thereon, a drum on said derrick having an operative clutch controlled connection with said drive shaft, a tool lifting and releasing cable on said derrick and secured to said drum, and further having an open loop, a ratchet disk fixed on said shaft having a notch, a cam disk loosely mounted on said shaft, means for adjustably holding said cam disk stationary, the edge of said cam disk being cut away to about the depth of said notch, the unmutilated portion of the edge being substantially flush with the edge of said ratchet disk, said cut away portion merging into said unmutilated portion in a cam surface, a rock arm having said shaft as an axis of rotation, a pawl on said rock arm adapted to engage in said notch and to be directed out of said notch by said cam surface, and means on said rock arm adapted to loosely engage the bight of said loop.

[Claims 6 to 9 not printed in the Gazette.]

1,016,736. OIL-CONVEYER. CHARLES EDWIN BURNS, Momence, Ill. Filed Aug. 15, 1911. Serial No. 644,082. (Cl. 121—115.)



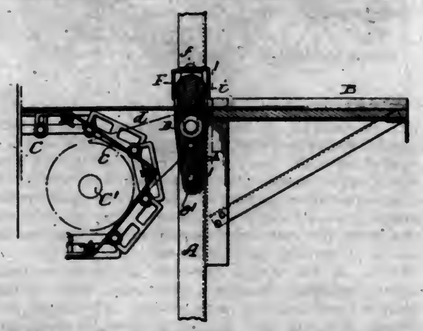
1. In combination with the cylinder and exhaust muffler of an engine, of a heat radiating pipe communicating therewith, and an oil supply pipe passing through said heating pipe and having one end leading to and connected with the cylinder.

2. In combination with an engine cylinder and exhaust muffler thereof, of a heat radiating pipe one end of which projects a suitable distance within the exhaust muffler and is turned downwardly, an oil supply pipe located within the pipe and in communication with the cylinder, and lubricator cup for feeding oil to said pipe.

3. In combination with an engine cylinder and exhaust muffler thereof, of a heat radiating pipe one end of which projects a suitable distance within the muffler and is turned downwardly, an inclined oil supply pipe located within the heating pipe, one end of the oil pipe communicating with the cylinder, and the other end extending through the heating pipe, and a lubricator cup located in close proximity to the muffler, whereby oil will be fed through said pipe in a liquid state.

4. In combination with an engine cylinder and exhaust muffler thereof, of a heat radiating pipe having one end projecting a suitable distance within the said exhaust chamber and turned downwardly through which a portion of the exhaust is adapted to pass, said pipe having a downwardly extended portion at its opposite end, terminating a short distance above the cylinder, a bracket for supporting the lower open end of the pipe at a suitable distance above the cylinder, and an inclined oil supply pipe extending through the heating pipe and in communication with the cylinder, and a lubricator cup attached to the upper projecting end of the oil supply pipe and located in close proximity to the muffler.

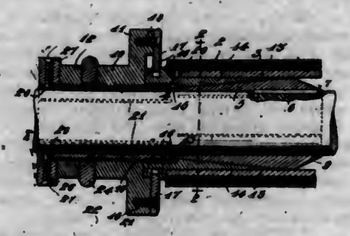
1,016,737. FEED ROLLS FOR VENEER-DRIERS. HARRY COULSTON, Philadelphia, Pa., assignor to Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 9, 1910. Serial No. 576,302. (Cl. 144—249.)



1. The combination in means for feeding veneers, of a frame; a driven roll mounted in bearings in the frame; a box; and a series of roll sections loosely mounted in the box and arranged to press the veneer against the driven roll.

2. The combination in means for feeding veneers, of a frame; a driven roll mounted in bearings in the frame; a box located above the driven roll, said box being open at the under side; and a series of loosely mounted roll sections in said box arranged to press the veneer against the driven roll.

1,016,738. CHUCK FOR PAPER-ROLL SHAFTS. CLAUD D. CURRY, Brooklyn, N. Y. Filed Dec. 19, 1910. Serial No. 598,054. (Cl. 242—72.)



1. The combination with a shaft, and a hollow core surrounding the same, of a sleeve split at both ends fitting around the shaft, the inner portion of the sleeve being provided with external longitudinal tapering grooves and the outer portion being externally threaded, wedges fitted in said grooves and having their outer sides bearing against the core and their outer ends projecting beyond the end of the core, an adjusting nut mounted on the threaded portion of the sleeve and engaging said wedges to move the same longitudinally of the sleeve, and a lock nut mounted on the sleeve and arranged to hold the adjusting nut in set position.

2. The combination with a shaft, and a hollow core surrounding the same, of a sleeve split at both ends fitting closely around the shaft and provided with a plurality of external longitudinally tapering grooves and having its inner extremity tapered toward the shaft, a plurality of wedges engaging said grooves and having convex outer sides flush with the outer surfaces of the sleeve when the wedges are in their outermost position, and means mounted on the outer portion of the sleeve and engaging the projecting ends of the wedges to move the same longitudinally of the grooves whereby the sleeve will be caused to bind around the shaft and the wedges to bind within the core.

3. The combination with a shaft, and a hollow core surrounding the same, of a sleeve split at both ends fitting around the shaft and having its outer end externally threaded and its inner end provided with longitudinal external tapering grooves, wedges fitted in said grooves and having their outer ends projecting over the threaded portion of the sleeve and provided on their inner faces with transverse shoulders adapted to impinge against the end of the threaded portion of the sleeve, and an adjusting nut mounted on the said threaded portion of the sleeve and engaging said wedges whereby rotation of the nut will cause the wedges to expand against the core and the sleeve to contract around the shaft.

4. The combination with a shaft, and a hollow core surrounding the same, of a split sleeve fitting around the shaft and having a threaded outer portion and provided in its inner portion with external longitudinal tapered grooves, the sleeve being further provided with longitudinal grooves in the outer surface of its threaded portion, wedges fitted in the tapering grooves of the sleeve, an adjusting nut mounted on the threaded portion of the sleeve and engaging said wedges, a washer having internal lugs engaging the longitudinal grooves of the threaded portion of the sleeve and adapted to rest against the adjusting nut, and a lock nut mounted on the said threaded portion of the sleeve and bearing against said washer.

5. A chuck for the purpose set forth comprising a split sleeve having an externally threaded outer portion provided with longitudinal grooves and having an inner portion provided with longitudinal tapering grooves, wedges slidably fitted in said tapering grooves, an adjusting nut mounted on the threaded portion of the sleeve and engaging said wedges, a washer having internal lugs engaging the grooves in the threaded portion of the sleeve and bearing against the adjusting nut, a lock nut fitted on the threaded portion of the sleeve and bearing against said washer, and a milled ring detachably secured on the outer extremity of the sleeve.

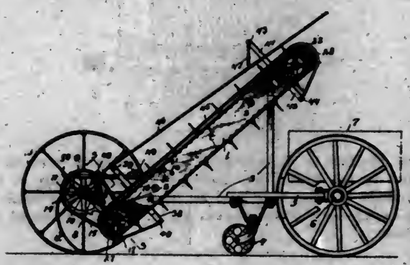
1,016,739. CLOSURE FOR CONTAINERS. WILMER E. DANAT, Buffalo, N. Y. Filed May 9, 1911. Serial No. 626,001. (Cl. 215—14.)

1. A closure for containers comprising a wafery cap for engagement with the container to normally close the opening thereof, the said cap having an inclined slit bounded by sides extended at an angle to the plane of the cap.

2. In a closure for containers, a wafery cap for engagement with the container to close the opening thereof, the said cap being removable from the said container and having a plurality of spaced converging parallel slits, each of the said slits bounded by parallel sides extending angularly to the plane of the cap.

3. A closure for containers comprising a wafery cap for engagement with the container to normally close the opening thereof, the said cap having a slit bounded by sides extended at an angle to the plane of the cap with the mentioned sides normally adapted to engage when the cap is positioned on the container.

1,016,740. HAY RAKE AND LOADER. HENRY E. ELLISON, Girard, Ill., assignor of one-half to Ross M. Ellison, Rockbridge, Ill. Filed May 5, 1911. Serial No. 625,176. (Cl. 56—61.)



1. In a loading attachment for hay rakes, a loader frame, an endless carrier on said frame, brackets associated with the loader frame and having hooks to engage the axle of the hay rake, guide members extending from the brackets, and connecting rods guided through said guide members, said connecting rods being adjustably connected at their front ends with the loader frame and adapted to be connected at their rear ends with the head of a hay rake.

2. The combination with a hay rake having a wheel carrying axle and a tooth carrying tilting head provided with upwardly extending arms, of a loader attachement comprising a frame having brackets provided with axle engaging hooks and upwardly extending guides, connecting rods guided through said guides and connected at their rear ends with the upwardly extending arms of the rake head, and means for connecting the forward ends of said rods adjustably with the loader frame.

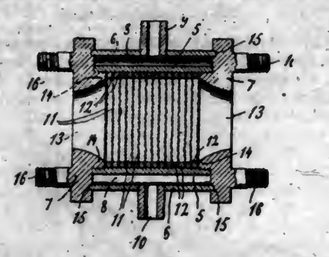
3. In a loading attachment for hay rakes, an inclined loader frame comprising side members suitably connected and spaced apart, shafts supported for rotation adjacent to the upper and lower ends of the frame, an endless carrier guided over said shafts, bracket members extending downwardly from the sides of the loader frame adjacent to the upper and lower ends of said frame, cross bars connecting said brackets, and floor members extending longitudinally of the loader frame above and adjacent to the upper lead of the carrier, said floor members being terminally curved around the ends of the loader frame and attached to the cross bars connecting the downwardly extending brackets.

4. In a loader attachment for hay rakes, an inclined loader frame, an endless carrier on said frame, floor members extending longitudinally above and adjacent to the upper lead of the carrier, said floor members being terminally curved around the lower and upper ends of the frame, suitably supported cross bars to which the floor members are terminally attached, guard bars hingedly supported above and adjacent to the lower end of the loader frame above the floor bars, said guard bars having free ends gravitating in the direction of the upper ends of the floor members, and flexible means to support the free ends of the guard bars.

1,016,741. MIXING DEVICE. AUGUST J. FRITZ, Farmington, N. Mex. Filed May 13, 1911. Serial No. 626,913. (Cl. 48—180.)

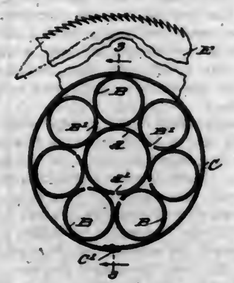
A mixing device of the character described, comprising a casing consisting of spaced and concentric inner and outer shells, the outer shell being provided with an inlet and an outlet for the space between said shell and the inner shell, heads connected to the ends of the shells to

close the space therebetween, and having inlet and outlet openings in line with the inner shell, and said heads having circular flanges and circular grooves spaced from and concentric to the flanges, said flanges being threaded to screw into the inner shell, and the ends of the outer



shell seating in the grooves, and a series of screens located in the inner shell between the inner ends of the aforesaid flanges, and held in place within the shell by the engagement of the flanges with the end screens of the series.

1,016,742. METALLIC SKELETON SPACE-BLOCK FOR GIN-SAWS. WILLIS R. GOLDEN, Atlanta, Ga. Filed Sept. 27, 1910. Serial No. 584,080. (Cl. 13—14.)



1. A spacing block for saws comprising a central split ring, a circular series of split rings surrounding the central ring with the adjacent rings in contact with each other and an inclosing band around the said circle of rings, substantially as set forth.

2. The combination of a shaft, saws thereon, and a spacing block comprising a central ring to encircle a shaft, a series of ring like members encircling the central ring and an inclosing band.

3. A spacing block comprising a central ring to encircle a shaft and a circular series of split rings encircling the central ring together with means for retaining the circular series of rings.

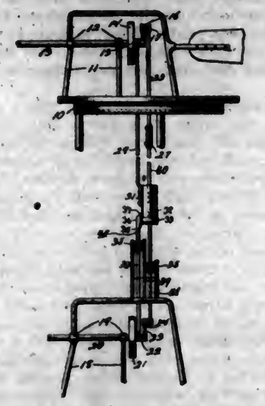
4. A spacing block comprising a central ring to encircle a shaft, a circular series of split rings encircling the central ring and an inclosing band encircling the series of split rings.

5. A spacing block comprising a central ring to encirle the shaft and split or opened, a circular series of split rings encircling the central ring and an inclosing band, the circular series of split rings being loosely confined between the central ring and the inclosing band.

[Claims 6 and 7 not printed in the Gazette.]

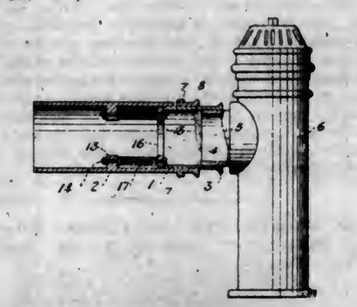
1,016,743. MECHANICAL MOVEMENT. PAUL HABECK, Rankin, Okla. Filed Nov. 3, 1908. Serial No. 460,849. (Cl. 74—5.)

In a device of the kind described, a lower horisontal shaft, fixed bearings for said shaft, an upper horisontal shaft, a turn table, means supporting said turn table, bearings mounted on said turn table and carrying said upper shaft, a double crank on each of said shafts, a rod having its upper end connected to one of the upper cranks, a sleeve swiveled on the lower end of said rod, a rod swiveled in said sleeve, a rod having its lower end connected to one of the lower cranks, a hinge joint between the second and third rods, a rod connected to the other of said upper cranks, a sleeve fixedly attached to the lower end of said fourth rod and surrounding the second rod in spaced relation thereto, a flange formed around the lower



end of said sleeve and provided with a groove extending around its upper face, a rod having an end provided with arms engaging over the upper and lower faces of said flange, a set screw in the last mentioned rod engaging in the groove in said flange, a rod having its lower end connected to the remaining lower crank, and a hinge joint between the last mentioned rods.

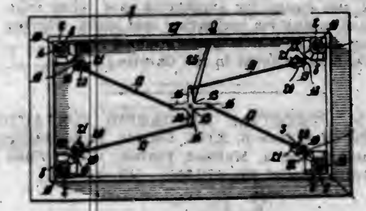
1,016,744. HOSE-COUPLING. JAMES G. HAYMAKER, Minerva, Ohio. Filed Mar. 7, 1911. Serial No. 612,905. (Cl. 137—28.)



1. In a hose coupler, a cylindrical hydrant member adapted to be detachably connected to a hydrant, a cylindrical hose member telescoping said hydrant member, diametrically opposed yokes on the periphery of the hydrant member, said hose member formed with diametrically opposed bayonet-shaped slots for the reception of said yokes, projections carried by said hose member and engaging in said yokes, a pair of inwardly arranged lugs carried by the hose member, a collar within the hose member and engaging the free end of the hydrant member, bolts movably mounted in said lugs and slidably connected to said collar, and springs interposed between said lugs and collar and surrounding said bolts.

2. A hose coupler comprising a cylindrical hydrant member adapted to be connected to a hydrant, a cylindrical hose member telescoping said hydrant member and provided with diametrically opposed slots, diametrically opposed yokes carried by the hydrant member and extending in said slots, projections carried by the hose member and engaging in said yokes, inwardly extending and diametrically opposed lugs integral with said hose member, a collar within the hose member and abutting against the free end of the hydrant member, bolts extending through said lugs and said collar, and springs surrounding said bolts and interposed between the collar and the lugs for maintaining said projections in said yokes.

1,016,745. TABLE-CASTER. EDWIN C. HENRIKSON, Tioga, N. D. Filed Apr. 11, 1911. Serial No. 620,295. (Cl. 16—165.)



1. A table including supporting legs therefor, caster supports mounted for vertical movement in the legs, controlling mechanism mounted beneath the table and operatively connected with the supports to move them vertically in the legs, said controlling means including a pivoted head, arms extending radially therefrom, and operating rods having their inner ends connected to said arms, a lever for the controlling mechanism, the said lever being extended through one side of the table and means for holding the lever against movement.

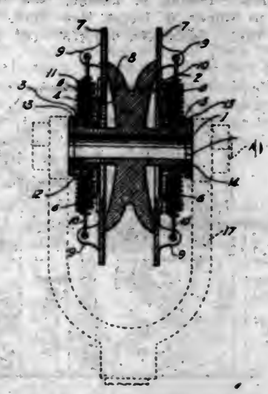
2. A table, supporting legs therefor, caster supports mounted for vertical movement in the legs, actuating mechanism for moving the supports vertically in the legs and including bell crank levers having portions loosely fitted to the reduced upper portions of the caster supports, and means for controlling said mechanism.

3. A table, supporting legs therefor, caster supports mounted for vertical adjustment in the legs, said supports provided with reduced portions and head portions at their upper ends, actuating mechanism for moving the supports vertically in the legs, said mechanism including angle levers loosely and operatively connected to the reduced portions and head portions of the supports, caster brackets pivotally mounted on the lower ends of the supports, swinging in a vertical plane, and said supports provided with oppositely inclined stop shoulders, providing a means to limit the vertical movement of the caster brackets, a lever for controlling the actuating mechanism for moving the supports vertically in the legs, said lever being extended through a slot formed in one of the depending side bars of the table, and means for holding the lever against any pivotal movement, said means consisting of an arm centrally pivoted within the slot and adapted to move in a vertical plane.

1,016,746. NUT-LOCK. JOSEPH J. HERZOG, Baltimore, Md. Filed Aug. 8, 1911. Serial No. 642,980. (Cl. 151—1.)

A nut locking device comprising a bolt nut proper formed with a cavity in its inner face and a bushing or washer made of soft material and secured in said cavity and projecting therefrom beyond the base of the nut, the bore of the bushing having a greater diameter than the bore of the nut and the latter having indented side portions, whereby the two parts are secured together and form practically one device adapted for use as such.

1,016,747. TROLLEY. EDWARD P. HINCHBERGER, Pittsburgh, Pa., assignor of one-third to Sarah Hinchberger, Pittsburgh, Pa. Filed June 17, 1911. Serial No. 633,665. (Cl. 191—37.)

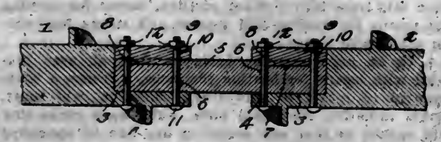


1. In a trolley, the combination with a trolley wheel having a hub, of pressure members arranged upon said hub, circular guard plates arranged between said members and said wheel, apertured lugs carried by the outer sides of said guard plates, and springs interposed between said members and said lugs, substantially as described.

2. In a trolley, the combination with a trolley wheel having a hub, of pressure members arranged upon said hub, circular guard plates arranged between said members and said wheel, apertured lugs carried by the outer sides of said guard plates, springs interposed between said members and said lugs, and heads secured to the ends of the hub of said wheel and adapted to retain said pressure members thereon.

3. In a trolley, the combination with a trolley wheel having a hub, of pressure members arranged upon the ends of the hub of said wheel, radially disposed arms carried by said members, circular guard plates encircling the hub of said wheel and retained in engagement with the sides of said wheel by said members and the arms thereof, apertured lugs carried by the outer sides of said guard plates, springs interposed between said members and said lugs, and means including heads adapted to retain said members upon the ends of the hub of said wheel, substantially as described.

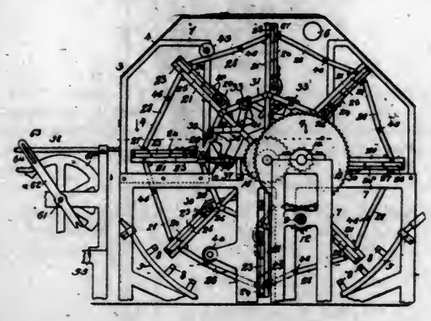
1,016,748. CONVEYER-SHAFT COUPLING. BENJAMIN F. HOWLAND, Des Moines, Iowa. Filed Dec. 3, 1910. Serial No. 595,407. (Cl. 64—13.)



The combination with the separate ends of the conveyer shaft to be connected, said ends being provided with semi-circular extensions having semi-circular longitudinal sockets, of a coupling shaft seated in the said extensions, semi-circular closing caps having semi-circular longitudinal sockets, bolts passing through the extensions of the conveyer shaft, through the coupling shaft and through

the caps for holding the caps in position and preventing displacement of the coupling shaft, said coupling shaft having longitudinal grooves arranged between the bolts at each end, and keys integral with the caps and adapted to enter said grooves to hold the coupling shaft from turning in the sockets, said caps and extensions conforming to the sides of the conveyer shaft.

1,016,749. MACHINE FOR BAKING WAFERS AND THE LIKE. ISRAEL Z. ISRAEL, New York, N. Y., assignor to Sidney M. Israel, New York, N. Y. Filed Apr. 19, 1911, Serial No. 621,975. (Cl. 107—58.)



1. A batter supplying device for waffle-irons consisting of a frame, a source of compressed air, a batter tank connected to said source whereby air under pressure is placed on top of the batter in said batter container, a pipe running from said batter container, a valve in said pipe, a second pipe connected to said valve which is also connected to an enlarged pipe and a smaller pipe telescoped in said larger pipe and provided at its free end with a suitable rose and means for moving said last-mentioned pipe in the direction of its length, and means for opening said valve when said pipe is at or near the limits of its movement, and closing said valve as soon as said pipe leaves the limit of its movement.

2. A batter supplying device composed of a frame, a source of air supply, a batter tank connected thereto, a batter pipe connected to said tank, and provided with a valve, means mounted in said frame for connecting said valve with a gear wheel, a pair of racks, engaging said gear and mounted in said frame, an oscillating arm adapted to engage said racks, and a movable pipe connected with said arm and also with said valve whereby said arm may be thrust in the direction of its length and supplied with batter and when withdrawn the batter supply is cut off.

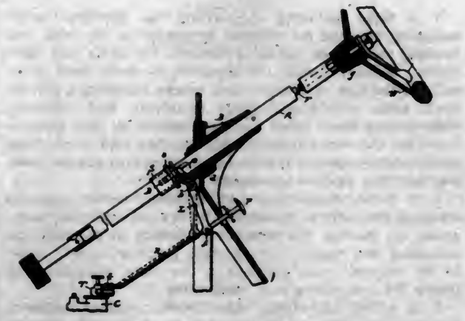
3. A machine for baking wafers composed of an oven provided with heaters, a frame, a shaft mounted to rotate in said frame and means for driving said shaft, hubs on said shaft, spokes extending from said hubs, waffle irons mounted on said spokes, toggles adapted to force said irons into a closed position, means for opening and means for closing said toggles and means for opening said waffle irons.

4. In an apparatus for baking wafers, an oven provided with means for heating the same, a frame, a shaft mounted to rotate in said frame, hubs on said shaft, spokes radiating from said hubs, waffle-irons connecting said spokes so that one spoke on one hub is connected with the corresponding spoke on the other hub, each of said waffle-irons being composed of two parts, hinged together, toggle levers connecting said waffle irons, means for bringing said toggles beyond their dead centers whereby the irons are kept in a compressed state, and means for forcing said toggles in opposite directions so that the irons may be opened, bars connecting said spokes, shafts mounted in said bars, connections between said bars and waffle irons, cams on said bars and rollers on said frame adapted to engage said cams, whereby said irons may be opened.

5. In an apparatus for baking wafers, an oven, means for heating the same, a frame, a shaft mounted in said frame and means for driving said shaft, hubs on said shaft, spokes radiating from said hubs, waffle-irons secured to said spokes each iron being composed of two parts hinged together, one of said parts being fixed to said spokes, projecting arms from the movable irons, and each waffle iron a roller adapted to engage said projection, a shaft and means for supporting said roller from said shaft, and means for oscillating said shaft, whereby said iron may be opened at a predetermined time.

[Claim 6 not printed in the Gazette.]

1,016,750. THROTTLE MECHANISM FOR AUTOMOBILES. CHARLES B. KING, Detroit, Mich., assignor of one-half to Ora J. Mulford, Detroit, Mich. Filed July 21, 1910. Serial No. 572,955. (Cl. 21—90.)



1. The combination of an engine operating part, a steering post, a part adapted to slide lengthwise upon said steering post, means for adjusting said sliding parts to different positions along said steering post, a pivoted lever resting against said sliding part, and means connecting said engine operating part and lever so that any movement of said lever shall actuate said engine operating part, and a pedal adapted to impart motion to said lever that shall carry it out of contact with said sliding part, substantially as and for the purpose described.

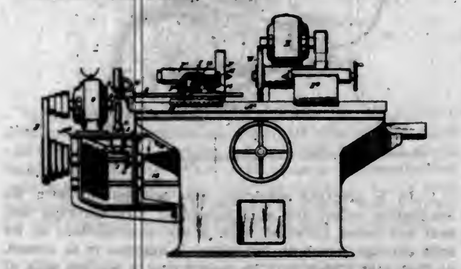
2. The combination of a throttle valve, a steering post, a part adapted to slide lengthwise upon said steering post, means for adjusting said sliding parts to different positions along said steering post, a pivoted lever resting against said sliding part, and means connecting said throttle valve and lever so that any movement of said lever shall actuate said throttle valve, and a pedal adapted to impart motion to said lever that shall carry it out of contact with said sliding part, substantially as and for the purpose described.

3. The combination of an engine operating part, a steering post, a sleeve upon said steering post adapted to move longitudinally thereof but restrained from angular motion relative thereto, a part adapted to rotate within said steering post, a cam upon said rotating part within said steering post engaging said sleeve so as to cause a longitudinal movement of said sleeve when said part is turned, a lug upon said sleeve, a pivoted lever engaging against said lug, and a rod pivoted to said engine operating part and said lever, said lever having a pedal connected therewith, for the purpose described.

4. The combination of an engine operating part T, a pivoted lever L, a rod R connecting said lever and said engine operating part so that any movement of one will follow the movement of the other, a steering post A, a sleeve S on said steering post, slots in said steering post, a pin D extending through said slots, a rotatable head H in said steering post having a spiral slot h, engaging said pin, and means for rotating said head, the lever L resting against said sleeve, substantially as and for the purpose described.

5. The combination of an engine operating part T, a pivoted lever L, a rod R connecting said lever and said engine operating part so that any movement of one will follow the movement of the other, a steering post A, a sleeve S on said steering post, slots in said steering post, a pin D extending through said slots, a rotatable head H in said steering post having a spiral slot h engaging said pin, and means for rotating said head, the lever L resting against said sleeve, and a pedal P adapted to oscillate said lever.

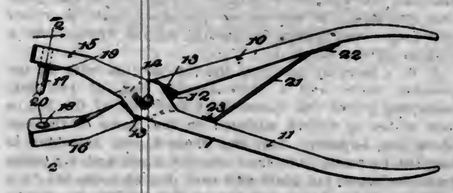
1,016,751. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Apr. 25, 1902. Serial No. 104,687. (Cl. 51—4.)



1. In a grinding machine, the combination, of the bed, the work holding and driving mechanism, a longitudinally movable carriage mounted on said bed, an electric motor mounted on the bed and connected to drive the work and traverse the carriage, a slider mounted to move transversely upon said carriage, a grinding wheel base swiveled on said slider, another electric motor mounted upon said grinding wheel base, the grinding wheel with its spindle journaled in bearings in said base, and gearing connecting the shaft of said motor with said grinding wheel spindle, substantially as set forth.

2. In a grinding machine, the bed having longitudinal ways, a carriage mounted upon said ways, a grinding wheel mounted upon said carriage, said ways covered by inwardly projecting shields, said carriage having a water channel in its top and outlets from said channel communicating to a channel in said bed, substantially as set forth.

1,016,752. PUNCH. GEORGE E. LEITH, San Diego, Cal. Filed Aug. 20, 1909. Serial No. 513,806. (Cl. 164—122.)

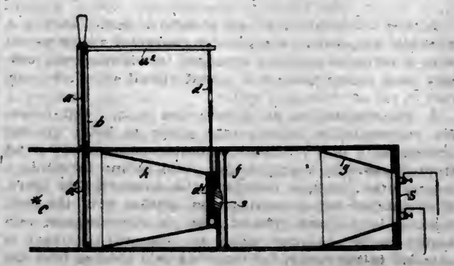


1. A punching tool including pivotally united handles terminating in longitudinally disposed jaws, one of said jaws being twisted to present an inner face disposed at an oblique angle to the adjacent face of the mating jaw, a correspondingly inclined anvil seated in the inner face of the twisted jaw, and a tubular cutter secured to and depending from the inner face of the mating jaw and having its free end provided with a cutting edge inclined to conform to and adapted to bear against the upper surface of the anvil.

2. A punching tool including pivotally united handles terminating in longitudinally disposed jaws, the free ends of which are bent inwardly at an angle to the longitudinal plane of the handles, the bent portion of one of the jaws being twisted to present an inner face disposed at an oblique angle to the inner face of the mating jaw, a correspondingly inclined anvil seated in the inner face of the twisted jaw, and a tubular cutter secured to and depending from the inner face of the mating jaw and having its free end provided with a cutting edge inclined to conform to and adapted to bear against the upper surface of the anvil.

3. A punching tool including pivotally united handles terminating in longitudinally disposed jaws, one of said jaws being twisted to present an inner face disposed at an oblique angle to the adjacent face of the mating jaw, and a tubular cutter secured to and depending from the inner face of said mating jaw and having its free end provided with a cutting edge inclined to conform to the inner face of the twisted jaw.

1,016,753. PERMEABILITY-MEASURING APPARATUS. RICHARD LEUMANN, Monthey, Switzerland. Filed Jan. 12, 1911. Serial No. 602,166. (Cl. 88—14.)



1. Apparatus for measuring the permeability of objects to light, comprising a source of light, a selenium cell in the path of the rays from said source and a holder for the object whose permeability is to be measured located between the source of light and the cell.

2. Apparatus for measuring the permeability of objects to light, comprising a source of light, a selenium cell in the path of the rays from said source, means to support the object whose permeability is to be measured situated between the source and cell, and a diaphragm between the object and cell.

3. Apparatus for measuring permeability to light, comprising a source of light, a selenium cell in the path of the rays from said source, means between the source and cell to support the object whose permeability is to be measured, a diaphragm between the object and cell and a specular walled tube between the diaphragm and cell.

4. Apparatus for measuring permeability to light, comprising a source of light, a selenium cell in the path of the rays from said source, means between the source and cell to support the object whose permeability is to be measured, a diaphragm between the object and cell, a specular walled tube between the diaphragm and cell, and a similar tube between the source and object.

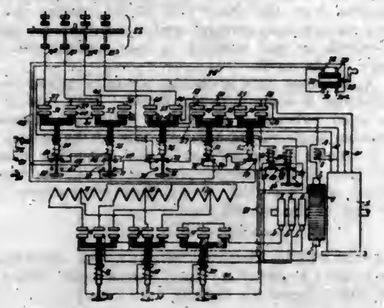
5. Apparatus for measuring the permeability of objects to light, comprising a source of light, a selenium cell in the path of the rays from said source, a holder for the object whose permeability is to be measured located between the source of light and the cell and a light dispersing means in front of the cell.

[Claims 6 to 11 not printed in the Gazette.]

1,016,754. SYSTEM OF MOTOR CONTROL. LOUIS J. LINGO, Jr., Wilmington, Del., assignor of one-half to Robert W. Smith, Wilmington, Del. Filed Oct. 5, 1911. Serial No. 652,947. (Cl. 172—289.)

1. The combination of an alternating current motor having a normally inoperative commutator; a pilot

switch; means controlled by said switch for connecting said motor to a source of current supply; means including brushes for automatically connecting said commutator in a closed circuit when said motor is cut off from its source of current supply; and means controlled by said pilot switch for removing the brushes from the commutator when alternating current is supplied to the motor.



2. The combination of an induction motor having a normally inoperative commutator connected to its rotor; with a series of switches arranged to automatically connect said commutator in a closed circuit when the current is cut off from said motor.

3. The combination of an induction motor; with means for automatically causing said motor to build up and operate as a direct current generator when it is cut off from its current supply mains; said means including a commutator; brushes therefor; and automatically operative switches for connecting said brushes with the commutator in a closed circuit; with an electromagnet connected to be energized when an alternating current is supplied to the motor, for removing said brushes from the commutator.

4. The combination of an induction motor; means for causing said motor to build up and operate as a direct current generator when it is cut off from the alternating current supply mains; with means for preventing current being supplied from the mains to the motor until the direct current generated by it has fallen to a predetermined point.

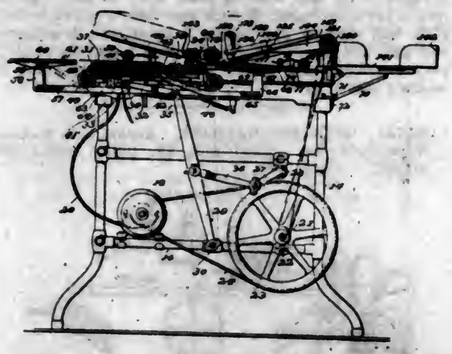
5. The combination of an induction motor having a commutator; brushes operative thereon; means for automatically connecting said brushes in a closed circuit with one of the stator windings after the motor has been cut off from its current supply mains; and means whereby said stator winding is disconnected from said supply mains after the other stator winding has been so disconected.

[Claims 6 to 15 not printed in the Gazette.]

1,016,755. RECEPTACLE. EDGAR R. LOWERRE, Baltimore, Md., assignor to Continental Can Company, Baltimore, Md., a Corporation of New Jersey. Filed Aug. 9, 1910. Serial No. 576,372. (Cl. 220—22.)

The combination of a receptacle, a friction cover therefor having an outwardly projecting flange constructed to frictionally engage the interior of said body portion, said body portion and said flange having alined apertures, a bail having its ends bent to engage said apertures for securing the cover to the body portion, said flange on the cover forming a recess in the outer face thereof in which said bail may be housed during shipping, and a sealing substance attached to the cover within the recess thereof at a plurality of points, including the apertures, which substance serves to seal the can and make a more perfect closure at the apertures through which the bail passes, and whereby any movement of the bail to release the cover will break the sealing substance.

1,016,756. PRINTING-PRESS. JOHN F. MAHLSTEDT, Los Angeles, Cal. Filed July 15, 1910. Serial No. 572,141. (Cl. 101—4.)



1. In a printing machine, the combination with an impression roller, and a reciprocating form-carrying bed, said bed being provided with a slot intermediate of its ends through which an ink ribbon is adapted to be passed, so that said ribbon may be passed over a portion only of said form, and a bar adapted to fit said slot whereby said bed may be used to support a form, some of the type of which can extend over the slot.

2. In a printing machine, the combination with a frame, an impression roller and a form-carrying bed, of two ink-supplying plates one mounted at each end of the bed, a pair of inking rollers mounted on the frame of the machine one adjacent each end thereof, one of which is adapted to receive ink from one ink plate and the other from the other ink plate and each transfer ink to a portion of the form and means for feeding an ink ribbon over a portion of the form.

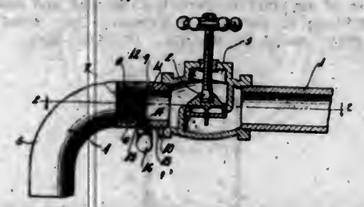
3. In a printing machine the combination with a frame, an impression roller and a form-carrying bed, of brackets extending out from each end of the bed, an ink supplying plate rotatably journaled in each bracket, a pair of inking rollers mounted on the frame of the machine one adjacent each end thereof, one of which is adapted to receive ink from one plate and the other from the other ink plate and each transfer ink to a portion of the form, each of said ink supplying plates being provided with a ratchet, a pair of pawls mounted on the frame of the machine, one adapted to engage the ratchet of one plate and the other the ratchet of the other plate to rotate said plates and means for feeding an ink ribbon over a portion of the form.

4. In a printing machine, the combination with an impression roller and a form-carrying bed, of two ink-supplying plates one mounted at each end of the bed, a pair of inking rollers mounted on the frame of the machine one adjacent each end thereof, one of which is adapted to receive ink from one ink plate and the other from the other ink plate and each transfer the ink to a portion of the form, and means for feeding an inking ribbon over a portion of the form not inked by the inking rollers.

5. In a printing machine the combination with a frame, an impression roller, and a form-carrrying bed, of two ink-supplying plates one mounted at each end of the bed, a pair of inking rollers mounted on the frame one adjacent each end thereof, one of which is adapted to receive ink from one ink plate and the other from the other ink plate, and each transfer ink to a portion of the form, two sets of bearings mounted on the frame for one of said ink rolls, into either of which the roll may be mounted, whereby the combined inking action of said two rolls may be caused to cover the entire printing form or only a portion thereof, and means for feeding an ink ribbon over the portion of the form not engaged by the inking rollers when the inking rollers do not cover the entire form.

[Claims 6 to 15 not printed in the Gazette.]

1,016,757. FAUCET-FILTER. LUTHER A. MASON, Ellensburg, Wash. Filed Oct. 19, 1910. Serial No. 587,955. (Cl. 210—6.)

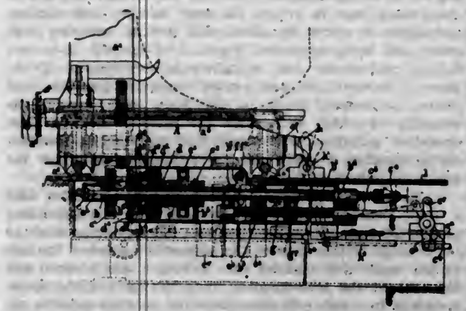


In a faucet filter, including a valve, the combination with a filtering chamber on the outlet side of said valve and a filter in said chamber, said chamber having a single opening in its lower wall, said opening communicating both with the filtering chamber and the filter, and a plug detachably secured in said opening, said plug having its inner end concaved to register with the edge of the filter.

1,016,758. PROCESS OF PRODUCING ALKALI METAL FROM OXYGEN COMPOUNDS OF ALKALI. HERMANN MENNER, Berlin, Germany. Filed Nov. 23, 1911. Serial No. 661,998. (Cl. 75—183.)

Process of producing alkali metal consisting in bringing oxygen compounds of alkali into reaction with molten cast iron and collecting the vapors formed by the reaction.

1,016,759. SAWMILL SET-WORKS. PAUL MICHEL, Fils, Troyes, France. Filed Jan. 18, 1910. Serial No. 538,672. (Cl. 143—120.)



1. A feed device for a machine of the character described, comprising a longitudinally displaceable shaft having a threaded portion, a nut thereon held against rotation but free to travel on said spindle during the rotation of the latter, a tappet arranged in the path of said nut, a clutch on said shaft and means in connection therewith for driving the latter, means in connection with the longitudinal displacement of said shaft following the impingement of said nut against said tappet for disengaging the clutch members and thereby stopping the drive of said shaft, in combination with means for connecting said shaft to the feed gearing for the transversely movable work supports on a traveling carriage when the latter is in predetermined position.

2. A feed device for a machine of the character described, comprising a longitudinally displaceable shaft having a threaded portion, a nut thereon held against rotation but free to travel on said spindle during the rotation of the latter, a tappet arranged in the path of said nut, a clutch on said shaft and means in connection therewith for driving the latter, means in connection with the longitudinal displacement of said shaft following the impingement of said nut against said tappet for disengaging the clutch members and thereby stopping the drive of said shaft, in combination with means for connecting said shaft to the feed gearing for the transversely movable work supports on a traveling carriage when the latter is in predetermined position, together with means for holding said connecting means in inoperative position.

3. A feed device for a machine of the character described, comprising a longitudinally displaceable shaft having a threaded portion, a nut thereon held against rotation but free to travel on said spindle during the rotation of the latter, a tappet arranged in the path of said nut, a clutch on said shaft and means in connection therewith for driving the latter, means in connection with the longitudinal displacement of said shaft following the impingement of said nut against said tappet for disengaging the clutch members and thereby stopping the drive of said shaft, a braking device automatically brought into action upon the opening of the clutch to stop the rotation of the shaft, in combination with means for connecting said shaft to the feed gearing for the transversely movable work supports on a traveling carriage when the latter is in predetermined position.

4. A feed device for a machine of the character described, comprising a longitudinally displaceable shaft having a threaded portion, a nut thereon held against rotation but free to travel on said spindle during the rotation of the latter, a tappet arranged in the path of said nut, a clutch on said shaft and means in connection therewith for driving the latter, means in connection with the longitudinal displacement of said shaft following the impingement of said nut against said tappet for disengaging the clutch members and thereby stopping the drive of said shaft, in combination with means for connecting said shaft to the feed gearing for the transversely movable work supports on a traveling carriage when the latter is in predetermined position, together with means to insure the positioning of said carriage in the operatively coördinated relation of said feed gearing and connecting means.

5. A feed device for a machine of the character described, comprising a longitudinally displaceable hollow shaft having a threaded portion, a nut thereon held against rotation but free to travel on said spindle during the rotation of the latter, a tappet arranged in the path of said nut, a clutch on said shaft and means in connection therewith for driving the latter, means in connection with the longitudinal displacement of said shaft following the impingement of said nut against said tappet for disengaging the clutch members and thereby stopping the drive of said shaft, in combination with a pinion splined on said shaft and adapted to engage a coöperating pinion of the feed gearing for the transversely movable work supports on a traveling carriage, together with a rod passing longitudinally through said shaft and means in connection with said rod for controlling the position of said pinion on the shaft, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,016,760. REINFORCED CONCRETE STRUCTURE. MATTHEW MINGAY, Detroit, Mich. Filed Jan. 10, 1911. Serial No. 601,809. (Cl. 72—112.)

1. In a device of the class described, the combination with an elongated bar, of a longitudinally extending rib secured thereto, attaching devices arranged in pairs on opposite sides of the bar at intervals throughout its length, connecting ribs for said attaching devices bridged across the bar, means to prevent endwise movement of the bar, and shear members engaged beneath the attaching members and extending over the bar.

2. In a device of the class described the combination with an elongated bar having a substantially circular body, a longitudinal rib on the under side of said body, attaching ribs arranged at intervals throughout the length of the bar on opposite sides of the body to form attaching bars,

ribs connecting said attaching bars and bridged across the body, anti-slipping ribs surrounding the body between the attaching bars, and shear members comprising two-part members engaged beneath the attaching bars and twisted into single members above the anti-slipping ribs.

1,016,761. PROCESS OF PRODUCING STARCH AND GLUCOSE. CHARLES C. MOORE, Lexington, Ky. Filed Apr. 16, 1909. Serial No. 490,411. (Cl. 127—10.)

1. The process of treating sensitive vegetable materials which comprises impregnating the same in a comminuted state with an enzym poison and desiccating.

2. The process of treating sensitive vegetable materials which comprises impregnating the same in a comminuted state with a composition comprising SO_2 and desiccating.

3. The process of treating sensitive vegetable materials which comprises impregnating the same in a comminuted state with an enzym poison, desiccating and recovering starch.

4. The process of treating sensitive vegetable materials which comprises impregnating the same in a comminuted state with a composition comprising SO_2, desiccating and recovering starch.

5. The process of treating sensitive vegetable materials which comprises impregnating the same in a comminuted state with an enzym poison, desiccating, recovering starch together with convertible fiber and converting the recovered matters into glucose.

[Claims 6 to 17 not printed in the Gazette.]

1,016,762. PROCESS OF TREATING CASSAVA AND PRODUCTS THEREOF. CHARLES C. MOORE, Washington, D. C. Filed May 7, 1910. Serial No. 559,907. (Cl. 127—10.)

1. The process of preparing valuable products from cassava which comprises disintegrating fresh cassava, treating to arrest enzymic activity, preparing a starch milk containing the soluble sugars, separating the starch therefrom to form a residual liquor and preparing a concentrated sugary product from such residual liquor.

2. The process of preparing valuable products from cassava which comprises disintegrating fresh cassava, treating to arrest enzymic activity, preparing a starch milk containing soluble sugars with the aid of returned residual liquor, separating the starch therefrom to form residual liquor, returning a portion of the residual liquor to aid in preparing fresh starch milk and evaporating another portion of such residual liquor to obtain concentrated sugary products.

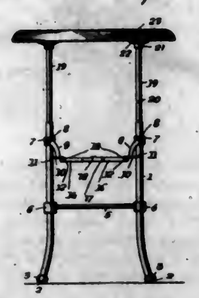
3. The process of preparing valuable products from cassava which comprises disintegrating fresh cassava, treating with enzym-arresting chemicals, preparing a starch milk containing the soluble sugars, separating the starch therefrom to form a residual liquor and preparing a concentrated sugary product from such residual liquor.

4. The process of preparing valuable products from cassava which comprises disintegrating fresh cassava, treating with enzym-arresting chemicals, preparing a starch milk containing soluble sugars with the aid of returned residual liquor, separating the starch therefrom to form residual liquor, returning a portion of the residual liquor to aid in preparing fresh starch milk and evaporating another portion of such residual liquor to obtain concentrated sugary products.

5. The process of preparing valuable products from cassava which comprises disintegrating fresh cassava, treating with enzym-arresting chemicals and drying, preparing a starch milk from the treated cassava, separating the starch therefrom to form a residual liquor and preparing a concentrated sugary product from such residual liquor by evaporation.

[Claims 6 to 18 not printed in the Gazette.]

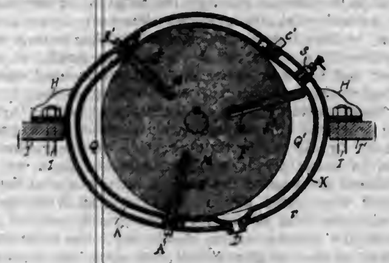
1,016,763. STOOL. JOHN B. NILL, Warren, Ohio, assignor of one-sixth to Patrick J. Murphy and one-sixth to William S. German, McKeesport, Pa. Filed May 26, 1911. Serial No. 629,621. (Cl. 155—39.)



1. In an adjustable stool, a supporting member and a seat member, said members having a corresponding number of legs, the legs of the seat member being adapted to telescope within legs of the supporting member, the legs of the supporting member each having a single notch and the legs of the seat member each having notches corresponding in number to the number of possible relative adjustments of the members, the notches of each of the seat member legs being positioned to intersect the notch of the leg within which its seat member leg is moved during relative movements of the legs, and a locking member positioned between and having its opposite ends pivotally carried by adjacent legs, said ends each having a device adapted to enter the alined notches of telescoping legs to retain the seat member legs against movement in either direction, said devices opposing each other and being connected together to operate in unison in the positioning and withdrawing movements of the pairs of devices into and out of operative position, said device connection being in the form of a toggle, the breaking of which withdraws the pairs of devices from operative position, said toggle and the devices substantially forming a brace for the adjacent legs when the toggle is unbroken.

2. In an adjustable stool, a supporting member and a seat member, said members having a corresponding number of legs, the legs of the seat member being adapted to telescope within legs of the supporting member, the legs of the supporting member each having a single notch and the legs of the seat member each having notches corresponding in number to the number of possible relative adjustments of the members, the notches of each of the seat member legs being positioned to intersect the notch of the leg within which its seat member leg is moved during relative movements of the legs, and a locking member positioned between and having its opposite ends pivotally carried by adjacent legs, said ends each having a device adapted to enter the alined notches of telescoping legs to retain the seat member legs against movement in either direction, said devices opposing each other and being connected together to operate in unison in the positioning and withdrawing movements of the pairs of devices into and out of operative position, said device connection comprising a toggle breakable solely in an upward direction, the toggle members in normal or unbroken position preventing movement of the devices to release the seat legs, said toggle and the devices substantially forming a brace for the adjacent legs when the toggle is unbroken.

1,016,764. ROTARY GAS-ENGINE. HAZLEHURST B. NOYES, Savannah, Ga. Filed Feb. 13, 1909. Serial No. 477,617. (Cl. 123—16.)



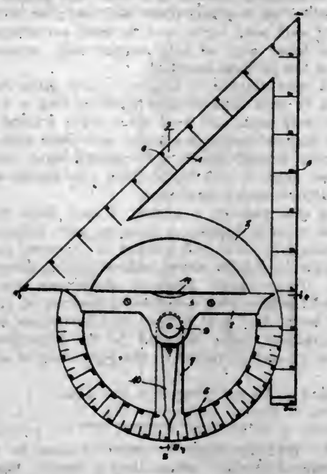
1. In a rotary gas engine, the combination of a rotary carrier, a casing in which said carrier is mounted so as to rotate and with whose inner face the carrier contacts at opposite points so as to divide the interior of the casing into two chambers, one on each side of the carrier, an inlet and outlet for each chamber whereby one chamber will constitute a compression chamber and the other a combined explosion and exhaust chamber, a series of pistons slidably mounted within the carrier and contacting at all times with the inner surface of the casing, a valved connection outside of the chambers between the delivery of the compression chamber and the inlet of the explosion chamber, means whereby the rotating carrier is caused to operate said valve at intervals, and means for exploding the compressed mixture in the explosion chamber whereby it will drive forward the piston in advance of it and will cause said piston to drive from the exhaust the spent gases ahead of it.

2. In a rotary gas engine, the combination of a casing with an internal contour comprising an elliptical section and approximately a quadrant of a circular section, a rotary carrier mounted in the casing with its periphery in close contact with the circular section and in tangential contact at the opposite side of the casing whereby said carrier divides the casing into two chambers, one on each side thereof, one chamber serving as a compression chamber and the other as an explosion chamber, a plurality of sliding pistons mounted in said carrier and in constant contact with the inner face of the casing, an inlet and outlet communicating with each chamber within the casing, a valved passage connecting the outlet of the compression chamber to the inlet of the explosion chamber, means whereby the carrier is caused to operate the valve in said passage at intervals, and means for exploding the mixture in the explosion chamber.

3. In a rotary gas engine, the combination with a casing of a drive shaft, a rotary carrier mounted upon said drive shaft and dividing the casing into two chambers on opposite sides of the carrier, pistons slidably mounted in said carrier, a conduit connecting the two chambers, a casing having a valve therein interposed in said conduit between the chambers, a valve rod by which said valve is carried, a cam on the drive shaft for operating the valve, connections between the valve rod and the cam whereby the valve is operated and caused periodically to permit the flow of compressed gas from one chamber to the other, and means for exploding the compressed gas in the latter chamber, substantially as described.

4. In a rotary gas engine, the combination of a casing, a drive shaft, a rotary carrier mounted upon said shaft and dividing the casing into two chambers on opposite sides of the carrier, pistons slidably mounted in said carrier, a conduit connecting the two chambers, a valve interposed in said conduit between the chambers, a valve rod, means acting thereon to close the valve, a cam on the drive shaft, a slide operated by said cam, a trip on said slide for engaging the valve rod, and a stop for engaging said trip and releasing it from engagement with the valve rod when the valve has reached the limit of its opening movement, thereby permitting flow of compressed gas from one chamber to the other of the casing, and means for exploding the compressed gas in the latter chamber, substantially as described.

1,016,765. COMBINATION-TOOL. CHRISTOPHER C. O'HANLON, Logan, Utah. Filed Aug. 8, 1911. Serial No. 642,965. (Cl. 73—188.)



A tool of the character described, comprising a square, a circular member formed integrally with said square and between the arms thereof, said member being provided with protractor scales, an arm extending radially within said circular member, a transverse member pivoted to said arm and provided with an indicator needle adapted to pass over the scales, means for securing said transverse member in adjusted position and a level carried by said transverse member.

1,016,766. CORN-PLANTER. FRANK R. PACKHAM, Springfield, Ohio, assignor to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed June 30, 1911. Serial No. 636,157. (Cl. 111—6.)

1. In a seed planter, a support, a gear ring, a peripheral ledge formed on said support to receive said gear ring, a seed plate rotatably connected to said gear ring, said seed plate being formed in the nature of an open ring having seed cells on its inner periphery, each of said seed cells being formed open at its top and bottom and so at its inner side, a second peripheral ledge on said support above said first ledge constituting a stationary bottom for said seed cells, a vertical wall formed by said support above said second ledge constituting an inner station-

ary side for said seed cells, and an opening in said second ledge and wall for the discharge of the seed in said cells.

2. In a seed planter, a hopper, a seed plate in the nature of an open ring revolubly supported in said hopper, said seed plate having a series of depressed seed cells on its inner periphery, and inner and outer stationary inclined members in said hopper leading to said cells, said plate being beveled above said cells, said outer stationary member having a series of inclined serrations which temporarily expose portions of the top of said seed plate, substantially as and for the purpose specified.

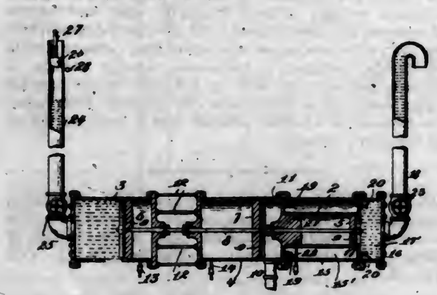
3. In a seed planter, a hopper, a seed plate revolubly supported in said hopper, said plate having depressed interior seed cells, said plate above said cells being beveled to form inclinations toward said cells, said hopper having an inclined ring located about and capping the upper surface of said seed plate, and inclined serrations about the lower inner edge of said hopper ring, substantially as and for the purpose specified.

4. In a seed planter, a hopper, a seed plate revolubly supported in said hopper, said plate having a series of depressed seed cells, said seed plate being formed with a series of inclined serrations above said seed cells, and a hopper ring located above and capping said plate, the lower inner edge of said hopper ring also having a series of gradually deepened serrations.

5. In a seed planter, a hopper, a seed plate revolubly supported in said hopper, a ring in said hopper above and capping said plate, and a series of depressed seed cells in said plate, said plate above said cells being formed with a series of gradually deepened serrations, the lower edge of said hopper ring also having a series of gradually deepened serrations, said hopper ring serrations and seed plate serrations being adapted to lie coincident with each other at certain points in the revolution of said seed plate.

[Claims 6 to 10 not printed in the Gazette.]

1,016,767. HYDROSTATIC PUMP. FRANK D. PAGLIUCHI, Mantua, Cuba. Filed July 3, 1907. Serial No. 382,107. (Cl. 103—68.)



1. In a pump, the combination of a pumping element, of a column of liquid being pumped and a column of liquid opposing it between which columns the pumping element will be approximately in equilibrium when in one position and out of equilibrium in another position, and means for alternately applying, by impact through the medium of an elastic body, and removing, power with respect to one of said columns, whereby the pumping element is moved from its position of equilibrium by such application of power and returned to such position by the column of liquid being pumped.

2. Hydrostatic apparatus comprising pipes to contain hydrostatic columns arranged in balancing relation, a pumping element having pistons acted on by the hydrostatic heads of both columns, and means for producing an impact upon one of said columns through the medium of an interposed elastic body to create an overbalance of the hydrostatic head of one column to cause a discharge of liquid therefrom and for causing a displacement of the pumping element, the latter being acted on by the hydrostatic head of the column having the overbalance of hydrostatic pressure to cause a reverse stroke thereof.

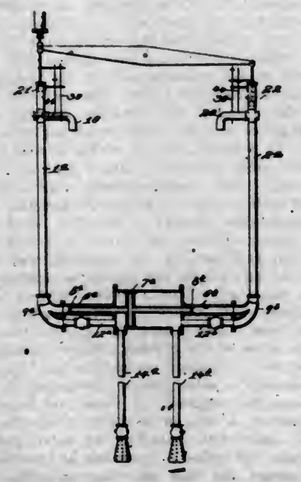
3. Hydrostatic apparatus comprising hydrostatic columns, one of said columns having a discharge permanently open to the atmosphere, a pumping element having a pair of pistons acted on by the hydrostatic pressure of both columns, and an impact-producing device acting on one of said columns through the medium of an elastic body for actuating the pumping element to cause a discharge of liquid from the column communicating with the atmosphere, the atmospheric pressure acting on said column and the overbalance of hydrostatic head thereof causing return movement of the pumping element.

4. Hydrostatic apparatus comprising a pair of hydrostatic columns, a pumping element embodying a piston acted on by the hydrostatic pressure of one column, a piston of relatively larger surface acted upon by the hydrostatic pressure in the other column and also having a liquid discharging piston communicating with one of said columns, and means for increasing by impact and through the medium of an elastic body the hydrostatic pressure of the column which acts upon the relatively larger piston surface.

5. Hydrostatic apparatus comprising a pair of hydrostatic columns of different heights, the longer column having a discharge permanently open to the atmosphere, a pumping element having a relatively small piston area acted on by the hydrostatic pressure in the higher column, having a relatively larger piston area acted on by the hydrostatic pressure in the shorter column and also having a liquid discharging piston communicating with the base of the relatively longer column, and means for overbalancing by impact and through the medium of an elastic body the hydrostatic pressure in the shorter column with reference to that in the longer column.

[Claims 6 to 19 not printed in the Gazette.]

1,016,768. HYDROSTATIC PUMP. FRANK D. PAGLIUCHI, New York, N. Y. Filed May 9, 1908. Serial No. 431,884. (Cl. 103—68.)



1. A hydrostatic pump comprising a pair of cylinders of different diameters arranged in axial alinement, a pumping element embodying a pair of pistons mounted to operate in the respective cylinders, a column to contain a liquid which acts hydrostatically on the smaller piston, a discharge pipe leading from the discharge side of said larger piston into said column and having a non-return valve therein, a second column arranged to act hydrostatically on the pumping element and a valved plunger arranged to act on said second column to drive the pumping element on its discharging stroke and embodying means for maintaining an elastic body between such plunger and the top of the liquid in its respective column.

2. A hydrostatic pump comprising a liquid receiving and discharging cylinder having a piston to operate therein, a relatively smaller cylinder arranged in axial alinement with the cylinder first mentioned, a piston connected to the piston first mentioned and arranged to operate in said smaller cylinder, a column adapted to contain a liquid in permanent communication with the smaller cylinder, a liquid discharge pipe leading from the liquid receiving and discharging cylinder into the lower end of said column and provided with a non-return valve, and a second liquid containing column arranged to act on said pumping element and a valved plunger arranged to act on said second column to drive the pumping element on its discharging stroke through the medium of an elastic body.

3. A hydrostatic pump comprising a liquid receiving and discharging cylinder, a pair of smaller cylinders arranged in alinement at the opposite ends of the cylinder first mentioned, a piston mounted to operate in the cylinder first mentioned and provided with oppositely extending stems which form relatively smaller pistons to operate in the corresponding cylinders, a pair of columns adapted to contain bodies of liquid which act hydrostatically on the respective smaller pistons, a valved plunger embodying means for maintaining an elastic body below it to act on one of the columns to produce an overbalance in hydrostatic pressure therein to drive the pistons in one direction, and a discharge pipe leading from the liquid receiving and discharging cylinder into one of said columns and provided with a non-return valve.

4. A hydrostatic pump comprising a relatively large central cylinder, a pair of relatively smaller supplemental cylinders arranged in alinement at opposite ends of the central cylinder, a pumping element having a relatively large piston mounted to operate in the central cylinder and having oppositely extending stems forming pistons which operate in the respective smaller cylinders, a pair of columns adapted to contain bodies of liquid which act hydrostatically on the respective smaller pistons, a pair of discharge pipes leading from the opposite ends of the central cylinder into the respective columns and provided with non-return valves, and a pair of valved plungers to act alternately on the respective columns through interposed elastic mediums to reciprocate the pumping element alternately in opposite directions.

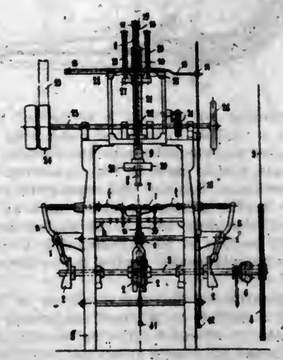
5. A hydrostatic pump comprising a pair of columns adapted to contain bodies of liquid, a pumping element acted upon hydrostatically by said columns and having means for discharging liquid thereinto, and a pair of plungers mounted to operate upon the liquid in the respective columns and having means for automatically maintaining bodies of air between them and the liquid in the respective columns.

[Claim 6 not printed in the Gazette.]

1,016,769. LASTING-MACHINE. JOSEPH PARTY, Paris, France. Filed Dec. 22, 1909. Serial No. 534,520. (Cl. 12—12.)

1. In a machine for securing uppers to insoles, the combination with a suitable support, of a mold or last holder mounted thereon, and adapted to receive the last carrying the upper, said mold being divided longitudinally into two unconnected sections, said sections being capable of movement in a direction at right angles to their length, means for urging said sections together so as to grip the last and hold it with the edges of the upper projecting above the mold, said mold constituting the only support for said last, a plate slidably mounted on said support at each side of said mold, and means for bodily shifting said plates laterally so as to cause them to engage and fold down the upstanding edges of the upper over the sole portion of the last.

2. In a machine for securing uppers to insoles, the combination with a suitable support, of a mold or last holder adapted to receive the last carrying the upper, said mold being divided longitudinally into two unconnected sections, such sections being slidably mounted on said support so as to be capable of movement only in a plane parallel with that of the sole of the last, means for urging said sections together so as to grip the sides of the last and hold it with the edges of the upper projecting above the mold, thus permitting an insole to be placed in position on the sole of the last, a plate slidably mounted on said support at each side of said mold, and means for bodily shifting said plates laterally so as to cause them to engage and fold down the upstanding edges of the upper upon the insole, and resilient means for urging said plates toward the last, whereby the downturned edges of said upper are firmly pressed against said insole.



3. In a machine for cementing uppers to insoles, the combination with a suitable support, of a mold or last carrier mounted thereon and adapted to receive the last carrying the upper and insole, said mold being divided longitudinally into two unconnected sections mounted for relative bodily movement in a direction at right angles to their length, resilient means urging said sections together, said sections having on their inner faces frictional means adapted to engage the upper, mechanism for forcing said last into said mold in such manner that the upper will be drawn tight thereover by virtue of such frictional means, a plurality of plates slidably mounted adjacent said mold, and means for shifting said plates so as to cause them to engage and fold the edges of the upper which project above the sole of the last over upon the insole.

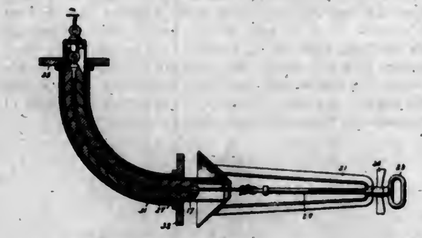
4. In a machine for cementing uppers to insoles, the combination with a suitable support, of a mold or last holder mounted thereon, and adapted to receive the last carrying the upper and insole, means for securing the last in the mold with the edges of the upper projecting above the same, a pair of plates slidably mounted on said support and disposed at the sides of said mold, a second pair of similarly mounted plates arranged at the ends of said mold, a power driven shaft, and connections between said plates and shaft whereby, as said shaft revolves, said pairs of plates are periodically reciprocated, so as to engage the upstanding edges of said upper and fold them down upon the insole.

5. In a machine for cementing uppers to insoles, the combination with a suitable support, of a mold or last holder mounted thereon, and adapted to receive the last carrying the upper and insole, means for securing the last in the mold with the edges of the upper projecting above the same, a pair of plates slidingly mounted on said support, one at each side of said mold, means for simultaneously shifting said plates laterally so as to cause them to engage the side edges of the upper and fold them down upon the insole, and a second pair of plates slidably mounted on said support, at each end of said mold, and means for simultaneously shifting these plates so as to

cause them to engage and fold the end edges of said upper, said pairs of plates operating alternately and having overlapping paths.

[Claim 6 not printed in the Gazette.]

1,016,770. APPARATUS FOR LINING PIPES. JAMES O. PERSONS, Norfolk, Va. Filed Aug. 20, 1909. Serial No. 513,870. (Cl. 29—88.2.)



1. An apparatus for drawing a section of lining material within a conduit to be lined comprising a flexible member adapted to extend through the section, means at one end of the flexible member for connecting the member to the section at that end and transmitting stress applied to the flexible member to the section at said end, and means at the other end of the flexible member for engaging said section at its opposite end, whereby such stress will be simultaneously applied to the section at said opposite end.

2. An apparatus for drawing a section of lining material within a conduit to be lined comprising a flexible member adapted to extend lengthwise through the section of material means for fixedly attaching to it the lining at the advanced end, and a series of filling members carried by the flexible member, said filling members having expanding outer surfaces adapted to contact with the inner walls of the section.

3. An apparatus for drawing a section of lining material within a conduit to be lined comprising a flexible member adapted to pass through the section and to be rigidly attached to it at one end, a series of filling members carried by the flexible member within the section, and means for connecting the flexible member with the other end of the section.

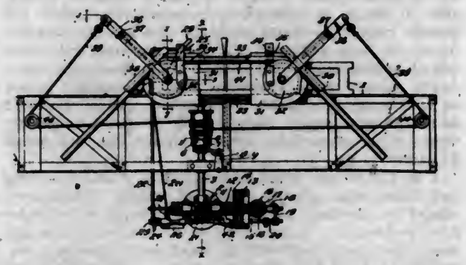
4. An apparatus for drawing a section of lining material within a conduit to be lined comprising a flexible member adapted to pass through the section and to be rigidly attached to it at one end, a series of filling members carried by the flexible member within the section, and adjustable means for connecting the flexible member with the other end of the section whereby the tension of the flexible member between the ends of the section may be adjusted.

5. An apparatus for drawing a section of lining material within a conduit to be lined, comprising a flexible member, means for attaching the said member to one end of the section of lining material comprising two cooperating clamping members secured to the flexible member and of an external diameter substantially equal to the diameter of the section adapted to receive the end of the section, and means for clamping the members together and upon the end of the section.

[Claims 6 to 17 not printed in the Gazette.]

1,016,771. METAL-TUBE-BENDING MACHINE. ALFRED H. PLANTE, Atlanta, Ga., assignor to Atlanta Metal Bed Company, Atlanta, Ga., a Corporation of Georgia. Filed Mar. 25, 1911. Serial No. 616,900. (Cl. 153—46.)

1. In a machine of the character described, the combination of bending mechanism, means for transmitting power to the bending mechanism including a shaft, a second shaft geared to the power transmitting shaft, a loose pulley mounted on the second shaft and having a clutch member, a companion clutch member secured to said second shaft, a rod, connecting means between the rod and second shaft for throwing the loose pulley into clutched engagement with said second shaft, means for moving the rod in one direction to hold the loose pulley out of clutched engagement with said second shaft, a latch for holding the rod when moved to throw the loose pulley into clutched engagement with said second shaft, and a trip mechanism actuated by the bending mechanism to effect release of the rod.



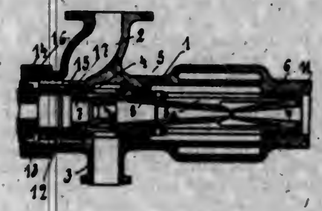
2. In a machine of the character described, the combination of bending mechanism, power transmitting means including a shaft, a second shaft connected with the first mentioned shaft, a loose pulley mounted upon the second shaft and having a clutch member, a companion clutch member secured to the second shaft, a rod, connecting means between said rod and loose pulley for moving the latter into engagement with the clutch member secured to the second shaft, means for moving the rod in one direction to hold the loose pulley out of clutched engagement, means for securing the rod when moved in an opposite direction to throw the loose pulley into clutched engagement, operating means for moving the said rod, and a trip mechanism actuated by the bending mechanism for effecting release of the rod to permit of the loose pulley automatically freeing itself from the clutch member secured to the said second shaft.

3. In a machine of the character described, the combination of bending mechanism, a power transmitting shaft, a second shaft connected with the power transmitting shaft, a loose pulley mounted upon the second shaft and provided with a clutch member, a companion clutch member secured to said second shaft, a longitudinally movable rod, connecting means between the rod and loose pulley for throwing the latter into engagement with the clutch member secured to the second shaft, a brake member carried by said rod and normally engaging the said companion clutch member when the loose pulley is freed therefrom, means for yieldingly moving the said rod in one direction, means for moving the rod in the opposite direction to release the brake and to throw the loose pulley into clutched engagement with said second shaft, means for securing the said rod when moved into the last mentioned position, and a release mechanism adapted to be actuated by the bending mechanism for freeing said rod from the holding means.

4. In a machine of the character described, the combination of a bending mechanism, operating means therefor including a shaft, a pulley loose upon said shaft and having a clutch member, a companion clutch member secured to the shaft, a collar loose upon the shaft, bell cranks pivoted to said collar, a second collar adapted to engage corresponding members of the bell cranks, a longitudinally movable rod, connecting means between said rod and the second collar, means normally tending to move the rod in one direction, means for moving the rod in the opposite direction for throwing the loose pulley into clutched engagement, means for holding said rod in the last mentioned position, and a trip mechanism adapted to be actuated by the bending mechanism for effecting release of the rod for throwing the loose pulley out of clutched engagement.

5. In a machine of the character described, the combination of bending mechanism, a power transmitting shaft including a manually operable clutch, a second shaft connected with the power transmitting shaft, a loose pulley mounted upon the second shaft and having a clutch member, a companion clutch member secured to the second shaft, a longitudinally movable rod, connecting means between said rod and loose pulley for throwing the latter into clutched engagement with said companion clutch member, a brake member mounted upon said rod and adapted to engage the said companion clutch member, means for yieldingly moving the rod in one direction, means for moving said rod in an opposite direction to throw the loose pulley into clutched engagement, means for securing the rod in the last mentioned position, and a trip mechanism for releasing the holding means.

1,016,772. INJECTOR. CARL POTTEL, Halle-on-the-Saale, Germany. Filed July 12, 1911. Serial No. 638,056. (Cl. 162—3.)



1. In combination, in injectors, a casing, a series of nozzles slidably inserted in said casing and having parts abutting against each other and collars abutting against relatively stationary parts, a collar mounted loosely and externally on one member of said casing and coöperating with screw-threads on the end of the other member of said casing to connect the same detachably, a nut mounted on the former member inside of the latter member and provided with ribs which fit into grooves in said latter member to lock said nut against rotation, whereby it may be adjusted longitudinally of said last member to tighten the above connection and the engagement between the various nozzles and said nozzles and said intermediate nut substantially as set forth.

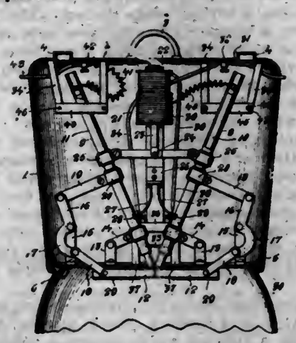
2. In combination, in injectors, a casing consisting of two members, a nut loosely mounted on one member for connecting said members, a cage mounted in the other of said members and having an annular flange which holds it in position and a series of nozzles mounted in said cage, said nozzles having shoulders which engage annular flanges in said cage and ribs which engage the shoulder of the adjacent nozzle for holding said nozzles in position and means for tightening the connection between said members of said casing and the engagement between said casing and said cage and between said nozzles in said cage, substantially as set forth.

3. In combination, in injectors, a casing consisting of two members, a nut loosely mounted on one member for connecting said members, a series of nozzles removably mounted as a unit in said casing and means for tightening the connection between said members of said casing and the engagement between said casing and said series of nozzles substantially as set forth.

1,016,773. ARC-LAMP. THOMAS J. PRISK and WILLIAM H. PRISK, Johnstown, Pa. Filed Mar. 21, 1911. Serial No. 615,820. (Cl. 178—68.)

1. In combination with converging tubes, carbons therein, means for supporting the carbons in contacting position, means for separating the contacting points of the carbons and simultaneously withdrawing the supporting means, and means for supporting the carbons when separated.

2. In combination, converging tubes, carbons therein, means for supporting the carbons in contacting position, means for separating the contacting points of the carbons and simultaneously withdrawing said supporting means, and stationary springs for holding the carbons when in separated position.

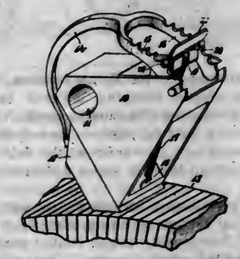


3. In combination, converging carbons, means for supporting the ends of the carbons in contacting relation, means for simultaneously withdrawing said supporting means and separating the contacting ends of said carbons, and stationary spring members for supporting the carbons when in separated position.

4. In combination, converging carbons, an electric circuit in which said carbons are connected, a magnet connected in the circuit in series with said carbon, supporting members for the contacting ends of the carbons, means operated by the magnet for withdrawing said supporting means and simultaneously separating said carbons and stationary supporting springs for supporting the carbons when separated.

5. In combination, a pair of converging carbons, an electric circuit in which said carbons are included, a magnet included in series of the said carbons in circuit, slidable members adapted to support the contacting ends of the carbons, means operated by the magnet for withdrawing the supporting members and simultaneously separating the contacting ends of said carbons, and stationary means, said withdrawing means adapted to pull the carbons into engagement with the stationary means to support the carbon when their contact points are separated.

1,016,774. COLLECTING DEVICE FOR DYNAMO-ELECTRIC MACHINES. HOWARD H. RALSTON, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed May 24, 1907. Serial No. 375,391. (Cl. 171—210.)



1. In a collecting device for dynamo-electric machines, the combination of a brush, a notched lever engaging said brush, a spring, a tiltable device through which the force of the spring is transmitted to the lever, said device having a fulcrum which engages a notch of said lever, and said

fulcrum having a projection which projects into the next notch in one direction when the tiltable device is tilted in the other direction and throws the fulcrum into said next notch when the tiltable device is released.

2. In a collecting device for dynamo-electric machines, the combination of a brush, a notched lever engaging said brush, a spring, a tiltable device through which the force of the spring is transmitted to the lever, said device having a fulcrum which engages a notch of said lever, and said fulcrum having a projection which projects into the next notch in either direction when the tiltable device is tilted in the other direction and throws the fulcrum into said next notch when the tiltable device is released.

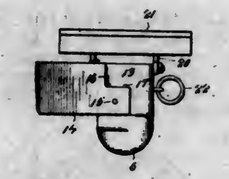
3. In a collecting device for dynamo-electric machines, the combination of a brush, a notched lever engaging said brush, a spring, a tiltable device through which the force of the spring is transmitted to the lever, said device having a fulcrum which engages a notch of said lever, and said fulcrum having a projection which projects into the next notch when the tiltable device is tilted and throws the fulcrum into said next notch when the tiltable device is released.

4. In a collecting device for dynamo-electric machines, the combination of a brush, a notched member, a tiltable device having a fulcrum which engages a notch in said member, and a spring engaging said tiltable device and acting on said brush, said spring tending to keep said tiltable device substantially upright relatively to said notched member, and the fulcrum of said tiltable device having a projection which projects into the next notch in one direction when the tiltable device is tilted in the other direction and acts as a pivot for the spring to throw said fulcrum into said next notch when the tiltable device is released.

5. In a collecting device for dynamo-electric machines, the combination of a brush, a notched member, a tiltable device having a fulcrum which engages a notch in said member, and a spring engaging said tiltable device and acting on said brush, said spring tending to keep said tiltable device substantially upright relatively to said notched member, and the fulcrum of said tiltable device having a projection which projects into the next notch in either direction when the tiltable device is tilted in the other direction and acts as a pivot for the spring to throw said fulcrum into said next notch when the tiltable device is released.

[Claims 6 to 9 not printed in the Gazette.]

1,016,775. ROAD-RUTTER. JOHN T. RANNEY, Fort Kent, Me. Filed Mar. 7, 1911. Serial No. 612,781. (Cl. 37—35.)



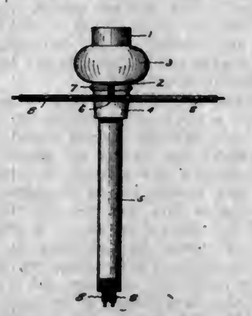
1. A rutter attachment for sleigh runners, comprising a substantially U-shaped scraping member having a forwardly inclined downwardly bowed medial portion provided with a lower cutting edge, a curved inturned wing formed on the member rearwardly of the said downwardly curved medial portion thereof, and a deflector plate pivoted to said wing.

2. A rutter attachment for sleigh runners, comprising a substantially U-shaped scraping member having a forwardly inclined downwardly bowed medial portion provided with a lower cutting edge, a curved inturned wing formed on the member rearwardly of the said downwardly curved medial portion thereof, a deflector plate pivoted to said wing, and means on the wing and engageable with the deflector plate to limit its swinging movement in reverse directions.

1,016,776. WRENCH. JOHN REIBER, Huntington, Oreg. Filed June 27, 1910. Serial No. 569,125. (Cl. 81—130.)

A wrench comprising a shank having a stationary double jaw projecting from opposite sides thereof at one end and provided on said sides with series of teeth inclining in the direction of said jaw, a handle at the opposite end of the the shank, movable jaws arranged on the opposite toothed sides of the shank and having teeth corresponding with and adapted to engage those of the shank, and links having no connection with and arranged at opposite sides of the shank, the ends of the links having pivotal connections with the movable jaws near the outer work engaging ends of the latter, the pivotal connections aforesaid constituting fulcrums permitting independent pivotal movement of each movable jaw relative to the other jaw whereby a step by step adjustment of the jaws on the shank may be obtained, and whereby a simultaneous pressure on the movable jaws in the direction of the stationary jaw will release the former relative to the shank.

1,016,777. ELECTRIC-FIXTURE CONNECTION. JOSEPH P. ROHAN, Hartford, Conn. Filed Apr. 28, 1911. Serial No. 623,873. (Cl. 240—85.)



1. The combination of an insulating joint having a threaded stem, and a coupling screwed thereon, said coupling being formed in a single piece and provided with threads for attachment to the joint stem and threads for the attachment of a fixture pipe, and having a wire opening that extends through one side from the top down, said joint stem when the coupling is screwed thereon closing the upper part of said wire opening.

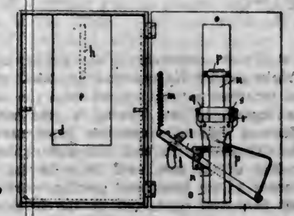
2. The combination of an insulating joint having a threaded stem, and a coupling screwed thereon, said coupling being formed in a single piece and provided with threads for attachment to the joint stem, and threads for the attachment of a fixture pipe, and having a transverse wire opening in one side and a slot opening from the top down to said transverse opening, said wire opening being closed at the top by the stem when the joint and coupling are screwed together.

1,016,778. HEATING APPARATUS. GASTON ROSE, Paris, France. Filed July 17, 1911. Serial No. 638,996. (Cl. 18—18.)

1. A vulcanizing apparatus comprising, in combination, a casing; a plurality of lamps disposed in said casing with their burner portions projecting outwardly therefrom, said lamps being adapted to contain different predetermined quantities of fuel; and a heating chimney adapted to receive said burner portions and to be held in intimate contact with the article to be vulcanized.

2. A vulcanizing apparatus comprising, in combination, a casing; a plurality of lamps disposed in said casing with their burner portions projecting outwardly therefrom, said lamps being adapted to contain different predetermined quantities of fuel; and a chimney adapted to be held in intimate contact with the article to be vulcanized, for heating the same, said chimney having an apertured top and bottom which is formed with draft openings and with additional openings through which the said burner portions project.

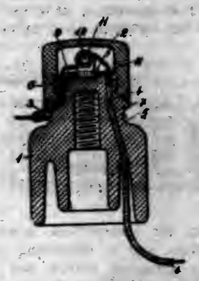
1,016,779. APPARATUS FOR DISTRIBUTING FLAT BODIES. FRIEDRICH RUPPEL, Strassburg, Germany. Filed Sept. 29, 1910. Serial No. 584,536. (Cl. 211—8.)



1. In an apparatus for ejecting flat bodies comprising in combination with an outer receptacle having an ejecting opening, of a container for said bodies having a delivery end adjacent said ejecting opening, said container having a hinged bottom and means for normally raising the delivery end of said bottom, reciprocating ejecting means for said receptacle having a spring held rotating element for engagement with the uppermost of said bodies, and a device for preventing rotation of said element on the ejecting stroke and permitting rotation on the return stroke, substantially as described.

2. In an apparatus of the class described, the combination with an outer receptacle having an ejecting opening, of a container for flat bodies having a delivery end disposed adjacent to said opening, and ejecting mechanism for said receptacle comprising guides mounted on said receptacle, a U-shaped spring having one leg slidably mounted in said guide and a roller on the other leg thereof engaging the upper motion of said bodies, means for reciprocating said spring, and a device for preventing rotation of said roller on the ejecting stroke, substantially as described.

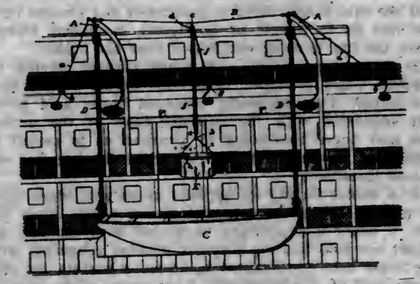
1,016,780. INSULATOR. PAUL RUTZKY, Crefeld, Germany. Filed Feb. 15, 1910. Serial No. 544,056. (Cl. 173—28.)



1. A leading-in insulator having a detachable cap for telegraph and telephone lines, in which both the bare line-wire and also the leading-in cable are led through ducts in the body of the insulator into the closed chamber under the cap and are there electrically connected, the bare line-wire being brought in from the outside while the leading-in cable enters from the interior of the petticoat chamber, the duct for the bare line-wire opening into an annular channel at the edge of the convex head of the insulator, from which channel water collected in the chamber can flow away through the duct for the bare line-wire, while the leading-in cable is surrounded so closely by its duct that condensed water cannot issue through this duct.

2. An insulator, particularly for telegraph and telephone lines, comprising in combination, an insulator body having a concave top face, a lateral external groove, and a petticoat, said face having a channel in the same; and a detachable cap forming a chamber inclosing said face; said body having a duct leading directly from said groove to said channel and a second duct leading from under said petticoat to said channel, the latter duct having an elevated edge at said channel.

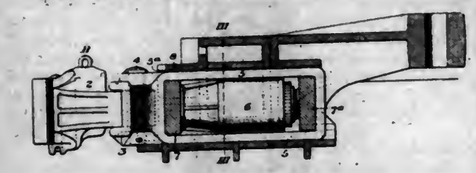
1,016,781. SAFETY DEVICE FOR SHIPS. WILLIAM S. SCARLETT, Fall River, Mass. Filed May 25, 1911. Serial No. 629,456. (Cl. 9—2.)



1. A safety apparatus for loading passengers into boats comprising a pair of davits with a block and tackle at each davit for connection with the ends of the boat, a collapsible safety conveyer and means intermediate the davits and independent of the block and tackle thereof for lowering the safety conveyer into the boat as held by the block and tackle of the davits, substantially as described.

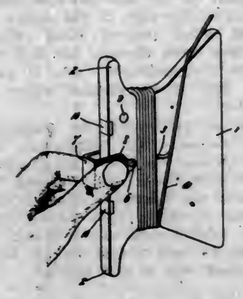
2. In combination in apparatus of the class described, a pair of davits each with a block and tackle, a cable extending between the davits, a safety conveyer of collapsible form and a block and tackle suspended from the cross cable for manipulating the safety conveyer, substantially as described.

1,016,782. COUPLING MECHANISM FOR LOCOMOTIVES. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 13, 1909. Serial No. 527,809. (Cl. 213—42.)



A pilot beam for locomotives, comprising an upper horizontal portion and a depending portion, said depending portion being of hollow box form to form a pocket for a draft rigging, said box portion having an open bottom, and a removable plate normally closing the open bottom, substantially as described.

1,016,783. FISH-LINE HOLDER. EDWIN B. SCHMUCKER, Norfolk, Va. Filed Nov. 30, 1910. Serial No. 594,860. (Cl. 242—77.)



1. A line receiving holder comprising a flat substantially rectangular member, a pivoted holder for the member and said member adapted to oscillate upon its holder when the line is withdrawn from the holder.

2. A reel having a pivoted holder, a line for the holder, and the said holder being so positioned and pivoted upon the reel as to permit of oscillatory movement thereof when the line is being withdrawn from the holder.

3. A reel comprising a flattened member having its opposite edges scalloped to provide horns, a line upon the holder, a substantially U-shaped finger hold pivotally connected with the opposite faces of the holder, and said finger hold being so arranged as to permit of oscillatory movement of the reel when the line has unwound therefrom.

4. A holder having its opposite transverse edges incut to provide oppositely arranged horns, a line upon the reel, a finger-hold pivotally connected with the reel adjacent one side thereof, a spring member connected with the finger hold and adapted to normally sustain the said finger hold at a substantially right angle to the edge of the reel adjacent its pivotal connection therewith, and said finger hold adapted to permit of oscillatory movement of the reel when the line is unwound.

1,016,784. ORGANIC MERCURY COMPOUND. HEINRICH SCHOTT, Charlottenburg, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed May 8, 1911. Serial No. 625,770. (Cl. 23—24.)

1. The hereinbefore-described process for the manufacture of new organic mercury compounds which consists in acting with a mercury compound on a pyrazolone which, acording to the comonly employed constitution formula, contains a methylene group: $-CH_2-$.

2. The hereinbefore-described process for the manufacture of new organic mercury compounds which consists in acting with a mercury compound on a phenylpyrazolone which, according to the commonly employed constitution formula, contains a methylene group: $-CH_2-$.

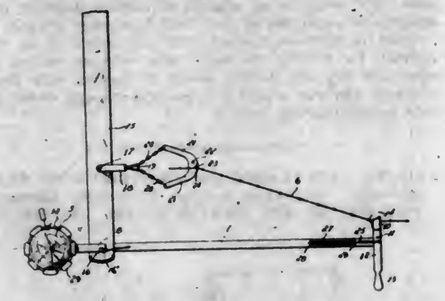
3. The hereinbefore-described process for the manufacture of new organic mercury compounds which consists in acting with a mercury compound on 1-phenyl-3-methyl-5-pyrazolone-para-sulfonic acid.

4. The hereinbefore-described process for the manufacture of new organic mercury compounds which consists in acting with mercuric oxid on a solution of an alkali salt of 1-phenyl-3-methyl-5-pyrazolone-para-sulfonic acid.

5. The hereinbefore-described process for the manufacture of a new organic mercury compound which consists in acting with the mercuric oxid prepared from 27 parts of mercuric chlorid on an aqueous solution of the normal sodium salt prepared from 51 parts of 1-phenyl-3-methyl-5-pyrazolone-para-sulfonic acid.

[Claims 6 to 9 not printed in the Gazette.]

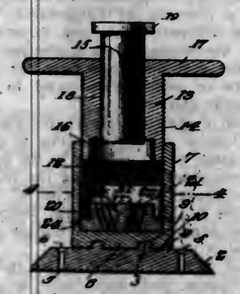
1,016,785. WIRE-STRETCHER. EDMUND W. SCOTT, Simpsonville, Md. Filed Aug. 23, 1909. Serial No. 514,281. (Cl. 39—55.)



A wire stretcher comprising a bar having one end disposed at right angles thereto and provided with an upturned and inturned portion spaced from the bent portion to form a stationary jaw having a rearwardly curved working face, a manually operable lever pivoted intermediate its extremities to said bar and contacting with the upper face of the jaw, said lever having a rounded forward corner at its inner end portion working against said curved face and contacted by the inturned portion of the body and with its opposite extremity extending beyond the bar, a guide eye rising from said bar spaced rearwardly of the lever, a rod slidable therethrough for a portion of the length of the bar and pivotally connected at its forward end to the lever adjacent to its pivot point, an adjusting nut threaded on the inner end of said rod, a coiled spring between the nut and eye for automatically gripping a wire between the lever and jaw, the opposite extremity of the bar being adapted for attachment to a supporting member against movement, a pull rod pivotally connected thereto adjacent to the supporting member and a wire engaging clamp connected with the bar removed from its pivot point for drawing the wire through the aforesaid gripping member when operated.

1,016,786. DENTAL SWAGE. JAMES BERNARD SEDBERRY, Thompsons Station, Tenn. Filed May 25, 1911. Serial No. 629,414. (Cl. 113—39.)

1. A device of the character specified, comprising a base having an annular rib on its upper face, and having a pin at one side of the rib, a substantially cylindrical body having an open top and a closed bottom provided on its under face with an annular groove receiving the rib, and an opening for receiving the pin, said body having an opening in its side wall and being internally threaded at its top, a plunger threaded into the body and having an annular radial flange at its upper end, said plunger having a central longitudinal bore co-axial with the body, and a counterbore at the inner end of the longitudinal bore, a solid plunger slidable in the bore of the first named plunger and provided with an annular radial flange at its upper end, and a plurality of nested flasks in the body, each of the flasks having a frusto-conical bore provided with a longitudinal rib, the outermost flask having an annular rib engaging the inner face of the body, and the inner flasks having on their outer surfaces a vertical groove for receiving the rib of the adjacent flask.



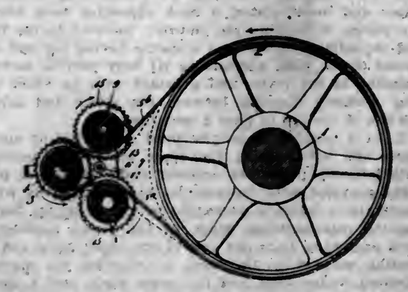
2. A device of the character specified, comprising a substantially cup-shaped body having an opening in its side, a plurality of nested flasks in the body and resting on the bottom thereof, the inner flasks being frusto-conical in shape and the outermost flask having a cylindrical outer surface for engaging the inner surface of the body to hold the flasks co-axial to the body, each flask having an internal longitudinal rib, and the inner flasks having each an external longtudinal groove for receiving the rib of the adjacent flask, the opening in the side wall of the body being of sufficient size to permit the insertion and the removal of the flasks, a plunger threaded into the upper end of the body, said plunger having a central longitudinal bore and a counter bore at the inner end of the longitudinal bore, and a solid plunger slidable in the bore.

3. A device of the character specified, comprising a substantially cup-shaped body having an opening in its side, a plurality of nested flasks in the body and resting on the bottom thereof, the inner flasks being frusto-conical in shape and the outermost flask having a cylindrical outer surface for engaging the inner surface of the body to hold the flasks co-axial to the body, each flask having an internal longitudinal rib and the inner flasks having each an external longitudinal groove for receiving the rib of the adjacent flasks, the opening in the side wall of the body being of sufficient size to permit the insertion and the removal of the flasks, a hollow plunger threaded into the body, and a solid plunger slidable in the hollow plunger.

1,016,787. BELT-TIGHTENER. JAMES H. SEWALL, Keene, N. H., assignor of one-half to Daniel D. Sewall, Augusta, Me. Filed Dec. 31, 1908. Serial No. 470,216. (Cl. 64—5.)

1. The combination with a pair of pulleys and a belt connecting said pulleys, of means automatically controlled by the differences in tension in the respective portions of the belt for taking up variable slack therein, said means comprising a pair of auxiliary pulleys normally forming angles of flexure in said respective portions, and movable means connecting said auxiliary pulleys whereby they are moved in unison in a direction transverse to the line of centers of said first-named pulleys by said differences in tension, thereby varying said angles of flexure.

2. The combination with a pair of pulleys and a belt connecting said pulleys, of means automatically controlled by the differences in tension in the respective portions of said belt for taking up variable slack therein, said means comprising a pair of auxiliary pulleys normally forming angles of flexure in said respective portions, and means connecting said auxiliary pulleys and movable about a center in the axis of rotation of one of said first-named pulleys whereby said auxiliary pulleys are moved in unison in a direction transverse to the line of centers of said first-named pulleys by said differences in tension, thereby varying said angles of flexure.



3. The combination with a pair of pulleys and a belt connecting said pulleys, of means automatically controlled by the differences in tension in the respective portions of said belt for taking up variable slack therein, said means comprising a pair of auxiliary pulleys movable about a common center and normally arranged to engage said belt and form angles of flexure in said respective portions thereof at points substantially the same distance removed from said center, and means pivotally arranged to be movable about said center and connecting and carrying said auxiliary pulleys whereby said auxiliary pulleys are movable in unison in a direction around said center by said differences in tension, thereby varying said angles of flexure.

4. The combination with a pair of pulleys and a belt connecting said pulleys, of means automatically controlled by the differences in tension in the respective portions of said belt for taking up variable slack therein, said means comprising a pair of auxiliary pulleys and movable means connecting and carrying said auxiliary pulleys whereby they are moved in unison in a direction transverse to the line of centers of said first-named pulleys by said differences in tension to normally form unequal angles of flexure in said portions of the belt.

5. The combination with a pulley and a belt running about said pulley, of a shaft to which said pulley is affixed, a frame pivotally supported from said shaft, said frame comprising sides spaced from one another and each pivotally connecting with said shaft on either side of said pulley, hubs extending from the interior of said sides and meeting in abutting edges for defining the separated position of said sides, means for securing said sides to one another, and auxiliary pulleys carried by said frame to coöperate with said belt.

[Claims 6 to 11 not printed in the Gazette.]

1,016,788. AUTOMATIC CAR-COUPLING. JAMES D. SHELTON, Nortonville, Ky. Filed Feb. 14, 1911. Serial No. 608,525. (Cl. 213—52.)

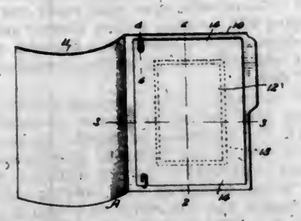
1. In a coupler, a coupler head consisting of spaced upper and lower plates, a hook extending from one of the plates, a coupling pin movably mounted in the hook and the adjacent plate, and a spring having its body portion movably mounted in the plates and bent to form a seat for

the pin and having one end extending over the other end of the pin and secured to the hook for limiting the outward movement of said pin.

2. In a coupler, a coupler head consisting of spaced upper and lower plates, a hook extending from one of the plates, a coupling pin movably mounted in the hook and the adjacent plate, and a spring having one end connected to the hook and having its body portion movably mounted in the plates and provided with an offset portion normally disposed between the plates and beyond the end of the pin to form a seat therefor.

3. In a coupler, a coupler head consisting of spaced upper and lower plates, the upper plate being provided with laterally projecting opposed wings, the lower plate being provided with downwardly projecting walls which terminate in laterally projecting wings, means for fastening the corresponding wings of the plates together, a hook projecting from one end of the upper plate and extending rearwardly thereover, a coupling pin movably mounted in the hook and the upper plate, and a spring having one end connected to the hook and extending over the upper end of the pin and having its body portion movably mounted in the plates and bent to form a seat for the pin.

1,016,789. LETTER-FILING DEVICE. CHAUNCEY SMITH, Atlanta, Ga. Filed May 12, 1911. Serial No. 626,842. (Cl. 129—19.)



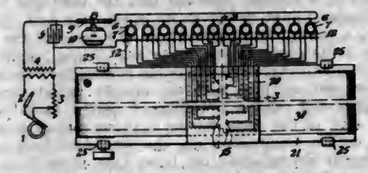
1. In a filing device for letters and other papers, the combination of a leaf and a sheet connected thereto and having opposite free marginal portions to which letters, etc., may be attached, the said sheet being connected to the leaf by means located between said free marginal portions.

2. In a filing device for letters and other papers, the combination of a leaf and a sheet attached thereto by means located within its border, the said sheet having free marginal portions at opposite ends to which letters, etc., may be attached.

3. In a filing device for letters and other papers, the combination with a leaf, of a sheet shorter than the leaf, said sheet and leaf being connected together on transverse lines near the upper and lower ends of the sheet whereby the sheet is provided with upper and lower free margins to which papers may be connected by means of clips or bands.

4. In a filing device for letters and other papers, the combination with a leaf, of a sheet connected to the leaf near its upper and lower ends by adhesive material, whereby the upper and lower marginal portions of the sheet are free and papers may be connected thereto by suitable fastening devices.

1,016,790. METHOD OF DESTROYING INSECTS. FRANKLIN S. SMITH, Philadelphia, Pa. Filed Jan. 7, 1911. Serial No. 601,282. (Cl. 175—311.)



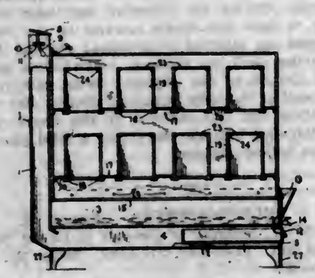
1. The method of treating articles and objects for the purpose of destroying the insects, their eggs, larvæ or pupæ which may infest the same, which consists in the production of a plurality of independent electric discharges between different points and thereby forming a field of electric discharges and in subjecting the articles or objects to the said discharges, whereby the insects, their eggs, larvæ or pupæ are subjected to the action thereof and thereby destroyed.

2. The method of treating tobacco for the purpose of destroying the insects, their eggs, larvæ or pupæ, which may infest the same, which consists in the production of an electrical discharge and subjecting the tobacco to the action of said discharge with the planes of its leaves or portions of leaves in the same general direction as that in which the discharge takes place to destroy such insects, their eggs, larvæ or pupæ.

3. The method of treating tobacco for the purpose of destroying the insects, their eggs, larvæ or pupæ, which may infest the same, which consists in the arrangement of the tobacco with the planes of its leaves or portions of leaves in substantially parallel relation with the lines of discharge produced by an alternating electric current and placing the said tobacco so arranged within the region of the said discharge, whereby the said insects, their eggs, larvæ or pupæ are destroyed.

4. The method of treating tobacco for the purpose of destroying the insects, their eggs, larvæ or pupæ, which may infest the same, which consists in the production of an electric discharge, in adjusting the energy of the sparks of the discharge to the conductivity of the tobacco and subjecting the tobacco to the action of the said discharge with the planes of its leaves or portions of its leaves extending in the same general direction as that of the sparks of the discharge, whereby such insects, their eggs, larvæ or pupæ are destroyed.

1,016,791. FOOD-WARMING CABINET. JESSIE SMITH, Selma, Ala. Filed Feb. 6, 1911. Serial No. 606,985. (Cl. 126—261.)



In a food warming cabinet, a base having arranged therein a heating compartment and a water tank, a draft tube connected to one end of said heating compartment, a damper arranged on the upper end of said tube, a fuel receptacle having a sliding engagement with said heating compartment whereby said receptacle may be opened and closed, a funnel connected to one end of said water tank, whereby the latter may be filled, a faucet adapted to draw the water therefrom, a food compartment comprising a box having an open bottom and adapted to be arranged over said water tank, a series of perforated drawer supporting plates arranged in said box having drawer supporting flanges formed thereon, drawers having a sliding engagement with said flanges, and covers removably engaged with said drawers.

1,016,792. PIPE-COVER. ALBERT STUART SPEIRS, New York, N. Y., assignor to Marcia E. Speirs, New York, N. Y. Filed Jan. 17, 1911. Serial No. 603,139. (Cl. 131—12.)

1. An attachment for tobacco pipes, including a spring gripping element insertible into the bowl of a pipe and expansible therein to engage the bowl throughout the length of said element, a screening member carried by said element and secured thereto, and means for contracting the gripping element to disengage it from the bowl.

2. A tobacco pipe attachment including a member insertible into the bowl of the pipe and expansible to grip the bowl throughout the length of the member, means outstanding from said member for bearing on the bowl to support the member within the bowl, a screening device carried by said member, and finger pieces projecting from the terminals of said bearing means.

3. An attachment for tobacco pipes, including a spring gripping element insertible into the bowl of a pipe and expansible therein to engage the bowl throughout the length of said element, a coiled spring having its other convolution connected directly to said element, and means extending from opposite portions of said element for contracting it and the spring.

4. A tobacco pipe attachment including a gripping member insertible into the bowl of a pipe and expansible to engage said bowl throughout the length of the member, an elastic screening element carried by said member and secured thereto, and means for contracting said member and spring to disengage the member from the bowl.

5. An attachment for tobacco pipes, comprising a spring band insertible into the bowl of a pipe and expansible to engage the bowl throughout the length of the band, a screening device carried by the band, and means for contracting the band and screening device to disengage said band from the bowl.

[Claim 6 not printed in the Gazette.]

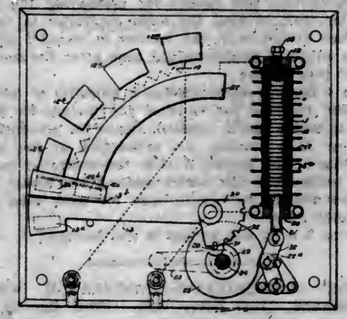
1,016,793. RHEOSTAT. HALVDAN A. STERN, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Aug. 1, 1910. Serial No. 575,023. (Cl. 219—51.)

1. In a circuit-controlling device, the combination of a main resistance, a compressible auxiliary resistance, means for connecting said compressible resistance in parallel with portions of said main resistance, and means for compressing said compressible resistance.

2. In a circuit-controlling device, the combination of a main resistance, means for cutting into or out of circuit portions of said main resistance, a compressible auxiliary resistance, means for connecting said compressible resistance in parallel with portions of said main resistance, and means for compressing said compressible resistance.

3. In a circuit-controlling device, the combination of a main resistance, an auxiliary resistance capable of being continuously adjusted, means for adjusting said auxiliary resistance, and means operated by said adjusting means for cutting into or out of circuit portions of said main resistance.

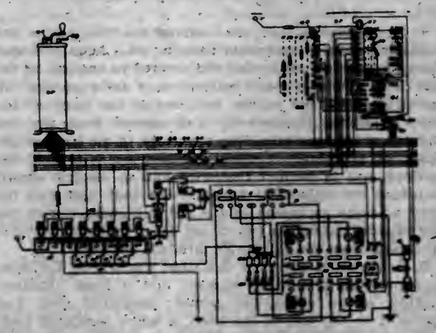
4. In a circuit-controlling device, the combination of a circular row of contacts, resistance sections connected between successive pairs of said contacts, two brushes for successively engaging said contacts, said brushes being insulated from each other, a compressible resistance connected between said brushes, a device for compressing said resistance, and means actuated by said device for operating said brushes.



5. In a circuit-controlling device, the combination of a main resistance, an auxiliary compressible resistance, means for intermittently connecting portions of said main resistance in parallel with said compressible resistance and for varying said main resistance, and means for intermittently compressing said compressible resistance and operating the aforesaid means.

[Claims 6 to 13 not printed in the Gazette.]

1,016,794. SYSTEM OF MOTOR CONTROL. EMMETT W. STULL, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed July 20, 1910. Serial No. 572,891. (Cl. 172—179.)



1. In a motor control system, a motor, a main controller therefor including a main reversing switch, a master controller therefor including a master reversing switch, the master reversing switch controlling the movements of the main reversing switch independently of the remainder of the master controller, and means for preventing the completion of the motor circuit unless the position of the main reversing switch corresponds to that of the master reversing switch.

2. In a motor control system, a plurality of motors, a main controller therefor including a main series-parallel switch, a master controller for controlling the operation of said main controller, and means for preventing the series-parallel switch, after it has once been moved to parallel position, from being moved to series position until the master controller has been brought to off position.

3. In a motor control system, a plurality of motors, a main controller therefor including a main series-parallel switch, a master controller for controlling the main con-

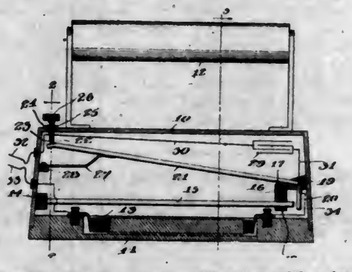
troller and including two parts, one of which operates the other through a lost motion connection, and means for preventing the completion of the motor circuits through the main controller unless said two parts of the master controller are in corresponding positions.

4. In combination, a plurality of motors, a main controller therefor including a main series-parallel switch, a master controller for controlling the operation of the main controller, and means for preventing the master controller from causing the main controller to complete the motor circuit with the motors in parallel unless it does so within a predetermined time after the series circuit has been broken.

5. In a motor control system, a plurality of motors, a controller therefor for causing the motors to be connected in series and in parallel, means for preventing the controller from causing the production of the parallel connection of the motors if after the controller has been moved beyond the last series position the motor circuit has been allowed to remain open for more than a predetermined time

[Claims 6 to 17 not printed in the Gazette.]

1,016,795. THERMOSTATIC REGULATOR. CHARLES E. TEETERS, Canal Dover, Ohio. Filed Apr. 27, 1911. Serial No. 623,696. (Cl. 219—25.)

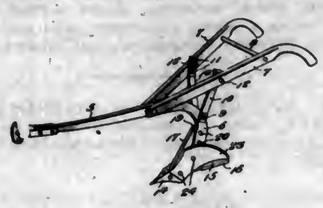


1. In an electric iron, the combination with a base and a heating element embedded therein; of a hood arranged upon the base, an expansible rod secured at one end of the said hood, the other end being free, a lever pivoted adjacent the free end of the rod, one of the arms of the lever extending downwardly and spaced from the rod and the other arm extending upwardly in an inclined position, an adjustable terminal member, means to hold the inclined arm in contact therewith and an electric circuit including the adjustable member, the heat unit and the lever whereby expansion of the rod will contact with the downwardly extending end of the lever to disconnect the other arm from the adjustable terminal member.

2. A heater of the class described comprising the combination with a heating element and a hood arranged thereon, of an expansible member insulated from and anchored at one end of the hood, a screw insulated from and adjustable in a bore in the hood, a pivoted member arranged to be contacted by the expansible member, said pivoted member normally contacting with the screw and adapted to be disengaged therefrom by the longitudinal expansion of the expansible member, a condenser connected in circuit with the screw, the pivoted member and the heating element and means for preventing lateral movement of the expansible member.

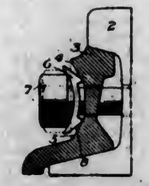
1,016,796. PLOW. JASPER C. TERRELL, Magnolia, Ark. Filed Dec. 3, 1910. Serial No. 595,399. (Cl. 97—32.)

The combination with a plow beam having a depending standard, of a frog formed with a socket for receiving the said standard, a sub-soiling share detachably connected upon the forward end of the frog and projecting below the same, a cutting blade detachably connected to the standard above the frog and extending at a forward inclination to the rear end of the share, mold boards fixed to the opposite sides of the frog and overlapping a portion of the rear edge of the cutting blade, a heel plate fixed to the under surface of the frog intermediate the width thereof and projecting rearwardly therebeyond, the



forward end of the said sub-soiling share and the said shoe being arranged in alinement and in a plane below the under surface of the frog.

1,016,797. RAIL-JOINT. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa., assignors to Thomson-Thomson Company, Philadelphia, Pa., a Partnership. Filed Feb. 17, 1911. Serial No. 609,231. (Cl. 151—38.)



1. In a rail joint, a spring washer having a concave outer face and a bearing extending along the upper edge of its inner face, said bearing contacting with the splice bar above the bolt holes in a plane lying at an angle to the vertical.

2. In a rail joint, a spring washer having a concave face on its nut side and having a bearing face extending along its opposite side for the full width of the washer adjacent to its upper edge, said bearing face engaging a slanting outer face of the splice bar.

3. In a rail joint, a spring washer having a concave face on its nut side and having a bearing face extending along the edge of its opposite side for the full width of the washer, said bearing face to fit within a longitudinally channeled outer face of a splice bar.

4. In a rail joint, a spring washer having a concave face on its nut side and having a fulcrum bearing extending horizontally along its opposite side and lying between the center of the bolt and one of the horizontal edges of the washer.

5. In a rail joint, a spring washer having a concave face on its nut side, said face being adapted to flatten out when the washer is clamped tightly between the nut and two longitudinally extending bearings lying adjacent to its upper and lower edges.

[Claims 6 to 15 not printed in the Gazette.]

1,016,798. NUT-LOCKING WASHER. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa., assignors to Thomson-Thomson Company, Philadelphia, Pa., a Partnership. Filed Feb. 17, 1911. Serial No. 609,232. (Cl. 151—38.)

1. A spring washer having a curved face and a rib or flange extending across said face to partially resist said washer from flattening out when it is clamped into a tightened position, substantially as described.

2. A spring washer having a curved face and a rib or corrugation across said face at an angle to the axis of said curvature, substantially as described.

3. A spring washer having an upright convex bearing face for a nut, said washer being bent along vertical axes and having a horizontally extending stiffening rib, substantially as described.

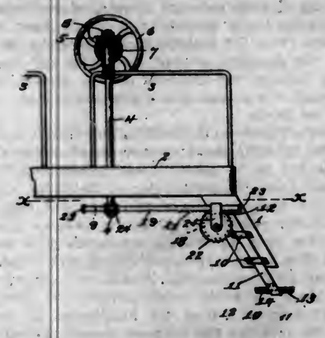
4. In a rail joint, a splice bar, a clamping bolt and nut, and a spring washer which is bent so that in its untightened position, it has a portion of its inner face standing free from a portion of the outer face of said splice bar, said washer being traversed by an integral reinforcement disposed at an angle to the axis of curvature and acting to increase the tensile resistance of the washer to compression, substantially as described.

1,016,799. PROCESS OF PREPARING ORGANIC IODIN COMPOUNDS. JOSEPH L. TURNER, Philadelphia, Pa., assignor to The H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 8, 1910. Serial No. 565,784. (Cl. 23—24.)

1. The process of preparing iodo-anhydromethylene proteid which consists in acting on a proteid with iodin; subjecting the product of such re-action to the action of formaldehyde; and thereafter separating out the desired product.

2. The process of preparing iodo-anhydromethylene proteid which consists in acting on fifty (50) pounds of a proteid with twenty (20) pounds of iodin; treating fifty (50) pounds of the product of such a re-action with eight (8) pints of a forty per-cent. (40%) solution of formaldehyde; and thereafter separating out the precipitate formed; substantially as described.

1,016,800. EXTENSIBLE CAR-STEP. EDGAR G. UHL, Encinal, Tex. Filed Oct. 31, 1911. Serial No. 657,726. (Cl. 105—87.)



1. The combination, with passenger car steps, an extensible step, and a pair of rack bars slidable on the sides of the steps, of a rack bar having two sets of teeth, one set thereof being at right angles to the other set, a hand-operated gear, a vertical shaft, a pinion on each end of the shaft for imparting motion to the double rack bar, and means for operating the vertical shaft.

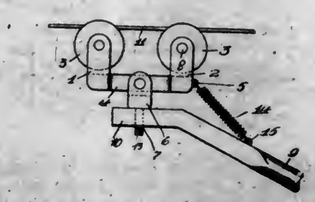
2. The combination, with a passenger car step, a supplemental slidable step, and a pair of rack-bars slidable on the sides of the said steps, of open brackets in which the ends of said step are carried, a plate on the brackets and forming an abutment for the step and having the said rack-bars secured thereto, and mechanism for sliding the rack-bars.

3. The combination with passenger car steps, a supplemental step, a hand wheel, a gear secured to the hand wheel, a vertical shaft having a gear meshing with the hand wheel gear, a pinion on the vertical shaft, a horizontal shaft journaled on the steps, and a plurality of gears on this shaft, of a rack-bar having one set of teeth meshing with the said vertical shaft pinion, and another set of teeth meshing with one of said horizontal shaft gears, a pair of rack-bars slidably attached to the sides of the steps and meshing with the other of said gears of the horizontal shaft, and brackets for holding and connecting the supplemental step with the said pair of rack-bars.

1,016,801. PROCESS OF MAKING A VISCOUS LIQUID MATERIAL. LEONARD S. VAN WESTRUM, Brantford, Ontario, Canada. Filed May 18, 1909. Serial No. 496,841. (Cl. 134—80.)

The herein described composition of matter consisting of substantially 70 parts asphalt, 20 parts petroleum residuum, and 10 parts cotton seed oil pitch adapted, when spread over surfaces and allowed to dry, to form a tough coating, substantially as described.

1,016,802. TROLLEY. CHARLES F. VENSEL, Jr., Chicora, Pa. Filed Mar. 17, 1910. Serial No. 549,892. (Cl. 191—39.)



The combination of a trolley pole having a substantially horizontal upper end, a trolley harp pivoted on said upper end to swing on a vertical axis, said harp comprising a support forming the vertical pivot member and a wheel carrying member pivoted to said support on a horizontal axis, said wheel carrying member having a pair of spaced-apart wheels positioned on planes in front and rear of said horizontal pivot, and a spring member connecting the forward end of the harp with the pole and adapted to function as a tension member with respect to movements of the harp on both vertical and horizontal pivots.

1,016,803. MANUFACTURE OF DEXTRIN. JOSEPH VEAITY, Stretford, England, assignor to Carlo Frua De Angeli, Milan, Italy. Filed July 12, 1911. Serial No. 638,423. (Cl. 127—10.)

1. The process of converting farinaceous substances into dextrin which consists in subjecting the material to heat and pressure in narrow, flat shallow sealed vessels immersed in tanks containing a heated liquid through which the heat can readily penetrate evenly throughout the mass of material without stirring or agitating, substantially as described.

2. The process of converting farinaceous substances into dextrin which consists in treating the material without agitating in narrow flat or sealed vessels immersed in heated liquid, the material being under considerable pressure and at a temperature at or above 212° F., substantially as described.

1,016,804. MANUFACTURE OF METALLIC FILAMENTS FOR INCANDESCENCE LIGHTING. CHRISTOPH HEINRICH WEBER, Berlin, Germany. Filed Apr. 20, 1910. Serial No. 556,598. (Cl. 176—132.)

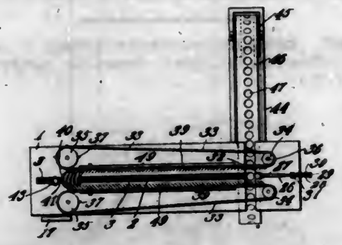
1. A metallic filament for incandescent lighting comprising a metal of high melting point and containing tellurium within the limits of 0.02% and 1.%, substantially as described.

2. A metallic filament for incandescent lighting consisting of tungsten with tellurium, the latter within the limits of 0.2% and 1%, substantially as described.

3. The process of manufacturing metallic filaments for incandescent lighting which consists in mixing a finely divided metal of high fusing point with pulverized tellurium dioxid and a suitable binder, forming a filament from the mixture, and heating the filament in an atmosphere consisting of a neutral gas and sulfur dioxid.

4. The process of manufacturing metallic filaments for incandescent lighting which consists in mixing finely divided tungsten with pulverized tellurium dioxid and a suitable binder, forming a filament from the mixture, and heating the filament in an atmosphere consisting of a neutral gas and sulfur dioxid.

1,016,805. MACHINE FOR APPLYING CARTONS TO BOTTLES. CLIFFORD E. WENDTE and JOHN NASH, North Yakima, Wash. Filed Mar. 27, 1911. Serial No. 617,095. (Cl. 93—2.)



1. A machine of the class described including a movable presser head, a suction device in the path thereof, and means at opposite sides of and movable with the head for engaging opposite portions of articles in the path of the head, said means extending parallel with the path of the head and throughout the length of said path.

2. In a machine of the class described a suction device, a movable presser head for shifting articles in the direction thereof, and means at opposite sides of and parallel with the path of the head for engaging opposite portions of said articles, said means extending throughout the length of said path.

3. A machine of the class described including a suction device, a movable presser head for shifting articles in the direction of said suction device, parallel flexible devices at opposite sides and extending throughout the length of the path of the head for frictionally engaging opposite portions of said articles and for receiving motion from said articles.

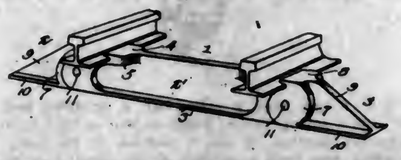
4. A machine of the class described including a suction device, a movable head for pressing articles in the direction of said device, parallel flexible brushes at opposite sides and extending throughout the length of the path of the head for engaging opposed portions of the articles and adapted to be shifted with the head by the articles.

5. A machine of the class described including a suction device, a movable head for pressing articles in the direction of the suction device, flexible means at opposite sides and extending throughout the length of the path of the head for frictionally engaging opposite portions of said devices, the said articles constituting means for transmitting motion from the head to said flexible engaging devices to shift said devices bodily with the head.

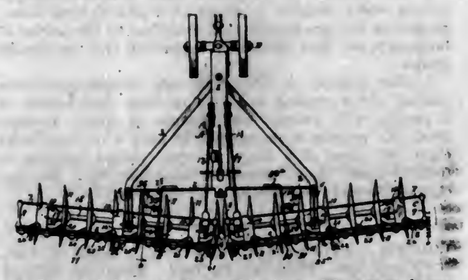
[Claims 6 to 13 not printed in the Gazette.]

1,016,806. RAILROAD-TIE. VICTOR B. WHEATON, Ionia, Mich. Filed May 9, 1911. Serial No. 625,982. (Cl. 238—5.)

A tie for railway rails comprising a central or body portion, the said body portion comprising a vertically straight web having off-set flanges, the ends of the body being enlarged, the said ends of the body adjacent the upper portion thereof being formed with lips and having horizontally straight portions arranged below said lips, the said ends of the body being formed with reduced extending portions, end members for the body, each of said end members having their inner portions enlarged and provided with lips adapted to overlie the horizontal portions of the body, the said ends being further provided with extensions which are pivotally connected with the extensions of the body, the said ends being inclined downwardly and outwardly from their enlarged portions, and the said inclined portions each comprising a central web and integrally formed off-set flanges.



1,016,807. HARROW. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed June 14, 1907. Serial No. 378,979. (Cl. 55—81.)



1. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers for the disks adapted to be moved from points near the axis toward and from the peripheries of the disks, means for pressing the scrapers toward the disks and means for positively holding the scrapers out of contact with the disks against the action of the pressing devices, substantially as set forth.

2. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers for the disks adapted to be moved from points near the axis toward and from the peripheries of the disks, means for pressing the scrapers toward the disks and means operable at will for positively holding the scrapers against the action of the pressing devices, substantially as set forth.

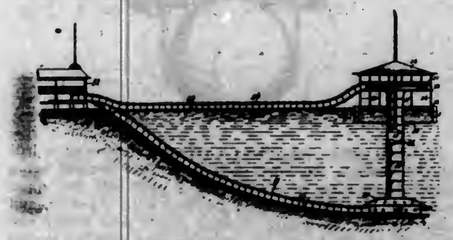
3. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers adapted to have their operative parts moved from points near the axis toward and from the peripheries of the disks, a spring for pressing the scrapers toward the surfaces of the disks, and means for holding the scrapers away from the disks against the action of the spring, substantially as set forth.

4. In a disk harrow, the combination with a frame and a disk carried thereby, of a scraper, a scraper-carrier means for moving the scraper from points near the axis toward and from the periphery of the disk, means for automatically moving the scraper toward the concave side of the disk, and means for holding the scraper off the disk against the action of the said automatic means, substantially as set forht.

5. In a disk harrow, the combination of a frame, a disk carried thereby, a scraper support, a scraper adjustable relative to the said support and to the disk, means for moving the scraper from the axis toward and from the periphery of the disk, a spring for moving the scraper bodily toward the disk, and means for resisting at will the action of the spring in its pressure of the scraper upon the disk, substantially as set forth.

[Claims 6 to 32 not printed in the Gazette.]

1,016,808. SUBMARINE PLEASURE APPARATUS. CHARLES WILLIAMSON, Norfolk, Va. Filed Dec. 28, 1909, Serial No. 535,314. Renewed July 3, 1911. Serial No. 636,912. (Cl. 104—111.)



1. A submarine pleasure apparatus comprising a submergible chamber having observation windows in its walls some at an angle to the vertical and others adjacent to them in vertical planes.

2. A submarine pleasure apparatus comprising a submergible chamber having windows in its walls some at 45° to the vertical and others adjacent to them in vertical planes.

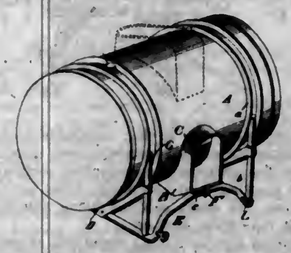
3. A submarine pleasure apparatus comprising a submergible chamber, offsets in the walls of said chamber, and windows in said offsets the walls of which are arranged in part vertically and in part at an angle to the vertical.

4. A submarine pleasure apparatus comprising a submergible caisson, means for supporting said caisson, and means for closing the upper end of the caisson watertight when it is desired to suspend use of it.

5. A submarine pleasure apparatus comprising a double-decked float, a submergible observation chamber, and a passage-way connecting said chamber with said float which leads to the upper deck of said float.

[Claims 6 to 35 not printed in the Gazette.]

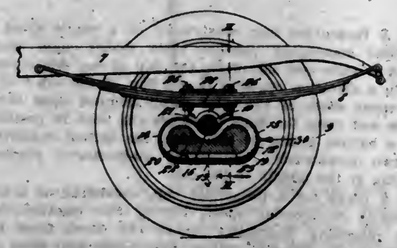
1,016,809. STOCK-WATERING DEVICE. FRANK E. WILLIAMSON, Glasco, Kans. Filed July 22, 1909. Serial No. 509,043. (Cl. 119—77.)



1. In a stock watering device, the combination of a cylindrical water-containing vessel having a drinking trough, with a supporting and transporting frame comprising parallel longitudinal pieces arranged to serve as runners, uprights between which the vessel rests, and rolling supports below the central longitudinal axis of the vessel on which the latter bears, and means for holding the vessel in position against rotation about its axis, when in feeding position.

2. In a stock-watering device, the combination of a ponderous cylindrical water-containing vessel having a drinking trough to which the water from the vessel is fed and in which it is maintained at an approximately constant level, with a frame upon which the vessel is supported on its side, the frame being provided with bearings on which the vessel rests and on which it is adapted to turn without progressive bodily movement, and with means located at the sides of the vessel for holding it upon the said bearings, the said frame being open at the top whereby the vessel may be bodily lifted therefrom, substantially as described.

1,016,810. PNEUMATIC SUSPENSION DEVICE FOR VEHICLES. JOHN WILLIAMSON, Brooklyn, N. Y., assignor, by direct and mesne assignments, of one-third to Harvey E. Randall and one-third to Albert P. Stewart, Brooklyn, N. Y. Filed Mar. 31, 1911. Serial No. 618,181. (Cl. 21—50.)



1. In a vehicle, the combination with the axle and frame member, of a casing, an annular resilient member vertically arranged in the casing and engaging the peripheral wall of the casing, a block in the casing engaging the resilient member by its periphery and freely movable in the casing in all directions to compress the resilient member when moved in any direction in said casing, the casing and block having similar peripheral reentrant portions, the axle and the frame member being connected with the block and the casing, by the block being secured to one of said two members and the casing at its reëntrant portion being secured to the other of said two members.

2. In a vehicle, the combination with a frame member and the axle, of a casing having a reëntrant portion and a horizontal portion, a block of similar shape located in the casing, a resilient member interposed between the periphery of the block and the wall of the casing, bolts projecting out from the block on each side, a yoke member extending upwardly from said bolts on each side, said two members the yoke and the reëntrant portion of the casing being one of them secured to the axle and the other one to the frame member of the vehicle.

3. A suspension device comprising a casing provided with an axle seat, means for fastening said casing to said axle, below the same, a block corresponding in contour with said casing and freely movable therein, resilient means surrounding said block, and yokes for suspending said block from a vehicle frame.

4. A suspension device comprising a casing provided with a transversely arranged axle seat in its top, means for clamping an axle to said seat, said casing being provided with alined side openings, a block freely movable in said casing and provided with laterally projecting bolts that extend through said openings, frame engaging yokes carried by said bolts, and compressible means interposed between said block and casing.

5. A suspension device comprising a casing, means for suspending the same from a vehicle axle below said axle, an inflatable cushion in said casing, a block surrounded by said cushion and having roughened surfaces for gripping said cushion, and yokes for suspending said block from a vehicle frame.

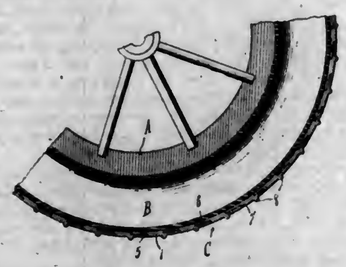
[Claims 6 and 7 not printed in the Gazette.]

1,016,811. TURPENTINE-CUP. LEWIS T. BAKER, Pensacola, Fla. Filed Mar. 2, 1911. Serial No. 611,840. (Cl. 47—40.)

1. A turpentine cup, constructed of a single sheet of material embodying parallel sides folded upon themselves to form two side flaps, the flap of one side extending in a direction opposite to the flap of the other side, the upper edges of the sides being crimped upon themselves and upon the flaps to secure the flaps in position, and a bottom joined to the sides, the bottom consisting of two downwardly converging co-extensive portions meeting at the middle of the cup.

2. A blank for a turpentine cup, consisting of a substantially rectangular sheet, having two parallel fold lines extending diagonally across the sheet from one corner to the opposite corner, four other fold lines extending at right angles to the edges of the sheet from which they extend inwardly toward the first named lines and meet the latter at the middle thereof, and a single diagonal fold line extending at right angles to the first-named fold lines, the edges of the blank being cut away from points where the second-named fold lines meet the edges of the corners met by the single diagonal line, to produce flanges, for the purpose specified.

1,016,812. TIRE-PROTECTOR. JOSEPH L. BARNES, Des Moines, Iowa. Filed Dec. 16, 1908. Serial No. 467,873. (Cl. 152—16.)



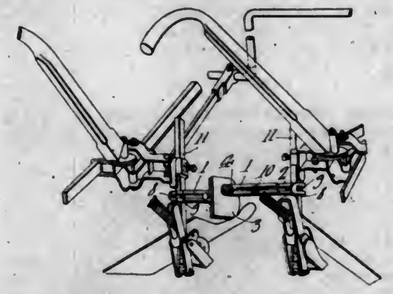
A tire protector comprising a plurality of like overlapping flexibly connected U-shaped plates, each plate having its exterior face stepped at one end and its interior face stepped at its other end throughout its entire width so that said plates will lie in telescopic relation with their inner and outer faces in registration, the abutting edges of all of said plates converging toward a common center so that the strain upon the sustaining plate will be transmitted to the remaining plates and reinforce the former, a pin projecting outwardly from each plate at a point between its ends, links pivotally mounted on said pin and connecting said plates to one another, the ends of each link being disposed in overlapping relation to the ends of the adjacent links, each of said U-shaped plates being further provided with a transverse rib projecting from its exterior face directly opposite the step in the interior face whereby said rib constitutes both tractor and reinforcing means.

1,016,813. BALL-CASTER. WILLIS A. BARNES and ROBERT W. JAMIESON, New York, N. Y. Filed Dec. 8, 1910. Serial No. 596,814. (Cl. 16—45.)

1. A ball caster comprising a cylindrical housing, a ball for the housing, the lower portion of said housing being shaped to conform to the contour of said ball, the upper portion of said housing being provided with a groove, and a bearing disk resiliently retained within said groove and centrally provided with an opening, said opening having its walls shaped to conform to the contour of said ball whereby said ball is maintained in spaced relation with respect to said housing.

2. A ball caster comprising a cylindrical housing, a ball within the housing, said housing being bent at its lower end to conform to the contour of the adjacent surface of the ball, said housing being formed at its upper end to provide a plurality of spurs, said housing being further provided with a groove at a point adjacent said spurs, and a bearing disk resiliently retained within said groove and provided with a central opening, the walls of said opening being concaved to conform to the contour of the adjacent surface of the ball.

1,016,814. BRACE FOR COTTON-SCRAPER STANDARDS. HENRY F. CARTER, Fort Smith, Ark., assignor of one-half to Cordy N. Pate, Fort Smith, Ark. Filed Feb. 23, 1911. Serial No. 610,287. (Cl. 97—9.)



1. In a cotton scraper having standards secured thereto, the combination of two members each comprising sections, means for securing the respective sections together in adjusted position, and abutment plates carried by the inner sections, the outer sections being attached to the standards of the cotton scraper.

2. In a cotton scraper having standards secured thereto, sections each composed of a rod bent back upon itself and having spaced side portions, a securing device for holding the sections fixed with relation to each other, said securing device passing through the space between the side portions of the sections, an abutment plate mounted upon one of the sections, and a securing device passing through the space between the sides of the said sections and securing the said abutment plate, the other section being clamped to one of the standards of the cotton scraper, and a second abutment plate secured to the other standard and against which the former abutment plate is adapted to rest.

3. In a cotton scraper having standards, two members of like construction, each member being longitudinally extensible, and an abutment plate adjustably mounted at the inner extremity of each member, the outer ends of said members being secured to the standards of the cotton scraper.

1,016,815. PIPE OR LAUNDER. JAMES LESTER CLARK, South Kensington, London, England. Filed June 9, 1911. Serial No. 632,353. (Cl. 137—75.)

1. A pipe or launder of the character designated composed of a sheet of yielding and in part absorbent material rolled upon itself and carrying an added abrasion resisting material together with an agglutinant, such as bitumen, incorporated therewith whereby a hard gritty abrasion resisting but flexible article is obtained.

2. A pipe or launder of the character designated composed of a sheet of yielding and in part absorbent material rolled upon itself and carrying an added abrasion resisting material together with an agglutinant, such as bitumen, incorporated therewith, and between the layers of same whereby a hard gritty abrasion resisting but flexible article is obtained.

3. A pipe or launder of the character designated composed of a sheet of waterproofed and dried yielding and in part absorbent material rolled upon itself and carrying an added abrasion resisting material together with an agglutinant incorporated therewith and between the layers of same, whereby a hard gritty abrasion resisting but flexible article is obtained.

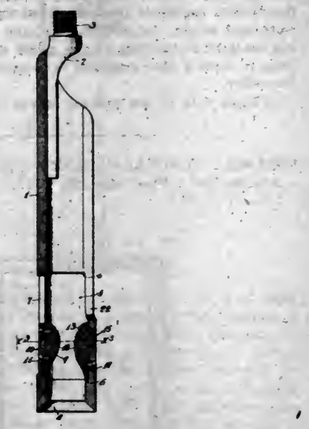
4. A pipe or launder of the character designated composed of a sheet of yielding and in part absorbent material rolled upon itself and carrying an added abrasion resisting material together with an agglutinant, such as bitumen, incorporated therewith, and having also a lining of similar abrasion resisting material and agglutinant whereby a hard gritty abrasion resisting but flexible article is obtained.

5. A pipe or launder of the character designated composed of a sheet of yielding and in part absorbent material rolled upon itself and carrying an added abrasion resisting material together with an agglutinant, such as bitumen, incorporated therewith and between the layers of same, and a flexible protective covering whereby a hard gritty abrasion resisting but flexible article is obtained.

1,016,816. FISHING-TOOL. CHARLES DANIEL, Los Angeles, Cal. Filed May 19, 1910. Serial No. 562,314. (Cl. 166—5.)

1. A fishing tool comprising a tubular supporting member open at top and bottom, the bore of said tubular member having an enlarged portion near the lower end thereof, a fixed jaw within said enlarged portion of the tubular member at one side thereof, the other side of said tubular member having a vertical slot extending from the enlarged bore portion thereof to the outside of the tubular member, said slot having outwardly flaring walls, an outwardly flaring plate mounted in said slot to slide vertically therein and a movable jaw detachably secured to said plate and extending at each side of the plate to engage the inside of the enlarged bore portion of the tubular member, said plate engaging the walls of the slot to hold said jaw against the inside of the tubular member, and said fixed and movable jaws having grip portions projecting within the bore of the tubular member.

2. A fishing tool comprising a tubular supporting member open at top and bottom, the bore of said tubular member having an enlarged portion near the lower end thereof, forming a shoulder at the lower end of said enlarged portion, a fixed jaw within said enlarged bore portion of the tubular member, the lower end of said fixed jaw engaging said shoulder, a screw rigidly connecting said fixed jaw to said tubular supporting member to detachably hold the fixed jaw in position, said tubular supporting member



having a slot back of the fixed jaw and said fixed jaw having a lug fitting in said slot and a movable jaw slidably mounted at the other side of the enlarged bore portion of the tubular member, said fixed and movable jaws being provided with grip portions projecting within the bore of the tubular member.

1,016,817. ROLLER FOR COTTON-GINS. FRANCIS A. DIFFENDERFER, Brooklyn, N. Y., assignor, by mesne assignments, to Mary E. Diffenderfer, Brooklyn, N. Y. Filed Aug. 27, 1910. Serial No. 579,244. (Cl. 13—20.)

1. A cotton delinting roller having a fiber-grasping surface composed of a plurality of rings, each formed of a series of laminated segments of hair-cloth and fabric, the hair-cloth having the hair-fibers projecting therefrom and forming the fiber-grasping face of the roller.

2. A cotton delinting roller having a fiber-grasping surface formed of a plurality of vulcanized ring sections composed of segments formed of vulcanized layers of hair-cloth and fabric, the layers of hair-cloth having their hair-fibers arranged radially to the axis of the roller and projecting to form a fiber-grasping face around the periphery of the roller.

3. A cotton delinting roller having a fiber-grasping surface formed of rings arranged side by side and having their meeting faces bound together, each ring comprising a series of segments formed of alternately disposed layers of hair-cloth and fabric, bound together, the layers of hair-cloth having their hair-fibers arranged radially to the axis of the roller and projecting to form a fiber-grasping face around the periphery of the roller.

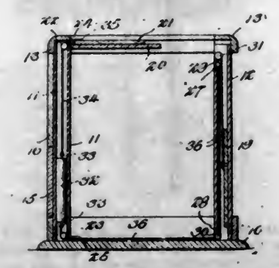
4. A cotton delinting roller having a fiber-grasping surface composed of a series of rings arranged side-by-side and suitably united, each ring consisting of a series of

segmental blocks composed of alternately disposed layers of hair-cloth and fabric, vulcanized together, the layers of hair-cloth having their hair-fibers projecting to form a fiber-grasping face around the periphery of the roller.

5. A cotton delinting roller having a fiber-grasping surface composed of a series of rings arranged side-by-side and suitably united, each ring consisting of a series of interlocked segments formed of vulcanized layers of hair-cloth and fabric, the hair-fibers of the cloth layers extending radially to the axis of the roller and projecting therefrom to form a fiber-grasping face around the periphery of the roller.

[Claims 6 to 15 not printed in the Gazette.]

1,016,818. DISPLAY-CABINET. JOHN A. DOUGLASS, Austin, Tex. Filed Mar. 22, 1911. Serial No. 616,057. (Cl. 211—25.)

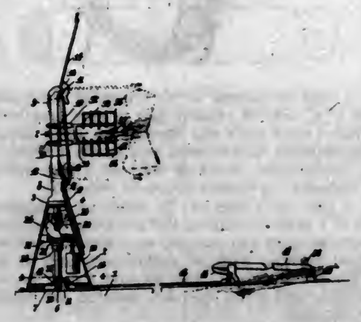


1. A display cabinet comprising a base, a plurality of uprights secured to the front end of the base and having longitudinally extending ducts formed therein, a plurality of uprights secured to the rear end of the said base and provided with longitudinally extending apertures, sides and ends connected to the said base to form a casing, the upper side of the said casing having an opening therein and the front side of the said casing having an opening, a closure mounted on the upper side of the said casing and adapted to slide thereon, a second closure mounted on the front side of the said casing and adapted to slide thereon, weights mounted to slide in the apertures of the rear uprights, cords connecting the said weights with the closure on the upper side of the said casing and cords extending through the said ducts in the said front uprights and connecting the said weights with the said front closure, so that when the closure on the upper side of the casing is operated, the closure on the front side of the casing will be relatively operated.

2. A display cabinet comprising a base, a plurality of uprights secured to the front and rear ends of the said base, the said front uprights being provided with ducts and the said rear uprights having cylindrical apertures extending therethrough, a coping connecting the upper ends of the said uprights, sides and ends connected to the said uprights to form a casing having an opening in the upper sides thereof and a second opening in the front side thereof, closures mounted to slide in the said casing and adapted to close the said openings therein, pulleys mounted in the said front uprights, and the said rear uprights and cords adapted to pass over the said pulleys and extending through the ducts in the said front uprights and through the said openings in the rear uprights, the ends of the said cords being connected to the said closure so that when one of the closures is operated the other said closure will be relatively operated to open or close the openings in the said casing.

3. In a display cabinet the combination of a base, uprights secured to the said base at the front and rear ends thereof, the front uprights being provided with ducts and the rear uprights being provided with apertures extending longitudinally therethrough, sides and ends connected to the said uprights to form a casing provided with openings in the upper and front sides thereof, closures mounted to slide in the said casing to close the openings in the upper and front sides thereof, weights mounted to slide in the apertures in the rear uprights, flexible connections between the said weights and the closure on the upper side of the said casing and flexible connections extending through the ducts in the said front uprights and connecting the said weights with the closure on the front of the casing, the closure on the front of the casing being operable simultaneously with the closure on the upper side of the casing.

1,016,819. MAIL CATCHER AND DELIVERER. BENJAMIN EVANS, Bluefield, W. Va. Filed Sept. 26, 1911. Serial No. 651,352. (Cl. 105—231.)



1. In combination, a rotating member, pivoted bag supporting arms carried thereby, means held in operative position to rotate said member in one direction when the bag is upon the arms, means to hold said member against rotation, train controlled mechanism for releasing said holding member, automatically actuated means for separating the arms and reversely rotating the member when the bag is released from the arms, and a catching device carried by the member and rotatable therewith.

2. In combination, a rotating member, pivoted bag supporting arms carried thereby, means held in operative position to rotate said member in one direction when the bag is upon the arms, means to hold said member against rotation, train controlled mechanism for releasing said holding member, automatically actuated means for separating the arms and reversely rotating the member when the bag is released from the arms, and a catching device adjustably mounted upon the member and rotatable therewith.

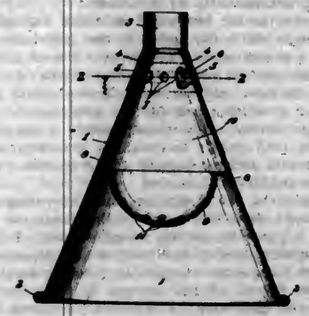
3. In combination, a rotatably mounted shaft, pivoted bag supporting arms carried thereby, an operating connection between said arms, means actuated by one of the arms which normally tends to rotate the shaft when a bag is in position upon the arms, means for holding said shaft against rotation, train operated mechanism for releasing said holding means, means to limit the rotation of the shaft, means for separating said arms, and reversibly rotating the shaft, and a catcher carried by the shaft.

4. In combination, a rotatably mounted shaft, pivoted bag supporting arms carried thereby, an operating connection between said arms, means actuated by one of the arms which normally tends to rotate the shaft when a bag is in position upon the arms, means for holding said shaft against rotation, train operated mechanism for releasing said holding means, means to limit the rotation of the shaft, means for separating said arms, and reversibly rotating the shaft, a catcher carried by the shaft, and a car carried catcher and deliverer to remove the sack from the arms to deliver the sack to the catcher.

5. In combination, a rotating shaft, pivoted bag supporting arms carried thereby, car controlled mechanism for moving the arms in a bag catching position, and means actuated upon the releasing of the bag for returning the arms to normal position.

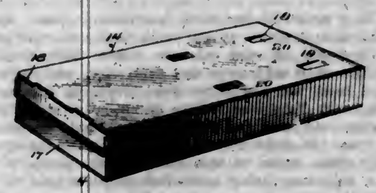
[Claims 6 to 8 not printed in the Gazette.]

1,016,820. CLOTHES-WASHER. MARK G. EVANS and GEORGE W. LOGAN, Denver, Colo. Filed Mar. 18, 1911. Serial No. 615,389. (Cl. 68—5.)



A pneumatic clothes washer comprising a vertically disposed conical vessel open at one end, a perforated diaphragm positioned within the vessel intermediate the ends thereof, the upper portion of the said vessel immediately adjacent its end being provided with a series of transversely arranged openings with respect to the longitudinal alinement of the vessel, a conical valve revolubly mounted upon the vessel, said valve being formed to provide a transversely arranged elongated opening therein adapted to be moved in coincidence with one or all of the said openings in the vessel, a handle engaging member mounted on the upper end of the vessel, the lower portion of the said member forming a stop adapted to hold the valve against displacement from the vessel.

1,016,821. MAILING-CABINET. MARCUS P. EXLINE, Dallas, Tex. Filed Feb. 2, 1911. Serial No. 606,162. (Cl. 129—43.)



1. In a device of the class described, a unit comprising upper and lower compartments, such unit being composed of sheet metal slitted to form tongues, and such tongues being bendable into the compartments to vary the operative length of such compartments.

2. In a device of the class described, a unit comprising upper and lower compartments, such unit being composed of sheet metal slitted to form tongues bendable into the compartments to vary the lengths of the compartments and a closure for one of the compartments arranged to receive a designation.

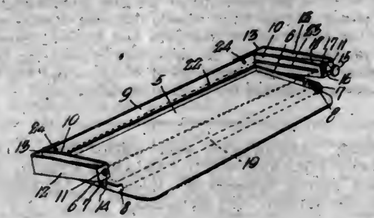
3. In a device of the class described, a unit comprising upper and lower compartments, and composed of sheet metal slitted to produce tongues bendable into the compartments at different positions.

4. In a device of the class described, a unit comprising upper and lower compartments, such unit being composed of sheet metal slitted upon one side to produce tongues bendable into the compartment and into engagement with the opposite side, adapted to vary the operative length of the compartment.

1,016,822. FLOWER-HOLDER. JOHN W. GOLDEN, Johnstown, Pa. Filed May 12, 1910. Serial No. 560,949. (Cl. 47—12.)

A flower holder comprising a single piece of wire bent at one portion of its length to provide a ring having a loop and hook thereon, said wire being bent laterally to provide an arm, said arm being bent vertically downwardly to provide a stake member having parallel U-shaped bends on the upper and lower ends to engage one side of the stake member, said stake member also having a reverse U-shape bend at its central portion to provide an intermediate holder to engage the other side of the stake member said hook of the ring having a bend on its terminal to prevent injury to the fingers when the hook is to be engaged or disengaged from the ring loop.

1,016,823. EXPRESS-RECEIPT-BILLING MACHINE. WARD C. GOODMAN, Walla Walla, Wash., assignor of one-half to Frank M. Shore, Walla Walla, Wash. Filed July 31, 1911. Serial No. 641,531. (Cl. 11—23.)



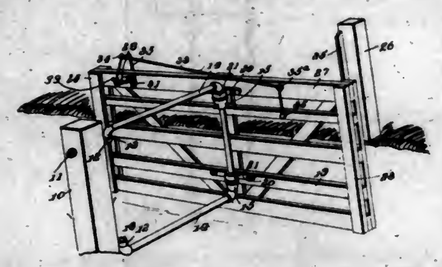
1. A device of the character described comprising a base plate having means for holding a stack of forms thereon, and a frame formed of a strip of metal pivoted thereto having side arms for carrying carbon paper and shafts mounted in said side arms, one of said shafts being adapted to carry a roll of carbon paper and the other shaft being adapted to wind up the said carbon paper.

2. A device of the character described comprising a base plate, a frame formed of a strip of metal set on edge having the intermediate portion hinged to the rear edge of the plate and the ends bent forwardly, then outwardly, then rearwardly, and then inwardly and secured to the said intermediate portion, the said forwardly bent portions having elongated slots therein, and shafts carried by the ends of said strip.

3. A device of the character described comprising a base plate formed from a piece of sheet metal having the rear and side edges upturned to form flanges and the front ends of said flanges inturned to form lips and having ears stuck out from the said flanges near the front ends thereof, a frame formed of a strip of metal set on edge and the intermediate portion hinged to the rear edge of the plate and the ends thereof bent forwardly, then outwardly, then rearwardly, and then inwardly and secured

to said intermediate portion, the said forwardly bent portion having elongated slots therein and being adapted to set within the said ears, and shafts carried by the ends of the said strip.

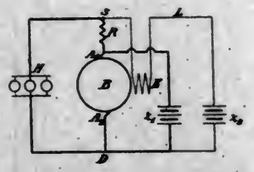
1,016,824. GATE. JOHN H. GREEN, Bladen, Ohio. Filed Jan. 7, 1911. Serial No. 601,362. (Cl. 39—5.)



1. A device of the character described comprising a main post, a swinging section carried by the post, a gate hinged midway of its ends upon the swinging section, a spaced outer post for receiving the outer end of the gate when closed, a laterally spaced post arranged in registration with the main post for receiving the inner end of the gate when opened, a latch carried upon the inner end of the gate for engagement with the swinging section to lock the gate thereto, and fastening means carried upon the inner end of the gate and upon the laterally spaced post for retaining the gate open.

2. A gate mechanism comprising a main post, a pivoted section outstanding from the post, a gate hinged midway between its ends upon the outer end of the pivoted section, an oppositely spaced post receiving the outer end of the gate when closed, a longitudinally spaced post receiving the inner end of the gate when open, an automatic latch on the inner end of the gate interlocking with the pivoted section when closed, releasing means carried upon the outer end of the gate and having connection with the latch to raise the same, and coöperating fastening means upon the inner end of the gate and the longitudinally spaced post for holding the gate open.

1,016,825. APPARATUS FOR PRODUCING A CONSTANT VOLTAGE WITH VARIABLE SPEED. HUGO GROB, Zurich, Switzerland. Filed Mar. 17, 1908. Serial No. 421,741. (Cl. 171—225.)



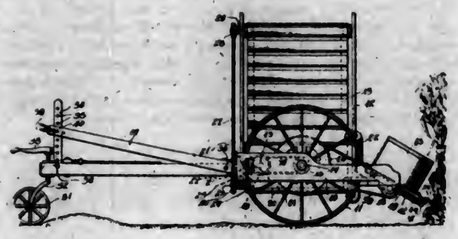
1. An apparatus for producing constant voltages on a pair of circuits while the speed of the generator varies comprising a generator; an exciting coil for the generator; a load circuit; an external independent source of voltage connected in parallel with the load circuit, the exciting coil being inserted into said connection; and a resistance inserted in the load circuit between the generator and a point where said external source connection reaches the load circuit, substantially as described.

2. An apparatus for producing constant voltages on a pair of circuits while the speed of the generator varies, comprising a generator; a load circuit; an external independent source of voltage; connections between the external ipdependent source of voltage and two points of said load circuit; an exciting coil for the generator in one of said connections, and a resistance inserted in the load circuit between the generator and the point where the connection including the exciting coil reaches the load circuit, substantially as described.

3. An apparatus for producing constant voltages on a pair of circuits while the speed of the generator varies, comprising a generator; a load circuit; a storage battery furnishing an external and independent source of voltage; connections between said battery and two points on said load circuit; a exciting coil for the generator in one of said storage battery connections; and a resistance inserted in the load circuit between the generator and the point where said storage battery connects with the load circuit, substantially as described.

4. An apparatus for producing constant voltages on a pair of circuits while the speed of the generator varies, comprising a generator having brushes; a load circuit; a storage battery divided into halves and furnishing an external and independent source of voltage; means connecting both halves of the storage battery with the brushes of the generator; a resistance inserted in the load circuit; and a field coil in the connection between one of the half batteries and a brush of the generator, substantially as described.

1,016,826. SHOCK-LOADER. THOMAS HECKER, Carrington, N. D. Filed Jan. 28, 1910. Serial No. 540,624. (Cl. 214—2.)



1. In a device of the kind described, a frame, wheels supporting said frame, spaced cams fixed upon said frame, disks mounted on said cams to rotate thereon, drums concentric with said disks and fixed upon and extending upward from the respective disks, swinging fingers carried by said disks, and means connected to said fingers to engage said cams and swing and hold said fingers outward from the disks during a portion of the revolutions of said disks, stops on said frame in the paths of said fingers, said stops being positioned to be engaged by said fingers to swing the same inward during the remainder of the revolutions of said disks, and an operating mechanism for said disks connected to and actuated by the rotation of said wheels.

2. In a device of the kind described, a frame, wheels supporting said frame, spaced cams fixed upon said frame, disks mounted on said cams to rotate thereon, a series of shafts journaled in said disks adjacent the peripheries of the disks, arms formed on said shafts, rollers on said arms adapted to contact with portions of the respective cams, fingers carried by said shafts and lying substantially at right angles to the arms, elements arranged to swing said fingers inward, said elements being positioned on the frame to engage the fingers after the rollers have left the portions of the cams wherewith they engage, drums fixed upon the upper ends of said disks concentric therewith and an operating mechanism for said disks connected to and actuated by the rotation of said wheels.

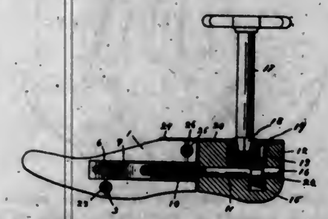
3. In a device of the kind described, a frame, wheels supporting said frame, spaced cams fixed upon said frame, disks mounted on said cams to rotate thereon, swinging fingers carried by said disks, and means connected to said fingers to engage said cams and swing and hold said fingers outward from the disks during a portion of the revolutions of said disks, a drum arranged to swing the fingers of one disk inward during the remainder of the revolution of the disk, and an operating mechanism for said disks connected to and actuated by the rotation of said wheels; in combination with a conveyer extending upwardly and laterally from said frame and having its lower end lying immediately behind the space between the disks, a guide board extending upward said guide board also forming means to swing the fingers of the remaining disk inward after release from the respective cam and away from said conveyer to form a trough behind the space between said disks, and means to actuate said conveyer.

4. In a device of the kind described, a frame, wheels supporting said frame, spaced cams fixed upon said frame, disks mounted on said cams to rotate thereon, drums concentric with said disks and fixed upon the respective disks, swinging fingers carried by said disks, and means connected to said fingers to engage said cams and swing and hold said fingers outward from the disks during a portion of the revolutions of said disks, a stop on said frame in the paths of the fingers of one disk, said stops being positioned to swing said fingers inward during the remainder of the revolutions of said disk, and an operating mechanism for said disks connected to and actuated by the rotation of said wheels; in combination with a conveyer extending upwardly and laterally from said frame and having its lower end lying immediately behind the space between the disks, a guide board extending upward said guide board also forming means to swing the fingers of the remaining disk inward after release from the respective cam and means to actuate said conveyer.

5. In a device of the kind described, a frame, wheels supporting said frame, spaced cams fixed upon said frame, disks mounted on said cams to rotate thereon, a series of shafts journaled in said disks adjacent the peripheries of the disks, arms formed on said shafts, rollers on said arms adapted to contact with portions of the respective cams, fingers carried by said shafts and lying substantially at right angles to the arms, a stop arranged to swing the fingers of one disk inward, said element being positioned on the frame to engage the fingers after the rollers have left the portions of the cams wherewith they engage, and an operating mechanism for said disks connected to and actuated by the rotation of said wheels; in combination with a conveyer extending upwardly and laterally from said frame and having its lower end lying immediately behind the space between the disks, a guide board extending upward and away from said conveyer to form a trough behind the space between said disks, said guide board also forming means to swing the fingers of the remaining disk inward after release from the respective cam and means to actuate said conveyer.

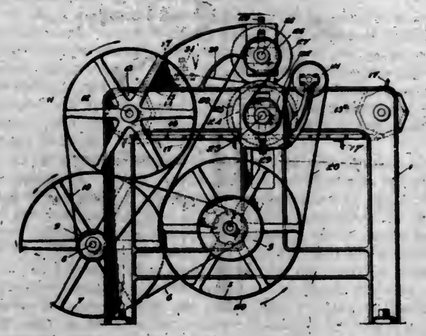
[Claims 6 to 8 not printed in the Gazette.]

1,016,827. REPAIRING AND STRETCHING LAST. JOSHUA HEUFARD, Terre Hill, Pa. Filed Apr. 15, 1911. Serial No. 621,246. (Cl. 12—132.)



In a combined shoe last and stretcher of the class described, the combination of a heel member and a divided last member, having means mounted therein for spreading the halves of said divided member, of a guide plate secured upon the upper surface of said heel member and provided with an extending portion adapted to slide upon the upper surface of the rear portion of the divided members, to prevent their turning with respect to said heel member.

1,016,828. WOOD-GAINING MACHINE. WILLIAM L. HUME, Rome, Ga. Filed Oct. 2, 1911. Serial No. 652,460. (Cl. 144—145.)



1. An apparatus of the character described, comprising a saw shaft and a series of rotary saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

2. An apparatus of the character described, comprising a saw shaft and a series of groove cutting saws and a pair of end cutting saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

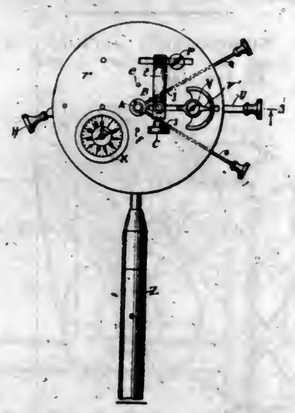
3. An apparatus of the character described, comprising a saw shaft and a series of rotary saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, springs pressing said boards toward said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

4. An apparatus of the character described, comprising a saw shaft and a series of groove cutting saws and a pair of end cutting saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, springs pressing said boards toward said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

1,016,829. DEVICE FOR SETTING PALLET-JEWELS. ABRAHAM HURWITZ, New York, N. Y. Filed May 19, 1911. Serial No. 628,292. (Cl. 81—7.)

1. In a device for setting pallet jewels, the combination of a support having means whereby an escape-wheel-substitute may be held thereby, another support having means whereby a pallet may be held thereby, means for relative adjustment and setting of said supports toward and from each other, gage members carried by said sup-

ports for application to the centers of the escape-wheel and pallet staff in a watch so as to enable said supports to be relatively adjusted to the distance between such centers, and a register operated by the adjusting means for indicating the size of escape-wheel substitute to be employed in accordance with such distance.



2. In a device for setting pallet jewels, the combination of a body plate constructed for the reception of an escape-wheel-substitute, an upward-projecting gage-pin mounted on said body plate, a slide having an arm overhanging the body plate for the support of a pallet-staff, a second upward-projecting gage-pin carried by said arm, said pins being constructed and adapted to be applied to the centers of the escape-wheel and pallet staff in a watch, and a register connected with said slide.

3. In a device for setting pallet jewels, the combination of a removable and replaceable escape-wheel-substitute, means for holding the same, means for holding a pallet, adjustment means whereby the distance between the pallet and escape-wheel-substitute may be varied, and an indicator operated by said adjustment means and designed to indicate the various sizes of escape-wheel-substitutes corresponding with various adjustments.

4. In a device for setting pallet jewels, the combination of a support having a center, a removable and replaceable disk, constituting a substitute for the inner circle of an escape-wheel, mounted thereon, and two movable gages for locating the pallet jewels in proper angular relation, said gages being constrained to move relatively to said center and at an angle to each other corresponding to the angle between faces of the pallet jewels.

5. In a device for setting pallet jewels, the combination of a relatively stationary part, a removable and replaceable disk constituting a substitute for the inner circle of an escape-wheel, means holding the disk on said part, a member having means for engaging the pallet staff of a lever, means for adjusting and setting said member to position the pallet staff with respect to the center of said disk, and two movable gages for locating the pallet jewels in proper angular relation, said gages being constrained to move relatively to said center and at an angle to each other corresponding to the angle between faces of the pallet jewels.

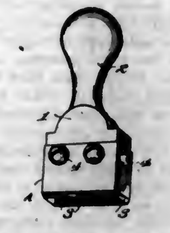
[Claims 6 to 11 not printed in the Gazette.]

1,016,830. PORTABLE AIR-WITHDRAWING OR VACUUM-PRODUCING APPARATUS. ALEXANDER MACKENZIE JACK, Sheffield, England. Filed June 9, 1911. Serial No. 632,220. (Cl. 230—2.)

The combination of a pair of independent bellows adapted to be secured severally to the feet of an operator whereby they may be moved from place to place while being operated, flexible piping connecting the suction inlets of the bellows, and a suction pipe connected to the said flexible piping at an intermediate point of the length

thereof whereby a continuous inflow will be established through the suction pipe.

1,016,831. BUDDING-TOOL. JOHN F. JONES, Jeanerette, La. Filed Aug. 29, 1910. Serial No. 579,389. (Cl. 47—6.)

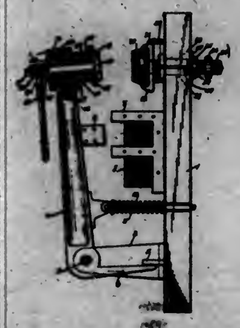


A budding tool comprising a hollow cutter of box-like form having its peripheral edge sharpened and having a plurality of openings in its sides, a handle having a body portion shaped in proportion to snugly fit in the cutter, and a plurality of fastenings passing through the openings and extending into the body of the handle for detachably securing the cutter thereto.

1,016,832. METHOD OF FORMING HOLLOW GLASS ARTICLES. KARL JUNG, Grosspriesen-on-the-Elbe, Austria-Hungary, assignor to The Firm of Glasfabriken und Raffinerien Josef Inwald A. G., Vienna, Austria-Hungary. Filed July 19, 1910. Serial No. 572,738. (Cl. 49—83.)

The method herein described of forming hollow glass articles, which consists of gathering a mass of molten glass, adding to the exterior of said mass another mass of glass of a different color, partially blowing said mass as a single member thus forming a globe having the added mass of glass distributed over the greater part of the globe, then further inflating said globe in a mold having its inner surface provided with corrugations or other projections adapted to cut substantially through the outer mass of glass, then removing said globe from said mold and further blowing the same, and then converting said globe into a finished article.

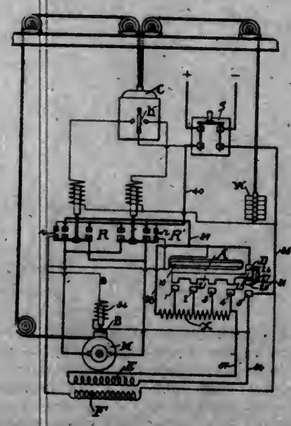
1,016,833. ELECTRIC-SWITCH-CONTACT HOLDER. DAVID LARSON, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 7, 1908. Serial No. 431,496. (Cl. 175—282.)



1. In a switch, the combination with a support formed with an opening therein, of a pair of clamping jaws each having a stem extending into said opening, and means for securing the jaws together.

2. In a switch, the combination with a support, of a clamping jaw having a stem extending through an opening in the support, a threaded extension on the stem, a clamping nut on said extension, a second clamping jaw having a stem extending into said opening, and means for clamping said jaws to a switch contact.

1,016,834. CONTROLLING MECHANISM. DAVID LARSON, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 18, 1911. Serial No. 639,081. (Cl. 172—152.)



1. In a system of motor control, the combination with a compound wound electric motor, of starting resistance therefor, and a device controlled by the motor for short-circuiting said starting resistance and for closing a short-circuit around the resistance and the series field winding of the motor and introducing resistance in series with the said field winding.

2. In a system of motor control, the combination with a compound wound electric motor, of a sectional starting resistance therefor, and means dependent upon the speed of the motor to short-circuit sections of the said resistance and to close a short-circuit around the resistance and the series field winding of the motor and introduce resistance in series with the said field winding.

3. In a system of motor control, the combination with a compound wound electric motor, of a sectional starting resistance in series with a field winding of the motor, and means controlled by the motor to close short-circuits across sections of the starting resistance, to close a short-circuit around the resistance and the series field winding of the motor, and to again open one or more of said first-named short circuits.

4. In a system of motor control, the combination with a compound wound electric motor, of sectional starting resistance, and an electro-magnet controlled by the motor to short-circuit sections of the starting resistance, to close a circuit around the starting resistance and the series field winding of the motor, and to remove the said short circuit.

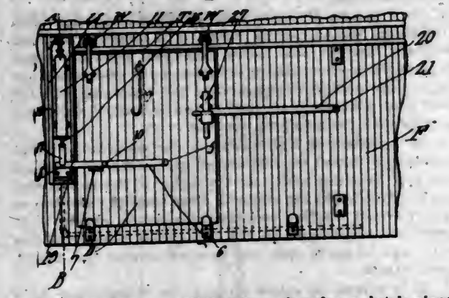
5. In a system of motor control, the combination with a compound wound electric motor, of sectional starting resistance in series with the series field winding of the motor, and an accelerating magnet operative to short-circuit sections of the starting resistance, to close a short-circuit around the starting resistance and the series field winding of the motor, and to again introduce a portion of the starting resistance in circuit with the series field winding.

[Claims 6 to 12 not printed in the Gazette.]

1,016,835. STRETCHER. JULES LEVY-MAURICE and RENÉ FREDERIC AUGUSTIN POYART, Paris, France. Filed Jan. 30, 1911. Serial No. 605,591. (Cl. 85—36.5.)

A stretcher comprising an internally screw threaded sleeve, a rod in connection with the part to be stretched provided with a screw thread corresponding to the thread in the sleeve, a screw thread cut on the outside of and at the end of the sleeve, such screw thread being oppositely directed and of slightly different pitch from the thread on the inside of the sleeve and on the rod, another and secondary thread cut on the rod and corresponding in direction and pitch with the thread on the outside of the sleeve, and a nut provided with two internal screw threaded portions of different diameter but corresponding in direction and pitch with the secondary thread on the rod and with the external thread on the sleeve substantially as set forth.

1,016,836. CAR-DOOR LOCK. WILLIAM M. LEWIS, Richmond, Va., assignor of one-half to Clayton A. Brock, Pinners Point, Va. Filed Mar. 15, 1911. Serial No. 614,616. (Cl. 105—265.)



1. A freight car, a sliding door therefor, a latch pivoted to the door with its free end projecting beyond the free edge of the door and having a notch, a rod having a flattened end to engage the notch in the latch, a piston on the rod, a cylinder within which the piston moves, and connections between the cylinder and the air-brake system.

2. A freight car, a sliding door therefor, a latch pivoted to the door with its free end projecting beyond the free edge of the door and having a notch in its upper side, a rod having a flattened end to engage the notch in the latch, a piston at the upper end of said rod, a cylinder within which the piston moves, connections between the upper end of the cylinder and the air-brake system, and a spring for holding the rod normally elevated and disengaged with the notch in the latch.

3. A freight car, a sliding door therefor, a latch pivoted to the door with its free end projecting normally beyond the free edge of the door and having a notch, a pin on the latch, a hook on the door so disposed that when engaged with said pin the free end of the latch is prevented from projecting beyond the edge of the door, a rod whose lower end is adapted to engage the notch in the latch, a piston on the rod, a cylinder within which the piston moves, and connections between the cylinder and the air-brake system.

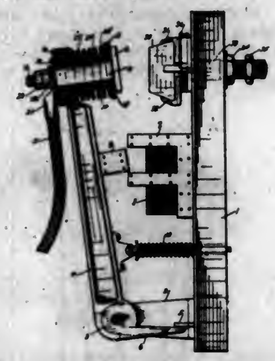
4. A freight car, a sliding door therefor, a latch pivoted to the door with its free end projecting beyond the free edge of the door and having a notch, a rod having a locking end to engage the notch in the latch, a piston on the rod, a cylinder within which the piston moves, connections between the cylinder and the air-brake system, and a casing inclosing the cylinder and having a hole through which the tip of the latch is projected as the door is closed.

1,016,837. ELECTRIC-SWITCH-CONTACT HOLDER. DAVID L. LINDQUIST and DAVID LARSON, Yonkers, N. Y., assignors to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 7, 1908. Serial No. 431,523. (Cl. 175—282.)

1. In an electric switch, the combination with a support having an opening extending therethrough, of an electric contact having a stem extending through said opening, a sleeve or bushing mounted on said stem and extending loosely through said opening and provided with a flange in position to form a stop to limit the movement of said stem, and a plate mounted on the stem and securing said sleeve or bushing against displacement.

2. In an electric switch, the combination with a contact plate, of a stem extending therefrom, a reduced extension formed on the stem, a plate mounted on said extension, means for securing said plate against the end of the stem, an insulating flanged sleeve or bushing mounted on the stem, and a support having an opening in which the stem and the insulating sleeve are loosely mounted.

3. In an electric switch, the combination with a switch arm having an opening therethrough, of a switch contact plate, a stem formed thereon and extending through said opening, an extension of reduced diameter on said stem, a plate mounted on said extension, a clamping nut securing said plate against the shouldered end of the stem, a sleeve of insulating material mounted on the stem and having a flange at one end bearing against said contact plate, a disk or washer of insulating material forming a flange for the opposite end of the sleeve and located between the switch arm and said plate, and a coil spring surrounding said sleeve and located between the switch arm and contact plate.

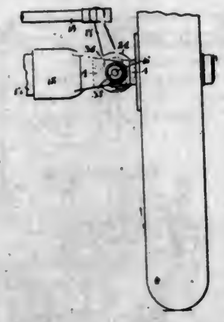


4. In an electric switch, the combination with a contact plate, of a stem formed thereon, a sleeve of insulating material mounted on the stem and having an integral flange at one end bearing against the contact plate, a plate of insulating material mounted on the stem and forming a flange for the other end of said sleeve, a metal sleeve mounted on the insulating sleeve and forming a stop for said plate of insulating material, and a plate secured to the stem and securing the insulating material against displacement.

5. In an electric switch, the combination with a support, of a contact, connections between the support and contact permitting universal movement of the contact, and insulating material carried by the contact and insulating it from its support.

[Claims 6 to 10 not printed in the Gazette.]

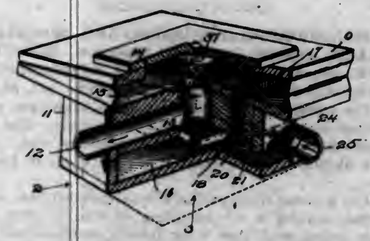
1,016,838. STEERING MECHANISM FOR MOTOR-VEHICLES. DON CURTIS LUCE, Boston, Mass. Filed Nov. 9, 1910. Serial No. 591,510. (Cl. 21—90.)



1. A steering mechanism comprising a hub having a series of bisymmetrical cams and radial arms between said cams, said arms having transverse slots, U-shaped springs engaged with said slots and confined thereby against sidewise displacement, a locking cup surrounding the hub, the cup and the hub cams forming roll-receiving chambers, each of which is wider at its ends than at its center, rolls in the end portions of said chambers in contact with the springs, and pressed simultaneously thereby in opposite directions toward the central portion of the chambers, an unlocking cup having fingers located in the central portions of the chambers, between the rolls therein, and a spindle engaged with the unlocking cup, and adapted to turn in the hub.

2. A steering mechanism comprising a supporting member having ears or brackets, a spindle journaled in said brackets, a hub mounted on the spindle and provided with a series of cams and arms at its lower portion, a non-rotating locking cup detachably engaged with one of said brackets, and surrounding the hub-cams and arms, the surfaces of the cams, arms and cup-forming roll-receiving chambers, each of which is wider at its ends than at its center, rolls located in said chambers, means for pressing said rolls toward the central portion of the chambers, an unlocking cup engaged with the spindle to turn therewith and provided with fingers which coöperate with the rolls, a dust-excluding ring confined between the margin of the locking cup and a shoulder on the hub, and means, such as a nut, engaged with the spindle for detachably connecting said parts.

1,016,839. TEMPO-REGULATOR. ENDFRED LUNDBERG, Westfield, N. J., assignor to Hardman, Peck & Company, New York, N. Y., a Corporation. Filed May 2, 1908. Serial No. 430,610. (Cl. 230—35.)

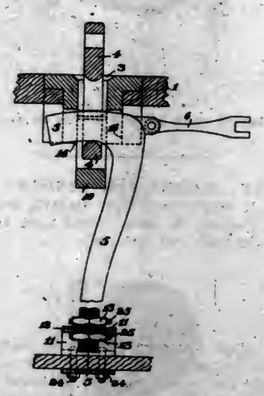


1. A tempo regulator comprising a chamber with rigid walls, a chamber formed upon one of the side walls of the first mentioned chamber having a collapsible wall, said side wall being provided with two openings communicating directly with both of said chambers, slide valves positioned to cover both of said openings, a duct leading into the first mentioned chamber, a duct communicating with one of said openings leading out of said second mentioned chamber and a valve carried by the collapsible wall proportioned to increasingly restrict the opening communicating with said second mentioned duct as the collapsible wall moves toward said side wall.

2. A tempo regulator comprising a housing formed with rigid walls, a plurality of openings arranged in one of the walls of said chamber, a bellows construction connected with said housing and defining a chamber in free communication with said openings, an outlet duct communicating with one of said openings, an inlet duct communicating with said first mentioned chamber, means for normally maintaining closed the opening between said chambers to which said outlet duct is connected, means for adjustably closing the other of said openings for regulating the air passing from said first mentioned chamber to said second mentioned chamber, and a valve structure connected with the movable part of said bellows construction arranged to fit into the opening communicating with said outlet duct for permitting a rarefaction of the air in said outlet duct according to the degree of closure of the bellows construction.

1,016,840. HOLDING AND DISENGAGING GEAR FOR THE BOATS OF SHIPS AND THE LIKE. THOMAS IRVINE MACAULAY, Birkenhead, England. Filed July 14, 1911. Serial No. 638,523. (Cl. 9—23.)

1. In a holding and disengaging gear for ships' boats, the combination with an operating handle and connections therefrom and hooks adapted to be operated by said connections, of sockets, one over each hook, and adapted to receive the eyes of the boat lowering gear, catches pivoted beneath said sockets to move in a plane at right angles to that in which the hooks move, and means tending to raise the said catches, the relative positions of the catches and hooks being such that when the hooks are drawn back the catches will rise in front of the hooks, substantially as described.



2. In a holding and disengaging gear for ships' boats, the combination of sockets adapted to receive the eyes of boat lowering gear, hooks beneath said sockets, each hook having a threaded shank with nuts thereon, supports for the hooks adapted to engage the shanks between the nuts thereon, whereby the height of the hooks relatively to the sockets can be adjusted by adjustment of the nuts, and a hand lever and connections therefrom to the hooks.

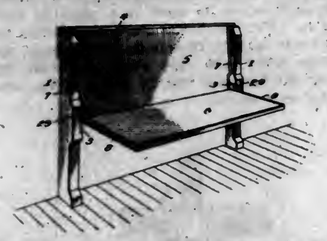
3. In a holding and disengaging gear for ships' boats, the combination with the two hooks for engaging with the eyes of the boat lowering falls, of catches with means pivotally supporting them in a plane at right angles to that in which the said hooks can move and means tending to raise the ends of said catches, means for drawing back the hooks simultaneously whereby the catches are allowed to rise in front of the hooks, and means tending to move the hooks forward.

4. In a holding and disengaging gear for ships' boats, the combination with the sockets near the ends of the boat adapted to receive the eyes of the lowering falls, and hooks with means supporting them beneath the sockets, of links connected to said hooks and to bell crank levers at the sides of the boat, a hand lever with means pivotally supporting it at the side of the boat, and connections from the bell crank levers to the said hand lever, said connections extending along the overhanging side pieces of the boat and beneath the same, whereby the operating parts are all arranged to be protected from damage, substantially as described.

1,016,841. COMBINED TABLE AND BENCH. ANGUS E. MACDONALD, Detroit, Mich. Filed Nov. 30, 1910. Serial No. 594,867. (Cl. 155—6.)

A combined article of furniture comprising spaced supporting members, a pair of leaves pivotally connected with each other, one of the said leaves being pivotally connected with the said supporting members, edge supporting members carried by each of said leaves, one of said edge members provided with an off-set portion, the other of said members being formed with a rearwardly projected extension adapted to fit in said off-set portion when said leaves are in a horizontal plane, spaced lugs carried by

said spaced supporting members, said lugs adapted to be slidably engaged by the rear extension of the said edge



members whereby to hold said leaves at an angle to one another.

1,016,842. SCREEN FOR WINDOWS OR DOORS. THOMAS J. MCBURNEY, Fort Bayard, and JOHN MCALISTER, Central, N. Mex. Filed June 16, 1911. Serial No. 633,568. (Cl. 43—22.)

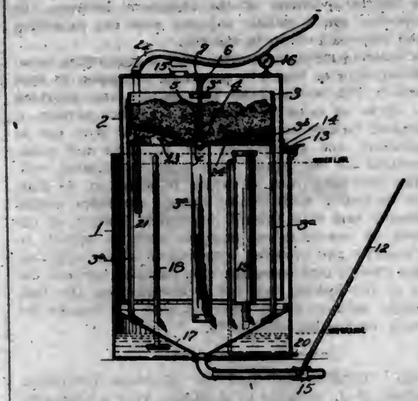
1. A screen of the class described, comprising a frame, upper and lower wire mesh sections mounted upon the frame and overlapping each other at their inner edges, guide means interposed between the overlapped portions of the sections and secured to the frame for spacing said sections apart, and a fly trap removably fitted in said guide means and having entrances exteriorly and interiorly of the plane of the lower section.

2. A screen of the class described, comprising a frame, upper and lower wire mesh sections mounted upon the frame and overlapping each other at their inner edges, guide means interposed between the overlapped portions of the sections and secured to the frame for spacing said sections apart, a fly trap removably fitted in said guide means and having entrances exteriorly and interiorly of the plane of the lower section, and a shield depending from the said trap exteriorly of the lower section and spaced therefrom.

1,016,843. ACETYLENE-GAS GENERATOR. JAMES HENRY MINER, Lumberton, Miss. Filed Mar. 8, 1911. Serial No. 613,069. (Cl. 48—36.)

1. An acetylene gas generator comprising a water tank, a bell therein and means for simultaneously stopping the downward movement of the bell and lowering the water level to reduce the gas pressure.

2. An acetylene gas generator comprising a water tank, a bell movable therein, a carbid receptacle within the bell, means operated by the downward movement of the bell for feeding carbid, a catch for preventing the downward movement of the bell, a refuse controlling



cock and a lever for opening said cock and for throwing the catch into operation.

1,016,844. ARTIFICIAL TOBACCO AND PROCESS OF MAKING SAME. ADOLPH MOONELIS, New York, N. Y. Filed Mar. 22, 1910, Serial No. 550,974. Renewed June 29, 1911. Serial No. 635,961. (Cl. 92—3.)

1. The process of preparing a tobacco substitute which comprises making a tobacco paper of tobacco fiber free of water-soluble constituents and treating such paper with a distilled-water extract of a good grade of tobacco leaves.

2. The process of preparing a tobacco substitute which comprises making a tobacco paper of tobacco fiber from tobacco stems, said fiber being free of water-soluble constituents, and treating such paper with a distilled-water extract of a good grade of tobacco leaves.

3. The process of preparing a tobacco substitute which comprises making a tobacco paper of tobacco fiber with the aid of distilled water and treating such paper with a distilled-water extract of a good grade of tobacco leaves.

4. The process of preparing a tobacco substitute which comprises making a tobacco paper of tobacco fiber from tobacco stems with the aid of distilled water and treating such paper with a distilled-water extract of a good grade of tobacco leaves.

5. The process of preparing a tobacco substitute which comprises making tobacco paper from tobacco stems under exclusion of air and with the aid of distilled water and treating such paper with a distilled-water extract of a good grade of tobacco.

[Claims 6 and 7 not printed in the Gazette.]

1,016,845. CROSS-TIE LAWRENCE C. MOONEY, Montgomery, Ala. Filed June 1, 1911. Serial No. 630,704. (Cl. 238—3.)

1. A composition tie, comprising a concrete body having a metallic strengthening member embedded therein, said member having pockets formed at the ends thereof, and cushion blocks in said pockets surrounded on all sides by the walls of said pockets, one of the walls of each pocket constituting a bearing for a rail.

2. A composition tie, comprising a concrete body having a metallic strengthening member embedded therein, said member having pockets formed at the ends thereof, cushion blocks in said pockets surrounded on all sides by the walls of said pockets, one of the walls of each pocket constituting a bearing for a rail, and tie rods extending between said pockets.

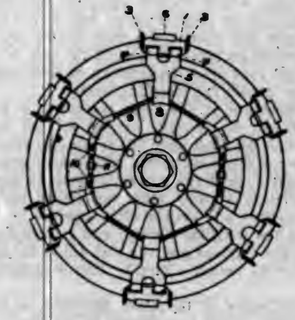
3. A composition tie, comprising a concrete body having a metallic strengthening member embedded therein, said member provided with pockets at the ends thereof and integral therewith, and cushioning blocks in said pockets surrounded on all sides by the walls of said pockets, one of the walls of each pocket constituting a bearing for a rail.

4. A composition tie, comprising a concrete body having a metallic strengthening member embedded therein, said member provided with pockets adjacent the ends thereof, and cushion blocks in said pockets surrounded on all sides and one end by the walls of said pockets, one of the walls of each pocket constituting a bearing for a rail.

5. A composition tie, comprising a concrete body, having a metallic strengthening member embedded therein, said member having pockets formed adjacent the ends thereof and integral therewith, and cushion blocks in said pockets surrounded on all sides and one end by the walls of said pockets, one of the walls of each pocket constituting a bearing for a rail.

[Claims 6 to 18 not printed in the Gazette.]

1,016,846. ANTISKIDDING ATTACHMENT FOR WHEELS. CHARLES H. MYERS, Franklin, Pa. Filed Mar. 20, 1911. Serial No. 615,501. (Cl. 152—14.)



1. In an anti-skidding attachment for wheels, a tread-plate, oblique, relatively diverging flanges and transverse flanges upon the outer face of said plate, longitudinal, inwardly-extending flanges at the lateral edges of said plate, there being slots through said plate, in proximity to said lateral flanges, side-plates bifurcate at one end thereof and formed at the extremity of said bifurcations into hooks arranged to engage said tread-plates through said slots, and a flexible tension device exerting a tension upon said plates in the direction of the center of the wheel.

2. In an anti-skidding attachment for wheels, the combination with the wheel of a self-propelled vehicle of a tread-plate, oblique, relatively-diverging flanges upon the tread of said plate formed by carrying a portion of the metal thereof outward, thus leaving an opening in the plate between said flanges, inwardly-extending flanges upon the lateral edges of said plate, a side-plate upon either side of said tread-plate, bifurcate at one end and flexibly joined at said end to said tread-plate in proximity to said inwardly-extending flange, said side-plate being off-set, for the purpose of bearing against the metallic member of the rim of said wheel, the inner end of said side-plate toward the center of the wheel being formed into a hook for the engagement of a retaining cable, a retaining cable engaging said plates and screw-actuated means adapted to exert tension upon said cable for the purpose of drawing said plates toward the center of the wheel.

1,016,847. TERMINAL PLATE FOR TELEPHONE DESK-STANDS. GUSTAV NELSON, New York, N. Y. Filed Aug. 2, 1911. Serial No. 642,036. (Cl. 179—147.)

[redacted] device of the character set forth, the combination with a terminal plate having formed therein a slot [redacted] an insulating block to rest within said slot and provided with the binding posts used by telephone stands; resilient contact blades mounted on said block and electrically connected with two of said posts, said blades being normally separated; a movable member flexibly mounted on said plate at the upper end of said slot to hold said blades together, said movable member being arranged for movement by the receiver hook of a telephone stand to release said blades; and means for holding said insulating block in said slot.

2. In a device of the character set forth, the combination with a terminal plate having formed therein a slot the sides whereof overhang; of an insulation block having binding posts mounted thereon, said block having grooved sides to receive the overhanging sides of said slot; and means for holding said block in said slot.

3. In a device of the character set forth, a terminal plate having formed therein an end opening slot the sides of said slot being extended to form guides; and an insulating block having the binding posts for a telephone stand, said block being grooved to slide on the sides of said slot and adapted for insertion within said slot from the open end thereof.

4. In a device of the character set forth, a terminal plate having formed therein an end opening slot the sides of said slot being extended to form guides; an insulating block having the binding posts for a telephone stand, said block being grooved to slide on the sides of said slot and adapted for insertion within said slot from the open end thereof; and a holding screw for said block insertible therethrough to engage said plate after said block is in position.

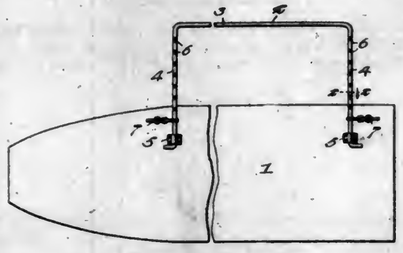
5. In a terminal plate of the character set forth, an insulating block having binding posts mounted thereon, said block having a pad extension formed at the one end thereof to receive one of said posts; and a plurality of spring contact blades to engage two of said posts respectively, one of said blades having a perforation formed therein to extend over said pad.

[Claims 6 to 8 not printed in the Gazette.]

1,016,848. ATTACHMENT FOR IRONING-BOARDS. HANNAH MAY NORTH, Oscoda, Mich. Filed Oct. 1, 1910. Serial No. 584,906. (Cl. 68—10.)

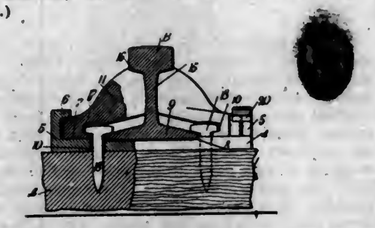
The combination of an ironing board, a U-shaped frame provided with a series of notches and having the

ends thereof bent laterally outward, bearing blocks secured to the said ironing board and having the said frame slidably mounted therein, and spring-pressed



catches secured to the said ironing board and adapted to engage the notches of the said frame to adjust the frame relatively to the ironing board.

1,016,849. RAIL-CLAMP. CHARLES ORENSTEIN, Sedalia, Mo. Filed July 11, 1911. Serial No. 637,907. (Cl. 238—2.)

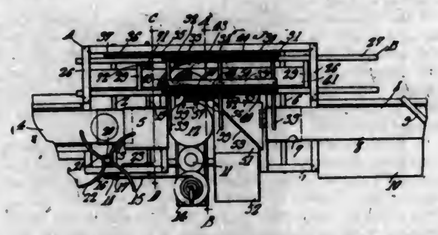


1. In a means for attaching a railroad rail to a tie, a plate adapted to rest on the tie beneath the rail, said plate having its opposite ends upturned to form a ledge, said plate having apertures extending therethrough on opposite sides of the base flange of the rail, a shoe disposed on each side of the rail, said shoe being disposed beneath said ledge, and having a recessed portion adjacent the aperture in said plate, and a spike adapted to be driven through each aperture in the plate into the tie, one side of the head of said spike adapted to rest on the lower flange of the tie and the other side of said head adapted to be positioned in the aperture in the under side of the shoe, to hold said shoe firmly in position.

2. In a means for attaching a railroad rail to a tie, a plate adapted to rest on the tie beneath the rail, said plate having its opposite ends upturned to form a ledge, said plate having apertures extending therethrough on opposite sides of the base flange of the rail, a shoe disposed on each side of the rail, said shoe being disposed beneath said ledge and having a recessed portion adjacent the aperture in said plate, and a spike adapted to be driven through said aperture in the plate into the tie, one side of the ledge of said spike adapted to rest on the lower flange of the tie and the other side of said head adapted to be positioned in the aperture in the under side of the shoe to hold said shoe firmly in position, said ledge being adapted to be bent to clamp said shoe in position.

3. In a means for fastening a rail to a tie, a plate resting on the tie and disposed transversely beneath the rail, the ends of said plate being upturned and inturned to form a ledge, a shoe disposed on opposite sides to and in close engagement with the web and head of the rail and having a portion disposed beneath said ledge and resting on said plate, a spike passing through said plate, the head of said spike holding said rail, shoe and plate in position on the tie, said shoe covering said spike, and means locking said shoe in position, thereby preventing access to said spike.

1,016,850. WEIGHING-MACHINE. JAMES F. PERKINS, Blaine, Wash., assignor to Arthur Y. Seely, Blaine, Wash. Filed Feb. 1, 1911. Serial No. 605,959. (Cl. 73—3.)



1. In a structure of the class described, a weighing device; a reciprocating carriage; a rack slidable upon the carriage transversely of its line of reciprocation; and means for advancing and retracting the rack upon the carriage to move one article after another across the weighing device.

2. In a structure of the class described, a frame; a weighing device; a carriage mounted for reciprocation upon the frame; a rack slidable upon the carriage transversely of its line of reciprocation: and interengaging elements upon the rack and the frame for advancing and retracting the rack upon the carriage to move one article after another across the weighing device.

3. In a structure of the class described, a frame; a weighing device; a carriage mounted for reciprocation upon the frame; a rack slidable upon the carriage transversely of its line of reciprocation; and a cam yieldably supported upon the frame; the rack having an element adapted to travel peripherally around the cam to advance and retract the rack upon the carriage, to move one article after another across the weighing device.

4. In a structure of the class described, a frame; a weighing device; a conveyer carried by the frame; a rotatable spacer mounted upon the frame and overhanging the conveyer; a frame-supported rock shaft; means upon the rock shaft to hold the spacer for step by step movement; a carriage slidable upon the frame and having means to advance one article after another of the conveyer across the weighing device; and interengaging elements upon the carriage and the rock shaft for actuating the rock shaft to permit a step by step movement of the spacer.

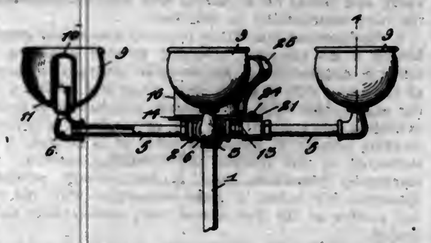
5. In a structure of the class described, a frame; a weighing device; a conveyer carried by the frame; a rotatable, frame-supported spacer overhanging the conveyer; a frame-supported rock shaft; means upon the rock shaft to hold the spacer for step by step movement; a carriage slidable upon the frame and having means to advance one article after another from the conveyer across the weighing device, and a pawl tiltably supported upon the rock shaft and engageable by the carriage to actuate the rock shaft and to permit a step by step movement of the spacer.

[Claims 6 to 14 not printed in the Gazette.]

1,016,851. DRINKING-FOUNTAIN. HERMAN N. RODEN, Oshkosh, Wis. Filed Apr. 26, 1911. Serial No. 623,382. (Cl. 137—11.)

1. In a drinking fountain, the combination of a supply pipe, a four way connection secured thereon, supporting pipes threaded into said connection, said pipes having cups secured on the outer ends thereof, and an emergency cup detachably secured to a plate disposed upon said four way connection.

2. In a drinking fountain, the combination of a supply pipe, a four way connection secured thereon, provided with threaded openings, supporting pipes secured in said openings, elbows threaded on the outer ends of said pipes, cups secured on the upper end of said elbows, said cups having a vertically disposed tubular member centrally arranged therein, communicating with said supporting pipes and said tubular members having passages at the bottom thereof opening into the interior of the cups.



3. In a drinking fountain, the combination of a supply pipe, having a four way connection secured thereon, supporting pipes threaded into said connection, cups secured on the outer ends of said supporting pipes, one of said pipes having an upright pipe threaded therein, a plate secured on said upright pipe near the center thereof, and the upper end of said pipe being disposed above said plate and tapered to form a pivot, an emergency cup detachably secured to said plate and mounted on said pivot, and said upright pipe forming a communication with the interior of the cup.

4. In a drinking fountain, the combination of a supply pipe, having a four way connection secured thereto, supporting pipes threaded into said connection, fountain cups secured upon the outer ends of said pipes, a plate horizontally disposed over said connection having a vertically disposed pipe secured therein, the lower end of said pipe being threaded into one of said supporting pipes, and an emergency cup disposed over the upper end, said cup having a vertically disposed tube adapted to fit over the upper end of said pipe, and opening into a vertically disposed tubular member formed integral with the cup, said tubular member being provided with openings communicating with the interior of the cup, and means for detachably connecting said cup to said plate.

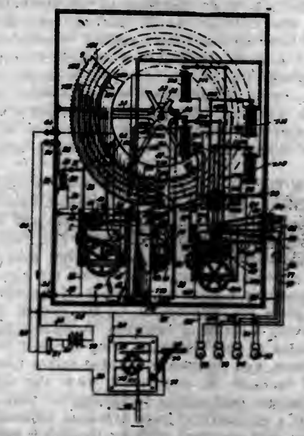
5. In a drinking fountain, the combination of a supply pipe, having a four way connection secured thereto, means for supporting and connecting fountain cups to said connection, a plate disposed over said connection, a vertically disposed pipe secured to said plate, an emergency cup disposed over said pipe, having a flange formed thereon, said flange being provided with a slot, having a reduced portion, said slot being adapted to engage a headed pin secured to said plate and the reduced portion of said slot being adapted to engage the under side of the head of the pin to hold the cup in place.

[Claims 6 and 7 not printed in the Gazette.]

1,016,852. ELECTRIC PROGRAM-CLOCK. AUGUST LEONARD RONELL, Fort Dodge, Iowa. Filed Mar. 31, 1911. Serial No. 618,106. (Cl. 161—2.)

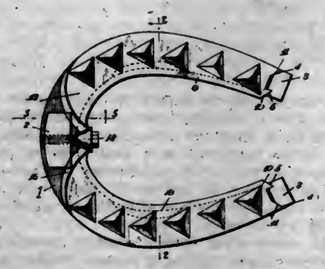
1. A device of the character described comprising a time wheel provided with teeth, a pawl for engaging said teeth and turning said time wheel step by step, a rocking lever carrying said pawl, a spring motor provided with a revoluble member, a connection from said revoluble member to said rocking lever, a cam wheel mounted upon said revoluble member and provided with a shoulder, a pawl provided with a portion for engaging said shoulder of said cam wheel in order to prevent said spring motor from running electrically operated mechanism for moving said pawl out of engagemont with said cam wheel, said electrically operated mechanism including a circuit, and a master clock provided with contact mechanism, said contact mechanism being included in said circuit for controlling said electrically operated mechanism.

2. The combination of a spring motor provided with gearing, a spiral cam connected with said gearing and actuated thereby, a contact member carried by said cam, a second contact member disposed partially within the path of travel of said first-mentioned contact and said cam carried thereby, an alarm circuit connected with said contact members and controllable by them, time controlled mechanism for starting said motor into action and for bringing said second mentioned contact member into engagement with said cam, and means for normally supporting said second mentioned contact member in a position into which it is moved by said cam.



3. A device of the character described comprising a spring motor, a cam wheel connected with said motor and driven thereby, a contact member carried by said cam wheel, a normally stationary contact member disposed adjacent to the path of travel of said cam wheel, a lever for normally supporting the second mentioned contact member, a mechanism including an electric circuit and controllable thereby for causing said lever to drop in order that the first-mentioned contact member may, by the revolution of said contact wheel, be brought into engagement with said second-mentioned contact member, means controllable by said electric circuit for starting said spring motor into action, mechanism including a time wheel for energizing said electric circuit, and an alarm circuit including the first-mentioned contact member and the second-mentioned contact member.

1,016,853. HORSESHOE. WILLIAM RUFF, New York, N. Y. Filed Mar. 29, 1911. Serial No. 617,616. (Cl. 168—11.)



1. The combination with a horseshoe, of a plurality of plates engaging the bottom of said horseshoe, said plates having projections at their opposite ends, and said shoe having recesses formed in the forward and rear calks to receive said projections, and removable means carried by the forward part of the shoe and engaging the forward ends of the said plates to lock the plates against displacement.

2. The combination with a horseshoe, of removable plates attached to the bottom of said shoe, said plates

having projections formed on their opposite ends, and said shoe having recesses or notches in the forward and rear calks to receive said projections, said plates also having upstanding flanges for engaging against the inner sides of the shoe, and each having a lug extending laterally from the top of said flanges, said lugs being beveled on their lower sides and engaging against the corresponding beveled surface of the body of the shoe, and means removably fastened to the front part of the body of the shoe to engage the adjacent ends of the plates to lock the said plates against displacement.

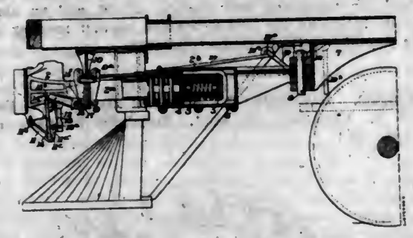
3. In a device of the kind described, a plate adapted to fit against the bottom of the horseshoe, and having one edge curved to correspond with the outer edge of the horseshoe, and an upstanding flange formed along the opposite edge, said plate having projections at its front and rear to engage notches on the shoe, to hold the same in place.

4. In a device of the kind described, a plate adapted to fit against the body of the horseshoe, said plate having projections extending from its front and rear to engage recesses formed in the body of the shoe, and having an upstanding flange along one edge, said flange having a laterally-extending lug adjacent the top, to engage a corresponding surface on the body of the shoe.

5. A plate for attachment to the bottom of a horseshoe, having a series of openings therethrough, the plane of the sides of said openings being inclined to the plane of the plate, and a series of pointed spikes having lateral surfaces inclined to correspond with the sides of the said openings, said spikes being smaller than said openings, and a plurality of lugs arranged adjacent one edge of each of said openings whereby the spikes can be put in place after the plate is attached to the bottom of the horseshoe, and means held in place by said lugs and engaging the lateral surfaces of the said spikes to keep the spikes from falling out.

[Claims 6 to 8 not printed in the Gazette.]

1,016,854. UNCOUPLING MECHANISM FOR CAR-COUPLINGS. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 12, 1906. Serial No. 522,351. (Cl. 213—59.)



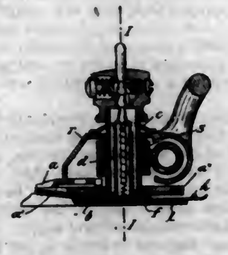
1. In uncoupling mechanism for car couplers the combination with a laterally moving car coupler, of a lifting member, a lever for actuating said member, a bail-shaped device connected with said lever to move with the coupler in the lateral movements of the latter, and lever mechanism connected to the bail-shaped device to raise the same and thereby raise the lifting device; substantially as described.

2. The combination with a radially swinging bottom-opening car coupler, having a locking member and a lifting device, of a lever connected to said device, a bail-shaped member engaging said lever and having upwardly extending arms, a transverse shaft having levers connected to said arms, and means for operating said shaft from the side of the car; substantially as described.

3. The combination with a bottom opening radially swinging car coupler having a vertically movable lock actuating member, of a lever connected to said device, a bail-shaped element having a transverse portion engaging said lever and having upwardly extending side arms, a rock shaft carried by a part movable laterally with the coupler having levers connected to said arms, a longitudinally extending actuating rod also connected to said shaft, and means for actuating said rod from the side of the car; substantially as described.

4. The combination with a laterally moving car coupler, having a movable lock releasing member extending below the coupler head, an actuator pivotally supported at the under side of the coupler shank and having a lifting engagement with said member and having a portion extending upwardly at one side of the head, a laterally movable member in which the actuator is pivoted, a rod connected to said portion and extending upwardly and rearwardly therefrom, and a transversely extending operating rod having a loose connection with the rear end portion of the first named rod; substantially as described.

1,016,855. HAIR-CLIPPING MACHINE. HANS SCHNEIDER, Nuremberg, Germany. Filed Mar. 20, 1911. Serial No. 615,789. (Cl. 30—1.)



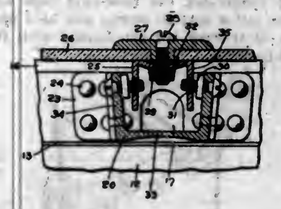
1. A hair clipping machine comprising a bottom plate, a threaded extension revoluble with and carried by said plate, said threaded extension being provided with flattened portions of different lengths extending longitudinally of the periphery thereof, cutting mechanism superjacent to said plate and movable relative thereto, a threaded wheel in engagement with said threaded extension and carried by said cutting mechanism, means rotating said wheel upon actuation of said cutting mechanism, whereby the latter is raised from said plate, and means retaining said threaded extension upon one of said flattened portions in the path of said threaded wheel, whereby the same is rendered inactive upon movement to the said interrupted portion, combined substantially as and for the purpose set forth.

2. A hair clipping machine comprising a bottom plate, cutting mechanism superjacent to said plate and movable relative thereto, means operable upon actuation of said cutting mechanism for raising the latter from said plate, interchangeable means rendering said first mentioned means inoperative subject to movement between the cutting mechanism and said plate through a line of predetermined length, and a guide comb interposed between said cutting mechanism and said bottom plate adapted to follow closely the cutting mechanism upon movement thereof, for guiding the hair thereto.

3. In a hair clipping machine, the combination with a bottom comb plate, cutting mechanism superjacent to said plate, and movable relative thereto, of a resilient comb plate intermediate the said comb plate and cutting mechanism, adapted to follow closely the cutting mechanism upon movement thereof, for guiding the hair thereto.

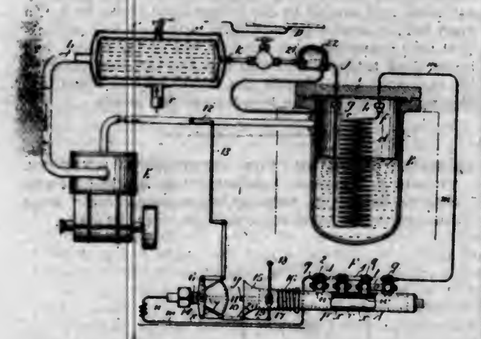
1,016,856. SKYLIGHT-BAR. CHARLES SCHROEDER, Bridgeport, Conn. Filed July 31, 1911. Serial No. 641,465. (Cl. 108—16.)

1. In a skylight, in combination, a relatively heavy supporting bar having raised sides, a relatively light glass carrying bar having depending sides lying adjacent the sides of said supporting bar, the sides of one of said bars being provided with angular slots having portions extending to the edges of said sides and communicating portions extending parallel to said edges, and studs projecting from the sides of the other of said bars and entering said slots.



2. In a skylight, in combination, a supporting bar arranged at an angle to the horizontal and having raised sides, a glass carrying bar arranged parallel to said supporting bar and having depending sides lying adjacent the sides of said supporting bar, the sides of one of said bars being provided with L-shaped slots having transverse portions extending to the edges of said sides and longitudinal portions, studs projecting from the sides of the other of said bars and entering said slots, said slots being arranged to cause said studs to be normally held at the ends of the longitudinal portions thereof away from said transverse portions.

1,016,857. STEAM-GENERATING SYSTEM. SYDNEY HOWARD SHEPHERD, Cricklewood, England. Filed Jan. 14, 1911. Serial No. 602,717. (Cl. 60—6.)



1. In combination, a steam generator, an oil vapor burner adapted to heat such generator, a motor deriving steam from the generator, an oil vessel adapted to be heated by exhaust steam from the motor and a vaporizer associated with the burner supplied with oil from the oil vessel and located in the generator, substantially as described.

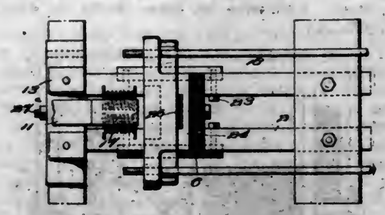
2. In combination, a steam generator, an oil vapor burner adapted to heat such generator, a motor deriving steam from the generator, an oil vessel adapted to be heated by exhaust steam from the motor, a vaporizer associated with the burner supplied with oil from the oil vessel and located in the generator and means comprising a Bourdon pressure tube adapted to control the flow of oil from the vessel to the vaporizer in accordance with the pressure in the generator.

3. In combination, a steam generator, an oil vapor burner adapted to heat such generator, a motor deriving steam from the generator, an oil vessel adapted to be heated by exhaust steam from the motor, a vaporizer supplied with oil from the oil vessel, a connection from the vaporizer leading to the burner, a vapor nozzle co-acting with the burner, a throttle valve controlling the supply of steam to the motor and means associated with the nozzle adapted to be operated conjointly with the throttle valve and vary the supply of vapor in accordance with the variation in the supply of steam.

4. In combination, a steam generator, an oil vapor burner adapted to heat such generator, a motor deriving steam from the generator, an oil vessel adapted to be heated by exhaust steam from the motor, a vaporizer supplied with oil from the oil vessel, a connection from the vaporizer leading to the burner, a vapor nozzle co-acting with the burner, a throttle valve controlling the supply of steam to the motor, an adjustable air inductor associated with the burner, a valve plate associated with the nozzle adapted to vary the discharge of vapor therefrom, and means connecting the throttle valve, valve plate and inductor for simultaneous operation.

5. In combination, a steam generator, an oil vapor burner adapted to heat such generator, a motor deriving steam from the generator, an oil vessel adapted to be heated by exhaust steam from the motor, a vaporizer associated with the burner supplied with oil from the oil vessel and located in the generator, and a superheating device heated by the burner receiving vapor from the vaporizer and conducting it to the burner.

1,016,858. DRAFT-RIGGING FOR ROLLING-STOCK. HARMAN STRAUB, Ensley, Ala. Filed Nov. 23, 1910. Serial No. 593,910. (Cl. 213—41.)



1. The combination of a car frame, a draw bar at each end of said car frame, a detachably mounted support for the rear end of each of said draw bars, connections between the rear end of each of said draw bars and its detachably mounted support, tie bolts connecting said detachably mounted supports with their adjacent end sills of the car frame, and tie rods connecting said detachably mounted supports together, substantially as described.

2. The combination of a car frame, a draw bar at each end thereof, a detachably mounted support for each of said draw bars, connections between the rear end of each of said draw bars and its adjacent detachably mounted support, including as an element cushioning means, an abutment for each of said detachably mounted supports, slidably mounted on the center sills of said frame, intermediate of said detachably mounted supports and adapted to engage the inside faces thereof, tie bolts forcing said abutments in engagement with said detachably mounted supports, and tie rods connecting said detachably mounted supports together for holding same snugly against said abutments, substantially as described.

3. The combination of a car frame, a casing for each end of said frame formed by a pair of castings adjustably mounted longitudinally of said frame and divided laterally relatively to said frame, said castings having recessed inner faces providing a pocket when assembled, slots being cut in said castings and leading from said recesses, a draw bar, means connecting the inner ends of said draw bar within said pocket, permitting said draw bar to swing laterally and to reciprocate longitudinally under limited restraint, tie bolts connecting the inner castings of said casings with their adjacent end sills of the car frame, and tie rods connecting the outer castings of said casings together and holding said castings snugly assembled and secured together, substantially as described.

4. The combination of a car frame, a short track mounted on the outside faces of the center sills, adjacent the

1,016,862. APPARATUS FOR PRODUCING PERFO-

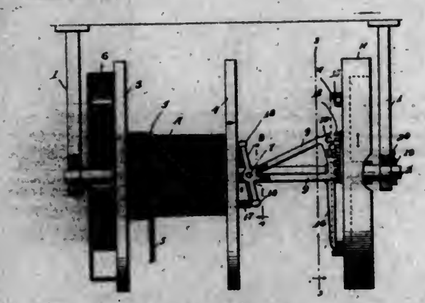
for feeding a sheet to be perforated therethrough at a

end sills of the car frame, a pair of castings recessed on their upper edge to form upwardly disposed projections having a horizontal and a vertical flat surface engaging the bottom and sides of said center sills, the vertical walls of said recess being provided with opposed longitudinal grooves adapted to receive said tracks, said recess terminating centrally in a slot opening into a lower recess providing a pocket when said castings are assembled and secured, a draw bar, and means resiliently connecting the inner end of said draw bar within said pocket permitting said draw bar to reciprocate longitudinally and to swing laterally under tension of said resilient connection, substantially as described.

5. The combination of a car frame, a draw bar casing at each end of said car frame, said casing comprising a two part casting having recesses cut in their inner faces for forming a pocket when the parts are assembled, the outer of said castings having a slot leading from said pocket, a draw bar disposed in each of said slots and extending within said pocket, means resiliently connecting said draw bar with said casing within said pocket, tie bolts adjustably connecting said casings with the said end sills of the frame and tie rods connecting said casings together, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,016,859. FIRE-ESCAPE. HERMAN J. WALTERS, Hamilton, Mont. Filed Mar. 22, 1911. Serial No. 616,078. (Cl. 227—2.)



In a fire escape of the class described, a drum, a shaft upon which said drum is supported for rotation, a flexible element wound upon the drum, a wedge-shaped cam associated with one head of the drum, an escapement lever supported for oscillation on the supporting shaft of the drum and having its ends provided with anti-friction members disposed in the path of the cam, divergent arms extending from the lever and carrying a rack segment, a balance wheel supported upon the drum carrying shaft and having a toothed portion meshing with the rack, an arcuate casing upon the balance wheel, a volute spring within said casing and engaging one end of the latter, and an arm extending from the shaft within the casing and engaging the other end of the volute spring to place the latter under tension when the balance wheel rocks in one direction under the impulse of the rack associated with the escapement lever.

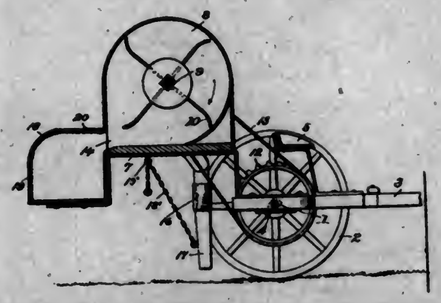
1,016,860. DRAG-BUCKET. WILLIAM C. WEEKS, Vancouver, British Columbia, Canada. Filed Nov. 28, 1910. Serial No. 594,588. (Cl. 37—54.)

1. The combination with a drag bucket having a closed top, a draft bail, a draft rope attached to said bail, a back-haul rope attached to the rear end of the bucket, a gate hinged to the upper edge of the bucket at the rear, a manually releasable catch for said gate adapted to lock when the gate is closed, and means connecting said back-haul rope with the draft bail to swing the latter upward and backward.

2. The combination with a drag bucket having a closed top, a gate hinged to the upper rear edge of the bucket to swing outward and adapted to close the rear open end of the bucket, a manually releasable catch automatically engaged to lock the door when it is closed, a draft bail, a draft rope connected with the bail, a back-haul rope, and means connecting the back-haul rope and the bail whereby the latter may be swung and held upwardly and rearwardly to thereby tilt the bucket with its rear end in elevated position.

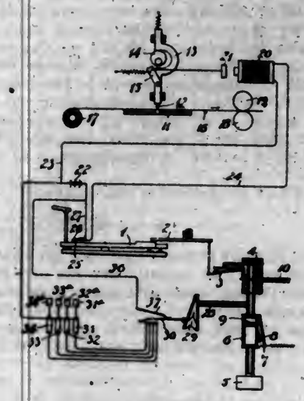
3. The combination with a drag bucket having a closed top, a gate pivoted to the upper rear edge of the bucket to swing outward and adapted to close the rear open end of the bucket, a manually releasable catch for said gate automatically locked when the gate closes, of an upwardly extending arm carried by the forward end of the bucket, a draft bail, a draft rope connected with said bail, a back-haul rope connected with the rear end of the bucket, and connections between said arm and the bail controlled by the back-haul rope whereby the bucket may be tilted into digging position with its forward end downward.

1,016,861. MACHINE FOR GATHERING INSECTS. THOMAS J. WHEELER, Lewisville, Ark., assignor of one-half to George M. McKnight, Lewisville, Ark. Filed June 29, 1911. Serial No. 636,124. (Cl. 43—1.)



A machine for gathering insects comprising a wheel mounted axle, side arms arched at their intermediate portions and mounted at their forward ends upon the axle, a pair of casings mounted upon the intermediate arched portions of the arms, a shaft journaled in the casings, fans fixed to the shaft and located in the casings, said casings having inlet openings and outlet openings, a pulley mounted upon the axle and operatively connected with the shaft at a point between the casings, intake pipes communicating with the interiors of the casings and located behind said pulley and at the opposite sides thereof, and a pound mounted upon the rear ends of the arms and communicating with the outlet openings of the casings.

1,016,862. APPARATUS FOR PRODUCING PERFORATED NOTE-SHEETS. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed July 21, 1911. Serial No. 639,755. (Cl. 164—113.)



1. In an apparatus for producing perforated note sheets for music playing instruments, a cutter apparatus including cutters for forming in a sheet note perforations, and a separate cutter for forming in said sheet expression controlling perforations, a manually controllable player apparatus, said cutter apparatus and said player apparatus being so arranged as to operate simultaneously and coöperatively, the speed of one being variable relatively to the speed of the other, the speed of the latter being substantially uniform, means between said player apparatus and said cutter apparatus for controlling the moment of and duration of operation of the cutters for forming note perforations in the sheet being perforated, and means between the player apparatus and the cutter apparatus for controlling the moment of and duration of operation of the cutter for forming the expression controlling perforations in the sheet being perforated.

2. In an apparatus for producing perforated note sheets for music playing instruments, a cutter apparatus including a plurality of cutters for forming note perforations in a note sheet, and also a plurality of cutters for forming perforations in said sheet to control the power of the instrument with which said note sheet is to be used, a mechanical player apparatus manually controllable as to power, means for driving said cutter apparatus to feed a note sheet therethrough at a substantially uniform speed, and manually controllable means for driving said player apparatus at a variable speed, means between said player apparatus and said cutter apparatus for controlling the moment of and duration of the operation of the cutters for cutting note perforations, and other means between said player apparatus and said cutter apparatus for controlling the operation of the cutters for forming the power controlling perforations.

3. In an apparatus for producing perforated note sheets, a mechanical cutter apparatus, including a plurality of cutters, some for forming note sheet perforations and some for forming expression controlling perforations, in combination with a manually controllable mechanical player piano having elements therein for controlling speed of operation thereof, and having other elements therein for controlling the power thereof, connections between said mechanical player piano and said mechanical cutter apparatus for determining the moment of and duration of operation of the cutters for forming the note perforations, and other means between the power controlling elements of the mechanical player piano and the cutters for the expression controlling perforations for controlling the operation of said expression controlling perforation cutters, said cutter apparatus having means for feeding a sheet to be perforated therethrough at a substantially uniform speed.

4. In an apparatus for producing perforated note sheets for music playing instruments, a cutter apparatus including a plurality of cutters for forming perforations in a note sheet to control the selection of notes and also a plurality of cutters for forming perforations in said sheet to control expression, a mechanical piano-player apparatus including a pneumatic system for operating the note producing mechanism of a piano with which said player apparatus may be associated, and means of connection between said pneumatic system and the cutter for producing said expression controlling perforations whereby said cutters will be controlled by variations in air tension in said pneumatic system.

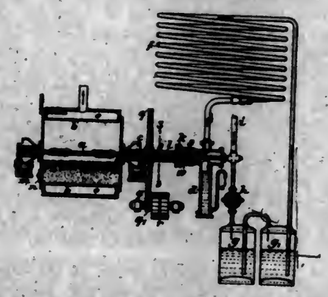
5. In an apparatus for producing perforated note sheets for music playing instruments, a cutter apparatus including mechanically operated and controlled cutters for forming note perforations in a sheet, means for driving a sheet to be perforated across the path of movement of said cutters, in combination with a piano player apparatus the latter being controllable as to speed, note striking means in said player apparatus and coupler mechanism between said note striking means and said cutters respectively for controlling the selection of cutters as well as the moment of and period of operation of said cutters on said sheet.

[Claim 6 not printed in the Gazette.]

1,016,863. PROCESS OF TREATING NUTS. WILLIAM R. WHITE, Birmingham, Ala., assignor of one-half to Hugh Martin and James A. Martin, Birmingham, Ala. Filed Mar. 18, 1911. Serial No. 615,301. (Cl. 99—1.)

The herein described process for producing salted nuts in the shell, which consists in pickling the unshelled nuts in a bath of brine, washing the shells to remove the salt thereon, drying and roasting the unshelled nuts, and moistening the shells of the nuts while heated with a solution of gelatin and water to coat the shells, substantially as described.

1,016,864. APPARATUS FOR PRODUCING CATALYSTS. MOSES WILBUSCHEWITSCH, Nischninovgorod, Kanavino, Russia. Original application filed Jan. 12, 1911, Serial No. 602,322. Divided and this application filed July 19, 1911. Serial No. 639,452. (Cl. 23—3.)



1. In an apparatus for producing a catalyst, the combination, with a rotary drum, of means for supplying a reducing gas to said drum, means for withdrawing the said gas and the gases produced by the reaction from said drum, and means for removing the foreign matter from the gases withdrawn from the drum, and returning said matter to the drum, and means for returning the reducing gas to the drum.

2. In apparatus for producing a catalyst, the combination, with a rotary drum, of means for supplying a reducing gas to said drum, means for withdrawing the said gas and the gases produced by the reaction from said drum, and means for removing the dust from the gases withdrawn from the drum, and returning the dust to the

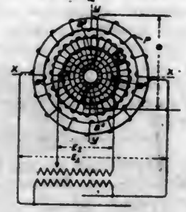
drum, and means for returning the reducing gas to the drum.

3. In apparatus for producing a catalyst, the combination, with a rotary drum, of means for supplying a reducing gas to said drum, means for withdrawing the said gas and the gases produced by the reaction from said drum, means for removing the dust from the gases withdrawn from the drum, and means for returning the duct to the drum.

4. In apparatus for producing a catalyst, the combination, with a rotary drum, of means for supplying a reducing gas to said drum, means for withdrawing the said gas and the gases produced by the reaction from said drum, means for drying and revivifying the gases withdrawn from the drum, and means for returning the dried and revivified gas to the drum.

5. In apparatus for producing a catalyst, the combination, with a rotary drum, of means for supplying a reducing gas to said drum, a tube connected with said drum, and a screw-conveyer located within said tube and adapted to separate the dust from the gases withdrawn from the drum, and means for returning the dust into the drum.

1,016,865. ALTERNATING-CURRENT DYNAMO-ELECTRIC MACHINE. GABRIEL WINTER, Vienna, Austria-Hungary, and FRIEDRICH EICHBERG, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Original application filed June 11, 1902, Serial No. 111,180. Divided and this application filed Aug. 3, 1906. Serial No. 329,022. (Cl. 172—276.)



1. An alternating current motor of the commutator type, having brushes coöperating to form for each pair of primary poles, first a path along the line of the primary field for the currents induced in the armature, and second, means for feeding a magnetizing current from outside for generating the torque-producing field of the motor.

2. In an alternating-current motor of the commutator type, brushes and connections therefor coöperating to form for each pair of primary poles, first, a path along the line of the primary field for the currents induced in the armature, and second, means for generating at all speeds a torque-producing field by feeding an appropriate magnetizing current from outside to the armature and separate means for impressing a counter-electromotive force on the armature.

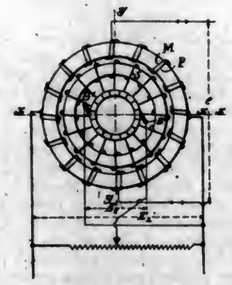
3. In an alternating-current motor of the commutator type, brushes and connections therefor coöperating to form for each pair of primary poles, first, a path along the line of the primary field for the currents induced in the armature, and second, means for generating at all speeds a torque-producing field by feeding an appropriate magnetizing current from outside to the armature and separate means for impressing a variable counter-electromotive force on the armature.

4. In an alternating-current machine of the commutator type, brushes and connections therefor coöperating to form for each pair of primary poles, first along the line of the primary field (*i. e.* the working-axis), a path approximating the same axis for the working currents in the armature, and second, means for feeding from outside to the armature a magnetising current, the connections for feeding said magnetizing current being arranged to supply at all speeds current substantially in phase with said working-currents and separate means for impressing a variable counter-electromotive force on the armature.

5. In an alternating-current machine of the commutator type, brushes and connections therefor coöperating to form for each pair of primary poles, first along the line of the primary field (*i. e.* the working-current axis), a path approximating the same axis for the working-currents in the armature, and second, separate brushes for feeding from outside a magnetizing current to the armature, the connections for feeding said magnetizing current being arranged to supply at all speeds current substantially in phase with said working-currents and separate means for impressing a counter-electromotive force on the armature.

[Claims 6 to 9 not printed in the Gazette.]

1,016,866. ALTERNATING-CURRENT DYNAMO-ELECTRIC APPARATUS. GABRIEL WINTER and FRIEDRICH EICHBERG, Vienna, Austria-Hungary, assignors to General Electric Company, a Corporation of New York. Filed June 11, 1902, Serial No. 111,180. Renewed Sept. 10, 1908. Serial No. 452,450. (Cl. 172—276.)



1. In combination, an alternating current machine supplied with a commutator and brushes, windings on both members of said machine adapted to magnetize said machine, in a fixed direction, means for supplying to said windings voltages of relatively varying magnitudes, and means for magnetizing said machine in a second direction at an angle to the first direction.

2. In combination, an alternating current machine supplied with a commutator and brushes, windings on both members adapted to produce jointly a single alternating field, means for supplying to said windings voltages varying in relative magnitude, and means for producing a second alternating field at an angle to the first.

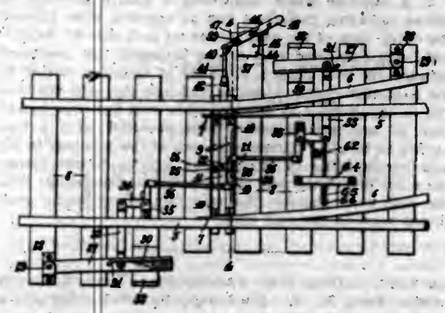
3. In combination, an alternating current machine supplied with a commutator and brushes, means for supplying to adjacent points on both members of said machine voltages of relatively varying magnitude, and means for supplying at other points of one of the members currents in phase with the currents produced by the first named voltages.

4. In combination, an alternating current machine, windings on the stator of said machine adapted for polyphase currents, leads from a source of polyphase voltages to said windings, windings on the rotor of said machine supplied with a commutator, brushes bearing on the commutator, and means for supplying to said brushes voltages variable in magnitude relative to the voltages of said leads.

5. In combination, an alternating current machine supplied with a commutator and brushes, means for producing in one member an alternating magnetic field, means for supplying to that part of the winding of the other member under the influence of said field a variable voltage opposing the voltage induced in said winding by said field, and means for producing a second field at an angle to the first.

[Claims 6 to 15 not printed in the Gazette.]

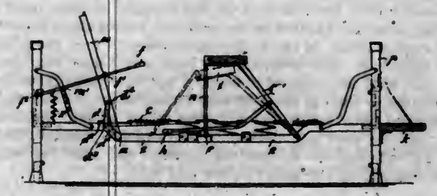
1,016,867. AUTOMATIC RAILWAY-SWITCH. JAMES LEE WOOLEY, Shreveport, La. Filed July 6, 1911. Serial No. 637,058. (Cl. 104—23.)



1. In a railway switch, the combination with main and siding rails, of movable switch bars arranged at the points of intersection of the siding rails with the main rails, spaced uniting bars connecting the switch bars, a plunger element movably mounted between the uniting bars, expansion means coöperative with the plunger element and the uniting bars for moving the same in reverse directions to each other, locking means for holding the plunger element and uniting bars against independent movements, manually operated means connected with the plunger element for opening and closing the switch bars, means engaging the manually operated means to lock the same for holding the switch bars open, and means operated upon by a moving car for releasing the plunger locking means, whereby the switch bars will automatically swing to closed position.

2. In a railway switch, the combination with a main and siding rails, of movable switch bars arranged at the points of intersection of the siding rails with the main rails, spaced uniting bars connecting the switch bars, a plunger element movably mounted between the uniting bars, expansion means coöperative with the plunger element and the uniting bars for moving the same in reverse directions to each other, locking means for holding the plunger element and uniting bars against independent movements, manually operated means connected with the plunger element for opening and closing the switch bars, means engaging the manually operated means to lock the same for holding the switch bars open, and means located at opposite sides of the switch bars and operated upon by a moving car for releasing the plunger locking means, whereby the switch bars will automatically swing to closed position.

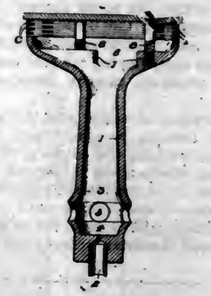
1,016,868. BEDSTEAD. HEINRICH ACKERMANN, Berlin, Germany. Filed Apr. 14, 1911. Serial No. 621,038. (Cl. 5—43.)



1. In combination with a bed bottom, of an adjustable support for the end section, a pair of links of unequal length at each side of said support, each of said links being pivoted to said support and at fixed points to the bedstead frame so that said support is capable of turning about the two center lines of the fixed pivots of said links with said bedstead frame, said turning movement being analogous to or capable of being resolved into a rotary movement about an axis of rotation located in space above said bedstead frame and mattress, the longer of said links being extended to form an operating handle, means for adjusting said support by turning said links about their fixed pivots and means for retaining said longer arm in adjusted position.

2. In combination with a bed bottom, of an adjustable support for the end section, a pair of links of unequal length at each side of said support, each of said links being pivoted to said support and at fixed points to the bed bottom so that said support is capable of turning about the two center lines of the fixed pivots of said links with said bed bottom, the longer of said links being extended to form an operating handle, bearings carried by said longer link, a spring-controlled spindle slidable in said bearings and having a handle at one end thereof and a nose at the other end thereof and a toothed rack with which said nose is adapted to engage to retain said longer link in adjusted position.

1,016,869. FUEL-GAS BURNER. JOHN C. BECKFIELD, Pittsburgh, Pa. Filed Nov. 30, 1908. Serial No. 465,429. (Cl. 158—116.)



1. A fuel gas burner having a mixer for gas and air, and comprising a body portion, a cap to close the top thereof, and an annular portion interposed between the body portion and the cap and secured therebetween, the said annular portion comprising a series of narrow plain rings and a series of rings, peripheries of which are provided at regular intervals with radially projecting fingers, the said plain rings being alternately disposed between the rings having fingers.

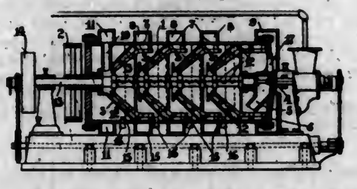
2. A fuel gas burner comprising a hollow chamber formed to receive a combustible gas, and a cap adapted to close the same, the portion of the wall of said chamber between the cap and the lower portion thereof comprising a series of superposed thin metallic members, the edge of each alternate one of said series of members having inwardly extending slots formed between fingers, each of which is provided with a shoulder, and the other series of members being plain and seated upon the first mentioned members between the shoulder and the outer edge thereof, whereby series of gas emission openings are formed, and the said members are held against displacement by expansion and contraction.

3. A fuel gas burner comprising a hollow chamber adapted to receive gas and air, a cap to close the same, the upper portion of the wall of said chamber comprising a series of superposed thin metallic members, the edge of every alternate one of which is provided with slots, the edges of the members interposed therebetween being uninterrupted, whereby gas emission orifices are formed in the upper portion of the wall of said chamber.

4. A fuel gas burner comprising a hollow chamber adapted to receive gas and air, a cap to close the same, the upper portion of the wall of said chamber comprising a series of thin metallic members superposed between the lower portion of said chamber and said cap and secured therebetween, the edge of every alternate member of said series being provided with projections, the projections being out of horizontal alinement with the re-

maining portions of said members, and the remaining members of the series being plain metallic members interposed between said members having projections, whereby gas emission orifices are formed.

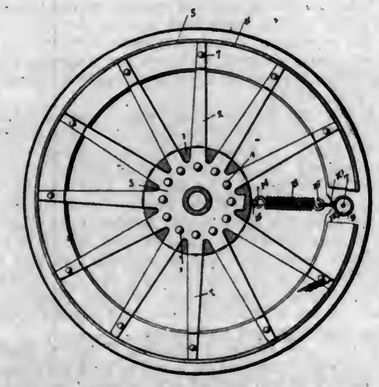
1,016,870. PROCESS OF SEPARATING SOLIDS AND LIQUIDS. JOHN J. BERRIGAN, Orange, N. J., assignor to Francis J. Arend, New York, N. Y., and John Bernstrom, Stockholm, Sweden. Filed Mar. 6, 1908. Serial No. 419,486. (Cl. 127—3.)



1. In the separation of solids and liquids, the process which comprises forming by centrifugal action a layer of said materials, working the solids thereof toward one end of said layer, discharging the liquid thereof at the other end of said layer, and simultaneously circulating gas over the surface of said layer during the said separation of the liquid and solid material, thereby carrying off liberated vapor.

2. In the separation of solids and liquids, the process which comprises forming by centrifugal action a layer of said materials, working the solids thereof toward one end of said layer, discharging the liquid thereof at the other end of said layer, and simultaneously circulating gas over the surface of said layer toward that end thereof where liquid is discharged during the said separation of the liquid and solid material, thereby carrying off liberated vapor.

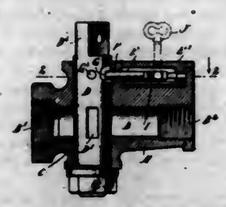
1,016,871. RESILIENT WHEEL. HOWARD WILBUR BROOKS and SMITH FREDERICK KRUPP, Memphis, Tenn. Filed Apr. 21, 1911. Serial No. 622,470. (Cl. 152—28.)



1. A resilient wheel comprising a hub, a plurality of spokes radiating therefrom and on opposite sides thereof, rims secured to the outer ends of the said spokes, bolts extending from the spokes on one side of the wheel to the spokes on the other side of the wheel whereby the rim is positioned thereon, a U-shaped tire positioned between the said rims, a plurality of alining openings in each side of the tire, a plurality of thimbles carried by the said tire, each thimble being positioned by engagement in one pair of said alining openings, the said bolts connecting the said spokes and rims extending through the said thimbles and being normally out of engagement therewith, together with a number of springs each in engagement at one end with the hub and at the other end with the said thimbles whereby the said tire is resiliently mounted with respect to the hub.

2. A resilient wheel comprising a hub, a plurality of spokes radiating therefrom and on opposite sides thereof, the outer ends of the said spokes on each side of the said hub being connected to a rim, a U-shaped tire positioned between the said rims, a plurality of thimbles carried by the said tire, bolts extending through the said thimbles and in engagement at opposite ends with opposite spokes, each of the said thimbles being provided with a boss having an opening therein and each of the openings in the said bosses being in engagement with a helical spring, the other end of the said spring being in engagement with the said hub whereby the said tire is resiliently positioned between the said rims.

1,016,872. LOCK FOR GAS-COCKS. JOHN J. COMER, New York, N. Y. Filed Jan. 18, 1911. Serial No. 603,245. (Cl. 137—7.)

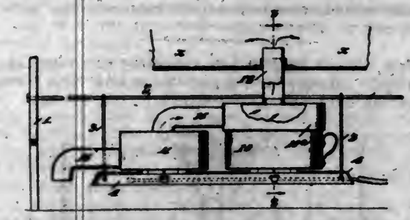


1. A gas cock, comprising a body provided with a bore having an inlet and an outlet, an integral seat formed in the said body, and an integral lock casing provided at its top with a cover having a key hole for the insertion of a key, a plug mounted to turn in the said seat and having a port adapted to register with the said inlet and the said outlet, the said plug being provided at its outer end with an offset for the reception of a device for turning the plug, the plug having peripheral recesses within the said seat at right angles to each other, a key-controlled bolt mounted to slide in the said lock casing and adapted to pass through the inner wall of the casing into the said seat to engage the said plug recess in register at the time with the said bolt to lock the plug against turning, the bolt when in engagement with one of said recesses holding the plug in open position, and when in engagement with the other recess holding said plug in closed position, and a spring-pressed and key controlled tumbler mounted to slide in the said lock casing for locking the bolt in forward or retracted position.

2. A gas cock, comprising a body having an inlet, an outlet, a plug seat and an integral lock casing provided at its top with a cover, the latter having a key-hole for the insertion of a key, a plug mounted to turn in the said seat and having a port adapted to register with the said inlet and outlet, the said plug having peripheral recesses within the said seat at right angles to each other, a bolt mounted to slide in the said lock casing and adapted to engage either of the said plug recesses to lock the plug in closed or open position, the said bolt being provided at one side with spaced notches, a spring-pressed tumbler mounted to slide in the said lock casing below the bolt and provided with means for engaging either of said notches to lock the said bolt in forward or retracted position, and a key adapted to be inserted through the said key-hole for controlling the said tumbler and bolt.

1,016,873. VAPORIZING AND AIR-HEATING ATTACHMENT FOR BATH-CABINETS. BERT J. DIBBLE, Denver, Colo. Filed July 5, 1911. Serial No. 636,906. (Cl. 4—13.)

1. The improved attachment for bath cabinets, comprising a vaporiser having a pipe extending into the cabinet, an air-heating drum, and a pipe connecting it with the vaporiser and provided with a lateral air inlet, and a heating apparatus proper on which said receptacle and drum are supported, substantially as described.

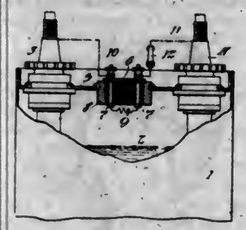


2. The improved attachment for the purpose specified, comprising a vaporizer proper having a pipe for conducting vapors into a bath cabinet, an air-heating drum and a pipe connecting it with the vaporizer, a plate provided with heating devices proper whereon the vaporizer and drum are supported, and means for suspending the apparatus beneath the cabinet, substantially as described.

3. The combination with a bath cabinet and a frame for supporting the same, of a detachable portable vaporizing and heating attachment comprising a vaporizer proper having a pipe extending into the cabinet, an air-heater and drum and a pipe connecting it with the vaporizer, said drum having a lateral pipe for introduction of air, a plate provided with openings and burners arranged therein beneath the vaporizer and air-drum respectively, and means for suspending the entire vaporizing and heating attachment from the frame of the cabinet, substantially as described.

4. The improved heating attachment, comprising a vaporizer, an air heating drum, a pipe connecting the same at the top, a lateral pipe extending from the lower portion of the drum for inlet of air, burners for heating the vaporizer and drum, and means for supporting the vaporizer and drum, substantially as described.

1,016,874. MEANS AND METHOD FOR PREVENTING DEPLETION OF ELECTROLYTE. THOMAS A. EDISON, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed June 21, 1911. Serial No. 634,424. (Cl. 204—29.)



1. The method of preventing depletion of electrolyte in a secondary cell which consists in preventing the escape from the cell of the gases evolved during the charging of the same, and causing the oxygen and hydrogen evolved to recombine within the cell to form water, by application of sufficient heat to cause such recombination within the space occupied by said gases during the formation thereof.

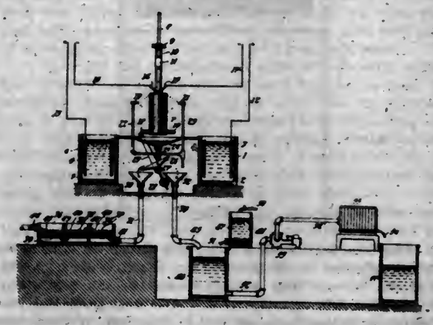
2. The method of preventing depletion of electrolyte in a secondary cell which consists in producing sufficient heat within the space occupied by gases evolved during the charging of a cell, by decomposition of the electrolyte, to cause the recombination of the oxygen and hydrogen to form water, and causing the same to reënter the electrolyte solution.

3. The method of preventing depletion of electrolyte in a secondary cell which consists in causing the conversion of electrical energy into heat within a confined space connected with the electrolyte of a secondary cell during the charging of the cell, the heat generated being sufficient to cause the combination of oxygen and hydrogen evolved from the electrolyte to reform water.

4. In a secondary cell, the combination with the closed containing vessel, and terminals, of an electrical connection across said terminals including a member mounted within the gas-space of the said cell and adapted to be heated by passage of current therethrough to a temperature above that at which oxygen and hydrogen combine to form water.

5. In a secondary cell, the combination with the closed containing vessel having a space in which gas is adapted to collect during the charging of the cell, of a member positioned in said space and adapted to give off heat during the evolution of oxygen and hydrogen in the cell, sufficient to cause the combination of the same to form water.

1,016,875. ELECTROPLATING APPARATUS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed July 28, 1911. Serial No. 641,104. (Cl. 204—5.)



1. In electro-plating apparatus, a cathode for successively receiving electrolytic deposits of different metals, means for washing said cathode comprising a receptacle for receiving the wash water, a plurality of apparatus for separately recovering the valuable constituents of the wash water, and means for causing the wash water from said receptacle to run into any desired one of said apparatus, substantially as described.

2. In electro-plating apparatus, a movable cathode for successively receiving electrolytic deposits of different metals, means for washing said cathode comprising a stationary receptacle for receiving the wash water, a plurality of stationary apparatus for separately recovering the valuable constituents of the wash water, and means for causing the wash water from said receptacle to run into any desired one of said stationary apparatus, substantially as described.

3. The combination with an electro-plating bath containing a soluble salt of one metal, an electro-plating bath containing a soluble salt of another metal, a cathode to be plated with both metals, of means for washing the cathode after removal from each bath, and means for separating the wash water containing a salt of one metal from the wash water containing a salt of the other metal, substantially as described.

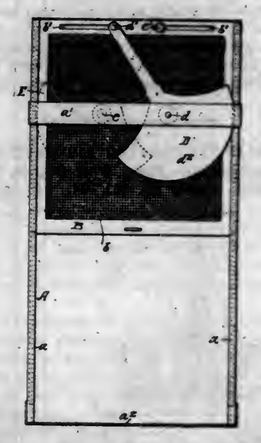
4. The combination with an electro-plating bath containing a nickel salt, an electro-plating bath containing a copper salt, and a cathode to be plated with both metals, of means for washing the cathode after removal from each bath, and means for separating the wash water containing a copper salt from the wash water containing a nickel salt, substantially as described.

5. The combination with an electro-plating bath containing nickel sulfate, an electro-plating bath containing copper sulfate, and a cathode to be plated with both metals, of means for washing the cathode after removal

from each bath, and means for separating the wash water containing copper sulfate from the wash water containing nickel sulfate, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,016,876. MEANS FOR BALANCING FRAMES FOR FIREPLACE SCREENS, BLOWERS, AND WINDOW-SASHES. LOUIS F. EISELE, Philadelphia, Pa., assignor to Wm. H. Watts & Co., Philadelphia, Pa., a Firm. Filed June 1, 1911. Serial No. 630,668. (Cl. 126—202.)



1. The combination in a fire place screen or blower, of a frame adapted to be mounted in the fire place; vertical guides at each side of said frame; a sash containing the screen or blower adapted to the said guides; and two weighted arms, one arm pivoted at the back of the frame and the other arm pivoted at the front of the frame, said arms being independent of each other and connected to the sash, whereby the sash, when raised, will pass between the arms.

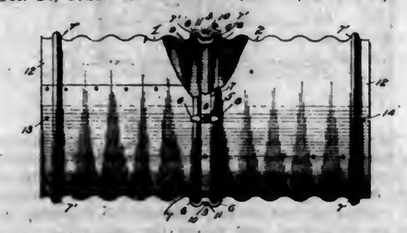
2. The combination in a fire-place screen or blower, of a frame adapted to be mounted in the fire-place, said frame having a solid back, a cross bar extending in front of the frame, vertical guides at each side of the frame, a sash containing the screen or blower adapted to the said guides, slots in the upper portion of the sash, two weighted arms having projections, the projection of one arm entering one slot of the sash and the projection of the other arm entering the other slot of the sash, one of said weighted arms being pivoted to the back plate and the other to the cross bar whereby the screen or blower, when raised, can pass between the two weighted arms.

1,016,877. EAR-PROTECTOR. JAMES A. R. ELLIOTT, New York, N. Y. Filed Jan. 18, 1911. Serial No. 603,244. (Cl. 181—23.)

1. An ear protector comprising an elongated body normally disposed in the meatus of the ear and having a longitudinal canal open at its outer end, and closed at its inner end, forming a cul-de-sac, the said body being provided at its inner end with a transverse opening adjacent to the cul-de-sac.

2. An ear protector, comprising an elongated body having a longitudinal unobstructed canal open at its outer end and closed at its inner end forming a cul-de-sac, and spaced diaphragms on the body, said body being provided with a transverse opening between the diaphragms and with a transverse opening at one side of the inner diaphragm and adjacent to the cul-de-sac.

1,016,878. MEANS FOR JOINING CULVERT-SECTIONS. ALBERT G. FELKER, Marshfield, Wis. Filed Oct. 14, 1911. Serial No. 654,767. (Cl. 61—9.)

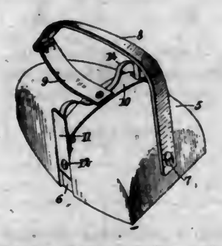


1. Means of joining culvert sections comprising a series of circumferentially spaced clamps arranged at the meeting ends of the sections, each clamp consisting of an outer and an inner clip with oppositely curved portions adapted to fit corresponding portions of the sections.

2. Means of joining culvert sections comprising a series of clamps arranged at the meeting ends of the sections, each clamp consisting of an outer and an inner clip provided with oppositely curved portions adapted to fit corresponding portions of the sections and means for securing the clamps in place consisting of bolts and nuts.

3. Means of joining culvert sections consisting of sections having at their ends special high corrugations with abnormally steep slopes, and a series of clamps arranged at the meeting ends of adjacent sections for joining the sections together, each clamp comprising an outer and an inner clip formed with oppositely curved portions, adapted to engage the outer and inner walls, respectively, of the corrugations above referred to, connecting bolts passing through the clamps and the ends of the culvert sections and nuts screwing on the outer threaded ends of the bolts.

1,016,879. COMBINED SMOOTHING AND GLAZING SAD-IRON. HENRY FLETCHER, Spring Hill, Brisbane, Queensland, Australia. Filed Apr. 19, 1909. Serial No. 490,712. (Cl. 68—26.)



1. The combination in a sad iron, of an iron body having a plurality of working faces, a handle overhanging the iron body and pivoted thereto at one end to swing about the body, and a locking mechanism for engaging the opposite sides of the body to secure the body and handle against relative movement and pivotally connected to the opposite and overhanging end of the handle to swing to and from the handle and the body.

2. The combination in a sad iron, of an iron body, a handle pivoted to the body to swing thereabout, a cross member having latches to engage the opposite sides of the body, and a suspension piece fixed to the cross member and pivoted to the handle to move vertically to and from the iron body.

3. The combination in a sad iron, of an iron body having a plurality of working faces, a handle movably

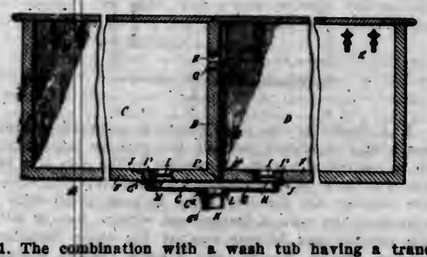
connected with the body to bring either of said faces to a working position, and a member extending crosswise of the body, having means for engaging the opposite sides thereof and supported on the handle to move vertically to and from the iron body independently of the movement of the handle.

4. The combination in a sad iron, of an iron body, a handle pivoted at one end to swing about the body, with the opposite end of the handle terminating above the iron, a suspension piece hinged to said opposite end of the handle, a cross member attached to the suspension piece, and spring-pressed latches for engaging the opposite sides of the iron, pivotally connected at the opposite ends of the cross member.

5. The combination in a sad iron, of an iron body having a plurality of working faces, a handle connected to said body to bring either of said faces in working position, and a cross member connected to and movable vertically to and from the handle and having latches for engaging the opposite sides of the body to lock said handle and body against relative movement.

[Claim 6 not printed in the Gazette.]

1,016,880. TWIN WASTE FOR SOAPSTONE WASH-TUBS. EDWARD E. FLYNT, New York, N. Y., assignor of one-fourth to Walter T. Noble, Brooklyn, N. Y., and one-fourth to Walter T. Noble, Brooklyn, N. Y., and N. J. Filed July 8, 1910. Serial No. 570,971. (Cl. 4—24.)



1. The combination with a wash tub having a transverse partition and outlet openings in its bottom, one at each side of the partition, of a shallow elongated basin on the under side of the tub and into which the outlet openings thereof lead, said basin being provided at its top with an outwardly extending marginal and apertured flange, a central discharge nipple projecting from its bottom, and a slotted lug on each side at its center of length below the flange for securing a waste pipe thereto, cup-shaped plug seats fitting in the outlet openings of the tub and having marginal and apertured flanges fitting upon the inner side of the bottom of the tub, bolts extending through the bottom of the tub and the apertured flanges of the basin and plug seats.

2. A twin waste for a two compartment wash tub, comprising a shallow elongated waste basin open at the top and having a marginal apertured flange adapted to fit against the under side of a wash tub and to be bolted thereto, said basin being provided at its center with a tapering nipple projecting from its under side, and with a laterally projecting lug on each side at its center of length below the said flange, said lugs being provided with openings to receive the bolts by which the waste pipe is secured to the nipple of the basin.

1,016,881. GILL-NET. SIMON J. FOX, Bellingham, Wash., assignor of one-half to David E. Lain, Bellingham, Wash. Filed July 17, 1911. Serial No. 638,904. (Cl. 43—9.)

1. In a gill net the combination of a float line; a lead line; a strip of plain web having meshes of practically uniform size, said float line being connected to one edge of said strip of web and said lead line being connected to the other edge of said web; and means connecting said float line with said lead line at spaced distances, being adapted to retain said float line nearer said lead line than the width of said strip of web, and being further adapted to support said web and permit the same to freely pass over said means.

2. In a gill net comprising a strip of web with a float line attached along one edge of said web and a lead line attached along the other edge of said web, the combination of said gill net and cross lines connecting said float line with said lead line at spaced distances, said cross lines being adapted to maintain said float line nearer said lead line than the width of said web, to support said web, and to permit said web to freely move over the same.

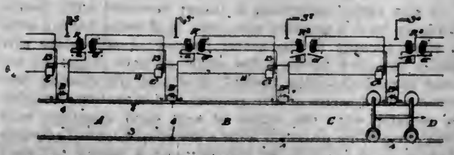
3. In a gill net comprising a strip of web with a float line attached along one edge of said web and a lead line attached along the other edge of said web, the combination of said gill net and pairs of cross lines connecting said float line with said lead line at spaced distances, said web lying between the lines of each of said pairs and being adapted to move over the same, and said pairs of lines being shorter than the width of said web.

4. In a gill net comprising a strip of web with a float line attached along one edge of said web and a lead line attached along the other edge of said web, the combination of said gill net; pairs of cross lines connecting said float line with said lead line at spaced distances, said web lying between the lines of each of said pairs and being adapted to move over the same, and said pairs of lines being shorter than the width of said web; and a plurality of inflexible spreaders, of practically the same length as said cross lines, attached to said float and lead lines and being adapted to retain portions of said lead line at a fixed distance from portions of said float line.

5. In a gill net comprising a strip of web having a strengthening line attached along each edge of the same, the combination of said net and a plurality of pairs of cross lines, said pairs of cross lines being adapted to connect said strengthening lines at spaced intervals and retain the same in nearer proximity than the width of said web and being further adapted to retain said web between the individual members of each of said pairs of cross lines and permit said web to freely move over said cross lines.

[Claim 6 not printed in the Gazette.]

1,016,882. RAILWAY SIGNALING SYSTEM. THOMAS M. FREEBLE, Rochester, Pa., assignor of one-half to Raymond M. Kaufmann, Pittsburgh, Pa. Filed Apr. 29, 1911. Serial No. 624,152. (Cl. 246—30.)



1. In a railway signaling system, a track rail divided into insulated sections, a source of signaling current having opposite terminals connected to the respective sections at opposite sides of the insulation and adjacent thereto, and normally closed signal controlling circuits also having their terminals connected to said sections at opposite sides of the insulation, the two sources of current connected to each track section being connected thereto to oppose each other; substantially as described.

2. In a rail signaling system, a track rail divided into sections insulated from each other, and sources of current having their opposite terminals connected to adjacent rails at opposite sides of the separating insulations to be short-circuited by the wheels of a vehicle bridging the

insulations, and signal mechanisms connected in normally closed circuits with the sources of current, the said mechanisms being electrically connected with the one divided track rail only, and each section of said rail being connected at both ends to like terminals of the respective sources of current, substantially as described.

3. In a signaling system, a track rail divided into block sections insulated from each other, and a source of current for each block section having its terminals bridging the insulation, the two sources of current connected to each section being arranged to oppose each other; a signal circuit for each block connected to the said track rail at points adjacent to the connections of the source of current, substantially as described.

4. In a railway signaling system, a track rail divided into blocks or sections, sources of current supply each having its terminals connected to the ends of adjacent blocks or sections around the insulation, the two sources connected to each block or section being oppositely connected to thereby oppose each other, and signaling mechanism connected to the said rail adjacent to the points of connection of a source of current and having a normally closed circuit, substantially as described.

5. In a railway signaling system, a track rail having insulated blocks or sections, sources of current each of which has one terminal connected to the rail of one block adjacent to an insulated joint, and its other terminal connected to the corresponding rail of the adjacent block at the other side of the insulated joint, signal-controlling relays each of which has two magnets in series, one of said magnets being located near the entrance to the block and the other near the exit of the block, and having their terminals connected with the source at opposite sides of the insulated joint, and switch devices one of which is connected across each source of current and having contacts which assist in the control of the relay magnet circuits; substantially as described.

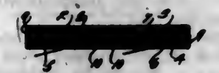
[Claims 6 to 9 not printed in the Gazette.]

1,016,883. GUN-SIGHT. ARTHUR ALEXANDER GERMAN, Duluth, Minn. Filed Mar. 20, 1911. Serial No. 615,604. (Cl. 42—80.)

A gun sight comprising a target provided with double walls to form a box-like structure, said walls having each a sight opening in the center thereof; a stop plate pivotally mounted between the walls of said target to extend beyond the edge thereof, said stop plate being provided with a series of size graduated perforations adapted to register with the center of said sight openings, said stop plate being provided with a series of rounded recesses formed in the periphery thereof; and a spring mounted between the walls of said target having a head adapted to bear against the opposite walls of said recesses to move the said plate to register the said perforations with said sight openings said head being arranged to ride out of said recesses in both directions.

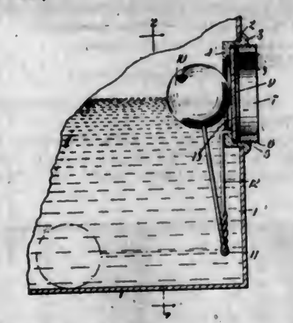
1,016,884. BOX FOR FOLDING PAPERS. MICHAEL GLUCKMAN, New York, N. Y. Filed July 20, 1911. Serial No. 639,537. (Cl. 206—57.)

A package comprising a section provided with slots adapted for the passage therethrough of leaves of paper, a plurality of foldable portions secured together carried by said section at the upper edge thereof, said foldable portions being adapted to form a cover, a flap carried by the lower edge of said section, tongues carried by said flap, wings carried by each side edge of said section, said wings



being provided with slots adapted to receive the tongues on said flap, and a foldable portion carried by each of said wings, at the outer edge thereof, adapted to form partitions when said package is folded.

1,016,885. WATER-GAGE. FRED E. GROSVOLD, Eau Claire, Wis. Filed June 28, 1911. Serial No. 635,729. (Cl. 73—82.)

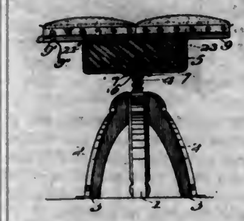


1. A device of the class described comprising a member having shoulders thereon, the member being adapted to be positioned within an opening in the side of a tank, the shoulders being positioned around opposite sides of the member, one shoulder being in engagement with the outside of the tank, a transparent window secured within the member and bearing against the other shoulder, a washer bearing against the window, means contained within the member and bearing against the washer, whereby the window is secured in position and a water-tight joint is obtained, a float positioned within the tank and a support for the said float, the float being actuated by the rise and fall of the water and being movable into position adjacent the inside of the window when the water has reached a certain height.

2. A device of the class described comprising a member having shoulders thereon, the members being adapted to be positioned within an opening in the side of a tank, the shoulders being positioned around opposite sides of the member and extending in opposite directions, one shoulder being in engagement with the outside of the tank, a transparent window secured within the member and bearing against the other shoulder, a washer bearing against the window, means contained within the said member and bearing against the washer whereby the window is secured in position and a water-tight joint is secured, a float positioned within the tank, together with a support made up of a piece of bent wire, one end of which is in engagement with the said inner shoulder of the said member, the other end of the wire being in pivotal engagement with the float whereby it may rise and fall with the level of the water in the tank.

3. A device of the class described comprising a member having shoulders thereon, the member being positioned within an opening in the side of a tank, the shoulders being positioned around opposite sides of the member, one shoulder being in engagement with the outside of the tank, a window secured within the member and bearing against the other shoulder, a washer bearing against the window, an annular member in screw-threaded engagement with the first named member and bearing against the washer, whereby the window is secured in position and a water-tight joint is obtained, a float pivotally mounted within the tank, together with a support for holding the float in position whereby it may rise and fall with the level of the water and may be seen through the said window.

1,016,886. PIANO-STOOL. JOHN HEGERHORST, Chicago, Ill. Filed Jan. 6, 1911. Serial No. 601,235. (Cl. 155—38.)



1. In a piano stool, a box, a member hinged to one end of the box, a lock arranged between said end of the box and the adjacent side of said member, a second member hinged to the first named one, a pair of seats, a track in the box to receive both of the seats when both of the seats are in use, a hinge connection between said seats whereby when but one seat is in use the other may be folded beneath the same, and a lock between the second member and one end of one of the seats when said seats are in their folded position.

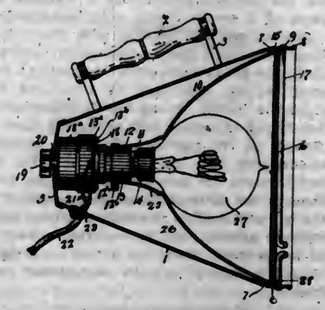
2. In a piano stool, a box, tracks carried by the box on its interior, a pair of seats for engagement with the tracks having their inner ends hingedly connected whereby one seat may be folded under the other, said box having an open end to receive the folded seat, and a closure for said open end composed of a pair of hingedly connected members, and a spring lock carried by one of the members to engage an end of one of the seats to thereby hold the closure in locked position.

3. In a piano stool, the combination of a casing provided with upper and lower tracks arranged interiorly thereof, and with an open end; a two-part closure for said end hinged to said casing; and a pair of seats hingedly connected together at their mutually-adjacent ends, one of said seats being slidably engaged at all times with the upper track, while the other seat is arranged to be swung downwardly upon its hinge connection and inserted through the open end of said casing into engagement with the lower track when the stool is used for solo playing, and to be withdrawn through said open end and swung upwardly upon said hinge connection into engagement with said upper track when the stool is used for duet playing, said closure having one of its members constituting a portion of the bottom wall of said casing for enlarging the open end of the latter, to permit said other seat to be inserted into and withdrawn from said casing.

1,016,887. PORTABLE SEARCH-LIGHT. HARRIE B. KENYON, Bedford, Ohio. Filed July 11, 1910. Serial No. 571,332. (Cl. 240—41.)

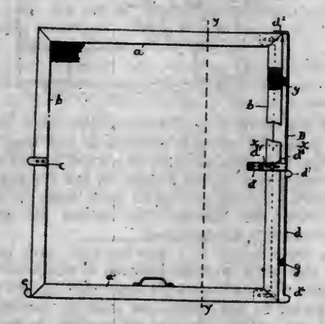
1. A portable search light comprising in combination a tapered casing having an apertured plate closing its smaller end and a transparent member closing its larger end, an incandescent light socket axially supported in said casing, an electric light bulb seated therein and facing the larger end of the casing, a tapering supporting neck attached to said socket at its smaller end and approaching closely the flaring wall of the bulb at its larger end, and a concave reflecting surface extending outwardly and forwardly from the larger end of said neck and contacting with the inner surface of said casing at its larger end.

2. A portable search light comprising in combination a tapered casing having an apertured plate closing its smaller end and a transparent member closing its larger end, an incandescent light socket axially supported in said casing, an electric light bulb seated therein and facing the larger end of the casing, a tapering supporting neck attached to said socket at its smaller end and approaching closely the flaring wall of the bulb at its larger end, and a concave reflecting surface extending outwardly and forwardly from the larger end of said neck and contacting with the inner surface of said casing at its larger end, said neck portion being provided with air-circulation passages.



3. A portable search light comprising in combination a frusto-conical shell having an apertured plate closing its smaller end and a transparent member closing its larger end, a lamp switch and socket axially supported in said casing, a reflector comprising a concave reflecting surface and a tapering supporting neck, said neck being clamped to said socket and the larger end of the reflector contacting with both said casing and said transparent member, a chamber formed between said reflector and said casing, and air-circulation apertures through said neck into said chamber.

1,016,888. WINDOW-SCREEN. WALTER V. KNIGHT, Westbrook, Me. Filed Jan. 14, 1911. Serial No. 602,669. (Cl. 156—38.)

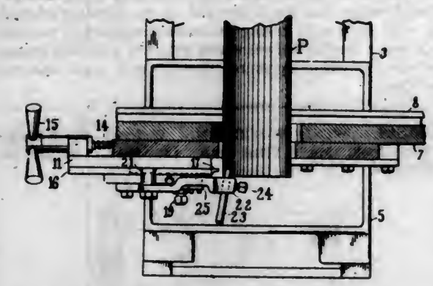


1. A device for holding a screen in a window frame, said device comprising a bar of right-angular cross-section throughout its length, a pair of parallel lugs extending from the edge of one of the flanges of the bar adjacent the ends thereof and both lugs being disposed in the same plane with such flange to engage with the latter the outer surface of the screen frame, a lug extending laterally from the edge of the other flange at an intermediate point of the bar and extending parallel with the first-mentioned lugs though disposed in a plane to one side of the plane of the first-mentioned lugs a distance to permit the screen frame to fit between the lugs on one flange and the lug on the other flange, a plurality of lugs extending from the bar in the opposite direction from the afore-mentioned lugs to engage, with a portion of the window frame, in combination with a screen, means for slidably connecting

the screen-engaging lugs with the said screen, and yielding means interposed between the said bar and screen for urging the bar from the screen into engagement with the window frame.

2. A device for holding a screen in a window frame comprising a bar composed of two flanges disposed in angular relation, one flange having at its ends laterally-extending screen-engaging lugs, each lug having a longitudinal slot and the slot of one lug being parallel with that of the other, a screen-engaging lug extending from the other flange of the bar at an intermediate point and offset from the first-mentioned lugs a distance equal to the thickness of a screen frame, said last-mentioned lug having a longitudinal slot parallel with the slots of the first-mentioned lugs and also having an extremity formed into a handle, the flange having the intermediate lug being bent laterally at its upper end in alinement with the upper end of the flange having the first-mentioned lugs, and window-frame engaging lugs extending from the respective flanges of the bar in a direction opposite from the screen-engaging lugs, in combination with a screen frame fitted between the screen-engaging lugs, fastenings passing through the slots of the screen-engaging lugs for holding the bar attached to the screen frame, and spring means confined between the screen frame and bar for urging the latter away from the screen to maintain the window frame engaging lugs in engagement with the window frame.

1,016,889. REAMING-TOOL HOLDER FOR PIPE-MACHINES. JOHN F. LINEHAN, Yonkers, N. Y., assignor to D. Saunders' Sons, Yonkers, N. Y., a Corporation of New York. Filed Nov. 22, 1910. Serial No. 593,756. (Cl. 10—87.)



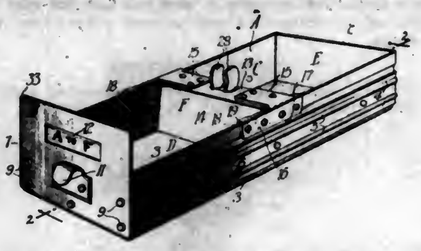
1. The combination in a pipe-machine with means for rotating pipe, of a carriage movable in line with the axis of the pipe, a cutting-off slide supported by the carriage, and a reaming-tool holder pivoted to the cutting-off slide and supported by the cutting-off slide when in operative position with the reaming tool beyond the cutting-off tool, substantially as described.

2. The combination in a pipe-machine with means for rotating pipe, of a carriage movable in line with the axis of the pipe, a transverse slide supported by the carriage, means carried by the transverse slide for holding a cutting-off tool, and a reaming-tool holder pivoted to the transverse slide on an axis parallel with the axis of the pipe-machine and supported by the cutting-off slide when in operative position, substantially as described.

1,016,890. DRAWER AND FILE-HOLDER. GEORGE B. MELENEY, Chicago, Ill. Filed May 31, 1910. Serial No. 564,224. (Cl. 129—16.)

1. As a new article of manufacture a metallic file drawer, a resilient covering over the bottom, lower edges and corners, and a band encircling the sides of said drawer and holding said covering in place.

2. As a new article of manufacture a metallic file drawer, a resilient covering over the bottom, lower edges and corners and extending upwardly about the sides of the drawer, and a band encircling the sides of said drawer and holding said covering in position.



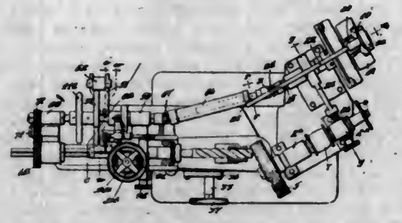
3. As a new article of manufacture a metallic file drawer, a resilient covering over the bottom, lower edges and corners and extending upwardly about the sides of the drawer and a band provided in part with a plurality of longitudinal ribs encircling the sides of said drawer, and holding said covering in position.

4. As a new article of manufacture a metallic file drawer, a resilient covering protecting its bottom, lower edges and corners, follower guides formed integrally with the sides of said drawer and a follower adapted to slide on said guides.

5. As a new article of manufacture a metallic file drawer, a resilient covering protecting its bottom, lower edges and corners, follower guides, formed by bending over the upper portions of the material forming the sides of said drawer, and a follower adapted to slide on said guides.

[Claims 6 to 12 not printed in the Gazette.]

1,016,891. MACHINE FOR GRINDING DRILLS. ANTON MILL, Sr., and ANTON MILL, Jr., Cincinnati, Ohio, assignors to Heinrich Heine, Chicago, Ill. Filed Oct. 10, 1910. Serial No. 586,299. (Cl. 51—7.)



1. In a drill grinding machine, a main frame, a grinder wheel rotatively mounted upon said main frame, an oscillating drill stock supporting frame mounted on said main frame, means for oscillating said frame, means for adjusting said frame to and from the grinder, to change its degree of oscillation relatively to the grinder, a drill spindle supported upon said oscillating frame with means for manually and automatically feeding the same to the grinder wheel, means for rotating said spindle, and means for reciprocating said spindle in time movements to and from the grinder wheel relative to the number of cutting edges that a drill is provided with in a given rotation of the drill.

2. In a drill grinding machine, a main frame, an oscillating drill stock supporting frame, means for oscillating said frame, a grinder wheel angularly disposed relative thereto, means for oscillating said grinder wheel, means for adjusting said oscillating frame to and from the grinder wheel for governing the angle of oscillation relative to the grinder wheel, a drill spindle supporting carriage slidably mounted upon said oscillating frame, means for reciprocating said carriage, a drill spindle mounted on said carriage, means for rotating said drill spindle, and means for horizontally feeding said drill spindle independent of its rotation, whereby a drill is fed to and from the work at step periods during a given rotation of the drill and in a continuous arc of movement to the action of the grinder, providing a relieving finish in rear of each cutting edge of the drill.

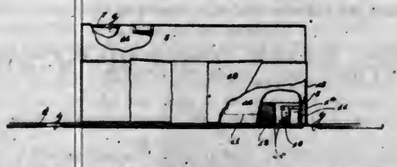
3. In a machine for grinding a twist drill, a rotary grinder, a drill supporting spindle, means for rotating the spindle in the opposite direction from the grinder, means for reciprocating the spindle longitudinally in time movement to successively present the cutting edges of the drill to the grinder, means for oscillating the spindle to grind the drill in the arc of a circle, and means for rocking the grinder to bring the entire grinding surface into action on the drill point.

4. In a machine for grinding a twist drill, a rotary grinder, a drill supporting spindle, means for rotating the spindle in the opposite direction from the grinder, means for reciprocating the spindle longitudinally in time movement to successively present the cutting edges of the drill to the grinder, means for oscillating the spindle to grind the drill in the arc of a circle, and means for rocking the grinder to bring its entire grinding surface into action on the drill point, and means for longitudinally feeding the drill to the grinder.

5. In a machine for grinding a twist drill, a rotary grinder, a drill supporting spindle, means for rotating the spindle in the opposite direction from the grinder, means for reciprocating the spindle longitudinally in time movement to successively present the cutting edges of the drill to the grinder, means for oscillating the spindle to grind the drill in the arc of a circle, and means for rocking the grinder to bring its entire grinding surface into action on the drill point, means for longitudinally feeding the drill to the grinder, and means for changing the angle of spindle oscillation.

[Claims 6 to 17 not printed in the Gazette.]

1,016,892. HAT. FREDRICK W. NASH, Minneapolis, Minn. Filed Aug. 2, 1909. Serial No. 510,852. (Cl. 2—108.)

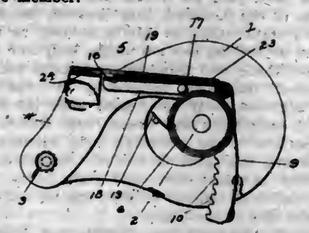


1. A hat provided with a rim constructed of several annular plies of cloth of similar material united at their inner and outer portions by stitches and provided with flaps extending inward of the inner stitches, a resilient distending hoop and a draw cord located between the plies of said rim and pressing respectively against the outer and inner stitches thereof, and a hat crown, the flaps of said rim being turned upward and secured to the said crown.

2. A hat comprising a rim and crown constructed of cloth or similar material, the said crown having a stiffening band, a two-ply top and a resilient distending hoop within the said top, and the said rim being made of two annular plies stitched together at their inner and outer edges and provided at their inner edges with upturned flaps stitched to the body of said hat crown, and a resilient marginal distending hoop and a draw cord between the plies of said rim, the former engaging the outer stitches and the latter engaging the inner stitches of the said two plies, substantially as described.

1,016,893. TICKET HOLDING AND SERVING DEVICE. FRED OPPENHEIMER and WILLIAM G. SPIEGEL, New York, N. Y.; said Spiegel assignor to said Oppenheimer. Filed May 8, 1909. Serial No. 494,920. (Cl. 211—33.)

1. A ticket holding and serving device including in combination a frame member, a spindle for holding a roll of tickets with its side toward the frame member, a detent member alongside the spindle and against the frame member so as to be covered by the ticket roll, means for preventing access to the pawl between the ticket roll and frame member, a movable member adjacent to the periphery of the ticket roll, and a detent member extending from said movable member to engage said first mentioned member between the ticket roll and said frame member.



2. A ticket holding and serving device including in combination a frame member, means for supporting a roll of tickets with the side of the roll closely contiguous to the frame member, a movable member adapted to follow the peripheral face of the ticket roll as the tickets are served off, and means protected from access by said ticket roll for preventing the retraction of said movable member from the face of the roll, said means becoming accessible when the roll is exhausted.

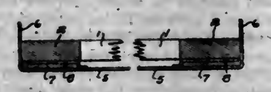
3. A ticket holding and serving device including in combination a frame member, a support for rotatably holding a ticket roll with its side against said frame member, a member movable to and from the side of said ticket roll opposite said frame member, connections for holding said movable member against said face which are inaccesible for disconnection until the ticket roll is exhausted, and means for preventing access between the roll and frame to disconnect said connections.

4. A ticket holding and serving device including in combination a casing and supporting means for a ticket strip, and a member having a detent normally engaging the strip to prevent its being drawn out, said member being arranged so that it may be grasped by the hand together with the end of the strip to simultaneously disengage the detent and begin the removal of the strip from the casing.

5. A ticket holding and serving device including in combination a casing and supporting means for a ticket strip, a movable member having a detent normally engaging the ticket strip to prevent its being drawn out of the casing, and a member having a straight or tearing edge for detaching the tickets and a cut away portion to permit said ticket strip and said movable detent member to be grasped together within said straight edge.

[Claims 6 to 8 not printed in the Gazette.]

1,016,894. COUCH-HAMMOCK. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Filed Oct. 2, 1911. Serial No. 652,304. (Cl. 5—61.)



1. A couch hammock comprising in combination a frame, a hammock body continuous with the suspension means and underlying the frame, said frame overlying the flat portion of the hammock body between the suspension means and slat, strip or plate devices attached to the said body and engaging the frame to prevent the ends of the underlying body portion being drawn beyond the frame ends and against the end edges thereof.

2. A couch hammock comprising in combination a frame, a hammock body continuous with the suspension

means and underlying the frame, said frame overlying the flat portion of the hammock body between the suspension means and strip slat or plate devices carried by the said body at or adjacent to the frame ends and engaging said frame to prevent drawing of the underlying portion of the body beyond the frame ends.

3. A couch hammock comprising in combination a frame, a hammock body continuous with the suspension means and underlying the frame, said frame overlying the flat portion of the hammock body between the suspension means, and slats, strips or plates secured to the upper face of the underlying portion of the body and extending both longitudinally and transversely beneath the frame.

4. A couch hammock comprising in combination a frame, a hammock body continuous with the suspension means and underlying the frame, said frame overlying the flat portion of the hammock body between the suspension means, the upper face of the underlying portion of said body having pockets and slats, strips or plates in said pockets and bearing flatwise against but unsecured to the under side of the frame.

5. A couch hammock body continuous from end to end and having suspension means, said body being provided with marginal corner slat, strip or plate-receiving pockets.

[Claim 6 not printed in the Gazette.]

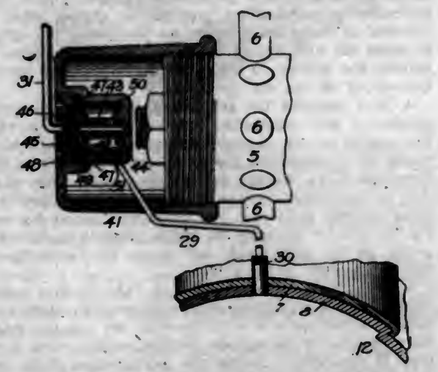
1,016,895. HIGH-TENSION MAGNETO IGNITION APPARATUS FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER MARCUS PATTON, Belfast, Ireland, assignor to Chambers Motors Limited, Belfast, Ireland. Filed Apr. 6, 1909. Serial No. 488,278. (Cl. 123—149.)

A driving connection of the type referred to comprising in combination a driving shaft, a driven shaft, a lever upon the driving shaft, a sleeve mounted upon the driven shaft, a spring having one end connected with the driving shaft and the other end connected with said sleeve, a stationary hollow ratchet, a pawl within said ratchet and pivoted upon the aforesaid sleeve, a weight connected with said pawl and adapted to be engaged with the aforesaid lever on the driving shaft for the purpose of releasing the pawl from the ratchet and a stop upon the sleeve for engaging said lever, substantially as and for the purpose hereinbefore set forth.

1,016,896. SYSTEM FOR INFLATING PNEUMATIC TIRES. CHARLES A. RIVERS, Denver, Colo. Filed Mar. 13, 1909. Serial No. 483,259. (Cl. 152—11.)

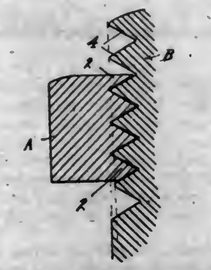
1. In an apparatus for inflating pneumatic tires, the combination with a wheel and its pneumatic tire, of a cap fixed upon the wheel hub and including an interior, normally closed chamber in communication with said tire and having an axial opening in its outer end, an interior recess surrounding the same and a cavity corresponding with said opening in its opposite end, a longitudinally bored head fitted in said opening and in said cavity and having a passage connecting the bore with the interior of the chamber and an integral collar occupying said recess, a washer connected with said chamber covering the joint between the collar and the recess, a second washer similarly connected in frictional engagement with the circumferential surface of the head and a conduit extending outside of said cap, fixedly connected with the head in communication with its bore.

2. In an apparatus for inflating pneumatic tires, in combination with a wheel and its pneumatic tire, of a cap fixed upon the wheel-hub and having a chamber communicating with its exterior surface by an axial opening, a head fitted in said opening and having an axial bore in communication with said chamber, a flexible washer fixed at its marginal portion, and in frictional engagement with the circumferential surface of the head, a fixed conduit in communication with the bore of said head, and a connection between the said chamber and the tire.



3. In an apparatus for inflating pneumatic tires, the combination with a wheel and its pneumatic tire, of a cap adapted to be secured upon the wheel-hub and having an axial chamber projecting inwardly from its outer surface, a nut screwed into the outer portion of said chamber, and having an axial opening, a head fitted in said opening and having a bore in communication with the interior of the chamber, a washer clamped between said nut and a shoulder on the wall of the chamber, in engagement with said head, whereby the connection of the latter with the nut is rendered impervious, a fixed conduit in communication with the bore in said head, and a connection between the chamber and the wheel-tire.

1,016,897. NUT-LOCK. CATHERINE RYAN, St. Paul, Minn. Filed July 7, 1911. Serial No. 637,390. (Cl. 151—14.)

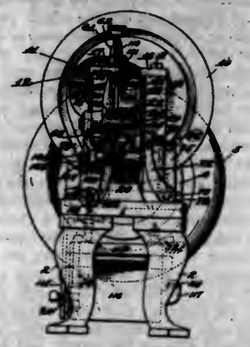


1. In combination a threaded bolt and an expansible threaded nut, the groove formed by the nut thread being shallower than the groove formed by the bolt thread, and the bolt thread having its top cut off an increasing amount from the outer and toward its inner end.

2. In combination a threaded bolt and a threaded expansible nut, the top of the bolt thread being cut off an increasing amount from its outer and toward the inner end of the bolt, for the purpose set forth.

1,016,898. SEWING-MACHINE. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors to Walter G. Battle, Cyrus E. Clark, and Thomas W. Fuqua, St. Louis, Mo. Filed June 11, 1909. Serial No. 501,462. (Cl. 112—20.)

1. A sewing machine comprising a work-table, means for holding the work thereon, a rocking carrier, an awl pivoted on said rocking carrier and arranged to oscillate independently thereof and in a direction substantially at right angles to the direction of movement of said rocking carrier, means for rocking said carrier to reciprocate said awl longitudinally to puncture the work, and means for intermittently oscillating said awl on said carrier to feed the work for each successive stitch, said means comprising a cam on one side of the awl and a coöperating element on a stationary part of the machine, whereby the awl is moved in the direction to feed the work during its puncturing stroke, and a cam on the opposite side of the awl adapted to coöperate with a second element on a stationary part of the machine, whereby the awl is restored to puncturing position during its reverse stroke.



2. A sewing machine comprising a work table, means for holding the work thereon, a rocking carrier, an awl pivoted on said rocking carrier and arranged to oscillate independently thereof and in a direction substantially at right angles to the direction of movement of said rocking carrier, means for rocking said carrier to reciprocate said awl longitudinally to puncture the work, means for shifting said awl on its pivot while it is in the work, said means comprising a cam face on one side of the awl and a coöperating cam face on an adjacent part of the machine, and means for restoring the awl to its puncturing position after it has backed out of the work, comprising a cam on the opposite side of the awl and a coöperating element on an adjacent part of the machine, whereby said awl intermittently feeds the work for each successive stitch.

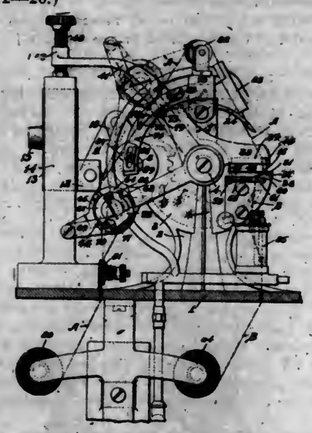
3. A sewing machine comprising a work-table, means for holding the work thereon, a rocking carrier, an awl pivoted on said rocking carrier and arranged to oscillate independently thereof and in a direction substantially at right angles to the direction of movement of said rocking carrier, means for rocking said carrier to reciprocate said awl longitudinally to puncture the work, means for shifting said awl on its pivot while it is in the work, said means comprising a cam on one side of the awl and a coöperating cam on an adjacent stationary part of the machine, and means for restoring the awl to its puncturing position after it has backed out of the work, said means comprising a cam on the opposite side of the awl and an adjustable cooperative element on an adjacent stationary part of the machine, whereby said awl intermittently feeds the work for each successive stitch, and whereby, also, the length of the stitch may be varied.

4. A sewing machine comprising a work-table, means for holding the work thereon, a rocking carrier, an awl pivoted on said rocking carrier and arranged to oscillate independently thereof and in a direction substantially at right angles to the direction of movement of said rocking carrier, means for rocking said carrier to reciprocate said awl longitudinally, means for positively shifting the awl on its pivot in one direction to a fixed point while it is in the work, said means comprising a cam on one side of the awl and a fixed coöperating cam on an adjacent stationary part of the machine, and means for restoring the awl to puncturing position after it has backed out of the work, said means comprising a cam on the opposite side of the awl and a coöperating projection on an adjacent stationary part of the machine, whereby said awl intermittently feeds the work for each successive stitch, said projection which coöperates with the second mentioned cam on the awl being adjustable toward and away from the awl to vary the puncturing position of the awl.

5. A sewing machine comprising a work-table, means for holding the work thereon, an oscillatory awl and needle carrier, an arcuate needle mounted on said carrier, an arcuate awl pivotally-mounted on said carrier, said needle and said awl being curved on the same radius and center and oppositely disposed, the frame of the machine having thereon a curved face corresponding to the peripheral face of the awl and upon which the awl slides, means for oscillating said carrier to alternately move the awl and needle through the work, means for shifting said awl on its pivot while it is in the work, said means comprising a cam on one side of the awl and a coöperating cam on the adjacent portion of the frame, and means for restoring the awl to its puncturing position after it has backed out of the work, said restoring means comprising a cam on the opposite side of the awl and a coöperating element on the adjacent portion of the frame, whereby said awl intermittently feeds the work to bring the puncture therein into the path of the needle.

[Claims 6 to 11 not printed in the Gazette.]

1,016,899. LOOP-LOCK-STITCH-FORMING MECHANISM. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors to Walter G. Battle, Cyrus E. Clark, and Thomas W. Fuqua, St. Louis, Mo. Original application filed June 11, 1909, Serial No. 501,462. Divided and this application filed Nov. 19, 1909. Serial No. 528,942. (Cl. 112—20.)



1. A sewing machine comprising means for carrying a loop of thread through the work, a reciprocatory member arranged and adapted to carry a locking loop of thread through said first-mentioned loop, and an escapement device bearing resiliently against said reciprocatory member and engaging the thread thereon for preventing the locking loop from following the reciprocatory member on its reverse stroke.

2. A sewing machine comprising a work-table, means for holding the work thereon, means for puncturing the work, means for intermittently carrying a bight of thread through the punctures in the work, means for intermittently feeding the work, and a reciprocatory locking-loop-carrier adapted to lay a bight of thread successively through each of said first-mentioned bights of thread after the same are passed through the work, and a resilient device coöperating with said locking-loop-carrier and engaging the thread on said carrier for preventing the locking-loop thread from following the carrier on its reverse stroke.

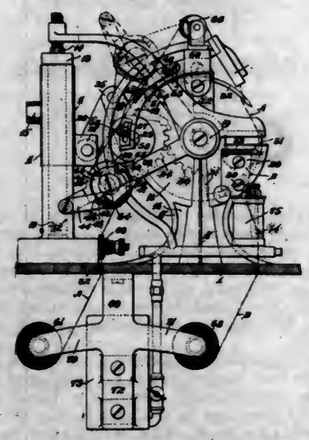
8. A sewing machine comprising a work-table, means for holding the work upon the table, means for puncturing the work, means for intermittently carrying a bight of thread through the punctures in the work, means for intermittently feeding the work, and a reciprocatory locking-loop-carrier adapted to lay a bight of thread successively through each of said first-mentioned bights of thread after the same are passed through the work, said locking-loop-carrier comprising an elongated hook member having a longitudinal groove through which the locking-loop thread passes, and a resilient device arranged to bear against the thread in said groove to prevent the thread from following the hook member on its reverse stroke.

4. In a sewing machine, a locking-loop-carrier comprising a reciprocatory member having an elongated hook extension over which the locking-loop thread is looped, said hook extension having a longitudinal groove therein through which the locking-loop thread passes, and a resilient device having a projection arranged to coöperate with the grooved portion of said hook extension to engage the thread and prevent the same from following the carrier on its reverse stroke.

5. In a sewing machine, a locking-loop-carrier comprising a reciprocatory member having a hook extension over which the locking-loop thread is looped, the inner end portion of said hook extension having a notch therein which communicates with longitudinal grooves in the top and bottom of the hook extension, the bottom groove extending to the outer end of said hook extension, and the inner end of said hook extension being curved downwardly and laterally to form a spreader for the stitching-thread loop through which the locking-loop is laid, and a resilient tension device having a projection arranged to coöperate with the groove in the bottom of said hook extension to engage the locking-loop thread therein to prevent the same from following the carrier on its reverse stroke.

[Claims 6 and 7 not printed in the Gazette.]

1,016,900. TAKE-UP AND THREAD-MEASURER FOR SEWING-MACHINES. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors to Walter G. Battle, Cyrus E. Clark, and Thomas W. Fuqua, St. Louis, Mo. Original application filed June 11, 1909, Serial No. 501,462. Divided and this application filed Nov. 19, 1909. Serial No. 528,943. (Cl. 112—26.)



1. In a sewing machine, the combination with a stitch-forming mechanism, of a combined thread-measuring and take-up device comprising a rock-arm, a thread-guide thereon, an eccentric disk pivotally mounted on said rock-arm with its peripheral face in coöperative relation to said thread-guide and adapted to clamp the thread therebetween, means for automatically throwing said eccentric disk into effective position while the rocking-arm is moving in the direction to pull the thread and set the stitch, said means comprising a lever on the rock-arm and a coöperating tripping device on a stationary part of the machine, and means for throwing said eccentric disk into ineffective position at a predetermined time during the pulling stroke of said rocking-arm.

2. In a sewing machine, the combination with a stitch-forming mechanism, of a combined thread-measuring and take-up device comprising a rock arm, a thread-guide thereon, a disk pivotally mounted on said rock-arm and having a peripheral cam face in coöperative relation to said thread-guide and adapted to clamp the thread therebetween, means for automatically throwing said disk into effective position while the rock-arm is moving in the direction to pull the thread and set the stitch, said means comprising a movable element on the rock-arm and an actuating device therefor on a stationary part of the machine, and means for throwing said disk into ineffective position at a predetermined time during the pulling stroke of said rock-arm, said last mentioned means being adjustable so as to actuate said disk at different distances from said first mentioned actuating means for the disk, whereby the length of thread used in the respective stitches may be varied.

3. In a sewing machine, the combination with a stitch-forming mechanism, of a thread-measuring and take-up device comprising an oscillatory arm, a thread-guide thereon, a curved flange located on said oscillatory arm in coöperative relation to said thread-guide, an eccentric disk pivotally mounted on said oscillatory arm and adapted to clamp the thread against the inner side of said curved flange, means for throwing said eccentric disk into effective position when said oscillatory arm moves in the direction to pull the thread and set the stitch, and means for moving said cam into ineffective position at a predetermined time during the pulling stroke of said oscillatory arm.

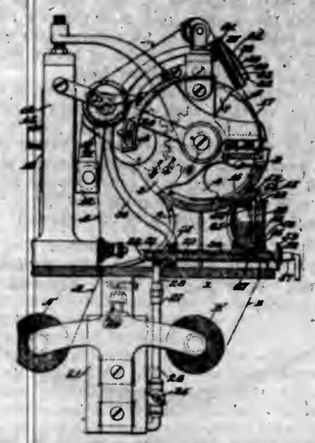
4. In a sewing machine, the combination with a stitch-forming mechanism, of a thread-measuring and take-up device comprising an oscillatory arm, a thread-guide thereon, a member movably mounted on said arm in coöperative relation to said thread-guide and adapted to clutch the thread therein, a lever arm pivotally mounted on said oscillatory arm and operatively connected to said movable member, a latch member in the path of said lever arm adapted to actuate the same to positively move said movable member into effective position when said oscillatory arm moves in the direction to pull the thread and set the stitch, and a tripping device arranged to positively move said movable member into ineffective position at a predetermined time during the pulling stroke of said oscillatory arm.

5. A thread-measuring and take-up device comprising an oscillatory arm having a curved flange thereon which is provided with thread-guides at its opposite ends, a cam pivotally mounted on said arm in coöperative relation to said flange and adapted to clutch the thread between the ends of said flange, a lever-arm pivotally mounted on said oscillatory arm and operatively connected to said cam, means for actuating said lever-arm to throw said cam into effective position when said oscillatory arm moves in the direction to pull the thread, and means for moving said cam into ineffective position at a predetermined time during the pulling stroke of said oscillatory arm.

[Claims 6 to 9 not printed in the Gazette.]

1,016,901. THREAD-TREATING DEVICE FOR SEWING-MACHINES. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors to Walter G. Battle, Cyrus E. Clark, and Thomas W. Fuqua, St. Louis, Mo. Original application filed June 11, 1909, Serial No. 501,462. Divided and this application filed Nov. 19, 1909. Serial No. 528,944. (Cl. 112—28.)

1. A sewing machine utilizing two threads and comprising separate guide devices for the needle-thread and locking-thread, respectively, said guide devices being arranged and adapted to receive a liquid treating substance, a reservoir containing a liquid treating substance under pressure, separate pipe connections between said reservoir and said guide devices, and means for controlling the passage of the treating substance through said pipe connections, whereby the supply may be both simultaneously and alternately cut off from said guide-devices.



2. A sewing machine comprising stitch-forming and stitch-setting mechanism, said mechanism comprising a needle which is adapted to carry a loop of thread through the work, a carrier for laying a loop of locking-thread through the needle loop, and means for pulling the needle-thread to interlock the two loops, a thread-treating device for the needle-thread located adjacent to the needle, a separate thread-treating device for the locking-thread located adjacent to the locking-loop-carrier, a reservoir adapted to contain a liquid treating substance, means for admitting air pressure into said reservoir, pipe connections between said reservoir and said thread-treating devices, and means for controlling the passage of the treating substance through said pipe connections.

3. In a sewing machine, a thread-treating device comprising a thread-guide, a closed reservoir for containing a normally liquid self hardening treating substance under air pressure, said reservoir being located in a plane below said thread-guide, a pipe connection between said reservoir and said thread-guide, and means for cutting off communication between said reservoir and said thread-guide.

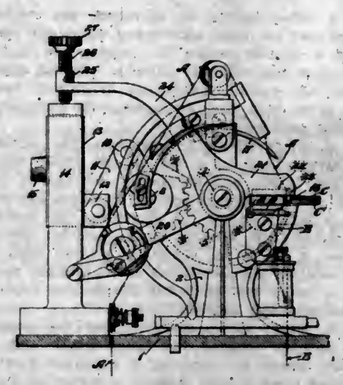
4. In a sewing machine, a thread-guide comprising a member having a longitudinal groove adapted to receive the thread therein, a sleeve slidably fitted on said member and having a rib adapted to fit in said groove to confine the thread therein, and a pipe communicating with said groove and a source of supply of a liquid treating substance.

5. In a sewing machine, a thread-guide comprising a member having a longitudinal groove adapted to receive the thread therein, said groove having an inclined bottom, a sleeve slidably fitted on said member and having a rib adapted to fit in said groove, the edge of said rib being inclined to correspond to the inclination of the bottom of said groove, whereby by moving said rib lengthwise in said groove the distance between the bottom of the groove and the edge of the rib may be varied, and a pipe communicating with said groove and a source of supply of a liquid treating substance.

[Claims 6 to 9 not printed in the Gazette.]

1,016,902. PRESSER-FOOT FOR SEWING-MACHINES. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors to Walter G. Battle, Cyrus E. Clark, and Thomas W. Fuqua, St. Louis, Mo. Original application filed June 11, 1909, Serial No. 501,462. Divided and this application filed Nov. 19, 1909. Serial No. 528,945. (Cl. 112—13.)

1. A sewing machine comprising a work-table, means for feeding the work, a work-holder adapted to hold the work slidably on said table, said work-holder comprising a horizontally pivoted member having a forwardly projecting substantially horizontal portion arranged to overlie the work and an upwardly and rearwardly curved arm, the pivot of said work-holder being substantially in the horizontal plane of the surface of the work, an adjusting device at the outer end of said upwardly and rearwardly curved arm, and a support in coöperative relation to said adjusting device whereby the work-holder may be adjusted for different thicknesses of work.



2. A sewing machine comprising a work-table, means for feeding the work, a work-holder adapted to hold the work slidably on said table, said work-holder comprising a horizontally pivoted member having a forwardly projecting substantially horizontal portion arranged to overlie the work, and also having a rearwardly projecting resilient lever extension, the pivot of said work-holder being substantially in the horizontal plane of the surface of the work, an adjusting device at the outer end of said lever extension, and a support located in coöperative relation to said adjusting device whereby said work-holder may be adjusted for different thicknesses of work.

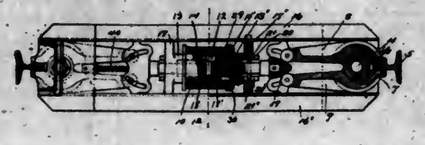
3. In a sewing machine, the combination with the work-table, of a presser-foot comprising a horizontally pivoted rocking lever having a forwardly projecting substantially horizontal portion arranged to overlie the work, the pivot of said rocking lever being substantially in the horizontal plane of the surface of the work, a lateral extension on the forward end of said forwardly projecting portion having an opening through which the needle and awl are adapted to pass, a rearwardly projecting extension on said pivoted member, an adjusting device mounted on the end of said extension, and a fixed support located in coöperative relation to said adjusting device.

4. In a sewing machine, the combination with the work-table, of a presser-foot comprising a horizontally pivoted rocking lever having a forwardly projecting substantially horizontal portion arranged to overlie the work, the pivot of said rocking lever being substantially in the horizontal plane of the surface of the work, a lateral extension on the forward end of said forwardly projecting portion which is slotted to permit the passage of the awl and needle, a resilient rearwardly extending arm on said member, and an adjusting device carried by the resilient extension and arranged to engage a fixed part of the machine.

1,016,903. ELEVATOR SAFETY DEVICE. RUDOLPH C. SMITH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 28, 1905. Serial No. 289,431. (Cl. 187—91.)

1. In a safety device for elevators, the combination with a rotatable drum, of a wedge cam connected loosely to said drum, sleeves engaged by said cam, friction devices for preventing said sleeves from turning initially,

right and left-hand screws engaged by said sleeves, and clamping devices connected to said screws.



2. In a safety device for elevators, the combination with high and low pitch screws and means for operating them, of a friction device for causing the high pitch screw to move longitudinally initially, clamping apparatus, and pawl and ratchet mechanism to prevent backward rotation of the high pitch screw when the clamping apparatus meets sufficient resistance.

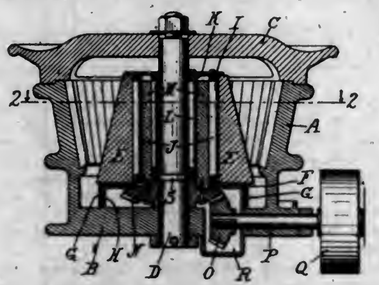
3. In a safety device for elevators, the combination with a safety drum, of a cam located within the drum, a clamping device, and differential mechanism between said cam and clamping device for operating the latter.

4. In a safety device for elevators, the combination with a safety drum, of a rotary cam member operated by said drum, a device for yieldingly holding said member against rotation but permitting a longitudinal movement thereof, a brake, and operating connections between the brake and said cam member.

5. In a safety device for elevators, the combination with a member adapted for longitudinal and rotary movement, means for applying a combined longitudinal and turning force to said member, a device for yieldingly resisting the rotation of said member, and braking mechanism operated by said member.

[Claims 6 to 9 not printed in the Gazette.]

1,016,904. STONE-CRUSHER. EDGAR B. SYMONS, Milwaukee, Wis., assignor to Smith and Post Company, Milwaukee, Wis., a Corporation of Wisconsin. Original application filed Feb. 26, 1904, Serial No. 195,459. Divided and this application filed May 13, 1907. Serial No. 373,239. (Cl. 83—10.)



1. In a crushing machine, the combination of an outer crushing shell having a spider arm bottom and a removable crown piece, a centrally located tie-shaft fixed to said bottom and crown piece, a crusher head movable on the shaft and containing a rotating eccentric sleeve and means for rotating said sleeve.

2. In a crushing machine, the combination of an outer crushing shell with a crown piece fitted to said shell, a centrally located fixed shaft supported within such shell by bearings in the crown piece and in the shell, a collar of rollers within the crushing shell surrounding said shaft as a roller bearing, and an eccentric sleeve surrounding said rollers and means for rotating said sleeve.

3. In a crushing machine, the combination of a stationary crushing shell with a centrally located stationary shaft supported by suitable connections to said shell, a roller collar surrounding said shaft and comprising a series of rollers, an eccentric sleeve within the crushing shell surrounding said roller collar, and means for turning said sleeve.

4. In a crushing machine, the combination of a stationary outer crushing shell with a centrally located stationary shaft supported in such shell, an eccentric sleeve within the crushing shell mounted on a roller bearing around said shaft, means for turning such sleeve, and a roller collar comprising a series of rollers surrounding said sleeve and a movable crusher head.

5. In a crushing machine, the combination of a stationary outer crushing shell with a centrally located and substantially vertical stationary shaft held by connections to said shell, an eccentric sleeve within the crushing shell mounted on a roller bearing around said shaft, a crushing head mounted on a roller bearing surrounding said sleeve, and means for turning said sleeve.

[Claims 6 to 17 not printed in the Gazette.]

1,016,905. VEHICLE-SPRING. JOHN S. THIELL, St. Louis, Mo. Filed Aug. 12, 1910. Serial No. 576,825. (Cl. 21—103.)

A vehicle spring comprising a series of leaves, said leaves having a zigzag groove in the upper faces thereof, a centrally disposed bolt extending through all the leaves for connecting the same together, said bolt having grooves in the opposite sides of the shank portion thereof, said grooves communicating with the zigzag grooves in the leaves of the spring, and a lubricator cup connected to the end of said bolt for feeding oil through the grooves in the shank of the bolt and to the zigzag grooves, essentially as described.

1,016,906. TACHOMETER. CURTIS HUSSEY VEEDER, Hartford, Conn., assignor to The Veeder Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 24, 1911. Serial No. 616,773. (Cl. 73—123.)

1. In an instrument of the character described, the combination of an indicator tube, a casing having a main chamber and a pump chamber communicating with the main chamber and with the indicator tube, an impeller in said pump chamber with its axis vertical, an open ended tube secured at its lower end in the bottom of the pump chamber, a central shaft extended upward through said tube, a sleeve shaft, and means to connect said sleeve shaft to said central shaft above the upper end of said tube said sleeve shaft supporting the impeller at its lower end.

2. In an instrument of the character described, the combination of a main casing having a main chamber formed therein, a bottom part formed with a pump chamber, an indicator tube supported on said casing, said pump chamber communicating with the main chamber and the indicator tube, an open ended tube secured in said bottom part and extended upward into the main chamber, a central shaft extended upward through said tube, a sleeve shaft, means to connect said sleeve shaft to said central shaft at its upper end and an impeller located in the pump chamber and secured to said sleeve shaft.

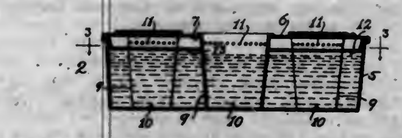
3. In an instrument of the character described, the combination of a main casing having a main chamber formed therein, a bottom part having a pump chamber formed therein, an indicator tube mounted on the main casing, said pump chamber communicating with the main chamber and the indicator tube, an open ended tube secured at its lower end in said bottom part and extended upward into the main chamber, a central shaft extended upward through said tube, a short shaft secured to the upper end of said central shaft above the upper end of said tube and having a bearing in the top of the main casing and a sleeve shaft secured to said short shaft and depending about said tube and an impeller located in the pump chamber and secured to said sleeve shaft.

4. In an instrument of the character described, the combination of a main casing having a main chamber formed therein, an indicator tube mounted on said casing, a bottom portion formed independently of the main casing and having formed therein a pump chamber which communicates with the main chamber and the indicator tube, means to secure the bottom portion to the main casing, and an outer shell overlapping the joint between the main casing and the bottom portion and cemented to both.

5. In an instrument of the character described, the combination of a casing having formed therein a main chamber and a pump chamber with portions of different diameters, a valve seat formed in the bottom of the casing and having ports which communicate respectively with the different portions of the pump chamber and with the indicator tube, a valve plug coöperating with said valve seat and adapted to place the indicator tube in communication with one portion or the other of the valve chamber, and an operating shaft for said valve extended upward through the top of the casing.

[Claims 6 to 14 not printed in the Gazette.]

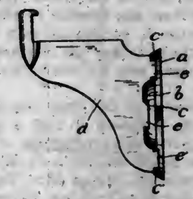
1,016,907. ORCHARD-HEATER. ABRAHAM D. WARD, Palisade, Colo. Filed June 6, 1910. Serial No. 565,299. (Cl. 126—59.5.)



In an orchard heater the combination with an oil storage reservoir, of a cover fitted thereon having openings therein, a perforated diaphragm located a short distance below the reservoir cover, a plurality of tapering generator burners open at both ends and having the larger upper ends secured within the openings in said cover and extending to the bottom of the reservoir, said burners having inlets in the lower ends to admit oil to the burners, and numerous perforations in said burners between the reservoir cover and diaphragm, which are sufficiently small to prevent the passage of flame from the burner to the reservoir.

1,016,908. BRACKET. ALONZO A. WARNER, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed June 9, 1911. Serial No. 632,229. (Cl. 248—18.)

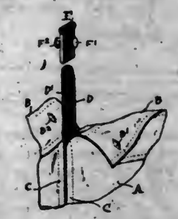
1. A device of the character described comprising a base and a bracket arm, three or more points of attachment of said arm to said base, said points of attachment being in alinement when seen from the front of said base, one of said points of attachment being out of alinement with at least two of the others when seen from the edge of the base.



2. A device of the character described comprising a base, a boss offset from the plane of the base, alined apertures in the boss and the marginal rim, and a bracket arm provided with tangs adapted to fit in said apertures.

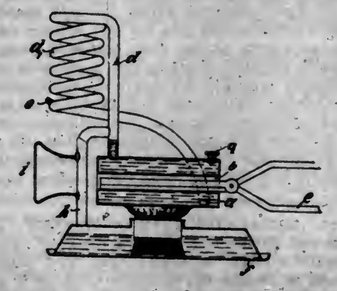
3. A device of the character described comprising a base, a bracket arm secured thereto at three or more points, and means for bracing said arm against side strain which consists in offsetting one point of attachment from at least two of the other points of attachment.

1,016,909. PLACKET-FASTENER. JULIA SEAY BASHAW, Gainesville, Fla. Filed Dec. 31, 1910. Serial No. 600,237. (Cl. 24—267.)



The combination of placket members provided with pockets and with buttonholes, a pair of stays pivotally connected together at one end and adapted to swing apart said stays each being disposed in one of said pockets, a sleeve detachably fitted upon the ends of said stays at the ends thereof opposite the pivotal connection, said sleeve being free of said placket members and provided with a pair of buttons disposed oppositely to each other for the purpose of engaging respectively said buttonholes.

1,016,910. MANUFACTURE OF HEATING APPARATUS. HEINRICH BECK, Berlin, Germany. Filed Mar. 12, 1909. Serial No. 482,935. (Cl. 126—226.)



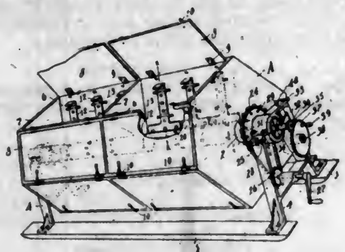
1. A portable device of the class described comprising a closed vessel adapted to be heated from the exterior thereof, a liquid in said vessel of a boiling temperature higher than water and a circuitous and uninterrupted conduit extending from the interior of the vessel and re-

turning to the same for conveying the vapors generated by the heat back to the liquid.

2. A portable device of the class described comprising a closed vessel adapted to be heated from the exterior thereof, a liquid in said vessel of a boiling temperature higher than water, and a circuitous and uninterrupted conduit extending from the interior of the vessel and returning to the same, a portion of said conduit having the form of a spiralic tubing for condensing the vapors generated by the heat and for conveying the same back to the liquid.

3. A portable device of the class described comprising in combination with a source of heat a closed vessel including portions partly surrounding an orifice adapted to receive an article to be heated, a liquid in said vessel of a boiling temperature higher than water and a circuitous and uninterrupted conduit extending from the interior of the vessel and returning to the same, a portion of said conduit having the form of a spiralic tubing.

1,016,911. ROTATABLE BIN. EHRMANN F. VON BORRIES, East Shore Park, Minn. Filed Aug. 18, 1911. Serial No. 644,782. (Cl. 98—26.)



1. An apparatus of the class described comprising a rotatably supported drum constructed with a plurality of radial chambers and valve controlled openings between said chambers for the purpose set forth.

2. An apparatus of the class described comprising a bin made up of a plurality of compartments, valve controlled openings between said compartments, and means for turning said bin to bring different of its compartments to relatively lower and upper position for the purpose set forth.

3. An apparatus of the class described comprising a horizontally disposed rotatable bin, a plurality of radial longitudinally extending division walls forming intermediate compartments, movable closures for said compartments and valve controlled openings separating said compartments.

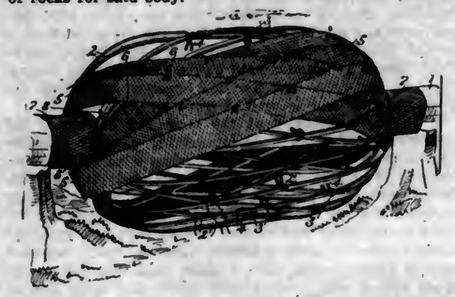
4. An apparatus of the class described comprising a horizontally disposed rotatable bin, a plurality of longitudinally extending division walls constituting intermediate compartments, said division walls being formed with openings, controling valves for said openings and movable exterior closing lids for said compartments.

5. An apparatus of the class described comprising a horizontally disposed rotatable bin, a plurality of radial longitudinally extending division walls constituting intermediate compartments, said division walls being formed with openings connecting said compartments, controlling valves for said openings controllable from the exterior of the bin, and exterior closures for said compartments.

[Claims 6 to 8 not printed in the Gazette.]

1,016,912. METAL-CONCRETE CONTAINER. ISAAC A. BRADDOCK, Haddonfield, N. J., assignor of one-sixth to William C. Codd, Baltimore, Md., and one-sixth to Nicholas A. Kestler and one-sixth to David E. Anthony, Washington, D. C. Original application filed June 18, 1910, Serial No. 567,572. Divided and this application filed Aug. 19, 1910. Serial No. 577,992. (Cl. 83—9.)

1. A metal-cement container composed of a body of globular form having an inlet and an outlet, said body consisting of a metallic frame embedded in a cement-like substance, and longitudinal metallic partitions within said body also embedded in a cement-like substance and connected with said body together with an internal lining of rocks for said body.



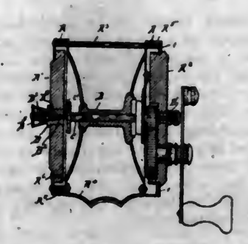
2. In an apparatus of the class described, a frame composed of hoop-like members tied together, a metallic strip wound on said hoop-like members to form a covering therefor, a cement-like body embedding said frame and covering, tie wires for tying said frame and covering together, said tie wires having their ends projected inwardly, and a rock lining within said cement-like body, said tie-wire ends interlocking with said rock lining.

3. In an apparatus of the class described, a frame composed of hoop-like members tied together, a metallic strip wound on said hoop-like members to form a covering therefor, a cement-like body embedding said frame and covering, tie wires for tying said frame and covering together, said tie wires having their ends projected inwardly, and a rock lining within said cement-like body, said tie-wire ends interlocking with said rock lining, and means for turning the aforesaid structure.

4. A container including a frame composed of hoop-like members tied together, a metallic strip wound on said hoop-like members to form a covering therefor, a cement-like body embedding said frame and covering, tie wires for tying said frame together, and having their ends projected into said container, a rock lining within said cement-like body into which said tie wire ends project.

5. A container including a frame composed of hoop-like members tied together, a metallic strip wound on said hoop-like members to form a covering therefor, a cement-like body embedding said frame and covering, tie wires for tying said frame together, and having their ends projected into said container, a rock lining within said cement-like body into which said tie wire ends project, and partitions within said container.

1,016,913. FISHING-REEL. PLINY CATUCCI, Newark, N. J. Filed Sept. 15, 1910. Serial No. 582,135. (Cl. 43—15.)



1. In a fishing reel, the combination of a reel frame, a spool mounted to rotate therein, said frame comprising a pair of flanged head rings channel-shaped in cross section, head plates detachably secured to said head rings to one of the flanges thereof, cross bars connecting said rings and passing through the flanges thereof, spacing tubes or thimbles located upon the cross bar-ends between the ring flanges and means for securing the cross bars to the ring flanges and spacing tubes or thimbles.

2. In a fishing reel, the combination of a reel frame, comprising a pair of flanged head rings, cross bars connecting said head rings, a rear headplate located in one of said head rings, means for securing said head-plate in position comprising a plurality of elbow nuts, one arm of each of said nuts bearing upon the inner face of said head-plate and the other arm of each of said nuts bearing upon the flange of the head ring, and screws for clamping said nuts, plate and flange together.

3. In a fishing reel, the combination of a head-ring consisting of a metallic ring, channel-shaped in cross-section, having its flanges of differing widths, a head plate and means for detachably securing said head-plate to the wider flange of said head-ring.

4. In a fishing reel, a cylindrical metallic head ring having inturned flanges of differing widths at its upper and lower edges, a head plate, and means for detachably securing said head plate to the wider flange of said head ring.

5. In a fishing reel, a head ring consisting of a metal ring having flat flanges at its upper and lower edges, said flanges being of different widths and directed toward the center of the ring to form a ring of channel shape in cross section, a head plate, and means for detachably securing said head plate to the wider flange of said head ring.

[Claims 6 and 7 not printed in the Gazette.]

1,016,914. VISE FOR HOLDING VEHICLE-LAMPS. ELMER V. CHRISTIANA, Kingston, N. Y. Filed July 15, 1911. Serial No. 638,715. (Cl. 29—89.)

The combination with a base, of laterally adjustable oppositely arranged arms mounted thereon comprising horizontal portions having upwardly extending portions provided with enlarged and transversely pierced outer ends, L-shaped brackets carried in the enlarged pierced outer ends of the arms the inner ends of which are adapted to be rotated in a vertical plane, and means for clamping the brackets in fixed adjustment on the arms to support a vehicle lamp in adjusted positions, substantially as described.

1,016,915. POSTAL-CARD RACK. SAMUEL B. CLAY, Sterling, Colo. Filed Mar. 27, 1911. Serial No. 617,115. (Cl. 40—28.)

A device of the class described comprising a U-shaped frame, a rod connecting the outer ends of the arms of said frame, a plate, ears secured to said plate at opposite sides of the plate and rotatably mounted on said rod, each of said ears being provided with a pair of outwardly directed recesses, a shaft journaled between the arms of the frame at the inner ends thereof having an intermediate crank portion, pitmen pivotally connected to the crank portion at each end of the latter, said pitmen being provided respectively with longitudinal slots through which the rods connecting the free ends of the arms of the frame extend, whereby the rotation of said shaft will effect the reciprocation of said pitmen, a pair of rods connecting said pitmen adapted to enter respective recesses in the ears secured to the plate during the reciprocation of the pitman to effect the oscillation of said plate and a card holder, supported by said plate for automatic reversal upon oscillation of the plate to each extreme position.

1,016,916. JOINTING METAL SASH-BARS. FRANCIS HENRY CRITTALL, Braintree, England. Filed June 22, 1911. Serial No. 634,763. (Cl. 189—77.)

1. A joint between two T section sash bars in which the flange of one bar lies between the flange and the web of the other bar, the web of each bar having a rectangular slot cut in it to receive the uncut portion of the web of the other bar, such webs being otherwise uncut and having their metal otherwise undisturbed, substantially as described.

2. The process of preparing a T section bar for jointing with a bar of equal size consisting in first separating the flange of the bar from the web by a slit then enlarging the slit by bending the flange away from the web thus stretching it, next further enlarging the width and length of the slit and lastly cutting a rectangular slot in the web substantially as described.

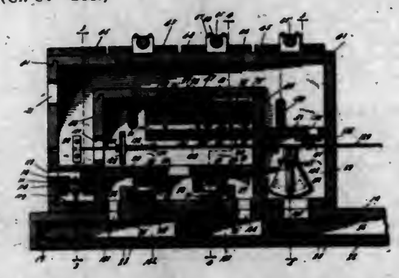
3. A joint between two crossed T-section sash bars of equal cross-section in which the flange of one bar lies between the flange and web of the other bar, the web of each bar having a rectangular slot cut in it to receive the uncut portion of the web of the other bar, such webs being otherwise uncut and having their metal otherwise undisturbed.

4. The process of forming a joint between two T-section sash bars of equal size which consists in first separating the flange of one bar from its web by a slit, then enlarging the slit by bending the flange away from the web thus stretching it, then further enlarging the width and length of the slit, then cutting a rectangular slot in the web, next inserting another bar crosswise in the opening made in the first mentioned bar and then closing the bent flange of the first mentioned bar down upon the flange of the second bar.

5. The process of forming a joint between two T-section sash bars of equal size, which consists in first separating the flange of one bar from its web by a slit, then enlarging the slit by bending the flange away from the web to thus stretch the flange, then cutting a rectangular slot in the web, next inserting another slotted bar crosswise in the opening made in the first mentioned bar, and then closing the bent flange of the first mentioned bar down upon the flange of the second bar.

[Claims 6 and 7 not printed in the Gazette.]

1,016,917. PNEUMATIC PLAYER MECHANISM. FRANCIS W. DRAPER, Richmond, Ind., assignor to Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed Aug. 24, 1910. Serial No. 578,780. (Cl. 84—168.)



1. In a pneumatic player mechanism, an expression box having interior partitions arranged therein to form a main chamber, a motor chamber, an expression chamber, and branches leading from said expression chamber to pneumatic action mechanism, pneumatic controllers carried by said box one for each branch from the expression chamber to the pneumatic action, each of said controllers communicating with the expression chamber and a branch therefrom, a direct connection between the expression chamber and each branch, a valve for opening and closing said direct connection, pneumatic valve mechanism for operating each of said valves, a pneumatic motor-controller forming a connection between the main chamber and motor chamber, a valve independent of the pneumatic controller for regulating the size of the passage through the said controller between the main chamber and motor chamber, a direct connection between the main chamber and motor chamber, a valve controlling said direct connection, a connection between the main chamber and the expression chamber, a valve for controlling said connection, and a valve stem carrying said last mentioned valve and the valve controlling the direct connection between the main chamber and motor chamber, the valve for controlling the connection between the main chamber and expression chamber having a spring connection with the valve stem, whereby said valve stem may have a limited play independent of the spring-connected valve.

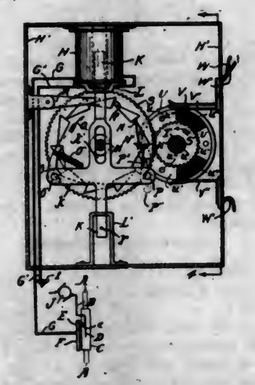
2. In a pneumatic player mechanism, an expression box having interior partitions arranged therein to form a main chamber, a motor chamber, an expression chamber, and branches leading from said expression chamber to pneumatic action mechanism, pneumatic controllers carried by said box one for each branch from the expression chamber to the pneumatic action, each of said controllers communicating with the expression chamber and a branch therefrom, a direct connection between the expression chamber and each branch, a valve for opening and closing said direct connection, pneumatic valve mechanism for operating each of said valves, a pneumatic motor-controller forming a connection between the main chamber and motor chamber, a valve independent of the pneumatic controller for regulating the size of the passage through the said controller between the main chamber and motor chamber, a direct connection between the main chamber and motor chamber, a valve controlling said direct connection, a connection between the main chamber and the expression chamber and a valve for controlling said connection.

3. In a pneumatic player mechanism, an expression box having interior partitions arranged therein to form a main chamber, a motor chamber, an expression chamber, and branches leading from said expression chamber to pneumatic action mechanism, pneumatic controllers carried by said box one for each branch from the expression chamber to the pneumatic action, each of said controllers communicating with the expression chamber and a branch therefrom, a direct connection between the expression chamber and each branch, a valve for opening and closing said direct connection, pneumatic valve mechanism for operating each of said valves, a pneumatic motor-controller forming a connection between the main chamber and motor chamber, a valve independent of the pneumatic controller for regulating the size of the passage through the said controller between the main chamber and motor chamber, a direct connection between the main chamber and motor chamber, a valve controlling said direct connection, a connection between the main chamber and the expression chamber, a valve for controlling said connection, and a valve stem carrying said last mentioned valve and the valve controlling the direct connection between the main chamber and motor chamber.

1,016,918. METHOD OF MAKING PNEUMATIC TIRES. WILLIAM W. DUNCAN, Watertown, and ARTHUR N. HOOD, Newton, Mass., assignors to Hood Rubber Company, Boston, Mass. Filed Aug. 22, 1910. Serial No. 578,341. (Cl. 154—14.)

The herein described method of manufacturing pneumatic tires which consists in forming a tire body of fabric and uncured rubber, separately rolling a strip or band of uncured rubber with an embossed surface, applying said strip or band to the periphery of said body, and thereafter subjecting the tire to the "open heat" vulcanizing treatment, substantially as described.

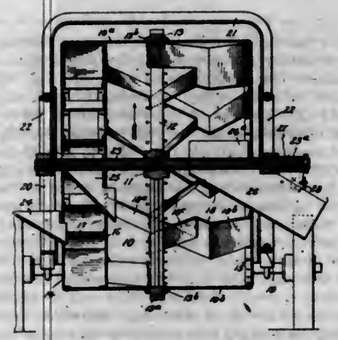
1,016,919. CROSSING-SIGNAL. THOMAS A. GRIST, Knox, Ind. Filed Nov. 22, 1909. Serial No. 529,386. (Cl. 246—36.)



1. A rotatably mounted shaft, oppositely placed ratchet wheels rigidly mounted on the shaft, an electromagnet, an armature arranged to co-act with said magnet, said armature extending from the magnet to beyond the shaft and provided with a cross bar, a dog mounted on the cross bar adjacent to one end, and an abutment on said cross bar adjacent to the other end, means to yieldingly hold the dog in engagement with one of said ratchet wheels to turn the shaft a determined distance in a given direction when the magnet is energized and said armature is advanced, said abutment positioned to engage with a tooth of the remaining ratchet wheel at the end of said advance movement of the armature and means to prevent the shaft from turning in the opposite direction, in combination with movable terminals which are arranged to be moved by the movement of said shaft, and electric brushes arranged to co-act with said terminals.

2. A rotatably mounted shaft, oppositely placed ratchet wheels rigidly mounted on the shaft, an electromagnet, an armature arranged to co-act with said magnet, said armature extending from the magnet to beyond the shaft and provided with a cross bar, a guide arranged to permit longitudinal movement of the armature therein, a dog mounted on the cross bar adjacent to one end, and an abutment on said cross bar adjacent to the other end, means to yieldingly hold the dog in engagement with one of said ratchet wheels to turn the shaft a determined distance in a given direction when the magnet is energized and said armature is advanced, said abutment positioned to engage with a tooth of the remaining ratchet wheel at the end of said advance movement of the armature and means to prevent the shaft from turning in the opposite direction, in combination with an additional shaft, gear wheels on said shafts arranged to intermesh, movable terminals connected to said additional shaft to be moved thereby, and electric brushes arranged to co-act with said terminals.

1,016,920. CONCRETE-MIXER. ALVAH D. HADSEL, Dorranceton, Pa. Filed Nov. 19, 1910. Serial No. 593,219. (Cl. 83—73.)



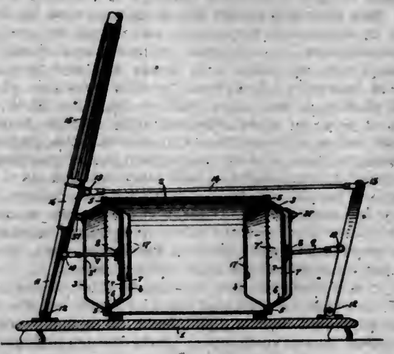
1. In a concrete mixer, a cylindrical drum having a central annular supporting gear member having a hub, spokes, a rim, and flanges extending therefrom toward the ends of the drum, a shaft on which said hub is mounted and constituting the sole support for the drum through said gear member, the curved portion of the drum consisting of a pair of shells attached respectively to said flanges, a head attached to each end of the drum, the head at the receiving end consisting of a narrow circumferential rim, a partition between said receiving end and the gear member and having a central opening for the transfer of material therethrough, a circular series of buckets within the space between said rim and said partition to elevate the material to transfer it as stated, and a series of mixing flights extending spirally between the partition and the delivery end of the drum.

2. In a concrete mixing drum, the combination of a cylindrical shell, means to support the same for rotation about a fixed axis, said supporting means including a gear member having spokes, and a series of flights extending from one end of said shell to the other, each of the flights passing diagonally across and secured to the forward face of a spoke and each flight including an end section formed from the same material as the main section and extending spirally in a different direction therefrom forming a pocket.

3. In a concrete mixer, the combination of a cylindrical shell, means to rotate the shell continuously in a single direction around a fixed axis, means to deliver materials to be mixed into the said shell, a series of mixing flights secured within said shell, each of the flights being formed of a single blank extending spirally from one end of the said section to the other and comprising a main section extending spirally in a certain direction, an auxiliary section extending from the end of the main section at an angle and spirally in a different direction, forming a lifting pocket and means tending to move the material toward the middle of the drum and a third section extending rearwardly spirally from the main section at an angle slightly removed from the aforesaid angle between the main and auxiliary sections, and means to discharge the mixed material from the drum.

4. In a concrete mixer, the combination of a frame, a shaft supported upon said frame and extending at one end beyond the frame, a rotatable mixing drum mounted upon said shaft, means to introduce material into one end of the drum, and means at the other end thereof to deliver the mixed material therefrom, said delivering means comprising a chute suspended normally from the aforesaid shaft extension below the axis of the shaft, and means to swing the chute circumferentially around the axis of the shaft to throw it out of delivering position, the inner end of the chute being provided with a lateral projection to increase its receiving capacity, substantially as set forth.

1,016,921. SUCTION CLEANING DEVICE. HENRY KOCH, Rahway, N. J., assignor to The Regina Company, Rahway, N. J., a Corporation of New Jersey. Filed June 4, 1910. Serial No. 564,962. (Cl. 83—47.)

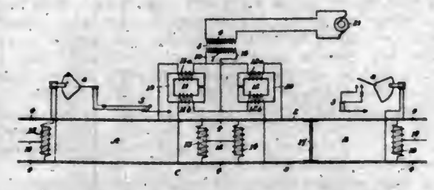


1. In a suction cleaning device, the combination of a suction chamber provided with an inlet opening, oppositely arranged suction pumps constituting end walls of said chamber said pumps having reciprocating members adapted to move in a common axis, means for operating said pumps, and a dust collector supported within said chamber between said inlet opening and said pumps.

2. In a suction cleaning device, the combination of a suction chamber provided with an inlet opening, oppositely arranged suction pumps constituting end walls of said chamber said pumps having reciprocating members connected together for simultaneous operation, means for actuating said members, and a dust collector supported within said chamber between said inlet opening and said pumps.

3. In a suction cleaning device, the combination of a suction chamber provided with an inlet opening, oppositely arranged suction pumps constituting end walls of said chamber said pumps having reciprocating members connected together for simultaneous operation, means for actuating said members, and a dust collector removably supported within said chamber between said inlet opening and said pumps.

1,016,922. RAILWAY SIGNALING SYSTEM. LLOYD V. LEWIS, Edgewood, and JOHN S. HOLLIDAY, Wilkinsburg, Pa., assignors to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed July 7, 1911. Serial No. 637,269. (Cl. 246—36.)



1. In a railway signaling system, two adjacent block sections, a source of alternating signaling current, a transformer whose primary is connected with the source of alternating signaling current and whose secondary is connected across the track rails of both block sections, and two substantially equal resistances connected respectively between the transformer secondary and each rail of one of the block sections.

2. In a railway signaling system, two adjacent block sections, a source of alternating signaling current, a transformer whose primary is connected with the source of alternating signaling current and whose secondary is connected across the track rails of both block sections, and two substantially equal resistances connected respectively between the transformer secondary and each rail of one of the block sections, and two substantially equal resistances connected respectively between the transformer secondary and each rail of the other block section.

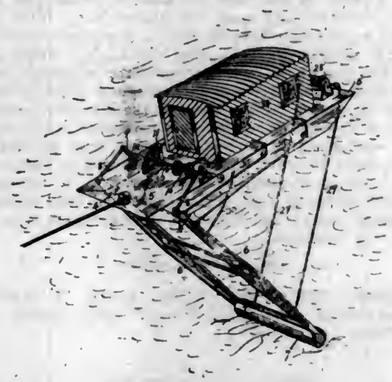
3. In a signaling system for electric railways the track rails of which are included in the circuit for the propulsion current, two adjacent block sections divided by insulation in the track rails, means for permitting propulsion current to flow from the rails of either of the said block sections to the rails of the other block section, a source of alternating signaling current, a transformer whose primary is connected with the source of signaling current at whose secondary is connected across the track rails of both of said block sections, two substantially equal resistances connected respectively between the transformer secondary and each rail of one of the block sections, and two substantially equal resistances connected respectively between the transformer secondary and each rail of the other block section.

4. In a signaling system for electric railways the track rails of which are included in the circuit for the propulsion current, two adjacent block sections divided by insulation in the track rails, means for permitting propulsion current to flow from the rails of either of the said block sections to the rails of the other block section, a track circuit for each block section each of which track circuits includes the opposite lines of rails of the block section, a source of alternating signaling current, a transformer whose primary is connected with the source of signaling current and whose secondary is connected across the track rails of both of said block sections, two substantially equal resistances connected respectively between the transformer secondary and each rail of one of the block sections, and two substantially equal resistances connected respectively between the transformer secondary and each rail of the other block section.

5. In a signaling system for electric railways, the track rails of which are included in the circuit for the propulsion current, two adjacent block sections divided by insulations in the track rails, means for permitting the propulsion current to flow from the rails of either block section to the rails of the other block section, a source of alternating signaling current, a transformer having its primary connected with the source of signaling current and its secondary connected across the track rails of both block sections, two substantially equal inductive resistances wound in the same direction on one magnetic core and interposed respectively between the secondary and each track rail of one of the block sections, and two substantially equal inductive resistances wound in the same direction on another magnetic core and interposed respectively between the secondary and each track rail of the other block section.

[Claims 6 and 7 not printed in the Gazette.]

1,016,923. MARINE SOUNDING APPARATUS. HUGH KEITH MARSHALL, Sydney, New South Wales, Australia. Filed Nov. 25, 1910. Serial No. 594,218. (Cl. 234—1.)



1. In a marine sounding apparatus, a floating structure, a sounding frame pivotally supported intermediate of its length from said floating structure and extending therebelow into the water downwardly and rearwardly and contacting the bed of the water at its lower end, a rotating recording drum carried on said floating structure, and means operatively connected to said frame above its pivot point and adapted to rotate said recording drum exactly proportional to the changes in depth of the water as denoted by the swinging of said sounding frame.

2. In a marine sounding apparatus, a floating structure, a pair of depending arms pivoted to the forward end of said structure one on each side thereof and having extensions beyond the pivot point, a ground roller journaled in the lower extremities of said arms and extending horizontally therebetween, a recording apparatus, and means operatively connecting said recording apparatus with said extensions.

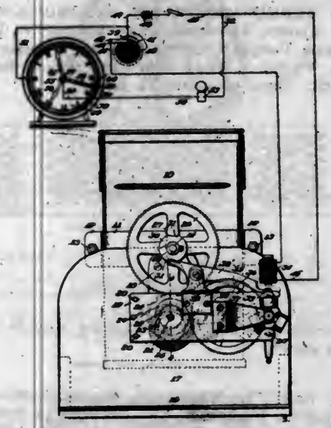
3. Improvements in marine sounding apparatus consisting of a ground roller pivotally mounted transversely between the lower extremities of the members of a dependent frame pivoted to a floating structure, a rotatably mounted drum carrying a recording chart and operated and controlled by the said frame by means of levers and gearing, all substantially as described and illustrated.

4. Improvements in marine sounding apparatus consisting of a ground roller pivotally mounted transversely between the lower extremities of the members of a dependent frame pivoted to a floating structure, a rotatably mounted drum carrying a recording chart and operated and controlled by the said frame by means of levers and gearing, and a balance weight operated and controlled by the said frame, all substantially as described and illustrated.

5. In a marine sounding apparatus, a floating structure, a pair of depending arms pivoted one at each side of said structure at the forward end thereof and having extensions beyond the pivot point a ground roller journaled at the lower extremities of said arms and extending therebetween, a rotatable drum mounted on said structure and carrying a recording chart on its periphery, levers and gears operatively connecting said extensions with said drum for rotating the latter coincidently with the movement of said depending arms, a marker in contact with said chart, and means for constantly and uniformly moving said marker in an axial direction across said chart.

[Claim 6 not printed in the Gazette.]

1,016,924. PHOTOGRAPHIC DEVELOPING APPARATUS. HORACE C. WILCOX, Hazleton, Pa. Filed Oct. 23, 1900. Serial No. 524,162. (Cl. 161—1.)



1. The combination of a tank mounted for rotation, a motor operatively connected to the tank, means for locking the motor, means for releasing the locking means, a time-controlled device for intermittently actuating the releasing means, and means for holding the locking means in release position until the tank has been inverted, said holding means thereupon permitting the locking means to return to locking position.

2. The combination of a tank mounted for rotation, a motor operatively connected to the tank, means for locking the motor, an electro-magnet for releasing the locking means, a time-controlled device for intermittently closing the magnet circuit, and means for holding the locking means in release position until the tank has been inverted, said holding means thereupon permitting the locking means to return to locking position.

3. The combination of a tank mounted for rotation, a motor operatively connected to the tank, a projection on a movable part of the motor, a lever having a shoulder located in the path of the projection, time-controlled means for swinging the lever in a direction to release the projection, and means for holding the lever in release position until the tank has been inverted, said means thereupon permitting the lever to return to locking position.

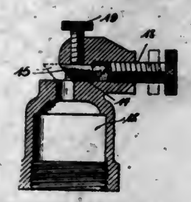
4. The combination of a tank mounted for rotation, a motor operatively connected to the tank, a projection on a movable part of the motor, a lever having a shoulder located in the path of the projection, an electro-magnet for swinging the lever in a direction to release the projection, time-controlled means for closing the magnet circuit at intervals, and means for holding the lever in release position until the tank has been inverted, said means thereupon permitting the lever to return to locking position.

5. The combination of a support, a tank having trunnions journaled in the support, a disk fast on one of the trunnions, and having diametrically opposite cam surfaces, a motor operatively connected to the trunnion, a projection on a movable part of the motor, a lever having a shoulder located in the path of the projection, one end of the lever engaging the cam surfaces of the disk, and time-controlled means for swinging the other end of the lever in a direction to release the projection.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

13,366. NOZZLE. LEWIS C. BOWERS, Boise, Idaho. Filed Apr. 27, 1911. Serial No. 623,792. Original No. 978,835, dated Dec. 20, 1910, Serial No. 558,170. (Cl. 137—81.)



1. The combination with a nozzle of a baffle having a plurality of effective faces comprised in its peripheral edge and movable to bring any one of said faces into active position, and means for holding said baffle against movement to maintain the desired effective face thereof in active position.

2. A nozzle comprising a body having a transverse slot therein at one end and a longitudinal passage opening through one wall of said slot and the other end of the body, a slidable disk mounted in said slot adapted to open and close said passage, means for sliding said disk, and means for locking said disk against sliding movement.

3. A nozzle comprising a body having a transverse slot therein at one end and a longitudinal passage opening through one wall of said slot and the other end of the body, a slidable disk mounted in said slot adapted to open and close said passage, a thumb screw mounted in said body adapted when moved inwardly to engage one end of the disk and slide same toward the outer end of the slot, and a second set screw mounted in said body adapted when moved inwardly to engage one side of the disk and force same against the side of the slot through which the passage opens.

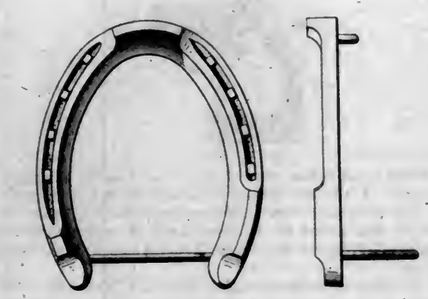
4. A nozzle comprising a body having a transverse slot therein at one end and a longitudinal passage opening through one wall of said slot and the other end of the body, a slidable disk mounted in said slot adapted to open and close said passage, said slidable disk having its sides converging toward the side of the slot through which the passage opens, means for sliding said disk, and means for locking said disk against sliding movement.

5. A nozzle comprising a body having a transverse slot therein at one end and a longitudinal passage opening through one wall of said slot and the other end of the body, guide rails mounted in said slot on opposite sides of the passage, a slidable disk mounted between said guide rails adapted to open and close said passage, means for sliding said disk and means for locking said disk against sliding movement.

6. A nozzle comprising a body having a transverse slot therein at one end and a longitudinal passage opening through one wall of said slot and the other end of the body, a slidable disk mounted in said slot adapted to open and close said passage, the sides of said disk being equal, whereby the position of said sides with relation to said slot may be varied at will, means for sliding said disk, and means for locking said disk against sliding movement.

DESIGNS.

42,122. HOLDER FOR WHISK-BROOMS AND SIMILAR ARTICLES. HENRY BUERMANN, Newark, N. J. Filed Dec. 7, 1910. Serial No. 596,140. Term of patent 3½ years.

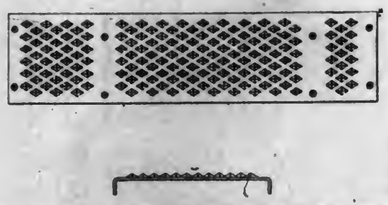


The ornamental design for a holder for whisk-brooms and similar articles, as shown.

42,123. HANDLE FOR SPOONS OR SIMILAR ARTICLES. BENJAMIN A. BURNS, Shelton, Conn. Filed Sept. 19, 1911. Serial No. 650,285. Term of patent 7 years.

The ornamental design for a handle for spoons, or similar articles, as shown and described.

42,124. RUNNING-BOARD FOR AUTOMOBILES. WILLIAM CAIRNS, Cleveland, Ohio, assignor to Parish & Bingham Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Sept. 16, 1909. Serial No. 518,123. Term of patent 14 years.

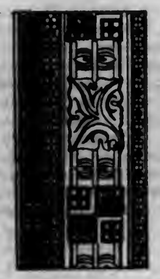


The ornamental design for a running board for automobiles as shown.

42,125. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,167. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

42,126. RUG-BORDER. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,168. Term of patent 3½ years.

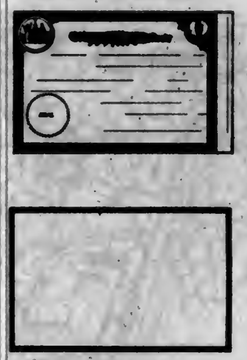


The ornamental design for a rug border, as shown.

42,127. LAMP-CASING. EDWIN R. ESTEP, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 21, 1908. Serial No. 463,925. Term of patent 7 years.

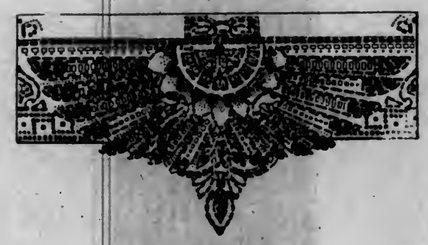
The ornamental design for a lamp casing, as shown, and described.

42,128. OFFICIAL CERTIFICATE. JOHN B. GOODWIN, Baltimore, Md., assignor to The Sovereign Grand Lodge of the Independent Order of Odd Fellows, a Corporation of Maryland. Filed Nov. 16, 1911. Serial No. 660,725. Term of patent 14 years.



The ornamental design for an official certificate, as shown.

42,129. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,052. Term of patent 3½ years.



The ornamental design for wall covering as shown and described.

42,130. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,053. Term of patent 3½ years.

The ornamental design for wall covering as shown and described.

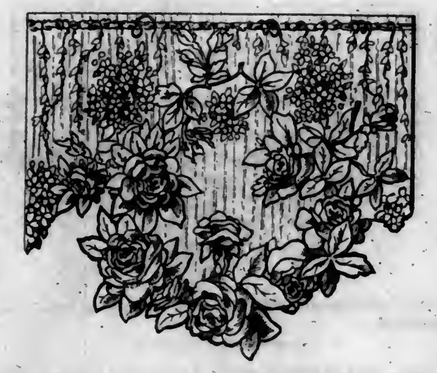
42,131. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,054. Term of patent 3½ years.

The ornamental design for wall covering as shown and described.

42,132. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,055. Term of patent 3½ years.

The ornamental design for wall covering as shown and described.

42,133. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,056. Term of patent 3½ years.

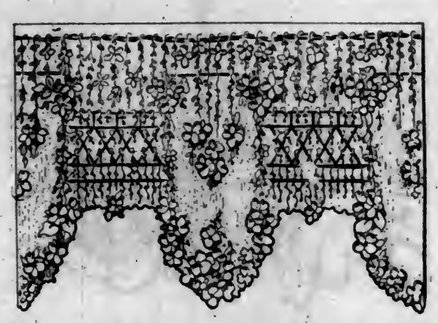


The ornamental design for wall covering as shown and described.

42,134. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,057. Term of patent 3½ years.

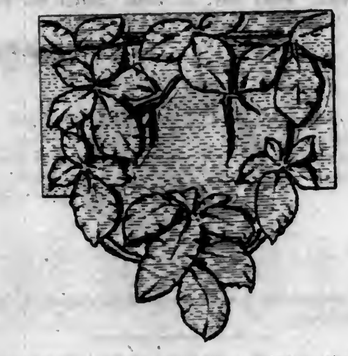
The ornamental design for wall covering as shown and described.

42,135. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,058. Term of patent 3½ years.



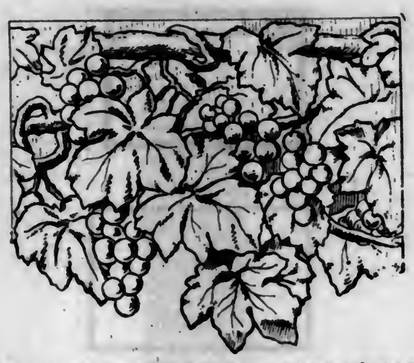
The ornamental design for wall covering as shown and described.

42,136. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,059. Term of patent 3½ years.



The ornamental design for wall covering as shown and described.

42,137. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Nov. 23, 1911. Serial No. 662,060. Term of patent 3½ years.

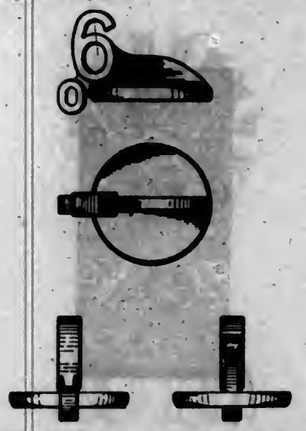


The ornamental design for wall covering as shown and described.

42,138. TEXTILE FABRIC. EMANUEL M. HACKER, New York, N. Y., assignor of one-half to M. Goldman & Co., New York, N. Y., a Firm. Filed Dec. 2, 1909. Serial No. 531,108. Term of patent 3½ years.

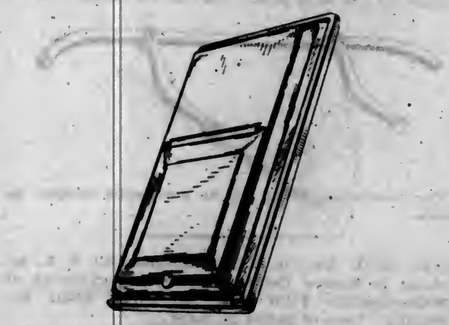
The ornamental design for a textile fabric, as shown and described.

42,139. AUTOMOBILE RADIATOR-FILLER CAP. HENRY B. JOY, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 27, 1911. Serial No. 657,198. Term of patent 7 years.



The ornamental design for an automobile radiator filler cap, as shown.

42,140. RESERVOIR-TOP. FREDERICK W. JUDD, Cleveland, Ohio, assignor to The Wrought Iron Range Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 25, 1908. Serial No. 464,504. Term of patent 7 years



The ornamental design for a reservoir top, as shown.

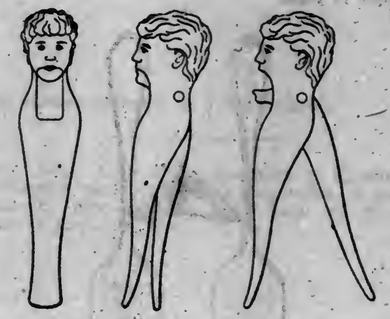
42,141. CARPET. JOHN MERRY, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,165. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

42,142. CARPET. JOHN B. MOFFAT, Bronxville, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,164. Term of patent 3½ years.

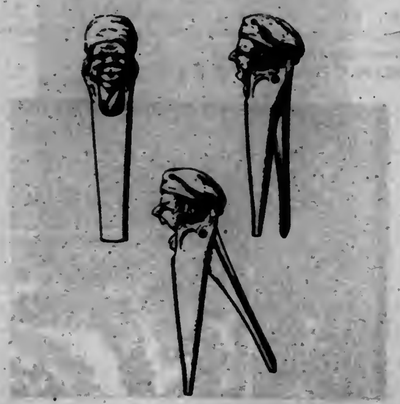
The ornamental design for a carpet, as shown.

42,143. NUTCRACKER. ANDERS L. MORDT, Guymon, Okla. Filed Sept. 11, 1911. Serial No. 648,775. Term of patent 14 years.



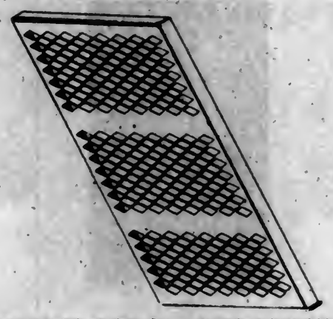
The ornamental design for a nut cracker as shown.

42,144. NUTCRACKER. ANDERS L. MORDT, Guymon, Okla. Filed Sept. 11, 1911. Serial No. 648,776. Term of patent 14 years.



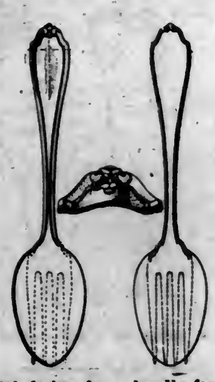
The ornamental design for a nut cracker as shown.

42,145. RUNNING-BOARD FOR AUTOMOBILES. GEORGE W. MORSE, Cleveland, Ohio, assignor to Parish & Bingham Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Sept. 20, 1909. Serial No. 518,721. Term of patent 14 years.



The ornamental design for a running board for automobiles as shown.

42,146. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. CHARLES OSBORNE, New York, N. Y. Filed Sept. 2, 1911. Serial No. 647,450. Term of patent 14 years.



The ornamental design for a handle for a spoon, fork or similar article, as shown.

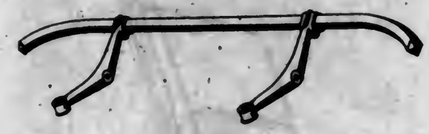
42,147. RUG. WILLIAM G. REITH, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,160. Term of patent 7 years.

The ornamental design for a rug, as shown.

42,148. CARPET. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,161. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

42,149. AUTOMOBILE-BUMPER. JAMES H. SAGER, Rochester, N. Y. Filed Oct. 21, 1911. Serial No. 656,013. Term of patent 7 years.

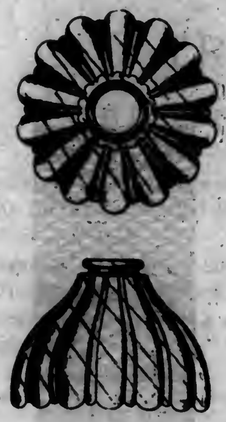


The ornamental design for an automobile bumper, as shown.

42,150 RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,163. Term of patent 3½ years.

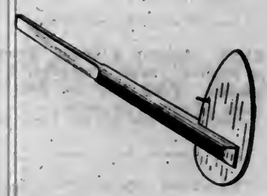
The ornamental design for a rug, as shown.

42,151. LAMP-SHADE. HARRY A. SCHNELBACH, Steubenville, Ohio, assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Sept. 23, 1911. Serial No. 651,000. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

42,152. KEY. FRANK SOLEY, Philadelphia, Pa., assignor to Miller Lock Company, Frankford, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 20, 1911. Serial No. 655,808. Term of patent 14 years.

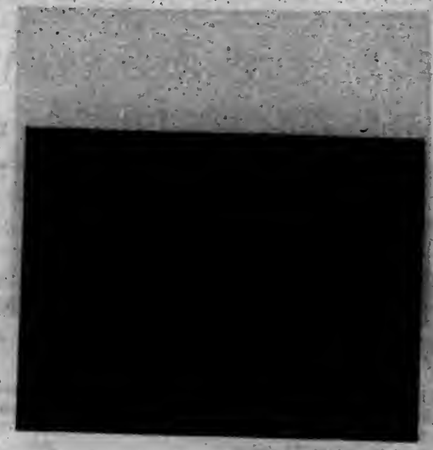


The ornamental design for a key, as shown.

42,153. CARPET. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,169. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

42,154. RUG. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,171. Term of patent 3½ years.



The ornamental design for a rug, as shown.

42,155. RUG. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,171. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,156. RUG. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,172. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,157. RUG. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,173. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,158. RUG. ERNEST W. TRIK, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,162. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,159. CARPET. JOSEPH WISHART, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,158. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

42,160. CARPET. JOSEPH WISHART, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 663,159. Term of patent 3½ years.

The ornamental design for a carpet, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 6, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 3,558. (CLASS 39. CLOTHING.) EDSON, MOORE & CO., Detroit, Mich. Filed Apr. 29, 1905.

Ste Claire

The word and abbreviation "Ste. Claire."

Particular description of goods.—Men's and Women's Hosiery.

Claims use since the 1st day of November, 1898.

Ser. No. 30,348. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) PETER F. HEERING, Copenhagen, Denmark. Filed Oct. 2, 1907. Under ten-year proviso.

(Which includes the name of the founder of the firm, Peter F. Heering, now deceased, as written by Peter Nicolai Heering, senior member of the applicant firm,) no claim being made to the printed words "Peter F. Heering Kiobenhavn, Bottled at Copenhagen by Sole Manufacturer" and the words "P. F. Heering" perforated in the cap.

Particular description of goods.—Cherry Brandy.

Claims use since the 19th day of October, 1888.

Ser. No. 35,368. (CLASS 47. WINES.) CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed June 15, 1908.

Particular description of goods.—Wine of the Burgundy Type.

Claims use since the 1st day of April, 1906.

Ser. No. 35,503. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

KING

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Claims use since Feb. 20, 1906.

Ser. No. 42,626. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHICAGO CONSOLIDATED BOTTLING COMPANY, Chicago, Ill. Filed May 24, 1909. Under ten-year proviso.

Particular description of goods.—Ginger-Ale.
Claims use since Feb. 15, 1895.

Ser. No. 43,828. (CLASS 12. CONSTRUCTION MATERIALS.) KINGSTONE ORNAMENTAL & CONSTRUCTION COMPANY, Los Angeles, Cal. Filed July 27, 1909.

KINGSTONE

Particular description of goods.—Artificial Building-Stones.
Claims use since Apr. 1, 1906.

Ser. No. 44,773. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) DR. J. G. B. SIEGERT & HIJOS, Port of Spain, Trinidad. Filed Sept. 18, 1909.

Particular description of goods.—Cordials.
Claims use since the 1st day of May, 1907.

Ser. No. 45,002. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. S. SANDERSON & BROTHER, Denver, Colo. Filed Sept. 29, 1909.

Particular description of goods.—Coffee.
Claims use since on or about August, 1905.

Ser. No. 45,745. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GLOBE FOUNDRY & MACHINE CO., Sheboygan, Wis. Filed Nov. 6, 1909.

Particular description of goods.—Gasolene-Engines and Silo-Machines.
Claims use since the year 1852.

Ser. No. 46,761. (CLASS 2. RECEPTACLES.) THE SEALSHIPT OYSTER SYSTEM, INC., South Norwalk, Conn., assignor to Sealshipt Oyster System, Boston, Mass., a Corporation of New York. Filed Dec. 28, 1909.

SEALSHIPTOR

Particular description of goods.—Oyster-Shipping Cases.
Claims use since May 25, 1909.

Ser. No. 46,762. (CLASS 2. RECEPTACLES.) THE SEALSHIPT OYSTER SYSTEM, INC., South Norwalk, Conn., assignor to Sealshipt Oyster System, Boston, Mass., a Corporation of New York. Filed Dec. 28, 1909.

SEALSHIPTICASE

Particular description of goods.—Oyster-Shipping Packages.
Claims use since May 25, 1909.

Ser. No. 48,133. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910.

REKORD

Particular description of goods.—High-Speed Tool-Steel.
Claims use since Sept. 4, 1905.

Ser. No. 48,134. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910. Under ten-year proviso.

SÖDERFORS

Particular description of goods.—Tool-Steel.
Claims use since June 17, 1870.

Ser. No. 48,135. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910. Under ten-year proviso.

Particular description of goods.—Tool-Steel.
Claims use since Apr. 9, 1892.

Ser. No. 48,136. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910.

Particular description of goods.—Tool-Steel and Anvils.
Claims use since July 19, 1895.

Ser. No. 48,137. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910. Under ten-year proviso.

S in DANNEMORA

Particular description of goods.—Tool-Steel.
Claims use since Apr. 2, 1869.

Ser. No. 48,138. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden. Filed Mar. 3, 1910.

PARAGON

Particular description of goods.—Anvils.
Claims use since Oct. 19, 1908.

Ser. No. 48,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Modoc

Particular description of goods.—Canned Salmon.
Claims use since Aug. 1, 1901.

Ser. No. 48,942. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

ROCK

Particular description of goods.—Canned Salmon.
Claims use since Aug. 1, 1901.

Ser. No. 52,710. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HELENE SWIFT, New York, N. Y. Filed Nov. 10, 1910.

Being a portrait of myself.
Particular description of goods.—A Dermatine Toilet Preparation, Toilet Powder, and Toilet Cream.
Claims use since Sept. 30, 1895.

Ser. No. 52,929. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE REPUBLIC METALWARE COMPANY, Buffalo, N. Y. Filed Nov. 25, 1910.

SAVORY

Particular description of goods.—Percolators.
Claims use since about July 1, 1910.

Ser. No. 53,353. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARLYLE MILLING COMPANY, Carlyle, Ill. Filed Dec. 19, 1910.

The word "Cupid" and the intermediate border being printed in red.

Particular description of goods.—Wheat-Flour.
Claims use since about Oct. 2, 1905.

Ser. No. 53,558. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. ZIEGLER CO., Milwaukee, Wis. Filed Dec. 30, 1910.

CHOCOLATE
ANGELS' FOOD

No claim being made to the word "Chocolate."
Particular description of goods.—Candy.
Claims use since Oct. 19, 1904.

Ser. No. 54,045. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM V. HIRSH, New York, N. Y. Filed Jan. 23, 1911.

Particular description of goods.—Coffee.
Claims use since the 17th day of January, 1911.

Ser. No. 55,229. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) T. M. SINCLAIR & CO., LIMITED, Cedar Rapids, Iowa. Filed Mar. 21, 1911.

Particular description of goods.—Lard.
Claims use since the year 1890.

Ser. No. 55,485. (CLASS 46 FOODS AND INGREDIENTS OF FOODS.) KINGSLEY & SMITH, Hartford, Conn. Filed Apr. 3, 1911.

ELC

Particular description of goods.—Butter.
Claims use since Oct. 25, 1897.

Ser. No. 55,492. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DURHAM DUPLEX RAZOR COMPANY, New York, N. Y. Filed Apr. 3, 1911.

DURHAM-DERBY

Particular description of goods.—Razors.
Claims use since the 13th day of January, 1911.

Ser. No. 56,054. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SAVARESE MARCARONI CO., Brooklyn, N. Y. Filed Apr. 29, 1911.

IMPERIAL

Particular description of goods.—Macaroni.
Claims use since November, 1910.

Ser. No. 56,482. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HYGIENIC PRODUCTS COMPANY, Canton, Ohio. Filed May 19, 1911.

Sani-Flush

Particular description of goods.—Cleaning-Powder.
Claims use since Apr. 25, 1911.

Ser. No. 56,670. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM P. WARD, Brooklyn, N. Y. Filed May 27, 1911. Under ten-year proviso.

WYNKOOP'S
ICELAND
PECTORAL

No claim being made to the word "Pectoral."
Particular description of goods.—A Remedy for Coughs, Colds, Nervousness, and for Consumptives.
Claims use since 1850.

Ser. No. 57,252. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LONSDALE COMPANY, Providence, R. I. Filed June 22, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Goods in the Piece.
Claims use since 1860.

Ser. No. 57,253. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LONSDALE COMPANY, Providence, R. I. Filed June 22, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Goods in the Piece.
Claims use since 1860.

Ser. No. 57,285. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN ELECTRICAL HEATER CO., Detroit, Mich. Filed June 24, 1911.

Particular description of goods.—Electric Sad-Irons, Electric Water-Heaters, Electric Warming-Pads, Electric Disk Heaters, and Electric Coffee-Percolators.
Claims use since Feb. 1, 1911.

Ser. No. 57,366. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOPE COMPANY, Providence, R. I. Filed June 29, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Goods in the Piece.
Claims use since 1860.

Ser. No. 57,425. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH-SUPERIOR MILLING COMPANY, Duluth, Minn. Filed June 30, 1911.

GIANT

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 15, 1895.

Ser. No. 57,426. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES R. HATMAKER, Paris, France. Filed June 29, 1911.

AMBROSIA

Particular description of goods.—Milk, Dried Milk, Cream, Butter, and Cheese.
Claims use since June 23, 1911.

Ser. No. 57,439. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) "SELAS" GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany. Filed July 1, 1911.

Selas

Particular description of goods.—Electric Switches, Illuminating-Bodies for Electric Light, Electric Incandescent Lamps, Arc-Lamps, Dynamos, Electric Motors, Batteries for Storing and Generating Electricity, (Secondary and Primary,) Electric Fire-Alarms, Electrodes for Arc-Lamps.
Claims use since the 29th day of September, 1900.

Ser. No. 57,482. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAUL GODFREY LIEBMANN, Ardmore, Okla. Filed July 5, 1911.

DIAMOND A

Particular description of goods.—Ice-Cream.
Claims use since Feb. 15, 1911.

Ser. No. 57,536. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y. Filed July 8, 1911.

LL

Particular description of goods.—Roofing, Sheathing, Building, Waterproofing, and Insulating Felts and Papers.
Claims use since on or about Jan. 1, 1879.

Ser. No. 57,537. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y. Filed July 8, 1911.

Crescent

Particular description of goods.—Roofing, Sheathing, Building, Waterproofing, and Insulating Felts and Papers.
Claims use since on or about Jan. 1, 1888.

Ser. No. 57,549. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BLACKSTONE MFG. COMPANY, Providence, R. I. Filed July 8, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Goods in the Piece.
Claims use since 1860.

Ser. No. 57,550. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LONSDALE COMPANY, Providence, R. I. Filed July 8, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Goods in the Piece.
Claims use since 1860.

Ser. No. 57,562. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN BOYD, Houston, Tex. Filed July 7. 1911.

CHERAMI

Particular description of goods.—A Remedy for Malaria, Biliousness, Diseases of the Kidneys, Liver, and Bowels, and a Medicinal Tonic.
Claims use since Feb. 1, 1910.

Ser. No. 57,646. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEACOAST CANNING CO., Eastport, Me. Filed July 15, 1911.

CONTINENTAL

Particular description of goods.—Fresh Herring.
Claims use since June, 1899.

Ser. No. 57,733. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOSEPH BENN & SONS, INC., Greystone, R. I. Filed July 20, 1911.

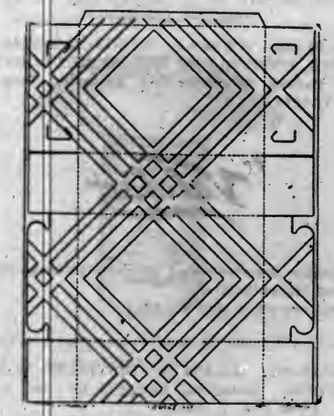
The words "Benns' Mohairs Greystone Mills" in the triangular border being disclaimed.
Particular description of goods.—Alpaca and Mohair Dress Goods in the Piece.
Claims use since July 1, 1911.

Ser. No. 57,858. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSENBERG BROS. & CO., San Francisco, Cal. Filed July 27, 1911.

ROSCO

Particular description of goods.—Raisins.
Claims use since Apr. 28, 1911.

Ser. No. 57,860. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSENBERG BROS. & CO., San Francisco, Cal. Filed July 27, 1911.



No claim being made to the representation of the carton.
Particular description of goods.—Raisins.
Claims use since Apr. 28, 1911.

Ser. No. 57,913. (CLASS 37. PAPER AND STATIONERY.) ARNOLD OTTO MEYER, Hamburg, Germany. Filed July 28, 1911.

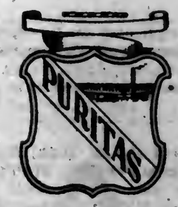
Particular description of goods.—Letter-Paper, Envelops, and Printing-Paper.
Claims use since Sept. 30, 1908.

Ser. No. 57,982. (CLASS 15. OILS AND GREASES.) UNION WELL SUPPLY CO., Los Angeles, Cal. Filed July 29, 1911.

MOTORITE

Particular description of goods.—Lubricating-Oil.
Claims use since Jan. 1, 1909.

Ser. No. 58,292. (CLASS 39. CLOTHING.) EARNSDALE WORSTED COMPANY, Clinton, Mass. Filed Aug. 21, 1911.



Particular description of goods.—Suits of Clothing for Outer Wear.
Claims use since Nov. 2, 1905.

Ser. No. 58,450. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CARDINAL VARNISH CLEANER COMPANY, Akron, Ohio. Filed Aug. 30, 1911.

No claim is made for the word "Cleaner."
Particular description of goods.—Liquid Varnish-Cleaners.
Claims use since July 1, 1911.

Ser. No. 58,514. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) W. A. & J. C. HAARTZ, INC., Boston, Mass. Filed Sept. 2, 1911.

No claim being made to the word "Cleaneasy."
Particular description of goods.—Waterproof Cloth.
Claims use since the 18th day of August, 1911.

Ser. No. 58,567. (CLASS 32. FURNITURE AND UPHOLSTERY.) ENGLANDER SPRING BED COMPANY, New York, N. Y. Filed Sept. 7, 1911.

Particular description of goods.—Spring-Mattresses and Couch-Beds, Divans, and Davenports Having Spring-Mattresses.
Claims use since June 9, 1909.

Ser. No. 58,591. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) NATIONAL COMMITTEE OF THE CONFEDERATED SUPPLY ASSOCIATIONS, New York, N. Y. Filed Sept. 8, 1911.

NACO

Particular description of goods.—Lead Traps and Bends, Soil-Pipes and Fittings, Closet Tanks and Seats, Bath-Tubs, Lavatories, Enameled and Cast-Iron Sinks, Faucets, and Supply-Pipes.
Claims use since July 1, 1910.

Ser. No. 58,602. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE F. JEFFERSON, Houston, Tex. Filed Sept. 11, 1911.

Particular description of goods.—Bread.
Claims use since July 28, 1911.

Ser. No. 58,630. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) UNION PETROLEUM COMPANY, Philadelphia, Pa. Filed Sept. 11, 1911.

The trade-mark consists of the symbol of a scale-balance having barrels supported and depending from the outer free ends of the scale-beam, no claim being made to the words "Union Film Oil" and "Linseed Oil."
Particular description of goods.—Oils Generally Used for or as an Ingredient in Mixtures or Compounds for Painting or Otherwise Coating or Finishing Surfaces.
Claims use since about Aug. 23, 1911.

Ser. No. 59,035. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) ORMAN PARTEE SADDLERY CO., Nashville, Tenn. Filed Oct. 7, 1911.

"Valubac"

Particular description of goods.—Harness, Horse-Saddles, and Horse-Collars.
Claims use since May 30, 1911.

Ser. No. 59,061. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDBERG, BOWEN & CO., San Francisco, Cal. Filed Oct. 7, 1911.

CONSTITUTION

Particular description of goods.—Gin, Brandy, and Blended Whisky.
Claims use since about Sept. 20, 1911.

Ser. No. 59,191. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) L. SONNEBORN SONS, INC., New York, N. Y. Filed Oct. 17, 1911.

CEMCOAT

Particular description of goods.—Paints Adapted to Form a Tough Elastic and Wear-Resisting Finish for Cement, Stone, or Brick Walls and for Floors and Adapted for Analogous Uses.
Claims use since the 1st of September, 1911.

Ser. No. 59,211. (CLASS 37. PAPER AND STATIONERY.) SCHWANHÄUSSER, LATE GROSSBERGER & KURR, Nuremberg, Germany. Filed Oct. 18, 1911.

Particular description of goods.—Lead-Pencils and Colored Pencils.
Claims use since 1875.

Ser. No. 59,243. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CHARLES TWINING, New York, N. Y. Filed Oct. 20, 1911.

ADOMATER

Particular description of goods.—Computing-Machines.
Claims use since the 13th day of October, 1911.

Ser. No. 59,276. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) C. H. OEHMIG-WEIDLICH, Zeitz, Germany. Filed Oct. 21, 1911.

Particular description of goods.—Sticky Fly-Paper.
Claims use since July 7, 1911.

Ser. No. 59,365. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BERGSTROM STOVE COMPANY, Neenah, Wis. Filed Oct. 26, 1911.

EMPEROR

Particular description of goods.—Heating-Furnaces.
Claims use since on or about the year 1885.

Ser. No. 59,484. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) E. JENCKES MANUFACTURING COMPANY, Worcester, Mass. Filed Nov. 1, 1911. Under ten-year proviso.

HICKS'

Particular description of goods.—Belt-Hooks.
Claims use since about 1886.

Ser. No. 59,556. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. MYERS LYE CO., St. Louis, Mo. Filed Nov. 4, 1911.

Particular description of goods.—Lye.
Claims use since Oct. 20, 1911.

Ser. No. 59,558. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Nov. 6, 1911.

A

Particular description of goods.—Turnbuckles.
Claims use since October, 1899.

Ser. No. 59,587. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAS. R. BOYD, Sacramento, Cal. Filed Nov. 7, 1911.

PHENOSEPTINE

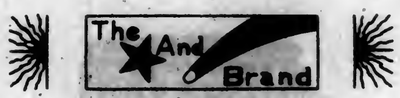
Particular description of goods.—A Preparation Used as a Remedy for Leucorrhea, Gonorrhea, Pruritus, Vaginitis, and other Disorders of the Urethra and Vagina; as a Local Application to Wounds, Ulcers, Abscesses, and Insect-Bites; and as a Gargle for the Throat.
Claims use since about June 1, 1905.

Ser. No. 59,603. (CLASS 37. PAPER AND STATIONERY.) RONEO COMPANY OF NEW YORK, New York, N. Y. Filed Nov. 7, 1911.

NUMERALPHA

Particular description of goods.—Index-Cards.
Claims use since Oct. 20, 1911.

Ser. No. 59,614. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BYRON J. DOLPHIN, Seattle, Wash. Filed Nov. 8, 1911.



Particular description of goods.—Peanut-Butter.
Claims use since June 1, 1910.

Ser. No. 59,646. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EMERSON-BRANTINGHAM COMPANY, Rockford, Ill. Filed Nov. 10, 1911. Under ten-year proviso.

STANDARD

Particular description of goods.—Mowing-Machines.
Claims use since 1852.

Ser. No. 59,686. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. D. LEE MERCANTILE CO., Saline, Kans. Filed Nov. 13, 1911.

CADET

Particular description of goods.—Dried Apricots, Dried Apples, Dried Peaches, Dried Pears, Dried Prunes, Cake-Flour, Buckwheat-Flour, Pancake-Flour, Griddle-Cake Flour, Spices, Sweet Corn, Canned Black Raspberries, Canned Salmon, Canned Gooseberries, Canned White-Heath Peaches, Canned Lemon Cling Peaches, Canned Damson Plums, Sorghum, Seeded Raisins, Evaporated Raspberries, Cleaned Currants, Rolled Oats, Sago, Rice, Tapioca, Barley, Mince-Meat, Coffee, Canned Blackberries, Canned Tomatoes, Canned Yellow Free Peaches, Canned Pineapple, Canned Pears, Black Cherries, Canned Egg Plums, Vanilla Extract, Lemon Extract, Prepared Mustard, Fruit Preserves, Malt Vinegar, Catsup, Jelly, Pickles, Olives, Tea, Canned Oysters, Canned Early June Peas, Canned Strawberries, Canned Hominy, Canned Apricots, Canned White Cherries, Corn-Syrup.
Claims use since Oct. 9, 1911.

Ser. No. 59,705. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GAGE-DOWNS COMPANY, Chicago, Ill. Filed Nov. 13, 1911.

AMAZONE

Particular description of goods.—Corset-Stiffeners.
Claims use since about Sept. 15, 1911.

Ser. No. 59,746. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN FEEDOGRAPH COMPANY, Philadelphia, Pa. Filed Nov. 16, 1911.

Feedograph

Particular description of goods.—An Attachment for Automatically Feeding Sheets, Envelops, or Cards to Type-Writing Machines.
Claims use since Mar. 18, 1911.

Ser. No. 59,754. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COCHRAN, BURNS & FARNSWORTH CO., Boston, Mass. Filed Nov. 16, 1911. Under ten-year proviso.

"GILT EDGE"

Particular description of goods.—Canned Lobster, Kippered Herring, Crab-Meat, Mackerel, Sardines, Clams, and Blueberries.
Claims use since about January, 1895.

Ser. No. 59,759. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREEN & GREEN COMPANY, Dayton, Ohio. Filed Nov. 16, 1911.

HAPPY TOWN

Particular description of goods.—Crackers.
Claims use since Oct. 2, 1911.

Ser. No. 59,779. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 18, 1911.

In Advance

Particular description of goods.—Fertilizer.
Claims use since 1890.

Ser. No. 59,780. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 18, 1911.

The picture of the man shown being fanciful.
Particular description of goods.—Fertilizers.
Claims use since 1890.

Ser. No. 59,787. (CLASS 39. CLOTHING.) E. R. SMITH & Co., Boston, Mass. Filed Nov. 18, 1911.

ERSCO

Particular description of goods.—Men's Outer Suits and Overcoats.
Claims use since Apr. 1, 1911.

Ser. No. 59,808. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHULTS BREAD COMPANY, New York, N. Y. Filed Nov. 20, 1911.

The picture constituting the trade-mark is a fanciful one.
Particular description of goods.—Bread.
Claims use since Nov. 3, 1911.

Ser. No. 59,844. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KIRSHNER & BERMAN, Baltimore, Md. Filed Nov. 22, 1911.

K. B.

Particular description of goods.—A Headache Remedy.
Claims use since Oct. 14, 1911.

Ser. No. 59,845. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) S. HOLLANDER & SON, New York, N. Y. Filed Nov. 22, 1911.

The picture being fanciful.
Particular description of goods.—Veiling.
Claims use since Apr. 1, 1909.

Ser. No. 59,853. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE NONOTUCK SILK COMPANY, Northampton, Mass. Filed Nov. 22, 1911.

DEFENDER

Particular description of goods.—Ribbons of Silk, Cotton, and Silk and Cotton.
Claims use since about the year 1903.

Ser. No. 59,862. (CLASS 17. TOBACCO PRODUCTS.) WM. A. STICKNEY CIGAR CO., St. Louis, Mo. Filed Nov. 22, 1911.

Particular description of goods.—Cigars.
Claims use since Oct. 14, 1910.

Ser. No. 59,913. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) LEAS & MCVITTY INC., Philadelphia, Pa. Filed Nov. 25, 1911. Under ten-year proviso.

SALEM

Particular description of goods.—Sole-Leather and Belting-Leather.
Claims use since 1890.

Ser. No. 59,997. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLAUDIUS M. TICE, Boston, Mass. Filed Nov. 29, 1911.

Particular description of goods.—A Compound of Maple-Sugar and Cane-Syrup.
Claims use since April, 1909.

Ser. No. 60,033. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 1, 1911.

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,082. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HULMAN & Co., Terre Haute, Ind. Filed Dec. 5, 1911.

Particular description of goods.—Coffee.
Claims use since Nov. 1, 1911.

Ser. No. 60,088. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE WESTERN CLOCK MANUFACTURING CO., Peru, Ill. Filed Dec. 6, 1911.

BUENOS DIAS

Particular description of goods.—Clocks and Watches.
Claims use since Nov. 17, 1911.

Ser. No. 60,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

KING BEE

Particular description of goods.—Biscuits.
Claims use since October, 1890.

Ser. No. 60,175. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEABOARD RICE MILLING CO., Galveston, Tex. Filed Dec. 11, 1911.

Particular description of goods.—Rice.
Claims use since Nov. 20. 1911.

Ser. No. 60,205. (CLASS 38. PRINTS AND PUBLICATIONS.) WARD BROS. COMPANY, Philadelphia, Pa. Filed Dec. 13, 1911.

Modern — Delivery

Particular description of goods.—A Monthly Magazine.
Claims use since Mar. 25, 1911.

Ser. No. 60,232. (CLASS 12. CONSTRUCTION MATERIALS.) WESTERN BRICK COMPANY, Danville, Ill. Filed Dec. 14, 1911.

Empire

Particular description of goods.—Bricks.
Claims use since Dec. 8, 1911.

Ser. No. 60,280. (CLASS 39. CLOTHING.) B. ALTMAN & Co., New York, N. Y. Filed Dec. 16, 1911.

Vocal

Particular description of goods.—Gloves.
Claims use since Mar. 18, 1909.

Ser. No. 60,282. (CLASS 42. KNITTED, NETTED AND TEXTILE FABRICS.) BATES MANUFACTURING COMPANY, Lewiston, Me. Filed Dec. 16, 1911. Under ten-year proviso.

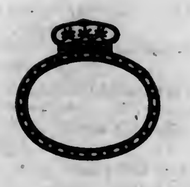
BATES

Particular description of goods.—Cotton Piece Goods.
Claims use since about Jan. 1, 1878.

Ser. No. 60,287. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Dec. 16, 1911.

Said mark being the representation of a panel of cream color upon which is superimposed a panel of light blue, with the shown scroll and ornamentation interposed between the borders of the two panels and at the upper part thereof.
Particular description of goods.—Buttons.
Claims use since about Nov. 2, 1906.

Ser. No. 60,289. (CLASS 39. CLOTHING.) HANAN & SON, Brooklyn, N. Y. Filed Dec. 16, 1911.



Particular description of goods.—Leather Boots and Shoes.
Claims use since Sept. 1, 1908.

Ser. No. 60,298. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM F. BAILEY, Macon, Ga. Filed Dec. 18, 1911.

Consisting of a portrait of myself.
Particular description of goods.—A Liniment.
Claims use since Aug. 19, 1911.

Ser. No. 60,385. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WHEELER CONDENSER & ENGINEERING CO., Carteret, N. J. Filed Dec. 20, 1911.

CROWN TUBES

No claim being made to the word "Tubes."
Particular description of goods.—Condenser-Tubes.
Claims use since Sept. 1, 1911.

Ser. No. 60,426. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE POPE MANUFACTURING COMPANY, Hartford, Conn. Filed Dec. 23, 1911.

SEMINOLE

Particular description of goods.—Bicycles.
Claims use since Sept. 25, 1911.

Ser. No. 60,459. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE RUDOLPH WURLITZER CO., Cincinnati, Ohio. Filed Dec. 26, 1911.

Strad

Particular description of goods.—Pianos.
Claims use since July 14, 1911.

TRADE-MARKS

REGISTERED FEBRUARY 6, 1912.

85,213. ORANGES, GRAPE-FRUITS, LEMONS, LIMES, AND CITRON. WILLIAM ALLAN, New York, N. Y., and San Juan, Porto Rico.
Filed July 26, 1911. Serial No. 57,842. PUBLISHED SEPTEMBER 26, 1911.

85,214. BAGGING FOR BALING COTTON. THE AMERICAN MANUFACTURING COMPANY, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, Boston, Mass., a Corporation of Massachusetts.
Filed October 21, 1910. Serial No. 52,356. PUBLISHED DECEMBER 5, 1911.

85,215. BAGGING FOR BALING COTTON. THE AMERICAN MANUFACTURING COMPANY, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, Boston, Mass., a Corporation of Massachusetts.
Filed October 21, 1910. Serial No. 52,359. PUBLISHED DECEMBER 5, 1911.

85,216. BAGGING FOR BALING COTTON. THE AMERICAN MANUFACTURING COMPANY, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, Boston, Mass., a Corporation of Massachusetts.
Filed October 21, 1910. Serial No. 52,360. PUBLISHED DECEMBER 5, 1911.

85,217. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed September 20, 1911. Serial No. 58,738. PUBLISHED DECEMBER 5, 1911.

85,218. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed September 20, 1911. Serial No. 58,739. PUBLISHED DECEMBER 5, 1911.

85,219. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed September 20, 1911. Serial No. 58,740. PUBLISHED DECEMBER 5, 1911.

85,220. EVAPORATED APPLES. AMERICAN TRADING COMPANY, New York, N. Y.
Filed August 9, 1911. Serial No. 58,104. PUBLISHED NOVEMBER 28, 1911.

85,221. ROTARY WELL-DRILLING MACHINES. AMERICAN WELL & PROSPECTING CO., Corsicana, Tex.
Filed October 3, 1911. Serial No. 58,984. PUBLISHED NOVEMBER 21, 1911.

85,222. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,328. PUBLISHED NOVEMBER 28, 1911.

85,223. VEIL-HOLDERS. SARAH E. BALLARD, New York, N. Y.
Filed October 5, 1911. Serial No. 59,002. PUBLISHED DECEMBER 5, 1911.

85,224. COFFEE. BIEDERMANN BROS., Chicago, Ill.
Filed October 11, 1911. Serial No. 59,112. PUBLISHED DECEMBER 5, 1911.

85,225. ELASTIC WEBBING. BOSTON GORE AND WEB MANUFACTURING COMPANY, Boston, Mass.
Filed September 5, 1911. Serial No. 58,526. PUBLISHED DECEMBER 5, 1911.

85,226. HOSE-CLAMPS. JOHN R. CLANCY, Syracuse, N. Y.
Filed August 3, 1911. Serial No. 58,022. PUBLISHED NOVEMBER 14, 1911.

85,227. TYPE-WRITERS AND TYPE-WRITER PARTS. THE COLUMBIA TYPEWRITER MANUFACTURING COMPANY, New York, N. Y.
Filed September 30, 1911. Serial No. 58,943. PUBLISHED NOVEMBER 28, 1911.

85,228. CERTAIN ELECTRICAL APPARATUS. C. CONRADTY (INHABER PAULINE & EUGEN CONRADTY) FABRIK ELEKTRISCHER U. GALVANISCHER KOHLEN, Nuremberg, Germany.
Filed July 26, 1910. Serial No. 51,081. PUBLISHED NOVEMBER 28, 1911.

85,229. COATS, VESTS, TROUSERS, AND OVERCOATS. J. CORDAY & CO., New York, N. Y.
Filed May 16, 1911. Serial No. 56,389. PUBLISHED DECEMBER 5, 1911.

85,230. JOINTERS, SHAPERS, PLANERS, BORING-MACHINES, GRINDERS, AND COMBINATION-MACHINES FOR JOINTING, BORING, ROUNDING, SHAPING, AND GRINDING. THE CRESCENT MACHINE COMPANY, Leetonia, Ohio.
Filed May 2, 1910. Serial No. 49,467. PUBLISHED NOVEMBER 14, 1911.

85,231. SHEET-STEEL. THE DEFOREST SHEET & TINPLATE CO., Niles, Ohio.
Filed October 16, 1911. Serial No. 59,185. PUBLISHED NOVEMBER 28, 1911.

85,232. PUDDING-POWDERS. GEORGE ECKHARDT, Chicago, Ill.
Filed August 30, 1911. Serial No. 58,454. PUBLISHED NOVEMBER 28, 1911.

85,233. CERTAIN FANCY GOODS. EMPIRE NOTION CO., New York, N. Y.
Filed August 15, 1911. Serial No. 58,219. PUBLISHED DECEMBER 5, 1911.

85,234. CERTAIN OPTICAL AND MEASURING INSTRUMENTS. THE EUCLID OPTICAL COMPANY, Cleveland, Ohio.
Filed November 9, 1908. Serial No. 38,543. PUBLISHED DECEMBER 29, 1908.

85,235. COOKING COMPOUND CONTAINING COTTON-SEED OIL AND OLEO-STEARIN. THE N. K. FAIRBANK COMPANY, Chicago, Ill.
Filed June 25, 1906. Serial No. 20,553. PUBLISHED JULY 21, 1908.

85,236. FLOORING, SURFACING, BAND-SAW AND RESAW, TENONING, MOLDING, AND MORTISING MACHINES. J. A. FAY & EGAN COMPANY, Cincinnati, Ohio.
Filed June 23, 1911. Serial No. 57,271. PUBLISHED NOVEMBER 14, 1911.

85,237. SHEARS, KNIVES, AND RAZORS. FOERY & BAUER, Brooklyn, N. Y.
Filed July 29, 1911. Serial No. 57,951½. PUBLISHED NOVEMBER 14, 1911.

85,238. RUBBER BUCKETS FOR CHAIN-PUMPS. HENRY C. FRESHOUR, Bridgeport, Conn.
Filed October 10, 1911. Serial No. 59,172. PUBLISHED NOVEMBER 28, 1911.

85,239. COPPER AND ALUMINUM ALLOYS. GABRIEL & Co., Birmingham, England.
Filed March 9, 1911. Serial No. 54,958. PUBLISHED NOVEMBER 14, 1911.

85,240. HOSIERY. JOHN M. GIVEN, INC., Pittsburgh, Pa.; New York, N. Y., and Chicago, Ill.
Filed March 23, 1911. Serial No. 55,260. PUBLISHED NOVEMBER 7, 1911.

85,241. HOSIERY. JOHN M. GIVEN, INC., Pittsburgh, Pa.; New York, N. Y., and Chicago, Ill.
Filed August 30, 1911. Serial No. 58,439. PUBLISHED DECEMBER 5, 1911.

85,242. CHOCOLATES AND MARSHMALLOWS. GOTTMANN & KRETCHMER, Chicago, Ill.
Filed October 7, 1911. Serial No. 59,049. PUBLISHED DECEMBER 5, 1911.

85,243. LUBRICATING-OILS, ILLUMINATING-OILS, AND GREASES MADE FROM PETROLEUM PRODUCTS. THE GREAT WESTERN OIL CO., Cleveland, Ohio.
Filed February 6, 1911. Serial No. 54,332. PUBLISHED JULY 18, 1911.

85,244. CURTAINS, PILLOW-SHAMS, AND LACE COVERLETS. DAVID V. GREEN, Bridgeport, Conn.
Filed September 6, 1911. Serial No. 58,544. PUBLISHED DECEMBER 5, 1911.

85,245. WHEAT-FLOUR. GULFPORT GROCERY CO., Gulfport, Miss.
Filed December 7, 1908. Serial No. 39,159. PUBLISHED DECEMBER 5, 1911.

85,246. CARBONS FOR ELECTRIC LAMPS AND CARBON ELECTRODES FOR SMELTING PURPOSES. HERMANN M. HIRSCHBERG, New York, N. Y.
Filed October 16, 1911. Serial No. 59,181. PUBLISHED NOVEMBER 28, 1911.

85,247. AUTOMOBILES. HUPP MOTOR CAR CO., Detroit, Mich.
Filed May 23, 1910. Serial No. 49,881. PUBLISHED NOVEMBER 28, 1911.

85,248. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed June 17, 1911. Serial No. 57,127. PUBLISHED NOVEMBER 28, 1911.

85,249. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed June 17, 1911. Serial No. 57,130. PUBLISHED NOVEMBER 28, 1911.

85,250. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed June 17, 1911. Serial No. 57,133. PUBLISHED DECEMBER 5, 1911.

85,251. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed June 21, 1911. Serial No. 57,217. PUBLISHED NOVEMBER 28, 1911.

85,252. JACK-SCREWS, TIRE-BENDERS, AND TIRE-SHRINKERS. ILLINOIS IRON & BOLT CO., Carpentersville, Ill.
Filed June 15, 1911. Serial No. 57,081. PUBLISHED NOVEMBER 14, 1911.

85,253. CERTAIN HOUSEHOLD FURNITURE. INTERNATIONAL MFG. CO., Ann Arbor, Mich.
Filed November 24, 1908. Serial No. 38,867. PUBLISHED MARCH 2, 1909.

85,254. HAND AIR-PUMPS. JUDD & LELAND M'F'G. CO., Clifton Springs, N. Y.
Filed July 12, 1911. Serial No. 57,599. PUBLISHED NOVEMBER 14, 1911.

85,255. ORANGES. GEORGE KAEHLER, Fresno, Cal.
Filed October 7, 1911. Serial No. 59,040. PUBLISHED DECEMBER 5, 1911.

85,256. WOMEN'S, MEN'S, AND BOYS' CLOTHING. KALASIRIS, FABRIK FÜR HYG. UNTERKLEIDUNG, G. M. B. H., Bonn, Germany.
Filed August 5, 1910. Serial No. 51,272. PUBLISHED DECEMBER 5, 1911.

85,257. ELECTRIC METERS. KÖRTING & MATHIESEN A.-G., Leutzsch-Leipzig, Germany.
Filed March 21, 1910. Serial No. 48,573. PUBLISHED NOVEMBER 28, 1911.

85,258. MEN'S COATS, OVERCOATS, VESTS, AND TROUSERS. KRAMER & CO., New York, N. Y.
Filed June 4, 1910. Serial No. 50,113. PUBLISHED DECEMBER 5, 1911.

85,259. CANDY IN THE FORM OF WHISTLES. EDWIN E. KRAUSHAR CO., New York, N. Y.
Filed October 11, 1911. Serial No. 59,106. PUBLISHED DECEMBER 5, 1911.

85,260. AUTOGRAPH REGISTERS. KRAUTH & BENNINGHOFEN, Hamilton, Ohio.
Filed February 20, 1911. Serial No. 54,605. PUBLISHED NOVEMBER 14, 1911.

85,261. HATS. LES FILS PINAY JEUNE, St.-Symphorien-sur-Coise, France.
Filed June 5, 1911. Serial No. 56,831. PUBLISHED DECEMBER 5, 1911.

85,262. COATS, VESTS, TROUSERS, OVERCOATS, AND RAIN-COATS. LEVY & MARKOWITZ, New York, N. Y.
Filed December 10, 1910. Serial No. 53,220. PUBLISHED DECEMBER 5, 1911.

85,263. GRAPE-JUICE AND BOILED CIDER. FRANKLIN MACVEAGH & COMPANY, Chicago, Ill.
Filed August 16, 1909. Serial No. 44,153. PUBLISHED DECEMBER 5, 1911.

85,264. WEIGHTS FOR GARMENTS. LOUIS MALLACH, New York, N. Y.
Filed October 2, 1911. Serial No. 58,969. PUBLISHED DECEMBER 5, 1911.

85,265. BRONZE ALLOYS. THE MANGANESE BRONZE & BRASS COMPANY, LIMITED, London, England.
Filed July 1, 1910. Serial No. 50,665. PUBLISHED NOVEMBER 8, 1910.

85,266. SOLDER. MARVEL SOLDER CO., New York, N. Y.
Filed August 5, 1911. Serial No. 58,050. PUBLISHED NOVEMBER 28, 1911.

85,267. EYEGLASSES AND SPECTACLES. E. B. MEYROWITZ, New York, N. Y.
Filed March 17, 1911. Serial No. 55,128. PUBLISHED NOVEMBER 21, 1911.

85,268. PULLEY-BLOCKS. MILL & MINE SUPPLY CO., Seattle, Wash.
Filed July 5, 1911. Serial No. 57,483. PUBLISHED NOVEMBER 14, 1911.

85,269. CERTAIN PLUMBING AND STEAM-FITTING SUPPLIES. H. MUELLER MANUFACTURING COMPANY, Decatur, Ill.
Filed November 16, 1908. Serial No. 38,682. PUBLISHED NOVEMBER 21, 1911.

85,270. CERTAIN ELECTRICAL APPLIANCES. MUTUAL ELECTRIC & MACHINE COMPANY, Wheeling, W. Va.
Filed July 20, 1911. Serial No. 57,727. PUBLISHED NOVEMBER 14, 1911.

85,271. EMBROIDERY-FLOSS SPUN FROM SILK, LINEN, COTTON, AND WOOL. THE NONOTUCK SILK COMPANY, Northampton, Mass.
Filed August 31, 1911. Serial No. 58,458. PUBLISHED DECEMBER 5, 191.

85,272. CERTAIN GAMES AND TOYS. NÜRNBERGER METALL- UND LACKIERWARENFABRIK VORMALS GEBRÜDER BING, AKTIENGESELLSCHAFT, Nuremberg, Germany.
Filed November 26, 1910. Serial No. 52,967. PUBLISHED NOVEMBER 28, 1911.

85,273. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,152. PUBLISHED DECEMBER 5, 1911.

85,274. TOILET-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,153. PUBLISHED DECEMBER 5, 1911.

85,275. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,155. PUBLISHED DECEMBER 5, 1911.

85,276. TOILET-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,156. PUBLISHED DECEMBER 5, 1911.

85,277. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,157. PUBLISHED DECEMBER 5, 1911.

85,278. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,158. PUBLISHED DECEMBER 5, 1911.

85,279. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,159. PUBLISHED DECEMBER 5, 1911.

85,280. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,160. PUBLISHED DECEMBER 5, 1911.

85,281. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed August 11, 1911. Serial No. 58,161. PUBLISHED DECEMBER 5, 1911.

85,282. MEN'S AND BOYS' COATS, VESTS, AND TROUSERS. OLD WOOLEN MILLS, Mayfield, Ky.
Filed June 14, 1911. Serial No. 57,015. PUBLISHED DECEMBER 5, 1911.

85,283. OLIVE-OIL. M. G. PAREJO, Seville, Spain.
Filed October 11, 1911. Serial No. 59,109. PUBLISHED DECEMBER 5, 1911.

85,284. CONDUITS FOR ELECTRIC WIRING. JOHN H. PARKER, Boston, Mass.
Filed July 3, 1911. Serial No. 57,469. PUBLISHED NOVEMBER 14, 1911.

85,285. TRACTION-ENGINES. PIONEER TRACTOR MANUFACTURING COMPANY, Winona, Minn.
Filed August 25, 1911. Serial No. 58,394. PUBLISHED NOVEMBER 21, 1911.

85,286. CANNED FRUITS. H. G. PRINCE & COMPANY, Fruitvale, Cal.
Filed October 7, 1911. Serial No. 59,043. PUBLISHED DECEMBER 5, 1911.

85,287. CANNED FRUITS. H. G. PRINCE & COMPANY, Fruitvale, Cal.
Filed October 7, 1911. Serial No. 59,044. PUBLISHED DECEMBER 5, 1911.

85,288. OILS FOR MIXING PAINTS. RED STAR OIL COMPANY, Philadelphia, Pa.
Filed September 6, 1910. Serial No. 51,675. PUBLISHED NOVEMBER 28, 1911.

85,289. RUBBER HEELS AND SOLES OF BOOTS AND SHOES. REVERE RUBBER COMPANY, Chelsea, Mass.
Filed August 28, 1911. Serial No. 58,419. PUBLISHED DECEMBER 5, 1911.

85,290. VENDING-MACHINES. DANIEL B. SAMUELS, San Francisco, Cal.
Filed October 2, 1911. Serial No. 58,958. PUBLISHED NOVEMBER 28, 1911.

85,291. BRASS AND IRON VALVES. SCHADE VALVE MANUFACTURING CO., Philadelphia, Pa.
Filed May 1, 1911. Serial No. 56,099. PUBLISHED NOVEMBER 14, 1911.

85,292. CERTAIN GARMENTS WORN BY BOYS, MEN, AND CHILDREN. HENRY SONNEBORN & Co., Baltimore, Md.
Filed August 24, 1911. Serial No. 58,353. PUBLISHED DECEMBER 5, 1911.

85,293. CANNED VEGETABLES AND COFFEE. STETSON-BARRET CO., Los Angeles, Cal.
Filed October 4, 1911. Serial No. 58,998. PUBLISHED DECEMBER 5, 1911.

85,294. EYEGLASSES, SPECTACLES, AND THE COMPONENT PARTS OF EYEGLASSES AND SPECTACLES. STEVENS & COMPANY, INCORPORATED, Providence, R. I.
Filed July 19, 1911. Serial No. 57,711. PUBLISHED NOVEMBER 28, 1911.

85,295. MAGNETS FOR TECHNICAL PURPOSES. TIGGES & Co., Haspe, Germany.
Filed April 10, 1911. Serial No. 55,654. PUBLISHED NOVEMBER 14, 1911.

85,296. GLASS-CUTTERS. JAMES W. TUCKER, Chicago, Ill.
Filed October 27, 1911. Serial No. 59,385. PUBLISHED NOVEMBER 28, 1911.

85,297. WRENCHES. TWIN-GRIP WRENCH COMPANY, New York, N. Y.
Filed September 8, 1910. Serial No. 51,723. PUBLISHED NOVEMBER 14, 1911.

85,298. WRENCHES. TWIN-GRIP WRENCH COMPANY, New York, N. Y.
Filed September 8, 1910. Serial No. 51,724. PUBLISHED NOVEMBER 14, 1911.

85,299. CLEANSER, POLISHER, AND FINISHER FOR HARDWOOD SURFACES. WARD & WARD, Chicago, Ill.
Filed February 20, 1911. Serial No. 54,625. PUBLISHED OCTOBER 10, 1911.

85,300. FRICTION-CLUTCHES. CHARLES WEAR, Boston, Mass.
Filed July 7, 1911. Serial No. 57,526. PUBLISHED NOVEMBER 21, 1911.

85,301. CORSETS. WEINGARTEN BROS., INC., New York, N. Y.
Filed September 20, 1911. Serial No. 58,726. PUBLISHED DECEMBER 5, 1911.

85,302. RAZORS, SCISSORS, AND POCKET-KNIVES. WEBSTER BROS., New York, N. Y.
Filed September 30, 1911. Serial No. 58,950. PUBLISHED NOVEMBER 28, 1911.

85,303. ROASTED COFFEE. F. WIDLAR & Co., Cleveland, Ohio.
Filed April 14, 1909. Serial No. 41,786. PUBLISHED NOVEMBER 28, 1911.

85,304. COMBS, BARRETTES, AND HAIR-RETAINERS. WILCOX COMB COMPANY, INC., Keene, N. H.
Filed July 17, 1911. Serial No. 57,669. PUBLISHED DECEMBER 5, 1911.

85,305. COFFEE. THOMAS WOOD CO., Boston, Mass.
Filed January 28, 1909. Serial No. 40,178. PUBLISHED NOVEMBER 28, 1911.

85,306. OBJECTIVE-LENS SYSTEMS. CARL ZEISS, Jena, Germany.
Filed September 21, 1911. Serial No. 58,791. PUBLISHED NOVEMBER 21, 1911.

85,307. OBJECTIVE-LENS SYSTEMS. CARL ZEISS, Jena, Germany.
Filed September 21, 1911. Serial No. 58,792. PUBLISHED NOVEMBER 21, 1911.

85,308. OBJECTIVE-LENS SYSTEMS. CARL ZEISS, Jena, Germany.
Filed September 21, 1911. Serial No. 58,793. PUBLISHED NOVEMBER 21, 1911.

85,309. FIELD-GLASSES. CARL ZEISS, Jena, Germany. Filed September 21, 1911. Serial No. 58,794. PUBLISHED NOVEMBER 21, 1911.

85,310. FIELD-GLASSES. CARL ZEISS, Jena, Germany. Filed September 21, 1911. Serial No. 58,795. PUBLISHED NOVEMBER 21, 1911.

TRADE-MARKS CANCELED.

68,300. COGNAC AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Registered March 24, 1908. Canceled January 10, 1912.

68,880. ALE, BEER, HALF-AND-HALF, PORTER, MALT EXTRACT, AND BROWN STOUT. THE WEST END BREWING CO., Utica, N. Y.
Registered May 5, 1908. Canceled December 20, 1911.

79,255. WHEAT-FLOUR. CARLYLE MILLING COMPANY, Carlyle, Ill.
Registered August 23, 1910. Canceled December 12, 1911.

81,888. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Registered May 16, 1911. Canceled January 4, 1912.

81,889. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Registered May 16, 1911. Canceled January 4, 1912.

82,233. COTTON GOODS IN THE PIECE. HOPE COMPANY, Providence, R. I.
Registered June 13, 1911. Canceled January 4, 1912.

82,293. COTTON GOODS IN THE PIECE. BLACKSTONE MFG. COMPANY, Providence, R. I.
Registered June 20, 1911. Canceled January 4, 1912.

82,339. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Registered June 20, 1911. Canceled January 4, 1912.

LABELS

REGISTERED FEBRUARY 6, 1912.

16,150.—*Title:* "REMICK'S ECZEMA REMEDY." (For Remedy.) JAMES F. BALLARD, St. Louis, Mo. Filed December 29, 1911.

16,151.—*Title:* "McGEE'S BABY ELIXIR." (For a Medicinal Preparation.) JAMES F. BALLARD, St. Louis, Mo. Filed December 29, 1911.

16,152.—*Title:* "BURCKHARDT'S ROYAL FARINA." (For Farina.) F. BURCKHARDT, San Francisco, Cal. Filed January 3, 1912.

16,153.—*Title:* "JUSTIVA." (For Cigars.) C. B. HENSCHEL MFG. Co., Milwaukee, Wis. Filed January 22, 1912.

16,154.—*Title:* "EL MAGNO." (For Cigars.) C. B. HENSCHEL MFG. Co., Milwaukee, Wis. Filed January 22, 1912.

16,155.—*Title:* "TEMPUS." (For Cigars. C. B. HENSCHEL MFG. Co., Milwaukee, Wis. Filed January 22, 1912.

16,156.—*Title:* "MUSGO." (For Baking-Powder.) CHRISTIE-COLLAR MFG. Co., Muskegon, Mich. Filed January 26, 1912.

16,157.—*Title:* "DERMAX." (For an Internal Remedy.) CORONA CHEMICAL COMPANY (NOT INC.), Chicago, Ill. Filed November 28, 1911.

16,158.—*Title:* "PIN-ACUS." (For Lotion or Salve.) ERNEST W. GAUBE, Cleveland, Ohio. Filed November 15, 1911.

16,159.—*Title:* "GOLDEN WEDDING." (For Coffee.) GRIFFIN & HOXIE, Utica, N. Y. Filed December 21, 1911.

16,160.—*Title:* "OLD FASHION POUND CAKE." (For Pound-Cake.) J. HANNEMANN BAKING Co., Atlanta, Ga. Filed July 27, 1911.

16,161.—*Title:* "PANAMA." (For Oranges and Lemons.) JOHNSTON FRUIT Co. (INC.), Santa Barbara, Cal. Filed January 16, 1912.

16,162.—*Title:* "GOLDEN SPRAY." (For Beer.) JUNG BREWING COMPANY, Milwaukee, Wis. Filed January 25, 1912.

16,163.—*Title:* "BOB WHITE MAPLE AND CANE SYRUP." (For Maple and Cane Syrup.) THE KEYES MANUFACTURING COMPANY, Denver, Colo. Filed June 19, 1911.

16,164.—*Title:* "LEE-HI." (For Cement.) LEHIGH PORTLAND CEMENT COMPANY, Chicago, Ill. Filed December 29, 1911.

16,165.—*Title:* "LEMON SEIDLITZ." (For Lemon Seidlitz-Powders.) THE LEMON SEIDLITZ Co., Baltimore, Md. Filed November 15, 1911.

16,166.—*Title:* "LIPTON'S TEA." (For Tea.) THOMAS J. LIPTON, New York, N. Y., and Chicago, Ill. Filed January 12, 1912.

16,167—*Title:* "LIPTON'S TEA." (For Tea.) THOMAS J. LIPTON, New York, N. Y., and Chicago, Ill. Filed January 12, 1912.

16,168.—*Title:* "FLAXLAWN." (For Paper.) OSBORN PAPER COMPANY, Marion, Ind. Filed January 10, 1912.

16,169.—*Title:* "TIP-TOP FLOUR." (For Wheat-Flour.) OSCAR REIN, New York, N. Y. Filed December 21, 1911.

16,170.—*Title:* "SPIRITED HAIR TONIC." (For Hair-Tonic.) TOLLIE FANING GRUST SHORT, Vancouver, Wash. Filed July 26, 1911.

15,171.—*Title:* "FITZ-EM-ALL." (For Fruit-Jar Rings.) SMALLEY, KIVLAN & ONTHANK, Boston, Mass. Filed December 21, 1911.

16,172.—*Title:* "ELEVEN IN ONE." (For Polish for Metals and Glass.) UPHAM & LEAVITT, Portland, Me. Filed September 30, 1911.

16,173.—*Title:* "NATURALINE." (For a Mineralized Compound.) WARREN E. WALTERS, Los Angeles, Cal. Filed November 28, 1911.

16,174.—*Title:* "WOODELIXIR." (For Wood and Metal Polish or Cleaner.) WOODELIXIR MANUFACTURING COMPANY, St. Paul, Minn. Filed December 21, 1911.

PRINTS.

REGISTERED FEBRUARY 6, 1912.

2,942.—*Title:* "APPELBAUM MY TAILOR." (For Clothing and Wearing-Apparel.) ISAAC APPELBAUM, Philadelphia, Pa. Filed October 27, 1911.

2,943.—*Title:* "SPREAD FOR BREAD." (For Karo Corn-Syrup.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J. Filed December 19, 1911.

2,944—*Title:* "DE LAVAL CREAM SEPARATORS." (For Cream-Separators.) THE DE LAVAL SEPARATOR COMPANY, New York, N. Y. Filed December 28, 1911.

2,945.—*Title:* "PIN-ACUS." (For a Balm.) ERNEST W. GAUBE, Cleveland, Ohio. Filed January 4, 1912.

2,946.—*Title:* "INTERWOVEN TOE AND HEEL." (For Hosiery.) INTERWOVEN STOCKING COMPANY, New Brunswick, N. J. Filed December 20, 1911.

2,947.—*Title:* "INTERWOVEN TOE AND HEEL." (For Hosiery.) INTERWOVEN STOCKING COMPANY, New Brunswick, N. J. Filed December 20, 1911.

2,948.—*Title:* "KRISCHER'S HY-LO." (For Collar-Supporters.) NATHAN A. KRISCHER, New York, N. Y. Filed January 3, 1912.

2,949.—*Title:* "ELENA." (For Cordials.) MENNILLO & LIONANTE, New York, N. Y. Filed December 21, 1910.

2,950.—*Title:* "PLEXO CLEANSING CREAM." (For Greaseless Cleansing-Cream.) PLEXO PREPARATIONS, INC., New York, N. Y. Filed December 28, 1911.

2,951.—*Title:* "THE SEALY SALESMAN." (For Mattresses.) THE SEALY MATTRESS COMPANY, Sugar Land, Tex. Filed December 22, 1911.

2,952.—*Title:* "WON'T YOU COME TO MY PARTY?" (For Shaw's Best Pancake-Flour.) LIDA M. SHAW, Helena, Mont. Filed October 13, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE POULSON.

Decided October 16, 1911.

1. APPLICATION—PROSECUTION—FINAL REJECTION.

Where ample opportunity had been afforded the applicant to present such claims as he desired to adhere to and an issue had been reached between himself and the Examiner, *Held* that a final rejection was properly entered.

2. SAME — SAME — ACTION NOT RESPONSIVE — ABANDONMENT.

Where within the year following a final rejection which had been properly entered an applicant neither cancels the rejected claims nor appeals, but merely seeks to have the final rejection set aside as premature, *Held* that the application is abandoned.

3. SAME—SAME—TIME WITHIN WHICH ACTION MAY BE TAKEN.

Where claims were rejected on June 1, 1909, the statutory year for action expired June 1, 1910.

ON PETITION.

ANTIFRICTION DEVICE FOR SLIDING DOORS.

Messrs. Prindle & Williamson for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Primary Examiner finally rejecting the claims, refusing to enter and consider an amendment, and holding the application abandoned.

The record shows that this application has been repeatedly amended and acted upon by the Office. On May 13, 1909, applicant amended by inserting at the end of each of the two claims in the case the words—

the sides of the rollers being free from projections and directly engaged by said plate,

and by correcting one of the claims to correspond with the suggestion of the Examiner. On June 1, 1909, the Primary Examiner finally rejected the claims, the letter reading as follows:

Amendment filed May 13, 1909, considered.

The most that applicant has done is to substitute an ordinary grooved roller for the balls disclosed in either Lobel or Cossey #809,728, both of record, in an otherwise old combination.

Furthermore, it is believed in view of the prior art as disclosed in the references of record, that the subject-matter of the alleged invention is devoid of patentable novelty and will not support an allowable claim and hence inasmuch as the claims as now presented, are the same in substance as those heretofore rejected, the same are again and finally rejected. (See *ex parte Perry*, 140 O. G., 1001.)

On June 1, 1910, applicant filed a paper in which he directed the insertion of the word "complementary" before "peripheries" in line 5 of claim 1 and in which he asked a reconsideration of the claims and argued that the final rejection of the Examiner was premature. On June 28, 1910, the Examiner refused to admit the amendment filed June 1, 1910. On August 11, 1910, applicant asked for a reconsideration of the Examiner's answer refusing to admit said amendment. In a letter dated August 30, 1910, the Examiner adhered to his former action and stated that the application appears to have become abandoned. On August 5, 1911, the present petition was filed.

It is noted that the Examiner's letter of final rejection cites no new references, states that the claims as amended are the same in substance as those previously rejected, and adds that the alleged invention is devoid of patentable novelty and will not support an allowable claim.

Under these circumstances the action of the Examiner is believed to have been entirely proper. Ample opportunity had been afforded the applicant to present such claims as he desired to adhere to, and an issue had been reached between him and the Examiner. The case comes clearly wtihin the practice set forth in *ex parte Perry*, (140 O. G., 1001,) *ex parte Miller*, (150 O. G., 827,) and *ex parte Lang*, (153 O. G., 1081.) The action of the Commissioner in the last-mentioned case was upheld by the Supreme Court of the District of Columbia in *Lang* v. *Moore*, (168 O. G., 527.)

The application is held to be abandoned, not for the reasons stated by the Primary Examiner, but for lack of proper prosecution following the final rejection of June 1, 1909, as stated below.

The Examiner called attention to the fact that applicant's action following the final rejection of June 1, 1909, was not filed until June 1, 1910, and held that the statutory year within which applicant might act expired on May 31, 1910. This holding of the Examiner is in error, since under the well-established practice of the Office the statutory year for action did not expire until June 1, 1910. (*Ex parte Cannon*, 94 O. G., 2165; *ex parte Reis*, 116 O. G., 2007.) The application, however, is found to be abandoned for the reason that the action taken by the applicant within the year was not a proper one, nor such as the condition of the case required. Since the final rejection of the Examiner was proper, as

stated above, applicant should have responded by either canceling the rejected claims or filing an appeal to the Examiners-in-Chief within the year following said final rejection.

For the reasons stated the petition is denied and the application is held to have become abandoned.

EX PARTE NAYLOR.

Decided December 19, 1911.

APPEAL—RECONSIDERATION OF.

The power to rehear or reconsider its cases is inherent in any judicial tribunal and as applied to the Commissioner himself certainly has no relation to his supervisory authority over the Patent Office.

ON PETITION.

CARPET-CLEANING TOOL.

Mr. Watson E. Coleman for the applicant.

BILLINGS, *First Assistant Commissioner:*

Applicant has filed a paper which purports to be a petition for the exercise of the supervisory authority of the Commissioner to "direct a reconsideration" of applicant's appeal to the Commissioner, a decision on which was rendered December 8, 1911.

This is obviously not a case for the exercise of supervisory authority. The power to rehear or reconsider its cases is inherent in any judicial tribunal and as applied to the Commissioner himself certainly has no relation to his supervisory authority over the Patent Office.

The petition is, in effect, a motion for rehearing. It, however, does not present anything which was not given full consideration at the original hearing. As to the allegation that grounds of the decision are not clear, I fail to find such to be the case. Applicant's petition, especially his fourth "reason" therefor and the first paragraph beginning on page 3, indicate a misunderstanding of the principles of law applicable to the facts in this case as announced in the decision. The case presents merely the question of patentability over references, and no involved reasoning or explanation is necessary to make clear the grounds of the holding.

The petition is denied.

BETTENDORF *v.* O'CONNOR.

Decided May 19, 1911.

1. INTERFERENCE—PRIORITY—DILIGENCE.

Evidence considered and *Held* to establish that B. was the first to conceive the invention and was exercising due diligence in reducing the same to practice at the time that O'C. entered the field and subsequently thereto.

2. SAME—TESTIMONY—FAILURE TO INTRODUCE CUMULATIVE EVIDENCE.

Where B. had clearly established that he was the first to conceive the invention, *Held* that no unfavorable presumption could be drawn from the fact that he did not introduce the testimony of other witnesses to describe the invention in detail.

APPEAL from Examiners-in-Chief.

DRAFT-RIGGING.

Mr. Frank D. Thomason for Bettendorf.

Messrs. Munday, Evarts, Adcock & Clarke for O'Connor. (*Mr. Edmund Adcock* and *Mr. H. N. Low* of counsel.)

TENNANT, *Assistant Commissioner:*

This is an appeal by O'Connor from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences awarding priority of invention to Bettendorf.

The invention relates to draft-rigging for railroad-cars, and the issue is set forth in three counts as follows:

1. A draft and buffing gear comprising a single draft-beam, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.

2. A draft and buffing gear comprising a single flanged metallic beam, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.

3. A draft and buffing gear comprising an I-beam with part of its web removed, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.

Both parties are applicants. O'Connor's application is assigned to the W. H. Miner Co., which is therefore the real party in interest against Bettendorf.

The evidence shows, and it is not denied by Bettendorf, that O'Connor had a conception of the invention on March 7, 1908, and he is entitled to a constructive reduction to practice by the filing of his application on March 16, 1908.

Bettendorf had made some claim to a reduction to practice on or before March 7, 1908; but the evidence is insufficient to establish it, inasmuch as the device is of a nature such that clear proof of a successful test would be necessary. The earliest reduction to practice Bettendorf has shown is by the filing of his application on May 23, 1908. To prevail, therefore, he must show a conception of the invention prior to March 7, 1908, and due diligence in reducing it to practice at that time and thereafter until the filing of his application. It is upon the sufficiency of Bettendorf's proofs to show such conception and diligence that the case turns. Each of the lower tribunals have found them sufficient to establish both points.

The witnesses called on behalf of Bettendorf testify that during the year 1906 a sample car, known as the "Wabash" car, was made at the factory of the Bettendorf Axle Company under the direction of Bettendorf. The witness Ploehn in answer to question 21 fully describes the construction of the draft-rigging in this sample car, and as thus described it undoubtedly embraces every element of the invention in issue. Exhibit drawings A, B, and C have been introduced in evidence as the drawings or part of the drawings from which this car was constructed. They have been identified by the draftsman who made them and clearly show every element of the claims in issue except the "followers."

The followers are the members located at each end of the buffing-spring of the draft-gear by which the pulling or pushing strain is transmitted thereto. As pointed out by the Examiners-in-Chief, such followers were in common use in draft-rigging long prior to the time of this invention, and they would seem to be so essential to the operation of a draft-

gear such as illustrated in the drawings above referred to that they may fairly be inferred to have been a part thereof, although not specifically shown. Furthermore, both Reck and Ploehn specifically testify that followers were used in the draft-rigging of the Wabash car. (Reck X-Qs. 53, 60, and 66; Ploehn Q. 21.) The testimony in regard to the "Wabash" car is therefore believed to be sufficient in itself to establish conception of the invention by Bettendorf in 1906.

There is further evidence, however, of conception by Bettendorf prior to March 7, 1908, which concerns the construction of a sample car, known as the "Milwaukee" car, made for the inspection of certain officials of the Chicago, Milwaukee & St. Paul Railway. Ploehn testifies that the order for the construction of this car was issued as early as January 27, 1908. He gives a full description of the draft-rigging of this car in answer to question 20, and as there described it clearly embodies the issue. He also testifies that the draft-rigging in this car was like that shown in Exhibits E and G. These are prints made after March 7 and while differing from each other in detail are identical in principle, and both embody the invention in issue. He points out, furthermore, the details in which the Milwaukee car differed from the construction shown in Exhibit G. He also points out (Q. 22) the difference between the construction shown in Exhibit C (the Wabash car) and that used in the Milwaukee car. These differences are differences in detail and do not concern the present invention.

Ploehn testifies that the Milwaukee car as thus constructed was completed on March 4 or 5 (Qs. 17 and 22) and was inspected on March 6 by certain officials of the Chicago, Milwaukee & St. Paul Railway, whose names are given. He also states that two officials of the Chicago, Burlington & Quincy Railway were present by accident on this occasion and gives their names. Bettendorf testifies (Q. 25) that the car was completed the "first week in March." He elsewhere states that it was completed within ten days of the issuance of the order for construction and that the order was issued about the 1st of March.

It further appears that the Bettendorf Axle Company obtained the order from the Chicago, Milwaukee & St. Paul Railway for twenty-five hundred cars shortly after the inspection above referred to and that the Milwaukee car was taken to pieces and the parts thereof used as patterns and templets for the construction of dies, etc., used in manufacturing the twenty-five hundred cars to supply this order. Bettendorf also states expressly in answer to question 32 that there was no difference between the draft-rigging of the "Milwaukee" sample car and the cars afterward furnished to the Chicago, Milwaukee & St. Paul Railway under this order, and there is no question but that the cars furnished contained the invention in issue.

Under these circumstances it must be concluded that the "Milwaukee" car embodied the invention in issue, and it, as well as the "Wabash" car, is evidence of conception by Bettendorf prior to March 7, 1908.

The testimony above discussed is likewise sufficient to show that Bettendorf was working on the invention at the time O'Connor entered the field on March 7. Bettendorf's application was filed on May 23, 1908. In this interval Bettendorf succeeded in obtaining an order for the cars from the Chicago, Milwaukee & St. Paul Railway and had constructed and delivered to that company part of the cars ordered. Under the circumstances his conduct is believed to clearly discharge the obligation of diligence imposed upon him by reason of the entrance of O'Connor into the field and to entitle him to an award of priority. In reaching this conclusion Bettendorf has not been given the benefit of any testimony introduced in rebuttal to which O'Connor has taken exception.

O'Connor has vigorously attacked the Bettendorf proofs on the ground that he did not put in all of the evidence which was apparently available. He calls attention in particular to the failure of the witnesses other than Ploehn to describe the invention in detail, to the failure to put into evidence certain orders and prints mentioned by Ploehn in answer to question 15, and the failure to call the officials who inspected the car. The evidence submitted, however, is of a convincing character and is found to be enough to discharge the burden of proof under which Bettendorf rests. The fact that more might have been introduced does not cast any great suspicion on his case, especially in view of the fact that the evidence omitted, if damaging to Bettendorf, might easily have been brought out by his opponent for the purpose of contradicting him, since Ploehn gave the names of the officials in question and stated that he had the prints and orders with him.

O'Connor also points out that certain prints made after the alleged construction of the Wabash car and as late as March 6, 1908, did not contain the issue, and he concludes, therefore, that Bettendorf did not have a conception thereof at the time alleged. The prints referred to are Bettendorf Exhibit K and O'Connor Exhibit 5. It is alleged that these prints do not disclose the issue, because they do not show "cheek-plates." In this O'Connor is believed to be in error. The cheek-plates shown are not of the form disclosed in the applications here in issue; but they are believed to conform to the definition of the cheek-plates as used in this art. The *Car Builders' Dictionary* (1906 edition) defines a "draft-gear cheek-casting" as—

> a malleable-iron casting which incloses the thimbles or followers and carries the thrust to the draft-sills and draft-timbers, to which it is bolted.

Whether this is true or not, however, the mere fact that Bettendorf produced certain prints showing draft-rigging not conforming to the issue would be wholly insufficient to indicate a lack of conception by him at that time in the face of the positive testimony above referred to. The same may be said of O'Connor's criticism based upon the fact that Bettendorf's Patent No. 909,360 does not

claim the invention in issue, although the drawings therein conform closely to the exhibit drawings from which the Wabash car is said to have been constructed.

O'Connor has also contended before the lower tribunals and still contends that Bettendorf is estopped from asserting that he had the invention on or before March 7, 1908, by reason of the following letter written to the W. H. Miner Company, O'Connor's employer, by the witness Ploehn under instructions from Bettendorf:

> Confirming our phone conversation of this afternoon, we are sorry to advise you that our design of the draft-gear end of the center sill on the Milwaukee stock-car underframe is in such a stage that we cannot send you a sketch or print of same. The fact is that as yet, no complete drawings have been made.

Assuming without deciding that the doctrine of equitable estoppel may be invoked in such a proceeding as the present, it is sufficient to say that I do not find any ground for applying it in this instance. This letter is of a nature such that O'Connor, who is an employee of the Miner Company, had no reason to draw the conclusion therefrom that Bettendorf was at the time of writing without a conception of the present invention or that he was not working on it or did not consider it his invention. It has been explained in the record that it is contrary to the rules of the Bettendorf Company to send out prints or information regarding prospective orders until the order had been obtained and the prints approved. Furthermore, as above indicated, there is no evidence in the record that complete drawings were in existence prior to the time the Milwaukee sample car was made, and obviously it might well have been finished without the making of drawings which would be "complete drawings" within the meaning of this letter. I find no reason for holding Bettendorf estopped to assert his right to the invention.

The decision of the Examiners-in-Chief is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

JOHNSON EDUCATOR FOOD COMPANY *v.* SYLVANUS SMITH & CO., INC.

Decided April 3, 1911.

1. TRADE-MARKS—GOODS OF THE SAME DESCRIPTIVE PROPERTIES.

   "We think two trade-marks may be said to be appropriated to merchandise of the same descriptive properties in the sense meant by the statute when the general and essential characteristics of the goods are the same. * * * The test is whether there is such a sameness in the distinguishing characteristics of the goods as to be likely to mislead the general public."

2. SAME—SAME—SALTED, SMOKED, PACKED, AND CANNED FISH NOT OF SAME DESCRIPTIVE PROPERTIES AS CRACKERS, BISCUITS, AND BREAKFAST CEREALS.

   An opposition by the owner of a mark applied to crackers, biscuits, bread, and breakfast cereals to the registration by another of the same mark as applied to salted, smoked, pickled, and canned fish *Held* properly dismissed, since "it requires altogether too great a stretch of the imagination to conclude that any one calling for breakfast food would accept salted codfish without knowing the difference."

Mr. George P. Dike for the appellant.

Mr. C. A. Barnard for the appellee.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents (174 O. G., 1027) dismissing the opposition of appellant to the registration of the word "Educator" as a trade-mark for salted, smoked, pickled, and canned fish. Appellant had previously registered the same word as a trade-mark for crackers, biscuits, bread, and breakfast cereals, and had built up an extensive trade in those products. The opposition is based upon the contention that the preparations of appellant are "of the same descriptive properties" as the fish products of appellee.

This is a statutory proceeding and we must, of course, be governed by the provisions of the statute relating thereto. Section 4 (b) of the Trade-Mark Act of February 20, 1905, (33 Stat., 724,) prohibits the registration of two marks "appropriated to merchandise of the same descriptive properties," and section 7 of the same act permits a prior registrant or applicant to oppose the registration of a mark "appropriated to goods of the same descriptive properties" as his own.

> We think two trade-marks may be said to be appropriated to merchandise of the same descriptive properties in the sense meant by the statute when the general and essential characteristics of the goods are the same. * * * The test is whether there is such a sameness in the distinguishing characteristics of the goods as to be likely to mislead the general public. (*Phoenix Paint & Varnish Co.* v. *John T. Lewis & Bros.*, 32 App. D. C., 285; *Walter Baker & Co., Limited*, v. *Harrison*, 32 App. D. C., 272.)

Unless, therefore, there are no distinguishing characteristics between the goods of the respective parties, we have no authority to interfere with the award of registration to appellee. We think the case ruled by our decision in the *Muralo Co.* v. *National Lead Co.*, present term, (36 App. D. C., 541; 165 O. G., 475.) In that case the Muralo Company sought registration of a mark for calcimine. The opposition was upon the ground that calcimine was of the same descriptive properties as white lead, to which the opposer's mark applied. The court, speaking through Mr. Chief Justice Shepard, said:

> The real question is whether the use of the figure of a Dutch boy on one package and that of a Dutchman on the other is calculated to mislead an ordinary person seeking to buy white lead, into buying a package of calcimine. Bearing in mind the essential differences between the two articles, we think it impossible that such should be the case. The purchaser has some definite use in view and must know whether he wants white lead to compound into paint, or for other purposes, or whether he wants calcimine. * * * The fact that one intending to use oil-paint for interior walls calls for white lead, but may be induced to use calcimine instead upon the representation that it is cheaper and when put on the wall cannot be distinguished from oil-paint by any one but an expert, does not make a case of confusion in trade.

In the present case it requires altogether too great a stretch of the imagination to conclude that any one calling for breakfast food would accept salted codfish without knowing the difference. The general and essential characteristics of the two products are dissimilar, and while each is prepared

for human consumption no confusion such as the statute contemplates can possibly arise in the mind of the public if the two products are sold under the same mark.

The decision of the Commissioner is therefore affirmed and the clerk will certify this opinion as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

MIDGLEY *v.* WARD.

Decided December 4, 1911.

1. INTERFERENCE—PRIORITY.

   Evidence reviewed and *Held* to establish that W. was the first to conceive the invention and was diligent at and after the time M. entered the field and that priority was properly awarded him.

2. SAME—TESTIMONY—LEADING QUESTION.

   Certain questions considered and *Held* not leading.

Mr. W. B. Corwin and *Mr. Edward W. Vaill* for the appellant.

Mr. John H. Roney for the appellee.

ROBB, *J:*

This is an interference proceeding in which priority of invention was awarded Ward.

The invention relates to a so-called antiskidding device for automobile-tires and is expressed in ten counts, of which the following are representative:

> 1. A tire of resilient material having embedded in the tread portion thereof a plurality of helices so disposed that portions thereof are flush with the road-engaging surface of the tire.
>
> 4. A tire of resilient material having embedded in the resilient material thereof a structure comprising a plurality of layers of metallic coils, portions of the bent rods or wires of the outer layer being flush with the road-engaging surface of the tire.
>
> 10. A tire-tread, a substantially continuous elastic member embedded therein and coiled in the direction of the circumference, and having portions of its coil exposed upon the tread.

Each of the three tribunals of the Patent Office found that Midgley is entitled to no date of conception or disclosure of the issue prior to May, 1906. We concur in that finding. Midgley filed his application September 11, 1906, while that of Ward was not filed until April 19, 1907.

The Examiner of Interferences, after a careful review of the evidence in behalf of Ward, ruled that it established conception of the invention by Ward in July or August of 1905, and that inasmuch as Ward was exercising diligence at and after the time Midgley entered the field in May, 1906, he was entitled to the award of priority. The Examiners-in-Chief reversed this ruling largely upon the ground that the answers of Ward's principal witness, a Mr. Atterholt, were inspired by leading questions and hence that such answers were not entitled to consideration. The First Assistant Commissioner, who then heard the case on appeal, in a well-considered opinion, (173 O. G., 584,) pointed out the untenableness of the Board's position and sustained the Examiner of Interferences.

The decision of the Assistant Commissioner was clearly right. We entertain no doubt that Ward conceived and disclosed the invention long prior to the time Midgley entered the field. As that evidence has been reviewed by the Examiner of Interferences, we content ourselves with a mere statement of our conclusion.

While we do not wish to detract from the force of our observations in *American Stove Co.* v. *Detroit Stove Works*, (31 App. D. C., 304,) concerning the practice of asking leading questions, we agree with the Assistant Commissioner that the questions here involved are not of that character. To illustrate: Mr. Atterholt was asked whether Ward had explained—

> how he intended to utilize this (the exhibit) in connection with an automobile-tire.

The answer of the witness clearly showed that he did not fully understand the question. Counsel, apparently appreciating this, then asked the following question:

> Possibly you misunderstood my question. Did Mr. Ward, at the time he showed this sample, explain to you how it was to be applied to a tire? If so, give, as near as you can recall, Mr. Ward's statement in this respect.

The witness had already testified that the sample referred to had been shown him by Mr. Ward and had already stated in response to an entirely proper question his independent recollection of the nature of the invention and that it was to be applied to tires. It is at once apparent that this question was in no way leading but merely calculated to direct the attention of the witness to the particular matter under investigation. It was not strange that the witness should have been somewhat misled when he was asked whether Ward had explained to him how he intended to *utilize* an exhibit consisting of a short piece of rubber with wire coils embedded therein "in connection with an automobile-tire." The object of the challenged question was clearly to elicit from the witness any information that had been imparted to him by Ward concerning the manner in which the *invention* was to be applied to a tire. The question does not contain a suggestion of the expected answer. This is the test.

For the reasons given by the Assistant Commissioner, we affirm his decision.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C.) The Pfatischer patent, No. 775,310, for a variable-speed motor, *Held* void for anticipation. *Electro-Dynamic Co.* v. *Westinghouse Electric & Mfg. Co.*, 191 Fed. Rep., 506.

(U. S. C. C.) A preliminary injunction against infringement of the Hewlett and Emmet Patent No. 800,916, for a removable oil-can, high-potential electric switch, denied, but granted as to the Emmet and Hewlett Patent No. 789,597, for a high-potential switch. *General Electric Co.* v. *Condit Electrical Mfg. Co.*, 191 Fed. Rep., 511.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Spollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seldovia Salmon Company, of

Seattle, Wash., for a trade-mark and registration No. 10,890, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 18, 1893, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "E. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 13, 1912.

Keystone Nail Co., Inc., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to Hoopes & Townsend, of Philadelphia, Pa., and trade-mark registration No. 49,864, dated February 20, 1906, to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Keystone Nail Co., Inc., was returned signed "Keystone Nail Co., Com. Tr. Co." No evidence of the right to intervene in this interference has been filed by the Keystone Nail Co., Com. Tr. Co., within the time allowed for that purpose.

Notice is therefore hereby given to the said Keystone Nail Co., Inc., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Saiant & Saiant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,890, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-mark registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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CONTENTS.

	Page.
ISSUE OF FEBRUARY 13, 1912	271
DISCLAIMER	271
ACCESS TO PENDING APPLICATIONS	271
APPLICATIONS UNDER EXAMINATION	272
PATENTS GRANTED	273
REISSUES	518
DESIGNS	519
TRADE-MARKS—REGISTRATION APPLIED FOR	525
TRADE-MARKS—REGISTERED	537
LABELS AND PRINTS	540
REPORT OF THE COMMISSIONER OF PATENTS TO CONGRESS FOR THE YEAR ENDED DECEMBER 31, 1911	541
ADJUDICATED PATENTS	553
INTERFERENCE NOTICES	553

ISSUE OF FEBRUARY 13, 1912.

Patents	717—No.	1,016,925 to No.	1,017,641, inclusive.
Designs	21—No.	42,161 to No.	42,181, inclusive.
Trade-Marks	87—No.	85,311 to No.	85,397, inclusive.
Labels	2—No.	16,175 to No.	16,176, inclusive.
Prints	1—No.	2,953.	
Reissues	2—No.	13,367 to No.	13,368, inclusive.
Total	830		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	2	North Dakota	3	....
Arkansas	5	1	Ohio	54	4
California	37	3	Oklahoma	4	....
Colorado	6	1	Oregon	4	....
Connecticut	17	1	Pennsylvania	85	7
Delaware	1	....	Rhode Island	1	1
Florida	3	1	South Carolina	2	....
Georgia	3	....	South Dakota	2	....
Idaho	6	....	Tennessee	2	2
Illinois	61	7	Texas	12	1
Indiana	18	2	Utah	....	1
Iowa	11	....	Vermont	....	....
Kansas	15	2	Virginia	5	1
Kentucky	2	....	Washington	11	....
Louisiana	3	....	West Virginia	6	....
Maine	1	1	Wisconsin	16	1
Maryland	3	2	Wyoming	....	....
Massachusetts	46	14			
Michigan	27	2	Alaska, District of	....	....
Minnesota	15	2	Arizona Territory	1	....
Mississippi	2	....	Canal Zone	4	....
Missouri	16	1	District of Columbia	5	....
Montana	1	....	Hawaii Territory	....	....
Nebraska	2	....	Philippine Islands	....	....
Nevada	3	....	Porto Rico	....	....
New Hampshire	2	1	U. S. Army	....	....
New Jersey	22	4	U. S. Navy	....	....
New Mexico	1	....			
New York	95	21	Total to citizens of the United States	646	86
North Carolina	4	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	7	....	Newfoundland	....	....
Belgium	1	....	New South Wales	2	....
Brazil	....	1	New Zealand	1	....
British West Indies	....	....	Norway	....	....
Canada	15	....	Persia	....	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	....	....
China	....	....	Scotland	2	....
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	1	....
Denmark	2	....	Sweden	2	....
Ecuador	....	....	Switzerland	4	....
England	17	....	Transvaal, South Africa	....	....
France	7	2	Victoria	2	....
Germany	26	1	Western Australia	....	....
India	....	....			
Ireland	....	....			
Italy	1	....	Total to citizens of foreign countries	91	4
Japan	....	....			
Mexico	1	....			

Disclaimer.

970,556.—*Andrew F. Rosenberger*, Chicago, Ill. LIGHTNING-PROTECTOR. Patent dated September 20, 1910. Disclaimer filed February 5, 1912, by the trustee, *Charles J. Schmidt.*

Enters this disclaimer—

"To claims 1, 2, and 7, which are as follows:

"1. In a protector, the combination with suitable electrical connections, of a pair of electrodes provided with opposed spark-gap surfaces which converge, and a solid dielectric interposed between the most contiguous portions of said electrodes and arranged to divert passing discharges across the gap between said convergent surfaces.

"2. In a protector, the combination with suitable supports and terminal connections, of a pair of electrodes having opposed uncovered convergent surfaces and a dielectric of greater insulating resistance than air separating said electrodes at their place of nearest approach.

"7. A spark-gap device for lightning-arresters, comprising a plurality of carbon plates spaced apart by an insulating washer and having cut-away portions to form an arc-expanding chute."

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 10, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 4	Dec. 19	533
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 12	Jan. 2	524
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Jan. 11	Jan. 29	190
222	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Jan. 11	Jan. 12	313
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 5	Dec. 20	448
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 11	Jan. 11	305
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Nov. 25	Dec. 28	611
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports	Jan. 13	Jan. 13	374
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Jan. 8	Jan. 11	286
235	10. Carriages and Wagons	Dec. 11	Jan. 1	648
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 23	Dec. 19	377
334	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Dec. 28	Dec. 20	634
339	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Dec. 12	Jan. 3	440
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 19	Jan. 3	401
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 19	Dec. 19	807
109	16. Telegraphy; Telephony	Jan. 2	Dec. 27	214
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 11	Jan. 10	311
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 4	Jan. 5	300
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 4	Dec. 28	489
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 11	Jan. 12	167
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 3	Jan. 10	344

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 15	Jan. 12	346
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 2	Dec. 27	422
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 2	Dec. 20	455
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 16	Jan 17	198
106	26. Electricity, Generation; Motive Power.	Oct. 5	Nov. 1	514
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 8	Jan. 11	376
65	28. Internal-Combustion Engines	Dec. 1	Nov. 20	895
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines: Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 15	Jan. 10	462
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 4	Jan. 26	278
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Jan. 4	Jan. 8	342
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages: Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 22	Jan. 11	299
71	32. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 26	Dec. 30	452
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 2	Dec. 20	479
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 6	Jan. 9	771
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 8	Dec. 1	580
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Nov. 20	Jan. 8	526
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Dec. 13	Dec. 13	634
221	39. Water Distribution	Dec. 12	Nov. 27	505
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 10	Jan. 22	354
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 24	Jan. 8	569
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 29	Nov. 25	575
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 11	Dec. 12	319

Oldest new case, Oct. 5; oldest amended, Nov. 1.

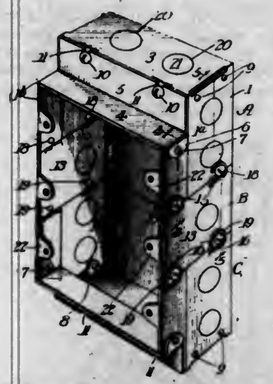
Total number of applications awaiting action 19,067

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 2	Jan. 2	1291
	Designs	Dec. 9	Jan. 12	310
	Labels and Prints	Jan. 31	Jan. 27	65

PATENTS

GRANTED FEBRUARY 13, 1912.

1,016,925. OUTLET-BOX. ALBERT I. APPLETON, Chicago, Ill., assignor to Chicago Fuse Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 21, 1909. Serial No. 513,939. (Cl. 247—5.)



1. An electric outlet box comprising two sections, and means for securing adjacent side walls of said sections together comprising a screw in one side wall and a slotted lug rigidly fixed on the adjacent side wall and extending in a plane substantially parallel with said walls and adapted to be slipped beneath the head of said screw.

2. An electric outlet box comprising two sections, and means for securing adjacent walls of said sections together comprising a projecting part on one wall and a slotted lug rigidly fixed on the adjacent wall and adapted to engage said projecting part.

3. An electric outlet box comprising two sections, and means for securing said sections together comprising screws in opposite side walls of one section and slotted lugs rigidly fixed on the other section and extending in planes substantially parallel with said side walls and adapted to be slipped beneath the heads of said screws.

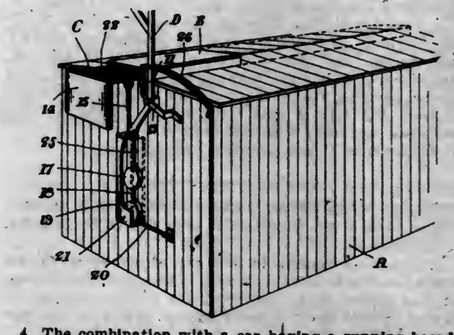
4. An electric outlet box comprising two sections, and means for connecting said sections together comprising portions projecting from opposite side walls of one section, and lugs rigidly fixed upon the other section and extending in planes substantially parallel with said side walls and having open-end slots adapted to receive said projecting portions.

1,016,926. AUTOMATIC RUNNING-BOARD FOR CARS. JOHN ARMSTRONG, North Bay, Ontario, Canada. Filed Aug. 7, 1911. Serial No. 642,847. (Cl. 105—194.)

1. In a car, a running board movable outwardly from the end of the car, and a plurality of separated weights operatively connected to the running board and tending to force the same outwardly, said weights being thrown into operation successively.

2. In a car, a running board movable outwardly from the end of the same, a weight operatively connected to the running board and tending to force the same outwardly and a spring adapted to resist inward movement of the running board and thrown into operation with the weight.

3. In a car, a running board movable outwardly from the end of the same, means normally forcing the board to outermost position, a barrier member movable across the running board and means normally retaining the barrier member in position across the running board, but adapted to withdraw said barrier member when the running board is moved inwardly.

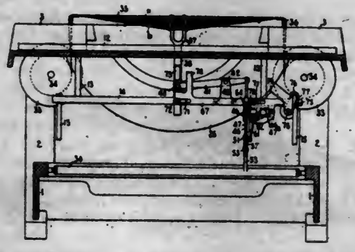


4. The combination with a car having a running board, of a barrier member adapted to normally extend across the running board, means operated by the adjacent car for withdrawing said barrier, said means including a longitudinally movable member adapted to be forced inwardly by the adjacent car, and connecting means connecting said member and the barrier member.

5. In a car, a running board movable outwardly from the end of the same, a weight connected by a cord running over a pulley to said running board and tending to force the same outwardly, and a pivoted barrier member operated by the movement of said cord adapted when the movable running board is in outermost position to extend across the top of the same.

[Claim 6 not printed in the Gazette.]

1,016,927. TYPE-WRITING MACHINE. JOHN H. BARR, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Aug. 21, 1911. Serial No. 645,210. (Cl. 197—155.)



1. In a typewriting machine, the combination of a ribbon vibrator, an operating member, connection between said operating member and said vibrator, a plurality of key operated actuators, and a device operative independently of said actuators and of said ribbon vibrator for connecting said actuators at will with said member.

2. In a typewriting machine, the combination of a ribbon vibrator, an operating member, connections between

said operating member and said vibrator, a plurality of key operated actuators, and a device mounted on said member for alternatively connecting said actuators with said member.

3. In a typewriting machine, the combination of a ribbon vibrator, an operating member, connections between said operating member and said vibrator, a plurality of key operated actuators, a device supported on said member, and key controlled means for setting said device independently of said member to connect said actuators alternately with said member.

4. In a typewriting machine, the combination of a ribbon vibrator, an operating member, connections between said member and said vibrator, a plurality of key controlled actuators having an unvarying normal position, and means for separately connecting said actuators with said member, said vibrator remaining quiescent during the connecting and disconnecting operations of said means.

5. In a typewriting machine, the combination of a ribbon vibrator, an operating member, connections between said member and said vibrator, a plurality of key controlled actuators having an unvarying normal position, and means operating independently of said member and of said vibrator and also of said actuators for connecting said actuators separately with said member.

[Claims 6 to 15 not printed in the Gazette.]

1,016,928. CLEANSING FABRICS. HOWARD B. BISHOP, New York, N. Y. Filed Dec. 2, 1909. Serial No. 531,096. (Cl. 8—2.)

1. The improvement in the art of cleansing fabrics which consists in bringing fabrics having iron stains thereon into contact with a water soluble compound of fluorin having an acid reaction, substantially as and for the purpose described.

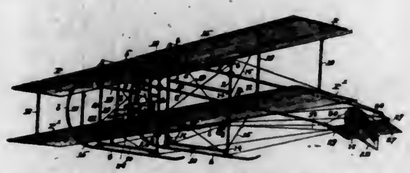
2. The improvement in the art of cleansing fabrics which consists in bringing fabrics having iron stains thereon into contact with a solution of a water soluble compound of fluorin having an acid reaction, substantially as and for the purpose described.

3. The improvement in the art of cleansing fabrics which consists in bringing fabrics having iron stains thereon into contact with a solution of hydrofluoric acid, substantially as and for the purpose described.

4. The improvement in the art of cleansing fabrics which consists in immersing the same in water, neutralizing an alkali in said water by an acid and adding to the water a water soluble compound of fluorin having an acid reaction, substantially as and for the purpose described.

5. The improvement in the art of removing iron stains from fabrics which consists in moistening and treating the portion of the fabric having the stain, with a water soluble compound of fluorin having an acid reaction, substantially as and for the purpose described.

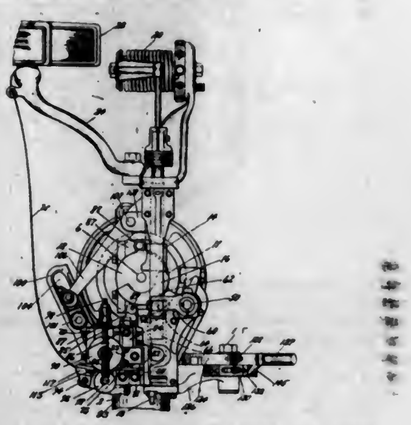
1,016,929. AEROPLANE. DAVID BLACK, Edwardsville, Ill. Filed Feb. 9, 1911. Serial No. 607,462. (Cl. 244—12.)



1. In a machine as described, a main frame having transverse bars at its sides, a set of planes disposed in the same horizontal plane and each of said planes pivotally mounted on one of said bars and extending inward from its pivot substantially half way across said frame and adapted to tilt independently of the other plane, and means adapted to automatically restore said planes to normal position after tilting comprising a spring for each plane having a substantially rigid projection and a connection between said projection and the edge of said plane.

2. In an aeroplane, a main frame having forwardly bowed sides and the ends thereof constituting the top and bottom side bars of said frame, a set of planes on each side in substantially the same horizontal relation to the machine and pivotally mounted on the said side bars respectively between their ends and extending part way into said frame from each side, said planes independently pivoted and adapted to tilt, in combination with springs on said frame connected with each plane and adapted to hold the same normally in horizontal working relations under a spring tension, and a cable connecting the ends of the said springs with the edge portion of said planes.

1,016,930. MACHINE FOR MAKING AND DRIVING STAPLES. WILLIAM H. BORDEN, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 16, 1905, Serial No. 241,293. Renewed Nov. 4, 1911. Serial No. 658,620. (Cl. 1—20.)



1. In a machine for inserting fastenings, the combination with means for severing fastenings from a wire, of means for feeding a proper length of wire to form the fastening comprising a rotatable wire feeding roll, operating means connected therewith, and means to insure feeding of a predetermined length of wire comprising means to oscillate said feeding roll through said operating means positively forwardly and backwardly said wire feeding means having provision for varying the amount of the positive oscillation.

2. In a machine for inserting fastenings, the combination with means for severing fastenings from a wire, of means for feeding a proper length of wire to form a fastening comprising a rotatable wire feeding roll, operating means connected therewith, and means to insure feeding of a predetermiued length of wire comprising an actuator for said operating means constructed and arranged to oscillate said means positively forwardly and backwardly said wire feeding means having provision for varying the amount of the positive oscillation.

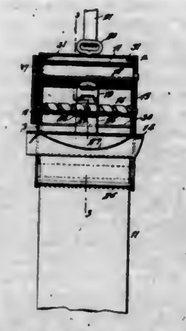
3. In a machine of the class described, wire-feeding mechanism including a rotatable feed roll, operating means connected therewith, an actuator for said operating means constructed and arranged to oscillate said means positively forwardly, and backwardly, and means for varying the extent of movement imparted to said mechanism.

4. In a machine of the class described, staple forming means, wire feeding wheels, means for causing said wheels to move in unison, operating means for moving positively in both directions one of said feeding wheels, forwardly with the wire and backwardly over the wire, and actuating means for said operating means constructed to hold and lock positively said operating means at the end of its forward stroke to prevent any excess of feeding movement of said feeding wheels said actuating means and said operating means being connected with provision for varying the amount of the positive movement.

5. In a machine of the class described, staple forming mechanism, wire feeding mechanism, a single means for actuating said wire feeding mechanism positively in one direction to feed the wire and positively in the reverse direction preparatory to each feeding operation, wire cutting means, and means for effecting simultaneously both an adjustment of said wire feeding mechanism and its positive actuating means to cause a different length of wire to be fed and a corresponding relative adjustment of the cutting means and the staple forming mechanism to keep the legs of the staple equal.

[Claims 6 to 13 not printed in the Gazette.]

1,016,931. RAZOR-STROPPING MACHINE. ISIDOR BUCHLER, New York, N. Y. Filed May 31, 1911. Serial No. 630,453. (Cl. 51—16.)



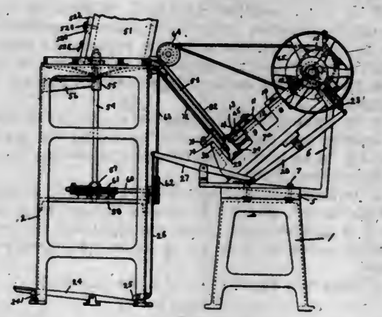
1. A razor stropping machine comprising a main frame, a spirally grooved shaft journaled at its ends in said frame and having on one end a gear wheel, a friction roller journaled at its ends in said frame and having on one end a gear wheel operatively connected with the gear wheel on said shaft, a blade holder pivotally mounted on said shaft and having a stud engaged in the spiral groove thereof to effect endwise travel of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, and means to be actuated by the strop for turning the blade-holder to the reach of the strop pulled outwardly; substantially as set forth.

2. A razor stropping machine comprising a main frame, a spirally grooved shaft journaled at its ends in said frame and having on one end a gear wheel, a friction roller journaled at its ends in said frame and having on one end a gear wheel operatively connected with the gear wheel on said shaft, a blade holder having a shank portion provided with a sleeve encompassing said shaft and having a stud engaged in the spiral groove thereof to effect endwise travel of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, and a transverse bar centrally pivoted at the upper side of said sleeve and somewhat greater in length than the normal distance between the reaches of said strop to be actuated by the strop for turning the blade-holder to the reach of the strop pulled outwardly; substantially as set forth.

3. A razor stropping machine comprising a main frame, a spirally grooved rotary but otherwise stationary shaft journaled therein, a rotary but otherwise stationary friction roller journaled in said frame, an endwise movable pivotally mounted blade-holder having a part engaged in the spiral groove of said shaft to effect endwise movement of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, means connecting said roller and shaft for transmitting rotary motion from the roller to the shaft during the alternate outward movements of the reaches of the strop actuating said roller, and means for turning the blade holder to the reach of the strop moved in a direction to strop the blade; substantially as set forth.

4. A razor stropping machine comprising a main frame, a spirally grooved rotary but otherwise stationary shaft journaled therein, a rotary but otherwise stationary friction roller journaled in said frame, an endwise movable pivotally mounted blade-holder having a part engaged in the spiral groove of said shaft to effect endwise movement of the said holder during the rotatio nof said shaft, a strop folded over said roller, shaft and holder and guided in said frame, means connecting said roller and shaft for transmitting rotary motion from the roller to the shaft during the alternate outward movements of the reaches of the strop actuating said roller, and a transverse centrally pivoted bar somewhat greater in length than the normal distance between the reaches of said strop to be actuated by the strop for turning the blade-holder to the reach of the strop moved in a direction to strop the blade; substantially as set forth.

1,016,932. MACHINE FOR PUNCHING OR SHAPING METALLIC BLANKS. MICHAEL F. CAHILL, Boston, Mass. Filed Jan. 10, 1910, Serial No. 537,217. Renewed Oct. 4, 1911. Serial No. 652,789. (Cl. 164—87.)



1. In combination, a hopper, a fixed sorting table upon which said hopper discharges, a revolving table for receiving the blanks from the fixed sorting table, an inclined race-way, suitable guides leading the blanks from the revolving table to the race-way, one of said guides being movable, and means for moving said guide, substantially as described.

2. In combination, a revolving table, a race-way into which said table discharges, a movable guide, means for agitating said movable guide, a die plate at the lower end of said race-way, a rest or bracket on said die plate for supporting the lowermost blank in the line of blanks over the opening in the die plate and a reciprocating die, substantially as described.

3. In combination, a reciprocating plunger, a die carried by said plunger, a stripper plate through which said die passes and a striker located adjacent the stripper plate and actuated by the die plunger to strike the died out article as it is stripped from the die, substantially as described.

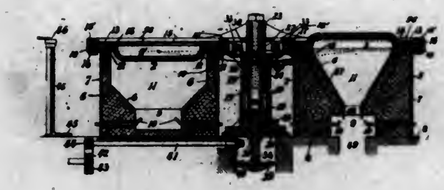
4. In combination, a reciprocating plunger, a die carried by said plunger, a stripper plate through which said die passes and a spring striker located adjacent the stripper plate to strike the died out article as it is stripped from the die, said striker being actuated by the die plunger, substantially as described.

5. In combination, a race-way, a rest at the lower end of said race-way for supporting the lowermost blank in

the line of blanks in the race-way, and a guard transversely spanning the race-way above the next adjacent blank in the race-way, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,016,933. APPARATUS FOR HANDLING GLASS. JAMES A. CHAMBERS, Allegheny, Pa. Filed Feb. 23, 1911. Serial No. 610,422. (Cl. 49—17.)



1. In glass handling apparatus, a furnace, a drawing pot, a horizontally rotatable support separate from the furnace for presenting the pot to the furnace, and means for revolubly mounting the pot in the support.

2. In glass handling apparatus, a furnace, a pot, a rotatable support separate from the furnace for bringing the pot into position with the furnace; the pot being revolubly carried thereby, and means for revolving the pot as it is brought to the furnace.

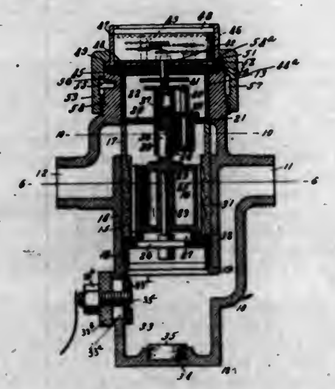
3. In glass handling apparatus, a furnace, a pot, a vertically shiftable, rotatable support for presenting the pot to the furnace, and means for shifting the support upwardly preparatory to presenting the pot to the furnace, and lowering the support in presenting the pot to the furnace.

4. In glass handling apparatus, a plurality of furnaces, a drawing pot, and means for presenting the pot to one furnace, in an upright position, and to another furnace in a downturned position.

5. In glass handling apparatus, a plurality of furnaces, a drawing pot, means for bringing the pot from one furnace to another, and means for revolving the pot in a vertical plane as it is brought from one furnace to another.

[Claims 6 to 13 not printed in the Gazette.]

1,016,934. FLUID-METER. THOMAS CHARLTON, Chicago, Ill. Filed Dec. 21, 1910. Serial No. 598,614. (Cl. 73—37.)



1. A meter comprising a check valve having a weight approximately equal to the weight of the water it displaces and arranged in the fluid passage way within the meter to prevent the flow of fluid through the meter in a direction opposite to normal.

2. A rotary fluid meter comprising a chambered casing, an open ended rotor chamber in said casing, a rotor in said chamber and of the shape of the chamber, the walls of said chamber being spirally fluted with open ended flutes, and the outer surface of said rotor being provided with open ended flutes at an angle to the flutes of the chamber walls, and registering devices geared to the rotor, said meter having an inlet opening at one end of the rotor chamber, and an outlet opening at the other.

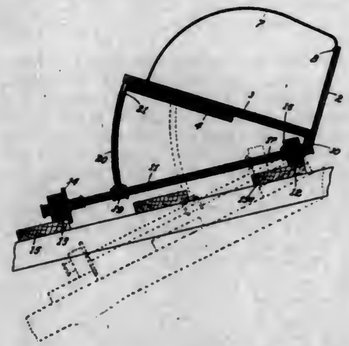
3. A rotary fluid meter comprising a chambered casing, a rotor chamber in said casing, a rotor in said chamber, said rotor having a weight approximately equal to the weight of the water it displaces, whereby the rotor may be moved in the direction of flow of the fluid, said meter having inlet and outlet openings, the bottom of said rotor being constituted a valve and adapted to be operated to close one of said openings when it is attempted to make the direction of flow of the fluid through the meter the reverse of normal.

4. A rotary meter comprising a chambered casing, a movable measuring device in said casing, said measuring device having a weight approximately equal to the weight of the water it displaces, whereby said measuring device may be moved in the direction of flow of the fluid through the meter, bearings for said measuring device which permit said movement in addition to the measuring movement of the meter, said meter having inlet and outlet openings and a valve seat associated with the measuring device, said measuring device being adapted to engage said valve seat and to close one of said openings when it is attempted to make the direction of flow of the fluid through the meter the reverse of normal.

5. A meter comprising a one piece chambered body casing, a measuring chamber in said casing, a measuring device in said chamber, said casing body having a single opening in line with said chamber and through which the measuring device may be inserted and removed, and a sealing device for said opening, said sealing device comprising a sealing member threaded to the casing by bastard threads, and an interior normally inaccessible inclosed sealing mechanism between the sealing member and the casing.

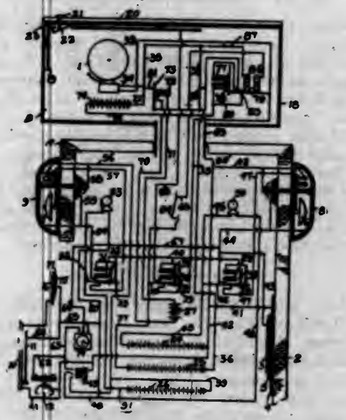
[Claims 6 and 7 not printed in the Gazette.]

1,016,935. PORTABLE SHINGLE-RACK. CORNELIUS CLARK, Lodi, Cal. Filed Apr. 19, 1911. Serial No. 622,036. (Cl. 20—86.)



A device of the character described comprising the combination of a platform, projecting tubular members hinged to the underside of said platform at one end thereof, rollers on the ends of said tubular members, sleeves, turnably mounted on said tubular members, tubular members carried by said sleeves and having open outer ends, removable pins carried by said platform and adapted to project into the open ends of said last named tubular members, said pins being capable of being disengaged from said tubular members, said last named tubular members being adapted to lie horizontally with respect to said first named tubular members when they are disengaged from said pins and said platform being adapted to rest on said first named tubular members when said last named tubular members are in such described horizontal position as described.

1,016,936. ELECTRICAL BURGLAR-ALARM. WALTER K. COOK, Minneapolis, Minn., assignor to The American Bank Protection Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Aug. 9, 1909. Serial No. 512,062. (Cl. 177—314.)

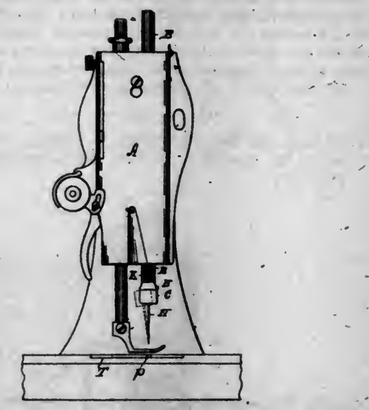


1. An electrical burglar alarm system, comprising, in combination, a guarded structure having, in its inclosing walls, suitable electrical conductors insulated from each other, a protected housing having inclosing walls comprising electrical conductors insulated from each other, a main alarm located in said protected housing, a suitable battery arranged within said guarded structure, an open ringing circuit, connecting said main alarm with said battery, open tripping circuits connected with the insulated conductors of the guarded structure and protected housing, an automatic drop within the guarded structure arranged to be operated when any one of said tripping circuits is closed by electrically connecting the insulated conductors of the guarded structure or protected housing, and, when thus operated, closing said ringing circuit, a local alarm circuit arranged in said protected housing and including said main alarm, and a closed circuit extending from the guarded structure to the protected housing and operating, when broken, to close the local alarm circuit in the protected housing.

2. An electrical burglar alarm system, comprising, in combination, a guarded structure having, in its inclosing walls, suitable electrical conductors insulated from each other, a protected housing having inclosing walls comprising electrical conductors insulated from each other, a main alarm located in said protected housing, a suitable battery arranged within said guarded structure, an open ringing circuit connecting said main alarm with said battery, a protected alarm located on the outer wall of said guarded structure, an open ringing circuit connecting said alarm with said battery, open tripping circuits connected with the insulated conductors of the guarded structure and protected housing, automatic drops within the guarded structure arranged to be operated when any of said tripping circuits is closed, and when thus operated closing said ringing circuits, a local alarm circuit arranged in said protected housing and including said main alarm and a closed circuit extending from the guarded structure to the protected housing and operating, when broken, to close the local alarm circuit in the protected housing.

3. An electrical burglar alarm system, comprising, in combination, a guarded structure having, in its inclosing walls, suitable electrical conductors insulated from each other, a protected housing having inclosing walls comprising electrical conductors insulated from each other, a main alarm located in said protected housing, a suitable battery arranged within said guarded structure, an open ringing circuit connecting said main alarm with said battery, open tripping circuits connected with the insulated conductors of the guarded structure and protected housing, an automatic drop within the guarded structure arranged to be operated when anyone of said tripping circuits is closed by electrically connecting the insulated conductors of the guarded structure or protected housing, and, when thus operated, closing said ringing circuit, a local alarm circuit arranged in said protected housing and including said main alarm, a magnet in said protected housing provided with an armature that serves, when released from the magnet, as a circuit closer for said local alarm circuit, a closed main circuit, including said magnet, and extending from the guarded structure to the protected housing and serving normally to hold said armature out of circuit closing contact, and a battery in the guarded structure to which said closed main circuit is connected, substantially as described.

1,016,937. SEWING-MACHINE. GARRY J. DORMANDY, Troy, N. Y., assignor of one-half to United Shirt & Collar Company, Troy, N. Y. Filed Aug. 19, 1901. Serial No. 72,486. (Cl. 112—37.)



1. In a sewing machine, a work support having a needle passage therein, and a feeding means adapted to engage two-ply work on said support, said feeding means acting on one ply only for feeding forward both plies past the sewing point, combined with a means for reciprocating a needle to pass from the outer side to project substantially beyond the inner side of the work and reverse, for forming a line of stitches in two plies of fabric to sew them together, and a needle, said needle being fixed at an incline to its line of reciprocation, so that said needle while forming a line of stitches will simultaneously act on both fabric plies to effect a progressive relative speed-gain of one ply with respect to the other; whereby the unequal action of said feeding means may be corrected by the action of the stitch forming means.

2. In a sewing machine, a means for reciprocating a needle for forming a line of stitches in two plies of fabric to sew them together, together with a needle, a needle support having means for setting it to hold the needle at an incline to its line of reciprocation, whereby said needle while forming a line of stitches will simulta-

neously act on both fabric plies to effect a progressive relative speed-gain of one ply with respect to the other; said needle setting means being adjustable to vary the incline of the needle while maintaining unchanged the position of the needle point.

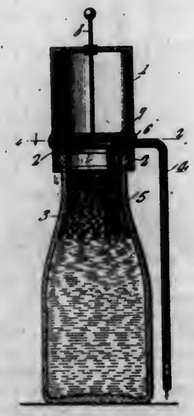
3. In a sewing machine, the combination of a work support having a needle passage therein, a presser foot opposed thereto, the material to be sewed passing between said support and presser foot, a reciprocating feed dog, and means for causing a progressive relative speed-gain in one ply of material when two plies are being sewed together, with respect to the other ply, said means consisting of a needle, mechanism for reciprocating the needle to pass from the outer side to project substantially beyond the inner side of the work and reverse, and an attaching device for rigidly holding the needle in a fixed relation to and at an incline with its line of movement with the needle point in coöperative relation to said needle passage.

4. In a sewing machine, a reciprocating needle bar combined with a needle secured rigidly to said needle bar in a fixed relation and at an incline with its line of movement, for the purpose of effecting a progressive relative speed-gain in one of two plies of fabric being sewed together with respect to the other ply, and means for adjustably varying the angle of the needle's inclination while retaining the rigid condition for each adjustment, said adjustment being of the needle's shank, the needle's point remaining in the same position.

5. The combination with the vertically reciprocated needle bar of a sewing machine, and the table plate provided with the needle passage, of a needle clamp mounted rigidly and adjustably on the needle bar, and a needle carried by the clamp, said clamp being adjustable in a curve concentric with the point of the needle and the needle being thereby located at an acute angle relatively to a vertical line coincident with the line of movement of the needle bar and the said passage, the point of the needle moving in a line co-incident with the said vertical line, substantially as and for the purposes set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,016,938. SIPHON-SKIMMER. CHESTER A. GILKERSON, Joliet, Ill. Filed Jan. 26, 1911. Serial No. 604,886. (Cl. 137—20.)



1. A skimmer comprising an open ended body, said body being diametrically enlarged at a point between its ends, a siphon passing through the side of the body below the enlarged portion thereof, a piston mounted for reciprocation in the said body and arranged to pass into the said enlarged portion at the end of the stroke toward the open end of the said body, and a sleeve adjustably mounted on the shorter leg of the siphon.

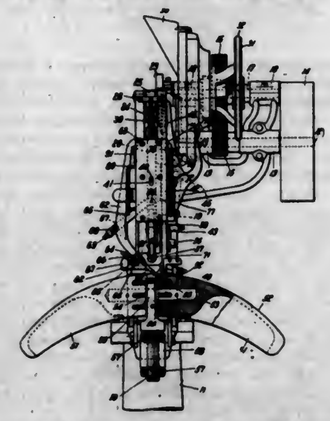
2. A skimmer comprising an open ended body having in the vicinity of its lower end an inner annular flange, said body being diametrically enlarged at a point between its ends, a piston mounted for reciprocation in the body and arranged to pass into the said enlarged portion at the end of the stroke toward the open end of the said body, and a siphon passing through the side of the body at a point above the said flange and below the path of movement of said piston.

3. A skimmer comprising an open ended body, said body being diametrically enlarged at a point between its ends, a siphon passing through the side of the body below the enlarged portion thereof, and a piston mounted for reciprocation in the body, the enlarged portion being at the end of the stroke of the piston toward the open end of the said body, whereby a space is created between the edge of the piston and the said body upon the piston being forced to the end of its stroke toward the open end of the body.

1,016,939. PROCESS FOR MANUFACTURE OF BRIQUETS. FRIEDRICH OTTO GRIPP, Bremen, Germany. Filed May 18, 1911. Serial No. 628,033. (Cl. 44—1.)

A process for making briquets from substances not binding under pressure alone (such as close-burning coal or coke) consisting in first mixing a quantity of the coking coal with water, then adding a binding material liquefied under heat in the proportion approximately of four times the mixture of coking coal and water and one part of the binding material, and then adding this auxiliary mass to the mass of material of which the briquets are to be made, and then pressing the commingled masses into the form of briquets, substantially as described.

1,016,940. MACHINE FOR SETTING RIVETS. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'fg Co., a Corporation of Massachusetts. Filed Apr. 25, 1911. Serial No. 623,136. (Cl. 218—2.)



1. A riveting machine having, in combination, a rivet holder, a driver, and a work-support located beneath said driver, the working face of said work-support adjacent to and directly beneath said driver being circular in cross section and convexly curved longitudinally thereof on the side adjacent to said driver.

2. A riveting machine having in combination, a rivet holder, a driver, and a work-support located beneath said driver, the working face of said work-support adjacent to and directly beneath said driver being circular in cross section and convexly curved on the side thereof adjacent to said driver, a portion of said work-support being rotatable about a median axial line extending transversely of said driver.

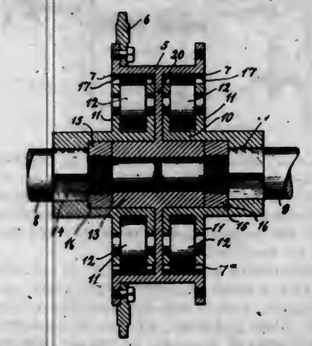
3. In a riveting machine, a convexly curved work-support, said work-support embodying a holder upon which are oppositely disposed members journaled to rotate about a median axial line extending transversely of said holder, said oppositely disposed members being circular in cross section and convexly curved longitudinally thereof.

4. In a riveting machine, a convexly curved work-support consisting of a central member constituting a holder and two horn-shaped members rotatably mounted on opposite sides, respectively, of said central member.

5. In a riveting machine, a convexly curved work-support consisting of a central member constituting a holder, a shaft journaled on said holder and extending transversely thereof, and two horn-shaped members fast to said shaft on opposite sides, respectively, of said holder.

[Claims 6 to 12 not printed in the Gazette.]

1,016,941. DRIVING MECHANISM. NICHOLAS HELWIG, Middletown, Ohio. Filed July 18, 1911. Serial No. 639,129. (Cl. 74—7.)



1. The combination of a driving member having an annular friction surface, a ring normally in frictional engagement with said surface but free to slide thereon, a driven member and means for clamping the ring to the friction surface to lock the driving and driven members together when the former is in motion.

2. The combination of a driving member having an internal annular friction surface, an expansible ring normally in frictional engagement with said surface but free to slide thereon, a driven member, and means for expanding the ring to lock the driving and driven members together when the former is in motion.

3. The combination of a driving member having an internal annular friction surface, an expansible ring normally in frictional engagement with said surface but free to slide thereon, a driven member, and coöperating devices on the rings and the driven member for expanding the ring to lock the driving and driven members together when the former is in motion.

4. The combination of a driving member having an internal annular friction surface, an expansible ring normally in frictional engagement with said surface but free to slide thereon, a driven member, and coöperating devices on the ring and the driven member for expanding the ring to lock the driving and driven members together when the former is running in either direction.

5. The combination of a driving member having an internal annular friction surface, an expansible ring normally in frictional engagement with said surface but free to slide thereon, the inner surface of the ring having cams, a driven member, and means carried by the driven member and engageable by the cams for expanding the ring to lock the same to the driving member when the latter is in motion.

[Claims 6 to 10 not printed in the Gazette.]

1,016,942. BLADE-LASHING. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 30, 1910. Serial No. 574,648. (Cl. 121—57.)

1. In combination with a row of blades, a binding member comprising spacing pieces located between the blades and secured to strips mounted in slots provided in the blades.

2. In combination with a row of blades, a binding member for the blades comprising spacing pieces located between the blades, and strips to which said pieces are secured by means of rivets.

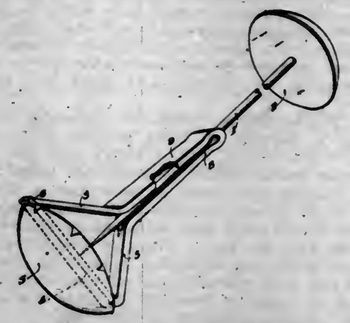
3. In combination with a row of blades, spacing pieces located between the blades, and circumferentially extending members located in slots provided in the blades and secured to said spacing pieces by means of rivets.

4. In combination with a row of blades, a binding member comprising a spacing piece located between the blades, and strips secured to said piece for holding them in place.

5. In combination with a row of blades, a binding member comprising spacing pieces located between the blades, and strips located in slots provided in the blades and secured to said spacing pieces.

[Claims 6 to 9 not printed in the Gazette.]

1,016,943. HAT-PIN PROTECTOR. CHARLES E. HOOPS, Portland, Oreg. Filed Mar. 8, 1911. Serial No. 612,992. (Cl. 24—155.)

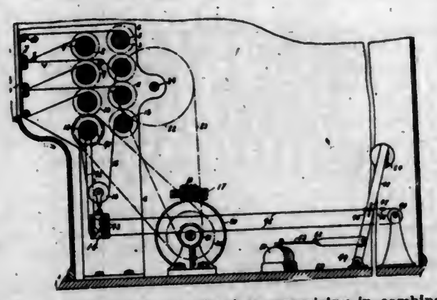


A hat pin protector formed of a single piece of flattened resilient material, the said member comprising a pair of closely adjacent substantially parallel arms, the inner faces of each of the arms having registering grooves, the juncture of the arms having an opening communicating with the grooves, both of the arms having their extremities arranged at oppositely disposed angles, one of the said arms being further bent to provide a head, the head being incut to form a lip, and the said lip adapted to be engaged by the opposite arm of the device.

1,016,944. ADVERTISING APPARATUS. GEORGE PERCY KENT, Southend-on-Sea, England. Filed Aug. 29, 1910. Serial No. 579,559. (Cl. 40—31.)

1. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of rollers geared to cause operation of the bands in prescribed relation with respect to each other, and means connected with one of the rollers for moving said bands to a starting position and comprising a shaft having an arm rigidly mounted thereon, a pawl pivoted on said arm, means for releasably holding said pawl in one of two positions, a pawl arm loose on said

shaft and arranged to be engaged and operated by said pawl, and a trip device for throwing the pawl into and out of position to engage with said pawl arm.



2. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of rollers geared to cause operation of the bands in prescribed relation with respect to each other, a shaft adapted to be driven in different directions, a wheel loose on said shaft and operatively connected with one of said rollers, a pawl arm rigidly mounted on said shaft and having a pawl with means for releasably holding the pawl in a plurality of positions, and a trip device for throwing said pawl into driving relation with said wheel when said shaft is rotating in one direction and for throwing said pawl out of driving relation with said wheel upon rotation of the shaft in the other direction.

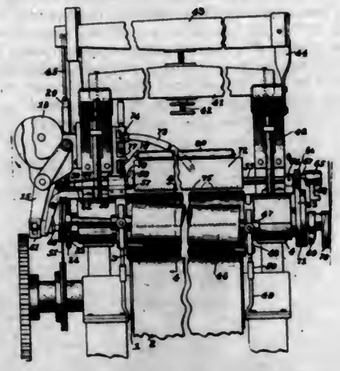
3. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of rollers geared together to cause operation of the bands in prescribed relation with respect to each other, a shaft arranged to be driven in opposite directions, mechanism operated by said shaft when driven in one direction to intermittently advance the bands, and mechanism operated by said shaft when driven in the other direction for returning said bands to a starting position.

4. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of sets of rollers with the rollers of each set geared together to operate the bands in prescribed relation with respect to each other, a shaft arranged to be driven in opposite directions, mechanism operated by said shaft when driven in one direction and connected with one set of rollers to intermittently advance the bands, and mechanism operated by said shaft when driven in another direction and connected with the other set of rollers for returning the bands to a starting position.

5. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, rollers geared to each other to cause operation of said bands in prescribed relation with respect to each other, a shaft adapted to be driven in opposite directions, means operated from said rollers for reversing the direction of rotation of said shaft, mechanism operated by said shaft to intermittently advance said bands, and mechanism operated by said shaft for returning said bands to a starting position.

1,016,945. LEATHER-BOARD MACHINE. ROSWELL A. LANCEY, Townsend, Mass., assignor, by mesne assignments, to Leon C. Spaulding, Huntley N. Spaulding, and Roland H. Spaulding, Rochester, N. H., and Emma C. Spaulding and Marion L. Spaulding, Boston, Mass., Copartners doing business under the firm-name and style of J. Spaulding & Sons Company, Rochester, N. H. Filed Jan. 6, 1911. Serial No. 601,193. (Cl. 92—67.)

1. A leatherboard machine, having, in combination, a collecting roll, a knife within the roll, mechanism for actuating the knife, and a roll arranged with its axis at an inclination to the axis of the collecting roll and having a longitudinally concaved periphery for progressively coöperating with the edge of the knife in severing the stock, substantially as described.



2. A leatherboard machine, having, in combination, a vertically moving collecting roll, a felt roll on which the collecting roll rests, a knife mounted in the collecting roll, an abutment roll against which the knife cuts, and mechanism for projecting and retracting the knife, substantially as described.

3. A leatherboard machine, having, in combination, a collecting roll, a knife for severing the stock on the roll, a stripper plate, and means for directing a blast of air between the plate and stock, substantially as described.

4. A leatherboard machine, having, in combination, a collecting roll, a stripper plate, and means for directing a blast of air over the surface of the plate toward its active edge, substantially as described.

5. A leatherboard machine, having, in combination, a collecting roll, a knife mounted in the roll, mechanism for actuating the knife, a stripper plate, a cam on the roll for timing the stripper plate, devices for rendering the cam inactive after it has thrown the stripper plate into operation, and means for throwing the stripper plate out of operation and for resetting said devices after the collecting roll has completed a single revolution, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,016,946. COMBINATION PIPE-WRENCH AND PIPE-CUTTER. CLEREWOOD LE CLERE LYONS, Willows, Cal. Filed Sept. 19, 1910. Serial No. 582,665. (Cl. 81—206.)

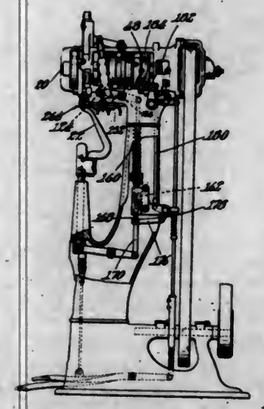
1. A tool as described comprising a handle having a jaw adapted to receive a pipe, a cutting blade in said jaw, a chain secured in said handle member and adapted to extend around said pipe and said jaw, means for securing said chain in fixed position, a protecting blade adapted to be disposed between said chain and said pipe, said blade having a hook adapted to project through one of the links of said chain as described.

2. A combination wrench and pipe cutter comprising a handle member having a curved arm on its upper end, a serrated edge on the outer curved surface of said arm, a chain secured at the base of said arm and adapted to receive a pipe between it and said serrated edge, a frame projecting at right angles to the inner curved surface of said arm, a rotating cutting blade mounted in said frame said chain being adapted to receive a pipe between itself and said arm and said cutting blade and means for moving said chain as described.

3. A combination wrench and pipe cutter comprising a handle member, an upper curved arm on said handle member, said arm having a longitudinal slot, such slot being closed at the upper end of said arm, a frame projecting at right angles to said arm, a rotating cutting blade mounted in said frame, a rotating guide mounted on said arm in alinement with said rotating cutting blade, a block slidable over said handle member, a hook on said block, a threaded rod journaled in the end of

said handle member and extending through said sliding block and a chain secured at the base of said curved arm and adapted to engage said hook as described.

1,016,947. MACHINE FOR INSERTING FASTENINGS. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 23, 1910. Serial No. 568,487. (Cl. 1—18.)



1. In a machine of the class described, a double raceway having a long nail position and a short nail position, mechanism for shifting said raceway from one position to the other and means for automatically controlling the operation of said mechanism in accordance with variations in the thickness of the work constructed to operate for an increase or decrease of predetermined amount within a determined range of thicknesses greater than that covered by the required amount of increase or decrease.

2. In a machine of the class described, a double raceway having a long nail position and a short nail position, mechanism for shifting said raceway from one position to the other and means for automatically controlling the operation of said mechanism in accordance with variations in the thickness of the work constructed to operate for an increase or decrease of predetermined amount within a determined range of thicknesses greater than that covered by the required amount of increase or decrease, said means having provision for adjustment to different determined ranges of thicknesses.

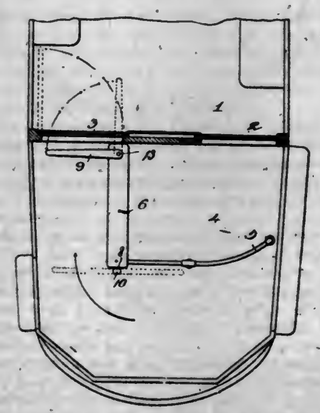
3. In a machine of the class described, a plurality of fastening guides, a fastening receiver, work thickness gaging means and means for automatically effecting a relative movement of said guides and receiver to bring a different guide into fastening delivering relation to said receiver as said gaging means registers a variation in the thickness of the work of a predetermined amount, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

4. In a machine of the class described, a double raceway carrying long and short nails, work thickness gaging means and means controlled by an increase or decrease in the thickness of the work gaged of a predetermined amount for bringing said raceway into position to deliver a nail of the length required, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

5. In a machine of the class described, a double raceway carrying long and short nails, work thickness gaging means and means controlled by an increase or decrease in the thickness of the work gaged of a predetermined amount for bringing said raceway into position to deliver a nail of the length required, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, and provision for adjustment to different critical thicknesses, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

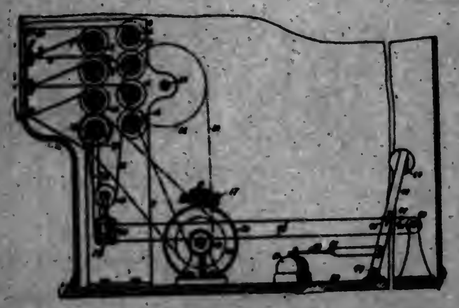
[Claims 6 to 10 not printed in the Gazette.]

1,016,948. TURNSTILE MECHANISM. DUNCAN A. L. MCDONALD, Montreal, Quebec, Canada, assignor to The Pay-As-You-Enter-Car Corporation, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1910. Serial No. 583,984. (Cl. 39—99.)



1. In a device of the class described, a railing supporting two bars, means connecting said railing and bars, so that one of said bars moves in a horizontal plane and the other moves in a vertical plane, and mechanism connecting said bars, so that when the horizontally disposed bar swings through an angle of or about 90° and back, the vertically disposed bar will swing through an angle of or about 180°.

shaft and arranged to be engaged and operated by said pawl, and a trip device for throwing the pawl into and out of position to engage with said pawl arm.



2. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of rollers geared to cause operation of the bands in prescribed relation with respect to each other, a shaft adapted to be driven in different directions, a wheel loose on said shaft and operatively connected with one of said rollers, a pawl arm rigidly mounted on said shaft and having a pawl with means for releasably holding the pawl in a plurality of positions, and a trip device for throwing said pawl into driving relation with said wheel when said shaft is rotating in one direction and for throwing said pawl out of driving relation with said wheel upon rotation of the shaft in the other direction.

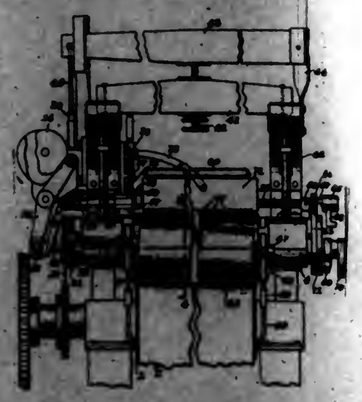
3. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of rollers geared together to cause operation of the bands in prescribed relation with respect to each other, a shaft arranged to be driven in opposite directions, mechanism operated by said shaft when driven in one direction to intermittently advance the bands, and mechanism operated by said shaft when driven in the other direction for returning said bands to a starting position.

4. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, a plurality of sets of rollers with the rollers of each set geared together to operate the bands in prescribed relation with respect to each other, a shaft arranged to be driven in opposite directions, mechanism operated by said shaft when driven in one direction and connected with one set of rollers to intermittently advance the bands, and mechanism operated by said shaft when driven in another direction and connected with the other set of rollers for returning the bands to a starting position.

5. A picture display mechanism comprising in combination, a plurality of bands provided with display matter, rollers geared to each other to cause operation of said bands in prescribed relation with respect to each other, a shaft adapted to be driven in opposite directions, means operated from said rollers for reversing the direction of rotation of said shaft, mechanism operated by said shaft to intermittently advance said bands, and mechanism operated by said shaft for returning said bands to a starting position.

1,016,945. LEATHER-BOARD MACHINE. ROSWELL A. LANCHY, Townsend, Mass., assignor, by mesne assignments, to Leon C. Spaulding, Huntley N. Spaulding, and Roland H. Spaulding, Rochester, N. H., and Emma C. Spaulding and Marion L. Spaulding, Boston, Mass., Copartners doing business under the firm-name and style of J. Spaulding & Sons Company, Rochester, N. H. Filed Jan. 6, 1911. Serial No. 601,198. (Cl. 92—67.)

1. A leatherboard machine, having, in combination, a collecting roll, a knife within the roll, mechanism for actuating the knife, and a roll arranged with its axis at an inclination to the axis of the collecting roll and having a longitudinally concaved periphery for progressively codperating with the edge of the knife in severing the stock, substantially as described.



2. A leatherboard machine, having, in combination, a vertically moving collecting roll, a felt roll on which the collecting roll rests, a knife mounted in the collecting roll, an abutment roll against which the knife cuts, and mechanism for projecting and retracting the knife, substantially as described.

3. A leatherboard machine, having, in combination, a collecting roll, a knife for severing the stock on the roll, a stripper plate, and means for directing a blast of air between the plate and stock, substantially as described.

4. A leatherboard machine, having, in combination, a collecting roll, a stripper plate, and means for directing a blast of air over the surface of the plate toward its active edge, substantially as described.

5. A leatherboard machine, having, in combination, a collecting roll, a knife mounted in the roll, mechanism for actuating the knife, a stripper plate, a cam on the roll for timing the stripper plate, devices for rendering the cam inactive after it has thrown the stripper plate into operation, and means for throwing the stripper plate out of operation and for resetting said devices after the collecting roll has completed a single revolution, substantially as described.

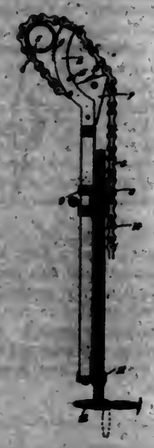
[Claims 6 to 21 not printed in the Gazette.]

1,016,946. COMBINATION PIPE-WRENCH AND PIPE-CUTTER. CLERWOOD LE CLERE LYONS, Willows, Cal. Filed Sept. 19, 1910. Serial No. 582,665. (Cl. 81—206.)

1. A tool as described comprising a handle having a jaw adapted to receive a pipe, a cutting blade in said jaw, a chain secured in said handle member and adapted to extend around said pipe and said jaw, means for securing said chain in fixed position, a protecting blade adapted to be disposed between said chain and said pipe, said blade having a hook adapted to project through one of the links of said chain as described.

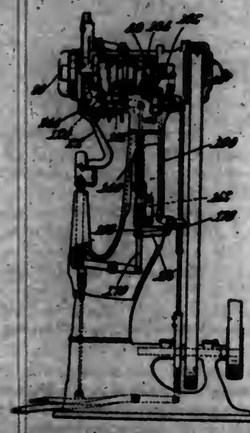
2. A combination wrench and pipe cutter comprising a handle member having a curved arm on its upper end, a serrated edge on the outer curved surface of said arm, a chain secured at the base of said arm and adapted to receive a pipe between it and said serrated edge, a frame projecting at right angles to the inner curved surface of said arm, a rotating cutting blade mounted in said frame said chain being adapted to receive a pipe between itself and said arm and said cutting blade and means for moving said chain as described.

3. A combination wrench and pipe cutter comprising a handle member, an upper curved arm on said handle member, said arm having a longitudinal slot, such slot being closed at the upper end of said arm, a frame projecting at right angles to said arm, a rotating cutting blade mounted in said frame, a rotating guide mounted on said arm in alinement with said rotating cutting blade, a block slidable over said handle member, a hook on said block, a threaded rod journaled in the end of



said handle member and extending through said sliding block and a chain secured at the base of said curved arm and adapted to engage said hook as described.

1,016,947. MACHINE FOR INSERTING FASTENINGS. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 23, 1910. Serial No. 568,487. (Cl. 1—18.)



1. In a machine of the class described, a double raceway having a long nail position and a short nail position, mechanism for shifting said raceway from one position to the other and means for automatically controlling the operation of said mechanism in accordance with variations in the thickness of the work constructed to operate for an increase or decrease of predetermined amount within a determined range of thicknesses greater than that covered by the required amount of increase or decrease.

2. In a machine of the class described, a double raceway having a long nail position and a short nail position, mechanism for shifting said raceway from one position to the other and means for automatically controlling the operation of said mechanism in accordance with variations in the thickness of the work constructed to operate for an increase or decrease of predetermined amount within a determined range of thicknesses greater than that covered by the required amount of increase or decrease, said means having provision for adjustment to different determined ranges of thicknesses.

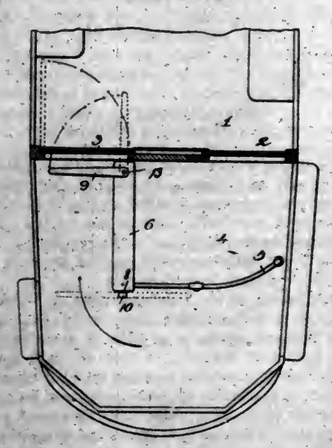
3. In a machine of the class described, a plurality of fastening guides, a fastening receiver, work thickness gaging means and means for automatically effecting a relative movement of said guides and receiver to bring a different guide into fastening delivering relation to said receiver as said gaging means registers a variation in the thickness of the work of a predetermined amount, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

4. In a machine of the class described, a double raceway carrying long and short nails, work thickness gaging means and means controlled by an increase or decrease in the thickness of the work gaged of a predetermined amount for bringing said raceway into position to deliver a nail of the length required, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

5. In a machine of the class described, a double raceway carrying long and short nails, work thickness gaging means and means controlled by an increase or decrease in the thickness of the work gaged of a predetermined amount for bringing said raceway into position to deliver a nail of the length required, said means being constructed to operate only for thicknesses gaged within a limited range upon either side of a predetermined critical thickness, and provision for adjustment to different critical thicknesses, the total range of thicknesses being greater than that covered by the amount of increase or decrease required to produce the said relative movement.

[Claims 6 to 10 not printed in the Gazette.]

1,016,948. TURNSTILE MECHANISM. DUNCAN A. L. MCDONALD, Montreal, Quebec, Canada, assignor to The Pay-As-You-Enter-Car Corporation, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1910. Serial No. 583,984. (Cl. 39—99.)



1. In a device of the class described, a railing supporting two bars, means connecting said railing and bars, so that one of said bars moves in a horizontal plane and the other moves in a vertical plane, and mechanism connecting said bars, so that when the horizontally disposed bar swings through an angle of or about 90° and back, the vertically disposed bar will swing through an angle of or about 180°.

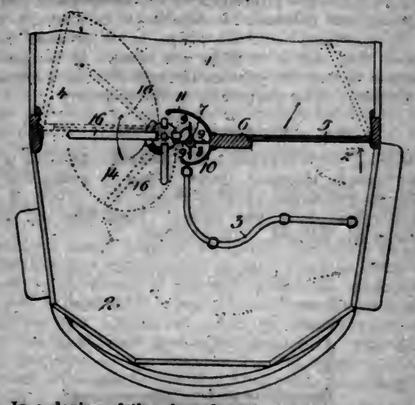
2. In a device of the class described, a railing supporting two bars, one adapted to oscillate through an angle in a horizontal plane and one adapted to rotate in a vertical plane, and mechanism connecting said bars.

3. In a device of the class described, a railing supporting two bars, shafts on which said bars are mounted, intermeshing bevel gears, sprocket chains, sprocket wheels on one of said shafts, sprocket wheels operatively connected with said bevel gears and coöperating with said chains, and pawl and ratchet mechanism connecting said bevel gears and the adjacent sprocket chains so that one of said bars will oscillate and the other will rotate.

4. In a device of the class described, a railing supporting two bars, shafts on said railing fixed to said bars, stud shafts adjacent to one of said bars, sprocket wheels and chains connecting said stud shafts and one of said shafts, bevel gears adjacent to said sprocket wheels on said stud shafts, pawl and ratchet mechanism connecting said last mentioned sprocket wheels and said bevel gears, and an additional bevel gear fixed to the shaft to which one of said arms is fixed and adapted to be driven by either of said first mentioned bevel gears, and means for driving said bars in one direction.

5. In a device of the class described, a railing supporting two bars, shafts to which said bars are secured, means for connecting said shafts so that when one bar is oscillated through an angle in a horizontal plane, the other bar is rotated in a vertical plane.

1,016,949. PAY-AS-YOU-ENTER CAR. DUNCAN A. L. MCDONALD, Montreal, Quebec, Canada, assignor to The Pay-As-You-Enter-Car Corporation, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1910. Serial No. 583,986. (Cl. 39—99.)



1. In a device of the class described, a turnstile having pivoted spokes and means for causing said spokes to be shifted into a horizontal position during a portion of the revolution and permitting said spokes to fall into a vertical position during a portion of the revolution, a spindle, a hub on said spindle, vanes carried by said hub and adapted to be moved by said spokes.

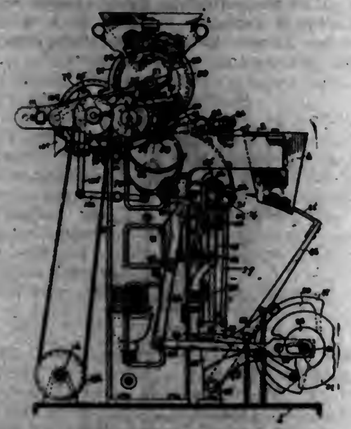
2. In a device of the class described, a turnstile with pivoted spokes and a support near which said spokes are adapted to move during a portion of their movement, a spindle near said turnstile, a hub on said spindle and vanes extending from said hub and adapted to engage said spokes during a portion of their movement, so as to form a substantially air-tight joint therewith and guards adjacent to said vanes, so that when the turnstile is not in use and the adjacent door is closed, air currents will not be permitted to pass adjacent thereto.

1,016,950. ENVELOP. CLEVELAND F. MOULTON, St. Louis, Mo. Filed Jan. 26, 1911. Serial No. 604,802. (Cl. 229—76.)

1. An envelop comprising a body portion and a plurality of flaps, one of the end flaps being elongated and provided with a reinforced projecting point, folded twice over the bottom flap, 6, forming a lock and a projecting tab by withdrawing which the lock may be released, substantially as specified.

2. An envelop constructed for either first or third class mail matter consisting of a body portion, an inturned short end flap an elongated end flap resting over the short end flap, a bottom flap partly secured to the short end flap, a reinforcing strip applied to the pointed end of the elongated end flap and arranged to be folded over the bottom flap, and a sealing flap adapted to be sealed against the outer surface of the third mentioned bottom flap, substantially as specified.

1,016,951. MACHINE FOR MANUFACTURING BRUSHES. JOSEPH F. MUMFORD, Philadelphia, Pa., assignor to Automatic Brush Machinery Company, Wilmington, Del., a Corporation of Delaware. Filed Mar. 1, 1904, Serial No. 196,063. Renewed July 3, 1911. Serial No. 636,745. (Cl. 15—7.)



1. In a brush machine, the combination of two separate holders to contain bristles, bristle assembling mechanism and means for transferring bristles from said holders to said mechanism in alternate succession.

2. In a brush machine, the combination of a holder to contain bristles, means for taking a predetermined quantity of bristles from said holder, a second holder to contain bristles, means for taking a predetermined quantity of bristles from said second holder, and means for assembling the bristles taken from the first named holder around the bristles taken from the second named holder.

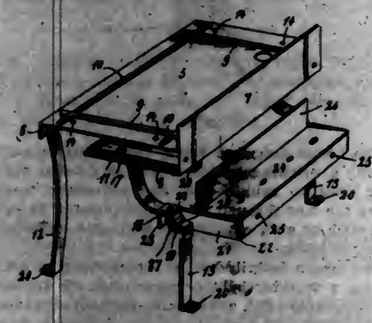
3. In a brush machine, the combination of a holder to contain bristles, means for taking a predetermined quantity of bristles from said holder and arranging them in a thin layer, a second holder to contain bristles, means for transferring a predetermined quantity of bristles from said second holder to said layer of bristles, and means for assembling said layer of bristles around the bristles taken from the second named holder.

4. In a brush machine, the combination of a holder to contain bristles, a transfer device to receive bristles from the holder, means for moving said device to a position beneath the holder, means for dividing the bristles within the holder a slight distance above said device to provide the device with a thin layer of bristles, means for moving the device away from the holder, a second holder to contain bristles, means for transferring a predetermined quantity of bristles from said second holder to said layer of bristles and means for assembling said layer of bristles around the bristles taken from the second named holder.

5. In a brush machine, the combination of a holder to contain bristles, a flexible member to receive bristles from the holder, means for introducing a thin layer of bristles from the holder to said member, a second holder to contain bristles, means for transferring a predetermined quantity of bristles from said second holder to said layer of bristles, and means for actuating the flexible member to assemble said layer of bristles around the bristles taken from the second named holder.

[Claims 6 to 14 not printed in the Gazette.]

1,016,952. DESK. JAMES A. PERK, North Manchester, Ind., assignor of one-half to George Shupp, North Manchester, Ind. Filed June 28, 1911. Serial No. 635,854. (Cl. 155—34.)



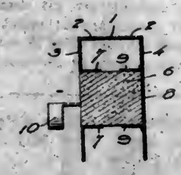
1. The combination of a desk top having an upstanding portion at its forward edge, said upstanding portion terminating in a downward bend below the plane of the top, and thence bent rearwardly under the top to form a shelf, supporting legs, and a seat carried by the front supporting legs.

2. The combination of a desk top, supporting legs therefor, and a seat carried by the front legs, said seat comprising a frame consisting of end pieces and a connection therebetween, and a seat proper comprising a sheet bent over said connection and said sheet being doubled at its rear end and terminating in an upward bend to form a back rest.

3. A desk comprising a top, a shelf beneath the same, and supporting legs, said supporting legs comprising a strip having bends to form the legs and a connecting portion, said connecting portion extending beneath the top and secured thereto, and having a downward bend to the shelf across which it extends to the front edge thereof, and thence around said edge and beneath the shelf.

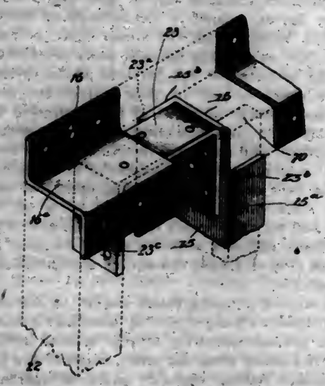
4. A desk comprising a top and a shelf formed of a single piece of sheet metal, said sheet having an upward bend at its forward edge, said upward bend terminating in a downward bend below the plane of the top, and said downward bend having a rearward bend beneath the top to form the shelf, and supporting legs for the desk, said supporting legs comprising a single strip having bends to form the legs and a connecting portion therebetween, said connecting portion extending beneath the top, and downwardly along the downward bend, and thence rearwardly across the top of the shelf and over the front edge thereof and beneath the same, and fastening means passing through the connecting portion of the strip and the parts engaged thereby.

1,016,953. CHALK-HOLDER. LOUIS PELOQUIN, Southbridge, Mass. Filed July 19, 1911. Serial No. 639,389. (Cl. 46—8.)



A chalk-holder, comprising a U-shaped frame, constructed and adapted to be attached to the underside of a billiard table by its transverse member, an annular flange projecting inwardly from each depending leg member, the latter having openings therein, within said flanges, one of said openings being of the same diameter as the inside diameter of said flanges and the other opening being of smaller diameter, and a segmental cue guide secured to the outer side of the leg having the larger opening and located below the latter.

1,016,954. END DOOR-FRAMING FOR CARS. EDWARD POSSON, Chicago, Ill. Filed Mar. 31, 1910. Serial No. 552,718. (Cl. 105—192.)



1. An end framing for a car comprising vertical frame members spaced from the side walls of said car and abutting a horizontal frame member at their upper ends, said horizontal member extending beyond the upper extremities of said vertical members, and having a downwardly projecting flange to serve as a lintel for a door.

2. An end framing for a car comprising vertical frame members spaced from the side walls of said car and abutting a horizontal frame member at their upper ends, said horizontal member extending from side to side of the car, and having a downwardly projecting flange to serve as a lintel for a door.

3. An end framing for cars comprising vertical frame members spaced from the side walls of the car, a transverse frame member overlying the ends of said vertical members at the top and having a downwardly projecting flange to serve as a lintel for a door, and a transverse frame member upon which said vertical members rest at their lower ends.

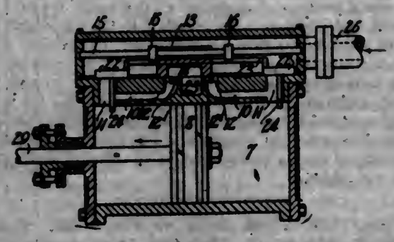
4. An end framing for cars comprising vertical flanged bars spaced from the side walls of the car, vertical bars adjacent the side walls of the car, a flanged bar overlying the upper ends of all of said vertical bars, U-shaped members between said flanged bars and said outer bars joined to both said bars and to the overlying bar for securing said parts together, and metal plates spaced apart and secured to the flanges of said bars on both sides of said bars.

5. An end framing for cars comprising vertical flanged bars spaced from the side walls of the car, vertical bars adjacent the side walls of the car, a flanged bar overlying the upper ends of all of said vertical bars, a transverse

horizontal member underlying the lower ends of said bars, U-shaped members between said flanged bars and said outer bars joined to both said bars and to the overlying bar and underlying member respectively for securing said parts together, and metal plates spaced apart and secured to the flanges of said bars on both sides of said bars.

[Claims 6 to 16 not printed in the Gazette.]

1,016,955. STEAM-ENGINE. GEORJE PSARRAS and NICK BALESOS, Holyoke, Mass. Filed May 12, 1911. Serial No. 626,765. (Cl. 121—4.)



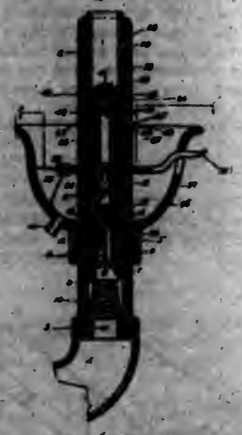
1. In a duplex pumping steam engine, in combination, a pair of cylinders arranged side by side, and a steam chest thereover, having oppositely located sets of inlet and exhaust ports leading from the steam chest to the respective cylinders, and having opposite pairs of apertures communicating between the end portions of the cylinders and the valve chest, a pair of slide valves for alternately opening and closing the ports of the respective cylinders, frames slidable in the steam chest and having members projecting through said apertures into the opposite ends of the cylinders to be alternately engaged by the pistons, one of the frames over one cylinder, having operative connection with the slide valve controlling the ports of the other cylinder, and means between the other of said frames and the relatively opposite slide valve for causing from the movements of such frame, the sliding movement of the latter named valve.

2. In a duplex pumping steam engine, in combination, a pair of cylinders arranged side by side, and a steam chest thereover, having oppositely located sets of inlet and exhaust ports leading from the steam chest to the respective cylinders, and having opposite pairs of apertures communicating between the end portions of the cylinders and the valve chest, a pair of slide valves for alternately opening and closing the ports of the respective cylinders, frames slidable in the steam chest and having members projecting through said apertures into the opposite ends of the cylinders to be alternately engaged by the pistons, one of the frames over one cylinder having transverse members connecting it with the slide valve controlling the ports of the other cylinder, and an intermediately pivoted lever engaging the other frame and the slide valve relatively opposite thereto.

3. In a duplex pumping steam engine, in combination, the cylinders, having steam inlet and exhaust ports opening thereinto, and pistons therein, slide valves for alternately opening and closing the inlet ports and having chambers in the base thereof for alternately opening and closing the exhaust ports, and also having grooves in their top, guide rods above the valves with which the grooved tops of the valves engage, stops on said rods for limiting the movements of the valves, pin protruding downwardly from the steam chest into the cylinders, slidable blocks by which said pins are carried, means for uniting a pair of blocks, and means operated by the united pair of blocks for operating the slide valves, respectively opposite thereto.

4. In a reciprocating steam engine, in combination, a steam chest, a cylinder, and a wall separating them, having exhaust and inlet ports, and also having apertures leading through the said wall from the steam chest to opposite ends of the cylinders, a slide valve for alternately opening and closing the inlet and exhaust ports, a piston in the cylinder and a frame slidable in the steam chest, comprising blocks having closing relations to said apertures and provided with pins extending through said apertures into the opposite ends of the cylinders to be alternately engaged and moved by the piston, said frames operatively co-acting with the slide valve.

1,016,956. VALVE FOR DRINKING-FOUNTAINS. JOSEPH D. RAMSEY, Dorchester, Mass. Filed Jan. 9, 1911. Serial No. 601,565. (Cl. 137—11.)



1. The herein described valve, comprising an outlet for delivering a drinking bubble, a supply conduit for transmitting fluid to said outlet, and automatic means for stopping the flow through said supply conduit to said outlet, operable by such engagement with said outlet as tends to close the latter.

2. The herein described valve, comprising an outlet for delivering a drinking bubble, connections for transmitting the fluid to said outlet, a manually operated valve for opening and closing said connections, and automatic means for positively cutting off the flow of liquid to said outlet operable independently of said valve by engagement with said outlet which tends to close the latter.

3. The herein described valve, comprising a readily movable outlet part for delivering a drinking bubble, a supply conduit for transmitting fluid to said outlet part, and automatic means for stopping the flow through said supply conduit to said outlet, controllable by movement of said outlet part by a closing pressing movement against the outlet.

4. The herein described valve, comprising an outlet for delivering a drinking bubble, mounted to yield in a direction opposite to that of the delivery flow, a supply conduit for transmitting fluid to said outlet, and means operable by slight pressure against said outlet for stopping the flow through said supply conduit.

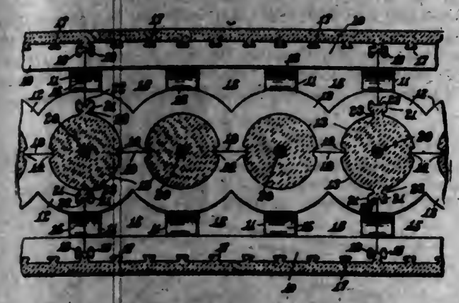
5. The herein described valve, comprising an outlet for delivering a drinking bubble, mounted to yield in a direction opposite to that of the delivery flow, a supply conduit for transmitting fluid to said outlet, means operable by slight pressure against said outlet for stopping the flow through said supply conduit, and manually operable means for controlling the primary flow to the outlet.

[Claims 6 to 18 not printed in the Gazette.]

1,016,957. BUILDING CONSTRUCTION AND BLOCK THEREFOR. WILLIAM H. RICKER, Cambridge, Mass. Filed Dec. 9, 1909. Serial No. 532,266. (Cl. 72—30.)

A building block having a hollow body portion provided on one face with a plurality of semi-cylindrical depressions having inwardly extending beads and adapted to receive columns of cement to which said block is adapted to be locked by said beads extending into said cement columns, the ends of said block being provided with

parti-cylindrical depressions and smaller shouldered depressions near said parti-cylindrical depressions, the walls of said smaller shouldered depressions near said parti-cylindrical depressions being of less depth, whereby when



two blocks are brought together, a channel is formed providing a means for the introduction of the cement into the smaller shouldered depressions, thereby locking the blocks together and to said cement columns.

1,016,958. METHOD OF TRANSPORTING OIL LONG DISTANCES. ALFRED E. ROSSETTE, Sausalito, and ARTHUR L. EMERY, Palo Alto, Cal. Filed Nov. 22, 1910. Serial No. 593,787. (Cl. 137—78.)

1. In a method of transporting oil through long pipe lines, forcing the oil into the pipe line at a plurality of distant stations, and suitably heating the oil transported at a plurality of points between the stations by means of electric power generated at one of said stations, substantially as described.

2. In a method of transporting oil through long pipe lines, forcing the oil into said pipe line at a plurality of different pumping stations suitable distances apart and heating the oil so transported at a plurality of different places between the pumping stations from electric power generated at a central station, substantially as described.

3. In a method of transporting oil through long pipe lines, forcing the oil into said pipe line at a number of successive stations suitable distances apart, and electrically heating the oil at a plurality of different places between the successive pumping stations, substantially as described.

4. In a method of transporting oil through long pipe lines, forcing the oil into said pipe line at suitable successive stations, and electrically heating the oil at a plurality of successive places between the pumping stations from current generated at one of said stations and controlled at a number of places, substantially as described.

5. In a method of transporting oil through long pipe lines, pumping the oil into said pipe line at a number of distant stations, supplying power to each of said pumping stations from a central station, and heating the oil at a number of points between successive stations from electric power generated at the central station, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,016,959. DOMESTIC WATER-CIRCULATING SYSTEM. JOHN P. B. SADTLER, Baltimore, Md. Filed Feb. 24, 1906. Serial No. 302,729. (Cl. 122—13.)

1. In a domestic stand boiler for circulating hot and cold water, an insulating partition within the boiler and dividing the boiler into an upper water chamber and a lower water heating chamber, means for supplying water to said water heating chamber, and water conducting means between the said chambers.

2. In a stand boiler for circulating hot and cold water, an insulating partition dividing the boiler into an upper water chamber and a lower water heating chamber of less capacity than the upper chamber, water conducting means between said chambers, and means for supplying water to said water heating chamber.

3. The combination, with a stand boiler, of an insulating partition forming a supplemental bottom for the boiler with a water chamber between the supplemental bottom and the top of the boiler and a water heating chamber between the supplemental bottom and the bottom of the boiler, a water pipe connecting the lower chamber with the upper portion of the upper chamber, and means for supplying water to said water heating chamber.

4. In a water circulating system, a stand boiler, an insulating partition dividing the boiler into an upper and a lower compartment and preventing convection currents being set up in the upper compartment from a source of heat applied to the lower compartment, means for supplying water to the boiler, means forming communication between the lower compartment and the lower portion of the upper compartment, means forming communication between the lower compartment and the upper portion of the upper compartment, and means for heating the lower compartment.

5. In a water circulating system, a stand boiler, a partition provided with a vacuum chamber dividing the boiler into an upper and a lower compartment and preventing convection currents being set up in the upper compartment from a source of heat applied to the lower compartment, means for supplying water to the boiler, a pipe connecting the lower compartment with the lower portion of the upper compartment upon the outside of the boiler, and a heater under the lower compartment.

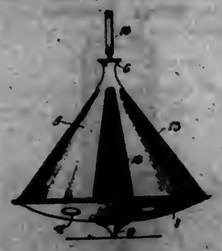
1,016,960. TOP. CHARLES H. SAPPER, Newburgh, N. Y. Filed Sept. 20, 1910. Serial No. 582,854. (Cl. 46—32.)

1. In a top and outer hollow member with an opening through its outer wall, a decorated member disposed therein, the members being adapted to rotate relatively to each other, and a member extending from one of the first-two-mentioned members, for retarding its rotation.

2. In a top an outer hollow member with an opening in its wall and having a peg and bearings, an inner decorated member having a spindle journaled in the said bearings, and wings on the inner member adapted to retard its rotation relatively to the outer member.

3. In a top, a hollow member with an opening through its outer wall, a decorated member disposed therein, the

members being adapted to rotate relatively to each other, a spindle secured to the inner member, and a member secured to the spindle adapted to retard the rotation of the inner member.



4. In a top an outer member with an opening in its wall, and having a peg, a collar and bearings, an inner decorated member having a spindle journaled in the said bearings, and a wing, and a cord secured to the collar.

5. In a top, an outer hollow member with openings in its wall, and having a peg and bearings at its top and bottom, an inner member decorated having a spindle journaled in the said bearings, the outer wall of the inner member being disposed substantially parallel with the inner wall of the outer member, and wings on the inner member, adapted to retard its rotation relatively to the outer member.

[Claims 6 to 14 not printed in the Gazette.]

1,016,961. HEEL-CLAMP. HENRY G. SCHMITT, Elmira, N. Y. Filed July 22, 1911. Serial No. 639,878. (Cl. 36—64.)

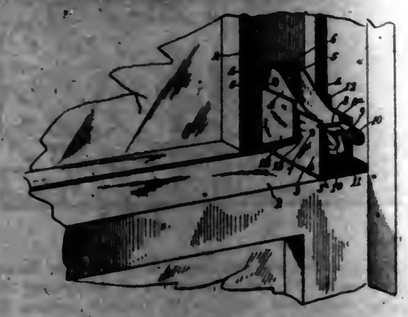
1. A removable anti-slipping heel device comprising a sheet metal heel plate having downwardly extending integral tread lugs, and having also upwardly extending fixed clamping lugs at one end, coöperating clamping lugs at the opposite end, the latter lugs being movable longitudinally of the plate and also having a slight up and down swinging movement around an edge of said heel plate, a crank shaft having horisontal bearings on said plate, a connection between the crank shaft and the movable clamping lugs, and a handle for the shaft swinging in a vertical plane and giving movement to the movable clamping fingers.

2. A removable anti-slipping heel device comprising a heel plate having downwardly extending tread lugs and having fixed upwardly extending clamping lugs at one end, coöperating clamping lugs at the opposite end, the latter lugs being movable longitudinally of the plate and also having a slight swinging movement around an edge of said heel plate, a crank shaft having horisontal bearings on said plate, a connection between the crank shaft and the movable clamping lugs, and a handle for the shaft swinging in a vertical plane and giving movement to the movable clamping fingers, the movable fingers being guided between and by the lugs at one end of the plate.

3. A removable anti-slipping heel plate comprising tread lugs and fixed clamping lugs, combined with coöperating movable clamping lugs, a crank shaft and crank for moving the latter lugs, and a handle for operating the crank shaft, said handle being in the form of a bail and connected to both ends of the shaft.

4. A heel plate having fixed clamping fingers, movable clamping fingers, a crank shaft in bearings on the plate, a crank, and a handle for moving the shaft, crank, and movable fingers, said crank and handle extending on the same side of the bearings and adapted to swing from and toward said plate, as set forth.

1,016,962. AUTOMATIC WINDOW-LOCK. JAMES OTIS SCHURTZ, Grand Rapids, Mich. Filed Oct. 28, 1910. Serial No. 589,648. (Cl. 16—30.)



1. A window lock, comprising a housing having parallel sides provided with open end slots, a stop slidable in the slots, and projecting therefrom, a rivet connecting the sides of the housing, a spring mounted on the rivet and engaging the stop and a pawl pivoted on the rivet.

2. A window lock, comprising a housing having vertical parallel sides spaced apart and provided with open end slots, a stop having a bottom slidable in the slots and sides extending upward and embracing the housing, a spring engaging the stop to project the same outward from the housing, a pawl pivoted in the housing and partially inclosed by the stop, shoulders on the pawl, and a stop in the housing to engage the shoulder and limit the movement of the pawl.

1,016,963. SAW-CLAMP. CHRISTOPHER A. SEIBERT, Sandyville, Ohio. Filed Mar. 11. 1910. Serial No. 548,681. (Cl. 76—78.)

1. The combination with a saw clamp including a supporting bracket having spaced upstanding members adapted to embrace a saw, of an arm extending laterally from the bracket and provided with spaced depending lugs engaging the opposite walls of said bracket between the upstanding members thereof, a support mounted for vertical movement in the free end of the arm and having its upper end provided with a seat for the saw handle, and means extending through the arm and engaging the adjacent end of the support for holding the latter in different positions of vertical adjustment.

2. A saw clamp including a substantially U-shaped bracket having arms of different lengths, the long arm of said bracket being provided with laterally extending ears for attachment to a support and having its upper end reduced to form a vertically disposed stud defining an inwardly extending shoulder, a clamping member having its intermediate portion pivotally mounted on the short arm of the bracket and having its upper end reduced to form a stud defining an inwardly extending shoulder arranged diametrically opposite the shoulder on the long arm, relatively stationary and movable clamping jaws having openings formed therein for the reception of the studs of the long arm of the bracket and clamping member, respectively, and having their lower faces resting on the adjacent shoulders and their upper faces disposed flush with the free ends of said studs, and means extending through the lower end of the clamping member and engaging the adjacent face of the short arm of the bracket for forcing the movable clamping jaw into engagement with a saw.

1,016,964. MAGNETIC ROTARY METER. HOWARD A. SELAH, Philadelphia, Pa., assignor, by direct and mesne assignments, to Cyrus N. Anderson, trustee, Philadelphia, Pa. Filed Nov. 18, 1909. Serial No. 528,721. (Cl. 73—37.)

1. In a rotary gas meter, the combination of a turbine member actuated by the flow of gas therethrough, registering mechanism actuated by the said turbine member, and a magnetic device operating as a retarder upon the said turbine member.

2. In a rotary gas meter, the combination of a disk having openings therethrough and the said disk having inclined portions adjacent to the said openings upon which the gas or other fluid passing through the meter impinges and thereby causes rotation of the said disk, mechanism having operative connection with the said disk for indicating the quantity of gas or other fluid which passes through the said meter, and a magnetic device associated with the said disk for retarding the movement thereof.

3. In a rotary meter, the combination of a rotary gas member and magnetic means, the said member having a portion which projects into the field of the said magnetic means, and also having a portion provided with openings and with hoods extending over said openings against which the gas impinges to cause rotation of said member.

4. In a rotary gas meter, the combination of a magnet having its poles located adjacent to each other, a rotary disk having a flange which projects into the magnetic field between the said poles and also having hooded openings and the rotation of the said disk being caused by the impingement of gas upon the hoods, the said magnet and the said disk being relatively adjustable, and mechanism having operative connection with the said disk whereby the rotation of the latter causes operation of the said mechanism to indicate the quantity of gas or other fluid which passes through the meter.

5. In a rotary gas meter, the combination of an external chamber, an internal chamber, a rotary disk located above the internal chamber, the said disk having means whereby the passage of a gas or similar fluid through the said meter occasions rotation of the said disk, and the said disk having a flange, a magnet into the field of which the said flange projects, a shaft to which the said rotary disk is secured, and mechanism actuated by said shaft to indicate the quantity of gas or similar fluid which passes through the said meter.

[Claims 6 and 7 not printed in the Gazette.]

1,016,965. UNIVERSAL SHEAVE. JOHN FRANCIS SHEA, Tampa, Fla. Filed Mar. 10, 1911. Serial No. 613,579. (Cl. 57—34.)

1. The combination of a peripherally grooved sheave having a swiveled support, a casing for said sheave mounted to swivel therewith and comprising flat circular side walls lying adjacent the side walls of said sheave and joined by an internally concave peripheral wall forming with the sheave groove a substantially circular guideway, in cross section, around said sheave, said concave peripheral wall bulging laterally and flaring upwardly to form opposed substantially semi-cylindrical openings projecting laterally beyond the sides of the sheave, substantially as described.

2. The combination of a U-shaped strap swiveled to a suitable support, a peripherally grooved sheave freely journaled between the walls of said U-shaped strap, a casing for said sheave comprising side walls disposed within said U-shaped strap and incasing the side faces of said sheave, said walls comprising flat circular disks joined by an internally concave peripheral wall coöperating with the peripherally grooved sheave to form a guideway of circular cross-section, said side walls at their upper ends bulging lateraly and flaring upwardly to form a freeway to guide and prevent the fouling of a cable when rove therearound, substantialy as described.

3. The combination of a peripherally grooved sheave having a swiveled support, and a casing for said sheave mounted to swivel therewith and comprising flat circular side members lying adjacent the side walls of said sheave, and of a diameter slightly greater than the diameter of the sheave, said casing having an internally concave peripheral wall, the lower portion of which forms a semi-cylindrical continuation of said ridge and the upper portion of which extends laterally and inwardly of said ridge to form laterally bulging and upwardly flaring guideways terminating at opposite peripheral sides of the sheave in openings or freeways of semi-cylindrical contour and of greater diameter than the lower peripheral wall, substantially as described.

4. The combination of a stationary support, a sheave support having a sheave journaled therein, a headed swivel pin between said sheave support and said stationary support, a casing for said sheave, comprising flat side walls and an internally concave peripheral wall bulging laterally and flaring upwardly to form enlarged semi-cylindrical openings at the top of the sheave, the lower peripheral wall of said casing being cut away to form a space for the head of said swivel pin, and a ball bearing between said sheave support and said swivel head, substantially as described.

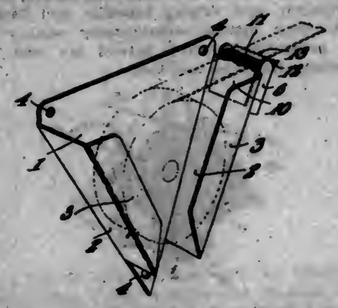
5. The combination of a stationary support, a sheave having a support swiveled to said stationary support, a casing for said sheave mounted to swivel with said sheave and its support, means carried by said casing forming the upper raceway of a ball bearing, said stationary support being provided with a complementary raceway for said ball bearing, balls between said raceways for supporting the weight of said sheave casing and swiveled support, and a ball bearing between said swiveled support and its swivel for taking the upward thrust on said sheave, substantially as described.

[Claim 6 not printed in the Gazette.]

1,016,966. TAPE HOLDER AND MOISTENER. FRANK G. SHUMAN, Chicago, Ill. Filed Feb. 13, 1911. Serial No. 608,282. (Cl. 91—14.)

1. In combination with a holder having synclinal side portions, a moistener formed from a blank of sheet material having a back portion a flap portion substantially parallel with the back portion, side portions with ends

which project above the back portion, a bottom portion, and a front portion the bottom portion and front portion being secured at their edges to the side portion and a cutting blade mounted upon the upper part of the front portion of the said moistener.



2. In combination with a holder provided with syncline sides, a moistener adapted to be applied to one of the sides of the said holder and consisting of the blank of sheet material formed with a back portion and a flap adapted to receive between them the edge portion of one of the sides of the holder said moistener also having side portions with ends which project above the back portion, a bottom portion and a front portion the edges of the bottom and front portion being secured to the edges of the said side portion the front portion being provided with an inwardly disposed flange, and absorbent material contained within the moistener and a cutting blade applied to the front portion of the moistener.

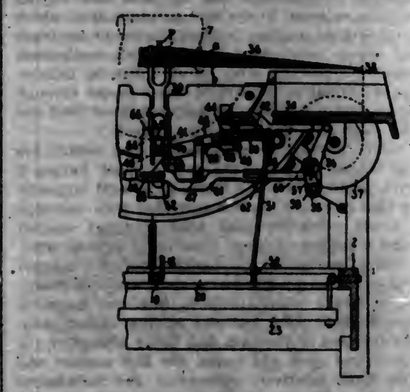
1,016,967. PRESSURE-VALVE. SIDNEY W. SINSHEIMER, Swink, Colo. Filed July 26, 1910. Serial No. 573,869. (Cl. 137—47.)

1. A device of the class described, comprising a casing, a valve piece located within the casing, a valve stem protruding coaxially through the casing, the said valve stem having a threaded portion beyond the valve piece, the forward side of the valve piece having a recess surrounding the threaded portion of the stem and tapering inwardly to the said stem, a gasket of counterpart shape threaded on the valve stem and adapted to fit within the said recess, and a locking nut arranged to engage the gasket, the casing being provided with a circumferential flange forming a valve seat and located forward of the valve piece, the inner side of the valve piece being concave, the concave surface of the valve piece being adapted to be acted upon by forward pressure for maintaining the forward side of the valve piece in engagement with the circumferential flange, and exteriorly located means adapted to act upon the protruding portion of the valve stem for opening the valve against forward pressure, substantially as described.

2. A device of the class described, comprising a casing, a valve piece located within the casing, a valve stem protruding through the casing, the said valve stem having a threaded portion beyond the valve piece, the forward side of the valve piece having a recess surrounding the threaded portion of the stem and tapering inwardly to the said stem, a gasket of counterpart shape threaded on the valve stem and adapted to fit within the said recess, and a locking nut arranged to engage the gasket, the casing being provided with a circumferential flange tapering forwardly on its inner side from the inner periphery thereof, the said flange being arranged forward of the valve piece and forming a valve seat, the valve piece being arranged to be acted upon by forward pressure for maintaining the valve piece in engagement with the seat, substantially as described.

3. A device of the class described, comprising a casing, a valve piece located within the casing, a valve stem protruding forwardly through the casing, the forward side of the valve piece having a recess surrounding the stem and tapering inwardly to the said stem, a gasket of counterpart shape surrounding the valve stem and arranged within the said recess, the casing being provided with a circumferential flange tapering forwardly on its inner side from the inner periphery thereof, the said flange being arranged forward of the valve piece for forming a valve seat, the valve piece being arranged to be acted upon by forward pressure for maintaining the gasket of the valve piece in engagement with the seat, substantially as described.

1,016,968. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 26, 1911. Serial No. 604,779. (Cl. 197—154.)



1. In a typewriting machine, the combination of a ribbon vibrator, actuating devices therefor including an operating lever, and connections between the vibrator and the operating lever, said connections comprising a pin on the vibrator and a spring finger on the operating lever engaging said pin and operative to permit the operating lever to advance beyond the ribbon vibrator.

2. In a typewriting machine, the combination of a ribbon vibrator, actuating devices therefor including an operating lever, and a pin and slot connection between the vibrator and the operating lever, the sides of the slot normally closely embracing the pin and one of the sides of the slot being yielding.

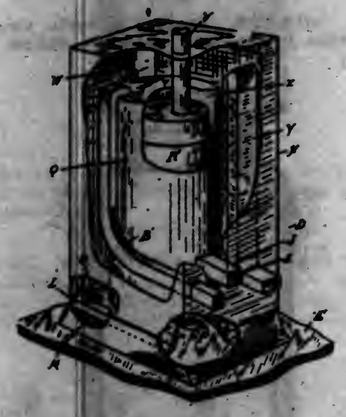
3. In a typewriting machine, the combination of a ribbon vibrator, a stop device therefor, actuating devices for said vibrator including a lever, and connections between said lever and said vibrator, said connections comprising a pin on the vibrator, and a hair-pin spring on said lever.

4. In a typewriting machine, the combination of a ribbon vibrator, a stop device therefor, actuating devices for said vibrator including a lever, and connections between said lever and said vibrator, said connections comprising a pin on the vibrator, and a hair-pin spring on said lever, said pin coacting with said stop device.

5. In a typewriting machine, the combination of a ribbon vibrator, a stop therefor, actuating devices for said vibrator including a lever, connections between said lever and said vibrator comprising a pin on the vibrator and a hair-pin spring on said lever, and a U-shaped housing for said spring secured to said operating lever.

[Claims 6 to 10 not printed in the Gazette.]

1,016,969. HEATING APPARATUS. ELMER J. SMITH, Detroit, Mich., assignor to Peter Smith Heater Company, Detroit, Mich., a Copartnership. Filed Mar. 13, 1909. Serial No. 483,242. (Cl. 237—3.)

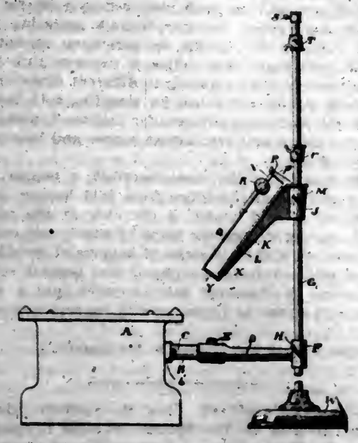


1. A car heater of the character described comprising a heater, a casing surrounding said heater spaced from the top and sides thereof to form a substantially closed heating chamber therebetween, a second casing surrounding said first mentioned casing and spaced from the top and sides thereof to provide a preliminary heating chamber, said last named chamber being provided with an inlet in its lower portion for fresh air, means for positively withdrawing the preliminarily heated air from the upper portion of said preliminary heating chamber and for forcing said air downwardly through the first mentioned heating chamber, and an outlet from the bottom portion of the latter leading beyond the preliminary heating chamber and adapted to discharge into a conduit therewithout at a point adjacent to the floor of the car.

2. A car heater of the character described comprising a heater, a casing surrounding said heater and spaced from the top and sides thereof to form a substantially closed heating chamber therebetween, a second casing surrounding said first mentioned casing and spaced from the top and sides thereof to provide a preliminary heating chamber, said last named chamber being provided with an inlet in its lower portion for fresh air, means for positively withdrawing the preliminarily heated air from the upper portion of said preliminary heating chamber and for forcing said air downwardly through the first mentioned heating chamber said first mentioned heating chamber having an outlet for heated air in the lower portion thereof.

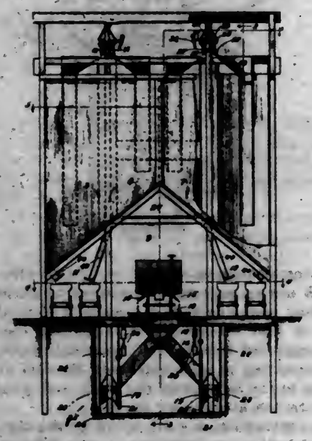
1,016,970. BOOK-HOLDER. ROBERT HENRY SMITH, Boston, Mass. Filed Feb. 17, 1911. Serial No. 609,252. (Cl. 45—82.)

In a book holder, the combination of a supporting member; a book support mounted thereon; a weighted holder plate pivoted to the book support and adapted to bear down upon a book held by the support to hold the leaves



thereof open; and a transparent cover sheet carried by the holder plate and adapted to protect a book.

1,016,971. SORTING AND STORING DEVICE. JOHN M. SNEAD, Chicago, Ill., assignor to Gravity Coal Bin Company, a Corporation of Maine. Filed June 1, 1909. Serial No. 499,407. (Cl. 214—12.)



1. In a device of the class described, a plurality of bins arranged in two adjacent tiers, a hopper above each transverse pair of bins, gates in said hoppers communicating with the adjacent bins, a conveyer between adjacent hoppers, and automatic means for discharging said conveyer into either of the adjacent hoppers.

2. In a device of the class described, a plurality of bins arranged in two adjacent tiers, a hopper above each transverse pair of bins, gates in said hoppers communicating with the adjacent bins, conveyers between adjacent hoppers, automatic means for discharging each conveyer into either of the adjacent hoppers, a hopper at the receiving end of said conveyers, and means for discharging said last-named hopper into either of said conveyers.

3. In a device of the class described, a plurality of bins, hoppers above said bins, gates in said hoppers leading to a plurality of bins, a hopper beneath said bins, said hopper being provided with a plurality of outlets, conveyers extending from said outlets to a point above said upper hoppers, and automatic means for discharging said conveyers into selected hoppers.

4. In a device of the class described, a hopper, a two-way gate at the base of said hopper, chutes leading in dif-

jecting downward from the under surface of said projecting part providing an annular chamber between said flange

an intervening annular channel, a basket receiving the

car entering the block, a shunt around said switch, the second relay being adapted to close said shunt and a

4. In a device of the class described, a hopper, a two-way gate at the base of said hopper, chutes leading in different directions from said gate, conveyer shafts at the ends of said chutes, conveyer buckets operating in said shafts, gates in each bucket, hoppers upon opposite sides of said shaft above said chutes, a two-way gate in each of said hoppers, chutes leading in different directions from said gates, power mechanism for elevating said buckets in said shafts, and a compartment for said mechanism having a position above said first named hopper and between said conveyer shafts.

5. In a device of the class described, a hopper, chutes leading in different directions from said hopper, gates at the outlets of said chutes, a conveyer at the outlet of each chute, means upon the gates by which said conveyers may actuate said gates, a series of hoppers at the discharge point of said conveyers, a series of bins beneath said hoppers, means to discharge said conveyer into a selected hopper, and means to discharge said hoppers into selected bins.

[Claims 6 to 17 not printed in the Gazette.]

1,016,972. SEPARATOR. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed June 27, 1910. Serial No. 569,020. (Cl. 230—11.)

1. In combination, a shell, a cap fitting the top of said shell and having an extension projecting beyond the side of the shell upon one side, a receptacle secured to the underside of said extension and depending therefrom and wholly supported thereby, said receptacle having an inlet, a communicating passage extending through said cap and extension to the interior of the shell, and means for forcing a current of air through the shell.

2. In combination, a shell, a cap fitting the top of said shell and having an extension at one side projecting beyond the side of the shell, a ridge located upon the upper surface of said cap and extension and having a communicating passage to the interior of the shell and underside of said extension, a receptacle secured to the under surface of the extension and depending therefrom and wholly supported thereby, said receptacle having an inlet opening, and means for creating a current of air in the shell.

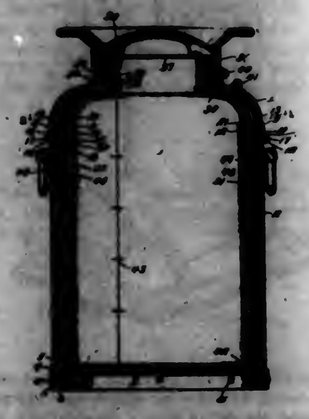
3. In combination, a shell, a cap fitting said shell and having an extension at one side edge projecting beyond the side of the shell and with a depending wall therefrom, said wall having an inlet opening, a receptacle secured to and wholly supported by said depending wall, a communicating passage extending from the under surface of the cap to the under surface of the extension, and means for forcing a current of air through the shell.

4. In combination, a shell, a cap fitting said shell and having an integral extension at one side edge overhanging the side of the shell and with a depending wall, a receptacle removably secured to said depending wall and wholly supported thereby, means for holding the receptacle in place, said wall having an inlet opening, a flange projecting downward from the under surface of said projecting part providing an annular chamber between said flange and said depending wall and with an opening through the cap within said flange, a communicating passage between said opening and the interior of the shell, and means for creating a current of air in the shell.

5. In combination, a shell composed of rings superimposed, the upper ring constituting a cap to close the top of the shell and having an extension at one side projecting beyond the side of the shell, and with a ridge extending across the upper surface of said cap, a receptacle removably secured to the under side of said cap at one side of the shell and wholly supported by said cap, and with a communicating passage between the underside of the projecting part and the under surface of the cap overlying the shell, and means for creating a current of air in the shell.

[Claim 6 not printed in the Gazette.]

1,016,973. MILK-CAN. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 4, 1911. Serial No. 612,206. (Cl. 215—3.)



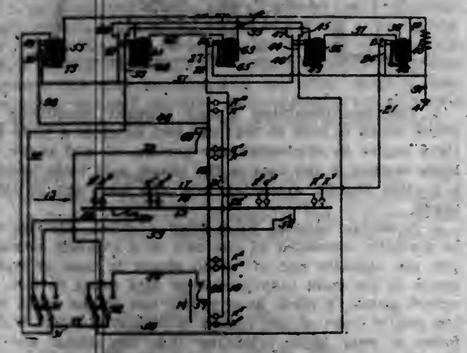
1. A can comprising upper and lower sections, a recessed flange on the lower section, a flange depending from the upper section and embracing the flange of the lower section, and attaching devices having their lower portions disposed above the plane of the lower edge of the flange of the upper section of the can and adapted to be extended through the recesses in the flange of the upper section, the said upper and lower sections of the can being adapted for relative rotation to permit the lower portions of the attaching devices to be secured beneath the flange of the said lower section.

2. A can comprising upper and lower sections, a recessed flange on the lower section, a flange depending from the upper section and embracing the flange of the lower section, attaching devices having their lower portions disposed above the plane of the lower edge of the flange of the upper section of the can and adapted to be extended through the recesses in the flange of the upper section, the said upper and lower sections of the can being adapted for relative rotation to permit the lower portions of the attaching devices to be secured beneath the flange of the said lower section, and means for holding the attaching devices in their adjusted positions.

1,016,974. ICE-CREAM-STORAGE CAN. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 8, 1911. Serial No. 613,039. (Cl. 215—3.)

An ice cream can comprising a jacket having a portion at its upper end of increased diameter, the liner removably fitted in the jacket and having a portion at its upper end of decreased diameter, the upper portions of the jacket and liner respectively being spaced to form an intervening annular channel, a basket receiving the liner and having ear portions disposed in the channel, a bail supported by the ears and provided with an intermediate looped portion extending above the plane of the top of the liner, a cover for the liner, and a cover for the jacket.

1,016,975. BLOCK-SIGNAL SYSTEM FOR ELECTRIC RAILWAYS. SAMUEL S. STOLP, Chicago, Ill., assignor of one-half to William J. C. Kenyon, Chicago, Ill. Filed Sept. 4, 1908. Serial No. 451,638. (Cl. 246—21.)



1. A railway block signal system to protect two intersecting tracks in the neighborhood of their intersection comprising warning signals adjacent to both tracks, a permissive signal adjacent to one track between the warning signal and the intersection point, mechanism located between that warning signal and the permissive signal that are adjacent to the same track, said mechanism being adapted to be actuated by a car approaching the intersection, apparatus to energize all said signals simultaneously, means to render said apparatus operative, and operating connections from said mechanism to said means.

2. In a railway block signal system, a signal actuating circuit, two relays, one of them being adapted to close said circuit, another circuit including both relays in series and having a switch adapted to be closed by a car entering the block and a shunt around said switch, the second relay being adapted to close said shunt.

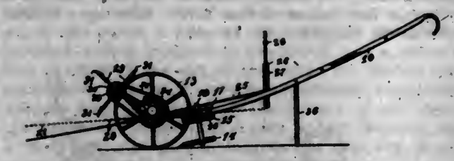
3. In a railway block signal system, a signal actuating circuit, two relays, one of them being adapted to close said circuit, another circuit including both relays in series and having a switch adapted to be closed by a car entering the block, a shunt around said switch, the second relay being adapted to close said shunt, and a circuit including a third relay adapted to open said shunt, said last named circuit having a switch adapted to be closed by a car leaving the block.

4. A railway block signal system to protect two intersecting tracks in the neighborhood of their intersection, comprising a red lamp adjacent to one track, a green lamp between said red lamp and the point of intersection, another red lamp adjacent to the intersecting track, apparatus to energize said signal lamps, and means located between the first mentioned red lamp and the green lamp to be actuated by a car to govern the apparatus to set all said lamps.

5. A railway block signal system to protect two intersecting tracks, comprising two signal circuits, each having branches in multiple along the two intersecting tracks, switches adapted to be actuated by cars approaching the intersection along the respective tracks, means actuated by said switches to close respective signal circuits, permissive signals adjacent to each track, warning signals adjacent to each track, each said circuit including a permissive signal adjacent to one track and a warning signal adjacent to the other track.

[Claims 6 to 14 not printed in the Gazette.]

1,016,976. VEGETABLE-HARVESTER. MARTIN STOLTS, South Dayton, N. Y. Filed Feb. 9, 1911. Serial No. 607,532. (Cl. 55—107.)



1. In a vegetable harvester, a V-shaped knife, a reel mounted on said knife and means for turning said reel, knives on said reel to cut in conjunction with said V-shaped knife, and a ratchet for raising and lowering the tines of said V-shaped knife.

2. In a vegetable harvester, a carriage and means for propelling the same, a V-shaped knife supported on said carriage, a ratchet for adjusting said knife, a frame mounted on said knife, a reel-shaped knife revolubly mounted on said frame to cut in conjunction with said V-shaped knife, and sprocket chains geared to said carriage for turning said reel.

3. In a vegetable harvester, a carriage comprising an axle and wheels revolubly mounted on said axle, handles attached to said axle for propelling said carriage, a V-shaped knife adjustably supported on said axle and extending in front of said axle, a ratchet for adjusting said V-shaped knife, a reel revolubly mounted on said V-shaped knife, knives on said reel cutting in conjunction with said V-shaped knife when rotated, and sprocket chains and wheels connecting said reel and carriage wheels to rotate said reel when said carriage is moved forward, substantially as and for the purpose specified.

4. In a vegetable harvester, a carriage, means for propelling the same, a V-shaped knife supported on said carriage, a ratchet for adjusting said knife, a frame mounted on said knife, a reel revolubly mounted on said frame, knives on said reel cutting in conjunction with said V-shaped knife when rotated, and means on said carriage for digging the vegetables.

5. In a vegetable harvester, a carriage comprising an axle and wheels revolubly mounted on said axle, handles attached to said axle for propelling said carriage, a V-shaped knife adjustably supported on said axle and extending in front of said axle, a ratchet for adjusting the angle of said V-shaped knife, a reel revolubly mounted on said V-shaped knife, knives on said reel cutting in conjunction with said V-shaped knife when rotated, sprocket chains and wheels connecting said reel and car-

riage wheels to rotate said reel when said carriage is moved forward, and shovels adjustably mounted on said handles as to their angle of inclination for digging the vegetables, substantially as and for the purpose specified.

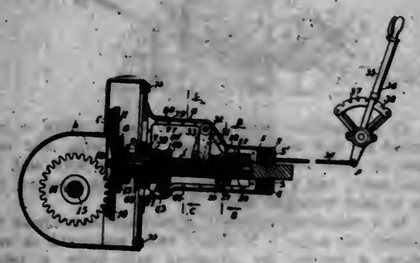
1,016,977. MANUFACTURE OF CARBAMATES OF TERTIARY ALCOHOLS. HEINRICH THROM, Frankfort-on-the-Main, EDUARD SPRÖNGERTS, Biebrich, and CARL FREUND, Frankfort-on-the-Main, Germany, assignors to Vereinigte Chininfabriken Zimmer & Co., G. M. B. H., Frankfort-on-the-Main, Germany, a Firm of Germany. Filed July 10, 1911. Serial No. 637,781. (Cl. 23—24.)

1. The herein described process of the production of carbamac acid esters of tertiary alcohols which consists in causing ureachlorid to react on tertiary alcohols in the presence of a substance which is able to bind hydrochloric acid.

2. Carbamic acid esters of tertiary alcohols obtained by causing ureachlorid to react on a tertiary alcohol in the presence of a substance able to bind hydrochloric acid.

3. Carbamic acid ester of tertiary amyl alcohol obtained by causing ureachlorid to react on tertiary amyl alcohol in the presence of a substance able to bind hydrochloric acid.

1,016,978. MECHANICAL MOVEMENT. WILLARD IRVING TWOMBLY, New York, N. Y., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed Apr. 7, 1910. Serial No. 553,948. (Cl. 74—36.)



1. In a power transmission mechanism, a driven element, and a continuously rotating element to transmit variable forward and reverse rotary motions to the driven element, comprising a shaft having a fixed axis and carrying a segmental wheel having a series of semi-circular threads on the face of each wheel segment, said segments adjustable laterally of each other to change the centers of the semi-circular threads relative to the axis of the shaft to transform said threads either into right-hand or left-hand multiple threaded spirals, the driven element comprising a shaft having a worm wheel connected thereto with which the threads on the wheel segments mesh.

2. In a power transmission mechanism, the combination of a driving shaft, a wheel connected thereto having a series of concentric semi-circular threads thereon, so arranged that they can be thrown off center to transform them into spirals, a driven shaft, and a worm wheel connected to the driven shaft and with which the threads on the driving shaft wheel mesh.

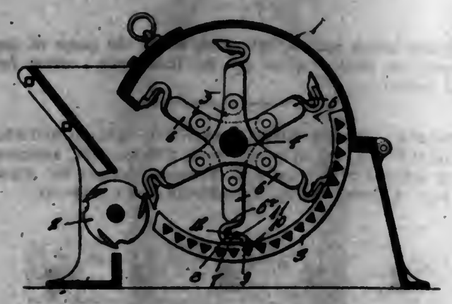
3. In a power transmission mechanism, a drive shaft, a power transmission wheel connected to and rotatable with said shaft, comprising a pair of segments adjustable laterally of each other and transversely of the axis of the driving shaft, each segment having a series of semi-circular threads, a driven shaft, and a worm wheel connected thereto with which the threads on the segmental wheel mesh to transmit rotary motion from the drive shaft to the driven shaft.

4. In a power transmission mechanism, a driving shaft, a segmental wheel having a series of concentric circles of threads connected to said shaft to rotate therewith, the segments of the wheel having sliding movements relatively to and laterally of each other and transversely of its axis, a driven shaft, and a worm wheel connected thereto with which the threads on the segmental wheel mesh to transmit rotary motion to the driven shaft.

5. In a power transmission mechanism, a driving shaft, a wheel comprising a pair of semi-circular segments having a series of concentric circles of threads, said wheel segments connected to said shaft to rotate therewith and to have sliding movement laterally of each other and transversely of the axis of the driving shaft, a driven shaft, a worm wheel connected thereto with which the threads on the segmental wheel mesh, and means to throw the segmental wheel into and out of mesh with the driven shaft worm.

[Claims 6 to 30 not printed in the Gazette.]

1,016,979. SLICING-HAMMER. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 28, 1911. Serial No. 646,533. (Cl. 83—11.)



1. The hereindescribed slicing hammer comprising a shank which is bent so that one end occupies a plane at right angles to the main body portion of said shank, a blade secured to the bent in the shank, said blade having a portion thereof extending over the bent end of said shank.

2. A slicing hammer comprising a shank, adapted to be pivotally connected at one end to a rotating member and the opposite end of which shank is bent at right angles to the main body portion of said shank to form a curved pocket, a blade fixed to the end of the shank below and in front of said pocket, a portion of which blade forms a wear plate extending into the pocket and a shoulder between the blade and end of the shank to which it is applied.

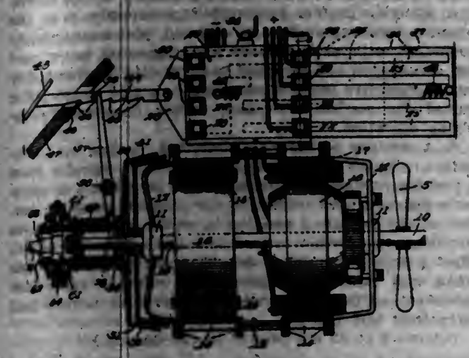
3. In a device of the class described, a slicing hammer comprising a pivotally mounted shank provided with a U-shaped pocket at one end, which pocket is disposed at right angles with respect to the plane occupied by the body of the shank, a blade applied to the free end of the shank, said blade having a portion thereof extending into said pocket and covering a portion of the inner end of the surface thereof.

4. A slicing hammer comprising a shank having a pocket in one end thereof, a blade applied to the end of the shank in front of and below the pocket, the rear side of which blade bears directly against the outer end of the shank below the pocket, and said blade having a portion extending into the pocket and covering a portion of the surface thereof.

5. In a device of the class described, a slicing hammer comprising a shank which is bent a quarter turn, a blade applied to the shank below the bent portion thereof, said blade having a portion thereof overlying that portion of the hammer shank to which it is secured.

[Claim 6 not printed in the Gazette.]

1,016,980. CONTROLLING DEVICE FOR ELECTRIC-MOTOR VEHICLES. ELMORE W. BENDER, Los Angeles, Cal. Filed July 18, 1910. Serial No. 571,704. (Cl. 172—179.)

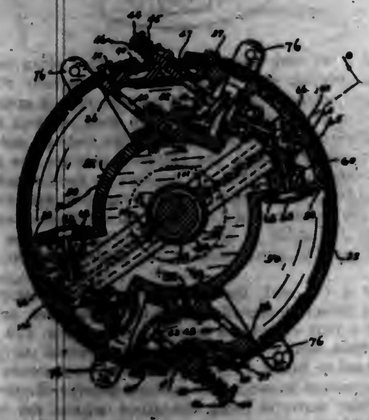


1. In combination, a direct current electro-mechanical machine adapted to act either as a motor or generator and an electric motor mechanically connected together, a controller for the direct current machine, a mechanical clutch connected to the direct current machine, and connective means whereby the clutch and controller are actuated simultaneously.

2. In combination, a direct current electro-mechanical machine adapted to act either as a motor or generator and an alternating current motor mechanically connected together, an electrical controller for the direct current machine, a mechanical clutch for the direct current machine, and mechanical connective means whereby the clutch and controller are operated together.

3. In an electric vehicle, a direct current electro-mechanical machine adapted to act either as a motor or as a generator, an alternating current motor mechanically connected to the said machine, a drive shaft, a clutch connection between the said machine and the drive shaft, a controller for the said machine, and connective means whereby the controller and clutch are operated simultaneously.

1,016,981. INTERNAL-COMBUSTION ENGINE. RAY CARMICHAEL, Indianapolis, Ind., assignor to Indianapolis Gas Engine Company, Indianapolis, Ind., a Corporation. Filed Mar. 6, 1911. Serial No. 612,564. (Cl. 123—18.)



1. An internal combustion engine provided with a fan-shaped combustion chamber, an oscillatory hollow piston operating therein, ignition means in said chamber, means for conveying the combustible mixture into said piston, and valve-controlled ports in said piston for charging the combustion chamber.

2. An internal combustion engine provided with a fan-shaped combustion chamber, an oscillatory hollow piston operating in said chamber, ignition means in said chamber at each side of said piston, means for conveying the combustible mixture into said piston, and valve-controlled ports at each side of said piston for charging the combustion chamber.

3. An internal combustion engine including a pair of oppositely located combustion chambers, an oscillated hollow piston with its axis between said chambers and its ends projecting into and operating in said chambers, ignition means at each end of each of said chambers, means for conveying explosive mixture into said hollow piston, and a valve-controlled port at each side of each end of said piston for charging the combustion chambers.

4. An internal combustion engine including a pair of oppositely located combustion chambers, an oscillatable hollow piston with its axis between said chambers and its ends projecting into and operating in said chambers there being a longitudinal passageway near the axis of said piston to the interior of the piston, a stationary chamber adjacent said piston near its axis and in communication with said passageway whereby explosive mixture may be furnished to said piston during its operation, ignition means at each end of each of said chambers, and a valve-controlled port at each side of each end of said piston for charging the combustion chambers.

5. An internal combustion engine including a pair of oppositely located combustion chambers, an oscillatable hollow piston with its axis between said chambers and its ends projecting into and operating in said chambers and having a laterally extending hub on one end, means on which said piston is mounted the hub of the piston being provided with a longitudinal passageway, and a non-rotative chamber at the end of the piston hub having communication with said passageway whereby combustible mixture may be supplied to the interior of the piston, ignition means at each end of each of said chambers, and a valve-controlled port at each side of each end of said piston for charging the combustion chambers.

[Claims 6 to 18 not printed in the Gazette.]

1,016,982. WALL-SUPPORTED INCUBATOR. EDWARD F. CARPENTER, Millersport, Ohio. Filed Apr. 19, 1911. Serial No. 622,063. (Cl. 248—18.)

1. A device of the character described comprising a wall strip for attachment to a wall and having a straight lower edge and spaced outstanding hooks, a body arranged beneath the wall strip and having an upper straight edge engaging against the edge of the wall strip and having straps upon its upper end engaging over the hooks, the straps being offset forwardly to suspend the body flat against the wall and beneath the strip.

2. A device as specified comprising a wall strip, screws engaging through the wall strip to support the same against a wall and having outstanding hook-heads, a body having a back resting snugly against the wall beneath

the wall strip, and a pair of forwardly offset straps se-

horizontal axis, and means for depressing the supporting

2. In a car [illegible] the combination with an apertured

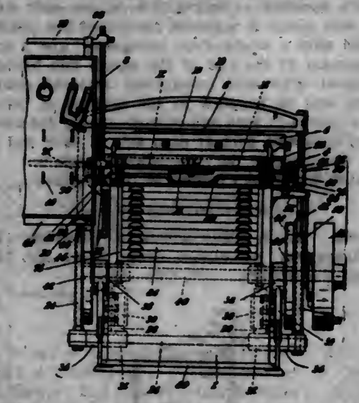
a gear surrounding said driving shaft, mesh-

the wall strip, and a pair of forwardly offset straps secured against the back and having eyes in their upper ends for engagement over the hook-heads.

3. A wall incubator comprising a back resting against the wall, sides outstanding in parallelism from the edges of the back, a top fitting between the upper ends of the sides, a bottom fitting between the sides and being spaced below the top, a front engaging across the forward edges of the top and bottom and engaging against the inner opposite faces of the sides, a wall strip having attachment to the wall directly above the back and engaging against the upper edge thereof, screws engaging through the ends of the wall strip for securing the same to the wall and having outstanding hook-heads, and forwardly offset straps carried by the back and having openings in their upper ends for engagement over the hook-heads.

4. A wall incubator comprising a body having a back for engagement against the wall, forwardly offset straps countersunk in the rear face of the back at its upper end, a wall strip secured above the back and having a lower straight edge engaging therewith, screws engaging through the wall strip for holding the same in position and having outstanding hook heads receiving the upper ends of the straps, and a rest carried upon the upper edge of the wall strip for the reception of a level to determine the position of the wall strip.

1,016,983. PRESS. LOUIS A. CASGRAIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 15, 1908. Serial No. 438,612. (Cl. 164—23.)



1. A machine of the class described having, in combination, a bed presenting a surface of considerable area over which stock may be spread for inspection, a die freely movable over said bed, a pressure applying member arranged to be swung into and out of operative position over said bed about an axis below the bed and dimensioned to coöperate with the die wherever located upon the bed, and means for moving said member toward the bed to engage the die and force it through the stock constructed and arranged to insure parallelism of said member and bed throughout the cutting operation.

2. A machine of the class described having, in combination, a bed presenting a surface of considerable area over which stock may be spread for inspection, a die freely movable over said bed, a pressure applying member arranged to be swung into and out of operative position over said bed and dimensioned to coöperate with the die wherever located upon the bed, and automatic means for moving said member into operative position over the bed and for depressing said member to effect a cutting operation constructed and arranged to insure parallelism of said member and bed throughout the cutting operation.

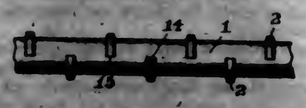
3. A machine of the class described, having, in combination, a bed, a pressure applying member pivotally supported in such manner that it may be swung bodily into and out of operative position over said bed about a single horizontal axis, and means for depressing the supporting pivots in a right line, when said member is in operative position, to effect, a pressure applying operation.

4. A machine of the class described, comprising a stock supporting bed, a pressure applying member having a pressure applying surface substantially coextensive with the pressure receiving surface of said bed, and means rigidly connected with said member and supported below said bed constructed and arranged to carry said member bodily out of operative position over said bed, said means being guided for vertical movement during the pressure applying operation.

5. A machine of the class described, having, in combination, a bed, a pressure applying member movable from a position in which its pressure applying surface is angularly disposed with respect to the pressure receiving surface of the bed into a position in which said surfaces are parallel, and movable toward and away from the bed to effect a pressure applying operation, and means operating when said surfaces are parallel to effect a right line movement of the pressure applying member toward and away from said bed.

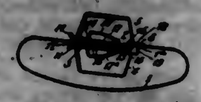
[Claims 6 to 32 not printed in the Gazette.]

1,016,984. DEFORMED REINFORCING-BAR FOR CONCRETE. WILLIAM ARTHUR COLLINS, Chicago, Ill. Filed Sept. 7, 1909. Serial No. 516,580. (Cl. 72—111.)



A reinforcing bar or rod having a series of transverse projections or lugs arranged in groups that are oppositely disposed on said bar, the members of said groups being extended each half-way around said bar or rod and being of even height throughout, and in staggered relation transversely with respect to each other and alternately disposed, the members of each of said groups being in alinement longitudinally of said bar or rod and being provided with bonding spaces.

1,016,985. CAR-SEAL. DON D. DAVIS, Saginaw, Mich. Filed Dec. 9, 1910. Serial No. 596,529. (Cl. 70—99.)



1. In a car seal, the combination with a strap having a locking opening, of a housing formed integrally with the strap and comprising a pair of pockets, spaced apart from each other along the strap, the open ends of which pockets are registered, means to close the sides and one end of the housing against access, the material between the pockets being folded over within the housing to form a guide, the opening between the folds of which registers with the open end of the housing, and a spring latch mounted on and held open by the guide to be tripped by the insertion of the free end of the strap between the folded portions of the guide.

2. In a car seal, the combination with a strap, of a housing formed integrally therewith at one end, and comprising a pair of pockets arranged in tandem, and spaced apart from each other, the material between the pockets being bent or folded to register with the open ends of the pockets, means to secure the pockets together at the sides, the folded material being contained within the housing formed by the pockets, and constituting a guide, the strap terminating at one end in an extension projecting from the end pocket, said extension having lateral lugs to grip the strap in front of the remaining pocket to close one end of the housing, and a spring latch within the housing tripped by the insertion of the free end of the strap.

3. In a car seal, the combination with an apertured strap, of a housing secured to one end thereof, and inclosing guide arms integral with the housing and bent or folded over at their inner ends to form a throat, a latch supported on the guide arms, said arms having a registering slot at their folded end, and separate registering openings in advance thereof to coöperate with the latch, said housing having an opening into which the free end of the strap is inserted to trip the latch, and divergent lips projecting outwardly from the opening and integral with the housing, with which lips said strap contacts as it is entered in the housing.

4. In a seal of the character described, the combination with a flexible strap, of a housing formed integrally therewith near one end, and comprising a pair of pockets, the open ends of which are registered to form a chamber, the edges of the pockets being secured together at all sides but the rear, to prevent access to the chamber, a guide within the housing to accommodate the free end of the strap when inserted, said guide terminating at its outer end in lips projecting beyond the open rear end of the housing, and a latch mounted on the guide to lock the free end of the strap in the housing.

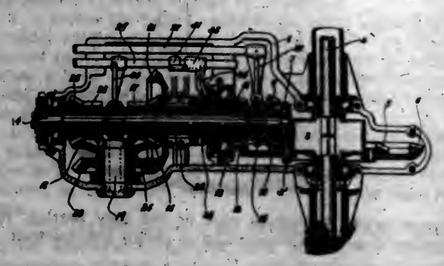
5. In a car seal, the combination with an apertured strap, of a housing formed integrally therewith, at one end and comprising a pair of pockets arranged in tandem along the strap and spaced apart from each other, the material between the pockets being bent or folded backwardly upon itself to lie within the pockets the open ends of which are registered, to form the housing, the sides and one end of the pockets being closed against access, the folded material constituting a guide leading inwardly from the open end of the housing, and being apertured, and a spring latch supported on the guide in the path of the free end of the trip when inserted in the opening end of the housing to be tripped by said free end and lock it within the housing.

1,016,986. LAST. AMOS G. FITZ, Auburn, Me., assignor to Fitz-Empire Double Pivot Last Company, Auburn, Me., a Corporation of Maine. Filed Mar. 9, 1911. Serial No. 613,463. (Cl. 12—136.

A last divided by lines of cut which form on the rear end of the fore part a reëntrant angle at the top and two salient angles below and on the front end of the heel part a salient angle at the top and a reëntrant angle below, and, when the last is in extended position, a gap extending downwardly into it from the top, whereby when the heel of the last is moved upwardly and forwardly the salient angle at the top of the heel part moves forwardly into the reëntrant angle in the fore part and into locking engagement with the fore part.

1,016,987. DRIVING MECHANISM. WALTER O. FOSS, Newington, Conn., assignor to Charles E. Bunnell and Richard Bradley, Branford, Conn. Filed Feb. 23, 1910. Serial No. 545,410. (Cl. 74—89.)

1. The combination of a driven shaft, a driving shaft, a pair of gears surrounding said driving shaft, a pair of gears in mesh with the other pair of gears and connected with said driven shaft, the gears of one pair being of different diameters, means for alternately putting the gears of the first pair into driving relation with said driving shaft, a gear surrounding said driving shaft, speed modifying and reversing means coöperative with said last mentioned gear, means for alternately putting a member of the speed modifying and reversing means into driving relation with said shaft, and means for throwing said last mentioned gear into and out of driving relation with one of said first mentioned gears.



2. The combination of a driven shaft, a driving shaft, a pair of gears surrounding said driving shaft, a pair of gears of different diameters, in mesh with the other pair of gears and connected with said driven shaft, means for alternately putting the gears of the first pair into driving relation with the driving shaft, a gear surrounding said driving shaft, speed modifying and reversing means cooperative with said last mentioned gear, means for putting a member of the speed modifying and reversing means alternately into driving relation with said shaft, and means for throwing the last mentioned gear into and out of driving connection with one of said first mentioned gears.

3. The combination of a driven member, a pair of gears, a second pair of gears in mesh with the other pair of gears and connected with said driven member, the gears of one pair being of different diameters, means for alternately putting the gears of the first pair into driving relation with a source of power, a gear, speed modifying and reversing means connected with said last mentioned gear, means for alternately putting a member of the speed modifying and reversing means into effective action, and means for throwing said last mentioned gear into and out of operative relation with one of said first mentioned pair of gears.

4. The combination of a driven member, a driving shaft, a pair of gears surrounding said driving shaft, a pair of gears in mesh with the other gears and connected with said driven member, the gears of one pair being of different diameters, means for alternately clutching the gears of the first pair to said shaft, a transmitting gear loosely surrounding said shaft, means for putting said transmitting gear into and out of driving relation with one of said first mentioned pairs of gears, speed modifying and reversing means coöperative with said transmitting gear and including gears loosely surrounding said shaft, and means for alternately clutching said last mentioned gears to said shaft.

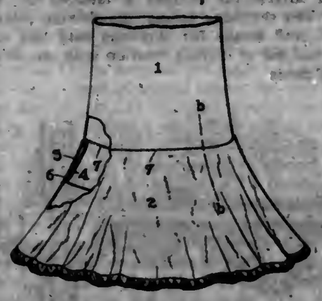
5. The combination of a source of power, a driven member, a gear connected with said driven member, a second gear in mesh with the first gear, means for clutching said second gear to said source of power, a third gear, means for clutching together the second and third gears, a fourth gear, a fifth gear, both fourth and fifth gears being in constant driving connection with said third gear, and means for clutching said fourth and fifth gears alternately to said source of power and during the time the second and third gears are clutched to each other.

[Claims 6 to 17 not printed in the Gazette.]

1,016,988. GARMENT. MARIE W. FUCHS, Buffalo, N. Y. Filed Oct. 5, 1909. Serial No. 521,152. (Cl. 2—42.)

A garment comprising a body portion, a lower flounce secured to the body portion and a substantially oval stiffening band secured at the junction of the body portion and the flounce and with its wider portion in the front part

of the garment and having its lower outer portion free and in sliding contact with the interior surface of the



flounce below the bottom edge of the body portion, for causing it to flare substantially as shown and specified.

1,016,989. PROCESS OF UTILIZING LIME-MUD IN THE MANUFACTURE OF FERTILIZERS. HUGH A. GALT, Barberton, Ohio, assignor to Columbia Chemical Company, Barberton, Ohio, a Corporation of Pennsylvania. Filed Sept. 19, 1910. Serial No. 582,659. (Cl. 71—7.)

1. The process of utilising lime mud comprising calcium carbonate and caustic soda in the manufacture of fertilizers, which comprises mixing the said lime mud with phosphate rock and furnacing the mass.

2. The process of utilising the caustic soda remaining in lime mud after the treatment of sodium carbonate with lime and the separation of the body of the caustic soda from the calcium carbonate, which comprises mixing the said lime mud with phosphate rock and furnacing the mass.

3. The process of utilising the caustic soda remaining in the lime mud produced in the manufacture of caustic soda and consisting of calcium carbonate and caustic soda, which comprises mixing the said lime mud with phosphate rock, and a sodium compound, and furnacing the mass.

4. The process of utilising the caustic soda remaining in the lime mud produced in the manufacture of caustic soda and consisting of calcium carbonate and caustic soda, which comprises mixing the said lime mud with phosphate rock, and soda ash, and furnacing the mass.

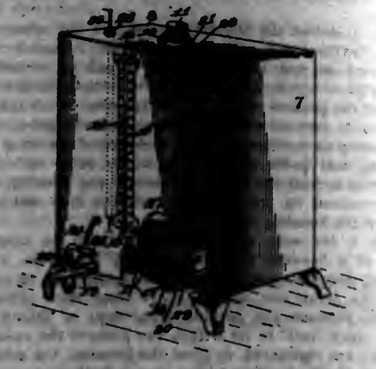
5. The process of utilising lime mud comprising calcium carbonate having a relatively small amount of caustic soda mixed therewith, which comprises mixing the said lime mud with phosphate rock, and a sodium compound and furnacing the mass.

[Claims 6 and 7 not printed in the Gazette.]

1,016,990. DISPENSING-TANK FOR LIQUIDS. OTTO A. HECKEL, St. Louis, Mo., assignor of one-half to Ernst H. Spellmeyer, Jr., St. Louis, Mo. Filed Jan. 15, 1910. Serial No. 538,253. (Cl. 73—164.)

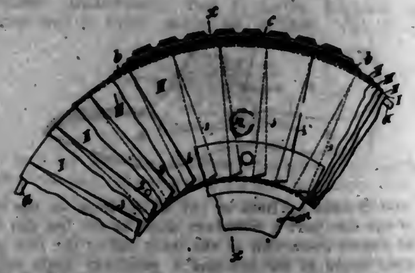
1. An improved dispensing tank for liquids comprising a primary receptacle, a secondary receptacle, a faucet connected to the secondary receptacle, a pipe connected to the faucet, and to the primary receptacle, said faucet provided with a key having a port whereby the liquid from the primary tank may be fed by way of the faucet to the secondary tank, said key arranged to close off the connection between the faucet and primary tank when the faucet is operated to extract the contents of the secondary receptacle by way of the faucet, a vent pipe extending through the primary receptacle from the top of the secondary receptacle to the top of the primary receptacle, a float valve operating in the vent pipe to prevent the liquid in the secondary receptacle from passing into the pipe and a gage connected at its bottom to the primary receptacle for admitting air through the same into the primary receptacle when the contents are being extracted, substantially as specified.

2. A device of the class described comprising a primary receptacle and a plurality of secondary receptacles located beneath the same, a faucet connected to each of the secondary receptacles, a pipe connected to the primary receptacle and to the faucet, said faucet provided with a key having a port by which the liquid from the primary receptacle is directed to the secondary receptacle for filling the same with liquid from the primary receptacle, said key provided with a second port to permit the liquid from the secondary receptacle to pass out by way of the



faucet and during which time the passage from the primary receptacle is closed by the key, a vent pipe connected to each of the secondary receptacles and passed upwardly through the primary receptacle, a float valve operated in each of said pipes, a gage located on the outer face of the primary receptacle and connected to the same at its bottom whereby air is admitted into the receptacle at the bottom when the faucet is operated for filling the secondary receptacle from the primary receptacle, substantially as specified.

1,016,991. ELASTIC TIRE. CARL HEROLD, Brünn, Austria-Hungary. Filed Sept. 8, 1910. Serial No. 580,288. (Cl. 152—8.)

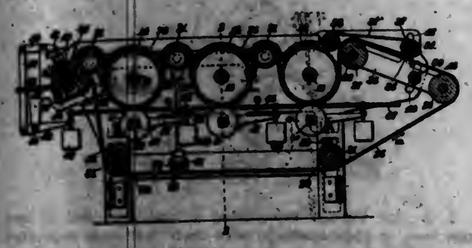


In an elastic tire, the combination with the inner rim of an outer resilient rim of greater diameter, a number of strips of fabric broader than and stretched around the said rim and having their protruding borders so plaited in triangular folds and secured to each other as to form with the rim an inwardly open gutter and means for fastening the said borders to the inner rim, substantially as and for the purpose described.

1,016,992. FLAT-WORK IRONER. FRANKLIN P. HESS, Lynn, Mass. Filed Feb. 21, 1911. Serial No. 610,038. (Cl. 68—9.)

1. In a machine of the class described, the combination with a series of ironing or smoothing cylinders and an endless apron passing partially around the cylinders, of perforated cylinders over which the apron passes after leaving the ironing cylinders; and means for creating a suction in said perforated cylinders.

2. In a machine of the class described, the combination with a series of ironing or smoothing cylinders and an endless apron passing partially around the cylinders, of perforated cylinders over which the apron passes after leaving the ironing cylinders; a pipe from each perforated cylinder; and a suction fan with which said pipe communicates.



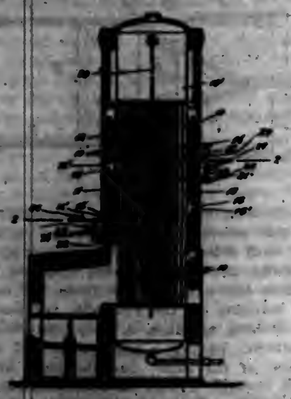
3. In a machine of the class described, the combination with a series of ironing or smoothing cylinders and an endless apron passing partially around the cylinders, of pairs of pivoted weighted members below the apron; shafts revoluble one in each pair of members; and a plurality of felt disks on said shafts forming pressure rollers coacting with said apron and ironing cylinders.

4. In a machine of the class described, the combination with a series of ironing or smoothing cylinders and an endless apron passing partially around the cylinders, of pairs of pivoted members below the apron; shafts revoluble one in each pair of members and having a squared portion intermediate its ends; a plurality of felt disks on said squared portion; clamping members on said shaft for forcing said disks together; and weights on said members adapted to retain said disks in contact with the apron as it passes partially around an ironing cylinder.

5. In a machine of the class described, the combination with a series of ironing or smoothing cylinders and an endless apron passing partially around the cylinders; of a plurality of pairs of pivoted members below the apron; a pressure roller revolubly mounted in one end of each pair of pivoted members; a movable weight at the opposite end of each member adapted to retain said roller in contact with said apron; and means for simultaneously shifting the position of all of said weights relative to said members.

[Claims 6 to 16 not printed in the Gazette.]

1,016,993. BLOWER FOR BOILERS. HARRY A. HIGGINS, Detroit, Mich., assignor to Diamond Power Specialty Co., Detroit, Mich. Filed Mar. 28, 1911. Serial No. 616,858. (Cl. 122—30.)



1. A blower for boilers comprising a steam supply-pipe, a leader pivotally connected thereto, a jet tube pivoted on the leader to swing transversely of the boiler tubes, and a head on said jet tube having perforations disposed in a plane parallel to the boiler tubes.

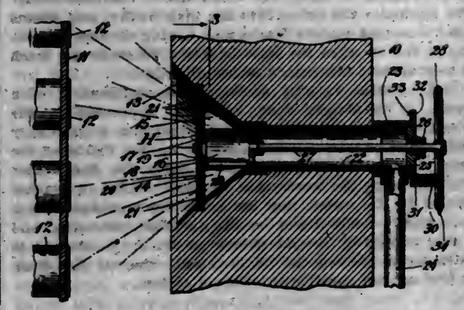
2. A blower for boilers comprising a steam supply-pipe, a leader pivotally connected thereto, a jet tube pivoted on the leader to swing transversely of the boiler tubes, a head on said jet tube having perforations disposed in a plane parallel to the boiler tubes, and means for controlling the passage of steam through the leader.

3. A blower for boilers comprising a steam supply-pipe, a leader pivotally connected thereto, a series of jet tubes pivoted on the leader to swing transversely of the boiler tubes, a head on each jet tube having perforations disposed in a plane parallel to the boiler tubes, and means for swinging said tubes simultaneously.

4. A blower for boilers comprising a steam supply pipe, a branch pivoted thereto, a leader pivoted on the branch pipe to swing transversely of the boiler-tubes, a jet tube pivoted on the leader, and means for swinging said jet tube.

5. The combination with the setting of a vertical boiler having apertures at opposite sides, of a blower therefor comprising a stationary vertical steam-supply pipe, branches extending horizontally to opposite sides thereof, leaders pivoted for horizontal swing on said branches, and jet tubes pivoted for horizontal swing on said leaders.

1,016,994. BLOWER FOR BOILERS. HARRY A. HIGGINS, Detroit, Mich., assignor to Diamond Power Specialty Co., Detroit, Mich. Filed May 4, 1911. Serial No. 624,901. (Cl. 122—30.)



1. A flue blower comprising a steam-supply pipe, a distributing head having a series of separate radial chambers, and a controller for establishing communication between said pipe and chamber successively.

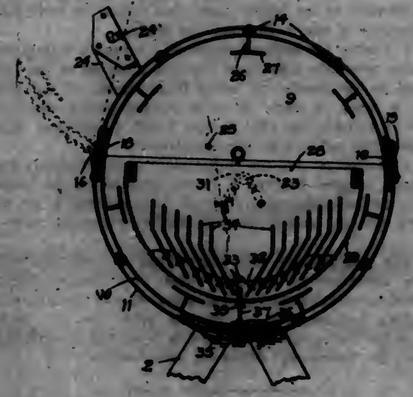
2. A flue blower comprising a steam-supply pipe, a distributing head having a series of separate radial chambers, a controller for establishing communication between said pipe and chambers successively, and means for moving said controller step-by-step.

3. A flue blower comprising a steam-supply pipe, a distributing head having a series of separate radial chambers, a controller for establishing communication between said pipe and chambers successively, a hand-wheel on the controller, and a spring-actuated plunger on the hand wheel and in engagement with said pipe for positioning said controller relatively to the chambers.

4. A flue-blower comprising a steam-supply pipe, a distributing head having a series of partitions dividing said head into a series of separate adjacent chambers, a controller journaled in said head and comprising a hollow casing having a slot adapted to register with the space between the partitions, and means for rotating said controller.

5. A flue-blower comprising a steam-supply pipe, a distributing head having a series of partitions dividing said head into a series of separate adjacent chambers each having a series of diversely inclined apertures, a controller journaled in said head and comprising a hollow casing having a slot adapted to register with the spaces between the partitions, and means for rotating said controller.

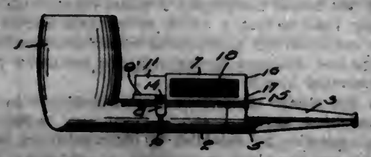
1,016,995. DISH-WASHING MACHINE. JOHN F. HILSCHER, St. Paul, Minn. Filed Nov. 26, 1910. Serial No. 594,388. (Cl. 141—9.)



1. In a dish washing machine, the combination of a frame, a water-tight drum rotatably supported in the frame, said drum having a hinged lid section, a stationary dish holder within the drum, means on the inside of the drum adapted to carry the water above the dish holder and discharge the water into the dish holder, and means rigidly carried by the frame and having devices for engaging the lid when the same is raised, whereby the drum is held against rotation in either direction.

2. In a dish washing machine, the combination of a frame, a water-tight drum rotatably supported in the frame, said drum having a hinged lid section, a stationary dish holder within the drum, means on the inside of the drum adapted to carry the water above the dish holder and discharge the water into the dish holder, a bracket carried by the frame, said bracket being provided with a downwardly inclined slot having an offset extension, and a stud carried by the lid section of the drum adapted to enter the slot when the lid is raised, whereby the drum is held against rotation in either direction.

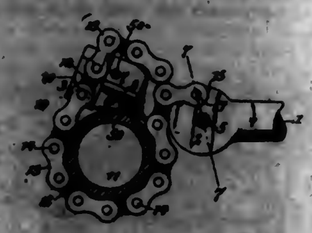
1,016,996. MATCH-BOX. WILLIAM H. HORN, Hyde Park, N. Y. Filed May 16, 1911. Serial No. 627,476. (Cl. 206—20.)



An attachment for pipes, comprising a casing having a depending ear for engagement between the end of the pipe stem and the shoulder of the mouth piece, a match box slidably mounted in the casing, a slotted tubular guide member projecting forward from the casing, a spring mounted in the casing in the tubular member, a depending lug carried by the box and projecting through the slot into engagement with the spring, the spring resisting the open movement of the box, and a spring pressed closure for normally closing the inner end of the casing.

1,016,997. PIPE-WRENCH. WILLIAM ANDREW HYLE, Buffalo, N. Y., assignor to Peter E. Macdonald, Toronto, Canada. Filed Mar. 25, 1911. Serial No. 616,890. (Cl. 81—69.)

1. A pipe wrench comprising a jaw composed of two side bars or cheeks which have their rear ends separated while their front ends are provided with complementary interlocking faces, a handle to which the rear ends of said bars are pivoted, and a chain connected at one end with said handle and adapted to be connected with said jaw.



2. A pipe wrench comprising a jaw composed of two side bars or cheeks which have their rear ends separated while their front ends are provided with inwardly projecting coöperating lugs, one of said lugs being provided on its face with a longitudinal groove and the other lug with a longitudinal rib engaging with said groove, a handle to which said jaw is pivoted, and a chain adapted to detachably connect said handle with said jaw.

3. A pipe wrench comprising a jaw, a handle to which said jaw is pivoted and which is provided with a hub having recesses arranged on its opposite sides and extending to the periphery of the hub, a chain adapted to be connected at its front end with said jaw and provided at its rear end with a pair of links which are seated in said recesses and which normally rest on one side against one side of said recesses, and a transverse pivot connecting said hub and the links in the recesses thereof.

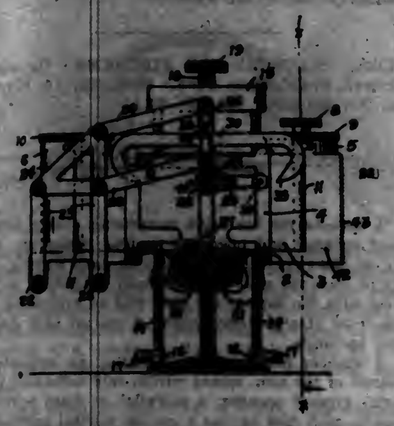
4. A pipe wrench comprising a jaw having two side bars or cheeks each of which is provided on its inner side with a hook-shaped rib the mouth of which forms a seat and opens upwardly toward the top of the jaw, while its back forms a longitudinal downwardly facing straight shoulder arranged below said seat and is connected at its outer end with the front side of the bill of said hoop-shaped rib by a curved corner or shoulder, a handle pivotally connected with said jaw, and a chain connected with said handle and provided with laterally projecting pins adapted to engage with said seats and to extend underneath said longitudinal shoulders.

1,016,998. DITCHING-MACHINE. FRIEDRICK JOHANNING and LEO RICHNOW, Cortez, Colo. Filed July 19, 1911. Serial No. 639,304. (Cl. 97—12.)

1. In a ditching machine, the combination of a body having its side pieces angularly disposed with respect to the ground, said side pieces having their upper rear portions cut away and a mold board disposed in said cut away portions and arranged to guide the material dug up by said machine off the rear side portions thereof.

2. In a ditching machine, a body comprising a single piece of material having a portion thereof arranged to form the base of the same, and the sides angularly set with respect thereto, a back integrally connected to the end of the last mentioned portion and arranged to connect with said base, said side pieces having their rear upper portions cut away and a mold board disposed in said angularly arranged portion and having a draw bar integrally connected thereto, said mold board being arranged to guide the material dug up by said machine, to the rear side portions thereof.

1,016,999. RAILOGRAPH. EDWARD E. JOHNSON, St. Paul, Minn. Filed May 26, 1911. Serial No. 629,869. (Cl. 33—6.)



1. A railograph comprising a frame adapted to support a record sheet or card, means for clamping the frame to a rail, said clamping means including legs adapted to seat themselves on the upper surface of the rail base and means engaging the rail head to clamp said legs against said base, and a reproducing mechanism including a pantograph and scribing and tracing points.

2. A railograph comprising a frame adapted to support a record sheet or card and having means for centering and clamping it on a rail, said centering and clamping means including legs adapted to seat themselves on the top of the rail base, and means engaging the upper portion of the rail for forcing the legs downwardly upon said base, and a scribing and tracing mechanism.

3. A railograph comprising water-proof record containers, a supporting frame having a surface between said containers forming a backing for the record sheet, means for centering and clamping said frame on a rail, said centering and clamping means including legs adapted to seat themselves on the top of the rail base and clamping jaws to engage the opposing surface on the underside of the rail head, and a scribing and tracing mechanism.

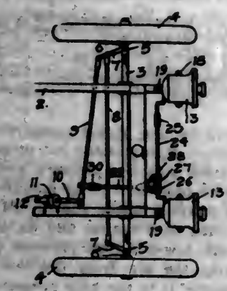
4. A railograph comprising record roll containers having means for reeling the record roll from one container to the other, said roll having numbered sections, a supporting frame having a backing between said containers for the numbered sections, means for clamping and centering said frame on a rail, said clamping and centering means including upright parallel legs adapted to seat themselves on the top of the rail base, and clamping jaws to engage the underside of the rail head, and a scribing and tracing mechanism.

5. A railograph comprising record sheet or roll containers, a supporting frame having a backing for the record sheet between said containers, means for severing the record sheet, means for centering and clamping said frame on a rail, said centering and clamping means including legs adapted to seat themselves on the top of the rail base and clamping jaws adapted to engage the under surface of the rail head, and a scribing and tracing mechanism.

[Claims 6 to 16 not printed in the Gazette.]

1,017,000. VEHICLE-LAMP. JOSEPH A. JONCAS, Minneapolis, Minn. Filed May 17, 1910. Serial No. 561,860. (Cl. 240—62.)

1. In a motor vehicle, the combination, with a frame, of brackets mounted thereon, plates having ball bearings on said brackets, bolts passing through said plates and brackets, and having lock nuts and springs provided on said bolts between said nuts and said brackets, lamps carried by said plates, said plates having laterally extended slotted arms, a rod having its ends connected to said arms in said slots, a steering apparatus and means operatively connecting said rod with said steering apparatus.



2. The combination, with a frame, of lamps swiveled thereon, a rod connecting said lamps to operate them simultaneously, a yoke adapted to slide on said rod, a spring arranged on said rod and engaging said yoke and resisting its movement in one direction, a rod connected with said yoke, and a steering apparatus operatively connected with said rod.

3. In a motor vehicle, the combination, with the upwardly and forwardly extending brackets having flattened upper surfaces, plates having flattened under surfaces provided with anti-friction bearings on said brackets, bolts passing through said plates and brackets and having springs and lock nuts for yieldingly securing said plates and brackets together, lamp standards mounted on said plates, lamps carried by said standards, a crank rod extending transversely of the machine between said plates and attached at its ends to said plates, a steering apparatus, and means connecting said steering apparatus with said crank rod.

4. The combination, with a motor vehicle frame, of lamps having rotating bearings on said frame, a transversely arranged crank rod having its ends connected to said lamps, a steering apparatus, means interposed between said steering apparatus and said crank rod and having a pivotal connection with said steering apparatus at one end, and a yielding connection with said crank rod at its other end.

5. The combination, with a motor vehicle frame, a forward axle and wheels therefor, of lamp brackets mounted on said frame, lamps carried by said brackets, springs interposed between said axle and frame, a crank rod extending transversely of said frame and having its ends connected with said lamps, the middle portion of said crank rod depending below said frame between said springs, a steering apparatus connected with said wheels in the rear of said axle, and a rod connected at its forward end to said crank rod and extending backwardly above said axle and attached at its rear end to said steering apparatus.

[Claim 6 not printed in the Gazette.]

1,017,001. TURBINE-BLOWER. PATRICK H. KANE, Buffalo, N. Y. Filed Aug. 22, 1910. Serial No. 578,351. (Cl. 230—11.)

1. A compound turbine blower comprising a low pressure air propeller, a high pressure air propeller which receives the air from said low pressure propeller, the low and high pressure propellers being mounted side by side on independent shafts arranged end to end, and means for independently driving said shafts.

2. A compound turbine blower comprising a low pressure air propeller, a high pressure air propeller which receives the air from said low pressure propeller, the low and high pressure propellers being mounted side by side

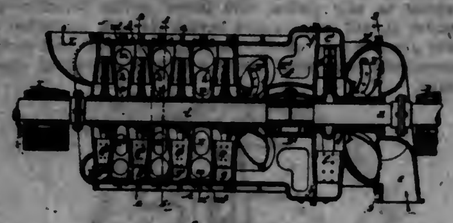
on independent shafts arranged end to end, and independent motors for driving said propellers at different

arms whereby the outer edge of said blades will lie against the rim in the descending portion of the wheel and

arm, and nose guards mounted to swing substantially horizontal plane, supported on the offset portion and

hold tickets or the like secured to the other end of said sheet, the sheet of cardboard being pasted to the inner

on independent shafts arranged end to end, and independent motors for driving said propellers at different speeds.



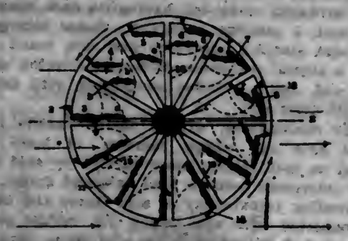
3. A compound turbine blower comprising a low pressure air propeller, a high pressure air propeller which receives the air from said low pressure propeller, the low and high pressure propellers being mounted side by side on independent shafts arranged end to end, means for independently driving said shafts, and an air chamber located between said low and high pressure propellers, said chamber receiving the air from the low pressure propeller and delivering it to the high pressure propeller.

4. A compound turbine blower comprising a case containing a series of propeller-chambers arranged side by side, a plurality of pressure-propellers arranged in said chambers and each delivering air to the succeeding chamber, said chambers and propellers being constructed of progressively-decreasing dimensions toward the outlet of the blower, and an air-gathering and supply fan having scoop-shaped blades and arranged to deliver air into the first of said propeller-chambers.

5. A compound turbine blower, comprising a low-pressure air propeller, an inlet propeller arranged to deliver the incoming air to the low-pressure propeller, a plurality of high-pressure air-propellers, and a supply propeller interposed between said low-pressure propeller and the first of the series of high-pressure propellers.

[Claims 6 to 10 not printed in the Gazette.]

1,017,002. WATER-WHEEL. RICHARD D. KELLY, The Dalles, Oreg. Filed Apr. 19, 1911. Serial No. 621,900. (Cl. 138—12.)



1. A water wheel comprising an extended hub having a series of arms radiating from each end, the arms of the one end being paired against those of the other, a rim secured upon the ends of each series of arms whereby the latter are maintained at equal distances apart, a blade adapted to lie upon each pair of arms, and blade holders having a shank bent at an angle and pivotally secured to the rim at a point intermediate of said blades will lie against the rim in the descending portion of the wheel and the free edges will swing outwardly against the rim at the adjacent arm, in the ascending portion.

2. The combination in a water wheel comprising an extended hub having a series of arms radiating from each end, the arms of one end being paired against those of the other, a rim secured upon the ends of each series of arms whereby the latter are maintained at equal distances apart, a blade adapted to lie upon each pair of arms, blade holders each having a shank bent at an angle and pivotally secured to the rim at a point intermediate of said arms whereby the outer edge of said blades will lie against the rim of the descending portion of the wheel and the free edges will swing outwardly against the rim at the adjacent arm, in the ascending portion of the wheel, and a blade pivotally secured to each pair of arms and bearing thereupon in the descending portion of the wheel with its outer edge resting against the free edge of the outer blade and adapted to swing outwardly so that the free edge will bear at an angle against the side of the outer blade in the ascending portion of the wheel.

1,017,003. SILENCER FOR FIREARMS. CHARLES H. KENNEY, New London, Conn. Filed May 16, 1910. Serial No. 561,610. (Cl. 89—31.)

1. A silencer for fire arms comprising a ring having a tapered opening and openings leading therefrom, a plurality of disks forward of said ring each having a plurality of openings near the periphery extending in a line parallel with the bore of the arm, and an expansion chamber in front of said disks having a central bore and concentric openings.

2. A silencer for fire arms including an extension for the barrel of the arm, means within said extension having an axial tapered opening, a plurality of disks within the extension, each disk having a conical central portion with axial opening, and openings near the periphery extending in a line parallel with the bore of the arm.

3. A silencer for fire arms including an extension for the barrel of the arm, means within said extension having an axial tapered opening, a plurality of disks within the extension, each disk having a conical central portion with axial opening, openings near the periphery extending in a line parallel with the bore of the arm, an equalizing chamber at one end of said extension, and an expansion chamber at the other end.

4. In a silencer for fire arms, an extension for the barrel of the arm having an equalizing chamber adjacent the end of the arm, an expansion chamber at the other end with axial and concentric openings leading therefrom, a ring in said extension at one end of the equalizing chamber and a plurality of disks between said ring and the expansion chamber, said disks having axial openings and openings near the periphery and extending in a line parallel with the bore of the arm, said ring having openings near the periphery, of increasing area from rear to front.

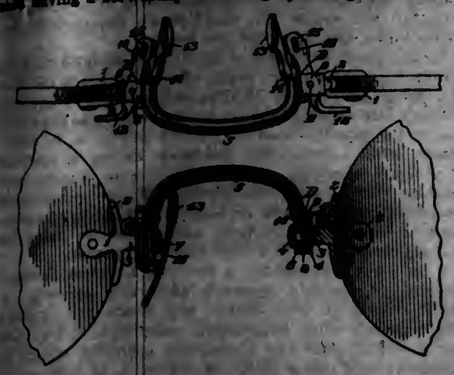
5. A silencer for fire arms including an extension for the barrel of the arm, a ring within the rear end of said extension having tapered openings and openings leading therefrom, a plurality of disks within said extension forward of said ring, each disk having a plurality of openings near the periphery extending in line with the bore of the arm, and an expansion chamber in front of said disks with a central bore and concentric openings.

[Claim 6 not printed in the Gazette.]

1,017,004. EYEGLASSES. HENRY E. KIRSTEIN, Rochester, N. Y., assignor to E. Kirstein Sons Co., Rochester, N. Y., a Corporation of New York. Filed Aug. 14, 1907. Serial No. 388,484. (Cl. 88—50.)

1. In an eyeglass mounting, the combination with a support embodying a bridge and lens-attaching devices detachably connected to the bridge, of brackets independent of the lens-attaching devices arranged over the latter, and nose guards mounted to swing substantially in a horizontal plane on the brackets.

2. In an eyeglass mounting, a bridge, lens-attaching devices detachably connected thereto, brackets independent of the lens-attaching devices each comprising a vertically arranged attaching arm by which it is secured and an outwardly offset portion extending laterally from the attaching arm, and nose guards mounted to swing substantially in a horizontal plane, supported on the offset portion and each having a forwardly extending operating arm.



3. In an eyeglass mounting, lens mounts having vertically arranged seats, a bridge secured in the seats, brackets each comprising a vertically arranged attaching arm secured in one of the seats, and a horizontal extending offset portion, and nose guards each swingingly mounted on the offset portion of a bracket to move substantially in a horizontal plane and having a forwardly extending operating arm.

4. In an eyeglass mounting, a bridge, lens mounts centrally secured thereto, nose guards mounted to swing substantially in a horizontal plane and having forwardly extending operating arms, and brackets for supporting the guards offset outwardly from the ends of the bridge, and extending in the direction of the lenses, said offset portion being provided with vertical pivots for the guards.

5. The combination of a bracket embodying a vertically extending attaching arm and a horizontal U-shaped portion at one end of said arm, with a nose guard arranged between the arms of the U-shaped portion.

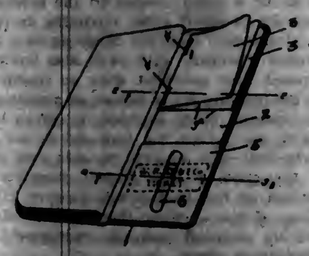
[Claims 6 to 10 not printed in the Gazette.]

1,017,005. ELECTRODE OR PENCIL FOR THE ARC-LIGHT. ISADOR LADOFF, Cleveland, Ohio, assignor of thirty one-hundredths to Philip C. Peck, New York, N. Y. Filed May 14, 1906. Serial No. 316,969. (Cl. 176—136.)

1. An arc light pencil composed of an alloy of titanium with other metal and potassium fluotitanate.

2. An arc light pencil composed of an alloy of titanium with other metal, and fluotitanate of an alkaline metal.

1,017,006. POCKET-BOOK. WILLIAM H. LEE, Chicago, Ill. Filed June 9, 1911. Serial No. 632,125. (Cl. 11—17.)



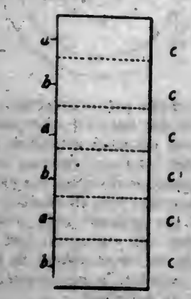
1. The combination with a book, or the like, of a plurality of pockets for tickets or stamps, and a common backing sheet to which said pockets are secured, the backing sheet being secured to the inner face of one of the book covers.

2. In a pocket book, the combination of a cover, a sheet of cardboard, or the like, a pocket formed of waxed paper secured to one end of said sheet, and a pocket designed to hold tickets or the like secured to the other end of said sheet, the sheet of cardboard being pasted to the inner face of the book cover.

3. The combination with a book, of a stamp pocket made of waxed paper or the like, open at its top edge and one of its side edges and closed at its bottom edge, and a backing sheet to which the said pocket is secured, the backing sheet being attached to the inner face of the book cover.

4. The combination with a book, of a ticket pocket comprising a backing sheet and a piece of cloth having three of its edges folded over the edges of the backing sheet and formed with a slit extending transversely to the open side of the pocket, said backing sheet being pasted to the inner face of the book cover.

1,017,007. METHOD OF ARRANGING TICKETS FOR STREET-CARS. LOUIS P. LIPPS, Cleveland, Ohio, assignor to Louis P. Lipps, trustee, of one-half for himself, one-fourth for Willis L. Westcott, and one-fourth for George C. Wing, Cleveland, Ohio. Filed Apr. 10, 1911. Serial No. 620,180. (Cl. 11—15.)



1. As an article of manufacture, a series of tickets for street-cars, detachably connected together along their sides, and having alternate members of the series of different width from the rest, substantially as shown and described.

2. As an article of manufacture, a rectangular sheet of tickets for street-cars, with weakened folding lines across the same between the tickets at alternately different intervals, substantially as shown and described.

1,017,008. ENGINE. WILLIAM RILEY MCKEEN, Jr., Omaha, Nebr., assignor to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed Aug. 21, 1909. Serial No. 513,915. (Cl. 230—27.)

1. In apparatus of the nature described, in combination, a cylinder head having air inlet and discharge passages extending laterally into the head and thence into the cylinder; a central opening for the passage of a piston rod; water chambers intermediate the air passages; an inlet opening into the first of said water chambers; an outlet opening from the last of said chambers; and a raised circular projection adapted to extend into the cylinder, and containing passages connecting the water chambers in series, substantially as described.

2. In apparatus of the nature described, a cylinder; a cylinder head having an inner and an outer wall; and an annular projection from said inner wall into the cylinder, said head being provided with a series of passages extending from one wall of the cylinder head to the other, and having intervening water chambers connected one with another in series by passages formed in said annular projection.

3. In apparatus of the nature described, the combination of a cylinder; a cylinder head provided with air inlet and discharge passages extending through the head from face to face; water chambers intermediate said air passages; a conical or tapering projection rising from the inner face of the cylinder head, and provided with passages

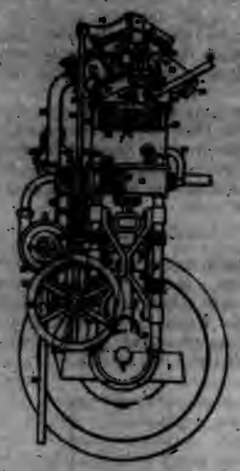
connecting the water chambers in series; and a piston within said cylinder of substantially bell shape, to fit closely over and about the projection of the cylinder head

tion with a detachable hat-block composed of a plurality of slidable segments, means detachably connecting each slidable segment with a movable element on the

disposed on the outer side of the middle portion of the cylinder and arranged to be actuated by the fluid

passage throughout of serpentine and approximately flat helical shape.

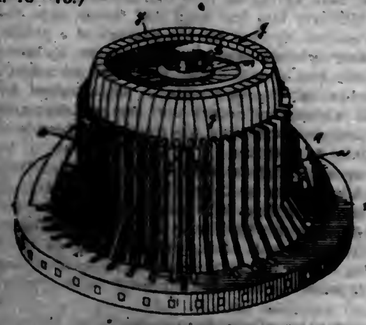
connecting the water chambers in series; and a piston within said cylinder of substantially bell shape, to fit closely over and about the projection of the cylinder head.



4. In apparatus of the nature described, a cylinder head of hollow form provided with air inlet and discharge passages, and with valve openings extending through the two walls of the cylinder head and opening into the cylinder, the walls of said passages dividing the cylinder head into separate water chambers; and an annular projection from the inner wall of the cylinder head extending into the cylinder, overhanging the air ports, and containing passages connecting the water chambers in series, the ports opening into the cylinder being circumferentially elongated, substantially as described.

5. In apparatus of the nature described, the combination of a cylinder having hollow heads and a jacketed body communicating one with another, a rotary pump geared to the main shaft of the engine to be driven thereby; a pipe connecting the casing of the pump with one of the cylinder heads; and a discharge pipe opening from the other cylinder head, whereby water from the pump is caused to pass in succession through one cylinder head, thence through the cylinder jacket, thence through the other cylinder head, and finally to escape therefrom.

1,017,000. HAT-CONFORMATOR. JAMES R. MCKINLESS, Oakland, Cal., assignor, by mesne assignments, to International Conformer Company, a Corporation of California. Filed Nov. 16, 1909. Serial No. 528,110. (Cl. 73—73.)

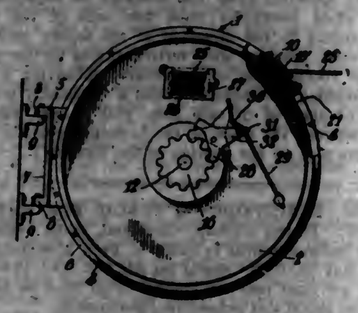


1. A hat conformator having a plurality of movable elements arranged around an oval space adapted to admit the head of a person and having yielding movement under contact therewith, whereby said elements are set to conform to the profile of the inserted head; in combination with a detachable hat-block composed of a plurality of slidable segments, means detachably connecting each slidable segment with a movable element on the conformator, and means for clamping all the movable segments before detaching the hat-block.

2. In a hat-conformator, a plurality of movable elements arranged around an oval space adapted to admit the head of a person and having yielding movement on radial lines whereby said elements are set to conform to the shape and size of the inserted head by contact therewith, in combination with a detachable hat-block having a plurality of movable segments, means operating to connect each segment with a movable element of the conformator whereby the same will be correspondingly set by the movement of the movable element, and means for fixing the said segments in position after such adjustment.

3. In a hat conformator, a sectional hat-block having a plurality of movable segments adjustable generally radially around an oval center, and means for clamping said segments after adjustment, comprising a top plate and a bottom plate and a centrally operating means for tightening said plates upon the segments, in combination with a conformator including in its structure adjustable elements movable radially in corresponding manner to the segments of the hat-block by contact with the head on which the conformator is placed, and means detachably connecting each adjustable element on the conformator with a segment in the hat-block.

1,017,010. CLOTHES-LINE REEL. ROBERT H. MCNAIR and WILLIAM A. MCNAIR, Peoria, Ill. Filed Apr. 4, 1910. Serial No. 553,190. (Cl. 242—102.)



A clothes line reel comprising a casing with a shaft extending through the same and having its opposite ends projecting therefrom, a spring actuated drum mounted on the shaft within the casing, means adapted to be connected to one of the projecting ends of the shaft so as to stretch the line, a ratchet wheel on the other projecting end of the shaft, a pawl pivoted to the casing having a pair of inwardly disposed arms extending in opposite directions to alternately lock the drum against reverse rotation in either direction, said pawl also having an outwardly disposed arm provided with an opening therein, one wall of the opening being abrupt or angular, the other wall of the opening being inclined, a spring having one end secured to the casing, the free end of the spring being angularly bent and adapted to ride over the abrupt portion of the opening and project therefrom so that the flat portion of the spring will contact with the inclined portion of the opening thereby to hold the teeth of the inwardly disposed arms in engagement with the teeth of the ratchet wheel.

1,017,011. AIR-BRAKE. WILLIAM E. MEAD, Marshall, Tex. Filed June 21, 1911. Serial No. 634,460. (Cl. 188—1.)

1. In a fluid pressure brake apparatus the combination with a cylinder having a plurality of holes circumferentially drilled in the middle portion thereof, a plurality of

[illegible] disposed on either side of the middle portion of [illegible] cylinder and arranged to be actuated by the fluid [illegible] therein, a plurality of sleeves disposed on said [illegible] for guiding the same, guiding bosses for guiding said sleeves, a plurality of springs disposed within said [illegible] and arranged to exert pressure, a plurality of rods [illegible] said sleeves and connected to said springs and arranged to be actuated thereby, and a lever system pivoted [illegible] and rods for actuating the brake shoes.

2. In a fluid pressure brake apparatus the combination of a cylinder [illegible] having a plurality of holes circumferentially disposed in the central portion of said cylinder for the admission of air therein, means for supplying air to said holes, a pair of pistons disposed on either side of said holes and arranged to be actuated therein, rods attached to said pistons and arranged to be actuated thereby, springs disposed within said sleeves and [illegible] therein, rods secured to said springs and arranged to be actuated thereby, which the same are actuated by said pistons, guides for said sleeves, a lever system pivoted to said rods for [illegible] the brake shoes, and springs disposed within said cylinder for returning the piston heads to their central position when the air pressure is removed from the cylinder.

1,017,012. WATER-HEATER. FREDERICK H. OEHLER, Lorain, Ohio, assignor to Hoffman Heater Company, Lorain, Ohio, a Corporation of Ohio. Filed May 16, 1911. Serial No. 627,897. (Cl. 122—249.)

1. A serpentine water heating coil comprising successive laterally extended sections joined together at alternate ends, the lateral extensions of successive sections being directed alternately toward opposite sides of the coil.

2. A serpentine water heating coil comprising alternate sections laterally extended in opposite directions with relation to the longitudinal axis of the coil and joined together successively at alternate ends.

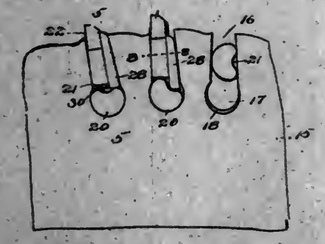
3. A serpentine water heating coil comprising a longitudinal series of laterally extended sections joined together at alternate ends, the entire coil being comprised in a single casting, the sections having the lateral extensions [illegible] alternately opposite sides of the central longitudinal [illegible] of the coil.

4. A water heating coil comprising a longitudinal series of relatively flat laterally extended sections joined together at alternate ends and provided with a continuous internal passage throughout of serpentine and approximately flat helical shape.

5. A water heating coil comprising integrally joined flat approximately segmental sections connected alternately at the ends with a continuous passage throughout the coil, the sections being staggered with relation to the longitudinal axis of the coil.

[Claims 6 to 9 not printed in the Gazette.]

1,017,013. INSERTIBLE SAW-TOOTH. FREDERICK C. OLDHAM, Brooklyn, N. Y. Filed Nov. 15, 1909, Serial No. 528,256. Renewed July 6, 1911. Serial No. 637,093. (Cl. 143—153.)



1. The combination with a saw having a slot extending inward from its edge and increasing in width and terminating in a segmental opening, of a saw tooth having substantially parallel sides insertible within the slot, a wedge member adapted to fill the space between the tooth and the adjacent side of the slot, and a cam inserted within the segmental opening tending to move the wedge longitudinally of the tooth and slot when rotated.

2. The combination with a saw having a slot extending inward from its edge, said slot increasing in width and terminating in a segmental opening, a tooth having approximately parallel sides, narrower than the slot and having tongue and grove connections with one side of the slot, a wedge complementary to the tooth and adapted to fill the opening between the tooth and the adjacent side of the slot, tongue and groove connections between the wedge and the tooth, and a cam disposed within the opening adapted when rotated to force the wedge longitudinally outwardly.

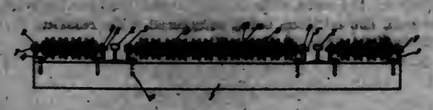
3. The combination with a saw having a slot projecting inwardly from its edge and terminating in a segmental opening, of a cam disposed within the segmental opening and having tongue and groove connections therewith, a tooth member having substantially parallel sides disposed within the slot, and resting upon the cam and having tongue and groove connections with the side of the slot, a wedge member complementary to the tooth disposed within the slot and having tongue and groove connection with the tooth, the cam being proportioned when rotated to force the wedge member longitudinally outwardly into binding engagement with the tooth and opposed wall of the slot.

4. The combination with a saw having a slot extending inward from its edge increasing in width and terminating in a segmental opening, of a crescent-shaped cam disposed within the opening and having tongue and groove connection therewith, a tooth having substantially parallel sides disposed within the slot, and resting upon the cam, a complementary wedge disposed between the tooth and the wall of the slot and bearing upon the cam in such manner that when the tooth is driven inwardly the cam is rotated to force the wedge outwardly.

5. The combination with a saw having a slot extending inwardly from its edge increasing in width and terminating in a segmental opening, of a cresent-shaped cam disposed within the opening, a tooth inserted within the opening and bearing upon one horn of the cresent, and a complementary wedge inserted between the tooth and the sides of the slot and bearing upon the other horn of the cresent.

[Claim 6 not printed in the Gazette.]

1,017,014. CATTLE-GUARD. ROBERT J. OTEY, Birmingham, Ala. Filed Oct. 7, 1911. Serial No. 653,454. (Cl. 29—42.)



1. A cattle guard comprising a series of disks each having its periphery slitted and the cut portions bent at an angle to the body of the disk, alternate portions being bent in opposite directions, and means to rotatably support said disks in spaced relationship, substantially as described.

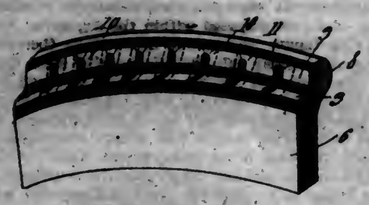
2. In a cattle guard, the combination of a series of shafts, of a series of sheet metal disks mounted on said shafts, spacer sleeves on the shafts having a centrally disposed annular sharpened projection, the peripheries of said disks being slitted and bent outwardly to present irregular angularly disposed tongues substantially as described.

3. In a catle guard, a section thereof comprising end bearings, shafts mounted in said bearings, a series of metal disks mounted thereon, spools interposed between the disks to space them and provided with sharp annular cutting edges, said disks having the metal in their peripheries displaced to give irregular portions which overhang said spools, substantially as described.

4. In a cattle guard, the combination of a series of shafts and means to support same, of a series of sheet metal disks mounted on each shaft, means to space said disks which have their peripheries distorted to provide angularly disposed portions which overhang the spacing means between the disks, substantially as described.

5. In a cattle guard, a series of juxtaposed sheet metal disks having their peripheries radially slitted and the tongues between the slits bent alternately in opposite directions at an angle to the body of the disks, and means to assemble said disks in spaced relationship, substantially as described.

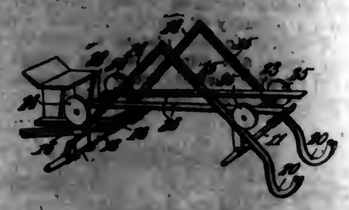
1,017,015. BRAKE-SHOE. JAMES T. PERKINS, Cedartown, Ga., assignor of one-half to William R. Golsan, Cedartown, Ga. Filed Dec. 10, 1910. Serial No. 596,689. (Cl. 184—3.)



A brake shoe having a smooth imperforate working face and a flange along one side of the shoe, said flange having a curved working face adapted to contact with the flange of a wheel and having a plurality of non-communicating lubricant holding pockets extending inwardly from said curved face and adapted to be closed by the wheel flange, all of the walls of each pocket converging inwardly along straight lines from the curved open end of the pocket.

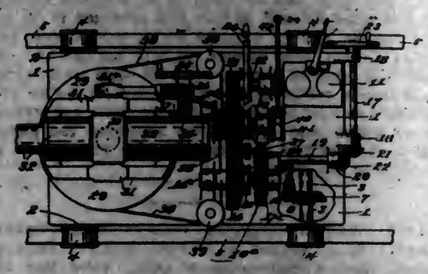
1,017,016. DUMPING-WAGON. HOMER L. PHELPS, Martinsburg, W. Va., assignor to The Auburn Wagon Company, Martinsburg, W. Va. Filed Jan. 7, 1911. Serial No. 601,383. (Cl. 21—20.)

In a dumping wagon front and rear bolsters, spaced rails each having a single bend between its ends to form anticlinal portions extending forwardly and rearwardly, said forwardly extending portions being secured at their ends to the front bolster, means for connecting the rearwardly extending portions to the rear bolster, said portions being provided with hooked terminals, a wagon



body, and wheels thereon movable along the rails and into the hooked terminals.

1,017,017. MACHINE FOR OPERATING COAL-PUNCHES. ANDREW POWELL, Uniontown, Pa. Filed July 25, 1910. Serial No. 573,621. (Cl. 125—14.)



1. In a machine for operating coal punches, the combination, with a truck, truck axles having pinions, a longitudinal shaft under the truck and geared with the truck axles, a turn-table revolubly mounted on the truck, a vertically swinging punch mounted on the table, and a motor on the truck and having a driving shaft, of a drum, a drum shaft geared with the driving shaft, a shaft geared with the drum shaft and with the said longitudinal shaft, a clutch between these gears, an endless cable operated by the drum for revolving the table, a clutch mechanism for coupling and uncoupling the drum shaft with the driving shaft and means for operating the clutches.

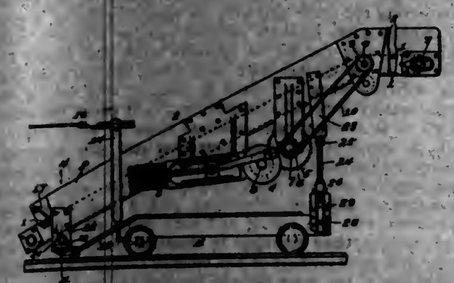
2. In a machine for operating coal punches, the combination with a truck, a motor mounted on the truck, a longitudinal shaft geared with the truck axles, and a revoluble punch-table mounted on the truck, of a pair of shafts one of which projects from the motor, a drum mounted on the other shaft of said pair, an endless cable operated by the drum for revolving the table, a short shaft between the longitudinal shaft and the drum shaft, gears connecting the motor shaft with the drum shaft and the latter and the short shaft with the said longitudinal shaft, a clutch on the drum shaft, a clutch on the short shaft, and a clutch lever fulcrumed between the clutches for operating them.

1,017,018. MINE-CAR LOADER. ANDREW POWELL, Uniontown, Pa. Filed Aug. 17, 1911. Serial No. 644,676. (Cl. 198—8.)

1. The combination, with a conveyer frame, and a truck having a rear extension projecting downwardly and forming a support for the rear end of said frame, of a cross plate having up-turned ends, a shaft secured in said ends and having the said frame pivotally mounted thereon, and means for pivoting the plate to the said extension.

2. The combination, with a conveyer frame, a truck, and means for connecting the frame with the truck for vertical and lateral movement of the frame, of a pony truck, a straight track pivoted to the said truck for the

pony truck, a screw carried by and working in the pony truck, and means for connecting the frame with the screw.



3. The combination, with a conveyer frame, a truck, and means for connecting the frame with the truck for vertical and lateral movement of the frame, of a pony truck, a screw connected with the frame and working in the pony truck for adjusting the frame vertically, and a pony truck track pivoted to said truck and operated by the lateral movement of the frame.

4. The combination, with a conveyer frame, a truck, and means connecting the frame with the truck for vertical and lateral movement of the frame, of a pony truck, an adjusting screw carried by and working in the pony truck, a yoke secured to and depending from the frame for connecting the frame with the screw, a shaft mounted on the said truck, and a pony truck track pivoted to the shaft and adapted to be operated by the lateral movement of the frame.

5. The combination, with a conveyer frame, and a truck, of a drop projection extending from the rear end of the truck, pivoted connections between the projection and the frame permitting vertical and lateral movement of the frame, an elevated track pivoted to the front end of the truck and operated by the lateral movement of the frame, a pony truck operated on the track by the lateral movement of the frame, a yoke attached to and depending from the frame, above the track, and an adjusting screw having the yoke loosely mounted thereon and working in the pony truck.

1,017,019. DEVICE FOR HANGING WALL-PAPER. MILLARD F. RANDLE, Mobile, Ala., assignor of one-fourth to Margaret A. V. Roberts and one-fourth to Lily Roberts, Mineral Wells, Tex., and five one-hundredths to Redford O. Braswell and forty-five one-hundredths to Julia H. Randle, Forth Worth Tex. Filed Apr. 8, 1911. Serial No. 619,834. (Cl. 216—7.)

1. In a paper hanger's implement, handles pivoted together, an arm pivoted on one of the handles, a socket applied to the arm of one of the handles, arms on the socket, a tool carried by the arms and adjustable holding arms connected to the other handle.

2. In a paper hanger's implement, handles, an arm pivoted to one of the handles, an extension pivoted to the other handle, clamping arms pivoted on the extension, a socket having arms, the said socket being fitted to the first mentioned arm, a brush clip carried by the arms on the socket, and a brush having a head provided with recesses to receive the edge of the clip.

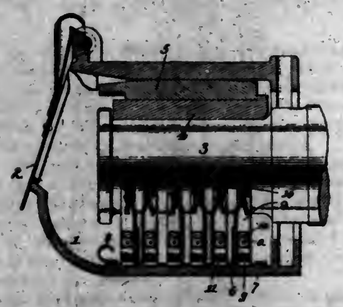
3. In a paper hanger's implement, handles, an arm pivoted to one of the handles, means for attaching a tool to said arm paper holding arms pivotally connected to the other handle and movable to positions at angles to the handle or parallel therewith.

4. In a paper hanger's implement, handles, an arm pivoted to one of the handles, paper holding arms pivotally connected to the other handle, a socket having arms, the said socket being fitted to the arm on the handle, means for holding the pivoted arm at different positions of adjustment, and a tool caried by the arms on the socket.

5. In a paper hanger's tool, handles pivoted together, an arm pivoted in one of the handles, a latch for holding the arm at different positions of adjustment, and a socket having arms carrying a tool, said socket being mounted on the arm.

[Claim 6 not printed in the Gazette.]

1,017,020. LUBRICATING DEVICE. LEVERETT ARTHUR SANFORD, Bristol, Conn., assignor to Edward J. Millspaugh and John F. Maynard, Utica, N. Y. Filed Dec. 17, 1910. Serial No. 597,858. (Cl. 64—35.)



1. In a lubricating device for journals, the combination of a journal box adapted to contain a supply of lubricant; a base-frame or support located within said box; a series of feeders for the lubricant, extending from the lubricant space to the journal; a series of fingers or holders for said feeders; and springs, one for each finger, each spring comprising a leaf or strip of metal folded upon itself at a point between its ends and thence coiled into circular form, the free ends being thence separated and one carried upward to form an upstanding finger-bearing arm, and the other carried horisontally in one direction and thence bent backward to form two slightly separated parallel members, adapted to clasp between them a member of the base-frame.

2. In a lubricating device, the combination of a feeder-carrying finger; and a connecting spring consisting of a strip of resilient material folded upon itself and coiled in such folded form into a circular coil, one of the free ends of the strip being carried thence forward in substantially horisontal plane, there bent sharply backward, to produce two substantially parallel and slightly separated leaves or members to clasp the base-frame, and the other end being carried in an upward direction to form an upstanding arm to receive and support the feeder-carrying finger.

3. In a lubricating device for journals, a support for a feeder-carrying finger, consisting of a strip of resilient material first doubled or folded upon itself, thence coiled into a substantially circular form, the two leaves being thence separated and one carried upward to form an upstanding arm, and the other being carried first forward in substantially horisontal plane, thence sharply bent backward and carried beneath and parallel to the horisontal portion, and finally bent sharply upward to form a retaining lip or catch, substantially as described and shown.

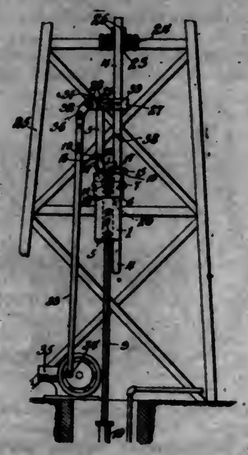
4. In a lubricating device for journals, a support for a feeder-carrying finger, consisting of a folded strip of

resilient material coiled in its folded condition into substantially circular form, the two leaves diverging from said coil and carried, one in an upward direction to form an upstanding arm *c*, and the other in a substantially horizontal position to form a leaf *b*, thence folded back beneath said leaf *b* to form a parallel leaf *a*, and terminating in a sharply upturned lip *e*.

5. In combination with a base-frame having a strip or member provided with notches in its front and rear edges, a flat spring, having one of its end portions folded back upon itself to form two parallel leaves, and its extremity turned sharply at an angle to its face; whereby it is adapted to clasp the base-frame, and to retain itself in place thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,017,021. WINDMILL AND ENGINE COUPLING. DAVIS SEMEN, Rudd, Tex. Filed June 26, 1911. Serial No. 635,498. (Cl. 103—62.)



1. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the bars being provided with means for connecting it with the pump rod of a windmill, means for connecting the other bar with an engine or motor, a guide spaced from the casing and mounted on one of the reciprocatory bars and receiving the other reciprocatory bar and provided with an antifriction device arranged to bear against the same, and means for connecting either of the said reciprocatory bars with the casing.

2. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably mounted in the casing, one of the reciprocatory bars being provided with means for connecting it with a windmill, a guide spaced from the casing and secured to the other reciprocatory bar and slidably receiving the first-mentioned reciprocatory bar, a pitman pivoted to the guide and adapted to be connected with the crank or wrist pin of an engine, and means for connecting either of the reciprocatory bars with the casing.

3. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the reciprocatory bars being provided with means for connecting it with a windmill, a guide consisting of plates secured to the other reciprocatory bar and extending therefrom in opposite directions and arranged at opposite sides of the first-mentioned reciprocatory bar, an antifriction roller mounted between the guide plates and also arranged between the reciprocatory bars and forming a bearing for the said first-mentioned reciprocatory bar, and means for connecting the guide with the engine or motor.

4. A device of the class described including a casing having means for connecting it with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the bars being provided with means for connecting it with the pump rod of a windmill, means for connecting the other bar with an engine or motor, a pair of independently movable catches, one for each bar, each catch engaging the bar at opposite sides, and means for connecting the catches with each other and with the casing, whereby when one catch is engaged with one of the reciprocatory bars such engagement will cause the other catch to be automatically released from the other bar.

5. A device of the class described including a casing, spaced reciprocatory bars slidably arranged in the casing and provided at their inner and outer edges with notches arranged at different elevations, and a pair of catches connected with the casing and each provided with inner and outer portions arranged to simultaneously engage the inner and outer notches of the reciprocatory bars, whereby either one of the same may be coupled to the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,017,022. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 19, 1910. Serial No. 598,071. (Cl. 197—119.)

1. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby and which is at all times free to be rotated unlimited extents both backwardly and forwardly, a rotative indicator, and means for fixedly connecting said indicator with the carriage or with said platen as may be desired at any line space position of the platen in the rotative movement thereof and irrespective of the rotative position of the indicator.

2. In a typewriting machine, the combination of a carriage, a rotative platen which is at all times free to be rotated unlimited extents both backwardly and forwardly, an indicator-carrier fixed to the carriage, an indicator-carrier connected to move in unison with the platen as the latter is rotated, a rotative indicator, and means for disconnecting said indicator from either one of said carriers and for connecting it with the other of said carriers at any line space position in the rotative movement of the platen and irrespective of the rotative position of the indicator.

3. In a typewriting machine, the combination of a carriage, a rotative platen at all times free to be rotated unlimited extents both backwardly and forwardly, an indicator-carrier fixed to the carriage and arranged concentric with the platen, a second indicator-carrier fixed to turn with the platen and arranged concentric therewith, a rotative indicator, and means for disconnecting said indicator from either one of said carriers and for connecting it with the other of said carriers at any line space position in the rotative movement of the platen and irrespective of the rotative position of the indicator.

4. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby and which is at all times free to be rotated unlimited extents both backwardly and forwardly, a rotative indicator mounted concentric with the platen and adapted to turn with the platen or to remain fixed while the platen turns independently thereof, and means for fixedly connecting said indicator with the carriage or with said platen as may be desired at

any line space position of the platen in the rotative movement thereof and irrespective of the rotative position of the indicator.

5. In a typewriting machine, the combination of a carriage, a rotative platen, two annular carriers, one of said carriers being fixed to the carriage and the other turning with the platen, an indicator shiftable from one carrier to the other at any line space position of the platen, and means for positively connecting said indicator with either one or the other of said carriers as may be desired.

[Claims 6 to 16 not printed in the Gazette.]

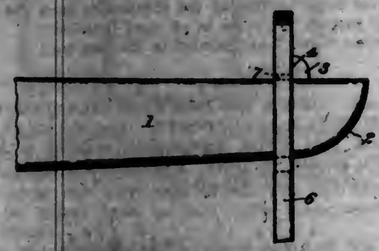
1,017,023. MANUFACTURE OF CELLULOSE. FRANCIS L. STEWART, Murrysville, Pa., assignor to Maise Sugar & Cellulose Company, Pittsburgh, Pa., a Corporation of South Dakota. Filed Nov. 11, 1908. Serial No. 462,119. (Cl. 8—2.)

1. In the manufacture of cellulose, the method which consists in first obtaining a fine bleached pulp from the fiber and cellular matter of maize, and then treating the pulp with chlorinated lime and hydrochloric acid; substantially as described.

2. In the manufacture of cellulose, the method which consists in treating immature maize to reduce its fiber and cellular matter to the form of a fine bleached pulp, then treating such pulp with chlorinated lime and hydrochloric acid, for the purpose of removing impurities which would otherwise hinder the material, after subsequent nitration, from dissolving in the ordinary solvents; substantially as described.

3. In the manufacture of cellulose for nitration, the step which consists in taking a fine bleached pulp produced from the fiber and cellular matter of maize, and treating the same with chlorinated lime and hydrochloric acid; substantially as described.

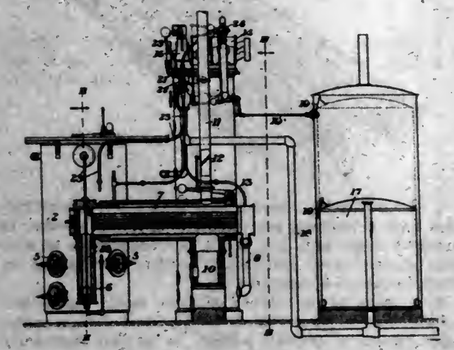
1,017,024. SWINGLETREE AND TRACE CONNECTION. WILLIAM ARTHUR STINSON, Greenwood, Miss. Filed Apr. 14, 1910. Serial No. 555,886. (Cl. 21—79.)



1. The combination with a swingletree having an end reduced along its front edge only to form a shoulder, of a stop secured to the tree at the rear of the latter, the stop and shoulder being arranged diagonally opposite each other and only slightly out of alinement with each other, and a trace having an eye adapted to be passed over said stop and be swung on the latter over the end of the tree into engagement with said shoulder, the stop preventing accidental outward movement of the trace from off the tree and the shoulder at the front of the tree limiting inward movement of the trace on the tree, the trace having only slight play between said stop and shoulder.

2. The combination with a swingletree whose rear edge is longer than its front edge and having a rounded end with the curvature thereof merging from the rear edge of the tree into the front thereof, of a stop secured to the rear of the tree near the end thereof, the distance between the inner side of the stop at the base of the latter and the end of the tree at the rear of the latter being substantially the same as the distance between the inner side of the stop at the base of the latter and all points of the adjacent curvature of rounded end of the tree and also between the same point of the stop and the front face of the tree where the curvature merges into the front edge of the tree, and a trace having an eye adapted to be placed over said stop and swung on the latter over the curved end of the tree to pass the end of the tree through the eye and position the ends of the eye adjacent the front and rear edges of the tree.

1,017,025. GAS-PRODUCER MECHANISM. FRANCIS H. TREAT, Cleveland, Ohio. Filed May 4, 1908. Serial No. 430,681. (Cl. 48—63.)



1. A gas producer having means for supplying steam and air thereto, an exhauster for drawing steam and air through the producer charge, an engine for driving the exhauster, a source of live steam supply for the engine, and means for causing the volume of gas produced to control the supply of live steam to the engine.

2. A gas producer having means for supplying steam and air thereto, an exhauster which draws the steam and air through the producer charge, an engine driving the exhauster, a connection leading from the exhaust of the engine to the producer, and means controlled by the volume of gas produced for varying the quantity of steam delivered from the exhaust.

3. A gas producer, an exhauster therefor, an engine for driving the exhauster, a connection for delivering exhaust steam from said engine into the producer, and valve means controlled by the volume of gas delivered by the producer for controlling the amount of exhaust steam delivered to the producer from said engine and whereby a volumetric ratio between the gas produced and such delivered steam may be maintained; substantially as described.

4. A gas producer, an exhauster therefor, an engine for driving the exhauster, a connection for delivering exhaust steam from said engine into the producer, and valve means controlled by the volume of gas delivered by the producer for controlling the amount of exhaust steam delivered to the producer from said engine and whereby a volumetric ratio between the gas produced and such delivered steam may be maintained, together with heating means for the boiler of said engine and means for regulating the pressure of steam in said boiler in accordance with the rate of steam supply to the producer; substantially as described.

5. A gas producer, an exhauster therefor, an engine for driving the exhauster, means controlled by the volume of gas produced for automatically controlling the supply of steam to the engine, a connection leading from the exhaust of the engine to the producer, means for varying the quantity of steam delivered to the producer through said connection, and means for superheating such steam before it is delivered into the producer; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,017,026. POST-MOLD. FRANKLIN P. VAN HOOK, Caldwell, Idaho. Filed Mar. 29, 1911. Serial No. 617,646. (Cl. 25—118.)

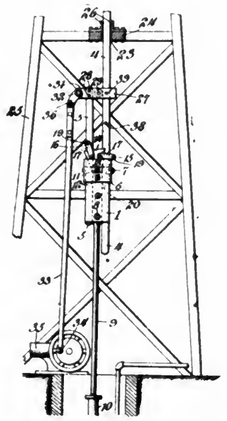
1. A mold having a wall formed with a slot in combination with a metal retainer, having arms extending be-

resilient material coiled in its folded condition into substantially circular form, the two leaves diverging from said coil and carried, one in an upward direction to form an upstanding arm *a*, and the other in a substantially horizontal position to form a leaf *b*, thence folded back beneath said leaf *b* to form a parallel leaf *c*, and terminating in a sharply upturned lip *e*.

5. In combination with a base-frame having a strip or member provided with notches in its front and rear edges, a flat spring, having one of its end portions folded back upon itself to form two parallel leaves, and its extremity turned sharply at an angle to its face; whereby it is adapted to clasp the base-frame, and to retain itself in place thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,017,021. WINDMILL AND ENGINE COUPLING. DAVIS SHEEN, Rudd, Tex. Filed June 26, 1911. Serial No. 635,498. (Cl. 103—62.)



1. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the bars being provided with means for connecting it with the pump rod of a windmill, means for connecting the other bar with an engine or motor, a guide spaced from the casing and mounted on one of the reciprocatory bars and receiving the other reciprocatory bar and provided with an antifriction device arranged to bear against the same, and means for connecting either of the said reciprocatory bars with the casing.

2. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably mounted in the casing, one of the reciprocatory bars being provided with means for connecting it with a windmill, a guide spaced from the casing and secured to the other reciprocatory bar and slidably receiving the first-mentioned reciprocatory bar, a pitman pivoted to the guide and adapted to be connected with the crank or wrist pin of an engine, and means for connecting either of the reciprocatory bars with the casing.

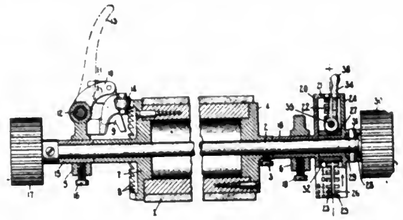
3. A device of the class described including a casing designed to be connected with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the reciprocatory bars being provided with means for connecting it with a windmill, a guide consisting of plates secured to the other reciprocatory bar and extending therefrom in opposite directions and arranged at opposite sides of the first-mentioned reciprocatory bar, an antifriction roller mounted between the guide plates and also arranged between the reciprocatory bars and forming a bearing for the said first-mentioned reciprocatory bar, and means for connecting the guide with the engine or motor.

4. A device of the class described including a casing having means for connecting it with the plunger or piston rod of a pump, reciprocatory bars slidably arranged in the casing, one of the bars being provided with means for connecting it with the pump rod of a windmill, means for connecting the other bar with an engine or motor, a pair of independently movable catches, one for each bar, each catch engaging the bar at opposite sides, and means for connecting the catches with each other and with the casing, whereby when one catch is engaged with one of the reciprocatory bars such engagement will cause the other catch to be automatically released from the other bar.

5. A device of the class described including a casing, spaced reciprocatory bars slidably arranged in the casing and provided at their inner and outer edges with notches arranged at different elevations, and a pair of catches connected with the casing and each provided with inner and outer portions arranged to simultaneously engage the inner and outer notches of the reciprocatory bars, whereby either one of the same may be coupled to the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,017,022. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 19, 1910. Serial No. 598,071. (Cl. 197—119.)



1. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby and which is at all times free to be rotated unlimited extents both backwardly and forwardly, a rotative indicator, and means for fixedly connecting said indicator with the carriage or with said platen as may be desired at any line space position of the platen in the rotative movement thereof and irrespective of the rotative position of the indicator.

2. In a typewriting machine, the combination of a carriage, a rotative platen which is at all times free to be rotated unlimited extents both backwardly and forwardly, an indicator-carrier fixed to the carriage, an indicator-carrier connected to move in unison with the platen as the latter is rotated, a rotative indicator, and means for disconnecting said indicator from either one of said carriers and for connecting it with the other of said carriers at any line space position in the rotative movement of the platen and irrespective of the rotative position of the indicator.

3. In a typewriting machine, the combination of a carriage, a rotative platen at all times free to be rotated unlimited extents both backwardly and forwardly, an indicator-carrier fixed to the carriage and arranged concentric with the platen, a second indicator-carrier fixed to turn with the platen and arranged concentric therewith, a rotative indicator, and means for disconnecting said indicator from either one of said carriers and for connecting it with the other of said carriers at any line space position in the rotative movement of the platen and irrespective of the rotative position of the indicator.

4. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby and which is at all times free to be rotated unlimited extents both backwardly and forwardly, a rotative indicator mounted concentric with the platen and adapted to turn with the platen or to remain fixed while the platen turns independently thereof, and means for fixedly connecting said indicator with the carriage or with said platen as may be desired at any line space position of the platen in the rotative movement thereof and irrespective of the rotative position of the indicator.

5. In a typewriting machine, the combination of a carriage, a rotative platen, two annular carriers, one of said carriers being fixed to the carriage and the other turning with the platen, an indicator shiftable from one carrier to the other at any line space position of the platen, and means for positively connecting said indicator with either one or the other of said carriers as may be desired.

[Claims 6 to 16 not printed in the Gazette.]

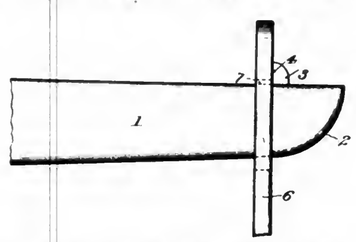
1,017,023. MANUFACTURE OF CELLULOSE. FRANCIS L. STEWART, Murrysville, Pa., assignor to Maize Sugar & Cellulose Company, Pittsburgh, Pa., a Corporation of South Dakota. Filed Nov. 11, 1908. Serial No. 462,119. (Cl. 8—2.)

1. In the manufacture of cellulose, the method which consists in first obtaining a fine bleached pulp from the fiber and cellular matter of maize, and then treating the pulp with chlorinated lime and hydrochloric acid; substantially as described.

2. In the manufacture of cellulose, the method which consists in treating immature maize to reduce its fiber and cellular matter to the form of a fine bleached pulp, then treating such pulp with chlorinated lime and hydrochloric acid, for the purpose of removing impurities which would otherwise hinder the material, after subsequent nitration, from dissolving in the ordinary solvents; substantially as described.

3. In the manufacture of cellulose for nitration, the step which consists in taking a fine bleached pulp produced from the fiber and cellular matter of maize, and treating the same with chlorinated lime and hydrochloric acid; substantially as described.

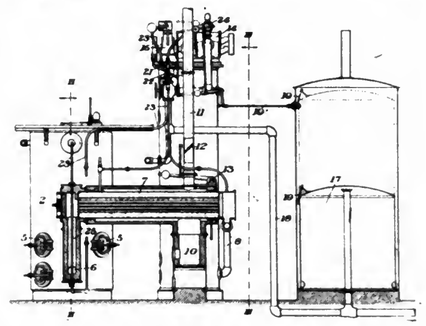
1,017,024. SWINGLETREE AND TRACE CONNECTION. WILLIAM ARTHUR STINSON, Greenwood, Miss. Filed Apr. 14, 1910. Serial No. 555,386. (Cl. 21—79.)



1. The combination with a swingletree having an end reduced along its front edge only to form a shoulder, of a stop secured to the tree at the rear of the latter, the stop and shoulder being arranged diagonally opposite each other and only slightly out of alinement with each other, and a trace having an eye adapted to be passed over said stop and be swung on the latter over the end of the tree into engagement with said shoulder, the stop preventing accidental outward movement of the trace from off the tree and the shoulder at the front of the tree limiting inward movement of the trace on the tree, the trace having only slight play between said stop and shoulder.

2. The combination with a swingletree whose rear edge is longer than its front edge and having a rounded end with the curvature thereof merging from the rear edge of the tree into the front thereof, of a stop secured to the rear of the tree near the end thereof, the distance between the inner side of the stop at the base of the latter and the end of the tree at the rear of the latter being substantially the same as the distance between the inner side of the stop at the base of the latter and all points of the adjacent curvature or rounded end of the tree and also between the same point of the stop and the front face of the tree where the curvature merges into the front edge of the tree, and a trace having an eye adapted to be placed over said stop and swung on the latter over the curved end of the tree to pass the end of the tree through the eye and position the ends of the eye adjacent the front and rear edges of the tree.

1,017,025. GAS-PRODUCER MECHANISM. FRANCIS H. TREAT, Cleveland, Ohio. Filed May 4, 1908. Serial No. 430,681. (Cl. 48—63.)



1. A gas producer having means for supplying steam and air thereto, an exhauster for drawing steam and air through the producer charge, an engine for driving the exhauster, a source of live steam supply for the engine, and means for causing the volume of gas produced to control the supply of live steam to the engine.

2. A gas producer having means for supplying steam and air thereto, an exhauster which draws the steam and air through the producer charge, an engine driving the exhauster, a connection leading from the exhaust of the engine to the producer, and means controlled by the volume of gas produced for varying the quantity of steam delivered from the exhaust.

3. A gas producer, an exhauster therefor, an engine for driving the exhauster, a connection for delivering exhaust steam from said engine into the producer, and valve means controlled by the volume of gas delivered by the producer for controlling the amount of exhaust steam delivered to the producer from said engine and whereby a volumetric ratio between the gas produced and such delivered steam may be maintained; substantially as described.

4. A gas producer, an exhauster therefor, an engine for driving the exhauster, a connection for delivering exhaust steam from said engine into the producer, and valve means controlled by the volume of gas delivered by the producer for controlling the amount of exhaust steam delivered to the producer from said engine and whereby a volumetric ratio between the gas produced and such delivered steam may be maintained, together with heating means for the boiler of said engine and means for regulating the pressure of steam in said boiler in accordance with the rate of steam supply to the producer; substantially as described

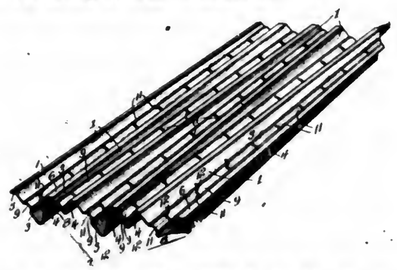
5. A gas producer, an exhauster therefor, an engine for driving the exhauster, means controlled by the volume of gas produced for automatically controlling the supply of steam to the engine, a connection leading from the exhaust of the engine to the producer, means for varying the quantity of steam delivered to the producer through said connection, and means for superheating such steam before it is delivered into the producer; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,017,026. POST-MOLD. FRANKLIN P. VAN HOOK, Caldwell, Idaho. Filed Mar. 29, 1911. Serial No. 617,646. (Cl. 25—118.)

1. A mold having a wall formed with a slot in combination with a metal retainer, having arms extending be-

yond one side of said wall and a looped portion to project through the slot beyond the opposite side of said wall, and a key adapted to pass through said loop and having fixed arms and a spring arm to bear upon the latter named wall and having an offset to engage said loop.



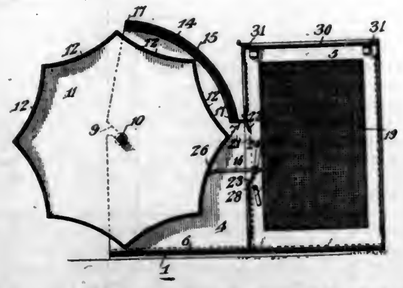
2. A mold having a wall formed with a slot in combination with a retainer, provided with a looped portion to extend through said slot, and a key adapted to be slidably engaged with said looped portion, and having an offset to interlock therewith.

3. A mold having at one side an inset longitudinal concavo-convex rib provided with a cross slot, a metal loop having a central portion to project outwardly through the slot into the concavity of the rib and arms to extend laterally beyond the convex side of the rib, and a key to engage the central portion of the loop and concaved face of the rib.

4. A mold having a concavo-convex rib provided with a cross slot therein, in combination with a metal loop to project through said slot with arms to project beyond the inner face of the rib, and a sliding spring key to interlock with the loop and concaved face of the rib.

5. A mold having at one side a concavo-convex rib with one or more cross slots, a metal loop adapted to be passed through said slot and having arms to project beyond the inner wall of the rib, and a key adapted to be slidably engaged with the loop and concaved face of the rib, and having an offset to interlock with the loop.

1,017,027. FLY-TRAP. WILLIAM SIMPSON WALLACE, San Antonio, Tex., assignor of one-half to Casper O. Dallet, Austin, Tex. Filed Dec. 23, 1910. Serial No. 598,980. (Cl. 43—32.)



1. A trap of the class described including a casing open at the front and composed of spaced sides having inclined upper edges, an inclined transparent top connecting the upper edges of the sides and extending upwardly and forwardly from the top of the rear opening to the top of the front opening of the casing, a cage fitted against the casing at the back thereof and partially closing the rear opening of the same and having an opening communicating with the interior of the casing, a rotary bait carrying drum mounted between the sides of the casing and adapted to carry insects from the front of the casing through the latter to the opening of the cage, and a scraper mounted at the lower portion of the rear opening of the casing to remove insects from the drum and forming a closure for the opening of the cage when the latter is removed from the casing.

2. A trap of the class described including a cage having an opening, a bait carrying drum arranged to convey insects to the opening, and a scraper movably mounted at the opening and arranged to remove the insects from the drum, said scraper being also movable to a position across the opening of the cage and forming a closure for the same.

3. A trap of the class described including a removable cage provided with an entrance opening, a rotary bait carrying drum arranged adjacent to the opening of the cage, and a scraper pivotally mounted on the cage at the entrance opening thereof and adapted to scrape the insects from the drum and arranged to swing across the opening of the cage to form a closure for the same when the cage is removed.

4. A trap of the class described including a removable cage provided with an entrance opening, a rotary bait carrying drum arranged adjacent to the opening of the cage, and a scraper consisting of a plate pivoted at one side of the center to the cage and located at the entrance opening thereof and arranged to extend through the same, the inner portion of the scraper being heavier than the outer portion and adapted to maintain the scraper in cooperative relation with the drum and to swing the scraper automatically to a position across the opening of the cage when the scraper is free to close.

5. A trap of the class described including a removable cage provided with an entrance opening, a rotary bait carrying drum arranged adjacent to the opening of the cage, and a scraper consisting of a plate pivoted at one side of the center to the cage and located at the entrance opening thereof and arranged to extend through the same, the inner portion of the scraper being heavier than the outer portion and adapted to maintain the scraper in cooperative relation with the drum and to swing the scraper automatically to a position across the opening of the cage when the scraper is free to close, and an operating device having an arm or portion arranged to engage the weighted inner portion of the scraper to open the latter and to support the same in an open position.

[Claims 6 and 7 not printed in the Gazette.]

1,017,028. BETON OR CONCRETE SLEEPER WITH RESILIENT RAIL-SUPPORTS. OTTO WILHELMI, Feldmeilen, near Zurich, Switzerland, assignor to Rudolf Wolle, Leipzig, Germany. Filed Feb. 23, 1910. Serial No. 545,467. (Cl. 238—3.)

1. A concrete sleeper for rails comprising central and end parts composed of solid concrete, and bodies composed of an elastic mixture of fibrous and a cement-like material hardened with the concrete and forming with the central and end concrete parts an integral and congruous, composite mass, the said elastic bodies being disposed only at the rail supporting parts of the sleeper and being co-extensive with the rails and not extending laterally of the rails to an appreciable extent.

2. A concrete sleeper for rails comprising a body portion of concrete, and bodies composed of an elastic mixture of cement-like and asbestos-like substance hardened with the concrete sleeper and forming therewith an integral congruous, composite mass, the said elastic bodies being disposed only at those points of the sleeper on which the rails are supported and not extending laterally of the rails to an appreciable extent, substantially as set forth and shown.

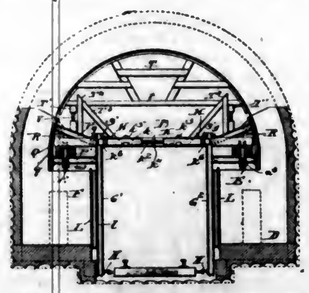
3. A concrete sleeper for rails comprising a body portion wherein the ends and central parts are composed of concrete, and bodies composed of an elastic mixture of cement-like and fibrous substance constituting, with the concrete ends and central parts, an integral congruous, composite mass, the said elastic bodies being disposed only at rail supporting parts of the sleeper and being coextensive in width with the rail and not extending laterally of the rail to an appreciable extent.

4. A concrete sleeper for rails comprising a body portion of concrete, bodies composed of an elastic mixture of cement-like and fibrous substance constituting, with the concrete sleeper an integral congruous, composite mass, said bodies being flush with the upper face of the sleeper and extending downwardly therein to at least half the depth thereof, the said elastic bodies being coextensive in width with respect to the width of the rails but not extending laterally of the rails to an appreciable extent.

5. A sleeper for rails comprising a body portion composed of concrete, and bodies composed of a heterogeneous elastic mixture hardened with the concrete and forming with the body portion a congruous, composite mass, said bodies being disposed only at the rail supporting parts of the sleeper and not extending laterally of the rails to an appreciable extent.

[Claims 6 to 9 not printed in the Gazette.]

1,017,029. FORM FOR TUNNEL-WORK. EDWARD G. WILLIAMS and ELMER H. BROWN, Washington, D. C. Filed Nov. 21, 1906. Serial No. 344,423. (Cl. 25—32.)



1. In an apparatus of the class described, the combination, with a carriage open beneath, of side-wall forms bodily adjustable transversely of the carriage, and means at the upper and lower ends of said side-wall forms to carry the lateral loads on said forms independently of the carriage.

2. In an apparatus of the class described, the combination, with a carriage open beneath, of side-wall forms bodily adjustable transversely of the carriage and arranged to be carried by the carriage, and means at the upper and lower ends of said side wall forms and arranged to carry the lateral loads on said forms without transmitting the same to the carriage.

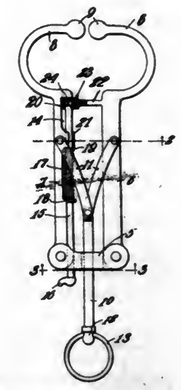
3. In an apparatus of the class described, the combination, with a substructure, of wall forms supported by the substructure and bodily movable laterally with relation thereto, means arranged to carry the lateral loads on said forms without transmitting the same to the substructure, an arch-form mounted on the substructure over the wall-forms, said arch form being provided with clearance spaces to receive the upper ends of the wall-forms when the latter are drawn in and the arch-form is lowered, and means for raising and lowering the arch-form with relation to the substructure.

4. In an apparatus of the class described, the combination, with a through truss, through which the traffic of the tunnel may pass, of forms carried on opposite sides of said truss, means above the traffic passage way for holding the upper ends of the forms against displacement, and removable means out of the traffic passage way for holding the lower ends of the forms against displacement.

5. In an apparatus of the class described, the combination with the tunnel track, of a supplemental track having its rails outside the tunnel track, a carriage mounted on the supplemental track and open above the tunnel track to permit traffic over the latter, forms carried by the said carriage, and means independent of said carriage for sustaining the transverse load on said forms.

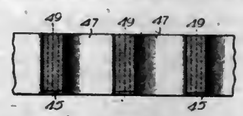
[Claims 6 to 8 not printed in the Gazette.]

1,017,030. LEAD-RING. FRANK P. WILLIAMS, Burlington, Kans. Filed Nov. 17, 1910. Serial No. 592,912. (Cl. 119—151.)



The combination with two pivoted jaws of a lead ring, one of said jaws having a shouldered portion and the other a shank provided with a recessed outer end, said shank when the jaws are toward each other abutting the shouldered portion, of a slidingly mounted rod carried by the jaw having the shouldered portion and having a finger pin upon its free end and its inner end disposed to seat within the recess of the shank, and a spring upon the rod for holding the rod and shank so that its lock engaging end will seat within the recessed portion of the shank and hold the jaws in closed and spaced relation.

1,017,031. PROCESS OF MAKING MAGNETIC POLE-PIECES. OSCAR WINGAARD, Chicago, Ill., assignor, by mesne assignments, to Hoskins Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 31, 1909. Serial No. 535,822. (Cl. 29—148.)



1. The process of making magnetic pole pieces which consists in forming a longitudinal series of holes in a bar of magnetic material, filling said holes with a non-magnetic brazing mixture, removing magnetic material between the holes thus filled with said brazing mixture and cutting said bar transversely through the holes containing the brazing mixture.

2. The process of forming pairs of magnetic pole pieces which consists in forming a longitudinal series of holes in a suitable bar of magnetic material, filling said holes with non-magnetic material, fusing said non-magnetic material to the walls of the holes, boring said bar to intersect the non-magnetic material filling said holes, and cutting said bar transversely through the holes containing the brazing mixture.

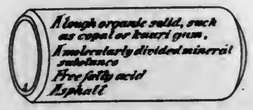
3. The process of forming pairs of magnetic pole pieces, which consists in forming a longitudinal series of holes in a suitable bar of magnetic material, filling said holes with non-magnetic material, fusing said non-magnetic material to the walls of the holes, boring said bar to intersect the non-magnetic material filling said holes, and then finishing the pole pieces into substantially prismatic form about the axis of said bore.

4. The process of making magnetic pole pieces which consists in forming a longitudinal series of holes in a bar of magnetic material, said holes not penetrating through said bar, filling said holes with a non-magnetic brazing mixture, removing magnetic material to break the magnetic connection between the sides of said bar, and cutting said bar transversely through the holes containing the brazing mixture.

5. The process of making magnetic pole pieces which consists in drilling a longitudinal series of holes in a bar of magnetic material, placing a flux in said holes, heating said bar and said flux, adding a non-magnetic brazing mixture in said holes, removing magnetic material between the holes filled with said brazing mixture to break the magnetic connection between the sides of said bar, and cutting said bar transversely through the holes containing the brazing mixture.

[Claims 6 to 11 not printed in the Gazette.]

1,017,032. COMPOSITION FOR DUPLICATE SOUND-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed May 25, 1907. Serial No. 375,726. (Cl. 106—1.)



1. An improved composition for duplicate sound records, comprising an organic solid and an inert metallic salt chemically precipitated *in situ* and suspended therein and of excessive fineness, substantially as described.

2. An improved composition for duplicate sound records, comprising an organic solid and an inert lead salt chemically precipitated *in situ* and suspended therein and of excessive fineness, substantially as described.

3. An improved composition for duplicate sound records, comprising an organic solid and a lead sulfid chemically precipitated *in situ* and suspended therein and of excessive fineness, substantially as described.

4. An improved composition for dulicate sound records, comprising an organic solid and an inert substance chemically precipitated *in situ* and suspended therein and of excessive fineness, and free stearic acid, substantially as described.

5. An improved composition for duplicate sound records, comprising an organic solid and an inert substance chemically precipitated *in situ* and suspended therein and of excessive fineness, and asphaltum, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,017,033. TURN-TABLE. THADDEUS C. BEACH, St. Johns, Mich. Filed June 16, 1911. Serial No. 633,494. (Cl. 104—19.)

1. The combination with a pedestal having an annular ball bearing thereon, a pin anchored to the pedestal by a thrust ball bearing alined with the annular bearing, securing the lower end of the pin to the pedestal, the upper portion of the pin being movable laterally, and a turn-table on the annular bearing whose inner portion is adjustable longitudinally on the pin to which it is secured.

2. The combination with a pit having a center pedestal, of an annular bearing plate on the pedestal, an anchor pin secured concentrically in the bearing of the plate, and a turn-table traveling on the annular bearing with its inner portion adjustable longitudinally on the anchor pin.

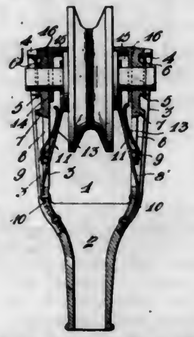
3. The combination with a pit having a center pedestal and an annular bearing thereon, of an anchor pin, a thrust bearing resisting endwise movement of the pin and a turn-table having outwardly extending members supported between their ends on the annular bearing, the inner ends of said members being adjustable longitudinally on the pin.

4. The combination with a pit having a central bearing pedestal of a plate on the pedestal having an annular raceway, an anchor pin, an end thrust bearing resisting endwise movement of the pin, and a turn-table having outwardly extending members fulcrumed between their ends on the annular bearing and secured at their inner ends to the pin by means affording adjustment longitudinally of the pin.

5. The combination with a pit having a central bearing pedestal, of a cap on the pedestal, a sleeve concentrically secured on the cap, a pin extending loosely through the sleeve, a thrust ball-bearing resisting upward movement of the pin in the sleeve, a plate adjustable longitudinally on the pin, an annular ball-bearing between the plate and pedestal plate concentric with the sleeve, beams extending outwardly from the plate over the ball-bearing, and a platform on the beams.

[Claims 6 to 11 not printed in the Gazette.]

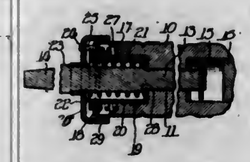
1,017,034. TROLLEY-HARP. THEOPIHL BEDNAROWICZ, South Bend, Ind. Filed Nov. 21, 1910. Serial No. 593,587. (Cl. 191—39.)



1. In a trolley wheel harp a pole engaging socket, a pair of wheel supporting fork members formed on said socket, outwardly projecting hubs formed on the upper ends of said fork members, a trolley wheel shaft engaged with said hubs, a trolley wheel revolubly mounted on said shaft, washers arranged on the shaft between the trolley wheel and the side bars or the fork member, guard flanges formed on the upper sides of said washers and adapted to project over the hubs of the trolley wheel whereby the trolley wire is prevented from entering between the wheel and the adjacent sides of the fork members of the harp and locking lugs formed on the outer edges of the fork members whereby the washers are held in operative position with the guard flanges thereon above the hub of the wheel

2. In a trolley harp a pole engaging socket, wheel supporting fork members formed on said socket, said fork members having therein bearing hubs, a wheel supporting shaft arranged in said hubs, a trolley wheel revolubly mounted on said shaft, contact springs secured at their lower ends to the sides of the fork members of the harp and having formed in their outer ends apertures adapted to receive the ends of the trolley wheel shaft, reinforcing springs secured to the sides or fork members of the harp and adapted to engage said contact springs whereby the latter are held in positive electrical engagement with the hubs on the trolley wheel, washers arranged on the shaft between the ends of the trolley wheel hub and the inner sides of the fork members of the harp, said washers having a semicircular inwardly projecting guard flange formed on the enlarged upper portion of each of said washers, said guard flanges projecting over the hub of the trolley wheel thereby positively preventing the trolley wire from catching between the wheel and the sides or fork members of the harp, and means formed on said washers whereby the same are held in position to maintain the guard flanges thereon above the hub of the trolley wheel.

1,017,035. SCREW-DRIVER. REUBEN B. BENJAMIN, Chicago, Ill. Filed May 19, 1910. Serial No. 562,278. (Cl. 145—76.)



1. A screw driver comprising an independently rotatable blade, a ratchet member associated with said blade, a manually rotatable second ratchet member arranged to be brought into operative relation with said first-named ratchet member by the exertion of a longitudinal thrust upon said second-named member, and means for converting the ratchet connection into a positive clutch connection in each direction between the blade and said second-named member.

2. A screw driver comprising a blade, a handle associated with said blade so as to be capable of rotary and longitudinal movement relatively thereto, a ratchet member associated with said blade, a ratchet member associated with said handle, a spring for normally holding said ratchet members out of operative relation, so that the blade may normally be rotated independently but may be brought into ratchet connection with said handle by the application of a longitudinal thrust to the latter, and means for converting the ratchet connection into a positive clutch connection in each direction between said blade and said handle.

3. A screw driver comprising a blade, a handle associated with said blade so as to be capable of rotary and longitudinal movement relatively thereto, a ratchet member associated with said blade and longitudinally movable relatively thereto, a ratchet member associated with said handle, said ratchet members being arranged to make a ratchet connection, or a clutch connection, with each other according as they are made to engage each other to a greater or less extent, and resilient means for holding said ratchet members out of operative relation.

4. A screw driver comprising a blade; a handle associated with said blade so as to be rotatable, and longitudinally movable to a determined extent, with respect to said blade; a ratchet member associated with said blade and longitudinally movable with respect thereto; a ratchet member carried by said handle, said ratchet members being arranged to make a ratchet connection, or a clutch connection, with each other according as they are made to engage each other to a greater or less extent; and a spring interposed betwen said ratchet members.

5. A screw driver comprising a handle, a blade mounted rotatably and longitudinally-movably in the handle, means for limiting the longitudinal movement, means for forming an annular chamber around the blade at the forward end of the handle, a ring mounted in this chamber and provided with teeth extending through openings in the forward end thereof, a spring normally projecting said teeth through said openings, a disk mounted slidably and non rotatably on the blade and provided with a series of openings through which said teeth may extend, and a spring normally projecting the blade and holding said disk out of engagement with said teeth, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,017,036. WIRING-TACK. CHARLES C. BLAKE, Brookline, Mass. Filed Sept. 18, 1911. Serial No. 650,005. (Cl. 173—319.)

1. A wiring tack comprising a metal plate having its ends bent over and downward with a central opening through the metal, a nail or pin having its head supported in said opening, and an insulating lining covering the interior surface of the plate the central portion of which is doubled, perforated and extending downward forming a midway, partition and embracing the nail or pin, as set forth.

2. A wiring tack comprising a metal plate having opposite ends bent at substantially right angles with a central depression in its upper portion extending through the metal forming a tubular orifice, a nail or pin supported by its upper end in said depression, and an insulating lining the central portion of which is doubled and centrally perforated, its sides being parallel and embracing the nail or pin.

3. A wiring tack comprising a metal plate having its ends bent over and downward and a portion of its upper surface elevated with a central depression extending through the metal, a nail or pin having its head supported in said depression, and an insulating lining the central portion of which is doubled and perforated and embraces the nail or pin, as set forth.

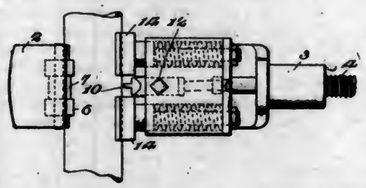
4. A wiring tack comprising an oblong metal plate having its end bent over and downward, a portion of its upper surface being elevated and having a central depression extending through the metal, a nail or pin supported by its upper end in said depression, and an insulating lining the central portion of which is doubled and perforated, its sides being parallel and embracing the nail or pin.

5. A wiring tack comprising a metal plate having opposite ends bent at substantially right angles, a portion of its upper surface having a ring-shaped elevation with a central depression extending through the metal, a nail or pin supported by its upper end in said depression, and an insulating lining the central portion of which is doubled and centrally perforated with its sides parallel and embracing the nail or pin.

1,017,037. PIPE-CUTTING TOOL. BRADFORD BORDEN, Toronto, Ontario, Canada, assignor to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed May 3, 1910. Serial No. 559,070. (Cl. 81—192.)

1. A hand-operated pipe-cutting tool comprising a fixed member and a movable member, a cutting knife, two pipe engaging members arranged in different planes with the knife located between them, said knife and engaging members being mounted in one of the first mentioned members,

each pipe engaging member being movable independently of the other, and means for effecting a relative movement between the fixed and movable members.

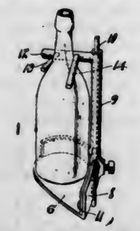


2. A hand-operated pipe cutting tool comprising a fixed member and a movable member, a cutting knife, two corresponding pipe engaging saddles arranged in different planes, with the knife located between them, each saddle engaging the pipe on opposite sides of the plane of the knife, separate springs acting each on one of the saddles, the knife, saddles, and the springs being mounted in one of the before-mentioned members, and means for effecting a relative movement between such latter members.

3. A hand-operated pipe-cutting tool comprising a fixed member and a movable member, a cutting knife, two corresponding pipe engaging saddles arranged in different planes with the knife located between them, each saddle being of approximately V-shape and having broad bearing surfaces for engaging the pipe on opposite sides of the plane of the knife, separate springs acting each on one of the saddles, the knife, saddles, and the springs being mounted in one of the before-mentioned members, and means for effecting a relative movement between such latter members.

4. A hand-operated pipe cutting tool comprising a body having a fixed jaw at one end and an internally threaded bearing at the other end, a carrier slidably mounted on said body, an externally-threaded rod mounted in said bearing and connected to said carrier, a fixed cutting knife mounted in said carrier, two saddles mounted in said carrier on opposite sides of the knife, separate springs acting each on one of the saddles, said saddles having broad bearing surfaces for engaging a pipe longitudinally thereof laterally of the knife, and rollers journaled in said fixed jaw for engaging the pipe on opposite sides of the plane of the knife.

1,017,038. BOTTLE-HOLDER FOR BOTTLE-FILLING MACHINES. JOSEPH H. CHAMP, Cleveland, Ohio. Filed Sept. 21, 1911. Serial No. 650,499. (Cl. 226—9.)



1. In mechanism of the class described, the combination with a bottle-holder including a plate provided with a lateral flange adapted to engage the bottom of a bottle and properly locate the latter; of a rod rising vertically from said holder; and a member adapted to detachably engage said rod, said member being provided at its upper end with fingers arranged to engage the upper portion of such a bottle.

2. In mechanism of the class described, the combination with a bottle-holder including a plate provided with a lateral flange adapted to engage the bottom of a bottle and properly locate the latter; of a rod rising vertically from said holder; and a member adapted to detachably engage said rod, said member being provided at its upper end with an arm extending horizontally over said holder and having two diverging fingers arranged to engage the upper portion of such a bottle.

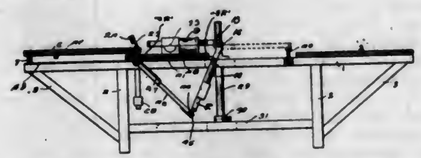
3. In mechanism of the class described, the combination with a holder for relatively large bottles including a plate provided with a lateral flange adapted to engage the bottom of such a large bottle and properly locate the latter; of a rod rising vertically from said holder; and a member adapted to detachably engage said rod, said member being provided at its lower end with a flange adapted to fit within the aforesaid flange and reduce the space on said holder plate, and at its upper end with fingers arranged to engage the upper portion of a relatively small bottle.

4. In mechanism of the class described, the combination with a holder for relatively large bottles including a plate provided with a lateral flange adapted to engage the bottom of such a large bottle and properly locate the latter; of a rod rising vertically from said holder; and a member adapted to detachably engage said rod, said member being provided at its lower end with a flange adapted to fit within the aforesaid flange and reduce the space on said holder plate, and at its upper end with an arm extending horizontally over said holder and having two diverging fingers arranged to engage the upper portion of a relatively small bottle.

5. In mechanism of the class described, the combination of bottle feeding mechanism including guide means; a bottle-holder including a plate provided with a lateral flange adapted to engage the bottom of a bottle and properly locate the latter when transferred from said feeding mechanism to said holder; and a member supported vertically above said holder and provided with fingers arranged to engage the upper portion of such a bottle, said fingers forming, in effect, continuations of said guide-means when said holder is adjacent said feeding mechanism.

[Claim 6 not printed in the Gazette.]

1,017,039. CORE-MAKING MACHINE. FREDERICK WM. DELANOY, Alameda, Cal. Filed Feb. 21, 1911. Serial No. 609,077. (Cl. 22—10.)



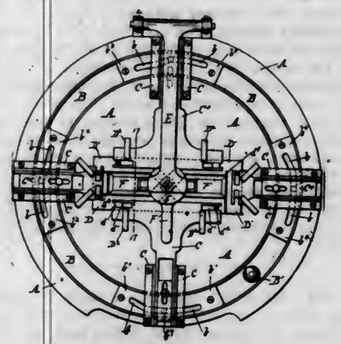
1. In an apparatus of the kind described, a framework, a pair of rectangular frames hinged at their adjacent ends to said framework, and normally located in a horizontal position and adapted to be swung together to a horizontal position, each of said frames having the core mold sections adapted to fit together, a tamping device adapted to be swung horizontally over each of said core mold sections, and vertically movable to tamp the core therein and then swung horizontally out of the way, and means for delivering a completed core from said core section.

2. In an apparatus of the kind described, a frame provided with a pair of longitudinal rails spaced apart from each other, a pair of rectangular frames hinged to said rails at their adjacent ends, and normally supported in a horizontal position, each of said frames having a core mold section, said frame being adapted to be swung over to a horizontal position to bring said mold sections together, a horizontally movable shelf movable into position by one of said mold sections, and means for delivering a completed core upon said shelf.

3. In an apparatus of the kind described, a framework provided with longitudinal rails spaced apart from each other, a pair of rectangular frames located horizontally between said rails and hinged at their inner ends, each of said frames having a core section, one of said frames having its outer end resting against a support and the other of said frames having its outer ends resting against a support and automatically out of the way of said end, each of said frames and core sections being adapted to be swung together in a horizontal position, a tamping device for tamping each of said core sections, and means for receiving and delivering a completed core from said core section.

4. In a device of the kind described, a framework having a pair of longitudinal rails, a pair of rectangular frames, each hinged at their adjacent ends to said rails and each provided with a mold section, the outer end of one of said frames resting upon a support, a hinged transverse bar having a counterweight at one end, the outer end of the other of said rectangular frames resting upon said bar, a horizontally movable platform located adjacent to the last mentioned rectangular frame, and means connected with said movable platform adapted to be operated by said rectangular frame to move said platform into position above said rectangular frame.

1,017,040. MACHINE FOR FOLDING BLANKS FOR CUFFS, &c. GARRY J. DORMANDY, Troy, N. Y., assignor to The United Shirt and Collar Company, a Corporation of New York. Filed Jan. 17, 1907. Serial No. 352,745. (Cl. 223—55.)



1. In a blank-edge infolding-machine, the combination of a blank support, a templet which is substantially integral both in its width and length and whose outline is the same as and serves for defining the outline of the folded blanks, mechanical means for guiding the templet in its movements to and from the support, infolding mechanism for successively infolding different edge portions of a given blank, and mechanism for effecting relative horizontal movement between templet and support in at least two directions from the normal folding position, whereby the templet may be successively disengaged from the different blank folds and repositioned thereon in normal position until the blank is completely folded.

2. In a blank-edge infolding-machine, the combination of a blank support, a templet which is substantially integral both in its width and length and whose outline is the same as and serves for defining the outline of the folded blanks, mechanical means for guiding the templet in its movements to and from the support, infolding mechanism for successively infolding different edge portions of a given blank, mechanism for effecting relative horizontal movement between templet and support in at least two directions from the normal folding position, whereby the templet may be successively disengaged from the different blank folds and repositioned thereon in normal position until the blank is completely folded, and means for creasing folds by pressure between support and infolders.

3. In a blank-edge infolding-machine, the combination of a blank support, a templet which is substantially integral both in its width and length and whose outline is the same as and serves for defining the outline of the folded blanks, mechanical means for guiding the templet in its movements to and from the support, infolding mechanism for successively infolding different edge portions of a given blank, and mechanism for bodily shifting the templet horizontally in at least two directions from the normal folding position, whereby the templet may be successively disengaged from the different blank folds and repositioned thereon in normal position until the blank is completely folded.

4. In a blank-edge infolding-machine, the combination of a blank support, a templet consisting of a single plate the same size and shape as the finished blank, mechanical means for guiding the templet in its movements to and from the support, infolding mechanism for successively infolding different edge portions of a given blank, and mechanism for effecting relative horizontal movement between the templet and support in at least two directions from the normal folding position, whereby the templet may be successively disengaged from the different blank folds and repositioned thereon in normal position until the blank is completely folded.

5. A blank-edge infolding-machine comprising in combination, a support for the blanks, infolders, a templet having a constant blank-defining periphery or outline, positioning mechanism therefor, mechanism whereby said templet may be given to and fro movements along two horizontal lines in sequence; whereby the templet may be extracted from the folds first formed over it and again positioned on the same blank so as to define the yet unfolded edge portions thereof, and mechanism for operating said infolders in sequence in accord with the templet movements, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,017,041. SOUND-BOX. LEON F. DOUGLASS, San Rafael, Cal., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed June 5, 1909. Serial No. 500,356. (Cl. 181—11.)

1. The combination with a stylus bar, of a mounting therefor comprising a torsional member, means arranged to flex said torsional member, without effecting a tensional strain on said torsional member, and means to prevent relative twisting of the opposite ends of said torsional member.

2. The combination with a stylus bar, of a mounting therefor comprising a torsional member rigidly secured to said bar, and means arranged to flex said torsional member by bowing from its connection with said bar, without tending to shift said bar.

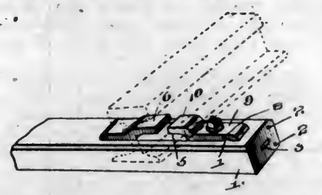
3. The combination with a stylus bar, of a mounting therefor comprising a torsional resilient member rigidly secured to said bar, means arranged to flex said torsional member, to vary the torsional coefficient, and means arranged to prevent a tensional strain of said resilient member.

4. The combination with a stylus bar, of a mounting therefor comprising a torsional rod rigidly connected to said stylus bar, and extending transversely thereof, and means adjustable to flex said rod by bowing, to vary its torsional effect without affecting the normal position of said bar.

5. The combination with a stylus bar, of a mounting therefor comprising a torsional member, spaced bearings having open grooves supporting said torsional member, and means arranged to flex said torsional member exterior to said bearings to hold the same upon said bearings.

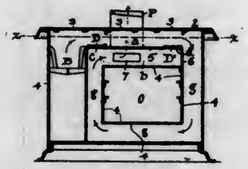
[Claims 6 to 11 not printed in the Gazette.]

1,017,042. RAILWAY-TIE. FRANK EISEL, FRANK HAGEN, and ARTHUR SCHROEDER, Breese, Ill. Filed Mar. 30, 1911. Serial No. 617,846. (Cl. 238—3.)



A railway tie comprising a body of concrete having sockets formed in its upper face, bed plates fitted snugly in the sockets, the bed plate being provided at one end with an overhanging arm and at the other end on its upper face with a transverse projection, a separate clamping arm having a transverse groove in its lower face, a plate embedded in the concrete, and a binding bolt passing from the lower face of the tie through the embedded plate, the bed plate and the clamping arm.

1,017,043. COOKING STOVE OR RANGE. JOHN ERBEN, Cleveland, Ohio. Filed Feb. 13, 1911. Serial No. 608,483. (Cl. 126—1.)



1. A kitchen range having top and bottom plates horizontally at its top and a draft space between the said plates, an oven beneath said bottom plate and a draft flue for the products of combustion provided with a single inlet opening located between the said bottom plate and the top plate of the oven, said bottom plate having a down draft hole in advance of said inlet opening, and a damper adapted to open and close said down draft hole.

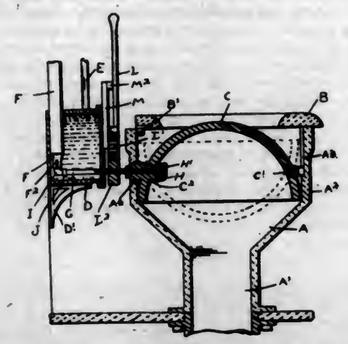
2. A kitchen range having a fire pot and a draft space in its top open to said fire pot and provided with front and rear down draft holes through the bottom plate of said space, a draft passage having an exhaust opening located beneath said bottom plate and separate dampers controlling said down draft holes.

3. A kitchen range having a draft space in its top and a draft flue for the products of combustion provided with an inlet opening beneath the bottom plate of said space, said plate having down draft holes front and rear in respect to said flue, and a damper for each of said down draft holes adapted to be raised to close said draft space and divert the products of combustion downward through the corresponding hole.

4. A kitchen range having a fire-box and a draft space in its top, an oven and a draft passage over the same, a horizontal plate dividing said draft space from said draft passage provided with down draft holes front and rear of the range, separate dampers for said holes adapted to be raised to divert the draft downward, a draft flue at the rear of the range and an exhaust opening for the products of combustion from said draft passage into said draft flue.

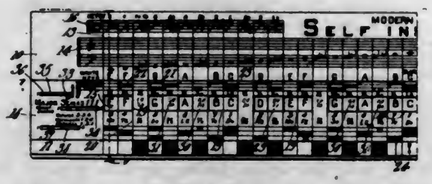
5. A kitchen range having a draft space front to rear in its top and a bottom plate for said space provided with down draft holes in its front and rear respectively, a damper for each of said holes adapted to be raised to close said draft space, and a draft flue to carry off the products of combustion having an inlet opening beneath said bottom plate and relatively between said down draft holes.

1,017,044. WATER-CLOSET. WILLIAM ALEXANDER FRASER, Georgetown, Ontario, Canada. Filed Apr. 11, 1910. Serial No. 554,860. (Cl. 4—17.)



The combination with a main bowl, of a reversible bowl, trunnions formed on said bowl and journaled in the walls of the main bowl, of a pipe extending through one of the trunnions and provided with an eccentric outer end, a nut having a deflecting lip attached to its inner extremity, a pinion located upon said pipe, and a quadrant meshing with the pinion for turning the pipe, a water supply tank into which the outer end of the pipe extends, a main water supply pipe provided with a tapered seat at the lower end having side slots formed in the lower part thereof, an elbow extending up into the seat and having the horizontal portion provided with a gland fitting onto the eccentric outer end of the trunnion pipe, and a ball located at the bottom of the main water supply pipe and designed to be seated alternately on the main seat and on the seat at the top of the elbow, as and for the purpose specified.

1,017,045. MUSICAL CHART. ANDREW J. FRENCH, Purcell, SAMUEL A. MCKELVY, McCloud, and JOSEPH W. SCROGGS, Kingfisher, Okla. Filed Sept. 29, 1910. Serial No. 584,580. (Cl. 84—86.)



1. A music chart including a body having columns thereon corresponding with the keys of a key-board, each of said columns being provided with a note of the staff and a character, a slidable member mounted on the body and having columns adapted to register with the columns on the body, said member having characters corresponding with the characters in the columns on the body, the said columns on the slidable member having means for exposing the notes constituting a predetermined chord and slides carried by the slidable member and separately movable to conceal certain of the characters on the slidable member and to expose those characters designating the notes of a predetermined scale.

2. A music chart including a body having key-indicating columns and a staff intersected by the columns, each column being provided with a note on the staff and with a character, a longitudinally slotted member slidable on the body, separate slides mounted on said member, and concealing devices carried by the slides and arranged in alinement, said member and concealing devices coöperating to select the notes in the columns to make up a predetermined scale.

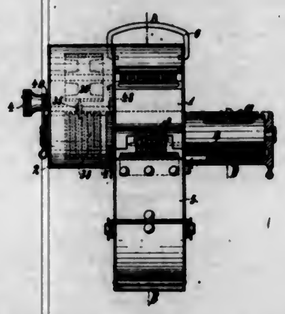
3. A music chart including a body having key indicating columns thereon and a staff intersected by the columns, each column being provided with a note upon the staff and with a character, a slotted member slidably mounted on the body and normally concealing certain of the characters thereon, and separately movable slides cooperating with said slidable member and having portions adapted to conceal certain of the characters in the columns, said slides being shiftable relative to the slidable member to expose the characters forming a predetermined scale, said member and slides being movable together to indicate the selected scale in a predetermined key.

4. A music chart including a body having columns adapted to register with the keys of a piano keyboard and designated by characters indicating the tones of the chromatic scale, and separate means having portions for concealing all of said characters but those of a predetermined major scale, said means being movable relative to each other and to the body to expose characters indicating the change from major sixths and sevenths to minor sixths and sevenths.

5. A music chart including a body having columns adapted to register with the keys of a piano keyboard and designated by characters indicating the notes of the chromatic scale, and separate means having portions for concealing all of said characters but those of a predetermined major scale, said means being movable independently relative to each other and to the body to expose characters indicating the change from major thirds, sixths and sevenths to minor thirds, sixths and sevenths.

[Claim 6 not printed in the Gazette.]

1,017,046. TRANSPORTABLE TICKET-PRINTING AND FARE-RECORDING APPARATUS. HEINRICH FRIEDLEIN, Deutz, near Cologne, Germany. Filed Sept. 1, 1909. Serial No. 515,672. (Cl. 235—31.)



1. In a fare registering and ticket printing apparatus in combination with an inclosed roller printing mechanism; longitudinally adjustable type bars determining the printing of variable indications of fare, destination, and the like on a ticket, and mechanism for registering and totaling the fares thus printed, said mechanism adapted to be actuated by the turning of the printing roller.

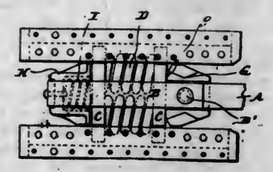
2. In combination in a transportable fare registering apparatus adapted to print consecutive detachable tickets on a paper roll; means for pressing the ticket to be printed against the type face of the printing roller, a handle on the axle of said roller adapted to rotate the roller by hand pressure, sliding and locking bars for varying the composition of the said type face, and mechanism operated from the printing roller for registering and for totaling the separate fares printed by said type face.

3. In combination in a transportable fare registering apparatus adapted to print consecutive detachable tickets on a rotatable paper roll; means for pressing the ticket against the type face of the printing mechanism, a longitudinally grooved printing roller, a handle on the axle of said roller adapted to rotate the roller by hand pressure, an inking device adapted to come periodically into contact with said roller, type bars on said roller adapted to slide in the longitudinal grooves of said roller, means for securing said type bars in predetermined positions on said printing roller, a movable gear wheel adapted to transmit the adjustment motion of the type bar to the fare-registering mechanism, and a fare-registering and totaling mechanism operated from the printing roller.

4. In combination in a transportable ticket printing and fare registering apparatus, a roller adapted to press the ticket against the type surface of the printing roller, means for rotating said printing roller, a longitudinally grooved printing roller having partially fixed type surface, longitudinally adjustable type bars adapted to slide in the grooves of said printing roller, a double roller inking device adapted to ink the types on said printing roller, a fare-totaling and registering apparatus, and gearing adapted to transmit the indications of the movable type bars to the said registering apparatus.

5. In combination in a hand-operated transportable ticket printing and fare registering apparatus, a longitudinally grooved printing roller, adjustable type bars on said roller, a locking rack on the ticket price type bar of the printing roller, so adjusted that the mechanism can only revolve when the said bar is correctly adjusted, an inking device adapted to ink the printing surface of said printing roller, a fare-totaling and registering apparatus, and a gear wheel movable on its axle in coöperation with the ticket-price type bar for transmitting the indications of said bar to the registering apparatus.

1,017,047. DRAFT-GEAR FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y., assignor to Standard Coupler Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 21, 1909, Serial No. 497,489. Divided and this application filed Dec. 22, 1909. Serial No. 534,476. (Cl. 213—42.)

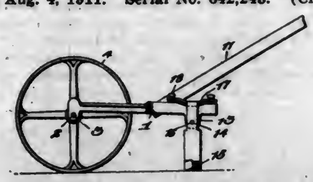


1. In a draft gear, the combination with the front and rear followers, stops between which said followers are movably mounted, and draft springs interposed between said followers, of the draw-bar tail strap surrounding said followers and springs, a block rigid with the draw-bar pivotally connected with said tail strap and having a flat face bearing against one of said followers, a spring cup also mounted in said strap adapted to bear against the opposite face of the other follower and free to move away from the same, and a supplemental spring of less initial capacity than the draft spring mounted in said spring cup and adapted to normally bear against said last mentioned follower to separate the follower and cup and thereby center the draw-bar.

2. In a draft gear, the combination with the stop irons, followers loosely mounted in said stop irons and adapted to move toward each other, a draft spring interposed between said followers, and a draw-bar, of a draw-bar tail strap, a block rigid with the draw-bar, pivotally mounted in said tail strap and engaging the outer face of the outer follower, a spring cup mounted in the rear end of said strap, said spring cup having a central spring chamber and lateral faces adapted to engage the inner follower,

and a supplemental spring mounted in said cup, drawing the block rearwardly against the outer follower, said supplemental spring being of less initial capacity than the draft springs, substantially as described.

1,017,048. CULTIVATOR. AUGUST GLATT, Eureka, Cal. Filed Aug. 4, 1911. Serial No. 642,245. (Cl. 97—42.)



In combination with a cultivator, a knife, holding members secured to the end portions of said knife and extending upwardly therefrom and arranged for pivoted connection to said cultivator, a plurality of arms disposed on the upper portion of said members and arranged to come in contact with the frame of said cultivator, said arms being provided with a plurality of threaded holes therein, a plurality of screws disposed in said holes and arranged to come in contact with said frame so as to regulate the angular tip fore and aft of said knife.

1,017,049. CAP. CYRUS S. GREENWOOD, Detroit, Mich. Filed Dec. 19, 1910. Serial No. 598,009. (Cl. 2—107.)

1. A cap formed of a single piece of material closed at one end and adapted to encircle the head and neck of the wearer and having its body portion provided with an arc-shaped slit, the abutting walls of the slitted portion being spread apart to provide an opening for the face, the upper wall of the slitted portion forming the vizor, the vizor being fulled to provide a thickness greater than the thickness of the remaining portion of the cap.

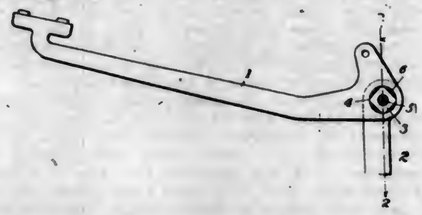
2. A cap formed of a single annular piece of material closed at one end and adapted to encircle the head and neck of the wearer, an arc-shaped slit cut in the body portion of the fabric, the abutting walls of the slitted portion being spread apart to provide an opening for the face, the upper wall of the slitted portion forming a projecting vizor to shield the eyes of the wearer.

1,017,050. TYPE-WRITING MACHINE. EDWIN F. GRIFFIN, Scranton, Pa., assignor to International Text Book Company, Scranton, Pa., a Corporation of Pennsylvania. Filed Oct. 2, 1907. Serial No. 395,636. (Cl. 197—38.)

1. In a typewriting machine, the combination of a type bar hanger, a block connected with the hanger and having a plurality of integral rounded bearing surfaces spaced one from the other, a type bar having a circular eye in which said bearing surfaces have a working fit, and a screw connected with the hanger and having an annular flange for guiding said type bar.

2. In a typewriting machine, the combination with a hanger, of a polygonal bearing block having rounded corners, a screw connecting said bearing block with the hanger, and a type bar mounted on said bearing block, the screw being adapted to hold said type bar in position upon its bearings and guide the same.

3. In a typewriting machine, the combination with a hanger, of a screw threaded into the hanger and having a shoulder 7 and an annular flange 8, a polygonal bearing block having rounded corners confined between the hanger and said shoulder 7, and a type bar pivotally carried on said bearing block and arranged between the type bar and said flange 8.



4. In a typewriting machine, the combination of a type bar hanger, a block upon the hanger having a plurality of rounded bearing surfaces, a type bar having a circular eye in which said bearing surfaces have a working fit, and means for detachably connecting the block to the hanger, whereby it may be readily removed and replaced.

5. In a typewriting machine, the combination of a type bar hanger, a block upon the hanger having a plurality of rounded bearing surfaces, a type bar having a circular eye in which said bearing surfaces have a working fit, and a screw for detachably connecting the block to the hanger, the said screw being also constructed to retain and guide the type bar upon the bearing block.

1,017,051. LAMP-SOCKET. JAMES MONROE HALL, Sulphur Springs, Tex. Filed Aug. 14, 1911. Serial No. 643,876. (Cl. 219—49.)

1. In a device of the class described, the combination with a bulb; of a socket therefor, comprising a metallic cylindrical member, insulated heads for said member, line wires extending through said heads, one of which has a terminal in one of said heads, while the other has a terminal in the other head, a plurality of coils within said cylindrical member having terminals mounted on one of said heads and in connection with one of said line wires, means on the other head to receive said bulb, and additional means to complete the circuit from said bulb to the terminals of said coils, a portion of said last referred to means being adjustable to regulate the intensity of the current therethrough.

2. A device of the class described, comprising the combination with a bulb; of a socket therefor, comprising a metallic cylindrical member, insulated heads therefor, one of said heads being provided with a cavity for the reception of said bulb, line wires entering one of the heads of said cylindrical member, one of said wires continuing to the opposite head to form a terminal in the cavity thereof, the other line wire extending laterally through the other head and forming a terminal on the periphery thereof, said last referred to terminal being spaced from the metallic cylindrical member, a plurality of coils within said cylindrical member having terminals on the last referred to head and connected with the terminal of the last referred to line wire, an additional wire extending from the cavity in the opposite head to said cylindrical member, and a slide carried by said cylindrical member adapted to engage a plurality of contacts formed from said coils to complete the circuit and regulate the intensity of the current passing therethrough.

3. In a device of the class described, the combination with a bulb; of a socket therefor, comprising a metallic cylindrical member having a slot in the periphery adjacent one end thereof, insulated heads therefor, line wires extending through said heads, one of which has a terminal in the one head, while the other has a terminal in the other of said heads, a plurality of coils within the cylindrical member having terminals mounted on one of said heads in connection with the terminal of the line wire therein, means on the other head to receive a bulb, a slide, guiding means on said cylindrical member for said slide, said slide being provided with a spring tongue disposed through the slot in said cylindrical member and adapted to contact with the terminals of said coils and the terminal of the line wire, and a finger piece on said slide, whereby the same may be manually operated.

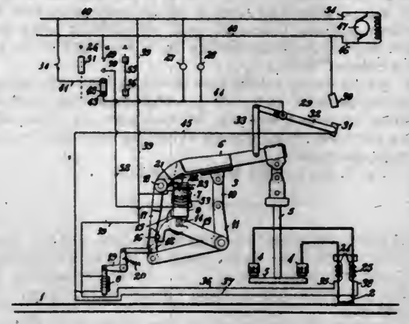
4. A device of the class described, comprising the combination with a bulb; of a socket therefor, comprising a metallic cylindrical member provided with a peripheral slot adjacent the upper end thereof, insulated heads for said cylindrical member, one of which is provided with a cavity for the reception of said bulb, line wires extending through one of said heads, one of said line wires having a terminal in said mentioned head, the other of said line wires extending through the cylindrical member and having a terminal in the cavity of the other head, a plurality of coils within said cylindrical member having terminals on the first mentioned head in alinement with the terminal of the line wire thereon, an additional wire having terminals, respectively, in the wall of said cavity and said cylindrical member and means to complete the circuit between said line wires, comprising a slide mounted on the periphery of said cylindrical member adjacent the upper end thereof, said slide being provided with a spring tongue at one end thereof extending through the slide in said cylindrical member, said spring tongue being adapted to contact with the terminals of the coils and line wire on the adjacent head, a finger piece on the slide for manual operation thereof, and means to limit the movement of said slide.

1,017,052. SYSTEM OF ELECTRIC-CIRCUIT CONTROL. FORD W. HARRIS, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1908. Serial No. 420,062. (Cl. 175—294.)

1. The combination with a main circuit and an interrupter therefor having stationary and movable contact members, means for holding the members in engagement with each other, electro-magnets for operating the movable contact member and for releasing the holding means, and a circuit interrupter having a time element, of an auxiliary circuit and a controller for selectively supplying energy to the electro-magnets and for connecting the interrupter having a time element in shunt circuit relation to the release magnet.

2. The combination with an automatic circuit breaker having stationary and movable contact members and operating and release magnets, an auxiliary switch controlled by the movable member and a circuit interrupter haveing a time element, of a remote controller to act in conjunction with the auxiliary switch and connect the circuit interrupter having a time element in shunt circuit relation to the release magnet.

3. In a system of electric circuit control, the combination with a main circuit, an interrupter therefor having stationary and movable contact members, an operating magnet and a release magnet having independent windings, an auxiliary circuit and connections from the release magnet to the main circuit and to the auxiliary circuit, of remote means for introducing a time element into the automatic operation of the breaker.



4. In a system of electric circuit control, the combination with a main circuit, an interrupter having stationary and movable contact members, an operating magnet and an automatic release magnet having independent windings, an auxiliary circuit and connections from the release magnet to the main circuit and to the auxiliary circuit, of remote means for governing the operation of the circuit interrupter and for introducing a time element into its automatic operation.

5. In a system of electric circuit control, the combination with a main circuit, an interrupter having stationary and movable contact members, an operating magnet and an automatic release magnet having independent windings, an auxiliary circuit and connections from the release magnet to the main circuit and to the auxiliary circuit, of a controller for selectively supplying energy from the auxiliary circuit to the electromagnets and for connecting an auxiliary circuit interrupter having a time element in shunt circuit relation to the release magnet.

[Claims 6 to 13 not printed in the Gazette.]

1,017,053. BRAKE-HEAD FOR RAILWAY-CARS. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation. Filed May 12, 1911. Serial No. 626,840. (Cl. 188—28.)

1. A brake head having a shoe attaching lug formed with leg portions and with a bridge connecting said leg portions to form a keyhole, said portions having chambers and having the bearing surface of the lug extending across said chambers.

2. A brake head having a shoe attaching lug formed with leg portions and with a bridge connecting said leg

portions to form a keyhole, said leg portions being formed with open chambers and having the bearing surface of the lug extending across said chambers.

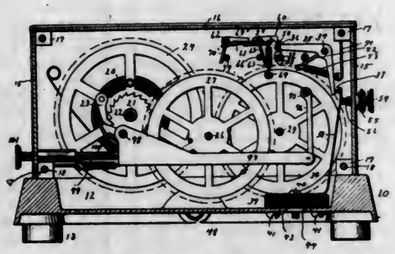
3. A brake head having shoe attaching lugs provided with key holes therethrough and having channels extending from the sides of said key-holes.

4. A brake-head having a shoe attaching lug formed with leg portions and with a bridge connecting said leg portions to form a key-hole, said leg portions being provided with channels extending from the key-hole to the outer sides of the lug.

5. A brake head having shoe attaching lugs each formed with leg portions and with a bridge connecting said leg portions to form a key-hole, said leg portions of the lugs being provided with channels extending from side to side of the brake-head.

[Claim 6 not printed in the Gazette.]

1,017,054. TELEGRAPH SENDING-MACHINE. JOHN A. HULIT, Topeka, Kans., assignor to The Hulit Transmitter Company, Topeka, Kans., a Corporation of Kansas. Filed Nov. 6, 1909. Serial No. 526,516. (Cl. 178—69.)



1. In a machine of the kind described, the combination of a base having a top and sides with a depression in the top, a frame erected on the base over the depression, a motor mounted in the base and extending down into the depression, a circuit-closer mounted in the frame and operated by the motor, finger-keys for controlling the motor and circuit closer, a switch mounted on the base and having a tongue and a leaf, said leaf being insulated from the base, and said base having an opening in said depression and an opening under said leaf, insulating mountings at said openings, one of the members of the circuit-closer being mounted at said opening in the depression, and a bar extending between said mountings and being electrically connected with said leaf and said member.

2. In a machine of the kind described, the combination of a base having a depression in the top thereof, a frame erected on the base over the depression, a motor mounted in the frame and extending down in said depression, a circuit closer driven by the motor and mounted in the frame, a switch mounted on the base outside said frame, the base having an opening through said depression and an opening at the switch, insulating blocks mounted on the base at said openings, one member of the circuit-closer being mounted on the insulating block over the opening in the depression and one member of the switch being mounted on the other insulating block, a bar extending across said blocks under said base, and electrical conductors extending through said blocks and connecting the bar with said respective members.

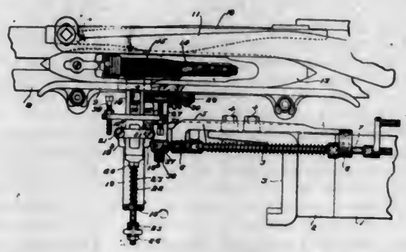
3. In a machine of the kind described, the combination of a frame, a motor mounted therein, a circuit-closer operated by the motor, a reciprocating pivoted weight for retarding the motor, a lever for shifting the weight nearer to and farther away from the pivot from which it is operated, and an adjusting screw having its head outside the frame for shifting the lever.

4. In a machine of the kind described, the combination of a frame, a motor mounted therein, a circuit-closer operated by the motor, an escapement device having a reciprocating tail, a weight having a pin-and-slot connection with said tail said slot extending radially from the pivot of said escapement device, a pivoted lever to which said weight is pivoted and being capable of shifting said weight nearer to and farther away from said pivot, a spring tending naturally to force said lever in one direction, and a screw capable of forcing said lever in the opposite direction.

5. In a machine of the kind described, the combination of a frame, a motor mounted in the frame, a circuit-closer operated by the motor, an escapement device for retarding the motor and comprising a star-wheel and a yoke engaging the star-wheel and oscillated thereby said yoke being pivoted in the frame, a bumper-screw arranged so that the yoke strikes against the end thereof, and said screw being capable of adjustment to limit the range of movement of the yoke so as to increase and diminish the speed of the motor.

[Claim 6 not printed in the Gazette.]

1,017,055. WEFT-FEELER DEVICE FOR LOOMS. SIMEON S. JACKSON, Readville, Mass., assignor to The Stafford Company, Readville, Mass., a Corporation of New Jersey. Filed Sept. 27, 1911. Serial No. 651,531. (Cl. 139—85.)



1. In combination, controller-means, a feeler mounted independently of the lay and controlled by means carried by a shuttle on the lay, and an actuator mounted independently of the shuttle and feeler, moving in unison with the lay, and rendered operative by said feeler to call said controller-means into action when the predetermined volumetric change within the shuttle is ascertained.

2. In combination, controller-means, a feeler mounted independently of the lay and controlled as to the extent of its entrance into a shuttle on the lay by wound weft or filling within the shuttle, and an actuator mounted independently of the shuttle and feeler, moving in unison with the lay, and moved by said feeler into position to call said controller-means into action when the feeler passes a predetermined distance into the shuttle.

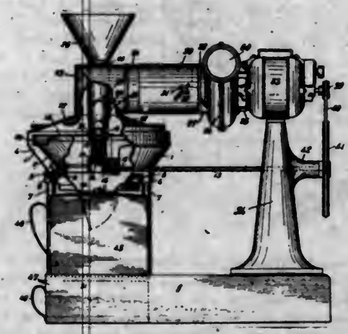
3. In combination, controller-means, a lay, a feeler mounted independently of the lay and controlled by means carried by a shuttle on the lay, and an actuator movably mounted on the lay and independently of the shuttle and rendered operative by said feeler to call said controller-means into action when the predetermined volumetric change within the shuttle is ascertained.

4. In combination, controller-means, a lay, a feeler mounted independently of the lay and controlled as to the extent of its entrance into a shuttle on the lay by wound weft or filling within the shuttle, and an actuator movably mounted on the lay independently of the shuttle and rendered operative by said feeler, when the latter passes a predetermined distance into the shuttle, to call said controller-means into action.

5. In combination, a lay, controller-means mounted upon a support independent of the lay, a feeler mounted independently of the lay, and an actuator for said controller-means, pivoted upon the lay, and given operative position by the feeler when the predetermined volumetric change within the shuttle takes place.

[Claims 6 and 7 not printed in the Gazette.]

1,017,056. REFINING-MACHINE FOR COFFEE. HERBERT L. JOHNSTON, Troy, Ohio, assignor to The Hobart Electric Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed Dec. 17, 1910. Serial No. 597,765. (Cl. 150—17.)



1. In a coffee refiner, an inner and an outer funnel shaped vessel spaced apart to form an annular passage between them through which the coffee falls by gravity, a disk forming a cover for the inner vessel mounted horizontally over said inner vessel, with means for rotating the disk, a hopper with discharge tube therefor over the central portion of said disk, and means for creating an air blast through the annular passageway opposed to the movement of the coffee with the inner vessel inclosed from access to the air.

2. In a coffee refiner, an inner and an outer vessel spaced apart to form an annular passage between them through which the coffee falls by gravity, a disk mounted horizontally above said annular passage, with means for rotating the disk, a hopper with discharge tube therefor over the central portion of said disk, and an exhaust blower to create an air blast through the annular passageway opposed to the movement of the coffee, and means for regulating the amount of the blast with the inner vessel inclosed from access to the air.

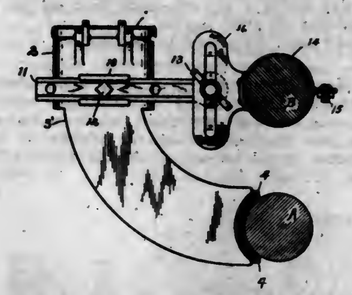
3. In a coffee refiner, an inner and an outer vessel spaced apart to form an annular passage between them through which the coffee falls by gravity, a perforated disk forming a cover for the inner vessel having an upwardly extending cone-shaped central portion, with means for rotating the disk to project the coffee into said annular passage and to deposit the finer particles within said inner vessel, a hopper and discharge therefrom over the central portion of said perforated disk, and means for creating an air blast through the annular passageway opposed to the movement of the coffee.

4. A coffee refiner comprising a horizontally mounted rotatable disk, having an upwardly extending cone shaped central portion, a delivery tube to deliver the coffee upon said cone, and means to adjust the distance between the end of the tube and the cone to regulate the amount of the delivery opening, an annular receptacle to receive the coffee projected from the disk through which the coffee falls by gravity, and means for creating an air blast through the annular receptacle opposed to the movement of the coffee.

5. A coffee refiner comprising a horizontally mounted rotatable disk, having an upwardly extending cone shaped central portion, a delivery tube to deliver the coffee upon said cone, and means to adjust the distance between the end of the tube and the cone to regulate the amount of the delivery opening, an inner and an outer vessel spaced apart to form an annular passage to receive the coffee projected from the disk through which the coffee falls by gravity, and means for creating an air blast through the annular passage opposed to the movement of the coffee.

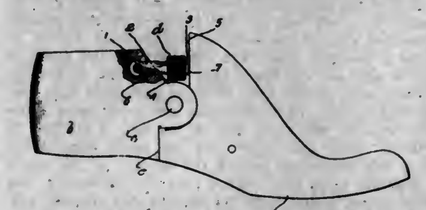
[Claims 6 to 9 not printed in the Gazette.]

1,017,057. AUTOMATIC PISTON-ROD OILER. CHARLES KNOPF and WILLIAM N. JOHNSON, Richmond, Ind. Filed May 9, 1910. Serial No. 560,152. (Cl. 184—25.)



An automatic piston rod oiler comprising a metallic cup, a lid hinged thereto, a flat wick tube formed with the cup at one side thereof and extending from a point near the top of the cup interiorly thereof and depending therefrom, the lower end of the tube being concaved to fit the contour of the rod, a wick coiled in the cup to attract oil therefrom and extending through the tube to fit the rod and supply oil thereto, said cup being provided with a bifurcated lug and a bar slidably engaging in the lug for adjustment therein, said bar being vertically adjustable.

1,017,058. LAST-LOCK. EDWIN O. KRENTLER, Detroit, Mich., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 2, 1910. Serial No. 595,301. (Cl. 12—136.)



1. A divided last, provided with a locking device wholly carried by one member of the last, said locking device being movable as a whole to and from locking position, and having a part with a separate variable and controllable adjusting movement to engage the other member of the last for locking action, said adjusting movement of the locking device adapting it to hold the last members rigid in locked position irrespective of wear thereof.

2. A hinged last, having abutting portions below the hinge, and a locking device mounted on one last member, said locking device being movable as a whole to and from locking position, and a part thereof being mounted for variable and controllable extensible adjustment against the other last member to lock the last in lengthened position, the construction being such that the last members may be rigidly locked in lengthened position irrespective of wear thereof and of their hinge connection.

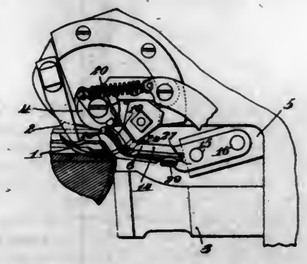
3. A divided last, having a connection between the parts thereof and provided with a pivoted locking device mounted to swing on an axis transverse of the last, said locking device being arranged to coöperate with said connection to hold the parts rigid in extended position and having a threaded adjustment for increasing the length of the locking device to bear against the opposing part of the last to lock the last in lengthened position.

4. A last, comprising pivotally joined members, and a locking device consisting of a bolt pivoted to one member and having a nut adjustable thereon to engage against the other member.

5. A last, comprising members having hinged connection, abutting shoulders below the hinge, an opening above the hinge, and a locking device operable in said opening, said locking device consisting of an eye bolt pivoted to one member and having a nut adjustable from the free end thereof against the other member.

[Claims 6 and 7 not printed in the Gazette.]

1,017,059. WELT-GUIDE FOR SEWING WATER-TIGHT INSEAMS. JAMES E. MCPHERSON, Canton, and EDWARD E. ORR, Weymouth, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 15, 1910. Serial No. 577,266. (Cl. 112—20.)

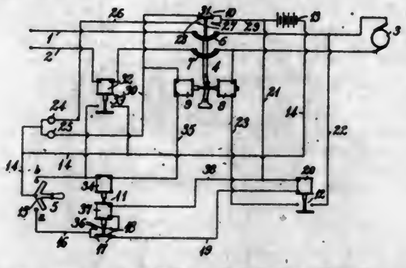


1. A shoe sewing machine for stitching the welt to a lasted insole and upper, having, in combination, stitch forming mechanism comprising a curved hooked needle, and a welt guide having a welt guiding aperture to feed the welt beneath the needle, and having side walls for said aperture which bear against the edges of the welt, the side wall adjacent the lower edge of the welt being near the path of the needle, and having a welt guiding surface forming the upper wall of said aperture bearing against the finished side of the welt and transversely curved to provide a shoulder near that side wall of the aperture which is adjacent the lower edge of the welt, to present the lower edge of the welt with its unfinished side convexly bent against the lasted insole and upper beneath the needle, whereby the lower edge of the welt is stitched to the lasted insole and upper, and the upper edge of the welt is left projecting beyond the surface of the insole in a position to be later turned over and outwardly, and stitched to the outsole with its finished side exposed, substantially as described.

2. A shoe sewing machine for stitching the welt to a lasted insole and upper, having, in combination, stitch forming mechanism comprising a curved hooked needle, and a welt guide having a welt guiding aperture to feed the welt beneath the needle, and having side walls for said aperture which bear against the edges of the welt, the welt guide being positioned with respect to the needle to bring the path of the needle before the mouth of the aperture and near the side wall which bears against the lower edge of the welt, and having a transversely curved bearing surface provided with a shoulder pressing against the face of the welt near its lower edge to present the lower edge of the welt to the lasted insole and upper beneath the needle, whereby the welt is stitched near its lower edge to the lasted insole and upper, and the upper edge of the welt is left projecting beyond the surface of the insole in a position to be later turned over and outwardly, and stitched to the outsole, substantially as described.

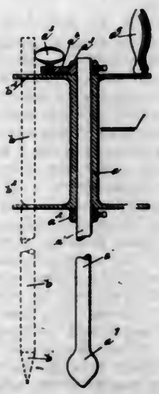
1,017,060. SYSTEM OF ELECTRIC-CURRENT DISTRIBUTION. CHARLES M. MOSS and STEPHEN Q. HAYES, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 13, 1909. Serial No. 495,781. (Cl. 175—294.)

1. The combination with a distributing circuit, a circuit interrupter therefor having actuating and release electro-magnets, control circuits and a master switch for selectively energizing the electro-magnets, of means dependent upon predetermined conditions in the distributing circuit for energizing the release magnet, interrupting the circuit of the actuating electro-magnet and preventing the closure of the interrupted control circuit until the master switch has been returned to its off position.



2. The combination with a distributing circuit, a circuit interrupter having a closing magnet and a tripping magnet, control circuits, and a master switch for selectively energizing the electro-magnets, of a series relay switch dependent upon predetermined current in the distributing circuit for energizing the tripping magnet independently of the master switch, interrupting the control circuit of the closing magnet and preventing the completion of said control circuit until the master switch is returned to its off position.

1,017,061. LINE-MARKER. CHARLES E. PATRIC, Springfield, Ohio. Filed Feb. 3, 1910. Serial No. 541,758. (Cl. 111—45.)

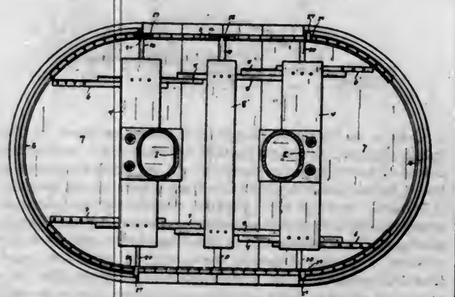


1. In a line marker for planting machines, a rod, a reel rotatably mounted thereon, and means on said rod for holding said reel in fixed relation thereto, said rod being provided with a sharpened, flattened lower end, substantially as specified.

2. In a line marker for planting machines, a rod having a sharpened lower end, a reel rotatably mounted thereon, means for holding said reel in fixed relation to said rod, a second rod with a sharpened end coöperating with said first rod in the operative condition of said marker, and registered perforations in the sides of said reel to receive said second rod in the inoperative condition of said marker, substantially as and for the purpose specified.

1,017,062. PEDESTAL EXTENSION-TABLE. WILLIAM L. PFEFFERKORN, ALBERT P. SCHLOERB, and AUGUST H. HAMMETTER, Milwaukee, Wis. Filed Apr. 1, 1909. Serial No. 487,219. (Cl. 45—112.)

1. In an extension table the combination with the fixed bed and top boards, of flexible bed members spanning the space between the fixed bed members when the table is extended, and movable to concealed position under the fixed top boards when the table is contracted, means for supporting said flexible bed members in a relatively stationary position when the table is being adjusted at different lengths, said flexible bed members being composed of a series of wooden blocks, connected together by a flexible band, and having their abutting ends beveled to permit an inwardly folding flexion along a curved line and their outer surfaces finished to correspond with the other portions of the table, the top boards being provided with curved guide ways in their under surfaces and said bed members having end portions loosely engaged in said guide ways.



2. In an extension table provided with fixed bed members and top boards, the combination of flexible bed members spanning the space between the fixed bed members when the table is extended, and movable to concealed positions under the fixed top boards when the table is contracted, said top boards being provided with undercut guide grooves in their under surfaces, and the end portions of said flexible bed members being provided with guide members movably engaged in said grooves.

3. In an extension table provided with fixed bed members and top boards, the combination of flexible bed members spanning the space between the fixed bed members when the table is extended, and movable to concealed positions under the fixed top boards when the table is contracted, a set of table slides, a bridging member having fixed connection with the central slides and with the central portions of the flexible bed members, and other bridging members connected with slides which are movable outwardly from said central slides and having sliding connection with the flexible bed members.

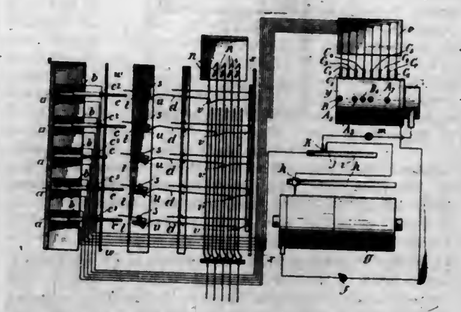
4. In an extension table provided with fixed bed members and top boards, the combination of flexible bed members spanning the space between the fixed bed members when the table is extended, and movable to concealed positions under the fixed top boards when the table is contracted, said flexible bed members being each composed of a series of wooden blocks having finished outer surfaces and connected with each other by a flexible tension cable of coiled wire fixed to the end portions and engaging each of the blocks.

5. In an extension table provided with fixed bed members and top boards, the combination of flexible bed members spanning the space between the fixed bed members when the table is extended, and movable to concealed positions under the fixed top boards when the table is contracted, said flexible bed members being each composed of a series of wooden blocks having finished outer surfaces and connected by a flexible tension cable of coiled wire fixed to the end portions and embedded in a longitudinal channel in the bed member.

[Claims 6 and 7 not printed in the Gazette.]

1,017,063. ELECTRIC JACQUARD APPARATUS. AUGUST REGAL, Vienna, Austria-Hungary. Filed May 9, 1911. Serial No. 626,094. (Cl. 139—16.)

1. In an electric jacquard apparatus, the combination of a vertically movable griff, hooks to be raised and lowered thereby, cross-wires arranged substantially horizontally and operatively connected with corresponding hooks and movable up and down relatively thereto, each cross-wire having a depending projection, means for moving the cross-wires horizontally comprising bars normally supporting the cross-wires and engageable with their projections, said bars being movable vertically and horizontally, armature cores projecting under the respective cross-wires and normally preventing their downward movement with said bar, electro-magnets controlling said cores and adapted to move them from under the cross-wires, an electric circuit including said magnets, and means for making and breaking the circuit, substantially as described.



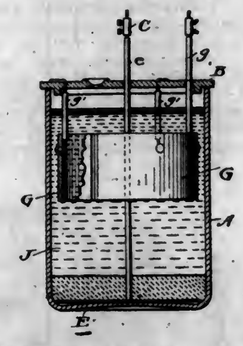
2. In an electric jacquard apparatus, the combination of a vertically movable griff, hooks to be raised and lowered thereby, cross-wires arranged substantially horizontally and operatively connected with corresponding hooks and movable up and down relatively thereto, each cross-wire having a depending projection, means for moving the cross-wires horizontally comprising bars normally supporting the cross-wires and engageable with their projections, said bars being movable vertically and horizontally, armature cores projecting under the respective cross-wires and normally preventing their downward movement with said bar, electro-magnets controlling said cores and adapted to move them from under the cross-wires, an electric circuit including said magnets, and means for making and breaking the circuit, said magnets receiving the armature cores and each having a friction-grip on the corresponding armature core, substantially as described.

3. In an electric jacquard apparatus, the combination of a vertically movable griff, hooks to be raised and lowered thereby, cross-wires arranged substantially horizontally and operatively connected with corresponding hooks and movable up and down relatively thereto, each cross-wire having a depending projection, means for moving the cross-wires horizontally comprising bars normally supporting the cross-wires and engageable with their projections, said bars being movable vertically and horizontally, armature cores projecting under the respective cross-wires and normally preventing their downward movement with said bar, electro-magnets controlling said cores and adapted to move them from under the cross-wires, an electric circuit including said magnets, and means for making and breaking the circuit, said magnets receiving the armature cores and each armature core having its received portion U-shaped and frictionally engaging within the corresponding core, substantially as described.

1,017,064. GALVANIC BATTERY. EDWARD C. SMITH and EDWARD L. MARSHALL, Fremont, Ohio, assignors to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 7, 1909. Serial No. 511,666. (Cl. 204—38.)

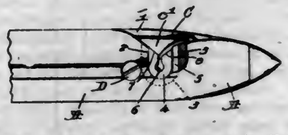
A primary battery comprising a transparent jar, a metallic plate supported within the jar near the bottom thereof, a conductor attached to said plate, a layer of

metallic oxid upon said plate, said oxid being visible through the side walls of the jar, whereby the color change of the oxid is visible as the cell is used, an elec-



trolyte containing caustic alkali, a zinc element suspended in the electrolyte and spaced a considerable distance above the layer of oxid for the purpose described.

1,017,065. AUTOMATICALLY-THREADING SHUTTLE. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 9, 1911. Serial No. 659,290. (Cl. 139—46.)



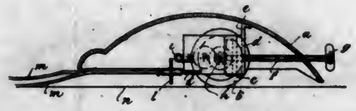
1. A shuttle having a thread passage in the end portion thereof, and a transverse U-shaped recess leading therefrom through the side wall of the shuttle, said recess having its sides and bottom provided with a continuous groove, and an eye-member comprising a U-shaped body having an open thread inlet at its top, and adapted to fit in said recess, and having between its inner and outer ends an external integral and symmetrical positioning flange to seat in the continuous groove of said recess and prevent rotative or endwise movement of the eye-member.

2. A shuttle having a thread passage in the end portion thereof, and a transverse U-shaped recess leading therefrom through the side-wall of the shuttle, said recess having its sides and bottom provided with a continuous groove, and an eye-member comprising a U-shaped body having a V-shaped inlet at its top and adapted to fit in said recess and having an external, integral and symmetrical positioning flange to seat in the groove of said recess and prevent rotative and endwise movement of the eye-member, combined with a threading member detachably mounted in said thread passage and having a projection overhanging and seating upon one of the flared sides of the V-shaped inlet, to retain the latter seated in the recess.

3. A shuttle having a thread passage in the end portion thereof, and a transverse U-shaped recess leading therefrom through the side-wall of the shuttle, said recess having its sides and bottom provided with a continuous groove, and an eye-member comprising a U-shaped body having a V-shaped inlet at its top and adapted to fit in said recess and having an external, integral and symmetrical positioning flange to seat in the groove of said recess and prevent rotative and endwise movement of the eye-member, combined with a threading member detachably mounted in said thread passage and having a projection overhanging and seating upon one of the flared sides of the V-shaped inlet, to retain the latter seated in the recess, said flared side extending inward and abutting at its inner end against a portion of the threading member.

4. An eye-member for a self-threading shuttle comprising a U-shaped body having a delivery passage and a V-shaped inlet at its top leading into said passage and having between its inner and outer ends an external, integral and U-shaped positioning flange symmetrical with the body, and terminating at the flaring sides of said V-shaped inlet.

1,017,066. MOVING TOY. ADOLF WEIGEL, Nuremberg, Germany. Filed Mar. 20, 1911. Serial No. 615,779. (Cl. 46—45.)



1. In a moving toy, adapted for operation upon an elevated surface, the combination of propelling mechanism therefor, and means for turning said toy from a margin of the elevated surface upon the toy approaching the same.

2. In a moving toy, adapted for operation upon an elevated surface, the combination with a body simulating portion, of mechanism for propelling said body over the surface, a device disposed forwardly of said body portion for guiding it in a substantially forward direction upon the surface, and a guide means for coaction with said propelling mechanism for turning the body portion upon its approaching a margin of said surface, and actionable upon movement of said guide device from the elevated surface.

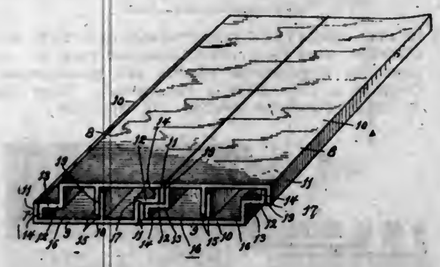
3. In a moving toy, adapted for operation upon an elevated surface, the combination with a body simulating portion, of mechanism for propelling said body portion over the surface, a feeler disposed forwardly of said body portion for guiding it in a substantially forward direction upon the surface, and a pilot wheel for coaction with said propelling mechanism for turning the body portion upon its approaching a margin of said surface, and actionable upon movement of said feeler from the elevated surface.

4. In a moving toy, adapted for operation upon an elevated surface, the combination with a body simulating portion, of propelling mechanism provided with a drive wheel and an idler disposed at either side of the axis of said body portion, a device disposed forwardly of said body portion for guiding it in a substantially forward direction, and a pilot wheel disposed intermediate said propelling mechanism and guiding device, and disposed with its plane of rotation cross-wise the direction of forward travel of said body portion for coaction with said propelling mechanism to turn the body portion upon its approaching a margin of said surface and actionable upon movement of said guide device from the elevated surface.

5. In a moving toy, adapted for operation upon an elevated surface, the combination with a body simulating portion, of propelling mechanism provided with a drive wheel and idler disposed at either side of the axis of said body portion, a feeler disposed forwardly of said body portion for guiding it in a substantially forward direction, and a pilot wheel disposed intermediate to the propelling mechanism and feeler and disposed with its plane of rotation cross-wise the direction of forward travel of said body portion, for coaction with said propelling mechanism to turn the body portion upon its approaching a margin of said surface and actionable upon movement of said feeler from the elevated surface.

1,017,067. BUILDING-SLAB. ARTHUR WHITE, Sheboygan Falls, Wis. Filed Jan. 23, 1911. Serial No. 604,102. (Cl. 72—38.)

1. A building slab, comprising similar sections of cementitious material having side flanged portions and stepped flanged portions and intermediate flanges which overlap each other and form a slab with an air space therebetween when one of the sections is inverted and reversed side for side with relation to the other section, the stepped flange of one section overlapping the flanged portion, and means embedded in the flanges for reinforcing the same.

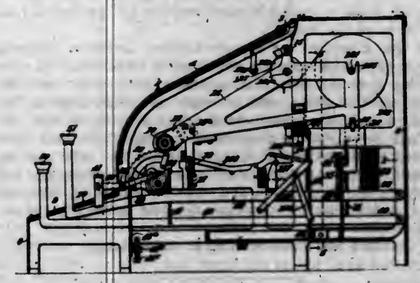


2. A building slab section, consisting of an elongated body part of cementitious material having a flange projecting at right angles from one side edge thereof and a stepped flange projecting from the opposite side edge, the step of said step flange extending in a plane parallel to the plane of the body portion, and a flange projecting at right angles from the body portion intermediate of the other flanges.

3. A building slab, comprising similar sections of cementitious material having flanged portions and stepped flanged portions which overlap each other and form a slab with an air space therebetween when one of the sections is inverted and reversed side for side with relation to the other section, said flanges and stepped flanges positioned to overlap similar parts of adjacent sections to form rabbet joints located between the air spaces of adjacent sections, and means provided for binding the sections and the slabs together.

4. A building slab, comprising similar sections of cementitious material having flanged portions and stepped flanged portions which overlap each other and form a slab with an air space therebetween when one of the sections is inverted and reversed side for side with relation to the other section, the stepped flange of one section overlapping the flanged portion, and means embedded in the flanges for reinforcing the same.

1,017,068. ADDING AND LISTING MACHINE. EDWIN WILLIAMSON, Talladega, Ala. Filed Dec. 31, 1910. Serial No. 600,357. (Cl. 235—59.)



1. In a machine of the class described, a totalizer, an actuating device therefor, a rock shaft on which said device is mounted, a series of levers pivotally mounted on said shaft, a pin carried by each lever, a lug on the shaft adjacent each lever, adapted to be engaged by the corresponding pin, and means for selectively moving said levers, the distance between each pin and its corresponding lug varying progressively from one end of the series to the other.

2. In a machine of the class described, a totalizer, an actuating device therefor, a rock shaft on which said device is mounted, a set of digit key levers, a second series of levers pivoted at one end to said shaft and each connected at the other end with one of said key levers, and a lost motion connection between each of such pivoted levers and said shaft, the amount of such lost motion for each lever being inversely proportional to the value of the corresponding digit.

3. In a machine of the class described, the combination with a totalizer comprising a set of digit wheels, of an actuating device therefor, said device comprising a plate, a shaft on which said plate is mounted, an arc-shaped rack having teeth on the outer edge thereof, a pair of links pivotally connecting said rack with said plate, a spring confined between said plate and the inside of said rack, and tending to force them apart, and means serving to limit the pivotal movement of said rack and links in one direction whereby, on the forward stroke of the actuating device, the teeth of said rack will engage the periphery of said digit wheels to shift them, while on the reverse stroke, said spring will yield and permit such teeth to slide over said wheels without operating them.

4. In a machine of the class described, the combination with a totalizer comprising a set of digit wheels, of an actuating device therefor arranged to engage and shift said wheels, a shaft on which said actuating device is mounted, and means for locking said shaft and actuating device together at times, and for permitting said shaft to move independent of said actuating device at other times.

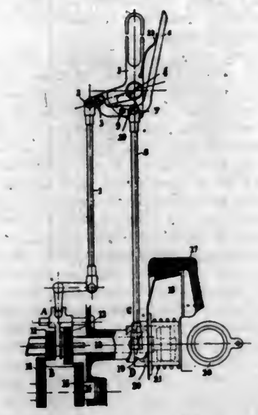
5. In a machine of the character described, the combination with a totalizer, of an actuating device therefor, such device comprising a plate, a shaft on which such plate is loosely mounted, a driving member rigidly secured to said shaft adjacent said plate, said driving member having a notch, and said plate having a slot, a pin passing through said slot, and means for shifting said pin in said slot into and out of engagement with the notch in said driving member, whereby said parts may be locked together or disconnected, as desired.

[Claims 6 to 17 not printed in the Gazette.]

1,017,069. WHISK-BROOM. DANIEL A. ANDREWS, Cedar Keys, Fla., assignor to The Standard Manufacturing Company, Cedar Keys, Fla., a Corporation of Florida. Filed Oct. 30, 1911. Serial No. 657,643. (Cl. 15—22.)

A broom comprising two bunches of fibrous material, one of said bunches being bent intermediate its length to bring the ends of the fibers together, means for tying said bent bunch, said bunch being separated into two approximately equal parts, a second bunch inserted between the spread portions of said first bunch and the free ends of both bunches being brought together into a single bunch, and means for maintaining the integrity of said last bunch.

1,017,070. GEARING. ALFRED ANDRI, Liege, Belgium, assignor to Fabrique Nationale D'Armes de Guerre Societe Anonyme, Herstal, Belgium. Filed Nov. 17, 1909. Serial No. 528,474. (Cl. 74—58.)



1. The combination with a gear-set of fixed and movable gear members, and a clutch device of a lever having a fixed pivot, connections between the lever and the gear-set for shifting the movable gear members upon swinging the lever, a second lever pivoted on said lever beyond its axis, connections between the second lever and the clutch device, a stationary locking member positioned to be engaged by the second lever, and an operative connection between the two said levers.

2. The combination with a gear-set of fixed and movable gear members, and a clutch device of a lever having a fixed pivot, connections between the lever and the gear-set for shifting the movable gears upon swinging the lever, a second lever pivoted on said lever beyond its axis, connections between the second lever and the clutch device, a stationary locking member positioned to be engaged by a portion of the second lever, and a spring connection between the two said levers.

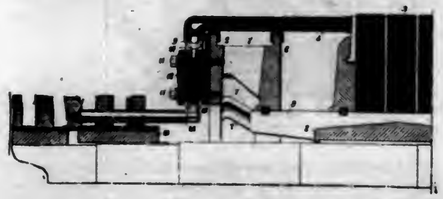
3. The combination with a gear-set of fixed and movable gear members, and a clutch device; of a lever having a fixed pivot, connections between the lever and the gear-set for shifting the movable gear members upon swinging the lever, a second lever pivoted on said lever beyond its axis, connections between the second lever and the clutch device, a stationary locking member positioned to be engaged by a portion of the second lever, and a spring connection between the two said levers operative to shift the second lever into engagement with the locking plate.

4. The combination with a gear-set of fixed and movable gear members, and a clutch device, of a lever having a fixed pivot, connections between the lever and the gear set for shifting the movable gear members upon swinging the lever, a second lever pivoted on said lever beyond its axis, connections between the second lever and the clutch device, a connection between the two said levers, a pin on the second lever, and a stationary locking plate having notches arranged to receive the said pin on the second lever and thereby retain the first said lever in adjusted positions.

5. The combination with a gear-set of fixed and movable gear members, and a clutch device, of a lever having a fixed pivot, connections between the lever and the gear set for shifting the movable gear members upon swinging the lever, a second lever pivoted on said lever beyond its axis, connections between the second lever and the clutch device, a spring connection between the two said levers, a pin on the second lever, and a stationary locking plate having notches arranged to receive the pin on the second lever and thereby retain the first said lever in adjusted positions.

[Claims 6 and 7 not printed in the Gazette.]

1,017,071. ARMATURE FOR DYNAMO-ELECTRIC MACHINES. JENS BACHE-WIIG, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 22, 1911. Serial No. 628,738. (Cl. 171—206.)



1. An armature for dynamo-electric machines comprising a core, a plurality of coils upon the core having reversely bent projecting end portions, reversely bent connectors having their ends connected to the bight portions of certain of the coils, collector rings, and connections between the bight portions of certain of the connectors and the collector rings.

2. An armature for dynamo-electric machines comprising a core, a plurality of coils upon the core having reversely bent projecting end portions, reversely bent connectors having their ends connected to the bight portions of certain of the coils, the said connectors being located in radial planes between the ends of the coils, collector rings, and connections between the bight portions of certain of the connectors and the collector rings.

3. An armature for dynamo-electric machines comprising a core, a plurality of coils upon the core having reversely bent end portions projecting therefrom, certain of the said reversely bent end portions extending beyond the remainder thereof, and reversely bent connectors having their ends connected to the extended end portions of the coils.

4. An armature for dynamo-electric machines comprising a cylindrical core, a plurality of coils upon the core having reversely bent end portions projecting from the core, certain of the said reversely bent end portions extending radially inward beyond the remaining coils, and reversely bent nested connectors having their ends connected to the extended end portions of the coils and arranged to lie in radial planes between the projecting end portions of the coils.

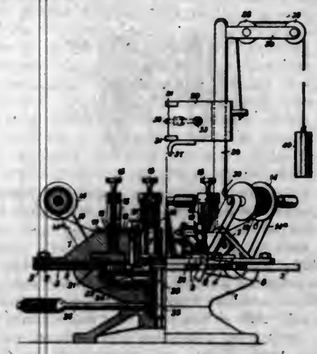
5. An armature for dynamo-electric machines comprising a cylindrical core, a plurality of coils upon the core having reversely bent end portions projecting from the core, certain of the said reversely bent end portions extending radially inward beyond the remaining coils, reversely bent nested connectors having their ends connected to the extended end portions of the coils and arranged to lie in radial planes between the projecting end portions of the coils, an end member associated with the core, and means for clamping the said connectors to the end member.

[Claims 6 and 7 not printed in the Gazette.]

1,017,072. MACHINE FOR MANUFACTURING PARTS OF INCANDESCENT LAMPS. GEORGE W. BEADLE, East Orange, N. J., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed May 16, 1910. Serial No. 561,697. (Cl. 140—93.)

1. A machine of the character described comprising a reciprocable carriage, means for feeding wire longitudinally therethrough, means mounted in the carriage for severing the wire, and means for governing the operation of the said feeding and severing means.

2. A machine of the character described comprising a reciprocable carriage, and feed rolls and a knife mounted in the carriage.



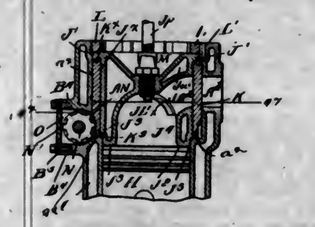
3. A machine of the character described comprising a reciprocable carriage, means for feeding wire longitudinally therethrough, and means mounted in the carriage for severing the wire.

4. A machine of the character described comprising a reciprocable carriage, means for actuating the same, feed rolls and a knife mounted in the carriage, and means for governing the operation of the feed rolls and knife.

5. A machine of the character described comprising a reciprocable carriage, means for actuating the same, feed rolls mounted in the carriage, means for actuating the feed rolls upon reciprocation of the carriage, and means for governing the said actuating means.

[Claims 6 to 11 not printed in the Gazette.]

1,017,073. INTERNAL-COMBUSTION ENGINE. EDWARD H. BELDEN, Pittsburgh, Pa. Filed Nov. 8, 1911. Serial No. 659,204. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder in combination with a piston operable therein, a head wholly within the end of the cylinder and having both its inner end and its outer end circumferentially engaged with and guided by said cylinder, means securing said head against movement in said cylinder and effecting oil and pressure tight circumferential joints between the cylinder walls and head at said ends of the head, said cylinder and head having admission and exhaust ports intermediately situated therein, between said ends of the head and between the planes of said joints, and means situated between the ports in the cylinder and the ports in the head for effecting the opening and closing of said ports in time with the movement of said piston.

2. In an internal combustion engine, a cylinder in combination with a piston operable therein, a head within the end of the cylinder and having both its inner end and its outer end circumferentially engaged with and guided by the walls of said cylinder, means also within the cylinder securing the head therein and effecting complete oil and pressure tight circumferential joints between the cylinder walls and head at said ends of the head, and admission and exhaust controlling means operated by said piston and situated between the cylinder and head and between the planes of said joints.

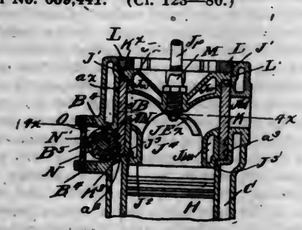
3. In an internal combustion engine, a cylinder in combination with a piston therein, a head within the end of the cylinder and having both its inner end and its outer end circumferentially engaged with and guided by the walls of said cylinder, means securing said head against movement in said cylinder and effecting oil and pressure tight joints between the cylinder and head at said ends of the head, corresponding admission and exhaust ports in the cylinder and head between said ends of the head, a ported valve confined between the cylinder and head and between the planes of said joints, controlling said ports and actuated by said piston.

4. In an internal combustion engine, a cylinder in combination with a piston therein, a head within the end of the cylinder and having both its inner end and its outer end circumferentially engaged with and guided by the walls of said cylinder, means securing said head against movement in said cylinder and effecting oil and pressure tight circumferential joints between the ends of the head and the walls of said cylinder, admission and exhaust ports situated in said cylinder and head between the planes of said joints, a port controlling valve also situated between said joints and movable rotatively between the cylinder and head, and means through the medium of which said valve is timed and is operated by said piston.

5. In an internal combustion engine, a cylinder in combination with a piston therein, a head within the end of the cylinder and having both its inner end and its outer end circumferentially engaged with and guided by the walls of said cylinder, means securing said head against movement in said cylinder and effecting oil and pressure tight annular joints between the cylinder and the head at said inner and outer ends of the head, admission and exhaust ports being provided in said cylinder and head intermediate said ends of the head, an annular port-controlling valve concentric with, confined between and operable upon those surfaces of said cylinder and head, which are between said joints, and means through the medium of which said valve is actuated by said piston.

[Claims 6 to 46 not printed in the Gazette.]

1,017,074. INTERNAL-COMBUSTION ENGINE. EDWARD H. BELDEN, Pittsburgh, Pa. Filed Nov. 9, 1911. Serial No. 659,441. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder and a piston therein in combination with a cylinder head fixed in the end of said cylinder, the inner and outer ends of said head being tightly jointed to said cylinder throughout their respective circumferences, the intermediate portion of said head being of less diameter than the adjacent portion of the cylinder and concentric therewith, an annular valve cavity being thereby formed between said ends of the head, one side of said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve of slightly greater diameter than the head and of slightly less diameter than said adjacent portion of the cylinder and occupying said cavity, said valve containing a port positioned to register with aforesaid ports, said head containing a balancing port approximately opposite the first mentioned ports, means for supplying oil to said cavity and means for rotating said valve in said cavity in time with the movements of said piston.

2. In an internal combustion engine, a cylinder and a

piston therein, in combination with a head concentric with and fixed in the end of the said cylinder, said head having inner and outer ends which make complete annular tight joints with the cylinder, the cylinder and head having corresponding admission and exhaust ports in one side thereof between said joints, an annular valve of slightly greater diameter than said head and of slightly less diameter than the cylinder longitudinally fixed between said head and cylinder and between said joints and having two diametrically opposite ports adapted to register with the aforesaid ports, the distance between the ports in the cylinder approximating the width of each port in said valve, a balancing port in said head approximately opposite the first mentioned ports in position to register with the ports in the valve, means for supplying oil to said valve, and means for rotating said valve once during every eight strokes of said piston.

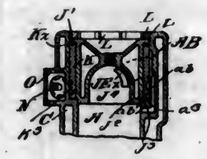
3. In an internal combustion engine, a cylinder and a piston therein, in combination with a head concentric with and removably fixed in the end of said cylinder, said head having inner and outer ends which make complete annular joints with the cylinder, the cylinder and head having corresponding admission and exhaust ports in one side thereof between said joints, an annular valve of slightly greater diameter than said head and of slightly less diameter than the cylinder longitudinally fixed between the cylinder and head and between said joints and having a port adapted to register with the aforesaid ports, the distance between the ports in the cylinder approximating the width of said port in said valve, a balancing port in said head approximately opposite the first mentioned ports, in position to register with the port in the valve, and of slightly less area than the combined area of the first mentioned ports, means for supplying oil to said valve, and means for rotating said valve in time with the movements of said piston.

4. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head removably fixed in the end of said cylinder, the inner and outer ends of said head making complete annular oil and pressure tight joints with said cylinder, the intermediate portion of said head being of less diameter than the adjacent portion of the cylinder and concentric therewith, an annular valve cavity being thereby formed between said ends of the head, one side of said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve of slightly greater diameter than the head and of slightly less diameter than said adjacent portion of the cylinder and occupying said cavity, said valve containing one or more ports positioned to register with aforesaid ports, said head containing a balancing port approximately opposite the first mentioned ports and positioned to register with the port in the valve, an opening in the cylinder adjacent the said balancing port, valve operating means positioned in said opening and means for supplying oil to said operating means and valve.

5. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head removably fixed in the end of said cylinder, the inner and outer ends of said head being in complete circumferential jointure with said cylinder, the intermediate portion of said head being of less diameter than the adjacent portion of the cylinder and concentric therewith, an annular valve cavity being thereby formed between said ends of the head, one side of said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve of slightly greater diameter than the head and of slightly less diameter than said adjacent portion of the cylinder and occupying said cavity, said valve containing two approximately opposite ports positioned to register with aforesaid ports, said head containing a balancing port approximately opposite the first mentioned ports and positioned to register with the ports in the valve, an opening in that side of the cylinder which is adjacent to said balancing port, valve operating means positioned in said opening, means for supplying oil to said operating means and valve and a driving connection between said piston and said operating means.

[Claims 6 to 12 not printed in the Gazette.]

1,017,075. INTERNAL-COMBUSTION ENGINE. EDWARD H. BELDEN, Pittsburgh, Pa. Filed Nov. 9, 1911. Serial No. 659,442. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head fixed in the end of said cylinder, the inner and outer ends of said head being tightly jointed to said cylinder, the intermediate portion of said head being of less diameter than the adjacent portion of the cylinder and concentric therewith an annular valve cavity being thereby formed between said ends of the head, one side of said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve of slightly greater diameter than the head and of slightly less diameter than said adjacent portion of the cylinder and occupying said cavity, said valve containing a port positioned to register with aforesaid ports, said cylinder containing a balancing cavity opening into said valve cavity between the ports in the cylinder and in communication with the piston space in the cylinder and valve operating gearing deriving motion from said piston.

2. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head fixed in the end of said cylinder, the inner and outer ends of said head being tightly jointed to said cylinder, the intermediate portion of said head being of less diameter than the adjacent portion of the cylinder and concentric therewith an annular valve cavity being thereby formed between said ends of the head, one side of said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve of slightly greater diameter than the head and of slightly less diameter than said adjacent portion of the cylinder and occupying said cavity, said valve containing two diametrically opposite ports positioned to register with aforesaid ports, the distance between the ports in the cylinder approximately equaling the width of each port in the valve, said cylinder containing a balancing cavity opening into said valve cavity between its ports, a gear formed on the end of said valve, an operator meshing therewith and deriving rotation from said piston, and means for constantly supplying oil to said gears and cavity.

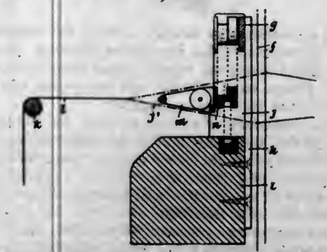
3. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head, the cylinder having admission and exhaust ports in one side, an annular valve positioned within the cylinder, concentric therewith and adapted to close said ports, said valve having an opening adapted to register with aforesaid ports, said cylinder containing a balancing cavity in one side adjacent to its ports and of greater area than either thereof, said cavity opening against said valve and communicating with the piston space in the cylinder, means for supplying oil to said valve, and means for operating said valve in time with the movements of said piston.

4. In an internal combustion engine, a suitably cooled cylinder and a piston therein, in combination with a suitably cooled cylinder head fixed in the end of said cylinder, said head being of less diameter than the adjacent portion of the cylinder and concentric therewith, an annular valve cavity being formed thereby, said head and cylinder containing admission and exhaust ports which open into said cavity, an annular valve occupying said cavity and cooled by the cylinder and head, said valve containing a port positioned to register with aforesaid ports, said cylinder containing a balancing cavity opening through the outer wall of said valve cavity between the ports in the cylinder and in communication with the piston space in the cylinder and valve operating gearing deriving motion from said piston.

5. In an internal combustion engine, a cylinder and a piston therein, in combination with a cylinder head fixed in the end of said cylinder, said head being of less diameter than the adjacent portion of the cylinder and concentric therewith an annular valve cavity being thereby formed between the cylinder and head, one side of said cylinder containing admission and exhaust ports which open into said cavity, a port controlling sleeve valve occupying said cavity, means in said side of the cylinder co-acting with the outer periphery of the valve and substantially balancing said valve in said cavity, and valve operating gearing acting on the valve and deriving motion from said piston.

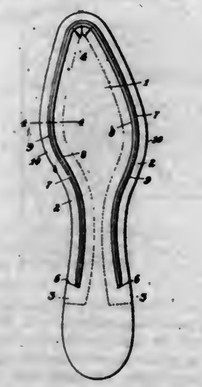
[Claims 6 to 14 not printed in the Gazette.]

1,017,076. BATTEN STRUCTURE FOR NARROW-WARE LOOMS. FREDERICK BENZ, Jr., Haledon, N. J., assignor to Joseph Frank, New York, N. Y. Filed Apr. 17, 1911. Serial No. 621,455. (Cl. 139—19.)



The combination of the batten proper, shuttle blocks arranged thereon, the batten proper and shuttle blocks having vertical rear faces flush with each other, and the backs of the shuttle blocks having horizontally alined recesses extending across them, and means for securing the shuttle blocks to the batten proper including a framework interlocked with the shuttle blocks and comprising flat upright plates bearing against the backs of the batten proper and shuttle blocks and a bracing strip arranged against the front faces of and connecting said plates and received by and bearing down upon the lower surfaces of said recesses, substantially as described.

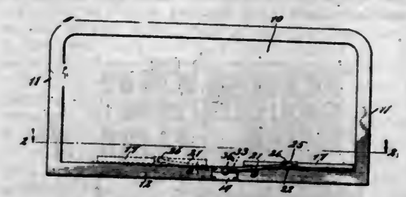
1,017,077. WELT-INSOLE. SAMUEL M. BRADLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 17, 1911. Serial No. 644,628. (Cl. 36—43.)



1. A double-lipped all leather insole, comprising a sole shaped blank, having the inner lip of the insole formed on its marginal portion and a wedge-shaped strip secured beneath the inner lip to the periphery of the blank along its shank and forepart, said strip having its outer edge split substantially throughout its length and upturned against the inner lip, thereby forming the outer lip and feather.

2. A double-lipped all leather insole, comprising a sole shaped blank, having an inner lip formed by upturning the entire thickness of the marginal portion of the blank, and a wedge-shaped strip arranged parallel thereto consisting of an upturned portion forming an outer lip, a portion outside of said outer lip forming a feather, and a portion inside of said outer lip and beneath the inner lip by which the strip is secured to the blank.

1,017,078. AUTOMOBILE GLASS-SCREEN CLEANER. HENRY F. BUTH, Chicago, Ill., assignor, by mesne assignments, to Kimbo Co., Chicago, Ill., a Corporation. Filed Apr. 22, 1909. Serial No. 491,522. (Cl. 15—59.)



1. In a window cleaner, the combination of a member, one end of which is journaled in and passes through the frame of the window, a handle connected with said end on one side of the window, the portion of the member on the other side of the window arching toward the window and with the end of the member standing in close proximity to the window and substantially parallel thereto, and a wiper connected intermediate its ends to the last said end of the member, and being disposed between said end and the window, said wiper resting and being held against the window by the elasticity of the member, said wiper being adapted to be moved bodily over the window.

2. The combination of a member having its ends bent toward each other to form a resilient arched body portion, one extremity of the member being passed through a window or screen, a handle on said end and on the side of the window opposite to that on which the body of the member is located, the other extremity of the member standing in close proximity to the respective face of the window, and a wiper connected with the last recited end, said wiper being disposed between the ends of the member and the window and being held in engagement with the window by the tension of the end of the member to which it is attached and which tension is exerted upon the wiper intermediate the ends of the latter said wiper being movable across the window by the operation of the said handle.

3. The combination of a member having its ends bent toward each other to form a resilient arched body portion, one extremity of the member being passed through a window or screen, a handle on said end and on the side of the window opposite to that on which the body of the member is located, the other extremity of the member standing in close proximity to the respective face of the window, and a wiper disposed between the last said end of the member and the window, means pivotally connecting the wiper with said end and at a point intermediate the ends of the wiper, said wiper being held in engagement with the window only by the tension of the end of the member to which it is attached and being movable across the window by the operation of the said handle.

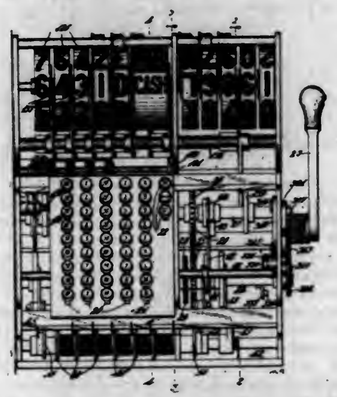
4. The combination of a member, one end of which is adapted to be passed through a screen or window, a handle secured to said end, the other end of the member standing in close proximity to the opposite face of and extending in a direction across the window, a wiper supported by said other end of the member and for pivotal movement with respect to the other end of the member, and means for limiting said pivotal movement of the wiper with re-

spect to the said member, said wiper being movable bodily across the window when the member is oscillated.

5. The combination of a member, one end of which is adapted to be passed through a screen or window, a handle secured to said end, the other end of the member standing in close proximity to the opposite face of and extending in a direction across the window, a wiper supported by said other end of the member and for pivotal movement with respect to the other end of the member, and interengaging means on the wiper and member for limiting said pivotal movement of the wiper, said wiper being movable bodily across the window when the member is oscillated.

[Claims 6 to 8 not printed in the Gazette.]

1,017,079. CASH-REGISTER. THOMAS CARROLL, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Aug. 14, 1905. Serial No. 274,099. (Cl. 235—9.)



1. In a cash register, the combination with an actuating element and means for positioning the same differentially, of a setting element; means for moving said setting element into engagement with said actuating element; and means for restoring said actuating element to normal position after the setting element is moved into engagement therewith, whereby to transmit differential movements to the setting element.

2. In a cash register, the combination with an actuating element and means for positioning the same differentially, of a setting element; means for moving said setting element into engagement with said actuating element; means for restoring said actuating element to normal position after the setting element is moved into engagement therewith, whereby to transmit differential movements to the setting element; and differential indicating devices controlled by said setting element.

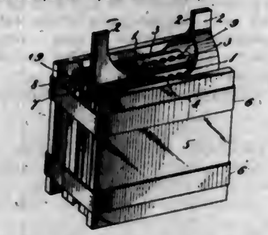
3. In a cash register, the combination with an actuating element and means for positioning the same differentially, of a pivoted setting element; and means for shifting said element radially to couple the same to said actuating element.

4. In a cash register, the combination with an actuating element, and manipulative amount determining means for positioning the same differentially, of a setting lever; means for shifting said lever radially to couple the same to said actuating element; and means for restoring said actuating element to normal position when such coupling is effected.

5. In a cash register, the combination with a segmental actuating lever and manipulative amount determining means for positioning the same differentially, of a setting lever mounted by the side of said actuating lever and provided with rack teeth for coupling to a projection on said actuating lever; means for shifting said setting lever radially on its pivotal point to couple said rack teeth to the projection on the actuating lever; and means for restoring said actuating lever to normal position when such coupling is effected whereby to position the setting lever differentially.

[Claims 6 to 45 not printed in the Gazette.]

1,017,080. SECONDARY OR STORAGE BATTERY. JAMES P. CLARE, Stratham, N. H. Filed Sept. 23, 1910. Serial No. 583,416. (Cl. 204—29.)



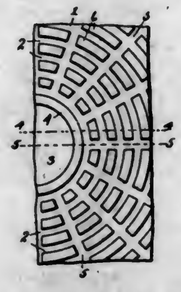
1. In a secondary or storage battery, the combination of porous plates, electrodes and active material, each of said porous plates along the edges thereof being formed to present an abrupt edge between said electrodes and removed therefrom and from one another.

2. In a secondary or storage battery, the combination of porous plates, electrodes and active material, each of said porous plates along the edges thereof being formed to present between said electrodes surfaces angularly inclined with respect to one another and meeting in an abrupt edge removed from said electrodes and from one another.

3. In a secondary or storage battery, the combination of porous plates, electrodes and active material, each of said porous plates along the edges thereof being formed to present surfaces extending in direction away from the direct line of direction between said electrodes and terminating in an abrupt edge removed from said electrodes and from one another.

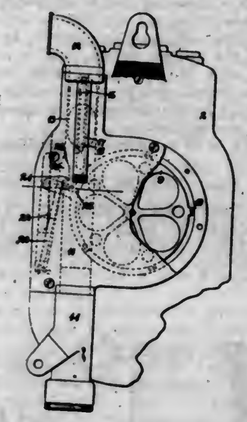
4. In a secondary or storage battery. the combination of porous plates, electrodes and active material, said porous plates being formed to present along the edges thereof curved surfaces extending in a substantially reverse direction to the direct line of direction between said electrodes with surfaces also angularly inclined with respect to said curved surfaces and meeting the same in abrupt edges removed from said electrodes.

1,017,081. WINDOW-CLEANER AND GLASS-POLISHER. EDWARD E. COLLINS, Detroit, Mich. Filed Mar. 2, 1908. Serial No. 418,719. (Cl. 15—59.)



As an article of manufacture, an integral structure for cleaning windows comprising a flat, metal plate provided with a plurality of radially disposed rows of sector blocks rectangular in cross section projecting from the face of said plate, the blocks of each row being of gradually increasing length and all of said blocks having four cutting edges, there being in the central portion of said plate an unbroken ring having square cutting edges.

1,017,082. PREPAYMENT-METER. FRANK CONRAD, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1905. Serial No. 272,438. (Cl. 194—94.)

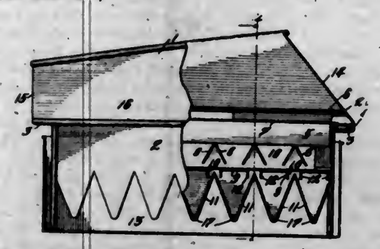


1. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, and a chute into which the wheel projects, of a spring-actuated device that normally prevents rotation of the wheel but is movable out of its path by a coin of the proper size.

2. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, having lugs and a chute into which the wheel projects, of a device that normally projects into the path of movement of the wheel lugs and is movable out of said path by coins of the proper dimensions.

3. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, and a chute into which the wheel projects, of a device having a part that normally projects into the coin chute and a part that normally projects into the path of movement of the wheel lugs.

1,017,083. MILK-STRAINER. CHARLES M. CUPPEL, Milwaukee, Wis. Filed May 26, 1911. Serial No. 629,729. (Cl. 210—16.)

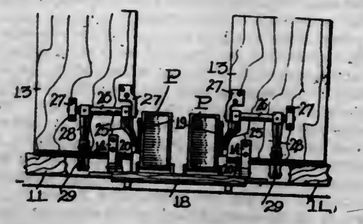


1. In a device of the described class, a milk strainer consisting of the combination of a plurality of separable tanks arranged one above the other, a plurality of screens detachably supported in said tanks, a plurality of partitions located in said tanks provided with open spaces for the passage of milk, the open spaces in one partition being formed opposite the closed portions of the next adjacent partition, whereby the direct downward flow of milk through spaces is retarded and the same is more uniformly distributed over the lower screen, and a lower screen comprising a plurality of angular inverted V-shaped sections located in the lower tank of the series.

2. In a device of the described class, a milk strainer consisting of the combination of a plurality of separable tanks arranged one above the other, the upper tank of the series being provided upon its lower side with telescoping flanges adapted to be inserted within the mouth of the next succeeding tank below, a plurality of screens detachably supported in said tanks, a plurality of partitions located in said tanks provided with open spaces for the passage of milk, the open spaces in one partition being formed opposite the closed portions of the next adjacent partition, whereby the direct downward flow of milk through said spaces is retarded and the same is more uniformly distributed over the lower screen, and a lower screen comprising a plurality of angular inverted V-shaped sections located in the lower tank of the series.

3. In a device of the described class, the combination of a plurality of separable tanks arranged one above the other, the rear end of the upper tank being inclined upwardly and forwardly, above and at an angle to the front wall, said tank being provided on its respective sides with angular vertical walls diverging upwardly from their front to their rear ends, said tank being provided upon its respective ends and sides with a vertical flange adapted to enter the mouth of the next succeeding tank below, a plurality of screens of different mesh supported at a slight distance apart in said upper tank, a plurality of inverted V-shaped screens supported at their respective ends from the walls of the lower tank, a series of horizontal partitions having open spaces between them, said horizontal partitions being respectively provided on their respective sides with vertical flanges extending downwardly past the apexes of said screens, and a series of angular V-shaped partitions interposed between said horizontal partitions and the next succeeding screen above, the lower diverging edges of said angular partitions straddling the open spaces between said horizontal partitions, whereby the downward current of milk is subdivided and uniformly spread over the entire surface of the said lower screen, said screens and partitions being detachably connected together, whereby they are adapted to be separated for cleansing, all substantially as and for the purpose specified.

1,017,084. PUMPING DEVICE. THOMAS DANQUARD, New York, N. Y., assignor to Auto Pneumatic Action Co., a Corporation of New York. Filed June 30, 1910. Serial No. 569,773. (Cl. 84—169.)



1. The combination with a bellows having a fixed and a movable leaf, of a pedal located at the side of the bellows, a shaft journaled on the fixed leaf, and two arms on opposite ends of the shaft, one connected with the pedal and the other with said movable leaf.

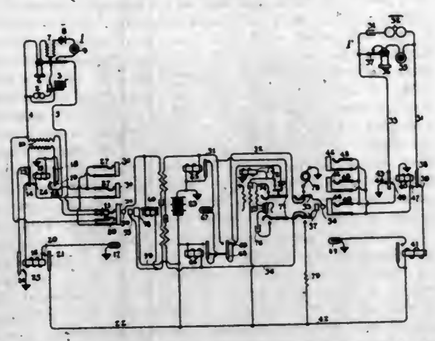
2. The combination with a bellows having a fixed and a movable leaf, of a folding pedal located in position to fold in at the side of the bellows, bearings on the fixed leaf of the bellows, a horizontal shaft mounted in said bearings, a connection between the shaft and folding pedal at one side of the fixed leaf whereby the operation of the pedal will oscillate the shaft at the center of the fixed leaf, and means on said shaft for moving the movable leaf of the bellows when the shaft is oscillated.

3. The combination with a bellows having a fixed and movable leaf, of a folding pedal located in position to fold at one side of the bellows, a link on the pedal at the side toward the bellows, an arm pivotally connected with

said link, a shaft on the bellows on which said arm is mounted, and means on said shaft for exerting an evenly balanced pressure on the movable leaf of the bellows when the shaft is turned, said means comprising an arm on the shaft, and a link pivoted to said arm and to the movable leaf of the bellows, said link and arm being in line with each other and with the center of the bottom of said movable leaf.

4. As an article of manufacture, a bellows having on the fixed leaf thereof a shaft provided with an arm at the center of said leaf pivotally connected with the other leaf and having at the end of the shaft and at the side of the bellows an operating arm.

1,017,085. TELEPHONE SYSTEM. FRED M. DAVIS, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1909. Serial No. 486,300. (Cl. 179—69.)



1. In a telephone system, the combination with a telephone line having answering and multiple jacks at the central office, of a local battery cord circuit to connect with the answering jack, a common battery cord circuit, the multiple jacks being adapted to be used when a connection is established between said line and a common battery cord circuit, and means associated with said line to prevent battery from the common battery cord circuit flowing over the line when connection is established between said multiple jacks and said common battery cord circuit, substantially as described.

2. In a telephone system, the combination with a telephone line having two types of jacks comprising answering and multiple jacks at the central office, the test contacts of the answering jack being connected with the test contacts of the multiple jacks and the other contacts of the answering jack being connected in a circuit independent of the other contacts of the multiple jacks, a repeating coil for the line, means for including windings of the repeating coil when using one type of jack for establishing a talking connection, and means for excluding windings of the repeating coil when using the other type of jack for establishing a talking connection, substantially as described.

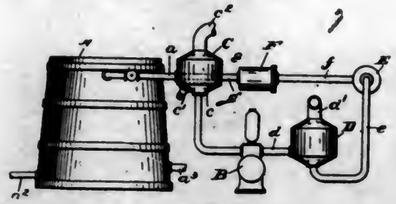
3. In a telephone system, the combination with a telephone line, of an answering jack therefor having contacts directly connected with the limbs of the line, a repeating coil in the line and multiple jacks having contacts inductively connected with the telephone line through said repeating coil during conversation, substantially as described.

4. In a telephone system, the combination with a telephone line, of a line relay therefor adapted to be actuated by current from the substation on the line, a line lamp displayed by the actuation of said relay, a cut-off relay adapted by its actuation to interrupt a locking circuit through said line relay, answering and multiple jacks for the line, the sleeve contacts of said jacks being connected to the coil of said cut-off relay, the other contacts of the answering jack being directly connected with the limbs of the telephone line and being independent of the other contacts of the multiple jacks, substantially as described.

5. In a telephone system, the combination with a telephone line, of a local battery subscriber's station located on the line, a repeating coil permanently associated with the line, answering and multiple jacks for the line, the said repeating coil being adapted to be inductively included in the talking circuit when a connection is established with one of the multiple jacks, and being adapted to be excluded from the talking circuit when a connection is established with the answering jack, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,017,086. PROCESS OF REMOVING ALCOHOL FROM AND PURIFYING BEER. HENRY E. DECKEBACH, Cincinnati, Ohio. Filed Apr. 11, 1908. Serial No. 426,502. (Cl. 195—20.)



The process of treating beer consisting of withdrawing it from the fermenting tub, passing heated, compressed air through it, carrying off the air, sending the beer through a cooler, thence carrying it through a strainer, returning it from the strainer to the fermenting tub, and continuing the circulation until the beer has been lowered to the desired temperature.

1,017,087. TRANSOM-LIFT. JOSEPH A. DILLON, New Haven, Conn. Filed Oct. 11, 1911. Serial No. 653,997. (Cl. 16—28.)

1. In a transom lift, the combination with one or more fixed blocks; of a rod slidable in said blocks; a transom plate; an arm pivotally secured to said rod at one end and to said transom plate at the other end, having a locking member thereon, one of said blocks being so arranged that the engagement of said locking member therewith will lock said transom when in its closed position.

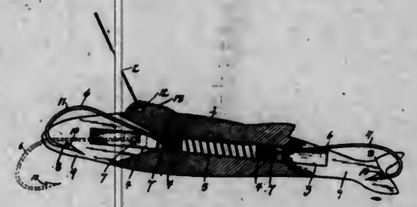
2. In a transom lift, the combination with one or more fixed blocks, one of said blocks having locking notches therein; of a rod slidable in said blocks; a transom plate; and an arm pivotally secured to said rod at one end and to said transom plate at the other end, having a locking member thereon arranged so as to engage the said locking notches when the transom is in its closed position.

3. In a transom plate, the combination with one or more fixed blocks, one of said blocks having notched wings thereon; of a rod slidable in said blocks; a transom plate; and an arm pivotally secured to said rod at one end and to said transom plate at the other end, and during its movement passing between said notched wings, said arm having locking wings thereon arranged so as to engage the notches in said wings when the transom is in its closed position.

4. In a transom lift, the combination with one or more fixed blocks; of a rod slidable in said blocks; a transom plate; an arm pivotally secured to said rod at one end and to said transom plate at the other end, having a locking member thereon between the ends thereof; and a fixed member arranged so that the engagement of said locking member therewith will lock said transom when in its closed position.

5. In a transom lift, the combination with a rod; of a yoke block fixed thereto; a second rod; means for pivotally connecting said second rod to said yoke block; an arm adjustably secured to said second rod and having locking wings thereon; a transom plate; an extension rod adjustably secured within said transom plate and having a pivotal connection with said arm; and a fixed member having notches therein for the reception of said locking wings.

1,017,088. ARTIFICIAL FISH-BAIT. ALBERT J. DREMEL, Milwaukee, Wis. Filed May 25, 1911. Serial No. 629,258. (Cl. 43—31.)

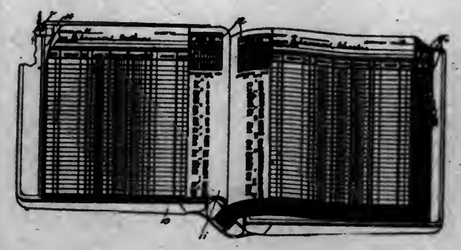


1. In a device of the described class, the combination of a bait resembling the body of a fish, provided with a longitudinal recess for the reception of a fish hook, and at its center with a longitudinal aperture, a sliding block located in said aperture, a fish hook pivotally connected with said block, a push spring adapted to yieldingly bear against said block, means for normally retaining said hook within said longitudinal recess and a line attached to the side of the bait, said hook being adapted to be actuated by the recoil of said spring independently of the tension on said line.

2. In a device of the described class, the combination of a bait representing the body of a fish, provided at its respective ends with a longitudinal recess, and at its center with a longitudinal aperture, a pair of sliding blocks located in said longitudinal aperture, a fish hook pivotally connected with each of said blocks, a spiral spring interposed between said blocks, and means connected with the respective ends of the fish for normally retaining said hooks in said longitudinal end recess, said spring being adapted, when either of said hooks is disengaged from said retaining means, to throw such hook forwardly out of said end recesses with a quick positive movement.

3. In a device of the described class, the combination of a bait resembling the body of a fish, provided at its respective ends with a longitudinal vertical recess, and at its center with a longitudinal aperture, a pair of sliding blocks located in said central aperture, a spiral spring interposed between said blocks, a fish hook pivotally connected at one end with each of said blocks, while its opposite end is normally retained in said longitudinal recess, a pair of transversely arranged pins located in said longitudinal recess adapted to engage the laterally projecting barb of the hooks and normally retain said hooks within said bait, a fish line, and means for connecting such fish line with said bait at an intermediate point between its respective ends, all substantially as and for the purpose specified.

1,017,089. INDEX SYSTEM. EDWARD A. DUNN, Newton, Mass. Filed July 5, 1910. Serial No. 570,276. (Cl. 11—7.)



1. An index comprising a series of sheets or cards each having alphabetical subdivisions for surnames, individualized by numerals, and also having alphabetical subdivisions for Christian or firm names individualized by numerals other than the first mentioned numerals, in combination with an indexed element or elements, whereby an indexed element may be indicated by combining an individualised numeral of the surname subdivision with an individualized numeral of the Christian name subdivision.

2. An index comprising a series of sheets or cards, each having alphabetical sub-divisions for surnames individualized by numerals in sequence of 10's, and also having alphabetical sub-divisions of initials in groups individualised by numerals 0 to 9, in combination with an indexed element or elements, whereby an indexed element may be indicated by combining an individualized numeral of the surname subdivision with an individualized numeral of the Christian name subdivision.

3. A posting sheet having two separate series of alphabetical sub-divisions individualized by numerals, one series including the first and second letters of surnames in alphabetical order and with the numerals in sequence, the other series having initials in groups, each group having a single numeral, in combination with an indexed element or elements, whereby an indexed element may be indicated by combining an individualized numeral of the surname subdivision with an individualized numeral of the Christian name subdivision.

4. A posting sheet having two separate series of alphabetical sub-divisions individualized by numerals, one series including the first and second letters of surnames in alphabetical order and with the numerals in sequence in multiples of 10's, the other series having initials in groups individualised by the numerals 0 to 9, in combination with an indexed element or elements, whereby an indexed element may be indicated by combining an individualized numeral of the surname subdivision with an individualized numeral of the Christian name subdivision.

5. A sheet having a column of initials and second letters of surnames numbered in sequence, and having also, a name key comprising initials in groups, each group being individualised by a single numeral, in combination with an indexed element or elements, whereby an indexed element may be indicated by combining an individualised numeral of the surname subdivision with an individualised numeral of the Christian name subdivision.

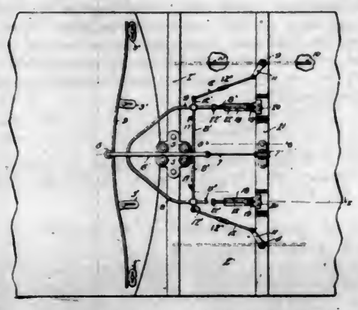
[Claim 6 not printed in the Gazette.]

1,017,090. SAFETY-GATE FOR BRIDGES. CASPER

ried on each side of the truck and resting on the rails of the track, a torque projecting forwardly from each axle

movable receiving end, a vertical adjustable rake pivotally

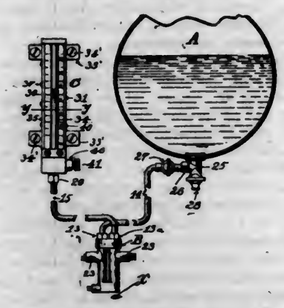
1,017,090. SAFETY-GATE FOR BRIDGES. CASPER FAUST, Oshkosh, Wis. Filed Nov. 6, 1911. Serial No. 658,738. (Cl. 14—37.)



1. In a horizontally swinging bridge having a cam-rail adjacent to its end, an apertured abutment with which the bridge in adapted to register, a reciprocative roller-carrying plunger adapted to be actuated in one direction by the cam-rail, guides for the plunger carried by the abutment, a weighted cable in connection with said plunger whereby the same is moved in one direction; the combination of a yoke carried by the plunger, gate-carrying spindles journaled in the aforesaid abutment, cranks secured to the spindles, rods connecting the cranks and plunger-yoke, disappearing gate-locking stubs mounted within the abutment apertures and actuating means for the stubs controlled by movement of said plunger.

2. In a horizontally swinging bridge having a cam-rail adjacent to its end, an apertured abutment with which the bridge is adapted to register, a reciprocative roller-carrying plunger adapted to be actuated in one direction by the cam-rail, guides for the plunger carried by the abutment, a weighted cable in connection with said plunger whereby the same is moved in one direction; the combination of a yoke carried by the plunger having end extensions, gate-carrying spindles journaled in the abutment, cranks secured to the spindles, rods connecting the cranks and plunger yoke, disappearing gate-locking stubs mounted within the abutment apertures, eyed straps connecting the stubs the strap-eyes being in slidable engagement with ends of the yoke and an extension carried by the yoke-ends adapted to abut the strap-eyes whereby the stubs are actuated incidental to a gate-closing movement of said plunger.

1,017,091. SYSTEM OF INDICATING THE CONTENTS OF LIQUID-CONTAINERS. OSCAR FREDERICKSON, Chicago, Ill. Filed Mar. 4, 1911. Serial No. 612,369. (Cl. 73—54.)



1. An indicating system for liquid containers, comprising, in combination, a tank, a mercury container located below said tank and including a multiplicity of chambers connected in series, a tube connecting said tank to the first one of said chambers, mercury in each of said chambers occupying normally approximately the lower half of said chambers, the liquid in said tank acting upon the mercury in the first chamber by gravity, a liquid-operated indicator located at a distance from said mercury container, a tube connecting said indicator to the last one of the said chambers, there being in said indicator a transparent tube smaller in diameter than the tube connecting said indicator to said chamber, a liquid in the last said tube and the indicator tube acted upon by the mercury in the last one of said chambers, whereby the vertical movement of the mercury in said chambers caused by the varying column of liquid acting upon the said mercury in the first chamber is transmitted to the liquid in the indicator tube and increased therein in the same ratio as the diameter of the indicator tube bears to that of the indicator-connecting tube, as set forth.

2. An indicating system for liquid containers, comprising, in combination, a tank, a discharge pipe connected to said tank at its lowermost point, a mercury container comprising an integral body of tubular members, a tubular boss projecting laterally from the first of said tubular members and a further tubular boss projecting laterally from the last of said tubular members, both bosses being located near the upper ends of said tubular members, a nipple on each of these tubular bosses, screw-actuated valves in said tubular bosses, connecting means at the upper ends of said first and last tubular members to one of which said discharge tube is removably connected, a tube removably connected to the other of said connecting means, a liquid-operated indicator located at a distance from said mercury container and connected thereto by a tube, and means in said indicator for increasing and decreasing the cubic contents of the latter tube, as stated.

3. In a system of indicating the height of liquid in liquid containers, a mercury-actuated device operated by the liquid in said container comprising an integral body having a multiplicity of chambers connected in series, there being on the ingress and egress chambers of the series connecting means and tubes removably connected to said connecting means, branches leading from said ingress and egress chambers, nipples on said branches whereto a hose may be attached, valve seats in said branches and screw-operated valves in said branches constructed to open and close communication between said chambers and the outer atmosphere, as specified.

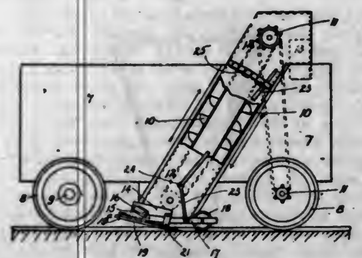
4. In an indicating system for liquid containers, the combination, of a tank, a discharge pipe leading from said tank, a mercury container to which said discharge pipe is connected, a further pipe leading from said mercury container, and an indicator to which said latter pipe is connected, said indicator including a body, means on said body for increasing and decreasing the cubic contents of the last-mentioned pipe, a glass indicating tube, and a movable indicator scale, said scale comprising separate, adjustable members, and a plate at the side of said body for simultaneously clamping said separate members to said body, as specified.

5. A system for indicating the height of liquid in liquid containers, comprising a tank, a mercury container located below said tank, a pipe connecting said mercury container to said tank, an indicator, and a pipe connecting said indicator to said mercury container, said mercury container comprising a series of connected tubes adapted to contain mercury, said indicator including a body, a glass indicating tube on said body, and a series of separate, movable, indicating pointers on said body, said indicator pointers being secured to said body in adjusted position by a clamping bar acting simultaneously upon all of said indicating pointers.

[Claim 6 not printed in the Gazette.]

1,017,092. MEANS FOR USE IN CLEANING TRAMWAY-TRACKS. ARTHUR GARDNER, Wellington, New Zealand. Filed Dec. 19, 1910. Serial No. 598,088. (Cl. 104—38.)

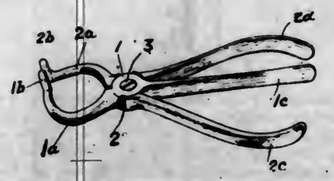
1. Means for the purposes herein indicated comprising a truck adapted to be moved along the track, scoops carried on each side of the truck and resting on the rails of the track, a tongue projecting forwardly from each scoop adapted to enter the groove in the corresponding rail, and an elevator on each side of the truck arranged to work along the bottom of the corresponding scoop and to deliver the dirt into the truck, substantially as specified.



2. In means for purposes herein indicated, a truck adapted to be moved along the track, a scoop pivotally supported on the side of the truck, a tongue extending forwardly from the front edge of the scoop and mounted in guide bearings on the scoop, a spring cushioning such tongue when moved longitudinally backward, an elevator mounted on the side of the truck and arranged to travel along the scoop bottom, a chute entering the truck over which the elevator passes, and means whereby such elevator may be driven, substantially as specified.

3. In means for the purposes herein indicated, a truck adapted to be moved along the rails, a scoop pivotally supported at its back end to the truck side, a lever pivoted to the side of the truck and connected with the scoop at its forward end, a tongue slidably mounted beneath the scoop and projecting beyond the front edge thereof, a spring cushioning such tongue, an elevator mounted on the side of the truck and arranged to travel along the bottom of the scoop, a chute entering the truck over which the elevator passes, and connections between the truck axle and the elevator shaft, for driving the elevator, substantially as specified.

1,017,093. COMBINATION-TOOL. GEORGE WALKER GILMER, Jr., Philadelphia, Pa. Filed June 5, 1911. Serial No. 631,296. (Cl. 7—3.)

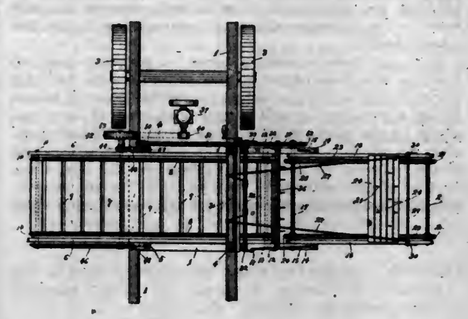


1. A tool comprising a lever provided with a jaw and two handles, in combination with a lever provided with a jaw adapted to coöperate with said jaw first named and a handle disposed between said handles first named.

2. A tool comprising a lever having integrally formed therewith a jaw and a pair of handles, a second lever having integrally formed therewith a jaw and a handle, and a pivot whereby said levers are connected together so that the handle of said second lever shall oscillate between the handles of said first lever, whereby said jaws are brought together and expanded.

1,017,094. MANURE-LOADER. WILLIAM GRAETZ, Sumner, Minn., assignor of one-third to Henry Miller, Beaver Dam, Wis., and one-third to Frank L. Hodgson, Stewartville, Minn. Filed Aug. 3, 1911. Serial No. 642,102. (Cl. 214—1.)

1. In a loader of the kind described, the combination with a support, of an inclined elevator having a vertically movable receiving end, a vertical adjustable rake pivotally connected to the receiving end of said elevator, and a ground engaging runner supporting the receiving end of said elevator and delivery end of said rake.



2. In a loader of the kind described, the combination with a support, of an inclined elevator intermediately pivoted thereto, a vertically adjustable rake pivotally connected to the receiving end of the said elevator, and a ground engaging runner supporting the receiving end of said elevator and the delivery end of said rake.

3. In a loader of the kind described, the combination with a support, of an inclined elevator intermediately pivoted thereto, a vertically adjustable rake pivotally connected to the receiving end of the said elevator, and a ground engaging runner supporting the receiving end of said elevator and the delivery end of said rake, and a rotary toothed stripper working in the vicinity of the receiving end of said elevator and of the delivery end of said rake.

4. In a loader of the kind described, the combination with a truck, of a transversely inclined elevator intermediately pivoted thereto, a vertically adjustable rake pivotally connected to the receiving end of said elevator, and a guide engaging runner supporting the receiving end of said elevator and the delivery end of said rake.

5. In a loader of the kind described, the combination with a truck, of a transversely inclined elevator intermediately pivoted thereto, a vertically adjustable rake pivotally connected to the receiving end of said elevator, a guide engaging runner supporting the receiving end of said elevator and the delivery end of said rake, and a stripper working in the vicinity of the receiving end of said elevator and of the delivery end of said rake.

[Claims 6 and 7 not printed in the Gazettte.]

1,017,095. FIRE AND BURGLAR ALARM. MARSHAL J. GREGORY, Sour Lake, Tex., assignor of one-half to John W. Turnbow, Sour Lake, Tex. Filed July 5, 1910. Serial No. 570,458. (Cl. 116—11.)

1. In an alarm system, a signal; a latch; a flexible strand connecting the signal and the latch; a weight under

the control of the latch; signals operatively connected with the weight to be operated by the weight when the weight is released by the action of the latch; slidably mounted weights adapted to engage the strand intermediate the signal and the latch; and other strands adapted to yield under a rise in temperature, and connected with the last named weights.

2. In an alarm system, a signal; a pivotally mounted latch; a strand connected at remote points with the latch and with the signal; a weight; a flexible element constituting a support for said weight, and adapted to be engaged by the latch; a signal actuable by the flexible element; a slidably mounted weight adapted to engage the strand between the first named signal and the latch; and another strand adapted to yield under a rise in temperature, and constituting a support for the last named weight.

1,017,096. SHOE-CLEANER. FRADELSHON HARRIS and ROSALIND STERNBERG, St. Louis, Mo. Filed June 16, 1910. Serial No. 567,127. (Cl. 21—55.)

1. In a shoe cleaner of the class described, the combination with a rectangular, metallic member one side of which is sharpened to serve as a shoe scraper, of a pair of channel bars to serve as guides for the rectangular member, said bars adapted to be secured in place so that the channels in the guides will incline.

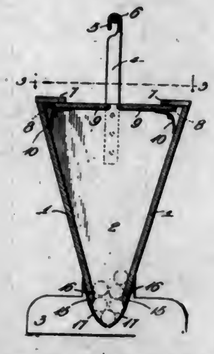
2. In combination with a running board of an automobile, a pair of channel bars secured at an angle to the underneath face of the running board, a rectangular member held in place between the channel bars and having one of its sides sharpened to serve as a shoe cleaner, a stop secured to the running board to limit the movements of the rectangular member, and resilient members for engagement with the rectangular member, for the purposes stated.

3. In combination with a running board of an automobile, a pair of guides, having inclined channels, secured to the underneath face of the running board, a rectangular member, having its forward edge sharpened to serve as a shoe scraper, held in place between said guides, and means for limiting the movement of the rectangular member.

4. In combination with a running board of an automobile, a pair of guides, having inclined channels, secured to the underneath face of the running board, a rectangular member, having its forward edge sharpened to serve as a shoe scraper, held in place between said guides, means for limiting the movement of the rectangular member, there being pockets formed in said guides and in the side portions of said rectangular member, and resilient devices held in said pockets to produce friction between the rectangular member and the guides.

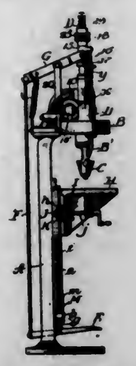
1,017,097. CLOTHES-PIN HOLDER. JOHN J. HARRIS, Calumet, Mich. Filed Oct. 26, 1911. Serial No. 656,946. (Cl. 68—11.)

The herein described clothes-pin holder comprising rigid upright end walls, rigid side walls connecting said end walls and converging downward toward each other, means for permitting the withdrawal of the contents from between the lower edges of the side walls, rigid longitudinal top strips connecting said end walls and extending from above the side walls inward toward each other, gates hinged at their outer edges under said strips, springs holding said gates elevated into normal contact with the strips,



a handle connecting the end walls, and a hook on the handle, for the purpose set forth.

1,017,098. ADJUSTABLE TABLE FOR AUTOMATIC SCREW-DRIVING MACHINES. WILSON P. HUNT, Moline, Ill., assignor to Reynolds Pattern and Machine Company, Moline, Ill., a Corporation of Illinois. Filed Feb. 26, 1910. Serial No. 546,242. (Cl. 144—84.)



1. In a machine of the kind specified comprising a downwardly movable revoluble bit, an upwardly movable bed-plate, mechanism including a vertically adjustable screw-threaded yielding bar, a rotatable shaft supported by said bed-plate, gearing connecting said shaft and bar through the medium of which said bed-plate is adjustable vertically, and means for simultaneously actuating said rod and bar.

2. A machine of the kind specified comprising a downwardly movable bit, an upwardly movable bed-platen, mechanism, including a vertical rod for moving said bit downward, an elevating frame having a vertical opening, a hollow plug filling the lower end of said opening, a vertical bar the lower end of which is seated in and has a limited longitudinal movement in the upper portion of said opening, a spring governing the movement of said bar in said opening, and a foot-lever engaging said plug and having one end connected to said rod, which latter is actuated by said lever simultaneously with said bar.

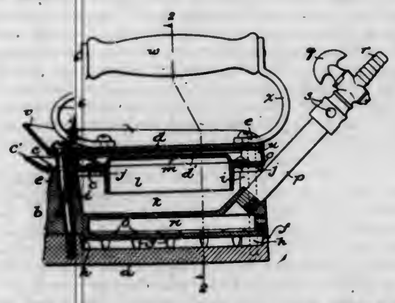
3. A machine of the kind specified comprising a downwardly movable bit, an upwardly movable bed-platen, mechanism including a vertical rod for moving said bit downward, an elevating-frame having a vertical opening, a hollow plug filling the lower end of said opening, and having a transverse retaining pin passed through the upper

end of the same, a vertical bar having a bifurcated lower end the arms of which straddle said pin and are retained thereon by a pin, a spring on said bar tapped through the same below and at an angle to said first mentioned pin, and a foot-lever engaging said lug and having one end connected to said rod which latter is actuated by said lever simultaneously with said bar.

4. A machine of the kind specified comprising a downwardly movable bit, an upwardly movable bed-platen, mechanism, including a vertical rod for moving said bit downward, an elevating frame having a vertical opening, a hollow plug filling the lower end of said opening and having a transverse retaining pin passed through the upper end of the same and provided with an antifriction roller on its lower end, a vertical bar having a bifurcated lower end the arms of which straddle said pin and are retained thereon by a pin passed through the same below and at an angle to said first mentioned pin, a spring on said bar, and a foot lever engaging the roller on said plug and having a cam mediate its ends that engages said roller, one end of said lever connected to said rod which latter is actuated by said lever simultaneously with said bar.

5. A machine of the kind specified comprising a downwardly movable bit, an upwardly movable bed-platen, mechanism including a vertical rod for moving said bit downward, an elevating-frame having a vertical opening, a hollow plug filling the lower end of said opening, and having a transverse retaining pin passed through the upper end of the same, a vertical bar having a bifurcated lower end, the arms of which straddle said pin and are retained thereon by a pin tapped through the same below and at an angle to said first mentioned pin, a spring on said bar, and a foot-lever pivoted mediate its ends and provided with a cam that engages said plug and having one end connected to said rod which latter is actuated by said lever simultaneously with said bar.

1,017,099. FLAT-IRON. FRITZ JOHNSON, Racine, Wis., assignor to Johnson Combined Pressing & Refinishing Iron Company, Racine, Wis., a Corporation of Wisconsin. Filed Sept. 7, 1911. Serial No. 648,181. (Cl. 158—23.1.)

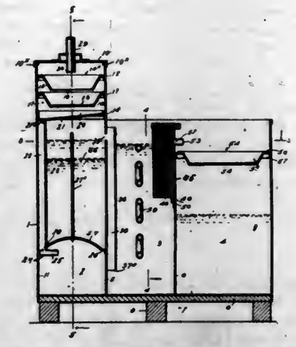


1. In a flat iron the combination of a base having upturned marginal walls, a burner section formed with corresponding marginal walls and a tubular burner having downwardly directed jet orifices, a flue plate having a downwardly flanged central opening and a deflector over said opening and a handle plate and shield supported above said flue plate and deflector with an open air space between them, all of said parts being detachably secured together by bolts, and the walls of the base and of the burner section being formed with air inlet and outlet openings below and above the burner.

2. In a flat iron the combination of a base having upturned marginal walls, a burner section formed with corresponding marginal walls fitted to and forming an upward continuation of the base walls and with a longitudinal tubular burner having downwardly directed gas orifices in the lower side thereof close to the base, a flue plate having a downwardly flanged central opening and a deflector over said opening, and a handle plate and shield provided with a handle and supported above said flue plate and deflector with an open space between them, all of said parts being detachably secured together by bolts and the walls of the base and of the burner section being formed with air inlet and outlet openings below and above the burner.

3. In a flat iron the combination of a base, a burner section provided with a burner adjacent to the base, and a top plate having an outwardly and upwardly inclined perforated marginal guard, all of said parts being secured together and forming a combustion chamber with air inlet openings adjacent to the base and outlet openings adjacent to the top plate.

1,017,100. OIL-FILTER. JOSEPH E. JONES, Youngstown, Ohio. Filed Aug. 10, 1910. Serial No. 576,505. (Cl. 210—10.)

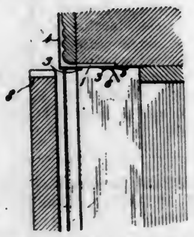


In a device of the character described, a shell divided into a plurality of compartments, the first compartment extending upwardly above the others and having one side thereof formed open, a door hinged to said first compartment to normally close the open side thereof, a plurality of spaced superposed strainer devices disposed within the first compartment and adapted to be readily removed therefrom through the open side thereof, a conveyer pan disposed within said first compartment, arranged below said strainer devices and adapted to be removed therefrom through said open side, a vertical conduit disposed to receive oil from said conveyer pan and discharge the same into the lower end of the first compartment, a strainer removably mounted in the lower end of said first compartment and disposed above the discharge end of said conduit, said strainer being in the embodiment of a plate curved in cross-section to provide the greatest area and perforated throughout, whereby the oil is separated into fine particles when passing therethrough, a second conduit disposed within the second compartment and adapted to convey oil from the upper end of the first compartment and discharge the same into the lower end of the second compartment, a heating coil arranged within the second compartment, having its turns substantially horizontally disposed and the inlet end arranged above the oulet end, whereby the condensed steam or water will run out of the coil and not seal the same, a conduit for discharging material from the upper end of the second compartment into the upper end of the third compartment, a removable strainer device disposed in proximity to the last named conduit and being curved in cross-section to afford the maximum area, and a removable strainer device disposed in the upper portion of the third compartment to catch material delivered through the last named conduit.

1,017,101. AUTOMATIC BELL-SWITCH. ALFRED FREDERICK KAISER, Detroit, Mich. Filed May 29, 1909. Serial No. 499,123. (Cl. 179—202.)

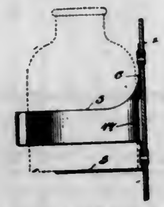
The combination with a door frame and a swinging door, contact plates carried by the top of the door frame, said

plates forming part of an electric circuit and being spaced apart, and an angled plate pivoted adjacent the contact plates, one portion of said angled plate being heavier than the other, the heavier portion normally hanging down-



wardly in position to be swung into a horizontal plane by the closing of a door, the lighter portion of the plate bearing against the contact plates when the heavier portion is in normal position.

1,017,102. RACK FOR VESSELS. ADAM KAUFMAN, Milwaukee, Wis., assignor to Res Manufacturing Company, Milwaukee, Wis. Filed May 9, 1911. Serial No. 626,120. (Cl. 248—20.)



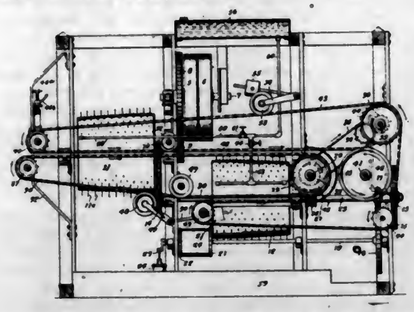
1. A rack comprising a skeleton frame having vertical and transverse bars, a series of holders secured to the vertical bars, each holder being formed from a single blank comprising a circular foot portion and a backbone extending therefrom, the circular foot portion being at right angles to the backbone, oppositely disposed circular arms radiating from the backbone and terminating to form an open throat therebetween, a neck extending from the backbone, and securing means connecting the backbone and neck to said vertical arm.

2. A rack comprising a skeleton frame having vertical and transverse bars, a series of holders secured to the vertical bars, each holder being formed from a single blank comprising a circular foot portion and a backbone extending therefrom, the circular foot portion being at right angles to the backbone, oppositely disposed circular arms radiating from the backbone and terminating to form an open throat therebetween, an offset portion upon the backbone approximately at the point of juncture between the arms of said backbone, a neck extending from the backbone, and securing means connecting the backbone and neck to said vertical arm.

1,017,103. SUBMARINE BOAT. ROBERT OWEN KING, Buffalo, N. Y. Filed May 7, 1910. Serial No. 559,941. (Cl. 115—12.)

A submarine boat having a pair of horizontal front jets projecting in opposite directions from the bow, a pair of vertical front jets projecting in opposite directions from the bow, a pair of horizontal rear jets projecting in opposite directions from the stern, a pair of vertical rear jets projecting in opposite directions from the stern, means for supplying water to said jets and a valve mechanism for controlling the flow of water through said jets.

1,017,104. DECORTICATING-MACHINE. LUCIUS LAVEDAN and HENRI AMIGUES, New Orleans, La. Filed Sept. 23, 1910. Serial No. 583,422. (Cl. 13—2.)



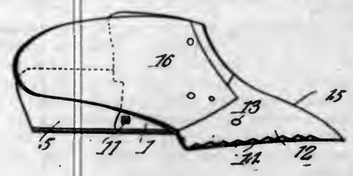
1. In a decorticating device, a plurality of sets of drums provided with spikes of teeth on their peripheries, a pair of endless chains disposed between one set of drums, one of said chains serving as a lower support for the plants and the other serving as an upper retaining member, said chains having their return portions extending between a second set of drums, and the upper chain serving as a lower supporting member, and the lower chain serving as an upper retaining member between the second set of drums, a guide member for reversing the position of the plants.

2. In a decorticating device, a plurality of sets of drums provided with spikes or teeth on their peripheries, a number of endless chains disposed between one set of drums, one of said chains serving as a lower support for the plants, and the other serving as an upper retaining member, said chains having their return portions extending between a second set of drums, the upper chain serving as a lower supporting member, and the lower chain serving as an upper retaining member between the second set of drums, a guide member for reversing the position of the plants, an upper reservoir disposed above one set of drums, a lower reservoir disposed below the upper reservoir and in alinement therewith, and means for pumping water from the lower to the upper reservoir.

3. In a decorticating device, a plurality of sets of drums provided with spikes or teeth on their peripheries, a number of endless chains disposed between one set of drums, one of said chains serving as a lower support for the plants, and the other serving as an upper retaining member, said chains having their return portions extending between a second set of drums, the upper chain serving as an upper retaining member between the second set of drums, a guide member for reversing the position of the plants, and means for subjecting one of said sets of drums to streams of water.

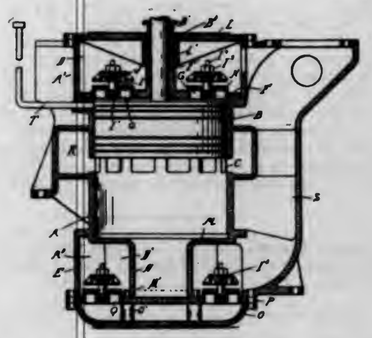
1,017,105. PLOW. JAMES SCHUYLER LUPTON, Chattanooga, Tenn. Filed July 22, 1909. Serial No. 508,990. (Cl. 97—17.)

A plow comprising a frog having a rib upon its land side portion, said rib having a recess, said frog having at the lower edge of its land side portion a lug, a land side plate fitting upon the land side portion of the frog below the rib and having a lug adpted to enter the recess in the rib, and having a recess for the reception of the rear portion of the rib whereby the land side is locked against longitudinal movement, said land side plate having at its lower forward edge a recess for the reception of the lug upon the frog, a share fitting upon the frog in advance of the land side plate and having a recess for the reception of the forward portion of the lug upon the



frog, said share and land side plate having chamfered overlapping ends.

1,017,106. PUMP. ALFRED G. MATTSSON, Detroit, Mich., assignor to Great Lakes Engineering Works, Detroit, Mich., a Corporation of Michigan. Filed Mar. 18, 1911. Serial No. 615,372. (Cl. 230—27.)

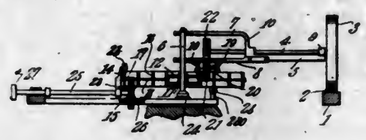


1. In a pump, the combination with a barrel having a vertical axis and a reciprocatory piston therein, of an inlet conduit communicating with the central portion of the barrel and adapted to alternately discharge into the barrel upon opposite sides of the piston, a downward extension of the barrel provided with a central contracted passage, a surrounding annular valve chest in communication with the central passage, an upward extension of said barrel forming a second valve chest, a discharge conduit communicating with the upper and lower chests, and gravity seated valves controlling communication between the chest and the barrel.

2. In a pump, the combination with a barrel having a vertical axis, and a reciprocatory piston therein, of an inlet conduit communicating with the central portion of the barrel adapted to alternately discharge into the latter upon opposite sides of the piston, a downward extension of the barrel having a central contracted passage and a surrounding annular chamber forming a valve chest, a recessed cap for closing said downward extension and forming a communication between the central passage and the annular surrounding chamber, an annular seat between said cap and said annular chamber having a circular series of valve ports therein, studs projecting upward from said seat centrally of the ports, gravity seated valve disks engaging said studs, an upward extension of the barrel forming a second valve chest, gravity seated valves therein, and a conduit connecting said valve chests forming a discharge outlet therefor.

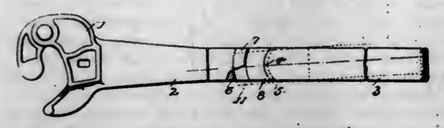
3. In a pump, the combination with a barrel and a reciprocatory piston therein, of a valve chest at the end of the barrel, valves in said chest, controlling ports communicating with the barrel, and a pressure relief conduit communicating with the barrel below said chest and below the highest point of travel of the piston, said conduit having an elastic fluid trap therein, for the purpose described.

1,017,107. GEARING. ANDREW J. MCLENDON, Edith, Tex. Filed July 14, 1909. Serial No. 507,644. (Cl. 74—34.)



A power transmitter comprising a member rotative in a horizontal plane, gearing carried by the member, a series of concentric circular bands arranged below the gearing, a series of radial bolts connecting the outer bands, a series of similar bolts connecting the inner bands and engaged by the gearing, means extending from the outer to the inner bands for rigidly connecting the parts, and gearing actuated by the outer series of bolts.

1,017,108. DRAFT-RIGGING FOR CARS. ALOIS P. PRENDERGAST and JOHN J. TATUM, Baltimore, Md. Filed Nov. 21, 1907. Serial No. 403,204. (Cl. 213—42.)



1. In a draft rigging for cars, the combination of a draw-bar having a groove formed in the upper and lower faces thereof, the walls of said grooves being arc-shaped, and also having a lug projecting over one end of each of said grooves, the ends of said lugs being arc-shaped, with a yoke having arc-shaped shoulders engaging the arc-shaped walls of said grooves and other arc-shaped shoulders engaging the arc-shaped ends of said lugs, all of said arcs being struck from a common center located between said arcs and the closed end of said yoke.

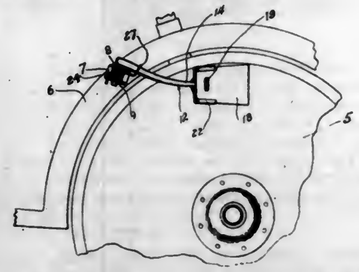
2. In a draft rigging for cars, the combination of a draw-bar having a groove formed in the upper and lower faces thereof, the end walls of said grooves being arc-shaped, and also having a lug projecting over one end of each of said grooves, the ends of said lugs being arc-shaped, with a yoke having arc-shaped shoulders engaging the arc-shaped walls of said grooves, and other arc-shaped shoulders engaging the arc-shaped ends of said lugs, all of said arcs being struck from a common center located outside of said arcs.

3. In a draft rigging for cars, the combination of a draw-bar having on each of its upper and lower sides two arc-shaped end-thrust-receiving shoulders lying in different vertical and horizontal planes and an undercut draft-receiving arc-shaped shoulder, all of said arcs being struck from a common center outside of said arcs, with a non-perforated yoke embracing said draw-bar and having two arc-shaped shoulders engaging the said end-thrust-receiving shoulders on the bar, and an arc-shaped draft-receiving shoulder engaging the undercut shoulder on the draw-bar.

1,017,109. DISK FURROW-OPENER. OTTO G. RIESKE, St. Louis Park, Minn., assignor to The Monitor Drill Company, a Corporation of Minnesota. Filed Dec. 13, 1910. Serial No. 597,126. (Cl. 111—18.)

1. In combination with a disk implement, a U-shaped yoke rigidly secured to a stationary portion of the implement frame, and having a pair of oppositely disposed holes in the arms of the yoke, and having a plurality of adjustment slots in the periphery of one of the arms, a paddle arm, a pin on one end of the same extending substantially at right angles to the paddle arm and entered through the holes of the yoke arms to bring the paddle arm into engagement with the outside face of the

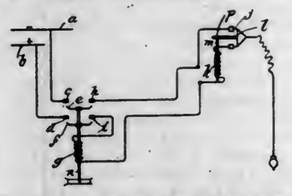
unslotted yoke arm, and a helical spring surrounding the pin between the yoke arms and having one end in engagement with an adjustment slot of the yoke and having its other end in engagement with the paddle arm, the yoke being so positioned on the implement frame with respect to the disk of the same that the working edge of the paddle extends in a suitable direction to clear the disk of dirt, substantially as described.



2. In combination with a disk implement, a U-shaped yoke rigidly secured to a stationary portion of the implement frame, and having a pair of oppositely disposed holes in the arms of the yoke, and having a plurality of adjustment slots in the periphery of one of the arms, a paddle arm, a pin on one end of the same extending substantially at right angles to the paddle arm and entered through the holes of the yoke arms to bring the paddle arm into engagement with the outside face of the unslotted yoke arm, and a helical spring surrounding the pin between the yoke arms and having one end in engagement with an adjustment slot of the yoke and having its other end in engagement with the paddle arm and of hooked formation for holding the paddle arm in engagement with the outer face of the unslotted yoke arm to maintain the pin within the holes of the yoke arms, the yoke being so positioned on the implement frame with respect to the disk of the same that the working edge of the paddle extends in a suitable direction to clear the disk of dirt, substantially as described.

3. In combination with the frame of a disk implement, a U-shaped yoke in engagement with one of the faces of such frame and provided in its arms with a pair of oppositely disposed holes and in one arm with a plurality of adjustment slots, a paddle arm, a pin on the same extending through the holes of the yoke arms, a helical spring surrounding the pin between the yoke arms and having one end in engagement with an adjustment slot and the other end in engagement with the paddle arm, and a non-circular rivet extending through that portion of the yoke which is in engagement with the face of the implement frame and through the implement frame for maintaining the yoke in engagement therewith, and for maintaining it against rotation, substantially as described.

1,017,110. LOCK FOR ELECTRIC PLUGS. ERNEST EDWARD ROGERS, London, England, assignor to Foster Engineering Company, Limited, London, England. Filed Feb. 16, 1911. Serial No. 608,995. (Cl. 175—281.)



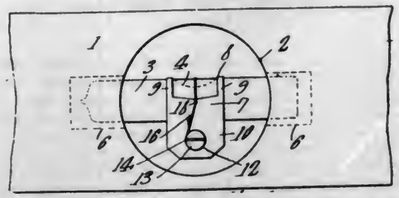
1. The combination with a plug having between its terminals an arm provided with a transverse perforation, a socket, a solenoid through which one of the socket-wires is connected, and a core within the solenoid projected through said perforation when the current flows; of the line wires, and a switch connecting them with the socket wires.

2. The combination with a plug having between its terminals an arm provided with a transverse perforation, a socket, a solenoid through which one of the socket-wires is connected, and a core within the solenoid projected through said perforation when the current flows; of the line wires, a switch for connecting them with the socket wires, and an electro-magnet in circuit in one of the socket wires and holding said switch closed when the current flows.

3. The combination with a plug having between its terminals an arm provided with a transverse perforation, a socket, a solenoid through which one of the socket-wires is connected, and a core within the solenoid projected through said perforation when the current flows; of the line wires, their terminals being spaced from the terminals of the socket wires, a double-pole switch whose contacts are adapted to bridge said terminals, and an electro-magnet in circuit in one of the socket wires and tending to hold said switch closed when the current flows.

4. The combination with a plug having an arm provided with a perforation, a socket, an electro-magnet in circuit in one of the socket wires, and means actuated by the armature of said magnet for projecting an element through said perforation when the current flows; of the line wires, their terminals being spaced from the terminals of the socket wires, a double-pole switch whose contacts are adapted to bridge said terminals, and an electro-magnet in circuit in one of the socket wires and tending to hold said switch closed when the current flows.

1,017,111. PLUMB-RULE. LAWRENCE MILTON RUDY, Shreveport, La. Filed June 19, 1911. Serial No. 633,970. (Cl. 73—70.)

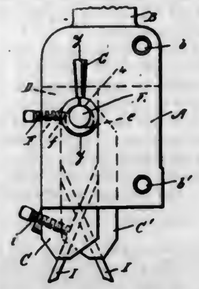


1. A device of the character described, including a bubble containing tubular member, indicator forming members and a supplemental indicator forming member, said indicator forming members encompassing said bubble containing member, the said supplemental member being intermediate of the other members.

2. A device of the character described, including an air-bubble containing tubular member, an indicator forming member having a passage therein and comprising a split clasp member embracing said tubular member, the resulting depending limbs thereof being equipped with an adjusting screw, and a supplemental indicator formed of a wire applied to the upper portion of said tubular member, said clasp member having a viewing opening in its upper portion receiving said supplemental indicator, one end of said wire being attached to the first referred to indicator and extending through the passage in said indicator oppositely to its said attached end, the other end of said supplemental indicator forming wire being attached to said adjusting screw.

1,017,112. TOOL-HOLDER. FREDERICK SEITZ, Rensselaer, N. Y. Filed Feb. 21, 1911. Serial No. 610,099. (Cl. 90—53.)

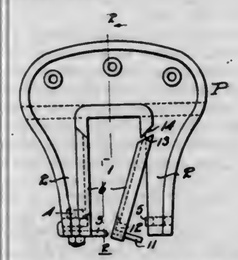
1. In a tool holder, the combination, with a housing provided with slots having openings at its opposite faces, of a shaft journaled in the housing and projecting crosswise through its slots, said shaft being provided with an eccentric arranged in one of the slots, and two tool blocks pivoted in the said slots on the said shaft and its eccentric respectively, and bearing against the housing in opposite directions, said tool blocks being provided with means for holding cutting tools in position.



2. In a tool holder, the combination, with a housing provided with slots having openings at its opposite faces and provided also with shaft bearings, of a split bush arranged in the housing in line with the shaft bearings, a shaft journaled in the said bearings and provided with an eccentric arranged in one of the said slots, a screw for contracting the said split bush on the said shaft, and two tool blocks pivoted in the said slots on the said shaft and its eccentric respectively, and bearing against the housing in opposite directions, said tool blocks being provided with means for holding cutting tools in position.

3. In a tool holder, the combination, with a housing provided with slots having openings at its opposite faces, one of the said slots being deeper than the other and the said housing being provided with means for securing it to the tool head of a planing machine in place of the usual tool apron, of two tool blocks pivoted on the same axis in the said slots and bearing against the housing in opposite directions, said tool blocks being provided with inclined holes for the cutting tools arranged crosswise of each other.

1,017,113. JOURNAL-BOX PEDESTAL. GEORGE M. SLACK, Altoona, Pa. Filed May 8, 1911. Serial No. 625,851. (Cl. 105—113.)



1. In a journal box pedestal, the pedestal body having an opening therein for the journal box, and substantially U-shaped detachable wear lining sections fitted to each side of the opening, each of said lining sections having an interlocked connection at one end with the body and a bolted connection at the other end with the body.

2. In a journal box pedestal, the pedestal body having an opening therein for the journal box, and detachable wear lining sections fitted to the body at the sides of the opening, each of said lining sections having an interlocked connection at one end with the body, and a bolted connection at the other end with the body.

3. In a journal box pedestal a pedestal body having projecting abutments and an opening for the journal box, and detachable wear lining sections fitted to the body at the sides of the opening and interlocked with said abutments, and a bolted connection at the other end with the body.

4. In a journal box pedestal, the pedestal body having beveled abutments, spaced ribs at the sides of the opening, and bolt ears adjacent the lower ends of its side legs, and a detachable wear lining section fitted to the body at each side of the opening therein, the said lining section having spaced channeled members fitting the ribs of the body, a connecting piece for said members having a bolting flange for bolting to a bolt ear of the body, and beveled portions at the ends of said members for engagements with said beveled abutments.

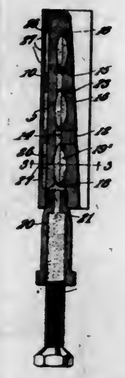
1,017,114. SASH-PULLEY. FRANK F. SMITH, Newark, N. J. Filed Aug. 28, 1911. Serial No. 646,541. (Cl. 16—17.)

1. The improved sash-pulley construction consisting of a housing-part, a fork-part, a sash-pulley and an axle-pin, the housing-part consisting of a housing adapted to operatively contain the sash-pulley and having a strap extending rearwardly from its base, the sides of the housing having grooves which extend transversely to the length of the strap, and said fork-part consisting of a strap having a fork at one end whose arms slidably enter the grooves in the sides of the housing, the arms of the fork and the sides of the housing having holes through them, which are in alinement when the housing and fork-parts are assembled together to receive through them the axle-pin which likewise operatively supports the pulley in the housing, and securing means on said straps for securing them and the entire construction to the corner of the window-frame.

2. The improved sash-pulley construction consisting of a housing-part, a fork-part, a sash-pulley having an axle-hole therethrough, and an axle-pin, the housing-part consisting of a hollow housing adapted to contain the sash-pulley and having a strap extending rearwardly from the bottom of the housing, the sides of the housing having grooves extending transversely relatively to the strap and the sides of said grooves converging toward the top of the housing, and said fork-part consisting of a strap having a fork at one end the planes of whose arms are transverse to the plane of the strap, the sides of said arms converging toward their free ends to slidably enter endwise the grooves in the sides of the housing, the arms of the fork and the sides of the housing having holes through them, which are in alinement when the housing and fork-parts are assembled as described to receive through them the axle-pin which likewise passes through the axle-hole in the pulley to operatively support it in the housing, the aforesaid straps being provided with securing means for securing them and the entire construction to the corner of the window-frame.

3. The improved sash-pulley construction consisting of a housing-part, a fork-part, a sash-pulley and an axle-pin, the housing-part consisting of a housing adapted to operatively contain the sash-pulley and having a strap extending rearwardly from its base, and said fork-part consisting of a strap having a fork at one end whose arms straddle the sides of the housing when the housing and fork-parts are assembled together, the arms of the fork and the sides of the housing having holes through them which are in alinement when the parts are assembled together, said holes receiving through them the axle-pin which likewise operatively supports the pulley in the housing, and securing means for securing the straps and the entire construction to the corner of the window-frame.

1,017,115. BEARING. FREDERICK H. SMITH, Pittsburg, Kans. Filed Dec. 27, 1910. Serial No. 599,365. (Cl. 105—113.)



1. A journal-bearing wedge expanded by fluid pressure.

2. A journal-bearing wedge having a cushion under fluid pressure.

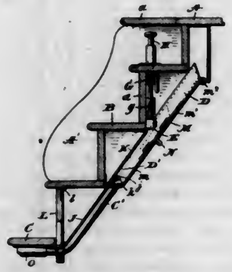
3. A journal-bearing wedge laterally expanded by fluid pressure.

4. A journal-bearing wedge embodying fluid pressure expanding means.

5. A journal-bearing wedge embodying a movable face, and fluid pressure adjusting means acting thereagainst.

[Claims 6 to 19 not printed in the Gazette.]

1,017,116. EXTENSIBLE STEP. CHARLES H. STARK, Strasburg, Va. Filed Apr. 8, 1911. Serial No. 619,853. (Cl. 105—87.)



1. The combination with stationary steps, of a casing member secured to said stationary steps and spaced therefrom to form a chamber therebetween, said casing member being formed in part to constitute a door, an extensible step provided with a portion working in said chamber, and controlling means for holding said extensible step in an elevated position mounted on the underside of the stationary steps within said chamber, and accessible from the door in said casing member.

2. The combination with stationary steps, of an extensible step operatively associated therewith, and a support for the extensible step when in active position comprising a bracket carried thereby having an offset portion, and a plate mounted on the stationary steps having a portion adapted to be engaged by said offset, substantially as described.

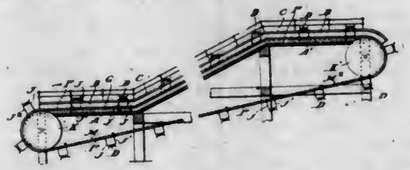
3. The combination with stationary steps, of an extensible step operatively associated therewith, and rigid means for supporting the extensible step in active position at its ends and at an intermediate portion thereof, substantially as described.

4. The combination with stationary steps, of an extensible step operatively associated therewith, an arm carrying the extensible step, means engaging said arm to hold the step in inactive position, and means for supporting the step in active position comprising a foldable rise engaging the lowermost stationary step and slotted to embrace said arm and engage the same in its lowermost position, but permitting said rise to be folded when the step is folded into inactive position.

5. The combination with stationary steps, of an extensible step operatively associated therewith, supporting arms at the opposite edges of said extensible step, and means for locking the step in elevated position comprising a pivoted dog adapted to engage one of said arms, means for automatically engaging said dog, and means for releasing said dog comprising a lever having a foot portion occupying a position adjacent to the uppermost stationary step.

[Claims 6 to 10 not printed in the Gazette.]

1,017,117. TRANSPORTING AND ELEVATING DEVICE. WILLIAM HOMER STRICKLER, Chicago, Ill. Filed Apr. 25, 1910. Serial No. 557,599. (Cl. 104—165.)



1. In a transporting and elevating device, the combination of a car having a heat, a seat-support comprising a pair of standards, located one in front of the other, extending downward from the car body, and bearings carried by said standards, a plurality of parallel tracks, arranged one upon each side of another, a driving chain connected to the lower end of the front standard and resting upon the middle track, the lower portion of the rear standard being bifurcated so as to straddle the middle track and bear upon the outer tracks.

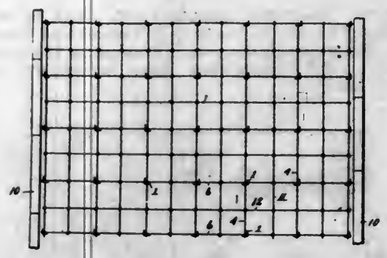
2. In a transporting and elevating device, the combination of a car having a seat, a seat-support, said support having standards extending downward from the seat and having a plurality of bearings, a plurality of tracks upon which said bearings rest, respectively, and a closed casing having through its top a longitudinal slot through which the standards pass.

3. A transporting and elevating device having, in combination, a casing for the running gear closed in except for an upper longitudinal slot, a seat or platform, a seat-support having standards extending from the seat downward through said slot, said standards having three bearings triangularly arranged, tracks on which said bearings rest and the necessary running and driving gear.

4. A transporting and elevating device having, in combination, a car having a seat, a seat-support having standards, a casing for the running gear closed in except for an upper longitudinal slot through which the standards of the seat-support pass, an endless chain connected to the seat support, a support on which said chain runs and which supports the front standard, the rear standard being bifurcated within the casing, and tracks on which the bifurcated rear standard bears.

5. A transporting and elevating device having, in combination, a car having a seat, a seat-support having standards extending downward therefrom, said standards being connected to the front and rear ends of the seat, respectively, an endless chain engaging the front standard, a track on which said chain runs and which supports the front standard, the rear standard being bifurcated within the casing, wheels journaled to the bifurcated lower ends of said rear standard tracks on which said wheels run, means for preventing the lifting of the car from said tracks, and driving gear for driving the chain.

1,017,118. REINFORCEMENT FOR CONCRETE ROADWAYS. AVILA THOMAS, Detroit, Mich., assignor to Thomas Steel Reinforcement Co., Detroit, Mich., a Corporation. Filed Jan. 23, 1911. Serial No. 604,030. (Cl. 72—109.)



1. A reinforcing structure for concrete bodies, comprising supporting members L-shaped in cross section, longitudinal and transverse tension members passing through the wings of said angular supporting members and crossing at right angles, and integral locking tongues on said supporting members movable into locking engagement with said tension members for preventing longitudinal movement of the tension members through the wings of the supporting members.

2. A reinforcement for cementitious bodies, comprising vertical members having projecting wings disposed at right angles, transverse and longitudinal tension members crossing at right angles at said supporting members and passing through the wings thereof to be supported thereby, the wings of said supporting members having locking tongues which engage the tension members and prevent longitudinal movement of said members through said wings.

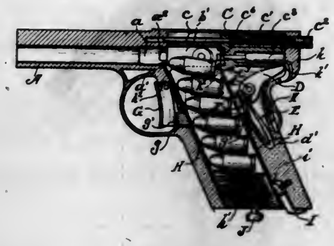
3. A reinforcement for cementitious bodies, comprising supporting members having wings disposed at right angles and provided with feet members formed integral therewith, the faces of said wings being provided with apertures, tension members passing through the supporting wings and crossing at right angles, and locking tongues on the faces of said supporting wings extending into said apertures to engage the tension members and lock them therein.

4. As a unitary structure, a section of reinforcing fabric for cementitious bodies, comprising vertical members having angularly disposed wings and a foot portion adapted to rest upon a grade, said wings have apertures therethrough, transverse and longitudinal tension members crossing at right angles and passing through the apertures in the angular wings of the supporting members, and integral locking tongues on the wings extending into said apertures for locking the tension members to the wings of the supporting members to maintain them in place and unify the structure.

1,017,119. AUTOMATIC FIREARM. GEORGE TOBORG, Chicago, Ill. Filed Aug. 16, 1909. Serial No. 512,945. (Cl. 42—3.)

1. In an automatic firearm, the combination with the barrel of a stock rigidly connected with the barrel and provided with a chamber extended rearwardly in line with the barrel, a breech-block provided with a longitudinal bore and adapted to slide back and forth entirely within said chamber and free of any locking device, and a coil spring within the bore of said breech-block and projected therefrom against the rear wall of said chamber for holding the breech-block normally pressed against the front wall of the chamber over the barrel bore, and permitting it to be reversed by a superior opposite force, for ejecting the shell, without becoming set in its backward position, as specified.

2. In an automatic firearm, the combination with the barrel of a stock rigidly connected with the barrel and provided with a chamber extended rearwardly in line with the barrel, a breech-block provided with a longitudinal bore and adapted to slide back and forth entirely within said chamber and free of any locking device, a coil spring within said bore and projected therefrom against the rear wall of said chamber for holding the breech-block normally pressed against the front wall of the chamber and permitting it to be reversed without becoming set in its backward position, and a rod within said spring having an elongated head threaded in an aperture in the rear part of the frame for regulating the spring pressure upon the breech-block, as specified.



3. In an automatic firearm, the combination with the barrel and chambered frame having rigid connection, of a breech-block provided with a longitudinal bore and adapted to reciprocate freely within the frame chamber, a coil spring within the bore of the breech-block and projected against the rear wall of the frame chamber, a spring-pressed hammer arranged behind the breech-block and a spring sear and trigger for setting and releasing the hammer, as specified.

4. In an automatic firearm, the combination with the barrel, of a stock frame having rigid connection with the barrel and provided with a chamber for housing the working parts and with an opening in the side of said chamber for ejecting the empty shells, a freely-sliding breech-block provided with a longitudinal bore and a longitudinal groove in the side, a coil spring within the bore of the breech-block and projected against the rear wall of said chamber, and a stop-pin on the side plate opposite from said slot and projecting into said groove about in line with the rear end of said opening, as specified.

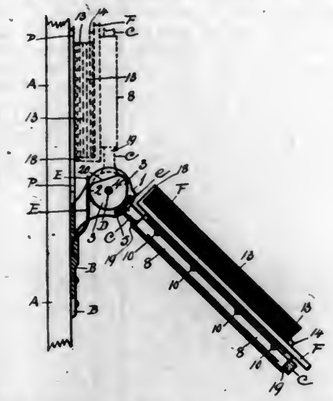
5. In an automatic firearm, the combination with the barrel, of a stock frame having rigid connection with the barrel and provided with a chamber for housing the working parts, a breech-block adapted to slide freely within the limits of said chamber and provided with a longitudinal bore, an extractor hook on the breech-block, a coil spring within said bore and projected against the rear wall of said chamber, and a hammer, main-spring, sear-spring and trigger-bar, inclosed by said chamber, as specified.

1,017,120. OPEN-BOOK REST. WILLIAM JAS. WALSH, Hamilton, Ontario, Canada. Filed May 20, 1911. Serial No. 628,433. (Cl. 45—82.)

1. In a book support, the combination with an arm which is partly rounded and partly flat in cross sectional outline, of a sleeve of resilient material having a trough-shaped part embracing and adapted to turn on the rounded part of the arm and provided with a flange which is adapted to rest upon the flat part of the arm, and a supporting table or the like carried by said flange.

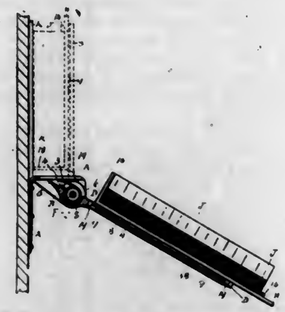
2. In a book rest, the combination with a table or rest, of independent clamping strips arranged thereon and adapted to receive the back of a book therebetween, and fastenings adjustably connecting the respective strips to

the table or rest, whereby said strips may be independently adjusted in the face of the table toward or away



from each other and made to clamp the binding of a book and hold it on the rest.

1,017,121. OPEN-BOOK REST. WILLIAM J. WALSH, Hamilton, Ontario, Canada. Filed Aug. 28, 1911. Serial No. 646,484. (Cl. 45—82.)



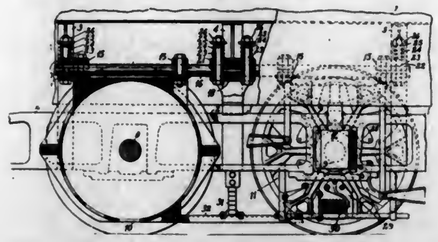
1. In an open book rest, a wall bracket having jaws, a book rest, or support, provided with a casing received between the jaws, a combined pivot and clamping device through the jaws and casing, and said casing adapted for pivoting the book support between the jaws, a spring actuating device bearing on the bracket and the casing to hold the support, and the book, in inclined readable position.

2. In an open book rest, the combination with a wall bracket having jaws, a book rest or table provided with a casing adapted to swing between the jaws, a spring actuating device in the casing, and bearing thereon, and on the bracket to hold the support and the open book, in readable position.

3. In an open book rest, the combination with an arm, having a flat upper side, of a sleeve of resilient nature embracing and adapted to tilt thereon in opposite directions, and provided with a flange which is adapted to rest on the flat part of the arm, and an open book supporting table, or rest, carried by said flange.

4. In an open book rest, a wall bracket having jaws extending therefrom, an arm having an end transverse casing received between the jaws and adapted to swing therein, a table on the arm, a spring actuating device in the casing and bearing thereon, and on the bracket to hold the arm and the table, together with an open book on the table in an inclined readable position, and said spring device adapted to allow the table and book to remain in said position, and when slightly assisted, to carry almost the whole weight of the table and the book to a vertical, and out of the way position, and there remain.

1,017,122. ELECTRIC LOCOMOTIVE. JOHN E. WEBSTER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 20, 1910. Serial No. 567,907. (Cl. 105—259.)



1. In a railway vehicle, the combination with a driving wheel axle and a frame having a plurality of cross ties, of an electric driving motor surrounding the axle and yieldingly connected thereto and means for pivotally suspending the motor from the vehicle frame in its central longitudinal plane.

2. In a railway vehicle, the combination with a driving wheel axle and a frame having a plurality of cross ties, of an electric driving motor surrounding the axle and yieldingly connected thereto and pivotally suspended from the cross ties, the axis of adjustment lying in the central longitudinal plane of the vehicle.

3. In a railway vehicle, the combination with a driving wheel axle and a frame supported thereon and having a plurality of cross ties, of an electric driving motor surrounding the axle and yieldingly connected thereto and pivotally suspended from a pair of adjacent cross ties, the axis of adjustment being substantially coincident with the longitudinal gravity axis of the vehicle.

4. In a railway vehicle, the combination with a driving wheel axle and a frame supported thereon and having a plurality of cross ties, of an electric driving motor comprising a rotor surrounding the axle and yieldingly connected thereto, a stator having trunnion projections rotatably supported upon a pair of adjacent cross ties in an axis which lies in the central longitudinal plane of the vehicle.

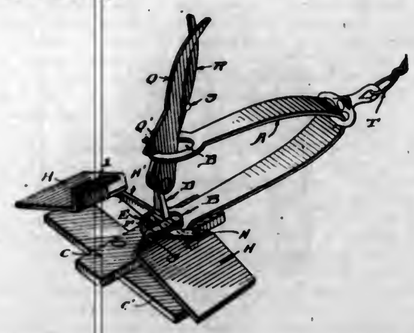
5. In a railway vehicle, the combination with a driving wheel axle and a frame supported thereon and having a plurality of cross ties, of an electric driving motor comprising a rotor surrounding the axle and yieldingly connected thereto, a stator having trunnion projections rotatably supported by a pair of adjacent cross ties upon a horizontal axis substantially coincident with the longitudinal gravity axis of the locomotive.

[Claims 6 to 10 not printed in the Gazette.]

1,017,123. SPRING-TRAP. WILLIAM JAMES WEBSTER and RICHARD NOALL, Bisbee, Ariz. Filed Jan. 18, 1911. Serial No. 603,363. (Cl. 43—23.)

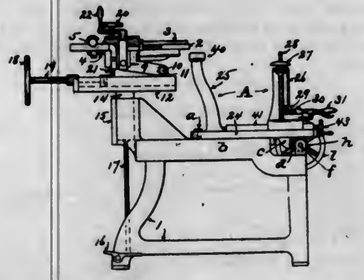
1. A spring trap comprising two pivotally mounted tread members, one having a flange and the other carrying a pivotal tongue engaging said flange, a bowed spring, pivotally mounted jaws, one of which is adapted to bear against the under surface of said tongue to hold the trap set and held by the tension of the spring.

2. A spring trap comprising a bowed spring with apertures in the end, a bar having lugs projecting therefrom, one of which extends through an aperture in the spring, tread members pivotally mounted between said lugs, one of the members having a flange and the other a pivoted tongue engaging said flange, and jaws pivotally mounted upon one of said lugs and bearing against the under surface of the tongue.



3. A spring trap comprising a bowed spring with apertures in the end, a bar having lugs projecting therefrom, one of which extends through an aperture in the spring, tread members pivotally mounted between said lugs, one of the members having a flange and the other a pivoted tongue engaging said flange, jaws pivotally mounted upon one of said lugs, a stop upon one jaw against which the other is adapted to contact, a lateral projection upon one jaw against which the marginal edge of the aperture in one end of the spring is adapted to contact to limit the upper throw of the spring.

1,017,124. LASTING-MACHINE. ERASTUS E. WINKLEY and FREDERICK L. ALLEY, Lynn, Mass.; said Alley assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 29, 1896. Serial No. 589,804. (Cl. 12—14.)



1. In a lasting machine, the combination, with suitable toe lasting devices, of a jack capable of a laterally swinging movement about a center substantially under the toe of a last when adjusted upon the jack, and means for actuating the jack to adjust the toe lasting devices for right and left shoes, substantially as described.

2. In a lasting machine the combination with suitable toe lasting devices, of a jack capable of a laterally swinging movement, a supporting frame, a shaft mounted in suitable bearings in said frame in which it is free to rotate, and suitable connections between the shaft and jack whereby a rotation of the shaft in opposite directions produces a laterally swinging movement of the jack in opposite directions, and the parts are adjusted for right and left shoes, substantially as described.

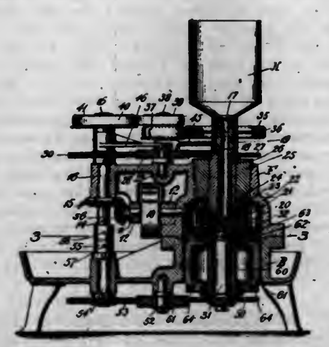
3. In a lasting machine, the combination with suitable toe lasting devices, of a jack capable of a laterally swinging movement about a center substantially under the toe of a last when adjusted upon the jack, a supporting frame, a shaft mounted in suitable bearings in said frame, and connections between the shaft and jack for swinging the jack about the center to properly position the jack for right and left shoes, substantially as described.

4. In a lasting machine, toe lasting devices, a last supporting jack composed of a bottom plate pivoted substantially in vertical alinement with the center of the toe of the last on the jack and carrying a toe and a heel support for the last, and means permitting said plate to be moved about said pivot to adapt the swing of the last to the toe lasting devices.

5. A lasting machine, comprising toe lasting devices and a last supporting jack composed of a plate provided with a heel pin and a toe support, said plate having its inner end mounted to turn about a pivot occupying a vertical position immediately below the toe end of the last, said pivot being located between the toe support and the toe lasting devices, the heel pin supporting the heel end of the last having a sliding movement toward and from the toe-support.

[Claims 6 to 22 not printed in the Gazette.]

1,017,125. BALL-ROLLING MACHINE. GEORGE E. ABBOTT, Hartford, Conn. Filed Mar. 6, 1909. Serial No. 481,566. (Cl. 80—21.)



1. In a ball rolling machine, the combination with a supporting platen, of a rolling disk coöperative therewith, means for rotating said disk, and means for revolving said disk around an axis disposed eccentrically to the rotation axis thereof.

2. In a ball rolling machine, the combination with a supporting platen, and means for rotating the same in a horizontal plane, of a rolling disk coöperative with said platen, means for rotating said disk, and means for revolving said disk on an axis disposed eccentrically to the rotation axis thereof.

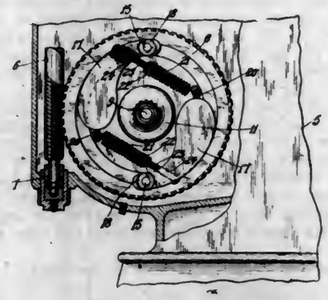
3. In a ball rolling machine, the combination with a supporting platen having a horizontal face, and means for rotating said platen on a vertical axis, of a rolling disk disposed above said platen and having a face coöperative with that of the platen, means for rotating said disk on an axis eccentrically disposed relatively to the platen-axis, and means for revolving said disk on an axis in alinement with the rotation axis of the platen.

4. In a ball rolling machine, the combination with a rolling disk, means for rotating said disk, and means for revolving said disk around an axis disposed eccentrically to the rotation axis thereof, of a supporting platen coöperative with said disk, and means for varying the position of said platen relatively to the disk for increasing or decreasing the distance between said platen and the disk.

5. In a ball rolling machine, the combination with a rolling disk, and means for rotating said disk, and means for revolving said disk around an axis disposed eccentrically to the rotation axis thereof, of a supporting rolling-platen coöperative with said disk, and means for varying the position of one of said rolling elements relatively to the other for increasing or decreasing the distance between said platen and the disk.

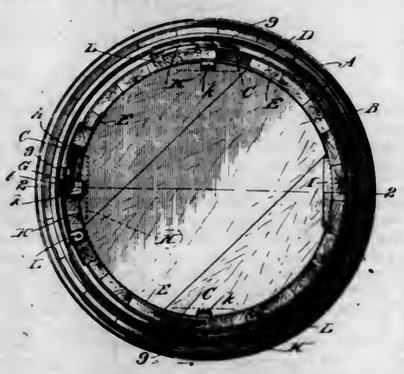
[Claims 6 to 18 not printed in the Gazette.]

1,017,126. SPEED-GOVERNOR. HENRY O. BARENZ, Jackson, Wis. Filed Apr. 9, 1909. Serial No. 488,985. (Cl. 74—45.)



A speed governor, comprising a driven shaft having a wheel fast thereon, a wheel loosely mounted on said shaft, friction bands pivotally connected to said loose wheel and provided with friction shoes positioned to engage the fast wheel, bolts extending through the loose wheel and provided with eccentric heads to the peripheries of which the friction bands are connected, lever weights rigidly connected to the bolts for turning said bolts to release the friction shoes from engagement with the fast wheel when the speed of rotation of the loose wheel increases above a predetermined rate, coiled springs connected to the free ends of said lever weights, nuts connected to the opposite ends of said springs, bolts extending through openings provided in said lever weights adjacent to the eccentric headed bolts and threaded to the nuts connected to the springs to adjust the tension of said springs, said springs being connected to both lever weights to provide for equal tension of both lever weights under different adjustments of the springs.

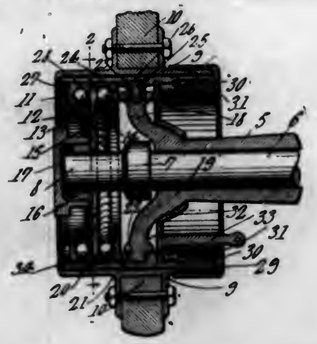
1,017,127. BARREL-HEAD FASTENER. SAMUEL BARTMANN, St. Louis, Mo. Filed Apr. 17, 1911. Serial No. 621,555. (Cl. 70—3.)



1. In a barrel, means for preventing the head thereof from falling out, said means comprising a dog pivotally mounted on the staves of said barrel and having the head adapted to project inwardly from said staves, and means for holding said dog in engaging position, substantially as described.

2. In a barrel, means for preventing the head thereof from falling out, said means comprising a dog pivotally mounted on the staves of said barrel and having a head adapted to project inwardly from said staves, and a slidable bolt adapted to engage said dog, substantially as described.

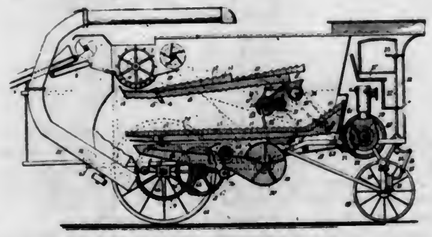
1,017,128. FRONT-AXLE DRIVE. ROLLO ROBIN BELL, Wichita, Kans. Filed Mar. 13, 1911. Serial No. 614,095. (Cl. 21—90.)



1. In drive mechanism of the class described, an axle, a collar formed interiorly with a socket and at its diametrically opposite point with a boss, the axle having an arm fitting at its end in the socket and having an arm disposed at its ends in juxtaposition to the boss, a screw threaded through the boss and having a portion projecting into the end of the last mentioned arm, a ball race held within the collar, a series of bearing balls in the race, a hub rotatably fitted upon the collar, a disk held for rotation with the hub and projecting at its peripheral portion between the series of bearing balls, and a drive shaft fixed for rotation with the disk.

2. In drive mechanism of the class described, an axle, a collar suported at the end of the axle for turning movement about a vertical axis, a hub rotatably fitted upon the collar, a cap collar removably fitted upon the hub and receiving one end of the first mentioned collar, the hub at its other end having a flange, a disk removably secured to the flange, a ball race held within the first mentioned collar, a series of bearing balls in the race, the disk projecting at its peripheral portion between the series of bearing balls, and a drive shaft fixed with relation to the disk.

1,017,129. THRESHING-MACHINE. HANS M. BOE, Hampden, N. D. Filed Mar. 25, 1910. Serial No. 551,469. (Cl. 130—24.)

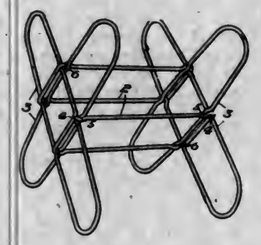


1. A threshing machine of the character specified comprising a box-like body; a plurality of approximately horizontal superposed straw racks arranged to advance the straw thereon in opposite directions; an inclined straw rack section formed on the lower of said straw racks; a rotary beater mounted in bearings in said body and extended transversely across the lower of said racks and having arms adapted to remove the straw from said inclined rack section toward the delivery end of the lower of said straw racks; and means for rotating the said beater and vibrating the said racks.

2. A threshing machine of the character specified comprising a box-like body; a plurality of superposed straw racks vibratively mounted therein; means for vibrating said straw racks to advance material thereon in opposite directions; a grain pan mounted on the upper of said racks arranged to deliver the grain therefrom near the straw delivery end of said rack; a conveyer trough disposed below the delivery end of said grain pan; a beater rotatively mounted in said body having blades adapted to impinge upon and spread the straw upon the lower of said racks and to cause an air current between said grain pan and said conveyer trough; and a shield for guiding said air current.

3. A threshing machine of the character specified comprising a body portion; a plurality of superposed straw racks vibratively mounted therein; a sharply inclined end rack section rigidly mounted on the lower of said straw racks at the receiving end thereof; a grain pan mounted on the upper of said racks arranged to deliver the grain delivered from near the straw delivery end of said rack; a conveyer trough transversely mounted in said body below the delivery end of said grain pan to receive the grain therefrom; a rotary full-bladed beater rotatively mounted in said body adapted to distribute straw on the lower of said racks and to create an air current to flow between the said grain pan and said conveyer trough; a shield for said beater to guide the air current produced thereby; a vibrator mechanism for said straw racks; and a transmission mechanism connecting the said beater, and vibrating mechanism.

1,017,130. COLLAPSIBLE REEL. EDWIN H. BRODEN, Edgewood Park, and JAMES G. MUSTIN, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 22, 1911. Serial No. 650,786. (Cl. 242—115.)



1. A collapsible reel comprising metal cross arms forming end members, and wire rings forming tie members to connect the end members in spaced apart relation, the overlapping contacting marginal surfaces of at least part of the tie members and end members being indented, to thereby yieldingly secure and detachably hold said several members forming the empty reel together in assembled relation.

2. A collapsible reel comprising cross arms forming end members, and wire rings forming tie members to connect the end members in spaced apart relation, the overlapping contacting marginal surfaces of the tie members and end members being indented, to thereby yieldingly secure and detachably hold said several members forming the empty reel together in assembled relation.

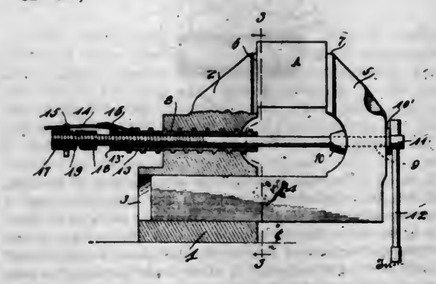
3. A collapsible reel comprising wire rings forming end members and forming tie members to secure the end members in spaced apart relation, said rings being indented adjacent to the intersecting points thereon contacting with one another when assembled together to thereby yieldingly and detachably secure the members forming the empty reel in their spaced apart relation.

4. A collapsible reel comprising elongated wire rings forming end members and forming tie members to secure the end members in spaced apart relation, each end member being formed of two of said rings and arranged with their long axes at right angles to each other, said rings being indented adjacent to the intersecting points thereon contacting with one another when assembled together to thereby yieldingly hold and detachably secure the members forming the empty reel in spaced apart relation.

5. A collapsible reel comprising a plurality of endless wire rings forming spaced apart end members and tie members, said several members having indentations engaging with the intersecting member contacting therewith whereby the end and tie members forming the empty reel are detachably held together in assembled position.

[Claims 6 to 8 not printed in the Gazette.]

1,017,131. VISE. WILLIAM R. BUCHANAN, Carrsville, Ky. Filed Sept. 28, 1911. Serial No. 651,820. (Cl. 81—33.)



1. In a vise the combination with a stationary jaw, a movable jaw, coöperating means carried by said stationary and movable jaws for guiding said movable jaw relative to said fixed jaw, bores in said jaws arranged in longitudinal alinement, the bore in the stationary jaw having coarse threads formed therein, a hollow speed screw mounted in said threaded bore and having coarse external threads operatively engaged with said bore, a power screw having an unthreaded end mounted in the bore of said movable jaw, said power screw extending through said hollow speed screw, and coöperating means carried by said screws for holding them in engagement, and means for releasing said screws when resistance is offered to said movable jaw.

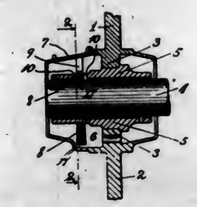
2. In a vise the combination of a fixed and a movable jaw, a hollow speed screw rotatably mounted in said fixed jaw, a power screw revolubly mounted in said movable jaw and in said hollow speed screw, a collar fixed to the threaded end of said power screw, a ratchet yieldably held in frictional engagement with said collar, and means on said speed screw for engaging said ratchet to connect said screws when no resistance is offered to the movable jaw and actuating means connected with said power screw.

3. In a vise the combination of a fixed and a movable jaw, a hollow speed screw rotatably mounted in said fixed jaw, a power screw revolubly mounted in said movable jaw and in said hollow speed screw, a collar fixed to the threaded end of said power screw, a ratchet yieldably held in frictional engagement with said collar, and a spring pressed pawl mounted on said speed screw and engaging said ratchet wheel whereby said screws are connected and adapted to operate as a single element when no resistance is offered to the movable jaw.

4. In a vise the combination of a fixed jaw having an angular opening, an angular shank slidably mounted in said opening, bores in said jaws arranged in longitudinal alinement and in a plane parallel with said shank, a hollow coarse threaded speed screw mounted in said fixed jaw, a power screw loosely mounted in said movable jaw and in said hollow speed screw and projecting beyond the outer end of said speed screw, the projecting end of said power screw having a collar fixed thereto, another collar fixed to said screw and spaced inwardly from said first mentioned collar, a ratchet loosely mounted on said screw between said collars, a coiled spring arranged on said screw between the inner collar and said ratchet wheel to yieldably hold said ratchet wheel in frictional

engagement with said outer collar, a spring pressed pawl fixed to said speed screw and normally engaged with said ratchet wheel whereby said screws are connected when turned in one direction and released when turned in the other direction, and means for actuating said screws.

1,017,132. SELF-OILING BEARING. JAMES BURKE, Erie, Pa., assignor to Burke Electric Company, a Corporation of Pennsylvania. Filed Sept. 17, 1907. Serial No. 393,336. (Cl. 64—31.)



1. In a self-oiling bearing, the combination of a shaft and bearing therefor, a reservoir for lubricant, and a plurality of lubricating disks coöperating with each other and lying immediately adjacent each other along a line parallel to the axis of said shaft, said disks being rotated by said shaft and adapted at their lower portions to pass through the lubricant in said reservoir.

2. In a self-oiling bearing, the combination of a shaft and bearing therefor, a reservoir for lubricant, and a plurality of lubricating disks coöperating with each other and lying immediately adjacent each other along a line parallel to the axis of said shaft, said disks having oil carrying recesses, said disks being supported at their upper portions by said shaft and rotated thereby, and adapted at their lower portions to pass through the lubricant in said reservoir.

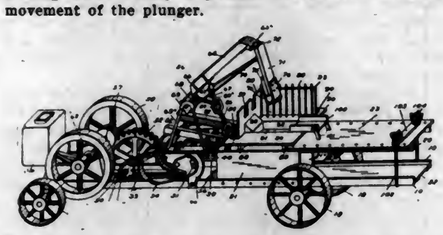
3. In a self-oiling bearing, the combination of a shaft, a bearing and supporting frame for the same, a reservoir for lubricant, a plurality of lubricating disks laterally adjacent each other carried and rotated by said shaft, each of said disks having laterally opening recesses and adapted at its lower portion to pass through the lubricant in said reservoir, and means for positively removing the lubricant from said disks to said bearing, said means comprising a part carried by said frame.

4. In a self-oiling bearing, the combination of a shaft, a bearing and supporting frame for the same, a reservoir for lubricant, a plurality of coöperating disks lying immediately adjacent each other along a line parallel to the axis of said shaft, said disks being carried at their upper portions by said shaft and thereby rotated, and adapted at their lower portions to pass through the lubricant in said reservoir, and means for positively removing oil from said disks to said bearing, said means comprising a part carried by said frame.

5. In a self-oiling bearing, the combination of a shaft and bearing therefor, a reservoir for lubricant, and a plurality of movable lubricating elements coöperating with each other and lying immediately contiguous to each other along a line parallel to the axis of said shaft, said elements being rotated by said shaft and adapted at their lower portions to pass through the lubricant in said reservoir.

1,017,133. BALING-PRESS. JOHN W. BURKETT, Kansas City, Kans., assignor to The Kansas City Hay Press Company, a Corporation of Missouri. Filed Aug. 24, 1910. Serial No. 578,722. (Cl. 100—25.)

1. In a baling press the combination with the feed chamber for the material to be baled having a feed opening, a reciprocating head block or plunger within said chamber, means for operating said plunger, a rigid apron flexibly connected with the plunger and adapted to close the feed opening suitable guide bearings for said apron and a rock shaft on said press, a material feeding beam and a triangular plate on the rock shaft supporting said beam and an operative timing lever arm pivotally connected with one angle of the said triangular plate and the said apron adapted to afford a dwell of said material feeding beam during a partial forward and backward movement of the plunger.



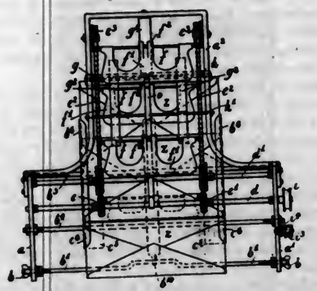
2. In a baling press the combination with the feed chamber for the material to be baled having a feed opening a reciprocating head block or plunger within said chamber, means for operating said plunger and rocking material feeding devices on the said press for feeding the material within the feed chamber consisting of standards a rock shaft mounted thereon, a triangular plate secured rigidly at its apex to said shaft, a rocking beam connected at its lower end with the upper portion or angle of the said triangular plate, a feeding arm pivotally connected with the upper end of said beam and connecting rods pivotally connected with said arm and the standards supporting the rock shaft a rigid apron flexibly connected at its forward end with the plunger, and movable in suitable guide bearings in rear of the feed chamber, and an operative timing lever pivotally connected with the rear end of said apron and the lower portion or angle of the said triangular plate on the rock shaft and adapted to afford a dwell of the material feeding beam during a partial forward and backward movement of the plunger.

3. In a baling press the combination with the feed chamber the plunger, rack bars rigidly connected therewith and parallel shaft bearing plates between said rack bars, a power driven rotary shaft journaled in said plates whose ends extend beyond the lines of their outer surfaces, spur wheels on the said ends of said shaft, studs on the inner surfaces of the rack bars spaced apart upper and lower guide rollers for the rack bars and curved guide plates co-acting with the outer ends of the rack bars when reversed in position by the spur wheels, and stop pins on the outer surfaces and ends of the rack bars.

4. The combination in a baling press with the bed the feed chamber for the material to be baled the head block or plunger of rack bars rigidly connected with the plunger, parallel shaft bearing plates located between the rack bars and supported in position adjacent to the rear end of the feed chamber, a power driven rotary shaft journaled in said bearing plates, its ends extending beyond the lines of the outer surfaces thereof, spur wheels on the ends of said shaft, studs on the inner surfaces of the rack bars extending from the outer ends of the rack bars toward the plunger in series and spaced apart for engagement with the spur wheels and stop-pins on the outer surfaces and at the outer ends of said rack bars rear curved guide plates supported in position in rear of the feed chamber and at the end of the rearward movement of said rack bars and with which the ends of the rack bars come into contact when the inner stud of the series is engaged by the spur wheels to reverse the direction of movement of the rack bars, upper and lower guide rollers in the upper and lower horizontal planes of movement of the rack bars.

1,017,134. ENVELOP-FEEDING DEVICE FOR TYPEWRITERS. MCION JAMES DOUGLAS CARTER, London, England. Filed Oct. 24, 1910. Serial No. 588,844. (Cl. 197—130.)

1. Apparatus for feeding envelops to typewriting machines comprising a receptacle for the enevelop adapted to be attached to the typewriter, endless flexible traveling members free of the platen, guide rollers operatively associated with said members, said members being provided with pivotally mounted bodies engaging the envelops between the flap and body portions thereof and a guide by which the envelops are led from the receptacle to the platen of the machines.



2. Apparatus for feeding envelops to typewriting machines comprising a frame supporting a receptacle for the envelops, said frame being mounted upon the carriage of the machine in rear of the platen, endless flexible traveling members, guide rollers operatively associated with said members, means for operating said members from the platen spindle, said members having pivotally mounted bodies engaging the envelops between the flaps and body portions thereof and a guide by which the envelops are led to the platen of the machines.

3. Apparatus for feeding envelops to typewriting machines, comprising a frame supported upon the non-rotatable portion of the carriage of the typewriter, an envelop receptacle carried by said frame, guide rollers supported by said frame, endless traveling members engaging said rollers, means operatively associated with the platen of the machine to actuate said members, pivotally-mounted bodies engaging the envelops between the flap and body portions thereof carried by said members, and means to guide the envelops from the receptacle to the platen.

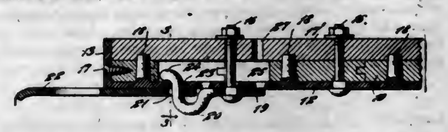
4. Apparatus for feeding envelops to typewriting machines comprising a frame mounted upon the carriage of the machines in rear of the platen, a magazine having members adjustable to suit different sizes of envelops supported by said frame, guide rollers also supported by the frame around which pass endless flexible traveling members having pivotally mounted bodies for engaging the envelops between the flap and body portions thereof, a sheave upon one of the guide rollers, a belt passing around said sheave and around a sheave upon the platen spindle, and a guide by which the envelops are led to the platen of the machines.

5. Apparatus for feeding envelops to typewriting machines comprising a frame clamped to the carriage of the machine in rear of the platen, a magazine for the envelops supported by said frame, means for adjusting the magazine to different sizes of envelops, guide rollers also supported by said frame around which pass endless chains, cross bars upon said chains, plates upon said cross bars for engaging the flaps of the envelops, a sheave upon one of the guide rollers, a sheave upon the platen spindle, a belt passing around both sheaves, means for tensioning the belt, and a guide embracing the sides of the envelops by which they are led to the platen of the machine.

[Claims 6 to 8 not printed in the Gazette.]

1,017,135. HASP-FASTENER FOR DOORS. FRANK W. CHAFFEE, Albany, N. Y. Filed May 5, 1910. Serial No. 559,590. (Cl. 70—83.)

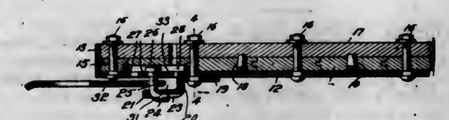
1. In combination with a car door made of vertical planks, a hasp-fastener therefor comprising a base-plate (12) applied against and extending horizontally along the face of the door and having an integral flange (13) engaging the edge of the door, bolts securing said base-plate to the door, a hasp, a plate fastened to said base-plate and a member in coöperative relation with said plate to hold one end of said hasp, said base-plate being formed integrally at its inner side with studs (18) spanning the joints between the vertical planks of the door and said planks being formed with sockets to snugly receive said studs; substantially as set forth.



2. In combination with a car-door made of vertical planks, a hasp-fastener therefor comprising a base-plate (12) applied against and extending horizontally along the face of the door and formed integrally at its inner side with inwardly projecting studs (18), bolts alternating with said studs securing said base-plate to the door, a hasp, a plate 19 fastened to said base-plate, and a member in coöperative relation with said plate 19 to hold one end of said hasp, said door being formed with sockets to snugly receive said studs; substantially as set forth.

3. In combination with a car-door having an inner horizontal bar (17'), a hasp-fastener therefor comprising a base-plate (12) applied against and extending horizontally along the face of the door in line with said bar and having bolt-holes, a hasp, a plate 19 applied to said base-plate and having a bolt-hole, a member in coöperative relation with said plate 19 to hold one end of said hasp, a bolt extending through said base-plate and the door and said inner bar, and a bolt extending through said plate 19 and through said base-plate and the door and said inner bar, said bolts at their outer ends having integral heads and polygonal stem portions and the holes in said plate 19 and the outer portion of said base-plate being of polygonal outline to interlock with the bolts; substantially as set forth.

1,017,136. HASP-FASTENER FOR DOORS. FRANK W. CHAFFEE, Albany, N. Y. Filed Nov. 21, 1911. Serial No. 661,454. (Cl. 70—83.)



1. In a door fastening device, a base-plate secured to the door, a plate-member adapted to overlie said base-plate and having a bar offset outwardly therefrom, a pin extending through said base-plate and having a head at the inner side thereof and at its outer portion being engaged with said bar, a securing bolt passing through said plate-member, base-plate and door, and a hasp having a hole at one end thereof engaged by the said pin.

2. In a door fastening device, a base-plate secured to the door, a plate-member adapted to overlie said base-plate and having a bar offset outwardly therefrom and containing a hole extending transversely through it, a pin extending through said base-plate and having at its inner end a head to prevent the outward withdrawal of the pin through said base-plate and said pin being extended through said hole in said bar and having its outer portion, (24) extending at an angle to the body of the pin and closely along said bar, a securing bolt passing through said plate-member, base-plate and door, and a hasp having a hole at one end thereof engaged by the said pin.

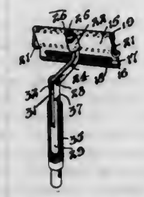
3. In a door fastening device, a base-plate secured to the door, a plate-member adapted to overlie said base-plate and having a bar offset outwardly therefrom and containing a hole extending transversely through it, a

pin extending through said base-plate and having at its inner end a head to prevent the outward withdrawal of the pin through said base-plate and said pin being extended through said hole in said bar and having its outer portion (24) extending at an angle to the body of the pin and closely along said bar, a securing bolt passing through said plate-member, base-plate and door, and a hasp having a hole at one end thereof engaged by the said pin, said plate-member having upper and lower edge flanges passing upon the adjacent edges of said base-plate, and said bar having a longitudinal groove in its outer face to receive the said outer portion of said pin.

1,017,137. BALANCE. RALPH F. CHATILLON, New York, N. Y. Filed May 17, 1911. Serial No. 627,836. (Cl. 73—46.)

In a balance, a casing comprising two telescopic tubes each provided with a recessed extension and movable relatively to each other, resilient means in said tubes having one end located in each recessed extension, a suspending member connected with one end of said resilient means and passing through the recessed extension of one tube and a suspended member connected with the other end of said resilient means and passing through the recessed extension of the other tube.

1,017,138. SAFETY-RAZOR. HANS CHRISTIANSEN, Boston, Mass., assignor to Bedford Safety Razor Company, Bedford, Mass., a Corporation of Massachusetts. Filed Jan. 18, 1911. Serial No. 603,269. (Cl. 30—12.)



1. A safety razor comprising a blade holder, a handle pivoted to the back of the blade holder in a plane parallel with the plane of the blade supporting portion and at right angles to the longitudinal axis of the blade holder, whereby said handle may swing into a position parallel with said axis, and means for permitting adjustment of the relative angle of said blade holder and handle when the parts are swung into parallel position.

2. A safety razor comprising a blade holder, an angular arm pivoted to the back of the blade holder in a plane parallel with the plane of the blade supporting portion and at right angles to the longitudinal axis of the blade holder, said arm having a member adapted to extend parallel with said axis, and a handle pivoted to said member to permit relative angular adjustment of said handle and arm irrespective of the relative positions of said arm and blade holder.

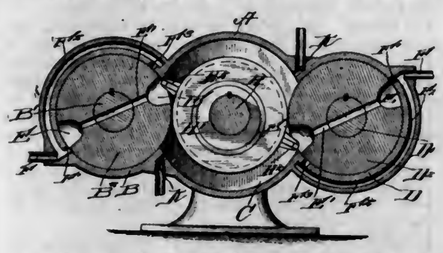
3. A safety razor comprising a blade holder, an angular arm pivoted to the back of the blade holder in a plane parallel with the plane of the blade supporting portion and at right angles to the longitudinal axis of the blade holder, said arm having a member adapted to extend parallel with said axis, a handle pivoted to said member to permit relative adjustment of said handle and arm irrespective of the relative position of said arm and blade holder, and means for interlocking said arm and said handle in different relative positions.

4. A safety razor comprising a blade holder, an angular arm pivoted to the back of the blade holder in a plane parallel with the plane of the blade supporting portion and at right angles to the longitudinal axis of the blade holder, said arm having a member adapted to extend parallel with said axis, said member having a notched outer end, a handle pivoted to said member to permit relative angular adjustment of said handle and arm irrespective of the relative position of said arm and blade holder, and means for engaging said notched end to lock said arm and handle in different relative positions.

5. A safety razor comprising a blade holder, an angular arm pivoted to the back of the blade holder in a plane parallel with the plane of the blade supporting portion and at right angles to the longitudinal axis of the blade holder, said arm having a member adapted to extend parallel with said axis, said member having a notched outer end, a handle pivoted to said member to permit relative angular adjustment of said handle and arm irrespective of the relative position of said arm and said blade holder, and a slidable sleeve mounted on said handle and adapted to engage said notched end to lock said arm and handle in different relative positions.

[Claims 6 to 10 not printed in the Gazette.]

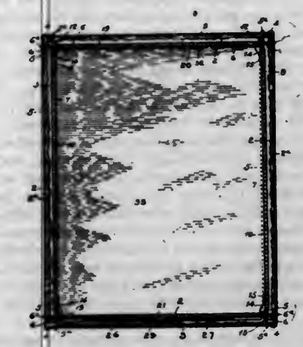
1,017,139. ROTARY ENGINE. HERBERT L. CUMMINS, East Ely, Nev., assignor of five-twelfths to Henry M. Fulmer, East Ely, Nev., and one-twelfth to Bert L. Quayle and one-twelfth to Charles S. Chandler. Filed June 30, 1911. Serial No. 636,177. (Cl. 121—51.)



A rotary or turbine engine comprising a casing having two compartments and an intermediate compartment, the latter having suitable exhaust ports and the former being provided with two steam supply ports entering the compartment at points diametrically opposite, shafts mounted in the walls of each compartment, a cylinder fixed to each shaft, a space about the intermediate cylinder forming a steam chamber, pistons projecting from the central cylinder, the end cylinders having diametrically disposed ducts leading therethrough and terminating at their ends in recesses, and gear connections between the shafts.

1,017,140. COLLAPSIBLE COOP. JOHN BROOKE DAVIS and HARRY W. SMITH, Abingdon, Ill. Filed Dec. 27, 1910. Serial No. 599,399. (Cl. 220—17.)

1. A collapsible coop comprising a top having pendent sides and ends, each of said sides entirely free from contact with said top and provided with apertures, and each of said ends provided with apertures, longitudinally arranged rods disposed in coinciding pairs of said apertures in said pendent ends, a side wall hinged on each of said rods, transversely arranged rods disposed in coinciding pairs of apertures in said pendent sides, an end wall hinged on each of said transversely arranged rods, and means for locking said side and end-walls from disengagement.



2. A collapsible coop comprising an invertible pan-like top, side walls hinged to the ends of said top and adapted to be collapsed thereinto, end walls hinged to the sides of said top and adapted to be collapsed thereinto, but entirely free from contact with said walls when in position for use and a bottom adapted for sliding engagement with a portion of said walls and adapted to be loosely contained within said top when the coop is in operative position.

3. A collapsible coop comprising a top having pendent sides and pendent ends, each side and end provided with coinciding apertures, longitudinally arranged rods disposed in coinciding pairs of apertures in said pendent ends, a side wall hinged on each of said rods, each of its ends reflexed to provide a channel, transversely arranged rods disposed in coinciding pairs of apertures in said pendent sides and crossing said longitudinally arranged rods, an end wall hinged on each of said transverse rods and each of its ends flanged substantially rectangularly to its body and adapted for engagement with the channels aforesaid, doors slidably engaged with one of said ends, and means for locking the sides and ends from disengagement when the coop is assembled.

4. A collapsible coop comprising a top having pendent sides and ends, each thereof provided with coinciding pairs of apertures, longitudinally arranged rods disposed in coinciding pairs of apertures in said pendent ends, a side wall hinged on each of said rods, whereby the side walls are hinged to the pendent ends of the top, transversely arranged rods disposed in coinciding pairs of apertures in said pendent sides of the top, the last recited rods crossing those first recited, end walls hinged on each of said transversely arranged rods, whereby the end walls are hinged to the pendent sides of the top, and means for locking said side and end walls together when in operative positions.

5. A collapsible coop comprising a top having pendent sides and pendent ends, each of said sides and ends provided with pairs of coinciding apertures, longitudinally disposed rods arranged in coinciding pairs thereof in the said ends, a side wall hinged on each of said rods, whereby the side walls are hinged to the pendent ends of the top, each end of said side walls reflexed to provide a channel, transversely arranged rods disposed in coinciding pairs of apertures in said pendent sides, the last recited rods crossing those first recited, an end wall hinged on said transversely arranged rods, whereby the end walls are hinged to the pendent sides of the top, means for locking said side and end walls together when in operative position each end of each end wall flanged substantially rectangularly to its body and adapted for engagement with the channels aforesaid, each side wall provided with a channel at the lower portion thereof, and a bottom having downturned edges adapted to slide loosely in said channels, and said walls spaced a distance from said top.

[Claim 6 not printed in the Gazette.]

1,017,141. PAINT AND VARNISH VEHICLE. CARLETON ELLIS, Larchmont, N. Y. Filed May 12, 1909. Serial No. 495,463. (Cl. 134—56.)

1. A paint thinning composition comprising the clarified product from aging and filtration of a mixture of light kerosene hydrocarbon, flashing at not less than 90° F., turpentine and pine oil.

2. A paint thinning composition comprising a clear mixture of light mineral hydrocarbon, spirits of turpentine and a modicum of pine oil.

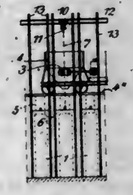
3. A paint thinning composition comprising a clear mixture of light mineral hydrocarbon, spirits of turpentine and a modicum of terpineol.

4. A paint thinning composition comprising a clear mixture of light mineral hydrocarbon, flashing at not less than 90 F., spirits of turpentine and a modicum of pine oil.

5. A paint thinning composition, comprising a clear mixture of a light mineral hydrocarbon, flashing between 90 F. and 110 F. spirits of turpentine and a modicum of pine oil.

[Claim 6 not printed in the Gazette.]

1,017,142. HOISTING DEVICE FOR OVEN-DOORS. LUDWIG CARL FLACCUS, Stettin, Germany, assignor to Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier, Stettin, Germany, a Corporation of Germany. Filed Aug. 29, 1910. Serial No. 579,498. (Cl. 212—2.)



1. The combination with an oven having a movable door and a charging truck movable adjacent to the oven, of a door-operating mechanism carried by said truck, a track parallel with the path of the said truck, a guide pulley arranged to travel on said track, and a flexible connection extending from said mechanism to said pulley and provided with means for detachably connecting it with the door.

2. The combination with an oven having a movable door and a charging truck movable adjacent to the oven, of a door-operating mechanism carried by said truck, a track parallel with the path of said truck, upwardly extended anchoring posts to which said track is secured, a guide pulley arranged to travel on said track, and a flexible connection extending from said mechanism to said pulley and provided with means for detachably connecting it with the door.

1,017,143. WRENCH. BELA W. FRECSKA, Amsterdam, Ohio. Filed Mar. 30, 1911. Serial No. 618,163. (Cl. 81—138.)

1. A wrench comprising a shank having the rear side thereof provided with a longitudinal groove, a jaw formed integral with the outer end of said shank, a rod rotatably mounted in the groove of said shank and extending into the inner side of said integral jaw, a sleeve movably mounted upon the inner ends of said shank and said rod, an arm carried by the inner end of said rod within said sleeve, a laterally projecting pin carried by said arm, a slotted lug carried by the inner side of said sleeve and adapted to engage said pin, a movable jaw slidably mount-

ed upon said shank and said rod, and a cam approximately half the length of said rod and adapted to be shifted into engagement with said movable jaw to fix said jaw relatively to said shank.

2. A wrench comprising a shank having the rear side thereof provided with a longitudinal groove, a jaw formed integral with the outer end of said shank, a rod rotatably mounted in the groove of said shank and extending into the inner side of said integral jaw, a sleeve movably mounted on the inner ends of said shank and said rod, an arm carried by the inner end of said rod within said sleeve, a laterally projecting pin carried by said arm, a slotted lug carried by the inner side of said sleeve and adapted to engage said pin, a movable jaw slidably mounted upon said shank and said rod, a cam approximately half the length of said rod and adapted to be shifted into engagement with said movable jaw to fix said jaw relatively to said shank, and an auxiliary jaw movably mounted upon said shank and having the rear end thereof connected to the rear end of said movable jaw and the forward end thereof engaging the forward end of said movable jaw, substantially as described.

3. In a wrench, a wrench shank provided at its outer end with a fixed jaw and having a groove in the rear face thereof extending from end to end of the shank, a rod rotatable in said groove and provided at its inner end with a laterally-projecting arm overlying the inner end of said shank, a pin carried by said arm, a sleeve mounted on the inner end of said shank for partial rotation thereon, a lug carried by said sleeve and engaging the pin on said arm to rotate the rod as the sleeve is rotated, a jaw slidable on the wrench shank and rod, and a cam on the rod for engagement with said jaw to hold the same in adjusted position.

4. In a wrench, a wrench shank provided at its outer end with a fixed jaw and having a groove in the rear face thereof, a rod mounted in said groove, an arm carried by the inner end of said rod and overlying the inner end of the shank, a pin carried by said arm, a sleeve mounted for partial rotation on the shank and rod, means carried by said sleeve and engaging the pin on said arm for effecting rotary movement of the rod when the sleeve is rotated, a jaw slidable on the wrench shank and rod, and a cam on the rod for engagement with the jaw to hold the latter in adjusted position.

5. In a wrench, a wrench shank provided at its outer end with a fixed jaw, a rod rotatable on the rear face of said shank, an arm carried by the inner end of said rod and overlying the inner end of the shank, a sleeve surrounding the shank and rod and extending beyond the inner end of the shank, connections between the extending portion of said sleeve and said arm whereby the rod is rotated in unison with the sleeve, a jaw slidable on the shank and rod, and a cam carried by the rod for engagement with the slidable jaw to lock the latter in adjusted position.

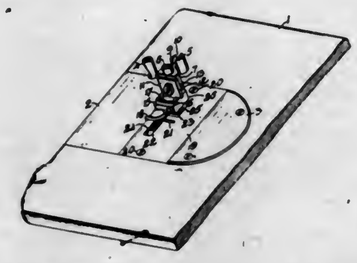
1,017,144. PRESERVING OF RAW VICTUALS OF ANIMAL ORIGIN. SIEGFRIED GIRONCOLI, Zollfeld, Austria-Hungary. Filed Mar. 24, 1908. Serial No. 423,000. (Cl. 99—8.)

1. A process of preserving raw vituals of animal origin, the said process consisting in first coating the articles to be preserved with a solid fatty substance, afterward inclosing them in an air-tight chamber, filling this chamber with a suitable gas under a pressure of from 2 to 5 atmospheres, and keeping up this pressure up to the moment of the victuals being cooked, the gas being not poisonous and of such a nature as not to attack the articles and not to impart to them any taste or smell, substantially as and for the purpose described.

2. A process of preserving raw victuals of animal origin, the said process consisting in first coating the articles to be preserved with an emulsion of fat and solution of sugar, afterward inclosing the coated articles in an air-tight chamber, filling this chamber with a suitable gas under a pressure of from 2 to 5 atmospheres, and keeping up this pressure up to the moment of the victuals being cooked, the gas being not poisonous and of such a nature as not to attack the articles and not to impart to them any taste or smell, substantially as and for the purpose described.

3. A process of preserving raw victuals of animal origin, the said process consisting in first coating the articles to be preserved with an emulsion of fat and extract of red beet, afterward inclosing the coated articles in an air-tight chamber, filling this chamber with a suitable gas under a pressure of from 2 to 5 atmospheres, and keeping up this pressure up to the moment of the victuals being cooked, the gas being not poisonous and of such a nature as not to attack the articles and not to impart to them any taste or smell, substantially as and for the purpose described.

1,017,145. FEEDING MECHANISM FOR SEWING-MACHINES. CHARLES FREDERICK GRAY, Sierra Madre, Cal., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 21, 1909. Serial No. 497,518. (Cl. 112—8.)

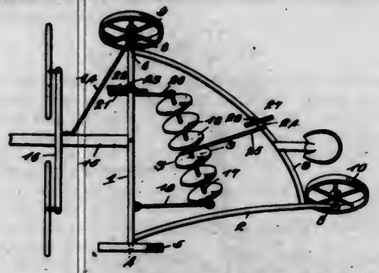


1. In a feeding mechanism for sewing machines, the combination of a plurality of feed-dogs having feeding surfaces of different lengths, an integrally formed rocking cloth-presser provided with feeding surfaces of different lengths, a throat-plate having openings of different lengths to accommodate the feed movements of said feed-dogs and provided with a needle opening, the feeding surface of the shortest of said feed-dogs being provided with unbroken serrations arranged in a line transverse to the line of seam formation and of a length substantially that of the needle opening, the rear wall of the shortest feed-dog opening being located forward of the rear end of the shortest feeding surface of said presser-foot, the rear portion of said latter surface coacting with the upper surface of said throat-plate to hold the sewing threads against movements in the direction of said needle opening when chaining off.

2. In a feeding mechanism for sewing machines, the combination of a plurality of feed-dogs having feeding surfaces of different lengths, a cloth-presser carrying bar, an integrally formed rocking cloth-presser adjustably mounted with respect to said bar and provided with feeding surfaces of different lengths, a throat-plate having openings of different lengths to accommodate the feed movements of said feed-dogs and provided with a needle opening, the feeding surface of the shortest of said feed-dogs being provided with unbroken serrations arranged in a line transverse to the line of seam formation and of a length substantially that of the needle opening, the rear wall of the shortest feed-dog opening being located forward of the rear end of the shortest feeding surface of said presser-foot, the rear portion of said latter surface coacting with the upper surface of said throat-plate to hold the sewing threads against movements in the direction of said needle opening when chaining off.

3. In a feeding mechanism for sewing machines, the combination of a plurality of feed-dogs having feeding surfaces of different lengths, a cloth-presser carrying bar, a cloth-presser bracket carried by said bar, an integrally formed rocking cloth-presser carried by said bracket and provided with feeding surfaces of different lengths, a throat-plate having openings of different lengths to accommodate the feed movements of said feed-dogs and provided with a needle opening, the feeding surface of the shortest of said feed-dogs being provided with unbroken serrations arranged in a line transverse to the line of seam formation and of a length substantially that of the needle opening, the rear wall of the shortest feed-dog opening being located forward of the rear end of the shortest feeding surface of said presser-foot, the rear portion of said latter surface coacting with the upper surface of said throat-plate to hold the sewing threads against movements in the direction of said needle opening when chaining off.

1,017,146. ROTARY-DISK PLOW. CONRAD GRONQUIST, Bigelow, Kans. Filed Sept. 20, 1911. Serial No. 650,331. (Cl. 97—40.)



1. A plow of the class described comprising a frame of substantially triangular design, one arm of which is arched, a plurality of disks pivotally carried on one of the other arms of the frame, means carried on the arched arm for raising and lowering said disks, and additional means to dispose the same to various angles with respect to the frame.

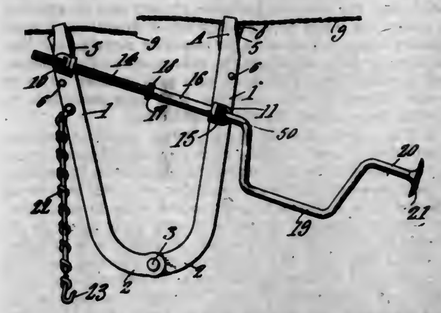
2. A plow of the class described comprising a frame, one arm of which is arched, a bar carrying a plurality of disks thereon, means to pivotally mount said bar on one of the other arms of the frame, means carried on the arched arm and having connection with the said bar for raising and lowering the same, and means to dispose said bar to various angles with respect to said frame.

3. A plow of the class described comprising a frame, one arm of which is arched, a bar carrying a plurality of disks thereon, a connecting rod having one end thereof pivotally engaged with said bar adjacent its one end, the opposite end of said rod being pivotally engaged with one arm of the frame, a lever pivotally carried on the arched arm of the frame, connecting means between said lever and the disk carrying bar to raise and lower the same, and means also in connection with said bar to dispose the same to various angles.

4. A plow of the class described comprising a frame, one arm of which is arched, a bar carrying a plurality of disks thereon, a connecting rod having one end thereof pivotally engaged with said bar adjacent its one end, the opposite end of said rod being pivotally engaged with one arm of the frame, a lever pivotally carried on the arched arm of the frame, connecting means between said lever and the disk carrying bar to raise and lower the same, an additional rod having one end thereof engaged with said disk carrying bar, and an additional lever fulcrumed on another arm of the frame and having the opposite end of the last referred to rod pivotally engaged therewith, whereby said disks may be disposed at various angles.

5. A plow of the class described comprising a frame of substantial triangular design, one arm of which is arched, wheels carried at the points of intersection of said arms, certain of said wheels being swivelly mounted thereon, a bar carrying a plurality of disks thereon, a connecting rod having one end thereof pivotally connected with said bar adjacent its end, the opposite end of said rod being pivotally connected with one arm of the frame, an additional rod having one end thereof engaged with the opposite end of said disk carrying bar, a lever fulcrumed on the last referred to arm of said frame and having the lower end thereof pivotally connected to the last referred to rod, an additional lever fulcrumed on the arched arm of the frame, a connecting rod having one end thereof pivoted to the last referred to lever, the opposite end of said connecting rod being slotted to receive therethrough the disk carying arm.

1,017,147. WIRE-STRETCHER. JOHANN G. HALL, Gardar township, Pembina county, N. D. Filed July 30, 1910. Serial No. 574,692. (Cl. 39—55.)

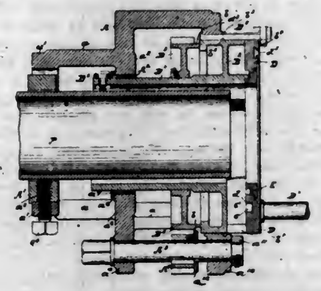


A wire stretcher including an operating member having a crank and a threaded end and a shoulder located between the crank and the threaded end; and means for mounting the operating member, whereby a tightening of the wire will operate to swing the crank portion of the operating member clear of the wire, for rotation; said means including primary and secondary arms pivotally connected at one end, brackets pivoted to the arms, the bracket of the primary arm being located at a greater distance from the free end of the primary arm than is the bracket of the secondary arm from the free end of the secondary arm, the threaded portion of the operating member being engaged with the bracket of the secondary arm, the shoulder of the operating member being engaged with the bracket of the primary arm, wire-engaging means at the free end of the primary arm, and a tension member pivoted to the secondary arm between the bracket of the secondary arm and the pivotal connection between the arms.

1,017,148. DEVICE FOR CUTTING SCREW-THREADS. LOUIS F. HART, Cleveland, Ohio, assignor to The Hart Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 23, 1906. Serial No. 307,598. (Cl. 10—122.)

1. The combination of work-holding means; a die-holding member, said means and member being longitudi-

nally and rotatably movable with reference to each other; dies movable in said member; a plate rotatably secured to said member, said plate engaging said dies and being adapted upon rotation to position the same in said member, the die-engaging elements of said plate being so arranged and constructed that the outward pressure of the dies is effective to rotate said plate in a predetermined direction; and means adapted to control the rotation thus had, the operation of said means being effective upon the longitudinal movement of said member.



2. The combination of work-holding means; a member longitudinally and rotatably movable with reference thereto; dies movable in said member; a plate rotatably secured to said member and provided with cam-elements engaging said dies, the elements of said cam-plate being so disposed that the outward pressure of said dies is effective to rotate the latter in a predetermined direction; and an element supported so as to be rotatably movable but longitudinally fixed relatively to said work-holding means, said element being connected with said member so as to rotate therewith, and engaging with said cam-plate to control the rotation effected by said dies.

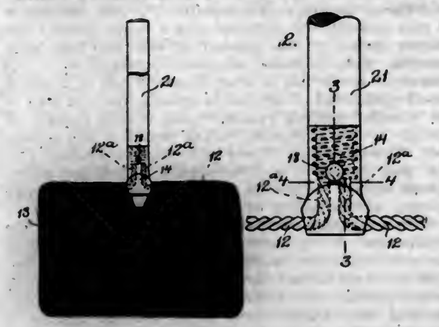
3. The combination of work-holding means; a member longitudinally and rotatably movable with reference thereto; dies movable in said member; a plate rotatably secured to said member, said plate engaging said dies and being adapted upon rotation to position the same in said member, the die-engaging elements of said plate being so arranged that the outward pressure of said dies is effective to rotate said plate in a predetermined direction; and an element borne by said member, so as to be rotatable therewith, but longitudinally fixed relatively to said work-holding means, said element engaging with said plate and the engaging faces of said element and plate being arranged and constructed to permit the latter a limited rotative movement upon longitudinal movement of said member with respect to said work-holding means.

4. The combination of work-holding means; a die-holding member, said means and member being longitudinally and rotatably movable with reference to each other; dies movable in said member; and interengaging elements borne by said work-holding means and member, respectively, and adapted to restrain retraction of said dies, the faces of said elements being proportioned to the length of the thread to be cut, whereby said elements are disengaged upon proper longitudinal movement of said member with respect to said work-holding means and said dies thus left free to retract.

5. The combination of work-holding means; a member longitudinally and rotatably movable with reference thereto; dies movable in said member; inter-engaging elements borne by said work-holding means and member, respectively, and adapted to restrain retraction of said dies, the faces of said elements being proportioned to the length of the thread to be cut, whereby said elements are disengaged upon proper longitudinal movement of said member with respect to said work-holding means and said dies, thus left free to retract; and other means, independent of said elements, adapted to limit such retraction.

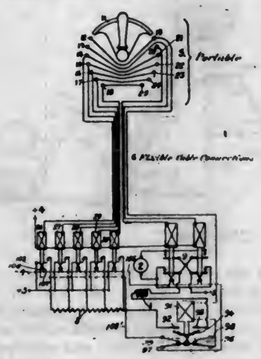
[Claims 6 to 33 not printed in the Gazette.]

1,017,149. MOP-HEAD. FRED E. HILL, Stoneham, Mass. Filed Feb. 17, 1911. Serial No. 609,186. (Cl. 15—56.)



A mop head comprising a pair of clamping jaws each comprising a concavo-convex body flattened and thickened at its lower end and provided with lateral extensions, the inner faces of said flattened portions being provided with longitudinal recesses having lateral branches extending to the extremities of said lateral extensions, whereby L-shaped frame-engaging sockets are formed, a looped mop frame having L-shaped end portions engaging said sockets, and a transverse fastening member for uniting said jaws, said concavo-convex body portions forming a handle engaging socket when the jaws are united, said fastening member passing through said socket.

1,017,150. CONTROLLER FOR ELECTRIC CRANES. EDWARD MORTEN HOLME, Stockport, England. Filed Oct. 29, 1909. Serial No. 525,352. (Cl. 172—179.)



1. In an electrical control means for a crane, the combination of an electrically operated winding motor, a plurality of electro-magnetic devices, a plurality of starting resistances connected with the motor, and adapted to be successively put in and out of circuit by the electro-magnetic devices, a portable switch instrument adapted to be carried by the operator and to be operated at a distance from the motor and said devices and having a plurality of circuit opening and closing contacts connected respectively with the said electro-magnetic devices, a flexible cable connection connecting the said portable switch instrument, and the said electro-magnetic devices, substantially as set forth.

2. In an electrical control means for a crane, the combination of an electric winding motor, a plurality of electro-magnetic devices, a plurality of starting resistances connected with the motor and adapted to be successively put in and out of circuit by the electro-magnetic devices, means for reversing the connections for causing the motor to rotate in opposite directions, electro-magnetic devices for controlling the operation of the reversing means, a switch instrument adapted to be carried by the operator and operated at a distance from the motor and devices and having a plurality of circuit opening and closing contacts connected respectively with the two sets of electro-magnetic devices, a flexible cable connection connecting said portable switch instrument, and the said electro-magnetic devices also connected with the portable switch instrument through the said flexible cable connection, substantially as set forth.

3. In an electrical control means for a crane, the combination of an electric winding motor, electro-magnetic devices, a plurality of starting resistances connected in circuit with the motor and adapted to be successively put in and out of circuit by the electro-magnetic devices, a switch instrument adapted to be carried by the operator and to be operated at a distance from the motor and said devices, and having a plurality of circuit opening and closing contacts, connected respectively with the said electro-magnetic devices, a flexible cable connection connecting the said portable switch instrument and the said electro-magnetic devices, and a safety main interlocked switch, substantially as set forth.

4. In an electrical control means for a crane, the combination of an electric winding motor, a plurality of electro-magnetic devices, a plurality of starting resistances connected in circuit with the motor, and adapted to be successively put in and out of circuit by the said devices, a portable switch instrument adapted to be carried by the operator and to be operated at a distance from the motor and devices and having a plurality of circuit opening and closing contacts connected respectively, with the said electro-magnetic devices, a flexible cable connection connecting the said portable switch instrument and the said electro-magnetic devices, and a separate circuit making and breaking main switch interlocked with the main controlling system and adapted to prevent the main circuit being re-closed except when all the starting resistances are in circuit, substantially as set forth.

1,017,151. PROCESS OF RAISING THE NAP OF CLOTH. JAMES ALEXANDER JAMIESON, Montreal, Quebec, Canada. Filed Aug. 20, 1909. Serial No. 513,880. (Cl. 8—8.)

1. In the treatment of cloth for raising the nap thereon, subjecting the affected portion of the cloth to a carbonate in solution and an acid.

2. In the treatment of cloth for the purpose of raising the nap thereon first impregnating the affected portion of the cloth with a carbonate in solution and then applying an acid thereto.

3. In the treatment of cloth for the purpose of raising the nap thereon first impregnating the affected portion of the cloth with a solution of bicarbonate of soda and then applying an acid thereto.

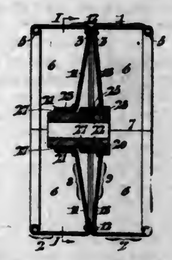
4. In the treatment of cloth for the purpose of raising the nap thereon first impregnating the affected portion of the cloth with a carbonate in solution and then applying acetic acid thereto.

5. In the treatment of cloth for the purpose of raising the nap thereon first impregnating the affected portion of the cloth with a solution of bicarbonate of soda and then applying acetic acid thereto.

1,017,152. PULLEY. BURDETTE H. JOHNSON, Moores, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1910. Serial No. 554,312. (Cl. 74—17.)

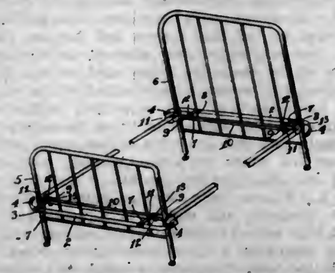
1. In a pulley, the combination of a rim; a hub, and two spiders, each comprising a plurality of spokes and a band connecting the same and arranged at an angle thereto, the spokes of one spider having a pitch with relation to its band, different from that of the other spider; said bands being mounted upon the hub to extend in the same direction with relation to their respective spokes; and means for securing the bands to the hub, substantially as set forth.

2. In a pulley, the combination of a rim; a hub, and two spiders, each comprising a plurality of spokes and a band connecting the same and arranged at an angle thereto, the spokes of one spider having a pitch with relation to its band, different from that of the other spider, said bands



being mounted upon the hub to extend in the same direction with relation to their respective spokes; said hub being provided with a shoulder to provide an abutment for one of said bands; and collars adapted to embrace said bands and clamp them rigidly upon the hub, substantially as set forth.

1,017,153. BED-PROTECTOR. JOHN F. KAMPE, Brooklyn, N. Y. Filed Nov. 26, 1910. Serial No. 594,268. (Cl. 5—41.)



1. In combination with a bed, a protecting means located at the outside of and spaced from the head or foot member thereof for protecting such head or foot from knocks, said protecting means projecting beyond but terminating adjacent to the end posts of such head or foot member.

2. In combination with a bed, a protecting attachment located at the outside of and extending in the same direction as and spaced from the head or foot member thereof at substantially the height of the spring mattress supporting means of the bed, said attachment projecting beyond but terminating adjacent to the end posts of said head or foot member.

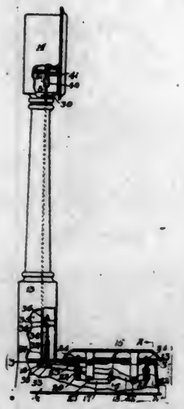
3. In combination with a bed, a protecting attachment located at the outside of and running across and spaced from the head or foot member thereof and comprising a bar secured to the bed and having curved protecting ends terminating adjacent to the posts of said head or foot member.

4. In combination with a bed having angle iron members, a protecting attachment located at the outside of and extending in the same direction as the head or foot member thereof and comprising a bar secured to such angle iron members of the bed, said bar projecting beyond but terminating adjacent to the end posts of said member.

5. In combination with a bed having a head and a foot member, a protecting attachment located at the outside of and extending in the same direction as the head or foot member thereof, and adjustable means for attaching it in position on a transverse angle iron bar of said head and foot members.

[Claims 6 to 13 not printed in the Gazette.]

1,017,154. PLATFORM WEIGHING-SCALE. WALLACE C. KLINE, Buffalo, N. Y., assignor to Charles S. Marsh, Winchester, Mass. Filed Dec. 27, 1910. Serial No. 599,575. (Cl. 73—46.)



1. In a platform scale the combination with the base frame, a platform, and motion multiplying levers each provided with spaced apart trunnions, of supporting members secured to the base frame, and fulcrum links depending from said supporting members and receiving the trunnions of the respective levers, said fulcrum links being provided with means for preventing lateral movement of said levers, each of said supporting members being vertically adjustable independently of the others to correspondingly and independently adjust that portion of the respective levers supported thereby, whereby said platform may be accurately leveled.

2. In a platform scale the combination with a base frame, a platform, and motion multiplying levers each provided with spaced apart trunnions, of supporting members each comprising a screw threaded rod passed through orifices in the base frame and provided with a hook end, fulcrum links suspended from the hook ends of said supporting members and receiving the trunnions of the respective levers, said fulcrum links being provided with means for preventing lateral movement of said levers, and a nut engaging the threaded rod of each supporting member and bearing upon said base frame to vertically adjust each supporting member independently of the others to correspondingly and independently adjust that portion of the respective levers supported thereby, whereby said platform may be accurately leveled.

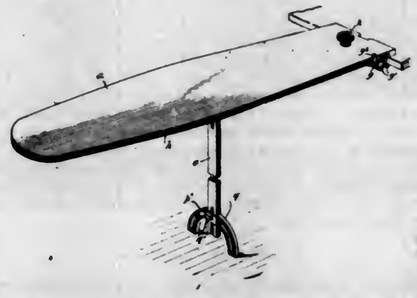
3. In a platform scale the combination with the base frame, the platform and the bifurcated motion-multiplying levers supporting the platform, each lever bifurcation having two oppositely projecting trunnions, of U-shaped fulcrum links bestriding the lever bifurcations and each having two trunnion bearings, said fulcrum links being provided with means for supporting the levers against lateral tipping and swinging movements, and supporting members engaged with the base frame and with the fulcrum links, each of said supporting members being vertically adjustable independently to vertically adjust the lever bifurcation supported thereby independently of the other bifurcation of the same lever, and thereby vertically adjust the corresponding portion of the platform, whereby the latter may be accurately leveled.

4. In a platform scale the combination with the base frame, the hollow standard thereon, the platform, and the motion-multiplying mechanism supporting the platform, said mechanism including the secondary lever located under the platform and projecting under the hollow standard, of a rod engaged with said lever and extending upwardly through the standard, an anvil adjustably connected to the upper end of said rod and provided with means for exerting a binding pressure upon said rod, and a tension spring supported by the standard and engaged with the lever to yieldingly support the latter, and means for adjusting said spring to determine the normal height of the levers, rod and anvil.

5. In a platform scale the combination with the base frame, the hollow standard thereon, the platform, and the motion-multiplying mechanism supporting the platform, said mechanism including the secondary lever located under the platform and projecting under the hollow standard, of a rod engaged with said lever and extending upwardly through the standard, an anvil adjustably connected to the upper end of said rod and provided with means for exerting a binding pressure upon said rod, the standard being provided with an inwardly projecting ear, a rod vertically adjustable in said ear and provided with locking means whereby it may be secured at any desired adjustment and a tension spring supported by said rod and engaged with the lever to yieldingly support the latter.

[Claims 6 and 7 not printed in the Gazette.]

1,017,155. IRONING-BOARD. WILLIAM EDWARD KOCH, York, Pa. Filed Mar. 18, 1911. Serial No. 615,190. (Cl. 68—10.)

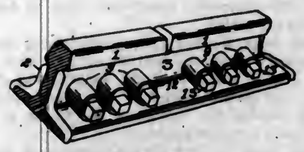


1. In combination with an ironing-board having grooved edges, a stub-shaft journaled at one side of the board, a cord extending entirely around the edges of the board and lying in said grooves and having its opposite ends brought together from opposite directions and secured to said stub-shaft and wound thereon in opposite directions, and means for rotating said stub-shaft and locking it against rotation.

2. In combination with an ironing-board having a groove extending around its outer end and along its side edges to points near its inner end, a groove extending partly along the inner straight edge of the board and diagonal passages through the corners of the board connecting the ends of said grooves, of a plate secured to the bottom of the board at one side thereof and provided with a depending projection, a stub-shaft having its inner end journaled in said projection and its outer end extending outwardly to the edge of the board, a cord extending around the edges of the board in said grooves and passages and having its opposite ends coming from opposite directions secured to said stub-shaft, and means for rotating the shaft and locking it against rotation.

3. In combination with an ironing-board having a groove extending around the edges thereof, a plate secured to the bottom of the board at one side thereof and having a depending projection, a stub-shaft having its inner end journaled in said projection and its other end extending outwardly to the edge of the board, a ratchet-wheel secured on the outer end of said shaft, means for rotating the shaft and ratchet-wheel, a pawl pivotally mounted on said plate and adapted to engage the ratchet wheel to lock the shaft against rotation, and a cord extending around the edges of the board in said groove and having its opposite ends coming from opposite directions passed through a hole in the stub-shaft and knotted together.

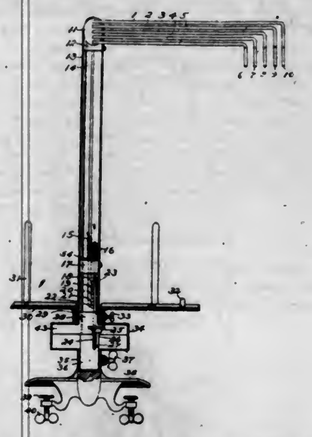
1,017,156. SPLICE-BAR. ANDREW KUBIK, McKees Rocks, Pa. Filed Nov. 10, 1911. Serial No. 659,505. (Cl. 239—9.)



1. A splice-bar structure composed of a pair of plates engaging the opposite sides of the rails, bolts seated in said plates and extending through holes in the rails, tubular bosses on one of said plates, nuts engaging said bolts within said bosses, and plugs screwed down into said bosses and locking said nuts.

2. A splice-bar structure composed of a pair of plates engaging the opposite sides of the rails, bolts having their heads seated in locking recesses in one of said plates and extending through holes in the rails and in the other plate, tubular bosses on the second plate into which the ends of said bolts extend, nuts seated in said bosses and engaging said bolts, and plugs screwed down into said bosses and locking said nuts.

1,017,157. MUSIC-LEAF TURNER. JAMES LEONARD and NORMAN J. SMITH, Waterloo, Iowa, assignors of one-third to Albert Horat, Waterloo, Iowa. Filed Feb. 27, 1911. Serial No. 611,050. (Cl. 84—135.)



1. A music leaf turner, comprising supporting means, a number of spring-actuated turning-rods supported rotatably thereby and having projections at their lower ends and leaf-turning arms at their upper ends, a spring-actuated ratchet-bar having a bent-over portion adapted to removably receive and hold said projections, a movable body adapted to detchably engage said ratchet-bar, a fixed support, a spring connected between said fixed support and said movable body, and so located with respect to said movable body and to said fixed support as to exert a sidewise stress on said movable body to normally retain it in contact with said ratchet-bar, and resilient-means so connected to said ratchet-bar as to exert an upward stress thereon.

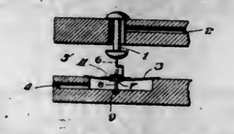
2. A music leaf turner, comprising a closed supporting casing, a series of spring-actuated turning-rods supported in said casing and having projections at their lower ends and leaf-turning arms at their upper ends, a spring-actuated ratchet-bar having a bent-over portion adapted to removably receive and hold said projections, a movable body adapted to detachably engage said ratchet-bar, a fixed support, a spring connected between said fixed support and said movable body, and so located with respect to said movable body and to said fixed support as to exert a sidewise stress on said movable body to normally retain it in contact with said ratchet-bar, resilient-means so connected to said ratchet-bar as to exert an upward stress thereon, a pedal, and connecting-means between said pedal and said movable body.

3. A music leaf turner, comprising supporting means, a number of spring-actuated turning rods supported rotatably thereby and having projections at their lower ends and leaf-turning arms at their upper ends, a spring-actuated ratchet-bar having a bent-over portion adapted to removably receive and hold said projections, a movable body adapted to detachably engage said ratchet-bar, a fixed support, a spring connected between said fixed support and said movable body, and so located with respect to said movable body and to said fixed support as to exert a sidewise stress on said movable body to normally retain it in contact with said ratchet-bar, a spring so connected to said ratchet-bar as to exert an upward stress thereon, and means for detachably securing said supporting-means to a musical instrument.

4. A music leaf turner, comprising supporting-means, a number of spring-actuated rods supported rotatably thereby and having projections at their lower ends and leaf-turning arms at their upper ends, a spring-actuated ratchet-bar having a bent-over portion adapted to removably receive and hold said projections, a movable body adapted to detachably engage said ratchet-bar, a fixed support, a spring connected between said fixed support and said movable body, and so located with respect to said fixed support and to said movable body as to exert a sidewise stress on said movable body to normally retain it in contact with said ratchet-bar, a spring so connected to said ratchet-bar as to exert an upward stress thereon, and a removable bookholder supported on said supporting-means below said arms and, provided with means for detachably clasping the covers of a book when the latter are spread apart.

5. A music leaf turner, comprising a plurality of spring-actuated turning-rods, supports therefor, said rods having leaf-turning arms at one end and projections at the other ends, a movable ratchet-bar formed to removably receive and hold said projections, a detachable pawl engaged with said ratchet-bar, resilient-means drawing said ratchet-bar toward said projections, a fixed support, a spring connected between said fixed support and said pawl, and so located with respect to said fixed support and to said pawl as to exert a sidewise stress upon said pawl to normally keep it in contact with said ratchet-bar.

1,017,158. PLAYER-PIANO OR SIMILAR INSTRUMENT. EINAR LESCHBRANDT, Philadelphia, Pa. Filed Dec. 21, 1910. Serial No. 598,586. (Cl. 84—178.)



1. The combination in a player piano or similar instrument of a movable diaphragm with a bleed-hole therein and a pin of lesser diameter than said hole passing therethrough, said pin being so carried that it can move freely from side to side of said bleed-hole.

2. The combination in a player piano or similar instrument, of a movable diaphragm with a bleed-hole therein and a pin of lesser diameter than said hole passing therethrough.

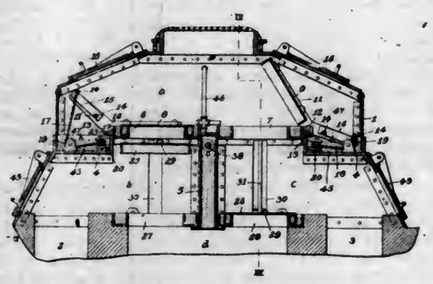
3. The combination in a player piano or similar instrument, of a movable diaphragm with a bleed-hole placed centrally therein, and a pin of lesser diameter than said hole passing therethrough.

4. In a player piano or similar instrument, in combination, a diaphragm, an eyelet placed centrally in said

diaphragm, a disk secured by said eyelet to said diaphragm, and a pin of less diameter than the hole in said eyelet passing therethrough.

5. In a player piano or similar instrument, in combination, a perforated diaphragm, a pin of less diameter than said perforation passing therethrough, and a seat in which said pin is stepped.

1,017,159. VALVE MECHANISM FOR FURNACES. CHARLES LONGENECKER, Pittsburgh, Pa. Filed Jan. 22, 1910. Serial No. 539,461. (Cl. 126—286.)



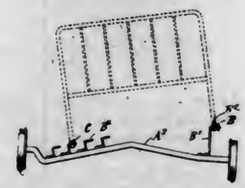
1. In a valve mechanism for furnaces, the combination of levers and a valve provided with lugs supported on the upper edges of the levers.

2. In a valve mechanism for furnaces, the combination of fulcrum blocks, levers provided with trunnions loosely supported by said blocks, a valve loosely supported by the lever arms on one side of the fulcrum, and counterbalancing weights loosely supported by the levers on the opposite side of the fulcrum.

3. In a valve mechanism for furnaces, the combination of a pair of gas controlling valves, a pair of stack valves controlling the flow of products of combustion, and a common means for closing one gas valve, then reversing the stack valves, and then opening the other gas valve.

4. In a valve mechanism, the combination of valves controlling the flow of gas and products of combustion, and means for reversing said valves with sequential movement, said reversing means consisting of a series of disks mounted on a shaft, said disks being operatively connected to each other and to said valves, substantially as described.

1,017,160. TRUCK. MORTIMER G. MERRITT, Rome, N. Y., assignor to Rome Metallic Bedstead Company, Rome, N. Y., a Corporation of New York. Filed May 19, 1910. Serial No. 562,198. (Cl. 21—65.)



1. A drip truck comprising supporting axles, brackets upon one end of each of said axles, brackets of greater height at the opposite ends of said axle, detachable tubes connecting said brackets, and work engaging means carried by said tubes, whereby supports at different levels are provided to maintain an article in an inclined position.

2. A drip truck comprising supporting axles, brackets on one end of said axles, brackets of greater height upon the opposite ends of said axles, detachable tubes connecting said brackets to provide supports of different heights whereby an article may be supported in an inclined position, and pins projecting from said tubes to engage the article to be supported.

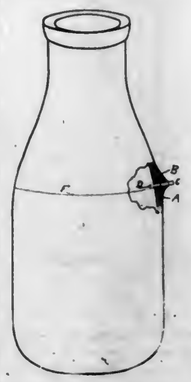
3. A drip truck for bed frames comprising supporting axles, a bracket upon one end of each of said axles, a bracket of greater height upon the opposite end of each of said axles, and means carried by the upper ends of said brackets to engage the legs of a bed frame to support the same in an inclined position.

4. A drip truck for bed frames comprising supporting axles, a bracket at one end of each of said axles, a bracket of greater height at the opposite end of each of said axles, tubes connecting said brackets to provide supports of different levels, and means carried by said tubes to engage the legs of a bed frame whereby the latter may be supported at an inclined position.

5. A drip truck for bed frames comprising supporting axles, a series of angular brackets upon one end of each of said axles, an angular bracket of greater height upon the opposite end of said axles, a tube adapted to connect the free end of either of said brackets in the series, a tube connecting the free ends of said higher brackets whereby supports of different levels are provided to support bed frames of different widths in an inclined position, and means carried by said tubes to engage the tubes of a bed frame.

[Claims 6 to 11 not printed in the Gazette.]

1,017,161. MILK-BOTTLE. ALJE MULDER, Grand Rapids, Mich. Filed July 23, 1910. Serial No. 573,583. (Cl. 215—70.)

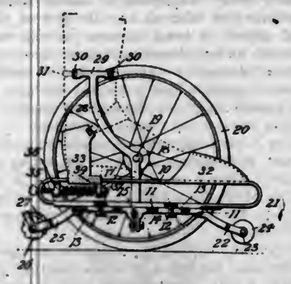


In combination with a bottle having a discharge opening in the top thereof and a relatively small discharge opening in the side thereof, said latter opening being approximately at the cream line, a paper wafer seal for the top opening and a combined plug stopper and pin for the side opening, said pin being permanently attached to the stopper and adapted to be removed from the bottle therewith and to puncture the paper wafer, thereby providing a vent.

1,017,162. TOURING-SKATE. ALFRED NAUMANN, New York, N. Y. Filed June 6, 1911. Serial No. 631,519. (Cl. 46—50.)

1. A touring skate provided with a frame having a fixed foot rest, and a pair of freely rotatable traction wheels of unequal size mounted on opposite sides thereof, the larger wheel being journaled above the foot rest, while the smaller wheel is journaled below said foot rest.

2. A touring skate provided with a foot rest, a pair of parallel bars adjustably connected thereto, a pair of traction wheels of unequal size rotatably secured to said bars on opposite sides thereof, a lead wheel rotatably secured



to the forward end of one of said bars, and a trailer rotatably secured to the rear end of the other bar.

1,017,163. HOSE. FRANK R. NEFF, Philadelphia, Pa., assignor to Charles A. Daniel, Philadelphia, Pa. Filed Apr. 4, 1911. Serial No. 618,824. (Cl. 138—66.)

1. A hose comprising an outer covering of rubber having longitudinally extending closely spaced ribs forming corrugations extending longitudinally of the hose, said ribs terminating in solid annular sections, equally spaced along said hose, the outer faces of said ribs and the outer faces of said annular sections being substantially in alinement.

2. A hose comprising an outer covering of rubber having longitudinally extending closely spaced ribs forming corrugations extending longitudinally of the hose, said ribs terminating in solid annular sections equally spaced along said hose, the outer faces of said ribs and the outer faces of said annular sections forming one continuous cylindrical surface, the distance between the annular sections being a common unit of linear measure.

1,017,164. SEWING-MACHINE. DONALD NOBLE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 25, 1910. Serial No. 568,784. (Cl. 112—8.)

1. In a two needle sewing machine, an upper four-motion feeding device including a vertically actuated feed-bar carrying at its lower end a yieldingly mounted and a rigidly secured feeding cloth-presser, and a vertically actuated cloth-presser bar mounted in the head of the bracket-arm of the sewing machine and provided with a cloth-presser, the vertical movements of said cloth-presser bar alternating with the like movements of said feed-bar to advance the fabric to the action of the stitch-forming mechanism.

2. In a two needle sewing machine, a stich-forming and cloth-feeding mechanism including an actuating shaft and a frame, connections including an eccentric between said actuating shaft and said frame for giving to the latter oscillating movements, and a feed-bar mounted in said frame and operatively connected with said shaft to move vertically, said feed-bar being provided with feeding cloth-pressers one of which is rigidly secured to said feed-bar, the other of said cloth-pressers being resiliently mounted to move vertically with or independently of said rigidly secured cloth-presser.

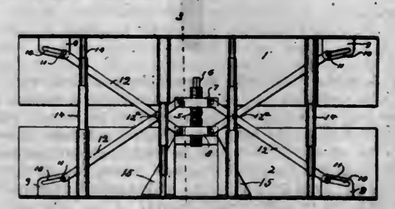
3. In a two needle sewing machine, a stitch-forming and cloth-feeding mechanism including an actuating shaft mounted in the sewing machine bracket-arm, a cloth-presser bar mounted in the head of said arm and provided with a cloth-presser, a frame pivoted on said head, connections between said shaft and said frame for giving to the latter oscillating movements, and a feed-bar mounted in said frame and operatively connected with said shaft to move vertically, said feed-bar being provided with feeding cloth-pressers one of which is rigidly secured to said feed-bar, the other of said cloth-pressers being resiliently mounted to move vertically with or independently of said rigidly secured cloth-presser.

4. In a two needle sewing machine, a stich-forming and cloth-feeding mechanism including a frame carrying a needle-bar provided with an eye-pointed needle, a feed-bar mounted in independent bearings in said frame, connections between the actuating mechanism of the sewing machine and said frame for giving to said needle-bar and feed-bar vertical and oscillating movements, said feed-bar being provided with feeding cloth-pressers one of which is rigidly secured to said feed-bar, the other of said cloth-pressers being resiliently mounted to move vertically with or independently of said rigidly secured cloth-presser.

5. In a two needle sewing machine, a stitch-forming and cloth-feeding mechanism including an actuating shaft, a presser-bar mounted in the head of the bracket-arm of the sewing machine and provided with a cloth-presser, a frame pivoted on said head, a needle-bar mounted in said frame, connections between said frame and said actuating shaft including an eccentric for giving to said frame oscillating movements, a feed-bar mounted in said frame and provided at its lower end with a rigidly secured and a yieldingly mounted feeding cloth-presser, and connections between said feed-bar and said cloth-presser-bar and between the latter and said eccentric for alternately giving to said feed-bar and cloth-presser bar vertical movements.

[Claims 6 to 9 not printed in the Gazette.]

1,017,165. LOOSE-LEAF BINDER. ARTHUR OPALLA, Chicago, Ill., assignor, by mesne assignments, to Ralph B. Wilson, Chicago, Ill. Filed May 13, 1909. Serial No. 495,815. (Cl. 129—13.)



1. The combination of parallel cover-plates, two pairs of oppositely extending shear-levers arranged between said cover-plates and extending lengthwise thereof, the fulcrum-pivot of each pair being located toward the power end of the pair, shifting hinge-connections between the ends of the outer or longer arms of each pair and the respective cover-plates, and means acting in right lines

for simultaneously spreading or approximating the shorter arms of said pairs along said lines.

2. The combination of parallel cover-plates, two pairs of oppositely extending shear-levers arranged between said cover-plates and extending lengthwise thereof, the fulcrum-pivot of each pair being located toward the power end of the pair, shifting hinge connections between the ends of the outer or longer arms of each pair and the respective cover-plates, and means acting in right lines, perpendicular to the cover-plates, for simultaneously spreading or closing the shorter arms of said pairs along such lines.

3. The combination of parallel cover-plates, a right and left screw-threaded key-spindle arranged between said plates and perpendicular thereto, nut-blocks on the respective threads of said spindle, levers fulcrumed in pairs and extending from hinge connections with said blocks, the levers from the lower block to the hinge-connections at the opposite ends of the upper cover-plate and the levers from the upper block to hinge-connections at the opposite ends of the lower cover-plate, and means permitting slip located in the train.

4. The combination of parallel cover-plates having slots located near their ends and trending longitudinally of the plates, a right and left screw-threaded key-spindle arranged between said plates and perpendicular thereto, nut-blocks on the respective threads of said spindle, and levers fulcrumed in pairs and extending from hinge-connections with said blocks, the levers from the lower block to hinging connections with the slots at the opposite ends of the upper cover-plate and the levers from the upper block to hinging connections with the slots at the opposite ends of the lower cover-plate.

5. The combination of parallel cover-plates having inwardly and convergingly trending guide-slots near their respective ends, a right and left screw-threaded key-spindle arranged between said plates and perpendicular thereto, nut-blocks on the respective threads of said spindle, and levers fulcrumed in pairs and extending from hinge-connections with said blocks to hinging and sliding connections with the slots at opposite ends of the reversely located cover-plates.

1,017,166. SAFETY-RAZOR. JOHN P. PADDINGTON, New York, N. Y. Filed Dec. 29, 1910. Serial No. 599,795. (Cl. 30—12.)

1. A safety razor comprising a blade-holding head having two members, one of which has a stem portion provided with a dove-tailed part, and the other an opening through which said part may project, a handle provided with an enlarged part and having a groove extending entirely across the same through which the dove-tailed part of the head may fit, and a split ring adapted to close the open end or ends of said groove.

2. A safety razor comprising a blade-holding head having two members, one of which has a stem portion provided with a dove-tailed part, and the other an opening through which said part may project, a handle provided with an enlarged part and having a groove extending entirely across the same through which the dove-tailed part of the clamping device may fit with a sliding movement, and means to prevent or permit detachment of the head from the handle.

3. A safety razor comprising a handle having an enlarged part provided with an annular groove, a split ring fitting said groove, a comb member having one surface thereof curved, and a clamping member having a curved under surface adapted to clamp a blade between the same and the comb member and provided with a projecting part, said handle having a dove-tailed groove to receive the projecting part of the clamping member.

4. A safety razor comprising a handle provided with an enlarged part and having a groove extending across the same, a plate holding head provided with a dove-tailed part adapted to fit in said groove and a split ring rotatably held to the handle and adapted to close the open end of said groove.

5. A safety razor comprising a handle provided with an enlarged part and having a groove extending across said enlarged part, a plate holding head provided with a tenon adapted to fit in said groove, and a split ring rotatably held to the handle and adapted to close the open end of said groove.

1,017,167. RECEPTOR FOR SHOWER-BATHS. LEO H. PLEINS, Chicago, Ill., assignor to James B. Clow & Sons, Chicago, Ill., a Corporation. Filed May 11, 1907. Serial No. 373,188. (Cl. 4—26.)

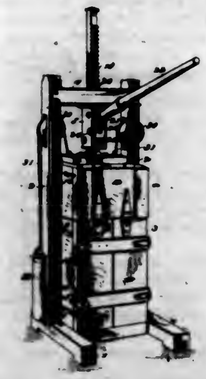
As a new article of manufacture, a receptor for shower baths having an imperforated foot-slab provided with a drain opening, and a wall-base bounding the foot-slab and extending both above the upper and below the lower surfaces of the slab, the wall-base being provided in its top side with a groove resulting in parallel flanges extending above the upper surface of the foot-slab and adapted to receive between them and confine the lower edges of wall slabs, the foot-slab being provided on its under side with strengthening and supporting ribs resulting in dead air spaces bounded by the downwardly extending portions of the wall-base, the several integrant parts of the receptor being rigid and the entire receptor being made in a single integral piece, whereby the several integrant parts of the receptor are united without joints or seams.

1,017,168. BALING-PRESS. BURTON CALVIN POSTON, Chillicothe, Ohio. Filed Apr. 5, 1911. Serial No. 619,149. (Cl. 100—6.)

1. A pressing mechanism comprising a vertically movable follower, a vertically movable rack-bar projecting from the follower, a housing through which the rack-bar passes, an operating lever having its inner end pivoted to the housing, a holding dog pivoted in the housing below the pivoted end of the lever and normally engaging the rack-bar, the holding dog having an intermediate slot, an operating dog pivoted to the lever and depending through the said slot and normally engaging the rack-bar, substantially as described.

2. A pressing mechanism comprising a follower, a rack-bar projecting therefrom, a stationary housing through which the rack-bar passes, an operating lever having its inner end pivoted in the housing, a holding dog pivoted in the housing and provided with a slot adjacent its pivoted end, an operating dog pivoted to the operating handle and projecting through the slot, said dog normally engaging the rack and a releasing dog adapted to engage the operating dog and force it out of engagement with the rack-bar, the operating dog in turn adapted to engage the holding dog and force it out of engagement with the rack bar for the purpose described.

3. A pressing mechanism comprising a follower, a rack bar projecting therefrom, a housing through which the rack bar projects, an operating lever pivoted at its inner end in the said housing, a holding dog normally engaging the rack-bar, an operating dog normally engaging the rack-bar, the operating dog constructed to engage the holding dog when it is forced out, and means for forcing the operating dog outward when the lever is depressed for the purpose of releasing the toothed dogs from the rack-bar.



4. A compressing mechanism comprising a follower, a rack-bar projecting therefrom, a stationary housing through which the rack-bar passes, an operating lever pivoted at its inner end to said housing, a holding dog pivoted in the housing and normally engaging the rack-bar, the holding dog having a slot through its pivotal end, an operating dog pivoted to the operating handle and extending through the slot of the holding dog and normally engaging the rack-bar, the inner end of the operating dog having a projection adapted to engage the holding dog for the purpose described, and a pivoted lever adapted to have its inner end engage the operating dog for forcing it away from the rack-bar and the projection thereon in contact with the holding dog to force it out of engagement with the rack bar when the operating handle is depressed.

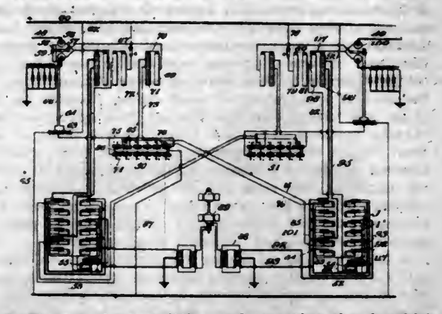
5. A press comprising a bale casing, standards projecting therefrom, a cross-bar connecting the upper ends of the standards, a vertically arranged housing carried by and projecting from the cross-bar, a follower in the bale casing, a rack-bar projecting upward from the follower and passing through the housing, an operating lever pivoted in the housing, a holding dog pivoted in the housing below the operating lever, and an operating dog connected to the lever, both dogs normally in engagement with the rack-bar, the parts operating as described.

[Claims 6 to 9 not printed in the Gazette.]

1,017,169. METHOD OF AND APPARATUS FOR TRANSMITTING SIGNALS OVER TELEGRAPHIC CIRCUITS. LOUIS M. POTTS, Baltimore, Md., assignor by mesne assignments, to Austin McLanahan, Baltimore, Md. Filed Jan. 25, 1908. Serial No. 412,628. (Cl. 178—42.)

1. The art of transmitting and repeating signals which consists in normally transmitting half waves over the line when no signals are being sent and in suitably transmitting over the line a sufficient number of reversed half waves to constitute the signals in question in repeating said reversed half waves; and in causing a distinctive signal to be transmitted whenever more than a given number of said reversed half waves are on the line, substantially as described.

2. The art of transmitting and repeating signals which consists in synchronously transmitting and repeating signals and causing a distinctive signal to be automatically sent to the receiving station, whenever synchronism is lost, substantially as described.



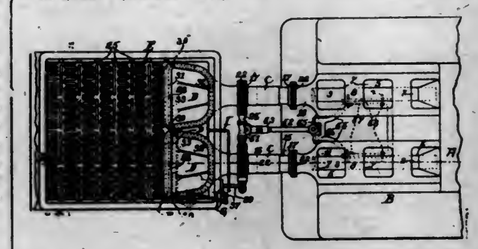
3. The art of transmitting and repeating signals which consists in synchronously transmitting and repeating signals from a sending station to and through a repeating station, and causing a distinctive signal to be automatically sent from the repeating station to the receiving station, whenever synchronism is lost whereby the attendant at the receiving station is automatically informed that the trouble is at or beyond the repeating station, substantially as described.

4. In the art of synchronously transmitting and repeating signals, the steps which consist in transmitting and in automatically repeating the said signals and sending a distinctive signal to the receiving station whenever synchronism is interrupted, substantially as described.

5. The steps in the art of transmitting and repeating signals which consist in automatically transmitting and in sending from the repeating instrument a distinctive signal whenever synchronism is interrupted, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,017,170. MECHANICAL STOKER. GEORGE B. RAIT, Minneapolis, Minn. Filed July 29, 1910. Serial No. 574,463. (Cl. 110—47.)



1. In a mechanical stoking device, a reciprocating plunger, a series of forwardly pointing transverse teeth on said plunger adapted to engage and move forward fuel lodged on said teeth, a transverse bar above said teeth having a sharp rearward corner adapted to coöperate with said teeth, and means for operating said plunger, whereby lumps of fuel fed to the stoker are adapted to be crushed between said teeth and bar and to be advanced by the succeeding teeth of said plunger.

2. In a mechanical stoker, an elongated hopper chamber having a grooved bottom and bridges across its top dividing the top into a series of openings having sharp corners, a plunger reciprocating in said groove, a plurality of forwardly pointing teeth on said plunger adapted to coöperate with the sharp corners of said bridges in breaking up lumps of coal caught between them, and means for actuating said plunger.

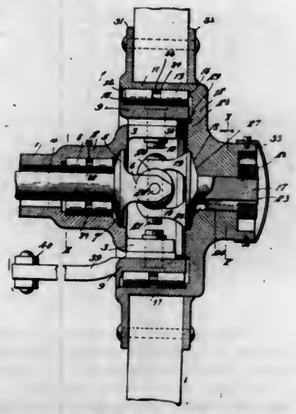
3. A mechanical stoker for locomotives, comprising, in combination, a tender, a fire grate for said locomotive, a

charging mechanism on the tender, an underfeed coking chamber below the firegrate of said locomotive, and a flexible tubular connection from said charging mechanism to said coking chamber, the charging mechanism being formed with a reciprocating plunger adapted to advance fuel from the tender through said flexible connection and coking chamber to said grate, a twyer element lying at the rear of the opening of said coking chamber on the grate and having openings directed forward across said chamber opening, a second twyer element lying at the front of said chamber opening and having blast openings directed upward and forward across the grate, and means for supplying live stem and air to said rear twyer and exhaust steam to said front twyer, whereby the draft and the combustion of gases in said coking chamber may be promoted and the fuel advanced along the grate.

4. In a mechanical stoker for locomotives, an underfeed coking chamber opening into said locomotive, a force feed of fuel connected thereto, a segmental twyer ring in connection with said coking chamber, having a segment lying to the rear of the opening of said coking chamber and adapted to pass a constituent into the fuel coking therein to promote combustion, and a second segment lying in front of the opening of said coking chamber and adapted to supply a distributing blast for the distribution of the coked fuel within said locomotive.

5. In a mechanical stoker for locomotives, an engine, a fuel distributer thereon, a tender, an elongated hopper chamber thereon, having a grooved bottom, a bridge across said chamber having a sharp corner, a plunger reciprocating in said groove, a plurality of forwardly pointing teeth on said plunger adapted to coöperate with said sharp corner on said bridge in breaking lumps of fuel, a tube connecting said hopper chamber and said fuel distributer, a universal joint interposed in said tube between its ends, and means for operating said plunger and said distributer.

1,017,171. AUTOMOBILE-WHEEL. PHILIP J. RIVERS, New Rochelle, N. Y. Filed May 9, 1910. Serial No. 560,200. (Cl. 21—90.)



A wheel comprising a hub provided with an inwardly projecting spoke receiving ring, said ring being provided on its inner surface with end shoulders, said hub having its inner face provided with an annular shoulder, a non-rotatable bearing ring within the spoke ring and spaced therefrom, said bearing ring being provided with a flange for engaging one of the shoulders of the spoke ring, anti-friction bearings interposed between the spoke and bearing rings and engaging the shoulder of the bearing ring and one of the shoulders of the spoke ring, a washer seated on the hub shoulder and engaging the bearing ring, a resilient ring for holding the washer in contact with the bearing ring, an axle casing having end arms, means for pivotally connecting the arms to the bearing ring, an axle projecting through the casing and provided with end arms, a spindle carried by the hub and provided with end arms, and means for universally connecting the axle and spindle arms.

1,017,172. ELECTRIC ADVERTISING AND SIGNALING DEVICE. WALTER S. RYAN, New York, N. Y., assignor to Louis Hengerer, trustee, New York, N. Y. Filed July 11, 1911. Serial No. 637,937. (Cl. 177—346.)

1. In apparatus of the class stated the combination of an insulator containing a plurality of separate chambers, brushes adapted to enter said chambers, means to clamp the brushes in said chambers and means to support the insulator.

2. In apparatus of the class stated the combination of an insulator containing a plurality of separate chambers having a recess on its under surface adapted to engage with the support thereof, brushes adapted to enter said chambers, means to clamp the brushes in said chambers and a support adapted to enter the recess in the insulator.

3. In apparatus of the class stated the combination of a T-iron, an insulator containing a chamber for the reception of a brush and having also a recess in its under part adapted to engage with the T-iron, a brush adapted to enter said chamber, means to clamp the brush within the chamber and other means to clamp the insulator to the T-iron.

4. In apparatus of the class stated the combination of a support for the insulators, insulators adapted to be movably adjusted upon the support, means to attach the insulators as adjusted to the support and other means whereby brushes may be rigidly held to the insulators.

5. In apparatus of the class stated the combination of an insulator containing a chamber for the reception of a brush and having openings for the passage of screws through its upper part, a brush adapted to enter said chamber, clamp plates adapted to be received within the chamber and to clamp the brush between them and means extending through the openings in the upper part of the insulator and engaging with the plates whereby they may be caused to clamp the brush.

[Claims 6 to 9 not printed in the Gazette.]

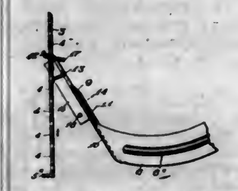
1,017,173. ELECTRIC-LIGHT ATTACHMENT. WALTER S. RYAN, New York, N. Y., assignor to Louis Hengerer, trustee, New York, N. Y. Filed Oct. 9, 1911. Serial No. 653,582. (Cl. 240—111.)

1. A cover shade embodying a translucent, cup-shaped, solid walled body part, and resilient holding devices on the inside of the body part adapted to hold the same to a lamp bulb, said devices being supported at their lower ends by the body part and given stiff spring action by contact with its interior walls above their ends.

2. A cover shade embodying a translucent, cup-shaped, solid walled body part having resilient holding devices adapted to hold the same in position upon a lamp bulb, each of said holding devices embodying a downwardly extending member supported at its lower end by the body part and a horizontally extending member which engages with the interior walls of the body part.

3. In a cover shade for electric lamps, a translucent cup-shaped, solid walled body part having a perforation in its bottom, resilient holding devices for the body part embodying members which pass through said perforation and are bent against the appropriate outer surface of the body part and other members attached cross-wise of the first named members and which are put under tension and caused to grip the lamp bulb by engaging with the inner walls of the body part.

1,017,174. BRACKET AND SUPPORT THEREFOR. VALENTINE SANDER and PETER W. SEILER, Rochester, N. Y. Filed Apr. 26, 1909. Serial No. 492,125. (Cl. 108—29.)



1. An eaves trough hanger comprising a curved supporting arm made from flat stock, provided with a trough engaging device at its outer end and having the flat faces of the stock lying vertically, an integral attaching plate at the inner end of the arm projecting upwardly from the latter and formed of flat stock with its side faces vertically arranged and transverse to the planes of the flat faces of the supporting arm the bend between the arm and the attaching plate being in the plane of the latter so as to contact with the part to which the attaching plate is secured; and a trough securing device on the attaching plate above the inner end of the supporting arm.

2. A bracket made from a single piece of flat stock and comprising a supporting arm having the flat faces of the stock vertically arranged and an attaching plate having the flat faces of the stock vertically arranged and lying transverse to the planes of the flat faces of the supporting arm, the latter being connected to the attaching plate by a horizontal bend, and the attaching plate being provided with a corrugation extending above and below the upper side of the bend and in proximity to the latter.

3. The combination with a bracket support comprising a supporting portion having a horizontal seat thereon, of a bracket having a portion arranged to engage the seat, and coacting with the seat to prevent movement of the bracket lengthwise of the support, and a spring latch arranged on the side of the bracket to coöperate with the edges of the supporting portion to maintain the bracket portion on the seat.

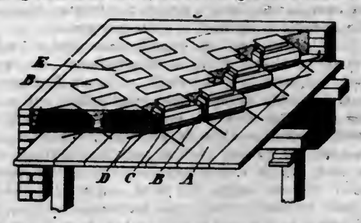
4. The combination with a bracket support having an opening therein, of a bracket having a rearwardly and upwarly extending projection adapted to be passed through the opening, and flanges arranged to coöperate with opposite sides of the bracket support.

5. The combination with a bracket support having an opening therein, of a bracket embodying a supporting arm and an attaching plate, the latter having a rearwardly and upwardly extending projection adapted to be passed through the opening and also a pair of rearwardly extending flanges to coöperate with the sides of the bracket support.

[Claim 6 not printed in the Gazette.]

1,017,175. FLOOR OR LIKE STRUCTURE. FERDINAND SCHÄR, Lucerne, Switzerland. Filed July 27, 1909. Serial No. 509,916. (Cl. 22—66.)

A ceiling, floor or like structure, comprising a plurality of blocks having exposed upper surfaces and provided with shoulders laterally projecting on all sides of the blocks intermediate the upper and lower surfaces thereof, said blocks being arranged in rows in spaced relation to one another, concrete interposed between said blocks and embedding said shoulders, reinforcing members embedded



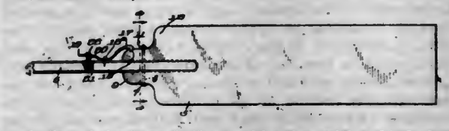
within said concrete in a plane below the plane of the uppermost of said shoulders, and U-shaped straps embedded within said concrete and engaging said reinforcing members, the ends of said straps engaging the uppermost shoulders of said blocks and being positioned below the upper surfaces of the blocks.

1,017,176. METHOD OF TREATING RAW AND WORKED TEXTILE FIBERS, SUCH AS JUTE, HEMP, FLAX, AND THE LIKE. RICHARD SCHRECKENBACH, Salzgitter, Germany. Filed Oct. 19, 1911. Serial No. 655,599. (Cl. 92—5.)

1. Method of treating raw and worked jute, flax, hemp, ramie fibers and the like, consisting in the raw fibers and the yarns and fabrics made thereof respectively being exposed to a fermenting bath, to which glycerin is added adapted to promote the growth of an effective organized ferment, whereupon the thus threated materials are washed out in water and eventually dried.

2. Method of treating raw and worked jute, flax, hemp, ramie fibers and the like, consisting in the raw fibers and the yarns and fabrics made thereof respectively being exposed to a fermenting bath, to which glycerin is added adapted to promote the growth of an effective organized ferment, the materials being then washed in soft water and placed in a bath composed of an aqueous solution of peroxid of sodium, whereupon the thus treated materials are again washed out in water and eventually dried.

1,017,177. BAKER'S PEEL. HENRY L. SCHROEDER, Chicago, Ill. Filed Aug. 27, 1910. Serial No. 579,208. (Cl. 107—67.)



1. In a baker's peel, the combination with a blade having a longitudinal opening, of a handle extending into said opening, a single continuous and uniform retaining connection between the handle and the blade, and a device for locking the handle and blade together.

2. In a baker's peel, the combination with a blade composed of like material throughout and having a short shank, of a handle composed of like material throughout, a single continuous tongue and groove connection between said handle and blade, and a single straight rod extending through registering openings in said shank and handle for connecting the handle and blade together.

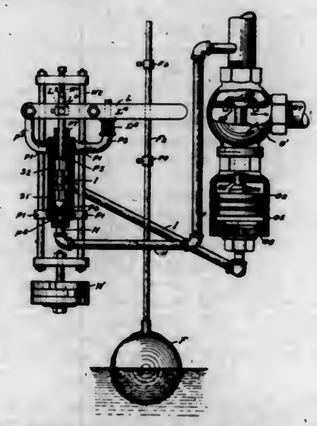
3. In a baker's peel, the combination with a blade of tapering longitudinal cross-section and having a short shank, of a handle fitting into a longitudinal opening extending through said shank into said blade, the exposed surfaces of the handle where connected to the blade being flush with the flat surfaces of the blade, a single continuous retaining connection between the handle and the blade, and means for locking together the handle and the blade.

4. In a baker's peel, the combination with a blade entirely of wood, of a handle entirely of wood fitting therein, a single continuous and uniform retaining connection between the handle and the blade to enable the handle to sustain the blade and material thereon and prevent twisting of said handle, and a device for locking together the handle and blade against relative movement.

5. In a baker's peel, the combination with a blade having a short shank with a longitudinal cut extending through the same into the blade, of inner continuous and uniform retaining walls in said longitudinal cut, a handle having retaining surfaces corresponding to said retaining wall to effect a close fit between the handle and the blade, lock the handle against twisting relatively to the blade, and enable the handle to sustain the blade and material thereon with the load uniformly distributed over said retaining wall and retaining surface, and a single device to lock the handle and blade together against relative longitudinal movement.

[Claims 6 to 8 not printed in the Gazette.]

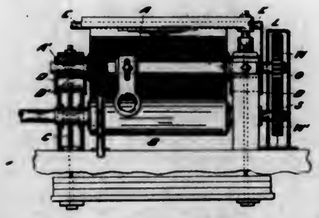
1,017,178. AUTOMATIC DRAINAGE-GOVERNOR. CHARLES SELIN, Brooklyn, N. Y. Filed Feb. 8, 1910. Serial No. 542,780. (Cl. 103—86.)



1. In combination, a pilot valve comprising a cylinder, a compound valve member longitudinally movable in said cylinder consisting of spaced heads, a fluid supply pipe and an operating valve therein, a pipe connecting the supply pipe to one end of the pilot valve cylinder, said cylinder being provided with a passage connecting the pipe with the interior of the cylinder, said cylinder also having a valve seat in each end thereof and an escape port at one end open to the atmosphere, a weighted frame slidably mounted on the valve cylinder and bearing upon said compound valve member to normally hold said member against movement and close communication between the supply pipe and said valve, a second pipe connecting said operating valve with the pilot valve at a point intermediate of said valve heads, said heads each being provided with a plurality of longitudinal grooves, the grooves in one head opening communication between the interior of the valve cylinder and the escape port thereof when the valve is closed, and a float to lift said valve member against the weight of said frame whereby the pressure fluid is admitted to the connecting pipe between said valves and the escape port simultaneously closed, whereby the operating valve is opened.

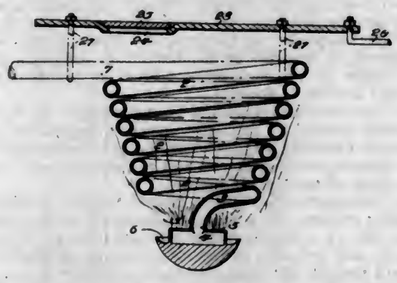
2. In combination, a pilot valve comprising a cylinder, a compound valve member movable in said cylinder and consisting of spaced heads forming a fluid receiving chamber therein, said cylinder being provided with a valve seat in each end and an escape port communicating with one of the valve seats and open to the atmosphere, said valve heads being provided with passages opening into said central chamber, a sliding frame mounted upon said cylinder and bearing upon said valve member to normally hold the same against movement, a supply pipe and an operating valve therein normally held in its closed position by pressure from said supply pipe, a pipe connecting the pilot valve to said supply pipe, said pilot valve cylinder having an inlet passage opening upon one of the valve seats, a second pipe connecting said central chamber of the pilot valve with the operating valve, a pivoted lever journaled at one end upon the valve cylinder and connected to said compound valve member, and a float having spaced adjustable collars to engage said lever and move the valve member to its open and closed positions whereby said operating valve is automatically opened and closed.

1,017,179. BUR-CRUSHING OR LIKE APPARATUS FOR USE IN CONNECTION WITH CARDING-ENGINES. WILLIAM SHAW, JOSEPH BOWER, and FRED WILSON, Bradford, England. Filed Jan. 5, 1909. Serial No. 470,859. (Cl. 19—1.)



A bur crushing apparatus comprising a pair of uprights, a lower roller journaled in said uprights, an upper roller, gear wheels having deep teeth on said rollers meshing with each other, bearings for said upper roller vertically movable in the uprights, weight supporting rods connected with said bearings and passing downwardly through the uprights, weights supported by said rods, a cam rotatably mounted in each upright below the movable bearing, said cam having a flat face on which the bearing rests in the normal position of the upper roller, a lever connected with each cam, and a bar connecting the free ends of said levers together for simultaneously rotating the cams.

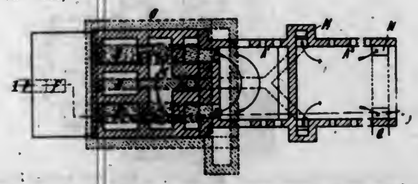
1,017,180. HYDROCARBON-BURNER. ORLO F. SHERMAN and CHARLES F. ERDMANN, Otto, N. Y. Filed Jan. 14, 1911. Serial No. 602,730. (Cl. 158—79.)



1. In apparatus of the character described, a vaporizing coil having the form of an inverted conical volute, a burner located below the apex of the coil and connected with the same, said burner having jet openings directed toward the coil, a priming cup surrounding the burner, a fuel inlet pipe connected to the upper end of the coil, and a deflecting plate supported above the upper end of the coil and slightly larger in diameter than the same, said deflecting plate formed in sections.

2. In apparatus of the character described, a vaporizing coil having the form of an inverted conical volute, a burner connected to the lower end of the coil and disposed below the apex of the volute, a priming cup integral with the burner and surrounding the same, fuel pipe connected to the upper end of the coil, a deflecting plate supported upon the upper end of the coil and formed with an opening, and a lid normally closing said opening but removable therefrom.

1,017,181. FURNACE. FRIEDRICH SIEMENS, Berlin, Germany. Filed Mar. 18, 1910. Serial No. 550,212. (Cl. 75—40.)

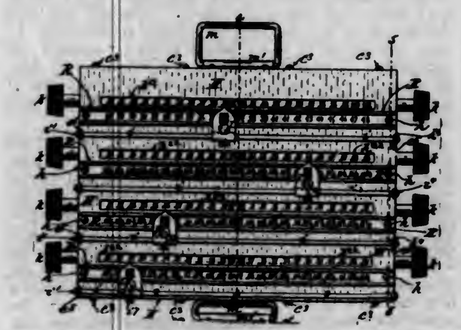


1. In an apparatus of the class described, in combination, a furnace, means for heating a portion of said furnace by a reversing flame, and means for drawing off a portion of said reversing flame to heat another portion of said furnace.

2. In an apparatus of the class described, in combination, a furnace, a regenerator operatively associated with said furnace, means for heating a portion of said furnace by a reversing flame from said regenerator, and means for drawing off a portion of said reversing flame to heat another portion of said furnace.

3. In an apparatus of the class described, in combination, a furnace comprising a plurality of parts, a gas producer operatively associated with said furnace, a regenerator operatively associated with said furnace and with said gas producer, means for delivering heated gases from said producer and said regenerator to one part of said furnace to form a flame, and means for causing a portion of said flame to pass to one of the other parts of said furnace and for causing the remaining portion of the flame to pass into the regenerator.

1,017,182. CALCULATOR. CHESTER J. SMITH, Jamestown, and PHILIP KLEEBERG, New York, N. Y., assignors to National Calculator Company, New York, N. Y. Filed Aug. 21, 1911. Serial No. 645,181. (Cl. 235—86.)



1. In a calculating machine, an inner supporting frame for the cylinders, driving and actuating mechanism, outer end plates on said frame, and an open-ended channel casing for inclosing the same and of which said end plates of said basic frame form the end walls.

2. In a calculating machine, a channel plate, a basic supporting frame comprising inner journal plates, outer end plates connected therewith, said inner plates forming supports for the cylinders and driving mechanism, and a face plate removably connected with said channel plate and the basic frame.

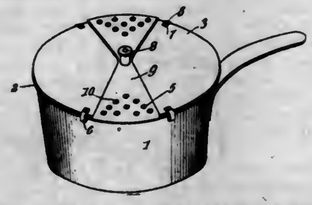
3. In a calculating machine, a channel plate, a bodily removable basic supporting frame embodying journal plates for the support of the cylinders and their actuating and driving means and end plates removable with the basic frame, a removable face plate, and means for detachably securing said removable frame to the channel plate and to the face plate.

4. In a calculating machine, a channel plate forming the back and side walls of a casing, a removable face plate having a continuous longitudinal slot, and a bodily removable basic frame forming the support for the cylinders and driving means, and plates removable with the basic frame and forming the end walls of the casing.

5. In a calculating machine, a channel plate forming the back and side walls of a casing, a removable face plate having a continuous longitudinal slot, and a bodily removable basic frame forming the support for the cylinders and driving means, and plates removable with the basic frame and forming the end walls of the casing, said face plate being flanged and the removable member having flanges for detachable connection with said face plate and the rear wall of the casing.

[Claims 6 to 14 not printed in the Gazette.]

1,017,183. LID FOR COOKING UTENSILS. CORDELIA SPENCER, Loyalton, Cal. Filed May 16, 1911. Serial No. 627,411. (Cl. 53—8.)



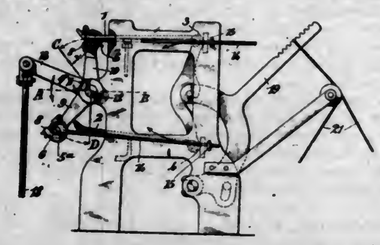
The combination with a utensil having its mouth provided with the usual bead, of a closure for the opening, said closure having its inner face formed with a flange, the top of the closure being provided with a plurality of engaging fingers, each of said fingers being constructed of a single piece of resilient material and each of the said fingers being bent upon itself to provide a downwardly extending loop which is adapted to engage with the sides and beneath the bead of the utensil, said closure being provided with a plurality of oppositely arranged perforations, a pivoted handle for the closure, a plate connected with the handle, said plate being provided with openings corresponding with the number of the perforations of the closure, and the engaging fingers adapted to serve as stops to bring the openings of the plate into register with the perforations of the closure when the handle is turned in one direction, and to cover the perforations of the closure when the handle is rotated in the opposite direction.

1,017,184. DOBBY OF THE HATTERSLEY TYPE. HERMANN STÄUBLI, Horgen, Switzerland, assignor to Gebr. Stäubli, Horgen, Switzerland. Filed Mar. 6, 1911. Serial No. 612,646. (Cl. 139—79.)

1. In a dobby of the Hattersley type, a bell crank lever, knives mounted to rotate in the ends of said lever, means connected to said knives to maintain them when moving in approximately the direction in which they are held when in their normal position, oscillating hooks to engage said rotatable knives, the knives being so disposed that in their normal position their working edges are alternately approximately in a vertical plane that includes the fulcrum point of the bell-crank lever.

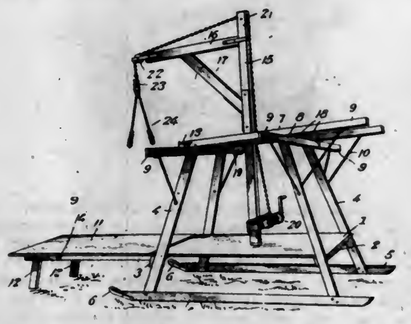
2. In a dobby of the Hattersley type, a bell-crank lever, knives mounted to rotate in the ends of said lever, guide rods connected to said knives, bearings loosely supporting

said guide rods, oscillating hooks to engage said rotatable knives, the knives being so disposed that in their normal position their working edges are alternately approximately in a vertical plane that includes the fulcrum point of the bell-crank lever.



3. In a dobby of the Hattersley type, a bell-crank lever, knives mounted to rotate in the ends of said lever, guide rods connected to said knives, bearings loosely supporting said guide rods, and oscillating hooks to engage said rotatable knives, the edges of the knives being located in the pivotal axis of the knives.

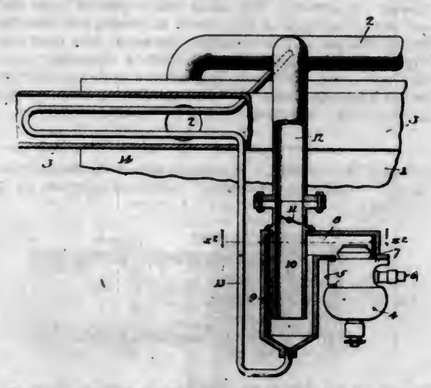
1,017,185. HOG-SUSPENDING DEVICE. GEORGE STEPHENS, Jr., Danvers, Ill. Filed Apr. 27, 1911. Serial No. 623,635. (Cl. 17—30.)



A hog suspending device comprising a frame including upwardly converging corner posts or uprights, a platform arranged between and carried by said uprights, said platform being provided with a bearing, longitudinal and transverse bars mounted upon the uprights above the platform and extended to form a series of projecting arms at the sides and rear of the device, a bearing supported by said bars in alinement with the platform bearing, a crane journaled in said bearings and having its arm projecting laterally beyond the vertical plane of the bars, and suspending means carried by the crane and arranged to be moved into proximity to said suspending arms by the rotation of the crane.

1,017,186. CARBURETING DEVICE FOR HEAVY FUELS. ALFRED C. STEWART, Los Angeles, Cal. Filed Feb. 27, 1911. Serial No. 611,287. (Cl. 148—214.)

1. In combination with an inlet means for an internal combustion engine and a carbureter for supplying air and oil in definite proportions, of a chamber connected to said carbureter and adapted to receive the oil therefrom and provided with means for collecting condensed oil, a connection from said chamber to the said inlet means for passage of vapor and air to said air inlet means, said connection being provided with a throttle and a connection from the lower part of said chamber to said air inlet means for passage of condensed fuel from said chamber to the said oil inlet means and means for supplying heat to said fuel connection.



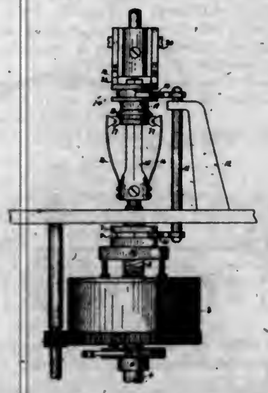
2. In combination with an inlet means for an internal combustion engine and a carbureter for supplying air and oil in definite proportions of a chamber connected to said carbureter and adapted to receive the oil therefrom and provided with means for collecting condensed oil, a connection from said chamber to the said inlet means for passage of vapor and air to said air inlet means, said connection being provided with a throttle and a connection from the lower part of said chamber to said air inlet means for passage of condensed fuel from said chamber to the said air inlet means, said engine having an exhaust connection extending in heat transmitting relation to a part of said fuel connection to supply heat thereto.

3. The combination with inlet means for an internal combustion engine, of a carbureter, separating means connected to the carbureter to receive the mixture of oil and air therefrom and to separate the unvaporized from the vaporized oil, a connection from the said separating means to said inlet means for delivering the mixture of air and oil vapor from the said separating means to said inlet means, a throttle in said connection and heating means connected to receive the unvaporized oil from the separating means and connected to the said inlet means to deliver thereto the oil vapor from such heating means.

4. In combination with inlet means for an internal combustion engine, a carbureter, a separating chamber having an inlet connected to said carbureter, and having an outlet connected to the engine inlet means, a throttle controlling communication from said outlet to the engine inlet means and separating means extending into said chamber to deflect the mixture passing therethrough toward the bottom of the chamber so as to separate the unvaporized oil from the mixture, a fuel connection leading from the lower part of said fuel collecting chamber to the engine inlet means, and means for heating said fuel connection.

5. In combination with inlet means for an internal combustion engine, a carbureter, a separating chamber having an inlet connected to said carbureter, and having an outlet connected to the engine inlet means, a throttle controlling communication from said outlet to the engine inlet means and separating means extending into said chamber to deflect the mixture passing therethrough toward the bottom of the chamber so as to separate the unvaporized oil from the mixture, a fuel connection leading from the lower part of said fuel collecting chamber to the engine inlet means, and means for heating said fuel connection, said fuel separating means consisting of a tubular member extending from the outlet of said chamber downwardly and opening into said chamber and said chamber surrounding said tubular member, leaving a space between said tubular member and the wall of said chamber, and the inlet means for said chamber opening tangentially through the wall of said chamber to deliver the mixture into said space with a whirling motion.

1,017,187. CLOCK WINDING MECHANISM. EDWARD L. SWAIN, New York, N. Y. Filed May 13, 1911. Serial No. 626,972. (Cl. 185—40.)



1. In combination, a clock mechanism comprising an arbor, a clutch having a driving and a driven member the latter slidably supported on said arbor, and a connection between the clock mechanism and said driven member to advance the latter along the arbor as the clock unwinds and into engagement with said driving member when the clock is unwound a pre-determined amount.

2. In combination, a clock mechanism comprising an arbor, a clutch having a driving and a driven member the latter slidably supported on said arbor, and a connection between the clock mechanism and said driven member to advance the latter along the arbor as the clock unwinds and into engagement with said driving member when the clock is unwound a pre-determined amount; said driven member having a cam face, and means coöperating with said cam to impart a quick movement to said driven member to insure its engagement with the driving member.

3. In combination, a clock mechanism comprising a spring barrel and an arbor, a clutch having a driving and a driven member the latter slidably supported on said arbor, and a connection between said barrel and driven member whereby as the barrel is rotated a pre-determined amount in unwinding the driven member of the clutch will be made to engage the driving member.

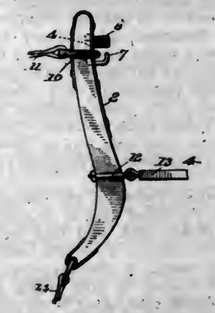
4. In combination, a clock mechanism comprising an arbor having a threaded section, a clutch having a driving and a driven member the latter slidably supported on said arbor, a collar engaging said threaded section of the arbor and connected to the clock mechanism so as to be advanced thereon, and a connection between said collar and the driven clutch member whereby when the clock is unwound a predetermined amount the said driven member will be made to engage said driving member.

5. In combination, a clock mechanism comprising an arbor having a threaded section, a collar engaging said section, a spring barrel, a connection between said barrel and collar whereby they rotate in unison, a clutch having a driving and a driven member the latter slidably supported on said arbor, a connection between said collar and driven member whereby the latter is advanced on said arbor toward the driving member of the clutch.

[Claim 6 not printed in the Gazette.]

1,017,188. ADJUSTABLE HAME-RING HOLDER. PAUL J. TIX, Colorado Springs, Colo. Filed Apr. 15, 1911. Serial No. 621,396. (Cl. 54—29.)

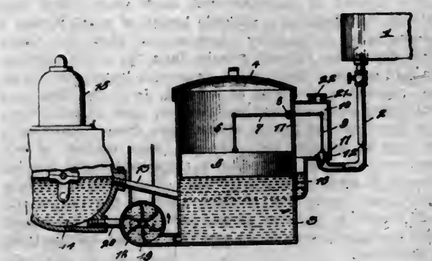
1. In combination with hames having at their upper outer portions elongated recesses, strips located over said recesses and having slots which communicate with the same, brackets located in the recesses and bearing against the inner faces of the strips, said brackets having ledge portions which project through the slots in the strips and which terminate in upstanding extremities, hame rings surrounding the hames and resting upon the ledge portions of the brackets, and knobs threaded into the brackets and lying over the outer portions of the hame rings and adapted to bear against the outer faces of the strips.



2. In combination with hames provided at their upper outer portions with elongated recesses, strips located over the recesses and having slots which communicate with the same, brackets adjustably mounted in the recesses and having ledge portions which project through the slots, said ledge portions having at their opposite sides recesses which receive the edge portions of the strips at the opposite sides of the slots, the outer extremities of the ledge portions being upwardly disposed, hame rings surrounding the upper portions of the hames and resting upon the ledge portions of the brackets, and knobs threaded into the brackets and lying over the outer portions of the hame rings and adapted to impinge against the outer faces of the strips.

3. In combination with hames, brackets adjustably mounted thereon, said brackets having outstanding ledges with upturned portions, knobs adapted to secure the brackets in adjusted positions upon the hames and extending along the brackets to the upturned ends thereof, and hame rings surrounding the hames and resting upon the brackets and retained thereon by the knobs.

1,017,189. LUBRICATING SYSTEM FOR ENGINES. BENJIMAN H. TURNAGE, Society Hill, S. C. Filed Oct. 21, 1911. Serial No. 655,837. (Cl. 184—13.)



1. In a lubricating apparatus, the combination with an oil reservoir, and a conduit leading therefrom; of an auxiliary tank with which said conduit communicates, a supply pipe leading from said tank, at a point adjacent the entrance of the conduit thereto, to a housing adapted to receive the oil from the reservoir, a return pipe entering said tank, and a float valve in said tank operating in connection with the aforesaid conduit at its entrance to the tank.

2. In a lubricating apparatus, the combination with an oil reservoir, and a housing to which the oil in said reser-

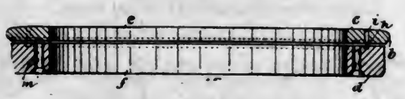
voir is adapted to be conducted; of an auxiliary tank, a conduit leading from the reservoir to said tank, a supply pipe extending from the tank to said housing, the entrance of said pipe to the tank being adjacent the entrance of the conduit thereto, a return pipe between said housing and tank, a rotary pump disposed in said return pipe, and a float valve in said tank operating in connection with the entrance of the conduit thereto.

3. A lubricating apparatus, comprising the combination with the crank case of an engine; of an oil reservoir, a conduit leading therefrom, an auxiliary tank to which said conduit leads, a supply pipe extending from said tank to said crank case, the entrance of said pipe to the tank being adjacent the entrance of said conduit thereto, a return pipe between the lower portions of said crank case and tank, a rotary pump mounted within said return pipe, a float within said tank, and a valve operated by said float to open and close the entrance of said conduit to the tank.

4. In a lubricating system of the class described, the combination with the crank case of an engine; of an oil reservoir, an auxiliary tank, said tank having a casing formed on one side thereof, a conduit leading from said reservoir to said casing, a float-operated valve at the entrance of said conduit to said casing, an additional conduit extending from said casing to the crank case, said latter conduit also having direct communication with the tank, communicating means between the lower portions of said crank case and tank, and a pump disposed in said communicating means.

5. In a lubricating system of the class described, the combination with the crank case of an engine; of an oil reservoir, an auxiliary tank, said tank being provided with a casing in one side thereof having communication with said tank, a conduit leading from said reservoir to said casing, a valve seated at the entrance of said conduit to said casing, a float disposed in said tank operating said valve, an additional conduit leading from said casing to the crank case, said latter conduit also having communication with said tank, and a pump adapted to draw the oil from the crank case to said tank.

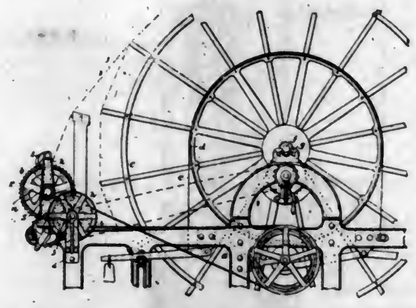
1,017,190. METHOD OF MANUFACTURING CHAIR-SEATS. EDWIN P. WANNER, New York, N. Y. Filed Feb. 4, 1909. Serial No. 476,043. (Cl. 155—4.)



The method of manufacturing chair seats which consists in first forming a suitable length of wood having a substantially rectangular cross-section with one transverse dimension thereof greater than the other, bending the said length of wood, with its greater transverse dimension parallel to the axis of bending, into the form of a continuous structure and securing the ends of said structure together, and finally severing the frame crosswise of the axis of bending and near one plane surface of said structure, whereby to produce a thick continuous member adapted to form a permanent part of a chair and a relatively thin continuous member adapted for the attachment thereto of the seat-proper and to be attached to said thick continuous member or a replica thereof, substantially as described.

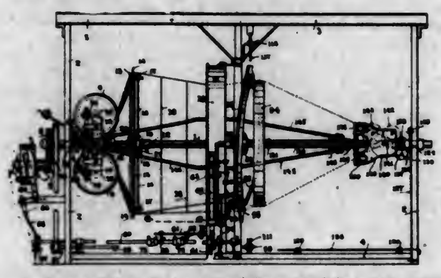
1,017,191. BEAMING-MACHINE. JOHN WARBURTON, Paterson, N. J., assignor to Benjamin Eastwood Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 21, 1910. Serial No. 588,258. (Cl. 28—14.)

The combination of the frame, the extraneously driven rotary receiving member around the axis of which the material to be wound is wound, the rotary driven member driven by the pull of the material and from around which the material to be wound is unwound, and means for rendering yielding in character the strain imposed on the material consisting of a torsionally yielding carrier directly supporting the windings and arranged in coaxial relation to one of said members, and a spring interposed



between the latter member and the carrier and assuming the torsional yielding pressure of the carrier, substantially as described.

1,017,192. CIRCULAR LOOM. CHRISTOPHER WHALLEY, Clitheroe, England. Filed Mar. 6, 1911. Serial No. 612,463. (Cl. 139—7.)



1. A revolving loom comprising revolving warp supporting devices, a back-rest for the warps, warp let-off mechanism, tension controlled means working said warp let-off mechanism, revolving automatic shedding mechanism, radial needles and cards controlling the shedding, a rotating reed, coöperating with a stationary shuttle, means for driving the reed and means for supporting said shuttle, and fabric take-up mechanism, carried about the central shaft.

2. A revolving loom having in combination a rotating warp supply, rotating warp tension controlling mechanism, warp let-off mechanism controlled thereby, means governing the shedding and consisting of a revolving cumberboard, radially movable needles, and a traveling metal card, a rotating reed, driven from the main shaft, and acting with a stationary shuttle, rotating take-up mechanism about the main shaft, all as described.

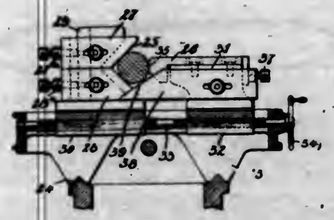
3. The combination in a revolving loom, revolving warp carrying means, a back rest, an automatic tension device comprising movable sections, guide spindles, a rotatable plate, and push spindles, and warp let-off mechanism, revolving shedding mechanism, revolving beat-up mechanism, stationary shuttles, rotating temples and take-up gear as described.

4. In combination in a revolving loom, a main revolving shaft, revolving warp beams, gear to drive said warp beams, a rotating back-rest, radially movable devices on said back-rest acted on by the warp tension, a rotatable plate, means for insuring driving connection for the warp beams on movement of the plate, a revolving cumberboard, with radially movable needles, a movable card, a revolving reed, a stationary shuttle, a revolving temple, and rotating take-up rollers, and gear driven from the main revolving shaft to take-up the cloth as woven substantially as described.

5. In revolving looms, and in combination, a main driving shaft, a warp supply, a back-rest and means for controlling warp delivery, a revolving cumber-board or heddle frame, needles or heddles in the same and revolving therewith, and a pattern device, moving with the cumber-board, a revolving reed, a stationary shuttle, a revolving temple, and rotating take-up rollers, and gear driven from the main driving shaft to take-up the cloth as woven substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,017,193. CENTERING-MACHINE. LUCIUS E. WHITON, New London, Conn. Filed Feb. 16, 1910. Serial No. 544,188. (Cl. 77—18.)



1. In a centering machine, a pair of oppositely arranged drill spindles, a non-rotatable rack so sleeved upon each of said spindles as to permit free rotation of the latter but fixed against relative longitudinal movement of said spindles, a pinion geared to said rack and having manually operable means, a bar meshing with said pinion at one end and having an adjustable arm mounted upon the opposite end adapted to engage the rack on the opposite spindle whereby said spindles may be simultaneously adjusted toward and from each other.

2. In a centering machine, the combination with a pair of oppositely arranged drill spindles, of two chucks, each comprising a pair of relatively adjustable jaws, said jaws constructed to present three points of contact to the work, means for adjusting said jaws constructed and arranged to maintain said points of contact at all times equidistant from a given center, and a temporary work rest adjustably mounted below said points of contact.

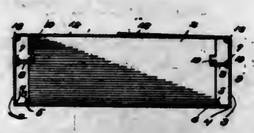
3. In a centering machine, the combination with a pair of oppositely arranged drill spindles, of two chucks, each comprising an angular jaw presenting two contact surfaces for the work, a coöperating jaw presenting a single contact surface for the work, an adjustable work rest extending below said contact surfaces, means for adjusting said jaws toward and from each other, said contact surfaces being so arranged as to raise the work out of engagement with said work rest when said jaws are brought into engagement with the work.

4. In a centering machine, the combination with a pair of oppositely arranged drill spindles, of two chucks, each having an angular jaw presenting two points of contact to the work, a coöperating jaw presenting a single point of contact to the work, an adjustable work rest extending below said points of contact, means for adjusting said jaws toward and from each other, said points of contact being so arranged that an adjustment of said jaws into operative engagement with the work will move the work on said angular jaw out of engagement with said rest.

5. In a centering machine, the combination with a pair of oppositely arranged drill spindles, of two chucks, each comprising an angular jaw and a coöperating straight jaw and means for relative adjustment of the sides of the angle of said angular jaw to raise or lower the work engaged between said jaws when said jaws are brought into operative engagement with the work.

[Claims 6 to 12 not printed in the Gazette.]

1,017,194. KNOCKDOWN BOX AND CRATE. HARRY M. ALDERFER, Lower Providence, Pa. Filed June 7, 1911. Serial No. 631,724. (Cl. 220—17.)

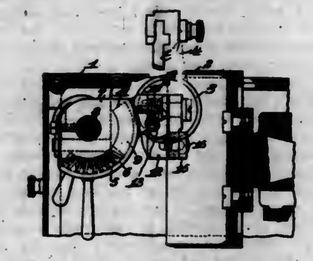


1. A crate comprising a bottom, sides and ends bent forming when the crate is open, extensions on said bottom, said extensions hinged to the bottom, whereby when said sides and ends are folded, a receptacle is formed, substantially as described.

2. A crate comprising a bottom, sides and ends bent forming when the crate is open, extensions on said bottom, said extensions hinged to the bottom, whereby when said sides and ends are folded, a receptacle is formed, and means for holding the sides and ends in upright position, preventing hinged movement thereof, substantially as described.

3. A crate comprising a bottom, sides and ends bent forming when the crate is open, extensions on said bottom, said extensions hinged to the bottom, whereby when said sides and ends are folded, a receptacle is formed, means on the ends constructed to engage the sides and hold the sides and ends in upright position, whereby a receptacle is formed with open corners, substantially as described.

1,017,195. SKIVING-MACHINE. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 16, 1910. Serial No. 577,396. (Cl. 69—9.)



1. A skiving machine comprising a knife, a feed roll supported adjacent thereto and arranged to have a bodily movement to and from the edge of the skiving knife and to be tipped relatively to the knife, and a scraper fixedly secured adjacent to the surface of the feed roll and movable with the feed roll in order to operate effectively in all positions of the feed roll, substantially as described.

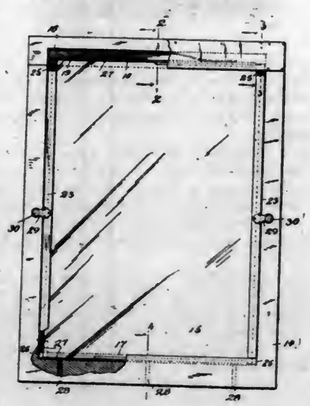
2. A skiving machine comprising a knife, a feed roll supported adjacent thereto and arranged to have a bodily movement to and from the edge of the knife and to be tipped relatively to the knife, and a scraper fixedly secured adjacent to the surface of the feed roll and having provision for adjustment relatively to the feed roll, substantially as described.

3. A skiving machine comprising a knife, a feed roll, a scraper arranged diagonally of the axis of the feed ro' and having one end projecting outwardly beyond the edge of the skiving knife in order to direct the chips which are sheared from the feed roll away from the skiving knife, substantially as described.

4. A skiving machine comprising a skiving knife, a feed roll, means for yieldingly supporting the feed roll adjacent to the skiving knife comprising a rod, a lever pivotally mounted upon the rod, a block mounted upon the free end of the lever and adapted to oscillate trans-

versely of the rod, the feed roll being journaled in the block, and a scraper mounted upon the block adjacent to the peripheral surface of the feed roll, substantially as described.

1,017,196. PANE-FASTENER. NAZARETH BALOIAN, New York, N. Y. Filed Sept. 17, 1910. Serial No. 582,450. (Cl. 20—56.4.)



1. In a removable panel structure, a frame having side and end pieces, said end pieces having grooves or recesses in their opposed faces, said side pieces having inwardly extending flanges adjacent one of the side surfaces thereof to form open sided seats, the inner surface of the side piece adjacent the open sided seat therein forming a wall of the seat, a panel having side pieces, said side pieces adapted to be received flatwise in said seats, the ends of the panel adapted to be removably received in the grooves or recesses in the frame end pieces.

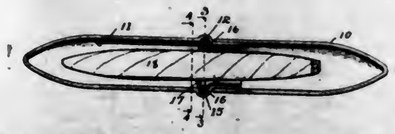
2. In a removable panel structure, a frame having opposite side and end pieces, said side and end pieces having longitudinal grooves in the opposed faces thereof, one of the walls of the groove in each side piece being of less transverse width than the other to form an open sided seat or guideway of said groove, a panel having its end edges received in the grooves of the end frame pieces, and its side edges adapted to be received flatwise in the open sided seats or guideways of the frame side pieces, and means for yieldingly opposing the insertion of one of the panel ends in the groove of one of the frame end pieces.

3. In a removable panel structure, a frame having opposite side and end pieces with longitudinal grooves in the opposed faces thereof, one of the walls of the groove in each side piece being of less transverse width than the other to form an open sided seat or guideway of said groove, a panel having strips applied to opposite faces thereof adjacent and parallel to its side edges, one end of each of said strips being beveled, said strips adapted to be received in the open sided seats or guideways in the frame side pieces, the end edges of the panel being received in the grooves in the frame end pieces, the beveled ends of the strips being received in the groove of one of the frame end pieces, and means for yieldingly opposing the insertion of one end of said panel into the groove of the corresponding frame end piece.

4. In a removable panel structure, a frame having side and end pieces, the end pieces having recesses, and the side pieces having channels, a panel having side pieces applied thereto, the ends of said panel side pieces and the corresponding ends of the panel arranged to be received in the recesses in the frame end pieces, the side surfaces of the panel side pieces being received, held, and guided in the channels of the frame side pieces, and means for yieldingly opposing the insertion of one end or edge of the panel into the corresponding recess in the frame end piece.

5. In a removable panel structure, a frame having side and end pieces, said end pieces having grooves or recesses in their inner opposed faces, said side pieces having inwardly extending flanges adjacent one of the side surfaces thereof, said flanges having laterally extending ribs or beads at their inner edges, forming, with the inner surface of the side pieces, an open sided seat, a panel having side pieces adapted to be received flatwise in said seats, the ends of the panel adapted to be removably received in the grooves or recesses in the frame end pieces.

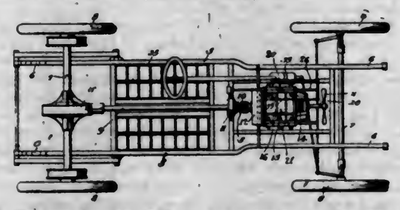
1,017,197. HOLDER FOR LIGHTED CIGARS. JOHN R. BARNES, Oskaloosa, Iowa. Filed May 17, 1911. Serial No. 627,843. (Cl. 206—41.)



1. A holder for lighted cigars, comprising two cylindrical members each of which is closed at one end, the free end of one of said members being slidingly received within the free end of the other of said members, an outwardly extending circumferential groove on one of said members near its free end, a rubber tube of substantially smaller diameter than said cylindrical members, a ring section of resilient metal normally greater in diameter than said cylindrical sections received in said rubber tube at a point spaced apart from one end thereof, said rubber tube and said ring section being received within one of said cylindrical members with said ring section in said groove, and means for securing said cylindrical members against disengagement with each other.

2. A holder for lighted cigars, comprising two cylindrical members each of which is closed at one end, the free end of one of said members being slidingly received within the free end of the other of said members, an outwardly extending circumferential groove on one of said members near its free end, a rubber tube of substantially smaller diameter than said cylindrical members, a reinforcing resilient band at one end of said rubber tube, a ring section of resilient metal normally greater in diameter than said cylindrical sections received in said rubber tube at a point spaced apart from said reinforcing band, said rubber tube and said ring section being received within one of said cylindrical members with said ring section in said groove, and means for securing said cylindrical members against disengagement with each other.

1,017,198. ELECTRIC MOTOR-VEHICLE. ELMORE W. BENDER, Los Angeles, Cal. Filed July 13, 1910. Serial No. 571,703. (Cl. 172—179.)



1. In combination with a motor-generator having field and armature coils, and a storage battery, a controller for and connected to the storage battery, and a motor-generator controller connected to the battery and battery controller and connected to the field and armature windings of the motor-generator and adapted to connect said windings together in series or multiple relation.

2. In combination with a motor-generator having field and armature coils, and a storage battery arranged in sections of equal voltage, a controller for the storage battery and connected thereto to connect the said sections in series, multiple or series-multiple relation, and a motor generator controller connected to the battery and battery controller and connected to the field and armature windings of the motor-generator and adapted to connect said windings together in series or multiple relation.

3. In combination with a motor-generator having field and armature coils, and a storage battery arranged in sections of equal voltage, a controller for the storage battery and connected to the said sections to connect them in series, multiple or series-multiple, a motor generator controller comprising a set of stationary contacts and relatively movable connecting members, connections between the field and armature coils and some of the stationary contacts, and connections between other of the stationary contacts and the battery and battery controller.

4. In combination with a motor-generator having field and armature coils, and a storage battery, a controller for the motor-generator and comprising a set of stationary contacts, connections between the contacts and the field and armature coils of the motor-generator, a movable member carrying contact members adapted to engage with and connect various of stationary contacts in such manners as to connect the field and armature coils together in series of multiple relation, and connections between the motor-generator controller and the storage battery.

5. In combination with a motor-generator having field and armature coils, and a storage battery, a controller for the motor-generator and comprising a set of stationary brushes and movable contacts adapted to connect certain of the brushes together, connections between certain of the brushes and the individual field and armature coils of the motor-generator, and connections between others of the brushes and the storage battery, the movable contacts being so arranged with relation to the brushes and their connections to said field and armature coils that in different positions of the contacts the field and armature coils are connected in series and in parallel.

[Claims 6 and 7 not printed in the Gazette.]

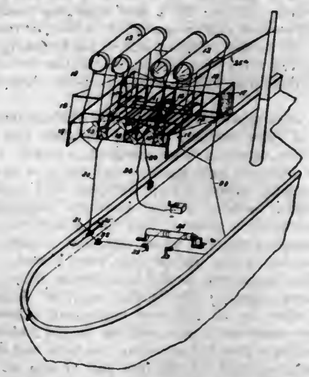
1,017,199. SAFETY-RAZOR. FREDERICK E. BLODGETT, Newark, N. J., assignor to Young Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 20, 1911. Serial No. 603,636. (Cl. 30—12.)

In a safety razor, the combination of a flat, single-edged, apertured blade, a flat holder plate, a flat guard plate, means for positioning said blade with respect to said plates, a threaded locking handle for locking the three, and a guard or comb on said guard plate; said positioning means comprising a pair of lugs engaging the blade back-edge and a threaded lug engaging the blade aperture, said threaded lug adapted to be engaged by said locking handle.

1,017,200. CAPTIVE LOOKOUT FOR USE ON BOARD SHIPS. FREDERICK BRACKETT, Washington, D. C. Filed Sept. 14, 1909. Serial No. 517,582. (Cl. 244—4.)

1. A lookout for ships comprising an air craft, a cable guying said craft to each side of the ship, and a centrally located windlass common to both of said cables for controlling the elevation of said craft.

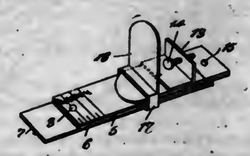
2. A lookout for ships comprising an air craft, a cable guying said craft to each side of the ship, a centrally located windlass common to both of said cables for controlling the elevation of said craft, and longitudinal movable sheaves through which said cables run secured to the opposite gunwales of the vessel.



3. A lookout for ships comprising an air craft, a cable guying said craft to each side of the ship, a centrally located windlass common to both of said cables for controlling the elevation of said craft, sheaves at the deck on opposite sides and adjacent the gunwales through which said cables run, and longitudinal movable sheaves above the first named sheaves and secured to the gunwales of the ship.

4. A lookout for ships comprising an air craft, adjustable side cables depending from the air craft and guying the same to a ship, a tow cable connecting the forward end of the air craft to the mast of the ship, and independent propelling means for the air craft controllable from the craft and the ship.

1,017,201. SHOE-MEASURE. JOHN M. BROMLEY, New York, N. Y. Filed Dec. 5, 1910. Serial No. 595,596. (Cl. 73—64.)



1. In a shoe measuring stick, the combination with a series of flat members pivoted together and foldable flatwise one upon the other, of a heel engaging member pivotally mounted on the outer face of one of the outer members and foldable flatwise thereon, a toe-engaging member having a box slidable over the folded sections and over the folded heel-engaging member for holding these in their folded relation.

2. In a shoe measuring device the combination with a plurality of flat sections pivoted together and adapted to fold together flatwise, one upon the other, a heel-engaging member comprising a portion having a face for engaging the heel and a portion hinged thereto and secured to the outer end of the outer face of one of the sections, said latter portion being provided with a tapped hole, an angle bar carried by the outer face of said hinged portion and provided with a tapped hole, located in position to aline with the hole in the other portion, a set screw mounted in the tapped hole in said angle bar for engagement with the first mentioned tapped hole, a toe-engaging member having a box for traversing the stick and registering with a scale thereon, said box being of sufficient dimension to closely engage the stick sections and the heel-engaging member when folded together flatwise, and the edge of the angle bar being in position for acting as a stop for

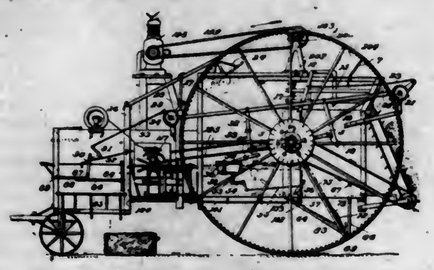
said box, and a scale upon the stick in proper relation to the heel-engaging face.

3. In a measuring device the combination with a stick composed of a plurality of sections pivoted together to fold one upon another, of a heel engaging member carried by one section and so connected therewith that it will fold upon the folded sections, and a toe engaging member carried by the stick and having a portion for surrounding the sections and heel engaging member when these are folded.

4. In a shoe measuring device, the combination with a plurality of stick sections pivoted together and foldable one upon the other, a heel engaging member, a pivotal connection between said member and the free end of one of the sections, means for positioning and locking the heel engaging member in its operative position, a toe engaging member, a slide on one of the sections carrying the toe engaging member when open and slidable on said sections for embracing the sections when folded.

5. A shoe measuring device comprising three flat sections pivoted together for folding together flatwise one upon the other by an edgewise movement, a heel-engaging member comprising two portions hinged together, one portion having a face for engaging the heel, and the other portion being secured to the free end of one of the sections, means for supporting the first named portion in operative position, a toe engaging member provided with a slide for embracing and traversing the stick and registering with a scale thereon, said slide being of sufficient dimension to closely embrace the stick sections and heel engaging member when folded together.

1,017,202. BALING-MACHINE. OSCAR M. BRYAN, Chanute, Kans. Filed Mar. 21, 1911. Serial No. 615,982. (Cl. 100—20.)



1. A baling machine, embodying a baling chamber, a reciprocating carriage mounted above the baling chamber, the machine being provided with a runway the rear end of which is designed to receive the hay into the machine and the front end of which communicates with the baling chamber, doors mounted in said runway, means for drawing the carriage forwardly to carry the hay past the doors with the latter in open position, and means operative by the return movement of the carriage for closing said doors whereby to tuck the hay inwardly from the walls of the runway.

2. A baling machine, embodying a baling chamber, a runway leading from the rear of the machine to the baling chamber, a carriage mounted to reciprocate above the runway and adapted to carry the hay toward the baling chamber, laterally movable doors mounted in the runway and provided with fingers, the carriage being provided with spring lugs arranged to engage said fingers in the return movement of the carriage whereby to close the doors inwardly and forwardly to tuck the hay, and means for reciprocating said carriage.

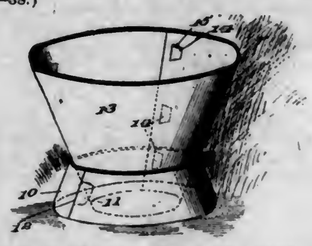
3. A baling machine, embodying a baling chamber and a runway leading to said baling chamber, a carriage mounted to reciprocate above the runway and arranged to carry the hay from the receiving end of the runway toward the baling chamber, depending arms carried by said carriage, a drive shaft, sweep arms carried by said drive shaft and arranged to strike said depending arms to move the carriage forwardly in the runway, and means for moving said carriage rearwardly.

4. A baling machine, embodying a baling chamber, a runway leading to the baling chamber, a carriage mounted to reciprocate above the runway and adapted to carry the hay from the receiving end of the machine toward the baling chamber, means for moving said carriage toward the baling chamber, a cable connected to the carriage, a drum over which the cable is adapted to wind, a wheel movable with the drum, a drive shaft, a drive wheel mounted thereon, a bar operatively connected to the first named wheel and adapted to move the same into and out of engagement with the drive wheel, for the purpose specified, a lever connected to the bar, and a sweep arm carried by the drive shaft and arranged to engage said lever to move the bar in a direction to carry the first named wheel into engagement with the drive wheel.

5. A baling machine, embodying a baling chamber, a runway leading to the baling chamber, a carriage adapted to move toward and from the baling chamber in the runway to carry the hay from the receiving end of the machine toward the baling chamber, the carriage being provided with a depending arm, a cable operatively connected to said carriage and extending rearwardly therefrom, a drum on which the cable is adapted to wind, a wheel movable with the drum, a drive shaft, a drive wheel mounted on said shaft, a bar operatively connected to the first named wheel to carry it into and out of engagement with the drive wheel, a lever connected to the bar, and a sweep arm mounted upon the drive shaft and arranged to successively strike the arm of the carriage and said lever, for the purpose specified.

[Claims 6 to 31 not printed in the Gazette.]

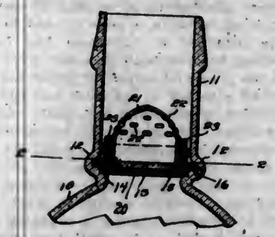
1,017,203. SANITARY CUSPIDOR. ELIJAH BUCK, Marshall, Mich. Filed Jan. 28, 1911. Serial No. 605,314. (Cl. 4—38.)



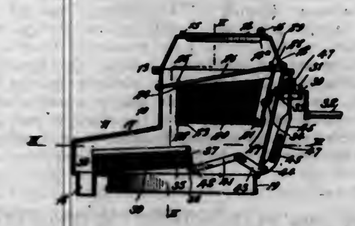
A cuspidor including a conical bowl formed from an arcuate blank of paper having flaps at its inner edges which constitute the bottom flange of the bowl, a circular disk also of paper fitting in the bowl and resting upon the flaps and forming the bottom of the bowl, a conical base also formed from an arcuate blank of paper and snugly receiving the lower part of the bowl in its upper smaller end, the lower edge of the base and the lower sides of the flaps lying in the same plane.

1,017,204. NON-REFILLABLE BOTTLE. EDWIN M. CALEF, Hillsboro, Oreg. Filed Feb. 25, 1911. Serial No. 610,889. (Cl. 215—60.)

A bottle having an annular inwardly directed bearing shoulder in its neck and provided with an annular inwardly opening channel next to the shoulder, an annular rigid member corresponding substantially in outer diameter to the interior of the neck and adapted to be supported upon said shoulder, said rigid member having a lateral inwardly directed shoulder in its upper face, a pliable member bearing upon said annular rigid member and corresponding in diameter with the interior of the channel and adapted to enter the same, said pliable member being provided with a valve seating upon the annular rigid member, an imperforate rigid member connected to the under face of said valve and bearing upon the shoulder of the annular member and serving to protect the valve from the contents of the bottle, a perforated cap bearing upon the pliable member, and fastening devices connecting the annular member, the pliable member and the cap.



1,017,205. ASH-SIFTER. THOMAS W. COMSTOCK, New Haven, Conn. Filed June 14, 1911. Serial No. 633,071. (Cl. 83—60.)



1. A device of the character described, comprising a casing, an inclined guide rod extending lengthwise of said casing, a substantially rectangular sifter member supported to rock on said rod at one end and having a part guided to move freely in a vertical direction at the other end thereof, means for rocking said member and at the same time elevating one end only thereof to impart a rocking and elevating movement to said member, and means whereby the refuse from the material is discharged from the casing.

2. A device of the character described, comprising a casing, a guide rod extending lengthwise of said casing, a sifter member suspended therefrom and supported to rock on said rod at one end and having a part guided to move freely at the other end thereof, and means for rocking said member and at the same time elevating one end only thereof to impart a rocking and elevating movement to said member.

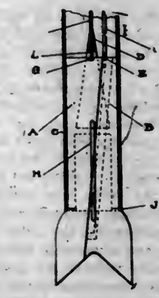
3. A device of the character described, comprising supporting means, an inclined guide rod extending lengthwise of said casing, a substantially rectangular sifter member supported to rock on said rod at one end and having a part guided to move freely at the other end thereof, a reciprocatory sifter member located under and in advance of the first-mentioned member, means including a crank rod for rocking one end of the first mentioned member and simultaneously elevating the other end thereof, and means operated by said crank rod for operating the reciprocatory member.

4. A device of the character described, comprising a substantially closed casing having inlet and separate discharge openings, a rocking sifter member, a reciprocatory sifter member located under the first-mentioned member, a crank shaft connected to the first-mentioned member, means for operating said shaft, said shaft having a crank portion, guides for the reciprocatory member, a pivotally held lever, a link connecting the reciprocating member to said lever, a loose connection between the crank and the lever whereby a limited reciprocatory movement may be given simultaneously with a rocking movement to the first-mentioned member.

5. A device of the character described, comprising a substantially closed casing having inlet and separate discharge openings, a sifter member having a rocking motion at one end and a rocking and elevated movement at the other, a reciprocatory sifter member located under the first-mentioned member, a crank shaft connected to the first-mentioned member, means for operating said shaft, said shaft having a crank portion, guides for the reciprocatory sifter member, a pivotally held lever, a link connecting the reciprocating member to said lever, and means for operating said lever.

[Claims 6 and 7 not printed in the Gazette.]

1,017,206. WELL-BORING ROTARY BIT. CLARENCE WYTHE DODGE, Taft, Cal. Filed Mar. 7, 1911. Serial No. 612,979. (Cl. 166—6.)



1. The combination with a casing, of a bit larger at its lower end than the bore of said casing, said bit being formed in sections between which there is a relative longitudinal movement when the bit is being inserted or withdrawn, means connecting said sections to allow them to travel in tandem when being inserted or withdrawn, and raising and lowering means for the bit.

2. The combination with a casing, of a bit larger at its lower end than the bore of said casing, said bit being formed in two corresponding sections between which there is a relative longitudinal movement when the bit is being inserted or withdrawn, a sliding connection between said sections to allow them to travel in tandem when being inserted or withdrawn, and raising and lowering means for the bit.

3. The combination with a casing, of a bit larger at its lower end than the bore of said casing, said bit being formed in two corresponding sections, one having a slotted tongue and the other a groove for said tongue and a pin projecting through the slot of the tongue, and raising and lowering means for the bit.

4. The combination with a casing, of a bit larger at its lower end than the bore of said casing, said bit being formed in two corresponding sections, one having a slotted tongue and the other a groove for said tongue and a pin projecting through the slot of the tongue, and separate cables connected, respectively, to said bit sections.

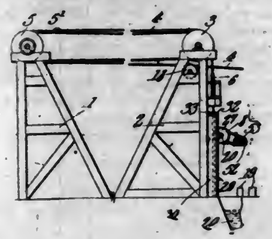
5. The combination with a casing having an internal stop shoulder, of a bit larger at its lower end than the bore of said casing, said bit being formed in two corresponding sections between which there is a relative longitudinal movement when the bit is being inserted or withdrawn, a sliding connection between said sections, lugs projecting from the latter designed to rest on said shoulder, and raising and lowering means for the bit.

[Claims 6 to 8 not printed in the Gazette.]

1,017,207. STONE-SAWING MACHINE. ERNEST EGGERS, New York, N. Y., assignor to Colorado-Yule Marble Co., New York, N. Y. Filed May 14, 1910. Serial No. 561,409. (Cl. 125—18.)

1. In a stone cutting machine, an endless cutting cable, guides therefor, yielding means for holding the cable normally taut, said cable having its active portion held

straight between two of the guides, and independently operable means actuated by the cable for shifting said last mentioned guides toward the work.

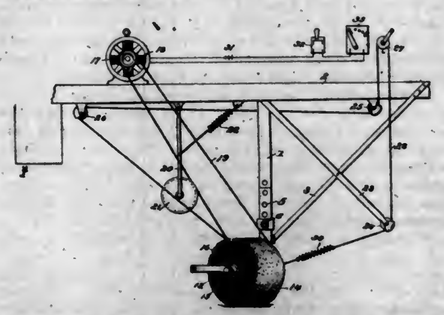


2. In a stone cutting machine, an endless cutting cable, revoluble guides therefor and operated thereby, the active portion of the cable being interposed between two of the guides, means for yieldingly holding the cable taut, and means operated by the last mentioned guides when rotated by the cable, for feeding the active portion of the cable in either of two directions and for moving said last mentioned guide devices at the same or at different speeds.

3. In a stone cutting machine, the combination with a cutting cable and means for driving the same, and yielding means for holding the cable taut during the movement thereof, of guide pulleys engaged and rotated by the cable, the active portion of the cable being interposed between the pulleys, and separately operating means actuated by the respective pulleys for feeding said pulleys in either of two directions separately or simultaneously at the same or different speeds, to shift the active portion of the cable therewith.

4. In a stone cutting machine, an endless cable means for driving the same, said cable constituting cutting means, guide pulleys engaged and actuated by the cable, the active portion of the cable being interposed between the pulleys, yielding means for holding the cable taut under all conditions, a slidable frame carrying each of the pulleys, said frames being separately movable, separately operable feed mechanism connected to each frame, friction gearing for transmitting motion from each pulley to the feed mechanism of the frame on which the pulley is mounted, means for shifting said mechanism to vary the speed or reverse the movement of the feed mechanism to raise or lower the frames and the pulleys thereon together with the active portion of the cable mounted on and between the pulleys.

1,017,208. ELECTRIC TRACK-SWEEPER. ALBERT M. GARDNER, Indianapolis, Ind. Filed June 23, 1911. Serial No. 634,988. (Cl. 104—65.)



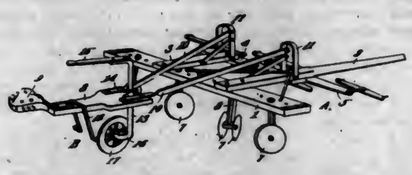
1. A sweeper adapted to be applied to the sill of a vehicle comprising brackets, a yoke pivotally mounted in the brackets, a frame carried by the yoke, a shaft journaled in the yoke, shaft sections journaled in the frame and connected with the shaft by universal joints, brooms carried by the shaft sections, means for rotating the shaft, and means for resiliently holding the brooms in sweeping position.

2. A sweeper adapted to be applied to the sill of a vehicle comprising brackets, a yoke pivoted to the brackets, a frame attached to the yoke and including a cross bar having an intermediate bowed section, a shaft journaled in the yoke and extending under the cross bar, a sprocket wheel attached to the shaft and located within the bowed section of the cross bar, shaft sections journaled in the frame and operatively connected with the shaft by universal joints, brooms carried by the shaft sections, a motor mounted upon the sill of the vehicle and having its shaft operatively connected with the sprocket wheel upon the first mentioned shaft, and means for resiliently holding the brooms in sweeping position.

3. A sweeper adapted to be applied to the sill of a vehicle comprising brackets, a yoke pivoted in the brackets, a frame carried by the yoke, a shaft journaled in the yoke, shaft sections journaled in the frame and extending at angles to the axis of the said shaft and operatively connected with the shaft by universal joints, brooms carried by the shaft sections, means for rotating the shaft, and means for resiliently holding the brooms in sweeping position.

4. A sweeper adapted to be applied to the sill of a vehicle comprising brackets, a yoke pivoted therein, rotating brooms carried by the yoke, means for rotating the brooms, means for resiliently holding the brooms in sweeping position consisting of a windlass, pulleys journaled to the sill of the vehicle and in advance of the brooms, and a cable trained over the windlass and about the pulleys and connected at its opposite ends with the yoke and having in its length a resilient section.

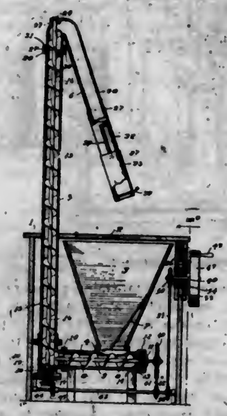
1,017,209. RIDING ATTACHMENT FOR CULTIVATORS. CHARLES W. GERDES, Mound Valley, Kans. Filed May 22, 1911. Serial No. 628,678. (Cl. 10—138.)



1. The combination with a cultivator or the like including a beam, soil engaging devices for supporting the rear end portion of the beam, and forwardly extending draft means connected to the beam, of a riding attachment including a seat carrying structure, a trailing wheel for supporting said structure below the plane of the beam, said wheel being located in advance of the seat, yokes upstanding from the cultivator, forwardly diverging arms fixedly connected to the seat carrying structure and projecting into and pivotally connected to the respective yokes, said arms being extended along straight lines, and a steering lever above the seat carrying structure and in front of the seat for shifting the trailing wheel.

2. The combination with a cultivator structure including a beam, soil engaging devices for supporting the same, and forwardly extending draft means connected to the beam, of upstanding yokes upon the cultivator and in advance of the soil engaging devices, a seat carrying structure, a steering shaft extending perpendicularly through the front portion of said structure and in front of the seat, a trailing wheel connected to and shiftable by said shaft, a lever connected to the upper end of the shaft and extended normally toward the seat, a boxing upstanding from the seat carrying structure and constituting a bearing and a reinforcing means for the shaft, forwardly diverging arms fixedly connected to the seat carrying structure and projecting into and pivotally connected to the yokes.

1,017,210. DELIVERY DEVICE FOR SUGAR, &c. JOSIAH GRIMES, Whittier, Cal., assignor of one-half to Bird F. Lyttle, Los Angeles, Cal. Filed Apr. 3, 1911. Serial No. 618,712. (Cl. 193—18.)



1. A delivery apparatus comprising a bin, a horizontal tube extending below said bin and communicating therewith to receive material therefrom, a screw mounted to rotate on a horizontal axis within said horizontal tube, a vertical tube connected at its lower portion with said horizontal tube and extending above said bin, and an elevating screw mounted to rotate on a vertical axis within said vertical tube, said vertical tube being provided with a delivery spout at its upper end.

2. A delivery apparatus comprising a bin, a horizontal tube extending below said bin and communicating therewith to receive material therefrom, a screw mounted to rotate on a horizontal axis within said horizontal tube, a vertical tube connected at its lower portion with said horizontal tube and extending above said bin, and an elevating screw mounted to rotate on a vertical axis within said vertical tube, said vertical tube being provided with a delivery spout at its upper end, said delivery spout being mounted on said vertical tube by a swivel support to turn to different angular positions.

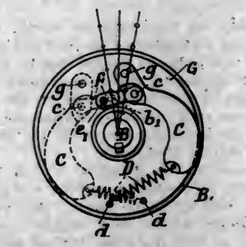
3. A delivery apparatus comprising a bin, a horizontal tube extending below said bin and communicating therewith to receive material therefrom, a screw mounted to rotate on a horizontal axis within said horizontal tube, a vertical tube connected at its lower portion with said horizontal tube above said bin, and an elevating screw mounted to rotate on a vertical axis within said vertical tube, said vertical tube being provided with a delivery spout at its upper end, said spout extending outward and downward from the vertical tube, in combination with telescoping extension sleeves slidably mounted on said spout.

1,017,211. METHOD OF MAKING CEMENT. WILLIAM B. HILL, Kansas City, Mo. Filed Sept. 25, 1909. Serial No. 519,650. (Cl. 106—43.)

1. The herein described process of making Portland cement, consisting in mixing predetermined quantities of clay or shale, and quick-lime and water, the water and quick-lime being in such proportions as will effect disintegration of the clay and complete hydration of the lime in said mixture and reduce the mixture during the hydration of the lime to a fine powdery mass; then clinkering such powdery mass; and finally pulverizing the clinker.

2. The improved process of making Portland cement, consisting in mixing predetermined quantities of clay or shale, with sufficient water to disintegrate the clay or shale and suspend it in the water; then adding to said mixture such a quantity of quick-lime as will absorb, by and during the process of hydration, all of the water in the mixture and reduce the mass to a dry powdery, condition; the lime and materials being intimately mixed by and during the process of hydration of the lime and the resultant mass being practically uniform in constituents; then clinkering such mass; and finally pulverizing the clinker.

1,017,212. IGNITING MECHANISM IN INTERNAL-COMBUSTION ENGINES. GOTTLOB HONOLD and ARNOLD ZAHRINGER, Stuttgart, Germany, assignors to The Firm of Robert Bosch, Stuttgart, Germany. Filed Dec. 17, 1909. Serial No. 533,680. (Cl. 123—117.)



1. In speed responsive mechanism for driving and driven parts, a driving element, a driven element, a weighted member connected to each of said elements, pivots about which said members are adapted to swing outwardly in response to centrifugal action, and an intermediate member carrying said pivots; whereby the difference of angular position of the elements is cumulatively changed as the speed changes.

2. In speed responsive mechanism for driving and driven parts, a driving element, a driven element, a weighted member operatively connected from a point intermediate of its ends to each of said elements, pivots about which said members are adapted to swing outwardly in response to centrifugal action, and an intermediate member carrying said pivots; whereby the difference of angular position of the elements is cumulatively changed as the speed changes.

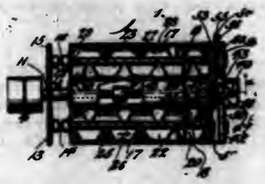
3. In speed responsive mechanism for driving and driven parts, a driving element, a driven element, a weighted member connected to the driving element so as to swing outwardly in response to centrifugal action, a weighted member connected to the driven element so as to swing outwardly in response to centrifugal action, and a connection between the weighted members, said connections being arranged in such manner that the difference of angular position of the driving and driven elements is cumulatively changed as the speed changes.

4. In speed responsive mechanism for driving and driven parts, a driving element, a driven element, a weighted member connected intermediate of its ends to the driving element so as to swing outwardly in response to centrifugal action, a weighted member connected intermediate of its ends to the driven element so as to swing outwardly in response to centrifugal action, and a connection between the weighted members, said connections being arranged in such manner that the difference of angular position of the driving and driven elements is cumulatively changed as the speed changes.

5. In speed responsive mechanism for driving and driven parts, a driving element, a driven element, a weighted member connected intermediate of its ends to the driving element so as to swing outwardly in response to centrifugal action, a weighted member connected intermediate of its ends to the driven element so as to swing outwardly in response to centrifugal action, and a connection between the ends of the weighted members, said connections being arranged in such manner that the difference of angular position of the driving and driven elements is cumulatively changed as the speed changes.

[Claims 6 to 8 not printed in the Gazette.]

1,017,213. MEAT-CUTTER. CHARLES W. HOTTMANN, Philadelphia, Pa., assignor to Richard T. Randall, Philadelphia, Pa. Filed Aug. 1, 1911. Serial No. 641,709. (Cl. 17—20.)



1. In a device of the character stated, a stationary container having a chamber at one end and provided with a plurality of feed channels located side by side and opening into said chamber, cutting mechanism within said chamber, means within said channels for feeding the meat to and from such chamber and from one feed channel to the other, and actuating means for the feeding mechanism and the cutting mechanism.

2. In a device of the character stated, a stationary container having a chamber at one end and provided with a plurality of feed channels opening into said chamber, cutting mechanism within said chamber, means within said container on opposite sides thereof for feeding the meat to and from such chamber and from one feed channel to the other, actuating means for the feeding mechanism and the cutting mechanism, and means for controlling the discharge of meat from said chamber.

3. In a device of the character stated, a stationary container, cutting mechanism therein, a plurality of feeding mechanisms within the container, one of said feeding mechanisms being adapted to feed the meat to the cutting mechanism, and the second feed mechanism being adapted to feed the meat from said cutting mechanism to said first feeding mechanism, means for rotating one of the feeding mechanisms in a direction opposite to that of the other feeding mechanism, and actuating means for the cutting mechanism.

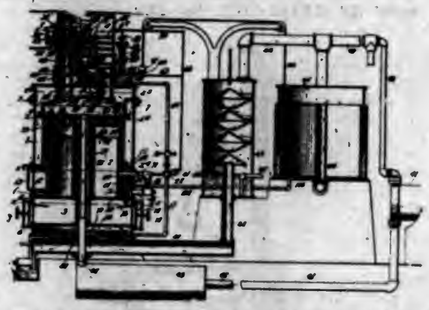
4. In a device of the character stated, a stationary container, having the central portion thereof upwardly deflected thereby forming feed channels, a feed screw located in each of said feed channels and said feed screws being adapted to feed the meat in opposite directions, cutting mechanism within the container and located at one end of said feed screws, and means for actuating said feed screw and said cutting mechanism.

5. In a device of the character stated, a frame, a container mounted thereon and having the central portion thereof upwardly deflected to form feed channels, devices in each of said channels adapted to feed the meat in opposite directions, cutting mechanism located at one end of said devices and to and from which the meat is fed by said devices, a driving shaft carried by said frame and on which said cutting mechanism is mounted, and means for actuating said feeding devices, and said cutting mechanism.

[Claims 6 to 17 not printed in the Gazette.]

1,017,214. OIL-GAS GENERATOR. EZRA S. HOYT, Los Angeles, Cal. Filed Apr. 24, 1909. Serial No. 492,080. (Cl. 48—94.)

1. A gas generator comprising a generating and expanding chamber, means for applying heat to the walls of said chamber, means for preheating oil to a temperature sufficient to cause vaporization of the lighter part of the oil and to cause expansion into vapor of the heavier part of the oil when released from said chamber, said preheating means having a vent communication from the upper part of said preheating means to the generating and expanding chamber to allow the vapor generated in said preheating means to pass to the said chamber, and atomising valve means controlling the supply of heated oil from the lower part of the preheating means to the generating and expanding chamber to allow the heavier portion of the oil to be atomised and vaporised in the generating and expanding chamber.



2. A gas generator comprising a generating and expanding chamber, means for applying heat to the walls of said chamber, means for preheating oil to a temperature sufficient to cause vaporization of the lighter part of the oil and to cause expansion into vapor of the heavier part of the oil when released from said chamber, said preheating means having a vent communication with the generating and expanding chamber to allow the vapor generated in said preheating means to pass to the said chamber, atomising valve means controlling the supply of heated oil from the preheating means to the generating and expanding chamber to allow the heavier portion of the oil to be atomised and vaporised in the generating and expanding chamber, thermostatic means controlling said atomizing valve means responsively to the temperature in said preheating means and elastic fluid supply means for injecting the oil into the generating chamber.

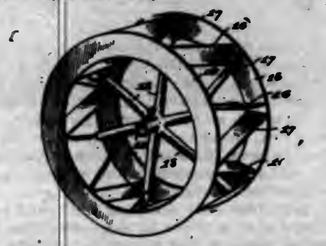
3. A gas generator comprising a generating and expanding chamber, means for applying heat to the walls of said chamber, means for preheating oil to a temperature sufficient to cause vaporization of the lighter part of the oil and to cause expansion into vapor of the heavier part of the oil when released from said chamber, said preheating means having a vent communication with the generating and expanding chamber to allow the vapor generated in said preheating means to pass to the said chamber, atomising valve means controlling the supply of heated oil from the preheating means to the generating and expanding chamber to allow the heavier portion of the oil to be atomised and vaporised in the generating and expanding chamber, thermostatic means controlling said atomizing valve means responsively to the temperature in said preheating means, a deflecting means located in the chamber below the oil supply means, and means for heating said deflecting means.

4. A gas generator comprising a generating and expanding chamber, means for applying heat to the walls of said chamber, means for preheating oil to a temperature sufficient to cause vaporization of the lighter part of the oil and to cause expansion into vapor of the heavier part of the oil when released into said chamber, said preheating means having a vent communication with the generating and expanding chamber to allow the vapor generated in said preheating means to pass to the said chamber, atomising valve means controlling the supply of heated oil from the preheating means to generating chamber to allow the heavier portion of the oil to be atomised and vaporized in the generating and expanding chamber, thermostatic means controlling said atomizing valve means responsively to the temperature in said preheating means, elastic fluid supplying means for injecting the oil into the generating chamber, and deflecting means located in the chamber below the oil supply, and means for heating said deflecting means.

5. A gas generator comprising a generator chamber, a combustion chamber inclosed therein, a burner provided with means for supplying combustible and air thereto and extending into communication with the combustion chamber, outlet means communicating with the combustion chamber to carry off the products of combustion therefrom, an oil preheater inclosed within said outlet means for the products of combustion, a vent communication from the preheater to the generating and expanding chamber, an oil supply valve connected with said preheater and communicating with the generator chamber to supply oil thereto, and means for drawing off gas from the generator chamber.

[Claims 6 to 24 not printed in the Gazette.]

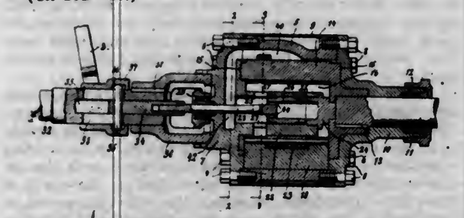
1,017,215. CENTRIFUGAL FAN OR PUMP. ROBERT A. ILG, Chicago, Ill. Filed Oct. 2, 1909. Serial No. 520,604. (Cl. 230—11.)



1. A centrifugal fan or pump, comprising a casing having a relatively large suction opening in its side and a tangential discharge opening, in combination with a fan-wheel therein having parallel side members and a plurality of independent blades connecting and supported by said side members and disposed lengthwise successively in opposite oblique directions relatively to the plane of rotation, substantially as described.

2. A centrifugal fan or pump, comprising a casing having a relatively large suction opening in its side and a tangential discharge opening, in combination with a fan-wheel therein having parallel side members and a plurality of straight flat independent blades connecting and supported by said side members, said blades being arranged in two series with the blades of one series alternating with those of the other, and the blades of the two series presenting equal and opposite obliquities, respectively, to the plane of rotation of the fan-wheel, substantially as described.

1,017,216. FLUID-CLUTCH. GUSTAVE T. JOHNSON, Chicago, Ill. Filed June 6, 1911. Serial No. 631,580. (Cl. 192—18.)



1. A fluid clutch comprising a cylinder, a hollow rotor mounted eccentrically in the bore of the cylinder and in contact with the wall thereof at one point, the cylinder having passages opening at one of their ends into the bore of the cylinder on opposite sides of said point of contact, and said passages having their other ends opening through one end of the cylinder, a head on the last-mentioned end of the cylinder, said head having chambers which are in communication, respectively, with the aforesaid passages, one of said chambers also communicating with the bore of the rotor, and the other chamber communicating with the bore of the cylinder, a valve controlling the flow into the bore of the rotor, a driving element connected to the rotor, a driven element connected to the cylinder, radially sliding impeller blades carried by the rotor, and means for operating said blades.

2. A fluid clutch comprising a cylinder, a hollow rotor mounted eccentrically in the bore of the cylinder and in contact with the wall thereof at one point, the cylinder having passages opening at one of their ends into the bore of the cylinder on opposite sides of said point of contact, and said passages having their other ends opening through one end of the cylinder, a head on the last-mentioned end of the cylinder, said head having a ported tubular extension into the bore of the rotor, said head also having chambers which are in communication, respectively, with the aforesaid passages, one of said chambers also being in communication with the bore of the tubular extension, and the other chamber being in communication with the bore of the cylinder, a valve working in the bore of the tubular extension and controlling the ports thereof, a driving element connected to the rotor, a driven element connected to the cylinder, radially slidable impeller blades carried by the rotor, and means for operating said blades.

3. A fluid clutch comprising a cylinder, a hollow rotor mounted eccentrically in the bore of the cylinder and in contact with the wall thereof at one point, the cylinder having passages opening at one of their ends into the bore of the cylinder on opposite sides of said point of contact, and said passages having their other ends, opening through one end of the cylinder, a head on the last-mentioned end of the cylinder, said head having a ported tubular extension into the bore of the rotor, said head also having chambers which are in communication, respectively, with the aforesaid passages, one of said chambers also being in communication with the bore of the tubular extension, and the other chamber being in communication with the bore of the cylinder, a perforated piston valve controlling the flow into the bore of the rotor, a driving element connected to the rotor, a driven element connected to the cylinder, radially slidable impeller blades carried by the rotor, and means for operating said blades.

4. A fluid clutch comprising a cylinder, a hollow rotor mounted eccentrically in the bore of the cylinder and in contact with the wall thereof at one point, the cylinder having passages opening at one of their ends into the bore of the cylinder on opposite sides of said point of contact, and said passages having their other ends opening through one end of the cylinder, a head on the last-mentioned end of the cylinder, said head having a ported tubular extension into the bore of the rotor, said extension having a cam surface, said head also having chambers which are in communication, respectively, with the aforesaid passages, one of said chambers also being in communication with the bore of the tubular extension, and the other chamber being in communication with the bore of the cylinder, a valve working in the bore of the tubular extension and controlling the ports thereof, a driving element connected to the rotor, a driven element connected to the cylinder, and radially slidable impeller blades carried by the rotor in contact at one of their ends with the aforesaid cam surface and at their other ends with the cylinder wall.

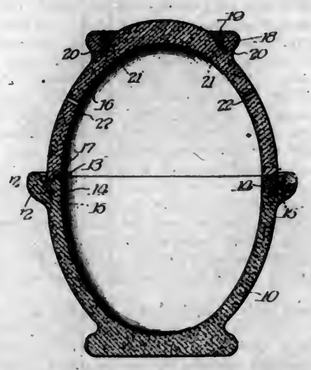
1,017,217. REFRIGERATING DEVICE. GEORGE EDWIN JONES, Chicago, Ill. Filed Oct. 12, 1911. Serial No. 654,290. (Cl. 62—10.)

1. A refrigerating device composed of interfitting upper and lower sections, said lower section near its upper extremity being provided with a plurality of staggered holes by means of which water may be directed to the inner or outer portions of the walls therebelow, substantially as described.

2. A refrigerating device composed of interfitting upper and lower sections, said lower section having an annular flange near its upper extremity, whereby a trough is formed, said flange containing a relatively large number of staggered holes, whereby water is directed to the inner and outer portions of the walls, substantially as described.

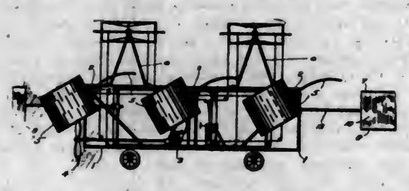
3. A refrigerating device composed of interfitting up-

per and lower sections, said lower section having an annular flange providing a trough, said upper section also having an exterior flange and provided near its top with



a plurality of staggered holes, said flange providing a trough and lifting or handling projections, substantially as described.

1,017,218. AEROCRAFT. JOSEPH J. V. KAULINSKAS, Philadelphia, Pa. Filed Dec. 3, 1910. Serial No. 595,766. (Cl. 244—29.)

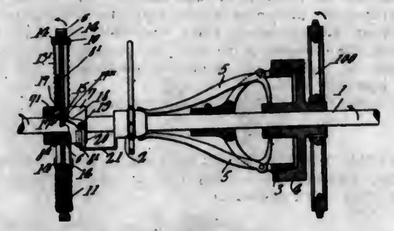


1. In apparatus of the class described the combination of a framework including its complemental propelling mechanism or fore and aft rudders provided with elongated rudder shafts, ball and socket connections for said shafts, ring-like attachments provided with radially arranged projections fixed to the inner ends of said shafts, pulleys having relatively fixed relation with the framework, other pulleys relatively movable with respect to the framework, cables passing over said pulleys and connecting said projections and means connected with said cables for operating said rudders.

2. In apparatus of the class described the combination of a framework including its complemental propelling mechanism of fore and aft rudders of I-shape cross-section provided with elongated rudder shafts, ball and socket connections for the rudder shafts, a pair of steering wheels, pulleys, some of which are relatively fixed with respect to the framework and some of which are relatively movable with respect to the framework and cables operatively connecting said steering wheels and the inner ends of said shafts, said cables passing over said pulleys whereby by operating one wheel said rudders may be caused to be simultaneously shifted upwardly or downwardly and by operating the other of said wheels said rudders may be caused to be simultaneously shifted outwardly.

3. A rudder construction for aerocraft comprising a pair of horizontal planes having spaced vertical planes therebetween, a rudder shaft therefor having fixed thereto a spherical member, a two-part flanged socket for said spherical member, supports for said socket the flanged portions of said socket being bolted to said supports, a ring-like attachment provided with radially arranged projections fixed to the inner end of said rudder shaft and operating cables connected with said projections.

1,017,219. AUTOMATIC CLUTCH-RELEASE. WARREN B. KEATOR, Findlay, Ohio. Filed June 21, 1911. Serial No. 634,398. (Cl. 192—8.)



1. The combination with a driving shaft, and a clutch mounted thereon, of a clutch release, comprising a rotatably mounted wheel, a ring secured to one side thereof, a spider made fast to the shaft, a plurality of terminals carried by the spider, said terminals being slidably mounted upon said ring, means to cushionedly secure the spider to the wheel to cause the wheel to rotate with the shaft, and means operably connected to the spider, wheel, and clutch for operating the clutch.

2. The combination with a driving shaft, and a clutch mounted thereon, of a clutch release, comprising a rotatably mounted wheel, a ring secured to one side thereof and concentric with the periphery thereof, a spider made fast to the shaft and adjacent the wheel, a plurality of terminals carried by said spider and slidably mounted upon said ring, means mounted upon the ring to cushionedly secure the terminals and the spider to the wheel and cause the shaft to rotate with the wheel, and means operably connected to the spider, wheel and clutch for operating the clutch.

3. The combination with a driving shaft, a clutch mounted thereon, of a clutch release, comprising a rotatably mounted wheel, a ring secured to both sides thereof and concentric therewith, a spider made fast to the shaft, one upon each side of said wheel, a series of terminals to each spider slidably mounted upon said rings, a tension spring and a recoil spring mounted upon said ring between the terminals of the spiders, and means operably connecting the spiders to the wheel and clutch for operating the clutch.

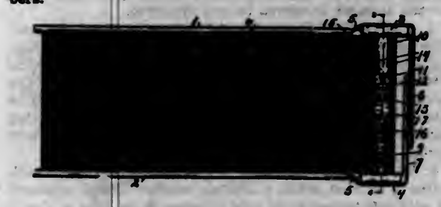
4. The combination with a driving shaft, and a clutch mounted thereon, of a clutch release, comprising a rotatably mounted wheel, a ring secured to each side thereof concentrically of the wheel, a spider made fast to the shaft upon each side of said wheel, a series of terminals to each spider slidably connected to said rings, a recoil spring and a tension spring mounted upon the rings for each terminal of the spider, and a tripping device operably connected with the spiders, wheel and clutch mechanism.

5. The combination with a driving shaft, and a clutch mounted thereon, of a clutch release, comprising a rotatably mounted wheel provided with a slot within its periphery, two rings mounted upon and carried by said wheel one upon each side thereof and concentric with the periphery thereof, two spiders made fast to the shaft, a plurality of terminals to each spider slidably secured to the rings of the wheels upon both sides of said wheel, a tension spring and a recoil spring mounted upon the rings, one pair to each terminal of the spider, a trip lever pivotally connected to one of said spiders and having its free ends operably connected with the slot in the wheel and with the clutch mechanism.

[Claims 6 to 13 not printed in the Gazette.]

1,017,220. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. REINHOLD KRUMMING, Milwaukee, Wis. Filed Sept. 5, 1911. Serial No. 647,746. (Cl. 129—13.)

1. In a binder, the combination with a pair of binding members, a pair of tubular outer members mounted at the ends of one of said binding members and having longitudinal slots in their outer sides extending from their outer ends and transverse kerfs extending across said slots to provide a double series of teeth, a pair of tubular inner members mounted at the ends of the other binding members to telescope with said outer members and having parallel longitudinal slits extending from their outer ends to provide spring pawls, the end of each pawl being turned outwardly to coact with the teeth of the outer post members, and finger pieces on said pawls adapted to project through the slots of said outer members.



2. In a binder, the combination with a pair of binding members, a pair of tubular outer members mounted at the ends of one of said binding members and having longitudinal slots in their outer sides extending from their outer ends, the edges of the slots being provided with teeth, a pair of tubular inner members mounted at the ends of the other binding member to telescope with said outer members and slitted longitudinally to provide pawls adapted to coact with the teeth of the outer members, and finger pieces on said pawls adapted to project laterally through the slots of said outer members when said inner members are telescoping therewith.

3. In a binder, the combination with a pair of binding members, tubular outer members mounted on one of said binding members and having longitudinal slots extending from their outer ends, the edges of the slots being provided with teeth, tubular inner members mounted on the other binding member to telescope with said outer members and slitted longitudinally to provide pawls adapted to coact with the teeth of the outer members, and finger pieces on said pawls adapted to project through the slots of said outer members when said inner members are telescoping therewith.

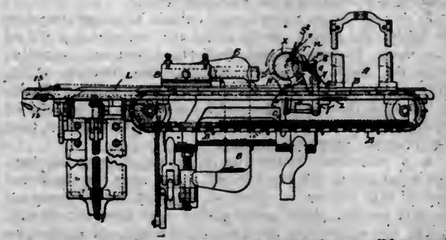
4. In a binder, the combination with a pair of binding members, tubular outer members mounted on one of said binding members and having longitudinal slots extending from their outer ends and provided with teeth, inner members mounted on the other binding member to telescope with said outer members and having pawls adapted to coact with the teeth of the outer post members, and finger pieces on said pawls adapted to project through the slots of said outer members when said inner members are telescoped therewith.

5. In a binder, the combination with a pair of binding members, toothed adjusting members mounted on one of said binding members and having longitudinal slots extending from their outer ends and provided with a series of teeth at each side of the slots, pawl adjusting members coacting with the toothed adjusting members, mounted on the other binding member to telescope with said toothed members, and finger pieces on said pawls adapted to project through the slots of said toothed members when said pawl members are telescoped therewith.

[Claims 6 to 14 not printed in the Gazette.]

1,017,221. INKING-RIBBON MECHANISM FOR ADDRESSING-MACHINES. ULYSSES G. LEE, Brooklyn, N. Y., assignor to Montague Mailing Machinery Company, New York, N. Y., a Corporation of Tennessee. Original application filed Aug. 16, 1909, Serial No. 513,044. Divided and this application filed Feb. 18, 1910, Serial No. 544,723. Renewed July 14, 1911. Serial No. 638,584. (Cl. 197—162.)

1. In combination, an impression member, an inking ribbon movement, including a ribbon spool at one end of the ribbon, with means for operating the same, a ribbon reel at the other end of said ribbon, connections moving in one direction only tending to operate the ribbon reel in one direction, including a rotary one-direction friction member which, when the ribbon is to be wound on the reel, will drive the reel and which, when the ribbon spool winds the ribbon, will tend to rotate the reel and thus place a tension on the ribbon, substantially as described.



2. In combination, an impression member, a ribbon reel, a ribbon spool, driving means for the ribbon spool, reversing devices for changing the direction of movement of the ribbon spool, and a one-direction friction driving member for the ribbon reel to wind the ribbon thereon when it unwinds from the spool and to permit the reel to reverse its movement by the pull of the ribbon when the spool winds the ribbon.

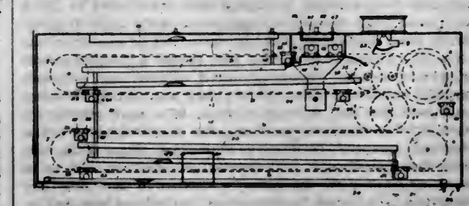
3. In combination an impression member, a ribbon spool, connections for driving the ribbon spool, a reversing member for said connections, a driver for said reversing member to move the same for reversing the said connections, a detent for said reversing member to hold it in position, a tension device engaging the ribbon to be moved when the tension on the ribbon increases, and connections between said tension device and the detent, substantially as described.

4. In combination, an impression member, a ribbon spool, connections for driving the ribbon spool, a reversing member for said connections, a driver for said reversing member to move the same for reversing the said connection, a detent for said reversing member to hold it in position, a tension device engaging the ribbon to be moved when the tension on the ribbon increases, and connections between said tension device and the detent, said driver being placed under tension during the winding of the ribbon on the spool, substantially as described.

5. In combination an impression member, a ribbon spool, driving means for the ribbon spool, a reverser for said driving means to change the direction of movement of the spool, a torsion spring acting as a driver for the reverser, and acting first in one direction and then in the other, a detent for holding the reverser and a device engaging the ribbon and operated by increase of tension on the ribbon for operating the detent, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,017,222. PERCOLATOR. JOHN B. LIVINGSTON, New Haven, Conn. Filed May 15, 1911. Serial No. 627,282. (Cl. 87—6.)



1. A percolator comprising a series of sprocket wheels with a chain running over them, tracks along the horizontal path of the chain, buckets having perforated bot-

toms connected with the chain, means for supporting the buckets as they pass along the runs, and means for spraying the material carried in the buckets.

2. A percolator comprising a series of sprocket wheels with a chain running over them, tracks along the horizontal path of the chain, buckets having perforated bottoms connected with the chain, means for supporting the buckets and spraying the contents therein as they pass along the runs, a discharge hopper, and means for inverting the buckets over said hopper.

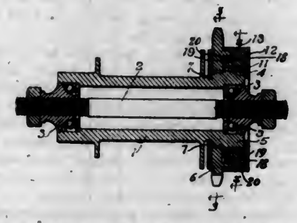
3. A percolator comprising a chain arranged to move in horizontal paths, tracks along the horizontal paths of the chain, buckets having perforated bottoms connected with the chain, means for spraying the contents of the buckets in their horizontal movement, a discharge hopper, a platform in said hopper, and a shoulder at one end of said platform adapted to trip said buckets whereby they are inverted over said hopper.

4. A percolator comprising a casing, a receiving hopper arranged in the top thereof, and a gate for the lower end of said hopper, a series of sprocket chains arranged in said casing, chain passing over said sprocket wheels, tracks for supporting the runs of the said chain, buckets having perforated bottoms connected at intervals to said chain, means for spraying the material in the buckets as they pass along the runs, a discharge hopper, and means for inverting the buckets over said hopper.

5. A percolator comprising a casing, a series of sprockets in said casing, a chain running over said sprockets, buckets having perforated bottoms secured to and carried by said chain, means for spraying the contents of said buckets as they move horizontally, a discharge hopper, means for inverting the buckets in said hopper, and steam pipes opening into said hopper whereby the buckets when inverted may be cleaned by the pressure of steam.

[Claims 6 and 7 not printed in the Gazette.]

1,017,223. BRAKE MECHANISM. JOHN J. LYONS, Dayton, Ohio, assignor of one-fourth to George W. Ozias and one-fourth to Charles Whealen, Dayton, Ohio. Filed Aug. 17, 1911. Serial No. 644,625. (Cl. 208—57.)



1. The combination, with a hub having a part constituting a friction, a driving member loosely mounted on said hub adjacent to said friction drum, and a clutch connection between said hub and said driving member, of a part carried by said driving member and having a recess therein, a brake band arranged between said friction drum and said part and having one end secured to a fixed support and the other end free, and a movable dog mounted in the recess to engage said brake band to force the same into operative engagement with said friction drum when said driving member is moved in one direction.

2. The combination with a hub having a friction drum, a driving member loosely mounted in said hub adjacent to said friction drum, and a clutch connection between said hub and said driving member, of a part carried by said driving member, another part constituting a brake member arranged between said friction drum and said first mentioned part, and having one end secured to a fixed support and the other end free, a movable dog mounted in a recess in one of said parts and adapted to hold them in engagement and force said second mentioned part into operative engagement with said friction drum when said driving member is moved in one direction.

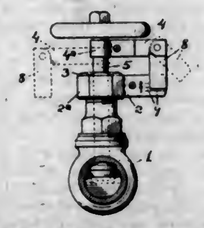
3. The combination, with a hub having a friction drum, a driving member loosely mounted on said hub adjacent to said friction drum, and a clutch connection between said hub and said driving member, of a part secured to said driving member and having a recess therein, a brake member extending about said friction drum and having one end secured to a fixed support and the other end free, said free end of said brake member having a shoulder, a spring actuated dog mounted in said recess and adapted to engage said shoulder and force said brake member into operative engagement with said friction drum when said driving member is moved in one direction.

4. The combination, with a hub having a portion constituting a friction drum, a driving member for said hub, and a clutch connection between said hub and said driving member, of a brake band extending about said drum and having a shoulder, means for preventing the rotation of said brake band, and a dog connected with said driving member and adapted to engage said shoulder when said driving member is moved in one direction.

5. The combination, with a hub having a part constituting a friction drum, a driving member loosely mounted on said hub adjacent to said friction drum, and a clutch connection between said hub and said driving member, of a part carried by said driving member and extending across and out of engagement with said friction drum, a friction band extending about said friction drum, an actuating member arranged between the part carried by said driving member and said brake band and adapted to move said brake band into operative engagement with said friction drum when said driving member is moved in one direction, and means to prevent the rotation of said brake band.

[Claims 6 and 7 not printed in the Gazette.]

1,017,224. FEED-INDICATOR FOR VALVES. EDGAR R. MACBETH, Brazil, Ind. Filed July 19, 1911. Serial No. 639,386. (Cl. 137—4.)



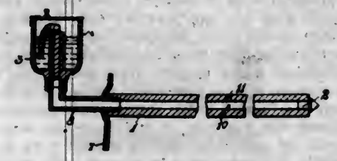
1. A feed indicator for valves, comprising a movable member adapted to be secured to a movable part of the valve, a fixed member adapted to be secured to a fixed part of the valve, one of said members having a vertical plane surface bearing a series of vertically spaced graduations, and a hinged arm upon the other of said members, having a vertical plane surface adapted for stop engagement with the plane surface of the other member when the valve has been opened to a predetermined extent, and capable of being turned out of the way of the other member, said arm being adapted to have close engagement with and indicate upon said scale the extent of movement of the valve.

2. A feed indicator for valves, comprising a movable member adapted to be secured to a movable part of the valve, a fixed member adapted to be secured to a fixed part of the valve and having a vertical plane surface bearing a series of vertically spaced graduations, and a hinged arm upon said movable member having a vertical plane surface adapted for stop engagement with the plane surface of the fixed member when the valve has been opened to a predetermined extent, and capable of being turned out of the way of the fixed member, said arm being adapted to have close engagement with and indicate upon said scale the extent of movement of the valve.

3. A feed indicator for valves, comprising a movable member adapted to be secured to a movable part of the valve, a fixed member adapted to be secured to a fixed part

of the valve and having a vertical plane surface bearing a series of vertically spaced graduations, and a hinged arm upon said movable member, normally at right angles thereto and having a vertical plane surface having stop engagement with the plane surface of the fixed member when the valve has been opened to a predetermined extent, and capable of being turned out of the way of the fixed member, said arm being adapted to have close engagement with and indicate upon said scale the extent of movement of the valve, and a stop upon the fixed member for said hinged arm when turned at right angles.

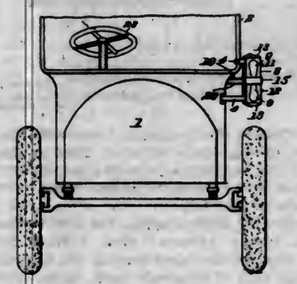
1,017,225. PICKER-SPINDLE FOR LOOMS. JAMES MARTIN, Manchester, England. Filed Mar. 2, 1910. Serial No. 546,950. (Cl. 139—48.)



1. In a loom, the combination with a picker, of a spindle therefor, provided with an oilway extending longitudinally thereof, an air hole open to the upper surface of said spindle and an oil outlet in communication with said oilway, and oil supply means in connection with the said oilway, said air hole and oil outlet being in relative proximity to each other whereby the oil is fed from the latter upon movement of the picker over the former, substantially as and for the purpose set forth.

2. In a loom, the combination with a picker, of a spindle therefor, provided with an oilway extending longitudinally thereof, oil outlets extending laterally of said oilway and airholes open to the upper surface of said spindle, and oil supply means in connection with said oilway, said oil outlets and air holes being in relative proximity to each other whereby the oil is fed from the former by compressed air resulting from the passage of the picker over the latter.

1,017,226. DEVICE FOR INDICATING THE INTENDED MOVEMENTS OF VEHICLES. GEORGE S. MATTHEWS, Kansas City, Mo. Filed Nov. 29, 1910. Serial No. 594,786. (Cl. 177—311.)



1. An indicator of the character described comprising a central block, differently colored globes attached to the opposite ends of said block, caps fitted over the outer ends of said globes, a longitudinally extending rod secured to said caps, a protecting band passed around said block and projecting beyond the joints between said globes and block, said band being also connected to the longitudinal rod, electric bulbs in said globes, means to support the indicator upon a vehicle, and means to illuminate said bulbs either separately or at the same time.

2. An indicator of the character described comprising a central block, flanged plates secured to the opposite ends thereof, differently colored globes fitted within said flanged plates, caps fitted over the outer ends of said globes, a longitudinally extending rod secured to said caps, means for fastening the rod to a vehicle, electric bulbs mounted in said globes, and means to illuminate said bulbs either separately or at the same time.

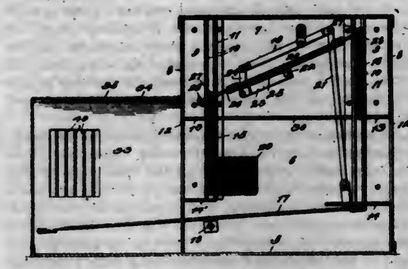
3. An indicator of the character described comprising a central block, flanged plates secured to the opposite ends thereof, differently colored globes fitted within said flanged plates, caps fitted over the outer ends of said globes, a longitudinally extending rod secured to said caps, a band passed around said block and secured to said rod, said band projecting beyond the points between the globes and the flanged plates, for the purpose specified, means for fastening the indicator to a vehicle, electric bulbs mounted in said globes, and means to illuminate said bulbs either separately or at the same time.

4. An indicator of the character described comprising a central block, differently colored globes attached to the opposite ends of said block, a longitudinally extending rod, means attached to said rods for retaining the globes in position, means for fastening the indicator to a vehicle, electric bulbs mounted in said globes, and means to separately illuminate said bulbs.

5. An indicator of the character described comprising a central block, differently colored globes attached to the opposite ends of said block, a longitudinally extending rod, caps fitted over the outer ends of said globes and secured to said rod, means for fastening the indicator to a vehicle, electric bulbs mounted in said globes, and means to separately illuminate said bulbs.

[Claim 6 not printed in the Gazette.]

1,017,227. ANIMAL-TRAP. JAMES C. MCATEE, Hiwasse, Ark. Filed Oct. 9, 1911. Serial No. 653,556. (Cl. 43—26.)

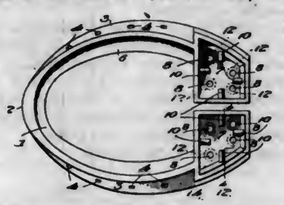


1. A victim set trap, comprising a cage consisting of a base, parallel longitudinal side walls and end walls connecting said side walls, a horizontal plate connecting the side walls and arranged in spaced relation to the base and provided with an opening, said end walls being provided with openings, vertical guides on the side walls, doors movable in said guides to open and close the openings in the end walls, a bait basket carried by one of said doors, a compartment arranged upon the base, the opening in one of the end walls affording communication to said compartment, a tilting platform mounted between the side walls and having its pivot located between said end walls, said platform extending into said compartment, and means mounted between the side walls and connected to one end of said platform and to said doors to slide the doors in opposite directions by the weight of the animal on one end of the platform whereby the bait basket is moved through the opening in said horizontal plate and disposed above the same and communication is afforded between the interior of the trap and said exterior compartment.

2. A victim set trap comprising a cage having a body portion consisting of a base, parallel longitudinal side walls arranged upon said base and having vertical extensions on one of their ends, transverse walls connecting

the side walls and extending longitudinally upon their inner faces, guides formed in the extensions of the transverse walls, said walls having openings in their lower ends, a tilting platform pivotally mounted intermediate of its ends in said side walls and beneath said openings, doors vertically movable in said guides in reverse directions to alternately open and close said openings, a bait receptacle carried by one of said doors, a horizontal plate arranged between the side walls and provided with an opening to receive said receptacle above which the same is disposed when the door is in its elevated position, a transverse angle bar journaled in the side walls, a longitudinally extending rod fixed upon said angle bar, loops secured to the upper edges of the doors, the ends of said rod being slidably disposed in the loops, and means connected to the tilting platform and to said angle bar to rotate said bar and slide the doors under the weight of the animal upon said platform.

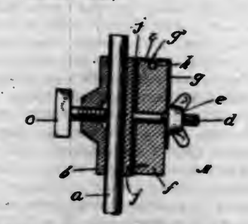
1,017,228. HORSESHOE. JAMES A. NEIL, Washington, D. C., assignor of one-half to John E. Gale and one-eighth to James A. Donaldson, Washington, D. C. Filed June 13, 1910, Serial No. 566,522. Renewed July 11, 1911. Serial No. 638,021. (Cl. 168—13.)



1. A horseshoe comprising an outwardly extending flange provided with nail holes, an inwardly extending flange, a downwardly extending plane tread-surface, receptacles formed at the heel ends of the shoe, resilient pads in said receptacles, the latter having studs projecting from the inner walls thereof and countersunk openings in the upper walls thereof, said openings and studs being arranged alternately, and a canvas layer secured to the top of the shoe by means of the ends of the pads which project through said openings.

2. A horseshoe comprising an outwardly extending flange provided with nail holes, a downwardly extending plane tread-surface, receptacles formed at the heel ends of said shoe, said receptacles having studs projecting inwardly from the inner walls thereof, and openings in the upper walls of said receptacles, said openings and studs being arranged alternately, and pads secured in said receptacles by means of said studs and openings, said pads projecting beyond the tread surface of the shoe.

1,017,229. TARGET-CLAMP. FRED OSCAR NELSON, Estherville, Iowa. Filed Jan. 30, 1911. Serial No. 605,392. (Cl. 88—12.)



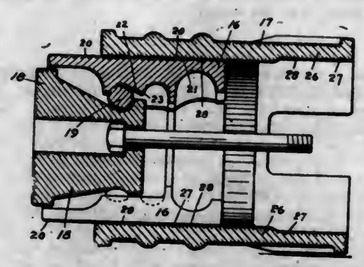
1. A grading instrument having a supporting rod; a carrier-block which is adjustably mounted thereon and which is formed with a pivot-stud and provided with a device for fastening said carrier-block upon said rod in its adjusted position, a bracket-plate pivotally mounted on said pivot-stud; a crossarm mounted in said bracket-plate; and means for fastening said crossarm and bracket-plate in adjusted position on said pivot-stud.

2. A grading instrument having a supporting rod; a crossarm provided with a level; a carrier-block slidably mounted upon said rod and provided with a device for fastening said carrier-block upon said rod in its adjusted position, said carrier-block being formed with a pivot-stud; a U-shaped bracket-plate the legs of which are pivotally mounted on said pivot-stud and the base of which overlies and protects the vial of said level and is formed with a slot through which said vial may be viewed, said crossarm being mounted in said bracket-plate and pivotally upon said pivot-stud; and means for fastening said crossarm and bracket-plate in adjusted position on said pivot-stud.

3. A grading instrument having a supporting rod; a crossarm provided with a level; a carrier-block slidably mounted upon said rod and provided with a device for fastening said carrier-block upon said rod in its adjusted position, said carrier-block being rounded and being formed with a pivot-stud which projects from one of the faces of said carrier-block, said face being ribbed; a U-shaped bracket-plate the legs of which are pivotally mounted on said pivot-stud and the base of which overlies and protects the vial of said level and is formed with a slot through which said vial may be viewed, said crossarm being mounted in said bracket-plate and pivotally upon said pivot-stud; and means for fastening said crossarm and bracket-plate in adjusted position on said pivot-stud.

4. A grading instrument having a supporting rod; a rounded carrier-block slidably mounted thereon and provided with a device for fastening said carrier-block upon said rod in its adjusted position, said carrier-block being formed with a centrally-disposed pivot-stud; a crossarm pivotally mounted upon the latter; and means mounted on said pivot-stud for fastening said crossarm in its adjusted position upon said pivot-stud.

1,017,230. FRICTION DRAFT-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Dec. 28, 1910. Serial No. 599,754. (Cl. 213—64.)



1. In a friction draft rigging, the combination of friction shoes having hardened steel friction faces, of a malleable iron friction shell having an integral friction face layer or skin of relatively hard, dense, brittle metal, substantially as specified.

2. In a friction draft rigging, the combination of friction shoes having hardened steel friction faces, of a malleable iron friction shell having an integral friction face layer or skin of relatively hard, dense, brittle metal, with the outermost portion oxidized, substantially as specified.

3. In a friction draft rigging, the combination with cast steel friction shoes having hardened and polished friction faces and hardened roller bearing wedge faces, a wedge having hard roller bearing wedge faces, hard steel anti-friction rollers interposed between the wedge and friction shoes, and a malleable iron friction shell having a relatively hard and dense friction face layer in sliding frictional engagement with the hard smooth, polished friction faces of the friction shoes, substantially as specified.

4. In a friction draft rigging, the combination with cast steel friction shoes having hardened friction faces and hardened roller bearing wedge faces, a wedge having hard roller bearing wedge faces, hard steel antifraction rollers interposed between the wedge and friction shoes, and a malleable iron friction shell having a relatively hard and dense friction face layer in sliding frictional engagement with the hard smooth, polished friction faces of the friction shoes, said friction face layer or skin of the malleable iron friction shell having its outermost portion oxidized, substantially as specified.

1,017,231. VENDING-MACHINE. LAYTON M. PARKHURST, Indianapolis, Ind., assignor to The Parkhurst Company, Indianapolis, Ind., a Corporation of New Jersey. Original application filed June 19, 1906, Serial No. 322,372. Renewed Oct. 22, 1908, Serial No. 459,091. Divided and this application filed May 27, 1910. Serial No. 563,748. (Cl. 194—93.)

1. In a coin-controlled apparatus, the combination with supporting means, of an operator, a movable coin chute, coin-arresting means carried by the supporting means and arranged in the path of a coin through the chute, and coin-gripping means carried by the movable chute.

2. In a coin-controlled apparatus, the combination of supporting means, an operator, a movable coin chute, a coin-abutment carried by the supporting means, and means operated by the movement of the operator to grip a coin.

3. In a coin-controlled apparatus, the combination of supporting means, an operator, a movable coin chute, a coin abutment carried by the supporting means, and means operated by the movement of the operator to alternately grip and release a coin.

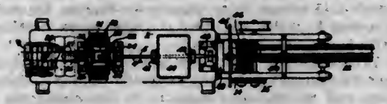
4. In a coin-controlled apparatus, the combination of supporting means, an operator, a movable coin chute, a coin abutment carried by the supporting means, means operated by the movement of the operator to grip a coin, and means for releasing the coin.

5. In a coin-controlled apparatus, the combination of supporting means, an operator, a movable coin chute, a coin abutment carried by the supporting means, means operated by the movement of the operator to grip a coin, means for releasing the coin, and a lock for the operator arranged intermediate the grip-operating and the releasing means.

[Claims 6 to 19 not printed in the Gazette.]

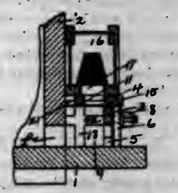
1,017,232. MECHANISM FOR MANUFACTURING ELECTRICAL CONDUITS. ROBERT C. RAHM, Wyomissing borough, Pa., assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 23, 1910. Serial No. 578,603. (Cl. 154—6.)

In a tube forming machine substantially as described, the combination with strip-feeding mechanism, strip-folding mechanism, and tube-winding mechanism, of a tube take-off mechanism comprising tube guide rolls and a



take-off wheel formed with different sized tube-engaging circumferential grooves, substantially as set forth.

1,017,233. BEEHIVE-ENTRANCE GUARD. GEORGE C. RAHN, Haileybury, Ontario, Canada. Filed July 18, 1911. Serial No. 639,094. (Cl. 6—4.)



1. In a beehive entrance guard, the combination of a box shaped guard frame with a front opening and with horizontal grooves in the ends of said frame; a removable traveling board arranged in said grooves; and an adjustable cover for the opening in the front.

2. In a beehive entrance guard, the combination of a box shaped guard frame with a front opening and with horizontal grooves in the ends of said frame; a removable screen traveling board arranged in said grooves; and an adjustable cover for the opening in the front.

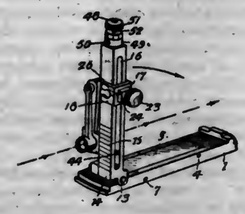
3. In a beehive entrance guard, the combination of a box shaped guard frame with a front opening, said frame having vertical grooves in its ends; an adjustable cover for the front opening arranged to vary the size of the opening and to maintain it in a central position; and a guard strip arranged in the grooves and having openings out of register with the front opening.

4. In a beehive entrance guard, the combination of a box shaped guard frame with a front opening; adjustable slides arranged over said openings; means for securing said slides; and a perforated strip arranged between said slides and the front and held in place by said slides.

5. In a beehive entrance guard, the combination of a box shaped frame with a front opening; a removable cover for said opening in the top; and a screen traveling board removably secured in the guard above the front opening.

[Claims 6 and 7 not printed in the Gazette.]

1,017,234. GUN-SIGHT. JOHN D. RUSS, Spencer, W. Va. Filed May 24, 1911. Serial No. 629,129. (Cl. 42—82.)



1. In a gun-sight, a hinged leaf-mount, a sight-leaf hinged thereto, and means, expansible by heat, co-acting with said mount to automatically depress the end of said mount to which said leaf is hinged upon heating of the rifle-barrel in rapid firing.

2. In a gun-sight, a pivoted leaf-mount, a sight-leaf hinged thereto, and a member, expansible by heat, co-acting with said mount to automatically depress the end of said mount to which said leaf is hinged upon heating of the rifle-barrel in rapid firing.

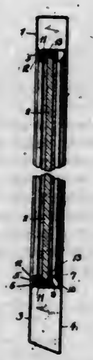
3. In a gun-sight, a pivoted leaf-mount, a sight-leaf hinged thereto, and a member, expansible by heat, disposed beneath said mount and automatically depressing the end of said mount to which said leaf is hinged upon heating of the rifle-barrel in rapid firing.

4. In a gun-sight, a pivoted leaf-mount provided with a downward-extending toe at one end thereof, and a member, expansible by heat, disposed beneath said mount and bearing against said toe and automatically depressing the end of said mount to which said leaf is hinged upon heating of the rifle-barrel in rapid firing.

5. In a gun-sight, a base provided with a slot, a leaf-mount disposed in said slot and pivoted to said base, and a member, expansible by heat, disposed beneath said mount and automatically depressing the end of said mount to which the leaf is hinged upon heating of the rifle-barrel in rapid firing.

[Claims 6 to 11 not printed in the Gazette.]

1,017,235. WINDOW. HAROLD M. THOMAS, Philadelphia, Pa., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed July 29, 1910. Serial No. 574,468. (Cl. 189—78.)



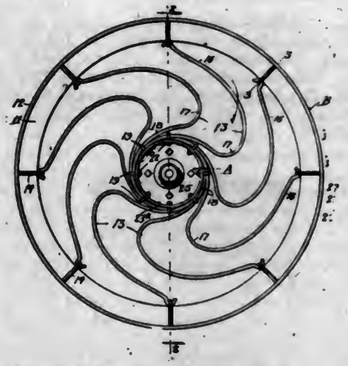
1. The combination of a rectangular sash consisting of four members secured together at their ends each formed from a single strip of sheet-metal bent to a rectangular cross-section and to form a flange at one of the lateral edges and a fold at the other inclosing said flange and forming therewith a flange extending inwardly of the sash, metallic strips of channel section, packings in the channels of said strips, a glass having its edges entering the channels of said strips, and integral portions on said strips folded over said flanges on the sash and securing the glass in position within the sash, substantially as set forth.

2. The combination of a metallic window-sash certain of the members of which have inwardly extending flanges thereon, a pane of glass, and metallic strips each bent to a channel section and to provide folds on both sides of the channel one of which folds partially incloses one of said inwardly extending flanges to secure the strip thereto, the edges of said glass being received in the channels of said strips, substantially as set forth.

3. The combination of a rectangular metallic window-sash certain of the members whereof have flanges projecting inwardly of the sash from the inner walls thereof, metallic strips of channel section within said sash each having the bottom of the channel bearing against the inner wall of a member of the sash, a fold on one side of said channel inclosing the flange on a member of the sash and a fold on the other side of said channel the edge of which lies close to the inner wall of said member, and a glass the edges of which enter the channels in said strips, substantially as set forth.

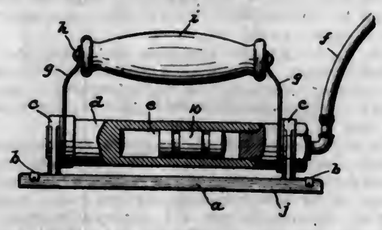
4. The combination of a metallic window-sash certain of the members whereof have flanges extending inwardly of the sash, the strips 7 having the channels therein, the projections 12 integral with said strips and folded over said flanges, the walls 10 integral with said strips, and the panel having its edges entering the channels in said strips, substantially as set forth.

1,017,236. VEHICLE-WHEEL. IVAR L. TVINDE, Watertown, S. D. Filed Mar. 9, 1911. Serial No. 613,419. (Cl. 152—28.)



In a vehicle wheel, the combination with a rim and a hub, of flat spring steel spokes, arranged around the hub, each spoke having a U shaped bend intermediate its ends and curved end portions that run to the rim and hub respectively, the outer end of each spoke having a hook formation arranged for pivotal connection with the rim, clips secured to the rim, one for each spoke, each clip having a round shank between which and the rim the hook of the spoke is confined in pivotal condition, and clips for securing the inner ends of the spokes upon the hub.

1,017,237. POLISHER OR ABRADER. WILBER H. VAN SICKEL, Philadelphia, Pa., assignor to Thos. H. Dallett Co., a Corporation of New Jersey. Filed June 30, 1911. Serial No. 636,154. (Cl. 51—13.)



1. In combination, a polisher or abrader, a vibrator, and means to transmit the vibrations, but not the movement of, the vibrator to the polisher or abrader.

2. The combination with a polisher or abrader, of a pneumatic vibrator and a rigid connection between the cylinder of the vibrator and the polisher or abrader.

3. In combination, a polisher or abrader, a reciprocating vibrator and members rigid with the polisher or abrader adapted to transmit the vibrations in the reciprocation of the vibrator.

4. In combination, a polisher or abrader, a vibrator, means to transmit the vibrations, but not the movement of, the vibrator to the polisher or abrader, and a cushioning handle for the polisher or abrader.

5. The combination with a polisher or abrader, of a pneumatic vibrator and a rigid connection between the cylinder of the vibrator and the polisher or abrader, and a cushioning handle for the polisher or abrader.

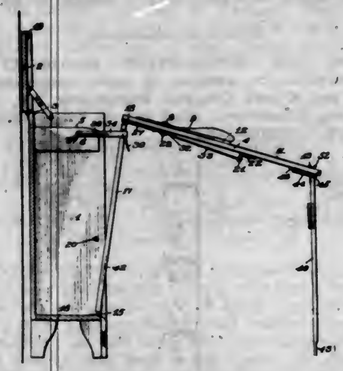
[Claim 6 not printed in the Gazette.]

1,017,238. NIGHT-LATCH. DAVID WALTER WEED, Terryville, Conn., assignor to Eagle Lock Co., Terryville, Conn., a Corporation. Filed Nov. 7, 1911. Serial No. 658,956. (Cl. 70—42.)

1. The combination in a knob latch, of a bolt having a spindle, a plate secured to the inner end of said spindle, said plate provided with a stop-lug at one side, and a knob lever having two arms one of which will engage with said lug whereby the latch bolt may be locked in its retired position.

2. The combination in a knob latch, of a bolt having a spindle, a plate secured to the inner end of said spindle, said plate provided on opposite sides and in opposite edges with lugs, and a knob lever one arm of which is adapted to engage with one of the lugs, whereby the latch bolt is locked in its retired position.

1,017,239. FILING-CABINET. FREDERICK W. ACKERMAN, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 5, 1911. Serial No. 619,142. (Cl. 45—2.)



1. The combination with a cabinet, a supporting member connected thereto for relative movement, and a front foldable against the supporting member and adapted to be extended to form a shelf, of a sliding connection between the supporting member and cabinet comprising a link on one part provided with a guide terminating in a locking shoulder and an abutment on the other coöperating with the guide and shoulder, and means operating on one member tending to disconnect the locking shoulder from the abutment, said means being actuated by the front when moved to its folded position against the supporting member.

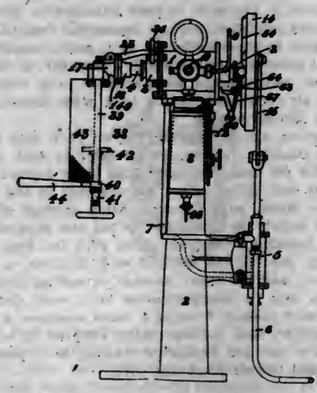
2. The combination with a cabinet, a supporting frame hinged thereto at its lower end to tilt outwardly and a front hinged to the upper end of the supporting frame to fold against the same or assume an extended position in which it constitutes a shelf, of a link pivoted to the supporting frame and provided with a guide having a locking shoulder, an abutment on the cabinet coöperating with the guide and engaging with the locking shoulder when the frame is tilted and a spring arm on the link operating, when compressed, to throw the shoulder and abutment out of engagement, said arm being actuated by the front when folded against the supporting frame.

3. The combination with a cabinet having a front adapted to be extended therefrom to constitute a shelf, of a leg hinged to the shelf to fold against the same, or to be extended to a supporting position and an abutment at one side of the front normally lying below the surface thereof but automatically actuated to project above such surface by the action of the leg when the latter is extended.

4. The combination with a cabinet having a front adapted to be extended therefrom to constitute a shelf, of a leg hinged to the shelf to fold against the same, or to be extended to a supporting position and an abutment at one side of the front comprising a pin arranged in the body of the front, and a spring having a normal tendency to hold the pin below the outer surface thereof, said pin being actuated by the leg when the later is extended, to project outwardly from the surface of the shelf.

5. The combination with a cabinet having a hinged front adapted to be extended to form a shelf, of a locking projection at each side of the cabinet, a spring latch on each side of the front arranged to coöperate with the respective projections, a bell crank for each latch having one arm pivotally connected thereto, a pivoted releasing lever arranged centrally of the front and members connected to the other arm of each bell crank, respectively, and connected to the releasing lever on opposite sides of its pivot.

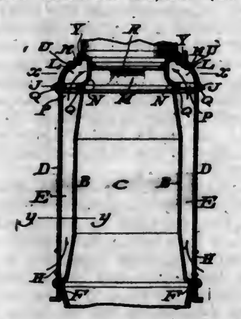
1,017,240. AERATION OF LIQUIDS. ARTHUR JAMES BILLOWS, Melbourne, Victoria, Australia. Filed July 9, 1910. Serial No. 571,106. (Cl. 209—3.)



1. In an apparatus for aerating liquids, the combination of a stationary aerating chamber, an expansion chamber normally out of communication with said aerating chamber, means controlling communication between said chambers, means for supplying gas to said expansion chamber and means for periodically establishing communication between said expansion and aerating chambers, said controlling means being adapted to operate automatically on an excess of liquid in the aerating chamber.

2. In an apparatus for aerating liquids, the combination of a stationary aerating chamber to which liquid is delivered, an expansion chamber normally out of communication with said aerating chamber and to which gas is supplied, a valve controlling communication between said chambers, means for opening said valve periodically to admit gas from said expansion chamber to said aerating chamber and means whereby said valve will open automatically on an excess of liquid in said aerating chamber and permit said excess to pass to said expansion chamber.

1,017,241. STOVE. ISAAC BROOKE, Pottstown, Pa. Filed June 17, 1911. Serial No. 633,650. (Cl. 126—67.)



1. In a stove, an air heating flue on the combustion chamber thereof, an air inlet in said flue, a hot air outlet for said flue, concentric caps superimposed on said chamber and flue forming a hot air chamber, said caps being closed at the top and separated at the bottom forming a communication with said flue, a hot air port in the exterior cap, and a valve for said port, an offset passage communicating with said hot air chamber, a valve chamber extending from the exterior cap communicating with said passage, and a valve in said chamber, said passage leading to a point remote from said port.

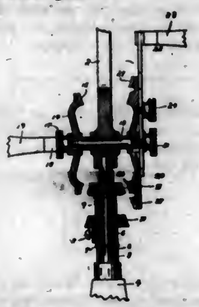
2. In a stove, an air heating flue on the side of the combustion chamber thereof, an air inlet in said flue, a hot air outlet for said flue, a hot air chamber in the upper part of the stove, said chamber being formed of concentric caps which are closed at the top and separated at the bottom forming a communication with the flue, a hot air discharge port in the wall of said chamber, a valve for said port, and an offset passage extending from the exterior cap and in communication with said chamber, the wall of said passage forming a valve chamber, a valve in said chamber, said passage being adapted to be connected with a hot air conductor leading to a point remote from said hot air discharge port.

3. In a stove, an air heating flue on each side of the combustion chamber thereof, an air inlet in each flue, a hot air outlet for each flue, said flues being formed independently of each other, a hot air chamber in the upper part of the stove, said chamber being formed of concentric caps which are closed at the top and separated at the bottom forming a communication with the flue, a hot air discharge port in the wall of said chamber, a valve for said port, and an offset passage extending from the exterior cap and in communication with said chamber, the wall of said passage forming a valve chamber, a valve in said chamber, said passage being adapted to be connected with a hot air conductor leading to a point remote from said hot air discharge port.

1,017,242. COMBINED BREAST-DRILL AND VALVE-GRINDER. ARTHUR BENJAMIN BROWNE, Branford, Conn. Filed Oct. 20, 1911. Serial No. 655,667. (Cl. 51—4.)

1. The combination with a frame, of a driven shaft mounted in said frame, a sleeve secured to said shaft, said sleeve carrying two bevel gears, a drive shaft, disks carried by said drive shaft upon opposite sides of said driven shaft, both of said disks carrying sectional racks adapted to be engaged with one of the bevel gears, and one of the disks carrying an endless rack adapted to be engaged by the other bevel gear.

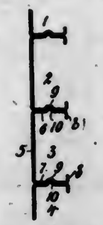
2. The combination with a frame, a chuck mounted in said frame and having an inwardly projecting shaft, a sleeve longitudinally movable on said shaft, said sleeve carrying two bevel gears, a drive shaft, disks carried by said drive shaft, both of said disks having sectional racks adapted to be engaged by one of the bevel gears, and one of the disks formed with an endless rack adapted to be engaged by the other gear.



3. The combination with a frame, a chuck mounted in the said frame and having an inwardly projecting shaft, a sleeve adjustably secured to said shaft, said sleeve carrying two bevel gears, a drive shaft, disks adjustably secured to said drive shaft, both of said disks having sectional racks adapted to be engaged by one of the bevel gears, and one of the disks formed with an endless rack adapted to be engaged by the other gear.

4. The combination with a frame, a chuck mounted in said frame and having an inwardly projecting shaft, a sleeve adjustably secured to said shaft, said sleeve carrying two bevel gears, a drive shaft, disks carried by said drive shaft, one of said disks adapted to be moved longitudinally on the drive shaft, whereby the disks may be separated to permit the adjustment of the sleeve, both of said disks having sectional racks adapted to be engaged by one of the bevel gears, and one of the said disks formed with an endless rack adapted to be engaged by the other gear.

1,017,243. CAR CONSTRUCTION. EDWARD G. BUDD, Philadelphia, Pa., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 20, 1907. Serial No. 389,325. (Cl. 189—85.)



1. A metallic sheathing comprising a plurality of assembled sections of thin sheet-metal each having a body portion and the body portions of the several sections lying in substantially the same plane to form a wall, certain of said sections each having integral edge portions at the lateral edges thereof turned at an angle and so formed as to interlock a section with the sections adjacent thereto to hold it in position, and certain of said sections being removable from the sheathing independently of the parts adjacent thereto by a movement of the section away from said wall, substantially as described.

2. A metallic sheathing comprising a plurality of sections, certain of said sections consisting of sheet-metal strips pressed to provide a body-portion and integral edge portions at the lateral edges of the body-portion turned at an angle thereto, said sections being assembled with said body-portions lying in substantially the same plane, and means for subjecting said sections to flexure, substantially as described.

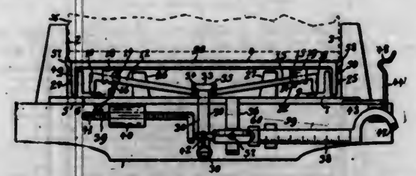
3. A metallic sheathing comprising a plurality of sections, certain of said sections consisting of sheet-metal strips pressed to provide a body-portion and integral edge portions at the lateral edges of the body-portion turned at an angle thereto and to form interlocking parts in said edge portions for positioning the sections, said sections being assembled with said body-portions lying in substantially the same plane and being removable one independently of the sections adjacent thereto by a movement of the edge portions of the section toward each other to cause disengagement of the interlocking parts thereof, substantially as described.

4. A metallic sheathing comprising a plurality of sections consisting of sheet-metal strips pressed to provide in each a body-portion and integral edge portions at the lateral edges of the body-portion turned at an angle thereto and to form parts in said edge portions for interlocking adjacent sections together, said sections being assembled with said body-portions forming a substantially unbroken wall, and means for bowing the sections in the direction of their length, substantially as described.

5. A metallic sheathing comprising a plurality of sections consisting of sheet-metal strips pressed to provide in each a body-portion and integral edge portions at the lateral edges of the body-portion turned at an angle thereto and to form parts in said edge portions for interlocking adjacent sections together, said sections being assembled with said body-portions forming a substantially unbroken wall, said edge portions extending at an angle to the wall to brace the same and having said parts interlocked to position the sections, and said interlocking parts being so formed that one section may be inserted or removed by a movement toward or away from said wall, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,017,244. SCALE ATTACHMENT FOR SUPPORTING WAGON-BEDS. CHARLES E. BURNETT, North Rose, N. Y., assignor of one-half to Cassius M. Clapp, North Rose, N. Y. Filed May 1, 1911. Serial No. 624,508. (Cl. 73—8.)



1. The combination in a scale attachment for a wagon bed of a base plate having recessed ends and a top plate therefor, scale levers mounted on knife edges interposed between said plates and extending parallel thereto, a lever mounted on said base plate and extending transversely thereto, said scale levers having the free ends thereof attached to said transverse lever, a bracket depending from said base plate, a scale beam pivotally mounted on said bracket, weights mounted to slide on said scale beam on one side of said pivot, connections between said scale beam and said transverse lever on the other side of said pivot.

2. The combination in a scale attachment for a wagon of a base plate, angles attached thereto near the ends thereof, a top plate extending parallel to said base plate and having down turned ends thereon, pin and slot connections between said angles and the down turned ends of said top plate, by which a limited vertical movement is permitted to said top plate, scale levers and knife edges interposed between said top plate and said base plate.

3. The combination in a scale attachment for a wagon of a base plate, angles attached thereto near the ends thereof, a top plate extending parallel to said base plate and having down turned ends thereon, pin and slot connections between said angles and the down turned ends of said top plate, by which a limited vertical movement is permitted to said top plate, scale levers and knife edges interposed between said top plate and said base plate, said scale levers being fulcrumed in said angles and extending toward the center of said base plate and parallel thereto.

4. The combination in a scale attachment for a wagon of a base plate, angles attached thereto near the ends thereof, a top plate extending parallel to said base plate and having down turned ends thereon, pin and slot connections between said angles and the down turned ends of said top plate, by which a limited vertical movement is permitted to said top plate, scale levers and knife edges interposed between said top plate and said base plate, said scale levers being fulcrumed in said angles and extending toward the center of said base plate and parallel thereto, a transverse lever pivoted on said base plate, connections between the free ends of said scale levers and said transverse lever whereby the movement of the top plate is communicated to said transverse lever.

5. The combination in a scale attachment for a wagon of a base plate, angles attached thereto near the ends thereof, a top plate extending parallel to said base plate and having down turned ends thereon, pin and slot connections between said angles and the down turned ends of said top plate, by which a limited vertical movement is permitted to said top plate, scale levers and knife edges interposed between said top plate and said base plate, said scale levers being fulcrumed in said angles and extending toward the center of said base plate and parallel thereto, a transverse lever pivoted on said base plate, connections between the free ends of said scale levers and said transverse lever whereby the movement of the top plate is communicated to said transverse lever, means for balancing said transverse lever against said top plate and indicating the weight resting thereon.

[Claims 6 to 11 not printed in the Gazette.]

1,017,245. JOURNAL-BOX. WENDELL R. BUSS, Grand Rapids, and NICHOLAS YONKMAN, Holland, Mich.; said Yonkman assignor to said Buss. Filed Aug. 1, 1911. Serial No. 641,868. (Cl. 64—55.)

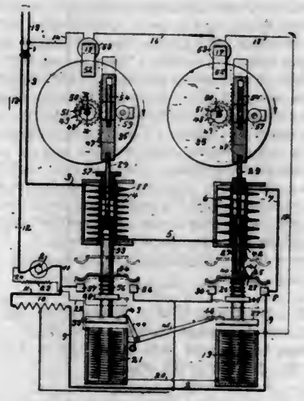
1. A journal box having vertical parallel walls extending upward from the lower half of the box and oppositely inclined inner portions, a cap vertically adjustable between said walls, wedge blocks engaging the cap and having inclined faces engaging the inclined portions of the walls and bolts extending through the walls and wedge blocks and clamping the same to each other.

2. A journal box, comprising a lower part, upwardly extended parallel walls integral therewith having downwardly and outwardly inclined inner portions, a cap vertically adjustable between said walls and clamped thereby, wedge blocks having elongated openings to receive bolts and inclined surfaces engaging the inclined portions of walls, bolts extending through the upper part of the walls and the opening of the wedge blocks and nuts on the bolts oppositely engaging the walls and blocks.

3. A journal box, comprising a fixed lower part, upwardly extended parallel walls integral therewith, a cap vertically adjustable between said walls, said walls having downwardly and outwardly inclined portions on the inner side, wedge blocks each having one vertical and one inclined side and bolts extending through openings in the walls through said wedge blocks to clamp the inclined surface of the same against each other.

4. A journal box, comprising a fixed lower part having at its respective sides upwardly extended parallel walls, a cap vertically adjustable between said walls and oppositely engaged thereby, wedge blocks having elongated openings and recessed into the cap, the said walls and wedge blocks also having engaging downwardly and outwardly inclined surfaces, bolts extending through said walls and blocks, outer nuts on the bolts engaging the outer surfaces of the walls to clamp the same against the cap and inner nuts on the bolts adapted to clamp the inclined surfaces of the wedge blocks against the inclined surfaces of the walls.

1,017,246. AUTOMATIC STARTER FOR ELECTRIC MOTORS. JOHN B. CALDERWOOD, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Dec. 30, 1904. Serial No. 238,884. (Cl. 172—288.)



1. The combination of an electric switch biased to an open position, means for first moving said switch farther away from its closed position, and means for thereafter moving said switch to its closed position.

2. In combination, an electric motor, a resistance in circuit with said motor, a switch for short-circuiting said resistance, said switch being biased to an open position, an electromagnet energized upon the closing of the motor circuit for moving said switch farther away from its closed position, and means for thereafter moving said switch to its closed position.

3. In a starting device for electric motors, the combination of a resistance, a switch which in one position short-circuits said resistance, said switch being biased to another position, means rendered operative upon the closing of the motor circuit to move said switch to a third position farther removed from its short-circuiting position, and means for thereafter moving said switch to its short-circuiting position.

4. In combination, a motor, a resistance in the armature circuit thereof, a switch for short-circuiting said resistance, said switch being biased to an open position from which it is movable both to closed position and to a position farther removed from closed position, two electromagnets tending to move said switch respectively to closed position and to the position farther away from closed position, the former of said magnets being in a path parallel to that including the motor armature and the other magnet being in series with the motor armature.

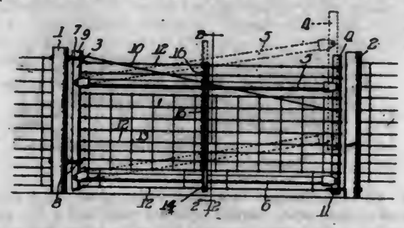
5. In combination, an electric motor, a sectional resistance in the armature circuit thereof, switches for short-circuiting the several sections of said resistance, said switches being biased to an open position, means rendered operative upon the closing of the motor circuit for moving said switches farther away from their closed position, and means for thereafter moving said switches successively to closed position.

[Claims 6 to 15 not printed in the Gazette.]

1,017,247. SEWING-MACHINE NEEDLE. ANGUS CARSON, Tionesta, Pa. Filed Jan. 21, 1910. Serial No. 539,229. (Cl. 112—11.)

A needle including a shank having a longitudinal groove therein, an eye and a point, and a resilient member received by said groove and having a right angled lower end terminal and an upper end bend with a portion parallel with the shank body, said shank also having a lateral opening communicating with said eye, and a short groove in its upper end to receive said resilient member, said lateral opening receiving said right angled lower end terminal and said upper end short groove receiving the parallel portion of the upper end bend of said resilient member.

1,017,248. GATE. JOSEPH B. CLAY, Cedar Falls, Iowa. Filed June 25, 1910. Serial No. 568,778. (Cl. 39—100.)

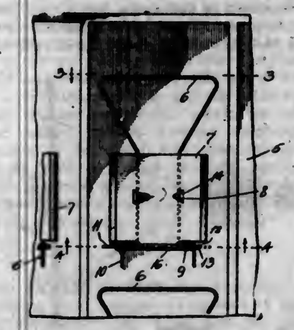


The combination with a gate of the character set forth including end bars and cross bars pivotally connecting said end bars, of a detachable brace comprising mating members extending transversely of said cross bars with one on each side thereof, said members being offset to provide elongated openings therebetween at the cross bars permitting relative movement between the brace and cross bars in the vertical adjustment of the gate, and clamping means positioned to one side of the cross bars to maintain said brace members in engagement with each cross bar at substantially one point on each side thereof to provide a pivotal connection between the brace and cross bars.

1,017,249. SPRING-CLIP. EDWIN H. COOPER, Los Angeles, Cal. Filed Mar. 11, 1911. Serial No. 613,719. (Cl. 129—20.)

1. A file clamp mechanism comprising a back, a clamp frame having hinge engaging portions, and a hinge adapted to engage said hinged portion and extending through the back together with interlocking securing means for holding said hinge in place.

2. A file mechanism comprising a clamp having springs formed thereon, a pivot pin extending through said springs, a back for supporting the said pivot pin, one end of said pivot pin being extended through the back, and a bar engaging said end and extending through the back at one point for holding the said pivot pin in position.



3. A file holding clamp mechanism comprising a clamp, a pivot pin adapted to engage one end of said clamp for holding it pivotally in place, and a locking bar arranged upon the other side of the back and adapted to extend through the same for locking the pivot pin in position.

4. A file mechanism comprising a back, clamps mounted on the opposite faces thereof, and having coiled springs at their ends, interlocking pivot pins engaging said coiled springs, and extending through the said back for holding both of said clamps in pivotal position.

5. A file mechanism comprising a clamp, having spring looped portions formed thereon, a backing carrying said clamp, a pivot rod extending through the loop portions and securing the same to the backing, a tab holder carried by the clamp and having a pivot pin engaging portion, the said portion being arranged to space the spring portions of the clamp a suitable distance apart.

1,017,250. MOVING-PICTURE-PROJECTING APPARATUS. GUSTAV DIETZ, Yonkers, N. Y. Filed Apr. 29, 1910. Serial No. 558,356. (Cl. 88—18.)

1. In an apparatus of the character described a series of blades, and means for rotating them in unison, the radius of each blade being shorter than the distance between its axis and the axial line of the lens.

2. In an apparatus of the character described a series of blades, mounted in symmetrical positions in a circle around the axial line of the lens and means for rotating them in unison, the radius of each blade being shorter than the distance between its axis and the axial line of the lens.

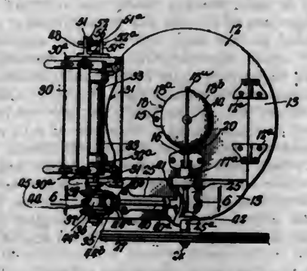
3. In an apparatus of the character described, a series of blades arranged in pairs in opposing positions and means for rotating the blades of each pair in unison, the radius of each blade being shorter than the distance between its axis and the axial line of the lens.

4. In an apparatus of the character described a series of blades arranged in pairs in opposing positions and means for rotating the blades of each pair in unison, the blades of each pair being arranged to cause their center lines to be in line with the center of the lens at the same time, the radius of each blade being shorter than the distance between its axis and the axial line of the lens.

5. In an apparatus of the character described a series of blades mounted in symmetrical positions in a circle around the axial line of the lens and arranged in pairs in opposing positions and means for rotating the blades of each pair in unison, the radius of each blade being shorter than the distance between its axis and the axial line of the lens.

[Claims 6 to 36 not printed in the Gazette.]

1,017,251. GEARING. JOHN EDENS, Davenport, Iowa, assignor to H. F. Brammer Manufacturing Company, Davenport, Iowa, a Corporation of Iowa. Filed Oct. 21, 1911. Serial No. 655,852. (Cl. 74—58.)



1. An operating mechanism for wringers and the like comprising a driving shaft, a driven shaft adapted to be rotated in either direction, an endwise movable sleeve mounted on said driven shaft and rotatable therewith, said sleeve having an annular groove in its outer surface, oppositely placed reversing gears made rigid with said sleeve, a pinion rigidly secured to said driving shaft and adapted for engagement with either of said reversing gears, a gear casing having a part engaging within the groove of said sleeve, means for imparting endwise movement to said sleeve in either direction and a locking device adapted to lock said sleeve with either of the reversing gears in engagement with said beveled pinion or in a neutral position at either side of said pinion.

2. An operating mechanism for wringers and the like, comprising a driving shaft, a driven shaft adapted to be rotated in either direction, an endwise movable sleeve mounted on said driven shaft and rotatable therewith, oppositely placed reversing gears made rigid with said sleeve, a pinion fixed to said driving shaft and adapted for engagement with either of said reversing gears, a gear casing having rotative bearing on said sleeve but being fixed against movement on said sleeve in a direction endwise thereof, and means acting on said gear casing to move it in either direction parallel to the longitudinal axis of said sleeve.

3. An operating mechanism for driving a wringer and the like comprising a driving shaft, a driven shaft, an endwise movable sleeve mounted on said driven shaft and rotatable therewith, said sleeve having an annular groove in its periphery, oppositely placed reversing gears made rigid with said sleeve, a pinion secured to said driving shaft and adapted for engagement with either of said reversing gears, a gear casing adapted for the protection of said reversing gears and provided with a radial flange on its inner surface engaging within the groove of said sleeve, a lever fulcrumed to swing in a plane parallel to the direction of movement of said sleeve, said lever having pivotal connection with said gear casing, a hand lever located a distance from said first lever, a link operatively connecting said two levers, and means adapted to lock said hand lever in either of its positions corresponding to the two operative positions and the neutral position of said reversing gears.

4. An operating mechanism for driving a wringer and the like comprising a driving shaft, a driven shaft, a bushing of rectangular cross section fixed to said driven shaft, a sleeve having endwise movement on said bushing provided with an annular groove in its periphery, oppositely placed reversing gears made rigid with said sleeve, a pinion secured to said driving shaft and adapted for engagement with either of said reversing gears, a gear casing adapted for the protection of said reversing gears and provided with a radial flange on its inner surface engaging within the groove of said sleeve, a lever fulcrumed to swing in a plane parallel to the direction of movement of said sleeve, said lever having pivotal connection with said gear casing, a hand lever located at a distance from said first lever, a link operatively connecting said two levers, and means adapted to lock said hand lever in either of its positions corresponding to the two operative positions and the neutral position of said reversing gears.

5. An operating mechanism for wringers and the like comprising a main driving shaft, an auxiliary driving shaft at right angles thereto and driven thereby, a driven shaft parallel to said main driving shaft adapted to be rotated in either direction, an endwise movable sleeve mounted on said driven shaft and rotatable therewith, oppositely placed reversing gears made rigid with said sleeve, a pinion rigidly secured to said auxiliary driving shaft and adapted for engagement with either of said reversing gears, means for imparting endwise movement to said sleeve in either direction, a locking device adapted to lock said sleeve with either of the reversing gears in engagement with said pinion or in neutral position at either side of said pinion, and a common base-plate provided with upright bearing arms for said several shafts.

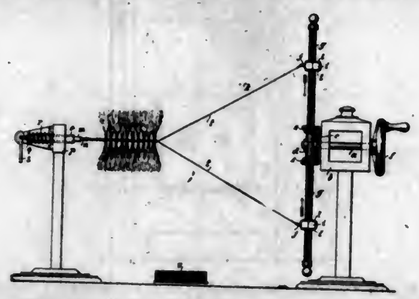
1,017,252. SASH-PULLEY. FREDERICK EGGE, Bridgeport, Conn., assignor to The Smith & Egge Mfg. Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 14, 1911. Serial No. 665,729. (Cl. 16—17.)

1. In a sash pulley, the combination of a face plate having its outer edges bent rearwardly at right angles to the face of said plate and provided with inwardly extending ears that are suitably spaced from the rear face of said plate, complementary housing sections having flange portions provided with shoulders projecting therefrom, said portions adapted to be confined between said ears and the rear face of said plate with said shoulders and ears in abutment, and the pulley suitably journaled within said housing sections.

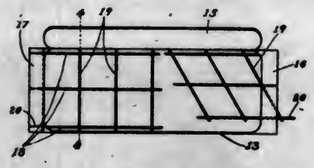
2. In a sash pulley, the combination of the face plate having its outer edges bent rearwardly at right angles to the face of said plate and having opposite sides of said bent portions lanced and driven inwardly to form ears that are spaced from the rear face of said plate, complementary housing sections having flanges extending from their inner edges and shouldered portions formed in said flanges, the latter in assembled position extending beneath said ears with the shouldered portions abutting thereagainst, and a pulley wheel journaled within said housing sections.

1,017,253. APPARATUS FOR MAKING WIGS AND FALSE FRINGES. ALBERT ETIENNE, St.-Benoit-sur-Loire, France, assignor to Raoul Lory, Paris, France. Filed Feb. 28, 1910. Serial No. 546,527. (Cl. 132—24.)

In an improved apparatus for making wigs and false fringes the combination of two fixed uprights having bearings at their upper ends, with a shaft revolubly mounted in one of said bearings, a hand wheel for revolving said shaft, a bevel wheel fixed to said bearings, a support keyed upon said shaft, bevel wheels engaging with the fixed bevel-wheel, mounted upon the ends of said support, screw spindles fixed upon said bevel-wheels, a nut upon each of said screw spindles carrying an eye each nut being composed of two parts, and a tube fixed in the bearing of the other upright, an axle movably mounted in said tube, a hook fixed in the front end of said axle, a cotter in the rear end of said axle and a spiral spring inserted between said cotter and said bearing, a cam lever behind the rear end of said axle for pushing the same forward in compressing said spiral spring, and a wire fixed with one end to the eye of the upper nut guided at the middle by said hook of the movable axle and fixed with its other end to the eye of the lower nut; substantially as described and illustrated and for the purpose set forth.



1,017,254. EGG-CASE. GEORGE A. FISHER and JOHN A. MORRISON, Minneapolis, Minn., assignors to Fisher Paper Box Company, Minneapolis, Minn., a Corporation. Filed Aug. 21, 1911. Serial No. 645,112. (Cl. 229—28.)

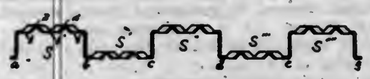


1. An egg crate comprising a four-walled open-ended outer casing, said walls being united at the edges thereof, a door cut wholly from the top wall of said outer casing and hingedly connected with one of the side walls, and an articulated partition member within the outer casing forming compartments for the reception of individual eggs and coöperating with the door to hold the same properly positioned when closed.

2. An egg crate comprising a four-walled open-ended outer casing, said walls being united at the edges thereof and adapted to fold at the points of union of said walls to form a flat member, a door cut wholly from the top wall of said outer casing and hingedly connected with one of the side walls, and an articulated partition member within the outer casing also adapted to fold flat within the outer casing, and when raised therein forming compartments for the reception of individual eggs and coöperating with the door to hold the same properly positioned when closed.

3. An egg crate comprising a four-walled open-ended outer casing, said walls being united at the edges thereof and adapted to fold at the points of union of said walls to form a flat member, the top wall being cut across near each end and at the junction with one side to form a door hingedly connected with the other side and leaving straps of said top wall connecting said side walls at their ends, and an articulated partition member within the outer casing also adapted to fold flat within the outer casing, and when raised therein forming compartments for the reception of individual eggs and coöperating with the door to hold the same properly positioned when closed, said partition member having the longitudinal partitions thereof extended beyond the compartments at each end beneath said straps.

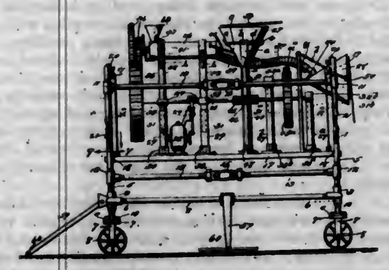
1,017,255. EXPANDED METAL. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor of one-half to Alexander M. Neeper, Pittsburgh, Pa. Filed Jan. 30, 1911. Serial No. 605,626. (Cl. 72—117.)



1. An expanded metal made from a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other, between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof, and the bases of the corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections, said entire metal sections and reticulated metal sections being in different planes.

2. An expanded metal made from a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other, between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof, and the bases of the corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections, said entire metal sections and said reticulated sections being in planes substantially at right angles to each other.

1,017,256. PLASTERING-MACHINE. GUY R. FOX, Evanston, Ill. Filed Feb. 21, 1911. Serial No. 610,095. (Cl. 72—180.)



1. In a plastering machine, a funnel shaped member, a cylinder therein, a spiral feed mechanism arranged in the cylinder and having a hollow shaft, a revoluble knife above the funnel shaped member and having a shaft arranged telescopically within the hollow shaft of the feed mechanism, and means for yieldably mounting the shaft of the knife.

2. In a plastering machine, a funnel shaped member, a spiral feed mechanism therein having a hollow shaft, a revoluble plastering knife above the funnel shaped member and provided with a shaft extending into the shaft of the feed mechanism, means for yieldably mounting the shaft of the plastering knife, and connections between the two shafts to permit them to rotate as one body.

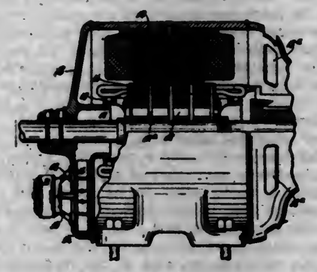
3. In a plastering machine, a vertically movable platform, supports thereon having thumb screws penetrating their ends, an annular member having a turn buckle engaged by the thumb screws, and a funnel shaped member including a revoluble plastering knife and plaster feed mechanism, said funnel shaped member being supported within the annular member.

4. In a plastering machine, a funnel shaped member including a revoluble plastering knife and plaster feed mechanism, a plaster mixing tank having a flexible connection with the funnel shaped member, said tanks having mixing mechanism a revoluble crank shaft having gear connections with the feeding mechanism, and knife, and with the mixing mechanism, for transmitting motion thereto.

5. In a plastering machine, a funnel shaped member including a revoluble plastering knife and plaster feed mechanism, a plaster mixing tank having a flexible connection with the funnel shaped member, said tank having mixing mechanism, a revoluble crank shaft having gear connections with the feeding mechanism, and knife and with the mixing mechanism, for transmitting motion thereto, and means for throwing the mixing mechanism in and out of gear.

[Claims 6 to 28 not printed in the Gazette.]

1,017,257. SYSTEM OF MOTOR CONTROL. BUDD FRANKENFIELD, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Jan. 31, 1907. Serial No. 354,969. (Cl. 171—252.)



1. The method of ventilating an electric motor, which consists in producing part of the ventilation by its own rotation and part from an auxiliary source, and varying said parts inversely.

2. In combination, a main electric motor, ventilating means driven thereby, an auxiliary electric motor, ventilating means driven thereby, and means for varying the speeds of said motors inversely.

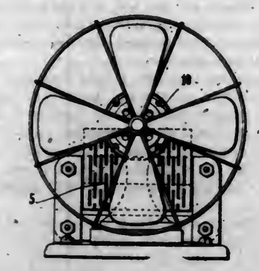
3. In combination, a dynamo-electric machine which ventilates itself by its own rotation, an auxiliary dynamo-electric machine, a fan driven by said auxiliary machine and assisting the ventilation of the main dynamo-electric machine, and means for varying the speeds of the two machines inversely.

4. In combination, a variable speed main dynamo-electric machine which ventilates itself by its own rotation, an auxiliary motor, a fan driven by said motor and assist-

ing in the ventilation of said main motor, and connections for said auxiliary motor for causing the speed thereof to vary inversely to the speed of said main motor.

5. In combination, a dynamo-electric machine which circulates a cooling fluid through itself by its own rotation, auxiliary means for assisting the circulation of said fluid, and means for varying the amount of assistance given by said auxiliary means inversely to the amount of circulation caused by the rotation of the main dynamo-electric machine.

1,017,258. OZONIZING APPARATUS. MAX FUSS, Berlin, Germany. Filed Feb. 16, 1911. Serial No. 608,925. (Cl. 204—32.)



1. In an ozonizing apparatus, a transformer having a high tension coil, and a condenser acting as ozonizer, the said condenser being arranged so as to surround the high tension coil of the transformer.

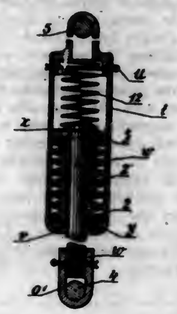
2. In an ozonizing apparatus, a transformer having a high tension coil, and a condenser acting as ozonizer, said condenser consisting of a tube of dielectric material lined on the inside with metal foil and arranged to surround the high tension coil of the transformer and a metallic tube surrounding said tube of dielectric material, an air gap being formed between said tubes.

3. In an ozonizing apparatus, a transformer provided with a high tension coil, and a condenser acting as ozonizer, said condenser consisting of a tube of dielectric material having a metal lining on its inside and arranged to surround the high tension coil of the transformer and a metal tube surrounding said tube of dielectric material and spaced apart therefrom so as to form an air gap therebetween, the high tension wire of the transformer being connected to said metal lining, and the leading-in wire of the high tension coil being connected to the iron core of the transformer and said outer metallic tube.

4. In an ozonizing apparatus, a transformer provided with a high tension coil, and a condenser acting as ozonizer, said condenser consisting of a tube of dielectric material having a metal lining on its inside and arranged to surround the high tension coil of the transformer and a metal tube surrounding said tube of dielectric material and spaced apart therefrom so as to form an air gap therebetween, the high tension wire of the transformer being connected to said metal lining, and the leading-in wire of the high tension coil being connected to the iron core of the transformer, and said outer metallic tube being slitted so as to afford the passage of air.

1,017,259. ELASTIC WHEEL. LOUIS ANTOINE GARCHEY, Paris, France. Filed Dec. 16, 1908. Serial No. 467,845. (Cl. 152—28.)

An elastic spoke for wheels comprising in combination a metal tube fixed to the rim, said tube being closed at its inner end but having an opening in said closed end, a metal bolt fixed to the hub and having a head at its opposite end, said bolt passing through said opening and telescoping in said tube, a guide disk on said bolt bearing against the head thereof, an elastic element consisting of superposed Belleville-washers interposed between said disk and the inner closed end of said tube, and a spiral spring inserted between said guide disk and the upper narrow



end of the tube, substantially as described and shown and for the purpose set forth.

1,017,260. ELECTRIC-LAMP SOCKET. JOHN H. GORNST, Chicago, Ill., assignor to Federal Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1910. Serial No. 591,009. (Cl. 173—342.)

1. A socket embracing a hollow shell member adapted to be attached to a support and provided with an internal thread at its lower end, an insulating block adapted to fit within said shell member and to which are secured a center contact and a shell contact together with their associated binding posts, said insulating block having apertures for the passage of the conductor wires, said shell member and insulating block being provided with engaging parts adapted to prevent rotation of said block with reference to said shell member, and a tubular insulating block surrounding said contacts and said binding posts and adapted to engage at its upper end against said insulating block, said tubular block being provided with an external thread adapted to engage with the internal thread of said shell member.

2. A socket embracing a hollow shell member having a dome-shaped body provided at its lower end with an internal screw-thread and having a tubular internally threaded extension at its top, an insulating block adapted to fit within said dome-shaped body of the shell member and provided with apertures for the line wires, said insulating block and shell member being provided with engaging parts adapted to prevent the block from rotating with reference to the shell member, said block being provided with a central boss to which are secured a center contact and a shell contact and their associated binding posts, and a tubular insulating block surrounding said contacts and binding posts and engaging at its upper end against the lower face of said insulating block, said tubular block being provided with an external thread adapted to engage with the internal thread at the lower end of said shell member.

3. A socket embracing a hollow shell member having a dome-shaped body provided at its lower end with an internal screw-thread and having a tubular extension at its top, an internally threaded, reinforcing ring secured within said tubular extension, an insulating block embracing a base conformed to fit within the dome-shaped body of said shell member, and a central boss, said insulating

block and said shell member having engaging parts adapted to prevent the rotation of one with reference to the other, said boss being cut away at its opposite sides and said insulating block being provided with oppositely disposed apertures for the conductor wires, a center contact and a shell contact secured to said boss, associated binding posts secured to said insulating block adjacent said apertures at the points where said boss is cut away, and a tubular insulating block recessed at its upper end to receive said boss and engaging at its upper end against said insulating block, said tubular block being provided with a thread adapted to engage with the internal thread at the lower end of said shell member.

4. A socket embracing a hollow shell member adapted to be attached to a support and provided with an internal and external thread at its lower end, an insulating block adapted to fit within said shell member and to which is secured a center contact and a shell contact, together with their associated binding posts, said insulating block having apertures for the passage of the conductor wires, said shell member and insulating block being provided with engaging parts adapted to prevent rotation of said block with reference to said shell member, and a tubular insulating block surrounding said contacts and said binding posts and adapted to engage at its upper end against said insulating block, said tubular block being provided with an external thread adapted to engage with the internal thread of said shell member.

5. A socket embracing a hollow shell member adapted to be attached to a support at its upper end, an insulating block adapted to fit within said shell member and to which is secured a center contact and a shell contact together with their associated binding posts, said insulating block having apertures for the passage of the conductor wires, said shell member and insulating block being provided with means adapted to prevent rotation of said block with reference to said shell member, and a tubular insulating block surrounding said contacts and said binding posts adapted to engage at its upper end against said insulating block, and means provided on said tubular block adapted to engage the lower end of said shell member.

1,017,261. PROCESS OF PRODUCING FORMATES. ALBERT HEMPEL, Leipsig-Oetzsch, Germany. Filed Sept. 7, 1910. Serial No. 580,913. (Cl. 23—24.)

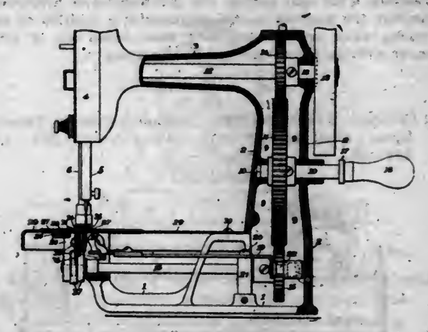
1. The process herein described of producing formates, which consists in adding caustic alkalies gradually in small quantities to carbon monoxid at a high temperature, high pressure and present in excess.

2. The process herein described of producing formates, which consists in adding caustic alkalies gradually in small quantities to carbon monixid at a temperature of about 200° C. high pressure and present in excess.

1,017,262. HAND SEWING-MACHINE. ORVILLE D. KIES, New York, N. Y. Filed Dec. 5, 1910. Serial No. 595,665. (Cl. 112—22.)

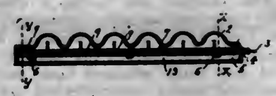
1. In a hand sewing machine, a hollow upright, a driving shaft journaled in opposite walls of said upright and having its outer end projecting beyond the outer wall of the upright, a master spur gear on the interior of the upright carried by said shaft, a needle shaft having one end journaled in the outer wall of the upright and having said end thereof extending beyond the outer wall of the upright, a balance wheel arranged on said outer end of the needle shaft, a feed dog shaft at the base of the upright, small spur gears carried by said needle and feed dog shafts and meshing with said master gear, and a crank lever secured directly to the outer end of the driving shaft beyond the balance wheel.

2. In a hand sewing machine, a hollow head, a driving shaft journaled in opposite walls of said head and having its outer end projecting beyond the outer wall of the head, a master spur gear on the interior of the head carried by said shaft, a needle shaft in the head, a small spur gear on the needle shaft in mesh with said master gear, a feed dog shaft in the head, a small spur gear carried by the feed dog shaft, and meshing with said



master gear, and a crank lever secured directly to the outer end of the driving shaft.

1,017,263. ELECTRIC ILLUMINATION. ISIDOR KITSEE, Philadelphia, Pa. Filed Feb. 8, 1909. Serial No. 476,614. (Cl. 176—14.)



1. A luminous sign, comprising a casing, a filament holder arranged therein, a plurality of conductors associated with said holder and having line terminals at the exterior of the casing, a plurality of filaments connected in parallel to said conductors, and means for locking the filament holder in position within the casing.

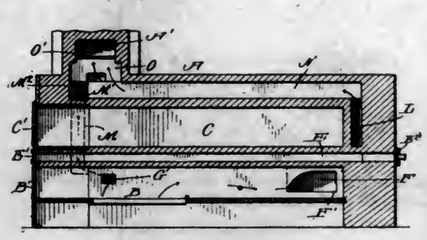
2. A luminous sign, comprising a casing provided with bulb-like portions in simulation of individual incandescent lamps, a filament holder arranged within the casing, a plurality of conductors carried by said holder and having line terminals projecting at the exterior of the casing, a plurality of filaments connected in parallel to said conductors, one of said filaments being arranged in each of said bulb-like portions of the casing, and means for interlocking said filament holder with said casing to maintain the filaments in their respective bulb-like portions.

3. A luminous sign, comprising a casing, having inwardly-extending projections, a filament holder arranged within said casing, a plurality of conductors associated with said holder and having line terminals extending at the exterior of the casing, a plurality of filaments connected in parallel to said conductors, and a plurality of other projections carried by the casing and separated from the first-mentioned projections, whereby the filament holder is received between said two series of projections, the filament holder having notches to receive the last-mentioned projections when said notches register therewith and to hold said filament holder in assembled relation to the casing when the filament holder has been moved to bring said notches out of alinement with the last-mentioned projections.

4. A luminous sign, comprising a casing having inwardly-extending projections therein, said casing also having a series of bulb-like portions to simulate individual incandescent lamps, a filament holder arranged within said casing, a plurality of conductors associated with said holder and having line terminals at the exterior of the casing, a plurality of filaments connected in parallel to said conductors, one of said filaments projecting into each of said bulb-like portions of the casing, and a plurality of other projections also arranged in said casing, the filament holder being provided with notches adapted

to register with the last mentioned projections, whereby to permit the filament holder to be placed in assembled relation with said casing, the last-mentioned projections holding the filament holder in assembeled relation to said casing when said notches have been moved out of alinement with said last-mentioned projections.

1,017,264. BAKER'S OVEN. FRIEDRICH KOCH, Parsons, Kans. Filed Apr. 18, 1911. Serial No. 621,803. (Cl. 107—55.)



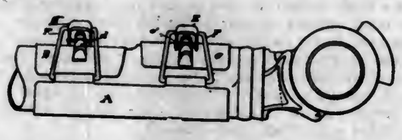
1. A baker's oven comprising a combustion chamber, an oven, a dead air space arranged between the oven and the combustion chamber and having a width equal to that of the oven, and opening outwardly at opposite ends of the oven structure, flues arranged beneath said dead air space upon each side of the combustion chamber, two of said flues being arranged upon each side, one flue on each side having communication with the combustion chamber at its forward end, and the other flue on each side having communication with said chamber at its rear end, and a chimney, each of said side flues having communication at their forward ends with the chimney.

2. An oven structure having a baking chamber arranged centrally therein, a combustion chamber arranged beneath the baking chamber and of less width, two parallel flues being arranged upon said side of the combustion chamber, a dead air space arranged between the baking and the combustion chambers, said dead air space extending over both sets of side flues, the said flues of each set communicating respectively with the combustion chamber at the forward and rear ends of the structure, and having communication with a suitable chimney, of flues arranged at the sides of the baking chamber, said last mentioned flues communicating with a transverse flue arranged at the rear of the baking chamber and communicating centrally with the rear end of the combustion chamber, and a plurality of flues arranged above the baking chamber, a portion of said last mentioned flues receiving products of combustion from the rear transverse flue, and the remainder of them receiving products of combustion from the first mentioned flues having communication with the rear of the combustion chamber, all of said upper flues having communication with a suitable chamber.

3. A baker's oven comprising a structure having an oven chamber and provided with a chimney, a furnace arranged under said chamber, a dead air space arranged between said furnace, and oven chamber flues arranged over and to each side of said oven chamber communicating with said chimney, and flues arranged under said dead air space communicating with the first-mentioned flues.

4. A baker's oven comprising a furnace structure having a central furnace, a dead air space arranged over said furnace, the dead air space opening to the outer air at each end, doors adapted to close said opening, an oven arranged over said dead air space, flues arranged over said oven, flues arranged to each side of said furnace under said dead air space, said flues communicating respectively with the front and rear ends of said furnace and with the flues surrounding said oven.

1,017,265. HOSE-PATCH. SAMUEL MCRAE and JOHN H. BLOM, Everett, Wash., assignors to McRae-Blom Company, Everett, Wash., a Corporation of Washington. Filed July 11, 1911. Serial No. 637,927. (Cl. 137—33.)



1. A hose-patch composed of a relatively long semi-cylindrical section and two relatively short semi-cylindrical sections hingedly attached, and adapted to embrace the hose, interlocking mechanism carried at the meeting edges of said sections and having independent circumferential movement so as to cause a relative approach of the edges and to hold them in locked engagement.

2. A hose-patch composed of a relatively long semi-cylindrical section and two relatively short semi-cylindrical sections, said short sections being hingedly attached to a longitudinal edge of the long section, and adapted to embrace the hose, and co-acting means for adjustably connecting said sections and holding them in locked engagement.

3. A hose-patch composed of a relatively long semi-cylindrical section and two relatively short semi-cylindrical sections, the short sections being hingedly attached to a longitudinal edge of the long section, and adapted to embrace the hose, and locking-levers and curved rack-bars carried at the meeting edges of said sections and constructed and arranged for coöperation whereby the meeting edges may be drawn together relatively, according to the variations in the circumference or compressibility of the hose, and held in locked engagement.

4. A hose-patch composed of two semi-cylindrical short sections hingedly connected longitudinally to one semi-cylindrical long section, and co-acting means at the meeting edges of said sections to adjustably connect the same relatively to the variations in the circumference and compressibility of the hose within the embrace of the patch and to hold them in locked engagement and around the hose.

5. A hose-patch composed of two semi-cylindrical short sections hingedly connected longitudinally to one semi-cylindrical long section and adapted to embrace the hose, the inner curved surface of each section having a marginal projection, and co-acting means carried at the meeting edges of said sections to adjustably connect them relatively to the variations in the circumference and compressibility of the hose and to hold them in locked engagement.

[Claim 6 not printed in the Gazette.]

1,017,266. WINDOW-SCREEN. WILLIAM B. MILLER, Pine Bluff, Ark. Filed July 15, 1911. Serial No. 638,704. (Cl. 156—14.)

1. The combination with a window frame having vertical guide cleats secured to opposite sides thereof, of a screen slidably mounted in said frame, guide plates at the upper and lower ends of the screen movable upon said cleats, said screen being pivotally mounted between the guide plates at its upper end and having outward swinging movement with relation to the window frame when in its lowered position, and means for preventing further downward movement of the screen in the window frame in the swinging movement thereof.

2. The combination with a window frame having vertical guide cleats secured to opposite sides thereof, of a screen slidably mounted therein, and substantilly U-shaped guide plates carried by the screen at its upper and lower ends and movable upon said cleats, said upper guide plates embodying resilient sustaining means adapted for frictional engagement with the window frame to retain the screen in a raised position therein.

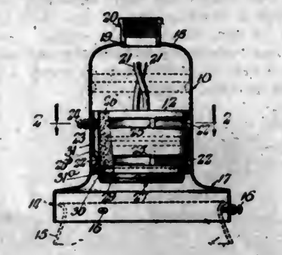
3. The combination with a window frame, of a screen slidably mounted therein, guide members secured to the upper ends of the screen at opposite sides thereof engaging the frame to guide the screen in its sliding movement, said guide members also embodying sustaining means to support the screen against gravity movement in the window frame.

4. The combination with a window frame having vertical guide cleats secured to opposite sides thereof and terminating above the base of the frame, of a screen slidably mounted in said frame, guide members secured to the upper and lower ends of the screen at opposite edges thereof movable upon said cleats, said screen being pivotally mounted between the upper guide members for swinging movement when the screen is in its lowered position, the lower guide members being transversely movable between the base of the frame and the lower end of said cleats, and means secured to the frame to prevent further downward movement of the upper guide members in the pivotal movement of the screen.

5. The combination with a window frame having vertical guide cleats secured to opposite sides thereof and terminating above the base of said frame, guide members arranged upon the upper and lower ends of said screen and on opposite edges thereof for movement upon said cleats, said guide members being of U-shaped form in section, said screen being pivotally arranged between the upper guide members, said members having one of their parallel flanges of greater width than the other and extending upon the sides of the window frame, the other of said flanges being provided at their upper ends with spring tongues for engagement with the frame to sustain the screen therein against gravity movement, said lower guide members being movable beneath the guide cleats in the pivotal movement of the screen, and stop members secured to opposite sides of the window frame and engaged by the upper guide members to prevent their downward movement in the pivotal movement of said screen.

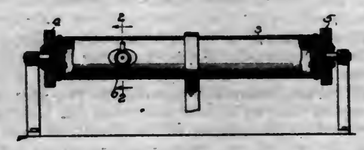
1,017,267. ELECTRIC-LIGHT FIXTURE. WILLIAM F. OVERBAGH, FRANKLIN OVERBAGH, and IRVIN H. BRENT, Chicago, Ill., assignors to Overbagh and Ayres Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1911. Serial No. 658,332. (Cl. 240—91.)

An electric light fixture comprising a tubular shell, a lamp socket located therein and capable of adjustment lengthwise of said shell, said lamp socket being provided with longitudinally spaced, annular grooves formed in its outer surface, means for securing said socket at one of a plurality of predetermined longitudinally spaced positions in said shell, said means comprising annularly spaced set screws projecting through the tubular shell and adapted to engage within one of the annular grooves



in said socket, and a shade supporting member located below said tubular shell and made integral therewith.

1,017,268. PROCESS FOR SMOOTHING AND POLISHING METAL ARTICLES AND PARTS. WINSLOW R. PARSONS, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 452,977. (Cl. 51—14.)



1. The herein described method of smoothing metal articles and parts, the same consisting in subjecting them to a wearing frictional action simultaneously in the presence of brass, a liquid and an abrasive material, substantially as described.

2. The herein described method of smoothing metal articles and parts stamped from sheet metal, the same consisting in subjecting them to smoothing frictional contact simultaneously with brass, oil and an abrasive material, and each with the other, substantially as described.

3. That improvement in the art of smoothing and polishing articles and parts of steel and brass, the same consisting in simultaneously subjecting both in the presence of a liquid to a frictional movement one upon the other in the form and for a time substantially as herein described.

1,017,269. HAIR-DYE. LOUISE SEAGO and ALBERT SEAGO, New York, N. Y. Filed Apr. 19, 1911. Serial No. 622,009. (Cl. 167—5.)

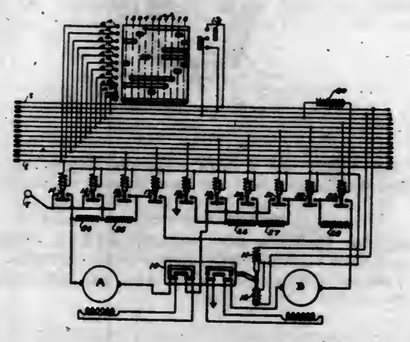
A hair dye consisting of an aqueous solution of permanganate of potash and common salt.

1,017,270. MOTOR-CONTROL SYSTEM. EMMETT W. STULL, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Aug. 1, 1910. Serial No. 575,024. (Cl. 172—179.)

1. In combination, two motors, resistances, and means for connecting said motors and all of said resistances in series with one of said resistances between two motors, for then cutting out part of the resistances but leaving the one between the two motors still in circuit, for then connecting the positive terminals of the two motors together through one and the negative terminals together through another of the cut out resistances, and for then breaking the series connection between the two motors.

2. In combination, a supply circuit, two motors, resistances, means for connecting the two motors in parallel with a resistance between the positive side of the supply circuit and the corresponding side of one motor, and another resistance in series between the negative side of the

supply circuit and the corresponding side of the other motor, for then connecting the intermediate points between the two motors and their respective resistances to each through a third resistance, for then breaking the connection of each motor to the supply circuit through said first two resistances respectively, and for then connecting said first two resistances in series with said two motors and the third resistance.



3. In combination, a supply circuit, two electric motors, three resistances, and a controller for connecting said two motors and said three resistances all in series with one of said resistances between the two motors, for then cutting out two of said resistances but leaving the one between the two motors still in circuit, for then connecting the two cut out resistances respectively between the two sides of the supply circuit and the corresponding terminals of the motors not directly connected to them, and for then breaking the connection extending between the two motors through such first resistance.

1,017,271. LAMINATED COHESIVE INTERWOUND FABRIC BAND. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Dec. 31, 1910. Serial No. 600,313. (Cl. 154—52.)

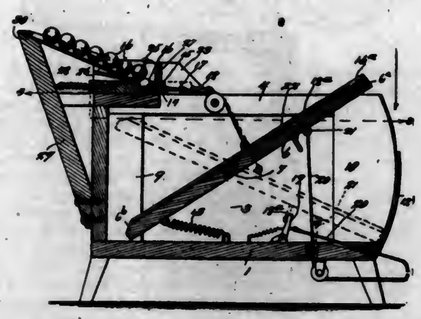
1. As an article of manufacture, a band for incorporation in a fabric, comprising, a flattened tube composed of unwoven interwound groups of close lying parallel yarns or threads, arranged in parallel rows, and the sides of the tube compressed together to form selvage edges, the said band saturated with fluid rubber or other adhesive material.

2. A band for incorporation in a fabric, comprising, a tubular structure composed of threads formed from groups of close lying parallel yarns or threads, said groups of threads laid in spaced parallel rows at predetermined angles crossed by spaced groups of threads laid at predetermined angles thereto, a row of said spaced groups of threads filling the spaces between the rows of groups of threads parallel therewith, the sides of said tube being flattened together and saturated with fluid rubber or other adhesive material and an exterior coating on said band.

3. In a constituent element for an interwound fabric, in which the elements cohere together and are interlaid, a flattened tube, composed of unwoven flattened threads interwound and interlaid with each other, each thread composed of a parallel series of yarns, the finished product saturated with fluid adhesive material, and provided with an external coating of the same.

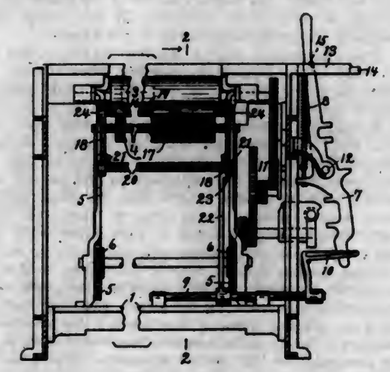
4. As an article of manufacture, an element from which a fabric can be constructed, said element comprising a flattened tube composed of unwoven interwound and interlaid flattened threads, compressed together, each thread composed of a series of parallel yarns loosely associated together, said flattened band saturated throughout and between the yarns with fluid rubber, or other adhesive material.

1,017,272. TARGET-TRAP. JOHN T. SWAIN, Prentice, Ill. Filed Apr. 10, 1911. Serial No. 620,106. (Cl. 124—5.)



In a target trap of the class described, a frame, a pair of vertically disposed, centrally arranged posts, a thrust bar pivoted between said posts, said thrust bar being spring-actuated, a catch disposed in the lower part of said frame, and adapted to engage a U-shaped member on said thrust bar, each end of the trap having guideways, each end of said thrust bar being adapted to engage a guideway.

1,017,273. CLOTH-STOP FOR LOOMS. ANDREW L. TOLMAN, Thorndike, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 18, 1911. Serial No. 603,261. (Cl. 130—52.)

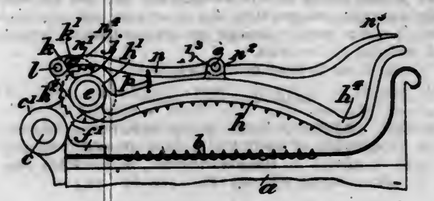


1. A loom of the high-roll take-up type including a take-up roll partially around which the cloth passes, a cloth roll mounted to be rotated by the cloth wound thereon frictionally engaging the cloth on the take-up roll, a device over and in contact with which the cloth travels in passing from the take-up to the cloth roll, an abutment for limiting the movement of the device toward the rolls and against which the device is normally held by the tension on that portion of the cloth between the rolls, and a loom stop mechanism arranged to be operated by the device when the latter reaches a predetermined point due to the slackening of the cloth.

2. A loom comprising a take-up roll, a cloth roll mounted adjacent to the take-up roll and driven by the latter contacting with the cloth wound on the cloth roll, a fixed guide extending longitudinally of and spaced laterally from the take-up roll for supporting the cloth after it passes the take-up roll and before it winds on the cloth roll, a device for exerting a tension on the cloth between said guide and cloth roll to maintain the cloth between the guide and take-up roll taut, and a stop mechanism operated by the device when the slackening of the cloth between the rolls permits the device to reach a predetermined position.

3. A loom comprising a take-up roll, a cloth roll mounted adjacent to the take-up roll and driven by the latter contacting with the cloth wound on the cloth roll, a fixed guide extending longitudinally of and spaced laterally from the take-up roll for supporting the cloth after it passes the take-up roll and before it winds on the cloth roll, a device for exerting a tension on the cloth between said guide and cloth roll to maintain the cloth between the guide and take-up roll taut, a stop mechanism operated by the device when the slackening of the cloth between the rolls permits the device to reach a predetermined position, and bearings for the guide forming abutments against which the device bears when the tension of the cloth between the rolls is normal.

1,017,274. MEAT-CLAMP FOR MEAT-SLICING MACHINES. JOHANNES CORNELIS VAN BERKEL, Zurich, Switzerland. Filed Aug. 2, 1910. Serial No. 575,052. (Cl. 17—24.)



1. A meat clamp for meat slicing machines comprising, in combination, a clamp lever adapted to move through the arc of a circle, spring means for forcing down the clamp lever and ratchet wheel and pawl gear whereby the clamp lever can be retained out of engagement with the meat.

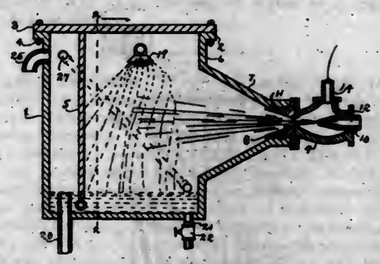
2. A meat clamp for meat slicing machines comprising, in combination, a clamp lever adapted to move through the arc of a circle, spring means for forcing down the clamp lever, ratchet wheel and pawl gear whereby the clamp lever can be retained out of engagement with the meat, and means fulcrumed to the clamp lever for disengaging the pawl from the ratchet wheel.

3. A meat clamp for meat slicing machines comprising, in combination, a clamp lever adapted to move through the arc of a circle, spring means for forcing down the clamp lever, ratchet wheel and pawl gear whereby the clamp lever can be retained out of engagement with the meat, and a hand lever fulcrumed to the clamp lever for disengaging the pawl from the ratchet wheel.

4. A meat clamp for meat slicing machines comprising, in combination, a clamp lever adapted to move through the arc of a circle, spring means for forcing down the clamp lever, ratchet wheel and pawl gear whereby the clamp can be retained out of engagement with the meat, a pin in the pawl, and a hand lever pivoted to the back of the clamp and having a slot at one end which slot engages the pin of the pawl.

5. A meat clamp for meat slicing machines comprising, in combination, a clamp lever adapted to move through the arc of a circle, a screw for feeding forward the said clamp lever, spring means for holding the clamp lever down upon the meat, ratchet wheel and pawl gear whereby the clamp lever can be retained out of engagement with the meat, and means connecting the clamp lever and feed screw.

1,017,275. SUCTION-CLEANER. JOHN GEORGE WALKER, Sewaren, N. J. Filed Mar. 18, 1911. Serial No. 615,195. (Cl. 230—13.)



1. In a suction cleaner, a casing, an expansion chamber formed in said casing, means for injecting and inducting fluids at a high velocity into said casing, and means within said casing for condensing one of the fluids and overcoming the pressure due to the high velocity.

2. In a device of the character described, a casing provided with a plurality of apertures through its sides, a funnel shaped member formed integral with another side, an expansion nozzle secured in said funnel shaped member and a baffle plate suspended within said casing, means for admitting air and an expansible fluid through said expansion nozzle into said casing to be impinged upon said baffle plate, means for condensing said expansible fluid within said casing and a pipe entering through one of the apertures in said casing for carrying away the condensation.

3. The combination with a casing having a plurality of apertures, a cover, and a cone shaped projection from one side of said casing, an expansion nozzle, and a steam jet secured in the apex of said cone, a sprayer nozzle and a pipe therefor leading through another aperture, an equalizing pipe connected to another aperture, an overflow pipe connected to another aperture, and inlet and outlet flush pipes connected to other apertures in said casing, and a baffle plate suspended from the cover, means for admitting water through the sprayer nozzle, means for admitting air and steam through the expansion nozzle into the spray from said sprayer nozzle and against said baffle plate and means for ejecting air through said equalizing pipe and water through said overflow pipe as herein specified and for the purpose set forth.

4. In a device of the character described, a casing having a vertical baffle arranged therein, means for injecting steam and air into said casing, and means for showering water adjacent to said baffle and between said baffle and said steam and air inlet for condensing the steam and purifying the air within said casing.

5. In a device of the character described, a chamber, provided with inlet and outlet passages, means for injecting air at a high velocity through said inlet passage, and a baffle arranged within said chamber between said inlet and outlet passages protecting said outlet passage from the pressure of the inlet passage as specified.

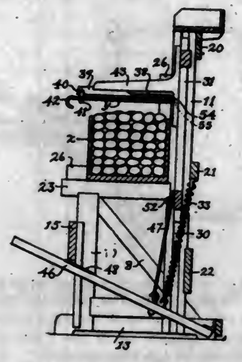
[Claim 6 not printed in the Gazette.]

1,017,276. BOX-COVERING MACHINE. THOMAS H. WIBLE, Grand Junction, Colo. Filed Apr. 4, 1910. Serial No. 553,412. (Cl. 100—57.)

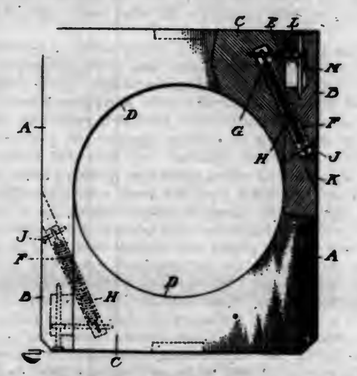
1. In a box covering machine, a box support, a vertically guided cover carriage, a pair of brackets secured to the side members of said carriage having pivoted bars provided with lugs at their rear ends to position the cover and with their outer ends connected by a cross rod, and a straining bar for supporting the cover against the lower edge of the pivoted bars.

2. In a box covering machine, a box support, a vertically guided cover carriage, a pair of brackets secured to the side members of said carriage having pivoted bars provided with lugs at their rear ends to position the cover

and with their outer ends connected by a cross bar provided with an approximately central recess, a bracket adjustably secured to the central members of the cover carriage and provided with a socket, and a straining bar removably supported on the recess and socket for supporting the cover against the lower edge of the pivoted bars.



1,017,277. DUST-GUARD FOR CAR JOURNAL-BOXES. LACEY Y. WILLIAMS, Toledo, Ohio. Filed Aug. 15, 1911. Serial No. 644,201. (Cl. 64—22.)



1. A dust guard consisting of two complemental L-shaped sections, each section having a semi-circular bearing edge, and said sections oppositely disposed to each other to form a substantially circular opening, said sections having alined holes adjacent their meeting edges; helical springs within the alined holes and overlapping the said meeting edges; means for anchoring the ends of the springs in opposite sections; and means for holding the edges of the sections together which permit the longitudinal movement of one section relative to the other under the action of the springs.

2. A dust guard consisting of two complemental L-shaped sections, each section having a semi-circular bearing edge, a long arm and a short arm with holes in each arm, and said sections oppositely disposed to each other to form a substantially circular opening and so that a hole in each short arm is in alinement with a hole in a long arm; helical springs located at opposite corners of the guard within the alined holes, each spring lapping the meeting edges of the long and short arm, and the end of each spring anchored to a long and short arm; and means for holding the two sections together and against sidewise displacement.

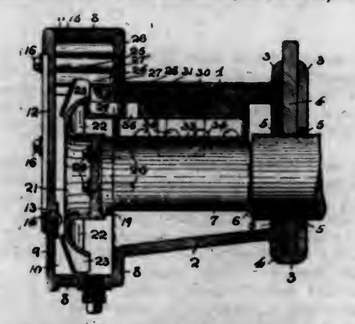
3. A dust guard consisting of two complemental L-shaped sections, each section having a semi-circular bearing edge, a long arm and a short arm, and said sections being oppositely disposed to each other to form a substantially circular opening, springs positively engaging and uniting the sections and located at their diagonally opposite meeting edges or corners and acting to draw the sections together and also to limit the longitudinal sliding movement of one section relative to the other; and means for holding the sections together consisting of pins and guide shanks turned at the ends to engage the pins, said turned ends being movable within recesses in the arms and relative to the pins.

4. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm, and a semi-circular bearing edge, and said sections being oppositely disposed to each other to form a substantially circular opening; springs each with its opposite ends anchored to opposite sections; and means for holding the sections together consisting of pins and guide shanks turned at the ends at opposite corners of the guard, a guide shank turned at the end being secured to one arm of the section and projecting into a recess formed in the opposite adjacent arm and a pin passed through the recess and engaging and guiding the said shank turned at the end.

5. A dust guard comprised of two complemental L-shaped sections each with a long arm provided with a hole and a short arm provided with a hole and a semi-circular bearing edge, said sections being oppositely disposed so the hole in the long arm will substantially match a hole in the short arm; and helical springs in the holes each spring having an eye at each end and the opposite ends anchored, respectively, to a short arm and to a long arm by means passed through the eyes and seated within the material of the arms.

[Claim 6 not printed in the Gazette.]

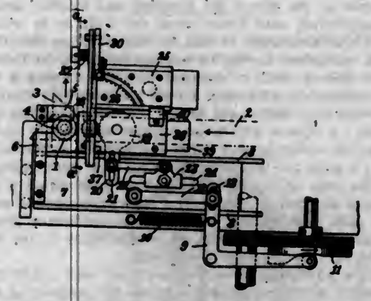
1,017,278. JOURNAL-BOX. CHARLES F. BEERS, Newark, N. J., assignor of one-third to John Hensler and one-third to Adolph F. Hensler, Newark, N. J. Filed Jan. 12, 1911. Serial No. 602,152. (Cl. 54—24.)



1. A self-oiling journal-box comprising a main casing, a journal, a bearing-block provided with oil-passages, a key-block, a spout-member connected with said key-block, said key-block having a passage or duct connecting said spout-member with the oil-passages of said bearing-block, a reservoir-casing connected with said main casing, the same providing a main oil-reservoir in its lower portion, a pair of auxiliary side-reservoir elements arranged in the upper side-portions of said reservoir-casing, a central auxiliary reservoir-element arranged in the upper central portion of said reservoir-casing, each of said auxiliary side reservoir elements being provided with outlet-openings at their inner ends, trough-members upon the rear wall of said reservoir-casing, said trough-members lying under said respective outlet-openings of said auxiliary side reservoir-elements and adapted to conduct the oil therefrom to the spout-members of said key-block, vertical ribs arranged upon the rear wall of said reservoir-casing beneath said central auxiliary reservoir-element and adapted to form an intervening channel or duct below the outlet-opening of said central auxiliary reservoir-element communicating with the spout-member of said key-block, and means for carrying oil from said main reservoir to the said respective reservoir-elements, substantially as and for the purposes set forth.

2. A self-oiling journal-box comprising a main casing, a journal, a bearing-block provided with oil-passages, a key-block, a spout-member connected with said key-block, said key-block having a passage or duct connecting said spout-member with the oil-passages of said bearing-block, a reservoir-casing connected with said main casing, the same providing a main oil-reservoir in its lower portion, a pair of auxiliary side reservoir-elements arranged in the upper side-portions of said reservoir-casing, a central auxiliary reservoir-element arranged in the upper central portion of said reservoir-casing, each of said auxiliary side reservoir-elements being provided with outlet-openings at their inner ends, trough-members upon the rear wall of said reservoir-casing, said trough-members lying under said respective outlet-openings of said auxiliary side reservoir-elements and adapted to conduct the oil therefrom to the spout-members of said key-block, vertical ribs arranged upon the rear wall of said reservoir-casing beneath said central auxiliary reservoir-element and adapted to form an intervening channel or duct below the outlet-opening of said central auxiliary reservoir-element communicating with the spout-member of said key-block, means for carrying oil from said main reservoir to the said respective reservoir elements, a disk-pump secured upon the free end of said journal, and a plurality of oil-carrying members connected with said disk-pump, substantially as and for the purposes set forth.

1,017,279. MACHINE FOR MAKING CIGARETTE-MOUTHPIECES. WOLF BENJAMINOWITSCH, Berlin, Germany, assignor of one-half to Gottfried Lebrecht Tillmanns, Moscow, Russia. Filed Feb. 21, 1911. Serial No. 609,895. (Cl. 164—42.)



1. In a machine of the character described for making cigarette mouth-pieces, the combination of a vertically revoluble shaft carrying a pair of shears for cutting a strip of paper fed to the latter, a gear on said shaft, a toothed segment meshing with the former gear and having a slotted extension gear, a reciprocating slide, a rod pivotally connected with the slide and with said slotted extension, whereby when the slide is reciprocated the shears are placed at various angles to the direction of motion of the paper, and means for operating said shears in the angular end-positions thereof.

2. In a machine of the character described for making cigarette mouth-pieces, the combination of a vertical revoluble shaft carrying a pair of shears for cutting a strip of paper fed to the latter, a gear fast on said shaft, a toothed segment meshing with the former gear and having a slotted extension, a reciprocating slide, a rod pivotally connected with the slide and with said slotted extension, whereby when the slide is reciprocated the shears are placed at various angles to the direction of motion of the paper, a vertically movable plate having an arc-shaped slot, a vertically movable pin connected with one arm of the movable blade of the shears and movable in said arc-shaped slot, and means for vertically reciprocating said plate when the pair of shears is in its angular end-positions.

1,017,280. PROCESS OF INCREASING THE DUCTILITY OF METALLIC TUNGSTEN. WERNER VON BOLTON, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 13, 1911. Serial No. 649,020. (Cl. 75—17.)

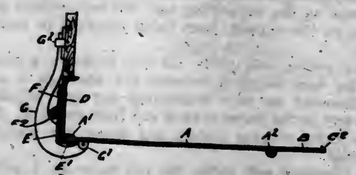
1. The process of increasing the ductility of metallic tungsten which consists in treating metallic tungsten at a high temperature with a mixture of hydrogen and a vaporizable halogen compound of sulfur, and in passing an electric current through the mass thereby obtained in an indifferent atmosphere and thereby expelling any sulfur from the said mass.

2. The process of securing metallic tungsten of good ductility which consists in heating the material to be converted into highly ductile metal at a high temperature in the presence of hydrogen and a halogen compound of sulfur, and heating the resulting product in an inert environment and thereby expelling the sulfur.

3. The process of increasing the ductility of metallic tungsten which consists in treating tungsten at a high temperature with a mixture of hydrogen and protochlorid of sulfur, and in passing an electric current through the mass thereby obtained in an indifferent atmosphere and thereby expelling any sulfur from the said mass.

4. The process of securing metallic tungsten of good ductility consisting in treating the material to be converted into highly ductile metal at a high temperature with a halogen compound of sulfur together with a reducing agent which will unite with the halogen and prevent combination of the halogen with the tungsten, and heating the resulting product in an inert environment to eliminate any sulfur introduced by the treatment.

1,017,281. DUMP-CAR DOOR. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Jan. 16, 1911. Serial No. 602,976. (Cl. 105—185.)



1. In a dump car door an edge adapted to meet the bottom of the sill of a car, and an angle plate hinged to the sill and adapted to close under the door edge as described.

2. In a dump car door, an edge resting against the lower side of a sill, a plate secured to the said sill, an angle plate hinged to such plate, and adapted when closed to support the door edge as described.

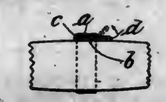
3. In a dump car door, the combination of a door hinged to a hopper wall, an edge adapted to meet the lower side of a sill, a sill, an angle plate hinged to the said sill and adapted when closed to support the edge of the door, and means to lock the angle plate when closed as described.

4. In a dump car door the combination of a door having an edge, a sill, an angle plate hinged to the said sill and means to lock the angle plate when its lower portion supports the door edge as described.

5. In a dump car door the combination of a door hinged to a hopper wall, an edge to the door, a sill, a plate secured to said sill, an angle plate hinged to the plate, a bent lever hinged to the lower side of the door and means to lock the end of the bent lever to the car wall as described.

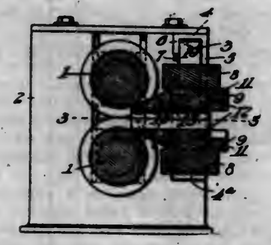
[Claim 6 not printed in the Gazette.]

1,017,282. CIGAR-BAND. ARTHUR A. CALL and WILLIAM S. SMITH, Springfield, Mass. Filed Feb. 17, 1911. Serial No. 609,159. (Cl. 40—21.)



A cigar band having ends adapted to overlap and a tearing tab integral therewith extending from one side and spaced from one end thereof and of such length that when folded upon itself and beneath the band, it may extend beyond the side of the band opposite the point of its attachment thereto and of such width that when folded upon itself and beneath a single thickness of the band it has a greater tensile strength than the band.

1,017,283. ROLLING-MILL GUIDE. HENRY J. DAVIS, Niles, Ohio. Filed Apr. 18, 1911. Serial No. 621,931. (Cl. 80—51.)



1. In a rolling mill guide, the roll housing, a pair of supporting bars mounted between the housing, a guide holder mounted on each supporting bar, and a guide member loosely and detachably seated in the holder.

2. In a rolling mill guide, the roll housings, a pair of supporting bars mounted between the housings, a guide holder mounted on each supporting bar, and a guide member loosely and detachably seated within the holder and also seated on the supporting bar, the holders and guide members on the opposite bars being arranged in inverted relation.

3. In a rolling mill guide, the roll housings, a pair of supporting bars mounted between the housings, a guide holder mounted on each supporting bar and adjustable transversely of the latter toward and from the rolls, and a separate guide member loosely and detachably seated in each holder.

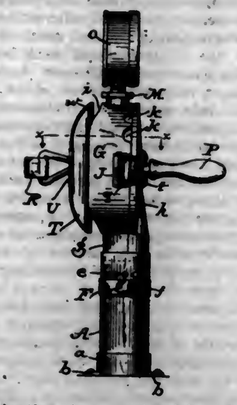
4. In a rolling mill guide, the roll housings, a pair of supporting bars mounted between the housings, a U-shaped guide holder mounted on each supporting bar and having its open end next to the mill rolls, and a separate guide member loosely seated in the guide holder and projecting through and beyond the open end thereof.

5. In a rolling mill guide, the roll housings, a pair of supporting bars mounted between the housings, a guide holder consisting of a yoke piece mounted on each supporting bar and having an open end next to the mill rolls, and a separate guide member detachably seated in each holder.

[Claims 6 and 7 not printed in the Gazette.]

1,017,284. DRY-HEAT VULCANIZER. HARRISON M. DETRICK, Dayton, Ohio, assignor to David F. Detrick, Dayton, Ohio. Filed June 26, 1911. Serial No. 635,426. (Cl. 18—18.)

1. The combination in a vulcanizer,—of a burner; a body detachably connected to said burner and communicating therewith; a compartment within said body adapted to receive the flame and dry heat directly from said burner; a boiler to said body located within said compartment; a straight siphon projecting within said boiler; a gage carried by said vulcanizer; a hollow spring to said gage with which said siphon has a direct and continuous communication; and means for pressing the body of said vulcanizer against the part to be repaired, also for supporting the vulcanizer from the article being repaired; all substantially in the manner and for the purposes described.



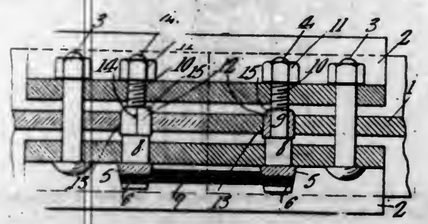
2. The combination in a vulcanizing device,—of a burner; means on said burner for regulating and controlling the flame therefrom; a body provided with a neck detachably connected to said burner; a heating chamber within said body having an open communication with said burner, and adapted to receive dry heat therein; a boiler located within said chamber; a straight siphon held in suspended position within said boiler; a gage detachably connected to said body and from which said siphon is suspended; a hollow spring within said gage having an open and direct communication with said siphon; and means connected to the device for pressing and binding against and supporting, said device from the body to be vulcanized; all substantially as and for the purposes described.

3. A vulcanizer having in combination with its burner; a body formed with a concaved face and having a slip-joint connection with said burner; a dry heat chamber communicating with said burner; a boiler within said chamber; a siphon within said boiler adapted to receive some of the water in said boiler through the action of the steam; a gage for indicating the degree of heat, mounted upon the body of the device; a hollow gage-spring within said gage adapted to receive in a direct manner the water forced into said siphon; and a supporting-strap detachably connected to the device; all substantially in the manner and for the purposes described.

4. In a vulcanizer a burner provided with draft openings and a draft regulator; a stand for supporting said burner; a body formed with a concaved face and connected to said burner; a chamber within said body adapted to receive the dry heat from said burner; a boiler within said chamber; a siphon suspended within said boiler; a hollow spring having an open communication with said siphon; a gage in which said spring is located; a face-plate constituting a tight cover to said chamber, and provided with a handle for lifting and moving the device; a supporting-plate adapted to bear against the article to be vulcanized which rests against the concaved face of said body; and means connected to said body for supporting the supporting-plate, and binding said plate and said body to the part to be vulcanized; all substantially as described.

1,017,285. RAIL-BOND. JOHN T. DEVIESE, Hilltop, W. Va., assignor of one-half to William E. Deegans, Glen Jean, W. Va., one-fourth to Lewis P. Johnson, Lafollette, Tenn., and one-fourth to William S. Johnson, Mount Hope, W. Va. Filed May 31, 1911. Serial No. 630,321. (Cl. 173—262.)

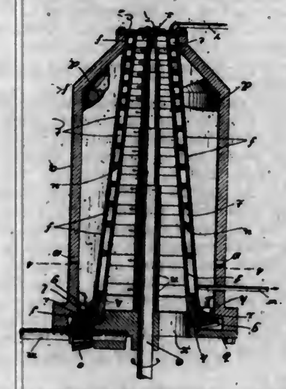
1. The combination with the abutting ends and the fish plates thereof, of an electrical bond, comprising two bolts passing through said fish plates and the rails, each of said bolts being provided with tapered heads with transverse channels therethrough, a bonding wire passing through said channels, and held in place by the wedging of the metal at the top of the heads, and a tapered sleeve carried upon each bolt and adapted to be swaged into close contact with the web of the rail.



2. The combination with the abutting ends of the rails and the fish plates, of an electrical bond therefor, comprising two bolts adapted to secure the fish plates in place, each one of said bolts being provided with openings through the heads thereof, an electrical bond having its terminals connected in each opening of the respective heads of the bolts, and a removable swaging sleeve mounted upon each bolt and adapted to engage the web of the rail when the bolts are holding the fish plates in place.

3. The combination with the abutting rails and fish plates, of an electrical bond therefor, comprising two bolts adapted to secure the fish plates to the rails, each one of said bolts being provided with a tapered head with a transverse channel therethrough, a metallic bond mounted in the transverse channel of the said bolts and swaged therein by the metal of the bolts, a split sleeve mounted upon the bolts and adapted to fit within the web of the rail, and a nut upon each bolt for drawing the bolt tightly so as to wedge the sleeve into close contact with the rail and hold the fish plates in place.

1,017,286. APPARATUS FOR TREATING EXPLOSIVE POWDER. FRANCIS I. DU PONT, Wilmington, Del., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Mar. 1, 1909. Serial No. 480,580. (Cl. 18—12.)



1. In an apparatus of the character and for the purpose described, a vessel, having in its length and on its interior alternate sets of fixed and rotating blades, the angles with respect to the axis, of successive sets of fixed blades increasing and the angles with respect to the axis, of successive sets of rotating blades decreasing, from the inlet to the exit.

2. In an apparatus of the character and for the purpose described, a vessel, having in its length and on its interior alternate sets of fixed and rotating blades, the angles with respect to the axis, of successive sets of fixed blades increasing and the angles with respect to the axis, of successive sets of rotating blades decreasing, from the inlet to the exit, and the number of fixed blades, in successive sets, decreasing.

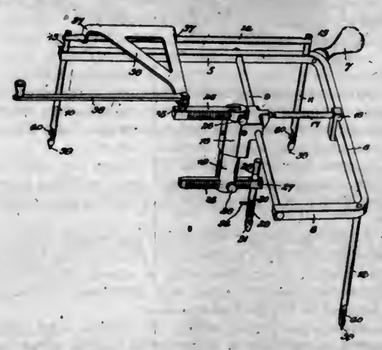
3. In an apparatus of the character and for the purpose described, a vessel, having in its length and on its interior alternate sets of fixed and rotating blades, the angles with respect to the axis of successive sets of fixed blades increasing and the angles with respect to the axis, of successive sets of rotating blades decreasing, from the inlet to the exit, the fixed blades at the outlet end forming a screw, there being an outlet in line of action of said screw, and rolls, exterior to the machine, in line with said opening.

4. In an apparatus of the character and for the purpose described, a vessel, having in its length and in its interior alternate sets of fixed and rotating blades, the angles, with respect to the axis of successive sets of fixed blades increasing, and the angles with respect to the axis of successive sets of rotating blades decreasing in angle from the inlet to the exit, each set of fixed and rotating blades being contiguous to each other.

5. In an apparatus of the character and for the purpose described, in combination, a conical vessel having in its length and on its interior alternate sets of fixed and rotating blades, the angles with respect to the axis of successive sets of fixed blades increasing, and the angles with respect to the axis of successive sets of rotating blades decreasing from the inlet to the exit.

[Claims 6 to 26 not printed in the Gazette.]

1,017,287. ELLIPSOGRAPH. ALBERT GRAN and JULIUS H. KARLSON, Chicago, Ill., assignors to Designers Rule Co. Filed May 27, 1911. Serial No. 629,753. (Cl. 33—5.)

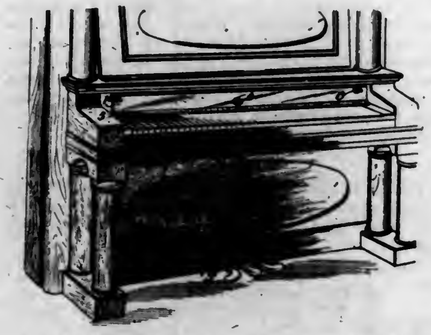


1. In an instrument of the character described, the combination of an L-shaped frame comprising bars formed and extending at right angles to one another, one of said bars being provided with an extension projecting at right angles therefrom and parallel with the other bar, a rod connected between said extension and the frame bar parallel therewith, a second rod mounted upon one of the frame bars at right angles to said first named rod, a carriage slidably mounted upon said first named rod, a guide member having one portion thereof mounted to slide upon the other rod, a vertical rotatable post mounted in said carriage, graduated bars slidably mounted through the upper and lower portions of said post, the upper one of which is provided with an upstanding stud adjacent to one end, a line marking device carried by one end of the lower slide bar, said guide member having an opening through which the said slide bar stud loosely extends, and an operating handle rigidly secured to said stud.

2. In an instrument of the character described, the combination of an L-shaped frame comprising bars formed and extending at right angles to one another, one of

said bars being provided with an extension projecting at right angles therefrom and parallel with the other bar, a rod connected between said extension and the frame bar parallel therewith, a second rod mounted upon one of the frame bars at right angles to said first named rod, supporting legs depending from said frame and provided with lower split ends, surface engaging pins frictionally held within said split leg ends, a carriage slidably mounted upon said first named rod, a guide member having one portion thereof mounted to slide upon the other rod, a vertical rotatable post mounted in said carriage, graduated bars slidably mounted through the upper and lower portions of said post, the upper one of which is provided with an upstanding stud adjacent to one end, a line marking device carried by one end of the lower slide bar, said guide member having an opening through which the said slide bar stud loosely extends, and an operating handle rigidly secured to said stud.

1,017,288. PIANO-SHIELD. CHARLES W. GRAVES, Logansport, Ind. Filed June 22, 1911. Serial No. 634,674. (Cl. 64—98.)



1. A surface-protecting shield for pianos and other instruments, comprising a transparent flexible sheet having inwardly-directed peripheral bearing flanges and suction or vacuum attaching means secured thereto.

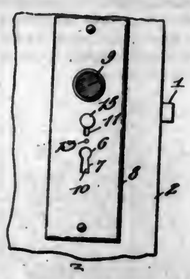
2. A surface-protecting shield for pianos and other instruments, comprising a transparent sheet having a lateral stiffening flange and pneumatic attaching means secured thereto.

3. A surface-protecting shield for pianos and other instruments, comprising a transparent sheet having a lateral stiffening flange along one edge, a woven fabric strip secured to the opposite edge, and pneumatic attaching means secured to the rear of the sheet.

4. A surface-protecting shield for pianos and other instruments, comprising a transparent flexible sheet provided with a plurality of apertures and pneumatic flexible attaching devices having projecting buttons secured in said apertures.

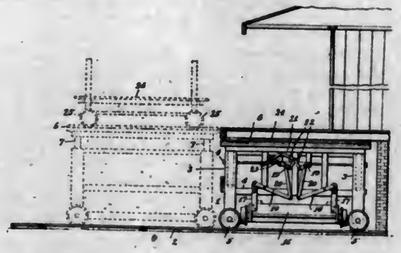
1,017,289. DOOR-LOCK. JULIAN T. GRZYBOWSKI, Grand Rapids, Mich. Filed Feb. 2, 1911. Serial No. 606,167. (Cl. 70—7.)

The combination with a lock plate adapted to be secured to a door in spaced relation thereto, said plate having a key hole and a vertical slot therein above the key hole, of a slide movable upon the inner face of said plate and spaced from the door, a threaded pin fixed in one end of said slide and projecting through the vertical slot in said lock plate, a head threaded upon the outer end of said pin and adapted to bind against the face of the plate to rigidly secure the slide against movement, said slide having a longitudinal slot open at its lower end to receive the shank of a key, and a guide stud fixed in said lock plate adjacent the lower end of the slot therein and projecting inwardly, said stud extending through the slot of said slide and having a head formed on its inner end disposed between the slide and the face of the door to maintain said slide



upon the locking plate and the slot thereof in alinement with the key shank.

1,017,290. LOADING AND UNLOADING DEVICE. WILLIAM ERASTUS HAM and ALBERT MOSES COOK, Mebane, N. C. Filed May 20, 1911. Serial No. 628,543. (Cl. 21—118.)



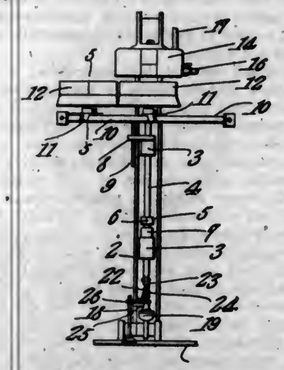
1. In an apparatus of the class set forth, a main truck provided with a set of wheels, an auxiliary set of wheels mounted on the main truck and arranged to run at right angles to the wheels of the main truck, means for elevating the main truck and wheels and relatively lowering the auxiliary set of wheels, whereby the truck may be adjusted to run on tracks at right angles to each other, a platform supported on the main truck so as to be raised and lowered therewith, and means for raising and lowering this platform independent of the main truck, said means embodying devices for locking the platform in its adjusted position.

2. A freight and baggage transfer apparatus for railway stations, consisting of an auxiliary track extending from a point under the station platform across the adjacent railway tracks, and an apparatus adapted to run on said main tracks and on said auxiliary track and be housed under the station platform, said apparatus consisting of a main truck provided with a set of wheels adapted to run only upon the auxiliary track, an auxiliary set of truck wheels arranged at right angles to the aforesaid truck wheels and adapted to run only on the tracks of the railway, means for lowering the auxiliary wheels into operative position and raising the main truck and its wheels, a platform supported on the main truck and means for raising and lowering said platform independently of both sets of truck wheels, for the purposes set forth.

1,017,291. COLLAR-SHAPING MACHINE. JOSEPH B. HAMILTON, San Antonio, Tex. Filed July 24, 1909, Serial No. 509,358. Renewed July 22, 1911. Serial No. 640,036. (Cl. 68—97.)

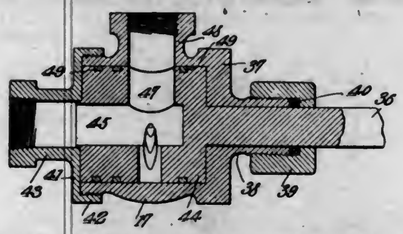
1. In a collar-shaping machine, the combination of a hollow drum having a collar receiving groove in its under face, a pair of diverging arms arranged below the said drum and having their inner ends joined in the plane

of the center of the drum, collar-holding rings slidably mounted on said arms, and means for raising and lowering said arms.



2. The combination of a standard, a hollow drum supported by the upper end of the standard and having a collar-receiving groove in its under side, a reciprocating rod mounted vertically on the standard in alinement with the center of the drum, a pair of horizontal guides secured to the upper end of the said rod and diverging therefrom, collar-holding rings slidably mounted on the said guides, and means for reciprocating the said rod.

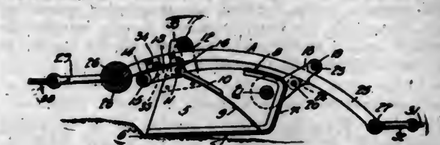
1,017,292. STEAM-VALVE. JOHN HYDE, Pittsburgh, Pa. Filed Apr. 14, 1909, Serial No. 489,821. Renewed Jan. 4, 1912. Serial No. 669,436. (Cl. 137—7.)



A valve comprising a cylindrical casing provided with a lateral neck, and having a bore of like diameter throughout and closed at one end by a fixed head carrying a reduced externally threaded neck, a gland engaging the neck, a detachable head connected with the other end of the casing and carrying a reduced internally threaded neck, a straight plug valve arranged within the bore of the casing and being coextensive in length therewith and held against endwise movement by the detachable head, the valve being provided with a series of radial passages, of graduated sizes, to register with the opening in the lateral neck, a stem carried by one end of the valve and extending through the gland on the first named neck, an annular flange carried by the other end of the valve and engaging the second named neck, and resilient packing rings carried by the valve and engaging the walls of the bore to afford a fluid tight coaction between the parts.

1,017,293. EXCAVATING-SCRAPER. ERIC JOHNSON, Seattle, Wash. Filed Mar. 30, 1911. Serial No. 617,847. (Cl. 37—19.)

1. In a scraper, the combination with the body, of a draft frame connected with the body for endwise motion, a hauling line secured to an end of said frame, a haul back line secured to the other end of the frame, means for limiting the movement of said frame with respect to the body, means for releasably securing the frame against endwise motion, and devices actuated by a load taken into the scraper whereby said frame-securing means is rendered inoperative.



2. In a scraper, the combination with the body, of a bow-shaped draft frame connected with the body for endwise motion, a hauling line secured to an end of said frame, a haul back line secured to the other end of the frame, means for limiting the movement of said frame with respect to the body, means for releasably securing the frame against longitudinal motion, and devices actuated by a load taken into the scraper whereby said frame-securing means is rendered inoperative.

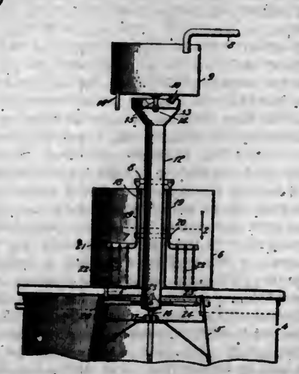
3. A scraper comprising a body, a draft frame connected with the body for longitudinal movements, stops at both ends of the frame for limiting the relative movement of the body, a catch upon the forward end of the draft frame, a plate hingedly connected to the body, and an arm secured to the plate adapted to be engaged by said catch and released when said plate is deflected upwardly.

4. In a scraper, the combination with the body, of a draft frame slidably connected to said body, a catch on said frame, a plate hingedly connected to the body, and an arm secured to the plate and normally engaged with said catch, said plate being arranged to be influenced by a quantity of material scooped into the scraper so as to cause the said arm to be disengaged from said catch.

5. A scraper comprising, in combination, a body, a draft frame connected with the body for longitudinal movements, hauling and haul-back lines connected at respective ends of the frame, stops at both ends of the frame for limiting the relative movement of the body, a catch upon the forward end of the draft frame, a plate hingedly connected to the body, and an arm secured to the plate adapted to be engaged by said catch and released when said plate is deflected upwardly.

[Claim 6 not printed in the Gazette.]

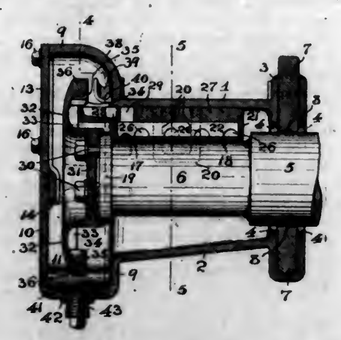
1,017,294. WATER-SOFTENING APPARATUS. CASS L. KENNICOTT, Chicago Heights, Ill., assignor to The Kennicott Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1911. Serial No. 652,361. (Cl. 210—1.)



In a water-softening apparatus, the combination of a box for receiving water to be treated and provided with a discharge-outlet in its bottom, a precipitating tank, a solution-holder discharging into said tank and having a central opening with a sleeve rising from about it, a conduit

journaled at its upper, open end to the bottom of said box to receive the discharge therefrom, and extending through said sleeve and closed at its opposite end, at which it is journaled on said tank, pipes extending from the conduit, having deflected nozzle-equipped outer ends for discharging the water from and thereby rotating the conduit, and a stirrer-device supported on the conduit to be rotated thereby in the solution-holder.

1,017,295. JOURNAL-BOX. FERDINAND H. KOERNER, Irvington, N. J., assignor, by direct and mesne assignments, of one-third to Adolph F. Hensler, one-sixth to Charles F. Beers, and one-sixth to John Hensler, Newark, N. J. Filed Aug. 20, 1910. Serial No. 578,220. (Cl. 64—24.)

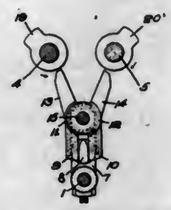


1. A self-oiling journal box comprising a casing for the reception of a journal, a bearing-block provided with oil-distributing passages arranged in said casing and upon said journal, a wedge or key-block arranged upon said bearing-block, means in said wedge or key-block for conveying oil to said bearing-block, a conveyer-casing providing a reservoir for the oil, a conveyer-disk secured in connection with said journal so as to turn therewith, buckets connected with said conveyer-disk for raising the oil from said reservoir-space and delivering the same directly to said oil-conveying means in said wedge or key-block when said journal rotates at slow speed, said conveyer-casing being provided in its upper rear wall with a curved portion for receiving the oil thrown thereupon, a pair of gutters connected with said conveyer-casing adapted to catch the oil flowing from said curved portion and deliver the same to said oil-conveying means in said wedge or key-block, and a rearwardly extending curved marginal edge at the periphery of said conveyer-disk adapted to throw the oil upon said curved portion of said conveyer-casing when said journal rotates at fast speed, substantially as and for the purposes set forth.

2. A self-oiling journal-box comprising a casing, a journal rotating in said casing, a bearing-block provided with oil-distributing passages arranged in said casing and upon said journal, a wedge or key-block arranged upon said bearing-block, means in said wedge or key-block for conveying oil to said bearing-block, a receiving shell connected with one end of said casing, said receiving shell being provided with openings to permit the passage of said journal, a wiper-plate arranged in said receiving-shell and in connection with said journal, a conveyer-casing providing a reservoir-space for oil connected with the other end of said casing, a conveyer-disk secured in connection with said journal so as to rotate therewith, buckets connected with said conveyer-disk for raising the oil from said reservoir-space and delivering the same directly to said oil-conveying means in said wedge or key-block when said journal rotates at slow speed, said conveyer-casing being provided in its rear wall with a curved portion, a pair of gutters connected with said rear wall beneath said curved portion and adapted to receive the oil flowing from said curved portion and deliver the same to said oil-conveying means in said wedge or key-block, and a rearwardly extending curved marginal edge at the periphery of said conveyer-disk adapted to throw the oil upon said curved portion of said conveyer-casing when said journal rotates at fast speed, substantially as and for the purposes set forth.

3. A self-oiling journal box comprising a casing, a journal rotating in said casing, a bearing-block provided with oil-distributing passages arranged in said casing and upon said journal, means for preventing lateral and longitudinal displacement of said bearing-block, a wedge or key-block arranged upon said bearing-block, a conveyer-casing connected with one end of said casing and providing in its lower portion a reservoir-space for oil, a spout connected with said wedge or key-block adapted to extend into the interior of said conveyer-casing, said wedge or key-block being provided with oil-passages connecting said spout with said oil-distributing passages of said bearing-block, a conveyer-disk secured to said journal, buckets connected with said conveyer-disk for raising the oil from said reservoir-space and delivering the same directly to said spout when said journal rotates at slow speed, said conveyer-casing being provided in its upper rear wall with a curved portion, a pair of gutters connected with said rear wall beneath said curved portion and adapted to receive the oil therefrom and deliver the same to said spout, and a rearwardly extending curved marginal edge at the periphery of said conveyer-disk adapted to throw the oil upon said curved or inclined portion of said conveyer-casing when said journal rotates at fast speed, substantially as and for the purposes set forth.

1,017,296. WARP-DRAWING MACHINE. CHARLES LEA, Boston, Mass., assignor to American Warp Drawing Machine Company, a Corporation of Maine. Filed June 21, 1911. Serial No. 634,412. (Cl. 130—94.)



1. In a harness eye positioning apparatus, the combination with a harness eye positioning device of an actuating member and yielding means between the actuating member and the positioning device adjusted to limit the tension placed upon a positioned heddle.

2. In a harness eye positioning mechanism, the combination with a harness eye positioning device, of a shaft for actuating said device, and yieldable means for moving said shaft in either direction.

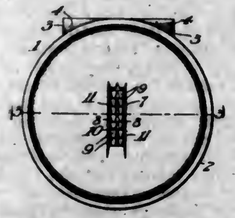
3. In a harness eye positioning mechanism, the combination with a harness eye positioning device, of means for moving the same to apply a predetermined tension to the strands.

4. In a warp drawing machine, the combination with a pair of oppositely moving actuating members, a harness positioning shaft, and means for oscillating said shaft from one or the other of said members comprising an actuator on said shaft and opposed devices spring-pressed against said actuating member and adapted to be moved by said actuating members.

5. In a warp drawing machine, the combination with a harness eye positioning member, a pair of actuating devices and a self-centering yieldable transmission means between said positioning device and said actuating devices.

[Claim 6 not printed in the Gazette.]

1,017,297. TURPENTINE-CUP. WILLIAM J. L'ENGLE, New Orleans, La. Filed Apr. 18, 1911. Serial No. 621,927. (Cl. 47—40.)



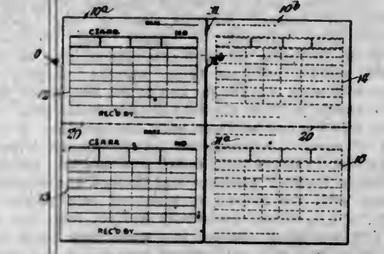
1. A turpentine cup comprising a body semi-circular in cross section having an annular rectangular flange surrounding its upper edge, and a rectangular lug on said flange, the rear wall of which intersects the arc of the top edge of the cup.

2. A turpentine cup comprising a body semi-circular in cross section having an annular rectangular flange surrounding its upper edge, and a rectangular lug on said flange, the rear wall of which intersects the arc of the top edge of the cup, the lower corners of the lug being beveled to the said flange, the edge of the flange forming a cutting edge for cutting into the body of a tree from which it is suspended.

3. A turpentine cup comprising a body having a groove in its bottom face, and teeth disposed in the bottom of said groove.

4. A turpentine cup comprising a body having a groove in its under face, and two rows of teeth in the bottom of said groove, said rows of teeth being separated by a groove.

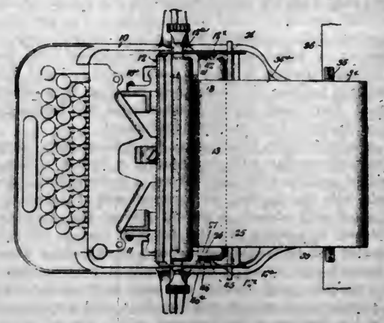
1,017,298. MULTIFORM BILLING-SHEET. EDWARD Z. LEWIS, Chicago, Ill. Filed Oct. 21, 1910. Serial No. 588,306. (Cl. 11—23.)



1. A multiform billing sheet embracing a sheet folded along its longitudinal median line to form superposed sections and adapted to be wound two or more times about the platen of a typewriter, each section being provided with one or more vertically arranged printed forms, said forms being of such size and so arranged that when in position in a typewriter, the forms will register, the forms on the top section being printed on the obverse side of the sheet and the forms on the bottom section being printed on the reverse side of the sheet, said forms being successively reduced in vertical spacing starting with the bottom form on the top section, and proceeding with the forms of both sections taken in alternation toward the top of the sheet, and the successive forms after the first form mentioned, in the order named, being spaced at successively increasing distances above the position they would occupy if uniformly spaced.

2. A multiform billing sheet embracing a sheet folded along its longitudinal median line to form superposed sections, and adapted to be wound two or more times about the platen of a typewriter, each section being provided with one or more vertically arranged printed forms, said forms being of such size and so arranged that when in position in a typewriter the forms will register, the forms on the top section being printed on the obverse side of the sheet and the forms on the bottom section being printed on the reverse side of the sheet, said forms being successively reduced in vertical spacing starting with the bottom form on the top section and proceeding with the forms of both sections taken in alternation toward the top of the sheet, and the successive forms after the first form mentioned, in the order named, being spaced at successively increasing distances above the position they would occupy if uniformly spaced, the two sections of the sheet being divided by a cut extending from the bottom of the sheet to a point near the top thereof.

1,017,299. ATTACHMENT FOR TYPE-WRITING MACHINES. EDWARD ZUVER LEWIS, Chicago, Ill. Filed Nov. 3, 1911. Serial No. 658,322. (Cl. 197—126.)



1. A manifolding attachment for typewriter comprising, in combination with the platen, a carbon ribbon having its end attached to the surface of said platen, a roll extending parallel to said platen, and having the same diameter as said platen, an attaching device for removably securing a manifolding sheet to the surface of said roll, means for inducing tension in said roll tending to cause its rotation in a direction to wind from said platen, and means for locking said roll to prevent such winding movement.

2. A manifolding attachment for typewriter comprising, in combination with the platen, a carbon ribbon having its end attached to the surface of said platen, a roll extending parallel to said platen, and having the same diameter as said platen, an attaching device for removably securing a manifolding sheet to said roll along a predetermined longitudinal line of its surface, said predetermined line in the surface of said roll being spaced from the line of connection of the carbon ribbon to said platen a distance equal to the circumference of said platen, said distance being measured along a strip wound upon said roll and unwound from the platen, means for inducing tension in said roll tending to cause its rotation in a direction to wind from said platen, and means for locking said roll to prevent such winding movement.

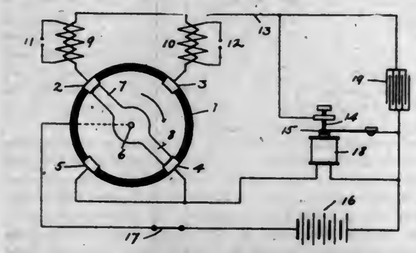
3. A manifolding attachment for typewriters comprising, in combination with the platen, a carbon ribbon roll extending parallel with said platen, a carbon ribbon wound on said roll and having its forward end attached to the surface of said platen, a second roll of the diameter of the platen extending parallel to said platen, an attaching device for removably securing a manifolding sheet to said second roll along a predetermined longitudinal line of its surface, said second roll and said platen having such angular and spaced relation that said predetermined line in the surface of said second roll is spaced from the line of connection of the carbon ribbon to said platen a distance equal to the circumference of said platen, said distance being measured along a strip wound upon said second roll and unwound from the platen, means for inducing tension in said carbon ribbon roll and in said second roll tending to cause their rotation in a direction to wind from said

platen, and means for locking said rolls to prevent such winding movement.

4. A manifolding attachment for typewriters comprising, in combination with the paper carriage and the platen carried thereby, a carbon ribbon roll rotatively carried by said paper carriage and extending parallel with said platen, a carbon ribbon wound on said roll and having its forward end attached to the surface of said platen, a second roll rotatively supported by said paper carriage and extending parallel to said platen, said second roll having the same diameter as said platen, an attaching device for removably securing a manifolding sheet to said second roll along a predetermined longitudinal line of its surface, said roll and said platen having such angular and spaced relation that said predetermined line in the surface of said second roll is spaced from the line of connection of the carbon ribbon to said platen a distance equal to the circumference of said platen, said distance being measured along a strip wound upon said second roll and unwound from the platen, said second roll being provided with a longitudinal slot in its surface at or adjacent to said predetermined line, means for inducing tension in said carbon ribbon roll and in said second roll tending to cause their rotation in a direction to wind from said platen, and means for locking said rolls to prevent such winding movement.

5. A manifolding attachment for type-writers comprising, in combination with the platen, a carbon ribbon roll extending parallel with said platen, a carbon ribbon wound on said roll and having its forward end attached to the surface of said platen, a second roll of the diameter of the platen extending parallel to said platen, an attaching device for removably securing a manifolding sheet to said second roll along a predetermined longitudinal line of its surface, said second roll and said platen having such angular and spaced relation that said predetermined line in the surface of said second roll is spaced from the line of connection of the carbon ribbon to said platen a distance equal to the circumference of said platen, said distance being measured along a strip wound upon said second roll and unwound from the platen, gearing intermediate said carbon ribbon roll and said second roll, whereby the one is driven by the other at substantially the same rate of circumferential speed, means for inducing tension in one of said rolls tending to cause its rotation in a direction to wind from said platen, and backratcheting means to normally prevent such winding movement.

1,017,300. SINGLE-SPARK IGNITION SYSTEM. EDWIN S. LINCOLN, Brookline, Mass., assignor to Electric Goods Manufacturing Company, a Corporation of Maine. Filed Dec. 6, 1909. Serial No. 531,645. (Cl. 123—148.)



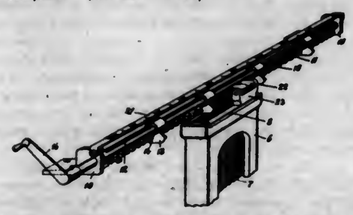
1. In an electric discharge producing system, in combination; a source of electric energy; an induction coil; an energising circuit adapted to connect the source of energy with the coil; a circuit interrupter having separable contacts intercalated in said energising circuit, said interrupter including an actuating winding for causing the separaton of the said contacts; an actuating circuit adapted to connect the source of energy with the actuating winding; and means for contemporaneously closing said energising and actuating circuits independently.

2. In an electric discharge producing system, in combination; a source of electric energy; an induction coil; a distributer-timer having a distributer contact, a timer contact, and a rotating member having contact making surfaces adapted to contemporaneously engage both said distributer contact and said timer contact independently; an energizing circuit extending from said distributer contact through said source of energy and the coil to one of said contact making surfaces; a circuit interrupter having separable contacts intercalated in said energizing circuit, said interrupter including an actuating winding for causing the separation of said separable contacts; and an actuating circuit extending from said timer contact through the actuating winding and said source of energy to another of said contact making surfaces.

3. In an electric discharge producing system, in combination; a source of electric energy; an induction coil having a primary winding; a circuit interrupter having separable contacts, and embodying a magnetizing winding for effecting the separation of said contacts; a circuit controller having a distributer contact and a timer contact, and a rotating member carrying a plurality of contact surfaces, one of said surfaces being adapted to engage said distributer contact in the course of the rotation of the arm and another of said surfaces being adapted contemporaneously to engage said timer contact at the moment of discharge; electric connections connecting said contact surfaces collectively with one terminal of said source of energy; an electric circuit adapted to connect said distributer contact through the separable contacts and the primary winding with the second terminal of said source of energy; and an electric circuit, electrically distinct from the circuit just mentioned, adapted to connect said timer contact with said second terminal of the source of energy through said magnetizing winding.

4. In an ignition system, in combination; a source of electric energy; a plurality of induction coils having primary windings; a circuit breaker having separable contacts, and embodying a magnetizing winding for effecting the separation of said contacts; a distributer-timer having a plurality of distributer contacts and a plurality of timer contacts, and a rotating member carrying a plurality of contact surfaces, one of said contact surfaces being adapted to engage said distributer contacts in succession as said arm rotates, and another of said contact surfaces being adapted, contemporaneously with such engagement and at the moment of ignition, to engage a timer contact; electric connections connecting said contact surfaces with one terminal of said source of energy; independent electric circuits adapted to separately connect said distributer contacts through the selected primary windings and through the separable contacts with the second terminal of said source of energy; and a circuit electrically distinct from the circuits just mentioned adapted to connect said timer contacts collectively with said second terminal of the source of energy through said magnetising winding.

1,017,301. TYPE-WRITER TABULATING MECHANISM. MARQUIS H. LOCKWOOD, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 6, 1911. Serial No. 612,516. (Cl. 197—179.)



1. In a typewriter and tabulating mechanism, the combination of a tabulating stop, movable transversely of its plane and stop positioning means adapted to be thrust aside by said stop in its transverse movement and thereafter to engage the stop and hold it from transverse movement in either direction.

2. In a typewriter and tabulating mechanism the combination of a tabulating stop movable transversely of its plane and stop positioning means adapted to automatically engage said stop and hold it from transverse movement in either direction, said engagement being effected by a transverse movement of the stop toward said positioning means.

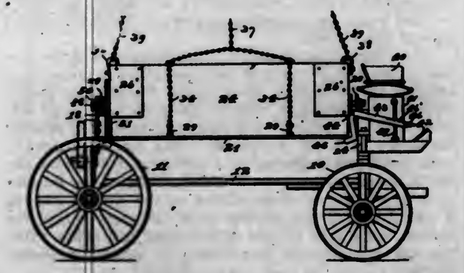
3. In a typewriter and tabulating mechanism the combination of a tabulating stop movable transversely of its plane, a support adapted to reciprocate with the typewriter carriage and on which said stop is adapted to slide and stop positioning means adapted to engage said stop as it is moved transversely from either direction toward said positioning means by a movement of said support and after such engagement to hold the stop against movement while said support may be moved in either direction to position said stop thereon.

4. In a typewriter and tabulating mechanism the combination of a tabulating stop movable transversely of its plane, a support adapted to reciprocate with the typewriter carriage and on which said stop is adapted to slide, means adapted to secure the stop from sliding on said support and stop positioning means adapted, when the stop is released from said securing means, to engage said stop as it is moved transversely from either direction toward said positioning means by a movement of the typewriter carriage and after such engagement to hold it against movement while the carriage may be moved in either direction to position said stop on said support.

5. In a typewriter and tabulating mechanism the combination of a tabulating stop movable transversely of its plane, a support adapted to reciprocate with the typewriter carriage and on which said stop is adapted to slide, means adapted to secure the stop from sliding on said support, stop positioning means adapted when the stop is released from said securing means to engage said stop as it is moved transversely from either direction toward said positioning means by a movement of the typewriter carriage, and after such engagement to hold the stop against movement while the carriage may be moved in either direction to position said stop on said support and means for releasing said stop from its securing means and bringing it into the path of said positioning means to be engaged and positioned thereby.

[Claims 6 to 31 not printed in the Gazette.]

1,017,302. DUMPING-WAGON. CHARLES LYNCH, Chicago, Ill. Filed May 18, 1910. Serial No. 561,959. (Cl. 21—20.)



1. In a dumping wagon, the combination with a wagon frame having front and rear bearings, of a body provided at its ends with trunnions engaging said bearings, said body having a hinged side, means on the wagon frame for rotating said body on its trunnions, means on the ends of said body for the attachment of hoisting chains, and means on the opposite sides of said body, respectively, for the attachment of dumping chains, substantially as described.

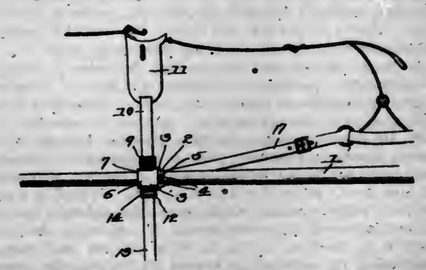
2. In a dumping wagon, the combination with a wagon frame having front and rear bearings, of a body provided at its ends with trunnions engaging said bearings, said body having a movable side thereof provided with inwardly extending arms pivoted to the end walls of said body, means on the wagon frame 1or rotating said body on its trunnions, means on the ends of said body for the attachment of hoisting chains, and means on the opposite sides of said body, respectively, for the attachment of dumping chains, substantially as described.

3. In a dumping wagon, the combination with a wagon frame having front and rear bearings, of a body provided at its ends with trunnions engaging said bearings, said body having its longitudinal side walls provided with inwardly extending arms pivoted to the end walls of said body, means on the wagon frame for rotating said body on its trunnions, means on the end walls of said body for the attachment of hoisting chains, and means on one of said side walls and on the bottom wall at the opposite side of the body for the attachment of dumping chains, substantially as described.

4. In a dumping wagon the combination with a wagon frame having front and rear bearings, of a body provided substantially centrally of its ends with trunnions engaging said bearings, said body having its longitudinal side walls provided with inwardly extending arms hinged to the end walls of said body on common pivots located directly above said trunnions, means on the wagon frame for rotating said body on its trunnions, means on the end walls of said body for the attachment of hoisting chains, and means on one of said side walls and on the bottom wall at the opposite side of the body for the attachment of dumping chains, substantially as described.

5. In a dumping wagon, the combination with a wagon frame having front and rear bearings, of a body provided substantially centrally of its ends with trunnions engaging said bearings, said body having its longitudinal side walls provided with inwardly extending arms hinged to the end walls of said body on common pivots located directly above said trunnions, means on the wagon frame for rotating said body on its trunnions, means on and centrally of the end walls of said body for the attachment of hoisting chains, spring actuated locking bolts on one of said side walls adapted to engage the adjacent edge of the bottom wall of said body, and means on said locking bolts and on the opposite edge of said bottom wall for the attachment of dumping chains, substantially as described.

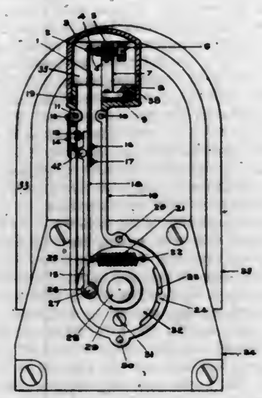
1,017,303. THILL-TUG. JAMES W. MARSALIS, Hattiesburg, Miss. Filed Sept. 14, 1911. Serial No. 649,287. (Cl. 54—50.)



1. A thill tug, including a sheet metal sleeve adapted to be fitted upon a shaft, the said sleeve being provided at one end thereof with a tongue which is rolled rearwardly to form an eye and having tongues stamped from the top and bottom thereof, the lower tongue being rolled to form an eye while the upper tongue is bent upwardly, a buckle engaged by the end of the upper tongue and adapted to receive the saddle strap, a loop engaging the eye at the bottom of the sleeve and adapted to engage the belly band, and a loop engaging the eye at the end of the sleeve and adapted to engage the hold-back strap.

2. A thill tug, including a reversible sheet metal sleeve adapted to be fitted removably over the end of a shaft, opposite ends of the sleeve being provided upon the inner side thereof with tongues which are rolled to provide vertically disposed eyes, and tongues being stamped from the top and bottom of the sleeve, the lower tongue being rolled to form a horizontally disposed eye while the upper tongue is bent upwardly and has the end thereof bifurcated, a buckle adapted to engage the saddle strap and having the middle cross bar thereof engaged by the arms of the bifurcation of the upper tongue, a loop engaged by the bottom eye and adapted to receive the belly band, and loops engaging the eyes at the ends of the sleeve, the rear loop being adapted to receive the hold-back strap.

1,017,304. INTERRUPTER FOR IGNITION-DYNAMOS. CHARLES T. MASON, Sumter, S. C. Filed Jan. 12, 1911. Serial No. 602,170. (Cl. 123—166.)



1. In an interrupter for ignition dynamos, a casing, contact mechanism positioned therein, the contacts projecting vertically from said casing, and a cover for the casing.

2. In an interrupter for ignition dynamos, a casing having an open end and side, a cover for the side, a cap for the end, contacts inclosed by said cap, contact mechanism inclosed by the side and casing, and means for oiling the mechanism without removing the cap or cover.

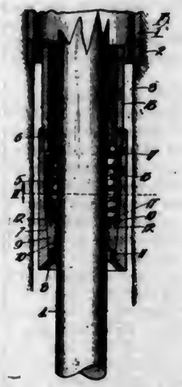
3. In an interrupter for ignition dynamos, a casing, an opening in the side of the casing and a cover therefor, contact mechanism in said casing, contacts projecting from and opening in the casing and a cap for the opening.

4. An interrupter for ignition dynamos comprising a casing having a removable side, a spring controlled contact lever positioned in said casing, a contact connected to said lever, means for adjusting said contact, a fixed contact carried by said casing, insulation between one of the contacts and the casing, means for adjusting the fixed contact in relation to the movable contact, and means inclosed by the cover of the casing for limiting the movement thereof.

5. An interrupter mechanism for ignition dynamos comprising a casing one end of which incloses a cam and the end of a lever, the other end supporting an insulated contact, a contact on the lever registering with the insulated contact, a bearing intermediate the two ends of the lever for supporting same, means inclosed in the casing for restraining the movement of the lever, a cover for the casing, and an independent cover for that portion of the casing inclosing the contacts.

[Claims 6 and 7 not printed in the Gazette.]

1,017,305. EXTRACTING APPLIANCE FOR USE IN OIL OR GAS WELLS. ALBERT P. MCBRIDE, Independence, Kans. Filed Mar. 29, 1911. Serial No. 618,191. (Cl. 166—5.)



1. An extracting appliance, comprising a cylinder having a portion of downwardly-decreasing internal diameter, a circular slip or gripper to fit within the cylinder and of downwardly-decreasing external diameter to engage said portion of the cylinder of downwardly-decreasing internal diameter; said slip or gripper being formed internally with teeth and consisting of a plurality of segments pivotally connected together.

2. An extracting appliance, comprising a cylinder having a portion of downwardly-decreasing internal diameter, a circular slip or gripper to fit within the cylinder and of downwardly decreasing external diameter to engage said portion of the cylinder of downwardly-decreasing internal diameter; said slip or gripper being formed internally with teeth and consisting of a plurality of segments fitting endwise together and interlocked at such ends as regards independent vertical movement of the segments.

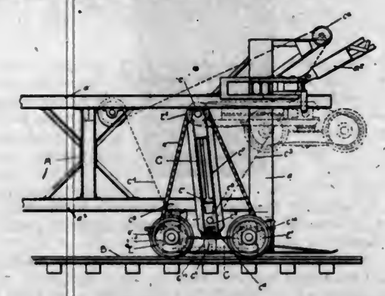
3. An extracting appliance, comprising a cylinder, having a portion of downwardly-decreasing internal diameter, a circular slip or gripper to fit within the cylinder and of downwardly decreasing external diameter to engage said portion of the cylinder of downwardly-decreasing internal diameter; said slip or gripper being formed internally with teeth, and consisting of a plurality of segments fitting endwise together and interlocked at such ends as regards independent vertical movement of the segments; and a vertical pivot pin extending downward through abutting ends of the sections.

4. An extracting appliance, comprising a cylinder having a portion of downwardly-decreasing internal diameter, a circular slip or gripper to fit within the cylinder and of downwardly-decreasing external diameter to engage said portion of the cylinder of downwardly-decreasing internal diameter; said slip or gripper being formed internally with teeth and consisting of a plurality of segments pivotally connected together, a spring fitting in the cylinder upon the upper or enlarged end of the slip or gripper, a ring fitting in the cylinder upon the upper end of the spring, and a tube secured in the upper end of the cylinder and overlying the ring to prevent upward movement thereof.

5. An extracting appliance, comprising a cylinder, having a portion of downwardly-decreasing internal diameter, and a flaring mouth at its lower end, a circular slip or gripper to fit within the cylinder and of downwardly-decreasing external diameter to engage said portion of the cylinder of downwardly-decreasing internal diameter; said slip or gripper being formed internally with teeth and consisting of a plurality of segments pivotally connected together, and beveled at their lower ends to provide a downwardly flaring mouth, and a tube secured at its lower end to the upper end of the cylinder.

[Claim 6 not printed in the Gazette.]

1,017,306. LOG-LOADING MACHINE. JOHN R. MCGIFFERT, Duluth, Minn., assignor to Clyde Iron Works, Duluth, Minn., a Corporation of Minnesota. Filed July 2, 1910. Serial No. 570,033. (Cl. 212—12.)



1. In a machine of the class described, the combination of a main frame; a frame oscillatorily secured to said main frame; and a truck pivotally attached to said oscillatory frame about an axis transverse of the latter's axis of oscillation.

2. In a machine of the class described, the combination of a main frame; a frame oscillatorily secured to said main frame; and a four-wheel truck pivotally attached to said oscillatory frame about an axis transverse of the latter's axis of oscillation.

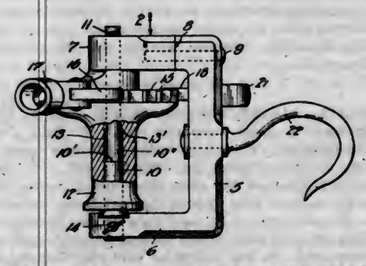
3. In a machine of the class described, the combination of a main frame; a frame oscillatorily secured to said main frame; and a truck pivotally attached to said oscillatory frame about an axis parallel with the latter's axis of oscillation.

4. In a machine of the class described, the combination of a main frame adapted to span a track; a frame oscillatorily secured to said main frame; and a truck attached to said oscillatory frame so as to be pivotal about axes respectively transverse of and parallel with the latter's axis of oscillation, the center of gravity of said truck lying below said truck's last-named pivotal axis.

5. In a machine of the class described, the combination of a main frame adapted to span a track; a frame oscillatorily secured to said main frame; a bolster pivotally attached to said oscillatory frame about an axis parallel with the latter's axis of oscillation; and a truck pivotally attached to said bolster about an axis transverse of such axis of oscillation.

[Claims 6 to 13 not printed in the Gazette.]

1,017,307. WINCH. OSKAR MELBYE, Cypress Island, Wash. Filed Oct. 20, 1910, Serial No. 588,116. Renewed Dec. 19, 1911. Serial No. 666,842. (Cl. 57—85.)



A winch, comprising a U-shaped frame formed with a transverse bar and two arms extending from the ends thereof, one of said arms being secured by a swivel to the bar to be rotatable upon its longitudinal axis, a transverse shaft journaled in bearings provided in said arms, a drum loosely mounted upon said shaft and constructed to coöperate with the shaft to afford a limited end movement to the latter, means for securing the shaft in operative position, a pawl engageable with ratchet teeth provided on the drum, a lever fulcrumed to the shaft and carrying said pawl, and a detent pawl supported by said frame for engagement with the ratchet teeth of the drum.

1,017,308. LIGHTNING-CONDUCTOR. MELVIN G. MITCHELL, South Bend, Ind., assignor to National Cable & Mfg. Co., Niles, Mich., a Corporation of Michigan. Filed Apr. 22, 1909. Serial No. 491,421. (Cl. 173—31.)

1. In lightning-conductors, the combination of a bracket having means whereby it may be secured to a support, a distributer-point, an adjustable connection between the point and the bracket whereby the point may be adjusted to be disposed truly vertical, an electrical conductor, and means for securing said conductor to the bracket.

2. In lightning-conductors, the combination of a bracket having means whereby it may be secured to a support, a distributer-point, a pivotal connection between the point and the bracket whereby the point may be adjuated to be disposed truly vertical, an electrical conductor, and means for securing said conductor to the bracket.

3. In lightning-conductors, the combination of a bracket formed of conducting-material and having means whereby it may be secured to a support or building, a distributer-point, an adjustable connection between the point and the bracket whereby the point may be adjusted to be disposed truly vertical, an electrical conductor, and means for securing the conductor to said bracket and whereby the bracket will serve to conduct energy from the bracket to the point.

4. In lightning-conductors, the combination of a bracket formed of conducting-material and having means whereby it may be secured to a support or building, a distributer-point, a pivotal connection between the point and the bracket whereby the point may be adjusted to be disposed truly vertical, an electrical conductor, and means for securing the conductor to said bracket and whereby the bracket will serve to conduct energy from the bracket to the point.

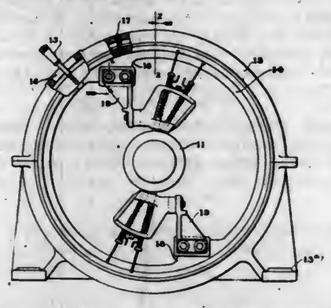
5. In lightning-conductors, the combination of a bracket of conducting-material provided with lugs whereby the bracket may be secured to a support or building, a distributer-point, a pivotal connection between the point and the bracket whereby the point may be adjusted to be disposed truly vertical, an electrical conductor, and means for connecting said conductor to said bracket.

[Claims 6 to 11 not printed in the Gazette.]

1,017,309. BRUSH-HOLDER. SÖREN H. MORTENSEN, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Apr. 15, 1909. Serial No. 489,987. (Cl. 171—210.)

1. In combination, a brush rigging for a dynamo-electric machine, comprising a yoke independent of the field yoke

of the machine, a ring carried by said yoke, said ring having inwardly extending arms, and brackets secured to said arms and insulated therefrom, said brackets having brush holders secured thereto.



2. In combination, in a dynamo-electric machine, a main frame or yoke, a brush rigging comprising a brush yoke independent of the main yoke, a ring supported by said brush yoke, said ring having inwardly projecting arms, a plurality of brush holders, and brackets to which said holders are secured, said brackets having arms which project outwardly on opposite sides of the arms on the rings and are rigidly secured thereto.

3. A field frame, a brush yoke supported independently of the field frame, a ring adjustably mounted on said yoke, said ring having inwardly projecting arms, a plurality of brush holders, and brackets to which said brush holders are bolted, said brackets each having a pair of arms projecting outwardly on opposite sides of one of said arms on the ring, U-shaped sheets of insulation separating the arms of the bracket from the arms of the ring, and bolts passing through said arms and securing the brackets to the ring.

4. In combination, a brush rigging for dynamo-electric machine, comprising a yoke independent of the field yoke of the machine, a ring rotatable within said yoke, a brush holder mounted on said ring and comprising a brush-receiving portion, an outer brush follower supporting portion, a pair of inwardly projecting arms connecting said follower supporting portion to the brush-receiving portion, said brush-receiving portion having a plurality of brushes, said follower supporting portion having sockets arranged in alinement with the brushes, threaded sleeves in said sockets, and pressure springs between said sleeves and brushes.

5. In combination, a brush rigging for a dynamo-electric machine, comprising a yoke independent of the field yoke of the machine, a ring rotatable within said yoke, a brush holder mounted on said ring and having a frame or body portion with a brush-receiving portion, partitions dividing the same into a number of brush sockets arranged in adjacent rows, a follower supporting portion extending over the brush-receiving portion and connected thereto, brushes in said sockets, said follower supporting portion having threaded sockets, sleeves mounted in said threaded sockets and having an arrangement corresponding to the arrangement of the brushes and being in alinement therewith, and coil springs arranged in the brushes and sleeves.

[Claims 6 to 8 not printed in the Gazette.]

1,017,310. HOSIERY. ARTHUR W. NEWMAN, Philadelphia, Pa. Filed Mar. 15, 1910. Serial No. 549,461. (Cl. 66—4.)

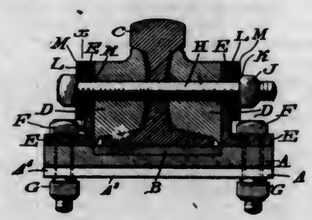
1. A stocking provided on its leg portion with a barrier for the purpose described, the same being composed of a line of circumferentially-disposed stitches imposed on the knit fabric and adapted to unite the courses and wales of said fabric along said line.

2. A stocking provided on its leg portion with a barrier for limiting the downward progress of "drop stitches" due to upward strain exerted on the stocking, said barrier being composed of a circumferentially-disposed line of stitches uniting the courses and wales of the knit fabric along said line.

3. A stocking having, in the single web portion, one or more courses of sewing stitches extending around the web.

4. A stocking having, below the welt or hem, and within the single web of which the leg is composed, one or more courses of sewing stitches extending around the web.

1,017,311. INSULATED JOINT FOR RAILROAD-RAILS. THOMAS O'BRIEN, Philadelphia, Pa. Filed July 31, 1911. Serial No. 641,450. (Cl. 239—5.)

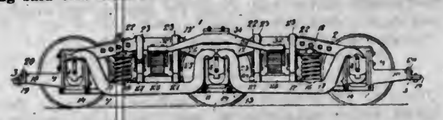


1. In an insulating joint of the character stated, a metallic base plate having a recess in the upper face thereof, a cushion of insulating material in said recess, the same being adapted to have railroad rails imposed thereon, flanged bars rested on said base plate, blocks of insulating material interposed between said bars and said rails, bolts passed through the horizontal flanges of said bars and the adjacent portion of said base plate below the same, and tightening nuts on said bolts, and an integral downward projection on the under side of said base plate, the terminals of the same forming shoulders which engage the ties on which said base plate is seated.

2. In an insulating joint of the character stated, a metallic base plate having a recess upon its upper face, a cushion of insulating material in said recess extending upon opposite sides of the joint between adjacent rails and being adapted to have said rails imposed thereon, said recess having shoulders on the opposite terminals thereof, and downward projection on the under side of the plate having shoulders abutting against the adjacent faces of adjacent ties.

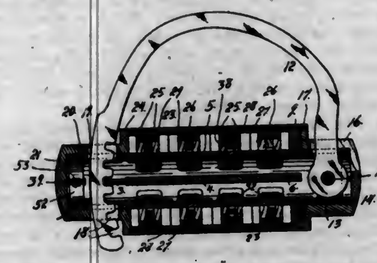
1,017,312. SIX-WHEEL CAR-TRUCK. HENRY PEARSON, Springfield, Mass., assignor to J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 9, 1910. Serial No. 596,413. (Cl. 105—244.)

1. In a truck of the class described, a center axle and an axle on each side thereof, journal boxes on said axles, side frames carried by said axle boxes, equalizing bars resting on said axle boxes, springs between said equalizing bars and the top chords of said side frames, stirrups suspended from said top chords, springs carried by said stirrups, horizontally disposed bars supported by said springs carried by said bars, bolsters carried by said springs, arched bars carried by said bolsters carrying center and side bearings and transoms and crossings uniting said side frames.



2. In a truck of the class described center and end wheels and axles, journaled boxes on said axles, side frames supported by equalizing springs on equalizing bars, said bars resting on said axle boxes, stirrups hung from the top chord of said side frames, springs carried by said stirrups, horizontally disposed bars supported by said springs, elliptical springs carried by said horizontally disposed bars, bolsters supported by said elliptical springs, upwardly arched side and center bearing bars carried by said bolsters, side and center bearings carried by said bars, transoms with rub plates limiting the movement of said bolsters and crossings uniting said side frames.

1,017,313. PERMUTATION-LOCK. ELLSWORTH E. QUAINTANCE, Denver, Colo. Filed Jan. 4, 1911. Serial No. 600,839. (Cl. 70—112.)



1. The combination with a hollow spindle provided with a longitudinal uninterrupted slot, a pallet laterally movable within the spindle and having a straight uninterrupted edge adapted to entirely enter the said slot, a shackle connected at one extremity with the spindle, its opposite extremity being adapted to enter the spindle, permutation devices rotatably mounted on the spindle and having recesses adapted to be brought into alinement and register with the slot in the spindle, the said alined recesses of the permutation devices being adapted to receive the edge of the pallet to permit the pallet to fall out of interlocking relation with the shackle, substantially as described.

2. In a permutation lock, the combination with a hollow spindle, of a pallet laterally movable therein, a permutation device rotatably mounted on the spindle and having recesses, the hollow spindle being provided with a longitudinal uninterrupted slot adapted to receive one entire edge of the pallet, the permutation device being provided with recesses adapted to be brought into register with the slot in the spindle, the said recesses of the permutation device being adapted to receive the edge of the pallet when the latter is passed through the slot of the spindle, for the purpose set forth.

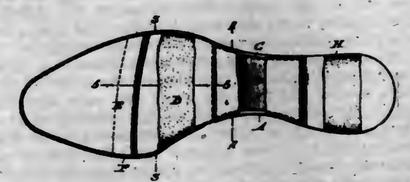
3. The combination with a hollow spindle, of a pallet laterally movable therein, a permutation device mounted on the spindle for controlling the lateral movement of the said pallet, and click springs located in the said spindle and having an abrupt outward bend intermediate their extremities protruding through the slots formed in the shell of the spindle and adapted to be engaged by the recesses of the permutation devices, for the purpose set forth.

4. The combination with a hollow spindle, of a pallet laterally movable therein, permutation devices mounted on the spindle and adjustable to control the lateral movement of the pallet, the opposite extremities of the spindle protruding beyond the permutation device, removable caps applied to the protruding extremities of the spindle, and a shackle pivotally connected with one protruding extremity of the spindle, the cap concealing the pivot of the shackle, the said cap being slotted on its flange and end to receive the shackle and allow it to open wide enough to permit the removal of the cap from the spindle to the shackle, substantially as described.

5. In a permutation lock, the combination with a hollow cylinder or spindle, of a pallet located therein and extending longitudinally thereof and laterally movable therein, a permutation device mounted on the cylinder and adjustable to control the lateral movement of the pallet, the pallet having projections at one extremity protruding through the shell of the spindle, and a member having an elongated opening through which the spindle passes, the projections of the pallet being engaged by the said member, the elongated opening in the member being of sufficient size to permit of lateral movement upon the spindle, whereby the said member may be moved and cause the pallet to be carried therewith, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,017,314. CUSHION-SOLE. ADAM REED, St. Joseph, Mo., and DAVID A. REED, Bozeman, Mont.; said Adam Reed assignor of one-fourth of the right to said David A. Reed. Filed Mar. 22, 1911. Serial No. 616,233. (Cl. 36—28.)



1. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a raised hard-leather toe portion extending throughout its width, a hard-leather layer secured on the instep portion of the body and extending throughout the width thereof; a piece of sheet-steel interposed between said layer and the body; a cushion secured in position and superposed on the body throughout the area between the opposed ends of the raised toe portion and layer; and a cover secured in position and arranged over the toe portion, layer and cushion.

2. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a raised hard-leather toe portion extending throughout its width, and a raised hard-leather instep portion extending throughout its width and also having between the opposed ends of said raised portions a space that extends throughout its width; a cushion secured in position and superposed on the body throughout the area between the opposed ends of the raised portions; a cover secured in position and arranged over the hard leather portions and the cushion and extending in rear of the rearmost hard-leather portion, and a cushion disposed under the cover and in rear of the rearmost hard-leather portion and abutting at its forward end against said rearmost hard-leather portion.

3. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a raised hard-leather toe portion extending throughout its width, and a raised hard-leather instep portion extending throughout its width and also having between the opposed ends of said raised portions a space that extends throughout its width; a cushion secured in position and superposed on the body throughout the area between the opposed ends of the raised portions; and a cover secured in position and arranged over the hard-leather portions and the cushion.

4. A cushion sole for boots or shoes, comprising a cushion, a leather body of the full size and form of an ordinary shoe sole, corresponding in width to the cushion and arranged under the same and having a toe portion disposed in front of the cushion and an instep portion disposed in rear of the same, and a cover arranged over said body and cushion; said body, cushion and cover being suitably connected.

1,017,315. RAILROAD STRUCTURE. CHARLES W. REINOEHL and WILLIAM M. HENDERSON, Steelton, Pa.; Helen B. Reinoehl, Steelton, Pa., executrix of said Charles W. Reinoehl, deceased. Filed Oct. 12, 1910. Serial No. 586,594. (Cl. 104—12.)

1. In a railroad structure the combination of a main rail and a tapering switch rail adjacent the main rail and movable toward and from the same; said main rail comprising a rail section bent outwardly forming a recess adjacent the point end of the switch rail, a second rail section having an end portion overlapping the outwardly bent portion of the first named section, a hard metal wear piece within said recess and abutting against the end of the second named section and forming a stop for the switch rail in one position thereof, means for securing said wear piece to the first named section, and means for securing the overlapping ends of said sections together.

2. In a railroad structure the combination of a main rail and a tapering switch rail adjacent the main rail and movable toward and from the same; said main rail comprising a rail section having a straight portion adjacent the heel portion of the switch rail and an outwardly bent portion forming a recess adjacent the point end of the switch rail, a second rail section alined with the straight portion of the first named section and having an end portion overlapping the outwardly bent portion of the first named section, a hard metal wear piece within said recess and abutting against the end of the second named section and forming a stop for the switch rail in one position thereof, means for securing said wear piece to the first named section, and means for securing the overlapping ends of said sections together.

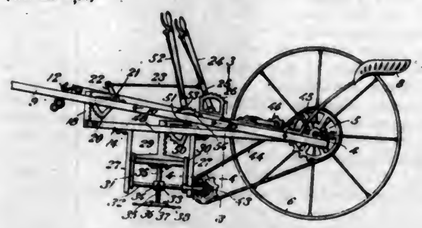
3. In a railroad structure the combination of a main rail and a tapering switch rail adjacent the main rail and movable toward and from the same; said main rail comprising a rail section bent outwardly forming a recess adjacent the point end of the switch rail, a hard metal wear piece within said recess and forming a stop for the switch rail in one position thereof and having an inwardly extending base flange supporting the point end of the switch rail in one position thereof, and means for securing said wear piece to said rail section.

4. In a railroad structure the combination of a main rail and a tapering switch rail adjacent the main rail and movable toward and from the same; said main rail comprising a rail section bent outwardly forming a recess adjacent the point end of the switch rail and having the inner portion of its base cut away adjacent the point end of the switch rail, a hard metal wear piece within said recess and forming a stop for the switch rail in one position thereof and occupying the space of the cut away portion of the base of said rail section and having an inwardly extending flange supporting the point end of the switch rail in one position thereof, and means for securing said wear piece to said rail section.

5. In a railroad structure the combination of a main rail and a tapering switch rail adjacent the main rail and movable toward and from the same; said main rail comprising a rail section bent outwardly forming a recess adjacent the switch rail and diminishing in width toward the heel end of the switch rail, a second rail section having an end portion overlapping the outwardly bent portion of the first named section, a tapering hard metal wear piece within said recess and having its wide end abutting against the end of the second named rail section and its narrow end extending toward the heel end of the switch rail, means for securing said wear piece to the first named section, and means for securing the overlapping ends of said sections together.

[Claims 6 to 13 not printed in the Gazette.]

1,017,316. BEET-BLOCKER. ERNEST C. REYNOLDS, Sanford, Colo. Filed May 29, 1911. Serial No. 630,054. (Cl. 13—5.)



1. A beet blocker comprising a main driving axle, a main frame pivotally mounted thereon and provided with a draft attachment, an auxiliary frame pivotally mounted for vertical adjustment independently of the main frame, means for adjusting said auxiliary frame, cutters mounted on the auxiliary frame to rotate in planes at right angles to the line of draft, said cutters being arranged on opposite sides of the longitudinal center of the implement, and means for vertically adjusting said cutters upon the auxiliary frame.

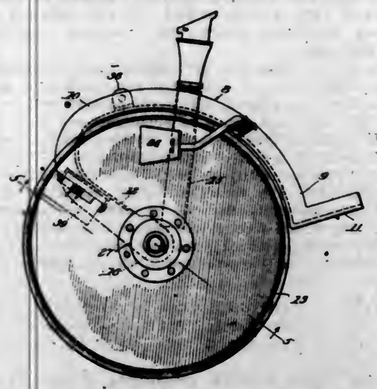
2. A beet blocker comprising a main driving axle, a main frame pivotally mounted thereon and provided with a draft attachment, a vertically adjustable auxiliary frame, means for adjusting the same, depending supports on said adjustable frame, cutters vertically adjustable upon said supports and arranged on opposite sides of the longitudinal center of the implement to rotate at right angles to the line of draft, a shaft in gear with the cutters and vertically adjustable therewith, means for adjusting said cutters and shaft, and gearing between said shaft and the main driving axle.

3. A beet blocker comprising a main driving axle, a main frame pivotally mounted thereon and provided with a draft attachment, a pivoted vertically adjustable auxiliary frame, a crank shaft, rack gearing between said crank shaft and auxiliary frame, means for actuating said gearing to adjust said auxiliary frame, supports depending from the opposite sides of the auxiliary frame, brackets vertically adjustable upon said supports, rotary cutters carried by the brackets, a shaft in gear with the rotary cutters and vertically adjustable therewith, a second crank shaft, rack gearing between the same and said brackets, means for operating said gearing to adjust the cutters and shaft, and a driving connection between the shaft and the main driving axle.

1,017,317. ORCHARD OIL-BURNER. GEORGE C. RICHARDSON, Leavenworth, Kans. Filed Aug. 8, 1910. Serial No. 576,223. (Cl. 126—50.5.)

An orchard burner, comprising a burner having an imperforate bottom and an annular wall extending upwardly from the margin of the bottom and provided with perforations, an oil supply tank, a feed pipe extending from the supply tank at one side thereof to the burner at one side thereof and communicating with the latter in a plane above the plane of the point of communication with the supply tank and provided within the burner with a flared end, all points of the bottom of the feed pipe between the tank and burner lying above the plane of said bottom of said pipe at its point of communication with the supply tank, and a valve controlling said feed pipe.

1,017,318. GRAIN-DRILL. OTTO GEORGE RIESKE, Minneapolis, Minn., assignor to The Monitor Drill Company, a Corporation of Minnesota. Filed Jan. 3, 1911. Serial No. 600,554. (Cl. 111—18.)



1. In a grain drill, the combination of a channel-shaped member, arched in its forward portion to provide a boot and downwardly extending in its rear portion to provide a standard, and a pair of co-acting disks rotatably mounted on the lower end of the standard.

2. In a grain drill, the combination of a channel-shaped member of resilient material, arched in its central portion to provide a boot, forwardly extending in its forward portion to provide a drawbar attachment, and downwardly extending in its rear portion to provide a standard, and a pair of co-acting disks rotatably mounted on the lower end of the standard.

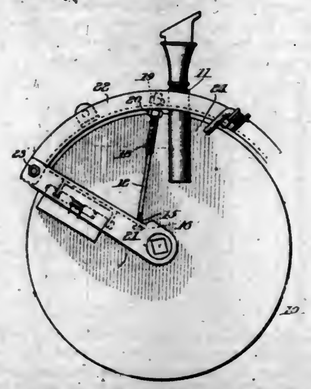
3. In a grain drill, the combination of a channel-shaped member, arched in its forward portion to provide a boot and downwardly extending in its rear portion to provide a standard, a pair of disks mounted on the lower end of the standard, and means for maintaining their edges in contact at a suitable point with respect to the boot.

4. In a grain drill, the combination of a member of channel-shaped cross section and arched upwardly and rearwardly to provide a boot, and then extending downwardly in its rear portion to provide a standard, and a disk suitably mounted on the lower end of the standard, the flanges of that portion of the channel which constitutes the boot extending away from the disk, and the flanges of that portion of the channel which constitutes the standard extending rearwardly.

5. In a grain drill, the combination of a member of channel-shaped cross section arched upwardly and rearwardly in its forward portion to provide a boot and extending downwardly in its rear portion to provide a standard, and a disk suitably mounted on the lower end of the standard, the flanges of that portion of the channel which constitutes the boot extending outwardly from the disk, and the flanges of that portion of the channel which constitutes the standard extending rearwardly, and the flanges being of suitable depth and of material having such resiliency that obstructions cause the standard to flex slightly, whereby the disk is enabled to ride over such obstructions.

[Claims 6 to 11 not printed in the Gazette.]

1,017,319. GRAIN-DRILL. OTTO GEORGE RIESKE, St. Louis Park, Minn., assignor to The Monitor Drill Company, a Corporation of Minnesota. Filed Jan. 3, 1911. Serial No. 600,555. (Cl. 111—18.)



1. In a grain drill, the combination of a boot, a downwardly extending standard on the end of the same, a pair of disks rotatably mounted on the standard, and an adjustable reinforcing member between the disks and connected at one end to the standard and adjustably secured at the other end to the boot.

2. In a grain drill, the combination of a boot, a downwardly extending standard hinged to the rear end of the same, a disk mounted on the standard, and a reinforcing adjustment member extending from the standard to the boot.

3. In a grain drill, the combination of a boot, a downwardly extending standard hinged to the rear end of the same, a pair of disks rotatably mounted on the inner end of the standard, and a reinforcing adjustment member connected at one end to the standard and at its other end adjustably secured to the boot.

4. In a grain drill, the combination of a boot, a downwardly extending standard on one end of the same, a pair of co-acting disks rotatably mounted on the standard, an independent grain delivery spout terminating at a point between the disks, and a grain guide partition between the disks and behind the grain delivery spout and downwardly extending from the boot commencing at a point between the standard and the spout.

5. In a grain drill, the combination of a boot, a downwardly extending standard on the end of the same, a pair of disks mounted on the standard, an independent grain delivery spout terminating at a point to deliver grain between the disks, and a reinforcing partition between the disks and behind the grain delivery spout and in advance of the standard, and extending from the lower end of the standard to the boot.

[Claims 6 to 13 not printed in the Gazette.]

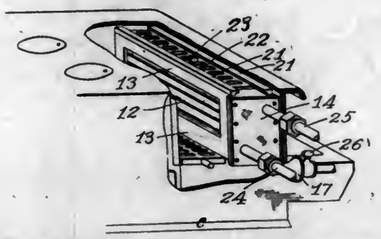
1,017,320. PROCESS OF TREATING WASTE LIQUORS FROM SODA-PULP MILLS. ERIK LUDVIG RINMAN, Harnäs, Sweden. Filed Jan. 27, 1911. Serial No. 605,095. (Cl. 23—22.)

The process of treating black liquors from soda pulp mills, which consists in first freeing the liquor substantially from organic substances capable of being precipitated by carbonic acid, and thereupon precipitating bicarbonate of soda by saturating the liquor with carbonic acid at a suitable concentration and a suitable temperature of the liquor.

1,017,321. WATER-HEATER. ROBERT W. ROOMS, Worcester, Mass. Filed Nov. 16, 1910. Serial No. 592,721. (Cl. 126—354.)

1. In a device of the class described, the combination of a chamber for the combustion of solid fuel, a casing

located adjacent to said combustion chamber and having an opening in the wall facing said chamber, a coil of piping having the turns thereof superimposed to form a wall to close the opening in the face of said casing, inlet and outlet pipes connected to said coil, a fluid burner beneath said coil, means for conveying combustible fluid to said burner, and means for permitting the escape of the products of combustion from said casing.

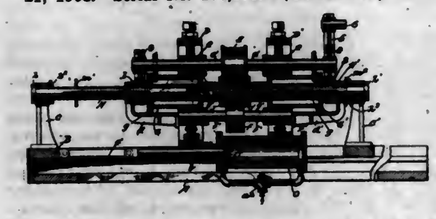


2. In a device of the class described, the combination of a chamber for the combustion of solid fuel, a casing located adjacent to said combustion chamber and having the side toward said chamber open to admit the heat of combustion from said chamber, a coil of piping having the turns thereof superimposed to form a wall to close said opening, inlet and outlet pipes connected to said coil, a fluid burner located beneath said coil, means for conveying combustible fluid to said burner, an air inlet in said casing beneath said burner, and a damper controlled outlet adjacent to the top of said casing for the escape of the products of combustion from said burner.

3. In a device of the class described, a chamber for the combustion of solid fuel, a water heater adapted to be placed in said chamber comprising, a casing open on one side and closed on the opposite side, a water heating coil situated within said casing, and a fluid fuel burner for heating said coil, said casing being open at the bottom and being provided adjacent to its top with a damper controlled outlet for the escape of the products of combustion from said burner.

4. In a device of the class described, a chamber for the combustion of solid fuel, and a water heater adapted to be placed adjacent to said chamber, said heater comprising, a casing open on one side and closed on the opposite side, a water heating coil situated within said casing and having the turns of said coil superimposed to form a wall to close the open face of said casing, and a fluid fuel burner for heating said coil, said casing having an opening in the bottom thereof and being provided near its top with a damper controlled outlet for the escape of the products of combustion from said burner.

1,017,322. APPARATUS FOR MAKING PIPE-COUPLINGS. JOHN H. RONEY, Allegheny, Pa. Filed Oct. 21, 1903. Serial No. 177,876. (Cl. 78—88.)



1. In a machine for making pipe couplings, etc., the combination of a welding roll, oppositely disposed rotary mandrels, means to bring said mandrels successively into operative position with relation to said roll, means to hold either of said mandrels in operative position until the welding operation of the coupling thereon is complete, and means to move the mandrel out of operative position, simultaneously the other mandrel is moved into operative position with relation to said roll.

2. In a machine for making pipe couplings, etc., the combination of a welding roll, oppositely disposed rotary mandrels, means to bring said mandrels successively into operative position with relation to said roll, means to hold either of said mandrels in operative position until the welding operation of the coupling thereon is completed, means to move the mandrel out of operative position, simultaneously the other mandrel is moved into operative position with relation to said roll, and means disposed in the path of the mandrel for removing the coupling therefrom.

3. In a machine for making pipe couplings and other hollow cylindrical bodies, the combination of a welding roll, oppositely disposed mandrels, the axes of which are parallel with the axis of said roll, and means to successively operatively position said mandrels with relation to said rolls.

4. In an apparatus for making pipe couplings, etc., the combination of a welding roll, oppositely disposed mandrels, the axes of which are parallel with the axis of said roll, and means to simultaneously move one of said mandrels into operative position, and the other of said mandrels out of operative position.

5. In an apparatus for making pipe couplings, etc., the combination of a rotatable former, oppositely disposed rotatable mandrels, the axes of which are parallel with the axis of said former, and means to successively operatively position said mandrels with relation to said former.

[Claims 6 to 9 not printed in the Gazette.]

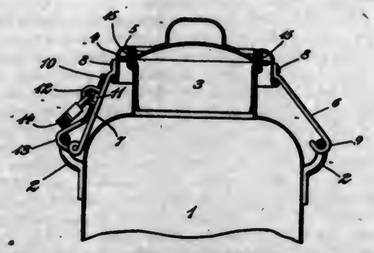
1,017,323. PAINT-VEHICLE AND FURNITURE-POLISH. JOSEPH ARTHUR ROUTHIER, Montreal, Quebec, Canada. Filed Mar. 3, 1911. Serial No. 612,122. (Cl. 134—56.)

The herein described composition of matter consisting of:

Benzin	1½	gallons,
Raw linseed oil	1	pint,
Brown japan	1	pint,
Beeswax	½	pound,
Sal ammoniac	2	grams,

mixed together and used as a paint vehicle and furniture polish.

1,017,324. RETAINING MEANS FOR RECEPTACLE-COVERS. LAWRENCE F. RYAN, New York, N. Y. Filed Sept. 21, 1911. Serial No. 650,545. (Cl. 70—3.)



A device of the character described comprising a member adapted to surround the closure of a receptacle and having an inturned flange adapted to rest on the upper surface of such closure, straps depending from such member, one of such straps terminating in a hook like member and a second of such straps having an auxiliary strap member hingedly secured thereto and adapted to be swung thereon and means for holding such auxiliary strap member against displacement when in such position.

1,017,325. SAFETY-RAZOR-STROPPING DEVICE. LIONEL D. SAXTON, New York, N. Y. Filed Jan. 27, 1911. Serial No. 605,078. (Cl. 51—16.)

1. In a stropping device, the combination of a carriage provided with means for engaging a strap strop, a holding frame for said carriage adapted to slide back and forth thereon and provided with sidewalls having slots open at the top thereof, an oscillating blade holder pivoted on said carriage above said sidewalls and provided with lateral studs disposed in triangular relation with the pivot of said blade holder and adapted to swing into and out of engagement with said slots in alternation in reversal of the device on the strop, the entry of one stud into its slot preceding the release of other stud from its slot.

2. In a stropping device, the combination of a carriage provided with means for engaging a strap strop adapted to slide therethrough and with trunnions projecting beyond its sidewalls, a holding frame for said carriage adapted to slide back and forth thereon and provided with sidewalls offset in their upper parts and having slots open at the top thereof, and an oscillating blade holder pivoted on said trunnions and having its side plates disposed between the sides of said carriage and the offset portions of the sidewalls of said holding frame, said side plates having lateral studs disposed on opposite sides in triangular relation with the pivot of said blade, said studs being adapted to swing into and out of engagement with said slots in alternation in reversing the movement on the strop, the entry of one of said studs into its slot preceding the release of the other stud from its slot.

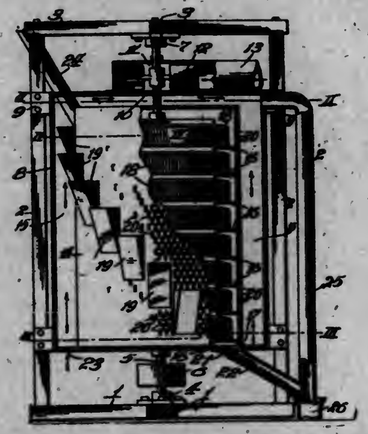
3. In a stropping device, the combination of a carriage, a holding frame for said carriage adapted to slide back and forth thereon, and an oscillating blade holder pivoted on said carriage, said carriage being provided with means for engaging a strap strop adapted to slide therethrough, said means consisting of end crossbars, a central crossbar and a bow-shaped spring adapted to hold said strop against said crossbars, said spring having a struck up socket engaging said central crossbar and flat surfaces adapted to rest against said strop at points opposite the points of engagement of the blade to be sharpened.

1,017,326. GRAIN HULLING AND SCOURING MACHINE. CHARLES SCHACHT, Highland, Ill. Filed May 1, 1911. Serial No. 624,323. (Cl. 83—29.)

1. In a device of the character described, the combination with a scouring casing, of annular ledges disposed around the inner wall of said casing, movable scouring disks respectively overhanging said ledges, and chutes for conveying grain from one ledge to another, said chutes being open through the lateral wall of said casing.

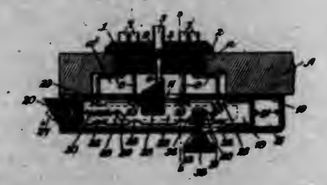
2. In a grain scouring machine, the combination with a scouring shell provided with ledges projecting inwardly from its inner surface said ledges being provided with discharge openings, of a rotor provided with scouring disks overhanging said ledges, respectively, said disks and ledges being close enough to prevent the passage of grain therebetween, said scouring shell being provided with openings for the passage of cleanings; and means for drawing off the cleanings through said openings.

3. In a device of the character described, the combination with a casing provided with annular ledges projecting inwardly, said casing being provided with openings extending respectively on opposite sides of said ledges and said ledges being provided with peripheral openings registering with the openings in said casing, of protuberant pockets on the outer wall of said casing and covering said openings therein, and scouring disks movable relatively to said ledges, and close enough thereto to prevent grain passing therebetween.



4. In a device of the character described, the combination with a scouring shell closed at the top and provided with lateral openings for the passage of cleanings, of a plurality of ledges projecting horizontally from the inner surface of said shell; said ledges being provided with discharge openings arranged in stepped order around said shell, and a rotor within said shell and provided with a plurality of scouring disks overhanging said ledges; said disks being adapted to jumble the grain and to convey it around each ledge to the opening therein.

1,017,327. KEYLESS COMBINATION DOOR-LOCK. JOHN J. SCHAEFER, Elgin, Ill. Filed Apr. 21, 1911. Serial No. 622,516. (Cl. 70—18.)



1. The combination of a bolt case, a bolt slidably mounted in said case, members engaging said bolt to lock the same, plungers mounted to engage and release said bolt engaging members, and a supplemental member mounted to release said bolt engaging members, and having a portion thereof projecting outwardly of the bolt head.

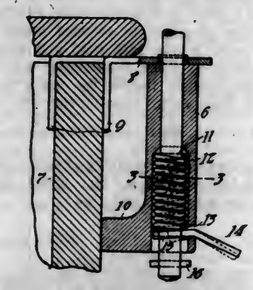
2. The combination of a bolt case, a bolt slidably mounted in said case, members engaging said bolt to lock the same, plungers extending into the case from one side to release the bolt engaging members, a supplemental member projecting from the bolt head to automatically release the bolt engaging members, and means extending into the opposite side of the case to manually actuate said supplemental member.

3. The combination of a bolt case, a bolt slidably mounted in said case and provided with notches upon opposite faces, spring catches secured at one of their ends to the case on the inside thereof to coincide with the bolt notches, certain of said catches being extended upon one face of the bolt and in engagement with certain of the notches, and certain others of the catches being extended upon the opposite bolt surface and free of the notches, and a plurality of plungers extending into the case from one side thereof to engage the free ends of said catches.

4. The combination of a bolt case, a notched bolt slidably mounted in said case, spring catches secured in the case to engage within certain of the notches of the bolt to lock the same, a plurality of catch-releasing plungers extending into the case, each of said plungers coinciding with one of the bolt notches, a member slidably mounted alongside the bolt and having a beveled head extending outwardly of the bolt head, said member being movable toward, and engageable with, the said catches, to release the same upon its sliding movement.

5. The combination of a bolt case, a notched bolt slidably mounted in said case, spring catches secured within the case to engage within certain of the notches of the bolt to lock the same, a plurality of catch-releasing plungers extending into the case, each of said plungers coinciding with one of the bolt notches, a member disposed alongside the bolt, within its case, and provided with a beveled end extending outwardly of the bolt head, said member being movable toward, and engageable with, the said catches, to release the same upon its sliding movement, a member movably mounted through a portion of the bolt case, said member being engageable with said sliding member, to slide the same and release and move the bolt.

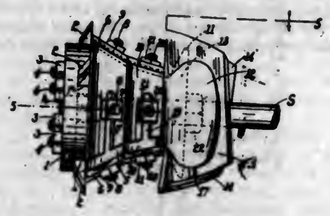
1,017,328. PHONOGRAPH-HORN SUPPORT. CHARLES SCHIFFL, West Orange, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed May 11, 1909. Serial No. 495,225. (Cl. 248—40.)



In a horn support, the combination of a member formed with a counterbored socket having a shoulder therein and also formed with a lateral opening extending through the wall of said member into the counterbored portion of said socket, a horn-supporting rod inserted in said socket, a clamp having a finger piece extending out through said opening at a considerable angle to said member, said clamp being fulcrumed on the edge of said opening and having a passageway therein through which said rod extends, said rod being freely movable through said passageway when said clamp is positioned at one angle thereto and bound or wedged in said passageway when said clamp is positioned at another angle thereto, a spiral spring surrounding said rod within the counterbored portion of said socket and bearing at its ends against said shoulder and against said clamp for pressing the latter into binding position, substantially as described.

1,017,329. CROZE-CUTTING TOOL. HERMAN SCHNEIDER, St. Louis, Mo. Filed Oct. 30, 1911. Serial No. 657,650. (Cl. 144—236.)

A croze-cutting tool comprising a shaft, a terminal disk keyed thereto and provided with radial grooves, cutters deposited in said grooves and projecting beyond the periphery of the disk, a member having a pyramid-frustum body portion mounted on the shaft and engaging the disk aforesaid, blades on the faces of the frustum having cutting edges disposed in a circle interior to the free cutting edges of the radial blades of the disk, a second pyramid frustum engaging the first frustum, and forming substantially an extension of the first frustum, blades on the faces of the second frustum, an outer terminal member on the shaft coupled to the second frustum and comprising a central head, lateral outwardly diverging wings forming inclined slots or grooves with the sides of the



head, and blades inserted in said grooves and supported by, and secured to the wings, the succession of blades starting from the last set successively chamfering, dressing, beveling and shouldering the assembled staves, as set forth.

1,017,330. SPRING-WHEEL. FRANK SMITH, Rossville, Ga. Filed Apr. 11, 1911. Serial No. 620,349. (Cl. 152—28.)

1. A wheel comprising a hub, spaced inner and outer rims, the inner rim being carried by the hub, and the outer rim having annular flanges on its inner periphery, cushioning elements interposed between the rims, and an annular band encircling and secured to the outer periphery of the inner rim, said band having a channel on one side of the inner rim, annular plates encircling the band and closing up the space between the rims, the aforesaid flanges having a sliding engagement with the plates, a loose connection between the plates and the flanges, a split ring seating in the foresaid channel and engageable with one of the plates, means for contracting said ring in the channel, integral lugs on the band, said lugs being located between the plates, and fastening means passing through the lugs and the plates.

2. A wheel comprising a hub, spaced inner and outer rims, the inner rim being carried by the hub, and the outer rim having annular flanges on its inner periphery, cushioning elements interposed between the rims, an annular band encircling and secured to the inner rim, said band having an outstanding flange on one side and a channel on the other side of the rim, annular plates encircling the band and closing up the space between the rims, the aforesaid annular flanges having a sliding engagement with the plates, and one of said plates being in engagement with the outstanding flange, a split ring seating in the aforesaid channel and engageable with the other one of said plates, means for contracting the ring in the channel, a loose connection between the plates and the annular flanges, integral lugs on the band, said lugs being located between the plates, and fastening means passing through the lugs and the plates.

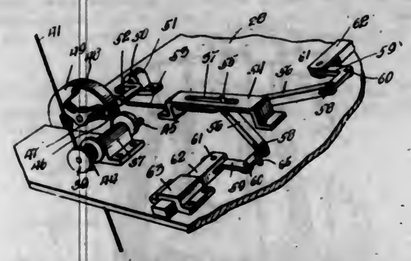
1,017,331. LUBRICATOR FOR ELEVATOR-GUIDES. OWEN T. SNYDER, Columbus, Ohio. Filed June 23, 1911. Serial No. 635,000. (Cl. 184—22.)

1. In a lubricator of the kind described, the combination with an oil box or reservoir, of a spring consisting of a strip of spring metal secured at its upper end to the upper portion of the box, said spring containing at its lower end a block of non-absorptive material to be yieldingly held by the spring against the part to be lubricated, and a wick extending from the interior of the box over and adjacent to said spring and to said block.

2. In a lubricator of the kind described, the combination with an oil box or reservoir, of a spring consisting of a strip of spring metal secured at its upper end to the upper portion of the box, said spring containing at its lower end a block of non-absorptive material and a recess to receive the wick, said block to be yieldingly held by the spring against the part to be lubricated, and a wick extending from the interior of the box over and adjacent to said spring and into the recess of said block.

3. In a lubricator of the kind described, the combination with an oil box or reservoir, of a spring bearing at its lower end a block of non-absorptive material and a wick leading from the interior of the oil box thereto, said block being recessed to receive the wick so that the latter extends substantially flush with the face of the block.

1,017,332. ELEVATOR SAFETY DEVICE. FRANK SOWINSKI, Detroit, Mich. Filed Oct. 25, 1911. Serial No. 656,598. (Cl. 187—89.)



In an elevator safety device, the combination with guides, and a cage movably mounted between said guides, of stop block holders, yieldable stop blocks arranged in said holders, a governor carried by said cage, a cable fixed relatively to said cage and adapted to impart an oscillatory movement to said governor, arms carried by said cage, and means actuated by an increase of movement of said governor to shift said arms outwardly into the path of said yieldable stop blocks.

1,017,333. UNDERREAMER. GEORGE E. SQUIER, Jersey City, N. J. Filed May 29, 1911. Serial No. 630,022. (Cl. 166—6.)

1. An under-reamer, comprising a stock having transverse ways intermediate its ends, and an axial bore, cutters mounted to slide in said ways, a mandrel mounted to slide in said bore and movable outwardly between the cutters to spread the same, a spring bearing against said mandrel to move the same outwardly, and means within the stock and engaging the mandrel to move the same inwardly.

2. An under-reamer, comprising a stock having transverse ways and an axial bore, transversely movable cutters mounted to slide in said ways, a transversely apertured mandrel mounted to slide in said bore and movable outwardly between the cutters to spread the same, a spring bearing against said mandrel to move the same outwardly, and a member pivoted in the stock and having an outer cam portion and an inner portion extending within the aperture of said mandrel.

3. An under-reamer, comprising a stock, cutters mounted to slide diametrically in the stock and adapted to be withdrawn within the stock or moved outward to project beyond the sides of the stock, the inner ends of the cutters being provided with bevels, a spring-pressed mandrel mounted to slide lengthwise in the stock and having a pointed end adapted to engage the said bevels of the said cutters to move the latter outwardly, the body of the mandrel then passing between the inner ends of the cutters to hold the same locked in an outermost position, and means on the said stock and cutters to limit the outward movement of the cutters.

4. An under-reamer, comprising a stock, under-reaming cutters mounted to slide transversely in the said stock, a spring-pressed mandrel mounted to slide lengthwise in the stock and pressing the said cutters outwardly into active position and locking the same therein, and a locking means for locking the mandrel in position in the stock during the downward movement of the stock in the well casing, said means comprising a member pivoted in the stock and having a portion extending inwardly into engagement with the mandrel.

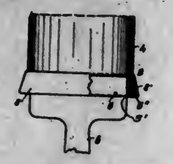
5. An under-reamer, comprising a stock, cutters mounted to slide diametrically in the stock and adapted to be withdrawn within the stock or moved outward to project beyond the sides of the stock, the inner ends of the cutters being provided with bevels, a spring-pressed mandrel mounted to slide lengthwise in the stock and having a pointed end adapted to engage the said bevels of the said cutters to move the latter outwardly, the body of the mandrel then passing between the inner ends of the cutters to hold the same locked in outermost position, and a lever fulcrumed on the stock and engaging the said mandrel to hold the latter in retracted position, the outer end of the lever extending beyond the side of the stock for engagement with the well casing.

[Claims 6 to 8 not printed in the Gazette.]

1,017,334. BRUSH. CARL STAHL, Nuremberg, Germany. Filed Feb. 9, 1910. Serial No. 542,841. (Cl. 15—36.)

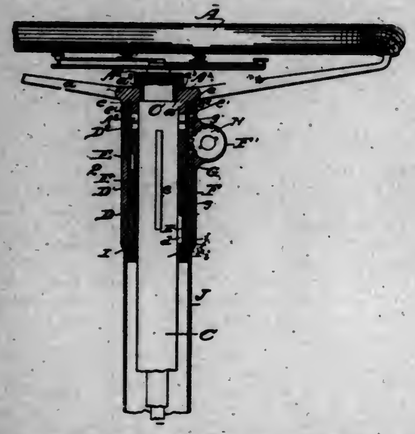
In combination, a bundle of bristles assembled to form a brush and provided with a hollow handle receiving portion composed of a single length of bristles extending from end to end of the brush, a handle projecting into said hollow portion and having laterally projecting pins engaging the ends of said bristles, and a one-piece guard or ferrule having a slotted top portion fitting about the handle and engaging said pins on that side thereof op-

posite to the point of engagement therewith by the ends of said bristles, said guard having lateral portions embracing the bristles and having their outer or end marginal portions compressed against the bristles to reduce



the thickness of the brush, at the marginal portion of said guard, with respect to the length of said pins, and with respect to the thickness of the bristles adjacent the top of said guard.

1,017,335. LOCK FOR STEERING-WHEELS. THEODORE D. STANLEY, Detroit, Mich. Filed June 5, 1911. Serial No. 631,447. (Cl. 70—90.)



1. In a steering mechanism for vehicles, a steering post, a sleeve adapted to reciprocate on the post, a steering wheel adapted to rotate on the post, a clutch, the co-acting parts of which are respectively carried by the sleeve and steering wheel, means for forcing the clutch member carried by said reciprocating sleeve into co-acting relation with the clutch member carried by the wheel, and means adapted to secure the reciprocating portion of the clutch in a locked and an unlocked relation to said steering wheel clutch portion.

2. In a steering mechanism for vehicles, the combination of a steering post, a sleeve adapted to reciprocate on the post and keyed against rotation and having notched projections forming one member of a clutch, a steering wheel adapted to rotate on the post having a hub portion provided with notched projections forming the co-acting member of the clutch, means for moving the sleeve with its notched projections into locked or unlocked relation with the notched projections of the hub, and means for securing said reciprocating clutch in either a locked or unlocked relation to the hub.

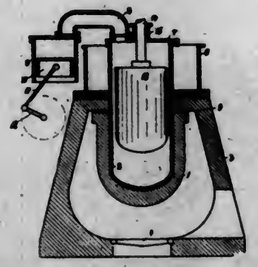
3. In a steering mechanism for vehicles, a steering post, a sleeve adapted to reciprocate on the post, and keyed against rotation, and having notched projections forming one member of a clutch, said sleeve provided with a screw-threaded portion, a steering wheel adapted to rotate on the post having a hub portion provided with notched projections co-acting with the notched projections on the sleeve, a thimble loosely engaged with the hub and concentric with the sleeve having an internal screw-threaded portion co-acting with the screw-threaded portion of the sleeve, means for rotating said thimble to move the sleeve clutch member into locked or unlocked relation with the hub clutch member, and means for maintaining said last named parts in their locked or unlocked relation.

4. In a steering mechanism for vehicles, a steering post, a sleeve provided with a screw-threaded portion adapted to reciprocate on the post, and keyed against rotation, and having projections at one end forming one portion of a clutch, a steering wheel having a hub free to turn on the post, said hub portion provided with projections forming the opposing member of the clutch on the end of the sleeve, a thimble loosely engaged with the hub having an internal screw-threaded portion co-acting with the screw-threaded portion of the sleeve, a rotatable sleeve concentric with the thimble, means for locking said last named sleeve with the thimble, whereby upon manually rotating the sleeve, the thimble may be rotated and the clutch member carried by the first named sleeve forced into or withdrawn from co-acting relation with the clutch member carried by the hub, and means for maintaining said parts in their locked and unlocked relations.

5. In a steering mechanism for vehicles, a steering post, a sleeve provided with a screw-threaded portion adapted to reciprocate on the post and keyed against rotation, having on one end one member of a clutch, a steering wheel having a hub adapted to rotate on the post, said hub provided with the co-acting member of the clutch carried by the sleeve, a thimble loosely engaged with the hub having an internal screw-threaded portion co-acting with the screw-threaded portion of the sleeve, a rotatable sleeve concentric with the thimble, a reciprocating bolt carried by the rotatable sleeve, means for actuating said bolt, means coöperating with the bolt to lock the rotatable sleeve and thimble together, whereby upon manually rotating said sleeve the thimble may be rotated and thereby the clutch member on the reciprocating sleeve brought into locked or unlocked relation with the co-acting clutch member carried by the hub.

[Claims 6 to 14 not printed in the Gazette.]

1,017,336. FIRE-POT FOR ENGINES. THEODOR STOCKMANN, Wilmersdorf, near Berlin, Germany. Filed Oct. 5, 1911. Serial No. 653,061. (Cl. 60—17.)



1. A fire-pot for high pressure hot air engines, comof high density and sufficient strength, and a tightly fitting mantle of fireproof metal of good heat conducting properties, substantially as, and for the purpose, set forth.

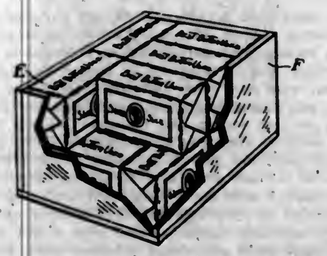
2. A fire-pot for high pressure hot air engines, comprising in combination, an interior pot of wrought metal, an exterior pot of fire proof metal surrounding said interior pot and in conductive relation thereto, and a layer of carbon proof material between said pots, substantially as, and for the purpose, set forth.

3. A fire-pot for high pressure hot air engines, comprising in combination, an interior pot of wrought metal, an exterior pot of fire proof material surrounding and in heat conductive relation with said interior pot, and a layer of enamel between said pots, substantially as, and for the purpose, set forth.

4. A fire-pot for high pressure hot air engines, comprising in combination, an interior pot of wrought metal, an exterior pot of fireproof metal surrounding said interior pot, and ridges provided between said pots, substantially as, and for the purpose, set forth.

5. A fire-pot for high pressure hot air engines, comprising in combination, an interior pot of wrought metal, an exterior pot of fireproof metal surrounding one end of said interior pot, and a cooling mantle surrounding the other end of said interior pot, substantially as, and for the purpose, set forth.

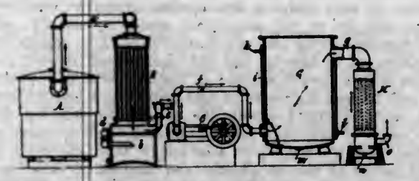
1,017,337. MEANS OF WRAPPING AND PACKING CAKES. PENN O. STONE, Cincinnati, Ohio. Filed July 18, 1910. Serial No. 572,479. (Cl. 206—65.)



1. A package of cakes consisting of a series of individual packages, each of the individual packages consisting of a card-board strip in contact with the bottom and the ends of the cake, and a wrapper enveloping the card-board strip and the cake, the individual packages being arranged in layers with the card-board strips standing in vertical planes, the individual packages of adjacent layers being so arranged that the weight thereof is carried by the card-board strips.

2. A package of cakes consisting of a series of individual packages, each of the individual packages consisting of a cardboard strip in contact with the bottom and the ends of the cake and a wrapper enveloping the cardboard strip and the cake, the individual packages being arranged in layers with the cardboard strips standing in vertical planes, and the individual packages of a layer being placed at right angles to the position of the packages in the subjacent layer.

1,017,338. CONDENSING APPARATUS. EMIL WILHELM STROHN, Buffalo, N. Y. Filed June 19, 1908. Serial No. 439,288. (Cl. 196—5.)

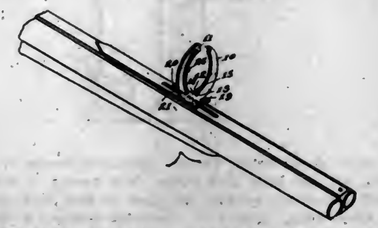


1. The combination with an evaporating vessel provided with means for evaporating a volatile solvent, and a vacuum pump, of an expansion vessel and a condenser both communicating with the eduction side of the pump and with the atmosphere, said expansion vessel being arranged between the pump and the condenser and permitting the air and vapor discharged by the pump to come to a comparative state of rest before entering the condenser, substantially as set forth.

2. The combination with an evaporating vessel provided with means for evaporating a volatile solvent, a vacuum pump and a condenser through which the air and vapor are drawn by the pump from said vessel, of an expansion vessel and a final condenser through which the gas and vapor are forced by the pump and which communicate with the atmosphere, the expansion vessel being arranged between the eduction side of the pump and the final condenser and permitting the air and vapor discharged by the pump to come to a comparative state of rest before entering the final condenser, substantially as set forth.

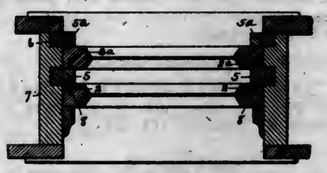
3. The combination with an evaporating vessel provided with means for evaporating a volatile solvent, and a vacuum pump by which the air and vapor are drawn from said vessel, of an expansion vessel which communicates with the eduction side of the pump and with the atmosphere and permits the air and vapor to come to a comparative state of rest therein, said vessel being provided with means for condensing the vapor, substantially as set forth.

1,017,339. GUN-SIGHT. RICHARD STUART, Crows Landing, Cal. Filed June 7, 1911. Serial No. 631,774. (Cl. 42—80.)



A gun sight comprising a casing for attachment to a gun barrel, means for adjusting the said casing relatively to the gun barrel, a sight plate slidably mounted in the said casing and a handle secured to the plate and projecting through a slot in the said casing, for operating the said sight plate in the said casing.

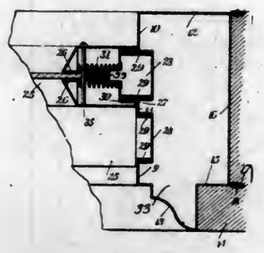
1,017,340. WEATHER-STRIP. ROBERT B. SWART, Detroit, Mich., assignor to American Metal Screen and Weatherstrip Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 22, 1910. Serial No. 588,507. (Cl. 20—69.)



In combination with a window frame having the several vertical and horizontal frame portions, an upper horizontal strip attached to the upper frame member, and said frame also provided with a vertical channel in the side frame portion, a middle stop engaging in said channel, outside and inside stops on either side of said middle stop, an upper sash slidable in the space between the outside and middle stop and provided with a vertical groove in its inside face, a lower sash slidable between the inside stop and middle stop and provided with a vertical groove in its outside face, a pair of nailless, anti-creep, weather strips, the one comprising a web having an integral lug at its upper end adapted to be bent at a right angle and tightly wedged between the upper frame member and the upper horizontal strip, and a web extending from the top of the frame to below the middle of said middle stop facing the outside thereof, said web being wedged between the wall of the channel and the middle stop and folded in the form of a double flange engaging spreadingly in the vertical groove of the upper sash, and the other strip comprising a web having an integral lug at the bottom folded at a right angle and engaging between the bottom of the middle stop and the lower frame member, the said web facing the inside of said middle stop between the

bottom and a point above the center thereof, and wedged between the wall of said channel and said middle stop, and an integral flange, doubled upon itself, engaging spreadingly within the groove of the said lower sash, substantially as described.

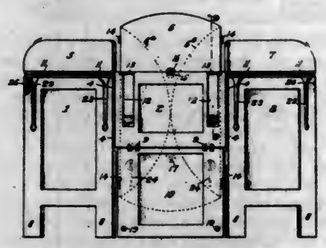
1,017,341. SHEET-METAL WINDOW SASH AND FRAME. MAX SWARTZ, New York, N. Y., assignor to National Fire Proof Sash and Door Company, Brooklyn, N. Y., a Corporation. Filed May 10, 1911. Serial No. 626,196. (Cl. 189—78.)



1. In a sheet metal window sash and frame, a sash having box-like rails and stiles, each having a channel formed therein for holding the glass of said sash, one of said stiles being formed of separated pieces; a closure member for said separated pieces slidably connected with said pieces to cover the exposed edge of said glass; means provided in said sash for holding the same in position; and a plurality of resilient members adapted to extend said closure member into guided relation with said channels.

2. In a sheet metal window sash and frame, a sash having one of the stiles thereof constructed from two separated pieces of sheet metal the outer edges whereof are inwardly bent to form hooks; a guide member constructed from sheet metal the edges whereof are shaped to form hooks to engage the first mentioned hooks and to hold the sash and guide member in guided relation; and a resilient member disposed between said guide member and said sash to normally extend the said guide member outwardly from said sash.

1,017,342. CONVERTIBLE ARTICLE OF FURNITURE. MAURICE SWITZER, New York, N. Y. Filed Nov. 26, 1909. Serial No. 529,857. (Cl. 155—6.)

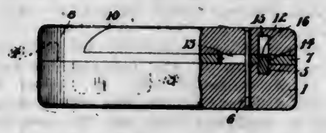


1. A convertible article of furniture comprising a vertical central section, two substantially rectangular horizontally swinging screen sections each hinged to said central section and arranged to be swung into substantial alinement with each other and also to positions crosswise thereof, and a vertically swinging table top section hinged to said vertical section and arranged to rest upon said screen sections when the latter are swung to their said crosswise positions and to be folded downwardly behind the central section when said screen sections are swung into alinement with each other, substantially as described.

2. A convertible article of furniture comprising a vertical central section, two substantially rectangular horizontally swinging screen sections each hinged to said central section and arranged to be swung into substantial alinement with each other and also to positions crosswise thereof, and a vertically swinging table top section hinged to said vertical section and arranged to rest upon said screen sections when the latter are swung to their said crosswise positions and to be folded downwardly behind the central section when said screen sections are swung into alinement with each other, said screen sections being provided with horizontally hinged upwardly and downwardly swinging sections, substantially as described.

3. A convertible article of furniture comprising a vertical central section, two substantially rectangular horizontally swinging screen sections each hinged to said central section and arranged to be swung into substantial alinement with each other and also to positions crosswise thereof, and a vertically swinging table top section hinged to said vertical section and arranged to rest upon said screen sections when the latter are swung to their said crosswise positions and to be folded downwardly behind the central section when said screen sections are swung into alinement with each other, said screen sections being provided on their adjacent faces with shouldered portions 18, and said central section with a seat section 10 resting upon such shouldered portions when said screen sections are folded to their crosswise positions, substantially as described.

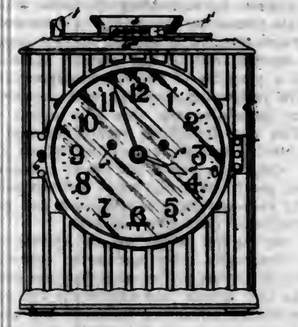
1,017,343. PUZZLE-BOX. JOHN SZUMLINSKI, Amsterdam, N. Y. Filed Nov. 16, 1911. Serial No. 660,574. (Cl. 46—41.)



A box of the type described, comprising a body having a cavity formed therein, a dove-tailed tongue carried by the top of said body at one end thereof, the opposite end of said body having a recess formed therein, a lid having one end thereof slotted and pivotally mounted upon said body adjacent to the recess thereof, said lid having one end thereof enlarged to provide a dove-tailed groove to receive the tongue of said body, said lid having an opening formed therein adapted to register with the recess of said body, a lid member pivotally supported upon said lid by the same pivot means of said lid, said lid member having one end thereof beveled to engage the enlargement of said lid and the opposite end thereof provided with a pocket adapted to register with the opening of said lid and the recess of said body, and a gravity locking block arranged within the opening of said lid and the recess of said body for locking said lid in a closed position, said block being of less length than the depth of said pocket of the lid member and adapted to enter said pocket of said lid member, whereby said lid member can be adjusted to move said block out of registration with the opening of said lid to permit of said lid being longitudinally shifted upon said body and swung to an open position.

1,017,344. WORKMAN'S TIME-RECORDER. WILLIAM TAYLOR, Leicester, England. Filed June 6, 1907. Serial No. 377,639. (Cl. 234—43.)

1. In a time recorder adapted to make a record upon a card or removable record surface, the combination with a time stamp and a positioning device for varying the position of printing on the card according to fixed periods of time, of a primary motor, a detent on the motor, a secondary motor for effecting the periodical release of the detent, means actuated by the primary motor to change the printing types, and means, acting concurrently therewith, of storing energy from the primary motor to actuate the card positioning device.



2. In a time recorder adapted to make a record upon a card or removable record surface, the combination with a time stamp and a positioning device for varying the position of printing on the card according to fixed periods of time, of a primary motor, a detent on the motor, a secondary motor for effecting the periodical release of the detent, means actuated by the primary motor to change the printing types, a tertiary motor energized by the primary motor for actuating the card positioning device, a detent on the tertiary motor, and means for releasing said detent periodically.

3. In a time recorder adapted to make a record upon a card or removable record surface, the combination with a time stamp and a positioning device for varying the position of printing on the card, of a spring for actuating the positioning device, a motor for changing the printing types and winding said spring, a detent on the positioning device, and means to release the detent periodically.

4. In a time recorder adapted to make a record upon a card or removable record surface, the combination with a time stamp, a motor for changing the printing types, a detent on the motor, and a clock adapted to release the detent periodically, of means for releasing the detent manually.

5. In a time recorder: the combination with a device for varying the position of the time record on the card or record surface, of the rack E, the spring actuated pinion e^5, the detent g, and the trip g^6 which releases the detent periodically.

[Claims 6 to 17 not printed in the Gazette.]

1,017,345. APPARATUS FOR CONTROLLING TEMPERATURE AND HUMIDITY. WILLIAM TAYLOR, Leicester, ROBERT ERNEST ATKINSON, Knighton, and DAVID MEIN NESBIT, Leicester, England. Filed Oct. 23, 1908. Serial No. 459,263. (Cl. 236—8.)

1. In a thermostat for controlling temperature with reference to humidity, a compound expansion member part of the length of which is composed of a substance which expands with increase of temperature, and part of a substance which expands with increase of humidity substantially as described.

2. In a thermostat for controlling temperature with reference to humidity, the combination with a valve for controlling a motor-actuating fluid, of a compound expansion member adapted to actuate the valve and part of the length of which is composed of a substance which expands with increase of temperature, and part of a substance which expands with increase of humidity substantially as described.

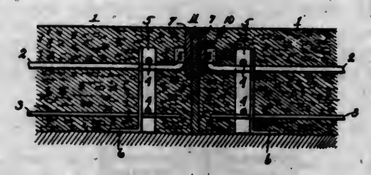
3. In a humidostat for controlling humidity with reference to temperature a compound expansion member part of the length of which is composed of a substance which expands with increase of temperature, and part of a substance which expands with increase of humidity substantially as described.

4. In a humidostat for controlling humidity with reference to temperature, the combination with a valve a motor-actuating fluid, of a compound expansion member adapted to actuate the valve and part of the length of which is composed of a substance which expands with increase of temperature, and part of a substance which expands with increase of humidity substantially as described.

5. The combination with a controlling instrument of the kind herein referred to, comprising a tubular expansion member part of the length of which is composed of a substance which expands with increase of temperature and part of a substance which expands with increase of humidity, a relatively non-expanding tubular member in the aforesaid expansion member, a valve actuated by the expansion member and for the purpose of controlling the flow of a fluid agent acting on the expansion member and circulated longitudinally through the inner member and through the annulus between the members, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,017,346. EXPANSION-JOINT FOR CONCRETE ROADWAYS. AVILA THOMAS, Detroit, Mich., assignor to Thomas Steel Reinforcement Co., Detroit, Mich., a Corporation of Michigan. Filed Oct. 25, 1911. Serial No. 656,558. (Cl. 94—1.)



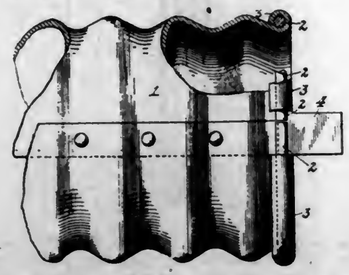
1. An expansion joint for cementitious masses, comprising a reinforcing frame-work having tension members with hooked terminals, and opposed face plates set in the edges of the sections of the cementitious masses at the surface thereof, said plates having members thereon engaged by the hooked terminals of the tension members to affect a connection between said parts.

2. An expansion joint for cementitious masses, comprising a reinforcing frame-work having tension members with hooked terminals, opposed face plates set in the edges of the sections of the cementitious masses and spaced to allow a filling therebetween, tongues on said plates having eyes which receive the hooked terminals of the tension members, and a compressible filling between the cementitious masses and occupying the space between said plates.

3. A structure of the character described, comprising tension members having hooked terminals, a face plate having tongues struck therefrom, the free ends of said tongues being formed into embracing eyes to receive the hooked terminals of the tension members to effect a connection between said members and said face plate.

4. An expansion joint for cementitious masses, comprising a reinforcing framework and opposed face plates set in the edges of the sections of the cementitious masses, and means for connecting said face plates to said reinforcing frame-work in a manner to tie said parts together.

1,017,347. METALLIC CULVERT. KARL JOHAN THORSBY, Oakland, Cal., assignor to California Corrugated Culvert Company, Oakland, Cal., a Corporation of California. Filed Oct. 30, 1911. Serial No. 657,460. (Cl. 61—9.)

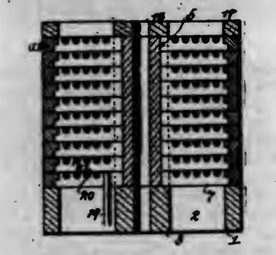


1. A sheet-metal culvert of the corrugated metal type having its end bent to form a peripheral channel, the inner portion of which is the bottom of a furrow of the corrugated metal and a reinforcing member seated in said channel.

2. A sheet-metal culvert of full round section with overlapping sides, the innerlying side being cut in from the end to form a tongue, and the corresponding portion of the outerlying side being removed, the end of said culvert and the said tongue being bent to form a peripheral channel; and a reinforcing member seated in said channel.

3. A sheet-metal culvert of full round section with overlapping sides, the innerlying side being cut in from the end to form a tongue, and the corresponding portion of the outerlying side being removed, the end of said culvert and the said tongue being bent to form a peripheral channel; and a reinforcing member seated in said channel, and so disposed that its meeting ends ore covered by said tongue.

1,017,348. REACTANCE-COIL. THOMAS E. MURRAY and PHILIP TORCHIO, New York, N. Y. Filed May 19, 1911. Serial No. 628,268. (Cl. 171—242.)



1. An electric coil of flat parallel spirals, a central standard, a plurality of superposed supports thereon having recesses for embedding the wire of said spirals, and a wall surrounding and detachably secured to said supports.

2. An electric coil of flat parallel spirals, a central standard, a plurality of superposed supports thereon having recesses for embedding the wire of said spirals, and a wall formed in detachably connected sections surrounding and detachably secured to said supports.

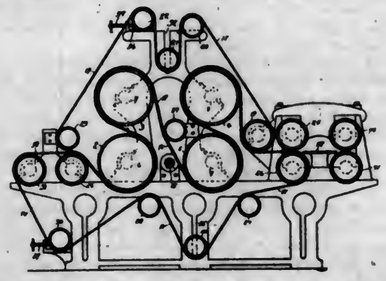
3. An electric coil of flat parallel spirals, a central standard, a plurality of superposed supports thereon provided with registering openings, each support having recesses for embedding the wire of a spiral, and a wall surrounding and detachably secured to said supports.

4. An electric coil of flat parallel spirals and a casing therefor comprising inner and outer concentric tubular walls, and partitions in the space between said walls and separating said spirals: the said walls and partitions being of insulating refractory material.

5. An electric coil of flat parallel spirals and a casing therefor comprising inner and outer concentric tubular walls, and partitions in the space between said walls and separating said spirals: the said walls and partitions being of insulating refractory material, and the said outer wall and partitions being formed in detachable sections.

[Claims 6 to 17 not printed in the Gazette.]

1,017,349. DRYING AND IRONING MACHINE. WILLIAM H. H. TRACY, Troy, N. Y. Filed June 16, 1909, Serial No. 502,433. Renewed June 28, 1911. Serial No. 635,895. (Cl. 58—9.)



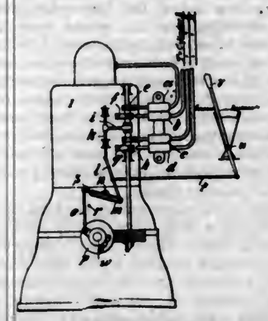
1. In a machine for the purpose set forth, a plurality of rollers, two conveyer belts adapted to pass over said rollers, said belts traveling together over some of the rollers, and singly over others, said belts being separated at the rear of the machine and thence returned to the forward end thereof, means for heating the rollers over which said belts pass when traveling together, ironing rollers in the rear of the point where said belts separate, and means for driving the heating rollers and ironing rollers in unison.

2. In a machine for the purpose set forth, a plurality of heated rollers, conveyer belts adapted to move together over said rollers during a portion of their travel and to confine collars and cuffs between the meeting faces thereof, said belts consisting of a body portion of felt and a facing of linen or cotton, the facings of said belts lying contiguous when said belts are passing together over said rollers.

1,017,350. REVERSING DEVICE FOR MULTICYLINDER INTERNAL-COMBUSTION ENGINES. GUSTAV HEINRICH WILHELM UREN, Aachen, Germany, assignor to Aachener Stahlwaarenfabrik Fafnir-Werke Aktiengesellschaft, Aachen, Germany. Filed Aug. 24, 1911. Serial No. 645,810. (Cl. 123—41.)

1. Reversing mechanism for multi-cylinder internal combustion engines, comprising, in combination with the cylinders, fuel supply devices, one for each cylinder, an actuating member for each fuel supply device, and means for operatively connecting some of said actuating members with the fuel supply devices of oppositely acting cylinders for the purpose of reversing the engine.

2. Reversing mechanism for multi-cylinder internal combustion engines comprising, in combination with the cylinders, fuel supply devices, one for each cylinder, an actuating member for each fuel supply device, means for operatively connecting some of said actuating members with the fuel supply devices of oppositely acting cylinders for the purpose of reversing the engine, and means for automatically returning the actuating members to their initial positions.



3. Reversing mechanism for multi-cylinder internal combustion engines comprising, in combination with the cylinders, fuel supply devices, one for each cylinder, an actuating member for each fuel supply device and means for operatively connecting some of said actuating members with the fuel supply devices of oppositely acting cylinders for the purpose of reversing the engine, said actuating members being so constructed as to supply an increased amount of fuel when the engine is reversed.

1,017,351. TRUNK. MIKE VITOSZKI, Johnstown, Pa., assignor of one-fourth to Janos Tomasowski and one-fourth to Mihalj Makranvey, Johnstown, Pa. Filed Apr. 21, 1911. Serial No. 622,566. (Cl. 190—21.)

A folding trunk comprising a bottom, side walls, and end walls, a metal covering for said bottom having the ends and longitudinal edges folded over onto the bottom to provide flanges, angle bars carried by the side and end walls and having their longitudinal flanges received under the flanges of said metal covering, sliding latches carried by the end walls to engage with the side walls at the ends of latter, said end walls having sockets in the inner faces thereof adjacent the ends of the walls, toggle levers having their free ends received in said sockets, said toggle levers extending at an acute angle with respect to the trunk walls and acting both as braces for the walls and as tray supports, and a lid detachably-connected to the rear wall of said trunk.

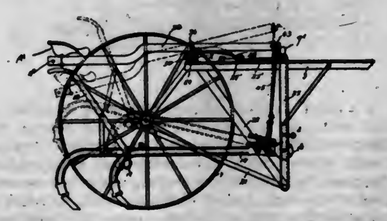
1,017,352. COMBINED DRILL, CENTER-REAMER, AND COUNTERSINK TOOL. FREDERICK A. WAGNER, Norwood, Ohio. Filed May 16, 1910, Serial No. 561,537. Renewed Dec. 21, 1911. Serial No. 667,214. (Cl. 77—66.)

1. A combined drill, center-reamer and countersink tool comprising in combination a head provided with an end slot located in the axial plane of said head and extending lengthwise of said head from its end for forming a pair of wings, a cutter-blade having thereon a drilling section, a center-reaming section and a countersinking section received in said slot, and a clamp-screw received through said blade and clamping said wings toward said blade for clamping the blade in position, substantially as described.

2. A combined drill, center-reamer and countersink tool comprising in combination, a head provided with an end slot located in the axial plane of said head and extending lengthwise of said head from its end for forming a pair of wings, a cutter-blade having thereon an end drilling section, a middle center-reaming section and an inner counter-sinking section received in said slot, the said middle center-reaming section having tapering edges, and a clamp-screw received through said blade and clamping said wings toward said blade for clamping said blade in position, the outer ends of said wings being provided with tapering portions contacting the sides of the middle section of said blade, substantially as described.

3. A combined drill, center-reamer and countersink tool comprising in combination a head provided with an end slot located in the axial plane of said head and extending lengthwise of said head to a substantial extent from its end for forming a pair of wings, a flat cutter-blade having thereon a middle tapered center-reaming section, a drilling section at the outer end of the latter, and a counter-sinking section at the inner end of said tapered center-reaming section, said cutter-blade received in said slot, and a clamp-screw received through said blade and clamping said blade in position, the said cutter-blade being provided at the respective sides of its median line and at opposite sides of said blade with end cutting edges 15 and side cutting edges 16 at said drilling section, with end-cutting edges 18 at said counter-sinking section, and with inclined center-reaming cutting-edges 17 at said center-reaming section which extend at acute angles with relation to each other and at obtuse angles with relation to said end-cutting edges 18 and side cutting-edges 16, the respective sides of said blade being provided with clearance rake-grooves at the respective edges of said blade which extend longitudinally of said cutting edges and follow the angles thereof, the said wings being provided with clearance recesses at said grooves, and the said wings being provided with outer parti-conical ends located at the respective sides of said tapered center-reaming section closely adjacent to the rear of the cutting edges of said blade, substantially as described.

1,017,353. CULTIVATOR. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Sept. 23, 1909. Serial No. 519,296. (Cl. 97—35.)



1. In a cultivator, the combination of a frame, plow beams having pivotal connections at their forward ends

with the frame, a seat lever mounted upon the frame and carrying a seat at its rear end, connections from the front end of the seat lever to the plow-beams, a curved supporting frame adapted to movably support and provide an automatically adjustable fulcrum for said seat lever to provide for variable leverage.

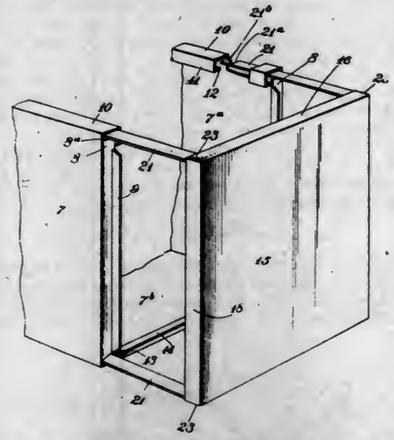
2. In a cultivator, the combination with a frame, plow beams having a pivotal connection at their forward ends with the frame, connections from the pivot end of the seat lever to the plow beams, a curved supporting frame, a seat lever movably mounted on said supporting frame whereby increased or decreased leverage on the plow beams is obtained automatically.

3. In a cultivator, the combination with a frame, plow beams having pivotal connections at their forward ends with the frame, connections from the front end of the seat lever to the plow beams, a curved supporting frame mounted on the frame of the cultivator, a seat lever mounted on said supporting frame the fulcrum of which is automatically changed when movement is imparted to said seat lever and means to prevent the displacement of said seat lever as described and set forth.

4. In a cultivator, the combination of a frame and plow beams having pivotal connections at their forward ends, connections from the front end of the seat lever to the plow beams, with said frame, a curved supporting frame mounted on said cultivator frame, a seat lever, means to removably secure said seat lever to said supporting frame whereby the fulcrum of said seat lever is automatically changed to increase or decrease the leverage of said seat lever while at work.

5. In a cultivator, the combination of a frame and a pole frame connected thereto, plow beams having their forward ends pivotally connected to said frame, a combined curved supporting frame and draft bar, a seat lever mounted on said supporting frame, connections between said seat lever and the forward ends of the beams and means to movably connect said seat lever to the curved supporting frame whereby the fulcrum of the seat lever is automatically changed at the will of the operator.

1,017,354. WALLED SHEET-METAL STRUCTURE. PETER M. WEGE, Marietta, Ohio. Filed Dec. 9, 1909. Serial No. 532,204. (Cl. 220—17.)



1. In a sheet metal structure of the kind described, two parallel walls and a connecting wall, said parallel walls provided with bent over concealing margins, combined with walls joining said parallel walls, and arms connected with said joining walls and extending under the concealing margins of the first named walls, the arms at each side of the structure provided with means for interlocking them at their ends whereby the joining walls are held in position with reference to the first mentioned walls.

2. In a sheet metal structure of the kind described, two parallel walls and a wall permanently connecting them at their corresponding edges, the free margins of said parallel walls being inwardly bent to form grooves, combined with closing walls to connect the aforesaid parallel walls, said closing walls also provided with inwardly standing marginal grooves, and angular pieces, each having an arm secured in said last named marginal grooves and a second arm extending into one of the first mentioned marginal grooves, the corresponding last named arms being interlocked with each other, substantially as described.

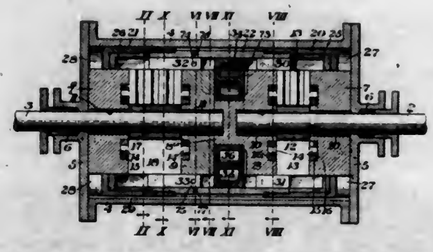
3. In a sheet metal structure of the kind described two parallel walls and a wall permanently connecting them at corresponding edges, combined with separate walls to connect the aforesaid parallel walls, said separate walls provided with marginal grooves and angular pieces engaging the marginal grooves of the said separate walls and having arms interlocked with corresponding arms adjacent the first named parallel walls.

4. In a sheet metal structure of the kind described two parallel walls and a wall permanently connecting them at corresponding edges, combined with separate walls to connect the aforesaid parallel walls, said separate walls provided with marginal grooves, angular pieces engaging the marginal grooves of the said separate walls and interlocked with each other adjacent the first named parallel walls, and means for holding said angular pieces interlocked with each other.

5. In a sheet metal structure of the kind described, in combination, two parallel walls and a wall permanently connecting them at corresponding edges, separate end walls to connect the aforesaid parallel walls, said end walls having marginal grooves, angular pieces each having an arm engaging one of the said marginal grooves and an arm interlocked with the corresponding arm of an opposite angular piece, and separate inserted walls to hold said angular pieces interlocked.

[Claim 6 not printed in the Gazette.]

1,017,355. POWER-TRANSMISSION APPARATUS. HERBERT E. WHITE, Youngstown, Ohio. Filed Jan. 25, 1911. Serial No. 604,573. (Cl. 138—3.)



1. In power-transmission apparatus, a driving element, a pump actuated thereby, a motor driven by the pump, a driven element to which the motor is connected, and regulating means whereby the speed of the motor and driven element may be varied relatively to the speed of the driving element without changing the power transmitted, the pump and motor having radially reciprocating piston blades of constant stroke and which rotate therewith, substantially as described.

2. In power-transmission apparatus, a driving element, a pump actuated thereby, a motor driven by the pump, a driven element actuated by the motor, and means for increasing or decreasing the speed of the motor and its driven element and for correspondingly decreasing or increasing the torque exerted by said element, the pump and motor having radially reciprocating piston blades of constant stroke, and which rotate therewith, substantially as described.

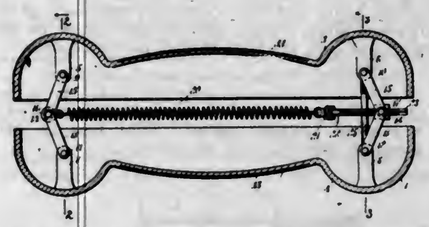
3. In power-transmission apparatus, a driving element, a pump actuated thereby, a motor driven by the pump, a driven element carrying the motor and driven thereby, and means for varying the capacity of the motor, the pump and motor having radially reciprocating piston blades of constant stroke and which rotate therewith, substantially as described.

4. In power-transmission apparatus, a driving element, a pump actuated thereby, a motor driven by the pump, a driven element carrying the motor and driven thereby, and means for varying the effective piston area of the motor, the pump and motor having radially reciprocating piston blades of constant stroke and which rotate therewith, substantially as described.

5. In power-transmission apparatus, a driving element, a pump actuated thereby, a motor driven by the pump, a driven element carrying the motor and driven thereby, and means for varying the effective piston area of the pump, the pump and motor having radially reciprocating piston blades of constant stroke, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,017,356. EXERCISING DEVICE. HORATIO WHITING, New York, N. Y. Filed Dec. 20, 1909. Serial No. 534,147. (Cl. 46—69.)



1. An exercising device, comprising a plurality of relatively-adjustable members, means for limiting the relative movement of said members, comprising nuts having angular connection with said members and screw-threaded rods adjustably connected to said nuts, toggles connecting said members, a spring connected at one end to one of said toggles, a swivel connected to the opposite end of said spring, a screw-threaded adjusting rod connected to said swivel and also connected to the other of said toggles, and a hand grip for said members.

2. The combination with a dumb-bell divided into a plurality of sections, of a single spring located within said dumb-bell and extending in substantially the same longitudinal direction as said dumb-bell, for holding the sections of said dumb-bell apart and adapted to yield under pressure on said sections to permit the approach of said sections toward each other, and means for varying the tension on said spring.

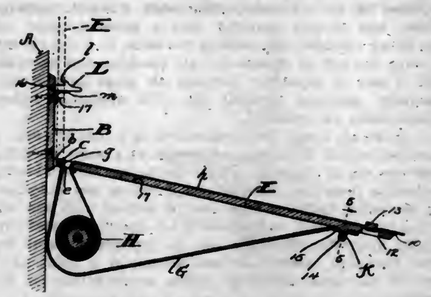
3. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, and a spring connecting said toggles together, normally tending to straighten said toggles, so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other.

4. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, each of said toggles comprising a plurality of links pivotally connected together and pivotally connected to said sections, and a spring connecting the pivotal points of connection of said toggle-links yieldingly together in such a manner as to tend to straighten said toggles so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other.

5. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, and a spring connecting said toggles together, normally tending to straighten said toggles, said spring being fixedly secured to one of said toggles and adjustably secured to the other of said toggles, whereby the tension on said spring may be varied.

[Claims 6 and 7 not printed in the Gazette.]

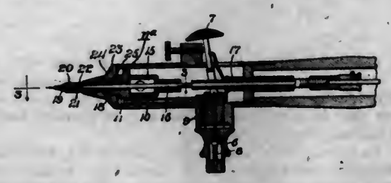
1,017,357. COMBINED DESK AND REGISTER. JAMES E. WINCHEL, Cleveland, Ohio. Filed Nov. 19, 1910. Serial No. 593,178. (Cl. 11—22.)



1. A combined desk and register comprising the following:—a stationary plate; a table pivotally connected to the said plate and arranged to swing on a substantially horizontal axis and projecting upwardly or forwardly from the plate according as the table is in its upwardly swung or downwardly swung position, which table at its forward end has a cutting edge extending transversely of the table and is provided near the said end with a slot which is spaced rearwardly from the cutting edge and extends transversely of the table, said table being provided at the top of the said slot with a cross-bar which extends transversely of the table and from end to end of the said slot and is rigid with the table and arranged between and spaced from the side walls of and depending slightly into the slot, and a holder for supporting a roll of paper, which holder is arranged at the underside of the table in the downwardly swung position of the table, said holder being pivotally connected to the aforesaid plate and arranged to swing in a vertical plane.

2. A combined desk and register comprising the following:—a stationary plate; a table pivotally connected to the said plate and arranged to swing on a substantially horizontal axis and projecting upwardly or forwardly from the plate according as the table is in its upwardly swung or downwardly swung position, which table is provided at the under side of its forward portion with a downwardly projecting lug; a receptacle for containing and supporting a roll of paper at the under side of the table in the downwardly swung position of the table, which receptacle extends from under the rear portion to and under the forward portion of the table in the downwardly swung position of the table, said receptacle being pivotally connected to the aforesaid plate and arranged to swing in a vertical plane and provided in its forward portion with a slot engaged by the aforesaid lug, and a withdrawable pin extending through the said lug externally of the receptacle.

1,017,358. AIR-BRUSH. OLAUS C. WOLD, Chicago, Ill. Filed May 5, 1911. Serial No. 625,356. (Cl. 91—45.)



1. In an air brush, the combination with a mechanism provided in its forward portion with a color discharge orifice, and a needle for controlling the opening of the same, and further provided with a screw-threaded lug, and an air chamber surrounding the same, of a cap threaded onto the lug to inclose the air chamber, and provided with a pair of oppositely disposed air pipes having their

discharge openings adjacent the color discharge orifice, substantially as described.

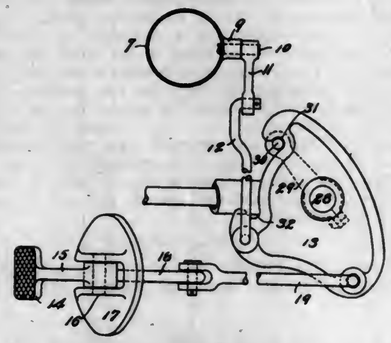
2. In an air brush, the combination with a mechanism provided in its forward portion with a color discharge orifice, and further provided with a screw-threaded lug and an air chamber surrounding the same, of a cap threaded onto the lug to inclose the air chamber and provided with a pair of oppositely disposed air pipes having their discharge openings adjacent the color discharge orifice, substantially as described.

3. In an air brush, the combination of a tubular shell, a partition within the same and located at a point inwardly from one end of the same, a color discharge tube outwardly projecting from the partition, an inclosing cap surrounding the color discharge tube and in contact with the end of the tubular shell, and a pair of air discharge tubes outwardly projecting from the cap on opposite sides of the color discharge orifice, and terminating at a point adjacent to the color discharge orifice, substantially as described.

4. In an air brush, the combination of a tubular shell, a partition within the same and located inwardly from one end of the same, a color discharge tube outwardly extending from the partition, a lug on said tube, an inclosing cap threaded onto the lug, and serving to inclose a space in front of the partition, and a pair of air discharge tubes outwardly projecting from the cap on opposite sides of the color discharge tube, substantially as described.

5. In an air brush, the combination of a member provided with a color discharge orifice, and an elongated tapered needle located within the orifice and projecting therefrom, means for actuating the needle in and out to control the opening of the orifice, and a pair of oppositely disposed air discharge tubes located immediately adjacent opposite sides of the orifice member, and terminating at points substantially in line with each other and immediately behind the end of the orifice member, substantially as described.

1,017,359. CONTROLLING MEANS FOR EXPLOSIVE-ENGINES. LOUIS C. WOLFE, Altoona, Pa. Filed Apr. 19, 1910. Serial No. 556,400. (Cl. 123—98.)



1. In an explosive engine, the combination with supply controlling mechanism, of a movable motion transmitting device connected thereto and having spaced abutments, and an actuating member that is movable between and engages the abutments.

2. In an explosive engine, the combination with supply controlling mechanism, of an oscillatory motion transmitting device having spaced oppositely disposed shoulders, and means for operating the device, including a swinging crank arm having a projection that operates between the shoulders.

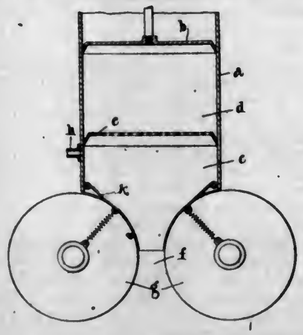
3. In an explosive engine, the combination with supply controlling mechanism, of a movable motion transmitting device connected thereto and having spaced abutment shoulders, an actuating member that is movable between and engages the shoulders, and another actuating member that is connected directly to the device.

4. In an explosive engine, the combination with an engine having an intake and a throttle valve controlling the intake, of an oscillatory motion transmitting device, a link connection between the device and the throttle valve, a treadle, a link connection between the treadle and motion transmitting device, said device having oppositely disposed shoulders, and an actuating member including a crank arm having a projection that operates between and engages said shoulders.

1,017,360. PROCESS OF ENAMELING STEEL AND THE LIKE. DAVID A. YORK, North Grove, Ind., and JUSTUS A. TINKER, Cleveland, Ohio, assignors of one-third to August W. Kraft, Painesville, Ohio. Filed Feb. 9, 1911. Serial No. 607,486. (Cl. 49—73.)

The process described of enameling steel and the like, which consists in applying to the steel a coating comprising a plastic mixture of powdered glass, borax, saltpeter, feldspar, cobalt oxid and clay, burning the coated steel, applying to the first coat a coating comprising a plastic mixture of borax, feldspar, soda, saltpeter, silica, tin oxid, kriolita and clay, and again burning the coated steel.

1,017,361. AERATION OF DOUGH. MATTHEW ATKINSON ADAM, London, England. Filed June 18, 1910. Serial No. 567,731. (Cl. 99—10.)



1. A process of dough treatment consisting in subdividing the dough exposing it to a suitable free oxygen containing gas under pressure and recombining the dough while still under gaseous pressure; as set forth.

2. A process of dough treatment consisting in subdividing dough in an atmosphere of a suitable free oxygen containing gas under pressure and recombining the dough before removal from this atmosphere; as set forth.

3. A process of dough treatment consisting in exposing dough in filiform subdivision to a suitable free oxygen containing gas under pressure and recombining the thread-like parts while still in the atmosphere; as set forth.

4. A process for the aeration of dough in which the aeration is commenced after the lapse of a part of the period of fermentation and is effected by exposing the dough in suitable subdivision to a suitable free oxygen containing gas under pressure and recombining the parts of the dough while still under gaseous pressure; as set forth.

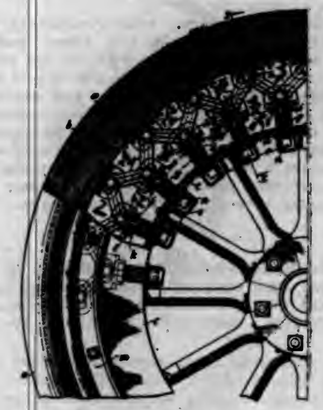
5. Process for the aeration of dough, in which the aeration, commenced after the lapse of a part of its period of fermentation, is carried out by positively forcing the dough into contact with dividing means, exposing the divided dough to a suitable free oxygen containing gas under pressure and positively recombining the parts of the dough while still under the gaseous pressure; as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,017,362. SANITARY PROTECTOR FOR TELEPHONE-TRANSMITTERS. CHARLES ADAMS, New York, N. Y. Filed Mar. 14, 1911. Serial No. 614,299. (Cl. 179—185.)

As an article of manufacture, a sanitary protector for a telephone transmitter, consisting of a cup-shaped body formed of thin sheet material, the body having a bottom forming a diaphragm adapted to extend across the opening of the mouthpiece of the transmitter, the side of the body being inclined outwardly and of a length to reach from the edge of the mouthpiece to the front edge of the casing of the transmitter, the said side terminating in a cylindrical flange adapted to fit snugly onto the peripheral face of the casing of the transmitter.

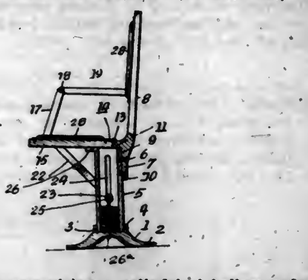
1,017,363. WHEEL. JAMES J. ADAMSEN, Brooklyn, N. Y. Filed May 15, 1911. Serial No. 627,182. (Cl. 152—29.)



1. A wheel having a rim, an outer tread shoe, a device including a plurality of links arranged in a continuous zig-zag course around the entire rim, bearing pieces having elongated slots, pivot pins at the vertex of each angle formed by the links engaging in said slots, and radially adjustable plugs upon which rest the bearing pieces on the inner side of said device, whereby the pressure at any point upon the shoe may be distributed to all parts of the shoe around the entire rim.

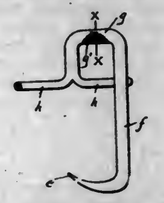
2. A wheel having a trough-shaped rim, a shoe consisting of an outer tread piece and an inner cushioning piece, a device within the rim including a plurality of links arranged in a zig-zag course around the entire rim, bearing pieces having elongated slots, pivot pins at the vertex of each angle formed by the links engaging in said slots, and radially adjustable plugs in the rim base, the bearing pieces upon the outer side of said device bearing upon the cushioning piece and those upon the inner side bearing upon the plugs, whereby the pressure at any point upon the shoe may be distributed to all parts of the shoe around the entire rim.

1,017,364. FOLDING CHAIR. FLOYD W. ALBERT, Butler, Pa, assignor of one-fourth to Joseph F. Truman and one-fourth to Barons Milner, Butler, Pa. Filed June 15, 1911. Serial No. 633,217. (Cl. 155—13.)



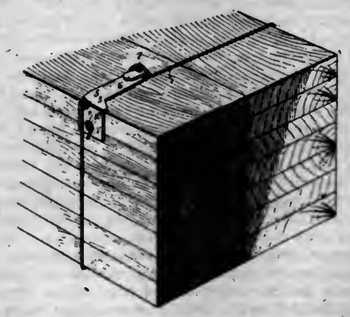
A folding chair comprising a cylindrical hollow pedestal provided with opposed vertically extending slots, a forwardly projecting and upwardly inclined rectangular lip integral with the front of said pedestal at the top thereof, a back secured to the rear of said pedestal at the top thereof and provided with a forwardly projecting and upwardly inclined rectangular flange seated upon the top of the pedestal at the rear thereof, a seat hinged to said flange and seated upon said pedestal and lip when in a lowered position, a spring controlled means extending through said slots and carried by the pedestal, and braces connected to said seat and to said means.

1,017,365. BARREL-HEAD FASTENER. MORRIS ALEXANDER, New York, N. Y. Filed Mar. 10, 1906. Serial No. 305,226. (Cl. 217—89.)



As a new article of manufacture, a barrel head fastener consisting of a single inverted U shaped wire, one end of the U shaped part terminating in a lateral T shaped cross head adapted to press against the head of the barrel and the other end terminating in a hook, the fastener being adapted to straddle the hoops to permit the hook to enter sides of the barrel beyond the hoops.

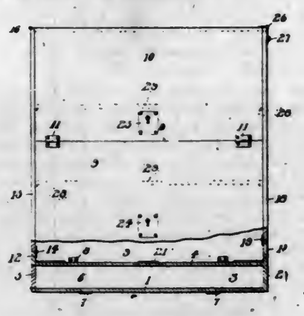
1,017,366. BALE-TIE BUCKLE. SEPTIMEOUS L. AUSTIN and HOWARD COLES, Blissville, Ark. Filed June 1, 1910. Serial No. 564,395. (Cl. 24—28.)



A bale tie buckle, comprising a rectangular body portion having recesses formed therein for holding a wire;

and a tongue portion integrally formed with said body portion and extended therefrom with one edge thereof in the same vertical plane with one of the sides of said body portion, said tongue having a wedge-shaped body structure contracted to the end removed from said body portion, and the median width of said tongue equaling half of the width of said body portion.

1,017,367. FOLDING BOX. JOHN BALAZS, Michel, British Columbia, Canada, assignor of one-fourth to Unoka Mihalj, one-fourth to G. Hekkel, and one-fourth to Mandi Balint, Michel, British Columbia, Canada. Filed Apr. 27, 1911. Serial No. 623,680. (Cl. 217—15.)

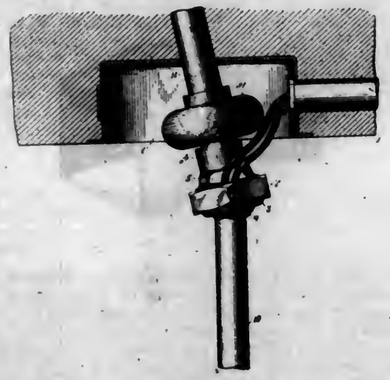


1. A folding box comprising a sectional hollow bottom having compartments formed therein, hinged doors normally closing said compartments, sectional end walls hinged to said hollow bottom and adapted to have the sections thereof fold inwardly with one section of each wall resting upon said hollow bottom and the other section resting upon the first mentioned section, a sectional rear wall adapted to fold inwardly upon the last mentioned sections of said end walls, a sectional lid hinged to the upper edge of said sectional rear wall and adapted to fold rearwardly upon the outer side of said sectional rear wall, and a sectional front wall carried by said hollow bottom and adapted to fold inwardly upon the outer side of said sectional rear wall, said sectional bottom having the sections thereof hinged together and foldable upon themselves and carrying when folded, the elements of the box folded thereon.

2. A folding box comprising a sectional hollow bottom having compartments formed therein, hinged doors normally closing said compartments, sectional end walls hinged to said hollow bottom and adapted to have the sections thereof fold inwardly with one section of each wall resting upon said hollow bottom and the other section resting upon the first mentioned section, a sectional rear wall adapted to fold inwardly upon the last mentioned sections of said end walls, a sectional lid hinged to the upper edge of said sectional rear wall and adapted to fold rearwardly upon the outer side of said sectional rear wall, a sectional front wall carried by said hollow bottom and adapted to fold inwardly upon the outer side of said sectional rear wall, said sectional bottom having the sections thereof hinged together and foldable upon themselves and carrying when folded, the elements of the box folded thereon, and sectional shelves detachably arranged in said box and adapted to be placed in the sections of said hollow bottom.

3. A folding box comprising a compartment bottom provided with doors for closing the compartment formed thereby, said bottom formed of two sections hinged together and foldable upon themselves, sectional end walls foldable upon themselves and each hinged to a section of said bottom, front and rear walls foldable upon each other and each formed of two sections, each of the sections of said front and rear walls hinged to a section of said bottom, and a lid foldable upon the outer side of the rear wall and formed of two sections each hinged to a section of the rear wall.

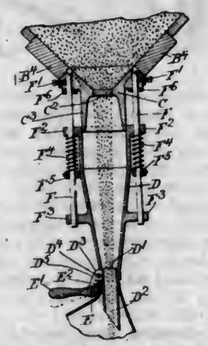
1,017,368. COUPLING FOR ELECTRIC FIXTURES. JOHN T. BARTLEY, Jersey City, N. J. Filed June 15, 1910. Serial No. 566,992. (Cl. 240—85.)



1. A coupling for electric fixtures comprising a collar having an internally threaded neck portion and an externally threaded ring portion, said portions being connected by a spider construction, the inner side of said ring portion being further shaped to form a half socket for the ball joint; a clamping collar having a neck portion screw threaded to engage the threads on said ring portion, said collar being shaped to form a segmental socket for a ball; and a ball having a tapered perforation therethrough to receive an electroller pipe.

2. A coupling for electric fixtures comprising a collar having an internally threaded neck portion and an externally threaded ring portion, said portions being connected by a spider construction, the inner side of said ring portion being further shaped to form a half socket for the ball joint; a clamping collar having a neck portion screw threaded to engage the threads on said ring portion, said collar being shaped to form a segmental socket for a ball; a ball having a tapered perforation therethrough to receive an electroller pipe, and a swinging support for said collar adapted to be disposed at various angles.

1,017,369. BAGGING-MACHINE. ADELMER M. BATES, Cleveland, Ohio, assignor to Bates Valve Bag Company, Cleveland, Ohio, a Corporation of West Virginia. Filed May 16, 1906. Serial No. 317,069. (Cl. 83—26.)



1. In a filling machine the combination of a supply hopper having a discharge throat, with a filling throat tube smaller in cross section than the discharge throat, and vertically beneath the discharge throat, means for attaching the receptacle to be filled to the filling throat, and a telescopic tube connecting and inclosing the two

throats, said tube larger in cross section at its smallest point than the filling throat tube.

2. In a bag filling machine, the combination of a hopper having a lower discharge throat with a filling tube smaller in cross section than the discharge throat, means for supporting the tube directly beneath and at a distance from the discharge throat, means for holding the bag beneath such filling tube, and a yielding connection between the filling tube and the hopper comprising springs interposed between overlapping projections rigidly connected respectively with the tube and the hopper whereby the former is elastically supported on the latter.

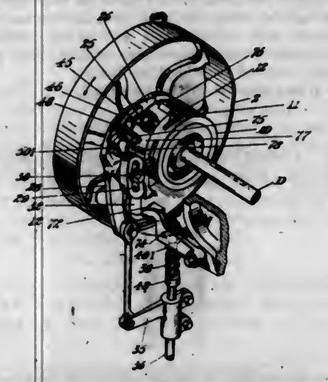
3. In a bag filling machine, a bag carrier having a convex upper surface on which the bag is adapted to rest.

4. In a bag filling machine, a bag carrier having a convex upper surface on which the bag rests, in combination with means for supporting the bags at their upper ends.

5. In a bag filling machine, a bag carrier comprising a bottom part having a convex surface upon which the bag is adapted to be supported, and a back rest adjustable with respect to the bottom part.

[Claims 6 to 9 not printed in the Gazette.]

1,017,370. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 2, 1908, Serial No. 409,063. Renewed Sept. 10, 1909. Serial No. 517,111. (Cl. 12—2.)



1. In a machine for lasting shoes, the combination with grippers for pulling the upper, of automatically operating mechanism for actuating the grippers constructed and arranged to bring them to rest in a predetermined position which can be varied.

2. A machine for lasting shoes having grippers for pulling an upper and means for securing the upper, combined with automatic actuating mechanism therefor, and including a cam for uplifting the grippers to pull the upper, and mechanism between the cam and its actuator arranged to disconnect the cam from the actuator only when the grippers are at a predetermined point in their path of movement and capable of adjustment to vary that point.

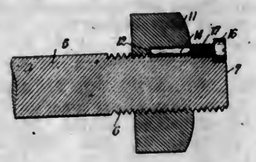
3. A lasting machine having grippers and mechanism for actuating them to work an upper over a last, combined with means arranged to be adjusted to cause the grippers to come to rest at a predetermined point in their path of movement.

4. A lasting machine having grippers and mechanism for actuating them to work an upper over a last, combined with means for automatically causing the grippers to stop at a predetermined point in the path of their movement, said means having provision for adjustment to vary the stopping point.

5. A lasting machine having grippers, actuating means therefor, and means for automatically disengaging them from their actuating means having provision for varying the point in their path of movement at which the disengagement shall take place.

[Claims 6 to 38 not printed in the Gazette.]

1,017,371. LOCK-NUT. LARKIN BECK, Kirkland, N. Mex. Filed July 6, 1911. Serial No. 637,104. (Cl. 151—8.)

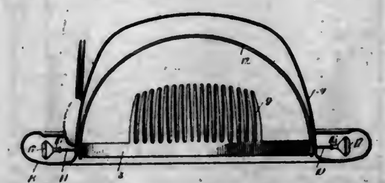


1. A bolt having a threaded end, a nut threaded to said end, said nut having a groove therein opening into the bore thereof, a groove in said threaded end, extending longitudinally from the outer edge thereof, an outer portion of said groove having screw threads tapped therein, and a pin fitting in said groove and threaded on to said tapped portion the inner end of said pin being smooth and adapted to be inserted in the groove in said nut.

2. In combination, a threaded bolt, a nut adapted to be threaded on said bolt, the bore of said nut having a semi-cylindrical groove opening thereinto and extending part way through said nut from one side thereof, a similar threaded bolt having a correspondingly formed semi-cylindrical groove adapted to be alined with the groove in the nut, to form a smooth bored pocket in said bolt and nut, the groove in said bolt external of said pocket being threaded, and a pin having a smooth portion adapted to fit in said pocket and a threaded portion adjacent said smooth portion adapted to receive said threaded portion of the pin, to hold said pin in position.

3. A bolt having a threaded end, said threaded end having a longitudinally-extending groove in the face thereof and extending from the outer edge, the outer end of said groove being enlarged to afford a head-receiving recess, a portion of said groove in the rear of said recess being threaded and the inner portion of said groove being smooth in contour, a nut adapted to be rotated on said threaded portion of the bolt, said nut having a groove therein opening into the bore thereof, the groove in the nut and the smooth portion of the groove in the bolt coacting to form a pin-receiving recess, and a pin having a smooth end adapted to fit into said last-mentioned recess and having a threaded portion in the rear of said smooth portion adapted to thread into the threads in the groove and having an enlarged head adapted to be seated in the enlarged head-receiving portion of the groove in the bolt.

1,017,372. LADY'S HAT-FASTENER. JACOB BELASCO, New York, N. Y. Filed May 19, 1911. Serial No. 628,155. (Cl. 132—25.)

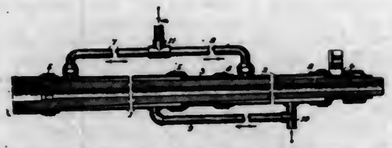


1. A lady's hat fastener, having a bowed comb portion adapted to be rotatably mounted on the hat structure and adapted to be disposed within the crown of the hat; means operatively connected with the said comb portion and adapted to be disposed exterior the hat structure for rotating the said comb portion to insert the teeth thereof

within the hair of the wearer; and a hoop member adapted to be fixedly mounted within the crown of the hat and connected with said comb portion to form a clamp therewith.

2. A lady's hat fastener, having a resilient hoop member adapted to be fixedly mounted within the crown of a hat adjacent the transverse median section thereof; a bowed comb rotatively mounted on said hoop member to swing from the forward portion of said crown toward said hoop member and under the same; and a plurality of extended pivot members for said comb rotatively mounted in said hoop member and having manipulating devices at the ends thereof and adapted to be placed external the hat structure.

1,017,373. COOLING DEVICE FOR FIREARMS. ANDRÉ BERTHIER, Paris, France. Original application filed Sept. 16, 1909, Serial No. 518,013. Divided and this application filed Mar. 24, 1911. Serial No. 616,649. (Cl. 89—1.)

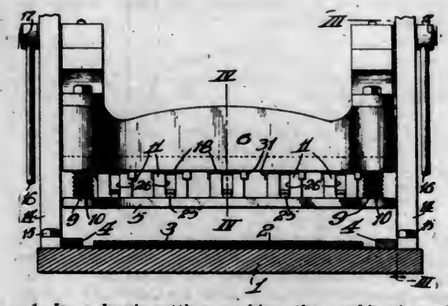


1. In a cooling device for fire-arms the combination of a jacket surrounding the barrel and being but slightly larger in diameter than the barrel and formed in two parts communicating with one another by tubes on the exterior of the jacket, and a feed device supplying only so much cooling water as will be vaporized, when it enters the cooling jacket, substantially as described.

2. In a cooling device for fire-arms the combination of a jacket surrounding the barrel and being but slightly larger in diameter than the barrel and formed in two parts communicating with one another by tubes on the exterior of the jacket, one of the said tubes being furnished with means adapted to carry away the steam generated in the jacket, and a feed device supplying only so much cooling water as will be vaporized when it enters the cooling jacket, substantially as described.

3. In a cooling device for fire-arms the combination of a jacket surrounding the barrel and being but slightly larger in diameter than the barrel and formed in two parts communicating with one another by tubes on the exterior of the jacket, one of the said tubes being furnished with a flexible tube adapted to carry away the steam generated in the jacket, and a feed device supplying only so much cooling water as will be vaporized when it enters the cooling jacket, substantially as described.

1,017,374. DOUGH-CUTTING MACHINE. CHARLES F. BETZ, St. Louis, Mo. Filed May 3, 1911. Serial No. 624,760. (Cl. 107—26.)



1. In a dough cutting machine, the combination with a cutter head, of an outer tubular cutter depending therefrom, said cutter being provided with slots extending through the walls thereof, an inner tubular cutter spaced from the outer cutter, and a follower fitting the space between said cutters; said follower being provided with laterally projecting arms reciprocably mounted within said slots.

2. In a dough cutter, a cutting die provided with a plurality of tubular knives, the passageways therethrough being enlarged away from the cutting edges, and a common receptacle into which said passageways discharge, the lateral walls of said receptacle being disposed outwardly beyond the lateral walls of said passageways.

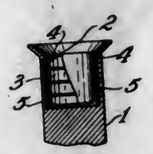
3. In a dough cutter, the combination with a reciprocable cutter head, of a cutting die carried thereby and comprising an outer shell secured to said cutter head, and an inner portion nested within the outer shell and having tubular cutters with outwardly enlarged passageways leading therethrough, and a receptacle common to all of said passageways, the bottom plate of said cutter head being provided with an opening therethrough in register with said receptacle and enlarged upwardly.

4. In a dough cutter, the combination with a cutting die comprising an outer shell open at the top and provided with oppositely disposed slots extending to the top of said shell, and an inner tubular cutter nested within said shell and provided with a flange closing the upper end thereof, and a follower fitting into and closing the space between said die portions, said follower being provided with laterally projecting arms reciprocable within said slots.

5. In a dough cutter, the combination with a cutter head, of inner and outer tubular cutters depending therefrom, a wiper plate resiliently suspended from said cutter head; said plate being provided with apertures conforming to said outer cutter, and a follower reciprocably mounted in the space between said cutters; said follower being rigidly secured to said wiper plate.

[Claim 6 not printed in the Gazette.]

1,017,375. CANDLE-HOLDER. CASPER H. BOURGEOIS, Chicago, Ill. Filed Apr. 10, 1908. Serial No. 426,274. (Cl. 67—23.)



1. A candle holder, comprising a soft rubber sleeve adapted to be slipped over the end of a candle, an integral outwardly disposed annular flange extending around said sleeve and adapted to fit within a socket of larger diameter than said sleeve to prevent the entrance of wax between said sleeve and the walls of the socket, and horizontally disposed resilient projections spaced apart vertically on said sleeve below said flange adapted to engage the walls of the socket for centering said sleeve.

2. A candle holder, comprising a soft rubber sleeve adapted to be slipped over the end of a candle, integral horizontally disposed thin annular flanges extending around said sleeve at its upper and lower edges in combination with a candle holder socket, said flanges being adapted to engage the walls of said socket for centering said sleeve therein, and said upper flange being also adapted to prevent the entrance of wax between said sleeve and the walls of said socket.

3. A candle holder adapted to hold a candle in a candle-stick socket and comprising a soft rubber cap having on its periphery a plurality of outwardly disposed, thin, annular flanges spaced apart vertically and each adapted to engage the walls of the socket and support a candle concentrically therein, one of said annular flanges being located at the upper end of said cap.

1,017,376. BALL AND CATCHER TOY. JULIUS E. BRANDT, Lindsborg, Kans. Filed Mar. 23, 1911. Serial No. 616,814. (Cl. 46—59.)

1. A toy, comprising a bat having a central aperture formed therein, a netted receptacle secured to one face of the bat below the aperture, a door pivoted to the bat to close the aperture, said door being so pivoted as to swing into the receptacle, the bat and door having alined sockets formed therein, a coil spring mounted in said sockets and having one end secured to the bat and the other to the door to swing the door into closed position, and a return ball secured to the bat and of less diameter than the aperture in the bat, whereby the ball may be passed through the aperture into the receptacle therebelow.

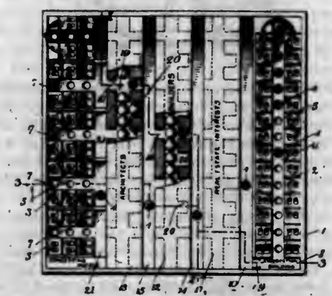
2. A toy, comprising a bat having an aperture formed therein, a trap door hinged to the under side of the bat and forming a closure for the aperture, a spring device for normally holding the door in closed position, a receptacle secured to the under face of the bat around the aperture, and a return ball secured to the bat, the diameter of the ball being less than the diameter of the aperture, whereby the ball may be passed through the aperture by skilful wielding of the bat.

1,017,377. ASEPTIC CLINICAL-THERMOMETER HOLDER. WASHINGTON I. BROWN, Savannah, Mo. Filed Dec. 23, 1910. Serial No. 598,903. (Cl. 73—52.)

The combination with an aseptic clinical thermometer case provided with caps at top and bottom and having an inner flange near its upper end and a metal spring clasp attached within the top cap to receive and support a thermometer of any diameter, of a removable perforated barrel within and spaced from said case and held at the upper end thereof by said flange, the lower end thereof supported by solidified formaldehyde packing in said bottom cap, the space between said barrel and case also constituting a chamber for similar packing.

1,017,378. CONGESTION-PROBLEM PUZZLE. WILLIAM HULL BROWNING, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,625. (Cl. 46—41.)

1. In a congestion-problem puzzle, the combination with a representation of a high building on one side, of a representation of a plurality of low buildings on the opposite side, a plurality of balls, representing tenants, adapted to be manipulated from one side of the puzzle to the other from said high building to said low buildings, and a plurality of obstructions located between said high building and said low buildings, adapted to prevent the easy passage of said balls representing tenants, said obstructions representing various interests which might oppose the change from high buildings to low buildings, said obstructions having a plurality of passages therein, and a plurality of blocking balls located in said obstructions and adapted to prevent the passage of said tenant members through said passages.



2. In a congestion-problem puzzle, the combination with a representation of a high building on one side, of a representation of a plurality of low buildings on the opposite side, a plurality of balls, representing tenants, adapted to be manipulated from one side of the puzzle to the other from said high building to said low buildings, a plurality of obstructions located between said high building and said low buildings, adapted to prevent the easy passage of said balls representing tenants, said obstructions representing various interests which might oppose the change from high buildings to low buildings, said obstructions having a plurality of passages therein, and a plurality of blocking balls located in said obstructions and adapted to prevent the passage of said tenant members through said passages, said obstructions having pockets therein adapted to accommodate some of said blocking balls to remove them from obstructing said passages.

3. In a congestion-problem puzzle, the combination with a representation of a high building on one side, of a representation of a plurality of low buildings on the opposite side, a plurality of balls, representing tenants, adapted to be manipulated from one side of the puzzle to the other from said high building to said low buildings, a plurality of obstructions located between said high building and said low buildings, adapted to prevent the easy passage of said balls representing tenants, said obstructions representing various interests which might oppose the change from high buildings to low buildings, said obstructions having a plurality of passages therein, and a plurality of blocking balls located in said obstructions and adapted to prevent the passage of said tenant members through said passages, said obstructions having pockets therein adapted to accommodate some of said blocking balls to remove them from obstructing said passages, said pockets being located on the side adjacent said tall building.

4. In a congestion-problem puzzle, the representation of a tall building on one side, having a channel therethrough, in which are located a plurality of depressions adapted to hold a series of movable balls, representing tenants, a series of representations of low buildings having a capacity equal to that of said tall building and each having a channel therein, with depressions in the channel adapted to hold said balls representing tenants, a series of parallel obstructions interposed between said tall building and said low buildings and spaced apart from each other to form parallel passages, said obstructions having a plurality of passages therethrough communicating with said parallel passages, and also each having a longitudinally-extending channel, and blocking balls in said channels adapted to obstruct the passage of said tenant balls through said passages, said obstructions having pockets therein located on the side next to said tall building, wherein said blocking balls may fall.

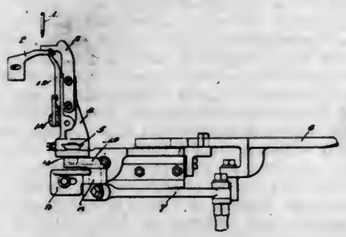
1,017,379. HUMIDOR. WILLIAM HULL BROWNING, New York, N. Y. Filed May 10, 1911. Serial No. 626,305. (Cl. 131—30.)

1. A humidor of the character described, comprising a shallow saucer-like section having a centrally disposed upturned open-ended tubular extension, the end of said extension being above the edge of said saucer-like section; a separable cover section for said saucer-like section; and yielding supports for said humidor permanently attached thereto and extended from the periphery thereof.

2. A humidor of the character described, comprising a shallow saucer-like section having a centrally disposed upturned open-ended tubular extension, the end of said extension being above the edge of said saucer-like section; a separable cover section for said saucer-like section; and a plurality of supporting springs rigidly connected with said humidor and extended beyond the periphery thereof to engage in holding relation the walls of a receptacle in which the humidor is to be placed.

3. A humidor of the character described, comprising a saucer-like section having an upturned open-ended tubular extension to form an open passage in said section opening above and below the liquid contained therein; a removable solid cover section to seal said saucer-like section; and means for supporting said saucer-like section to permit the passage of air from within the said sections downward through the passage of said tubular extension.

1,017,380. WELT-CHANNELING ATTACHMENT FOR SOLE-SEWING MACHINES. CARSON J. CADY, Rochester, N. Y., and JOSEPH E. THAYER, West Bridgewater, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 396,880. (Cl. 112—20.)



1. A sole sewing machine, having, in combination with the stitch forming devices, a work-support, an arm pivotally mounted below the work support upon an axis extending in the direction of feed and having its upper free end engaging the awl and needle slot of the work support, said arm consisting of a flat piece of metal having its lower end portion arranged at right angles to the upper portion, a welt channeling knife upon the upper end of the arm, and a movable support for the lower end of the arm.

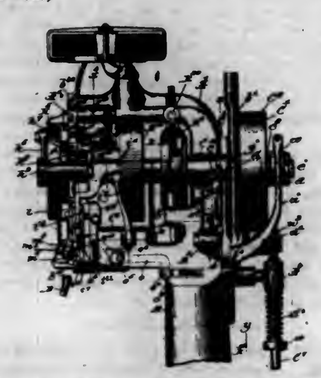
2. A sole sewing machine, having, in combination with the stitch forming devices, a work support, an arm pivotally mounted below the work support and having its upper free end engaging the awl and needle slot of the work support, a welt channeling knife upon the upper end of the arm, and a brace engaging the arm above its pivot and acting to support the arm against the thrust of the work.

3. A sole sewing machine, having, in combination with the stitch forming devices, a work support, an arm pivotally mounted below the work support and having its upper free end engaging the awl and needle slot of the work support, said arm consisting of a flat piece of metal twisted through an angle of 90° near its lower end, a welt channeling knife upon the upper end of the arm, and a brace engaging the arm above the point at which it is twisted.

4. A sole sewing machine, having, in combination with the stitch forming devices, a work support, an arm pivotally mounted below the work support and having its upper free end engaging the awl and needle slot of the work support, a welt channeling knife upon the upper end of the arm, and a brace pivotally mounted to move with the arm engaging the arm above its pivot.

5. A sole sewing machine, having, in combination with the stitch forming devices, a work support, an arm pivotally mounted below the work support and having its upper free end engaging the awl and needle slot of the work support, a welt channeling knife upon the upper end of the arm, a pivotally mounted brace engaging the arm above its pivot, and a bolt passing through and supporting the arm and brace.

1,017,381. NAILING-MACHINE. LOUIS A. CASGRAIN, Winchester, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, a Corporation of New Jersey. Filed Oct. 24, 1898. Serial No. 694,381. (Cl. 1—32.)



1. In an apparatus of the class described, a vertically movable work-support or horn, a driving shaft, a cam thereon, connections between said cam and work-support and operated by the former, to positively effect downward movement of the horn, manually controlled means to start the apparatus, including a clutch and controlling devices therefor, an elongated, segmental stop forming a part of such controlling devices and rotatable with the main shaft, and a detent to stop the apparatus and adapted to be held in inoperative position by the periphery of said stop, to prevent stoppage of the apparatus before the horn is lowered.

2. In an apparatus of the class described, a rising and falling horn, a driving shaft, means, including a cam thereupon, to effect downward movement of the horn, a clutch for the driving shaft, controlling means for the clutch, including two members mounted on the shaft and having a limited relative angular movement, a segmental stop on one of said members, and a manually controlled detent to maintain the clutch inoperative when engaged by the leading end of the stop, the periphery of the latter preventing return of the detent into stopping position before the lowering of the horn.

3. In an apparatus for inserting fastenings, two feed wheels, means to rotate them intermittingly, two opposed and coöperating presser wheels, a common supporting shaft for the presser wheels, having an eccentric portion on which one of them is mounted, whereby rotation of the shaft will vary the distance between one of the feed wheels and its corresponding presser wheel, and means to maintain the shaft in adjusted position.

4. In an apparatus for inserting fastenings, two feed wheels placed side by side, means to rotate them intermittingly, two coöperating presser wheels mounted eccentrically to each other on a common support, and means to vary the distance between one of the presser wheels and its corresponding feed wheel.

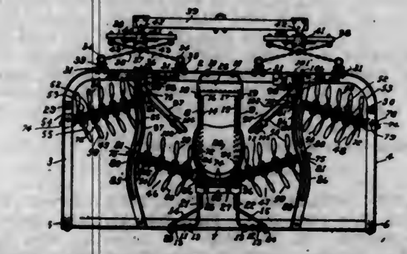
5. In an apparatus for inserting fastenings, two feed wheels placed side by side, and rotatable on a fixed support, means to rotate them intermittingly, an adjustable yoke, a shaft mounted thereon and having an eccentric portion, two presser wheels mounted on the main and eccentric portions of the shaft respectively, whereby rotation of the latter will vary the distance between the eccentrically mounted presser wheel and its corresponding feed wheel, and means to maintain the shaft in adjusted position.

[Claims 6 to 17 not printed in the Gazette.]

1,017,382. WHEELED LADDER. AUGUST C. CHMIDLING and JOHN W. TINCHER, Lowemont, Kans. Filed Oct. 4, 1910. Serial No. 585,329. (Cl. 228—15.)

In a wheeled ladder, a base frame, a ladder supporting one end thereof, a pair of ladder braces secured to said ladder and the base frame and projecting below the latter, the lower ends of said braces having longitudinal axle-slots, a wheeled axle passing through said slots, a strut connecting the sides of said frame above the axle, a block supported by the center of the axle and supporting the center of the strut, and pivotal means connecting the block and the axle, whereby the wheels of the axle may accommodate themselves to uneven ground without affecting the stability of the ladder.

1,017,383. ADJUSTABLE PULVERIZER. OSCAR CHRISTIANSON, Sugar Grove, Ill. Filed June 15, 1911. Serial No. 633,399. (Cl. 55—83.)



1. In a pulverizer, the combination with the frame of the machine, of a pair of gangs of pulverizer disks or blades pivoted at their opposite ends to the sides of said frame, another pair of gangs pivoted at the median draft line of the frame, a pair of slide-ways on which adjacent ends of the first mentioned pair of gangs and opposite ends of the last mentioned pair of gangs are movable angularly relative to each other, means for supporting a driver on said pulverizer, and means for adjusting all of said gangs from the driver's seat.

2. In a pulverizer, the combination of a frame, a pair of gangs of pulverized disks or blades, each having one of its ends pivoted to a side of said frame, a second pair of gangs having their adjacent ends pivoted at the middle draft line of the machine, a pair of slide-ways on which the other ends of said gangs are angularly movable, a pair of levers for moving the movable ends of said gangs and connections between said levers and said last mentioned ends whereby the latter are moved at each throw of said levers and means for reversing said connections to reverse the direction of movement of each gang without changing the directions of movements of said levers.

1,017,384. SMOKING DEVICE. HARRY EDWARD COATES, Sacramento, Cal. Filed Aug. 21, 1911. Serial No. 645,085. (Cl. 46—40.)

1. A smoking device, comprising a hollow figure, simulating a smoker and having an articulated arm provided in the hand with an imitation smoker's article, a pipe connected with the mouth of the figure at the inside thereof, a smoke box having a valved discharge connection with the said pipe and having a valved suction inlet, a holder connected with the said inlet and adapted to carry a smoker's article, a cylinder connected at one end with the said smoke box, a piston reciprocating in the said cylinder, and an actuating device connected with the said piston and with the said arm, the said arm and piston moving in unison.

2. A smoking device, comprising a hollow figure, simulating a smoker, and having an articulated arm provided in the hand with an imitation smoker's article, a pipe connected with the mouth of the figure at the inside thereof, a smoke box having a valved discharge connection with the said pipe, and having a valved suction inlet, a holder connected with the said inlet and adapted to carry a smoker's article, a cylinder connected at one end with the said smoke box, a piston reciprocating in the said cylinder, and a scattering device for scattering the smoke arising from the burning end of the smoker's article.

3. A smoking device, comprising a hollow figure, simulating a smoker and having an articulated arm provided in the hand with an imitation smoker's article, a pipe connected with the mouth of the figure at the inside thereof, a smoke box having a valved discharge connection with the said pipe and having a valved suction inlet, a holder connected with the said inlet and adapted to carry a smoker's article, a cylinder connected at one end with the

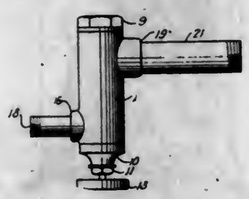
said smoke box, a piston reciprocating in the said cylinder, a scattering device for scattering the smoke arising from the burning end of the smoker's article, and driving means for simultaneously driving the said actuating device and the said scattering device.

4. A smoking device, comprising a hollow figure, simulating a smoker and having an articulated arm provided in the hand with an imitation smoker's article, a pipe connected with the mouth of the figure at the inside thereof, a smoke box having a valved discharge connection with one said pipe and having a valved suction inlet, a holder connected with the said inlet and adapted to carry a smoker's article, a cylinder connected at one end with the said smoke box, a piston reciprocating in the said cylinder, a driven shaft carrying crank disks, a pitman connecting one of the crank disks with the piston rod of the said piston, and a pitman connecting the other crank disk with the said articulated arm.

5. A smoking device provided with a hollow figure simulating a smoker, a holder for holding a smoker's article, a suction and discharging device for producing a suction on the said holder to draw smoke from the smoker's article and discharging the smoke through the mouth of the said figure, and a scattering device for scattering the smoke arising from the burning end of the smoker's article.

[Claims 6 to 9 not printed in the Gazette.]

1,017,385. VALVE. EWING O. DAVIS, Greensboro, Pa. Filed Mar. 30, 1911. Serial No. 617,931. (Cl. 67—115.)



1. A valve of the type described comprising a valve body having the upper and lower ends thereof provided with communicating bores, an outlet pipe carried by said body and in communication with the lowermost bore, a coupling member carried by said valve body and in communication with the uppermost bore, a valve movably mounted in the uppermost bore of said valve body and adapted to close by gravity and shut off the communication between said bores, a tubular spring pressed valve member carried in said coupling member and a valve seat for coöperating therewith, said last-named valve adapted to be placed in an open position by pressure within said coupling member, an extension carried by said last-named valve and adapted to hold the first mentioned valve in an elevated and open position when said last-named valve is in an open position, and means including a rod arranged in said valve body and adapted to restore the first mentioned valve to an open position after having been released by said extension of the last-named valve, substantially as described.

2. A valve of the type described comprising a body having communicating bores formed therein, a coupling member in communication with one of said bores, a valve movably mounted in the last-mentioned bore and adapted to shut off the communication between said bore and said coupling member and betwen the bores, a tubular valve member arranged in said coupling member and a valve seat for coöperating therewith, said last-named valve adapted to be maintained in an open position by pressure of gas within said coupling member, an extension carried by said last-named valve and adapted when the last-named valve is in an open position to retain the first mentioned valve in an open position, means arranged within said coupling member and adapted to close said last named valve upon decrease in the pressure of gas in said coupling member, and release the first mentioned valve to close the communication between said bores, and means carried by said valve body and adapted to restore the first mentioned valve to an open position, substantially as described.

3. In an automatically closing valve, a valve body provided with communicating chambers located respectively in the upper and lower ends of the body, said valve body having an inlet port communicating with the upper chamber and an outlet port communicating with the lower chamber, a hollow member connected to the valve body and communicating with the upper chamber through said inlet port, a slidable valve member in said hollow member and a valve seat for coöperating therewith, an extension carried by said valve member and projecting through the inlet port into the upper chamber of the valve body, a valve in said upper chamber of the valve body having a stem on its lower end projecting into the lower chamber of the valve body and having a head on its upper end underneath which head the extension of the slidable valve member is received to hold said valve open when said extension is projected into the upper chamber, a spring acting on the slidable valve member to close the latter when pressure of gas in the hollow member falls below the tension of said spring whereby the valve in the upper chamber is permitted to drop by gravity to closed position and the head of said valve closes the inlet port of the valve body, and means carried by the valve body for engagement with the stem of said valve for restoring the latter to open position.

4. In an automatically closing valve, a valve body having an upper and a lower chamber communicating one with the other, said valve body having an inlet port communicating with the upper chamber and an outlet port communicating with the lower chamber, a valve mounted in the upper chamber and adapted when the valve is closed to shut off communication between the chambers and to also close the inlet port to the upper chamber, a hollow member carried by the valve body and communicating with the inlet port, a valve-member slidably-mounted in said hollow member, and a valve seat coöperating therewith, means carried by said slidable valve-member and projecting into the upper chamber in the valve body to engage and hold the valve in said chamber normally in an open position, and means acting to seat the valve member when the fluid pressure back of said member is reduced whereby the support for the valve in the upper chamber is removed and said valve permitted to drop into position to close communication between the chambers and between the upper chamber and the inlet port.

5. In an automatically closing valve, a valve body having an upper and a lower chamber normally in communication one with the other, said valve body having an inlet port communicating with the upper chamber and an outlet port communicating with the lower chamber, a valve in the upper chamber adapted when the valve is closed to shut off communication between the chambers and also to close the inlet port to the upper chamber, a hollow member connected to the valve body and communicating with the inlet port, a slidable valve-member in said hollow member, means carried by said valve member extending through the inlet port into the upper chamber and constituting a support for normally holding the valve in said chamber in an open position, and a spring in the hollow member acting when fluid pressure in said member is reduced to close the valve-member and also withdraw the support for the valve to permit the latter to move to closed position.

[Claim 6 not printed in the Gazette.]

1,017,386. BUILDING CONSTRUCTION. LEWIS K. DAVIS, New York, N. Y. Filed June 29, 1911. Serial No. 636,068. (Cl. 72—66.)

1. In a building construction comprising hollow blocks having passages open at their ends, the blocks being positioned with their adjacent ends spaced apart to permit the formation of an intermediate beam of hardening plastic extending in said space and into the interior passages of the blocks and said blocks having openings in their walls intersecting said passages at a point back from the end thereof, means mounted in said opening and intersecting said passages in a direct line at a point within the body of the block and back of the ends of said passages to limit the entrance of said plastic therein, said means being exposed with relation to the exterior face of the block to enable withdrawal thereof from the block in the plane of said direct line after the plastic has hardened.

2. In a building construction comprising hollow blocks having passages open at their ends, the blocks being positioned with their adjacent ends spaced apart to permit the formation of an intermediate beam of hardening plastic extending in said space and into the interior passages of the blocks and openings being provided in the walls of the block, means slidable through said opening and within the body of the block in a direct line on a plane crossing said passages to limit the entrance of said plastic therein, said means being projective with relation to the exterior face of the block to enable the slidable withdrawal thereof from the block in the plane of said direct line after the plastic has hardened.

3. In a building construction comprising hollow blocks having passages open at their ends, the blocks being positioned with their adjacent ends spaced apart to permit the formation of an intermediate beam of hardening plastic extending in said space and into the interior passages of the blocks, a slotted portion at the end of the block, said slots extending on a plane crossing said passages, and a dam slidably mounted in said slots to limit the entrance of said plastic within said passages and slidably removable from the block after the plastic has hardened.

4. In a building construction comprising hollow blocks having passages open at their ends, the blocks being positioned with their adjacent ends spaced apart to permit the formation of an intermediate beam of hardening plastic extending in said space and into the interior passages of the blocks, a slotted portion at the end of the block, said slots extending on a plane crossing said passages and inclined downwardly toward the lower end portion of the block, and a dam slidably mounted in said slots to limit the entrance of said plastic within said passages and slidably removable from the block after the plastic has hardened.

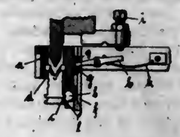
5. In a building construction comprising hollow blocks having a plurality of passages open at their ends and located one above the other, the blocks being positioned with their adjacent ends spaced apart to permit the formation of an intermediate beam of hardening plastic extending in said space and into the interior passages of the blocks, a slotted portion at the end of the block, said slots extending on a plane crossing a plurality of said passages located one above the other, and a dam slidably mounted in said slots and intersecting said plurality of passages to limit the entrance of said plastic therein and slidably removable from the block after the plastic has hardened.

[Claims 6 to 15 not printed in the Gazette.]

1,017,387. LINOTYPE-MACHINE. HEINRICH DEGENER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 6, 1909. Serial No. 521,386. (Cl. 199—7.)

1. In a linotype machine in combination, an elevator or hoist conveying the matrix line to the distributing point a member in said elevator keeping the matrices on the upper level, said member being a rotatable spindle mounted in the hoist and means for turning the said spindle for the purpose of moving it out of engagement with the matrices.

2. In a linotype machine in combination, an elevator or hoist conveying the matrix line to the distributing point a member in said elevator keeping the matrices on the upper level, said member being a rotatable spindle mounted in the hoist and having a recess adapted to engage with the lower matrix lugs, and means for turning the said spindle for the purpose of moving it out of engagement with the matrices.



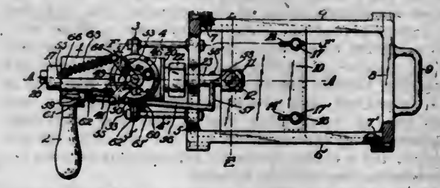
3. In a linotype machine in combination, an elevator or hoist conveying the matrix line to the distributing point and a member in said elevator keeping the matrices on the upper level said member consisting of a spindle mounted in the hoist and having a recess adapted to receive the lower matrix lugs and forming two lips, the lower of which keeps the matrices in the upper position, while the upper is utilized for depressing the matrices into the lower position after the line has been cast.

4. In a linotype machine in combination, an elevator conveying the matrix line to the distributing point, a spindle in the elevator for keeping matrices in the upper level and mounted to turn and means for preventing the accidental turning of the spindle in the casting position.

5. In a linotype machine in combination, an elevator conveying the matrix line to the distributing point, a spindle in the elevator for keeping the matrices in the upper level and mounted to turn, a cam arranged on said spindle and a fixed stop engaging with said cam and preventing the accidental turning of the spindle in the casting position.

[Claims 6 to 11 not printed in the Gazette.]

1,017,388. PNEUMATIC RUBBING-MACHINE. JEREMIAH J. DICKSON, Indianapolis, Ind. Filed Mar. 23, 1911. Serial No. 616,471. (Cl. 51—11.)



1. A rubbing machine including a guide frame having two guide bars spaced apart, a rubbing head member movably mounted in contact with the two guide bars and having two opposing projecting jaws on one side thereof, means for rigidly securing a rubbing instrument between the two jaws to project beyond them, and means for moving the head member.

2. A rubbing machine including a guide frame having two guide bars spaced apart, a rubbing head member movably mounted in contact with the two guide bars and provided on one side thereof with adjustable clamping devices for rigidly securing a rubbing instrument removably thereto, and operating mechanism connected with the guide frame and the rubbing head member.

3. A rubbing machine including a head bar, a tail bar, two guide bars connected to the head bar and also to the tail bar, a rubbing head member mounted movably on the guide bars and having a jaw fixed thereon, a jaw secured adjustably to the rubbing head member, a bolt connected with the two jaws, a rod connected to the rubbing head member, and means for moving the rod.

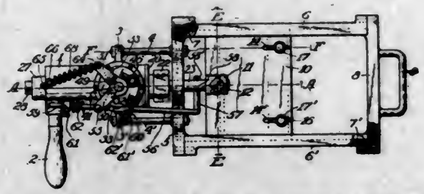
4. A rubbing machine including a head bar, a tail bar, two guide bars connected to the head bar and also to the total bar, a rubbing head member mounted movably on

the guide bars and having a jaw fixed thereon, the member having also slots therein, a jaw having a base flange adjustably seated on the head member, screws extending through the slots and into the base flange, bolts connected with the two jaws, and a rod connected to the head member.

5. A pneumatic rubbing machine including a guide frame having a handle thereon, a rubbing head movably mounted in the guide frame and having two opposing jaws, one of the jaws being adjustable relative to the other, means for forcing the adjustable jaw toward the other one of the two jaws, an engine cylinder having a handle thereon, means securing the guide frame to the cylinder, a piston in the cylinder, and a piston-rod connected to the piston and also to the rubbing head.

[Claim 6 not printed in the Gazette.]

1,017,389. RUBBING-MACHINE ENGINE. JEREMIAH J. DICKSON, Indianapolis, Ind. Filed May 17, 1911. Serial No. 627,822. (Cl. 138—2.)



1. An engine including a cylinder having a valve-chest thereon and ports extending from the ends of the cylinder to the valve-chest, heads on the cylinder, two rods secured to opposite sides of the cylinder and extending to a plane beyond one end of the cylinder, a frame member connected to the rods, a piston movable in the cylinder, a piston-rod connected to the piston and extending through one of the heads, and a valve movable in the valve-chest for opening or closing the ports.

2. An engine including a cylinder having a valve-chest thereon and ports extending from the ends of the cylinder to the valve-chest, heads on the cylinder, two rods secured to opposite sides of the cylinder and extending to a plane beyond one end of the cylinder, a frame member connected transversely to the rods, a piston movable in the cylinder, a piston-rod connected to the piston and extending through one of the heads, a valve rotatable in the valve-chest and provided with an operating arm and also an accelerating arm, a valve-rod operatively connected with the operating arm and also with the piston-rod, and a spring interposed substantially between the accelerating arm and the cylinder.

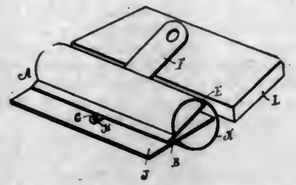
3. An engine including a cylinder having a valve-chest thereon and ports extending from the ends of the cylinder to the valve-chest, the cylinder having two ears on opposite sides thereof, two rods secured to the two ears respectively and extending to a plane beyond one end of the cylinder, heads on the cylinder, a frame member secured to the rods, a piston movable in the cylinder, a piston-rod secured to the piston and extending through one of the heads and beyond the frame member, a valve rotatable in the valve-chest and provided with an operating arm, and a valve-rod operatively connected with the arm and also with the piston-rod beyond the frame member.

4. In an engine, the combination with a cylinder having two ports extending from the ends thereof, of a valve-seat formed on the cylinder and into which the ports extend, the valve-seat having a central guide socket therein, an exhaust port extending from the valve-seat, a valve-chest secured to the cylinder and covering the valve-seat, a valve movable rotatably on the valve-seat in the valve-chest and having two inlet ports therein and also a curved exhaust cavity, a shaft rotative in the valve-chest and keyed to the valve, the shaft extending through the valve and into the guide socket and having a collar thereon seated rotatably against the inner side of the valve-chest opposite the valve, a spring seated on the valve and against the collar, and an operating arm secured to the shaft.

5. In an engine, the combination with a cylinder, heads on the cylinder, a piston movable in the cylinder, a piston-rod secured to the piston and extending through one of the heads, a valve-chest on the cylinder, and ports extending from the valve-chest to the ends of the cylinder, of a valve rotative in the valve-chest to open or close the ports, a shaft connected to the valve and rotatable in the valve-chest, an arm secured to the shaft, a boss rotatably mounted on the arm, a valve rod slidingly mounted in the boss and having an arm thereon operatively connected with the piston-rod, two collars secured to the valve-rod at opposite sides of the boss, and two springs on the valve-rod at opposite sides of the boss between the boss and the collars.

[Claim 6 not printed in the Gazette.]

1,017,390. ROOFING-TOOL. FERDINAND J. DITTRICH, Philadelphia, Pa. Filed June 27, 1910. Serial No. 569,055. (Cl. 145—23.)



1. In a roofing tool, the combination with a clamp comprising an upper and lower jaw, the lower jaw being of greater width than the upper one, the point of contact of the narrow jaw being about midway the width of the wider jaw, a perforated lug formed with said upper jaw, a rearwardly extending handle formed with each of said jaws, the handle of the lower jaw being bent to produce a hook, said handle adapted to hold a weight, a spring for normally holding the jaws in engagement, and a marking cord secured to the lug formed with the upper jaw.

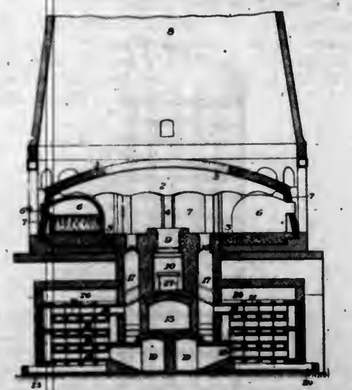
2. In a roofing tool a clamp comprising two coacting jaws, one of said jaws being of greater width than the other, the narrower jaw contacting with the wider jaw about midway the width of said wider jaw, a lug having a perforation therein formed with the narrower jaw intermediate its length, handles formed with said jaws, one of said handles adapted to carry a weight, and a spring for normally holding the jaws closed.

3. In a roofing tool a clamp composed of a pair of coacting jaws of different widths causing the edge of the narrower jaw to engage one of the faces of the wider jaw about midway the width of said wider jaw, a lug formed with the narrower jaw intermediate its length, said lug having a perforation therein through which passes a cord, handles carried by the jaws, a hook produced from one of said handles, the handles having a hook produced therefrom adapted to carry a weight, and resilient means for normally holding the edge of the narrower jaw in contact with the face of the wider jaw.

1,017,391. GLASS-POT FURNACE. HENRY L. DIXON, Knoxville, Pa., assignor to H. L. Dixon Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 22, 1911. Serial No. 640,031. (Cl. 49—59.)

1. A recuperative glass pot furnace having its bench provided with means for supporting a complete circle of glass pots and having fuel supply offtake and ports leading through its central portion at points inside of the circle of pots, together with supply and offtake flues communicating respectively with said supply and offtake ports and maintaining a constant circulation of the products of combustion therethrough in one direction, substantially as described.

2. A recuperative glass pot furnace having its bench provided with means for supporting a complete circle of glass pots and having a central fuel supply port and an offtake port at each side of the fuel supply ports, all of said ports being within the circle of pots, together with supply and offtake flues connected respectively to said supply and offtake ports and arranged to maintain a circulation of the products of combustion continuously in one direction, substantially as described.



3. A recuperative glass pot furnace having its bench provided with means for supporting a complete circle of glass pots and having gas and air supply ports discharging centrally through the support for the furnace pots, said bench also having offtake ports leading downwardly therethrough at opposite sides of the supply port and within the circle of pots, substantially as described.

4. A recuperative glass pot furnace having its bench provided with means for supporting a complete circle of glass pots and having a gas and air supply port discharging centrally through said bench, said bench also having an offtake port at each side of the first named port and within the circle of pots, substantially as described.

5. A recuperative glass pot furnace having its bench provided with means for supporting a complete circle of glass pots and having a central fuel supply port, and offtake ports adjacent to the supply port, and a series of flues communicating respectively with said supply and offtake ports, substantially as described.

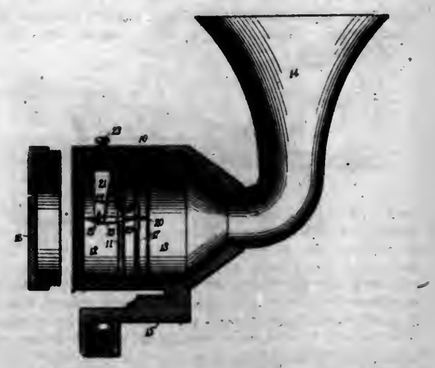
1,017,392. DEVICE FOR GRAPHICALLY REPRODUCING SOUND-WAVES. HERBERT GROVE DORSEY, Ithaca, N. Y. Filed Sept. 29, 1910. Serial No. 584,452. (Cl. 181—0.5.)

1. A device of the class described comprising a corrugated indented diaphragm with the indentations crossing the corrugations, an adjustable mirror, and means connecting the diaphragm and the said mirror for operating the mirror when the diaphragm is actuated.

2. A device of the class described comprising a diaphragm, circular corrugations on the diaphragm with radial indentations crossing the said corrugations, a mirror, means for adjustably supporting the mirror, and a bow connecting the diaphragm and the mirror for operating the mirror when the diaphragm is actuated.

3. A device of the class described comprising a casing having a tapered end, a diaphragm therein, the said diaphragm being corrugated in one direction and having indentations crossing the said corrugations, a mirror mounted on the casing, means for adjusting the mirror, means connecting the mirror and diaphragm for operating the mirror when the diaphragm is actuated, a horn for attachment to the said tapered end of the casing and a bracket integrally formed on the casing and depending therefrom.

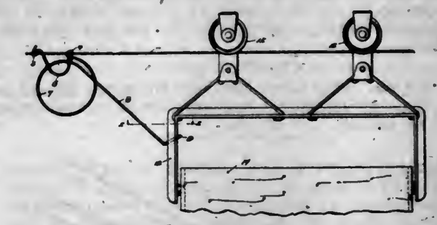
4. A device of the class described comprising a casing, a diaphragm therein, the said diaphragm being corrugated in one direction and having indentations crossing the said corrugations, a mirror mounted on a spindle on the casing, means for adjusting the mirror, and a bow connecting the diaphragm and the said mirror for operating the mirror when the diaphragm is actuated, the said bow consisting of a curved rod having a flexible member connected to its ends with the said member encircling the spindle of the mirror intermediate the ends of the bow.



5. A device of the class described comprising a corrugated diaphragm provided with indentations crossing the corrugations and in lines relatively at right angles, a mirror, means for adjusting the mirror and means connecting the diaphragm and said mirror for operating the mirror when the diaphragm is actuated.

[Claims 6 to 9 not printed in the Gazette.]

1,017,393. ELEVATED-CARRIER STOP. HERBERT H. DREW, Waterloo, Wis. Filed May 6, 1911. Serial No. 625,498. (Cl. 186—24.)



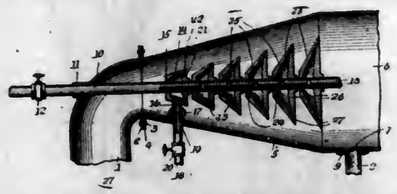
1. An elevated-carrier stop comprising a spring-rod sinuously bent at one end to form a loop, as well as a coil crossing the loop, and angularly bent at its other end to form a fork-terminal below said coil, the loop-end of the rod being attachable to the carrier-track, and a hanger in connection with said rod at the junction of its loop and coil for engagement with said track.

2. An elevated-carrier stop comprising a spring-rod sinuously bent at one end to form a loop, as well as a coil crossing the loop, and angularly bent at its other end to form a fork-terminal and hook-extension of the same, below said coil, the loop-end of the rod being attachable to the carrier-track, and a hanger in connection with said rod at the junction of its loop and coil for engagement with said track.

3. An elevated-carrier stop comprising a spring-rod sinuously bent at one end to form a spirally twisted hanger-terminal, a loop and a coil crossing the loop, its other end being angularly bent to form a fork-terminal below the coil; and a cockeye in connection with the rod at the junction of its loop and coil, the cockeye and the hanger-terminal of said rod being for engagement with a track for the carrier.

4. An elevated-carrier stop comprising a spring-rod sinuously bent at one end to form a spirally twisted hanger-terminal, a loop and a coil crossing the loop, its other end being angularly bent to form a fork-terminal and hook-extension below the coil, and a cockeye in connection with the rod at the junction of its loop and coil; the cockeye and the hanger terminal of said rod being for engagement with a track for the carrier.

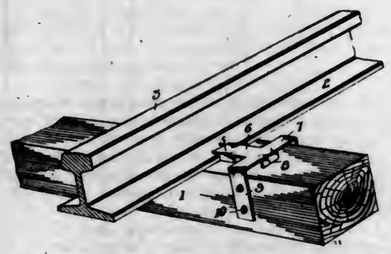
1,017,394. SMOKE-SEPARATOR. JOSEPH DVORAK, Pittsburgh, Pa. Filed June 10, 1911. Serial No. 632,372. (Cl. 110—142.)



1. A smoke separator comprising a frusto-conical hood, an elbow for connecting the contracted end of the hood to a stack, a liquid supply pipe extending longitudinally with respect to said hood and provided with spaced openings constituting outlets, a series of spaced liquid ejectors mounted upon said pipe and each surrounding an outlet, the diameters of the respective ejectors increasing to provide a series of ejectors having the peripheral edges parallel with the inner face of the hood, and a blower mounted upon said pipe ahead of the ejectors in the direction of flow of the gases.

2. A smoke separator comprising a frusto-conical hood, an elbow for connecting the contracted end of the hood to a stack, a liquid supply pipe extending longitudinally with respect to said hood and provided with spaced openings constituting outlets, and a series of spaced liquid ejectors mounted upon said pipe and each surrounding an outlet, the diameters of the respective ejectors increasing to provide a series of ejectors having the peripheral edges in a plane parallel with the inner face of the hood.

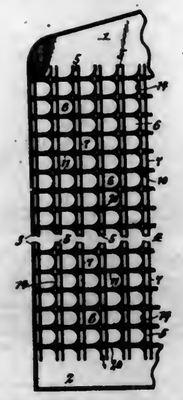
1,017,395. SPIKE-PROTECTING DEVICE. GEORGE H. ELLIOTT, Johnstown, Pa. Filed Oct. 27, 1911. Serial No. 657,109. (Cl. 85—23.)



A spike protecting device comprising a strap adapted to have the ends thereof secured to a tie, a right angular extension carried by said strap and having the end thereof provided with a channel housing adapted to engage the head of a spike driven in said tie, and a supporting lug carried by said strap at the opposite edge from the extension of said strap.

1,017,396. RADIATOR. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Theodore C. Fedders, Buffalo, N. Y. Filed Dec. 8, 1911. Serial No. 664,603. (Cl. 62—28.)

1. A radiator comprising inlet and outlet headers, and a core arranged between said headers and consisting of a plurality of units, each unit comprising two sections one of which is constructed of a strip of sheet metal to form a plurality of flat webs and a plurality of transverse locking beads arranged at intervals on said strip and the other section being constructed of a strip of sheet metal to form a plurality of transverse plaits each of which engages at its crown with the concave side of one of the beads in the other section and a plurality of curved webs each of which connects the opposing plies of two adjacent plaits and is arranged with its convex side opposite a flat web of the other section, each of said flat webs being provided adjacent to its ends with longitudinal spacing beads and each of said curved webs having its ends arranged at right angles to the plaits and engaging with the convex sides of said spacing beads.

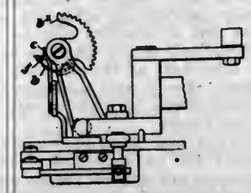


2. A radiator comprising inlet and outlet headers, and a core arranged between said headers and consisting of a plurality of units, each unit comprising two sections one of which is constructed of a strip of sheet metal to form a plurality of flat webs and a plurality of transverse locking beads arranged at intervals on said strip and the other section being constructed of a strip of sheet metal to form a plurality of transverse plaits each of which engages at its crown with the concave side of one of the beads in the other section and a plurality of curved webs each of which connects the opposing plies of two adjacent plaits and is arranged with its convex side opposite a flat web of the other section, each of said flat webs being provided adjacent to its ends with longitudinal spacing beads and each of said curved webs having its ends arranged at right angles to the plaits and engaging with the convex sides of said spacing beads.

3. A radiator comprising inlet and outlet headers, and a core arranged between said headers and consisting of a plurality of units, each unit comprising two sections one of which is constructed of a strip of sheet metal to form a plurality of flat webs and a plurality of transverse locking beads arranged at intervals on said strip and the other section being constructed of a strip of sheet metal to form a plurality of transverse plaits each of which engages at its crown with the concave side of one of the beads in the other section and a plurality of curved webs each of which connects the opposing plies of two adjacent plaits and is arranged with its convex side opposite a flat web of the other section, each of said flat webs being provided adjacent to its ends with longitudinal spacing beads and each of said curved webs having its ends arranged at right angles to the plaits and engaging with the convex sides of said spacing beads and each of said spacing beads being provided on its convex side with an alining bead which is arranged in line with one of the locking beads and said curved webs being provided adjacent to their ends with concave seats which receive said alining beads.

4. A radiator comprising inlet and outlet headers, and a core arranged between said headers and consisting of a plurality of units, each unit comprising two sections one of which is constructed of a strip of sheet metal to form a plurality of flat webs and a plurality of transverse locking beads arranged at intervals on said strip and the other section being constructed of a strip of sheet metal to form a plurality of transverse plaits each of which engages at its crown with the concave side of one of the beads in the other section and a plurality of curved webs each of which connects the opposing plies of two adjacent plaits and is arranged with its convex side opposite a flat web of the other section and each of said plaited sections being provided between its ends with a flattened upright stiffening portion.

1,017,397. SEWING-MACHINE. IRA E. FLETCHER and WILLIAM J. MACLEAN, Brockton, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 31, 1905. Serial No. 253,089. (Cl. 112—20.)



1. A sole sewing machine, having means for stitching the outer sole to the welt work feeding means and means for forming a channel in the welt acting on the welt, in advance of the stitching means in line with the seam and movable into and out of engagement with the welt during the continued operation of the work feeding and stitching means whereby the stitches may be sunk into the welt for a portion of the stitch path only.

2. A sole sewing machine, having means for stitching the outer sole to the welt work feeding means and means for forming a channel in the welt acting on the welt in advance of the stitching means in line with the seam and movable into and out of engagement with the welt during the continued operation of the work feeding and stitching means whereby the stitches may be sunk into the welt about the forepart of a shoe and drawn down upon the unbroken surface of the welt about the shank portion thereof.

3. In a sole sewing machine the combination with stitching mechanism, means acting in advance of said stitching mechanism to form a slit or channel in the leather, and means for throwing said slit forming means in and out of engagement with the leather permitting a continued operation of the machine in sewing a seam.

4. In a sole sewing machine the combination with stitching mechanism of means for gaging the distance of the stitch from the edge of the sole, means acting in advance of said stitching mechanism for forming a slit in the leather and means for throwing said slit forming mechanism into or out of engagement upon change in said gaging means.

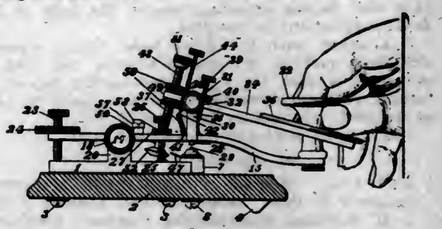
5. In a sole sewing machine the combination with stitching mechanism, means for changing the length of the stitch, means acting in advance of the stitching mechanism for forming a slit in the face of the leather, and means for throwing said slit forming mechanism into and out of engagement upon change in said stitch changing mechanism.

[Claims 6 to 16 not printed in the Gazette.]

1,017,398. TELEGRAPH-KEY. JOHN E. FOLSOM, St. Louis, Mo. Filed Jan. 16, 1911. Serial No. 602,842. (Cl. 178—29.)

1. In a telegraph-key, the combination of a pivoted key bar, a conductor located beneath said bar, a lever pivoted to said bar and adapted to hold same normally in engagement with said conductor, said lever being arranged to be actuated by the operator's hand taking hold of the key, and means for returning said lever to its initial position when said key is released.

2. In a telegraph-key, the combination of a pivoted key bar, a conductor located beneath said bar, a lever pivoted to said bar and adapted to hold same normally in engagement with said conductor, said lever being arranged to be actuated by the operator's hand taking hold of the key, and means for returning said lever to its initial position when said key is released, said return movement being automatic.



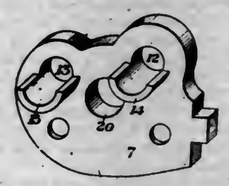
3. In a telegraph-key, the combination of an open-ended frame electrically connected with one of the terminals of a circuit, a conductor located in the opening in the end of said frame and being electrically connected with another terminal of the circuit, a key bar pivotally attached to said frame and extending over said conductor, and means borne by said bar for holding same normally in contact with said conductor.

4. In a telegraph-key, the combination of an open-ended frame electrically connected with one of the terminals of a circuit, a conductor located in the opening in the end of said frame and being electrically connected with another terminal of the circuit, a key bar pivotally attached to said frame and extending over said conductor, and means borne by said bar for holding same normally in contact with said conductor, said means being adjustable.

5. In a telegraph-key, the combination of an open-ended frame electrically connected with one of the terminals of a circuit, a conductor located in the opening in the end of said frame and being electrically connected with another terminal of the circuit, a key bar pivotally attached to said frame and extending over said conductor, and means borne by said bar for holding same normally in contact with said conductor, said means being adapted for making and breaking an electrical connection between said frame and said conductor.

[Claims 6 to 20 not printed in the Gazette.]

1,017,399. SOCKET-LEVER FOR LIFTING-JACKS. GEORGE F. FREED, Pittsburgh, Pa., assignor to The Duff Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1910. Serial No. 544,346. (Cl. 57—99.)



1. A socket lever for lifting jacks, having a removable heel bearing for the lifting pawl, said bearing extending beneath the body of the pawl and arranged to be engaged thereby; substantially as described.

2. A lifting jack having a pivoted socket lever, a toothed rack slidably mounted in the jack, removable plates secured to the sides of the socket lever, lifting pawls journaled in the removable plates and semicylindrical seats formed integrally with the side plates, and arranged to support the heel end of the pawls, substantially as described.

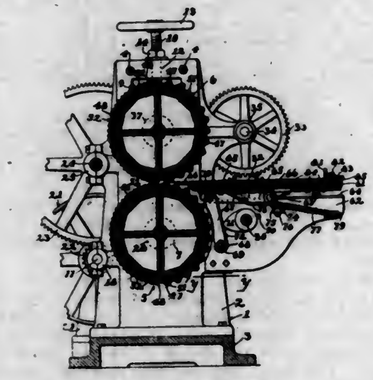
3. A socket lever for lifting jacks, having separate side plates provided with means whereby they may be secured to a lever, said plates carrying a pawl heel bearing for substantially the full width of the pawl; substantially as described.

4. A socket lever for lifting jacks, having separate side plates provided with means whereby they may be secured to a lever, each of said plates carrying a portion of a pawl heel bearing extending beneath the body of the pawl; substantially as described.

5. A socket lever for lifting jacks, having separate side plates provided with means whereby they may be secured to a lever, and a pawl heel bearing formed integrally with said plates and extending beneath the body of the pawl; substantially as described.

[Claim 6 not printed in the Gazette.]

1,017,400. ROTARY CORRUGATING-MACHINE. CLARENCE N. FREY, Cincinnati, Ohio, assignor to The J. M. Robinson Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 18, 1908. Serial No. 453,599. (Cl. 153—77.)



1. In a rotary corrugating machine, the combination of corrugating rollers, a stock-supporting table, gears for driving one of said rollers from the other of said rollers, a shaft under said table rotated by said gears, said shaft being parallel with said rollers, a cam on said shaft adjacent each end of said table, a contact-arm for each of said cams pivoted to the main frame, and a link between said contact-arm and table for causing movement of said table with relation to said corrugating rollers, substantially as described.

2. In a rotary corrugated machine, the combination of corrugating rollers, a stock-supporting table, gears for driving one of said rollers from the other of said rollers, a shaft under said table rotated by said gears, said shaft being parallel with said rollers, a cam on said shaft adjacent each end of said table, a contact-arm for each of said cams pivoted to the main frame, a link between each of said contact-arms and table for causing movement of said table in one direction with relation to said corrugating rollers, and means for automatically moving said table in the opposite direction with relation to said rollers, substantially as described.

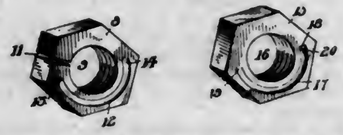
3. In a rotary corrugating machine, the combination of corrugating rollers, each of which has corrugations of different depths on the respective halves of its circumference, said corrugations on each of said rollers having similar pitch-lines, said rollers being geared together for causing juxtaposition of corrugations of similar depth on both said corrugating rollers, a train of gearing comprising intermediate gears for accomplishing said gearing together of said rollers constructed for driving one of said corrugating rollers from the other of said corrugating rollers, a shaft parallel with said corrugating rollers extending longitudinally under said table and supporting one of said intermediate gears, a cam on said shaft adjacent each end of said table having connection with said table for moving said table in a given direction with relation to said corrugating rollers, and means for moving said table in the opposite direction with relation to said corrugating rollers.

4. In a rotary corrugating machine, the combination of corrugating rollers, each of which has corrugations of different depths on the respective halves of its circumference, said corrugations on each of said rollers having similar pitch-lines, said rollers being geared together for causing juxtaposition of corrugations of similar depth on both said corrugating rollers, a train of gearing comprising intermediate gears for accomplishing said gearing together of said rollers constructed for driving one of said corrugating rollers from the other of said corrugating rollers, a shaft parallel with said corrugating rollers extending longitudinally under said table and supporting one of said intermediate gears, a cam on said shaft adjacent each end of said table, means for securing said cams to said shaft at two opposing positions for causing movement of said table toward said corrugating rollers upon juxtaposition of either of said sizes of corrugations on said rollers.

5. In combination, in a rotary corrugating machine, a corrugating roller and corrugating dies therefor having longitudinal tongues and grooves therebetween, said corrugating dies having longitudinal corrugations terminating in advance of each end of said dies for forming blank spaces at each end of said dies, and means in said blank spaces at both ends of said dies for securing said dies to said rollers.

[Claims 6 to 8 not printed in the Gazette.]

1,017,401. NUT-LOCKING DEVICE. FREDERICK M. FUNDIS, New Kensington, Pa. Filed Sept. 1, 1911. Serial No. 647,137. (Cl. 151—19.)

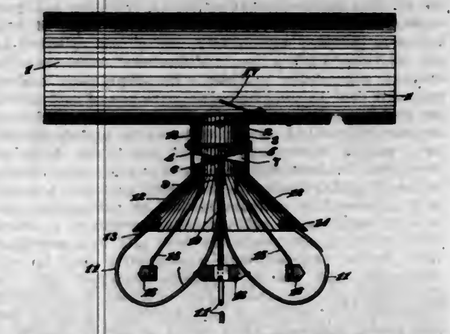


1. In a nut locking device, the combination with a bolt, of a sectional nut screwed upon said bolt, one of said sections having a radially disposed split and the outer side thereof provided with a semi-circular groove with one end of said groove in closer proximity to the opening of said nut than the opposite end, and the other section of said nut having the inner face thereof provided with a semi-circular rib adapted to ride into the groove of the split section of said nut and produce a sidewise movement of the split section of said nut that tends to clamp said split section upon said bolt.

2. In a nut locking device, the combination with a bolt, of a sectional nut screwed upon said bolt, one section of said nut having a radially disposed slit and the outer side thereof provided with a semi-circular groove tapering in depth from one end thereof to the opposite end and disposed eccentrically with respect to the bolt opening, and a semi-circular rib carried by the inner face of the other section of said nut and tapering from one end thereof to the opposite end whereby said rib can easily ride into the groove of the other section of said rib and producing a sidewise movement of the split section of said nut, whereby said split section will clamp upon the bolt.

1,017,402. VENTILATOR. EDMOND GAGNON, Montreal, Quebec, Canada, assignor of one-third to Joseph Leonide Perron and one-third to Thibodeau Rinfret, Montreal, Canada. Filed Dec. 5, 1910. Serial No. 595,687. (Cl. 98—27.)

1. In combination, a pipe provided with a lateral opening, a branch pipe surrounding said opening, a fan revolubly supported in said branch pipe, and means carried by said fan for creating a lateral draft toward said fan.



2. In combination, a pipe provided with a lateral opening, a branch pipe surrounding said opening, a fan revolubly supported in said branch pipe, arms carried by said fan, and lateral draft creating plates carried by said arms.

3. In combination, a pipe provided with a lateral opening, a deflector mounted in said pipe and extending above said opening, a branch pipe secured about said opening, a draft fan provided with means for creating a lateral draft and means for supporting said draft fan in said branch pipe.

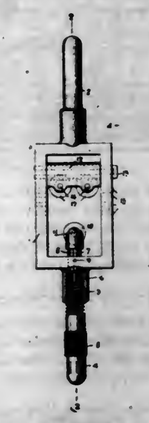
4. In combination, a pipe provided with a lateral opening, a branch pipe secured about said opening and provided with a skirt flange, a rod extending across the interior of said branch pipe and provided with a socket, a fan post provided with reduced ends one of which is adapted to be seated in said socket, motor blades mounted on and turning said post, fan blades 16 secured to said post, a post provided with a cup socket, a bearing block mounted therein and provided with a socket adapted to receive the other reduced end of the aforesaid fan post, looped arms extending from said post, and means for connecting said arms to the aforesaid skirt flange.

5. In combination, a pipe provided with a lateral opening, a branch pipe secured about said opening and provided with a skirt flange, a rod extending across the interior of said branch pipe and provided with a socket, a fan post provided with reduced ends one of which is adapted to be seated in said socket, motor blades mounted on and turning said post, fan blades 16 secured to said post, a post provided with a cup socket, a bearing block mounted therein and provided with a socket adapted to receive the other reduced end of the aforesaid post, looped arms extending from said post, and means for adjustably clamping said arms to the aforesaid skirt flange.

1,017,403. RETHREADING-TOOL. DAVID GEORGE GARBARINO and CHARLES WILLIAM ROESSLE, New York, N. Y. Filed Dec. 28, 1910. Serial No. 599,664. (Cl. 10—1.)

1. A re-threading tool comprising an open frame, a plurality of disk-shaped members mounted in said frame and adapted to engage a bolt or screw to be re-threaded at a plurality of points to secure the bolt or screw in position, all of said disk-shaped members being rotatable and one being provided with a cutting edge to re-form the threads of the screw or bolt, and being loosely mounted; the others having end play and wabbling movement.

2. A re-threading tool comprising an open frame, a transversely-mounted adjustable member in said frame, a boss carried by the outside of said frame and having a bore therethrough extending in the direction of the longitudinal axis of the frame, a shank carrying a disk-shaped member on its inner end, mounted in said bore, and disk-shaped members carried by the transverse member in the side adjacent to the disk-shaped member in the end of the shank, said disk-shaped members forming means for securing a bolt or screw in the frame to be re-threaded, one or more of said disk-shaped members being provided with a cutting edge to engage and re-form the threads of said bolt or screw.



3. A re-threading tool comprising an open frame, a transversely-mounted adjustable member in said frame, a boss carried by the outside of said frame and having a bore therethrough extending in the direction of the longitudinal axis of the frame, a shank carrying a disk-shaped member in its inner end, adjustably mounted in said bore, and disk-shaped members carried by the transverse member in the side adjacent to the disk-shaped member in the end of the shank, said disk-shaped members forming means for securing a bolt or screw in the frame to be re-threaded, one or more of said disk-shaped members being provided with a cutting edge to engage and re-form the threads of said bolt or screw.

4. A re-threading tool comprising a frame, a handle extending from one end of said frame, a transverse member adjustably mounted in said frame, a boss extending from the side of the frame opposite the said handle member, another handle member adjustably mounted in said boss, a shank mounted in said boss, terminating within the frame, said shank being connected to the handle member and having a longitudinal key-way in its surface, a pin in the frame, loosely fitting said key-way, a disk-shaped member in the inner end of said shank, and disk-shaped members carried by the transverse member on the side facing the shank, the said disk-shaped members forming means for securing a bolt or screw in position in the frame, the shank disk of said disk-shaped members forming a cutter to fit the threads of the bolt or screw and re-form them, the other disks having end play and wabbling movement.

5. A re-threading tool comprising an open frame, and a plurality of members mounted in said frame and adapted to engage a bolt or screw to be re-threaded at a plurality of points to secure the bolt or screw in position, one of said members being provided with a cutting edge to re-form the threads of the screw or bolt, and being loosely mounted to fit the slope of the thread of the screw or bolt, the other members engaging the outer periphery of the screw or bolt to hold the same in position to allow the cutter member to move between the said threads.

[Claims 6 and 7 not printed in the Gazette.]

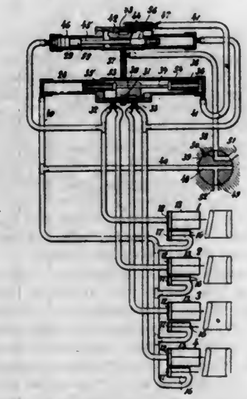
1,017,404. INDICATOR FOR STREET-CARS. HENRY GEBHART, Dayton, Ohio. Filed Oct. 30, 1911. Serial No. 657,668. (Cl. 40—77.)

In an indicator for street cars, the combination with a revoluble indicator consisting of a casing having transparent side plates with indications inscribed thereon, of

hollow pintles extending from the ends of said casing, brackets forming bearings for said pintles, one of said brackets having a stop thereon, lamps mounted on and fixed to said casing, electrical conductors extending from said lamps through said pintles, and a crank mounted on

one of said pintles having a projection thereon adapted to engage the stop on said bracket to limit the rotation of said revoluble member, whereby the electrical conductors are prevented from being twisted from the lamps during the operation of selecting the various indications.

1,017,405. PULSATOR FOR MILKING-MACHINES. REGNER HENRY JULIUS GJETTING, Copenhagen, Denmark. Filed Sept. 21, 1911. Serial No. 650,586. (Cl. 31—95.)



1. In a milking machine, the combination with a plurality of pairs of coacting pulsating cylinders and pressure cylinders for actuating the milking flaps, of twin cylinders provided with pistons, one of said cylinders being provided with a larger diametrical bore than the other, a valve device provided with independent conducting ports each in communication with one of said pulsating cylinders, and an exhaust port, means operatively connecting said pistons and valve device to actuate the latter, providing alternate opening of said ports to the exhaust and the interior of the valve device, upon reciprocation of said pistons, two auxiliary cylinders provided with pistons, each cylinder having independent connections with one of said pulsating cylinders, a second valve device in communication with said first mentioned valve device, provided with a conducting port in communication with the said cylinder provided with the larger bore, and an exhaust port, mechanism operatively connecting the pistons of said auxiliary cylinders with second mentioned valve device to actuate the latter, upon reciprocation of said pistons, providing alternate communication between the conducting port and exhaust port thereof, or communication between the former and interior of the valve device, means for delivering fluid pressure to said valve devices, means for delivering fluid pressure to said cylinder of said first mentioned cylinder provided with a small bore, the fluid pressure delivered to said cylinder and valve devices being substantially uniform, and mechanism for controlling both of the said fluid pressure delivering means.

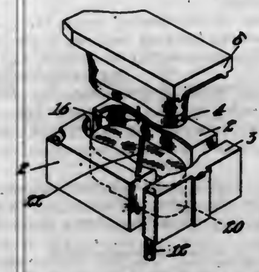
2. In a milking machine, the combination with a plurality of pairs of coacting pulsating cylinders and pressure cylinders for actuating the milking flaps, of twin cylinders provided with pistons, one of said cylinders being provided with a larger diametrical bore than the other, a valve device provided with independent conducting ports each in communication with one of said pulsating cylinders, and an exhaust port, means operatively connecting said pistons and valve device, to actuate the latter providing alternate opening of said ports to the exhaust and the interior of the valve device, upon reciprocation of said pistons, two auxiliary cylinders provided with pistons, each cylinder having an independent connection with one of said pulsating cylinders, a second valve device in communication with said first mentioned valve device, provided with a conducting port in communication with the said cylinder provided with the larger bore, and an exhaust port, mechanism operatively connecting the pistons of said auxiliary cylinders and said second mentioned valve device to actuate the latter upon reciprocation of the pistons, providing alternate communication between the conducting port and exhaust port thereof, or communication between the former and interior of the valve device, means for delivering fluid pressure to said valve devices, means for delivering fluid pressure to said cylinder of said first mentioned cylinder provided with the smaller bore, the fluid pressure delivered to the said cylinder and valve devices being substantially uniform, and means for simultaneously opening said last mentioned delivery means and opening said valve devices to the atmosphere, or simultaneously opening both of the said delivery means for conveyance of fluid pressure.

3. In a milking machine, the combination with a plurality of pairs of coacting pulsating cylinders and pressure cylinders for actuating the milking flaps, of twin cylinders provided with pistons, one of said cylinders provided with a larger diametrical bore than the other, a valve device provided with independent conducting ports each in communication with one of said pulsating cylinders, and an exhaust port, means operatively connecting said pistons and valve device to actuate the latter, producing alternate opening of said ports to the exhaust and the interior of the valve device, upon reciprocation of said pistons, a second valve device in communication with said first mentioned valve device provided with a conducting port in communication with the said cylinder provided with the larger bore, and an exhaust port, means for delivering fluid pressure to said valve device, means for operating said second meantioned valve device relative to the position of said pistons to open the said cylinder of larger diametrical bore to the exhaust when the piston is in a forward position, and to open the communication between the said cylinder and valve device for introduction of fluid pressure into the cylinder upon movement of the said piston to a rearward position with respect to the cylinder, means for delivering fluid pressure to said cylinder of said first mentioned cylinders provided with the smaller bore, the fluid pressure delivered to the said cylinder and valve devices being substantially uniform, and mechanism for controlling both of the said fluid pressure delivering means.

4. In a milking machine, the combination with a plurality of pairs of coacting pulsating cylinders and pressure cylinders for actuating the milking flaps, of twin cylinders provided with pistons, one of said cylinders being provided with a larger diametrical bore than the other, a valve device provided with independent conducting ports each in communication with one of said pulsating cylinders, and an exhaust port, means operatively connecting said pistons and valve device to actuate the latter providing alternate opening of said ports to the exhaust and the interior of the valve device upon reciprocation of the said pistons, a second valve device in communication with said first mentioned valve device, provided with a conducting port in communication with the said cylinder provided with the larger bore, and an

exhaust port, means for delivering fluid pressure to said valve devices, means for operating said second mentioned valve device relative to the position of said pistons to open the said cylinder of larger diametrical bore to the exhaust when the piston is in a forward position, and to open the communication between the said cylinder and valve device for introduction of fluid pressure into the cylinder upon movement of the said piston to a rearward position with respect to the cylinder, means for delivering fluid pressure to said cylinder of said first mentioned cylinders provided with the smaller bore, the fluid pressure delivered to the said cylinder and valve devices being substantially uniform, and means for simultaneously opening said last mentioned delivery means and opening said valve devices to the atmosphere, or simultaneously opening both of the said delivery means for conveyance of fluid pressure.

1,017,406. HEEL-COMPRESSOR. JOHN E. GLIDDEN, insane, Beverly, Mass.; Sadie E. Glidden, guardian; said Sadie E. Glidden, administratrix of said John E. Glidden, deceased, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 13, 1910. Serial No. 571,775. (Cl. 12—48.)



1. A machine of the class described having, in combination, means for forming a tread surface and means for forming a heel seat upon the same face of a double blank.

2. A machine of the class described having, in combination, means for forming a tread surface and a heel seat upon one face of a double blank, and means for forming a heel seat and a tread surface upon the opposite face of said double blank.

3. A machine of the class described having, in combination, means for forming a tread surface and a heel seat upon one face of a double blank, and means for forming a heel seat and a tread surface upon the opposite face of said double blank, each of said tread surfaces being opposite a corresponding heel seat on the opposite face of the blank.

4. In a machine of the class described, the combination with means for dividing a double heel blank to form two heels, of means for subjecting the heels to vertical and lateral pressure.

5. In a machine of the class described, the combination of means for compressing a double heel blank and means for dividing the double blank into two heels while the compressing operation is taking place.

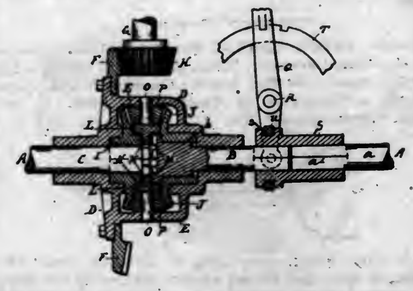
[Claims 6 to 13 not printed in the Gazette.]

1,017,407. TRANSMISSION MECHANISM FOR AUTOMOBILES. MAX H. GRABOWSKY, Detroit, Mich. Filed June 21, 1911. Serial No. 634,555. (Cl. 74—34.)

1,017,407. TR

1. In a transmission mechanism two portions of a shaft an equalizing gearing having a ring L uniting the portions of said shaft, said ring being provided with teeth, the inner end of one of said shaft portions being provided with teeth and means for moving said portion of said shaft longitudinally to engage and disengage said teeth for the purpose described.

2. In a transmission mechanism two shaft portions having an equalizing gearing uniting said shaft portions and provided with a ring L having an internal web, said web being provided with teeth formed therein and means for engaging one of said shaft portions with said teeth.



3. In a transmission mechanism, two shaft portions having an equalizing gearing uniting said shaft portions, and provided with a ring L having an internal web, said web being provided with teeth formed therein, the inner end of one of said shaft portions being provided with teeth and means for moving said shaft portion longitudinally to engage the teeth upon its end with the teeth in said web and to disengage the same.

1,017,408. JAWS FOR CHUCKS. EDWARD M. GRAHAM, Chicago, Ill., assignor to Vaughan & Bushnell Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1911. Serial No. 640,197. (Cl. 145—93.)

1. The combination of a pair of co-acting jaws, having oppositely disposed inwardly extending sockets in their upper portions and channeled in their outer portions for the reception of spring arms, and a helical spring entered within the sockets, and having each arm extending through a jaw from the socket to the channel thereof, and lying within the channel and having the end of the arm secured to the corresponding jaw, substantially as described.

2. The combination of a pair of co-acting jaws, having oppositely disposed sockets in their upper portions extending inwardly at substantially right angles to the socketed faces of the jaws, and having elongated channels in the outer faces of the jaws and in communication with the sockets, and a coiled spring lying within the sockets and having its arms extended through from the sockets and lying in the channels, and having the end of each arm secured to the corresponding jaw, substantially as described.

3. The combination of a pair of jaws, having their upper portions oppositely socketed and provided with perforations extending from the sockets to the outer faces of the jaws, and a coiled spring lying within the sockets and having its arms extended through the perforations to the outer faces of the jaws, and having the ends of the arms secured to the jaws, substantially as described.

4. The combination of a pair of co-acting jaws, having their upper portions beveled away from each other, each jaw being provided with a socket extending inwardly from the corresponding beveled face and substantially at right angles thereto, and each jaw being provided with a perforation extending from the corresponding socket to its outer face, and a coiled spring lying within the sockets and having its ends extended through the perforations to the outer faces of the jaws, whereby, when the spring is

in normal condition, the socketed ends of the jaws are drawn together and the spring is straightened to throw the jaws at an angle to each other, substantially as described.

1,017,409. UNDERCURRENT WATER-MOTOR. HEMAN H. GRANGER, Davenport, Wash., assignor to The Granger Under-Current Water Motor Company, Davenport, Wash., a Corporation of Washington. Filed Oct. 29, 1909. Serial No. 525,284. (Cl. 138—12.)

1. A water wheel, comprising an air-tight drum constituting a float and having spiders secured to its ends, said spiders having radial arms projecting beyond the drum, buffer bars secured between the arms adjacent to the drum, buffers carried by the said bars, vanes provided at their outer edges with pivot rods mounted in the outer ends of the said arms of the spiders and adapted to abut with their inner free ends against the buffers, said vanes having at their upper and lower edges frame bars projecting beyond the pivots, and imperforate balance vanes provided at their outer edges with pivot rods mounted in the projecting ends of the frame bars of the first vanes, the balance vanes being adapted to abut with their inner free edges against the pivoted ends of the said first vanes.

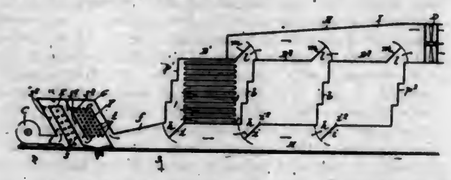
2. A water wheel, comprising a vertical hub having radial arms projecting from its ends, buffers carried by the arms adjacent to the drum, vanes pivoted at their outer ends between the outer ends of the said arms and adapted to abut with their free inner ends against said buffers, said vanes having at their upper and lower edges frame bars projecting beyond the pivots, and imperforate balance vanes pivoted at their outer ends between the projecting portions of the frame bars of the first vanes, the balance vanes being adapted to abut with their free inner ends against the pivoted ends of the said first vanes.

3. A water wheel, comprising a vertical hollow and air-tight hub having radial arms projecting from each end, a plurality of buffers carried by each pair of arms adjacent to the hub, vanes pivoted at their outer ends between the outer ends of the said arms and adapted to abut with their free inner ends against said buffers, said vanes being provided at their upper and lower edges with members projecting beyond the pivots, and imperforate balance vanes pivoted at their outer ends between the projecting members of the first vanes and adapted to abut with their free inner ends against the pivoted ends of the said first vanes.

1,017,410. PROCESS OF PAINTING. NORRIS B. GREGG, St. Louis, Mo. Filed July 11, 1910. Serial No. 571,260. (Cl. 91—68.)

The process of painting wooden objects having a previously painted surface, which consists in indenting the object to be painted to produce a series of openings extending through the old coat of paint and a series of paint-receiving jackets extending into the body of the object itself, said openings leading directly into said pockets, and in subsequently applying a fresh coat of liquid paint to the surface of the old coat to cause the fresh paint to fill said openings and said pockets and to spread in the latter by capillary attraction, the paint occupying said pockets forming anchors connected integrally with the body of the fresh coat by the webs produced by the paint occupying said openings.

1,017,411. FOOD PRODUCT AND PROCESS OF PREPARING IT. GORDON DON HARRIS, Bay Shore, and JAMES S. POLLARD, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company, a Corporation of New York. Filed Nov. 1, 1909. Serial No. 525,675. (Cl. 99—5.)



1. In the art of dehydrating foods, the process which consists in cutting entire bananas, including their skins, into small pieces, and then dehydrating said pieces by subjecting them to the action of warm dehydrated air.

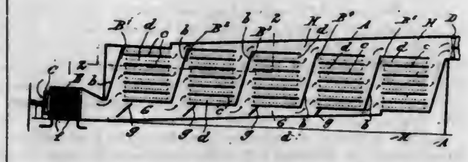
2. In the art of dehydrating foods, the process which consists in cutting entire bananas, including their skins, into small pieces, dehydrating said pieces by subjecting them to the action of warm dehydrated air, then roasting the dried product.

3. In the art of dehydrating foods, the process which consists in cutting bananas into small pieces, including their skins, then dehydrating said pieces, and then roasting them.

4. In the art of dehydrating foods, the process which consists in cutting bananas into small pieces, including their skins, then dehydrating said pieces, then roasting them, mixing water therewith, and finally grinding the product.

5. As a new article of manufacture, dehydrated banana fruit and skins the sugar content of which is partially caramelized so that the product has a coffee color.

1,017,412. APPARATUS FOR DEHYDRATING FOODS. GORDON DON HARRIS, Bay Shore, and JAMES S. POLLARD, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company, a Corporation of New York. Filed Feb. 13, 1909, Serial No. 477,667. Renewed Aug. 22, 1911. Serial No. 645,412. (Cl. 34—39.)



1. In an apparatus of the class described, a casing, an air inlet and an air exist thereto, a series of inclined partitions therein forming a plurality of chambers, and a series of partitions in each chamber dividing the chamber into a number of compartments.

2. In an apparatus of the class described, a casing, an air inlet and an air exist thereto, a series of inclined partitions therein forming a plurality of chambers, a series of partitions in each chamber dividing the chamber into a number of compartments, and a foraminous tray in each compartment.

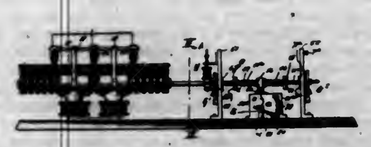
3. In an apparatus of the class described, a casing, a series of partitions within the same forming a plurality of chambers, a series of partitions within each chamber and dividing the same into a series of compartments, said last mentioned partitions being transverse to the first named partitions, a tapering air in-take common to said chambers, and a tapering air exist also common to said chambers.

4. In an apparatus of the class described, a casing, a series of partitions within the same forming a plurality of chambers, a series of partitions transverse to, and disconnected from, the first named partitions, said second named partitions being within each chamber and dividing the same into separate compartments, an in-take common to said chambers, an air exit also common to said chambers, a blower C forcing air into said air in-take, and a fan for exhausting air from said air exit.

5. In an apparatus of the class described, a casing, a series of partitions within the same forming a plurality of chambers, each of said chambers being provided with a series of horizontal partitions arranged to divide the chamber into compartments, said compartments of each chamber having a common inlet and a common outlet, an air in-take common to the inlets of all said chambers, an air exit also common to outlets of all said chambers, a blower C for forcing air into said air in-take, a fan for exhausting air from said air exit, and an air heater intermediate said blower and the air in-take.

[Claims 6 to 9 not printed in the Gazette.]

1,017,413. ELECTRIC CONTROLLER. JOHN P. HAYES, Pittsburgh, Pa. Filed June 11, 1907. Serial No. 378,330. (Cl. 172—179.)



1. In an electric controller for automatically controlling electric devices, standards, circuit breakers carried thereby, contacts carried by said standards, a head movably mounted between said standards, arms carried by said head for actuating said circuit breakers, and contacts supported by said arms for engaging the contacts of said standards in advance of the actuation of said circuit breakers, and means for controlling the operation of the head.

2. A controller comprising a movable head, arms carried thereby, contacts supported by said arms, automatic circuit breakers actuated by said arms, a lock magnet, actuated by said circuit breakers, standards, contacts supported by said standards and adapted to be engaged by the contacts of said arms, and a rheostat arranged to coöperate with said movable head.

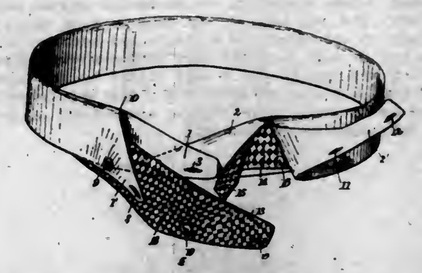
3. A controller comprising a movable head, contacts carried by said head, standards automatic circuit breakers, one of said circuit breakers being actuated by the movement of said head in one direction and the other of said circuit breakers by the movement of said head in the opposite direction, a lock magnet actuated by the movement of said head, contacts adapted to be engaged by the first mentioned contacts, means for retarding the movement of said head in either direction, and means for controlling the operation of the last mentioned means.

4. The combination with a motor and a suitable source of electrical energy, of standards, electrical conductor contacts carried thereby and in circuit with said motor, a reverser head arranged between said standards, a reciprocating electric motor in circuit with said source of electrical energy and controlled by said motor for operating said reverse head, resiliently mounted contact disks carried by said head and adapted to engage the contacts of said standards for starting the first mentioned motor, and a rheostat actuated by said reverser head.

5. The combination with an electric motor and a suitable source of electrical energy, of standards, a reverser head movably mounted between said standards and in circuit with said motor, resilient and stationary contacts for starting said motor, means actuated by said reverser head for gradually bringing said motor up to a predetermined speed, and a reciprocating armature in circuit with said electrical energy for actuating said reverser head.

[Claims 6 to 24 not printed in the Gazette.]

1,017,414. COLLAR AND TIE. ANDREW C. HEICHELBECH, West Baden, Ind. Filed May 26, 1911. Serial No. 629,537. (Cl. 2—70.)



1. The combination of a folded collar having inner tabs and outer tabs at the ends thereof, one of the outer tabs being of greater length than the other, the edges of the collar adjacent the tabs being remote from each other, together with a tie positioned between the folds of the collar, the tabs being provided with means for engaging a button on a garment and the said longer tab being also provided with means for engaging the other outer tab whereby when the tabs are brought together and secured in position the tie will be exposed.

2. The combination of a folded collar having inner tabs and outer tabs at the ends thereof, the folded portions of the collar adjacent the tabs being remote from each other, the inner tabs being each provided with a buttonhole for engagement with a button on a garment, a tie positioned between the folds of the collar and the ends thereof being provided with means for engaging each other, the outer tabs of the collar being provided with means for engaging the button on the said garment whereby when the parts are secured in position the tie will be exposed.

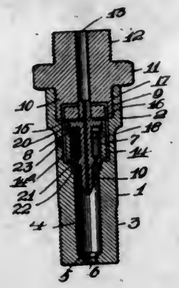
3. The combination of a folded collar having inner and outer tabs at its ends and a tie contained between the folds, the folded portions of the collar adjacent the ends being remote from each other, the inner tabs being each provided with a buttonhole for engagement with a button carried by a suitable garment, one end of the tie being provided with a buttonhole for engagement with the button of the said garment, the said end being also provided with a button, the other end of the tie being provided with a buttonhole for engagement with the button of the said garment, another buttonhole at the other end of the tie, the said end being also provided with a button intermediate the said buttonholes, one of the outer tabs of the collar being provided with a buttonhole for engagement with the button of the said garment and being also provided with a button, the other outer tab being provided with a plurality of buttonholes, one of which engages the intermediate button on one of the ends of the tie and the other of which engages the button on the other outer tab.

4. As a new article of manufacture a folded collar having inner and outer tabs at each end thereof, the upper edges of the said tabs being inclined, the inner tabs being provided with buttonholes for securing them to a suitable garment, one of the outer tabs being provided with a button and also a buttonhole and the other outer tab being provided with a plurality of buttonholes whereby the outer tabs are secured together, the said collar being adapted to receive a tie between its folds and to hold the same exposed adjacent the tabs when the collar is worn.

1,017,415. AUTOMATIC CHOKE-VALVE. CHARLES Y. HOOD, Wilkinsburg, and JAMES CHALMERS, Homewood, Pa. Filed Aug. 5, 1910, Serial No. 575,678. Renewed Sept. 15, 1911. Serial No. 649,533. (Cl. 184—52.)

1. An automatic choke valve comprising a body having a longitudinal bore formed therein, a chamber and a

socket, a plug detachably mounted in the socket of said body and having a longitudinal port formed therein, said plug and said body having oppositely disposed by-paths formed therein establishing communication between said chamber and the port of said plug, a stem slidably mounted in the chamber of said body and extending into the port of said plug, said stem having a longitudinal port formed therein, and a head carried by said stem and adapted to close the lower ends of said by-paths, said head having ports formed therein, substantially as and for the purpose herein described.

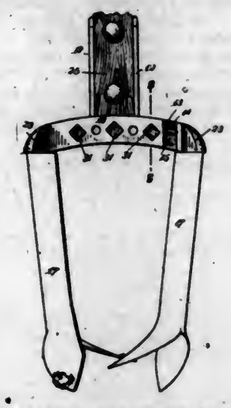


2. An automatic choke valve comprising a body having a longitudinal bore formed therein, a chamber and a socket, a plug detachably mounted in the socket of said body and having a longitudinal port formed therein, said plug and said body having oppositely disposed by-paths formed therein establishing communication between said chamber and the port of said plug, a stem slidably mounted in the chamber of said body and extending into the port of said plug, said stem having a longitudinal port formed therein, a head carried by said stem and adapted to close the lower ends of said by-paths, said head having ports formed therein, and means adapted to normally establish communication between the by-paths of said plug and the by-paths of said body,

3. A choke valve comprising a body, said body having a longitudinal bore formed therein with the upper end of said bore enlarged to provide an intermediate chamber and a socket, said body having by-paths formed therein in communication with said chamber, a plug detachably mounted in the socket of said body and having a longitudinal port in communication with the chamber of said body, said plug having by-paths formed therein normally in communication with the by-paths of said body, said body having a port formed therein communicating with one of the by-paths of said body, a stem slidably mounted in the chamber of said body and extending into the port of said plug, said stem having a longitudinal port formed therein, and a head carried by said stem and adapted to close the by-paths of said body, said head having ports formed therein, substantially as described.

4. A choke valve comprising a body, said body having a longitudinal bore formed therein with the upper end of said bore enlarged to provide an intermediate chamber and a socket, said body having by-paths formed therein in communication with said chamber, a plug detachably mounted in the socket of said body and having a longitudinal port in communication with the chamber of said body, said plug having by-paths formed therein normally in communication with the by-paths of said body, said body having a port formed therein communicating with one of the by-paths of said body, a stem slidably mounted in the chamber of said body and extending into the port of said plug, said stem having a longitudinal port formed therein, a head carried by said stem and adapted to close the by-paths of said body, and adapted to limit the movement of the stem in one direction, said head having ports formed therein, and means carried by said stem and adapted to limit the movement of said stem in opposite directions, substantially as described.

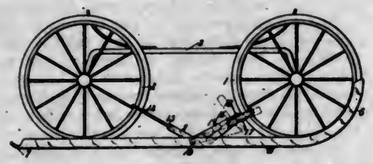
1,017,416. EARTH-AUGER. ROBERT THOMAS JENNEY, De Pere, Wis. Filed Mar. 7, 1911. Serial No. 612,883. (Cl. 166—12.)



1. In an earth auger a yoke member having two guideways, one at each side, two plates adjustable relatively to each other and to the yoke member, each of the plates having an arm with a guide and a flange, the guides being adapted to be disposed in the guideways respectively, and the flanges being adapted to be disposed edge to edge and against a surface of the yoke member, and means for securing the arms to the yoke member in adjusted positions.

2. In an earth auger a shank having in cross section a web portion and a flange, at each side, a transverse yoke member secured to the shank and having two guideways, one at each side, two plates adjustable relatively to each other and to the transverse yoke, each having an arm with a guide, the transverse yoke member and the arms being disposed side by side with the guides in the guideways, and means for securing the arms to the yoke member in adjusted positions.

1,017,417. DETACHABLE RUNNER FOR FOLDING GO-CARTS. WILLIAM H. JOY, MARK H. SMITH, and FRANCIS KORFF, Lansing, Mich., assignors to Korff Manufacturing Company, Lansing, Mich. Filed May 12, 1911. Serial No. 626,739. (Cl. 21—96.)



1. The combination with the front and rear wheels, of a carriage; a runner formed of angle metal adapted to receive said wheels; plates secured to said runner to coact with the vertical arm of the angle metal to form seats to retain the wheels; an adjustable attaching member comprising a link pivoted to said runner between the wheels, an adjustable wheel engaging hook having a threaded shank and lock nut means connected to said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purpose specified.

2. In a runner attachment for a carriage, a runner formed of angle metal adapted to receive the wheels; plates secured to said runner to coact with the vertical arm of the angle metal to form seats to retain the wheels; an adjustable attaching member comprising a link pivoted to said runner between the wheels, an adjustable wheel engaging hook connected to said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purpose specified.

arm of the angle metal to form seats to retain the wheels; an adjustable attaching member comprising a link pivoted to said runner between the wheels, an adjustable wheel engaging hook having a threaded shank and lock nut means connected to said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purposes specified.

3. In a runner attachment for a carriage, a runner formed of an angle metal adapted to receive the wheels; plates secured to said runner to coact with the vertical arm of the angle metal to form seats to retain the wheels; an adjustable attaching member comprising a link pivoted to said runner between the wheels, an adjustable wheel engaging hook connected to said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purpose specified.

4. In a runner attachment for a carriage, a runner formed of angle metal adapted to receive the wheels; plates secured to said runner to coact with the vertical arm of the angle metal to form seats to retain the wheels; an attaching member comprising a link pivoted to said runner between the wheels, a wheel engaging hook connected on said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purpose specified.

5. In a runner attachment for a carriage, a runner, with seats to receive the wheels; an adjustable attaching member comprising a link pivoted to said runner between the wheels, an adjustable wheel engaging hook connected on said link; and a clamping toggle comprising a link pivoted on said runner between the wheels, a lever pivoted on said toggle link, and a wheel engaging hook pivoted on said lever, the pivot for said hook being disposed so that it is carried past the dead center line of the pivots for the lever to the link and for the link to the runner when the lever is forced against the runner, for the purpose specified.

[Claims 6 to 13 not printed in the Gazette.]

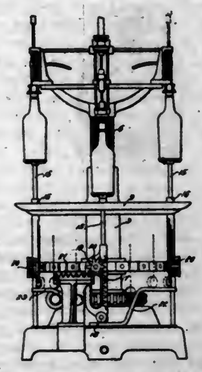
1,017,418. ROTARY MACHINE. KARL KIEFER, Cincinnati, Ohio. Filed Apr. 17, 1909. Serial No. 490,635. (Cl. 226—15.)

1. In a rotary machine of the character described, the combination consisting of a number of lifting elements rotating around a common center, in combination with a number of gears co-acting to raise the lifting elements, and of a stationary rack operating said gears.

2. In a rotary machine of the character described, the combination consisting of a number of lifting elements, racks attached to said elements, gears meshing with said racks, said lifting elements being movable around a common vertical axis, and of a stationary rack operating said gears.

3. In a rotary machine of the character described, the combination consisting of a frame movable around a vertical axis, a number of lifting elements carried by said frame, a number of gears carried by said frame co-acting to raise the lifting elements, and a stationary rack meshing periodically with the gears.

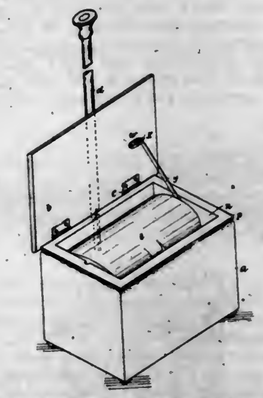
4. In a rotary machine of the character described, the combination with a filling head, of lifting tables, the filling head being adjustable vertically and circumferentially with relation to the lifting tables, so as to accommodate vessels of different heights and diameters, and means for maintaining the radial positions of the vessels.



5. In a rotary machine of the character described, the combination with a vertically and circumferentially adjustable filling head, of a series of lifting tables to cooperate with said filling head, provided with convergent bottle centering guides to maintain the radial positions of bottles carried by the tables.

[Claims 6 to 14 not printed in the Gazette.]

1,017,419. SPUTUM-RECEPTACLE. JULIUS KNAPP and JULIUS LIGART, Passaic, N. J. Filed Oct. 3, 1911. Serial No. 652,520. (Cl. 4—39.)



A sputum receptacle comprising, in combination, a vessel containing a liquid, a cover for said vessel movable to close or expose the mouth thereof and normally occupying the closed position, a rocking sputum receiver journaled within said vessel on a horizontal axis disposed in a vertical plane cutting the receiver substantially centrally thereof and said receiver having the part thereof below its axis normally dipping into the liquid, part-cylindrical in form and heavier than the part of the receiver above said axis, and means, connecting the cover and receiver, for causing them to move together, substantially as described.

1,017,420. WATCHCASE. KIHEI KOIKE, Seattle, Wash. Filed Mar. 7, 1911. Serial No. 614,239. (Cl. 58—102.)

1. In a watch, in combination with a case, a cover hinged thereto, a catch for said cover, and the push member for operating said catch, an engaging part on said cover projecting into said case, and a cam member

supported in said case for bodily movement and connected with said push member for movement into engagement with said engaging member to thereby open said cover.

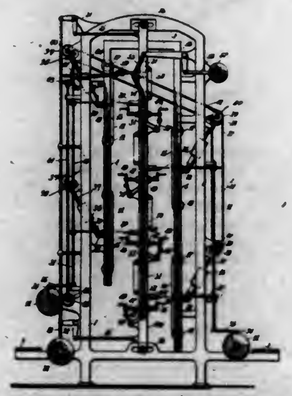
2. In a watch, in combination with a case, a cover hinged thereto, a catch for said cover, and the push stem for operating said catch, an engaging member on said cover projecting into said case, a cam member slidably supported in said case and normally engaged with said engaging member, and means connecting said cam member with said push stem for reverse movements thereby.

3. In a watch, in combination with a case, a cover hinged thereto, and a push stem, an engaging part on said cover projecting into said case, a cam member slidably supported in said case and connected with said push member for movement thereby into engagement with the engaging part of said cover to thereby open the latter, and means for closing said cover.

4. In a watch, the combination with a case, a cover hinged thereto, and a push stem, an engaging part on said cover projecting into said case, an actuator member slidably supported in said case for engagement with said engaging part, means connecting said actuator member with said push stem for actuation thereby, and an upwardly extending cam track in the path of said actuator member for elevating the active end portion thereof.

5. In a watch, in combination with a case, a cover hinged thereto, and a push stem, an engaging part on said cover projecting into said case, an actuator member slidably supported in said case for engagement with said engaging part for opening said cover, a stud on said actuator member, and means on said push stem provided with a cam opening in which said stud is engaged.

1,017,421. MULTIPLEX-SHUTTLE EMBROIDERING-MACHINE. JOHN KRUSI, New York, N. Y., assignor, by mesne assignments, to Multiplex Shuttle Embroidering Machine Company, a Corporation of New York. Filed Feb. 1, 1911. Serial No. 605,855. (Cl. 112—7.)



1. In an embroidering machine, the combination with a frame, of a floating fabric frame movably mounted on said first-mentioned frame, said floating fabric frame having a plurality of reaches extending in different vertical planes and each adapted to support one or more strips of fabric to be embroidered, an operator interposed between said reaches, and needles extending from opposite sides of said operator and adapted to alternately engage strips of fabric on said reaches, located on opposite sides of said operator.

2. In an embroidering machine, the combination with a frame, of a floating fabric frame movably mounted on said first-mentioned frame, said floating fabric frame having a plurality of reaches extending in different vertical planes and each adapted to support one or more strips of fabric to be embroidered, an operator interposed between said reaches, needles extending from opposite sides of said operator and adapted to alternately engage strips of fabric on said reaches, located on opposite sides of said operator, borers movably mounted in said operator and directed in opposite directions on opposite sides of said operator so as to engage strips of fabric on said reaches located on opposite sides of said operator, and means for manipulating said borers.

3. In an embroidering machine, the combination with a frame, of a floating fabric frame movably mounted on said first-mentioned frame, said floating fabric frame having a plurality of reaches extending in different vertical planes and each adapted to support one or more strips of fabric to be embroidered, an operator interposed between said reaches, needles extending from opposite sides of said operator and adapted to alternately engage strips of fabric on said reaches, located on opposite sides of said operator, and means for reciprocating said operator.

4. In an embroidering machine, the combination with a frame, of a floating fabric frame movably mounted on said main frame, means for manipulating said floating fabric frame, said fabric frame having a plurality of vertically-extending reaches adapted to support a plurality of strips of fabric in different vertical planes, an operator interposed between said reaches, and needles disposed in opposite sides of said operator, the needles on one side being staggered relative to the needles on the other side.

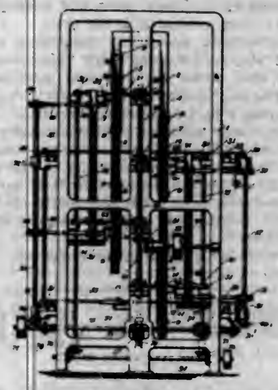
5. In an embroidering machine, the combination with a frame, of a single integral fabric frame movably mounted on said first-mentioned frame and comprising a plurality of reaches extending in different vertical planes, and members arranged in pairs on each of said reaches, for supporting one or more strips of fabric on said reaches, the pairs of said members on one reach being out of horizontal alinement with the pairs on the other reach, so that the strips of fabric on one of said reaches supported thereby will be staggered relative to the strips of fabric supported thereby on the other of said reaches.

[Claims 6 to 9 not printed in the Gazette.]

1,017,422. SHUTTLE EMBROIDERING-MACHINE. JOHN KRUSI, New York, N. Y., assignor to Emma Krusi, New York, N. Y. Filed Apr. 1, 1911. Serial No. 618,320. (Cl. 112—7.)

1. The combination with a supporting frame for supporting a plurality of strips of fabric arranged in different vertical planes, of shuttle mechanism interposed between said strips of fabric, needle elements coöperating with said shuttle mechanism, arranged on the opposite sides of said strips of fabric from said suttle mechanism, means for driving said needle elements, boring mechanism adapted to produce openings in said strip of fabric, said shuttle mechanism being movable into and out of coöperative relation with said needle elements, and means for manipulating said shuttle mechanism so as to be out of coöperation with said needle elements when said boring mechanism is in action.

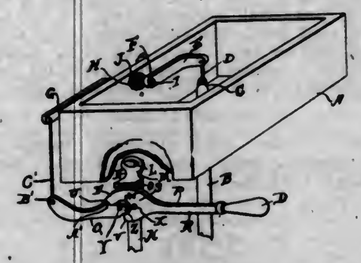
2. The combination with a floating fabric frame, of means for supporting a plurality of strips of fabric on said frame in staggered spaced relation, a shuttle frame interposed between strips of said fabric, shuttle bars movably mounted on said frame in staggered vertically-shaped relation, means for manipulating said shuttle bars, needle elements disposed on opposite sides of said fabrics from said shuttle frame and arranged in vertical spaced relation and staggered relative to each other so as to coöperate with said shuttle bars, and means for driving said needle elements.



3. The combination with a floating fabric frame having a plurality of reaches adapted to support a plurality of strips of fabric in different vertical planes, of a shuttle frame interposed between the reaches of said fabric frame, means for moving said shuttle frame in a vertical direction, a plurality of shuttle bars on said shuttle frame, and means for moving said shuttle bars in a horizontal direction.

4. The combination with a floating fabric frame having a plurality of reaches adapted to support a plurality of strips of fabric in different vertical planes, of a shuttle frame interposed between the reaches of said fabric frame, means for moving said shuttle frame in a vertical direction, a plurality of shuttle bars on said shuttle frame, means for moving said shuttle bars in a horizontal direction, shuttles on said shuttle bars, and means for driving said shuttles, having a loose connection adapted to maintain the driving connection between said shuttle bars and said driving means, irrespective of the vertical position of said shuttle frame.

1,017,423. LEVER FOR FLUSH-TANKS. HERMANN R. KUEHNER, Camden, N. J. Filed Jan. 31, 1911. Serial No. 605,821. (Cl. 4—5.)

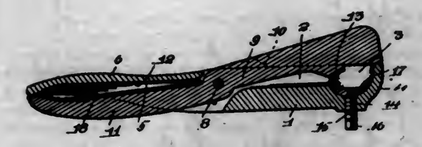


1. In combination with a flush tank, a supply pipe, a bracket comprising an arm having an aperture therein with which registers the supply pipe, downwardly extending parallel ears formed with the arm, an operating lever comprising a shank and head, said lever being pivoted between the ears of the bracket, a lower lip formed on the head, an upper lip having a notch in its outer end also formed on the head, a coacting lever pivoted between the ears of the bracket, a finger formed on said lever contacting with the upper surface of the lower lip, and a lug formed with the upper surface of the co-acting lever adapted to register with the notch of the upper lip.

2. In combination with a flush tank, a supply pipe, a bracket comprising an arm having an aperture therein with which registers the supply pipe, downwardly extending parallel ears formed with the arm, an operating lever comprising a shank and head, said lever being pivoted between the ears of the bracket, a lower lip formed with the head, an upper lip having a notch in its outer end also formed with the head, a coacting lever pivoted between the ears of the bracket, a finger formed with said lever, contacting with the upper surface of the lower lip, a lug formed with the upper surface of the co-acting lever adapted to register with the notch of the upper lip, a swinging lever comprising a shaft, an inner and an outer arm, the shaft thereof passing through the rear wall of the tank, a washer contacting with the inner surface of said rear wall, a coiled spring mounted upon the shaft, one end resting against the inner arm, the opposite end against the washer, and a connector, one end of which is fastened to the outer end of the swinging lever, the opposite end being fastened to the outer end of the co-acting lever.

3. In an exposed flush tank lever, the combination with a flush tank of a bracket, a co-acting lever provided with means for attachment to the valve mechanism and having a short arm formed therewith, said lever being pivoted in the bracket and having contact points at both sides of the pivot point and in different planes, said co-acting lever being so constructed that it may be inverted, an operating lever pivoted to the bracket having two contact points upon the same side of the pivot point of said operating lever, one of said contact points co-acting with one of the contact points on the co-acting lever, and the other contact point on the operating lever co-acting with the contact point on the co-acting lever at the opposite side of the pivot point of said co-acting lever, said operating lever adapted to be inverted when the co-acting lever is inverted as specified.

1,017,424. NUTCRACKER. WICETY KWIATKOSKY, Elizabeth, Pa. Filed Apr. 21, 1911. Serial No. 622,565. (Cl. 146—3.)

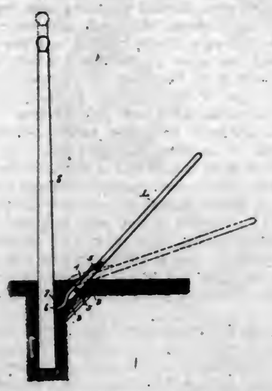


A nut cracker comprising a body having its upper face for a portion of its length provided with a longitudinally-extending groove and its lower face for a portion of its length provided with a longitudinally-extending groove, said grooves merging into each other at the inner end thereof and approximately centrally of said body, said body having the forward end thereof provided with a nut receiving socket into which opens said upper groove, a longitudinally-extending member arranged in the upper and lower grooves of said body and pivoted to the body at the juncture of said groove, the forward end of said member adapted to extend over said socket, means carried by said member and projecting into the socket for cracking the nut when the forward end of the member is shifted toward the forward end of the body, and a nut support mounted in said socket and adjustably connected to said body.

1,017,425. POST-PULLER. PERRY T. LAMKIN, Whittaker, Mich. Filed Aug. 11, 1909. Serial No. 512,306. (Cl. 57—104.)

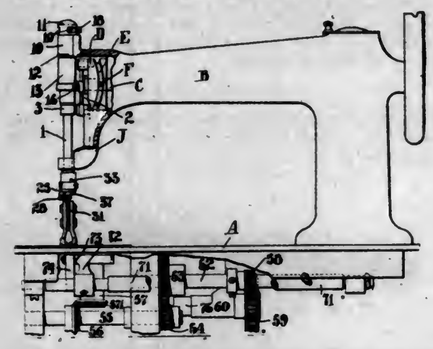
A post puller comprising a wooden lever having a relatively flat wide portion near one end to afford a broad fulcrum bearing upon the earth, a relatively narrow steel beak mounted upon the upper face of said flat wide portion to project beyond the end thereof, said beak being

tapered and curved transversely, and the sides of the wide portion at its forward end being tapered to a point



which extends under and supports the curved portion of said steel beak.

1,017,426. SEWING-MACHINE. JAMES LEATHEM, New York, N. Y., assignor to Hermann, Aukam & Co., New York, N. Y., a Corporation of New York. Filed Feb. 4, 1908. Serial No. 414,159. (Cl. 112—4.)



1. A stitch forming mechanism for sewing machines comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, a guide sleeve, and an actuating sleeve connected to said actuating shaft, and an oscillating rack arranged to operate the same for rotating said actuating shaft a part of a revolution for every reciprocation of the needle bar.

2. A stitch forming mechanism for sewing machines comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, a guide sleeve, and an actuating sleeve connected to said actuating shaft, an oscillating rack arranged to operate the same for rotating said actuating shaft a part of a revolution for every reciprocation of the needle bar, and a needle holder eccentrically mounted on said actuating shaft.

3. A stitch forming mechanism comprising a reciprocating needle bar, an intermittently rotatable shaft therein, a needle holder eccentrically mounted on said shaft and arranged to produce a series of at least three stitches of unequal length one for each reciprocation of the needle bar, means for holding the material stationary until the series of stitches are completed, and means for feeding the material after the series of stitches have been produced.

4. Stitch forming mechanism comprising needle actuating means arranged to form three stitches of unequal length together forming a right angled triangle within a cycle of operations, and means for holding the work stationary in carrying out such cycle, and means for feeding the work at the conclusion of the cycle.

5. A stitch forming mechanism comprising a reciprocating needle bar, an actuating shaft therein, means for reciprocating said needle bar and said actuating shaft, means for rotating said actuating shaft a third of a revolution during a part of each reciprocation, an actuating cam eccentrically mounted on said actuating shaft, a needle holder mounted on said actuating cam eccentrically to said actuating shaft and eccentrically to said actuating cam, means for regulating the movements of said actuating cam to form a series of three unequally spaced stitches, and means for feeding the material forward after each series of stitches.

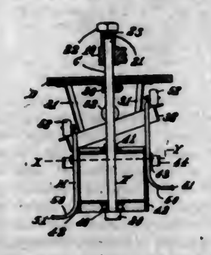
[Claims 6 to 45 not printed in the Gazette.]

1,017,427. SHEET-METAL CASK. ISIDORE LEFEBVRE, Aubervilliers, France. Filed Jan. 18, 1907. Serial No. 352,991. (Cl. 220—4.)

1. A sheet metal cask or barrel comprising a body formed of sheet metal, heads for the body formed of sheet metal, said heads being jointed to the chimes of the body and a metal hoop having inturned edge portions to overlap the joints between the heads and the chimes to reinforce and protect such joints.

2. A sheet metal cask or barrel comprising a body formed of sheet metal, corrugated heads for the body formed of sheet metal, said heads being jointed to the chimes of the body and a metal hoop having inturned edge portions to overlap the joints between the heads and the chimes to reinforce and protect such joints.

1,017,428. CLOTHES-LINE SUPPORT. GEORGE LEFEVRE, Lawrence, Mass. Filed Dec. 4, 1911. Serial No. 663,892. (Cl. 68—8.)



1. In a clothes line support, a plate, an inclined annular track hung underneath said plate, a rod which passes centrally through said track, a drum rotatably supported by said rod and having vertical slots, together with line holders slidable in said slots each having a hook at the lower end and a wheel which rests upon the track at the upper end.

2. In a clothes line support, a plate, an inclined annular track hung underneath said plate, a rod which passes centrally through said track, and ball bearings supported by said rod, combined with a drum rotatably supported by the ball bearings and having vertical slots, together with line holders loosely slidable in said slots each having a hook at the lower end and a wheel which rests upon the track at the upper end.

3. In a clothes line support, a plate, an inclined annular track hung underneath said plate, a rod which passes centrally through said track, and ball bearings supported by said rod, combined with a drum rotatably supported by the ball bearings and having vertical slots, together with line holders loosely slidable in said slots each having a hook at the lower end and a wheel which rests upon the track at the upper end, and guard straps attached to the drum which extends outward over said line holder hooks.

1,017,429. DEVICE FOR USE IN CURING HAY IN THE FIELDS. JOHN LIESENFELD, Park Rapids, Minn. Filed Apr. 5, 1911. Serial No. 619,027. (Cl. 34—36.)

1. In a device of the class described, the combination of a ground rod, and supporting means thereon, for holding a quantity of hay remote from the ground, the said means comprising a plurality of legs in engagement with the rod and the ground, together with means adjacent the top of the rod for engagement with the top of the hay whereby the sides thereof are held in position to easily shed water.

2. In a device of the class described, a ground rod, a plurality of legs carried by the rod and in engagement with the ground, a ring engaging each of the legs adjacent the other end thereof, each of the said legs being in engagement with said rod, and means for holding the legs and rings in position, together with means adjacent the top of the rod for engagement with the top of the hay whereby the sides thereof are held in position to easily shed water.

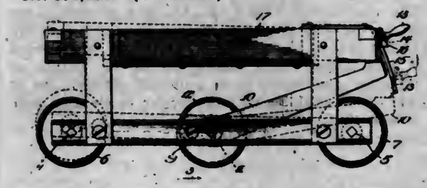
3. A device of the class described comprising a supporting rod, a ring thereon adjacent the lower portion thereof, the ring being provided with a plurality of legs, means carried by the rod for supporting the ring remote from the ground, the said ring and legs being adapted to support a quantity of hay, together with a ring adjacent the top of the said rod and provided with downwardly extending resilient rods in engagement with the top portion of the hay, the inner ends of the said resilient rods being in engagement with the said supporting rod, whereby the ring is held in position and the top of the hay-cock is in shape to easily shed water.

4. A device of the class described comprising a ground rod, a ring carried thereon adjacent the lower end thereof, the said ring being provided with a plurality of legs resting on the ground, the said ring and legs being adapted to support a quantity of hay, a ring carried by the ground rod adjacent the top thereof, the said ring being provided with a plurality of resilient rods, the outer ends of which bear against the sides of the hay-cock in a lower plane than the plane of the ring carrying the said resilient rods, and the inner ends thereof being in engagement with the said ground rod, whereby the ring with the rods thereon is held in position, the construction and arrangement of the parts permitting circulation of air between the ground and the bottom portion of the hay-cock, the upper portion thereof being of a shape to easily shed water.

5. A device of the class described comprising a ground rod having one end thereof in engagement with the ground, a circular ring carried by the said rod and provided with a plurality of legs, the said rod being provided with a pin or nail whereby the ring is supported in position, the said ring and legs being adapted to support a quantity of hay, the upper portion of the hay being provided with a canvas covering and the upper portion of the said ground rod being provided with a ring having resilient downwardly bent rods thereon, the outer ends of the said rods holding the canvas covering in position on the top of the hay-cock and the inner ends of the said resilient rods being in engagement with the said ground rod, whereby as the said ring is forced downwardly on the said rod, the said inner ends of the resilient rods will engage the said ground rod, thereby holding the said ring and the resilient rods securely in position.

[Claim 6 not printed in the Gazette.]

1,017,430. LAND-ROLLING MACHINE. CHARLES L. LILLEBERG, Chicago, Ill. Filed Nov. 28, 1910. Serial No. 594,488. (Cl. 55—6.)



1. A land rolling machine including three land rolling rollers arranged in tandem; a mounting for said rollers serving normally to hold the axes thereof in substantially fixed relation and in such relative position as to have the peripheral portions of the rollers nearest the ground occupy substantially the same plane; and mechanism for effecting the elevation of an outer roller while the intermediate roller remains upon the ground to permit the outer rollers to be lifted from the ground while the intermediate roller remains upon the ground, said intermediate roller being separated into two independently rotatable divisions to enable the machine readily to turn when the outer rollers are elevated.

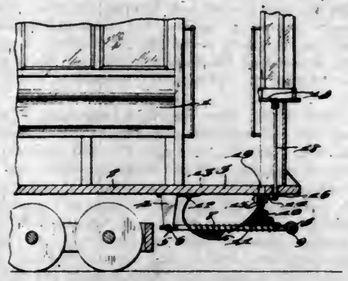
2. A land rolling machine including three land rolling rollers arranged in tandem; a mounting for said rollers serving normally to hold the axes thereof in substantially fixed relation and in such relative position as to have the peripheral portions of the rollers nearest the ground occupy substantially the same plane; and mechanism for effecting the elevation of an outer roller while the intermediate roller remains upon the ground to permit the outer rollers to be lifted from the ground while the intermediate roller remains upon the ground.

1,017,431. CAR-FENDER. FREDERICK LILLICH, Philadelphia, Pa. Filed July 19, 1911. Serial No. 639,273. (Cl. 105—130.)

1. A fender comprising a frame, a flexible slack drag at the forward end of the frame, and means on the car engaging the intermediate portion of said drag to hold the fender in elevated position, substantially as described.

2. A fender comprising a frame, rollers at the forward end of the frame adapted to run on the track, a flexible slack drag at the forward end of the frame, and means

on the car engaging the intermediate portion of said drag to hold the fender in elevated position, substantially as described.



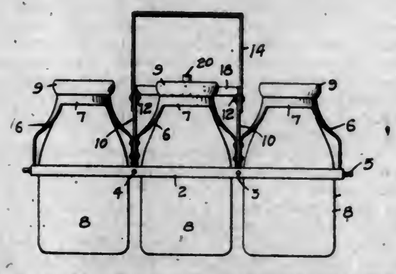
3. A fender comprising a pivoted frame, a flexible netting secured in said frame, a flexible slack drag secured to said frame and to the forward end of said netting, and means on the car engaging the intermediate portion of said drag to hold the fender in elevated position, substantially as described.

4. A fender comprising a support, a frame pivoted to the support, a netting secured to said frame, a chain connected at its ends to the frame and between its ends to said netting, said chain constituting a drag, and means on the car engaging the intermediate portion of said chain to hold the fender in elevated position, substantially as described.

5. The combination with a car, brackets secured to the bottom of the car, a fender frame pivotally mounted in said brackets, a chain drag connected to the forward end of said frame, and a sliding bar on the bottom of said platform constructed to be projected through one of the links of the chain to hold the fender in elevated position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,017,432. BOTTLE-CARRIER. ERICK P. LINDAHL, Minneapolis, Minn., assignor, by direct and mesne assignments, to Sanitary Bottling Device Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Apr. 7, 1910. Serial No. 554,059. (Cl. 224—48.)



1. A carrier comprising a frame, relatively movable inner and outer jaws mounted in said frame, and links pivotally connecting said movable jaws with one another.

2. A bottle carrier comprising a frame, outer jaws pivotally supported at the sides of said frame, inner jaws pivotally supported near the middle of said frame, means connecting the outer jaws on each side with the inner jaws on the opposite side of the frame, whereby when the outer jaws move toward one another, the inner jaws will move in opposite directions to coöperate with the outer jaws, and operating handles connected with said jaws.

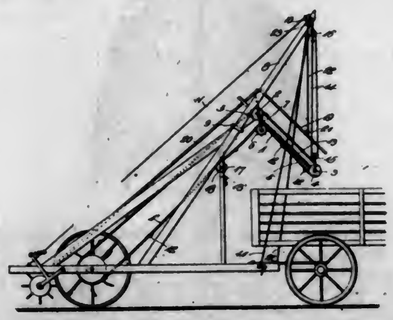
3. A bottle carrier comprising a frame, jaws pivotally supported thereon and having curved clamping faces, some of said jaws being arranged near the outer edges of said frame and others of said jaws near the middle portion thereof and on both sides of the center, the outer jaws on each side being operatively connected with the inner jaws on the opposite side of the center, whereby when said outer jaws are swung toward each other said inner jaws will be separated, and carrying handles connected with said jaws and adapted, when moved toward one another, to swing said jaws to their clamping position.

4. A carrier comprising a frame, relatively movable outer and inner jaws mounted in said frame, links pivotally connecting said movable jaws with one another, suitable carrying handles, and a locking means for said jaws.

5. A bottle carrier comprising a frame, outer and inner jaws pivotally mounted thereon, means connecting the outer and inner jaws on opposite sides of the center of said frame with one another, whereby when said outer jaws are swung toward one another, said inner jaws will be separated and will move toward said outer jaws to clamp a bottle neck between them, carrying handles connected with said outer jaws and adapted to swing toward one another to a carrying position, and means for locking said jaws in their clamping position, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,017,433. ATTACHMENT FOR HAY-LOADERS. PAUL RUSSELL LOVELL and ERNEST HENRY MICHAEL, Logan, Iowa. Filed Aug. 31, 1911. Serial No. 647,112. (Cl. 193—18.)

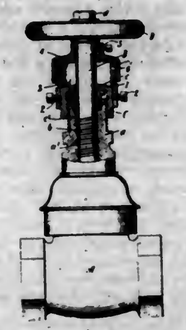


1. The combination with a main endless elevator belt and an extension thereof at its upper end adjustable to positions in line with or at an angle to the main belt, of compressor slats parallel with the main belt, and an extension comprising slats pivoted to the compressor slats at their upper ends and adjustable to maintain a parallel position with relation to the belt extension.

2. The combination with a frame, a supporting wheel and axle for the frame, sprocket wheels on the axle, uprights rising from the frame, a shaft journaled in the upper ends of the uprights, an endless elevator belt engaging the sprocket wheels and parallel compressor slats mounted above the belt, of an attachment pivotally connected on the shaft at the top of the uprights having sprocket wheels at its outer ends over which the endless belt of the conveyer is carried, a pivoted guard or compressor comprising slats in continuation of the compressor slats of the conveyer, pivoted to the upper ends of said conveyer slats, and means whereby the attachment and pivoted guard may be separately or simultaneously adjusted at any desired angle to or in alinement with the conveyer uprights.

3. The combination with a frame, two pairs of supporting uprights one of each pair rising from the frame on opposite sides and crossing each other above the frame, sprocket wheels at the bottom of the uprights, a shaft at the top of one of the uprights, sprocket wheels on the shaft, a frame journaled hingedly on the shaft, sprocket wheels mounted at the end of the hinged frame, an endless elevator belt passing under the lower first named sprocket, and the sprocket at the end of the hinged frame, and having its upper stretch passed over the sprockets at the top of one of the uprights, two brackets depending from the other upright and a shaft and sprocket journaled in each bracket to support the lower stretch of the endless belt.

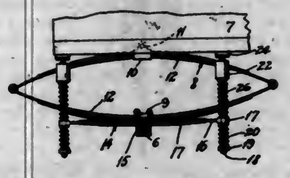
1,017,434. VALVE. ELLSWORTH ADELBERT LOWE, South Lee, N. H. Filed Sept. 16, 1911. Serial No. 649,672. (Cl. 137—4.)



1. In a valve, a sleeve, means to detachably secure the sleeve to the bonnet of the valve, a cap, means to detachably secure the cap to the valve stem, and a threaded connection between the sleeve and cap.

2. In a valve, a sleeve, means to detachably secure the sleeve to the bonnet of the valve, a screw thread upon the outer side of said sleeve, a cap, means to detachably secure the cap to the valve stem, and a screw thread upon the inner side of the cap mating with the screw threads on the sleeve.

1,017,435. SHOCK-ABSORBER. HENRY LUXEMBOURGER, Jr., Los Angeles, Cal. Filed Apr. 18, 1910. Serial No. 556,029. (Cl. 21—105.)

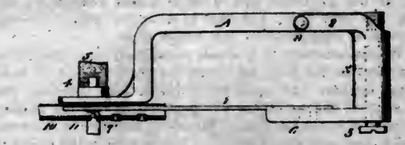


1. In combination, a vehicle having a body, an axle, a carriage spring supporting said body on said axle, a resilient cross-head attached to said axle, stems coöperating with said cross-head, springs disposed around said stems seating against said cross-head, and means for guiding said stems on said body.

2. In combination, a vehicle having a body, an axle, a carriage spring supporting said body above said axle, a cross-head attached to said axle, stems passing through the ends of said cross-head, said stems having pistons on the upper ends thereof, cylinders secured to said body to guide said pistons, springs disposed around said stems and between said cylinders and said cross-head, and springs disposed around said stems below said cross-heads, said last named springs being arranged to resist an upward movement of said stems.

3. In combination, a vehicle having a body, an axle, a spring disposed between said body and said axle, a resilient cross head attached to said axle, stems having pistons on the upper ends thereof coöperating with said cross head, cylinders disposed in operative relation to said cross heads to guide said pistons, and springs disposed around said stems seating against said cross head.

1,017,436. RIVETING-MACHINE ATTACHMENT. OGDEN MALLORY, Oakland, Cal. Filed Oct. 10, 1910. Serial No. 586,261. (Cl. 218—1.)



1. A riveting machine attachment consisting of a bracket having an end carried in the line of movement of the plunger head, a pin fixed in the opposite end, an anvil and rivet setter, a carrying sleeve therefor turnable upon the pin, and a stop carried by the sleeve and contacting with the bracket.

2. A riveting machine attachment consisting of a bracket having an end carried in the line of movement of the plunger head, a pin fixed in the opposite end, an anvil and rivet setter, a carrying sleeve therefor turnable upon the pin, a stop carried by the sleeve and contacting with the bracket, and means to adjust the stop and limit the swing of the anvil arm.

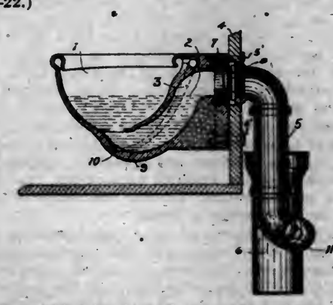
3. A riveting machine attachment consisting of a bracket having one end fixed to and movable with the plunger head or follower, a pin fixed at right angles with the opposite end of the bracket, a sleeve turnable upon the pin, and an anvil bar and rivet setter carried by the sleeve and turnable into or out of the path of the plunger head.

4. A riveting machine attachment consisting of a bracket having one end fixed to and movable with the plunger head or follower, a pin fixed at right angles with the opposite end of the bracket, a sleeve turnable upon the pin, an anvil bar and rivet setter carried by the sleeve and turnable into or out of the path of the plunger head, and means for varying the vertical play of the sleeve to accommodate various thicknesses of material.

5. A riveting machine attachment consisting of a bracket having one end fixed to and movable with a plunger head or follower, a pin fixed at right angles with the opposite end of the bracket, a sleeve turnable upon the pin, an anvil bar and rivet setter carried by the sleeve and turnable into or out of the path of the plunger head, a stop by which the movement of the anvil bar and rivet setter is limited, and spacing bars adapted to fit within the loop by the side of the anvil bar to retain the loop in position and insure the alinement of the rivets.

[Claims 6 to 8 not printed in the Gazette.]

1,017,437. WATER-CLOSET. IRA A. MANN, Pittsburgh, Pa. Filed May 31, 1910. Serial No. 564,045. (Cl. 4—22.)



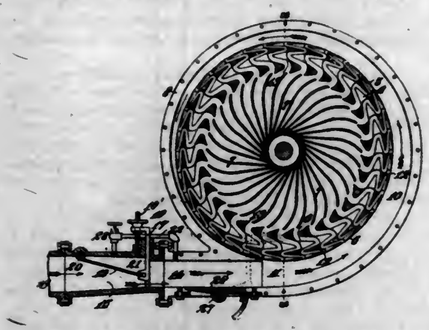
1. In combination in a closet construction, a partition, an upright outlet pipe adjacent the rear thereof, a bowl mounted for relatively free vertical movement upon the front of the partition and provided with the short leg of a siphon leading through the partition and a longer siphon leg connected thereto and rigidly secured to the outlet pipe, whereby the closet is supported by the outlet pipe.

2. In combination in a closet construction, a partition, an upright outlet pipe adjacent the rear thereof, a bowl mounted for relatively free vertical movement upon the front of the partition and a rigid outlet connection between the said bowl and the said outlet pipe, whereby the closet is supported by the outlet pipe.

3. In combination in a closet construction, a partition, an upright outlet pipe adjacent the rear thereof, a bowl bearing against the partition, connections holding the bowl against the partition but permitting vertical sliding movement thereon, and a rigid outlet connection between the said bowl and the said outlet pipe whereby the closet is supported and held by the outlet pipe against downward movement.

4. In combination in a closet construction, a partition, an upright outlet pipe adjacent the rear thereof, a bowl of vitreous material bearing against the partition for relatively free vertical movement and having an outlet through its rear portion, an annular metal member rigidly secured in the bowl surrounding the said outlet, and a rigid metal screw connection between the said annular metal member and the outlet pipe whereby the bowl is supported and carried by the said outlet pipe.

1,017,438. COMPOUND HIGH-PRESSURE TURBINE-WHEEL. THOMAS MCAULEY, Reno, Nev. Filed Feb. 28, 1911. Serial No. 611,321. (Cl. 138—6.)



1. In a fluid pressure turbine, a disk formed on a hub mounted on a drive shaft, said disk having concentric rows of impact buckets formed on the sides thereof, and each of said buckets formed with a shallow curved face and a tapered extension on the rear thereof, and said disk having blades extending from the hub to substantially the innermost row of buckets having inner ends substantially opposite the spaces between said buckets.

2. In a fluid pressure turbine, a disk formed on a hub mounted on a drive shaft, said disk having concentric rows of impact buckets formed on the sides thereof, and said disk having blades extending from the hub to substantially the innermost row of buckets having inner ends substantially opposite the spaces between said bucket, and each of said buckets formed with a shallow curved face and a tapered extension on the rear thereof, said rows of buckets adapted to extend between concentric rows of similarly shaped but oppositely disposed stationary buckets rigidly mounted on a casing, the tapered extensions of the buckets forming the walls of zigzag channels for the passage of fluids.

3. In a fluid pressure turbine, a disk formed on a hub mounted on a drive shaft, said disk having concentric rows of impact buckets formed on the sides thereof, and said disk having blades extending from the hub to substantially the innermost row of buckets having inner ends substantially opposite the spaces between said bucket, and each of said buckets formed with a shallow curved face and a tapered extension on the rear thereof, said rows of buckets adapted to extend between concentric rows of similarly shaped but oppositely disposed stationary buckets rigidly mounted on a casing, the tapered extensions of the buckets forming the walls of zigzag channels for the passage of fluids, and the casing on which said stationary buckets are mounted, said casing disposed eccentric to the disk to form a volute shaped passage around the periphery of the disk.

4. In a fluid pressure turbine, a disk formed on a hub mounted on a drive shaft, said disk having concentric rows of impact buckets formed on the sides thereof, each of said buckets formed with a shallow curved face and a tapered extension on the rear thereof, and a series of blades on said disk arranged tangential to the center thereof, said blades disposed within the inner row of impact buckets and having a straight portion at their inner ends and a curved portion at their outer ends.

5. In a fluid pressure turbine, a disk formed on a hub mounted on a drive shaft, said disk having concentric rows of impact buckets formed on the sides thereof, each of said buckets formed with a shallow curved face and a tapered extension on the rear thereof, a series of blades on said disk arranged tangential to the center thereof, said blades disposed within the inner row of impact buckets and having a straight portion at their inner ends and a curved portion at their outer ends, a casing inclosing said disk, and rows of similarly shaped but oppositely disposed stationary buckets rigidly mounted on said casing, said last named rows of buckets extending between the rows of buckets on the disk.

[Claims 6 and 7 not printed in the Gazette.]

1,017,439. PILE-DRIVING-FOLLOWER ATTACHMENT. MATTHEW T. MCKENNA, San Francisco, Cal. Filed May 4, 1911. Serial No. 624,978. (Cl. 61—37.)

1. A pile driving apparatus, comprising a capping cylinder having a transverse plate adapted to rest upon a pile, and a section telescoping over said cylinder having pile engaging spurs.

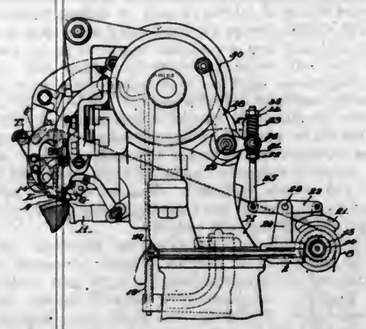
2. An apparatus for driving piles in deep water comprising a follower adapted to rest upon a pile, means upon the follower for sustaining the pile, and means adjustable in opposite directions upon the follower for supporting the sustaining means and causing the latter to engage with and disengage from the pile.

3. In a pile driving apparatus, the combination with a cylinder, adjustable over the top of the pile, of a sleeve concentric with the cylinder and movable relatively thereto, and provided with pile engaging devices adapted to sustain the pile in the cylinder.

4. A pile placing apparatus, including a cylinder adapted to embrace a pile, a sleeve movable over the cylinder, and dogs mounted on the sleeve effecting to sustain the pile in the cylinder.

5. A pile placing apparatus, including a cylinder adapted to embrace a pile, a sleeve movable over the cylinder, dogs mounted on the sleeve effecting to sustain the pile in the cylinder, and means for disengaging the dogs from the pile.

1,017,440. SHOE-SEWING MACHINE. WILLIAM C. MEYER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 4, 1904. Serial No. 231,342. (Cl. 112—20.)



1. A chain-stitch, shoe sewing machine, having, in combination, a needle, a looper, a stitch setting take-up, a constantly acting normal tension, and an intermittently acting supplemental tension operating during the stitch-setting movement of the take-up to increase the tension on the thread, substantially as described.

2. A chain-stitch, shoe sewing machine, having, in combination, a needle, a looper, a stitch-setting take-up, a normally operative tension mechanism for exerting a constant tension upon the thread during the operation of the machine, a supplementary tension mechanism operative during the setting of the stitch, and means for relieving the constant tension to remove and enter the work, substantially as described.

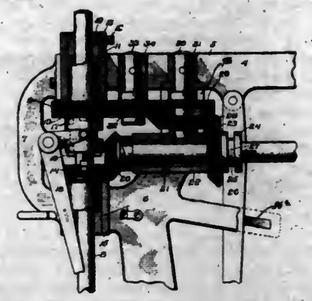
3. A chain-stitch, shoe sewing machine, having, in combination, a needle, a looper, a stitch-setting take-up, a tension mechanism acting to exert tension upon the thread during the retracting stroke of the needle, and a supplementary tension mechanism acting to increase the tension exerted upon the thread during the stitch setting movement of the take-up, substantially as described.

4. A chain-stitch, shoe sewing machine, having, in combination, a needle, a looper, a stitch-setting take-up, a tension device operating to exert a uniform and relatively light tension upon the thread during the retracting stroke of the needle and an increased tension during the setting of the stitch, and means for adjusting the tension device to vary the amount of increase in the tension without affecting the uniform and relatively light tension exerted thereby on the thread during the retracting stroke of the needle, substantially as described.

1,017,441. GEARING. ROBERT MILNE, Rockford, Ill., assignor to Rockford Drilling Machine Company, Rockford, Ill., a Corporation of Illinois. Filed Jan. 3, 1911. Serial No. 600,552. (Cl. 74—59.)

1. In a device of the class described, the combination of a driving shaft, a drill spindle, an advancing gear, and a reversing gear, loosely mounted on said spindle, a gear fixed on the driving shaft meshing with the advancing gear, clutch mechanism for connecting the advancing and reversing gears with the spindle, a train of gearing extending from the reversing gear and lying to one side and longitudinally of said driving shaft, and a gear on the main driving shaft and meshing with one gear of the train of gears, substantially as described.

2. In a device of the class described, the combination of a driving shaft, a drill spindle, an advancing gear and a reversing gear, loosely mounted on said spindle, a gear fixed on the driving shaft meshing with the advancing gear, clutch mechanism for connecting the advancing and reversing gears with the spindle, a train of gearing extending from the reversing gear and lying to one side and longitudinally of said driving shaft, a gear sliding on the main driving shaft meshing with one gear of said train of gears, and a swinging lever secured to the drill press frame for shifting said slidable gear, substantially as described.



3. In a device of the class described, the combination of a frame, a main driving shaft, a drill spindle, an advancing gear and a reversing gear loosely mounted on said spindle, clutch mechanism for connecting the advancing and reversing gears with the spindle, a gear fixed on the main driving shaft meshing with the advancing gear, a train of gearing extending from the reversing gear and lying to one side and longitudinally of said driving shaft, a gear on the main driving shaft meshing with one of said gears of the train of gears, and having a grooved collar thereon, a rail secured to the frame, a lever pivoted to the rail, and a pin on the lever entering into the groove of the collar, substantially as described.

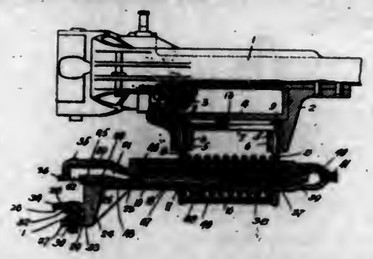
4. In a device of the class described, the combination of a frame, a main driving shaft, a drill spindle, an advancing gear loosely mounted on the spindle, a reversing gear on the spindle, clutch mechanism for connecting the advancing gear and the reversing gear with the drill spindle, a rail attached to the frame lying to one side and longitudinally of said driving shaft, a plurality of stub shafts fixedly mounted on said rail, a spur gear mounted on one of said stub shafts and meshing with the reversing gear, a spur gear on another of said stub shafts meshing with the first mentioned spur gear, a bevel gear secured to the second mentioned spur gear, and a bevel gear splined to the main driving shaft and meshing with said bevel gear on the spur gear, substantially as described.

5. In a device of the class described, the combination of a main driving shaft, a drill spindle, an advancing gear loosely mounted on the spindle, a reversing gear loosely mounted on the spindle, clutch mechanism for connecting the advancing gear and the reversing gear with the drill spindle, a rail attached to the body of the frame lying to one side of and parallel to said driving shaft, a plurality of stub shafts fixedly mounted on said rail, a spur gear mounted on one of said stub shafts and meshing with said reversing gear, a spur gear on another of said stub shafts meshing with the first mentioned spur gear, a bevel gear connected to the second mentioned spur gear, a bevel gear splined to the main driving shaft and meshing with the bevel gear attached to said spur gear, and a lever pivoted to said rail for shifting said splined bevel gear on the driving shaft, substantially as described.

1,017,442. AUTOMATIC AIR-BRAKE COUPLING. ROBERT J. MITCHELL, Marion, Ohio. Filed July 15, 1911. Serial No. 638,638. (Cl. 188—13.)

1. In an automatic air brake coupling, brackets, hangers movably supported by said brackets, a tubular body movably mounted on said hangers, a coupling head carried by said body and in communication therewith, a normally closed valve arranged in said body, a stem carried by said valve an extending to said coupling head adapted to be actuated by another coupling head to open

said valve, and means, including a cam lever carried by said brackets and adapted to adjust said hangers to correctly position said coupling head.

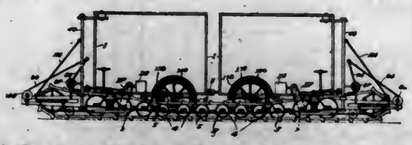


2. In an automatic air brake coupling, brackets, hangers movably supported by said brackets, a tubular body movably supported by said hangers, a coupling head carried by said body and in communication therewith, a valve adapted to control the communication between said head and said body, means arranged in said body and adapted to normally maintain said valve closed, means arranged in said coupling head and adapted to be actuated by another head to open said valve, means including socket members carried by said coupling head and adapted to maintain another head in engagement therewith, and means encircling said body and adapted to normally maintain said body in the forward position.

3. In an automatic air brake coupling, brackets capable of being suspended from a car, hangers movably supported by said bracket, a tubular body movably mounted in said hangers and communicating with a train pipe, a coupling head carried by said body and in communication therewith, a valve for controlling communication between said head and body and provided with a stem projecting in said coupling head and capable of being shifted and maintained in shifted position by an opposing coupling head, thereby establishing communication between its respective tubular body and coupling head, and means carried by said bracket for adjusting the hanger to operative position with respect to said first mentioned coupling head.

4. In an automatic air brake coupling, brackets capable of being suspended from a car, hangers movably supported by said bracket, a tubular body movably mounted in said hangers and communicating with a train pipe, a coupling head carried by said body and in communication therewith, a valve for controlling communication between said head and body and provided with a stem projecting in said coupling head and capable of being shifted and maintained in shifted position by an opposing coupling head, thereby establishing communication between its respective tubular body and coupling head, means carried by said bracket for adjusting the hanger to operative position with respect to said first mentioned coupling head, and means for normally maintaining said body in engagement with said hangers.

1,017,443. ENDLESS TRACKS MOUNTED ON WHEELED CARRIERS. PHILIPPE MONTSARRÉ, Fresno, Cal. Filed Dec. 5, 1910. Serial No. 595,741. (Cl. 21—114.)



1. In an apparatus of the class described, the combination of carriers or cars, a plurality of wheels longitudinally arranged with respect to said cars, flexible track sections for said wheels, means for balancing said cars transversely, means for supporting said track sections, resilient means for actuating said supporting means so as to take up the slack in said track sections, and means for picking up and laying down the track as the apparatus advances.

2. In a mechanism of the class described, the combination of carriers or cars having a pair of longitudinally arranged series of wheels, a pair of endless flexible rails for said wheels, means for supporting said rails, resilient means for said last mentioned means so as to keep the same taut and to permit them to expand and contract in a longitudinal direction, and means for supporting and balancing said cars transversely.

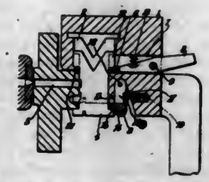
3. In a mechanism of the class described, the combination of a pair of parallel flexible endless rails, a carrier having wheeled trucks arranged to travel on said rails, laterally swinging frames at the ends of the mechanism, and wheels resiliently mounted on said swinging frames for supporting the looped portions of the rails and means for balancing said carrier.

4. In a machine of the character described, the combination of a pair of parallel flexibly connected endless rails, laterally swinging frames at the end portions of said machine, longitudinally movable slides in said frames, wheels carried by said slides and engaged with the looped portions of the rails, and means for resiliently forcing said slides outwardly at the end portions of the machine.

5. In a machine of the character described, the combination of endless rails, wheeled carriers arranged to travel on said rails, laterally swinging frames disposed on said carriers and arranged to engage with the looped portions of said rails, longitudinally movable slides on said frames, drum wheels carried by said slides for guiding said rails on said frames and track guiding means controlled by said slides.

[Claims 6 to 22 not printed in the Gazette.]

1,017,444. MEANS FOR LEVELING MULTIPLE-FACE MATRICES IN LINE-CASTING MACHINES. CARL MUEHLEISEN and CHRISTIAN AUGUSTUS ALBRECHT, Berlin, Germany, assignors to Mergenthaler Linotype Company, New York, N. Y. Filed Apr. 5, 1910. Serial No. 553,564. (Cl. 199—7.)



1. In a line casting machine, the combination of matrices adapted to stand at a plurality of levels, a movable member for supporting them, a member distinct from said supporting member for shifting matrices to a different level, and a single means for actuating said shifting member and for moving the supporting member out of its normal position.

2. In a line casting machine, the combination of matrices adapted to stand at a plurality of levels, a movable member for supporting them, a member distinct from said supporting member for shifting matrices to a different level, and a single means for positively actuating said shifting member and for moving the supporting member out of the path of the matrices.

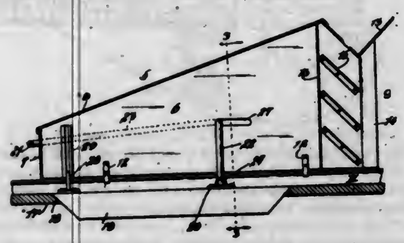
3. In a line casting machine, the combination of matrices and a movable device for supporting them, with matrix leveling means acting through the matrices to move the supporting device out of their path.

4. In a line casting machine, the combination of matrices adapted to stand at a plurality of levels, a movable member for supporting them, and a matrix leveling member distinct from said supporting member but adapted also to cause the movement of the supporting member out of the path of the matrices.

5. In a line casting machine, the combination of matrices adapted to stand at a plurality of levels, a movable member for supporting them, and a matrix shifting member distinct from said supporting member, the whole so arranged that said matrices are shifted from one level to another and the supporting member is moved out of their path.

[Claims 6 to 16 not printed in the Gazette.]

1,017,445. VENTILATOR FOR REFRIGERATOR-CARS. DANIEL C. MULVIHILL, Chicago, Ill., assignor to American Car & Foundry Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 5, 1909. Serial No. 521,118. (Cl. 62—12.)



1. In a device of the class described, the combination of a car body having a ventilating opening formed therein, a cover for said opening, a housing surrounding said opening and having a mouth formed therein for the admission of air, an operating arm entered through said housing and attached to said cover, for raising and lowering said cover to open and close the ventilator, and a track-way secured to the car body, upon which the housing is slidably mounted substantially as described.

2. In a device of the class described, the combination of a car body having a downwardly tapered ventilating opening formed in the roof thereof, a cover for said opening having a corresponding downwardly extending taper, a housing surrounding said opening and having a mouth formed therein for the admission of air, an operating arm consisting of a portion lying outside of the housing, a portion formed at substantially right angles thereto lying inside of the housing and connected to said cover, and guide members attached to one end of said cover and operating in guideways secured to the side walls of the housing, substantially as described.

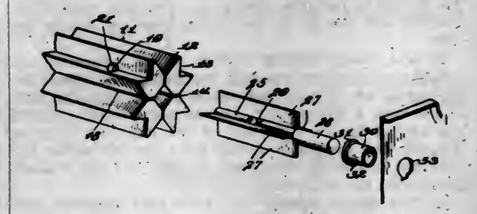
3. In a device of the class described, the combination of a car body having a downwardly tapered ventilating opening formed in the roof thereof, a cover for said opening having a corresponding downwardly extending taper, a housing surrounding said opening and having a mouth formed therein for the admission of air, an operating arm consisting of a portion lying outside of the housing, a portion formed at substantially right angles thereto lying inside of the housing and connected to said cover, guide members attached to one end of said cover and operating in guideways secured to the side walls of the housing, and horizontally extending slots formed in the side walls of the housing to permit of horizontal movement of the operating arm in the raising and lowering of the cover, substantially as described.

4. In a device of the class described, the combination of a car body having a downwardly tapered opening formed in the roof thereof, said opening serving to permit of the entrance of either air or ice into the interior of the car body, a cover for said opening having a corresponding downwardly extending taper, a housing surrounding said opening and having a mouth formed therein for the admission of air, an operating arm entered through said housing and attached to said cover, for raising and lowering said cover to open and close the opening, and a track-way upon which said housing travels when the removal of the housing is necessary in order to permit ice to be entered through the opening into the refrigerating chamber, substantially as described.

5. In a device of the class described, the combination of a car body having a downwardly tapered opening formed in the roof thereof, said opening serving to permit of the entrance of either air or ice into the interior of the car body, a cover for said opening having a corresponding downwardly extending taper, a housing surrounding said opening and having a mouth formed therein for the admission of air, an operating arm entered through said housing and attached to said cover, for raising and lowering said cover to open and close the opening, a track-way upon which said housing travels when the removal of the housing is necessary in order to permit ice to be entered through the opening into the refrigerating chamber, the lower end of the side walls of said housing having flanges which rest upon said track-way and support the housing thereon, and flanged members secured to the inside face of the side walls of the housing and contacting the trackway, the flanges and the flanged members gripping the rail of the trackway and holding the housing firmly in place thereon, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,017,446. COTTON-FEEDER. STEPHEN D. MURRAY, Dallas, Tex. Filed Mar. 10, 1910. Serial No. 548,365. (Cl. 13—12.)



1. A feed roller for a cotton feeder composed of a plurality of grooved slats having intermediate means for continuously holding the said slats in fixed associated relation, means for separably securing the opposite extremities of the slats, the said opposite extremities of the slats being releasable to permit the same to flare outwardly with relation to each other, and spindles telescopically mounted in the opposite extremities of the slats.

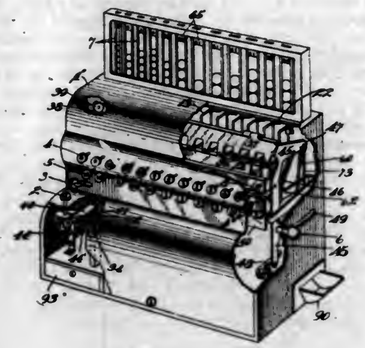
2. A feed roller for a cotton feeder composed of a plurality of grooved slats positively secured at their intermediate portions, means for separably securing the opposite extremities of the slats, and spindles telescopically mounted in the opposite extremities of the slats.

3. A feed roller for a cotton feeder composed of a plurality of grooved slats positively secured at their intermediate portions, means for separably securing the opposite extremities of the slats, and spindles telescopically mounted in the opposite extremities of the slats and provided with radial blades movably disposed between the slats.

4. A feed roller for a cotton feeder composed of a plurality of slats positively secured at their intermediate portions, means for separably securing the opposite extremities of the slats and disposed in planes at right angles to each other and engaging opposing slats, and spindles telescopically mounted in the opposite extremities of the slats and having openings therein for the said securing means.

5. A feed roller for a cotton feeder composed of a plurality of slats positively secured at their intermediate portions, means for separably securing the opposite extremities of the slats and disposed in planes at right angles to each other and engaging opposing slats, and spindles telescopically mounted in the opposite extremities of the slats and having openings therein for the said securing means and also provided with radial blades movably disposed between the slats.

1,017,447. AUTOMATIC CHANGE-MAKING MACHINE. FREDERICK L. NAY, Vacaville, Cal. Filed Nov. 28, 1910. Serial No. 594,470. (Cl. 133—2.)



1. In a change making machine, a coin magazine, and means for delivering the coin therefrom, said means including a lever having one end interposable in the path of the coin, a horizontally disposed transversely rockable pin carried by the other end of the lever, and an actuator alinable with the pin to operate the lever and release the coin.

2. In a change making machine, a coin magazine, and means for delivering the coin therefrom, said means including a lever having one end interposable in the path of the coin, a horizontally disposed transversely rockable pin carried by the other end of the lever, an actuator alinable with the pin to operate the lever and release the coin, and means for moving said pin into and out of alinement with the actuator.

3. In a change making machine, a coin magazine, and means for delivering the coin therefrom, said means including a lever having one end interposable in the path of the coin, a horizontally disposed transversely rockable pin carried by the other end of the lever, an actuator alinable with the pin to operate the lever and release the coin, and means including a push-key for moving said pin out of alinement with said actuator.

4. In a change making machine, a coin magazine, and means to control the delivery of the coin from the magazine, said means including a lever, a horizontally disposed transversely rockable and longitudinally movable member on the lever, and an actuator alinable with said rockable-member.

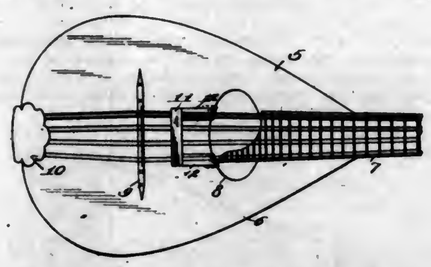
5. In a change making machine, a coin magazine and means for controlling the delivery of coin therefrom said means including two levers, one of which has a part interposed in the range of action of the other whereby one lever is operable by the other, said levers having rearwardly acting valve members, and means including a transversely rockable push pin carried by one lever, for operating said levers.

[Claims 6 to 47 not printed in the Gazette.]

1,017,448. FINGER-SUPPORT FOR STRINGED INSTRUMENTS. WILLIAM H. S. NELSON, Capon Springs, W. Va. Filed Mar. 4, 1910. Serial No. 547,318. (Cl. 84—115.)

1. The combination with a musical stringed instrument of the mandolin type having a sound opening, of a support extending transversely over all of the strings of the instrument and having a straight flat surface parallel with the strings with which one or more fingers of the hand holding the plectum movably engage, the support having terminal attaching means detachably engaging a part of the body of the instrument, the strings of the instrument being exposed both in front and in rear of the support and the latter being out of contact with all of the strings.

2. The combination with a musical stringed instrument of the mandolin type, of a flat support extending transversely over and parallel to and out of contact with all of the strings and having terminal attaching means detachably engaging a portion of the body of the instrument and shiftable from one position to another on the instrument body.

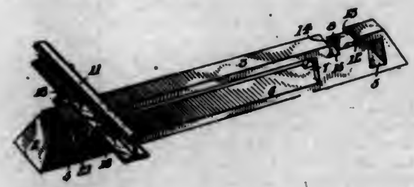


3. The combination with a musical stringed instrument of the mandolin type and having a sound opening, of a flat support detachably held on the body of the instrument and extending over and parallel with all of the strings of the instrument and freely movable to different positions on the instrument body and serving to maintain one or more fingers of the hand holding the plectrum in proper position to produce tremolo effects.

4. The combination with a musical stringed instrument of the mandolin type, of a plurality of separated supports extending transversely over all of the strings and resting on the body of the instrument to be engaged by one or more fingers of the hand holding the plectum during various movements in playing the strings, the said supports being parallel and out of contact with the strings and the one support being in advance of the other so that a different volume and quality of tones may be obtained by the performer changing the position of the hand from one support to another.

5. The combination with a musical stringed instrument of the mandolin type having a sound hole, of supports extending transversely over and out of contact with all of the strings, said supports being located at different places along the length of the strings for movable engagement by a portion of the fingers of the hand of the performer to produce uniformity of movement of the fingers and regularity of depression of the plectrum and to obtain variations in volume and quality of tones by changing the position of the hand from one support to another.

1,017,449. METALLIC TIE AND RAIL-FASTENER. WILLIAM C. NETH, Connellsville, Pa. Filed Oct. 18. 1911. Serial No. 655,303. (Cl. 238—5.)



A metallic tie and rail fastener comprising an oblong body having inclined sides and ends, said body further having transverse openings at each end, a longitudinally extending opening, and longitudinally extending passages communicating with the longitudinal opening and with the transverse opeing, the top of said body formed with rail seats, certain of the walls of said seats overhanging the flanges of the rails and constituting fasteners.

1,017,450. BLOWPIPE-CARRIER. GEORGE NEVERGOLD, Jeannette, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 26, 1910. Serial No. 557,792. (Cl. 57—15.)

1. A carrier for glass working blow-pipes, comprising a hook adapted to be inserted in an axial hole in the heavy end of the pipe and another hook to embrace the stem, whereby the inclined position of the pipe retains the hold and enables the pipe to be moved without touching with the hands.

2. A carrier for glass working blow-pipes, comprising a member having an upturned hook at one end to fit within the lower portion of a blow-pipe, a laterally turned hook at its other end to embrace the stem of the blow-pipe, and a hand-hold or grip intermediate of the hooks; substantially as described.

3. A carrier for glass working blow-pipes, comprising a rod having a grasping portion for the hand, a laterally bent hook to engage the stem of the pipe, and a longitudinally bent hook adapted to enter in a generally axial direction the hollow end of the pipe, substantially as described.

4. A carrier for glass working blow-pipes, comprising a member having an upturned hook at one end to fit within the axial opening in the lower portion of a blow-pipe, a laterally turned hook at its other end to embrace the stem of the blow-pipe, and a hand-hold or grip intermediate of the hooks, the portion of the member between the hooks being of a length less than the distance between the lower end of the blow-pipe and the point where the latter engages its support; substantially as described.

1,017,451. CAN-NOZZLE. EDWIN NORTON, Paget, Bermuda, and BERNARD H. LARKIN, Chicago, Ill., assignors, by direct and mesne assignments, to Continental Can Company, Baltimore, Md., a Corporation of New Jersey. Filed May 12, 1911. Serial No. 626,870. (Cl. 220—77.)

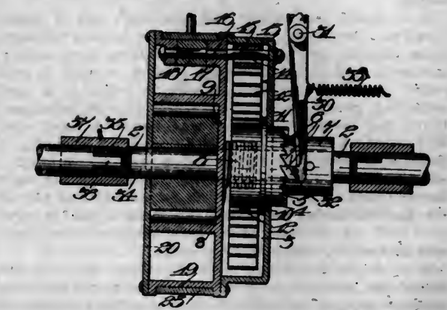
A metal receptacle including in combination, a body portion having an opening, the metal adjacent said opening being bent to form a seating shoulder, and an outwardly projecting flange, an inner closure having a downwardly projecting wall for frictionally engaging the body portion of the receptacle, said inner closure having a projecting ledge adapted to rest on said seating shoulder, a cover hinged at one side to said flange and adapted to seat thereon, means for holding the cover closed, means for securing a gasket to said cover, whereby said gasket seats against the flange on the body portion when said cover is closed.

1,017,452. WINDOW-SHADE ADJUSTER. HARRY OGLESBY, Chester, Pa. Filed Mar. 24, 1911. Serial No. 616,761. (Cl. 156—7.)

1. In a window shade adjuster, T-shaped rails to be located at the sides of the window; lugs located in line of the rails; shade-hanging brackets slidably mounted on the rails; a rod having spot-holes in it, secured to each bracket and fitted to slide through one of the said lugs; a box secured upon each rod; a latch and a spring therefor mounted in each box and adapted to engage one of the said lugs; a stop-guide slidably mounted on each rail and adjustable along one of the said rods; and a binding-screw in each stop-guide, adapted to engage any one of the spot-holes therein, the same lug being engaged by the said latch to hold the shade in its normal position, and by the said stop-guide to hold the shade when lowered.

2. In a window shade adjuster, rails to be located at the sides of the window; a lug to be located in line of each rail; a shade-hanging bracket mounted to slide on each rail and provided with a rod which extends through the said lug; a spring latch mounted on the end of the rod and adapted to engage one of the said lugs; and a stop-guide to engage the same lug slidably mounted on a rail and the adjacent rod, and means for securing this stop-guide at definite points upon the rod, substantially as shown and described.

1,017,453. GAS-ENGINE STARTER. JOHN J. O'LEARY, Healdsburg, Cal. Filed Feb. 25, 1911. Serial No. 610,839. (Cl. 123—187.)



1. The combination of a driven shaft, a clutch hub keyed upon said shaft, a flanged disk adapted to drive said hub in one direction, friction rollers interposed between the periphery of said hub and the inner surface of the flange of the disk, a casing removably attached to the flanged side of the disk, a housing secured to the other side of said disk, a spring inclosed in said housing, a pin supported adjacent the periphery of the housing and to which one end of said spring is connected, a collar having radial teeth upon one of its faces slidably mounted upon said shaft and projecting inwardly into the aforesaid housing and having attached the other end of the spring, a complementary clutch member secured upon the shaft, having teeth adapted to engage with the teeth of said collar, a lever adapted to engage and restrain the collar, and a spring bearing against one side of the flanged disk and normally effective to thrust the toothed collar into engagement with the clutch member, and means for restraining the housing during the winding of the main spring.

2. The combination of a driven shaft, a clutch hub keyed upon said shaft, a flanged disk adapted to drive said hub in one direction, friction rollers interposed between the periphery of said hub and the inner surface of the flange of the disk, a casing removably attached to

the flanged side of the disk, a housing secured to the other side of said disk, a spring inclosed in said housing, a pin supported adjacent the periphery of the housing and to which one end of said spring is connected, a collar having radial teeth upon one of its faces slidably mounted upon said shaft and projecting inwardly into the aforesaid housing and having attached the other end of the spring, a restraining lever engageable with the collar, a complementary clutch member secured upon the shaft, having teeth adapted to engage with the teeth of said collar, a spring bearing against one side of the flanged disk and normally effective to thrust the toothed collar into engagement with the clutch member, means for restraining the housing while the main spring is being wound, and means for disengaging the slidable clutch collar.

3. The combination of a driven shaft, a clutch hub keyed upon said shaft, a flanged disk adapted to drive said hub in one direction, friction rollers interposed between the periphery of said hub and the inner surface of the flange of the disk, a casing removably attached to the flanged side of the disk, a housing secured to the other side of said disk, a brake operative upon said housing, a spring inclosed in said housing, a pin supported adjacent the periphery of the housing and to which one end of said spring is connected, a collar having radial teeth upon one of its faces slidably mounted upon said shaft and projecting inwardly into the aforesaid housing and having attached the other end of the spring, a complementary clutch member secured upon the shaft, having teeth adapted to engage with the teeth of said collar, a spring bearing against one side of the flanged disk and normally effective to thrust the toothed collar into engagement with the clutch member, and means for disengaging the slidable clutch collar, said means including a lever having projections adapted to engage the teeth of said collar to prevent its rotation when disengaged from its complementary clutch.

4. A device comprising a driven shaft and a power conserving instrumentality comprising a toothed shiftable collar slidable upon said shaft, a restraining lever engageable with said collar, a flexible member secured to said collar, a housing for said member to which it is also connected, means for imparting power to said instrumentality, said means including a toothed member fixed upon said driving shaft coöperative with the shiftable collar, a brake operative upon the housing, and an automatic releasing device connected to said flexible member, said device comprising a rockable pin secured to one end of the flexible member and carrying a tiltable pawl engageable with an abutment and releasable therefrom when said member is sufficiently tensioned.

5. A device comprising a driven shaft and a power conserving instrumentality comprising a toothed shiftable collar loose upon said shaft, a flexible member secured to said collar, and a housing for said member to which it is also connected, means for imparting power to said instrumentality, said means including a toothed member fixed upon said driving shaft coöperative with the shiftable collar, means whereby the stored energy of the flexible member may be transmitted to initially turn the shaft from a position of rest and an automatic releasing device connected to said flexible member, said device comprising a rockable pin secured to one end of the flexible member and carrying a tiltable pawl engageable with an abutment and releasable therefrom when said member is sufficiently tensioned.

[Claims 6 to 8 not printed in the Gazette.]

1,017,454. COIN-COLLECTOR. PAUL E. OSWALD, Los Angeles, Cal., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Original application filed Mar. 7, 1905, Serial No. 248,908. Divided and this application filed May 14, 1906. Serial No. 316,692. (Cl. 194—102.)

1. The combination with a toll box, of a coin chute therefor, said chute near its mouth extending in a substantially horizontal direction, the horizontal portion of said chute being laterally inclined and open on one side, a guide adapted to support the top of a coin of predetermined size to direct the same along the floor of the chute and into the box, a refund chute having its mouth adjacent the opening in said laterally inclined portion of the coin chute, a coin of less than the predetermined size rolling off said floor through said opening, a stop against which such coin strikes, and a guide along which said coin moves into the refund chute.

2. In a toll box, the combination with a coin chute, said chute near its mouth being laterally inclined, one side of the inclined portion of said chute being cut away to form an opening through which undersized coins may roll, said chute having a downwardly projecting flange along the upper side thereof where said opening is formed, of a refund tray, a chute communicating therewith, a guide in front of said opening adapted to divert coins into said chute, and a stop between said guide and the wall of the main chute; whereby a proper coin passes through the main chute and into the interior of the box, being held in the chute by said flange, but a coin of less than the proper size rolls into engagement with said stop and is directed by the guide into the refund chute.

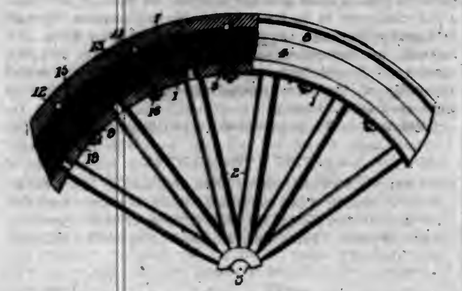
3. In a toll box, a coin chute having a laterally inclined portion near the entrance thereto, said inclined portion having its lowermost wall bent outwardly to form an opening in the side of the chute, and having the lower end of said wall bent inwardly to form a stop, said chute about said opening being provided with a flange at the top and a ledge at the bottom thereof, and a refund chute having a mouth communicating with said ledge below said opening.

1,017,455. DRIP-PAN. ALBERT A. OTTO, Pittsburgh, Pa., assignor of one-half to Edward C. Miller, Pittsburgh, Pa. Filed May 19, 1911. Serial No. 628,221. (Cl. 141—11.)

1. A drip pan comprising an open top receptacle, a shell having a contracted lower portion extending into and seated upon the top of said receptacle, a perforated plate formed integral with the bottom of said shell and of a width approximately half the length of the shell, a vertically disposed wall integral with and forming in connection with said plate and shell a compartment, and a downwardly inclined member extending from the top of said wall, through said shell and into said receptacle to one end of the latter and forming in connection with the receptacle and shell a compartment.

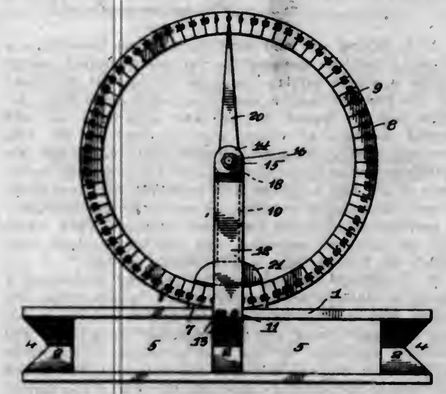
2. A drip pan comprising an open top receptacle, a shell having a contracted lower portion extending into and seated upon the top of said receptacle, a perforated plate formed integral with the bottom of said shell and of a width approximately half the length of the shell, a vertically disposed imperforate wall integral with and forming in connection with said plate and shell a compartment, and a downwardly inclined member extending from the top of said wall, through said shell and into said receptacle to one end of the latter and forming in connection with the receptacle and shell a compartment, said member engaging the side walls of the shell and having a transverse row of perforations in proximity to its lower end.

1,017,456. TIRE. WILLIAM PAVLIK, Bayport, N. Y. Filed Sept. 22, 1911. Serial No. 650,718. (Cl. 152—36.)



A tire comprising a concave rim, an annular yieldable block mounted upon said rim, a convexo-concave tire mounted upon said block, socket members carried by the inner side of said tire and abutting against said block, bolts extending through said rim and said block into said socket members, said block snugly engaging said bolts heads carried by said bolts and movably arranged in said socket members, nuts screwed upon the inner ends of said bolts for retaining said bolts in engagement with said rim, and coiled compression spring embedded in said block and encircling said bolts between said socket members and said rim.

1,017,457. LEVEL. JOSEPH F. PERLIK, Pittsburgh, Pa. Filed Apr. 21, 1911. Serial No. 622,532. (Cl. 73—71.)



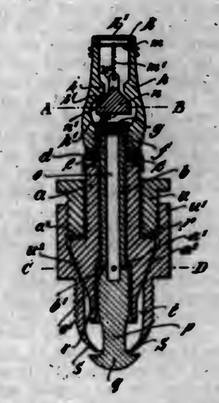
A level comprising an oblong body having its bottom, its sides and each of its ends provided with V-shaped grooves whereby said body can be mounted at its ends, sides and bottom upon inclined surfaces and against sharp edges and corners, a ring secured to the top of said body and having the sides thereof graduated, uprights carried by said body, and an indicator having one end thereof weighted and the opposite end opposing said graduations upon both sides of said ring.

1,017,458. LINK-GUARD. SHERIDAN SMITH PIPER, Spalding, Idaho. Filed Mar. 4, 1911. Serial No. 612,183. (Cl. 24—240.)

An approximately circular link having an opening and a closure therefor, and a spring secured at one end to the inner surface of the link adjacent to the opening therein and extended on a curved line thence across the link and normally contacting at its free end with the opposite side of the link, the convex surface of the spring being on the side thereof toward the opening of the link and the curvature or bow of the spring conforming as to direction, generally, to that portion of the link facing the convex side of the spring whereby the latter may, under stress, be pushed back to coincide with and bear against

the inner side of such portion of the link and overlie the opening therein, substantially as set forth.

1,017,459. ELECTRIC SPARK-PLUG FOR COMBUSTION-ENGINES. LEOPOLD PODSZUS, Charlottenburg, Germany. Filed Nov. 23, 1910. Serial No. 593,951. (Cl. 123—169.)



1. In a spark plug, an electrode having an opening therein, non-radial holes in communication with said opening, and means for admitting air through said opening and said holes for causing a rotary circulation of air around the electrode.

2. In a spark plug, an electrode having a hollow therein and having a valve closure thereon and having non-radial holes therein communicating with said hollow, and means for admitting air through said holes for causing a rotary circulation of air around the electrode.

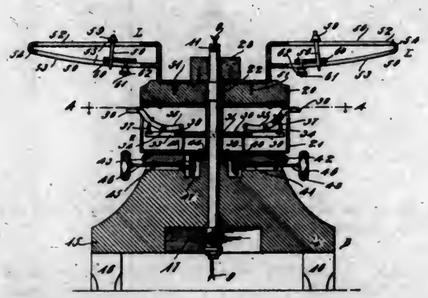
3. In a spark plug, an electrode having a concaved ignition dish and having a conical shoulder thereon, an annular electrode surrounding the first said electrode and coöperatively connected therewith by means of an insulating member having a seat for receiving the said shoulder, and means for causing a rotary circulation of air between said electrodes.

4. In a spark plug, a hollow electrode having holes communicating with the hollow therein, a spring for retaining said electrode in its normal position, a reciprocable closure member adjacent to the end of said hollow electrode for partially sealing the hollow therein, and an annular electrode coöperatively connected with said hollow electrode.

5. In a spark plug, a hollow electrode having holes communicating with the hollow thereof, a valve cap secured on an end of said electrode by means of an adjusting nut having recesses in an end thereof, a reciprocable closure member held in its normal position in the valve cap by resilient means and adapted to be moved by air pressure against the resistance of said resilient means, and means for admitting air forcefully through said valve cap in one direction and for preventing the passage of air or gas therethrough in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,017,460. ALBUM BOOK-STAND. GIUSEPPE POLVERINO, New York, N. Y. Filed Oct. 5, 1911. Serial No. 653,031. (Cl. 45—60.)



1. In a book stand, the combination with a series of book holders, a hollow block on which they are supported, and a central upright within the block, the bottom of the latter having a series of holes around the upright; of a base upon which the block is rotatably mounted, its top having a series of holes concentric with those in the bottom of the block, a plate supported by said standard so as to rock thereon, a plurality of arms projecting radially from said plate, and on each arm a spring-actuated catch having at one end a pin adapted to engage said holes when they register and at its other end a thumb piece projecting to the exterior of the block, for the purpose set forth.

2. In a book stand, the combination with a plurality of book holders, a block upon which they are supported, and a base upon which the block is rotatably mounted; of the gear wheel secured to said block, a shaft journaled in the base, a gear wheel fast on the inner end of the shaft and meshing with that on the block, a knob at the outer end of the shaft, a plate carried by the block and having holes, and a series of catches carried by the block each having a pin adapted to engage the holes in said plate and a projecting thumb piece for the purpose set forth.

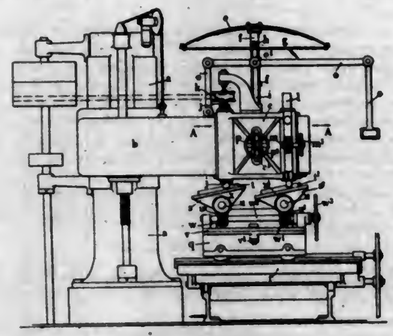
3. In a book stand, the combination with a series of book holders, a hollow block on which they are supported, and a base on which the block is rotatably mounted; of rotating mechanism between said block and base comprising means for permitting the manual rotation of the block, the bottom of the latter and the top of the base having a series of holes adapted to register, and a plurality of spring-actuated catches disposed within the hollow body of the block and each having a pin adapted to engage said holes when they register and a thumb piece projecting to the exterior of the block, for the purpose set forth.

4. In a book stand, the combination with a series of book-holders, a block on which they are mounted, a hollow casing within the block, an upright tube through the casing, the latter having a series of holes in its bottom, a base whose top plate has a series of holes adapted to register with those just mentioned, and an upright through the center of said base and passing loosely through said tube; of means in its base for rotating the block by hand, a plate within said casing having a hole loosely surrounding said tube and pivoted at opposite sides thereto, arms projecting oppositely from said plate at right angles to its pivot, and on each arm a spring catch having at one end a pin adapted to engage said holes when they register, and a projecting thumb piece for the purpose set forth.

5. In a book stand, the combination with a series of book holders, a block on which they are mounted, a hollow casing within the block, an upright tube through the casing, the latter having a series of holes in its bottom, a base whose top plate has a series of holes adapted to register with those just mentioned, and an upright through the center of said base and passing loosely through said tube; of means in its base for rotating the block by hand, a plate within said casing having a hole loosely surrounding said tube and pivoted at opposite sides thereto, arms projecting radially from said plate at right angles to its pivots and each having a perforation, an ear on each arm, a lever pivoted between its ends to said ear, a pin connected to its inner extremity and passing through said perforation and adapted to engage said holes when they register, an expansive spring between the arm and the outer end of said lever, and a thumb piece at the outer extremity of the lever projecting through a slot in the outer wall of the casing.

[Claims 6 to 10 not printed in the Gazette.]

1,017,461. CUTTING-OUT AND MOLDING MACHINE. ERNEST LOUIS POURTAUBORDE, Paris, France, assignor to Société des Onyx du Sidi-Hamza et des Pyrénées, Paris, France. Filed Feb. 23, 1907. Serial No. 359,010. (Cl. 159—3.)



1. A cutting out and molding machine comprising a frame, a carriage mounted for vertical movement on the frame, a second carriage mounted for vertical movement on the first carriage, a spring connecting the first carriage and the second carriage and supporting the said second carriage, an elbow lever mounted on the first carriage, having one arm connected with the second carriage, horizontal supports for the work and for the model, each of the said supports being provided with trunnions, a bed plate having bearings for receiving the trunnions, a carriage mounted for transverse movement upon which the bed plate is supported, and another carriage upon which the first carriage is transversely movable.

2. A cutting out and molding machine comprising a frame, a carriage mounted for vertical movement on the frame, said carriage having wedge-shaped grooves, a second carriage having ribs for engaging the grooves and movable vertically on the first carriage, a laminated spring connecting the carriages and supporting the second carriage, a cord or wire connecting the ends of the spring, a rod on the second carriage, a pulley connected with the rod and engaging the cord, vertical arbors in the second carriage, an elbow lever mounted on the first carriage, having one arm connected with the second carriage, horizontal supports for the work and for the model, a bed plate upon which the supports are mounted, a carriage upon which the bed plate is mounted, and another carriage mounted for longitudinal movement on the frame, the carriage carrying the bed plate being transversely movable on the last-named carriage.

3. A cutting out and molding machine comprising a frame, a carriage mounted for vertical movement on the frame, a second carriage mounted for vertical movement on the first carriage, a spring connecting the carriages and supporting the second carriage, said second carriage having vertical arbors, one of the arbors being adapted to carry a tool, a guiding point carried by the second arbor, said second arbor having a rack, a pinion engaging the rack, an elbow lever mounted on the first carriage, and having one arm connected with the second carriage, supports for the work and for the model, a bed plate upon which the supports are mounted, a carriage upon which the bed plate is mounted, and another carriage movable longitudinally on the frame, the carriage carrying the bed plate being mounted for transverse movement on the last-named carriage.

4. A cutting out and molding machine comprising a frame, a carriage mounted for vertical movement on the frame, a second carriage mounted for vertical movement on the first carriage, said second carriage having vertical arbors, an elbow lever mounted on the first carriage and having one arm connected with the second carriage, supports for the work and for the model, each support being provided with trunnions, a bed plate having bearings for the trunnions, pinions on the supports, parallel endless screws engaging the pinions for actuating the same to simultaneously move the said pinions, a carriage upon which the bed plate is mounted for transverse movement, and another carriage on the frame upon which the carriage carrying the bed plate is mounted for transverse movement.

5. A cutting out and molding machine comprising a frame, a carriage mounted for vertical movement on the frame, a second carriage mounted for vertical movement on the first carriage, a spring connecting the carriages and supporting the second carriage, said second carriage having vertical arbors, an elbow lever mounted on the first carriage and having one arm connected with the second carriage, horizontal supports for the work and for the model, each of the said supports being provided with trunnions, a bed plate having bearings for receiving the trunnions, a vertical shaft on which the bed plate is mounted, a rack secured to one end of the bed plate, a pinion engaging the rack for turning the bed plate on its axis, a carriage upon which the bed plate is mounted, and another carriage mounted on the frame for longitudinal movement and upon which the first carriage is mounted for transverse movement.

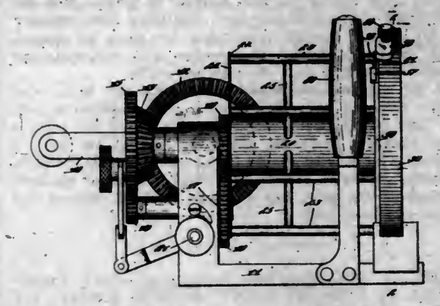
1,017,462. FROG FOR TROLLEYS. JOHN MIKEOL PREMOSHIS, Forbes Road, Pa. Filed Aug. 26, 1911. Serial No. 646,173. (Cl. 191—11.)

1. A trolley frog comprising a base having its lower face provided with a recess and further provided within said recess with a longitudinal extending tongue and a pair of tongues diverging at an inclination in the direction of their length the longitudinal tongue extending between said inclined tongues, trolley wire holders integral with and projecting from said base and further integral with said tongues, each of said holders provided with a socket for the reception of the end of a trolley wire, and means carried by the holders for clamping the trolley wires thereto.

2. A trolley frog comprising a base having a recess in the lower face, a tapering tongue integral with and central of the top wall of said recess at one end thereof, a pair of tongues integral with said top wall and arranged in proximity to each side of said recess at the other end thereof, said tapering tongue extending between the inner ends of said pair of tongues, the tongues of said pair disposed at opposite inclinations with respect to each other, rectangular holders integral with the outer end of each of said tongues and with said base and projecting from each end of said base, and means for securing trolley conductors to the outer ends of said holders.

1,017,463. SEWING-MACHINE. HENRY B. PRUDEN, Dayton, Ohio, assignor by mesne assignments, to Reuben F. Myers, trustee, Dayton, Ohio. Filed Feb. 14, 1905. Serial No. 245,559. (Cl. 112—21.)

1. In a sewing machine, the combination with a curved needle, of a driving member for driving said needle, a storage member for supporting a supply of thread for the needle, and a stationary member interposed between said driving member and said storage member.



2. In a sewing machine, the combination with a curved needle, and a rotary driving member coöperating with means for engaging said needle and driving the same in a circular path, of a stationary member situated in juxtaposition to said driving member and said needle and having provisions for dividing the strands of thread at the point where said strands are carried through the fabric by the needle.

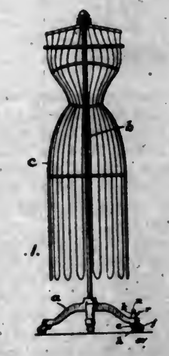
3. In a sewing machine, the combination with a curved needle, and means for driving the same in a circular path, of means operating at the point where the strands of thread are carried through the fabric by the needle for dividing said strands at said point.

4. In a sewing machine, the combination with a curved needle, of a member for driving the same, a storage member for supporting a supply of thread for the needle, a stationary member interposed between said driving member and said storage member, and dividing means carried by said stationary member for dividing the strands of thread as they are carried through the fabric by the needle.

5. In a sewing machine, the combination with a curved needle, of a driving member for the same, a storage member for supporting a supply of thread for the needle, a stationary member interposed between said storage member and said driving member, said stationary member having provisions for supporting one of the strands of thread during the process of forming the stitch.

[Claims 6 to 22 not printed in the Gazette.]

1,017,464. CASTER. JOHN RAE, Philadelphia, Pa., assignor to Kearns Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Original application filed Mar. 30, 1910, Serial No. 552,292. Divided and this application filed Feb. 15, 1911. Serial No. 608,658. (Cl. 16—165.)

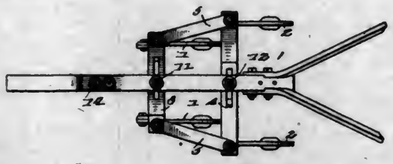


1. In a caster, the combination with the base and rollers on which the same is mounted, of a post slidable on the base,

locking means including a spring and lever, the latter engaging the post and normally preventing it from rising, a spring tending to lift the post, and an elastic block, on the lower end of the post, adapted to contact with the floor when the post is depressed, said block being recessed in its bottom, thereby permitting the block to expand, upon release of downward pressure upon the post, and relieve the weight upon the adjacent roller.

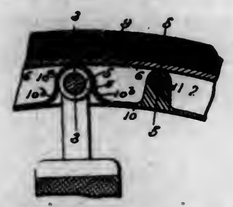
2. In a caster, the combination with the base, of a frame mounted above the base, a post slidable in both the base and frame, a bracket swiveled on the post, a floor engaging device on the lower end of the post, a locking lever pivoted on the frame and engaging the post, a spring normally holding said lever in locking position, a head on the post, and a spring confined between the frame and said head.

1,017,465. CULTIVATOR. JOHN J. RAMPLEY, Carnesville, Ga. Filed Nov. 6, 1911. Serial No. 658,741. (Cl. 97—10.)



In a cultivator of the type indicated, the combination with a central beam and flat transverse bars forming the main frame and secured to the beam, of the shovel-carrying standards, and two pairs of right angular transverse bars 7 and 10 whose ends are bent forward, at a right angle, the standards being laid alongside such ends and secured thereto, the bodies of the right angular bars being lapped, and hooked screw-bolts embracing the same and passing through the beam, thus serving to secure the angular bars in any required endwise adjustment, substantially as described.

1,017,466. VEHICLE WHEEL-RIM. GEORGE T. REICHENBACH and HARTWIG O. PECK, Portland, Oreg., assignors to H. O. Peck Automobile Wheel Company, Incorporated, Portland, Oreg. Filed May 9, 1911. Serial No. 626,018. (Cl. 152—28.)



1. In a vehicle wheel, a rim composed of a pair of side plates having tire receiving channels at their outer peripheries, spoke heads pivoted between said plates and spaced apart, an inner annular band for closing the space between said side plates adjacent to the inner edges thereof, said band having portions bent to form spoke head receiving pockets and means for securing said side plates and said band in position.

2. In a vehicle wheel, a rim composed of a pair of side plates having tire receiving channels at their outer peripheries, spoke heads pivoted between said plates and spaced apart, an inner annular band for closing the space between said side plates adjacent to the inner edge thereof, said band having portions bent to form spoke head receiving pockets and means for securing said side plates and said band in position, and a metallic tire band held between said side plates and located between said spoke head pockets and said tire.

3. In a vehicle wheel, a rim including a pair of side plates, spoke pivots carried by said side plates and projecting between said side plates and spaced apart, an annular metallic rim band mounted between said side plates, outer spoke heads pivoted on said spoke pivots between said side plates, means for holding said side plates in position, and means for closing the space between said side plates and said spoke heads, said last named means comprising an annular band held between said side plates adjacent to their inner edge and having spoke head receiving pocket portions shaped to receive said spoke heads, and projecting between said spoke heads and said outer annular band, said inner band having inward projections through which said side plate holding means project.

1,017,467. BINDER FOR TURBINE-BUCKETS. WALTER F. RICE, Quincy, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 1, 1910. Serial No. 574,957. (Cl. 121—57.)

1. The combination with a plurality of turbine buckets, of a binder passing through said buckets and having initially an approximately U-shaped cross-section, the portions of the two opposite walls of which between the buckets are afterward expanded outwardly.

2. The combination with a plurality of turbine buckets, of a binder passing through said buckets, comprising a bar having initially an open longitudinal slot or channel in one side thereof forming two walls on the opposite sides of the slot or channel, the portions of the walls between the buckets being afterward spread apart.

3. The combination with a plurality of turbine buckets having holes about midway of their length, of a binder consisting of a bar threaded through said holes and provided with an open slot or channel in one side thereof forming two walls, one at each side of said channel or slot, which are spread apart between said buckets to form abrupt shoulders abutting against said buckets.

4. The combination with a plurality of turbine buckets, of a binder threaded through the same, comprising a bar having initially two parallel longitudinal portions connected along one edge only thereof, the sections of said portions between said buckets being afterward bent outwardly so as to be wider there than the sections that pass through said buckets.

5. The combination with a plurality of turbine buckets, of a binder threaded through the same, consisting of a bar having along one side two adjacent separable portions spread apart only between said buckets.

[Claim 6 not printed in the Gazette.]

1,017,468. SAFETY APPLIANCE FOR GAS-FIXTURES. PETER R. RICHARDS, Hazleton, Pa. Filed July 17, 1911. Serial No. 639,018. (Cl. 137—30.)

1. In a safety appliance of the character described, a coupling member, a tube adapted to be engaged with said member, a valve seat having a passage, a valve adapted to be engaged with said seat, a stem secured to said valve and extending through said passage, a hook formed on the outer end of said stem, a valve retracting spring having a series of centrally disposed coils arranged to receive the hook end of the valve stem and having diverging ends to engage and project through the end of the coupling member into position to engage the walls of the tube connected with said coupling member, whereby said spring ends are contracted and, the valve forced and held in an open position while the tube remains in operative engagement with the coupling member and when said tube is disengaged from said member the ends of said spring will expand and draw the valve into engagement with its seat.

2. In a safety appliance of the character described, a coupling member having an interiorly threaded end, a tube adapted to be engaged with said end, a valve seat comprising an exteriorly threaded disk having formed therein a tapered passage and adapted to be screwed into engagement with the interiorly threaded end of said coupling member, a valve adapted to be engaged with the tapered passage in said seat, a stem secured to said valve, a hook formed on the outer end of said stem, a valve retracting spring, said spring having a series of centrally disposed coils adapted to receive the hooked end of the valve stem and having diverging ends adapted to engage and project through the end of the connection of the coupling member, said ends of the spring having their extremities bent into the form of coils adapted to engage the walls of the tube connected with said coupling member whereby said ends of the spring are contracted and the valve thus forced and held inwardly to an open position as long as the tube remains in operative engagement with the coupling member and whereby when said tube is disengaged from said member said ends of the spring will expand against the ends of the coupling member and thereby draw and hold the valve in engagement with its seat thus closing the passage through the coupling member.

1,017,469. CENTER-PUNCH. JULIUS RICHTER, Ford City, Pa. Filed July 21, 1911. Serial No. 639,768. (Cl. 73—149.)

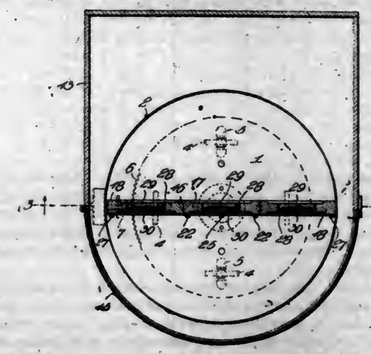
1. A center punch, comprising a punch member, a guide bar, guide blocks adjustably mounted thereon, means for securing the latter in adjusted position on said guide bar radially extending centering screws mounted in said blocks, and cap screws on the face sides of said blocks and impinging on said centering screws.

2. A center punch, comprising a punch member, guide blocks therefor, centering screws mounted thereon, retaining screws on the face sides of said blocks, and means for supporting and adjusting said guide blocks in various positions relating to each other.

1,017,470. DISPLAYING APPARATUS FOR SHOW WINDOWS AND CASES. BENNETT P. ROSE, Henderson, N. C. Filed Dec. 11, 1911. Serial No. 665,199. (Cl. 211—12.)

1. In a displaying apparatus of the character described, a revolubly supported platform, a partition arranged across said platform to form a background for the goods to be displayed, and means whereby the platform is revolved to successively bring the goods on the opposite sides of the partition into position to be displayed.

2. In a displaying apparatus of the character described, a revolubly mounted platform, a reversible partition arranged on said platform to form a background for the goods to be displayed, said partition comprising a plurality of detachably connected sections, means to detachably secure said sections together, and means to pivotally and rigidly secure the same to the platform.



3. In a displaying apparatus of the character described, a revolubly mounted platform, a reversible partition arranged on said platform to form a background for the goods to be displayed, said partition comprising a plurality of detachably connected sections, means to detachably secure said sections together, reversible panels secured in said sections, one side of said panels having thereon a mirror, and means to pivotally and rigidly secure the partition to the platform.

4. In a displaying apparatus for show cases and windows, a platform revolubly mounted in the floor of the case or window, a centrally disposed platform supporting standard, a ball bearing connection between said platform and standard, a plurality of platform supporting rollers adapted to revolubly support the outer portion of the platform, an annular rack secured to the under side of the platform, a platform operating motor geared to said rack, and a partition secured to said platform and adapted to form a background for the goods arranged on the platform on opposite sides of the partition.

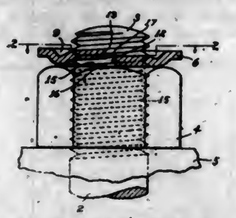
5. In a displaying apparatus of the character described, a revolubly mounted platform, means whereby the same is driven, a reversible partition arranged on the platform, said partition comprising central and side sections, catches arranged on the inner edges of said side sections and adapted to be engaged with the adjacent edges of the central section, bolts adapted to be engaged with said catches to hold the sections of the partition together, pivot bolts arranged in the upper and lower ends of said central section whereby the same is pivotally and detachably secured in position on the platform, fastening bolts arranged in the lower outer corners of the outer sections of the partition whereby the latter is fastened in position on the platform, and reversible panels arranged in said sections.

1,017,471. LOCK-NUT. AXEL RYDEN and CARL H. STAHL, Chicago, Ill. Filed June 15, 1911. Serial No. 633,380. (Cl. 151—15.)

1. In a nut-lock, the combination with a threaded bolt, of a washer or disk having a bolt-hole therein, a spiral flange commencing beyond one side and ending beyond the opposite side of the plane of said washer or disk, said flange being inclined to the plane of said washer or disk and having its ends spaced apart, whereby one end of said flange serves as a wedge adapted to operate against a nut and a portion of the thread of the bolt to raise said portion between the ends of said flange.

2. In a nut-lock the combination with a threaded bolt and an article to be locked upon said bolt, of a disk having a bolt-hole therein, a spiral flange formed around the

edge of said bolt-hole, said flange having its ends spaced apart, and a depressed portion about said flange, said portion gradually receding from the edge of the flange from one of its ends toward the other end.



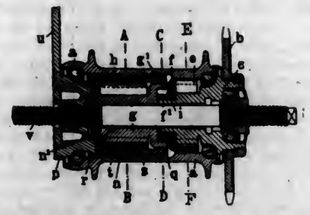
3. In a nut-lock, the combination with a threaded bolt and an article to be mounted and locked thereupon, of a disk having a bolt-hole therein, a spiral flange around said bolt-hole, a circular depression on one side and a circular bead, rib or rise on the opposite side of said disk around said flange.

4. In a nut-lock, the combination with a threaded bolt and an article to be mounted and locked upon said bolt, of a disk having a bolt-hole therein, a spiral flange around said bolt-hole and a spiral depression about said flange, the ends of said flange being spaced apart, one of said ends serving as a wedge adapted to form a bulge on the thread of the bolt intercepting a return movement of the opposite end of said flange.

5. In a nut-lock, the combination with a bolt-thread, of a washer or disk having a bolt-hole therethrough, a spiral flange about said bolt-hole, said flange being an outwardly bent rim of said hole, whereby a V-shaped thread is formed out of a square edge of said rim, the ends of said flange being spaced apart at right angles to the bolt-thread engaged by said flange, and the spaced-apart ends serving, respectively, to form a bulge or stop on the thread and a part of the flange to be engaged by said bulge or stop.

[Claims 6 and 7 not printed in the Gazette.]

1,017,472. FREE-WHEEL AND BACK-PEDALING BRAKE MECHANISM. ERNST SACHS, Schweinfurt, Germany. Filed Aug. 24, 1910. Serial No. 578,776. (Cl. 208—13.)



1. In a free wheel and brake mechanism for cycle hubs, the combination with a driver, of a wheel hub, a friction-reducing driving coupling between the said driver and the wheel hub, a brake expanding mechanism spaced from the driving coupling longitudinally of the hub, and a clutch provided between the said driving coupling and the brake-expanding mechanism, the said clutch being operative only in the reverse rotation.

2. In a free wheel and brake mechanism, the combination with a driver, of a wheel hub, a friction-reducing coupling capable of connecting the driver to the wheel hub, a friction-reducing appliance for expanding the brake spaced from the coupling longitudinally of the hub, and a clutch device disposed between the said coupling and said appliance, which clutch is only operative in the reverse rotation.

3. In a free wheel and brake mechanism, the combination of a driver, a hub, a friction-reducing mechanism adapted to operatively connect the driver and the hub, a braking member, a friction-reducing mechanism adapted to apply the braking member to the hub, the two friction-reducing mechanisms being each complete in itself and separate from the other, and a clutch device disposed between and operative in one direction of rotation to connect the said mechanisms.

4. In a free wheel and brake mechanism, the combination with a driving mechanism, of a brake-applying mechanism spaced from the driving mechanism axially, and a clutch arranged to transmit the power from the driving mechanism to the brake-applying mechanism, which clutch is operable only in the reverse rotation.

5. In a free wheel and brake mechanism, the combination with a driving mechanism having friction-reducing members and a retainer ring for the said members, of a brake applying friction-reducing mechanism, and a clutch separate from and disposed between the two mechanisms and adapted to connect said retainer ring to the brake-applying mechanism in the reverse rotation.

[Claims 6 to 11 not printed in the Gazette.]

1,017,473. METHOD OF PRODUCING PRACTICALLY PURE IRON. ARTHUR P. SCOTT, Brackenridge, Pa. Filed Mar. 1, 1911. Serial No. 611,662. (Cl. 75—27.)

1. The process of producing iron of high purity comprising the subjecting of a bath of crude iron to oxidizing conditions until the carbon has been reduced to approximately .20 percentum and without substantially oxidizing the iron, then adding an oxidizable agent, and finally continuing the oxidation and removal of the carbon without oxidizing the iron until the carbon has been reduced to not over .15 per centum.

2. The process of producing iron of high purity comprising the melting down of iron in combination with the usual fluxes and reagents to remove impurities and until oxidation of the iron commences, then introducing titanium into the said bath, and finally continuing the oxidation and removal of the impurities.

3. The process of producing iron of high purity comprising the melting down of iron in combination with the usual fluxes or reagents to partially remove carbon and other impurities and until oxidation of the iron commences, then introducing an oxidizable agent to protect the metal in the bath, and finally continuing the oxidation and removal of the carbon until its content has been reduced to not exceed .15 percentum.

4. The process of producing iron of high purity comprising melting down iron in combination with the usual fluxes or reagents and removing the impurities therein, then introducing titanium into the bath and introducing sticks of wood.

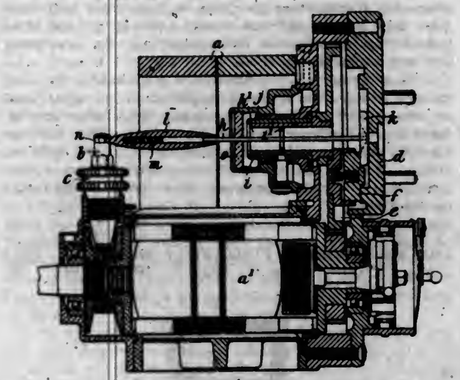
5. The process of producing iron of high purity comprising melting down iron in combination with the usual fluxes or reagents and removing the impurities therein, then introducing titanium into the bath and introducing sticks of wood, and finally adding titanium to said metal bath while in the ladle.

[Claims 6 to 10 not printed in the Gazette.]

1,017,474. HIGH-TENSION MAGNETO-ELECTRIC APPARATUS. FREDERICK RICHARD SIMMS, Kilburn, London, England, assignor to The Simms Magneto Company, a Corporation of New York. Filed June 27, 1910. Serial No. 569,200. (Cl. 123—149.)

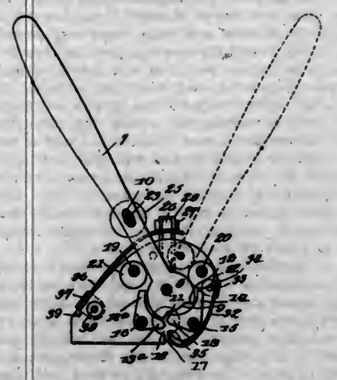
1. In a high tension magneto, the combination with the high tension terminal thereof, of a conductor connected with the high tension terminal, a detachable ring surrounding a portion of the conductor, out of contact therewith and separated from the conductor only by an air gap, to form a spark gap between the inner face of the ring, and the portion of the conductor passing therethrough, said ring having a ground connection, and means for detachably supporting said ring, whereby the ring may be removed and a ring of different internal diameter substituted therefor, to adjust the spark gap.

2. In a high tension magneto, the combination with the high tension terminal thereof, of a conductor connected with the high tension terminal, a cylindrical part surrounding said conductor, a ring detachably secured in said cylindrical part and having a ground connection, said ring surrounding a portion of the conductor, and being separated therefrom only by an air gap, the inner edge of the ring being sharpened all the way around, to facilitate sparking, whereby said ring may be removed and replaced by a similar ring of different internal diameter, to adjust the spark gap.



3. In a high tension magneto, the combination with the high tension terminal, of a distributer, a conductor extending from the said terminal to the distributer, a hollow cylindrical part surrounding a portion of the conductor, but out of contact therewith, and having a ground connection, and a transparent closure for one end of said cylindrical part, having an aperture for the passage of the conductor therethrough, a ring fitted in said cylindrical part at the desired distance from said closure to prevent injury to the same, said ring surrounding the conductor but out of contact therewith.

1,017,475. SAW-SET. JOHN SIMPSON, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 654,812. (Cl. 76—63.)



1. A saw set comprising spaced substantially parallel plates, said plates having a transverse opening near their lower edges and a slot leading from the opening to the lower edge to form a passage for the saw, a lever provided with a head pivoted between the plates, the head having spaced oppositely arranged setting jaws extending into the passage and facing each other, an elbow lever pivoted between the plates on each side of the passage, each lever having one arm extending upwardly alongside the head and another arm extending laterally into the passage, said last named arm having a setting jaw for cooperating with the jaw at the opposite side of the head, the first named arm extending into position for engagement by the other jaw of the head to swing the lever to bring the first named arm into setting position, a spring at one side of the passage for pressing the saw toward the opposite side, a guide plate for engagement by the back of the saw, means for adjustably connecting said plate to one of the plates, a stop at each side of the lever for limiting the movement thereof, means for varying the position of the said stops, means for intermittently advancing the saw, and means on the lever for operating the said means intermediate the end of its movement in each direction, said means being adjustable on the lever.

2. A saw set comprising spaced substantially parallel plates, said plates having a transverse opening near their lower edges and a slot leading from the opening to the lower edge to form a passage for the saw, a lever provided with a head pivoted between the plates, the head having spaced oppositely arranged setting jaws extending into the passage and facing each other, an elbow lever pivoted between the plates on each side of the passage, each lever having one arm extending upwardly alongside the head and another arm extending laterally into the passage, said last named arm having a setting jaw for cooperating with the jaw at the opposite side of the head, the first named arm extending into position for engagement by the other jaw of the head to swing the lever to bring the first named arm into setting position, a spring at one side of the passage for pressing the saw toward the opposite side, a guide plate for engagement by the back of the saw, means for adjustably connecting said plate to one of the plates, an adjustable stop on each side of the lever for limiting the movement thereof, a guide for the saw, and means operated by the lever on its movement in each direction between the stops for intermittently advancing the saw.

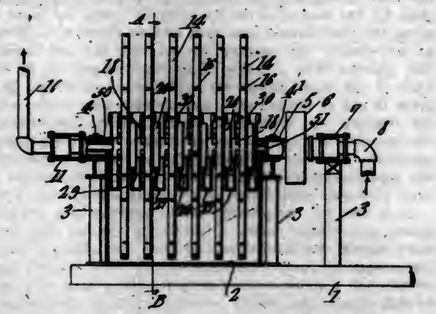
3. A saw set comprising spaced substantially parallel plates, said plates having a transverse opening near their lower edges and a slot leading from the opening to the lower edge to form a passage for the saw, a lever provided with a head pivoted between the plates, the head having spaced oppositely arranged setting jaws extending into the passage and facing each other, an elbow lever pivoted between the plates on each side of the passage, each lever having one arm extending upwardly alongside the head and another arm extending laterally into the passage, said last named arm having a setting jaw for cooperating with the jaw at the opposite side of the head, the first named arm extending into position for engagement by the other jaw of the head to swing the lever to bring the first named arm into setting position, an adjustable stop on each side of the lever for limiting the movement thereof, a guide for the saw, and means operated by the lever on its movement in each direction between the stops for intermittently advancing the saw.

4. A saw set comprising a lever pivoted at one end and provided with a setting jaw at said end on each side of the pivotal connection, an elbow lever pivoted at each side of the said pivotal connection, each lever having an arm extending into position for engagement by the adjacent jaw of the lever to rock the said elbow lever and an arm provided with a jaw for cooperating with the remote jaw of the lever when the elbow lever is rocked, a stop on each side of the lever and adjustable toward and from the lever to limit the movement thereof, and a guide for the saw adjustable toward and from the jaws.

5. A saw set comprising a lever pivoted at one end and provided with a setting jaw at said end on each side of the pivotal connection, an elbow lever pivoted at each side of the said pivotal connection, each lever having an arm extending into position for engagement by the adjacent jaw of the lever to rock the said elbow lever and an arm provided with a jaw for cooperating with the remote jaw of the lever when the elbow lever is rocked, and a stop on each side of the lever and adjustable toward and from the lever to limit the movement thereof.

[Claims 6 to 10 not printed in the Gazette.]

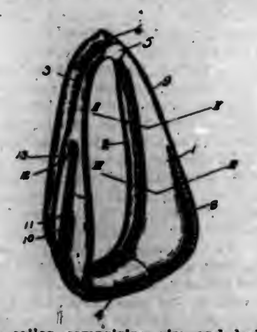
1,017,476. FILTER. CHARLES EDWARD SINGER, Parral, Mexico. Filed Feb. 7, 1911. Serial No. 607,120. (Cl. 75—86.)



1. In a device of the class described, a supporting structure; telescoped tubular members secured together for simultaneous rotation in the structure; a filter frame secured to the outer of said members; a tank into which the frame is adapted to dip; connections between the interiors of both members and the interior of the frame; a valve casing interposed in the connections; a valve rotatable in the casing to open and to close the connections alternately; a pinion secured to the valve; a fixed frame having spaced racks to engage the pinion; a fixed trough supported above the tank; and a scraper upon the trough, positioned adjacent the frame.

2. In a device of the class described, a supporting structure; telescoped tubular members secured together for simultaneous rotation in the structure; means for supplying pressure to the interior of one of said members; means for supplying suction to the interior of the other of said members; a valve casing; a pipe connecting the interior of the valve casing with the interior of one of said members; a pipe connecting the interior of the valve casing with the other of said members; a filter frame disposed radially of said members, and having a single opening into the casing; a valve rotatable in the casing, and provided with sinuous ports therethrough, adapted successively, when the valve is disposed in successive positions of rotation, to establish communications between the said pipes and the opening; and means for rotating the valve.

1,017,477. HORSE-COLLAR. DEARCY A. SMITH, Kansas City, Mo., assignor to Askew Saddlery Company, Kansas City, Mo., a Corporation of Missouri. Filed June 13, 1911. Serial No. 632,834. (Cl. 54—19.)



1. A horse collar comprising rim and body members, said body member having a face seamed at the bottom and seamless at the top, the outside portion of the seamless top being lapped over the outer face of the base.

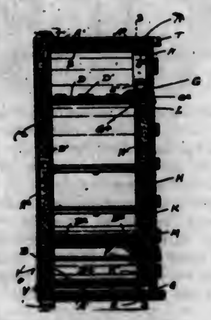
2. A horse collar comprising rim and body members, said body member having a face seamed at the bottom and seamless at the top, the outside portion of the seamless top being lapped over the outer face of the base and secured thereto.

3. In a horse collar, a rim, and a body having outer strips extending only partially throughout the length of the body, and inner strips extending throughout the length of the body, the inner and outer strips being secured to the rim and to each other, and the upper portions of said inner strips being rolled above the outer strips and secured to said rim at their inner and outer edges.

4. In a horse collar, a rim, and a body having an outer base strip shorter than the body, and an inner strip having a base portion stitched to said outer strip, said inner strip having an extension in its upper part for completing the body above the outer strip.

5. In a horse collar, a rim, and a body having an inner strip provided with a lateral extension at its upper part, an outer strip stitched to the inner strip below the extension and having its upper end lapped under said extension, the outer edges of said outer strip and said extension being stitched to said inner strip to form a completed body, having a seamless upper part, substantially as described.

1,017,478. COOLER. PHILIP STAUF, Muncie, Ind. Filed Nov. 25, 1910. Serial No. 594,210. (Cl. 62—10.)



1. A container of the kind described, comprising a hollow body having an internal concentric partition to form a central compartment and a space between the outer wall and the partition, one end of said hollow body being open, receptacles disposed in said space and having open forward ends and being exteriorly shouldered near said forward ends, an annular packing ring to close said space between the wall and said partition and the ends of said receptacles and extending outside of the said wall, said hollow body having its frontal face to register with the said packing ring, a face ring, means to draw the face ring and the faces of the partition, and of the inner and outer wall into tight contact with the packing ring, means to draw the edges of the packing ring into contact with the shoulders of the said receptacles, a door carried by the face ring to form a closure for said central compartment, and a main opening through the upper portion of the face ring and of the packing ring.

2. A container of the kind described, comprising a hollow body having a concentric partition to form a central compartment and a space between the outer wall and the partition one end of said hollow body being open, receptacles formed integral with the rear side of said body and located in said space and having their forward ends shouldered, an annular packing ring to close said space between the wall and said partition and the shouldered ends of said receptacles and extending outside of said wall and being provided with a main opening therein, foraminous partitions in said space and located above said receptacles, a hollow outer body having its face to register with the inner face of said packing ring, a face ring having openings therein to register with the open ends of said receptacles and being provided with a main opening located to register with the main opening in the packing ring, means to draw the face ring and the face of the partition and the faces of the inner and outer walls into tight contact with the packing ring, means to draw the edges of the packing ring into contact with the shoulders of the said receptacles, a door carried by the face ring to form a closure for said central compartment, and a main opening through the upper portion of the face ring and of the packing ring.

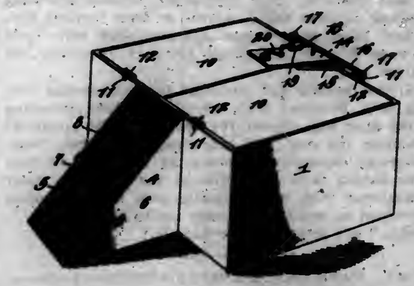
3. A container of the kind described, comprising a hollow body having an internal concentric partition to form a central compartment and a space between the outer wall and the partition, one end of the said hollow body being open, receptacles disposed in said space and having open forward ends and being exteriorly threaded near said forward ends, an annular packing ring to close said space between the wall and the said partition and the ends of said receptacles, a face ring having openings therein to register with the open ends of said receptacles and being provided with a main opening located to register with the main opening in the packing ring, means to draw the face ring and the faces of the partition and of the outer wall into tight contact with the packing ring, an insulating covering for the outer wall, means to draw the edges of the packing ring into contact with the shoulders of said receptacles, a door for said central compartment, and a closure to close the space between the main opening of the face ring and that of the packing ring, and a lid for said opening.

4. A container of the kind described, comprising a hollow body having an internal concentric partition to form a central compartment and a space between the outer wall and the partition, one end of the said hollow body being open, receptacles disposed in said space and having shouldered forward ends, an annular packing ring to close said space between the wall and the said partition and the ends of said receptacles, a face ring, means to draw the face ring and the faces of the partition and of the outer wall into tight contact with the outer wall, means to draw the edges of the packing ring into contact with the shouldered ends of said receptacles, an insulating covering for said outer wall, and cap closures for said receptacles.

5. A container of the kind described, comprising a hollow body having a concentric partition to form a central compartment and a space between the outer wall and the partition one end of the said hollow body being open, receptacles formed integral with the rear side of said body and located in said space and having their forward ends shouldered, an annular packing ring to close said space between the wall and said partition and the shouldered ends of said receptacles and extending outside of said wall and being provided with a main opening therein, foraminous partitions in said space and located above said receptacles, a hollow outer body having its face to register with the said packing ring, insulating material between the hollow outer body and the aforesaid inner body, a face ring having openings therein to register with the open ends of said receptacles and being provided with a main opening located to register with the main opening in the packing ring, bolts to draw the face ring and the face of the partition and the faces of the inner wall and outer wall into tight contact with the packing ring, means to draw the edges of the packing ring into contact with the shouldered ends of the receptacles, a door to form a closure for the said central compartment, a closure to close the space between the main opening of the face ring and that of the packing ring, a lid for said opening, cap closures for the receptacles.

1,017,479. ANIMAL-TRAP. WALTER JAMES STEWART, Reno, Nev. Filed Feb. 23, 1911. Serial No. 610,355. (Cl. 43—24.)

1. In a trap of the character described, a box, trap doors pivotally supported on said box, stop lugs formed on the pintles of one end of said doors, a teeter, comprising a board pivotally supported over the inner edges of the doors, a cross bar secured to the outer end of said board and adapted to be engaged with the stop lugs on the pintles of the doors, a balancing weight adjustably secured to said board, means to secure a bait to the inner end of the board whereby the latter will be tilted by an animal in reaching for the bait thus releasing the doors and permitting the latter to precipitate the animal into the box and means to restore the doors to a closed position.



2. In a trap, a box, an incline arranged adjacent to one side of the box, said incline comprising, a triangular frame having its upper inclined side set down below the upper edges of the vertical sides of the incline, thereby forming a compartment, bait holding cleats arranged in said compartment, a screen door arranged over said compartment, said door forming a walk up which the animals are attracted by the bait on said cleats and thus directed to the top of the box, pivoted trap doors adapted to close said box and means whereby the doors are opened by the animal thereon thus precipitating the animal into the box.

1,017,480. BALL-RETAINER. JACKSON L. STRAUB, Lancaster, Pa., assignor to The Star Ball Retainer Company, Lancaster, Pa., a Corporation of New Jersey. Filed Dec. 6, 1911. Serial No. 664,231. (Cl. 64—59.)

1. A ball retainer and separator for ball-bearings consisting of a base-ring with spaced standards extending from the outer edge thereof, the free ends of the standards overhanging the ring, the latter being corrugated, thereby providing ball-seating depressions between the standards, said depressions extending transversely of the axis of the ring and having the effect of increasing the length of the standards and lessening the distance therebetween.

2. A ball retainer and separator for ball bearings consisting of a base-ring with spaced standards extending from its outer edge, the free ends of the standards overhanging the base-ring, the latter being corrugated, thereby providing ball-seating depressions between the standards, said depressions extending transversely of the axis of the ring, and widening toward one edge of the ring and in effect increasing the length of the standards and lessening the distance therebetween.

3. As a new article of manufacture, a ball retainer and separator for ball-bearings consisting of a base-ring with spaced standards rising from its outer edge, the free ends of said standards overhanging the base-ring, the latter being corrugated, thereby providing depressions between the bases of the standards to form alternating ridges

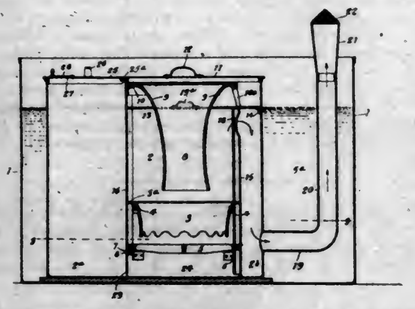
and ball-seating furrows which extend transversely of the axis of the ring and lessen the distance between adjacent standards.

4. A ball-retainer and separator for ball-bearings consisting of a base-ring with spaced standards extending from the outer edge thereof parallel with the axis of the same, the free ends of the standards overhanging the ring, said base-ring being corrugated, thereby providing depressions between the standards to form furrows having their inner ends deeper and narrower than their outer ends, whereby spaces are provided to receive and retain the balls.

5. A ball retainer and separator for ball-bearings consisting of a base-ring with spaced standards extending from the outer edge thereof, the free ends of the standards overhanging the ring, said ring being corrugated, thereby providing depressions between the standards to form furrows having their ends adjacent the standards wider and shallower than their opposite ends whereby spaces are provided to receive and retain the balls.

[Claim 6 not printed in the Gazette.]

1,017,481. TANK-HEATER. WILKIE TINKER, Anamoose, N. D. Filed Feb. 6, 1911. Serial No. 606,742. (Cl. 126—368.)

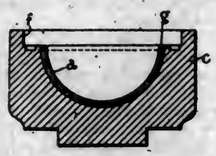


A tank heater comprising a casing having oppositely arranged extensions, a partition secured to the casing between one of the extensions and the central portion of the casing, said partition being spaced apart from the bottom of the casing to form an air inlet opening, the extension adjacent to the said partition forming an air inlet chamber, said casing having a guideway at the junction of the other extension with the said casing, a partition slidable in the guideway and having an opening at its upper end for the products of combustion, the extension adjacent to the said slidable partition forming a smoke chamber, and the casing having a smoke pipe leading therefrom and extending above the top of the casing, a fire pot removably supported in the central portion of the casing, a grate mounted for rotating movement below the fire pot, a hopper removably supported above the fire pot, an annular baffle plate supported above the fire pot and encircling the hopper, a cover for the central portion of the casing, said cover having an extension covering the smoke chamber, a cover for the air inlet chamber, said cover having a draft opening, and a door for controlling the said opening.

1,017,482. METHOD OF MANUFACTURING LAWN-TENNIS AND LIKE BALLS. JOHN TURNER and ANTHONY BUXTON, Uxbridge, England, assignors to The Rubber Patents Limited, Cowley, England, a Corporation of Great Britain. Filed May 23, 1910. Serial No. 562,904. (Cl. 154—16.)

1. The method of manufacturing lawn tennis or like balls which consists in dying out parts of same from uncured rubber in a plastic state, then curing same while still held between the member of the die, and then cementing the cured parts together by an adhesive which will not cure by the fumes from the cured parts.

2. The method of manufacturing lawn tennis or like balls which consists in dying out parts of same from uncured rubber in a plastic state, then curing same while still held between the members of the die, and then cementing the cured parts together by an adhesive which will not cure by the fumes from the cured parts and under heat and pressure.



3. The method of manufacturing lawn tennis or like balls which consists in dying out parts of same from uncured rubber in a plastic state, then curing same while still held between the members of the die, then cementing the cured parts together by an adhesive which will not cure by the fumes from the cured parts and under heat and pressure and then transferring the ball to the members of a mold capable of exerting increased pressure and heating such mold members for a short period.

4. The method of manufacturing lawn tennis and like balls which consists in dying out parts of same from uncured rubber then curing same while still held between the members of the die, then applying to the edges of the cured parts an adhesive which will not cure by the fumes from the cured parts, then inserting inside the parts an internal bladder and then transferring the ball to the members of a mold capable of exerting increased pressure and heating such mold members for a short period.

5. The method of manufacturing lawn tennis and like balls which consists in dying out parts of same from uncured rubber then curing same while still held between the members of the die, then applying to the edges of the cured parts an adhesive which will not cure by the fumes from the cured parts, then inserting inside the parts an internal bladder carrying a plug of material which will not cure and any opening made in which will readily close and then transferring the ball to the members of a mold capable of exerting increased pressure and heating such mold members for a short period.

1,017,483. PROCESS OF MAKING MOLDED CONDUCTORS. CHARLES VAN BRUNT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 23, 1910. Serial No. 551,157. (Cl. 171—210.)

1. The process which consists in mixing carbonaceous material, a carbonizable binder and sulfur, compacting said mixture, and firing to a temperature sufficient to carbonize said binder.

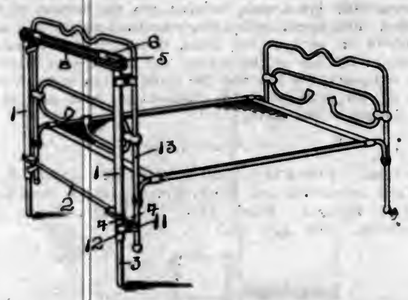
2. The process of forming articles from carbonaceous material, which consists in mixing said material with a heavy hydrocarbon and sulfur, pressing said mixture into predetermined form, and heating at an elevated temperature to carbonize said hydrocarbon.

3. The process of increasing the density of a molded conductor into whose formation carbonizable hydrocarbon compounds enter, which consists in adding sulfur to the raw mixture and firing to a temperature sufficient to carbonize said hydrocarbon compounds.

4. The process which consists in mixing carbonaceous material and pitch, with sulfur, compacting said mixture and firing to a temperature in the neighborhood of 400 to 500° C to carbonize the pitch.

1,017,484. BED-LIFTER. JOSEPH S. VISGER and CHRISTIAN CLAUS, Brooklyn, N. Y. Filed Aug. 7, 1911. Serial No. 642,737. (Cl. 5—41.)

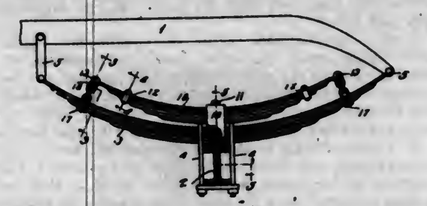
1. A bed lifter comprising hollow posts, means for connecting the posts, means for securing the posts to the bed, internally threaded pipes within and extending through the lower ends of said posts, and means for moving the posts longitudinally upon the pipes to vary the height of the bed.



2. A bed lifter comprising connected hollow posts, pipes within the hollowed posts, said posts being adapted to be moved vertically upon the pipes, means for securing the connected hollow posts to the end of the bed, means for moving the posts vertically to raise or lower the end of the bed, and means for limiting the vertical movement of said posts in either direction.

3. A bed lifter comprising a framework including hollow posts, pipes within the posts and projecting through the lower end thereof, rods projecting through the upper ends of the posts and extending into the pipes within said posts, connections between the upper ends of the rods to rotate the same and move the posts upon the pipes to vary the height of the lifter, means for limiting the movement of said posts and means for securing the framework to a bed.

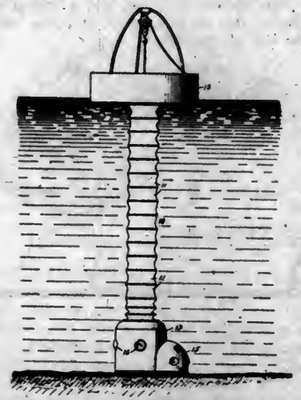
1,017,485. BROKEN-SPRING REPAIRER. JOHN H. WARNER, Mount Pocono, Pa. Filed June 29, 1911. Serial No. 635,939. (Cl. 21—50.)



1. The herein described emergency repairer for vehicle springs consisting of a flat spring of less length than the one to be repaired and having eyes in its extremities, a rod passing transversely through each of said eyes and having itself an eye in one end and a hook in the other, a section of chain having one end link engaging said eye in the rod and of a length sufficient to permit it to pass around the broken spring and engage the hook, and means for temporarily holding the emergency spring upon the center of the other spring.

2. The herein described emergency repairer for vehicle springs consisting of a leaf spring of equal width with but of less length than the spring to be repaired and having eyes in its extremities, a rod passing transversely through each of said eyes and having an eye in one end and a hook in the other, a section of chain having one end link engaging said eye in the rod and of a length sufficient to permit it to pass around the broken spring and engage the hook, an inverted U-shaped guide whose center passes over the center of the emergency spring and whose arms extend down past its edges and are adapted to straddle the edges of the broken spring, and a bolt securing said guide upon the emergency spring.

1,017,486. SUBMARINE MINING APPARATUS. CHARLES WILLIAMSON, Norfolk, Va. Filed Feb. 7, 1910, Serial No. 542,598. Renewed July 12, 1911. Serial No. 638,213. (Cl. 61—7.)



1. A submarine mining apparatus comprising an operating chamber at atmospheric pressure, a work chamber at high pressure associated therewith, means for operating in the work chamber from the operating chamber, a movable receptacle for receiving the products mined, and means for moving said receptacle into and out of said work chamber.

2. In a submarine mining apparatus, a pneumatic caisson, means whereby operations may be carried on within the caisson from without the same, and a receptacle movable into and out of said caisson for receiving the products mined.

3. In an apparatus of the character described, in combination, a working chamber, a lock communicating with the same, and a receptacle in said chamber, said receptacle being directly connected in operative relation to one gate of said lock.

4. In an apparatus of the character described, in combination, a working chamber, a lock mounted in the wall of and communicating with the same, and a transfer operatively associated with said lock.

5. In an apparatus of the character described, a working chamber, a lock associated therewith, a transfer movable in said lock, and a lock gate associated with said transfer.

[Claims 6 to 30 not printed in the Gazette.]

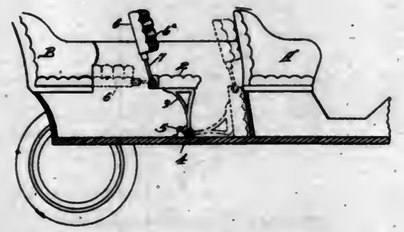
1,017,487. BARREL-LOCK. ARTHUR CREED WRIGHT, Norwich, Conn., assignor to The Hopkins & Allen Arms Company, Norwich, Conn., a Corporation of Connecticut. Original application filed Jan. 25, 1909, Serial No. 473,953. Divided and this application filed June 27, 1910. Serial No. 569,024. (Cl. 42—44.)

1. In a firearm, the combination with the frame, barrel, and pivoted barrel lock, of a slide guided in the frame to reciprocate, means for reciprocating the slide, a pair of rods pivotally connected with said slide near the rear end thereof and extending forward and downwardly therefrom, and pivotally connected near the free end of the barrel lock.

2. In a firearm, the combination with the frame, barrel,

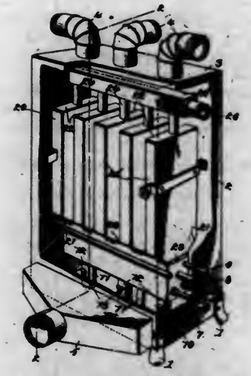
and pivoted barrel lock, of a longitudinally movable slide, the frame having guides therefor, a top lever for operating the slide, means for connecting the slide with the barrel lock, a screw at the rear of the slide having a cut-away face toward the slide, and a spring having one end resting in the cut-away face and the other resting against the end of the slide.

1,017,488. AUTOMOBILE-SEAT. JOHN B. ZIMDARS, San Francisco, Cal. Filed June 13, 1910. Serial No. 566,627. (Cl. 21—43.)



A vehicle having front and rear seats and a plurality of parallel intermediate seats having eccentrically journaled lower ends and coacting brackets to support the seats in their normal position or allow them to be tilted forwardly on edge, seat backs having the outer edges curved and the contiguous edges line, standards upon which the backs are adjustable, said standards having horizontal extensions with lugs in the angles, brackets fixed to the seats having slots, and springs by which the lugs are engaged to lock the seat backs in a normal or extended position.

1,017,489. GAS-FURNACE. JOHN A. ABRAMS, Wadsworth, Ohio. Filed Apr. 27, 1911. Serial No. 623,715. (Cl. 126—116.)



A gas furnace comprising a casing with a rectangular fire box extending across and above the bottom of the same and spaced from the surrounding wall of the casing, a cold air receptacle secured to one side at the bottom of the casing and extending substantially the entire width thereof, and projecting outwardly from the casing said receptacle having on one side double oblique walls having an inlet connection at their apex, a plurality of rectangular shaped radiators arranged midway within the casing and spaced from each other and from the surrounding wall of the casing, outlets each having their lower ends secured to the central portions of the tops of the radiators, a fume collector arranged between the top of the casing and above the radiators, and provided on one end with an exhaust pipe, said fume collector having the upper ends of the outlets detachably connected thereto, said radiators having oblique and flanged lower ends which are detachably secured to the fire box, a plurality of tubes having their lower ends opening into the bottom of the casing, their upper ends being connected to the fire box, dampers for each of the tubes, a plurality of pipes secured to the top of the casing, and said spaces between the radiators, fire box and the walls of the casing forming hot air passages which communicate with said pipes on the top of the casing.

1,017,490. NON-REFILLABLE BOTTLE. LEWIS WALLACE ALEXANDER and JOHN WILLIAM HALL, Auckland, New Zealand. Filed Apr. 10, 1911. Serial No. 620,153. (Cl. 215—65.)

1. In a non-refillable bottle, the combination, with a neck having upper and lower constricted portions, of a baffle movable in the space between said portions and comprising an outer shell of yieldable material provided with a series of catches, and an inner body of rigid material disposed within said shell and formed with a shoulder engaged by said catches, said body being adapted for insertion into said shell after the latter has been introduced into said space.

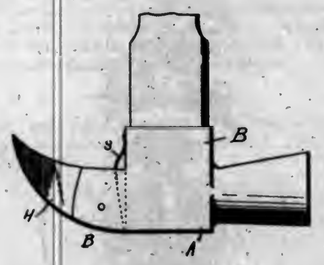
2. In a non-refillable bottle, the combination, with a neck having upper and lower constricted portions, of a baffle movable in the space between said portions and comprising an outer shell provided with a series of catches, and an inner body of rigid material disposed within said shell and formed with a shoulder engaged by said catches.

3. A non-refillable bottle, the combination, with a neck having upper and lower constructed portions, of a baffle movable in the space between said portions and comprising an outer shell provided with a series of upstanding arms having their free ends turned inwardly to produce catches, and an inner body of rigid material disposed within said shell between said arms and formed with a shoulder engaged by said catches.

4. In a non-refillable bottle, the combination, with a neck, of a baffle movable therein and comprising an outer shell provided with a series of spaced yielding arms having terminal catches, and a vitreous body disposed within said shell between said arms, said body being formed with an external shoulder engaged by said catches and with an outwardly-projecting corrugated portion.

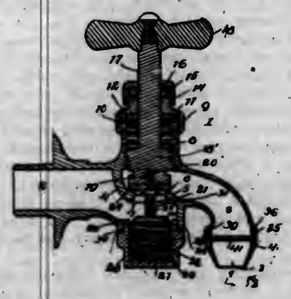
1,017,491. HAMMER ATTACHMENT. GEORGE W. ANSLEY, Spokane, Wash. Filed Oct. 4, 1911. Serial No. 652,892. (Cl. 145—42.)

1. A nail extracting device having a head with a curved fulcrum forming surface having a slot running in from one end, jaws having reduced portions or arms pivoted to said head and each other at their inner ends at the inner end of said slot, the body of said jaws extending from the end of the head and forming nail drawing claws with exposed free ends, the outer faces of said jaws and the walls of said slot being inclined so that outward movement of the jaws through the slot tends to press the jaws toward each other, the inner faces of the claw part of the jaw being hollowed out to form nail pinching edges which do not extend any substantial distance into the slot of the head, substantially as described.



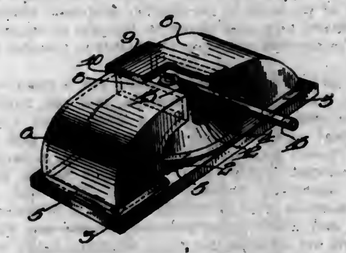
2. A nail extracting device having a head with a curved fulcrum forming surface having a slot running in from one end, jaws having reduced portions or arms pivoted to said head and each other at their inner ends at the inner end of said slot, the body of said jaws extending from the end of the head and forming nail drawing claws with exposed free ends, the outer faces of said jaws and the walls of said slot being inclined so that outward movement of the jaws through the slot tends to press the jaws toward each other, the inner faces of the claw part of the jaw being hollowed out to form nail pinching edges which do not extend any substantial distance into the slot of the head, and a spring tending to press the jaws outward in the slot.

1,017,492. COMPRESSION-BIB. WINFIELD SCOTT ARTHUR, Woodstown, N. J., assignor of one-half to Sipron C. Keith, Woodstown, N. J. Filed July 5, 1910. Serial No. 570,473. (Cl. 137—4.)



A faucet of the class described, comprising inlet and outlet members, a partition intermediate the members and having an opening formed therein, valve seats formed at the top and bottom of said opening, a main valve including a head, adapted to engage the upper seat, a fibrous washer, a member threaded in said head and formed with an enlarged portion intermediate its ends, the said enlarged portion forming a clamp to secure the washer to the head, a pin depending from said enlarged portion, a spring pressed valve located below the partition and adapted to be seated upon the lower side thereof, a guide tube projecting upwardly from said valve and formed integral therewith, and said guide tube being adapted to receive the said pin whereby to hold the valve and plug in alinement.

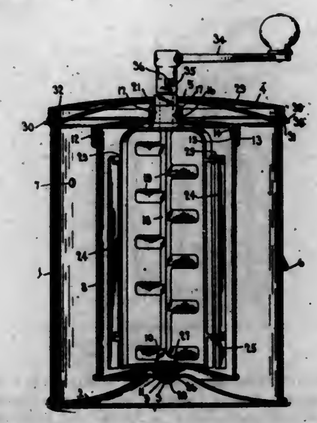
1,017,493. OIL-BURNER. HARRY W. AXFORD and JOHN E. CLEARWATER, San Francisco, Cal. Filed Aug. 22, 1911. Serial No. 645,346. (Cl. 158—91.)



1. An oil burner comprising a pan having a plurality of draft openings surrounded by ridges forming seats, curved flues tapering from one end to the other having the larger ends seated upon the pan, a coupler having side openings engaging and retaining the smaller ends of the flues, and having a downwardly opening mouth, means for supplying liquid fuel to the interior of the burner, and a conical flue seated upon the central portion of the pan and projecting upwardly into said coupler.

2. A hydrocarbon oil burner comprising a substantially flat plate or pan having draft openings, a plurality of seats upon the upper surface of the pan, curved flues tapering from one end to the other having the lower larger ends seated upon the pan, a central coupler in which the flues rest at their upper smaller ends, a central, conical flue projecting into the coupler, and flame deflecting webs formed upon one side of said flues to direct the products of combustion to the opposite side of the burner.

1,017,494. ICE-CREAM FREEZER. JOHN N. BEEKMAN, Brooklyn, N. Y. Filed Apr. 10, 1911. Serial No. 620,057. (Cl. 62—4.)



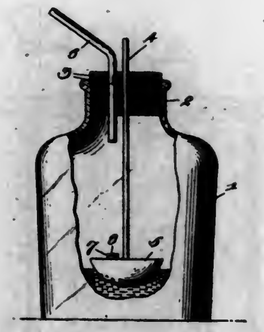
1. In an ice cream freezer, an outer tub, a cream can revolubly mounted therein, a cover lockable to the can having a central opening and a cylindrical flange projecting upwardly around the opening and provided with notches in its upper edge, a dasher removably mounted in the can, and a handle provided with means for connecting it with the dasher to revolve the same and having lateral lugs to engage the notches in the cylindrical flange of the cover when the dasher is removed therefrom.

2. In an ice cream freezer, an outer tub having opposite slots near its upper edge, a cream can and a removable dasher mounted in the tub and connected for

joint revolution, the dasher having a square upper end, a handle having a square socket to fit over the upper end of the dasher, an upwardly bowed brace fitting in the slots in the tub and having a central opening to permit of the passage of the stem of the handle, said stem having opposite lateral lugs, and means on the cam to engage said lugs to revolve the can when the dasher is removed therefrom.

3. In an ice cream freezer, an outer tub, a cream receiving can revolubly mounted therein, said can having in its lower end a squared socket, a cover having a locked engagement with the upper end of said can, said cover having therein a centrally disposed passage, a flange arranged around said passage, said flange having formed therein oppositely disposed notches, inner and outer dasher members arranged in said can, means to operatively connect said inner dasher member with the can whereby said parts are revolved in unison, a tubular shank formed on said outer dasher member, a squared extension formed on the upper end of said inner dasher and projecting above the tubular shank of said outer member, a bracing bar adapted to be secured at its ends in the sides of said tub, said brace bar having formed therein a rectangular passage adapted to receive the rectangular portion of the tubular extension of the outer dasher member whereby said member is held against turning, a cover arranged on said outer tub, said cover having formed therein a passage to receive the extended end of the inner dasher member, a handle having a squared socket adapted to be engaged with the extension of said inner dasher member whereby the latter and the cream receiving can are revolved, and lugs formed on the socket of said handle and adapted to be engaged with the notches in the flange of the cover on the can whereby the latter may be turned when the dasher members are removed therefrom.

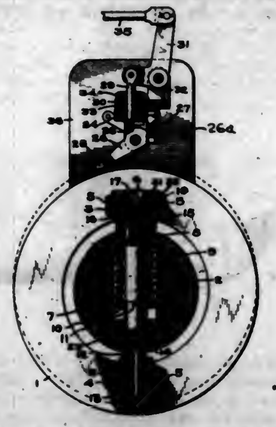
1,017,495. GAS-GENERATOR. RAYMOND BELLAMY, Moores Hill, Ind. Filed Nov. 18, 1911. Serial No. 661,064. (Cl. 48—45.)



1. A device of the class described, comprising a receptacle, a removable closure therefor, said closure being provided with a restricted outlet, a foraminous bowl-shaped member disposed within said receptacle, means to raise and lower the same, and means on said bowl-shaped member for closing the restricted outlet when the same is raised.

2. A device of the class described, comprising a receptacle, a closure therefor, a tube mounted in said closure having the lower end thereof disposed a short distance within said receptacle, a rod slidably mounted in said closure, a bowl-shaped member mounted on the lower end of said rod, and a sleeve member mounted within said bowl-shaped member and adapted to receive the lower end of said tube to close the same when said rod is raised.

1,017,496. HIGH-SPEED EMERGENCY-GOVERNOR. FRED W. BENTLEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 6, 1910. Serial No. 570,560. (Cl. 121—112.)



1. In an emergency governor, the combination with a shaft having a diametrically located chamber therein, of a rod passing through said chamber, a spring in said chamber acting on said rod, rings surrounding said shaft, blocks connecting said rings and having holes to receive said rod, and means mounted in one of the blocks for moving said rod lengthwise to adjust the tension of said spring.

2. In an emergency governor, the combination with a rotatable shaft having an approximately diametrical hole therethrough, a rod arranged in the hole that is of less diameter than said hole and has its ends projecting beyond the periphery of the shaft, a sleeve mounted on the shaft and having oppositely disposed holes in its walls that are accurately located on a diameter of the shaft and sleeve and in which the ends of the rod are mounted, a ring-shaped member mounted on the rod that surrounds the shaft and has its mass unequally distributed with respect to the axis of the shaft, and a spring that opposes the movement of said member.

3. In an emergency governor, the combination with a shaft, having an approximately diametrical hole therethrough, of a longitudinally movable rod passing through said hole, a collar on said shaft having holes accurately located diametrically opposite and receiving said rod, and rings surrounding said shaft and mounted on said rod.

4. In an emergency governor, the combination with a shaft having a transverse chamber therein, of a rod passing through said chamber, a spring in said chamber acting on said rod, a weight in said chamber disconnected from said rod and acting to balance the mass of the spring, and rings surrounding the shaft and mounted on said rod.

5. In an emergency governor, the combination with a shaft having a transverse chamber therein, of a spring in said chamber, a screwthreaded rod passing through said chamber and engaging with said spring, rings surrounding said shaft, blocks connecting said rings and having holes for said rod, and a nut engaging one end of said rod and bearing on one of said blocks, for regulating the tension of said spring.

[Claims 6 to 13 not printed in the Gazette.]

1,017,497. ARC-LIGHT ELECTRODE. EDWARD R. BERRY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 6, 1909. Serial No. 511,520. (Cl. 176—136.)

1. An arc light electrode, containing a preponderating amount of titanium carbid and an admixture of chromium carbid.

2. A titanium carbid electrode, having distributed through its mass a small percentage of chromium carbid as a restrainer.

3. An arc light electrode material consisting of a titanium carbid mixture, and about one-half to five per cent. of chromium carbid.

4. An arc light electrode material consisting of ninety-five and one-half per cent. of titanium carbid mixture and four and one-half per cent. of chromium carbid.

5. An arc-light electrode containing a preponderating amount of non-oxidized titanium compound, and an admixture of non-oxidized chromium compound.

1,017,498. PISTON FOR EXPLOSIVE-ENGINES. JOHN BITTNER, Newcastle, Ind. Filed Feb. 7, 1911. Serial No. 607,101. (Cl. 121—104.)

1. A piston comprising a hollow body, a head detachably fitted to and closing the hollow body and having a portion projecting therein, a rod, the projecting portion of the head and the rod having transversely registering openings, and a pin passing through the openings of the head and rod and connecting the latter to the former and adapted to be retained in place by the inner walls of the hollow body.

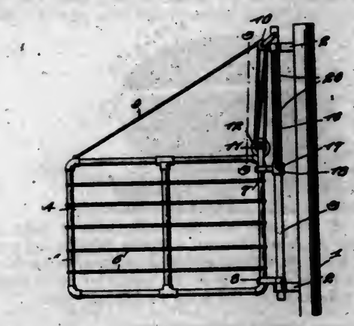
2. A piston comprising a hollow body having an end portion internally threaded, a head having a portion overlapping an end of the hollow body and having a portion externally threaded to make screwthread connection with the threaded end portion of the hollow body, said head having projecting portions upon its inner side, a rod, and a pin passing through registering openings formed in the rod and projecting portions of the head to connect the rod to the latter, said pin adapted to be held in place by the inner walls of the hollow body.

1,017,499. GATE. EDWIN BLY, Kenyon, Minn. Filed Oct. 30, 1911. Serial No. 657,557. (Cl. 39—19.)

1. A gate construction comprising a supporting post, a swinging gate slidably mounted thereon, means to raise and lower said gate, and means to prevent the swinging of said gate except at predetermined points on the supporting post.

2. In a gate construction, the combination with a post having longitudinal slot therein, said post being also provided with a lateral slot communicating with the longitudinal slot; of a swinging gate slidably mounted on said post, means to raise and lower said gate, and means carried on the gate entering the vertical slot guide said gate in its vertical movement, said latter means being also adapted to enter the lateral slot of the post when brought into registration therewith to allow said gate to be swung.

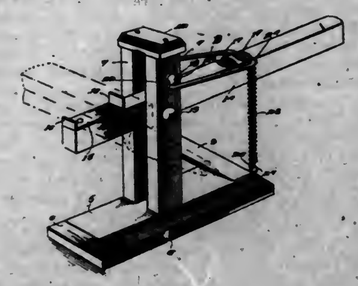
3. In a gate construction, the combination with a post having a vertical slot therein and also provided with a lateral slot communicating with the vertical slot; of a gate slidably arranged on said post, means to raise and lower said gate on the post, and a stem carried on said gate and normally entering the vertical slot of said post to guide the gate in its vertical movement, said stem being also adapted to enter the lateral slot of the post when brought into registration therewith.



4. In a gate construction, the combination with a post having a vertical slot therein; of a swinging gate slidably mounted on said post, means to raise and lower said gate, means carried on the gate entering the vertical slot of the post to prevent the swinging movement of the gate during the sliding movement thereof, and additional means in connection with said slot to allow said gate to be swung at predetermined points on the post.

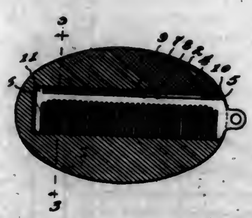
5. In a gate construction, the combination with a post, a hollow bar carried thereby and spaced therefrom, said bar being provided with a vertical slot and also having a lateral slot in communication with the vertical slot; of a gate provided with sleeves slidably arranged on said bar, means to raise and lower said gate on the bar, and a stem carried on one of said sleeves normally entering the vertical slot of the bar to guide the gate in its vertical movement thereon, said stem being also adapted to enter the lateral slot of the post when brought into registration therewith to allow said gate to be swung on the bar.

1,017,500. WAGON-JACK. AMOS BOSEAG, Cambridge, Ill. Filed Jan. 30, 1911. Serial No. 605,504. (Cl. 57—43.)



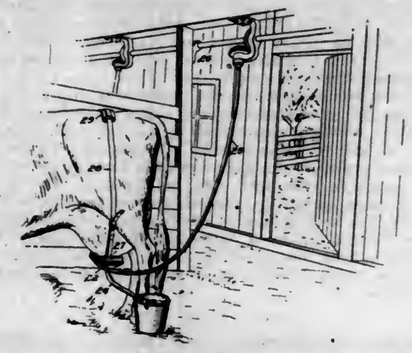
A lifting jack comprising a base, a pair of standards carried thereby, a shaft carried by said standards, a lifting lever pivotally supported between said standards by said shaft, a work holding plate on the upper surface of the forward end of said lever, said lever having the upper surface of its rear portion provided with spaced transverse inclined notches, a pivot bolt carried by said standards above said lever, a loop-shaped dog having end hooks pivotally connected to the ends of said bolt, removable abutments carried by said standards for preventing accidental release of said hooks from said bolt, and a spring connection between said dog and said base for normally holding the dog in engagement with one of said notches.

1,017,501. COMBINED COMB AND BRUSH. CARMINE BOCCIA, New York, N. Y. Filed June 20, 1911. Serial No. 634,254. (Cl. 132—11.)



A device of the class described comprising a head, a comb slidably mounted thereon, a spring bearing against the comb to resist the sliding movement thereof, and means on the comb adapted to engage the spring so as to limit the sliding movement of the comb in one direction.

1,017,502. MILKING-MACHINE. CHRISTOPHER BOKALRUD, McIntosh, S. D. Filed June 9, 1911. Serial No. 632,160. (Cl. 31—96.)



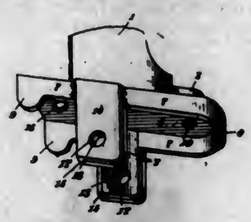
1. A milking machine comprising pressure plates yieldable supporting means for the pressure plates, means for relatively adjusting the yieldable supporting means to properly position the pressure plates and to regulate the space between them, a compressing device for advancing the pressure plates, and yieldable supporting means for the pressing means.

2. In a milking machine, the combination of a pair of pressure plates, yieldable supporting means therefor, one of the pressure plates having a concave recess in its outer side, and an eccentric compressing device to sweep across the concave depression of the pressure plates to gradually move the same toward the opposite pressure plate for gradually compressing the teat from base to point.

3. In a milking machine, the combination of a pair of pressure plates, slidably mounted blocks, yieldable connections between one of the pressure plates and the slidable blocks, yieldable and adjustable connecting means between the other pressure plate and the framework, other yieldable and adjustable connecting means between the slidable blocks and the framework, a shaft mounted in the said blocks, and an eccentric mounted upon said shaft and adapted to engage the adjacent pressure plate for gradually moving the same toward the companion pressure plate.

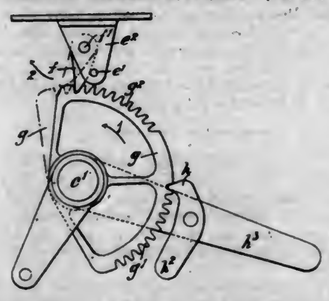
4. A milking machine comprising a framework embodying end plates and tie rods, a pressure plate mounted upon the tie rods, yieldable and adjustable connecting means between said pressure plate and an end plate of the frame, outer pressure plates mounted upon the tie rods, blocks slidably mounted upon the side tie rods, yieldable connections between said blocks and the outer ends of the adjacent pressure plates, a second block slidably mounted upon the intermediate tie rods, yieldable connecting means between the inner ends of the pressure plates and the intermediate slide block, yieldable and adjustable connecting means between the intermediate and side blocks and the adjacent end plate of the frame, a shaft mounted in the side blocks, and eccentrics mounted upon said shaft and having a diametric arrangement to alternately engage the outer pressure plates.

1,017,503. WAGON-STAKE. AARON BOLANDER, Barberton, Ohio, assignor to John H. Todd, Barberton, Ohio. Filed Nov. 7, 1910. Serial No. 590,975. (Cl. 21—54.)



In a device of the character described, a bolster, a bolster plate adapted to fit upon the upper face of the bolster and near the end thereof, a downwardly extended flange formed upon the bolster plate adapted for contact with the sides and end of said bolster, said flange provided with a depending portion on its outer end, downwardly extending ears, said downwardly extending ears provided with inward extended flanges, a wagon stake provided at its lower extremity with ears, said ears adapted for contact upon their inner edges with the inward extending flanges and a bolt located through the flanges of the bolster plate and the ears of the wagon stake and the bolster, substantially as and for the purpose specified.

1,017,504. BRAKE APPARATUS PARTICULARLY APPLICABLE TO RAILWAY-WAGON BRAKES. GEORGE BARKER BOWLES, Forest Gate, London, England. Filed Nov. 27, 1908. Serial No. 464,779. (Cl. 188—40.)



1. Means for automatically adjusting a brake block, comprising a toothed member for transmitting power to the brake block, a movable brake operating member, a pawl carried by the brake operating member and adapted to engage and operate the toothed member, a stationary support adjacent to the toothed member, an anchoring pawl pivoted to the said support so that it can turn between said support and the toothed member after the manner of a toothed wheel but cannot move endwise, said anchoring pawl being arranged to slide upon one tooth of the ratchet member while the brake block is properly adjusted, to automatically ride over the said tooth when the block requires readjustment and to turn backward with backward motion of the toothed member, and a stop

to limit the extent of backward turning movement of said anchoring pawl and toothed member.

2. Means for automatically adjusting a brake block, comprising a toothed member for transmitting power to the brake block, a movable brake operating member, a pawl carried by the brake operating member and engaging the toothed member, a stationary support adjacent to the toothed member, an anchoring pawl pivoted to the said support so as to be capable of turning thereon but not of moving endwise, said anchoring pawl gearing with said toothed member and being of less effective length than the shortest distance between its center of motion and the bottom of the space between two teeth of said toothed member, and a stop arranged to permit of limited backward turning movement of said anchoring pawl and toothed member.

3. Means for automatically adjusting a brake block, comprising a toothed member for transmitting power to the brake block, a movable brake operating member, a loaded pawl carried by the brake operating member and engaging the said toothed member, a stationary support adjacent to the toothed member, a pivot pin carried by said support, an anchoring pawl mounted on said pivot pin so that it can turn thereon but cannot move endwise, said anchoring pawl normally hanging substantially in a vertical position and gearing after the manner of a toothed wheel with the teeth of the toothed member, and a fixed stop arranged to permit of a limited backward turning motion of said anchoring pawl and toothed member sufficient to prevent locking of the brake block after the anchoring pawl has slipped backward over the tooth that previously turned it in a forward direction, owing to predetermined wear of said block.

4. Means for automatically adjusting the brake blocks of a railway wagon, comprising, in combination, a shaft, an operating lever thereon, a ratchet quadrant on said shaft, an operating pawl pivoted to said lever and engaging the ratchet quadrant, a stationary bracket adjacent to the ratchet quadrant, a pivot pin carried by said bracket, an anchoring pawl mounted to turn but not to move endwise upon said pin and gearing with the teeth of said ratchet quadrant so as to turn therewith after the manner of a toothed wheel and permit of retractile movement of the quadrant after said anchoring pawl has slipped backward over one tooth and engaged the next, and a fixed stop arranged to arrest the anchoring pawl and quadrant after the same have turned backward to a sufficient extent to prevent locking of the brake block in the "on" position after re-adjustment of said quadrant to compensate for wear, substantially as described.

5. Means for automatically adjusting the brake blocks of a railway wagon, comprising, in combination, a shaft, a ratchet quadrant on said shaft, a lever mounted on the said shaft, a weighted operating pawl pivoted to the said lever and engaging the ratchet quadrant, a stationary bracket adjacent to the ratchet quadrant, a pivot pin carried by said bracket, an anchoring pawl mounted to turn but not to move endwise on said bracket and gearing with said ratchet quadrant, said anchoring pawl being of less effective length than the radial distance between the axis of said pin and the bottom of the space between two teeth of the quadrant, and a fixed stop for limiting backward motion of the anchoring pawl and quadrant, the teeth of the ratchet quadrant engaged by said anchoring pawl being undercut as set forth.

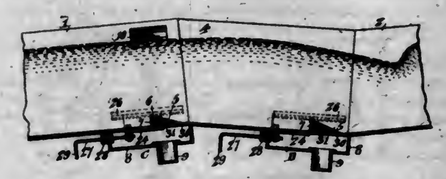
1,017,505. IGNITER. MICHAEL BRANDSTÄTTER, Vienna, Austria-Hungary. Filed July 19, 1911. Serial No. 639,267. (Cl. 158—10.)

1. An igniting device for hearths, stoves and the like, comprising a vessel for the igniting liquid fuel, said vessel having an opening in its bottom, a pipe or sleeve centrally arranged on said vessel and projecting upward from said opening, a grate formed from a spirally wound wire in a cap like shape covering said vessel, ears connected with the said vessel and grate, and a detachable handle adapted to seize the said ears, substantially as described.

2. An igniting device for hearths, stoves and the like, comprising a vessel, a grate covering said vessel, a pipe or sleeve on the vessel, ears connected with the vessel and grate, the ear (7) of the grate encircling the ear (4) of the vessel, and a handle (8) for simultaneous seizing the said two ears, substantially as described.

3. An igniting device for hearths, stoves and the like, comprising a vessel, a grate covering said vessel, a pipe or sleeve on the vessel, ears connected with the vessel and grate, a handle for seizing the two ears, one end of said handle being bent so that when it is in engagement with the device, the handle will be substantially vertical, and the other end being bent so that when it is in engagement with the device, the handle will be substantially horizontal.

1,017,506. BLACK-SAND-SEPARATING MACHINE. JACOB M. BURCH, Wallace, Idaho, assignor of one-fourth to John Lafors, Wallace, Idaho. Filed Oct. 6, 1909. Serial No. 521,417. (Cl. 83—89.)



1. In combination, a continuous series of sluice sections all declining in the same direction, sections of moderate declination alternating directly with sharply declining sections to constitute a series of alternating retarding and accelerating sections, said series being free from uprising portions in the path of the current, the declination and length of the accelerating sections being such as not to disturb the stratification, and collecting means for the heavier material located in proximity to points of deflection between the sections.

2. In combination, a continuous series of sluice sections all declining in the same direction, sections of moderate declination alternating directly with sharply declining sections to constitute a series of alternating retarding and accelerating sections, said series being free from uprising portions in the path of the current, the declination and length of the accelerating sections being such as not to disturb the stratification, and collecting means for the heavier material located in proximity to points of deflection between the sections, the sluice sections being of substantially V-shape throughout with the angle lowermost and the collecting means each comprising a receptacle beneath the angle bottom of the section communicating with said section through an opening therein, and a grizzly for each receptacle covering the opening through which the bottom of the sluice section communicates with said receptacle.

3. In combination, a continuous series of sluice sections all declining in the same direction, sections of moderate declination alternating directly with sharply declining sections to constitute a series of alternating retarding and accelerating sections, said series being free from uprising portions in the path of the current, the declination and length of the accelerating sections being such as not to disturb the stratification and all of the sections contract-

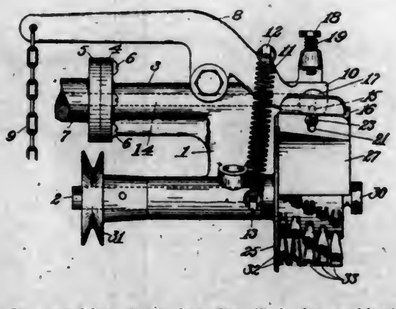
ing in width toward the bottom, and collecting means for the heavier material located in the contracted bottom portion of the sections in proximity to points of deflection between the sections.

4. In combination, a continuous series of sluice sections all declining in the same direction, sections of moderate declination alternating directly with sharply declining sections to constitute a series of alternating retarding and accelerating sections, said series being free from uprising portions in the path of the current, the declination and length of the accelerating sections being such as not to disturb the stratification, grizzlies in proximity to points of deflection between the sections, and receptacles for material passing through the grizzlies underriding such grizzlies.

5. A sluice trough having separated declining sections with connecting declining sections of greater pitch, all the sections being free from uprising portions in the path of the current, grizzlies at the ends of the several trough sections, and means for conducting water from the tail ends of the separated sections of the trough to and discharging the same beneath the grizzlies at the tail end of each main section and of the next adjacent intermediate section in order.

[Claims 6 to 19 not printed in the Gazette.]

1,017,507. CEMENTING-MACHINE. ROBERT J. BURNS, Avon, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 9, 1908. Serial No. 461,696. (Cl. 91—39.)



1. In a machine of the class described, the combination of a distributer and means for delivering coating material obliquely across the face of said distributer.

2. In a machine of the class described, the combination of a distributer and means for delivering a sheet of coating material obliquely across the face of said distributer.

3. In a machine of the class described, the combination of a distributer and means for delivering a sheet of coating material to the face of the distributer, the plane of said sheet being oblique to said face.

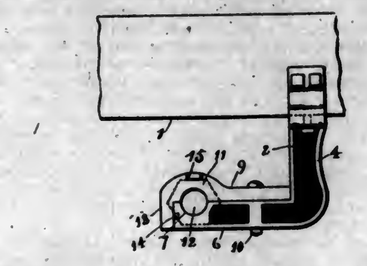
4. In a machine of the class described, the combination of a distributer, means for delivering coating material obliquely across the face of said distributer and means for regulating the thickness of the coating.

5. In a machine of the class described, the combination of a rotary distributer and means for delivering coating material obliquely across the face of said distributer.

[Claims 6 to 16 not printed in the Gazette.]

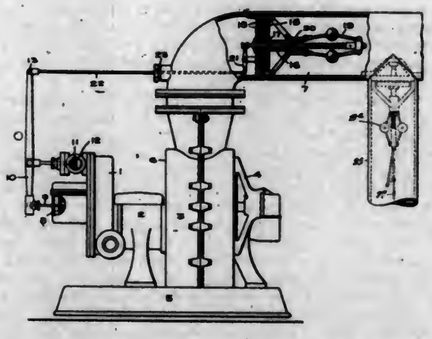
1,017,508. TRAIN-LINE HANGER. JACOB D. CALLAHAN, Jersey Shore, Pa. Filed Nov. 2, 1911. Serial No. 658,256. (Cl. 188—8.)

A device for supporting train pipes comprising a fixed bracket member having a laterally projecting portion with a recess in its upper edge for the reception of the train pipe, a second member having an angled portion extending abont the end of said bracket member and having a recess registering with the recess in said bracket arm, and a single laterally projecting lug upon the face thereof



directly above the recesses for the reception of the train pipe, as set forth.

1,017,509. GOVERNING MECHANISM FOR CENTRIFUGAL APPARATUS. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 20, 1909. Serial No. 497,152. (Cl. 230—24.)



1. In combination, a centrifugal apparatus, a motor for driving it, a regulator for the motor, a means driven by the motor for actuating the regulator, and a speed-responsive device driven by the fluid that passes through said apparatus for modifying the action of the regulator.

2. In combination, a centrifugal apparatus, a motor for driving it, a regulator for the motor, a primary means driven by the motor for controlling the action of the regulator, and a secondary means acted upon by the flowing fluid after it has passed through and been discharged from the said apparatus which coöperates with the primary means to determine the effective action of the regulator.

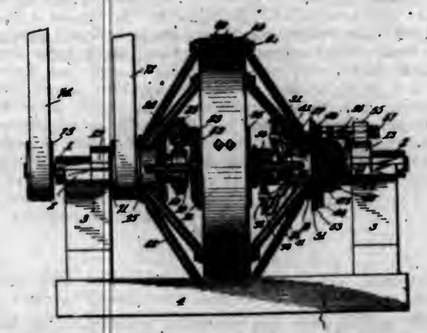
3. In combination, a centrifugal air compressor, a motor for driving it, a regulator for the motor, a speed governor driven by the motor which acts on the regulator, a rotating volumetric governor, the speed and volumetric governors acting together to determine the position of the regulator, and a free running rotor for driving the volumetric governor which is driven by the air that passes through the compressor.

4. In combination, a centrifugal apparatus, a motor for driving it, a regulator for the motor, a conduit receiving fluid discharged by said apparatus, a speed-responsive device located in said conduit, a means for rotating the device, and means for transmitting movements of the said device to the regulator.

5. In combination, a centrifugal apparatus, a motor for driving it, a speed governor driven by the motor, a regulator for the motor that is actuated by the governor, a conduit receiving fluid from said apparatus, a speed-responsive device in said conduit, and means actuated by said device which modifies the action of the governor on the regulator.

[Claims 6 to 8 not printed in the Gazette.]

1,017,510. ELECTRIC MOTOR. FLOYD W. CASTERLINE, Tipton, Iowa. Filed Jan. 9, 1911. Serial No. 601,639. (Cl. 172—36.)



1. In an electric motor, a rotatable armature, a rotatable field surrounding the armature, gearing between the armature and field for causing relative rotation thereof in opposite directions, a commutator for the armature carried thereby, a collecting ring rotatable with the armature, a brush holder and mounting therefor preventing rotative movement of the brush holder with the armature, brushes carried by the brush holder and bearing on the commutator and collecting ring, respectively, a duplex commutator carried by and rotatable with the field, and separate brushes for each member of the duplex commutator.

2. In an electric motor, two alined tubular supports, journal blocks mounted for rotation on said supports, a field structure secured to said journal blocks, an armature within the field, a shaft carrying the armature and extending through the tubular supports, bearings for the shaft exterior to the tubular supports, a commutator for the armature mounted on the shaft between the armature and one of the tubular supports, and a commutator mounted on one of the journal blocks supporting the field structure.

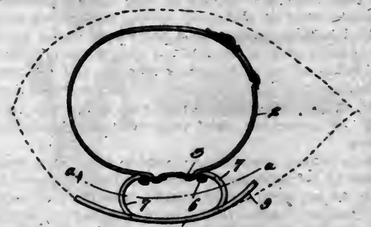
3. In an electric motor, oppositely rotatable field and armature members each having electro-magnets, a commutator and collecting ring associated with the armature member and electrically connected to the magnets thereof, brushes in operative relation to the commutator and collecting ring, respectively, a commutator rotatable with the field member and electrically connected with the magnets thereof, brushes in operative relation to the field commutator, an electrical connection between one brush of the field commutator and the brush of the armature commutator, and other connections to the external terminals of the motor from the other brush of the field commutator and the brush of the collecting ring.

4. In an electric motor, a stationary support, a rotatable armature member journaled on the support, a rotatable field member journaled on the support, commutators carried, respectively, by the armature and field members, a collecting ring carried by one of the members, brush holders associated with the members and both mounted on the support, brushes on one of the holders bearing on one of the commutators, and brushes on the other holder bearing, respectively, on the remaining commutator and the collecting ring.

5. In an electric motor, a stationary tubular member, a rotatable armature member associated therewith and having a commutator, a rotatable field member journaled on the tubular member and having a commutator also also journaled on the tubular member, a brush holder for the armature commutator secured to the tubular member between the field commutator and the armature member, and a brush holder for the field commutator.

[Claims 6 to 14 not printed in the Gazette.]

1,017,511. TROUSERS-LEG HOLDER. JAMES F. CAVANAGH, Philadelphia, Pa. Filed Aug. 2, 1911. Serial No. 641,893. (Cl. 2—126.)



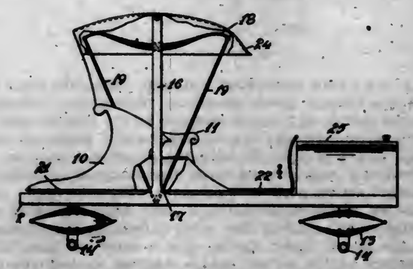
1. A trousers leg holding device of the class described embodying an elastic bar, a leg engaging device, and means for connecting the said bar and the leg engaging device, said connecting means being spaced from the ends of the bar, spacing the bar from the leg engaging device and holding the bar in a substantially horizontal position.

2. A trousers leg holding device of the class described embodying an elastic bar provided with elastic fingers at its ends, a leg engaging device and means connecting the said bar and the leg engaging device, said connecting means being spaced from the ends of the bar, spacing the bar from the leg engaging device and holding the bar in a substantially horizontal position.

3. A trousers leg holding device of the class described embodying an elastic bar, a leg engaging device and elastic means connecting the said bar and the leg engaging device, said elastic connecting means being spaced from the ends of the bar, spacing the bar from the leg engaging device and holding the bar in a substantially horizontal position.

4. A device of the class described comprising a band to engage the leg of the user, clip plates counected to and adjustable on the band, an elastic bar to bear against the inner side of a trousers leg, and elastic attaching devices between the clip plates and the bar to space the latter from the clip plates and yieldingly support said bar.

1,017,512. VEHICLE-SPRING. GEORGE CONDERMAN, Hornell, N. Y. Filed Jan. 15, 1909. Serial No. 472,408. (Cl. 21—50.)



1. A vehicle frame comprising strip metal in rectangular form for a supporting platform, strip metal in the form of an arch attached to said platform at each side, leaf springs on said arch, and a vehicle body supported by said leaf springs.

2. A vehicle comprising a horisontal portion to form a supporting platform, an upright portion in the form of an arch rigidly attached to said horisontal portion at each side, a vehicle body, leaf springs on said upright

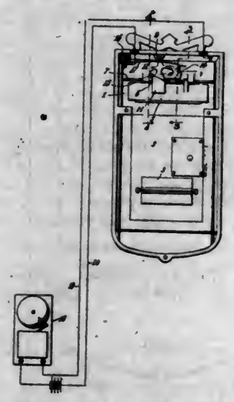
portion a leaf spring on the under side of said vehicle body and attached thereto, and connecting rods from said leaf springs on said upright portion to said leaf spring on said vehicle body.

3. A vehicle comprising a horizontal supporting frame portion, an upright arch portion attached to said horizontal portion at each side, a top frame on said upright portion, leaf springs on said upright portion, a vehicle body having a leaf spring on its under side, and connecting rods from said springs on said upright portion to the opposite ends of said body spring to support said body.

4. A vehicle comprising a horizontal frame portion 12, an upright arch portion 16 on said horizontal portion, a top frame 23 on said upright portion, leaf springs 18 attached to the opposite sides of said upright portion, a body 10, a leaf spring 20 on said body, and connecting rods 19 attaching said leaf springs, substantially as shown.

5. A vehicle comprising a vehicle body 10, a supporting frame 12 for said body, vehicle springs 13 on said frame, axles 14 supporting said vehicle, wheels 15 on said axles, an upright frame 16 on said supporting frame, leaf springs 18 on said upright frame at each side, connecting rods 19 at each end of said leaf spring, a leaf spring 20 on said vehicle body and attached to the lower ends of said connecting rods at each side, additional leaf springs 21 and 22 on said body and frame to steady said body, and a top supporting frame 23 on said upright having a suitable top thereon, substantially as and for the purpose specified.

1,017,513. ELECTRIC-ALARM MAIL-BOX. JAMES H. CORBETT, Jr., Syracuse, N. Y., assignor, by mesne assignments, to Edward M. Worden, Salem, Va. Filed Aug. 10, 1910. Serial No. 576,441. (Cl. 177—301.)



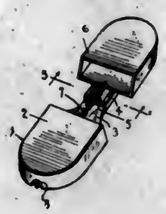
1. An alarm mechanism for mail boxes including an alarm circuit, a pendulum contact forming one terminal of the circuit, and means operated by the introduction of mail matter into the box to oscillate said pendulum contact, and a member forming the remaining terminal of the circuit and designed to be engaged by the pendulum contact during oscillation.

2. An alarm mechanism for mail boxes including an alarm circuit, a pendulum contact forming one terminal of the circuit and a spring strip forming the remaining terminal of the circuit, means adapted to oscillate the pendulum contact upon introduction of mail matter into the box and a pin carried by the pendulum contact to engage the strip during the oscillation of said contact.

3. The combination with a mail box including a slot closing plate of a pendulum supported in the box, means carried by the plate to engage and oscillate the pendulum in the opening movement of the plate and an alarm circuit designed to be closed by the successive oscillations of the pendulum.

4. The combination with a mail box including a mail slot closing plate, a pendulum supported within the box, a spring strip secured within the box and projecting adjacent the pendulum, a finger carried by the plate to engage and oscillate the pendulum in the opening movement of the plate, a pin carried by the pendulum to intermittently engage the strip during the oscillation of the pendulum and an alarm circuit having its terminals electrically connected to the strip and pendulum.

1,017,514. EYEGLASS-CASE. ERVIN S. COY, Tacoma, Wash. Filed Apr. 21, 1911. Serial No. 622,621. (Cl. 24—13.)



1. An eye glass case comprising a pocket, a cap supporting bar formed thereon, a cap slidably and hingedly mounted on said bar, a spring to yieldingly connect said cap with said pocket and means to attach the case to a garment.

2. An eye glass case comprising a pocket, a cap supporting bar formed thereon, a combined hinge and attaching plate slidably engaged with said supporting bar, a cap hingedly connected to said attaching plate, and a spring connected to said cap and pocket whereby the cap is retracted and held in yielding engagement with the glasses when the latter are in said pocket.

1,017,515. AWNING-BRACKET. LOUIS A. DAUS, Evansville, Ind. Filed Feb. 21, 1911. Serial No. 609,898. (Cl. 156—15.)

1. In an awning of the class described, the combination of an arm for holding the awning in extended condition, and a bracket for supporting said arm at different inclinations comprising a fixed member, and a head connected to the awning arm and having means for centering and locking it adjustably and reversibly at either side of said fixed member.

2. In an awning of the class described, the combination of an arm for holding the awning in extended condition, and a bracket for said arm comprising a fixed member having centering and locking devices formed at opposite sides thereof, and a pair of heads, one head being connected to said arm and both heads having means to interchangeably interlock with and center themselves relatively to the locking devices at opposite sides of said member.

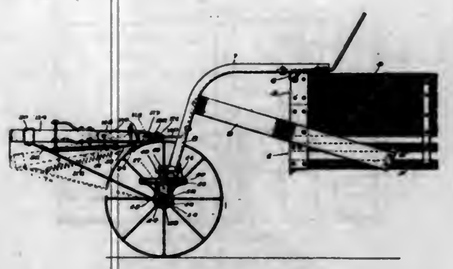
3. In an awning of the class described, the combination of an arm for holding the awning in extended condition, and a bracket for rigidly supporting said arm at different inclinations comprising a fixed bracket member having an opening therein the walls of which form locking devices, and a member having means for connecting it to said arm and interlocked with the locking devices of the fixed bracket member.

4. In an awning of the class described, the combination of an arm for holding the awning in extended condition, and a bracket for supporting the arm comprising a fixed member having reversely tapered walls formed in its opposite sides, and a pair of heads capable of being reversibly applied to and clamped against said walls, one of said heads having means for connecting said arm thereto.

5. In an awning of the class described, the combination of an arm for holding the awning in extended condition, and a bracket for adjustably supporting said arm comprising a relatively fixed member formed with a flange, said flange having an opening therethrough the walls of which are tapered toward opposite sides of the flange and formed with circumferentially spaced teeth, a pair of heads having correspondingly tapered and toothed peripheries and fitted into said opening from the opposite sides of said flange, one of said heads being connected to said arm, and means connecting said heads and operative to hold said heads in positive locked relation to said fixed member.

[Claim 6 not printed in the Gazette.]

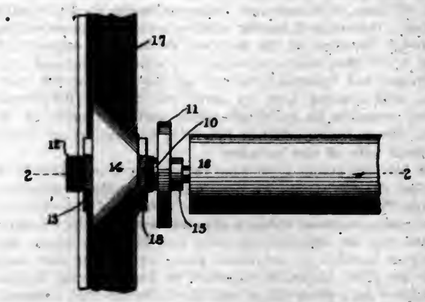
1,017,516. FORE TRUCK FOR VEHICLES. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Oct. 11, 1911. Serial No. 654,032. (Cl. 21—63.)



1. A fore truck for vehicles including, in combination, a truck axle, a bolster member, said axle being connected with said bolster member in a manner permitting it to turn about a vertical axis and to rock about the longitudinal axis thereof relative to said bolster member, a draft tongue having its rear end connected with said bolster member in a manner permitting said tongue to swing laterally and to rise and fall at its front end relative to said bolster member, a truck frame member having the rear end thereof secured to said axle and its front end slidably connected with said draft tongue, and a counterbalancing spring having its front end connected with the front end of said truck frame member and its opposite end with said draft tongue.

2. A fore truck for vehicles including, in combination, a truck axle, a bolster member, a circular bolster plate secured to said bolster member, a circular axle plate having depending leg portions spaced apart in the direction of the length of said axle and provided with saddle portions adapted to receive said axle in a manner permitting a rocking movement thereof, a draft tongue having its rear end connected with said bolster member in a manner permitting said tongue to swing laterally and to rise and fall at its front end relative thereto, a truck frame member having its rear end secured to said axle between the depending legs of said axle plate, a yoke slidably mounted upon said tongue and having the front end of said truck frame member secured thereto, and a counterbalancing spring having its front end connected with the front end of said truck frame member and the opposite end thereof with said draft tongue.

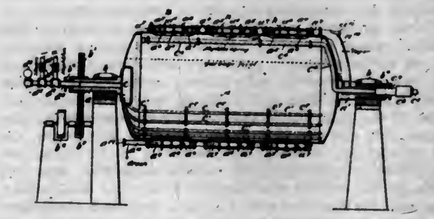
1,017,517. ROLLER-TRUCK. JAMES A. DODD, Muskogee, Okla. Filed May 13, 1911. Serial No. 626,904. (Cl. 101—71.)



1. In a device of the class described a tubular body adapted to receive a roller stock therethrough and provided with screw threads on the periphery thereof, a beveled roller mounted to threadedly engage the said tubular body and operable over the screw threads thereof and means operable over the screw threads on the said body for adjusting the said roller relatively to the said body.

2. In a device of the class described, the combination of a tubular body having a circular guide flange integrally formed at one end thereof, the other end of the said body being threaded, a plurality of locking nuts threadedly mounted on the said body and spaced apart, and a beveled roller threadedly engaging the said body between the said locking nuts, the said roller being operable on the said body and adapted to be rigidly positioned on the body by the said locking nuts, the said roller being adapted to operate on the beveled frame of a printing press.

1,017,518. APPARATUS FOR EXTRACTING GREASE AND OILS. CHARLES EDGERTON, Philadelphia, Pa. Filed June 15, 1911. Serial No. 633,216. (Cl. 87—6.)



1. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and an attached filtering and straining inner diaphragm parallel to the outer plate, of smaller size than the marginal frame, a plurality of fixed spacing devices between said outer plate and the filtering and straining diaphragm distributed along the surface of the same, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm and fastening devices for the cover of the opening.

2. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and an attached filtering and straining inner

diaphragm parallel to the outer plate, of smaller size than the marginal frame, a plurality of fixed spacing devices between said outer plate and the filtering and straining diaphragm distributed along the surface of the same, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said opening with its cover and filtering diaphragm being repeated in an alined series and each made of oblong shape whose greatest length is parallel to the longitudinal axis of the cylinder.

3. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and an attached filtering and straining inner diaphragm parallel to the outer plate, of smaller size than the marginal frame, a plurality of fixed spacing devices between said outer plate and the filtering and straining diaphragm distributed along the surface of the same, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm and fastening devices for the cover of the opening, said opening with its cover and filtering diaphragm being repeated in alined series and each made of oblong shape whose greatest length is parallel to the longitudinal axis of the cylinder, the branch connection between the off-take pipe and each oblong opening being made at a plurality of points along the side of each opening.

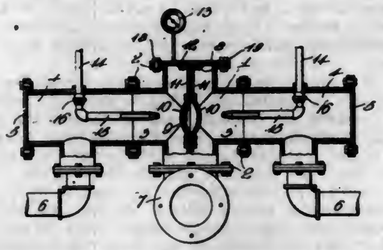
4. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and a filtering and straining inner diaphragm parallel to the outer plate, fixed spacing devices between said outer plate and the filtering and straining diaphragm, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said off-take pipe being extended outside of the end of the casing down to and communicating with a hollow trunnion.

5. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and a filtering and straining inner diaphragm parallel to the outer plate, fixed spacing devices between said outer plate and the filtering and straining diaphragm, and an off take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said off take pipe being extended outside of the end of the casing down to and communicating with a hollow trunnion and a calvert spray pipe extended concentrically through said trunnion and bent up to lie parallel to and within the upper wall of the casing.

[Claims 6 to 18 not printed in the Gazette.]

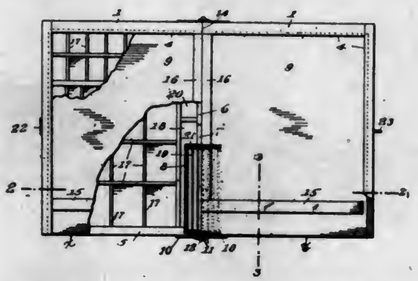
1,017,519. CONDENSER. WILLIAM F. EDWARDS, Ashland, Ohio. Filed Apr. 24, 1911. Serial No. 622,908. (Cl. 62—25.)

The herein described condenser comprising a body consisting of a four-way member having annular attaching flanges on its arms, two of the latter being horizontal and the other two upright, steam pipes connected with the horizontal arms, a discharge pipe connected with the lower upright arm and adapted to be led to the suction end of a pump, water pipes opening through the upper sides of the horizontal arms and having nozzles at their inner ends directed toward each other, a top plate removably bolted to the flange of the uppermost upright arm, and a deflector or baffle having flanges secured to the lower



side of said plate, said deflector depending into the uppermost arm and filling it laterally and standing between said nozzles, all substantially as described.

1,017,520. TYPE-CASE. BENJAMIN O. FANSLOW, Williamsport, Pa., assignor to Polygraph Duplicating Typewriter Company, New York, N. Y., a Corporation of New York. Filed May 11, 1909. Serial No. 495,305. (Cl. 101—149.)



1. A folding type-case comprising two frames, a removable cover for each of said frames, and means for hinging the two frame-parts together so that contiguous edges of the covers may be held from separation when the case is closed.

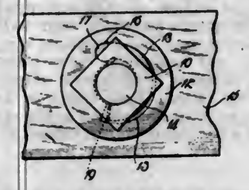
2. A type-case comprising two frame-portions, hinges applied to the outside of said frame-portions and having vertically-extending parts, and a cover for each of said frame-portions held in place by flanges of the latter and one of the hinges.

3. A type-case comprising two frame-portions hinged together, said case being provided, near one of its hinges, with a receptacle for a type-stick, and said hinge having a projecting portion for engaging said stick to prevent it from slipping from the case.

4. A type-case comprising two portions hinged together, each being provided with overhanging retaining flanges, a cover for each of said portions of a size to slide under and be retained by said flanges leaving a recess above said covers bounded by said flanges, the flanges of each portion coöperating the one with the other when the portions of the case are folded upon their hinges and brought together as to produce a chamber between said portions in which articles may be carried.

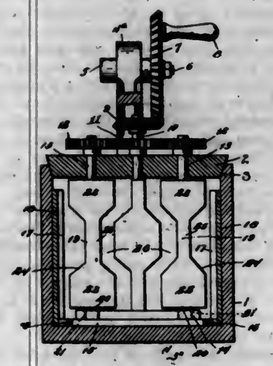
5. A type-case composed of two parts having overhanging flanges at its top and along opposite sides, in combination with a two-part cover coöperating with portions of said flanges, and hinges for movably securing the two parts of the type-case together, one of said hinges coöperating with edges of the two covers, whereby said covers will be held closely down upon the type-case under the said flanges and against the said hinges.

1,017,521. NUT-LOCK. JOHN L. FARNES, Rexburg, Idaho, assignor of one-fourth to David Athay and Leon J. Findlay, Salt Lake City, Utah, and one-fourth to Matthew H. Farnes, Logan, Utah. Filed June 18, 1909. Serial No. 502,955. (Cl. 151—41.)



In a nut lock, a washer having a bolt opening therethrough and an arcuate aperture at one side communicating with the bolt opening throughout a portion of its circumference and terminating at one end in a circular enlargement, a stop pawl corresponding in shape to said arcuate aperture and terminating at one end in a circular head adapted to be engaged in the circular enlargement of said aperture whereby the pawl is held out of the bolt opening, the other end of said pawl extending above the surface of the washer, said pawl being provided upon its lower face intermediate its length with a transversely extending rib, and a nut bearing upon said washer and provided with a plurality of radial recesses to be engaged by the extended terminal of the pawl.

1,017,522. CHURN. SAMUEL E. FELIS, Keokee, Va., assignor to Russell P. Cooper, Keokee, Va. Filed July 1, 1911. Serial No. 636,384. (Cl. 31—44.)

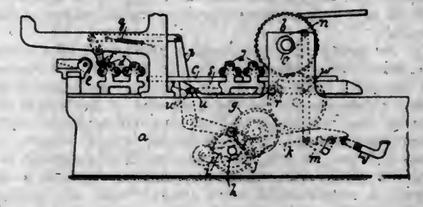


1. In a churn, the combination of a receptacle, a removable base plate therein, a central dasher blade carried by the base member and provided with an enlarged central portion, side dasher blades having reduced central portions, and means for rotating all of the dasher blades, the enlarged central portion of the dasher blade passing the side dasher blades at the reduced portion of the latter.

2. In a churn, the combination of a receptacle having grooved guide ways, of a base member adapted to slide in and be retained by the guide ways, a central dasher blade, and side dasher blades journaled at their lower end portions in said base member, said central dasher blade being arranged to turn between the side dasher blades a cover for the churn, shafts for the dasher blades extending through the cover, and gearing for rotating all of said shafts.

1,017,523. PRINTING-PRESS. GEORGE P. FENNER, New London, Conn. Filed Oct. 11, 1911. Serial No. 654,019. (Cl. 101—78.)

1. In a printing press, the combination with an impression cylinder, a reciprocating type bed, and inking devices, mechanism for automatically elevating and lowering the impression cylinder, a lever adapted to be actuated by the cylinder mechanism for operating the inking devices; and a rod connected to the lever and coöperating with the cylinder mechanism for preventing movement of the lever when the cylinder is elevated.

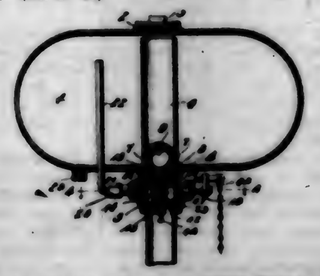


2. In a printing press, the combination with an impression cylinder, a reciprocating type bed, and inking devices, mechanism for automatically elevating and lowering the impression cylinders, a lever adapted to be actuated by the cylinder mechanism for operating the inking devices; a rod connected to the lever and coöperating with the cylinder mechanism for preventing movement of the lever when the cylinder is elevated, and means for adjusting the rod to move it out of operation with the cylinder mechanism while the cylinder is elevated.

3. In a printing press, the combination with an impression cylinder, a reciprocating type bed, and inking roller, a ductor roller, and ink distributing rollers, mechanism for automatically elevating and lowering the impression cylinder, a lever connected to the ductor roller and operated by the cylinder mechanism; a rod connected to the lever, a device carried by the cylinder mechanism and coöperating with the rod for preventing movement of the ductor roller when the cylinder is elevated, and means for adjusting the rod to move it out of coöperation with the cylinder mechanism for bringing the ductor roller into operation.

4. In a printing press, the combination with an impression cylinder, a reciprocating type bed, a fountain roller, a ductor roller, and ink distributing rollers, mechanism including a link for automatically elevating and lowering the impression cylinder, a lever connected to the the ductor roller and operated by the cylinder mechanism; a rod connected to the lever, a device carried by the link and coöperating with the rod for preventing movement of the ductor roller when the cylinder is elevated, and means for adjusting the rod to move it out of coöperation with the link to bring the ductor roller into operation.

7,017,524. FLUSH-TANK. ROBERT GEORGE FERGUSON, Lakewood, N. J. Filed May 1, 1911. Serial No. 624,320. (Cl. 4—5.)



1. The combination with an air tight flush tank provided with a threaded opening in its bottom, of a nipple threaded into said opening and projecting into the tank, the inward projecting portion of the nipple being formed into a float-valve seat and being externally threaded, a vertical valve casing within the tank, extending from

...diaphragm parallel to the outer plate, of smaller size than the marginal frame, a plurality of fixed spacing devices between said outer plate and the filtering and straining diaphragm distributed along the surface of the same, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said opening with its cover and filtering diaphragm being repeated in an alined series and each made of oblong shape whose greatest length is parallel to the longitudinal axis of the cylinder.

3. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and an attached filtering and straining inner diaphragm parallel to the outer plate, of smaller size than the marginal frame, a plurality of fixed spacing devices between said outer plate and the filtering and straining diaphragm distributed along the surface of the same, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said opening with its cover and filtering diaphragm being repeated in alined series and each made of oblong shape whose greatest length is parallel to the longitudinal axis of the cylinder, the branch connection between the off-take pipe and each oblong opening being made at a plurality of points along the side of each opening.

4. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and a filtering and straining inner diaphragm parallel to the outer plate, fixed spacing devices between said outer plate and the filtering and straining diaphragm, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said off-take pipe being extended outside of the end of the casing down to and communicating with a hollow trunnion.

5. An extraction apparatus comprising a rotatable horizontal casing having an opening in its side, a marginal frame for said opening projecting outside of the plane of the casing, a cover for said opening consisting of an outer plate and a filtering and straining inner diaphragm parallel to the outer plate, fixed spacing devices between said outer plate and the filtering and straining diaphragm, and an off-take pipe arranged longitudinally to the casing outside thereof and having a branch connection extending through the edge of the marginal frame and communicating with the space between the outer plate and diaphragm, and fastening devices for the cover of the opening, said off-take pipe being extended outside of the end of the casing down to and communicating with a hollow trunnion and a solvent spray pipe extended concentrically through said trunnion and bent up to lie parallel to and within the upper wall of the casing.

[Claims 6 to 16 not printed in the Gazette.]

1,017,519. CONDENSER. WILLIAM F. EDWARDS, Ashland, Ohio. Filed Apr. 24, 1911. Serial No. 622,908. (Cl. 62—32.)

The herein described condenser comprising a body consisting of a four-way member having annular attaching flanges on its arms, two of the latter being horizontal and the other two upright, steam pipes connected with the horizontal arms, a discharge pipe connected with the lowermost upright arm and adapted to be led to the suction end of a pump, water pipes opening through the upper sides of the horizontal arms and having nozzles at their ...upper plate resting upon upright arm... to the lower

...side of said plate, said nozzles depending into the uppermost arm and being ... and standing between said nozzles, all ... as described.

1,017,520. TYPE-CASE. ...AMUEL O. FARNLOW, Williamsport, Pa., assignor to Duplicating Typewriter Company, New York, N. Y., a Corporation of New York. Filed May 11, 1910. Serial No. 495,905. (Cl. 163—149.)

1. A folding type-case comprising two frames, a removable cover for each of said frames, and means for hinging the two frames together on their contiguous edges of the covers may be held from separation when the case is closed.

2. A type-case comprising two frame-portions, hinges applied to the outside of said frame-portions and having ...ding parts and a cover for each of said frame-portions held in place by ... of the latter and one of the hinges.

3. A type-case comprising two frame-portions hinged together, said cases being provided, near one of its hinges, with a ... a cover-rib, and said hinge having a projecting portion for engaging said notch to prevent it from slipping from the notch.

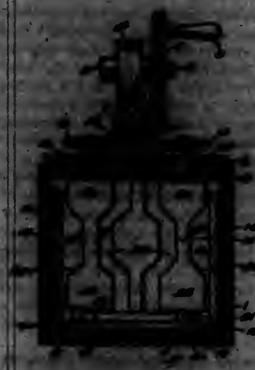
4. A type-case comprising two portions hinged together, each being provided with projecting ... retaining flanges, a cover for each of said portions ... a plate to slide under and be retained by said flanges, leaving a recess above said cover bounded by said flanges, the flanges of each portion ... the other when the portions ... their hinges and brought together in a position ... between said portions in which position they are ...

5. A type-case comprising ... having overhanging flanges at the top, and ... sides, in combination with a ... for ... securing the two parts of the ... whereby said covers will be held closed, ... type-case under the said flanges and against the said hinges.

1,017,521. ... Idaho, assignor of ... to David Athey and Leon J. ... Salt Lake City, Utah, and one-fourth to ... Utah. Filed June 18, 1909. ... (Cl. 151—41.)

In a ... lock, a washer having a bolt opening therethrough and an irregular aperture at one side communicating with ... opening throughout a portion of its circumference and terminating at one end in a circular enlargement, a ... corresponding in shape to said arcuate aperture and terminating at one end in a circular head adapted ... to the circular enlargement of said aperture whereby the pawl is held out of the bolt opening, the other end of said pawl extending above the surface of the washer, said pawl being provided upon its lower face ... with a transversely extending rib, ... washer and provided with a ... to be engaged by the extended ... of the pawl.

1,017,522. CHURN. ... Keokee, Va., assignor to ... Russell P. Cooper, Keokee, Va. Filed July 1, 1911. Serial No. 636,384. (Cl. 31—44.)

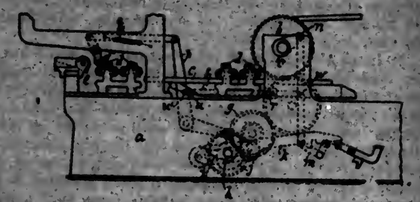


1. In a churn, the combination of a receptacle, a removable ... plate thereto, a central dasher blade carried by the base member and provided with an enlarged central portion, side ... having reduced central portions, and means for ... all of the dasher blades, the enlarged central portion of the dasher blade passing the side ... in the reduced portion of the latter.

2. In a ... the combination of a receptacle having grooved guide ways, of a base member adapted to slide in and be ... by the guide ways, a central dasher blade, and side ... formed at their lower end portions in said base member, said central dasher blade being ... to have between the side dasher blades a cover ... the shafts, shafts for the dasher blades extending ... cover, and gearing for rotating all of said shafts.

1,017,523. ... New London, Conn. Filed Oct. 11, 1911. Serial No. 654,019. (Cl. ...—76.)

1. In a ... the combination with an impression cylinder, a ... type bed, and inking devices, mechanism for automatically elevating and lowering the impression cylinder, a lever adapted to be actuated by the cylinder mechanism for operating the inking devices; and a rod connected to the lever and coöperating with the cylinder mechanism for preventing movement of the lever when the cylinder is elevated.

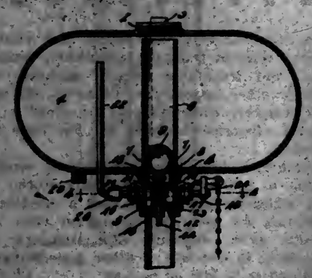


2. In a printing press, the combination with an impression cylinder, a reciprocating type bed, and inking devices, mechanism for automatically elevating and lowering the impression cylinders, a lever adapted to be actuated by the cylinder mechanism for operating the inking devices; a rod connected to the lever and coöperating with the cylinder mechanism for preventing movement of the lever when the cylinder is elevated, and means for adjusting the rod to move it out of operation with the cylinder mechanism while the cylinder is elevated.

3. In a printing press, the combination with an impression cylinder, a reciprocating type bed, and inking roller, a ductor roller, and ink distributing rollers, mechanism for automatically elevating and lowering the impression cylinder, a lever connected to the ductor roller and operated by the cylinder mechanism; a rod connected to the lever, a device carried by the cylinder mechanism and coöperating with the rod for preventing movement of the ductor roller when the cylinder is elevated, and means for adjusting the rod to move it out of coöperation with the cylinder mechanism for bringing the ductor roller into operation.

4. In a printing press, the combination with an impression cylinder, a reciprocating type bed, a fountain roller, a ductor roller, and ink distributing rollers, mechanism including a link for automatically elevating and lowering the impression cylinder, a lever connected to the the ductor roller and operated by the cylinder mechanism; a rod connected to the lever, a device carried by the link and coöperating with the rod for preventing movement of the ductor roller when the cylinder is elevated, and means for adjusting the rod to move it out of coöperation with the link to bring the ductor roller into operation.

7,017,524. FLUSH-TANK. ROBERT GEORGE FERGUSON, Lakewood, N. J. Filed May 1, 1911. Serial No. 624,320. (Cl. 4—5.)



1. The combination with an air tight flush tank provided with a threaded opening in its bottom, of a nipple threaded into said opening and projecting into the tank, the inward projecting portion of the nipple being formed into a float-valve seat and being externally threaded, a vertical valve casing within the tank, extending from

near the top thereof and threaded upon the inward projection of the nipple, a float valve in the casing adapted to engage the seat, a vertical, spring retracted plunger slidably mounted in the nipple, a valve seat formed in the nipple, a valve slidable on the plunger and normally held up against the seat, and means for raising the plunger and thereby simultaneously raising the float valve off its seat and pressing the supplemental valve against its seat.

2. In an air tight flush tank, a discharge nipple having its inner end projecting into the tank, a seat formed on the inner upper end of said nipple, a valve cage in the tank, rigidly secured to the inner end of the nipple and having near its lower end an annular series of water discharge passages, a valve in the casing adapted to normally rest on said seat and close said discharge passages, a spring retracted plunger slidably mounted in the nipple, a supplemental valve slidable upon said plunger and normally held closed by the spring, a crank shaft revolubly mounted on said nipple, means on the shaft projecting into the nipple into engagement with the plunger whereby when the shaft is rocked the plunger will be raised and the valve on the upper end of the nipple lifted from its seat and the supplemental valve raised into contact with its seat and means whereby the vacuum caused by the discharge of the water from the tank is broken.

3. In an air tight flush tank, a discharge nipple connected to and projecting into the tank, a valve seat formed on the projecting inner end of the nipple, an automatically closing valve adapted to engage said seat, a spring retracted plunger adapted to lift said valve from its seat, a bearing sleeve formed on said nipple and communicating therewith, a crank shaft revolubly mounted in said sleeve, said shaft having in one end an air passage, a plunger engaging member arranged on said shaft, and adapted to engage and rest on said plunger and thereby lift said valve from its seat, an air pipe extending into said tank and connected at its outer end with one end of said bearing sleeve adjacent to the end of the crank shaft having said passage whereby air is permitted to pass into the tank thereby breaking the vacuum therein when the water is discharged and a check valve arranged in said air pipe.

1,017,525. RAILROAD-TRACK. WALTON FERGUSON, JR., Stamford, Conn., and ALBERT W. BOEL, New York, N. Y. Filed June 5, 1911. Serial No. 631,310. (Cl. 238—3.)

1. An interchangeable monolithic unit section or element for a railroad track superstructure, comprising longitudinal and transverse metallic members incased in concrete or other cementitious material, the longitudinal metallic members being adapted to afford a practically continuous support or bearing for the rails throughout their length.

2. An interchangeable monolithic unit section or element for a railroad track superstructure, comprising metallic stringers adapted to afford a practically continuous bearing for the rails throughout their length and reinforcing bars connecting said stringers, the whole being incased in concrete or other cementitious material and adapted to be laid on ballast.

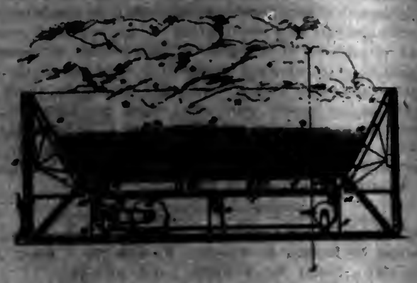
3. An interchangeable monolithic unit section or element for a railroad track superstructure, comprising metallic stringers and reinforcing bars connecting said stringers, the whole being incased in concrete or other cementitious material and adapted to be laid on ballast and means for holding the rails on said stringers.

4. An interchangeable monolithic unit section or element for a railroad track superstructure, comprising metallic stringers adapted to form a practically continuous support for the rails, relieving the rails of the bending stresses, and reinforcing bars connecting said stringers, said stringers and reinforcing bars being incased throughout their length in concrete or other cementitious material.

5. An interchangeable monolithic unit section or element for a railroad track superstructure, comprising metallic stringers, and reinforcing bars connecting said stringers, said stringers being incased throughout their length and partly through their height in concrete, the reinforcing bars being wholly incased in said concrete.

[Claims 6 to 9 not printed in the Gazette.]

1,017,526. AMUSEMENT APPARATUS. YATES FERBACK, White Hall, Ill. Filed Sept. 5, 1911. Serial No. 647,626. (Cl. 46—71.)



1. An amusement structure of the character described, comprising a base, upwardly and outwardly inclined walls arranged upon the edges of said base and having their inner surfaces prepared to represent the sky, said base having a reflective upper surface, and a platform extending above said base in parallel relation thereto.

2. An amusement structure of the character described, comprising a base and inclosing wall therefor extending above the horizon line, said base having a reflective upper surface, sky simulating means arranged within said wall, and a platform arranged above said base.

3. An amusement structure of the character described, comprising a base, upwardly and outwardly inclined walls arranged upon the edges of the base and extending above the horizon line, said walls being prepared upon their inner surfaces to symbolize the sky and to provide what appears to be a continuation thereof, and a platform movable between the end walls and disposed above the base in parallel relation thereto.

4. An amusement structure of the character described, comprising a base having a mirrored surface, upwardly and outwardly inclined side and end walls arranged upon the edges of the base having their inner surfaces prepared to represent the sky, a movable platform extending above said base in parallel relation thereto, and means for preventing a person stationed on said platform from observing his reflection in the mirrored surface of the base.

5. An amusement structure of the character described, comprising a base having a mirrored surface, upwardly and outwardly inclined side and end walls arranged upon the edges of the base and provided with a plurality of star-shaped openings, the inner surfaces of said walls being prepared to represent the sky and form what appears to be a continuation thereof, said walls extending above the line of the horizon, electric light bulbs arranged behind the openings in said walls, a movable platform extending over said base in spaced relation thereto, said platform extending from one end wall to the other, means arranged adjacent to the edges of the platform to prevent a person stationed thereon from seeing his reflection in the mirrored surface of the base, and rails arranged at opposite sides of the platform.

[Claims 6 to 8 not printed in the Gazette.]

1,017,527. ELECTRIC-LINE SWITCH. FRANK FISHER, Roslyn, Wash. Filed Dec. 1, 1909. Serial No. 530,560. (Cl. 175—322.)

In a device of the class described, a supporting frame, a plurality of standards of insulating material spaced apart and arranged in pairs, said pairs being located at the terminals of the frame and at intermediate points thereon, clamp devices carried by said terminal standards, line wires coupled to said terminal clamp devices at one end, electric contacts carried by said terminal clamp devices at the opposite ends, two arms pivoted at opposite sides of said frame and in alinement with said terminal standards, electric contacts carried by said arms and engaging respectively with the contacts of said standards, a lever arm mounted in said frame, a segment carried by said frame and over which said lever arm operates, connecting means between said lever arm and said contact carrying arm, and means for coupling said lever to said segment.

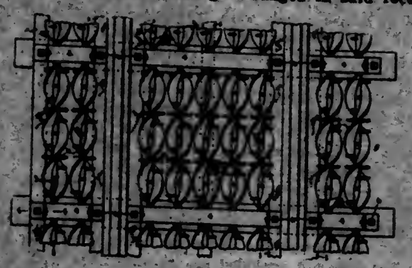
2. In a device of the class described, a supporting frame, line wires connected to said frame and each provided with an electric contact, an arm mounted to swing upon said frame and provided with electric contacts at its ends adapted to be engaged with and disengaged from the contacts of said line wires, a conductor element between the contacts of said swinging arm, a standard carried by said frame, a lever arm swinging from said standard, a segment carried by said frame and over which said lever arm operates, connecting means between said lever arm and said swinging contact carrying-arm, and means for coupling said lever arm to said segment.

1,017,528. LOCK-WASHER. WILLIAM H. FRY, Tuscola, Ill. Filed Dec. 15, 1909. Serial No. 533,196. (Cl. 151—50.)

A nut locking washer formed in a single piece of resilient metal and having aligning projections on one face forming diametrically arranged knife edges constituting bearings for engaging a structure, there being a segment projecting from the other face of the washer and gradually increasing in thickness from one end to the other, all portions of the segment being located at one side of the line of the projections and the straight edge of said segment being arranged substantially parallel with said line.

1,017,529. CATTLE-GUARD. JOACHIM GABRIELSEN, Grastilleger, Iowa. Filed May 22, 1911. Serial No. 628,615. (Cl. 20—42.)

A cattle guard for railways comprising a series of stringers secured to the ties of the railway, a series of transversely disposed lower cross bars secured to said stringers, said bars having formed therein bearing recesses, a series of upper bars arranged above and secured to said lower bars and having formed in their lower faces bearing recesses, casings arranged in said recesses



to form annular ball races, bearing balls arranged in said races, a series of guard axles, and grooved wheels fixed on the ends of said axles and adapted to engage the balls in said races.

1,017,530. HOOK. NATHANIEL C. GARLAND, Chase City, Va. Filed Sept. 23, 1910. Serial No. 583,460. (Cl. 248—22.)

In a device for the purpose set forth a pair of hook members, one of said hook members being provided with an eye, the second member having one of its ends upset to engage with the eye, a disk having a centrally arranged elongated slot normally resting upon the eye of the first named hook member and having the upset portion of the second named hook member pass through the elongated slot substantially as and for the purpose set forth.

1,017,531. PUBLIC SIGNAL. MARK S. GIBSON, Girard, Pa. Filed Jan. 25, 1910. Serial No. 540,053. (Cl. 40—76.)

1. In a sign structure, a movable sign member provided at opposite ends with trunnions, a disk fixed upon one of said trunnions and provided with a notch in the periphery thereof, an arm provided adjacent the disk and provided on its outer end with a lug adapted to lockingly engage within the said notch, means for moving the sign member to inoperative position upon the releasing of the

locking arm, actuating means for said locking arm, movable sign indicating means, and means connecting the said actuating means to the sign indicating means.

2. In a sign structure, a movable sign member provided at opposite ends with trunnions, a disk fixed upon one of said trunnions and provided with a notch, said disk having a jaw projecting therefrom, an arm pivoted adjacent the disk and provided on its outer end with a lug adapted to lockingly engage within the said notch, means for moving the sign to inoperative position upon the releasing of the locking arm from said notch, and movable means coöperating with the said jaw and arm to set and release the movable sign member.

3. In a sign structure, a movable sign member provided at opposite ends with trunnions, a disk fixed upon the said trunnions and provided with a notch, said disk having a jaw projecting therefrom, an arm pivoted adjacent the disk and provided on its outer end with a lug adapted to engage within the said notch, a trip arm projecting from said arm adjacent the pivot and provided on its outer end with a lug, a movable member adapted upon movement in one direction to engage the lug of the trip arm to release said lug from the disk notch, and movable in the opposite direction for engagement with the said jaw to move the sign member to set position, means for moving the sign to inoperative position upon the releasing of the locking lug, actuating means for said movable member.

4. In a sign structure, a movable sign member, movable sign locking means, means for moving the sign to inoperative position upon release of said locking means, a vertically movable element, devices carried by said element adapted to coöperate with the locking means and the movable sign member to release and set said member, and actuating means for said vertical moveable element.

5. In a sign structure, a movable sign member provided at opposite ends with trunnions, a disk fixed upon one of said trunnions and provided with a notch, said disk having a jaw projecting therefrom, an arm pivoted adjacent the disk and provided on its outer end with a lug adapted to lockingly engage within said notch, a trip arm projecting from said arm, means for moving the sign to inoperative position upon the releasing of the lug from said notch, a vertically movable element, devices carried by said element and coöperating with the said trip arm and the said jaw respectively to release and set the movable sign member, and actuating means for said vertical element.

[Claims 6 and 7 not printed in the Gazette.]

1,017,532. HOSE-REEL. RALPH W. GLENN, Fruitvale, Cal. Filed Apr. 22, 1911. Serial No. 622,742. (Cl. 242—86.)

1. A hose reel consisting of a cylindrical shell having a circumferential spiral groove, and inner handles by which it may be manually raised and revolved free of other support.

2. A reel comprising in combination a drum having a continuous spiral groove formed on its outer peripheral surface, means for attaching a hose near one terminal of said spiral groove, and handles by which the drum may be manually raised and revolved free of other support to wind the hose in said spiral groove.

3. A reel comprising in combination a drum having a continuous spiral groove formed on its outer peripheral surface, means for attaching a hose near one terminal of said spiral groove, a bar diametrically disposed in said drum and attached at each end thereto, and a hand-hold mounted on each side of said bar, one of said hand-holds being situated on one side of the axial line of said drum and the other hand-hold situated on the other side of the axial line.

1,017,533. ATOMIZING-NOZZLE. JOSEPH E. J. GOODLETT, Memphis, Tenn. Filed May 17, 1911. Serial No. 627,869. (Cl. 137—58.)

1. In an atomizing nozzle, a liquid supply head provided with atomizing nozzles, an air supply head, and air conduits movable within said atomizing nozzles and provided with valve heads adapted to open and close the latter.

2. An atomizing nozzle, comprising a liquid supply casing provided with a bank of atomizing nozzles, a bank of air conduits movably mounted in said casing and provided with air nozzles and valve heads in coöperative relation to said atomizing nozzles, and operating mechanism for moving and adjusting said air nozzles and valve heads.

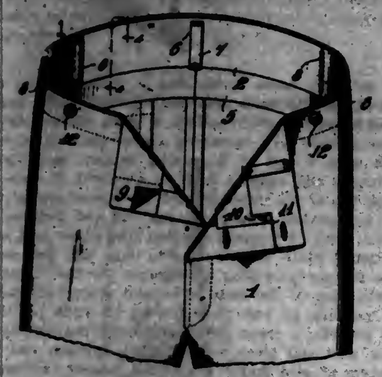
3. An atomizing nozzle, comprising a liquid supply body provided with a bank of atomizing nozzles, a bank of air pipes slidably mounted in said liquid supply body and provided with tapered nozzles disposed within said atomizing nozzles, valve heads carried by said tapered nozzles and adapted to open and close said atomizing nozzles, and means for moving and adjusting said bank of air pipes.

4. An atomizing nozzle, comprising a liquid supply chamber provided with atomizing nozzles, bonnet members and packing nuts at the rear of said nozzles, an air chamber member provided with air conduits mounted in said bonnet members and provided with tapered nozzles extending within said atomizing nozzles and forming annular liquid supply passages therein, a rocking member provided with a handle, and link and crank mechanism connecting said rocking member to said air chamber member.

1,017,534. WHEELWRIGHT-MACHINE. ALLEN DAVIS GOSETT, Burleson, Tex. Filed Oct. 4, 1910. Serial No. 585,286. (Cl. 81—57.)

The combination in a device such as described, of a table, blocks secured to the upper side thereof and arranged in spaced parallel relation to each other, a plate connecting the upper edges of the said blocks, the said plate being bent upwardly near one end to produce an abutment for the tire of a wheel, a pivot movable through a slot formed in said plate for engagement with the hub of a wheel, a shaft journaled between the blocks, an operating crank attached to one end of the shaft, a pinion keyed to the opposite end of the shaft, bearings formed upon the upper side of the plate, a shaft longitudinally movable in these said bearings, a pinion slidably keyed to the longitudinally movable shaft and engaging the first mentioned pinion and held in engagement therewith by the bearings, a protector secured to the plate and surrounding the pinions, a nut engaging head upon one end of the movable shaft, spaced collars carried by the opposite end of the movable shaft, a rod slidable below said table, an arm extending vertically therefrom through a slot formed in the table and engaging the collars, a treadle pivoted below the table, a chain connecting the treadle with the movable rod, a sprocket wheel engaging the chain and a spring located upon the movable rod, substantially as and for the purposes set forth.

1,017,535. CONVERTIBLE WAISTBAND. ROBERT W. GRAHAM, York, Pa. Filed Mar. 30, 1911. Serial No. 618,014. (Cl. 2—142.)



1. A garment having a convertible waist band secured intermediate its width to said garment at the upper end thereof and suspender attaching means on one face of said band.

2. A garment having a convertible waist band comprising a member secured intermediately of its width to said garment at the upper end thereof, suspender supporting elements secured to one face of said band and belt supporting means on its other face.

1,017,536. SILENCER FOR INTERNAL-COMBUSTION ENGINES. MARK FRANK GRAYDON, Trenton, Ontario, Canada. Filed Oct. 9, 1911. Serial No. 653,730. (Cl. 121—116.)

1. In a silencing device for internal combustion engines having an exhaust pipe, a valve seat secured to the exhaust pipe, a spider secured to the valve seat, a valve, a stem on said valve slidably mounted in the spider, and means for holding the valve in a normal closed position against the valve seat and an expansion casing having a dome shaped top and an exhaust aperture below said top, as and for the purpose specified.

2. In a silencing device for internal combustion engines having an exhaust pipe, a valve seat embracing the discharge end of said exhaust pipe, a spider secured to the inner upper edge of said valve seat and extending within said exhaust pipe, a valve, a stem on said valve slidably mounted in said spider, a pin passing through the end of said stem, and a spring bearing against said pin at one end and against said spider at the other end adapted for holding the valve in normally closed position against the valve seat and an expansion casing having a dome shaped top and an exhaust aperture below said top.

3. In a silencing device for internal combustion engines, the combination with the exhaust pipe and muffler, of a subsidiary silencer comprising a hollow valve seat secured to the exhaust pipe, a spider formed in the interior of the valve seat, a valve above the valve seat, a stem extending below the valve and slidably mounted in the spider, and a spring mounted on the stem for holding the valve in a normally closed position against the valve seat and an expansion casing having a dome shaped top and an exhaust aperture below said top as and for the purpose specified.

4. In a silencing device for internal combustion engines, the combination with the exhaust pipe and muffler, of a subsidiary silencer comprising a hollow valve seat secured to the exhaust pipe and having an enlarged externally threaded portion at the top thereof, a spider formed in the interior of the valve seat, a valve above the seat, a stem extending below the valve and slidably mounted in the spider, and a spring mounted on the stem for holding the valve in a normally closed position against the valve seat and an expansion casing having a dome shaped top and an exhaust aperture below said top as and for the purpose specified.

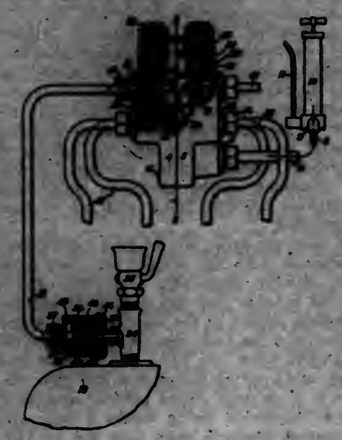
5. A subsidiary silencer for internal combustion engines comprising a hollow valve seat secured to the exhaust pipe and having an enlarged externally threaded portion at the top thereof, a spider formed in the interior of the valve seat, a valve above the seat, a stem extending below the valve and slidably mounted in the spider, and a spring mounted on the stem for holding the valve in a normally closed position against the valve seat and an expansion casing having a dome shaped top and an exhaust aperture below said top as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,017,537. COMBINED CAP AND SOCKET WRENCH USED ON AND IN CONNECTION WITH VALVES OF PNEUMATIC TIRES FOR WHEELS. JOHN H. CROWELL, Vineyard Haven, Mass. Filed Feb. 9, 1911. Serial No. 607,656. (Cl. 152—12.)

A guide and shield for a socket wrench for valves of pneumatic tires, consisting of a cap having a body provided with a socket wrench projecting from the top of and in the axial line of said body, and having the exterior wall of said body prolonged longitudinally to constitute a tubular guide and shield annularly surrounding said wrench and extending beyond the outer end thereof, and arranged and adapted for longitudinal sliding movement on the end of a valve shell to retain said wrench in concentric engagement with the valve operating nut, and to be rotated on said valve shell in one direction to withdraw the valve and in the opposite direction to seat the valve.

1,017,538. ENGINE STARTING APPARATUS. EDWARD A. HALLBERG, Rochester, N. Y., assignor to Northeast Electric Company, Rochester, N. Y., a Corporation. Filed Apr. 12, 1911. Serial No. 620,683. (Cl. 123—180.)



1. An automatic selector for engine-starting apparatus having, in combination, valves for controlling the admission of air to the respective cylinders of an engine, said valves being movable into open position by pressure from the respective cylinders, and connections between the valves whereby movement of either valve to open position causes the movement of a plurality of the other valves to closed position.

2. An automatic selector for engine-starting apparatus having, in combination, three valves controlling the admission of air to as many cylinders of an engine, said valves being movable, respectively, into open position by pressure from the respective cylinders, and lever connections between the valves whereby movement of either valve to open position causes movement of the other two valves to closed position.

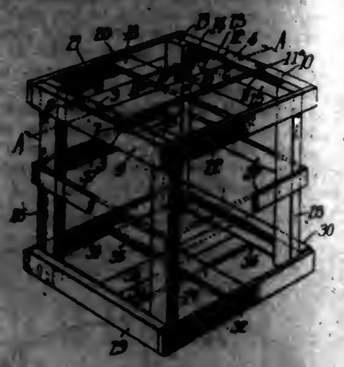
3. An automatic selector for engine-starting apparatus, having, in combination, three valves for controlling the admission of air to as many cylinders of an engine, said valves being movable, respectively, into open position by pressure from the respective cylinders, and a lever of generally-triangular form engaging the valves at the respective apices of the triangle and fulcrumed between said apices, so that the movement of either apex, by the operation of the valve engaging said apex, causes opposite movement of the other apices to close the other two valves.

4. An automatic selector for engine-starting apparatus having, in combination, a plurality of valves for controlling the admission of air to the respective cylinders of an engine, said valves being movable, respectively, into open position by pressure from the respective cylinders, and a polygonal lever engaging the valves at its apices and fulcrumed in the middle of its sides, so that movement of either apex by the opening of the corresponding valve causes opposite movement of the other apices to close the valves connected therewith.

5. Engine-starting apparatus having, in combination with an internal-combustion engine, a source of supply of combustible mixture, a casing provided with an inlet connected with said source of supply and a plurality of outlets connected, respectively, with three or more cylinders of the engine, a valve controlling each outlet and movable into open position by pressure from the corresponding cylinders, and mechanism connecting the valves whereby movement of either valve to open position closes a plurality of the other valves.

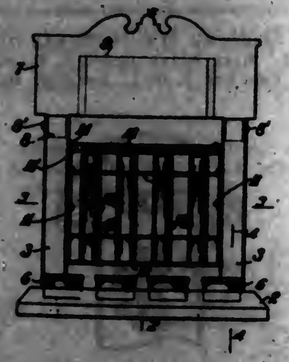
[Claims 6 to 8 not printed in the Gazette.]

1,017,539. SHIPPING-CRATE. GEORGE E. HALLABON, Chicago, Ill. Filed Oct. 19, 1910. Serial No. 587,963. (Cl. 217—66.)



A shipping crate comprising a frame having the end bars of its side walls provided on their inner faces with means to constitute supports, a plate secured to the top of one of said bars, extending across the support and provided with a pair of depending flanges, said plate with its flanges and support forming a pocket, a plate secured to the top of the other of said bars, overlapping the support and having a flange at one end and forming in connection with the support a pocket open at one end, said last-mentioned plate of less length than the first-mentioned plate thereby providing a clearance for the inserting and withdrawing of the ends of an end piece into and out of said pockets, an end piece having its ends positioned in said pockets, a cross piece extending transversely of and below said end piece and retained between the opposite members of said frame whereby a lateral shifting of the cross piece is arrested, and means for detachably securing said end piece and cross piece together for retaining the ends of the end piece in said pockets thereby closing that end of the frame provided with the pockets.

1,017,540. OIL-DISPLAY RACK. ABRAHAM WALTER HARRIS, Warwick, R. I. Filed Apr. 25, 1910. Serial No. 557,885. (Cl. 211—14.)



1. A display rack comprising a rotatable member, means for supporting said member, a plurality of transparent containers held in a parallel plane in said member and each having an open end, said containers being each partly filled with liquids of different density, said member comprising means for longitudinally clamping said containers so as to close the open ends thereof.

2. In a device for displaying and testing oils a base, a pair of vertical supports on said base, a rack pivotally mounted between said uprights for rotation therebetween, a plurality of transparent containers held in said rack in the same plane and means for longitudinally clamping said containers.

3. In a device for displaying and testing oils the combination of a base, a pair of vertical uprights on said base, a rack pivotally mounted between said uprights for rotation therebetween, a plurality of transparent containers in said rack and held in the same plane with each other, said containers being each partly filled with an oil of different density and means for longitudinally clamping said containers.

4. A device for displaying and testing oils comprising a base, a pair of vertical uprights on said base and supporting a display top, a rack pivotally mounted between said uprights for rotation therebetween and comprising an open top frame, a pair of perforated shelves supported in said frame, a plurality of transparent containers partly filled with oils of different densities set in said openings and arranged in the order of their densities and a top movably clamped to said frame and normally pressing upon the ends of said containers, substantially as and for the purpose specified.

1,017,541. TURPENTINE-CUP. HASKELL HARSEY, Andalusia, Ala. Filed Aug. 2, 1911. Serial No. 641,972. (Cl. 47—40.)

1. In a device of the character described, a gutter having a relatively movable portion, a cup having a portion disposed beneath the said relatively movable portion, and means connecting the gutter with the cup.

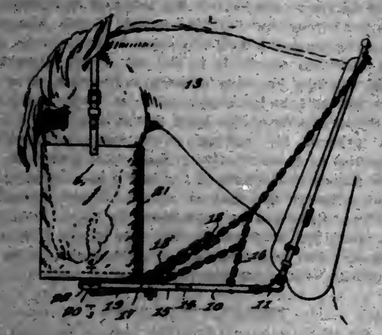
2. In a device of the character described, a gutter having a relatively movable portion, a cup having a portion disposed beneath the said relatively movable portion, and means detachably connecting the gutter with the cup.

3. A device of the character described comprising a gutter member, a cup member disposed therebeneath, hooks carried by the gutter member and provided with subtantially wedge shaped tongues, and eye members carried by the cup and adapted to receive the tongues of the hooks.

1,017,542. FEED-BAG HOLDER. COLBERT G. HAYHURST, Brooklyn, N. Y., assignor of one-third to George L. Clark, Hudson, N. Y. Filed Mar. 14, 1911. Serial No. 614,313. (Cl. 119—67.)

1. In a feed bag holder the combination of a rod, a hook mounted on the said rod and adapted to engage a harness, a sleeve mounted to turn on one end of the said rod, a feed bag mounted on the outer end of the said sleeve, a spring clasp secured to the said sleeve and engaging the said feed bag in removably position the same on the said sleeve, a chain secured to the said rod and extending over the horse's neck with the other end of the chain removably attached to the said sleeve and means for adjusting the length of the chain relatively to the said sleeve.

2. A feed bag holder comprising a rod for removable attachment to the hame of a harness, a sleeve mounted to turn at one end of the said rod, a feed bag releasably mounted at the outer end of the said sleeve and a chain connected to the said rod and extending over the horse's neck with the other end of the said chain releasably engaging the said sleeve to position the said bag relatively to the horse's head.

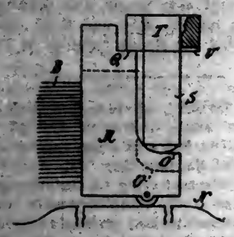


3. A feed bag holder comprising a rod, a snaffle hook mounted on the said rod and adapted to engage a harness, a sleeve mounted to turn on the said rod, a chain secured to the said rod and adapted to pass over the horse's neck with the other end of the chain releasably connected to the said sleeve, a hook on the said chain for securing the said chain to the said sleeve and retaining the same in relative locking engagement, a spring clasp formed on the under side of the said sleeve, a feed bag, and a loop formed on the under side of the said feed bag, the said feed bag being adapted to be attached to an end of the said sleeve with said loop encircling the said sleeve and the said spring being adapted for releasable engagement with the said loop, to relatively position the said feed bag on the said sleeve.

4. In a feed bag holder the combination of a rod for connection with the hame of a harness, a sleeve mounted at one end of the said rod, a feed bag mounted at one end of the said sleeve and a chain connected to the said rod and extending from the horse's neck with the other end of the said chain releasably connected to the said sleeve.

5. In a feed bag holder the combination of a rod, a hook mounted on the rod and adapted for engagement with the harness, a sleeve mounted at one end of the said rod, a feed bag mounted on the said sleeve and a chain secured to the said rod and extending over the horse's neck with the other end of the said chain connected to the said sleeve.

1,017,543. PROCESS FOR ROLLING SCREW-BOLTS. JULIUS HELLER, Vienna, Austria-Hungary, assignor to The Firm of Schrauben- und Schmiedewarenfabriks Aktiengesellschaft, Breviller & Co. und A. Urban & Söhne, Vienna, Austria-Hungary. Filed June 9, 1910. Serial No. 566,048. (Cl. 10—10.)



1. A process for rolling screw bolts consisting in causing dies to move relatively and parallel to each other at right angles to the axis of the bolt and in contact with the bolt whereby the bolt is caused to roll along both dies and in causing a knife to move in the course of the rolling operation relatively to the bolt in the direction

of its axis whereby an edge of such knife turns down the end of the bolt.

2. A process for rolling screw bolts consisting in causing the dies to move relatively and parallel to each othe at right angles to the axis of the bolt and in contact with the bolt whereby the bolt is caused to roll along both dies and in causing a knife to move in the course of the rolling operation relatively to the bolt in the direction of its axis whereby an edge of such knife turns down the end of the bolt and another edge of such knife turns down the underside of the head of the bolt.

3. A process for rolling screw bolts consisting in causing dies to move relatively and parallel to each other at right angles to the axis of the bolt and in contact with the bolt whereby the bolt is caused to roll along both dies and in causing a knife to move in the course of the rolling operation, relatively to the bolt in the direction of its axis and also in a direction at right angles to its axis, substantially as and for the purpose described.

1,017,544. TROUSERS. ABRAM HOFFMAN, Montreal, Quebec, Canada. Filed Apr. 24, 1911. Serial No. 622,998. (Cl. 2—143.)

1. In trousers, a pair of straps or belt sections permanently stitched between their ends to the side seams of the trousers, fastening means secured to the front ends of said straps for securing them together at the front of the waist line and fastening means for detachably securing said rear ends to the trousers.

2. In trousers, a pair of straps or belt sections permanently secured toward the rear ends thereof at the sides of the trousers forming flaps with button holes extending rearwardly from said fastening, said straps overlapping at their front ends, a plurality of buttons secured to the trousers to the rear of each of said fastenings of the straps to the trousers, and means atached to the front ends of the straps for fastening them over the trouser fly.

3. In trousers, a pair of straps or belt sections stitched to the side seams of the trousers above the side pocket line and forming a pair of end flaps from each side seam, said end flaps having fastening means therein, a plurality of fastening devices arranged in a row on the waist line to the rear of said side seams and coacting with said fastening devices on the said end flaps, and adjustable means for fastening the straps together at the front.

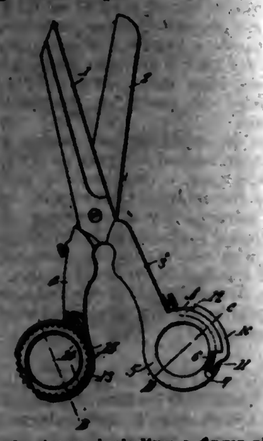
1,017,545. SCISSORS. ANNIE HOPKINS, Lewistown, Mont. Original application filed Apr. 17, 1909, Serial No. 490,484. Divided and this application filed Oct. 12, 1910. Serial No. 586,770. (Cl. 7—6.)

1. A pair of scissors having an annular groove in one of the finger rings of the handles, and a marking device seated within the groove and projecting beyond the ring.

2. A pair of scissors having an annular groove in one of its finger rings, and a marking device mounted for movement within and projecting beyond the groove.

3. A pair of scissors having an annular groove in the peripheral portion of one of its finger rings, and a curved marker movably mounted within and projecting from the groove.

4. A pair of scissors having a finger ring upon one of its handles, and an annular spur wheel housed in said ring, and extending therethrough.



5. A pair of scissors including a finger ring upon one of the handles, said ring being tubular and having a cut-away portion, and an annular spur wheel mounted for rotation within said ring and having a portion thereof projecting from the cut-away portion.

1,017,546. FILAMENT-SUPPORT. JOHN W. HOWELL, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Dec. 28, 1906. Serial No. 349,794. (Cl. 176—39.)

1. The combination of a filament, supporting means therefor through which the filament passes, and a refractory metal spring yieldingly pressing the filament laterally against said supporting means and holding the filament in position by frictional engagement.

2. In combination with a filament, a conductive strip embracing said filament, and a tantalum spring yieldingly pressing the filament laterally against said strip and holding the filament in position by frictional engagement.

3. The combination of a filament, a conductive support engaging therewith, and a tantalum wire spring yieldingly pressing the filament laterally against said support and holding the filament in position by frictional engagement.

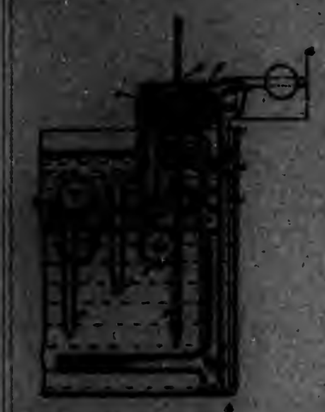
4. The combination of a leading-in conductor, a strip connected therewith and folded into a bend, a filament passing through said bend, and a helical spring surrounding said strip and holding said filament in place.

5. The combiantion with a filament, of supporting means removably connected therewith, and a refractory spring contacting with said filament and holding it against said supporting means.

[Claims 6 to 11 not printed in the Gazette.]

1,017,547. APPARATUS FOR THE TREATMENT OF TEXTILES IN THE FORM OF THREADS, CORDS, HANKS, AND FABRICS. FRANCISCO JAUMANDREU, Barcelona, Spain. Filed May 15, 1911. Serial No. 627,350. (Cl. 8—19.)

1. In apparatus for treating textiles with liquid, the combination of a chute vertically placed at the point of exit of the textiles from the liquid, a plate or wall covering said chute, and leaving the necessary space for the passage of the textiles, means for causing the hanks to pass into the chute when leaving the liquid, means for holding the chute and the cover vertically with the lower mouth dipped into the liquid and the upper one remaining out of the liquid, so as to prevent the entrance of scums and impurities accumulated on the surface of the liquid; substantially as described.



2. In apparatus for treating textiles with liquids, the combination of a chute vertically placed at the point of exit of the textiles from the liquid, means for causing the textiles to pass into the chute on leaving the liquid, in said chute a movable wall or cover, acted upon by springs which tend to push it constantly against the other wall or against the textiles which pass through the chute, and means for vertically holding the chute and the cover, so that the lower mouth dips into the liquid and the upper mouth remains out of the same, in order to prevent the entrance of scums and impurities which accumulate on the surface of the liquid; substantially as described.

3. In apparatus for treating textiles with liquids, the combination of a chute vertically placed at the point of exit of the textiles, a lower bar on which the chute is fixed, a second lower bar parallel to the former, on which is hinged the movable wall or cover of the chute and on which are fixed the springs of the cover, so that the chute leaves only the necessary space for the textiles to pass out of the liquid, and has its lower mouth dipped into the liquid while the upper one remains out of the same, in order to avoid contact of the textiles with the scums and impurities existing on the surface of the liquid; substantially as described.

1,017,548. FOLDING BED. HARRY A. JAVINS, Oakland, Cal., assignor to Javins Manufacturing Company, San Francisco, Cal., a Corporation of Arizona. Filed June 29, 1911. Serial No. 636,071. (Cl. 5—37.)

1. A folding bed, supporting brackets, and means slidably mounted upon said bed and adapted to fold and unfold certain of the legs of said bed when said bed is mounted upon and removed from said supporting brackets.

2. A folding bed, supporting brackets, plates slidably mounted upon said bed, bars connecting said plates with certain of the legs of said bed whereby certain of said legs will be folded when said plates are connected with said brackets.

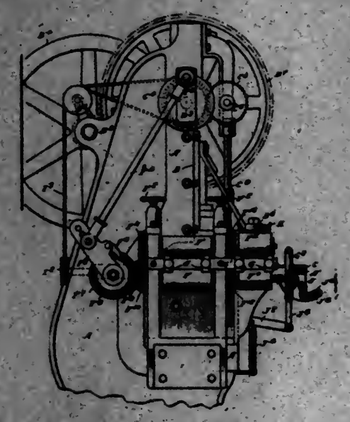
3. A folding bed, supporting brackets, plates slidably and pivotally mounted upon said bed, bars connecting said plates with certain of the folding legs of said bed, catches carried by said bed and engaging said plates to hold said legs in an extended position and cams formed upon said plates for causing said plates to be released from said catches when said plates are engaged by said brackets.

4. A folding bed comprising a frame, legs pivotally connected with said frame, supporting brackets, and means for connecting said bed with said brackets which means fold and unfold certain of said legs.

5. A folding bed comprising a frame, legs pivotally connected with said frame, plates slidably and pivotally mounted upon said frame, bars connecting said plates with certain of said legs, a bracket mounted upon said frame adjacent each of said plates and provided with an opening through which said plate projects, said plate being provided with a notch for engaging said bracket, a cam formed upon said plate, and supporting brackets for said bed adapted to engage said plates and release them from said first mentioned brackets to permit certain of said legs to be fouled.

[Claim 6 not printed in the Gazette.]

1,017,549. CLOSURE-MAKING MACHINE. CHARLES FRANCIS JENKINS, Washington, D. C., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Mar. 4, 1910. Serial No. 547,377. (Cl. 93—36.)



1. The combination with automatic means for feeding short tubular rings successively into a predetermined position, of automatic means for pressing a cup-like closure-body into each, while in such position, until it lies below the plane of the ring's upper margin, and automatic means for also pressing into the ring against the margin of the closure body a disk covering the open end of said body and filling the space between the planes of said margins, whereby a hollow closure having an annular external shoulder is formed.

2. The combination with a rotary plate having a series of openings or recesses, of the diameter of a closure-body, each counterbored to receive a short tubular ring, of means for rotating said plate step by step, means for inserting such rings in said openings successively during corresponding periods of rest, means for inserting a closure-body in the ring-containing openings respectively during subsequent periods of rest, and means for also inserting terminal disks in said rings respectively during later periods of rests.

3. The combination with a plate provided with a series of openings adapted to receive cup-like closure-bodies and counterbored to receive tubular rings having the same internal diameter as the openings, of means for rotating the plate step by step in its own plane, ring-inserting de-

vices, closure-body inserting devices, and disk-inserting devices arranged at successive points along the path of said openings in position to aline with different openings when the plate is at rest, and automatic means for actuating all the inserting devices.

4. The combination with a plate provided with suitable closure receiving openings and arranged to be rotated step by step to bring said openings successively to an ejecting point, of an ejector mechanism arranged to lift closures from said openings and then tilt to throw all in the same direction.

5. In apparatus of the class described, the combination with a plate having an opening adapted to receive a closure-body and enlarged upon one face of the plate to receive a short tubular ring having the same internal diameter as the non-enlarged portion of the opening, of means for inserting such a ring in the enlarged portion, and means for forcing a closure-body in the same direction partially through said ring and into said non-enlarged portion.

1,017,550. WRENCH. MILTON A. JOHNSON, Denison, Iowa. Filed May 11, 1911. Serial No. 626,481. (Cl. 81—85.)

A wrench of the class described, comprising a stem having a head formed at its outer end and its inner end provided with a threaded reduced portion, inner and outer jaws slidably mounted on said stem, the outer jaw being provided with a shoulder which coacts with the under side of the head to form a nut socket, a handle mounted on said reduced portion and being connected to the inner jaw, an orifice formed in the inner jaw, a leaf spring pivotally connected to the outer jaw, a pin carried upon the outer end of the spring, said spring being adapted to be swung upon its pivot to allow the pin to engage in the orifice formed in the inner jaw, whereby when the handle is rotated both the inner and outer jaws are simultaneously adjusted upon the stem.

1,017,551. SKATE. SIMON C. JOHNSON, De Kalb, Ill. Filed Feb. 20, 1911. Serial No. 609,675. (Cl. 46—50.)

1. A skate having foot gripping members movable transversely of the foot receiving portion of the skate and also toward and from such foot receiving portion in a direction substantially perpendicular to the first direction of movement, and locking means for holding the foot gripping members in different positions of transverse adjustment, said foot gripping members being movable in a direction away from the foot receiving portion of the skate substantially perpendicular thereto and having a normal constraint toward said foot receiving portion of the skate.

2. In a skate, foot gripping members slidable with relation to the foot receiving portion of the skate in a direction transverse and substantially parallel therewith and also movable in a direction substantially perpendicular to the foot receiving portion of the skate, and locking means active to the foot clamping members when the latter are moved toward the foot receiving portion of the skate in a direction substantially perpendicular thereto.

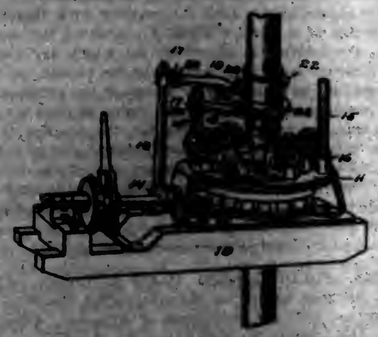
3. In a skate, clamp members provided with step portions, a retaining member on the skate for receiving the stems of the clamp members and in which said stems are slidable in opposite directions one past the other and substantially parallel one to the other and with the foot receiving portion of the skate, and said stem members being also movable from and toward the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members against movement substantially parallel with the foot receiving portion of the skate beyond the same.

4. In a skate, clamp members provided with stem portions, a retaining member on the skate for receiving the stems of the clamp members and in which the stems of the clamp members are slidable in opposite directions, said stem members being also movable toward and from the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members when said stems are moved toward the foot receiving portion of the skate, and means for limiting the movement of the stem members transversely of the skate.

5. In a skate, clamp members each provided with an elongated stem increased in thickness at the end remote from the clamp member, a retaining member on the skate adapted to receive the stems of the clamp members and along which said stems are slidable in opposite directions, means for retaining the stem members in the sustaining member, said stem members having a range of movement toward and from the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members active to the stem members when moved toward the foot receiving portion of the skate.

[Claims 6 to 11 not printed in the Gazette.]

1,017,552. PIPE-TONGS. HORACE G. JOHNSTON, Corsicana, Tex. Filed Apr. 29, 1911. Serial No. 624,098. (Cl. 166—7.)



1. The combination with a rotary well drilling machine comprising a stationary base and rotating table with uprights upstanding from each, of collars surrounding the uprights and pipe tongs pivoted to the collars in such manner as to be supported by the collars and uprights in horizontal position.

2. The combination with an upright, of a collar surrounding and rotatable upon the upright, and pipe tongs pivoted to the collar and capable of movement in a horizontal plane about the upright.

1,017,553. WHEEL. EDWARD C. JONES, Plymouth, Pa. Filed Aug. 18, 1909. Serial No. 513,497. (Cl. 64—17.)

A pulley comprising, a body portion having its rim formed with a central groove and having openings extending from the groove through to the inner face of the rim, a plurality of rim segments filling the groove, each of said segments having one of its ends provided with pockets the said pockets being arranged adjacent the opposite edges of the said segments, the opposite end of each of the segments being formed with reduced extending lugs, each of the said lugs being provided adjacent the

opposite [illegible] parallel [illegible] to engage [illegible] and each of said [illegible] having provided with a downwardly [illegible] to the rear of the [illegible] provided with the lugs, the said ears [illegible]

communicate with the [illegible] groove, each of the said ears having an [illegible], a wedge-shaped retaining member having its opposite [illegible] and adapted to engage within the opening of each of the lugs, nuts for the threaded ends of the [illegible] elements, the said nuts adapted to contact with the opposite faces of the rim of the wheel [illegible] and for the purpose set forth.

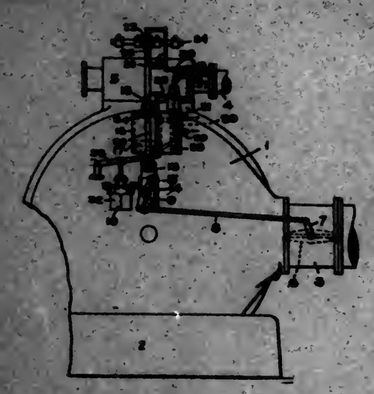
1,017,554. CHURN. WILLIAM N. JONES, Acton, Ala. Filed Nov. 4, 1910. Serial No. 590,746. (Cl. 31—30.)

1. A churn dasher and holder including a support, a pair of slotted hangers depending therefrom, a bracket having spaced [illegible] provided with adjusting bolts engaged in the slots of said hangers, said bracket having [illegible] said upstanding arms, and bearings on said arms adapted to detachably engage a dasher rod.

2. In a churn, the combination of a receptacle, a dasher, a frame arranged above said receptacle carrying dasher actuating mechanism, a pair of angle iron slotted hangers depending from said frame, a bracket having spaced upstanding arms provided with adjusting bolts engaged in the slots of said hangers, said bracket having cross arms connecting said upstanding arms, and hinged bearings on said cross arms detachably engaging said dasher rod.

1,017,555. [illegible] FOR MIXED-PRESSURE [illegible] and ALEXANDER [illegible], assignors to General Electric [illegible], a Corporation of New York. Filed July [illegible]. (Cl. 123—118.)

1. In a mixed pressure turbine, the combination with a low pressure [illegible] valves, of a motor adapted to operate said valves, and a slide connected to said motor and having a cam groove adapted to actuate the low pressure valve during a part of its movement only.



2. In a mixed pressure turbine, the combination with a low pressure valve and high pressure valves, of a motor, a slide actuated thereby and having a slot containing an oblique portion and a longitudinal portion, and a lever connected to the low pressure valve and engaging with said slot.

3. In a mixed pressure turbine, the combination with a low pressure valve and high pressure valves, of a motor, a slide actuated thereby and having a slot containing an oblique portion and a longitudinal portion, a lever connected to the low pressure valve and engaging with said slot, and a cam shaft geared to said motor and arranged to actuate said high pressure valves during the time that the lever is engaged with the longitudinal portion of said slot.

4. In a mixed pressure turbine, the combination with the low pressure conduit, of a butterfly valve therein, a lever for turning said valve, a slide having a cam slot therein provided with an active portion for actuating said lever and an idle portion for holding said lever locked during the further movement of said slide.

5. In a mixed pressure turbine, the combination with the low pressure conduit, of a butterfly valve therein, a lever for turning said valve, a slide having a cam slot therein provided with an active portion for actuating said lever and an idle portion for holding said lever locked during the further movement of said slide, and high pressure valve gear operative only during the time that said lever engages said idle portion of said slot.

[Claim 6 not printed in the Gazette.]

1,017,556. SOLE-TEMPERING MACHINE. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J., assignor to The Keighley Company, Vineland, N. J., a Corporation of New Jersey. Filed Dec. 1, 1910. Serial No. 595,123. (Cl. 12—1.)

1. The combination in a sole wetting machine of a brush; means for supplying a liquid thereto; a shoe supporting structure including a number of substantially parallel strips; and means for supporting said strips over the brush so that the latter projects between them; with means for moving the brush and the shoe supporting structure relatively to each other to cause the brush to engage different parts of the soles of shoes mounted on the structure.

2. The combination in a sole wetting machine of a brush; means for supplying liquid thereto; a shoe supporting structure; and means for oscillating the brush and structure relatively to each other to cause said brush to engage different parts of the soles of shoes mounted on the structure.

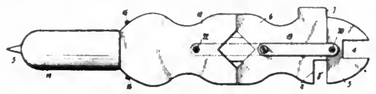
3. The combination in a sole wetting machine of a brush; means for supplying liquid thereto; a shoe sup-

vices, closure-body inserting devices, and disk-inserting devices arranged at successive points along the path of said openings in position to aline with different openings when the plate is at rest, and automatic means for actuating all the inserting devices.

4. The combination with a plate provided with suitable closure receiving openings and arranged to be rotated step by step to bring said openings successively to an ejecting point, of an ejector mechanism arranged to lift closures from said openings and then tilt to throw all in the same direction.

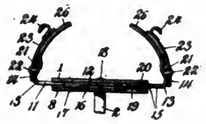
5. In apparatus of the class described, the combination with a plate having an opening adapted to receive a closure-body and enlarged upon one face of the plate to receive a short tubular ring having the same internal diameter as the non-enlarged portion of the opening, of means for inserting such a ring in the enlarged portion, and means for forcing a closure-body in the same direction partially through said ring and into said non-enlarged portion.

1,017,550. WRENCH. MILTON A. JOHNSON, Denison, Iowa. Filed May 11, 1911. Serial No. 626,481. (Cl. 81—85.)



A wrench of the class described, comprising a stem having a head formed at its outer end and its inner end provided with a threaded reduced portion, inner and outer jaws slidably mounted on said stem, the outer jaw being provided with a shoulder which coacts with the under side of the head to form a nut socket, a handle mounted on said reduced portion and being connected to the inner jaw, an orifice formed in the inner jaw, a leaf spring pivotally connected to the outer jaw, a pin carried upon the outer end of the spring, said spring being adapted to be swung upon its pivot to allow the pin to engage in the orifice formed in the inner jaw, whereby when the handle is rotated both the inner and outer jaws are simultaneously adjusted upon the stem.

1,017,551. SKATE. SIMON C. JOHNSON, De Kalb, Ill. Filed Feb. 20, 1911. Serial No. 609,675. (Cl. 46—50.)



1. A skate having foot gripping members movable transversely of the foot receiving portion of the skate and also toward and from such foot receiving portion in a direction substantially perpendicular to the first direction of movement, and locking means for holding the foot gripping members in different positions of transverse adjustment, said foot gripping members being movable in a direction away from the foot receiving portion of the skate substantially perpendicular thereto and having a normal constraint toward said foot receiving portion of the skate.

2. In a skate, foot gripping members slidable with relation to the foot receiving portion of the skate in a direction transverse and substantially parallel therewith and also movable in a direction substantially perpendicular to the foot receiving portion of the skate, and locking means active to the foot clamping members when the latter are moved toward the foot receiving portion of the skate in a direction substantially perpendicular thereto.

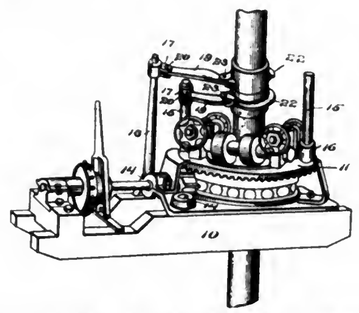
3. In a skate, clamp members provided with step portions, a retaining member on the skate for receiving the stems of the clamp members and in which said stems are slidable in opposite directions one past the other and substantially parallel one to the other and with the foot receiving portion of the skate, and said stem members being also movable from and toward the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members against movement substantially parallel with the foot receiving portion of the skate beyond the same.

4. In a skate, clamp members provided with stem portions, a retaining member on the skate for receiving the stems of the clamp members and in which the stems of the clamp members are slidable in opposite directions, said stem members being also movable toward and from the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members for engaging and holding the stems of the clamp members when said stems are moved toward the foot receiving portion of the skate, and means for limiting the movement of the stem members transversely of the skate.

5. In a skate, clamp members each provided with an elongated stem increased in thickness at the end remote from the clamp member, a retaining member on the skate adapted to receive the stems of the clamp members and along which said stems are slidable in opposite directions, means for retaining the stem members in the sustaining member, said stem members having a range of movement toward and from the foot receiving portion of the skate in a direction substantially perpendicular thereto, and stop members active to the stem members when moved toward the foot receiving portion of the skate.

[Claims 6 to 11 not printed in the Gazette.]

1,017,552. PIPE-TONGS. HORACE G. JOHNSTON, Corsicana, Tex. Filed Apr. 29, 1911. Serial No. 624,098. (Cl. 166—7.)



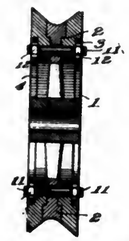
1. The combination with a rotary well drilling machine comprising a stationary base and rotating table with uprights upstanding from each, of collars surrounding the uprights and pipe tongs pivoted to the collars in such manner as to be supported by the collars and uprights in horizontal position.

2. The combination with an upright, of a collar surrounding and rotatable upon the upright, and pipe tongs pivoted to the collar and capable of movement in a horizontal plane about the upright.

1,017,553. WHEEL. EDWARD C. JONES, Plymouth, Pa. Filed Aug. 18, 1909. Serial No. 513,497. (Cl. 64—17.)

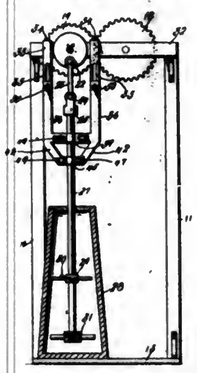
A pulley comprising, a body portion having its rim formed with a central groove and having openings extending from the groove through to the inner face of the rim, a plurality of rim segments filling the groove, each of said segments having one of its ends provided with pockets the said pockets being arranged adjacent the opposite edges of the said segments, the opposite end of each of the segments being formed with reduced extending lugs, each of the said lugs being provided adjacent the

opposite faces of the segments and arranged in a plane parallel therewith, the lugs of one of the segments adapted to engage within the pockets of the co-acting segments and each of the said segments being provided with a downwardy extending ear arranged directly to the rear of the end of the segment provided with the lugs, the said ears adapted to pass through the openings which



communicate with the central groove, each of the said ears having an opening, a wedge-shaped retaining member having its opposite ends threaded and adapted to engage within the opening of each of the lugs, nuts for the threaded ends of the retaining elements, the said nuts adapted to contact with the opposite faces of the rim of the wheel substantially as and for the purpose set forth.

1,017,554. CHURN. WILLIAM N. JONES, Acton, Ala. Filed Nov. 4, 1910. Serial No. 590,746. (Cl. 31—30.)

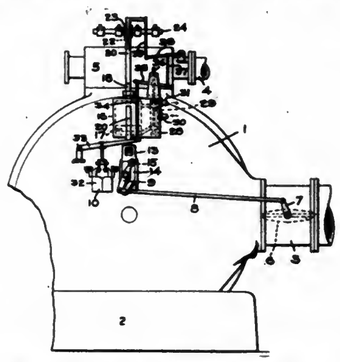


1. A churn dasher rod holder including a support, a pair of slotted hangers depending therefrom, a bracket having spaced upstanding arms provided with adjusting bolts engaged in the slots of said hangers, said bracket having cross arms connecting said upstanding arms, and bearings on said cross arms adapted to detachably engage a dasher rod.

2. In a churn, the combination of a receptacle, a dasher, a frame arranged above said receptacle carrying dasher actuating mechanism, a pair of angle iron slotted hangers depending from said frame, a bracket having spaced upstanding arms provided with adjusting bolts engaged in the slots of said hangers, said bracket having cross arms connecting said upstanding arms, and hinged bearings on said cross arms removably engaging said dasher rod.

1,017,555. GOVERNING MECHANISM FOR MIXED-PRESSURE TURBINES. OSCAR JUNGGREN and ALEXANDER T. GRAY, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed July 29, 1911. Serial No. 641,264. (Cl. 121—118.)

1. In a mixed pressure turbine, the combination with a low pressure valve and high pressure valves, of a motor adapted to operate said valves, and a slide connected to said motor and having a cam groove adapted to actuate the low pressure valve during a part of its movement only.



2. In a mixed pressure turbine, the combination with a low pressure valve and high pressure valves, of a motor, a slide actuated thereby and having a slot containing an oblique portion and a longitudinal portion, and a lever connected to the low pressure valve and engaging with said slot.

3. In a mixed pressure turbine, the combination with a low pressure valve and high pressure valves, of a motor, a slide actuated thereby and having a slot containing an oblique portion and a longitudinal portion, a lever connected to the low pressure valve and engaging with said slot, and a cam shaft geared to said motor and arranged to actuate said high pressure valves during the time that the lever is engaged with the longitudinal portion of said slot.

4. In a mixed pressure turbine, the combination with the low pressure conduit, of a butterfly valve therein, a lever for turning said valve, a slide having a cam slot therein provided with an active portion for actuating said lever and an idle portion for holding said lever locked during the further movement of said slide.

5. In a mixed pressure turbine, the combination with the low pressure conduit, of a butterfly valve therein, a lever for turning said valve, a slide having a cam slot therein provided with an active portion for actuating said lever and an idle portion for holding said lever locked during the further movement of said slide, and high pressure valve gear operative only during the time that said lever engages said idle portion of said slot.

[Claim 6 not printed in the Gazette.]

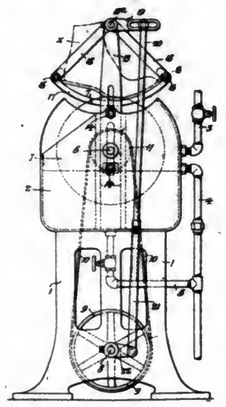
1,017,556. SOLE-TEMPERING MACHINE. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J., assignor to The Keighley Company, Vineland, N. J., a Corporation of New Jersey. Filed Dec. 1, 1910. Serial No. 595,123. (Cl. 12—1.)

1. The combination in a sole wetting machine of a brush; means for supplying a liquid thereto; a shoe supporting structure including a number of substantially parallel strips; and means for supporting said strips over the brush so that the latter projects between them; with means for moving the brush and the shoe supporting structure relatively to each other to cause the brush to engage different parts of the soles of shoes mounted on the structure.

2. The combination in a sole wetting machine of a brush; means for supplying liquid thereto; a shoe supporting structure; and means for oscillating the brush and structure relatively to each other to cause said brush to engage different parts of the soles of shoes mounted on the structure.

3. The combination in a sole wetting machine of a brush; means for supplying liquid thereto; a shoe sup-

porting structure; and means for oscillating the brush and structure relatively to each other to cause said brush to engage different parts of the soles of shoes mounted on the structure; with means for varying the arc of oscillation in which such movement occurs.

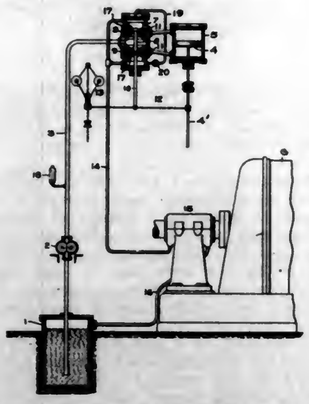


4. The combination in a sole wetting machine of a brush; means for supplying liquid to the brush; and a shoe supporting structure adjacent the brush; said structure including a series of substantially parallel, edgewise set strips placed to permit portions of the brush to extend between them; with means for oscillating the brush and supporting structure relatively to each other.

5. The combination in a sole wetting machine of a brush; means for supplying liquid to the brush; and a shoe supporting structure adjacent the brush; said structure including a series of substantially parallel edgewise-set strips spaced to permit portions of the brush to extend between them; means for oscillating the brush and supporting structure relatively to each other; with a stop on said strips for holding the shoes in definite positions.

[Claims 6 to 9 not printed in the Gazette.]

1,017,557. OIL-CIRCULATING SYSTEM FOR LUBRICATING AND REGULATING. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 28, 1911. Serial No. 641,138. (Cl. 121—118.)



1. The combination with a system of forced lubrication, of a valve-actuating motor operated by the lubricant, and a regulating valve for said motor which permits the lubricant to flow through it in its central position.

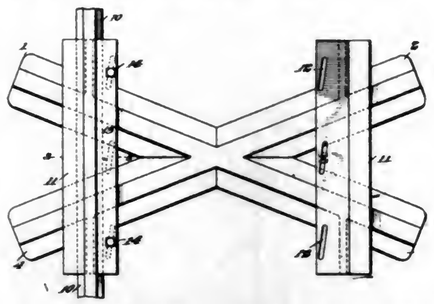
2. The combination with a system of forced lubrication, of a valve-actuating motor operated by the lubricant, and a regulating valve for said motor comprising pistons which in their central position have bypasses around them.

3. The combination with a system of forced lubrication, of a valve-actuating motor, a valve casing for said motor interposed in the path of the lubricant, and a regulating valve in said casing which permits a free flow of the lubricant except when it is shifted to cause said lubricant to operate said motor.

4. The combination with a system of forced lubrication, of a valve-actuating motor, a valve-casing for said motor provided with ports, a regulating valve in said casing comprising two pistons controlling said ports, a supply pipe for lubricant entering said casing between said pistons, a delivery pipe leading from the ends of said casing, and flanges on said pistons having notches covering said ports when the valve is in its central position.

5. The combination with a system of forced lubrication including a pump, of a valve-actuating motor, a regulator for the motor comprising a casing through which fluid from the pump continuously flows, and a valve in the casing which controls the distribution of fluid to the lubricating system and also to the motor.

1,017,558. STANDARD METAL RAILROAD CROSS-TIE. CHARLES T. KILGORE, Hot Springs, Ark., assignor of one-third to John P. Smith, Hot Springs, Ark. Filed Oct. 30, 1911. Serial No. 657,519. (Cl. 238—5.)



1. A cross tie of metal and of substantially X-shape, a cross arm connecting the members of each pair of arms, each arm being of T-shape, and having a tread a web and a base, the tread of the cross arms being of greater width for holding the rail and having at its outer edge an overlying flange for engaging over the rail base, the said tread having a plurality of slots at its inner edge, said slots being inclined with respect to the flange and in the same direction, a holding plate having openings for registering with the slots, and bolts passing through the openings and the slots.

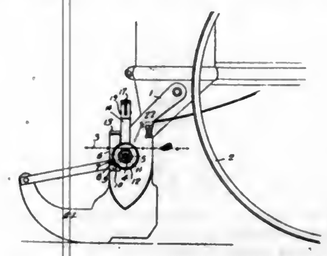
2. A cross tie of metal and of substantially X-shape, a cross arm connecting the members of each pair of arms, each arm being of T-shape, and having a tread a web and a base, the tread of the cross arms being of greater width for holding the rail and having at its outer edge an overlying flange for engaging over the rail base, the said tread having a plurality of slots at its inner edge, said slots being inclined with respect to the flange and in the same direction, a holding plate for the inner side of each rail, and means passing through the slots and engaging the plates for holding them in position.

3. A cross tie of metal and of substantially X-shape, a cross arm connecting the members of each pair of arms, each arm being of T-shape, and having a tread a web and a base, the tread of the cross arms being of greater width for holding the rail and having at its outer edge an overlying flange for engaging over the said base, and means in connection with each of the said treads for holding the rail thereon.

4. A cross tie of metal and of substantially X-shape, a cross arm connecting each adjacent pair of arms of the tie, said cross arms having wide flat upper faces for receiving the rails, and each face having an overlying flange at its outer side for engaging over the outer side of the rail base, a holding plate on the inner side of each face for engaging the inner edge of the rail base, and means for adjustably connecting each holding plate to the cross arm, said means comprising slots in the said face inclined in the same direction with respect to the flange, and bolts passing through the slots and engaging the plates.

5. A cross tie of metal and of substantially X-shape, a cross arm connecting each adjacent pair of arms of the tie, said cross arms having wide flat upper faces for receiving the rails, and each face having an overlying flange at its outer side for engaging over the outer side of the rail base, a holding plate on the inner side of each face for engaging the inner edge of the rail base, and means for adjustably connecting each holding plate to the cross arm.

1,017,559. PLANTER ATTACHMENT. HERMAN KILL, Liberty, Ill. Filed Oct. 17, 1911. Serial No. 655,148. (Cl. 111—43.)



1. In a check rower, the combination with the wire pulley, and the bracket arm hinged to the planter for swinging the pulley with its axis in vertical or horizontal position, of an arm secured to the bracket arm and provided with an arched portion at its free end extending longitudinally above the pulley, a cord having one of its end secured to the arm near its free end and the other end adjacent to the operator, eyes on the arm and the planter for guiding the cord, and a guide for the wire extending longitudinally of the pulley at the outer end thereof for guiding the wire to the pulley.

2. In a check rower, the combination with the wire pulley, and the bracket arm hinged to the planter for swinging the pulley with its axis in vertical or horizontal position, of an arm secured to the bracket arm and provided with an arched portion at its free end extending longitudinally above the pulley, a cord having one of its ends secured to the arm near its free end and the other end adjacent to the operator, eyes on the arm and the planter for guiding the cord.

3. In a check rower, the combination with the wire pulley, and the bracket arm hinged to the planter for swinging the pulley with its axis in vertical or horizontal position, of an arm secured to the bracket arm and provided with an arched portion at its free end extending longitudinally above the pulley, and a cord having one end secured to the arm near its free end for swinging the pulley.

4. In a planter of the check rower type, the combination with the wire pulley and the mounting for the same for permitting the pulley to be swung with its axis horizontal or vertical, of an arm secured at one end to the mounting, the free end of the arm extending longitudinally of the pulley, and a cord having one end secured to the arm near its free end, and a guide bar on the outer side of the pulley and extending longitudinally thereof.

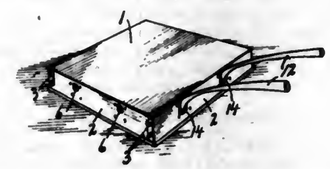
5. In a planter of the check rower type, the combination with the wire pulley and the mounting for the same for permitting the pulley to be swung with its axis horizontal or vertical, of an arm secured at one end to the mounting, the free end of the arm extending longitudinally of the pulley, and a cord having one end secured to the arm near its free end.

[Claim 6 not printed in the Gazette.]

1,017,560. PROCESS OF PRODUCING DERIVATIVES OF CANTHARIDIC ACID CONTAINING IODIN AND MERCURY. ALEXANDER KLEIN, Berlin, Germany. Filed June 29, 1911. Serial No. 636,013. (Cl. 23—24.)

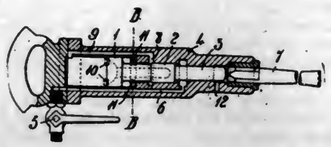
The process of producing a derivative of cantharidic acid containing iodin and mercury, consisting in treating a solution of cantharidic acid with substances containing iodin and mercury in the presence of an alkali.

1,017,561. BAKING UTENSIL. CHARLES KLOSSNER and JOHN P. KLOSSNER, Westernville, N. Y. Filed Feb. 6, 1911. Serial No. 606,839. (Cl. 53—6.)



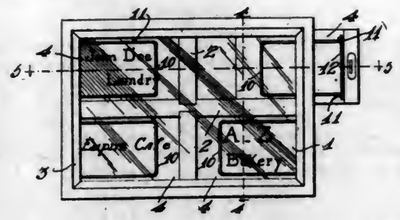
A baking utensil comprising a substantially flat plate having its marginal edges provided with depending flanges of substantially uniform depth, each flange having a pair of apertures, reinforcing brackets surrounding the apertures and secured to the flanges and also provided with openings registering with said apertures, shoulders on the brackets some distance inwardly from the flanges, and handles having portions thereof passed through the apertures and openings and provided with means engaged with said shoulders for holding the handle in operative position.

1,017,562. PNEUMATIC HAMMER. ERNST HJALMAR LAGERSTRÖM, Stockholm, Sweden. Filed June 2, 1911. Serial No. 630,792. (Cl. 121—20.)



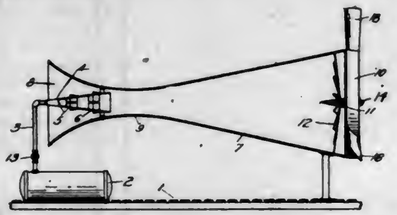
In a pneumatic rock-drilling machine or the like in which no distributing valve or any other special distributing member is employed, the combination of a cylinder and a piston; the piston being of differential type and having a large rear portion and an intermediate portion of smaller diameter than the rear portion arranged in front of said rear portion and also having at the forward end of the intermediate portion an extension of smaller diameter than said intermediate portion, and the cylinder having a forward interior portion which receives in an airtight manner the said extension of the piston, and the piston and the cylinder being so constructed and relatively arranged that the air pressure for returning the piston from the tool or bit acts on the shoulder between the said extension and the intermediate portion of the piston, and the cylinder being further provided with a space in front of the shoulder between the intermediate portion and the rear portion of the piston, which space communicates directly with the atmosphere.

1,017,563. DISPLAYING DEVICE FOR ADVERTISEMENTS. CHARLES A. LAIN and EDWARD W. JENNINGS, High Point, N. C., assignors of one-third to A. A. Dickens, High Point, N. C. Filed Aug. 22, 1910, Serial No. 578,366. Renewed July 24, 1911. Serial No. 640,357. (Cl. 40—65.)



An advertisement displaying device comprising a series of cases having arranged therein partitions whereby said cases are divided into compartments, glass cover frames arranged over said cases, a series of advertisement carrying slides having a sliding engagement with the partitions in said cases, and spring actuated slide projecting rods arranged in the rear portion of the cases and adapted to force said slides to an open position, and a locking mechanism to hold the slides in closed or operative position.

1,017,564. PROPELLING APPARATUS FOR AERIAL AND OTHER MACHINES. CHRISTOPHER J. LAKE, Bridgeport, Conn. Filed Apr. 8, 1909, Serial No. 488,703. Renewed July 15, 1911. Serial No. 638,730. (Cl. 244—25.)



1. In a propelling apparatus, in combination, a longitudinal conduit, means for producing a fluid current therethrough from front to rear for direct propulsion by reaction, a turbine wheel located in the path of and driven by said current and propeller blades actuated by said turbine wheel and arranged so as to cause a corresponding current in the air exterior to the conduit.

2. In a propelling apparatus, in combination, a longitudinal conduit, means for producing a fluid current therethrough from front to rear for direct propulsion by reaction, an axial-flow turbine wheel at the rear end of the conduit driven by said current and propeller blades mounted on the periphery of said turbine wheel and arranged so as to cause a corresponding current in the air exterior to the conduit.

3. In a propelling apparatus, in combination, a longitudinal conduit, means for producing a fluid current therethrough from front to rear for direct propulsion by reaction, a turbine wheel located in the path of and driven by said current and propeller blades mounted on the periphery of said turbine wheel and arranged so as to cause a corresponding current in the air exterior to the conduit.

4. In a propelling apparatus, in combination, a longitudinal conduit, means for producing a fluid current therethrough from front to rear for direct propulsion by reaction, guide vanes arranged in the discharge end of the conduit, a turbine wheel adjacent said guide vanes to absorb a portion of the energy of the current and propeller blades actuated by said tubrine wheel and arranged so as to cause a corresponding current in the air exterior to the conduit.

5. In a propelling apparatus, in combination, a longitudinal conduit, means for producing a fluid current therethrough from front to rear for direct propulsion by reaction, guide vanes arranged in the discharge end of the conduit, a turbine wheel adjacent said guide vanes to absorb a portion of the energy of the current and propeller blades mounted on the periphery of said turbine wheel and arranged so as to cause a corresponding current in the air exterior to the conduit.

[Claims 6 to 10 not printed in the Gazette.]

1,017,565. GRIP OR HANDLE. ALLAN E. LARD, Washington, D. C. Filed Nov. 4, 1911. Serial No. 658,604. (Cl. 46—4.)

1. A handle or grip, comprising a tubular sleeve; and a rubber member wound spirally around the same, the edges of said member being rounded.

2. A handle or grip, comprising a supporting member; and a member composed of rubber throughout wound spirally around the same under tension, the edges of said rubber member being rounded.

3. A handle or grip, comprising a supporting member having a rubber member susceptible of elongation in the form of a strip wound spirally about the supporting member under tension, the ends of the strip being secured to prevent unwinding of the same, and the edges of the strip being rounded so that there are no thin or sharp portions exposed at the joints between the adjacent convolutions of the strip.

4. A handle or grip, comprising a supporting member; a rubber tube wound spirally around the same under tension; and means for securing the ends of the tube in position upon the supporting member.

5. A handle or grip, comprising a supporting member; a flattened tubular rubber member wound spirally about the same, the adjacent convolutions of said flattened member contacting; and means for securing the ends of said tubular member in position upon the supporting member.

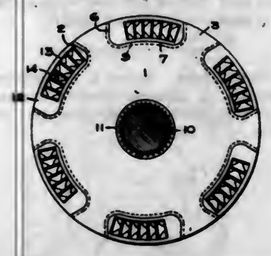
[Claims 6 to 10 not printed in the Gazette.]

1,017,566. DIAPHRAGM FOR TURBINES. OSCAR LASCHE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 6, 1909. Serial No. 521,311. (Cl. 121—57.)

1. In an elastic fluid turbine, the combination of a diaphragm having a peripheral recess, a detachable nozzle-containing member located in said recess and interlocking with the walls thereof, a casing, and means carried by the casing which engage the peripheral portion of the diaphragm and also the said member, the latter transmitting strains from the former to the casing.

2. In an elastic fluid turbine, the combination of a casing, a diaphragm within the casing having projections and peripheral recesses with members removably mounted

in said recesses and interlocking with the walls thereof, the said members forming a part of the periphery of the diaphragm whose diameter is the same as that of the other parts and being held by the casing against outward movement.



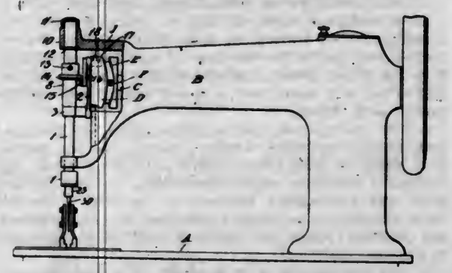
3. In an elastic fluid turbine, the combination of a diaphragm having peripheral recesses and projections, nozzle members located in said recesses, each of said members being removable as a unit and comprising a cast metal body with sheet metal partitions which are cast-jointed thereto, the said partitions forming walls of the nozzle passages, and means carried by the diaphragm and members which interlock.

4. In an elastic fluid turbine, the combination of a diaphragm having alternate projections and recesses in its periphery, a casing that supports the diaphragm at its periphery by means of the projections, detachable members which are mounted in and fill the recesses and engage the casing to assist in supporting themselves and also the diaphragm, some or all of said members being provided with fluid conveying passages, and means interlocking the members and the diaphragm which also forms a fluid tight joint.

5. In an elastic fluid turbine, a casing, a diaphragm mounted in the casing so that it can be turned about its axis when the turbine is opened, said diaphragm having recesses in its periphery, and radially removable members mounted in the recesses and interlocking with the walls thereof, said members being normally held by the casing against outward movement and some or all of them being provided with fluid conveying passages.

[Claim 6 not printed in the Gazette.]

1,017,567. SEWING-MACHINE. JAMES LEATHEM, New York, N. Y., assignor to Hermann, Aukam & Co., New York, N. Y., a Corporation of New York. Filed Dec. 28, 1910. Serial No. 599,649. (Cl. 112—7.)



1. A needle mechanism for sewing machines comprising in combination a reciprocating needle bar, an actuating shaft rotatably mounted therein, a needle holder pivotally mounted on said needle bar, and cam means connected to said shaft for actuating said needle holder, and means for continually rotating said actuating shaft in one direction.

2. A needle mechanism for sewing machines comprising in combination a reciprocating needle bar, an actuating shaft rotatably mounted therein, a needle holder pivotally mounted on said needle bar and cam means connected to the end of said shaft for actuating said needle holder, said cam means being arranged to vary the position of the needle holder on each of a series of reciprocations of the needle bar and means for continually rotating said actuating shaft.

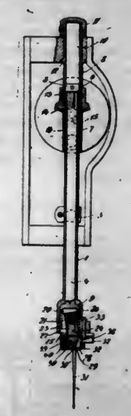
3. A needle mechanism for sewing machines comprising in combination a reciprocating needle bar, an actuating shaft rotatably mounted therein, a needle holder pivotally mounted on said needle bar, and cam means connected to said shaft for actuating said needle holder, said means being arranged to vary the position of the needle holder on each of a series of reciprocations of the needle bar, and means for continually rotating said actuating shaft a part of a revolution for each reciprocation of the needle bar.

4. A needle mechanism for sewing machines comprising in combination a reciprocating needle bar, an actuating shaft rotatably mounted therein, a needle holder pivotally mounted on said needle bar, a cam secured to said shaft, means for keeping said holder in contact with said cam and means for continually rotating said actuating shaft.

5. A needle mechanism for sewing machines comprising in combination a reciprocating needle bar, an actuating shaft rotatably mounted therein, a needle holder pivotally mounted on said needle bar, and spring acting means for keeping said holder in contact with said cam.

[Claims 6 to 10 not printed in the Gazette.]

1,017,568. SEWING-MACHINE. JAMES LEATHEM, New York, N. Y., assignor to Hermann, Aukam & Co., New York, N. Y., a Corporation of New York. Filed Dec. 28, 1910. Serial No. 599,686. (Cl. 112—7.)



1. A stitch forming mechanism for sewing machines comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, and means for continually rotating said actuating shaft without interruption, a needle holder, and means for operatively connecting said needle holder to said actuating shaft.

2. A stitch forming mechanism for sewing machines comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, an actuating sleeve connected to actuating shaft and means for continually rotating said actuating sleeve, a needle holder, and means for operatively connecting said needle holder to said actuating shaft.

3. A stitch forming mechanism for sewing machines comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, and means for continually rotating said actuating shaft without interruption, a needle holder, and means for operatively connecting said needle holder to said actuating shaft, the means for rotating said actuating shaft being arranged to rotate said actuating shaft a part of a revolution for each reciprocation of the needle bar.

4. A stitch forming mechanism comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, means for continually rotating said shaft a third of a revolution for each reciprocation of the needle bar, a needle holder eccentrically mounted on said shaft and arranged to produce a series of stitches.

5. A stitch forming mechanism comprising a reciprocating needle bar, an actuating shaft rotatably mounted therein, means for continually rotating said shaft a third of a revolution for each reciprocation of the needle bar, a needle holder eccentrically mounted on said shaft and arranged to produce a series of stitches, and means for feeding the material after the series of stitches have been produced.

[Claims 6 to 12 not printed in the Gazette.]

1,017,569. RIFFLING-MACHINE. CYRUS LEWIS, Sr., Lorain, Ohio. Filed Oct. 19, 1910. Serial No. 587,974. (Cl. 80—1.)

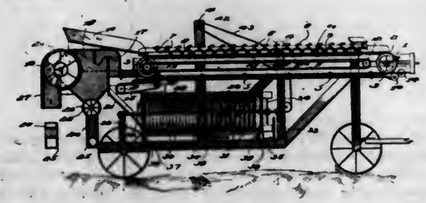
1. In a rifling machine, the combination with a sizing device, of a sizing core, and rollers carried by the sizing core for rifling the interior of the pipe.

2. In a pipe rifling machine, the combination with a pair of sizing rolls, of an interior sizing core, and a plurality of rifling rollers carried by the core.

3. In a pipe rifling machine, the combination with a pair of sizing rolls, of an interior sizing core, a plurality of rifling rollers arranged diagonally across the axis of the core, and means to adjust the height of the rollers with relation to the surface of the core.

4. In a pipe rifling machine, the combination with a pair of sizing rolls, of an interior sizing core having sockets therein, and a plurality of rifling rollers removably mounted in said sockets.

1,017,570. PEANUT-PICKER. THOMAS MILICUT LILLISTON, Suffolk, Va. Filed May 22, 1911. Serial No. 628,692. (Cl. 130—30.)

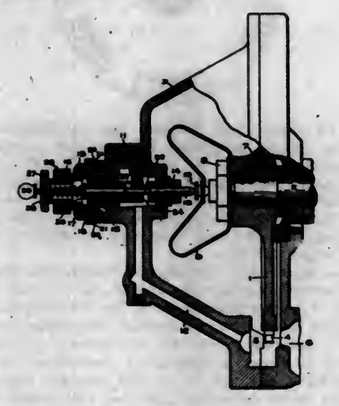


1. In a machine of the character described, an endless belt having transverse rows of picker pins, transverse rows of picker pins located above said endless belt and coöperating with the picker pins on the endless belt, a second endless belt located within the first named endless belt and movable in the opposite direction, a third endless belt located adjacent to one end of the second named belt and adapted to receive the peanuts separated from the vines.

2. In a machine of the character described, an endless belt having transverse rows of picker pins, transverse rows of picker pins located above said endless belt, and coöperating with the picker pins on the endless belt, a second endless belt located within the first named endless belt and movable in the opposite direction, a third endless belt located adjacent to one end of the second named endless belt for receiving peanuts separated from the vines, an inclined chute adjacent to one end of said last named belt.

3. In a machine of the character described, an endless belt having transverse rows of picker pins, transverse rows of picker pins, and longitudinal undulating wires located above said endless belt and coöperating with the picker pins thereon.

1,017,571. GOVERNOR. LOUIS C. LORWENSTEIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 29, 1910. Serial No. 569,474. (Cl. 121—112.)



1. The combination with a prime mover, of resilient members secured to a shaft thereof at an oblique angle thereto with their free ends forming a reëntrant angle and terminating adjacent to the axis of the shaft, and a throttle valve movable axially in line with said shaft and bearing against the free ends of said members.

2. The combination with a prime mover, of resilient members secured at one end to a shaft thereof and extending therefrom at an oblique angle with their free ends forming a reëntrant angle, an axially arranged button to which said free ends are secured, and a spindle bearing against said button in line with said shaft and adapted to control the supply of motive energy to said prime mover.

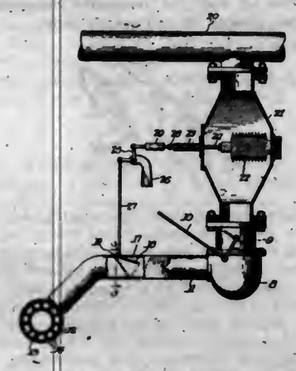
3. The combination with a prime mover, of springs having overlapped ends secured to the end of a shaft thereof, the free ends of said springs extending outwardly from said shaft at an oblique angle and bent back to form a reëntrant angle, an axially arranged button secured to the free overlapping ends of said springs, a valve body having ports for the flow of motive fluid through it to the prime mover, a spindle sliding in said body and controlling said ports, and a spring urging said spindle against said button.

4. The combination with a prime mover, of U-shaped centrifugally-responsive members having one leg secured to a shaft of said prime mover with their other legs forming a reëntrant angle approaching the end of said shaft and terminating adjacent to its axis, a throttle valve adapted to be directly actuated by said members, and resilient means for retaining said valve yieldingly in a normal position.

5. The combination with a motor, of a resilient, centrifugally-responsive member mounted on the end of a shaft driven by the motor, said member having a portion inclined outwardly from the axis of the shaft which is moved outwardly by centrifugal force and a second portion extending from the end of the first portion and bent inwardly to terminate adjacent the end of the shaft said second portion being moved axially by the first portion, and a device for regulating the supply of motive energy to the motor which is controlled by said second portion.

[Claim 6 not printed in the Gazette.]

1,017,572. ATTACHMENT FOR CARBURETERS. JAMES B. LUND, Chicago, Ill. Filed Dec. 18, 1911. Serial No. 666,314. (Cl. 48—149.)



1. The combination of a carbureter, a pipe adapted to connect said carbureter with an engine manifold, and means adapted to be actuated by temperature and pressure for automatically regulating the temperature of the mixture delivered from said carbureter through said pipe.

2. The combination of a carbureter, an air intake pipe connected therewith, a shutter disposed in said pipe for controlling the relative proportions of hot and cold air delivered to said carbureter, and means actuated by variations in temperature and pressure for automatically controlling the operation of said shutter.

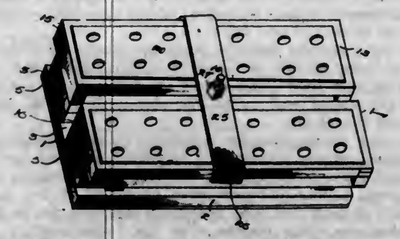
3. The combination of a carbureter, an air intake pipe connected therewith and provided with a cold air inlet port, means for heating the air drawn into the end of said pipe, and temperature and pressure controlled means for automatically regulating the proportions of hot and cold air admitted to said pipe whereby to control the temperature of the mixture delivered from said carbureter.

4. The combination of a carbureter, an air intake pipe connected therewith and provided with a cold air port, an air heating device connected with said pipe, a shutter adapted to vary the relative proportions of air admitted through said heating device and through said port, and a heat and pressure controlled device for automatically controlling the operation of said shutter to regulate the temperature of the mixture delivered from said carbureter.

5. The combination of a carbureter, an air supply pipe therefor provided with a port communicating directly with the atmosphere, an air heating device attached to the end of said pipe, and thermostatically and pressure controlled means positioned to be influenced by the temperature and pressure of the mixture delivered from said carbureter whereby the temperature of said mixture may be automatically regulated.

[Claims 6 and 7 not printed in the Gazette.]

1,017,573. FOLDING CRATE. WILLIAM MALCHOW, Natoma, Kans. Filed Dec. 28, 1910. Serial No. 599,662. (Cl. 217—15.)

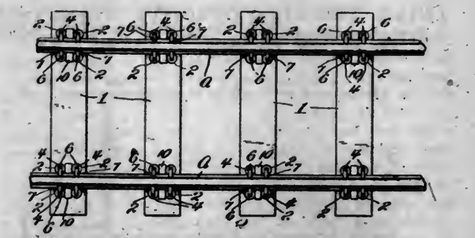


A folding crate and a device for holding said crate in either folded or set up position, comprising a threaded bolt, plates pivotally mounted upon said bolt, a threaded rod rigidly secured between the outer ends of said plates, and a securing nut adapted to be mounted upon said bolt and rod, said plates when moved to a vertical position having a frictional engagement with the threads of said bolt to retain said rod in a vertical position.

1,017,574. CURTAIN-FIXTURE. WILLIAM PERRY MARQUIS, Central City, Nebr. Filed Oct. 24, 1910. Serial No. 588,749. (Cl. 156—24.)

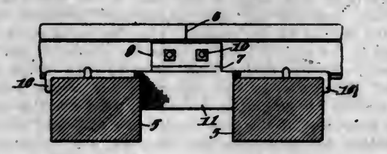
In a fixture of the character described, a shade bracket carrying plate, having a slot longitudinally disposed at one end, two ears formed integral with the respective ends of the plate and extending from the opposite ends of the bracket, a slide provided with a T-shaped head of lesser length than the slot but of greater length than the width of said slot adapted to enter said slot and be turned so that its body and head parallel the ears, and form a sliding member of a window frame engaging clamp, and a screw mounted in one ear of the plate and connected with said slide for causing the slide to coact with the other ear of the plate to form a clamp.

1,017,575. RAIL-FASTENING. BENJAMIN MCCANN, Moundsville, W. Va. Filed May 16, 1911. Serial No. 627,410. (Cl. 238—4.)



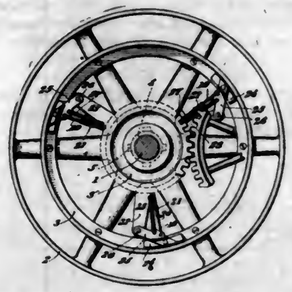
The combination with a metal tie; and companion pairs of fastening devices including rail engaging spikes and expansible members receiving the spikes and fitted in the tie; of a yieldable member mounted on the upper surface of the tie and having portions fitted in the intervening spaces between the companion fastening devices.

1,017,576. RAIL-JOINT SUPPORT. THOMAS H. MCKAY and JACOB F. HUGHES, Guthrie, Okla. Filed July 14, 1911. Serial No. 638,522. (Cl. 239—12.)



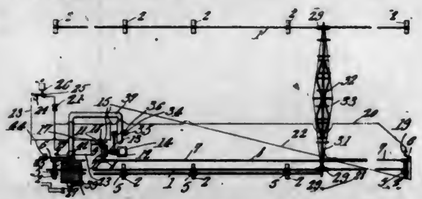
The combination with the meeting ends of railway rails, of a split chair having laterally extending tongues on opposite sides thereof, a support for the chair comprising a cradle receiving said chair, bearing seats within the cradle for said chair, and oppositely extending arms on the cradle for engaging and resting upon adjacent cross ties and having downturned ends for abutment with the outer sides of said ties.

1,017,577. CLUTCH. JAMES K. MCKELVEY, Warnock, Ohio. Filed May 9, 1911. Serial No. 625,980. (Cl. 192—4.)



The combination with a fly wheel having a brake band and mounted upon an axle, of a ribbed sleeve loosely positioned upon the axle, a sliding collar having its bore provided with a plurality of recesses adapted to engage with the ribs of the sleeve, a spider mounted upon the ribbed sleeve, a plurality of brake shoes having angular arms pivotally connected with the arms of the spider, resilient means for normally retaining the brake shoes out of contact with the brake band, angularly arranged adjustable rods connecting each of the brake shoes with the collar, the said collar being provided with a plurality of openings, springs within the openings, pins within the openings and adapted to be contacted and partly ejected from the openings by the springs, and the fly wheel being provided with a plurality of openings corresponding in number and arranged in register with the pins, and means for sliding the collar.

1,017,578. IRRIGATING APPARATUS. WILLIAM PERRY MCMILLAN, Tampa, Fla. Filed July 25, 1910. Serial No. 573,608. (Cl. 137—66.)



Irrigating apparatus including parallel supporting cables, a longitudinally trussed spraying pipe extending thereacross, wheels mounted to travel along the cables and constituting supports for the pipe, a reel, a hose connection between the reel and the pipe, means for forcing water into the hose upon the reel and thence to the pipe, a motor continuously operating, means actuated by the motor for shifting the pipe along the cables, electrically operated means for reversing said shifting mechanism, a pair of contacts at each limit of the path of the pipe and electrically connected to said electrically operated means, means carried by the spraying pipe for engaging the contacts in the path thereof to close the circuit to said electrically operated means upon the completion of the movement of the pipe in each direction, and means acted on by gravity for actuating the reel to wind the hose during the movement of the pipe toward the reel, said pipe constituting means for pulling the hose and unwinding it from the reel during the movement of the pipe away from the reel.

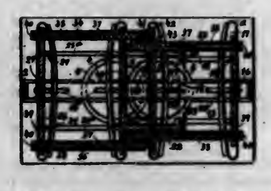
1,017,579. SPRING-FRAME FOR PINCE-NEZ. JOHN LITTLEJOHN NICOL, Sydney, New South Wales, Australia. Filed May 15, 1911. Serial No. 627,324. (Cl. 88—45.)

1. In a pince-nez eyeglass, the combination with the lenses of a detachable spring frame comprising a spring part having projecting pins and a guiding part, rims for the reception of the lenses, an eyelet on each of said rims in slidable attachment with said guiding part and a tubular projection on each rim removably embracing one of the projecting pins on the said spring part.

2. In pince-nez eyeglasses, the combination with the lenses, of a detachable spring frame comprising a spring part having projecting pins and a guiding part, rims for the reception of the lenses, an eyelet on each of said rims in slidable attachment with said guiding part, a tubular projection on each rim removably embracing one of the projecting pins on the said spring part, and a placket resiliently mounted on each of the tubular projections.

3. In pince-nez eyeglasses, the combination with the lenses, of a detachable spring frame comprising a spring part having projecting pins and a guiding part, rims for the reception of the lenses, an eyelet on each of said rims in slidable attachment with said guiding part, a tubular projection on each rim having a recess and removably embracing one of the projecting pins on the said spring part, a placket pivotally mounted on each tubular projection and comprising a base part and a tubular piece having a slot and adapted to fit the respective tubular projection, and a flat spring attached to each base part and adapted to pass through the said slot and corresponding recess and press against the pin coöperating therewith whereby the placket is retained in position with pressure.

1,017,580. MILKING-MACHINE. JENS NIELSEN, Copenhagen, Denmark. Filed Mar. 20, 1911. Serial No. 615,772. (Cl. 31—96.)



1. In a milking machine, a suitable frame, a plurality of pairs of co-acting shields carried by said frame and capable of longitudinal sliding and oscillatory movement with respect thereto, and means for producing a similar simultaneous counter movement between each of the co-acting shields of all of the pairs.

2. In a milking machine, a suitable frame, a plurality of co-acting shields arranged in oppositely disposed pairs carried by said frame and capable of longitudinal sliding and oscillatory movement with respect thereto, a drive shaft, eccentrics carried by said shaft, and means transmitting movement of said eccentrics for causing a similar simultaneous counter movement of the oppositely disposed shields of each of said pairs.

3. In a milking machine, a suitable frame, a plurality of co-acting shields arranged in opposite pairs and carried by said frame, and means for transmitting a longitudinal sliding and oscillatory movement to the outer shields of each pair.

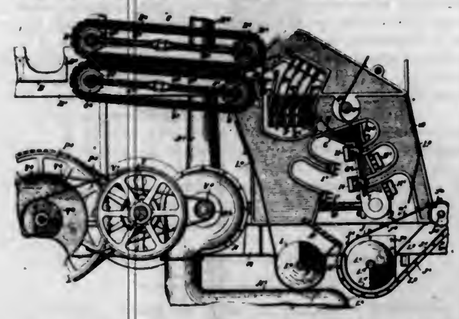
4. In a milking machine, a suitable frame, a plurality of co-acting shields arranged in opposite pairs and carried by said frame, means for transmitting a simultaneous longitudinal sliding and oscillatory movement to the outer shields of each pair, and motion transmitting means connecting the outer shields with the complementary co-acting shields of the opposite outer shields, combined substantially as and for the purpose set forth.

1,017,581. RADIO-ACTIVE COMPOSITION OF MATTER. VICTOR CHARLES JOHN NIGHTINGALL, Melbourne, Victoria, Australia. Filed June 11, 1910. Serial No. 566,486. (Cl. 71—9.)

1. A composition comprising a radio active material combined with a phosphate fertilizer, substantially as and for the purposes specified.

2. A radio active material combined with a fertilizer, substantially as and for the purposes specified.

1,017,582. HEMP-BRAKE. FRANK O'NEILL, Jr., Paris, Ky., assignor of one-sixth to Frank O'Neill, Sr., and three-sixths to George Alexander, Paris, Ky. Filed Nov. 15, 1909. Serial No. 528,138. (Cl. 13—6.)



1. A hemp brake provided with an initial softening and breaking mechanism, a rebreaking and cleaning mechanism arranged to receive the material from the first mechanism, the said initial softening and breaking mechanism having fixed members, and reciprocating members moving to and from the said fixed members, and the said re-breaking and cleaning mechanism having two spaced sets of fixed members and two sets of reciprocating members co-acting alternately with the said sets of fixed members, and an angular reciprocating lever carrying the reciprocating members of the said two mechanisms.

2. A hemp brake provided with an initial softening and breaking mechanism disposed approximately horizontally, and re-breaking and cleaning mechanism disposed approximately vertically and receiving the material from the said initial softening and breaking mechanism, the initial breaking mechanism having upper fixed members and lower up and down reciprocating members, and a suction device arranged adjacent to the said upper fixed members for receiving extraneous matter from the said fixed members.

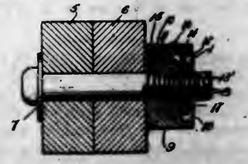
3. A hemp brake provided with an initial softening and breaking mechanism disposed approximately horizontally and re-breaking and cleaning mechanism disposed approximately vertically and receiving the material from the said initial softening and breaking mechanism, the initial breaking mechanism having upper fixed members and lower up and down reciprocating members, a suction device arranged adjacent to the said upper fixed members for receiving the extraneous matter from the said fixed members, and a conveyer for carrying off the extraneous matter dropping from the said reciprocating members.

4. A hemp brake having an angular reciprocating lever provided with arms on opposite sides of the fulcrum, one of the arms extending approximately in a horizontal direction and the other arm extending approximately in a vertical direction, breaking members mounted on the said horizontal arm to reciprocate with the latter, stationary breaking members above the said reciprocating breaking members, sets of breaking members on the said vertical arm of the lever to reciprocate with the latter, and spaced sets of stationary breaking members on opposite sides of the said vertical arm of the said lever and with which co-act the said sets of breaking members on the lever.

5. A hemp brake comprising opposed conveyers, between which passes the material to be operated on, fixed and reciprocating initial breaking members receiving the material from the said conveyers, fixed and reciprocating re-breaking and cleaning members receiving the material from the said initial breaking members, a fiber conveyer receiving the fibers from the said re-breaking and cleaning members, and means including a suction device and a conveyer for gathering the extraneous matter from the said breaking means and discharging the said matter separate from the said fibers.

[Claims 6 to 22 not printed in the Gazette.]

1,017,583. LOCK BOLT AND NUT. EARLE A. PACK and RUPERT A. MOON, Weiser, Idaho. Filed Nov. 28, 1910. Serial No. 593,932. (Cl. 151—17.)



1. In a nut lock, a bolt having right and left hand screw threads, a nut having right screw threads fitted on said bolt, said nut being provided with a socket, a spring pressed pawl arranged within said socket, said pawl being provided with a beveled face, a pin carried by said nut, said pin extending within said socket, the end portion of said pin being arranged to enter a longitudinal slot formed in said pawl, said pawl being formed with a transverse slot to receive the end portion of said pin when the pawl is forced against the tension of said spring, and a nut provided with left hand threads, said nut being formed with a plurality of apertures to receive the beveled end portion of said pawl.

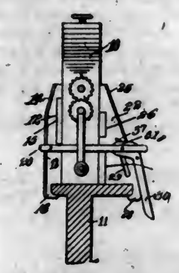
2. In a nut lock, a bolt having right and left hand screw threads, a nut provided with right threads fitted on said bolt, a socket formed in said nut, a pawl mounted for movement within said socket, a spring bearing against the end portion of said pawl, a pin carried by said nut, said pin extending within said socket, and entering a transverse groove formed in the pawl to hold the same against the tension of said spring, said pawl being provided with a longitudinally arranged groove adapted to normally accommodate the end portion of said pin, and a second nut provided with left threads, said nut being formed with apertures to receive the end portion of said pawl.

3. In a nut lock, a bolt having right and left screw threads, a nut having right threads fitted on the bolt, said nut having a socket, a pawl disposed in the socket bearing against a spring, said pawl being provided with an inclined slotted outer end and with body slots, two of said slots being formed in the sides of the pawl and extending longitudinally of said pawl and one of said slots being formed transversely in said pawl and communicating with the longitudinal slots, a pin threaded in the nut adapted to engage either of the slots of the pawl to hold said pawl in the nut socket for limited movement or against movement with the inclined head thereof secured inwardly of the outer face of the nut, and a nut threaded on the bolt and formed with left screw threads to engage the screw threads of the bolt and with openings adapted to receive the inclined end of the locking pawl.

1,017,584. CLOTHES-WRINGER CLAMP. PEARL V. PARRISH, Nowata, Okla. Filed July 13, 1910. Serial No. 571,755. (Cl. 68—32.)

1. A wringer clamp comprising a pair of jaws engageable with opposite sides of a wringer upright, said jaws having wringer penetrating teeth arranged on their edges, a pivoted link connecting the jaws, and a lever

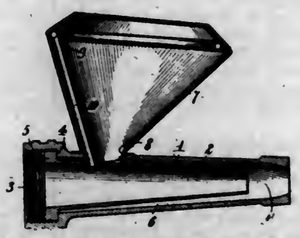
pivotally mounted on one of the jaws and loosely connected to said connecting link, said lever operating to rock said link whereby to move apart or draw together the jaws in mounting or releasing the clamp.



2. A wringer clamp, comprising a pair of jaws adapted to be engaged upon opposite sides of the wringer upright, a draw bar pivotally connected at one end to one of the jaws, a handle lever fulcrumed upon the other jaw, and pivotally connected to the free end of said draw bar, the actuation of said handle lever causing the draw bar to spread apart or draw together the jaws for releasing or locking the same to the wringer.

3. A wringer clamp, comprising a pair of jaws adapted to engage the opposite sides of a wringer upright, said jaws having anchoring means arranged upon their inner edges, a draw bar pivotally connected to one of the jaws, a handle lever having a laterally extending head pivotally connected to the other jaw, the free end of said draw bar being pivotally connected to said lever head, the pivot of said draw bar working in an arcuate rabbet in the underlying jaw and operating to evenly guide the lever in its rocking movement, said lever operating through the instrumentality of the draw bar to spread apart or draw together the jaws.

1,017,585. FIRE-EXTINGUISHING NOZZLE. RICHARD PATTIN, Brookline, Mass. Filed Mar. 22, 1911. Serial No. 616,123. (Cl. 169—9.)

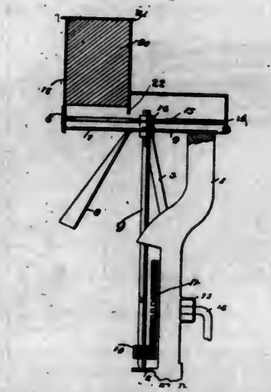


1. A fire extinguishing nozzle comprising inner and outer spaced tubes, each of said tubes being formed with a relatively large inner portion and a restricted outer portion, a hopper for a powdered fire extinguishing chemical supported by the outer tube and opening directly thereinto, and a spraying pipe carried by the hopper and located therewithin and having a leg portion extending downwardly within the hopper and into the inner tube.

2. A fire extinguishing nozzle comprising inner and outer tubes each being of an outwardly decreasing diameter, the said tubes being spaced apart, and the outer tube being extended in advance of the outer end of the inner tube, a hopper supported by the outer tube, and a spraying member carried by the hopper and having a water intake end extending into the inner tube midway between the ends thereof and adapted to receive water on the flow of the same through the inner tube.

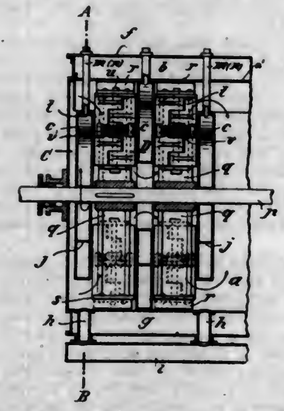
3. A fire extinguishing nozzle comprising inner and outer tubes, the said tubes each being of an outwardly decreasing diameter, a hopper carried by the outer tube, the said tubes being spaced from each other to form an intervening chemical receiving space for receiving the chemical from the hopper, the said hopper being in open communication with said space, and a sprayer carried by the hopper and having an intake portion extending downwardly into the inner tube and disposed adjacent to the large end of the said tube so that a part of the water under pressure when discharging through the tube will be directed to the said sprayer.

1,017,586. VEGETABLE SLICER AND GRATER. WILLIAM EDWARD PETCHUCK, Mahanoy City, Pa. Filed May 7, 1910. Serial No. 559,951. (Cl. 146—9.)



In combination, a standard, a base having an upstanding edge flanged and a delivery opening, a chute depending from said opening, a cover hinged and provided with a transversely extending member adapted to limit the movement of the material to be cut over said base, a material chamber formed in said cover and located above the delivery opening, a shaft extending through the base, a horizontal flange on the cover, and a cutter secured to the shaft and movable against the horizontal flange and under the material chamber.

1,017,587. APPARATUS FOR COOLING PARAFFIN OR THE LIKE. PHILIPP PORGES, Vienna, and RICHARD NEUMANN, Brünn, Austria-Hungary. Filed May 29, 1911. Serial No. 630,196. (Cl. 62—16.)



1. A cooling apparatus comprising a horizontally arranged cylindrical tank, a plurality of vertically arranged hollow cooling bodies mounted therein and revoluble stirrers mounted between the cooling bodies and having scrapers to engage the sides of the latter and the interior wall of the tank.

2. A cooling apparatus comprising a horizontally arranged cylindrical tank, a plurality of vertically arranged annular cooling bodies mounted therein of substantially the same diameter as the tank, and cylindrical cooling bodies of smaller diameter than the annular bodies interposed between the latter, thereby forming a zig-zag passage through and around the cooling bodies.

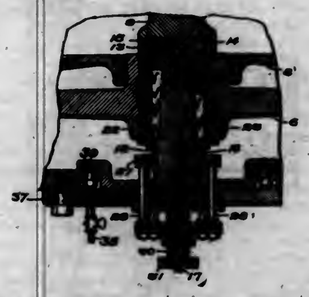
3. A cooling apparatus comprising a horizontally arranged cylindrical tank, a plurality of vertically arranged annular cooling bodies mounted therein of substantially the same diameter as the tank, and cylindrical cooling bodies of smaller diameter than the annular bodies interposed between the latter, and revoluble stirrers mounted between the cooling bodies and having scrapers to engage the sides of the latter and the interior wall of the tank.

4. A cooling apparatus comprising a horizontally arranged cylindrical tank, a plurality of vertically arranged cylindrical cooling bodies mounted therein, and partitions in said bodies to cause a cooling medium in the latter to flow in successively diminishing circular paths.

5. A cooling apparatus comprising a horizontally arranged cylindrical tank, a plurality of vertically arranged cylindrical cooling bodies mounted therein, each alternate body being of substantially the same diameter as the tank, and partitions in said bodies to cause a cooling medium in the latter to flow in successively diminishing circular paths.

[Claims 6 to 14 not printed in the Gazette.]

1,017,588. BEARING FOR TURBINES. ALPHONSO C. PRATT, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed June 14, 1907. Serial No. 378,938. (Cl. 64—47.)



1. In a turbine, a shaft with a hollow end, in combination with a step-bearing located within the bore of said end, a support therefor, a guide-bearing also located within said bore, means external to the bore of the shaft for changing the diameter of the guide bearing to adjust the clearance, and a conduit passing through the support for supplying lubricant to said bearings.

2. In a turbine, a shaft with a hollow end, in combination with a step-bearing located within the bore of said end, a support therefor, a guide-bearing also located within said bore, a means for changing the diameter of the guide-bearing to vary the shaft clearance, and a conduit passing through the guide-bearing and discharging lubricant to the step-bearing.

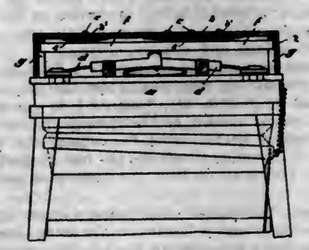
3. A shaft having a hollow end, in combination with a support that enters the bore of said end, a bearing block carried by the shaft, a stationary block carried by the support, a guide bearing mounted on the support between the stationary block and the end of the shaft, and a means for increasing or decreasing the diameter of the guide bearing to change the clearance between it and the shaft.

4. A vertical shaft having a hollow lower end, in combination with a base; a support mounted thereon and extending into the bore of the shaft, opposed bearing blocks located within the bore of the shaft, one of which is carried by the support, a guide bearing also located within said bore and carried by the support, means accessible from a point exterior of the base for changing the diameter of the guide bearing to adjust the clearance, and means supplying lubricant to one bearing from which it flows through the other.

5. A vertical shaft having a hollow end, in combination with a base, a support mounted thereon and extending into the bore of the shaft, opposed bearing blocks in the bore, one of which is carried by the support, an internally tapered guide bearing mounted upon the support between the bearing blocks and the end of the shaft, means for raising and lowering the guide bearing on the support, a conduit supplying lubricant under pressure to the bearings, and an annular member which incloses one end of the support and receives the lubricant after it exhausts from the bearings.

[Claims 6 to 8 not printed in the Gazette.]

1,017,589. KEYBOARD MUSICAL INSTRUMENT WITH CHART. CARL REICHELT, Klingenthal, Germany. Filed Nov. 4, 1910. Serial No. 590,655. (Cl. 84—150.)



1. A musical instrument, with devices for controlling the sounding of the notes, and a key-board in which the keys for notes recurring in a tune are repeated as many times as said notes occur.

2. A musical instrument with devices for controlling the sounding of the notes, and a key-board in which the keys for notes recurring in a tune are repeated as many times as said notes occur, said key-board having graphic means indicating the order in which the keys must be struck to produce said tune.

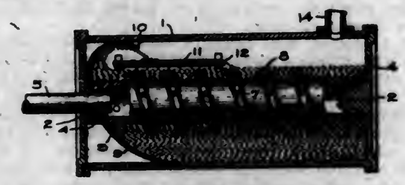
3. A musical instrument with devices for controlling the sounding of the notes, a key-board wherein the keys for notes recurring in a tune are repeated as many times as said notes occur, and means whereby the keys for each note, thus repeated, are severally enabled to actuate one of said controlling devices, said key-board having graphic means indicating the order in which the keys must be struck to produce said tune.

4. A musical instrument with devices for controlling the sounding of the notes, a key-board wherein the keys for notes recurring in a tune are repeated as many times as said notes occur, and bars for actuating said controlling devices, one bar for each device, arranged below said keys, whereby each of said bars for any note is actuatable by all the keys provided for that note, said key-board having graphic means indicating the order in which the keys must be struck to produce said tune.

5. A musical instrument with devices for controlling the sounding of the keys, comprising a key-board wherein the keys for notes recurring in a tune are repeated as many times as said notes occur, said keys being arranged in rows, a bar for actuating the controlling devices for said notes, said bars being parallel with said rows, and severally arranged below the same, and arranged to engage the controlling devices below the bars, each of said bars being actuatable by all the keys in the row above it, and graphic means on said key-board for indicating the order in which the keys must be struck to produce the tune.

[Claim 6 not printed in the Gazette.]

1,017,590. STEAM-ACCUMULATOR. RICHARD H. RICE, Lynn, Mass., and FRED A. LARKIN, New York, N. Y., assignors to General Electric Company, a Corporation of New York. Filed July 8, 1909. Serial No. 506,494. (Cl. 121—95.)



1. A steam accumulator comprising a water containing drum, a tubular shaft located therein and submerged in the water, means for discharging steam from the shaft in a manner to cause it to rotate, means for causing the water in the drum to circulate longitudinally thereof, a steam inlet and a steam outlet.

2. A steam accumulator comprising a drum containing steam and water, a tubular member located within the drum and in contact with the water, means for rotating the member, a peripheral helical projection on the member for causing the water in the drum to circulate longitudinally, a steam inlet and a steam outlet.

3. A steam accumulator comprising a drum containing water, a conduit for supplying steam thereto, a tubular member located within the drum and in contact with the water, means carried by the member for rotating it, a means carried by the drum for causing the water in the drum to circulate from end to end thereof, and a conduit for taking steam from the drum at a point above the water.

4. A steam accumulator comprising a drum containing water, a hollow member located in the water, means carried by the drum for rotating it and through which the steam flows, a conduit admitting steam to the member, means carried by the member for causing the water to circulate lengthwise of the drum, and a conduit receiving steam from the drum at a point above the level of the water therein.

5. A steam accumulator comprising a drum containing water, a hollow member located in the water, means for rotating the member, means admitting steam to the member, means for causing the rotation of the member to produce a movement of the water lengthwise of the drum, a pan arranged to receive water due to the action of the said member, and an outlet for the steam.

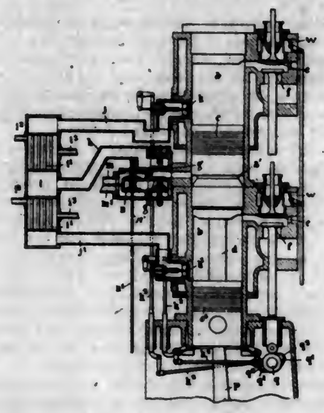
[Claims 6 to 8 not printed in the Gazette.]

1,017,591. METHOD OF GOVERNING INTERNAL-COMBUSTION ENGINES. THOMAS RIGBY, Dumfries, Scotland. Filed Oct. 16, 1911. Serial No. 654,941. (Cl. 123—104.)

1. A method of governing internal combustion engines in which the main charge is drawn in on the suction stroke, which consists in admitting to the working cylinder at or near the end of the suction stroke, a supplementary charge cooled to a temperature below the temperature of the charge, and in varying the amount of the supplementary charge in accordance with the load.

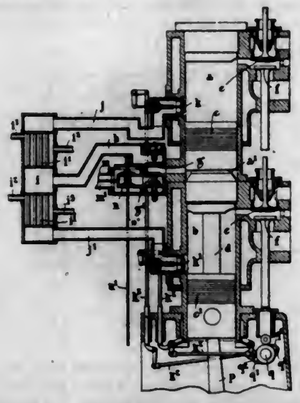
2. A method of governing internal combustion engines in which the main charge is drawn in on the suction stroke, which consists in admitting to the working cylinder at or near the end of the suction stroke, a supplementary charge cooled to a temperature below the temperature of the charge, and in varying the amount of the supplementary charge in accordance with the load, and in throttling the charge of the suction stroke when the load is below a predetermined amount.

3. The method of governing internal combustion engines in which the main charge is drawn in on the suction stroke, which consists, above a predetermined load, in admitting a supplementary fuel charge to a compressor from which it passes to the engine at or near the end of the suction stroke, and varying said supplementary charge in accordance with the load, and cutting off said



supplementary charge from the compressor while below said predetermined load.

1,017,592. METHOD OF WORKING AND GOVERNING INTERNAL-COMBUSTION ENGINES. THOMAS RIGBY, Dumfries, Scotland. Filed Oct. 16, 1911. Serial No. 654,942. (Cl. 123—1.)



1. A method of working internal combustion engines in which the main charge is drawn in on the suction stroke, which consists in admitting to the working cylinder a supplementary charge cooled to a temperature below the temperature of the usual charge at or near the end of the suction stroke when the load of the engine exceeds a predetermined amount.

2. A method of working internal combustion engines, which consists in drawing into the cylinder a charge of gas and air by suction, cooling a supplementary charge to a temperature below the temperature of the first-named charge admitting the supplementary charge at or near the end of the suction stroke, compressing the suction charge and the supplementary charge together, igniting the charge to move the piston on its working stroke, and permitting the products of combustion to be expelled on the exhaust stroke.

3. A method of working internal combustion engines, which consists in drawing into the cylinder a charge of gas and air by suction, cooling a supplementary charge to a temperature below the temperature of the first-named charge admitting the supplementary charge at or near the end of the suction stroke, compressing the suction charge and the supplementary charge together, igniting the charge to move the piston on its working stroke, permitting the products of combustion to be expelled on the exhaust stroke, and simultaneously compressing the supplementary charge for the succeeding explosion.

4. The method of working internal combustion engines which consists in drawing into a cylinder a charge of gas and air by suction, compressing a supplementary charge in the engine, cooling said supplementary charge below the temperature of said first named charge, and admitting said supplementary charge at or near the end of the suction stroke.

1,017,593. PROCESS OF MAKING AMORPHOUS ANHYDROUS BARIUM HYDROXID. CHARLES ROLLIN, Newcastle-upon-Tyne, England. Original application filed Oct. 8, 1910, Serial No. 586,049. Divided and this application filed Sept. 1, 1911. Serial No. 647,232. (Cl. 23—13.)

1. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid said process consisting in causing dry inert gaseous fluid to flow over the barium hydroxid while melted in its water of crystallization and until the mass reaches the solidification stage, then breaking up the mass and afterward removing the remaining water of crystallization therefrom while the same is heated to a comparatively low temperature.

2. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in melting the crystallized barium hydroxid in its water of crystallization at a comparatively low temperature, causing gaseous fluid heated to a temperature not much exceeding 220° C. and at substantially ordinary atmospheric pressure to flow slowly over the liquefied barium hydroxid until the mass thereof reaches the solidification stage, then breaking up the resulting mass of partly dehydrated barium hydroxid and afterward slowly removing the remaining water of crystallization therefrom by further heating the mass at a comparatively low temperature the pressure not being substantially below ordinary atmospheric pressure.

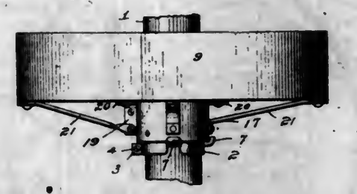
3. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in melting the crystallized barium hydroxid in its water of crystallization at a comparatively low temperature, causing a stream of dry gaseous fluid inert to barium hydroxid to flow continuously over the liquefied hydroxid at a comparatively low temperature, until the mass reaches the solidification stage, the gaseous fluid after leaving the hydroxid being dehydrated and then again passed over the barium hydroxid, breaking up the mass of partly dehydrated barium hydroxid and afterward removing the remainder of the water of crystallization therefrom at a comparatively low temperature and at substantially atmospheric pressure.

4. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in causing dry purified air to flow slowly and at substantially atmospheric pressure over the barium hydroxid while melted in its water of crystallization, removing moisture from the air after it leaves the hydroxid, re-heating the air and again passing it over the hydroxid and continuing the operation until the mass reaches the solidification stage, breaking up the solidified mass, and afterward removing the remaining water of crystallization therefrom while heated to a comparatively low temperature and at substantially atmospheric pressure.

5. A process for producing anhydrous amorphous barium hydroxid from crystallized barium hydroxid, said process consisting in causing dried purified air heated to a temperature not much exceeding 220° C. and under substantially ordinary atmospheric pressure, to flow in a continuous stream for about three or four days over the barium hydroxid while melted in its own water of crystallization whereby it is solidified the air being dehydrated after leaving the hydroxid, re-heating the air and again passing it over the hydroxid and continuing the operation until the mass reaches the solidification stage, breaking up the solidified mass, similarly heated air again being passed over the mass for a further three or four days to remove the remaining water of crystallization therefrom substantially as described.

[Claim 6 not printed in the Gazette.]

1,017,594. PORCH FLOWER-BRACKET. GEORGE L. ROPPENEKER and ALBERT L. SCOTT, Franklin, Pa. Filed May 24, 1911. Serial No. 629,247. (Cl. 47—26.)



1. The combination with a post or support and a sleeve surrounding the post, of a flower box adapted to be supported by the sleeve, said flower box comprising a flanged member having its base slitted and its flange on one of its sides being also slitted in a plane with the slitted base, one of the edges of the flange being provided with a projecting hook, the edge of the second member of the flange having an eye adapted to receive the hook, substantially as described.

2. The combination with a post having a sleeve provided with offset-supports, of a flower box comprising a flanged member having its base slitted and its flange at one side thereof also slitted, the central portion of the base being provided with a cylindrical opening, a sectional collar extending below the base and rigidly connected with one of the sections provided by the slitted base, means for securing the slitted edges of the box together, and means for securing the slitted edges of the collar whereby the said collar may be removably connected with the sleeve of the post.

3. In combination with a post having a sleeve provided with supports supported therein, of a sectional flower box having its lower extremity provided with a slitted collar rigidly secured to one of the sections of the box and removably connected with the second section, and said collar adapted to rest upon the supports of the sleeve.

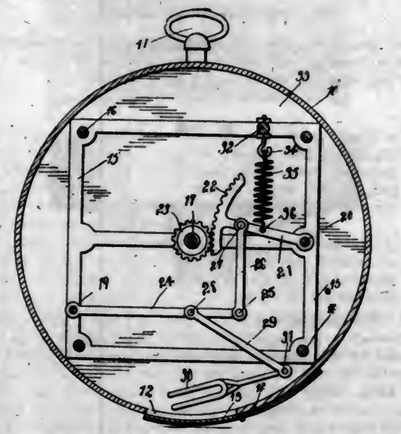
4. A box or basket of the class set forth adapted to be positioned upon a post or pillar, said box or basket comprising a member having a slitted base, said member being also provided with a flange slitted in a line with the base, a catch member for connecting the slitted ends of the flange, a slitted collar securely connected with one of the sections of the base and removably connected with the opposite section of the base, the said collar being provided with openings adapted for the reception of securing elements, the sections of the base having an opening which is surrounded by the said collar, a second slitted collar having its lower extremity formed with feet, means for removably connecting the feet with the sections of the base, and the said second collar being provided with a pivoted catch for securing the ends of the said collar together.

1,017,595. PROCESS OF PRODUCING TOILET CREAM. WILLIAM H. ROYSTONE, Scranton, Pa. Filed Nov. 3, 1911. Serial No. 658,422. (Cl. 167—9.)

The process of producing a toilet cream consisting in employing an alkaline solution consisting of one quart of water and five ounces of caustic potash, melting four pounds of stearic acid in a mixture of one gallon of water and one quart of glycerin, diluting the caustic potash so-

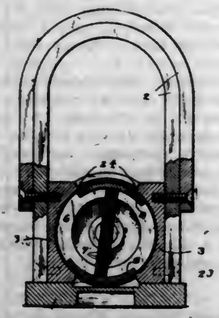
lution with two gallons of water and raising to a temperature of 212° F., pouring the boiling solution into the stearic acid compound, stirring until admixed and boiling until complete saponification takes place.

1,017,596. SCALE. WALTER H. SABIN and HANS LARSON, Crookston, Minn. Filed Sept. 27, 1910. Serial No. 584,083. (Cl. 73—46.)



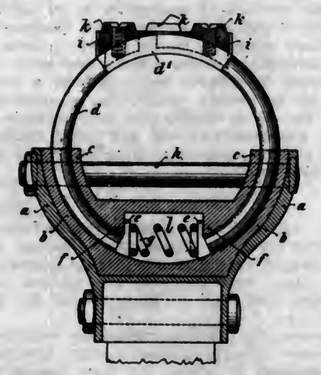
In a weighing scale, a casing having a graduated dial and with an opening in one of its walls, a frame secured in said casing, a shaft journaled in said frame and extending through the casing, a pointer carried by the shaft and operating over said dial, a pinion also carried by said shaft, an arm pivotally mounted on said frame and having at one end a segment gear meshing with said pinion, a second arm pivoted by one end to said frame, a link connecting the free end of said second arm with the first mentioned arm intermediate the length of the latter, a spring connected to maintain said arms yieldably in one position, means for adjusting said spring, a flexible member connected to said last mentioned arm and extending through the casing aperture, and a supporting device connected to said flexible member.

1,017,597. MAGNETO. JAMES E. SEELEY, Los Angeles, Cal., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 31, 1911. Serial No. 605,775. (Cl. 171—209.)



In a magneto, the combination with the field pole pieces of an armature, mounted to rotate between said pole pieces, and comprising heads having opposite notches, a core consisting of H formed laminations, having arms extending into said notches to secure the laminations in place, and segmental pole pieces secured to said flanges, and extending over and in contact with said core.

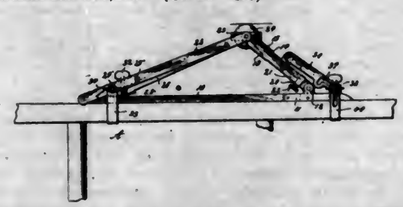
1,017,598. TIRE. ARTHUR SEELIG, Wilmersdorf, Berlin, Germany. Filed Sept. 6, 1911. Serial No. 647,802. (Cl. 152—8.)



1. A tire, comprising a rim, and split resilient rings located transversely thereof, the lower part of the legs of each ring being completely inclosed by the rim, and means for preventing rotation of the rings within the rim, consisting of a projection on the one part engaging in a recess in the other part, and a compression-spring located in the gap between the two ends of the ring.

2. A tire including a rim having passages formed therein, split rings having their ends sliding in said passages, and coil springs interposed between the ring ends.

1,017,599. ATTACHMENT FOR PAINTERS' STAGES. CHARLES E. SHARP, Pittsburgh, Pa. Filed Dec. 14, 1910. Serial No. 597,289. (Cl. 20—82.)



1. In combination, a painter's stage, and a wall engaging attachment therefor comprising a frame composed of sections pivotally connected at one end to the stage and pivotally connected together at their other ends, means for holding said sections at various angular adjustments, a slide adjustably mounted upon one of said sections, and a bearing member carried by said slide to engage with a wall or the like.

2. In combination, a painter's stage, and a wall engaging attachment therefor comprising a frame composed of sections pivotally connected at one end to the stage and pivotally connected together at their other ends, means for holding said sections at various angular adjustments, a slide movably mounted on one of said sections, means for holding said slide at various adjustments projecting from but in alinement with the section carrying the same, and a bearing member to engage a wall carried by the outermost portion of said slide.

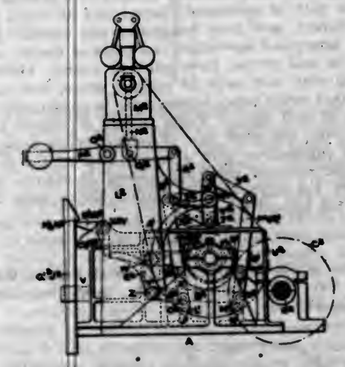
3. In combination, a painter's stage, and means for spacing said stage from a wall consisting of a frame composed of sections pivotally connected together at one end and adjustably connected at the opposite ends to the stage, a wall engaging member, and pivotal supporting means for said wall engaging member arranged in alinement with the pivotal connection between adjacent ends of said sections.

4. In combination, a painter's stage, and means for spacing said stage from a wall consisting of a frame arranged at one side of the stage and composed of sections pivotally connected at one end to the stage and pivotally connected together at their opposite ends, a rotatable wall engaging member pivoted adjacent to said opposite ends of the sections, and a supporting ring in which said member is rotatable, the pivot connections between said sections being in alinement with the axis of said supporting ring.

5. In combination, a painter's stage, and means for spacing the same from a wall comprising a carrying plate at one side of the stage, a frame composed of adjustable sections, clamps connected to said sections and engaged with the stage, and means for effecting coöperation in said clamps with the stage and simultaneously securing the carrying plate to the stage.

[Claims 6 to 8 not printed in the Gazette.]

1,017,600. GEAR FOR THE PREVENTION OF OVERWINDING. JOHN SHAW, Kirby Moorside, North Riding, England; John Reginald Shaw, Elmsall Lodge, Pontefract, England, administrator of said John Shaw, deceased. Filed June 19, 1911. Serial No. 634,015. (Cl. 57—130.)



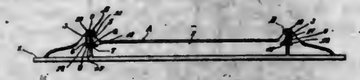
1. An overwinding apparatus of the class described comprising a non-rotating screw a nut thereon a projection carried by the nut, a rotatable sleeve having a longitudinal slot through which the projection extends, a governor operated with the sleeve, a pivoted and vertically movable member having a projection adapted to be swung in the path of the projection on the nut and being adapted when in said path to be raised by the said projection, connecting means between said member and the governor whereby excess speed will cause the member to swing to position with the projection on the nut, and braking means operated by raising of the member.

2. In overwinding apparatus of the type in which a traveling nut is traversed along a non-rotating screw (for the purpose of actuating the speed-controlling mechanism) by means of a rotatable concentric tube or hollow shaft engaging with a projection upon the nut; the combination of the permanently fixed screw D, the rotatable tube L having a pair of longitudinal slots M N formed respectively in opposite ends and sides of the tube, the pair of nuts O P upon the screw, and projections Q R on the respective nuts; said projections being slidable within the respective slots so as to traverse the nuts simultaneously in the same direction along the screw as the tube is rotated, and the nuts being alternately operative, each in one direction only, substantially as herein set forth.

3. In overwinding apparatus of the type in which brake releasing or stop valve closing mechanism is actuated from a rotating shaft through the medium of pivoted levers on each side of the shaft having hooks or the like adapted to be moved under the influence of a governor into and out of the path of engaging devices on the shaft; the improved mechanism actuated from the traveling nuts O, P, and comprising levers N' O' and P' Q', sliding blocks R' S' having lips T' U' (the positions of which are controlled by the governor M^2), links X' Y', levers A^2 B^2, and curved lever E^2, for the purpose of releasing the trip lever F^2 and weighted bar J^2 to cut off the power and apply the brake in case the speed has not been reduced at a predetermined point or if after that point is passed the speed is not reduced at the pre-determined rate, substantially as herein set forth.

4. In overwinding apparatus of the type in which brake releasing or stop valve closing mechanism is actuated by lever and trip gear from a traveling nut or nuts on a screw shaft or shafts; the pivoted bar or lever A' having a semi-annular end encircling the lower half of the shaft and having internal lips E' F' adapted to be lifted by contact with the traveling nuts O P, for the purpose of preventing overwinding by releasing the trip lever B' and weighted bar G' to cut off the power and stop the engine when the ascending cage reaches the pit bank, substantially as herein set forth.

1,017,601. RAILROAD-TRACK. TANNES SIVERTSON, Tacoma, Wash. Filed May 12, 1911. Serial No. 626,683. (Cl. 238—5.)



1. A metallic railroad tie having a web provided with rail receiving recesses, each of said recesses extending downwardly and inwardly and having a convexly curved inner wall, a concavely curved outer wall and a flat bottom, the web of the tie being also provided adjacent to the upper end of the outer wall of each rail receiving recess with a rail head receiving notch.

2. A metallic railroad tie having a web provided with obliquely disposed downwardly and inwardly extending rail receiving recesses, each recess having a convexly curved inner wall, a concavely curved outer wall, a flat bottom portion and an acute angular notch at the angle between the bottom portion and the outer wall; said web being also provided adjacent to the upper end of the outer wall of each rail receiving recess with a rail head engaging notch.

3. A metallic railroad tie having a web provided with obliquely disposed downwardly and inwardly extending rail receiving recesses, each recess having a convexly curved inner wall, a concavely curved outer wall, a flat bottom portion and an acute angular notch at the angle between the bottom portion and the outer wall, said web being also provided adjacent to the upper end of the outer wall of each rail receiving recess with a rail head engaging notch, in combination with a railroad rail comprising a head, a web, a flange extending from one side of the lower end of the web and a beveled rib constituting a heel portion formed upon the opposite side of the web, and a fastening key engaging between the rib and the angular bottom notch.

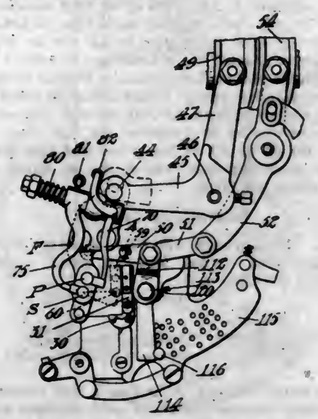
1,017,602. EYELETING-MACHINE. ROBERT B. SMITH, Stoughton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 28, 1910. Serial No. 569,261. (Cl. 218—15.)

1. A machine of the class described having, in combination, work guiding means, fastener inserting means including a work feeding member arranged to engage the work intermittently and being mounted for pivotal movement in a plane parallel to the work, and means for moving said member to draw the work through said guiding means in a straight path.

2. A machine of the class described having, in combination, stationary work guiding means, fastener inserting means including a work feeding member arranged to engage the work intermittently and being mounted for pivotal movement about an axis at the rear of said fastener inserting means, said work feeding member having

provision whereby it may be moved in a straight path transversely with respect to the work guiding means.

3. A machine of the class described having, in combination, a pivoted head, a punch and set mounted therein, a device for actuating one or the other to engage the work, means for swinging said head about its pivot while the work is so engaged and simultaneously moving the head in such a manner that the work shall receive feeding movement in a straight path.

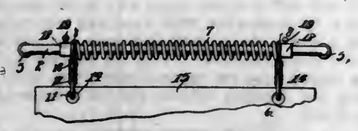


4. A machine of the class described having, in combination, a pivoted head, a punch and set carried thereby and arranged for movement toward the work to engage the same, means for swinging said head about its pivot while the work is engaged by one of said elements, and means for simultaneously moving the head so that a rectilinear feeding movement is imparted to the engaging element.

5. A machine of the class described having, in combination, a pivoted head, a work-engaging member mounted therein, means for swinging said head about its pivot while the work-engaging member is in engagement with the work, and means for simultaneously moving said head in such a manner that the work engaging member shall receive a rectilinear movement.

[Claims 6 to 15 not printed in the Gazette.]

1,017,603. TAG-HOLDER. FRANK J. SOTH, Sedgwick, Kans. Filed June 21, 1911. Serial No. 634,554. (Cl. 40—129.)



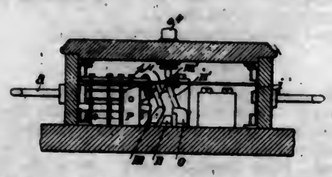
1. A license tag holder, comprising a U-shaped bar having its ends adapted to be secured to a vehicle, a spring wound on the central portion of the bar, clip members having eye portions slidably engaged on the bar and having the ends of the spring resting thereagainst to force the same outward, said clips having resilient portions adapted to engage a tag, and adjustable abutments for limiting the outward movement of the clips.

2. A tag holder, comprising a supporting bar, clips slidably engaged on the bar for engaging the tag, resilient means for forcing the clips apart and stops for limiting the motion of the clips.

3. A tag holder, comprising a supporting bar, a spring coiled upon the bar, clips slidably mounted upon the bar and having depending portions adapted to engage the tag, and means adjustably mounted on the bar exterior to the clips and adapted to engage the clips to hold the same inward against the expansive force of the spring.

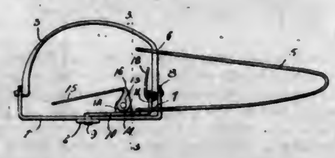
4. A tag holder, comprising a supporting bar, a pair of clips having eye portions slidably engaged upon the bar, a spring wound on the bar and having its end bearing against the eye portions for forcing the clips apart, said clips having resilient portions for permitting of the introduction of the tag thereinto and having depending reduced loops for engaging and holding the tag, and means for locking the clips against sliding movement along the bar.

1,017,604. CIRCUIT-CLOSER. VICTORIEN TARDIEU, Arles, France. Filed July 25, 1907. Serial No. 385,536. (Cl. 177—10.)



A circuit closer for use in telephone substation sets comprising a movably mounted member o^4 a pivoted lever p^4 in the path of movement thereof and arranged to be moved thereby, said lever comprising two metallic plates with an interposed insulation, two pairs of contact strips secured to said plates, three pairs of contact blocks cooperating with said pairs of contact strips, one pair of said contact strips being permanently in engagement with one pair of said contact blocks during movement of the pivoted lever, the other pair of contact strips being normally in engagement with a second pair of the contact blocks and movable from engagement therewith to engage with the third pair of contact blocks upon movement of the pivoted lever.

1,017,605. ANIMAL-TRAP. WILLIAM H. TILLEY, Willow-ranch, Cal. Filed Apr. 17, 1911. Serial No. 621,632. (Cl. 43—23.)



A trap of the character described, comprising a base having upwardly directed terminals, a second base member secured thereto and having an upwardly directed terminal parallel to and spaced apart from one of the first mentioned terminals, a U-shaped spring provided with apertured end portions, one of said end portions being seated over said spaced apart terminals, a trip pivotally secured to the second base member, a trigger pivoted to the upwardly directed terminal of said latter member and adapted to co-act with said strip and spring to maintain the latter in compressed position, and jaws swingingly mounted in the terminals of said first mentioned base member, one end of each of said jaws being passed through the aperture of the other end portion of the spring, the inner edges of said jaws adjacent one end thereof being provided with recesses adapted to receive the trigger when the trip is released.

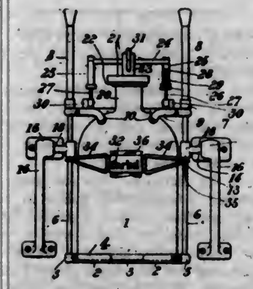
1,017,606. WASHING DEVICE. JOHN W. TOOL, THOMAS F. LINEGAR, and JOHN G. WILLIAMS, Seattle, Wash. Filed May 24, 1910. Serial No. 563,220. (Cl. 15—51.)

1. A scrubbing device comprising a brush wheel having radially projecting bristles, an impulse water wheel alongside the brush wheel, said wheels having parallel and separated journals, a casing inclosing both said wheels within a common chamber, a speed-reducing driving connection between said wheels, a nozzle in position to discharge water upon the water wheel in a direction approximately toward that side of the brush wheel which is farthest removed from the axis of the water wheel, the inclosing casing having an opening for the projection of this side of the brush wheel, and also having an inclined portion adapted to deflect the discharge from the water wheel into the bristles of the projecting portion of the brush wheel.

2. A scrubbing device comprising a brush wheel mounted to turn upon a central shaft, an internally toothed wheel concentrically secured to one side of the brush wheel, an impulse water wheel having a pinion concentrically secured thereto and meshing with said gear, a nozzle adapted to discharge upon said water wheel, and a casing inclosing both wheels and having an opening at the side opposite the nozzle for the projection of the brush bristles, and also having a surface in position to receive the waste water from the water wheel and deflect it into the bristles of the brush wheel.

3. A scrubbing device comprising a brush wheel having peripherally projecting bristles, an impulse water wheel mounted to turn alongside the brush wheel, a speed-reducing connection between said wheels, a hollow handle-socket adapted to convey the water supply, a nozzle connected with said handle socket and adapted to discharge upon the water wheel, a casing inclosing both wheels and having an opening opposite the nozzle through which the brush projects, said casing having an inclined portion in position to receive the waste water discharge from the water wheel and deflect it into the bristles of the brush wheel.

1,017,607. TILTING BOTTLE. HUGO TURK, Iserlohn, Germany. Filed Aug. 22, 1910. Serial No. 578,430. (Cl. 221—91.)



1. In a tilting support for a bottle the combination of a base ring adapted to receive and support a bottle, an ear formed on each side of said base ring, rods secured in said ears, a horizontal trunnion secured to and extending from each of said vertical rods, brackets located adjacent the rods and formed with bearings for said trunnions, an upper clamp supported on the rods and having its ends bent downwardly to engage the top of the body of a bottle to hold the latter in position and means for holding the clamp in position on the vertical rods.

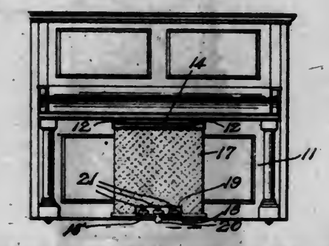
2. In a tilting support for a bottle the combination of a base ring open at its front and adapted to support a bottle, ears formed on said base ring, vertical rods engaging the said ears, a horizontal trunnion secured to each of said vertical rods, brackets formed with bearings to receive said trunnions, an upper clamp open at its front and having its ends bent downwardly to bear on the top of a bottle to hold the latter in position, and means for securing the said upper clamp in position on the said vertical rods, the ends of the clamp having buffers.

3. In a tilting support for a bottle, the combination of a base ring open at its front and adapted to receive the bottom of a bottle, a vertical rod secured to each side of said base ring, the upper ends of said rods being threaded, a horizontal trunnion extending from each of said vertical rods, brackets formed with bearings to receive said trunnions, an upper clamp open at its front and having its ends bent downwardly to engage the upper part of a bottle, lateral ears formed on said upper clamp to receive the vertical rods, handles provided with lower internally screw threaded sleeves which engage the threaded ends of the rods.

4. In a tilting support for a bottle, the combination of a base ring adapted to receive a bottle, vertical rods secured to the base ring, a trunnion extending from each vertical rod, brackets formed with bearings for the trunnions, the upper portion of the openings being open to receive the trunnions, a stop on each of said trunnions, one side of each of said bearings having a circular depression, abutments formed at the ends of each of the circular depressions which cooperate with the stops to limit the tilting motion of the support, an upper clamp which engages a bottle, and means for securing said clamp to the vertical rods.

5. In a tilting support for a bottle, the combination of a base, two vertical rods supported by the base, trunnions extending from the rods, brackets formed with bearings to receive the trunnions, means on the trunnions and the brackets to limit the movement of the tilting support, a clamp secured to the vertical rods, the ends of said clamp extending downwardly and adapted to bear on a bottle, lugs extending from the clamp to engage the bottle opposite the downwardly extended ends, and handles secured to the vertical rods.

1,017,608. PIANO-PROTECTOR. WILLIAM R. TURNER, Wallace, Idaho. Filed May 11, 1910, Serial No. 560,698. Renewed Sept. 14, 1911. Serial No. 649,480. (Cl. 84—98.)

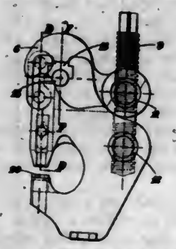


1. A piano protector comprising a bracket arranged adjacent the pedals, a roller supported by said bracket, a shield of flexible material secured to said roller and adapted to be drawn down to the pedals of the piano, means for holding the roller yieldably with the shield wound thereon, said shield being provided with a cut-away portion through which the pedals of the instrument may extend, and a rod incased by the lower edge portion of

said shield, said rod being adapted to engage the under face of said pedals, to hold the shield in an extended position against the tension of the roller-holding means.

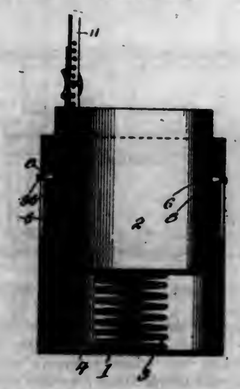
2. A piano protector comprising a bracket positioned upon the lower part of the front of the instrument, a spring roller, mounted between the end portions of said bracket, a shield of flexible material secured to said spring roller, the lower portion of said shield being provided with a centrally arranged opening, a rod incased by the lower edge portion of said shield, the portion of said rod adjacent said opening, being provided with a resilient covering and a tab centrally arranged upon said rod.

1,017,609. PORTABLE SCREW-PUNCH AND THE LIKE. ARTHUR VERNET, Dijon, France. Filed Dec. 17, 1909. Serial No. 533,664. (Cl. 164—101.)



In a punching machine, a frame provided with a fixed die carrying anvil and with a fixed arm overhanging the anvil, a punch holder fitted in the forward portion of the arm for vertical reciprocatory movement, an operating lever of the first order pivotally mounted on the arm, the arm being provided with wings, bearings for the pivot of the operating lever which are fitted between the wings, the openings between the latter above the bearings being of less width than the openings in which the bearings are fitted, a cap connecting and bracing the wings, a pivot connection between the forward end of the lever and the punch holder, the lever having a cylindrical bearing at its rear end, said bearing being provided with oppositely disposed openings, a cylindrical nut mounted for horizontal rocking movement in the bearing, the frame having a recess, a cylindrical nut fitted in the recess, and a shaft having adjoining right and left hand threaded portions, the shaft passing through the said nuts.

1,017,610. NOSE-BAG FOR HORSES. ERNEST A. WALDSPURGER, Philadelphia, Pa. Filed July 29, 1911. Serial No. 641,218. (Cl. 119—65.)

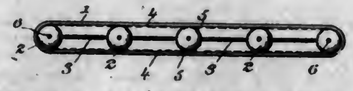


1. A nose bag comprising an outer receptacle, an inner receptacle, means in the outer receptacle for moving the inner receptacle in one direction, lateral stems secured to the inner receptacle spacing elements supported by the stems and having portions extending beyond the said stems, and means having sliding engagement with the outer receptacle and removably fitted in said spacing elements.

2. A nose bag comprising an outer receptacle, an inner receptacle, means in the outer receptacle for moving the inner receptacle in one direction, rivets supported by the inner receptacle and having stem portions extending in the direction of the outer receptacle, spacing elements supported by the stems and having portions extending beyond the said stems, the said outer receptacle having vertical slots therein, and removable devices extending through the slots and into the said spacing elements.

3. A nose bag comprising an outer receptacle, an inner receptacle, means in the outer receptacle for moving the inner receptacle in one direction, rivets supported by the inner receptacle and having stem portions extending in the direction of the outer receptacle, spacing elements supported by the stems and having portions extending beyond the said stems, and devices extending through the sots and threadedly connected with the said spacing elements.

1,017,611. ROOFING-CLEAT. HENRY R. WARDELL, New York, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Oct. 31, 1911. Serial No. 657,736. (Cl. 108—7.)



1. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of dome-like upwardly extending portions perforated at their centers, the remaining portions of the strip having longitudinal corrugations formed therein to stiffen the same and afford a plurality of gripping means on its under surface.

2. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of centrally perforated dome-like portions extending upwardly to a height sufficient to produce stiffness against vertical compression, and also having between said dome-like portions longitudinal corrugations of a much less height calculated to produce stiffness against transverse bending strains.

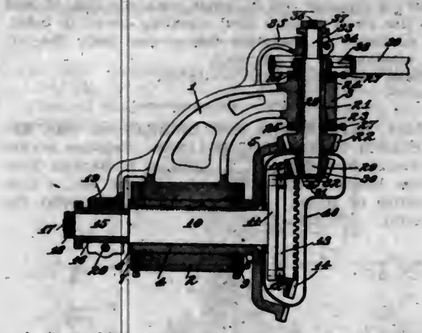
3. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of centrally perforated dome-like portions extending upwardly to a height sufficient to produce stiffness against vertical compression, and also having downwardly projecting ribs on the under face of the strip adapted to transversely stiffen the same and also serve as means for gripping the roofing beneath.

1,017,612. GEAR-GRINDING DEVICE. ROBERT B. WEAVER, Detroit, Mich. Filed Apr. 12, 1911. Serial No. 620,568. (Cl. 51—17.)

1. A machine for grinding toothed gears, comprising means for holding intermeshing gears to be ground in correct working position, and a positive driving device independent of said intermeshing gears for revolving them at their correct velocity ratio.

2. A machine for grinding toothed gears, comprising means for holding intermeshing gears to be ground in correct working position, means, external of themselves, for revolving said gears at their correct velocity ratio, and means for maintaining abrasive material in contact with the coöperating rubbing faces of said gears.

3. A machine for grinding toothed gears, comprising rotatory means for holding intermeshing gears to be ground in exact working position without back lash, means, independent of the gears to be ground, for rotating said rotatory gear-holding means to positively drive said gears to be ground at their correct velocity ratio, and means for maintaining abrasive material in contact with the coöperating rubbing faces of said gears.

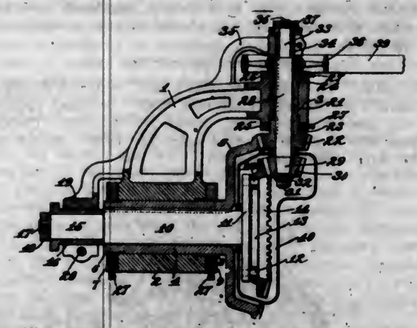


4. A machine for grinding toothed gears, comprising accurately formed intermeshing driving gears without back lash, means for mounting intermeshing gears to be ground in fixed relation to the respective driving gears so as to be rotated positively therewith, and means for adjusting the gears being ground into closer mesh.

5. A machine for grinding toothed gears, comprising rotatory carriers for intermeshing gears to be ground, and means for positively driving said gear-carriers, comprising accurately fitting intermeshing gears without back lash, whereby said gears to be ground are positively driven at their correct velocity ratio by means external of themselves.

[Claims 6 to 8 not printed in the Gazette.]

1,017,613. PROCESS OF GRINDING GEARS. ROBERT B. WEAVER, Detroit, Mich. Filed Oct. 4, 1911. Serial No. 652,866. (Cl. 51—12.)



1. The process of grinding gears which consists in placing a set of gears ready to be ground in coöperative working relation and driving said gears with continuously invariable velocity ratio by means independent of themselves.

2. The process of grinding gears which consists in placing the gears to be ground in coöperative working relation and driving such gears with continuously invariable velocity ratio in the presence of an abrasive material.

3. The process of grinding gears which consists in placing a set of gears to be ground in coöperative working relation until the high spots of the coöperating rubbing faces touch, driving such gears positively by means independent of themselves while maintaining abrasive material in contact with the tooth faces and feeding said gears closer together as the high spots are worn down, until the final coöperative working relation of the gears is reached.

4. The process of grinding mating gears which consists in driving said gears by positive means at uniform speeds, the respective speeds bearing the same ratio to each other as the velocity ratio of said gears, and gradually bringing the teeth of said rotating gears into mesh with each other in the presence of an abrasive material.

5. The method of grinding gears which consists in placing a set of gears to be ground in coöperative working position, fixing said gears respectively to coöperative master gears which are accurately formed and fitted to operate free of back lash and correlated to the respective gears to be ground so as to positively drive them at continuously invariable velocity ratio, driving said gears, and maintaining an abrasive material in contact with the rubbing faces of the gears.

1,017,614. TRAVELING CONTACT FOR ELEVATORS. SAMUEL S. WILLIAMSON and BAINBRIDGE WILSON, Philadelphia, Pa.; said Williamson assignor to said Wilson. Filed Dec. 31, 1901. Serial No. 87,932. (Cl. 172—152.)

1. In combination with a conductor, a traveling contact having a perforation through which the conductor passes, means normally overlying the plane of the edge of the opening for engaging the conductor.

2. A traveling contact comprising coacting members having oppositely opposed recesses to receive a conductor and means normally overlying the plane of the edges of the recesses for engaging the conductor.

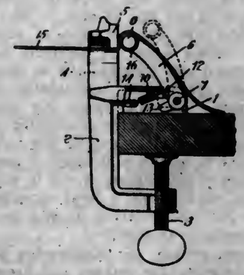
3. In combination with a conductor, a traveling contact having an opening through which the conductor passes, and spring means normally overlying the plane of the edge of the opening for engaging the conductor.

4. A traveling contact comprising coacting members having oppositely opposed recesses to receive a conductor, and springs normally overlying the plane of the edges of the recesses to engage the conductor.

5. A traveling contact comprising coacting members having oppositely opposed recesses to receive a conductor and yieldable means normally overlying the plane of the edges of the recesses for engaging the conductor.

[Claims 6 to 11 not printed in the Gazette.]

1,017,615. WORK-HOLDER. HARRY C. WILSON, New York, N. Y. Filed Nov. 1, 1911. Serial No. 658,066. (Cl. 223—54.)

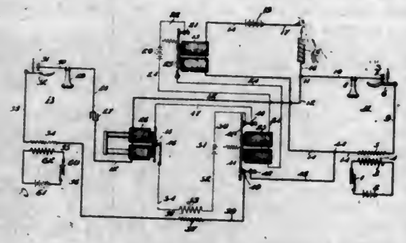


1. A work-holder including a clamp, having an upper jaw formed with two horizontal arms, said arms partly bridged across the top and adapted to bear on the top of a table, the lower jaw of said clamp being formed with an arm extending downwardly from the front edge of the upper jaw and inwardly under the same, said clamp being provided with a thumb-screw and thereby adapted to coact with said arms for clamping the table, a rigidly mount-

ed over-hanging jaw supported by a U-shaped arm, said U-shaped arm projecting at right angles from one side of the arm connecting the table-clamping jaws, and a lever provided with a jaw pivoted to the horizontal arms of the upper jaw, said lever being positioned to fall and bring its jaw into operating contact with the over-hanging jaw and thereby adapted to hold the work.

2. A work-holder including a clamp, having an upper jaw formed with two horizontal arms, said arms partly bridged across the top and adapted to bear on the top of a table, the lower jaw of said clamp being formed with an arm extending downwardly from the front edge of the upper jaw and inwardly under the same, said clamp being provided with a thumb-screw and thereby adapted to coact with said arms for clamping the table, a rigidly mounted over-hanging jaw supported by a U-shaped arm, said U-shaped arm projecting at right angles from one side of the arm connecting the table-clamping jaws, and a lever provided with a jaw pivoted to the horizontal arms of the upper jaw, said lever being positioned to fall and bring its jaw into operating contact with the over-hanging jaw and thereby adapted to hold the work, and resilient means for holding the pivoted jaw in contact with said work.

1,017,616. TELEPHONE REPEATING APPARATUS AND CIRCUITS. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Mar. 13, 1911. Serial No. 614,188. (Cl. 179—170.)



1. In a telephone system, the combination of a main line metallic circuit; a condenser in series in said circuit; a repeater coil in series in one side of sad circuit; a coil in series in the other side of said circuit; a local repeating circuit having a coil in inductive relation to said second mentioned coil, and magnetic means for making and breaking said local circuit, substantially as described.

2. In a telephone system, the combination of a main line metallic circuit; magnetic means for making and breaking said circuit; means at one of the terminals of said circuit for controlling said magnetic means; a repeater coil in series in one side of said circuit; a coil in series in the other side of said circuit; and a local repeating circuit having a coil in inductive relation to said second mentioned coil, substantially as described.

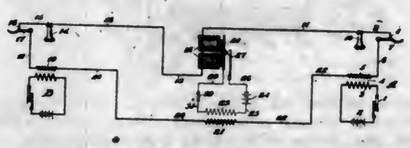
3. In a telephone system, the combination of a main line metallic circuit; magnetic means for making and breaking said circuit; a relay for controlling said magnetic means; means located at one of the terminals of said circuit adapted to control said relay; a repeater coil in series in one side of said circuit; a coil in series in the other side of said circuit; and a local repeating circuit having a coil in inductive relation to said second mentioned coil, substantially as described.

4. In a telephone system, the combination of a main line circuit; a controller for making and breaking said circuit; a relay and circuit controlled from one of the terminals of said circuit for operating said controller; an impedance in said relay circuit; a repeater coil in series with one side of said main line circuit; a local repeating circuit in inductive relation with said main line circuit; and a coil associated with said local circuit in series in the other side of said main line circuit, substantially as described.

5. In a telephone system, the combination of a main line circuit; a condenser in series with said circuit; a controller for making and breaking said circuit; a relay and circuit for operating said controller actuated from one of the terminals at will; an impedance in said relay circuit; a repeater coil in series with one side of said main line circuit; and a local repeating circuit in inductive relation with the other side of said main line circuit, substantially as described.

[Claim 6 not printed in the Gazette.]

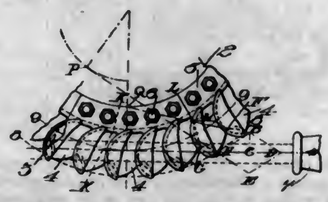
1,017,617. APPARATUS FOR INCREASING THE EFFICIENCY OF TELEPHONE-LINES. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Mar. 13, 1911. Serial No. 614,191. (Cl. 179—170.)



1. In a telephone repeating system, the combination with a main line metallic circuit of transmitting and receiving apparatus at the terminals thereof; a repeater intermediate said terminals having a coil in series with one side of said circuit; a local battery and coil associated with said repeater; and a third coil in inductive relation with said second mentioned coil and in series with the other side of said circuit, substantially as described.

2. In a telephone repeating system, the combination with a main line metallic circuit of transmitting and receiving apparatus at the terminals thereof; a repeater intermediate said terminals having a coil in series with one side of said circuit; a local battery and coil associated with said repeater; means for opening or closing the circuit of said battery at will; and a third coil in inductive relation with said second mentioned coil and in series with the other side of said circuit, substantially as described.

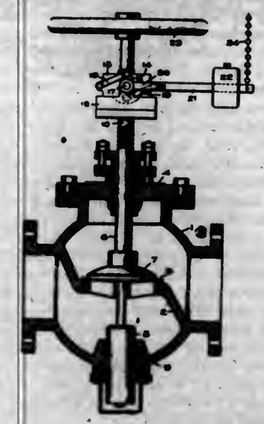
1,017,618. TANGENTIAL-IMPULSE WATER-WHEEL. SENECA L. BERRY, Sunnyvale, Cal. Original application filed Nov. 16, 1908, Serial No. 462,882. Divided and this application filed Aug. 15, 1910. Serial No. 577,312. (Cl. 138—18.)



1. The combination with a hydraulic nozzle, of an impulse water wheel having a circumferential series of double buckets, said buckets each having a splitter, said splitters in the plane of the center line of the nozzle, each splitter wedge-shaped in cross section, the edge of said splitter and said nozzle being constructed and arranged to cause said edge to be constantly normal to the relative flow line of the entering stream, said splitter edge being in the form of a modified involute, substantially as described.

2. The combination with a hydraulic nozzle, of an impulse water wheel having a circumferential series of double buckets, said buckets each having a splitter, said splitters in the plane of the center line of the nozzle, each splitter wedge-shaped in cross section, the edge of said splitter and said nozzle being constructed and arranged to cause said edge to be constantly normal to the relative flow line of the entering stream, and said buckets being constructed and arranged to be mutually supported one by the other throughout the greater part of their radial depth, said splitter edge being in the form of a modified involute, substantially as described.

1,017,619. COMBINED EMERGENCY AND THROTTLE VALVE. JOHN G. CALLAN, Nahant, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 16, 1909. Serial No. 490,264. (Cl. 137—4.)



1. In combination, a valve, a screw threaded stem for normally opening and closing the valve, a nut normally in engagement with the threads on the stem, a means for disengaging the nut and the threads on said stem under emergency conditions, and means for closing the valve quickly when said disengagement occurs.

2. In combination, a valve, a screw threaded stem for normally opening and closing the valve, a divided nut that is normally in engagement with the threads on the stem, a means for moving the parts of the nut away from the stem when it is desired to close the valve suddenly, and a means for closing the valve when the nut and stem are disengaged.

3. In combination, a valve, a screw-threaded stem for the valve, a nut which normally engages the threaded portion of the stem, guides for directing the movements of the nut toward and away from the stem, a means for moving the nut on the guides, and a means for causing the valve to close when the nut and stem are disengaged.

4. In combination, a valve, a screw threaded stem, a nut, the stem and nut coöperating for normal operation, a device responsive to an emergency condition for releasing the stem from the nut, and a means that tends at all times to close the valve.

5. In combination, a valve, a screw threaded stem and hand wheel, a divided nut that coöperates with the stem for normal operation, a lock for holding the parts of the nut in engagement with the stem, a device which unlocks the nut and opens the parts to free the stem, and a means for closing the valve after the nut is opened by said device.

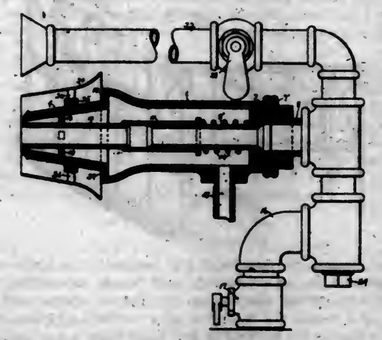
[Claims 6 to 11 not printed in the Gazette.]

1,017,620. METHOD OF DENITROGENIZING PRACTICALLY PURE IRON. ROBERT D. CAMPBELL, Pittsburgh, Pa. Filed May 24, 1911. Serial No. 629,191. (Cl. 75—27.)

1. The method of denitrogenizing iron consisting in introducing into the molten metal titanium preheated to a temperature not exceeding 500 degrees centigrade.

2. The method of denitrogenizing iron consisting in introducing into the molten metal titanium preheated to a temperature not exceeding 500 degrees centigrade, the molten metal being at a temperature of not less than 1575 degrees centigrade.

1,017,621. HYDROCARBON-BURNER. MARCUS S. CLARKE, Houston, Tex. Filed Mar. 9, 1911. Serial No. 613,269. (Cl. 158—74.)



1. A device of the character described including a nozzle having a tapering free end, and a fuel pipe formed of telescoping sections extending therethrough, a fuel supply inlet and an inlet for furnace gases each communicating with said fuel pipe and supplying fuel and furnace gases thereto and a resilient seat surrounding one of said telescoping pipe sections upon which the other of said sections rests.

2. A device of the character described including a nozzle having a tapering free end and a telescoping tube extending therethrough, said tube being composed of two sections, one of which is immovable with respect to the nozzle and the other of which is united to the immovable section by means of a slip joint, the discharge end of the movable section being flush with the discharge end of the nozzle, a resilient cushion against which said movable section rests, a fuel supply inlet and an inlet for furnace gases communicating with said tube and supplying fuel and furnace gases thereto, and an inlet for spraying fluid communicating with the nozzle.

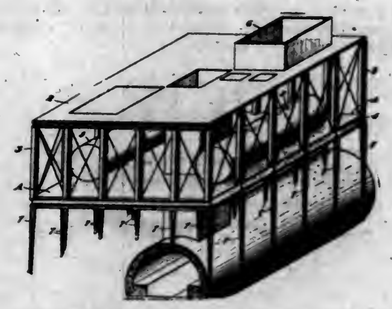
3. A device of the character described including a suitable burner nozzle and a telescoping fuel conducting tube extending therethrough, said tube being composed of two sections united by a slip joint, a fuel supply inlet and an inlet for furnace gases communicating with said tube, an inlet for spraying fluid communicating with said nozzle, a hood surrounding the discharge end of said nozzle and forming an air passageway between the hood and the discharge end of the nozzle, said nozzle being provided with a plurality of vents which discharge jets of the spraying fluid from the nozzle within the hood and create a suction between said hood and nozzle.

4. A device of the character described including a nozzle having a reduced free end, a fuel supply tube extending therethrough, said tube being composed of two sections united by a slip joint, a coil spring arranged to serve as a seat for one section of the tube and hold the free end of the same flush with the free end of the nozzle, a fuel supply inlet and an inlet for furnace gases communicating with said tube, and an inlet for spraying fluid communicating with said nozzle.

5. A device of the character described including a nozzle and a detachable hood surrounding the free end and conforming to the shape thereof and providing an air passage between said hood and said nozzle end, a fuel pipe formed of telescoping sections united by a slip joint, a resilient member surrounding one of said sections and forming a seat for the other of said sections, and a fuel supply inlet and an inlet for furnace gases each communicating with said fuel pipe and supplying fuel and furnace gases thereto.

[Claims 6 to 13 not printed in the Gazette.]

1,017,622. SUBAQUEOUS TUNNELING AND EXCAVATING. RUSSELL L. DUNN and LEON M. HALL, San Francisco, Cal. Filed May 17, 1911. Serial No. 627,870. (Cl. 61—16.)



1. A means for solidifying a protecting surface above the portion to be excavated, said means consisting of a movable platform adapted to be located above said surface, and means for introducing a solidifying element.

2. A means for hardening and solidifying a surface above a part to be excavated, said means including a platform adapted to cover the surface, a tank located upon the platform and adapted to contain a refrigerant, passages extending from the tank into the material to be solidified, and means to raise and lower the apparatus.

3. Means for hardening or solidifying a surface above the portion to be excavated, said means including a platform adapted to cover the surface, a non-conducting surface carried by said platform, a superposed receiver for a liquid capable of reducing temperature, and means for sending said liquid through the platform and into the tubes which extend into the material to be solidified.

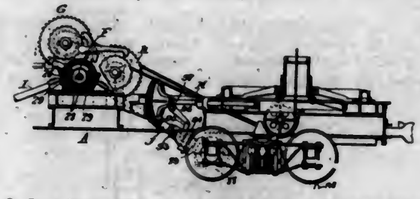
4. Means for hardening or solidifying a surface above the part to be excavated, said means including a non-heat conducting platform, a refrigerating brine containing tank carried thereby and means for reducing the temperature, by circulating pipes leading from said tank to the space in the material beneath the tank whereby the temperature around the pipes is reduced to allow the supporting material beneath to be excavated, and protecting structures to be built therein.

1,017,623. RAILROAD-RAIL ANTICREEPER. HARRY HICKS FERRIS, Anaheim, Cal. Filed Mar. 8, 1911. Serial No. 613,100. (Cl. 238—2.)

In combination with a tie plate having a seat for a rail, and a recess to extend under one side of the rail, a dog pivotally mounted on the bottom of said recess, having a curved camming end to bear against one base flange of the rail, and also having a flange at said camming end to engage under said base flange of the rail.

1,017,624. LOCOMOTIVE FOR SELF-PROPELLED PILE-DRIVERS AND THE LIKE. WALTER FERRIS, South Milwaukee, Wis., assignor to The Bucyrus Company, South Milwaukee, Wis., a Corporation of Wisconsin. Original application filed Apr. 18, 1910, Serial No. 556,163. Divided and this application filed May 8, 1911. Serial No. 625,863. (Cl. 105—227.)

1. In a locomotive for self-propelled pile drivers and the like, a car having front and rear wheeled trucks, a prime mover on the car having a transverse operating shaft above the deck or floor of the car and between the trucks, inclined driving shafts operatively connected with said operating shaft and extending down into proximity to the rear axle of the forward truck and the forward axle of the rear truck respectively, and shiftable mechanism to couple the driving shafts with the respective axles.



2. In a locomotive for self-propelled pile drivers and the like, a car having front and rear wheeled trucks, a transverse operating shaft on the car, a sliding quill on said shaft having beveled gears at the respective ends, and driving shafts interposed between said operating shaft and axles of the respective trucks and having bevel gears to mesh with the respective gears of the quill, all of said gears being so arranged as to drive the car at different speeds according to the position of said quill on its shaft.

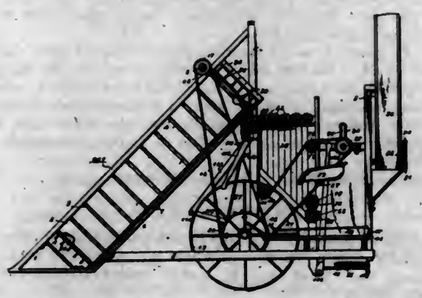
3. In a locomotive for self-propelled pile drivers and the like, a wheeled car, a transverse operating shaft, a quill slidable along said shaft and carrying oppositely located bevel gears, a driving shaft interposed between said operating shaft and one of the car axles, and bevel gears on one end of said driving shaft and interposed between the gears on the quill, all of said gears being so arranged as to drive the car at different speeds according to the position of said quill on its shaft.

4. In a locomotive for self-propelled pile drivers and the like, a wheeled car, a driving shaft operatively connected at one end with one of the axles thereof and equipped at the opposite end with a plurality of gears, a power shaft on the car, a quill slidable on said power shaft, and gears on the quill arranged to mesh with the respective gears on the driving shaft, said quill having an intermediate position in which all of the gears are disengaged.

5. In a locomotive for self-propelled pile drivers and the like, a wheeled car, a driving shaft to drive one of the axles, and equipped with bevel gears, a power shaft on the car, and a sliding quill or sleeve on said last named shaft carrying bevel gears to mesh with the respective gears on the driving shaft and thereby propel the car at different speeds.

[Claims 6 to 19 not printed in the Gazette.]

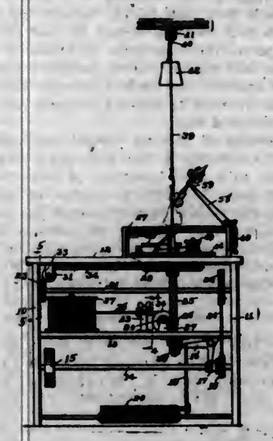
1,017,625. CORN-HARVESTER AND HUSK-BALER. MARY A. GIBBONS, Walnut, Iowa. Filed Dec. 23, 1910. Serial No. 598,993. (Cl. 56—113.)



1. In a corn harvester, a frame, gathering frames extending downwardly and forwardly therefrom in planes at right angles to the surface on which the machine rests, comprising parallel members substantially rectangular in shape, spaced apart to receive between them standing stalks of corn and spaced apart at their forward ends to form gathering arms, rollers rotatably mounted near the ends of said members, endless aprons of strong flexible material mounted on said rollers and designed to travel upwardly and rearwardly on the inner sides of said members, transverse slats on said endless aprons, pins set in said slats designed to strip from stalks of corn, the ears, leaves and soft portions suitable for fodder, strips of strong flexible material fastened to the lower edges of said endless aprons, pins set in said strips, said pins being of such length that the pins in one of said strips almost touch the pins in the opposite strip, said pins being composed of strong rigid material and being designed to carry the parts torn from the stalks.

2. In a corn harvester, a frame, gathering frames extending downwardly and forwardly therefrom in planes at right angles to the surface on which the machine rests, comprising parallel members substantially rectangular in shape, spaced apart to receive between them standing stalks of corn and spaced apart at their forward ends to form gathering arms, rollers rotatably mounted near the ends of said members, endless aprons of strong flexible material mounted on said rollers and designed to travel upwardly and rearwardly on the inner sides of said members, transverse slats on said endless aprons, pins set in said slats designed to strip from stalks of corn, the ears, leaves and soft portions suitable for fodder, strips of strong flexible material fastened to the lower edges of said endless aprons, pins set in said strips, said pins being of such length so that the pins in one of said strips almost touch the pins in the opposite strip, said pins being composed of strong rigid material and being designed to carry the parts torn from the stalks, pins secured to the upper ends of the said frame members and designed to prevent the carrying of material around said upper ends by the pins in said strips.

1,017,626. DEVICE FOR WINDING ARTIFICIAL VINES. CLYDE L. HULSIZER, Des Moines, Iowa. Filed Feb. 24, 1911. Serial No. 610,521. (Cl. 41—3.)



1. In a device of the class described, the combination of means for folding a strip of paper longitudinally with means for winding said folded paper spirally about a wire, and means for imparting tension to said paper as it is wound about the wire.

2. In a device of the class described, the combination of means for folding a strip of paper longitudinally with means for winding said folded paper spirally about a wire, means for winding thread about a wire with said paper, means for imparting tension to said paper as it is wound, and means for imparting tension to said thread as it is wound.

3. In a device of the class described, the combination of means for folding a strip of paper longitudinally, means for winding said folded paper spirally about a wire, and means for winding a thread about said wire within the fold of said paper.

4. In a device of the class described, the combination of means for folding a strip of paper longitudinally, means for winding said folded strip thus made, spirally about a wire, means for winding thread about said wire with said paper, and means for imparting tension to said thread.

5. In a device of the class described, the combination of means for folding a strip of paper longitudinally, means for winding said folded strip thus made, spirally about a wire, means for winding thread about said wire with said paper, means for imparting slight tension to said paper, and means for imparting greater tension to said thread.

[Claims 6 to 23 not printed in the Gazette.]

1,017,627. BEARER FOR CORRODING-POTS. ALBERT JOHN MEIER, Glendale, Mo. Original application filed Jan. 22, 1909, Serial No. 473,631. Divided and this application filed Dec. 27, 1910. Serial No. 599,376. (Cl. 21—88.)

1. A bearer for corroding pots comprising a pair of parallel members, a support projecting thereunder, and a tie-rod connecting said support to one of said parallel members, there being a projection from one of said members and said tie-rod being provided with a hook adapted to coöperate therewith.

2. A bearer for corroding pots comprising a pair of members, a support pivoted to said members at its upper end and depending therefrom at an angle, and a tie rod connected to the end of the support at the base thereof and having its upper end connected to one of said members.

3. A bearer for a series of corroding pots, including main supporting means for engagement with means formed on the pots whereby the pots are supported from said means in depending relation thereto, and a front pot is supported by contact with an adjacent rear pot, and means carried by said supporting means for engagement with one of the end pots to hold same against endwise movement with respect to the main supporting means.

4. A bearer for corroding pots, including a pair of spaced parallel members for engagement with means on the pots whereby the latter are suspended from the members, and an end support depending from said members at an angle thereto whereby to support an end pot at an angle to said members.

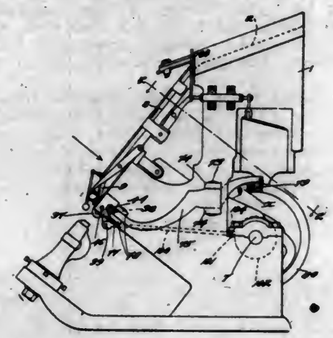
5. A bearer for a plurality of corroding pots including spaced members to support the pots in suspended relation thereto, and means to hold the pots at an angle to the members against endwise movement with respect to said members.

[Claims 6 to 8 not printed in the Gazette.]

1,017,628. WIRE-FEED MECHANISM. GEORGE W. PERKINS, Chelsea, Mass., assignor to Heaton-Peninsular Button Fastener Company, Boston, Mass., a Corporation of Maine. Original application filed Apr. 15, 1910, Serial No. 555,600. Divided and this application filed Jan. 31, 1911. Serial No. 605,698. (Cl. 140—130.)

1. A wire feed comprising a stationary block having pivoted thereto a grip which engages the wire to prevent backward movement of the same and yields to allow its forward movement, a rod on which said block is held stationary, a feed block slidably mounted on said rod, means for reciprocating said feed block on said rod,

gripping mechanism pivotally connected with said feed movement of the feed block and which yields to allow the backward movement of the feed block without moving the wire, and a guide rod parallel with said first rod which passes loosely through both of said blocks.



2. A wire feed comprising a stationary block having a grip which engages the wire to prevent backward movement of the same and yields to allow its forward movement, a slidable feed block carrying gripping mechanism which engages the wire and feeds it on the forward movement of the feed block and which yields to allow the backward movement of the feed block without moving the wire, means for reciprocating said feed block, adjustable supports mounted on both of said blocks to support the wire, and means for adjusting said supports to maintain the proper level of the wire.

3. A wire feed comprising a stationary block having pivoted thereto a grip which engages the wire to prevent backward movement of the same and yields to allow its forward movement, a rod on which said block is held stationary, a feed block slidably mounted on said rod, means for reciprocating said feed block on said rod, gripping mechanism pivotally connected with said feed block which engages the wire and feeds it on the forward movement of the feed block and which yields to allow the backward movement of the feed block without moving the wire, a guide rod parallel with said first rod which passes loosely through both of said blocks, and a stop on said guide rod which limits the rearward movement of the feed block.

4. A wire feed comprising a stationary block having pivoted thereto a grip which engages the wire to prevent backward movement of the same and yields to allow its forward movement, a rod on which said block is held stationary, a feed block slidably mounted on said rod, means for reciprocating said feed block on said rod, gripping mechanism pivotally connected with said feed block which engages the wire and feeds it on the forward movement of the feed block and which yields to allow the backward movement of the feed block without moving the wire, a guide rod parallel with said first rod which passes loosely through both of said blocks, a stop on said guide rod which limits the rearward movement of the feed block, and means for adjusting the stop mechanism to vary the extent of backward movement of the sliding feed block.

5. A wire feed comprising a stationary block having pivoted thereto a grip which engages the wire to prevent backward movement of the same and yields to allow its forward movement, a rod on which said block is held stationary, a feed block slidably mounted on said rod, means for reciprocating said feed block on said rod, gripping mechanism pivotally connected with said feed block which engages the wire and feeds it on the forward movement of the feed block and which yields to allow the backward movement of the feed block without moving the wire, a guide rod parallel with said first rod which passes loosely through both of said blocks, a stop on said guide rod which limits the rearward movement of the feed block, adjustable supports mounted on both of said blocks to support the wire, and means for adjusting said supports to maintain the wire on a level.

[Claims 6 to 13 not printed in the Gazette.]

1,017,629. MANUFACTURING AND REFINING COPPER ALLOYS. WALTER S. ROCKEY and HILLIARY ELDRIDGE, New York, N. Y., assignors to Metallurgical Research Company, a Corporation of Arizona. Filed Jan. 28, 1911. Serial No. 605,281. (Cl. 75—1.)

1. The process of refining and manufacturing copper alloy consisting in first reducing to a fluid condition by heat a flux containing boron trioxid, then fusing the alloying metal under the flux and then reducing the copper by heat to a fluid condition and protecting the same from oxidation by carbon and then flowing said copper into said flux thus joining the alloying metal to form the copper alloy and protecting same beneath the surface thereof while maintaining the heat thereon to expel the gases and impurities therefrom into said flux.

2. The process of refining and manufacturing copper alloy consisting in first reducing a flux containing boron trioxid to a fluid condition by heat, then melting the alloying metal beneath the surface of said flux, then flowing the molten copper through said flux thus joining the alloying metal to form the copper alloy and protecting same beneath the surface thereof while maintaining the heat until the metal alloy is formed and the gases and impurities have been expelled therefrom.

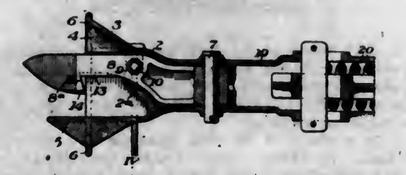
3. The process of refining and manufacturing copper alloy consisting in first reducing a flux containing boron trioxid to a fluid condition by heat, then melting zinc beneath the surface of said flux, then pouring the molten copper through said flux thus joining the zinc and forming the copper alloy and protecting same beneath the surface thereof while maintaining the heat until the metal alloy is formed and the gases and impurities have been expelled therefrom.

4. The process of refining and manufacturing copper alloy consisting in first reducing to a fluid condition by heat a suitable flux, then fusing the alloying metal under the flux and then reducing copper by heat to a fluid condition and protecting same from oxidation by carbon and then flowing said copper beneath said flux and protecting said copper beneath the surface thereof while maintaining the heat thereon to expel the gases and impurities therefrom into said flux.

5. The process of refining copper and manufacturing copper alloy consisting in first reducing a flux containing boron trioxid to a fluid condition by heat, then melting the alloying metal beneath the surface of said flux, and then flowing the molten copper beneath the said flux and protecting said copper beneath the surface thereof while maintaining the heat until the metal alloy is formed and the gases and impurities have been expelled therefrom.

[Claims 6 to 21 not printed in the Gazette.]

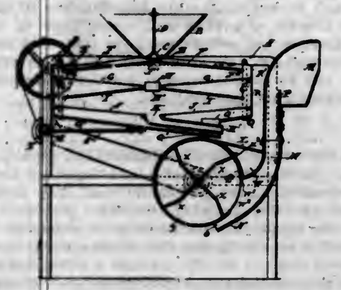
1,017,630. COUPLING. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 29, 1910. Serial No. 594,689. (Cl. 213—17.)



1. A coupler having at one side a tapering recess and at the other side a tapering projection, said parts being arranged to coact with a similar recess and projection on an opposing coupler to center the parts, the coupler head also having an interior guiding and centering rib, and a vertically movable hook member, the said rib acting as a guide for the entering similar hook member of an opposing coupler, substantially as described.

2. A coupler having at one side a tapering recess and at the other side a tapering projection, said parts being arranged to coact with a similar recess and projection on an opposing coupler to center the parts, the coupler head also having an interior guiding and centering rib, said rib extending downwardly from the upper inner wall of the head, and a vertically movable hook member, the said rib acting as a guide for the entering similar hook member of an opposing coupler, substantially as described.

1,017,631. SEED-CLEANING MACHINE. PETER L. WILLET, Shiloh, Ohio. Filed Apr. 14, 1911. Serial No. 621,074. (Cl. 130—15.)

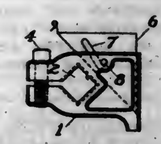


1. In a grain cleaner, the combination with a chute, and a deflecting member thereon, of reversely inclined distributing plates underneath said deflecting member, reversely inclined screens extending beyond said distributing plates and arranged to receive the material therefrom in a distributed state, a common discharge pipe adapted to receive chaff from said screens, reversely inclined plates adapted to redistribute said material and reversely inclined finer screens adapted to receive the redistributed material, a common outlet chute for said last mentioned screens, and reversely inclined plates adapted to receive the screened material from said finer screens, common supports for said screens and plates and means for vibrating said supports to urge the particles of seed and chaff alternately from the plates and sieves at right angles to their edges.

2. In a seed cleaner, in combination, a chute for delivering grains, reversely inclined distributing plates having their angle of junction underneath said chute, reversely inclined screens adapted to receive on their upper ends the distributed material from the lower ends of said distributing plates, similar reversely inclined redistributing plates, underneath said screens, finer screens adapted to receive the redistributed material, reversely inclined plates adapted to receive the sifted grain from the finer screens, a chute adapted to receive the chaff from the coarser screens, a chute adapted to receive the chaff from the finer screens and a chute adapted to receive the screened seed and dust and means for giving vibrating movement to said screens at right angles to their edges.

3. In a grain cleaner, in combination, a chute for delivering mixed dust, grain, and chaff, reversely inclined distributing plates for grain and chaff, having their angle of junction underneath said chute, reversely inclined coarse screens adapted to receive the distributed material on their upper ends as it passes from the lower ends of said distributing plates, said screens adapted to pass the grain and finer material through their meshes, and to convey the chaff to a central opening, a series of reversely inclined redistributing plates adapted to receive the grain and finer material as it passes through said sieves, and to retain the grain while passing the dust through their meshes, a second series of reversely inclined redistributing plates, a final series of reversely inclined sieves adapted to discharge the dust therethrough and to retain the seed, reversely inclined surfaces adapted to convey away the dust, a chute therefor, and a chute for the sieved seed, swinging side boards to which said plates and sieves are attached, and means for vibrating said plates and screens in a direction at right angles to the edges, whereby the particles are alternately given a downward impetus upon reversed screens and plates to distribute the same and to provide a constant flow of the particles of chaff and seed therefrom and a continuous flow of cleaned grain from the lower edges thereof.

1,017,632. SAW-TABLE GAGE. WILLIAM S. WILLIAMS, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Oct. 21, 1910. Serial No. 588,387. (Cl. 143—168.)



1. A saw table gage comprising a body member, having an opening therein for a supporting rod, and having a slot, the bottom of the slot being normally inclined from the horizontal, a stop slidably mounted in the slot in the body member, and having a face normally inclined from the horizontal sliding upon the bottom of the slot, said stop having a slot approximately parallel with its inclined edge, and a pin passing through the body member and the slot in the stop.

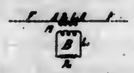
2. A saw table gage comprising a body member having an opening therein for a supporting rod, and having a slot, the bottom of the slot being normally inclined from the horizontal, a stop slidably mounted in the slot in the body member and having a face normally inclined from the horizontal sliding upon the bottom of the slot; said stop having an L-shaped slot therein, and a pin passing through the body member and the slot in the stop which is capable of engaging the short arm of the slot for holding the stop out of its operative position.

1,017,633. ICE-BOX OR REFRIGERATOR LINING. WILLIAM VON BAUMBACH, Milwaukee, Wis. Filed Mar. 9, 1906. Serial No. 305,045. (Cl. 62—10.)

An ice box or refrigerator lining having its top and bottom, back, and two side walls formed integral with each other to constitute a seamless lining without joints, having the internal corners along the lines of the angles at the sides and back of the lining curved, and consisting of

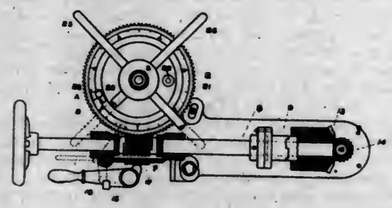
a non-conducting, non-contractible and non-expansible composition formed of substantially equal parts of asbestos and magnesite and materially smaller percentage of wood fiber, substantially as described.

1,017,634. MEANS FOR PROTECTING ELECTRICAL INSTALLATIONS FROM EXCESS VOLTAGES. GINO CAMPOS, Milan, Italy. Filed Aug. 19, 1910. Serial No. 578,047. (Cl. 175—30.)



In means for protecting electrical installations from excess voltages, the combination with line conducting means, of a conducting length provided with an ohmic resistance and inductance and connected in series with the said line conducting means, and a secondary circuit associated with the conducting length and having a greater ohmic resistance and inductance for the purpose specified.

1,017,635. AUTOMATIC TRIPPING DEVICE FOR THE FEED MECHANISM OF MACHINE-TOOLS. LESLIE H. COLBURN, Franklin, Pa. Filed June 13, 1910. Serial No. 566,560. (Cl. 77—33.)



1. In an automatic trip for the feed mechanism of machine tools, the combination with a disengageable drive for said feed, of a latch arranged to engage said drive for the purpose of retaining same in the operative position, and means for automatically disengaging said latch for the purpose of rendering said drive and the feed inoperative; said disengaging means being arranged to impinge upon said latch at successive intervals and to be positioned so as to actuate the same at any one of said intervals as desired.

2. In an automatic tripping device for the feed mechanism of machine tools, the combination with a disengageable drive for said feed, of a latch arranged to engage said drive for the purpose of retaining same in the operative position, a pawl arranged to impinge upon said latch at successive intervals, said pawl being adjustable so as to actuate said latch or to be actuated and readjusted thereby as desired into actuating position, and means for retaining said pawl in its respective positions of adjustment and readjustment.

3. In an automatic trip for the feed mechanism of machine tools, a revoluble shaft, means upon said shaft adapted to feed the tool-holding element of a machine tool, a worm-gear keyed to said shaft, a worm adapted to drive said gear, a shaft to which said worm is keyed, a swinging bracket in which said worm-shaft is revolubly mounted so that said worm may be placed in operative engagement with said gear or disengaged therefrom, a cam-lever adapted to actuate said bracket, and to hold the same in the position in which said worm coöperates with said gear, a detent lever adapted to engage said cam lever for the purpose of holding same in said operative position, a graduated dial revolubly mounted upon the hub of said worm gear, means for securing said dial at a certain position, a tripping device adapted to disengage said detent lever from said cam-lever, said tripping device consisting of a multiple-armed pawl, one of which arms is adapted to actuate said detent lever, the remainder of said arms being adapted to be actuated by said detent lever, and an index indicating the passage and position of the graduations upon said dial.

4. In an automatic tripping device for the feed mechanism of a drill-press a spindle for the reception of a drill, a sleeve through which said spindle passes, a rack upon said sleeve, a pinion meshing with said rack, a shaft to which said pinion is attached, a worm-gear keyed to said shaft, a worm for driving said shaft and disengageable therefrom, a shaft for said worm, a movable bearing for said shaft, a cam operating upon said movable bearing, a lever for said cam for operating the same to place said worm in operable engagement with said gear, a detent lever adapted to engage said cam-lever to hold same in the operative position, a graduated dial revolubly mounted upon the hub of said worm gear, means for securing said dial at a determined position, a pawl secured to said dial and having a plurality of arms, one of said arms being adapted to actuate said detent lever to cause the disengagement of said detent lever from said cam lever, the remainder of said arms being actuated by said detent lever, and an adjustable index positioned approximate to the graduations upon said dial.

1,017,636. PROCESS OF PRESERVING WOOD. CARLETON ELLIS, Montclair, N. J., assignor to Copper Oil Products Company, a Corporation of New York. Filed June 14, 1911. Serial No. 633,076. (Cl. 99—12.)

1. The herein described process of preserving railroad ties and other fibrous material, which consists in injecting into said ties and the like, at least a fiber-coating amount of an oil comprising asphaltic petroleum carrying arsenic material in solution therein, the said arsenic material being present in predetermined amount whereby preservative action persists for a period substantially equivalent to that of the mechanical life of the tie and similar material and in causing the major portion of the interior fiber of said ties and similar material to be substantially uniformly coated with said oil.

2. The herein described process of preserving railroad ties and other fibrous material which consists in injecting thereinto at least a fiber-coating amount of an oil comprising asphaltic petroleum carrying antiseptic material in solution in the oil, the said antiseptic material being present in predetermined amount whereby preservative action substantially coincides with the mechanical life of the fibrous structure, and in causing the major portion of the interior fibers of said structure to be coated with said oil.

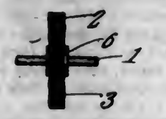
3. A preserved wood product comprising wood containing oil-soluble arsenic in solution in a petroleum oil.

4. A preserved wood product comprising wood containing a solution of an arsenic compound in an oil.

5. A preserved wood product comprising wood having its interior fibers coated with a solution of an arsenic compound in an oil.

[Claim 6 not printed in the Gazette.]

1,017,637. GIN-SAW. JAMES C. GARNER, Dallas, Tex., assignor of one-half to Charles S. Reynolds, Houston, Tex. Original application filed May 11, 1909, Serial No. 495,271. Divided and this application filed Nov. 12, 1909. Serial No. 527,655. (Cl. 13—14.)

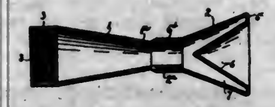


1. A toothed drum for fiber cleaners and the like comprising in combination a shaft, and a series of saw disks thereon, said disks having their peripheral parts crimped

or corrugated and being so spaced from each other that they form a substantially continuous cylindrical surface of rotation.

2. A toothed drum for fiber cleaners and the like comprising in combination a shaft, a series of saw disks mounted on the shaft, said disks having their peripheral parts corrugated or offset axially, and a series of spacing collars between said saw disks, the thickness of said spacing collars being such in relation to the axial depth of the corrugations of the disks that the drum when rotated has a substantially continuous cylindrical surface of rotation.

1,017,638. HOSE-NOZZLE. GABRIEL W. MCCOOLE, Hot Springs, Ark. Filed Feb. 11, 1911. Serial No. 608,083. (Cl. 137—81.)



1. A hose nozzle, comprising a tubular body provided with a constricted portion terminating in a truncated cone-shaped flaring nozzle head, and a hollow conical shaped spreader member forming an annular wedge shaped passage intermediate the walls of said spreader member and nozzle head, and provided with a perforated rim portion extending across the terminating portion of said passage, said perforated rim portion being provided with an internally threaded portion threaded upon said flaring nozzle head.

2. A hose nozzle comprising a constricted tubular body terminating in an enlarged truncated cone-shaped nozzle head having an externally threaded base, and a hollow cone-shaped deflector member forming an outwardly flaring wedge-shaped annular passage intermediate the walls of said deflector member and said nozzle head and terminating in a perforated internally threaded rim portion extending across the terminating portion of said annular passage and threaded upon said externally threaded base of said nozzle head.

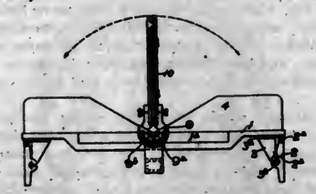
3. A hose nozzle, comprising a constricted tubular body terminating in a flaring nozzle head, and a conical shaped spreader member extending therein and forming conjointly with said nozzle head an annular wedge-shaped passage terminating in a series of perforations about the more enlarged portion of said nozzle head.

1,017,639. GAGE FOR STRAIGHT-EDGES. EDWARD C. MERSHON, Saginaw, Mich., assignor to Wm. B. Mershon & Co., Carrollton, Mich., a Corporation of Michigan. Filed Sept. 6, 1910. Serial No. 580,555. (Cl. 73—149.)

1. The combination with a straight edge, of a pivot and a laterally projecting pin carried by said straight edge, a bracket mounted on said pivot and provided with an opening to receive the pin, a set bolt and an opposing clamping screw carried by the bracket and located on opposite sides of said opening and adapted to engage said pin between them, and an arm carried by the bracket, said arm formed with a transversely projecting shoulder.

2. The combination with a straight edge, of a pivot, an L-shaped arm carried by said pivot, one branch of said arm formed with a transversely projecting shoulder, a projecting pin on said straight edge and means carried by the remaining branch of said arm and engaging said projecting pin, said means adapted to adjust the position of said arm with relation to the straight edge.

1,017,640. MITER-BOX. HENRY S. MILLER, San Diego, Cal. Filed Jan. 5, 1911. Serial No. 600,949. (Cl. 143—88.)



1. The combination in a miter box of a base portion provided with a drop therein, an extensible axis piece pivotally mounted on said base, and a longitudinally extensible frame pivotally mounted on the ends of said axis piece below the top surface of said base portion, all substantially as set forth.

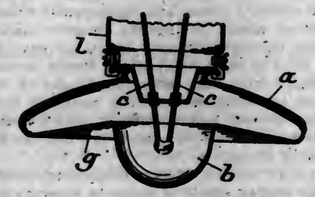
2. The combination in a miter box, of a base portion provided with a drop therein, an extensible axis piece pivotally mounted on said base portion in said drop, a longitudinally extensible frame pivotally mounted on the ends of said axis piece and provided with upwardly extended means for holding a slotted saw, two plates each provided with a degree scale rigidly mounted, one on each end of said axis piece, all substantially as set forth.

3. The combination in a miter box of two two-piece hinged vertical arms detachably mounted in a frame on said miter box, a guide piece mounted in said hinged arms adapted to guide a slotted saw both vertically and longitudinally, all substantially as set forth.

4. In a miter box, the combination of a base portion provided with a drop therein and a degree scale in said drop, an extensible axis piece pivotally mounted near its one end in said base portion in said drop and provided with a degree scale on each of its ends, a longitudinally extensible frame pivotally mounted on the ends of said axis piece, and means on said longitudinally extensible frame for holding a saw, all substantially as set forth.

5. In a miter box, the combination of a slotted saw, two two-piece hinged vertical arms spaced apart adapted to fold over said slotted saw, and pins adapted to slide vertically in said hinged arms and to fit in the slots in said saw for guiding the same and preventing its removal, all substantially as set forth.

1,017,641. ARC-LAMP. TITO LIVIO CARBONE, Charlottenburg, Germany. Filed Feb. 21, 1910. Serial No. 545,090. (Cl. 176—52.)



1. An arc-lamp burning smoke-producing carbons, comprising a closed globe having in combination a substantially hemispherical chamber substantially concentric with the arc and having all its parts in close proximity thereto, and a chamber having its outer part remote from the arc.

2. An arc lamp burning smoke producing carbons, comprising a chamber entirely closed surrounding the smoke producing arc, having in combination, a substantially hemispherical globe substantially concentric to the posi-

tion of the arc, and having all its parts in close proximity thereto, whereby it is heated substantially equally throughout, and a condensing chamber having its outer part remote from the arc so as to cause a condensation therein.

3. An arc lamp burning smoke producing carbons, comprising an inclosure, surrounding the smoke producing arc and composed of two parts, a light transmitting part in close proximity to the arc and of a shape to be substantially equally heated, and a condensing part remote from the arc, and cooler than the proximate light transmitting part, and in free communication therewith, whereby the coolness causes condensation of the gases produced by the arc, and the free communication causes further gases to enter the condensing part and to be condensed therein.

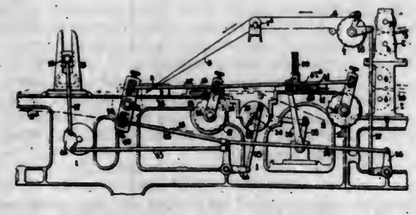
4. An inclosed smoke producing carbon arc-lamp comprising an arc inclosure having an arc-heated light-transmitting part in proximity to the arc and substantially equally heated thereby, and a precipitation part disposed above said light-transmitting part and outspreading laterally therefrom substantially symmetrically therewith.

5. An inclosed smoke producing carbon arc-lamp comprising an arc inclosure having a light-transmitting part subjected to the direct rays of the arc and substantially equally heated thereby, and a precipitation part disposed above said light-transmitting part and having a laterally extended portion forming an annular flattened chamber distant from the arc and shaded from the direct radiation of the arc.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

13,367. MACHINE FOR THE MANUFACTURE OF FILLED BISCUITS AND THE LIKE. WILLIAM THEODORE CARR, Carlisle, England, assignor of one-half to Carr & Company, Limited, Carlisle, England. Filed Jan. 5, 1912. Serial No. 660,986. Original No. 1,006,530, dated Oct. 24, 1911, Serial No. 533,656. (Cl. 107—1.)

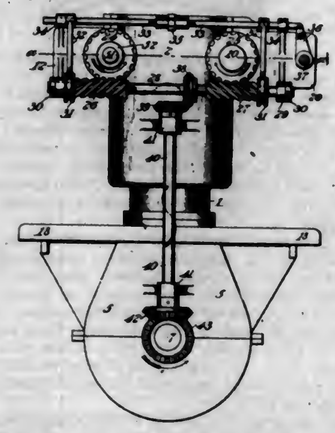


1. A biscuit making machine comprising in combination two superposed endless conveyers for feeding sheets of dough in separate planes and subsequently bringing them into contact, means for feeding separate biscuit fillings on to the lowermost of said sheets in spaced relation thereon prior to the contact of the sheets, means for cutting biscuits from said contacting sheets of dough and means for actuating said cutting means in unison with the filling feeding means whereby said fillings will lie within the area of the cut out dough and the waste will be free from filling.

2. A biscuit making machine comprising in combination means for feeding sheets of dough in separate planes and subsequently bringing them into contact, a series of feed hoppers and a delivery mechanism coöperating with the dough sheet feeding means, whereby separate biscuit fillings are fed in the form of disks or slices on to the lower dough sheet prior to the contact of the sheets and means for cutting biscuits from the contacting sheets of dough whereby the fillings are located within the area of the cut out dough with the waste free from filling.

3. A biscuit making machine comprising in combination two superposed conveyers for feeding two sheets of dough, in separate planes and subsequently bringing them into contact, a series of feed hoppers and delivery mechanism adjustably placed in the space between the two conveyers and adapted to feed biscuit fillings in the form of disks or slices on to the lower dough sheet prior to the contact of the sheets, means for cutting biscuits from the two contacting sheets of dough whereby the fillings are located within the area of the cut out dough with the waste free from filling and means for adjusting and timing the stroke of the filling feed mechanism.

13,368. EXPLOSIVE-ENGINE. CYRUS E. MEAD, Dayton, Ohio, assignor, by direct and mesne asisgnments, to The Mead Engine Company, Dayton, Ohio, a Corporation of Ohio. Filed May 8, 1911. Serial No. 625,903. Original No. 921,264, dated May 11, 1909, Serial No. 423,094. (Cl. 123—80.)



1. In an explosive engine, the combination with a cylinder having pocket sand ports therein, a piston, a main shaft, and a connection between said piston and said main shaft, of a rotary inlet valve, a rotary exhaust valve, said valves being independent of each other and provided with ports adapted to register with the ports in the cylinder, caps having ports adapted to register with the valve ports, an independent shaft for each of said valves, a driving shaft common to said valve shafts, gears interposed between the valve shafts and said common shaft, and means for actuating the common shaft from the main shaft of the engine.

2. In an explosive engine, a cylinder having ports therein, a piston, a main shaft connected with the piston, a rotary inlet valve, a rotary exhaust valve, both of which have ports adapted to communicate with the ports in the cylinder, means for rotating said valves concurrently with the main shaft, and means for rocking said valves simultaneously with and independently of their rotation to change the timing of the valve ports and the cylinder ports to enable the engine to be reversed.

3. In an explosive engine, a cylinder having ports therein, a rotary inlet valve and a rotary exhaust valve having ports adapted to register with the ports in the cylinder, means for rotating said valves, and means for rocking said valves to change the timing of the regulation of said valve ports and the cylinder ports so that the engine may be reversed.

4. In an explosive engine, a cylinder having ports therein, a piston within said cylinder, a main crank shaft driven from said piston, rotary valves mounted on said cylinder and having ports therein and gears thereon, said

ports registering with the ports in the cylinder, a shaft common to said valves and driven from the main crank shaft through suitable connections, gears splined to said common shaft and in mesh with the gears on said rotary valves, and means for sliding the gears on said common shaft to rock the valves independently of their rotation.

5. In an explosive engine, a cylinder having ports therein, a piston, a crank shaft driven from said piston, rotary valves mounted on said cylinder and provided with ports, the port in one of said valves being at an angle to the port of the other of said valves, means for driving said rotary valves from said crank shaft, and means for varying the angles of the ports in said valves.

6. In an explosive engine, a cylinder having ports therein, a piston, a crank shaft driven from said piston, rotary valves having ports therein and gears thereon, said ports being adapted to communicate with the cylinder ports, a shaft common to said valves, gears on said shaft in mesh with the gears on the valves, and means for varying the distance between the gears on said common shaft, and means for rotating said common shaft from the main shaft of the engine to rotate said valves.

7. In an explosive engine, a cylinder having ports therein, a piston, a crank shaft driven from said piston, rotary valves mounted on said cylinder, means for rotating the valves from the crank shaft to bring the ports in the valves in registration with the ports in the cylinder, the port in one of said valves being at an angle with the port of the other valve, and means for varying the angle between said valve ports.

8. In an explosive engine, a cylinder having ports therein, a piston, a crank shaft driven from said piston, a rotary inlet valve and a rotary exhaust valve mounted upon said cylinder and having ports adapted to register with the ports in the cylinder, means for rotating said valves from the crank shaft, a throttle valve mounted within the inlet valve and having a port adapted to register with the port of the inlet valve, and means connected to the inlet valve and engaging the throttle valve for independently rotating said throttle valve with relation to the inlet valve to throttle the engine.

9. In an explosive engine, a cylinder having ports therein, a rotary inlet valve and a rotary exhaust valve mounted upon said cylinder and having ports adapted to register with the ports in the cylinder, means for rotating said valves from the crank shaft of the engine, a throttle valve incased in the inlet valve and having a port registering with the port in said inlet valve, and means splined to said inlet valve and engaging the throttle valve for varying the opening of the port of said inlet valve.

10. In an explosive engine, a cylinder having ports therein, a piston, a crank shaft driven from said piston, a rotary inlet valve and a rotary exhaust valve mounted upon said cylinder, said valves having ports registering with the ports in the cylinder, means for rotating said valves from the crank shaft, a throttle valve mounted within the inlet valve and having a port registering with the port in the inlet valve, means for preventing horizontal movement of said throttle valve, a nut splined to said inlet valve and engaging a screw-threaded portion of the throttle valve, and means for shifting said nut to rock said throttle valve.

11. In an explosive engine, the combination, with an engine cylinder having an inlet port and an exhaust port, separated from and independent of each other, of independent separated rotary valves each having a through-and-through port, one valve for the inlet port and one for the exhaust port of the cylinder, and means continuously connecting said valves with the engine shaft to impart constant rotary motion to them.

12. In an explosive engine, the combination, with an engine cylinder having an inlet port and an exhaust port separated from and independent of each other, of independent separated rotary valves each having a through and through port, one valve for the inlet port and one for the exhaust port of the cylinder, and means to rotate each of said valves and cause it to alternately present opposite ends of its port toward the ignition chamber.

DESIGNS.

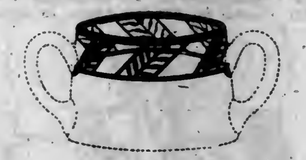
42,161. TRAY OR SIMILAR ARTICLE. CHARLES A. BENNETT, Taunton, Mass. Filed Oct. 21, 1911. Serial No. 656,010. Term of patent 14 years.

The ornamental design for a tray or similar article, as shown.

42,162. BAR OF CANDY. ROBERT C. BOECKEL, York, Pa. Filed Oct. 28, 1911. Serial No. 657,391. Term of patent 3½ years.

The ornamental design for a bar of candy, or similar article, as shown.

42,163. GLASS VESSEL. EDGAR MOTT BOTTOME, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Nov. 1, 1911. Serial No. 658,012. Term of patent 3½ years.



The ornamental design for a glass vessel, as shown.

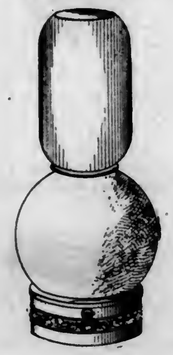
42,164. GOLF-BALL. FREDERICK C. BREAKSPEAR, Chicopee, Mass., assignor to A. G. Spalding & Bros., Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 22, 1911. Serial No. 661,872. Term of patent 7 years.

The ornamental design for a golf ball, as shown.

42,165. COVER FOR TOBACCO-PIPES. JOHN E. CLEMENS, Pampa, Wash. Filed Mar. 11, 1911. Serial No. 613,943. Term of patent 7 years.

The ornamental design for a cover for tobacco pipes, as shown.

42,166. LIQUID COOLER AND DISPENSER. HENRY G. CORDLEY, Glen Ridge, N. J. Filed Nov. 3, 1911. Serial No. 658,452. Term of patent 14 years.



The ornamental design for a liquid cooler and dispenser, as shown.

42,167. LUCKY FIGURE, AMULET, OR TALISMAN. RUDOLF FÄNNER, Vienna, Austria-Hungary. Filed Oct. 20, 1911. Serial No. 655,810. Term of patent 7 years.

The ornamental design for a lucky-figure, amulet, or talisman, as shown.

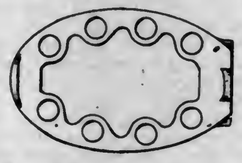
42,168. HINGE-LEAF. WILLIAM D. FERRIS, Sterling, Ill. Filed Sept. 28, 1908. Serial No. 455,220. Term of patent 7 years.

The ornamental design for a hinge leaf, as shown.

42,169. HANGER FOR HAND-BAGS OR SIMILAR ARTICLES. KELSIE B. FORD, Newark, N. J., assignor to Eastwood-Park Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 14, 1911. Serial No. 644,073. Term of patent 7 years.

The ornamental design for a hanger for hand bags or similar articles, substantially as shown.

42,170. CYCLE PEDAL-FRAME. GRAHAM I. FRANCIS, Coventry, England. Filed Jan. 9, 1909. Serial No. 471,536. Term of patent 14 years.

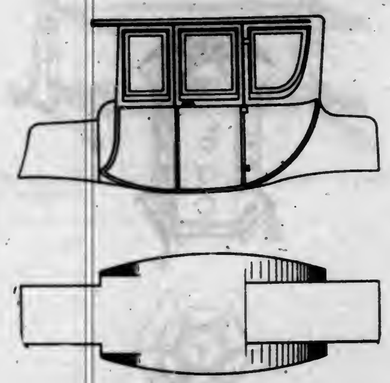


The ornamental design for a cycle pedal frame, as shown.

42,171. WARDROBE-DRESSER. ROGER A. JENNINGS, Greensboro, N. C. Filed Nov. 8, 1911. Serial No. 659,255. Term of patent 7 years.

The ornamental design for a wardrobe dresser, as shown.

42,172. VEHICLE-BODY. HAROLD H. KENNEDY, Indianapolis, Ind., assignor to The Waverly Company, Indianapolis, Ind., a Corporation of Indiana. Filed June 19, 1911. Serial No. 634,198. Term of patent 7 years.

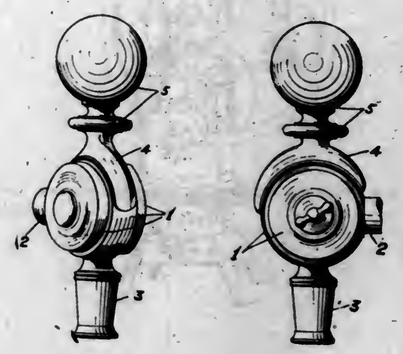


The ornamental design for a vehicle body, as shown.

42,173. LIGHTNING-ROD TERMINAL. SIDNEY D. KRETZER, St. Louis, Mo., assignor to St. Louis Lightning Rod Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 18, 1911. Serial No. 661,179. Term of patent 14 years.

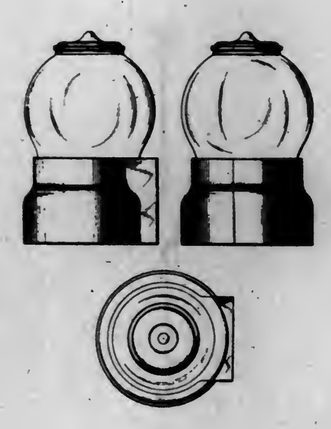
The ornamental design for a lightning rod terminal, as shown.

42,174. FAUCET. FISHER H. LIPPINCOTT, Philadelphia, Pa., assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1911. Serial No. 658,282. Term of patent 7 years.



The ornamental design for a faucet as shown and described.

42,175. VENDING-MACHINE CASING. WILLIAM MILLARD, New York, N. Y., assignor to Alball Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 23, 1911. Serial No. 645,656. Term of patent 14 years.



The ornamental design for a vending machine casing as shown.

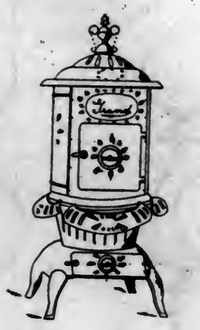
42,176. STOVE. JOHN H. O'BRIEN, Cleveland, Ohio.

42,178. GAS-HEATER. JOSEPH ROY, Cleveland, Ohio, as-

42,180. DISPLAY-STAND FOR MERCHANDISE. FRANK

42,181. SYMBOL. THEODORA ZAKRZEWSKI, Philadelphia,

42,176. STOVE. JOHN H. O'BRIEN, Cleveland, Ohio. Filed Nov. 4, 1911. Serial No. 658,587. Term of patent 3½ years.

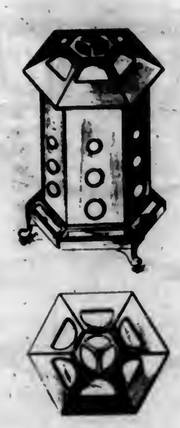


The ornamental design for a stove, as shown.

42,177. SCARF-PIN. AUGUSTUS REININGER, San Francisco, Cal. Filed Nov. 7, 1911. Serial No. 659,060. Term of patent 3½ years.

The ornamental design for a scarf pin, as shown.

42,178. GAS-HEATER. JOSEPH ROY, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 16, 1911. Serial No. 655,063. Term of patent 14 years.

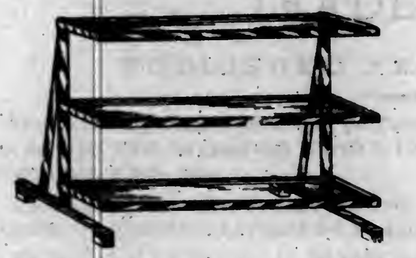


The ornamental design for a gas heater as shown.

42,179. OPERATING-TABLE TOP. MAX SCHMIDT, Cincinnati, Ohio. Filed Nov. 1, 1909. Serial No. 525,834. Term of patent 14 years.

The ornamental design for an operating table top, as shown.

42,180. DISPLAY-STAND FOR MERCHANDISE. FRANK YESBERA and JOSEPH JAMESON, Toledo, Ohio. Filed Nov. 14, 1910. Serial No. 592,410. Term of patent 7 years.



The ornamental design for a display stand for merchandise, as shown.

42,181. SYMBOL. THEODORA ZAKRZEWSKI, Philadelphia, Pa. Filed May 20, 1910. Serial No. 562,559. Term of patent 3½ years.

The ornamental design for a symbol as shown and described.

TRADE-MARKS

PUBLISHED FEBRUARY 13, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 25,118. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE A. SCHOENHUT COMPANY, Philadelphia, Pa. Filed Feb. 4, 1907.

Particular description of goods.—Horns; Cornets; Clarinets; Tubas; Trombones; Vocaphones; Xylophones; Metallophones; Musical Bells, and Chimes.
Claims use since about Mar. 1, 1887.

Ser. No. 40,656. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PEERLESS RUBBER MANUFACTURING COMPANY, New Durham, N. J., and New York, N. Y. Filed Feb. 18, 1909.

ARCTIC

Particular description of goods.—Packing Composed of Rubber or Rubber Combined with Fabric.
Claims use since 1897.

Ser. No. 43,538. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) T. I. BIRKIN & Co., Nottingham, England. Filed July 15, 1909.

No claim being made to the words "Double Woven Net," nor to the fabric illustrated in the drawing as being the means employed for carrying and applying the trade-mark.

Particular description of goods.—Nottingham Cotton-Lace Curtains Manufactured by Machinery, Not in the Piece.
Claims use since June 11, 1903.

Ser. No. 45,464. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) PACKARD MOTOR CAR COMPANY, Detroit, Mich. Filed Oct. 22, 1909.

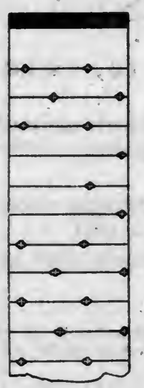
Particular description of goods.—Casings for Lamps.
Claims use since June, 1909.

Ser. No. 48,212. (CLASS 5. ADHESIVES.) SOLVA WATERPROOF GLUE CO., Chicago, Ill. Filed Mar. 5, 1910.

SOLVA

The trade-mark consists of the word "Solva."
Particular description of goods.—Glue.
Claims use since December, 1909.

Ser. No. 48,660. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TAYLOR PROVISION COMPANY, Trenton, N. J. Filed Mar. 25, 1910.



The top band and the lines being printed in red, no claim being made to the outline of the bag shown in the drawing.

Particular description of goods.—Pork Roll.
Claims use since Jan. 31, 1910.

Ser. No. 49,842. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COAST PRODUCTS COMPANY, St. Louis, Mo. Filed May 21, 1910.

House BRAND

Particular description of goods.—Canned Fruits, Preserved Fruits, and Canned Vegetables.
Claims use since Apr. 10, 1910.

Ser. No. 50,311. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD H. WAGNER, Mineral Wells, Tex. Filed June 15, 1910.

MIN-ALA SPLIT

Particular description of goods.—Laxative Tablets.
Claims use since Apr. 1, 1910.

Ser. No. 51,653. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LU-E-SA REMEDY CO., Hales Corners, Wis. Filed Sept. 1, 1910.

LU-E-SA

Particular description of goods.—A Preparation for Restoring Gray Hair to Its Original Color.
Claims use since about July 25, 1910.

Ser. No. 51,717. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORRIS EISENBERG, New York, N. Y. Filed Sept. 8, 1910.

IMPALA

LMA

Particular description of goods.—Cream-Cheese.
Claims use since Jan. 1, 1910.

Ser. No. 51,799. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Sept. 13, 1910.

TENA J.B.

Particular description of goods.—Soap.
Claims use since Jan. 1, 1910.

Ser. No. 52,248. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) STAR SEAL COMPANY, New York, N. Y. Filed Oct. 13, 1910.

STAR SEAL

No claim being made for the word "Seal."
Particular description of goods.—Metallic Bottle-Seals.
Claims use since about August, 1908.

Ser. No. 52,574. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ARROW ELECTRIC COMPANY, Hartford, Conn. Filed Nov. 2, 1910.

FORTY

Particular description of goods.—Electric Sockets and Electric Receptacles.
Claims use since Apr. 4, 1910.

Ser. No. 52,666. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. SONNEBORN SONS, INC., New York, N. Y. Filed Nov. 8, 1910.

CREFENOL

Particular description of goods.—A Disinfectant Which May be Used as a Dip for Sheep or other Animals.
Claims use since 1909.

Ser. No. 53,023. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURKE & JAMES, Chicago, Ill., assignor to Burke & James, Inc., a Corporation of Delaware. Filed Nov. 29, 1910.

TRADE B&J MARK

Particular description of goods.—Hydroquinol Developing-Powders, Metol-Quinol Developer, Toning and Fixing Powder, Reducing-Powder, Intensifying-Powder, and Restraining-Tablets.
Claims use since May, 1904.

Ser. No. 54,003. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WESTERN ELECTRIC COMPANY, Chicago, Ill., and New York, N. Y. Filed Jan. 21, 1911.

Hawthorn

Particular description of goods.—Electromagnetic Annunciators, Insulated Wire, Electric Motors, Dynamo-Electric Machines, Electric-Light Fixtures, and Electric-Arc Lamps.
Claims use since Mar. 15, 1904.

Ser. No. 54,464. (CLASS 17. TOBACCO PRODUCTS.) THE GOVERNOR AND COMPANY OF ADVENTURERS OF ENGLAND TRADING INTO HUDSON'S BAY, Winnipeg, Manitoba, Canada. Filed Feb. 11, 1911.

IMPERIAL MIXTURE

No claim being made to the word "Mixture."
Particular description of goods.—Smoking-Tobacco.
Claims use since the year 1890.

Ser. No. 54,628. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARL WEINREBEN FABRIK PHARMACEUTISCHER PRÄPARATE, Frankfort-on-the-Main, Germany. Filed Feb. 21, 1911.

Eusclerol

Particular description of goods.—A Preparation for Preventing Hardening of the Arteries.
Claims use since Nov. 14, 1910.

Ser. No. 54,809. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) GRANTORPETS TÄNDSTICKSFABRIKS AKTIEBOLAG, Westervik, Sweden. Filed Mar. 2, 1911.

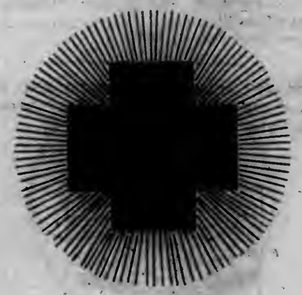
Particular description of goods.—Matches.
Claims use since Sept. 13, 1909.

Ser. No. 54,964. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) E. C. ATKINS & COMPANY, Indianapolis, Ind. Filed Mar. 9, 1911.

ACERO-PLATA

Particular description of goods.—Saws, Corn-Knives, Cane-Knives, Hay-Knives, and Machetes.
Claims use since early in 1901.

Ser. No. 54,989. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ROTHSCHILD, MEYERS & Co., New York, N. Y. Filed Mar. 10, 1911.



Particular description of goods.—Enameled-Steel Surgical Trays, Instrument-Boilers, Sterilizers, Milk-Sterilising Apparatus, Irrigators, Catheter-Trays, Arm-Bath Jars, Evaporating-Dishes, Bed-Pans, Douche-Pans, Urinals, (Invalids' and Travelers',) Pus-Basins, Instrument-Trays, Spit-Cups, Feeding-Cups.
Claims use since June, 1900.

Ser. No. 55,037. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) ADOLPH SAUBER, Arbon, Switzerland. Filed Mar. 11, 1911.

Particular description of goods.—Automobiles, Automobile Wheels, Radiators, Chassis, Bodies, Transmission-Gearing, and Motor-Boats.
Claims use since the 1st day of May, 1910.

Ser. No. 55,196. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH B. SCURRMAN, Nanticoke, Pa. Filed Mar. 20, 1911.

CHEERUPS

Particular description of goods.—Remedies for Coughs, Corns, Headache, Neuralgia, Insomnia, and Fatigue.
Claims use since Feb. 22, 1911.

Ser. No. 55,322. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. CRAWFORD CO., Baltimore, Md. Filed Mar. 27, 1911.

PHOENIX

Particular description of goods.—Spices, Tapioca, Herbs, Mustard, Tea, Poultry-Seasoning, Flavoring Extracts, Corn-Starch, Imitation Flavoring Extracts, Crushed Fruits, and Olive-Oil.
Claims use since Jan. 1, 1837.

Ser. No. 55,547. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TYLER GROCERY COMPANY, Birmingham, Ala. Filed Apr. 6, 1911.

POINTER

No claim being made for the words "Quality" and "Tyler's."
Particular description of goods.—Canned Fruits, Vegetables, Coffee, Sauer-Kraut, and Hominy.
Claims use since Mar. 27, 1911.

Ser. No. 55,630. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DEERE & COMPANY, Moline, Ill. Filed Apr. 8, 1911. Under ten-year proviso.

JOHN DEERE

MOLINE, ILL

Particular description of goods.—Plows, Cultivators, Harrows, Mowers, Reapers, Grain Harvesters and Binders, Hay-Rakes, Hay-Presses, Hay-Tedders, Hay-Loaders, Hay-Stackers, Hay-Unloaders, Hay-Forks, Hand and Power Corn, Cotton, Potato, and Garden-Seed Planters, Hand and Power Broadcast Seeders, Grain-Drills, Potato-Diggers, Potato-Sorters, Manure-Spreaders, Fertilizer-Distributers, Spraying-Machines, Windmills, Stalk-Cutters, Surface-Graders, Corn Harvesters and Huskers, Corn-Shellers, Feed-Grinders, Ensilage-Cutters, Feed-Cutters, Horse-Powers, Speed-Jacks for Horse-Powers, Lawn-Mowers, Clod-Crushers, Soil-Pulverizers, Land-Rollers, Spraying and Farm Pumps, Cider-Mills, Cane-Mills, Grain-Elevators, Elevators and Conveyers for Corn-Shellers and Ensilage-Cutters, Evaporators, Wood-Sawing Machines, and Gasolene-Engines.
Claims use since about the year 1873.

Ser. No. 55,672. (CLASS 12. CONSTRUCTION MATERIALS.) ATLANTIC COAST HARDWARE CO., Boston, Mass. Filed Apr. 11, 1911.

ATCO

Particular description of goods.—Paper Roofing.
Claims use since Mar. 1, 1911.

Ser. No. 55,778. (CLASS 39. CLOTHING.) NEW COLUMBIA SHIRT COMPANY, New York, N. Y. Filed Apr. 15, 1911.

MAXAM

Particular description of goods.—Negligée, Dress, and Plaited Shirts.
Claims use since Apr. 4, 1911.

Ser. No. 56,267. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. A. VANTINE & Co., New York, N. Y. Filed May 9, 1911. Under ten-year proviso.

KUTCH

Particular description of goods.—Soap.
Claims use since June 21, 1893.

Ser. No. 56,269. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed May 9, 1911.

BLUE STREAK

The words being printed in block letters and colored blue.
Particular description of goods.—Elastic Vehicle-Tires.
Claims use since on or about Dec. 15, 1910.

Ser. No. 56,355. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILFORD HERBERT OACHS, New York, N. Y. Filed May 13, 1911.

OZANE

Particular description of goods.—Antiseptics, Disinfectants, and Insecticides.
Claims use since Feb. 1, 1910.

Ser. No. 56,396. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOUTHALL BROS. & BARCLAY, LIMITED, Birmingham, England. Filed May 17, 1911.

VITAFER

Particular description of goods.—A Tonic Food Composed of Milk Proteid in Combination with Glycerophosphates of Sodium, Calcium, and Magnesium.
Claims use since the 21st of June, 1910.

Ser. No. 56,615. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL JEAN FOUQUIER, Paris, France. Filed May 27, 1911.

MASSECORRIDE

Particular description of goods.—Massage-Cream.
Claims use since Feb. 28, 1911.

Ser. No. 56,726. (CLASS 48. THREAD AND YARN.) ISAAC J. SILVERSTEIN, New York, N. Y. Filed June 1, 1911.

UNIVERSAL

Particular description of goods.—Cotton and Mercerized Thread.
Claims use since Mar. 1, 1911.

Ser. No. 57,384. (CLASS 48. MALT EXTRACTS AND LIQUORS.) VICTOR NEUSTADTL, INC., New York, N. Y. Filed June 29, 1911.

The picture of the girl is a fanciful one.
Particular description of goods.—Beer.
Claims use since about Jan. 3, 1911.

Ser. No. 57,398. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) EDWARD L. WHITE, Boston, Mass. Filed June 30, 1911.

SMOKOMIS

Particular description of goods.—Leather for the Uppers of Boots and Shoes.
Claims use since on or about June 1, 1911.

Ser. No. 57,440. (CLASS 39. CLOTHING.) STUART, KEITH CO., Baltimore, Md. Filed July 1, 1911.

JUMBO

Particular description of goods.—Overalls and Jumpers.
Claims use since Apr. 30, 1909.

Ser. No. 57,617. (CLASS 39. CLOTHING.) GEORGE R. DAVIS, Seattle, Wash. Filed July 18, 1911.

The picture shown being a portrait of Geo. R. Davis and the name as it appears beneath the portrait being a facsimile-signature of Geo. R. Davis.
Particular description of goods.—All Styles of Leather Shoes and Boots.
Claims use since June 8, 1911.

Ser. No. 57,899. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY BALZHISER, Brooklyn, N. Y. Filed July 28, 1911.

Particular description of goods.—A Preparation of Cod-Liver Oil, a Remedy for Tuberculosis, Malnutrition, Marasmus, Bronchitis, and All Wasting Diseases.
Claims use since Sept. 1, 1900.

Ser. No. 58,001. (CLASS 17. TOBACCO PRODUCTS.) B. LEGARDA, Manila, Philippine Islands. Filed Aug. 3, 1911.

The words "Flor de Legarda" being disclaimed.
Particular description of goods.—Cigars.
Claims use since January, 1910.

Ser. No. 58,003. (CLASS 17. TOBACCO PRODUCTS.) B. LEGARDA, Manila, Philippine Islands. Filed Aug. 3, 1911.

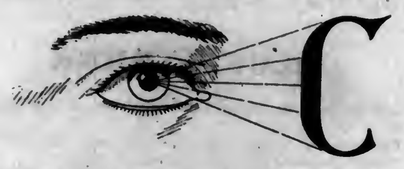
The words "Flor de Legarda" being disclaimed.
Particular description of goods.—Cigars.
Claims use since January, 1910.

Ser. No. 58,085. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROYAL TEA COMPANY, San Antonio, Tex., assignor to Royal Tea & Coffee Company, San Antonio, Tex., a Firm. Filed Aug. 8, 1911.

ST. ANTHONY

Particular description of goods.—Tea and Coffee.
Claims use since Jan. 1, 1911.

Ser. No. 58,299. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EDWARD BROWN, Omaha, Nebr. Filed Aug. 21, 1911.



Particular description of goods.—A Metal-Polish.
Claims use since Aug. 1, 1911.

Ser. No. 58,562. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM F. WORTHINGTON, San Francisco, Cal. Filed Sept. 7, 1911.

Consisting of applicant's portrait and a facsimile of his signature.
Particular description of goods.—Skin-salve and a Remedy for Seasickness.
Claims use since July 1, 1911.

Ser. No. 58,600. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) CHANDLER OIL CLOTH & BUCKRAM CO., Taunton and East Taunton, Mass. Filed Sept. 8, 1911.

Particular description of goods.—Oiled Duck.
Claims use since Jan. 15, 1906.

Ser. No. 58,653. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PICTUREGRAPH COMPANY, New York, N. Y. Filed Sept. 13, 1911.

Picturegraph

Particular description of goods.—Moving-Picture Machines.
Claims use since May 1, 1911.

Ser. No. 58,608. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. C. LAWRENCE LEATHER CO., Boston, Mass. Filed Sept. 16, 1911.

NUBUCK

Particular description of goods.—Calfskin, Known in the Trade as "Kip," and Cowhide.
Claims use since Mar. 1, 1911.

Ser. No. 58,802. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ZENITH EMBROIDERY CO., New York, N. Y. Filed Sept. 14, 1911.

No claim being made to the word "Embroidery."
Particular description of goods.—Embroideries.
Claims use since Apr. 1, 1911.

Ser. No. 58,897. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE MURALO COMPANY, New York, N. Y. Filed Sept. 28, 1911.

EMPIRITE

Particular description of goods.—Washable Flat Paint to be Mixed with Cold Water.
Claims use since Sept. 1, 1911.

Ser. No. 59,087. (CLASS 38. PRINTS AND PUBLICATIONS.) WM. J. MILLIKEN, Salt Lake City, Utah. Filed Oct. 9, 1911.

National Publicity Edition

No claim being made for the word "Edition."
Particular description of goods.—Newspapers and Magazines Published Monthly.
Claims use since July 15, 1911.

Ser. No. 59,110. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ARTHUR CHEMICAL CO., New Haven, Conn. Filed Oct. 11, 1911.

ANCHOR

Particular description of goods.—Soap.
Claims use since 1870.

Ser. No. 59,210. (CLASS 27. HOROLOGICAL INSTRUMENTS.) WALTHAM WATCH COMPANY, Waltham and Boston, Mass. Filed Oct. 18, 1911. Under ten-year proviso.

Particular description of goods.—Watches and Parts of Watches.
Claims use since 1893.

Ser. No. 59,267. (CLASS 39. CLOTHING.) A. ROSENBERG & SONS, Chicago, Ill. Filed Oct. 21, 1911.

The pictures being fanciful.
Particular description of goods.—Infants', Children's, Misses', and Ladies' Dresses.
Claims use since Aug. 1, 1909.

Ser. No. 59,275. (CLASS 7. CORDAGE.) THE A. H. HART CO., Paterson, N. J. Filed Oct. 21, 1911. Under ten-year proviso.

Particular description of goods.—Twine and Cord.
Claims use since 1870.

Ser. No. 59,294. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DEERE & COMPANY, Moline, Ill. Filed Oct. 23, 1911.

Particular description of goods.—Plows, Cultivators, Harrows, Mowers, Reapers, Grain Harvesters and Binders, Hay-Rakes, Hay-Presses, Hay-Tedders, Hay-Loaders, Hay-Stackers, Hay-Unloaders, Hay-Forks, Hand and Power Corn, Cotton, Potato, and Garden-Seed Planters, Hand and Power Broadcast Seeders, Grain-Drills, Potato-Diggers, Potato-Sorters, Manure-Spreaders, Fertilizer-Distributers, Spraying-Machines, Windmills, Stalk-Cutters, Surface-Graders, Corn Harvesters and Huskers, Corn-Shellers, Feed-Grinders, Ensilage-Cutters, Feed-Cutters, Horse-Powers, Speed-Jacks for Horse-Powers, Lawn-Mowers, Clod-Crushers, Soil-Pulverizers, Land-Rollers, Spraying and Farm Pumps, Cider-Mills, Cane-Mills, Grain-Elevators, Elevators and Conveyers for Corn-Shellers and Ensilage-Cutters, Evaporators, Wood-Sawing Machines, and Gasolene-Engines.
Claims use since about Feb. 3, 1873.

Ser. No. 59,335. (CLASS 17. TOBACCO PRODUCTS.) VOGT-APPLEGATE CO., Louisville, Ky.; Kansas City, Mo., and New Orleans, La. Filed Oct. 25, 1911.

The picture being fanciful, no claim being made to the representation of the tobacco-leaves.
Particular description of goods.—Chewing and Smoking Tobacco.
Claims use since Sept. 1, 1911.

Ser. No. 59,364. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BOWERS RUBBER WORKS, San Francisco, Cal. Filed Oct. 26, 1911.

GEE-WHIZ

Particular description of goods.—Rubber Hose, Rubber Packing, Rubber Belts, and Non-Metallic Tires.
Claims use since about the 1st of May, 1911.

Ser. No. 59,375. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. REYNOLDS, Syracuse, N. Y. Filed Oct. 27, 1911.

EKON

Particular description of goods.—Foot-Powders.
Claims use since Oct. 15, 1911.

Ser. No. 59,523. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) C. S. SCHMIDT, DRAHTGEWEBE UND GEFLECHTEWERKE, Niederlahnstein-on-the-Rhine, Germany. Filed Nov. 3, 1911.

DACAPO

Particular description of goods.—Rodent-Traps.
Claims use since Aug. 4, 1908.

Ser. No. 59,524. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) C. S. SCHMIDT, Niederlahnstein-on-the-Rhine, Germany.. Filed Nov. 3, 1911.

FINIS

Particular description of goods.—Rodent-Traps.
Claims use since Oct. 28, 1904.

Ser. No. 59,542. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) HALDENS TAENDSTIKFABRIK, Fredrikshald, Norway. Filed Nov. 4, 1911.

TELEPHONE

Particular description of goods.—Matches.
Claims use since May 2, 1896.

Ser. No. 59,796. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE CORTICINE FLOOR COVERING COMPANY, LIMITED, London, England. Filed Nov. 18, 1911.

CORTICINE

Particular description of goods.—Floor-Coverings.
Claims use since the year 1873.

Ser. No. 59,807. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES I. STEPHENS, Chicago, Ill. Filed Nov. 20, 1911.

SURE-IS

Particular description of goods.—A Remedy for Sweaty, Tired, Swollen, Aching, Odoriferous, Calloused Feet.
Claims use since June 1, 1911.

Ser. No. 59,813. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) MINNESOTA HARNESS FACTORY, INCORPORATED, Winona, Minn. Filed Nov. 20, 1911.

Scotch Knocker

Particular description of goods.—Horse-Collars.
Claims use since June 1, 1908.

Ser. No. 59,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLOSSET & DEVERS, Portland, Oreg. Filed Nov. 20, 1911.

Mabud

Particular description of goods.—An Imitation Maple Flavor.
Claims use since Oct. 20, 1911.

Ser. No. 59,840. (CLASS 39. CLOTHING.) STEINBERGER & KALISHER, New York, N. Y. Filed Nov. 21, 1911. Under ten-year proviso.

Eskay

Particular description of goods.—Gloves.
Claims use since March, 1890.

Ser. No. 59,867. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEETON-KRUEGER CO., Atlanta, Ga. Filed Nov. 23, 1911.

Particular description of goods.—Prepared Stock Feed.
Claims use since month of September, 1910.

Ser. No. 59,876. (CLASS 39. CLOTHING.) MARK M. HENDERSON, New York, N. Y. Filed Nov. 23, 1911.

ROCKINCHAIR

Particular description of goods.—Union Suits of Textile Material.
Claims use since July 1, 1911.

Ser. No. 59,991. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORONA CHEMICAL COMPANY, Chicago, Ill. Filed Nov. 28, 1911.

DERMAX

Particular description of goods.—Medicines for Diseases of the Skin.
Claims use since Nov. 25, 1911.

Ser. No. 60,044. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STANDARD RULE CO., Flint, Mich. Filed Dec. 2, 1911.

ECLIPSE

Particular description of goods.—Steel Tapes and Parts Thereof.
Claims use since July 15, 1911.

Ser. No. 60,045. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE NEW YORK SKIRT CO., New York and Cortland, N. Y. Filed Dec. 2, 1911.

Particular description of goods.—Silk Goods in the Piece.
Claims use since the 1st day of December, 1910.

Ser. No. 60,075. (CLASS 38. PRINTS AND PUBLICATIONS.) ANTON H. HANSEN, Cleveland, Ohio. Filed Dec. 5, 1911.

A. H. Hansen

Facsimile of applicant's signature.
Particular description of goods.—Trading-Stamps.
Claims use since Nov. 15, 1911.

Ser. No. 60,079. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 5, 1911.

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,080. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y. Filed Dec. 5, 1911.

ACITRIN

Particular description of goods.—An Antiarthriticum.
Claims use since Nov. 11, 1911.

Ser. No. 60,083. (CLASS 11. INKS AND INKING MATERIALS.) S. S. STAFFORD, INC., New York, N. Y. Filed Dec. 5, 1911. Under ten-year proviso.

COMMERCIAL

Particular description of goods.—Writing-Inks.
Claims use since the year 1880.

Ser. No. 60,093. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GYRO MOTOR CO., Washington, D. C. Filed Dec. 6, 1911.

GYRO

Particular description of goods.—Internal-Combustion Engines.
Claims use since on or about the 1st day of May, 1911.

Ser. No. 60,108. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading Pa. Filed Dec. 7, 1911.

Particular description of goods.—Turnbuckles.
Claims use since August, 1911.

Ser. No. 60,136. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER E. GILLAM, New York, N. Y., and Philadelphia, Pa. Filed Dec. 9, 1911.

Homolax

Particular description of goods.—A Cathartic Preparation.
Claims use since Nov. 8, 1911.

Ser. No. 60,159. (CLASS 39. CLOTHING.) LENA KAUFMAN, Philadelphia, Pa. Filed Dec. 11, 1911.

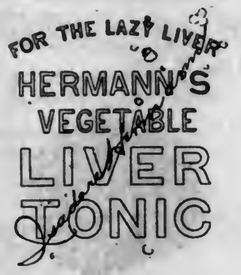
XL

Particular description of goods.—Hosiery.
Claims use since Nov. 1, 1911.

Ser. No. 60,188. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LANCASTER MILLS, Clinton, Mass. Filed Dec. 12, 1911.

Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since about December, 1906.

Ser. No. 60,222. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ISADORE HERMANN, Columbus, Ga. Filed Dec. 14, 1911.



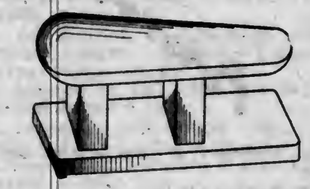
The name "Isadore Hermann" being a facsimile-signature of the proprietor of the mark, the name "Hermann's" and the words "For the Lazy Liver Vegetable Liver Tonic" being disclaimed.
Particular description of goods.—A Purgative and a Tonic for the Liver and for Indigestion.
Claims use since January, 1900.

Ser. No. 60,233. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES F. WREN, Cleveland, Ohio. Filed Dec. 14, 1911.

FERROMATIC

Particular description of goods.—Elastic Tires Partly of Metal and Partly of Rubber.
Claims use since about the month of February, 1909.

Ser. No. 60,357. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. SIMIANSKY & CO., New York, N. Y. Filed Dec. 19, 1911.



Particular description of goods.—Canvas.
Claims use since Dec. 1, 1911.

Ser. No. 60,358. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STANDARD UNDERGROUND CABLE COMPANY, Pittsburgh, Pa. Filed Dec. 19, 1911.

EXCELSITE

Particular description of goods.—Insulation for Electrical Conductors.
Claims use since June 20, 1911.

Ser. No. 60,367. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ANNIN & CO., New York, N. Y. Filed Dec. 20, 1911. Under ten-year proviso.

HIGH GRADE

Particular description of goods.—Bunting.
Claims use since 1847.

Ser. No. 60,453. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Dec. 26, 1911.

DOMINO

Particular description of goods.—Lubricating-Oils.
Claims use since Aug. 7, 1911.

Ser. No. 60,454. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Dec. 26, 1911.

FIRESIDE

Particular description of goods.—Kerosene.
Claims use since Aug. 7, 1911.

Ser. No. 60,455. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Dec. 26, 1911.

KUSHON

Particular description of goods.—Gear-Greases.
Claims use since Aug. 7, 1911.

Ser. No. 60,456. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Dec. 26, 1911.

PILOT

Particular description of goods.—Lubricating-Oils.
Claims use since Aug. 7, 1911.

Ser. No. 60,458. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Dec. 26, 1911.

YANKEE

Particular description of goods.—Cup-Greases.
Claims use since Aug. 7, 1911.

Ser. No. 60,472. (CLASS 37. PAPER AND STATIONERY.) SCOTT PAPER COMPANY, Philadelphia, Pa. Filed Dec. 27, 1911.

Sno-Tissue

Particular description of goods.—Toilet-Paper.
Claims use since Oct. 1, 1911.

Ser. No. 60,473. (CLASS 39. CLOTHING.) TANCHUM SILBERMAN, Baltimore, Md. Filed Dec. 27, 1911.

LOXITON

Particular description of goods.—Undershirts and Drawers Made of Textile Material.
Claims use since Oct. 1, 1911.

Ser. No. 60,486. (CLASS 39. CLOTHING.) JACOB PFRENGER, New York, N. Y. Filed Dec. 28, 1911. Under ten-year proviso.

Particular description of goods.—Bathing-Suits.
Claims use since 1891.

Ser. No. 60,487. (CLASS 39. CLOTHING.) JACOB PFRENGER, New York, N. Y. Filed Dec. 28, 1911.

The Diver

Particular description of goods.—Bathing-Suits.
Claims use since Dec. 1, 1911.

Ser. No. 60,489. (CLASS 39. CLOTHING.) JACOB PFRENGER, New York, N. Y. Filed Dec. 28, 1911.

Ocean Queen

Particular description of goods.—Bathing-Suits.
Claims use since Dec. 1, 1911.

Ser. No. 60,511. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MILWAUKEE-WAUKESHA BREWING COMPANY, Milwaukee, Wis. Filed Dec. 29, 1911.

Particular description of goods.—Ginger-Ale and Mineral Water.
Claims use since about July 14, 1908.

Ser. No. 60,570. (CLASS 15. OILS AND GREASES.) UTAH OIL REFINING COMPANY, Salt Lake City, Utah. Filed Jan. 2, 1912.

EVERGREEN

Particular description of goods.—Lubricating-Oils.
Claims use since Aug. 7, 1911.

Ser. No. 60,640. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TRIPPE, BARKER & CO., New York, N. Y. Filed Jan. 5, 1912.

PHANTOM

Particular description of goods.—Cotton and Linen Piece Goods.
Claims use since Aug. 20, 1911.

Ser. No. 60,648. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE J. GEER, New York, N. Y. Filed Jan. 5, 1912.

SCINTELLA

Particular description of goods.—Woolen, Worsted, Silk, Mohair, and Cotton Piece Goods and Piece Goods Made of a Combination of Two or More of Those Fibers.
Claims use since Nov. 1, 1911.

Ser. No. 60,651. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE J. GEER, New York, N. Y. Filed Jan. 5, 1912.

IRIDESSA

Particular description of goods.—Woolen, Worsted, Silk, Mohair, and Cotton Piece Goods and Piece Goods Made of a Combination of Two or More of Those Fibers.
Claims use since Nov. 1, 1911.

TRADE-MARKS

REGISTERED FEBRUARY 13, 1912.

85,311. WRITING-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 7, 1907. Serial No. 27,926. PUBLISHED DECEMBER 5, 1911.

85,312. WATCHES. THE ANSONIA CLOCK COMPANY, New York, N. Y.
Filed October 19, 1911. Serial No. 59,226. PUBLISHED DECEMBER 12, 1911.

85,313. GERMICIDAL, DEODORIZING, AND DISINFECTING LIQUID. ASCHENBACH & MILLER, INCORPORATED, Philadelphia, Pa.
Filed September 21, 1911. Serial No. 58,774. PUBLISHED DECEMBER 5, 1911.

85,314. COTTON PIECE GOODS. ATLANTIC COTTON MILLS, Lawrence and Boston, Mass.
Filed August 1, 1911. Serial No. 57,972. PUBLISHED DECEMBER 12, 1911.

85,315. CERTAIN TOILET PREPARATIONS. AUBRY SISTERS, New York, N. Y.
Filed September 2, 1911. Serial No. 58,512. PUBLISHED DECEMBER 5, 1911.

85,316. CERTAIN TOILET PREPARATIONS. AUBRY SISTERS, New York, N. Y.
Filed September 8, 1911. Serial No. 58,586. PUBLISHED DECEMBER 5, 1911.

85,317. CERTAIN PARTS OF HARNESS. B & F MANUFACTURING CO., Greeley, Colo.
Filed August 29, 1911. Serial No. 58,485. PUBLISHED DECEMBER 5, 1911.

85,318. MEDICAMENTS FOR ABORTIVE TREATMENT OF INFLAMMATION OF THE URETHRA. THE BERLIN CHEMICAL COMPANY, Jersey City, N. J.
Filed May 27, 1911. Serial No. 56,652. PUBLISHED DECEMBER 5, 1911.

85,319. WOODEN FLOORING. BLISS COOK OAK COMPANY, Blissville, Ark.
Filed August 19, 1911. Serial No. 58,273. PUBLISHED DECEMBER 12, 1911.

85,320. FLY-TRAPS. CHARLES E. BOWEN, Alameda, Cal.
Filed July 12, 1910. Serial No. 50,806. PUBLISHED DECEMBER 12, 1911.

85,321. REMEDIES FOR NERVOUS DISEASES. THE J. W. BRANT COMPANY, LIMITED, Albion, Mich.
Filed June 12, 1908. Serial No. 35,302. PUBLISHED DECEMBER 5, 1911.

85,322. ALMOND-CREAM, COMPLEXION-CREAM, DEODORIZING-CREAM, AND FOOT-POWDER. CAMEO MANUFACTURING COMPANY, Worcester, Mass.
Filed March 20, 1911. Serial No. 55,201. PUBLISHED DECEMBER 5, 1911.

85,323. LADIES' AND MISSES' TRIMMED AND UNTRIMMED HATS. L. F. CASTLE COMPANY, New York, N. Y.
Filed July 20, 1911. Serial No. 57,732. PUBLISHED DECEMBER 12, 1911.

85,324. ASPHALT. CENTRAL COMMERCIAL CO., Chicago, Ill.
Filed October 6, 1911. Serial No. 59,011. PUBLISHED DECEMBER 5, 1911.

85,325. LIVER MEDICINE. CHATTANOOGA MEDICINE CO., Chattanooga, Tenn.
Filed October 12, 1911. Serial No. 59,117. PUBLISHED DECEMBER 5, 1911.

85,326. REMEDY FOR TUBERCULOSIS. MICHAEL D. CHOUQUETTE, Denison, Tex.
Filed October 14, 1911. Serial No. 59,156. PUBLISHED DECEMBER 5, 1911.

85,327. BOSOM-SHIRTS, NEGLIGÉE SHIRTS, AND TEXTILE-FABRIC UNDERWEAR. COHEN BROS. COMPANY, Milwaukee, Wis.
Filed September 26, 1911. Serial No. 58,861. PUBLISHED DECEMBER 12, 1911.

85,328. LETTERS FOR SIGNS. ROBERT J. CRAKER, Oakland, Cal.
Filed July 26, 1911. Serial No. 57,832. PUBLISHED DECEMBER 12, 1911.

85,329. SHERRY-WINE, OPORTO WINE, MARSALA WINE, AND MADEIRA. P. DEMPSEY & CO., Boston, Mass.
Filed January 22, 1908. Serial No. 32,367. PUBLISHED MARCH 17, 1908.

85,330. LAXATIVE REMEDIES. DONOVAN & SPANG, St. Paul, Minn.
Filed June 8, 1911. Serial No. 56,887. PUBLISHED DECEMBER 5, 1911.

85,331. TRAVELING-BAGS AND TRUNKS. DRESDNER REISEUTENSILIEN- & LEDERWARENFABRIK G. L. LIPPOLD, Dresden, Germany.
Filed October 9, 1909. Serial No. 45,196. PUBLISHED DECEMBER 5, 1911.

85,332. CULTURES OF BENEFICIAL SOIL-BACTERIA. EARP-THOMAS FARMOGERM COMPANY, Jersey City and Bloomfield, N. J.
Filed October 6, 1911. Serial No. 59,006. PUBLISHED DECEMBER 12, 1911.

85,333. REMEDY FOR GONORRHEA. EASTERN DRUG CO., Bakersfield, Cal.
Filed October 3, 1911. Serial No. 58,982. PUBLISHED DECEMBER 5, 1911.

85,334. SUSPENDERS AND GARTERS. THE C. A. EDGARTON MFG. CO., Shirley, Mass.
Filed April 29, 1911. Serial No. 56,041. PUBLISHED DECEMBER 12, 1911.

85,335. ELECTRICAL THERAPEUTIC APPLIANCE. THE ELECTRIC RESPIRONE COMPANY, Cleveland, Ohio.
Filed September 26, 1911. Serial No. 58,857. PUBLISHED DECEMBER 12, 1911.

85,336. BROOMS. ENTERPRISE BROOM COMPANY, Chicago, Ill.
Filed July 22, 1911. Serial No. 57,780. PUBLISHED DECEMBER 5, 1911.

85,337. FERTILIZER. FARMERS' COTTON OIL & FERTILIZER CO., Huntsville, Ala.
Filed August 28, 1911. Serial No. 58,422. PUBLISHED DECEMBER 5, 1911.

85,338. CERTAIN COMBINATION UNDERGARMENT. EVA O. FARNSWORTH, New York, N. Y.
Filed September 30, 1911. Serial No. 58,942. PUBLISHED DECEMBER 12, 1911.

85,339. EMOLLIENT PREPARATION FOR APPLICATION TO THE SKIN AFTER SHAVING. LOUIS FÉRET, Paris, France.
Filed October 31, 1910. Serial No. 52,529. PUBLISHED DECEMBER 5, 1911.

85,340. LININGS AND PADDING USED FOR CERTAIN PURPOSES. D'ROY F. FOWLER, Melrose Park, Pa.
Filed August 28, 1911. Serial No. 58,412. PUBLISHED DECEMBER 12, 1911.

85,341. LIQUID ANTISEPTIC AND REMEDY FOR CERTAIN DISEASES. EDUARDO FERREIRA FRANÇA, Rio de Janeiro, Brazil.
Filed June 21, 1909. Serial No. 43,156. PUBLISHED DECEMBER 5, 1911.

85,342. WINDOW-SHADES AND VENETIAN BLINDS. THEO. H. GARY CO., New York, N. Y.
Filed July 7, 1911. Serial No. 57,516. PUBLISHED OCTOBER 31, 1911.

85,343. GLOVES. GREGG GLOVE CO., Crawfordsville, Ind.
Filed September 27, 1911. Serial No. 58,866. PUBLISHED DECEMBER 12, 1911.

85,344. CASKS AND BARRELS. THE GREIF BROS. CO., Cleveland, Ohio.
Filed May 5, 1911. Serial No. 56,204. PUBLISHED DECEMBER 5, 1911.

85,345. CERTAIN KINDS OF BOOTS, SHOES, SLIPPERS, AND STOCKINGS. ARTHUR HALE, New York, N. Y., and Chicago, Ill.
Filed August 26, 1911. Serial No. 58,403. PUBLISHED DECEMBER 12, 1911.

85,346. STOMACH AND NERVE TONIC. HOWELL I. HAMMER, Baltimore, Md.
Filed September 29, 1911. Serial No. 58,938. PUBLISHED DECEMBER 5, 1911.

85,347. APPLE VINEGAR. HARRISON & CO., New York, N. Y.
Filed October 7, 1911. Serial No. 59,045. PUBLISHED DECEMBER 5, 1911.

85,348. CHICKEN COOPS, HOUSES, NESTS, AND FEED-BOXES WITHIN THE COOPS. LEWIS A. HILLS, Salt Lake City, Utah.
Filed June 5, 1911. Serial No. 56,844. PUBLISHED OCTOBER 3, 1911.

85,349. CERTAIN REMEDY. HIMROD MAN'F'G CO., New York, N. Y.
Filed October 21, 1911. Serial No. 59,274. PUBLISHED DECEMBER 5, 1911.

85,350. MEN'S, BOYS', WOMEN'S, GIRLS', AND INFANTS' CLOTHING. HOCHSCHILD KOHN & CO., Baltimore, Md.
Filed February 9, 1911. Serial No. 54,395. PUBLISHED DECEMBER 12, 1911.

85,351. INDOOR GAMES. INDOOR RUGBY COMPANY, New York, N. Y.
Filed July 11, 1910. Serial No. 50,776. PUBLISHED DECEMBER 12, 1911.

85,352. DISPLAY-CABINETS. HOWLAND AND WHEATON COMPANY, Warren, R. I.
Filed May 27, 1911. Serial No. 56,668. PUBLISHED DECEMBER 5, 1911.

85,353. DYNAMITE AND POWDER. INDEPENDENT POWDER COMPANY OF MISSOURI, Joplin, Mo.
Filed May 17, 1911. Serial No. 56,408. PUBLISHED DECEMBER 5, 1911.

85,354. PAPER TOWELS AND PAPER NAPKINS. JAPANESE TISSUE MILLS, Holyoke, Mass.
Filed September 26, 1910. Serial No. 51,967. PUBLISHED DECEMBER 12, 1911.

85,355. BLOCK AND HYDROCARBON-CONTAINING PAVING MATERIALS. THE JENNISON-WRIGHT CO., Toledo, Ohio.
Filed September 18, 1911. Serial No. 58,709. PUBLISHED DECEMBER 12, 1911.

85,356. WHEEL-RIMS. K & C MANUFACTURING COMPANY, Henniker, N. H.
Filed September 6, 1911. Serial No. 58,552. PUBLISHED DECEMBER 5, 1911.

85,357. AUTOMOBILE-TRUNKS. ISIDORE SIDNEY KALLIS, New York, N. Y.
Filed July 6, 1910. Serial No. 50,723. PUBLISHED DECEMBER 12, 1911.

85,358. HARNESS AND HORSE-COLLARS. KELLEY-HOW-THOMSON CO., Duluth, Minn.
Filed August 9, 1911. Serial No. 58,109. PUBLISHED DECEMBER 12, 1911.

85,359. ARTIFICIAL-FLY BOOKS USED FOR CARRYING FISHING-FLIES. F. W. KLINGER & LANGREIN COMPANY, Philadelphia, Pa.
Filed June 19, 1911. Serial No. 57,726. PUBLISHED DECEMBER 5, 1911.

85,360. MEN'S AND BOYS' OUTER CLOTHING. KUH, NATHAN & FISCHER COMPANY, Chicago, Ill.
Filed February 17, 1908. Serial No. 32,803. PUBLISHED DECEMBER 12, 1911.

85,361. SAD-IRONS. LANDERS, FRARY AND CLARK, New Britain, Conn.
Filed June 29, 1911. Serial No. 57,377. PUBLISHED DECEMBER 12, 1911.

85,362. ARTIFICIAL PEARLS. THE LASSNER COMPANY, New York, N. Y.
Filed November 7, 1911. Serial No. 59,593. PUBLISHED DECEMBER 12, 1911.

85,363. HAIR-INVIGORATOR. THE LUXO COMPANY, Wichita, Kans.
Filed December 21, 1908. Serial No. 39,458. PUBLISHED DECEMBER 5, 1911.

85,364. JEWELRY FOR PERSONAL ADORNMENT. ROBERT B. MACDONALD, Attleboro, Mass.
Filed August 11, 1911. Serial No. 58,150. PUBLISHED DECEMBER 5, 1911.

85,365. LINIMENTS. ALBERT E. MERCER, Gary, Ind.
Filed July 21, 1911. Serial No. 57,773. PUBLISHED DECEMBER 5, 1911.

85,366. HOSIERY. MIDDLESEX COMPANY, Lowell, Mass.
Filed October 30, 1911. Serial No. 59,428. PUBLISHED DECEMBER 12, 1911.

85,367. GLOVES. MILLS & GIBB, East Orange, N. J., and New York, N. Y.
Filed September 23, 1911. Serial No. 58,826. PUBLISHED DECEMBER 12, 1911.

85,368. CORN-STARCH AND FOOD-STARCH. CHAS. MORNINGSTAR & CO., New York, N. Y., assignor to Joseph Morningstar, New York, N. Y.
Filed November 7, 1910. Serial No. 52,653. PUBLISHED DECEMBER 5, 1911.

85,369. WATERPROOFING COMPOSITIONS TO BE USED IN FIREPROOF CONSTRUCTION. NATIONAL FIRE PROOFING COMPANY, Pittsburgh, Pa.
Filed May 24, 1911. Serial No. 56,572. PUBLISHED DECEMBER 5, 1911.

85,370. EXPANDED-METAL LATH. NORTHWESTERN EXPANDED METAL CO., Chicago, Ill.
Filed October 2, 1911. Serial No. 58,961. PUBLISHED DECEMBER 5, 1911.

85,371. ANIMAL-TRAPS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed September 26, 1911. Serial No. 58,852. PUBLISHED DECEMBER 12, 1911.

85,372. LACE, VEILINGS, HAIR-NETS, AND NET PIECE GOODS. S. OPPENHEIMER & LEVY, New York, N. Y.
Filed August 23, 1911. Serial No. 58,352. PUBLISHED DECEMBER 12, 1911.

85,373. CARD GAMES. PARKER BROTHERS, Portland, Me., and Salem, Mass.
Filed November 2, 1911. Serial No. 59,489. PUBLISHED DECEMBER 12, 1911.

85,374. MILK AND CREAM CANS. PLYMOUTH CREAMERY COMPANY, Boston, Mass.
Filed June 30, 1911. Serial No. 57,421. PUBLISHED DECEMBER 12, 1911.

85,375. REMEDY FOR CERTAIN AILMENTS. ROSS PORTER, Neodesha, Kans.
Filed October 6, 1911. Serial No. 59,024. PUBLISHED DECEMBER 5, 1911.

85,376. DRESSED FURS. CHARLES R. PROTZE, West Brookville, N. Y.
Filed September 14, 1911. Serial No. 58,674. PUBLISHED DECEMBER 12, 1911.

85,377. PIANOS AND PLAYER-PIANOS. THE REGAL PIANO & PLAYER CO., New York, N. Y.
Filed August 22, 1911. Serial No. 58,334. PUBLISHED DECEMBER 5, 1911.

85,378. LEATHER BOOTS AND SHOES. REGAL SHOE COMPANY, Whitman and Boston, Mass.
Filed May 4, 1910. Serial No. 49,508. PUBLISHED DECEMBER 12, 1911.

85,379. MEN'S OUTER SUITS. THEOPHILUS C. SCHAFFNER, Chicago, Ill.
Filed May 17, 1911. Serial No. 56,420. PUBLISHED DECEMBER 12, 1911.

85,380. CLOCKS. THEODORE SCHISGALL, New York, N. Y.
Filed October 26, 1911. Serial No. 59,[illegible]. PUBLISHED DECEMBER 12, 1911.

85,381. FLYING-MACHINES AND PARTS THEREOF. SOCIÉTÉ DES MOTEURS GNOME, Paris, France.
Filed August 12, 1910. Serial No. 51,366. PUBLISHED DECEMBER 12, 1911.

85,382. PIANOS. SOHMER & COMPANY, New York, N. Y.
Filed September 8, 1911. Serial No. 58,592. PUBLISHED DECEMBER 5, 1911.

85,383. TANNING AND DYEING EXTRACTS. C. A. SPENCER & SON COMPANY, Boston, Mass.
Filed October 23, 1911. Serial No. 59,293. PUBLISHED DECEMBER 5, 1911.

85,384. CERTAIN FANCY GOODS. THE SPIRELLA COMPANY, Meadville, Pa.
Filed October 4, 1911. Serial No. 58,989. PUBLISHED DECEMBER 12, 1911.

85,385. COLLAR-BUTTONS MADE OF PRECIOUS METAL. STERN BROS. & COMPANY, New York, N. Y.
Filed October 20, 1911. Serial No. 59,257. PUBLISHED DECEMBER 12, 1911.

85,386. CALENDARS. STONE PRINTING & MFG. CO., Roanoke, Va.
Filed June 16, 1911. Serial No. 57,095. PUBLISHED DECEMBER 12, 1911.

85,387. SAD-IRONS. LOUIS J. STRAUSS, Philadelphia, Pa.
Filed August 25, 1911. Serial No. 58,372. PUBLISHED DECEMBER 12, 1911.

85,388. PREPARATION OF PEAT-MOSS FOR POULTRY. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed August 31, 1911. Serial No. 58,456. PUBLISHED DECEMBER 12, 1911.

85,389. WRAPPING-PAPER. THE UNION PAPER & TWINE CO., Detroit, Mich.
Filed October 24, 1910. Serial No. 52,411. PUBLISHED DECEMBER 5, 1911.

85,390. REMEDY FOR SYPHILIS AND BLOOD-POISON. UNITED GROCERY CO., Jacksonville, Fla.
Filed October 6, 1911. Serial No. 59,027. PUBLISHED DECEMBER 5, 1911.

85,391. CARTRIDGE-SHELLS. UNITED STATES CARTRIDGE COMPANY, Lowell, Mass.
Filed June 26, 1911. Serial No. 57,315. PUBLISHED DECEMBER 12, 1911.

85,392. TONIC BITTERS. VAN VLEET-MANSFIELD DRUG CO., Memphis, Tenn.
Filed August 2, 1905. Serial No. 11,184. PUBLISHED DECEMBER 5, 1911.

85,393. LEAD-PENCILS. OSCAR A. WEISSENBORN, Jersey City, N. J.
Filed July 15, 1911. Serial No. 57,633. PUBLISHED DECEMBER 5, 1911.

85,394. LEAD-PENCILS. OSCAR A. WEISSENBORN, Jersey City, N. J.
Filed September 22, 1911. Serial No. 58,821. PUBLISHED DECEMBER 5, 1911.

85,395. FOOD REMEDIES DIRECTED TOWARD BUILDING NATURAL RESISTANCE OF THE BODY. ALONZO M. WHEELER, Chicago, Ill.
Filed August 4, 1911. Serial No. 58,043. PUBLISHED DECEMBER 5, 1911.

85,396. FISHING-RODS, SWIVELS, AND SINKERS. HORACE A. WHITTEMORE, Boston, Mass.
Filed October 10, 1910. Serial No. 52,183. PUBLISHED DECEMBER 5, 1911.

85,397. TALCUM POWDER. GEORGE C. WILSON, Tyrone, Pa.
Filed September 2, 1911. Serial No. 58,522. PUBLISHED DECEMBER 5, 1911.

LABELS

REGISTERED FEBRUARY 13, 1912.

16,175.—*Title:* "CLEANER-POLISH." (For a Cleaner-Polish.) ADA C. JONES, Cincinnati, Ohio. Filed December 18, 1911.

16,176.—*Title:* "CUSTOM CLOTHING MAKERS UNION OF AMERICA." (For Clothing and Wearing-Apparel.) G. ROTHOLS, Birmingham, Ala. Filed December 23, 1911.

PRINTS

REGISTERED FEBRUARY 13, 1912.

2,953.—*Title:* "LA TOURAINE, THE PERFECT COFFEE." (For Coffee.) W. S. QUINBY COMPANY, Boston, Mass. Filed December 15, 1911.

REPORT
OF THE
COMMISSIONER OF PATENTS
TO CONGRESS

FOR THE YEAR ENDED DECEMBER 31, 1911.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

To the Senate and House of Representatives of the United States of America in Congress assembled:

In compliance with section 494 of the Revised Statutes I have the honor to submit the following report of the business of the Patent Office for the year ended December 31, 1911:

RECEIPTS.

Detailed statement of all moneys received for patents, for copies of records or drawings, or from any source whatever.

Applications:		
Cash received		$1,738,154.00
Cash refunded		6,257.00
Net cash		1,731,897.00
Certificates of deposit		51,685.00
Total cash and certificates		1,783,582.00
Copies:		
Cash received		185,627.52
Cash refunded		7,141.97
Net cash		178,485.55
Certificates of deposit		1,169.65
Total cash and certificates		179,655.20
Recording assignments:		
Cash received		32,398.86
Cash refunded		1,742.63
Net cash		30,656.23
Certificates of deposit		169.00
Total cash and certificates		30,825.23
Official Gazette:		
Cash received		18,650.85
Cash refunded		2.25
Net cash		18,648.60
Certificates of deposit		----------
Total cash and certificates		18,648.60
Registration of prints and labels:		
Cash received		7,649.00
Cash refunded		1,062.00
Net cash		6,587.00
Certificates of deposit		60.00
Total cash and certificates		6,647.00
Court costs:		
Cash received		30.00
Cash refunded		-----
Net cash		30.00
Certificates of deposit		-----
Total cash and certificates		30.00
Aggregates.		
Cash received		1,982,510.23
Cash refunded		16,205.85
Net Cash		1,966,304.38
Certificates of deposit		53,083.65
Total cash and certificates		2,019,388.03

EXPENDITURES.

Amounts expended under the several appropriations from January 1 to December 31.

	1910.	1911.
Salaries	$1,252,450.99	$1,202,716.26
Scientific library	1,743.01	2,253.65
International Union for Protection of Industrial Property	618.36	617.60
Stationery	10,621.36	10,075.40
Postage on foreign matter	1,240.00	935.00
Furniture, carpets, ice, telephones, washing towels, and sundries	14,649.84	17,484.15
Law library	383.18	482.38
Photolithographing:		
Paid contractor	142,837.35	120,128.85
Paid Public Printer for old specifications	----------	16,999.99
Printing and binding, for Official Gazette, indexes, printing specifications, and miscellaneous work	578,263.39	491,976.63
Rent for storage of models and removal of same	2,874.00	----------
Defending suits, etc	30.46	20.00
Total	2,005,711.94	1,953,689.91

RECEIPTS AND EXPENDITURES.

Receipts from all sources	$2,019,388.03
Expenditures	1,953,689.91
Surplus	65,698.12

Surplus earnings of the Patent Office, deposited in the Treasury of the United States.

Amount of total net surplus in Treasury, January 1, 1911	$6,998,227.64
Net surplus for the year 1911	65,698.12
Total net surplus, December 31, 1911	7,063,925.76

SUMMARY OF THE BUSINESS OF THE PATENT OFFICE.

Applications for patents for inventions	67,370
Applications for patents for designs	1,534
Applications for reissues of patents	217
Total	69,121
Applications for registration of trade-marks	7,085
Applications for registration of labels	909
Applications for registration of prints	337
Disclaimers filed	10
Appeals on the merits	1,693
Total	10,034
Patents issued, including designs	33,927
Patents reissued	157
Total	34,084
Trade-marks registered	4,205
Labels registered	659
Prints registered	248
Total	5,112
Patents expired during the year	19,875
Applications forfeited for non-payment of final fees	7,028
Applications allowed, awaiting final fees	11,803
Trade-mark applications passed for publication	4,767

PATENTS ISSUED.

Patents issued to citizens of the United States, with the ratio of population to each patent granted.

States and Territories.	Patents and designs.	One to every—	States and Territories.	Patents and designs.	One to every—
Alabama	163	13,117	Ohio	2,233	2,135
Arkansas	135	11,663	Oklahoma	235	7,052
California	1,575	1,516	Oregon	246	2,735
Colorado	477	1,675	Pennsylvania	2,919	2,626
Connecticut	845	1,319	Rhode Island	315	1,723
Delaware	56	3,613	South Carolina	65	23,314
Florida	104	7,237	South Dakota	109	5,357
Georgia	224	11,647	Tennessee	175	12,484
Idaho	105	3,101	Texas	591	6,593
Illinois	3,172	1,778	Utah	103	3,624
Indiana	726	3,720	Vermont	61	5,835
Iowa	583	3,816	Virginia	226	9,122
Kansas	382	4,427	Washington	410	2,785
Kentucky	340	9,541	West Virginia	196	6,230
Louisiana	165	10,039	Wisconsin	703	3,320
Maine	142	5,228	Wyoming	26	5,614
Maryland	272	4,762			
Massachusetts	1,842	1,828	Alaska	5	12,871
Michigan	1,035	2,715	Arizona	41	4,984
Minnesota	475	4,370	Canal Zone	9	.....
Mississippi	113	15,904	District of Columbia	239	1,385
Missouri	945	3,486	Hawaii	19	10,100
Montana	112	3,357	New Mexico	50	6,546
Nebraska	318	3,749	Philippine Islands	6	.....
Nevada	39	2,099	Porto Rico	7	159,716
New Hampshire	81	5,316	United States Army	10	.....
New Jersey	1,360	1,866	United States Navy	16	.....
New York	4,777	1,908			
North Carolina	191	11,551	Total	[1] 29,801	.....
North Dakota	132	4,372			

[1] Not including 157 reissues and 68 patents withdrawn.

Patents granted to citizens of foreign countries.

Algeria	1	England	935	Netherlands	17
Argentina	6	Ecuador	1	Newfoundland	1
Austria-Hungary	140	France	347	New South Wales	29
Belgium	37	Germany	1,320	New Zealand	38
British West Indies	3	Greece	1	Nicaragua	1
Brazil	3	Guatemala	1	Norway	36
Canada	554	India	6	Orange River Colony	1
Cape Colony	4	Ireland	11	Persia	1
Chile	2	Italy	62	Queensland	5
Colombia	1	Japan	12	Roumania	2
Cuba	10	Java	1	Russia	49
Denmark	32	Luxemburg	2	Scotland	47
Egypt	2	Mexico	42	South Australia	3
Spain	18				
Sweden	92				
Switzerland	106				
Tasmania	5				
Transvaal	28				
Venezuela	2				
Victoria	34				
West Australia	7				
Total	4,058				

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836, and exhibit in detail the business of the Office during the last calendar year:

Comparative statement of the business of the Office from 1837 to 1911, inclusive.

Year.	Applications.	Caveats filed.	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289.08	$23,506.98	.....
1838	.....	.....	520	42,123.54	37,338.92	$4,784.62
1839	.....	.....	425	38,019.97	34,543.51	3,476.46
1840	765	228	473	35,056.51	39,020.67	.....
1841	847	312	495	40,412.01	52,066.87	.....
1842	761	291	517	36,505.63	31,241.43	5,264.20
1843	819	315	519	35,215.21	30,776.96	4,438.25
1844	1,045	380	497	42,509.26	36,344.53	6,164.73
1845	1,246	452	503	51,076.14	39,395.65	11,680.4
1846	1,272	448	638	50,264.16	46,158.71	4,105.45
1847	1,531	533	569	63,111.19	41,878.35	21,232.84
1848	1,628	607	653	67,576.69	58,905.84	8,670.85
1849	1,955	595	1,077	80,752.78	77,716.44	3,036.34
1850	2,193	602	993	86,927.05	80,100.95	6,826.10
1851	2,258	760	872	95,738.61	86,916.93	8,821.68
1852	2,639	996	1,019	112,056.34	95,916.91	16,139.43
1853	2,673	901	961	121,527.45	132,969.83	.....
1854	3,324	868	1,344	163,789.84	167,146.32	.....
1855	4,435	906	2,013	216,459.35	179,540.33	36,919.02
1856	4,960	1,024	2,505	192,588.02	199,931.02	.....
1857	4,771	1,010	2,896	196,122.01	211,582.09	.....
1858	5,364	943	3,710	203,716.16	193,193.74	10,522.42
1859	6,225	1,079	4,538	245,942.15	210,278.41	35,663.74
1860	7,653	1,084	4,819	258,352.59	252,820.80	3,531.79
1861	4,643	700	3,340	187,354.44	221,491.91	.....
1862	5,088	824	3,821	218,754.09	182,810.39	32,944.06
1863	6,014	787	4,170	195,583.29	189,414.14	6,179.15
1864	6,972	1,069	5,020	240,919.96	229,868.00	11,051.96
1865	10,664	1,932	6,616	348,791.84	274,199.34	74,592.50
1866	15,269	2,723	9,450	495,065.38	361,724.28	133,341.10
1867	21,276	3,597	13,015	646,581.92	639,263.32	7,318.60

Comparative statement of the business of the Office from 1857 to 1911, inclusive—Continued.

Year.	Applications.	Caveats filed.	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1868	20,445	3,705	13,378	$681,565.86	$628,679.77	$52,886.09
1869	19,271	3,624	12,986	693,145.81	486,430.74	206,715.07
1870	19,171	3,273	13,321	609,456.70	557,147.19	112,309.57
1871	19,472	3,366	13,033	678,716.46	562,091.64	116,624.82
1872	18,246	3,090	13,500	699,726.39	665,595.00	34,131.39
1873	20,414	3,248	12,864	703,191.77	691,178.98	12,012.79
1874	21,602	3,181	13,599	738,278.17	679,288.41	58,989.76
1875	21,638	3,094	14,837	743,453.36	721,657.71	21,795.65
1876	21,425	2,697	15,595	757,987.65	652,542.60	105,445.05
1877	20,308	2,809	14,187	732,342.85	613,152.62	119,190.23
1878	20,260	2,755	13,444	725,375.55	593,062.89	132,292.66
1879	20,059	2,620	13,213	703,931.47	529,638.97	174,292.50
1880	23,012	2,490	13,947	749,085.32	538,865.17	210,220.15
1881	26,059	2,406	16,584	853,065.89	605,173.28	248,492.61
1882	31,522	2,553	19,267	1,009,219.45	683,867.67	325,351.78
1883	34,576	2,741	22,383	1,146,240.00	675,234.86	471,005.14
1884	35,600	2,582	20,413	1,075,798.80	970,579.76	105,219.04
1885	35,717	2,552	24,233	1,188,089.15	1,024,378.85	163,710.30
1886	35,908	2,513	22,506	1,154,551.40	992,503.45	162,047.95
1887	35,613	2,622	21,477	1,144,809.00	994,472.22	150,337.26
1888	35,797	2,251	20,506	1,118,516.10	973,108.78	145,407.32
1889	40,575	2,431	24,166	1,261,728.05	1,052,955.96	208,772.09
1890	41,048	2,311	26,292	1,340,372.66	1,099,297.74	241,074.92
1891	40,552	2,408	23,244	1,271,285.78	1,139,713.35	131,572.43
1892	40,753	2,290	23,559	1,286,331.88	1,110,739.24	175,592.80
1893	38,473	2,247	23,769	1,242,871.64	1,141,038.45	101,833.19
1894	38,439	2,286	20,867	1,187,439.56	1,100,047.12	87,392.46
1895	40,680	2,415	22,057	1,245,246.93	1,106,389.49	138,857.44
1896	43,982	2,271	23,373	1,324,059.53	1,112,413.71	210,646.12
1897	47,905	2,176	23,794	1,375,641.72	1,122,843.13	252,798.59
1898	35,842	1,659	22,267	1,137,734.48	1,136,196.20	1,538.28
1899	41,443	1,716	25,527	1,325,457.03	1,211,783.73	113,673.30
1900	41,980	1,731	26,499	1,350,828.53	1,260,019.62	90,808.91
1901	46,449	1,842	27,373	1,449,398.16	1,297,385.64	152,012.52
1902	49,641	1,851	27,886	1,552,859.08	1,393,345.54	159,513.54
1903	50,213	1,771	31,699	1,642,201.81	1,448,645.81	193,156.00
1904	52,143	1,808	30,934	1,657,326.53	1,476,000.38	181,326.15
1905	54,971	1,896	30,399	1,806,758.14	1,479,633.22	327,124.92
1906	56,452	1,885	31,965	1,790,921.38	1,554,891.20	236,030.18
1907	58,762	1,967	36,620	1,910,618.14	1,631,458.36	279,159.78
1908	61,475	2,110	33,682	1,896,847.67	1,712,303.42	184,544.25
1909	65,839	1,948	37,421	2,042,828.14	1,955,151.14	87,677.00
1910	64,629	970	35,930	2,025,536.69	2,005,711.94	19,824.75
1911	69,121	.....	34,084	2,019,388.03	1,953,689.91	65,698.12

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of letters patent commenced, together with the total number of each issued during the year.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	1	.....	.....	.....	.....	.....	109	.....	.....	.....	.....	.....	.....	.....
1837	110	.....	.....	.....	.....	.....	436	.....	.....	.....	.....	.....	.....	.....
1838	546	.....	1	.....	.....	.....	515	.....	6	.....	.....	.....	.....	.....
1839	1,061	.....	7	.....	.....	.....	404	.....	13	.....	.....	.....	.....	.....
1840	1,465	.....	20	.....	.....	.....	458	.....	10	.....	.....	.....	.....	.....
1841	1,923	.....	30	.....	.....	.....	490	.....	6	.....	.....	.....	.....	.....
1842	2,413	.....	36	.....	.....	.....	488	.....	13	.....	.....	.....	.....	.....
1843	2,901	1	49	.....	.....	.....	494	14	11	519	.....	.....	.....	.....
1844	3,395	15	60	.....	.....	.....	478	12	7	497	.....	.....	.....	.....
1845	3,873	27	67	.....	.....	.....	475	17	11	503	.....	.....	.....	.....
1846	4,348	44	78	.....	.....	.....	566	59	13	638	.....	.....	.....	.....
1847	4,914	103	91	.....	.....	.....	495	60	14	569	.....	.....	.....	.....
1848	5,409	163	105	.....	.....	.....	534	46	23	653	.....	.....	.....	.....
1849	5,993	209	128	.....	.....	.....	988	49	30	1,067	.....	.....	.....	.....
1850	6,961	258	158	.....	.....	.....	884	83	26	993	.....	.....	.....	.....
1851	7,865	341	184	.....	.....	.....	757	90	25	872	.....	.....	.....	.....
1852	8,622	431	209	.....	.....	.....	800	109	20	1,019	.....	.....	.....	.....
1853	9,512	540	229	.....	.....	.....	846	86	29	961	.....	.....	.....	.....
1854	10,358	626	258	.....	.....	.....	1,759	57	28	1,844	.....	.....	.....	.....
1855	12,117	663	296	.....	.....	.....	1,892	70	51	2,013	.....	.....	.....	.....
1856	14,009	753	337	.....	.....	.....	2,315	107	83	2,505	.....	.....	.....	.....
1857	16,324	860	420	.....	.....	.....	2,686	113	97	2,896	.....	.....	.....	.....
1858	19,010	973	517	.....	.....	.....	3,467	102	126	3,695	.....	.....	.....	.....
1859	22,477	1,075	643	.....	.....	.....	4,165	108	231	4,504	.....	.....	.....	.....
1860	26,642	1,183	674	.....	.....	.....	4,363	183	232	4,779	.....	.....	.....	.....
1861	31,006	1,366	1,106	.....	.....	.....	3,040	142	147	3,329	.....	.....	.....	.....
1862	34,045	1,508	1,253	.....	.....	.....	3,221	195	116	3,532	.....	.....	.....	.....
1863	37,295	1,708	1,360	.....	.....	.....	3,781	176	227	4,184	.....	.....	.....	.....
1864	41,047	1,879	1,596	.....	.....	.....	4,638	139	248	5,025	.....	.....	.....	.....

Statement showing the number of the first patent, design patent, and reissued patent, etc.—Continued.

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-Marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-Marks.	Labels.	Prints.	Total certificates.
1865	45,685	2,018	1,844	.....	.....	.....	6,099	221	296	6,616	.....	.....	.....	.....
1866	51,784	2,239	2,140	.....	.....	.....	8,874	294	280	9,458	.....	.....	.....	.....
1867	60,658	2,533	2,430	.....	.....	.....	12,301	325	400	13,026	.....	.....	.....	.....
1868	72,959	2,858	2,830	.....	.....	.....	12,544	446	420	13,410	.....	.....	.....	.....
1869	85,503	3,304	3,250	.....	.....	.....	12,957	506	534	13,997	.....	.....	.....	.....
1870	98,460	3,810	3,784	1	.....	.....	12,157	737	439	13,333	121	.....	.....	121
1871	110,617	4,547	4,223	122	.....	.....	11,687	905	464	13,056	486	.....	.....	486
1872	122,304	5,452	4,687	608	.....	.....	12,200	884	529	13,613	491	.....	.....	491
1873	134,504	6,336	5,216	1,099	.....	.....	11,616	747	501	12,864	492	.....	.....	492
1874	146,120	7,093	5,717	1,591	1	.....	12,230	886	483	13,599	559	232	.....	791
1875	158,350	7,969	6,200	2,160	233	.....	13,291	915	631	14,837	1,188	232	.....	1,370
1876	171,641	8,884	6,831	3,283	465	.....	14,172	802	621	15,595	950	472	.....	1,431
1877	185,813	9,686	7,452	4,247	937	.....	12,920	699	568	14,187	1,216	392	.....	1,608
1878	196,733	10,385	8,020	5,463	1,329	.....	12,345	690	509	13,444	1,455	492	.....	1,947
1879	211,078	10,975	8,529	6,918	1,821	.....	12,133	592	488	13,213	872	355	.....	1,227
1880	223,211	11,567	9,017	7,700	2,176	.....	12,926	518	506	13,947	349	203	.....	552
1881	236,137	12,062	9,523	8,139	2,379	.....	15,548	565	471	16,584	834	202	.....	1,036
1882	251,685	12,647	9,994	8,973	2,581	.....	18,135	861	271	19,267	947	304	.....	1,251
1883	269,820	13,508	10,265	9,920	2,885	.....	21,196	1,020	167	22,383	902	906	.....	1,808
1884	291,016	14,528	10,432	10,822	3,791	.....	19,147	1,160	116	20,413	1,021	513	.....	1,534
1885	310,163	15,678	10,548	11,843	4,304	.....	23,331	773	129	24,233	1,067	391	.....	1,458
1886	333,494	16,451	10,677	12,910	4,695	.....	21,797	696	116	22,609	1,029	378	.....	1,407
1887	355,291	17,046	10,793	13,999	5,073	.....	20,429	949	99	21,477	1,133	380	.....	1,513
1888	375,720	17,995	10,892	15,072	5,453	.....	19,585	835	86	20,506	1,069	327	.....	1,396
1889	395,305	18,530	10,978	16,131	5,780	.....	23,360	723	75	24,158	1,220	319	.....	1,539
1890	418,665	19,553	11,053	17,360	6,099	.....	25,222	886	84	26,292	1,415	304	.....	1,719
1891	443,967	20,439	11,137	18,775	6,403	.....	22,328	836	80	23,244	1,762	137	.....	1,899
1892	466,315	21,275	11,217	20,537	6,540	.....	22,661	817	81	23,559	1,737	[6]	.....	1,743
1893	488,976	22,092	11,298	22,274	None.	1	22,768	902	99	23,769	1,677	None.	2	1,679
1894	511,744	22,994	11,397	23,951	None.	3	19,575	928	64	20,857	1,806	None.	4	1,810
1895	531,619	23,922	11,461	25,757	None.	7	20,883	1,115	59	22,057	1,829	None.	3	1,832
1896	552,502	25,037	11,520	27,586	6,546	10	21,867	1,445	61	23,373	1,813	1	32	1,846
1897	574,369	26,482	11,581	29,399	6,547	42	22,098	1,631	65	23,794	1,671	14	16	1,701
1898	596,467	28,113	11,646	31,070	6,561	58	20,404	1,803	60	22,267	1,238	200	35	1,473
1899	616,871	29,916	11,706	32,308	6,761	93	23,296	2,130	92	25,527	1,649	511	100	2,260
1900	640,167	32,055	11,798	33,957	7,272	193	24,660	1,758	81	26,499	1,721	737	93	2,551
1901	664,827	33,813	11,879	35,678	8,009	286	25,558	1,734	81	27,373	1,928	878	159	2,965
1902	690,385	35,547	11,960	37,606	8,887	445	27,136	640	110	27,886	2,006	767	158	2,931
1903	717,521	36,187	12,070	39,612	9,654	608	31,046	536	117	31,699	2,186	990	270	3,446
1904	748,567	36,723	12,189	41,798	10,644	873	30,267	557	110	30,934	2,158	1,114	297	3,569
1905	778,834	37,280	12,299	43,956	11,768	1,170	29,784	486	129	30,399	4,490	830	350	5,670
1906	808,618	37,796	12,428	45,446	12,588	1,529	31,181	625	159	31,965	10,568	709	656	11,933
1907	839,799	38,391	12,587	50,014	13,297	1,874	35,880	589	161	36,630	7,878	667	315	8,860
1908	875,679	38,980	12,738	66,892	13,964	2,189	32,757	757	168	33,682	5,191	618	220	6,029
1909	906,436	39,737	12,906	72,063	14,582	2,409	36,574	687	160	37,421	4,184	492	148	4,824
1910	945,010	40,424	13,066	72,267	15,074	2,557	35,168	630	123	35,930	4,239	370	120	4,729
1911	980,178	41 063	13,189	80,506	15,444	2,677	32,917	1,010	157	34,084	4,205	659	248	5,112

[1] Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al.* v. *Keuffel et al.* (55 O. G., 1139) with the registration of No. 6,545, June 14, 1892. Resumed June 9, 1896, with the registration of No. 6,546.

First print registered Mar. 7, 1893.

Expenditures for photolithographic and photographic work since 1906–7.

Fiscal year.	Contractor.	Price per page. Current issue.	Reproduction of exhausted copies.	Library edition.	Photographic copies.	Total.
1906–1907	Norris Peters Co	[1] $0.80; [2] .65				$140,000.00
	Norris Peters Co		[3] $0.57; [4] .85			
	A. B. Graham Co			[5] $1.22		
	E. L. Parker				[3] $0.08; [7] .13	
1907–1908	Norris Peters Co	[1] .77; [2] .64				140,000.00
	J. A. Eckert		[3] .50; [4] .67			
	Columbia Planograph Co			[5] 1.15		
	H. A. Farnham				[3] .09; [7] .13	
1908–1909	Norris Peters Co	[1] .71½; [2] .57½				140,000.00
	Sackett & Wilhelms Co		Spec. [3] .42½; [4] .53. Drg. [3] .43½; [4] .55			
	Columbia Planograph Co			[5] .98		
	F. W. Ernst				[3] .12; [7] .10	

Expenditures for photolithographic and photographic work since 1906–7—Continued.

Fiscal year.	Contractor.	Price per page. Current issue.	Reproduction of exhausted copies.	Library edition.	Photographic copies.	Total.
1909–1910	A. B. Graham Co	[1] $0.74				$140,000.00
	A. B. Graham Co			[5] $1.00		
	Norris Peters Co	[2] .61				
	Sackett & Wilhelms Co		[3] $0.44½; [4] .57			
	F. W. Ernst				[3] $0.12; [7] .15	
	Leet Brothers					
	Norris Peters Co	[1] .79				
	Webb & Boocorselski	[2] .52				
1910–1911	Sackett & Wilhelms Co		[3] .49½; [4] .58			140,000.00
	Sackett & Wilhelms Co			[5] .95		
	Leet Bros				[3] .11½; [7] .11½	
	Columbia Planograph Co	[1] .73; [10] .50				
1911–1912	Sackett & Wilhelms Co		[3] .50½; [4] .60			$140,000.00
	Sackett & Wilhelms Co			[5] .89		
	F. W. Ernst				[3] .09½; [7] .10½	

[1] For 100 thin, 2 thick, and 1 bond copies.
[2] For 50 thin, 2 thick, and 1 bond copies of trade-marks and designs.
[3] For 50 copies each, mechanical and design patents and trade-marks.
[4] For 100 copies each, mechanical and design patents and trade-marks.
[5] For 150 copies.
[6] Size, 7 x 11 in.
[7] Size, 10 x 15 in.
[8] Size, 8 x 12½ in.
[9] Estimated.
[10] Designs.

Number of patents issued by the United States and foreign countries from the earliest period to December 31, 1911.

[Foreign figures for 1911 estimated.]

Country.	To 1870, inclusive.	1871 to 1911.	Total.	Country.	To 1870, inclusive.	1871 to 1911.	Total.
Argentina	83	9,850	9,933	Luxemburg	.....	9,296	9,296
Australia	.....	10,542	10,542	Malta	.....	88	88
Austria	.....	70,463	70,463	Mauritius	113	288	401
Austria-Hungary	15,350	67,583	82,933	Mexico	22	11,113	11,135
Bahamas	.....	2	2	Netherlands	4,535	.....	4,535
Barbados	.....	147	147	Newfoundland	40	421	461
Belgium	35,044	213,156	248,200	New South Wales	236	11,740	11,976
Bolivia	42	65	107	New Zealand	109	14,345	14,454
Brazil	185	7,489	7,674	Norway	737	28,119	28,856
British Guiana	32	94	126	Paraguay	.....	91	91
British Honduras	1	19	20	Peru	.....	160	160
Canada	4,061	137,325	141,406	Portugal	245	7,165	7,410
Ceylon	58	739	797	Queensland	67	6,368	6,435
Chile	266	2,042	2,308	Russia	1,464	25,453	[1]26,917
Colombia	.....	1,029	1,029	St. Helena	.....	4	4
Congo Free State	.....	244	244	South African Republics	.....	1,262	1,262
Costa Rica	.....	64	64	South Australia	123	6,221	6,344
Cuba	.....	1,300	1,300	Spain	.....	46,915	46,915
Denmark	464	22,559	23,023	Straits Settlements	.....	290	290
Ecuador	.....	10	10	Sweden	1,629	33,606	35,235
Fiji Islands	.....	43	43	Switzerland	.....	53,449	53,449
Finland	112	4,364	4,476	Tasmania	43	2,426	2,469
France	103,934	352,710	456,644	Transvaal	.....	2,900	2,900
Germany	9,996	249,638	259,634	Trinidad	6	220	226
Great Britain	53,408	389,627	443,035	Tunis	.....	861	861
Guatemala	.....	57	57	Turkey	.....	2,060	2,060
Hawaii	.....	148	148	Uruguay	.....	400	400
Hongkong	.....	187	187	Venezuela	.....	244	244
Hungary	.....	50,474	50,474	Victoria	822	12,463	13,285
India	445	11,476	11,921	West Australia	.....	3,524	3,524
Italy and Sardinia	4,723	102.179	106,902				
Jamaica	22	231	253	Total foreign	238,437	2,003,658	2,242,095
Japan	.....	21,191	21,191	United States	120,573	902,478	[1]1,023,051
Leeward Islands	.....	25	25				
Liberia	.....	2	2	Grand total	359,010	2,906,136	3,265,146

[1] Including 9,957 patents issued prior to July 1, 1836.

The following comparison between the receipts, expenditures, applications filed, issues of the Office, the printed copies sold, copies of records furnished, and the number of employees for the years ended, respectively, December 31, 1899, and December 31, 1911, illustrates the growth of the business of the Patent Office:

Class.	1899	1911	Increase.	Percentage of increase.
Receipts	$1,325,457.03	$2,019,388.03	$693,931.00	52.3
Expenditures	$1,211,783.73	$1,953,689.91	$741,906.18	61.2
Applications (including caveats in 1899)	45,990	77,512	31,522	68.5
Letters patent, design and reissue patents granted, and trade-marks, labels, and prints registered	27,787	39,196	11,409	41.
Printed copies of patents sold	1,451,519	2,329,259	877,740	60.4
Price received	$50,201.11	$109,975.75	$59,774.64	119.
Words written in copies of records furnished	13,575,650	27,186,100	13,610,450	100.2
Number of employees	663	939	276	41.6

In 1911 there were received 67,370 applications for mechanical patents, 1,534 applications for design patents, 217 applications for reissues of patents, 7,085 applications for registration of trade-marks, 969 applications for registration of labels, and 337 applications for registration of prints. There were 33,927 patents issued, including designs, 157 patents reissued, and 4,205 trade-marks, 659 labels, and 248 prints registered. The number of patents that expired was 19,875. The number of allowed applications awaiting the payment of final fees was 11,803, and the number forfeited for non-payment of the final fees 7,028. The total receipts were $2,019,388.03, the expenditures $1,953,689.91, and the surplus of receipts over expenditures $65,698.12. The total balance to the credit of the Patent Office in the Treasury of the United States on December 31, 1911, was $7,063,925.76.

In proportion to population more patents were issued to citizens of Connecticut than to those of any other State—1 to every 1,319. Next in order are the following: District of Columbia, 1 to every 1,385; California, 1 to every 1,516; Colorado, 1 to every 1,675; Rhode Island, 1 to every 1,723; Illinois, 1 to every 1,778; Massachusetts, 1 to every 1,828; New Jersey, 1 to every 1,866; New York, 1 to every 1,908; Nevada, 1 to every 2,099; Ohio, 1 to every 2,135; Pennsylvania, 1 to every 2,626; Michigan, 1 to every 2,715; Oregon, 1 to every 2,735; Washington, 1 to every 2,785; Idaho, 1 to every 3,101; Wisconsin, 1 to every 3,320; Montana, 1 to every 3,357; Missouri, 1 to every 3,486; Delaware, 1 to every 3,613; Utah, 1 to every 3,624; Indiana, 1 to every 3,720; Nebraska, 1 to every 3,749; Iowa, 1 to every 3,816; Minnesota, 1 to every 4,370; North Dakota, 1 to every 4,372; Kansas, 1 to every 4,427; Maryland, 1 to every 4,762; Arizona, 1 to every 4,984; Maine, 1 to every 5,228; New Hampshire, 1 to every 5,316; South Dakota, 1 to every 5,357; Wyoming, 1 to every 5,614; Vermont, 1 to every 5,835; West Virginia, 1 to every 6,230; New Mexico, 1 to every 6,546; Texas, 1 to every 6,593; Oklahoma, 1 to every 7,052; Florida, 1 to every 7,237; Virginia, 1 to every 9,122; Kentucky, 1 to every 9,541. The fewest patents granted in proportion to the number of inhabitants were in the following States and Territories: Porto Rico, 1 to every 159,716; South Carolina, 1 to every 23,314; Mississippi, 1 to every 15,904; Alabama, 1 to every 13,117; Alaska, 1 to every 12,871; Tennessee, 1 to every 12,484; Arkansas, 1 to every 11,663; Georgia, 1 to every 11,647; North Carolina, 1 to every 11,551; Hawaii, 1 to every 10,100, and Louisiana, 1 to every 10,039.

As to foreign patents, 1,320 were granted to citizens of Germany; 935 to those of England; 554 to those of Canada; 347 to those of France; 140 to those of Austria-Hungary; 108 to those of Switzerland; 98 to those of Sweden; 62 to those of Italy; 49 to those of Russia; 47 to those of Scotland; 42 to those of Mexico; 38 to those of New Zealand; 37 to those of Belgium; 36 to those of Norway; 34 to those of Victoria; 32 to those of Denmark; 29 to those of New South Wales; 28 to those of Transvaal; 17 to those of the Netherlands; 12 each to those of Japan and Spain; 11 to those of Ireland; 10 to those of Cuba; 7 to those of West Australia; 6 each to those of India and Argentina; 6 to those of Queensland; 4 to those of Cape Colony; 3 each to those of British West Indies, Brazil, South Australia, and Tasmania; 2 each to those of Chile, Egypt, Luxemburg, Roumania, and Venezuela, and 1 each to those of Algeria, Colombia, Ecuador, Greece, Guatemala, Java, Newfoundland, Nicaragua, Orange River Colony, and Persia.

CONDITION OF WORK.

There is a steady noticeable improvement in the work being done by the examining corps. The increased efficiency of this body of highly-trained men is undoubtedly due to the material increase of salaries granted by Congress in 1909. I do not believe that there is anywhere in the Government service a more competent, intelligent, or efficient class of employees than can be found in the Patent Office. Owing to the rigid examination necessary to pass in order to enter the examining corps it is made up almost exclusively of men who have graduated from various technical schools and universities, and they nearly all have a knowledge of the law, and many take law courses at the Washington law schools.

Although the salaries have been increased during my incumbency of the office of Commissioner and I have been able by this means to check to a certain degree the great number of resignations, I am still unable to hold as great a percentage of these specially-trained men as is desirable to obtain the best possible aggregate of efficiency. This is due to the attractive offers that these men receive from established law-firms and corporations. There has

been no request, however, during the present year for any increase in the salaries of the examining corps.

CLASSIFICATION OF PATENTS.

In the present appropriation bill I have asked for five additional Examiners to aid in the work of the classification which is now under way. This work should be pushed to a completion as rapidly as possible, owing to the fact that no adequate classification of patents has been made since the Office was established. During the last four years the Division of Classification has been rehabilitated and reorganized, with the result that the work is now about half finished. The work of course progresses slowly, due to the fact that there must be digested not only the great volume of American patents already issued, amounting now to more than one million, but also between two and three millions of foreign patents and about fifty thousand volumes of scientific and technical works in the library of this Bureau. When this work is completed, an enormous benefit will accrue to the inventors and manufacturers of this country and the outside public generally, since the work of examination of applications for patent will be much simplified and such patents as are granted will have a much greater degree of validity attached to them.

GAINS IN EFFICIENCY AND ECONOMY.

Within the year just ended a change has been made in the manner of printing certificates of trade-mark registration, which has resulted in the saving of between five and six thousand dollars annually. This will be a continual annual saving.

Plans are now in contemplation which will result in a more economical method of publishing the PATENT OFFICE GAZETTE. At this time I am able to say that a saving of between eighty and ninety thousand dollars a year will be made possible, and these contemplated changes will not detract from the efficiency of that publication as a work of reference, but will rather add to it in that respect. It will be less bulky and in its more compact form will be appreciated by those who must economize in shelf-space.

Certain changes have been formulated in the rules of practice relating to the registration of trade-marks, and have already taken effect, which accomplish a considerable saving of time to Examiners in searching this large class of applications. Formerly it was necessary for the Examiners to search through 20,000 pending applications, which were in various stages of prosecution. The new rules are the same as now apply to applications for patents—that is, they must be amended within one year from the last Office action or the application becomes abandoned. This will not cause forfeiture or undue hardship, it is believed, because applicants still have the right to file new applications if they desire.

PENDING LEGISLATION.

Among the bills now before the Committee on Patents of the House of Representatives the passage of which is urgently desired for the betterment of conditions in the Patent Office is H. R. 7600, reintroduced by Chairman Oldfield and originally prepared by me, which provides for the amendment of the Revised Statutes concerning appeals within the United States Patent Office. Under the present statutes patent appeals in *ex parte* cases lie from the Primary Examiners to the Board of Examiners-in-Chief, thence to the Commissioner, (the First Assistant Commissioner or the Assistant Commissioner,) and from his decision to the Court of Appeals of the District of Columbia. In interference cases the course of appeals is the same, there being three appeals in each case.

The purpose of the proposed amendment to the statute is to shorten the course of prosecution by the elimination of one of the appeals within the Office. This is designed to be accomplished by combining the Commissioner, First Assistant Commissioner, Assistant Commissioner, and Examiners-in-Chief into a single appellate tribunal, any three of whom shall constitute a quorum, to which all appeals shall lie, whether from a Primary Examiner or from the Examiner of Interferences, and from which appeals would lie to the Court of Appeals of the District of Columbia.

The present course of appeals is not well adapted to the volume of business which the Office is now called upon to handle for the following reasons:

It imposes on applicants an unnecessary amount of delay and expense. The very purpose of the patent system is to place at the service of the public at as early a date as practicable inventions as they are made, and unnecessary delays affect not only applicants but all interested in the industries to which the inventions relate. One appeal within the Office, together with the appeal to the Court of Appeals of the District of Columbia, would seem to be ample, especially in view of the fact that in a suit on a patent a single appeal takes the case from the trial court to the court of appeals. The elimination of one appeal would materially shorten the time required for the ultimate disposal of appealed cases and effect a considerable saving of expense to applicants.

Section 4910 provides for an appeal to the Commissioner in person from the Board of Examiners-in-Chief. The work of the Office and the consequent number of appeals have increased to such an extent that it has become difficult and will soon be impossible for the Commissioner to give to each case the amount of personal attention proper to its disposal.

The Board of Examiners-in-Chief as at present constituted consists of three members, and no provision is made under the present law to supply a temporary vacancy caused by the sickness or absence from other cause of any of the members. The absence of one member often results in an evenly-divided board, with the consequent necessity for a rehearing, and the absence of two members causes an entire suspension of business. With the proposed appellate board the presence of a quorum of three would be practically assured at all times, which has

not been the case in numerous instances in the past, owing to frequent absences of a member of the board on account of periods of illness of greater or less duration and also by reason of annual leave and other causes. The work of this tribunal has so greatly increased during the last few years that it is almost impossible for its members to give the thorough joint consideration to each case which it deserves.

The existing trade-mark law provides for appeals from the Examiner of Trade-Marks and from the Examiner of Interferences in trade-mark cases directly to the Commissioner, (First Assistant or Assistant Commissioner.) From these tribunals appeal lies to the Court of Appeals of the District of Columbia, as in patent cases. The amendment submitted merely substitutes the proposed board of appeals for the Commissioner as the appellate tribunal of the Office in cases relating to trade-marks, making the course of appeals in this class of cases conform to the course of appeals recommended above in cases involving applications for patents.

These changes in the course of appeals would not only have the effect of expediting the prosecution of applications on appeal, but the elimination of an appeal would be a saving to the inventors of one appeal fee, the attorneys' fees, and other expenses incident thereto. Furthermore, having but one appeal within the Office in lieu of two would result in giving greater stability to the decisions of the Office tribunals and would also obviate any want of comity that has at times existed in the past between the decisions of the Commissioner of Patents and the Assistant Commissioner. These proposed changes in the law in no wise affect the present legal status of the Commissioner of Patents, the First Assistant Commissioner, the Assistant Commissioner, or the Examiners-in-Chief.

Bills embracing the substance of this recommendation were introduced by Senator Smoot and were passed by the Senate. No action, however, was taken upon these bills in the House. I most earnestly recommend that these bills be passed in view of the following facts:

It is the practically unanimous opinion of inventors and manufacturers throughout the country that one appeal should be eliminated in the Patent Office in order to save the great cost and loss of time now involved in obtaining a final adjudication and consequent grant of patent.

That no general protest has been lodged and no effective arguments have been made against the passage of the bill.

Scientific journals have favorably commented upon this measure by editorials and otherwise and offered no protest or objection.

That a great amount of time and labor would be saved to the tribunals of the Patent Office. Under the present system the work is done twice to no good effect.

This is an important part of the plan to expedite business and to grant patents to inventors within a reasonable time, which they have demanded and to which they are entitled.

The bill recently reported favorably from the House Committee on Patents now before the House—viz., H. R. 7711—was also prepared by me and was first introduced in the Sixtieth Congress. This bill provides for the amendment of section 4889 of the Revised Statutes and is aimed to safeguard applications for patent from possible mutilation or fraudulent amendment during the pendency in the Patent Office. Certain changes in the phraseology of the statutes are provided by the bill; but the really essential provision is that there shall be required to be filed with an application for patent, in addition to the drawing, two photographic copies of such drawing. This imposes upon every applicant for patent an additional statutory requirement—to wit, to file with each application of which a signed and attested drawing forms part two photographic copies of such signed and attested drawing.

The purposes of this requirement are (1) to guard against and enable the detection of unauthorized changes in the original drawing or abstraction of such drawing and substitution of another; (2) to lessen the danger of serious mistakes on the part of the Office in failing to detect interferences between copending applications for the same invention.

It is proposed to accomplish the first purpose by causing to be filed in secret archives, in charge of the Chief Draftsman, one of these photographic copies, which may serve as a permanent standard of comparison with the pen-and-ink drawing from which the copies that form a part of the patent are taken. At present the drawing when sent to the attorneys' room upon request of any one appearing of record as having an interest in the application might be changed or abstracted and replaced by a corrupt attorney or employee of the Patent Office, leaving no evidence, or at best negative indications, that any unauthorized changes have been made. An illuminative example of what unauthorized changes may be made is found in the case of the Heany patent, No. 872,936, where no drawing was filed originally with the application, but one was filed subsequently, which was later abstracted and replaced by another of entirely different character, the last drawing being the one which now forms a part of the patent. If at the time the Heany application was filed all applicants had been required to file a photographic reproduction of the drawing, the changes could hardly have been made without detection except by the collusion of two or more employees and with great difficulty.

It is proposed to accomplish the second purpose by retaining the second photographic copy of the drawing in the file-wrapper and sending it with the file to the attorneys' room, upon order, or to any other division or any tribunal of the Patent Office, when required, leaving the original drawing in the examining division where the application is classified for examination, or if for any reason it should become necessary to send the original drawing out of the examining division the photographic copy could be retained therein, where it would be

discovered in interference searches. Under the present procedure both drawing and file-wrapper are sent out of the division on attorneys' orders, also when they are placed in interference or are appealed, and the drawing is frequently sent out on orders of the official draftsman or the Chief of the Copy and Manuscript Division for extended periods, amounting in interference proceedings to years. While the drawing is out of the examining division interferences between the application of which it forms a part and other subsequently-filed applications may be overlooked, as the interference search is made by means of the drawing. The memory of the Examiner cannot always be relied upon to recall interfering applications, especially as the *personnel* of the force changes continually.

The size of the sheets upon which the proposed photographic copies shall be made, their character and disposition, may be left to the discretion of the Commissioner of Patents, who may prescribe, subject to the approval of the Secretary of the Interior, all proper requirements, by rule, under the authority of section 483 of the Revised Statutes.

It is very clear that it is desirable for applicants filing applications for patent to accompany the same with photographic copies of the drawings. This has been the opinion of my predecessors in office. Commissioner Butterworth issued an order to this effect, but subsequently revoked it because he was convinced that he could not legally enforce that order without statutory authority. The recent developments in the Patent Office in regard to the tampering with patent records makes it essential that the statute be amended as requested, so as to give statutory authority to the requirement for the photographic copies. It may be said, however, that this is the first time that the records of the Patent Office have been tampered with during its history, covering a period of 121 years, and it is the only patent so tampered with in more than one million patents which have been granted by the United States to date.

H. R. 7710, now before the House Committee on Patents, was prepared by me and legalizes the issuance of certificates of corrections in Letters Patent. Experience has shown that because of errors, either committed in this Office or the Government Printing Office, the printed patent as issued does not always correspond with the record thereof as filed in this Office. The error may be one of punctuation, technical words may be misspelled, and other mistakes may occur which are inevitable when it is necessary to make a printed reproduction of copy which is technical in its character and which oftentimes is very much confused because of the many amendments which have been made thereto. It has long been the practice of the Patent Office to issue certificates of corrections where the mistakes do not constitute a sufficient ground for reissue. Inasmuch as these certificates do not have the positive sanction of law objection is frequently made to them. Many times the Office is put to the expense of a reissue to correct a mistake which could just as well be corrected by a certificate of correction at much less expense to the Government.

I also respectfully recommend the passage of the bill (H. R. 8388) prepared by me and introduced and referred to the Patent Committee of each House of Congress in the Sixty-first Congress and reintroduced by Mr. Oldfield, chairman of the Patent Committee, requiring that an application for patent shall be prosecuted within six months after any action by the Patent Office. The present period within which the applicant is allowed to amend is one year, and under the existing practice there have been many instances of cases being amended just within the one-year limit in order to keep them alive, they thus serving as drag-nets in many cases to catch inventions along similar lines which may be subsequently applied for, thereby involving inventors in expensive interference proceedings. It has been the effort of the Office to get the old cases out of the Office whenever possible consistent with good work. The Office has been severely criticized recently, especially in the last year or two, for allowing applications, particularly those owned by corporations, to rest in the Office for such long periods as to really have the effect of extending the patent period in case such applications are later passed to issue. Instructions have been repeatedly given to the examining corps to as far as possible get rid of all such cases as are delayed intentionally by the applicant or his attorney. Had this bill passed it would have almost entirely overcome that criticism.

Full hearings were given on all these bills by the Patent Committees of the Sixtieth and Sixty-first Congresses, and these bills were prepared by the Office and their passage strongly urged for fully three years by the present administration of the Office. The bill for shortening the period during which amendments may be filed and the bill eliminating the appeal within the Patent Office were opposed before the Patent Committee by certain members of the Patent Bar Association of Washington and a few attorneys not members of that association. Despite this opposition, however, the bills were favorably reported by the committee, but were not reached on the calendar. I respectfully urge that action be taken during the present session looking to the passage of these bills, as under their operation, if they become laws, a marked increase in the efficiency of this Bureau may be expected.

APPEALS.

In connection with the bill H. R. 7609, showing the heavy appeal docket in the Patent Office, for which this bill provides relief, I furnish the following table:

Number of interferences declared during the year	1,528
Decisions of the Examiner of Interferences on priority in interference cases	298
Appeals to Examiners-in-Chief in interference cases	172
Ex parte appeals to Examiners-in-Chief	928
	1,100

Appeals to Commissioner in interference cases	116
Appeals to Commissioner in opposition cases	15
Appeals to Commissioner in cancelation cases	3
Ex parte appeals to Commissioner	164
Interlocutory appeals to Commissioner	220
Ex parte appeals in trade-mark cases	57
	575
Petitions to Commissioner	2,393
	2,968
Appeals to Court of Appeals, District of Columbia:	
Ex parte cases	33
Interference cases	49
Opposition cases	5
Cancelation cases	3
	90

THE CASE OF EVERDING, BARTON, AND HEANY.

In the fall of 1907 my suspicions were aroused as to probable irregularities in Patent No. 872,936 and also as to several applications for patent pending in the name of John Allen Heany, of York, Pa., for improvements in tungsten-lamps.

I personally conducted for some three weeks the investigation as to these matters. I appointed a board consisting of Examiner-in-Chief Frank C. Skinner, Examiner-in-Chief Levin H. Campbell, and Examiner of Classification Eugene D. Sewall, the sessions being held and all the witnesses examined in my private office.

These inquiries resulted in placing the evidence in the hands of the United States district attorney for the District of Columbia, and the same were by him presented to the grand jury, who at the January term, 1908, returned indictments against Henry E. Everding, a patent attorney of Philadelphia, Ned W. Barton, an Assistant Examiner in the Patent Office, and John Allen Heany, inventor, of York, Pa., for forgery and violation of sections 5403 and 5440 of the Revised Statutes, based upon the destruction of certain papers forming parts of original applications for patents filed in the Patent Office by said Heany and the substitution therefor of forged and fraudulent papers. The case came on for trial in the fall of 1908. Barton pleaded guilty and was immediately sentenced to the penitentiary. Everding and Heany stood trial, with the result that in a verdict rendered by the jury December 24, 1908, Everding was convicted and Heany acquitted. Both Everding and Barton served their terms in the penitentiary. The Government was represented at the trial of the criminal case by United States Attorney D. W. Baker, assisted by Jesse C. Adkins and then Principal Examiner F. C. Skinner, the latter two being appointed by the Attorney-General, at my request, to represent the Patent Office.

After the termination of the criminal trial I then issued an order against John Allen Heany, the alleged inventor, to show cause why certain interferences in which his applications were involved should not be dissolved and his applications included therein and also certain other applications also tainted with fraud should not be stricken from the files and treated as a nullity.

At that time, being under appointment by the President as expert attaché to the United States delegation to the Fourth International Conference of American States at Buenos Aires, 1910, and also subsequently and during the period of these later hearings occupying the position, by appointment of the President, as chairman of the American delegation to the Conference at Washington of the International Union for the Protection of Industrial Property, which Conference was wholly placed in my charge by the Secretary of State, and as my whole time was occupied with these and other important duties I assigned the further investigation and the hearings and determination of the questions which would result from my order to Heany to show cause to First Assistant Commissioner Cornelius C. Billings.

This investigation was begun in the summer of 1910 and was carried on for a period of several months, and a great many witnesses were examined. During these hearings the Government was represented by Mr. Jesse C. Adkins, who was continued specially in the case, at my request, by the Attorney-General, and also by Mr. Webster S. Ruckman, Chief Law Clerk of the Patent Office.

The investigation was very thorough and complete, and the conclusions arrived at by Mr. Billings are set forth in a very able decision, which will be found published in the OFFICIAL PATENT OFFICE GAZETTE of the issue of October 24, 1911. The interferences in which the said Heany applications were involved were dissolved and patents to Heany were refused on the ground of fraud.

The conclusions reached by Mr. Billings and expressed in his decision meet my full and unqualified approval, and I wish also to express my appreciation of the very valuable assistance rendered by Messrs. Skinner, Campbell, and Sewall in detecting and bringing to the surface the very craftily disguised fraudulent sheets and inserted matter in these cases.

I wish also to certify in this report to the very able assistance given by Messrs. Adkins and Ruckman to Mr. Billings in conducting the further investigation.

The Department and the Patent Office are to be congratulated at the very satisfactory termination of the criminal case and the Office investigations as well. As I stated in my previous report and also to the press, this is the only case of its kind that has ever occurred in the Patent Office during the 117 years of its history, a very wonderful record for a Bureau, especially in view of the fact that there are so many possible temptations by reason of the great interests passed upon therein.

THE CONFERENCE AT WASHINGTON.

The International Union for the Protection of Industrial Property held its Fourth Amendatory Conference in Washington beginning May 15, 1911, and completed its deliberations by the signing of the Convention of Washington on June 2 of the same year. Congress made two appropriations of $10,000 each for the expenses and entertainment of the delegates of this Conference, at which there were representatives of more than forty nations, including those nations which were adherents to the Treaty of Paris of 1883, and the Pan-American nations, non-adherents, who were invited to send

representatives. I had the honor to bear the commission of the President of the United States as chairman of the American delegation, and the other members on behalf of the United States were Honorable Charles H. Duell, former Commissioner of Patents, ex-justice of the Court of Appeals of the District of Columbia; Robert H. Parkinson, Esq., of Chicago; Frederick P. Fish, Esq., of Boston, and Melville Church, Esq., of Washington, D. C., all of whom are leaders of the patent bar and well-known authorities in patent law and practice.

The Treaty of Paris having provided that the language of these Conferences be in French, that language was used exclusively by the Conference of Washington in all its publications, including reports and propositions submitted. Important conventions affecting changes in both international patent and trade-mark laws were discussed at the Conference, and the final convention was adopted and signed by the delegates, subject to the ratification of their various governments. Aside from the very desirable changes in the laws of nations relating to patents and trade-marks there is another important underlying reason why these conferences are desirable: they bring together men familiar with the subjects to be discussed and who become well acquainted and talk over their differences not only in formal session but in their social intercourse.

The Conference elected as its permanent chairman the Honorable Charlemagne Tower, formerly American Ambassador to Germany. The formal opening session was presided over by me as chairman of the United States delegation, and after addresses by the Secretary of State, Honorable Philander Chase Knox, and the Secretary of the Interior, Honorable Walter Lowrie Fisher, who welcomed the delegates on behalf of this Government, the chair was relinquished to Mr. Tower, who then addressed the Conference. Subsequent deliberations were presided over by the vice-president of the Conference, M. Georges de Ro, of Brussels, Belgium.

It is a great pleasure for me to report that it was announced in formal session by the vice-president, who voiced the unanimous sentiments of the delegates, that this was one of the most successful Conferences of the Union that had ever been held. The French Ambassador, M. Jusserand, the British Ambassador, Mr. Bryce, the Mexican Ambassador, Senor Zamacona, and the Minister of Portugal, Viscount de Alte, also expressed in unstinted terms their great appreciation on behalf of their respective countries at the splendid manner in which the Conference had been entertained by the United States Government.

The resulting treaties are now pending before the Senate of the United States for approval, and I have no hesitancy in expressing the opinion that when approved by this and the other adhering nations these amendments to the Treaty of Paris will result in much lasting benefit to the inventors and manufacturers of this country.

During the Conference I received a cablegram which stated that the German Reichstag had passed a patent law which upheld the treaty between Germany and the United States providing that patents of American inventors should not be revoked by the German Government for failure to work or manufacture the same in Germany within four years, provided, however, the same is manufactured in the United States in the same period of time. This so-called "working clause" is embraced in the laws of nearly all nations; but since the treaty with Germany has been entered into several of them have modified their laws in this respect. This treaty was the result of certain negotiations instituted by me while in Berlin in 1908, while acting under the direction of the Secretary of State. In the following year I again visited Germany in the interest of this treaty and also visited several other countries at the direction of Secretary of State Knox and Assistant Secretary Huntington Wilson, and the result has been the revision of the laws relating to the working clause in Norway, Sweden, and Switzerland, so that the manufacture of patented inventions in these countries by United States citizens is no longer required in order to sustain their patents. It is thought that several other countries will speedily follow this example.

COURT OF PATENT APPEALS.

I wish to express my hearty approval of the efforts of the American Bar Association to obtain legislation looking to the establishment of a court of patent appeals. Legislation to accomplish this end should, in my opinion, become law at the earliest practical moment. A patent is granted by the Government which is effective throughout the United States and Territories. When this patent, however, is involved in a suit which is brought in any judicial district, the final decision, on appeal, is rendered by the circuit court of appeals of that jurisdiction. A decision involving the construction of a patent by the circuit court of appeals of one jurisdiction is effective only for that jurisdiction and has no legal effect in any other of the several circuits, except through comity. There have been in the past decisions rendered by several circuit courts of appeals which are directly opposed to each other. In view of the fact that a patent when issued is effective in all the States and Territories it is very clear that there should be one court of patent appeals whose decisions will control the status of that patent throughout the entire country. The importance of this is evident when it is considered that there are nine circuit courts of appeals and one Court of Appeals of the District of Columbia, and each of which may and often does entertain in some particular a different view from the others with regard to the same patent.

SCIENTIFIC LIBRARY.

I have in mind the thorough reorganization of the Scientific Library of this Bureau. That branch is of very great importance to inventors and the Office, the number of volumes having reached between forty and fifty thousand, all scientific works, which are constantly searched by interested people and the examining corps in the conduct of their

work of examining applications for patents. It

the loss of which by fire or otherwise would be a

ADJUDICATED PATENTS.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

work of examining applications for patents. It is my desire to have thoroughly digested that whole subject-matter, so that it will be readily accessible and will be a saving of much time and expense.

I deem it quite necessary that additional translators should be provided, as the present translator is compelled to do much translating for the various Bureaus of this Department. The present translator is familiar with ten languages and has a working knowledge of half a dozen in addition.

Of course the number of foreign publications and patents increase each year, as a great many nations other than the larger countries, who have had patent systems for many years, are inaugurating them, and we are now receiving patents printed in many languages. It is highly important that assistant translators be provided who can translate these numerous languages in order that the patents may be at once classified and sent to the various examining divisions to be used as references in the examination of applications for patents. Translations are made for inventors and others, and the Office receipts therefor would pay the salaries of this force.

An addition of five Assistant Examiners has been asked of Congress to assist the Librarian in speedily digesting the library material. It is quite necessary that we should have men who possess technical qualifications and knowledge, to some degree, of languages, as many of the works are in foreign tongues.

NEED FOR ADDITIONAL SPACE IN THE PATENT OFFICE.

I have repeatedly in my reports to the Secretary of the Interior and to the Congress urged the necessity for legislation which will relieve the now extremely overcrowded condition of the United States Patent Office. The present Secretary of the Interior and his immediate predecessor also made strong recommendations in their reports to the President that there should be immediate action in this regard. I now wish again to urge in the strongest possible terms that appropriation be made for the building of a new and adequate structure to house this rapidly-growing Bureau.

It is of course well known throughout the country among inventors and manufacturers and the public generally that the present accommodations for the Patent Office are entirely obsolete and inadequate as to both space and equipment, and are so much so as to seriously interfere with the expeditious and careful handling of the work of the Office and a downright hardship to the inventors and the public. Congress has provided more force and larger salaries, but the great present need to-day in this Bureau is more room.

The present structure is not fireproof and is piled high with tons upon tons of inflammable matter comprising the secret archives of the Office. Much of this material is stored in wooden cases and on open shelves, subject to the ravages of time and other destructive agents. There are also recorded in this Office the deeds of all assignments of titles to inventions, which are of the greatest value in determining the ownership of valuable patents and the loss of which by fire or otherwise would be a tremendous blow to the commercial interests of this country.

Bills have been introduced for the erection of a new Patent Office; but probably in view of the then existing deficit in the Treasury it was necessary to refuse the appropriation for this purpose. Conditions, however, have been growing worse and worse, so I can say that we have about reached the limit of congestion. In the effort to obtain more room for the storage of Patent Office records and the transaction of business in the Patent Office rooms in the basement have been cleaned out and floored for the use of examining divisions, and other rooms have been utilized for the storage of records. In order to obtain this room many tons of valuable books and reports were removed from the basement in a rotted condition, owing to the dampness caused by the earth of the court, and the conditions are so deplorable that I think some immediate action should be taken by Congress. The District fire department and other officials have pronounced the building unsafe as to fire, and the engineers of the War Department have said that the walls should be lightened of their great weight, especially in the northwest corner of the building.

A bill was introduced by the late Senator Daniel in the Sixty-first Congress (S. 1629) providing for the erection of a new building for the Patent Office on the property adjoining the Congressional Library on the north. This is a desirable site, as a subway could be arranged which would give the Patent Office access to the Library of Congress and the readers in the Library would have access to the Scientific Library of the Patent Office. That site, too, it is thought, would be very convenient to out-of-town inventors, manufacturers, and attorneys arriving at the Union Station, which is within three squares of the proposed site, and as there are several first-class hotels in the immediate neighborhood it would be an ideal location.

Great Britain and Germany have each been forced within the past five years to provide larger buildings, owing to the great annual growth pertaining to patents, trade-marks, designs, and labels and prints.

I cannot urge too strongly the importance of providing for a new building for the United States Patent Office. The present net surplus in the Treasury of more than seven million dollars would more than pay for the proposed site and the building, and not a single dollar out of the general revenues of the country would have to be appropriated. This surplus was paid in by the inventors and the manufacturers of the country and represents the net earnings of the Patent Office. That it should be expended for the purpose of increasing the efficiency of the Office, which increased efficiency will work largely to the benefit of those who have actually contributed the money, is a proposition which is not only reasonable but just. I respectfully ask that the present Congress take action looking to this result.

Respectfully submitted.

EDWARD B. MOORE,
Commissioner.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Schmitz and Ehrensberger patent, No. 534,178, for a process of manufacturing armor-plates, claim 5 *Held* void for lack of patentability novelty. *Fried. Krupp Aktien-Gesellschaft* v. *Midvale Steel Co.*, 191 Fed. Rep., 588.

(U. S. C. C. A.) The Schmitz patent, No. 642,926, for a process of improving quality of armor-plate, claim 1 *Held* void for lack of invention. *Fried. Krupp Aktien-Gesellschaft* v. *Midvale Steel Co.*, 191 Fed. Rep., 588.

(U. S. C. C. A.) The Ehrensberger patents, Nos. 651,965 and 653,413, relating to a process of hardening armor-plates, *Held* not infringed. *Fried. Krupp Aktien-Gesellschaft* v. *Midvale Steel Co.*, 191 Fed. Rep. 588.

(U. S. C. C. A.) The Herman patent, No. 721,041, for an apparatus for making blue-prints, claims 32 and 33 *Held* void for lack of patentable invention. *Herman* v. *Youngstown Car Mfg. Co.*, 191 Fed. Rep., 579.

(U. S. C. C. A.) The Herman patent, No. 743,160, for an apparatus for making blue-prints, claim 7 *Held* not infringed. *Herman v. Youngstown Car Mfg. Co.*, 191 Fed. Rep., 579.

(U. S. C. C. A.) The Hilker patents, No. 744,196, claim 1, and No. 758,753, claim 1, both for self-wringing mops, *Held* void for lack of patentable invention in view of the prior act. *Edward Hilker Mop Co. v. United States Mop Co.*, 191 Fed. Rep., 613.

(U. S. C. C. A.) The Herman patent, No. 777,096, for an apparatus for making blue-prints, *Held* void for lack of invention as to claims 16, 17, and 18, but valid, and infringed as to claims 12 and 13. *Herman* v. *Youngstown Car Mfg. Co.*, 191 Fed. Rep., 579.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 24,092, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,796, dated November 7, 1893, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Flaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Heekin Spice Company, of Sixth, New, and Culvert streets, Cincinnati, Ohio, the registration of the Standard Import Co., Ltd., of 216–224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,536, and the registration of The Flaccus & Elliott Co., of Wheeling, W. Va., dated August 3, 1897, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Flaccus Co.," of Wheeling, W. Va., and the said The E. C. Flaccus Co. has failed to file evidence of successorship, as required by the Office.

Notice is therefore hereby given to the said The Flaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Scollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seldovia Salmon Company, of Seattle, Wash., for a trade-mark and registration No. 10,890, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 18, 1893, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "E. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives,

that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Keystone Nail Co., Inc., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to Hoopes & Townsend, of Philadelphia, Pa., and trade-mark registration No. 49,864, dated February 20, 1906, to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Keystone Nail Co., Inc., was returned signed "Keystone Nail Co., Com. Tr. Co." No evidence of the right to intervene in this interference has been filed by the Keystone Nail Co., Com. Tr. Co., within the time allowed for that purpose.

Notice is therefore hereby given to the said Keystone Nail Co., Inc., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1912.

William J. Bloomer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Salant & Salant, 71–73 Worth street, New York, N. Y., for trade-mark registration and trade-mark registration No. 12,890, dated December 29, 1885, to William J. Bloomer, of New York, N. Y., and the notice of such declaration sent by registered mail to the said William J. Bloomer at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said William J. Bloomer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 2, 1912.

Peninsular Trading and Fishing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Columbia River Packers Association, of Astoria, Oreg., for a trade-mark; trade-marks registered to the Portland Packing Company, of 26 York street, Portland, Me.; Reed and Gamage, of 213 East Main street, Gloucester, Mass.; R. H. Macy & Co., of Sixth avenue, Thirteenth to Fourteenth streets, New York, N. Y.; James G. Tarr & Bro., of Gloucester, Mass.; the Eureka Packing Co., of Eureka, Wash., and Tillmann & Bendel, of San Francisco, Cal., and trade-mark registration No. 17,062, dated September 24, 1889, to the Peninsular Trading and Fishing Co., of San Francisco, Cal., and the notice of such declaration sent by registered mail to the said Peninsular Trading and Fishing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Peninsular Trading and Fishing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF FEBRUARY 20, 1912	555
NOTARIES PUBLIC—AMENDED LAW	555
PREPARATION OF SPECIFICATIONS AND AMENDMENTS FOR THE PRINTER	555
APPLICATIONS UNDER EXAMINATION	556
PATENTS GRANTED	557
REISSUES	819
DESIGNS	822
TRADE-MARKS—REGISTRATION APPLIED FOR	825
TRADE-MARKS—REGISTERED	837
LABELS AND PRINTS	842
COMMISSIONER'S DECISIONS—	
McBerty v. Shore and Shore	843
Ex parte Smith	844
Hawkins v. Ward	845
Ex parte The Vi-Stix Products Company	846
ADJUDICATED PATENTS	847
DISCLAIMERS	847
INTERFERENCE NOTICES	847

ISSUE OF FEBRUARY 20, 1912.

Patents	750—No.	1,017,642 to No.	1,018,400, inclusive.
Designs	14—No.	42,182 to No.	42,195, inclusive.
Trade-Marks	143—No.	85,398 to No.	85,540, inclusive.
Labels	8—No.	16,177 to No.	16,184, inclusive.
Prints	7—No.	2,954 to No.	2,960, inclusive.
Reissues	4—No.	13,369 to No.	13,372, inclusive.
Total	935		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	1	North Dakota	4	.....
Arkansas	3	.....	Ohio	48	7
California	30	5	Oklahoma	4	.....
Colorado	9	1	Oregon	1	.....
Connecticut	25	4	Pennsylvania	89	10
Delaware	.....	.....	Rhode Island	1	1
Florida	4	.....	South Carolina	2	.....
Georgia	7	1	South Dakota	4	.....
Idaho	2	.....	Tennessee	6	.....
Illinois	83	19	Texas	12	8
Indiana	22	1	Utah	2	1
Iowa	13	1	Vermont	1	.....
Kansas	10	.....	Virginia	2	2
Kentucky	5	2	Washington	14	.....
Louisiana	6	.....	West Virginia	2	2
Maine	3	.....	Wisconsin	18	2
Maryland	9	.....	Wyoming	.....	.....
Massachusetts	54	11			
Michigan	16	4	Alaska, District of	1	.....
Minnesota	11	1	Arizona Territory	1	.....
Mississippi	1	.....	Canal Zone	1	.....
Missouri	14	7	District of Columbia	4	.....
Montana	2	.....	Hawaii Territory	.....	1
Nebraska	5	1	Philippine Islands	.....	2
Nevada	.....	.....	Porto Rico	.....	.....
New Hampshire	.....	.....	U. S. Army	.....	.....
New Jersey	20	5	U. S. Navy	.....	.....
New Mexico	4	.....			
New York	109	37	Total to citizens of the United States	704	137
North Carolina	3	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Mexico	1	.....
Argentine	1	.....	Netherlands	.....	.....
Austria-Hungary	2	.....	Newfoundland	.....	.....
Belgium	.....	1	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	12	.....	Queensland	1	.....
Cape Colony	.....	.....	Roumania	1	.....
Chile	.....	.....	Russia	1	.....
China	.....	.....	Scotland	2	2
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	.....	.....	Spain	.....	.....
Denmark	.....	.....	Sweden	1	1
Ecuador	.....	.....	Switzerland	.....	.....
England	17	7	Transvaal, South Africa	.....	.....
France	6	1	Victoria	.....	1
Germany	22	6	Western Australia	.....	.....
India	.....	.....			
Ireland	.....	.....			
Italy	1	1	Total to citizens of foreign countries	69	20
Japan	1	.....			

Notaries Public—Amended Law.

[PUBLIC—No. 362.]

An act to amend section five hundred and fifty-eight of the Code of Law for the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section five hundred and fifty-eight of the Code of Law for the District of Columbia, relating to notaries public, be amended by adding at the end of said section the following: "*Provided,* That the appointment of any person as such notary public, or the acceptance of his commission as such, or the performance of the duties thereunder, shall not disqualify or prevent such person from representing clients before any of the Departments of the United States Government in the District of Columbia or elsewhere, provided such person so appointed as a notary public who appears to practice or represent clients before any such Department is not otherwise engaged in Government employ, and shall be admitted by the heads of such Departments to practice therein in accordance with the rules and regulations prescribed for other persons or attorneys who are admitted to practice therein: *And provided further,* That no notary public shall be authorized to take acknowledgments, administer oaths, certify papers, or perform any official acts in connection with matters in which he is employed as counsel, attorney, or agent or in which he may be in any way interested before any of the Departments aforesaid."

Approved, June 29, 1906.

Preparation of Specifications and Amendments for the Printer.

The Examiners are directed before passing applications to issue to carefully examine all the papers and see that they are in such shape and condition as to avoid all possibility of error being made by the printers. Whenever interlineations or erasures have been made in the specifications or amendments which would lead to confusion and mistake, the Examiners should require the entire specification to be rewritten before passing the case to issue.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 17, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 19	Jan. 2	507
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 18	Jan. 2	514
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Jan. 18	Feb. 5	192
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Jan. 18	Jan. 18	318
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 5	Jan. 2	447
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 12	Jan. 18	324
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 13	Jan. 5	609
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 18	Jan. 18	357
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Jan. 18	Jan. 18	291
235	10. Carriages and Wagons	Dec. 18	Jan. 11	660
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 23	Dec. 23	343
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Jan. 3	Dec. 29	630
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Dec. 22	Jan. 3	488
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 27	Jan. 15	375
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 2	Jan. 2	813
109	16. Telegraphy; Telephony	Dec. 13	Jan. 10	229
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 17	Jan. 17	310
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 12	Jan. 8	307
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 4	Dec. 28	478
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 20	Jan. 22	140
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 6	Jan. 17	355

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 18	Jan. 16	333
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 2	Jan. 10	406
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 6	Jan. 2	450
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 22	Jan. 25	208
106	26. Electricity, Generation; Motive Power.	Oct. 5	Nov. 1	492
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 17	Jan. 16	345
65	28. Internal-Combustion Engines	Dec. 7	Dec. 7	854
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 29	Jan. 10	473
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 22	Feb. 1	300
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Jan. 4	Jan. 11	351
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 29	Jan. 18	291
71	33. Cutlery, Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Dec. 26	Jan. 6	436
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 2	Jan. 2	472
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 18	Jan. 17	731
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 15	Jan. 10	585
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Dec. 1	Jan. 17	506
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Dec. 13	Dec. 18	650
221	39. Water Distribution	Dec. 12	Dec. 1	548
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 18	Jan. 31	400
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 1	Jan. 13	576
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 29	Dec. 1	571
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 18	Jan. 11	351

Oldest new case, Oct. 5; oldest amended, Nov. 1.

Total number of applications awaiting action 19,016

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 2	Jan. 4	1306
	Designs	Dec. 27	Jan. 12	379
	Labels and Prints	Feb. 10	Feb. 9	57

PATENTS

GRANTED FEBRUARY 20, 1912.

1,017,642. MOUNTING FOR SPECTACLES. LEO F. ADT, Albany, N. Y. Filed Apr. 29, 1910. Serial No. 558,453. (Cl. 88—41.)

1. A mounting for spectacles comprising a rigid bridge conforming to and arranged to rest directly upon the nose of the wearer, lens attaching devices, a pliable portion connecting the lens attaching devices with the bridging portion, and nose rests arranged in fixed spaced relation having a wide portion arranged entirely below and directly beneath the horizontal plane of the extremities of the bridging portion, and having a reduced pliable portion connected to the mounting between the pliable portions so that the lens attaching devices are movable relatively to each other without affecting the relative positions of the nose rests.

2. A mounting for spectacles comprising a rigid bridge conforming to and arranged to rest directly upon the nose of the wearer, lens attaching devices, pliable loops connecting the lens attaching devices and the ends of the bridging portion, and rests arranged in fixed spaced relation having wide portions arranged entirely below the ends of the bridging portion and pliable reduced portions extending from the upper portions of the wide portions and connected to the mounting on the inner sides of the pliable loops.

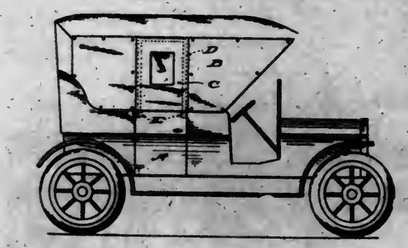
3. A mounting for spectacles comprising a rigid bridge conforming to and arranged to rest directly upon the nose of a wearer, lens attaching devices, forwardly opening pliable loops each connecting one of the lens attaching devices to one of the extremities of the bridging portion in a horizontal plane with such extremities, and rests arranged in fixed spaced relation having widened portions and pliable reduced portions connected to the mounting in advance of and on the inner sides of the bends of the loops.

4. A mounting for spectacles comprising a rigid bridge conforming to and arranged to rest directly on the nose of the wearer, lens attaching devices, horizontally arranged loops having their inner arms connected to the bridging portions in a horizontal plane with the extremities of the bridging portion and their outer arms connected to the lens attaching devices, and rests arranged in fixed spaced relation having wide portions arranged entirely below the extremities of the bridging portion and pliable reduced portions each extending vertically connecting with the mounting on the inner side of the bend of one of the loops.

5. A mounting for spectacles comprising a rigid bridge, lens attaching devices, forwardly opening loops connected to the lens attaching devices and to the extremities of the bridging portion in a horizontal plane with the ends of the latter, and rests arranged in pairs in fixed spaced relation at each end of the bridging portion, one member of each being arranged above the loops and the other member being arranged below the loops and each rest having a wide bearing portion and an individual reduced portion connecting with the mounting on the inner sides of the bends of the loops.

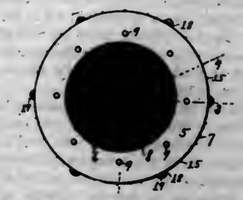
[Claim 6 not printed in the Gazette.]

1,017,643. AUTOMOBILE CURTAIN-SUPPORT. MERLE B. BARTON, Peoria, Ill. Filed Dec. 27, 1910. Serial No. 599,442. (Cl. 21—62.)



In combination with a vehicle door, a collapsible curtain holding frame consisting of two uprights, a separate member pivoted at one end to the upper end of each of said uprights, said members being pivotally connected at their free ends, means for detachably securing the frame to the door, and a curtain secured at one of its edges to one of the uprights, and means at its opposite edge to detachably secure that edge to the opposite upright.

1,017,644. FLY-TRAP. DAVID D. BOLICK, Topeka, Kans., assignor of one-half to T. H. Hassey, Brooklyn, N. Y. Filed Oct. 17, 1911. Serial No. 655,165. (Cl. 43—22.)



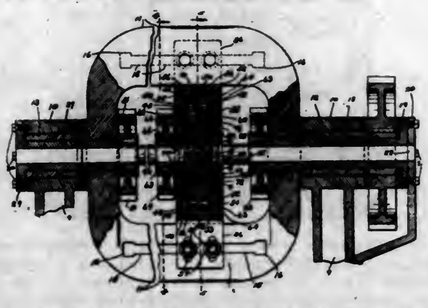
1. In combination, a top plate having a central opening and a downwardly extending flange around its outer edge, a similar bottom plate, a wire cloth extending from plate to plate and over the lower flange and inside the upper flange, a ring for clamping the wire cloth against the upper flange, a wire cloth covering the upper central opening, a wire cloth cone fitting in the lower opening and extending up into the trap and having an opening at its apex and having its lower edge flared out against the under side of the lower plate, a series of metal strips secured to said flared edge, a series of buttons pivoted to the bottom plate for securing said strips, a wire netting comprising vertical and horizontal wires surrounding the plates and cloth and extending below the botttom plate with a horizontal wire at the extreme lower end the upper ends of some of the vertical wires terminating in loops, a series of bolts for securing said loops, clamping ring, wire cloth, and upper flange together, and a series of bolts for securing said netting, wire cloth, and lower flange together.

2. In combination, top and bottom circular plates, each having a central opening and a downwardly flanged edge, a wire cloth extending from plate to plate and secured inside the upper flange and outside the lower flange, a

wire cloth covering the upper opening, a wire cloth cone in the lower opening extending into the trap and having a hole at its apex and flared lower edge, a series of pivoted buttons for holding said lower edge, and a wire netting surrounding the cloth and extending below the bottom plate.

3. In a fly trap of the kind described, the combination of a bottom plate having a central opening, a cone fitting in said opening and having its lower edge flared outwardly against the under side of said plate, a series of separate metal pieces secured to the flared-out edge, and a series of buttons pivoted to the bottom plate for holding the metal pieces against said bottom.

1,017,645. STRAIGHTENING-MACHINE. LATHAM H. BRIGHTMAN, Lakewood, Ohio. Filed Apr. 14, 1911. Serial No. 620,966. (Cl. 153—37.)



1. In a machine of the character described, the combination of a flier frame, means for revolubly supporting said flier frame, a straightening die rotatably mounted in said flier frame, said die being provided with an opening for the passage of the bar which is to be straightened, and rolls mounted in the opening in said die and adapted to engage with the bar as it passes through said die.

2. In a machine of the character described, the combination of a flier frame, means for revolubly supporting said flier frame, a straightening die rotatably mounted in said flier frame, said die being provided with an opening for the passage of the bar which is to be straightened, rolls mounted in the opening in said die and adapted to engage with the bar as it passes through said die and means for adjusting said rolls in said opening.

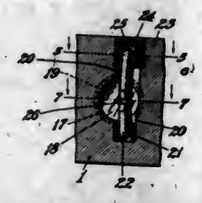
3. In a machine of the character described, the combination of a flier frame, means for revolubly supporting said flier frame, a straightening die rotatably mounted in said flier frame, said die being provided with an opening for the passage of the bar which is to be straightened, bearing blocks mounted in the wall of said opening in said die, rolls journaled in said bearing blocks and means for adjusting said bearing blocks so as to increase or decrease the space between said rolls.

4. In a machine of the character described, the combination of a flier frame, means for revolubly supporting said flier frame, a straightening die rotatably mounted in said flier frame, said die being provided with an opening for the passage of the bar which is to be straightened, bearing blocks mounted in the said opening in said die, rolls journaled in said bearing blocks, wedges arranged between the walls of said opening in said die and said bearing blocks and means for moving said wedges in or out between the walls of said opening and said bearing blocks, for the purpose set forth.

5. In a machine of the character described, the combination of a flier frame, means for revolubly supporting said flier frame, a bracket mounted on said flier frame, said bracket having a body portion provided with an opening extending therethrough and having a shoulder arranged at one end of said opening, an anti-friction bearing arranged in said bearing and having its inner end abutting against the shoulder in said opening, a die mounted in said anti-friction bearing and having a flange arranged to abut against the outer end of said anti-friction bearing, means for securing said die in said bearing, rolls mounted in said die and adapted to engage with the bar which is to be straightened as it passes through said die and means for adjusting said rolls.

[Claims 6 and 7 not printed in the Gazette.]

1,017,646. SPIRIT-LEVEL. GRANT BROADMORE, Brighton, Mich. Filed Apr. 28, 1911. Serial No. 623,811. (Cl. 73—70.)

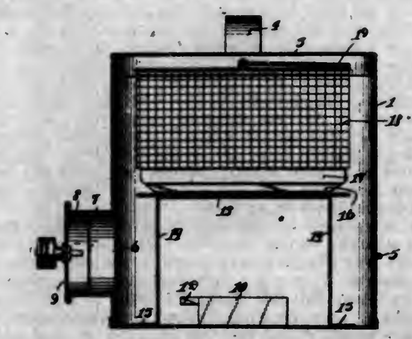


1. In a spirit level, the combination of a straight edge formed with a circular chamber extending therethrough and a bore extending inward from one face of the straight edge and cutting through the chamber, a spirit tube extending across the chamber with its ends within the bore, a bearing block for the tube in the inner end of the bore, a bearing block within the outer end of the bore and adapted to be turned therein and provided with an opening to receive and support the end of the tube, said opening being arranged eccentrically to the axis of the block.

2. In a spirit level the combination of a straight edge provided with a bore extending inward from one face thereof, a spirit tube in said bore, a screw plug in the outer end of the bore and having an axial chamber in its inner end, a bearing block fitting within said chamber to turn with the plug and provided with an opening to receive the end of the spirit tube, which opening is formed eccentrically to the axis of said plug.

3. In a spirit level, the combination of a straight edge provided with a chamber extending therethrough and a bore extending inward from one face of the straight edge and cutting through the chamber, lenses for closing the outer ends of the chamber, a spirit tube within the bore and extending across the chamber, a bearing block in the inner end of the bore and having an opening to receive the end of the tube, a screw plug in the outer end of the bore and having an axial chamber in its inner end, and a bearing block within said chamber eccentrically engaging and holding the outer end of the tube.

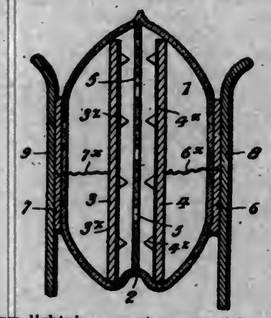
1,017,647. FUMIGATOR FOR FRUIT PRODUCTS. ANDREW BURTON, Perkins, Okla. Filed June 13, 1911. Serial No. 632,936. (Cl. 99—9.)



A fumigator for food products consisting of a vessel having a fumigant chamber in its base, a baffle disposed horizontally directly above the fumigant chamber centrally of the vessel and in spaced relation to the sides thereof, said baffle having supports upon its upper face,

a foraminous receptacle disposed upon the supports in spaced relation to the baffle in position to form passages in connection with the baffle and its supports, which passages extend entirely across the baffle in position to conduct fumigant to all parts of the bottom of the receptacle, and a closure for the vessel.

1,017,648. VACUUM LIGHTNING-ARRESTER. FRANK SPENCER CHAPMAN and JOHN TYLER GREENE, Toledo, Ohio, assignors to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 20, 1909. Serial No. 529,137. (Cl. 175—30.)



1. A vacuum lightning arrester, comprising a chamber, a central perforated insulating barrier located in said chamber, and a pair of conducting plates having inwardly extending projections directed toward said perforated plate.

2. In a lightning arrester electrodes having projections, and a non-conducting barrier between the electrodes, said barrier having perforations which are in staggered relation with said projections and so placed that the projections are severally approximately equi-distant from a plurality of perforations.

3. A lightning arrester, comprising, in combination, a pair of electrodes provided with projections on adjacent faces, and between said electrodes a non-conducting barrier formed with openings in staggered relation with said projections, said electrodes being covered on adjacent surfaces with non-conducting coverings through which said projections extend.

4 A lightning arrester comprising in combination a pair of electrodes formed so as to provide a pair of oppositely arranged points of discharge, and between said electrodes, a barrier of non-conducting material formed with a plurality of openings out of line with said points of discharge and substantially equi-distant from the same, respectively.

5. A lightning arrester comprising in combination a vacuum chamber, a pair of electrodes therein formed with projections, non-conducting coverings on the adjacent faces of said electrodes having openings through which said projections extend, and a barrier of non-conducting material between said electrodes.

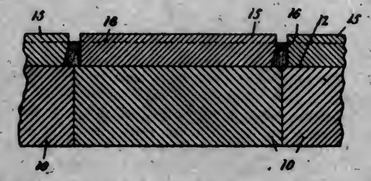
[Claim 6 not printed in the Gazette.]

1,017,649. LIGHTNING-ARRESTER. FRANK S. CHAPMAN, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 2, 1910. Serial No. 541,549. (Cl. 175—30.)

1. In a device of the character described, the combination with holding means comprising two terminals, one of which at least is a spring, of a sealed evacuated glass vessel provided exteriorly on opposite sides with contact plates adapted to make contact with said terminals and interiorly with electrodes electrically connected with said contact plates respectively; the walls of said vessel being formed so as to provide inward projections which hold the electrodes in fixed position and spaced apart.

2. In a device of the character described, the combination with holding means comprising two terminals, one of which at least is a spring, of a sealed evacuated glass vessel formed exteriorly on opposite sides with recesses and provided with contact plates in said recesses, said vessel being adapted to be held between said terminals with the contact plates in contact therewith, and a pair of electrodes arranged in said vessel and electrically connected with said contact plates; the walls of said vessel being formed with inward projections between said electrodes which hold the electrodes in fixed position and spaced apart.

1,017,650. WOOD PAVING-BLOCK. JAMES A. COGSWELL, Boston, Mass. Filed June 17, 1911. Serial No. 633,808. (Cl. 94—7.)

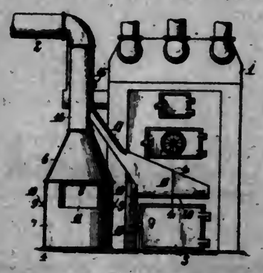


1. As a new article of manufacture, the paving-block herein described consisting of a block having a kerf in its tread-face, extended longitudinally with respect to the block from end to end thereof, a metal grid made of a thickness corresponding to the width of the block and of a depth greater than the depth of the kerf, and of a length less than the length of the kerf, said grid being fitted into the kerf so as to leave a space at one or both ends thereof, adapted to be filled with cement when arranged adjacent another block.

2. As a new article of manufacture, the paving-block herein described consisting of a block having a kerf in its tread-face extended longitudinally with respect to the block from end to end thereof, a metal grid of a thickness corresponding to the width of the block, and of a depth greater than the depth of the kerf, and of a length less than the length of the kerf and having one end under-cut, said grid being fitted into the kerf so as to leave a space at one or both ends thereof adapted to be filled with cement when arranged adjacent another block.

3. A section of street pavement composed of blocks arranged in a row, each block having a kerf in its tread-face and a grid arranged therein and projecting therefrom which is made of less length than the length of the block, thereby leaving spaces in the kerf at the ends of the block, and cement-keys arranged in said spaces which connect the blocks together, substantially as described.

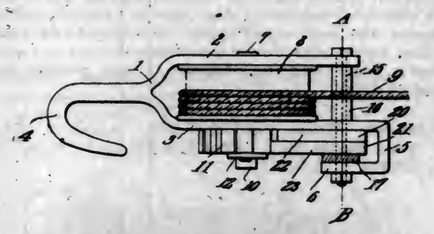
1,017,651. DEVICE FOR REMOVING DUST FROM ASHES. JOHN M. COMSTOCK, Rochester, N. Y. Filed Mar. 25, 1911. Serial No. 616,894. (Cl. 126—242.)



In combination, a furnace having a smoke stack and an ash pit, an attachment for said furnace comprising an

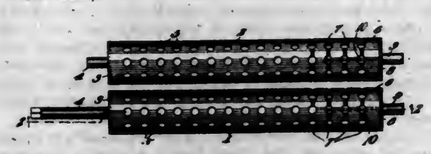
ash receptacle casing having a removable apertured front, a pipe directly connecting the casing with the smoke stack, a damper in the pipe, a suction hood mounted adjacent the ash pit, and a connection between the suction hood and the pipe below the damper.

1,017,652. SNATCH-BLOCK. JOSEPH W. DAVIS, Concordia, Kans. Filed Apr. 22, 1911. Serial No. 622,737. (Cl. 57—85.)



In a device of the class described, a body comprising spaced main arms, one of the main arms being back-bent upon itself to form a supplemental arm; a shaft journaled for rotation in the main arms; a drum secured to the shaft, between the main arms; a ratchet wheel secured to the shaft upon the outside of one of the main arms; a shaft mounted in the main arms and in the supplemental arm; a lever fulcrumed upon the last named shaft, between the supplemental arm and the adjacent main arm, the lever being provided with eccentrics; straps surrounding the eccentrics, the straps carrying pawls adapted to engage the ratchet wheel successively, when the lever is manipulated.

1,017,653. GRATE-BAR. DANIEL DEE, Pocatello, Idaho, assignor of one-half to Egbert C. Stratford, Pocatello, Idaho. Filed Aug. 19, 1911. Serial No. 644,902. (Cl. 126—181.)



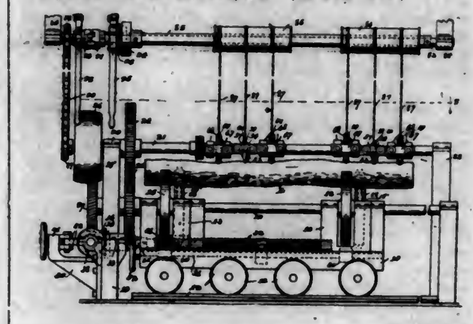
A grate bar, having a hollow cylindrical body sealed at one end and provided with perforations through the wall thereof throughout its length and a series of circumferential breaking grooves near its open end, a journaling stud at the closed end, a removable cap having a plurality of wings projecting from one side of the cap and insertible within the open end of the body remaining after a portion of the body is broken off, to removably secure the cap to the body, and a journaling stud upon the opposite side of the cap, both of said studs forming a journal for the bar.

1,017,654. SAFETY CONNECTION FOR GAS-FIXTURES. GERALD DE GREY, Philadelphia, Pa. Filed Aug. 15, 1911. Serial No. 644,149. (Cl. 137—30.)

1. A connection of the character described, comprising two cylindrical members, one member adapted to telescope within the other, means for locking the members in telescoped position, a valve in one member moved by the other to open position, said valve comprising a sleeve, a tubular stem movable through said sleeve and having openings therein, a valve on the end of said stem, a guide sleeve secured around said stem and movable in the first mentioned sleeve, a coiled spring around the stem pressing against the guide sleeve and normally holding the valve in closed position, a flaring disk on the end of said guide sleeve, a second disk against the guide sleeve and having an opening through which the stem projects, the said last-mentioned disk engageable by the smaller member, substantially as described.

2. A connection of the character described, comprising two cylindrical members, one member adapted to telescope within the other, means for locking the members in telescoped position, a valve in one member moved by the other to open position, said valve comprising a sleeve, a tubular stem movable through said sleeve and having openings therein, a valve on the end of said stem, a guide sleeve secured around said stem and movable in the first-mentioned sleeve, a coiled spring around the stem pressing against the guide sleeve and normally holding the valve in closed position, a flaring disk on the end of said guide sleeve, a second disk against the guide sleeve and having an opening through which the stem projects, and said last-mentioned disk engageable by the smaller member, a sleeve frictionally held in the larger section, a packing sleeve around said last-mentioned sleeve, and said first-mentioned sleeve screwed into said frictionally held sleeve, substantially as described.

1,017,655. BARK-REMOVING MACHINE. HERBERT L. DRAKE, Medford, Wis., assignor of forty-five one-hundredths to George E. Foster, Mellen, Wis. Filed Feb. 15, 1911. Serial No. 608,654. (Cl. 144—208.)



1. In a de-barking machine, the combination of means for causing a log to move bodily longitudinally and to rotate simultaneously about its longitudinal axis whereby any point on the periphery of the log will generate a helix, and a knife held against the bark of the log to cut said bark along a helical line upon such movement of the log, the cutting edge of said knife being at an angle with reference to the log axis which is greater than the pitch angle of the helical movement of points on said log whereby the bark, after being cut, is moved laterally with reference to the log and thereby loosened from the log.

2. In a de-barking machine, the combination of means for giving a log simultaneous bodily longitudinal movement and rotary movement about its longitudinal axis, and a knife having its cutting edge extending transversely across the log in engagement with the bark thereon and at an angle with the log axis whereby the bark is cut and removed in the form of a helical band.

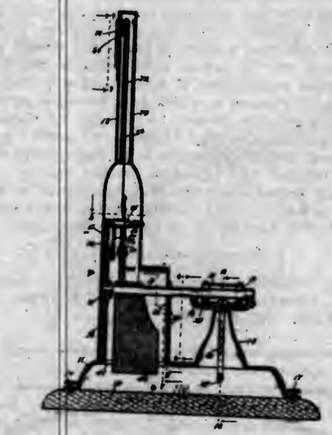
3. In a de-barking machine, the combination of means for giving a log simultaneous bodily longitudinal movement and rotary movement about its longitudinal axis, and a knife having its cutting edge extending transversely across the log in engagement with the bark thereon and at an angle varying with the pitch of the movement of the log whereby the bark is cut and removed in the form of a helical band, and means for operating in advance of said knife to remove the rough outer part of the bark.

4. In a de-barking machine, the combination of means for giving a log combined bodily longitudinal movement and rotary movement about its longitudinal axis, means operating to remove the rough outer layers of the bark, and cutting mechanism applied to the inner layers of the bark to cut a dividing line through said inner layers and helically around the log during movement of the log.

5. In a de-barking machine, the combination of means for giving a log combined bodily longitudinal and rotary movement about its longitudinal axis whereby any point on the periphery of the log will generate a helix during movements of the log, means operating to remove the rough outer layers of the bark, a knife blade applied to the inner layers of the bark and having its cutting edge at an angle with the longitudinal axis of the log, which angle is greater than the pitch angle of the helix generated by a point on the periphery whereby said inner layers of the bark are cut along a helical line and the severed sections moved with reference to the log to become loosened and pealed therefrom in the form of a helical band.

[Claims 6 to 12 not printed in the Gazette.]

1,017,656. SCALE. FRANK P. DUNN, Anderson, Ind., assignor to The Anderson Tool Company, Anderson, Ind., a Corporation of Indiana. Filed Nov. 13, 1908. Serial No. 462,390. (Cl. 73—104.)



1. A scale including a beam, a shaft serving as the fulcrum of said beam, indicating means, an upwardly extending arm secured to said shaft, connecting means between said arm and the indicating means, whereby the indicating means is actuated and controlled by said arm, and a downwardly extending weight secured to the shaft so that it normally maintains the indicating means at zero.

2. A scale including a scale beam, a shaft co-axial with the fulcrum and secured to said beam and oscillated thereby, an indicating means, means actuated by the shaft for controlling the indicating means, a dash pot, an arm secured to said shaft for actuating the dash pot, and a weight secured to and suspended from said shaft in a direction opposite to the indicator actuating arm and at an angle to the dash-pot actuating arm.

3. A scale including a scale beam, a shaft co-axial with the fulcrum and secured to said beam and oscillated thereby, an indicating means, means actuated by the shaft for controlling the indicating means, a dash pot, a weight secured to and suspended from said shaft in a direction opposite to the indicator actuating arm and at an angle to the dashpot actuating arm, the relative positions of said indicator actuating arm and dash pot actuating arm being fixed.

4. A scale including a beam fulcrumed between its ends, a shaft coaxial with the fulcrum and oscillated by said beam, a weight secured to and suspended from said shaft, a load-receiving member mounted on one end of said beam, and weighted means on the other end of said beam sufficient to counterbalance said load-receiving member and hold said pendulum weight to one side of a vertical line through its axis.

5. A scale including a beam fulcrumed between its ends, an indicator, oscillatory means connecting with and actuated by said beam for operating the indicator, a pendulum weight secured to and suspended from said indicator actuating means, a load-receiving member on one end of said beam, and weighted means on the other end of said beam sufficient to counterbalance the load-receiving member and maintain the indicator at zero and said pendulum weight to one side of a vertical line through its axis.

[Claims 6 to 8 not printed in the Gazette.]

1,017,657. ARSENOBENZENE DERIVATIVES AND PROCESS OF MAKING SAME. PAUL EHRLICH and ALFRED BERTHEIM, Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 12, 1911. Serial No. 632,766. (Cl. 23—24.)

1. As new products, the asymmetrical arsenobenzene derivatives containing a salt-forming group of atoms; being yellow to yellowish-brown powders soluble in glacial acetic acid and concentrated sulfuric acid, readily altering when heated and exposed to the air, particularly in presence of alkalis, and, when heated with tin and hydrochloric acid, being split up with formation of two aromatic arsins; having a bactericidal action in trypanosomes infections.

2. As a new product, the asymmetrical arsenobenzene derivative, namely the phenylglycin-arseno-3-amino-4-oxybenzene of the formula

$$COOHCH_2NH-C_6H_4-As=As-C_6H_3(NH_2)OH;$$

being a yellowish-brown powder, soluble in concentrated sulfuric acid and glacial acetic acid, insoluble in water, easily altering when heated, or when exposed to the air, particularly in an alkaline solution, and when heated with tin and hydrochloric acid being split up with formation of phenylglycin-arsin and aminooxybenzene-arsin; said product forming when treated with diluted hydrochloric acid and with alkalis, salts which are readily soluble in water; producing a curative effect in diseases caused by trypanosomes.

3. The process of producing asymmetrical arsenobenzene derivatives, which consists in treating with strong reducing agents two aromatic arsenoxids mixed in molecular proportions and of which at least one contains a salt-forming group of atoms.

4. The process of producing asymmetrical arsenobenzene derivatives, which consists in treating with strong reducing agents two aromatic arsenoxids mixed proportionally to their molecular weights, one of which is an aminooxyarsenoxid.

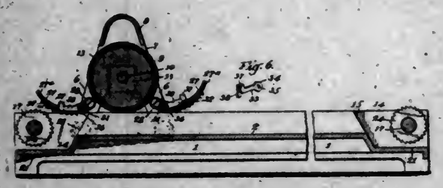
5. The process of producing asymmetrical arsenobenzene derivatives, which consists in treating with hydrosulfite two aromatic arsenoxids mixed proportionally to their molecular weights and of which at least one contains a salt-forming group of atoms.

[Claim 6 not printed in the Gazette.]

1,017,658. RIBBON-FEEDING MECHANISM FOR REPRODUCING-MACHINES. BENJAMIN O. FANSLOW, Williamsport, Pa., assignor to Polygraph Duplicating Typewriter Company, New York, N. Y., a Corporation of New York. Filed May 11, 1909. Serial No. 495,302. (Cl. 101—11.)

1. In combination with a stationary type-bed, a ribbon-reel journaled thereon provided with a ratchet-wheel, means for rotating said reel to feed the ribbon compris-

ing a support, a feed-pawl pivoted to said support in position to engage the ratchet-wheel, means for causing the support to travel from end to end of the type-bed so as to bring the pawl and ratchet into operative engagement to rotate the latter, and means for adjusting the position of the pawl relatively to the ratchet to vary the feed of the wheel.



2. In combination, a stationary type-bed, a ribbon-reel journaled thereon, a support, and means whereby the support may be caused to travel from end to end of the type-bed, devices carried by said support and reel for cooperative action to rotate the reel, and means for varying the position of one of said devices for controlling the amount of movement imparted to said reel.

3. In combination, a frame having a ribbon-reel journaled thereon, a support, and means whereby the frame and support may be caused to travel relatively, means carried by said support and reel for coöperative action to rotate the reel, means for varying the extent of relative travel of the frame and support, and means for varying the feed-movement of said ribbon-reel.

4. In combination, a frame for supporting the composition, a carriage for supporting an impression-roller, ribbon-supporting means for holding the ribbon over the composition, means for feeding the ribbon a predetermined extent in one direction, means for feeding the ribbon a predetermined extent in the opposite direction, and means carried by the ribbon-feeding means for altering at will the extent of ribbon-feeding movement.

5. In combination, a supporting-frame, ribbon-reels supported at opposite ends thereof, feeding means for the ribbon-reels mounted to travel on said frame, and devices carried by said feeding means for regulating the feed-movement of the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,017,659. ADJUSTABLE WINDOW-SHADE-ROLL HOLDERS. FRANCESCO FERRARA, Boston, Mass. Filed Jan. 26, 1910. Serial No. 540,154. (Cl. 156—27.)

1. In combination, a spring-actuated shade roll having a spindle provided with a flattened portion projecting from one end thereof, a holder in which the other end of said roll is rotatably supported, and a second holder in which said flattened portion is held, said second holder comprising two members disposed on opposite sides of said flattened portion, and provided with recesses forming an elongated chamber in which said flattened portion is located, and two parallel screws located on opposite sides of said flattened portion and adapted to hold said members in coöperative relation therewith.

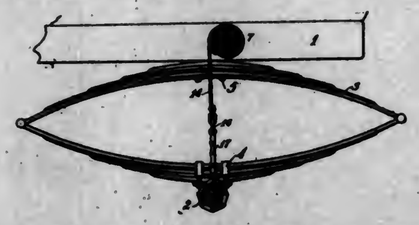
2. In combination, a spring-actuated shade roll having a spindle provided with a flattened portion projecting from one end thereof, a holder in which the other end of said roll is rotatably supported, and a second holder in which said flattened portion is held, said second holder comprising a pair of plates having flanges disposed on opposite sides, respectively, of said flattened portion, and provided with recesses in which the same is located, and a third plate having a projection provided with a recess in which said flanges are located, the last-mentioned plate being located in a plane substantially parallel to the first-mentioned pair of plates.

3. In combination, a spring-actuated shade roll having a spindle provided with a flattened portion projecting from one end thereof, a holder in which the other end of said roll is rotatably supported, and a second holder in which said flattened portion is held, said second holder comprising a pair of plates having flanges disposed on opposite sides, respectively, of said flattened portion, and provided with recesses in which the same is located, and a third plate having a projection provided with a recess in which said flanges are located, said flanges being provided with recesses in which said projection is located.

4. In combination, a spring-actuated shade roll having a spindle provided with a flattened portion projecting from one end thereof, a holder in which the other end of said roll is rotatably supported, and a second holder in which said flattened portion is held, said second holder comprising a pair of plates having flanges disposed on opposite sides, respectively, of said flattened portion and provided with recesses in which the same is located, and a third plate secured to the other two and arranged substantially parallel thereto; and a cord secured to said third plate and to one of said pair of plates from which cord said second holder is suspended.

5. In combination, a spring-actuated shade roll having a spindle provided with a flattened portion projecting from one end thereof, a holder in which the other end of said roll is rotatably supported, and a second holder in which said flattened portion is held, said second holder comprising a pair of plates having flanges disposed on opposite sides respectively of said flattened portion, and provided with recesses in which said flattened portion is located, a third plate secured to said pair of plates in a plane substantially parallel thereto, two screws passing through said flanges on opposite sides respectively of said flattened portion, and two nuts bearing against one of said flanges having screw-threaded engagement with said screws, respectively, and located in the space between said third plate and one of the plates of said pair.

1,017,660. SHOCK-ABSORBING DEVICE. CLAUD H. FOSTER, Cleveland, Ohio. Filed Apr. 9, 1908. Serial No. 426,144. (Cl. 21—105.)



1. The combination, with a pair of relatively movable members, of a shock absorbing device, said device comprising a spiral spring having an open central portion operatively connected to one of such members and having its outer portion flexibly connected with the other member, and friction material interposed between some of the outer convolutions of said spring.

2. The combination, with a pair of relatively movable members, of a shock absorbing device interposed therebetween, said device comprising a stud fixedly connected to one of said members, a spiral spring having its central portion connected with said stud and having its inner convolutions spaced apart, friction material interposed between the outer convolutions of said spring, and a flexible connection secured to the outer portion of said spring and extending around the outermost convolution thereof and connected to the other member.

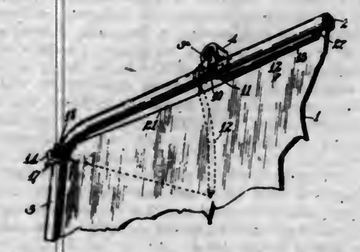
3. The combination, with a pair of relatively movable members, of a shock absorbing device comprising a spiral spring having its inner portion operatively connected with one of such members and having some of the convolutions thereof normally in gripping engagement and other convolutions normally out of gripping engagement, and a connection between the outer portion of said spring and the other member.

4. The combination, with a pair of relatively movable members, of a shock absorbing device comprising a spiral spring having a relatively open central portion, the inner convolutions being normally out of engagement and the outermost convolutions being normally in gripping engagement with each other, means operatively connecting the central portion of the spiral spring with one of such members, and a flexible connection between the outermost convolution of the spring and the other member.

5. The combination, with a vehicle frame and axle, of a shock absorbing device comprising a spiral spring having a relatively open central portion the convolutions whereof are normally out of engagement, said spring having its outer convolutions normally in gripping engagement with each other, means operatively connecting the central portion of the spring with one of the vehicle members, and a flexible connection between the outermost convolution of the spring and the other vehicle member, said connection being under tension and said spring under compression when the vehicle spring is nearly fully compressed.

[Claims 6 to 8 not printed in the Gazette.]

1,017,661. CLEANING DEVICE. CLAUD H. FOSTER, Cleveland, Ohio. Filed Feb. 14, 1910. Serial No. 543,733. (Cl. 15—59.)



1 The combination, with a frame for a pane, of a coiled spring supported by said frame, said spring being provided with an extension, and a cleaning member carried by said extension and arranged to be moved in an arc across a portion of the surface of said pane.

2. The combination, with a frame for a pane, of a resilient arm supported at one end by said frame and having a cleaning member adapted to engage the pane, a pivoted tube carried by said frame, a spring arranged to resist the movement of said arm in one direction, and a flexible operating device connected with said arm and extending through said tube, said tube having a portion extending substantially parallel with said pane.

3. The combination, with a frame for a pane, said frame comprising a pair of angularly disposed members, a resilient arm supported at one end by one of the frame members, a cleaning member carried by said resilient arm, a flexible device connected with said arm for moving the same in an arc, and a tube pivotally supported by the other member of the frame and extending substantially parallel with the pane and through which tube the flexible device extends.

4. The combination, with a frame for a pane, of a barrel carried by said frame, a coiled spring within said barrel, said spring being provided with an extension which is offset from the center of such coil, and a cleaning member carried by said extension, said member being arranged so as to swing in an arc adjacent to the surface of the pane.

5. The combination, with a frame for a pane, of a barrel carried by said frame, a coiled spring within said barrel, said spring being provided with an extension which is offset from the center of such coil, a cleaning member carried by said extension, said member being arranged so as to swing in an arc adjacent to the surface of the pane, a cord operatively secured to said arm, and a swiveled tube through which said cord extends, said tube having a branch extending substantially parallel with the pane.

[Claims 6 to 11 not printed in the Gazette.]

1,017,662. ENDLESS WIRE FABRIC. RENÉ FRANCK, Schlettstadt, Germany. Filed July 30, 1909. Serial No. 510,458. (Cl. 245—10.)

1. An endless wire cloth formed from a strip woven of warp and weft wires, the warp wires being rigidly secured to the end weft wire at each end of the strip, said strip having the last weft wire at one end secured to the last weft wire at the other end.

2. An endless wire cloth formed from a strip composed of warp wires and weft wires, said warp wires being secured to the last weft wires at each end of the strip, the last weft wires at each end of the strip being reduced in cross section, said last weft wires being united to one another.

3. An endless wire cloth formed from a strip composed of warp wires and weft wires, said warp wires being secured to the last weft wires at each end of the strip, the last weft wires at each end of the strip being united to one another, said last weft wires being reduced to such an extent that when the reduced wires are united the cross section of the united portions will be substantially the same as the cross section of the weft wires.

4. An endless wire cloth formed from a strip woven of warp and weft wires, the warp wires being rigidly secured to the end weft wire at each end of the strip, said strip having the last weft wire at one end secured to the last weft wire at the other end, and the ends of the warp wires at one end of the strip being united to the ends of the warp wires at the other end of the strip.

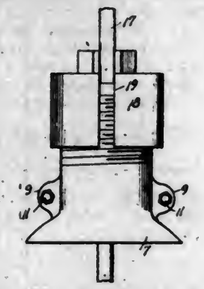
5. An endless wire cloth formed from a strip composed of warp wires and weft wires, said warp wires being secured to the last weft wires at each end of the strip, the last weft wires at each end of the strip being reduced in cross section and the warp wires at each end of the strip being correspondingly shortened, said last weft wires being united to one another and the ends of the warp wires at one end of the strip being united to the ends of the warp wires at the other end of the strip.

1,017,663. ATTACHMENT FOR OIL-WELLS. NORMAN M. FRASER, Norwalk, Ohio. Filed June 20, 1910. Serial No. 567,947. (Cl. 66—1.)

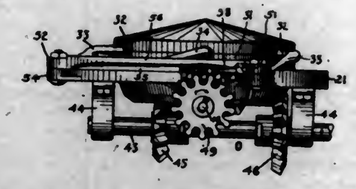
1. A piston guide and packing comprising two semi-cylindrical sections each having an aperture therein and each having a shoulder at the terminus of the aperture and each having an externally screw threaded end, metal washers fitted into the apertures through which the piston extends, packing material around the piston and between the washers, and an internally screw-threaded cap fitted onto the external screw threads of the semi-cylindrical members, said cap having a radial slot extending throughout the axial length thereof and terminating in a central aperture through which the piston extends.

2. A piston guide and packing comprising semi-cylindrical apertured members secured together with said apertures adjacent to each other and having a piston extending therebetween, packing material in the apertures around the piston, and a cap screw threaded onto the

semi-cylindrical members, said cap having a radial slot extending throughout the axial length thereof and extending radially inward beyond the center and terminating in an aperture through which the piston extends.



1,017,664. COTTON-SEED-DROPPING MECHANISM. WILLIAM S. GRAHAM, Canton, Ill., assignor to Parlin & Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed June 19, 1911. Serial No. 634,144. (Cl. 111—6.)



1. In a seed-dropping mechanism, the combination of a seed-plate provided with a plurality of seed-cells, means for rotating said seed-plate, and a toothed wheel rotatably mounted below said seed-plate, the teeth of said wheel being adapted to extend upward through said seed-cells.

2. In a seed-dropping mechanism, the combination of a seed-plate provided with a plurality of seed-cells, means for rotating said seed-plate, a toothed wheel rotatably mounted below said seed-plate, the teeth of said wheel being adapted to extend upward through said seed-cells to eject seed therefrom, and means coöperating with said toothed wheel for scraping seed from said seed-plate.

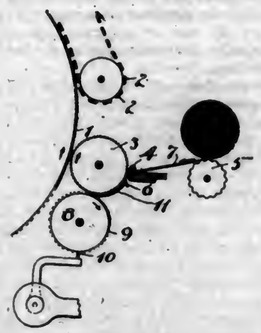
3. In a seed-dropping mechanism, the combination of a seed-plate provided with a plurality of seed-cells, means for rotating said seed-plate, a toothed wheel rotatably mounted below said seed-plate, the teeth of said wheel being adapted to extend upward through said seed-cells to eject seed therefrom, and a diagonally-disposed plate located above said toothed wheel immediately next to said seed plate.

4. In a seed-dropping mechanism, the combination of a seed-plate provided with a plurality of seed-cells, means for rotating said seed-plate, a toothed wheel rotatably mounted below said seed-plate, the teeth of said wheel being adapted to extend upward through said seed-cells to eject all of the seed from said cells successively, and a plate located immediately above said seed-plate extending diagonally across the seed-cells therein and adapted to scrape the seed over the edge of the seed-plate by the rotation of the seed-plate when the seed is raised from the cell by the toothed wheel.

5 In a seed-dropping mechanism, the combination of a seed-plate provideo with a plurality of seed-cells each of which is wider at its top than at the bottom, means for rotating said seed-plate, and means for forcing all of the seed upward from said seed-cells successively and delivering said seed over the edge of the plate.

[Claims 6 to 10 not printed in the Gazette.]

1,017,665. CARDING-MACHINE. PETER HARDMAN, Willimantic, Conn. Filed Oct. 3, 1911. Serial No. 652,490. (Cl. 19—15.)



1. In a carding machine, a main carding cylinder, a lickerin roll adjacent thereto, the adjacent surfaces of said cylinder and roll moving in the same direction, the former at a greater speed, a stripping cylinder carrying card clothing thereon, the latter being arranged closely adjacent to said lickerin roll, the adjacent surfaces of said roll and stripping cylinder moving in opposite directions, the latter at a very much slower speed than the former, and means for guiding the material on the lickerin to the space between said lickerin roll and the stripping cylinder whereat the combing action of one relatively to the other occurs.

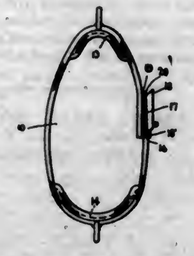
2. In a carding machine, a main carding cylinder, a lickerin roll adjacent thereto, the adjacent surfaces of said cylinder and roll moving in the same direction, the former at a greater speed, a stripping cylinder carrying card clothing, the surface of the latter being arranged closely adjacent to the surface of said lickerin roll and away from the surface of the main cylinder, the adjacent surfaces of the stripping cylinder and the lickerin roll moving in opposite directions and at substantially different speeds, the latter at a comparatively high speed, means for feeding stock to be cleaned to the lickerin roll and thereby to said main cylinder, and means to cause all of said stock to pass into the space between said lickerin roll and said stripping cylinder to receive the combing action of the latter.

3. In a carding machine, a main carding cylinder, a lickerin roll adjacent thereto, the adjacent surfaces of said cylinder and roll moving in the same direction, the former at a greater speed, a stripping cylinder carrying card clothing, the surface of the latter being arranged closely adjacent to the surface of said lickerin roll and away from the surface of the main cylinder, the adjacent surfaces of the stripping cylinder and the lickerin roll moving in opposite directions and at substantially different speeds, the latter at a comparatively high speed, means for feeding stock to be cleaned to the lickerin roll and thereby to said main cylinder, and means to cause all of said stock to pass into the space between said lickerin roll and said stripping cylinder to receive the combing action of the latter, said means comprising a guard plate arranged adjacent to that part of the stock between the feeding means and the space whereat said combing action takes place.

4. In a carding machine, a main cylinder having card clothing on its surface, a lickerin roll arranged adjacent thereto, the surfaces of said cylinder and roll moving in the same direction, the former at a higher speed than the latter, a stripping cylinder carrying card clothing on its surface and arranged closely adjacent to said lickerin and spaced substantially away from said main cylinder, the surface of said stripping cylinder moving in a direction opposite to that of the adjacent surface of the lickerin but at a very slow speed to secure a combing action on stock passing therethrough, means for feeding stock to be cleaned into the space where said combing action occurs, said means serving to hold all of the stock to be cleaned adjacent to the lickerin roll as it approaches the latter and until said stock enters the space where said combing action between the stripping cylinder and said lickerin occurs.

5. In a carding machine, a main cylinder having card clothing on its surface, a lickerin roll arranged adjacent thereto, the surfaces of said cylinder and roll moving in the same direction, the former at a higher speed than the latter, a stripping cylinder carrying card clothing on its surface and arranged closely adjacent to said lickerin and spaced substantially away from said main cylinder, the surface of said stripping cylinder moving in a direction opposite to that of the adjacent surface of the lickerin but at a very slow speed to secure a combing action on stock passing therethrough, means for feeding stock to be cleaned into the space where said combing action occurs, said means serving to hold all of the stock to be cleaned adjacent to the lickerin roll as it approaches the latter and until said stock enters the space where said combing action between the stripping cylinder and said lickerin occurs, and means for removing waste gathered upon the card surface of the stripping cylinder.

1,017,666. OPEN HARNESS-TUG. JOHN JOSHUA HARWARD, Friendship, Tenn. Filed Aug. 30, 1910. Serial No. 579,793. (Cl. 54—51.)



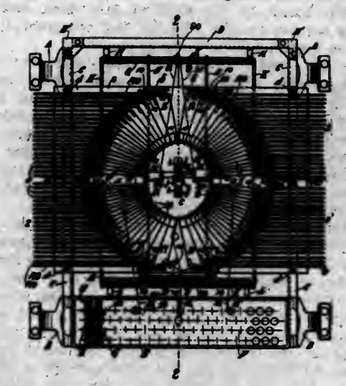
A fastening device, comprising the combination with a harness tug loop, having one of its ends terminating in a reduced portion, of a frame having an upper and lower bar, the lower bar of said frame being hingedly connected to the reduced end portion of the loop, a casing secured to the other end of said loop and having its upper edge concave, the upper bar of said frame being adapted to seat in the concave upper edge of the casing, and a spring pressed latch member carried by the casing to contact with said reduced portion of the loop at its point of connection with the lower bar of the frame.

1,017,667. KEYBOARD-MACHINE FOR SETTING AND DISTRIBUTING TYPE FOR FACSIMILE TYPEWRITING. ANTON HEGER, New York, N. Y. Filed June 28, 1911. Serial No. 635,791. (Cl. 101—130.)

1. In a machine for setting type for facsimile typewriting, the combination with the key-board and keys, of a movable chase, type magazines, and type carriers connected to be operated by the keys for positively conveying type from the magazines to the chase and for depositing said type directly in the chase.

2. In a machine for setting type for facsimile typewriting, the combination with the key-board and keys, of a movable chase, type magazines adapted to hold the type in vertical position, and means connected to be operated by the keys for picking up type from the magazines, and depositing said type directly in the chase, while maintaining said type in vertical position throughout the movement from the magazines to the chase.

3. In a machine for setting type for facsimile typewriting, the combination with the key-board and keys, of a movable chase, type magazines, adapted to hold the type in vertical position, and means connected to be operated by the keys for picking up type from the magazines, and depositing said type directly in the chase, while maintaining said type vertical, whereby the type faces the same way in the chase as in the magazines.

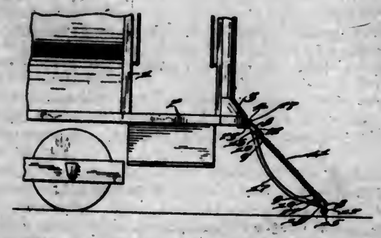


4. In a machine for setting type for facsimile typewriting, the combination with a key-board and keys, of a movable chase, type magazines, type carriers connected to be operated by the keys for conveying the type from the magazines to the chase, pick-up devices carried by said carriers, type spacing mechanism connected to move the chase and controlled by said carriers, and mechanism for line spacing.

5. In a machine for setting type for facsimile typewriting, the combination with a key-board and keys, of a movable chase, type magazines, type carriers connected to be operated by the keys for picking up type from the magazines and setting said type in the chase, said type carriers holding the type in vertical position throughout the movement from the magazines to the chase, type spacing mechanism connected to move the chase and controlled by the type carriers and mechanism for line spacing.

[Claims 6 to 32 not printed in the Gazette.]

1,017,668. CAR-FENDER. WILLIAM HELBLING, Philadelphia, Pa. Filed May 16, 1911. Serial No. 627,471. (Cl. 105—255.)



1. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers and other springs connecting the ends of said bars, substantially as described.

2. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, and coiled springs connected to said hooks and to said netting, substantially as described.

3. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, and spring tongues secured to said rear bar and constructed to support the fender, substantially as described.

4. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, coiled springs connected to said hooks and to said netting, and spring tongues secured to said rear bar and constructed to support the fender, substantially as described.

5. The combination with a car, and a transverse rod secured on the forward end of the car, of a fender comprising front and rear bars, telescoping devices connecting said bars, a flexible netting connecting said bars, springs in said telescoping devices exerting outward pressure on the forward bar, other springs connecting said bars and exerting a rearward pull on said forward bar, and spring tongues secured to the rear bar and positioned under and against the bottom of the car, substantially as described.

1,017,660. SOLUTION OF PERFUMES AND METHOD OF MAKING THE SAME. ALBERT HESSE, Wilmersdorf, Germany. Filed June 13, 1910. Serial No. 566,673. (Cl. 167—3.)

1. As a new composition of matter, a solution of an organic perfume containing a phthalic acid ester as a solvent.

2. As a new composition of matter, a solution of an organic perfume containing a phthalic acid ester and alcohol as solvents.

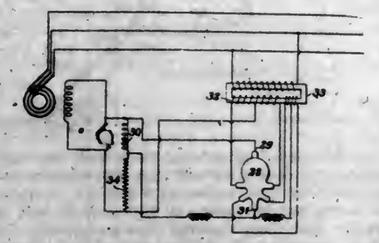
3. As a new composition of matter, a solution of an organic perfume containing a phthalic acid ester, alcohol and water as solvents.

4. As a new composition of matter, a solution of an ethereal oil containing a phthalic acid ester as a solvent.

5. As a new composition of matter, a solution of an ethereal oil containing a phthalic acid ester and alcohol as solvents.

[Claims 6 to 10 not printed in the Gazette.]

1,017,670. VOLTAGE-REGULATOR. RAY P. JACKSON, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1908. Serial No. 420,065. (Cl. 171—241.)



1. The combination with an electrical circuit, and a generator associated therewith, of means for governing the voltage of the generator comprising a field magnet winding, a resistance in series therewith, and a current-rectifying device having its direct current terminals respectively connected to the terminals of the resistance and adapted to cause the drop of potential over the resistance to vary approximately as the voltage of the circuit.

2. The combination with an electrical circuit, and a generator associated therewith, of means for governing the voltage of the generator comprising a field magnet winding, a resistance in series therewith, and a current-rectifying device adapted to cause the drop of potential over the resistance to vary approximately as the voltage of the circuit, and having auxiliary terminals connected respectively to points of the field magnet winding.

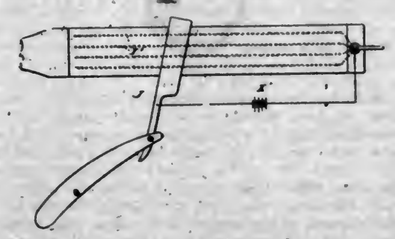
3. The combination with an electrical circuit, and a generator associated therewith, of means for governing the voltage of the generator comprising a field magnet winding, a resistance in series therewith, means for causing the drop of potential over the resistance to vary approximately as the voltage of the circuit, and means for causing a reduction in the drop of potential over the field magnet winding when the said drop attains a predetermined value.

4. The combination with an electrical circuit, and a generator associated therewith, of a current-rectifying device upon which is impressed a voltage that is proportional to the voltage of said circuit, an exciter for the generator having a field magnet winding, and a resistance connected in series with the exciter field magnet winding and between the direct current terminals of the rectifying device.

5. The combination with an electrical circuit and a generator associated therewith, of means for governing the voltage of the generator comprising a field magnet winding, a resistance in series therewith, and a current-rectifying device upon which a voltage is impressed that is in proportion to the voltage of the said circuit and the direct current terminals of which are respectively connected to the terminals of the resistance.

[Claim 6 not printed in the Gazette.]

1,017,671. TAPERING METAL BODIES. CHARLES FRANCIS JENKINS, Washington, D. C. Filed July 27, 1911. Serial No. 640,930. (Cl. 204—1.)



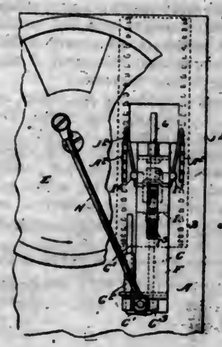
1. For sharpening cutting implements, the combination with a porous sharpening material containing an electrolyte, of means for supplying an electric current through said electrolyte and the implement to be sharpened when the latter is placed upon the abrading material.

2. The combination with a porous strop saturated with an electrolyte and having electrical conductors embedded therein, of a source of electric current, means for connecting one terminal of said source to said conductors, and a flexible connection adapted to join the other terminal to a razor to be sharpened upon said strop.

1,017,672. MOTION-PICTURE APPARATUS. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Sept. 21, 1911. Serial No. 650,629. (Cl. 88—18.)

1. In apparatus of the class described, the combination with a yielding reciprocating film feeding device, of a stop arranged to limit, positively, the film-advancing movement of said device.

2. In apparatus of the class described, the combination with a suitable film guide, of a film engaging device, means for reciprocating said device, a stop positively limiting the advance movements of said device, and means whereby force imparting reciprocating movement to said device causes it to engage the film before advancing and releasing the film before retreating.



3. In apparatus of the class described, the combination with a reciprocating film engaging device adapted to yield when in its advance it meets strong resistance, a stop in and near the end of the path through which said device advances, and means for reciprocating said device.

4. In apparatus of the class described, the combination with means for guiding a perforated film, of spurred reciprocating devices arranged to advance said film step by step and adapted to yield when meeting strong resistance to film advancing movement, means for causing said devices to engage and disengage the film alternately, and an unyielding stop in position to limit the film-advancing movement of said devices.

1,017,673. PAPER-HOLDER. GRANDVILLE F. JONES, Exeter, Nebr. Filed July 31, 1911. Serial No. 641,544. (Cl. 43—22.)

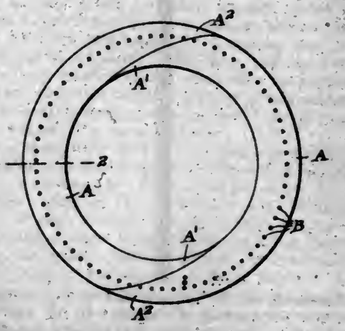
A fly paper holder comprising a body including side pieces; strips secured to the ends of the side pieces and prolonged beyond the side pieces, the upper, outer edges of the strips being beveled; spring plates pivoted to the ends of the strips and provided with transverse corrugations; bars secured between the spring plates, and adapted to move over the beveled edges of the strips, into engagement with the outer side faces of the strips.

1,017,674. METALLIC ROD-PACKING. CHARLES W. G. KING, Philadelphia, Pa., assignor to The United States Metallic Packing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 19, 1910. Serial No. 577,971. (Cl. 121—109.)

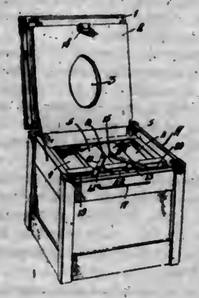
1. A packing ring formed of soft metal and a reinforcing woven wire fabric about which said soft metal is cast.

2. A packing ring formed of interlocking segments each consisting of soft metal and a loosely woven wire fabric or reinforcing strip about which said soft metal is cast.

3. A packing ring formed of interlocking segments, each consisting of soft metal and a loosely woven fabric formed of brass wire about which the soft metal is cast, said fabric having interstices of substantially greater cross section than the cross section of said wire.



1,017,675. SANITARY CLOSET. JAMES H. KING, Pacific Grove, Cal. Filed Sept. 22, 1910. Serial No. 583,303. (Cl. 4—32.)



1. In a commode, a trap floor, a trap composed of door members slidably guided thereon, levers fulcrumed upon the trap floor and connected pivotally with the door members, actuating springs engaging the levers to force the door members to an obstructing position, a flexible member connecting the free ends of the levers, and a hingedly supported seat having a block engaging the flexible member to actuate the levers against the tension of the springs.

2. In a commode, a hingedly supported seat, a hingedly supported trap floor below the seat, and a receptacle supported detachably below and adjacent to the trap floor, said trap floor being provided with a trap composed of two slidably supported door members, spring actuated levers to operate said door members, and a flexible element connecting the levers, the seat being provided with a block engaging the flexible element to actuate the levers against the tension of the springs.

3. In a commode, a detachable receptacle, having a supporting flange provided with longitudinal grooves, a trap floor supported hingedly above and adjacent to the receptacle, trap doors slidable upon said trap floor, spring actuated operating levers for the trap doors, a flexible element connecting the levers, a hingedly supported seat having a block engaging the flexible element, a hinged cover, and a slide engaging the grooves upon the flange of the receptacle, the body of the commode being provided with a slot for the admission of a slide.

1,017,676. DETACHABLE SOLE FOR SLIPPERS AND THE LIKE. FRANZ KNIPP, Darmstadt, Germany. Filed Oct. 26, 1911. Serial No. 656,965. (Cl. 36—15.)

A detachable sole for slippers and the like, comprising a rubber sole provided at the toe and at the heel with an undercut edge, and U-shaped metal strips connected to the ordinary sole of the slipper to receive said undercut edge and hold the rubber sole in position, substantially as set forth.

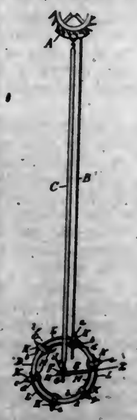
1,017,677. COMPOUND AND METHOD OF INCREASING COMBUSTION OF COAL, &c. EDWARD C. LARKIN and JOSEPH F. DUNCAN, Dayton, Ohio. Filed Oct. 4, 1911. Serial No. 652,790. (Cl. 44—4.)

1. The herein described composition of matter, consisting of salt, alum, willow charcoal and water, combined in the proper proportions, substantially as described and for the purposes specified.

2. The herein described method of increasing the combustion of coal and consuming carbon therein, which consists in injecting a solution of salt, alum, charcoal and water, and in applying heated compressed air as a medium for the distribution of said solution over the fire at each charge of coal, and adding additional atmospheric oxygen to the fire.

3. The herein described method of increasing the combustion of coal, which consists in spraying the coal with a solution of salt, alum, charcoal and water, in injecting heated compressed air with said solution, and in stopping the injection of the solution and in permitting the injection of air to continue.

1,017,678. CLOCK COMPENSATING PENDULUM. CARMELO LAZZARO, Mendoza, Argentina. Filed Nov. 22, 1907. Serial No. 403,422. (Cl. 58—133.)



1. A compensating pendulum for clocks, comprising a pendulum rod, a compensating spiral suspended by said rod, and means for permitting longitudinal expansion and contraction of the spiral while restraining lateral movement of the convolutions relatively to each other.

2. A compensating pendulum for clocks, comprising a pendulum rod, a compensating spiral suspended at one end from said rod, a weight attached to the other end of said spiral, and guide clamps engaging the convolutions for permitting longitudinal movement of the convolutions while restraining lateral movement.

3. A compensating pendulum for clocks, comprising the pendulum rod, a compensating spiral suspended from said rod, guides for said spiral, a weight connected to the spiral and an anchor rod engaging the spiral.

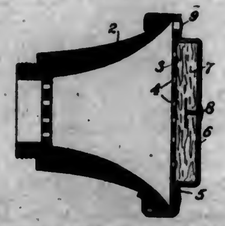
4. A compensating pendulum for clocks, comprising the pendulum rod, a compensating spiral, an arm for suspending said spiral from the pendulum rod, and guide clamps for guiding and spacing the convolutions of the spiral.

1,017,679. TURPENTINE-CUP. WILLIAM J. L'ENGLE, New Orleans, La. Filed Aug. 1, 1910. Serial No. 574,924. (Cl. 47—40.)

1. In a device for gathering turpentine, the combination with a flexible liquid proof turpentine cup, of a rigid support adapted to be secured to a tree and sustain the sides, ends and bottom of said cup throughout their entire area against bulging under the pressure and weight of the turpentine therein.

2. In a device for gathering turpentine, the combination with a flexible liquid proof turpentine cup comprising a single piece of paper, the sides of which are bent upward, the fullness at the ends being disposed in overlapping folds with upwardly extended edges, whereby leakage is prevented, of a stiff holder adapted to be secured to a tree and constructed to receive said flexible cup and sustain its ends, sides and bottom against bulging under the pressure and weight of the turpentine therein.

1,017,680. SANITARY MOUTHPIECE FOR TELEPHONES. MOSES MITTELDORFER MARCUSE, Far Rockaway, N. Y., assignor to West Disinfecting Co., New York, N. Y., a Corporation of New York. Filed Jan. 25, 1911. Serial No. 604,655. (Cl. 179—185.)



1. In combination with the mouth piece of a telephone transmitter an auxiliary diaphragm mounted thereon, means for securing said diaphragm to said mouth piece, a laterally movable shutter pivoted to said diaphragm and having a recess on the inner face thereof, a pad of absorptive material in said recess and adapted to contain a disinfectant to wipe across said diaphragm in the lateral movement of said shutter.

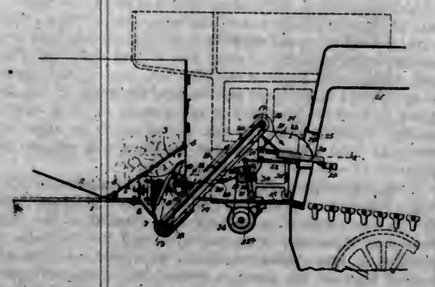
2. An auxiliary diaphragm for the mouth piece of a telephone transmitter comprising a disk, means on the margin of said disk for mounting said diaphragm upon a telephone mouth piece, a laterally movable shutter pivoted to said diaphragm and having a central cupped portion therein, an opening on its inner face and an absorptive pad in said shutter cup for holding a disinfectant to wipe said diaphragm, in the lateral movement of said shutter.

1,017,681. STARTER FOR INTERNAL-COMBUSTION ENGINES. FRANK G. MCKLVEEN and LESLIE W. NAYLOR, Denver, Colo.; said Naylor assignor to said McKlveen. Filed Jan. 30, 1911. Serial No. 605,642. (Cl. 123—185.)

1. The combination with an engine shaft, of a wheel mounted thereon and connected in operative relation therewith, a device for operating the same, a spring connected with one extremity of the device, the said device having a section normally held in engagement with the wheel by the spring, said section having a centrally located space and the wheel being equipped with teeth adapted to move in said space, whereby the wheel may rotate without moving the device, the portion of the latter, beyond the said section, being adapted to engage the teeth to operate the wheel, and means for actuating the device to operate the wheel for engine-starting purposes, substantially as described.

2. The combination with an engine shaft, of a wheel connected in operative relation therewith and having a relatively wide periphery, a row of teeth formed on said periphery, a toothless space on the periphery of the wheel adjacent the teeth, an operating shaft, a device forming a connection between the operating shaft and said wheel, a spring attached to one extremity of said device, the latter having a section normally held in engagement with the wheel by the spring, said section having a space corresponding in location with the teeth on the wheel, to allow the wheel to turn without moving the device, the said device beyond its inactive section and in line with the space being constructed to engage the teeth to operate the wheel, and means for actuating the operating shaft to bring the said device into operative relation with the wheel on the said shaft, for the purpose set forth.

1,017,682. AUTOMATIC STOKER FOR LOCOMOTIVES. ALEXANDER J. MCMULLEN, Milwaukee, Wis. Filed Apr. 6, 1911. Serial No. 619,333. (Cl. 110—109.)



1. In a locomotive having a furnace provided with a feed opening and a detachable coal-tender; the combination of a stoker in communication with the furnace feed opening, a forwardly and downwardly inclined bottom section for the tender, a forwardly and upwardly inclined bottom section in hinge connection with the first named bottom section, the forwardly and upwardly inclined bottom section being provided with a door controlled feed opening, a coal crusher detachably secured to the tender under said upwardly inclined bottom section and in register with its feed opening, an endless coal feeding conveyer apron yieldably connecting the crusher and stoker, a motor carried by the locomotive, an endless belt drive gear connection between the motor and stoker, and a tumbler-rod in gear connection with the stoker and crusher, whereby the same is driven.

2. In a locomotive having a furnace provided with a feed opening and a detachable coal-tender; the combination of a stoker in communication with the furnace feed opening, a forwardly and downwardly inclined bottom section for the tender, a forwardly and upwardly inclined bottom section in hinge connection with the first named bottom section, the forwardly and upwardly inclined bottom section being provided with a door-controlled feed opening, a coal-crusher, a shaft journaled within the coal crusher, a gear connection between the shaft and coal crusher mechanism, a conveyer apron frame loosely mounted upon said shaft the free end of the conveyer apron frame being arranged to rest upon the stoker, a motor carried by said locomotive, a gear connection between the motor and stoker, and a flexible gear connection between the stoker and coal-crushing mechanism.

1,017,683. DETONATING TOY. WILLIAM MEIS, Mount Oliver borough, Pa., assignor to William C. McClure, Carrick borough, Pa., and William Fromm, St. Clair borough, Pa. Filed Apr. 7, 1911. Serial No. 619,539. (Cl. 46—46.)

1. A detonating toy comprising a body portion having a passageway and a slotted portion therein, a cap-supporting plate mounted in a recess in said body and said slotted portion, a pivoted spring operated hammer within the slotted portion of said body portion, and a cord passing through said passageway and connected to said hammer for releasing the hammer to permit it to strike against a cap on said plate.

2. A detonating toy comprising a body portion having a slotted portion therein, a pivoted hammer within said body, a U-shaped spring within said slotted portion engaging with one end of said hammer, and a cord connected to the other end of said hammer for releasing the same to permit said hammer to strike against a cap within said body.

3. A detonating toy comprising a body portion having a slotted portion therein and a passageway in said body leading from said slotted portion to and opening on one side of said body, a pivoted hammer within the slotted portion of said body, a U-shaped spring within said slotted portion engaging with said hammer, and a cord passing through said passageway and connected to said hammer for releasing the hammer to permit it to strike against a cap within said body.

4. A detonating toy comprising a body portion having a slotted portion therein, a cap-supporting plate mounted in a recess in said body and said slotted portion, a pivoted hammer within the slotted portion of said body, a U-shaped spring within said slotted portion engaging with the rear end of said hammer, and a cord connected to the front end of said hammer for releasing the same to permit said hammer to strike against a cap on said plate.

the supports, and when the lever is released the door

5. A detonating toy comprising a body portion having a slotted portion therein and a passageway in said body leading from said slotted portion to and opening on one side of said body, a cap-supporting plate in said body, a pivoted hammer within the slotted portion of said body, a U-shaped spring within said slotted portion engaging with said hammer, and a cord passing through said passageway and connected to said hammer for releasing the same to permit said hammer to strike against a cap on said plate.

1,017,684. SAFETY APPLIANCE FOR ELEVATORS. SOLOMON M. MILLER, Peoria, Ill. Filed July 15, 1907. Serial No. 383,951. (Cl. 187—49.)

1. In mechanism of the class described, the combination with an elevator-car and its starting lever, of means in the car having provision to engage and hold the lever, and having an extension projecting into the elevator-shaft, the floor-door, a rock-shaft mounted upon the floor of the building and operated by said door, and a rod lying parallel to the door and shiftable in the direction of its length by said shaft through the movement of said door, and adapted to meet the described extension to carry the lever-locking means in the car into engagement with the said starting lever.

2. The combination with an elevator-car and its starting lever, of means in the car to engage and hold the lever and provided with an extension projecting into the elevator shaft, the floor-door, a rocking member on the floor operated by the door as it opens, a rod lying substantially parallel to the path of movement of the door and shifted by the rocking member and adapted to engage the said extension and therethrough control the said starting lever, a support to guide the rod, and a device to automatically operate the first described means to release the starting lever as the door closes.

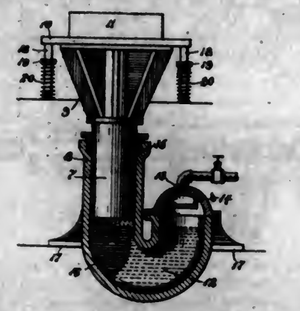
3. In mechanism of the class described, the combination of an elevator-car, a starting lever for the same, locking means carried by said car to hold the lever in its position of rest and having an extension projecting into the elevator shaft, the floor-door, a rock-shaft journaled on the floor of the building, an arm secured thereon, a single member attached to and moved by the arm in the direction of its length parallel to the door and adapted to engage the said extension to lock the starting lever when the door is open or when it is in the act of opening, and a second arm secured on said rock-shaft adapted to be moved by the door.

4. In mechanism of the class described, the combination of an elevator-car, a starting lever for the same, locking means to hold the lever in its position of rest and having an extension projecting into the elevator shaft, the floor-door, a rock-shaft journaled on the floor of the building, an arm secured thereon, a member attached to and moved by the arm parallel to the door and adapted to engage the extension to lock the lever by the opening movement of the door, a second arm secured on said rock-shaft adapted to be moved by the door, and a member to retract the lever-holding means when and as the door closes.

5. In mechanism of the class described, the combination with the elevator-car and a starting lever, of a single member carried by the car and provided with a recess for receiving said lever at its position of rest, an arm in control of the member and extending into the space between the car and the wall of the elevator-shaft, the floor door, a rock-arm mounted on the building floor and engaged by the door and a member pivoted relatively to the rock-arm and moved by it parallel to the plane of the door to engage the arm.

[Claims 6 to 36 not printed in the Gazette.]

1,017,685. JOLT-RAMMING APPARATUS. EDGAR H. MUMFORD, Philadelphia, Pa. Filed Sept. 29, 1909. Serial No. 520,096. (Cl. 22—45.)



1. In combination in jolt ramming apparatus, a mold support, and means for imparting a blow to the support from beneath and for carrying the support upward with such means after the blow is struck.

2. In combination in jolt ramming apparatus, a mold support, means for imparting a blow to the support from beneath and carrying the support upward with such means after the blow is struck, and then returning the support comparatively slowly to starting position whereby a reverse jolt is avoided.

3. In combination in jolt ramming apparatus, a mold support, means for imparting a blow to the support from beneath and carrying the support upward with such means after the blow is struck, and means for cushioning the return movement of the support.

4. In combination in jolt ramming apparatus, a mold support and a ram beneath the support arranged to strike the support and carry such support upward therewith a substantial distance.

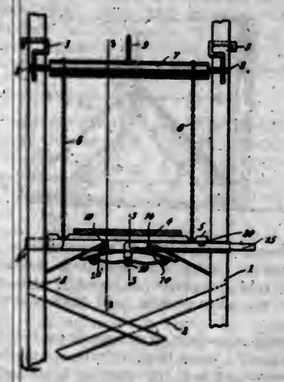
5. In combination in jolt ramming apparatus, a mold support, a ram beneath the support arranged to strike the support and carry such support upward therewith a substantial distance, and means for retarding the return movement of the support and reducing the jar incident thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,017,686. ADJUSTABLE SCAFFOLD. DAVID J. MUNS, Dublin, Ga. Filed Feb. 28, 1911. Serial No. 611,393. (Cl. 20—81.)

1. An adjustable scaffold comprising upright supports, a platform, means for raising and lowering the same, a pair of retaining dogs pivoted to each end of the scaffold, a leaf spring arranged between each pair of dogs and connected to the same at its ends, and a lever for controlling said spring, said lever in one position causing the spring to spread the dogs apart and engage the sides of the uprights to hold the platform of the scaffold in place, and in another position releasing the spring so as to draw the retaining dogs away from the uprights and permit the platform of the scaffold to be moved.

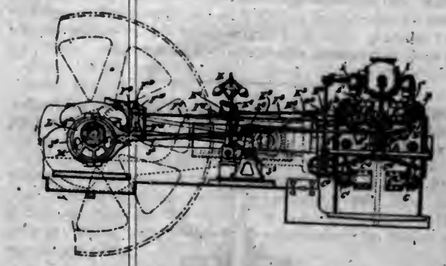
2. An adjustable scaffold comprising supports, a platform, means for raising and lowering the platform relative to the supports, a pair of dogs pivoted to the platform and engaging the supports to hold the platform in position, a leaf spring engaging the retaining dogs and located between the same, a second leaf spring arranged beneath the first spring, and pivotally connected thereto at its ends, a controlling lever connected to the second spring at its center, and a catch for the lever, whereby when the lever is engaged by the catch the springs will be compressed to throw the dogs into engagement with the supports, and when the lever is released the dogs will be withdrawn from such engagement.



3. In an adjustable scaffold, the combination of upright supports, a platform, means for raising and lowering the same, a pair of retaining dogs pivoted to each end of the scaffold, a leaf spring arranged between each pair of dogs and connected to the same at its ends, and means for controlling said spring, said means in one position causing the spring to spread the dogs apart and engage the sides of the uprights to hold the platform of the scaffold in place, and in another position releasing the spring so as to withdraw the retaining dogs from their engagement with the uprights and permit the platform of the scaffold to be moved.

4. An adjustable scaffold comprising upright supports, a platform, means for raising and lowering the same, bands attached to the scaffold at the corners of the same, passing around the uprights and extending beyond the said uprights, braces having their ends extending beyond said uprights and connected at their ends to the said bands, the said braces being bent downward below the level of the platform, and rollers carried in said bands and said braces to engage the outer faces of the upright supports to guide the platform in its up and down movements.

1,017,687. CORLISS VALVE-GEAR. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 5, 1910. Serial No. 570,258. (Cl. 121—103.)



1. In a Corliss valve gear, a combination with an admission valve and its actuating lever of an idler lever, a hook carried thereby, a governor controlled cam, a tripping member adapted on engagement with said cam to disconnect the hook and valve actuating lever, and connections independent of said cam for giving said idler lever and said member oscillatory movements in synchronism with the movements of an engine piston and in substantially quarter-phase relation with each other.

2. In a Corliss valve gear, the combination with an admission valve and its actuating lever, of an idler lever and hook carried thereby, connections for giving the idler lever oscillatory movements which begin and end at about the instants when the engine piston is near its middle position, a governor controlled cam, a tripping member adapted on engagement with said cam to disconnect said hook and valve actuating lever, and connections independent of said cam for giving said tripping member oscillatory movements beginning and ending at about the same instants at which the engine piston strokes begin and end.

3. In a Corliss valve gear, the combination with an admission valve and its actuating lever, an idler lever and hook carried thereby, and a governor controlled cam, of a hook trip arm spaced away from the cam, a tripping piece adapted when moved between the cam and the trip arm, to disconnect the valve from the idler lever, connections for giving the idler lever oscillatory movements which begin and end when the engine piston is near the middle position, and connections for giving the distance piece oscillatory movements beginning and ending at about the same instants at which the piston strokes begin and end.

4. In a Corliss valve gear of the character described, the combination with an admission valve, of an actuating lever therefor, a governor controlled cam lever, an idler lever, a trip lever, all of said levers being co-axially pivoted, a hook and hook trip arm carried by said idler lever, said hook trip arm being spaced away from said cam lever, and a tripping member connected to said trip lever and adapted to be moved thereby into and out of engagement with said cam and on engagement with said cam to engage said hook trip arm and disconnect the hook and valve actuating lever.

5. In a Corliss valve gear of the character described, the combination with an admission valve, of an actuating lever therefor, a governor controlled cam lever, an idler lever, a trip lever, all of said levers being co-axially pivoted, a hook and hook trip arm carried by said idler lever, said hook trip arm being in the same plane with, but spaced away from, the cam on said cam lever, and having its edge adjacent said cam elongated and curved about the common axes of said levers, and a tripping member connected to said trip lever and adapted to be moved thereby into and out of engagement with said cam and on engagement with said cam to engage said hook trip arm and disconnect the hook and valve actuating lever.

[Claims 6 and 7 not printed in the Gazette.]

1,017,688. COAT-HANGER. WILLIAM ELMER RAPS, Catawissa, Pa. Filed Apr. 29, 1911. Serial No. 624,078. (Cl. 248—23.)

1. A garment hanger including a clamp having slidably connected jaws, a hook, and means separate from and operated by the hook when subjected to a load, for drawing the jaws of the clamp toward each other.

2. A garment hanger including a clamp having opposed jaws, a hook, and means separate from and operated by the hook when subjected to a load, for shifting the jaws toward each other.

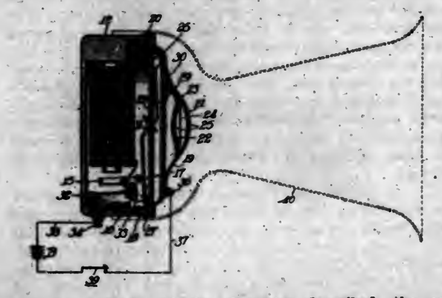
3. A garment hanger including a clamp having slidably connected jaws, a garment engaging member movably connected to the jaws, and means operated by said member when subjected to the weight of a garment, for sliding the jaws toward each other.

4. A garment hanger including a base, a jaw extending therefrom, a slidably mounted jaw connected to the base, and a hook carrying member connected to the base for shifting the slidable jaw relative to the base.

5. A garment hanger including a base having a jaw, a jaw slidable relative to the base, a member pivotally connected to the base, means revoluble with said member for shifting the slidable jaw relative to the jaw upon the base, and a garment supporting element movable with and supported by said member.

[Claim 6 not printed in the Gazette.]

1,017,689. ELECTROWHISTLE-ALARM. CHARLES H. RETTMANN, Chicago, Ill. Filed May 6, 1911. Serial No. 625,510. (Cl. 177—311.)



1. In a device of the character described, the combination with a casing, an electro-magnet therein, of a cover therefor, means on the cover operable by impulses of air to produce sound, a diaphragm, and diaphragm moving means associated with said diaphragm and magnet to produce impulses of air for the sound producing means.

2. In a device of the character described, the combination with a casing, a perforate closure therefor, a flexible diaphragm dividing said casing into two compartments, an electro-magnet in one compartment, and means connecting said magnet and diaphragm to vibrate the latter whereby air in the other compartment is caused to be projected from and drawn in through said perforation to produce a whistling sound.

3. In a device of the character described, the combination with a casing, a perforate closure therefor, a flexible diaphragm dividing said casing into two compartments, an electro-magnet in one compartment, means connecting said magnet and diaphragm to vibrate the latter to produce air currents to and from the other compartment through said perforations, and a sound-producing means in the path of said air currents.

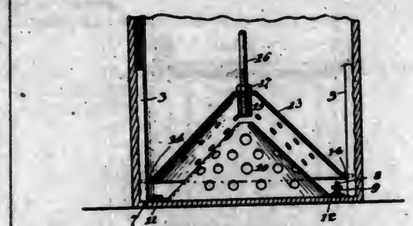
4. In a device of the character described, a casing, a cover therefor, means upon the cover operable by impulses of air to produce a sound, a diaphragm dividing said casing into two compartments, means in one said compartment to hold said diaphragm yieldingly toward the other compartment, and means in said other compartment to move the diaphragm back against said yielding means to cause impulses of air, comprising an electromagnet, an armature therefor, an arm movable by said armature to press against said diaphragm, and suitable electric contacts to control said electromagnet.

5. In a device of the character described, a casing, means on a wall of the casing operable by impulses of air to produce a sound, a diaphram in said casing, a spring upon one side of said diaphragm bearing upon the diaphragm near its center, and means upon the other side of the diaphragm to move it against the effect of said spring to produce an impulse of air, comprising an electromagnet, an armature moved thereby, and an arm 31 fixed at one end to said armature, and at its other end arranged to bear against said diaphragm near its center when the armature is attracted.

[Claim 6 not printed in the Gazette.]

1,017,690. CHURN. IRA V. RICKER, Chicago, Ill. Filed Apr. 12, 1911. Serial No. 620,528. (Cl. 31—3.)

1. A churn comprising a receptacle; a hollow perforated convex upwardly extending projection in the bottom of said receptacle; a concave dasher; and means for reciprocating said dasher, substantially as described.



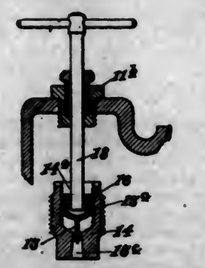
2. A churn comprising a receptacle; a hollow perforated convex upwardly extending projection in the bottom of said receptacle; a concave perforated dasher; and means for reciprocating said dasher, substantially as described.

3. A churn comprising a receptacle; a hollow perforated convex upwardly extending projection removably mounted in the bottom of said receptacle; a concave perforated dasher; and means for reciprocating said dasher, substantially as described.

4. A churn comprising a receptacle; a loop socket arranged on the bottom of said receptacle at one side; a threaded bolt stud arranged on the other side of the receptacle bottom; a hollow perforated cone having a projection at one side adapted to enter said loop socket and a perforated projection on its other side adapted to engage said bolt stud; vertical guides arranged on the inner walls of said receptacle; a perforated conical dasher arranged in said receptacle and provided with notched projections engaging said guides, the perforations in said dasher being smaller than those in the cone, and means for reciprocating said dasher, substantially as described.

5. A churn comprising a receptacle; a loop socket arranged on the bottom of said receptacle at one side; a threaded bolt stud arranged on the other side of said receptace bottom; a hollow perforated cone having a projection at one side adapted to enter said loop socket and a perforated projection on its other side adapted to engage said bolt stud; vertical guides arranged on the inner walls of said receptacle; a perforated conical dasher arranged in said receptacle and provided with notched projections engaging said guides, the perforations in said dasher being smaller than those in the cone; a perforated slide on the cover of said receptacle; an operating rod secured to the upper end of said dasher and projecting through the perforation in said slide; an operative shaft mounted on the cover of said receptacle and carrying a crank pinion connected with said rod; a pinion on said shaft; a gear wheel mounted on the side of said receptacle and meshing with said pinion; and an operating handle on said gear wheel, substantially as described.

1,017,691. VACUUM-CREATOR. FRED B. SAUNDERS, Orange, Mass. Filed May 6, 1911. Serial No. 625,543. (Cl. 230—13.)



In a vacuum-creator, a suction-chamber, and a sprayer communicating therewith and comprising: a centrally-bored screw-plug, an exteriorly-threaded nut screwed into said plug and carrying a depending pin governing passage through said plug, and an exteriorly-threaded check-nut screwed into said plug above said first mentioned nut and engaging the latter, said nuts being internally notched for engagement with an adjusting-tool.

1,017,692. MANUFACTURE OF RESIN SOAP. HERMAN G. SCHANCHE, Philadelphia, Pa., and FRANKE STUART HAVENS, Hartford, Conn., assignors to Harrison Bros. & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 15, 1907. Serial No. 357,506. (Cl. 134—21.)

1. The process of manufacturing a desiccated acid resin soap, which consists in adding to an excess of melted resin, soda combined with an amount of water sufficient to cause diffusion and prevent undue segregation of the soda, but not sufficient to effect solution of the entire mass and not substaptially exceeding the precentage of water which is contained in crystalline carbonate of soda; and thereby forming an acid resin soap in an initial state of non-aqueous liquefaction; and causing the resultant product to solidify by cooling, substantially as set forth.

2. As a new composition of matter an inherently desiccated acid resin soap in a state of substantial comminution throughout, not entirely soluble in water and containing free resin uniformly diffused throughout its mass.

1,017,693. MANUFACTURE OF RESIN SOAP. HERMAN G. SCHANCHE, Philadelphia, Pa., assignor to Harrison Bros. & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 15, 1907. Serial No. 357,507. (Cl. 134—21.)

1. The process of manufacturing a desiccated acid resin soap, which consists in adding to an excess of melted resin, soda combined with an amount of water only sufficient to cause diffusion and to prevent undue segregation of the soda, but not sufficient to effect solution of the entire mass, and not substantially exceeding the percentage of water which is contained in dry crystalline sodium carbonate, and thereby forming an acid resin soap in an initial state of non-aqueous liquefaction, incorporating with the mass while in such initial liquefied condition an inert extending material, and causing the resultant product to solidify by cooling.

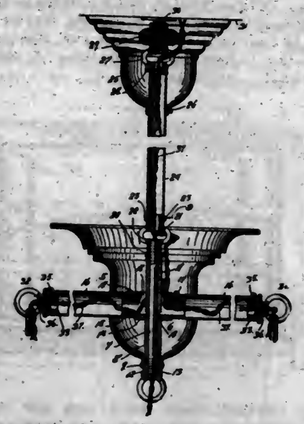
2. As a new composition of matter, an inherently desiccated acid resin soap in a state of substantial comminution throughout, not entirely soluble in water, containing free resin uniformly diffused throughout its mass, and containing an inherently incorporated inert extending material.

1,017,694. CHANDELIER. ALBERT SECHRIST, Denver, Colo. Filed Sept. 18, 1911. Serial No. 650,011. (Cl. 240—78.)

1. A fixture body equipped with a connector having a hollow central member provided with tubular projections, adapted to receive the inner extremities of tube arms, a pipe centrally located in the fixture body and passing through the connector which is perforated for the purpose, and a spacing sleeve surrounding the pipe and interposed between the bottom of the connector and the bottom of the fixture body for supporting the connector within the latter.

2. The combination with a fixture body, of a pipe centrally located therein, a tube arm connector also located therein and perforated to receive the said pipe, the tube arm connector being composed of a central hollow member and tubular projections extending radially therefrom, the said projections being reduced and shouldered to receive tube arms, and a spacer surrounding the pipe within the fixture body and interposed between the tube arm connector and the bottom of the fixture body, the said pipe protruding below the fixture body, its protruding portion being threaded, and a nut applied to the lower threaded extremity of the pipe, substantially as described.

3. The combination with a canopy, of a tube arm connector supported therein, the said connector being hollow and having laterally projecting tubular parts, fastening devices applied to said tubular projections, and tubular arms having slots to receive said fastening devices, the tube arms being fitted over the connector extensions, substantially as described.



4. The combination with a fixture body and a centrally-located pipe, of a connector through which the said pipe passes; the connector being located within the fixture body, means for supporting the connector within the fixture body, and tube arms entering openings formed in the fixture body, the inner extremities of the tube arms being detachably fitted to the connector, substantially as described.

5. The combination with a fixture body and a pipe centrally located therein, of a connector through which the pipe passes, the connector being hollow and having tubular extensions, screws located thereon for fastening purposes, and the tube arms entering openings formed in the fixture body, their inner extremities adapted to surround the tubular extensions of the connectors and being slotted to receive the screws mounted thereon, substantially as described.

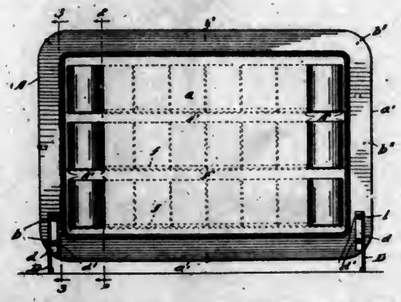
[Claims 6 to 10 not printed in the Gazette.]

1,017,695. COMBINED CONDENSING AND EVAPORATING APPARATUS FOR ICE-MAKING MACHINES. CARL SENSSENBRENNER, Duesseldorf-Oberkassel, Germany. Filed Oct. 5, 1909. Serial No. 521,154. (Cl. 62—6.)

In an ice-making machine the combination of two vessels one placed above the other, the lower vessel com-

municating with the bottom portion of the upper vessel and with a receptacle disposed in one of said vessels, annular upwardly-extending conical ribs projecting from the outer side of this receptacle, and means for alternately heating and cooling the other vessel, substantially as set forth.

1,017,696. COLLAPSIBLE SHEET-METAL SIGN AND CAN-HOLDER. CHARLES W. SHONK, Maywood, Ill., assignor to Charles W. Shonk Company, Maywood, Ill., a Corporation of New Jersey. Filed Sept. 7, 1909. Serial No. 516,547. (Cl. 211—14.)

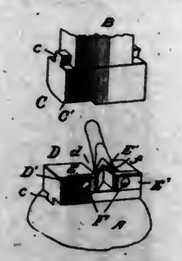


1. The combined sheet metal sign and can display holder, comprising a sheet metal sign having a marginal flange, and provided with a plurality of can display openings, a stiffening frame fitting within the marginal flange of the sign and secured thereto, leg bolts extending through said frame and having heads and nuts, removable legs having flanges furnished with slots to receive said leg bolts, shelf bolts extending into said frame and having heads and nuts, and removable shelves having end flanges furnished with angle slots to receive said shelf bolts, substantially as specified.

2. The combination with a sheet metal sign having can display openings therein, of a stiffening frame secured thereto, leg bolts extending therethrough and removable legs having slots to receive said leg bolts, substantially as specified.

3. The combination with a sheet metal sign having can display openings therein, of a stiffening frame secured thereto, leg bolts extending therethrough and removable legs having slots to receive said leg bolts, shelf bolts extending into said frame, and removable can holder shelves having slots to receive said shelf bolts, substantially as specified.

1,017,697. PICK-SHARPENER. JOHN N. SMOTHERS and JOHN N. CARROLL, Mortons Gap, Ky. Filed July 19, 1911. Serial No. 639,319. (Cl. 164—29.)



1. A die for forming the forked ends of mining picks, provided with a transverse channel with parallel side walls and a cutting blade having a V-shaped portion projecting into but not through said channel with its apex disposed between the side walls thereof, and side wings extending from said V-shaped portion and attached to the outside of the die.

2. A die for forming the forked ends of mining picks, provided with a transverse channel with parallel side walls, and a cutting blade having a V-shaped portion arranged in said channel with its cutting edge substantially level with the face of the die and its apex disposed between the side walls of the channel, side wings extending laterally from the V-shaped portion, and means for adjustably connecting said wings to the outer wall of the die block which permit the cutter to be adjusted vertically.

1,017,698. TRANSPARENT BOOK-SUPPORT. MARK D. STEVENSON, Akron, Ohio. Filed Mar. 8, 1911. Serial No. 613,067. (Cl. 45—82.)

1. A device for the purpose set forth comprising supporting means, a supporting element formed of a pair of hinged sections, a ball and socket connection between said supporting element and said supporting means, and a pair of vertically-disposed transparent elements mounted in said supporting elements and constituting a support for and further permitting of an inspection there-through of reading matter.

2. A device for the purpose set forth comprising a supporting means, a supporting element formed of a pair of hinged sections, each having a groove in its upper face, a ball and socket connection between one of said sections and said supporting means, and a pair of vertically-disposed transparent elements mounted in said grooves and constituting supports for and further permitting of an inspection there-through of reading matter.

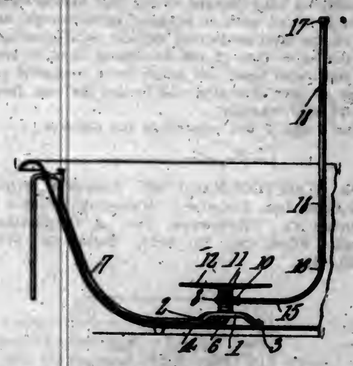
1,017,699. 1-P-DIMETHYLAMINOPHENYL-3.4.4-TRIMETHYL-5-PYRAZOLONE AND PROCESS OF MAKING SAME. FRIEDRICH STOLZ, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 13, 1911. Serial No. 632,912. (Cl. 23—24.)

1. As a new product, the 1-p-dimethylaminophenyl-3.4.4-trimethyl-5-pyrazolone, being a white crystalline powder, melting at 58–59° C., scarcely soluble in water, readily soluble in ether, alcohol, benzene and acids, the solution of its chlorhydrate in water assuming by addition of ferric chlorid a bluish-violet color.

2. The process of manufacturing 1-p-dimethylaminophenyl-3.4.4-trimethyl-5-pyrazolone, which consists in methylating 1-p-aminophenyl-3.4.4-trimethyl-5-pyrazolone.

1,017,700. BATH-SEAT. JOSEPH G. STROCK, Trindle Spring, Pa. Filed Apr. 23, 1910. Serial No. 557,198. (Cl. 4—26.)

1. A device of the class described comprising a base; a seat supported above the base; a discharge pipe rotatably connected with the base and having an upright portion revoluble about the seat; and means for connecting the discharge pipe with a source of supply.



2. A device of the class described comprising a base; an upright intake pipe mounted in the base; a collar rotatable upon the intake pipe; a seat mounted upon the intake pipe above the collar; a discharge pipe forming a continuation of the intake pipe and having one end mounted in the collar, the other end of the discharge pipe being disposed in an upright position for revolution about the seat; and means for connecting the intake pipe with a source of supply.

3. A device of the class described comprising a base; a seat supported above the base; a discharge pipe rotatably connected with the base and having an upright portion revoluble about the seat and provided with ports positioned to discharge toward the seat; a plurality of casings surrounding the upright portion of the discharge pipe, the casings having openings adapted to be brought into and out of alinement with the ports upon a rotation of the said sections; and means for connecting the discharge pipe with a source of supply.

1,017,701. ELECTROSTATIC SEPARATOR. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Filed June 21, 1909. Serial No. 503,484. (Cl. 83—49.)

1. In an electrostatic separator, means for supporting and conveying material, and means for establishing upon said supporting means an electrostatic field of density varying across said supporting means sufficiently to deviate the travel of part of the material from the normal line of travel of the material.

2. In an electrostatic separator, a support for the material to be separated, means for feeding material to said support, means for producing an electrostatic field of unequal density along the surface of said support, said means being adapted to cause part of the material upon the support to move thereupon from its normal position.

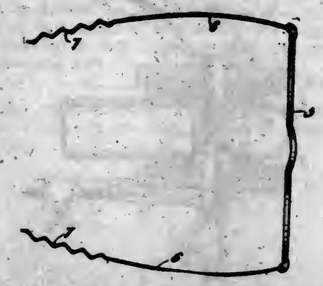
3. In an electrostatic separator, means for supporting and moving comminuted material, means for producing an electrostatic field of density varying along said surface in a direction deviating from the line of normal movement of said material, and means for initially delivering material to the weaker portion of said field.

4. In an electrostatic separator, means for supporting and moving comminuted material, means for producing an electrostatic field of unequal density varying across said supporting means sufficiently to cause a deviation of travel upon said surface of a portion of the material from the normal travel of the material, means for moving said field crosswise of the normal path of said material, and means for separately collecting the thus separated particles.

5. In an electrostatic separator, a plurality of electrodes charged to produce an electrical field of suspension, means for moving said electrodes collectively in one direction, means for feeding comminuted material across the line of travel of said electrodes and at such distances therefrom as to deflect said material from the normal line of feed without attraction to the electrodes.

[Claims 6 to 38 not printed in the Gazette.]

1,017,702. TEMPLE FOR SPECTACLES. WILLIS B. SWARTWOUT, Milwaukee, Wis. Filed Sept. 28, 1910. Serial No. 584,239. (Cl. 88—52.)

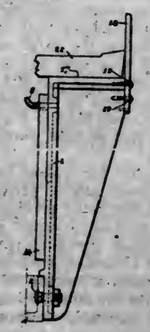


1. Spectacle temples, comprising members constructed to be connected at one end to a spectacle frame and having their opposite ends corrugated to engage the side of the head of the wearer, the corrugations extending along the engaging faces of temples.

2. A spectacle temple, comprising a member adapted to be connected to a spectacle frame at one end and having its other end flattened and corrugated to engage the side of the head of the wearer.

3. A spectacle temple, comprising members constructed to be connected at one end to a spectacle frame and having their opposite ends corrugated to engage the side of the head of the wearer, the corrugations being bent horizontally and the inwardly projecting portions which are adapted to engage the head being flattened.

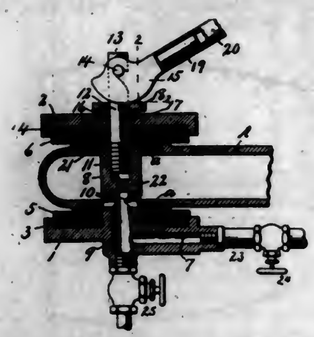
1,017,703. LATHE-TOOL-SETTING APPARATUS. LEROY TABOR and HORACE K. HATHAWAY, Philadelphia, Pa., assignors, by mesne assignments, to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 30, 1909. Serial No. 510,410. (Cl. 73—144.)



A lathe tool setting apparatus comprising a set of tool spacers each marked with an identifying symbol and means

for indicating the spacing required for a lathe tool comprising a support having a surface upon which a tool to be set may rest, and a scale above said surface and provided with graduations adapted to register respectively with the nose of a tool resting on said surface according to the elevation of the nose, each of said graduations having applied to it the symbol or combination of symbols applied to the spacer or combination of spacers which, when interposed between said surface and said tool would bring the nose of the tool to a predetermined elevation.

1,017,704. TESTING APPARATUS FOR HOLLOW CASTINGS. GEORGE C. TALLMAN, Syracuse, N. Y. Filed July 27, 1911. Serial No. 640,799. (Cl. 73—51.)



1. A testing apparatus for hollow castings having alined openings in opposite sides, said testing apparatus comprising opposite clamping heads, connections between said heads having portions thereof adapted to pass through the openings and including means for forcing the heads toward each other, one of the heads and adjacent portion of the connections having fluid passages therein leading from the exterior of such head to a point in the exterior of the connections between said head for admitting a testing fluid to the interior of the casting.

2. A testing device for hollow castings comprising opposed clamping heads, adjustable connections between the central portions of the heads including means for forcing the heads toward each other, one of the heads and adjacent portion of the connections having fluid passages therein leading from the exterior of such head to a point in the exterior of the connections between the heads for admitting the testing fluid to the interior of the casting.

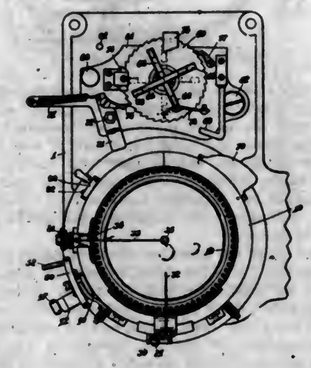
3. A testing device for hollow castings comprising opposed clamping heads having packings on their inner faces, one head having an opening therethrough, connections between the central portions of the heads and extending through such opening, said connections including a bearing member across the outer end of said opening, and means engaged with said bearing for drawing the heads toward each other, the opposite head and adjacent portion of the connections having fluid passages leading from the exterior of such head to a point in the exterior of the adjacent portion of said connections between the heads.

4. A testing device for hollow castings comprising opposed clamping heads having packings on their inner faces, one of said heads being provided with an inlet for the testing fluid and also provided with a central hub having outlet passages communicating with the inlet, said hub having an extension projecting through and beyond the opposite head, a bearing on said opposite head, and a cam pivoted to the outer end of the extension and engaged with said bearing, and means for rocking the cam.

5. In a testing device for hollow castings, a clamping head having an inlet for the testing of the fluid and provided with an inwardly projecting hub having an outlet communicating with the inlet for permitting the discharge of the testing fluid into an article under test, an additional clamping head opposed to the first named clamping head and provided with an opening therethrough, an extension on the hub projecting through said opening and beyond the outer face of the additional head, a bearing on said additional head, and a cam lever connected to the outer end of said extension and having its cam face engaged with said bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,017,705. KNITTING-MACHINE. AUGUST C. TIMMING, South Bend, Ind., assignor to Mishawaka Woolen Manufacturing Co., Mishawaka, Ind., a Corporation of Indiana. Filed Aug. 15, 1910. Serial No. 577,270. (Cl. 66—21.)



1. A pattern cam operating mechanism, comprising a rotative wheel, grooves formed in the upper side thereof, trip dogs arranged to slide in said grooves, a shift block for contacting with the ends of the trip dogs to shift the same in one direction, and means for shifting the trip dogs in the opposite direction.

2. A pattern cam operating mechanism, comprising a rotative wheel, radial grooves formed in the upper side thereof, arch-shaped trip dogs crossing each other and their leg members engaging said grooves, and means for shifting the trip dogs upon rotation of the wheel.

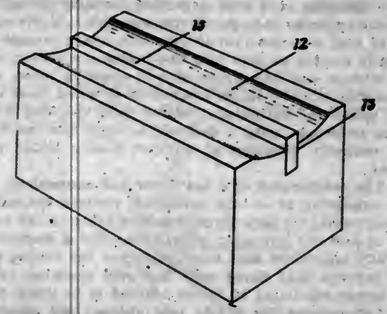
3. A pattern cam operating mechanism comprising a rotative pattern wheel, trip dogs mounted on said pattern wheel and slidable radially of the axis thereof, and means coöperating with the pattern wheel for alternately shifting the trip dogs toward and away from the periphery of said wheel.

4. In a pattern mechanism for knitting machines, the combination with the cam cylinder and pattern cam, actuating mechanism for the pattern cam, a pattern wheel having radially shiftable trip members mounted thereon, means on the cam cylinder coöperating with means for imparting intermittent motion to the pattern wheel, and means coöperating with the pattern wheel to alternately shift the trip members into and out of the path of the cam actuating mechanism.

5. In a pattern mechanism for knitting machines, the combination of the cam cylinder, a pattern cam arranged to slide thereon, a swinging arm pivoted on the cam cylinder and having its swinging end connected with the pattern cam, a shifting bar having a part thereof extending beneath said swinging arm for actuating the latter, a trigger mounted adjacent said shifting bar for locking engagement with the latter when in an elevated position, means for tripping the trigger, and mechanism operable by the cam cylinder for actuating the shifting bar at predetermined periods.

[Claim 6 not printed in the Gazette.]

1,017,706. PAVING-BLOCK. EDWARD A. TRACY, Boston, Mass. Filed June 17, 1911. Serial No. 633,697. (Cl. 94—7.)



As a new article of manufacture, the paving-block herein described, composed of a block having a recess in its tread-face extending longitudinally with respect thereto, and a longitudinal kerf arranged in and medially disposed with respect to said recess, and a grid arranged in said kerf, the upper edge portion of which projects therefrom and occupies a position in the recess and terminates approximately in the plane of the tread-face of the block.

1,017,707. CASTING APPARATUS. FRANK W. TRACY, Chicago, Ill. Filed Mar. 9, 1911. Serial No. 613,305. (Cl. 22—69.)

1. A casting apparatus comprising a closed crucible, a flask below said crucible the sprue of which is in register with the gate of said crucible, means for supplying molten metal to said closed crucible consisting of a measuring chamber and alternating operative valves controlling the feed and discharge of said chamber, and devices for supplying air under pressure to said crucible and forcing the molten metal into said flask.

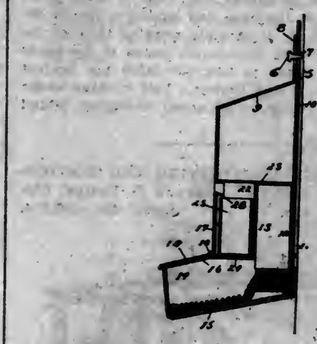
2. A casting apparatus comprising a closed crucible, a flask below said crucible the sprue of which is in register with the gate of said crucible, means for supplying molten metal to said closed crucible in fixed quantities consisting of a measuring-chamber and alternately operative valves one at the inlet and one at the outlet of said chamber that regulate the feed and discharge of said chamber, and devices for supplying air under pressure to said crucible and forcing the molten metal into said flask.

3. A casting apparatus comprising a closed crucible, a flask below said crucible the sprue of which is in register with the gate of said crucible, means for supplying molten metal to said closed crucible consisting of a measuring chamber and alternating operative valves controlling the feed and discharge of said chamber, heating devices surrounding said crucible, and devices for supplying air under pressure to said crucible and forcing the molten metal into said flask.

4. A casting apparatus comprising a closed crucible, a flask below said crucible the sprue of which is in register with the gate of said crucible, means for supplying molten metal to said closed crucible in fixed quantities consisting of a measuring-chamber and alternately operative valves one at the inlet and one at the outlet of said chamber that regulate the feed and discharge of said chamber, heating devices surrounding said crucible, and devices for supplying air under pressure to said crucible and forcing the molten metal into said flask.

5. A casting apparatus comprising a closed crucible having a tapered lower portion, a flask below said crucible the sprue of which is in register with the gate of said crucible, means for supplying molten metal to said crucible in fixed quantities, heating coils surrounding the tapered portion of said crucible, and devices for supplying air under pressure to said closed crucible and forcing the metal into said flask.

1,017,708. MATCH-SAFE. MARIE E. TUTTLE, Butte, Mont. Filed July 10, 1911. Serial No. 637,820. (Cl. 206—31.)



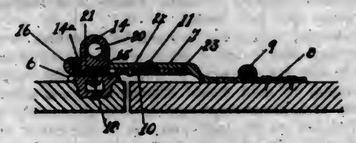
1. A match safe comprising a main body portion and a forwardly extending portion at the bottom thereof having an open top, a cover hinged to the front wall of the main body portion and covering the said extension, said main body portion being divided into two parts, the rearmost of which communicates with the interior of said forwardly extending portion, and a drawer-like receptacle slidable through one of the side walls of said main body portion, there being an opening formed through said front wall and a deflector plate arranged inside said opening and overhanging said receptacle.

2. A match safe comprising a main body portion and a forwardly extending portion at the bottom thereof having an open top, a cover hinged to the front wall of the main body portion and covering the said extension, said main body portion being divided into two parts, the rearmost of which communicates with the interior of said forwardly extending portion, and a drawer-like receptacle slidable through one of the side walls of said main body portion, the rear of the main body portion being open, a vertically sliding door for closing the rear side of the main body portion and an upward extension upon the main body portion, there being registering openings formed through the upward extension and the sliding door as and for the purposes set forth.

1,017,709. HASP-FASTENER. GEORGE UNTCH, Cleveland, Ohio. Filed Oct. 16, 1911. Serial No. 654,850. (Cl. 70—83.)

1. The combination with a hasp and staple, of a latch plate pivoted to the back of the hasp and having a tongue

engageable in an opening in the staple, a spring latch pin located behind the staple and engageable with said tongue, and means to disengage the latch pin.

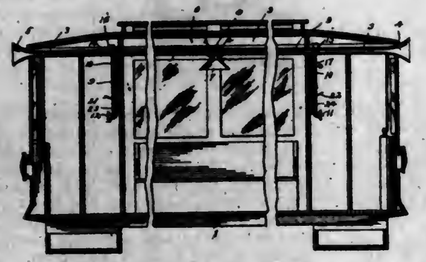


2. The combination with a hasp and a staple and a plate from which the staple projects, of a latch plate pivoted to the back of the hasp and having a tongue engageable in an opening in the staple, in front of the plate, a latch pin working through said plate behind the staple to engage said tongue, a spring located behind the plate and connected to the pin and tending to advance the same, and a push pin connected to the spring to disengage the latch pin.

3. The combination of a hasp and staple, a latch plate pivoted to the back of the staple and having a tongue engageable in the staple, a latch pin movable in and out behind the staple to engage or disengage the tongue, and means to lock the latch pin against movement.

4. The combination of a hasp, a plate having a staple projecting therefrom to engage the hasp, a latch plate pivoted to the back of the hasp and having a tongue engageable with the staple, a latch pin working through the plate and engageable with the tongue, means to disengage the latch pin, and means to lock the latch pin against movement comprising a lock having a bolt working under said plate and which may be advanced to engage behind the latch pin.

1,017,710. COMBINED VENTILATING AND STATION-ANNUNCIATING MEANS. SHERMAN D. UPHAM, Chicago, Ill. Filed Apr. 10, 1911. Serial No. 620,254. (Cl. 98—23.)



1. The combination of a ventilator and annunciator for cars, consisting of a tube extending straight through a car and having its ends flared, speaking tubes on the outer ends of said car connected to said tube and a megaphone centrally located on said tube and means for closing said tube between said flared ends and said speaking tubes.

2. The combination of a ventilator and annunciator for cars, consisting of a tube extending straight through a car and having its ends flared, speaking tubes on the outer ends of said car connected to said tube and a megaphone centrally located on said tube and means for closing said tube between said flared ends and said speaking tubes, said means consisting of valves adapted to be lifted from said tube, and means for lifting said valves.

3. The combination of a ventilator and annunciator for cars, consisting of a tube extending straight through a car and having its ends flared, speaking tubes on the outer ends of said car connected to said tube and a megaphone centrally located on said tube and means for closing said tube between said flared ends and said speaking tubes, said means consisting of valves adapted to be lifted from said tube, means for lifting said valves, said speaking tubes having telescopic ends.

4. The combination of a ventilator and annunciator for cars, consisting of a tube extending straight through a car and having its ends flared, speaking tubes on the outer ends of said car connected to said tube and a megaphone centrally located on said tube and means for closing said tube between said flared ends of said speaking tubes, said means consisting of valves adapted to be lifted from said tube, means for lifting said valves, said speaking tubes having telescopic ends, a deflector in said tube whereby it is centrally disconnected without closing either part thereof.

5. The combination of a ventilator and annunciator for cars, consisting of a tube extending straight through a car and having its ends flared, speaking tubes on the outer ends of said car connected to said tube and a megaphone centrally located on said tube and means for closing said tube between said flared ends and said speaking tubes, said means consisting of valves adapted to be lifted from said tube, means for lifting said valves, said speaking tubes having telescopic ends, a deflector in said tube whereby it is centrally disconnected without closing either part thereof, said flared ends being on a line with said tube whereby in-rushing air may have an unobstructed passage therethrough.

1,017,711. DEVICE FOR HOLDING TROLLEY-POLES ON WIRES. WILLIAM F. VAN CLEAVE and ANDERSON T. WOODALL, Dallas, Tex. Filed Oct. 18, 1909. Serial No. 523,336. (Cl. 191—37.)

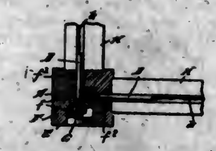
1. In a device of the class described, the combination with a trolley pole and trolley wire; of a frame having a sleeve portion bolted to the pole below the wheel thereof, arms projecting upwardly from said frame and having an interior space adapted to receive the trolley wire, spring actuated means mounted in the upper portion of the frame to prevent disengagement of the trolley wheel from the wire and said wire from the interior space, means to limit the upward movement of the frame without friction and means for separating said spring actuated means in a parallel line, to permit upward displacement of the wire.

2. The combination with a trolley pole and trolley wire; of a wheel carried rotatably at the upper end of the pole, a frame attached to the pole below its upper end and spaced from the wheel forwardly, means carried by the frame below the wire to prevent upward movement thereof and reduce the friction thereon, bars mounted in the upper portion of the frame, projections formed on the frame to limit the inward movement of the bars, guides for said bars, means for holding said bars normally together and flexible connections for separating said bars to permit removal of the wire.

3. In a device of the character described, the combination with a trolley pole and trolley wire, of a frame attached to the upper portion of the trolley pole, having an interior space adapted to receive the trolley wire, bars laterally supported upon said frame, having their inner faces parallel to the trolley wire, springs acting on said bars holding them normally adjacent, preventing upward displacement of the trolley wire, means to prevent upward movement of the frame and to reduce friction thereon and a flexible connection to each of said bars by which it may be displaced.

4. In a device of the character described, the combination with a trolley pole and trolley wire, of a frame rigidly fastened upon the upper portion of the trolley pole, having an interior space adapted to receive the trolley wire, a wheel rotatably mounted in said frame adapted to contact with the wire, pins projecting inwardly from the upper portion of said frame, bars slidable upon said pins, springs holding said bars normally adjacent, and cords attached to said bars adapted to separate them, compressing the springs when put under tension.

1,017,712. FURNITURE CONSTRUCTION. OTTO VANSELOW, Schoolcraft, Mich. Filed Oct. 2, 1911. Serial No. 652,287. (Cl. 155—3.)

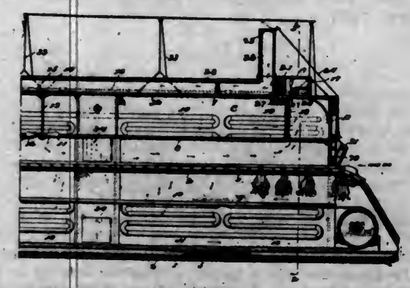


1. The combination with an article of furniture having supporting members and transverse members between the supporting members, of a reinforcing device for the same comprising tie rods which are concealed within the transverse members, and coupling elements for the tie rods, one end of each of the tie rods being secured to a coupling element and the other end passing through another coupling element and being provided on the other side of the same with tension adjusting means.

2. The combination with an article of furniture having supporting members and transverse members between the supporting members, of a reinforcing device for the same comprising tie rods which are concealed within the transverse members and coupling elements for the tie rods arranged within the supporting members, the ends of the tie rods being threaded and one end being secured in a threaded socket in a coupling element and the other end passing loosely through another coupling element and being provided with a nut.

3. The combination with an article of furniture having supporting members and transverse members between the supporting members, of a reinforcing device for the same comprising tie rods which are concealed within the transverse members, and cylindrical coupling elements arranged in bores in the supporting members, one end of each of the tie rods extending through the curved surface of the cylindrical coupling element and being secured thereto, the other end extending from end to end through another cylindrical coupling element and being provided on the other side of the same with tension adjusting means.

1,017,713. TOBACCO-TREATING MACHINERY. JAMES M. VAUGHAN, Owensboro, Ky. Filed Apr. 26, 1911. Serial No. 623,478. (Cl. 131—55.)



1. An apparatus of the character described, embodying a compartment for the tobacco, means for establishing a circulation of heated air through the compartment, and means for condensing the nicotin from the circulating air.

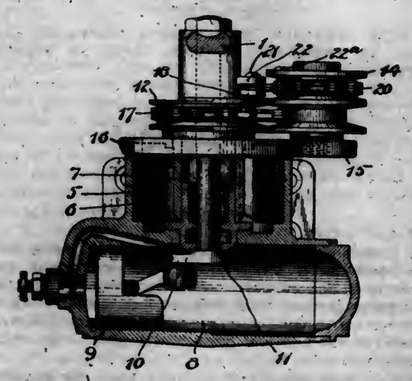
2. An apparatus of the character described, embodying a compartment for the tobacco, means for establishing and maintaining a circulation of heated air in said compartment, and a nicotin condenser mounted in said compartment in the path of the current of air.

3. An apparatus of the character described, embodying a compartment for the tobacco, means for maintaining a circulation of heated air in said compartment, said means including down-draft fans, a flue connected at its ends to the compartment, a nicotin condenser in said flue, and an up draft fan interposed in said flue between the condenser and the communicating end of the compartment.

4. An apparatus of the character described, comprising a compartment for the tobacco, a flue connected at its ends to the compartment, the flue being provided with a damper controlled discharge passage, a nicotin condenser interposed between said passage and the adjoining end of the compartment, and means for establishing a circulation of air through the flue and compartment, said air passing through the condenser.

5. An apparatus of the character described, embodying a compartment for the tobacco, a flue connected at its ends to the top of the compartment, said flue being provided with a damper controlled discharge passage, a nicotin condenser comprising cold water pipes mounted in said flue, a trough underneath said pipes, and means for establishing a circulation of heated air through the flue and compartment.

1,017,714. DOOR-CLOSER. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 4, 1912. Serial No. 669,412. (Cl. 16—88.)



1. In a door closer, a flat coiled spring, a fixed abutment for one end thereof, a rotary abutment for the other end thereof, an exposed head for said rotary abutment, a roller adjacent thereto, a chain connected to said head extending partly around the same and connected to said roller, a lever arm adjacent said roller, and a chain connected thereto and extending partly around said roller whereby the rotation of said lever arm in either direction away from the normal will wind up the spring.

2. In a door closer, a flat coiled spring, a stationary abutment for one end, a rotatable abutment for the other end, an exposed head for said rotatable abutment, a roller at one side of said head, a chain connected to said head at one end and extending partly around said head and connected to said roller, means for varying the point of connection of one end of said chain with the part to which it is connected, a lever arm mounted adjacent said roller, a connection between said lever arm and said roller, and a chain connecting said lever arm and said roller and extending partly around the roller whereby when said lever arm is swung in either direction said spring will be wound up.

3. In a door closer, a flat coiled spring, a stationary abutment for one end thereof, a movable abutment for the other end thereof, a rotatable head connected with the movable abutment to wind up the spring, a lever arm pivotally mounted to swing, operative means of connec-

tion between said lever arm and said flat spring, said lever arm having a normal position wherein the door to which the apparatus is applied is closed, and operative means of connection between said lever arm and said head whereby said spring will be wound up when the lever arm is swung in either direction away from the normal.

4. In a door closer, a flat coiled spring, a stationary abutment for one end, a rotatable abutment for the other end, a head on said rotatable abutment, a roller adjacent said head, a chain connected to said head and extending partly around the same and connected to said roller whereby said spring will be wound up when said roller is rotated in one direction, a lever arm, and means of connection between said lever arm and roller whereby said roller will be turned in the same direction when said lever arm is moved in either direction away from the normal position.

5. In a door closer, a flat coiled spring, a stationary abutment for one end, a rotatable abutment for the other end, a roller, the axis of the roller being out of line with the axis of said rotatable abutment, a flexible connection between said rotatable abutment and extending partly around the same and connected with said roller, a lever arm, a flexible connection between said lever arm and said roller, said connection extending partially around said roller and being connected with said lever arm at a point between the axis of rotation of the latter and the axis of said roller whereby when said lever arm is swung in either direction it will rotate said roller in the same direction to wind up said spring.

1,017,715. FUSIBLE LINK. FRANK VOIGTMANN, Chicago, Ill. Filed Nov. 16, 1908. Serial No. 462,954. (Cl. 236—16.)

1. A fusibly-separable link composed of two relatively thin sheet metal members, partially overlapped and united by a film of solder extending between them, the overlapping portions being stamped into similar intaglio-relief-surface patterns and internested, and the non-overlapped apertured ends of the device provided with metal reinforcements.

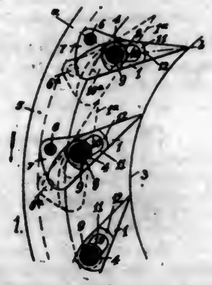
2. The combination with two thin sheet-like members partially overlapped and internested as to their overlapping portions and forming when united a thin relatively flat sheet-like link, said members being provided at their free outer ends with closed loop portions, and a film of solder incasing the exterior of said links, and extending between and uniting the overlapping portion.

3. A fusibly-separable link composed of two thin sheet metal members, partially overlapped and united by a film of solder lying between them, the overlapping portions being stamped into similar intaglio-relief surface patterns and internested, and the openings in the extremities of the link reinforced by eyelets.

4. A fusibly-separable link composed of two substantially identical thin sheet metal members, each comprising a generally ring-shaped main body and a generally ring-shaped terminal loop, each ring portion being stamped into concavo convex form in radial section, the main bodies of the two members being overlapped and internested and united by a film of solder.

5. A fusibly-separable link composed of two thin sheet metal members, each comprising a generally ring-shaped main body and a smaller generally ring-shaped terminal loop, each ring-shaped main body being stamped into concavo convex form in radial section, the main bodies of the two members overlapped and internested, and the parts united by a film extending between the overlapped portions and covered with a coating of solder.

1,017,716. GATE-CASE WITH BALANCED GATES FOR WATER-TURBINES. ARNOLD VONARSCH, Owen Sound, Ontario, Canada. Filed June 13, 1910. Serial No. 566,668. (Cl. 138—5.)



1. In a gate case for turbines, a gate, a pivot for said gate, and means for swinging said gate around its pivot and simultaneously shifting the pivoted point with respect to the gate.

2. In a gate case for turbines, a post, a gate pivoted thereon in such position that the pressures on the gate on each side of the post are equal during open gate position, and means for shifting the gate on said post whereby the pressures on the gate on each side of the post are maintained equal during closed or partially closed position.

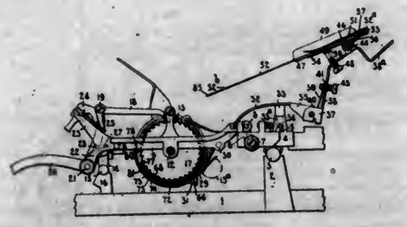
3. In a gate case for turbines, a slotted gate, a post pivotally supporting the gate passing through said slot, a gate ring, and a pin pivotally connecting the gate and gate ring.

4. In a gate case for turbines, a cover plate and a bottom plate, a gate having a slot therethrough located between said plates, a post holding said plates apart passing through the slot of said gate, and a gate ring pivoted to the gate.

5. In a gate case for turbines, a cover plate and a bottom plate, a gate having a slot therethrough located between said plates, a post holding said plates apart passing through the slot of said gate, and means connected to the gate arranged to revolve the gate around the post and simultaneously move the gate longitudinally with respect to the post.

[Claims 6 to 8 not printed in the Gazette.]

1,017,717. TYPE-WRITING MACHINE. CHARLES W. WALKER, Stratford, Conn., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Aug. 1, 1907. Serial No. 386,586. (Cl. 197—127.)



1. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to receive and clamp the upper edges of cards when the cards are introduced into the machine from the rear of the platen, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen.

2. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to clamp the upper edges of cards having tabs, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, and a gage for the bottom edge of the card.

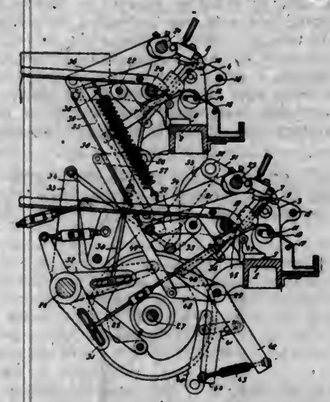
3. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to clamp the upper edge of a card, a gage for the lower edge of the card, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp and arresting the platen by a backward rotation thereof and when the clamp reaches a given point.

4. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen and operative to clamp a card or work sheet against the platen, and automatically operating means for opening said clamp and arresting the platen at a predetermined point in the backward rotation thereof and for affording a free forward rotation of the platen to any desired extent.

5. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby and operative to clamp a card or work sheet against the platen, and a plate fixed against rotation with the platen and extending longitudinally thereof, the construction and arrangement of the parts being such as to render said plate coöperative with the advancing edge of said clamp to open it.

[Claims 6 to 79 not printed in the Gazette.]

1,017,718. AUTOMATIC SPOOLING-MACHINE. ALEXANDER GROUNDWATER WALLS, Paisley, Scotland, assignor to Walter McGee & Son, Limited, Paisley, Scotland. Filed June 16, 1911. Serial No. 633,521. (Cl. 242—44.)



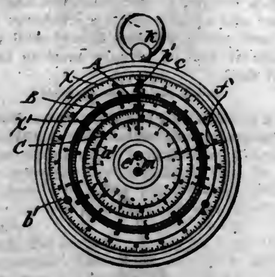
1. In an automatic spooling machine, the combination of a plurality of rows of headstocks, nicking, cutting, holding and winding mechanisms carried by said headstocks, and mechanisms for actuating said nicking, cutting, holding and winding mechanisms, said actuating mechanisms being coupled together to cause all said spooling means to operate in unison.

2. In an automatic spooling machine, the combination of a plurality of rows of headstocks, spooling means comprising winding, nicking, cutting and holding mechanisms, carried by said headstocks, ending means associated with said headstocks, means for actuating said spooling mechanisms, said means being coupled together to cause them to operate in unison, and means coupling said ending means to cause the same to operate synchronously.

3. In an automatic spooling machine, the combination of a plurality of rows of headstocks, spooling means on each headstock comprising winding, cutting, nicking and holding means and including shafts parallel to said rows for supporting said winding, cutting, nicking and holding means, means for actuating said shafts and means coupling the actuating means of each set of shafts to cause the latter to operate in unison.

4. In an automatic spooling machine, the combination, of a plurality of rows of headstocks, a set of spooling means including winding, cutting, nicking and holding means, a set of shafts in each headstock parallel to said rows for carrying said spooling means, means for actuating said shafts, and means coupling the actuating mechanisms of corresponding shafts in each headstock to cause the latter to operate in unison.

1,017,719. CIRCULAR SLIDE-RULE. HERBERT RICHARD WATTS, Brooklands, England. Filed Jan. 23, 1911. Serial No. 604,037. (Cl. 235—84.)



1. A circular slide rule comprising a spacing ring, dial rings secured to opposite sides of the spacing ring and having their inner edges stopping short of the corresponding edge of the spacing ring, a spacing disk arranged within the spacing ring, and dial disks secured to opposite sides of the spacing disk and arranged within the dial rings and having their outer edges projecting beyond the corresponding edge of the spacing disk and engaging with opposite sides of the spacing ring.

2. A circular slide rule comprising a spacing ring, dial rings secured to opposite sides of the spacing ring and having their inner edges stopping short of the corresponding edge of the spacing ring, a spacing disk arranged within the spacing ring, dial disks secured to opposite sides of the spacing disk and arranged within the dial rings and having their outer edges projecting beyond the corresponding edge of the spacing disk and engaging with opposite sides of the spacing ring, and a screw connecting said spacing and dial rings.

3. A circular slide rule comprising a spacing ring, dial rings secured to opposite sides of the spacing ring and having their inner edges stopping short of the corresponding edge of the spacing ring, a spacing disk arranged within the spacing ring, dial disks secured to opposite sides of the spacing disk and arranged within the dial rings and having their outer edges projecting beyond the corresponding edge of the spacing disk and engaging with opposite sides of the spacing ring, a rim inclosing said spacing and dial rings, and a hanger having a screw passing through a threaded opening in the rim and provided with a dowel entering the edge of the spacing ring.

4. A circular slide rule comprising a spacing ring, dial rings secured to opposite sides of the spacing ring and having their inner edges stopping short of the corresponding edge of the spacing ring, a spacing disk arranged within the spacing ring, dial disks secured to opposite sides of the spacing disk and arranged within the dial rings and having their outer edges projecting beyond the corresponding edge of the spacing disk and engaging with opposite sides of the spacing ring, said spacing and dial disks being provided with central openings, and thumb pieces secured centrally to opposite sides of the dial disks and one of said thumb pieces being provided with a dowel which enters the openings of said spacing and dial disks.

adapted to prevent the spiral chute from discharging itself | bolt and means to prevent retraction of the latch bolt by

1,017,720. CONCRETE-MIXING MACHINE. HARRIS MORGAN WHITCOMB, Albany, Wis. Filed Apr. 1, 1911. Serial No. 618,467. (Cl. 83—73.)

1. A mixing machine comprising a shell or drum having overlapping plates at one end with openings between them, a rotatable shaft with a spider therein to which one end of said drum is secured, said plates being also secured to a hub on said shaft, bearings for said shaft, and a plurality of inclined segmental plates secured to the inner face of said drum; said plates being spaced and the plates of adjacent series being staggered.

2. A mixing machine comprising a shell, a shaft on which shell is secured to said shaft and shell at one end of the latter and constituting the discharge end wall of said shell, and mixing members in said shell adapted both to mix material and to advance same to the discharge end of said shell.

1,017,721. FRUIT-PICKER'S BAG. EDWIN A. WILLIAMS, Riverside, Cal. Filed May 8, 1911. Serial No. 625,876. (Cl. 150—2.)

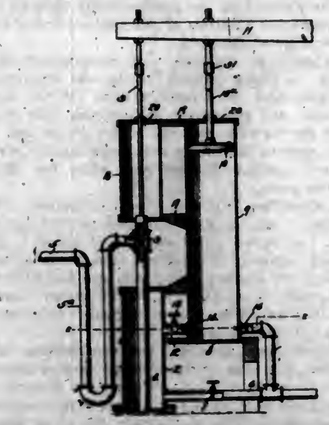
A fruit picker's bag formed with an open bottom having a folding portion to prevent the fruit from escaping, eyes at the corners of the folding portion, fasteners on the body portion of the bag detachably engaging said eyes, and a cord extending to both fasteners for opening the same to release the eyes to permit the folded portion to hang down and allow the escape of the fruit.

1,017,722. GAS-PUMP FOR OIL-WELLS. JAMES PHILLIP WINTZ, Ripley, W. Va. Filed May 22, 1911. Serial No. 628,803. (Cl. 103—79.)

1. The combination with the upper portion of an oil well tubing, of a supplemental pumping cylinder arranged adjacent thereto and having valve controlled communication with the tubing of an oil well for the purpose of receiving gas therefrom, of a discharge pipe leading from said cylinder, a gas discharge pipe leading from the well tubing, a valve therein, the first mentioned discharge pipe communicating with the second mentioned discharge pipe, and the valve in the latter being between the well tubing and the juncture of the two pipes, a piston operating in the supplemental cylinder, and common means for actuating the oil pumping mechanism and the said piston.

2. A device of the kind described having separate discharge pipes for oil and gas, of a cylinder, said cylinder having communication with the well and with a gas discharge pipe therefrom, a valve situated in said discharge pipe between the well and the point of communication between said discharge pipe and the cylinder, a valve for cutting off communication between the cylinder and the well, and a piston working in said cylinder and actuated by the well pumping mechanism.

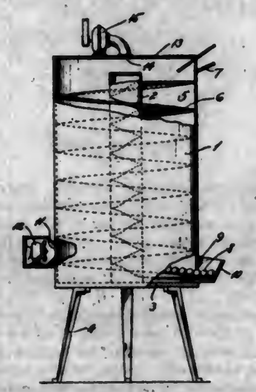
3. The combination with an oil well tubing, of a cylinder having a valve controlled communication with the said tubing, of a gas supply pipe, also having valve controlled communication with said tubing, and having valve controlled communication with said cylinder and a piston working in the said cylinder, as and for the purpose set forth.



4. In an oil well device comprising a well tubing, and a pumping tube, an oil discharge pipe having a trap therein, said pipe being in communication with the pumping tube, a gas discharge pipe in communication with the well tube, a valve in the last mentioned pipe, a by-pass arranged around said valve, a cylinder arranged in and forming a part of said by-pass and a piston operating in said cylinder, said piston being operated by the oil pumping mechanism.

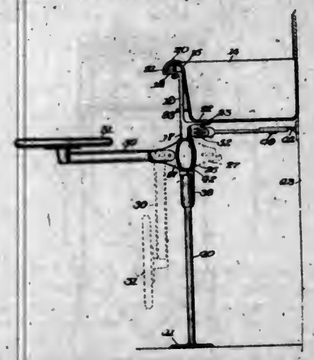
5. The combination with an oil well tubing having a pumping tube, of a U-trap adapted to receive oil from said pumping tube, said trap preventing the escape of gas from said tube, a cylinder having valve controlled communication with the well tubing, and adapted to receive gas therefrom, a gas main also having valve controlled communication with said cylinder, and a piston working in said cylinder, said piston being operatively connected to the walking beam of the oil pumping mechanism.

1,017,723. PRECOOLING APPARATUS FOR FRUIT. SAMUEL M. WOODBRIDGE, San Bernardino, Cal. Filed June 28, 1910. Serial No. 569,314. (Cl. 62—10.)



A precooling apparatus, comprising a cylindrical chamber having a central post, a spiral chute arranged in the annular space between said post, and the chamber wall, the inclination of said spiral chute being slight to enable the fruit to pass through the apparatus in a single layer, a discharge hopper at the lower end of the spiral chute adapted to prevent the spiral chute from discharging itself, and means for forcing a cooling air current along the chute as the fruit descends.

1,017,724. ADJUSTABLE SUPPORT AND SEAT-BRACKET. JAMES ALLINGHAM, Chicago, Ill. Filed Apr. 8, 1900. Serial No. 488,573. (Cl. 155—22.)



1. A seat-bracket consisting of a cylindrical body portion having an upward extension provided with means to secure it to a sink or similar support, a sleeve rotatably mounted on the body portion of the bracket and having a lateral extension provided at the lower portion of its free end with an upturned hook and having a horizontally disposed slot, and a seat supporting arm loosely secured in the slot to said extension and having on its lower surface a recess to engage the hook on said extension.

2. A seat-bracket consisting of a cylindrical body portion having an upward extension provided at its upper portion with a curved part to rest against a portion of the rim of a sink or similar support, means to detachably secure the bracket and said curved part thereof to the sink or support, and seat supporting means rotatably mounted on the body portion of said bracket.

3. A seat-bracket consisting of a cylindrical body portion having an upward extension provided with means to secure it to a sink or similar support, a horizontally disposed connection uniting the bracket and the wall or support on which the sink is mounted below the latter, and seat supporting means rotatably mounted on the body portion of said bracket.

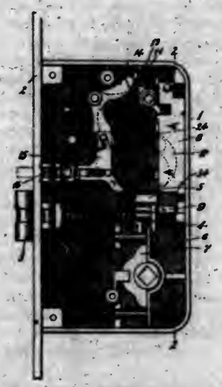
4. A seat-bracket consisting of a cylindrical body portion having an upward extension provided with means to secure it to a sink or similar support, a horizontally disposed connection uniting the bracket and the wall or support on which the sink is mounted below the latter, seat supporting means rotatably mounted on the body portion of the bracket, and a support adjustably connected to the bracket at one of its ends.

5. A seat-bracket consisting of a cylindrical body portion having an upward extension provided with means to secure it to a sink or similar support, a sleeve rotatably mounted on the body portion of the bracket and having a lateral extension provided at the lower portion of its free end with an upturned hook, a seat supporting arm loosely secured to said extension and having on its lower surface a recess to engage the hook on said extension, and a connection uniting the bracket to the wall or support on which the sink is mounted below the latter.

[Claims 6 to 11 not printed in the Gazette.]

1,017,725. HOTEL-LOCK-CYLINDER CONTROL. AUGUST ARENS and ERNEST L. TEICH, New Britain, Conn., assignors to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed May 1, 1911. Serial No. 624,295. (Cl. 70—98.)

1. In a lock, the combination with a latch bolt of a pin tumbler lock mechanism operable by any of a series of different keys including an emergency key to retract said bolt, and means to prevent retraction of the latch bolt by any other key of the series when said pin tumbler mechanism has been operated by said emergency key.



2. In a lock, the combination with a latch bolt of a pin tumbler locking mechanism operable by any of a series of different keys including an emergency key, and means to prevent the retraction of said latch bolt by any other key of the series when said pin tumbler mechanism has been given a complete rotation in one direction by the emergency key.

3. In a lock, the combination with a latch bolt of a pin tumbler mechanism operable by any of a series of keys including an emergency key and duplicate change keys, dead-locking means for said latch bolt operable from the inner side of the door, and means to prevent release of said dead-locking mechanism from the outer side of the door by any except the emergency key and the duplicate change keys.

4. In a lock, the combination with a latch bolt of a pin tumbler mechanism operable by any of a series of keys including an emergency key and change keys, dead-locking means for said latch bolt operable from the inner side of the door, and means to prevent release of said dead-locking means from the outer side of the door by any except the emergency and change keys, and means to prevent retraction of the latch bolt by any except the emergency key when said pin tumbler mechanism has been operated by the emergency key.

5. In a lock, the combination with a latch bolt of a pin tumbler mechanism operable by any of a series of keys including an emergency key and change keys, a dead-locking member for said latch bolt operable from the inner side of the door, means to confine release of said dead-locking means from the outer side of the door to said emergency key and change keys, and means to enable said emergency key to block retraction of the latch bolt by any of the other keys of the series when given a complete rotation in one direction by the emergency key.

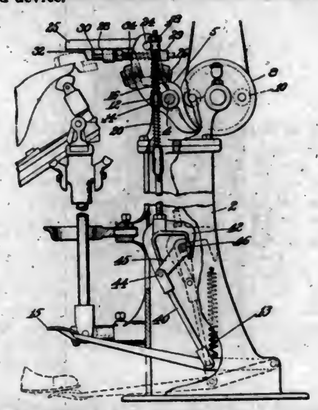
[Claims 6 to 10 not printed in the Gazette.]

1,017,726. SHOE-SHAPING MACHINE. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 21, 1909. Serial No. 491,338. (Cl. 12—51.)

1. A shoe beating machine having, in combination, a driver; a beating tool; means for operatively connecting the tool and driver to lift the tool to a uniform height for each stroke; and means for reversely moving the tool; said machine having provision for varying, at will of the operator and while the machine is running, the force with which the beating tool is impelled downwardly upon the work.

2. A shoe beating machine having, in combination, a beating tool; a driver; a lever connected with the tool to lift it and arranged to be held in the path of the driver by a manually operated device; and a spring through

which said device acts and which impels the tool downwardly and is controlled as to tension by the manually operated device.



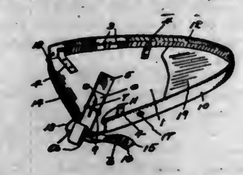
3. A shoe beating machine having, in combination, a beating tool, a driver to lift the tool, a spring to impart the beating blow to the tool, and a treadle connected with the spring to control the force of the blow.

4. A shoe beating machine having in combination, a beating tool, a driver to lift the tool, a spring to impart the beating blow to the tool, a treadle connected with the spring to control the force of the blow, and a vibration absorbing abutment between the treadle and the spring to steady the treadle.

5. A shoe beating machine having, in combination, a bell crank lever, one arm of which constitutes the shoe bottom beating member, a side beater slidingly mounted on the lower side of said lever arm, and a driver operatively connected with the other arm of the lever.

[Claims 6 to 20 not printed in the Gazette.]

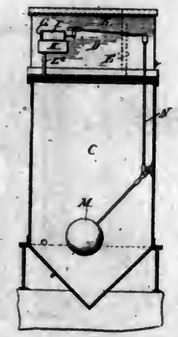
1,017,727. SOLE-PROTECTOR FOR BOOTS AND SHOES. EMERSON F. BALDWIN, Philadelphia, Pa. Filed Aug. 31, 1910. Serial No. 579,807. (Cl. 36—73.)



A device of the character indicated comprising a solid one-piece member of the contour of the sole of a boot or shoe adapted to cover the complete sole thereof, a series of clamp pieces fitted around the marginal edge of said member, said pieces extending from the toe portion thereof rearwardly to the points marking the greatest width of said member and adapted to engage the sides and top edge of a boot or shoe, a vertically disposed facing fitted around the marginal edge of the sole member and extended horizontally over and secured to said clamp pieces, a slidable clamp piece carried by said sole member for engaging the rear of a boot or shoe sole, a pliable member secured to the rear of said member for hugging the underside of a boot or shoe sole, and means operatively connected with said pliable member and said slidable clamp for engaging the vertical facing to lock the parts together.

1,017,728. APPARATUS FOR TREATING LIQUIDS. KENT W. BARTLETT, Chicago, Ill., assignor to Northern Water Softener Company, a Corporation of Maine. Filed June 13, 1910. Serial No. 566,514. (Cl. 210—1.)

1. In combination, a mixing reservoir, a chemical tank having an overflow outlet for permitting chemical to flow into the mixing reservoir, means for supplying water to said reservoir, means for delivering water into said tank during the time water is being supplied to the reservoir, and devices for governing the latter means so as to increase the rate of delivery of water to said tank relative to the rate of flow of water into said reservoir with increases in the total volume of water introduced in the reservoir.



2. In combination, a mixing reservoir, a chemical tank having an overflow outlet for permitting chemical to flow into said reservoir, means for supplying water to said reservoir, means for causing water to flow into said tank during the time water is flowing into said reservoir, and devices for controlling the latter means so as progressively to increase the rate of flow of water into said tank relative to the rate of flow into said reservoir.

3. In combination, a mixing reservoir, a chemical tank having an overflow outlet for permitting chemical to flow into the mixing reservoir, means for supplying water to said reservoir, means for causing water to flow into said tank during the time water is flowing into said reservoir and at a rate proportioned to the rate of flow of water into the said reservoir, and controlling devices governed by the total amount of water received in the reservoir for progressively increasing the rate of flow of water into said tank relative to the rate of flow of water into said reservoir.

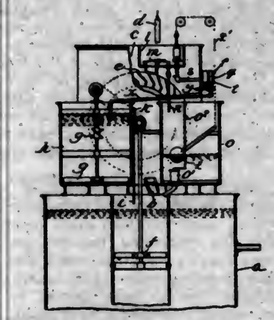
4. In combination, a mixing reservoir, a chemical tank having an overflow outlet for permitting chemical to flow into the mixing reservoir, means for supplying water to said reservoir, means for causing water to flow into said tank during the time water is flowing into said reservoir and at a rate proportioned to the rate of flow of water into the said reservoir, and a controlling device governed by the total amount of water received in the reservoir for controlling the latter means so as progressively to increase the rate of flow of water into said tank relative to the rate of flow of water into said reservoir.

5. In combination, a source of liquid supply, a liquid tank, a chemical tank, means including a valve for permitting liquid to flow from said source of liquid supply into each of the aforesaid tanks, and a device governed by the liquid level in the liquid tank for progressively operating said valve progressively to increase the quantity of liquid discharged into said chemical tank relative to the quantity of liquid discharged from the source of liquid supply.

[Claims 6 to 16 not printed in the Gazette.]

1,017,729. LIQUID-TREATING APPARATUS. KENT W. BARTLETT, Chicago, Ill. Filed June 27, 1910. Serial No. 568,984. (Cl. 210—1.)

1. A liquid treating apparatus, including a settling tank; a chemical tank; a float tank; independent means for conveying liquid to the chemical and float tanks; mechanism for effecting increasing flow of liquid into the chemical tank to displace liquid in the chemical tank and cause the increased flow thereof from the chemical tank to compensate for the reduction of strength of the chemical in the chemical tank; and float mechanism in the float tank governing the aforesaid mechanism.

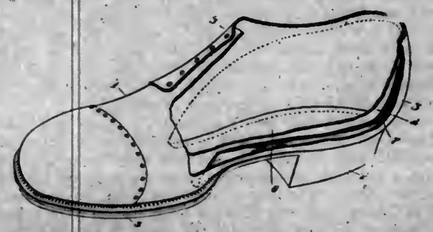


2. A liquid treating apparatus, including a settling tank; a chemical tank; a regulating tank; independent means for conveying liquid to the chemical and regulating tanks; mechanism for effecting increasing flow of liquid into the chemical tank to displace liquid in the chemical tank and cause the increased flow thereof from the chemical tank to compensate for the reduction of strength of the chemical in the chemical tank; and regulating mechanism governed by the liquid in the regulating tank and in turn governing the operation of the aforesaid mechanism.

3. A liquid treating apparatus, including a settling tank; a chemical tank; independent means for effecting passage of two streams of liquid, one of which flows into the chemical tank; mechanism for effecting increasing flow of liquid into the chemical tank to displace liquid in the chemical tank and cause the increased flow thereof from the chemical tank to compensate for the reduction of strength of the chemical in the chemical tank; and mechanism governed by the stream of liquid companion to that which flows into the chemical tank and in turn governing the aforesaid mechanism.

4. A liquid treating apparatus, including a settling tank; a chemical tank; means for conveying liquid to the chemical tank; a tapered plug valve for governing the volume of liquid flowing to the chemical tank; and liquid operated mechanism operating the tapered plug valve to cause said valve to admit an increasing volume of liquid into the chemical tank to displace liquid in the chemical tank and cause the increased flow thereof from the chemical tank to compensate for the reduction of strength of the chemical in the chemical tank.

1,017,730. COMBINED COUNTER-STIFFENER AND ARCH-SUPPORT. FRANK BEEBE, Chicago, Ill., assignor of one-fifth to Frank E. Willis, one-fifth to Charles H. Atwood, one-fifth to Frederick W. Krech, and one-fifth to Alfred Brewer, Chicago, Ill. Filed Sept. 25, 1911. Serial No. 651,057. (Cl. 36—68.)



1. The combination with a shoe, of a combined counter-stiffener and arch-support therefor formed of sole leather and slightly thicker as to its central portion, and secured between the outside and the inner lining of the shoe, said counter-stiffener and arch-support extending from the first metatarsal bone at the large toe joint around the heel and forwardly to the fifth metatarsal bone at the little toe joint, the rear part of the counter-stiffener and arch-support serving as a counter-stiffener and the sides thereof as an arch-support, said sides extending above the cuboid and scaphoid bones and tapering from thence gradually downwardly to said toe joints, said arch-support bracing and supporting the arch structure of the foot equally and yieldably on both sides of the arch structure including said cuboid and scaphoid bones.

2. The combination with a shoe, of a combined counter-stiffener and arch-support therefor formed of leather, secured within the shoe, and extending from the large toe joint rearwardly around the heel and forwardly to the little toe joint, the sides of said counter-stiffener and arch-support being of a width to extend above the cuboid and scaphoid bones and sloping downwardly toward the toe joint, the rear of said counter-stiffener and arch-support serving as a counter-stiffener and the sides thereof bracing and supporting the arch structure of the foot equally and yieldingly on both sides of the arch structure.

1,017,731. DAMPER-REGULATOR. GEORGE W. BIGELOW, New Haven, Conn. Filed May 8, 1911. Serial No. 625,680. (Cl. 236—8.)

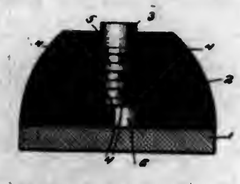
1. In a damper actuating mechanism, the combination with a casing; of a primary valve normally resting on a valve seat in said casing, and acting as a closure between the pipe connection above the primary valve and water passages within said casing; means, comprising a piston, having a physical connection with said primary valve, operated at a predetermined boiler pressure, to lift said valve off its seat; a secondary valve within said casing, arranged with reference to the aforesaid water passages, so as to admit or discharge water into or from the said casing; and a normally open outlet pipe leading therefrom, said casing being provided with a relief port between one of said water passages and said outlet pipe to relieve the pressure against said secondary valve and allow it to be seated by spring means.

2. In a damper actuating mechanism, the combination with a valve casing, having water passages therein and a normally open outlet pipe leading therefrom; of a primary valve, operative in a normally closed water chamber within said casing, and having an annular groove in the stem thereof; a spring within said chamber for holding said valve upon its seat; a secondary valve; a spring for normally holding said valve upon its seat; a water passage entering the valve casing and leading into said water chamber; a diaphragm piston controlled by the

boiler pressure, and upon the upper surface of which rests the stem of the said primary valve; and a spring for returning said diaphragm piston to its rest position.

3. In a damper actuating mechanism, the combination with a valve casing, having water inlet and outlet pipes connected therewith and water passages therein; a primary valve with a stem of reduced diameter for a portion of its length movably mounted within said casing, operated in one direction by the boiler pressure, and in the other direction by water pressure with the said reduced portion of said valve stem opposite one of said water passages; a secondary valve, also movably mounted therein, and operated in one direction by the pressure of the water passing through said primary valve and connected therewith by one or more of said water passages; and a diaphragm piston, arranged so that the stem of said primary valve rests thereon.

1,017,732. TIRE. FREDERICK E. BLAISDELL, Philadelphia, Pa. Filed Jan. 31, 1911. Serial No. 605,694. (Cl. 152—2.)



1. An anti-skidding stud for tires having an elastic cover wound thereon under tension.

2. An anti-skidding stud for tires and having an elastic cover wound thereon under tension, the outer surface of the stud uneven, whereby the cover interlocks with the surface thereof.

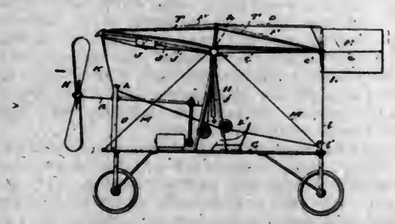
3. A tire having an opening therein, a stud, an elastic covering secured on said stud, and said elastic covering secured in said opening, said stud terminating short of the inner end of the opening forming a clearance space, and at its other end extending out beyond the tire.

4. A tire having a plurality of openings therein, elastically covered studs secured in said openings extending beyond the outer face of the tire, and said studs with their coverings terminating short of the inner ends of the openings, whereby pockets are formed of substantially the same diameter as the covered studs.

5. An elastic tire having a plurality of openings extending entirely through the same, and studs secured in said openings projecting beyond the face of the tire, and at their inner ends terminating short of the inner ends of the openings.

[Claim 6 not printed in the Gazette.]

1,017,733. AEROPLANE. ERNST C. F. W. BLIESATH, Seattle, Wash. Filed June 19, 1911. Serial No. 634,046. (Cl. 244—12.)



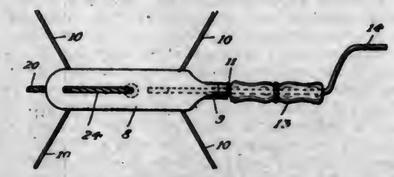
1. A supporting plane for aeroplanes rectangular in plan having its front and rear edges normally in the same horizontal plane and in a higher horizontal plane than the transverse axis of the supporting plane, the sides of said plane being hipped on said axis and inclined upwardly from the body of the plane and from the four corners or angles thereof.

2. A supporting plane for aeroplanes composed of four planes rigidly fixed to a frame in common the front and rear planes forming trapezoids while the planes at each side are triangular and inclined upwardly and outwardly from the converging sides of said trapezoids.

3. A supporting plane composed of the front and rear planes and the side planes hipped on their transverse axes, the spar projected on the transverse axis of the supporting plane, the parallel spars in front and rear, and the ribs connecting said spars, the diagonally placed spars, and means for bracing and holding said spars in position.

4. In an aeroplane the combination of the parallel transverse spars, the intermediate transverse spar placed midway between said parallel spars having projecting ends, the ribs connecting the two parallel transverse spars and bearing upon the under side of said intermediate spar, the diagonally placed spars, the spreader spars, a centrally located mast secured to said intermediate spar, braces connecting said mast, spars, and the extended ends of said transverse spar, a carriage mounted pendulous of said transverse spar, stays extending from the ends of said transverse spar to opposite ends of said carriage, a weight adjustably mounted on the longitudinal axis of the carriage, means for tilting the supporting plane on its transverse axis and means for steering the aeroplane.

1,017,734. CLOTHES-LINE REEL. WILLIAM BOSS, St. Paul, Minn. Filed Apr. 14, 1911. Serial No. 620,996. (Cl. 242—96.)



1. A clothes-line reel comprising a body of relatively flat and narrow form, arms formed of wires both ends of which are seated in the narrower edges of said body to form closed loops extending angularly therefrom at each corner of said body, means secured to the body for rotating the same, and means on the rotating means for supporting the reel by the hand while the body is being rotated.

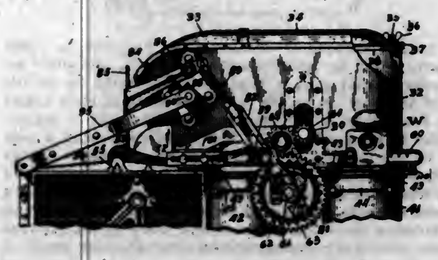
2. A clothes-line reel comprising a body of relatively flat and narrow form, arms extending angularly therefrom at each corner of said body, said body being provided with means for securing the line to said body with a loop of said line lying longitudinally of said body, means secured to the body for rotating the same, and means on the rotating means for supporting the reel by the hand while the body is being rotated.

3. A clothes-line reel comprising a body and arms thereon for holding the line, a spindle fast in said body provided with a crank handle, said body being provided with means for securing the line to said body with a loop of said line lying longitudinally of said body, and means on said crank handle whereby when said loop is drawn over a supporting member for the line and the line thereby is stretched said means will coöperate with the line to hold the same in stretched condition.

4. A clothes-line reel comprising a body and arms thereon for holding the line, a spindle fast in said body provided with a crank handle, said body being provided with a plurality of transverse holes for securing the line to the body with a loop of said line lying longitudinally of said body, said crank handle being formed with a bend to engage the line and hold the same in stretched condition when said loop has been drawn over a supporting member for the line and the line stretched by extending said loop.

5. A clothes-line reel comprising a body of relatively flat and narrow form having a reduced cylindrical portion at one end thereof, arms on the body for sustaining the outer coils of the line, a spindle fast in said body and extending centrally through said cylindrical portion, said spindle being formed with a crank handle at the free end thereof, the shank of said crank handle being provided with a line-engaging bend, and a hand piece rotatably mounted on the spindle between said cylindrical portion and crank handle.

1,017,735. GRAIN ELEVATOR AND WEIGHER. CHESTER BRADFORD and GEORGE L. CHATFIELD, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Filed Apr. 2, 1906. Serial No. 309,412. (Cl. 73—179.)



1. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, the valves thereof, and a tripping mechanism for said valves, said tripping mechanism embodying a trip shaft, a combined gear-and-clutch member loosely mounted thereon, means whereby the same is driven continuously from the elevator shaft, a member fixedly mounted on the trip shaft and carrying a second clutch part, a finger on said second clutch part, a trip arm carried rigidly by the weighing mechanism and extending into the path of said finger, and a spring carried by said member fixedly mounted on the trip shaft whereby when said tripping finger is raised out of contact with said second clutch part the latter will be thrown forward and engage with the first-named clutch part.

2. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, a trip mechanism driven from said elevating mechanism and embodying a constantly rotating clutch member, a shaft on which said clutch member is loosely mounted, a second clutch member rotating with said shaft, an arm carried by the scale beam extending into the path of a finger on said second clutch member, said first clutch member being in the form of a flange having an internal operating face, and said second clutch member being in the form of an arm having a portion which extends within and is adapted to engage with said face.

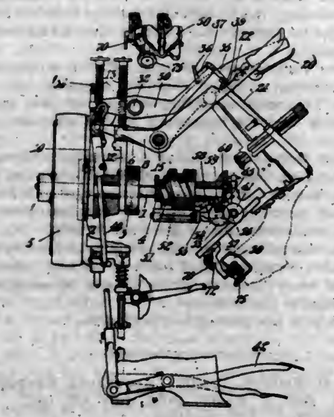
3. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, and a trip mechanism driven from said elevating mechanism and embodying a constantly rotating clutch member, a shaft on which said clutch member is loosely mounted, a second clutch member rotating with said shaft, and an arm carried by the scale beam extending into the path of a finger on said second clutch member, said first clutch member being in the form of a flange having an internal serrated operating face, and said second clutch member being in the form of an arm having a portion which extends within and is adapted to engage with the serrations in said face.

4. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, a tripping mechanism driven from the elevating mechanism, an arm extending out from the weigher adapted to engage with one clutch member of the tripping mechanism, a spring adapted to throw said clutch members into engagement when said arm is removed from the path of said member, and a detent pivotally mounted alongside said second clutch member and arranged to prevent a retrograde movement of said clutch parts.

5. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, and a tripping mechanism for the valves thereof, said tripping mechanism embodying a trip shaft, a clutch member loosely mounted thereon, means whereby the same is driven continuously from the elevator shaft, a member fixedly mounted on the trip shaft and carrying a second clutch part consisting of a shouldered finger, a trip arm mounted on the scale beam extending into the path of said shouldered finger, and a spring carried by the member fixedly mounted on the trip shaft whereby when said arm is raised out of contact with said finger the latter will be thrown forward and its shoulder caused to engage with the first-named clutch part.

[Claims 6 and 7 not printed in the Gazette.]

1,017,736. PULLING-OVER MACHINE. ELI BROTHERS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 18, 1910. Serial No. 562,072. (Cl. 12—4.)



1. A pulling-over machine having, in combination, toe and side grippers, means for actuating said grippers to pull the upper and means for automatically releasing the toe gripper while the side grippers continue to hold the upper said machine having provision for manually re-engaging the toe gripper with the upper, and means for effecting overdrawing and securing of the upper at the toe and sides of the shoe.

2. A pulling-over machine having, in combination, toe and side grippers, means for actuating the toe gripper to pull the upper lengthwise, means for subsequently actuating the side grippers to pull the upper and means for automatically releasing the toe gripper from the upper while the side grippers hold it.

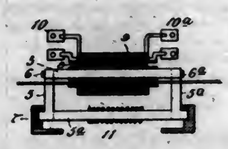
3. A pulling-over machine having, in combination, toe and side grippers, means for actuating the toe gripper to pull the upper lengthwise, means for subsequently actuating the side grippers to pull the upper and means for automatically relieving the longitudinal tension on the upper while the transverse tension is maintained.

4. A pulling-over machine having, in combination, toe and side grippers, means for actuating the toe gripper to pull the upper lengthwise, means for subsequently actuating the side grippers to pull the upper and means for automatically relieving the longitudinal tension effected by the toe gripper while the side grippers are moving to pull the upper transversely.

5. A pulling-over machine, having, in combination, the toe gripper, the lever 8 from which it is suspended, the cam 3 and slide 12 from which the lever is rocked, the unlocking lever 20, and the adjustable member 34 for actuating the unlocking lever at a selected time in the operation of the machine.

[Claims 6 to 29 not printed in the Gazette.]

1,017,737. SERIES TRANSFORMER. GEORGE AUGUSTUS BURNHAM, Cliftondale, Mass., assignor to Sears B. Condit, Jr., Brookline, Mass. Filed Feb. 8, 1911. Serial No. 607,368. (Cl. 171—124.)



1. A series transformer having a primary winding, a secondary winding, and a closed circuited coil to preserve its ratio of transformation under change of load.

2. A series transformer having a primary winding, a secondary winding, and an adjustable short circuited compensating coil to preserve the ratio of transformation of the transformer.

3. A series transformer having a primary winding, a secondary winding, a closed circuited compensating coil to preserve the ratio of transformation of the transformer, and a variable impedance in the compensating circuit.

4. A series transformer having a primary winding, a secondary winding and a closed circuited compensating winding placed over a different part of the core to increase the magnetic potential across the air gap and preserve the ratio of transformation of the transformer.

5. A series transformer having primary and secondary windings and a closed circuited tertiary winding, whereby the ratio of transformation under change of secondary load is practically uniform.

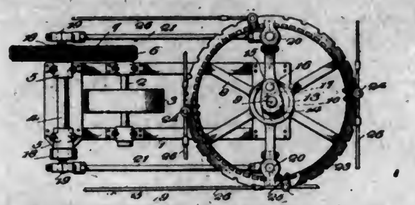
[Claims 6 to 8 not printed in the Gazette.]

1,017,738. GARMENT-HOOK. ALEXANDER KESTERSON CHAPMAN, Seattle, Wash. Filed July 12, 1911. Serial No. 638,107. (Cl. 24—228.)

A garment hook having a body comprising two substantially parallel lengths of the same wire, a set of thread holding loops formed integral with said body at each end thereof, a connecting brace formed integral with one set of said loops and disposed over said body and the terminating end of the wire forming one of the loops of the second set disposed over said body and bent downwardly in the other loop of the second set of said loops and then bent inwardly and disposed beneath the body forming a rigid connection between the two loops of the second set.

1,017,739. PUMPING-POWER. CHARLES E. CLARK, Wellsville, N. Y. Filed Nov. 10, 1908. Serial No. 461,930. (Cl. 74—5.)

1. In apparatus of the character described, a crank shaft, means for rotating said crank shaft, oppositely set cranks on said shaft, a master wheel mounted for oscillation about its center, inelastic operative connections between said shaft and wheel comprising a pair of pitmen universally connected to said respective cranks and universally connected to opposite sides of said master wheel, said connections simultaneously tending to shorten at certain parts of the stroke and to lengthen at others, and means to compensate for this tendency.



2. In apparatus of the character described, a crank shaft, means for rotating said crank shaft, oppositely set cranks on said shaft, a master wheel mounted for oscillation about its center and lying in a plane at right angles to the planes of the cranks, inelastic operative connections between said cranks and wheel comprising a pair of pitmen universally connected to said respective cranks and to opposite sides of the master wheel, the connection between each pitman and the master wheel comprising a universal joint, and means for alternately increasing and decreasing the travel of one of said joints during a stroke while alternately decreasing and increasing the travel of the other of said joints.

3. In apparatus of the character described, a horizontal crank shaft, a vertical pin, a master wheel mounted for oscillation about the said pin, and universal inelastic operative connections between said crank shaft and master wheel comprising a pitman and a universal joint in the connections between said pitman and master wheel having a point located at one part of the stroke in a diameter of the master wheel through the axis of said pin and at another part of the stroke in a line parallel to the said diameter but nearer the crank shaft than the axis of said pin, and means for causing the joint to change its position automatically during the stroke to vary the location of the point as stated.

4. In apparatus of the character described, a crank shaft, means for rotating said shaft, a master wheel, a center pin on which said master wheel is mounted for oscillation, oppositely located wrist pins supported from the wheel, operative connections between said crank shaft and pins, the location and mounting of the parts being such that the plane through the wrist pin centers contains the axis of the center pin at the extreme or dead center points of the stroke but is in advance of the said axis at mid or quarter stroke.

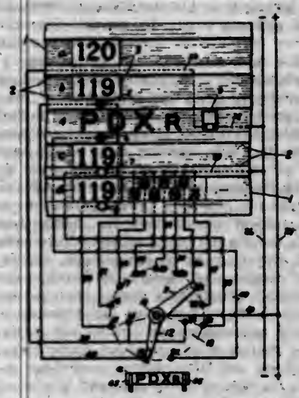
5. In apparatus of the character described, a crank shaft, means for rotating said shaft, a master wheel mounted for oscillation about a fixed center at a distance from said crank shaft, and connections between said shaft and wheel for oscillating the latter said wheel being also free to move bodily and automatically toward said crank shaft in the operation of the machine.

[Claims 6 to 13 not printed in the Gazette.]

1,017,740. ELECTRIC STOCK-QUOTATION BOARD. MELVIN D. COMPTON, New York, N. Y. Filed Mar. 19, 1910. Serial No. 550,542. (Cl. 177—327.)

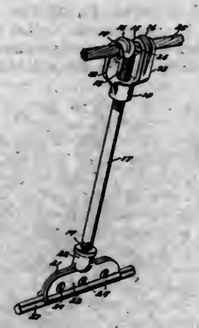
1. An electrical stock-board comprising the combination of a board having upon it the name of a stock, quotation cards indicating digits, means for detachably applying the quotation cards to the board, translucent plates having fractional quotations and having lamps for illuminating them and arranged to the right of one of the cards, lamps spaced above and below the name of the stock to indicate whether it is rising or falling, and a switch and electrical connections for successively lighting and extinguishing the

first mentioned lights to show fractional changes and for continuing the illumination of one or the other of the last mentioned lamps to show whether the fractional changes are upward or downward.



2. An electrical stock-board comprising the combination of a board having upon it the name of a stock, quotation cards indicating digits, means for detachably applying the quotation cards to the board, translucent plates having fractional quotations and having lamps for illuminating them and arranged to the right of one of the cards, lamps spaced above and below the name of the stock to indicate whether it is rising or falling, a switch and electrical connections for successively lighting and extinguishing the first mentioned lights to show fractional changes and for continuing the illumination of one or the other of the last mentioned lamps to show whether the fractional changes are upward or downward, and signaling means arranged on the board and having electrical connections to the switch for signaling to the operator upon the completion of a movement in either direction of the switch whereby he may be advised to change a quotation card.

1,017,741. SUSPENSION DEVICE FOR TROLLEY-WIRES AND THE LIKE. FRANCIS S. DENNEEN, Mansfield, Ohio. Filed Dec. 20, 1906. Serial No. 348,683. (Cl. 191—1.)



1. In a device of the class described, the combination of a wire, a clip having a hook-shaped portion removably engaging over the wire, said clip having a threaded aperture therethrough and adjacent the hook-shaped portion, a member threaded through said aperture with its extremity in close proximity to the opening of the hook shaped portion and extending in a direction lengthwise of the body or shank of the hook, said member being adapted to be adjusted into engagement with the wire and past the extremity of the hook to coöperate with the hook to clamp the wire and also adapted to be adjusted away from the wire so that its extremity will stand in substantially the same horizontal plane as the extremity of the hook to permit the clip to hang loosely upon the wire and to hold the clip against lateral displacement with respect to the wire, and a conductor clamp supported by the free end of said member.

2. In a device of the class described, the combination of a wire, a clip having a hook-shaped portion removably engaging over the wire, said clip having a threaded aperture therethrough and adjacent the hook-shaped portion, a member threaded through said aperture with its extremity in close proximity to the opening of the hook-shaped portion and extending in a direction lengthwise of the body or shank of the hook, said member being adapted to be adjusted into engagement with the wire and past the extremity of the hook to coöperate with the hook to clamp the wire and with its extremity below the plane of the upper edge of the hook-shaped portion, and also adapted to be adjusted away from the wire so that its extremity will stand in substantially the same horizontal plane as the the extremity of the hook to permit the clip to hang loosely upon the wire and to hold the clip against lateral displacement with respect to the wire, and a conductor clamp supported by the free end of said member.

3. In a device of the class described, the combination of a wire, a clip having spaced hook-spaced hook-shaped portions engaging over the wire and with the openings of the hooks oppositely disposed with respect to each other, said clip having a threaded aperture between the hook-shaped portions, a member threaded through the aperture with its extremity in close proximity to the open side of both of the hook-shaped portions and extending in a direction lengthwise of the body or shank of the hook, said member being adapted to be adjusted into engagement with the wire and past the extremity of both of the hooks to coöperate with the hooks to clamp the wire, and also adapted to be adjusted away from the wire so that its extremity will stand in substantially the same horizontal plane as the extremity of both of the hooks to permit the clip to hang loosely upon the wire and to hold the clip against lateral displacement with respect to the wire, and a conductor clamp supported by the free end of said member.

4. In a device of the class described, the combination of a wire, a clip having spaced hook-shaped portions engaging over the wire and with the openings of the hooks oppositely disposed with respect to each other, said clip having a threaded aperture between the hook-shaped portions, a member threaded through the aperture with its extremity in close proximity to the openings of both of the hook-shaped portions and extending in a direction lengthwise of the body or shank of the hook, said member being adapted to be adjusted into engagement with the wire and past the extremity of both of the hooks, to coöperate with the hooks to clamp the wire and with its extremity below the plane of the upper edges of the hook-shaped portions, and also adapted to be adjusted away from the wire so that its extremity will stand in substantially the same horizontal plane as the extremity of both of the hooks to permit the clip to hang loosely upon the wire and to hold the clip against lateral displacement with respect to the wire, and a conductor clamp supported by the free end of said member.

1,017,742. METHOD OF MAKING BOOTS AND SHOES. FRANK E. EWELL, East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 11, 1909. Serial No. 517,230. (Cl. 12—142.)

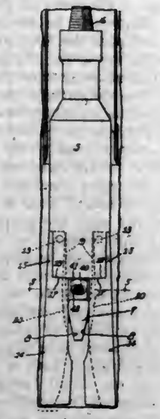
1. The process of making boots and shoes which consists in molding a marginal portion around the heel seat face of the heel arranged to be out of contact with the outer sole of the shoe after the heel is attached thereto, attaching the heel to the shoe and thereafter trimming the heel employing the peripheral recess formed between the heel and the shoe to coöperate with the guard of

the trimming tool in positioning the shoe relative to said tool.

2. The process of making boots and shoes of the type in which the rear portion of the outersole projects beyond the heel which consists in forming a marginal portion around the edge of the heel arranged to be out of contact with the shoe after the heel is attached to the shoe, attaching the heel to the shoe and thereafter trimming the heel employing the marginal recess formed between the heel and shoe in coöperation with the guard of the trimming tool to assist the operator in positioning the shoe relative to the tool.

3. The process of making boots and shoes of the type in which the rear portion of the outersole projects beyond the heel which consists in molding a marginal portion around the heel seat face of the heel arranged to intersect the usual concavity in said face, attaching the heel to the shoe and thereafter trimming the heel employing the peripheral recess between the heel and shoe in coöperation with the guard of the trimming tool to assist the operator in positioning the shoe relative to the tool.

1,017,743. UNDERREAMER. LARRY FITZGERALD, Whittier, Cal. Filed Apr. 15, 1911. Serial No. 621,279. (Cl. 166—6.)



1. An under-reamer, comprising a mandrel, a tongue projecting centrally from the lower end of the mandrel and of smaller size than the mandrel so as to form downwardly facing shoulders, there being recesses in the mandrel directly above opposite sides of the tongue, cutters loosely pivoted to the mandrel with their upper portions in said recesses, the lower portions of the cutters being enlarged to present upwardly facing shoulders which bear against the downwardly facing shoulders of the mandrel, the lower inner portions of the cutters bearing against the tongue, spring means for expanding the cutters, a pin projecting from the tongue, and slotted extensions on the cutters and engaging the pin.

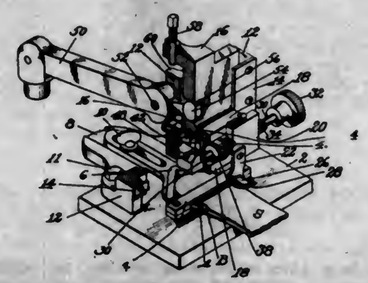
2. An under-reamer, comprising a mandrel, a tongue projecting centrally from the lower end of the mandrel and of smaller size than the mandrel so as to form downwardly facing shoulders, there being recesses in the mandrel directly above opposite sides of the tongue, cutters loosely pivoted to the mandrel with their upper portions in said recesses, the lower portions of the cutters being enlarged to present upwardly facing shoulders which bear against the downwardly facing shoulders of the mandrel, the lower portions of the cutters bearing against the tongue, a compression spring passing through the tongue and pressing outwardly against the cutters, a second compression spring arranged within the mandrel between the said recesses and pressing outwardly on the cutters, and stop means to limit the outward movement of the cutters and located on the cutters between the two springs.

3. An under-reamer, comprising a mandrel, a tongue projecting centrally from the lower end of the mandrel and of smaller size than the mandrel so as to form downwardly facing shoulders, there being recesses in the mandrel directly above opposite sides of the tongue, cutters loosely pivoted to the mandrel with their upper portions in said recesses, the lower portions of the cutters being enlarged to present upwardly facing shoulders which bear against the downwardly facing shoulders of the mandrel, the lower inner portions of the cutters bearing against the tongues, a compression spring passing through the tongue and pressing outwardly against the cutters, a second compression spring arranged within the mandrel between the said recesses and pressing outwardly on the cutters, and stop means to limit the outward movement of the cutters and located on the cutters between the two springs, said stop means comprising a pin projecting from the side of the tongue and slotted extensions from the cutters and engaging the pin.

4. An under-reamer, comprising a mandrel, a pair of cutters loosely pivoted at their upper ends to opposite sides of the mandrel, a compression spring between the cutters and pressing outwardly against them, a second compression spring arranged between the cutters below the first mentioned compression spring and pressing outwardly on the lower part of the cutters, and stop means to limit the outward movement of the cutters and located on the cutters between the two springs.

5. An under-reamer, comprising a mandrel, a tongue projecting centrally from the lower end of the mandrel and of smaller size than the mandrel, cutters loosely pivoted to the mandrel at their upper ends and on opposite sides of the tongue, a compression spring passing through the tongue and pressing outwardly against the cutters, another compression spring arranged between the cutters and pressing outwardly on them, the second mentioned compression spring being below the first mentioned compression spring, and stop means to limit the outward movement of the cutters away from the mandrel and located between the two springs.

1,017,744. SOLE-CUTTING MACHINE. PHILIPP FUNCK, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 5, 1908. Serial No. 431,040. (Cl. 12—17.)



1. In a machine of the class described, a sole support and cutting mechanism relatively movable in a direction transverse to the plane of the sole support, said mechanism comprising separated cutting members, a portion of each of which extends substantially longitudinally of the sole whereby pieces of material may be cut out from opposite edges of the sole.

2. In a machine of the class described, a sole support and cutting mechanism relatively movable in a direction transverse to the plane of the sole support and comprising two portions constructed and arranged to cut approximately pyramidal pieces of material from opposite edges of a sole sustained on said support, and thus to form shoulders upon the sole where the bases of the pyramids originally lay.

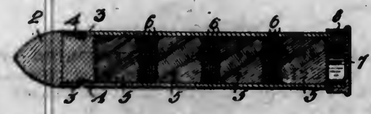
3. In a machine of the class described, a sole support and cutting mechanism relatively movable toward the sole support, said mechanism comprising two separated portions, each of which includes a transverse blade, and being constructed and arranged to cut out pieces of material having plane bases at their rear ends from opposite edges of a sole sustained on said support.

4. In a machine of the class described, means for supporting and positioning a sole in combination with a cutter comprising one blade substantially perpendicular and another blade inclined to the surface of said supporting means, the edges of the blades meeting approximately at right angles and the cutter being movable with relation to the sole supporting means in a plurality of directions in order to make an angular cut in the sole edge.

5. In a machine of the class described, a sole support and a pair of cutters each having angularly disposed cutting edges, said cutters being movable relatively to the sole support in a direction at an angle to its supporting surface and being constructed and arranged to cut a sole at opposite edges.

[Claims 6 to 12 not printed in the Gazette.]

1,017,745. LIFE-LINE PROJECTILE. INGEBRIGT J. GLESUM, Devils Lake, N. D. Filed June 1, 1911. Serial No. 630,586. (Cl. 102—34.)



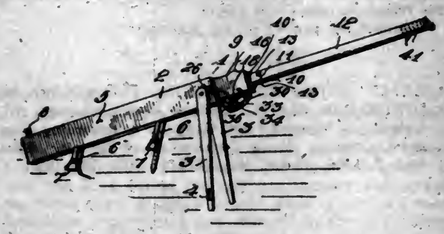
1. A life line projectile comprising a tubular body portion, a line disposed therein arranged in a series of balls having their ends connected together, a series of disks arranged between the balls of the twine forming the line, means to hold the balls firmly pressed together and to prevent the balls from being shaken while in transportation and from sliding out while the projectile is in motion, and means to close and seal the inner end of the projectile.

2. A life line projectile comprising a tubular cylindrical body portion, a head having a detachable engagement with the forward end of said tubular body portion, a line disposed in said tube arranged in the form of a series of balls, the outer end of each of which is connected to the inner end of the next forward ball, means to separate said balls, and to prevent the pressure of the propelling fluid from disturbing or interfering with the proper unwinding of the line, and a cap adapted to close the rear end of the projectile when the latter is not in use.

3. A projectile of the character described comprising a tubular body portion constructed of light material and having its forward end sealed to form a fluid tight closure, a line arranged in said tube, said line comprising a series of balls arranged in the body portion of the projectile, series of loose disks arranged between said balls, a collar arranged in the rear end of the projectile to hold the balls in place, and a removable cap adapted to be applied to the rear end of the tubular body portion of the projectile whereby the rear end of the latter is closed and sealed and the contents thus protected.

1,017,746. PNEUMATIC GUN FOR THROWING LIFE-LINES. INGEBRIOT J. GLESUM, Devils Lake, N. D. Filed June 1, 1911. Serial No. 630,587. (Cl. 89—6.)

1. In a gun of the character described, an air compressing chamber, a valve chamber connected therewith, a pressure retaining valve mounted in said valve chamber and adapted to retain the pressure of air in said air chamber, a catch adapted to be engaged with said valve to hold the same in closed position, a trigger adapted to release said catch, means to actuate said catch whereby the valve is forced into air tight engagement with its seat, a breech detachably engaged with said valve chamber, and a barrel detachably engaged with said breech.



2. In a pneumatic line throwing gun, a stock having arranged therein an air compressing chamber, a valve chamber detachably secured to the inner end of said air compressing chamber, a pressure retaining valve arranged in said valve chamber, a pivotally mounted slidably supported catch adapted to be engaged with said valve, a similarly mounted and supported trigger adapted to release said catch, means to slide said catch into forcible engagement with said valve whereby the latter is held in position to form an air tight closure for said air compressing chamber, a breech detachably engaged with the outer end of said valve chamber, a barrel detachably engaged with said breech, a foldable means to support the gun in operative position, handle attaching straps adapted to be engaged with the stock of the gun when said supporting means are in folded position, and carrying handles secured to said straps whereby the gun may be carried.

3. In a gun of the character described, a stock having arranged therein an air compressing chamber, a valve chamber detachably secured to said air compressing chamber, a breech detachably secured to said valve chamber, a barrel detachably secured to said breech, said barrel having formed in its outer end a series of perforations, a line carrying projectile adapted to be discharged from the barrel of the gun by the pressure of the air from said air compressing compartment, said projectile being relieved from the pressure of the air by the perforations in the end of the barrel and immediately before the projectile leaves said end of the barrel, a valve to control the pressure of air in said air compressing compartment, and means to release said valve.

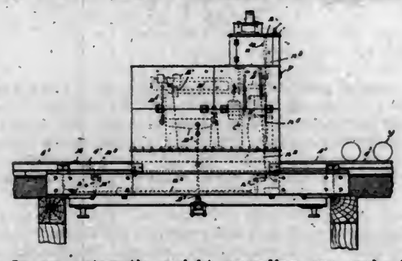
4. In a gun of the character described, a stock having arranged therein an air compressing chamber, a valve chamber detachably secured to said air compressing chamber, a breech detachably secured to said valve chamber, a barrel detachably secured to said breech, a line carrying projectile adapted to be engaged with the inner end of the barrel, a line suitably arranged in said projectile, a line holding bar adapted to be detachably secured in the inner end of the barrel to hold the inner end of the line, a valve arranged in said valve chamber, to control the air in said air compressing chamber, an extension formed on said valve chamber and adapted to receive the valve when forced open by the pressure of the air in said compressing chamber, said valve being adapted to closely fit said extension whereby the air in the latter will form a buffer to cushion the valve, means to hold said valve in closed position against the pressure of the air in said air compressing chamber, and a trigger adapted to release said valve.

5. In a pneumatic line throwing gun, a stock having arranged therein, an air compressing chamber, a valve chamber detachably secured to said stock and air compressing chamber, a breech secured to said valve chamber, a barrel detachably secured to said breech, a valve

seat arranged in said valve chamber, a hingedly supported valve adapted to be engaged with said seat, a slidably mounted catch and trigger supporting member, a valve engaging catch pivotally mounted in said member and adapted to be engaged with said valve to hold the same in closed position, a catch releasing trigger pivotally mounted in said sliding member, and a cam lever adapted to force said member in the proper direction to cause the catch carried thereby to hold said valve in fluid tight engagement with its seat until said catch is actuated by the trigger to release the valve.

[Claim 6 not printed in the Gazette.]

1,017,747. AUTOMATIC WEIGHING AND RECORDING MINING-CAR SCALE. GEORGE GOETZ, Chicago, Ill., assignor to Streeter-Amet Weighing & Recording Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 7, 1908. Serial No. 447,379. (Cl. 73—100.)



1. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, of a track lever on the scale platform, a rock shaft constituting the pivot or fulcrum for said track lever and a rocking bearing on the scale platform supporting the inner or platform end of said rock shaft, substantially as specified.

2. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, of a track lever on the scale platform, a dash-pot connected to said scale beam, said type wheel being above the scale beam and said counterbalance spring below the same and both directly and shortly connected therewith, substantially as specified.

3. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, a releasing trigger for the impression hammer lever, a dash-pot connected with the scale beam, a paper strip feed device, an ink ribbon feed device, a track lever on the scale platform, and connecting mechanism extending from said track lever to said impression hammer lever, to said releasing trigger, to said paper strip feed device and to said ink ribbon feed device, substantially as specified.

4. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, of a track lever on the scale platform, a rock shaft constituting the pivot or fulcrum for said track lever and a rocking bearing on the scale platform supporting the inner or platform end of said rock shaft, a slidably mounted catch and trigger supporting member, a valve engaging catch pivotally mounted in said member and adapted to be engaged with said valve to hold the same in closed position, a catch releasing trigger pivotally mounted in said sliding member, and a cam lever adapted to force said member in the proper direction to cause the catch carried thereby to hold said valve in fluid tight engagement with its seat until said catch is actuated by the trigger to release the valve.

5. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, a dash-pot connected with the scale beam, a paper strip feed device, an ink ribbon feed device, a track lever on the scale platform, and connecting mechanism extending from said track lever to said impression hammer, to said releasing trigger, to said paper strip feed device and to said ink ribbon feed device, said connecting mechanism including a counter bar carrying a pawl, a ratchet actuated thereby and a cam shaft having a raising cam and a releasing cam, substantially as specified.

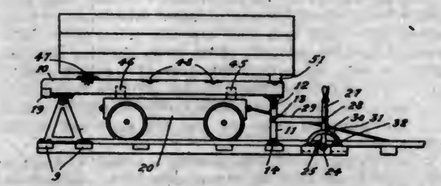
6. In an automatic weight recording car scale for weighing cars under action, the combination with a scale platform having track rails thereon, scale beam connected therewith, counterbalance spring and type wheel connected with said scale beam, stationary indicator type adjacent said type wheel, impression hammer and impression hammer lever, a dash-pot connected with the scale beam, a paper strip feed device, an ink ribbon feed device, a track lever on the scale platform, and connecting mechanism extending from said track lever to said impression hammer, to said releasing trigger, to said paper strip feed device and to said ink ribbon feed device, said connecting mechanism including a counter bar carrying a pawl, a ratchet actuated thereby and a cam shaft having a raising cam and a releasing cam, and also a check ratchet and check pawl, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,017,748. PROCESS OF CASE-HARDENING METALS AND ALLOYS. MAXIMILIAN GRÄF and OTTO PESCHEL, Tezel, near Berlin, Germany. Filed Oct. 17, 1910. Serial No. 587,617. (Cl. 148—25.)

The process of case hardening metals consisting in increasing the metal in small wood in fibered form impregnated with an ignifuge together with additions of soda and colophony and bringing the metal to incandescence.

1,017,749. MACHINE FOR TRANSFERRING LOADS OF MATERIAL. FRANK E. GUNTHER, Minneapolis, Minn. Filed Feb. 28, 1911. Serial No. 611,462. (Cl. 214—1.)



1. In combination with a truck for transporting material, oscillating means positioned above the top plane of the truck for receiving material, means to oscillate said receiving means so as to cause one end of the material to rest upon the truck, and a rotatable member on the receiving means holding the other end of the material and adapted to release the material and permit the same to be transferred to the truck when said truck is withdrawn from beneath said receiving means.

2. In combination with a truck for transporting material, standards, a material-supporting frame sustained by said standards above the top plane of the truck, a roller upon the frame above the forward standards and a cross piece loose on the frame above the rear standards upon which the material is directly supported, and means to shorten the effective length of the rear standards to lower the rear end of the frame and bring the material into contact with the truck, said roller operating to permit the material to be released from the frame and transferred to the truck when the said truck is withdrawn from beneath said frame.

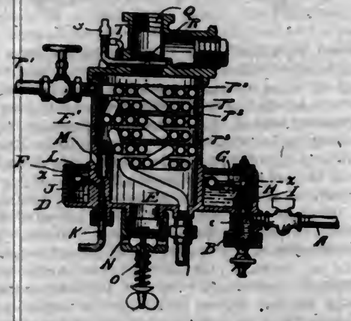
3. In combination with a truck for transporting material, a base frame having standards thereon, a material-supporting table carried by said standards above the top plane of the truck, said table comprising side members secured together at one end only and crossbars loosely mounted on said side members upon which the material is directly placed, and means for lowering said table to bring the material thereon into contact with the truck.

4. In combination with a truck for transporting material, a base frame having standards thereon, a material-supporting table carried by said standards above the top plane of the truck, said table comprising side members secured together at one end only and crossbars loosely mounted on said side members upon which the material is directly placed, said side members being spaced apart so as to come outside the truck on both sides thereof, and means for lowering said table to bring the material thereon into contact with the truck.

5. In combination with a truck for transporting material, a lower frame comprising longitudinal base members spaced apart to receive the truck between them, a pair of front standards rigidly secured to said base members, a pair of rear standards pivotally secured to said base members and each comprising a jointed member, a material-receiving frame pivoted to said front standards at one end and pivoted to said rear standards at the other end of said frame, a rod journaled in said base members having arms, one or both of which may include a hand lever, and links pivotally connecting said arms with said jointed standards whereby said joints may simultaneously be broken to lower the rear end of said frame and bring the material thereon into transferring engagement with the truck.

[Claim 6 not printed in the Gazette.]

1,017,750. MIXER FOR GASEOUS FUEL. GEORGE T. HANCHETT, Hackensack, N. J. Filed July 16, 1908. Serial No. 443,748. (Cl. 48—180.)



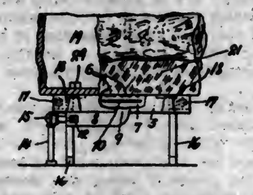
1. In a device of the character described, the combination of a carbureter casing having a chamber therein, a heating coil within said chamber against which mixed air and fuel may impinge, said coil having a plurality of turns in each of several substantially parallel planes and surrounding a common axis, and entrance and exit ports, said coil lying in the path between said entrance and exit ports.

2. In a device of the character described, the combination of a carbureter casing having a chamber, heating coils within said chamber, and metallic screens in direct contact with said coils and against which the mixed air and fuel impinge.

3. In a device of the character described, the combination of a carbureter casing having a heating chamber, heating coils within said chamber adapted to be supplied with water from a water jacket and against which the air and fuel impinge, and means interspersed between turns in the coil within the chamber for retarding the passage of the fuel and air therethrough.

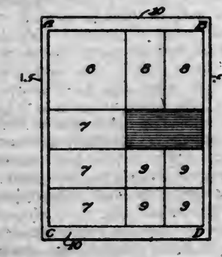
1,017,751. GAS-LOG. OTTO E. HANSEN, Perth Amboy, N. J. Filed July 8, 1911. Serial No. 637,496. (Cl. 126—128.)

1. The combination of a metal burner member having ignition openings at the top, supporting legs bolted to the said member for the support thereof, an upper artificial log member adjustably secured to the said legs and having a forwardly curved surface overhanging the said ignition openings and provided with a coating of non-burnable material.



2. The combination of a metal burner having a longitudinal inner gas chamber with ignition openings at the top, a fuel inlet formed at the bottom of the said burner, a baffle plate having a narrow slot supported above the said fuel inlet within the said gas chamber and extending for a slight distance to both sides of the said inlet, means for supplying a fuel mixture to the said burner, metal legs for supporting the latter, an artificial log member supported on the front of the said burner, a second artificial log member adjustably bolted to the said supporting legs and having a forwardly inclined surface overhanging the said ignition openings and provided with a coating of non-burnable material.

1,017,752. PUZZLE. LEWIS W. HARDY, Chicago, Ill., assignor to O. K. Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1907. Serial No. 406,438. (Cl. 46—41.)



1. In a movable block puzzle the combination of a suitably confined, substantially parallelogram-shaped field for movement of the blocks, with ten movable blocks of dimensions substantially as follows: one block measuring one-half of the width of said field one way, and two-fifths of its length the other way; three blocks measuring each one-half of the width of said field one way, and one-fifth of its length the other way; two blocks measuring each one-fourth of the width of said field one way, and two-fifths of its length the other way; and four blocks measuring each one-fourth of the width of said field one way, and one-fifth of its length the other way.

2. In a movable block puzzle the combination of a suitably confined, substantially parallelogram-shaped field for movement of the blocks, with ten parallelogram-shaped movable blocks of angles corresponding to those of the confined field aforesaid, and of dimensions substantially as follows: one block measuring one-half of the width of said field one way, and two-fifths of its length the other way; three blocks measuring each one-half of the width of said field one way, and one-fifth of its length the other way; two blocks measuring each one-fourth of the width of said field one way, and two-fifths of its length the other way; and four blocks measuring each one-fourth of the width of said field one way, and one-fifth of its length the other way.

3. In a movable block puzzle the combination of a suitably confined parallelogram-shaped field for movement of the blocks, with one parallelogram-shaped block

covering one-fifth of said field; five parallelogram-shaped blocks covering each one-tenth of said field; and four parallelogram-shaped blocks covering each one-twentieth of said field.

4. In a movable block puzzle the combination of a parallelogram-shaped box of suitable depth with a group of ten blocks which practically fill nine-tenths of the confines of said box, said group consisting of three different units in size, each a divisional or multiple part of the other, all arranged as and for the purposes substantially as specified.

5. In a movable block puzzle the combination of a parallelogram-shaped box of suitable depth with a group of ten blocks which practically fill nine-tenths of the confines of said box, said group being composed of a major block and two groups of lesser size blocks, said lesser blocks being divisional units of said major block, all arranged as and for the purposes substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,017,758. SCRAPING DEVICE FOR CANS AND THE LIKE. ALBERT V. HARRISON, West Orange, N. J. Filed Mar. 9, 1911. Serial No. 613,421. (Cl. 62—4.)

1. A scraper consisting of a single horizontal spring arm adapted to embrace a receptacle substantially parallel with its top edge, and a scraper-plate approximately vertically arranged and secured to the spring arms so that when the spring arm is in place the scraper-plate is over the top of the receptacle.

2. A scraper consisting of a sheet of metal bent to form a substantially vertical scraper-plate, obliquely arranged loops at the bottom of the scraper-plate and at its opposite ends, and a curved horizontal spring arm secured to the loops, said spring arm being adapted to clasp a receptacle at its top.

3. A scraper consisting of a sheet of metal bent to form a substantially vertical scraper-plate with loops projecting from its ends, and a spring arm adapted to embrace the top of a receptacle, said spring arm connecting the loops and projecting beyond them.

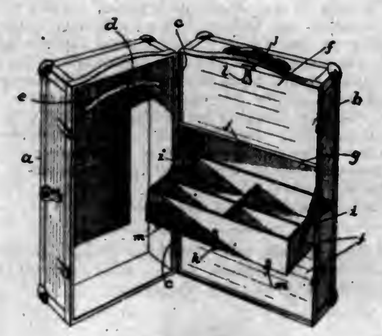
1,017,754. CURTAIN-HEADING TAPE. HENRY A. HART, Flushing, N. Y., assignor of one-half to Elliott C. Carter, New York, N. Y. Filed Nov. 16, 1910. Serial No. 592,618. (Cl. 156—21.)

1. As a new article of manufacture, a curtain heading tape comprising a strip of fabric with a plurality of spaced pins attached thereto, said pins having legs normally projecting from said tape but adapted to be readily clenched, substantially as and for the purpose described.

2. As a new article of manufacture, a curtain heading tape comprising a strip of fabric with a plurality of spaced pins attached thereto, the heads of the pins being between plies of the strip, substantially as and for the purpose described.

3. As a new article of manufacture, a curtain heading tape comprising a strip of fabric with a plurality of spaced pins attached thereto, said pins having points normally projecting through a central portion of the strip and the edges of the strip being overlapped upon the outside of the heads of the pins and stitched fast, substantially as and for the purpose described.

1,017,755. WARDROBE-TRUNK. EUGENE W. HAWLEY, Philadelphia, Pa. Filed June 18, 1911. Serial No. 632,964. (Cl. 190—13.)



1. In a wardrobe trunk, the combination with the two hinged compartments thereof adapted to stand upright on end, of boxes arranged one above the other within the space inclosed by one compartment and pivoted to its side walls near the front edges thereof and adapted to tilt forward to bring their centers of gravity outside the base of the trunk body, of means connected to said compartments adapted to permit the compartments to be swung into an open position and limit the extent of said opening movement, whereby in a trunk of relatively shallow depth capacious receptacles may be provided without sacrifice of the stability of the trunk during access thereto.

2. In a wardrobe trunk, the combination with the two hinged compartments thereof adapted to stand upright on end, of boxes arranged one above the other and pivotally supported in one of said compartments with their centers of gravity outside the base of the trunk, said boxes being of a depth approximating that of the compartment in which they are pivoted and being also of great width relatively to their depth, the pivots of the boxes being spaced apart a distance approximating their width thereby permitting the same to fold inwardly and approximately fill the compartment, and means connected to said compartments permitting the compartments to swing into an open position and limiting the extent of said opening movement, whereby capacious receptacles may be adapted to a trunk of relatively shallow depth without sacrifice of the stability of the trunk during access to the boxes.

3. In a wardrobe trunk, the combination with the two hinged compartments thereof adapted to stand upright on end, boxes arranged one above the other and occupying substantially all the space inclosed by one compartment, each of said boxes being pivoted to the side walls of said compartment near the front edges thereof and adapted to tilt forward to bring its center of gravity outside the base of the trunk body, of members connected to the hinged walls of the two compartments comprising a stop and an abutment adapted to engage when the compartments are swung into an open position and limit the extent of said opening movement.

1,017,756. COMBINED CLOSURE AND FAUCET. ROBERT HEAD, New York, N. Y., assignor to Pine Hill Crystal Spring Water Co., New York, N. Y., a Corporation of New York. Filed Aug. 3, 1910. Serial No. 575,822. (Cl. 225—22.)

1. A faucet provided with a liquid passage, a valve for controlling the flow of liquid through said passage, an air passage in said faucet for admitting air to a container to replace the liquid which flows from the container through the faucet, the delivery end of said air passage being adapted to be positioned within the container and below the level of the liquid in said container, and a single valve for controlling the flow of air through said passage, said valve being spring pressed and positioned at the delivery end of the air passage.

2. A faucet provided with a liquid passage, a valve for controlling the flow of liquid through said passage, an air passage for admitting air to a container to replace the liquid which flows from the container through the faucet, the delivery end of said air passage being adapted to be positioned within the container and below the level of the liquid in said container, a valve at the delivery end of said air passage, a spring for placing tension on said valve, and means for positively operating said spring so as to relieve the valve from tension.

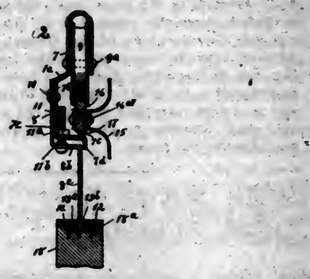
3. A faucet provided with a liquid passage, an air passage in said faucet, the delivery end of said air passage being adapted to be positioned below the liquid in a container, a single valve in said passage and positioned at the delivery end of the passage for precluding the admission of liquid thereto, and means for placing tension on said valve.

4. A faucet provided with a liquid passage, an air passage the delivery end of which is adapted to be positioned below the liquid in a container, a valve at the delivery end of the air passage for precluding the admission of liquid to said air passage, means for placing tension on the valve, and a device for positively removing tension from the valve.

5. A faucet provided with a liquid passage, a valve for controlling the flow of liquid through said passage, an air passage in said faucet for admitting air to a container to replace the liquid which flows from the container through the faucet, the delivery end of said air passage being positioned within the container and below the level of the liquid in said container, an automatic valve positioned at the delivery end of said air passage for precluding the admission of liquid thereto, means for placing tension on said automatic valve, and means for removing tension from said automatic valve subsequent to the operation of opening the liquid outlet valve.

[Claims 6 to 12 not printed in the Gazette.]

1,017,757. DOOR-HANGER. PETER L. HOFFMAN, Aurora, Ill., assignor, by mesne assignments, to Richards-Wilcox Manufacturing Company. Filed Apr. 7, 1910. Serial No. 553,957. (Cl. 16—7.)

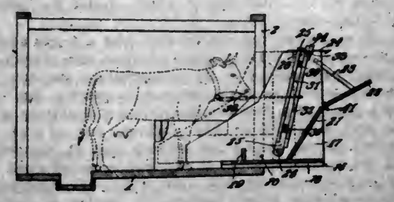


1. In a door-hanger, an upper member comprising a metal plate bent to form a wheel housing and having its lower portion slotted, extending below said housing and bent inwardly to underlie the wheel housing, a wheel mounted in said housing, a lower member comprising a metal plate having its upper portion slotted and adjustably connected with the said upper member, said lower member having a mid-portion at right angles to its upper and lower portions, the angular portions of both of said members having unthreaded openings therein and lying parallel to each other, a bolt passing through said openings, a nut carried by said bolt and engaging the slot in the upper member, and means connecting said lower member with a door.

2. In a door hanger, the combination of a wheel, an upper hanger member bent to form a housing for said wheel, the lower portion of said member extending horizontally beneath said housing, a lower member adjustably connected with said upper member, and having in its lower end a transverse slot, a door plate having a slot adapted to be engaged by the lower end of said door plate and having a stop on its under side, a latch pivoted on the under side of said door plate and constructed to engage the slot in the said lower member and the stop on said door-plate.

3. In a door hanger, the combination with a wheel, a hanger comprising hanger members adjustably connected, a door plate adapted to be screwed to the upper edge of a door and having a slot adapted to be engaged by the lower end of said hanger, a latch pivoted upon the under side of said door plate, a shoulder on said latch adapted to engage a slot in the lower end of the hanger, and a stop on said door-plate for said latch.

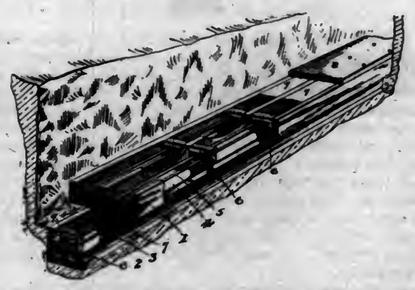
1,017,758. FEEDING DEVICE. WILLIAM S. HOWELL, Troy, N. Y. Filed Jan. 25, 1911. Serial No. 604,666. (Cl. 119—58.)



A device of the class described comprising side walls, one of which is provided with a slot; a frame located between the side walls and pivoted at its lower end to the side walls, the frame having guides in its sides, which guides open through the lower ends of the frame; a securing member movable in the slot and adjustably mounted in the frame, in alinement with the frame to hold

the upper end of the frame in adjusted positions; a rack comprising cross bars terminally mounted to slide in the guides, one bar being engageable by the upper end of the frame to limit the upward movement of the rack, and slats secured to the cross bars, the slats being upwardly extended above the upper end of the frame, and bearing against the rear edge of the frame; an arcuate member inserted into the upper end of the frame, and sourrounding one of the slats, thereby to form a means, auxiliary to the guides, for guiding the rack in its sliding movement; and a wedge insertible between the arcuate member and said slat, whereby to bind all of the slats against the rear edge of the frame.

1,017,759. ELECTRIC CONDUIT. OLIVER T. HUNGERFORD, Belleville, N. J. Filed Sept. 10, 1906. Serial No. 333,955. (Cl. 247—21.)



1. An electric conduit comprising a casing having a channel containing an electric conductor supported at intervals by cross supports or bridge-blocks of fibrous material saturated with a plastic non-conducting substance, and having hard blocks embedded therein immediately surrounding the conductor, the spaces of said channel between said bridge-blocks or supports being filled with a similar plastic non-conducting substance as that with which said bridge-blocks are saturated, substantially as set forth.

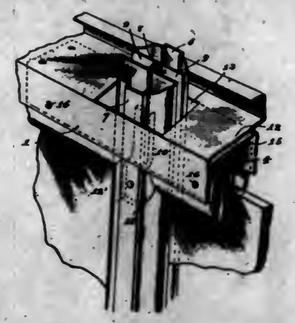
2. A subterranean conduit consisting of a case, having a channel containing an electric conductor supported at intervals by fibrous material saturated with a bituminous compound, and a non-friable bituminous compound of substantially the same nature as that occupying the interstices of the fiber supports surrounding the conductor and filling the channel between the supports and uniting with the matter occupying the interstices of the fiber supports.

1,017,760. FIREPROOF WINDOW WITH DETACHABLE MUNNION-BARS. ORLA H. IMAN, Chicago, Ill., assignor, by mesne assignments, to Frank Voigtmann, Chicago, Ill., and Silas H. Pomeroy, New Rochelle, N. Y. Filed May 2, 1910. Serial No. 559,023. (Cl. 189—78.)

1. In a window, the combination with a frame adapted to receive a plurality of panes of glass and provided in its inner perimeter with integral-structure channels permanently closed at their bottoms to receive the edges of the glass, of a munnion bar forming a unitary structure and insertible endwise through one of the side members of the frame and between and in engagement with the proximate edges of adjacent panes of glass.

2. In a fireproof window construction, the combination with a window frame adapted to receive a plurality of panes of glass and provided around its inner perimeter with integral-structure grooves permanently closed at their bottoms to receive the edges of the glass, of a munnion bar grooved at its opposite sides to receive and hold the proximate edges of panes of glass, said frame being provided with an opening in one of its sides in which said munnion bar is insertible as a unitary structure and means for securing the end of the munnion to the frame.

3. In a fireproof window construction, the combination with a window frame adapted to receive a plurality of panes of glass and provided in its inner perimeter with integral-structure grooves for the edges of the glass, a portion of said grooves being of excess depth to permit the insertion of the panes of glass in the grooves, and a munnion bar grooved at its opposite sides to receive the proximate edges of panes of glass and insertible endwise as a unitary structure.

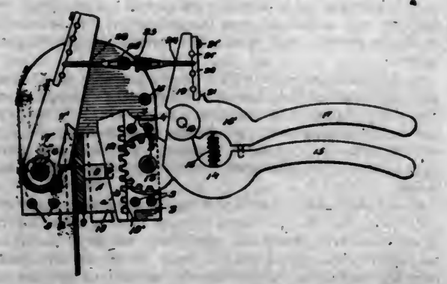


4. In a fireproof window, the combination with a window frame adapted to receive a plurality of panes of glass and grooved to receive the external edges of said glass, of a munnion bar formed at a unitary structure, grooved at its opposite sides to receive the proximate edges of panes of glass between which it is insertible, said frame being provided with an inlet opening through one of its sides, through which the munnion bar is insertible endwise, a reinforcement applied to the part of the frame weakened by the aperture therethrough, and means for securing the opposite ends of the munnion to the frame.

5. In a fireproof window construction, the combination with a sash frame adapted to receive a plurality of panes of glass and provided with permanently closed channels at its perimeter, the channels of the upper sash rail being of excess depth to permit the insertion of panes of glass, and a munnion bar removable endwise through the frame as a unitary structure.

[Claims 6 to 8 not printed in the Gazette.]

1,017,761. SAW-SETTING MACHINE. CHARLES L. JOHNSON, Kangley, Wash. Filed Aug. 7, 1907, Serial No. 387,491. Renewed July 17, 1911. Serial No. 639,063. (Cl. 76—63.)



1. A saw setting device comprising a frame, relatively fixed and movable clamping jaws thereon, one of said jaws being provided with an anvil, a setting means supported on said frame for movement toward and from the said anvil, a pair of pivotally supported levers arranged to be simultaneously grasped and moved toward one another for operating said setting means and said movable clamping jaw, means connecting one of said levers with said setting means, and independent means for connecting the other lever with said movable jaw for operating the same.

2. A saw setting device comprising a frame provided with means for clamping a saw, tooth setting means on said frame, means for operating said clamping and setting means comprising a pair of levers each pivotally supported and connected, one with said clamping means and the other with said setting means for operating the same, said levers being arranged adjacent one another to be simultaneously grasped and swung toward one another to operate said clamping and setting means, and means yieldingly holding said levers apart.

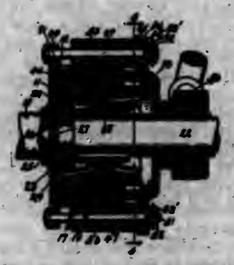
3. A saw setting device including a frame, and means on which said frame is adjustably supported for movement independent thereof toward and from the saw teeth, said means including outwardly projecting flexible members adapted to be set to curved form, and means for holding said flexible members as set.

4. A saw setting device including a frame, means on which said frame is supported for movement toward and from the saw teeth, means securing said frame for adjustment on said first means, said first means including flexible base extensions adapted to be bent to curved form and engage on the points of the teeth, and means adjustably connected with said extensions for holding them as bent.

5. In a saw setting device a frame, clamping jaws thereon one of which is slidably supported for movement toward and from the other, resilient means connected with said last named jaw for retracting the same, and means for sliding said last named jaw comprising a toothed wedge shaped member supported for movement at an angle to said movable jaw, and a rotatably supported toothed means journaled on said frame in mesh with the teeth of said wedge shaped member.

[Claims 6 and 7 not printed in the Gazette.]

1,017,762. CLUTCH. FRANK H. JONES, Muncie, Ind., assignor to Warner Gear Company, Muncie, Ind., a Corporation of Indiana. Filed Feb. 10, 1910. Serial No. 543,150. (Cl. 192—10.)



1. A multiple disk clutch comprising a rotary head formed integral with the supporting shaft and having a plurality of circumferentially arranged axially parallel arms, a wearing plate secured in position along one edge of each of said arms, a plurality of friction rings nested within said arms and having outwardly extending fingers projecting between said arms and engaging a wearing plate, a shaft arranged axially relative to the rotary head and projected into the space between its arms, a head secured to the inner end of said shaft and lying within the space between said arms, said head having a plurality of axially extending grooves in its circumference, a plurality of friction rings interdigitated with the first mentioned friction rings and having inwardly projecting fingers lying within the grooves of the last-mentioned head and engaging said last-mentioned wearing plates, and a clamping member rotatively connected to the first mentioned head and arranged to force the interdigitated friction rings into engagement with each other.

2. A multiple disk clutch comprising a rotary head formed integral with the supporting shaft and having a plurality of circumferentially arranged axially parallel arms, a plurality of friction rings nested within said arms and having outwardly extending fingers projecting between said arms and engaging a wearing plate, a shaft arranged axially relative to the rotary head and projected into the space between its arms, a head secured to the inner end of said shaft and lying within the space between said arms, said head having a plurality of axially extending grooves in its circumference, a plurality of friction rings interdigitated with the first mentioned friction rings and having inwardly projecting fingers lying within the grooves of the last-mentioned head and engaging said last-mentioned wearing plates, an axially movable clamping member rotatively connected to the first mentioned head and arranged to force the interdigitated friction rings into engagement with each other, and yielding means for yieldingly urging said clamping member into clamping position.

3. A multiple disk clutch comprising a rotary head formed integral with the supporting shaft and having a plurality of circumferentially arranged axially parallel arms, a wearing plate secured in position along one edge of each of said arms, a plurality of friction rings nested within said arms and having outwardly extending fingers projecting between said arms and engaging a wearing plate, a shaft arranged axially relative to the rotary head and projected into the space between its arms, a head secured to the inner end of said shaft and lying within the space between said arms, said head having a plurality of axially extending grooves in its circumference, a wearing plate detachably mounted in one side of each of said grooves, a plurality of friction rings interdigitated with the first mentioned friction rings and having inwardly projecting fingers lying within the grooves of the last-mentioned head and engaging said last-mentioned wearing plates, a clamping member rotatively connected to the first mentioned head and arranged to force the interdigitated friction rings into engagement with each other, and yielding means for yieldingly urging said clamping member into clamping position.

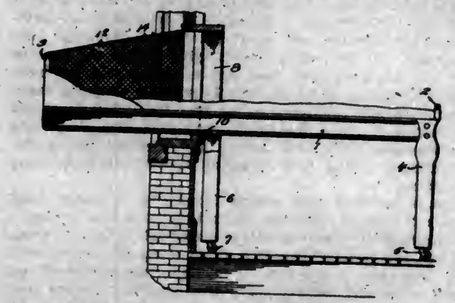
4. A multiple disk clutch comprising a rotary head having a plurality of circumferentially arranged axially parallel arms, a plurality of friction rings nested within said arms and having outwardly extending fingers projecting between said arms, a shaft arranged axially relative to the rotary head and projected into the space between its arms, a head secured to the inner end of said shaft and lying within the space between said arms, said head having a plurality of axially extending grooves in its circumference, a plurality of friction rings interdigitated with the first mentioned rings and having inwardly projecting fingers lying within the grooves of the last-mentioned head, a clamping cup having an interlocking axially-movable connection with the arms of the first-mentioned head, a plurality of spring containers seated in said clamping cup, a plurality of bolts carried by said first-mentioned head and extended through said spring containers, a spring mounted in each of said containers, and a nut carried by each bolt and engaging a spring.

5. A multiple disk clutch comprising a rotary head formed integral with the supporting shaft and having a plurality of circumferentially arranged axially parallel arms, a plurality of friction rings nested within said arms and having outwardly extending fingers projecting between said arms and engaging a wearing plate, a shaft arranged axially relative to the rotary head and projected into the space between its arms, a head secured to the inner end of said shaft and lying within the space between said arms, said head having a plurality of axially extending grooves in its circumference, a plurality of friction rings interdigitated with the first mentioned friction rings and having inwardly projecting fingers lying within the grooves of the last-mentioned head and engaging said last-mentioned wearing plates, a clamping cup having an interlocking axially-movable connection with the arms of the first-mentioned head, a plurality of spring containers seated in said clamping cup, a plurality of bolts carried by said first-mentioned head and extended through said

spring containers, a spring mounted in each of said containers, and a nut carried by each bolt and engaging a spring.

[Claims 6 to 9 not printed in the Gazette.]

1,017,763. COT OR BED. HENRY S. JONES, Augusta, Ga. Filed Sept. 5, 1911. Serial No. 647,703. (Cl. 5—4.)



1. In a cot or bed, a frame, supporting legs at the foot end of the frame, supporting legs located between the head end of the frame and the first mentioned legs, the last mentioned legs having standards extending above the said frame, a cross-piece connecting the said upper ends of the standards, and a screen stretched between the head end of the frame and the said cross-piece and the sides of the frame and the standards.

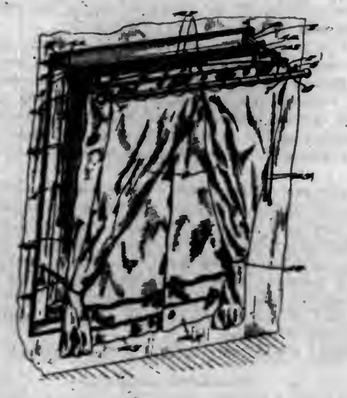
2. In a cot or bed, a frame, legs supporting the frame at its foot end, legs supporting the frame in advance of the head end thereof, and standards secured to the frame and extending thereabove and arranged to engage against the stiles of a window frame through which the head portion of the bed frame is fitted.

3. In a cot or bed, a frame having a foot end and a head end, supporting legs at the foot end of the bed, supporting legs fixed to the frame of the bed at points more or less removed from the head end of the bed and extending thereabove and arranged to engage against the stiles of a window frame through which the head portion of the bed frame is projected, a cross-piece connecting the upper ends of the standards, and a screen stretched between the head end of the bed frame and the said cross-piece and having depending side portions secured to the sides of the bed frame and to the said standards.

1,017,764. WHEEL-TIRE. PAUL M. KEMTER and ARTHUR W. HENTSCHEL, West New York, N. J. Filed Dec. 14, 1910. Serial No. 597,203. (Cl. 152—8.)

A tire of the class described comprising an outer sheathing of rawhide having clencher enlargements, a core formed from a single coil of wire, a sheet metal wear member curved transversely to conform to the curvature of the core and bearing around the outer portion of the same, an intermediate fabric member between the outer member and the core and detachably united at its edges, a fabric enlarging member between the outer portion of the outer member and the intermediate member, a fabric enlarging member between the outer portion of the intermediate member and the metal wear member, and fastening devices extending through the outer sheathing the intermediate member and the enlarging member, said fastening devices bearing at their inner ends upon the wear member.

1,017,765. CURTAIN-FIXTURE. HENRY KIEFER, Philadelphia, Pa. Filed Nov. 17, 1910. Serial No. 592,779. (Cl. 156—24.)



A device of the class described, consisting of a pair of brackets each comprising a horizontal bar and means for securing the same to a door or window frame, a slide mounted upon each of said bars, each of said slides comprising a U-shaped member having its parallel sides apertured to receive the bar and a second member resting on said bar and extending through said apertures, the ends of the last said members upon one slide being bent vertically upwardly and those upon the other being curved upwardly and inwardly forming eyes, rollers mounted in the lower portion of said U-shaped members, thumb screws extending through the last said members of said slides and impinging against said bars, and rods provided with eyes at one end to engage the said vertical upturned ends and the other ends of said rods adapted to extend through said eyes on the other slide, substantially as described.

1,017,766. SPECTACLES. FREDERICK W. KING, Cleveland, Ohio. Filed Nov. 27, 1911. Serial No. 662,551. (Cl. 88—41.)

1. In a pair of spectacles, lenses having their inner edges adjacent each other, a connection between the lenses holding the latter in fixed relative positions, a nose piece and a post secured to the nose piece at its lower end, and extending upwardly therefrom above the connecting means between the lenses, and thence extending downwardly between the lenses in said connecting means.

2. In a pair of spectacles, lenses having their inner edges adjacent each other and connected together at their adjacent edges so as to be held in fixed relative positions, a nose piece, a post supporting the nose piece and extending forwardly and upwardly therefrom, and having a forwardly extending loop above the connecting means, and thence extending from the loop downwardly between the lenses, the downwardly extending portion being secured to the connecting means.

1,017,767. BALLOON ATTACHMENT. ALBIN F. KRAFTSIK, Mount Pleasant, Pa. Filed June 27, 1911. Serial No. 635,615. (Cl. 244—21.)

1. A detaching device for an aerial carrier, comprising a suitably supported carrier bar, a trigger bar of a length greater than said carrier bar, a pliable connection extending from each end of said carrier bar each connection being secured to one end of said trigger bar, two pivotally connected lever arms each ending in a beak hook, each arm being secured to one of said pliable connections intermediate of its ends, said beak hooks normally overlapping one another, and a trigger cord connected to said trigger bar.

2. A detaching device for an aerial carrier, comprising a suitably supported carrier bar, a trigger bar of a length greater than said carrier bar, a pliable connection extending from each end of said carrier bar each connection being secured to one end of said trigger bar, two pivotally connected lever arms each ending in a beak hook, each arm being secured to one of said pliable connections intermediate of its ends, said beak hook normally overlapping one another, and a trigger cord connected to said trigger bar, said trigger bar held parallel to said carrier bar.

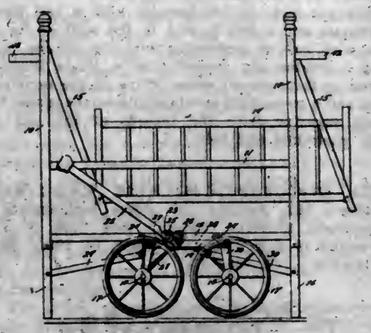
3. A detaching device for an aerial carrier, comprising a suitably supported carrying member, a trigger bar, two pliable connections extending from said carrying member and secured to the ends of said trigger bar, two similar lever arms each ending in a beak hook one beak hook being secured to each of said strands each of said levers having a plurality of bolt openings, a bolt connecting said two similar lever arms, and a strand extending from said trigger bar.

1,017,768. RAILWAY-SWITCH. JOHN H. LANEY, Minneapolis, Minn., assignor of one-eighth to Ronald L. Laney, Holloway, Minn. Filed Feb. 13, 1911. Serial No. 608,425. (Cl. 104—115.)

A switch rail having a transversely disposed recess located between its upper and lower sides, a tongue pivoted upon the rail and having a recess in its under side between its pivot and its point, a shaft journaled in the rail and extending transversely across the recess therein, an arm fixed to the said shaft and extending along the recess in the rail and projecting beyond the end thereof, and a cam head fixed to the said shaft and located in

the recess of the tongue and adapted when swung to engage the sides of the said recess and move the tongue.

1,017,769. CONVERTIBLE COT OR CRADLE. BENGT LARSON, Chicago, Ill. Filed Mar. 19, 1910. Serial No. 550,411. (Cl. 21—12.)



1. In an article of the character described, the combination with a bed section, of rolling supporting means connected with the bed section so that the bed section may be raised therefrom, means for raising said bed section relative to said rolling supporting means, and folding supports which are adapted to be folded or unfolded while said bed section is so raised.

2. In an article of the character described, the combination with a bed section, of rolling supporting means connected with the bed section so that the bed section may be raised therefrom, means for raising said bed section relative to said rolling supporting means, folding supports and means operated by said raising means for folding and unfolding said supports while the bed section is so raised.

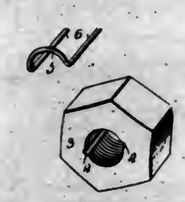
3. In an article of the character described, the combination with a bed section, of legs hinged to said bed section, rolling supporting means for said bed section, links connecting the bed section with the rolling supporting means, means for raising said bed section from said rolling supporting means, and operatively connected therewith means for folding and unfolding said legs.

4. In an article of the character described, the combination with a bed section, of legs hinged to said bed section, rolling supporting means for said bed section, links connecting the bed section with the rolling supporting means, means for raising said bed section from said rolling supporting means, and operatively connected therewith means for folding and unfolding said legs and for locking the same in their extended position.

5. In an article of the character described, the combination with a bed section, of legs hinged thereto, rolling supporting means for said bed section, links connecting the bed section with the rolling supporting means, means for shifting said bed section lengthwise of the rolling supporting means, and connected therewith means for folding and unfolding said legs.

[Claims 6 to 12 not printed in the Gazette.]

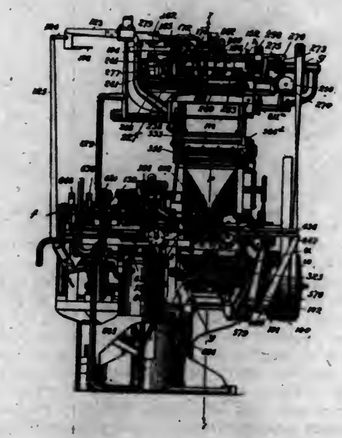
1,017,770. NUT-LOCK. JOHN A. LATSHAW, Vanport, Pa. Filed Apr. 13, 1911. Serial No. 620,922. (Cl. 151—8.)



1. In a nut lock, the combination with a bolt formed with grooves and a nut formed in the wall of its bolt opening with a groove, said grooves registering with the grooves in the bolt, of a locking key comprising spaced stems fitting in the registering grooves, and a head from which the stems project, the said head resting yieldably in engagement with the threads of the bolt.

2. In a nut lock, the combination with a bolt formed with grooves and a nut formed in the wall of its bolt opening with grooves registering with the grooves in the bolt, of a locking key formed from a single length of wire bent to form spaced stems fitting in the registering grooves, and a connecting substantially semi-annular head yieldably engaging with the threads of the bolt and partially encircling said bolt.

1,017,771. TYPOGRAPHIC MACHINE. EMIL LAWRENZ, Baltimore, Md., assignor, by mesne assignments, to Mergenthaler Linotype Company, New York, N. Y., a Corporation of New York. Filed Mar. 14, 1904. Serial No. 198,119. (Cl. 199—7.)



1. In a typographic machine, the means for separating a line of matrices, comprising a line forwarder, a matrix pusher for detaching the individual matrices from the line, devices for discontinuing the pressure of the forwarder upon the line when a matrix is being detached from a line and means for simultaneously advancing the pusher and operating said devices.

2. In a typographic machine, the combination of means for forwarding a line of matrices yieldingly, a pusher acting transversely to the line to separate individual matrices, a brake arranged to relieve the pressure of the forwarding device upon the line, a yielding gate arranged to exert a light pressure upon the matrix as it is ejected by the pusher and means for simultaneously advancing the pusher and operating said brake.

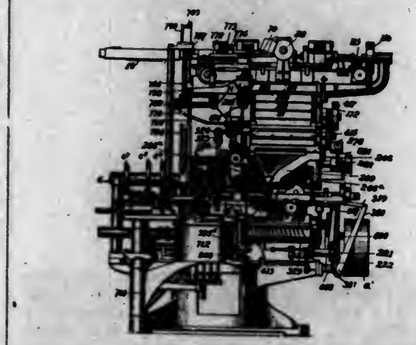
3. In a typographic machine, the combination of a channel, and means for forwarding a line of matrices therein, a gate in the side of the channel, a pusher for ejecting matrices through the gate opening, and means independent of the line forwarder for periodically opening the gate.

4. In a typographic machine, the combination of a channel, means for forwarding a line of matrices therein, a normally closed gate at one side of said channel, a pusher arranged opposite the gate and adapted to eject matrices through the gate opening, and means for locking the gate while a matrix is being ejected by the pusher.

5. In a typographic machine, the combination of a channel and means for forwarding matrices therein, with a gate at one side of said channel, a pusher opposite the gate, means for periodically openipg the gate, and means arranged to lock the gate in its open position when the pusher begins to eject a matrix through the gate opening.

[Claims 6 to 44 not printed in the Gazette.]

1,017,772. TYPOGRAPHIC MACHINE. EMIL LAWRENZ, Baltimore, Md., assignor to Ott. Mergenthaler Company, Baltimore, Md., a Corporation of Delaware. Filed Mar. 28, 1906. Serial No. 308,608. (Cl. 199—7.)



1. In a typographic machine, means for separating individual matrices from a line thereof comprising a pusher for the line of matrices, means for urging the pusher forward, a frictional clamp for stopping the pusher at any point in its travel, and means for periodically operating the clamp.

2. In a typographic machine, means for separating individual matrices from a line thereof comprising a pusher for the line of matrices, means for urging the pusher forward, a bar connected with the pusher, a frictional clamp coöperating with said bar to hold the pusher, and means for periodically operating said clamp.

3. In a typographic machine, means for separating individual matrices from a line thereof comprising a channel or guide-way, means for moving a line of matrices therein, a movable abutment for sustaining the end matrices, a pusher movable transversely of the channel for separating the end matrices from the line, and means for simultaneously advancing the pusher and retreating the abutment whereby the end matrix is made to take a diagonal course in moving from the line.

4. In a typographic machine, means for separating individual matrices from a line thereof comprising a channel or guide-way, means for moving a line of matrices therein, a pusher operating transversely of the channel for removing the end matrices, a movable abutment for sustaining the end matrices, a spring finger normally opposing the removal of the end matrices, and means for simultaneously advancing the pusher and retreating the abutment, the movements of the parts being so related that the end matrix is removed from the line in a diagonal direction and thereby released from the spring finger.

5. In a typographic machine, a font separator comprising a series of feelers, a series of testing slides arranged to carry the matrices into contact with the feelers, and means for operating the testing slides, said means including a cam, a rock shaft operated by the cam, a series of arms on the shaft, and spring links connecting the arms respectively with the slides.

[Claims 6 to 131 not printed in the Gazette.]

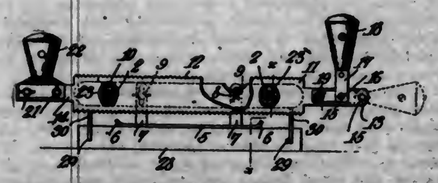
1,017,773. ASEPTIC FOUNTAIN SYRINGE OR IRRIGATOR. SHIRLEY N. LEACH, Sweet Water, Tex. Filed May 22, 1911. Serial No. 628,793. (Cl. 128—47.)

1. The herein described aseptic fountain syringe or irrigator comprising, in combination, a tank composed of rigid material and having upper and lower marginal rims, a lid adapted to close the top of the tank, said lid being hinged to the upper rim so as to swing, on opening, through an arc of substantially 270° into engagement with said lower rim, a hanger pivoted adjacent the lid hinge, and means whereby the hanger is elevated by the lid while the latter is swinging through the last portion of said arc, substantially as shown and described.

2. The herein described aseptic fountain syringe or irrigator comprising, in combination, a tapered tank of substantially rigid material, a lid hinged to the tank and constituting a wall brace preventing lateral movement or downward tilting of the tank when the device is in use, a hanger pivoted adjacent the lid hinge and adapted to lie within the lid when closed, means whereby said hanger is elevated on the opening movement of said lid and prevented from falling when being hung, and a flexible tube connected to the tank, substantially as and for the purposes set forth.

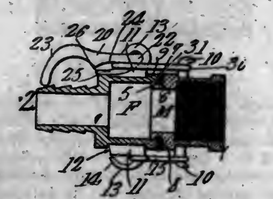
3. The herein described aseptic fountain syringe or irrigator comprising a tapered tank, means to hang the tank upon a wall at an elevated point, a lid hinged to the tank and movable from the top thereof to a position between the body of the tank and the wall, said lid serving to prevent lateral vibration of the tank, and means cooperating with the lid to keep the bottom of the tank spaced from the wall and so maintain the tank substantially vertical, as shown and described.

1,017,774. WOODWORKING-TOOL. JOHN LAWLER LEAVITT, Copperton, N. Mex. Filed June 1, 1911. Serial No. 630,719. (Cl. 145—1.)



A woodworking tool including adjustably connected parallel blades having teeth along the upper and lower edges thereof, there being transverse slots in the end portions of the blades, spacing elements interposed between the blades, means extending through the slots and spacing devices for securing the blades together to prevent relative movement thereof, tongues extending in opposite directions from one of the blades, and handles secured to the tongues.

1,017,775. HOSE-COUPLING. EDWARD LE BRETON, Cleveland, Ohio. Filed Apr. 11, 1911. Serial No. 620,301. (Cl. 137—28.)



1. The herein described hose coupling comprising oppositely disposed hooks on one member, oppositely disposed lugs on the other member, one of the lugs having a shoulder facing away from the extremity of its member, a link connected with the other lug and adapted to engage one hook, a triangular bail whose smaller end engages the other hook and whose cross bar engages said shoulder when the members are coupled, a hook on this lug projecting through the bail and having its bill close down onto the lug adjacent said shoulder, and a lever having a transverse eye loosely embracing said cross bar, a slot at right angles to the eye and loosely embracing the bill of the hook, a transverse fulcrum at the extremity of said slot journaled loosely through said hook, and a handle at the remote end of the lever curved inward toward the coupling.

2. The herein described hose coupling comprising oppositely disposed hooks on one member, oppositely disposed lugs on the other member, one of the lugs having a shoulder facing away from the extremity of its member, a link connected with the other lug and adapted to engage one hook, a triangular bail whose smaller end engages the other hook and whose cross bar engages said shoulder when the members are coupled, the shouldered lug having an eye, and a lever having a transverse eye loosely embracing said cross bar, a slot at right angles to the eye of the lever, and loosely embracing the lug, a transverse fulcrum at the extremity of said slot journaled loosely through the eye of the lug, and a handle at the remote end of the lever.

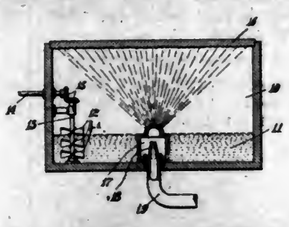
3. A device of the class described comprising coöperating coupling members, one of which is provided with a projection, the other of which is provided with a hook, the bill of the hook extending away from the projection; a lever extended toward its free end in the same direction as the bill of the hook, the lever having its other end seated in the bend of the hook, there being an opening in the lever to receive the bill of the hook, the lever having a notch in one edge, the mouth of which notch is disposed toward the free end of the lever; and a link engaged in the notch and with the projection.

1,017,776. METHOD OF PRODUCING ELECTROTYPES. HOWARD S. LEVY, Philadelphia, Pa. Filed Feb. 11, 1911. Serial No. 608,106. (Cl. 91—68.)

1. In the method of producing electrotypes, the step which consists in projecting against the wax matrix a liquid containing a cathode material while the matrix is held so that no part thereof is immersed in the liquid whereby said cathode material will be uniformly applied over the impress face of the matrix and the liquid will drop therefrom by gravity.

2. In the method of producing electrotypes, the step which consists in projecting against the wax matrix a liquid containing graphite while the matrix is held so that no part thereof is immersed in the liquid whereby

the graphite will be uniformly applied over the impress face of the matrix and the liquid will drop therefrom by gravity.



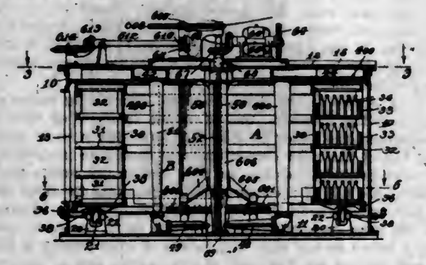
3. The herein described method of producing electrotypes which consists in placing a wax matrix horizontally with its impress face directed downwardly, over but not immersed in a liquid containing a cathode material and then projecting said liquid against said impress face whereby said cathode material will be uniformly applied over said face and the liquid will drop therefrom by gravity.

4. The herein described method of producing electrotypes which consists in placing a wax matrix horizontally with its impress face directed downwardly, over but not immersed in a mixture of water and graphite, constantly agitating said mixture, and projecting said mixture against the impress face of the mold whereby the graphite will be uniformly applied over said impress face and the liquid will drop therefrom by gravity.

5. The herein described method of producing electrotypes which consists in projecting a liquid containing a cathode material against a wax matrix held in a position such that the cathode material will adhere to the matrix and the liquid will drop therefrom by gravity, and thereafter removing from the matrix held in the same position the superfluous or non-adhering cathode material.

[Claim 6 not printed in the Gazette.]

1,017,777. PASTEURIZER. CHARLES H. LOEW, Lakewood, and ARNOLD RUETSCHI, Cleveland, Ohio, assignors to The Loew Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 30, 1909. Serial No. 535,700. (Cl. 126—272.)



1. In an apparatus of the class described an upright casing, a drum shaped carrier horizontally movable therein, the bottom of the carrier being arranged above the floor of the casing, a transverse partition dividing the space within the carrier drum and under the carrier into compartments, and means for supplying a pasteurizing agent at different temperatures to the different compartments and to the articles on the carrier as the same pass therethrough.

2. In an apparatus of the class described an upright casing, a drum shaped carrier horizontally movable therein, and a transverse partition whereby the casing is divided into two compartments in the space inside of the carrier drum and means for supplying water at different temperatures to the different compartments and to the articles on the carrier as said carrier passes therethrough.

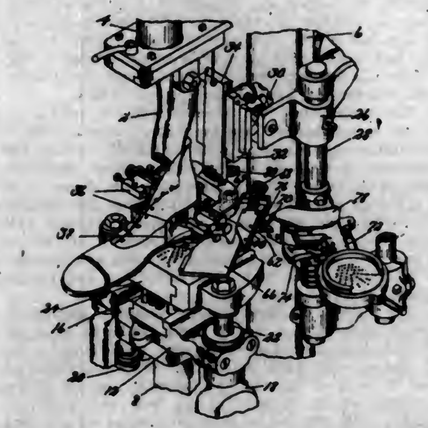
3. In an apparatus of the class described an upright casing, a drum shaped carrier horizontally movable therein, the bottom of the carrier being arranged above the floor of the casing, and a transverse partition dividing the space within the carrier drum and under the carrier into compartments and means for supplying water at different temperatures to the different compartments and to the articles on the carrier as said carrier passes therethrough.

4. In an apparatus of the character described, a series of water containers arranged in continuous series, means for discharging the contents of each container in the form of a spray, means for supplying hot water to the central container and cold water to one or more of the other containers and allowing it to overflow into the adjacent containers, and means for carrying articles to be treated through such spray.

5. In an apparatus of the character described, a series of water containers arranged in continuous series, means for discharging the contents of each container in the form of a spray, means for supplying hot water to the central container and cold water to the terminal containers, and means for carrying articles to be treated through such spray.

[Claims 6 to 27 not printed in the Gazette.]

1,017,778. MACHINE FOR ATTACHING HEELS. THOMAS LUND, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 17, 1906. Serial No. 317,374. (Cl. 1—32.)



1. In a machine of the class described, the combination with means for positioning a shoe, of mechanism for positioning a heel carried by the shoe, said mechanism being constructed to permit relative approaching movement of the shoe and heel and arranged to automatically release the heel during said movement.

2. In a machine of the class described, the combination of means for positioning a shoe and mechanism for positioning a heel in relation to the shoe, said mechanism being constructed to permit relative approaching movement of the shoe and heel and arranged to release the heel automatically during said movement.

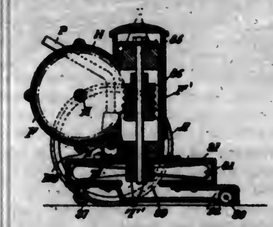
3. In a machine of the class described, the combination with a relatively movable nail block and work support, of gages constructed for engagement with the sides of a heel carried by a shoe to position said heel between the nail block and work support in alinement with the heel seat of the shoe, said gages arranged to be positively withdrawn from engagement with said heel during the relative movement of the work support and nail block.

4. In a machine of the class described, the combination with means for sustaining a shoe and means for pressing a heel upon the heel seat of said shoe, of a positioning device constructed to engage and position a heel in line with the heel seat, said device being arranged for positive automatic movement away from the heel prior to the completion of the operation of pressing the heel upon its seat.

5. In a machine of the class described, the combination of a work support and a nail block capable of relative movement, work positioning means including a bracket having a pair of arms, a band clamp supported by the ends of said arms and heel gages supported by said arms.

[Claims 6 to 18 not printed in the Gazette.]

1,017,779. PNEUMATIC CARPET-SWEEPER. THOMAS LYONS, Cleveland, Ohio, assignor to Ludwig F. Meyer, Cleveland, Ohio. Filed Mar. 8, 1911. Serial No. 613,078. (Cl. 15—60.)



1. In a carpet sweeper, the combination of driving wheels, a horizontal shaft supported thereby, a horizontal fan casing mounted between the wheels and under said shaft and having bearings on the top thereof through which said shaft extends, whereby said casing is hung in swinging relation from said shaft, a rotary fan in the casing having a vertical shaft geared to the driving shaft, and a suction nozzle communicating with the fan casing and arranged to swing therewith.

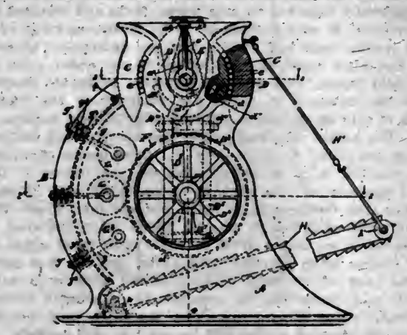
2. In a carpet sweeper, the combination of driving wheels, a horizontal shaft supported thereby, a horizontal fan casing located between the wheels and suspended in swinging relation from the shaft and under the same, a rotary fan in the casing, having a vertical shaft extending through the top thereof, a gear casing fixed on top of the fan casing, gearing in said casing between the first mentioned shaft and the fan shaft, and a suction nozzle secured to the underside of the fan casing and communicating therewith.

3. In a carpet sweeper, the combination of a wheeled driving shaft, a horizontal fan casing having bearings through which the said shaft extends, said casing being located under the shaft and arranged to swing on said bearings, a fan in the casing having a vertical shaft projecting upwardly beside the driving shaft, a gear casing fixed to the top of the fan casing, a horizontal countershaft extending into said gear casing, gearing in said casing between the countershaft and the fan shaft, gearing between the driving shaft and the countershaft and a suction nozzle communicating with said fan casing.

1,017,780. ORE-CRUSHER. EZRA A. MATHERS, Philadelphia, Pa., assignor of one-half to Daniel W. Harner, Philadelphia, Pa. Filed June 20, 1906. Serial No. 322,655. (Cl. 83—12.)

1. In an ore crusher, the combination, of the frame, a hopper formed on the top thereof, a crushing member having a hopper-like recess with corrugated sides mounted in said hopper and extending from side to side thereof formed cylindrical in cross section and with its ends mounted upon roller bearings in said frame and having an opening leading through its lower side, means to rock said crushing member, and a second fixed crushing member mounted between the sides of said first crushing member, substantially as set forth.

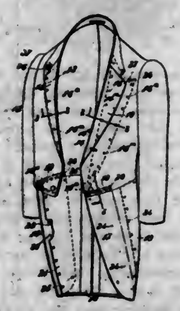
2. In an ore crusher, the combination, of the frame formed with a hopper at its top, a rocking crushing member of unitary structure and of exterior cylindrical formation with a hopper-like recess longitudinally thereof lined with corrugated chills and formed with an opening through its lower side for the discharge of the crushed material mounted within said hopper, means for rocking said member, and a second crushing member fixed in said recess of said rocking crushing member, substantially as set forth.



3. In an ore crusher, the combination, of the frame formed with a hopper at its top, a rocking cylinder mounted in suitable bearings at each end in said frame and formed with a hopper-like recess in its top side the sides of which are provided with crushing faces and an opening leading therethrough to the lower part of the machine, and a fixed crushing member mounted upon vertically adjustable bearings and located between the sides of said recess in said first crushing member, substantially as set forth.

4. In an ore crusher, the combination, of the frame, the hopper, a crusher in said hopper comprising a rocking crushing member and a fixed crushing member, a pulverizer beneath said crusher comprising a large roller mounted upon a driving shaft, rollers mounted in adjustable bearings and adapted to coact with said large roller, means for driving said driving shaft, a cam on said driving shaft, and a connection between said cam and the rocking crusher member for rocking it, substantially as set forth.

1,017,781. COAT. FRANK T. MATTHEWS, Baltimore, Md. Filed June 17, 1911. Serial No. 633,837. (Cl. 2—61.)



1. The herein described convertible coat the body portion of which comprises low-turned front lapels and which body portion is provided, adjacent to said lapels, with lining parts having free front edges, to form pockets, but which are provided with means whereby they may be detachably attached to the body of the coat, and facings permanently attached to said lining parts and adapted to be received in said pockets or to be folded outward over

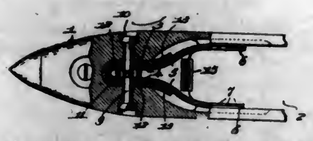
said lapels, combined with means for detachably attaching the outer edges of said facings to the under sides of the said lapels.

2. The herein described convertible coat the body portion of which comprises low-turned front lapels and which body portion is provided, adjacent to said lapels, with lining parts having free front edges, to form pockets, but which are provided with means whereby they may be detachably attached to the body of the coat, and facings permanently attached to said lining parts and adapted to be received in said pockets or to be folded outward over said lapels, combined with means for detachably attaching the outer edges of said facings to the under sides of the said lapels, said means comprising separable fastenings the members of which are attached to the under sides of said lapels and to the free edges of said facings.

3. The herein described convertible coat having divided fronts providing skirt portions the front parts of which are adapted to be turned inward, the rear parts of the skirt portions of the coat being provided with linings having free front edges to form pockets into which the front parts of the skirt may be folded when the coat is to be converted into a dress coat, the said front edges of said linings being provided with hooks, and the face sides of the body of the skirt being provided with loops with which said hooks may be engaged, to detachably attach the front edges of said linings to the skirt, and thereby retain the infolded portions of the skirt in said pockets.

4. The herein described convertible coat having divided fronts providing skirt portions the front parts of which are adapted to be turned inward, the rear parts of the skirt portions of the coat being provided with linings having free front edges to form pockets into which the front parts of the skirt may be folded when the coat is to be converted into a dress coat, the said front edges of said linings being provided with hooks, and the face sides of the body of the skirt being provided with loops with which said hooks may be engaged, to detachably attach the front edges of said linings to the skirt, and thereby retain the infolded portions of the skirt in said pockets, the adjacent edges of the body part of the coat and the infolding front part of the skirt having overlapping parts provided with separable fasteners.

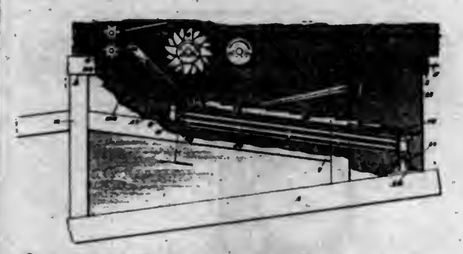
1,017,782. LOOM-SHUTTLE. WILLIAM MCCASLIN, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 6, 1911. Serial No. 606,729. (Cl. 139—27.)



A loom-shuttle having a longitudinal recess at one end of the bobbin-receiving opening, spring holding-jaws formed on the free ends of a strip of metal bent between the jaw portions into substantial parallelism and provided with opposite bolt-holes, a metallic backing member embracing the parallel jaw bases and interposed between them and the walls of the recess and apertured opposite the bolt-holes, the free ends of said member extending beyond the recess and coöperating externally with adjacent portions of the jaws and having the normal curvature of such portions of the jaws to prevent flexure thereof from being transmitted to their bases within the recess of the shuttle body and a retaining-bolt extended to the apertured backing member and the bolt-holes in the jaw bases.

1,017,783. CORN HUSKER AND SHREDDER. GEORGE M. MERWIN, Berwyn, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Aug. 28, 1911. Serial No. 646,440. (Cl. 130—5.)

1. A corn husking mechanism including, in combination, snapping rollers, means for advancing stalks toward said snapping rollers, husking rollers arranged in a plane below said snapping rollers and having the axes thereof at substantially right angles thereto, ear retarders slidably mounted above said husking rollers, means for transmitting a reciprocatory movement to said ear retarders in the direction of the length of said rollers, an inclined deck leading from said snapping rollers to the receiving ends of said husking rollers, agitator bars preferably rectangular in cross section slidably connected with said deck and movable parallel with the surface thereof and in close proximity thereto whereby the upper and side surfaces thereof only engage with the ears, and means operative to transmit a reciprocatory movement to said bars and said husking rollers at right angles to said snapping rollers.

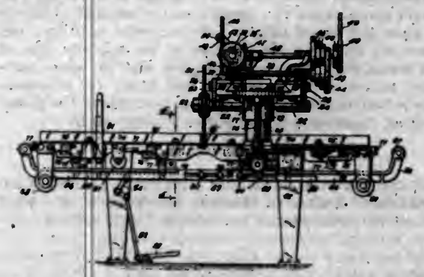


2. A corn husking mechanism including in combination, snapping rollers, means for advancing stalks toward said snapping rollers, husking rollers arranged in a plane below said snapping rollers and having the axes thereof at substantially right angles thereto, ear retarders slidably mounted above said husking rollers, means for transmitting a reciprocatory movement to said ear retarders in the direction of the length of said rollers, an inclined deck leading from said snapping rollers to the receiving ends of the husking rollers, agitator bars preferably rectangular in cross section slidably connected with said deck and movable parallel with the surface thereof and in close proximity thereto whereby the upper and side surfaces thereof only engage with the ears, and pitmen connecting the lower ends of said agitator bars with the rear ends of said ear retarders.

3. A corn husking mechanism including, in combination, snapping rollers, means for advancing stalks toward said snapping rollers, husking rollers arranged in a plane below said snapping rollers and having the axes thereof at substantially right angles thereto, ear retarders slidably mounted above said husking rollers, means for transmitting a reciprocatory movement to said ear retarders in the direction of the length of said rollers, an inclined deck leading from said snapping rollers to the receiving ends of said husking rollers, brackets secured to said deck, said brackets being provided with longitudinally arranged slotted openings parallel with said deck, agitator bars preferably rectangular in cross section and slidably connected with said brackets by means of bolts carried by said bars and received by the slotted openings in said brackets, said bars being operative in a plane substantially parallel with the axes of said husking rollers and in close proximity to said deck whereby the upper and side surfaces thereof only engage with the ears, and pitmen having cranked portions at opposite ends thereof connecting the lower ends of said agitator bars with the adjacent ends of said ear retarders, the cranked portions of the upper ends of said pitmen being received by one of the slotted openings in said agitator bars.

1,017,784. STONE-SAWING MACHINE. WILLARD F. MEYERS, Long Island City, N. Y. Filed July 31, 1909. Serial No. 510,539. (Cl. 125—18.)

1. A stone-sawing machine comprising a work-supporting table, a saw, means for supporting the saw in position to act on the work, means for actuating the saw, and an extensible work-supporting frame adapted to be extended from either end of the table, such frame comprising two parts adapted to be detachably connected, one part at each end of the table, and means by which the two parts of the frame may be connected together to move as a unit or may be disconnected one from the other for use independently.



2. A stone-sawing machine comprising a work-supporting table, a saw, means for supporting the saw in position to act on the work, means for actuating the saw, and an extensible work-suporting frame adapted to be extended from either end of the table, such frame comprising two parts adapted to be detachably connected, one part at each end of the table, and means by which the two parts of the frame may be connected together to move as a unit or may be disconnected one from the other for use independently, each part of the frame being provided with a work-supporting roller.

3. A stone-sawing machine comprising a work-supporting table, a saw, means for supporting the saw in position to act on the work, means for actuating the saw, elevating rollers for raising the work above the level of the table, and mechanism for raising the rollers above the surface of the table.

4. A stone-sawing machine comprising a work-supporting table having a saw-receiving groove therein, a saw, means for supporting the saw with its edge in the groove, means for actuating the saw, elevating rollers for raising the work above the surface of the table, and mechanism for raising the rollers to position above the surface of the table.

5. A stone-sawing machine comprising a work-supporting table, a saw, means for supporting the saw in position to act on the work, means for actuating the saw, elevating rollers for raising the work above the surface of the table, and eccentrics adapted and arranged to raise the rollers.

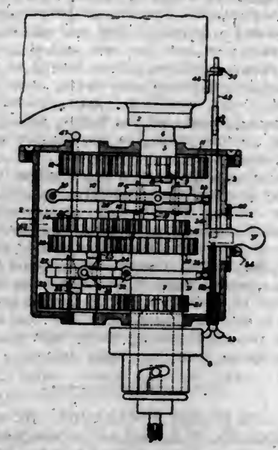
[Claims 6 to 9 not printed in the Gazette.]

1,017,785. AUTOMATIC SPEED-CHANGE AND TAP-REVERSING ATTACHMENT FOR DRILL-PRESSES. FRANK P. MILLER, Meadville, Pa. Filed June 20, 1910. Serial No. 567,876. (Cl. 10—138.)

1. An attachment for drill presses compprising a frame, a two-part spindle mounted therein, a gear train and clutch intermediate the sections of said spindle and arranged when the clutch is in different positions to drive the lower spindle section in reverse directions, means for locking said clutch in direct drive position, means for automatically disengaging said locking means and moving the clutch, and a movable stop arranged when in one position to stop the clutch when it reaches neutral position, and when in another position to permit the clutch to go to reverse drive position.

2. An attachment for drill presses comprising a frame, a two-part spindle mounted therein, a gear train and clutch connecting the two sections of said spindle and arranged when the clutch is in different positions to drive the lower spindle section in reverse directions, means for locking said clutch in direct drive position, and tripping means for disengaging said clutch from locked position, said tripping means comprising a rod formed in two sections and extensible one with reference to the other, means for locking said two sections together, and a gage member engaging one of said sections and a stationary part of the press.

3. An attachment for drill presses comprising a frame, a two-part spindle mounted therein, two or more trains of gearing connecting the sections of said two-part spindle, a plurality of clutches, and means arranged to prevent more than one of said clutches being placed in operative engagement with a coöperating member at the same time.

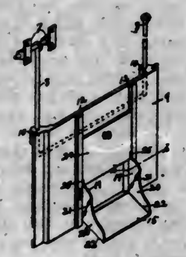


4. An attachment for drill presses comprising a frame, a two-part spindle mounted therein, two or more trains of gearing intermediate the sections of said spindle, a plurality of clutches, a lever for each clutch, and a catch plate with which said levers are engaged and arranged to prevent movement from neutral position of more than one of said levers at the same time.

5. An attachment for drill presses comprising a frame, a two-part spindle mounted therein, a plurality of trains of gearing connecting the sections of said spindle, a plurality of clutches, a lever for operating each clutch, and a catch plate provided with an opening in which said levers move in moving the clutches from neutral to operative position, the plate being provided with recesses and projections so arranged that when one lever is in position to hold its clutch in an operative position the other lever is held in neutral position.

[Claims 6 to 9 not printed in the Gazette.]

1,017,786. GRAIN-DOOR FOR CARS. RUDOLPH CHARLES MILLER, Beaumont, Tex. Filed Dec. 23, 1910. Serial No. 598,964. (Cl. 20—39.)



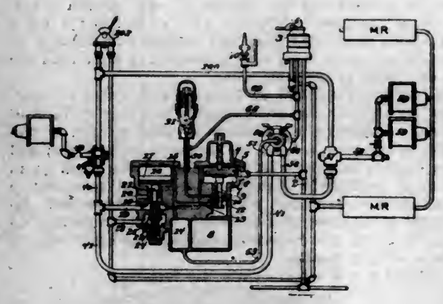
1. A device of the character described including a door having a discharge opening therethrough, a closure for said opening, foldable aprons hingedly secured to each side of the closure and detachably secured to said door and so arranged relative to the closure as to form a chute in combination therewith and a slidable closure for the opening carried by the door, said closures being arranged to close said discharge opening alternatively, and the last

mentioned closure adapted to normally hold the said aprons in an upright position.

2. A device of the character described including a hingedly mounted support; a door slidably mounted thereon and having a discharge opening therethrough; suitable cleats, secured on said door, one on each side of the opening and having two lengthwise grooves on the inner side thereof; a vertically sliding closure movable in one set of said grooves and arranged to close said opening; a closure hinged to said door near its base and also arranged to close said opening, folding aprons hinged at one side to said last mentioned closure and having their other edges free, means carried by said free edges disposed so as to engage in said grooves, and the folding aprons being held normally in position, when the closures are open, by the said sliding closure.

3. A device of the character described including a car door slidably mounted upon a suitable support and having a discharge opening therethrough; cleats carried by the door on each side of the opening and two lengthwise grooves on the inner sides thereof; a sliding closure, movable in one set of said grooves and arranged to close the opening; a closure hinged to the door near its base and also arranged to close its opening; folding aprons hinged at one side to said last mentioned closure and having their other edges free, and ribs carried by said free edges and arranged to engage in either of said grooves.

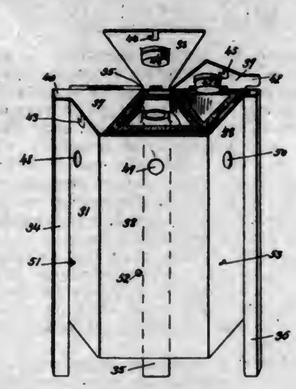
1,017,787. AIR-BRAKE APPARATUS. BLYTHE J. MINNIER, Watertown, N. Y., assignor to New York Air Brake Company, a Corporation of New Jersey. Filed June 9, 1910. Serial No. 565,958. (Cl. 188—1.)



1. In an air brake apparatus comprising a main reservoir and train pipe, and a special equipment controlled by train pipe pressure, but having its brakes applied by air pressure from the main reservoir, an automatic release valve comprising a valve proper which in normal position establishes communication to a portion of the brake cylinders of the special equipment that are to be independently released, and in release position cuts off said communication and connects said brake cylinders with an exhaust passage; an actuating piston for said valve; means for yieldingly impelling the same to normal position, said piston being normally subjected at both sides to fluid pressure while the brakes are applied; and means for relieving the pressure at one side of said piston to cause it to move the valve to the exhaust position; and means for automatically applying pressure at that side of said piston to move the valve to normal position when a further application of the brakes is made.

2. The combination with the engineer's valve and automatic control valve of an air brake apparatus; of an automatic release valve comprising a valve proper which in normal position establishes communication between the driving brake cylinders and a source of fluid pressure, and in release position cuts off said communication and places said brake cylinders in communication with an exhaust passage; an actuating piston for said valve, and a spring yieldingly pressing said valve toward the normal position; a communication at one side of said piston to a source of fluid pressure acting while the brakes are applied; a relatively small communication from one to the other side of said piston when in normal position adapted to be cut off when the piston is moved from normal position; and means for releasing the pressure at the opposite side of said piston from that communicating with the above mentioned source of fluid pressure; and means for automatically re-introducing fluid pressure at that side of the piston while an application of the brakes is being made.

1,017,788. APPARATUS FOR VENDING INDIVIDUAL DRINKS. LESLIE G. MURNIN, New York, N. Y. Filed Sept. 28, 1909. Serial No. 519,035. (Cl. 211—8.)



1. In a vending apparatus for dispensing liquids, the combination of a receptacle adapted to contain a liquid container, a cover for the receptacle for giving access to the liquid container, a long narrow chamber adapted to contain straws, a movable bottom for said receptacle adapted to permit insertion and removal of the liquid container and means for locking said cover closed.

2. In a vending apparatus for dispensing liquids, the combination of a receptacle adapted to contain a removable vessel, a pivoted cover for the receptacle, means carried by the cover for closing the mouth of the vessel, a chamber secured to the receptacle and adapted to contain straws, a cover for said chamber integral with the receptacle cover, a spring for opening said covers, a pivoted bottom for said receptacle, a lock for said bottom, and means for locking said covers closed.

3. In a vending apparatus for dispensing liquids the combination of a plurality of receptacles secured together, a plurality of chambers, each chamber adapted to contain straws and each chamber secured to a corresponding receptacle, a plurality of covers one for each receptacle, a plurality of covers one for each straw chamber, said covers being secured together and a plurality of mechanisms, one for each receptacle cover, for locking said covers closed.

4. In a vending apparatus for dispensing liquids, the combination of a receptacle adapted to contain a removable liquid container, a cover for the receptacle for giving access to said liquid container, an insulating lining for the receptacle, a movable bottom for the receptacle adapted to permit insertion and removal of the liquid container, and means for preventing the removal of the apparatus from a support comprising securing means located within the receptacle and adjacent to said bottom.

5. In a vending apparatus for dispensing liquids, the combination of a receptacle adapted to contain a removable vessel, a cover for the receptacle, a stop for preventing removal of the vessel from the receptacle, a movable bottom for the receptacle, a lock for the bottom and mechanism for locking said cover closed.

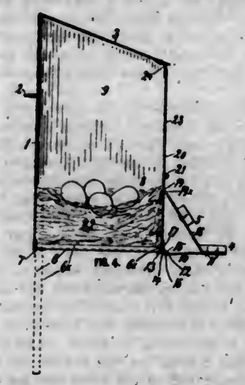
1,017,789. COMBINED HOT AND COLD WATER VALVE. JOHN F. MURPHY, Bridgeport, Conn. Filed Nov. 13, 1911. Serial No. 659,911. (Cl. 137—26.)

1. In a valve of the character described comprising a body having branch pipes for the admission of hot and cold water integral therewith communicating with ports in the valve body, said valve body having upper and lower outlet ports, a plug for the valve body having a recess adapted to register with either inlet port and the upper outlet port, said plug having oppositely located angularly disposed recesses adapted to register with the respective inlet ports and the lower outlet port of the valve body.

2. The combination with a valve body having hot and cold water inlet ports, upper and lower outlet ports, said upper outlet port on a line with the inlet ports, of a plug having a recess adapted to register with either inlet port and the upper outlet port, and oppositely located side recesses adapted to register with the respective inlet ports and the lower outlet port of the valve body.

3. In a valve of the character described comprising a body having an extension provided with a mixing chamber and a discharge port, said body having hot and cold water inlet ports, and upper and lower outlet ports communicating with the mixing chamber, a plug having a recess adapted to register with either inlet port and the upper outlet port, and oppositely located recesses adapted to register with the respective inlet ports and the lower outlet port.

1,017,790. HEN'S NEST. JOHN MUTH, Britton, S. D. Filed May 18, 1911. Serial No. 628,085. (Cl. 119—45.)



1. A nesting box having a door opening and a door hingedly suspended from the upper end of the opening and extending partly down into the opening, with freedom to swing in and out therethrough.

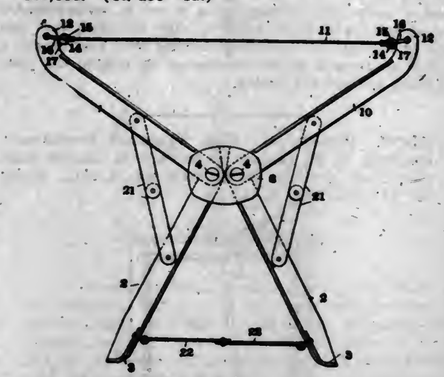
2. A nesting box having a door opening and a door hinged from the upper end of the opening and partly filling the same, with freedom to swing in and out in the opening; stepping strips arranged below the door opening at the outer side of the box; said strips being arranged in such proximity to each other and to the box that chickens or similar birds can not roost on them.

3. A nesting box having its bottom hinged at the rear edge to the box, and catches supporting its front edge when the bottom is in a level position; a stepping frame hingedly mounted at the front side of the box and diverging therefrom with its lower portion, and operative connections between said lower portion and the catches supporting the bottom, whereby the weight of the stepping frame holds the catches engaged; said front wall having openings for the birds to pass through.

4. In a device of the kind described, an elongated box divided by vertical partitions into a plurality of nesting compartments, an inclined roof covering the box, a bottom hinged to the box and extending underneath several of the compartments, to form the bottoms thereof, a swinging stepping frame hinged to the front of the box, to swing with its lower portion to and from the same; keepers on the box, bars extending from lower portion of the frame and guided in said keepers, the inner ends of said bars forming supports for the front edge of the bottom opposite from the edge having no hinges; said front wall having openings, and doors hinged in the upper ends of the openings, so as to be pushed open in either direction by a passing bird.

5. A nesting box forming an angular row of nesting compartments, each compartment having a door directly through the front wall of the box, excepting the compartment at the angle of the row, which opens into one of the adjacent compartments.

1,017,791. FOLDING CHAIR. DOUGLAS M. NEFF, East Cleveland, Ohio. Filed Apr. 24, 1911. Serial No. 622,884. (Cl. 155—32.)



1. In a folding stool or chair, a set of folding arms and a folding seat having slidable yoked connections therewith adapting the seat to be shifted to different angular planes when the chair is folded and unfolded.

2. In a folding stool or chair, a set of folding arms, a folding seat, yokes for the seat having slidable connection with said arms, and legs adapted to be folded substantially parallel with said arms.

3. In a folding stool or chair, folding arms, a flexible seat, and means to rotatably connect the seat in slidable relation with said arms from its transverse center to one edge, whereby the seat may be shifted transversely and also turned without detachment to wrap around the arms when folded.

4. In a folding stool or chair, folding arms, a seat, yokes having bent extremities connected with said seat and slidably engaged with said arms.

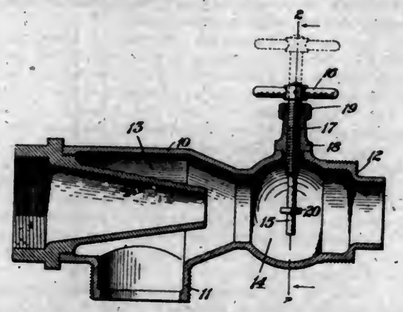
5. In a folding stool or chair, folding arms, a seat, and yokes connecting said seat and arms having a main stem inclined relatively to the median line of the seat between said arms.

[Claims 6 to 11 not printed in the Gazette.]

1,017,792. EJECTOR. FRANK J. O'LEARY, Detroit, Mich., assignor to Penberthy Injector Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 13, 1911. Serial No. 608,233. (Cl. 162—1.)

1. In a device of the character described, the combination with a chambered casing, an inlet nozzle therein, a

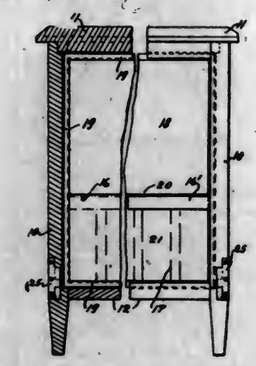
baffle member transversely movable in said casing, and means for shifting said member into and out of the path of the stream issuing from said nozzle.



2. In a device of the character described, the combination with a chambered casing, an inlet nozzle therein, and a baffle member comprising a transversely movable rod in screwthreaded engagement with said casing to shift the same into and out of the path of the stream issuing from said nozzle.

3. In a device of the character described, the combination with a chambered casing, an inlet nozzle therein, and a baffle member comprising a rod in screwthreaded engagement with said casing to shift the same into and out of the path of the stream issuing from said nozzle, a collar on the rod within the casing for closing the joint between the rod and casing.

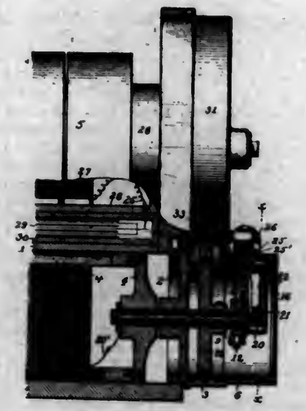
1,017,793. BEDSTEAD. ERIK WILLHELM PETTERSSON, Brooklyn, N. Y., assignor of one-half to Gustave Emil Calimander, Brooklyn, N. Y. Filed Mar. 2, 1911. Serial No. 611,828. (Cl. 5—4.)



1. In a bedstead, an end piece comprising corner posts and top and bottom rails, said posts and rails being provided, in their inner sides with a rectangularly extending groove, said top rail being removably fitted on said corner posts, an intermediate rail connecting said corner posts and offset from the plane of said groove, vertical bars connecting said intermediate rail and the bottom rail and also offset from the plane of the groove, and a removable and reversible panel held in said groove and slidable vertically therefrom upon removal of the top rail, said panel receiving lateral support from said intermediate rail and vertical bars.

2. In a bedstead, an end piece comprising a separable frame formed by corner posts and top and bottom rails, said posts and rails being provided in their inner sides with a rectangular groove, an intermediate cross-piece connecting said corner posts and offset from the plane of said groove, and a removable and reversible panel having tongues received in said groove, said panel comprising a thicker upper portion extending from the top of said cross-piece upward and a thinner lower portion offset from both faces of the thicker portion and extending downward to the bottom of the panel, said thinner portion receiving lateral support from said cross-piece and said thicker portion overhanging said cross-piece.

1,017,794. CIRCUIT-BREAKER FOR MAGNETO-ELECTRIC MACHINES. CARL A. PFANSTIEHL, Highland Park, Ill. Filed Apr. 18, 1910. Serial No. 556,245. (Cl. 123—166.)

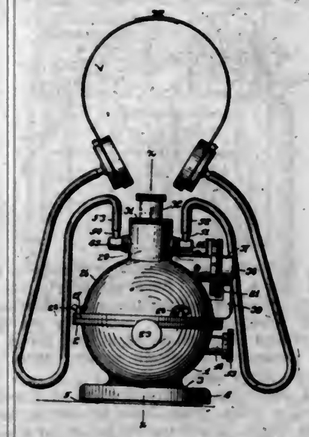


1. In a circuit breaker of the type herein described, the combination of an armature housing, a casing formed with a lateral pocket and adapted to having a turning adjustment on said housing, a cam disk arranged in said casing and receiving motion from the armature shaft, a movable contact lever pivoted in said casing and operatively engaging said cam disk, a plug of insulating material formed with marginal grooves engaging the margins of an orifice in a wall of the lateral pocket aforesaid, and a fixed contact member mounted on said plug and arranged in the path of the movable contact lever aforesaid, substantially as set forth.

2. In a circuit breaker of the type herein described, the combination of an armature housing, a casing formed with a lateral pocket and adapted to have a turning adjustment on said housing, a cam disk arranged in said casing and receiving motion from the armature shaft, a movable contact lever pivoted in said casing and operatively engaging said cam disk, a fixed contact member mounted in an insulated manner in a wall of the lateral pocket aforesaid and arranged in the path of the control lever aforesaid, an axially arranged arbor turning with the armature shaft and connected with the armature winding, a spring impelled contact plug contacting with said arbor, a radial arm carrying said contact plug and secured to the inside of the casing, a curved contact plate arranged in an insulated manner on the outside of the casing and electrically connected to the fixed contact aforesaid, and a conducting terminal having sliding contact with said plate, substantially as set forth.

3. In a circuit breaker of the type herein described, the combination of an armature housing, a casing formed with a lateral pocket and adapted to have a turning adjustment on said housing, a cam disk arranged in said casing and receiving motion from the armature shaft, a movable contact lever pivoted in said casing and operatively engaging said cam disk, a plug of insulating material formed with marginal grooves engaging the margins of an orifice in a wall of the lateral pocket aforesaid, a fixed contact member mounted on said plug and arranged in the path of the movable contact lever, an axially arranged arbor turning with the armature shaft and connected with the armature winding, a spring impelled contact plug contacting with said arbor, a radial arm carrying said contact plug and secured to the inside of the casing, a curved contact plate arranged in an insulated manner on the outside of the casing and electrically connected to the fixed contact aforesaid, and a conducting terminal having sliding contact with said plate, substantially as set forth.

1,017,795. ACOUMETER. CHARLES J. PILLING, Philadelphia, Pa. Filed Sept. 20, 1910. Serial No. 582,817. (Cl. 181—0.5.)



1. In an acoumeter the combination with a casing providing a normally closed sound-chamber having a concaved perforated area in its wall, of a rotatable valvular device coacting with said concaved perforated area to progressively uncover said perforated area, means on said valvular device to rotate it from without the casing, a graduated scale on said valve-actuating means to indicate the extent of its operative rotation, a tubular passageway communicating directly with said sound chamber through said valve-controlled perforated area, and means to create sound-vibrations at will within the casing.

2. In an acoumeter the combination with a casing providing a normally closed sound-chamber having a concaved perforated area in its wall, a rotatable valvular device adapted to progressively uncover said perforated area, means on said valvular device adapted to indicate the extent of its operative position relatively to said perforated area, a tubular passageway communicating with said sound chamber through said valve-controlled perforated area, a plurality of sound-discharge ports in said tubular passageway, valvular means governing all or either of said discharge ports at pleasure; and means to create sound vibrations at will in said casing.

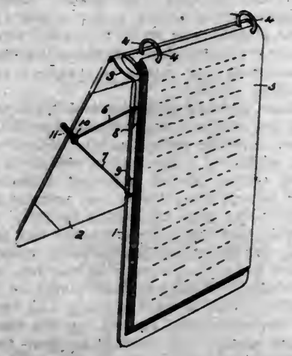
3. In an acoumeter the combination with a casing providing a normally closed sound chamber, a sound-producing means mounted therein, means to actuate the same at will, said means extending through the wall of said casing and adapted to be actuated from without; a tubular passage leading from the apex of said chamber, a valvular device between said elements adapted to progressively open said passageway, a plurality of sound-discharge ports in the wall of said tubular passageway, and a corresponding plurality of sound discharge tubes mounted rotatably in said ports, with valvular means adapted to independently open or close the same.

4. In an acoumeter the combination with a casing providing a substantially closed sound chamber, of a sonorous body mounted therein, means extending through the wall of said chamber and adapted to be actuated from without to intermittently strike said sonorous body and produce sound vibrations within said chamber, means to adjust the operative relation of said sonorous body and striker, means communicating with said sound chamber and constituting a passage-way for the discharge of said sound vibrations therefrom, and a plurality of sound discharge ports in the wall of said passage-way.

5. In an acoumeter the combination with a casing providing the sound chamber, of a sonorous body mounted therein, means extending through the wall of said chamber and adapted to be actuated from without to intermittently strike said sonorous body and produce sound vibrations within said chamber, means to adjust the operative relation of said sonorous body and striker, a scale on said means to denote the extent of said adjustment, means constituting a passage-way for the discharge of sound vibrations from said sound chamber, and a plurality of sound discharge ports in the wall of said passage-way.

[Claims 6 to 10 not printed in the Gazette.]

1,017,796. BOOK-COVER ATTACHMENT. WILLIAM P. PITT, Independence, Mo., assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Nov. 20, 1909. Serial No. 529,043. (Cl. 11—18.)



1. A loose leaf book provided with covers which may be positioned to form legs to support the book in open position, one cover having an eyelet extending therethrough, and a brace carried by the other cover and adapted to enter and releasably engage said eyelet to hold the covers so positioned.

2. A loose leaf book provided with covers which may be swung backward to an inverted V-shaped position, one cover having an eyelet extending therethrough, and a brace hinged to the other cover and having a spring catch insertible through and compressible by said eyelet, for releasably engaging said eyelet.

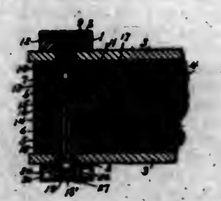
3. A loose leaf book provided with covers which may be swung backward to an inverted V-shape position, one cover having an eyelet, and a brace having two diverging arms hinged to the other cover along one side edge thereof, the brace being adapted to enter and releasably engage said eyelet.

4. A loose leaf book provided with covers which may be swung backward to an inverted V-shape position, and a brace hinged to one cover and having its axis parallel with one side edge thereof, and provided with means for releasably engaging the other cover to hold the covers in the inverted V shape position.

5. A loose leaf book provided with covers which may be swung backward to an inverted V-shape position, and a brace hinged to one cover and having its axis parallel with one side edge thereof and having means for engaging the other cover to hold the covers in the inverted V-shape position, the brace being capable of being swung parallel to and at the inner side of the cover to which it is hinged, and in the latter position not interfering with the closing of the covers.

[Claim 6 not printed in the Gazette.]

1,017,797. LOOSE-LEAF BINDER. WILLIAM P. PITT, Independence, Mo., assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Mar. 20, 1911. Serial No. 615,506. (Cl. 129—13.)



1. In a loose leaf binder, an extensible leaf supporting post having two members longitudinally movable relatively to each other, a wedge, spring actuated means for moving the wedge to a position in which the wedge will lock the members against relative movement in one direction, and a lever for operating the spring actuated means to withdraw the wedge from the locking position.

2. In a loose leaf binder, an extensible leaf supporting post having two members longitudinally movable relatively to each other, a rolling wedge, means for forcing the wedge to a position in which the wedge will lock the members against relative movement in one direction, and a lever for operating said means to withdraw the wedge from the locking position.

3. In a loose leaf binder, an extensible leaf supporting post having two members longitudinally movable relatively to each other, a rolling wedge, spring actuated means for forcing the wedge to a position in which it will lock the members against relative movement in one direction, and a lever for operating the spring actuated means to withdraw the wedge from the locking position.

4. In a loose leaf binder, an extensible leaf supporting post having two members longitudinally movable relatively to each other, one member having two oppositely inclined portions, the other member having an extension disposed between said inclined portions, and two wedges adapted to bear respectively against opposite sides of said extension and against said inclined portions for locking the members against movement in one direction.

5. In a loose leaf binder, an extensible leaf supporting post having two members longitudinally movable relatively to each other, one member having an inclined portion, the other member having a wedge bearing, a wedge, spring actuated means for forcing the wedge into locked engagement with the said bearing and inclined portion, and a lever for operating the spring actuated means to release the wedge from said locked engagement.

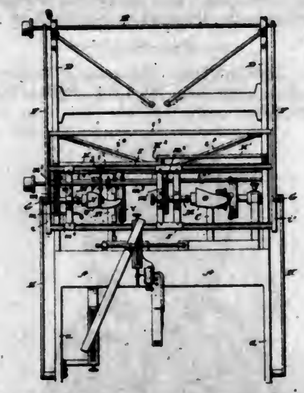
[Claims 6 to 12 not printed in the Gazette.]

1,017,798. LAST-LATHE. EDWIN J. PRINDLE, Washington, D. C., assignor, by mesne assignments, to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed May 7, 1904, Serial No. 206,945. Renewed Oct. 24, 1911. Serial No. 656,488. (Cl. 142—15.)

1. In a last lathe, the combination of a model wheel and cutter, a chuck frame, links pivoted upon the chuck frame, links pivoted below the chuck frame, and levers connecting the free ends of said links, said levers being pivoted to the chuck frame, said links and the respective lever-arms being so proportioned as to insure straight-line movements of the center pivots.

2. In a last lathe, the combination of a model wheel and cutter, a chuck frame, a link pivoted at one side of the frame of the machine, a link pivoted at the opposite side of such frame, and a lever connecting the free ends of said links, said lever being pivoted to said chuck frame, said links and the respective lever-arms being so proportioned as to insure straight-line movements of the center pivots.

3. In a last lathe, the combination of a model wheel and cutter, a chuck frame, a link pivoted at one side of the frame of the machine, a link pivoted at the opposite side of such frame, and a lever connecting the free ends of said links, said lever being pivoted to said chuck frame, said links being of equal length, and the point of connection between said lever and said chuck frame being at the middle of the link.



4. In a last lathe, the combination of a model wheel and cutter, a chuck frame, links pivoted to the ends of said chuck frame for guiding the latter toward and from the model wheel and cutter, means for preventing the rotation of said chuck frame about said pivots and linkages for preventing movement of said chuck frame in the direction of its length.

5. In a last lathe, the combination of a model wheel and cutter, a chuck frame, links pivoted to the ends of said chuck frame for guiding the latter toward and from the model wheel and cutter, means for preventing the rotation of said chuck frame about said pivots, said means consisting of braces attached to said chuck frame and connected with a horizontally movable part and linkages for preventing movement of said chuck frame in the direction of its length.

[Claims 6 and 7 not printed in the Gazette.]

1,017,799. DETACHABLE CASTER. DANIEL READ, Cottage Grove, Oreg. Filed Nov. 20, 1911. Serial No. 661,268. (Cl. 16—167.)

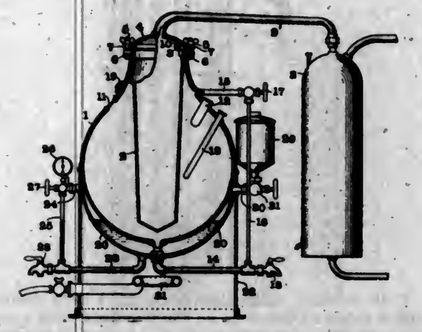
1. A detachable caster having a frame adapted to engage the rocker, a movable keeper engaged therewith, a clamping screw engaged with the keeper and adapted to bear against the rocker to thereby lock the keeper and hold the frame on the rocker, and a caster carried by the frame.

2. A detachable caster having a frame provided with a bottom and sides, a keeper pivoted to one side of the frame and adapted to swing crosswise of the latter, the other side of the frame and the keeper being provided with interlocking devices, and a caster carried by the frame.

3. A detachable caster having a frame provided with a bottom and sides, a keeper pivoted to one side of the frame and adapted to swing crosswise of the latter, the other side of the frame and the keeper being provided with interlocking devices, a clamping screw threaded through the keeper, and a caster carried by the frame.

4. A detachable caster having a frame provided with sides and a bottom which is arranged angularly to the sides, a caster secured to said angularly arranged bottom, a false bottom arranged substantially at right angles to the sides of the frame and in converging relation to the bottom aforesaid, and means for securing the frame to a rocker.

1,017,800. APPARATUS FOR MAKING FRUIT EXTRACTS. EUGÈNE G. RESSENCOURT, St. Louis, Mo., assignor to Eliot H. Chamberlain, trustee, St. Louis, Mo. Filed Oct. 26, 1910. Serial No. 589,130. (Cl. 99—2.)



1. In an apparatus for making fruit extract, the combination with a retort, of a shell inclosing the lower part of said retort and forming a water jacket, a pipe leading from the lower part of said shell, a water gage extending from said pipe to the upper part of said shell, a valved reservoir connected to the water jacket for supplying water thereto, a sleeve surrounding said water jacket and forming a support for the retort, said sleeve also forming a combustion chamber, and a burner situated within said combustion chamber.

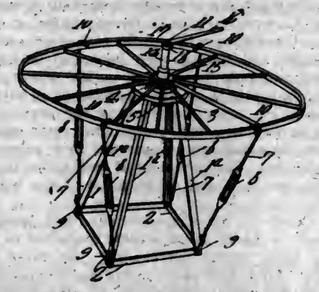
2. In an apparatus for making fruit extract, the combination with a retort, of a shell inclosing the lower part of said retort and forming a water jacket, a sleeve surrounding said water jacket, a pipe leading from the lower part of said shell through said sleeve, a water gage connecting said pipe with the upper part of said shell, a second pipe leading from the lower part of said retort through said shell and said sleeve, a second water gage connecting said pipe with the other part of said retort, and a valved reservoir connected with said jacket for supplying water thereto.

3. In an apparatus for making fruit extract, the combination with a retort having a restricted mouth, of a substantially cylindrical foraminous container provided with a flange adapted to rest on the lip of said mouth, a cover and means for clamping said cover against said flange, a pipe leading from said cover, and a condenser connected to said pipe.

4. In an apparatus for making fruit extract, the combination with a retort having a restricted mouth, of a substantially cylindrical foraminous container provided with a flange adapted to rest on the lip of said mouth, a cover provided with lugs, swing bolts pivoted to said retort, nuts on said swing bolts adapted to engage with the lugs to clamp said cover against said flange, a pipe leading from said cover, a condenser connected to said pipe, a shell inclosing the lower part of said retort and forming the water jacket, a sleeve surrounding said jacket, and a burner in said sleeve.

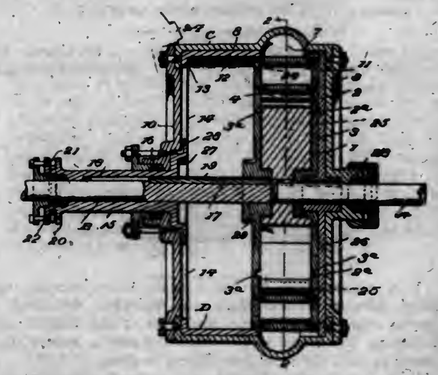
1,017,801. WHEEL JACK AND DISHER. IRVIN RICE, Jasper, Mo. Filed Aug. 5, 1911. Serial No. 642,473. (Cl. 29—87.)

A device of the character described, including a support, a tubular anvil-forming member adapted to be received by said support, a bracket depending from said support, below said anvil-forming member, a mandrel adapted to be inserted into said anvil-forming member, said bracket being provided with means for connection with the lower end of said mandrel, a nut terminated handle having screw-threaded engagement with said



mandrel, means adapted to be interposed between said anvil-forming member and said nut for delivering pressure to the hub of a vehicle-wheel, and turn-buckle equipped rods having upper and lower hook-ended members, and perforated members secured to said support for engagement with said lower hook-ended members.

1,017,802. CLUTCH. CHARLES CLAYTON RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Co., Mount Vernon, N. Y., a Corporation of Maine. Filed Mar. 29, 1911. Serial No. 617,777. (Cl. 192—18.)



1. A clutch of the character described, comprising a rotor, a rotor casing provided with inlet and outlet ports, a valve surrounding the rotor casing and longitudinally movable thereover to open and close the inlet and outlet ports, and a housing surrounding the valve and rotor casing and provided with a raceway adapted to communicate with said ports.

2. A clutch of the character described, comprising a rotor, a shaft to which the rotor is connected, a rotor casing in which the rotor is mounted, said casing being formed with inlet and outlet ports, a shaft to which said rotor casing is connected, a valve having a longitudinally sliding movement on the last named shaft and adapted to surround the rotor casing to control the communication between the ports thereof, and a housing surrounding the valve and rotor casing and provided with a raceway adapted to communicate with the ports of the rotor casing.

3. A clutch of the character described, comprising a rotor, a shaft to which the rotor is connected, a rotor casing in which the rotor is mounted, said casing being formed with inlet and outlet ports, a shaft to which said rotor casing is connected, a valve having a longitudinally sliding movement on the last named shaft and adapted

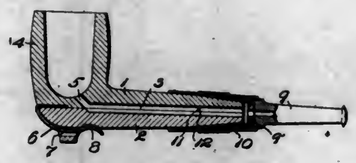
to surround the rotor casing to control the communication between the ports thereof, and a relatively stationary housing surrounding the valve and rotor casing and provided with a raceway adapted to communicate with the ports of the rotor casing.

4. A clutch of the character described, comprising, in combination with drive and driven shafts, a rotor connected to the drive shaft, a rotor casing connected to the driven shaft and formed with inlet and outlet ports, a valve longitudinally movable upon the driven shaft but compelled to rotate therewith and adapted to surround the rotor casing to cover and uncover the ports thereof, a housing surrounding said valve and rotor casing, and means for mechanically connecting said valve and the drive shaft upon the movement of said valve in one direction with the inlet and outlet ports of the rotor casing covered.

5. A clutch of the character described, comprising a drive shaft, a driven shaft, a rotor connected to the drive shaft, a rotor casing surrounding the rotor and provided with inlet and outlet ports and connected to the driven shaft, a valve movable longitudinally on the driven shaft, but rotatable therewith, the valve embodying a cylindrical drum adapted to slip over upon the rotor casing and control the inlet and outlet ports thereof, a housing surrounding the valve and rotor casing and in which the valve has a rotatable bearing, said housing being formed with a raceway adapted to communicate with the inlet and outlet ports of the rotor casing, a plate secured to the drive shaft, and means on the valve and plate adapted to co-act for interlocking engagement upon the movement of the valve to the position in which the communication between the inlet and outlet ports of the rotor casing are shut off from the raceway of the casing.

[Claims 6 to 12 not printed in the Gazette.]

1,017,803. TOBACCO-PIPE. LUTELLAS RICHARDS, Atwater, Ohio. Filed Apr. 10, 1911. Serial No. 619,924. (Cl. 131—12.)



1. A tobacco-pipe divided longitudinally through the stem, forming two sections, one carrying the bowl, a spring clip secured to the bowl end of one section and clamping the other section thereto, and a mouth-piece engaging over the stem ends of said sections.

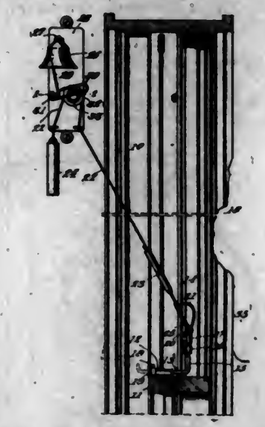
2. A tobacco-pipe divided longitudinally through the stem, forming two sections, one carrying the bowl, a spring clip secured to the bowl end of one section and clamping the other section thereto, a mouth piece engaging over the stem ends, and a sleeve engaging over the mouth-piece and stem sections.

3. A tobacco pipe divided longitudinally through the stem, forming two sections, one carrying the bowl, a spring clip secured to the bowl of the one section and projecting toward the stem, the one end of the other section extending beneath and secured to the other section by said clip, means for bringing the stem ends of both sections in registrable relation, a mouth-piece engaging over the stem ends, and a sleeve engaging over the mouth piece and stem.

1,017,804. ALARM AND SASH-LOCK. LAWRENCE E. ROBINSON, Coffeyville, Kans. Filed Apr. 23, 1910. Serial No. 557,246. (Cl. 116—42.)

1. In a device of the class described, a cable provided with a weight at both ends, an alarm device actuated by frictional contact with said cable, a retaining loop at one end of said cable, and a releasing device carried by a movable member and coöperating with said loop.

2. In a device of the class described, a cable provided with tension means, an alarm device connected for operation by said cable by frictional contact therewith, a retaining loop at one end of said cable, releasing means extending through said loop for retaining said cable, and a movable member adapted to actuate said releasing means.



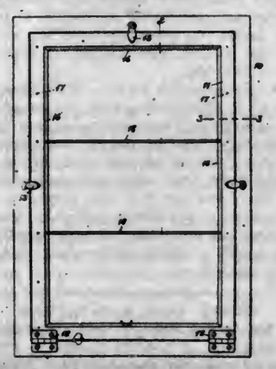
3. In a device of the class described, a cable provided with a weight at both ends, an alarm device having a member connected with said cable, a retaining loop carried by said cable, a releasing device for detachably securing said cable, a fusible portion connected to said cable, and a movable member adapted to actuate said releasing device.

4. In a device of the class described, a cable provided with tension means, an alarm device connected for operation by said cable by frictional contact therewith, a retaining loop at one end of said cable, a plug adapted to be engaged by said loop, a keeper to receive said plug, and independently movable means to engage and release said plug from said keeper.

5. In a device of the class described, a cable provided with tension means, an alarm device connected for operation by said cable, a retaining loop at one end of said cable, a plug to be engaged by said cable, a keeper adapted to receive said plug, and a bolt mounted upon a movable part to enter said keeper and release said plug.

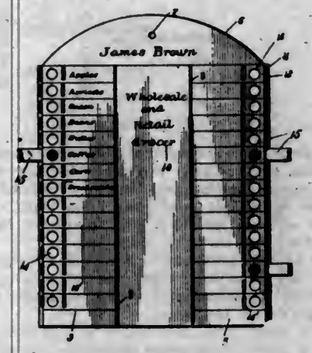
[Claims 6 to 8 not printed in the Gazette.]

1,017,805. POSTER-HOLDER. AUSTIN H. ROBY, Malden, and CHARLES H. CUTTER, Somerville, Mass. Filed Mar. 23, 1910. Serial No. 551,027. (Cl. 41—56.)



A holder for sheet posters comprising a backing recessed to present a raised margin, a sheet metal frame hinged at one edge to said backing, the outer edge of the frame being substantially flush with the front face of said margin, the inner edge of the frame extending rearwardly in an inclined direction to bear on a poster supported by the bottom of the recess of the backing, a portion of said inclined portion being serrated to engage the poster, pins projecting from the recessed portion of the backing under said frame, and means for holding the frame in sheet-clamping position.

1,017,806. INDICATOR. ELLSWORTH P. RODGERS, Hightstown, N. J. Filed Feb. 20, 1911. Serial No. 609,814. (Cl. 116—50.)



In a device of the class described, a plate having one of its edges turned to form a rearwardly projecting flange and provided with a series of guide openings in said flange, guides formed integral with said plate and arranged on the rear side thereof in line with the openings in said flange, sight openings between said guides and flanges, and slides arranged in said flange openings and said guides and having stops at their ends, and a plurality of indicating means on the front of said slides and adapted to appear in said sight openings when slides are moved to different positions.

1,017,807. METHOD OF PRODUCING STEEL METALS. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Oct. 10, 1911. Serial No. 653,784. (Cl. 75—45.)

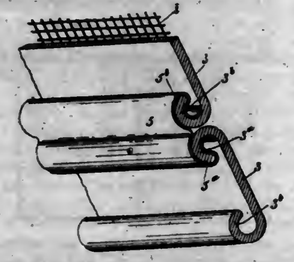
1. The method of producing steel characterized as containing less than 2% of titanium and less than 0.2% of manganese, which consists in first smelting iron ore, next in removing from the resulting iron while molten undesired elements and compounds together with, incidentally, manganese and carbon, next adding to the molten metal carbon, and finally adding thereto titanium in quantity sufficient to combine with and remove remaining undesired elements and compounds and leave in the resulting product less than 2% of titanium.

2. The method of producing steel characterized as containing less than 2% of titanium and less than 0.2% of manganese, which consists in first smelting iron ore, next in removing from the resulting iron while molten undesired elements and compounds together with, incidentally, manganese and carbon, next adding to the molten metal carbon, next pouring the metal and adding thereto an alloy of iron and titanium, next waiting a period, and, finally, pouring the metal into the mold, the said titanium being proportioned to combine with and remove remaining undesired elements and compounds and leave in the resulting product less than 2% of titanium.

3. The method of producing steel characterized as containing less than 2% of titanium, less than 0.2% of manganese and less than 0.02% of silicon, which consists in first smelting iron ore, next in removing from the resulting iron while molten undesired elements and compounds together with, incidentally, manganese, silicon and carbon, next adding to the molten metal carbon, and finally adding thereto titanium in quantity sufficient to combine with and remove remaining undesired elements and compounds and leave in the resulting product less than 2% of titanium.

4. The method of producing steel characterized as containing less than 2% of titanium, less than 0.2% of manganese and less than 0.02% of silicon, which consists in first smelting iron ore, next in removing from the resulting iron while molten undesired elements and compounds together with, incidentally, manganese, silicon and carbon, next adding to the molten metal carbon, next pouring the metal and adding thereto an alloy of iron and titanium, next waiting a period, and, finally, pouring the metal into the mold, the said titanium being proportioned to combine with and remove remaining undesired elements and compounds and leave in the resulting product less than 2% of titanium.

1,017,808. FLEXIBLE FIRE-RESISTING SHUTTER. ALBERT RUSH, Columbus, Ohio. Filed Mar. 4, 1908. Serial No. 419,150. (Cl. 189—56.)



A flexible shutter or curtain including in combination main slats of plastic material having at their longitudinal edges rolls or hooks formed in cross section on the arcs of circles, said rolls or hooks in the slats extending toward each other, and a connecting device for said main slats consisting of a metallic strip or slat bent at its opposite edges to form longitudinal pockets opening toward each other to receive the aforesaid rolls or hooks, said pockets having parallel inner walls concentric with the opposite surfaces of the aforesaid rolls or hooks and fitting against the said opposite surfaces of the hooks.

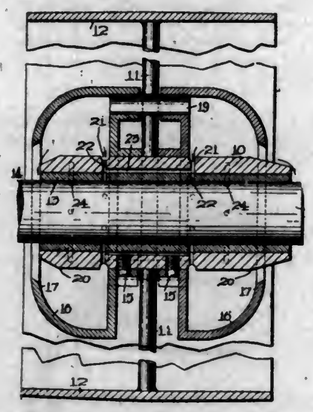
1,017,809. PUNCTURE-CLOSURE FOR PNEUMATIC TIRES AND THE LIKE. ROBERT SAMPSON, Montreal, Quebec, Canada. Filed Apr. 21, 1910. Serial No. 556,896. (Cl. 152—26.)

A puncture closure for pneumatic tires and the like embodying, in combination with an interior sealing member, an exterior clamping member comprising a thin, concavo-convex, skeletonized metal disk provided with a centrally-disposed, interiorly-threaded neck, a shield of elastic material surrounding said disk and extending through the skeletonizing openings therein, and a shank secured to said interior member and engaging the threaded neck of the exterior member.

1,017,810. SELF-LUBRICATING LOOSE PULLEY OR WHEEL. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Mar. 10, 1911. Serial No. 613,512. (Cl. 64—26.)

1. The combination with a wheel, of a pair of caps removably secured to the hub thereof on opposite sides of the center of the wheel, each cap comprising a hollow

disk-shaped member with an end opening near the end of the hub for the admission of a lubricant, and having passages communicating with the interior of the other cap, whereby the lubricant may flow freely from one cap to the other, the hub of the wheel being provided with passages for leading the lubricant to the shaft, and other passages for connecting the first named passages on opposite sides of the wheel, and also having a conical shaped end projecting beyond the end of the cap and having the base of the conical part within the cap for leading the lubricant that may be deposited thereon into a position to drop into said hollow caps.



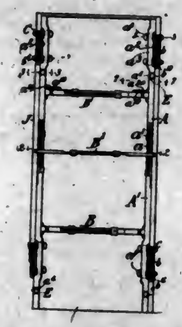
2. As an article of manufacture, a self lubricating loose pulley or wheel comprising a hub, web and rim, a pair of caps removably secured on said hub on opposite sides of the web each comprising a circular chamber for receiving a lubricant and having flanges at their outer edges extending toward the hub and open at their ends so that a lubricant can be introduced, the hub having radial passages on opposite sides of the central web for conducting a lubricant to the bearing and longitudinal passages for connecting two of said radial passages on opposite sides of the web, whereby lubricant will flow from one side directly therethrough to the bearing surface on the other.

3. As an article of manufacture, a self-lubricating loose pulley or wheel comprising a hub, web and rim, a pair of caps removably secured on the wheel on opposite sides of the web, each extending toward the hub and open at its ends so as to provide a space around the hub through which a lubricant can be introduced, the hub extending as far outwardly as the outer boundary of said cap and having radial passages on opposite sides of the central web for conducting a lubricant to the bearing and longitudinal passages for connecting two of said radial passages on opposite sides of the web, whereby a lubricant will flow from one side directly through to the bearing surface on the other.

1,017,811. DOOR-JAMB SETTER. FRANK SCHLEA, Harrison, N. Y. Filed Apr. 15, 1911. Serial No. 621,424. (Cl. 73—143.)

1. An extensible side bar for door-jamb setting machines, having a recess on its outer edge, said recess being provided with beveled edges adapted to form chisel guides, and a tool guide adjustable in said recess, said bar being provided with a guide slot extending from the recess to the inner edge of the bar adapted to permit vertical adjustment of the tool guide and admit light to the recess, and means for holding said tool guide in place.

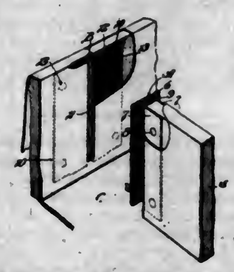
2. A device for setting door-jambs comprising a pair of parallel, longitudinally extensible side bars, adjustable cross braces connecting said bars, in combination with a removable adjustable reinforcing cross brace slotted at the ends to receive the side bars, and provided also with means for detachably fastening the side bars to the door-jamb.



3. A device for setting door-jambs comprising a pair of parallel, longitudinally extensible side bars, adjustable cross braces connecting said bars, in combination with a removable adjustable reinforcing cross brace, connecting the side bars and provided with means for rigidly connecting the side bars to the door-jamb.

4. An adjustable side bar for door jamb setters having a recess cut in its outer edge, said recess being provided with a scale in combination with a calibrated tool guide adjustable within the recess.

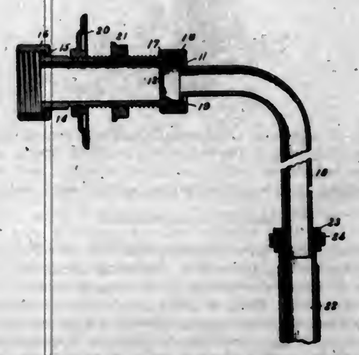
1,017,812. TRUNK-TRAY. PAUL H. SCHMELZER, St. Louis, Mo., assignor to P. C. Murphy Trunk Company, St. Louis, Mo., a Corporation of Missouri. Filed May 29, 1911. Serial No. 630,168. (Cl. 190—35.)



In a trunk tray, a pair of vertically disposed metal plates connected to one of the vertical walls of the tray and spaced slightly away from each other so as to form a vertical slot, the edge portions of said plates adjacent said slot being bent laterally away from the vertical wall of the tray so as to form a pocket, a partition, and a T-shaped device on the end of the partition whose head lies in said pocket, said device having a contracted neck which lies in said slot and laterally projecting flanges which embrace the partition.

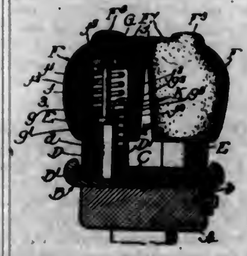
1,017,813. SUPPLY-PIPE FOR LAVATORY FITTINGS. ANTON C. SCHUERMANN, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed July 21, 1910. Serial No. 573,127. (Cl. 137—28.)

1. As a new article of manufacture, a supply pipe adapted for connection at its opposite ends respectively with a faucet shank and a service pipe, said supply pipe comprising a drawn metal tube having a portion thereof near one end projected laterally in all directions to provide an annular shoulder, the metal of the tube in advance of and adjacent said shoulder being convex in longitudinal section and tapering from the perimeter of the shoulder to the extremity of the tube to provide an annular seat-engaging wall, the mean diameter of which is greater than that of the tube, and the width of which is relatively broad as compared to the extent to which the annular shoulder projects beyond the surface of the tube, whereby said flaring convex wall may make facial contact with an outwardly flaring seating wall formed as an extension of the passage through an associated shank member, and the opposite end of said tube being smooth, whereby a slip-joint connection of greater or less penetration may be made with a service pipe.



2. In a coupling for water and other pipes, a supply pipe composed of a drawn metal tube having a portion thereof near one end projected laterally in all directions to provide an annular shoulder, the metal of the tube in advance of and adjacent the shoulder being convex in longitudinal section and tapering from the perimeter of the shoulder toward the extremity of the tube to provide an annular seat-engaging wall, the mean diameter of which is greater than that of the tube and the width of which is relatively broad as compared to the extent to which the shoulder projects beyond the surface of the tube, the opposite end of said tube being smooth, in combination with a pair of pipe connections, one of which connections has an outwardly flaring internal seat formed as an extension of the passage therethrough and into which the extremity of the tube projects and against which the outer face of the convex wall in advance of the said shoulder makes contact, and into the other of which connections the smooth end of the supply pipe is free to telescope to a greater or less depth, and coupling nuts for coupling the supply pipe at its opposite ends respectively to the said pipe connections.

1,017,814. RESILIENT TIRE. SEMPLE S. SCOTT, Chicago, Ill. Filed Apr. 27, 1911. Serial No. 623,728. (Cl. 152—8.)

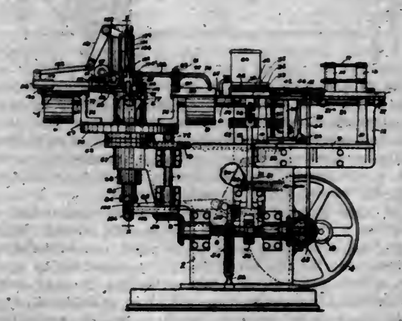


1. A tire consisting of a plurality of circumferential rows of radially extending blocks, means for supporting said blocks so that each may yield independently in a radial direction toward the tire center, said blocks having outer ends which together constitute the tread of the tire, each block having the edges of its outer end located closely adjacent to the edges of the outer ends of the adjacent blocks in its own row and in the adjacent row, and the adjacent sides of adjacent blocks being inclined away from each other toward the tire center.

2. A tire consisting of a plurality of radially extending, annularly arranged blocks, the outer ends of which together constitute the tread of said tire, an annular band located radially within said annular row of blocks, each block being provided with a radially extending cup-like recess opening through its inner end, a metallic tube secured within said cup-shaped recess, a sleeve rigidly secured to said band and extending within said tube, said tube and sleeve having sliding relation with each other, resilient means located within said sleeve adapted to resist the movement of said block toward said band and means connecting said band and said block adapted to limit the radial movement of said block away from said band.

3. A tire consisting of a plurality of radially extending, annularly arranged blocks, the outer ends of which together constitute the tread of said tire, an annular band located radially within said annular row of blocks, and means for yieldingly connecting each of said blocks to said band comprising a radially extending tubular nipple made rigid with said band and provided with an apertured reducing cap at its outer end, said nipple having a base of larger diameter than its outer end, a radially extending sleeve rigidly secured to said nipple base, each of said blocks having a cup-shaped recess opening through its inner end, a metallic inverted cup rigidly secured within the recess of said block, said sleeve extending within said cup and having telescoping relation with the side walls thereof, a bolt having a head slidably mounted within said nipple, said bolt projecting through the aperture in the said reducing cap and having its end threaded into the bottom of said metallic cup, and a coiled spring interposed between the bottom of said metallic cup and the base of said nipple.

1,017,815. CAN-BODY FORMING AND SEAMING MACHINE. LEE C. SHARP, Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 2, 1909. Serial No. 525,960. (Cl. 113—10.)



1. In a can-body forming machine, a curling device, means arranged to support a body-blank with one end adjacent to said curling device, and a member movable toward the curling device and adapted to engage the end of the body-blank remote from the curling device and from said end alone to push the blank through the curling device, said curling device being arranged transversely to the direction of movement of the blank pusher and adapted to deflect the whole of the advance edge of the blank.

2. In a can-body forming machine, a curling device, rectilinear guiding means having one end adjacent to the curling device, and a member movable through the guiding means toward the curling device, said member being engageable with one end of a body-blank held by the guiding means and adapted to push the blank through the curling device independently of other means, said curling device being arranged transversely to the direction of

movement of the blank pusher and adapted to deflect the whole of the advance edge of the blank.

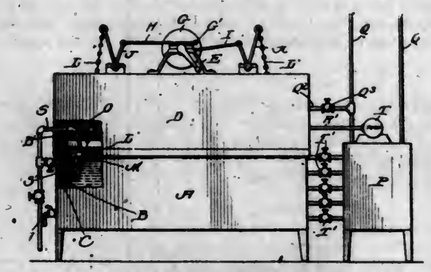
3. In a can-body forming machine, a table, means arranged adjacent to one end of the table to form an arcuate aperture having one end opening at and parallel to the surface of the table, a reciprocatable slide arranged upon the table and adapted to engage a body-blank lying thereon and push the same through the arcuate aperture, and means arranged to receive and support the blank after the same passes through the aperture.

4. In a can-body forming machine, a feed-table, a reciprocatable slide arranged thereon, means arranged near one limit of movement of the slide and forming an arcuate aperture having one end opening at and parallel to the surface of the table, a body-blank magazine carried on the table, means for removing a blank from the magazine and carrying it into the path of the reciprocatable slide, and means upon the slide for engaging and pushing the blank through the arcuate aperture.

5. In a can-body forming machine, a table having channels formed therein, means arranged at one end of the table to form an arcuate aperture intersecting the channels, a reciprocating slide mounted upon the table, and fingers connected with the slide and extending into the channels, the said fingers being adapted to engage a body-blank lying upon the table and push the same through the arcuate aperture.

[Claims 6 to 21 not printed in the Gazette.]

1,017,816. APPARATUS FOR HEATING AND COOLING LIQUIDS. GEORGE SINCLAIR, Greenwich, Ohio. Filed Apr. 18, 1911. Serial No. 621,806. (Cl. 31—92.)

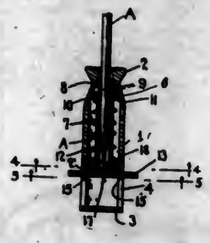


1. An apparatus of the kind described, comprising a vat having a removable cover, a crank shaft mounted on said cover carrying a disk, crank shafts mounted on each side of the first mentioned crank shaft connected to said disk by links, chains carried by said last mentioned crank shafts, a coil carried by said chains, and a tank having a pump for forcing liquid through said coil.

2. An apparatus of the kind described comprising a vat having a vessel supported therein and spaced therefrom to form a chamber, a cover arranged over said chamber, chains carried by said cover, a coil supported by said chains within said vessel, pipes extending through said cover, flexible pipes connecting said pipes to said coil, one of said pipes being provided with a branch extending into said chamber, and a pump connected to the other pipe for forcing liquid through said coil and chamber.

1,017,817. HAT-PIN GUARD. THEOPHILE SOKOLOWSKI and WALTER BUSZEK, St. Louis, Mo. Filed May 22, 1911. Serial No. 628,651. (Cl. 24—155.)

A hat pin guard comprising a tubular cylindrical clutch casing open at both ends and having one end tapered, a cap detachably connected with the larger end of said casing and having diametrically disposed longitudinally extending slots, a disk having a centrally disposed threaded aperture and oppositely disposed segmental slots arranged concentric with said aperture and adapted to slide on said clutch casing, the ends of said segmental slots being spaced apart to form guiding elements between the slots at oppositely disposed points on the disk and for engagement with the slots in said cap, a tubular stem externally screw threaded at one end to engage the threaded central aperture of said disk, a hollow truncated cone shaped member having its base tightly fitted on the



free end of said stem, and normally movable with said stem, and yieldably held in the tapered end of said casing, clutch members carried by said cone shaped member, and means for pressing said cone-shaped member into said casing.

1,017,818. PROCESS OF SOLDERING CHAIN-LINKS. EUGEN SPEIDEL, Pforzheim, Germany, assignor to The Firm of Friedrich Speidel, Pforzheim, Germany. Filed Apr. 22, 1910. Serial No. 557,011. (Cl. 113—112.)

1. Process of preventing inter-soldering of solder-cored metal chain links, consisting in applying a deoxidizer to the work piece, partially removing it again, and chemically producing on the surface of the metal of the work piece an antisoldering filmlike coating of a compound of such metal, substantially as set forth.

2. Process of preventing inter-soldering of solder-cored metal chain links, consisting in applying to the work piece a deoxidizer, partially removing it again, producing on the work piece a film like coating of an oxidized compound of the metal of the metal surface, and heating the workpiece until its core of solder melts and closes the joints, substantially as set forth.

3. Process of preventing inter-soldering of solder-cored metal chain links, consisting in treating the links with a deoxidizing agent, removing the latter again except from the faces of the joints, chemically producing on the metal of the surface of the links a film-like antisoldering coating of a compound of such metal, and then heating the chain to soldering heat, substantially as set forth.

4. Process of preventing inter-soldering of solder-cored metal chain links, consisting in applying to the work piece a deoxidizer, partially removing it again, chemically producing on the surface of the links a film-like coating of a compound of the metal of which the links are made, and then heating the links to soldering heat with the ends in contact, substantially as set forth.

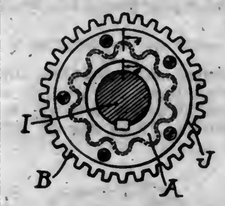
5. Process of preventing inter-soldering of solder-cored metal chain links, consisting in applying to the work piece a deoxidizer, partially removing it again, chemically producing on the surface of the metal of the links a compound of a metal component of the shell of the links, and then heating the links to soldering heat, substantially as set forth.

1,017,819. GEARING. AUGUST SUNDH, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 5, 1911. Serial No. 647,464. (Cl. 74—29.)

1. In a device of the class described, the combination of several parts or elements to be rotated, having corrugations, with a clearance space between the corrugations on one part and the corrugations on another part; and a strip or band of elastic material in the space.

2. In a device of the class described, the combination of several parts or elements to be rotated, having corrugations, with a clearance space between the corrugations on one part and the corrugations on another part; and a strip or band of steel in the space.

3. In a device of the class described, the combination of several parts or elements to be rotated, having corrugations, with a clearance space between the corrugations on one part and the corrugations on another part; the space being narrower at the median circumferential line of the two parts than at the end circumferential lines of the said two parts; and a strip or band of material in the space and occupying all the narrow portion or part of the space; the part of the said strip in the narrower portion of the said space being unyielding to deformation.



4. In a device of the class described, the combination of several parts or elements to be rotated, having corrugations, with a clearance space between the corrugations on one part and the corrugations on another part; the space being narrower at the median circumferential line of the two parts than at the end circumferential lines of the said two parts; and a strip or band of steel in the space, and occupying all the narrow portion of the said space.

5. In a device of the class described, the combination of several parts or elements to be rotated, having corrugations, with a clearance space between the corrugations on one part and the corrugations on another part; the space being narrower at the median circumferential line of the two parts and flaring outward to the sides of the two parts; and a strip of steel in the clearance space; that portion of the strip in the narrower part of the space occupying all the space there; and that portion of the strip not in the narrow part of the clearance, not occupying all the space, but being free to be moved, more or less, in that part of the space, from or toward the axial center of the said outer and inner parts.

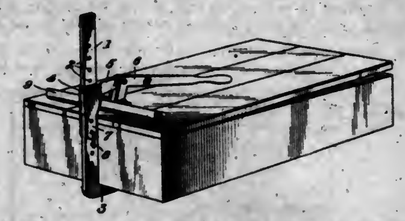
[Claims 6 to 11 not printed in the Gazette.]

1,017,820. PROPELLER. HENRY M. SVEBILIUS, Chicago, Ill. Filed July 24, 1911. Serial No. 640,236. (Cl. 115—44.)

A propeller, comprising a rotary supporting member, a plurality of hub members adapted to be axially mounted on said supporting member, a single blade on each of said hub members, the adjacent ends of said hub members being provided with uniformly spaced, interfitting projections and indentations, the number of projections on each of such adjacent ends of the hub members being a common multiple of the factors 1, 2, 3, etc., up to the total number of blades.

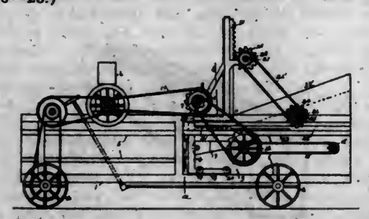
1,017,821. CLAMP. DAN B. SWICKARD, Galva, Ill. Filed Apr. 6, 1911. Serial No. 619,289. (Cl. 100—57.)

1. The combination, with a bar having an extending foot at one end, of a sleeve mounted on said bar and having an arm extending in the same direction as said foot, a bell-crank lever pivoted to said arm near its outer end, and a long presser-bar secured near its center to said lever and extending at either side thereof transversely to said foot and arm.



2. The combination, with a bar having an extending foot at one end, of an adjustable sleeve mounted on said bar and having an arm extending in the same direction as said foot, a bell-crank lever pivoted to said arm near its outer end, a long presser bar secured near its center to said lever and extending at either side thereof transversely to said foot and arm, a tongue on said sleeve extending along the bar toward the foot beyond the arc of movement of the presser-bar in that direction, and means to secure said tongue to the bar.

1,017,822. HAY-PRESS. FRANK W. TANNER, Fairbanks, Tex. Filed Apr. 14, 1910. Serial No. 555,396. (Cl. 100—25.)



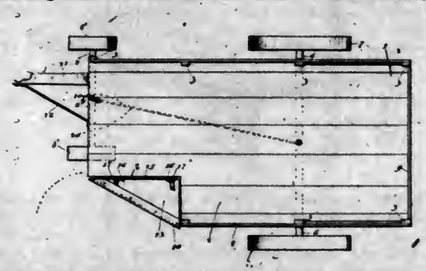
1. In a hay press a supporting frame; a compress chamber carried thereby; a plunger arranged to reciprocate therein; an operative mechanism connected to the plunger for imparting a reciprocating motion thereto; a rack member having teeth only a portion of the length thereof connected to said plunger and operated thereby; a second plunger also designed to operate in said chamber; a rack member carried by said second plunger, having teeth extending only a portion of the length thereof, said plunger being arranged to alternately operate against the chamber contents, at right angles to each other; an operative mechanism operated by the teeth of the first mentioned rack member and operating the other rack member and the plunger carrying the same.

2. A hay press comprising a supporting frame and a motive means carried thereby; a compress chamber carried by said frame; a wiring chamber adjacent to the compress chamber and disposed to receive therefrom; a plunger reciprocating in the compress chamber lengthwise thereof and another plunger reciprocating therein at right angles to the path of the first mentioned plunger and both plungers arranged to operate against the chamber contents; rack members carried by said plungers; rack teeth carried by said members extending only a portion of the length of said members, an operative mechanism operated by the rack member of the first mentioned plunger and having operative connection with the rack member of the second mentioned plunger and means for reciprocating the first mentioned plunger.

1,017,823. CORN-HARVESTER. HAL P. TROUTMAN, Kewanna, Ind. Filed Nov. 7, 1910. Serial No. 591,077. (Cl. 56—103.)

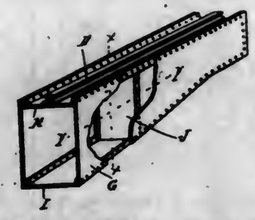
In a corn harvester, a frame comprising a flat unobstructed platform mounted upon wheels and having a

rectangular recess in one of its forward corners, and a rail extending along the sides and across the rear end of the platform, said rail terminating on the side with said recess at the rear end thereof, a triangular cutting blade arranged in said recess and having its cutting edge extending from the inner forward corner of said recess to



a point slightly beyond the rear outer corner thereof, and a hinged connection between the inner longitudinal edge of said blade and the adjacent edge of said platform, said hinged connection being adapted to normally hold the blade in horizontal operative position, substantially as described.

1,017,824. CRANE. GEORGE A. TRUE, Detroit, Mich., assignor of one-half to Northern Engineering Works, Detroit, Mich., a Corporation of Michigan. Filed Nov. 3, 1911. Serial No. 658,295. (Cl. 104—4.)



1. In a crane, a bridge girder comprising spaced vertically disposed web plates having their lower marginal edges tapering for a portion of their length to the ends, and top and bottom chord plates in the form of channel irons arranged between the web plates and having their flanges positioned intermediate the web plates and secured thereto, the lower channel being bent to conform to the lower marginal edges of the web plates.

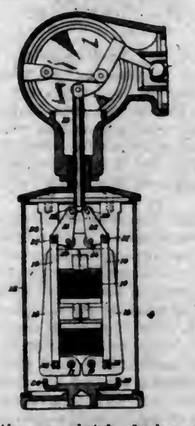
2. In a crane, a bridge girder comprising spaced vertically disposed web plates having their lower marginal edges tapering for a portion of their length to the ends, and top and bottom chord plates in the form of channel irons arranged between the web plates and having their flanges positioned intermediate the web plates and secured thereto, the lower channel being bent to conform to the lower marginal edges of the web plates and the upper channel being substantially straight, and a trolley rail supported upon the base of the upper channel, the latter being faced upward, whereby the flanges thereof form guards for the purpose described.

3. In a crane, a bridge girder comprising spaced vertically disposed web plates having their lower marginal edges tapering for a portion of their length to the ends, and top and bottom chord plates formed of channel irons arranged between the web plates and having their flanges secured thereto, the lower channel being bent to conform to the lower marginal edges of the web plates, and an internal reinforcement for said web plates.

4. In a crane, a bridge girder comprising spaced vertically disposed web plates having their lower marginal edges tapering for a portion of their length to the ends and top, and bottom chord plates formed of channel irons arranged between the web plates and having their flanges secured thereto, the lower channel being bent to conform to the lower marginal edges of the web plates, and a vertically arranged channel reinforcing member for the cord members and web plates positioned intermediate the latter and having the flanges thereof secured to the web plates, the ends of said reinforcing member engaging the cord members.

5. In a crane, a bridge girder comprising spaced vertically disposed web plates and top and bottom chord plates formed of channel irons arranged between the web plates and having their flanges secured thereto, and a plurality of spaced internal reinforcements for the chord members and web plates.

1,017,825. CLUTCH-CONTROLLING DEVICE. PER UTNE, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 10, 1911. Serial No. 643,309. (Cl. 192—1.)



1. In combination, a clutch device, a longitudinally movable rod adapted when retained in one position to hold the clutch device in engagement and to permit disengagement of the clutch device when not retained in such position, a movable member adapted to engage with one end of said rod for retaining the rod in position for the engagement of the clutch device, and means for holding the movable member in position for engagement with the end of the rod and for permitting the member to move out of the path of the rod.

2. In combination, a clutch device, a longitudinally movable rod adapted when retained in one position to hold the clutch device in engagement and to permit disengagement of the clutch device when not retained in such position, a movable member adapted to engage with one end of said rod for retaining the rod in position for the engagement of the clutch device and electromagnetic means for holding the movable member in position for engagement with the end of the rod for permitting the said member to move out of the path of the rod.

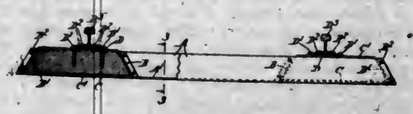
3. In combination, a clutch device, a longitudinally movable rod adapted when retained in one position to hold the clutch device in engagement and to permit disengagement of the clutch device when not retained in such position, a surface on said rod forming an angle with the longitudinal axis of the rod, a movable member adapted to engage with the said surface for retaining the rod in position for engagement of the clutch device, and means for holding the movable member in position for engagement with the said surface and for permitting the movable member to move out of such position.

4. In combination, a clutch device, a longitudinally movable rod adapted when retained in one position to hold the clutch device in engagement, and to permit disengagement of the clutch device when not retained in such position, a roller adapted to engage with one end of the rod, and means for holding the roller in position for engagement with the said end of the rod and for permitting the roller to move out of the path of the rod.

5. In combination, a clutch device, a longitudinally movable rod adapted when retained in one position to hold the clutch device in engagement, and to permit disengagement of the clutch device when not retained in such position, a roller adapted to engage with one end of the rod, and electromagnetic means for holding the roller in position for engagement with the said end of the rod and for permitting the roller to move out of the path of the rod.

[Claims 6 to 9 not printed in the Gazette.]

1,017,826. INSULATED CUSHION STEEL TIE. THOMAS E. VAUGHN, Chicago, Ill. Filed Sept. 24, 1910. Serial No. 583,556. (Cl. 238—5.)



1. A metallic tie of channel form having vertical webs, brace plates secured to and connecting said webs to form a braced skeleton structure, said brace plates being located in pairs, one pair at each end of said tie, to form cushion receiving recesses, and cushion blocks located in said recesses, the brace plates of a pair being inclined one toward the other, and one brace plate of each pair being movable, to removably retain said cushion blocks against longitudinal and transverse movements with respect to the tie.

2. A metallic tie comprising side members each consisting of a vertical web and a flange extending laterally and inwardly from said web, brace plates secured to said webs and connecting said side members to form a braced skeleton structure, said brace plates being located in pairs, one pair at each end of said tie to form cushion receiving recesses, and cushion blocks located in said recesses and resting on said flanges, the brace plates of a pair being inclined one toward the other and engaging the ends of a cushion block to retain the cushion blocks against longitudinal and transverse movement with respect to the tie.

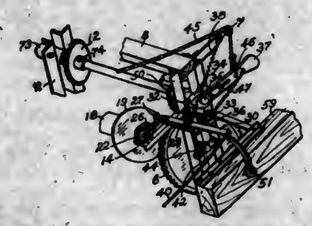
3. A metal tie comprising side plates having inwardly extending flanges along their bottom edges at right angles to said plates, rail carrying cushions mounted upon said flanges at either end and having angular ends, spacing channels in opposition to said ends and connecting said plates, some of said channels pivotally mounted with means for holding them in position.

4. A metal tie comprising side plates, inwardly extending flanges along their bottom edges, rail carrying cushions mounted upon said flanges at either end and having angular ends, spacing channels in opposition to said angular ends and rigidly carried by the side plates, together with spacing channels at the ends of the tie in opposition to said cushion and rotatatively mounted upon the side plates.

5. A tie comprising a metallic body having spacing members and insulating cushions held in position by said spacing members, one of said spacing members pivotally mounted.

1,017,827. SHIFTING AND LOCKING DEVICE FOR CLASH-GEARING. JOHN R. VOORHEES, Cedar Falls, and VICTOR V. SPEER, Waterloo township, Blackhawk county, Iowa. Filed July 21, 1910. Serial No. 573,084. (Cl. 57—22.)

1. In combination, rotatable winding-drums, a gear-wheel secured concentrically to one of said drums, a rotatable driving-shaft having a pinion mounted thereon, said pinion being movably mounted with relation to said gear-wheel to serve as clash-gearing, a fixed shaft, the other of said drums being both slidably and rotatably mounted thereon, and having a clutch-member on one end, a clutch-sleeve rotatably and non-slidably mounted on said fixed shaft and adapted to engage and mate with the clutch-member on said drum when the latter is moved longitudinally in one direction, and operative connections between said driving-shaft and said clutch-sleeve adapted to communicate rotation to the latter.



2. In combination, rotatable winding-drums, fixed shafts on which said drums are rotatably mounted, a gear-wheel secured concentrically to one of said drums, a rotatable driving-shaft having a pinion thereon, said pinion being movably mounted with relation to said gear-wheel to form clash-gearing, the other of said drums being slidable on its shaft and having on one end clutch-members, a sleeve rotatably and non-slidably mounted on said shaft and having on one end clutch-members adapted to mate with the clutch-members of said drum, means for moving said drum into engagement with said sleeve, resilient-means adapted to move said drum out of engagement with said clutch-sleeve, a sprocket-wheel on said clutch-sleeve, a sprocket-wheel on said driving-shaft, and a sprocket-chain operatively connecting said sprocket-wheels.

3. In combination, rotatable winding-drums, fixed shafts on which said drums are rotatably mounted, a gear-wheel secured concentrically to one of said drums, a rotatable driving shaft having a pinion thereon, said pinion being movably mounted with relation to said gear-wheel to form clash-gearing, the other of said drums being slidable on its shaft and having clutch-members, a sleeve rotatably and non-slidably mounted on said shaft and having clutch-members adapted to mate with the clutch-members on said drum, means for moving said drum into engagement with the clutch-members on said sleeve, resilient means adapted to move said drum out of engagement with said sleeve when said moving-means are released, a sprocket-wheel on said sleeve, a sprocket-wheel on said driving shaft, a sprocket-chain operatively connecting said sprocket-wheels, and resilient means connected to said pinion-carrying shaft adapted to act to move said pinion out of mesh with said gear-wheel.

4. In combination, rotatable winding-drums, fixed shafts on which said drums are rotatably mounted, a gear-wheel secured concentrically to one of said drums, a rotatable driving-shaft having a pinion thereon, said pinion being movably mounted with relation to said gear-wheel to form clash-gearing, the other of said drums being slidable on its shaft and having clutch-members on one end, a sleeve slidably and non-rotatably mounted on said shaft and having clutch-members adapted to mate with the clutch-members on said drum, means for moving said drum into engagement with said sleeve, a sprocket-wheel on said clutch-sleeve, a sprocket-wheel on said driving-shaft, a sprocket-chain operatively connecting said sprocket-wheels, resilient means adapted to act upon said last-mentioned drum to move it out of engagement with said clutch-sleeve when said moving-means are released, independent means for braking each drum to limit their speed, a resiliently-governed guard-pawl engaging the teeth of said gear-wheel, and resilient means for disengaging said pawl from the gear-teeth when desired.

5. In combination, a rotatable winding-drum, a fixed shaft on which said drum is rotatably mounted, a gear-wheel secured concentrically to said drum, a rotatable driving-shaft having a pinion mounted thereon, said pinion being movably mounted with relation to said gear-

wheel to form clash-gearing, a pivoted lever in which one end of said driving-shaft is rotatably mounted, a trip rope connected to the handle-end of said lever, a swing-arm having a lug adapted to engage the end of said lever opposite its handle-end to detachably hold the engaged end down to keep the said pinion in mesh with said gear-wheel, a tension-spring connecting said swing-arm and the handle-end of said lever, and means for disengaging the lug on said swing-arm from said lever to free the latter and permit said spring to act thereon to elevate said pinion out of mesh with said gear-wheel.

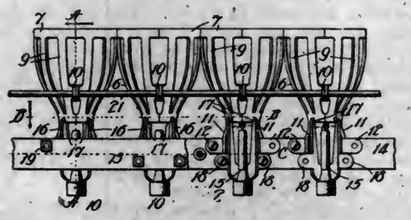
[Claims 6 to 8 not printed in the Gazette.]

1,017,828. ADJUSTABLE PISTON-RING CLAMP. CHARLES E. WAKE, Walla Walla, Wash., assignor of one-half to Clarence A. Andrew, Walla Walla, Wash. Filed July 10, 1911. Serial No. 637,725. (Cl. 29—84.)

1. A device of this character, comprising a flat strip of material provided with a series of semi-cup shaped projections formed at one edge thereof and provided with a plurality of double rows of apertures through one end thereof, a slotted plate adapted to be connected to one pair of said apertures at a time, the other end of said strip being curved upon itself and secured to form a transverse socket, a screw having a T-shaped head fitting in said socket thus formed, the screw shank thereof being positioned to enter the slot of the slotted plate, and a winged nut mounted upon the screw for securing said folded end to the slotted plate and the respective ends of the strip together.

2. A device of this character, comprising a strip of material provided with parallel edges, one of said edges being provided with a plurality of equi-distantly disposed projecting semi-cup shaped portions stamped from the material and producing a series of projections along said edge, said strip being further provided with a plurality of pairs of alined apertures through one end thereof, and the other end of said strip being folded upon itself and secured to produce a tubular transverse receptacle with a central aperture in the face thereof, a screw having a T-shaped head mounted in said tubular receptacle, the threaded shank thereof being projected through the aperture thereof, a slotted plate adapted to be adjustably connected to any pair of the apertures at the other end of the strip to receive the threaded shank of the screw, and a winged nut upon the threaded shank to lock the ends of the strip relatively to each other.

1,017,829. BOTTLE-HOLDER FOR BOTTLE-CLEANSING MACHINES. GEORGE M. WAKEFIELD, Chicago, Ill., assignor to E. Goldman & Co., Inc., Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1910. Serial No. 585,963. (Cl. 141—7.)



1. A bottle-holder for use in a bottle-cleansing machine of the character described, comprising an open-ended receptacle adapted to receive and support a bottle in inverted position and composed of an openwork-body having a contracted lower end, and a fixed jetting-nozzle registering centrally with the lower annular end of said receptacle and of a length adapted to enter the neck of a bottle introduced therein, the inner surface of said receptacle forming a guide for self-seating and self-centering the bottle-neck about the nozzle.

2. A bottle-holder for use in bottle-cleansing machines of the character described, adapted to receive and support a bottle in inverted position, and comprising a receptacle open at both ends and having a relatively-wide upper part and a relatively-narrow lower part, and a fixed jetting-nozzle registering centrally with the narrow lower part of said receptacle and of a length adapted to enter the neck of a bottle therein, the inner surface of the receptacle forming, for a bottle introduced neck-foremost therein, a guide for self-seating and self-centering the bottle-neck about the nozzle.

3. A bottle-holder for use in bottle-cleansing machines of the character described, comprising a receptacle adapted to receive and support a bottle in inverted position and composed of an upper annular band and a relatively-narrow neck-band spaced ribs connecting said bands, and a fixed jetting-nozzle registering centrally with said neck-band, and of a length adapted to enter the neck of a bottle introduced into the receptacle, the inner surface of the receptacle forming, for a bottle introduced neck-foremost therein, a guide for self-seating the bottle-neck about the nozzle.

4. A bottle-holder for use in a bottle-cleansing machine of the character described, adapted to receive and support a bottle in inverted position therein, comprising a receptacle composed of an upper annular band and a relatively-narrow band, with spaced connecting-ribs converging toward the neck-band and inwardly curved adjacent to their junction therewith, and a fixed jetting nozzle registering with the center of the neck-band and of a length adapted to enter the neck of the bottle, the inner surface of the receptacle forming, for a bottle introduced neck-foremost therein, a guide for self-seating and self-centering the bottle-neck about the nozzle.

5. A bottle-holder for use in bottle-cleansing machines of the character described, comprising, in combination with a jetting-nozzle, a receptacle composed of meeting sections, each having a semi-circular upper band and a semi-circular and relatively-narrow neck-band with spaced connecting-ribs converging toward the neck-band, and means on the sections for securing them together to form the receptacle with an annular neck-band concentric with said nozzle, and an inner guiding-surface for a bottle introduced neck-foremost into the receptacle for self-seating and self-centering the bottle-neck about the nozzle.

[Claims 6 and 7 not printed in the Gazette.]

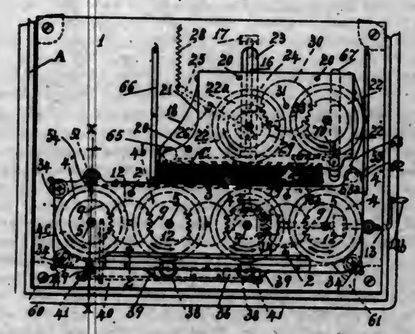
1,017,830. CARD-VENDING MACHINE. BEN S. WALLICK, Springfield, Ill. Filed Sept. 11, 1911. Serial No. 648,815. (Cl. 211—8.)

1. In a machine of the class described; the combination of a rotative cylinder having a half-circumference of hard and smooth surface and a half-circumference of yielding surface; a revoluble roller in yielding contact with and rotating in the same direction as the cylinder; and means for propelling cards in succession to the cylinder.

2. In a machine of the class described, the combination of a rotative cylinder having a half-circumference of hard and smooth surface and a half-circumference of yielding surface; a roller rotating in yielding contact with and in the same direction as the cylinder; means for propelling cards on edge in succession to the cylinder and means for propelling cards on edge away from the cylinder.

3. In a machine of the class described, the combination of a spacer substantially as described; means for propelling cards on edge to the spacer; means for propelling cards on edge away from the spacer; and controllable releasing means adapted to release any card running from the spacer.

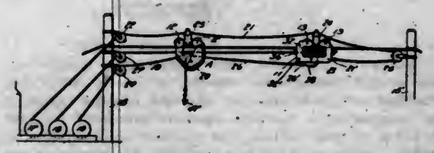
4. In a machine of the class described; the combination of a base plate; a carriage mounted to slide on the base plate; card-propelling cylinders mounted to rotate on the carriage and projecting forwardly over the front edge of the carriage; carrier cylinders, a spacer cylinder and a co-acting roller mounted to rotate on the base plate; a rotative main shaft; gears connecting the main shaft with the cylinders and the roller on the base plate to rotate them synchronously in one direction; a counter shaft driven from the main shaft; gears connecting the counter shaft with the cylinders on the carriage to rotate the cylinders on the carriage in a direction reverse to the direction of rotation of the cylinders on the base plate and a spring adapted to slide the carriage forwardly on the base plate.



5. In a machine of the class described; the combination of a base plate having a discharge slot; a carriage mounted to slide on the base plate; card-propelling cylinders mounted to rotate on the carriage; gears connecting said cylinders; card-propelling cylinders, a spacer cylinder and a co-acting roller mounted to rotate on the base plate; gears connecting said last-named cylinders and roller; a rotative main shaft; gears connecting the main shaft with the cylinders and roller on the base plate to rotate them synchronously in one direction; pinch wheels adapted to support cards above the discharge slot in the base plate; means for retracting said pinch wheels; a counter shaft driven from the main shaft; gears connecting the counter shaft with the cylinders on the carriage to rotate said cylinders synchronously in a direction reverse to the direction of rotation of the card-propelling cylinders on the base plate; and a spring adapted to slide the carriage forwardly.

[Claims 6 to 10 not printed in the Gazette.]

1,017,831. CABLE-TRAMWAY. SEBN P. WATT, Seattle, Wash., assignor to Washington Iron Works Co., Seattle, Wash., a Corporation of Washington. Filed July 19, 1911. Serial No. 639,341. (Cl. 214—14.)



1. In apparatus of the class described, the combination of a trackway, a load carriage and a trailer thereon, a hoisting line making a running engagement with the load carriage and the trailer, a hauling rope secured to the load carriage, an outhaul rope secured to the trailer, and means operated by the outhaul rope and the hoisting line whereby the hoisting line is paid out to afford slack.

2. In apparatus of the class described, the combination of a trackway, two carriages thereon, a hoisting line extending through both of the carriages, a hauling rope secured to one of said carriages, an outhaul rope secured to the other carriage, devices controlled by the line and said ropes whereby the ropes may be employed to cause the carriages to travel together or independently in either direction upon the trackway.

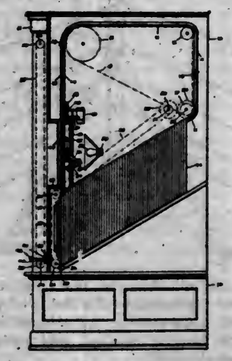
3. In apparatus of the class described, the combination of a trackway, a load carriage and a trailer mounted for travel on the trackway, rope sheaves provided in the load carriage and the trailer, a hauling rope secured to the load carriage, an outhaul rope secured to said trailer, a hoisting line passing about said rope sheaves, mechanism provided in the trailer and adapted for engagement with said hoisting line, and means provided on said hoisting line whereby said mechanism is caused to be positively actuated.

4. In apparatus of the class described, the combination of a trackway, a load carriage and a trailer mounted for travel on the trackway, rope sheaves provided in the load carriage and the trailer, a hauling rope secured to the load carriage, an outhaul rope secured to said trailer, a hoisting line passing about said rope sheaves, mechanism provided in the trailer and adapted for engagement with said hoisting line, means provided on said hoisting line whereby said mechanism is caused to be positively actuated, and a retractor associated with said mechanism for disengaging the latter when said controller is brought against the load carriage.

5. In apparatus of the class described, the combination of a trackway, a load carriage and a trailer mounted for travel on the trackway, rope sheaves provided in the load carriage and the trailer, a hauling rope secured to the load carriage, an outhaul rope secured to said trailer, a hoisting line passing about said rope sheaves, mechanism provided in the trailer and adapted for engagement with said hoisting line, means provided on said hoisting line whereby said mechanism is caused to be positively actuated, and a spring pressed retractor associated with said mechanism for disengaging the latter when said controller is brought against the load carriage.

[Claims 6 and 7 not printed in the Gazette.]

1,017,832. DISPLAY APPARATUS. MARTIN J. WESSELS, Spokane, Wash., assignor of one-half to Levi G. Monroe, Spokane, Wash. Filed Apr. 18, 1910, Serial No. 556,058. Renewed Oct. 16, 1911. Serial No. 655,023. (Cl. 40—36.)

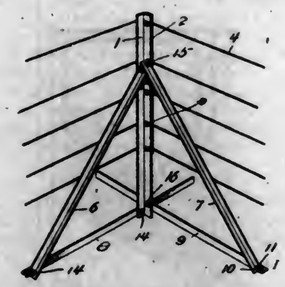


1. In a display apparatus, the combination with a suitable casing having a face-plate and an artificial light within the casing behind the face plate of a pair of rearward, downward and forwardly downward inclined tracks, vertical guides, a plurality of display transparencies having rollers attached to the upper outward edges of the same, adapted to travel in said tracks and guides, endless carriers provided with hooks to receive the rollers on the frames of said transparencies, the said endless carriers operating from a position near the top of the guides, rearwardly, and downwardly along the tracks,

thence diagonally forwardly and upwardly to the starting position, a pair of vertically operating endless carriers reaching to the lower ends of the guides and provided with hooks adapted to engage the lower edges of the frames of the transparencies, the said carriers adapted to move said transparencies upwardly from the forwardly downward inclined tracks to the rear of a face-plate in the casing and in front of said artificial light and thence upwardly through the guides, thence rearwardly and downwardly to the forwardly downward inclined tracks, substantially as described.

2. In a display apparatus, the combination with a suitable casing, having a face-plate and an artificial light within the casing behind the face plate of a pair of rearward, downward and forwardly downward inclined tracks, vertical guides, a plurality of display transparencies having rollers attached to the upper outward edges of the same, adapted to travel in said tracks and guides, endless carriers provided with hooks to receive the rollers on the frames of said transparencies, the said endless carriers operating from a position near the top of the guides, rearwardly and downwardly along the tracks, thence diagonally forwardly and upwardly to the starting position, a pair of vertically operating endless carriers reaching to the lower ends of the guides and provided with hooks adapted to engage the lower edges of the frames of the transparencies, the said carriers adapted to move said transparencies upwardly from the forwardly downward inclined tracks to the rear of a face-plate in the casing and in front of said artificial light, thence upwardly through the guides, thence rearwardly and downwardly to the forwardly downward inclined tracks, together with a pair of levers pinned to the sides of the casing in a position to be engaged by the frames as they are moved upwardly through the guides, arms pivoted to the levers and reaching downward to the tops of the frames of the transparencies, upon the forwardly and downwardly inclined tracks, guides for the arms, and arms pinned to the sides of the casing adapted to rest against the transparencies while they are at the position to the rear of the face-plate of the casing, substantially as described.

1,017,833. FENCE-POST. GEORGE H. WHITE, Enid, Okla. Filed July 1, 1911. Serial No. 636,467. (Cl. 39—131.)

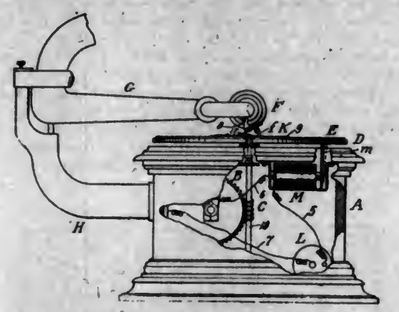


1. The combination with the post proper, of oblique braces detachably connected to the inside of the post, and horizontal braces connected to the oblique braces and to the outside of the base of the post, said horizontal braces extending beyond the post.

2. The combination with the post proper, of angular braces connected to the upper and lower portions of said post, said angular braces being connected back to back, so that the upper fastening will be on the inside of the post and the lower on the outside thereof.

3. The combination with the post proper formed of angle-iron, of oblique braces connected to the same, said braces formed of angle-iron, and horizontal braces formed of angle-iron, said braces adapted to be placed back to back and connected together so that they may be collapsed and folded in small compass.

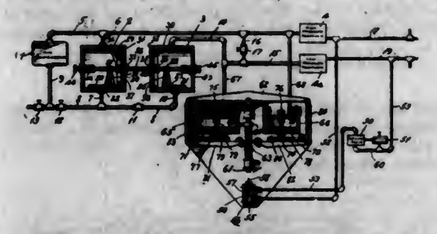
1,017,834. SOUND-PRODUCING APPARATUS. RICHARD A. WHITEHEAD, Los Angeles, Cal., assignor of one-half to Glenn B. Waterman, Los Angeles, Cal. Filed Oct. 5, 1910. Serial No. 585,481. (Cl. 181—3.)



1. In apparatus of the character described, a movable sound record support, the sound record thereon, a needle co-acting with the sound record in the production of sound, an adjustable support for the needle, a circuit maker co-acting with the needle, a brake adapted to be applied to terminate movement of the movable sound record support, and electro-magnetic means controlling the brake and electrically connected with the circuit maker; said circuit maker comprising a body adapted to be mounted upon the sound record, and a plurality of adjustably connected members adjustably connected with the body; one of said adjustably connected members being provided with a bifurcated end portion, there being a groove extending therefrom continuously throughout all of said members and a groove upon said body merging into said first named groove.

2. In apparatus of the character described, a circuit maker comprising a plurality of adjustably connected members, one of said members being provided with a bifurcated end portion, there being a groove extending therefrom continuously throughout all of said members.

1,017,835. APPARATUS FOR COMPRESSING AND DISTRIBUTING AIR UNDER PRESSURE. MELVILLE C. WILKINSON, Paloverde Valley, Cal. Filed Feb. 13, 1911. Serial No. 608,214. (Cl. 230—32.)



1. An air compressing and distributing mechanism, comprising a compressing means, a system of piping connected with the induction and the eduction sides of said compressor, a movable member interposed between the sides of said system and operable by the relative pressures in the two sides of the system for causing the compressor to take air from either side of the system and thus maintain the pressure in the two sides at a given rate with respect to each other.

2. An air compressing and distributing mechanism, comprising an air compressing device, a system of piping and reservoirs connected with the compression side of said device, a system of piping and reservoirs connected with the suction side of the said device, a movable member associated with the system and adapted to be actuated by the pressures from both sides of the system whereby a given ratio between the two systems may be maintained.

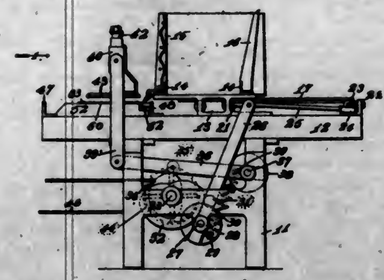
3. An air compressing and distributing system, comprising an air compressor, one side of said system being connected with the eduction side of the compressor while the other side of the system is connected with the induction side of the compressor, a reciprocating member associated with the system and having means for receiving the different pressures from the two sides of the system, and means operated by the said reciprocating member for maintaining a given ratio of pressure between the two sides, in accordance with the work performed by the air upon the compression side of the said system.

4. An air compressing and distributing system, comprising high and low pressure reservoirs, an air compressor connected with each by a suitable piping, and capable of drawing air from either reservoir in accordance with the amount of work performed, a reciprocating member associated with the system, valves operated by the said reciprocating member, the said valves being interposed in said piping and arranged to be moved by the reciprocating member in accordance with the pressure exerted upon the same from the two sides of the system, and means cooperating with the high and low pressure sides of the system capable of introducing additional air to the system whenever leakage occurs.

5. A compressed air system, comprising high and low pressure sides, a compressor interposed between them, a valve for connecting the low pressure side with the compressor when the pressure therein is depressed below the usual rate maintained and a second valve connected with the high pressure side, a reciprocating member connected with both of said valves, means carried by the said reciprocating member adapted to receive the differing pressures from the two sides of the system whereby the member will be so moved as to control the valves for maintaining the desired ratio between the sides of the system.

[Claims 6 to 14 not printed in the Gazette.]

1,017,836. PAPER-BOX-FORMING MACHINE. ADOLPH G. WOBUS and WALTER L. HUMPHREYS, St. Louis, Mo. Filed Sept. 6, 1910. Serial No. 580,734. (Cl. 93—51.)



1. A paper box forming machine comprising a frame, a bed plate, an adjustable die mounted thereon and formed of rollers, one of said rollers being formed in sections, a plunger, a feeder plate for advancing blanks over the die and a cam operating mechanism for operating the feeder plate and plunger alternately, substantially as specified.

2. A device of the class described comprising a frame, a bed plate, a die comprising rollers one of said rollers being sectional adjustably mounted, a sliding feeder plate, a hopper, a plunger located above the die, a lever mechanism for operating the plunger and the feeder plate alternately, and cams for controlling the movement of said levers, substantially as specified.

3. A device of the class described comprising a frame, a bed plate, a hopper mounted on said frame in which the blanks are placed, a sliding feeder plate operating beneath the hopper, a die located in advance of the hopper, a plurality of adjustable rollers one of said rollers being formed of sections forming the die frame, a plunger corresponding with the opening of the die arranged to operate therein, levers operating the plunger and the feeder plate, cams communicating with the levers for placing the same in operation alternately and a spring for controlling the movement of said levers when released by the cams, substantially as specified.

4. A paper box folding machine comprising a frame, a bed plate mounted thereon, a hopper supported above the bed plate, a feeder plate located beneath the hopper and supported on the bed frame, a die located in advance of the hopper, said die composed of a plurality of adjustable rollers forming the ends and one side of the die a sectional roller forming the other side of the die, an adjustable frame supporting the rollers, a plunger of a size to correspond with the opening of the die, levers connected to the plunger and levers connected to the feeder plate for operating the same, and cams supported in the frame for operating the levers alternately, substantially as specified.

1,017,837. PROTECTIVE SEAL. TINGLEY S. WOOD, Leadville, Colo. Filed Nov. 10, 1910. Serial No. 591,683. (Cl. 70—98.)

1. A protective seal, comprising a sealing shackle and a separate collar or sleeve surrounding the extremities of the shackle, the protruding extremities of the shackle being shaped to prevent withdrawal through the opening in the collar, one extremity at least of the shackle being bent for sealing purposes and constructed to produce rupture of the material if the bent sealing extremity is straightened and rebent.

2. The combination of a sealing shackle bent to form a loop, and a collar open to receive the extremities of the shackle when doubled to form a securing loop, the extremities of the shackle being bent on weakened lines for sealing purposes, substantially as described.

3. The combination of a sealing shackle and a collar open to receive the extremities of the shackle when doubled to form a securing loop, one extremity of the shackle beyond the collar being bent on weakened lines for sealing purposes, the shackle being formed with a stop to limit the collar between the sealing extremity of the shackle and the stop, substantially as described.

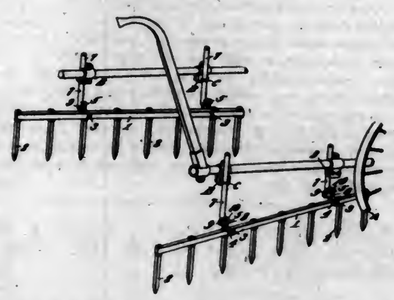
4. The combination of a sealing shackle and a collar adapted to receive the extremities of the shackle when doubled to form a securing loop, the extremities of the shackle being shaped to prevent withdrawal through the opening in the collar, one extremity at least of the shackle being bent for sealing purposes, the shackle being provided with a stop to limit the movement of the collar thereon between the stop and the sealing extremity of the shackle.

5. The combination of a shackle bent upon itself to form a loop a separate collar surrounding the extremities of the shackle, the extremities of the shackle beyond the

collar being bent to prevent withdrawal through the opening in the collar, and means for preventing movement of the collar upon the shackle substantially as described.

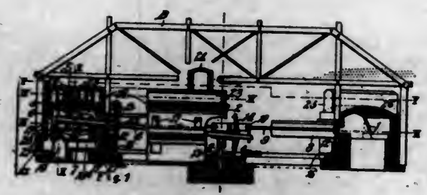
[Claims 6 to 8 not printed in the Gazette.]

1,017,838. HARROW ATTACHMENT FOR CULTIVATORS. ROBERT S. WYNNE, Waxahachie, Tex. Filed July 5, 1911. Serial No. 636,858. (Cl. 97—44.)



A harrow attachment for cultivators, including a tooth carrying bar, plates connected to, and adjustable angularly relative to the end portions of the bar, each plate having an arcuate slot in the free end portion thereof, the slotted portion of each plate being disposed in a plane intersecting the plane of adjustment of the plate relative to the bar, a standard detachably connected to the slotted portion of each plate and mounted for angular adjustment relative thereto, and means engaging the standard and the walls of the adjacent slot for holding the standard against movement relative to the plate.

1,017,839. RECUPERATIVE ROASTING-KILN. JOHN ZELLWEGER, St. Louis, Mo. Filed Jan. 9, 1911. Serial No. 601,709. (Cl. 75—143.)



1. An ore roasting kiln comprising a kiln chamber, means for subjecting ore in a portion of said kiln chamber to the radiating heat of fire gases within said chamber, means for withdrawing said fire gases from this portion of the kiln chamber, means arranged outside of the kiln chamber for causing fresh air to be heated by the outgoing fire gases and to be introduced into a different portion of the kiln chamber so as to oxidize the ore and produce heat therein, means for withdrawing the gases produced by the oxidation of said ore, and means for moving the ore through said kiln chamber.

2. An ore roasting kiln comprising a kiln chamber, means for supplying air to the ore in the front portion of said kiln chamber so as to oxidize same, means for thereafter subjecting said oxidized ore to radiating heat from fire gases within said chamber, and means for preventing said fire gases from mingling with the gases in the kiln chamber that are extracted from the fresh ore during the process of oxidizing same

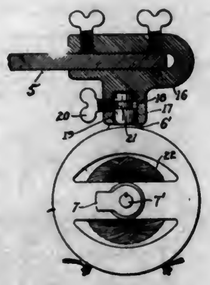
3. An ore roasting kiln comprising a kiln chamber, means for conveying ore through said kiln chamber, means for extracting the main portion of one of the constituents of said ore in one part of the kiln chamber and conducting it out of said kiln chamber, means for subsequently subjecting the ore to the radiating heat of fire gases within another part of the kiln chamber so as to roast said ore, and means for preventing the fire gases inside of one part of the kiln chamber from mingling with the gases inside the other part of the chamber that are extracted from the ore in this part of the kiln chamber.

4. An ore roasting kiln, comprising a continuous kiln chamber that is adapted to receive ore, means for roasting the ore in one part of said chamber in the presence of air so as to oxidize the components of same, means for collecting and withdrawing from the kiln chamber the major portion of one of the components produced by oxidizing the ore, means for causing said ore to be subsequently acted upon by fire gases within the chamber, and means for preventing the admixture in the kiln chamber of the fire gases and the gases that are extracted from the ore during the first stage of the process.

5. An ore roasting kiln, comprising a kiln chamber that is adapted to receive ore, means for introducing fire gases into the rear portion of said chamber so as to cause the ore in this portion of the chamber to be roasted by the heat which radiates from the fire gases within the chamber, means outside of said chamber for transferring part of the heat from said fire gases to air, means for supplying this heated air to the front portion of the chamber to oxidize the ore therein, and means for preventing the roast gases in the front portion of said kiln chamber from mingling with the fire gases within the rear portion of said chamber.

[Claims 6 to 26 not printed in the Gazette.]

1,017,840. THERAPEUTIC VIBRATOR. EDWARD H AMET, Redondo Beach, Cal. Filed Aug. 19, 1909. Serial No. 513,692. (Cl. 128—16.)

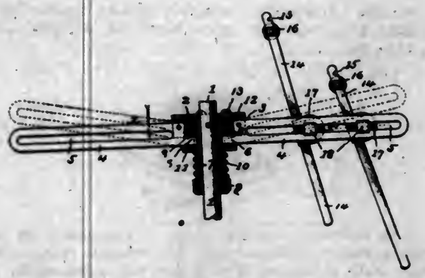


A therapeutic vibrator comprising a support for the human body or a part thereof, an intermediary vibration distributer, a shaft, an unbalanced rotor fixed on the shaft, a bearing frame for said rotor shaft connected with said intermediary means by swivel means, an electric motor having a portion thereof fixed to the bearing frame and a portion fixed to the shaft, the motor being thus swiveled and thus adapted to direct its rotation in different directions thereby to change the direction of vibration.

1,017,841. HAT-FRAME MACHINE. MATT M. AYES, Chicago, Ill. Filed Feb. 15, 1911. Serial No. 608,788. (Cl. 223—21.)

1. In a hat frame machine, the combination of a vertical standard, a spider attached to said standard and provided with peripheral pivot arms, a series of horizontal supporting bars pivoted at their inner ends to said pivot arms, a vertically movable sleeve arranged upon the standard and having a fixed upper flange or rim bearing upon the inner ends of the horizontal bars aforesaid, a support at the lower end of the sleeve for a spring, a sliding collar on said sleeve having bearing beneath the inner ends of the horizontal bars aforesaid, a spring interposed between the sliding collar and the spring support of the sleeve, and a series of pattern forming fingers secured to the horizontal bars aforesaid, substantially as set forth.

ing collar on said sleeve having bearing beneath the inner ends of the horizontal bars aforesaid, a spring interposed between the sliding collar and the spring support of the sleeve, and a series of pattern forming fingers secured to the horizontal bars aforesaid, substantially as set forth.



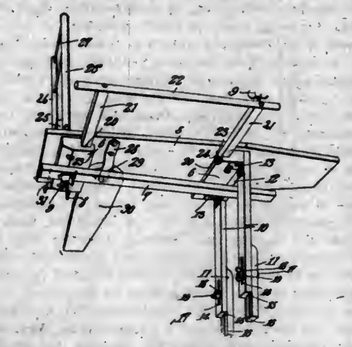
2. In a hat frame machine, the combination of a vertical standard, a spider attached to said standard and provided with peripheral pivot arms, a series of horizontal supporting bars pivoted at their inner ends to said pivot arms, the said bars having at their inner and lower corners inwardly extending lugs, a vertically movable sleeve arranged upon the standard and provided with a fixed upper flange or rim bearing upon the inner ends of the horizontal bars aforesaid, a spring support at the lower end of said sleeve, a sliding collar on said sleeve having bearing beneath the lugs at the inner ends of the horizontal bars aforesaid, a spring interposed between the sliding collar and the spring support of the sleeve, and a series of pattern forming fingers secured to the horizontal bars aforesaid, substantially as set forth.

3. In a hat frame machine, the combination of a vertical standard, a spider attached to said standard and provided with peripheral pivot arms, a series of horizontal supporting bars pivoted at their inner ends to said pivot arms, a vertically movable sleeve arranged upon the standard and having a fixed upper flange or rim bearing upon the inner ends of the horizontal bars aforesaid, a support at the lower end of said sleeve for a spring, a sliding collar on said sleeve having bearing beneath the inner ends of the horizontal bars aforesaid, a spring interposed between the sliding collar and the spring support of the sleeve, a stop disk secured in a vertically adjustable manner to the top of the spider, and a series of pattern forming fingers secured to the horizontal bars aforesaid, substantially as set forth.

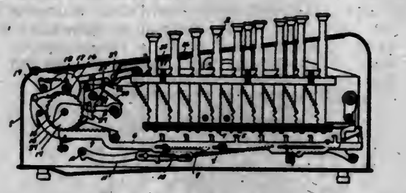
4. In a hat frame machine, the combination of a vertical standard, a spider attached to said standard and provided with peripheral pivot arms, a series of horizontal supporting bars pivoted at their inner ends to said pivot arms, the said bars having at their inner and lower corners inwardly extending lugs, a vertically movable sleeve arranged upon the standard and provided with a fixed upper flange or rim bearing upon the inner ends of the horizontal bars aforesaid, a spring support at the lower end of said sleeve, a sliding collar on said sleeve having bearing beneath the lugs at the inner ends of the horizontal bars aforesaid, a spring interposed between the sliding collar and the spring support of the sleeve, a stop disk secured in a vertically adjustable manner to the top of the spider, and a series of pattern forming fingers secured to the horizontal bars aforesaid, substantially as set forth.

1,017,842. IRONING-BOARD. CHARLES A. BAKER, Salem, Ill. Filed Jan. 25, 1909. Serial No. 474,147. (Cl. 68—10.)

The combination with a board, and parallel cleats across its bottom cut away at their upper inner corners to form rabbets; of a clothes rack having parallel arms sliding upon the rabbet-flanges and narrower than the latter, pins extending upward through the edges of the flanges past the arms and into the board, and stops projecting horizontally outward from the edges of the arms and adapted to engage said pins when the rack is withdrawn.



1,017,843. TRANSFER MECHANISM FOR CALCULATING-MACHINES. GLENN J. BARRETT, Grand Rapids, Mich., assignor to Barrett Adding Machine Company, Grand Rapids, Mich. Filed May 29, 1911. Serial No. 630,111. (Cl. 235—133.)



1. In a calculating machine having a key board and accumulating dials, a transfer mechanism for carrying over the tens from one dial to another, comprising a reciprocating digit stop, a swinging transfer stop normally adapted to arrest the movement of said reciprocating digit stop in one direction, means for moving said swinging transfer stop out of normal engagement with said reciprocating digit stop comprising a rotary cam with an engaging groove in the side thereof, a pin extending from said swinging transfer stop adapted to coöperate with said cam groove, and adjustable means for holding said swinging stop out of normal engagement with said reciprocating digit stop and out of contact with said cam, comprising a cam lever having a finger piece disposed on the key board, a double cam carried by said lever normally out of engagement with said swinging stop, but adapted to move said swinging transfer stop when said cam lever swings in either direction away from normal, substantially as described and for the purpose specified.

2. In a calculating machine having accumulating dials, a transfer mechanism for carrying over the tens from one dial to another, comprising a reciprocating digit stop, a swinging transfer stop normally adapted to arrest the movement of said reciprocating digit stop in one direction, means for moving said swinging transfer stop out of normal engagement with said reciprocating digit stop comprising a rotary cam, a pin extending from said swinging transfer stop adapted to coöperate with said cam, and adjustable means for holding said swinging stop out of normal engagement with said reciprocating digit stop and out of contact with said cam, comprising a cam lever having a finger piece disposed on the key board, a cam carried by said lever normally out of engagement with said swinging stop, but adapted to move said swinging transfer stop away from normal, substantially as described and for the purpose specified.

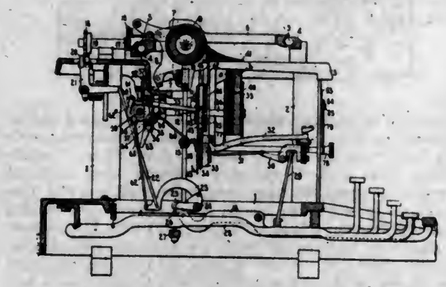
3. In a calculating machine having accumulating dials, a transfer mechanism for carrying over the tens from one dial to another, comprising a reciprocating digit stop, a swinging transfer stop normally adapted to arrest the movement of said reciprocating digit stop in one direction, means for moving said swinging transfer stop out of normal engagement with said reciprocating digit stop comprising a rotary cam with an engaging groove in the side thereof, and a pin extending from said swinging transfer stop adapted to coöperate with said cam groove, substantially as described and for the purpose specified.

4. In a carrying transfer mechanism for a calculating machine, the combination of a digit stop, a movable transfer stop to normally engage and arrest the movement of said reciprocating digit stop in one direction, and transfer means for moving said movable transfer stop out of normal engaging relation, comprising a grooved cam, and a projection from said transfer stop adapted to coöperate with said cam groove, substantially as described.

5. In a carrying transfer mechanism for a calculating machine, the combination of a reciprocating digit stop, a movable transfer stop normally adapted to arrest the movement of said reciprocating digit stop in one direction, and means for moving said movable transfer stop from arresting relation with said reciprocating member, comprising a rotary member and a projection and slot connection between said rotary member and said movable stop, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,017,844. TYPE-WRITING MACHINE. WALTER J. BARRON, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 26, 1911. Serial No. 604,780. Cl. 197—155.)



1. In a typewriting machine, the combination of a platen, shifting means therefor, a ribbon vibrator, means for vibrating the same including a link, and varying means operative on said link independently of said vibrator to vary the action of the vibrating means when the platen is shifted, said varying means comprising a cam having an unvarying relationship with said shifting means.

2. In a typewriting machine, the combination of a platen, a key controlled shift frame, a ribbon vibrator, means for vibrating the same including a link, and a cam fixed to the shift frame and operative on said link independently of said vibrator to vary the action of the vibrating means.

3. In a typewriting machine, the combination of a platen; platen shifting means; a cam thereon; a ribbon vibrator; means for vibrating the same including a link; and a lever controlling the normal position of said link and operative by said cam.

4. In a typewriting machine, the combination of a ribbon vibrator and actuating means therefor comprising an operating lever, said operating lever being fulcrumed to swing in two directions one of which is transverse of the other.

5. In a typewriting machine, the combination of a ribbon vibrator, an operating lever pivoted to swing in two directions, means for vibrating said lever to throw the vibrator to the printing point, and means for pivotally swinging said lever transversely of its plane of vibration to vary the extent of throw communicated to the vibrator.

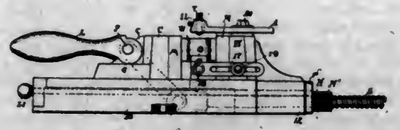
[Claims 6 to 20 not printed in the Gazette.]

1,017,845. NUT-LOCK. AARON A. BROWN, Roland Park, Md. Filed June 22, 1911. Serial No. 634,775. (Cl. 151—30.)

1. A nut-lock comprising a bolt, a nut secured on the bolt, a washer having a spiral coil provided thereon, the inner walls of the coil being formed with substantially V-shaped teeth, adapted to screw on the end of the bolt outside of the nut, the surfaces of said V-shaped teeth of the coil being provided with ridges adapted to engage the sides of the teeth of the bolt for preventing the nut from turning on the bolt.

2. A nut-lock, comprising a bolt, a nut, and means for preventing the nut from turning in one direction on the bolt, said means embodying a washer having a spiral coil secured thereto, the inner walls of said coil being adapted to screw on the bolt outside of the nut.

1,017,846. VISE OR CHUCK OR LIKE MACHINE. WILBUR F. BUDLONG, Berea, Ohio. Filed Mar. 20, 1911. Serial No. 615,708. (Cl. 77—63.)



1. A vise or like machine having a slidably mounted jaw, means to fix the working position of said jaw comprising a screw and nut, a lever with an eccentric bearing adapted to tighten the parts when otherwise adjusted and locked, and a link pivotally uniting said screw and lever.

2. A vise or like machine having a suitable base provided with a fixed jaw and having a slot therein, a slidable jaw, a non-rotatable screw slidably mounted within said base and having a screw-nut thereon, a device removably interposed between said nut and the base and adapted to limit the lengthwise movement of said screw, a link connected with said screw and extending through said slot, and a lever having an eccentric bearing adapted to draw said link and slidable jaw to clamp the work between the jaws after the preliminary adjustment of said parts has been effected.

3. A vise or like machine having one fixed and one movable jaw, in combination with means adapted to set said jaws to engage work of a given size and to clamp the jaws on the work without changing positions of the adjustable parts, the said means comprising an eccentrically mounted operating lever, a downwardly-inclined link pivotally united with said lever, a jaw-adjusting screw connected with said link, a nut on said screw, and a notched stop to engage said nut.

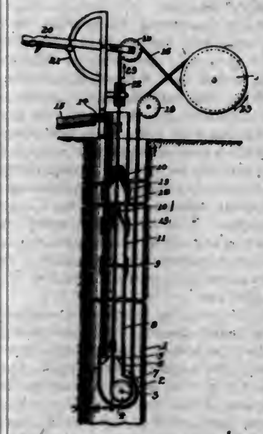
4. In vises and the like, a fixed jaw, a slidable jaw and a screw and eccentric-operating-lever therefor mounted to move therewith, a nut adjustably mounted on said screw, and a stop for said nut movably mounted and adapted to be thrown into and out of engagement therewith.

5. A vise or the like having a fixed jaw and an adjustable jaw, in combination with removable facings for said jaws having irregular outlines conforming to the work,

gages for the work supported at the side thereof and adapted to enter between said jaws, adjustable tool supports mounted on the top of one of said jaws and arranged to work between said side gages, and an adjustable cross-bar to unite said tool supports.

[Claims 6 to 9 not printed in the Gazette.]

1,017,847. OIL-WELL PUMP. IRVING CARL, Bakersfield, Cal. Filed Mar. 22, 1910, Serial No. 550,956. Renewed Aug. 24, 1911. Serial No. 645,714. (Cl. 103—6.)



1. An oil well pump, comprising a line of pump tubing, means forming a restricted opening in the pump tubing and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing, and through the restricted opening.

2. An oil well pump, comprising a line of pump tubing, means forming a restricted opening in the pump tubing, means for leading oil from the upper end of the pump tubing, brushes above the upper end of the pump tubing and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing, through the restricted opening and through the brushes.

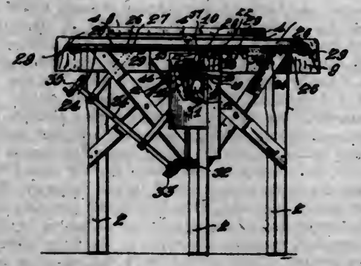
3. An oil well pump, comprising a line of pump tubing, inverted funnels mounted in the lower end of the pump tubing and forming restricted openings, and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing and through the restricted openings.

1,017,848. STAND FOR TALKING-MACHINES. ANNIBAL CASAGRANDE, Rochester, N. Y. Filed May 29, 1911. Serial No. 630,143. (Cl. 181—3.)

1. A stand for a talking machine, comprising a supporting part, a horn arranged below the supporting part, a horn extension detachably mounted upon said supporting part independently of the horn and extending rearwardly and upwardly above said supporting part and outside thereof, said extension being disposed exteriorly of the space inclosed by said supporting part, means for detachably mounting one end of said extension independently of the horn, and an inverted detachable U-shaped connection with the other end of said extension, said connection being designed for connection with the tone tube of a talking machine in lieu of the horn.

2. A stand for a talking machine, comprising a supporting part, a horn arranged below the supporting part, a horn extension detachably mounted upon said supporting part independently of the horn and extending rearwardly and upwardly above said supporting part and outside thereof, said extension being disposed exteriorly of the space inclosed by said supporting part, means for detachably mounting one end of said extension independently of the horn, an inverted detachable U-shaped connection with the other end of said extension, said connection being designed for connection with the tone tube of a talking machine in lieu of the horn, and a door to said supporting part opposite the larger end of said horn.

1,017,849. BRAKE FOR SELF-WAITING TABLES. WATSON CENTALA, Metz, Mich. Filed June 12, 1911. Serial No. 632,669. (Cl. 74—13.)



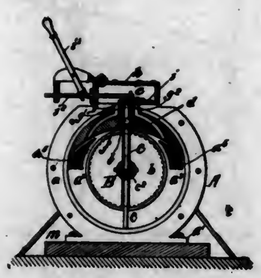
1. The combination with a shaft, means for rotating said shaft, and a spring-actuated brake for normally checking the rotation thereof; of mechanism for releasing said brake including a pivotally supported disk, a trip engaging said brake, connections between the disk and trip for actuating the latter when the former is turned, and a series of rods pivoted to said disk and extending tangentially therefrom.

2. The combination with a motor-driven shaft, and a spring-actuated brake for normally checking the rotation thereof; of mechanism for releasing said brake including a pivotally supported disk, a stud depending from said disk, a trip plate having lugs at its extremities one of which engages said brake and the other of which is adapted to be struck by said lug when the disk is turned, a pivotal support for said plate between its lugs, and a series of rods pivoted to said disk.

3. The combination with a shaft, means for rotating said shaft, a pivoted brake lever having at one extremity a shoe and at its other extremity an inclined surface, a spring throwing the shoe normally in contact with a moving part of the shaft-rotating means, a trip plate centrally pivoted to a fixed support and having lugs at its extremities whereof one engages said inclined portion of the brake-lever, a pivotally supported disk, a stud thereon adapted to strike the other lug of the trip plate when the disk is turned, a series of rods pivoted to said disk and extending tangentially therefrom, and means at the outer ends of the rods whereby any one may be drawn on to turn said disk.

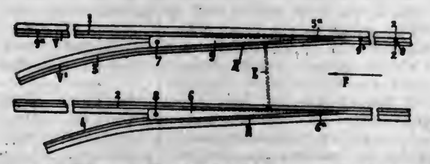
4. The combination with a motor-driven shaft having a disk thereon, mechanisms driven by said shaft, a brake having an inclined portion, and a spring throwing the brake normally against said disk; of a pivoted trip plate whereof one end bears against said inclined portion, a rotary disk having a stud adapted to engage the other end of said plate when the disk is rotated, and means for rotating it from remote points.

1,017,850. ROTARY MOTOR. JOHN FRANKLIN CESARIO, Bogalusa, La. Filed Mar. 25, 1911. Serial No. 616,806. (Cl. 121—74.)



In a fluid engine, a casing having an annular recess centrally therein and also an annular raceway concentric thereto of greater diameter than the same, a rotary shaft passed transversely through the casing at the center of the recess and having a slot opening through opposite sides thereof for alinement with the raceway, a circular blade carrier fixed to the shaft and substantially occupying the entire space of the recess, the said carrier being provided with a guide passage in alinement with the slot in the shaft and opening through the periphery of the carrier at opposite sides thereof, pressure blades slidable in said guide passage and having recessed overlapped inner ends engaged in the slot in the shaft, expansion means located between the overlapped inner ends of said blades for projecting the outer ends thereof in the raceway, the said blades being provided with channeled longitudinal side edges, spring acting packing strips arranged in the said channels and engaging the walls of the guide passage adjacent thereto, a cam enlargement formed at a point in the raceway to provide radial movements to the blades, the said casing being provided with by-passes near the ends of said enlargement and opening into the raceway, and means for admitting driving fluid to one side of the axis of movement of the blades and also for exhausting said fluid at the opposite of the axis of movement of the latter.

1,017,851. SWITCH-OPERATING MECHANISM. GEORGES CHAUMERET, Gennevilliers, France. Filed Dec. 28, 1909. Serial No. 535,350. (Cl. 104—24.)



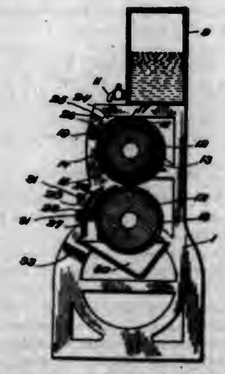
1. A switch operating mechanism comprising in combination with main grooved rails and switch points connected to move in unison, a longitudinally movable operating rod, bearings slidably mounting said rod on one of said rails, a vertically movable chamfered switch operating element slidably mounted in one of said main rails for shifting the points, a cam on said rod for actuating said element, and members vertically movable in one of the main rails and projecting into the path of the wheel flanges for reciprocating said rod, said members being disposed at points remote from the switch and at opposite ends therefrom.

2. A switch operating mechanism comprising in combination with main grooved rails and switch points connected to move in unison, a main operating rod, a vertically movable switch operating element arranged to be actuated by said rod, and members vertically movable in the main rails and alternately projecting into the path of the wheel flanges for actuating said rod, said members being disposed at points remote from the switch and at opposite ends therefrom.

3. In switch operating mechanism, the combination with main rails and switch points adapted to move in unison, a longitudinally movable operating member mounted laterally of the web of said rails, mechanism for normally retaining said switchpoint in operative relation to the rails for switching a vehicle in one direction, means operatively connected with said operating member for throwing said switch points out of a normal position for switching a vehicle in another direction upon movement of said operating member, mechanism operated by the flange of the car wheel to actuate said operating member in one direction for throwing said switch from a normal position, and means situated intermediate said mechanism and said switch points for actuation of said operating member in a counter-direction for return of said switch to a normal position.

4. A switch operating mechanism comprising in combination with main grooved rails, and switch points connected to move in unison, a longitudinally movable operating rod, means for adjusting the length of said rod, a vertically movable beveled switch operating element slidably mounted in one of said main rails for shifting the points, a cam on said rod for actuating said element, and members vertically movable in one of the main rails and projecting into the path of the wheel flanges for reciprocating said rod, said members being disposed at points remote from the switch and at opposite ends therefrom.

1,017,852. APPARATUS FOR TREATING SKINS. DANIEL CHESTNUT, Philadelphia, Pa. Filed July 31, 1911. Serial No. 641,421. (Cl. 91—49.)



1. In an apparatus of the character described, the combination with a frame, of upper and lower rolls mounted in the frame, one of said rolls having a longitudinal series of pockets therein, a covering on said roll comprising a strip of woven material, tapes secured to the inner face of said covering and knotted together, said knots located in said pockets, and means for supplying seasoning to said covering roll, substantially as described.

2. In an apparatus of the character described, the combination with a frame, of upper and lower rolls mounted in the frame, one of said rolls having a longitudinal series of pockets therein, a covering on said roll comprising a strip of woven material, tapes secured to the inner face of said covering and knotted together, said knots located

in said pockets, a lacing binding the edges of said covering, and means for supplying seasoning to said covering roll, substantially as described.

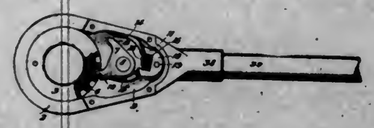
3. In an apparatus of the character described, the combination with a frame, of rolls mounted in said frame, means for transmitting rotary motion to said rolls, a covering of woven material on one of said rolls, means for supplying liquid to the covering on said last-mentioned roll, a relatively small roll engaging the surface of said covered roll, means for positively driving said last-mentioned roll, a rod extending across the frame, and adjustable partition plates on said rod conforming in shape to the covered roll and to the last-mentioned roll and operating to confine the liquid on said covered roll, substantially as described.

4. In an apparatus of the character described, the combination with a frame, of upper and lower rolls mounted in the frame, one of said rolls having a longitudinal series of pockets therein, a covering on said roll comprising a strip of woven material, tapes secured to the inner face of said covering and knotted together, said knots located in said pockets, means for supplying seasoning to said covering roll, a relatively small roll engaging the surface of said covered roll, means for positively driving said last-mentioned roll, a rod extending across the frame, and adjustable partition plates on said rod conforming in shape to the covered roll and to the last-mentioned roll, and operating to confine the liquid on said covered roll, substantially as described.

5. In an apparatus of the character described, the combination with a frame, of upper and lower rolls mounted in the frame, one of said rolls having a longitudinal series of pockets therein, a covering on said roll comprising a strip of woven material, tapes secured to the inner face of said covering and knotted together, said knots located in said pockets, a lacing binding the edges of said covering, means for supplying seasoning to said covering roll, a relatively small roll engaging the surface of said covered roll, means for positively driving said last-mentioned roll, a rod extending across the frame, and adjustable partition plates on said rod conforming in shape to the covered roll, and to the last-mentioned roll, and operating to confine the liquid on said covered roll, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,017,853. PIPE-THREADING TOOL. CLARENCE S. COCHRAN, Denver, Colo., assignor to The Octagon Die and Tool Company, Denver, Colo., a Corporation of Colorado. Filed Oct. 25, 1910. Serial No. 589,056. (Cl. 10—124.)

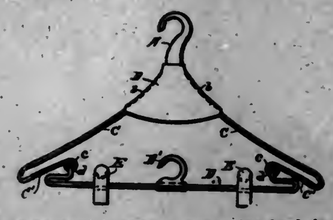


1. In combination, a stock carrying a revoluble toothed tool-holder and having a recess at one side of said holder, a double pawl pivotally mounted in said recess, a double spring in said recess, the two portions of said spring being respectively adapted to engage either side of said pawl and the opposite side of said recess, and means for shifting said spring.

2. In combination, a stock carrying a revoluble toothed tool-holder and having a recess at one side of said holder, a double pawl pivotally mounted in said recess, a U-shaped spring in said recess, the arms of said spring being respectively adapted to engage either side of said pawl and the opposite side of said recess, and a revoluble cam engaging the base of said spring for shifting the spring.

3. In a pipe threading tool, the combination of the manually rotating die stock provided with a walled recess on one side, the pawl provided with two teeth engaging lips pivotally mounted in said recess, the yoke shaped spring pivotally mounted in said recess to straddle and arranged with its opposite spring arm in operative engaging relation to said pawl's two ratchet tooth engaging pawl lips, and the cam pin arranged to throw said spring against the walls of said recess in alternate and predetermined order and to throw the spring arm of said yoke shaped spring that is not in engagement with the walls of said recess into operative resilient engagement with the opposite side of said pawl from the abutting arm, with a die holding disk revolubly mounted in said stock provided with a circular row of pawl lip engaging teeth arranged in operative engaging relation to said pawl.

1,017,854. GARMENT-HANGER. CHARLES B. CORBIN, Grand Rapids, Mich. Filed Aug. 2, 1911. Serial No. 642,024. (Cl. 211—13.)

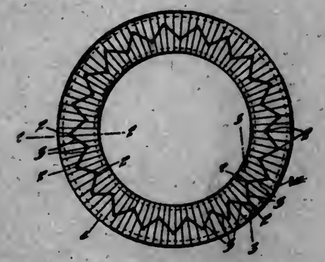


1. In a garment hanger, a supporting hook having lugs at the lower edge, shoulder bars pivotally secured to the lower end of said supporting hook and made to rest in the upper surface of the lugs and a cape pivotally secured to the supporting hook in position to cover the ends of the shoulder bars.

2. In a garment hanger, a supporting hook, shoulder bars pivotally secured to the hook, lugs on the lower edge of the hook in position to receive and support the bars, return hooks at the ends of the bars, said hooks terminating in eyelets, a cape pivotally secured to the supporting hook in position to cover the ends of the bars, and the edges of the cape folded over to protect the bars and the garments to be placed upon it, and a bar supported in the eyelets in position to give form to the bust of the garment.

3. In a garment hanger, a supporting hook, shoulder bars pivotally secured to said hook, lugs on said hook to receive and support the bars, return hooks at the free ends of the bars having eyelets formed at the ends, and a cape pivotally secured to the supporting hook in position to cover and protect the pivoted ends of the bars and arranged to prevent the collar of a garment from wrinkling.

1,017,855. PACKING-RING OR GASKET. FRANK A. DICKINSON, Philadelphia, Pa. Filed Oct. 5, 1911. Serial No. 652,966. (Cl. 121—110.)



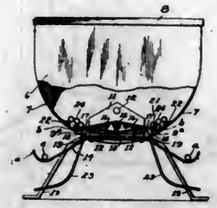
1. A packing ring or gasket comprising a metal ring, and a cord wound on said ring and secured to said metal ring, substantially as described.

2. A packing ring or gasket comprising a flat metal ring, and a cord wound around and entirely inclosing said ring, and said cord secured to said metal ring and flattened and treated with graphite, substantially as described.

3. A packing ring or gasket comprising a metal ring, a cord wound on said ring, said metal ring perforated, and a flexible binder sewed backwardly and forwardly through said perforations and through said cord, binding the cord on the ring, substantially as described.

4. A packing ring or gasket comprising a flat metal ring, a cord wound around and entirely inclosing said ring, and said cord flattened and treated with graphite, said metal ring perforated, and a flexible binder sewed backwardly and forwardly through said perforations and through said cord, binding the cord on the ring, substantially as described.

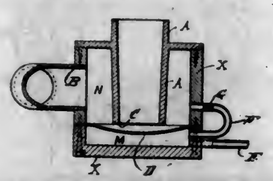
1,017,856. DISPENSING DEVICE. JOSEPH J. DOBES, Chicago, Ill. Filed Apr. 8, 1911. Serial No. 619,660. (Cl. 211—8.)



1. In a dispensing device, a receptacle having a longitudinal discharge opening in its bottom, a rod extending longitudinally of said receptacle adjacent said opening, a valve hinged on said rod and having its free edge bent to form a shoulder and a depending lip, said shoulder projecting over the discharge opening within the receptacle and said lip extending through said opening and engaging the edge of the receptacle wall on the opposite side of the opening, a spring yieldingly supporting said valve in its closed position, and means for moving said valve to open position.

2. In a dispensing device, a receptacle having a longitudinal discharge opening in its bottom, a rod extending longitudinally of said receptacle adjacent said opening, a valve hinged on said rod and having its free edge bent to form a shoulder and a depending lip, said shoulder projecting over the discharge opening within the receptacle and said lip extending through said opening and engaging the edge of the receptacle wall on the opposite side of the opening, a spring yieldingly supporting said valve in its closed position, a projection on the inner wall of the receptacle opposite the shoulder on the valve, and forming with said shoulder a restricted discharge passage, means for moving said valve to open position and means for receiving the articles dispensed from said receptacle.

1,017,857. VALVE FOR PNEUMATIC ACTIONS. LEWIS B. DOMAN, Syracuse, N. Y., assignor to The Amphion Piano Player Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 25, 1910. Serial No. 551,545. (Cl. 84—178.)

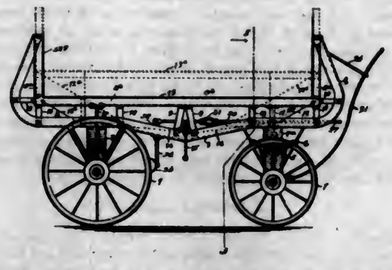


1. In combination with a pneumatic action, a valve comprising an air chamber, a conduit leading from the wind chest into said air chamber, a second conduit leading from the pneumatic action and projecting within said air chamber to form a valve-seat, a flexible diaphragm extending across said air chamber to provide a closure for said valve-seat, means for admitting air to inflate said diaphragm to close the valve, and means to equalize the air pressure on both sides of the diaphragm to open the valve.

2. In combination with a pneumatic action, a valve comprising an air chamber, a conduit leading from the wind chest into said air chamber, a second conduit leading from the pneumatic action and projecting within said air chamber to form a valve seat, a flexible diaphragm extending across said air chamber to provide a closure for said valve-seat, a tube opening to atmospheric air below said diaphragm to inflate same to close the valve, and a restricted passage connecting the compartments on opposite sides of the diaphragm to deflate same to open the valve when the tube controlling atmospheric air is closed.

3. In combination with a pneumatic action, a valve comprising an air chamber X, the pipe A and the pipe B, both opening into the exhaust chamber N of the air chamber X, the pipe B projecting into said air chamber to form a valve-seat C, the diaphragm D extending across said air chamber and adapted to close the valve-seat C, the tube E to admit air at atmospheric pressure below the diaphragm D to inflate same to close the valve-seat C, and the restricted air passages F, G, connecting the compartments M and N on opposite sides of the diaphragm D to deflate same to open the valve when the tube E is closed.

1,017,858. BAGGAGE-TRUCK. ORLO DOTY, Pueblo, Colo. Filed Aug. 26, 1910. Serial No. 579,183. (Cl. 21—118.)

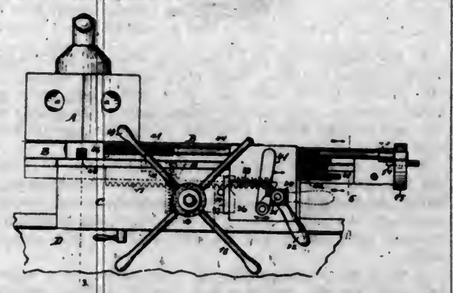


1. A truck having front and rear axles, a structural iron arch mounted on each axle, a reversed arch mounted on each arch, an I beam mounted on each reversed arch, a stationary frame composed of angle bars having horizontal and vertical portions, mounted on said I beams, bent angle bar braces at each side of said frame, said braces having arch shaped ends for supporting the vertical members of said frame, struts interposed between the bottom and sides of the frame and the braces, a rack, also composed of angle bars, mounted within said stationary frame and capable of vertical movement relatively thereto, and means for moving said rack.

2. A truck having a frame, angle bars having horizontal and vertical portions forming said frame, diagonal braces strengthening said frame, bent angle bar braces surrounding said frame and supporting its vertical portions, a rack composed of angle bars mounted within said frame and capable of vertical movement relatively thereto, pairs of coöperating cams under each corner of said rack, and means for moving one cam of each of said pairs of cams relatively to the other to give vertical movement to said rack.

1,017,859. STOP MECHANISM FOR TURRET-LATHES. HENRY DRESSE, Cincinnati, Ohio. Filed Aug. 9, 1911. Serial No. 643,081. (Cl. 29—65.)

1. In a turret-lathe, the combination of a turret, a feed-slide upon which it is mounted with a rotary adjustment, a support upon which the feed-slide is movably fitted, power-actuated-mechanism to move the slide on its support involving a worm-wheel and a complementary worm, a shaft near one end of which the worm is supported, a bearing for this end of the shaft, a bracket of which this bearing forms a part, means on which this bracket is supported so as to permit sliding adjustment in a manner whereby the worm may be moved with respect to the worm-wheel, a rack and pinion to hold and adjust this bracket, devices to lock the pinion against rotation to cause the sliding bracket to hold the worm in operative engagement and means to operate these devices to effect disengagement of the worm.



2. In a turret-lathe, the combination of a turret, a feed-slide upon which it is mounted with a rotary adjustment, a support upon which the feed-slide is movably fitted, power-actuated mechanism to move the slide on its support involving a worm-wheel and a complementary worm, a shaft near one end of which the worm is supported, a bearing for this end of the shaft, a bracket of which this bearing forms a part, means on which this bracket is supported so as to permit sliding adjustment in a manner whereby the worm may be moved with respect to the worm-wheel, a rack provided on this bracket, a pinion for it, a rod upon which this pinion is mounted, a handle to manipulate this rod, a projection provided in connection with this rod, a movable shoulder which, when in engagement with this projection, prevents rotation of the rod and means to actuate this shoulder so that when disengaged from the projection mentioned the pinion-carrying rod is released and permitted to rotate.

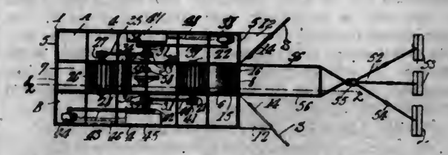
3. In a turret-lathe, the combination of a turret, a feed-slide upon which it is mounted with a rotary adjustment, a support upon which the feed-slide is movably fitted, power-actuated mechanism to move the slide on its support involving a worm-wheel and a complementary worm, a shaft near one end of which the worm is supported, a bearing for this end of the shaft, a bracket of which this bearing forms a part, means on which this bracket is supported so as to permit sliding adjustment in a manner whereby the worm may be moved with respect to the worm-wheel, a rack provided on the bracket, a pinion for it, a rod upon which this pinion is mounted, a handle to manipulate this rod, a projection provided in connection with this rod, a movable support, a spring whereby it is yieldingly held in engagement with the projection mentioned so as to prevent rotation of the rod and a handle to manipulate this support to disengage it from said projection to release the rod to permit rotation of the pinion.

4. In a turret-lathe, the combination of a turret, a feed-slide upon which it is mounted with a rotary adjustment, a support upon which the feed-slide is movably fitted, power-actuated mechanism to move the slide on its support involving a worm-wheel and a complementary worm, a shaft near one end of which the worm is supported, a bearing for this end of the shaft, a bracket of which this bearing forms a part, means on which this bracket is supported so as to permit sliding adjustment in a manner whereby the worm may be moved with respect to the worm-wheel, a rack provided on the bracket, a pinion for it, a rod upon which this pinion is mounted, a handle to manipulate this rod, a projection provided in connection with this rod, a movable support, a spring whereby it is yieldingly held in engagement with the projection mentioned so as to prevent rotation of the rod and means carried by the feed-slide and adapted to act upon said support in a manner to disengage it from the projection to release the rod and the pinion thereon for rotation.

5. In a turret-lathe, the combination of a turret, a feed-slide upon which it is mounted with a rotary adjustment, a support upon which the feed-slide is movably fitted, power-actuated mechanism to move the slide on its support involving complementary worm-gear-elements, an adjustably connected support for one of these elements, means involving a spring-actuated device to hold this support in adjustment to maintain the worm-gear elements in operative engagement, adjustably connected stops provided in connection with the device mentioned one for each turret-tool, an element carried by the feed-slide and adapted to act upon one of these stops on each forward movement of said feed-slide and means automatically actuated by the rotary adjustment of the turret whereby the element mentioned is adjusted to act upon a different stop, on each succeeding forward movement of the feed-slide.

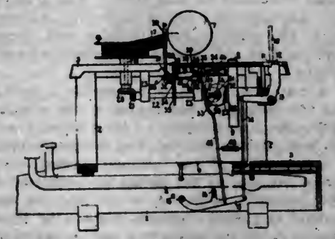
[Claims 6 to 10 not printed in the Gazette.]

1,017,860. WATER-MOTOR. ISAAC HILL DUNCAN, Humboldt, Tenn. Filed Jan. 10, 1911. Serial No. 601,813. (Cl. 138—3.)



A device of the class described comprising a casing provided with longitudinal partitions, defining a chute through the casing and hermetic compartments on each side of the chute; undershot wheels supported for rotation in the chute; front and rear deflectors in the chute, in advance of the wheels; a drive shaft journaled in the partitions and located in advance of the rear deflector; means in the compartments for connecting the drive shaft with the wheels; a hanger depending into the chute from the top of the casing; a jacket carried by the hanger; a differential in the jacket, and interposed in the drive shaft, the jacket being normally submerged, whereby the differential will be cooled; and a fly wheel upon the drive shaft, the fly wheel being located in the chute, in advance of the rear deflector; the fly wheel constituting a rotating means for preventing a jamming of floating material against the rear deflector.

1,017,861. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed July 12, 1910. Serial No. 571,603. (Cl. 197—157.)



1. In a typewriting machine, the combination of a ribbon carrier, means for actuating the same including a

two-part operating lever, the two parts being jointed together, and means for maintaining said two parts set in any one of a plurality of normal relationships to vary the normal position of said carrier, the change in normal position of said carrier taking place independently of the operation of the machine.

2. In a typewriting machine, the combination of a platen, a ribbon carrier, means for actuating said carrier including a two-part operating lever, the two parts being pivotally connected, and means for maintaining said two parts set in any one of a plurality of normal relationships to vary the normal position of said carrier with respect to said platen.

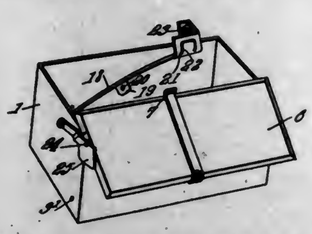
3. In a typewriting machine, the combination of a platen, a ribbon carrier, means for actuating said carrier including a two-part operating lever, the two parts being pivotally connected, and detent devices variable at will independently of the operation of the machine to change the set relationships of said two parts to vary the normal position of said carrier.

4. In a typewriting machine, the combination of a platen, a ribbon carrier, means for actuating the same including a two-part operating lever, the two parts being pivotally connected, said parts being relatively shiftable by hand independently of the platen, and means for maintaining said parts set with respect to each other after such shift, thus varying the normal position of said carrier.

5. In a typewriting machine, the combination of a ribbon carrier, an arm with which said carrier is pivotally connected, a lever of the first order, said arm being pivoted to one arm of said lever, key controlled actuating devices connected with the other arm of said lever, the normal relationship between said arm and said lever being variable at will independently of the operation of the machine, and means for maintaining said arm and said lever in different normal relationships.

[Claims 6 to 8 not printed in the Gazette.]

1,017,862. MAIL-BOX. JAMES A. FOUTS, Ottawa, Kans. Filed July 18, 1911. Serial No. 639,220. (Cl. 232—33.)



1. A mail box, having a receptacle, a spring mounted within the receptacle, a cover, a swinging connection between the cover and the receptacle engaging said spring to hold the cover in open or closed position, a double lever pivoted to the front wall intermediate of its ends within the receptacle, the lower end of said lever being operably connected to said spring, and a receptacle carried at the upper free end of said lever, whereby the actuation of the cover to open position will project the upper free end of said double lever above and without the receptacle.

2. A mail box, having a receptacle, a spring mounted within the receptacle and having a free terminal projecting from the rear toward the front thereof, a bail at its lower end pivoted within the receptacle and provided with a projection at one terminal thereof in engagement with the free end of the spring for operating the spring, a cover pivotally connected to the said bail and adapted to be held in opened or closed position by the contact of the spring with the projecting end of the bail, a double lever pivoted to the front wall intermediate of its ends, the lower end of said lever being operably connected with the free end of the spring, and a receptacle carried at the upper free end of said lever, whereby the actuation of the cover to open position will project the upper free end of said double lever above and without the receptacle.

1,017,863. DOUBLE SICKLE FOR MOWERS AND HARVESTERS. JAMES B. FULTON, Marne, Iowa. Filed Dec. 5, 1910. Serial No. 595,938. (Cl. 56—44.)

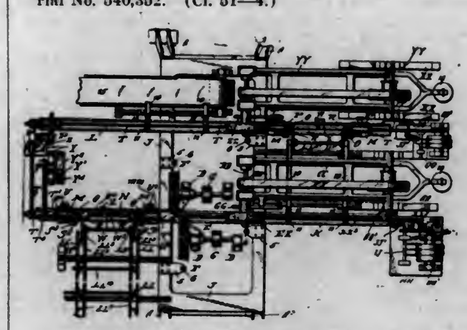
1. The combination of a finger bar and two sickle bars operated from the same crank shaft, one sickle bar carrying cutting knives, and the other sickle bar carrying guard sections, partially enveloping said cutting knives, the said cutting knives arranged to operate against the said guards enveloping them.

2. In a mower or harvester, the combination of a finger bar and guards holding two sickles having cutting knives arranged to work against each other and guards upon one sickle, the knives of the other sickle working between said guards and the knives of the first named sickle.

3. In a mower or reaper, the combination of a finger bar and guards, holding two sickles having cutting knives arranged to work against each other and guards upon one sickle, the knives of the other sickle working between said guards and the knives of the first named sickle and a double crank with crank journals oppositely placed and pitmen to operate said sickles.

4. In a mower or harvester, the combination of a finger bar, a double crank, pitmen, and sickle having guards attached to and operated therewith and a second sickle with knives operating upon the first sickle and between the knives thereof and said guards.

1,017,864. AUTOMATIC BUFFING-MACHINE. ALEXANDER C. FYFE, Weehawken, and WILLIAM E. GLADSTONE, West New York, N. J. Filed Jan. 27, 1910. Serial No. 540,352. (Cl. 51—4.)



1. In an automatic buffing machine, means for buffing a rod peripherally and longitudinally, simultaneously, means for presenting a rod to said buffing means, mechanically operated means for presenting an abrasive to said buffing means, and a mechanically operated cam for discharging said rod after its treatment.

2. In an automatic buffing machine, means for buffing a rod peripherally and longitudinally, simultaneously, means for presenting a rod to said buffing means, means for treating a rod longitudinally, and means for discharging said rod after its treatment by the first buffing means, and means for conveying said rod from the first buffing means to the second final buffing means.

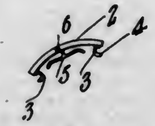
3. In an automatic buffing machine, means for buffing a rod peripherally and longitudinally, simultaneously, means for presenting a rod to said buffing means, additional means for treating said rod longitudinally, means for automatically presenting an abrasive to all of said buffing means, and an automatically operating cam for discharging said rod after its second treatment.

4. In an automatic buffing machine, means for buffing a rod peripherally and longitudinally, simultaneously, means for presenting a rod to said buffing means, additional means for treating said rod longitudinally, automatic means for discharging said rod after its second treatment, in combination with mechanically operated chucks for holding said rod while it is being buffed.

5. In an automatic buffing machine, means for buffing a rod peripherally and longitudinally, simultaneously, means for presenting a rod to said buffing means, additional means for treating said rod longitudinally, automatic means for discharging said rod after its second treatment and an automatically operated device for supplying said rods to said chucks.

[Claims 6 to 24 not printed in the Gazette.]

1,017,865. CUFF-FASTENER. ARTHUR G. GATES, Chicago, Ill. Filed Feb. 16, 1910. Serial No. 544,261. (Cl. 24—102.)



A cuff fastener consisting of a plurality of hingedly connected plates, shanks mounted adjacent the ends of said plates, said shanks having their ends disposed in opposite directions, said ends being enlarged and formed with a flat surface, a standard supported by one of said plates, a plurality of oppositely disposed tongues formed integral with said standard, said tongues having off-set end portions, said tongues being spaced from said plates and terminating short of said shanks.

1,017,866. SAFETY-RAZOR. JOHN GELIN, Chicago, Ill. Filed Jan. 4, 1909. Serial No. 470,583. (Cl. 30—12.)

1. In a razor, the combination of a blade, a holder comprising a pair of relatively movable jaws engaging opposite ends of the blade, a handle hinged on said holder and movable into and out of operating position, and means coöperating with said handle to secure said jaws in gripping engagement with the blade when said handle is in its operating position.

2. In a razor, the combination of a blade, a holder secured adjacent to and entirely behind one face of said blade, a projection on said holder, a handle fulcrumed on said projection, and clamping means comprised by said holder, and comprising relatively movable jaws engaging opposite edges of said blade and being secured in clamping engagement with said blade through the movement of said handle into operative position.

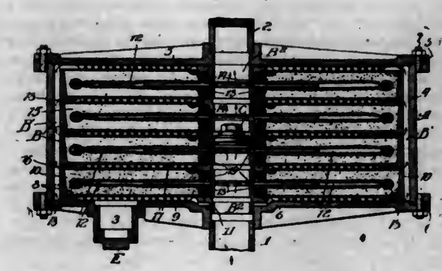
3. In a razor, the combination of a blade, a holder supporting said blade and comprising two relatively movable parts, a projection on one of said holder parts extending through the other, a handle having a part in interlocking engagement with said projection, a shoulder on said handle bearing on the other of said holder parts when said handle is in a certain position, means for retaining said handle in such certain position, and a spring interposed between said projection and handle.

4. In a razor, the combination of a supporting holder, a guard in said holder, a blade removably mounted in said holder adjacent to said guard, said blade having a cutting edge located closer to one face of the blade than to the other, whereby the position of said cutting edge with respect to the guard may be changed by inverting the blade in the holder.

5. In a safety razor, the combination of a blade sharpened at one edge and having chamfered edges disposed transversely to the sharpened edge, and a bowed clamp having jaws normally urged toward each other and adapted to be sprung into engagement with the chamfered edges of said blade, a projection on said clamp located between said jaws and extending away from said blade, a guard plate having an aperture for receiving said projection and having an edge arranged to coöperate with the cutting edge of said blade, and a handle interposed between said projection and guard plate and adapted, when in a certain position, to draw said clamp toward said guard plate and thereby urge said jaws into gripping engagement with the blade.

[Claims 6 to 15 not printed in the Gazette.]

1,017,867. FILTER. SIGMUND LUDWIG GOLDMAN, Chicago, Ill. Filed July 22, 1910. Serial No. 573,162. (Cl. 210—13.)



1. In a filter, the combination of a casing, filter-cells within said casing and forming therewith an annular chamber, said filter-cells having a central conduit with upper and lower orifices therefor, an orifice communicating with the interior of the casing at a distance from the center thereof, a plug removably inserted in said central conduit, said plug having means for expanding it within the conduit, and means for closing one of said orifices.

2. In combination with a filter comprising a casing and a plurality of filter-cells therein having a central conduit, of a plug removably inserted in said central conduit, whereby the filter may be employed either for single filtration or double filtration, said plug having expansion means, for the purpose set forth.

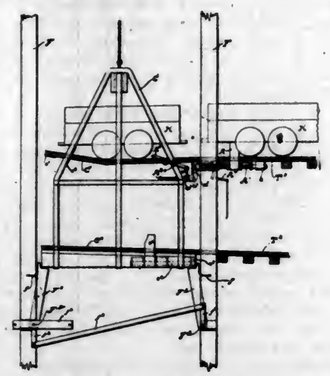
3. In combination with a filter comprising a casing and a plurality of filter-cells therein having telescopically related conduit sections, a plug adjustably inserted in said conduit, said plug being capable of adjustment without dismembering the filter.

4. In combination with a filter comprising a casing and a plurality of filter-cells within said casing having telescopically related conduit-sections, an expansible plug in one of said conduit-sections.

5. In a filter, the combination of a casing, a plurality of filter-cells therein having a conduit extending therethrough, and a plug for said conduit comprising a pair of disks, a clamping-bolt, and a gasket interposed between said disks.

[Claims 6 to 8 not printed in the Gazette.]

1,017,868. MECHANISM FOR HANDLING CARS. FRANK C. GREENE, Cleveland, and CHARLES G. PALMER, East Cleveland, Ohio; said Palmer assignor to said Greene. Filed Dec. 4, 1905. Serial No. 290,101. (Cl. 104—62.)



1. In car-handling mechanism, the combination with a cage adapted to travel in a shaft, such cage being provided with a fixed inclined track; of a stop normally operative to retain a car on said track; and means adapted, in one position of said cage, to render said stop inoperative.

2. In a car-handling mechanism, the combination with a cage adapted to travel in a shaft, such cage being provided with a fixed inclined track; of a movable stop adapted in one position to retain a car thereon, and in another position to permit the same to run off said track; and means adapted, in one position of said cage to render said stop inoperative.

3. In car-handling mechanism, the combination with a cage adapted to travel in a shaft, such cage being provided with a fixed inclined track; of a movable stop at the lower end of said track adapted in one position to retain a car thereon, and in another position to permit the same to run off said track; and means in the shaft fixed relatively to said cage, and adapted in one position of the latter to render said stop inoperative.

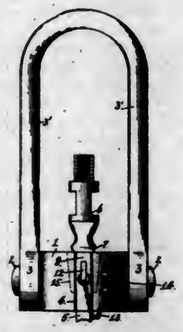
4. In car-handling mechanism the combination of a cage adapted to travel in a shaft, such cage bearing an inclined track; and a stop-device at the lower end of said track, said device comprising a rock-shaft bearing a stop-member and provided with a weighed arm whereby said stop-member is normally positioned to retain a car on said track; and means in the shaft fixed relatively to said cage and adapted upon downward movement of the latter thereby to engage said weighted arm and render said stop device inoperative.

5. In a car-handling mechanism the combination of a cage adapted to travel in a shaft, such cage bearing an inclined track; a stop-device comprising a rock-shaft bearing a stop-member and provided with a weighted arm whereby said stop-member is normally positioned to retain a car on said track; and a latch in said shaft adapted to raise said weighted arm whereby said stop-member is actuated to release said car.

[Claims 6 to 77 not printed in the Gazette.]

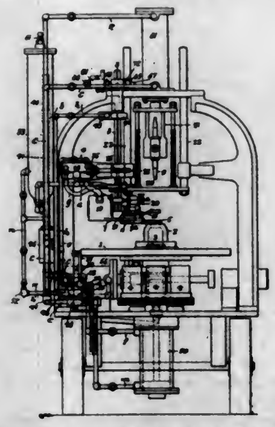
1,017,869. SUCKER-ROD ELEVATOR. SAMUEL ALLEN GUIBERSON, Jr., Coalinga, Cal. Filed Nov. 18, 1911. Serial No. 661,002. (Cl. 166—7.)

1. In a sucker-rod elevator, a block formed with a vertical through slot which opens at one end through the side of the block and is closed at its other end, said closed end being shaped to receive the rod and to lie under a shoulder on said rod, and said block being also formed with vertical sockets opening from the sides of said slot; and a locking slip to fit in said slot, and having side wings to fit in said sockets, said slip being formed with a face complementing the closed end of the slot to fit said sucker-rod and lie under the shoulder thereon.



2. A sucker-rod elevator comprising a lifting bail; a block having side pins pivotally mounted in the extremities of said bail, said block being formed with a vertical through slot which opens at one end through the side of the block and is closed at its other end, said closed end being shaped to receive the rod and to lie under a shoulder on said rod, and said block being also formed with vertical sockets opening from the sides of said slot; and a locking slip to fit in said slot and having side wings to fit in said sockets, said slip being formed with a face complementing the closed end of the slot to fit said sucker-rod and lie under the shoulder thereon.

1,017,870. GLASS-WORKING MACHINE. BENJAMIN T. HEADLEY and MERVIN C. BARD, Millville, N. J., assignors to Millville Machine Company, Millville, N. J., a Corporation of New Jersey. Filed May 31, 1910. Serial No. 564,205. (Cl. 49—5.)



1. The combination with a glass working machine having molds for the reception of glass and means mounted above the same for pressing the glass in said molds, of shearing means for severing the glass charged to said molds, fluid controlled means for operating said shearing means, a movable mount carrying both of said means, and means for imparting movement to said mount in two directions whereby said shearing means and its operating means may be carried to and away from a mold.

2. The combination with a glass working machine having molds for the reception of glass and means mounted above the same for pressing the glass in said molds, of shearing means for severing the glass charged to said molds, fluid-controlled means for operating said shearing means, a vertical shaft carrying the shearing means and the operating means therefor, and means for imparting movement to said shaft whereby said shearing means and its operating means may be moved to and away from a mold.

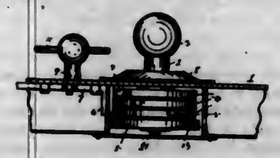
3. The combination with a glass working machine having molds for the reception of glass, of means for rotating said molds, shearing means for the glass, operating means therefor, a vertical shaft disposed beyond the path of the molds and carrying the shearing means and the operating means therefor, and means for imparting limited movement to said shaft in two directions whereby said shearing means and its operating means may be bodily moved to the active and inactive positions with respect to a mold.

4. In a glass working machine, the combination with a mold table and a mold carried thereby and means mounted above the same for pressing the glass in said molds, of shearing means comprising a pair of pivoted blades movable to a position over said mold, a fluid controlled piston for actuating said blades, a bracket carrying said piston, a movable mount carrying said bracket and having limited rocking movement, and means for moving said mount whereby the shears, bracket and piston may be carried bodily to the active and inactive positions with respect to the mold, said mount moving in the arc of a circle eccentric to the arc through which the molds are moved.

5. In a glass working machine, the combination with a mold table and a mold carried thereby, of shearing means comprising a pair of pivoted blades, a fluid-controlled piston for actuating said blades, a bracket carrying said piston, a vertical shaft carrying said bracket and having limited rocking movement, and means for moving said shaft whereby the shears, bracket and piston may be carried bodily to the active and inactive positions with respect to the mold, said latter elements moving in the arc of a circle eccentric to the arc through which the molds are moved.

[Claims 6 to 25 not printed in the Gazette.]

1,017,871. RESONATOR. LUDWIG H. HIMIOBEN, Hamilton, Ohio. Filed Feb. 11, 1911. Serial No. 608,174. (Cl. 116—33.)



1. A resonator comprising a closed cylindrical metal casing formed with a rectangular opening eccentric to the axis and with a series of circular partitions whereby it is separated into a number of concentric circular chambers, and gravity members movable within the chambers.

2. A resonator comprising a closed metal casing formed with a series of concentric partitions whereby it is divided into a plural number of chambers and a plural number of gravity balls movable in each of the chambers.

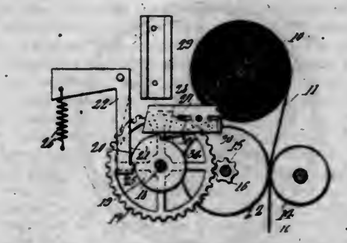
3. A resonator comprising a closed cylindrical metal casing formed with a longitudinal opening, and with a series of circular partitions therein whereby a series of closed circular chambers are formed within the casing, and a series of metal balls movable by gravity within each of the chambers.

1,017,872. COMBINED SHOEMAKER'S STAND AND LAST. HENRY F. HURST, Seattle, Wash. Filed Nov. 1, 1910. Serial No. 590,213. (Cl. 12—126.)

1. In a device of the character described, a base, a telescopic element connected with the base and having its upper end provided with an elbow, an adjustable fitting connected to said elbow, a last supporting post secured to said fitting and having its lower portion cut-away to provide a pair of vertically-disposed passages communicating with an entrance opening, a vertically-disposed plate connected to the base and having its inner face provided with ratchet teeth, a tread lever pivotally connected to said plate and adapted to engage said ratchet teeth to arrest upward movement of said lever, and a strap connected at one end to said lever and extending through said passages and overlapping the last upon the post for maintaining the last in position.

2. A device of the character described comprising a base, a telescopic element connected thereto, an adjustable supporting member connected and offset with respect to said element, a last supporting post connected to said member and having its lower end provided with a pair of passages and an entrance opening therefor, a strap extending through said passages and adapted to overlap the last upon the post for maintaining the last in position, and means carried by the base and connected to said strap for arresting upward movement of the strap thereby maintaining the last in position.

1,017,873. VENDING-MACHINE. HARRY E. JONES, Davenport, Iowa. Filed July 31, 1911. Serial No. 641,496. (Cl. 194—55.)



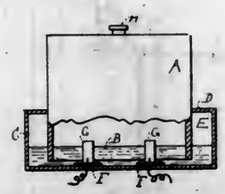
1. An actuating mechanism for check-controlled dispensing devices including a rotatably supported disk, a latch member arranged to contact with said disk to prevent its rotation, a bifurcated member arranged to impart movement to said disk, said member being provided with a pivoted arm arranged to contact with a projection mounted on said disk.

2. An actuating mechanism for check-controlled dispensing devices including a rotatably supported disk, a pivoted latch member arranged to contact with said disk to lock the same against movement, a reciprocating member arranged to impart movement to said disk, said latch member being forced out of contact with said disk by said reciprocating member when a coin is deposited.

3. An actuating mechanism for check-controlled dispensing devices including a rotatably supported disk, a

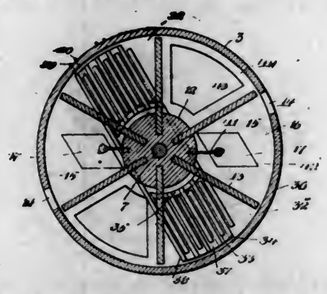
resiliently supported latch member, said latch member being bifurcated to receive said disk, a projection carried by the disk, projections formed integral with the bifurcated end of said latch member and adapted to contact with the projection carried by the disk, a reciprocating member, a pawl carried by said member, said pawl being arranged to contact with the projection carried by said disk to force the same out of contact with said latch member when a coin has been deposited between said disk and said latch member.

1,017,874. ELECTRIC HEATER. LESLIE E. A. KELSO, Provo, Utah. Filed Apr. 12, 1911. Serial No. 620,636. (Cl. 219—34.)



In an electric heater, the combination of a vessel, water therein, a second and inverted vessel dipping into said water by which position a steam containing-dome is formed above a part of the water which is directly below the said second vessel, a cover D connecting the upper rim of the first named vessel to the outside walls of the second named vessel for providing an air space above the water which is outside of the inverted vessel, the inverted vessel being maintained elevated above the bottom of the first vessel for the purpose of permitting the water to flow from either vessel to the other under variations of steam pressure in said dome, and electrodes immersed in the water which is directly under said dome.

1,017,875. ELECTRIC TRAP. JANOS KLEMOVICS, Homestead, Pa., assignor of one-fourth to Jozsef Pentek, one-fourth to Bertalan Kun, and one-fourth to Bertalan Kojsza, Homestead, Pa. Filed Mar. 30, 1911. Serial No. 617,878. (Cl. 43—34.)

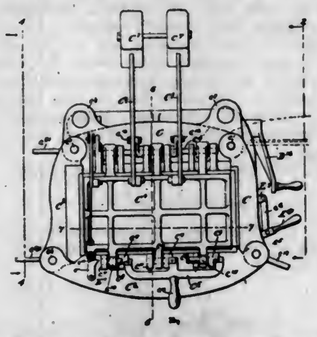


1. In an electric trap, a casing adapted to be mounted over a pit or receptacle and having the vertical wall thereof provided with openings, a rotary conveyer arranged in said casing and dividing it into a plurality of compartments, an electric motor arranged upon said casing for revolving said conveyer, the bottom of said casing having openings communicating with two of said compartments and said pit, contact bars arranged in the other of said compartments and in circuit with a source of electrical energy, and movable platforms arranged in two of said compartments and capable when actuated by the weight of a rodent to complete a circuit through said motor, thereby operating the conveyer and sweeping the rodent from off a platform on to said bars to be electrocuted.

2. In an electric trap, a casing having the vertical wall thereof provided with openings, a rotary conveyer dividing said casing into a plurality of compartments, said openings providing the entrance for said compartments, an electric motor mounted upon the casing for revolving said conveyer, contact bars arranged in certain of the compartments of said casing and in circuit with a source of electrical energy, and movable platforms arranged in the other of the compartments of said casing and capable when depressed of completing a circuit for operating the motor.

3. In an electric trap the combination with a pit or receptacle, of a casing mounted upon said receptacle and communicating therewith and provided with openings, a rotary conveyer arranged in said casing and dividing it into a plurality of compartments, said openings constituting entrances for said compartments, an electric motor arranged upon said casing for revolving said conveyer, contact bars arranged in certain of said compartments and in circuit with a source of electrical energy, depressible platforms arranged in the other of said compartments and capable when depressed to complete the motor circuit thereby revolving said conveyer, and a lever mechanism supported from the bottom of said casing and connected with said platform for normally maintaining them in an elevated position.

1,017,876. MACHINE FOR MOLDING CONCRETE. FRANK F. LANDIS, Waynesboro, Pa. Filed Sept. 10, 1906. Serial No. 333,957. (Cl. 25—41.)



1. A press for molding compressible substances comprising a base, a body or frame mounted to be vertically movable upon said base, mechanism for moving said frame, a mold on said frame with hinged sides connected with said mechanism for operating the same, and means for securing said sides closed, substantially as set forth.

2. In a press, the combination, of the base, the body or frame of the press proper mounted to be vertically movable upon said base by means of rock shaft and pivoted connections, means for rocking said shafts to raise or lower said frame, and the hinged sides of the mold connected with said mechanism, whereby as said sides are opened or closed, such frame is raised or lowered, substantially as set forth.

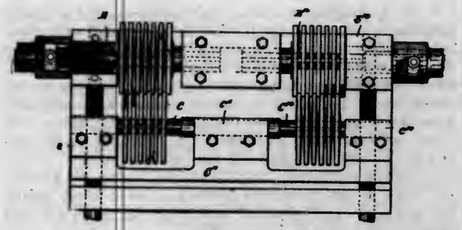
3. In a press, the combination, of the base, the frame of the mold supported on said base by means of mechanism which will permit said frame to be moved up and down, the mold proper comprising sides hinged to said frame, part of which are connected with the adjusting mechanism, whereby as they are opened or closed the mold is raised or lowered, the vertically movable fluid pressure table mounted beneath the bottom of said mold and supported upon said mechanisms, and carrying the pressure imparting devices, and means for operating said several parts, substantially as set forth.

4. In a press, the combination, of the base, the mold frame supported thereon by means of rock-shafts having crank arms which are pivoted to the supports of said frame, levers for turning said rock-shafts and raising or lowering said frame, the hinged sides of said mold, a part of which are connected to said operating levers, whereby as they are opened or closed said shafts will be rocked and the mold raised or lowered, the fluid pressure table mounted beneath the bottom of the mold and carrying the pressure imparting devices and also connected with said rock-shafts and adapted to be partially balanced by the weight of the mold, substantially as set forth.

5. In a press, the combination, of the base, the mold frame movably secured upon said base, mechanism for moving said frame, and the movable parts of said press connected with said mechanism, whereby they are partially balanced by the weight of said mold, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,017,877. CHANGE-SPEED GEARING. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Oct. 26, 1907. Serial No. 399,252. (Cl. 74—26.)



1. A change speed gearing comprising a driving and a driven shaft, a series of disks slidably mounted upon each shaft and arranged with those on one shaft engaging between the adjacent faces of those on the other shaft, means for clamping said disks by a force automatically adjusted to the load, one of said shafts being mounted in adjustable bearings, said bearings, and means for adjusting said bearings to carry the shaft therein toward and from said other shaft, substantially as set forth.

2. In a change speed gearing, the combination, of the driving shaft, a series of disks mounted to have a longitudinal movement thereon and formed with their adjacent faces tapered from a thick part adjacent to said shaft to a thinner outer edge, a driven shaft mounted in adjustable bearings parallel with said driving shaft, said bearings, a series of disks mounted thereon to have a longitudinal movement and arranged to engage between the faces of the disks on the driving shaft, means for varying the clamping force between said disks as the load varies, and means for adjusting the bearings of said driven shaft to vary the distance between said two shafts, substantially as set forth.

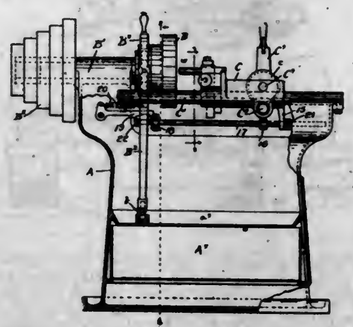
3. In a change speed gearing, the combination, of a driving shaft, a driven shaft, a set of longitudinally movable disks upon each of said shafts, those upon one shaft being adapted to engage between the adjacent faces of those upon the other shaft, means for automatically varying the clamping force between said sets of disks as the load varies, and means for adjusting one of said shafts toward and from the other, substantially as set forth.

4. In a change speed gearing, the combination, of a driving shaft, a driven shaft, a series of slidable disks mounted upon each of said shafts to rotate therewith, one set of said disks adapted to engage between the adjacent faces of the other set, the set of disks serving as the clamping disks being tapered on their adjacent faces and the disks arranged between said clamping disks being formed with rims wider than the main thickness of the disk, said rims having faces tapered correspondingly to the taper of the clamping disks, substantially as set forth.

5. In a change speed gearing, the combination, of the driving shaft having a series of slidable disks mounted thereon, said disks, the two end disks being formed with elongated hubs which extend through the bearings and serve as journals, said bearings, a sleeve mounted on the outer end of said shaft carrying the driving wheel, said sleeve formed with a cam-face in its side engaging with a transverse engaging part on said shaft, said driving wheel, a driven shaft having a series of disks engaging between the faces of the disks on said driving shaft, and said series of disks on the driven shaft, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,017,878. BOLT-THREADING MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Mar. 11, 1909. Serial No. 482,800. (Cl. 10—89.)



1. In a bolt threading machine, the combination of a frame, the cutter-head, the work carriage mounted on longitudinal tracks arranged inside the top of said frame, said tracks formed with racks on one side, pinions on a shaft carried by said carriage engaging with said racks, means for operating said pinions to slide said carriage back and forth on said tracks, the work holding clamp on said carriage, and means for operating said clamp, substantially as set forth.

2. In a bolt threading machine, the combination, of a frame, a cutter-head, a work carriage, means for sliding said carriage back and forth, and a work-holding clamp on said carriage comprising transversely adjustable blocks carrying clamping jaws in adjacent faces thereof, each of said blocks being formed with a part extending to one side of the adjusting screw and parallel with each other and formed with tapered faces adapted to contact with sliding parallel bars mounted in grooves in a rigid part and formed with correspondingly tapered ends, said bars and said adjusting screw, substantially as set forth.

3. A bolt threading machine, comprising a work-holding clamp consisting of blocks mounted on an adjusting screw, said screw, each block carrying a jaw of the clamp and formed with a projecting part extending to one side of said adjusting screw and formed with tapered faces, bars mounted to slide in grooves in a fixed part of the carriage adjacent to said parts and formed with tapered ends adapted to engage the tapered faces of said parts and hold them in true parallel relation, substantially as set forth.

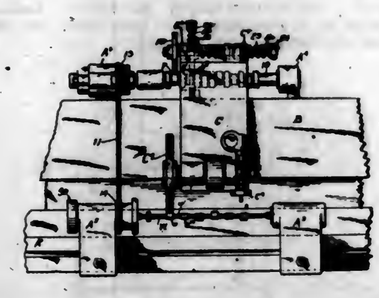
4. A bolt threading machine, comprising a work-holding clamp mounted on the carriage and consisting of blocks mounted on a right and left hand screw for adjusting them toward and from each other, each carrying a jaw of the clamp, and each formed with a part extending to one side of said screw and formed with parallel tapered faces at opposite ends, said screw, a sliding bar with correspondingly tapered ends adapted to engage with the tapered faces of each of said parts mounted to slide in rigid bearings in a part on the carriage, and said bearings, substantially as set forth.

5. A work-holding clamp for a bolt threading machine comprising jaw carrying blocks, means for adjusting them to clamp and release the work, each of said blocks being formed with projecting parts with tapered faces, sliding

parts with tapered faces engaging therewith and mounted in rigid bearings, and said rigid bearings, whereby said blocks are held parallel and the strain is received by said sliding parts, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,017,879. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed July 7, 1909. Serial No. 506,356. (Cl. 51—4.)



1. A grinding machine for grinding cam shafts comprising a frame, work holding and driving mechanism, a traversing carriage, a slider thereon carrying the grinding wheel, a pattern shaft carrying a series of cams as patterns for the work to be ground, gearing for driving said pattern shaft uniformly with the work, means for holding said slider yieldingly in contact with said pattern shaft, and means for moving said contact means from one pattern cam to the next, substantially as set forth.

2. A grinding machine for grinding cam shafts comprising a frame, work holding and driving mechanism, a traversing carriage, a slider thereon, a grinding wheel on said slider, a pattern shaft mounted on the frame adjacent to a part of said slider and carrying cams of larger size but in shape a pattern of the work to be ground, and a yielding connection between said slider and said pattern, whereby the grinding wheel is held in constant relation to the work, substantially as set forth.

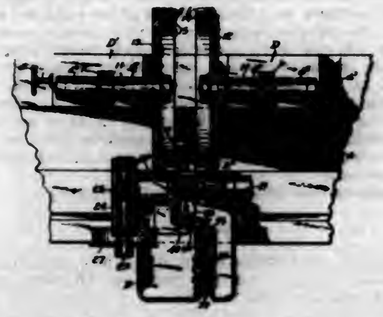
3. A grinding machine comprising a pattern shaft with a series of cams thereon as patterns for the work and mounted adjacent to the slider carrying the grinding wheel, a yielding connection between said slider and said pattern shaft, and means for moving said connection from one cam on said pattern shaft to the next, substantially as set forth.

4. In a grinding machine, the combination of the frame, a traversing carriage thereon, a slider on said carriage, a grinding wheel on said slider, the work holding devices, a pattern shaft journaled on the frame adjacent to a part of said slider and carrying cams of same shape but larger in size than the work, gearing for driving the work and pattern shaft in unison, a contact wheel carried on the slider and adapted to bear upon said pattern shaft, and a tension device interposed between a part of the slider and a part of the carriage for holding said wheel into constant contact with said pattern shaft under yielding pressure, substantially as set forth.

5. In a grinding machine, the combination of a frame, a carriage, a slider thereon, a grinding wheel on said slider, the work holding devices, a pattern shaft adjacent to a part of the slider carrying the pattern for the work to be ground, gearing for driving the work and pattern shaft in unison, a contact wheel mounted on a shaft carried in bearings on the slider arranged to contact with said pattern shaft, said shaft being mounted to yield longitudinally as said wheel passes from one part of the pattern to another, and means for holding said wheel yieldingly in contact with said pattern, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,017,880. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed July 15, 1909. Serial No. 507,836. (Cl. 51—4.)



1. In a grinding machine, the combination of a frame, grinding wheels mounted thereon and arranged with adjacent grinding surfaces, means for adjusting said grinding wheels toward and from each other, a work-holding mechanism comprising a wheel with transverse notches or recesses in its periphery to receive the work, a magazine adjacent to said wheel for feeding the work thereto, said wheel being mounted on a shaft and arranged to pass between the adjacent faces of the grinding wheels, means for rotating said shaft, radially sliding wedges for holding the work in the transverse recesses in said wheel during the operation, and means for automatically operating said wedges, substantially as set forth.

2. In a grinding machine, the combination of a frame, grinding wheels arranged with adjacent grinding faces, a work-feeding wheel mounted on a shaft and provided with work-carrying recesses in its periphery and radial perforations at the bottom of said recesses, said wheel being mounted to pass between the adjacent surfaces of the grinding wheel, means for rotating said wheel, and sliding wedges in said perforations for securing the work, substantially as set forth.

3. In a grinding machine, the combination of a frame, grinding wheels arranged with adjacent grinding faces a distance apart, a rotary work-carrying wheel arranged to pass between said grinding faces and formed with transverse work receiving and holding recesses, and radially movable clamps arranged to impinge against one side of the work for securing it in said recesses, substantially as set forth.

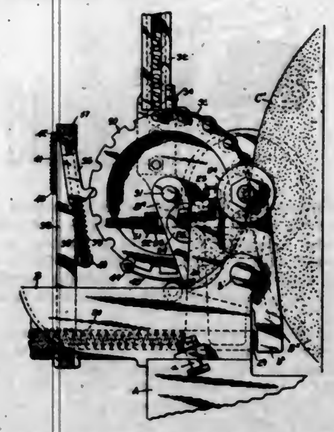
4. In a grinding machine, the combination of a frame, grinding mechanism, a rotary work-carrying wheel formed with transverse recesses in its periphery adapted to hold the work, sliding wedges for clamping the work in said recesses, means for sliding said wedges outward to clamp the work on the working side of the wheel, and means for sliding them back to release the work when the grinding has been done, substantially as set forth.

5. In a grinding machine, the combination of a frame, grinding mechanism, a rotary work-carrying wheel formed with recesses in its periphery to receive the work, said recesses being formed with overhanging adjacent edges and with central perforations extending through the rim of said wheel, sliding wedge-shaped pins mounted in said perforations, means for forcing said pins outwardly after the work has been received into said recesses, and means for forcing them inwardly after the grinding has been done, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,017,881. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed July 17, 1909. Serial No. 508,232. (Cl. 51—10.)

1. In a grinding machine, the combination of a frame, the grinding wheel, and the work-holding and feeding devices comprising a rotary chuck, an adjacent holding point for engaging the opposite end of the work, a rotary wheel for feeding the work forward, and means for releasing the work at the completion of the grinding operation, substantially as set forth.



2. In a grinding machine for grinding pins, etc., the combination of a frame, a grinding wheel, means for operating said grinding wheel, a work table, work-holding and feeding devices mounted on said table comprising a tilting frame carrying the head-stock and foot-stock and a rotary wheel for receiving and carrying forward the pins to operative position, and means for operating the frame to carry the work away from operative position, substantially as set forth.

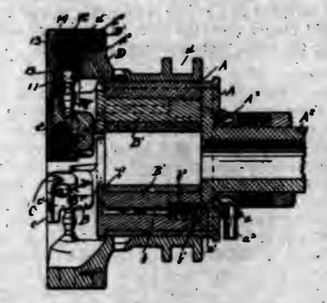
3. In a grinding machine, the combination of a frame, a grinding wheel, means for operating said grinding wheel, a work table, means mounted on said work table for holding and feeding the work comprising a head-stock and foot-stock carrying the work-holding means mounted on a tilting base, a rotary wheel also mounted on said base and formed with notches in its periphery to receive and carry the work, means for driving the work-holding means, a rotary cam carried on said tilting frame and geared to the work-driving mechanism, a contact block for said cam on the work table, and means for holding said tilting frame with said cam under pressure against said block, substantially as set forth.

4. In a grinding machine, the combination of a frame, a grinding wheel, means for operating said grinding wheel, a work table, means for holding and feeding the work mounted on said work table comprising a head-stock and foot-stock mounted on a tilting base, said head-stock carrying a chuck for clamping one end of the work and said foot-stock carrying a holding point for engaging the other end of the work, means for driving said head-stock, a spring for holding said work engaging holding point into contact with the work, a cam on said foot-stock adapted to engage a contact point on the table and withdraw said holding point from the work when the table is tilted backward, a rotary wheel formed with notches to receive and carry the work, and means for moving said wheel step by step, substantially as set forth.

5. In a grinding machine, the combination of a frame, a grinding wheel, means for operating said grinding wheel, a work table, means for holding and feeding the work mounted on said table comprising a head-stock and a foot-stock mechanism mounted on a tilting base, means for holding said base rigid during the period of grinding the work, means for tilting said base to carry the work away from the operative position, means for releasing the work, a rotary wheel on said tilting base formed with work-holding notches in its periphery, and means for moving said wheel forward step by step between the grinding operations, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,017,882. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Aug. 26, 1909. Serial No. 514,793. (Cl. 10—100.)



1. In a cutter-head, the combination of the body, a series of cutter-holders mounted on trunnions in perforations around the axis of said body, a sliding ring on said body, and toggle-pins each mounted with one end in a seat at the inner end of a cutter-holder opposite the cutting point and the other end in a seat carried by said sliding ring, substantially as set forth.

2. In a cutter-head, the combination of the body, a series of cutter-holders mounted to rock on trunnions in bearings formed in said body around its axis, a sliding ring mounted on said body, radial seats adjustably mounted in said ring surrounding said cutter-holders each of said cutter-holders being formed with a seat in its outside substantially in line with said adjustable seats and the axis of the head, and a toggle-pin mounted at one end in a seat in a cutter-holder and at its other end in a seat in said sliding ring, substantially as set forth.

3. In a cutter-head, the combination of the body, cutter-holders provided with rocking trunnions mounted in bearings around the axis of said body each of said trunnions and the holder thereon being formed with a longitudinal perforation extending from the inner end of the trunnion out through the cutter-holder with its discharge point adjacent to the work, an oil supply pipe communicating with a circumferential recess in the supporting part adjacent to the inner ends of said trunnions, and means for supporting and adjusting said cutter-holders to open and close the die, substantially as set forth.

4. A cutter-head comprising a body, cutter-holders with their trunnions mounted in longitudinal perforations in said body around its axis and formed with perforations extending longitudinally through said trunnions from their ends and at an angle through the cutter-holders to bring their point of discharge adjacent to the work, and a stationary part mounted on the spindle connected with an oil supply and formed with a circumferential recess and arranged to communicate through perforations with the inner ends of the perforations in the trunnions of said cutter-holder, substantially as set forth.

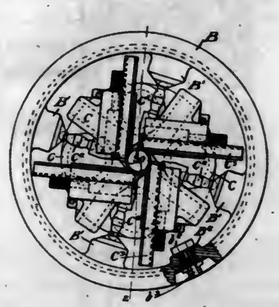
5. A cutter-head comprising a body, a ring mounted thereon by which the die is opened and closed, cutter-holders and cutters composing the die, supports for said cutter-holders interposed between seats carried by said ring and seats in said cutter-holders, said ring being secured on the body by a sliding connection with different circumferential engaging points, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,017,883. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Nov. 20, 1909. Serial No. 529,152. (Cl. 10—100.)

1. In a cutter-head the combination of the frame containing a series of cutter-holders mounted on trunnions in bearings around its axis, said cutter-holders, a sliding part mounted on said frame carrying seats, toggle-levers mounted at one end in seats in the outer end of said

cutter-holders and at the other end in said seats in said sliding part, means for adjusting said seats in said sliding part radially comprising a ring engaging with each of said seats and adapted to be turned by means of a pinion mounted in a radial perforation in said sliding part, and said pinion provided with wings on its outer end for turning the same, substantially as set forth.



2. In a cutter-head the combination of the body or frame, cutter-holders pivotally mounted therein, cutters carried by said holders, a sliding part on said body or frame, adjustable seats carried by said sliding part, toggles inserted between said cutter-holders and said adjustable seats, a ring engaging said adjustable seats, and means for turning said ring consisting of a pinion mounted in a radial seat in said sliding part and formed in its outer end with wings seated in a counter-sunk socket in the rim of said sliding part, said ring and the rim of said sliding part being formed with an indicator and scale for determining the degree of adjustment, substantially as set forth.

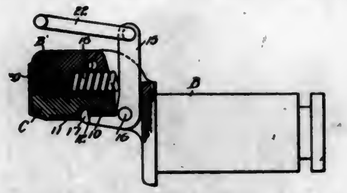
3. In a cutter-head the combination of the body or frame, the cutter-holders mounted on trunnions, said trunnions mounted in perforations in said base or frame each formed with a circumferential groove, a locking-plate formed with notches adapted to embrace said trunnions and engage with said grooves, means for normally holding said plate into engagement with said grooves, and means for turning said plate and holding it out of engagement with said grooves, substantially as set forth.

4. In a cutter-head the combination of the base or frame formed with seats or bearings for the cutter-holders, cutter-holders formed with trunnions mounted in said bearings, each of said trunnions being formed with a circumferential groove near its rear end, a plate secured to the rear end of the body and formed with semi-circular notches adapted to embrace the ends of the trunnions and engage with said grooves, a spring for normally holding the ends of said notches into engagement with said grooves, and a conical screw adapted to engage with a conical recess in the edge of said plate for turning and holding it out of engagement with said grooves, substantially as set forth.

5. In a cutter-head the combination of the body or frame, cutter-holders mounted in said body or frame formed with trunnions adapted to turn in their seats or bearings, means for holding and adjusting said cutter-holders, each of said cutter-holders being formed with a recess in its face to receive the chaser, said recess being formed with an overhanging flange on its inner edge having a tapered face, a chaser mounted in said recess and also formed with a correspondingly tapered face adapted to bear upon the tapered face of said flange and with a longitudinal groove in its back formed with tapered sides the backside being at a sharp angle, and a plunger mounted in a suitable socket in said cutter holder and formed with a tongue on its inner end adapted to engage with and bear against the short angle of said groove, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,017,884. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Dec. 20, 1909. Serial No. 534,229. (Cl. 10—100.)



1. A cutter-holder for cutter-heads comprising a body formed with a recess, a chaser mounted in said recess and formed with a longitudinal groove in its face, an angle lever formed with a projecting point adapted to engage with said groove and a spring for normally holding said point into engagement with said groove, substantially as set forth.

2. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, the inner edge of said recess being formed with an overhanging flange with a tapered inner face, a cutter formed with a tapered outer face adapted to fit under said overhanging flange, and with a longitudinal groove adjacent to said face, a spring pressed pivoted lever carrying a clamping jaw engaging with said groove, and means for holding said cutter longitudinally, substantially as set forth.

3. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, the inner edge of said recess being formed with an overhanging tapered flange, a cutter mounted in said recess and formed with its outer face tapered to fit under said flange and also formed with a groove adjacent to said tapered face, a pivoted lever formed with an engaging point adapted to engage with said groove, a spring for holding said point in engagement with said groove, and means for disengaging said point, substantially as set forth.

4. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, said cutter and recess being formed with tapered engaging faces engaging a short distance from the inner edge of said cutter, another bearing face between the back of the cutter and the main bearing face of the cutter-holder at its inner corner, and another bearing face between the cutter and the cutter-holder at its outer corner, and means for holding said cutter in position, substantially as set forth.

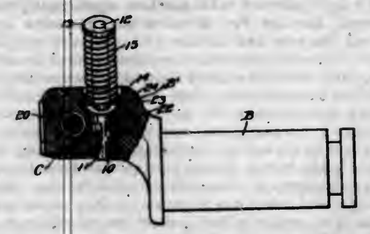
5. A cutter-head comprising a cutter-holder formed with a recess, for the cutter, a cutter mounted in said recess, said cutter and cutter-holder being formed to have three bearing faces two of which are at the outer corners on the back of said cutter and one of which is between an overhanging flange on the holder and a bearing face on the face of said cutter at a point inside of the bearing face on the back of said cutter, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,017,885. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro,, Pa. Filed Dec. 22, 1909. Serial No. 534,542. (Cl. 10—100.)

1. A cutter-head comprising a cutter-holder with a recess for the cutter, a cutter mounted in said recess with one edge resting against a shoulder in said recess and its other edge formed tapered, and a spring mounted clamping jaw mounted in a perforation in said holder alongside the tapered edge of said cutter and formed with tapered faces to engage therewith and clamp said cutter against said shoulder, substantially as set forth.

2. A cutter-head comprising a holder formed with a recess to receive the cutter, a cutter mounted in said recess with its outer edge resting against a shoulder at the outer edge of said recess, said cutter formed with a tapered edge adjacent to the cutting grooves, a spring mounted clamping member mounted in a socket adjacent to the inner edge of said cutter and formed with a tapered face adapted to engage with the tapered edge of said cutter, means for operating said clamping member against the action of said spring, and means for holding said cutter longitudinally, substantially as set forth.



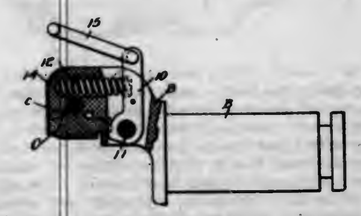
3. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter said recess being formed at its outer edge with a bearing face for the outer edge of the cutter to rest against, said cutter mounted in said recess and formed with a tapered corner on its inner edge adjacent to its face, a clamping member mounted to slide in a socket adjacent to said inner edge and formed with a tapered face arranged to engage with said tapered corner, means for normally forcing said clamping member into engagement with said tapered corner, means for disengaging said clamping member, and means for holding said cutter longitudinally, substantially as set forth.

4. A cutter-head comprising a cutter-holder formed to receive and support the cutter, a clamp for securing the cutter in said holder comprising a spring mounted plunger with a tapered face and arranged to engage one corner of said cutter and clamp the same against a fixed support at its opposite edge, substantially as set forth.

5. A cutter-head comprising a cutter-holder formed to receive and support the cutter, a cutter mounted therein with one edge resting against a fixed support or jaw in said holder and a movable clamping member with a tapered face arranged to engage with the opposite edge of said cutter and clamp it against said fixed support, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,017,886. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Feb. 2, 1910. Serial No. 541,565. (Cl. 10—100.)



1. A cutter-head comprising a cutter-holder, a cutter mounted in a recess in said cutter holder, said holder and cutter being formed with interengaging parts and a spring pressed cam engaging with one edge of said cutter for holding said inter-engaging parts into engagement and securing the cutter in place, substantially as set forth.

2. A cutter-head comprising cutter-holders and cutters mounted therein each of said cutter-holders being formed with a recess to receive the cutter and each of said cutters being formed with a projection adapted to engage with said recess, and a cam adapted to engage with one edge of said cutter for holding it in position, substantially as set forth.

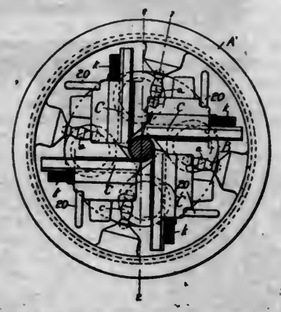
3. In a cutter-head, the combination of the frame or body, the cutter-holders mounted therein, the cutters mounted in said cutter-holders each of said cutter-holders being formed with a dove-tail shaped groove and each of said cutters being formed with a tapered projection adapted to engage with said groove and a spring pressed cam for holding said cutter in place, substantially as set forth.

4. A cutter-head comprising cutter-holders, cutters mounted in said holders, each of said holders being formed with a groove having an overhanging edge and each of said cutters being formed with a rib or projection having an edge adapted to engage with the overhanging edge of said groove, said cutters being mounted to slide transversely into and out of said engagement, a cam adapted to engage with each cutter for holding it into engagement, and means for operating said cam, substantially as set forth.

5. A cutter-head comprising cutter-holders each formed with a recess and a groove formed in the back face of said recess having an overhanging or tapered edge and another groove or slot formed in the edge face of said recess which extends at right angles to said first mentioned face, cutters mounted in said recesses each being formed with a rib on its back having a tapered edge adapted to engage with the tapered edge of groove in the back face of said recess and the inner edge of said cutter being adapted to engage with the slot or groove in the edge face of said recess, a pivoted cam engaging with the inner edge of said cutter and a spring for forcing said cam into contact with said inner edge and holding it in place, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,017,887. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Feb. 4, 1910. Serial No. 542,089. (Cl. 10—104.)



1. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter the outer edge of said recess being formed with an overhanging flange, a cutter mounted in said recess and formed with a shoulder near its outer back corner adapted to engage with said overhanging flange, and an eccentric clamping member mounted in a recess in the holder parallel with and alongside the inner edge of the cutter throughout the width of the holder, and means for normally forcing said cam against said inner edge to secure the cutter in position, substantially as set forth.

2. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter said recess being formed with an over hanging flange at its outer edge formed with a tapered inner face, a cutter formed with a shoulder to engage with said tapered inner face of said overhanging flange and with its inner edge also formed tapered, a cam cylinder for engaging the inner edge of said cutter, and a spring for holding said cam into engagement therewith, substantially as set forth.

3. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter said recess being formed with an outer rigid overhanging flange, a cutter mounted in said recess formed with a tapered shoulder to engage with said flange and with its opposite edge reversely tapered, a cylinder having a cam or eccentric face mounted in a bearing in said holder alongside the inner edge of said cutter and adapted to bear against said inner edge, a spring for turning said cylinder to force said cam face

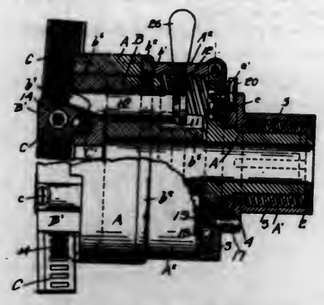
normally against the inner edge of said cutter and a handle or lever for turning said cylinder reversely to said spring, substantially as set forth.

4. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, a cutter mounted in said recess, means for securing said cutter in position, and means for holding and adjusting said cutter longitudinally comprising a cylinder having circumferential ribs engaging with transverse grooves or recesses in said cutter, said cylinder being formed with a screw-threaded part which is mounted in a screw-threaded nut fixed in the cutter-holder, substantially as set forth.

5. A cutter-head comprising a cutter-holder, a cutter secured to said holder, said cutter being formed with transverse grooves in its back and a screw mounted cylinder formed with circumferential ribs adapted to engage with said grooves for holding and adjusting said cutter longitudinally, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,017,888. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Mar. 4, 1910. Serial No. 547,250. (Cl. 29—100.)



1. A cutter-head for screw-cutting machines comprising a body having sections overhanging the face thereof, bearings for the trunnions of the cutter-holders arranged around the axis of said body and in line with said overhanging sections, cutter-holders mounted in said bearings, cutters mounted in said cutter-holders, and means for opening and closing the die and securing said cutter-holders in desired relation comprising sliding plungers mounted in longitudinal perforations extending through the trunnions of the several cutter-holders and adapted to Bear upon a face of an adjacent cutter-holder, substantially as set forth.

2. A cutter-head for screw cutting machines comprising a body formed with sections around its periphery overhanging its face, bearings for the trunnions of the cutter-holders arranged around the axis of said body and in line with said overhanging sections, cutter-holders mounted with their trunnions in said bearing, means for opening and closing the die and securing the cutter-holders in relative adjustment consisting of plungers mounted to slide longitudinally in perforations extending through the trunnions of the several cutter-holders being provided with tapered bearing faces adapted to engage therewith, and means for adjusting said plungers longitudinally, substantially as set forth.

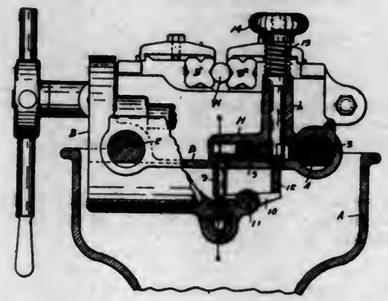
3. A cutter-head for screw-cutting machines comprising a body formed with sections around its periphery which overhang its face, bearings for the cutter-holders arranged around the axis of said body and in line with said overhanging portions, cutter-holders formed with trunnions having overhanging extensions on their outer outside corners extending forward from the main body of the trunnion and adapted to bear beneath said overhanging portions of the body, cutters mounted in said cutter-holders, means for opening and closing the die comprising plungers mounted in longitudinal perforations in the trunnions in said cutter-holders, said plungers being arranged to bear upon the face of the adjacent cutter-holder on one side and under the overhanging portions of the trunnion and body on its other side, and means for securing said plungers, substantially as set forth.

4. A cutter-head for screw-cutting machines comprising a body formed with portions overhanging the face thereof, bearings for cutter-holder trunnions arranged around its axis and in line with said overhanging portions, cutter-holders with trunnions mounted in said bearings, said trunnions being formed with overhanging extensions on their outer ends adapted to bear under said overhanging portions of the body and with rearwardly projecting extensions on their inner ends adapted to extend the length of the bearing within the body on their inner faces, cutters mounted in said cutter-holders, plungers mounted in longitudinal perforations extending through said trunnions formed with tapered or cam faces adapted to engage with the faces on the adjacent cutter-holders for securing them in relative adjustment and means for holding and adjusting said plungers, substantially as set forth.

5. A cutter-head comprising a body formed with bearings for the cutter-holder trunnions arranged around its axis, cutter-holders mounted with their trunnions in said bearings, cutters mounted in said cutter-holders, and means for securing said cutters comprising a cam cylinder and a screw for adjusting said cam cylinder to throw its cam into clamping engagement with said cutters, substantially as set forth.

[Claims 6 to 23 not printed in the Gazette.]

1,017,889. THREAD-CUTTING MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Mar. 4, 1910. Serial No. 547,251. (Cl. 10—89.)



1. In a screw cutting machine the combination of the frame the cutter-head, means for operating said cutter-head, a work carriage mounted to travel upon guides or tracks on said frame, said tracks, one of which is formed hollow with a slot through one side thereof, a screw-shaft mounted in said hollow track, a sliding nut mounted in a housing on said carriage and adapted to engage with said screw-shaft, means for operating said screw-shaft, and means for operating said nut to engage or release said screw-shaft, substantially as set forth.

2. In a thread cutting machine the combination of the frame, the cutter-head, means for operating said cutter-head, a work carriage mounted on tracks on said frame, said tracks, one of which is formed with a longitudinal perforation, and also with a slot through one side, a screw-shaft mounted in said longitudinal perforation, means for driving said screw-shaft, and means mounted on said carriage and adapted to project through said slot for engaging and releasing said screw-shaft, substantially as set forth.

3. A thread cutting machine comprising a work carriage mounted to be positively fed by a screw, said screw, means for driving said screw, a sliding nut mounted on the carriage for engagement with said screw, and means for sliding said nut in relation to said screw to engage

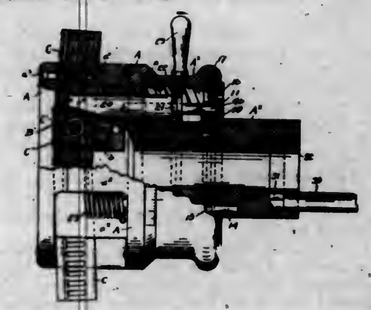
therewith, means for normally holding said nut away from said screw, and a plunger with a two-fine bearing for locking and releasing said nut, substantially as set forth.

4. A thread cutting machine comprising a frame, a cutter-head embodying a die, means for operating said cutter-head, a work carriage, means for sliding said work carriage rearwardly, and a positive forward feed for said work carriage comprising a screw-shaft, means for operating said screw-shaft, a nut carried by the carriage and adapted to move into or out of engagement with said screw-shaft and a single means for releasing said nut and opening the die, substantially as set forth.

5. A thread cutting machine comprising a frame, a cutter-head, means for operating said cutter-head, a work carriage, means for sliding said work carriage rearwardly, and a positive forward feed for said work carriage comprising a screw-shaft, means for operating said screw-shaft, and a nut mounted in a housing on said carriage and arranged to slide into or out of engagement with said screw-shaft, a spring for normally holding said nut out of engagement with said screw-shaft, a vertical plunger mounted to slide in a bearing in said frame adjacent to the rear edge of said nut and formed with a groove near its upper end adapted to receive said rear edge when the nut is disengaged from said screw-shaft, means for elevating said plunger at a predetermined point in the work to receive the rear edge of said nut in said groove, and means for sliding said nut in the reverse direction to engage said screw-rod when desired, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,017,890. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Apr. 11, 1910. Serial No. 554,775. (Cl. 10—100.)



1. A cutter-head for cutting screws, etc., comprising a body formed with bearings for the cutter-holder trunnions, a sleeve for attachment to the machine on which said body is mounted by a sliding engagement, cutter-holders with their trunnions mounted in said bearings, sliding plungers with tapered faces mounted in perforations in said trunnions with their outer ends adapted to bear against the outer face of the adjacent cutter-holder for securing and adjusting the same, an adjusting ring engaging with the rear ends of said plungers, a cylinder with internal spiral ribs or threads engaging with spiral grooves in the periphery of said ring, means for securing said cylinder when the die is closed, and means for turning said cylinder independent of the body when the die is opened, substantially as set forth.

2. A cutter-head comprising a sleeve or cylinder for securing the cutter-head to the spindle or turret of the machine, a body mounted on the outer end of said sleeve by means of a sliding connection and formed with bearings for the trunnions of the cutter-holders, a head secured to the rear end of the body to turn independent thereof, a cylinder secured on said head by means of an adjusting screw whereby it is held to turn therewith or may be adjusted circumferentially thereon, means for securing said head to said cylinder when the parts are in closed position, means for turning said head when the parts are unlocked, the cutter-holders with their trunnions mounted on the bearings in the body provided therefor, said trunnions being formed with central perforations, sliding plungers with tapered faces on their outer ends mounted in said perforations, said tapered faces being arranged to bear upon the backs of the adjacent cutter-holders for securing and adjusting them, a ring formed to engage the inner ends of said plungers, the outer surface of said ring being formed with spiral grooves and the inner surface of the surrounding cylinder being formed with internal spiral ribs adapted to engage therewith, and means for turning said cylinder to return the parts from open to closed position, substantially as set forth.

3. A cutter-head comprising a sleeve for securing the head to the spindle or turret of the machine, said sleeve being formed with a shoulder a distance from its rear end, a body mounted on said sleeve and formed with bearings for the cutter-holder trunnions, a head secured in the rear end of said body to have an independent rotary movement, a latch-pin for engaging a perforation in said head, means for normally holding said body back with said head against the shoulder in said sleeve, means for rocking said head on said body when the latch-pin is disengaged, cutter-holders mounted with their trunnions in said bearings, and means for adjusting and holding said cutter-holders to open and close the die connected with said head and operated thereby, substantially as set forth.

4. A cutter-head comprising a sleeve for securing the head to the spindle or turret of the machine, a body mounted to have a limited longitudinal movement on said sleeve, means for normally holding said body against a fixed shoulder in said sleeve, a locking device between said parts adapted to be engaged and disengaged by the movement of said body, cutter-holders with their trunnions mounted in bearings formed in said body, and means for securing and adjusting said cutter-holders, substantially as set forth.

5. A cutter-head comprising a body formed with bearings around its axis for the trunnions of the cutter-holders, said bearings being formed with extensions on the front end of the body on the outside and on the inner end of the body on the inside, the outer ends of said outer extensions being secured together by a rigid ring, cutter-holders formed with trunnions having outward extensions of their bearing surfaces on their outside forward corners and inwardly extending bearing surfaces on their inside rear corners, and means for securing and adjusting said cutter-holders, substantially as set forth.

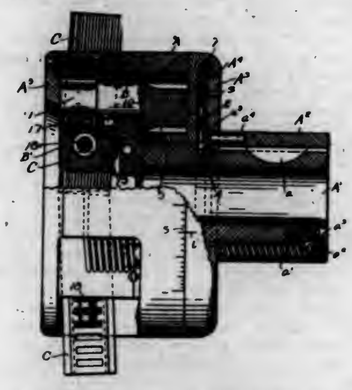
[Claims 6 to 12 not printed in the Gazette.]

1,017,891. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro. Pa. Filed May 7, 1910. Serial No. 560,089. (Cl. 10—100.)

1. A cutter-head comprising a body mounted in a sleeve to have a limited longitudinal movement therein, cutter-holders mounted with their trunnions in bearings in said body, cylinders mounted in perforations in said trunnions and formed with crank-pins on their front ends engaging with bearings on the sides of the adjacent cutter-holders and with their rear ends formed with gear-teeth on their peripheries, a plate mounted on the rear end of said body and formed with a hub having gear-teeth engaging with the gear-teeth on said cylinders, means for normally locking said plate to the sleeve, means for rocking said plate automatically when said locking means is disengaged, whereby said cylinders are rocked to open the die, and means for restoring the parts to locked position, substantially as set forth.

2. A cutter-head comprising a body mounted in a supporting sleeve to have a limited longitudinal movement therein, cutter-holders the trunnions of which are mounted in bearings around the axis of said body, the cutter-holders being formed to one side of the axis of each of said trunnions, cylinders mounted in perforations in said

trunnions and formed with crank-pins on their outer ends and gears on their rear ends, said crank-pins engaging with bearings in the adjacent cutter-holders and said gears engaging with a single rocking gear, means for securing said rocking gear in a fixed position to hold the die closed, means rocking said gear a limited distance to open the die, and means for returning the parts to locked position, substantially as set forth.



3. A cutter-head comprising a body formed with bearings around its axis for the trunnions of the cutter-holders, said cutter-holders mounted on one side of the axis of a hollow trunnion, said trunnions being mounted in the bearings provided therefor in said body, rocking cylinders mounted in said hollow trunnions having crank-pins on their front ends engaging with the adjacent cutter-holders and gear-teeth on their rear ends, a rocking gear mounted on the rear end of said body engaging with the gears of said several cylinders, a plate connected with said rocking gear by means to permit a circumferential adjustment between them, a locking device adapted to secure said plate to rotate with a head, means for rotating said plate a limited distance independent of the body when said locking means in disengaged, and means for restoring the parts to locked position, substantially as set forth.

4. A cutter-head comprising a body formed with journals for the cutter-holder trunnions around its axis, cutter-holders formed with hollow trunnions, said trunnions mounted in the bearings in said body, rocking cylinders with crank-pins on their front ends mounted in said trunnions with the crank-pins engaging with the adjacent cutter-holders, means for rocking said cylinders to open and close the die, and means for securing said cylinders to hold the die in fixed adjustment, substantially as set forth.

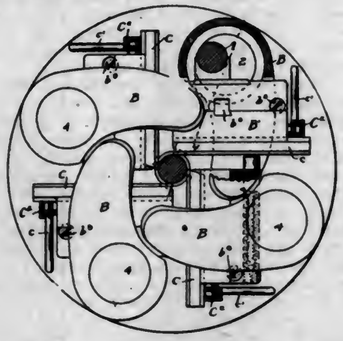
5. A cutter-head comprising a body, cutter-holders journaled on said body around its axis, rocking parts mounted in perforations in the trunnions of said cutter-holders and carrying crank-pins on their front ends, said crank-pins being each engaged with an adjacent cutter-holder, and means for rocking and securing said rocking parts, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,017,892. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed May 18, 1910. Serial No. 562,017. (Cl. 10—100.)

1. A cutter-head comprising a body having journals for the cutter-holders arranged around its axis, cutter-holders comprising arms adapted to extend across the face of the head mounted on said journals at one end and carrying the cutters on the inner face of their opposite ends, said cutters being arranged with their cutting points adjacent to the axis of the head, and means for opening ang closing the die, substantially as set forth.

2. A cutter-head comprising a body, cutter-holders pivoted on said body, each cutter-holder being pivoted at one side of said body and extending across the face thereof to the opposite side, means for supporting and adjusting said ends, cutters mounted on the inner face of said outer ends with their cutting points adjacent to the axis of the head, and means for opening and closing the die, substantially as set forth.



3. A cutter-head comprising a body, cutter-holders each of which is pivoted at one end on one side of the head and of a length to extend across the axis of said head to near the opposite side thereof, the outer or swinging end of each cutter-holder extending through a transverse aperture formed adjacent to the pivot in the opposite holder, means for supporting and adjusting said outer ends, cutters carried on the inner face of said outer ends, and means for opening and closing the die, substantially as set forth.

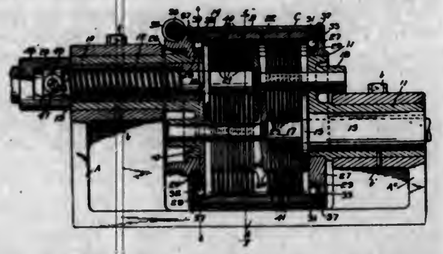
4. A cutter-head comprising a body, cutter-holders each of which is pivoted at one end on one side of said body, each cutter-holder being formed to extend across the axis of the head and swing on its pivot and also with a transverse aperture adjacent to its pivot the outer end of each holder being mounted to extend through said aperture in the opposite holder, means for supporting and adjusting the outer ends of said cutter-holders, means for swinging said outer ends to open and close the die, and cutters carried on the inner face of said outer ends with their cutting points adjacent to the axis of the head, substantially as set forth.

5. A cutter-head comprising a body, cutter-holders pivoted on journals around the axis of said body, each cutter-holder being formed to extend from its pivot across to the opposite side of the head, rocking cylinders mounted within journals of each cutter-holder and formed with eccentric bearings on their outer ends which engage with the swinging or outer ends of the adjacent cutter-holders for supporting and adjusting the same, spring plungers mounted in sockets in each cutter-holder and adapted to bear against the adjacent face of the cutter-holder which extends through the aperture therein to hold it outwardly against said eccentric bearing, and means for rocking and securing said cylinder to open and close the die, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,017,893. CHANGE-SPEED GEARING. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Aug. 27, 1909, Serial No. 514,953. Renewed Dec. 9, 1911. Serial No. 664,762. (Cl. 74—26.)

1. In a change speed gearing, the combination of the casing, a driving and a driven shaft journaled in said casing parallel to each other, a plurality of disks on each of said shafts mounted to move longitudinally, a revoluble part surrounding both of said shafts, a plurality of disks carried by said revoluble part a part of which are arranged to engage with the disks on one shaft and a part of which are arranged to engage with the disks on the other shaft, and means for adjusting the point of engagement, substantially as set forth.



2. In a change speed gearing, the combination of the casing, a driving shaft journaled therein, a driven shaft journaled therein parallel with said driving shaft, a series of disks mounted on the driving shaft to rotate therewith and slide therein, a series of disks mounted on the driven shaft to rotate therewith and slide thereon, a fixed disk at the inner end of each series of disks on each shaft, means for sliding each of said shafts longitudinally in its bearings, a revoluble part surrounding both of said shafts, a series of disks mounted in said revoluble part to rotate therewith and slide longitudinally, a part of said disks being arranged to engage with the disks on the driving shaft and a part being arranged to engage with the disks on the driven shaft, substantially as set forth.

3. A change speed gearing comprising a casing, a driving shaft, a driven shaft, a series of friction disks on each of said shafts, a revoluble part surrounding both of said shafts, a series of disks carried by said revoluble part, a part of which are arranged to engage with the disks on the driving shaft and a part of which are arranged to engage with the disks on the driven shaft, substantially as set forth.

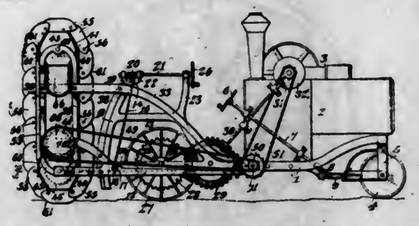
4. A change speed gearing comprising a casing, a driving shaft mounted to slide longitudinally in bearings therein, a series of disks slidably mounted thereon to rotate therewith, a driven shaft journaled in said casing parallel with said driving shaft, a series of disks slidably mounted thereon to rotate therewith, an eccentrically mounted revoluble part surrounding both of said shafts and the disks thereon, a series of disks carried by said revoluble part, a part of which are arranged to engage with the disks on the driving shaft and a part of which are arranged to engage with the disks on the driven shaft, and means for turning said eccentrically mounted revoluble part for adjusting the point of frictional contact between said several series of disks, substantially as set forth.

5. A change speed gearing comprising a casing, two parallel shafts journaled in said casing, a series of disks on each of said shafts, an eccentrically mounted revoluble part surrounding said shafts and disks, and a series of disks carried by said eccentrically mounted revoluble part arranged to engage with each of the series of disks on said respective shafts, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,017,894. ROAD GRADER AND ROLLER. CHARLES A. LANDON, Columbus, Ohio. Filed Feb. 17, 1910. Serial No. 544,373. (Cl. 37—24.)

1. A road grader comprising a self moving road roller having front rolling wheels and a rear rolling and steering wheel, an elongated frame carried by the road roller structure and extending in advance of the front supporting members of the road roller and also extended to the rear of the front rollers of the road roller and there pivoted to the road roller structure, means independent of the road roller for elevating and lowering the frame with relation to the surface to be treated in a direction substantially perpendicular thereto, said means yielding to upward movements of the elongated frame, an endless elevating excavator carried by said frame in advance of the supporting members of the road roller and having a run movable in shearing or stripping relation to the surface to be graded and of a width substantially the same as the road engaging portions of the road roller, and means for actuating the excavator at relatively different speeds with respect to the speed of travel of the road roller.



2. A road grader comprising a self moving road roller, an elongated frame pivoted to the road roller and extending in advance of the supporting members of the road roller, the pivot connections being readily separable for detaching the frame as a whole from the road roller, means for adjusting the forward end of the frame toward and from the base line of the roller in a direction substantially perpendicular thereto, and an endless elevating excavator carried by the frame in advance of the supporting members of the road roller, said excavator and the road roller being of substantially the same width, and the excavator having a run movable into shearing or stripping relation to the surface to be graded and provided with means for the actuation of the excavator at relatively different speeds with respect to the speed of travel of the road roller.

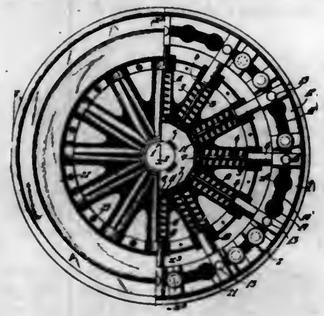
3. A self propelling and self sustaining road-rolling machine provided with a frame extending in advance of the supporting members of the road-rolling machine and there formed with upright curved guides, and an excavator having its active portions wholly in advance of the supporting members of the road-rolling machine and provided with a carrying frame exterior and pivoted to the frame of the road-rolling machine to turn on a horizontal axis central to the guides carried by the frame of the road-rolling machine, said excavator frame being provided with parts movable on the guides in co-active relation thereto.

4. A road-rolling machine provided with a supporting frame, front and rear rollers constituting supports for the frame and journaled within the confines of the frame, said frame extending beyond the front supporting rollers and there formed with upright curved guides, another frame having side members in embracing relation to the first named frame and at the rear end pivotally connected thereto at the center of curvature of the curved guides of the first named frame, said second frame having guide members co-acting with the first named guide members, and excavator mechanism carried by the second frame and of a width substantially that embraced by the supporting rollers of the road-rolling machine, and power means carried by the road-rolling machine for actuating the latter and the excavator.

5. A road-rolling machine provided with a supporting frame, front and rear rollers constituting supports for the frame and journaled within the confines of the frame, said frame extending beyond the front supporting rollers and there formed with upright curved guides, another frame having side members in embracing relation to the first named frame, and at the rear end pivotally connected thereto at the center of curvature of the curved guides of the first named frame, said second frame having guide members coacting with the first named guide members, and an endless elevating excavator carried by the second frame and of a width substantially that embraced by the supporting rollers of the road-rolling machine, and power means carried by the road-rolling machine for actuating the latter and the excavator.

[Claims 6 to 9 not printed in the Gazette.]

1,017,895. SPRING-WHEEL. GEORGE H. LANGTON and JAMES M. KELLERMAN, Los Angeles, Cal., assignors to Auto Air Cushion Wheel Company, Los Angeles, Cal., a Corporation of California. Filed July 26, 1909. Serial No. 509,715. (Cl. 152—28.)



1. In a spring wheel, the combination with a hub member, spoke bars mounted to move radially therein, spring means engaging said spoke bars and hub member to be compressed in such radial movement of the spoke bars in either direction, a tire member, an outer rim, annular plates within said outer rim and having circumferential grooves, and buttons carried by the outer rim and engaging said grooves, the grooved portions of said plates being provided with flanges interlocking with the buttons, said interlocking flanges being cut away at intervals for insertion of the buttons, each of the aforesaid spoke bars being provided with a transverse projection engaging in said grooves to prevent relative radial movement of the bar and rim member but permit limited circumferential movement.

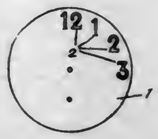
2. In a spring wheel, the combination with a hub member, and a rim member; of spoke bars mounted to move radially in the hub member, spring means engaging said spoke bars, and hub member, so as to be compressed in such radial movement of the spoke bars in either direction, heads on the outer ends of the spoke bars, having flattened outer ends providing shoulders and bearing against the rim member, and annular rim plates fitting between the rim member and the shoulders of the heads and against the flattened outer ends of the latter, said rim plates being provided with annular grooves on their opposed faces, means for securing the flattened outer ends of the heads and the annular rim plates together, studs connected to the rim extending between said rim plates, and buttons extending from said studs and engaging said grooves in said rim plates to secure the rim on said rim plates.

3. In a spring wheel the combination with a hub member, and a rim member; of spoke bars mounted to move radially in the hub member, spring means engaging said spoke bars and hub member so as to be compressed in such radial movement of the spoke bars in either direction, heads on the outer ends of the spoke bars having flattened outer ends providing shoulders and bearing against the rim member, and annular rim plates fitting between the rim member and the shoulders of the heads and against the flattened outer ends of the latter, means for securing the flattened outer ends of the heads and the annular rim plates together, means for securing the rim on said annular rim plates and guard means for closing the spaces between the hub member and the rim member.

4. In a spring wheel, the combination with a hub member, and a rim member; of spoke bars mounted to move radially in the hub member, spring means engaging said spoke bars and hub member so as to be compressed in such radial movement of the spoke bars in either direction, heads on the outer ends of the spoke bars having flattened outer ends providing shoulders and bearing against the rim member, and annular rim plates having circular grooves and fitting between the rim member and the shoulders of the heads and against the flattened outer ends of the latter, transverse pins extending across the flattened outer ends of the heads and entering the circular grooves of the annular rim plates, and means for securing the rim on said rim plates.

5. In a spring wheel, the combination with a hub member and a rim member, of spoke bars mounted to move radially in the hub member, spring means engaging said spoke bars and hub member so as to be compressed in such radial movement of the spoke bars in either direction, heads on the outer ends of the spoke bars having flattened outer ends providing shoulders and bearing against the rim member and annular rim plates having circular grooves cut away at intervals and annular grooves providing annular flanges and fitting between the rim member and the shoulders of the heads and against the flattened outer ends of the latter, transverse pins extending across the flattened outer ends of the heads and entering the circular grooves of the rim plates, and radial studs extending inwardly from the rim member having buttons, occupying the circular grooves, and formed with flanges passed through the cut away parts of the circular grooves and occupying the annular grooves and engaging the annular flanges.

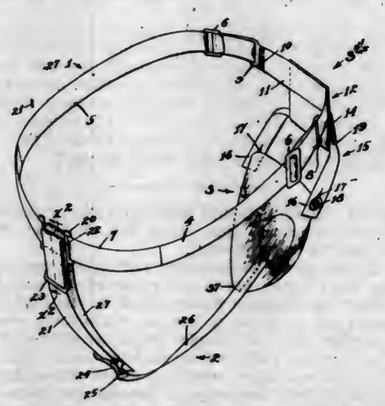
1,017,896. LUMINOUS DIAL. ERNEST DAVID LIPMANN, Paris, France. Filed Dec. 7, 1910. Serial No. 596,074. (Cl. 58—50.)



1. In a self-illuminating device, the combination with a front member provided with an opening outlining a character, and an element in the rear of the opening of said member and provided with a self-illuminating substance shaped to conform to the contour of the opening in said member and disposed in registry with said opening.

2. In a self-illuminating device, the combination with a front member provided with an opening, and a rear member or element provided with a self-illuminating substance shaped to conform to the character to be disclosed and disposed in registry with said opening.

1,017,897. SUSPENSORY. HIRAM W. MONTGOMERY, Santa Monica, Cal. Filed May 16, 1910. Serial No. 561,759. (Cl. 128—38.)

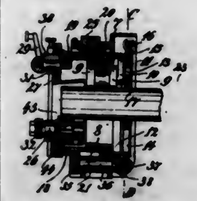


1. A suspensory comprising a belt having a back section, a link provided at its ends with eyes through which said back section slides, an elastic back strap suspended from said link, a sack suspended from the front of the belt, an under-strap fastened to the lower end of the sack, hook and ring means for connecting the under-strap with the back strap, and an inelastic protecting strip in front of the back-strap.

2. A suspensory comprising a belt, a cast-off at the front of the belt, a suspending loop in the cast-off, a triangular concavo-convex sack connected at its upper corners with the ends of the suspending loop, an under-strap fastened to the lower end of the sack and means for detachably connecting the back end of the under-strap with the back of the belt.

3. In a suspensory the combination with a belt, of a link provided with two eyes slidably mounted on the belt, a strap looped around the belt between said eyes, and a piece of elastic looped around the link whereby the elastic is protected by the strap from contact with the person.

1,017,898. APPARATUS FOR CUTTING THREADS ON TUBES AND FOR CUTTING OFF TUBES. VICTOR MÜLLER, Berlin, Germany. Filed Jan. 5, 1909. Serial No. 470,799. (Cl. 10—90.)



1. In a threading and shearing device, a revoluble, axially movable and around the axis of the stock rotatable spindle, in combination with a circular shearing tool and a circular threading tool, said threading tool having teeth for cutting a number of threads at once and both of said tools secured to said spindle, and simultaneously partaking of the several movements of said spindle.

2. In a threading and shearing device, a revoluble, axially movable, around the axis of the stock rotatable and radially displaceable spindle, in combination with a circular threading tool having teeth for cutting a number of threads at once and a circular shearing tool, both of said tools secured to and simultaneously partaking of the several movements of said spindle.

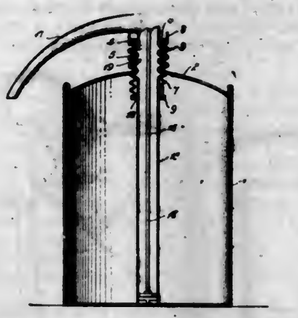
3. In a threading and shearing device, a revoluble, axially movable, around the axis of the stock rotatable and radially displaceable spindle, in combination with a circular threading tool having teeth for cutting a number of threads at once and a circular shearing tool, both of said tools secured to and simultaneously partaking of the several movements of said spindle, and means for imparting said revoluble, rotatable and radial movements singly or in any combination to spindle and tools.

4. In a threading and shearing device the combination of a circular threading tool and a circular shearing tool mounted on one spindle, said threading tool having teeth for cutting a number of threads at once, a tubular body or drum mounted concentrically with and revolving around the axis of the stock and constructed to impart a planetary movement to said tools and spindle, substantially as set forth.

5. In a threading and shearing device the combination of a circular threading tool and a circular shearing tool mounted on one spindle, said threading tool having teeth for cutting a number of threads at once, a tubular body or drum mounted concentrically with, and revolving around the axis of the stock and constructed to impart simultaneously an axial movement to said tools and spindle.

[Claims 6 and 7 not printed in the Gazette.]

1,017,899. OIL-CAN ATTACHMENT. SIMON J. NAGEL, Glen Ullin, N. D. Filed May 14, 1910. Serial No. 561,396. (Cl. 221—77.)



1. In combination with an oil can having a threaded opening therein, of a hollow threaded member adapted to be screwed in to said opening, a pump provided with threads and adapted to be screwed into said hollow member, and means on said hollow member for cleaning said pump.

2. In combination with an oil can having a threaded opening therein, of a hollow split and threaded member, screwed into said opening, a pump provided with threads for engagement with said hollow split member, and means on said split member for wiping the oil from said pump.

3. In combination with an oil can having a threaded opening therein, a hollow split member provided with interior and exterior threads, said exterior threads engaging with the threaded opening, a pump having threads for engagement with the interior threads, and means on said split member for wiping the oil from the pump.

4. In combination with an oil can having a threaded opening, a frusto-conical threaded member seated in said opening, a pump adapted to be passed through said frusto-conical member, and means on said pump for expanding the frusto-conical member when said pump is inserted.

5. In combination with an oil can having a threaded opening, a split frusto-conical member provided with interior and exterior threads, the exterior threads adapted for engagement in the threaded opening, a pump having a casing formed with threads, adapted to engage the interior threads and cause the expansion of the frusto-conical member, and a washer carried by the lower end of the frusto-conical member and engaging and producing a wiping action on the casing of the pump whereby when the pump is removed oil will be wiped therefrom.

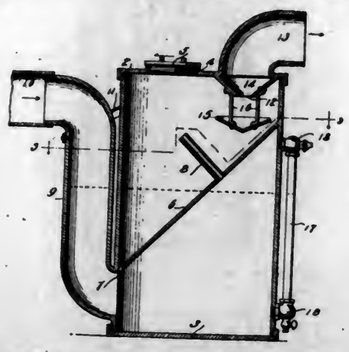
[Claim 6 not printed in the Gazette.]

1,017,900. APPARATUS FOR DEODORIZING THE EXHAUST-GASES OF MOTORS. CHARLES H. PHILLIPS, Poughkeepsie, N. Y. Filed July 27, 1911. Serial No. 640,941. (Cl. 110—183.)

1. The herein described gas deodorizing apparatus consisting of an upright cylindrical receptacle adapted to contain deodorizing liquid, an inclined baffle plate secured across its interior and having a passage through it near its lower edge and below the liquid level, a gas inlet pipe opening through one side of said receptacle below the lower edge of the plate, a discharge pipe opening through the top of the receptacle above the upper edge of the plate, and a transverse row of tubes seated in and opening through said plate with their bodies standing at right angles to it and their bores directing the gases obliquely across the interior of said receptacle from a point beneath the upper portion of the plate to a point above it remote from said discharge pipe.

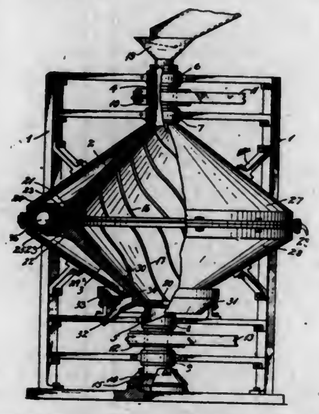
2. The herein described gas deodorizing apparatus consisting of an upright receptacle adapted to contain a de-

odorizing liquid, a baffle plate secured obliquely across its interior and dividing the latter into upper and lower compartments, said plate having a passage through it at its lowest point and below the liquid level, a relatively large gas inlet pipe opening into the lower compartment below the lower end of said partition, a discharge pipe opening out of the other compartment above the higher



end of said partition, a deflecting plate suspended within this compartment below the inner end of the discharge pipe, and a series of relatively small tubes having their lower ends opening through said baffle plate and their upper ends directed toward that portion of the upper compartment which is above the lower end of said plate and remote from the discharge pipe.

1,017,901. ROTARY PULVERIZER. ALVA J. PLOWMAN, Ocean Park, Cal. Filed Jan. 6, 1911. Serial No. 601,068. (Cl. 83—9.)



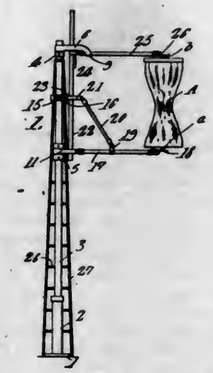
1. A pulverizer comprising oppositely arranged rotating hollow cones having opposing impact grinding faces, spacing means between the edges of said cones but outside the said grinding faces, said spacing means being adapted to properly center and movably hold the cones with respect to each other, and means for driving the cones in opposite directions, a slight space being left between the edges of the cones for the escape of the pulverized substance.

2. An ore pulverizer comprising oppositely arranged hollow conical members having spiral ore engaging corrugations upon their inner faces, means for driving the cones in opposite directions, the centrifugal force given to the ore causing the material to grind upon itself within the cones, runways formed upon the edges of the cones outside the corrugated surface, anti-friction balls mounted in said run-ways for movably holding the said edges of the cones with respect to each other, the balls also serving to further pulverize the material escaping from the cones, and a collecting casing arranged outside the cones and the ball run-ways for receiving the pulverized ore therefrom.

3. A rotary pulverizer comprising conical members carried by hollow shafts, a framing for movably supporting the said shafts, means for introducing materials to be acted upon through one of said hollow shafts, face plates secured to the inner edges of the said cones, and having a discharge space between them, ball run-ways being formed in said facing plates and anti-friction balls mounted in said run-ways.

4. A rotary pulverizer mechanism for ores comprising hollow rotating members having enlarged peripheral edges arranged opposite each other and having small discharge grooves between them whereby only finely crushed ore can escape therefrom, means for rotating the said casing in opposite directions with respect to each other, a pulp receiving casing rigidly mounted outside the rotating members and having an annular discharge opening at the bottom, an annular trough below said discharge opening and a device carried by one of the said rotating members for carrying the material received in the said trough to a discharge opening provided in the bottom thereof.

1,017,902. MAIL-CRANE. RICHARD L. PORTER, Vicksburg, Miss. Filed June 16, 1911. Serial No. 633,630. (Cl. 105—232.)



1. A mail crane including a standard, guide arms mounted for rotation thereon, pouch holding means movably engaging the guide arms, means for holding said arms against rotation about the standard, and means for shifting said holding means to release the arms when the pouch is removed from the crane.

2. A mail crane including a standard, guide arms mounted for rotation thereon, means for locking said arms against rotation about the standard, pouch holding means, and means under the control of the pouch holding means for automatically unlocking the guide arms when a pouch is removed from the crane.

3. A mail crane including a standard, guide devices mounted for rotation thereon, means for locking said devices against rotation about the standard, pouch holding means movably engaging the arms, said means being movable automatically toward the standard when the pouch is removed from the crane, and means for automatically unlocking the guide arms during such movement of the pouch holding means.

4. A mail crane including a standard, guide arms mounted for rotation thereon, a pouch holding arm pivotally connected to one of the guide arms, a rod slidably mounted within said guide arms, a pouch holding arm pivotally connected to the rod and slidably and pivotally

engaging the other guide arm, coöperating means upon the rod and standard for holding the arms against rotation about the standard, and means connected to one of the pouch holding arms and actuated thereby to unlock the arms from the standard when a pouch is removed from the crane.

5. A mail crane including a standard, guide arms mounted for rotation thereon, a lower pouch engaging arm pivotally connected to the lower guide arm, a rod slidably mounted within the guide arms, an upper pouch engaging arm pivotally connected to the rod and slidably and tiltably mounted within the upper guide arm, coöperating means upon the rod and standard for holding said arms against rotation about the standard, and a connection between the lower pouch engaging arm and one of said locking means for automatically unlocking the arms to permit rotation thereof when a pouch is removed from the crane.

[Claims 6 and 7 not printed in the Gazette.]

1,017,903. MANUFACTURE OF SHEETS AND PLATES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Feb. 27, 1911. Serial No. 611,230. (Cl. 148—24.)

1. The method of making sheets or plates of manganese steel which consists in heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling until the blank is of nearly the desired finished dimensions, equalizing the temperature in the blank so as to obtain a finishing temperature appropriate to the desired quality or condition of the product as it issues from the finishing pass of the rolls, rolling to finished gage, and then cooling rapidly; substantially as described.

2. The method of making sheets or plates of manganese steel which consists in heating a billet or blank manganese steel until in a uniform and ductile condition throughout, rolling until the blank is of nearly the desired finished dimensions, equalizing the temperature in the blank so as to obtain a finishing temperature appropriate to the desired quality or condition of the product as it issues from the finishing pass of the rolls, rolling to finished gage, cooling rapidly, and cold rolling the product to further stiffen it; substantially as described.

3. The method of making sheets or plates of manganese steel which consists in heating a billet or blank of manganese steel to a temperature above 1125° C., rolling until the blank is of nearly the desired finished dimensions, equalizing the temperature in the blank, rolling to finished gage at a finishing temperature between 800° C. and 1075° C. and cooling rapidly; substantially as described.

4. The method of making sheets or plates of manganese steel which consists in heating a billet or blank of manganese steel to a temperature above 1125° C., rolling until the blank is of nearly the desired finished dimensions, equalizing the temperature in the blank, rolling to finished gage at a finishing temperature below 1000° C. but above 800° C., reheating to about 1000° C. for a short time, and cooling rapidly; substantially as described.

1,017,904. PRODUCING ROLLED SHAPES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Oct. 30, 1911. Serial No. 657,397. (Cl. 148—24.)

1. The method of producing rolled shapes of manganese steel, which consists in first heating a manganese steel ingot or bloom until it is in a condition of substantial uniformity of distribution of its constituents, rolling to finished shape with finishing temperatures below 1075° C., transferring to an equalizing furnace and subjecting it to an equalizing reheat therein at such temperature as will effect the re-solution of any carbids that may have separated and until such resolution has been effected, terminating the equalizing reheat before any substantial loss of the wrought condition has occurred, and then quenching; substantially as described.

2. The method of producing rails of manganese steel, which consists in first heating a manganese steel ingot or bloom until it is in a condition of substantial uniformity of distribution of its constituents, rolling to finished shape with finishing temperatures below 1075° C. in the parts of the rail that are to be subjected in use to wear, transferring to an equalizing furnace and subjecting the rail therein to an equalizing reheat at such temperatures as will effect the resolution of any carbids that may have separated and until such re-solution has been effected, terminating the equalizing reheat before any substantial loss of the wrought condition has occurred and then quenching; substantially as described.

3. The method of producing rails of manganese steel, which consists in first heating an ingot above 1125° C. until in a uniform coherent condition, rolling to a bloom, reheating the bloom and equalizing for a short time at temperatures between 1000° C. and 1225° C., rolling to a rail with a finished temperature below 1075° C., equalizing for a short time, and quenching; substantially as described.

4. The method of producing rails of manganese steel, which consists in first heating an ingot above 1125° C., until in a uniform coherent condition, rolling to a rail with a finishing temperature below 1075° C., equalizing for a short time, and quenching; substantially as described.

5. The method of producing rails of manganese steel, which consists in first heating an ingot above 1125° C. until in a uniform coherent condition, rolling to a rail with a finishing temperature of about 950° C., equalizing for a short time at about 975° C. to 1025° C., and quenching; substantially as described.

[Claim 6 not printed in the Gazette.]

1,017,905. PRODUCTION OF SHEETS AND PLATES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Nov. 3, 1911. Serial No. 658,425. (Cl. 148—24.)

1. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, the temperature at finishing of the working being below 1075° C. and above 800° C., and quenching; substantially as described.

2. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, with intermediate reheating, the temperature at finishing of the working being below 1075° C. and above 800° C., and quenching; substantially as described.

3. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, the temperatures at finishing of the working being below 1075° C., and above 800° C., and quenching, the quenching being preceded by reheating at about the finishing temperature, for such time only that the sheet or plate is suitably annealed or toughened; substantially as described.

4. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, with intermediate reheating, the temperature at finishing of the working being below 1075° C., and quenching, the quenching being preceded by reheating at about the finishing temperature, for such time only that the sheet or plate is suitably annealed or toughened; substantially as described.

5. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, with intermediate reheating, the temperatures at finishing of the working being below 1075° C., and quenching; substantially as described.

[Claim 6 not printed in the Gazette.]

1,017,906. METHOD OF PRODUCING WROUGHT SHAPES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Dec. 28, 1911. Serial No. 668,276. (Cl. 148—24.)

1. The method of working manganese steel blanks, which comprises heating the blank until it has obtained a substantially uniform, continuous and firmly coherent austenitic structure; working the blank while in that condition and finishing the working operation at temperatures which in the finishing stage are between 800° C. and 1075° C.; and rapidly cooling to avoid recrystallization and separation of the constituents; substantially as described.

2. The method of working manganese steel blanks, which comprises heating the blank until it has obtained a substantially uniform, continuous and firmly coherent austenitic structure; preliminarily working the blank while in that condition; reheating until substantially equalized at such temperatures as will permit the product to be worked at final temperatures between 800° C. and 1075° C.; working the product to the shape intended; and rapidly cooling to avoid recrystallization and separation of the constituents; substantially as described.

3. The method of working manganese steel blanks, which comprises heating the blank until it has obtained a substantially uniform, continuous and firmly coherent austenitic structure; working the blank while in that condition and finishing the working operation at temperatures which in the finishing stage are between 800° C. and 1075° C.; and rapidly cooling to avoid recrystallization and separation of the constituents, the rapid cooling being preceded by rapidly reheating to an equalized temperature of about 1000° C.; substantially as described.

4. The method of working manganese steel blanks, which comprises heating the blank until it has obtained a substantially uniform, continuous and firmly coherent austenitic structure; preliminarily working the blank while in that condition and finishing the preliminary working at temperatures between 800° C. and 1075° C.; rapidly cooling to avoid recrystallization and separation of the constituents; reheating to not above 1075° C. so as to avoid loss of the fine-grained state, completing the working at temperatures which in the finishing stage are between 800° C. and 1075° C., and again rapidly cooling; substantially as described.

5. The method of working manganese steel blanks, which comprises heating the blank until it has obtained a substantially uniform, continuous and firmly coherent austenitic structure; preliminarily working the blank while in that condition; permitting the preliminarily worked shape to cool slowly; reheating the slowly cooled preliminarily wrought shape to above 1125° C.; finally working the preliminarily wrought shape to final form to restore the fine-grained condition at a temperature which in the finishing stage should be within the range of 800° C. to 1075° C.; and rapidly cooling; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,017,907. HEAT TREATMENT OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Jan. 9, 1912. Serial No. 670,214. (Cl. 148—24.)

1. The method of producing wrought shapes of manganese steel, which comprises heating the blank until in a uniform austenite state; forming; and cooling rapidly to below 950° C.; substantially as described.

2. The method of producing wrought shapes of manganese steel, which comprises heating the blank until in a uniform austenite state; forming; cooling rapidly to below 950° C.; reheating rapidly; further forming; and cooling rapidly to below 950° C.; substantially as described.

3. The method of producing wrought shapes of manganese steel, which comprises heating the blank until in a uniform austenite state; forming; cooling rapidly to below 950° C.; rapidly reheating to between 800° C. and 1075° C. to regrain the steel; and cooling rapidly to below 950° C.; substantially as described.

4. The method of producing wrought shapes of manganese steel, which comprises heating the blank until in a uniform austenite state; forming; cooling rapidly to below 950° C.; rapidly reheating to between 975° C. and 1075° C. for a short time to restore the carbids of the steel to solution; and cooling rapidly to below 420° C.; substantially as described.

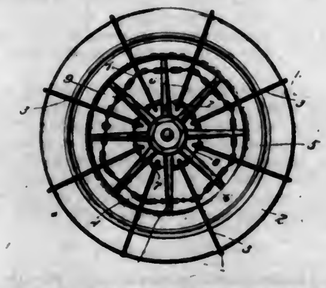
1,017,908. MANUFACTURE OF SHEETS OR PLATES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Jan. 10, 1912. Serial No. 670,376. (Cl. 148—24.)

1. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, partially rolling until in a thoroughly worked condition at temperatures which, in the finishing stage of the partial rolling, are between 800° C. and 1075° C., thereafter working with light pressure and but slight reductions until the temperature has fallen so low that reversion out of the uniform, austenite condition will not take place; substantially as described.

2. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, partially rolling until in a thoroughly worked condition at temperatures which, in the finishing stage of the partial rolling, are between 800° C. and 1075° C., and thereafter working with light pressure and but slight reductions, together with gradual water-quenching until the temperature has fallen so low that reversion out of the uniform, austenite condition will not take place; substantially as described.

3. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, partially rolling until in a thoroughly worked condition at temperatures which, in the finishing stage of the partial rolling, are between 800° C. and 1075° C., and thereafter working with light pressure and but slight reductions to substantially a black heat; substantially as described.

1,017,909. TRACTION AND NON-SKID DEVICE. JAMES W. REID, New York, N. Y. Filed Mar. 16, 1911. Serial No. 614,772. (Cl. 152—2.)

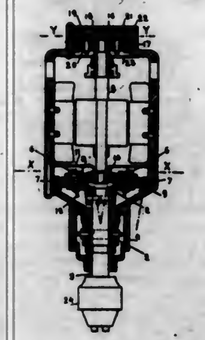


1. A traction and anti-skid device comprising a plurality of traction members, each being substantially of J-shape and having its ends extending radially of the wheel, the short end of each traction member terminating in an offset portion adapted to extend within the felly of the wheel, the longer ends extending to points adjacent the hub of the wheel, and connecting members adapted to connect the longer ends of said traction members.

2. A traction and anti-skid device comprising a plurality of traction members, each being of substantially J-shape, the shorter arm of each member being shaped to extend within and closely adjacent to the felly of the wheel, the other arm being of a length to extend well toward the hub of the wheel, flexible connecting members for connecting the ends of said traction members upon each side of the wheel respectively.

3. In a traction device for wheels, a plurality of hook shaped bails arranged to extend over and across the tread of a wheel, the bail ends extending inwardly toward the middle portion of said wheel, one of said bail ends being longer than the other, and means for holding all of said bails in contact with the thread of a wheel, the shorter bail ends hooking under the felly of the wheel.

1,017,910. FRICTION-GEARING. GUSTAF RENNERFELT, New York, N. Y. Filed Aug. 4, 1909. Serial No. 511,099. (Cl. 74—26.)



1. The combination of a beveled bushing, a track beveled with the same angle as the bushing, a plurality of spherical rollers between the bushing and the track, means for rotating the bushing, and means connected to the rollers for transmitting the rotation.

2. The combination of a bushing, a track, a plurality of rollers having convex rolling faces between the bushing and the track, the side of the track being parallel to the side of the bushing, means for rotating the bushing, and means connected to the rollers for transmitting the rotation.

3. The combination of a shaft, a plurality of studs supported by the shaft, a spherical roller mounted on each stud, a track in contact with the rollers, a bushing in contact with the rollers, the side of the track being parallel to the side of the bushing, means for pressing the bushing against the rollers, and means for rotating the bushing.

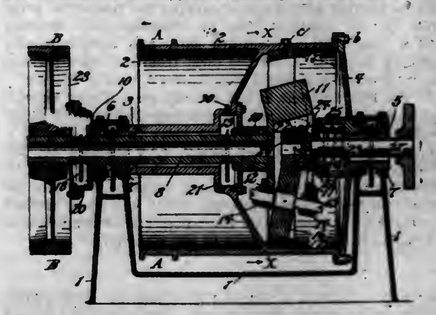
4. The combination of a bushing, a track, a plurality of rollers having spherical faces between the bushing and the track, yielding means for subjecting the rollers to balanced pressure between the bushing and the track, a frame surrounding the track, a shaft journaled in the frame and connection between the rollers and the shaft.

5. The combination of a shaft, a beveled bushing at one end thereof, a beveled track, a plurality of convex rollers between the bushing and the track, means for pressing the bushing against the rollers, a beveled race on the other end of the shaft, a beveled race concentric with the first race, a plurality of spherical rollers between the two races, means for rotating the shaft, and means connected to the first said plurality of rollers for transmitting the rotation.

[Claims 6 to 15 not printed in the Gazette.]

1,017,911. FRICTION-GEARING. GUSTAF RENNERFELT, New York, N. Y., assignor of one-half to Charles J. Kintner, New York, N. Y. Filed May 11, 1911. Serial No. 626,557. (Cl. 74—26.)

1. Friction gearing embracing a driving shaft, a pinion thereon, a spherical track, a plurality of rollers having convex rolling surfaces and located between the pinion and the track, means for forcing the pinion against the rollers, together with a second shaft operatively connected with the rollers, substantially as described.



2. Friction gearing embracing a driving shaft, a pinion thereon, a spherical track, a plurality of rollers having convex rolling faces and located between the pinion and the track, means for forcing the pinion against the rollers, a second shaft operatively connected with the rollers; together with a drum operatively connected to the track and all operating substantially as described.

3. Friction gearing embracing a driving shaft, a pinion thereon, a spherical track, a plurality of rollers having convex rolling faces and located between the pinion and the track, means for forcing the pinion against the rollers, a second shaft operatively connected with the rollers; together with a drum operatively connected to the track and a brake for the drum, substantially as described.

4. Friction gearing embracing a driving shaft, a pinion thereon, a spherical track, a plurality of rollers having convex rolling faces and located between the pinion and the track, means for forcing the pinion against the rollers, a second shaft operatively connected with the rollers; together with a drum operatively connected to the track, and two brakes, one for the drum and the other for the second shaft, and all operating substantially as described.

5. Planetary friction gearing embracing a plurality of rollers having spherical faces, a concave friction pinion, carried by a driving shaft, and a spherical track, said rollers having frictional bearing between the pinion and the track; together with means for frictionally forcing the pinion against the faces of the rollers, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,017,912. MANUFACTURE OF SLAG CEMENT. JOHN GUSTAF ADOLF RHODIN, London, England. Filed Feb. 23, 1910. Serial No. 545,552. (Cl. 106—43.)

1. In the manufacture of slag cement, the improvement which comprises incorporating suitable quantities of finely divided lime in chemical composition with solid finely divided blast furnace slag at a temperature below that at which any substantial fusion or sintering takes place and at about 900° C. by means of a suitable contact substance such as salt.

2. In the manufacture of slag cement, the improvement which comprises causing the chemical combination of finely divided lime with solid finely divided blast furnace slag at a temperature of about 900° C. by means of a suitable contact substance, while simultaneously removing sulfur in a volatile form from the blast furnace slag by providing a mixed atmosphere of steam and air.

3. In the manufacture of slag cement, the improvement which comprises causing the chemical combination of finely divided lime with solid finely divided blast furnace slag at a temperature of about 900° C. by means of a suitable contact substance, while improving the hydraulic properties of the resulting slag by simultaneously treating with a finely divided sulfate salt.

4. In the manufacture of slag cement, the improvement which comprises causing the chemical combination of

finely divided lime with solid finely divided blast furnace slag at a temperature of about 900° C. by means of a suitable contact substance, improving the hydraulic properties of the resulting slag by simultaneously treating with a finely divided sulfate salt, and simultaneously removing sulfur in a volatile form from the blast furnace slag by providing a mixed atmosphere of steam and air.

5. The improvement in the manufacture of slag cement, which comprises chemically combining quantities of finely divided lime with finely divided blast furnace slag at a temperature of 900° C. by means of a suitable contact substance, and at the same time rendering the hydraulic properties of the hydraulic cement permanent by the addition of a finely divided mixture which will yield calcium aluminate at approximately the herein stated temperature.

[Claims 6 to 8 not printed in the Gazette.]

1,017,913. WHITE HYDRAULIC CEMENT AND PROCESS OF MAKING THE SAME. JOHN GUSTAF ADOLF RHODIN, London, England, assignor to Gilbert Rosenbusch, London, England. Filed Jan. 6, 1911. Serial No. 601,152. (Cl. 106—43.)

1. The process of making a white hydraulic cement which comprises producing in a finely divided state a mixture of a mineral of the feldspar group with a suitable proportion of lime and common salt, and calcining the mixture at a temperature above 900° centigrade but below such a temperature as would cause clinkering and make regrinding necessary or would color the product.

2. The process of making white hydraulic cement which consists first in pulverizing and mixing a natural mineral having a large content of silicate of alumina, common salt and a suitable aluminum compound and secondly in calcining the mixture at a temperature above 900° centigrade but below such a temperature as would cause clinkering and make regrinding necessary or would color the product.

3. The process of making white hydraulic cement which consists first in pulverizing and mixing a natural mineral having a large content of silicate of alumina, common salt, a suitable aluminum compound and magnesium sulfate, and secondly in calcining the mixture at a temperature above 900° centigrade but below such a temperature as would cause clinkering and make regrinding necessary or would color the product.

4. The process of making a white hydraulic cement which consists in mixing together in a finely divided state suitable proportions of potash feldspar, quicklime, potash alum, common salt and magnesium sulfate and then calcining the mixture at a temperature below that at which the product would clinker, form lumps or develop color.

5. The process of making a white hydraulic cement which consists in mixing together in a finely divided state suitable proportions of feldspar, quicklime, an aluminum compound and common salt and calcining the mixture at a temperature at which the ingredients will form a cementitious body but will remain in the powdered form.

[Claims 6 to 12 not printed in the Gazette.]

1,017,914. CEMENT STEEL PLATE. HAROLD ASHTON RICHARDSON, London, England. Filed Oct. 15, 1910. Serial No. 587,342. (Cl. 148—40.)

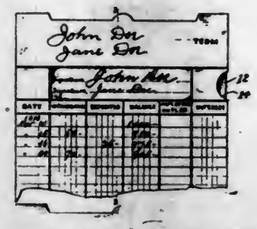
1. Cement steel plates or other articles having a glass-hard surface containing tungsten about 2½ per cent. throughout the plate or article, carbon 0.2 to 0.5 per cent. through the back portion of the plate or article and a further proportion of carbon in the face of the plate or article, as set forth.

2. Cement steel plates or other articles having a glass-hard surface containing about 2½ per cent. of tugsten, 4 per cent. of nickel and 0.3 per cent. of carbon throughout the back portion of the plate or article and an additional proportion of carbon in the face of the plate or article.

3. Cement steel plates or other articles having a glass-hard surface containing both molybdenum and tungsten in quantity equivalent to about 2½ per cent. of tungsten, carbon 0.2 to 0.5 per cent. through the back portion of the plate or article and a further proportion of carbon in the face of the plate or article.

4. Cement steel plates or other articles having a glass-hard surface containing both molybdenum and tungsten in quantity equivalent to about 2½ per cent. of tungsten, 4 per cent. of nickel and 0.3 per cent. of carbon throughout the back portion of the plate or article and an additional proportion of carbon in the face of the plate or article, as set forth.

1,017,915. SAVINGS-BANK LEDGER-CARD. CHARLES W. ROSENTHAL, Los Angeles, Cal. Filed Dec. 19, 1910. Serial No. 598,043. (Cl. 129—16.)



1. A ledger card having a signature pocket near the top of the card, said pocket being partly formed by the card and being open at one end and having an opening in the side of the pocket in that portion thereof which is made by the card, said pocket being wider and longer than the opening in the card.

2. A ledger card having a narrow opening therein near the top thereof, said opening extending from near one edge to near the other edge of the card; in combination with a strip of paper secured to the back of said card near the said opening except at one end thereof, said paper passing across said opening and forming with the card a signature slip pocket, said pocket being wider and longer than the opening in the card.

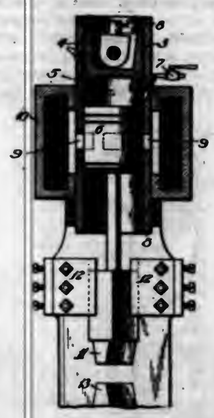
3. A ledger card having a signature slip pocket, said pocket having an open end and an opening in the face of the card in combination with a signature slip adapted to be inserted in said pocket by being pushed through the open end of the pocket.

4. A ledger card having a signature slip pocket with an opening in the face of the card and a thumb notch at one end of the pocket in combination with a signature slip adapted to be inserted in said pocket by being pushed in the open end of the pocket, said slip being wider and longer than the opening in the card.

1,017,916. POWER-HAMMER. GEORGE H. ROWE, Berwyn, Ill., assignor to The Electromagnetic Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1910. Serial No. 589,876. (Cl. 172—126.)

1. The combination with a cylindrer, of a driving piston and a driven piston working in the cylinder, an air space being provided between the said pistons, a solenoid surrounding the cylinder, the driven piston being the core of said solenoid, said solenoid being adapted when traversed by current to hold said driven piston in an intermediate suspended floating position, the driving piston, when reciprocated, acting through the medium of the air cushion formed in the said space to operate the driven piston, and a tool carried by said driven piston.

2. The combination with a cylinder and a solenoid surrounding the same, of a reciprocating hammer and its piston, adapted to be held suspended by the magnetic action of the solenoid when traversed by current, means under the control of the user for varying the strength of said current to regulate the position of the hammer, an air space being provided in the cylinder above the said piston, and a mechanically reciprocated piston acting, through the medium of the air forming a cushion in said space, upon the hammer to operate the same.



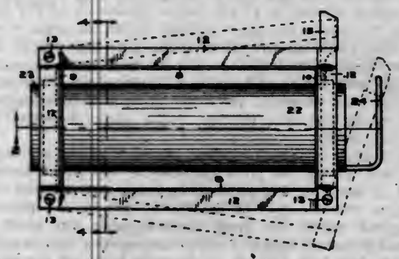
3. The combination in a power hammer mechanism, of a piston and a hammer carried thereby, a solenoid surrounding the piston, said solenoid when traversed by current being adapted to hold the hammer in a suspended or floating position, and means for varying the strength of the solenoid to regulate the length of the stroke and intensity of the blow, substantially as and for the purpose specified.

4. The combination of a driven connecting rod and a piston reciprocated thereby, a hammer and its piston, a cylinder having an air space therein between said pistons, a valve under the control of the user for regulating the air cushion formed between said piston, a solenoid, the hammer piston being of iron and serving as the core or armature of said solenoid which surrounds the said piston, and means for varying the strength of said solenoid whereby the length of stroke and consequent intensity of the blow of the hammer may be controlled by the user, substantially as and for the purpose specified.

5. The combination with a cylinder, of a mechanically driven piston arranged to reciprocate therein, a solenoid surrounding said cylinder beyond the end of the forward stroke of said piston, a second piston in said cylinder, said second piston constituting a core for said solenoid, and a tool carried by said second piston.

[Claims 6 and 7 not printed in the Gazette.]

1,017,917. COMBINATION BLOCK AND TILE MACHINE. JOSEPH E. RUNNER, Dugger, Ind. Filed Dec. 17, 1910. Serial No. 597,809. (Cl. 25—126.)

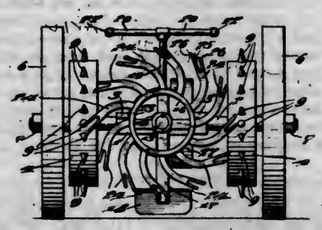


1. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box, the ends of said mold-box being provided with opposite core-holes, a semicircular resilient pallet to fit the internal dimensions of said mold-box and adapted to shape and hold the molded product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split-sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes by the mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

2. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box, the ends of said mold-box being provided with opposite core-holes, a semicircular resilient pallet to fit the internal dimensions of said mold-box and adapted to shape and hold the molded product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes by the mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

3. A combined block and tile machine comprising an open top and bottom rectangularly shaped mold-box having its sides and ends pivotally connected at three of its corners, a latch to secure the side and end at the remaining corner, the ends of said mold-box being provided with core-holes, a semicircular resilient pallet to loosely fit the internal dimensions of said box at the beginning of a molding operation but in a close manner under pressure and adapted to shape the bottom of the product, a semicircular trowel adapted to form the upper exterior surface of the molded product, and a longitudinally split sleeve having both resulting edges normally in the same cylindrical surface, said sleeve being removably supported in said core-holes of said mold-box and adapted to be rotated in one direction to smooth the internal surfaces of the core-holes in the molded product and to be rotated in the reverse direction to reduce the diameter of said sleeve to permit its free removal from said molded product.

1,017,918. POTATO-DIGGER. ANDREW D. RUSNAK, Philadelphia, Pa. Filed May 17, 1910. Serial No. 561,835. (Cl. 55—56.)

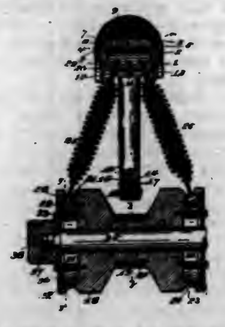


In a potato digger, the combination with a frame, an axle supporting the frame, and traction wheels supporting the axle and secured to turn therewith, of a rearwardly projecting shaft supported on the frame, beveled gears connecting the axle and shaft a plow supported by the frame, and a rotary agitator secured on said shaft and comprising a transversely disposed ring, a single circular series of laterally curved arms having transversely split ends, and said agitator turned in a direction to present the split ends endwise to the soil, substantially as described.

1,017,919. SPRING-WHEEL. SAMUEL P. SANDERS, Aurora, Nebr., assignor of one-half to Christian C. Grosshans, Aurora, Nebr. Filed Aug. 18, 1910. Serial No. 577,744. (Cl. 152—52.)

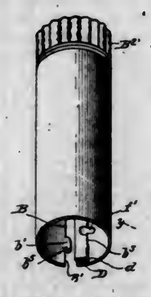
In a spring wheel, the combination, with a tread rim, an inner rim, and spokes rigidly connecting the rims, of

a hub having an annular groove, a bumper secured in the groove, a bumper ring carried by the inner rim within the said groove with a space between the ring and the hub-



bumper, and a series of spiral springs on each side of the spokes and forming the only connection between the hub and the tread rim.

1,017,920. SHEET-METAL PIPING. RAPHAEL T. SEMMES, Savannah, Ga. Filed Sept. 19, 1911. Serial No. 650,174. (Cl. 126—309.)



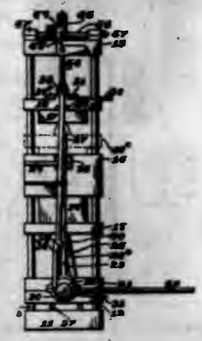
1. A pipe section having a hook on one edge, a double fold on the other having a longitudinal slot therein open at one end with which the hook coöperates, and means for preventing the escape of the hook from the slot.

2. A pipe section having hooks on one edge, a double fold on the other edge having longitudinal slots in the inner bend thereof open at one end with which the hooks cooperate, and tongues adapted to be bent over the mouth of the slots to prevent the escape of the hooks.

1,017,921. MACHINE FOR MAKING BRICK. JOHN F. SHECKLER, Oklahoma, Okla. Filed Sept. 27, 1909. Serial No. 519,871. (Cl. 25—96.)

1. A brick machine including a press chamber, a plunger mounted above the press chamber and adapted to enter the same, a second plunger slidable within the press chamber and forming a movable bottom for the same, a shaft, means actuated by the shaft when turned in one direction for drawing the plungers toward each other, means actuated by the shaft during the first half of its return movement for elevating the first plunger above the press and also elevating the second plunger to the top of the press chamber, and means actuated by the shaft during the second half of its return movement for slowly lowering the second plunger to normal position and providing a continuous support for the same during its downward movement.

2. A brick machine including a press chamber, a plunger slidably mounted within the press chamber, a shaft, means actuated by the shaft when turned in one direction for moving the plunger within the press chamber, means actuated by the shaft during the first half of its return movement for moving the plunger to the end of the press chamber to eject any material therein, a connecting rod pivotally connected to the plunger and normally swinging loosely against the shaft, and an arm projecting from the shaft for engagement with the said connecting rod to cause a slow return of the plunger to normal position upon the second half of the return movement of the rock shaft.



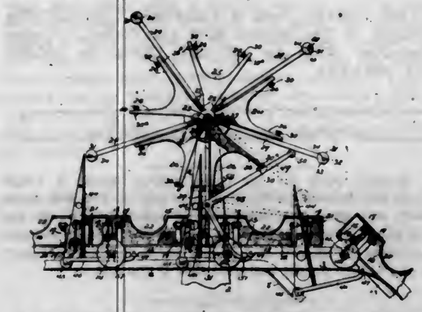
3. A brick machine including a press chamber, a plunger mounted within the press chamber, a rock shaft, an operative connection between the rock shaft and the plunger whereby the plunger is moved within the press chamber when the shaft is turned in one direction, a pair of connecting rods hanging loosely from the plunger on opposite sides of the shaft, means upon the shaft for coöperation with one of the connecting rods upon the initial portion of the return movement of the rock shaft for imparting a greater amplitude of movement to the plunger than is given by the cam, and means upon the rock shaft for engaging the opposite connecting rod during the later half of the return movement of the rock shaft to permit of an easy return of the plunger to normal position.

4. A brick machine including a press chamber, a plunger mounted over the press chamber, a second plunger mounted within the press chamber and forming a movable bottom for the same, a rock shaft arranged under the press chamber and formed with oppositely disposed cams, an extensible connecting rod between one of the cams and the second plunger, a connecting rod between the first plunger and the opposite cam whereby the plungers are drawn toward each other when the rock shaft is turned in one direction, a connecting rod hanging loosely from the first plunger on one side of the rock shaft, a second connecting rod hanging loosely from the second plunger on the same side of the rock shaft, a third connecting rod also hanging loosely from the second plunger upon the opposite side of the rock shaft, means upon the rock shaft for engaging the first two hanging connecting rods during the initial movement of the return movement of the rock shaft for lifting the upper plunger above the press chamber and elevating the lower plunger to the top of the press chamber, and means upon the rock shaft for coöperation with the third hanging connecting rod for permitting an easy return of the lower plunger to normal position during the later portion of the return movement of the rock shaft.

5. A brick machine including a press chamber, a plunger mounted within the press chamber, a rock shaft formed with a cam, an extensible connecting rod between the plunger and the cam of the shaft whereby the plunger is moved within the press chamber when the shaft is turned in one direction, a pair of connecting rods hanging loosely from the plunger on opposite sides of the shaft and provided with shoulders, and a pair of arms projecting from the shaft and disposed at an angle to each other, one of the arms engaging the shoulder of one of the connecting rods upon the initial portion of the return movement of the rock shaft so as to impart a greater amplitude thereto than is given by the cam, the opposite arm engaging the shoulder of the opposite connecting rod during the latter half of the return movement of the rock shaft so as to permit of an easy return of the plunger to normal position.

[Claims 6 to 12 not printed in the Gazette.]

1,017,922. TILE-CUTTING MACHINE. JAMES L. SHERON, Marion, Ind. Filed May 18, 1911. Serial No. 628,103. (Cl. 25—110.)



1. The combination with two trackways and cutting mechanism above said trackways, of a plurality of trucks movable on one of said trackways, and a plurality of cutter operating arms movable on the other trackway, and arms projecting from said first mentioned arms and pivotally connected with the trucks.

2. The combination with inner and outer trackways, the inner trackway having an inclined end portion, and cutting mechanism disposed over said trackways, of trucks movable on the outer trackway, cutter operating arms movable on the inner trackway, and arms projecting from said cutter operating arms and pivoted to the trucks.

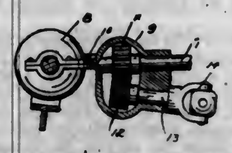
3. The combination with a plurality of connected trucks and a cutting reel, of operating devices for the cutting reel connected with said trucks, and means for moving said operating devices out of the way of the trucks after each cutting operation of the cutting reel.

4. The combination with a plurality of connected trucks and a cutting reel disposed over the same, of operating devices for said cutting reel, means connecting said operating devices with the trucks, means for causing said operating devices to be moved away from the trucks at the discharge end of the machine to facilitate the removal of severed material from the trucks.

5. The combination with trackways and an endless series of trucks movable on said trackways, of cutting mechanism over said trackways, inner trackways having inclined end portions, operating arms for the cutting mechanism movable on said inner trackways and connections between said operating arms and the trucks.

[Claims 6 to 8 not printed in the Gazette.]

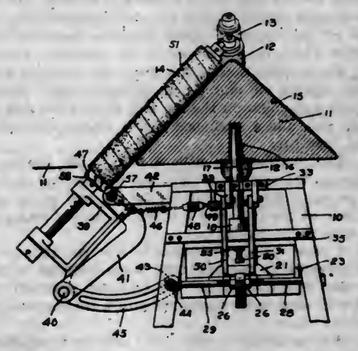
1,017,923. DRIVING MECHANISM. GEORGE WASHINGTON SLATER, Oakland, Cal. Original application filed Nov. 17, 1910, Serial No. 592,899. Divided and this application filed Oct. 5, 1911. Serial No. 653,037. (Cl. 74—7.)



1. A shield housing to be used in connection with a motor vehicle, comprising a pair of sections, each section being provided with a pair of legs adapted to straddle the axle of a vehicle for supporting said sections in engagement with the axle, each of said sections being provided with a socket portion, a drive shaft passing through one of said sections of said housing and a gear thereon, said gear fitting in said socket formed in one of said sections, an auxiliary shaft passing through the other of said sections of said housing and a gear thereon fitting in said socket and meshing with said first-mentioned gear, and means for securing said sections together.

2. A device of the class described comprising a main drive shaft, an auxiliary drive shaft, a sectional housing, a gear carried by each shaft and meshing with each other, said housing being provided with sockets for receiving said gears and having a substantially U-shaped end for straddling the drive casing carried by the axle of a vehicle, whereby the main shaft and auxiliary shaft may be held in correct relation with the drive casing.

1,017,924. NAP-RAISING MACHINE FOR FELT HATS. JOHN H. STARR, Danbury, Conn., assignor to E. A. Mallory and Sons, Incorporated, Danbury, Conn., a Corporation of Connecticut. Filed June 9, 1911. Serial No. 632,260. (Cl. 26—4.)



1. A machine of the character described comprising a body carrying cone, a driven primary nap raising roller adapted to engage a body on the cone and to rotate said body and cone, a secondary nap raising roller which is rotated by a body on the cone and means for retarding the rotation of the secondary nap raising roller.

2. A machine of the character described comprising a body carrying cone, a driven primary nap raising roller adapted to engage a body on the cone and to rotate said body and cone, a cleaning roller for said primary nap raising roller, a single bracket for supporting both of said rollers, means for driving the cleaning roller faster than said nap raising roller, a secondary nap raising roller rotated by a body on the cone and means for retarding the rotation of said secondary nap raising roller.

3. A machine of the character described, comprising a body carrying cone, a driven nap raising roller of uniform diameter and covered with a strip of card-cloth wound spirally from end to end, and a cleaning roller coöperating with said nap raising roller and provided on its periphery with longitudinal strips of card cloth with spaces between them.

4. A machine of the character described, comprising a body carrying cone, a driven primary nap raising roller adapted to engage a body on the cone and to rotate said body and cone, a pivoted bracket in which said roller is journaled, means for regulating the pressure of said roller on a hat body and an adjustable yoke on which the bracket is pivoted.

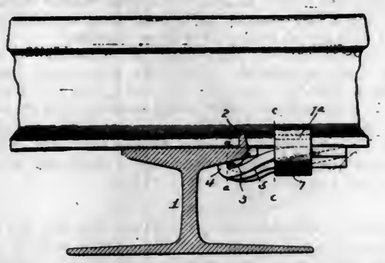
5. A machine of the character described comprising a body carrying cone, a driven primary nap raising roller adapted to engage a body on the cone and to rotate said body and cone, an operating lever, connections including a spring and turn buckle between said bracket and lever, for the purpose set forth, and an adjustable yoke on which the bracket is pivoted.

[Claims 6 to 18 not printed in the Gazette.]

into each other with a certain lateral play, a central pin

5. In a typograph composing machine, the combination

1,017,925. MEANS FOR SECURING RAILS TO METAL TIES. CLARENCE L. TAYLOR, Alliance, Ohio, assignor to William H. Morgan, Alliance, Ohio. Filed May 26, 1911. Serial No. 629,626. (Cl. 238—4.)



1. The combination of a metal tie having a top flange, a rail on said tie, a clamping plate bearing at one end against the tie and at its other end against the rail, and a U-shaped spring clamp the latter straddling one side edge of the clamping plate and the flange of the part against which the outer end of the clamping plate rests.

2. The combination with a metal tie having a top flange, a rail resting on said tie, a clamping plate engaging at one end a shoulder on the tie, and at its other end the base of the rail, and a U-shaped spring clamp for locking said parts together.

3. The combination with a metal tie having a top flange, a rail resting on said tie, a clamping plate engaging at one end a shoulder on the tie, and at its other end the base of the rail, and a U-shaped spring clamp for locking said parts together.

4. A plate for securing rails to ties, rectangular in plan, and provided at one end with a lip adapted to engage a shoulder depending from the tie, and provided adjacent each side edge on its underside with a rib extending lengthwise the plate.

5. The combination with a tie having a top flange provided with a depending shoulder, a rail on said tie and a securing plate adapted to interlock at one end with said shoulder and engage the rail at its opposite end, the said plate having ribs depending from its lower face, of a U-shaped spring metal clamp, one jaw of which engages the base flange of the rail and the other interlocks with one shoulder or rib on the securing plate.

[Claim 6 not printed in the Gazette.]

1,017,926. PROCESS OF VULCANIZATION. EDWIN TAYLOR, Farmingdale, N. Y., assignor to Union Clay Products Company, New York, N. Y., a Corporation of New Jersey. Filed May 14, 1910. Serial No. 561,466. (Cl. 106—23.)

1. The process of vulcanizing oil or resin, consisting in maintaining the oil at a vulcanizing temperature in the presence of a vulcanizing agent, until the vulcanizing operation is completed and mixing the product so produced with oil or resin maintained at a vulcanizing temperature.

2. The process of vulcanizing oil or resin, consisting in maintaining the oil at a vulcanizing temperature in the presence of a vulcanizing agent and clay until the vulcanizing operation is completed, and mixing the product so produced with oil or resin maintained at a vulcanizing temperature.

3. The process of vulcanizing oil or resin, consisting in maintaining the oil at a vulcanizing temperature in the presence of sulfur and clay containing sulfur until the vulcanizing operation is completed, and mixing the product so produced with oil maintained at a vulcanizing temperature.

4. The process of vulcanizing oil or resin, consisting in maintaining the oil at a vulcanizing temperature in the presence of an excess of a vulcanizing agent until the vulcanizing operation is completed, and mixing the product so produced with oil or resin maintained at a vulcanizing temperature.

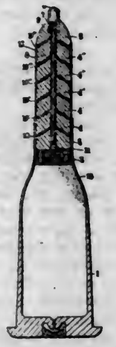
5. The process of vulcanizing oil or resin, consisting in maintaining the oil at a vulcanizing temperature in the presence of an excess of sulfur until the vulcanizing operation is completed, and mixing the product so produced with oil or resin maintained at a vulcanizing temperature.

[Claims 6 to 22 not printed in the Gazette.]

1,017,927. BEAM. JOHN E. TESSEYMAN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Apr. 25, 1910. Serial No. 557,551. (Cl. 189—37.)

A flanged beam for car underframes having a longitudinal slit formed in its web, one end of the slit being curved and extended downwardly substantially to the lower flange of the girder, the web at one side of the slit being offset to receive and have riveted thereto that portion of the web on the opposite side of the slit.

1,017,928. PROJECTILE FOR FIREARMS. GEORGI TOCIK, Ployeschi, Roumania. Filed Nov. 18, 1911. Serial No. 661,153. (Cl. 102—12.)



1. A shot or projectile for firearms, comprising in combination a plurality of superposed shot elements fitting into each other with a certain lateral play, a central pin on which these elements are loosely threaded, disks of easily compressible material between adjacent shot elements, and means associated with the central pin for adjusting the distance apart of the elements.

2. A shot or projectile for firearms, comprising in combination a plurality of superposed shot elements fitting into each other with a certain lateral play, a central pin on which these elements are loosely threaded, disks of easily compressible material between adjacent shot elements, spring means for holding the elements together during storage and transport, and means associated with the central pin for adjusting the distance apart of the elements.

3. A shot or projectile for firearms, comprising in combination a plurality of superposed shot elements fitting into each other with a certain lateral play, a central pin on which these elements are loosely threaded, but which can slide with some friction in the lowermost element, disks of easily compressibe material between adjacent shot elements, springs means for holding the elements together during storage and transport, and means associated with the central pin for adjusting the distance apart of the elements.

4. A shot or projectile for firearms, comprising in combination a plurality of superposed shot elements fitting into each other with a certain lateral play, a central pin on which these elements are loosely threaded and which is rigidly attached to the lowermost element, an adjustable collar on the upper end of the pin, disks of easily compressible material between adjacent shot elements, spring means for holding the elements together during storage and transport, and means associated with the central pin for adjusting the distance apart of the elements.

5. A shot or projectile for firearms, comprising in combination a plurality of superposed shot elements fitting into each other with a certain lateral play, a central pin on which these elements are loosely threaded and which is rigidly attached to the lowermost element, a nut working on the screwed upper end of the pin, disks of easily compressible material between adjacent shot elements, spring means for holding the elements together during storage and transport, and means associated with the central pin for adjusting the distance apart of the elements.

1,017,929. TYPOGRAPH COMPOSING-MACHINE. EDUARD UHTHOFF, Berlin-Charlottenburg, Germany, assignor to Typograph G. M. B. H., Berlin, Germany. Filed May 3, 1911. Serial No. 624,857. (Cl. 199—8.)

1. In a typograph composing machine the combination with permanent main wires continuous throughout the normal travel of the matrix bars and adapted to guide matrix bars, a basket, of subsidiary wires in the basket, one for each of said main wires and adapted to be brought with their ends in contact with said main wires and to permit the passage of the matrix bars from said main wires to said subsidiary wires and vice versa.

2. In a typograph composing machine the combination with permanent main wires continuous throughout the normal travel of the matrix bars and adapted to guide matrix bars, a basket, of subsidiary wires in the basket one for each of said main wires and adapted to be brought with their ends in contact with said main wires at a point intermediate the ends of said main wires and to permit the passage of the matrix bars from said main wires to said subsidiary wires and vice versa, whereby the matrix bars may be removed from and placed on the said main wires in the basket.

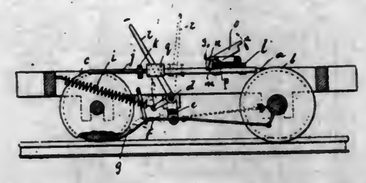
3. In a typograph composing machine, the combination with permanent main wires adapted to guide matrix bars and each having a portion of reduced cross-section to permit of the removal of said matrix bars therefrom, of subsidiary wires one for each of said main wires and adapted to be brought with their ends in contact with the portions of reduced cross-section of said main wires and to permit the passage of the matrix bars from said main wires to said subsidiary wires and vice versa.

4. In a typograph composing machine, the combination with permanent main wires adapted to guide matrix bars and each having a portion of reduced cross-section at a point intermediate its ends to permit of the removal of said matrix bars therefrom, of subsidiary wires one for each of said main wires and adapted to be brought with their ends in contact with the portions of reduced cross-section of said main wires and to permit the passage of the matrix bars from said main wires to said subsidiary wires and vice versa.

5. In a typograph composing machine, the combination with continuous main wires adapted to guide matrix bars, of subsidiary wires one for each of said main wires and adapted to be brought with their ends in contact with said main wires and to permit the passage of the matrix bars from said main wires to said subsidiary wires and vice versa, and an escapement device adapted to prevent the passage of the matrices from the main wires to the subsidiary wires.

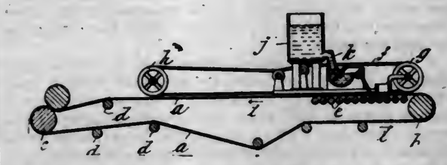
[Claims 6 to 16 not printed in the Gazette.]

1,017,930. BRAKE FOR VEHICLE-WHEELS. JACOB KARL ULLMANN, New Haven, Conn. Filed Dec. 7, 1910. Serial No. 596,004. (Cl. 188—65.)



In combination with a vehicle and the wheels thereof, of a rotary spindle, brakes consisting of curved or bent spring plates, fixed to said spindle and extending toward the lower part of the circumferences and the bearing points of the wheels, a spring actuated sliding member, a member secured to the spindle and operatively connected with said sliding member and a catch for said sliding member to lock the latter in a position in which the spring plates are retracted.

1,017,931. METHOD OF PRODUCING MOTTLED OR VARIEGATED PAPER. COLEMAN H. WAITE and GEORGE WALKER, Holyoke, Mass., assignors to Taylor-Burt Company, Holyoke, Mass., a Corporation of Massachusetts. Filed Feb. 13, 1911. Serial No. 608,437. (Cl. 92—39.)

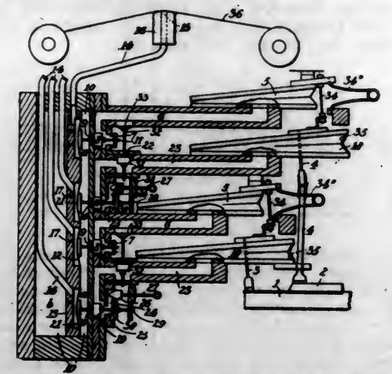


The method of producing paper with a mottled or variegated surface which consists in conveying a mass of paper-pulp through a paper making machine on the Fourdrinier wire and simultaneously causing a paper-pulp of different color to flow onto the pulp on said wire in a scattered and diluted condition by subjecting the upper surface of the colored pulp to a spray of water which scatters and dilutes the same into small flakes before it flows onto the pulp on the Fourdrinier wire, whereby the variegated effect is produced.

1,017,932. APPARATUS FOR AUTOMATICALLY PLAYING PIANOFORTES, CARILLONS, AND OTHER MUSICAL INSTRUMENTS. JAMES JOHN WALKER, London, England. Filed July 12, 1909. Serial No. 507,160. (Cl. 84—178.)

1. An automatic musical instrument or player comprising a plurality of positively connected motors operative upon each key or actuating lever; separate sets of control valves to each motor adapted to be individually controlled by the music sheet, and additional controlling means in connection with one motor so arranged as to be operative coincidentally with energization of a second motor to check free action of the said one motor when the latter is deënergized and driven by the second motor.

2. An automatic musical instrument or player comprising a plurality of positively connected motors operative upon each key or actuating lever; separate sets of control valves to each motor adapted to be individually controlled by the music sheet, additional controlling means in connection with one motor so arranged as to be operative coincidentally with energization of a second motor to check free action of the said one motor when the latter is de-energized and driven by the second motor; and an adjustment operative in connection with the said one motor to vary the effective retardation offered by this motor to the driving influence of the said second motor.



3. An automatic musical instrument or player comprising a plurality of positively connected motors operative upon each key or actuating lever; separate sets of control valves to each motor adapted to be individually controlled by the music sheet, additional controlling means in connection with one motor so arranged as to be operative coincidentally with energization of a second motor to check free action of the said one motor when the latter is de-energized and driven by the second motor; and a manually adjustable valve operative in connection with the said one motor the adjustment in one direction or the other being adapted to vary the effective retardation offered by the said one motor.

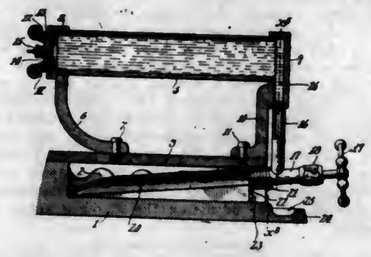
4. An automatic musical instrument or player comprising a plurality of positively connected motors operatively upon each key or actuating lever; separate sets of control valves to each motor the set corresponding to one motor comprising a valve controlling the communication between the interior of this motor and the atmosphere; a motor-device adapted to be energized coincidentally with the other motor; and operative connection between said motor-device and said valve.

5. An automatic musical instrument or player comprising a plurality of positively connected motors operative upon each key or actuating lever one of such motors having two means of communication with the atmosphere; separate sets of control valves to each motor the set corresponding to one motor comprising a valve controlling one communication between the interior of this motor and the atmosphere; a motor-device adapted to be energized coincidentally with the other motor; operative connection between said motor device and said valve; and a manually adjustable valve controlling a second communication between the interior of said motor and the atmosphere.

[Claims 6 to 8 not printed in the Gazette.]

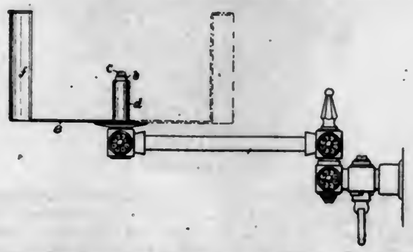
1,017,933. LAUNDRY-IRON. NAPOLEAN E. WALKER, Ontario, Cal., assignor of one-fourth to T. L. Lorbeer, Hemet, Cal. Filed Feb. 24, 1908. Serial No. 417,618. (Cl. 158—23.2.)

In a laundry iron, a hollow body, a burner for projecting fuel into said body, a top plate secured to the body, a front bracket secured to the top plate and having a head, a rear bracket secured to the top plate and having a hollow head, a hollow handle secured to the hollow head of the rear bracket, the front end of the handle being screwed to the head on the front bracket, a tube extending from the rear hollow head to the burner, a removable plug in the head of the front bracket, and a deflector plate



arranged in the body of the iron at an angle with its front end close to the bottom of the iron, the side walls of the body of the iron being formed to permit air to circulate over said deflector plate and under the top plate of the iron.

1,017,934. SHADE. JOHN H. WARD, Paterson, N. J. Filed Dec. 21, 1911. Serial No. 667,139. (Cl. 240—110.)



1. A shade attachment for a light fixture consisting of a substantially sector-shaped horizontal wall, a hollow post rising from one face of said wall at one end thereof and a vertical wall rising from the other end of said horizontal wall, substantially as described.

2. A shade attachment for a light fixture consisting of a substantially sector-shaped horizontal wall, a hollow post rising from one face of said wall at one end thereof and a vertical wall rising from the other end of said horizontal wall, said vertical wall being arc-shaped in plan, substantially as described.

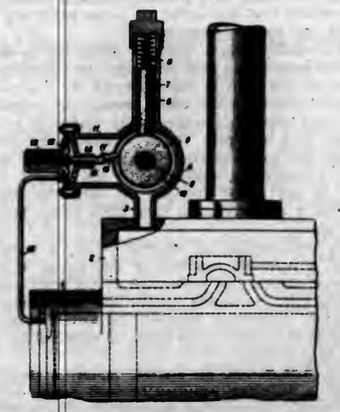
3. A shade attachment for a light fixture consisting of a substantially sector-shaped horizontal wall, a hollow post rising from one face of said wall at one end thereof and a vertical wall rising from the other end of said horizontal wall, said vertical wall being arc-shaped in plan, and the horizontal wall having its side edges and the vertical wall its side and top edges folded over so as to stiffen said walls, substantially as described.

1,017,935. LUBRICATING APPARATUS. LEWIS S. WATRES, Scranton, Pa., assignor of fifty-one one-hundredths to Clarence D. Simpson, Scranton, Pa. Filed Aug. 30, 1911. Serial No. 646,887. (Cl. 184—60.)

1. Lubricating apparatus, comprising the combination of a receptacle adapted to hold a mass of lubricant in the form of a solid, automatically operated means for removing from said solid finely divided lubricating particles, and means whereby the lubricating particles may be transferred to the surfaces to be lubricated.

2. Lubricating apparatus, comprising the combination of a receptacle adapted to hold a mass of lubricant in the form of a solid, automatic intermittently operated means

for removing from said solid finely divided lubricating particles, and means whereby the lubricating particles may be transferred to the surfaces to be lubricated.



3. The combination with an engine, of lubricating devices comprising a hollow body and within said body means for holding a mass of lubricant in the form of a solid, and means for cutting from said mass lubricating particles, means whereby said lubricating particles are conveyed to the interior surfaces to be lubricated, and means for operating said cutting means during the operation of the engine.

4. Lubricating apparatus for an engine driven by a fluid medium under pressure, comprising a hollow body adapted for communication with the surfaces to be lubricated and within said body means for holding a mass of graphite in the form of a solid and means for removing from said mass finely divided lubricating particles, and means adapted to be automatically operated for actuating said means for removing particles from said mass.

5. Lubricating apparatus for an engine driven by a fluid medium under pressure, comprising a hollow body adapted for communication with the surfaces to be lubricated and within said body means for holding a mass of graphite in the form of a solid and means for removing from said mass finely divided lubricating particles, and means adapted to be automatically operated by variation of pressure in the cylinder for actuating said means for removing particles from said mass.

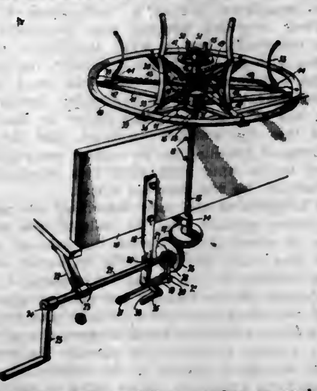
[Claims 6 to 8 not printed in the Gazette.]

1,017,936. LINE-WIRE REEL. JOHN WELTY, GEORGE M. WELTY, and CLINTON BRINSER, Seattle, Wash. Filed Mar. 31, 1910. Serial No. 552,636. (Cl. 242—84.)

1. In a reel, a vertical shaft, spaced brackets provided with bearings supporting said shafts, a hub fixed on said shaft above the upper bar, a flange at the upper end of said hub, a second flange at the lower end of said hub, radial arms secured at their inner ends to the upper flange and lying in the same plane, a ring connecting the outer ends of said radial arms, other arms connecting the outer ends of the first mentioned arms with the flange at the lower end of the hub, and strand-receiving members adjustably mounted on the first mentioned arms.

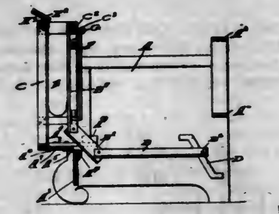
2. In a reel, a vertical shaft, spaced brackets provided with bearings supporting said shafts, a hub fixed on said shaft above the upper bar, a flange at the upper end of said hub, a second flange at the lower end of said hub, radial arms secured at their inner ends to the upper flange and lying in the same plane, a ring connecting the outer ends of said radial arms, other arms connecting the outer ends of the first mentioned arms with the flange at the lower end of the hub, strand receiving members adjustably mounted on the first mentioned arms, and means for locking said reel carrying arms in adjusted position.

3. In a reel, a vertical shaft, spaced brackets provided with bearings supporting said shafts, a hub fixed on said shaft above the upper bar, a flange at the upper end of said hub, a second flange at the lower end of said hub, radial arms secured at their inner ends to the upper flange and lying in the same plane, a ring connecting the outer ends of said radial arms, other arms connecting the outer ends of the first mentioned arms with the flange at the



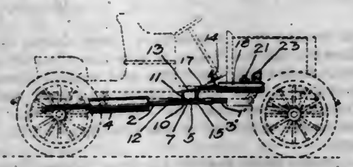
lower end of the hub, a sliding member on each of the first mentioned arms, a sleeve on said shaft above said hub and freely revoluble on the shaft, a gear formed on the lower part of the sleeve, a rack bar connected to each of the sliding members and meshing with said gear, strand-receiving members on said sliding members, and means connected to the sleeve for adjusting the position of the reel carrying arms.

1,017,937. SOFA-BED. FRANK BERNARD WERSEL, Jr., Mount Lookout, Ohio. Filed Apr. 5, 1911. Serial No. 619,137. (Cl. 5—51.)



The combination in a davenport sofa bed, of a folding bed frame, attached to the davenport, an inclined guideway attached to each end of said davenport, said guideway having a notch intermediate its ends, a supporting pin upon the rear end of said folding frame adapted to rest in said notch, all substantially as described.

1,017,938. SOUNDING-HORNS. ALVA WILLIAMSON, Atlantic, Iowa. Filed Mar. 29, 1910. Serial No. 552,188. (Cl. 116—1.)

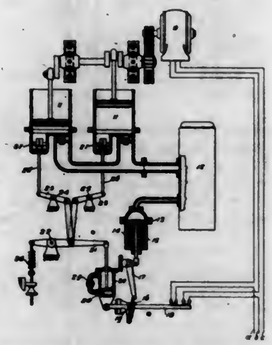


1. In a device of the class described, the combination of an engine exhaust pipe, an inelastic gas storage re-

ceptacle in communication with the exhaust pipe, said exhaust pipe being provided with an outlet other than the one leading to the storage receptacle, a manually operated valve device whereby the exhaust gases may be directed either into the storage receptacle or through the said outlet, a check valve interposed between the exhaust pipe and the storage receptacle to prevent the flow of gas from the storage receptacle to the exhaust pipe, a pressure equalizing receptacle, there being a restricted passageway provided between said receptacle and the storage receptacle, and a wind instrument operatively connected with the equalizing receptacle, the passageway from the equalizing receptacle to the wind instrument being unobstructed, whereby gas under fluctuating pressure in the exhaust pipe may either be discharged or directed into the storage receptacle, and the said gas under unequal pressure in the storage receptacle may be delivered to the wind instrument at a substantially uniform pressure, for the purposes stated.

2. In a device of the class described, the combination of an engine exhaust pipe, an inelastic gas storage receptacle in communication with the exhaust pipe, said exhaust pipe being provided with an outlet other than the one leading to the storage receptacle, a manually operated valve device whereby the exhaust gases may be directed either into the storage receptacle or through said outlet, a check valve interposed between the exhaust pipe and the storage receptacle to prevent the flow of gas from the storage receptacle to the exhaust pipe, a pressure equalizing receptacle, there being a restricted passageway provided between said receptacle and the storage receptacle, and a wind instrument operatively connected with the equalizing receptacle, the passageway from the equalizing receptacle to the wind instrument being unobstructed whereby gas under fluctuating pressure in the exhaust pipe may either be discharged or directed into the storage receptacle, and the said gas under unequal pressure in the storage receptacle may be delivered to the wind instrument at a substantial uniform pressure, and a suitable valve arranged between the check valve and the storage receptacle to relieve excessive pressure within the storage receptacle.

1,017,939. UNLOADING DEVICE FOR MOTORS. ROBERT B. WILLIAMSON, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Apr. 30, 1909. Serial No. 493,120. (Cl. 230—24.)



1. In combination, a motor, a pump driven thereby, means controlling the supply of power to the said motor, unloading means for the pump, and a mechanical connection between said power-controlling means and said unloading means whereby the operation of the former to admit power to the motor operates the latter to unload the pump.

2. In combination, a motor, a pump driven thereby, a reservoir supplied by the pump, means automatically controlled in response to the amount of the fluid in the reservoir for controlling the supply of power to the motor, normally inoperative unloading means for the pump, and a mechanical connection between said unloading means and said power-controlling means whereby the movement of the latter to power-admitting position renders the former operative.

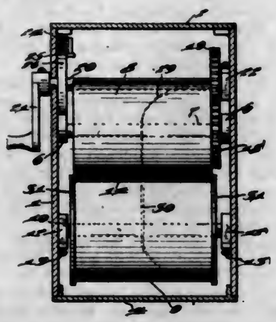
3. In combination, a motor, a pump driven thereby, a reservoir supplied by said pump, means controlled by the amount of the fluid in the reservoir for controlling the supply of power to the motor, means for unloading the pump, said unloading means being biased to inoperative position, and a slowly yieldable mechanical connection between the power-controlling means and the unloading means whereby the operation of the former to admit power to the motor operates the latter to unload the pump for a predetermined time after power is admitted to the motor.

4. In combination, an electric motor, a pump driven thereby, a reservoir supplied by said pump, a switch in the motor circuit and responsive to the fluid pressure in the reservoir, unloading means for the pump, and a mechanical connection between the switch and the unloading means whereby the latter is operated by the closing of said switch.

5. In combination, an electric motor, a pump driven thereby, a reservior supplied by said pump, a pressure switch in the motor circuit responsive to the fluid pressure in the reservoir, means for unloading the pump, said unloading means being biased to inoperative position, and a slowly yieldable mechanical connection between said switch and said unloading means whereby the closing of said switch renders the unloading means operative.

[Claims 6 to 14 not printed in the Gazette.]

1,017,940. SANITARY APPLIANCE. BENJAMIN WORTHINGTON, Mozart, Pa. Filed Mar. 15, 1911. Serial No. 614,574. (Cl. 211—32.)



A device of the class described, comprising two parallel contacting rolls, a cutter blade projecting from the periphery of one of said rolls, said blade extending inwardly a distance from one end of the roll and then circumferentially around the roll for a fixed distance, the other roll being provided with corresponding groove, a reel, a casing confining said rolls and said reel and provided with a slot adjacent said rolls, one edge of said slot being formed with a cutting edge, substantially as described.

1,017,941. CONVEYER. BENJAMIN H. WRIGHT, London, England, assignor to The Alvey-Ferguson Company, Louisville, Ky., a Corporation of Kentucky. Filed May 26, 1908. Serial No. 435,036. (Cl. 193—24.)

1. A conveying mechanism, comprising a bed or way and a traveling package carrier arranged end to end, said bed or way being adapted to engage the packages being conveyed and said carrier being adapted to conduct the packages relatively to the bed or way, mechanism movable relatively to the carrier and bed or way for moving the packages along the latter and means controlled by said mechanism for imparting intermittent package-conveying movement to the carrier.

2. A conveying mechanism for packaged articles, comprising a bed or way adapted to engage the packages being conveyed, an intermittently moving package-carrier arranged in advance of the receiving end of the bed or way and forming a continuation of the latter, mechanism having a package-engaging element which travels over the bed or way, and instrumentalities whereby the movement of said carrier is controlled by said traveling means.

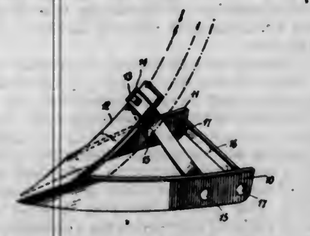
3. The combination with a power conveyer having traveling means adapted to transport a package from the receiving end of the conveyer by its engagement with a wall of the package, of a traveling carrier arranged in the plane of the receiving portion of the conveyer, and mechanism for producing relative movement of said traveling means and carrier at times so related to each other that a package will be automatically positioned with its said wall in front of the approaching traveling means.

4. The combination with a power conveyer, having a way adapted to support packages and traveling means for conducting the packages over said way, of means for feeding packages thereto comprising an intermittently movable package carrier arranged in the plane of said way and means for moving said carrier at predetermined times in the movement of the package conducting means.

5. The combination with a power conveyer having a way adapted to support packages and traveling means for conducting the packages over said way, of means for feeding packages thereto comprising an intermittently movable package carrier arranged approximately in the plane of said way and means operated by said conducting means for operating said carrier.

[Claims 6 to 28 not printed in the Gazette.]

1,017,942. PLOW. JAMES H. WRIGHT, Columbus, La. Filed June 26, 1911. Serial No. 635,410. (Cl. 97—26.)

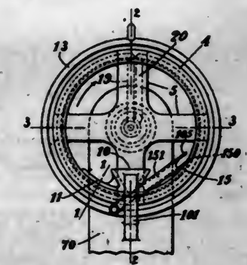


A plow share comprising spaced divergent outwardly bowed wings, a plow beam engaging tongue integral with the wings at their meeting and extending midway therebetween, an arched brace secured at its bight to the free end of said tongue and terminally secured to said wings, and a brace extending transversely across the space between the wings and terminally secured to said wings.

1,017,943. CASTING-MACHINE. ROBERT M. AKIN, Ossining, N. Y. Filed Nov. 14, 1908. Serial No. 462,646. (Cl. 207—11.)

1. A rotating annular internal mold including in combination, centrifugal means for retaining the molten metal in said mold, a gate in said mold having a dam extending into said mold, a scraper on the heel of said dam and a lifter for guiding the solidified metal from said mold.

2. A rotating annular internal mold including in combination, centrifugal means for retaining the molten metal in said mold, a gate in said mold having a dam extending into said mold, a scraper on the heel of said dam, a lifter for guiding the solidified metal out of said mold and a deflector over said lifter.



1,017,944. GANG-PLOW-LIFTING DEVICE. JAMES H. ALGARD and ALBERT BRAMER, Watertown, S. D. Original application filed Jan. 31, 1910, Serial No. 541,074. Divided and this application filed Nov. 19, 1910. Serial No. 593,254. (Cl. 97—30.)

1. In combination with a wheel supported frame, a series of plow beams connected with the frame, a bar arranged for vertical movement in parallel relation to the frame, a connection between said bar and each of the plow beams, means for elevating the bar, a stop mounted upon the frame and having a notch adapted to be projected below the lower ends of the bar, and a lever mechanism for swinging the said stop to carry the notch thereof beyond the lower edge of the said bar.

2. A plow comprising a frame having guides, a rod mounted for vertical sliding movement in the guides, means mounted upon the frame for moving said rod, a beam connected with the frame, a plate attached to the side of the beam, and a cuff attached to the lower portion of the rod and slidably receiving said plate.

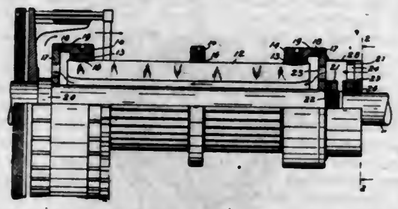
3. In combination with a frame, a series of plow beams connected to the frame, a bar arranged for movement vertically and in parallel relation with the frame, a connection between said bar and each of the plow beams, means for moving said bar in an upright direction, rods slidably mounted upon the frame for vertical movement, and means operatively connecting the said rods with the beams whereby the beams may move horizontally with relation to the rods.

1,017,945. COMMUTATOR CONSTRUCTION FOR DYNAMO-ELECTRIC MACHINES. THOMAS S. ALLEN, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Feb. 28, 1910. Serial No. 546,541. (Cl. 171—211.)

1. In a commutator construction, a shaft, a plurality of segments surrounding said shaft, segment clamping and supporting means engaging the outer surfaces of the segments only, and means carried by the shaft for creating a flow of air between said segments and shaft.

2. In combination, a shaft, a commutator comprising segments in the form of an annulus, the segments being clamped together and held in assembled relation on the exterior only, means for supporting the annulus concentrically with respect to the shaft so as to leave an un-

obstructed air space between the inner surface of each segment and the shaft, and means on said shaft for forcing air through the interior of the commutator.



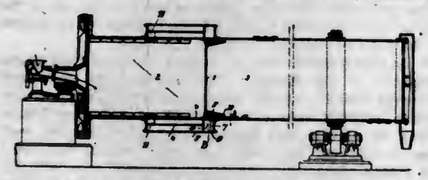
3. In a dynamo-electric machine, a shaft, a commutator comprising a plurality of segments arranged in the form of an annulus or shell, said segments being clamped together and held in assembled relation from the exterior only, and being supported from the shaft so as to leave an unobstructed annular passageway between the segments and the shaft, and means mounted on said shaft for creating a flow of air through said annular passageway.

4. In combination, in a dynamo-electric machine, a shaft, a commutator comprising an annulus or shell of segments, clamping rings engaging the outer surfaces of the segments and holding the latter in assembled relation, means mounted on the shaft for holding the annulus of assembled segments concentrically with respect to the shaft so as to leave an unobstructed passageway between the segments and the shaft, and means for causing a circulation of air through said passageway.

5. In combination, in a dynamo-electric machine, a shaft, a commutator comprising an annulus or shell of commutator segments, clamping rings engaging the outer surfaces of the segments only and holding the latter in assembled relation, means extending between said rings and shaft and beyond the ends of the segments for holding the annulus concentrically with respect to the shaft so as to leave unobstructed space between the shaft and the segments, and a blower for forcing air through said passageway along the inner surfaces of the segments throughout their length.

[Claims 6 and 7 not printed in the Gazette.]

1,017,946. COMPOUND BALL-MILL. RICHARD BENEKE, Bromberg, Germany, assignor to Limited Company Herm. Lönnert, Aktiengesellschaft, Bromberg, Germany. Filed Sept. 17, 1909. Serial No. 518,147. (Cl. 83—9.)



A rotatable drum having adjacent grinding chambers, in combination with an imperforate shell surrounding the adjacent ends of said chambers and secured to said drum, a screen between said drum and shell; vanes in said shell at one end thereof, and longitudinally extending hoods secured to said drum within one of said chambers and separated from the peripheral wall thereof, and covering openings therein; said chambers having orifices in their peripheral walls; which, with the spaces between the hoods and the peripheral walls form passageways from one chamber to the other.

1,017,947. RAILROAD-TIE. JACOB BOOTH, Reynoldsville, Pa. Filed Mar. 8, 1911. Serial No. 612,014. (Cl. 238—8.)

The combination with a tie having longitudinal reinforcing elements; of plates mounted on and embedded in the tie and having flanged ends extended inwardly, rails mounted on the plates, rectangular plates having surrounding flanges and a cross shaped opening centrally therethrough, said latter plates being mounted on the first

named plates and engaging the flanges of the rails and retaining means engaged through said plates and embedded in the tie to hold the rails in position, said cross-shaped openings permitting adjustment of the flanged plates.

1,017,948. SWITCH FOR IGNITION SYSTEMS. GEORGE H. BOYNTON, Dalton, Mass., assignor to Pittsfield Spark Coil Company, Dalton, Mass., a Corporation. Filed July 13, 1908. Serial No. 443,265. (Cl. 175—282.)

1. In a switch of the class described, in combination, a base-piece, a switch-lever pivoted thereto, contact-points engaged by the switch-lever, two sets of conducting bars, means for insulating the sets of conducting bars from each other, a plug, the insertion of which closes one set of conducting bars and opens the other set, and upon the withdrawal of which allows the first set to open and allows the second set of conducting bars to close, and connecting means between the plug, switch-lever and the conducting bars.

2. In a switch, in combination, a pivoted switch-bar, contact points, means for locking the switch-bar in adjusted positions and in engagement with the contact-points, two pairs of elastic conducting bars connected to the contacts, the bars of each pair being arranged for contacting relation with each other, a plug for operating the said bars, a strip of insulation for electrically insulating the pairs of bars from each other, and connecting means between the plug and contact-lever whereby upon the operation of the plug and switch-bar independent sources of electrical energy may be connected and disconnected, as described.

3. A switch having in combination with a base-piece, a metallic cover therefor, a terminal mounted in the base-piece, a spring push-button mounted in the plate and adapted to engage the terminal, a pair of normally separated conducting contact bars, a plug, a socket therefor, an electrical connection between the terminal and the socket, means for locking the plug to the socket and retaining said bars in contact, whereby a circuit may be closed through the plate when the button is operated.

4. In a switch construction, an insulating base-piece, a lever pivotally attached thereto, a series of contact-points adapted to be engaged by the lever, two sets of elastic contact strips, means for insulating one set from the other, means for simultaneously opening one set and permitting the other set to close, and vice versa, and connecting means between the strip-operating means and the lever, substantially as described.

1,017,949. PROCESS OF EXTINGUISHING FIRES. MAX BEREANN, Charlottenburg, Germany, assignor to The Firm of Minimax Consolidated Limited, London, England. Filed May 24, 1909. Serial No. 497,886. (Cl. 23—5.)

1. The process of extinguishing fires consisting in treating the burning substances with an aqueous solution of halogen salts of aluminium.

2. The process of extinguishing fires consisting in treating the burning substances with an aqueous solution of aluminium chlorid.

1,017,950. SNAP-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed Dec. 12, 1911. Serial No. 665,302. (Cl. 70—99.)

1. In a snap seal, the combination with a bulb-shaped seal part of a sheet-metal shackle having tubular ends provided with the respective members of a snap-fastening device and a flexible connecting portion, one of said ends being slidably insertible within the other and adapted to be snap fastened therein against withdrawal, and the other end being inseparably secured within and inclosed by said seal part.

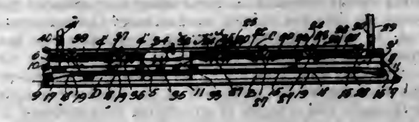
2. In a snap seal, the combination with a bulb-shaped seal part of a sheet-metal shackle having tubular ends provided respectively with snap holes and inwardly projecting snap catches to interlock with said holes, and a flexible connecting portion, one of said ends being slidably insertible within the other and adapted to be snap-fastened therein against withdrawal, and the other end being inseparably secured within and inclosed by said seal part.

3. The combination, in a snap seal, of a bulb-shaped seal part having an inlet hole surrounded by an inturned lip, and a sheet-metal shackle having tubular ends adapted respectively to fit within said inlet and to be slidably insertible within the other, and provided with the respective members of a snap-fastening device, said tubular ends being connected by a flexible body portion, and the outer tubular end being further constructed with outwardly projecting spurs to interact with said inturned lip of the seal part.

4. The combination, in a snap seal, of a bulb-shaped seal part having an inlet hole surrounded by an inturned lip, and a sheet-metal shackle having tubular ends adapted respectively to fit within said inlet and to be slidably insertible within the other, and provided with the respective members of a snap fastening device, said tubular ends being connected by a flexible body portion, and the outer tubular end being further constructed with outwardly projecting spurs and a superjacent outwardly projecting guard collar to interact with said inturned lip of the seal part.

5. An improved snap seal composed of a bulb-shaped seal part of sheet metal having an inlet surrounded by a lip turned inward and downward, and compressible to contract said inlet and lip, and a sheet metal shackle having a tubular end provided with outwardly and upwardly projecting spurs and a superjacent outwardly projecting guard collar to interact with said lip, and inwardly and downwardly projecting snap-fastening catches, a smaller tubular end at the other extremity of the shackle slidably insertible within the end first named and provided with catch holes to interlock with said catches, and a flexible labeling portion connecting said tubular ends, substantially as hereinbefore specified.

1,017,951. TOBACCO-DRYING APPARATUS. CLARENCE D. BROWN, Owensboro, Ky. Filed July 8, 1911. Serial No. 637,443. (Cl. 34—12.)



1. In a tobacco drying apparatus, the compartment of a centrally disposed cooling compartment, a drying compartment in communication at the forward end thereof, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, heating means disposed in the upper portion of the drying and ordering compartments respectively, and a series of circulating fans disposed below the heating means between the heating means and the lower portion of the respective drying and ordering compartments, for forcing air after passage through the heating means to the lower portion of said compartment, all air for the cooling, drying and ordering being admitted through the cooling compartment.

2. In a tobacco drying apparatus, the combination of a centrally disposed cooling compartment, a drying compartment having an air admission aperture for the complete apparatus in communication therewith, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, a series of tobacco leaf receiving conveyers disposed for travel through the drying, cooling and ordering compartments in train, a series of radiators disposed in the dome of the drying and ordering compartments respectively, and circulating fans disposed between the radiators and conveyers in the said respective drying and ordering compartments for exhausting the air from the cooling compartment and directing it after passage through the radiators downwardly upon the conveyers.

3. In a tobacco drying apparatus, the combination of a centrally disposed cooling compartment having an enlarged air inlet, a fan disposed therein for drawing the air through said inlet and forcing the air into the cooling compartment, a drying compartment in communication with the forward end of the cooling compartment for receiving air therefrom, an ordering compartment in communication at the opposite end of the cooling compartment to receive air therein from the cooling compartment, both drying and ordering compartments being provided with domes, heating means located in the domes of the drying and ordering compartments respectively, a series of circulating fans mounted below the heating means in the respective drying and ordering compartments, and leaf conveying means disposed below said fans and for travel through the drying, cooling and ordering compartments, in train.

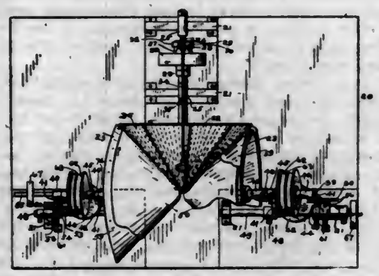
4. In a tobacco drying apparatus, the combination of a central cooling compartment, said cooling compartment being the air supplying compartment of the apparatus, a drying compartment extending therefrom and in communication therewith, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, both drying and ordering compartments being provided with domes, a tobacco conveyer mounted for travel through the drying, cooling and ordering compartments in train, a suction fan mounted in the cooling compartment for drawing the air thereinto and supplying air to the respective drying and ordering compartments, a heating means disposed in the domes of the respective ordering and drying compartments, and circulating fans interposed between the heating means and the tobacco conveyer in the respective drying and ordering compartments.

5. In a tobacco drying apparatus, the combination of a cooling compartment having an air inlet from above, a drying compartment in communication therewith, an ordering compartment also in communication therewith but disposed oppositely to the drying compartment, both

drying and ordering compartments having each a dome, a tobacco conveyer disposed for travel through the drying, cooling and ordering compartment in train, a suction creating device mounted in the cooling compartment for drawing air into the cooling compartment and supplying the air to the drying compartment in opposition to the movement of the tobacco conveyer therethrough and for simultaneously supplying air to the ordering compartment in the direction of the movement of the tobacco conveyer therethrough, and a series of circulating fans disposed in the dome of the respective drying and ordering compartments.

[Claims 6 to 19 not printed in the Gazette.]

1,017,952. NAP-RAISING MACHINE FOR FELT HATS. GEORGE E. BRUSH, Danbury, Conn., assignor to E. A. Mallory and Sons, Incorporated, Danbury, Conn., a Corporation of Connecticut. Filed Mar. 16, 1910. Serial No. 549,684. (Cl. 26—4.)



1. In a machine of the character described, the combination with a driven nap raising cone, of a body carrying cone driven thereby and having its axis obliquely inclined with relation to the axis of the nap raising cone, brackets provided with means for supporting said carrying cone, and connections between said brackets and said carrying cone for effecting a tilting adjustment of the axis of the carrying cone with relation to the axis of the nap raising cone.

2. In a machine of the character described, the combination with a driven nap raising cone, of a plurality of body carrying cones driven thereby and having their axes obliquely inclined with relation to the axis of the nap raising cone, means for independently adjusting the height of the carrying cones said adjusting means including means for independently tilting the axis of each of said carrying cones relatively to the axis of the nap raising cone independently, and means for retarding the rotation of the carrying cones independently.

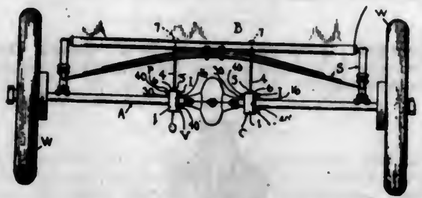
3. In a machine of the character described, the combination with a driven nap raising cone, of a body carrying cone driven thereby and having its axis obliquely inclined with relation to the axis of the nap raising cone, movable brackets, a swiveled support for said carrying cone, and connections between said swivel support and said brackets for effecting a tilting adjustment of the axis of the carrying cone with relation to the axis of the nap raising cone.

4. In a machine of the character described, the combination with a driven nap raising cone, of a body carrying cone driven thereby and having its axis obliquely inclined with relation to the axis of the nap raising cone, a carrying plate for said carrying cone, a bearing plate, means for providing a swivel connection between said bearing plate and said carrying plate, movable brackets, and connections between said brackets and said bearing plate for effecting a tilting adjustment of the axis of the carrying cone, with relation to the axis of the nap raising cone.

5. In a machine of the character described, the combination with a driven nap raising cone, a body carrying cone having a shaft and a drum carried thereby, of standards on which the shaft is journaled, an oscillatory carrying plate for the standards, means for locking said plate at any adjustment, a strap connected to the plate and passing over the drum, a lever to which said strap is connected and a weight on said lever whereby the rotation of the carrying cone is retarded.

[Claims 6 to 9 not printed in the Gazette.]

1,017,953. RECOIL-NEUTRALIZER. ALONZO C. BUTTMAN and FRANKLIN P. GABLE, Grandview, Iowa. Filed Oct. 5, 1911. Serial No. 652,969. (Cl. 21—105.)



1. In a recoil neutralizer, the combination with a cylinder connected with one member, a piston therein, a piston rod connected with the piston and extending through the cylinder head and connected with another member, and a spring connecting said members and whose recoil is to be neutralized; of an inlet valve opening inwardly into the cylinder at one side of the piston, an outlet valve opening outwardly from the cylinder at the other side of the piston, relief valves of smaller capacity than said inlet and outlet valves and located adjacent thereto, that near the inlet valve opening outward from the cylinder and that near the outlet valve opening inward toward the same, and independent means for permitting the adjustment of said relief valves.

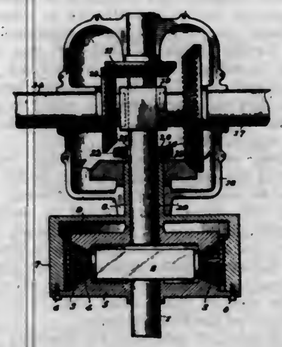
2. In a recoil neutralizer, the combination with a cylinder connected with one member, a piston therein, a piston rod connected with the piston and extending through the cylinder head and connected with another member, and a spring connecting said members and whose recoil is to be neutralized; of an inlet valve opening inwardly into the cylinder at one side of the piston, an outlet valve opening outwardly from the cylinder at the other side of the piston, a spring holding the inlet valve normally closed, a relief valve near the inlet valve opening outward from the cylinder, and a relief valve near the outlet valve opening inward toward the same, springs holding said relief valves normally closed, and screws for independently adjusting the tension of said springs.

3. In a recoil neutralizer, the combination with a cylinder connected with one member, a piston therein, a piston rod connected with the piston and extending through the cylinder head and connected with another member, and a spring connecting said members and whose recoil is to be neutralized; of an inlet valve opening inwardly into the cylinder at one side of the piston, an outlet valve opening outwardly from the cylinder at the other side of the piston, relief valves of smaller capacity than said inlet and outlet valves and located respectively adjacent thereto, that near the inlet valve opening outward from the cylinder and that near the outlet valve opening inward toward the same, springs holding said relief valves normally closed, and screws for independently adjusting the tension of said springs.

4. In a recoil neutralizer, the combination with a cylinder connected with one member, a piston therein, a piston rod connected with the piston and extending through the cylinder head and connected with another member, and a spring connecting said members and whose recoil is to be neutralized; of an inlet valve opening inwardly into the cylinder at one side of the piston, an outlet valve opening outwardly from the cylinder at the other side of the piston, a spring holding the outlet valve normally closed, a relief valve of smaller capacity than the outlet valve and located adjacent thereto and opening inwardly into the cylinder, a spring therefor of less power than that controlling the outlet valve, a tension plate for controlling the tension of this spring, and a screw for permitting the manual adjustment of said plate.

5. In a recoil neutralizer, the combination with a cylinder connected with one member, a piston therein, a piston rod connected with the piston and extending through the cylinder head and connected with another member, and a spring connecting said members and whose recoil is to be neutralized; of an inlet valve opening inwardly into the cylinder at one side of the piston, a spring holding the inlet valve normally closed, an outlet valve opening outwardly from the cylinder at the other side of the piston, a relief valve adjacent the inlet valve and opening outward from the cylinder, its capacity being less than that of said inlet valve, a relatively weak spring holding this valve normally closed, and manually operable means for adjusting the tension of said spring.

1,017,954. TRANSMISSION-GEARING. HORACE M. CAKE, Washington, D. C. Filed Oct. 12, 1909. Serial No. 522,248. (Cl. 74—34.)



1. In a transmission gearing in combination, a driving shaft, a transmission head carried on said driving shaft, compensating gears on said transmission head, a face plate carrying a beveled gear thereon, a tubular shaft, a casing integral with said tubular shaft, a cylindrical shaft, a beveled gear carried upon said cylindrical shaft, transmission shafts, gear means for connecting said cylindrical shaft with one of the transmission shafts and gear means for connecting said tubular shaft with the other transmission shaft.

2. In a transmission gearing in combination, a driving shaft, a transmission head carried on said driving shaft, compensating gears upon said transmission head, a face plate carrying a beveled gear thereon, a tubular shaft, a casing attached to said tubular shaft, a cylindrical shaft and a beveled gear; the driving shaft, the tubular shaft and the cylindrical shaft all being in axial alinement.

3. A transmission gearing including a driving shaft, a transmission head, compensating gears carried by said transmission head, a driven shaft, a tubular shaft, said tubular shaft and said driven shaft both being on one side of said transmission head, a beveled gear operatively connected to said driven shaft, said beveled gear being on the same side of the transmission head as are the driven shaft and the tubular shaft, a second beveled gear on the opposite side of said transmission head and operatively connected with said tubular shaft.

4. In a transmission gearing in combination, a driving shaft, a cylindrical driven shaft, a tubular member surrounding said cylindrical driven shaft, compensating means operatively connecting said driving shaft with both the cylindrical shaft and the tubular shaft and clutch means between the cylindrical shaft and the tubular shaft.

5. In transmission gearing in combination, a driving shaft, a transmission head, compensating gears carried by said transmission head, a cylindrical driven shaft, a tubular driven shaft, operative means connecting said tubular shaft with said compensating gears, operative means connecting said cylindrical shaft with said compensating gears and a clutch mechanism between said cylindrical shaft and said tubular shaft.

[Claim 6 not printed in the Gazette.]

1,017,955. HANDCUFF. GEORGE A. CARNEY, Boston, Mass., assignor of one-half to George H. Littlefield, Boston, Mass. Filed Oct. 4, 1911. Serial No. 652,881. (Cl. 70—24.)

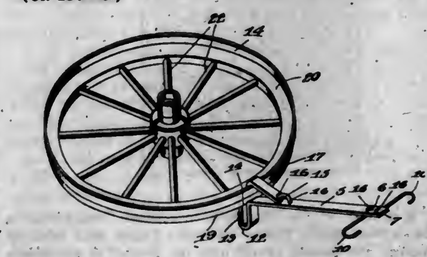
1. In a handcuff the combination of a fixed part, a locking means in said fixed part and a locking arm pivotally mounted on said fixed part in a manner whereby it may be revolved so as to be brought into or out of operative relation with said locking means by a continuous motion.

2. In a handcuff the combination of a fixed part, a locking arm pivotally mounted on said fixed part in a manner whereby it may be revolved and a locking means normally operating to check the revolution of said locking arm in one direction while allowing it to move freely in another direction.

3. In a handcuff the combination of a casing, an upwardly extending arm on said casing, a locking arm, means for pivotally mounting said locking arm on said upwardly extending arm on said casing in a manner whereby said locking arm may be revolved and means in said casing for locking said locking arm.

4. In a handcuff a locking arm provided with a serrated edge, means for pivotally mounting said locking arm in a manner whereby it may be revolved, a pawl adapted to engage the serrated edge of said locking arm and intermesh therewith, a stop to limit the movement of said pawl in one direction, thereby preventing its movement out of mesh with said serrated edge of said locking arm and a spring adapted to actuate said pawl into operative relation with said member provided with a serrated edge.

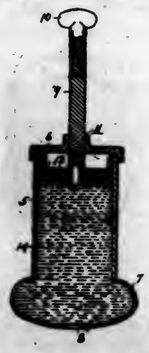
1,017,956. TIRE-SETTING TOOL. JAMES F. CARTER, Wadley, Ala. Filed July 6, 1911. Serial No. 637,179. (Cl. 157—5.)



A tool of the class described consisting of a body portion formed of metal constituting a handle, one end of the body portion being bent at right angles and thence forwardly and thence inwardly to form an offset hook, a

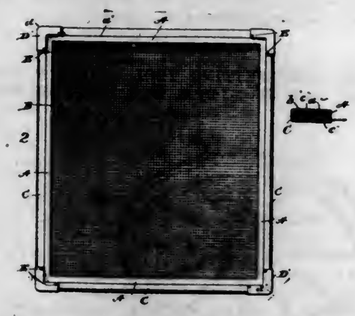
staple secured to the body portion adjacent the hook and projecting from the body portion in a direction opposite the hook, and a hook movably connected at one end with said staple.

1,017,957. IMPLEMENT FOR HOLDING AND SPREADING VISCOUS MATERIAL. LE VERT CLARK, Detroit, Mich. Filed June 22, 1908. Serial No. 439,765. (Cl. 91—675.)



An implement for holding and spreading paste and similar viscous material comprising a hollow body portion having an opening at one end for filling, the opposite end being convex and of not less than the diameter of the body portion and provided with a discharge orifice, and means for forcing the material out of said orifice, the location of said discharge orifice with respect to said convex end permitting the discharge material to be acted upon and spread by any portion of the convex end to the full extent of the diameter of the body portion, the convex surface being capable of a rocking movement across the orifice and a rotary movement around the orifice at various distances from the orifice to any extent equal to and greater than the diameter of the body portion, whereby the viscous material may be spread over a relatively large area in all directions.

1,017,958. METAL FLY-SCREEN. WARREN W. COLE, Portland, Me., assignor to The E. T. Burrowes Company, Portland, Me., a Corporation of Maine. Filed Jan. 10, 1910. Serial No. 537,355. (Cl. 156—14.)



1. A screen of the character described, comprising a frame, screen fabric folded over said frame, and molding embracing the screen fabric and the frame to constitute flat opposite faces, the frame having a rabbeted edge in which the margin of the screen is seated and the molding having an outer flange fitting said rabbet over said margin and an opposite wide flange substantially coextensive with the width of the frame.

2. A screen of the character described, comprising a frame, screen fabric folded over said frame, and molding embracing the screen fabric and the frame to constitute flat opposite faces, the frame having a rabbeted edge in which the margin of the screen is seated, the molding having a narrow outer flange fitting said rabbet over the margin and an opposite wide flange substantially coextensive with the width of the frame, and the molding being formed of spring metal bent upon itself with its oppisite flanges converging to constitute a spring clamp to bind the wire fabric to the frame.

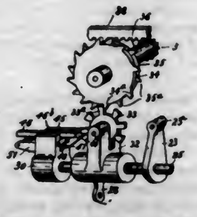
3. A screen of the character described comprising a frame having flat side members, screen fabric folded over said flat side members, a molding of metal bent upon itself to provide flat flanges adapted to engage the side members with the screen fabric therebetween, one surface of the side members being rabbeted to accommodate the margin of the screen fabric and one of the flanges of the molding being correspondingly narrow to fit said rabbeted portion.

4. A screen of the character described comprising a frame having flat side members, screen fabric folded over said flat side members, and a molding of metal bent upon itself to provide flat flanges adapted to engage the side members with the screen fabric therebetween, the molding being formed of spring metal with the flanges converging to constitute a spring clamp for the screen fabric, one surface of the side members being rabbeted to accommodate the margin of the screen fabric and one of the flanges of the molding being correspondingly narrow to fit said rabbeted portion.

5. A screen of the character described comprising a frame having flat side members, screen fabric folded over said flat side members, a molding of metal bent upon itself to provide flat flanges adapted to engage the side members with the screen fabric therebetween, one surface of the side members being rabbeted to accommodate the margin of the screen fabric and one of the flanges of the molding being correspondingly narrow to fit said rabbeted portion, the opposite flange being wide to be coextensive with the width of the side members.

[Claims 6 to 11 not printed in the Gazette.]

1,017,959. TYPE-WRITING MACHINE. EDWARD M. CRAWFORD, Corozal, Canal Zone. Filed May 3, 1911. Serial No. 624,835. (Cl. 197—84.)



1. In a type-writing machine, carriage feed and escapement mechanism including an escapement wheel having two rows of alternately arranged ratchet teeth, and a rocker carrying a dog wheel in coöperative relation to said ratchet teeth, and space control and regulating mechanism operatively connected therewith.

2. In a type-writing machine, the combination with the carriage feed and escapement mechanism thereof including an escapement wheel, and a rocker carrying a dog wheel in coöperative relation to said escapement wheel; of a space control and regulating mechanism operatively connected with said escapement mechanism.

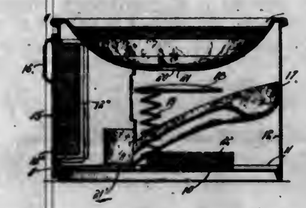
3. In a type-writing machine, carriage feed and escapement mechanism, including an escapement wheel having two rows of alternately arranged ratchet teeth, and a rocker carrying a dog wheel in coöperative relation to said ratchet teeth, space control mechanism connected therewith, and means for regulating and operating said space control mechanism.

4. In a type-writing machine, the combination with carriage feed and escapement mechanism including an escapement wheel having two rows of alternately arranged ratchet teeth and a rocker carrying a dog wheel in coöperative relation to said ratchet teeth, and key and space bars operatively connected with said carriage feed and escapement mechanism; of means for causing said mechanism to double space when said space bar and one of said key bars are simultaneously operated.

5. In a type-writing machine, the combination with a carriage feed and escapement mechanism including an escapement wheel having two rows of alternately arranged ratchet teeth and a rocker carrying a dog wheel in coöperative relation to said ratchet teeth, and a type-bar actuated universal bar and a space-bar operatively connected to said mechanism; of means for causing said mechanism to double space when said space-bar is actuated.

[Claims 6 to 12 not printed in the Gazette.]

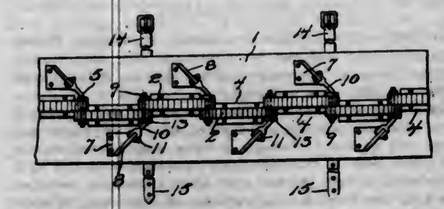
1,017,960. NEST. ANNA M. FISCHER, Onaga, Kans. Filed Apr. 3, 1911. Serial No. 618,584. (Cl. 119—48.)



1. A hen's nest consisting of a metallic base plate, a cylindrical metallic casing, the base portion of which embraces a flange carried by said base plate, said cylindrical casing being provided with an opening, guides carried by said casing adjacent said opening, a door slidably arranged between said guides, a curved track arranged within said casing and supported by the same, said track being concaved, its concaved face being provided with a suitable padding, a coiled spring supported by said base member, a concaved plate arranged on said coiled spring and a concaved supporting member, said member being provided with a depending flange adapted to embrace the upper edge of said cylindrical member.

2. A hen's nest consisting of a metallic casing, a base plate, said base plate being provided with a flange around which the lower edge of said casing extends, a removable concaved supporting member, said member being provided with a flange adapted to extend around the upper edge of said casing, a spirally arranged track secured to the inner wall of said casing, a plate and a coiled spring resiliently supporting said plate adjacent one edge thereof at a point above said track, said plate being adapted to discharge an egg onto the track under its weight.

1,017,961. ANTISKIDDING DEVICE. HORACE ARTHUR FISK, Clinton, Mich.; Jefferson C. Fisk administrator of said Horace Arthur Fisk, deceased. Filed Oct. 27, 1910. Serial No. 589,346. (Cl. 152—16.)

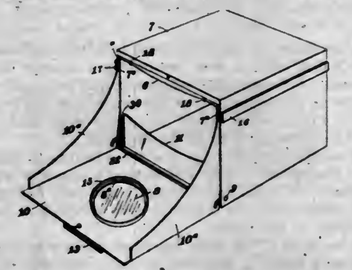


1. In an anti-skidding device comprising a continuous band, a plurality of links arranged substantially in the center of the band and having their bottom portions curved, bolt openings formed near the ends of each link, said links being provided with central flanges having serrations formed in their top edges, plates secured to the band and arranged at the side of each link in oblique relation thereto, said plates having upwardly extending flanges formed integral therewith, bolts having forked ends pivotally connected to the upwardly extending flanges, the remaining portion of said bolts passing through the registered openings in the ends of the links.

2. In an anti-skidding device comprising a continuous band, overlapping links having attaching flanges, and centrally arranged serrated flanges, bolt openings formed therein, plates arranged in staggered relation and secured to the band, said plates being provided with upwardly extending flanges, bolts having forked ends pivoted near the ends of the upwardly extending flanges, an enlargement formed on the bolt, said bolts being threaded for a certain distance of their length and adapted to pass through the registered openings at the overlapping points of the links, and nuts mounted upon the threaded portion of the bolt.

3. In an anti-skidding device, comprising a band of flexible material, links suitably secured thereto and having bolt openings formed therein, and plates suitably secured to the band, upstanding flanges integral with the plates, bolts pivotally connected to the upstanding flanges, a portion of said bolts adapted to pass through the openings formed in the links to pivotally connect the same.

1,017,962. BOX. BENJAMIN F. FLIEDNER, ALBERT O. FLIEDNER, and LOUIS FLIEDNER, Cleveland, Ohio. Filed Dec. 10, 1910. Serial No. 596,717. (Cl. 220—9.)



1. A box provided at one end with a lid hinged thereto and having wings adapted to swing into the box, and guide pieces pivotally connected at their lower ends to the sides of the box on the inside thereof and having a sliding connection to the rear edges of the wings, and adapted to swing into the box with the wings.

2. A box provided at one end with a lid hinged thereto and having wings adapted to swing into the box, and guide pieces pivotally connected at their lower ends to the sides of the box on the inside thereof and having pin and slot connections to the rear ends of the wings and adapted to swing therewith into and out of the box.

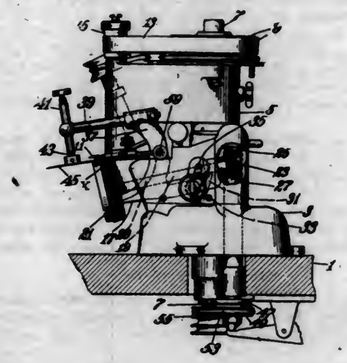
3. A box provided with opposite double side walls, and a lid hinged to one of the other side walls and having wings which swing into the spaces between said side walls when the lid is closed, and catches on the side walls of the box arranged to engage the wings when the lid is partly opened and hold the same in such position.

4. A box provided with opposite double side walls, and a lid hinged to one of the other side walls and having wings which swing into the spaces between said side walls when the lid is closed and catches arranged to hold the lid partly opened, said catches comprising projections on the inner side walls of the box, normally located in position to engage and stop said wings when swung outwardly, and means to withdraw said projections from such position.

5. A box provided with opposite side walls, and a lid hinged to one of the other side walls and having wings

which swing into the spaces between said side walls when the lid is closed and catches arranged to hold the lid partly opened, said catches comprising projections on the inner side walls of the box, normally located in position to engage and stop said wings when swung outwardly, and means to withdraw said projections from such position, consisting of a wire connected to the said inner side walls and adapted to spring the same inwardly for the stated purpose.

1,017,963. SKIVING-MACHINE. LOUIS W. G. FLYNT, Rochester, N. Y., assignor to Quentin W. Booth, Rochester, N. Y. Filed July 8, 1909. Serial No. 506,525. (Cl. 69—16.)



1. A machine of the class described, having in combination, a disk knife, a feed roll having a concave working face, means for actuating said knife and roll and means for pressing all points in that portion of the moving work which is about to be fed to the knife with equal force against the working face of the feed roll.

2. A machine of the class described, having in combination, a disk knife, a feed roll having a concave working face, means for actuating said knife and roll, and an arc-shaped presser foot the operative edge of which is parallel to the edge of the knife.

3. A machine of the class described, having in combination, a disk knife, a feed roll having a concave working face the curvature of which is determined by the curvature of the knife, means for actuating said knife and roll, and a presser foot having all points in its operative edge equidistant from the adjacent surface of the roll.

4. A machine of the class described, having in combination, a disk knife, a feed roll the diameter of which increases from one end to the other, the increase being dependent upon the diameter of the knife, means for actuating said knife and roll, and a presser foot having an outline corresponding to that of the knife.

5. A machine of the class described, having in combination, a knife, a concave feed roll, means for angularly adjusting said roll about a point which coincides approximately with the uppermost point on the inner edge of said roll, a segmental presser foot also angularly adjustable about the same point, and means for actuating said knife and roll.

[Claims 6 to 15 not printed in the Gazette.]

1,017,964. BASE-BALL GLOVE OR MITT. WILLIAM H. FOX, Minneapolis, Minn. Filed July 26, 1911. Serial No. 640,637. (Cl. 2—195.)

1. A base ball glove or mitt having a permanent pad therein and provided with a pocket over its padded palm portion only, in combination with a removable padding shaped to fit and fill said pocket.

2. A base ball glove or mitt provided with a permanent padding and provided with a pocket over its palm portion only, said pocket having a mouth at its rear end and detachable fastening means for closing said mouth, in combination with a removable padding shaped to fit and fill said pocket.

1,017,965. METALLIC RAILROAD-TIE. EDWARD H. FRANK, Centralia, Ill., assignor of one-half to Louis C. Koelling, Centralia, Ill., and George Kunz, Clinton, Ill. Filed Feb. 25, 1911. Serial No. 610,684. (Cl. 238—5.)

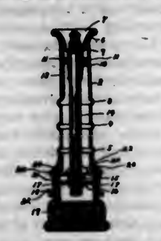
1. A metallic railroad tie formed of a single piece of metal having outwardly convex sides and ends and a concave bottom with an opening extending longitudinally through the tie, the face of said tie having oppositely extending clamping members, and a key adapted to engage with the clamping members and the flanges of the rail to lock the rail to the tie, substantially as described.

2. A metallic railroad tie formed of a single piece of metal having outwardly convex sides and ends and a concave bottom and a longitudinal opening extending through the tie, the face of said tie being provided with dovetailed recesses therein, and an oppositely facing clamp upon either side of said recess, a key provided with a tongue upon one side thereof and a groove upon the other, said key and the aforesaid clamps engaging the base of the rail to lock it in position, substantially as described.

3. A metallic railroad tie formed of a single piece of material with a longitudinal opening therethrough and having dovetailed recesses extending transversely of the face of the tie, each of said recesses being narrower at one edge of the tie than at the other, oppositely facing clamping members formed integrally with the tie, one of said clamping members engaging one side of the base of each rail, two keys each having a groove to engage the opposite side of each rail base, said keys being locked to the tie in the above mentioned dovetailed recesses and extending under one half the rail base, and means for locking the keys against displacement, substantially as described.

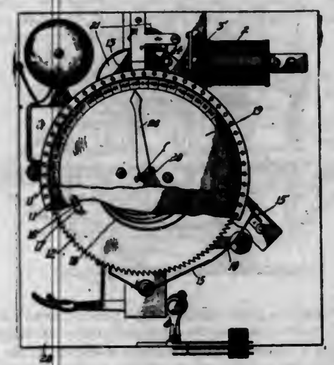
1,017,966. HOSE-NOZZLE. HENRY F. GOETZ, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed May 31, 1911. Serial No. 630,543. (Cl. 137—82.)

In a hose nozzle, the combination with a coupling-head, of a rotatable tubular sheet-metal shell provided at its outer end with a valve-seat, a valve plug located within the outer end of the shell and co-acting with the said valve-seat, a stem for the said plug, connection between the plug and shell for the rotation of the plug and stem with the shell, a tapering sheet-metal coupling sleeve interposed between the said shell and the coupling-head and having its upper end reduced to fit the said shell and its lower end adapted to take a bearing upon said coupling-head, packing washers located within the said



sleeve and applied over the inner end of the shell which is flared for the retention of the washers in place, and a washer interposed between the said packing washers.

1,017,967. TELEPHONE SELECTING DEVICE. FRANK E. GRANGER, Aberdeen, S. D. Filed Sept. 29, 1909. Serial No. 520,067. (Cl. 179—85.)



1. In a telephone selecting device, a rotatable shaft; means for changing the moving position of the axis of the said shaft; means for causing the rotation of said shaft in any one of a plurality of the possible positions of its axis; a fixed electrical contact member; and an electrical contact member carried by said shaft, said two members comprising an electric switch and adapted to engage each other in electrical contact during a portion of the movement of said shaft when its axis is in one of its possible positions.

2. In a telephone selecting device, a conducting brush; a rotatable shaft upon which said brush is mounted; movable journals upon which said shaft is mounted; and a fixed contact member which said electrical brush may engage when rotated with its shaft and journals in one of the possible positions of said journals.

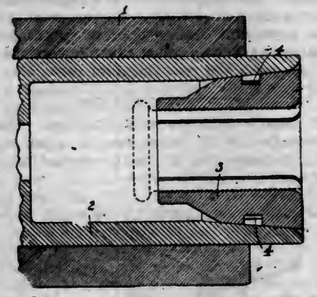
3. In a telephone selecting device, an electric switch; a rotatable shaft adapted to close said switch; movable journals for said shaft; a stepping mechanism to move said journals; means for causing the beginning of rotation of said switch controlling shaft at a predetermined point in the movement of said journals and retarding mechanism for said shaft and operative when the shaft is rotating to close the switch whereby the closing of said switch is delayed until said stepping mechanism may step the journals of the shaft beyond the switch closing position of the shaft when so desired.

4. In a telephone selecting device, a main movable member; stepping means for moving said member and adapted to step said main movable member at a predetermined speed; a sub-member movable upon said main member; means for causing said sub-member to move in a predetermined direction when said main member rotates to a predetermined position and for a short period of time subsequent thereto; an electric switch operable by said sub-member in the latter part of its possible predetermined movement when said main member is in its predetermined position, the interval between the instant of reaching the critical position and the instant of leaving the critical position being less than the interval between the beginning of movement of said sub-member and the closing of said switch by said sub-member.

5. In a telephone selecting instrument, a ratchet wheel impelled by a magnet controlled by a succession of electrical impulses and provided with means for limiting its movement to one step at each electrical impulse and having mounted upon its surface, in an eccentric position, a small gear wheel with a coil spring attached thereto, in combination with a partially toothed gear segment mounted in a fixed position concentric with said ratchet wheel, with the teeth of which segment the teeth of the small gear wheel will engage as it is being carried around upon the ratchet wheel, said partially toothed gear wheel having a sufficient number of teeth to wind up the coil spring sufficiently to furnish the power to do the work required, and an idler train having its low speed pinion adjacent to the end of the series of teeth upon said fixed segment and with which said small gear wheel meshes after leaving said segment and whereby the speed of said small gear wheel in unwinding said coil spring is retarded.

[Claims 6 to 29 not printed in the Gazette.]

1,017,968. CENTERING-CHUCK. GEORGE EDWARD GREENLEAF, Plainfield, N. J., and DANIEL HENRY TEAS, New Haven, Conn., assignors to Niles-Bement-Pond Company, Jersey City, N. J. Filed Aug. 14, 1911. Serial No. 643,861. (Cl. 82—8.)



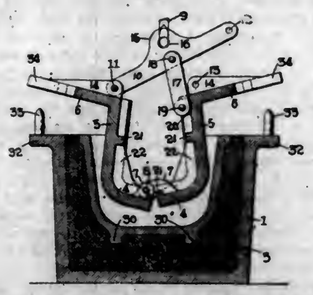
A centering chuck comprising a hollow spindle having in the end of its bore a tapering flare belled at its outer end, a circular series of segmental jaws having a bore adapted to fit an axle journal and having a tapered end adapted to fit said tapering flare and provided with a peripheral groove, said series of jaws being of reduced diameter at its inner end and gradually enlarging in diameter from such reduction to the tapered portion engaging the spindle, and a spring ring seated in a peripheral groove in said series of jaws, combined substantially as set forth.

1,017,969. METHOD OF CASTING METAL. REESE T. HARRIS, Buffalo, N. Y. Filed Jan. 11, 1010. Serial No. 537,522. (Cl. 22—200.)

1. A method of casting metals which consists in pouring the molten metal in a mold composed in part of non-friable metal and in part of friable material and then when the metal of the casting solidifies collapsing the non-friable metal part of the mold and breaking up the friable part.

2. The hereinbefore described method of casting metals consisting in first preparing a mold including a metal element and separate sand elements, heating the metal

element to prevent sudden chilling of the molten metal, pouring the molten metal in the mold, and then quickly removing the metal element of the mold, and simultaneously breaking up some of the sand elements to completely expose the interior of the hot casting to the atmosphere.

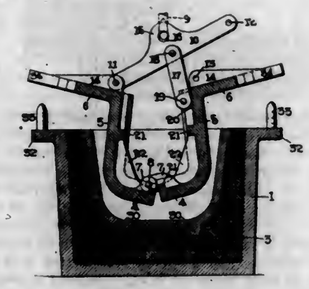


3. A method of casting metals which consists in pouring the molten metal in a mold composed in part of non-friable metal and in part of friable material and then when the metal of the casting solidifies simultaneously collapsing the non-friable part of the mold and breaking up the friable part.

4. A method of casting metals which consists in pouring the molten metal in a mold composed in part of non-friable metal and in part of friable material and then when the metal of the casting solidifies collapsing the non-friable part of the mold and by said collapsing crushing and breaking up the friable part.

5. A method of casting metals which consists in pouring the molten metal in a mold having a composite collapsible core of non-friable metal and friable material so constructed that the collapsing of the core portion of non-friable metal will crush and break up the portion of friable material and then when the metal of the casting solidifies collapsing and removing said core.

1,017,970. MOLD FOR CASTING METAL. REESE T. HARRIS, Buffalo, N. Y. Filed Jan. 11, 1910, Serial No. 537,521. Renewed Oct. 11, 1911. Serial No. 654,162. (Cl. 22—170.)



1. In a mold for casting charging boxes, a drag having a flask and a sand mold portion and a collapsible combined core and cope on the flask over the sand mold portion, said combined core and cope consisting of two opposed metal sides movably connected to each other at their lower edges, and sand end pieces fitted between the ends of the sides.

2. In a mold for casting metal, a drag having a flask and a sand mold portion and a collapsible element on the flask over the sand mold portion which constitutes both a core and a cope, said collapsible element consisting of two side members of angular form in cross-section hinged to each other on the bottom and two sand end pieces which are fitted between the ends of the members and are adapted to be crushed by the movement of said side members toward each other when the element is collapsed.

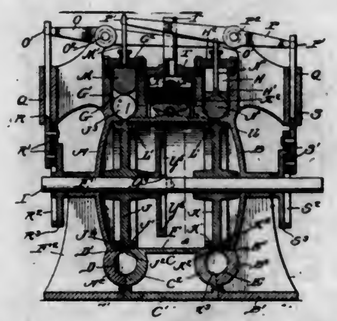
3. In a mold for casting metal, a drag having a flask and a sand mold portion and a collapsible element on the flask over the sand mold portion composed of two side members, a hinge for connecting said side members together at their lower edges, said hinge being located within the collapsible element, and end pieces of friable material fitted between the ends of said members.

4. In a mold for casting metal, an outer mold portion of sand, and an inner core composed of metal sides hinged to each other, and end pieces fitted between the metal sides, said end pieces being formed of friable material and being adapted to be crushed by the collapsing of the sides.

5. In a mold for casting metal, an outer mold portion of sand, and an inner core composed of two angular hinged together metal side members and sand end pieces fitted between the ends of the sides.

[Claims 6 to 23 not printed in the Gazette.]

1,017,971. ROTARY ENGINE. EDWARDT HELDT, Merrill, Wis. Filed Oct. 29, 1909. Serial No. 525,406. (Cl. 121—69.)



1. A rotary engine comprising spaced annular blade chambers, and a central cylindrical piston chamber communicating therewith, wheel pistons mounted in the piston chamber provided with annular ribs working in the slots communicating said chambers, circular blades carried by said pistons working in the blade chamber, a steam chest having ports communicating with the blade chamber, a slide valve for opening and closing said ports, and auxiliary valves for closing said ports.

2. A rotary engine comprising a sectional casting formed with a central piston chamber having spaced annular blade chambers communicating therewith, pistons working in the piston chamber carrying blades working in the blade chambers, housings formed on the top of said blade chambers, gate valves working in said housings operated by said pistons, a steam chest arranged between said housings, ports communicating said steam chest with the blade chambers, a slide valve for alternately opening and closing said ports leading to the respective chambers, and valves for closing said ports.

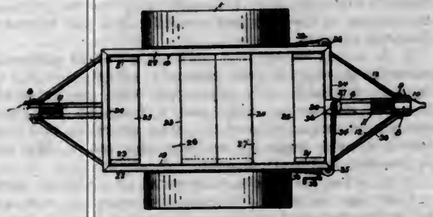
3. A rotary engine comprising a central piston chamber having spaced blade chambers communicating therewith, a shaft extending through said piston chambers. blade housings formed on the top of said blade chambers, gate valves working in said housings, pistons mounted on said shaft in said piston chamber, blades carried by said pistons working in said blade chambers, a steam chest arranged between said housings, having spaced ports communicating with the respective blade chambers, rotary valves for closing said ports, passages communicating with said ports, a slide valve for controlling the flow of fluid through said passages, and means operated by said shaft for operating said gate valve and slide valve.

4. In a rotary engine, the combination with spaced blade chambers communicating with a central piston chamber, of pistons mounted in said piston chamber carrying blades working in the blade chambers, gate valves for closing said piston chambers, a steam chest provided with side passages and end passages, ports communicating with said passages with the respective blade chambers, rotary valves for closing or communicating the end of side passages with said ports, exhaust pipes communicating with the end passages, central passages spaced apart and communicating with the respective side passages and a valve for alternately opening and closing said central passages.

5. A rotary engine comprising a sectional casting having a central cylindrical piston chamber and spaced annular blade chambers communicating therewith, a shaft extending longitudinally through said piston chamber, pistons mounted on said shaft carrying circular blades working in the blade chambers, housings formed on said blade chambers, gate valves working in said housings, a steam chest arranged between said housings, ports communicating said blade chambers with said steam chest, a valve slidably mounted in said steam chest, and cam wheels mounted on said shaft in connection with operating rods for operating the pivoted levers connected respectively to said gate-valves and slide-valve.

[Claims 6 to 10 not printed in the Gazette.]

1,017,972. TWO-WHEELED DUMP-WAGON. PLINY E. HOLT, Stockton, Cal. Filed July 1, 1909. Serial No. 505,385. (Cl. 21—93.)



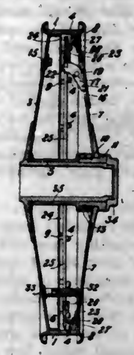
1. The combination with a wagon body, of a draw head comprising two parallel bars secured at one end to the wagon body, a block rigidly secured between the outer ends of said bars, a spring and a link surrounding said block and spring and having its side arms slidably mounted between said block and bars, said link having its forward end extending beyond said block to form a coupling loop.

2. The combination with a wagon body, of a draw head comprising two bars secured at one end to the wagon body, a block rigidly secured between the outer ends of said bars and having grooves formed in its sides, a spring abutting the inner end of said block, and a link surrounding said block and spring and having its side arms disposed to slide in said grooves, said link having its outer end extending beyond said block to form a coupling loop.

3. The combination with a wagon body, of a draw head comprising two bars secured at one end to the wagon body, a block rigidly secured between the outer ends of said bars and having grooves formed in its sides, a spring abutting the inner end of said block, and a link surrounding said block and spring and having its side arms disposed to slide in said grooves and its outer end extending beyond said block to form a coupling loop, and side stays extending from said block to the corners of the wagon frame.

4. The combination with a wagon body, of a draw head comprising two bars secured at one end to the wagon body, a block rigidly secured between the outer ends of said bars and having grooves formed in its sides, a spring abutting the inner end of said block, a link surrounding said block and spring and having its side arms disposed to slide in said grooves and its outer end extending beyond said block to form a coupling loop, side stays extending from said block to the corners of the wagon frame, and a top stay extending from said block to the wagon body.

1,017,973. WHEEL FOR ROAD-VEHICLES. EDGAR CHARLES HORNER, Clapham Park, London, England. Filed Oct. 27, 1911. Serial No. 657,131. (Cl. 21—69.)



1. In a wheel for road vehicles; the combination with a hub, an inner tire-retaining flange fixed to said hub, a flat outer ring extending inwardly of said inner tire-retaining flange, a plurality of radially projecting pins fixed to the inner periphery of said outer ring; of a removable outer tire-retaining flange, an inner flat ring extending inwardly from said outer tire-retaining flange and having a plurality of slots extending for a distance from the inner edge of said inner ring only in a direction parallel with the axis of the wheel, said slots being so arranged as to be engaged by said inwardly projecting pins on said outer ring when the inner ring is moved in an axial direction within the outer ring, means for insuring the correct position of the said pins and slots when placing said inner ring within said outer ring, and means for locking said pins in said slots to secure said inner ring to said outer ring.

2. In a wheel for road vehicles; the combination with a hub, an inner tire-retaining flange fixed to said hub, a flat outer ring extending inwardly of said inner tire-retaining flange, a plurality of radially projecting pins fixed to the inner periphery of said outer ring; of a removable outer tire-retaining flange, an inner flat ring extending inwardly from said outer tire-retaining flange, an inturned flange on the inner edge of said inner ring, through which inturned flange and said inner ring slots extend in a direction parallel with the axis of the wheel for a distance from the inner edge of said ring, said slots being so arranged as to be engaged by said radially projecting pins on said outer ring when said inner ring is slid into said outer ring in the direction of the axis of the wheel, an annular plate located and adapted to be turned in an angular direction within said inner ring, said plate having a plurality of outer peripheral notches adapted in a certain position of said plate to register with the slots in the said inner ring, means for retaining said annular plate against the inner face of said inturned flange, means for effecting the angular movement of said plate within said inner ring to close entrances to said slots in said inner ring to retain said radial pins in said slots when the inner ring has been placed within the outer ring to connect the said rings together, and means for insuring the correct relative position of the said radial pins and slots when connecting said inner and outer rings.

3. In a wheel for road vehicles; the combination with a hub, a disk fixed to the inner end of said hub, a flat outer ring connected to the outer edge of said disk and extending in an axial direction toward the outer end of said hub, an inner tire-retaining flange on the outer edge of said outer ring, a plurality of radially projecting pins fixed to the inner periphery of said outer ring; of a second disk adapted to be removably connected to the outer end of said hub, an inner flat ring connected to the inner

surface of said second disk at the outer edge thereof and extending inwardly therefrom, an inturned flange on the inner edge of said inner ring, through which inturned flange and said inner ring slots extend in a direction parallel with the axis of the wheel, said slots being so arranged as to be engaged by said radially projecting pins on said outer ring when said inner ring is slid in the direction of the axis of the wheel within said outer ring, an outer tire-retaining flange fixed to the outer edge of said second disk, means carried within said inner ring for locking said radial pins on the outer ring within the slots in the inner ring for connecting said inner and outer rings, and means for insuring the correct position of said pins and slots when placing said inner ring within said outer ring.

4. In a wheel for road vehicles; the combination with a hub, an inner tire-retaining flange fixed to said hub, a flat outer ring extending inwardly of said inner tire-retaining flange, a plurality of radially projecting pins fixed to the inner periphery of said outer ring; of a removable outer tire-retaining flange, an inner flat ring extending inwardly from said outer tire-retaining flange, an inturned flange on the inner edge of said inner ring, through which inturned flange and said inner ring slots extend in a direction parallel with the axis of the wheel for a distance from the inner edge of said ring, said slots being so arranged as to be engaged by said radially projecting pins on said outer ring when said inner ring is slid into said outer ring in the direction of the axis of the wheel, an annular plate located and adapted to be turned in an angular direction within said inner ring, said plate having a plurality of outer peripheral notches adapted in a certain position of said plate to register with the slots in the said inner ring, means for retaining said annular plate against the inner face of said inturned flange, means for effecting the angular movement of said plate within said inner ring to close entrances to said slots in said inner ring to retain said radial pins in said slots when the inner ring has been placed within the outer ring to connect the said rings together, means for preventing the angular movement of the annular plate when said plate has been moved to retain said radial pins in said slots, and means for insuring the correct relative position of the said radial pins and slots when connecting said inner and outer rings.

5. In a wheel for road vehicles; the combination with a hub, a disk fixed to the inner end of said hub, a flat outer ring connected to the outer edge of said disk and extending in an axial direction toward the outer end of said hub, an inner tire-retaining flange on the outer edge of said outer ring, a plurality of radially projecting pins fixed to the inner periphery of said outer ring; of a second disk adapted to be removably connected to the outer end of said hub, an inner flat ring connected to the inner surface of said second disk at the outer edge thereof and extending inwardly therefrom, an inturned flange on the inner edge of said inner ring, through which inturned flange and said inner ring slots extend in a direction parallel with the axis of the wheel, said slots being so arranged as to be engaged by said radially projecting pins on said outer ring when said inner ring is slid in the direction of the axis of the wheel within said outer ring, an outer tire-retaining flange fixed to the outer edge of said second disk, an annular plate located and adapted to be turned in an angular direction within said inner ring, said plate having a plurality of outer peripheral notches adapted in a certain position of said plate to register with the slots in said inner ring and having a notch in its inner periphery, means for retaining said annular plate against the inner face of said inturned flange, means for effecting the angular movement of said plate within said inner ring to close entrances to said slots in said inner ring to retain said radial pins in said slots when the inner ring has been placed within the outer ring to connect the said rings together, means for engaging said inner peripheral notch to prevent the angular movement of the annular plate when said plate has been moved to retain said radial pins in said slots, and means for insuring the correct relative position of said radial pins and slots when connecting the inner and outer rings.

[Claims 6 and 7 not printed in the Gazette.]

1,017,974. LATHE TOOL-HOLDER. JOHN W. HOUSEBERG, Pittsburgh, Pa. Filed Mar. 15, 1911. Serial No. 614,537. (Cl. 82—37.)

1. In a tool holder, the combination of an externally threaded member or body having a smooth bore, an internally threaded member coöperating with the externally threaded member or body, and a separable unthreaded tool-clamping member adapted to make direct contact with the tool, said separable member arranged in the bore of the body and projecting into the externally threaded member.

2. In a tool holder, the combination of an externally threaded member or body having a smooth bore, an internally threaded cap coöperating with the externally threaded member or body, and a separable loose tool-clamping member adapted to make direct contact with the tool, said separable member arranged in the bore of the body and projecting into the cap.

3. In a tool holder, the combination of a body or standard having an upper externally threaded portion and an unthreaded bore, an internally threaded cap coöperating with the threaded body or standard, and tool binding means comprising a separable plunger adapted to make direct contact with the tool, said plunger arranged in the bore of the body or standard and projecting into the cap.

4. In a lathe tool holder, the combination with a support, of an externally threaded member or body having a central unthreaded bore, an internally threaded cap coöperating with the externally threaded body, and a separable unthreaded tool-clamping member adapted to be moved into binding engagement with the tool by the movement of the cap on the body.

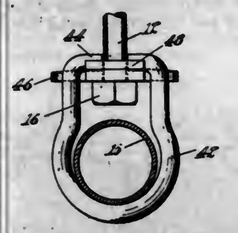
5. In a lathe tool holder, the combination with a support, of a body or standard having engaging means at its lower end, an upper externally threaded portion and a smooth bore, an internally threaded cap coöperating with the externally threaded portion of the body, and a separable tool-clamping plunger adapted to be brought into binding engagement with a tool by the movement of the cap on the body.

[Claim 6 not printed in the Gazette.]

1,017,975. PIPE-HANGER. PERCY N. KENWAY, Newton, Mass., assignor to Charles E. Riley, Newton, Mass. Filed Mar. 10, 1909, Serial No. 482,479. Renewed July 21, 1911. Serial No. 639,867. (Cl. 248—31.)

1. A hanger for use with a lag screw or the like, comprising a yoke constructed and arranged to be supported by a lag screw, said yoke having inclosing portions and a groove in its upper surface, together with a member for encircling a pipe, said member being constructed of a continuous integral piece of heavy wire and having oppositely disposed ends of the same cross section as the body portion thereof adapted to engage in said groove and being prevented from spreading by the inclosing portions of said yoke.

2. A hanger for use with a lag screw or the like, comprising a yoke constructed and arranged to be supported by the head of a lag screw and swivel about the shank thereof, together with a member for encircling a pipe, said member being constructed of a continuous integral piece of heavy wire and having unjoined ends of uniform cross section extending in alinement with each other and arranged to engage said yoke, above the head of the lag screw, said yoke being so shaped as to prevent spreading of the ends of said member.



3. A hanger for use with a lag screw or the like, comprising a yoke constructed and arranged to be supported by the head of a lag screw and swivel about the shank thereof and having angularly extending lips, together with a member for encircling a pipe, said member being constructed of a continuous integral piece of ductile material, the ends thereof being shaped to engage said yoke and prevented from spreading by said angularly extending lips.

4. A hanger for use with a lag screw or the like, comprising a yoke constructed and arranged to be supported by the head of a lag screw and swivel about the shank thereof and having lips extending outwardly and forwardly from each side thereof, together with a member for encircling a pipe, said member being constructed of a continuous piece of ductile material and having upwardly extending portions located within said lips and laterally extending ends for engaging said yoke

5. A hanger for use with a lag screw or the like, comprising a yoke constructed and arranged to be supported by the head of a lag screw and swivel about the shank thereof, together with a pipe encircling member constructed of ductile material of uniform cross section and having upwardly extending portions and horizontally extending ends, said yoke being provided with lips for preventing disengagement of said pipe encircling member by a movement toward the rear and a shoulder for preventing such disengagement by a forward movement of said member.

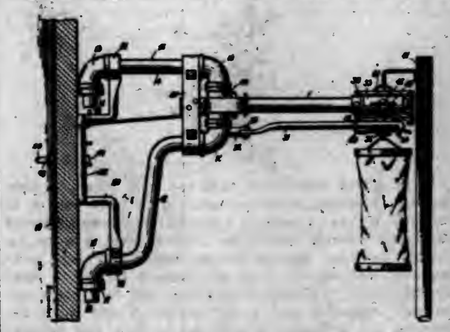
[Claims 6 and 7 not printed in the Gazette.]

1,017,976. AUTOMATIC MAIL-BAG CATCHER AND DELIVERER. RUDOLPH KOCH, Temple, Tex. Filed Aug. 25, 1911. Serial No. 645,897. (Cl. 105—231.)

1. A mail bag catcher including an arm, a hook projecting laterally from the arm, a spring controlled pin normally projecting across the open throat of said hook, and a spring controlled trigger slidingly fitted upon said hook and having a lip lockingly engageable with said pin for holding the pin in cocked position.

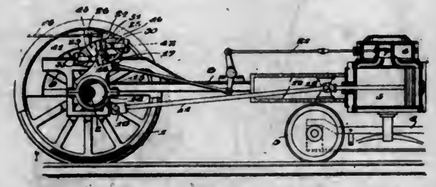
2. A mail bag catcher including an arm, a hook projecting laterally from said arm, a stop on said hook adapted for contact with the mail bag suspension means, said hook having an open throat disposed in advance of said stop, a spring controlled pin having a portion extending in advance of said stop and across the open throat of said hook, said pin being movable against the pressure of its spring to expose said open throat, and a trigger slidingly fitted on said hook and having a lip lockingly engaging and holding said pin in cocked position.

3. A mail bag catcher including an arm, a hook at the free end of said arm, and arranged at approximately a right angle thereto, said hook having an approximately U-shaped bight, a stop on the hook shank extending approximately parallel with said arm and disposed between said arm and the bight of said hook, a spring controlled trigger slidingly fitted in the bight of said hook, a spring



controlled pin carried by said hook shank and having a free end projecting transversely across the open throat of said hook and overlying said trigger, said trigger having a lid adapted to lockingly engage and hold said pin in cocked position.

1,017,977. VALVE-OPERATING MECHANISM. FERDINAND KRAMER, Green Timber, Idaho. Filed May 25, 1911. Serial No. 629,421. (Cl. 121—97.)



1. The combination with a rock shaft and an eccentric strap having an extended arm, of a reverse block for valves, comprising a body keyed upon said shaft and provided at each end with a split bearing, pins rotatably mounted in said bearings, crank arms carried by said pins, a link pivotably connecting the free ends of each of said crank arms, said link being provided with a centrally located bore adapted to engage with the arm of the eccentric strap.

2. The combination with a rock shaft and an eccentric strap having an extended arm provided with a pin, of a reverse block for valves, comprising a body keyed upon said shaft, a crank pin journaled in each end of said body, crank arms carried by said pin and provided at their free ends each with a second crank pin, a split bearing block each member of which is provided with a plurality of half bearings, means for adjustably securing said members together to form a plurality of bearings, one of said second mentioned crank pins being journaled in a bearing in one end of said block, the other of said crank pins being journaled in a bearing in the other end of said block, and the pin of said extended eccentric strap being journaled in a bearing centrally located in said block.

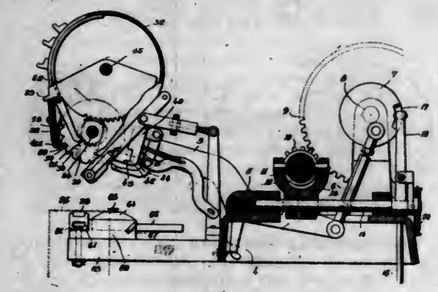
1,017,978. LOCK FOR SHOW-CASES. MORRIS KURTZON, Chicago, Ill. Filed Dec. 8, 1911. Serial No. 664,640. (Cl. 70—31.)

1. In a lock, supporting face and back plates, a locking arm pivotally mounted on said face plate, a worm rotatably mounted in said plates and engaged by the locking arm, a pawl pivotally mounted on said face plate and normally engaging said worm, means for limiting the

movement of said locking arm on said worm, and means on said worm adapted to engage said pawl to limit the rotating of said worm.

2. In a lock, supporting face and back plates, a locking arm pivotally mounted to move at right angles to said face plate and carrying a bolt adapted to be projected through a suitable opening in the face plate, a worm rotatably mounted in said plates, engaged by said locking arm, and having a key-way formed therein, a pawl pivotally and yieldingly mounted on said face plate and normally engaging said worm, means on said worm for limiting the movement of said locking arm, and interengaging means on said pawl and worm whereby the worm is locked against rotation.

1,017,979. PRINTING-MACHINE. GEORGE H. LANG, Boston, Mass. Filed Aug. 7, 1908. Serial No. 447,377. (Cl. 101—83.)



1. The combination with a printing head, of a platen support, an elongated platen sustained by said platen support and extending beyond the same at both sides thereof, said platen having a key slot extending longitudinally thereof in its under side and open at one end thereof, and a clamping bolt carried by the support and having its head occupying said slot whereby the platen can be adjusted longitudinally and clamped in any adjusted position.

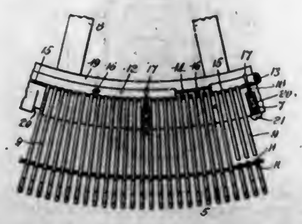
2. In a printing machine, the combination with a printing head, of a platen shaped to have a carton placed thereover with one end of the carton resting on the platen, means to move the printing head toward and from the platen, and a reversible gage for positioning the carton, said gage being adjustable toward and from the platen and the platen being adjustable in a direction at right angles to that in which the gage is adjustable.

3. In a printing machine, the combination with a printing head having a plurality of adjustable type-disks, of an auxiliary type-carrying member situated exterior to said printing head, said member being movable in a direction parallel to the axis of the type disks to bring it into and out of operative position for printing.

4. In a printing machine, the combination with a printing head having a plurality of adjustable type-disks having type thereon to print characters indicating the whole sizes of shoes and an auxiliary type-carrying member situated exterior to the printing head and having type thereon of a character to indicate the half sizes, and means for sustaining said auxiliary member for movement in a direction longitudinally of the head to bring it into and out of operative position.

5. In a printing machine, the combination with a printing head comprising a casing having type-disks therein, of a stud extending from said casing, an auxiliary type-carrying member mounted on said stud and movable longitudinally thereon into and out of operative position.

1,017,980. ELASTIC TIRE. JOSEPH LAZARUS, Boston, Mass. Filed Dec. 12, 1910. Serial No. 596,770. (Cl. 152—8.)



1. The combination with a wheel, of an elastic tire having two resilient sides connected to each other by chains forming an annular trough-like structure in which the periphery of said wheel is located.

2. The combination with a wheel, of an elastic tire having two resilient sides connected to each other by flexible non-elastic means forming an annular trough-like structure in which the periphery of said wheel is located.

3. The combination with a wheel, of an elastic tire comprising a series of transverse substantially U-shaped springs having outwardly-bowed arcuate sides, a pair of circumferential side members secured to opposite sides, respectively, of said springs, and flexible non-elastic means connecting said sides to each other and forming therewith an annular trough-like structure in which the periphery of said wheel is located.

4. The combination with a wheel, of an elastic tire comprising a series of transverse substantially U-shaped springs having outwardly bowed arcuate sides, means joining said springs to each other adjacent to the tread to prevent relative displacement of said springs in a circumferential direction, and flexible non-elastic means connecting the sides of said springs to each other and forming therewith a circumferential trough-like structure in which the periphery of said wheel is located.

5. The combination with a wheel, of an elastic tire comprising a series of transverse substantially U-shaped springs, a pair of circumferential side members provided respectively with circumferential grooves in which the ends of said springs terminate and are secured, and means connecting the sides of said springs to each other and forming therewith a circumferential trough-like structure in which the periphery of said wheel is located.

[Claims 6 and 7 not printed in the Gazette.]

1,017,981. ELECTROPLATING WITH ZINC. AUGUSTE ARSENE LEMÉTER, Paris, France. Original application filed May 29, 1911. Serial No. 630,158. Divided and this application filed Nov. 17, 1911. Serial No. 660,897. (Cl. 204—18.)

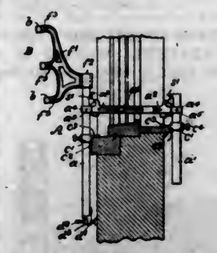
1. A process of electroplating with zinc which comprises preparing a bath comprising zinc sulfate, water, and materials capable of producing ammonium chlorid, sodium sulfate and sulfuric acid in the bath, and passing an elctric current through the said bath, containing an article to be electroplated, thus forming an adherent deposit of zinc upon such article.

2. A process of electroplating with zinc which comprises preparing a bath comprising zinc sulfate, water, and materials capable of producing ammonium chlorid, sodium sulfate and sulfuric acid in the bath, and passing an electric current through the said bath containing an article to be treated using a zinc plate as the anode, thus forming an adherent deposit of zinc upon such article.

3. A process of electroplating with zinc which comprises preparing a bath comprising zinc sulfate, water, and materials capable of producing ammonium chlorid, sodium sulfate and sulfuric acid in the bath, and passing an electric current through the said bath while in a cold state containing an article to be electroplated thus forming an adherent deposit of zinc upon such article.

4. An electroplating bath comprising zinc sulfate, water, and materials capable of yielding in the bath ammonium chlorid, sodium sulfate and sulfuric acid.

1,017,982. PROTECTOR FOR WINDOW-CLEANERS. LUDWIG LOHR, Philadelphia, Pa. Filed Nov. 1, 1911. Serial No. 657,927. (Cl. 20—87.)



1. A protector for window cleaners, comprising a back, two sides hinged thereto and composed of uprights connected by extension bars, adjustable stops on said uprights to suit the different levels of the inner and outer window sills, and an adjustable back stop at the lower end of the outer uprights substantially as and for the purposes set forth.

2. A protector for window cleaners comprising a back, two sides hinged thereto and composed of uprights and adjustable extension bars, the said bars pivoted to the said uprights, adjustable stops on said uprights to suit the levels of the inner and outer window sills, sliding stops on said uprights adapted to impinge on lugs formed on the extension bars, helical springs mounted in thimbles on the extension bars and normally keeping the sliding stops in contact with the said lugs, and adjustable back stops at the lower ends of the outer uprights, substantially as and for the purposes set forth.

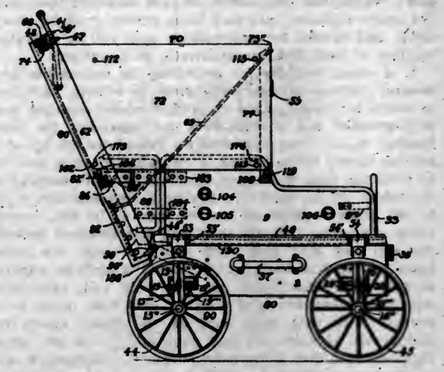
1,017,983. VEHICLE. ALBERT E. LONG, Brooklyn, N. Y. Filed July 26, 1911. Serial No. 641,122. (Cl. 21—83.)

1. In a vehicle, the combination of a body, a lid connected to the said body, a side member hinged to the said body, an extension connected to the said side member by means of hinges arranged one above the other, and a dash-board hinged to the forward portion of the said body.

2. In a vehicle, the combination of a body having side walls, a lid hinged to the said body, side members connected within the said body to side walls of the said body, extensions hinged to the said side members and adapted to swing about vertical axes when the said side members are open, and means for detachably connecting the said extensions with the said lid.

3. In a vehicle, the combination of a body, a lid hinged to the said body, side members hinged to the said body, extensions hinged to the said side members and adapted to swing about vertical axes when the said side members are open, a dash-board hinged to the said body, and running gear connected to the said body.

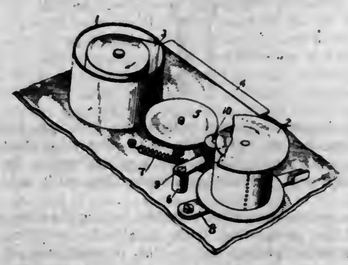
4. In a vehicle, the combination of a body, a lid hinged thereto, side members connected to the said body, extensions hinged to the said side members and adapted to swing about vertical axes when the said side members are open, and means for connecting the said extensions with the said lid.



5. In a vehicle, the combination of a body, a lid hinged to the said body, side members hinged to the said body, extensions hinged to the said side members and adapted to swing about vertical axes when the said side members are open, a dash-board hinged to the said body, and running gear hinged to the said body.

[Claims 6 to 11 not printed in the Gazette.]

1,017,984. TAPE-FEEDING MECHANISM FOR RECORDING INSTRUMENTS. AUBRY H. MARTIN, Short Hills, N. J., assignor to Recording Speedometer Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 24, 1911. Serial No. 622,853. (Cl. 234—29.)



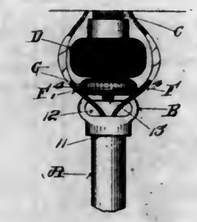
1. A speed recorder for recording the movements of a member driven automatically from a vehicle, including a device for feeding tape in predetermined amounts past said member and a clockwork for operating the tape-feeding device, said tape-feeding device consisting of a storage device for the tape, a roll adapted as it revolves to wind the tape thereon, a disk having a circumference equal to the predetermined amount of tape to be fed, and provided on its periphery with a surface adapted to grip the tape, said roll, disk and tape being arranged so that said disk is in contact with said tape only at the point where the peripheries of said roll and said disk are urged together, said disk being driven from the clockwork, and means for maintaining said roll in operative relation to said disk.

2. A speed recorder for recording the movements of a member driven automatically from a vehicle, including a device for feeding tape in predetermined amounts past said member, and a clock-work for operating the tape-feeding device, said tape-feeding device consisting of a storage device for the tape, a roll adapted as it revolves to wind the tape thereon, a disk substantially midway of the width of the tape and having a circumference equal

to the predetermined amount of tape to be fed, and provided on its periphery with a surface adapted to grip the tape, said roll, disk and tape, being arranged so that said disk is in contact with said tape only at the point where the peripheries of said roll and said disk are urged together, said disk being driven from the clock-work, and means for maintaining said roll in operative relation to said disk; substantially as described.

3. A speed recorder for recording the movements of a member driven automatically from a vehicle, including a device for feeding tape in predetermined amounts past said member and a clock-work for operating the tape-feeding device, said tape-feeding device consisting of a storage device for said tape, a roll adapted as it revolves to wind the tape thereon, a disk substantially midway of the width of the tape and having a circumference equal to the predetermined amount of tape to be fed, an idle roller of smaller diameter than said disk mounted between the roll and said disk, said disk and said idle roller being provided on their peripheries with surfaces adapted to grip each other, and the tape, said roll, idle roller and tape being arranged so that said idle roller is in contact with said tape only at the point where the peripheries of said roll and said idle roller are urged together, said disk being driven from the clock-work, and means for maintaining said disk, said roller and said idle roller in operative relation with each other; substantially as described.

1,017,985. HICKEY. WILLIAM R. MCLAIN, Philadelphia, Pa., assignor to The Macallen Company, Boston, Mass., a Corporation of Massachusetts. Filed June 6, 1908. Serial No. 437,107. (Cl. 240—85.)



1. The improved hickey comprising two end portions screw threaded for connection with proximate members, having a side opening therein and a slot extending through one of said end portions and connecting with said side opening.

2. The combination with a hickey having its ends screw threaded for connection with proximate members, and having a side opening and a slot through one of said threaded ends connecting with said side opening, of a strengthening ring about said slotted end.

3. In an electric light fixture, a tubular member split at one end for the passage of wires, and means engaging the split end of the member interiorly and exteriorly.

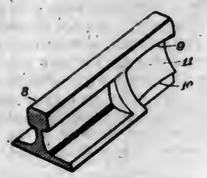
4. In an electric light fixture, a wire carrying tube, an insulating joint and a hickey interposed as a connection between said tube and joint and split throughout a portion of its length for the passage of wires.

5. In an electric light fixture, a tubular member split at one end for the passage of wires and a coöperating member encircling the split end of the first mentioned member.

[Claim 6 not printed in the Gazette.]

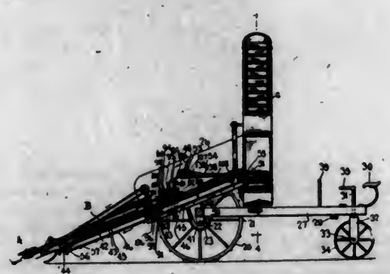
1,017,986. RAIL-JOINT. JOSEPH V. MORRES, Brookville, Pa. Filed Nov. 18, 1911. Serial No. 661,076. (Cl. 239—8.)

In an interlocking rail-joint, the combination of a rail-section terminated by two lateral lugs, the said lugs being provided with upwardly-curved interlocking surfaces and forming a groove increasing in width from top to bottom, the oppositely disposed faces of said groove being curved throughout, and a second rail-section terminating in a tongue which consists of a prolongation of the rail-flange and web, the said tongue portion having up-



wardly-curved interlocking surfaces and curved lateral surfaces adapted to fit within said groove and when in place to lock the abutting rail section, substantially as described.

1,017,987. BUTT-REMOVING ATTACHMENT FOR CORN-HARVESTERS. WILLIAM H. MORRIS, Carroll, Nebr. Filed May 7, 1909. Serial No. 494,611. (Cl. 130—5.)



1. In a corn harvester, an ear end cutting mechanism comprising a pair of reciprocatory knives, means operable on the passage of an ear to throw the knives alternately into operative position, and other means to reciprocate said knives when in operative position.

2. In a corn harvester, a rotary shaft having projecting arms, an ear end cutting mechanism comprising a pair of reciprocatory knives, and means to move said knives alternately into the paths of said arms.

3. In a corn harvester, a rotary shaft having projecting arms, an ear end cutting mechanism comprising a pair of reciprocatory knives, and means operable by the passage of an ear of corn to move said knives alternately into the paths of said arms.

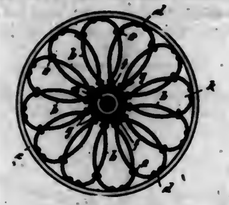
4. In a corn harvester, an ear conveyer, a rotary shaft having projecting arms, an ear end cutting mechanism held above and adjacent to said conveyer and comprising a pair of reciprocatory knives, and means operable by the passage of an ear of corn on said conveyer to move said knives alternately into the paths of said arms.

5. In a corn harvester, a reciprocatory ear end cutter, a swiveling sleeve supporting said cutter, a rotary shaft provided with a projecting arm, an ear conveyer, a trip adjacent said conveyer arranged to be lifted by the passage of an ear along said conveyer, and mechanism to move said sleeve on its swivel as the trip is moved.

[Claims 6 to 9 not printed in the Gazette.]

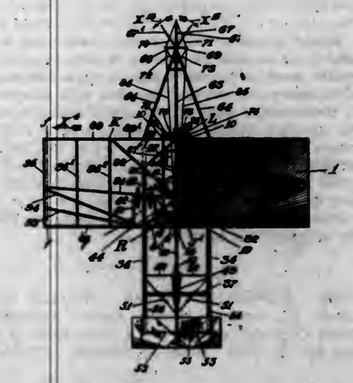
1,017,988. VEHICLE-WHEEL WITH ELASTIC SPOKES. HEINRICH MUNK, Berlin, Germany. Filed July 30, 1907. Serial No. 386,248. (Cl. 152—51.)

An elastic wheel comprising in combination a hub and a felly, and a number of spokes between the same consisting each of one endless pear-shaped blade or band spring having curved or arc-shaped inner and outer portions and attached to said hub and felly respectively, the adjacent spokes being further connected at their outer



and inner arc-shaped portions, substantially as and for the purpose set forth.

1,017,989. FLYING-MACHINE. RICHARD G. V. MYTTON, deceased, by Donald Barker, executor, Los Angeles, Cal. Filed Jan. 10, 1911. Serial No. 601,890. (Cl. 244—14.)



1. In a flying machine, a sustaining surface having dihedrally disposed lateral portions, and whereof the angle of incidence is positive except at the rearward central portion and the forward lateral portion thereof.

2. In a flying machine, a sustaining surface having dihedrally disposed lateral portions, and whereof the angle of incidence is relatively negative at the rearward central portions and the forward lateral portions thereof.

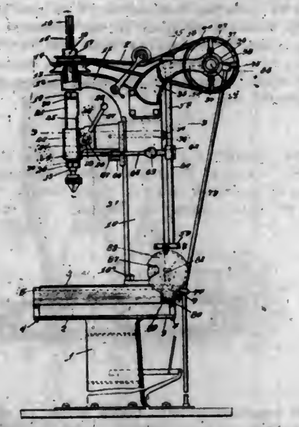
3. In a flying machine, a sustaining surface having obliquely upwardly convergent rearward central portions, disposed at a negative angle of incidence and obliquely divergent lateral portions disposed in part at a positive angle of incidence, said lateral portions being plane surfaces tangentially merged into curved surfaces each of a negative angle of incidence upon lines oblique to the forward margin of said sustaining surface.

4. In a flying machine, a sustaining surface having obliquely upwardly convergent rearward central portions, disposed at a negative angle of incidence and obliquely divergent lateral portions disposed in part at a positive angle of incidence, said lateral portions being plane surfaces tangentially merged into curved surfaces each of a negative angle of incidence upon lines oblique to the forward margin of said sustaining surface, the obliquity of said lines being in a direction laterally and rearwardly from said forward margin.

5. In a flying machine, a sustaining surface having obliquely upwardly convergent rearward central portions disposed at a negative angle of incidence, obliquely divergent lateral portions disposed in part at a positive angle of incidence, and a forward central portion disposed at a positive angle of incidence.

[Claims 6 to 12 not printed in the Gazette.]

1,017,990. DRILLING-MACHINE. HARLEY ALFRED OGLE, Chicago, Ill., assignor of one-third to Edwin O. Rowe and one-third to Joe S. Losee, Hebron, Ill. Filed Nov. 29, 1909. Serial No. 530,441. Renewed July 22, 1911. Serial No. 640,018. (Cl. 77—24.)



1. A drilling machine comprising a plurality of standards, a drill spindle loosely mounted in each standard, a pulley splined upon each of said spindles, a horizontal driving shaft journaled in portions of said standards, pulleys loosely mounted on said driving shaft for each of said spindles, belts connecting the respective driving shaft and spindle pulleys, and means actuated by the lowering of the spindles to feed the drills into the work, for imparting the motion of said driving shaft to each of the respective pulleys mounted thereon.

2. A drilling machine comprising a plurality of standards, a drill spindle vertically mounted in the upper end of each of said standards, a feeding sleeve mounted on each of said spindles and held in position thereon by collars fixed to said spindles, said sleeves loosely mounted in the outer ends of brackets slidably mounted in said standards, and having inclined notches formed in their lower ends on one side thereof, an operating arm pivoted to the inner end of each of said brackets, a roller journaled in the outer end of each of said operating arms and adapted to rest in said notches, whereby, when either of said sleeves is lowered, the inclined face of its notch will engage the roller and cause the said operating arm to swing on its pivot, and means actuated by said operating arms for starting and stopping each of the drill spindles independently.

3. In a drilling machine, the combination with a plurality of drill spindles arranged in vertical parallel relation, of a graduated grooved pulley splined to each of said spindles, a main driving shaft arranged horizontally to the rear of said spindles and having loosely mounted thereon graduated grooved pulleys for each of the spindles, members fixed to said driving shaft adjacent one side of each of said pulleys, and each having a leather ring fastened thereto on its side adjacent said pulleys, a clutch member slidably mounted on said shaft adjacent the opposite side of each of said pulleys, springs interposed between said clutch members and the adjacent sides of said pulleys, and means automatically operated on the lowering of the aforesaid spindles to feed the drills into the work, for shifting the clutch members into engagement with the pulleys, independently.

4. In a drilling machine, a drill spindle, driving and feeding means for the drill spindle, the feeding means including a recessed member movable therewith, a pivoted arm carrying a roller adapted to move into and out of the recess for swinging the arm on its pivot, a clutch device for the driving means, and a connection between the

tudinally split, and a smooth, tapered external surface on

3. A bottle-carrier for the purpose set forth, comprising,

aforesaid arm and the clutch device for actuating the latter.

5. In a drilling machine, a standard, a drill spindle carried thereby, a bracket mounted on the standard, a sleeve on the spindle slidably mounted in said bracket, an operating arm pivoted to said bracket and carrying a roller adapted to enter an inclined notch in the sleeve, a rod rotatably mounted adjacent to the standard and having an arm which is operatively connected to the aforesaid operating arm, a driving shaft, a clutch member mounted on said shaft, and clutch operating means connected to the aforesaid rod.

1,017,991. SIGHT-ILLUMINATING ATTACHMENT FOR GUNS. ANDREW N. OLSON, Idaho Springs, Colo., assignor of one-tenth to C. C. King, Denver, Colo. Filed Dec. 12, 1910. Serial No. 596,901. (Cl. 42—81.)

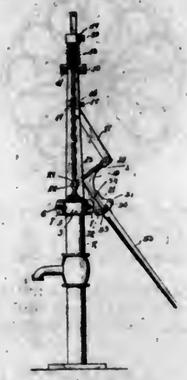
1. The combination with a gun barrel, of an illuminating device for the sight thereof, the said illuminating device being applied longitudinally to the side of the barrel, means for attaching the same to the barrel, the illuminating device comprising a lamp located at the forward extremity thereof, a battery with which the lamp is in circuit, means for making and breaking the circuit through the lamp, and a semi-spherical cap detachably applied to the lamp extremity of the device and inclosing the lamp, a frustum-shaped tube extending from one side of the cap at an angle to the longitudinal axis of the illuminating device and arranged to direct the rays of light upon the sight of the barrel, substantially as described.

2. The combination with a gun barrel, of an illuminating device for the sight thereof, the said illuminating device being applied longitudinally to the side of the barrel, means for attaching the same to the barrel, the illuminating device comprising a lamp at the forward extremity thereof, a battery with which the lamp is in circuit, means for making and breaking the circuit through the lamp, and a cap detachably applied to the lamp extremity of the device and having a tube extending toward the sight of the gun at an angle to the longitudinal axis of the illuminating device and arranged to direct rays of light upon the sight of the barrel, for the purpose set forth.

3. The combination with a gun barrel, of an illuminating device for the sight of the barrel, means for attaching the said device to the barrel, the illuminating device comprising a metal casing, a battery located therein, an electric lamp at one extremity of the casing, a metal cap applied to one extremity of the casing and provided with insulating parts, and recesses interposed between the insulating parts, a switch rotatably mounted in the cap and provided with a contact arm and adapted to travel in a circuit intersecting the insulating parts and the recesses, for making and breaking the circuit through the lamp, the free extremity of the contact arm being adapted to enter the recesses when the circuit is closed.

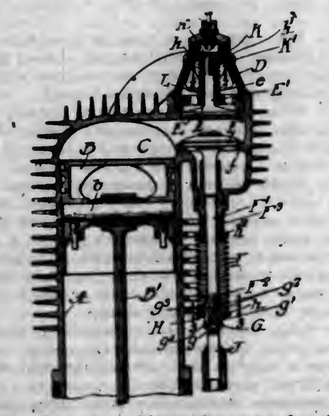
4. An illuminating device for gun barrel sights, comprising a metal casing, a battery located therein, an electric lamp at one extremity of the casing, a metal cap applied to one extremity of the casing and provided with insulating parts and recesses interposed between the insulating parts, a switch arm rotatably mounted in the cap and provided with a contact arm adapted to travel in a circuit intersecting the insulating parts and the recesses for making and breaking the circuit through the lamp, the free extremity of the contact arm being adapted to enter the said recesses and to maintain the said arm in the circuit closing position, substantially as described.

1,017,992. PUMP MECHANISM. BENNET OLSON, Glencoe, Minn., assignor of one-half to William C. Burtman, Waseca, Minn. Filed Apr. 25, 1911. Serial No. 623,221. (Cl. 103—62.)



A pump actuating mechanism, comprising a frame adapted to be secured to a pump casing, a pump rod reciprocally mounted in said frame, a collar adjustably secured to said pump rod and provided with oppositely disposed trunnions, a pair of bell crank levers having outwardly directed trunnions intermediate their length, said trunnions being journaled in the sides of the frame, links adjustably connecting one arm of each of said levers with one of the trunnions of said collar, a pump handle pivoted by one end between the other arm of said lever, and means for additionally and adjustably securing said handle between said lever arms.

1,017,993. EXPLOSIVE-ENGINE. WILLIAM OTTAWAY, Aurora, Ill., assignor to The Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Apr. 13, 1910. Serial No. 555,134. (Cl. 121—97.)



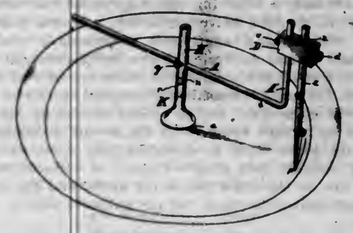
1. The combination with a valve-stem, of a sleeve surrounding and having screw-threaded connection with the stem, said sleeve having a smooth, tapered external surface and being split longitudinally in its tapered part, a collar fitting upon the tapered exterior of the sleeve, and a spring acting on said collar in a direction to force the same upon the tapered sleeve and to thereby hold the said sleeve in clamping engagement with the stem.

2. The combination with a valve-stem or like part, and a coiled actuating spring which surrounds the same, of a sleeve which surrounds and has screw-threaded engagement with the stem, said sleeve having a part which is longitudinally split, and a smooth, tapered external surface on its split portion, a collar provided with a tapered bore adapted to fit upon the tapered surface of said sleeve, said spring acting on the said collar to force the same upon the tapered sleeve and to thereby clamp the sleeve upon the stem.

1,017,994. GAGE. ALFRED D. OWEN, Fresno, Cal. Filed Apr. 19, 1911. Serial No. 622,143. (Cl. 73—146.)

A gage for banding china at a uniform distance from the edge thereof consisting of the combination of a rod A with an extension A' at approximately right angles to said rod A; a block C adjustable longitudinally on said rod A; a wire G extending through and turnably disposed in a hole *a* through block C at approximately right angles to rod A; concave rollers F and F' depending from either end of said wire G, and a marker adjustable longitudinally on the said extension A', all substantially as described.

1,017,995. COMPASS. ALFRED D. OWEN, Fresno, Cal. Filed Sept. 28, 1911. Serial No. 651,844. (Cl. 33—18.)



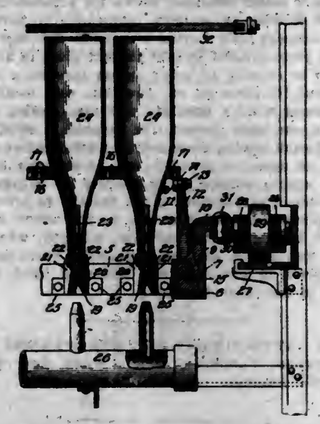
The combination of a support K having a perpendicular round hole *n* in the top thereof and terminating at the bottom with a base covered with an adhesive substance; a rod bent in the shape of an L; a pen adjustable longitudinally on an extension A' of said rod, and an upright post H adjustable longitudinally on the other branch of the rod A said branch forming the horizontal extension of said L the other extension being held upright, said post H terminating at the lower end with a pivot which fits with a running fit in said hole *n*, all substantially as described.

1,017,996. BOTTLE-CARRIER. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Co., Inc., Chicago, Ill., a Corporation of Illinois. Filed Mar. 22, 1911. Serial No. 616,216. (Cl. 193—8.)

1. A bottle-carrier for the purpose set forth, comprising, in combination, a bar provided on its ends with means for connecting it with conveyer-chains, frames extending from said ends, a grid secured at its ends to said frames and having a series of bottle guiding and encircling rings, and nozzle-devices secured at intervals to the bar to register their jetting-tubes with the centers of said rings.

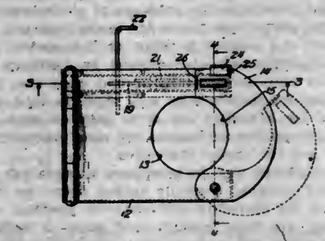
2. A bottle-carrier for the purpose set forth, comprising, in combination, a bar provided on its ends with blocks having angular arms extending from them for connection with conveyer-chains, frames secured to the blocks, a grid secured at its ends to said frames and having a series of bottle guiding and encircling rings, and nozzle-devices secured at intervals to the bar to register their jetting-tubes with the centers of said rings.

3. A bottle-carrier for the purpose set forth, comprising, in combination, a bar provided on its ends with means by which to secure the carrier to a support, a grid supported on the bar and having a series of bottle guiding and encircling rings, and nozzle-devices having hollow bodies and jetting tubes and webs extending from them with seat forming notches in the web-ends about the tubes, said bodies being secured at intervals to the bar to register the jetting-tubes with the centers of said rings.



4. A bottle-carrier for the purpose set forth, comprising, in combination, a bar provided on its ends with means by which to secure the carrier to a support, a grid supported on the bar and having a series of bottle guiding and encircling rings, and nozzle-devices consisting of hollow tapering bodies having jetting-tubes and webs extending from them with seat-forming notches in the web-ends about the tubes and angular feet on members of the webs at which the nozzle-devices are secured to a face of said bar at intervals to register the jetting-tubes with the centers of said rings.

1,017,997. BOTTLE-LOCKING DEVICE. FRED PAULSON, Geneva, Ill. Filed Mar. 22, 1911. Serial No. 616,264. (Cl. 232—41.)



1. A milk bottle retaining device comprising a support member, a locking member, said members being adapted to receive a milk bottle between them, and said locking member being pivoted to said support member so as to be capable of being swung through a complete circle about its pivot in one direction, and a releasable latch for preventing swinging of said locking plate in the opposite direction, whereby, when a bottle is in the device, the bottle prevents swinging of the locking plate in one direction and said latch prevents swinging in the other direction.

2. A milk bottle retaining device comprising a support member adapted to be attached to the casing of a door or window, a locking member, said members being adapted to receive a milk bottle between them, and said locking member being pivoted to said support member so as

to be capable of being swung through a complete circle about its pivot in one direction, and a releasable latch carried by said support member and disposed in such position thereon as to engage the door or window when the device is attached to the casing, whereby, when a bottle is in the device, the bottle prevents swinging of the locking plate in one direction and said latch prevents swinging in the other direction except when the door or window has been opened.

3. A milk bottle retaining device for attachment to the casing of a door or window comprising a horizontally disposed support plate having a notch in one edge thereof, a locking plate pivoted to said support plate in such manner as to be capable of being swung through a complete circle about its pivot in one direction, said locking plate being formed with a shoulder and also having a notch formed in one edge thereof, the notches in said support plate and said locking plate being so arranged as to form, together, an aperture suited to receive the neck of a milk bottle, a spring pressed latch adapted to engage behind the shoulder of said locking plate, thereby to prevent said locking plate from being swung in the other direction, said latch having an inclined face, whereby, when a bottle is in the device, the bottle prevents swinging of the locking plate in one direction and said latch prevents swinging in the other direction.

1,017,998. ATTACHMENT FOR AEROPLANES. ORSON L. PICKARD, Columbus, Ohio. Filed Dec. 1, 1910. Serial No. 595,058. (Cl. 244—21.)

1. In combination with an aeroplane, an auxiliary sheet of wind-proof material normally spread upon one of the planes, means for instantaneously releasing said sheet from its spread condition, and means for simultaneously lifting one portion of said sheet to admit the air therebeneath.

2. In combination with an aeroplane, an auxiliary sheet of wind-proof material normally spread upon one of the planes, strips preventing the entrance of air between said sheet and the plane, and means for instantaneously moving said sheet to a position to admit air thereunder.

3. In combination with an aeroplane, an auxiliary sheet of wind-proof material normally spread upon one of the planes, means for maintaining said sheet in taut condition, means for excluding air from between said sheet and one of the planes, and means for simultaneously rendering said last two means ineffective.

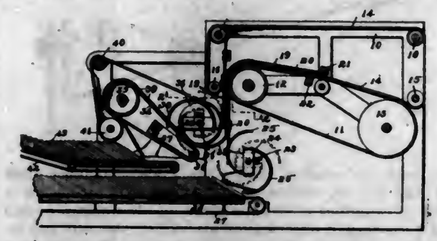
4. In combination with an aeroplane, an auxiliary sheet of wind-proof material normally spread upon one of the planes, ropes for fastening said sheet in position, strips for excluding air from beneath said sheet, a knife for cutting said ropes, and a pin operable simultaneously with said knife for pushing said sheet above said strips.

5. The combination with an aeroplane, of a parachute carried thereby, means for holding said parachute against the surface of said plane, and means for simultaneously releasing said last named means and moving said parachute to a position to receive the air.

[Claims 6 to 8 not printed in the Gazette.]

1,017,999. DELIVERING ATTACHMENT FOR PRINTING-PRESSES. JAMES M. PIERCE, Des Moines, Iowa. Filed July 24, 1911. Serial No. 640,226. (Cl. 101—31.)

1. In a delivering device of the class described, the combination of a shaft, a series of substantially convolute arms carried by said shaft and designed to receive and deliver books, a second shaft arranged above the first and at one side thereof, a set of substantially convolute arms carried by the second shaft and arranged to receive and deliver books, guide devices arranged to form a single guide way and designed to convey books to both of said sets of convolute arms, the convolute arms on both shafts being arranged to extend across the guide way, during certain parts of their movement, means for gearing said shafts together so that the arms of said shafts will alternately project across the guide way and engage books passing through the guide way, and a delivering apron for each of said sets of convolute arms in position to receive books therefrom.



2. In a device of the class described, the combination of a set of downwardly extended guide arms, a second set of downwardly extended guide arms spaced apart from the first to form a guide-way between them, the length of the second set of guide arms being materially less than the length of the first set, a delivering device comprising a shaft and a series of substantially convolute arms thereon arranged in position to receive books passing through said guide-way, a receiving apron arranged to receive the books from the said delivering device, a second delivering device comprising a shaft and substantially convolute arms, said second delivering device being arranged above the first and on the side of the guide-way opposite from the first, the arms thereof being designed to receive books from said guide-way, and a second delivering apron in position to receive books from the second delivering device, said parts being so arranged that alternate books passing through said guide-way will be engaged and delivered one to the lower delivering apron and the next to the upper delivering apron, for the purposes stated.

1,018,000. HEAT TREATMENT AND ROLLING OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Jan. 27, 1911. Serial No. 604,996. (Cl. 148—24.)

1. The method of producing rolled shapes of manganese steel, which consists in first heating a manganese steel ingot or blank to a point above the melting point of the eutectic until it is in a condition of substantial uniformity of distribution of its constituents, rolling it in that condition until the shape is partially formed, then rolling and intermittently cooling and equalising the temperatures of the different portions of the bar, until the bar is finally finished and worked throughout at temperatures below the fixation point; substantially as described.

2. The method of producing rolled shapes of manganese steel, which consists in first heating a manganese steel ingot or blank to a point above the melting point of the eutectic, rolling to a bloom, and cooling and working to finished shape at temperatures below 1075° C., substantially as described.

3. The method of producing rolled shapes of manganese steel, which consists in first heating a manganese steel ingot or blank to a point above the melting point of the eutectic, rolling to a bloom, cooling to the fixation point, and thoroughly working the bloom, by rolling, to finished shape at temperatures below the fixation point, to produce a uniform fine-grained structure throughout; substantially as described.

4. The method of producing rolled shapes of manganese steel, which consists in first heating a manganese steel ingot or blank to a point above the melting point of the eutectic, rolling to a bloom, and cooling and working to finished shape at temperatures below 1075° C., and thereupon immediately quenching; substantially as described.

5. In the production of wrought shapes of manganese steel from metal which has been heated to a temperature above the melting point of the eutectic until in a condition of substantial uniformity of distribution of its constituents, working the metal at a temperature which, in the finishing stage, shall be within the range of 800° C. to 1075° C.; and rapidly cooling; substantially as described.

1,018,001. METHOD OF MACHINING MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 29, 1911. Serial No. 668,459. (Cl. 148—24.)

1. The method of machining blanks of manganese steel previously heat-treated to secure uniformity and homogeneousness of structure which comprises heating the blank to a temperature between 300° C. and 1075° C.; machining it while in such heated condition; and finally imparting qualities of toughness to the blank by water quenching, substantially as described.

2. In the machining of blanks of manganese steel previously heat-treated to secure uniformity and homogeneousness of structure and then so rapidly cooled as to render the uniform state permanent, the method which comprises heating the blank to a temperature between 300° C. and 420° C.; and machining the blank while in such heated condition, substantially as described.

3. In the machining of blanks of manganese steel previously heat-treated to secure uniformity and homogeneousness of structure the method which comprises heating the blank to a temperature between 300° C. and 420° C.; and machining the blank while in such heated condition, substantially as described.

4. In the machining of blanks of manganese steel previously heat-treated to secure uniformity and homogeneousness of structure the method which comprises machining the blank at a temperature between 420° C. and 1075° C.; heating the blank to a temperature of approximately 1000° C.; and water quenching the machined blank, substantially as described.

1,018,002. MANUFACTURE OF SHEETS OR PLATES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Jan. 10, 1912. Serial No. 670,377. (Cl. 148—24.)

1. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working at temperatures which, in the finishing stage, are below 800° C., reheating until any separated carbids have been taken into solution; and quenching; substantially as described.

2. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working at temperatures which, in the finishing stage, are below 800° C., reheating at temperatures between 975° C. and 1075° C.; and quenching; substantially as described.

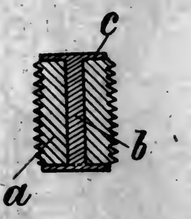
3. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working, with intermediate reheating, the working being effected at temperatures which, in the finishing stage, are below 800° C., reheating to restore ductility; and quenching; substantially as described.

4. The method of making sheets or plates of manganese steel, which comprises heating a billet or blank of manganese steel until in a uniform and ductile condition throughout, rolling and thereby working at temperatures which, in the finishing stage of the working, are below 800° C., reheating until any separated carbids have been taken into solution and continuing the reheating for such time only that the plate is suitably annealed or toughened; and quenching; substantially as described.

5. In the manufacture of sheets or plates of manganese steel, by rolling a billet or blank of manganese steel previously heated until in a uniform and ductile condition throughout, the method of restoring to solution any carbids which may have separated in the rolled metal which consists in reheating the rolled metal to temperatures between 975° C. and 1075°.; and quenching; substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,003. CARBON ELECTRODE FOR ELECTRICAL PURPOSES. BERTHOLD REDLICH, Ratibor, Germany, assignor to The Firm of Planiawerke Aktiengesellschaft für Kohlenfabrikation, Ratibor, Germany. Filed Oct. 13, 1911. Serial No. 654,533. (Cl. 204—64.)



1. The combination with carbon electrodes for electrical purposes, of means for connecting an old electrode to the new electrode comprising a carbon connecting piece, and means for equalizing the intermediate resistance of the connecting piece.

2. The combination with carbon electrodes for electrical purposes of means for connecting an old electrode to the new electrode comprising a carbon connecting piece, and means for equalizing the intermediate resistance of the connecting piece, consisting of a metal core embedded in the connecting piece.

3. The combination with carbon electrodes for electrical purposes of means for connecting an old electrode to the new electrode comprising a carbon connecting piece, and means for equalising the intermediate resistance of the connecting piece, consisting of a metal core embedded in the connecting piece, and expansions at the ends of the cores, said expansions being obtained by diverging the ends.

4. The combination with electrodes of a connecting piece consisting of a block of carbon, and a metal core within said block of carbon.

5. The combination with electrodes of a connecting piece consisting of a block of carbon, and a metal core within said block of carbon and enlargements formed at the ends of the metal core.

[Claims 6 and 7 not printed in the Gazette.]

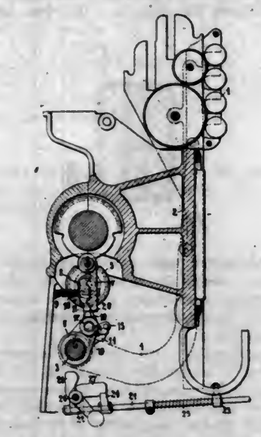
1,018,004. AWNING. JOHN RENNER, Kansas City, Mo. Filed Mar. 22, 1910. Serial No. 550,971. (Cl. 156—44.)

1. The combination with an awning cover, of an extensible arm supporting said cover and pivotally sup-

ported on a horizontal axis whereby the arm may be vertically swung, means for securing the arm in the position to which it may be swung, and a spring for extending the arm.

2. The combination with an awning cover, of an extensible arm comprising an inner and an outer member, pivoted to each other so as to be folded, the outer member supporting the awning cover, means for pivotally supporting the inner member on a horizontal axis whereby the arm may be vertically swung, a spring for extending said arm and means for securing the inner member in the position to which it may be swung.

1,018,005. SAFETY DEVICE FOR PLATEN PRINTING-PRESSES. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed May 17, 1911. Serial No. 627,656. (Cl. 101—111.)



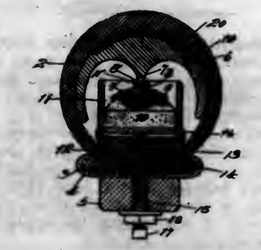
1. In a safety device for platen printing presses, the combination with a roller carriage, of means for reciprocating the carriage including pivotally mounted bars having coacting cam faces arranged to separate said bars upon relative movement of the same longitudinally from their normal position, a spring for holding said bars in coupled relation, throwout mechanism for the press, and a trip device engaging one of said bars and serving upon separating movement thereof to actuate said throwout mechanism, substantially as described.

2. In a safety device for platen printing presses, the combination with a roller carriage, of means for reciprocating the carriage including pivotally mounted bars having coacting cam faces arranged to separate said bars upon relative movement of the same longitudinally from their normal position, a spring for holding said bars in coupled relation, throwout mechanism for the press, and a trip device having a portion thereof mounted on the pivot of one of said bars and engaging the other of said bars and serving upon separating movement of the bars to actuate said throwout mechanism, substantially as described.

3. In a safety device for platen printing presses, the combination with a roller carriage, of means for reciprocating the carriage including connecting bars having coacting cam faces arranged to separate said bars for relative movement of the same longitudinally from their normal position, throwout mechanism for the press, and a trip device held by said bars in their normal position and released thereby when said bars are separated to actuate said throwout mechanism, substantially as described.

4. In a safety device for platen printing presses, the combination with a roller carriage, of means for reciprocating the carriage including coacting cam members with yielding means for holding the same in operative relation and permitting displacement thereof, throwout mechanism for the press, and a trip device arranged to be released from said cam members to actuate said throwout mechanism, substantially as described.

1,018,006. RESILIENT TIRE. MARSHALL C. ROGERS, Williams, Cal. Filed Aug. 29, 1910. Serial No. 579,507. (Cl. 152—5.)



1. In a vehicle tire, the combination of a flexible, circular continuous casing, having clencher shoulders and clencher rings adapted to engage the same, a felly upon which said clencher rings are supported, a plurality of sectional key-blocks having cups formed thereon, said key blocks having screws passing through the felly whereby the casing is expanded and retained in the clencher rings, and means interposed between the interior surface of the casing and the key blocks whereby the casing is resiliently supported, said means including a non-inflatable filler and a cushion support therefor, said filler having a centrally disposed web on its interior, and said support being inclosed by a key-block cup and having a channeled portion to receive said web edgewise.

2. A vehicle tire comprising a hollow circular endless casing a clencher rim adapted to clamp the same, means whereby the casing is expanded into engagement with the clencher rings, a circular sectional filler of arched cross section mounted within the casing having a centrally disposed web on its inner surface, and an adjustably mounted cushion having a channel in which the web is edgewise supported whereby the filler is projected outwardly against the interior surface of the casing.

3. The combination in a vehicle tire of a hollow, flexible endless casing, clencher members therefor, blocks whereby said casing is expanded into locking engagement with the clenchers a cup formed upon said blocks, a resilient cushion mounted in said cup, a spreader foot resting upon a surface of the resilient cushion, and means comprising sectional, transversely arched fillers each having a central portion in contact with the spreader-foot whereby the casing may be expanded and supported.

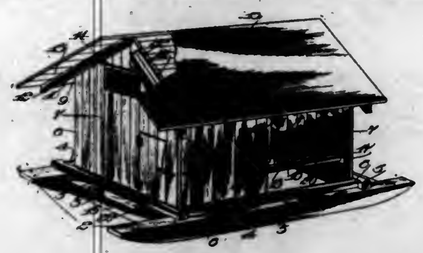
4. The combination in a vehicle tire of a hollow, flexible endless casing, clencher members therefor, blocks whereby said casing is expanded into locking engagement with the clenchers, a cup formed upon said blocks, a resilient cushion mounted in said cup, a spreader plate resting upon a surface of the resilient cushion, means comprising sectional transversely arched fillers each having a central portion in contact with the spreader-foot whereby the casing may be expanded and supported, and a device whereby said cushion member may be adjusted within the cup.

5. The combination in a vehicle tire of a hollow, flexible endless casing, clencher members therefor, keys whereby said casing is expanded into locking engagement with the clenchers, a cup formed upon said keys, a resilient cushion mounted in said cup, a spreader plate resting upon a surface of the resilient cushion, means comprising sectional transversely arched fillers each having a central portion in contact with the spreader-foot whereby the casing may be expanded and supported, a device whereby said cushion member may be adjusted within the cup, said device consisting of a plate upon which the base of the resilient

cushion rests, and a screw engaging threads in said expanding keys whereby the plate may be advanced within the cup.

[Claims 6 and 7 not printed in the Gazette.]

1,018,007. COLLAPSIBLE, PORTABLE, VERMIN-PROOF POULTRY-HOUSE. MARSHALL C. ROGERS, Williams, Cal., assignor of one-half to George Ash, Williams, Cal. Filed Apr. 6, 1911. Serial No. 619,270. (Cl. 119—21.)



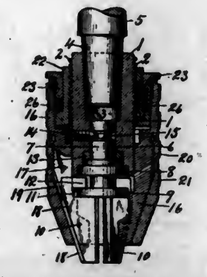
1. A portable structure of the character described, having in combination a sled provided with longitudinal and transverse sills; vertical side and end panels, and a roof; said side panels having their lower ends abutting against the inner surfaces of the longitudinal sills of the sled, and said end panels having their lower ends abutting against the inner surfaces of the transverse sills of said sled; longitudinal and transverse sill members on the outside just above the lower ends of the side and end panels, said transverse sill members being extended at the ends to overlap and rest upon the longitudinal sills of the sled.

2. A portable structure of the character described, having in combination a sled provided with longitudinal and transverse sills; vertical side and end panels, and a roof; said side panels having their lower ends abutting against the inner surfaces of the longitudinal sills of the sled, and said end panels having their lower ends abutting against the inner surfaces of the transverse sills of said sled; longitudinal and transverse sill members on the outside just above the lower ends of the side and end panels, said transverse sill members being extended at the ends to overlap and rest upon the longitudinal sills of the sled, and said side and end panels having girders secured to the outside of their upper ends, and said roof having rafters at the ends abutting against the outer surfaces of said girders.

3. A portable structure of the character described, having in combination a sled provided with longitudinal and transverse sills; vertical side and end panels, and a roof; said side panels having their lower ends abutting against the inner surfaces of the longitudinal sills of the sled and said end panels having their lower ends abutting against the inner surfaces of the transverse sills of said sled; longitudinal and transverse sill member on the outside just above the lower ends of the side and end panels; said transverse sill members being extended at the ends to overlap and rest upon the longitudinal sills of the sled, and said side and end panels having girders secured to the outside of their upper ends, and said roof having rafters at the ends abutting against the outer surfaces of said girders, said panels being formed of boards with grooved edges having a packing of vermin destroying material.

1,018,008. DRILL-CHUCK. ROSS M. RUSSELL, Binghamton, N. Y., assignor to Russell Anti-Friction Drill Chuck Company, Elmira, N. Y. Filed Apr. 19, 1909. Serial No. 490,847. (Cl. 29—115.)

1. In a drill chuck, a threaded head, a threaded sleeve engaging the threaded portion of the head, a spindle journaled in the head and provided with an annular flange, radially movable jaws engaging opposite faces of said flange, means for holding the spindle against endwise movement, a separate sleeve rotatably mounted on the first named sleeve and movable endwise thereof, one of the sleeves having an incline bearing engaged by the other sleeve for moving the second sleeve axially as it is rotated, means actuated by said axial movement of the second sleeve for moving the jaws radially, and means for limiting the degree of rotation of the second sleeve relatively to the first named sleeve.



2. In a drill chuck, a rotary head, radially movable jaws operatively connected to the head, a rotary tapering sleeve engaging the jaws and movable axially, means brought into action by the rotation of the sleeve in one direction for moving said sleeve axially to open the jaws, an additional sleeve secured to the first named sleeve and engaging the outer edges of said jaws, and additional means for automatically rotating the first named sleeve in the opposite direction a limited distance.

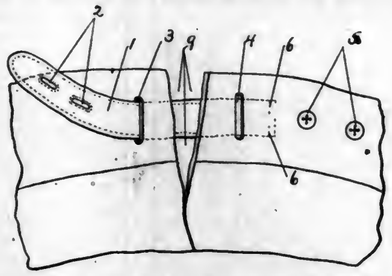
3. In a drill chuck, a rotary threaded head, a threaded sleeve engaging the threaded portion of the head, an annular flange rotatably mounted on the head, means for holding the flange against endwise movement, radially movable jaws engaging the inner and outer faces of the flange, a second sleeve rotatably mounted on the head and having a limited rotary movement relatively to the first named sleeve, means for limiting such relative rotary movement, means brought into action by the limited rotary movement of the second sleeve relatively to the first sleeve for moving the second sleeve axially relatively to the jaws, and means actuated by said axial movement of the second sleeve for moving the jaws radially.

4. In a drill chuck, a rotary threaded head, a threaded sleeve engaging the threaded head and rotatable thereon, a spindle journaled in the head and provided with an annular flange, means for holding the spindle against endwise movement, radially movable jaws engaging the inner and outer faces of the flange, a second sleeve rotatable on the head, interlocking connections with a lost motion between the two sleeves whereby the second sleeve has a limited rotary movement relatively to the first named sleeve, said connections including means for moving the second sleeve axially relatively to the first named sleeve as the second sleeve is rotated relatively thereto, and means carried by the second sleeve for moving the jaws radially as said second sleeve is rotated.

5. In a drill chuck, a threaded head, a rotary threaded sleeve section engaged with the threaded head, a second sleeve section rotatable relatively to the first sleeve section, said sleeve sections being provided with an interfitting tongue and groove, the groove being somewhat wider circumferentially than the tongue to allow a limited rotary movement of the second sleeve section relatively to the first sleeve section in one direction, means for forcing the second sleeve section in the opposite direction, said tongue and groove having inclined contact faces whereby the second sleeve is moved endwise during its limited rotation, a third sleeve section rigidly connected to the second sleeve section and provided with radial slots, jaws movable in said slots, means on the head for holding the jaws against endwise movement relatively

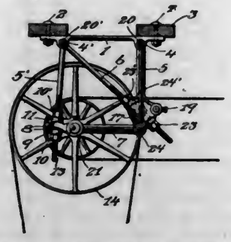
thereto, and a tapering sleeve section secured to the third sleeve section and engaging the outer edges of the jaws for moving the latter radially as the sleeve sections are moved axially.

1,018,009. FASTENING DEVICE FOR UNDERGARMENTS. ADOLPH P. SCHREMP, Utica, N. Y. Filed Oct. 4, 1911. Serial No. 652,893. (Cl. 2—143.)



The combination with an undergarment divided through a portion of the rear side and provided with slits therethrough at opposite sides of the division, a strap attached to the garment some distance from the division beyond the slit at that side and extended across the division and through the other slit and returned through the division and through the first named slit and attached to the garment.

1,018,010. ADJUSTABLE PULLEY-HANGER. WILTON S. SCHUYLER, Savannah, Mo. Filed Aug. 10, 1909. Serial No. 512,253. (Cl. 64—14.)



1. An adjustable pulley hanger comprising hanger plates, lugs on the hanger plates at opposite ends thereof, hanger arms pivotally supported in the lugs at one end of the plates, adjusting arms pivotally supported by the lugs at the other end of the plates, carrying arms pivoted to the ends of the hanger arms, means on the adjusting arms for holding said carrying arms rigid, boxes carried on the carrying arms, a shaft mounted in the boxes, and a pulley on the shaft.

2. In a pulley hanger, the combination of hanging arms, adjusting arms, means for pivotally supporting such arms, carrying arms pivotally connected to the ends of the hanging arms, means for adjustably securing the other ends of such carrying arms to the adjusting arms, boxes carried by the carrying arms, a shaft mounted in the boxes, and a pulley carried by the shaft.

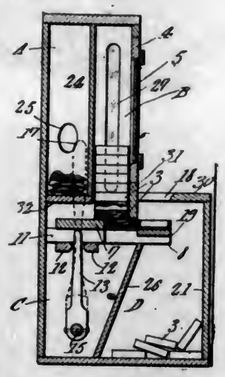
3. In a pulley hanger, the combination of hanging arms, adjusting arms, carrying arms pivotally connected to the ends of the hanging arms, means for adjustably securing the carrying arms to the adjusting arms, boxes carried on the carrying arms, a shaft mounted in the boxes, a pulley on the shaft, means for adjusting the angle of the several arms with relation to each other and means for pivotally supporting such arms.

4. In a pulley hanger, the combination of hanging arms, adjusting arms, means for pivotally supporting the same, carrying arms carried by and pivotally engaged by said hanging and adjusting arms, means arranged to vary the angle of the adjusting and hanging arms with relation to each other, boxes on the carrying arms, a shaft in the boxes, and a pulley mounted upon the shaft.

5. In a pulley hanger, carrying arms, hanging arms pivotally connected thereto, pivotally supported adjusting arms adjustably secured to the carrying arms, a brace block carried by a hanger arm, a brace through the brace block and arranged to hold the arms in rigid relation to each other, boxes on the carrying arms, a shaft in the boxes and a pulley carried by the shaft.

[Claim 6 not printed in the Gazette.]

1,018,011. TOWEL-CABINET. LEROY S. SHANK, Findlay, Ohio, assignor of one-half to William A. Morris, Findlay, Ohio. Filed Jan. 18, 1911. Serial No. 603,391. (Cl. 211—8.)



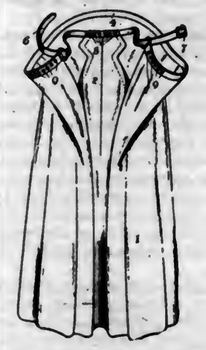
A cabinet for dispensing box-inclosed articles, the cabinet comprising a shaft and a forward extension provided with a front closure; a guide located in the extension; a table supported upon the guide and located directly below an opening in the top of the extension; a member movable upon the guide and adapted in a single operation to advance a box-inclosed article upon the table, from the shaft, and to push from the table, to the bottom of the cabinet, an empty box, the contents of which has been removed through the opening; there being a partition in the extension, connecting the bottom of the cabinet with the guide, to serve as a support for the guide, and to maintain the empty boxes adjacent the closure; there being an opening in the shaft, through which the dispensed articles may be inserted after use; and a partition in the shaft, separating used from the box-inclosed articles.

1,018,012. SKIRT. DAVID HARRY SHAPIRO, Montreal, Quebec, Canada. Filed Mar. 10, 1911. Serial No. 613,558. (Cl. 2—143.)

1. In a garment of the class described, a skirt having a rear opening, loops secured to said skirt at the edges of said opening at the waist line, a belt adapted to be secured around the waist and extending through said loops, and fasteners having members secured to the exterior of said waist belt and members secured to said skirt on each side of said opening.

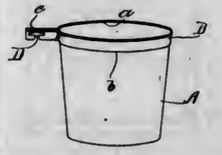
2. In a garment of the class described, in combination, a skirt having a rear opening and a flap extending upwardly behind said opening and terminating at the waist line, a belt secured to said flap at the top end and adapted to be fastened around the waist and hold said flap in its upper position, loops slidably arranged on said belt on each side of said flap and secured to the major portion of said skirt at the edges of said opening at the waist line and fasteners having members secured in a row suitably spaced across said flap at the top end thereof on the waist line and members secured in rows

to the major portion of the skirt on the outer side of the waist line and similarly spaced to the aforesaid members and adapted to fasten thereto.



3. In a garment of the class described, in combination, a skirt having a rear opening and a flap portion extending upwardly behind said opening and terminating at the waist line, an elastic waist belt secured to the upper end of said flap portion and adapted to be fastened around the waist of the wearer, a waist band secured at the top of the major portion of the skirt of greater length than ordinarily required to surround the waist of the wearer, loops secured to said major portion waist band at the edges of said opening and slidably arranged on said flap waist belt at each side of said flap and fasteners having members secured to the outer side of said flap on the line of said flap waist belt and suitably spaced and members secured on the outer side of said waist band of the major portion of the skirt in rows and suitably spaced extending inwardly from said loop ends.

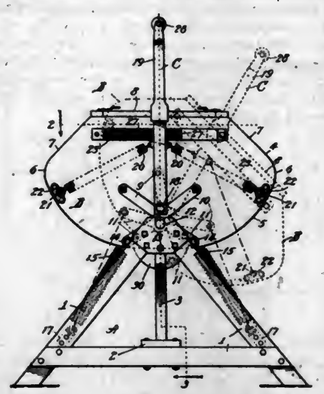
1,018,013. ASEPTIC CUP. JOHN J. SHEA, Beverly, Mass. Filed June 11, 1910. Serial No. 566,318. (Cl. 229—1.)



A paper drinking cup, comprising a tapered body and a band secured about the rim thereof, the external circumference of the band at its lower edge being greater than the internal circumference of the mouth of the cup whereby when a plurality of similar cups are stacked in nested relation, the shoulder formed by the lower edge of each band will rest on the upper edge of the cup next below it, the bands thus constituting spacers for the several cups in the stack, and a guide tab fast to said band, in a substantially vertical plane, said tab being cut away on one edge whereby when a plurality of similar cups are stacked in nested relation there is a clearance between the adjacent guide tabs.

1,018,014. ACTUATING MECHANISM. GEORGE SIM, Chicago, Ill., assignor to Donald Cameron, Chicago, Ill. Filed Feb. 2, 1911. Serial No. 606,126. (Cl. 74—14.)

1. The combination of a frame, an oscillatory body, a combination spring-attaching and trunnion-carrying member secured to one end of said body and having a horizontally disposed trunnion journaled in said frame, recoil-springs having their upper ends attached to said member on opposite sides of the trunnion and having their lower ends connected to said frame, a lever pivoted on said member and rising therefrom, and power-transmission springs on opposite sides of said lever and connected with said body.



2. The combination of a frame, an oscillatory body, a combination spring-attaching and trunnion-carrying member secured to one end of said body and having a horizontally disposed trunnion journaled in said frame, recoil-springs having their upper ends attached to said member on opposite sides of the trunnion and having their lower ends connected to said frame, a lever pivoted on said member and rising therefrom, and power-transmission springs on opposite sides of said lever having their adjacent ends attached to said lever and their remote ends attached to said body.

3. The combination of a frame, an oscillatory body having horizontal pivots journaled on said frame, a lever pivoted to swing in a vertical plane parallel with an end of said body, a guide for said lever carried by said body above the pivot of said lever, and power-transmission springs having their adjacent ends co-acting with said lever and having their remote ends connected with said body.

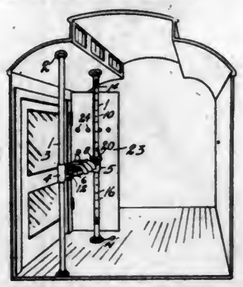
4. The combination of a frame, an oscillatory body having horizontal pivots journaled on said frame, a lever pivoted to swing in a vertical plane parallel with an end of said body, a guide for said lever carried by said body above the pivot of said lever, power-transmission springs having their adjacent ends co-acting with said lever and having their remote ends connected with said body, and recoil-springs having their upper ends attached to one end of said body on opposite sides of a pivot and having their lower ends attached to said frame beneath the body-pivot.

5. The combination of a frame, an oscillatory body having horizontal pivots journaled on said frame, a lever pivoted to swing in a vertical plane parallel with an end of said body, a guide for said lever carried by said body above the pivot of said lever, coil springs confined in said guide at opposite sides of said lever, power transmission springs having their adjacent ends connected with said lever beneath said guide and having their remote ends connected to said body, and recoil-springs connected with said body and with said frame.

1,018,015. REVOLVER SUPPORTING AND OPERATING APPARATUS. HENRY W. SIMS, Dallas, Tex. Filed June 8, 1911. Serial No. 631,929. (Cl. 89—1.)

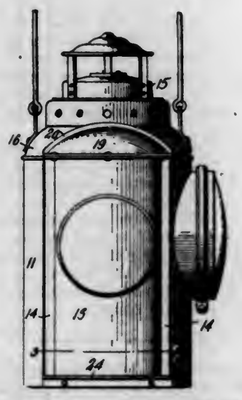
1. In an apparatus of the character described, a pair of standards, a rotatable transverse support extending between the standards and slidable vertically thereon, a fastening device mounted at one end of the support, a locking device positioned on the support so as to engage the standards, a plurality of revolvers mounted on the support, and a revolver operating device mounted on the support.

2. In an apparatus of the character described, a pair of standards, sleeves slidable on the standards, counter balancing weights connected to the sleeves, a transverse bar rotatably mounted in the sleeves, a plurality of revolvers secured on the bar, an adjusting lever mounted on the bar and engaging with one of the sleeves, spring pressed plungers mounted between the sleeves and engaging the standards, and a revolver operating member mounted on the bar and having a lever at one end.



3. In an apparatus of the character described, a pair of tubular standards, sleeves slidably mounted on the standards, pulleys mounted at the upper ends of the standards, counter balancing weights disposed in the standards, flexible connection between the sleeves and the weights passing over the pulleys, a transverse bar between the standards rotatably mounted in the sleeves, one of said sleeves having notches, an adjusting lever mounted on the bar and engaging with the notches of said sleeve, a plurality of revolvers mounted on the bar transversely thereof, spring pressed plungers mounted under the bar and engaging the standards, a crank shaft mounted on the bar and having its cranks in position to engage the triggers of the revolvers, and a lever at one end of the crank shaft.

1,018,016. SIGNAL-LAMP. FURMAN D. SPEAR, New York, N. Y., assignor to Armspear Manufacturing Company, New York, N. Y. Filed Oct. 20, 1910. Serial No. 588,020. (Cl. 240—11.)



1. The combination with a cylindrical lamp body having an upright door-opening in its side, a sloping breast above said opening, and a vertically sliding door applied to said opening, of a dam arranged on said breast over said opening and operating to deflect the water on said breast laterally past the sides of said opening, substantially as set forth.

2. The combination with a cylindrical lamp body having an upright door-opening in its side, a sloping breast above said opening, and a vertically sliding door applied to said opening, of an upwardly projecting flange arranged on said breast over said opening in substantially the position of the chord of the arc occupied by said opening, substantially as set forth.

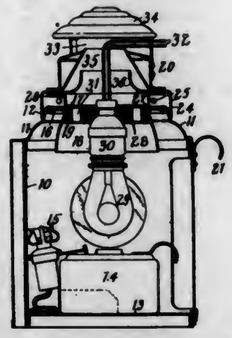
3. The combination with a cylindrical lamp body having an upright door-opening in its side and a sloping breast above said opening, of an upwardly projecting flange arranged on said breast above said opening, and a vertically sliding door provided at its top with a rim which is recessed on its under side and engages over said flange when the door is closed, substantially as set forth.

4. The combination with a cylindrical lamp body having an upright door-opening in its side and a sloping breast above said opening, of a vertical arched flange arranged on said breast above said opening, and a vertically sliding door provided at its top with an arched rim which engages over said flange when the door is closed, substantially as set forth.

5. The combination with a lamp body having a door-opening in its side, a sloping breast above said opening, and a vertically sliding door applied to said opening, of a curved shield applied to said breast over said opening and having an upwardly projecting guard flange, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,018,017. CONVERTIBLE LAMP. FURMAN D. SPEAR, New York, N. Y., assignor to Armspear Manufacturing Company, New York, N. Y. Filed Dec. 27, 1910. Serial No. 599,368. (Cl. 240—37.)



1. The combination with a lamp body, of a perforated annular plate supported transversely in the upper portion of the body and provided with a seat for the base plate of an electric light, a base plate resting on said seat and provided with means for carrying an electric light, and a movable lamp top which is movable toward and from said perforated plate, substantially as set forth.

2. The combination with a lamp body, of an annular perforated plate supported transversely in the upper portion thereof and provided with a seat for the base plate of an electric light, and a curtain depending below said plate and surrounded by a passage through which the air passes downwardly from said perforated plate, a base plate for an electric light resting on said seat, and a movable lamp top which is movable toward and from said perforated plate, substantially as set forth.

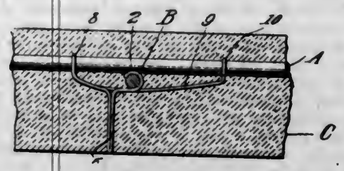
3. The combination with a lamp body and a lamp top movably connected therewith, of an annular perforated plate supported on said body and provided with a seat for the base plate of an electric light, an escape passage formed in said body and top and divided approximately at the level of said perforated plate, said passage comprising a portion arranged in and carried by said body below said perforated plate and a portion arranged in said top above said plate, said top being movable toward and from said perforated plate, and a base plate for an electric light arranged removably on said seat, substantially as set forth.

4. The combination with a lamp body provided in its upper portion with an annular perforated plate and an inner upright wall which is provided with an inwardly projecting supporting shoulder, of a base plate arranged within said wall and resting upon said shoulder, said base plate being provided with means for carrying an electric light, and a movable lamp top, substantially as set forth.

5. The combination with a lamp body provided in its upper portion with an annular perforated plate having an inner upright wall which is provided with an inwardly projecting supporting shoulder, of a base plate arranged within said wall and resting upon said shoulder, said base plate being provided with means for carrying an electric light, and a movable lamp top provided with a lower portion which stands over said base plate when the top is closed and prevents displacement thereof, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,018,018. CLIP USED IN CONCRETE CONSTRUCTION. JOSEPH H. STRAUS, Jr., Baltimore, Md., assignor of one-half to Raymond H. Williams, Baltimore, Md. Filed Dec. 5, 1911. Serial No. 663,995. (Cl. 72—122.)



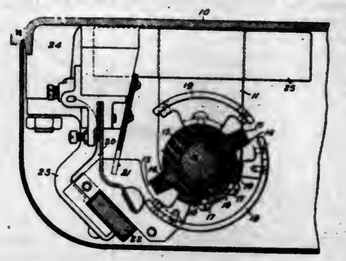
1. A clip for securing together crossing bars comprising a hook at one end engaging around one of the bars, a stretch substantially parallel with said bar crossing outside of and in contact with the second bar to bind it to the first named bar, a loop at the other end of said stretch engaging around the first named bar, a stretch from the loop substantially parallel with the first named stretch to the second bar, and a hook at the end of the last named stretch engaging around the second bar, the last named stretch bent outward substantially at a right angle and back upon itself, intermediate its ends, to form a supporting leg.

2. The hereindescribed reinforcement for floors or other horizontal concrete constructions, comprising two horizontal bars crossing and in contact with each other and a combined clamp and support for said bars comprising a wire bent at one end into a loop and embracing the lower bar and carried substantially horizontally a short distance, thence bent downward and doubled back upon itself forming a leg, thence again carried a short distance substantially horizontally and formed into a loop embracing the upper bar, thence carried substantially horizontally in the opposite direction across under in contact with the lower bar and beyond said lower bar, and terminating in a loop embracing the upper bar.

1,018,019. CONTROLLER. EMMETT W. STULL, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed July 20, 1910. Serial No. 572,892. (Cl. 172—179.)

1. In a controller, a shaft of magnetic material, a drum molded of plastic insulating material on said shaft, a contact segment mounted on said drum, and an iron plug molded in such drum adjacent to an end of such segment.

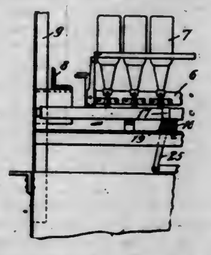
2. In a controller, a shaft of magnetic material, a molded insulating drum mounted on said shaft, contact segments mounted on said drum, contact fingers coöperating with said contact segments, means for producing a magnetic field extending from the shaft across the space occupied by the ends of said contact fingers, and parts of magnetic material embedded in said drum adjacent to ends of said contact segments.



3. In a controller, a shaft of magnetic material, a molded insulating drum mounted thereon, a contact segment mounted on said drum, a part of magnetic material embedded in the drum adjacent to an end of said contact segment, a contact finger coöperating with said segment, a plate of magnetic material on the other side of said contact finger from said drum, and means for creating a difference of magnetic potential between said plate and said shaft.

4. In a controller, a shaft of magnetic material, an insulating drum mounted thereon, a contact segment mounted on said drum, and a ping of magnetic material flared at its inner end and embedded in said drum.

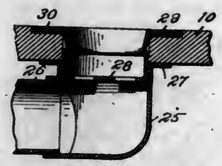
1,018,020. JET-PIPE-CLEANING ATTACHMENT. HENRY E. WERNER, Chicago, Ill., assignor to E. Goldman & Co. Inc., Chicago, Ill., a Corporation of Illinois. Filed July 10, 1911. Serial No. 637,845. (Cl. 137—58.)



1. In combination with a jet-pipe, a nozzle-cleaning device therefor, comprising a bar in the pipe bodily-movable back and forth relative to the nozzles, pins extending from the bar to register with the nozzles, openings in the pipe provided with stuffing-boxes, stems extending through the stuffing-boxes and connected at their inner ends with the bar, a rock-shaft supported on the pipe, connections between the rock-shaft and stems for reciprocating the stems by rocking said shaft, and means for operating the rock-shaft, for the purpose set forth.

2. In combination with a set of jet-pipes, a nozzle-cleaning device therefor, comprising bars in the pipes bodily-movable back and forth relative to the nozzles, pins extending from the bars to register with the nozzles, openings in the pipes provided with stuffing-boxes, stems extending through the stuffing-boxes and connected at their inner ends with the bars, rock-shafts supported on the pipes to extend across the set thereof, rods having crank and link connections with the rock-shaft and to which the outer ends of said stems are connected, arms on the rock-shafts, a reciprocably-supported bar connected with said arms, and an operating-lever with which said bar is connected, for the purpose set forth.

1,018,021. WASTE-FIXTURE. WILLIAM R. WILLETTS, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Original application filed Jan. 3, 1910, Serial No. 536,203. Divided and this application filed July 11, 1911. Serial No. 637,949. (Cl. 4—24.)



1. A waste comprising in combination a drawn sheet metal L member with interior threading and integral therewith, an annular rim flange, and a drawn sheet metal strainer member having a cup-shaped body portion provided with exterior threading and integral therewith an annular rim flange, said L member and said strainer member being adapted to be drawn toward each other by their threadings with the bottom of the object to which they are to be attached between their respective rim flanges and the fixture thus secured in place.

2. A waste comprising in combination a drawn sheet metal L member having a main body portion provided with interior threading and integral therewith an annular rim flange, and a drawn sheet metal strainer member having an exteriorly threaded cup-shaped body portion with a perforated bottom forming strainer bars integral with said body portion and an annular rim flange, said strainer member and L member being adapted to be drawn toward each other by their threading with the bottom of the object to which they are to be attached between their respective rim flanges and the fixture thus secured in place.

3. A waste fixture comprising in combination a drawn sheet metal L member with an annular rim flange, a drawn sheet metal strainer member having a cup-shaped body portion with a rim flange, and means for drawing said L member and strainer member toward each other with the bottom of the object to which they are to be attached between their respective rim flanges and thus securing the fixture in place.

4. A waste fixture comprising in combination a drawn sheet metal L member with interior threading and an annular rim flange, and a drawn sheet metal strainer member having a cup-shaped body portion provided with exterior threading and a rim flange, said L member and strainer member being adapted to be drawn toward each other by their threadings with the bottom of the object to which they are to be attached beween their respective rim flanges and the fixture thus secured in place.

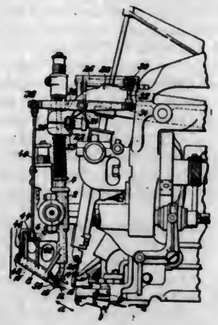
5. A waste fixture comprising in combination a drawn sheet metal L member having a main body portion with an annular rim flange, a drawn sheet metal strainer member having a cup-shaped body portion with a rim flange and a perforated bottom forming strainer bars integral with said body portion, and means for drawing said L member and strainer member toward each other with the bottom of the object to which they are to be attached between their respective rim flanges and thus securing the fixture in place.

[Claim 6 not printed in the Gazette.]

1,018,022. LASTING-MACHINE. ERASTUS E. WINKLEY and JOHN C. SMITH, Lynn, Mass. Filed Apr. 20, 1908. Serial No. 427,972. (Cl. 12—2.)

1. In a lasting machine, pincer jaws for seizing the stock arranged with their gripping faces in a plane at an oblique angle to the horizontal, in combination with means for moving said pincer jaws transversely in said plane and for rotating said jaws about an axis in or substantially parallel to said plane to plait the stock.

2. In a lasting machine, pincer jaws for placing an upper in over-worked position, a pincer carrier for rotatably supporting the pincer jaws at an angle permanently oblique to the plane of the shoe bottom throughout the lasting operation, and means for imparting a turning movement to the pincer jaws within the carrier.



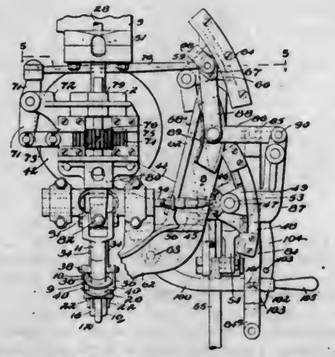
3. In a lasting machine, a pincer jaw carrier extending at an angle permanently oblique to the horizontal, pincer jaws for seizing the stock rotatably sustained in said carrier, mechanism to impart a lasting movement to said jaws, and means controlled by said mechanism to rotate said jaws to plait the stock.

4. In a lasting machine, a pincer jaw carrier extending at an angle permanently oblique to the horizontal, pincer jaws for seizing the stock mounted on a shank journaled within said carrier, a gear on said jaw shank, a second gear meshing therewith, and means to oscillate said second gear to impart a turning movement to said jaws.

5. In a lasting machine, normally open pincer jaws for placing an upper in over-worked position on a last, a plunger engaging one of said jaws, means to reciprocate said plunger to close the jaws, means to impart a turning movement to said jaws about an axis extending obliquely to the horizontal, and an extended bearing surface on one of said parts for maintaining a constant engagement between the jaws and plunger during the turning movement.

[Claims 6 to 15 not printed in the Gazette.]

1,018,023. LASTING-MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed Oct. 21, 1909. Serial No. 523,770. (Cl. 12—2.)



1. A lasting machine, having, in combination, a pincer bar provided with relatively movable pincer jaws, a toggle connecting the jaws, a toggle actuator for opening and closing the jaws, means for operatinng the actuator, and means for rotating the jaws and actuator relative to the actuator operating means, substantially as described.

2. A lasting machine, having, in combination, pincers having jaws adapted to close and open to seize and release the stock, means for rotating said pincers, and toggle means adapted to close and open the jaws mounted to rotate with the pincers, substantially as described.

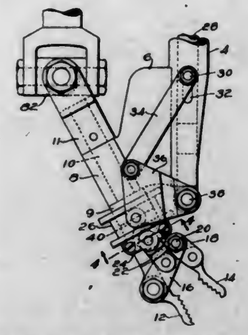
3. A lasting machine, having, in combination, pincers adapted to close and open to seize and release the stock, means for rotating said pincers, toggle pincer closing and opening means mounted to rotate with the pincers, and provision for operating said toggle means mounted independently of the pincers, substantially as described.

4. A lasting machine, having, in combination, pincers, separate trains of mechanisms for imparting lateral and turning movements to said pincers, and provisions for throwing said trains of mechanisms into operation independently, substantially as described.

5. A lasting machine, having, in combination, pincers, separate trains of mechanisms for imparting lateral and turning movements to said pincers, and means under control of the operator for throwing said trains of mechanisms into operation either simultaneously or independently, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,018,024. LASTING-MACHINE PINCERS. ERASTUS E. WINKLEY, Lynn, Mass. Original application filed Oct. 21, 1909, Serial No. 523,770. Divided and this application filed Nov. 11, 1910. Serial No. 591,782. (Cl. 12—11.1.)



1. A lasting machine, having, in combination, a pincer bar, a pincer jaw rigid therewith, a second pincer jaw pivoted on the bar, a toggle connecting the two jaws, and means supported independently of the toggle to actuate the toggle whereby the jaws may be opened and closed, substantially as described.

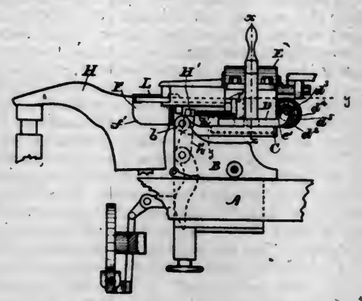
2. A lasting machine, having, in combination, a pincer bar, a pincer jaw rigid therewith, a second pincer jaw pivoted on the bar, an inverted toggle connecting the two jaws at a point intermediate the pivotal connection to the bar and their gripping faces, and actuating means mounted on the pincer bar operating to close the jaws when the toggle is straightened, substantially as described.

3. A lasting machine, having, in combination, a pincer bar, a pincer jaw rigid therewith, a second pincer jaw pivoted on the bar, an inverted toggle connecting the two jaws, a sliding toggle actuator on the pincer bar, a link connecting the toggle and actuator, and means to operate the actuator, substantially as described.

4. A lasting machine, having, in combination, a pincer bar, a pincer jaw rigid therewith, a second pincer jaw pivoted on the bar, a toggle connecting the two jaws at a point intermediate the pivotal connection to the bar and their gripping faces, and means supported independently of the toggle to actuate the toggle whereby the jaws may be opened and closed, substantially as described.

5. A lasting machine, having, in combination, a pincer bar, a pincer jaw rigid therewith, a second pincer jaw pivoted on the bar, a toggle connecting the two jaws at a point intermediate the pivotal connection to the bar and their gripping faces, and an actuator for the toggle to open and close the jaws mounted on the pincer bar, substantially as described.

1,018,025. LASTING-MACHINE. ERASTUS E. WINKLEY and FREDERICK L. ALLEY, Lynn, Mass.; said Alley assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 22, 1896. Serial No. 600,133. (Cl. 12—14.)



1. In a lasting machine the combination with a last clamp or band, of arms connected with opposite sides of said band, longitudinally movable slides, coöperating bearing surfaces on the arms and slides, and mechanism for actuating the slides, substantially as described.

2. In a lasting machine the combination with a movable head carrying lasting devices, and a last band or clamp connected therewith, of means for closing said clamp, and connected mechanism connecting said clamp and head whereby the closing of said clamp will impart a forward movement to said head, substantially as described.

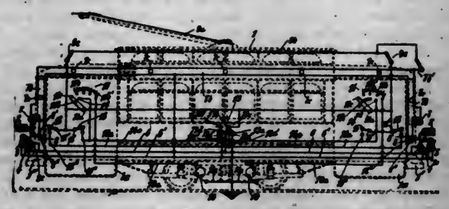
3. In a lasting machine the combination with a last clamp or band, of arms connected to the opposite sides thereof, longitudinally movable slides, coöperating bearing surfaces on said slides and arms for imparting a parallel lateral movement to said arms, elastic means for keeping said bearing surfaces in engagement, and mechanism for actuating the slides.

4. In a lasting machine, the combination with a head carrying lasting devices, of a last clamp or band, means for imparting to said band a longitudinal movement toward and from the last, opening and closing movements and a laterally swinging movement, substantially as described.

5. In a lasting machine the combination of a last clamp or band, and connected mechanism operating whenever it is actuated to impart to said band both a longitudinal movement toward and from the last, and an independent opening and closing movement, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

1,018,026. SAFETY SIGNAL APPARATUS. JOSEPH H. ALANDAR and RAYMOND MCGREGOR, Chicago, Ill. Filed Aug. 29, 1910. Serial No. 579,620. (Cl. 246—28.)

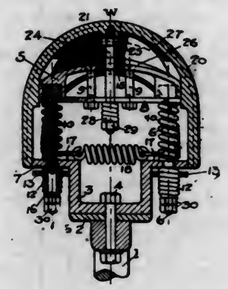


1. In combination, a car and starting and stopping means therefor, and safety signal apparatus therefor com-

prising a signal member, an actuating magnet and means whereby the actuating magnet displays the signal member when energized, an immediate signal-controlling switch, closed to energize and opened to deënergize the actuating magnet, opposed magnets, one closing and the other opening the immediate signal controlling switch, contacts to momentarily energize either of said opposed magnets, and a switch, operated with said starting and stopping means, and adapted to close a circuit through and energize the magnet that opens said immediate signal controlling switch.

2. In combination, an electric car and a controller for starting and stopping and changing the speed of said car, a signal member, an actuating magnet and means whereby the actuating magnet displays the signal member when energized, an immediate signal-controlling switch, closed to energize and opened to deënergize the actuating magnet, opposed magnets, one closing and the other opening the immediate signal controlling switch, contacts to momentarily energize either of said opposed magnets, and a switch, comprising a segment and a finger moved relatively by the operation of said controller, contact between the finger and segment being made when the car is started, and being maintained throughout the speed-changing operation of the controller, but the contact being broken when the controller is operated to stop the car, said switch, thus composed and operated, being adapted, when said contact is made, to close a circuit through and energize said magnet that opens the immediate signal controlling switch.

1,018,027. RESILIENT TIRE FOR WHEELS OF MOTOR-VEHICLES, &c. HENRY M. BAGDIGIAN, Worcester, Mass. Filed Sept. 29, 1911. Serial No. 651,975. (Cl. 152—8.)



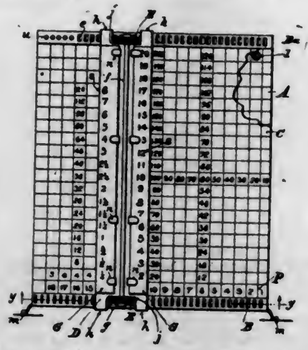
1. A metallic spring tire of the character described; comprising an oppositely flanged circular rim adapted for fitting upon the periphery of the wheel, a series of yieldable resilient sections forming the circumferential exterior thereon, each section composed of a seat member or resistance-plate, a pair of connecting bolts secured in the ends of said plates and respectively sliding through holes in the flanges of said rim, coil-springs arranged on said rods for sustaining the resistance plate, an arched bow-spring beneath the edges of the adjacent plate members, a radially yieldable outer shoe inclosing the said parts, a crescent-shaped elastic cushion between the resistance seat plate and shoe, and means securing the outer shoe and plate together and affording yielding action thereof.

2. In a resilient metallic tire mechanism of the class described, comprising a flanged tire-supporting rim, and a series of yieldable sections thereon, each including a resiliently movable resistance-plate and tension springs therefor; the combination therewith of the transversely positioned bow-springs acting beneath said resistance plates, the ends thereof formed with an inwardly offset slotted foot, slidably supported in connection with the tire-supporting rim, and a pull spring-coil uniting one foot with the other across the rim, substantially as set forth.

3. In a resilient tire mechanism comprising a mounting-rim and series of automatic resilient acting sections thereon, of the character described; the combination with the mounting-rim, the movable resistance-plates connected with radial bolts passing through holes in said rim; of the outer and inner balance springs arranged about said bolts for sustaining said plate, the inclosed springs exerting expanding tension, the projecting springs being pull-springs, the heads of said pull springs being spread and secured to the flanged rim by an attached clamping band or member, and the other end thereof being contracted and secured to the neck of the guiding-bolt, and retaining nuts on said bolts that facilitate disconnection of the tire-sections from said rim, substantially as set forth.

4. A mechanical tire, comprising a centrally channeled, laterally flanged supporting-rim, and a series of resilient sections mounted thereon; said sections each provided with a resiliently supported externally ribbed transverse plate, a pair of guide-bolts therefor having their heads confined to said plate near its ends, a bolt-attaching cross-piece secured thereto, said bolts extending through and slidable in said supporting rim, resilient balance springs coiled about said bolts, an internally ribbed outside shoe fitting over the section and guided against the ends of said transverse plate and the edges of the rim flanges, the transverse edges of said outer shoe being fitted to overlap with the next adjacent section, a cushion spring disposed between said plate and shoe and confined by the ribs thereon, and a shoe-retaining bolt passing through said cushion and plate and provided with a yieldable fastening means below the cross-piece, for the purposes set forth.

1,018,028. PAYMASTER'S CALCULATOR. MARY A. BEALS and MICHAEL J. STARK, Jr., Chicago, Ill.; said Stark assignor to said Beals. Filed Oct. 16, 1911. Serial No. 654,965. (Cl. 235—89.)



1. A device of the nature described, comprising, in combination, a base-board, guides fixedly secured to opposite margins of said base-board said guides having a member provided with a series of equally-spaced perforations, a slide movably mounted upon said guides, said slide having members embracing said guides, there being on said slide upstanding punctured members affording bearings, a shaft journaled in said punctured members, said shaft being located upon said slide and reaching from one end to the other end thereof, and pinions at the ends of said shaft constructed to engage the perforations in said guides.

2. A device of the nature described, comprising, in combination, a base-board, guides fixedly secured to opposite margins of said base-board, said guides having a member provided with a series of equally-spaced perforations, a slide movably mounted upon said guides, said slide having members embracing said guides, there being on said slide upstanding punctured members affording bearings, a shaft journaled in said punctured members, said shaft being located upon said slide and reaching from one end to the other thereof, pinions at the ends of said shaft constructed to engage the perforations in said guides, movable strips upon said slide, and means on said slide for retaining said strips in position thereon.

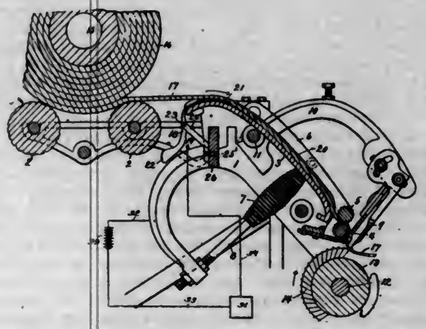
3. A device of the nature described, including, in combination, a base-board, guides fixedly secured to the top and bottom margins of said base-board, said guides having a rack, a slide movably mounted upon said guides, bearings on said slide, a shaft rotatably mounted in said bearings, said shaft being located above said slide and reaching from one end to the other thereof, pinions at the ends of said shaft constructed to engage said racks, means for raising the lower margin of said base board above the supporting surface of an object on which the device is constructed for use to afford space for the lower end of the slide to move horizontally on the lower guide, and means for supporting said base-board in inclined position.

4. A device of the nature described, including, in combination, a base-board, guides fixedly secured to the top and bottom margins of said base-board, said guides having racks, a slide movably located upon said guides, upstanding bearings on said slide, a shaft rotatably mounted in said bearings, said shaft being located above said slide and reaching from one end to the other end thereof, pinions at the ends of said shaft constructed to engage said racks, there being upon the face of said base-board vertical and horizontal rows of figures, and at the margins of said slide a series of figures registering with the figures on said base-board.

5. A device of the nature described, including, in combination, a base-board, guides fixedly secured to the top and bottom margins of said base-board, racks on said guides, a slide movably mounted on said guides, upstanding bearings on said slide, a shaft rotatably mounted in said bearings, said shaft being located above the slide and extending from one end to the other end thereof, pinions at the ends of said shaft constructed to engage said racks, one or more separate cards adapted to be superposed on said base-board, there being ways in said guides to receive said cards, and separate strips, constructed to be removably secured to the said slide, at both sides of said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,018,029. COMBINED EVENER AND STOP-MOTION FOR COMBING-MACHINES. ANDREW W. BELL and WILLIAM A. BELL, Holyoke, Mass. Filed Apr. 10, 1911. Serial No. 619,926. (Cl. 19—25.)



1. The combination, in a combing-machine, with the supporting and actuating members for the lap, of a stop motion, and two suitably supported movable members, one located under each edge of the lap and held out of engagement with the stop mechanism by the lap while it is intact, but free to move into engagement with the stop mechanism whenever the engaging edge of the lap becomes torn or is ruptured, whereby the stop motion operates to stop the machine before there is a complete rupture of the lap.

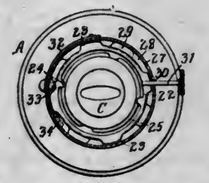
2. The combination, in a combing-machine, with the supporting and actuating members for the lap, including the lap-rolls and the half-lap, of an electric stop-motion-circuit member, and two suitably supported movable members having lap-receiving and contacting parts arranged between said rolls and said half-lap, to be held by the edges of the lap out of contact with said stop-motion-circuit member, and to contact with said circuit member when released by said edges.

3. The combination, in a combing-machine, with the frame, lap-rolls and lap-plate of the machine, of an electric stop-motion-circuit member, and a pair of rockers, one located at each side of the lap-plate, pivotally supported from said frame and having their upper terminals or beaks extending over the rear edge of said lap-plate into the course of the lap adjacent to the side edges thereof, such rockers being provided with means to retain them in contact with said stop-motion-circuit member when there is no lap in said course to contact with said beaks from above.

4. The combination, in a combing-machine, with the frame, lap-rolls and lap-plate of the machine, of an electric stop-motion-circuit member, and a pair of rockers pivotally supported from said frame and having their upper terminals or beaks flattened transversely and extended over the rear end of said lap-plate into the course of the lap adjacent to the side edges thereof, said rockers also having their lower terminals or tails weighted so that the rockers swing into contact with said stop-motion-circuit member when not subject to the influence of the lap above said beaks.

5. The combination, in a combing-machine, with the supporting and actuating members for the lap, and an electric stop-motion-circuit member, of two suitably supported movable members, between said circuit member and the lap, having lap-receiving and contacting parts arranged to be held by the edges of the lap out of contact with said stop-motion-circuit member, and to contact with said circuit member when released by said edges, each of said lap-receiving and contacting parts being narrow relative to the width of the lap so that a sligh tear or rupture in either edge of the lap releases the member held by such edge.

1,018,030. VEHICLE-LAMP. CHARLES L. BETTS, New York, N. Y., assignor to R. E. Dietz Company, New York, N. Y. Filed Nov. 11, 1910. Serial No. 591,799. (Cl. 240—50.)



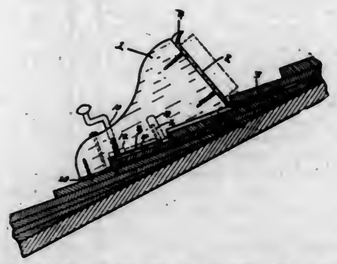
1. The combination with an oil pot having an attaching ring secured thereto and provided with outwardly-projecting attaching lugs, of a lamp body having a flanged attaching collar provided with openings for the passage of said lugs, a spring catch secured to said collar, projecting into the same and engaging one end of one of said lugs, and a stop in said collar engaging the opposite end of said lug, substantially as set forth.

2. The combination with an oil pot having an attaching ring secured thereto which is provided with outwardly projecting attaching lugs, of a lamp body having at its lower end an attaching collar comprising an inwardly projecting flange which is provided with openings registering with said lugs and permitting the passage of said lugs above said flange, said lugs being engaged with said flange by a rotary relative movement of the oil pot and lamp body, and a spring catch secured to the outer side of said attaching collar and having a head which penetrates said collar above its flange and is arranged on the outer side of said ring and engages one of the attaching lugs on said ring, substantially as set forth.

3. The combination with an oil pot, of an attaching

ring secured thereto and provided with outwardly-projecting lugs adapted to engage the lamp body and inwardly-projecting lips adapted to engage the burner, substantially as set forth.

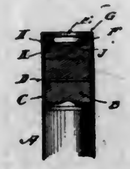
1,018,031. SCAFFOLDING ATTACHMENT FOR ROOFS OF BUILDINGS. COLUMBUS C. CARPENTER, Milwaukee, Wis., assignor of one-half to John P. Moe, Milwaukee, Wis. Filed Aug. 6, 1908. Serial No. 447,189. (Cl. 20—86.)



1. In a device of the described class, the combination of a body member, a plate secured to one end thereof and having forwardly projecting end portions, the lower portion of said plate comprising a wedge shaped member adapted to pass underneath a roof shingle, a coöperating plate secured to the under surface of the body member near its rear end and extending forwardly in a position to pass underneath another roof shingle, a clamping member movably secured to the body member in a position to rest upon the upper surface of said last mentioned shingle, when the device is in position of use, and a clamping set screw connected with the body member and arranged to bear upon the upper surface of the clamping member.

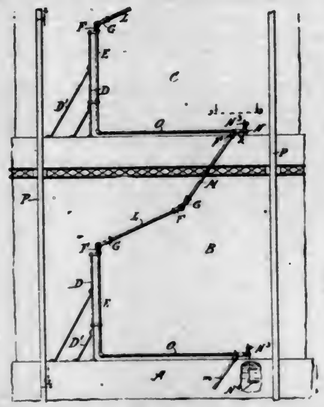
2. In a device of the described class, the combination of a body member, a plate secured to one end thereof and having forwardly projecting end portions, the lower portion of said plate comprising a wedge shaped member adapted to pass underneath a roof shingle, a coöperating plate secured to the under surface of the body member near its rear end and extending forwardly in a position to pass underneath another roof shingle, a clamping member movably secured to the body member in a position to rest upon the upper surface of said last mentioned shingle, when the device is in position of use, and a clamping set screw connected with the body member and arranged to bear upon the upper surface of the clamping member, said body member being provided with a nut socketed therein and engaged by said clamping set screw, and said body member having notches in its under surface into which the shingles of the roof are adapted to fit.

1,018,032. BILLIARD-CUE. FRED E. COOPER, HARRY W. TANEYHILL, and GEORGE K. PAGE, Peoria, Ill. Filed Apr. 2, 1909. Serial No. 487,551. (Cl. 46—9.)



The combination in a billiard cue of its shaft or stick, a ferrule secured thereon and provided with a wall portion to receive the end of said shaft or stick, the sides of said ferrule projecting beyond the said wall portion andd creating a recess, said sides having two inwardly projecting annular flanges on their inner surfaces overhanging said wall portion, one of said flanges lying at the outer extremity of the ferrule, the other being widely separated therefrom and near the bottom of the recess, the distance of separation between the innermost parts of the flanges being greater than the width of the first named flange, said first named flange having a flat under-surface lying in a plane substantially perpendicular to the sides of the ferrule, the other said flange having its upper wall inclined upward and terminating at the base of and beneath the first said flange, its under surface being inclined downwardly to meet the said wall of the ferrule substantially at its place of connection with the sides of the ferrule, and a tip of pliable material to lie in the recess and conform to the contour of the inner surfaces of the sides of said ferrule.

1,018,033. STEAM-PIPE FOR GAS-HOLDERS. WILLIAM ALEXANDER CRAMMOND, New York, N. Y. Filed Sept. 14, 1911. Serial No. 649,315. (Cl. 48—177.)



1. In a telescopic sectional gas holder having cups to form liquid seals at the junction of two sections, a heating arrangement comprising an upper pipe section located at the top of a holder section and arranged to discharge a heating agent into the cup, a vertical lower pipe section adapted to receive a supply of heating agent, said upper section being movable up and down relatively to said lower section, and swinging rigid pipe sections connected with each other and with said upper and lower sections by parallel horizontal pivot joints.

2. In a telescopic sectional gas holder having cups to form liquid seals at the junction of two sections, a heating arrangement comprising an upper pipe section located at the top of a holder section and arranged to discharge a heating agent into the cup, a vertical lower pipe section adapted to receive a supply of heating agent, said upper section being movable up and down relatively to said lower section, and swinging rigid pipe sections connected with each other and with said upper and lower sections by parallel horizontal pivot joints, the vertical pipe section and the swinging sections being located in the same plane, transverse to said parallel pivots.

3. In a telescopic sectional gas holder having cups to form liquid seals at the junction of two sections, a heating arrangement comprising an upper pipe section located at the top of a holder section and arranged to discharge a heating agent into the cup, a lower pipe section adapted to receive a supply of heating agent, said upper section being movable up and down relatively to said lower section, and swinging rigid pipe sections connected with each other and with said upper and lower sections by parallel horizontal pivot joints.

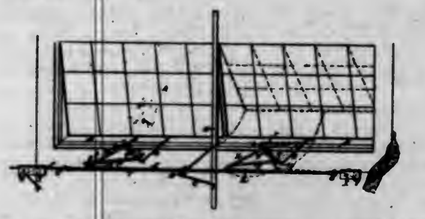
4. In a telescopic sectional gas holder having cups to form liquid seals at the junction of two sections, a heating arrangement comprising an upper pipe section

located at the top of a holder section and arranged to discharge a heating agent into the cup, a lower pipe section adapted to receive a supply of heating agent, said upper section being movable up and down relatively to said lower section, and swinging rigid pipe sections connected with each other and with said upper and lower sections by parallel horizontal pivot joints, said swinging sections being arranged to swing in the same plane.

5. In a telescopic sectional gas holder, having cups to form liquid seals at the junction of two sections, a heating arrangement comprising an upper pipe section located at the top of a holder section and arranged to discharge a heating agent into the cup, a lower pipe section adapted to receive a supply of heating agent, said upper section being movable up and down relatively to said lower section, swinging rigid pipe sections pivotally connected with each other and with said upper and lower sections, and a connecting pipe section extending from the upper pipe section of a holder section to the lower pipe section of the same holder section.

[Claims 6 and 7 not printed in the Gazette.]

1,018,034. WINDOW-SASH OPERATOR. HARLOW N. DAVOCK, Detroit, Mich. Filed Feb. 1, 1911. Serial No. 605,993. (Cl. 16—28.)

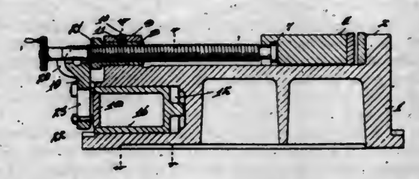


1. In combination with a casing, a frame hinged thereto, a series of link and lever members pivoted to one another and centrally pivoted to said casing, one of said link members being attached to said hinged frame, a tubular member extending adjacent said frame substantially parallel with the plane thereof, one of said levers being pivoted thereto, a flexible member having its center portion slidably engaging through said tubular member, sheave members at each end of said tubular member and spaced therefrom, the ends of said flexible member being passed thereover and attached to the adjacent ends of the tubular member, and means for actuating said sheave members and thereby actuating the frame toward or away from its casing and said tubular and said flexible members, substantially as described.

2. In a combination with a hinged frame, a tubular member slidably supported with respect thereto, a flexible member slidably engaging through said tubular member, the ends thereof extending in loop form beyond the ends of said tubular member and being connected therewith, manually actuatable sheave members over which the looped ends of said flexible member pass, and a series of link and lever members connected with said hinged frame and with said tubular member and with one another, and adapted to be actuated by the movement of said tubular member to and fro with respect to the frame, thereby swinging the same on its hinges, substantially as described.

1,018,035. VISE. ADOLPH L. DE LEEUW, Hamilton, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 4, 1909. Serial No. 520,814. (Cl. 81—33.)

1. In a vise, a pair of jaws, a longitudinally movable sleeve locked against rotation, an adjusting screw having a threaded engagement with said sleeve and connected to one of said jaws, and lever mechanism engaging said sleeve to impart longitudinal movement thereto and to the screw and jaw, to impart clamping movements thereto, whereby the initial adjustment of one jaw relative to the others is made by rotating the screw.



2. In a vise, a fixed and a movable jaw, a longitudinally movable nut, an adjusting screw having a threaded engagement with said nut and rotatively connected with said movable jaw for adjusting the movable jaw relative to the fixed jaw, and means engaging said nut to impart longitudinal movement thereto and to the screw and movable jaw for clamping movements.

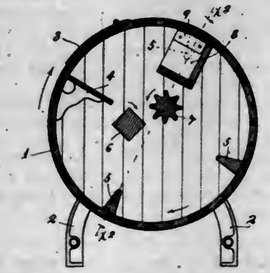
3. In a vise, a fixed and a movable jaw; a rotatively adjustable screw engaging the movable jaw, a longitudinally movable nut, locked against rotation, engaged with said screw, and pressure devices engaging said nut for actuating the same.

4. In a vise, a fixed and a movable jaw, a rotative adjustable screw engaging said movable jaw for initial adjusting of the movable jaw relative to the fixed jaw, and means locked against rotation and engaged with screw for longitudinally moving said screw and movable jaw independent of its rotative adjustment.

5. In a vise, a fixed and a movable jaw, a rotatably adjustable and longitudinally movable adjusting screw engaging said movable jaw, a longitudinally movable sleeve nut locked against rotation and engaging with said screw and pressure devices engaging said nut for longitudinally moving the same, whereby an initial adjustment of the movable jaw is made relative to the fixed jaw by rotative action of the screw, and a final longitudinal clamping movement through the actuation of the power devices.

[Claims 6 to 9 not printed in the Gazette.]

1,018,036. COMBINED CHURN AND BUTTER-WORKER. REUBEN B. DISBROW, Owatonna, Minn. Filed Sept. 21, 1911. Serial No. 650,578. (Cl. 31—25.)



1. In a machine of the kind described, the combination with an approximately horizontal rotary drum having internal working rollers, of a divider projecting inward from the intermediate portion of the shell of the drum.

2. In a machine of the kind described, the combination with an approximately horizontal rotary drum having coöperating working rollers and lifting shelf within the same, of a divider projecting inward from the intermediate portion of the shell of the drum toward one of the said rollers.

3. In a machine of the kind described, the combination with an approximately horizontal rotary drum having an internal lifting shelf and coöperating working rollers within said drum, of a divider projecting inward of the

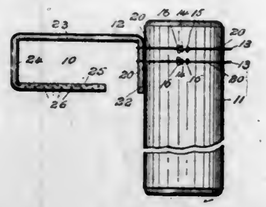
intermediate portion of the shell of the drum, the said lifting shelf being terminated adajacent to one of the said rollers and the said divider being terminated adjacent to the other of the said rollers.

4. In a machine of the kind described, the combination with an approximately horizontal rotary drum having an internal working roller, of a divider blade projecting inward from the intermediate portion of the shell of the drum and located in a plane that transversely intersects the axis of the drum.

5. In a machine of the kind described, the combination with an approximately horizontal rotary drum having cooperating working rollers and lifting shelf within the same, of a divider blade projecting inward from the intermediate portion of the shell of the drum toward one of said rollers, and located in a plane that intersects the axis of the drum approximately at a right angle.

[Claims 6 and 7 not printed in the Gazette.]

1,018,037. CLOTHES-DRIER. FRANK DUNHAM, New York, N. Y. Filed Oct. 11, 1910. Serial No. 586,489. (Cl. 34—26.)



1. In a clothes drier of the character described, a device consisting of a tube which is bent in a substantially rectangular form and having its lower horizontal portion provided with a plurality of perforations.

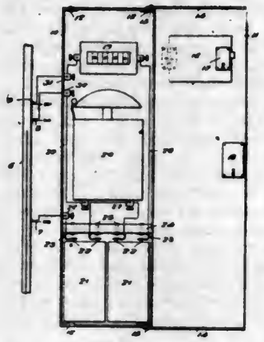
2. In a clothes drier of the character described, the combination with a suitable support, of a substantially rectangular tubular device having its lower horizontal portion provided with a plurality of perforations, and means adapted to detachably connect one of its vertical end portions to such suitable support.

3. In a clothes drier of the character described, a supporting pipe, a device consisting of a tube which is bent in a substantially rectangular form and having a perforated lower horizontal portion, and means adapted to detachably connect one of the vertical end portions to the supporting pipe.

4. In a clothes drier of the character described, the combination with a suitable support, of a corrugated band removably held to the support, and a substantially rectangular tube having one of its vertical portions guided through one of the corrugations of the band and having a plurality of perforations provided in its lower horizontal portion.

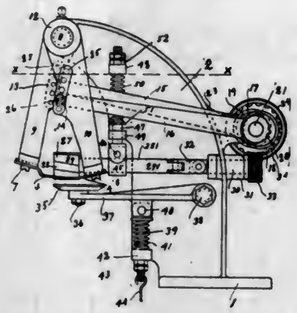
1,018,038. SIGNALING APPARATUS FOR TURPENTINE-STILLS. ROBSON DUNWODY, Kirkwood, Ga. Filed Mar. 10, 1911. Serial No. 613,623. (Cl. 177—311.)

An alarm and registering apparatus for a turpentine still comprising a thermometer having a portion adapted to be inserted into said still, electric contacts located in the bore of that portion of said thermometer outside the still at positions corresponding with three predetermined temperatures, a casing inclosing said outside portion of the thermometer and said contacts, said casing being provided with a door having a lock, an audible electric alarm connected with the lower and middle of said three contacts, an electric registering device connected between the middle and upper contacts, an electric battery in circuit with said alarm and register, a box inclosing said alarm register and battery, a door for said box having a lock and a sight opening for said register, and a separate



closure for said opening carried by said door and provided with its own lock.

1,018,039. SEAM-TRIMMING AND WELT-BEATING MACHINE. CLARENCE L. EATON, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 31, 1908. Serial No. 450,973. (Cl. 12—82.)



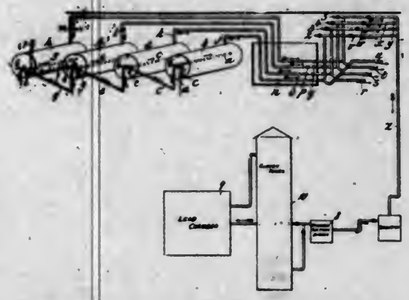
1. In a seam trimming and welt beating machine, in combination, a work support, a pair of rocking levers above the work support, carrying at their lower ends horizontally arranged cutters with opposed shearing edges, means for reciprocating said levers in opposite directions to move both cutters and means whereby one of said levers may be fixed and adjusted in a stationary position with relation to the movement of the other of said levers and its cutter, substantially as described.

2. In a machine for trimming the inseam and beating out the welt of a welted shoe in combination, a work support, means for trimming the inseam of a shoe supported on the work support, and means acting on the shoe to rub the trimmed seam and beat out the welt, substantially as described.

3. In a machine for trimming the inseam and beating out the welt of a welted shoe in combination, a work support, means for trimming the inseam of a shoe supported on the work support, and a roll arranged to act upon the trimmed seam and welt to rub the seam and beat out the welt, substantially as described.

4. In a machine for trimming the inseam and beating out the welt of a welted shoe in combination, a work support, means for trimming the inseam of a shoe supported on the work support, a roll acting upon the trimmed seam and welt to rub the seam and beat out the welt, a vertically yielding bearing for the roll, and means for positively rotating the roll, substantially as described.

1,018,040. UTILIZING SULFUR-CONTAINING PETROLEUM. JOHN E. EGGLESTON, Bayonne, N. J., assignor to Standard Oil Company, Bayonne, N. J., a Corporation of New Jersey. Filed Aug. 21, 1903. Serial No. 170,357. (Cl. 23—1.)



1. The improvement in utilizing Beaumont or analogous petroleum, consisting in passing a stream of such sulfur-containing oil through a still maintained at a temperature sufficient to evolve hydrogen sulfid, to wit, between about 300° F. and about 500° F., cooling the evolved gas to condense and so to separate therefrom the oil vapors burning the gas, and subjecting the products of combustion to operations for converting sulfur dioxid into sulfuric acid, substantially as described.

2. The improvement in utilizing Beaumont or analogous petroleum, consisting in passing a stream of such sulfur-containing oil through a still maintained at a temperature sufficient to evolve hydrogen sulfid, to wit, between about 300° F. and about 500° F., and subjecting the evolved gas to operations as specified for utilizing the sulfur content of hydrogen sulfid, substantially as described.

3. The improvement in utilizing Beaumont or analogous petroleum, consisting in passing a stream of such sulfur-containing oil through a still maintained at a temperature sufficient to evolve hydrogen sulfid, to wit, between about 300° F. and about 500° F., substantially as described.

4. The improvement in utilizing Beaumont or analogous petroleum, consisting in passing a stream of such sulfur-containing oil through a still maintained at a temperature sufficient to evolve hydrogen sulfid, to wit, between about 300° F. and about 500° F., and cooling the evolved gas to condense and so to separate therefrom the oil vapors, and burning the gas, substantially as described.

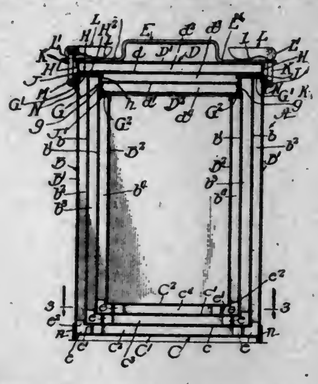
5. The improvement in utilizing Beaumont or analogous petroleum, consisting in passing a stream of such sulfur-containing oil through a series of stills maintained at gradually increasing temperatures between about 300° F. and about 500° F., substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,018,041. NON-HEAT-CONDUCTING RECEPTACLE. ANTON EVENSEN, Chicago, Ill. Filed May 31, 1911. Serial No. 630,317. (Cl. 62—23.)

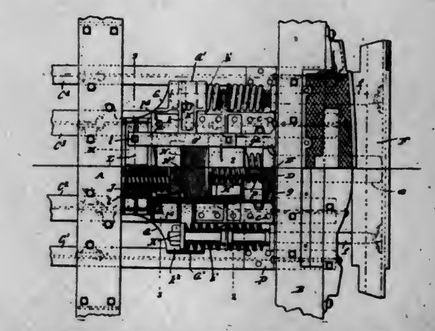
1. A non-heat conducting vessel having side walls and a bottom wall each comprising inner and outer members of sheet material spaced from each other, and one or more intermediate wall members of sheet material dividing the space between said inner and outer wall members into two or more air spaces, said side wall members and bottom wall members being connected together to provide two or more non-communicating jacket spaces one within the other inclosing the sides and bottom of said vessel, spacing pieces interposed between said side and bottom wall members at the junction of the latter, and means for closing the upper ends of the spaces between said side wall members adapted to provide a seat for a lid or closure for said vessel.

2. A non-heat conducting vessel having side walls and a bottom wall, each comprising inner and outer wall members of sheet metal spaced from each other, and a plurality of intermediate wall members of sheet fiber dividing the space between said inner and outer wall members into two or more air spaces, said side wall members and bottom wall members being connected together to provide three or more non-communicating jacket spaces one within the other inclosing the sides and bottom



of said vessel, spacing pieces interposed between said side and bottom wall members at the junction of the latter, and means for closing the upper ends of the spaces between said side wall members and adapted to provide a seat for a lid or closure for said vessel and provided with flanges forming grooves to receive the upper edges of the intermediate side wall members.

1,018,042. BUFFING MECHANISM FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y., assignor to Standard Coupler Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 21, 1910. Serial No. 588,358. (Cl. 213—39.)



1. In buffing mechanism for railway cars, the combination with the I-beams forming longitudinal sills and the end sill and a buffer beam secured on the top flanges of the I-beams, of a buffing mechanism embodying separate side castings resting on the I-beams and bridged between and having their outer and inner ends abutting directly against the buffer beam and end sill, respectively, a spring cup casting bridging and having its extremities interlocked with the inner ends of the side castings and resting against and held against inward movement by the end sill, a buffer and yielding pressure resisting members housed by the side castings and interposed between the spring cup casting and buffer; whereby strains will be transmitted from the buffer through the yielding members and cup casting directly to the end sill and from the buffer beam through the side castings directly to the end sill.

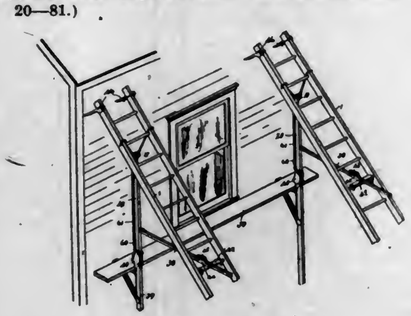
2. In buffing mechanism for railway cars, separate side castings between which the center yielding pressure resisting members are confined transversely, each of said castings having an integral outwardly projecting housing for a side stem follower, an independent bridging casting interlocked transversely with the rear ends of the side castings, and means independent of the side castings for supporting the bridging casting against movement rearwardly on the side castings.

3. In buffing mechanism for railway cars, the combination with the I-beams constituting longitudinal sills, the buffer beam and end sill mounted on the I-beams, of independent side castings secured to the I-beams in proximity to the buffer beam and each abutting against the buffer beam and end sill and a separate casting having its transverse extremities interlocked with the rear ends of the side castings in proximity to the end sill whereby the parts are held against independent lateral movement and each of said castings may transmit inward pressure to the end sill independently of the other.

4. In buffing mechanism for railway cars, a pair of independent side castings having ways on their proximate faces for the center yielding members and brackets on their outer faces for the side yielding members, and a bridging casting forming an abutment for the center yielding members, said bridging casting having hook-like extensions overlapping and engaging the side castings whereby the parts are held against independent transverse movement.

5. In buffing mechanism for railway cars, the combination with the independent side castings having ways on their proximate faces for center yielding members, of a bridging casting for the inner ends of the side castings and having extensions interlocking with the side castings and intermediate parallel chambers for the inner springs of the yielding members, the rear faces of the side and bridging castings being in the same plane.

1,018,043. SCAFFOLD. WILLIAM C. GAW, Cleveland, Ohio. Filed Aug. 29, 1910. Serial No. 579,521. (Cl. 20—81.)



1. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a straight rigid member adapted to be attached to the side rails of said ladder at their upper ends and to depend therefrom, rigid means adapted to connect the lower portion of said depending member with laterally separated portions of said ladder to prevent swaying of said depending member and to hold the same parallel to the said wall, a bracket adapted to be slidably mounted upon said rigid depending member, and to support a platform, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted position.

2. A swinging scaffold comprising in combination, a ladder adapted to be inclined against a wall, a straight rigid member, a supporting member carried by said rigid member and having an inclined shank terminating in a downturned hook, a suspending member adapted to be attached to said ladder and having an opening adapted to receive said hook, a rigid brace adapted to connect a lower portion of said rigid member with a corresponding portion of said ladder, a bracket adapted to be slidably mounted upon said rigid member and to support a platform, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted position.

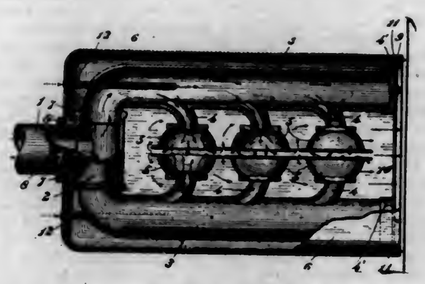
3. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a plate having means by which it can be suspended from said ladder and having an elongated vertical slot, a straight rigid member having a hook at its upper end adapted to take into the lower part of said slot, said hook being adapted to engage and securely hold said plate by engagement with the upper part of said slot, and means slidably adjustable upon said rigid member for supporting a platform.

4. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a plate having out-turned hooks adapted to be engaged with the side rails of said ladder, and having an elongated vertical slot, a straight rigid member having a hook at its upper end adapted to take into said slot, said hook having a notch in its upper surface adapted to engage and securely hold said plate, and means slidably adjustable upon said rigid member for supporting a platform.

5. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall and having a foot at its upper end adapted to space the same from said wall, a straight rigid member having a hook at one end, said hook having an inclined shank whereby it is offset from said rigid member, a plate adapted to be supported from said ladder and having an aperture adapted to receive said hook, a rigid brace adapted to connect a lower portion of said rigid member and to support a platform, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

1,018,044. MUFFLER. JOHN T. GILMER, Florala, Ala. Filed June 26, 1911. Serial No. 635,495. (Cl. 121—116.)



1. A muffler comprising a pair of tubular members adapted to be secured to the exhaust pipe of an engine, and a series of nozzles extending toward each other from the opposed surfaces of said tubular members.

2. A muffler comprising a pair of tubular members having closed outer ends and adapted to be secured to the exhaust pipe of an engine, outlet nozzles projecting toward each other from said tubular members, and spreaders on the ends of said nozzles.

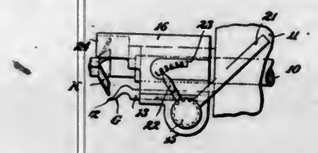
3. A muffler comprising a pair of tubular members having closed outer ends and adapted to be secured to the exhaust pipe of an engine, outlet nozzles projecting toward each other from said tubular members, and spreaders adjustably fitted on the ends of the nozzles.

4. A muffler comprising a housing secured upon the end of an engine exhaust pipe, means leading from the said exhaust pipe within the housing to permit expansion of the exhaust gases, and means communicating with said first mentioned means and discharging into the housing to successively permit increased expansion.

5. A muffler comprising expansion members adapted to be secured to the exhaust pipe of an engine, outlets arranged successively along the said members, and air intakes leading from the outside air through the front ends of said members.

[Claim 6 not printed in the Gazette.]

1,018,045. SHANK-TRIMMING MACHINE. GEORGE GODDU, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 25, 1908. Serial No. 454,727. (Cl. 12—85.)



1. A shank trimming machine having, in combination, a work-guide having a portion adapted to engage the bottom of the out-sole channel, and a trimming knife having its cutting portion adapted to trim off a portion of the edge of the sole, said guide constituting the only work guiding instrumentality and permitting movement of the shoe with relation to the guide and knife so that more or less material may be trimmed off of the sole edge, substantially as described.

2 A shank trimming machine having, in combination, a work-guide having a portion adapted to engage the bottom of the out-sole channel, and a rotary trimming knife having its cutting portion adapted to trim off a portion of the edge of the sole, said guide constituting the only work guiding instrumentality and permitting movement of the shoe with relation to the guide and knife so that more or less material may be trimmed off of the sole edge, substantially as described.

3. A shank trimming machine having, in combination, a work-guide having a portion adapted to engage the bottom of the out-sole channel, a trimming knife having its cutting portion adapted to trim off a portion of the edge of the sole, said guide constituting the only work guiding instrumentality and permitting movement of the shoe with relation to the guide and knife so that more or less material may be trimmed off of the sole edge, and means for adjusting the relative position of the guide and knife during the continued operation of the machine, substantially as described.

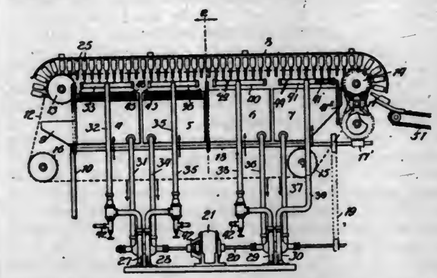
4. A shank trimming machine having, in combination, a work-guide having a portion adapted to engage the bottom of the out-sole channel, a trimming knife having its cutting portion adapted to trim off a portion of the edge of the sole, said guide constituting the only work guiding instrumentality and permitting movement of the shoe with relation to the guide and knife so that more or less material may be trimmed off of the sole edge, and means for adjusting the relative position of the guide and knife, substantially as described.

5. The combination with a work guide arranged to engage a shoe sole, of a sole trimming knife, a slide carrying the work guide adjustable longitudinally to change the position of the guide with relation to the knife and provided with a rack, an actuating pinion engaging the rack, and means for indicating the position of the guide comprising a pointer operatively connected to the pinion and a series of graduations cooperating with the pointer, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,018,046. METHOD OF CLEANING BOTTLES. SIGMUND L. GOLDMAN, Chicago, Ill. Filed June 15, 1910, Serial No. 566,936. Renewed Nov. 27, 1911. Serial No. 662,765. (Cl. 141—7.)

1. The improvement in the art of cleansing bottles and the like by subjecting them to the action of jets of water under pressure, which consists in providing a series of water-jets under relatively different pressures, and subjecting the bottles to be cleaned to the action of said jets successively, for the purpose set forth.



2. The improvement in the art of cleansing bottles and the like by subjecting them to the action of jets of water under pressure, which consists in providing a series of water-jets under relatively different pressures and temperatures, and subjecting the bottles to be cleaned to the action of said jets successively, for the purpose set forth.

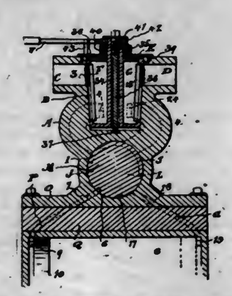
3. In the art of cleansing bottles and the like by subjecting them to the action of jets of water under pressure which successively vary in temperature, the improvement which consists in successively subjecting the bottles to the action of jets of water under weak pressure and jets of hot water under strong pressure, for the purpose set forth.

4. In the art of cleansing bottles and the like by subjecting them to the action of jets of water under pressure which successively vary in temperature, the improvement which consists in successively subjecting the bottles to the action of jets of warm water under weak pressure, jets of hot water and then jets of warm water, both under strong pressure, and jets of cool water, for the purpose set forth.

5 In the art of cleansing bottles and the like by subjecting them to the action of jets of water under pressure which successively vary in temperature, the improvement which consists in successively subjecting the bottles to the action of jets of warm water under weak pressure, jets of hot water and then jets of warm water, both under strong pressure, and jets of cool water under strong pressure, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,018,047. COMBINED THROTTLE AND REVERSING VALVE. ALFRED HACKETT, Toronto, Ontario, Canada. Filed May 13. 1911. Serial No. 626,043. (Cl. 136—12.)



1. A valve of the class described comprising a valve-casing provided with a first chamber provided with intake and exhaust ports, and further provided with a second-chamber connected with the first-mentioned chamber by a pair of live-steam ports and a pair of exhaust-steam

ports; a reversing valve mounted in the first-mentioned

5. A valve of the class described comprising a valve-

ed engagement with each other within the base piece,

automatically gripping said crusher bar and automatically

ports; a reversing valve mounted in the first-mentioned chamber; a partition dividing this valve into two separate chambers each of which is provided with a port; a distributing-valve mounted within said second-mentioned chamber; a partition dividing this valve into two distinct chambers, each of the said chambers being provided with a port which co-acts with its respective pair of said live-steam and exhaust-steam ports, and the said chambers being further each provided with a pair of ports which co-act with ports in said valve-casing whereby the ingress and egress of steam to and from a cylinder is controlled, as and for the purpose specified.

2. A valve of the class described comprising a valve-casing provided with a first-chamber provided with intake and exhaust ports, and further provided with a second-chamber connected with the first-mentioned chamber by a pair of live-steam and a pair of exhaust-steam ports, the ends of which opening into the first-mentioned chamber are spaced apart; a reversing valve mounted in the first-mentioned chamber; a partition dividing this valve into two separate chambers each of which is provided with a port which operate respectively between the ends of the said live-steam and exhaust-steam ports opening into the first-mentioned chamber, for the purpose set forth; a distributing-valve mounted within said second-mentioned chamber; a partition dividing this valve into two distinct chambers, each of the said chambers being provided with a port which co-acts with its respective pair of said live-steam and exhaust-steam ports, and the said chambers being further each provided with a pair of ports which co-act with ports in said valve-casing whereby the ingress and egress of steam to and from a cylinder is controlled, as and for the purpose specified.

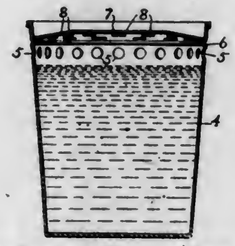
3. A valve of the class described comprising a valve-casing provided with a first-chamber provided with intake and exhaust ports, the inner end of each of which is flared as described, and further provided with a second-chamber connected with the first-mentioned chamber by a pair of live-steam and a pair of exhaust-steam ports; a reversing valve mounted in the first-mentioned chamber; a partition dividing this valve into two separate chambers each of which is provided with a port; means for limiting the range of movement of said valve so that the live-steam chamber thereof will always be in communication with said intake-port, and the exhaust-steam chamber thereof will always be in communication with said exhaust port; a distributing valve mounted within said second-mentioned chamber; a partition dividing this valve into two distinct chambers, each of the said chambers being provided with a port which co-act with its respective pair of said live-steam and exhaust-steam ports, and the said chambers being further each provided with a pair of ports which co-act with ports in said valve casing whereby the ingress and egress of steam to and from the cylinder is controlled, as and for the purpose specified.

4. A valve of the class described comprising a valve-casing provided with a first-chamber provided near its upper end with intake and exhaust ports, the inner end of each of which is flared, as described, and further provided with a second-chamber connected with the first-mentioned chamber by a pair of live-steam ports and a pair of exhaust-steam ports, the upper ends of which open into the first-mentioned chamber near the bottom thereof and are spaced apart; a reversing valve mounted in the first-mentioned chamber; a partition dividing this valve into two separate chambers each of which is provided with a port, means for limiting the range of movement of said valve so that the ports opening from the said chambers thereof can be made to register at will with the desired one of the said live-steam, and the desired one of said exhaust-steam ports; a distributing-valve mounted within said second-mentioned chamber; a partition dividing this valve into two distinct chambers, each of the said chambers being provided with a port which co-acts with its respective pair of said live-steam and exhaust-steam ports, and the said chambers being further each provided with a pair of ports which co-act with ports in said valve-casing whereby the ingress and egress of steam to and from a cylinder is controlled, as and for the purpose specified.

5. A valve of the class described comprising a valve-casing provided with a chamber provided near its upper end with intake and exhaust ports the inner ends of each of which is flared, as described, and further provided with a pair of live-steam, and exhaust-steam, ports, opening from said chamber near the bottom thereof and spaced apart; a reversing valve mounted in said chamber; a partition dividing this valve into two separate chambers each of which is provided with a port, and means for limiting the range of movement of said valve so that the ports opening from the said chambers thereof can be made to register, at will, with the desired one of the said live-steam, and the desired one of said exhaust-steam, ports, as and for the purpose specified.

[Claims 6 to 13 not printed in the Gazette.]

1,018,048. ORCHARD-HEATER. JAMES L. HAMILTON, Grand Junction, Colo., assignor to The Hamilton Orchard Heater Company, a Corporation of West Virginia. Filed Jan. 3, 1911. Serial No. 600,623. (Cl. 126—59.5.)



1. An orchard heater comprising a liquid fuel reservoir, having draft openings near the top thereof, and a perforated annular deflecting plate removably supported within and below the top of the reservoir but above the draft openings.

2. An orchard heater comprising a liquid fuel reservoir having draft openings near the top thereof, and a perforated annular deflecting plate having an upward slope toward the center and removably supported within and below the top of the reservoir, but above the draft openings.

3. An orchard heater comprising a frusto-conical liquid fuel reservoir having draft openings near the top thereof, and a perforated annular deflecting plate removably supported within and below the top of the reservoir but above the draft openings.

4. An orchard heater comprising a frusto-conical liquid fuel reservoir having draft openings near the top thereof, and a perforated annular deflecting plate having an upward slope toward the center and removably supported within and below the top of the reservoir but above the draft openings.

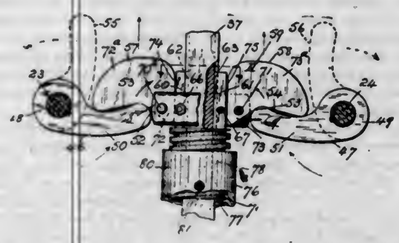
5. An orchard heater comprising a frusto-conical liquid fuel reservoir having draft openings near the top thereof, a circumferential rib immediately above said draft openings, and a perforated annular deflecting plate of such outside diameter that it will fit within the top of the reservoir and be supported on the circumferential rib.

1,018,049. RESILIENT TIRE. MELANCTHON HANFORD and DANIEL LEE TAYLOR, Malden, Mass.; said Hanford assignor to said Taylor. Filed Aug. 16, 1910. Serial No. 577,428. (Cl. 152—8.)

In a wheel, the combination with a wheel rim, of an annular base piece encircling the rim and having concaved sides, a plurality of load supporting arches, each having its sides curved to fit the curved sides of the base piece, a wear envelop encircling and inclosing the arches, bolts passing through the base piece and the edges of the envelop for securing the latter in position, said bolts each having a male and a female section having screw threaded engagement with each other within the base piece, clamping rings extending around the base piece and having convex sides to fit the concave shape of the load-supporting arches, bolts extending through the base piece,

arches and rings and clamping the parts in position, and means associated with the last mentioned bolts and co-operating with the wheel rim, to prevent creeping of the tire.

1,018,050. SUBAQUEOUS ROCK-BREAKER. ALEXANDER W. HASSELL, Jersey City, N. J., assignor, by mesne assignments, of one-half to Hasl-Coe Construction Company, a Corporation of New York. Filed July 26, 1910. Serial No. 573,864. (Cl. 37—50.)



1. In a device of the class described in combination, lifting means, a crusher bar, and a gripping device adapted to coöperate with said lifting means and said crusher bar; said gripping device including means for gripping the crusher bar when the gripping device is engaged by the lifting means, and means for disengaging the gripping device from the crusher bar when the gripping device is disengaged from the lifting means; and means for limiting the downward movement of the gripping device.

2. In a device of the class described in combination, lifting means, a crusher bar, and a gripping device; said gripping device including a clamping plate in operative relationship to the crusher bar, and a lever arm in operative relationship to the lifting means, the relationship of parts being such that the clamping plate is in operative engagement with the crusher bar when the lifting means is in operative engagement with the lever arm, and the clamping plate is disengaged from the crusher bar when the lifting means is disengaged from the lever arm.

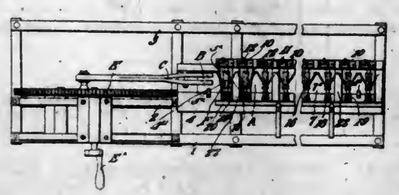
3. In a device of the class described in combination, lifting means, a crusher bar, and a gripping device; said gripping device including means for engaging the crusher bar, and means for automatically disengaging the crusher bar from the gripping device when the crusher bar is raised to a predetermined point; and means for limiting the downward movement of the gripping device.

4. In a device of the class described in combination, lifting means, a crusher bar, and a gripping device; said gripping device including means for automatically engaging the crusher bar, and means for automatically releasing the crusher bar.

5. In a device of the class described in combination, horizontal transmission shafts, elevating elements on said shafts, a crusher bar, a gripping device slidable on said crusher bar, said gripping device including means for automatically gripping said crusher bar and automatically disengaging said crusher bar, and means for adjusting the gripping device with relation to the transmission shafts.

[Claims 6 and 7 not printed in the Gazette.]

1,018,051. SICKLE-SHARPENER. CHARLES O. HATHAWAY and FRANCIS WM. HUFFAKER, Big Timber, Mont. Filed July 12, 1911. Serial No. 638,168. (Cl. 51—S.)



1. The combination with a support, and means for oscillating a mowing machine knife in said support mounted for oscillation thereon, and means for oscillating said knife, of a frame pivoted to the support and adapted to rest above the knife, a series of guides carried by the frame, one opposed to each blade of the knife, and a spring actuated blade sharpener carried by the frame and mounted in each guide.

2. The combination with a support, and means for oscillating a mowing machine knife in said support mounted for oscillation thereon, and means for oscillating said knife, of a frame pivoted to the support and adapted to straddle the knife, a series of guides carried at one side of the frame, a spring mounted in each guide, and a blade sharpener pivotally mounted in the frame and having its free end cushionedly engaged by said spring in the guide.

3. The combination with a support, and means for oscillating a mowing machine knife in said support mounted for oscillation thereon, and means for oscillating said knife, of a frame swingingly mounted to the support with relation to the knife, means for locking the same in operable relation to the knife, and a plurality of spring tensioned blade sharpeners, one to each blade of the knife, mounted in the frame.

4. The combination with a support, and means for oscillating a mowing machine knife thereon, of a frame pivoted to the support and adapted to rest above the knife, a series of guides carried by the frame, one opposed to each blade of the knife, and a rotatably mounted and spring actuated blade sharpener carried by the frame and mounted beneath the guide.

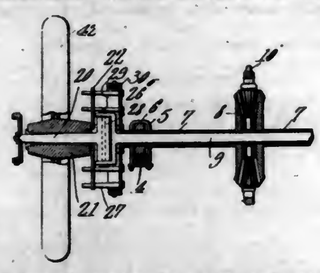
5. The combination with a support, and means for oscillating a mowing machine knife thereon, of a frame pivoted to the support and adapted to straddle the knife, a series of guides carried at one side of the frame, a spring mounted in each guide, and a rotatable blade sharpener mounted to swing longitudinally in the frame and have its free end cushionedly engaged by said spring in the guide.

[Claim 6 not printed in the Gazette.]

1,018,052. MOTOR-VEHICLE. CHARLES LIMON HEMENWAY and FRANK WILLIAM UPDEGRAFF, Covelo, Cal. Filed May 24, 1910. Serial No. 563,280. (Cl. 21—90.)

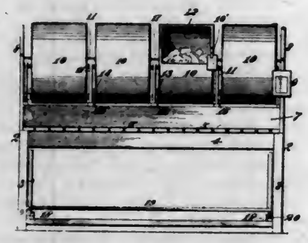
In a device of the class described, an axle; a tubular member mounted for rotation upon the axle; a movable axle end; a wheel upon the axle end; a plane upon the inner end of the hub of the wheel, the plate being provided with openings; a plate upon the tubular member, provided with a peripheral flange; a brake engaging the flange; fingers upon the last named plate, the fingers being located between the tubular member and the flange,

entering, removably, the openings in the first named plate; connections between the axle and the movable



axle end, located between the plates; and means for rotating the tubular member.

1,018,053. LISTING AND MARKING TABLE. BERT L. HERRICK, Oakland, Cal. Filed Oct. 3, 1910. Serial No. 585,011. (Cl. 45—16.)

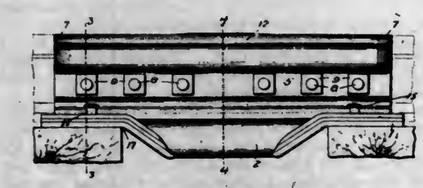


1. The combination in a listing and marking apparatus, of a table, a listing desk, bearings upon the table, containers having pivots turnable in the bearings and adapted to be turned to receiving and discharging positions with relation to the table, and latches to retain the containers in either position.

2. A listing and marking table comprising a receiving section formed of a plurality of horizontally spaced slats, a parallel, continuous area, a plurality of movable containers disposed centrally between said receiving table and the marking area, and a movable carriage mounted below the table top and adapted to be moved transversely across the table.

3. A listing and marking table comprising a frame, a platform formed of spaced slats, a listing board, independent, movable, open-mouthed containers adapted to receive articles, a list-holding clip secured upon each of said containers, a sliding bolt, and a plurality of fixed lugs secured upon each of the containers, whereby the latter may be adjusted temporarily in their several positions.

1,018,054. RAILWAY-JOINT. LOUIS R. HIBSHMAN and HARRY S. HOLLAR, Harrisburg, Pa. Filed May 31, 1911. Serial No. 630,521. (Cl. 238—2.)



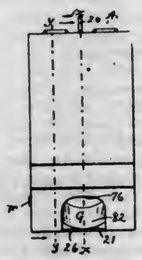
1. A railway joint comprising a base plate having a downwardly projecting portion on either side thereof and provided with a raised portion extending in the direction of its length, said raised portion being narrower along the said downwardly projecting portions than at its extremities and having the lateral edges of the wider portions slightly lower than the central parts of said wider portions, a plurality of side angle bars adapted to be bolted to the rails and provided with longitudinally extending shoulders adapted to embrace the under surface of the heads of the rails on either side thereof and form a support therefor, and means for securing said angle bars and said base plate to the ties.

2. A railway joint comprising a base plate having a downwardly projecting portion on either side thereof, said portions being adapted to lie between two ties and prevent longitudinal movement of the plate, a raised part extending along the central portion of said plate in the direction of its length, said raised portion being narrower along the said downwardly projecting portions than at its extremities, the said narrower part sloping longitudinally downward toward a point midway between the two extremities, a plurality of side angle bars adapted to be secured on either side of the rail ends to be joined by means of bolts and nuts, and means for securing the base plate and side angle bars to the ties.

3. A railway joint comprising a base plate, a raised part extending along the central portion of said plate in the direction of its length, said raised portion sloping longitudinally downward toward a point midway between the extremities of the plate, and underneath the meeting ends of the rails, a plurality of side angle bars adapted to be secured to the sides of the rail ends to be joined, the outside angle bar being provided with an upwardly rising extension adapted to lie adjacent to the heads of the rails, the highest portion of said extension being disposed at the meeting ends of the rails and in a vertical plane slightly above the heads of the rails and means for securing said base plate and angle bars to the ties.

4. A railway joint comprising a base plate having a downwardly projecting portion on either side thereof and provided with a raised portion extending in the direction of its length, said raised portion being narrower along the said downwardly projecting portions than at its extremities and having the lateral edges of the wider portions slightly lower than the central parts of said wider portions, said narrower portion sloping longitudinally downward toward a point midway of the tow extremities, a plurality of side angle bars adapted to be secured to the sides of the rail ends to be joined, the outside angle bar being provided with an upwardly rising extension, adapted to lie adjacent to the heads of the rails and having its extremities curved, the highest portion of said extension being disposed at the meeting ends of the rails and in vertical plane above the heads of the rails and means for securing the said base plate and angle bars to the ties.

1,018,055. COIN-CONTROLLED DEVICE. DANIEL P. HIGGINS, New Haven, Conn. Filed Aug. 8, 1911. Serial No. 643,005. (Cl. 194—1.)



1. In a coin controlled device comprising a lever operative under normal condition to deliver goods to a delivery platform responsive to a coin inserted in a coin slot in the said device and a coin way operative to deliver the said coin to said lever, the said coin way being fixedly and

rigidly supported and in combination therewith means for delivering the said coin to the said platform directly and independently of the operation of the said lever when the supply of goods to be delivered has been exhausted.

2. In a coin controlled device having means for delivering goods responsive to a coin inserted therein upon the operation of a lever and having a coin receiving slot, and a slot in which the lever has a limited motion, a shutter operated by the said lever serving to obstruct the said coin receiving slot and in combination with the said lever to close the said second slot.

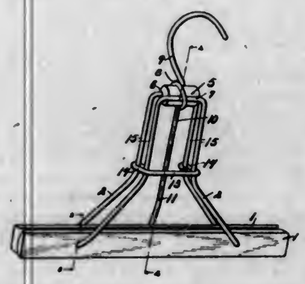
3. In a coin controlled device having means for delivering goods responsive to a coin inserted therein upon the operation of a handle having a limited reciprocal movement and having a coin receiving slot, a shutter pivotally mounted and in contact directly with the said handle and responsive by reason of such contact to the movements of the said handle, and the said shutter provided with an extension suitable for obstructing the said slot at one position of the said handle.

4. In a coin controlled device having a casing provided with a coin receiving slot and a second slot, and a handle having a reciprocal motion across the said second slot, a shutter operatively mounted and in contact with the said handle and operative in response to the movement thereof, the said shutter serving to close the portion of the said second slot not occupied by the said handle at all positions of the said handle therein and also to obstruct the said coin receiving slot at one position of the said handle.

5. In a coin controlled device, having a goods way, a coin way, and means operative under normal conditions for delivering goods from said goods way to a delivery chute, and for delivering a coin to a coin storage chamber, an auxiliary way supported under such normal conditions on said goods in said goods way, means for connecting the said auxiliary way with the said coin way upon the exhaustion of the supply of said goods, and operative to deflect a coin inserted in said coin way, via said auxiliary way to the said delivery chute.

[Claims 6 to 8 not printed in the Gazette.]

1,018,056. GARMENT-HANGER. LEE D. HINCHER, Shoals, Ind. Filed June 19, 1911. Serial No. 633,971. (Cl. 211—13.)

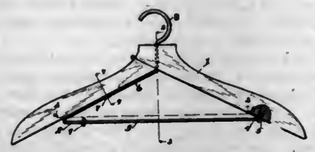


1. A garment hanger comprising a pair of clamping bars; a pivot block having longitudinal grooves in its sides; loop-like shanks for said bars, the loop ends of the shanks being arranged in said grooves of said block; a hook arranged transversely through said pivot block, the shank of hook being secured to one of the said bars; a ring arranged about said block to engage opposite sides of the shank of the hook whereby the ring is retained on said block and said shanks retained in said grooves thereof; and a clamping member.

2. A garment hanger comprising a pair of clamping bars; a pivot block having longitudinal grooves in its sides; loop-like shanks for said bars formed of wire, the ends of the arms being provided with inturned bar engaging prongs, the loop ends of the shanks being arranged in said grooves of said block; a hook arranged transversely through said pivot block, the shank of the hook being provided with an inwardly projecting prong engaged with one of the said bars; means for retaining said shank in said grooves; and a clamping member.

3. A garment hanger comprising a pair of clamping bars, a pivot block having longitudinal grooves in its sides; loop-like shanks for said bars, the loop ends of the shanks being arranged in said grooves of said block; a hook arranged transversely through said pivot block; a ring arranged about said block to retain said shanks in said grooves thereof, said ring being retained by said hook; and a clamping member for said clamping bars.

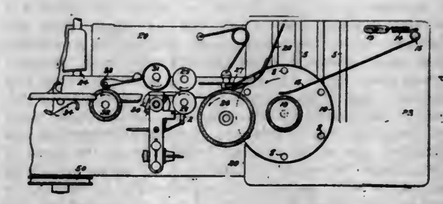
1,018,057. GARMENT-HANGER. LEE D. HINCHER, Shoals, Ind. Filed June 24, 1911. Serial No. 635,060. (Cl. 211—13.)



1. In a garment hanger, the combination with a body comprising downwardly diverging arms; and a pair of coacting clamp bars, formed integrally of a piece of wire folded upon itself, the loop end of the bars being secured to the under side of one of the body arms by a staple engaged with the loop, the other end of one of the clamp bars being secured to the under side of the other arm and being arranged through the arms and terminating in a suspending hook, the free end of the bar terminating in a laterally turned hook adapted to engage its said coacting bar.

2. In a garment hanger, the combination with a body comprising downwardly diverging arms; and a pair of coacting clamp bars formed integrally of a piece of wire folded upon itself, the loop ends of the bars being secured to one of the arms, the other end of one of the bars being secured to the other arm and arranged through the body and terminating in a suspending hook.

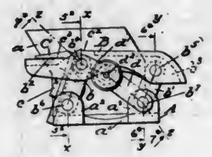
1,018,058. FEEDING MECHANISM. FREDERICK G. JAHN, New York, N. Y. Filed Sept. 21, 1907. Serial No. 393,981. (Cl. 101—39).



1. The combination of a feed roller, an opposed wiper, a second feed roller, a rotary feed plate mounted concentric with said second feed roller and a plurality of protuberances on the surface of said plate.

2. The combination of a feed roller, an opposed wiper, a second feed roller, a rotary plate having a plurality of protuberances on its surface and mounted concentric with said second feed roller, and a spring pressed finger for supporting the articles vertically in feeding position and against the second feed roller.

1,018,059. GRIPPER FOR PRINTING AND OTHER MECHANISM. FREDERICK G. JAHN, New York, N. Y., assignor to The International Postal Supply Company of New York, New York, N. Y., a Corporation of New York. Filed July 31, 1909. Serial No. 510,512. (Cl. 101—115.)



1. The combination, with a pair of movable jaws, a frame, and links or radius bars by which the jaws are connected with the frame, of coöperating toggle members connected at one end with such frame and at its other end with one of the radius bars for opening and closing said jaws, substantially as described.

2. The combination, with a pair of movable jaws, a frame, and links or radius bars jointed at one end to one of said jaws and similarly jointed at its other end to said frame, of coöperating toggle members jointed together and connected at one end to such frame and at its other end with the outer extremity of one of the links or radius bars for opening and closing said jaws, substantially as described.

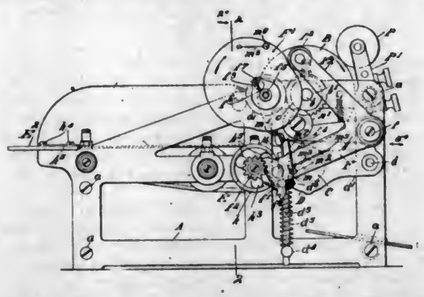
3. The combination, with a pair of movable jaws, a frame, and links or radius bars by which the jaws are connected with the frame pivoted at one of their ends in said frame and having one of the jaws adjustably secured upon one of such links or radius bars and the other jaw pivotally supported upon their outer ends, of coöperating toggle members jointed together and connected at one end with said frame and at the other end with one of the links or radius bars for opening and closing said jaws, substantially as described.

4. The combination, with a gripper having a plurality of movable jaws, and means by which the jaws are positively opened and closed and by which they are positivey locked when in a closed position, of a sprocket chain upon which it is mounted and carried, sprocket wheels upon which the sprocket chain is supported and operated, mechanism for imparting a back and forth longitudinal movement to such jaws upon the sprocket chain and mechanism for delivering a sheet or other article and depositing one of its ends or boundaries in the jaws of said gripper advanced to receive it, and a series of plates secured to said sprocket chain, whereby to furnish a support for the sheet or other article engaged by the gripper, substantially as described.

5. The combination, with a gripper having a plurality of movable jaws, and means by which the jaws are positively opened and closed and by which they are positively locked when in a closed position, of a sprocket chain upon which it is mounted and carried, sprocket wheels upon which the sprocket chain is supported and operated, mechanism for imparting a back and forth longitudinal movement to such jaws upon the sprocket chain and mechanism for delivering a sheet or other article and depositing one of its ends or boundaries in the jaws of said gripper advanced to receive it, a series of plates secured to said sprocket chain, whereby to furnish a support for the sheet or other article engaged by the gripper, and means for imparting rotary motion to one of said sprocket wheels, substantially as described.

1,018,060. PRINTING MECHANISM. FREDERICK G. JAHN, New York, N. Y., assignor to The International Postal Supply Company of New York, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1909. Serial No. 510,876. (Cl. 101—81.)

1. The combination, with a printing member mounted in fixed bearings, an impression member, and a spring pressed pivoted supporting-frame in which the impression member is mounted, of means for adjusting the printing and impression members longitudinally with respect to their supporting shafts, a sheet operated strut for controlling the movements of the impression member toward and away from the printing member, and a feeding mechanism for presenting single sheets or other articles to and against the strut, substantially as described.

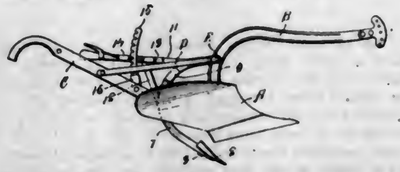


2. The combination, with a printing member mounted in fixed bearings, an impression member for coöperation therewith, and a spring pressed frame in which the impression member is supported, of a strut loosely mounted in such spring pressed frame and adapted to be tilted by the contact of a sheet or other article against it, a cam and connections engaging the strut to move the impression member out of contact with the printing member, a feeding mechanism and a separator or wiper coöperating therewith to present a single sheet at a time for cooperation with the strut, substantially as described.

3. The combination, with a swinging frame, a strut supported and carried by it, a swinging arm for cooperating with the upper edge of such strut, and a cam by which a swinging movement is imparted to such swinging arm and from this swinging arm to the swinging frame through said strut, of a stud for returning such strut to its normal position after having been tilted therefrom arranged to be carried past and into engagement with the strut as the stud travels in its course, substantially as described.

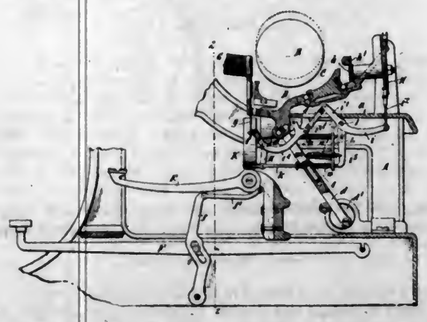
4. The combination, with a swinging frame, a strut supported and carried by it, a swinging arm for cooperating with the upper edge of the strut, and a cam by which a swinging movement is imparted to the swinging arm and from this swinging arm to the swinging frame through said strut, of an oscillating arm, a stud carried by such oscillating arm for engagement with the strut, and means for bringing this stud into engagement with said strut when carried by it in one direction and for removing it therefrom when carried by it in an opposite direction, substantially as described.

1,018,061. SUBSOIL ATTACHMENT FOR PLOWS. AUGUSTUS H. JENNINGS, Cokesbury, S. C. Filed Apr. 8, 1911. Serial No. 619,800. (Cl. 97—32.)



The combination with a turning plow having a beam and handles connected therewith, of a recessed block straddling the beam and connected therewith, a standard pivotally connected with the block and carrying a subsoiler blade, said standard being offset to present the subsoiler blade about midway of the furrow formed by the plow, a handle member associated with the standard, a bridge member secured upon the plow handles and having an upwardly extending rack, and a stop member associated with the handle member of the blade carrying standard and engaging the rack.

1,018,062. TYPE-WRITING MACHINE. OSCAR C. KAYLE, Syracuse, N. Y., assignor to Harvey A. Moyer, Syracuse, N. Y. Filed June 10, 1907. Serial No. 378,089. (Cl. 197—97.)



1. In a typewriting machine, the combination of a series of type actions, a rocking universal bar, an escapement operated by said universal bar, and a pair of universal bar actuators each acting to transmit motion from one half of the type actions to the universal bar, substantially as set forth.

2. In a typewriting machine, the combination of a series of type actions, a carriage escapement, a ribbon vibrator, a universal bar arranged at the rear portion of the machine between said escapement and said ribbon vibrator and operatively connected to each, and a plurality of universal bar actuators each acting to transmit motion from a plurality of said type actions to the universal bar, substantially as set forth.

3. In a typewriting machine, the combination of a series of type actions, a rocking universal bar, an escapement operated by said universal bar, a ribbon vibrator also operated by the universal bar, and a pair of independent universal bar actuators each acting to transmit motion from one half of the type actions to the universal bar, substantially as set forth.

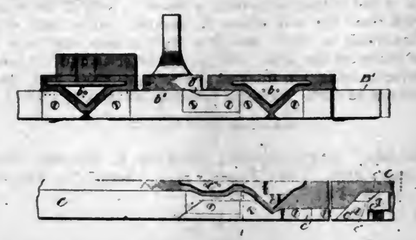
4. In a typewriting machine, the combination of a series of type actions, a rocking universal bar, a ribbon vibrator, an escapement, connections to transmit motion from the universal bar to the vibrator and escapement in different directions, and a pair of independent universal bar actuators each serving to transmit motion from one half of the type-actions to the universal bar, substantially as set forth.

5. In a typewriting machine, the combination of a universal bar consisting of a rock shaft having rigid arms projecting therefrom in three different directions, an actuator acting on one of said arms, and an escapement and ribbon vibrator each of which is connected to one of the two remaining arms, substantially as set forth.

[Claims 6 to 20 not printed in the Gazette.]

1,018,063. CIRCULAR-KNITTING MACHINE. EDWARD E. KILBOURN, New Brunswick, N. J., assignor to The Kilbourn Knitting Machine Company. Filed Dec. 16, 1902. Serial No. 135,420. (Cl. 66—24.)

1. In a circular knitting machine having independent needles, the combination with the stitch forming mechanism for making plain knitting, of mechanism for forming knitting of a different character, mechanism for producing color stripes around the web, narrowing and widening devices, and means for arresting the rotary movement of the striping mechanism and holding the same out of operation during the operation of the narrowing and widening devices, substantially as described.



2. In a circular knitting machine having independent needles, the combination with the stitch forming mechanism for forming plain knitting, of mechanism for forming knitting of a different character, mechanism for producing color stripes around the web, narrowing and widening devices, means for arresting the rotary movement of the striping mechanism and throwing the same out of operation before the narrowing and widening devices are put into action, substantially as described.

3. In a circular knitting machine, the combination with the needle cylinder, of independently movable needles, a cam mechanism for actuating said needles to knit, said needle cylinder and cam mechanism holding said needles to right line reciprocatory movements, and automatic means for causing certain of said needles to drop their stitches and cease from knitting at a predetermined point.

4. In a circular knitting machine, the combination with a needle cylinder, of independently movable needles, cam mechanism for actuating said needles to knit, said needle cylinder and cam mechanism holding said needles to right line reciprocatory movements, and means automatically causing certain needles to drop their stitches and cease knitting at a predetermined point.

5. In a circular knitting machine having independent needles, cam mechanism to coöperate with each needle to produce solid plain knitting, a further mechanism to cooperate with certain needles of a continuous portion of said series to cause them to drop the loop carried by them and cease knitting, the said certain needles to be so controlled being provided with longer nibs than the other needles of the said continuous portion to which they belong.

[Claims 6 to 46 not printed in the Gazette.]

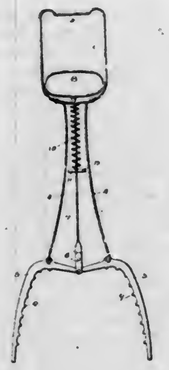
1,018,064. SOD-CUTTER. WILLIAM H. LAUDE, Monticello, Iowa. Filed Mar. 20, 1911. Serial No. 615,515. (Cl. 97—28.)

1. A sod cutter comprising a shank, a pair of arms projecting from said shank in parallel planes, said arms

terminating in sharp edged blade members that project forwardly in the planes of the said arms, said arms and blades at their juncture being curved to form bearing elbows.

2. A sod cutter comprising a shank, a pair of arms projected from the said shank in parallel planes, said arms terminating in blade members that project upwardly in the planes of the arms, the shank, the arms and the blade members being an integral body, said arms and blade members at their junctures forming penetrating elbows.

1,018,065. GAFF-TONGS. WEBSTER L. MARBLE, Gladstone, Mich. Filed June 5, 1911. Serial No. 631,487. (Cl. 43—12.)



1. Gaff tongs comprising a frame composed of a strip of metal forming an open hilt at one end and having resilient side members, L-shaped jaws pivoted to the ends of said side members, an actuating rod pivoted to the inner arms of said jaws and extending up into said hilt, and a spring encircling said rod and tending to urge said jaws open.

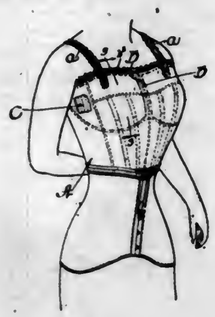
2. Gaff tongs comprising a frame composed of a strip of metal forming a hilt at one end and having resilient side members, jaws pivoted to said side members, an actuating rod pivoted to said jaws and provided with a transverse pin, a spring urging said jaws open, and a lock for arresting the movement of said rod to hold said jaws closed.

3. Gaff tongs comprising a frame having side members one of which contains a keyhole slot, jaws pivoted to said side members, an actuating rod pivoted to said jaws, and a transverse pin in said rod adapted to engage with said slot.

4. Gaff tongs comprising a frame having a hilt provided with a handle 2 at one end, and having resilient side members 4, connected by a cross bar 3, toothed jaws 5 pivoted to said side members, a rod 7 pivoted to said jaws and extending up into said hilt and having a handle 8 therein, a transverse pin 11 in said rod, and a spring 10 encircling said rod and abutting against the cross bar 3 and the pin 11.

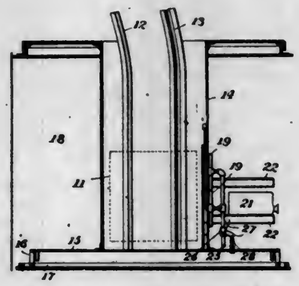
1,018,066. FORM-PADS. CLARENCE MAYER and SAMUEL YAFFE, Chicago, Ill., assignors to Nature's Rival Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1910. Serial No. 568,979. (Cl. 2—87.)

The combination with a waist provided with a bust portion having pockets, of pads adapted to be placed in said pockets embracing a front wall, stiffening means provided in said front wall, and a rear wall secured at its margins to the margins of the front wall, said rear wall



being of less extent than the front wall, and being adapted to maintain said front wall in the desired form.

1,018,067. AMMUNITION-LOADING APPARATUS. JOHN F. MEIGS and ROBERT P. STOUT, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed May 26, 1908. Serial No. 435,111. (Cl. 89—46.)



1. The combination with ammunition conveying mechanism, of means for moistening the surface of the ammunition, devices operable in conjunction with said mechanism for turning on and cutting off the supply of fluid to said moistening means, and means for spreading the fluid evenly over the ammunition.

2. The combination with ammunition conveying mechanism, of means for moistening the surface of the ammunition, and automatic devices for turning on and cutting off the supply of fluid to the moistening means.

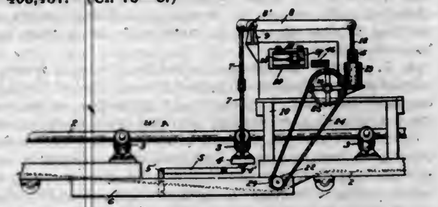
3. The combination with ammunition conveying mechanism, of a sprinkling ring through which the ammunition must pass, means for supplying a fluid to said spinkling ring, and means for spreading the fluid over the ammunition.

4. The combination with ammunition conveying mechanism, of a sprinkling ring through which the ammunition must pass, and means adapted and arranged to be operated by the moving ammunition for automatically controlling the supply of fluid to said sprinkling ring.

5. The combination with ammunition conveying mechanism, of a sprinkling ring through which the ammunition passes and which is adapted to moisten the surface of the ammunition in passing, and means for wiping off surplus fluid from the ammunition.

[Claims 6 to 13 not printed in the Gazette.]

1,018,068. AUTOMATIC WEIGHER. HERBERT L. MERRICK, Passaic, N. J. Filed Nov. 23, 1907. Serial No. 403,437. (Cl. 73—3.)



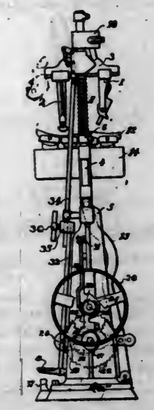
1. In an automatic weigher, the combination of a supporting framework, supporting rolls mounted thereon, scale mechanism, a supporting roll interposed between the supporting rolls on the framework and constituting a part of said scale mechanism, a conveying belt, an integrating wheel, a traveling element constituting a surface by which said wheel is frictionally actuated, mechanism for moving said element in synchronism with the conveying belt, and means interposed between said scale mechanism and said integrating wheel whereby the angle between the line of movement of said traveling element and the plane of rotation of said wheel varies with variations in the belt loading.

2. In an automatic weigher, the combination of a supporting framework, supporting rolls mounted thereon, scale mechanism, a supporting roll interposed between the supporting rolls on the framework and constituting a part of said scale mechanism, an endless load conveyer carried by said supporting rolls, an axially and rotatably movable integrating wheel, a traveling element constituting a surface by which said wheel is frictionally actuated with its plane of rotation parallel to the line of travel of said element in the zero or no load position, mechanism for moving said element in synchronism with the rate at which the load is transferred by said load conveyer, means interposed between said scale mechanism and said integrating wheel whereby the angle between the line of movement of said traveling element and the plane of rotation of said wheel varies with variations in the load, and means for indicating the extent of axial movement of said wheel.

3. In an automatic weigher, the combination of a supporting framework, supporting rolls mounted thereon, scale mechanism, a supporting roll interposed between the supporting rolls on the framework and constituting a part of said scale mechanism, an endless load conveyer carried by said supporting rolls, a rotary carrier, a series of integrating wheels mounted on the periphery of said carrier on axes extending circumferentially of the carrier, a traveling belt having two substantially parallel stretches with the surfaces of which the integrating wheels at opposite sides of the carrier frictionally engage with the plane of rotation of the carrier normal to the line of travel of said traveling belt in the zero or no load position, mechanism for moving said traveling belt in synchronism with the rate at which the load is transferred by said load conveyer, means interposed between said scale mechanism and said carrier for shifting the carrier out of said zero position, and means for indicating the extent of rotation of the carrier.

4. In an automatic weigher, the combination with a supporting framework, supporting rolls mounted thereon, an endless load conveyer carried by said supporting rolls and an integrating wheel, of means for varying the angular velocity of said integrating wheel with variations in the weight of the load passing the weighing point, said means comprising scale mechanism, a supporting roll interposed between said supporting rolls on the framework and constituting a part of said scale mechanism, a connection between said scale mechanism and said integrating wheel and a traveling element constituting a surface by which said integrating wheel is frictionally actuated and means for moving said traveling element in synchronism with the moving load.

1,018,069. SOLE-LAYING MACHINE. CHARLES L. MILLER, South Norwood, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 14, 1909. Serial No. 512,789. (Cl. 12—33.)



1. A sole pressing machine, having, in combination, a shoe-supporting jack, a sole-pressing pad coöperating therewith, means under the control of the operator for relatively moving the jack and pad toward each other in the direction of pressure, adjustable means for positively limiting the relative movement of the jack and pad, and power operated means for imparting a predetermined relative movement to the jack and pad in the direction of pressure to press the sole of the shoe, substantially as described.

2. A sole pressing machine, having, in combination, a shoe-supporting jack, a sole-pressing pad coöperating therewith, means under the control of the operator for moving the jack toward the pad in the direction of pressure, adjustable means for positively limiting the movement of the jack, and power operated means for imparting to the pad a predetermined movement in the direction of pressure, substantially as described.

3. A sole pressing machine, having in combination, a shoe-supporting jack, a sole-pressing pad coöperating therewith, a treadle connected to the jack, adjustable means for positively limiting the downward movement of the jack, and power operated means for actuating the pad, substantially as described.

4. A sole pressing machine, having, in combination, a shoe-supporting jack, a sole-pressing pad coöperating therewith, a treadle, an adjustable rod connecting the treadle and jack, a stop for limiting the downward movement of the treadle, and power operated means for actuating the pad, substantially as described.

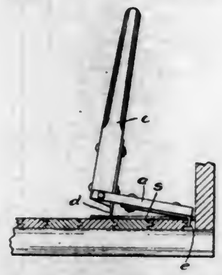
5. A sole pressing machine, having in combination, a shoe-supporting jack, a sole pressing pad coöperating therewith, a treadle and suitable connections for relatively moving the jack and pad toward each other in the direction of pressure, adjustable means for positively limiting the relative movement of the jack and pad, and power operated means for imparting a predetermined relative movement to the jack and pad in the direction of pressure to press the sole of the shoe, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,018,070. BOARD-CLAMP. HUGH F. MORRHEAD, New Britain, Conn. Filed Oct. 25, 1910. Serial No. 589,016. (Cl. 57—117.)

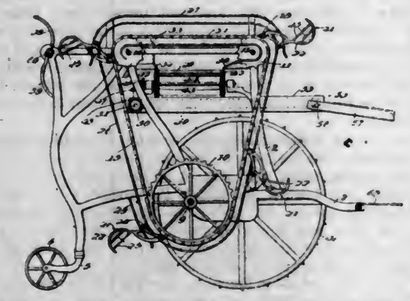
A device of the class described comprising a flat rectangular base provided with a bifurcated end, a lever pivoted at its lower end in the bifurcated end of said base, the bifurcation in the base being of a length to

permit reversing of the base on the lever for detachment to present either face of the base uppermost, a longitudinally-extending plate secured to said lever and having one end projecting below the pivoted end of the lever and constituting a fulcrum point, and a pair of plates secured



to one face of the base and having angularly-disposed ends constituting hooks, said angularly-disposed ends positioned at that end of the plate opposite the bifurcated end of the latter with the outer face of the hooks flush with the adjacent end of the base.

1,018,071. POTATO-HARVESTER. CHARLES MOWRY, Kimball, Ohio. Filed Nov. 2, 1910. Serial No. 590,396. (Cl. 55—51.)



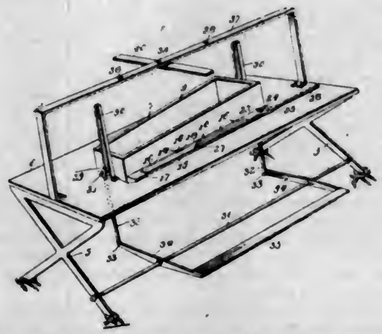
1. In a potato harvester, the combination of a frame, a pair of endless elements arranged therein in spaced parallel relation, means for driving said elements, a plurality of rakes pivoted to said elements and provided at their ends with rollers, and tracks for guiding said rakes when said elements are in motion, said tracks including each a continuous main rail along which the adjacent rollers travel conforming to the shape of said elements, and a pair of supplemental rails associated with the main rail and disposed in spaced parallel relation to the same for holding the rollers against said main rail at predetermined points.

2. In a potato harvester, the combination of a frame, a pair of endless elements arranged therein, means for driving said elements, a plurality of gathering rakes pivoted to said elements and provided with guide rollers, a discharge conveyer mounted in said frame, means for driving same, and tracks mounted on said frame and engaging said rollers for guiding said rakes during their travel and for successively inverting same on reaching a predetermined point, to discharge their contents onto said conveyer.

3. In a potato-harvester, the combination of a frame, a pair of endless elements arranged therein, means for driving said elements, a plurality of gathering implements pivoted to said elements and provided with guide rollers, a discharge conveyer mounted in said frame and running directly beneath the upper stretches of said elements, and at right angles to the same, means for driving said conveyer, a pair of continuous main rails engaging the adjacent rollers of said implements, and conforming to the shape of said elements, and supplemental rails associated with the upper portions of said main rails and likewise engaging said rollers, for inverting said implements on reaching a point above said conveyer, to dump their contents thereonto.

4. In a potato harvester, the combination of a frame, a pair of endless elements arranged therein, means for driving said elements, a plurality of gathering implements pivoted to said elements and provided with guide rollers, a discharge conveyer mounted in said frame and running directly beneath the upper stretches of said elements, and at right angles to the same, means for driving said conveyer, a pair of continuous main rails engaging the adjacent rollers of said implements, and conforming to the shape of said elements, and supplemental rails associated with the lower portions of the main rails, and engaging said rollers, for holding said implements in position to gather up the potatoes during a portion of their travel, and additional supplemental rails associated with the upper portions of said main rails and likewise engaging said rollers, for inverting said implements on reaching a point above said conveyer, to dump their contents thereonto.

1,018,072. POST-MOLD. JOHN T. NEELEY, Chesterton, Ind. Filed Sept. 14, 1910. Serial No. 582,087. (Cl. 25—41.)



1. A machine of the class described including a supporting frame and table, a mold supported on the table and provided with trunnions, a follower operating within the mold and having one face thereof provided with fixed inclined ribs, cores movable to operative position within the mold and diagonally across the upper edges of the adjacent ribs, a treadle, and links forming a pivotal connection between the treadle and trunnions for elevating the mold above the surface of the table when the treadle is depressed.

2. A machine of the class described including a supporting frame and table, a movable mold supported on the table, a follower operating within the mold and provided with depending pins extending through the table, fixed ribs secured to one face of the follower and extending the entire width of the latter, cores co-acting with the ribs and movable to operative position diagonally across and in contact with the faces of said ribs, means operatively connected with the mold for elevating the latter, means for reversing the mold, and means for discharging the molded product when said mold is reversed.

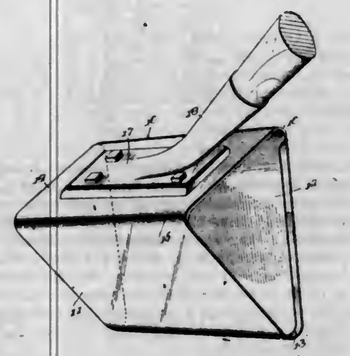
3. A machine of the class described including a supporting frame and table a movable mold normally resting on the table, an auxiliary frame, a follower operating within the mold and provided with depending pins extending through said table, means for elevating the mold, and means for reversing the mold, said pins being adapted to bear against the auxiliary frame and eject the molded product when the mold is reversed.

4. A machine of the class described including a supporting frame and table a reversible mold normally resting on the table, a follower operating within the mold and provided with spaced depending pins extending through openings in the table, fixed ribs secured to one face of the follower and extending the entire width of the latter, cores, each movable to a position diagonally across and in contact with one longitudinal edge of the adjacent rib, an auxiliary frame having openings formed therein, a bar pivotally mounted on the auxiliary frame and adapted to normally close said openings, means for elevating the mold, and means for ejecting the molded product when said mold is reversed.

5. A machine of the class described including a supporting frame and table, a mold normally supported on the table, a follower operating within the mold and provided with depending pins projecting through said table, fixed ribs secured to the follower, an auxiliary frame having spaced openings formed therein, means for elevating the mold above the surface of the table, and a bar pivotally mounted on the auxiliary frame and adapted, when in one position to engage the pins and actuate the follower to eject the molded product, and when in another position, to permit the pins to extend through the openings in the auxiliary frame.

[Claims 6 and 7 not printed in the Gazette.]

1,018,073. LAWN-TRIMMER. FRANK E. NELSON, Jamestown, N. Y. Filed Nov. 14, 1910. Serial No. 592,377. (Cl. 97—28.)

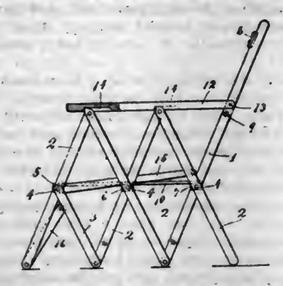


A trimming implement comprising a body continuous in transverse section and formed with diverging side portions and a flat top, the forward and rear edges of the body being at the same distance from each other throughout their lengths, the top and side portions of the body converging inwardly toward each other at one end of the body, and a base fixed to the top portion of the body and having a handle socket.

1,018,074. CONVERTIBLE CHAIR AND COUCH. ROBERT NORDIN, Brookside, Minn. Filed Nov. 5, 1910. Serial No. 590,828. (Cl. 5—9.)

1. A convertible chair and couch comprising lazy tong side members having at their intermediate joints, front, rear and intermediate cross bars, and alternated slats secured to the said front and rear cross bars, adapted, when the device is adjusted for use as a couch, to be drawn apart endwise and rested upon the said intermediate cross bar at their free ends, and a flexible step connection attached to reversely movable members of the said alternated slats.

2. In a convertible chair and couch, the combination with lazy tong side frames having one of the end members extended to afford a chair back and having at their intermediate joints, front, rear and intermediate cross bars, of alternated slats secured to the said front and rear cross bars and arranged to slide endwise over said intermediate cross bar, means for limiting the extending movement of said side frames, a head end extension frame pivoted to the front portion of the said side frames, and a lower bail-like supporting frame pivoted to the lower portion of the front bars of said side frames and adapted to support the said extension frame in working position.



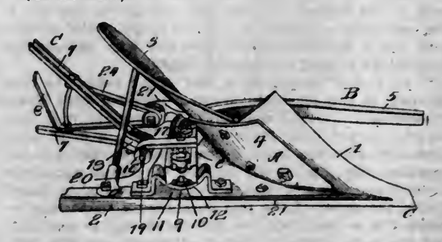
3. A convertible chair and couch having lazy tong side frames and provided with an extensible seat, and provided with arm rests that are detachably secured to said lazy tong side frames and hold the same against extending movements, substantially as described.

4. A convertible chair and couch having lazy tong side frames with back forming extensions and provided with an extensible seat, and provided with arm rests that are detachably connected to the back extensions of said side frames and to the upper pivotal connected ends of other members of said side frames and hold the same against extending movements, substantially as described.

5. A convertible chair and couch having lazy-tong side frames with back forming extensions and provided with an extensible seat, and provided with arm rests that are detachably pivoted to the back extensions of said side frames and have recesses that interlock with the upper pivotally connected ends of other members of said side frames, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,075. PLOW. RICHARD PAYTON, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Dec. 24, 1908. Serial No. 469,075. (Cl. 97—21.)



1. In a plow, the combination of a plow body having a part with a vertical horizontally curved surface, a plow beam having a standard provided with two parallel corners adapted to engage the said curved surface, at the said corners only, along two parallel lines of contact, and means for clamping the standard against the said curved surface in any one of a plurality of positions, substantially as set forth.

2. In a plow comprising a land side, a mold board and a share, the combination of a sheet metal frog for connecting the land side, mold board and share, the said frog having an integral part formed with a substantially vertical curved surface, a bracket separate from the frog but connected therewith, the said bracket being formed with a substantially vertical curved surface in alinement with the curved surface of the frog, a plow standard having a substantially vertical rear end part and means for

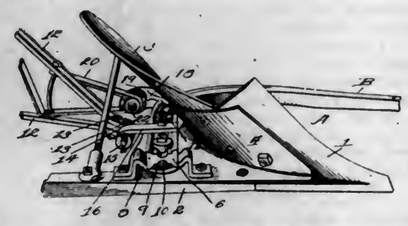
rigidly clamping the said rear end part of the standard in adjusted position against the said vertical curved surfaces of the frog and of the bracket, substantially as set forth.

3. In a plow, the combination of a plow beam having its rear end forming a vertical pivot, a plow body adjustably mounted on the said pivot, and plow handles adjustably mounted and secured entirely upon the said plow beam independently of the said body, substantially as set forth.

4. In a plow, the combination of a plow beam, a plow body adjustably connected to the plow beam to move in a horizontal plane about an axis coincident with the rear end thereof, and plow handles mounted and secured entirely on the plow beam independently of the body and adapted to be adjusted horizontally to different angular positions, substantially as set forth.

5. In a plow the combination of a beam having a substantially vertical rear end part, a plow body mounted on the rear end part of the beam to swing about an axis coincident therewith, rearward extending brackets secured to the said rear end part of the beam and plow handles mounted on the said brackets for angular adpustment, substantially as set forth.

1,018,076. PLOW. RICHARD PAYTON, Moline, Ill., assignor to Deere & Company, a Corporation of Illinois. Original application filed Dec. 24, 1908, Serial No. 469,075. Divided and this application filed Apr. 8, 1911. Serial No. 619,850. (Cl. 97—21.)



1. In a plow comprising a body and a beam, the combination of two separate pivot elements arranged one substantially vertically above the other, means for mounting both of the elements for angular adjustment relative to the body and beam about a common substantially vertical axis, and a handle mounting provided with independent connections to each of the said elements.

2. In a plow comprising a body and a beam, the combination of two separated brackets provided with alined substantially vertical apertures, two handle bars converging toward their lower forward ends, a pivot piece connected with the lower forward ends of the bars and provided with a pivot pin adapted to extend within the lower of the said apertures, a pivot pin adapted to extend within the upper of the said apertures, a connection between the second pivot pin and the bars, the said bars and the said connection being adjustable together with respect to the body and beam about the said pins, and means for locking the bars in adjusted position against movement about the pins.

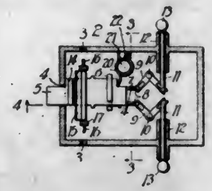
3. In a plow, two separated elements provided with alined substantially vertical apertures, a handle mounting, two separate alined pivot devices connected with the handle mounting and extending respectively into the apertures of the two brackets, and a device for locking the handle mounting directly to one of the brackets to prevent relative angular movement.

4. In a plow, the combination of a beam provided with a substantially vertical rear end portion forming a standard, a plow body secured to the standard, two separate rearward extending brackets secured at their forward ends to the standard and provided at their rear ends with alined apertures, a handle mounting, two separate alined pivot devices connected with the handle mounting and extending respectively into the apertures of the two brackets, and a device for locking the handle mounting directly to one of the brackets to prevent relative angular movement.

5. In a plow, the combination of a beam provided with a substantially vertical rear end portion forming a standard, a plow body secured to the standard, a rearward extending bracket secured at its forward end to the standard and provided at its rear end with vertical apertures, a handle mounting, a pivot device connected with the handle mounting and extending into the apertures in the bracket, a second bracket secured to the standard and provided with a vertical aperture in alinement with that of the first bracket, the said second bracket being provided with radial notches arranged concentrically with the said aperture, a plate secured to the handle mounting and provided with an aperture adapted to register with that of the second bracket and with teeth adapted to engage the notches of the second bracket, and a bolt extending through the apertures in the bracket and plate for securing them, together with the handle mounting, in adjusted position.

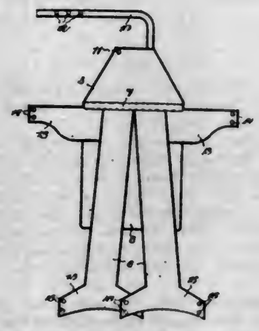
[Claims 6 and 7 not printed in the Gazette.]

1,018,077. DOOR-LOCK. AUGUST PETTERSON, St. Cloud, Minn. Filed July 21, 1910. Serial No. 573,080. (Cl. 70—29.)



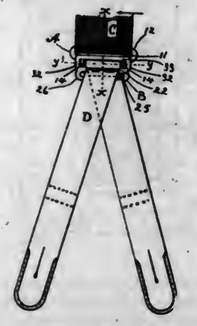
In a lock, a casing formed with integral sleeves, handles within said sleeves, a bolt slidable in said casing, a pair of fingers terminally carried by said bolt, a pair of pivoted clutches connecting said fingers and the aforesaid handles; a key shaft disposed transversely of the bolt, a tumbler arranged on said key shaft, a transverse lug arranged on said bolt between its free termination and the plane of the key shaft, a transverse lug arranged in one end of the casing, a projecting lug disposed within the casing and a spring connecting the last named lug and the aforesaid bolt.

1,018,078. MECHANIC'S APRON. FRANK O. POTTER, Torrington, Conn. Filed June 17, 1911. Serial No. 633,712. (Cl. 2—54.)



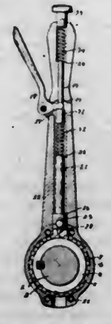
A mechanic's apron comprising a body portion, independent leg branches secured at their upper ends to the rear surface of said body portion and provided with upper and lower side attaching flaps, attaching means carried by said flaps, the lower portion of the body hanging free and flexible in front of said leg branches and a strip attached to and extending from the upper portion of the body at one side and adapted to extend around the wearer's neck, and relatively engageable fastening means carried by said strip and the opposite side of said upper body portion.

1,018,079. CAST-OFF. GEORGE E. PRENTICE, New Britain, Conn., assignor to Traut and Hine Manufacturing Company, New Britain, Conn., a Corporation. Filed Sept. 23, 1909. Serial No. 519,139. (Cl. 241—18.)



In a cast off for suspenders, two coöperating separable members, one of which is adapted for attachment to a shoulder strap and comprises a bar provided at its outer ends with depending lugs, and inwardly extending tongues on said lugs bent outwardly to form rolls separated by an open space, the other member comprising a plate having an elongated slot therein, the side edges of which are suitably spaced to snap over said rolls and the upper edge of which is adapted to bear on the upper edges of said rolls to carry the weight of the supported garment, the opposite edge of said slot being recessed to accommodate a tab strap, the above mentioned open space being sufficient to accommodate the width of said strap when the parts are in engagement.

1,018,080. SAFETY RATCHET-LEVER. HENRY P. RESTON, Oakley, Ohio, assignor to The Cincinnati Planer Company, Oakley, Ohio, a Corporation of Ohio. Filed Sept. 16, 1911. Serial No. 649,649. (Cl. 74—33.)



1. The combination of a tubular member, a plunger therein formed with a latch, a spring for moving and maintaining the plunger longitudinally in one direction, and a hand actuated spring for overcoming the exertion of the former spring and for moving and maintaining the plunger under a yielding pressure in the opposite direction.

2. The combination of a rotative shaft, a ratchet wheel splined thereon, a lever mounted to turn on the wheel, a plunger movable longitudinally within the lever and formed with a flat tapering nose adapted to engage with the wheel, a spring for moving and maintaining the plunger with the nose out of engagement with the wheel, and hand actuated spring mechanism constructed and arranged to overcome the exertion of said spring and for moving and maintaining under a yielding pressure the plunger in the opposite direction with the nose in engagement with the wheel.

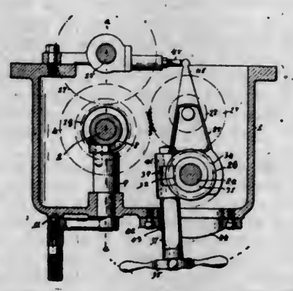
3. The combination of a ratchet wheel, a lever mounted to turn thereon, a rotatively adjustable plunger movable longitudinally within the lever and formed with a slanting nose adapted to engage with the wheel, said plunger being also formed with a longitudinal groove and a counter sink in its face, and a spring actuated locking pin adapted to automatically engage with the groove and counter sink successively for maintaining the plunger under a yielding pressure in predetermined positions of rotative adjustment.

4. The combination of a ratchet wheel, a lever movable in relation thereto, a detent movable with the lever, a spring for maintaining the detent under a yielding pressure out of engagement with the wheel and a hand controlled spring for overcoming the exertion of the former spring and for moving and maintaining the detent under a yielding pressure into engagement with the wheel.

5. The combination of a ratchet wheel, a lever movable parallel to the plane thereof, a spring controlled reversible detent adapted to be engaged with the wheel under a yielding pressure and movable with the lever, and automatic means for locking the detent out of engagement with the wheel.

[Claim 6 not printed in the Gazette.]

1,018,081. GEARING. HENRY P. RESTON, Oakley, Ohio, assignor to The Cincinnati Planer Company, Oakley, Ohio, a Corporation of Ohio. Filed Sept. 16, 1911. Serial No. 649,650. (Cl. 74—58.)



1. A gearing comprising a fixed plate formed with a slot terminating at one end in an enlarged opening, a flattened shaft rotatable within the opening and movable edgewise within the slot, and a tumbler movable longitudinally with the rotation of the shaft and rotatably with the edgewise movement thereof.

2. A gearing comprising a driving and a driven shaft, a cone of loose gears on the driving shaft, clutch connections of the said shaft therewith, a rack sleeve movable on the driven shaft and provided with a tumbler, a tumbler gear, a gear splined on the driven shaft engaging therewith, a collar splined on the sleeve and journaled in a fixed bearing, a flattened shaft journaled in the collar, a pinion thereon engaging with the rack sleeve, and a stationary slotted plate wherein the flattened shaft is movable edgewise for locking it in predetermined rotative adjustment.

3. A gearing comprising a shaft, a cone of gears mounted to turn thereon, clutch connections between said shaft and gears, a tumbler shaft, a rack sleeve movable thereon and provided with a tumbler, a tumbler gear, a gear splined on the tumbler shaft engaging therewith, a collar splined on the sleeve and journaled in a fixed bearing, a

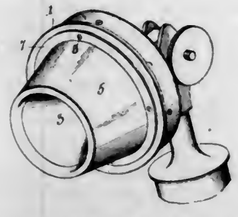
flattened shaft journaled in the collar, a pinion thereon engaging with the rack sleeve, and a stationary slotted plate wherein the flattened shaft is movable edgewise for locking it in a predetermined position of rotative adjustment.

4. The combination of a shaft, a gear splined thereon, a sleeve movable on the shaft and formed with a rack, a collar bearing splined on the sleeve and journaled in a fixed bearing, a shaft journaled in the collar bearing a hand wheel thereon and also a pinion on said shaft engaging with the rack, a tumbler secured to the sleeve, a tumbler gear thereon engaging with the shaft gear, and means for locking the latter shaft in predetermined position of rotative adjustment.

5. In a gearing the combination of a fixed plate formed with a circular opening and with a narrow slot extending therefrom, a flattened shaft rotatable within the opening and movable edgewise within the slot, a movable tumbler, and rack and pinion connections from the shaft therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,018,082. TELEPHONE-TRANSMITTER. CHARLES R. ROGERS, Waverly, N. Y. Filed Apr. 10, 1911. Serial No. 620,190. (Cl. 179—185.)



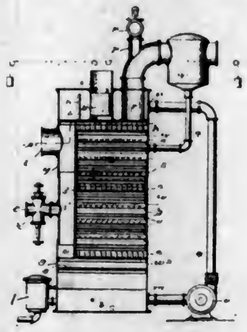
1. The combination with a transmiter having a base, and a mouth-piece projecting from said base, of an annular rim or wall extending from the base to the outer end of the mouth-piece and forming therewith a chamber inclosing the latter and adapted to hold an antiseptic, and a conduit having its ends in different radial planes of the transmitter whereby to convey emanations of the antiseptic from said chamber directly to the diaphragm of the transmitter in a path substantially longitudinal of said chamber.

2. The combination with a transmitter having a base, provided with a central opening therethrough, and a mouth-piece projecting from said base and secured in said opening, of an annular rim or wall extending from the base to the outer end of the mouth-piece and forming therewith a chamber inclosing the latter and adapted to hold an antiseptic, and a tube extending through the wall of the mouth-piece and having its outer end disposed in the outer end of said chamber and its inner end within the bore of the inner end of the mouthpiece and communicating through the same with the transmitter.

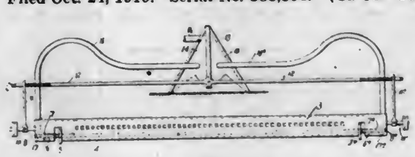
1,018,083. HEAT-ACCUMULATOR. WALTER SCHWARZ, Dortmund, Germany. Filed Oct. 23, 1909. Serial No. 524,103. (Cl. 121—95.)

1. In a heat accumulator of the kind referred to, the combination of a receiver, a graduation system within the receiver whereby the water passing down through the receiver is evenly and thoroughly divided and distributed throughout the receiver, a perforated plate adapted to form a water chamber at the bottom of the receiver, a water chamber on top of the receiver above the graduation system, a water circulating device outside of the receiver, communicating on the one hand with the bottom water chamber, and on the other hand with the top water chamber, means for automatically opening the top water chamber into the graduation system and means for conducting the steam from bottom to top through the graduation system, substantially as and for the purposes hereinbefore set forth.

2. In a heat accumulator of the kind referred to, the combination of a receiver, a graduation system within the receiver whereby the water passing down through the receiver is evenly and thoroughly divided and distributed thoroughly the receiver, a perforated plate adapted to form a water chamber at the bottom of the receiver, a water chamber on top of the receiver above the graduation system, a water circulating device outside of the receiver, communicating on the one hand with the bottom water chamber, and on the other hand with the top water chamber, means for automatically opening the top water chamber into the graduation system, means for conducting the steam from bottom to top through the graduation system and means for introducing steam from the graduation system chamber into the top water chamber above the level of the water therein, substantially as and for the purposes hereinbefore set forth.



1,018,084. PIANO-PLAYER ATTACHMENT. RAY W. SCOTT, New York, N. Y., assignor to New York Attachable Player Action Co., a Corporation of New York. Filed Oct. 24, 1910. Serial No. 588,804. (Cl. 84—161.)

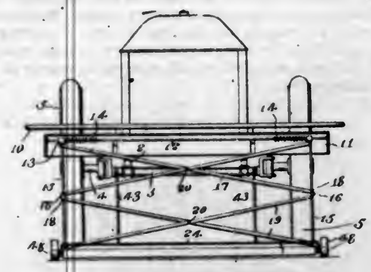


1. In combination with sheet adjusting mechanism and a tracker board, slidable members provided with rotatable stops adapted to bear against the opposite edges of the sheet, said slidable members being adapted to control the flow of air through a pneumatic, and means in combination with the same whereby said tracker is moved correspondingly as said sheet moves out of its normal course.

2. In combination with sheet adjusting mechanism and a tracker board, slidable members provided with rotatable stops adapted to bear against the opposite edges of the sheet, said slidable members being adapted to control the flow of air through a pneumatic, and means in combination with the same whereby said tracker is moved correspondingly as said sheet moves out of its normal course, said means comprising connection between the movable part of said pneumatic and said tracker board, and means for admitting air to said pneumatic when either of said rotatable stops of said slidable members are moved by either edge of said sheet.

3. In combination with sheet adjusting mechanism and a tracker board, a sheet, and slide mechanism adapted to be moved thereby, said mechanism having a resiliently retained spindle adapted to control the flow of air through the pneumatic of said sheet adjusting mechanism whereby said tracker board is moved as said sheet moves out of its normal course.

1,018,085. AUTOMOBILE-FENDER. OSCAR A. SEPPALA, Chicago, Ill. Filed July 26, 1911. Serial No. 640,639. (Cl. 105—255.)



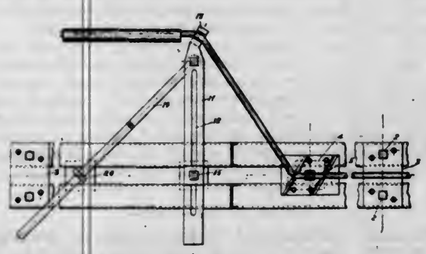
1. The combination with an automobile, of a fender therefor comprising a casing, and a back portion and ground engaging portion containable within said casing, said portions including spring operated lazy tong levers for opening the fender.

2. An automobile fender including a containing casing, a shaft in the casing, a pair of collars loosely mounted on the shaft, springs coiled on the shaft and having one end secured to the collars for drawing the collars inward and rotating the same, lazy tongs and toggle levers pivoted to the collars, collars pivoted to the forward ends of the lazy tongs and toggle levers, and springs for drawing the latter collars together, whereby the movement together of the two pairs of collars causes the lazy tongs to stretch out until their movement is limited by the toggle levers and the toggle levers serve to lock the lazy tongs against movement to hold the fender in extended position.

3. An automobile fender comprising a back section and a ground engaging section, each of said sections including spring pressed lazy tong levers for opening the same and toggle levers for locking the same in open position.

4. An automobile fender comprising a back section and a ground engaging section, each of said sections including spring pressed lazy tong levers for opening the same, toggle levers for locking the same in open position, and means for manually or automatically releasing the fender to allow the spring pressed lazy tong levers to open the same.

1,018,086. METAL-BENDING MACHINE. EDWARD LEE SOULÉ, San Francisco, Cal. Filed May 16, 1911. Serial No. 627,538. (Cl. 153—46.)



1. In a metal bending machine, a suitable base, guide members mounted upon said base, a bar retaining member, supporting means mounted upon said guide members beneath said retaining member and clamping mechanism carried by said retaining member for clamping the same in any position upon said guide members.

2. In a metal bending machine, a suitable base, guide members mounted upon said base, a bar retaining member, supporting blocks beneath said member, a guide block beneath said supports adapted to fit the slot between said guide members and clamping mechanism carried by said retaining member for clamping said member in any position upon said guide members.

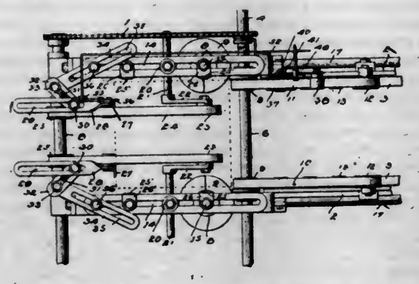
3. In a metal bending machine, a suitable base, guide members mounted upon said base, a bar retaining member mounted upon guide members and an arm adapted to receive the bent bar for further bending.

4. In a metal bending machine, a suitable base, guide members mounted upon said base, a bar retaining member and an adjustable arm mounted upon said guide members and adapted to receive the bent bar for additional bending.

5. In a metal bending machine, a suitable base, guide members mounted upon said base, a bar retaining member and an adjustable arm mounted upon said guide members said arm being provided with an offset portion containing a slot for the reception of the bent bar to permit of additional bending.

[Claims 6 to 11 not printed in the Gazette.]

1,018,087. BLANK PACKING AND COUNTING MECHANISM. EDWIN G. STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed Sept. 29, 1906. Serial No. 336,794. (Cl. 93—93.)



1. In a machine of the class described, the combination, with a blank carton receptacle and means for delivering the blanks thereto, of a movable feed bed in the bottom of said receptacle, said bed having a continuous contact with the pile of blanks and imparting a combined forward and upward movement to each blank as it enters the receptacle, and means at the receiving side of said receptacle for moving the rear ends of the blanks upwardly.

2. In a machine of the class described, the combination, with a receptacle and means for feeding the blanks horizontally, of moving means located in the bottom of said receptacle and presenting an inclined surface and having a continuous contact with the pile of blanks to move them upwardly and means at the receiving side of said receptacle to engage the rear ends of the blanks and move them upwardly simultaneously with their forward movement.

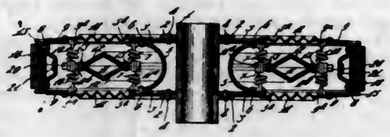
3. The combination, with means for delivering the blanks, of feeding means operating beneath the blanks to feed them one beneath another to form a pile, said feeding means having a continuous contact with the pile of blanks and imparting a combined forward and upward movement thereto, and elevating means arranged to engage the blanks near the receiving side of said feeding means.

4. The combination, with a blank receptacle, of means operating therein to engage and move the blanks forward in said receptacle and simultaneously elevate the forward ends of the blanks, and means for lifting the rear ends of the blanks during said forward movement.

5. The combination, with a receptacle and means for delivering the blanks thereto, of means having an inclined carrying surface, the receiving end of said surface being on a different level than the opposite end thereof, and a blank elevating means provided at the receiving side of said receptacle and adapted to elevate the rear portion of the blank while its forward portion is supported on said carrying surface.

[Claims 6 to 55 not printed in the Gazette.]

1,018,088. WHEEL. ALFRED J. SWING, Cincinnati, Ohio, assignor to The Auto-Spring Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 9, 1911. Serial No. 601,730. (Cl. 152—28.)



1. In a spring wheel, a hub, a circumferential hub member secured thereto comprising outwardly extended walls, a series of coil springs spanning said walls parallel with the axis, a circumferential rim member having inwardly extending walls disposed respectively in the planes of the hub member walls, a series of coil springs spanning the walls of said rim member, and means connecting together the medial portions of said radially alined coil springs.

2. In a spring wheel, a hub, a circumferential hub member secured thereto comprising outwardly extended walls, a series of coil springs spanning said walls parallel with the axis, a circumferential rim member having inwardly extending walls disposed respectively in the planes of the hub member walls, a series of coil springs spanning the walls of said rim member, and an annular member intermediate the hub and rim springs and to which said springs are secured at their medial portions.

3. In a spring wheel, a hub, a circumferential hub member secured thereto, comprising outwardly extended walls, a series of coil springs spanning said walls parallel with the axis, a circumferential rim member having inwardly extending walls disposed respectively in the planes of the hub member walls, a series of coil springs spanning the walls of said rim member, an annular member intermediate the hub and rim springs to which said springs are secured at their medial portions, and dust-shields attached to the respectively adjacent walls of the rim and hub members.

4. In a spring wheel, a hub, a circumferential hub member secured thereto comprising outwardly extended walls, a series of springs spanning said walls parallel with the axis, a circumferential rim member having inwardly extending walls disposed respectively in the planes of the hub member walls, a series of springs spanning the walls of said rim member, and means connecting said springs, one of said sets of springs being relatively weaker than the other.

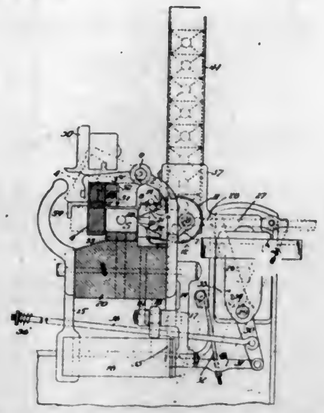
5. In a spring wheel, a hub, a circumferential hub member secured thereto, a circumferential rim member, said rim and hub members being concentrically disposed, their opposing peripheries having circumferential grooves forming separated edges, coil springs spanning said edges, a circumferential member interposed and mutually engaging the medial portions of said two sets of coil springs, and flexible dust-guards attached to the opposite adjacent faces of said hub and rim members.

[Claims 6 and 7 not printed in the Gazette.]

1,018,089. SHUTTLE-CHANGING LOOM. SAKICHI TOYODA, Nagoya, Japan. Filed June 6, 1910. Serial No. 565,349. (Cl. 139—85.)

1. A shuttle changing loom comprising in combination, a swinging lay, a shuttle-box therefor, flaps or doors forming an entrance wall for said box on one vertical side thereof, a movable portion constituting an exit wall on the opposite vertical side of said box and adapted to be opened by an exhausted shuttle when discharged, means acting to restrain the opening movement of said portion, a magazine for reserve shuttles opening toward said flaps, and horizontally acting ejecting means actuated upon movement of the lay in one direction for feeding a reserve shuttle between said flaps into said box and causing said reserve shuttle to discharge the exhausted shuttle through said exit wall.

2. A shuttle changing loom comprising in combination, a swinging lay, a shuttle-box therefor, side flaps or doors forming a vertical entrance wall for said box, a magazine for reserve shuttles opening toward said flaps, and horizontally acting ejecting means actuated upon movement or beat of the lay in one direction and projecting between said flaps for feeding a reserve shuttle therebetween into said shuttle-box and causing discharge of the exhausted shuttle.



3. A shuttle changing loom comprising in combination, a swinging lay, a shuttle-box therefor, side flaps or doors forming a vertical entrance wall to said box, a bunter for said lay, a dagger for engagement with said bunter, means adapted for operation by a weft work for moving said dagger into the path of said bunter, a magazine for reserve shuttles opening toward said door, and horizontally acting ejecting means operated by said dagger and projecting between said flaps to feed a reserve shuttle toward and against an exhausted shuttle to discharge the latter.

4. A shuttle changing loom comprising in combination, a swinging lay, a shuttle-box therefor, flaps or doors forming an entrance wall to said box, a magazine for reserve shuttles opening toward said doors, ejector mechanism operated upon movement of the lay in one direction for feeding a reserve shuttle between said flaps and into said box and discharging the exhausted shuttle therefrom, a picker check strap for said lay, and means operated upon movement of one of said flaps for shifting said check strap, allowing the picker stick to yield rearwardly, substantially as and for the purpose set forth.

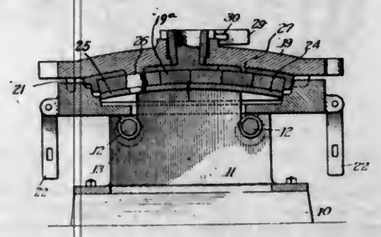
5. A shuttle changing loom comprising in combination, a swinging lay, a shuttle-box therefor, an upwardly swinging portion constituting an exit wall from said box and adapted to be opened by an exhausted shuttle when discharged, a guard for arresting outward and upward movement of the discharging shuttle, and a spring for actuating said movable portion to restore the same to a normal position and discharge the shuttle from said guard.

[Claims 6 to 13 not printed in the Gazette.]

1,018,090. APPARATUS FOR CASTING FURNACE-DOORS. JOHN B. WALKER, Ensley, Ala. Filed Aug. 7, 1911. Serial No. 642,634. (Cl. 22—154.)

1. Apparatus for casting furnace doors, comprising, in combination, a support, a chill on said support, said chill comprising top and bottom members having a casting space therebetween, means for removably uniting said top and bottom members, a floor mounted in and vertically movable with relation to said bottom member, and a cam member mounted on said support and arranged to permit the bottom member of said chill to move downward and away from a casting contained in said casting space, substantially as described.

2. Apparatus for casting furnace doors, comprising, in combination, a support, a chill on said support, said chill comprising top and bottom members having a casting space therebetween, means for removably uniting said top and bottom members, a floor mounted in and vertically movable with relation to said bottom member, and cam means mounted in said support and adapted to permit said bottom member to separate from a casting contained in said casting space, said shiftable floor being held against downward movement by contact with a portion of said support, substantially as described.



3. Apparatus for casting furnace doors, comprising, in combination, a support having an upwardly projecting portion, a chill superposed above said support, said chill comprising top and bottom members having a casting space therebetween, cam means mounted in said support and adapted to cause vertical reciprocation of a portion of said chill, a floor forming the lower wall of said casting space and means for shifting said cam means whereby the bottom member of said chill is permitted to be lowered away from a casting contained in said casting space, said floor and superposed casting being held in elevated position by contact with the projections on said support, substantially as described.

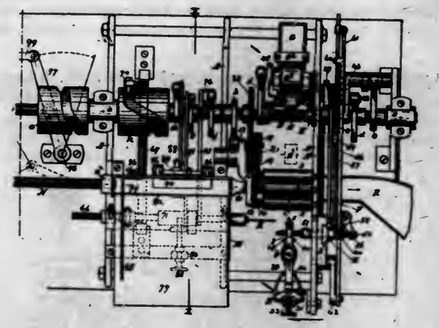
4. Apparatus for casting furnace doors, comprising, in combination, a support, a chill on said support, said chill comprising top and bottom members having a casting space therebetween and said top member being provided with an expansion groove, means for removably uniting said top and bottom members, a floor mounted in and vertically movable with relation to said bottom member, said floor forming the bottom wall of said casting space and cam members mounted on said support and arranged to permit the bottom member of said chill to be moved downward and away from the casting contained in said casting space, substantially as described.

5. Apparatus for casting furnace doors, comprising, in combination, a support, a chill on said support, said chill comprising top and bottom members having a casting space therebetween and said top member being provided with ribs projecting into said casting space, means for removably uniting said top and bottom members, a floor mounted in and vertically movable with relation to said bottom member, said floor forming the bottom wall of said casting space and cam members mounted on said support and arranged to permit the bottom member of said chill to be moved downward and away from the casting contained in said casting space, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,091. CIGAR-BANDING MACHINE. FRANK O. WOODLAND, Worcester, Mass. Filed Apr. 18, 1908. Serial No. 427,905. (Cl. 131—61.)

1. A machine for banding cigars or the like, comprising a cigar-supporting rotator, consisting of a group of rotatively actuated rollers, means for arranging and feeding cigars thereto, means for supporting a supply of bands, a movable picker-carrier, a picker carried thereon adapted for applying glue to one end of a band and transferring said band to the rotator, a gripping means acting against said picker for retaining the band thereon, means for curling the latter end of the band preparatory to its introduction to the rotator, means for releasing the picker grip mechanism for actuating the picker-carrier, and means for applying glue to said pickers.



2. A cigar banding machine, including a band-winding mechanism arranged for holding and rotating the cigar, a cigar-feeding chute adjacent thereto and having a feed-way in approximate axial alinement with said band-winding mechanism, means for passing a cigar from said feed-way to the winding mechanism, a band-supply holder arranged for sustaining a pack of bands, and delivering single bands therefrom, a picker for gluing and taking the bands from said pack, a picker-carrier moving said picker for delivering the bands to the winding mechanism, and suitable means for actuating the severel winding, feeding, and picker mechanisms, substantially as set forth.

3. In a cigar-banding machine, a cigar-holding band-winding rotator comprising a series of rollers mounted on approximately parallel axes, and grouped for action in circular order, the axis-supporting means being at one end of the rolls; in combination, with a tubular feed-channel for the cigar through said axis-supporting means in approximate axial alinement with the common center of the group, and a band-delivering element that moves transversely to said axes.

4. In a cigar-banding machine, a cigar-supporting rotator comprising a series of endwise projecting yieldably supported rotatable rollers disposed about a central space into and from which a cigar can be passed endwise in combination with means for automatically injecting a cigar, or the like, into said space.

5. In a cigar-banding machine, a cigar-supporting rotator or matrix comprising a series of endwise-removable tubular rollers mounted upon non-rotatable axles, said axles supported at one end and free at their other end, a movable carrier having a part of the series of roller-axles supported thereon, means for moving said carrier perpendicular to the plane of the axles, a band-carrying glue-applying picker, actuating and guiding means that controls said picker to carry the bands under the elevatable rollers, when moving it in one direction, and to pass over said rollers when moving in the opposite direction.

[Claims 6 to 44 not printed in the Gazette.]

1,018,092. METHOD OF PRODUCING OXALATES. LAUNCELOT W. ANDREWS, Davenport, Iowa. Filed Aug. 10, 1910. Serial No. 576,594. (Cl. 23—24.)

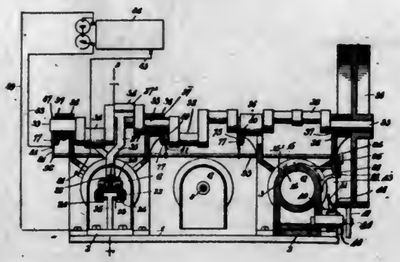
1. A process for producing oxalates consisting in mixing a carbohydrate material with caustic alkali and water, and immersing the mixture in a bath of heated oil.

2. A process for producing oxalates by the action of hot caustic alkali on oxalic acid forming material consisting in the immersion of the reacting mass during the period of the reaction, under the surface of a liquid non-reactive organic substance.

3. A process for producing oxalates consisting in mixing caustic alkali and an oxalic acid forming material, immersing the mixture in a bath of non-reacting oil, heating the bath of oil, and finally separating the oil from the solid product.

4. A process for producing oxalates consisting in mixing saw dust with hot caustic alkali, immersing the mixture in a bath of petroleum, heating the petroleum, and finally separating the oil from the solid product.

1,018,093. INTERNAL-COMBUSTION ENGINE. OLIVER C. BLAIR, Cleveland, Ohio. Filed Jan. 14, 1910. Serial No. 538,097. (Cl. 123—51.)



1. In an engine of the character described, a cylinder unit consisting of a cylindrical casing provided at the ends thereof with enlargements constituting flat bottomed chambers resting upon a foundation and supporting the intermediate cylinder body above such foundation, said chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, and heads mounted upon the ends of the unit; in combination with pistons operating in the cylindrical bore of the unit and having stems extending through the heads thereof.

2. In an engine of the character described, a cylinder unit consisting of a casing provided at the ends thereof with heads and with enlargements forming flat bottomed chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, base plates supporting the casing and connected with the undersides of the flat bottomed portions, said base plates being provided with guideways rising therefrom, slides on the guideways, and piston rods and crank rods operatively connected with the slides.

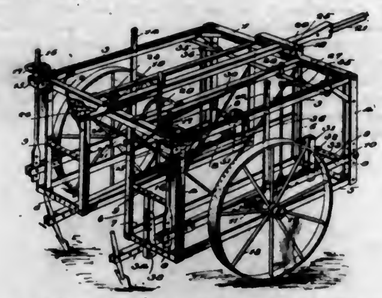
3. In an engine of the character described, a cylinder unit having a cylindrical bore, said unit being provided with enlargements constituting supporting members and forming mixing chambers that communicate with the ends of the cylindrical bore, heads or closures upon the ends of the unit, pistons operating in the cylindrical bore and having stems extending through the heads, slides supported for reciprocation adjacent to the ends of the unit, said slides being connected with the piston stems, and crank rods pivotally associated with said slides.

4. In an engine of the character described, a cylinder unit having heads at the ends thereof, inlet ports spaced from the cylinder ends, lubricating apertures communicating with the inlet ports, covering plates secured over the apertures and constituting safety members, and pistons mounted for reciprocation in the cylinder and having annular lubricating grooves adapted to register with the inner ends of the inlet ports.

5. In an engine of the character described, a cylinder unit provided at the ends thereof with enlargements forming chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, inlet ports spaced from the cylinder ends, lubricating apertures communicating with the inlet ports, covering plates secured over the apertures and constituting safety members, ducts connecting the inlet ports with the mixing chambers, and pistons mounted for reciprocation in the cylinder and intermittently obstructing the inner ends of the inlet ports, said pistons being provided with annular lubricating grooves adapted to register with the inlet ports to receive lubricant therethrough.

[Claims 6 to 8 not printed in the Gazette.]

1,018,094. PLOW-FRAME. BARTLEY BROWN, Fort Worth, Tex. Filed Aug. 10, 1911. Serial No. 643,330. (Cl. 97—35.)

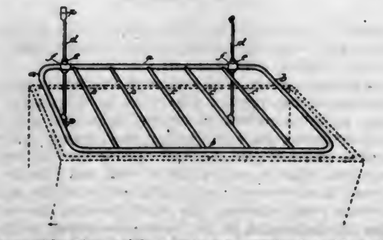


1. A frame including a forward corner bar, rear corner bars arranged in pairs spaced from each other, a lower bar connecting the forward and rear corner bars together, top bars arranged in pairs and connecting the forward and rear corner bars together, arms pivoted at their forward ends to the forward corner bars and fitting between the members of the pairs of the rear corner bars, wheels journaled to the arms, and means for raising or lowering the rear ends of the arms and for holding the same in adjusted positions.

2. A frame including forward corner bars, rear corner bars arranged in pairs the members of which are spaced from each other, lower bars connecting the forward and rear corner bars together, top bars connecting the forwad and rear bars together, the said top bars being arranged in pairs the members of which are spaced from each other, arms pivoted at their forward ends to the forward corner bars and fitting between the members of the rear corner bars, means for moving the rear ends of the arms up or down and holding them at adjusted positions, wheels journaled upon the arms, and upright bars mounted upon the arms at points between the ends thereof and fitting snugly between the members of the top bars of the frame and adapted to slide between them.

3. A frame comprising forward and rear cross bars, side bars arranged in pairs the members of which are spaced from each other and which are connected at their forward and rear ends with the forward and rear cross bars respectively, corner bars arranged in pairs the members of which are spaced from each other, said corner bars depending from the ends of the cross bars, arms pivoted at their forward ends between the members of the foremost corner bars and having their rear ends received between the members of the rearmost corner bars, means carried at the rearmost cross bar for raising and lowering the rear ends of the arms, blocks adjustably mounted upon the arms, wheels journaled to the blocks, and bars fixed at their lower ends to the blocks and extending vertically through the spaces between the members of the said side bars.

1,018,095. HAY-GATE FOR MANGERS. WILLIAM A. BROWN, St. Joseph, Mo. Filed Nov. 30, 1908. Serial No. 465,469. (Cl. 119—60.)



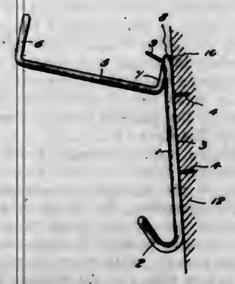
In combination with a manger, vertical guide-rods at the rear thereof, and a gate formed of a rectangular frame and cross-bars, the rear bar of said rectangular frame being mounted across and in front of said guide-rods, slidably and pivotally connected thereto, and the free side of said gate adapted to swing above and below the pivotal point of said rear bar, whereby said gate can be locked in the manger by lowering said free side below said pivotal point.

1,018,096. DRILLING APPARATUS. EUGENE B. CLARK, Chicago, Ill., assignor to Celfor Tool Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1909. Serial No. 502,150. (Cl. 77—71.)

1. A drilling apparatus, comprising a drill proper having an integral shank provided with opposite plane side faces and tapered edges, and a separable shank provided with a tapered bore in which the edges of said integral shank fit and having tapered distance blocks which fit closely and are secured within said bore at opposite sides thereof, said distance blocks having plane faces which engage the plane side faces of said integral shank.

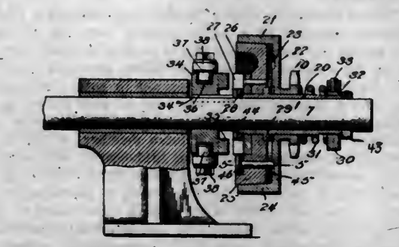
2. A drilling apparatus, comprising a drill proper having an integral shank provided with opposite plane side faces and tapered edges, and a separable shank provided with a tapered bore in which the edges of said integral shank fit and having tapered distance blocks fitted in said bore at opposite sides thereof and detachably secured to the separable shank, said distance blocks having plane faces which engage the plane side faces of said integral shank and curved faces which fit the bore.

1,018,097. HANGER. HERMANN CLAUSSEN, Brooklyn, N. Y. Filed Sept. 25, 1909. Serial No. 519,576. (Cl. 248—24.)



In a coat hanger, a hook member having fasteners projecting therefrom and formed at one end with an eye, a guard member having one end pivoted to the eye and formed with a resilient extension adapted to bear against the hook member when the guard is closed thereon, said extension projecting outwardly of the hook member when the guard is open, and an end extension carried by the guard member adapted to be snapped to the hook member.

1,018,098. CLUTCH MECHANISM. WILLIAM H. COLDWELL, Newburgh, N. Y. Original application filed June 21, 1910, Serial No. 568,195. Divided and this application filed Aug. 19, 1910, Serial No. 577,958. Renewed Jan. 15, 1912. Serial No. 671,867. (Cl. 192—9.)



1. The combination with the driving shaft, of a sleeve loosely mounted thereon, a positive clutch comprising a member rigidly connected with said sleeve, and a member connected with the shaft to rotate therewith and capable of longitudinal movement thereon, a friction clutch carried by said sleeve comprising a member rigidly secured thereto and a member loosely mounted thereon, a spring surrounding said sleeve and engaging the loosely mounted friction clutch member, for holding said friction clutch members together with a predetermined pressure; a nut on said sleeve for adjusting the tension of the spring, a locking device for securing the nut in its adjusted position, devices adapted to be secured to the shaft for holding the sleeve against endwise movement thereon, and a driving wheel secured rigidly to the loosely mounted friction clutch member.

2. The combination with the driving shaft, of a sleeve loosely mounted thereon, devices for holding said sleeve from longitudinal movement, a friction clutch member loosely mounted on said sleeve, and provided with an annular series of serrations, a friction clutch member rigidly secured to the sleeve, a spring for holding said friction clutch members in engagement, an adjusting nut on said sleeve engaging one end of the spring, a driving wheel secured to rotate with the loosely mounted friction clutch member, a pin loosely mounted in the fixed friction clutch member, in position to engage the serrations of the opposing member, a spring engaging said pin, a positive clutch member secured to said sleeve and a positive clutch member mounted on the shaft to rotate therewith, but movable longitudinally thereof into and out of engagement with the opposing positive clutch member.

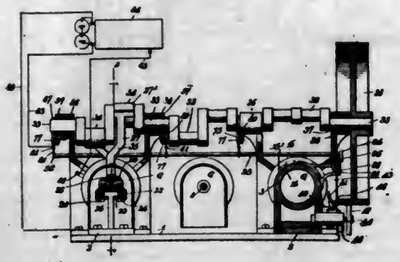
3. The combination with the driving shaft, of a sleeve loosely mounted thereon, devices for holding said sleeve from longitudinal movement, a positive clutch comprising a member keyed to the shaft and movable longitudinally thereon, and a member rigidly secured to said sleeve, said members having interlocking projections, a friction clutch carried by said sleeve, and comprising a friction cone rigidly secured to the sleeve, and a member loosely mounted on said sleeve and provided with a disk portion having an annular series of teeth, and a friction flange for engaging said cone, said friction cone being provided with an eccentric aperture parallel to its axis of rotation, in line with the series of teeth of the opposed clutch member, a pin loosely mounted in said aperture, a spring engaging said pin, a spiral spring surrounding said sleeve and holding said friction clutch members in engagement, an adjusting nut on said sleeve engaging one end of the said spiral spring, a locking device for said adjusting nut, and a driving wheel rigidly connected with the loosely mounted friction clutch member.

714 OFFICIAL GAZETTE FEBRUARY 20, 1912.

FEBRUARY 20, 1912. U. S. PATENT OFFICE. 715

4. A process for producing oxalates consisting in mixing saw dust with hot caustic alkali, immersing the mixture in a bath of petroleum, heating the petroleum, and finally separating the oil from the solid product.

1,018,093. INTERNAL-COMBUSTION ENGINE. OLIVER C. BLAIR, Cleveland, Ohio. Filed Jan. 14, 1910. Serial No. 538,097. (Cl. 123—51.)



1. In an engine of the character described, a cylinder unit consisting of a cylindrical casing provided at the ends thereof with enlargements constituting flat bottomed chambers resting upon a foundation and supporting the intermediate cylinder body above such foundation, said chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, and heads mounted upon the ends of the unit; in combination with pistons operating in the cylindrical bore of the unit and having stems extending through the heads thereof.

2. In an engine of the character described, a cylinder unit consisting of a casing provided at the ends thereof with heads and with enlargements forming flat bottomed chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, base plates supporting the casing and connected with the undersides of the flat bottomed portions, said base plates being provided with guideways rising therefrom, slides on the guideways, and piston rods and crank rods operatively connected with the slides.

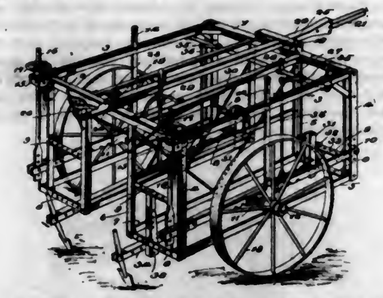
3. In an engine of the character described, a cylinder unit having a cylindrical bore, said unit being provided with enlargements constituting supporting members and forming mixing chambers that communicate with the ends of the cylindrical bore, heads or closures upon the ends of the unit, pistons operating in the cylindrical bore and having stems extending through the heads, slides supported for reciprocation adjacent to the ends of the unit, said slides being connected with the piston stems, and crank rods pivotally associated with said slides.

4. In an engine of the character described, a cylinder unit having heads at the ends thereof, inlet ports spaced from the cylinder ends, lubricating apertures communicating with the inlet ports, covering plates secured over the apertures and constituting safety members, and pistons mounted for reciprocation in the cylinder and having annular lubricating grooves adapted to register with the inner ends of the inlet ports.

5. In an engine of the character described, a cylinder unit provided at the ends thereof with enlargements forming chambers communicating with the ends of the cylindrical bore and combining therewith to form mixing chambers, inlet ports spaced from the cylinder ends, lubricating apertures communicating with the inlet ports, covering plates secured over the apertures and constituting safety members, ducts connecting the inlet ports with the mixing chambers, and pistons mounted for reciprocation in the cylinder and intermittently obstructing the inner ends of the inlet ports, said pistons being provided with annular lubricating grooves adapted to register with the inlet ports to receive lubricant therethrough.

[Claims 6 to 8 not printed in the Gazette.]

1,018,094. PLOW-FRAME. BARTLEY BROWN, Fort Worth, Tex. Filed Aug. 10, 1911. Serial No. 643,830. (Cl. 97—35.)

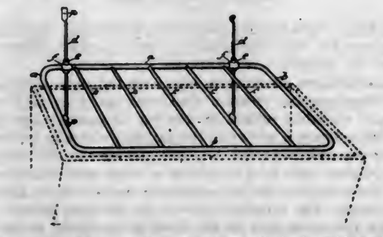


1. A frame including a forward corner bar, rear corner bars arranged in pairs spaced from each other, a lower bar connecting the forward and rear corner bars together, top bars arranged in pairs and connecting the forward and rear corner bars together, arms pivoted at their forward ends to the forward corner bars and fitting between the members of the pairs of the rear corner bars, wheels journaled to the arms, and means for raising or lowering the rear ends of the arms and for holding the same in adjusted positions.

2. A frame including forward corner bars, rear corner bars arranged in pairs the members of which are spaced from each other, lower bars connecting the forward and rear corner bars together, top bars connecting the forwad and rear bars together, the said top bars being arranged in pairs the members of which are spaced from each other, arms pivoted at their forward ends to the forward corner bars and fitting between the members of the rear corner bars, means for moving the rear ends of the arms up or down and holding them at adjusted positions, wheels journaled upon the arms, and upright bars mounted upon the arms at points between the ends thereof and fitting snugly between the members of the top bars of the frame and adapted to slide between them.

3. A frame comprising forward and rear cross bars, side bars arranged in pairs the members of which are spaced from each other and which are connected at their forward and rear ends with the forward and rear cross bars respectively, corner bars arranged in pairs the members of which are spaced from each other, said corner bars depending from the ends of the cross bars, arms pivoted at their forward ends between the members of the foremost corner bars and having their rear ends received between the members of the rearmost corner bars, means carried at the rearmost cross bar for raising and lowering the rear ends of the arms, blocks adjustably mounted upon the arms, wheels journaled to the blocks, and bars fixed at their lower ends to the blocks and extending vertically through the spaces between the members of the said side bars.

1,018,095. HAY-GATE FOR MANGERS. WILLIAM A. BROWN, St. Joseph, Mo. Filed Nov. 30, 1908. Serial No. 465,469. (Cl. 119—60.)



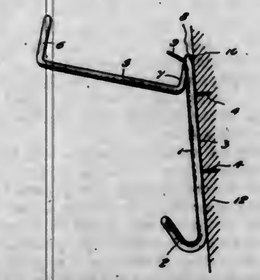
In combination with a manger, vertical guide-rods at the rear thereof, and a gate formed of a rectangular frame and cross-bars, the rear bar of said rectangular frame being mounted across and in front of said guide-rods, slidably and pivotally connected thereto, and the free side of said gate adapted to swing above and below the pivotal point of said rear bar, whereby said gate can be locked in the manger by lowering said free side below said pivotal point.

1,018,096. DRILLING APPARATUS. EUGENE B. CLARK, Chicago, Ill., assignor to Celfor Tool Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1909. Serial No. 502,150. (Cl. 77—71.)

1. A drilling apparatus, comprising a drill proper having an integral shank provided with opposite plane side faces and tapered edges, and a separable shank provided with a tapered bore in which the edges of said integral shank fit and having tapered distance blocks which fit closely and are secured within said bore at opposite sides thereof, said distance blocks having plane faces which engage the plane side faces of said integral shank.

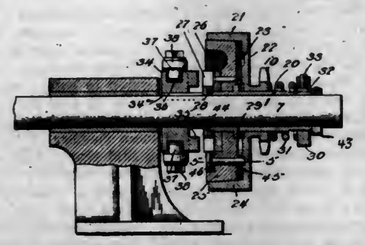
2. A drilling apparatus, comprising a drill proper having an integral shank provided with opposite plane side faces and tapered edges, and a separable shank provided with a tapered bore in which the edges of said integral shank fit and having tapered distance blocks fitted in said bore at opposite sides thereof and detachably secured to the separable shank, said distance blocks having plane faces which engage the plane side faces of said integral shank and curved faces which fit the bore.

1,018,097. HANGER. HERMANN CLAUSSEN, Brooklyn, N. Y. Filed Sept. 25, 1909. Serial No. 519,576. (Cl. 248—24.)



In a coat hanger, a hook member having fasteners projecting therefrom and formed at one end with an eye, a guard member having one end pivoted to the eye and formed with a resilient extension adapted to bear against the hook member when the guard is closed thereon, said extension projecting outwardly of the hook member when the guard is open, and an end extension carried by the guard member adapted to be snapped to the hook member.

1,018,098. CLUTCH MECHANISM. WILLIAM H. COLDWELL, Newburgh, N. Y. Original application filed June 21, 1910, Serial No. 568,195. Divided and this application filed Aug. 19, 1910, Serial No. 577,958. Renewed Jan. 15, 1912. Serial No. 671,367. (Cl. 192—9.)



1. The combination with the driving shaft, of a sleeve loosely mounted thereon, a positive clutch comprising a member rigidly connected with said sleeve, and a member connected with the shaft to rotate therewith and capable of longitudinal movement thereon, a friction clutch carried by said sleeve comprising a member rigidly secured thereto and a member loosely mounted thereon, a spring surrounding said sleeve and engaging the loosely mounted friction clutch member, for holding said friction clutch members together with a predetermined pressure; a nut on said sleeve for adjusting the tension of the spring, a locking device for securing the nut in its adjusted position, devices adapted to be secured to the shaft for holding the sleeve against endwise movement thereon, and a driving wheel secured rigidly to the loosely mounted friction clutch member.

2. The combination with the driving shaft, of a sleeve loosely mounted thereon, devices for holding said sleeve from longitudinal movement, a friction clutch member loosely mounted on said sleeve, and provided with an annular series of serrations, a friction clutch member rigidly secured to the sleeve, a spring for holding said friction clutch members in engagement, an adjusting nut on said sleeve engaging one end of the spring, a driving wheel secured to rotate with the loosely mounted friction clutch member, a pin loosely mounted in the fixed friction clutch member, in position to engage the serrations of the opposing member, a spring engaging said pin, a positive clutch member secured to said sleeve and a positive clutch member mounted on the shaft to rotate therewith, but movable longitudinally thereof into and out of engagement with the opposing positive clutch member.

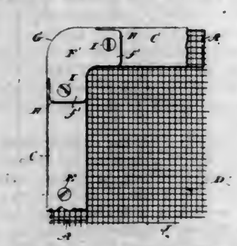
3. The combination with the driving shaft, of a sleeve loosely mounted thereon, devices for holding said sleeve from longitudinal movement, a positive clutch comprising a member keyed to the shaft and movable longitudinally thereon, and a member rigidly secured to said sleeve, said members having interlocking projections, a friction clutch carried by said sleeve, and comprising a friction cone rigidly secured to the sleeve, and a member loosely mounted on said sleeve and provided with a disk portion having an annular series of teeth, and a friction flange for engaging said cone, said friction cone being provided with an eccentric aperture parallel to its axis of rotation, in line with the series of teeth of the opposed clutch member, a pin loosely mounted in said aperture, a spring engaging said pin, a spiral spring surrounding said sleeve and holding said friction clutch members in engagement, an adjusting nut on said sleeve engaging one end of the said spiral spring, a locking device for said adjusting nut, and a driving wheel rigidly connected with the loosely mounted friction clutch member.

4. The combination with a driving shaft, of a friction cone clutch loosely mounted thereon, and comprising a fixed member, held against movement longitudinally of the shaft, and a member movable longitudinally of the shaft with respect to said fixed member, a driving wheel secured to the said movable member, a spring engaging the said movable member and holding it in contact with the fixed member with a predetermined pressure, a second clutch comprising a fixed member loose on the shaft but rigidly secured to the fixed member of the said friction clutch, and a movable member having a movement longitudinally of the shaft but secured thereto for joint rotation therewith.

5. The combination with a driving shaft having a plain cylindrical surface, of a sleeve loosely mounted on the shaft, means for holding the sleeve against endwise movement on the shaft, a friction cone clutch mounted on said sleeve, having a fixed member secured to rotate with the sleeve, and a member loosely mounted on said sleeve, and movable longitudinally thereof, a driving wheel loose on said sleeve but secured to said loose member of the friction clutch, a spring surrounding said sleeve, and engaging said loose member of the friction clutch for holding the said clutch members together with a predetermined pressure, a second clutch comprising a fixed member secured to rotate with said sleeve, and a movable member secured to said shaft to rotate therewith but movable longitudinally of the shaft.

[Claim 6 not printed in the Gazette.]

1,018,099. SCREEN. GEORGE H. DAVIS, Portland, Me., assignor to The E. T. Burrowes Company, Portland, Me., a Corporation of Maine. Filed Apr. 6, 1911. Serial No. 619,428. (Cl. 156—14.)



1. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of the corners of the body, and corner pieces adapted to embrace the corner of the body having separated flanged extensions adapted to be secured to the adjacent portions of the screen frame with the margin of the corner piece flush with the edges thereof.

2. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of the corners of the body, corner pieces adapted to embrace the corner of the body having separated flanged extensions adapted to be secured to the adjacent portions of the screen frame with the margin of the corner piece flush with the edges thereof, and tongues constituted by cutting away the web of the flanges projecting into the space between the web of the corner and the frame structure therewithin.

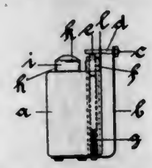
3. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of the corners of the body, and corner pieces completing the frame and secured to the retaining members in marginally flush relation thereto, web portions of the corner structure being cut away to provide securing flanges and to afford a space for the accommodation of the web of adjacent portions.

4. A screen of the character described comprising a body portion, the screen fabric, retaining strips overlying the body and screen fabric terminating at points short of the corners of the body, and corner pieces completing the frame and secured to the retaining members in marginally flush relation thereto, web portions of the corner structure being cut away to provide securing flanges and to afford a space for the accommodation of the web of adjacent portions, and tongues constituted by the cut away portions projecting into the space between the web and the interior frame structure.

5. The combination with a screen frame, of a corner piece for the frame comprising a metallic member of angular contour, U-shaped in cross section provided with separated flange extensions, substantially as and for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,100. FRICTIONAL POCKET-IGNITER. FRITZ DEIMEL, Berlin, Germany; Joseph Simson, attorney in fact, assignor to said Joseph Simson individually. Filed Sept. 1, 1910. Serial No. 580,087. (Cl. 67—8.)



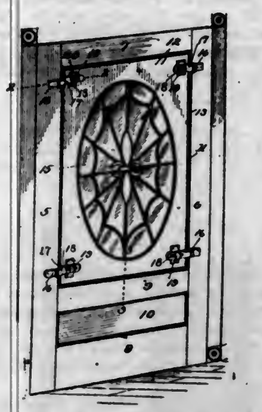
1. An igniter of the character described, comprising in combination, a substantially rectangular receptacle having a tubular guide for a wick, a hinged cap normally closing the end of the guide, a spring-pressed sparker mounted on the receptacle adjacent the guide, a spring, having one end secured to the receptacle, substantially parallel with the sides of the receptacle, and a substantially horizontal scraper carried by the other end of the spring and adapted to scrape the sparker, substantially as shown.

2. An igniter of the character described, comprising in combination, a substantially rectangular receptacle having a wick-tube, an upwardly spring-pressed sparker mounted on the receptacle adjacent the tube, a spring, having one end secured to the receptacle, substantially parallel with the sides of the receptacle, and a substantially horizontal scraper carried by the other end of the spring and adapted to scrape the sparker, substantially as shown.

1,018,101. CHANGEABLE FRONT DOOR. HERMAN F. DOLL, Wichita, Kans. Filed Dec. 8, 1910. Serial No. 596,334. (Cl. 20—36.)

1. A door having an opening therein, a sill secured to and projecting laterally from the outer face of the door at the lower wall of the opening and provided with a longitudinal groove inclined in the direction of said door, a removable panel seated in the opening, a flange of greater width than the sill extending laterally from the lower end of the panel above said groove and resting on the sill, said flange constituting a water shed, a longitudinal tongue depending from the lower face of said flange and adapted to enter the groove in the sill, and means for securing the panel in position on the door.

2. A door having an opening therein, a sill secured to and projecting laterally from the outer face of the door at the lower wall of the opening and provided with a longitudinal groove extending the entire width of said opening, one wall of the groove being inclined in the direction of the opening, a removable panel seated in said opening, a flange of greater width than the sill secured to and extending laterally from the panel above said groove and having its lower face flat and resting on the sill and its upper face inclined downwardly to form a water shed, a tongue of the same length as the groove depending from the flat lower face of the flange and having one wall thereof inclined to conform to and adapted to engage the inclined wall of said groove, and means for securing the panel in position on the door.



3. A door having an opening therein and extending for the major portion of the height of the door, one face of said door being rabbeted to produce a marginal flange entirely surrounding the opening, a sill rigidly secured to and projecting laterally from the outer face of the door and having a longitudinal seating groove formed therein and extending the entire width of said opening, a removable panel seated in the opening and provided with a flange bearing against the adjacent face of the door, a second flange of greater width than the sill rigidly secured to and projecting laterally from the lower edge of the panel and resting on the upper face of said sill at the groove therein, and a tongue of the same length as the groove depending from the lower face of the last mentioned flange and adapted to enter said groove.

4. A door having an opening therein, a transverse sill secured to the outer face of the door and having a longitudinally disposed substantially V-shaped groove formed therein and opening through the upper face of the sill, said groove extending the entire width of the opening, a removable panel seated in said opening, a transverse flange rigidly secured to and extending laterally from the upper face of the panel at the lower end thereof and having its lower face flat and of greater width than and bearing against the upper surface of the sill and its upper face inclined downwardly to form a water shed, a tongue of the same length as the groove depending from the lower face of the flange and adapted to enter the groove in the sill, said tongue terminating short of the opposite ends of the panel to form terminal shoulders adapted to bear against the inner face of the sill at the ends of the groove, and means for securing the panel in position on the door.

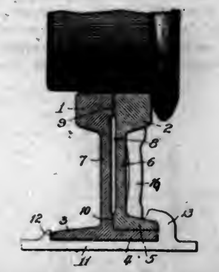
1,018,102. RAILWAY-RAIL. HENRY G. ELFBORG, Chicago, Ill. Filed Oct. 13, 1910. Serial No. 586,853. (Cl. 239—16.)

1. A railway rail comprising two longitudinal sections divided upon a substantially vertical plane, one section being formed of greater wear resisting capacity than the other.

2. A railway rail comprising two longitudinal sections divided on a substantially vertical plane, one section being formed of manganese-steel and the other of a material offering less resistance to wear.

3. A railway rail comprising two longitudinal sections divided on a substantially vertical plane, one section being formed of Bessemer-steel and the other of manganese-steel.

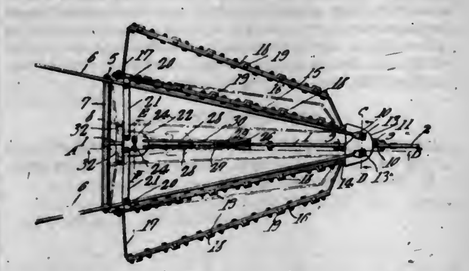
4. A railway rail comprising two longitudinal sections divided on a substantially vertical plane, one section being formed of carbon steel and the other of manganese-steel.



5. A railway rail comprising two longitudinal sections divided on a substantially vertical plane, one section being formed of carbon steel and the other of special steel.

[Claims 6 to 13 not printed in the Gazette.]

1,018,103. HARROW. EDWARD D. FERGERSON, Hill City, Tenn. Filed Aug. 23, 1911. Serial No. 645,504. (Cl. 55—125.)



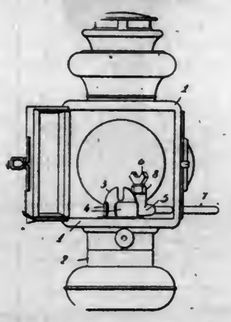
1. A harrow including a central beam having a clevis at one end, connecting plates clamped upon the beam adjacent the clevis, harrow teeth secured on the beam and constituting means for holding said plates against displacement longitudinally of the beam, a group of rigidly connected tooth carrying bars at each side of the beam, each group having a common pivot, a slide engaging the beam, link connections between the slide and the groups of bars, means upon the beam for shifting the slide, and stop devices connected to the beam and interposed between the bars.

2. A harrow including a central beam having a clevis at one end, connecting plates upon opposite faces of the beam, bolts engaging the plates for binding them on the beam, a group of tooth carrying bars at each side of the beam, the bars in each group being rigidly connected, there being an eye upon each group and engaging one of the said bolts, a slide upon the central beam, means for shifting the slide, said means being mounted on the beam, link connections between the slide and the bars, and means secured to the beam and extending laterally therefrom for limiting the backward movement of the slide and the inward movement of the bars.

1,018,104. GAS-BURNER ATTACHMENT FOR VEHICLE-LAMPS AND THE LIKE. JOHN FERGUSON, New York, N. Y. Filed Dec. 13, 1911. Serial No. 665,428. (Cl. 240—37.)

1. A gas burner attachment for oil burning vehicle lamps and the like, comprising a spring clip consisting of separable spring jaws adapted to embrace between them the flame guard of an oil burner and a gas conduit secured to said clip and having an upright terminal portion, and a burner tip fitted to the mouth of said terminal portion.

2. A gas burner attachment for oil burning vehicle lamps and the like, comprising a spring clip consisting of separable spring jaws adapted to embrace between them the flame guard of an oil burner, an elbow pipe fitting secured to said clip, one side of said elbow being upright, a burner tip fitted to the mouth of said upright portion, and a gas conduit connected to the other side of said elbow.

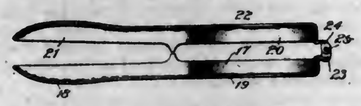


3. A gas burner attachment for oil burning vehicle lamps and the like, comprising a spring clip consisting of separable spring jaws adapted to embrace between them the flame guard of an oil burner, a gas conduit secured to said clip and having an upright terminal portion, and a hollow nut screwing into the mouth of said upright terminal portion and carrying a burner tip.

1,018,105. QUICK-REPAIR SHOE FOR CORN-PLANTERS. CLIFFORD FLOWERS, Camden, Ohio. Filed Sept. 25, 1911. Serial No. 651,234. (Cl. 111—6.)

A shoe for corn planter runners comprising a casing, side walls and spaces intervening between the same for the reception of the planter runner, the walls of each of said casings having longitudinal slots formed at intervals to each other and spaced apart and having bolts affording means to hold the casing to different sizes of runners, as set forth.

1,018,106. BLACKING-BOX OPENER AND HOLDER. VINCENT FRANK, Chicago, Ill. Filed Jan. 18, 1908. Serial No. 411,433. (Cl. 15—18.)

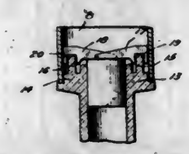


1. A device of the class described formed in its entirety of two members, each comprising a circular plate, an integral projecting handle on one side thereof, an integral flange surrounding said circular plate and handle, and an integral hinge member formed on said flange opposite said handle, one of said hinge members being provided with a slot and the other having a part adapted to engage said slot.

2. In a box opener and holder two relatively movable members, a yielding flange on each of said members, each of said flanges being interrupted at one point.

3. In a box opener and holder, two members each comprising a circular part and an integral handle projecting therefrom, an integral yielding flange surrounding each of said members to respectively fit over a box and its cover, and a hinge connecting the said members.

1,018,107. BOTTLE-SEALS. SAMUEL FRIEDMAN, New York, N. Y. Filed Sept. 26, 1910. Serial No. 583,887. (Cl. 215—12.)



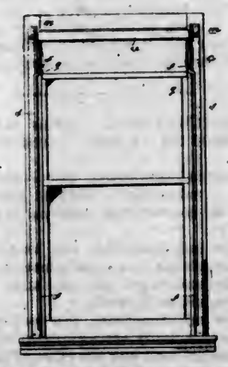
1. A non-resealable bottle having a reduced neck, extensions thereon, a pair of seals adapted to seat on the stopper of said bottle, means on said extensions for securing said seals, said seals having free ends adapted to be broken by twisting same, a ledge extending beyond said extensions and encircling said neck and adapted to seat a protecting member.

2. A non-resealable bottle having a reduced neck, extensions thereon, a pair of seals adapted to seat on the stopper of said bottle, means on said extensions for securing said seals, said seals having free ends adapted to be broken by twisting same, a ledge extending beyond said extensions and encircling said neck and adapted to seat a protecting member, and a protecting member seated thereon.

3. A non-resealable bottle having a reduced neck, extensions thereon, a pair of seals adapted to seat on the stopper of said bottle, means on said extensions for securing said seals, said seals having free ends adapted to be broken by twisting same, a ledge extending beyond said extensions and encircling said neck, adapted to seat a protecting member, a protecting member seated thereon, said seal securing means consisting of breakable posts.

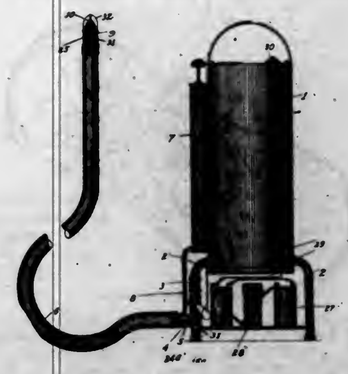
4. A non-resealable bottle having a reduced neck, extensions thereon, a pair of seals adapted to seat on the stopper of said bottle, means on said extensions for securing said seals, said seals having free ends adapted to be broken by twisting same, a ledge extending beyond said extensions and encircling said neck, and adapted to seat a protecting member, a protecting member seated thereon, said seal securing means consisting of breakable posts, said seals adapted to be fixedly secured to said posts.

1,018,108. SHADE-FIXTURE. ALBERT S. GORNTO, Norfolk, Va. Filed Sept. 14, 1911. Serial No. 649,846. (Cl. 156—27.)



In combination with a window frame, a guide-way fastened to the frame at each side of the window and provided with a longitudinal flange extending outwardly away from the window frame and notched at intervals, a shade roller whose brackets are provided with feet which work in said guide ways, a rod pivotally connected to each of said brackets and depending therefrom, each of said rods being provided with a horizontal shoulder at a point adjacent to the shade bracket, said shoulders being adapted to engage the notches in said flanges and the rods being adapted to lie adjacent to the flanges.

1,018,109. RODENT-EXTERMINATOR. DELVIN B. HARRIS, Minturn, Cal. Filed July 20, 1911. Serial No. 639,525. (Cl. 43—5.)



1. A device of the character described comprising a liquid tank, an air pump, a hose having a nozzle on its end, means connecting said tank and said air pump with said nozzle, points projecting outwardly from said nozzle, batteries disposed at a distance from said nozzle, wires extending from said batteries to said points, and means for completing a circuit through said batteries and to said points for the purpose of forming a spark as described.

2. A device of the character described comprising a nozzle having a port in its end, a needle valve forming a normal closure for said port, an air inlet into said nozzle, means admitting a fluid to said nozzle, and means for forming an electrical spark at the end of said nozzle as described.

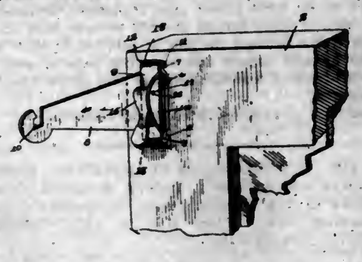
3. A device of the character described comprising a nozzle having a spray port, a needle valve forming a normal closure for said spray port, means admitting air pressure to said nozzle, means admitting liquid to said nozzle, means for opening said spray port by said air pressure and means for closing said spray port by a resilient means as described.

4. A device of the character described comprising a nozzle provided with a spray port, a needle valve forming a normal closure for said spray port, said nozzle being provided with two cylinders, a piston movable in one of said cylinders, a valve at each end of said other cylinder, a rod connecting said valves, said needle valve being linked to one end of said rod, a bell crank fulcrumed within said nozzle and linked to said needle valve, said bell crank projecting into alinement with and linked to said piston, means admitting air pressure to said first named cylinder and means admitting liquid to said last named cylinder as described.

5. A device of the character described comprising a liquid tank, an air pump, a hose having a nozzle on its end, means connecting said tank and said air pump with said nozzle, such connecting means projecting through said hose but being connected with said nozzle independently of said hose, and means for forming a spark at the end of said nozzle as described.

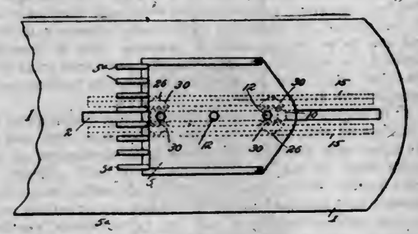
[Claims 6 to 8 not printed in the Gazette.]

1,018,110. WINDOW-SHADE FIXTURE. JOSEPH B. HOGLE, Chicago, Ill. Filed Dec. 27, 1910. Serial No. 599,300. (Cl. 156—24.)



In a window shade fixture, the combination of a base plate adapted to be secured to a window sash, the upper and lower edges of said plate being offset outwardly and the central portion being raised and provided with a slot; a bracket having a base portion disposed at substantially right angles to the body thereof and of a width substantially equal to that of said base plate, said base plate portion being slotted to correspond with the slot in said base plate; engaging flanges at the upper and lower edges of said base portion adapted to slidably embrace said edges of said base plate; a flange on said base portion opposite said bracket; an angular dog pivotally mounted between said securing flange and said bracket, the corresponding end of said dog being adapted to project through said slot and to lock said bracket to said base plate, substantially as described.

1,018,111. BACK GAGE FOR PAPER-CUTTING MACHINES. GEORGE H. HOLDT, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed June 28, 1911. Serial No. 635,804. (Cl. 164—59.)



1. The combination, in a paper cutting machine, of a slotted bed or table, a back gage adjustably mounted upon said table, a guide tongue secured to said gage and projecting freely through the slot of said table, and automatically adjustable spring actuated means carried by said tongue and engaging beneath said table for retaining said gage in position.

2. The combination, in a paper cutting machine, of a slotted bed or table, a back gage adjustably mounted upon said table, a guide tongue secured to said gage and projecting freely through the slot of said table, and self-adjusting guiding means carried by said tongue and engaging beneath said table for retaining said gage in position.

3. The combination, in a paper cutting machine, of a slotted bed or table, a back gage adjustably mounted upon said table, a guide tongue secured to said gage and projecting freely through the slot of said table, and antifriction guide bearings between said tongue and said table adapted to center said tongue in said slot and retain said gage in position.

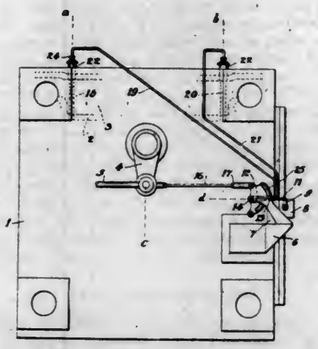
4. The combination, in a paper cutting machine, of a slotted bed or table, a back gage adjustably mounted upon said table, a guide tongue secured to said gage and projecting freely through the slot of said table, and guide

wheels carried by said tongue and engaging beneath said table.

5. The combination, in a paper cutting machine, of a slotted bed or table, a back gage adjustably mounted upon said table, a guide tongue secured to said gage and projecting freely through the slot of said table, guide wheels carried by said tongue and engaging beneath said table, and anti-friction bearings between said guide wheels and said tongue.

[Claims 6 to 16 not printed in the Gazette.]

1,018,112. STEAM-ENGINE LUBRICATOR. ROBERT C. HOLMAN and GEORGE I. THEILE, Hamilton, Ohio, assignors to The Hooven, Owens, Rentschler Company, Hamilton, Ohio. Filed Mar. 9, 1911. Serial No. 613,271. (Cl. 184—36.)



1. In engine lubricating mechanism, the combination of a horizontal cylinder having an oil inlet near each end of the upper side thereof, a valve rocker, two pumps, a cam, an operating connection between said cam and one of the pumps, an operating connection between said cam and the valve rocker, another identical cam in reversed position, an operating connection between said cam and the other pump, and an operating connection between said cam and the valve rocker.

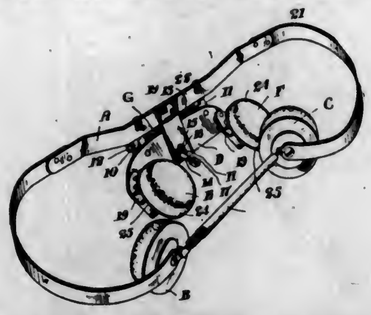
2. In engine lubricating mechanism, the combination of a horizontal cylinder having an oil inlet near each end of the upper side thereof, said inlets being somewhat on opposite sides of the longitudinal axis of said cylinder, a valve rocker, two pumps, a cam, an operating connection between said cam and one of the pumps, an operating connection between said cam and the valve rocker, another identical cam in reversed position, an operating connection between said cam and the other pump, and an operating connection between said cam and the valve rocker.

3. A horizontal steam-engine cylinder provided with an oil inlet near each end of its upper portion, a check-valve at each of said inlets arranged to open to the cylinder, an oil-pump provided with a pair of independently operable rockers, independent conduits from the pump to said oil-inlets, a pair of oscillating cams, links connecting the cams with a portion of the valve-gear of the engine to cause the valve-gear to rock the cams, and links connecting the pump-rockers with the cams to cause the cams to rock the pump-rockers, combined substantially as set forth.

4. A horizontal steam-engine cylinder provided with an oil-inlet near each end of its upper portion, a check valve at each of said inlets arranged to open to the cylinder, an oil-pump provided with a pair of independently operable rockers, independent conduits from the pump to said oil-inlets, a pair of oscillating cams, links connecting the cams with a portion of the valve-gear of the engine to cause the valve-gear to rock the cams, links connecting the pump-rockers with the cams to cause the cams to rock the pump-rockers, and means for varying the length of the first-mentioned links, combined substantially as set forth.

5. A horizontal steam-engine cylinder provided with an oil-inlet near each end of its upper portion, a check-valve at each of said inlets arranged to open to the cylinder, an oil-pump provided with a pair of independently operable rockers, independent conduits from the pump to said oil-inlets, a pair of slotted oscillating cams, links connecting the cams with a portion of the valve-gear of the engine whereby the valve-gear may rock the cams, a slotted guide fixedly supported alongside each cam, a pivot-block engaging each guide and the slot of the appropriate cam, and a link connecting each pivot-block with one of the pump-rockers, combined substantially as set forth.

1,018,113. RUPTURE-TRUSS. JAMES ALFRED JOHNSTON, Vancouver, British Columbia, Canada. Filed Mar. 20, 1911. Serial No. 615,493. (Cl. 128—26.)



1. In a rupture truss, supporting means, a compression member, a spring hinge connecting the compression member with the supporting means, a flat spring on the supporting member, and connecting means between the flat spring and the supporting member adapted to cause the flat spring to resist the movement of the compression member after the latter has moved a determined amount.

2. In a rupture truss and in combination supporting means, a spring actuated compression member hinged thereto formed with a perforation, a flat spring on the supporting member formed with a perforation and a connecting bolt extending between the perforations in the supporting member and flat spring respectively.

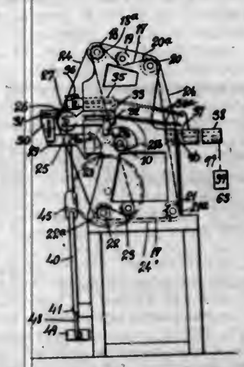
3. In a rupture truss and in combination, supporting means, a compression member carried thereby, brackets on the compression member, sockets carried by said brackets, compression pads formed with two inner plungers fitting within said sockets, springs extending between the sockets and the plungers, and bolts extending through the sockets and pads and adapted to limit the outward movement of the latter.

1,018,114. MACHINE FOR MAKING TUBES. EDWARD J. KERN, Brooklyn, N. Y. Filed Nov. 5, 1908. Serial No. 461,127. (Cl. 93—81.)

1. In a tube making machine, a driving shaft and transmission means, rolls operated thereby, an endless tape upon said rolls, a roller former having a carriage bearing auxiliary roller formers, means in combination with said roller former and said auxiliary roller formers whereby said carriage bearing and said auxiliary roller formers are moved relatively after each tube is made, and an ejector to discharge the made tube.

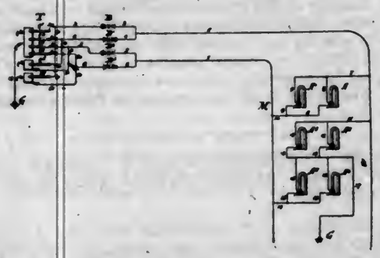
2. In a tube making machine, a driving shaft and transmission means, rolls operated thereby, an endless tape upon said rolls, a roller former and auxiliary roller formers, and means in combination with said roller former and said auxiliary roller formers whereby the same are moved relatively after each tube is made, said means comprising carriages in which said auxiliary roller formers are mounted and operating means for raising the carriage of one of said auxiliary roller formers and for advancing the other of said auxiliary roller formers in the direction of said roller former.

3. In a tube making machine, a driving shaft and transmission means, rolls operated thereby, an endless tape upon said rolls, a roller former and auxiliary rollers formers, means in combination with said roller former and said auxiliary roller formers whereby the same are



moved relatively after each tube is made, said means comprising carriages in which said auxiliary roller formers are mounted and means for raising one of said carriages and for advancing the other of said carriages of said auxiliary roller formers.

1,018,115. TELEGRAPHIC SYSTEM AND APPARATUS. CARL KINSLEY, Chicago, Ill., assignor to Globe Printing Telegraph Company, a Corporation of Michigan. Filed Feb. 2, 1903, Serial No. 141,524. Renewed Feb. 1, 1908. Serial No. 413,841. (Cl. 178—54.)



1. In a telegraphic system, a sending station, a receiving station and a line connecting them, a source of current at the sending station together with means to connect the source to line supply current of either direction and of different strengths, a recording surface at the receiving station and a number of movable pens coöperating therewith, each adapted to produce on the surface a mark constituting one element of a letter or character, magnets controlling the said pens, each magnet arranged to actuate its pen under the influence of current of a particular direction or a particular strength, or both, and connections from the magnets to line such that they may be caused to receive the currents determined at the sending station.

2. In a telegraph system, a sending station, a receiving station, and a line connecting them, a source of current at the sending station with a transmitter to send current to line in various strengths and of either direction in accordance with a determinate code, a recording surface at the receiving station, a set of recording pens adapted to coöperate therewith, each pen printing an element of a character, a corresponding set of magnets, each adapted to actuate its pen under the influence of current of given strength and polarity, and connections from said magnets to line and to each other such that the magnets controlling the elements of certain characters will simultaneously respond.

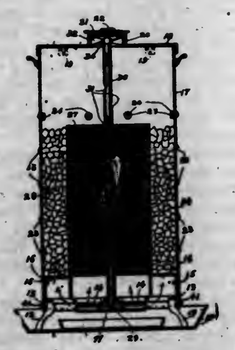
3. In telegraphic receiving apparatus, a recording surface, a recording pen therefor, said pen being composed of resilient material and held rigidly at one or more points, a magnet normally acting to distort the pen and prevent it from printing, and means whereby the magnetism may be varied to release the pen and permit it to print.

4. In telegraphic receiving apparatus, a recording surface, a pen of resilient material coöperating therewith, said pen being rigidly held at one or more points, but free at others, a permanent magnet including the pen in its field, and means whereby the magnet may be caused to distort the pen at will to alter its position relative to the recording surface for the purpose of printing.

5. In a telegraphic system, a sending and a receiving station and a line circuit connecting them, means at the sending station for transmitting current impulses at high frequency over the line, and a receiving apparatus connected to the line comprising an electromagnet, a resilient character printing type electrode directly controlled by said magnet, said electrode having a size, shape and mass whereby it will have a natural period of vibration approximating that of the line impulses, a chemically sensitized recording surface adapted to receive a character imprint from said electrode, and a circuit connection for said electrode to a suitable source of current whereby impact upon the sensitized surface will produce an instantaneous impression by means of electro-chemical action, substantially as described.

[Claims 6 to 39 not printed in the Gazette.]

1,018,116. COOKING UTENSIL. JULIAN KOWALSKI, Chicago, Ill. Filed Oct. 23, 1911. Serial No. 656,096. (Cl. 126—41.)



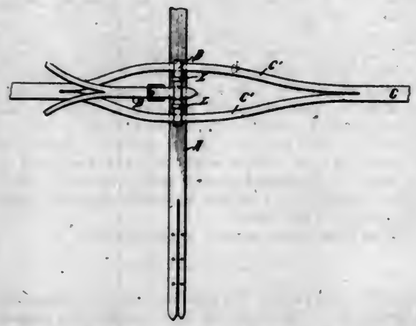
1. In a device of the character described, the combination with a gas burner having a frame of an outer casing having a door in one of its walls and mounted on the frame of said burner, a charcoal retainer removably located in the casing at a distance from three of the upright walls thereof but in contact with its other upright wall, a vertically disposed carrier rotatably mounted at its lower end on the gas burner and extended through the said retainer and upper portion of the outer casing, and a hot air motor on the upper portion of said carrier.

2. In a device of the character described, the combination with a gas burner having a frame of a perforated channeled base mounted on the upper surface of said burner, a casing mounted on the burner frame and surrounding said base, the said casing having a door in one of its walls and a cover for its upper portion provided centrally with a neck or chimney, a charcoal retainer removably located in the casing at a distance from the rear and side walls thereof and having its front portion open to register with the doorway of the casing, a vertically disposed carrier rotatably mounted at its lower

end on the gas burner and extended through the said retainer and into the chimney of the cover of the casing, and a hot air motor or fan mounted on the upper portion of said carrier.

3. In a device of the character described, the combination with a gas burner having a frame of a casing mounted on the frame of said burner and having a door in one of its walls, a cover for the upper portion of the casing provided centrally with a neck or chimney, a vertically disposed carrier rotatably mounted at its lower end on the gas burner and at its upper end within the chimney of the cover for the casing, and a hot air motor on the upper portion of said carrier.

1,018,117. OVERCHECK-GUIDE. JOHN KRESSIN, Milwaukee, Wis. Filed Feb. 4, 1911. Serial No. 606,464. (Cl. 54—13.)



1. In a device of the described class, the combination with a crown strap, of a flexible strap secured thereto and forming a crown loop, a set of metallic members within said loop secured to the crown strap on opposite sides of its central portion, and means for clasping the loop strap to the crown strap over the metallic members, each of said metallic members forming guide brackets into which an over-check strap may be manipulated at a point intermediate of its ends.

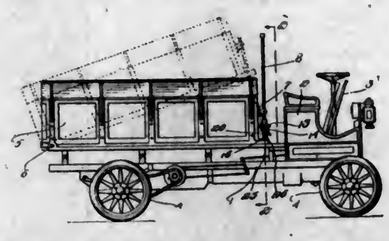
2. The combination with the crown strap of a bridle, of metallic guide brackets secured to the crown strap, and each adapted to receive a portion of the overcheck strap, a flexible crown strap loop extending over the guide brackets, and a resilient clasp intermediate of the guides, adapted to engage and hold the crown strap loop in a depressed position between the guides, and in a covering position on the guides.

3. The combination with the crown strap of a bridle, of metallic brackets secured to the crown strap, and each adapted to receive a portion of the overcheck strap, a flexible crown strap loop extending over the guides, and a resilient clasp intermediate of the guide brackets, adapted to engage and hold the crown strap loop in a depressed position between the guides and in a covering position on the guides, said guides being independently secured to the crown strap at opposite sides of the crown center.

4. The combination with the crown strap of a bridle, of metallic guide brackets secured to the crown strap, and each adapted to receive a portion of the overcheck strap, a flexible crown loop having a portion extending over the guide brackets, and connected with the crown strap at the respective ends of such portion, and clasping means for releasably engaging and holding the crown loop in a depressed position between the guides.

1,018,118. DUMPING MOTOR-VEHICLE. GEORGE W. LALLY, Boston, Mass. Filed July 16, 1910. Serial No. 572,319. (Cl. 21—20.)

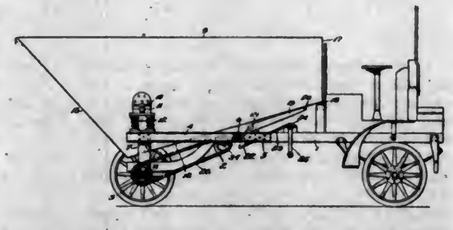
1. A dumping motor vehicle, comprising a pivotally mounted load carrier, an elevating screw having threaded engagement with one end thereof, gearing for operating said screw, and a pivoted bracket support for said gearing and the lower end of said screw, said support having an upward projection to fit into a socket in the lower end of the screw to provide a grit-shedding bearing.



2. A dumping motor vehicle, comprising a pivotally mounted load carrier, an elevating screw having threaded engagement with one end thereof, a base mounted on transverse pivots on the vehicle and carrying a pivot support for said screw, driving means for said screw extending transversely in a common plane with said pivots to a point adjacent the side of the vehicle, and a bracket fixed to said base having bearings rigid with relation to each other for said driving means and also for said screw whereby said parts are held in fixed relative position.

3. A hoisting apparatus for a vehicle of the kind described, comprising a hoisting screw, a nut for communicating the motion thereof to the part to be hoisted, a supporting bracket for the lower end of the screw adapted to extend transversely of the vehicle and provided on its under side with spaced apart pivotal bearings, a gear wheel carried by said screw, said bracket having two overhanging journal bearings for said screw, one above said wheel and one below the same, and a pinion and pinion shaft journaled longitudinally of said bracket to extend laterally of the vehicle for operating said gear wheel and screw, said bracket being provided with a conical end bearing pin for the extreme lower end of said screw, the overhanging lower journal bearing of said bracket affording an open space about said pin and said extreme lower end of the screw to aid the bearings in freeing themselves of grit.

1,018,119. AUTO GARBAGE-TRUCK. GEORGE W. LALLY, Boston, Mass. Filed Feb. 28, 1911. Serial No. 611,456. (Cl. 21—20.)



1. An apparatus of the kind described, comprising a vehicle framework having its rearward portion offset downwardly adjacent the rear axle, laterally offset portions fixed to the framework and extending rearwardly, and a receptacle body mounted on horizontal pivots and having support on said laterally offset rearwardly extending portions.

2. An apparatus of the kind described, comprising a vehicle framework having longitudinal parallel bars secured adjacent their ends to the rear axle, laterally offset bars secured to said framework bars and extending rearwardly above the same, and a body mounted on horizontal pivots, having supports adjacent the outer ends of said laterally offset bars.

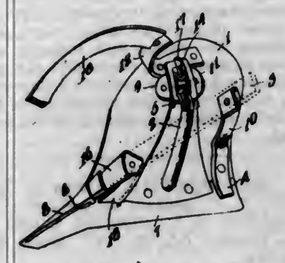
3. An apparatus of the kind described, comprising a vehicle framework, having longitudinally extending parts offset downward adjacent their rear ends to a point adjacent the rear axle, laterally offset bars fixed to the framework and extending to the rear of the vehicle, and a body horizontally pivoted on said laterally offset bars.

4. An apparatus of the kind described, comprising an automobile framework, having its rearward portion offset downward, the rear axle supporting said downwardly offset portion, laterally offset members fixed to said framework and extending rearwardly, and a body having horizontal pivotal mounting on said laterally offset member.

5. An apparatus of the kind described, comprising an automobile framework having a downwardly offset support at its rearward portion to have bearing on the rear axle, laterally offset members fixed to the framework and extending rearwardly, a body having a bottom tapering forwardly upward, and horizontal pivot mountings for said body upon said laterally offset members, the lower portion of said body extending down between said laterally offset members.

[Claims 6 to 11 not printed in the Gazette.]

1,018,120. PLOW. LYMAN S. LEWIS, Elkport, Iowa, assignor of one-half to Harry B. Fitz-Jerrell, Elkport, Iowa. Filed Nov. 15, 1911. Serial No. 660,429. (Cl. 97—18.)



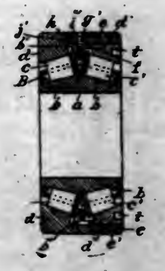
1. In a plow, the combination with a mold board, a landside bar, and an angle plate attached to the mold board and the landside bar and having a projecting nose, of a share having a landside gunnel, and a hook bent inward from the gunnel, the nose of the said plate fitting between the share and the gunnel and engaged by the said hook, and means for connecting the share and mold board.

2. In a plow, the combination with a mold board, a landside bar, an angle plate attached to the landside bar and the mold board, and a projection from the mold board, of a share having a landside gunnel, an arm secured to the share fitting between the said projection and flange and having a lip engaging the angle plate, the projection engaging in back of the share, and means for connecting the said arm to the mold board.

3. In a plow, the combination with a mold board, a landside bar, and a keeper secured to the mold board, of a share having a landside gunnel, an arm secured to the share fitting in back of the mold board, a link pivoted to the said arm and engageable over the keeper, and a wedge insertible in the keeper to retain the link in position.

4. In a plow, the combination with a mold board, a landside bar, an angle plate attached to the landside bar and the mold board and having a projecting nose, a projection from the mold board, and a keeper secured to the mold board, of a share having a landside gunnel and a hook bent inward from the gunnel, the nose of the said plate fitting between the share and gunnel and engaged by the said hook, an arm secured to the share fitting between the said projection and angle plate, the said projection engaging in back of the share, a link pivoted to the said arm and engageable over the said keeper, and a wedge insertible in the keeper to retain the link in position.

1,018,121. SPRING-LOCK FOR ADJUSTABLE CASINGS OF ROLLER-BEARINGS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed June 27, 1910. Serial No. 568,969. (Cl. 64—30.)



1. A roller bearing having a sectional casing, the outer section *d* having a cylindrical exterior with tapering roll-seat inside one end and having the shell *e* extended from the other end and threaded internally, the inner section *d'* fitted adjustably to such screw-thread, the hub *a* having the double conical seats *b* with sets of rolls *c* and *c'* between the same and the seats of the casing, the inner section *d'* having the flange *b'* provided upon its periphery with an annular series of recesses, the outer section *d* having the circumferential socket *h* upon its periphery with the perforation *f'* through the shell *e* near one end of said socket, the leaf-spring *i* riveted in the opposite end of the recess and having a tooth extended through the perforation *f'* and adapted to engage any of the recesses in the flange *b'*, the tooth having a sloping face and the recesses operating to push the tooth automatically outward when one section is turned upon the other, substantially as shown and described.

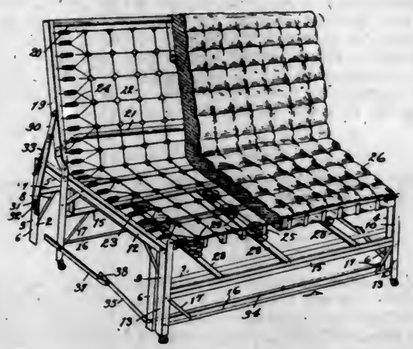
2. A roller bearing having a sectional casing, the outer section *d* having a cylindrical exterior with tapering roll-seat inside one end and having the shell *e* extended from the other end and threaded internally, the inner section *d'* fitted adjustably to such screw-thread, the hub *a* having the double conical seats *b* with sets of rolls *c* and *c'* between the same and the seats of the casing, the inner section *d'* having the flange *b'* provided upon its periphery with an annular series of adjacent concave recesses having doubly sloped faces, the outer section *d* having the circumferential socket *h* upon its periphery with the perforation *f'* through the shell *e* near one end of said socket, the leaf-spring *i* riveted in the opposite end of the recess and having a tooth extended through the perforation *f'* and adapted to engage any of the recesses in the flange *b'*, the tooth being provided with a convex end fitted to the concave recesses, and the recesses operating to push the tooth automatically outward when one section is turned upon the other in either direction, substantially as shown and described.

1,018,122. DAVENPORT. JOSEPH LUPPINO, Ridgewood, N. J., assignor to Luppino Davenport Company, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 12, 1911. Serial No. 643,660. (Cl. 5—47.)

1. A convertible davenport consisting of a stationary section having legs and a shiftable seat section also having legs and a hinged back linked to the stationary section and maintained upright when the structure is in the form of a davenport, the seat section being located above the stationary section so that it is shiftable over the same to carry the seat thereof to the front of said stationary section and the back down onto the stationary section.

2. A convertible davenport consisting of a stationary section having legs and a shiftable seat section also having legs and a hinged back linked to the stationary section and maintained upright when the structure is in the form of a davenport, the seat section being located above the stationary section so that it is shiftable over

the same to carry the seat thereof to the front of said stationary section and the back down onto the stationary section, and means for shifting said seat section to convert the structure into a double bed.



3. A convertible davenport consisting of a stationary section having supporting means and a shiftable seat section having legs and a hinged back linked to the stationary section and maintained upright when the structure is in the form of a davenport, the seat section being located above the stationary section so that it is shiftable over the same to carry the seat thereof to the front of said stationary section and the back down onto the stationary section, and means for shifting said seat section forwardly of the stationary section whereby the back will be lowered onto said stationary section while the stationary section is in its stationary position, said means comprising a shaft carried by one section and a pedal lever carried by the other section and connected to said shaft.

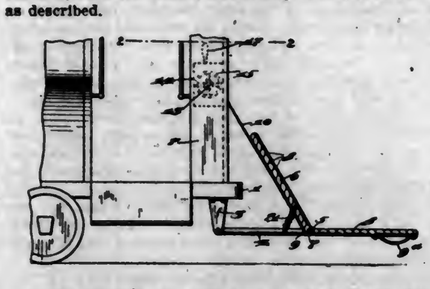
4. A convertible davenport consisting of a stationary section having legs and a shiftable seat section also having legs and a hinged back linked to the stationary section, the seat section being located above the stationary section so that it is shiftable over the same to carry the seat thereof to the front of said stationary section and the back down onto the stationary section, and means for shifting said seat section to convert the structure into a double bed, said means comprising a rock shaft carried by the stationary section and a pedal lever carried by the seat section and connected with said rock shaft.

5. A convertible davenport consisting of a stationary section having legs and a shiftable seat section also having legs and a hinged back linked to the stationary section, the seat section being located above the stationary section so that it is shiftable over the same to carry the seat thereof to the front of said stationary section and the back down onto the stationary section, and means for shifting said seat section to convert the structure into a double bed, said means comprising a rock shaft carried by the stationary section and a lever carried by the seat section and connected with said rock shaft, said rock shaft having a stop coöperating with the pedal lever for limiting movement of the rock shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,018,123. CAR-FENDER. JOHN RUSSELL MAGUIRE, Philadelphia, Pa. Filed Nov. 4, 1910, Serial No. 590,623. Renewed July 19, 1911. Serial No. 639,472. (Cl. 105—253.)

1. The combination with a car, and brackets secured to the car and depending therefrom, of a fender pivotally connected at its rear end to said brackets, spring contact shoes on the lower face of the fender at its forward end, a reel supported on the car, a flexible connecting device between the reel and the fender, means for turning the reel to wind the connecting device thereon and elevate the fender, a ratchet wheel secured to turn with the reel, a pivoted spring held lever engaging the teeth of said ratchet wheel, a hinged member on the fender, and springs connecting said hinged member with the main portion of the fender and holding the hinged member in an inclined position against the flexible connecting device, substantially as described.



2. The combination with a car, a dash board thereon having an opening therein, and a fender pivotally connected to the car, of a boxing secured to the inner face of the dash board, a shaft mounted in said boxing, and projected at one end through the boxing, a hand wheel on the protruding end of the shaft, a reel fixed on the shaft, a flexible connecting device between the reel and the fender and passing through the opening in the dash board, a ratchet wheel on the shaft in the boxing, a lever projecting through the boxing and engaging the ratchet wheel, a hinged member on the fender, and springs connecting said hinged member with the main portion of the fender and holding the hinged member in an inclined position against the flexible connecting device, substantially as described.

1,018,124. SIPHON-BOTTLE. PETER E. MALMSTROM, New York, N. Y., assignor of one-half to Aaron M. Sloss, New York, N. Y. Filed Feb. 3, 1909, Serial No. 475,742. Renewed July 15, 1911. Serial No. 638,728. (Cl. 215—3.)

1. In a device of the character described, a lining with a neck having a perforation therethrough, a casing exterior to said lining and connected therewith by gas-tight joint to form a chamber about the same adapted to be maintained at the same pressure as the interior of said lining because of said perforation and a siphon connected to said lining, said device being refillable.

2. In a device of the character described, a lining having a perforation in the upper wall thereof, a casing about said lining and separated therefrom to form a chamber therebetween, a gasket between said casing and lining about the neck thereof above said perforation to form a gas-tight joint, and a spring in said casing on which said lining rests.

3. In a device of the class described, a casing, a lining therein with a chamber between said casing and lining, means insuring a gas-tight joint between the casing and lining at the neck of the bottle, said lining having a perforation near its neck portion, and means interposed between the bottom of the lining and the bottom of the casing for pressing the lining upward to maintain a gas-tight joint between the casing and lining, and a siphon connected with said lining, the construction permitting of filling of the lining at low pressure.

1,018,125. LOOSE-LEAF BINDER. LEONARD M. MORRHOUSE, Newark, N. J. Filed June 12, 1911. Serial No. 632,688. (Cl. 129—13.)

1. In a loose-leaf binder, an upper and a lower bar adapted to receive leaves between them, a channel-shaped housing at each end of said upper bar and having inwardly projecting flanges, a plate at each end of said lower bar, received and guided in said housings, ratchet teeth on said plates, a latch in each housing slidably mounted in the said flanges thereof and adapted to engage the teeth of the adjacent plate, and a thumb-piece on the protruding end of each latch, arranged to move the latter out of engagement with said teeth.

2. In a loose-leaf binder, an upper and a lower bar adapted to receive leaves between them, a channel-shaped housing at each end of said upper bar and having inwardly projecting flanges, a plate at each end of said lower bar, received and guided in said housings, ratchet teeth on said plates, a latch in each housing slidably mounted in the said flanges thereof and adapted to engage the teeth of the adjacent plate, a spring arranged to hold said latch in yielding engagement with said teeth, and a thumb-piece on the protruding end of each latch, whereby the latter is moved to disengage said teeth in opposition to the force of said spring.

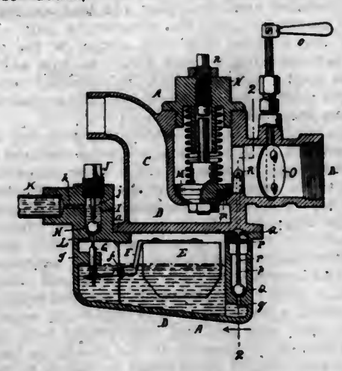
3. In a loose-leaf binder, an upper and a lower bar adapted to receive leaves between them, a channel-shaped housing at each end of said upper bar, having inwardly projecting flanges, a plate at each end of said lower bar constructed to be received and guided in said housing, ratchet teeth on the rear edges of said plates, a latch in each of said housings arranged to slide in openings in said flanges, and a tooth on each of said latches arranged to engage the teeth of said plates.

4. In a loose-leaf binder, an upper and a lower bar adapted to receive leaves between them, a channel-shaped housing at each end of said upper bar, having inwardly projecting flanges, a plate at each end of said lower bar constructed to be received and guided in said housing, ratchet teeth on the rear edges of said plates, a latch in each of said housings arranged to slide in openings in said flanges, a tooth on each of said latches arranged to engage the teeth of said plates, and a spring carried by each of said housings and arranged to hold said latch in yielding engagement with said teeth.

5. In a loose-leaf binder, an upper and a lower bar adapted to receive leaves between them, a channel-shaped housing at each end of said upper bar, having inwardly projecing flanges, a plate at each end of said lower bar constructed to be received and guided in said housings, ratchet teeth on the rear edges of said plates, a latch in each of said housings arranged to slide in openings in said flanges, a tooth on each of said latches arranged to engage the teeth of said plates, and means carried by said latches co-acting with said flanges to limit the movements of said latches.

[Claim 6 not printed in the Gazette.]

1,018,126. CARBURETER. WILLIAM E. NAGELVOORT, Detroit, Mich. Filed May 3, 1909. Serial No. 493,552. (Cl. 48—155.2.)



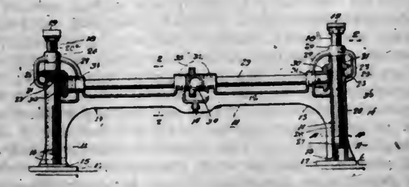
1. In a carbureter, a reservoir, a chamber *r*, a passage communicating with said reservoir and chamber, a valve in said chamber adapted to close one end of said passage and having a cavity formed therein, said chamber being provided with screw-threads in its walls, a perforated screw-threaded plug engaging said threads, a rod extending from said plug into the cavity in the ball-valve, substantially as and for the purpose described.

2. In a carbureter, a reservoir, a chamber *r*, a passage communicating with said reservoir and chamber, a valve in said chamber adapted to close one end of said passage and having a cavity formed therein, said chamber being provided with screw-threads in its walls toward its upper end, a perforated screw-threaded plug engaging said threads, a rod extending from said plug into the cavity in the ball-valve, a part of said carbureter being removably secured to said reservoir at the plane of the upper end of said chamber.

3. In a carbureter, a reservoir, a chamber *r*, a passage communicating with said reservoir and chamber, a valve in said chamber adapted to close one end of said passage, said chamber being provided with screw-threads in its walls, a perforated screw-threaded plug engaging said threads, said plug being adapted to limit the movements of said valve, substantially as and for the purpose described.

4. In a carbureter, a reservoir, a chamber *r*, a passage communicating with said reservoir and chamber, a valve in said chamber adapted to close one end of said passage, said chamber being provided with screw-threads in its walls toward its upper end, a perforated screw-threaded plug engaging said threads, a rod extending from said plug to a position adjacent to said valve, a part of said carbureter being removably secured to said reservoir at the plane of the upper end of said chamber, for the purpose described.

1,018,127. LIFTING-JACK. JOHN OLSON, Chicago, Ill. Filed May 1, 1911. Serial No. 624,367. (Cl. 57—15.)

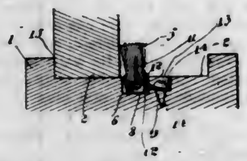


1. In a lifting jack, the combination with a frame comprising two oppositely disposed similar halves bolted together, each half comprising a hollow standard formed with an integral flat base and with an integral horisontal

bar extending to the middle of the jack, of a pair of screw threaded posts, one mounted to slide in each standard, and having a shoulder upon its upper end, a bevel pinion threaded upon each post and held against longitudinal movement upon the standard, a pair of bevel pinions, one meshing with each pinion on the posts, a cross shaft journaled on said horizontal bars and carrying said second named pinions, an operating lever, and pawl and ratchet mechanism operatively connected with said cross shaft and lever.

2. In a lifting jack, the combination with two similar frame members, each comprising a tubular standard having a gap intermediate its ends, and a cross connection extending to the center of the lifting jack, each cross connection having horizontal bearing apertures adjacent the standards and adjacent the center of the lifting jack, of a vertically movable post mounted in each standard, a shoulder-block carried by each post, and mechanism for raising and lowering the posts in unison, said mechanism including a cross shaft, journaled in said horizontal bearing apertures, a pinion upon each end of said cross shaft, a pinion upon each post and intermeshing with the adjacent pinion on the cross shaft, the pinions on the posts being confined against longitudinal movement in the gap in the standards, rock lever, and operative connections between the rock lever and shaft.

1,018,128. WINDOW. FRANCOIS X. PAYMENT, Chicago, Ill., assignor of one-half to Oscar W. Johnson, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,731. (Cl. 20—12.)



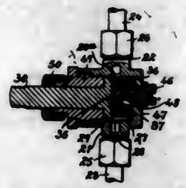
1. In a window, a frame having a vertical groove interposed between the window sashes, a parting strip resiliently mounted in said groove and adapted to exert pressure on the adjacent sash, the resilient mounting of said parting strip comprising a pair of wire springs secured by means of screws in recesses adjacent said groove and means for securing the free ends of said springs to the inner edge of said parting strip, substantially as described.

2. In a window, a vertical groove formed in the window frame between the sashes thereof, a parting strip mounted in said groove, a pair of wire springs secured to said parting strip and projecting laterally therefrom, and means for securing said springs to said frame adjacent the groove thereof, the mounting of said parting strip being such that the same will exert a constant pressure on the adjacent sash, substantially as described.

3. In a window, a parting strip groove provided in the window frame intermediate the sashes thereof, a parting strip inserted in said groove and adapted to have a limited oscillation therein, and resilient means controlling said oscillation comprising a pair of wire springs secured to said parting strip and to said frame adjacent the groove thereof, each spring being provided with three loops, two loops for the reception of nails by means of which the spring is secured to the parting strip, and one loop for the reception of a screw by means of which said spring is secured to the window frame, substantially as described.

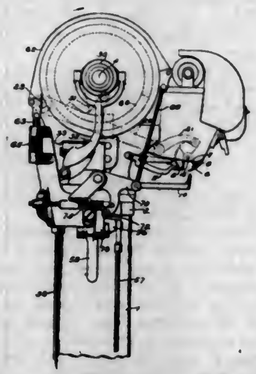
4. In a window, a window frame provided with a pair of sash grooves, a pair of sashes vertically movable in said grooves, a parting strip groove interposed between said sash grooves and disposed parallel thereto, a parting strip resiliently mounted in said parting strip groove and having a pair of recesses in the inner edge thereof, a pair of recesses in one of said sash grooves arranged in juxtaposition with the recesses of said parting strip, and a pair of springs secured to said parting strip in the recesses thereof and in the recesses provided in said sash grooves, substantially as described.

1,018,129. PUMP. JOHANNES TH. PEDERSEN, Woodside, N. Y., assignor to Pedersen Manufacturing Co., New York, N. Y., a Corporation of New York. Filed Sept. 15, 1909. Serial No. 517,769. (Cl. 103—44.)



In a pump, the combination with a casing having a cylindrical bore and inlet and discharge openings of small area, of a revoluble member comprising a head and stem fitting the bore of the casing and the head transversely slotted in the outer face, a solid piston comprising a base with a substantially flat back and arms at the ends at right angles to the base and the outer parts of which are at the respective ends of the piston, with the inner faces outwardly inclined so that there is produced between the arms a recess and the piston transversely slidable across the face of the head of the revoluble member in the slot thereof and moving therewith, a cover to the casing contacting with the face of the revoluble member and a tapering adjustable member secured in said cover off the axial center of the revoluble member for actuating said piston to feed the fluid handled by the pump.

1,018,130. SEWING-MACHINE. THOMAS GUSTAVE PLANT, Boston, Mass., assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed June 6, 1911. Serial No. 631,646. (Cl. 112—20.)



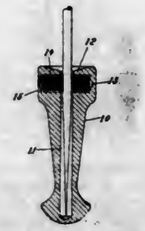
1. A chain stitch inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hooked needle and a looper and means, acting automatically upon stopping the machine, to free the last needle loop from the stitch forming devices and bring the needle to rest out of engagement with the work.

2. A chain stitch inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hooked needle and a looper and means, acting automatically upon stopping the machine, to retract the needle while its hook is empty and bring the needle to rest out of engagement with the work.

3. A chain stitch inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hooked needle and a looper and means, acting automatically upon stopping the machine, to reverse the cycle of operations and cause the needle to retract while its hook is empty and come to rest out of engagement with the work.

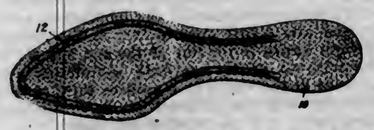
4. A chain stitch inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hooked needle and a looper and means, operating automatically upon stopping the machine, to reverse the cycle of operations after the needle has penetrated the work and cause the needle to retract while its hook is empty and come to rest out of engagement with the work.

1,018,131. PIN-GUARD. ROBERT L. PRAHAR, Massapequa, N. Y. Filed Jan. 26, 1911. Serial No. 604,819. (Cl. 24—155.)



A pin guard including a body having a passage extending lengthwise thereof to receive the pin point, and sockets intermediate between the ends of said passage and intersecting the same upon opposite sides, and a coil spring having its ends seated in said sockets and having its intermediate portion presenting one or more coils within said passage adapted to be forced toward said sockets upon the insertion of the pin through said passage and frictionally engaging with said pin to retain the latter between adjacent coils.

1,018,132. INSOLE. GEORGE L. PRESBLE, Lynn, Mass. Filed May 1, 1911. Serial No. 624,322. (Cl. 36—44.)

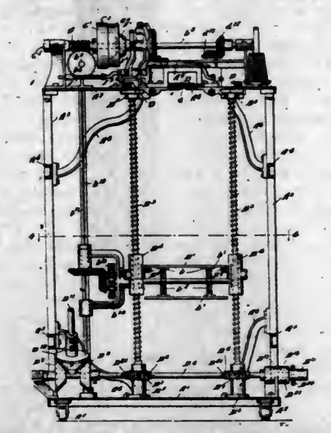


1. As an article of manufacture, an insole comprising a layer of textile material having a crease, a strip of fibrous material in said crease, and a layer of celluloid interlocked with said layer of textile material and with said strip.

2. As an article of manufacture, an insole comprising a layer of textile material having a stitch-receiving rib, a layer of suitable material, an intermediate layer of celluloid interlocked with the first-mentioned layers whereby they are joined together, and a shank stiffener of fibrous material between said first mentioned layers and interlocked with said layer of celluloid.

1,018,133. FILLED-SACK-SEWING MACHINE. GEORGE E. SCOTT and EDWARD D. SCOTT, Chicago, Ill., assignors to Timewell Sack Filling & Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 1, 1910. Serial No. 574,935. (Cl. 112—24.)

1. In a filled sack sewing machine, the combination with a sewing mechanism, of a horizontally movable endless flexible sack conveyer adjustable vertically and always remaining in a horizontal plane, means for raising and lowering the sack conveyer, means for propelling the sack conveyer, a driving shaft, and means for connecting and disconnecting the driving shaft with said conveyer raising and lowering mechanism, said sack conveyer propelling means being operated from the driving shaft, substantially as specified.



2. In a filled sack sewing machine, the combination with a sewing mechanism, of an endless flexible sack conveyer, mechanism for propelling said conveyer, and reversible mechanism for automatically and positively raising and lowering the conveyer to any one of an unlimited number of positions, substantially as specified.

3. In a filled sack sewing machine, the combination with a sewing mechanism, of an endless flexible sack conveyer, mechanism for propelling said conveyer, reversible mechanism for automatically and positively raising and lowering the conveyer, a power shaft and means for connecting and disconnecting said power shaft with the raising and lowering mechanism of said sack conveyer said means comprising a friction drive, substantially as specified.

4. In a filled sack sewing machine, the combination with a sack sewing mechanism, of a sack conveyer, a power shaft, connecting mechanism for propelling the sack conveyer from the power shaft and connecting reversible mechanism for positively raising and lowering the conveyer from the power shaft said raising and lowering mechanism comprising rotatable screws, substantially as specified.

5. In a filled sack sewing machine, the combination with a sack sewing mechanism, of a sack conveyer, a power shaft, connecting mechanism for propelling the sack conveyer from the power shaft and connecting mechanism for raising and lowering the entire conveyer from the power shaft provided with a connecting clutch for throwing said raising and lowering mechanism in and out of operation and a conveyer supporting frame supported centrally of the conveyer, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,018,134. KNITTED FABRIC AND HOSIERY MADE THEREFROM. ROBERT W. SCOTT, Leeds Point, N. J., assignor, by direct and mesne assignments, to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Sept. 22, 1905. Serial No. 279,635. (Cl. 66—4.)

1. A stocking having a leg portion knitted in rib stitch, a heel band knitted in separate plain webs, and a foot portion consisting of a plain web joining a rib course at the front of the bi-knit heel band, substantially as specified.

2. A stocking having a leg portion knitted in rib stitch, a heel band knitted in separate plain webs, and a foot portion consisting of a plain web joining a rib course

at the front of the bi-knit heel band and having a seamless toe, substantially as specified.

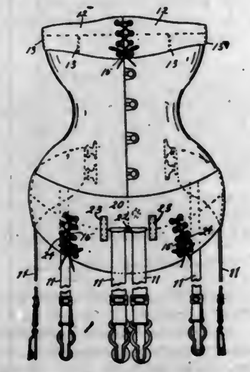
3. A stocking having a leg portion knitted in rib stitch, a knee band knitted in separate plain webs, a heel band also knitted in separate plain webs, and a foot consisting of a plain web united to the ribbed fabric at the front of the heel band, substantially as specified.

4. A stocking having a leg portion knitted in rib stitch, a knee band knitted in separate plain webs, a heel band also knitted in separate plain webs, and a foot consisting of a plain web united to the ribbed fabric at the point of the heel band, and having a seamless toe, substantially as specified.

5. A stocking having a leg portion knitted in rib stitch and a heel band knitted in separate plain webs, extending completely around the stocking, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

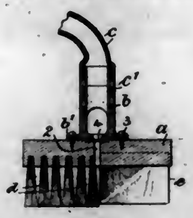
1,018,135. CORSET. MARY L. E. SCUDDER, Wayne township, Marion county, Ind. Filed Apr. 15, 1909. Serial No. 490,081. (Cl. 2—73.)



1. The combination of a corset body, hose supporters suspended from the lower front end thereof, a binding strip extending about the sides and front of the corset body at the lower end, having a slot in the front thereof through which the hose supporters extend, and projecting below the corset body to form an abdominal support, and whereby the front of said strip is held in place, means for securing the ends of said strip in place, and a lacing for tightening the lower portion of said strip.

2. The combination of a corset body, a binding strip extending across the sides and front of the corset body at the lower end thereof and projecting below the corset body to form an abdominal support, means for securing the ends of said binding strip to the corset body, means for holding down the front of said binding strip, a lacing for adjusting the tightness of the strip on the body, and hose supporters suspending from the lower rear portion of the strip.

1,018,136. VACUUM CLEANING DEVICE FOR CLEANING ANIMALS. JAMES J. SLEVIN, New York, N. Y. Filed Feb. 13, 1911. Serial No. 608,435. (Cl. 119—84.)



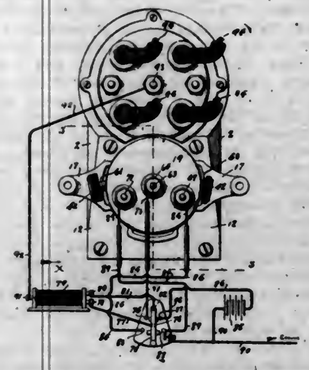
1. A vacuum cleaning device for cleaning animals, comprising a foundation of suitable material to be held in the hand and provided with a slot therein lengthwise thereof, an intake nozzle suitably secured to one surface of said foundation and having a slot coinciding with the slot of the foundation, series of bristles forming a brush secured to the opposite surface of said foundation and series of blades forming curry-comb members also secured to the same surface of the foundation, with the bristles and said blades arranged across the foundation and at right angles to the line of the slot so as to constitute unobstructed intake passage-ways to the slot.

2. A vacuum cleaning device for cleaning animals, comprising a foundation of suitable material to be held in the hand and provided with a slot therein lengthwise thereof, an intake nozzle suitably secured to one surface of said foundation and having a slot coinciding with the slot of the foundation, series of bristles forming a brush secured to the opposite surface of said foundation and series of blades forming curry-comb members also secured to the same surface of the foundation, with the bristles and said blades arranged across the foundation and at right angles to the line of the slot but not crossing the same so as to constitute unobstructed intake passage-ways to the slot, and a band or skirt of suitable material secured to the periphery of the foundation and extending partly over tue bristles and blades.

3. A vacuum cleaning device for cleaning animals, comprising a foundation of suitable material to be held in the hand and provided with a slot therein lengthwise thereof, an intake nozzle suitably secured to one surface of said foundation and having a slot coinciding with the slot of the foundation, and series of bristles secured to the opposite surface of the foundation and arranged in groups, and serrated blades forming curry-comb members arranged between the bristles and the said blades secured to the foundation at right angles to the line of the slot, so as to thereby produce unobstructed intake channels to the slot for the removal of particles into the slot in the vacuum cleaning operation.

1,018,137. DOUBLE OR TWIN INTERRUPTER FOR IGNITION SYSTEMS. JAMES M. SMITH, Philadelphia, Pa., assignor of one-half to Wilson D. Craig Wright, Philadelphia, Pa. Filed May 25, 1910. Serial No. 563,239. (Cl. 123—165.)

1. The combination with a magneto generator of a twin interrupter device for controlling a magneto or normally closed circuit and a battery or normally open circuit, comprising a carrier-plate, a contact means for said magneto circuit supported upon said carrier-plate, a contact means for said battery circuit supported upon said carrier-plate, means for pivotally supporting upon said carrier-plate an interrupter member provided with two interrupter arms, one arm normally contacting with said magneto circuit contact means, the other arm normally disengaged from said battery circuit contact means, and means, connected so as to rotate with the armature of said magneto generator, for engaging said interrupter member to oscillate its interrupter arms to break the magneto or closed circuit and close the battery or open circuit in a single movement of said interrupter-member, substantially as and for the purposes set forth.



2. The combination with a magneto generator of a twin interrupter device for controlling a magneto or normally closed circuit and a battery or normally open circuit, comprising a carrier-plate, a contact means for said magneto circuit supported upon said carrier-plate, a contact means for said battery circuit supported upon said carrier-plate, means for pivotally supporting upon said carrier-plate an interrupter member provided with two interrupter arms, one arm normally contacting with said magneto circuit contact means, the other arm normally disengaged from said battery circuit contact means, a spindle connected with the armature of said magneto generator so as to rotate therewith, a cam-member adjustably connected with said spindle, cam-portions on said cam-member adapted to engage with said interrupter member to oscillate its interrupter arms to break the magneto or closed circuit and close the battery or open circuit in a single movement of said interrupter-member, substantially as and for the purposes set forth.

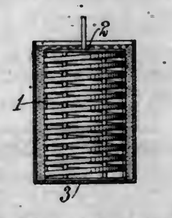
3. The combination with a magnetic generator of a twin interrupter device for controlling a magneto or normally closed circuit and a battery or normally open circuit, comprising a carrier-plate, a contact means for said magneto circuit supported upon said carrier-plate, a contact means for said battery circuit supported upon said carrier-plate, means for pivotally supporting upon said carrier-plate an interrupter member provided with two interrupter arms, one arm normally contacting with said magneto circuit contact means, the other arm normally disengaged from said battery circuit contact means, a means for retaining said interrupter member in its normal position and means connected so as to rotate with the armature of said magneto generator, for engaging said interrupter member to oscillate its interrupter arms to break the magneto or closed circuit and close the battery or open circuit by a single movement of said interrupter-member, substantially as and for the purposes set forth.

4. The combination with a magneto generator of a twin interrupter device for controlling a magneto or normally closed circuit and a battery or normally open circuit, comprising a carrier-plate, a contact-means for said magneto circuit supported upon said carrier-plate, a contact means for said battery circuit supported upon said carrier-plate, means for pivotally supporting upon said carrier-plate an interrupter member provided with two interrupter arms, one arm normally in contact with said magneto circuit contact means, the other arm normally disengaged from said battery circuit contact means, means for retaining said interrupter member in its normal position, a spindle connected with the armature of said magneto generator so as to rotate therewith, a cam-member adjustably connected with said spindle, cam-portions on said cam-member adapted to engage with said interrupter member to oscillate its interrupter arms to break the magneto or closed circuit and close the battery or open circuit in a single movement of said interrupter-member, substantially as and for the purposes set forth.

5. The combination with a magneto generator of a twin interrupter device for controlling a magneto or normally closed circuit and a battery or normally open circuit, comprising a carrier-plate movably supported in connection with said magneto generator, a contact-means for both circuits supported upon said carrier-plate, means for pivotally supporting upon said carrier-plate an interrupter member provided with two interrupter arms, one of said arms normally engaging a contact means to close said magneto circuit, the other of said arms being normally disengaged from the other contact means to interrupt said battery circuit, means for oscillating said interrupter member to move its interrupter arms and respectively break and close said closed and open circuits, substantially as and for the purposes set forth.

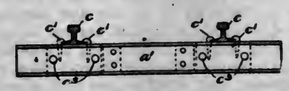
[Claims 6 to 12 not printed in the Gazette.]

1,018,138. PROCESS OF MAKING METALLIC LETTERS. NATHAN M. STANLEY, Dayton, Ohio. Filed Oct. 2, 1911. Serial No. 652,436. (Cl. 154—2.)



The herein described process of making metallic letters or figures for attachment to non-metallic surfaces, consisting in imparting to a metallic ribbon a roughened surface, in applying an adhesive substance to one side of said metallic ribbon, in applying a non-metallic ribbon to the side of said metallic ribbon, thus coated with adhesive substance, in applying adhesive substance to the side of the resulting ribbon containing the non-metallic surface, and in drying said adhesive substance and stamping the desired figures or letters from said ribbon.

1,018,139. RAILWAY-TIE. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa. Filed June 25, 1907. Serial No. 380,652. (Cl. 238—5.)



1. A railway tie consisting of a metallic member extending from rail to rail bent into an irregular form in a vertical plane transversely to the rails at a point between the end of the tie and the inner edge of the adjacent rail foot, said member having an upright web and a longitudinally extending flange projecting from its side, and a wooden member having its lower surface exposed and free to be engaged by the ballast of the road-bed, said metallic member adjacent to said bent portion being laterally secured to said wooden member and said wooden member being retained against longitudinal movement by said bent portion of the metallic member.

2. A railway tie having two metallic members secured together and having adjacent faces which are at varying distances apart and portions of which faces lie between the end of the tie and the inner edge of the adjacent rail foot, each of said members having an upright web and a longitudinally extending flange projecting from its side, and a wooden spiking member between said metallic members and held against longitudinal movement by the varying proximity of the adjacent faces of said metallic members.

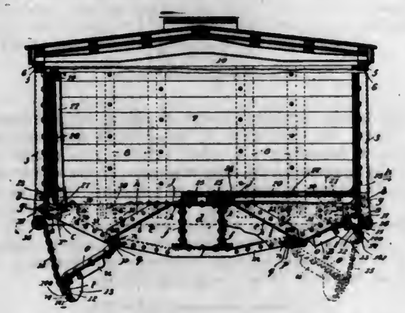
3. A railway tie having two metallic members secured together and having adjacent faces converging toward one another between an end of the tie and the inner edge of the adjacent rail foot, each of said members having an upright web and a longitudinally extending flange projecting from its side, and a wooden spiking member between converging portions of said adjacent faces of the metallic members.

4. A railway tie having the outer portions with laterally extending flanges, said outer portions being secured together and presenting an irregular outline on either side of the tie in a vertical plane transversely to the rails and between the end of the tie and the inner edge of the adjacent rail foot, and wooden spiking members secured between the outer members at the rail bearings, said outer portions and their securing means bounding space between the rail bearings which is open at the top and bottom of the tie.

5. A railway tie having outer members with laterally extending flanges, a portion of the upright web of each of said members being arranged at an angle one to the other with spiking blocks intervening between said portions.

[Claims 6 to 18 not printed in the Gazette.]

1,018,140. DUMP-CAR. HENRY HAGUE VAUGHAN, Montreal, Quebec, Canada. Filed Apr. 1, 1910. Serial No. 552,878. (Cl. 105—34.)



1. The combination in a box car, the sides of which have steel framing, of a center sill, a plurality of laterally extending cross-bearers secured to the center sill and suspended from the sides of the car and portions of which form the sides of hoppers, such bearers having upwardly and outwardly inclined lower edges, a plurality of downwardly and outwardly inclined hopper floor members arranged between said cross-bearers and secured at their inner edges to the top portion of the center sill, flanged doors hinged at their inner ends beneath the inclined hopper floor members in close proximity to the outer lower edges thereof, and adapted when closed to overlap the inclined lower edges of the cross-bearers and the edges of the hopper floors, and door operating mechanism supported by the sides of the car and operatively connected to the free ends of the doors.

2. A substructure for a car, comprising the combination of side sills, a center-sill, a plurality of cross-bearers secured to the center-sill and suspended from the side sills and portions of which form the sides of hoppers, such cross-bearers having upwardly and outwardly inclined hopper floor members extending between said cross-bearers and secured at their inner edges to the top portion of the center sill, doors hinged at their inner ends in close proximity to the outer lower edges of the inclined hopper floor members and adapted to contact when closed with the inclined lower edges of the cross-bearers, diagonal flanges formed on the inner ends of the doors and adapted to overlap and come into flat contact with the lower edges of the inclined floor members, and door operating mechanism operatively connected to the outer ends of the doors.

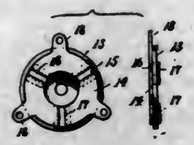
3. In a dump car, the combination with a center-sill, and a series of cross bearers portions of which form the sides or hoppers, of a series of inclined hopper floor members fixed at their sides to the cross bearers and at their upper ends to the center-sill and extending at an angle from the sides of the said center-sill, and a series of flanged doors hinged to the lower ends of such members and forming when open a projection thereof and when closed serving as the opposite inclined hopper floor members, the flanges of the doors overlapping the edges of the cross-bearers and the lower edges of the floor members.

4. In a dump car, the combination with a center-sill and side sills, of a series of cross-bearers of inverted-U-cross-section, bracing members of channel cross-section arranged between the lower portions of the sides of each cross-bearer and having down-turned flanges secured thereto, the lower edges of such flanges being substantially flush with the lower edges of the cross-bearers, and flanged door members extending between the said cross-bearers and having their flanges straddling the down-turned flanges of the bracing members.

5. In a dump car, the combination with a center-sill and a series of cross bearers of inverted-U-cross-section portions of which form the sides of hoppers, of a series of inclined hopper floor members fixed to the cross-bearers, and a series of flanged doors hinged to the edges of said floor members and forming when closed the opposite inclined hopper floor members and having the flanges thereof which form the sides of the door straddling the legs of the cross-bearers.

[Claims 6 to 13 not printed in the Gazette.]

1,018,141. COMMUTATOR. WILLIAM G. VIALL, Bridgeport, Conn., assignor to The Ives Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 28, 1910. Serial No. 558,109. (Cl. 171—211.)

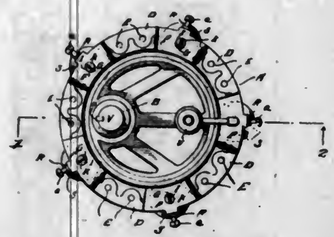


1. A commutator wheel, comprising a disk formed of insulating material and having a series of holes therein, a series of sheet metal segments with integral ends that are projected through the holes in the disk and bent over for the attachment of the segments to the disk.

2. A commutator wheel, comprising a fibrous disk having a series of holes therethrough, and a series of metal segments upon the side of the disk and having ends formed integral therewith which are projected through the said holes and bent down upon the opposite face of the disk for the attachment of the segments to the disk.

3. A commutator wheel, comprising a fibrous disk having a series of holes therein, a series of metal segments upon the side of said disk and each having a pair of extended ends formed integral therewith and projected through the said holes and bent down upon the opposite face of the disk for the attachment of the segments to the disk.

1,018,142. ANTIFRICTION-ECCENTRIC. JOSEPH EUGENE VILKIE, Titusville, Pa. Filed Sept. 26, 1910. Serial No. 583,851. (Cl. 74—1.)



1. In a device of the character described, the combination with the eccentric wheel, the slotted rims having elliptical recesses formed therein, the rollers revolubly mounted in said recesses, and the slotted shafts upon which the rollers are mounted adjustable in the slots in said rims, said shaft having the conical recesses in its outer face, the shouldered portion adapted to rest upon the lower portion of the recesses in said rims, the rectangular extension having the opening therein for the reception of the cotter pin for securing the shaft, and a wiper mounted in said slot in the shaft and adapted to contact with a suitable oiling device.

2. In an eccentric wheel, the combination with the slotted rims having recesses therein, and the rollers revolving in said recesses, of slotted shafts passing through said slotted rims and carrying said rollers, wiper plates on said shafts adapted to contact with a suitable lubricating device, shouldered portions near the lower ends of said shafts, downwardly extending rectangular portions having openings therein, pins passing through said openings, and means for adjustably securing said shafts in position.

3. The combination in an eccentric of the wheel, the slotted recessed rims, the rollers in said recesses, the slotted shafts carrying said rollers, the securing means for said shafts, the oil cup mounted above said eccentric wheel, the pipes leading therefrom, the wicks secured upon the ends of the pipes, and the wipers secured in the slots in said shafts contacting with said wicks.

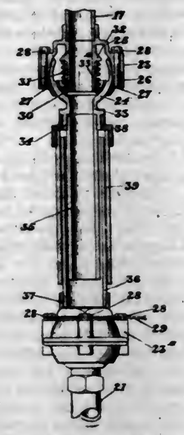
1,018,143. SAND-PIPE FOR SANDER DEVICES. HARRY VISSERING, Chicago, Ill., assignor to Harry Vissering and Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1910. Serial No. 569,956. (Cl. 105—263.)

1. In an apparatus of the character described, in combination, a sand delivery pipe provided with a universal joint member, a sand ejector pipe provided with a universal joint member and a reciprocating connection between said pipes, provided at each end with universal joint members respectively co-acting with said first mentioned universal joint members.

2. In an apparatus of the character described, in combination, a sand delivery pipe provided with a universal joint member, a sand ejector pipe provided with a universal joint member and an extensible connection between said pipes, provided at each end with universal joint members respectively co-acting with said first mentioned universal joint members.

3. In an apparatus of the character described, in combination, a sand delivery pipe provided with a universal joint member, a sand ejector pipe provided with a universal joint member and a flexible and reciprocating connection between said pipes, provided at each end with universal joint members respectively co-acting with said first mentioned universal joint members.

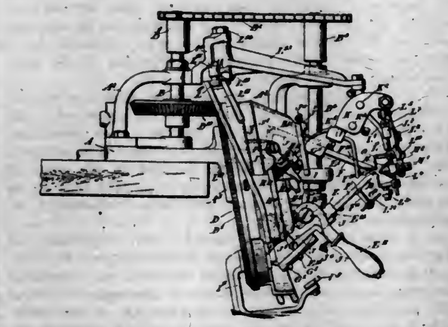
4. In a locomotive having a truck and a boiler pivotally mounted upon said truck in combination, a sand ejector member carried by the truck and having a universal joint member, a sand delivery member carried by the boiler and having a universal joint member,—and an extensible connection between said delivery and ejector members, provided at each end with universal joint members co-acting with said first mentioned universal joint members.



5. In a locomotive having a truck and a boiler pivotally mounted upon said truck in combination, a sand ejector member carried by the truck and having a universal joint member, a sand delivery member carried by the boiler and having a universal joint member,—and a reciprocating connection between said delivery and ejector members, provided at each end with universal joint members co-acting with said first mentioned universal joint members.

[Claims 6 to 10 not printed in the Gazette.]

1,018,144. KNITTING-MACHINE. FRANK WALTERS, Philadelphia, Pa., assignor, by mesne assignments, to James Leckie & Son Company, Camden, N. J., a Corporation of New Jersey. Filed Dec. 20, 1907. Serial No. 407,362. (Cl. 66—28.)



1. In a knitting machine having two sets of needles, supporting means for maintaining the needles of each set parallel to themselves and normally with their hooks extending in a direction opposite to that in which the hooks of the other set extend, and means for adjusting the supporting means to bring the needles of the two sets into such relation that their hooks point in the same general direction.

2. In a knitting machine having two sets of needles, supporting means for maintaining the needes of each set parallel to themselves and in the same plane, and normally at an angle to the plane of the needles of the other set, and

with the hooks of the needles of one set pointing in a direction opposite to that of the hooks of the other set, and means for adjusting the supporting means to bring the needles of the two sets into such relation that their hooks point in the same general direction, said adjusting means being arranged to preserve a substantially constant distance between the hook end of one side needle of one set and the hook end of the corresponding side needle of the other set during the adjusting operation.

3. In a knitting machine, a pair of needle plates, supporting means therefor normally supporting the needle plates in a position in which each is opposed to the other, means for adjusting the supporting means to bring one needle plate alongside the other.

4. In a knitting machine, a support provided with a curved guide, a needle plate mounted on said support, a second needle plate also mounted on said support and adjustable along said curved guide from a normal operating position in which it is opposed to the first mentioned needle plate into a position in which it extends alongside of the first mentioned needle plate.

5. In a knitting machine, a support, a pair of needle plate holders mounted thereon, a needle plate slidingly received in each of said holders, means for adjusting one of said holders on said support to move it from a normal operating position in which the needle plate mounted in it is opposed to the needle plate mounted in the other holder into a position in which the two needle plates extend side by side, and means for automatically retracting the two needle plates in their holders when the needle plates are brought alongside of one another.

[Claims 6 to 23 not printed in the Gazette.]

1,018,145. SHOE. BERTHA M. WEIR, Coalinga, Cal. Filed Aug. 3, 1911. Serial No. 642,136. (Cl. 36—15.)

1. A shoe comprising an upper, a sole and coacting securing devices permanently affixed to the upper and sole for detachably securing them together, said devices permitting the sole and upper to be disconnected by a movement of the devices affixed to the upper inwardly in a direction substantially parallel to the plane of the sole, substantially as set forth.

2. A shoe comprising an upper, a sole and coacting securing devices permanently affixed to the upper and sole for detachably securing them together and permitting them to be readily connected and disconnected as desired, said securing devices extending parallel to the edge of the sole but being located inwardly from said edge so as to underlie the space within the shoe, substantially as set forth.

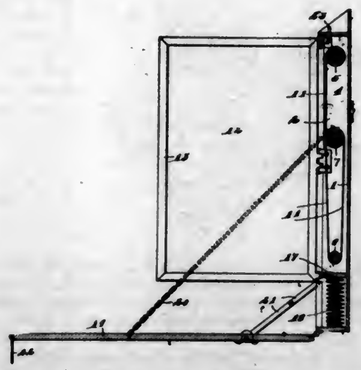
3. A shoe comprising an upper, a sole, a plurality of securing devices on the upper movable relatively in a direction parallel to the plane of the sole, and coacting securing means on the sole whereby the upper and sole may be detachably connected, substantially as set forth.

4. A shoe comprising an upper, a sole, a securing device secured to the sole, extending about the periphery thereof and having its inner edge free therefrom, and securing devices on the upper adapted to coact with the inner edge of the securing device on the sole, substantially as set forth.

5. A shoe comprising an upper, a sole, a securing device secured to the sole, extending about the periphery thereof and having its inner edge free therefrom, and a plurality of relatively movable projections on the upper adapted to be inserted under the inner edge of said device, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,018,146. EDUCATIONAL APPARATUS. FRANK J. WESTGATE, Superior, Wis. Filed July 21, 1911. Serial No. 639,774. (Cl. 35—9.)



1. An apparatus of the class described comprising a casing; two oppositely disposed webs arranged in said casing; means for simultaneously obscuring the view of one of said webs and exposing the other to view; and means for feeding said webs in opposite directions, substantially as described.

2. An apparatus of the class described comprising a casing; two oppositely disposed webs arranged in said casing; a door hinged between said webs and adapted to be swung over either of them; and means for feeding said webs in opposite directions, substantially as described.

3. An apparatus of the class described comprising a casing; a vertical partition in said casing dividing it into two compartments; an operating roller extending across the upper portions of said compartments; an operating roller extending across the central portions of said compartments; an idler roller arranged across the lower portion of one of said compartments; and oppositely disposed educational webs wound upon said operating rollers, one of said webs being passed over said idler roller, substantially as described.

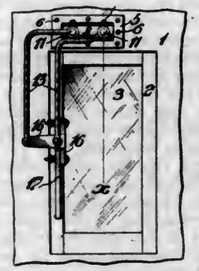
4. An apparatus of the class described comprising a casing; a vertical partition in said casing dividing it into two compartments, a door hinged to said partition and adapted to close either of said compartments; an operating roller extending across the upper portions of said compartments; an operating roller extending across the central portions of said compartments; an idler roller arranged across the lower portion of one of said compartments; and oppositely disposed educational webs wound upon said operating rollers, one of said webs being passed over said idler roller, substantially as described.

5. An apparatus of the class described comprising a casing, a vertical partition in said casing dividing it into two compartments; a slate member hinged to the bottom of said casing; an operating roller extending across the upper portions of said compartments; an operating roller extending across the central portions of said compartments; an idler roller arranged across the lower portion of one of said compartments; and oppositely disposed educational webs wound upon said operating rollers, one of said webs being passed over said idler roller, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,147. WINDOW-CLEANING DEVICE. FREDERICK W. WOODHULL, Philadelphia, Pa., assignor of one-third to Lucy H. Stetson, Philadelphia, Pa., and one-third to William H. Carson, Mount Ephraim, N. J. Filed Feb. 23, 1911. Serial No. 610,218. (Cl. 15—59.)

1. In a device of the character stated, a wiping bar, and two arms pivotally connected to said bar and adapted to be pivotally connected adjacent the window to have parallel movement.



2. In a device of the character stated, a wiping bar, a bracket secured at an angle to the same, and two arms adapted to be pivotally connected adjacent a window and pivoted to the bracket.

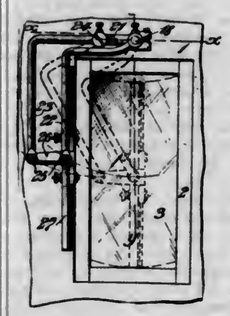
3. In a device of the character stated, a hanger adapted to be movably mounted adjacent a window, two pairs of arms pivotally connected to said hanger one pair on each side of the window, and two wiping bars, each pivotally connected to a pair of arms.

4. In a device of the character stated, a hanger adapted to be movably mounted adjacent a window to extend entirely through its support and formed with a bearing through it, a rock-shaft in such bearing, arms secured to the ends of said shaft, and wiping bars pivotally connected to such arms to be moved over the window pane, and such movable hanger admitting of either wiping bar being brought into contact with a face of the pane.

5. In a device of the character stated, a wiping bar, an arm having said bar secured to its free end, and means for pivotally supporting the inner end of said arm adjacent a window to allow the arm and bar to swing toward and from a window pane and to allow the arm and wiping bar to be moved over the same.

[Claims 6 to 13 not printed in the Gazette.]

1,018,148. WINDOW-CLEANING DEVICE. FREDERICK W. WOODHULL, Philadelphia, Pa., assignor of one-third to Lucy H. Stetson, Philadelphia, Pa., and one-third to William H. Carson, Mount Ephraim, N. J. Filed July 19, 1911. Serial No. 639,275. (Cl. 15—59.)



1. In a device of the character stated, a wiper-bar, a rock-shaft adapted to be supported adjacent the window, means for rocking said shaft, an arm directly secured upon said shaft and movably connected to said wiper-bar, and a support pivotally mounted adjacent the window in which said rock-shaft is journaled and the free end of which support is adapted to be swung to bring the wiper-bar against or away from the window-pane.

2. In a device of the character stated, a wiper-bar, a supporting link device adapted to be mounted adjacent the window to swing in a plane transverse to the plane of the window, a bearing-sleeve carried by said device to swing with the same, a rock shaft journaled in said sleeve, means for rocking said shaft and an arm secured to the rock-shaft and connected to the wiper-bar.

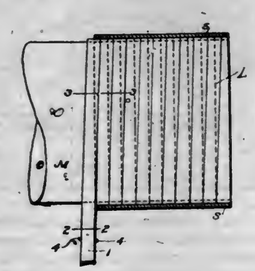
3. In a device of the character stated, a wiper-bar, a bracket adapted to be suppported adjacent a window, parallel links pivoted to said bracket, a horizontal bearing sleeve pivotally connected to the moving ends of said links, a rock-shaft in said bearing-sleeve, means for rocking said shaft, and an arm secured to the rock-shaft and connected to said bar.

4. In a device of the character stated, a bracket adapted to be secured adjacent a window, links pivoted to said bracket, a bearing sleeve pivotally connected to the moving ends of said links, a rock-shaft in said bearing sleeve, a wiper-bar, a bracket upon said bar, and arms pivotally connected to said bracket and one of said arms secured to the rock-shaft and the other arm pivoted adjacent the window.

5. In a device of the character stated, a bracket adapted to be secured adjacent a window and formed with two vertical sleeves, bolts in said sleeves, links having their ends pivoted on said bolts, a bearing-sleeve provided with a bracket formed with vertical sleeves, bolts in said sleeves and having the other ends of said links pivoted upon them, a rock-shaft in said sleeve, a hand-lever secured to said rock-shaft, a supporting arm secured on the opposite end of said sleeve, a wiper-bar, a bracket upon said wiper-bar, an arm secured on said rock-shaft and pivotally connected to said bracket, and an arm pivotally connected to the wiper-bar bracket and to the supporting arm on the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,018,140. METHOD OF MAKING METALLIC PACKING. WILLIAM J. WRIGHT, Franklin, Pa. Filed Oct. 17, 1910. Serial No. 587,559. (Cl. 29—148.)

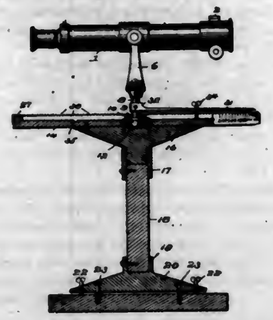


1. The method of forming metallic rings consisting in taking a band or strip of a width slightly less than the width of the ring desired, winding such strip spirally on a mandrel with its edges in contact and then cutting such strip in planes normal to the axis of the mandrel.

2. The method of manufacturing packing rings which consists in taking a strip or ribbon of material of a uniform width throughout its length and whose edges are beveled to reduce uniformly the width of the under surface of the strip, winding such strip spirally on a mandrel with its edges in contact, holding such strip on said mandrel, and then cutting said strip into ring sections, the cutting plane being normal to the axis of the mandrel.

3. The method of forming metallic packing rings which consists in taking a band or strip of a uniform width winding said strip tightly on a mandrel with its edges in contact, then cutting said strip in planes normal to the axis of the mandrel, said cutting planes being spaced apart a distance equal to the width of the ring desired.

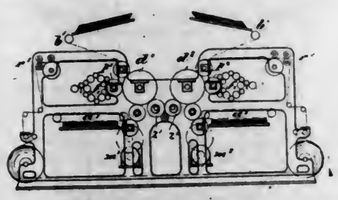
1,018,150. POSITION-LOCATING INSTRUMENT. DANIEL W. ADAMS, Glendale Springs, N. C. Filed Sept. 25, 1911. Serial No. 651,161. (Cl. 88—2.)



1. A position-locating instrument comprising a base plate having an annular series of indicating stops, a sighting member mounted to swing concentrically thereover, a pointer secured to said sighting member and adapted to engage said stops, and an annular series of designating characters corresponding with said stops.

2. A position-locating instrument comprising a base plate having an annular series of indicating stops, a sighting member centrally pivoted to swing thereover, a spring arm secured to said sighting member and adapted to yieldingly engage said stops, adjustable means for maintaining said arm in raised position to swing freely over said stops, and an annular series of designating characters corresponding with said stops.

1,018,151. ROTARY PRINTING-MACHINE. SAMUEL JOHANNES OSCAR ASMUSSEN, Ilford, England. Filed June 30, 1910. Serial No. 569,751. (Cl. 101—117.)



1. In a rotary printing machine, the combination of two complete printing apparatus, each comprising an impression cylinder, a plate cylinder, inking rollers, and feed, delivery and driving devices, with sheet reversing and transferring means between said two printing apparatus, and means for connecting and disconnecting said apparatus, whereby sheets or a web will be passed successively through said apparatus and printed upon both sides when the apparatus are connected together, or will be passed through the apparatus independently and be printed upon one side only when the apparatus are disconnected from each other.

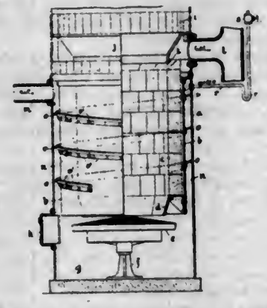
2. In a rotary printing machine, the combination of two complete printing presses, each comprising an impression cylinder, a plate cylinder, inking rollers, and feed, delivery and driving devices, each of said printing presses being adapted to operate independently to cause them to print at the same time each upon one side of sheets or a web, with means for connecting the impression cylinders of said presses to cause them to print successively upon opposite sides of sheets or a web.

3. In a rotary printing machine the combination of two complete printing apparatus comprising each an impression cylinder, a plate cylinder, coloring rollers and feed-delivery and driving devices with two intermediate cylinders arranged between the two impression cylinders and means for connecting to each other the two impression cylinders by adjustment of the two intermediate cylinders essentially as and for the purpose described.

4. In a rotary printing machine the combination of two complete printing apparatus comprising each an impression cylinder, a plate cylinder, coloring rollers and feed-delivery and driving devices with intermediate cylinders arranged between the impression cylinders and journaled in eccentric boxes and means for adjusting the eccentric journal boxes of the intermediate cylinders essentially as and for the purpose described.

5. In a rotary printing machine the combination of two complete printing apparatus comprising each an impression cylinder, a plate cylinder, coloring rollers and feed-delivery and driving devices with intermediate cylinders journaled in eccentric boxes means for adjusting the said journal boxes and means for locking the journal boxes in the adjusted position essentially as and for the purpose described.

1,018,152. VAPORIZER FOR GAS-PRODUCERS. CYRIL J. ATKINSON, Watertown, Wis. Filed Aug. 26, 1910. Serial No. 579,051. (Cl. 48—87.)



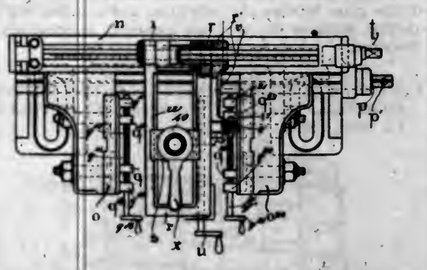
1. In a gas-producer, in combination with a wall, a vaporizer comprising a trough mounted on said wall, said trough comprising a plurality of independent downwardly sloping segments, the lower end of each segment overlapping the upper end of the next adjacent segment, and means for delivering water into the upper end of said trough.

2. In a gas-producer, the combination with the cylindrical upright shell containing the fuel-column and a concentric cylindrical outer shell leaving an annular air-passage between them, means for delivering air into the upper end of said passage, a helical trough mounted on and surrounding said inner shell and consisting of a plurality of curved segments, the lower end of each segment having an extension lug which is received within a recess in the upper end of the next adjacent segment and the abutting ends of said segments being normally separated by a distance sufficient to allow for expansion, and means for delivering water into the upper end of said trough.

3. In a gas-producer, the combination with the inner and outer cylindrical shells, said inner shell containing the fuel column, of a helical trough mounted on and encircling said inner shell and composed of a series of segments independently secured to said shell and connected one with the other by expansion joints.

4. In a gas-producer, the combination with the inner and outer cylindrical shells, said inner shell being a cylinder of sheet-metal, of a helical trough encircling said inner shell, said trough comprising a plurality of segments of cast-metal independently secured end to end to said inner shell and extending laterally outward therefrom, said segments being connected one with the other by expansion-joints permitting water to flow continuously from one to the next, and means for delivering water at the upper end of the trough.

1,018,153. BORING AND DRILLING MACHINE. ADOLF BANK, Essen-Ruhr-West, Germany. Filed Aug. 11, 1911. Serial No. 643,605. (Cl. 77—62.)



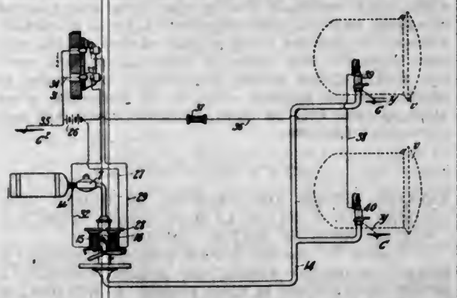
1. In a boring machine, the combination of a support, clamping means for securing a work-piece thereto, and a boring guide disposed above said means and adjustable in two directions at right angles to each other on said support, said clamping means comprising main jaws movable toward and from each other and auxiliary jaws adjustable on said main jaws.

2. In a boring machine, the combination of a support provided with a reversely threaded screwshaft, a one-way threaded screwshaft and a guide rod, main jaws movable toward and from each other on said reversely threaded screwshaft, a carriage adapted to slide on said guide rod and engaged by the one-way screwshaft, a hinged frame on said carriage and a boring guide adjustable on said hinged frame.

3. In a boring machine, the combination of a support provided with a reversely threaded screwshaft, a one-way threaded screwshaft and a guide rod, main jaws movable toward and from each other on said reversely threaded screwshaft, a carriage adapted to slide on said guide rod and engaged by the one-way screwshaft, a hinged frame on said carriage and a boring guide adjustable on said hinged frame, said guide rod and hinged frame being provided respectively with graduated scales.

4. In a boring guide, the combination of a support provided with a reversely threaded screwshaft, a one-way threaded screwshaft and a guide rod, main jaws movable toward and from each other on said reversely threaded screwshaft and provided with laterally adjustable jaws, a carriage adapted to slide on said guide rod and engaged by the one-way screwshaft, a hinged frame on said carriage and a boring guide adjustable on said hinged frame.

1,018,154. APPARATUS FOR CONTROLLING LIGHTS ON AUTOMOBILES. JOHN L. BECK, Springfield, Mass. Filed Feb. 18, 1911. Serial No. 609,281. (Cl. 240—7.)

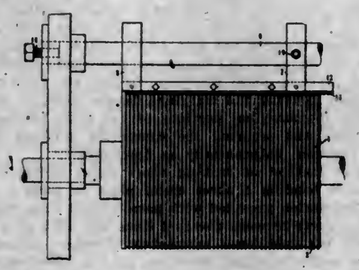


1. In a lighting system for automobiles, the combination with a gas supply tank, a burner within a lamp of the automobile, a pipe leading from said tank to said burner, a valve located in said pipe and comprising a plug having a port of large capacity and a port of smaller capacity therethrough, and electrical means controllable from the seat of the automobile for moving said plug to bring either of said ports into communication with said pipe at will.

2. In a lighting system for automobiles, the combination with a gas supply tank, a burner within a lamp of the automobile, a pipe leading from said tank to said burner, a valve located in said pipe and comprising a plug having a port of large capacity and a port of smaller capacity therethrough, electrical means controllable from the seat of the automobile for moving said plug to bring either of said ports into communication with said pipe at will, and a locally positioned valve at the burner for controlling the passage of gas therethrough.

3. In a lighting system for automobiles, the combination with a gas supply tank, a burner within a lamp of the automobile, a pipe leading from said tank to said burner, a valve located in said pipe and comprising a plug having a port of large capacity and a port of smaller capacity therethrough, electrical means controllable from the seat of the automobile for moving said plug to bring either of said ports into communication with said pipe at will, a locally positioned valve at the burner for controlling the passage of gas therethrough, electrical ignition means, and locally positioned controlling means for said electric ignition means at said burner.

1,018,155. WEB-PERFORATING MECHANISM. JAMES BENGOUGH, Niagara Falls, N. Y., assignor to The Carter-Crume Co., Limited, Niagara Falls, N. Y., a Corporation. Filed Oct. 5, 1908. Serial No. 456,158. (Cl. 164—99.)



1. In printing mechanism, in combination, a cylinder provided with a plurality of annular grooves, a second cylinder arranged adjacent thereto, a segment carried by said second cylinder, and a member provided with a plurality of perforating points carried by said segment, said perforating points being adapted to enter said grooves during the rotation of said cylinders.

2. In printing mechanism, in combination, a cylinder provided with a plurality of annular grooves, a second cylinder arranged adjacent thereto, a circumferentially adjustable segment carried by said second cylinder, a member carried by said segment and provided with a plurality of perforating points adapted to enter said grooves during the rotation of said cylinders, and means for effecting a relative longitudinal adjustment between said cylinders.

1,018,156. METHOD OF MAKING SHEET-METAL RADIATORS. OTTO S. BEYER, Hyde Park, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed May 28, 1910. Serial No. 563,849. (Cl. 113—116.)

1. The method of making sheet metal radiators consisting in bending a sheet metal plate to form a central transverse depression provided with parallel fold lines, with one or more ports between the fold lines, and with its bottom between the fold lines increasing in depth toward the ports in either direction, and to form marginal flanges and marginal semi-tubular depressions extending from the ends of the transverse depression, and semi-

tubular depressions extending from the transverse depression to the parallel marginal depressions, folding the plate on the fold lines to bring the marginal flanges together, closing together the marginal portions of the plate between the fold lines, and securing the contacting surfaces of the plate together, substantially as described.

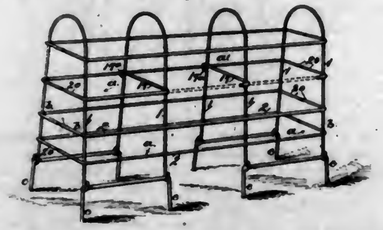
2. The method of making sheet metal radiators consisting in bending a sheet metal plate to form a central transverse flat-bottom depression of substantially uniform depth, marginal flanges and marginal semi-tubular depressions extending from the ends of the transverse depression and semi-tubular depressions extending from the transverse depression to the parallel marginal depressions, rebending the depressed central portion of the plate to form transverse parallel fold lines, and one or more ports between the fold lines, and to gradually increase the depth of the transverse depression toward the port or ports in either direction, folding the plate on the fold lines to bring the marginal flanges together, closing together the marginal portions of the plate between the fold lines, and securing the contacting surfaces of the plate together, substantially as described.

3. The method of making sheet metal radiators consisting in bending a sheet metal plate to form a transverse depression provided with parallel fold lines with one or more ports between the fold lines and with its bottom between the fold lines increasing in depth toward the port or ports in either direction, and to form marginal flanges and semi-tubular depressions extending at substantially right angles from the transverse depression, and to form transverse depressions between said semi-tubular depressions, folding the plate on the fold lines to bring the marginal flanges together, closing together the marginal portions of the plate between the fold lines, and securing the contacting surfaces of the plate together, substantially as described.

4. The method of making sheet metal radiators consisting in bending a sheet metal plate to form a central transverse depression of substantially uniform depth and to form marginal flanges and semi-tubular depressions extending at substantially right angles from the transverse depression and transverse depressions connecting said semi-tubular depressions, rebending the depressed central portion of the plate to form transverse parallel fold lines and one or more ports between the fold lines and to gradually increase the depth of the transverse depression toward the port or ports in either direction, folding the plate on the fold lines to bring the marginal flanges together, closing together the marginal portions of the plate between the fold lines, and securing the contacting surfaces of the plate together, substantially as described.

5. The method of making sheet metal radiators consisting in bending a sheet metal plate to form a transverse depression provided with parallel fold lines with one or more ports between the fold lines and with its bottom between the fold lines increasing in depth toward the port or ports in either direction and to form marginal flanges and semi-tubular depressions intersecting the transverse depression and separated by flat surfaces in the plane of the marginal flanges and to form transverse depressions connecting the semi-tubular depressions, folding the plate on the fold lines to bring the marginal flanges and flat surfaces together, closing together the marginal portions of the plate between the fold lines, and securing the contacting surfaces of the plate together, substantially as described.

1,018,157. PLANT PROTECTOR AND SUPPORT. CHARLES A. BLACK, Jr., Hightstown, N. J. Filed Oct. 17, 1911. Serial No. 655,162. (Cl. 47—12.)



1. A plant protector consisting of a section of open wire work, bent upon itself and having its ends connected to form an inclosure, portions of the wire work forming soil penetrating members, and other portions being bent over transversely to form transverse stays.

2. A plant protector comprising a body consisting of sets of wire strands, one set of the said strands crossing the other set of said strands and rigidly secured at the crossing point, the said body being bent back upon itself to form an inclosure some of the said strands extending the full length of the said body, others of the said strands being cut and bent transversely to engage a strand on the opposite side thereto and form transverse braces.

3. A plant protector consisting of a set of vertically arranged horizontally spaced U-shaped strands, a set of longitudinal strands connecting the said U-shaped strands and rigidly secured thereto, the ends of the longitudinal strands being bent over at right angles to form end closures, some of the said second set of strands being bent over transversely to engage strands on the opposite side and thereby form transverse braces.

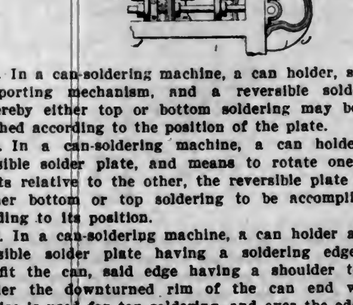
4. A plant protector consisting of a set of vertically arranged horizontally spaced U-shaped strands, a set of longitudinal strands connecting the said U-shaped strands and rigidly secured thereto, the ends of the longitudinal strands being bent over at right angles to form end closures, some of the said second set of strands being bent over transversely to engage strands on the opposite side and thereby form transverse braces, and soil penetrating members on which the said U-shaped strands are mounted.

5. As a new article, a form for a plant protector consisting of a section of poultry wire comprising a series of spaced vertically arranged wires, a series of parallel horizontally disposed wires rigidly secured to the vertical wires, the said horizontal wires having their opposite ends projected beyond the adjacent cross wires to which they are attached, some of the horizontal wires being cut and bent to form transverse braces and soil penetrating members.

1,018,158. PRESS FOR TESTING OR OTHER PURPOSES. LÉON BOLLÉE, Le Mans, France. Filed May 6, 1910. Serial No. 559,704. (Cl. 73—51.)

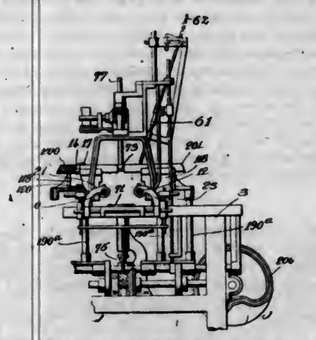
1. A press for testing or other purposes comprising a plunger, means for guiding the plunger vertically, a pivoted lever adapted to apply pressure to said plunger, a weight on said lever for producing said pressure and means longitudinally adjustable on said plunger for producing an impression.

2. A press for testing or other purposes comprising an adjustable pressure head, a plunger coöperating therewith, means for guiding the plunger vertically, a pivoted lever adapted to apply pressure to said plunger, a weight on said lever for producing said pressure, means for controlling the downward movement of said lever and means longitudinally adjustable on said plunger for producing an impression.



3. A press for testing or other purposes comprising an adjustable pressure head, a plunger coöperating therewith, means for guiding the plunger vertically, an adjustable die carrier or support on said plunger, a pivoted lever adapted to apply pressure to said plunger, means on said lever for producing said pressure, a screw for controlling the downward movement of said lever and means in said die carrier for producing an impression.

1,018,159. CAN-SOLDERING MACHINE. JAMES A. BOOTH, Everett, Mass., assignor of one-half to Roselle Wyllys and one-half to Ernest L. Gay, Boston, Mass. Filed July 14, 1909. Serial No. 505,507. (Cl. 113—71.)



1. In a can-soldering machine, a can holder, soldering-supporting mechanism, and a reversible solder plate whereby either top or bottom soldering may be accomplished according to the position of the plate.

2. In a can-soldering machine, a can holder, a reversible solder plate, and means to rotate one of said parts relative to the other, the reversible plate allowing either bottom or top soldering to be accomplished according to its position.

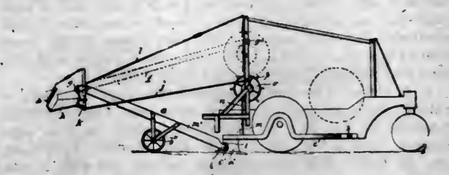
3. In a can-soldering machine, a can holder and a reversible solder plate having a soldering edge shaped to fit the can, said edge having a shoulder to extend under the downturned rim of the can end when the device is used for top soldering, and over the edge of the upturned rim of the can end when the device is used for bottom soldering.

4. In a can-soldering machine, a rotatable can holder and a reversible solder plate having an edge recessed to fit the can, said edge having a shoulder to extend under the downturned rim of the can end when the device is used for top soldering, and over the upturned edge of the can end when the device is used for bottom soldering, and means to heat the plate.

5. In a can-soldering machine, a can holder and a soldering plate provided with a semi-circular recess to fit the can, a shoulder projecting from the concaved face of said recess and adapted to extend under the downturned rim of the can end when the device is used for top soldering, and over the upturned edge of the can end when the device is used for bottom soldering, and a solder-delivery groove on each side of said plate.

[Claims 6 to 11 not printed in the Gazette.]

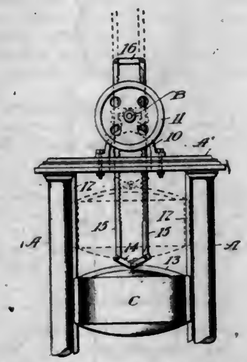
1,018,160. EXCAVATOR. JAMES M. BROOKS, Molena, Ga. Filed Mar. 9, 1911. Serial No. 613,336. (Cl. 37—25.)



1. The combination with a vehicle, of a ditching-plow attached thereto at one side at the rear, said plow being in the form of a scoop and being located directly back of one of the rear wheels of the vehicle, the beam of the plow embracing said wheel and being pivotally connected to the frame of the vehicle, means for raising and lowering the plow, and an elevating mechanism arranged back of the plow, for the purpose set forth.

2. An excavating plow consisting of a beam, a pair of depending flat side plates notched at their rear edges, a bottom plate connecting the side plates, a cutting edge connecting the plates, a bracket fastened to the outer side of each of the side plates coincident with the notch therein, a roller having the ends of its shaft journaled in said brackets and having its ends extending through said notches, a belt layer on the roller whose edges extend into said notches, said roller and belt lying under the rear edge of the said bottom plate, for the purpose set forth.

1,018,161. WAVE-MOTOR. FRANK BROWN, Atlantic City, N. J. Filed June 24, 1911. Serial No. 635,197. (Cl. 61—51.)



1. A wave motor comprising a frame, a power shaft journaled in bearings on said frame, a ratchet-wheel keyed to said shaft, a pair of pinions mounted to run loosely one on each side of said ratchet-wheel, pawls for connecting said pinions with said ratchet-wheel, a buoy mounted to be operated by the rise and fall of the waves, rack bars pivoted to said buoy and engaging one with one of said pinions on one side of the shaft and the other with the other of said pinions on the other side of said shaft, and

a guide frame surrounding said pinions and rack-bars, substantially as set forth.

2. A wave motor comprising a frame, a shaft journaled in bearings on said frame, pinions loosely mounted on said shaft, a ratchet connection between each of said pinions and said shaft, rack-bars connected with said pinions one on one side of said shaft and another on the opposite side of said shaft, a guide frame surrounding said pinions and rack-bars, and a floating buoy connected to the lower end of said rack-bars, substantially as set forth.

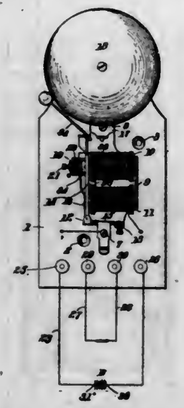
3. A wave motor comprising a frame, a shaft mounted in bearings on said frame, a floating buoy guided in said frame, rack-bars pivotally connected to said buoy, pinions mounted loosely on said shaft, a ratchet connection between each of said pinions and said shaft, one of said rack-bars engaging one of said pinions on one side of said shaft and the other engaging the other pinion on the other side of said shaft, and a guide frame surrounding said pinions and rack-bars, substantially as set forth.

4. A wave motor comprising a frame, a power shaft, a ratchet-wheel mounted to turn with said shaft, pinions mounted on the hub of said ratchet-wheel on each side thereof, pawls for connecting said pinions with said ratchet-wheel, rack-bars engaging one on one side of the shaft with one pinion and the other on the other side of the shaft with the other pinion, a frame surrounding said pinions and rack-bars for guiding and holding the parts in close relation, and a buoy guided in said frame and connected with the lower end of said rack-bars, substantially as set forth.

5. A wave motor comprising a frame, a power shaft, a fly-wheel on said power shaft, a ratchet-wheel keyed to said power shaft, pinions mounted on each side of said ratchet-wheel and connected therewith by pawls, rack-bars engaging with said pinions on opposite sides of the shaft, a frame surrounding said pinions and rack-bars to form guides therefor, anti-friction roller bearings in said frame against which said rack-bars bear, and a buoy connected to the lower end of said rack-bars, substantially as set forth.

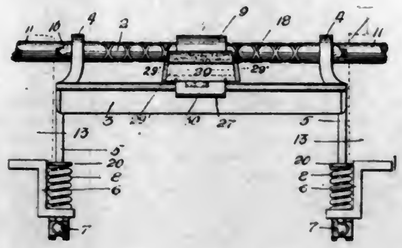
[Claims 6 and 7 not printed in the Gazette.]

1,018,162. ELECTRIC BELL. STEWART BROWN, Alexandria, Va. Filed Apr. 29, 1911. Serial No. 624,150. (Cl. 177—314.)



In an alarm device, the combination with a base plate of a metallic frame, comprising a yoke, a pair of magnets supported from and connected to said yoke, an arched arm on said frame and insulated from said frame, a bell, an adjustable contact screw in said arched arm, an armature in electrical contact with the frame, a spring on said armature having make and break contact with said adjustable contact point, a pair of binding-posts, an electric battery, a wire leading from the positive pole of said battery connected to one of said binding-posts and to said frame, a wire leading from the negative pole of the battery connected to the other of said binding-posts and to said magnets and thence to said arched arm, an alarm circuit comprising a pair of binding-posts, a pair of wires connected to said posts at one end and connected to each other at their opposite ends, a wire connecting one of said binding posts to said adjustable contact screw and a wire extending between the other of said binding-posts and the binding-post connected to the positive pole 31 of the battery.

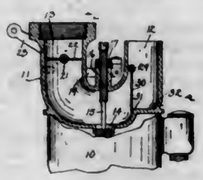
1,018,163. ROLL-POLISHING DEVICE. JAMES C. CAVILL and GEORGE F. LEHBERGER, New Castle, Pa. Filed Oct. 9, 1911. Serial No. 653,980. (Cl. 51—4.)



1. In a roll polisher, a revoluble feed screw, a pair of lever rods mounted for movement toward and away from the roll, a presser bar carried by said lever rods, a polishing block holder mounted to travel on said bar and having an eye receiving said feed screw, means for causing the holder to traverse the presser bar as the screw is operated, and means for yieldingly forcing the presser bar and holder toward the roll during the polishing operation.

2. In a roll polisher, a revoluble return feed screw, a suitably-supported presser bar, a polishing block holder mounted to travel on said presser bar, means carried by the holder and engaging the screw to cause travel of the holder on the bar as the screw is rotated, and means for yieldingly holding the block carried by said holder against the roll being polished.

1,018,164. CARBURETER. FRANCIS A. CHAPIN, Indianapolis, and WILLIAM Y. CHAPIN, Muncie, Ind., assignors to The Chapin Manufacturing Company, Indianapolis, Ind., a Corporation. Filed Jan. 7, 1911. Serial No. 601,414. (Cl. 48—155.2.)



1. A carbureter including a carbureting chamber which is substantially U-shaped and has an air intake and a mixture outlet, an air intake valve, a throttle valve, a shaft on which each of said valves is mounted and extending outward beyond the carbureting chamber, arms secured to each of said valves, a bar connecting said arms, a fuel nozzle entering the lower part of the carbureting chamber, a valve extending through the top of the carbureting chamber between the air intake and mixture outlet and projecting down to the nozzle, an arm on the upper end of said valve, another arm on the shaft of the throttle valve, means for pivotally connecting said two last mentioned arms, and a throttle lever on the shaft of the throttle valve.

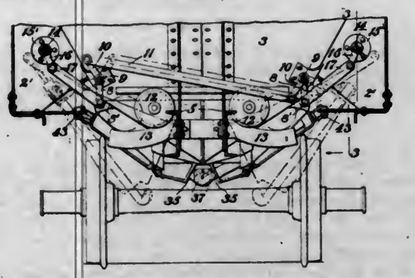
2. A carbureter including a carbureting chamber having an air intake and mixture outlet, a fuel nozzle in the carbureting chamber between the air intake and mixture outlet, a throttle valve in the mixture outlet, a valve for controlling the air intake which is secured to a shaft extending through and outwardly beyond said carbureting chamber, an arm loosely mounted on said shaft, a connection between said arm and the throttle valve whereby the two will be simultaneously operated, and a yielding connection between said arm and shaft.

3. A carbureter including a carbureting chamber having an air intake and mixture outlet, a fuel nozzle in the carbureting chamber between the air intake and mixture outlet, a throttle valve in the mixture outlet, a valve for controlling the air intake, a connection between said two valves whereby they will be simultaneously operated, and means for temporarily closing said air intake valve after the throttle has been operated.

4. A carbureter including a carbureting chamber having an air intake and mixture outlet, a fuel nozzle in the carbureting chamber between the air intake and mixture outlet, a throttle valve in the mixture outlet, a valve for controlling the air intake which is secured to a shaft extending through and outwardly beyond said carbureting chamber, an arm loosely mounted on said shaft, a connection between said arm and the throttle valve whereby the two will be simultaneously operated, a yielding connection between said arm and shaft, and a lever secured to said shaft for actuating it independently of said arm or throttle valve.

5. A carbureter including a carbureting chamber having an air intake and mixture outlet, a fuel nozzle in the carbureting chamber, between the air intake and mixture outlet, a throttle valve in the mixture outlet, a valve for controlling the air intake which is secured to a shaft extending through and outwardly beyond said carbureting chamber, an arm loosely mounted on said shaft, a connection between said arm and the throttle valve whereby the two will be simultaneously operated, a yielding connection between said arm and shaft, and means for adjusting the relation between said lever and arm to predetermine the position of the air intake valve.

1,018,165. DUMP-CAR. CHARLES H. CLARK, Crafton, Pa., assignor to Clark Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 17, 1910. Serial No. 544,394. (Cl. 105—185.)



1. The combination of a door for a dump car, fluid pressure means for opening and closing the door, and mechanism for locking and releasing the door actuated independently of the fluid pressure mechanism.

2. The combination of a door for a dump car, fluid pressure means and hand means operative interchangeably for opening and closing the door, and door locking and releasing mechanism operative independently of the door moving means.

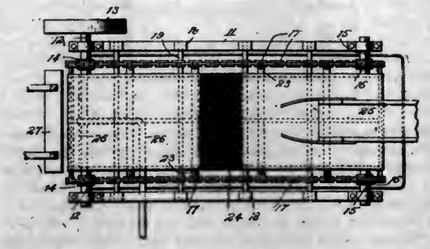
3. The combination of a door for a dump car, fluid means and hand means operative interchangeably for opening and closing the door, and hand operated door locking means.

4. The combination of a bodily movable door for a dump car, fluid pressure means for opening and closing the door, and mechanism for locking and releasing the door movable independently of the door moving means.

5. The combination of oppositely moving doors for a dump car closing together at their inner edges, fluid pressure means and hand means operative interchangeably for moving the doors, and mechanism for locking and releasing the doors operative independently of the door moving means.

[Claims 6 to 38 not printed in the Gazette.]

1,018,166. STRAINING DEVICE. FRANK EDWIN COOMBS, Natick, Mass. Filed Apr. 26, 1909. Serial No. 492,198. (Cl. 210—14.)



1. In a straining device, the combination with a traveling endless screen having a conveying portion, and means for feeding the material to the conveying portion of the screen; of a plurality of supporting cross straps upon which said screen is mounted, adapted to keep the screen free from frictional contact, and a plurality of longitudinal way-bars upon which said supporting cross straps slide.

2. In a straining device, the combination with a traveling endless screen having a conveying portion, and means for feeding the material to the conveying portion of the screen; of a plurality of supporting cross straps upon which said screen is mounted, a plurality of perforated longitudinal way-bars upon which said supporting cross straps slide, and stay-rods passing through and supporting the perforated way-bars.

3. In a straining device, the combination with two endless chains suitably driven, a plurality of supporting cross straps carried by said chains, an endless screen suitably mounted upon said supporting cross straps and having a conveying portion, and means for feeding the material to the conveying portion of the screen; of perforated longitudinal way-bars upon which said supporting cross straps slide, and stay-rods passing through and supporting said way-bars.

4. In a straining device, the combination with the traveling endless screen, supporting cross-bars, and stay-rods; of longitudinal way-bars adjustably mounted upon said stay rods and providing a way upon which said supporting cross straps move.

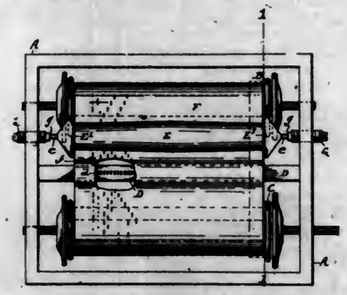
5. A straining device comprising in combination a traveling endless screen, chains to which said screen is secured and in the line of whose pivots the screen is disposed, and sprocket wheels over which said chains run.

[Claim 6 not printed in the Gazette.]

1,018,167. MECHANICAL PIANO-PLAYER. JOSEPH COURVILLE, Detroit, Mich. Filed Apr. 15, 1910. Serial No. 555,577. (Cl. 84—161.)

1. The combination of a music roll, a tracker board having a plurality of apertures, a storage roll on the opposite side of the tracker board from the music roll, a guide roll interposed between the music roll and tracker board and so positioned as to give a tension to a sheet passing from the music roll over the tracker board, the said guide roll having a progressively increased diameter from the ends to the mid point, a perforated music sheet stored on the music roll passed under tension, across the

guide roll, the tracker board and on to the storage roll, and means for adjusting the guide roll longitudinally of its axis, so as to line up the perforations on the music sheet with the apertures on the tracker board, substantially as described.



2. The combination of a music roll, a tracker board having a plurality of apertures, a storage roll on the opposite side of the tracker board from the music roll, a guide roll between the music roll and the tracker board and so positioned as to give tension to the sheet passing from the music roll across the guide roll, the said guide roll having flanges on its ends spaced from each other somewhat farther than the width of the sheet intended to be guided, and also having a greater diameter near its center and tapering toward the flanges, a music sheet stored on the music roll passed under tension across the guide roll, tracker board, and on to the storage guide roll, and means for adjusting the entire roll longitudinally of its axis, whereby the guiding means, capable of accommodating music sheets of different widths, is adapted to line the perforation therein up with the apertures on the tracker board by simply adjusting the guide roll, and to guide the music sheet without injury to its edges, substantially as described.

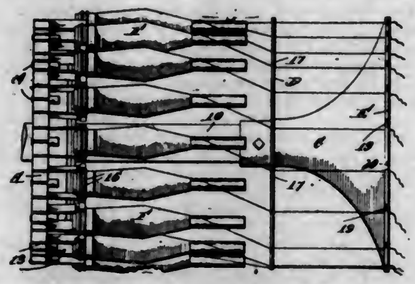
3. The combination of a frame work, a music roll, a tracker board having a plurality of apertures, a storage roll on the opposite side of the tracker board from the music roll, a guide roll provided with pintles at its ends, disposed between the music roll and tracker board and of progressively increasing diameter from the ends to the mid-point, thereby adapted to accommodate sheets of varying width without adjustment therefor, a perforated music sheet stored on the music roll passing across the guide roll, tracker board, and on to the storage roll, and set screws engaging in the frame work in alinement with the axis of the guide roll provided with hollowed inner ends adapted to act as bearings for the pintles of the guide roll, whereby music sheets of varying width may be properly lined up with the tracker board by adjustment of the set screws in the frame work, substantially as described.

1,018,168. BOBBIN-HOPPER FOR FILLING-CHANGING LOOMS. RANDOLPH CROMPTON and WILLIAM LUNNEY, Worcester, Mass., assignors, by mesne assignments, to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed July 12, 1906, Serial No. 325,833. Renewed Sept. 13, 1911. Serial No. 649,193. (Cl. 139—85.)

1. As an article of manufacture, a bobbin hopper or magazine having a plate which is provided with slots arranged in pairs, and a spring clamping arm removably held in each slot and extending substantially at right angles to the plane of the plate, said pair of clamping arms being adapted to hold a bobbin between them.

2. A bobbin hopper or magazine having a plate which is sawed or cut open, spring clamping arms placed in said cuts and projecting laterally therefrom, and means for removably clamping the clamping arms in said cuts.

3. A bobbin hopper or magazine having a plate provided with a circular flange projecting at right-angles to the plate and having means for holding the bobbins entirely on one side of the plate, the edge of said flange projecting under the bobbins and acting as a stop to limit and position them.

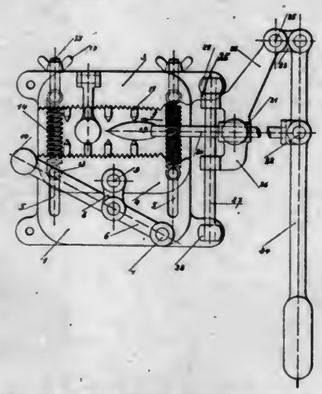


4. A bobbin hopper or magazine provided with notches corresponding to the bobbins, and means located in said notches for holding the filling threads in the notches.

5. A bobbin hopper or magazine comprising a plate or flange provided with notches, and means within the surface of said plate or flange for holding the filling threads in the notches.

[Claims 6 to 9 not printed in the Gazette.]

1,018,169. APPARATUS FOR OPENING OYSTERS. JEAN DANON, Le Raincy, France. Filed Feb. 7, 1910. Serial No. 542,529. (Cl. 17—31.)



1. In an oyster-opening device, the combination of a frame, a fixed jaw, a movable jaw on said frame spring-pressed toward said fixed jaw, means for operating said movable jaw against the spring pressure, and a plurality of spring-pressed rods arranged in juxtaposition to said jaws to engage the oyster.

2. In an oyster-opening device, the combination of a frame, a fixed jaw, a movable jaw on said frame spring-pressed toward said fixed jaw, means for operating said movable jaw against the spring pressure, and a plurality of spring-pressed rods arranged beneath said jaws to engage the oyster.

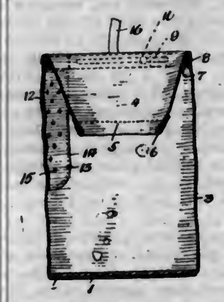
3. In an oyster-opening device, the combination of a frame, a fixed jaw, a movable jaw on said frame spring-pressed toward said fixed jaw, means for operating said movable jaw against the spring pressure, a plurality of spring-pressed rods arranged beneath said fixed jaw, and a plurality of spring-pressed rods arranged beneath said movable jaw and adapted to move therewith.

4. In an oyster-opening device, the combination of means for holding the oyster, a knife mounted upon said device for opening the oyster, a bearing for said knife comprising a support and a spring-pressed vertically-yielding member on which said support is mounted, and a handle for said knife.

5. In an oyster-opening device, the combination of means for holding the oyster, a knife mounted upon said device for opening the oyster, a bearing for said knife comprising a support and a spring-pressed vertically-yielding member on which said support is mounted, and a handle connected to said knife and pivoted to said support.

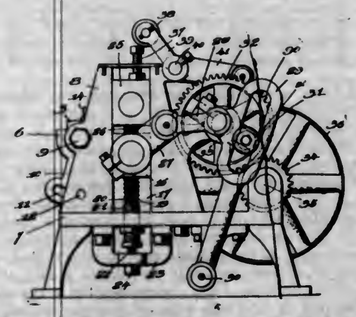
[Claim 6 not printed in the Gazette.]

1,018,170. FEED-BAG. JOE DOMBROSKI, Chelsea, Mass. Filed Sept. 28, 1911. Serial No. 651,716. (Cl. 119—65.)



A feed bag comprising a bottom plate, a cylindrical casing having its lower end secured thereto and provided near its top with a group of perforations, a perforated strip of leather secured to the inner face of said casing and reinforcing the perforated portion thereof, a funnel shaped mouth piece carried by the upper end of said casing and depending into the latter and terminating at a point above the lower end of said group of perforations, a spring band arranged within the casing at the upper end thereof and riveted thereto, one end of said band overlapping the other end, one of the ends of said band provided with a longitudinally extending slot, and a rivet extending through said casing and attached to the other end of said band and extending through said slot and constituting means for adjustably connecting the ends of the band together, said band constituting means for contracting the top of the casing.

1,018,171. LEATHER-SCARFING MACHINE. JOHN F. DONNELLY and HARRY LYON, Brockton, Mass.; said Lyon assignor to said Donnelly. Filed July 7, 1910. Serial No. 570,753. (Cl. 69—13.)



1. In a leather-scarfing machine, the combination with a knife, of feeding means to feed leather toward the knife, means operating automatically in timed relation with said feeding means to produce a relative movement between the feeding means and the knife in a direction transverse to the feeding movement of the leather before the feeding means begins its movement thereby to bring the leather firmly against the knife edge and after the feeding means has commenced to move the leather toward the knife to continue to produce such relative movement whereby the knife will enter the leather abruptly and then cut diagonally across the leather.

2. In a leather-scarfing machine, the combination with a knife, of a feeding roll movable toward the knife in a direction transverse to the direction of feed, a rocking member to give transverse movement to the roll, a shaft for operating the feed roll, a cam on said shaft for rocking the member to give the feeding roll its transverse movement, and means for operating the shaft.

3. In a leather-scarfing machine, the combination with a knife, of feeding rolls mounted to move bodily transversely to the direction of feeding movement, an actuator for giving the rolls such transverse movement, a cam having an adjustable section to engage and operate said actuator, and means to adjust either end of said cam section radially.

4. In a leather-scarfing machine, the combination with a knife, of feeding rolls mounted to move bodily transversely to the direction of feeding movement, an actuator for giving the rolls such transverse movement, a cam having a pivoted cam section to engage and operate said actuator, and means to swing said cam section about its pivot to vary the eccentricity thereof.

5. In a leather-scarfing machine, the combination with a knife, of feeding rolls mounted to move bodily transversely to the direction of feeding movement, an actuator for giving the rolls such transverse movement, a cam having an adjustable section to engage and operate said actuator, and means to adjust the leading end of said cam section radially.

[Claims 6 to 12 not printed in the Gazette.]

1,018,172. SERVICE-BOX KEY. SAMUEL T. DOWNS, Irvington, Ind., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Aug. 1, 1910. Serial No. 575,039. (Cl. 81—121.)

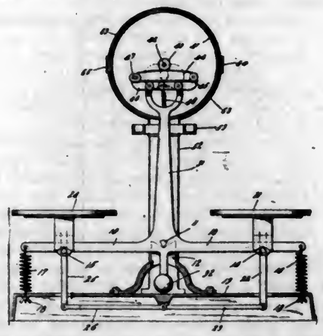
1. In a service box key, a round handle portion having an angular tapering upper end and having a collar at its lower end with a reduced angular extension projecting longitudinally below the collar, an internally threaded sleeve loose on the handle portion and having an inturned flange engaging the collar to retain the sleeve from displacement, a cross bar carried on the upper end of the handle portion and having a central opening of complemental configuration to bind the bar on the handle, and an extension member having an angular socket snugly receiving the angular extension of the handle portion and having exterior threads about the socket for the reception of said sleeve.

2. In a service box key, a round handle member having a fixed collar on its lower end, and an angular extension projecting longitudinally below the collar, the member being provided with an upwardly tapering angularly formed portion at its upper end, a sleeve loose on the round handle and having an inturned flange adapted to engage the collar to retain the sleeve on the member, and a cross bar carried on the upper end of the handle member and having an opening therethrough midway of its ends, the opening being of complemental configuration whereby the cross bar is adapted to bind on the handle member.

1,018,173. SCALE. FRANK P. DUNN, Anderson, Ind., assignor to The Anderson Tool Company, Anderson, Ind., a Corporation of Indiana. Filed June 21, 1909. Serial No. 503,337. (Cl. 73—104.)

1. In a weighing scale, a base, a scale beam mounted thereon and having an intermediate fulcrum, a weight

depending from said beam beneath said fulcrum, an arm extending upward from said fulcrum, means actuated by said arm for indicating the weight of the load, and a spiral spring secured to each end of the scale beam and said base, substantially as set forth.

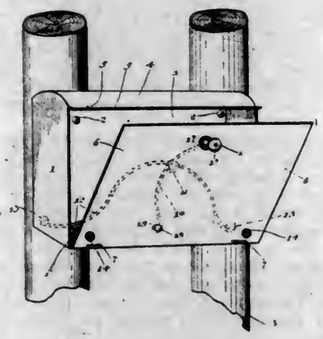


2. In a weighing scale, the combination, with a scale beam and a rotary indicator having a driving pinion, of a pair of levers carried by the scale beam upon axes substantially parallel with the axis of the pinion, a rack carried by the ends of said levers and meshing with the pinion, and means for yieldingly swinging said levers upon their axes to urge the rack into mesh with the pinion.

3. In a weighing scale, the combination, of a rotary pinion, a rack meshing with said pinion, a pair of levers connected at their outer ends with said rack to support the same, and a spring operating upon the inner ends of both the levers to yieldingly urge the rack into mesh with the pinion throughout the length of the rack.

4. In a weighing scale, the combination, of a rotary pinion, a rack meshing with said pinion, a pair of levers pivoted upon axes substantially parallel with the axis of the pinion and connected at their outer ends with said rack to support the same, and a spring operating upon the inner ends of both the levers to yieldingly urge the rack into mesh with the pinion throughout the length of the rack.

1,018,174. NEWSPAPER-BOX. NELS G. EDMAN, Chicago, Ill. Filed May 5, 1911. Serial No. 625,354. (Cl. 129—43.)



1. A newspaper-box comprising a body; a resilient member in said body arranged to hold papers upright therein; a hinged lid for said body; and a loop on said lid engaging said resilient member, substantially as described.

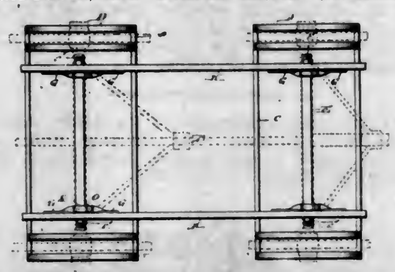
2. A newspaper-box comprising an elongated substantially rectangular body formed of sheet metal, a roof on said body, an apron formed integral with and extending forwardly from said roof, a lid hinged to a front edge of the body of said box, a handle for operating said lid secured adjacent the upper edge thereof, said body being adapted to be screwed to a suitable support, a U-shaped loop centrally secured to the interior surfaces of said lid, and resilient means coöperating with said loop for holding said lid in a normally closed position, substantially as described.

3. In a newspaper-box, a body having an open side, a lid hinged to the lower front edge of said body and adapted to close said open side, a handle secured to said lid, a wire loop centrally secured to the inner surface of said lid and extending transversely of the same, a substantially U-shaped flexible spring having a central runner formed integral therewith and engaging said loop, and means for securing the ends of said spring to the rear wall of said body, substantially as described.

4. In a newspaper-box, a substantially rectangular body having an open front, a lid hinged to the lower front edge of said body so as to swing on a horizontal axis, a substantially vertically disposed wire loop secured to the inner surface of said lid and extending approximately across the same, an elongated substantially U-shaped spring having a central runner for engaging said loop, and eyes formed at the terminals of said spring and secured to the rear wall of said box, substantially as described.

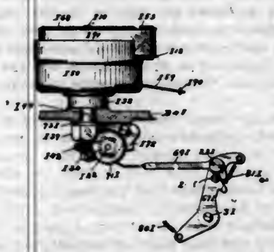
5. In a newspaper-box, a sheet metal body having an open front, a lid adapted to oscillate on a horizontal axis for closing the front of said body, a substantially vertically disposed loop secured to the inner surface of said lid at the center thereof, the main portion of said loop being spaced apart from the interior surface of said lid, a spring extending longitudinally of said body and substantially co-extensive therewith, a runner formed at the center of said spring for engaging said loop adjacent the middle thereof, said spring forming a newspaper support, and screws for securing the ends of said spring to the rear walls of said box, there being apertures formed in said lid for rendering said screws accessible, substantially as described.

1,018,175. HAY-RACK. JOHN E. EDMONDS, Athol, Kans. Filed Feb. 23, 1911. Serial No. 610,373. (Cl. 21—74.)



In a device of the character described, the combination with the bolsters and side rails of a vehicle, of a yoke fitting upon said bolsters, said yoke having a longitudinally disposed portion extending at right angles to said bolsters and a pair of depending vertically disposed arms formed integral with and extending downwardly at right angles to said longitudinal portion, a clamping plate slidably mounted upon said yoke and having a transverse aperture therein through which said longitudinally extending portion of the yoke extends to permit said clamping head to depend vertically therefrom, a pair of apertured plates having their longitudinally disposed portions secured to the side rails of the vehicle and their vertically disposed portions depending downwardly and resting against the vertically disposed arms of the yoke, and means passing through one of said vertically disposed arms of said plates and abutting against said clamping plate whereby the device may be secured in proper position upon the bolsters.

1,018,176. RIBBON WINDING AND REVERSING MECHANISM. HALCOLM ELLIS, East Orange, N. J. Filed Nov. 5, 1910. Serial No. 590,951. (Cl. 197—162.)



1. In a ribbon winding and reversing mechanism, the combination with ribbon reels or spools, of driving devices for the respective spools each of which is arranged to always rotate in the same direction, means for engaging the respective reels with said driving devices, an operative connection between said engaging means of the respective spools, whereby when one spool is engaged with its driving device the other is disengaged from its own driving device, shiftable ribbon attaching devices carried by the ribbon reels, and means operated by the movement of the ribbon attaching devices on the unwinding of the ribbon for reversing the condition of the engaging devices aforesaid at predetermined times.

2. In a ribbon winding and reversing mechanism, the combination of spindles, means for turning said spindles, ribbon reels loosely mounted on the spindles, clutches for engaging the respective reels with their spindles so that they will be driven thereby, operatively connected shifters for the respective clutches arranged so that when one of the reels is clutched to its spindle, the other reel is loose on its spindle, and shiftable ribbon attaching devices carried by the reels and operated by the unwinding of the ribbon thereof adapted to reverse the condition of the respective clutches.

3. In a ribbon winding and reversing mechanism, the combination of spindles, means for turning said spindles, ribbon reels loosely mounted on the spindles, clutches for engaging the respective reels with their spindles so that they will be driven thereby, operatively connected shifters for the respective clutches arranged so that when one of the reels is clutched to its spindle, the other reel is loose on its spindle, and movable ribbon clamps securing the ribbon to the respective reels which are arranged to effect reversal of the condition of the respective clutches when the ribbon is unwound.

4. In a ribbon winding and reversing mechanism, the combination of spindles, means for turning said spindles, ribbon reels loosely mounted on the spindles, clutches for engaging the respective reels with their spindles so that they will be driven thereby, operatively connected shifters for the respective clutches arranged so that when one of the reels is clutched to its spindle, the other reel is loose on its spindle, and ribbon clamps pivoted to the respective reels and connecting the ribbon to said reels, said clamps being coöperatively related to the clutch shifting means and adapted to effect reversal of the condition of the clutches when the ribbon is unwound.

5. In a ribbon winding and reversing mechanism, the combination with ribbon reels or spools, of driving devices for the respective spools each of which is arranged to always rotate in the same direction, a spring-actuated tripable snap mechanism for each of the reels adapted for engaging the reel with its driving device when released, an operative connection between said spring-actuated snap mechanisms of the respective spools whereby when one spool is engaged with its driving device the other is disengaged from its own driving device, and means operated by the ribbon for setting one of the snap mechanisms aforesaid and releasing the other of them.

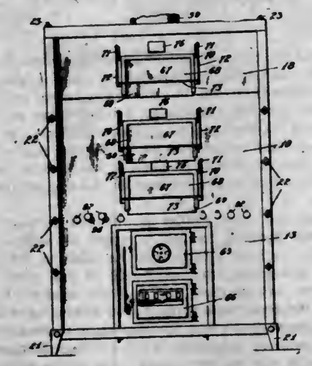
[Claims 6 to 14 not printed in the Gazette.]

1,018,177. SHARPENING DEVICE. PETER ESSER, Paterson, N. J. Filed Sept. 27, 1911. Serial No. 651,486. (Cl. 76—86.)

1. A sharpening device comprising a handle, a sharpening steel secured thereto and having a sharpening edge, a sharpening member pivoted to said steel above the handle and having a sharpening edge adapted to coöperate with the sharpening edge of the steel, an extension from the sharpening member extending downwardly opposite the upper end of the handle, and means for normally retaining the sharpening member in parallel alinement with said steel.

2. A sharpening device comprising a handle, a sharpening steel secured thereto and having a longitudinal sharpening edge adjacent the handle, a flange between said edge and said handle, a sharpening member pivoted to said steel above the flange and having a longitudinal sharpening edge adapted to coöperate with the sharpening edge of the steel, a projection on said member adapted to abut against said flange for arresting the movement of the member when in parallel alinement with the steel, an extension from said sharpening member extending below the flange, an operating button on said extension, and a spring between said extension and the handle adapted to move the sharpening member into parallel alinement with the steel.

1,018,178. BAKE-OVEN. JOHN FAULDS, Oak Park, Ill., assignor of one-half to John I. Marshall, Chicago, Ill. Filed June 10, 1909. Serial No. 501,268. (Cl. 107—62.)



1. In combination, a chambered wall for a baking compartment, a partition transverse to the plane of the wall dividing the chamber from end to end, a furnace flue leading into the chamber at each side of the partition,

the openings of such flues into the chamber being at opposite ends of the wall, respectively, and a flue leading out of the chamber at each side of the partition, the opening from the chamber into each of said last-named flues being located at that end of the wall remote from the furnace flue opening at the same side of the partition.

2. In a bake oven, in combination, a baking compartment having a chambered floor and roof, a vertical portition dividing the floor chamber from side to side of the compartment, a furnace flue leading into the floor chamber at each side of the partition, the openings of such flues into the chamber being at opposite sides of the compartment, respectively, and a flue leading from the floor chamber at each side of the partition to the roof chamber, each of said last-named flues being located at that side of the compartment remote from the furnace flue delivering to the floor chamber at the same side of the partition.

3. In a bake oven, in combination, a baking compartment having a chambered floor and roof, vertical partitions extending from side to side of the compartment dividing the floor and roof chambers, respectively, a furnace flue leading into the floor chamber at each side of the partition therein, the openings of such flues into the chamber being at opposite sides of the compartment, respectively, and flues located at opposite sides of the partitions leading from the floor chamber to the roof chamber, each of said last-named flues being located at that side of the compartment remote from the furnace flue delivering to the floor chamber at the same side of the partition therein.

4. In combination, a chambered floor for baking compartments having a cleanout opening in an end wall of its chamber, a horizontally-swinging vertical partition normally dividing the floor chamber from side to side, and a furnace flue delivering to the floor chamber at each side of the partition.

5. In combination, a chambered floor for baking compartments having a clean-out opening in an end wall of its chamber, a horizontally-swinging vertical partition pivotally mounted at the center of the floor chamber and normally dividing the said chamber from side to side, and a furnace flue delivering to the floor chamber at each side of the partition.

[Claims 6 to 10 not printed in the Gazette.]

1,018,179. LINK FOR CROSS-CHAINS OF ANTISKID DEVICES. FRANK AVERILL FOX, Brooklyn, N. Y. Filed Dec. 6, 1911. Serial No. 664,218. (Cl. 152—14.)

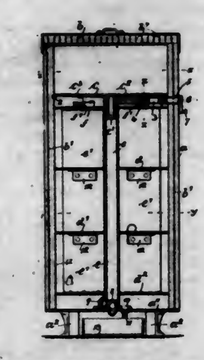
1. A link for cross chains of antiskid devices comprising a body portion having a recess in its back or bottom face, a tongue extending from one end of the body portion having its end portion adapted to fit the recess in the body portion and having opposite recesses formed in its end portion near but not extending to its end, and oppositely arranged lugs on the body portion adapted to be turned down into and to fit the recesses in the end portion of the tongue.

2. A link for cross chains of antiskid devices comprising a body portion having a recess of uniform width throughout its length formed in its back or bottom face, a tongue extending from each end of the body portion, the tongues having their end portions adapted to fit the recess in the body portion and each having oppositely arranged recesses in its end portion but not extending to its end, and pairs of oppositely arranged lugs formed on the body portion adapted to be bent down into said recesses in the end portions of the tongues.

3. A link for cross chains of antiskid devices comprising a body portion having a recess of uniform width throughout its length formed in its back or bottom face, a tongue extending from each end of the body portion, the tongues having their end portions adapted to fit the recess in the body portion, the tongues being of such length that their ends abut when bent into the recess in the body portion, the tongues having oppositely arranged recesses in their end portions not extending to their ends, and pairs of oppositely arranged lugs on the body portion adapted to be bent down into the recesses in the end portions of the tongues to lock them against strain.

4. A link for cross chains for antiskid devices comprising a body portion having a recess of uniform width throughout its length formed in its back or bottom face, a tongue extending from each end of the body portion, the tongues having their end portions adapted to fit and fill the recess in the body portion and each having oppositely arranged recesses in its end portion but not extending to its end, and pairs of oppositely arranged lugs on the body portion adapted to be bent down into and to fill the recesses in the end portions of the tongues, the parts being so proportioned that when the tongues are bent into the recess in the body portion and the lugs are bent into the recesses in the end portions of the tongues, the back or bottom face of the link presents a practically unbroken surface.

1,018,180. REFRIGERATOR. GEORGE S. GALLAGHER, New York, N. Y., assignor to Emma G. Gallagher, New York, N. Y. Filed July 13, 1910. Serial No. 571,695. (Cl. 62—10.)



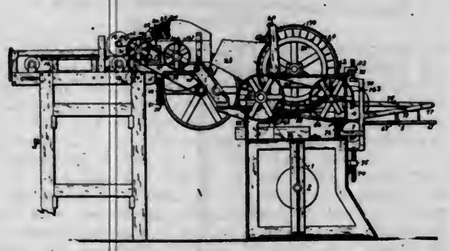
1. A refrigerator comprising a circular or cylindrical body having openings providing access thereto, a bottom plate and supports therefor, a cover adapted to fit over the cylindrical body, a platform near the upper part of the cylindrical body adapted to support ice and form of the upper part of the cylindrical body an ice chest, a series of circular shelves spaced a suitable distance apart, a tubular center and radial divisions connected together and forming a unit adapted to be rotated within the cylindrical body, an open-ended thimble or sleeve depending centrally from the platform for ice and entering the upper open end of the tubular center and forming a pivot, a step-bearing at the lower end of the tubular center also forming a bearing for the revoluble element and means for rotating the revoluble element and so arranged that a part thereof at the same time fixes the position of the platform for ice.

2. A refrigerator comprising a circular or cylindrical body having openings providing access thereto, a bottom plate and supports therefor, a cover adapted to fit over the cylindrical body, a platform near the upper part of the cylindrical body adapted to support ice and form of the upper part of the cylindrical body an ice chest, a series of circular shelves spaced a suitable distance apart, a tubular center and radial divisions connected together and forming a unit adapted to be rotated within the cylindrical body, an open-ended thimble or sleeve depending centrally from the platform for ice and entering the upper open end of the tubular center and forming a pivot, a step-bearing at the lower end of the tubular center also forming a bearing for the revoluble element, radial ribs on the under surface of the platform for ice for stiffening the same and one of said ribs hollow, a shaft with a gear on one end of the same received in said hollow rib, a sleeve passing through the concrete body of the refrigerator, a shaft in said sleeve and a handle outside on the shaft, means connecting the inner end of said shaft with the end of the shaft in said sleeve for rotating the shafts from the handle, a circular rack secured on the upper end of the revoluble member and adapted to be turned for the turning of the revoluble member by the rotation of the handle.

3. In a refrigerator and in combination, a cylindrical body, a platform for ice near the upper end forming therein an ice chamber, a rib secured to the inner surface of the body as a support for the said platform, a center open-ended thimble or sleeve secured to the under surface of the platform, radial ribs on the under surface of the platform for stiffening the same and one of said ribs made hollow for a portion of its length, a revoluble member within the refrigerator for holding articles to be kept cool, a top plate therefor and a circular rack secured on the top plate concentric with the axis, a shaft in the hollow rib member having a gear on the inner end thereof meshing with the teeth of said rack, and means for actuating said shaft and turning the same to revolve the revoluble member.

4. In a refrigerator and in combination, a cylindrical body, a platform for ice near the upper end forming therein an ice chamber, a rib secured to the inner surface of the body as a support for the said platform, a center open-ended thimble or sleeve secured to the under surface of the platform, radial ribs on the under surface of the platform for stiffening the same and one of said ribs made hollow for a portion of its length, a revoluble member within the refrigerator for holding articles to be kept cool, a top plate therefor and a circular rack secured to the top plate concentric with the axis, a shaft in the hollow rib member having a gear on the inner end thereof meshing with the teeth of said rack, a sleeve passing through the wall of the circular refrigerator body, an auxiliary shaft in said sleeve, a handle at the outer end of said shaft for turning the same, a connection from the inner end of the shaft to the end of the shaft in said rib, whereby the shaft within the rib is rotated for the rotation of the revoluble body within the refrigerator.

1,018,181. APPARATUS FOR MANUFACTURING PACKING-PADS. EDWARD WILLIAM GOODRICK, Oshkosh, Wis., assignor to Oshkosh Excelsior Mfg. Co., Oshkosh, Wis., a Corporation of Wisconsin. Filed Mar. 18, 1909. Serial No. 483,172. (Cl. 154—29.)



1. In apparatus of the described class, the combination with means for feeding a continuous covering strip and distributing filling material thereto, of a feeding conveyer for the material, a toothed combing cylinder having relatively short teeth, a concave provided with longer combing teeth in operative relation to the cylinder and means for delivering the material from the combing cylinder to the distributing means, said combing cylinder being arranged to engage the material on its upwardly moving side and carry it over the cylinder to the delivery point beyond said concave.

2. In apparatus of the described class, the combination with means for feeding a continuous covering strip and distributing filling material thereto, of a feeding conveyer for the material, a toothed combing cylinder having relatively short teeth, a concave provided with longer combing teeth in operative relation to the cylinder and means for delivering the material from the combing cylinder to the distributing means, said combing cylinder being arranged to engage the material on its upwardly moving side and carry it over the cylinder to the delivery point beyond said concave, together with a series of compression rollers arranged to bear with successively increasing pressure upon the material carried by the conveyer, preparatory to its delivery to the combing cylinder, one roller of each set being supported by pivotally swinging levers, and the levers of the last set of such rollers being provided with adjustable spring tension connections.

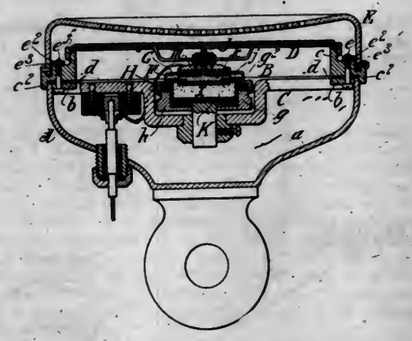
3. In apparatus of the described class, the combination with means for feeding a continuous covering strip and distributing filling material thereto, of a feeding conveyer for the material, a toothed combing cylinder, a concave provided with combing teeth in operative relation to the cylinder and means for delivering the material from the combing cylinder to the distributing means, said combing cylinder being arranged to engage the material on its upwardly moving side and carry it over the cylinder to the delivery point beyond said concave, together with a series of compression rollers arranged to bear with successively increasing pressure upon the material carried by the conveyer, preparatory to its delivery to the combing cylinder, one roller of each set being supported by pivotally swinging levers, and the levers of the last set of such rollers being provided with adjustable spring tension connections.

4. In apparatus of the described class, the combination with pad filling and forming devices of a combing cylinder having outwardly projecting and relatively short radial teeth, and a concave having longer teeth arranged to interact with those on the combing cylinder, said cylinder being arranged to rotate upwardly along the surface of the concave.

5. In apparatus of the described class, the combinaion with pad filling and forming devices of a combing cylinder, having outwardly projecting and relatively short radial teeth, and a concave having longer teeth arranged to interact with those on the combing cylinder, said cylinder being arranged to rotate upwardly along the surface of the concave, the teeth of said concave being arranged to extend trailingly in the direction of cylinder movement.

[Claims 6 to 28 not printed in the Gazette.]

1,018,182. TELEPHONE-TRANSMITTER. FELIX GOTTSCHALK, New York, N. Y. Filed June 12, 1911. Serial No. 632,565. (Cl. 179—123.)



1. In a telephone transmitter, a resistance cup comprising a casing, an electrode near the mouth portion of the casing with which the transmitter diaphragm coacts, a smaller metallic diaphragm, having the inner portion thereof engaged with the electrode, covering the same, closing the mouth of the casing, confined on the portion of the casing which surrounds its mouth, and means for insulating the smaller diaphragm from the casing which

extends to connection with the electrode in separation from the smaller diaphragm, so that such insulating material causes no obstruction to the free vibratory action of the adjacent diaphragm.

2. In a telephone transmitter, a resistance cup comprising a cylindrical shell having its mouth portion externally of step shape and provided with screw threads back of the step, an electrode near the mouth of the casing and forward of the granular carbon, and with which the transmitter diaphragm coacts, and a smaller metallic diaphragm, covering the electrode, closing the mouth of the casing and having an angularly turned marginal portion disposed relatively to the step shaped part of the casing and an internally flanged ring nut screw engaged on the casing and, by the flange thereof, having a confining engagement against the angular marginal portion of the smaller diaphragm.

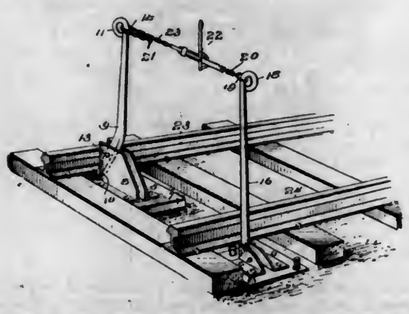
3. In a telephone transmitter, a resistance cup comprising a cylindrical casing, an electrode within the casing and a metallic vibratory diaphragm closing the mouth of the casing, confined on the portion of the latter which surrounds its mouth and insulated therefrom, and connected with the electrode, the material which insulates the diaphragm being in separation from the vibratory portion of the diaphragm lying between the mouth of the casing and the electrode.

4. In a telephone transmitter, a resistance cup comprising a cylindrical shell having its mouth portion externally of step shape and provided with screw threads back of the step, an electrode near the mouth of the casing, a metallic diaphragm, covering the electrode, closing the mouth of the casing and having an angularly turned marginal portion disposed closely relatively to the step shaped part of the casing, an internally flanged ring nut screw engaged on the casing and by the flange thereof having a confining engagement against the angular marginal portion of the smaller diaphragm, and a sheet of flexible insulating material centrally connected to the electrode within the metallic diaphragm, and marginally engaged and confined between the mouth portion of the casing and said ring nut.

5. In a telephone transmitter, a resistance cup comprising a metallic cylindrical casing, an electrode within the casing, a sheet of flexible heat resisting insulating material connected to the electrode extending therefrom to the mouth portion of the casing, and a vibratory metallic diaphragm covering the electrode and having the marginal portion thereof engaged with the mouth portion of the casing.

[Claims 6 to 14 not printed in the Gazette.]

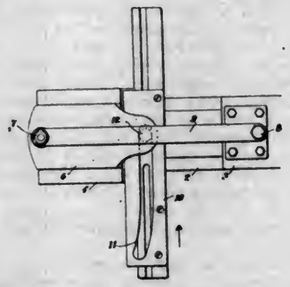
1,018,183. TRACK-LINER. JOHN W. GRAY, Wooldridge, Mo. Filed Aug. 10, 1911. Serial No. 643,264. (Cl. 104—16.)



1. In a track liner, a pair of base plates, a depending flange formed on one of the base plates, bearings rising vertically from the base plates, levers pivoted in said bearings, a rail abutting end formed on one of the levers, and means for connecting the upper ends of the levers.

2. In a track liner, a pair of base plates, a depending flange formed on one of the base plates, bearings rising vertically from the base plates, levers pivoted in the bearings, a rail abutting end formed on one of the levers, eyes formed on the upper ends of the levers, rings carried by the eyes, a chain connected to one of the rings, and a hook on the chain for detachably connecting said chain to the other ring.

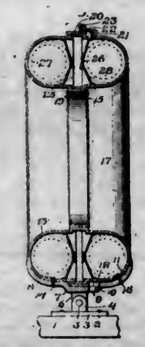
1,018,184. FORMER FOR LATHES. GEORGE E. GREENLEAF, Plainfield, N. J., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Oct. 26, 1911. Serial No. 656,971. (Cl. 82—14.)



1. A former for a lathe comprising, a guideway disposed transversely of the lathe-bed and secured to the lathe-bed, a pivot carrier fitted to slide in said guideway, a pivot carried by the pivot-carrier, a pivot carried by the tool-holder of the lathe, a link counecting the two pivots, a former-plate secured to the carriage and having longitudinal guiding surfaces, and a connection between the pivot carrier and the guiding surfaces of the former-plate, combined substantially as set forth.

2. A former for a lathe comprising, a guideway disposed transversely of the lathe-bed and secured to the lathe-bed, a pivot-carrier fitted to slide in said guideway, a pivot carried by the pivot-carrier, a pivot carried by the tool-holder of the lathe, a link connecting the two pivots, a former-plate carried by the lathe-carriage and provided with a longitudinal slot, and a projection carried by the pivot-carrier and engaging said slot, combined substantially as set forth.

1,018,185. TIRE-CASE FOR AUTOMOBILES. LEWIS GRIMM, Pittsburgh, Pa. Filed Oct. 12, 1910. Serial No. 586,734. (Cl. 150—54.)



1. A tire case comprising a receptacle in the form of an annulus, including a stationary and a hinged section, one of said sections seated in and overlapped by the other section when the receptacle is closed, means for maintaining the sections closed, a segment-shaped shoe secured to the lower portion of the stationary section and having its inner portion off-set, a segment-shaped shoe fixed to the lower portion of the hinged section and pivotally connected to the off-set portion of the other shoe, and means for connecting that shoe provided with the off-set portion to a support.

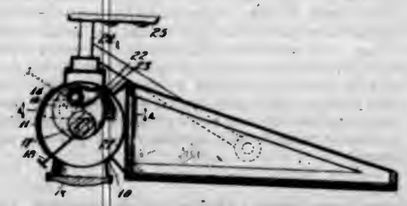
2. A tire case comprising a receptacle in the form of an annulus, including a stationary and a hinged section, the open side of one section opposing the open side of the other section, the marginal portions throughout of the side walls at the open side of one section seated in and overlapped by the marginal portions throughout of the side walls of the open side of the other section, means for maintaining the sections closed, a segment-shaped shoe fixed to the lower portion of the stationary section and having its inner part off-set and formed with a lug, said off-set portion providing a clearance when said sections are closed, a segment-shaped shoe fixed to the lower portion of the hinged section and pivotally connected to said lug, and means for connecting the off-set shoe to a support.

1,018,186. PROCESS OF OBTAINING ALKALI-METAL COMPOUNDS FROM MINERALS CONTAINING ALKALIS. MAX M. HAFF, Ottawa, Ontario, Canada, assignor to Thomas Leopold Willson, Ottawa, Canada. Filed July 7, 1906. Serial No. 325,051. (Cl. 23—22.)

1. The process of obtaining a phosphate of an alkali metal, which consists in heating a mineral bearing said metal with a phosphate of an alkaline earth metal less volatile than the alkali metal, to such a temperature that the phosphate of the alkali metal is produced and volatilized, and collecting such phosphate from the vapors.

2. The process of obtaining potassium phosphate, which consists in heating a potash bearing mineral with calcium phosphate to such a temperature that potassium phosphate is produced and volatilized, and collecting the potassium phosphate from the vapors.

1,018,187. LAMP. WILLIAM S. HAMM, Hubbard Woods, Ill., assignor to The Adams & Westlake Company, a Corporation of Illinois. Filed Mar. 25, 1910. Serial No. 551,449. (Cl. 240—37.)



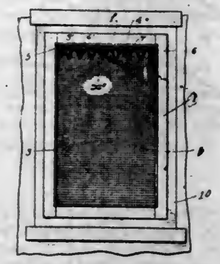
1. In a lamp, in combination, an upright body having a light-emitting aperture, an oscillatable font within the body and having its axis eccentric to the axis of the body, an oil burner, and an electric lamp mounted upon the font and at opposite sides of its center and being spaced apart therefrom a distance equal to the distance between the axes of the body and of the font.

2. In a lamp for vehicles, in combination, a chambered body having light-emitting apertures, an oil font within the body and having an oil burner and an electric lamp mounted thereon, and means external of the chambered body for oscillating the font to bring such sources of illumination in alternation into effective relation with reference to such apertures.

3. In a lamp, in combination, a chambered body having a light-emitting lens, an oscillatable oil font within the body, an oil burner, an electric lamp mounted upon the font and adjacent opposite sides thereof, a stem projecting from the font through the bottom of the body, and a crank arm fixed to the outer end of the stem.

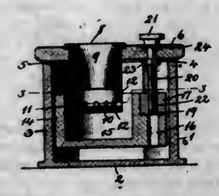
4. In a lamp, in combination, a body having a lens, an oscillatable support within the body and having its axis eccentric to the focal point of the lens, a plurality of light developing devices mounted on the support in a plane passing through the focal point of the lens and each being spaced apart from the center of the support a distance equal to the distance of such center from the focal point of the lens.

1,018,188. WINDOW-SCREEN INSECT-ESCAPE. CHARLES M. HAWORTH, Maricopa, Cal. Filed Apr. 6, 1911. Serial No. 619,375. (Cl. 156—37.)



A window screen insect escape comprising a plain frame, a short inner screen portion secured to the top of the frame and projecting partly in front of the opening of the frame, a solid zigzag strip having upwardly and downwardly extending bends and located in front of the inner screen portion, means securing the zigzag strip by its upper bends to the top of the frame above the lower edge of the latter, and a long outer screen portion overlapping the inner screen portion and secured to the bottom and sides of the frame and extending upwardly to a point above the lower edge of the top of the frame near the upper bends so as to leave small triangular openings located above the outer screen portion and providing insect exits.

1,018,189. INKSTAND. FRANK HEJNAL, Baltimore, Md. Filed Mar. 27, 1911. Serial No. 617,177. (Cl. 120—66.)

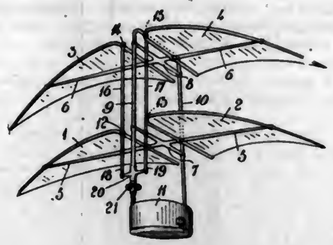


In an inkstand the combination of an outer receptacle having a cover at the upper side thereof; a stationary dip-cup attached to and depending from the said cover and having a bottom and perforations at its depending end; an inner receptacle having a well to contain ink and entirely inclosed within said outer receptacle and which encircles the depending end of the said stationary dip-cup, and a screw having an end exposed on the exterior of the outer receptacle and connected to said inner receptacle to raise and lower the same, whereby the ink may more or less submerge the bottom of the dip-cup or be entirely removed therefrom.

1,018,190. AEROPLANE. OLOF HELSING, Sandhem, Sweden. Filed Aug. 30, 1910. Serial No. 579,636. (Cl. 244—12.)

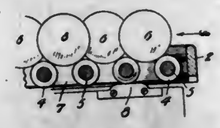
1. In an aeroplane, in combination, a gondola, bearing rods rigidly fixed thereto and extending upward to form a vertical frame, bearings in each of said bearing rods,

arms pivotally mounted in said bearings, bearing planes pivotally supported by said arms, a regulating device adjustably carried upon said gondola and rods of equal length coupling said regulating device to said bearing planes at the front edges of the latter, whereby said bearing planes are adapted to be feathered or tilted reversely fore and aft automatically in accordance with their tilting laterally whereby the equilibrium of the aeroplane will be automatically controlled.



2. In an aeroplane, in combination, a gondola, bearing rods rigidly fixed thereto and extending upward to form a vertical frame, bearings in each of said bearing rods, arms pivotally mounted in said bearings, two pairs of bearing planes located one above the other, said planes being pivotally supported by said arms, a regulating device adjustably carried upon said gondola and rods of equal length coupling said regulating device to said bearing planes at the front edges of the latter, whereby said bearing planes are adapted to be feathered or tilted reversely fore and aft automatically in accordance with their tilting laterally whereby the equilibrium of the aeroplane will be automatically controlled.

1,018,191. EGG-TURNING DEVICE. PAUL H. HERNDON, Tampa, Fla. Original application filed Jan. 23, 1911, Serial No. 604,230. Divided and this application filed Apr. 3, 1911. Serial No. 618,553. (Cl. 119—44.)



1. In an incubator, an egg tray provided with rollers and stationary elevated means coöperating with said rollers for raising the tray and giving the eggs a partial revolution as the tray is moved in or out.

2. In an incubator, an egg tray provided with rollers and stationary cam means coöperating with said rollers for engagement by said rollers for giving the eggs a partial revolution and raising the tray as the tray is moved in or out.

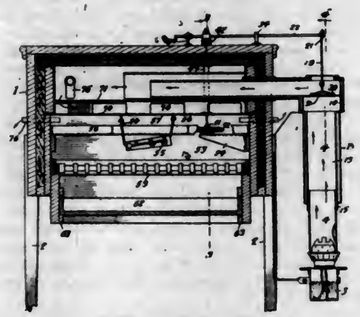
3. In an incubator, an egg tray provided with a plurality of rollers notched to form a multiplicity of bearing points for the eggs, and stationary means for contact with said rollers to raise the latter as the tray is moved, to give the eggs a partial revolution.

4. In an incubator, an egg tray provided with a plurality of rollers notched to form a multiplicity of bearing points for the eggs, and stationary cam means for contact with said rollers to raise the latter as the tray is moved, to give the eggs a partial revolution.

5. In an incubator, an egg tray provided with a plurality of rollers notched to form a multiplicity of bearing points for the eggs, and cam means for direct contact with said rollers to raise the latter as the tray is moved, to give the eggs a partial revolution.

[Claim 6 not printed in the Gazette.]

1,018,192. INCUBATOR. PAUL H. HERNDON, Tampa, Fla. Original application filed Jan. 23, 1911, Serial No. 604,230. Divided and this application filed Apr. 15. 1911. Serial No. 621,393. (Cl. 237—22.)

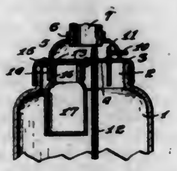


1. In an incubator, a hot air chamber, a source of heat, an outer chamber communicating with said source of heat and having an outlet in its top, said outer chamber having formed therein an inner chamber communicating with said hot air chamber and having an opening in its bottom communicating with said outer chamber, a rocking member and valves carried by said rocking member for alternately opening and closing the opening in the bottom of said inner chamber and the outlet in the top of the outer chamber.

2. In an incubator, a hot air chamber, a source of heat, an outer chamber intermediate said source of heat and hot air chamber and communicating with said source of heat, said outer chamber having formed therein an inner chamber communicating with said hot air chamber and having an opening in its bottom communicating with said outer chamber, the outer chamber having an outlet in its top, a rocking member, valves carried thereby for alternately opening and closing said outlet and opening, and thermostatic means for actuating said rocking member.

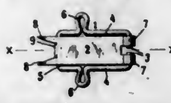
3. In an incubator, a source of heat, a hot air chamber, a conduit extending from the source of heat, an outer chamber into which said conduit discharges, and having an outlet in its top, said outer chamber having formed therein an inner chamber communicating with said hot air chamber and having an opening in its bottom communicating with said outer chamber, a thermostatically controlled rocking member, valves carried thereby for controlling said outlet and opening, a conduit extending from the inner chamber into said hot air chamber and a conduit extending within said hot air chamber surrounding the first-named conduit and extending well into the hot air chamber.

1,018,193. ATOMIZER. FERDINAND W. HINKLE, Los Angeles, Cal. Filed July 18, 1910. Serial No. 572,615. (Cl. 128—2.)



A device of the character described comprising a receptacle, a cap for said receptacle, said cap provided with a central opening at the top thereof, a pipe held in said opening and having its lower end depending within the cap, a discharge nozzle on said pipe, a partition plate in said cap, said plate provided with perforations in one portion thereof, an internally threaded tube depending from said plate and entirely surrounding said perforations, said tube having an annular flange, means for securing said flange to said plate, a drip receptacle threaded in said tube, a delivery tube passing through said partition plate adjacent said drip receptacle and having its outlet end located to one side of the center of the inlet end of the discharge pipe, terminating short of the lower end of the discharge pipe, a tube passing through said cap and provided with an annular extension adapted to pass through said plate and extend into said receptacle, and means for supplying air into said tube.

1,018,194. RUG-FASTENER. HAMPDEN HOGE and JOHN SCHADE, Jr., New York, N. Y.; said Schade assignor to said Hoge. Filed Sept. 19, 1911. Serial No. 650,198. (Cl. 16—3.)



1. A rug fastener device consisting of a resilient wire anchor member having sides spaced apart from each other and having loops for attaching said member to the floor and a substantially rigid stretching member hinged to the anchor member and closing between the sides thereof and having rug engaging prongs and a shoulder adapted to snap into engagement with a part of the wire anchor member.

2. A rug fastening device comprising a resilient wire member having loops at the opposite sides for attaching it to the floor and having an end member constituting a retaining bar, a rug stretching member pivoted to the opposite end of said anchor member and having rug engaging prongs at its free end and a lug adjacent the base of said prongs adapted to snap over the outside of said retaining bar for holding the parts in closed position, said loops projecting laterally beyond the said rug stretching member.

3. A rug fastener comprising an anchor member to be secured to the floor and formed of resilient wire bent into rectangular form with the free ends of the wire at one end and a rug stretching member hinged on said free ends and closing between the sides of the anchor member and having rug-piercing prongs and a down-turned lug for interlocking with said wire-anchor member.

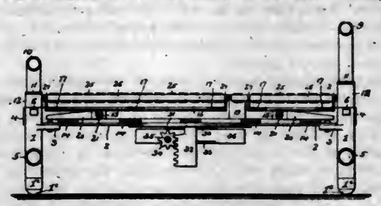
4. A rug fastener comprising an anchor member adapted to be secured to the floor and formed of wire bent into rectangular form having looped portions forming nail-receiving eyes near one end and forming a bearing at the opposite end, a rug-stretching member hinged on said bearing and having rug-engaging prongs at the opposite end extending beyond the looped portions of said anchor member.

5. A rug fastener comprising an anchor member formed of wire bent into rectangular form, one end constituting a retaining bar and the other end affording a bearing, portions of the sides being looped to form eyes and a rug stretching member hinged on the bearing portion of said anchor member and having rug-engaging prongs and a locking-lug at the opposite end, said lug having a snapping engagement with said retaining bar.

1,018,195. BEDSTEAD. JOHN A. KEMMLER, Philadelphia, Pa., assignor of one-half to Otto Klopfer, Philadelphia, Pa. Filed Oct. 8, 1910. Serial No. 585,986. (Cl. 5—12.)

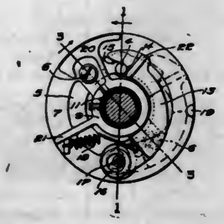
1. The combination, in a bed, of fixed frame, a turntable mounted thereon so as to be vertically movable, and a bed frame resting upon said turntable so as to be free to swing when it is raised above the limits of the fixed frame.

2. The combination, in a bed, of a fixed frame, a vertically movable turntable carried thereby, and a bed frame mounted upon said turntable so as to be free to swing when it is raised above the limits of the fixed frame, the



latter having removable head and foot pieces in order to permit such swinging movement.

1,018,196. AUTOMATIC SWITCH. CARLTON L. KENNEDY, South Braintree, Mass., assignor to The Holtzer-Cabot Electric Company, Brookline, Mass., a Corporation of Massachusetts. Filed Dec. 13, 1909. Serial No. 532,803. (Cl. 175—310.)



1. An automatic switch, having, in combination, a base, a fixed contact member, and a movable rigid contact member mounted thereon, one of the contact members being provided with a sliding-contact surface adapted to engage the other contact member, the moving contact member having direct mechanical connection with the base so as to be actuated by the rotation thereof, and such connection having provision for movement of the movable contact member, by centrifugal action, both in a direction to secure sliding engagement between the sliding-contact surface and the coöperating contact member and in a direction to cause the movable contact member to slide beyond and disengage the fixed contact member.

2. An automatic switch, having, in combination, a base, a fixed contact member and a movable integral contact member, one of the contact members having a butting-contact surface and a sliding-contact surface arranged at an angle with each other, the movable contact member having direct mechanical connection with the base so as to be actuated by the rotation thereof, and such connection having provision for movement of the movable contact member under centrifugal action both in a direction to secure sliding engagement between the sliding-contact surface and the coöperating member, and in a direction to slide out of engagement with the fixed contact member.

3. An automatic switch having, in combination, a base, two relatively movable contact members mounted thereon, one of which comprises an arm pivoted on the base and adapted to be actuated by the rotation thereof, one of said contact members having a pin and recess connection with the base, the recess being larger than the pin in a direction substantially inclined to the surfaces of the contact members which first engage each other, to allow the contact members to have a wiping engagement when they make and break contact, and means to yieldingly hold said surfaces in contact during their wiping engagement.

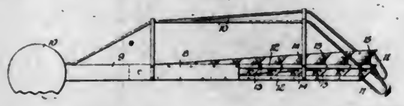
4. An automatic switch, having, in combination, a base, a fixed contact member, a movable contact member and a spring connected with the movable contact member and tending normally to maintain it in engagement with the fixed contact member, the movable contact member being in the form of an arm pivotally connected at one

end with the base, the pivotal connection having provision both for angular movement of the arm to permit it to be disengaged from the fixed contact member by centrifugal action, and for transverse movement of the arm to permit a sliding engagement between the arm and the fixed contact member.

5. An automatic switch, having, in combination, a base, a fixed contact member, a movable contact member, the movable contact member being in the form of an arm adapted to engage the fixed contact member at one end and connected at the other end with the base by a connection comprising a recess and a pin engaging the recess; the recess being substantially larger than the pin to allow the movable contact member to have a wiping engagement with the fixed contact member when the two members make or break contact, and a spring connected to the movable contact member and having a component of its force in a direction normal to that part of the surface of the fixed contact member which is first engaged by the movable contact member to insure the wiping engagement of these two members.

[Claims 6 and 7 not printed in the Gazette.]

1,018,197. COUNTERBALANCED STAIR. HENRY KLEINMARK, Chicago, Ill., assignor to J. L. Bondy Iron Works Co., Chicago, Ill., a Corporation of Illinois. Filed July 5, 1911. Serial No. 636,932. (Cl. 227—5.)



1. In a counterbalanced stairway, a pair of stringers hung upon a pivot, a weight carried by one of said stringers, and treads between said pivot, said treads being placed under torsional strain and being so secured to the stringers as to exert a torsional strain thereon in opposition to the direction of the strain exercised by the weight.

2. In a counterbalanced stairway, a pair of stringers hung upon and extending forwardly from a pivot, one of said stringers having an extension rearwardly from said pivot, a weight on said extension, and treads between said stringers, said treads being placed under torsional strain and being so secured to the stringers as to exert a torsional strain thereon in opposition to the direction of strain exercised by the weight.

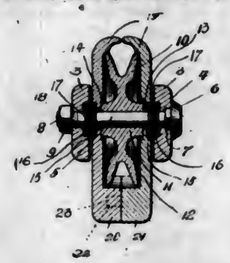
3. In a counterbalanced stairway, a pivot rod, a pair of stringers hung upon and extending forwardly from said pivot rod, one of said stringers being extended rearwardly from said pivot rod, a counterweight on said rearward extension, a plurality of treads each comprising side pieces secured to said stringers and a plurality of connecting rods placed under torsional strain in a direction tending ultimately to oppose the direction of strain exercised by the counterweight.

4. In a counterbalanced stairway, a pair of stringers one of which is counterweighted, and a torsional tread connecting them to exert a strain thereon in opposition to the direction of strain exercised by the counterweight.

5. The herein described process of alining a counterweighted stringer and an uncounterweighted stringer in a stairway, which consists in first building twisted treads, then straightening the treads to place them under torsional tension, and securing the treads between said stringers under such torsional strain.

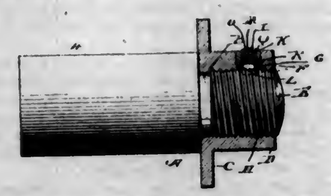
1,018,198. TROLLEY. HENRY F. KUNIESKI and MICHAEL SWIECICKI, Philadelphia, Pa. Filed Sept. 16, 1911. Serial No. 649,666. (Cl. 191—37.)

In a trolley, the combination with a pole provided with a harp, of a bolt extending through said harp, means to prevent the rotative movement of said bolt, a wheel revolubly mounted upon said bolt, guards loosely mounted upon said bolt between the ends of the hub of said wheel and the arms of the harp, said guards having the inner faces thereof recessed to provide clearances for the hub of said wheel, the arms of said harp having recesses in their inner faces, coiled springs encircling said bolt and extending into said guards and into the recesses of the arms of the harp, said springs maintaining said guards against said hub, said guards having the upper ends



thereof flared and bent inwardly to extend over said wheel and in proximity to each other, weighted enlargements carried by the lower ends of said guards thereby maintaining these latter normally in a vertical position, and dowel pins carried by one of said enlargements and extending into the other of said enlargements thereby preventing the vertical movement of one of the guards with respect to the other.

1,018,199. NUT-LOCK. CHARLES E. LINDSEY, Birmingham, Ala., assignor of one-eighth to E. E. Dupray, one-fourth to Louis Schulhoefer, one-sixteenth to George Hague, and one-sixteenth to James Lindsey, Birmingham Ala. Filed Feb. 14, 1911. Serial No. 608,631. (Cl. 151—6.)



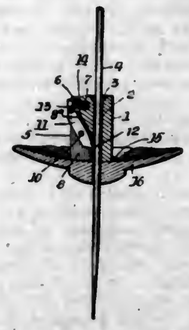
1. In a nut-lock device, the combination with the axle having the reduced threaded end, provided with a cylindrical socket, a nut fitted on the threaded end and provided with a flange for engaging the hub and with an opening adapted to aline with the socket in the threaded end, a sleeve mounted in said opening, and a spring-actuated locking pin confined in the sleeve and carrying a head at its upper end.

2. In a nut-lock, the combination with the axle having the reduced threaded end, provided with a cylindrical socket, a nut fitted on the threaded end and provided with a flange for engaging the hub and with an opening adapted to aline with the socket in the threaded end, a sleeve mounted in said opening, and a spring-actuated locking pin confined in the sleeve and carrying a head at its upper end, said nut being formed with slots and the sleeve being provided with vertical keys to engage said slots for securing the sleeve in the nut.

1,018,200. HAT-PIN FASTENER. LUKE LUCKOCK, East Pittsburgh, Pa. Filed May 26, 1911. Serial No. 629,615. (Cl. 24—155.)

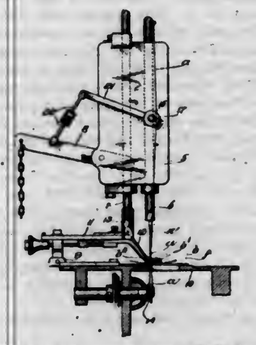
A hat pin fastener comprising a body provided with a bore for the reception of the pin, said body having one side provided with a longitudinal enlargement, said enlargement having one end provided with a circular recess and a pocket, said pocket communicating with the recess

and disposed at right angles with respect to said bore, said enlargement further provided with a longitudinally-extending slot communicating at one end with said recess and at its other end with said bore, a gripping member pivotally mounted in said slot and frictionally engaging the pin for locking the same, a head integral with said



gripping member and arranged at said recess, and a spring mounted in said pocket, extending across the recess and engaging said head and constituting means for normally maintaining the head projected and further constituting means for maintaining said member in gripping engagement with the pin.

1,018,201. SEWING-MACHINE. ROBERT L. LYONS, Waltham, Mass., assignor to himself, and Charles J. Sibbald, Troy, N. Y. Filed May 31, 1910. Serial No. 564,086. (Cl. 112—33.)



1. A sewing machine comprising stitch forming devices for forming a group of stitches, thread restraining means located above the work, means for straining the needle thread between the point at which it is restrained and the group of stitches and means for operating said thread restraining means and thread straining means approximately simultaneously.

2. A sewing machine comprising means for forming a group of stitches, means, adapted to be brought into operation, to restrain the feeding movement of the thread, at the completion of said group of stitches, means for exerting a strain on said thread lengthwise thereof to break the thread and operating mechanism connected with said thread restraining and thread straining means substantially as described.

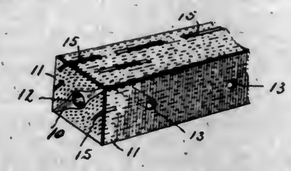
3. A sewing machine comprising means for forming a group of stitches, a button clamp, a lifting means for said button clamp, and means in operative relation to such button clamp lifting means and adapted to engage the needle thread to prevent its feeding movement before the movement of the button clamp is completed, substantially as described.

4. A sewing machine comprising means for forming a group of stitches, a button clamp, a lifting means for said button clamp, a thread restraining device, and operating means for said thread restraining device in operative connection with said button clamp lifting means, substantially as described.

5. A sewing machine comprising stitch forming means including a needle and a looper, a work holder movable with respect to such looper, means for clamping the thread to prevent its movement to the looper, means for moving said work holder away from said looper, and means actuated by said work holder moving means for effecting the operation of said thread clamping means.

[Claim 6 not printed in the Gazette.]

1,018,202. PACKING FOR PISTON-RODS, &c. CHARLES I. E. MARTIN, Midland Park, N. J. Filed June 24, 1911. Serial No. 635,231. (Cl. 121—107.)



1. A packing comprising a yieldable core and a wear resisting enveloping body said core being hollow longitudinally at its center and consisting of a strip that extends from the hollow central portion in opposite direction toward the exterior of said body.

2. A packing comprising a yieldable core and a wear resisting enveloping body consisting of a fibrous and elastic compound, the portions of the wear resisting body being capable of substantial bodily movement by reason of said yieldable core said core being a thin body or strip extending through the packing and rendering said portions distinct from each other.

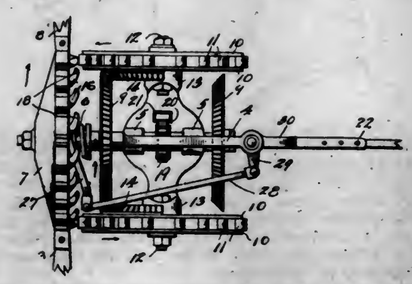
3. A packing comprising a yieldable core and a wear resisting enveloping body, said core being obliquely disposed in said body and separating the same in the form of similar, but oppositely disposed members, the core being a strip lying wholly between them.

4. A packing comprising a yieldable core and a wear resisting enveloping body, said packing having lubricant ducts or openings extending to the exterior of the packing.

5. A packing comprising a yieldable core and a wear resisting enveloping body and separating the same in the form of similar, but oppositely disposed members, the core being a strip lying wholly between them, said body having metallic pieces embedded therein.

[Claim 6 not printed in the Gazette.]

1,018,203. WINDMILL. SHERMAN MCNABB, Prague, Okla. Filed July 6, 1911. Serial No. 637,128. (Cl. 170—3.)



1. The combination in a wind-mill with a rotatable frame and a shaft supported therein, of a vane disk loosely

mounted on said shaft, revoluble members provided with anti-friction devices with which said vane disk engages, a pair of bevel gears on said shaft, means carried by said revoluble members for alternately engaging each of said gears, a pump rod and connections thereto for reciprocating the same.

2. The combination with a rotatable frame and a shaft supported therein, of a wind wheel, revoluble members adapted to be rotated by contact from said windwheel, a pair of oppositely disposed bevel gears on the shaft, and means carried by said revoluble members for alternately engaging said bevel gears to rotate them in opposite directions.

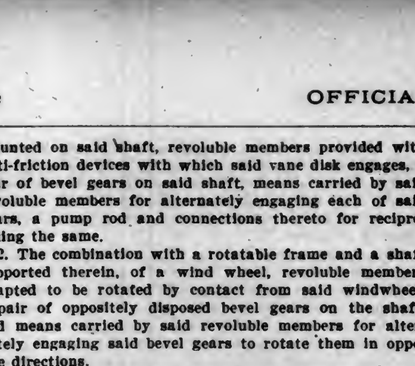
3. The combination with a rotatable frame and a shaft, of a windwheel, a pair of disks each provided with rollers, segmental gears on said disks, a pair of oppositely disposed bevel gears adapted alternately to be rotated in opposite directions by said segments, a pump rod with a rack thereon, and a rack wheel on said shaft.

4. The combination with a rotatable frame and a shaft, of a windwheel provided with contact arms, a pair of disks each provided with rollers about its periphery, a segmental gear on each disk, a pair of oppositely disposed bevel gears for alternate engagement with said segments, a pump rod with a rack thereon and a rack wheel for reciprocating said rod.

5. The combination with a rotatable frame, a shaft, a windwheel, a pump rod and mechanism for transmitting the motion of the windwheel to the pump rod, of means for throwing the mechanism out of the wind, said mechanism comprising diverging arms rising vertically from the frame, parallel arms extending outwardly at substantially right angles to the diverging arms, a vertical pintle mounted upon said parallel arms at right angles thereto, a yoke-shaped frame pivoted thereto, a fan carried thereby, a slidable sleeve yieldingly secured upon the shaft, a stationary headed sleeve, a cushioning means interposed between said slidable sleeve and windwheel, a lever arm on the fan, a push bar on the slidable sleeve, and a link connecting said arm and bar.

[Claim 6 not printed in the Gazette.]

1,018,204. PIANO-BENCH. ELBERT V. MENDENHALL, Los Angeles, Cal., assignor to Mary F. Mendenhall, Los Angeles, Cal. Filed Oct. 10, 1910. Serial No. 586,381. (Cl. 155—39.)



1. In a piano bench, a frame, a top mounted to move vertically thereon, a cross member movable longitudinally of said frame, said frame being provided with a guideway for said cross member, incline means on the top and incline means on said guide-way for engaging the cross member, to raise the top in the longitudinal movement of the cross member, by the joint action of said incline means, and means for moving said cross member longitudinally of the frame.

2. A piano bench comprising a frame, a top mounted to move vertically thereon, cross members movable longitudinally of the frame, means for moving said cross members longitudinally of the frame, incline means engaging said cross members to raise said top, said incline means having a greater lift in one side of the bench than the other, so as to tip the top of the bench.

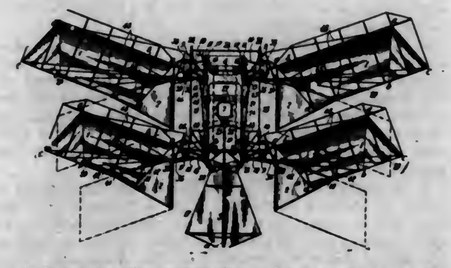
3. A piano bench comprising a frame, a top movably mounted thereon, incline members on said top, cross-members longitudinally slidable on said frame, a lever pivotally mounted on said frame, and links connecting said lever with said cross-members to separate said cross-members longitudinally in the pivotal operation of said lever, said frame being provided with guide-ways at each side for guiding the said cross-members, and means in said guide-ways at one side of the frame for tipping the corresponding ends of the cross-members upward in their outer movement along the frame, thereby tipping the top of the frame.

4. A piano bench, comprising a frame, a top movably mounted thereon, incline members on said top, cross-members longitudinally slidable on said frame, a lever pivotally mounted on said frame, and links connecting said lever with said cross-members to separate said cross-members longitudinally in the pivotal operation of said lever, said frame being provided with guide-ways at each side for guiding the said cross-bars, and means in said guide-ways at one side of the frame for tipping the corresponding ends of the cross-members upward in their outer movement along the frame, thereby tipping the top of the bench, said means comprising blocks pivotally mounted in said ways and movable into position to leave the ways clear of obstruction beneath said blocks, and also movable into position to obstruct said ways, said blocks being formed with inclined faces on which the said cross-members ride in their outward movement and means for controlling the position of said blocks.

5. A piano bench comprising a frame, a top movably mounted thereon, incline members on said top, cross-members longitudinally slidable on said frame, a lever pivotally mounted on said frame, and links connecting said lever with said cross-members to separate said cross-members longitudinally in the pivotal operation of said lever, said frame being provided with guide-ways at each side for guiding the said cross-bars, and means in said guide-ways at one side of the frame for tipping the corresponding ends of the cross-members upward in their outer movement along the frame, thereby tipping the top of the bench, said means comprising blocks pivotally mounted in said ways and movable into position to leave the ways clear of obstruction beneath said blocks, and also movable into position to obstruct said ways, said blocks being formed with inclined faces on which the said cross-members ride in their outward movement and means for controlling the position of said blocks comprising rods engaging said blocks and handle connected to operate the rods for both blocks simultaneously.

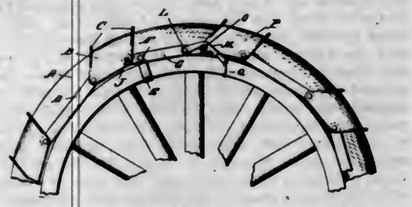
[Claims 6 to 9 not printed in the Gazette.]

1,018,205. FLYING-MACHINE. FELIX MICHAU, Paris, France. Filed Dec. 6, 1909. Serial No. 531,567. (Cl. 244—20.)



A flying machine comprising a heavy body an engine carried thereby, a seat also carried by said body, and beating wings pivoted to said body, each of said wings comprising a rod, means for causing said rod to describe a conical surface of revolution without rotating about itself, a surface secured to said rod, a second surface connected to the joint of the wing so as to follow the latter in one direction only, said first mentioned surface being inclined at its outer end and unfolded relatively to said second surface, means for rotating the joint of the wings in a vertical plane, means for beating said wings to support the machine during flight, means for steering the machine, together with folding means enabling the machine to start on the ground.

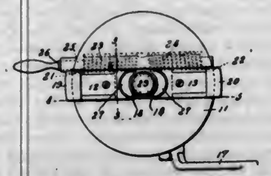
1,018,206. TIRE CHAIN AND GUARD. OLE J. MIKKELSON, Ferryville, Wis. Filed Nov. 6, 1911. Serial No. 658,770. (Cl. 152—14.)



1. In combination with a tire, the guard or chain consisting of the series of gripping members, links flexibly connecting the members, and means for connecting the meeting ends of the chain and securing the chain upon the tire, said means consisting of a pair of links having hooks at one end to engage one set of end members, a loop connected to said links to engage the tire rim, and a pair of levers fulcrumed to the other end of said links and having open recesses to engage pins on the other member of the chain at the meeting end.

2. In combination with the end members of a chain or guard provided each with lateral pins, a pair of links having hooks to engage the pins on one member, a pair of levers fulcrumed to the other ends of the links and having recesses to engage the pins on the other member, and means pivotally carried upon the rear ends of the hook carrying links and passing around the rim of the wheel for securing the links and levers in position for use.

1,018,207. APPARATUS FOR ATTACHING COUPLING-NUTS TO PIPE-FITTINGS. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,473. (Cl. 29—84.)



1. In an apparatus of the character described, a support for holding a coupling nut initially formed with an outwardly flaring socket end, a plurality of movable dies having concaved ends adapted to closely embrace on all sides the flared socket end of said nut, and means for forcing said flared socket end of the nut in an axial direction through said dies to change its form.

2. In an apparatus of the character described, a longitudinally movable traveler having means for attaching thereto a coupling nut initially formed with an outwardly flaring socket end having an inturned flange, a plurality of movable dies with concaved ends the walls of which ends flare correspondingly with the flared socket end of the nut, said dies adapted to closely embrace and forcibly bear against said flared socket end on all sides, means for simultaneously moving said dies, and means for moving said traveler axially of said nut to draw the flared end thereof through said dies to change its form.

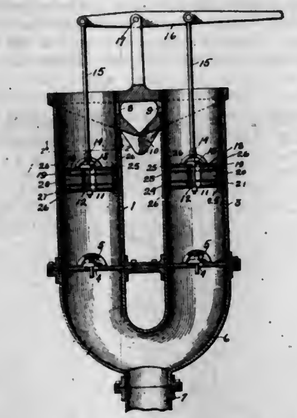
3. In an apparatus of the character described, a longitudinally movable traveler provided with means for attaching thereto a coupling nut initially formed with an outwardly flaring socket end and having an inturned flange, said traveler also having a supporting surface for one end of a fitting, a plurality of movable slides each carrying a die with a concaved end, the walls of which ends flare correspondingly with the flared socket end of the nut, said dies adapted to closely embrace and forcibly bear against said flared socket end on all sides, a worm operatively engaging each slide and means for rotating said worms in unison for simultaneously moving said dies radially toward and away from said nut to engage with or release the same, and means for moving said traveler axially of said nut to draw the flared end of the nut through said dies to change its form.

4. In apparatus of the character described, means for supporting a coupling nut formed with an initially flared and flanged socket wall, and also a flanged fitting adapted to enter said socket, dies adapted to closely embrace on all sides said flared socket wall, and means for actuating said supporting means and nut for drawing the flared socket through the dies to straighten its wall and cause the flange thereon to overlie the flange on the fitting.

5. In an apparatus of the character described, a longitudinally movable traveler provided with means for holding a coupling nut, a plurality of dies adapted to closely embrace the initially flared socketed end of the coupling nut, and means for applying longitudinal pressure to said coupling nut to draw it through said dies for the purpose of closing said socketed end over a flanged fitting placed therein.

[Claims 6 and 7 not printed in the Gazette.]

1,018,208. PUMP-PISTON. ADONIS M. PRINCE, Wilmington, N. C., and LOUIA COSCIA, Memphis, Tenn. Filed May 13, 1911. Serial No. 626,981. (Cl. 103—63.)



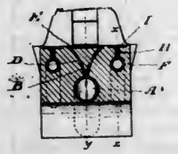
1. A piston adapted to reciprocate in a cylinder, rollers distributed about the periphery of the upper and lower faces of said piston and adapted to bear against the interior walls of said cylinder.

2. A piston adapted to reciprocate in a cylinder, rollers distributed about the periphery of the upper and lower faces of said piston and adapted to bear against the interior walls of said cylinder, a disk of flexible material, of greater diameter than that of the cylinder, located between the upper and lower faces of said piston.

3. A piston adapted to reciprocate in a cylinder, comprising a series of disks of less diameter than that of the interior of the cylinder, radial arms carrying rollers distributed about the periphery of the upper and lower disks of said piston, and adapted to bear against the interior walls of the cylinder.

4. A piston adapted to reciprocate in a cylinder, comprising a series of disks of less diameter than that of the interior of the cylinder, radial arms carrying rollers distributed about the periphery of the upper and lower disks of said piston and adapted to bear against the interior walls of the cylinder, and disks of flexible material, of greater diameter than that of the interior of the cylinder held between the disks of less diameter than that of the interior of the cylinder.

1,018,209. BRAKE-SHOE. ANDREW H. REID, Toronto, Ontario, Canada. Filed Mar. 14, 1911. Serial No. 614,374. (Cl. 188—27.)



1. A brake shoe having a tubular metal insert adjacent its face and an anchor connected with the tubular insert extending toward the back of the shoe.

2. A brake shoe having a tubular metal insert adjacent its face and anchor plates connected with the tubular insert, extending toward the back of the shoe and spreading from the insert toward the sides.

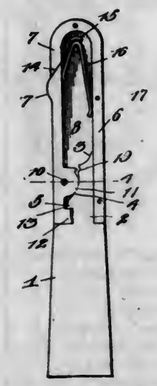
3. A brake shoe having a tubular metal insert adjacent its face and an anchor plate connected with the tubular insert extending to the back of the shoe and having a back plate formed thereon lying at the back of the shoe.

4. A brake shoe having a tubular reinforcement formed of sheet metal bent to form a tubular portion and an anchor plate extending toward the back of the shoe.

5. A brake shoe having a tubular reinforcement formed of sheet metal bent to form a tubular portion and two anchor plates extending toward the back of the shoe.

[Claims 6 and 7 not printed in the Gazette.]

1,018,210. TOOL. BERTRAM F. SEGEL, deceased, Bethlehem, Pa., by Herman E. G. Segel, administrator, South Bethlehem, and OWEN F. MARSH, Bethlehem, Pa. Filed May 25, 1911. Serial No. 629,520. (Cl. 145—104.)



1. In a device of the character described, the combination with a hollow handle member, a lever pivotally carried thereby and forming one of the side edges thereof, said lever being provided with a notch and a projection at one end thereof, an additional projection carried on said lever and means to dispose said lever normally in its effective position; of a tool having a shank thereon provided with a notch and projection adapted to be inserted in the handle and, respectively, receive the projection and notch of said lever, said shank being also provided with an additional notch adapted to receive the additional projection of the lever when moved to its ineffective position to force said shank from the handle.

2. In a device of the class described, the combination with a handle member, a lever pivotally carried therein and forming one of the side edges thereof, said lever being provided at one of its ends with a notch and projection, spring means within said handle member engaging the opposite end of said lever to force the same outwardly, means to limit the movement of said lever, said lever being provided with a convexed portion immediately adjacent the notch therein, and a lug formed at one end of said convexed portion; of a tool having a shank thereon adapted for insertion in the open end of said handle member, said shank being provided with a projection and notch to, respectively, engage the notch and projection of said lever, said shank being also provided with an additional notch adapted to receive the lug on the convexed portion of said lever when said lever is disengaged with the shank, whereby said shank will be forced from the handle member when the free end of the lever is pressed inwardly.

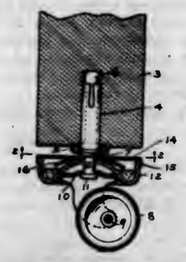
3. A device of the class described, comprising a handle member, a locking lever pivotally mounted therein and forming one of the side edges thereof, and spring means to retain said lever in its normal effective position; of a tool having a shank thereon adapted to be inserted in the open end of said handle member, interlocking means between said lever and shank, said lever being provided with an enlarged convexed portion adjacent its pivotal point, a lug formed at one end of said convexed portion, said shank being provided with a concaved portion to receive the convexed portion of said lever and also provided with a notch adapted to receive the lug of said lever when the latter is moved to its ineffective position, whereby said shank will be forced from the handle member when the free end of the lever is passed inwardly.

4. In a device of the class described, the combination with a hollow handle member having a channel-way formed in one side edge thereof, the end wall of said channel-way being beveled, a lever pivoted intermediate of its ends to the walls of said handle member and forming a closure for the channel-way, the one end of said lever being beveled coincident to the beveling of the end wall of said channel-way and adapted to contact with the latter to limit the movement of said lever in one direction, said lever being also provided with a notch and projection at the opposite end thereof and having a second projection immediately adjacent its pivotal point, and spring means within the handle member having engagement with said lever to force the beveled end thereof in normal contact with the beveled end wall of the channel-way of said handle member; of a tool having a shank thereon adapted for insertion within the open end of said handle member, said shank being provided with a projection and notch to, respectively, engage the notch and projection at the one end of said lever, said shank being also provided with a second notch adapted to receive the second projection of said lever when the one end of the latter is forced inwardly against the tension of said spring, whereby said shank will be forced from the handle member.

5. In a device of the class described, the combination with a hollow handle member provided with a channel-way in one side edge thereof, a lever pivoted intermediate of its ends and the walls of said handle member and forming a closure for said channel-way, the one end of said lever being adapted to engage the end wall of said channel-way to limit the movement of said lever in one direction, said lever being provided at its opposite

end with a notch and projection and also having an additional projection thereon immediately adjacent its pivotal point, and spring means to normally force the one end of said lever against the wall of the channel-way of the handle member; of a tool having a shank thereon adapted to be inserted in the open end of said handle member, said shank being provided with a notch and projection adapted to engage, respectively, the projection and notch of said lever, said shank being also provided with an additional notch adapted to receive the additional projection of the lever when the free end thereof is forced inwardly to disengage the notches and projections of said shank and lever, whereby said shank may be forced from the handle member.

1,018,211. GUARDED CASTER. WILFRED SELLERS and HENRY C. BECK, Elwood, Ind. Filed Aug. 10, 1911. Serial No. 643,464. (Cl. 45—15.)



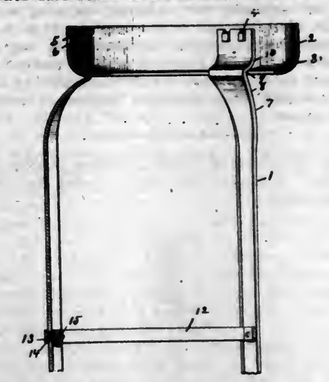
1. A vessel adapted to hold a liquid, having a bottom with a central hole, said bottom being rounded upwardly approximately as high as the rim of the receptacle around said hole, a caster having a stem which is passed through said hole in the bottom of the vessel, said stem having a shoulder above the bottom of the vessel, and a frame entering the concavity of said bottom and secured to the stem, said bottom being rigidly secured between said frame and shoulder on the stem.

2. A vessel adapted to hold a liquid, having a bottom with a central hole, said bottom being rounded upwardly approximately as high as the rim of the receptacle around said hole, a caster having a stem which is passed through said hole in the bottom of the vessel, said stem having a shoulder above the bottom of the vessel, a shield between the bottom of the vessel and the shoulder, and a frame entering the concavity of said bottom and secured to the stem by expanding the lower end of the stem to rigidly impinge the bottom of the vessel and the shield against the shoulder on the stem.

3. A vessel adapted to hold a liquid having a bottom with a central hole, said bottom being rounded upwardly approximately as high as the rim of the receptacle around said hole, a caster having a stem which is passed through said hole in the bottom of the vessel said stem having a shoulder and a frame entering the concavity of said bottom, an annular cover loosely seated on the rim of the vessel, a sleeve to enter the furniture leg and in which the caster-stem is held and a concave shield secured to the stem of the caster and extending down into the vessel below the cover and held against the concave bottom of the vessel.

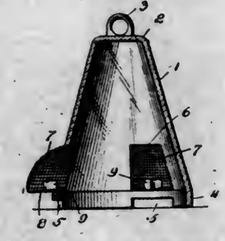
1,018,212. WATER-COOLER STAND. WILLIAM I. SHERWOOD, Montclair, N. J., assignor to Cordley & Hayes, a Corporation of New York. Filed Mar. 21, 1911. Serial No. 616,016. (Cl. 248—41.)

A water cooler stand comprising a vertically arranged ring adapted to support a water cooler said ring being formed with a plurality of inwardly extending fastening lugs and an inwardly extending annular flange at its lower edge; detachable legs provided with recesses in their upper edge to receive said fastening lugs, and a vertically and outwardly arranged portion adapted to contact with the inner surface of said flange and said ring when said stand is assembled, and a brace member



beneath said ring connecting said legs with one another, substantially as described.

1,018,213. FLY-TRAP. STEVE SIMON, Youngstown, Ohio. Filed Oct. 11, 1911. Serial No. 654,037. (Cl. 43—22.)



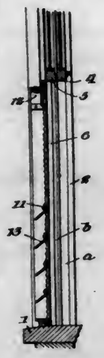
A fly trap comprising a hollow frusto-conical shaped body having openings adjacent to the lower terminus thereof and closed at its top, a vertically disposed cylindrical base integral with the lower terminus of said body and cut away at its lower edge to provide a series of inlet openings, cages projecting laterally from the openings of said body, and means connected with the closed top of said body to facilitate the suspending of the latter.

1,018,214. SASH-CORD FASTENER. LEONARD W. SMART, Chicago, Ill. Filed Jan. 9, 1911. Serial No. 601,615. (Cl. 16—16.)

The combination with a sash and its weight cord, the former having a recess in its upper edge at one side, of a

plate secured within said recess and having intermediate side pieces bent outwardly and curved toward one another to form an upwardly and inwardly tapering socket, a thimble in which the end of the weight cord is fastened, said thimble being adapted for detachable engagement within said socket, and provided with an upstanding lip, and a catch on the window frame engageable by said lip to hold the sash cord when the thimble is disengaged from the socket.

1,018,215. WINDOW-SCREEN. GEORGE W. STEIN, Chicago, Ill. Filed Jan. 26, 1911. Serial No. 604,789. (Cl. 156—14.)



1. In a window screen construction, a rectangular frame, a strip of wire netting carried by said frame, a series of cross bars, each of said cross bars having a portion parallel with and arranged to abut the netting and being provided with an outwardly and downwardly inclined portion, and means for securing the parallel portion of the bars to the netting.

2. In a window screen construction, a rectangular frame, wire netting carried by said frame, a series of parallel horizontal cross bars, each of said cross bars having a portion arranged to abut the netting and being provided with an outwardly and downwardly inclined integral portion, said parallel horizontal bars being permanently secured to said netting and forming stiffening members for the latter.

1,018,216. LOCK. ELMER B. STONE, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed May 29, 1911. Serial No. 630,091. (Cl. 70—108.)

1. A lock case having a recess, lock mechanism located within the case and including a member located and movable within said recess in the normal operation of said lock mechanism, the surface of said recess being formed to provide a number of small bearing surfaces for the movable member against the wall of said recess to prevent the member from becoming inoperative by reason of corrosion.

2. A lock case having a recess, lock mechanism located within the case and including a member located and movable in said recess in the normal operation of said lock mechanism, the wall of said recess being formed to provide a number of bearing ridges extending parallel with each other to form a bearing for said movable member to prevent said member from becoming inoperative by reason of corrosion.

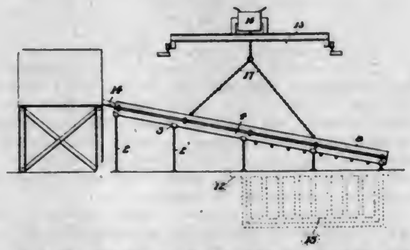
3. A lock case having a recess for a movable member, lock mechanism located within the case and including a member located and movable in said recess in the normal operation of said lock mechanism, the surface of said recess being formed to provide a bearing surface extending in a spiral direction around the wall of the recess forming a bearing for said movable member to prevent said member from becoming inoperative by reason of corrosion.

4. A lock including a containing part having a recess for a cylinder, the wall of said recess being formed to provide narrow bearing surfaces, and a cylinder constituting a part of the lock mechanism and located and movable in said recess in the normal operation of said lock mechanism and having a bearing against said surface to prevent said cylinder from becoming inoperative by reason of corrosion.

5. A lock including a containing part having a recess for a shackle, said recess being formed to provide narrow bearings for a shackle therein, and a shackle constituting a part of the lock mechanism and located and movable in said recess in the normal operation of said lock mechanism, said bearings preventing said shackle from becoming inoperative by reason of corrosion.

[Claims 6 and 7 not printed in the Gazette.]

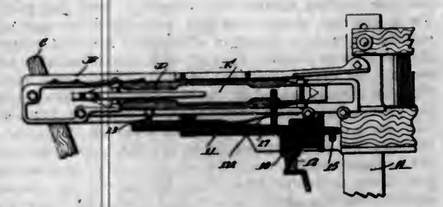
1,018,217. CONVEYER FOR MOLTEN METAL. PAUL SZATHMÁRY, Clarence, N. Y. Filed Oct. 30, 1911. Serial No. 657,403. (Cl. 22—79.)



A portable conveyer for molten metal comprising a pair of oppositely disposed semi-cylindrical sections having longitudinal extending flanges, the flanges of one section abutting against the flanges of the other section thereby providing an elongated hollow cylindrical member, means for shiftably connecting the flanges of one section to the flanges of the other section, said member, when in an operative position normally depending at an inclination, said lower member having disposed throughout the lower half portion thereof a series of openings, a cylindrical nonfusible lining engaging the inner face of each of said sections and having the lower portion thereof provided with intergal depending spouts of the same material, said spouts communicating with the interior of the lining and extending through and depending from the openings in the lower of said sections, and means whereby a conveying device can be coupled to the upper of said sections for transporting said member.

1,018,218. FILLING-DETECTOR FOR LOOMS. EDWARD D. THAYER, Worcester, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed July 12, 1906. Serial No. 325,803. (Cl. 139—85.)

1. In a device of the character described, the combination of the lay carrying a shuttle box, a filling detecting mechanism arranged in connection with the shuttle box, means separate from the filling detecting mechanism for holding the filling detecting mechanism out of operation until a shuttle comes into the box, said means being located in position to be engaged by the shuttle when it comes into the box, and a shutte adapted to render the filing detecting mechanism operative by engaging said means.



2. In a device of the character described, the combination of a shuttle box, a filling detecting mechanism arranged in connection therewith, a lock for holding the filling detecting mechanism inoperative, a shuttle, and means whereby the lock will be released when a shuttle comes into the shuttle box.

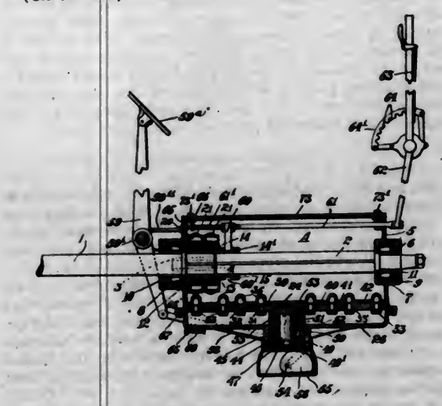
3. In a device of the character described, the combination of the lay carrying the shuttle box, a binder for holding the shuttle in the box, a filling detecting mechanism arranged in connection with the box, and a lock actuated by the binder for holding the detecting mechanism inoperative until a shuttle comes into the box.

4. In a filling detecting mechanism, the combination of a lay, a shuttle box, a lever pivoted thereto, a stationary cam which said lever engages, a feeler mechanism arranged in connection with said lever to engage the filling on the bobbin in the shuttle, operating connections arranged in the path of said lever, and means for holding the lever out of operation until a shuttle comes into the box.

5. In a filling detecting mechanism, the combination of a lay, a shuttle box, a shuttle having a feeler arranged therein to engage the filling on the bobbin, a pivoted lever having a projection to engage said feeler, a stationary cam whereby said lever will be vibrated as the lay beats, connections arranged in the path of said lever to be operated upon the exhaustion of the filling, and means for locking the lever in inoperative position until a shuttle comes into the box.

[Claim 6 not printed in the Gazette.]

1,018,219. VARIABLE-SPEED POWER-TRANSMISSION MECHANISM. WILLARD IRVING TWOMBLY, New York, N. Y., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed Mar. 12, 1910. Serial No. 548,776. (Cl. 74—41.)



1. In a variable speed power transmission mechanism, the combination of a drive shaft; a roller pinion fixed thereto, said pinion also constituting one member of a clutch; a driven shaft coaxial with the drive shaft; a roller pinion mounted on the driven shaft to rotate therewith and having sliding movement thereon, said pinion also constituting one member of a clutch; an intermediate gear the axis of which is transverse to the axes of the drive and driven shafts, comprising a wheel having a plurality of concentric circles of pins; means operative to throw and lock the said wheel into mesh with the pinions on the drive and driven shafts, and to permit it to drop out of mesh with the pinions; means to lock said wheel out of mesh with the pinions; and means to throw and lock the pinion on the driven shaft into and out of mesh with either circles of pins on the intermediate wheel to transmit different forward and reverse velocities to the driven shaft, or to throw the clutch portion of said pinion into engagement with the clutch portion of the drive-shaft pinion for direct drive, and simultaneously with the throwing of the clutch portions of the pinions into engagement operating the means to lock the intermediate wheel out of mesh with the pinions.

2. In a variable speed power transmission mechanism, the combination of a drive shaft; a roller pinion fixed thereto; a driven shaft, coaxial with the drive shaft and having a bearing in the end of said shaft; a roller pinion mounted on the driven shaft to rotate therewith and have sliding movement thereon; an intermediate gear comprising a wheel having a plurality of concentric circles of pins; means operative to throw and lock said intermediate gear into mesh with the drive and driven shaft pinions, and to permit it to drop out of mesh therewith; and a lever connected to the pinion on the driven shaft to throw it into and out of mesh with either one of the circles of pins on the intermediate gear; and means to lock the intermediate wheel out of mesh with the pinions.

3. In a variable speed power transmission mechanism, a drive shaft, a roller pinion connected to said shaft, a driven shaft, a roller pinion connected to said driven shaft to have sliding movement thereon, an intermediate gear comprising a disk having a plurality of concentric circles of fixed pins on its plane surface, rotatable caps on said pins, having flanges at their lower ends, rings having a series of holes to engage over the caps and secured to the intermediate wheel to retain the caps in place; and means to throw the intermediate gear into mesh with the roller pinions.

4. In a variable speed power transmission mechanism, a drive shaft, a roller pinion connected to said shaft, a driven shaft, a roller pinion connected to the driven shaft to have sliding movement thereon, each of said pinions constructed to form one member of a clutch, an intermediate gear comprising a disk having a plurality of concentric circles of pins, means to throw and lock the intermediate gear into mesh with the pinions, means to throw and lock the driven shaft pinion into and out of mesh with either one of the circles of pins on the intermediate gear, or throw and lock the clutch portions of the pinions into mesh to drive the driven shaft directly from the drive shaft.

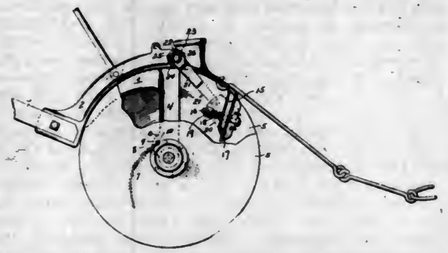
5. In a power transmission mechanism, the combination of a drive shaft, a roller pinion connected to said shaft, a driven shaft, a roller pinion mounted on the driven shaft to rotate therewith and have sliding movement thereon, an intermediate gear comprising a wheel or disk having a plurality of concentric circles of pins, and caps mounted for rotary movement upon the pins; the rollers of the pinions being convexed or barrel shaped, and the pin caps also being convexed so that the pinion rollers and caps will always have a rolling engagement to prevent chattering therebetween.

[Claims 6 to 21 not printed in the Gazette.]

1,018,220. GRAIN-DRILL. WILLARD A. VAN BRUNT, Horicon, Wis. Filed Aug. 10, 1910. Serial No. 576,501. (Cl. 111—18.)

1. In a grain drill, the combination with twin disks, of a laterally movable and yielding scraper located between said disks at a point forward of the axle, said scraper be-

ing constructed and arranged to project forwardly of and downwardly from the axle, substantially as set forth.



2. In a grain drill, the combination with twin disks, of a laterally movable and yielding curved scraper located between the disks at a point forward of the axle and constructed and arranged to project forwardly of and downwardly from the axle, substantially as set forth.

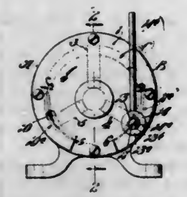
3. In a grain drill, the combination with twin disks, and a disk frame having a standard depending between the disks and provided with a bearing for the latter, of a curved scraper attached at its upper end to said standard and constructed and arranged to project forward of the axle and downwardly therefrom between the disks, substantially as set forth.

4. The combination with a disk frame and twin disks mounted thereon, of a scraper loosely connected at its upper end with the disk frame and arranged to project forward of and downwardly from the axle on which the disks are mounted, substantially as set forth.

5. The combination with a disk frame and twin disks mounted thereon, of a laterally movable and yielding scraper loosely attached at its upper end to the disk frame, and constructed and arranged to project forward of and downwardly from the axle on which the disks are mounted, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,018,221. COMPRESSOR. JAMES B. VERNON and GEORGE DE CAMP, St. Louis, Mo., assignors to Lee S. Smith & Son Company, Pittsburgh, Pa., a Copartnership. Filed Aug. 17, 1910. Serial No. 577,694. (Cl. 230—30.)



1. In a rotary pump, a stationary cylinder, a rotatable piston hub arranged eccentrically in said cylinder and at one side bearing against the cylindrical wall and providing a crescent shaped chamber between itself and said cylindrical wall, a plurality of radially disposed reciprocating pistons carried by said hub and constantly contacting the cylindrical wall of the cylinder, said piston hub and pistons extending the full length of the cylinder, the cylinder head being provided with induction and eduction ports located respectively adjacent to the ends of the crescent shaped chamber and of a larger diameter than the crescent shaped chamber at those points, and grooves in the inner face of said head adjacent to said ports and extending in opposite directions therefrom, one arm of each groove extending toward the end of the crescent shaped chamber and the other arm extending in the opposite direction.

2. In a rotary pump, a stationary cylinder, a rotatable piston hub arranged eccentrically in said cylinder and at one side bearing against the cylindrical wall and providing a crescent shaped chamber between itself and said cylindrical wall, a plurality of radially disposed reciprocating pistons carried by said hub and constantly contacting the cylindrical wall of the cylinder, said piston hub and pistons extending the full length of the cylinder, the cylinder head being provided with induction and eduction ports located respectively adjacent to the ends of the crescent shaped chamber and of a larger diameter than the crescent shaped chamber at those points, the induction port being located farther from its end of the crescent shaped chamber than the eduction port, the inner face of the cylinder head being provided with arc shaped grooves adjacent to said induction and eduction ports and extending in opposite directions therefrom, that portion of the groove at the induction port extending toward the end of the crescent shaped chamber being longer than the corresponding portion of the groove in the eduction port.

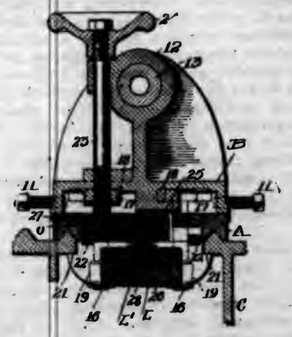
3. In a rotary pump, a stationary cylinder, a rotatable piston hub arranged eccentrically in said cylinder and at one side bearing against the cylindrical wall and providing a crescent shaped chamber between itself and said cylindrical wall, a plurality of radially disposed reciprocating pistons carried by said hub and constantly contacting the cylindrical wall of the cylinder, said piston hub and pistons extending the full length of the cylinder, the cylinder head being provided with induction and eduction ports located respectively adjacent to the ends of the crescent shaped chamber and of a larger diameter than the crescent shaped chamber at those points, and grooves in the inner face of said head adjacent to said ports and extending in opposite directions therefrom, one arm of each groove extending toward the end of the crescent shaped chamber and the other arm extending in the opposite direction, said grooves where they join the ports being of the full width of said ports and tapering toward both ends.

4. In a rotary pump, a stationary cylinder, a rotatable piston hub arranged eccentrically in said cylinder and at one side bearing against the cylindrical wall and providing a crescent shaped chamber between itself and said cylindrical wall, a plurality of radially disposed reciprocating pistons carried by said hub and constantly contacting the cylindrical wall of the cylinder, said piston hub and pistons extending the full length of the cylinder, the cylinder head being provided with induction and eduction ports located respectively adjacent to the ends of the crescent shaped chamber and of a larger diameter than the crescent shaped chamber at those points, the induction port being located farther from its end of the crescent shaped chamber than the eduction port, the inner face of the cylinder head being provided with arc shaped grooves adjacent to said induction and eduction ports and extending in opposite directions therefrom, that portion of the groove in the induction port extending toward the end of the crescent shaped chamber being longer than the corresponding portion of the groove in the eduction port, said grooves where they join the ports being of the full width of said ports and tapering toward both ends.

1,018,222. TAIL-STOCK-CLAMPING MECHANISM. ALONZO W. WHITCOMB, Worcester, Mass., assignor to Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 27, 1909. Serial No. 474,460. (Cl. 82—31.)

1. The combination of a tail-stock adapted to rest on a lathe bed, a lever having means for receiving pressure at one end and ears or clamping faces at the other end engaging under the lathe bed, a fulcrum member near the latter end and supported by the tail-stock, and means carried by the tail-stock for exerting pressure on said fulcrum member for operating the same.

2. The combination of a tail-stock, and means for clamping the same to the lathe bed, comprising two levers having four ears or clamping faces arranged to engage the ways of the lathe substantially under each corner of the front and rear faces of the tail stock.



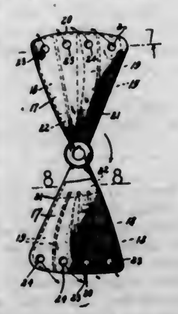
3. The combination of a tail-stock, and means for locking the same to the lathe bed, comprising two clamps each of which engages the lathe bed substantially under the two corners of the tail-stock on one end.

4. The combination of a tail-stock, and means for locking the same to the lathe bed comprising a plurality of separate clamps to engage the lathe bed substantially under the four corners of the tail-stock, and means for causing said clamps to operate simultaneously.

5. The combination of a tail-stock, and means for clamping the same to the lathe bed comprising a lever fulcrumed to the tail-stock having two separated ears or clamping faces to engage under both of the lathe bed ways near one end of the tail-stock, and means for operating said lever.

[Claims 6 to 14 not printed in the Gazette.]

1,018,223. PROPELLING MEANS FOR AERIAL VESSELS. CHARLES G. WIELAND, New York, N. Y. Filed Sept. 14, 1911. Serial No. 649,296. (Cl. 115—46.)



1. A propeller comprising a hub, and a plurality of blades projecting therefrom provided with a plurality of straight and a plurality of curved conduits running from near said hub toward the outer edges of said blades substantially parallel with the faces of said blades.

2. A propeller comprising a hub, and a plurality of blades projecting therefrom provided with a plurality of straight and a plurality of curved conduits running from near said hub toward the outer edges of said blades substantially parallel with the faces of said blades and gradually decreasing in cross section toward said outer edges.

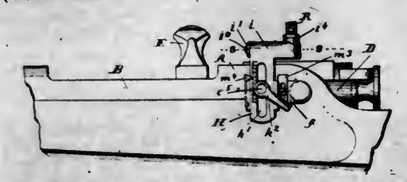
3. A propeller comprising a hub, and a plurality of blades projecting therefrom provided with a plurality of straight and a plurality of curved conduits running from near said hub toward the outer edges of said blades substantially parallel with the faces of said blades, the inlets of said conduits being provided in the front face of said propeller near said hub and the outlets thereof in its rear face near the outer edges of said blades.

4. A propeller comprising a hub, and a plurality of blades projecting therefrom provided with a plurality of straight and a plurality of curved conduits running from near said hub toward the outer edges of said blades substantially parallel with the faces of said blades and gradually decreasing in cross section toward said outer edges, the inlets of said conduits being provided in the front face of said propeller near said hub and the outlets thereof in its rear face near the outer edges of said blades.

5. A propeller comprising a hub, and a plurality of blades projecting therefrom provided with a plurality of straight and a plurality of curved conduits running from near said hub toward the outer edges of said blades substantially parallel with the faces of said blades, the inlets of said conduits being provided in the front face of said propeller near said hub and the outlets thereof in its rear face near the outer edges of said blades, the outlets of the straight conduits being arranged to discharge the air passing through said conduits in a direction substantially parallel to the longitudinal axis of said hub and the outlets of said curved conduits causing the air to pass at an angle to the direction at which it passes from the outlets of said straight conduits.

[Claim 6 not printed in the Gazette.]

1,018,224. SIGHT FOR FIREARMS. JAMES WINDRIDGE, Middlefield, Conn., assignor to The Lyman Gun Sight Corporation, Middlefield, Conn., a Corporation of Connecticut. Filed Oct. 16, 1908. Serial No. 457,980. (Cl. 42—82.)



1. In a sight for firearms a base having a vertical guide way for the sight limb and a bolt head groove parallel with the guideway, for the reception of the sight limb clamping bolt head substantially as specified.

2. In a sight for firearms a base having a vertical guide way for the sight limb and a T groove parallel with and opening into the guide way for the reception of the sight limb bolt head, substantially as specified.

3. In a sight for fire arms, a base having a vertical guide way for the sight limb, and a vertical T groove e^3 milled in the body of the base from the upper side thereof parallel with and opening into the guide way, substantially as specified.

4. In a sight for firearms a base having a vertical guide way for the sight limb and a vertical T groove e^3 milled in the body of the base from the upper side thereof parallel with and opening into the guide way, in combination with a bolt having its head engaged in the T groove, and its shank projecting through the plane of the guide way, and means for fastening the bolt head rigidly in the seat.

5. In a sight for firearms, the combination of a base having a vertical guide way, and a bolt head groove parallel with the guide way, a sight limb fitted to slide in the guide way of the base, and clamping means secured in the bolt head groove for clamping the sight limb to the base.

[Claims 6 to 14 not printed in the Gazette.]

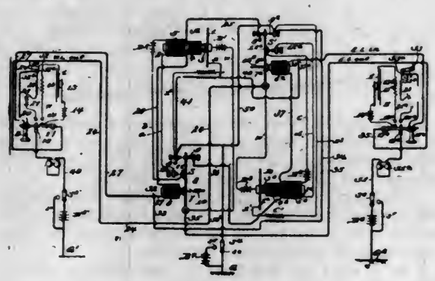
1,018,225. FEED-BAG SUPPORT. JOSEPH WRIGHT and GEORGE F. KRICK, Pittsburgh, Pa.; said Wright assignor to said Krick. Filed Aug. 24, 1910. Serial No. 578,677. (Cl. 119—67.)

In combination, a collapsible feed bag having a substantially rigid bottom, an irregularly-shaped ring at the

mouth of said bag and forming a support therefor, a pair of diverging arms carried by said ring and each having a hinge joint intermediate its ends, said joint being formed to permit folding movements of the free ends of the arms in a direction to approach the under side of the ring, the axis of movement being on or parallel to the plane of the

ring, whereby said ring and arms will form opposing members between which the bag may be collapsed when the device is folded, said arms having means for removable attachment to the harness of the animal, and supporting members carried by the ring and also adapted to be secured to the harness.

1,018,226. TELEPHONE REPEATING SYSTEM AND APPARATUS. CHARLES ADAMS-RANDALL, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me., a Corporation of Maine. Filed Apr. 2, 1910. Serial No. 553,073. (Cl. 179—170.)



1. In a telephone repeating system, a repeater organization having electro-magnetically operated transmitting means in duplicate, electro-magnetic switch means in duplicate for automatically opening and closing the respective line and local circuits of the repeater organization, a current supply of greater energy than the telephone current for operating the switch means during transmission from the terminal stations on either side of the repeater organization and included in series in the main line, and means at the terminal stations for controlling said main line current from the sending terminal station.

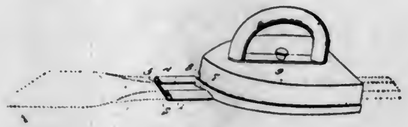
2. In a telephone repeating system, in combination with two separate, independent coöperating main line telephone circuits, of a repeating organization having electromagnetically operative transmitting means in duplicate, electro-magnetic controlling means in duplicate for automatically selecting and making and breaking the main line and local circuit connections of the repeater organization, a main line electric current supply included in series in the main line and of greater energy than the telephone current, and means at the terminal stations of the coöperating independent telephone circuits for controlling said battery current or other current supply of greater energy than the telephone current.

3. In a telephone repeating system, the combination with two separate, distinct and independent telephone circuits, of apparatus for transmitting and receiving telephone messages at the distant terminals of the two independent telephone circuits, a repeater organization intermediate the said two independent telephone circuits having electro-magnetic switch means in duplicate disposed respectively in the two independent telephone circuits for selecting and closing the line and local circuits of the repeater organization, a main line current supply of greater energy that the telephone or speaking currents and independent thereof for operating either of the electro-magnetic switch means as required, and means at the terminal stations for controlling the said main line current simultaneously with the transmission of telephone messages.

4. In a telephone repeating system, in combination with two distinct, independent telephone circuits, of an intermediate telephone repeater organization comprising electro-magnetically operated transmitting means in duplicate, electro-magnetic switching means in duplicate, a main line battery in each of the two independent circuits for operating the electro-magnetic switch means, terminal station apparatus in each of the two independent main line circuits adapted to transmit and receive telephone messages, and means at the terminal stations adapted to close the main line battery when transmitting.

5. A telephone repeating system embracing, in combination, two separate, distinct, independent main line telephone circuits, means intermediate said circuits adapted to receive telephone messages transmitted over either of said circuits and to automatically retransmit said messages into, over, or upon the other circuit, a main line battery in each of said circuits for operating the said means, when transmitting, with means at the terminal stations for transmitting and receiving messages together with means for closing at the transmitting station when messages are being transmitted, the respective main line battery.

1,018,227. BIAS-BAND MAKER. FREDERICK C. ALTHEN, Anamosa, Iowa. Filed May 12, 1911. Serial No. 626,674. (Cl. 223—15.)



A fabric folding device of the character described comprising two sheet metal sections, one of said sections forming a bottom plate having its side edges turned upwardly and inwardly to provide superposed parallel guide channels parallel with the bottom plate, said edges terminating in outturned tongues extending into the channels, and the other section comprising a top plate arranged above and parallel with the bottom plate to form an intervening transverse guideway connecting the channels, the edges of said top plate being bent upwardly and inwardly to form tongues interlocking with the tongues of the bottom plate.

1,018,228. BAG-HOLDER. FRANK APPLEBY and EDWIN A. HUBBART, Watts Flats, N. Y. Filed May 13, 1911. Serial No. 626,906. (Cl. 83—26.)

A bag holder comprising a supporting frame having downwardly diverging front and rear legs, a coupling connecting the upper ends of the legs together, a rearwardly arched brace iron engaged with each of the legs intermediate the ends thereof, an adjustable bracket carried by the frame, means for clamping said bracket to the frame, a hopper fixed to the bracket and having

guide links at its mouth edge embracing the front legs of the frame, and hooks fixed to the hopper at intervals

thereon near its lower edge for the hanging of a bag upon the hopper to sustain the said bag in open position.

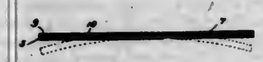
1,018,229. HOLDER FOR BILLIARD-CHALK AND SUCH LIKE. JOSEPH BAKER, Selly Oak, England. Filed Apr. 20, 1911. Serial No. 622,404. (Cl. 46—8.)

1. A billiard chalk or like holder combining a socket to contain the chalk block, means provided near the front end of the socket to resist the movement of the chalk in one direction, devices for opening and closing the back end of the socket, and means carried by said devices to force a feed of the chalk block, substantially as described.

2. A billiard chalk or like holder combining a socket to contain the chalk block, means provided near the front end of the socket to resist the movement of the chalk in one direction, means for opening and closing the back end of the socket, a screw device carried by said means to force a feed of the chalk block, and a locking device for the means and the screw device, substantially as described.

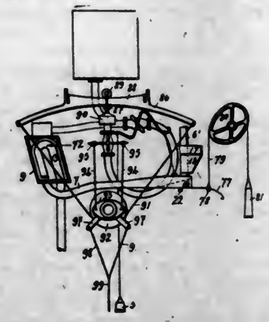
3. A billiard chalk or like holder combining a socket to contain the chalk block and provided at its front end with inward projections or teeth, a screw disk adapted to close the back end of the socket, a rotatable screw pin centrally carried by the disk to operate against the back end of the chalk block to feed it, and a lock nut for locking the screw pin after feed, substantially as described.

1,018,230. ANNOUNCEMENT-SLIDE FOR STEREOPTICONS. CHARLES E. BATTERSHALL and FRANK L. OLESON, Chicago, Ill. Filed Sept. 16, 1911. Serial No. 649,628. (Cl. 40—158.)



As an article of manufacture, a slide for stereopticons and the like consisting of a frame including two superposed flexible pieces each having an opening and a flexible binder and the outer edges of said pieces, and a transparent flexible sheet movably mounted between the frame pieces and extended across the openings therein, said pieces acting to normally hold the sheet flat, but to allow of its movement independently of the frame.

1,018,231. DEVICE FOR THE DISTRIBUTION OF WATER IN WATER-CLOSETS AND THE LIKE. FORTUNATO BERARDI, Naples, Italy. Filed Nov. 27, 1911. Serial No. 662,693. (Cl. 4—5.)



1. An apparatus of the character described, including a distribution tank, a siphon therein, a source of supply therefor provided with a controlling key, a water receiver having a movable connection and communicating with said tank, and operatively connected to said key and provided with an aerator, and means connected to said key for actuating the latter in opposition to said receiver.

2. An apparatus of the character described, including a distribution tank, a siphon therein, a source of supply for said tank provided with a controlling key, a counterpoised receiver operatively connected to said key and communicating with said tank, a valve interposed between the source of supply and said key and gravity controlled means operatively connected to said valve to control the latter.

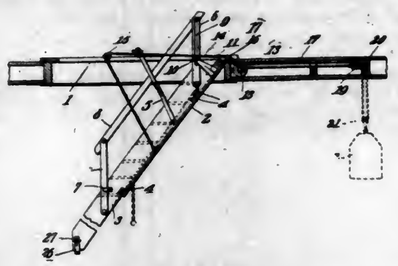
3. An apparatus of the character described, including a distribution tank, a siphon therein, a source of supply for said tank provided with a controlling key, a counterpoised receiver operatively connected to said key and communicating with said tank, a valve interposed between the source of supply and said key, gravity controlled means operatively connected to said valve to control the latter, and means for holding said last named means inoperative.

4. An apparatus of the character described including a distribution tank, a siphon therein, a source of supply for said tank provided with a controlling key, a counterpoised receiver, operatively connected to said key and communicating with said tank, a valve interposed between the source of supply and said key gravity controlled means operatively connected to said valve to control the latter and a rolling connection for said valve, a support therefor and a relatively rigid connection between said valve connection and said support.

5. An apparatus of the character described, including a distribution tank, a siphon therein, a source of supply for said tank provided with a controlling key, a counterpoised receiver operatively connected to said key and communicating with said tank, a valve interposed between the source of supply and said key, gravity controlled means operatively connected to said valve to control the latter, a lever controlling said valve, a guide, a rolling support, movable on said guide and operatively connected to said lever, and means for moving said valve according to the position of the rolling support relative to the guide.

[Claims 6 and 7 not printed in the Gazette.]

1,018,232. MOVABLE STAIRWAY. FRANK E. BESSLER, Akron, Ohio. Filed Nov. 29, 1910. Serial No. 594,716. (Cl. 228—27.)

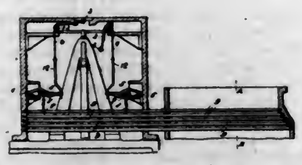


1. In combination with a hinged door, a set of stair steps slidably mounted thereon, a shaft journaled for rotation adjacent the hinged end of the door, a cable arranged to wind upon said shaft and connected with the door, a second cable arranged at one end to wind upon said shaft in the opposite direction to the first cable, its other end being connected with said steps and its center being looped, a weight, and a pulley block attached to the weight and hung in said loops.

2. In combination with a hinged door, a set of stair steps slidably mounted thereon, a shaft journaled for rotation adjacent the hinged end of the door, a cable arranged to wind upon the shaft and connected with the door, a second cable also arranged to wind upon the shaft and connected with the steps, and a weight pendantly supported by the last said mentioned cable.

3. In combination with a hinged door, a set of stair steps arranged to slide upon the same, a shaft journaled for rotation adjacent the hinged end of the door, a pair of cables arranged to wind upon the said shaft and connected with the door, a second cable arranged to wind upon the said shaft in the opposite direction to which said first-mentioned cables wind thereon and between their points of winding, this cable being led thence away from said door and having a pendant loop and its other leg being returned to and guided by said shaft and then connected with the steps, and a weight movably hung in said loop and sufficiently heavy to counterbalance the weight of both the door and the steps.

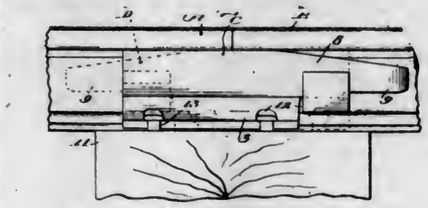
1,018,233. TYPOGRAPHIC STAMPING APPARATUS. MAX ERICH BLUME, Leipzig-Connewitz, Germany. Filed July 27, 1911. Serial No. 640,907. (Cl. 198—1.)



1. Typographic stamping apparatus comprising a plurality of type stamp lever supports, a plurality of sets of type stamp levers, the levers in each set being pivoted to one of said supports so that they can strike at a common center, means for alternatively moving said supports to a predetermined position for action of the levers, means for imparting rectilinear guidance to the type stamp ends of said levers at said common center, when in said position for action, actuating services common to individual units of the several sets of levers, telescopic rods connecting said levers to said actuating devices so that the latter are only operative in regard to the levers at said position for action, and means for imparting pressure to the type stamp ends of the levers when under the influence of said rectilinear guidance.

2. Typographic stamping apparatus comprising a plurality of groups of type stamp lever supports, a plurality of sets of type stamp levers, the levers in each set being pivoted to one of said supports so that they can strike at a common center, means for alternatively moving the supports belonging to each group to a predetermined position for action of the levers belonging to that group, means for collectively actuating said support moving means so that coördinated lever supports belonging to the several groups are collectively moved to and from their positions for action, means for imparting rectilinear guidance to the type stamp ends of the levers at the common centers in the positions for action, and means for imparting pressure to the type stamp ends of the levers when under the influence of said rectilinear guidance.

1,018,234. RAIL-JOINT. JAMES T. BOGARD, Timpson, Tex. Filed Dec. 7, 1911. Serial No. 664,336. (Cl. 239—9.)



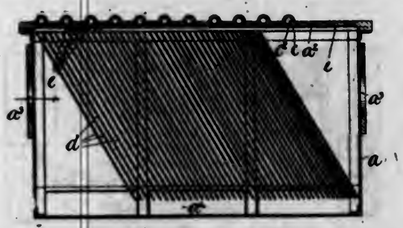
1. In a rail-joint, the combination, with a pair of rails having openings formed through their webs adjacent the abutting ends thereof; of a pair of reversely-arranged fish-plates overlapping said ends and disposed upon opposite sides of said rails against the faces of said webs, each fish-plate having a member thereof extending through the opening in one of said rails and interlocked with the adjacent portion of the other fish-plate.

2. In a rail-joint, the combination, with a pair of rails having openings formed through their webs adjacent the abutting ends thereof; of a pair of reversely-arranged fish-plates overlapping said ends and disposed upon opposite sides of said rails against the faces of said webs, each fish-plate being provided at opposite ends with a pair of integral tongues, one of which projects through the opening in the adjacent rail and interlocks with the adjacent tongue of the other fish-plate.

3. In a rail-joint, the combination, with a pair of rails having openings formed through their webs adjacent the abutting ends thereof; of a pair of reversely-arranged fish-plates overlapping said ends and disposed upon opposite sides of said rails against the faces of said webs, each fish-plate being provided at one end with a lateral tongue having a seat formed in its upper face, and at the other end with a longitudinal tongue, the first-named tongue of each fish-plate projecting through the opening in the adjacent rail and having the second-named tongue of the other fish-plate interlocked in the seat therein.

4. In a rail-joint, the combination, with a pair of rails having openings formed through their webs adjacent the abutting ends thereof; of a pair of reversely-arranged fish-plates overlapping said ends and disposed upon opposite sides of said rails against the faces of said webs, each fish-plate being provided at one end with a lateral tongue having a seat formed in its upper face and at the other end with a longitudinal tongue comprising a head and a reduced neck, the first-named tongue of each fish-plate projecting through the opening in the adjacent rail and having the neck of the second-named tongue of the other fish-plate engaged in the seat therein, the head portions of said second-named tongues projecting below the bottom walls of said seats to interlock said first- and second-named tongues together.

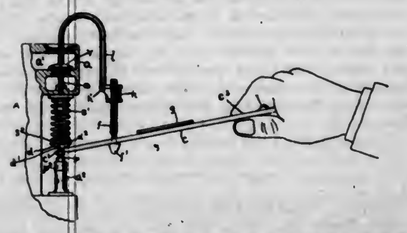
1,018,235. APPARATUS FOR EXTRACTING OR SEPARATING SUSPENDED MATTER FROM GASES. FREDERIC WILLIAM BURSTALL, Birmingham, England. Filed Oct. 15, 1910. Serial No. 587,270. (Cl. 48—135.)



1. An apparatus for removing tar from gas, comprising, in combination, a gas-tight chamber provided at one end with a gas inlet and at the opposite end with a gas outlet; series of hanging resilient wires disposed within said chamber approximately at right angles to the direction of the gas flow therethrough and having their upper ends permanently and rigidly fixed; and means for spraying liquid directly against said wires, the combined action of the spray and the gas flow vibrating the wires independently of each other by reason of their resilience, to cause the tar deposited upon said wires to trickle down the latter and drip from the lower ends thereof onto the bottom of the chamber.

2. An apparatus for removing tar from gas, comprising, in combination, a gas-tight chamber provided at one end with a gas inlet and at the opposite end with a gas outlet; series of hanging resilient wires disposed obliquely within said chamber approximately at right angles to the direction of the gas flow therethrough and having their upper ends permanently and rigidly fixed; and means for spraying liquid vertically directly against said wires, the combined action of the spray and the gas flow vibrating the wires independently of each other by reason of their resilience, to cause the tar deposited upon said wires to trickle down the latter and drip from the lower ends thereof onto the bottom of the chamber.

1,018,236. IMPLEMENT FOR AUTOMOBILE-ENGINES. JOHN J. COOPER, Providence, R. I. Filed Sept. 12, 1911. Serial No. 648,980. (Cl. 29—87.1.)



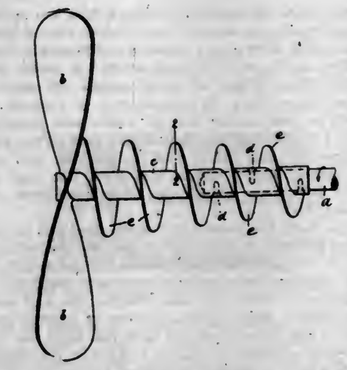
1. In a portable device or tool of the general character described, the combination of a manually controlled operating lever member having one end bifurcated and adapted, when in use, to engage with and compress the spring of a self-closing valve, a suitable fulcrum screw adjustably engageable with said forked or bifurcated end of the lever, a nut mounted to move longitudinally on said screw, and a bent hook-shaped rod having one end thereof hinged to said nut and the other or free end adapted to engage the valve of an engine when the valve-bonnet or cap is removed.

2. The combination with an operating lever of the character described, having a plurality of spaced notches on its face therein, of a screw adapted to movably engage and be actuated by said lever, a nut mounted to move endwise on the screw, a bent rod having one end jointed to said nut, and a strut or brace arranged, when in use, to engage the screw-threaded element and said notches.

3. In a portable tool or device of the general character described, the combination with an operating-lever having its inner end portion forked and bent at an obtuse angle, of a shoe member pivoted to each arm of said forked part of the lever.

4. In a portable tool or device of the general character described, the combination with an operating-lever having its inner end portion forked and bent at an obtuse angle, of a pair of oppositely disposed shoe members pivoted to the said forked portion of the lever, and having the heel or rear edge of each shoe upturned, for the purpose set forth.

1,018,237. PROPELLER. WILLIAM DEUTSCHER, New York, N. Y. Filed May 11, 1911. Serial No. 626,414. (Cl. 115—34.)



1. The combination of a shaft, means for driving the same, propeller blades mounted on said shaft and a continuous helical vane surrounding said shaft comprising a plurality of complete turns and terminating in one of said propeller blades.

2. The combination of a shaft, means for driving the same, an elongated hub mounted on said shaft, propeller blades mounted on said hub and a continuous helical vane mounted on said hub comprising a plurality of complete turns and terminating in one of said propeller blades.

3. The combination of a shaft, means for driving the same, propeller blades mounted on said shaft and a continuous helical vane surrounding said shaft comprising a plurality of complete turns and terminating in one of said propeller blades, the vane increasing in diameter from front to rear.

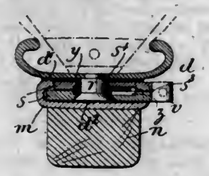
4. The combination of a shaft, means for driving the same, propeller blades mounted on said shaft and a continuous helical vane surrounding said shaft comprising a plurality of complete turns and terminating in one of said propeller blades, the turns of the helical vane being substantially equidistant from each other.

5. The combination of a shaft, means for driving the same, propeller blades mounted on said shaft and a continuous helical vane surrounding said shaft comprising a plurality of complete turns and terminating in one of said propeller blades, said vane increasing in diameter from front to rear and the turns of the helix being substantially equidistant from each other.

1,018,238. DETACHABLE RIM FOR PNEUMATIC TIRES. PERRY ERNEST DOOLITTLE, Ontario, Canada, assignor, by mesne assignments, to Doolittle Rim Co. Ltd. Filed Oct. 8, 1908. Serial No. 456,785. (Cl. 152—21.)

1. In a wheel for pneumatic tires, a fixed rim of channel or gutter section; a divided rim with expanding and con-

tracting means comprising a screw coupling having a hook formed at one end engaging one end of the divided rim and releasable therefrom by contraction of the rim independently of the screw; a suitable bracket fixed to the other end portion of the divided rim in which bracket the other end of the screw coupling is suitably carried; and means whereby the coupling can be rotated to expand and contract the divided rim from outside said fixed rim.



2. In a wheel for pneumatic tires, a fixed rim of channel or gutter section, a divided rim, a bracket fixed near one end of said divided rim, a worm wheel mounted to rotate but not move endwise in said bracket, a worm gearing into said worm wheel, a worm spindle for said worm mounted transversely in said bracket, a screwed sleeve mounted in said bracket and on which said worm wheel is fixed, a screwed spindle working in said sleeve adapted to engage the other end of said divided rim, said bracket being mainly located within said fixed rim, and means whereby said worm spindle can be rotated from outside said fixed rim.

3. In a wheel for pneumatic tires, a fixed rim of channel or gutter section formed with a slot in one of its side walls; a divided rim; and means for preventing said divided rim moving laterally upon said fixed rim comprising a part carried by said divided rim and movable relative thereto, which part is capable of passing through the slot in the side wall of said fixed rim while the divided rim is being withdrawn from or applied to the wheel and which is adapted, when said divided rim is on said fixed rim, to move to engage the wall of said fixed rim adjacent to the slot.

4. In a wheel for pneumatic tires, a fixed rim of channel or gutter section formed with a slot in one of its side walls; a divided rim; a radial pivot extending from the inside of said divided rim; a pair of plates mounted on said radial pivot, arranged one above the other and of such width that when opened out fan-wise they engage with the slotted side wall of said fixed rim at opposite sides of the slot, while when moved together, they are capable of being passed or withdrawn through the slot.

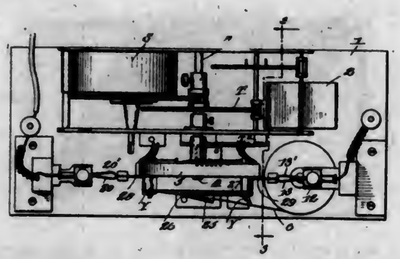
5. In a wheel the combination of a fixed rim; a detachable rim; a spring actuated latch carried by said detachable rim retractable by contact with the fixed rim; and means on the fixed rim adapted to be engaged by the latch to hold the detachable rim against displacement when the latter has been slipped into place on the fixed rim.

[Claims 6 to 11 not printed in the Gazette.]

1,018,239. AUTOMATIC FUSE-RESETTER. JOHN B. ELKIN, Columbia, S. C., assignor of one-half to James Harrison Berry, Columbia, S. C. Filed Aug. 10, 1911. Serial No. 643,267. (Cl. 175—278.)

1. In a device for automatically resetting fuses, a pair of terminals, a fuse between said terminals, means actuated by the blowing of said fuse for automatically resetting another fuse between said terminals, said means comprising a revoluble disk, driving means therefor, spring clips for holding a portion of the fuse wire, a stop member arranged to be engaged by the fuse wire and to be released upon the blowing of the fuse, and means for opening the clips to receive the fuse wire.

2. In a device for automatically resetting fuse wires, a revoluble disk, a pair of spring clips carried by the disk on each side thereof, a pair of levers pivotally mounted on said disk and adapted to be engaged by said fuse wire, means for opening and closing the spring clips to receive and hold a portion of the fuse wire, and means for rotating the disk.



3. In a device for automatically resetting fuse wires, a revoluble disk, a pair of spring clips carried by the disk on each side thereof, a pair of levers pivotally mounted on said disk and adapted to be engaged by said fuse wire, means for opening and closing the spring clips to receive and hold a portion of the fuse wire, said means comprising a cam member disposed near said disk, and a pivoted lever for each spring and clip arranged to engage said cam member during the revolution of the disk, and means for rotating the disk.

4. In a device for automatically resetting fuse wires, a revoluble disk, a pair of spring clips carried by the disk on each side thereof, a pair of levers pivotally mounted on said disk and adapted to be engaged by said fuse wire, means for opening and closing the spring clips to receive and hold a portion of the fuse wire, said means comprising a cam member disposed near said disk, a pivoted lever for each spring and clip arranged to engage said cam member during the revolution of the disk, means controlled by said levers for causing the stoppage of the disk at a predetermined point, and means for rotating the disk upon the disengagement of the fuse wire from the lever.

5. In a device for automatically resetting fuse wires, a pair of terminals, a rotatable disk provided with contacts arranged to engage said terminals, a pair of spring clips connected with one of said contacts, a second pair of spring clips connected with the other of said contacts, each of said spring clips comprising a cylinder, a spring-pressed stem therein, a head at one end of the stem, and a pivoted lever secured to the other end of the stem, a cam member disposed near said disk and arranged to be engaged by said pivoted lever for actuating the latter, said spring clips being arranged to engage and retain a portion of the fuse wire, and means actuated by the blowing of the fuse wire for causing the rotation of the disk.

[Claims 6 and 7 not printed in the Gazette.]

1,018,240. GREASELESS PEROXID PASTE. RICHARD VON FOREGGER, New York, N. Y., assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Nov. 16, 1910. Serial No. 592,653. (Cl. 167—9.)

1. A greaseless peroxid paste which is stable and contains a trihydric alcohol and a solid peroxid.

2. A greaseless peroxid paste which is stable and contains glycerin and a solid peroxid.

3. A greaseless peroxid paste which is stable and contains a trihydric alcohol and a solid peroxid insoluble in water.

4. A greaseless peroxid paste which is stable and contains glycerin and a solid peroxid insoluble in water.

5. A greaseless peroxid paste which is stable and contains a trihydric alcohol and an alkali peroxid.

[Claim 6 not printed in the Gazette.]

1,018,241. SHADE-HOLDER. EDWARD E. FORSTROM, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 29, 1911. Serial No. 663,018. (Cl. 240—114.)

1. In combination with a supporting bead, an expansible ring provided with a bead adapted to be positioned upon said supporting bead, a shade holder adapted to surround said expansible ring below the bead and hold the same in engagement with the supporting bead, in combination with means adjustable above said bead for supporting said shade holder upon said expansible ring.

2. In combination with a supporting bead, an expansible ring having at its upper edge an abutment flange and spaced below the same a bead adapted to be adjusted over the supporting bead, together with a shade holder having a sleeve adapted to fit over said expansible ring below the bead to hold the ring in adjusted position upon the supporting bead, an independent collar adapted to be passed over the supporting bead, and provided with an inturned edge adapted to engage the abutment flange of the expansible ring in adjusted position and means for securing said sleeve to the shade holder body.

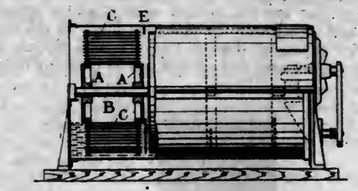
3. In combination with an electric lamp socket, having a supporting bead spaced from the lamp-receiving end of the socket, a shade holder comprising a threaded collar adapted to be passed over said supporting bead, an expansible beaded ring adapted to be adjusted upon said supporting bead, and a central depending sleeve on the shade holder body serving to retain said expansible ring on the supporting bead, and adapted to be engaged by said collar in adjusted position, together with engaging surfaces between said collar and expansible ring.

4. In a shade holder, a central threaded sleeve with inwardly offset flange, an expansible beaded ring adjustable upon a supporting bead, and retained in position by said inwardly offset flange on the central sleeve of the shade holder, together with a threaded collar adapted to be passed over a supporting bead and screwed down into said threaded sleeve in adjusted position, and abutment means between said sleeve and split ring to insure the support of the holder upon said split ring in adjusted position.

5. In a shade holder, an expansible ring provided with a bead intermediate the ends of the ring and adapted to be adjusted upon a supporting bead, a shade holder body member fitting over said ring below its bead and serving to hold the latter from below in engagement with the supporting bead, in combination with means engaging said ring above its bead on the one hand and serving to hold the latter from above in engagement with the supporting bead and on the other hand engaging the shade holder body whereby the latter is mounted on said expansible ring.

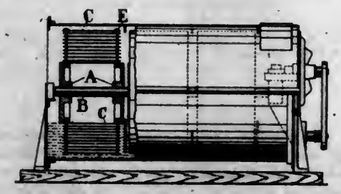
1,018,242. METHOD OF BUILDING COOLING OR WARMING DRUMS. HAMMERSLEY HEENAN, Manchester, England. Filed May 27, 1911. Serial No. 629,783. (Cl. 29—84.)

The method of building a spirally convoluted drum consisting in winding together upon a central hub or disk a sheet of suitable and flexible removable spacing bands, subsequently drilling holes through the convolutions and introducing into each hole a member to secure



and hold the convolutions rigidly in position, and finally removing the spacing bands, substantially as described.

1,018,243. APPARATUS FOR COOLING OR WARMING WATER, AIR, OR GAS. HAMMERSLEY HEENAN, Manchester, England. Original application filed May 27, 1911, Serial No. 629,783. Divided and this application filed Aug. 24, 1911. Serial No. 645,773. (Cl. 62—22.)



1. In an apparatus of the class specified, a drum comprising a central hub, a spirally wound sheet of metal mounted thereon, the convolutions of said sheet being provided with holes drilled radially therethrough, and the hub with holes alining with the first-named holes, and screws passed through the first-named holes and having their inner ends engaged in the second-named holes, the threads on said screws engaging the edges of said first-named holes, to space said convolutions evenly and hold the same in position.

2. In an apparatus of the class specified, a drum comprising a central hub, a spirally wound sheet of metal mounted thereon, the convolutions of said sheet being provided with holes drilled radially therethrough, a foundation ring encircling the outermost convolution and mounted thereon, a spirally wound sheet of metal mounted on said ring and provided with holes drilled radially through its convolutions, and inner and outer sets of screws passed through the holes in the first- and second-named convolutions, respectively, and having their inner ends secured, respectively, to said hub and said ring, the threads on said screws engaging the edges of said holes to space said convolutions evenly and hold the same in position.

1,018,244. INSECT-KILLER. JOHN JACKSON, Clinton, Iowa. Filed Aug. 12, 1910. Serial No. 576,795. (Cl. 43—1.)

1. An insect killer having a wire gauze body with a portion removed at one extremity and the latter contracted and secured, and a handle applied over and secured to said contracted extremity.

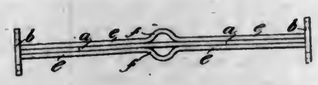
2. An insect killer having a wire gauze body with a triangular recess formed at one extremity and the two members provided by the recess drawn together and secured, and a handle applied over the secured members of the body.

3. An insect killer having a wire gauze body with one extremity recessed and contracted to reinforce the same, and a handle having one extremity fitted over and secured to the said contracted extremity of the body.

4. An insect killer having a wire gauze body with members drawn inwardly at one extremity and secured to each other, the opposite extremity of the body having the ends of the strands covered with a solder binding, which is held intact with the said body solely by the mesh of the wire embedded therein, and a handle having one extremity applied over and secured to the inwardly drawn members.

5. An insect killer having a wire gauze body with a recess at one extremity and the members formed by said recess drawn inwardly toward and secured to each other, a doubled spring strip applied over the said secured members and embracing both sides of the body, and a handle having a slotted extremity fitted over and secured to the inwardly drawn members and a portion of the spring.

1,018,245. GAGE-BAR. ARTHUR HENRY JOHNSON, Epsom, England, and LLEWELLYN WYNN WILLIAMS, Glasgow, Scotland. Filed Jan. 14, 1911. Serial No. 602,558. (Cl. 104—96.)



1. As an article of manufacture, a stretcher or gage bar formed of a laminated blade spring.

2. As an article of manufacture, a stretcher or gage bar formed of a laminated blade spring having a solid central portion and solid ends.

3. As an article of manufacture, a stretcher or gage bar formed of a laminated blade spring having a solid central portion and solid ends, said ends being formed with flanges for attachment to a switch blade.

4. The combination with a switch of a stretcher or gage bar formed of a laminated blade spring having solid central and end portions, and flanges for said portions rigidly connected to the blades of the switch.

5. The combination of a switch with a stretcher or gage bar formed of a plurality of substantially flat blade springs set on edge and rigidly secured to the blades of the switch.

[Claim 6 not printed in the Gazette.]

1,018,246. ELECTRICALLY-OPERATED DOOR. GUSTAV KORTTOWSKI, Berlin, Germany. Filed Jan. 5, 1912. Serial No. 669,608. (Cl. 39—95.)

1. The combination with a door adapted to open in either direction, of a movable floor plate adapted to be inclined on being trodden on either side of the closed door, an electromotor adapted to turn said door in either direction, means operated from either end of said floor plate when depressed for so controlling the direction of rotation of said electromotor, the rotation of the motor serving to turn the door away from the depressed end of said floor plate, and means controlled by the movement of the door for causing the return of the open door to its closed position.

2. The combination with a door adapted to open in either direction, of a movable floor plate adapted to be inclined on being trodden on either side of the closed door, an electromotor adapted to turn said door in either direction, means operated from either end of said floor plate when depressed for so controlling the direction of rotation of said electromotor, the rotation of the motor serving to turn the door away from the depressed end of said floor plate, and means operated from said door in either extreme position for reversing said electromotor and thus returning the door to its closed position.

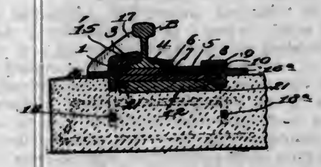
3. The combination with a door adapted to open in either direction, of a movable floor plate adapted to be inclined on being trodden on either side of the closed door, an electromotor adapted to turn said door in either direction, two circuits for alternately turning said electromotor in one or the other direction, two reversing switches in said two circuits each adapted to normally close one circuit and on being operated from the corresponding end of said floor plate when depressed to open this circuit and to close the other circuit, two electromagnets in said two circuits each adapted to lock the corresponding reversing switch when once engaged, two relays severally shunted to said two circuits and each adapted to normally prepare one circuit for closing by means of the corresponding reversing switch when engaged and on being energized to open this circuit and to close the other circuit, means operated from said door in either extreme position for opening one circuit and closing the other circuit whereby the reversing switch engaged is released so that it returns to its initial position, and means operated from said door on reaching its normal closed position for opening the other circuit.

4. The combination with a door adapted to open in either direction, of a floor plate movable in an opening in the flooring and extending from the closed door to both sides, springs supporting said floor plate in the plane of the closed door, means for preventing said floor plate from projecting above the flooring, an electromotor adapted to turn said door in either direction, two circuits for alternately turning said electromotor in one or the other direction, two reversing switches in said two circuits each adapted to normally close one circuit and on being operated from the corresponding end of said floor plate when trodden to open this circuit and to close the other circuit, two electrmagnets in said two circuits each adapted to lock the corresponding reversing switch when once engaged, two relays severally shunted to said two circuits and each adapted to normally prepare one circuit for closing by means of the corresponding reversing switch

when engaged and on being energised to open this circuit and to close the other circuit, means operated from said door in either extreme position for opening one circuit and closing the other circuit whereby the reversing switch engaged is released so that it returns to its initial position, and means operated from said door on reaching its normal closed position for opening the other circuit, said floor plate when trodden in the middle cross line being adapted to so operate said two reversing switches as to simultaneously open the two circuits and consequently to prevent said door from moving.

5. The combination with a door adapted to turn in either direction, of a vertical shaft adapted to move said door, a worm wheel fastened on said shaft, an electromotor having two commutator brushes and on its armature shaft a worm meshing with said worm wheel, an arm fastened on said shaft, two superposed insulated brush holders on said arm each carrying two contact brushes, two pliable conductors connecting said two brush holders with said two commutator brushes, a support, two long insulated contact segments on said support concentric with said shaft and adapted to each come into contact with one contact brush in said two brush holders, four short contact segments in pairs on said support concentric with said shaft, the contact segments in each pair being adapted to come one after the other into contact with the other contact brush in said two brush holders, a movable floor plate adapted to be inclined on being trodden on either side of the closed door, two circuits of which one includes said two long contact segments and the other said two pairs of short contact segments, devices in said two circuits, and means operated from either end of said floor plate when trodden for engaging the corresponding devices whereby the door is first opened and afterward closed.

1,018,247. RAIL-CHAIR. JACOB LAEUFER, Lima, Ohio, assignor to Horace K. Halladay, Findlay, Ohio. Filed Sept. 14, 1911. Serial No. 649,289. (Cl. 238—2.)



1. In a rail chair, a plate having a fixed flange engaging lip at one side thereof and having a longitudinal slot, a flange engaging lip confronting the first named lip and having an offset which is disposed in the slot and a flange which projects from the offset and is disposed under the plate, and a pair of clamp members adapted to be secured to a tie upon opposite sides of said plate to hold the latter against the movement, one of said clamps having a lip which is adapted to engage and overlie the first-named lip, and the other clamp having a lip which is adapted to engage the adjacent side of the plate.

2. In a rail chair, a plate having a fixed flange engaging lip at one side thereof and having a longitudinal slot, a flange engaging lip confronting the first named lip and having an offset which is disposed in the slot and a flange which projects from the offset and is disposed under the plate, and a pair of clamp members adapted to be secured to a tie and to hold the plate against movement, each clamp member having a tie engaging flange, a supporting ledge, and a lip overhanging the ledge.

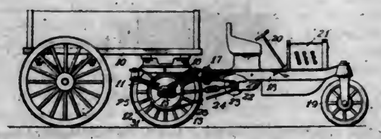
3. In a rail chair, a plate having a fixed flange engaging lip at one side thereof and having a longitudinal slot, a flange engaging lip confronting the first named lip and having an offset which is disposed in the slot and a flange which projects from the offset and is disposed under the plate, and a pair of clamp members adapted to be secured to a tie and to hold the plate against movement, the plate having a wedge shape and having a corrugated side face and one of the clamp members having its face corrugated to match the corrugated face of the plate.

4. In a rail chair, a plate having a fixed flange engaging lip at one side thereof and having a longitudinal slot, a flange engaging lip confronting the first named lip and having an offset which is disposed in the slot and a flange which projects from the offset and is disposed under the plate, a pair of clamp members adapted to be secured to a tie and to hold the plate against movement, and a second plate which rests directly upon the ledges of the clamp members and upon which the first plate rests, the second plate having end flanges which overlie the sides of the tie.

5. In a rail chair, a plate having a fixed flange engaging lip at one side thereof and having a longitudinal slot, a flange engaging lip confronting the first named lip and having an offset which is disposed in the slot and a flange which projects from the offset and is disposed under the plate, a pair of clamp members adapted to be secured to a tie and to hold the plate against movement, a second plate which rests directly upon the ledges of the clamp members and upon which the first plate rests, the second plate having end flanges which overlie the sides of the tie, and a cushion plate arranged under the second plate.

[Claims 6 and 7 not printed in the Gazette.]

1,018,248. VEHICLE. CHARLES H. MARTIN, Worcester, Mass. Filed Mar. 29, 1911. Serial No. 617,576. (Cl. 21—90.)



1. The combination with a vehicle having a front axle adapted to turn on a vertical axis, wheels thereon, and springs on the axle for supporting the vehicle body, of a frame comprising a body, springs connected therewith, more readily yielding than the springs on the axle, for supporting said frame at the rear from said front axle, means at the front for supporting and steering it, and a motor on said frame connected with said front wheels for driving them.

2. The combination with a vehicle having a front axle, wheels and springs thereon, of a frame provided with a front steering wheel or wheels, a more readily yielding spring independent of said vehicle connecting said frame at the rear with said front axle, and a motor on said frame geared up to the front wheels of the truck.

3. The combination with a vehicle having a front axle, wheels thereon, and a body supported at one end by said axle, of a frame provided with a front steering wheel or wheels and having means at the rear more resilient than the connections between the axle and body for movably supporting said frame from said front axle so that it is free to move vertically independently of said front axle and body, and a motor on the frame geared up to the front wheels of the vehicle.

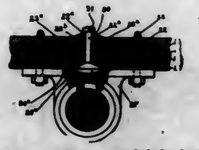
4. The combination with a vehicle having a front axle and wheels thereon, of a frame provided with a front steering support and yieldingly connected at the rear with said front axle, a power shaft on said frame, adjustable strut rods removably connecting said shaft with said front axle, and a motor on said frame geared up to the front wheels of the vehicle through said shaft.

5. The combination with a vehicle having a front axle adapted to turn on a vertical axis, and provided with traction wheels thereon, of a frame comprising a body resiliently supported at the rear by said front axle independently of the rest of said vehicle and having a front supporting means, a motor on the frame connected with said front wheels, transmission mechanism on said frame, and a steering device on said frame independent of said vehicle.

1,018,249. PENCIL-SHARPENER. SAMUEL MCILVANIE, Eburne, British Columbia, Canada. Filed Jan. 31, 1911. Serial No. 605,841. (Cl. 120—90.)

An improved pencil sharpener, comprising a flat blade whose end is beveled on the upper side, and an extended shank formed integrally with the blade and extended longitudinally therewith, the blade and shank being concave on the upper side as shown and described.

1,018,250. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 28, 1909. Serial No. 515,117. (Cl. 21—103.)



1. The combination, with a multiple leaf spring having leaves provided each with a central projection within the lateral edges thereof and a complementary recess, whereby said leaves may be centered with the projection of one leaf nesting within the recess of an adjacent leaf, of a spring seat having a surface conforming to the deflected portion of the adjacent spring leaf, and clips securing said spring to the seat.

2. A multiple leaf spring having a plurality of leaves each of which has at its central portion and within the confines of the lateral edges thereof a projection with a complementary recess and a central aperture, and a bolt extending through said apertures and having a head conforming in shape to a recess in the outer leaf of the spring.

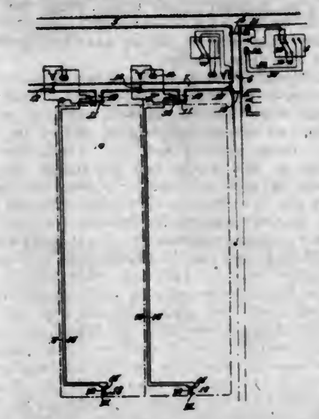
3. A multiple leaf spring having a plurality of leaves each of which has at its central portion and within the confines of the lateral edges thereof a projection with a complementary recess and a central aperture, and a bolt extending through said apertures.

1,018,251. IRRIGATION SYSTEM. CLARENCE W. MCKEE, Phoenix, Ariz. Filed May 1, 1911. Serial No. 624,388. (Cl. 137—66.)

1. In an irrigating system, the combination with a source of supply, of a land division with an inlet at one extremity having a normally open gravitating box gate therein, a race between the source of supply and said inlet, a saturation controller in the land division at a point distant from the said box gate, and means automatically operated by the controller to effect a release of the said box gate to permit the latter to close.

2. In an irrigating system, the combination with a source of supply, of a land division with an inlet at one extremity having normally open gravitating means for automatically closing the inlet, and a saturation controller at a point distant from the inlet and provided with means for releasing said automatic closing means.

3. In an irrigating system, the combination with a source of supply, a land division having an inlet at one extremity communicating with the source of supply, a normally open gravitating gate in said inlet, and a saturation controller in the land division at a point distant from the gate and automatically operating to release the latter after a certain degree of saturation of the land with water to permit the gate to close and shut off the inlet of water to the land division.

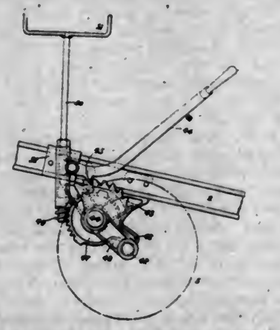


4. In an irrigating system, the combination with a source of supply, of a land division having an inlet at one extremity, a race between the source of supply and said inlet provided with an automatically opening and closing head gate, a normally open gravitating gate in said inlet, and a saturation controller in the land division at a point distant from the inlet gate and automatically operating to release and permit said inlet gate to close after a certain degree of saturation of the land to control the inlet of water to the land division.

5. In an irrigating system, the combination with a source of supply having a race communicating therewith, of land divisions with inlets communicating with different portions of said race, normally open gravitating closing gates for the inlets, normally closed automatically opening gates in the race between the land divisions, and saturation controllers at points distant from the said inlets and provided with means for releasing the respective inlet gates and permitting the latter to close.

[Claims 6 and 7 not printed in the Gazette.]

1,018,252. PLOW OPERATED BY STEAM OR OTHER MOTIVE POWER. HENRY MCLAREN, Leeds, England. Filed Sept. 23, 1909. Serial No. 519,174. (Cl. 97—30.)



1. A plow having a frame, a surface wheel with cranked spindle pivotally supported from the frame, a stop limiting the upward travel of said crank and means for vertically adjusting said stop, for the purpose specified.

2. A plow having a frame, a surface wheel with cranked spindle pivotally supported from said frame, a stop limiting the upward travel of said crank, a worm wheel controlling the position of said stop and means for actuating said worm wheel to vertically adjust the stop, for the purpose specified.

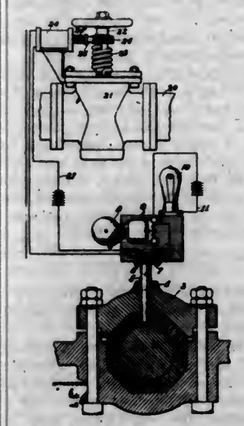
3. A plow having a frame, a surface wheel with cranked spindle pivotally supported from said frame and free to rotate on the lifting of said frame, means for automatically holding said spindle in the position to which it is rotated by the lifting of the frame, and an adjustable stop limiting the rotation of said crank in the opposite direction, for the purpose described.

4. A plow having a frame with side member, a stub shaft supported wholly by said side frame member, a surface wheel with cranked spindle pivoted on said stud shaft and free to rotate upon the lifting of said frame, a ratchet rigid with said cranked spindle and rotating therewith, a pawl pivoted on said frame member and engaging said ratchet to hold said crank in its lowered position, a stop limiting the upward travel of the crank, a worm wheel interposed between said ratchet and frame and controlling the position of said stop, and a worm gear carried by said frame and operating said worm wheel to adjust the vertical position of said stop, for the purpose specified.

5. In a device of the character described, a surface wheel with cranked spindle having limited freedom of oscillation on the frame and means to vary the extent of its oscillation, said means comprising an adjustable bearing arm pivoted to the frame and a stud on the cranked spindle bearing against said bearing arm.

[Claim 6 not printed in the Gazette.]

1,018,253. MECHANISM ACTUATED BY A HOT BEARING. JOHN MCWILLIAMS, East McKeesport, and MERRILL E. CLEELAND, West Homestead, Pa. Filed Dec. 3, 1910. Serial No. 595,369. (Cl. 136—11.)

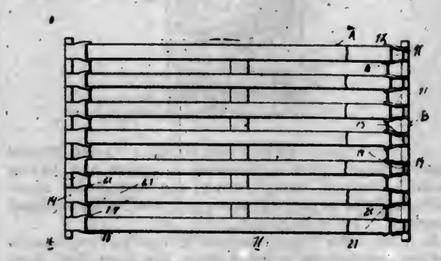


1. The combination of a machine provided with a journal bearing, machine-stopping mechanism, a signal, a thermostat actuated by heat generated in the bearing, means operated by the thermostat for actuating the signal, and means actuated by the thermostat when under a greater heat than that required for the signal for actuating the machine stopping mechanism.

2. The combination of a machine having a journal bearing, mechanism for stopping the machine, a thermostat exposed to the action of heat generated in the journal bearing, an alarm device, two normally open electric circuits—one for the signal device and the other for the machine-stopping mechanism, and circuit breakers adapted to be closed by the thermostat for energizing both circuits.

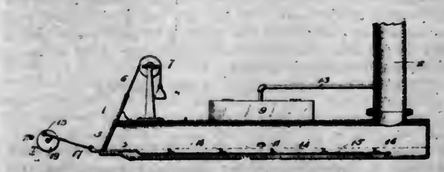
3. The combination of a machine having a journal bearing, machine-stopping mechanism, a thrmostat exposed to heat generated in the journal bearing, an electric circuit for operating the signal device and another circuit for actuating the machine-stopping mechanism, and normally open circuit breakers adapted to be closed by the thermostat, the circuit for the signal device arranged to close in advance of the circuit for the machine-stopping mechanism.

1,018,254. FOLDING CRATE. CLARENCE F. MIESEN, Carrollton, Ky. Filed Sept. 14, 1910. Serial No. 582,056. (Cl. 217—48.)



A folding crate including sides, each comprising a plurality of spaced slats, the slats extending longitudinally of the crate being shorter than the length of the latter, while those extending transversely of the crate are equal in length to the width of the crate, the slats extending longitudinally of the crate being pivoted to the ends of the slats extending transversely thereof at diagonally opposite points, and a plurality of metallic plates having spaced ears on one end, between which are pivoted the ends of the longitudinal slats, the outermost of said plates having their remaining ends pivoted in the spaces between the free ends of the transverse slats, while the intermediate plates have their remaining ends provided with rigid right-angular extensions respectively disposed in the spaces between the transverse slats and rigidly secured to the latter.

1,018,255. SULFUR-BURNER. GEORGE ERNEST MILLER, Madison, Me. Filed Aug. 1, 1911. Serial No. 641,799. (Cl. 23—1.)

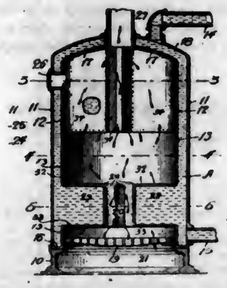


1. A sulfur burner combined with an agitator arranged and adapted to operate therein beneath the surface of the burning sulfur, and means whereby said agitator is reciprocated.

2. A sulfur burner combined with an agitator adapted to be submerged and to operate beneath the surface of the burning sulfur in the burner, said agitator comprising a centrally disposed bar and a series of laterally projecting arms secured to said bar, and means whereby the agitator is reciprocated.

3. A sulfur burner combined with an agitator arranegd in and adapted to operate beneath the surface of the burning sulfur in said burner, said agitator comprising a centrally disposed flat bar, a series of angle iron cross bars spaced apart and secured thereto, said cross bars projecting laterally beyond the opposite sides of the longitudinal bar to form agitator arms, a suitably driven crank disk, a pitman rod to connect said disk with the outer end of the agitator whereby the latter is reciprocated in said burner, and means whereby the sulfur is uniformly fed to the burner.

1,018,256. HOT-WATER HEATER. JOHN B. MILLER, Chicago, Ill. Filed Nov. 1, 1911. Serial No. 657,973. (Cl. 122—221.)



1. A hot water heater, comprising a casing formed with a water space surrounding a firebox and having radially disposed water pockets and interspaces therebetween at the bottom of the firebox, forming a subdivided firepot.

2. A hot water heater, comprising inner and outer shells having therebetween a water space, the inner shell being formed with radially disposed convolutions around the fire bed of the firebox and providing water pockets and interspaces therebetween, the interspaces opening into a central space in the fire bed and forming a subdivided firepot.

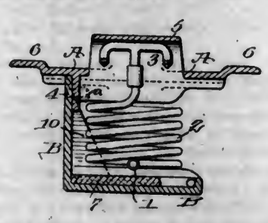
3. A hot water heater, comprising inner and outer spaced shells having therebetween a water space, the inner shell inclosing a firebox and having radially convolutions providing water pockets opening from said water space, and interspaces therebetween, located immediately above a grate and co-acting therewith to form a subdivided firepot.

4. A hot water heater, comprising inner and outer spaced shells, forming therebetween a water space, the inner shell inclosing a firebox and being formed with radial hollow ribs, the hollows of which open from said ribs providing therebetween interspaces and located immediately above grate bars to form a subdivided firepot.

5. A water heater, comprising inner and outer spaced shells forming therebetween a water space, the inner shell having radially disposed hollow ribs projecting in toward the center of the heater at the fire bed portion and providing water pockets therein opening to said water space, and interspaces therebetween coöperating with a grate to form a subdivided firepot.

[Claims 6 to 10 not printed in the Gazette.]

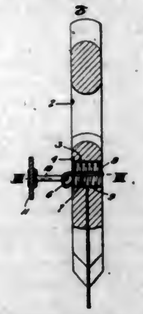
1,018,257. OIL-BURNER ATTACHMENT FOR STOVES. ISAAC L. MITCHELL, Cedar Rapids, Iowa. Filed Oct. 17, 1911. Serial No. 655,145. (Cl. 158—9.)



1. The improved oil-burner attachment for stoves, comprising a horizontal top plate A having a central raised hood open at its ends, side flanges adapted to rest upon the stove top, a pendent portion B having a right-angular form, one side of said pendent portion being secured to said top plate and the other side of said pendent portion forming a base, and an oil-vaporizing coil supported on the base portion B and having a T head which projects into the aforesaid hood, substantially as described.

2. An improved oil burner attachment comprising a horizontal top plate having horizontal side flanges adapted to rest upon a stove top and a right angular pendent portion, one side of said pendent portion being secured to said top plate and the other side of said portion forming a horizontal base, raised hook-shaped flanges formed on said base, an asbestos wick held in said flanges, and a vaporizing coil supported on the flanges above the wick, as described.

1,018,258. TOOL-SUPPORT. FRANCIS S. MORRIS, Moon township, Beaver county, Pa. Filed Jan. 5, 1911. Serial No. 601,016. (Cl. 24—3.)



1. The combination with a belt having a supporting staple, of a tool provided with a transversely mounted housing, a spring therein, and a stem in said housing normally retracted by said spring having a finger disk on one side of the tool and an engaging hook on the opposite side thereof to engage the staple, said hook having an innermost open side and adapted to be normally held backwardly against the housing to prevent disengagement of the staple, substantially as set forth.

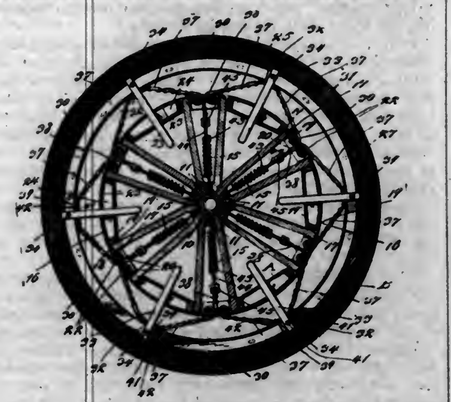
2. A tool having a grip portion and a handle extending forwardly of the grip portion, a housing mounted transversely in the handle and having a plate at one end, a stem extending through the housing having at one end a pressure disk in position for engagement by one of the fingers of the hand holding the grip and at the other end a reversed hook terminal, and a spring within the housing normally pressing outwardly against the disk to hold the open end of the hook against the end plate of the housing substantially as set forth.

1,018,259. SPRING-WHEEL. WILLIAM T. MURRAY, Baldwin, Kans. Filed June 6, 1911. Serial No. 631,624. (Cl. 152—28.)

1. A device of the class described comprising an interior wheel member and a rim member spaced from the periphery of the wheel, a plurality of guide spokes carried by the rim, retaining portions carried by the wheel receiving the spokes for longitudinal and lateral sliding movement, resilient devices carried by the wheel, and divergent flexible connections between the resilient devices and the rim.

2. A device of the class described comprising an interior wheel member comprising a hub, a plurality of spokes carried thereby, in pairs having wide spaces therebetween, rim members carried on opposite sides of the spokes at their extremities, spaced pairs of rollers adjacent the extremities of the spokes, a rim member spaced concentrically outward of the wheel, spring members anchored to the hub between the spokes of said pairs, flexible members connected to the springs extending outwardly between the rollers and thence divergently to and being secured upon the rim, and guide spokes carried by the rim and engaged slidably between the first named rims intermediately of the pairs of spokes as described.

3. A device of the class described comprising a wheel member including a hub, pairs of closely spaced spokes thereon having a spring receiving space between pairs, the pairs being widely spaced from each other at their outer ends, a rim concentrically spaced outwardly of the spokes, guide spokes carried thereby projecting inwardly intermediately of the pairs of spokes first named, opposed rim members having spoke receiving portions carried at the extremities of and on opposite sides of the spokes in spaced relation and receiving the guide spokes slidably therebetween for play between the pairs of spokes, buffer means at opposite sides of the pairs of spokes to limit the movement of the guide spokes, anti-friction devices carried between the said opposed rim members at the ends of the pairs of spokes, springs anchored to the hub between the pairs of spokes, flexible members connected thereto and leading outward between and extending divergently from the anti-friction devices to the said traction rim.

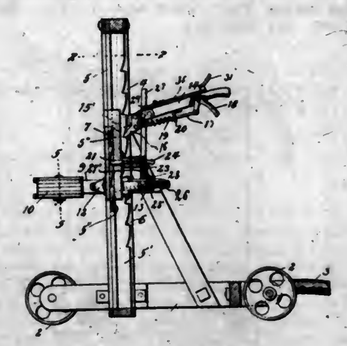


4. In a device of the class described, an outer rim member and stub spokes carried thereby, a wheel member spaced concentrically therewithin including a hub, spokes carried thereby, spring members carried by the hub, and opposed rims engaged with and on opposite sides of the spokes; spring members anchored to the hub, internally threaded members carried thereby, a bolt threaded in each and having an outer head portion and adapted to be engaged by an implement for rotation, a yoke swiveled on the head, and flexible members connected to the yoke and extending outwardly and divergently to and being secured upon the said outer rim.

5. A device of the class described comprising an outer rim portion adapted to receive a cushion tire portion, inwardly projecting stub spokes carried thereby, a wheel member spaced concentrically within the rim, including a hub, spokes carried thereby, resilient devices on the wheel, and divergent flexible connections between the resilient devices and the rim, opposed rims having spoke receiving portions carried thereby and having broadened portions between certain of the spokes receiving the stub spokes slidably therebetween, retaining ribs formed on their opposed faces at their broadened portions, cushion material secured between the ribs in slidable engagement with the stub spokes and buffer means at each end of the broadened portions to limit the movement of the stub spokes.

1,018,260. BARREL-TRUCK. PEDER MYRHOLM, Volga, S. D., assignor of one-half to Julius Martinson, Volga, S. D. Filed June 12, 1911. Serial No. 633,000. (Cl. 21—118.)

1. In a barrel truck, the combination of a wheeled frame, a vertical standard carried thereby and having a vertical toothed portion, a runner movably mounted upon said standard, a lever pivoted to said runner, a lifting dog carried by said lever to engage the toothed portion of the standard to raise the runner by a step by step movement, lifting arms pivoted between their ends to opposite sides of the runner, a spring secured to one side of the runner and having its ends engaging the front end portions of the lifting arms, normally tending to force the latter apart, gripping means carried by the front ends of the lifting arms, and pawls coacting with the rear ends of the lifting arms to lock the latter in engagement with an object.



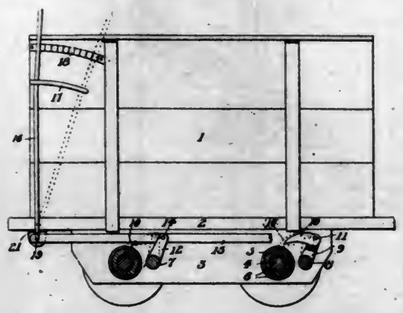
2. In a barrel truck, the combination of a wheeled frame, a vertical standard carried thereby and having a vertical toothed portion, a runner movably mounted upon said standard, a lever pivoted to said runner, a lifting dog carried by said lever to engage the toothed portion of the standard to raise the runner by a step by step movement, lifting arms pivoted between their ends to opposite sides of the runner, a spring secured to one side of the runner and having its ends engaging the front end portions of the lifting arms, normally tending to force the latter apart, gripping means carried by the front ends of the lifting arms, the rear ends of the lifting arms being toothed on their inner sides, pawls pivoted to the runner between the lifting arms and having their outer ends engageable with the teeth of the latter to lock the same in engagement with an object, a catch slidably mounted on the runner, the standard having notches adapted to be engaged by said catch, a spring normally holding the catch in engagment with the standard, and a handle for said catch movable into positions permitting free engagement of the catch with the standard or holding the catch temporarily disengaged from the standard.

3. In a barrel truck, the combination of a wheeled frame, a vertical standard carried thereby and having a vertical toothed portion, a runner movably mounted upon said standard, a lever pivoted to said runner, a lifting dog carried by said lever to engage the toothed portion of the standard to raise the runner by a step by step movement, lifting arms pivoted between their ends to opposite sides of the runner, a spring secured to one side of the runner and having its ends engaging the front end portions of the lifting arms, normally tending to force the latter apart, gripping means carried by the front ends of the lifting arms, pawls coacting with the rear ends of the lifting arms to lock the latter in engagement with an object, and means connecting the rear ends of the lifting arms for simultaneously moving the same toward and from one another.

4. In a barrel truck, the combination of a wheeled frame, a vertical standard carried thereby and having a vertical toothed portion, a runner movably mounted upon said standard, a lever pivoted to said runner, a lifting dog carried by said lever to engage the toothed portion of the standard to raise the runner by a step by step movement, lifting arms pivoted between their ends to opposite sides of the runner, a spring secured to one side of the runner and having its ends engaging the front end portions of the lifting arms, normally tending to force the latter apart, gripping means carried by the front ends of the lifting arms, pawls coacting with the rear ends of the lifting arms to lock the latter in engagement

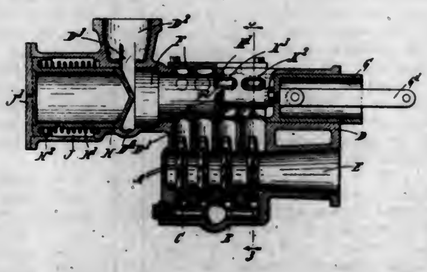
with an object, a toggle joint connecting said pawls, and means operable by the lever for actuating said toggle joint to simultaneously disengage the pawls from the lifting arms.

1,018,261. PIT-CAR BRAKE. WALENTY NALEPKA, South Omaha, Nebr., assignor of one-half to Louis Kulawik, South Omaha, Nebr. Filed Sept. 6, 1911. Serial No. 647,865. (Cl. 188—24.)



A brake for cars comprising a pair of axles, a pair of collars fixed to each of said axles in proximity to each end thereof and each provided with ratchet teeth, hangers carried by the body of the car and through which said axles extend, a rock shaft arranged rearwardly of each of said axles and journaled in said hangers, a pair of rearwardly extending lugs carried by each of said shafts in proximity to each end thereof, a pair of crank arms carried by each of said shafts intermediate its ends, a forwardly projecting dog pivotally connected to each pair of lugs and capable of engaging with the ratchet teeth of a collar when the shaft is rocked in one direction thereby preventing back rotation of the axles, a longitudinally extending operating bar pivotally connected to said pairs of crank arms and projecting forwardly of the forward axle, and an operating lever having a right-angularly disposed lower end provided with a cranked portion connected to said bar and adapted when operated to shift the latter, thereby moving the dogs into and out of engagement with said ratchet teeth.

1,018,262. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. HENRY ANDREWS NEAL, Richmond, England. Filed Mar. 7, 1910. Serial No. 547,797. (Cl. 48—155.1.)



1. In a carbureter for an internal combustion engine, the combination of a mixing chamber having an air inlet channel and a mixture outlet, a carbureting chamber communicating with the mixing chamber, a valve adapted to vary the dimension of the opening between the carbureting and mixing chambers, a second valve for varying the extent of opening of the air inlet channel to the mixing chamber, and a suction-operated throttle controlling the outlet from the mixing chamber.

2. In a carbureter for an internal combustion engine, the combination of a mixing chamber having a plurality of air inlets and a mixture outlet, a plurality of carbureting chambers, an adjustable valve adapted to establish communication between any desired number of the carbureting chambers and the mixing chamber, a second valve controlling the air inlets to the mixing chamber, and a suction-operated throttle controlling the mixture outlet from the mixing chamber.

3. In a carbureter for an internal combustion engine, the combination of a mixing chamber having a mixture outlet and a plurality of carbureting chambers disposed at different points along its length, a valve free to slide in the mixing chamber to establish communication between any desired number of the carbureting chambers and the mixing chamber, and a suction-operated throttle controlling the outlet from the mixing chamber.

4. In a carbureter for an internal combustion engine the combination of, a plurality of fuel jets, a mixing chamber having an outlet to the engine, a plurality of air-inlet channels whereof different channels are in communication with different jets, a plurality of auxiliary air-inlet orifices situated opposite the main air-inlet orifices, a valve for the mixing chamber that can be moved varying distances to uncover a greater or less number of the channels, a suction operated throttle controlling the outlet from the mixing chamber to the engine, and a valve adjustable for controlling the degree of opening of the auxiliary air inlet orifices, substantially as set forth.

5. In a carbureter for an internal combustion engine, the combination of a mixing chamber having a mixture outlet and a pocket whose longitudinal axis is transverse to the direction of said outlet, a plurality of carbureting chambers that communicate with the mixing chamber, an adjustable valve controlling the communication between the carbureting and mixing chambers, and a suction-operated throttle valve mounted in said pocket of the mixing chamber and adapted to obstruct the outlet from such chamber.

[Claims 6 to 8 not printed in the Gazette.]

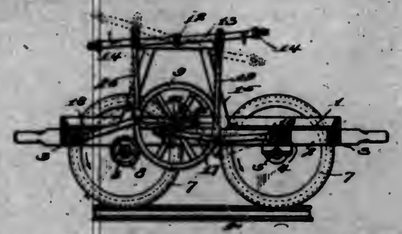
1,018,263. SPLIT PULLEY. JOHN J. NOVITSKI, Oshkosh, Wis. Filed Feb. 11, 1911. Serial No. 607,965. (Cl. 64—18.)

1. A band pulley having a portion of the hub opening formed with longitudinal ribs and another portion with circumferential ribs, said ribs having biting edges to engage the pulley shaft and prevent circumferential and longitudinal slipping of the pulley on its shaft.

2. A band pulley having one-half of its hub opening formed with longitudinal ribs and having the other half provided with circumferential ribs, said ribs terminating in edges to bite into the pulley shaft and prevent both longitudinal and circumferential slipping of the pulley.

3. A band pulley formed of sections, clamp members applied to the hub elements of each of the sections, one of the clamp members having its shaft gripping surface formed with longitudinal ribs and the other clamp member having its shaft gripping surface formed with circumferential ribs, said ribs terminating in edges which bite into the pulley shaft and prevent longitudinal and circumferential slipping of the pulley thereon.

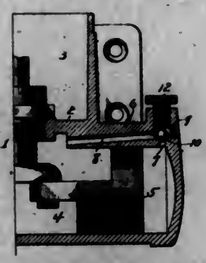
1,018,264. HAND-CAR. DAVID LAFAYETT PALMER, Worthington, Fla. Filed Oct. 23, 1911. Serial No. 656,260. (Cl. 105—196.)



1. In a hand car, the combination of rotatable wheeled axles one of which carries a pinion, a crank shaft provided with a pair of oppositely projecting cranks and having a spur gear thereon meshing with the said pinion, opposite sets of intermediately jointed levers having their inner members attached to the cranks and their outer members fulcrumed on portions of the car body, a rocking hand lever having hand bars at its opposite ends, and connecting bars depending from the hand lever and attached at their lower ends to the intermediate joints of the sets of levers.

2. In a hand car, the combination of rotatable wheeled axles one of which carries a pinion, a crank shaft provided with a pair of oppositely projecting cranks and having a spur gear thereon meshing with the said pinion, opposite sets of intermediately jointed levers having their inner members attached to the cranks and their outer members fulcrumed on portions of the car body, a rocking hand lever having hand bars at its opposite ends, and connecting bars attached to the hand lever on opposite sides of the center of the latter and depending to and movably connected at the intermediate joints of the sets of levers, the one connecting bar being longer than the other.

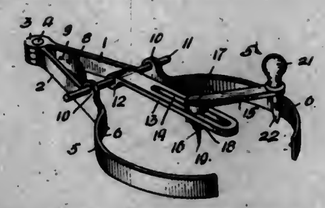
1,018,265. VALVE FOR DOOR-CHECKS. MALCOLM PETERSON, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 4, 1911. Serial No. 618,948. (Cl. 16—88.)



The combination with a liquid chamber, a piston therein, a by-pass in the top wall of said chamber and communicating with the latter in rear of the piston, and a port connecting said by-pass and the cylinder in front of the piston, of a vertically movable gravity ball valve for normally closing the upper end of said port, and a screw stem mounted in the wall of the cylinder above and in the plane of the ball valve, and adapted by its engagement with said valve to control the position of the latter with relation to its seat while the piston is moving, the said stem being disconnected from the valve.

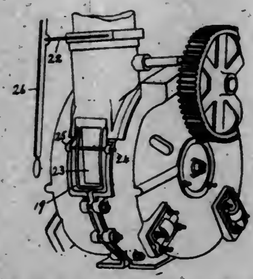
1,018,266. CAN-OPENER. JOSEPH ALEXANDER POLAKOVICH, New Brighton, Pa. Filed June 24, 1911. Serial No. 635,077. (Cl. 30—3.)

1. A can opener comprising a pair of arms pivotally connected at one end and terminating at their other ends in curved can gripping jaws, apertured lugs carried by said arms adjacent the gripping jaws, a rod loosely received in said apertured lugs, a slotted support secured at one end to said rod, a lever slidably supported at its inner end in the slotted portion of said support, a depending pin carried by the inner end of said lever for engagement in the cap top, and a depending cutting blade carried by the outer end of said lever.



2. In a can opener, a pair of arms constituting handles pivoted together at one end, curved gripping jaws formed integral with the other ends of said arms and provided with can gripping means on their inner faces, a spring between the arms normally tending to hold the gripping jaws in open position, apertured lugs carried by said arms on the upper edges thereof, a rod loosely received in said lugs, a support fixed at one end on said rod and provided with a longitudinal slot, a lever slidably mounted at its inner end in said slot and having a depending pin for engagement in the top of a can, a handle carried by said lever, and a cutter depending from the lever at the outer end thereof.

1,018,267. ROTARY PRESS. CARL RACH, Stapleton, N. Y. Filed Mar. 18, 1911. Serial No. 615,245. (Cl. 100—38.)



1. A rotary press of the character described having a disk with channeled face, slide-ways on said face and a series of segmental perforated screens confined in said slide-ways, for the purpose specified.

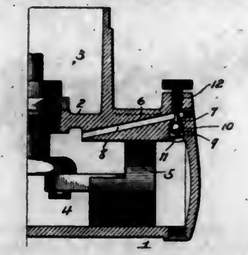
2. A rotary press of the character described having a disk with channeled face, slide-ways on said face and a series of segmental perforated screens confined in said slide-ways, in combination with a series of segmental arc pieces detachably secured to the periphery of the disk and serving to confine said segmental screens in position.

3. A rotary press of the character described having a disk with channeled face, slide-ways on said face and a series of segmental perforated screens confined in said slide-ways, in combination with a casing surrounding said disk and provided with a port through which one of said screens may be readily removed.

1,018,268. VALVE MECHANISM FOR DOOR-CHECKS. JOSEPH C. REGAN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 6, 1911. Serial No. 619,427. (Cl. 16—88.)

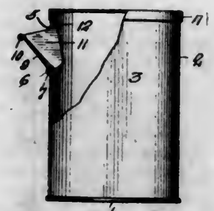
1. The combination with a liquid chamber, a piston therein, a passage in the wall of said chamber and com-

municating with the latter in rear of the piston and a port connecting said passage and liquid chamber in front of the piston and having a seat therein for the valve, of an unsupported ball valve located in a position to close the port and movable away from its seat by gravity, and a valve stem disconnected from the valve and adapted to control the position of the valve relative to its seat whereby the escape of the liquid may be regulated and controlled.



2. The combination with a liquid chamber, a piston therein, a passage in the wall of said chamber, and communicating with the latter in rear of the piston, a port connected with said passage and a compression chamber connecting the port and liquid chamber in front of the piston, of an unsupported ball valve located within said compression chamber for regulating the flow of liquid through said port, and a valve adjusting stem disconnected from the valve.

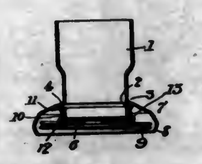
1,018,269. DISPENSING-BOX. ROY R. RINGER, Pittsburgh, Pa. Filed Oct. 27, 1911. Serial No. 657,110. (Cl. 221—11.)



A dispensing box comprising an oval-shaped body portion having a removable lid, a closed bottom and further having a dispensing opening in the upper portion of one of its sides, a spout comprising a front conforming in contour to the shape of a side of said body and having its lower end hinged at the lower edge of said opening and its upper end bent outwardly to provide a finger piece, said spout further including a pair of triangular-shaped side walls carried by and projecting inwardly from the sides of said front, and projections carried by the upper inner corners of said walls and capable of engaging the material bordering upon the upper edge of said opening for limiting the opening movement of said discharge spout, said body having the material bordering upon the vertical edges of the opening pressed inwardly to frictionally engage said side walls whereby said spout can be maintained in an adjusted position to regulate the discharge of the contents of the box.

1,018,270. SHADE-HOLDER ATTACHMENT FOR ELECTRIC-LIGHT SOCKETS. PATRICK H. ROBINSON, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Nov. 29, 1911. Serial No. 663,043. (Cl. 240—114.)

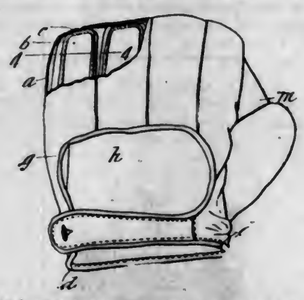
1. A shade holder attachment for electric light sockets and other objects, comprising a spring collar adapted to be snapped onto the socket shell and provided with a screw-threaded portion, a shade-holding ring having an inner introverted flange provided with a rabbet to receive and engage the spring collar, and a nut adapted to engage the screw-threaded portion of the collar to retain the shade-holder ring and collar in engaged position with relation to each other and upon the supporting shell.



2. A shade-holder attachment, comprising essentially a spring collar grooved and slitted at one end and having its other end externally screwthreaded, a shade-holding ring having a rabbeted flange, and a nut adapted to be screwed on to the screw-threaded end of the collar and also to engage the ring when these parts are assembled and also to retain them upon an object when applied to such object.

3. In a shade-holder attachment, a spring collar adapted to be sprung into engagement with the article to which it is to be attached, a shade-holding ring having an introverted flange which is rabbeted to conform to the collar and prevent the collar from springing when the two are assembled, and means to retain the collar and ring in engagement when assembled and permit the ring to turn upon the collar in a swiveling manner.

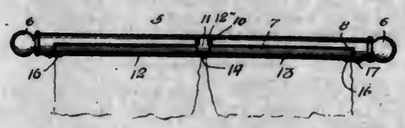
1,018,271. BASE-BALL MITT OR GLOVE. BURT T. ROGERS, Springfield, Mass., assignor to Victor Sporting Goods Company, Springfield, Mass., a Corporation. Filed Oct. 29, 1908. Serial No. 460,054. (Cl. 2—195.)



1. A hand covering comprising a fingered padded glove member and an inclosing casing therefor of flexible material, the fingers of the glove member being secured to the casing only at the tips of the fingers with the wrist portion of the gloved member secured to the wrist portion of the casing.

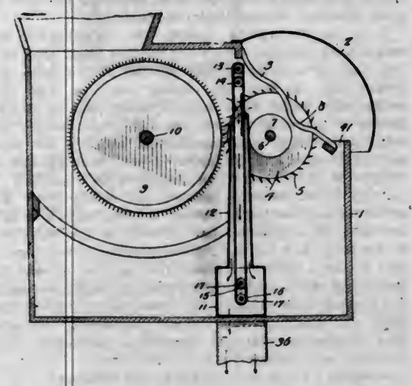
2. A hand-covering comprising a fingered glove member and an inclosing casing therefor of flexible material, the glove member being secured at its extremities only to said casing.

1,018,272. CURTAIN-FIXTURE. ALICE I. ROSS, Derry, Pa. Filed Sept. 28, 1911. Serial No. 651,691. (Cl. 156—19.)



A curtain pole comprising a body portion having its lower part cut away to provide a longitudinally extending seat terminating at a point removed from each end of said body portion, thereby providing a pair of shoulders, a longitudinal rib depending from the inner wall of said seat and extending from shoulder to shoulder, a clamping member formed of a pair of sections having their opposing ends hinged together, said sections opening outwardly and each provided with a centrally disposed longitudinally extending groove, said grooves being in longitudinal alinement and adapted to receive said rib, said sections abutting against said shoulders when the rib is mounted in said grooves, a pair of flanged holders, each secured at one side of said body portion centrally thereof and registering with the inner wall of said seat, retaining members mounted in said holders and capable of shifting downwardly to engage the front and rear of the section of the clamping member for securing the central portion of the latter in position, and pivoted retaining members secured to the ends of said body portion and capable of being shifted to engage the ends of the clamping member for retaining it in position.

1,018,273. GIN ATTACHMENT. EDWARD A. ROZIER, Sr., Sparta, Ga., assignor to Ella Lou Rozier, Sparta, Ga. Filed June 23, 1911. Serial No. 634,903. (Cl. 13—9.)



1. In a cotton gin, the combination with the saws, and the rotating brush, of a receptacle having an outlet arranged below and between the saws and the said brush, said receptacle having a tube extending upwardly between each adjacent pair of saws above the axis of the saws, a pair of vertically alined parallel shafts above the tubes, a pair of vertically alined parallel shafts in the receptacle below the tubes, a series of toothed wheels on each shaft, the wheels of each member of each pair being arranged alternately with respect to the wheels on the other member of the pair, and in register with the wheels of the corresponding shaft of the other pair, an endless belt supported on each registering pair of wheels, each belt comprising spaced superposed flexible metallic belts, a belt of fabric material between the said belts, bristles arranged transversely of one face of the last named belt and extending beyond the edges of the belts on both sides, eyelets connecting the belts at spaced intervals and engaging the teeth of the wheels, the ends of the bristles bearing against the edge of a saw at each side, means for moving the belts, and a stationary brush secured to the top of each tube, each brush comprising a holder arranged transversely of the tube, a strip doubled upon itself and having its ends received in the holder, and bristles between the doubled portion of the stripe, and means for drawing a current of air through the tubes and into the receptacle.

2. In a cotton gin, the combination with the saws, and the rotating brush, of a receptacle having an outlet arranged below and between the saws and the said brush, said receptacle having a tube extending upwardly between each adjacent pair of saws above the axis of the saws, a pair of vertically alined parallel shafts above the tubes, a pair of vertically alined parallel shafts in the receptacle below the tubes, a series of toothed wheels on each shaft, the wheels of each member of each pair being arranged alternately with respect to the wheels on the other member of the pair, and in register with the wheels of the corresponding shaft of the other pair, an endless belt supported on each registering pair of wheels, each belt comprising spaced superposed flexible metallic belts, a belt of fabric material between the said belts, bristles arranged transversely of one face of the last named belt and extending beyond the edges of the belts on both sides, eyelets connecting the belts at spaced intervals and engaging the teeth of the wheels, the ends of the bristles bearing against the edge of a saw at each side, means for moving the belts, and a stationary brush secured to the top of each tube, and means for drawing a current of air through the tubes into the receptacle.

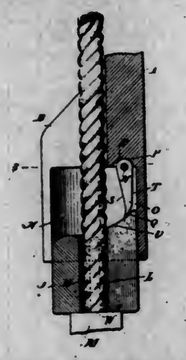
3. In a cotton gin, the combination with the saws, and the rotating brush, of a receptacle having an outlet arranged below and between the saws and the said brush, said receptacle having a tube extending upwardly between each adjacent pair of saws above the axis of the saws, a pair of vertically alined parallel shafts above the tubes, a pair of vertically alined parallel shafts in the receptacle below the tubes, a series of toothed wheels on each shaft, the wheels of each member of each pair being arranged alternately with respect to the wheels of the other member of the pair, and in register with the wheels of the corresponding shaft of the other pair, an endless belt supported on each registering pair of wheels, each belt comprising spaced superposed flexible metallic belts, a belt of fabric material between the said belts, bristles arranged transversely of one face of the last named belt and extending beyond the edges of the belts on both sides, eyelets connecting the belts at spaced intervals and engaging the teeth of the wheels, the ends of the bristles bearing against the edge of a saw at each side, means for moving the belts, and a stationary brush secured to the top of each tube.

4. In a cotton gin, the combination with the saws, and the rotating brush, of a receptacle having an outlet arranged below and between the saws and the said brush, said receptacle having a tube extending upwardly between each adjacent pair of saws above the axis of the saws, a pair of vertically alined parallel shafts above the tubes, a pair of vertically alined parallel shafts in the receptacle below the tubes, a series of toothed wheels on each shaft, the wheels of each member of each pair being arranged alternately with respect to the wheels of the other member of the pair, and in register with the wheels of the corresponding shaft of the other pair, an endless belt supported on each registering pair of wheels, each belt having openings for engagement by the teeth of the wheels and having bristles extending laterally from each side edge and engaging the edge of a saw, means for moving the belts, and a stationary brush at the top of each tube, said brushes having laterally extending bristles engaging the teeth of the saws at each side of each tube, and means for drawing a current of air through the tubes into the receptacle.

5. In a cotton gin, the combination with the saws, and the rotating brush, of a receptacle having an outlet arranged below and between the saws and the said brush, said receptacle having a tube extending upwardly between each adjacent pair of saws above the axis of the saws, a pair of vertically alined parallel shafts above the tubes, a pair of vertically alined parallel shafts in the receptacle below the tubes, a series of toothed wheels on each shaft, the wheels of each member of each pair being arranged alternately with respect to the wheels of the other member of the pair, and in register with the wheels of the corresponding shaft of the other pair, an endless belt supported on each registering pair of wheels, each belt having openings for engagement by the teeth of the wheels and having bristles extending laterally from each side edge and engaging the edge of a saw, means for moving the belts, and a stationary brush at the top of each tube, said brushes having laterally extending bristles engaging the teeth of the saws at each side of each tube.

[Claims 6 to 16 not printed in the Gazette.]

1,018,274. CABLE AND WIRE CUTTER. WALTER J. SHEEHAN and JOHN H. GILBERTSON, Coalinga, Cal.; said Gilbertson assignor to said Sheehan. Filed Apr. 3, 1911. Serial No. 618,529. (Cl. 166—3.)

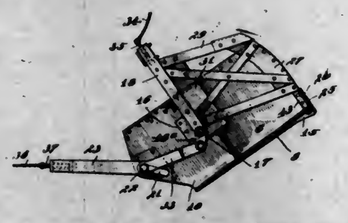


1. A wire rope cutter, comprising a body member having a recess therein, a block within the recess, the body member being also provided with a smaller recess communicating with the first-named recess, a knife member mounted within the second-named recess, with its end portion in engagement with the bottom of the said recess, whereby when the block member is brought into engagement with the knife in cutting a cable extending through the body member, the pressure is transmitted directly to the body member.

2. A wire cutter, comprising a body member having a recess in one end thereof, a block member movably mounted within the recess and having a curved upper portion, the body member being also provided with a smaller recess at the bottom of the first-named recess, a knife member pivoted to the body member, with its end portion adjacent the pivot in engagement with the body member at the bottom of the said second recess.

3. A wire cutter comprising a body member having an upwardly extending portion adapted to engage a sinker bar, the body member being provided with a recess, a block movable within the said recess, means being provided for guiding the block in its movement, the body member being also provided with a smaller recess at the bottom of the first-mentioned recess, a knife pivoted to the body member within the said smaller recess, the end portion of the knife adjacent the pivot being in engagement with the body member whereby as the block is moved the knife will be brought into engagement with the rope or cable passing therethrough, thereby severing the rope or cable.

1,018,275. EXCAVATOR-BUCKET. EMILE R. SHNABLE, Chicago, Ill., assignor to Shnable & Quinn, Chicago, Ill., a Copartnership. Filed Apr. 29, 1909. Serial No. 492,876. (Cl. 37—54.)



1. In an excavator bucket, the combination with a bucket-body having a forward cutting edge and an open rear end, of a closure for said rear end mounted on said bucket-body, a draft-member connected to the forward portion of said bucket-body above the center of gravity of the latter, and means connecting said draft-member and closure to hold the latter in closed position under pull on said draft member, substantially as described.

2. In an excavator bucket, the combination of a bucket-body having a forward cutting edge and an open rear end, a bucket-supporting member to which said bucket-body is pivoted, a closure on said supporting member for the rear end of said bucket-body, a draft member connected with said supporting-member and said bucket-body above the center of gravity of the latter and adapted under pull on said draft member to hold the loaded bucket-body in closed relation to said closure and permitting the bucket-body to turn on its pivots to dump its contents upon releasing the pull on the draft member, substantially as described.

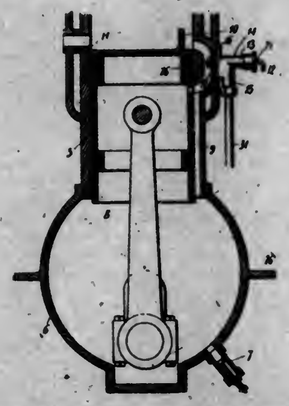
3. In an excavator bucket, the combination of a bucket-body having a forward cutting edge and an open rear end, a bucket-supporting member to which the sides of said bucket-body are pivoted, a closure for the rear end of said bucket-body rigidly affixed on said supporting member, and a draft member connected with said supporting member and said bucket-body above the center of gravity of the latter, said draft member under pull thereon acting to hold the loaded bucket-body in closed relation to said closure and permitting the bucket-body to turn on its pivots to dump its contents upon releasing the pull on the draft member, substantially as described.

4. In an excavating bucket, the combination with a bucket-body having a forward cutting edge and an open rear end, of a hoisting bail pivoted to the sides of said bucket-body, a door for closing the rear end of said bucket-body rigid with said hoisting bail, a draft-yoke having a lost-motion connection to the forward end of said bucket-body, and connections between the arms of said draft-yoke and the arms of said hoisting bail below the pivots of the latter, substantially as described.

5. In an excavating bucket, the combination with a bucket-body having a forward cutting edge and an open rear end, of a hoisting bail pivoted to the sides of said bucket-body and having rigid depending extensions below said pivots, a door for closing the rear end of said bucket-body rigid with said hoisting bail, a draft-yoke having a lost-motion connection to the forward end of said bucket-body, and links pivoted to and connecting the arms of said draft-yoke and the depending extensions of said hoisting bail, substantially as described.

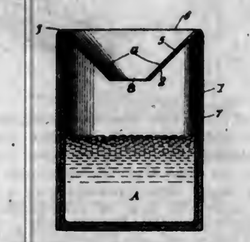
[Claims 6 to 10 not printed in the Gazette.]

1,018,276. FUEL-INJECTOR. EDWARD M. SMITH, Fall River, Mass. Filed July 20, 1909. Serial No. 508,668. (Cl. 123—30.)



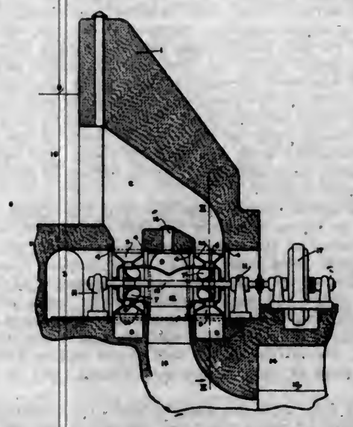
The combination of a cylinder having a piston therein, an air passage communicating with the cylinder and with a source of air supply, a fuel injector comprising a body having a threaded plug at its inner end adapted to be screwed into a wall of the air passage, said body being provided with a needle valve passage extending longitudinally therethrough, a valve in the passage, a fuel passage communicating with the valve passage, a cup on the inner end of said screw plug into which the valve discharges, and a deflector comprising a vertical wall spaced from and extending across the outer side of said cup, an inclined wall curved inwardly and downwardly from the upper edge of said vertical wall and overhanging said cup, said deflector being provided with end portions secured to the inner end of said screw plug.

1,018,277. ROACH-TRAP. HENRY N. SCHRE, Sparrows Point, Md. Filed May 16, 1911. Serial No. 627,474. (Cl. 43—22.)



An insect trap comprising an outer receptacle having a roughened outer surface, an inner receptacle removably fitted to the outer receptacle, a substantially inverted conical trapping member open at both ends and having its small end extended in the direction of the bottom of the said inner receptacle, the said trapping member being removably fitted to the inner receptacle, and a rough surface located at the intake end of the said trapping member.

1,018,278. HYDRAULIC-POWER PLANT. CHARLES O. TAPPAN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 13, 1911. Serial No. 602,387. (Cl. 138—5.)

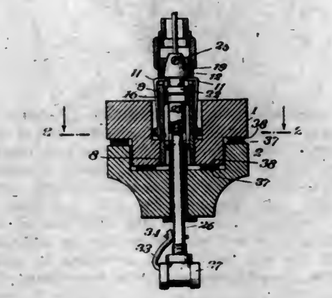


1. In a hydraulic power plant, the combination of a dam having a hydraulic conduit formed directly therein, a speed-gate in said conduit, a wheel within said speed-gate, and inspection passages formed in said dam separate from but adjacent to said conduit, said passages leading to both sides of said wheel and speed-gate.

2. In a hydraulic power plant, the combination of a dam, a conduit formed directly in said dam, two parallel flume-rings fastened in the structure of said dam, a speed-gate fastened to said rings and through which said conduit passes, a wheel within said gate, and an inspection passage adjacent each of said flume rings.

3. In a hydraulic power plant, the combination of a dam, a feeder therein, a spiral chamber formed in said dam and connecting to said feeder, a speed-gate leading from said spiral chamber, a wheel within said speed-gate, a draft tube formed in said dam, and a casing surrounding said wheel and connecting to said speed-gate and said draft tube and spaced from the structure of said dam to form a plurality of inspection chambers one on each side of said speed-gate.

1,018,279. AUTOMATIC HANGER. AMZIE A. TEETS, Brooklyn, N. Y. Filed July 8, 1911. Serial No. 637,572. (Cl. 240—66.)



1. In a hanger, the combination of a pair of separable members, one of said members having resilient means connected thereto and the other of said members having means for engaging said resilient means to secure said members together, and resiliently-controlled means for moving the engaging means of the said other member away from the resilient means of the first member when the said engaging means is released from the said resilient means.

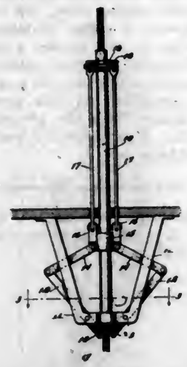
2. In a hanger composed of two separable members, an upper member having a tubular portion provided with a spring; a lower member provided with a stem adapted to engage said spring, and spring controlled means for releasing said stem.

3. In a hanger composed of two separable members having electric contacts on their meeting faces, an upper member having a tubular portion provided with a spring, a lower member provided with a headed stem, adapted to engage said spring, and spring controlled means for releasing said stem.

4. In a hanger composed of two separable members, an upper member having a tubular portion provided with a spring, a lower member provided with a tubular stem, a loose ring mounted exteriorly on said stem, a yoke having a ring-shaped top and mounted exteriorly on said stem below said ring, a plunger adapted to move up and down in said stem, a spring confined between said plunger and the head of said stem, and means uniting said yoke and said plunger.

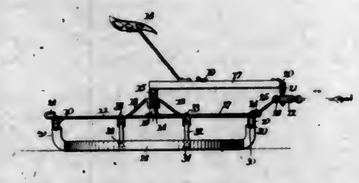
5. In a hanger composed of two separable members, an upper member having a tubular portion provided with a spring, a lower member provided with a tubular stem having a shape to be engaged by the said spring, a loose ring mounted exteriorly on said stem, a yoke having a ring-shaped top mounted exteriorly on said stem below the ring, a tubular plunger mounted to move up and down in said stem, said stem having longitudinal slots therein, means passing through said slots and connecting said tubular plunger to said yoke, and a spring confined between the end of said tubular plunger and the head of said stem.

1,018,280. BRAKE-CLUTCH. LUTHER T. TURNER, Artesia, N. Mex. Filed Sept. 13, 1911. Serial No. 649,021. (Cl. 187—44.)



In a device of the class described, a tubular casing, brake shoes mounted adjacent the lower end of the said casing, brake levers connected with the said brake shoes for operating the same, a sliding member mounted to encircle the said casing and slidable thereon, arms connecting the said brake levers with the said sliding member, bearings secured to the said sliding member, an operating lever and rods connecting the said operating lever with the said bearings for actuating the said brake shoes when the said operating lever is actuated.

1,018,281. BLADE-HARROW. CHARLES L. WALL, Lawrence, Kans. Filed May 4, 1911. Serial No. 624,924. (Cl. 55—22.)

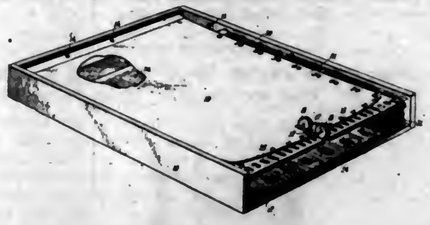


In a device of the class described, a symmetrical, reversible frame comprising longitudinal bars and fore and aft bars secured thereto, and a plurality of harrow blades, each having at the end an upwardly disposed arm rounded with a laterally disposed flange secured to one of the longitudinal bars of said frame, each of said blades being of round curvature throughout its entire length between said arms and having the lower blade edge lying in a horizontal plane.

1,018,282. DOOR-JACK. JACOB C. WARNER, Stockton, Cal. Filed Apr. 20, 1911. Serial No. 622,414. (Cl. 57—43.)

A device of the character described comprising a bottom member having a vertical post and side wings, a top member having wings, a pin disposed through said wings on said bottom and top members hinging them together, another cross pin on the wings of said upper plate, a locking bar normally resting on said last named pin and disposed over said vertical post in a manner obliquely with respect to the vertical plane of said post, and a spring wire finger member secured to said locking bar and projecting through said top plate as described.

1,018,283. DEPOSITORY AND ACCOUNTING DEVICE. FITZ MARTIN WHALLON, Mayville, N. Y. Filed June 30, 1910. Serial No. 569,825. (Cl. 211—37.)



1. A device of the class described comprising a plurality of sheets connected together at one end, the said sheets being adapted to hold therebetween other sheets of substantially the same size, the outer end of each of the first named sheets being provided with a number of alining punch holes, the first of said sheets having a maximum of said holes and each succeeding sheet being provided with a less number thereof, whereby as the second named sheets are withdrawn from between the first named sheets, the surface of the said first named sheets will become visible.

2. A device of the class described comprising a plurality of sheets connected together at one end, the said sheets being adapted to hold therebetween other sheets of substantially the same size, the outer end of each of the first named sheets being provided with alining punch holes, the first sheet having a maximum thereof and each succeeding sheet containing a less number, and a distinguishing mark carried by each of the said succeeding sheets, the said marks being disposed in the same plane as the holes on the preceding sheets, whereby as the second named sheets are withdrawn from between the first, the said mark on the succeeding sheets thereby becomes visible through the said holes on the preceding sheets.

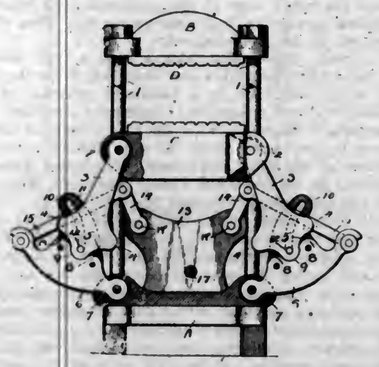
3. A device of the class described comprising a plurality of sheets connected together at one end, the outer end of the said sheets being provided with a number of alining punch holes, the first sheet having a maximum thereof and each succeeding sheet being provided with one less thereof, the succeeding sheets being each provided with a distinguishing mark, the said marks each lying in the same plane as the plane of some of the punch holes, whereby when the book is empty the said distinguishing mark will appear at the bottom of each of the said punch holes.

4. A device of the class described comprising a plurality of leaves connected together at one end, another end portion of the said leaves being provided with alining punch holes lying in the same vertical plane, the first sheet of the said device having a plurality of the said punch holes and each succeeding sheet being provided with one less thereof, whereby when other sheets which are adapted to be placed between the said sheets are withdrawn, the surface of the said sheets will be visible at the bottom of each of the said alining rows of punch holes.

5. In a device of the class described, the combination of a plurality of sheets connected together at one end thereof, another end thereof being provided with a number of punch holes, the top sheet having a maximum thereof and each succeeding sheet having one less thereof, the said punch holes lying in the same plane and being in register with each other, whereby the surface of a different sheet may be seen by looking through each of the punch holes on the said top sheet.

[Claims 6 to 12 not printed in the Gazette.]

1,018,284. BALING-PRESS. FRANK L. WHITE, Little Rock, Ark., assignor of three-tenths to Robert W. Griffith, Little Rock, Ark., and three-tenths to Robert B. Sutton, Winona, Miss. Filed June 18, 1910, Serial No. 567,729. Renewed May 23, 1911. Serial No. 629,061. (Cl. 100—9.)



1. In a baling press, the combination with a frame, of upper and lower platens, arms connected to the lower platen, levers connected to the frame, the faces of the arms and levers in free engagement with each other, forming a bearing to permit of a rocking action, and means connected to the levers for raising the platen.

2. In a baling press, the combination with a frame, of upper and lower platens, arms connected to the lower platen, levers connected to the frame, teeth on the arms and levers meshing to form a bearing, and means connected to the levers for raising the platen.

3. In a baling press, the combination with a frame, of upper and lower platens, arms connected to the lower platen, levers pivotally connected to the frame, the faces of the arms and levers in engagement with each other, forming a bearing to permit of a rocking action, crank shafts mounted on the frame, means connecting the levers to the crank shafts, gear wheels mounted on the crank shafts, and means for operating the gear wheels for actuating the arms and levers, whereby the platen is moved.

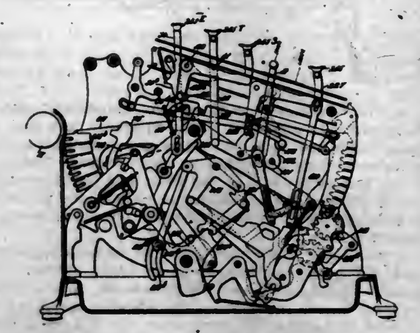
4. In a baling press, the combination with a frame, of platens, arms connected to one of the platens, levers connected to the frame, teeth on the arms and levers meshing for forming a bearing, links connected to the levers, and means engaging the levers for moving the platen.

5. In a baling press, the combination with a frame, of platens, arms connected to one of the platens, levers connected to the frame, teeth on the arms and levers meshing, links connected to the levers, crank shafts on the frame connected to the links, and means for operating the crank shafts for moving the platen.

1,018,285. ADDING AND LISTING MACHINE. NELSON WHITE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 29, 1909. Serial No. 499,139. (Cl. 235—60.)

1. In a machine of the character described, the combination of printing and accumulating mechanism comprising two sets of adding wheels and type carriers common thereto; controlling actuators for the wheels; devices for determining which set of wheels shall be active; a special type for designating items printed incidental to accumulation of corresponding amounts on one set of wheels; impression means coöperating with said special type; and means for disabling said impression means when the other set of wheels is accumulating amounts.

2. In a machine of the character described, the combination of printing and accumulating mechanism comprising two sets of adding wheels and type carriers common thereto; controlling actuators for the wheels; devices for determining which set of wheels shall be active; a special type for designating items printed incidental to accumulation of corresponding amounts on one set of wheels; a spring-actuated impression hammer for said special type; a detent normally restraining said hammer; means for displacing said detent when accumulating amounts on said one set of wheels; and means for disabling said displacing means when accumulating amounts on the other set of wheels.



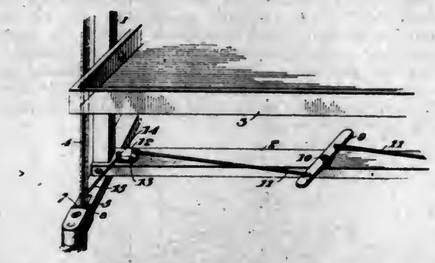
3. In a machine of the character described, the combination of printing and accumulating mechanism comprising two sets of adding wheels, amount type carriers common thereto, and spring-actuated impression hammers for the type carriers respectively; coöperatively related detents for said hammers; actuators for the wheels; controlling devices for determining which set of adding wheels shall be active; a special type for designating items printed incidental to accumulation of corresponding amounts on one set of wheels; a spring-actuated impression hammer for said special type; a detent for said hammer coöperatively related to the first mentioned detents; and means for suspending such coöperative relationship when accumulating amounts on the other set of wheels.

4. In a machine of the character described, the combination of printing and accumulating mechanism comprising two sets of adding wheels, amount type carriers common thereto, and spring-actuated impression hammers for the type carriers respectively; coöperatively related detents for said hammers; actuators for the wheels; controlling devices for determining which set of adding wheels shall be active; a special type for designating items printed incidental to accumulation of corresponding amounts on one set of wheels; a spring-actuated impression hammer for said special type; a detent for said hammer; a coupler between said detent and the adjacent detent of those first mentioned; and means for disabling said coupler when accumulating amounts on the other set of wheels.

5. In a machine of the character described, the combination of printing and accumulating mechanism comprising two sets of adding wheels, amount type carriers common thereto, and spring-actuated impression hammers for the type carriers respectively; coöperatively related detents for said hammers; actuators for the wheels; controlling devices for determining which set of adding wheels shall be active, including a manipulative lever; a special type for designating items printed incidental to accumulation of corresponding amounts on one set of wheels; a spring-actuated impression hammer for said special type; a detent for said hammer; and a coupler between said detent and the adjacent detent of those first mentioned, said coupler controlled by the aforesaid manipulative lever.

[Claims 6 to 41 not printed in the Gazette.]

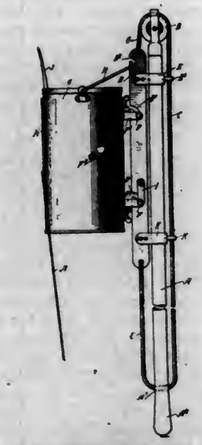
1,018,286. RELEASING DEVICE FOR SHOE RACKS OR CONVEYERS. FRANKLIN S. WILLIAMS, Bridgewater, Mass. Filed Apr. 8, 1910. Serial No. 554,242. (Cl. 211—14.)



1. The combination with a base, standards, trays or racks pivotally supported by the standards, and rods pivotally connected with the trays and terminating at their lower ends in spring-catches, of levers pivotally connected to the base of the rack or conveyer, said levers connected to one another, and to the catches whereby the latter may be simultaneously released when the levers are swung in one direction.

2. In a shoe rack or conveyer, the combination with a base, standards or posts, racks or trays pivotally connected between the posts or standards, rods pivotally connected to the racks, and terminating in spring-catches, of releasing mechanism comprising two bell-crank levers and an intermediate foot-lever, rods extending between said levers from opposite sides of the fulcrum of the foot-lever, and rods extending from the bell-crank levers to the catches, whereby the two catches are simultaneously operated to release the trays or racks.

1,018,287. FRUIT-PICKER. SAMUEL M. WORK, Indiana, Pa. Filed Oct. 4, 1911. Serial No. 652,758. (Cl. 56—99.)



1. A fruit picker, comprising a pole, a slide mounted for movement up and down on the said pole, and provided with notches, means for imparting an up and down movement to said slide, a fruit receiving receptacle provided with lugs for detachable engagement with the said notches, and a gravity latch member pivoted on said slide for engagement with one of said receptacle lugs, in order to removably secure the receptacle in engagement with the slide.

2. A fruit picker, comprising a pole, a fruit receiving receptacle mounted to slide up and down on the pole, and provided with a slot extending from the upper edge of the receptacle in a downward direction, the slot gradually enlarging toward said receptacle edge, prongs attached to the said receptacle at the side walls of the said slot, the upper ends of the prongs being curved outwardly and away from each other and extending a distance beyond the upper edge of the receptacle, and manually-controlled means for imparting an up and down sliding movement to the said receptacle.

3. A fruit picker, comprising a pole, a fruit receiving receptacle provided with a slot extending from the upper edge of the receptacle in a downward direction, a slide carrying the said receptacle, a manually-controlled knife comprising a single blade on the said receptacle and operating in conjunction with the said slot for cutting off the stem of the fruit, and manually-controlled means for imparting an up and down sliding movement to the said slide and the receptacle carried thereby.

4. A fruit picker, comprising a pole provided at its upper end with a pulley, a rope passing over the said pulley, a slide mounted to slide up and down on the said pole and having its ends connected with the said rope, and a fruit receiving receptacle detachably held on the said slide and provided with a slot extending from the upper edge of the receptacle downward, the slot gradually enlarging toward said receptacle edge, and prongs attached to the said receptacle at the side walls of the said slot, the upper ends of the prongs being curved outwardly and away from each other and extending upward a distance beyond the upper edge of the receptacle.

5. A fruit picker, comprising a pole provided at its upper end with a pulley, a rope passing over said pulley, a slide mounted to slide up and down on the said pole and having its ends connected with the said rope, a fruit receiving receptacle detachably held on the said slide and provided with a slot extending from the upper edge of the receptacle downward, the slot gradually enlarging toward said receptacle edge, prongs attached to the said receptacle at the side walls of the said slot, the upper ends of the prongs being divergently curved and extending a distance beyond the upper edge of the receptacle, a spring-pressed knife fulcrumed on the receptacle below the lower end of the said slot, and adapted to swing across the slot, an arm on the said knife, and an operating rope connected with the said knife arm.

[Claims 6 and 7 not printed in the Gazette.]

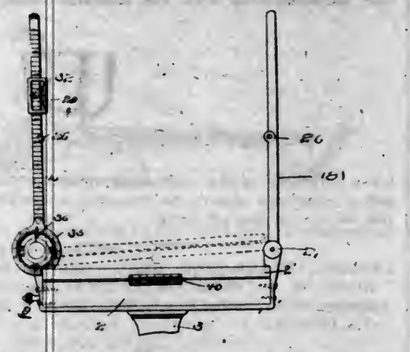
1,018,288. HOLDER FOR ERASERS. HENRY HERBERT YELF, Portsmouth, England. Filed Nov. 23, 1910. Serial No. 593,933. (Cl. 120—40.)

1. An eraser holder comprising a casing open at one end, an elastic eraser adjustably mounted therein, and having at one end a recess formed by resilient arms projecting from the eraser body, a member for advancing the eraser to a working position and releasably interlocking with said recess, and means for locking the same against backward movement.

2. An eraser holder comprising a casing open at one end, a longitudinally adjustable eraser, a shiftable slide having an interlocking connection with the eraser and provided with an external handle, said slide also being provided with a lock pin, and a spring held locking rack provided with an exteriorly exposed finger piece and whose teeth are adapted to engage the said lock pin of the slide.

1,018,289. ENGINEERING INSTRUMENT. DANIEL W. ADAMS, Glendale Springs, N. C. Filed Sept. 29, 1911. Serial No. 651,920. (Cl. 88—2.)

1. An engineering instrument comprising a compass provided with a graduated degree-circle and a pivoted magnetic needle coöperating therewith, and a base plate having a rectangular diagram inscribed within said circle and divided into a number of rectangular subdivisions.



2. An engineering instrument comprising a compass provided with a graduated degree-circle and a pivoted magnetic needle coöperating therewith, and a base plate having a rectangular diagram inscribed within said circle and divided into a number of rectangular subdivisions, said needle having a longitudinal edge in alinement with the pivot and the pointer thereof.

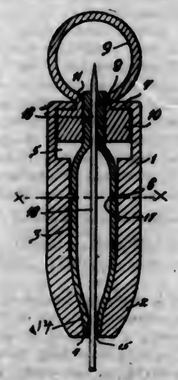
3. An engineering instrument comprising a compass provided with a graduated degree-circle and a pivoted magnetic needle coöperating therewith, and a base plate having a rectangular diagram inscribed within said circle and divided into a number of rectangular subdivisions, said needle having the alternate longitudinal edges upon opposite sides of the pivot in alinement with the pointers and the pivot.

4. An engineering instrument comprising a compass provided with a graduated degree-circle and coöperating pivoted magnetic needle, sight arms hinged to opposite sides of said compass, one of said arms being graduated and having a movable slide-frame carrying cross-hairs adapted to register with the graduations.

5. An engineering instrument comprising a compass provided with a graduated degree-circle and coöperating pivoted magnetic needle, sight arms hinged to opposite sides of said compass, one of said arms having reversely arranged sets of graduations and a centrally disposed sight line or hair, and a slide-frame movable along said graduated arm and carrying cross-hairs adapted to register with the graduations.

[Claims 6 to 8 not printed in the Gazette.]

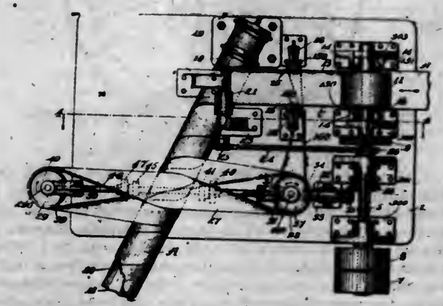
1,018,290. HAT-PIN-POINT PROTECTOR. LAURANCZ BARBALICZ, Cleveland, Ohio. Filed Mar. 14, 1911. Serial No. 614,379. (Cl. 24—155.)



1. A hat pin protector comprising a rotatable casing having a longitudinal bore, oppositely disposed teats carried by the walls of the bore of said casing, a head movably mounted in the upper end of said casing, and a guard connected to said head within the bore of said casing and having yieldable clamping arms adapted to be engaged by and forced toward each other by said teats thereby shifting said arms to clamp the end of the pin.

2. A hat pin protector comprising a head, a casing rotatably supported by said head, said casing having the bore thereof provided with oppositely disposed teats, a guard mounted in said head and adapted to receive the end of a hat pin, and yieldable clamping arms carried by said guard and extending in said casing and provided with openings adapted to normally receive the teats of said casing.

1,018,291. MACHINE FOR MAKING METAL TUBES. GEORGE W. BEADLE, Bayonne, N. J., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed May 9, 1911. Serial No. 626,104. (Cl. 113—35.)



1. In a tube forming machine the combination of means for feeding a strip out of which the tube is to be formed; means for turning over the edges of said strip; additional means for crimping and finishing said turned over edges; a mandrel around which said strip may be spirally wound; and a roller for pressing down said turned over edges, substantially as described.

2. In a tube forming machine the combination of means for feeding a strip out of which the tube is to be made; means for turning over the edges of said strip in opposite directions; grooved crimping rollers between which said turned over edges are forced; means for rotating said rollers; a mandrel around which said strip is wound; and means for pressing down said turned over edges on said mandrel, substantially as described.

3. In a tube forming machine the combination of means comprising a pair of rollers for feeding a strip out of which the tube is to be made; means comprising diagonally disposed rollers for turning over the edges of said strip in opposite directions; grooved crimping rollers between which said turned over edges are forced; means for rotating said rollers; a mandrel around which said strip is wound; and means comprising a roller for pressing down said turned over edges on said mandrel, substantially as described.

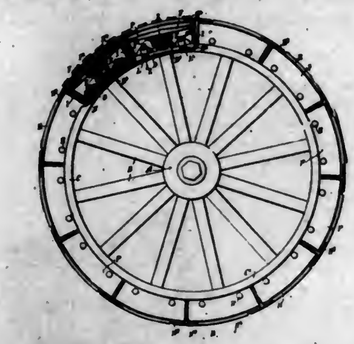
4. In a tube forming machine the combination of means for feeding a strip out of which the tube is to be formed; means for turning over the edges of said strip; a mandrel around which said strip may be spirally wound; a roller for pressing down said turned over edges, interlocking the same, and thereby forming the tube out of a single strip of material; and a belt encircling said mandrel for feeding said tube relatively to said mandrel, substantially as described.

5. In a tube forming machine the combination of means for feeding a strip out of which the tube is to be made; means for turning over the edges of said strip in opposite directions; grooved crimping rollers between which said turned over edges are forced; means for rotating said rollers; a mandrel around which said strip is wound;

means for pressing down said turned over edges on said mandrel; and a belt encircling said mandrel for moving the finished tube, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,018,292. WHEEL-TIRE. HERMAN LEO BIENER, New York, N. Y., assignor, by direct and mesne assignments, to Auto Sectional Leather Tire Company, New York, N. Y., a Corporation of New York. Filed July 14, 1910, Serial No. 571,945. (Cl. 152—8.)



1. A wheel tire made in sections arranged around the rim of the wheel, each section comprising a rim plate, a tread plate, a coil spring interposed between the said rim plate and the said tread plate at the middle thereof, a flexible inelastic connection between the rim and tread plates at the center of the plates, said connection extending through the spring, flexible inelastic connections between the ends of the said rim plate and tread plate, and means carried by the rim plate for detachably securing the section to the rim of a wheel.

2. A wheel tire made in sections arranged around the rim of the wheel, each section comprising a rim plate, provided with transverse guideways, a tread plate, resilient means interposed between the said rim plate and the said tread plate, pairs of fastening lugs mounted to slide in the guideways of the said rim plate and having outwardly extending flanges, and transversely extending screw rods each mounted to turn in one of the flanges and screwing in the other flange of a pair of lugs to move the latter into or out of engagement with the wheel rim flanges.

3. The combination with a wheel rim having inwardly extending side flanges, of a tire made in sections, arranged around the rim of the wheel, each section comprising a rim plate, a tread plate, resilient means interposed between the said rim plate and the said tread plate, pairs of fastening lugs mounted to slide transversely on the said rim plate for engaging and disengaging the wheel rim flanges, a screw rod engaging each pair of fastening lugs to move the latter transversely in and out of engagement with the wheel rim, a tread and a cover attached to the said tread and extending over the sides and ends of the section, and clamped between the said fastening lugs and the wheel rim flange.

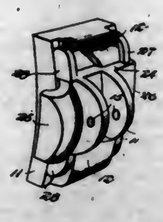
4. A wheel tire made in sections, each section consisting of a rim plate, a tread plate, a coiled spring interposed between the said plates at the center of length thereof, flexible inelastic connections between the ends of the said plates, a cushion on the tread plate, a tread on the cushion, a cover for the section secured at its center to the tread, and means carried by the rim plate for engaging the rim of a wheel to detachably secure the section and its cover to said rim.

1,018,293. MAGAZINE-PIPE. JOHN EDGAR BOYD, Dawson, N. Mex. Filed Dec. 3, 1910. Serial No. 595,448. (Cl. 131—12.)

In an article of the class set forth, a pipe bowl surrounded by a substantially cup-shaped magazine chamber, a closure for the magazine chamber, a closure for the pipe bowl, the bowl being provided with a plurality of openings communicating with the magazine chamber, the

lower extremity of the bowl being formed with a port and a removable closure for the port, substantially as and for the purpose set forth.

1,018,294. BRAKE-SHOE HEAD. IRA W. BURGESS, Minden, W. Va., assignor of one-half to James Howard, Minden, W. Va. Filed July 6, 1911. Serial No. 637,110. (Cl. 188—28.)



1. A brake shoe holder, comprising a head having a concaved face, an abutment flange at one longitudinal side edge thereof, a grooved car wheel flange engaging enlargement at the opposite longitudinal side edge thereof and a shoe removably fitted upon the head against the concaved face thereof and adapted to contact with the abutment flange at one side thereof and also with the flange of a car wheel at the opposite side thereof.

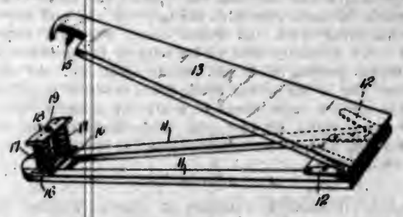
2. A brake shoe holder, comprising a head having a concaved face, an abutment flange at one longitudinal side edge thereof, a grooved car wheel flange engaging enlargement at the opposite longitudinal side edge thereof, a shoe removably fitted upon the head against the concaved face thereof and adapted to contact with the abutment flange at one side thereof and also with the flange of a car wheel at the opposite side thereof, and means on the shoe for holding it upon the head.

3. A brake shoe holder, comprising a head, a key receiving housing at one longitudinal side edge thereof, a shoe removably fitted upon the head and adapted for contact with the flange of a car wheel at one side thereof, a removable key fitted in the housing and adapted for contact with the shoe at the opposite side thereof, and a grooved car wheel flange engaging enlargement at the opposite side of the head.

4. A brake shoe holder, comprising a head, a key receiving housing at one longitudinal side edge thereof, a shoe removably fitted upon the head and adapted for contact with the flange of a car wheel at one side thereof, a removable key fitted in the housing and adapted for contact with the shoe at the opposite side thereof, a grooved car wheel flange engaging enlargement at the opposite side of the head, and an abutment flange on the head adjacent to the said enlargement and adapted for contact with the shoe at one side thereof.

1,018,295. IRONING-BOARD. JENNIE BURR, Matteawan, N. Y. Filed Mar. 21, 1911. Serial No. 615,821. (Cl. 68—1.)

In an ironing board, the combination of a base, a board body horizontally mounted at one end of the said base and adapted to fold thereon, a plurality of springs secured to the other end of the said base and extending upwardly therefrom, a lug secured to the outer end of the said board body and depending therefrom and an apertured latch member secured to the upper ends of the said springs, the lug on the said board body being adapted to be received in the aperture of the said latch member



to retain the outer end of the board body in engagement with the latch member.

1,018,296. AUTOMATIC SHEARING ATTACHMENT. EDWARD F. BUTLER, Cavendish, Vt. Filed Mar. 18, 1911. Serial No. 615,284. (Cl. 26—6.)

1. The combination with a shearing machine having a guide bar, over which is adapted to pass cloth, of shearing mechanism movably connected with said bar, means acted upon by the cloth and connected with said mechanism for automatically shifting the same away from such cloth when striking an obstruction therein, and means coöperative with said mechanism for holding it lifted for a predetermined period of time to permit the obstructing portion of such cloth to pass under the mechanism without the stopping of the machine.

2. The combination with a shearing machine having a cloth guiding bar, of cutting mechanism adapted for movement toward and away from said bar, mechanism acted upon by striking the obstructing portions in a piece of cloth traveling over the bar to automatically shift said cutting mechanism away from said bar, and means for balancing said mechanism to permit the obstructing portions of the cloth to pass under the cutting mechanism without the stopping of the machine.

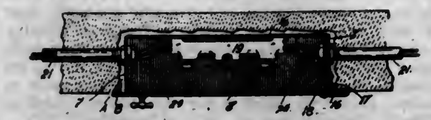
3. In an attachment of the class described, the combination with a shearing machine, of a guide bar supported upon said machine and over which is adapted to run cloth, a gage roller slidably supported by said bar and adapted for contact with such cloth, a swinging cutting mechanism supported by said machine and having connection with said gage roller, whereby on the displacement of the gage roller by contact with obstructing portions in the cloth, the said cutting mechanism will simultaneously move to enable the obstructing portions in the cloth to pass under the cutting mechanism without the stopping of the machine and counterbalancing means coöperative with the cutting mechanism for momentarily sustaining the latter elevated when raised.

4. In an attachment of the class described, the combination with a shearing machine, of a guide bar supported upon said machine and over which is adapted to run cloth, a gage roller slidably supported by said bar and adapted for contact with such cloth, a swinging cutting mechanism supported by said machine and having connection with said gage roller, whereby on the displacement of the gage roller by contact with obstructing portions in the cloth, the said cutting mechanism will simultaneously move to enable the obstructing portions in the cloth to pass under the cutting mechanism without the stopping of the machine, counterbalancing means coöperative with the cutting mechanism for momentarily sustaining the latter elevated when raised, and means for adjusting the cutting mechanism.

5. In an attachment of the class described, the combination with a shearing machine, of a guide bar supported upon said frame, and over which is adapted to run cloth, a gage roller slidably supported by said bar and adapted for contact with such cloth, swinging cutting mechanism supported by said frame and having connection with said gage roller, whereby on the displacement of the gage roller, the said cutting mechanism will simultaneously move therewith, means for adjusting the cutting mechanism toward and away from the said bar, and weight means coöperative with the cutting mechanism for counter-balancing the same.

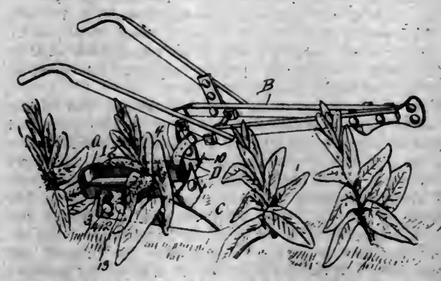
[Claims 6 and 7 not printed in the Gazette.]

1,018,297. SWITCH AND CUT-OUT BOX. WILLIAM P. CARSTARPHEN, Jr., Denver, Colo. Filed May 7, 1909. Serial No. 494,575. (Cl. 247—12.)



In combination, a box for concealing electrical devices, the said box being set in a recess formed in a wall so that its outer edges shall be flush with the surface of the said wall, a lid applied to the said box and projecting beyond the edges thereof on all sides far enough to cover the rough edges of the wall, the body of the box having a right-angle bracket, one member of the bracket being secured to the wall of the box on one side, and the other member projecting beyond the same, flush with the outer surface of the wall to form a hinge member, the lid having a coöperating hinge member, the axis of the hinge being located just beyond the projecting portion of the lid and extending parallel with the wall and just outside the said wall, whereby as the lid swings outwardly from the plane of the wall during its opening movement, its projecting portion, on the hinge side, swings free of the wall, substantially as described.

1,018,298. CULTIVATOR-FENDER. WILLIAM PRESTON CHEATHAM, Mackville, Ky. Filed Mar. 21, 1911. Serial No. 615,868. (Cl. 97—13.)



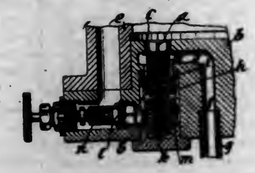
1. In a fender attachment, a yoke constituting a frame and having inner and outer arms, clamping means associated with the inner arm, bolts extending through the outer arm, nuts upon said bolts engaging the inner and outer faces of said outer arm, a fender blade pivoted upon one of said bolts and adjustably connected with the other bolt, and means for securing the fender blade in adjusted position upon the bolts.

2. In a fender attachment, a yoke constituting a frame and having inner and outer arms, clamping means associated with the inner arm, fender carrying members extending through the outer arm and adjustably connected therewith, a reversible fender blade pivoted upon one of said members and adjustably engaging the other member, and means for securing the fender blade in adjusted position.

1,018,299. COMBINATION COAT AND PANTS HANGER. FRANK A. COLLIER, Galveston, Tex. Filed Nov. 16, 1910. Serial No. 592,728. (Cl. 211—13.)

In a device of the class described, a wire hook, wire arms connected with the hook and extending in diametrically opposite directions therefrom, each of said wire arms comprising a single element and diverging gradually from their point of connection with the hook and terminating in loops, a longitudinally extending brace or reinforcing member also constructed of wire, said member having its extremities formed with loops, and a binding adapted to be wound around the loops of the arms and the loops of the brace member to connect the same together.

1,018,300. CONDENSING STEAM-ENGINE. JOHN DAVIDSON, Pendleton, England. Filed June 12, 1911. Serial No. 632,740. (Cl. 121—117.)

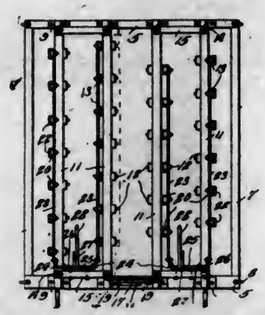


1. In a condensing steam engine, a cylinder end having an outlet port communicating with the exhaust pipe, two spring influenced valves of varying diameter in alinement with each other and the said port, the smaller of the said valves being adapted to establish and cut off communication between the cylinder and the exhaust pipe and the larger valve between the cylinder and the steam chest of the engine and normally held to its seat by the pressure of live steam from the steam chest and by its spring when the live steam is cut off and the smaller valve opens to drain the cylinder, all combined substantially as and for the purpose specified.

2. In a condensing steam engine, a cylinder end having an outlet port communicating with the exhaust pipe, two valves of varying diameter in alinement with each other and the said port, a chamber in connection with the larger of the said valves communicating with the steam chest and springs pressing the said valves to their seats, the smaller of the said valves being adapted to establish and cut off communication between the cylinder and the exhaust pipe and the larger valve between the cylinder and steam chest and normally held to its seat by the pressure of live steam passing from the steam chest into the said chamber and by its spring when the live steam is cut off and the smaller valve opens to drain the cylinder, all combined substantially as and for the purpose specified.

3. In a condensing steam engine, a cylinder end having an outlet port communicating with the engine exhaust pipe, two spring influenced valves of varying diameters in alinement with each other and the said port, the smaller of the said valves being adapted to establish and cut off communication between the cylinder and the exhaust pipe and the larger valve between the cylinder and steam chest, a chamber in connection with the larger of the said valves communicating with the steam chest, the said larger valve being normally held to its seat by the pressure of live steam passing from the steam chest into the said chamber and by its spring when the live steam is cut off and the smaller valve opens to drain the cylinder, and a screw-down valve between the said chamber and the steam chest, all combined substantially as and for the purpose set forth.

1,018,301. HARROW. GEORGE E. DAVIS, Visalia, Cal. Filed Mar. 7, 1911. Serial No. 612,736. (Cl. 55—103.)

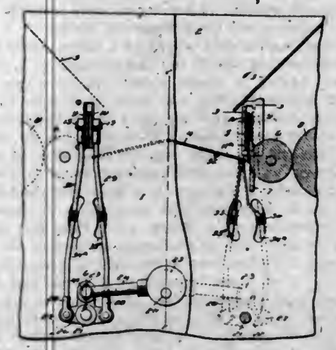


1. A harrow, comprising a frame, bearings fixed to the upper face of the frame at opposite ends thereof, rocking beams journaled in said bearings, ears rising from opposite ends of the beams, throw links pivoted to the ears for connecting the beams in pairs, harrow teeth pivoted at intervals to the beams and having extensions rising above the same, brackets connected to the throw links at one end of the frame, shifting bars connected with the extensions of the harrow teeth, cranks journaled in said brackets and having their ends pivotally connected to the shifting bars, toothed segments formed on the brackets, throw levers fixed to the cranks and having locking means engageable with the toothed segments for holding the harrow teeth in adjusted position laterally of the frame, and means for rocking the pairs of beams in unison at right angles to the lateral adjustment of the harrow teeth.

2. A harrow, comprising a frame, bearings fixed to the upper face of the frame at opposite ends thereof, rocking beams journaled in said bearings, ears rising from opposite ends of the beams, throw links pivoted to the ears for connecting the beams in pairs, harrow teeth pivoted at intervals to the beams and having extensions rising above the same, brackets connected to the throw links at one end of the frame, shifting bars connected with the extensions of the harow teeth, cranks journaled in said brackets and having their ends pivotally connected to the shifting bars, toothed segments formed on the brackets, throw levers fixed to the cranks and having locking means engageable with the toothed segments for holding the harrow teeth in adjusted position laterally of the frame, a segment fixed to the frame between the pairs of rocking beams, a throw lever pivoted to the last-named segment and having means for locking engagement therewith, and oppositely extending links connected with the last-named throw lever and also pivoted to the throw links adjacent thereto, so that the rocking beams may be shifted at right angles to the lateral adjustment of the harrow teeth.

1,018,302. ROLLER COTTON-GIN. FRANCIS A. DIFFENDERFER, Brooklyn, N. Y., assignor, by mesne assignments, to Mary E. Diffenderfer, Brooklyn, N. Y. Filed Nov. 8, 1910. Serial No. 591,230. (Cl. 13—7.)

1. In a roller cotton gin, a ginning roll, a doctor-blade arranged on one side of the drawing-in portion of the roll, cleaning combs arranged on the opposite side of the drawing-in portion of the roll, and movable on their working action toward the blade and across said portion of the roll, said combs being arranged in sets, with the combs of each set coupled to move to like degrees in unison, and means for simultaneously reciprocating the sets of combs to like degrees in opposite directions, to correspondingly advance one set of combs and retract the other set of combs.



2. In a roller cotton gin, a ginning roll, a doctor-blade disposed on one side of the drawing-in portion of the roll, a series of combs disposed on the opposite side of the drawing-in portion of the roll and arranged end to end in longitudinal alinement, said combs being coupled to provide oppositely movable sets coöperating with said roll and blade, the combs of one set alternating in arrangement with the combs of the other set, and means for simultaneously reciprocating said sets of combs in opposite directions, to advance one set and retract the other set.

3. In a roller cotton gin, a cleaner comprising a bar or plate carrying spaced combs, a second bar or plate carrying spaced combs arranged between and alternating with the first-named combs, and means for simultaneously reciprocating said bars in opposite directions, to advance one set of combs and retract the other.

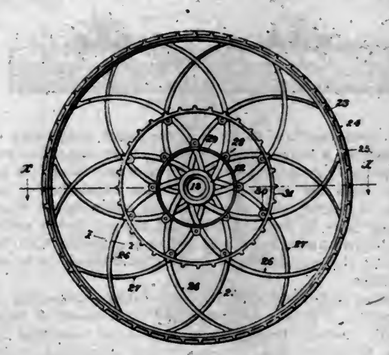
4. In a roller cotton gin, a cleaner comprising a longitudinal series of combs arranged end to end in sets and all movable in the same direction for a working action, bars carrying said sets of combs, and means connected with said bars for simultaneously moving one set of combs in the direction of their working movement and the other set of combs to an equal degree in the direction of their return movement, and vice versa.

5. In a roller cotton gin, a cleaner comprising a series of combs arranged in alinement with each other and all movable in the same direction for working action, said combs alternating in separate sets with the combs of each set coupled to move to like degrees in unison, and means for simultaneously reciprocating the combs of the different sets to like degrees in opposite directions, to advance one set of combs and retract the other set of combs.

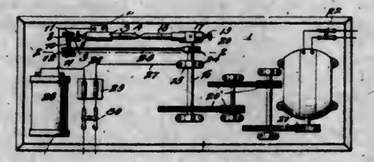
[Claims 6 to 23 not printed in the Gazette.]

1,018,303. METALLIC VEHICLE-WHEEL. HEDLEY JOHN DONAHOE, Chicago, Ill., assignor of one-half to Theodore C. Tiedebohl, Chicago, Ill. Filed Oct. 9, 1911. Serial No. 653,595. (Cl. 21—69.)

A vehicle wheel formed entirely of one piece of cast metal, comprising, a fixed rim or tread, a double series of spokes, and a central hub, one series of said spokes being curved in one direction and the other series of spokes being curved in the opposite direction, said spokes intersecting one another at a multiplicity of points, said spokes slightly overlapping each other at the hub and then gradually merging into each other and finally all terminating at the rim in the same plane, whereby said spokes are integrally connected to each other at each intersecting point, there being at the angles of the intersecting spokes punctured lugs constructed to receive removable attachments, as described.



1,018,304. FOG-SIGNAL LIGHT. ROY C. DOUGLAS, Oakland, Cal. Filed Oct. 13, 1910. Serial No. 586,921. (Cl. 177—311.)



1. An electric signal light comprising a stationary electrode, a revoluble electrode arranged to make wiping contact with the stationary electrode, means to operate said revoluble electrode, means to manually adjust said revoluble electrode longitudinally, and means to automatically adjust said stationary electrode to compensate for consumption.

2. An electric signal light comprising a stationary electrode, a revoluble electrode arranged to make wiping contact with said stationary electrode, means to operate said revoluble electrode, a manually operated adjusting screw adapted to engage said revoluble electrode, an adjusting screw engaged with said stationary electrode, an operating wheel on said screw, a tripping mechanism adapted to engage said wheel, a pawl and ratchet operating mechanism to actuate said tripping mechanism, and means whereby said pawl and ratchet operating mechanism is driven by said electrode operating mechanism.

3. An electric signal light comprising a stationary electrode, a standard, a tubular holder on said standard, an electrode slidably mounted in said holder, an electrode adjusting screw having a threaded engagement with said holder, a star wheel on said screw, a screw operating shaft, a trip finger on said shaft adapted to engage said star wheel, a ratchet gear fixed on said shaft, a rocker-arm loosely mounted on said shaft, a pawl carried by said arm and engaging said ratchet gear, a revolubly mounted electrode operating shaft, an electrode holder secured to said shaft, a revoluble electrode adjustably secured in said holder, means to rotate said shaft, an eccentric arranged on said shaft, and a pitman connecting said eccentric with said rocker-arm.

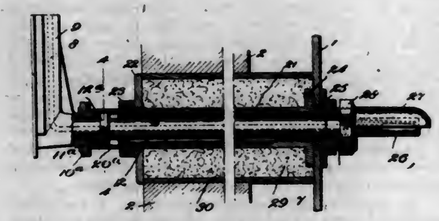
1,018,305. COMBINED TIE AND TRACK-FASTENING. FRED L. DOWNS, Gillum, Ill. Filed May 18, 1911. Serial No. 627,917. (Cl. 238—3.)

1. A combined tie and track fastening comprising in combination, a plastic body having a core embedded longitudinally therein, longitudinal projections extending upwardly from the core, each projection consisting of upwardly diverging side plates having their upper edges inwardly bent to form longitudinal flanges and a consequent longitudinal recess, and means engageable with the flanges of the projections for locking said elements to the projections.

2. A combined tie and track fastening comprising in combination, a plastic body having a core embedded longitudinally therein, longitudinal projections extending upwardly from the core, each projection consisting of upwardly diverging side plates having their upper edges inwardly bent to form longitudinal flanges and a consequent longitudinal recess, said flanges being formed adjacent their ends with transversely disposed corrugations, and rail-clamping elements having their underfaces correspondingly formed for engagement with said corrugated flanges.

3. A combined tie and track fastening comprising in combination, a plastic body having a core embedded therein, spaced longitudinal projections extending upwardly from the core, each projection consisting of upwardly diverging longitudinal plates having their upper edges inwardly bent to form longitudinal flanges, said flanges being centrally connected by a web to form consequent longitudinal slots between said flanges, said flanges being furthermore formed adjacent the ends with transversely disposed slots communicating with the longitudinal slots, rail clamps engageable with the flanges on opposite sides of the web, and bolts having their heads disposed between the diverging plates of the projection and below the flanges thereof, the shanks of said bolts projecting through the longitudinal slots for engagement with the clamps, and means carried by the bolts for locking the clamps to the projections.

1,018,306. THERMOMETER. ROBSON DUNWODY, Atlanta, Ga. Filed Mar. 8, 1911. Serial No. 613,073. (Cl. 73—52.)



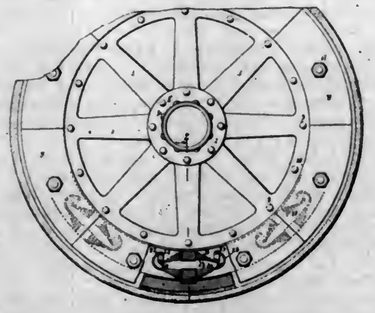
1. The combination with a still, of a thermometer therefor; a sleeve within which the thermometer is mounted; a tube within which said sleeve is mounted; means for securing said tube within the wall of the still; and an interlocking connection between said sleeve and tube adapted to prevent relative turning movement therebetween, for the purpose set forth.

2. The combination with a still, of a thermometer therefor; a sleeve within which the thermometer is mounted; a tube mounted to have turning movement within the wall of the still, and adapted to receive the thermometer sleeve, and an interlocking connection between said sleeve and tube adapted to prevent relative turning movement therebetween, for the purpose set forth.

3. The combination with a still, of a thermometer therefor; a sleeve within which the thermometer is mounted, a tube mounted to have turning movement within the wall of the still, said tube adapted to receive said sleeve and provided with a polygonal sided surface; and a polygonal sided collar on said sleeve adapted to fit against said surface and form an interlocking connection between said tube and sleeve whereby to prevent relative turning movement therebetween, for the purpose set forth.

4. The combination with a still, of a thermometer therefor; a sleeve within which the thermometer is mounted, said sleeve having a closed jacket piece; a tube provided with a closed socket end piece, said tube adapted to receive said sleeve and provide a space therebetween, and said socket pieces adapted to have a close fit; screw-threaded portions at either end of said tube; a collar formed integral with the tube adjacent one of said screw-threaded portions; a jam nut on said screw-threaded portion adapted to coöperate with said collar to engage a member therebetween; a shield screw-threaded on the inner end of said tube and adapted to overlie the tube socket piece; a washer loosely mounted on the other end of said tube; a nut screw-threaded on said end and adapted to secure said washer against an abutment; polygonal sided portions on said tube and sleeve adapted to interengage and prevent relative turning movement therebetween; and a member screw-threaded on said tube and holding said polygonal portions in engagement, substantially as described.

1,018,307. RESILIENT WHEEL. JOHN WOOD ENRIGHT, New Orleans, La. Filed Nov. 26, 1910. Serial No. 594,284. (Cl. 152—28.)

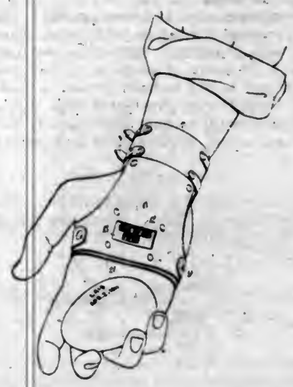


1. In a resilient wheel, an outer and an inner rim, pairs of lugs projecting from each of said rims, spaced-apart elliptical springs disposed between said rims and between the lugs of each pair, said springs comprising upper and lower leaves, a pin connection hinging said leaves together at their outer ends, whereby said pin may be withdrawn to disconnect said leaves.

2. In a resilient wheel, inner and outer rims concentrically disposed and spaced apart, lugs projecting from each of said rims into the space formed between the inner and outer rims, said lugs disposed in pairs transversely of said rims and arranged in diametrical alinement, and elliptical springs disposed between said rims, said springs having channels therein into which fit the said lugs, whereby said springs are removably retained in place.

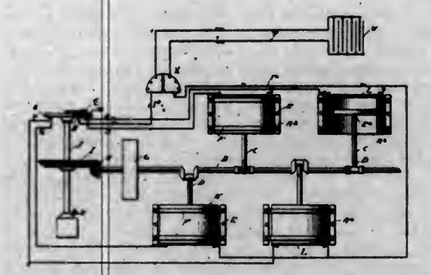
1,018,308. STAMP. OLE FERGUSON, Porter, Minn. Filed June 14, 1911. Serial No. 633,024. (Cl. 101—56.)

In an egg stamp adapted to be carried by the hand, means fastening said stamp to the hand, said stamp having an aperture therein, a stamp case, said stamp case having an aperture therein in alinement with the aperture in the stamp, removable type carried by said case



and adapted to project through said alined apertures, and a cover to said case adapted to hold said type in position.

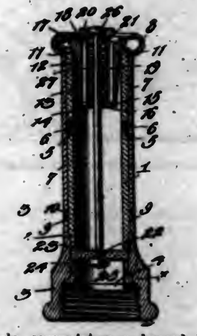
1,018,309. ELECTROMAGNETIC ENGINE. HARRY J. FORD, San Quentin, Cal., assignor of one-half to William John Hill. Filed May 6, 1911. Serial No. 625,472. (Cl. 172—126.)



1. An electric engine comprising a shaft having angularly disposed crank portions, solenoids, cores arranged to operate within the solenoids, rods pivotally connecting the stems of the cores with the crank portions of the crank shaft, a second shaft geared to the crank shaft and adapted to rotate at a slower speed, and a commutator comprising an arm connected to the second shaft to rotate therewith, two sets of contacts, the one being annular and the other comprising isolated elements, each of said elements having electric connection with one terminal of the helices of the several solenoids, and the annular contact having electric connection with the other terminals of said helices.

2. In an electric engine, the combination of a crank shaft having its crank portions arranged at different relative angles, solenoids, cores arranged to operate in the solenoids and having connection with the crank portions of the crank shaft, a second shaft driven from the crank shaft at a slower speed, an annular contact in electrical connection with one terminal of the helix or winding of each of the solenoids, groups of isolated contacts arranged in a circle about the annular contact, each contact of the several groups of contacts having electric connection with the other terminal of the helix or winding of the respective solenoids, and an arm connected with said second shaft, to rotate therewith and in electric connection with the annular contact and adapted to make electric connection with the contacts of the several groups in successive order.

1,018,310. HOSE-NOZZLE. SIGMUND FREY, Los Angeles, Cal., assignor of one-half to S. K. Elliott, Los Angeles, Cal. Filed Feb. 9, 1911. Serial No. 607,525. (Cl. 137—81.)



1. A hose nozzle comprising a barrel having a valve seat, a valve engaged with said seat and adapted to open under pressure of water passing through the barrel whereby the water is discharged from the nozzle in the form of spray, a sleeve slidably mounted on said barrel adapted to be projected beyond the barrel to convert a spray of water into a solid stream, and a spring arranged between said barrel and sleeve for holding the sleeve in its adjusted position.

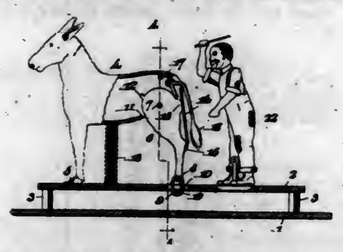
2. A hose nozzle comprising a barrel having in its outer end a seat, a hollow outer valve adapted to engage said seat, said valve having formed in its inner end water discharging passages, an inner water deflecting stopper arranged in said outer valve, said stopper being of less diameter than said outer valve whereby water is adapted to pass out between said valve and stopper in the form of an inner spray, a retaining bolt adapted to be engaged with said valve and stopper, a spring arranged on said bolt to yieldingly hold said valve on its seat, said spring being adapted to be overcome by the pressure of the water whereby the latter is discharged in the form of an outer spray and means to change said sprays to a solid stream.

3. A hose nozzle comprising a barrel having in its outer end a valve seat, a spring retracted valve engaged with said seat, said valve being adapted to open under pressure of water passing through the barrel whereby the water is discharged from the nozzle in the form of a spray, a sleeve slidably mounted on said barrel and adapted to be projected beyond the same whereby the spray of water from the nozzle is converted into a solid stream, and a spring arranged between said barrel and sleeve whereby the latter is held in its adjusted positions.

4. A hose nozzle comprising a barrel having formed in its outer end a seat and in its outer face midway between its ends an annular recess, a spring retracted valve engaged with said seat, said valve being adapted to open under pressure of the water passing through the barrel, a bolt to hold said valve in yielding engagement with its seat, a sleeve slidably mounted on said barrel, said sleeve having formed in its inner face an annular groove having an inclined inner wall, and a spring arranged in the recess in said barrel and adapted to frictionally engage the inner face of said sleeve whereby the same is held in a retracted position and to engage the groove in said sleeve and thereby hold the same in a projected position.

5. A hose nozzle comprising a barrel having in its outer end a valve seat, a spring retracted valve engaged with said seat, said valve being adapted to open under pressure of water passing through the barrel whereby the water is discharged from the nozzle in the form of a spray, a sleeve slidably mounted on said barrel and adapted to be projected beyond the same whereby the spray of water from the nozzle is converted into a solid stream, a bed formed on the outer end of said sleeve, whereby the same is strengthened and said valve protected, means to hold the sleeve in a retracted position and means whereby the same is locked in a projected position.

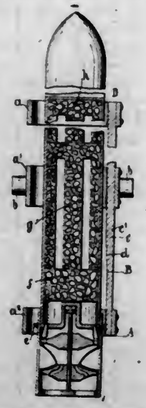
1,018,311. TOY. BERT GAINES, Dayton, Ohio. Filed Sept. 23, 1911. Serial No. 650,903. (Cl. 46—40.)



1. A toy comprising an animal figure, means supporting the figure for tilting movement, means for tilting the figure, movable legs on the figure, means for holding the animal including the legs against movement, a movable member located behind the figure and disposed in the path of the movable legs thereof, the said animal figure having a movable tail, and means on the movable legs of the animal for moving the tail on movement of the legs to kicking position.

2. A toy comprising an animal figure, means for supporting the figure for tilting movement, means for tilting the figure, movable legs on the figure, means for holding the figure including the legs against movement, a movable member located behind the figure and disposed in the path of the movable legs thereof, a stop on the figure, and a stop on the legs adapted to engage the stop on the figure to limit the movement of the legs in one direction.

1,018,312. GYROSCOPIC ROCKET AND THE FIRING APPARATUS' THEREFOR. NICOLAS GHERASSIMOFF, St. Petersburg, Russia. Filed Sept. 14, 1911. Serial No. 649,347. (Cl. 102—23.)



1. A firing apparatus for gyroscopic rockets comprising a plurality of supports having gripping surfaces provided with inclined planes adapted to frictionally hold the rocket until a desired pressure is exerted thereon, substantially as described.

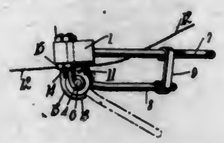
2. The combination of a rocket provided with an external belt and a firing apparatus having inclined planes adapted to be frictionally engaged by said belt, substantially as described.

3. In a firing apparatus for gyroscopic rockets, the combination of a plurality of supports provided with inclined planes adapted to receive a rocket between them; and means for holding said supports in operative relation to each other and to the rocket, substantially as described.

4. In a firing apparatus for gyroscopic rockets, the combination of a plurality of supports provided with tapered inclined planes adapted to receive a rocket between them; and means for holding said supports and inclined planes in operative relation to each other and to the rocket, substantially as described.

5. The combination of a rocket provided with a propellant; a gyroscope carried by said rocket adapted to be operated by said propellant; an exterior band carried by said rocket; a plurality of supports between which said rocket is adapted to fit; inclined planes on said supports adapted to contact with said band when said rocket is being fired; and means to hold said supports in operative relation to said rocket, substantially as described.

1,018,313. FENCE-WIRE STRETCHER. WILLIAM F. GOOLSBY, Livingston, Tenn. Filed July 26, 1911. Serial No. 640,664. (Cl. 39—53.)



1. A device of the class described comprising a base member, an eccentrically pivoted member thereon, the said member being movable to one position in order to permit the fence-wire to be inserted between the said members, movement of the said eccentric member to another position causing the said wire to be tightly engaged between the said members, together with braces engaging the pivoted member to prevent it from bending during movement.

2. A device of the class described comprising a base member, an eccentrically pivoted member supported thereon, hooks in which the said member turns, the said member being adapted to be brought into engagement with fence-wire in order to force the same tightly against the base member whereby the fence-wire may be stretched, there being suitable means carried by the base member and engaging the pivoted member whereby bending of the pivoted member during movement is prevented.

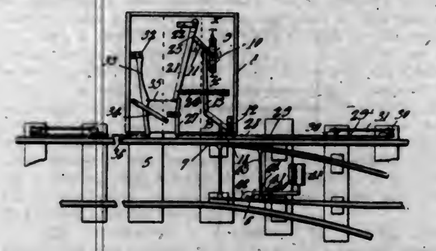
3. A device of the class described comprising a base member, a cylindrical member pivotally supported thereon, a rib or projecting portion on the said cylindrical member, the said member being movable into one position in order to carry the said rib away from the base member and movable into another position in order to bring it adjacent thereto whereby fence-wire may be tightly engaged between the base member and the said rib, there being suitable means carried by the base member and engaging the pivoted member whereby bending of the pivoted member during movement is prevented.

4. A device of the class described comprising a base member, hooks thereon, a cylindrical member having a projecting portion extending from end to end rotatably mounted in the said hooks, a plurality of braces secured to the base member and engaging the cylindrical member to prevent it from bending, the said movable member in one position bringing the rib away from the base member and when in another position bringing it adjacent thereto, whereby fence-wire may be tightly gripped between the said members and stretched.

5. A device of the class described comprising a base member, a handle extending laterally thereof, hooks adjacent opposite ends of the said member, a cylindrical member rotatably mounted in the hooks, a handle extending laterally of the said cylindrical member, a projecting portion on the side of the said cylindrical member and extending throughout its length, together with means for holding the handles closely together with the said projecting portion adjacent the base member whereby when fence-wire is engaged between the said member and the projecting portion it may be stretched by pulling on the said handles, there being braces in engagement with the pivoted member to prevent it from bending during turning.

[Claim 6 not printed in the Gazette.]

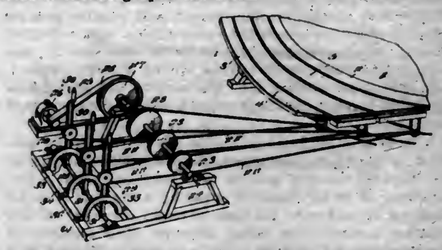
1,018,314. RAILROAD-SWITCH. FRANK M. HALL, Bellflower, Ill., assignor of one-ninth to John A. Bourne, one-ninth to John Baxter, one-ninth to William J. Rose, one-ninth to Jeptha Brooks, one-ninth to Floyd A. Poe, one-ninth to William W. Brandon, one-ninth to Fred J. Dunn, and one-ninth to Robert N. Jenkins, Bellflower, Ill. Filed May 12, 1911. Serial No. 626,702. (Cl. 104—23.)



The combination with a switch, of an operating mechanism for operating the same from two oppositely disposed points, comprising a housing disposed adjacent to the switch points of the switch, a link connected to the switch points and projecting beyond the switch toward the housing, a lever having one end fulcrumed within the housing and connected intermediate of its ends to said link, a shaft mounted in the housing, a spring connected thereto for rotating the shaft toward the switch, a cross arm connected to and carried by said shaft, a long link having one end connected intermediate the ends of the cross arm and having its other end connected to the end of the lever, a locking member having one end pivoted within the housing beyond the journaling of the rotary shaft with its free end toward the switch, said locking member being provided with a notch to receive the free end of the cross arm to lock the same against the tension of the springs of the rotary shaft, a spring mounted within the housing and connected to the free end of said locking member for holding the same toward the rotary shaft, oppositely disposed train actuated devices one upon each side of the switch, a flexible connection connected to each one of said train actuated devices and extending toward the housing, a locking member holding and releasing lever pivoted within the housing and disposed to have its inner end in the path of to engage the extreme end of the locking member, the outer free end thereof projecting beyond the housing toward the switch and operably connected to one of the train actuated flexible connections, the actuation of the train actuated device operating said lever to move the locking member against the tension of the spring to release the rotary shaft, another locking member holding and releasing lever pivoted within the casing at its inner end and having its outer end projecting without the housing toward the switch and connected to the other flexible member of the train actuated device, and a flexible connection connected intermediate the ends of said last mentioned locking and holding lever and the extreme end of the locking member, whereby the actuation of the train actuated device connected to the last mentioned holding and releasing lever will actuate the same to pull the locking member against the tension of the spring to release the cross arm.

1,018,315. MECHANICAL AMUSEMENT APPARATUS. WALTER HARLING, Bryn Mawr, Wash. Filed July 6, 1911. Serial No. 637,080. (Cl. 104—111.)

1. Mechanical amusement apparatus comprising a track, a car mounted to travel thereon, and means for regulating the speed of the car, the said means including a driving cable, and companion members over which the cable is passed, the said members being movable relatively between the leads of the cable and adapted to tension the cable to vary the speed of the car when the same is traveling upon the track.



2. Mechanical amusement apparatus comprising a track, a car mounted to travel on the track, a driven shaft, a driven pulley on the shaft, a second pulley on the shaft, a third pulley, a movable support for the third pulley, and a driving belt passing over the second and third pulleys respectively and operatively connected with the car to drive the same.

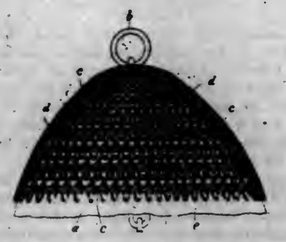
3. Mechanical amusement apparatus comprising a car, a surface on which the car is adapted to travel, a horizontally disposed track beneath the surface, a support carried by the car and extending through the surface, a grooved horizontally disposed wheel adapted to travel on the track and revolubly mounted on said support, means on the support, the said means holding the wheel operatively associated with the support and driven means engaging the first means and operatively to drive the car.

4. Mechanical amusement apparatus comprising a member, a car adapted to travel on the member, concentric superimposed tracks disposed horizontally beneath the member, grooved superimposed horizontally disposed wheels revolubly supported by the car and adapted to travel on the tracks, and means for driving the car.

5. Mechanical amusement apparatus comprising a member, a car adapted to travel on the member, a post depending from the car, horizontal superimposed tracks beneath the member, superimposed members on the post adapted to travel on the tracks, a member on the post, the said member holding the said track traveling means in position on the post, and means for driving the second member to cause the car to travel on the first member.

[Claim 6 not printed in the Gazette.]

1,018,316. FENDER. JOHANNES MARTIN WILHELM HEITMANN, Hamburg, Germany. Filed June 27, 1908. Serial No. 440,765. (Cl. 114—219.)



1. In a fender, the combination of a core, a flexible winding member disposed spirally about the same, and a flexible binding member wound spirally around said winding member and formed into loops, the loops around one convolution of said winding member extending through the loops around another convolution of said winding member.

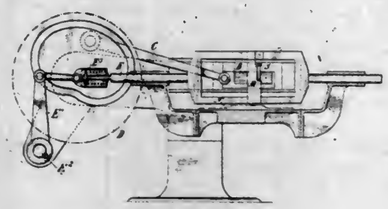
2. In a fender, the combination of a core, a flexible winding member disposed spirally about the same, and a binding member wound spirally around said winding member and formed into loops, each loop extending around a portion of said winding member and through an adjacent loop of another portion of said binding member.

3. A fender comprising a core, a winding member disposed thereupon, a portion of said winding member being thicker than another portion thereof, said winding member being formed into successive convolutions, and a flexible binding member wound into loops around one of said convolutions and also into loops around another convolution, the loops around said first-mentioned convolutions extending through the loops around said second-mentioned convolution.

4. A fender comprising a core having successive portions of gradually increasing diameter, a winding member disposed spirally around said core and having convolutions of small diameter engaging a portion of small diameter of said core, portions of larger diameter of said winding member thus being disposed upon portions of greater diameter of said core, and means for securing together the several adjacent convolutions of said winding member.

5. A fender comprising a core having generally an oval form, a winding member mounted spirally upon said core, the general diameter of said winding member, measured diametrically through said core, being progressively greater at the middle of said core than at the ends thereof, the diameter of the winding member, measured diametrically through said winding member, being also greater upon that portion of the winding member encircling the middle of said core, and means for securing different portions of said winding member substantially in predetermined positions relatively to each other.

1,018,317. MACHINE FOR ROLLING SCREW-BOLTS. JULIUS HELLER, Vienna, Austria-Hungary, assignor to The Firm of Schrauben- und Schmiedewarenfabriks Aktiengesellschaft Brevillier & Co. und A. Urban & Söhne, Vienna, Austria-Hungary. Original application filed June 9, 1910, Serial No. 566,048. Divided and this application filed Nov. 21, 1910. Serial No. 593,535. (Cl. 80—8.)

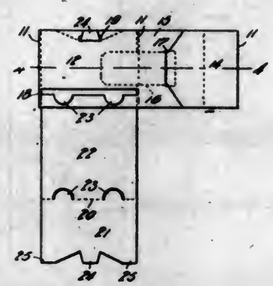


1. In a machine for rolling screw bolts, the combination of a pair of dies, means for moving such dies relatively and parallel to each other and at right angles to the axis of the bolt, a guide on a part of the machine moving relatively to the bolt at right angles to its axis during rolling and a knife adapted to move along such guide whereby the said knife is moved relatively to the bolt parallel to its axis.

2. In a machine for rolling screw bolts, the combination of a pair of dies, means for moving such dies relatively and parallel to each other and at right angles to the axis of the bolt, a guide on a part of the machine moving relatively to the bolt at right angles to its axis during rolling and a knife adapted to move along such guide whereby the said knife is moved relatively to the bolt parallel to its axis and means for moving the said knife relatively to the bolt at right angles to its axis.

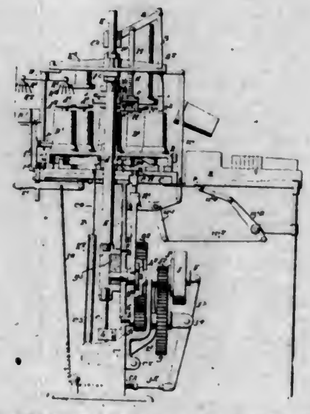
3. In a machine for rolling screw bolts, the combination of a pair of dies, means for moving such dies relatively and parallel to each other and at right angles to the axis of the bolt, a guide on a part of the machine moving relatively to the bolt at right angles to its axis during rolling, a knife adapted to move along such guide, a slide adapted to guide such knife parallel to the axis of the bolt and means for moving the said slide relatively to the bolt in a direction parallel to the said dies and at right angles to the axis of the bolt, substantially as and for the purpose described.

1,018,318. BERRY-BOX. PETER HENRICH, Hoquiam, Wash. Filed Jan. 23, 1911. Serial No. 604,115. (Cl. 229—23.)



A box having its side and end walls formed of a single piece of material and provided with interfitting ends, said side walls having upper and lower horizontally-disposed slots, a box bottom formed with a pair of vertically-disposed flaps, tongues extending downwardly from the lower termini of said flaps, and extending through the lower horizontal slots and engaging with the interior of said side walls and adapted to force the portions of said side walls which are below the lower horizontal slots under the adjacent edges of said bottom for the support thereof, and tongues provided at the upper ends of said flaps and extending through the upper horizontal slots and engaging the outer faces of the said side walls.

1,018,319. MACHINE FOR MAKING PAPER BOTTLES AND LIKE OBJECTS. HENRY R. HEYL, Philadelphia, Pa., assignor to The American Paper Bottle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 9, 1909. Serial No. 521,835. (Cl. 93—55.)



1. The combination in a machine for forming paper bottles and like articles, of a carrier, a series of forms mounted on the carrier to receive the body portion of the bottle, two hoppers, one hopper adapted to receive the bottom disks and the other adapted to receive the locking disks, means for removing a disk from the bottom of the hopper and placing it in position above one of the forms, means for removing a locking disk from its hopper and placing it above one of the forms, a series of plungers, means for moving said plungers toward the forms so that the bottom

disk will first be put in position in the form, then the body portion will be placed on the form by hand, and the plungers will then flange the body portion over the flange of the bottom, and finally force a locking disk into the cavity in the body of the bottle, locking the bottom to the body.

2. The combination in a machine for manufacturing paper bottles and like articles, of a base, a carrier mounted on the base, a cam on the base, forms mounted on the carrier, disks within the forms controlled by the cam on the base, a movable head, plungers carried by the head, means for intermittently rotating the carrier so as to bring the forms one after the other in line with the several plungers, means for feeding a bottom disk in position to be flanged and forced into the upper end of a form, the plungers being shaped to turn down the end of the body portion over the flange of the bottom, said body portion being placed on the forms by hand, with means for feeding a locking disk, forcing it into the cavity in the bottom of the bottle, and locking the flange of the body portion to the flange of the bottom.

3. The combination in a machine for making paper bottles and like articles, of a base plate, a carrier mounted on the base plate, means for intermittently rotating said carrier, a series of forms secured to the carrier and adapted to receive the body portion of the paper bottle, a disk mounted within each form, a fixed cam on the base plate upon which the disks rotate, a head, plungers carried by said head and adapted to register with the forms, means for reciprocating said head, a hopper for the bottom disks, a hopper for the locking disks, means for removing the disks from the hoppers and placing them in position between certain of the plungers and the forms, and a device for applying paste to the bottom disk after it is in position.

4. The combination of a base, a carrier mounted on the base, means for intermittently rotating said carrier, forms mounted on the carrier, a disk mounted in each form, a cam on the base controlling the movement of the disk, a head, plungers secured to the underside of the head adapted to aline with the forms, means for reciprocating the head, a hopper for the bottom disks, a selector adapted to remove one of the disks from the hopper and place it in position above a form, and means for operating said selector on the movement of the head.

5. The combination in a machine for manufacturing paper bottles and like articles, of a base, a carrier mounted on the base, means for intermittently rotating said carrier, a series of forms secured to the carrier to receive the body portion of the bottle, a disk mounted in each form having a spindle, a fixed cam on the base upon which the spindles of the disks ride, a head, plungers secured to the underside of the head adapted to aline with the forms, means for reciprocating the head, a hopper for the bottom disks and a hopper for the locking disks, pivoted selectors adapted to remove the disks from the hoppers and place them in position above the forms, and means for actuating said selectors from the reciprocating head.

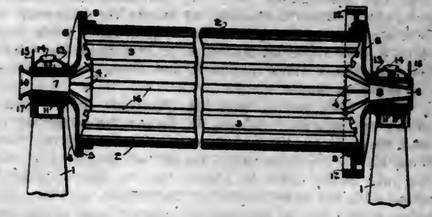
[Claims 6 to 21 not printed in the Gazette.]

1,018,320. FEED AND DISCHARGE END-LINER FOR TUBE-MILLS. HENRY C. HOLTHOFF, Mexico, Mexico, assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 27, 1909. Serial No. 474,357. (Cl. 83—9.)

1. As an article of manufacture, an end liner section formed flat on one side adapted to coact against the head of a tube mill, said liner section having an outer edge adapted to lie adjacent the periphery of said tube mill and having a freely shedding opposite side at an angle to said flat side and approaching said flat side at the outer edge of said liner section.

2. In a tube mill, an end liner having a convexly formed freely shedding surface above the mill axis extending from the most remote point of the end of the mill and lying entirely within the grinding chamber.

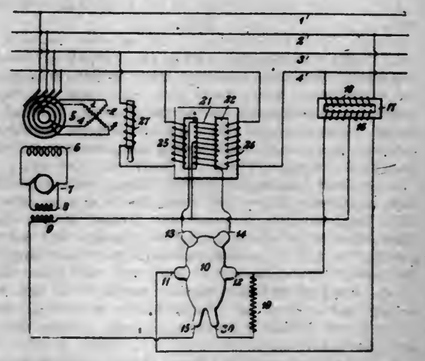
3. In a tube mill, an end liner composed of sections the sections being circularly grooved and having a sloping inwardly freely shedding surface above the mill axis extending from remote points of the end of the mill.



1,018,321. WRENCH. EDWARD H. IVESON, Cohoes, N. Y. Filed Oct. 10, 1911. Serial No. 653,932. (Cl. 81—180.)

The combination with a wrench, of a lever pivoted thereto, a spring clip of segmental formation secured to the lever and adapted to surround the adjusting nut of the wrench and by this resiliency retain the lever in its locking position, and an operating finger formed upon the lever.

1,018,322. VOLTAGE-REGULATING SYSTEM. RAY P. JACKSON, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1908. Serial No. 410,233. (Cl. 171—241.)



1. The combination with an electrical circuit, and a generator connected thereto, of means for adjusting the field strength of the generator approximately in proportion to variations in the wattless component of the current traversing the circuit, thereby substantially exactly compensating the field strength for varying deviations of the power factor of the circuit from unity and also substantially in proportion to the amount of said current.

2. The combination with an electrical circuit, and a generator connected thereto, of means for adjusting the field strength of the generator in accordance with variations in the vectorial difference of a flux produced by current traversing a circuit conductor and a flux that is substantially constant in amount and phase, only when the

said fluxes differ in phase, and means for producing the said component fluxes.

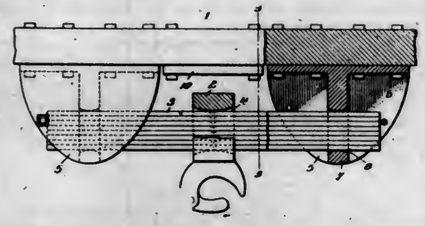
3. The combination with an electrical circuit, and a generator connected thereto, of means for adjusting the field strength of the generator in accordance with variations in the vectorial difference of two fluxes only when the said fluxes differ in phase, and means for producing the said component fluxes.

4. The combination with an electrical circuit, and a generator connected thereto, of means for adjusting the field strength of the generator in accordance with variations in the vectorial difference of two fluxes only when the said fluxes differ in phase, the one flux varying in phase with the power factor of the circuit, and the other being substantially constant in amount and phase, and means for producing the said component fluxes.

5. The combination with an electrical circuit, and a generator connected thereto, of means for adjusting the field strength of the generator in accordance with variations in the vectorial difference of two fluxes only when the said fluxes differ in phase, the one flux varying in phase with the power factor of the circuit, and the other being substantially constant in amount and phase, and for effecting the said adjustment also in accordance with variations in the amount of current traversing the circuit, and means for producing the said component fluxes.

[Claims 6 to 8 not printed in the Gazette.]

1,018,323. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN JEROME, Seattle, Wash. Filed Dec. 21, 1910. Serial No. 598,504. (Cl. 213—42.)



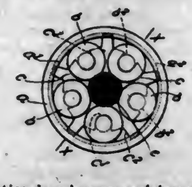
1. In draft rigging for railway cars, a pair of brackets comprising vertically disposed webs having a longitudinal arrangement and formed with transverse openings, a draft spring having its end portions passing through the transverse openings of said webs, and a draw bar slidably mounted upon said draft spring and having a limited movement thereon between the brackets.

2. In draft rigging for railway cars, a pair of brackets each comprising upper and lower plates and an intermediate longitudinally disposed web formed with a transverse opening, a draft spring having its end portions passing through the transverse openings of said longitudinal webs, stops supported in the upper and lower plates of the brackets to limit endwise movement of the draft spring, and a draw bar mounted upon said draft spring and adapted to have a limited movement thereon between the brackets.

3. In draft rigging for railway cars, a bracket for supporting a draft spring, said bracket comprising upper and lower plates, a base connecting the rear ends of the plates, and a centrally disposed longitudinal web connected at its upper and lower edges to said plates and at its rear to the base and having a transverse opening in its front portion to receive the draft spring.

4. In draft rigging for railway cars, a pair of brackets secured to the front side of the end sill of the car, each of said brackets comprising upper and lower plates, a base connecting the rear ends of the plates and secured to said end sill, and a longitudinally disposed web having a transverse opening in its front portion, said web having connection at its rear to said base and at its upper and lower edges to said upper and lower plates, a draft spring having its end portions passing through the transverse openings formed in the webs of the brackets, pins supported in the upper and lower plates of the brackets near the outer edges thereof and forming stops to limit the endwise movement of the draft spring, a draw bar mounted upon the draft spring and having a limited play thereon between the brackets, and a wear plate secured to the front side of the sill between the brackets.

1,018,324. ANTIFRICTION-BEARING. DANIEL E. KEMPSTER, Boston, Mass. Filed Sept. 10, 1908. Serial No. 452,459. (Cl. 64—62.)



1. An anti-friction bearing comprising a casing provided with an internal annular groove having a flared mouth, a series of rolls each provided with an annular groove, and a combined integral roll-supporting and retaining member provided with notches adapted to enter the grooves of the respective rolls and also provided with yieldable fingers fitting in the annular groove of the casing, said yieldable fingers permitting mounting and removal of the combined roll supporting and retaining member from the casing.

2. An anti-friction bearing comprising a one-piece or integral casing provided with an internal annular groove, a series of rolls each provided with an annular groove, and a combined integral roll-supporting and retaining member provided with notches adapted to enter the grooves of the respective rolls and also provided with yieldable fingers sprung into the annular groove of the casing.

3. An anti-friction bearing comprising a one-piece or integral casing having an internal annular groove, a series of grooved rolls, and a one-piece ring having notches to engage the grooves of the rolls and hold the latter against longitudinal displacement and also provided with radial yieldable fingers fitted in the annular groove of the casing.

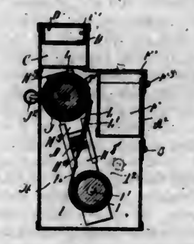
4. An antifriction bearing comprising a hub having an internal groove, a series of rolls each being annularly grooved intermediate its ends, and a combined pliable roll support and retainer having working fit in the annular grooves of the rolls and fitted in the annular groove of the hub or casing, the combined roll support and retainer being removably mounted in the groove of the hub incident to the pliable material of which it is formed.

5. An anti-friction bearing comprising a one-piece or integral hub or casing having an internal annular groove, a series of rolls, each roll being annularly grooved intermediate its ends, mounted in the hub or casing, and a retaining member having coöperating connection with the journals of the rolls and provided with radial, substantially equi-distant fingers engaged in the groove of the hub or casing, the fingers being comparatively narrow.

[Claims 6 to 8 not printed in the Gazette.]

1,018,325. MAIL-CARRIER'S BOX. JOHN ALMOND KILPATRICK, Fort Dodge, Iowa. Filed July 7, 1911. Serial No. 637,294. (Cl. 150—14.)

1. A mail carrier's box, comprising a casing, fixed members secured to the inner sides of the casing and having concave faces, rollers having their ends disposed against the said concave faces, and provided with cranks extending exteriorly of the casing, guides fixed to the inner casing sides between the rollers, members slidable in said guides and provided with concave faces engageable outwardly against said rollers, springs disposed within said guides and compressed between the adjacent ends of said sliding members, and a flexible mail-carrying web fixed on the said rollers so as to wind up on one and unwind from the other.



2. A mail carrier's box comprising a casing having a top compartment, a hinged cover normally closing said compartment, and a tray mounted in the upper portion of said compartment, on pivots adapted to permit said tray to be swung upwardly and expose the lower portion of said compartment.

3. A mail carrier's box comprising a casing open at its upper front portion and having its front divided to form upper and lower portions of which the former is hinged to the latter, a receptacle secured to the inner side of the upper front casing portion and of which the latter forms a part, and a cover hinged to said upper casing portion and closing said receptacle and the upper open casing portion.

1,018,326. CREPE-HOLDER. JOHN J. KLEIN, Scranton, Pa. Filed July 22, 1911. Serial No. 639,996. (Cl. 27—2.)

1. In a device of the class described, a face plate adapted to support a crape, a supporting plate, means for rigidly securing the face plate to the supporting plate, inclined guides formed on the supporting plate and provided with apertures therein, an attaching plate provided with inclined edges adapted to operate in the guides of the supporting plate, flanges formed on the inclined edges of the attaching plate and adapted to be received in the apertures in the said guides, a swivel plate slidably mounted on the attaching plate and a swivel rotatably mounted on the swivel plate and extending through the attaching plate for rigidly securing the attaching plate to a door or the like.

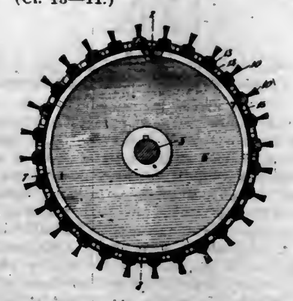
2. In a device of the class described, a supporting plate, a face plate for engagement with the front side of the supporting plate, inclined guides formed on the rear side of the supporting plate, an attaching plate having inclined edges for engagement with the guides of the supporting plate and means for connecting the attaching plate to a door or the like.

3. In a device of the class described, a supporting plate adapted to support a crape, incline guides formed on the supporting plate, an attaching plate for slidably engagement with the inclined guides of the supporting plate and a swivel mounted on the attaching plate for connecting the attaching plate to a door or the like.

4. In a device of the class described, a supporting plate adapted to support a crape, inclined guides formed on the supporting plate, an attaching plate having inclined edges for slidable engagement with the guides on the supporting plate and means on the attaching plate for connecting the same to a door or the like to retain the supporting plate in supporting position.

5. In a device of the class described, a supporting plate, a face plate secured to the supporting plate, and adapted to have a crape connected thereto, apertured guides formed on the supporting plate, an attaching plate for slidable engagement with the guides on the supporting plate, flanges formed on the attaching plate and adapted to be received in the apertures in the said guides when the attaching plate is slidably engaged with the supporting plate and means for connecting the attaching plate to a door or the like.

1,018,327. COTTON-GIN BRUSH. SMITH F. KRUPP, Memphis, Tenn. Filed Feb. 16, 1911. Serial No. 608,898. (Cl. 13—11.)



1. In a cotton gin brush, two head members spaced apart, ribs for holding brush members spaced apart and extending from one head member to the other, members U-shaped in cross section spaced from each other and disposed between the ribs, the U-shaped members having flanges for engaging neighboring ribs, and means for detachably securing the U-shaped members to the head members.

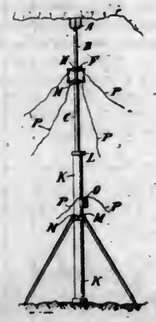
2. In a cotton gin brush, a head member, ribs for holding brushes spaced apart around the head member, members U-shaped in cross section spaced from each other and disposed between the ribs, the U-shaped members having flanges which engage neighboring ribs, and means for detachably securing the U-shaped members to the head member.

3. In a cotton gin brush a head member having orifices spaced apart, ribs for holding brush members, spaced apart around the head member, members disposed between the ribs respectively, and having orifices, flanges for engaging neighboring ribs, and additional flanges and screw members disposed in the orifices for holding the second-mentioned members relatively to the head member, the screw members being engaged by the said additional flanges to prevent their being turned.

4. In a cotton gin brush two head members spaced apart, ribs for holding brush members spaced apart and extending from one head member to the other, members disposed between the ribs respectively having bent-up portions, orifices, flanges for engaging neighboring ribs, and screw members disposed in the orifices for holding the second-mentioned members relatively to the head members, the screw members being engaged by the bent-up portions to prevent their being turned.

5. In a cotton gin brush a shaft, two head members having threaded orifices, spaced from each other and keyed to the shaft, ribs spaced from each other and extending from one head member to the other, U-shaped members disposed between the ribs having flanges engaging neighboring ribs and orifices in alinement with the threaded orifices in the head members respectively, screw members disposed through the orifices in the U-shaped members and meshing in the threaded orifices in the head members, a ring member disposed between the head members, and means for securing the U-shaped members to the ring member.

1,018,328. MINE-ALARM INSTRUMENT. HENRY WHITE LEE and GEORGE HENRY WEEDMAN, Mount Morgan, Queensland, Australia. Filed Feb. 11, 1911. Serial No. 607,916. (Cl. 177—311.)



1. In a mine alarm instrument, a pair of rods, one of said rods being arranged to extend within the other, a spring for holding the inner rod in an extended position, an adjustable contact member carried by the inner rod, a second adjustable contact member carried by the outer rod, means carried by said inner member for engaging one of the mine walls, and means in engagement with the opposite wall for supporting said outer member.

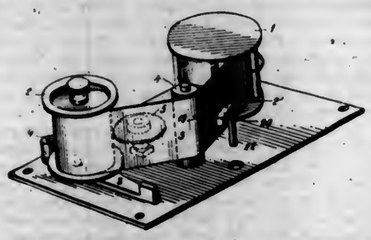
2. In a mine alarm instrument, a support in engagement with one of the mine walls, a hollow rod adjustably secured to said support, contact members adjustably secured to said hollow rod, a second rod arranged to enter said hollow rod, said second rod being provided with means for engaging the other of the mine walls, adjustable contacts carried by said second named rod arranged to engage the first named adjustable contacts, and a spring within said hollow rod for holding said inner rod in engagement with one of the walls.

1,018,329. PROCESS OF PRODUCING SULFUR DERIVATIVES DERIVED FROM GLYCERIN. LEON LILIENFELD, Vienna, Austria-Hungary. Filed Nov. 10, 1911. Serial No. 659,593. (Cl. 23—24.)

1. The herein described process of producing sulfur derivatives derived from glycerin, which consists in subjecting halogenhydrins containing at least one hydroxyl group to the action of inorganic sulfids.

2. The herein described process of producing sulfur derivatives from glycerin which consists in subjecting halogenhydrins containing at least one hydroxyl group to the action of inorganic sulfids.

1,018,330. SPEED-RECORDER. AUBRY H. MARTIN, Short Hills, N. J., assignor to Recording Speedometer Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 7, 1911. Serial No. 658,965. (Cl. 234—29.)

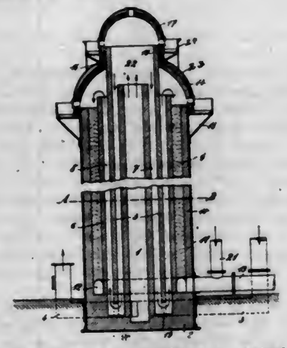


1. A speed recorder for recording the movements of a member driven automatically from a vehicle, including a device for feeding tape in predetermined amounts past said member and a clock-work for operating the tape-feeding device, said tape-feeding device consisting of a storage device for the tape, a roll adapted as it revolves to wind the tape thereon, a rotatary table intermediate of the storage device and the winding roll, a disk having a circumference equal to the predetermined amount of tape to be fed and provided on its periphery with a surface adapted to grip the tape, and means for maintaining said roll and the tape thereon, in operative relation with said disk; substantially as described.

2. A speed recorder for recording the movements of a member driven automatically from a vehicle, including a device for feeding tape in predetermined amounts past said member and a clock-work for operating the tape-feeding device, said tape-feeding device consisting of a storage device for the tape, a roll adapted as it revolves to wind the tape thereon, a rotary table intermediate of the storage device and the winding roll and out of line therewith, so as to give the tape an angular feed in passing from the one to the other, a disk having a circumference equal to the predetermined amount of tape to be fed, and provided on its periphery with a surface adapted to grip the tape, and means for maintaining said roll and the tape thereof, in operative relation with said disk; substantially as described.

3. A speed recorder, including a recording member adapted to be moved back and forth, a device for feeding the tape in predetermined amounts past said recording member and a clock-work for operating the tape-feeding device, said tape-feeding device consisting of a storage device for said tape, a roll adapted as it revolves to wind the tape thereon, a rotary table intermediate of the storage device and the winding roll, a disk substantially midway of the tape and having a circumference equal to the predetermined amount of tape to be fed and provided on its periphery with a surface adapted to grip the tape, said roll, disk and tape, being arranged so that said disk is in contact with said tape only at the point where the peripheries of said roll and said disk are urged together, said roll being driven from said clock-work, and means for maintaining said roll in operative relation with said disk; substantially as described.

1,018,331. HOT-BLAST STOVE. WALTHER MATHESIUS, Charlottenburg, Germany. Filed Oct. 10, 1911. Serial No. 653,844. (Cl. 75—52.)



1. A hot blast stove comprising a central combustion chamber to which the furnace gases and air may be supplied, an outer concentric cylindrical wall projecting above the combustion chamber, an annular flue being formed between said wall and combustion chamber, outer concentric annular flues communicating with the inner flue, an outer iron shell, a centrally apertured dome supported by said shell, said cylindrical wall passing through said dome, an expansible joint between said dome and cylindrical wall and a cupola fitted over said cylindrical wall and supported by said outer iron shell.

2. In a hot blast stove, a cylindrical combustion chamber, means for supplying air and gases to the combustion chamber so as to increase the length of the flame and cause the same to rise spirally in said chamber, comprising air and gas conduits opening tangentially into the lower part of said chamber.

3. In a hot blast stove, a cylindrical combustion chamber, means for supplying air and gases to the combustion chamber so as to increase the length of the flame and cause the same to rise spirally in said chamber, comprising air and gas conduits opening in parallel directions and tangentially into the lower part of said chamber.

1,018,332. ELECTROPLATING PROCESS. FRANCIS J. MCELHONE, Jersey City, N. J. Filed Mar. 26, 1908. Serial No. 423,358. (Cl. 204—8.)

1. The process which comprises treating graphite with an organic acid prior to applying said graphite to a mold, washing thereafter, and electroplating thereafter.

2. The process which comprises treating graphite with an organic acid, drying the graphite, applying the graphite to a mold, and electroplating the said mold thereafter.

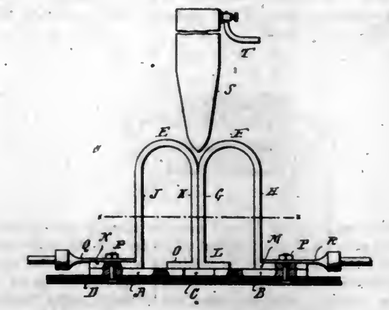
3. The process which comprises treating graphite with an organic acid, washing the graphite after treatment with said acid, applying the graphite to the mold and electroplating thereafter.

4. The process which comprises treating graphite with an acid of the carbocyclic group, washing the acid from said graphite, applying the graphite to a mold, and electroplating said mold.

1,018,333. PACKING-SHOE. GERHARD MEYER, Shreveport, La. Filed June 19, 1911. Serial No. 633,957. (Cl. 166—8.)

A device of the class described made up of a coupling, two concentric parts movable relatively to each other, one end of one of the parts being secured to the lower end of the coupling, there being a removed portion on the outside of the said part and extending there-along for a suitable distance, the second part being made up of two members in engagement with each other, a ring secured to the inside of the second part and held in position by reason of the engagement of the two members with each other, the ring being positioned within the removed portion on the outside of the first part, together with a plurality of resilient members having washers therebetween positioned on the outside of the first part, the end resilient members being engaged by the bottom of the coupling and by the top of the second part whereby, the outer diameters of the coupling, the resilient members, and the second part being equal, the parts are flush with each other, movement of the second part relatively to the first one, when the device is inserted into a suitable bore, bringing the coupling nearer the second part whereby the resilient members are expanded and come into engagement with the inside of the bore.

1,018,334. SPRING CONTACT-PLATES. THOMAS E. MURRAY, New York, N. Y. Original application filed June 29, 1911, Serial No. 636,016. Divided and this application filed Oct. 4, 1911. Serial No. 652,794. (Cl. 175—285.)

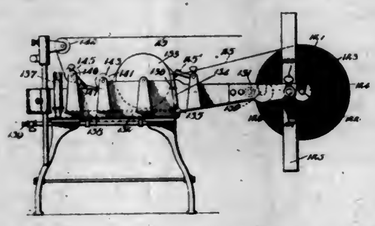


1. A support, two insulated fixed plates thereon, and two spring contact plates in loop form: the inner legs of said loops being normally in contact and having their free extremities bearing respectively on said fixed plates, and the outer legs of said loops being secured respectively to said fixed plates.

2. A support, two fixed plates thereon having an interval between them, and two spring contact plates in loop form: the inner legs of said loops being normally in contact and having their free extremities turned at right angles to extend over said gap and to bear respectively on said fixed plates, and the outer legs of said loops being secured respectively to said fixed plates.

3. A support, two insulated fixed plates thereon, circuit terminals connected to said fixed plates, two spring contact plates in loop form, a plug of conducting material adapted to enter between said plates, and a circuit terminal connected to said plug: the inner legs of said loops being normally in contact and having their free extremities bearing respectively on said fixed plates, and the outer legs of said loops being secured respectively to said fixed plates.

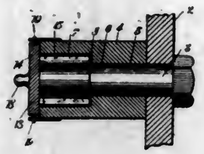
1,018,335. GLUE-APPLYING MACHINE FOR USE IN MAKING SPIRALLY-WOUND TUBES. FRANCIS C. OSBORN, Detroit, Mich, assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Original application filed June 28, 1909, Serial No. 504,915. Divided and this application filed Dec. 24, 1909. Serial No. 534,840. (Cl. 91—51.)



In an apparatus for applying adhesives to strips of material, the combination of means for mounting a roll of the strip, a tank for the adhesive, a water reservoir located beneath said adhesive tank, an adhesive applying roll mounted on the adhesive tank, a stripper associated with said adhesive applying roll, a tensioning device for the strip located adjacent said stripper, a pair of fixed guide rolls disposed to one side of the adhesive applying roll, a scraper located between said fixed guide roll, an ad-

justably mounted guide roll located above said fixed guide rolls, and burners located beneath the water reservoir, substantially as described.

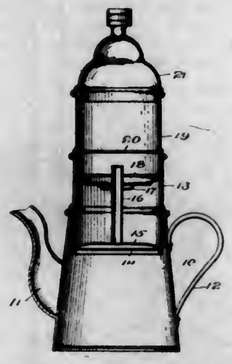
1,018,336. HOLD-ON SAFETY-TAP. HERMAN OTTE, Terre Haute, Ind. Filed June 6, 1911. Serial No. 631,577. (Cl. 85—5.)



1. The combination with a member having one or more keys thereon, of a tap adapted to be detachably connected to said member, said tap comprising a body portion having a plurality of bores of different magnitudes so as to form a shoulder between them, one of said bores having slots radiating therefrom corresponding to said keys and permitting said keys to pass into the larger of said bores, and a cap for rotating said keys out of alinement with said slots, said cap comprising a head, and a pair of semi-tubular flanges projecting from said head in spaced relation so as to form slots between them adapted to permit the passage of said keys between the flanges.

2. The combination with a member, having one or more keys thereon, of a tap adapted to be detachably connected to said member, said tap comprising a body portion having a plurality of bores of different magnitudes so as to form a shoulder between them, one of said bores having slots radiating therefrom corresponding to said keys and permitting said keys to pass into the larger of said bores, a cap for rotating said keys out of alinement with said slots, said cap comprising a head and a pair of semi-tubular flanges projecting from said head in spaced relation so as to form slots between them adapted to permit the passage of said keys between the flanges, lugs on said head, and spring catches on said body portion, adapted to engage said lugs to lock said cap against movement relative to said body portion.

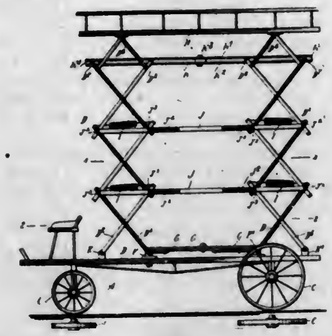
1,018,337. DRIP-COFFEE POT. RUDOLPH PETRY, New Orleans, La. Filed Sept. 14, 1911. Serial No. 649,292. (Cl. 53—3.)



1. In a coffee pot, a pot body, a cylinder insertible within and to extend above the pot body and provided with a perforate bottom, a coffee supporting member positioned within the cylinder and comprising a perforate base, a column and a perforate cup member supported upon the column and spaced from the base, a cylinder insertible within the first mentioned cylinder and adapted to extend above such cylinder and to position the coffee supporting device, a perforate bottom formed in the last mentioned cylinder, and a cover for the last mentioned cylinder.

2. In a coffee pot, a pot body, a cylinder insertible within the body and having a perforate bottom, a coffee supporting device disposed within the cylinder and comprising a perforate base, a central column and a perforate cup member, and a cylinder insertible in the first mentioned cylinder and embodying a perforate bottom disposed over the coffee supporting member.

1,018,338. FIRE APPARATUS. HARRY PINES, New York, N. Y. Filed Nov. 20, 1911. Serial No. 661,248. (Cl. 227—15.)



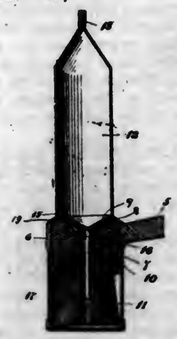
1. A fire apparatus, comprising a truck, a pair of raising and lowering lazy tongs having the outer lower members pivoted on the said truck, a platform pivotally attached to the upper ends of the said pair of lazy tongs, slides mounted to slide toward and from each other on the said truck and connected with the inner lower members of the said pair of lazy tongs, and an actuating lazy tong disposed horizontally and connected with the lower inner members of the said pair of lazy tongs.

2. A fire apparatus, comprising a truck, a pair of raising and lowering lazy tongs having the outer lower members pivoted on the said truck, a platform pivotally attached to the upper ends of the said pair of lazy tongs, slides mounted to slide toward and from each other on the said truck and connected with the inner lower members of the said pair of lazy tongs, and an actuating lazy tong disposed horizontally and connected with the lower inner members of the said pair of lazy tongs, the said actuating lazy tong having its middle members extended to form handles for opening or closing the said actuating lazy tong.

3. A fire apparatus, comprising a truck, a pair of raising and lowering lazy tongs having the outer lower members pivoted on the said truck, a platform pivotally attached to the upper ends of the said pair of lazy tongs, slides mounted to slide toward and from each other on the said truck and connected with the inner lower members of the said pair of lazy tongs, an actuating lazy tong disposed horizontally and connected with the lower inner members of the said pair of lazy tongs, and springs connected with corresponding members of each of the said pair of lazy tongs to counterbalance the same.

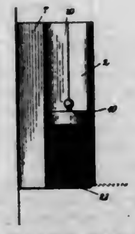
4. A fire apparatus, comprising a truck, a pair of raising and lowering lazy tongs having the outer lower members pivoted on the said truck, a platform pivotally attached to the upper ends of the said pair of lazy tongs, slides mounted to slide toward and from each other on the said truck and connected with the inner lower members of the said pair of lazy tongs, an actuating lazy tong disposed horizontally and connected with the lower inner members of the said pair of lazy tongs, and connecting and guiding links connecting the pair of lazy tongs with each other.

1,018,339. BLACKING-DAUBER. WILLIAM F. PORTER, Hartford, Conn. Filed Mar. 21, 1911. Serial No. 615,874. (Cl. 15—46.)



The combination with a brush stock provided with a basin-like cavity in one face, and bristles projecting from its opposite face, of a collapsible container having a hopper-shaped bottom adapted to fit within the basin-like cavity in the stock, and an annular flange circumscribing said bottom, a handle having a ring detachably threaded on the stock and engageable with the flange for removably fastening the container upon the stock, and a delivery tube mounted centrally in the stock and projecting into the bristles and communicating with the container at its bottom.

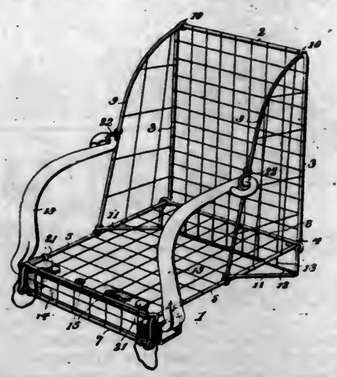
1,018,340. DENTAL DISK-HOLDER. JERRY A. PRESCOTT, Steele, N. D. Filed May 6, 1911. Serial No. 625,609. (Cl. 211—7.)



1. A device of the class described comprising two pieces of metal, the intermediate portions of each being provided with a plurality of semi-cylindrical embossings of different widths, the embossed sides of each piece lying adjacent each other with the said embossings in register whereby a series of magazines of varying diameters is secured, one of the said pieces being provided with a plurality of offset fingers extending transversely of each of the magazines at the lower end thereof and spaced from the other piece, a plate having a slot therein, the plate being curved to conform to the curvature of the embossings, a threaded stud carried by each embossing, the stud entering the said slot in the plate and a thumb nut engaging on the said stud whereby the plate may be adjustably secured in position and adjacent the forward ends of the fingers, thereby permitting disks of varying thicknesses to be successively withdrawn from each magazine.

2. A device of the class described, comprising two pieces of metal, the intermediate portions of each being provided with a plurality of semi-cylindrical embossings of different widths, the embossed sides of each piece lying adjacent each other, with the said embossings in register, whereby a series of magazines of varying diameters is secured, the end portions of each of the pieces being offset and secured together, one of the said pieces being provided with a plurality of offset fingers extending transversely of each of the magazines at one end thereof and spaced from the other piece, and a plate movably secured to the other piece, adjacent the forward ends of the fingers, whereby disks of varying thickness may be withdrawn successively from each magazine.

1,018,341. COMBINED CHAIR AND WINDOW-CLEANER'S SUPPORT. MAX RABINOWITZ, Baltimore, Md. Filed Dec. 9, 1911. Serial No. 664,721. (Cl. 20—87.)



1. In a combined chair and window cleaner's support, the combination with a suitable seat, of a casing carried by the front part thereof, of members having portions slidable in said casing, and extended upwardly to form chair arms when the device is used as a chair, and retaining devices when the seat is used for window cleaning purposes, and means for holding the members in adjusted position in the casing.

2. In a combined chair and window cleaner's support, the combination with a suitable seat, of a perforated casing, rigidly secured to the front thereof, of two members having flattened perforated portions, said members being slidable in the casing, and extended upwardly to serve as arms when the device is used as a chair, and as retaining devices when it is used for window cleaning purposes, and a removable pin adapted to extend through the perforations in the casing, and those in the slidable members, whereby the members are held in adjusted position.

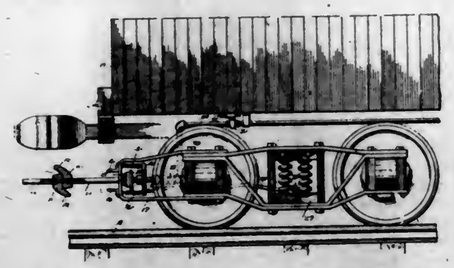
3. In a combined chair and window cleaner's support, the combination with a suitable seat, of a casing secured to the front part thereof, two members having portions slidable in said casing, said portions extending substantially for the full width of the seat, and having extensions outside of the casing, which extend upwardly and serve as arms when the device is used as a chair, and as retaining devices, when used for window cleaning purposes, and means for holding the slidable members in adjusted position.

4. In a combined chair and window cleaner's support, the combination with a suitable seat, of a perforated casing secured to the front part thereof and having a central perforated partition therein for substantially its entire length, members having perforated portions slidable in said casing, one above the partition and the other below, said members having extensions outside of the casing that extend upwardly to form chair arms or retaining devices for the purposes described, and pins adapted to extend through the perforations in the casing, sliding portions of the members, and the partition in the casing, to lock said members in adjusted position.

5. In a combined chair and window cleaner's support, the combination with a suitable seat, of a casing carried by the front part thereof, of members having slidable portions in said casing, said members outside of the casing being extended upwardly to form chair arms when the device is used as a chair and retaining devices when the seat is used for window cleaning purposes, means for holding the members in adjusted position in the casing,

a lower or leg portion upon which the seat is adapted to rest and means for temporarily securing the seat to the leg portion, all substantially as and for the purpose set forth.

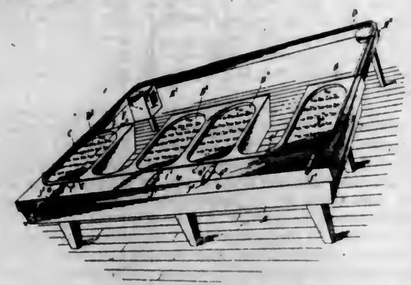
1,018,342. RAILWAY-TRAIN AIR-PIPE-COUPLING SYSTEM. GUY CARLETON READ, Davenport, Toronto, Ontario, Canada. Filed July 5, 1911. Serial No. 636,916. (Cl. 188—13.)



1. In a system of the character described, a coupling comprising a plurality of heads forming the terminals of a train pipe carried by each car, the faces of said heads being arranged to form air tight joints; a plurality of guide members radially extended and forwardly inclined to engage and guide the head being moved into engagement; resilient means operatively connected with said heads for advancing the same beyond the couplers of the draw heads of the car; supporting means fixedly connected with the carrying truck of the car for regulating the elevation of said heads; and means for supporting said heads on said trucks while the cars are disconnected to be moved from engagement with said truck when said cars are connected.

2. In a system of the character mentioned, in combination with a train pipe, of a plurality of slidably mounted terminal pipe sections; a plurality of coupler heads mounted on said pipe sections; a plurality of supporting frames connected with the car carrying trucks having an opening through which said pipe sections extend; a supporting head for each of said pipe sections having inclined sides extensible within said opening to pass said pipe sections; and yielding means for normally advancing said supporting heads within said openings.

1,018,343. GAME APPARATUS. AUGUST REIBSTEIN, New York, N. Y. Filed Jan. 31, 1911. Serial No. 605,771. (Cl. 46—61.)



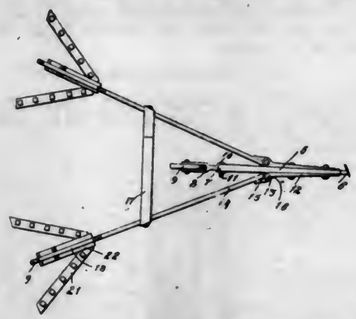
1. A game apparatus, comprising a supporting structure, having an endless guideway, a series of tables supported within the structure and having ball receiving recesses, the intermediate tables being adjacent to each other and spaced from the other tables, an endless chain mounted to travel in the guideway, cup-shaped ball supports carried by said chain, a motor mounted on the structure and operating the chain, and guns mounted on the structure.

2. A game apparatus, comprising a supporting structure, a series of tables arranged within the said structure and having ball receiving recesses, an endless chain mounted to travel on the said structure below and around the said tables, the chain having spaced cup-shaped supports extending above the tables, guns swiveled on the said structure to swing in a horizontal plane, the axes of the guns being in a plane extending through the centers of the said balls, and a motor mounted on the structure and geared with the said endless chain to impart a continuous traveling motion to the same.

3. A game apparatus, comprising a supporting structure having a plurality of tables arranged thereon and a guideway surrounding the tables, an endless chain mounted to travel in the guideway, cup-shaped ball supports mounted on the chain and extending above the table, a motor mounted on the structure, and a gear wheel on the shaft of the motor and engaging the links of the said chain to impart a traveling motion thereto.

4. In a game apparatus, a table supporting structure having an endless guideway, an endless chain mounted on the structure and having sundry of its links provided with pins, cup-shape ball supports detachably secured to the pins of the chain and traveling in the said guideway, and means for operating the endless chain.

1,018,344. HARROW. JOHN F. ROBBINS, Hamlin, Tex. Filed Sept. 23, 1911. Serial No. 650,905. (Cl. 55—125.)

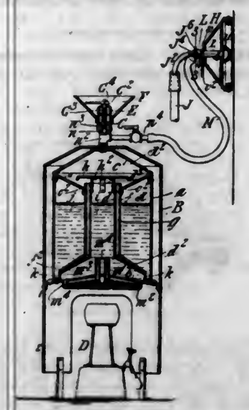


1. A harrow, comprising a central draft beam having a downwardly extended rear stem, a forked bracket adjustably connected with the stem and extending rearwardly therefrom, a ground wheel journaled in the fork of the bracket, drag beams hinged to opposite sides of the central draft beam, harrow teeth frames detachably connected with the rear ends of the said drag beams, and an adjustable bar connected with the beams for holding the same in spread or close relation to each other.

2. A harrow, comprising a central draft beam having a downwardly-extended rear stem, a forked bracket adjustably connected with the stem and extending rearwardly therefrom, a ground wheel journaled in the fork of the bracket, drag beams hinged to opposite sides of the central draft beam, harrow teeth frames detachably connected with the rear ends of the said drag beams, an adjustable bar connected with the beams for holding the same in spread or close relation to each other, and a hook extension formed on the forward end of the central draft beam.

1,018,345. APPARATUS FOR REMOVING OLD PAPER FROM WALLS. WAYNE C. ROBERTS and GEORGE H. CORSER, Holyoke, Mass. Filed Feb. 25, 1911. Serial No. 610,915. (Cl. 216—8.)

1. In an apparatus of the character described, the combination with a steam supply receptacle and a steaming head, of a tubular member with which the steaming head is connected, a flexible pipe having connection with the steam receptacle and with said tubular member, and an operating handle on which said tubular member is swiveled, and means for confining the tubular member in any adjustment on the operating handle.



2. In an apparatus of the character described, an operating handle, a fluid delivering head supported by the handle, revolubly adjustable relatively to the latter about a substantially horizontal axis and also revolubly adjustable about an axis at right angles to the first named axis, and a fluid conduit connected with said head.

3. In an apparatus of the character described, in combination, a boiler, a steaming head, an operating handle on which the head is revolubly adjustable about a substantially horizontal axis and also adjustable about an axis at right angles to such horizontal axis, respective means for confining the head in its separate adjustments relatively to the handle, and a flexible pipe between and to have communication with the boiler and the head.

4. In an apparatus of the character described, in combination, an operating handle having a yoke at its upper end, and having a coupling member mounted to swivel in the yoke, and means for confining it in any given adjusted position, a tubular member forming a rigid forward extension of the coupling member, a steaming head revolubly adjustably mounted on the tubular extension member, means for confining the head in its adjustment on such member, and a steam supplying conduit connected with the coupling member.

5. In combination, an operating handle having a yoke, an annular hollow coupling having trunnions between the arms of the yoke with compressible frictioning material between the trunnions and arms, a shaft, extending loosely through the trunnion provided coupling and through the arms, having a head at one end and screw threaded at its other extremity, a binding nut on the threaded extremity, a steaming head carried by and forward of the coupling, and a steam supply conduit connected with the coupling.

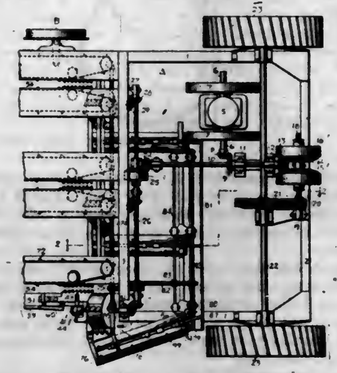
[Claims 6 to 11 not printed in the Gazette.]

1,018,346. CORN PICKING AND HUSKING MACHINE. WILLIAM HERMAN RUSSELL, Arcadia, Ind. Filed Dec. 30, 1910. Serial No. 600,153. (Cl. 56—111.)

1. In a corn-picking and husking machine, a framework comprising a guideway projecting from the front of said machine, a feeding mechanism working in said guideway, a shaft adjacent said mechanism, a picker on said shaft, working across said guideway and reciprocating means actuated by said shaft and connecting with said feeding mechanism, whereby the material to be acted upon is moved on to said picker.

2. In a corn-picking machine, in succession a feeding mechanism projecting from the front of said machine, an auxiliary feeding device receiving the material from said feeding mechanism, and a combing picker acting on the material carried on to the same by said feeding device.

3. In a corn-picking and husking machine, a guideway for the corn stalks extending forward from the machine, and a drum adjacent and parallel to said guideway having a picker comb thereon moving across one end of said guideway and adapted to pick or remove the ears of corn off the stalks as they are held against one side of said guideway.

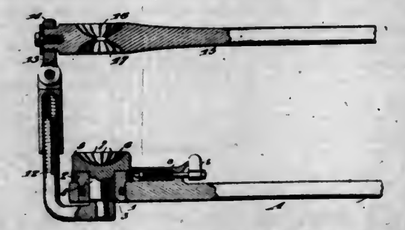


4. In a corn-picking and husking machine, a guideway for the corn stalks extending forward from the machine, a drum adjacent and parallel to said guideway having a picker comb thereon moving inside said guideway and adapted to pick the ears of corn off the stalks, as the stalks are carried along said guideway.

5. In a corn-picking and husking machine, feeding means adapted to feed the corn stalks to an auxiliary feeder, an auxiliary feeder in continuation of said feeding means comprising reciprocating means adapted to carry the stalks on to a picker, and a picker having teeth moving upwardly through the corn stalks adapted to raise and thereby separate the ears from the stalks.

[Claims 6 to 11 not printed in the Gazette.]

1,018,347. WRENCH. RUDOLPH SCHWARZ, Paynesville, Minn. Filed July 15, 1911. Serial No. 638,705. (Cl. 81—55.)



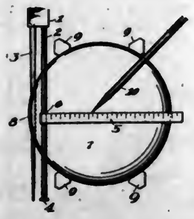
1. In a wrench, the combination with a handle having a ratchet, of a jaw operated by the movement of the ratchet, a lever having a plurality of sockets, and a strap removably connected to the handle, said lever swiveled to the strap whereby the different sockets can be presented for operating upon a bolt.

2. In a wrench, the combination with a handle having a ratchet, of a jaw actuated by the ratchet, an adjustable strap connected to the handle, a link pivotally connected to the strap, and a handle swiveled to the link having a plurality of sockets.

1,018,348. ENGRAVER'S TOOL. PAUL P. WENTZ, Sharon, Pa. Filed Nov. 17, 1910. Serial No. 592,919. (Cl. 33—19.)

1. In an engraver's tool, a block having two arms secured to one side thereof and extending therefrom in

the same direction, one arm being adapted to be secured to the object to be engraved, and the other arm having a rule slidably mounted thereon, substantially as shown and described.



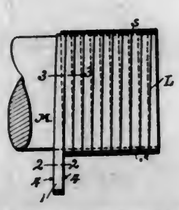
2. In an engraver's tool, a block having two arms secured thereto, one of said arms being tapered and the other arm of uniform diameter, and a rule slidably mounted on the latter arm, substantially as shown and described.

3. In an engraver's rule, a block having two arms secured thereto, one of said arms being tapered and the other arm being of uniform diameter throughout, a stop secured to the outer end of the latter arm, and a rule slidably mounted on said latter arm, substantially as shown and described.

4. In an engraver's tool, a block having two arms secured to one end thereof and extending therefrom in the same direction, one of the said arms being tapered, and the other arm being of uniform diameter throughout, a rule slidably mounted on the said latter arm, and a stop for preventing the accidental removal of the said rule, substantially as shown and described.

5. For use with a watch cap having a hinge bearing therein, a two armed member, one of the arms of which is adapted to fit into the hinge bearing, and the other arm having a rule slidably mounted thereon, said arms being substantially parallel, whereby the rule is maintained at right angles to the hinge bearing.

1,018,349. METALLIC PACKING. WILLIAM JAMES WRIGHT, Franklin, Pa. Original application filed Oct. 17, 1910, Serial No. 587,599. Divided and this application filed May 25, 1911. Serial No. 629,417. (Cl. 121—109.)



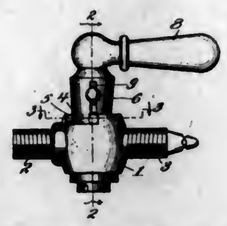
1. A packing ring which consists of a band or strip cut into a blank in the developed form of which is a parallelogram whose minor axis is equal to the width of the ring desired and a pair of diagonally opposite sides being each equal in length to the circumference of the ring desired.

2. A packing ring which consists of a band or strip cut into a blank in the developed form of which is a parallelogram whose minor axis is equal to the width of the ring desired and a pair of diagonally opposite sides being each equal in length to the circumference of the ring desired and lie at right angles to said minor axis.

3. A packing ring consisting of a band or strip bent into the form of a ring and having its ends extended to a feather edge whereby when said strip is folded into ring form the line of contact between the cut edges of the strip will extend throughout a complete turn.

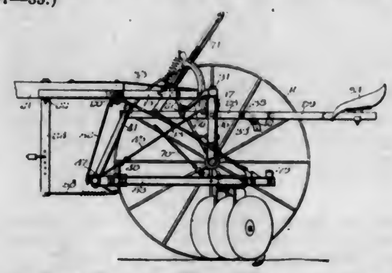
4. A packing ring consisting of a band or strip bent into the form of a ring and having its ends extended to a feather edge whereby when said strip is folded into ring form the line of contact between the cut edges of the strip will extend a distance sufficient to prevent separation of the ends of the ring when contracted.

1,018,350. GAS-COCK. LÉON BÉDARD, Quebec, Quebec, Canada. Filed May 23, 1911. Serial No. 629,042. (Cl. 137—7.)



A stop cock including a casing having the usual ports and a tapering bore communicating with the ports, a tapering plug having an opening communicating with the ports, a pin upon the plug, the casing having the usual recess forming the oppositely arranged shoulders, an automatic lock, the plug being provided with a slot having its inner wall inclined for the reception of the lock, the said plug being provided with a recess and with a depression, the lock having its upper extremity provided with a spring engaging within the recess, the lower extremity of the lock having a lock bar projecting beyond each of the faces thereof, one of said projecting portions engaging within the depression of the plug, the projecting portion of the lock bar adapted to engage the shoulder of the recess of the casing opposite to that occupied by the pin of the plug when the cock is in the closed position, the lock being provided with a head projecting beyond the plug, and said head adapted to be contracted to force the plug within the recess and the lock bar out of engagement with the shoulder when the said plug is to be rotated to open the cock.

1,018,351. AGRICULTURAL IMPLEMENT. CARL CHRISTENSEN, Bradley, Ill., assignor, by mesne assignments, to Sears, Roebuck & Company, Chicago, Ill., a Corporation of New York. Original application filed Sept. 25, 1907, Serial No. 394,557. Divided and this application filed Mar. 6, 1909. Serial No. 481,758. (Cl. 97—35.)



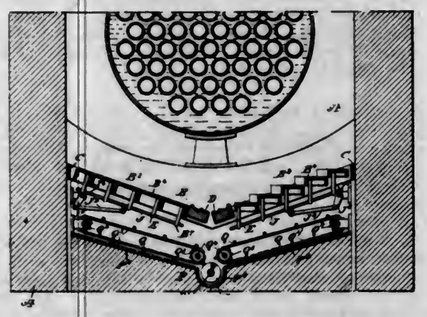
1. In a seat for agricultural implements, a laterally-swinging seat-support comprising a pivoted cross-head arranged to swing about a vertical axis, a Y-shaped seat-frame between the separated rear end portions of which said cross-head is secured, and seat-supporting bars pivotally connected with said Y-shaped seat-frame and extending rearwardly therefrom.

2. In a seat for agricultural implements, a laterally-swinging seat-support comprising a pivoted cross-head arranged to swing about a vertical axis, a Y-shaped seat-frame between the separated rear end portions of which said cross-head is secured, seat-supporting bars pivotally connected with said Y-shaped bars and extending rearwardly therefrom, and means for varying the angular position of said seat-supporting bars.

3. In a seat for agricultural implements, a seat-support comprising front and rear members, the front member comprising a cross-head, and a Y-shaped seat-frame between the separated rear end portions of which said cross-head is secured, and seat-supporting bars pivotally connected with said Y-shaped seat-frame and extending rearwardly therefrom.

4. In a seat for agricultural implements, a seat-support comprising front and rear members, the front member comprising a cross-head and a Y-shaped seat-frame between the separated rear end portions of which said cross-head is secured, the rear end portions of said seat-frame being turned down, self-supporting bars pivotally connected with said Y-shaped seat-frame and extending rearwardly therefrom, and means carried by the downwardly-extending portions of said Y-shaped seat-frame for supporting said supporting-bars.

1,018,352. GRATE. THADDIOUS V. ELLIOTT, New York, N. Y., assignor to Marlea Elliott, Flatbush, N. Y. Original application filed Dec. 8, 1904, Serial No. 235,942. Divided and this application filed Oct. 27, 1908, Serial No. 459,702. Renewed July 14, 1911. Serial No. 638,580. (Cl. 110—39.)



1. A furnace provided with an inclined grate, having longitudinally extending rocking grate bars, means for imparting a continuous rocking motion to the said grate bars, a longitudinally extending dumping bar at the lower side of the grate and provided with a shaft adapted to be periodically rocked to turn the bar into a dumping position, the said dumping bar being substantially rectangular in shape and having longitudinal corrugations on its upper face, an arm on the shaft of said dumping bar, and a weight connected by a link with said arm for returning the dumping bar to its closed position.

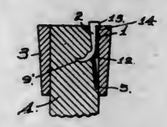
2. A furnace provided with a fire box, a grate inclined from the side of the fire box toward the longitudinal center thereof, the said grate having rocking grate bars, an ash pit having a correspondingly inclined bottom, dumping cars extending longitudinally at the lower side of the grate and adapted to be periodically rocked, the dumping bars being inclined toward each other and spaced apart, means for imparting a rocking motion to the grate bars, a conveyer at the lower side of the said bottom, longitudinal scraper bars for moving the ashes down the inclined bottom to the conveyer, and means for moving the scraper bars.

3. In a furnace, the combination with a grate formed in sections inclined downward from the sides of the furnace toward the longitudinal center thereof, the said grate having rocking grate bars, and dumping bars extending longitudinally between the lower ends of the grate sections and mounted to rock, the said dumping bars being substantially rectangular in shape and inclined toward each other and having their upper surfaces longitudinally corrugated, of an ash pit having a bottom inclined correspondingly to the grate sections, ash scrapers arranged to move over the bottom of the ash pit, and a conveyer arranged to receive the ashes.

4. A grate comprising grate bars provided with longitudinal air chambers extending from end to end of the grate bars, the said air chambers being open at the bottom and having tops provided with a series of spaced perforations, the air chamber in each grate bar having lateral extensions the top of which are also provided with spaced perforations, the extensions being spaced apart to form recesses for the reception of the extensions of the next adjacent grate bar, and a fixed inclined frame in which the grate bars are mounted to rock, the said frame being provided at its upper side with spaced extensions fitting into the spaces between the extensions of the uppermost grate bar.

5. In a furnace, the combination with a grate formed in sections inclined downward from the sides of the furnace toward the longitudinal center thereof, the said grate having rocking grate bars, and spaced dumping bars extending longitudinally between the lower ends of the grate sections and inclined toward each other, the said dumping bars being adapted to be periodically rocked, of an ash pit having a bottom inclined correspondingly to the grate sections, and ash scrapers arranged to move over the inclined bottom of the ash pit.

1,018,353. SECURING ATTACHMENT FOR TOOL-HEADS. ROLLIE B. FAGEOL, Oakland, Cal. Filed June 6, 1910. Serial No. 565,156. (Cl. 145—81.)



1. In a handle fastening, a wedge plate comprising a flat metal plate having a tapering key seat stamped therein, the portions of the plate at each side of said key seat being struck out to form tapering ribs extending downwardly from the top of the plate and merging into the plate adjacent the bottom edge thereof, and a lock key for said seat.

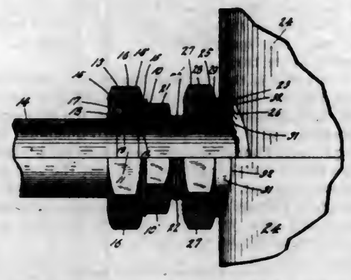
2. In a handle fastening, the same comprising a wedge plate member provided with a vertical lock key seat terminating in an outwardly inclined bottom wall, a lock key for said seat, and an outwardly projected shoulder on said key adjacent its lower end, which end as forced over the bottom surface of the lock key seat is outwardly turned and embedded in the member to be locked.

3. In a handle fastening, the same comprising a downwardly tapered wedge plate member provided with a vertically disposed lock key seat and laterally extended bearing surfaces, an outwardly inclined bottom wall section to the lock-key seat, a downwardly tapered lock key provided with an engaging shoulder at its upper end, and an outwardly projected shoulder adjacent the lower end of the lock key, the terminal section of the lock key being inclined to ride over the bottom wall of the lock key seat.

1,018,354. PIPE-JOINT. ALFRED R. FAIRFIELD, Indianapolis, Ind., assignor of one-third to Edwin S. Harter and one-third to Thomas S. Hitt, Indianapolis, Ind. Filed Nov. 12, 1910. Serial No. 592,121. (Cl. 137—28.)

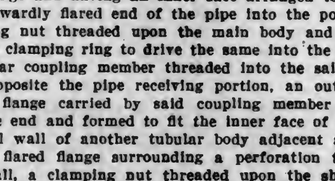
1. A pipe coupling comprising a main tubular body having an annular pipe receiving pocket formed around the end of the bore of the body, an axially extending flange flanking the pocket at its outer side, a clamping ring projected into the pocket within the outer edge of said flange and having an inner face arranged to clamp the outwardly flared end of the pipe into the pocket, means for driving said clamping ring into the pocket, a tubular coupling member threaded into the said main body opposite the pipe receiving portion, an outwardly

flaring flange carried by said coupling member at its opposite end and formed to fit the inner face of the cylindrical wall of another tubular body adjacent an outwardly flared flange surrounding a perforation through said wall, a clamping nut threaded upon the shank of said coupling member, and a clamping ring rotatably seated in said nut and provided with an inner face formed to coöperate with the coupling member and its flange to clamp the outwardly flared portion of the wall of the cylinder surrounding the perforation thereof into the space between the tubular shank and flange of said coupling member.



2. A pipe coupling comprising a main tubular body having an annular pipe receiving pocket formed around the end of the bore of the body, an axially extending flange flanking the pocket at its outer side, a clamping ring projected into the pocket within the outer edge of said flange and having an inner face arranged to clamp the outwardly flared end of the pipe into the pocket, a clamping nut threaded upon the main body and engaging the clamping ring to drive the same into the pocket, a tubular coupling member threaded into the said main body opposite the pipe receiving portion, an outwardly flaring flange carried by said coupling member at its opposite end and formed to fit the inner face of the cylindrical wall of another tubular body adjacent an outwardly flared flange surrounding a perforation through said wall, a clamping nut threaded upon the shank of said coupling member, and a clamping ring rotatably seated in said nut and provided with an inner face formed to coöperate with the coupling member and its flange to clamp the outwardly flared portion of the wall of the cylinder surrounding the perforation thereof into the space between the tubular shank and flange of said coupling member.

1,018,355. BATTERY FOR CLEANING TARNISHED METALS. ROBERT H. GALBREATH, Denver, Colo. Filed May 29, 1911. Serial No. 630,195. (Cl. 204—7.)



1. A battery for cleaning tarnished metals, composed of two adjacent plates having the relation of anode and cathode to each other, a frame surrounding the two plates, for securing the same in contact with each other, for the purpose set forth.

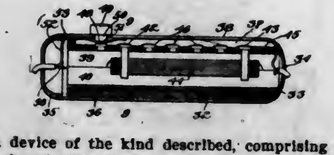
2. A device of the class described, consisting of two plates having the relation to each other of anode and cathode, suitable means comprising a frame for connecting the two plates to form a battery, and means applied to one side of the plate structure for supporting the article to be cleaned out of direct contact with the plate structure, the said means being of such character that the article to be cleaned has only a small portion of its surface in direct contact with the battery, for the purpose set forth.

3. A battery of the class described, consisting of two adjacent plates having the relation to each other of anode and cathode, the two plates being connected by a metal framework applied to their edges, substantially as described.

4. A battery of the class described, consisting of two plates of practically the same size which are respectively electro-negative and electro-positive to each other, a metal binding applied to the surrounding edges of the two plates, whereby they are held together in operative relation.

5. A battery of the class described, consisting of two adjacent plates which are respectively electro-negative and electro-positive to each other, a layer of metal mesh material applied to the opposite sides of the plate structure, and a metal binding applied to the surrounding edges of the aforesaid metal members, whereby they are all secured together in coöperative relation, the metal binding, as well as the metal mesh material, being electro-negative to the cleaning or electro-positive plate, substantially as described.

1,018,356. AUDIPHONE RHEOSTAT AND SWITCH. KENNETH B. HASTINGS, Boston, Mass., assignor to Globe Ear-Phone Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 13, 1911. Serial No. 620,875. (Cl. 219—62.)



1. A device of the kind described, comprising a metallic tubular shell having connection to constitute a circuit terminal, an insulating block fitted within the same and carrying spaced apart contacts constituting the other circuit connection, and a contact button slidable along said shell to make contact and complete the circuit from the same to any of said contacts, said button extending without the shell for direct hand operation.

2. A device of the kind described, comprising a metallic shell constituting a circuit connection, an insulating block fitted within the same and having a plurality of spaced-apart contacts extending lengthwise thereof to form the other circuit connection, and a button slidable in a lengthwise slot of said shell and adapted to complete the circuit from said shell to any one of said contacts at option, said button extending without the shell for direct hand operation.

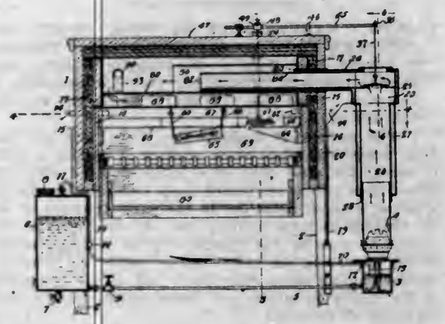
3. A device of the kind described, comprising a metallic shell connected to a line terminal, an insulating block fitted within said shell, a series of spaced-apart contacts extending lengthwise of said block, a resistance coil carried by said block and having different parts connected to said series of contacts and connected at one end to the other line terminal, and a contact button slidable along a slot in said shell and adapted to make contact from the shell to any one of said resistance-connected contacts or to a final contact to cut out all of said resistance.

4. A device of the kind described, comprising a metallic shell having an extended longitudinal slot, an insulating block fitted within said shell and having a series of spaced-apart contacts fixed to said block and connected to different parts of a resistance coil, and a button carrying a spring contact slidable along said slot and engageable with any one of said contacts.

5. A device of the kind described, comprising a metallic shell constituting a circuit connection, an insulating block within said shell and having transversely fixed thereto a series of spaced-apart contacts, said block being hollowed out, a resistance coil within the hollowed out portion of said block and having different parts thereof connected to the several contacts, and means for completing the circuit from said shell to any one of said contacts at will.

[Claims 6 to 11 not printed in the Gazette.]

1,018,357. INCUBATOR. PAUL H. HERNDON, Tampa, Fla. Filed Jan. 23, 1911. Serial No. 604,230. (Cl. 237—22.)



1. In an incubator, means embodying a plurality of conduits one within the other and both discharging through the same outlet, combined with means for automatically controlling the admission of heat to the hot air chamber, ventilating pipes within the hot air chamber having their inner ends terminating in proximity to the floor of the latter, and a casing supporting said conduits and having lateral discharge openings.

2. In an incubator, a hot air chamber, a source of heat disposed exteriorly thereof, a chamber interposed between the two, thermostatic controlled means for controlling the supply of heat from the said chamber to the hot air chamber and simultaneously operated means for the escape of the hot air from said chamber, said closing means being movable in unison in opposite directions, and means for spreading the hot air over the floor of the hot air chamber.

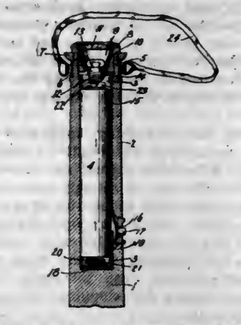
3. In an incubator, a hot air chamber, means therein for uniform distribution of heat within the same, ventilating pipes removed from said heat distributing means and extending within said hot air chamber with their inner ends disposed near the floor thereof near the opposite sides, and means for deflecting the hot air downwardly against the floor of the hot air chamber and to said ventilating pipes.

4. In an incubator, a hot air chamber, means therein for uniform distribution of heat within the same, ventilating pipes removed from said heat distributing means and extending within said hot air chamber with their inner ends disposed near the floor thereof near the opposite sides, and means for deflecting the hot air downwardly against the floor of the hot air chamber and to said ventilating pipes, said pipes having their ends within the hot air chamber bent downwardly and terminating near the floor thereof.

5. In an incubator, a hot air chamber, means embodying conduits one within the other within said hot air chamber for uniform distribution of heat within the same and ventilating pipes removed from said heat distributing means and extending within said hot air chamber with their inner ends disposed near the floor thereof, said pipes being disposed at the rear end of said chamber.

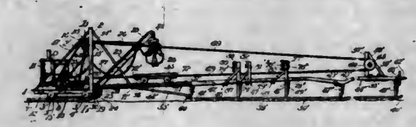
[Claims 6 to 8 not printed in the Gazette.]

1,018,358. COMBINED POLICEMAN'S CLUB AND LIGHT. ROBERT L. LITSEY, Seattle, Wash. Filed Feb. 16, 1911. Serial No. 608,927. (Cl. 240—8.4.)



In combination with a policeman's club having a handle provided with a longitudinal recess, a plug threaded into the outer end of the handle and having an opening therethrough flaring outwardly from the inner to the outer end of the plug, a reflector fitting the walls of the flaring opening, a lens mounted in the outer end of the opening, a lamp mounted in the opening at the inner end of the plug and provided with a terminal, a metallic strip carried by the inner end of the plug and engaging its inner end with said lamp terminal, a circuit forming metallic strip arranged longitudinally of the recess contacting at one end with the outer end of the metallic strip carried by the plug and having its other end terminating in an offset portion near the inner end of the recess, said offset portion carrying a push button extending through the wall of the recess, and a contact plate mounted in the recess at the closed end thereof, said plate connected to one pole of the battery and having an extension projecting into position to be engaged by said offset portion when the latter is forced toward the battery.

1,018,359. EXCAVATING AND CONVEYING APPARATUS. JOSEPH L. POTTER, Indianapolis, Ind. Filed Aug. 13, 1910. Serial No. 576,951. (Cl. 37—39.)



1. Excavating and conveying apparatus including traction wheels, axles secured to the traction wheels, a frame supported on and carried by the axles, an engine mounted on the frame, an excavating implement mounted also on the frame, a drive wheel secured to one of the axles, and gearing mounted on the frame for detachably connecting the drive wheel with the engine to rotate the traction wheels.

2. Excavating and conveying apparatus including a movable unitary structure, one end portion of the structure being provided with supporting traction wheels, a hoisting engine mounted on the structure, an excavating implement and a conveying car mounted also on the structure, the implement being connected detachably with the hoisting engine, and gearing mounted on the structure for detachably connecting the hoisting engine with the traction wheels to rotate the traction wheels.

3. Excavating and conveying apparatus including an engine-car having rotatable driving wheels for support, a hoisting-engine mounted on the engine-car, an excavating implement mounted on the engine-car and operatively connected with the hoisting-engine, a movable trestle, a conveying car movable on the trestle, and means mounted on the engine-car coöperating to

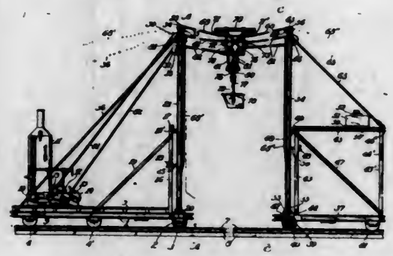
lock the driving wheels for preventing movement of the engine-car toward the excavating implement when the latter is operating.

4. Excavating and conveying apparatus including a trestle, a car movable on the trestle, a sheave mounted on the trestle, a cable guided by the car and extending about the sheave, means for operating the cable, and means for operatively connecting or disconnecting the cable and the car at a predetermined position during operation of the cable.

5. Excavating and conveying apparatus including a trestle, a car movable on the trestle, a sheave mounted on the trestle, a hoisting-engine, an excavating implement for loading the car operatively connected with the engine, a cable extending about the sheave, means for operating the cable, means for operatively connecting the cable with the car when the cable moves from the sheave, means for releasing the car from the cable at a predetermined position when the cable moves toward the sheave, and means for stopping the car when released from the cable.

[Claims 6 to 31 not printed in the Gazette.]

1,018,360. AERIAL-CABLE HOISTER AND CONVEYER. JOSEPH L. POTTER, Indianapolis, Ind. Filed Apr. 15, 1911. Serial No. 621,226. (Cl. 214—14.)



1. An aerial cable machine including two independently movable frames having each a tower removably mounted thereon, one of the frames having also a winding-drum thereon, a cable extending from one to the other of the towers, a carrier movably mounted on the cable, and a cable connected with the winding-drum and the carrier.

2. An aerial cable conveyer including two movable frames, one of the frames having a forward tower and also a winding-drum mounted thereon, the other one of the frames having a rearward tower mounted thereon, means for fixedly holding the frames relatively one to another, a cable extending from one to the other one of the towers, a sheave mounted on the forward tower, a carrier movably mounted on the cable, and a cable connected to the carrier and extending over the sheave to the winding-drum.

3. An aerial cable machine including a head frame provided with carrying wheels, one of the wheels being provided with a toothed wheel, a dog mounted on the frame and normally engaging the toothed wheel, a tower secured detachably to the head frame on one end portion thereof, a hoisting engine mounted on the opposite end portion of the head frame, a cable connected to the tower another tower partially supporting the cable, a carrier movable on the cable, operating cables connected with the hoisting engine and carrier, and guide sheaves on the towers for the operating cables.

4. An aerial cable machine including two movable frames, two towers removably mounted on the two frames respectively, a cable removably mounted on the two towers, a carrier movably mounted on the cable, a hoisting engine mounted on one of the frames, operating cables connected to the hoisting engine and operatively connected with the carrier, one of the cables being adapted for hoisting, sheaves on the towers guiding the operating cables, a cable secured to one of the frames and connected to the tower thereon, and a cable secured to the other one of the frames and connected to the tower thereon.

5. An aerial cable machine including a horizontal frame, wheels supporting the frame, two of the wheels being at one end portion of the frame and having each a toothed wheel connected thereto, dogs mounted movably on the frame to or from the toothed wheels, an upright frame fixedly mounted upon the horizontal frame, a tower supported on the horizontal frame and secured detachably to the upright frame, an oppositely arranged movable tower, a cable supported upon the two towers, a carrier movable on the cable, and a hoisting appliance supported by the carrier.

[Claims 6 to 13 not printed in the Gazette.]

1,018,361. MANUFACTURE OF PINS, LINKS, AND THE LIKE FROM MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 27, 1911. Serial No. 611,231. (Cl. 148—24.)

1. The method of forming pins, links, and the like, from manganese steel, which consists in heating a blank of manganese steel until in a uniform and ductile condition, then rolling the heated blank to form a bar having a dense wrought condition in the parts intended to act as wearing surfaces, cutting the bar into lengths, mechanically working the lengths into the intended shapes while preserving in the wearing parts the desirable wrought state, which those parts had at the completion of the rolling operation, and finally cooling rapidly; substantially as described.

2. The method of forming pins, links, and the like, from manganese steel, which consists in heating a blank of manganese steel until in a uniform and ductile condition, then rolling the heated blank to form a bar having a dense wrought condition in the parts intended to act as wearing surfaces, cutting the bar into lengths, mechanically working the lengths into the intended shapes while maintaining the temperature of the wearing parts within a range which will prevent any substantial loss of their dense wrought condition, and finally cooling rapidly, substantially as described.

3. The method of forming pins, links, and the like, from manganese steel, which consists in heating a blank of manganese steel to a temperature higher than 1125° C., then rolling the heated blank to form a bar having a surface temperature in the parts intended for wear not substantially lower than 800° C. nor substantially above 1075° C., maintaining the temperature of said surfaces within said range of temperature while the bar is being cut up into lengths and formed into the pins or the like to be produced, and finally rapidly cooling the finished pieces; substantially as described.

4. The method of forming pins, links, and the like, from manganese steel, which consists in heating a blank of manganese steel to a temperature higher than 1125° C., then rolling the heated blank to form a bar having a surface temperature in the parts intended for wear not substantially lower than 800° C. nor substantially above 1075° C., and a higher interior temperature appropriate to punching, maintaining the temperature of said wearing parts within said range of temperature while the bar is being cut up into lengths and formed into the punching pins or the like to be produced, and finally rapidly cooling the finished pieces; substantially as described.

5. The method of forming pins, links, and the like, from manganese steel, which consists in heating a blank of manganese steel to a temperature higher than 1125° C., then rolling the heated blank to form a bar having a surface temperature in the parts intended for wear not substantially lower than 800° C. nor substantially above 1075° C., maintaining the temperature of said surfaces within said range of temperature while the bar is being cut up into lengths and formed into the pins or the like to be produced, removing forging strains by equalizing the temperature in the pieces, and finally rapidly cooling; substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,362. PRODUCTION OF MANGANESE-STEEL FORGINGS. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed May 20, 1911. Serial No. 628,437. (Cl. 148—24.)

1. The process of producing forgings of manganese steel, which consists in forming the same from a manganese steel blank in a plastic condition and having its constituents in homogeneous solution, and completing the forming operation at a temperature below 1075° C., and finally cooling rapidly, thereby obtaining a product in which the steel has a homogeneous fine-grained structure and a high elastic limit.

2. The process of producing forgings of manganese steel, which consists in forming the same from a manganese steel blank in a plastic condition and having its constituents in homogeneous solution, and completing the forming operation at a temperature of about 900° C., and finally rapidly cooling, thereby obtaining a product in which the steel has a homogeneous fine-grained structure and a high elastic limit.

3. The process of producing forgings of manganese steel, which consists in forming the same from a manganese steel blank in a plastic condition and having its constituents in homogeneous solution, and completing the forming operation at a temperature below 1075° C. and above 720° C. and finally cooling rapidly, thereby obtaining a product in which the steel has a homogeneous fine-grained structure and a high elastic limit.

4. The process of producing forgings of manganese steel, which consists in heating a blank of manganese steel at a temperature above 1125° C., working the metal, completing the forming operation at a temperature below 1075° C., and rapidly cooling.

5. The process of producing forgings of manganese steel, which consists in heating a mass of manganese steel until the carbids have been absorbed, cooling to avoid separation of the carbids, reheating rapidly at temperatures between 640° C. and 720° C., heating further to a temperature sufficient to impart the desired ductility, forming the blank at a temperature below 1075° C. and cooling rapidly to a temperature below 420° C.

1,018,363. MANUFACTURE OF CHAINS. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 16, 1911. Serial No. 666,235. (Cl. 219—5.)

1. The method of producing wrought manganese steel chain, which consists in cutting a bar of manganese steel into pieces suitable for links; bending and interlocking the pieces and electrically welding their ends to form links; thoroughly working the welded portions at temperatures below 1075° C.; heating the links to about 1000° C.; and rapidly cooling to below 420° C.; substantially as described.

2. The method of producing wrought manganese steel chain, which consists in heating a bar of manganese steel to between 350° C. and 1075° C.; cutting the bar into pieces suitable for links; bending and interlocking the pieces and electrically welding their ends to form links; thoroughly working the welded portions at temperatures below 1075° C.; heating the links to about 1000° C.; and rapidly cooling to below 420° C.; substantially as described.

3. The method of producing wrought manganese steel chain, which consists in heating a bar of manganese steel to between 350° C. and 1075° C.; cutting the bar into pieces suitable for links; forming and interlocking the pieces and electrically welding their ends to form links; thoroughly working the welded portions at temperatures between 800° C. and 1075° C.; heating the links to about 1000° C.; and rapidly cooling to below 420° C.; substantially as described.

4. The method of producing wrought manganese steel chain, which consists in heating a manganese steel billet to about 1175° C.; rolling the billet to bar form with a finishing temperature below 1075° C.; cutting the bar into pieces while still hot from the heat of rolling; bending and interlocking the pieces and electrically welding their ends to form links; thoroughly working the welds at temperatures between 800° C. and 1075° C.; equalizing the temperatures in the links at about 1000° C.; and rapidly cooling to below 420° C.; substantially as described.

5. The method of welding, working and heating manganese steel, which comprises bringing the ends to be welded to a welding heat; pressing the said ends together; thoroughly working the welded portions at temperatures below 1075° C.; and rapidly cooling to below 420° C.; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,364. MAKING WROUGHT MANGANESE-STEEL CAR-WHEELS. WINFIELD S. POTTER, New York, N. Y. Filed Dec. 16, 1911. Serial No. 666,236. (Cl. 148—24.)

1. The method of producing wrought manganese steel car wheels, which consists in casting a manganese ingot so as to avoid porosity, and of a size to produce several wheel blanks; permitting the ingot, after freezing, to cool to between 1000° C. and 1100° C.; reheating to between 1125° C. and 1200° C.; reducing the ingot to substantially uniform cross-section throughout its length and cutting it into blanks; immediately reheating the blanks to not above 1200° C.; working the outer portion of the blanks and forming the hub and web portions, the final working of the hub and web portions taking place at temperatures below 1075° C. and the final working of the tread portion taking place at temperatures below 1025° C.; equalizing at between 975° C. and 1025° C.; and rapidly cooling to below 420° C.; substantially as described.

2. The method of producing wrought manganese steel car wheels, which comprises preliminarily working a manganese steel wheel blank at temperatures between 1125° C. and 1200° C.; finally working said blank throughout at temperatures between 900° C. and 1075° C.; equalizing at about 1000° C.; and rapidly cooling to below 420° C.; substantially as described.

3. The method of producing wrought manganese steel car wheels, which comprises preliminarily working a manganese steel wheel blank at temperatures between 1125° C. and 1200° C.; finally working said blank throughout at temperatures between 900° C. and 1075° C.; rapidly cooling to below 420° C., and machining to form at a surface temperature for the portions to be machined of between 300° C. and 420° C.; substantially as described.

4. The method of producing wrought manganese steel car wheels, which comprises reducing the ingot to substantially uniform cross-section throughout its length and cutting it into blanks at an initial temperature of about 1175° C.; thereafter working the blank into wheel form in a number of forming operations with intermediate reheating; the re-heating for each forming operation being rapidly conducted up to about 1175° C., and for a period of moderate duration; finishing the working at temperatures below 1075° C.; and finally cooling rapidly to below 420° C.; substantially as described.

5. The method of producing wrought manganese steel car wheels, which comprises reducing the ingot to substantially uniform cross-section throughout its length and cutting it into blanks at an initial temperature of about 1175° C.; thereafter working the blank into wheel forms in a number of forming operations with intermediate reheating; the re-heating for each forming operation being rapidly conducted up to about 1175° C., and for a period of moderate duration; and the temperature from one forming operation to the next re-heating not being permitted to drop below an average of about 1000° C.; finishing the working at temperatures below 1075° C.; and finally cooling rapidly to below 420° C.; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,365. MAKING CARBON-STEEL CAR-WHEELS. WINFIELD S. POTTER, New York, N. Y. Filed Dec. 16, 1911. Serial No. 666,237. (Cl. 148—24.)

1. The method of making a carbon steel car wheel, which comprises casting the ingot so as to avoid porosity,

and of a size to produce several wheel blanks; permitting the ingot, after freezing, to cool to a temperature not above 1150° C.; soaking the ingot at temperatures between 1050° C. and 1150° C. to eliminate irregularities of composition occurring during freezing and cooling; reducing the ingot to substantially uniform cross-section throughout its length and cutting it into wheel blanks; thoroughly working the outer portion of the blank at temperatures between 1050° C. and 1200° C. and thereafter stretching the tread portion; forming the hub and web of the wheel; reducing the tread portion throughout to a fine-grained dense condition by thoroughly and finally working it at temperatures below 950° C.; cooling the tread portion during such final working to below 850° C.; quickly cooling to below 550° C. after the final working; equalizing, to remove strains, at about 500° C.; and finally cooling evenly and gradually; substantially as described.

2. In the manufacture of carbon steel car wheels, the method of producing a blank in condition for subsequent working, which comprises casting an ingot in such manner as to avoid porosity, and, after freezing, cooling the ingot to a temperature of about 1150° C.; soaking the ingot at temperatures between 1050° C. and 1150° C. to eliminate irregularities of composition occurring during freezing and cooling; reducing the ingot to a bloom of substantially equal cross section throughout its length and cutting it up into blanks; substantially as described.

3. In the manufacture of carbon steel car wheels, the method of avoiding such lamination in the tread portions as may be due to feeble cohesion between the grains thereof, which comprises working said tread portions to form in one or more working operations, each working operation of said tread portion being preceded by a heat of moderate duration at temperatures within the range of 950° C. to 1200° C.; substantially as described.

4. In the manufacture of carbon steel car wheels, the method of avoiding such lamination in the tread portions as are due to the expansion of internal flaws therein, which comprises preliminarily working the tread portion of the blank at temperatures within the range of 1050° C. to 1200° C., and thereafter stretching said tread portion; substantially as described.

5. In the manufacture of carbon steel car wheels, the method of avoiding such lamination in the tread portions as may be due to internal flaws and as may be due to feeble cohesion between the grains, which comprises bringing the tread portion of the blank to a wrought condition prior to such elongation or stretching of said portion as would produce internal cleavage surfaces therein, and then working and thereby stretching the tread portion in one or more working operations, each working operation being preceded by a heat of moderate duration at temperatures within the range of 950° C. to 1200° C.; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,018,366. PRODUCTION OF MACHINED SHAPES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 18, 1911. Serial No. 666,500. (Cl. 148—24.)

1. The method of producing machined shapes of manganese steel, which comprises working the metal at temperatures beginning at between 950° C. and 1250° C., continuing the working of the metal at temperatures between 800° C. and 1075° C. thereby obtaining a fine-grained wrought condition of the metal, preliminarily machining at temperatures between 500° C. and 1075° C., heating at temperatures between 800° C. and 1075° C., rapidly cooling to below 420° C. and completing the machining at temperatures between 300° C. and 420° C.; substantially as described.

2. The method of producing machined shapes of manganese steel, which comprises working the metal at temperatures which in the final forming are below 1075° C. and preserving the wrought condition incident to such working by machining at temperatures which are between 500° C. and 1075° C.; substantially as described.

3. The method of producing machined shapes of manganese steel, which comprises working the metal at temperatures which in the final forming are below 1075° C. and preserving the wrought condition incident to such working by machining at temperatures which are between 500° C. and 1075° C., and toughening the metal by heating at temperatures between 800° C. and 1075° C. and rapidly cooling to a temperature below 420° C.; substantially as described.

4. The method of producing machined shapes of manganese steel, which comprises working the metal at temperatures which in the final forming are below 1075° C. and preserving the wrought condition incident to such working by machining at temperatures which in the roughing stages are between 500° C. and 1075° C., toughening the metal by heating at temperatures between 800° C. and 1075° C. and rapidly cooling to a temperature below 420° C., and avoiding the loss of the toughened state by completing the machining at temperatures between 300° C. and 420° C.; substantially as described.

5. The method of producing machined shapes of manganese steel, which consists in heat-treating and working the blank until it is in a fine-grained toughened wrought condition, and avoiding loss of the toughened state during the final machining by effecting such final machining at temperatures between 300° C. and 420° C.; substantially as described.

1,018,367. PRODUCTION OF WROUGHT SHAPES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y. Filed Dec. 20, 1911. Serial No. 666,869. (Cl. 148—24.)

1. The method of producing wrought shapes of manganese steel, which consists in casting a manganese steel shape; arresting the cooling of the cast shape and equalizing the temperature throughout the mass at between 950° C. and 1025° C.; working the casting to bring it to the desired shape and condition; and finally rapidly cooling; substantially as described.

2. The method of producing wrought shapes of manganese steel, which consists in casting a manganese steel shape; arresting the cooling of the cast shape and equalizing the temperature throughout the mass at between 950° C. and 1025° C.; working the casting to bring it to the desired shape and condition; heating to temperatures between 800° C. and 1075° C.; and finally rapidly cooling; substantially as described.

3. The method of producing wrought shapes of manganese steel, which consists in casting a manganese steel shape; regulating the rate and extent of cooling of the cast shape from the heat of casting until its temperature is arrested at between 950° C. and 1025° C.; working the casting to bring it to the desired shape and condition; and finally rapidly cooling; substantially as described.

4. The method of producing wrought shapes of manganese steel, which consists in casting a manganese steel shape; regulating the rate and extent of cooling of the cast shape from the heat of casting until its temperature is arrested at between 950° C. and 1025° C.; equalizing the temperature throughout the mass at between 950° C. and 1025° C.; working the casting to bring it to the desired shape and condition; and finally rapidly cooling; substantially as described.

5. The method of producing wrought shapes of manganese steel, which consists in casting a manganese steel shape; regulating the rate and extent of cooling of the cast shape from the heat of casting until its temperature is arrested at between 950° C. and 1025° C.; equalizing the temperature throughout the mass at between 950° C. and 1025° C.; working the casting to bring it to the desired shape and condition; heating to temperatures between 800° C. and 1075° C.; and finally rapidly cooling; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,368. HEAT TREATMENT OF LARGE MANGANESE-STEEL SHAPES. WINFIELD S. POTTER, New York, N. Y. Filed Dec. 29, 1911. Serial No. 668,458. (Cl. 148—24.)

1. The method of producing thick shapes of manganese steel in a strong tough condition substantially devoid of strains, which consists in bringing a blank of such steel into a uniform austenite condition at a suitably high working temperature, working the metal into the intended form and completing the working at temperatures between 800 and 1000° C., and then cooling by first subjecting the blank to the moderate cooling action of a suitable cooling agent and subsequently increasing the efficiency of the cooling agent to complete the cooling to a temperature below 420° C. at such rate as to avoid separations or recrystallization within the mass; substantially as described.

2. In a method of producing a thick shape of manganese steel in a strong tough condition substantially devoid of strains, from a blank of such steel which has previously been brought into a uniform austenite condition at a suitable high working temperature; preliminarily reducing the temperature of the blank with coincident working to avoid the separations and recrystallizations within the mass which would otherwise take place during such cooling, and completing the cooling to below 420° C. at a higher rate than is possible by immersion in still water; substantially as described.

3. The method of producing thick shapes of manganese steel in a strong tough condition substantially devoid of strains, which consists in bringing a blank of such steel into a uniform austenite condition at a suitably high working temperature, working the metal into the intended form and continuing the working through a substantial preliminary reduction of the temperature without separations or recrystallization within the mass, and then completing the cooling by immersing the blank in a bath of molten metal having a temperature less than 420° C.; substantially as described.

1,018,369. MANUFACTURE OF MANGANESE-STEEL WIRE. WINFIELD S. POTTER, New York, N. Y. Filed Jan. 4, 1912. Serial No. 669,460. (Cl. 148—24.)

1. The method of making manganese steel wire, which comprises producing a manganese steel rod in a fine-grained, austenite condition, and then, while the metal is in that condition and in a highly heated state working the rod with gradually diminished reductions as the metal cools, the working being continued from the higher temperatures to temperatures below 420° C.; substantially as described.

2. The method of making manganese steel wire, which comprises producing a manganese steel rod in a fine-grained, austenite condition, and then, while the metal is in that condition and in a highly heated state working the rod with gradually diminished reductions as the metal cools, the working being continued from the higher temperatures to temperatures below 420° C. with intermediate rapid cooling and reheating before the final stage of the working; substantially as described.

3. The method of making manganese steel wire, which comprises producing a manganese steel rod in a fine-grained, austenite condition, and then, while the metal is in that condition and in a highly heated state working the rod with gradually diminished reductions as the metal cools, the working being continued from the higher temperatures to temperatures below 420° C. with intermediate rapid cooling to below 420° C. and reheating for a short time to a temeparture within the range from 720° C. to 1050° C. before the final stage of the working; substantially as described.

4. The method of making manganese steel wire, which comprises producing a manganese steel rod in a fine-grained, austenite condition, and then, while the metal is in that condition and in a highly heated state working the rod with gradually diminished reductions as the metal cools, the working being continued from the higher temperatures to temperatures below 420° C., restoring such ductility as has been lost during the working of the drawn product and toughening it by heating the drawn product to a temperature within the range from about 720° C. to about 1025° C., and immediately rapidly cooling; substantially as described.

5. The method of making manganese steel wire which comprises producing a manganese steel rod in a fine-grained, austenite condition, and working the rod with gradually diminished reductions as the metal cools, the working being continued from higher temperatures to temperatures below 420° C., heating the drawn product to a temperature within the range from about 720° C. to about 1025° C., immediately rapidly cooling, and further wire-drawing to impart to the product additional smoothness or stiffness; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,018,370. MANUFACTURE OF PERFORATED PLATES OF MANGANESE STEEL. WINFIELD S. POTTER, New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 18, 1912. Serial No. 671,863. (Cl. 148—24.)

1. The method of perforating plates of manganese steel which have first been brought into a substantially uniform, austenitic condition, which comprises working the metal and impressing the plate with recesses corresponding in location to the desired perforations, the working and impressing of the plate being carried on at temperatures which in the finishing stage are within the range of 800° C. to 1075° C., quenching the recessed plate from a temperature within that range, reheating to between 300° C. and 420° C., and punching the plate or sheet at the indentations to complete the perforations, substantially as described.

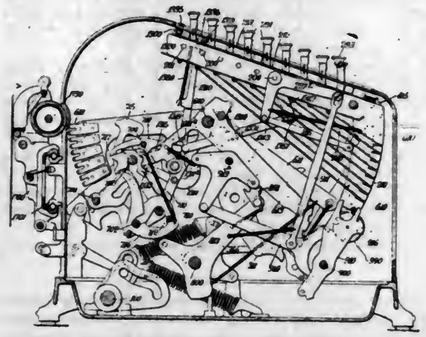
2. The method of perforating plates of manganese steel which have first been brought into a substantially uniform, austenitic condition, which comprises working the metal and impressing the plate with recesses corresponding in location to the desired perforations, the working and impressing of the plate being carried on at temperatures which in the finishing stage are within the range of 800° C. to 1075° C., equalizing the temperatures of the recessed plate within that range, quenching, re-heating to between 300° C. and 420° C., and punching the plate at the indentations to complete the perforations, substantially as described.

3. In the production of a perforated plate of manganese steel, the method of preparing the plate for punching, which comprises working the metal and impressing the plate with recesses corresponding in location to the desired perforations, the working and impressing of the plate being carried on at temperatures which in the finishing stage are within the range of 800° to 1075° C., equalizing the temperatures of the recessed plate within that range, and quenching, substantially as described.

1,018,371. ADDING-MACHINE. GEORGE B. PUTNAM, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 14, 1907, Serial No. 373,573. Renewed June 3, 1910. Serial No. 564,857. (Cl. 235—60.)

1. In a machine of the character described, the combination of percussive printing mechanism including interacting detents; means for suspending interaction between neighboring detents; and means for preliminarily displacing the first detent of the series to one side of the

point of suspension and thereby eliminating percussive action of a part of the printing mechanism.



2. In a machine of the character described, the combination with the total key and means for percussively printing numbers side by side; of means for effecting at will under control of said total key a gradual movement of a predetermined division of such printing means to eliminate imprints, substantially as described.

3. In a machine of the character described, the combination of means for effecting a split at will; means for percussively printing numbers side by side; and means for effecting under control of the said splitting means a gradual movement of the printing means at one side of the slit to eliminate imprints, substantially as described.

4. In a machine of the character described, the combination of a total key; percussive printing devices equipped for subdivision; manipulative means for determining whether or not the printing devices shall be subdivided; and means under the joint control of said total key and said manipulative means for effecting a gradual movement of a division of the printing devices to eliminate imprints.

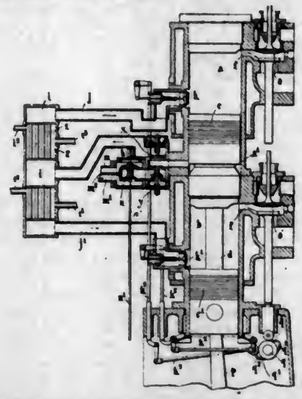
5. In a machine of the character described, the combination of sets of type, setting up means therefor, hammers to strike the type, means for retracting the hammers, latches for restraining the hammers, couplings between the latches for securing coöperative action in cipher-printing, means for severally tripping the latches, manipulative devices for uncoupling adjacent latches, an accumulator, totaling connections between the latter and the type, and means controlled by said totaling connections for tripping a left-hand division of latches prior to the action thereupon of the means for severally tripping them.

[Claims 6 to 50 not printed in the Gazette.]

1,018,372. INTERNAL-COMBUSTION ENGINE OF THE TANDEM TYPE. THOMAS RIGBY, Dumfries, Scotland. Filed Oct. 16, 1911. Serial No. 654,943. (Cl. 123—57.)

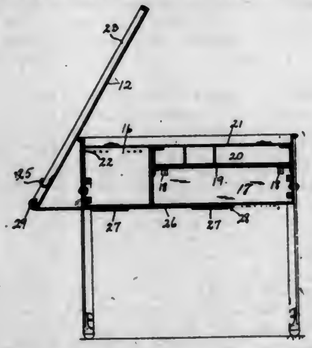
1. In an internal combustion engine comprising working cylinders in tandem, a piston in each cylinder, a rigid connection between the pistons, a compression chamber being formed at the inner end of the outermost cylinder, means for admitting combustible fluid to said cylinders, means for admitting a supplementary charge of combustible fluid to the said compression chamber, means for conducting the charge from the said chamber in alternation to the working cylinders, and means adapted to be controlled from a governor for controlling the admission of the supplementary charge to the engine.

2. In an internal combustion engine comprising working cylinders in tandem, a piston in each cylinder, a rigid connection between the pistons, a compression chamber being formed at the inner end of the outermost cylinder, means for admitting combustible fluid to the cylinders, a receiver adjacent to the cylinders, means adapted to be operated by an engine governor for admitting a supplementary charge of combustible fluid to the compression chamber in accordance with the load on the engine, means for conducting the said charge from the compression chamber to the receiver, and means for conducting the supplementary charges in alternation to the working cylinders of the engine from the receiver.



3. In an internal combustion engine comprising working cylinders in tandem, a piston in each cylinder, a rigid connection between the pistons, a compression chamber being formed at the inner end of the outermost cylinder, a receiver adjacent to the cylinders, a passage leading from the compression chamber to the receiver, a check valve in the passage, a passage from the receiver to each of the working chambers of the engine, valves for controlling the said passages, means operated by the engine for positively and alternately opening the said valves, means for admitting a supplementary charge to the compression chamber, said means having independent passages for the fuel and the air.

1,018,373. KINDERGARTEN-TABLE. ALICE GLENDON ROBBINS, Indianapolis, Ind., assignor to The Child's Welfare Company, Indianapolis, Ind., a Corporation. Filed June 30, 1911. Serial No. 636,317. (Cl. 35—12.)

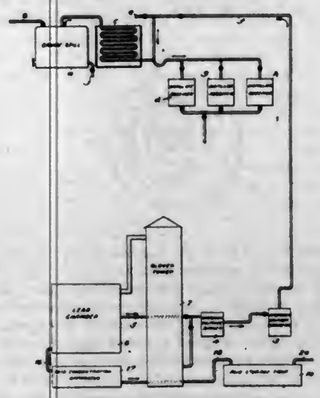


1. A table having a body, an unsecured top for said body, and reciprocable means mounted in connection with said body, for coöperating therewith in supporting and securing said top in an inclined position.

2. A table having a body, an unsecured top for said body, and top supporting means slidably mounted in connection with the table and horizontally and at a point below the top of the table and with the outer edge thereof turned upward whereby said top supporting means may be drawn outwardly partially and support and secure the lower edge of the top when it is placed in an inclined position and leaning against the upper edge of the table body.

3. A table having a body, an unsecured top for said body having the edges bent at an angle therewith, and top supporting bars slidably mounted in connection with the table and horizontally and at a point below the top of the table and with the outer ends thereof turned upward and returned downward whereby, when one of said bent edges is inserted within the curved end portion of said supporting bars and the top turned to rest against said table, said top will be secured.

1,018,374. UTILIZING SULFUR-CONTAINING PETROLEUM. CLARENCE I. ROBINSON, West New Brighton, N. Y., assignor to Standard Oil Company, Bayonne, N. J., a Corporation of New Jersey. Original application filed Aug. 21, 1908, Serial No. 170,327. Divided and this application filed Mar. 21, 1907. Serial No. 363,712. (Cl. 23—1.)



1. The process of making hydrogen sulfid, by heating sulfur bearing Beaumont or analogous petroleum to temperatures at which gas rich in hydrogen sulfid is evolved therefrom, removing condensable hydrocarbon vapors from the so evolved gas, and collecting the remaining gas appropriately for subsequent subjection of the same to operations for utilizing the sulfur content of said gas, substantially as described.

2. The process of making hydrogen sulfid, by heating sulfur bearing Beaumont or analogous petroleum to between 300° F. and 500° F., so as to evolve therefrom a gas rich in hydrogen sulfid and suitably free from non-condensable hydrocarbons, cooling the so evolved gas to separate the condensable hydrocarbons from the non-condensable constituents, and collecting the gas appropriately for subsequent subjection of the same to operations for utilizing the sulfur content of hydrogen sulfid, substantially as described.

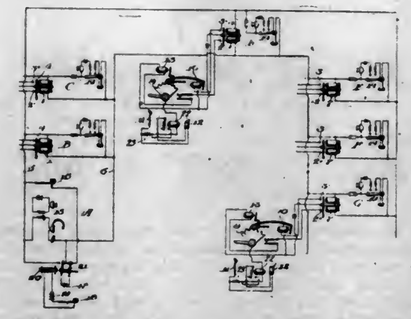
3. The process of making hydrogen sulfid, by heating sulfur bearing Beaumont or analogous petroleum to temperatures at which gas rich in hydrogen sulfid is evolved therefrom, regulating said heating appropriately for obtaining a steady stream of good volume of non-condensable gas rather than of hydrocarbons condensable as distillate, removing condensable hydrocarbon vapors from said gas, and collecting the gas appropriately for subsequent subjection of the same to operations for utilizing the sulfur content of said gas, substantially as described.

4. The process of making hydrogen sulfid, by heating sulfur bearing Beaumont or analogous petroleum to between 300° F. and 500° F., so as to evolve therefrom a gas rich in hydrogen sulfid and suitably free from non-condensable hydrocarbons, cooling the so evolved gas to separate the condensable hydrocarbons from the non-condensable constituents, regulating said heating appropriately for obtaining a steady stream of good volume of the gas rather than of the condensate formed by said cooling, and collecting the gas appropriately for subsequent subjection of the same to operations for utilizing the sulfur content of hydrogen sulfid, substantially as described.

5. The process of making hydrogen sulfid, by heating sulfur bearing Beaumont or analogous petroleum to gradually increasing temperatures to evolve gas rich in hydrogen sulfid therefrom, cooling the so evolved gas to separate the condensable hydrocarbons from the non-condensable constituents, collecting the gas appropriately for subsequent subjection of the same to operations for utilizing the sulfur content of hydrogen sulfid, and stopping such collection when the temperature of the so heated petroleum is about 500° F., substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,018,375. SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor to Sandwich Electric Company, Sandwich, Ill., a Corporation of Illinois. Filed July 8, 1909. Serial No. 506,584. (Cl. 177—343.)



1. A signaling system comprising a circuit for uniting two groups of substations with a central station, a step-by-step selector at each substation, electro-magnetic step-up means for operating each selector associated with said circuit, means controlled at the central station for operatively actuating a group of said step-up means simultaneously, and means controlled at the central station for operatively actuating the remainder of said step-up means.

2. A signaling system comprising a circuit for uniting a plurality of substations with a central station, a step-by-step selector at each substation, a magnet for each selector associated with the common circuit, and means controlled at the central station for operatively actuating said magnet in groups to thereby operate any predetermined group of selectors.

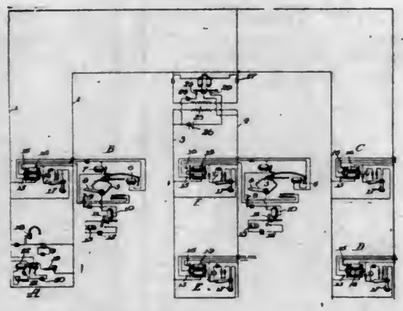
3. A signaling system comprising a circuit for uniting two groups of substations with a central station, a step-by-step selector for each substation of each group, a magnet for each selector of the first group adapted to control the step-up operation operable with a given character of current, a magnet for each selector of the second group adapted to control the step-up operation operable with a different character of current, and means controlled at the central station for causing the operation of said magnets.

4. A signaling system comprising a circuit for uniting two groups of substations with a central station, a step-by-step selector for each substation of each group, a magnet for each selector of the first group adapted to control the step-up operation operable with a given polarity of current, a magnet for each selector of the second group adapted to control the step-up operation operable with a different polarity of curent, and means controlled at the central station for causing the operation of said magnets.

5. A signaling system comprising a circuit for uniting two groups of substations with a central station, a step-by-step selector for each substation of each group, a magnet for each selector of the first group adapted to control the step-up operation operable with a given polarity of current, a magnet for each selector of the second group adapted to control the step-up operation operable with a different polarity of current, release means for each selector to restore same, and means controlled at the central station for causing the operation of said magnets.

[Claims 6 and 7 not printed in the Gazette.]

1,018,376. SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor to Sandwich Electric Company, Sandwich, Ill., a Corporation of Illinois. Filed Sept. 2, 1909. Serial No. 515,955. (Cl. 179—28.)



1. A selective signaling system comprising a central station and a plurality of substations united by an electric circuit, a branch circuit for associating a substation with said main electric circuit, step-by-step selective means at the branch substation, devices at the central station for impressing selective impulses on said electric circuit, means interposed between said electric circuit and said branch circuit to transfer said impulses to said branch circuit to selectively actuate said step-by-step means, and means between said electric circuit and said branch circuit to establish telephonic continuity therebetween.

2. A selective signaling system comprising a central station and a plurality of substations united by an electric circuit, a branch circuit for associating a substation with said main electric circuit, step-by-step selective means at the branch substation, devices at the central station for impressing selective impulses on said electric circuit, a relay interposed between said electric circuit and said branch circuit to transfer said impulses to said branch circuit to selectively actuate said step-by-step means, and means between said electric circuit and said branch circuit to establish telephonic continuity therebetween.

3. A selective signaling system comprising a central station and a plurality of substations united by an electric circuit, a branch circuit for associating a substation with said main electric circuit, step-by-step selective means at the branch substation, devices at the central station for impressing selective impulses on said electric circuit, means interposed between said electric circuit and said branch circuit to transfer said impulses to said branch circuit to selectively actuate said step-by-step means, telephones at said central station and said substations, and means between said electric circuit and said branch circuit to establish telephonic continuity therebetween.

4. A selective signaling system comprising a central station and a plurality of substations united by an electric circuit, a branch circuit for associating a substation with said main electric circuit, step-by-step selective means at the branch substation, devices at the central station for impressing selective impulses on said electric circuit, a relay interposed between said electric circuit and said branch circuit to selectively actuate said step-by-step selective means, telephones at said central station and said substations, and means between said selective circuit and said branch circuit to establish telephonic continuity therebetween.

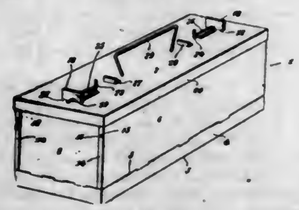
5. A selective signaling system comprising a central station and a plurality of substations united by an electric circuit, a branch circuit for associating a substation with said main electric circuit, step-by-step selective means at the branch substation, devices at the central station for impressing selective impulses on said electric circuit, and means interposed between said electric circuit and said branch circuit to transfer said impulses to said branch circuit to selectively actuate said step-by-step means.

[Claims 6 to 8 not printed in the Gazette.]

1,018,377. GARMENT-FORM. JACOB SATIN, Brooklyn, N. Y. Filed Oct. 23, 1911. Serial No. 656,213. (Cl. 223—18.)

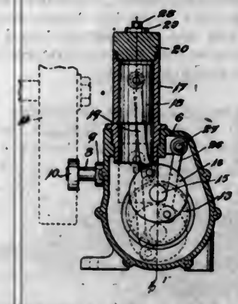
In combination, a support, a garment form comprising movable sections on said support, a gear movably mounted on said support, means for operating said gear, and rack members operable by said gear and connected to said sections for expanding and contracting the latter, said rack members being adapted to abut against each other when the sections are contracted for limiting the movement of the former.

1,018,378. FOLDING LUNCH-BOX. CHARLES W. SCHLEIER, Wellston, Mo. Filed Mar. 21, 1911. Serial No. 615,917. (Cl. 220—17.)



In a box for the purpose set forth, comprising a flanged base, the edges of the said base having integrally formed spaced butts, side and end members for the box, each of said side and end members having one of their longitudinal edges formed with spaced butts adapted to be arranged between the butts of the flange of the base, the opposite longitudinal edges of the said sides and ends being formed with inturned beads, a spring member having its upper portion arranged within the beads of each of the sides and ends, said spring member providing spaced legs contacting with the inner faces of the sides and ends, the said legs being bent and extended through the butts in opposite directions, the extremities of the said members being bent downwardly contacting the flange of the base at the corners thereof, a flanged closure for the box, and means for retaining the sides and ends upon the base when the said sides and ends are swung closed.

1,018,379. PUMP. ERNEST R. SEWARD, Hartford, Conn., assignor to The Hartford Machine Screw Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 14, 1911. Serial No. 621,019. (Cl. 103—62.)



1. In combination a driving member with means for rotating it, a lever mounted eccentrically on said driving member on a pivot fixed with respect to said lever, a reciprocating member, a rod connecting said lever and reciprocating member from one side of the pivot, and means connected with the lever on the opposite side of the pivot for controlling the movement of said lever.

2. In combination a driving member, means for rotating it, a lever mounted eccentrically on said driving member on a pivot fixed with respect to said lever, a reciprocating member, a connecting rod pivotally secured to said lever and to said reciprocating member, and means pivotally connected with the opposite end of said lever to restrain and thereby control its movement.

3. In combination a driving member with means for rotating it, a lever mounted eccentrically on said driving member on a pivot fixed with respect to said lever, a reciprocating member, a connecting rod pivotally attached to said lever on one side of its pivot and secured to said reciprocating member, and means pivotally connected with said lever on the opposite side of said pivot to restrain and thereby control its movement.

4. In combination a driving member with means for rotating it, a lever mounted eccentrically on said driving member on a pivot fixed with respect to said lever, a reciprocating member, a rod connecting said lever and reciprocating member from one side of the pivot of the lever, and means pivotally connected with said lever at the opposite side of said pivot and with a stationary part to restrain and thereby control the movement of said lever.

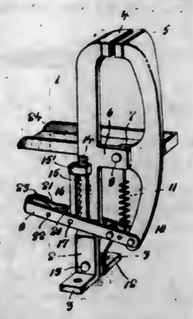
5. In combination a worm wheel, a worm in mesh with said wheel, means for driving said worm, a lever mounted eccentrically on said worm wheel on a pivot fixed with respect to said lever, a reciprocating member, a rod connecting said lever and reciprocating member from one side of the pivot of the lever, and means connected to the lever on the opposite side of said pivot for controlling the movement of said lever.

[Claims 6 to 11 not printed in the Gazette.]

1,018,380. HORSESHOER'S FOOT-VISE. ALBERT D. SMITH, Ogden, Utah, assignor of one-half to Nicholas L. Minster, Ogden, Utah. Filed July 8, 1911. Serial No. 637,417. (Cl. 81—21.)

1. In combination with a standard having a fixed jaw and a coacting pivoted jaw, of a foot lever connected to the pivoted jaw, a link pivoted to the standard and the lever, and a spring having one of its ends connected with the lever between the link and the pivoted jaw, and its opposite end connected to the standard.

2. In a device for the purpose set forth a standard having one of its extremities enlarged to provide a jaw, a second jaw centrally pivoted to the standard, a substantially U-shaped lever straddling the standard and having its arms pivotally connected with the second jaw, a link pivotally connected with the lever and with the standard, a spring arranged between the standard and the lever and adapted to normally sustain the second jaw away from the jaw of the standard, a rack bar upon the standard, a toothed member pivotally connected with the lever and adapted to engage the teeth of the said rack bar, a pedal member pivoted between the arms of the U-shaped lever, and a link connection between the toothed member and the pedal member substantially as and for the purpose set forth.



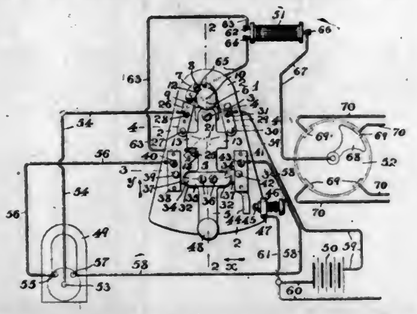
3. In a device for the purpose set forth, the combination with a standard having its upper end off-set and enlarged to provide a jaw, the said standard being centrally formed with a lateral arm, a movable jaw, said jaw having its central portion formed with an extension, a pivotal connection between the extension of the said jaw and the extension of the standard, an elongated U-shaped lever having its arms arranged adjacent to the opposite sides of the standard, the arms of the said lever being pivotally connected with the extremity of the pivoted jaw, a spring exerting tension between the lever and the extension of the standard, a link pivotally connected with the lever and with the standard, a rack bar for the standard, a sleeve surrounding the rack bar, an L-shaped member having one of its arms pivotally connected with the sleeve, the said arm of the L-shaped member being formed with a tooth arranged adjacent to the teeth of the rack bar, the said L-shaped member being pivotally connected between the arms of the lever, the second arm of the L-shaped member being enlarged or weighted, a link pivotally connected with the enlargement, and a locking lever pivotally connected between the arms of the first named lever and with the link, substantially as and for the purpose set forth.

1,018,381. ELECTRICAL-CIRCUIT SWITCH. JAMES M. SMITH, Philadelphia, Pa., assignor of one-half to Wilson D. Craig Wright, Philadelphia, Pa. Original application filed May 25, 1910, Serial No. 563,237. Divided and this application filed Jan. 16, 1911. Serial No. 602,791. (Cl. 175—282.)

1. A switch-device for switching into a main line alternate generator or other circuits, comprising a base-member, a switch-arm pivotally mounted upon said base-member, an insulated contact-plate carried by said switch-arm, a contact-member mounted on said base-member, said contact member being in constant contact with said insulated contact-plate carried by said switch-arm, a pair of contact-members mounted on said base-member, either one or the other being adapted to be engaged by said insulated contact-plate on said switch-arm when said switch-arm is properly moved, another pair of contact-members mounted on said base-plate either one or the other of which is adapted to contact with said switch-arm when the same is properly moved, substantially as and for the purposes set forth.

2. In a switch of the character set forth, the combination with a base-member of a movable switch-arm provided with spring actuated contact-points and an insulated

contact-plate, a contact-carrier mounted on said base-member carrying a spring-actuated contact point which is constantly in contact with said insulated contact-plate carried by said switch-arm, a contact-block mounted on said base-member, means for electrically connecting said contact-block with said movable switch-arm, and contact members mounted on said base-member adapted to be engaged upon proper movement of said switch arm respectively by said spring actuated contact-points of said switch-arm and said contact-plate carried by said switch-arm, substantially as and for the purposes set forth.



3. In a switch of the character set forth the combination with a base-member of a movable switch-arm provided with spring actuated contact-points and an insulated contact-plate, a contact-carrier mounted on said base-member carrying a spring-actuated contact-point which is constantly in contact with said insulated contact-plate carried by said switch-arm, a contact-block mounted on said base-member, means for electrically connecting said contact-block with said movable switch-arm, contact plates mounted on said base-member adapted to be engaged by said spring-actuated contact-points upon said switch-arm, contact-carriers mounted on said base-member, said contact-carriers being provided with spring-actuated contact-points adapted to be engaged by said insulated contact-plate carried by said switch-arm, substantially as and for the purposes set forth.

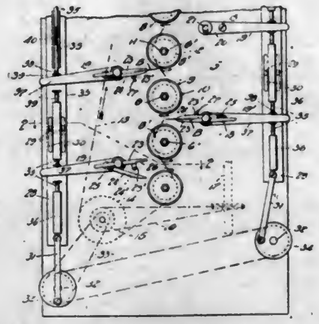
4. In a switch of the character set forth, the combination with a base-member of a movable switch arm provided with contact-points and an insulated contact-plate, a contact-member mounted on said base-member which is constantly in contact with said insulated contact-plate carried by said switch-arm, and contact-members mounted on said base-member adapted to be engaged upon proper movement of said switch-arm respectively by said contact-points of said switch-arm and said contact-plate carried by said switch-arm, substantially as and for the purposes set forth.

5. In a switch of the character set forth, the combination with a base-member of a movable switch-arm provided with contact-points and an insulated contact-plate, a contact-member mounted on said base-member which is constantly in contact with said insulated contact-plate carried by said switch-arm, contact-members mounted on said base-member adapted to be engaged upon proper movement of said switch-arm respectively by said contact-points of said switch-arm and said contact-plate carried by said switch-arm, a contact-block mounted on said base-member, and means for electrically connecting said contact-block with said movable switch-arm.

[Claims 6 and 7 not printed in the Gazette.]

1,018,382. RAZOR-SHARPENER. EARL TESSMER, Seattle, Wash., assignor, by mesne assignments, to F. M. Gordon, Detroit, Mich. Filed Mar. 7, 1911. Serial No. 612,969. (Cl. 51—16.)

1. A razor sharpener comprising a lever pivoted intermediate its ends, means for detachably connecting a razor blade to the inner arm of said lever, a pair of rotatable abrading wheels, a reciprocatory bar, a pair of tubular casings mounted upon said bar and opposing each other, spring controlled push rods projecting from said casings having their projecting ends opposing each other, the outer end of said lever extending between the opposing ends of said rods, and means for reciprocating the bar causing thereby said rods to yieldingly engage with the outer arm of said lever for alternately swinging the razor blade against the abrading wheels.



2. A razor sharpener comprising a lever pivoted intermediate its ends, means for detachably connecting a razor blade to the inner arm of said lever, a pair of rotatable abrading wheels, a reciprocatory bar, a pair of tubular casings mounted upon said bar and opposing each other, spring controlled push rods projecting from said casings having their projecting ends opposing each other, the outer end of said lever extending between the opposing ends of said rods, and means for reciprocating the bar causing thereby said rods to yieldingly engage with the outer arm of said lever for alternately swinging the razor blade against the abrading wheels, said rods having the outer ends therof slotted, and means carried by the bar and extending through said slots for limiting the movement in either direction of said rods.

3. A razor sharpener comprising a table, a series of vertically disposed rotatable shafts supported by and depending above and below said table, an abrading element carried by and rotating with each of said shafts, a reciprocatory bar arranged at each side of said table, levers pivotally connected to said table and disposed in a plane between each pair of abrading elements, means for detachably securing a razor blade to the inner arm of each of said levers, tubular casings carried by each of said bars and opposing each other, spring controlled rods projecting from said casings and opposing each other, the outer arms of said levers extending between the opposing ends of said rods, means for reciprocating said bars causing the rods to engage in the outer arms of the levers and alternately shift the razor blade into engagement with the abrading elements, driving means arranged below the table, an operative connection between said driving means and said shaft for rotating them, and an operative connection between the operating means for said bars and said driving means.

4. A razor sharpener comprising a table, a series of vertically disposed rotatable shafts supported by and depending above and below said table, an abrading element carried by and rotating with each of said shafts, a reciprocatory bar arranged at each side of said table, levers pivotally connected to said table and disposed in a plane between each pair of abrading elements, means for detachably securing a razor blade to the inner arm of each of said levers, tubular casings carried by each of said bars and opposing each other, spring controlled rods projecting from said casings and opposing each other, the outer arms of said levers extending between the opposing ends of said rods, means for reciprocating said bars causing the rods to engage in the outer arms of the levers and alternately shift the razor blade into engagement with the abrading

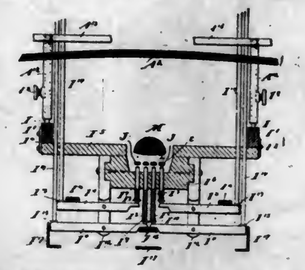
elements, driving means arranged below the table, an operative connection between said driving means and said shafts for rotating them, an operative connection between the operating means for said bars and said driving means, said rods having their projecting ends provided with slots, and means carried by the bars and extending through the slots for limiting the movement in either direction of said rods.

1,018,383. SPARKING PLUG. GEORGE S. WALKER, Boston, Mass., assignor of one-half to Edward J. Chadbourne, Wakefield, Mass. Filed Dec. 13, 1910. Serial No. 597,158. (Cl. 123—169.)

1. A sparking-plug comprising, in combination, an electrical connected metal tubular shell, exteriorly screw-threaded and at its opposite end-portions open and of different internal diameters joined by a circular running shoulder, and at its larger open end internally screw-threaded and at its smaller open end having a circular radial flange projecting inwardly, constituting an electrode, a gland exteriorly screw-threaded and screwing into said screw-threaded end of said shell, and at one end having an internal circular running flange or shoulder and at its opposite and open end having a removable sleeve closely fitting and terminating therewithin and projecting therefrom, an insulated cylindrical and tubular plug having an external running collar lying between said internal flange of, and the end of said sleeve within said gland, and at one end-portion extending into and along and spaced from the smaller tubular end-portion of said shell and said sleeve of the gland and at its opposite end-portion projecting from said gland, a cylindrical metal stem electrically connected and extending lengthwise through and projecting from the opposite ends of said plug, a screw-threaded nut on one of the projecting ends, and a spherical shaped head, constituting an electrode on the other opposite projecting end of said stem, and said head lying within and spaced from said electrode of said shell, all substantially as described, and for the several purposes specified.

2. A sparking-plug comprising, in combination, an electrical connected metal tubular shell, exteriorly screw-threaded and at its opposite end-portions open and of different internal diameters joined by a circular running shoulder, and at its larger open end internally screw-threaded and at its smaller open end having a circular radial flange projecting inwardly, constituting an electrode, and also having apertures about said flange leading to its interior chamber, a gland exteriorly screw-threaded and screwing into said screw-threaded end of said shell and at one end having an internal circular running flange or shoulder and at its opposite and open end having a removable sleeve closely fitting and terminating therewithin and projecting therefrom, an insulated cylindrical and tubular plug having an external running collar lying between said internal flange of and the end of said sleeve within said gland, and at one end-portion extending into and along and spaced from the smaller tubular end-portion of said shell and said sleeve of the gland and at its opposite end-portion projecting from said gland, a cylindrical metal stem electrically connected and extending lengthwise through and projecting from the opposite ends of said plug, a screw-threaded nut on one of the projecting ends, and a spherical shaped head, constituting an electrode, on the other and opposite projecting end of said stem, and said head lying within and spaced from said electrode of said shell, all substantially as described and for the several purposes specified.

1,018,384. SELF-PLAYING VIOLIN. JOSEPH WAUTERS, Binghamton, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Aug. 1, 1908. Serial No. 446,397. (Cl. 84—83.)



1. In an instrument of the violin type, a string, means for varying the length of the note-producing portion of the string, and a strip of material extending longitudinally of said string between the latter and said string-varying means.

2. In an instrument of the violin type, a string, fingering means therefor, and a strip of resilient material extending longitudinally of said string between the latter and said fingering means.

3. In a violin player, a string, a finger-board, fingering means constructed to close said string against said finger-board at various points in its length, and a strip of rubber extending longitudinally of said string between the latter and said fingering means.

4. In a violin player, a violin, fingering means for the strings thereof, and strips of resilient material extended longitudinally of said strings between the latter and said fingering means.

5. In a violin player, a violin, fingering means consisting of a series of pins for each string thereof and means for pressing said pins against said strings, and strips of rubber extended longitudinally of said strings between the latter and said pins.

[Claims 6 to 12 not printed in the Gazette.]

1,018,385. VARNISH. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Mar. 14, 1911. Serial No. 614,431. (Cl. 134—26.)

1. As a new composition of matter, a varnish comprising a condensation product of phenols and formaldehyde substantially free from uncombined phenols and a solvent therefor, said solvent containing a readily volatile organic liquid, and another organic liquid which is immiscible with water but miscible with said solvent and of which the boiling point exceeds that of water.

2. As a new composition of matter, a varnish comprising a condensation product of phenols and formaldehyde and a solvent therefor, said solvent containing amyl alcohol and a readily volatile organic liquid.

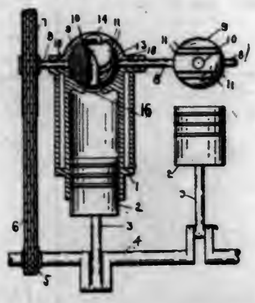
3. As a new composition of matter, a varnish comprising a condensation product of phenols and formaldehyde substantially free from uncombined phenols and a solvent therefor, said solvent containing acetone and an organic liquid of which the boiling point exceeds that of water.

4. As a new composition of matter, a varnish comprising a condensation product of phenols and formaldehyde and a solvent therefor, said solvent containing acetone and amyl alcohol.

5. As a new composition of matter, a varnish comprising a condensation product of phenols and formaldehyde and a solvent therefor, said solvent containing a readily volatile organic liquid, and another organic liquid which is immiscible with water but miscible with said solvent, which is volatilizable without decomposition when heated at atmospheric pressures, and of which the boiling point exceeds that of water.

[Claim 6 not printed in the Gazette.]

1,018,386. ROTARY VALVE. EUGENE BALLOU, Toledo, Ohio. Filed Nov. 7, 1910. Serial No. 590,979. (Cl. 136—7.)



1. In an internal combustion engine the combination with a part having a valve seat, of a valve fitting within said seat, such valve comprising a shaft and a valve member of double curvature carried thereby, such valve member having a port extending centrally therethrough at right angles to the axis of said shaft, said seat having oppositely disposed ports adapted to coöperate with the port in said valve member, and packing rings carried by said valve member on each side of said centrally extending ports, said rings lying in planes parallel with said port and with the axis of the shaft.

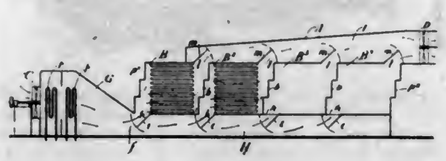
2. In an internal combustion engine, the combination with a part having a valve seat, of a valve fitting within said seat, such valve comprising a shaft and a valve member of double curvature carried thereby, said valve member having a port extending centrally therethrough at right angles to said shaft, said seat having oppositely disposed ports coöperating with the port in said valve member, and packing rings carried by said valve member on each side of said centrally extending port, all parts of each of said rings lying in a true plane, whereby the effects of expansion are rendered uniform throughout the periphery of the ring.

1,018,387. BOTTLE-CLOSURE. CHARLES DE WITT, Baltimore, Md., assignor to Charles Cawthorne Carter, Baltimore, Md. Filed Dec. 11, 1909. Serial No. 532,590. (Cl. 215—10.)

1. A bottle closure consisting of a bottle having around the mouth thereof an external bead, said bead having a circumferential groove, which opens radially from the bottle, and a flanged cap, the flanged portion of which has a normal diameter slightly less than that of the bead, said cap being formed of paper susceptible of a certain degree of compression so that when expanded under pressure, by being forced over the bead, it will tightly grip the same by its tendency to return to normal condition, the intermediate portion of the cap overlying said groove and being displaced and forced into the groove while the lower edge portion of said flange remains gripped to the bead, the flange being thereby lengthened to provide the said displaced portion thereof.

2. A bottle closure consisting of a bottle having around the mouth thereof an external bead, said bead having a circumferential groove which opens radially from the bottle, said bead having a plurality of spaced notches formed therein, and a flanged cap formed of paper susceptible of a certain degree of compression so that when expanded under pressure by being forced over the bead it will grip the bead by its tendency to return to normal condition, the intermediate portion of the cap being displaced and forced into locking engagement with said groove while the flange remains gripped to the bead, and portions of the displaced part of the flange being struck out thereof and forced into locking engagement with said notches.

1,018,388. APPARATUS FOR DEHYDRATING FOODS. GORDON DON HARRIS, Bay Shore, and JAMES S. POLLARD, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company, a Corporation of New York. Filed July 16, 1909, Serial No. 507,906. Renewed Jan. 4, 1912. Serial No. 669,435. (Cl. 34—39.)



1. In an apparatus for dehydrating foods and similar products, a casing, an air inlet and an air exit thereto, a series of step-up partitions therein forming a plurality of chambers, a series of partitions dividing each chamber into compartments, and a foraminous tray in each compartment.

2. In an apparatus for dehydrating foods and similar products, a casing containing a chamber separated into compartments by means of partitions, a foraminous tray in each of said compartments, an air inlet to the compartment above each tray, an air exit from the compartment below each tray whereby the air is forced to pass downwardly through the tray and the material thereon, and stepped partitions near the respective end walls of said chambers, said partitions forming with said end walls flues of varying cross sectional area, with which flues communicate the air inlets and the air exits, respectively.

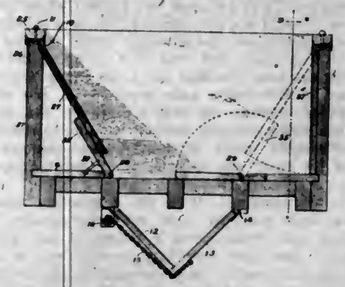
3. In an apparatus for dehydrating foods and similar products, a chamber provided with a series of trays having foraminous bottoms, means whereby air is compelled to pass into the trays through their tops and downwardly through the foraminous bottoms of the trays, means for withdrawing the air after its passage therethrough, and stepped partitions near the respective end walls of said chamber, said partitions forming with said end walls flues of varying cross sectional areas, with which flues communicate the air inlets and the air exits, respectively.

4. In an apparatus for dehydrating foods and similar products, a casing, a chamber therein containing compartments, a foraminous tray in each of said compartments and so positioned therein as to leave a free space above and below each tray, means for introducing air above each tray and for compelling it to pass downwardly through the tray, and an air exit for the air after it passes through said trays, and stepped partitions near the respective end walls of said chamber, said partitions forming with said end walls flues of varying cross sectional areas, with which flues communicate the air inlets and the air exits, respectively.

5. In an apparatus for dehydrating foods and similar products, a casing, a plurality of chambers therein, an air inlet flue common to all of said chambers, a tapering air intake from said flue to each of said chambers, a valve for controlling each of the air intakes, an air exhaust flue common to all of said chambers, and a tapering air exit from each of said chambers to the flue, the taper of said exits being in an opposite direction to the taper of the air intakes.

[Claims 6 to 8 not printed in the Gazette.]

1,018,389. DUMP-CAR. HARRY S. HART, Chicago, Ill., assignor to Rodger Ballast Car Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 27, 1909. Serial No. 519,865. (Cl. 105—84.)



1. A dump car comprising side walls adjustable to an inwardly and downwardly sloping position, and a central longitudinal hopper.

2. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, and movable sides adjustable to extend upwardly from the outer edges of said horizontal floor sections, or to extend upwardly and outwardly to slope substantially in the direction of the walls of the central hopper.

3. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, side frames, doors hinged at their upper edges to said side frames, said doors being adapted to be adjusted to a vertical position extending upwardly from the outer edges of said horizontal floor sections and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper.

4. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, side frames, doors hinged at their upper edges to said side frames, said doors being adapted to be adjusted to a vertical position extending upwardly from the outer edges of said horizontal floor sections and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper, and hinged floor sections adjustable to cover said central hopper or to leave said hopper open and unobstructed.

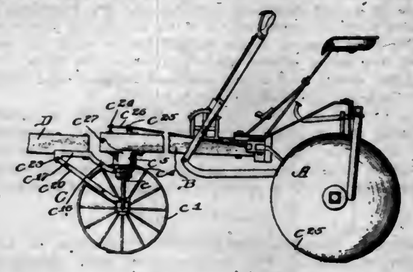
5. In a car of the class described, a central longitudinal hopper, side frames comprising side stakes, side sections hinged at their upper edges and adapted to be adjusted to an inwardly and downwardly sloping position, and side aprons hinged at their upper ends adjacent the tops of said side stakes and overlapping the adjacent side sections.

[Claims 6 to 11 not printed in the Gazette.]

1,018,390. FORE CARRIAGE FOR AGRICULTURAL IMPLEMENTS. WILLIAM E. JOHNSON, Rock Island, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed Feb. 25, 1907. Serial No. 359,068. (Cl. 21—63.)

1. A fore-carriage comprising a bail axle, wheels on the ends of said axle, bearings in which the bail portion of the axle is free to turn or rock, a pole connected to the axle and adapted to rock the latter in the said bearings when the pole moves up and down, and a swivel bearing for connecting the fore-carriage with a stub tongue, adapted to permit either wheel to rise and fall by tilting the axle in a transverse vertical plane.

2. A fore-carriage comprising a bail-shaped crank-axle, wheels on the ends of said axle, bearings in which the upper horizontal portion of the axle is mounted to oscillate a swivel bearing for connecting the axle with a stub tongue, a pole-plate hinged to the bearings in which the axle is mounted, and braces connecting the pole-plate with the axle.



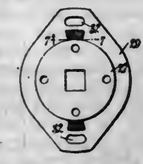
3. A fore-carriage comprising an axle, wheels on said axle, a swivel bearing for connecting the axle with a stub tongue, adapted to permit either wheel to rise and fall by tilting the axle in a transverse vertical plane, a pole-plate, a hinge connection between the pole-plate and the swivel bearing, permitting the pole to swing up and down relatively to the stub tongue, and braces connecting the axle with the pole-plate.

4. A fore-carriage comprising an axle, wheels on said axle, a swivel bearing for conecting the axle with a stub tongue, a pole-plate, and a hinge connection between the pole-plate and the swivel bearing, to permit the pole to swing up and down relatively to the stub tongue, to control the axle in its bearings said swivel bearing provided with means for permitting either wheel to rise over an obstruction, and also permitting the stub tongue to rock or roll sidewise without affecting the pole.

5. A fore-carriage adapted for attachment to a stub tongue, provided with bearings, an axle free to oscillate therein at a point above the axis of the wheels, and means comprising a pole connection controlling the oscillation of the axle in said bearings.

[Claims 6 to 9 not printed in the Gazette.]

1,018,391. ALINING PLATE FOR FLOOR-HINGES. OSCAR KATZENBERGER, Chicago, Ill. Original application filed Nov. 8, 1910, Serial No. 591,306. Divided and this application filed Oct. 4, 1911. Serial No. 652,727. (Cl. 16—25.)



1. In a floor hinge for doors, in combination, a floor plate having an opening therein, teeth on said plate disposed on the side of said opening, an adjusting plate, a boss depending from said plate and adapted to be rotatably mounted in said opening, teeth depending from said adjusting plate adapted to engage the teeth on the floor plate, a bearing plate carried by said adjusting plate, said bearing plate adapted to support the swinging door, and means for varying the relation of said adjusting plate with reference to said floor plate.

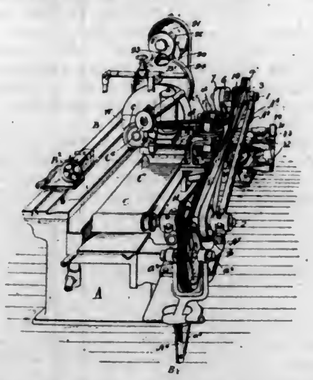
2. In combination, a floor plate having a vertically-extending opening therein, a set of teeth disposed on opposite sides of said opening, a door-carrying member journaled to rotate in said opening, said door-carrying member comprising two superposed plates concentrically disposed with reference to said opening, the lower of said plates having teeth depending therefrom adapted to engage the teeth on the floor plate to hold the door in a predetermined position, the upper of said plates carrying the door, and means adjustably fastening the two plates together, whereby the predetermined position of

the door may be varied when the sets of teeth are in engagement.

3. In a floor hinge, in combination, two superimposed plates pivotally connected to swing in parallel planes relative to each other means carried by one plate for stopping the swing of one plate relative to the other at a definite point, and means disposed between said plates for changing said definite point.

4. In a door hinge, a floor plate having a circular opening therein, and a cam carrying member, comprising an adjustable plate having a depending boss rotatably mounted in said opening, and means holding said adjustable plate in various positions relative to said floor plate.

1,018,392. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Apr. 26, 1906. Serial No. 313,784. (Cl. 51—4.)



1. A grinding machine comprising the traveling carriage carrying a driven part, a power shaft, a counter shaft at each end of the machine geared to and driven by said power shaft, and a rope belt running from a pulley on each of said countershafts around an idler adjacent to the driven part on said carriage, around a pulley on said driven part, back around another idler and then over a pulley on a yieldingly supported frame at the other end of the machine, substantially as set forth.

2. In a grinding machine, the combination, of the bed, the traveling carriage, the slider carrying the grinding wheel mounted thereon, a drive pulley on the spindle of said grinding wheel, a main power shaft, counter-shaft at each end of the machine, a belt connecting said counter shafts and another connecting them with said power shaft, a second pulley on each of said counter-shafts, a belt running from each of said pulleys toward the center of the machine and passing over an idler adjacent to the pulley on the grinding wheel spindle, then over said pulley on said grinding wheel spindle, then back over another idler and then to the other end of the machine and over a pulley supported on a yieldingly mounted frame, substantially as set forth.

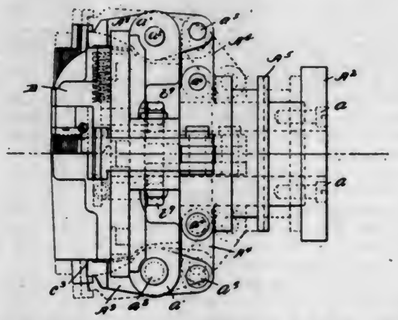
3. In a grinding machine, the combination, of the bed, the traveling carriage, the slider mounted thereon with the grinding wheel spindle mounted in bearings carried thereby, a pulley on said grinding wheel spindle, a main power shaft, a counter-shaft at each end of the machine, gearing connecting each of said counter-shafts to said power shaft, another pulley on each of said countershafts, a rope belt running from each of said pulleys over a suitably located idler to the pulley on the grinding wheel spindle and then to a pulley on a yieldingly held frame at the opposite end of the machine, the pulley on the counter-shaft that is belted direct to the power shaft being connected to said shaft and to the pulley by which it is belted to the other counter-shaft by a differential gear, substantially as set forth.

4. In a grinding machine, the combination, of the bed, the carriage, the slider on said carriage, the grinding wheel spindle journaled in bearings on said slider, a power shaft, a counter-shaft at each end of the machine, one of said counter-shafts being belted to said power shaft and then to the other counter-shaft by a crossed belt, another pulley on each of said counter-shafts, a belt running from each of said pulleys to the pulley on the grinding wheel spindle over suitably located idlers, and then to a pulley at the other end of the machine mounted on a yieldingly supported frame, and a differential gear mounted on one of the counter-shafts between the pulley receiving the driving belt and the pulley carrying the belt running to the grinding wheel spindle, which differential gear connects said pulleys to the shaft and to each other, substantially as set forth.

5. In a self-contained drive for a grinding machine comprising belts mounted upon pulleys supported upon the machine and running over a pulley on the grinding wheel spindle and over yieldingly held pulleys to maintain tension and permit lengthening and shortening of the belt to accommodate the movements of the slider, the combination of the driving belts mounted upon driven shafts of a differential gear mounted upon one of said shafts between the pulleys thereon carrying the belt for transmitting motion to its companion shaft and the pulley carrying the belt for transmitting motion to the grinding wheel spindle, said differential gear connecting said pulleys to each other and to said shaft, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,018,393. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Jan. 24, 1907. Serial No. 353,852. (Cl. 10—98.)



1. In a cutter head, the combination, of a die comprising tangentially arranged cutters mounted to slide in supports, said supports mounted to slide on the main head, the movement of said cutters and said supports being on lines at an angle to each other, and operating means, substantially as set forth.

2. A cutter head comprising a die composed of cutters mounted to move on supports, said supports mounted to move on the head, the movement of the cutters being at an angle to the movement of the supports and tangentially to the work, and operating means, substantially as set forth.

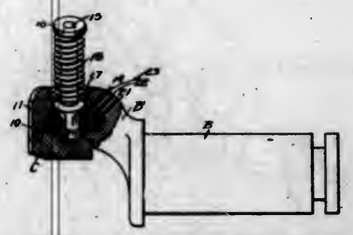
3. A screw-cutting die comprising a cutter mounted in a holder, said holder adapted to move on a line with the threading-grooves of said cutter, a support to receive said holder mounted to be adjusted radially, whereby the size of the die may be regulated, and operating means, substantially as set forth.

4. A screw-cutting die comprising a body, a cutter support on said body, a cutter holder mounted in said support to move on a line substantially tangent to a circle the axis of which is the axis of the die, for opening and closing the die, the support in which said holder operates being mounted to be adjusted radially by means of a cam, and said cam, substantially as set forth.

5. A screw-cutting die comprising a body, a support mounted thereon, means for adjusting said support across the body, a cutter holder mounted on said support to move on a line substantially tangent to a circle the center of which is the axis of the die, for opening and closing the die, a lever for moving said holder, and means for operating said lever, substantially as set forth.

[Claims 6 to 22 not printed in the Gazette.]

1,018,394. CUTTER-HEAD. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Dec. 21, 1909, Serial No. 534,389. Renewed Dec. 9, 1911. Serial No. 664,763. (Cl. 10—104.)



1. A cutter-head comprising a holder formed with a recess for the cutter, a cutter mounted in said recess and formed with a rib on its back with a tapered edge, and a spring pressed plunger with a tapered face engaging said edge for clamping said cutter in position, substantially as set forth.

2. A cutter-head comprising a cutter-holder formed with a recess to receive the cutter, a cutter mounted in said recess and formed with a rib on its back one edge of which rib is cut under or tapered, a spring pressed plunger mounted in a socket and formed with a tapered face adapted to engage the tapered edge of said rib, and means for securing said cutter longitudinally, substantially as set forth.

3. A cutter-head comprising a cutter-holder formed with a cutter receiving recess, a cutter formed with a rib on its back with a tapered edge mounted in said recess, a spring clamping member with a tapered face engaging said tapered edge, means for releasing said clamping member, and means for holding the cutter longitudinally, substantially as set forth.

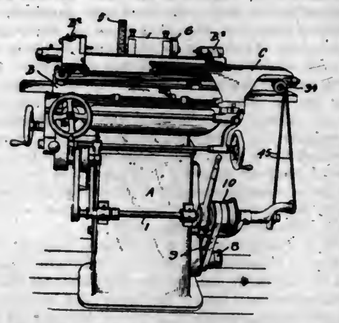
4. A cutter-head comprising a cutter-holder formed with a recess for the cutter, said recess being formed with a shoulder on one side for a part of the cutter to bear against, a cutter formed with a rib on its back and mounted in said recess, one edge of said rib being formed to bear against said shoulder and the other tapered or cut under, a spring mounted plunger mounted in a socket in said cutter-holder and formed with a tapered clamping face adapted to engage with said tapered edge, and means for securing said cutter longitudinally, substantially as set forth.

5. A cutter-head comprising a cutter-holder formed to carry the cutter, a cutter mounted thereon, said cutter being formed with a rib with one edge square to bear against a flange on the outer edge of the holder and its opposite edge tapered, a clamping member with a tapered face engaging said tapered edge, and means for operating said clamping member, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,018,395. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Aug. 17, 1908, Serial No. 448,829. Renewed Dec. 11, 1911. Serial No. 665,152. (Cl. 51—4.)

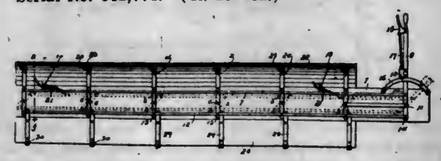
1. In a grinding machine, the combination of the frame, a driving shaft, a traversing carriage carrying the head-stock, said head-stock, gearing for driving the face-plate of said head-stock connected to the driving shaft of the machine by means of a belt which passes over a pulley on said main driving shaft, over idler pulleys on fixed supports near each end of the frame, over another idler pulley on a fixed intermediate support and over a pulley on a shaft geared to said face-plate, substantially as set forth.



2. In a grinding machine, the combination of the frame, the grinding mechanism, a carriage, a head-stock and a foot-stock on said carriage, means for driving the work-holding spindle of said head-stock comprising gearing connected to the driving shaft of the machine by means of a belt, and said belt passing over a pulley on said driving shaft, over a stationary pulley on the machine near one end thereof, over another pulley near the other end of the machine, around a pulley on the driving shaft in said head-stock, back to the opposite end of the machine, then around another stationary pulley, then back to an intermediate point between said stationary pulleys, and then around another stationary pulley, then back to the end of machine and down to the pulley on said driving shaft, substantially set forth.

3. In a grinding machine, the combination, of a frame having a carriage way, a traversing carriage on said way, a movable head-stock comprising a swiveled face-plate thereon, gearing for driving said face-plate connected to a driving shaft of the machine by a belt mounted on intermediate idler pulleys arranged to take up the length of said belt while said carriage and face-plate move in operation, substantially as set forth.

1,018,396. CULVERT-MOLD. OLEY L. LEDINGTON and JULIUS SANDELL, Marquette, Kans. Filed Aug. 7, 1911. Serial No. 642,774. (Cl. 25—32.)



1. In a culvert mold, two side members, releasable bracing means connecting the side members, a plurality of arches, means on one side member for supporting one set of ends of the arches, movable means for supporting the other set of ends of the arches, a lever, and means actuated by the lever for releasing the bracing means and simultaneously moving the movable supporting means from positions supporting the arches.

2. In a culvert mold, two side members, releasable means for connecting and bracing the side members, a plurality of arches, means on one side member for supporting one set of ends of the arches, movable members supported by the other side member for supporting the other set of ends of the arches, a longitudinally movable member for simultaneously moving the movable members from positions in which they are adapted to support the arches, means carried by the longitudinally movable member for releasing the bracing means when the longitudinally movable member is moved to withdraw the movable members from positions supporting the arches, and

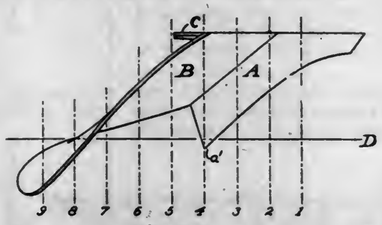
means for longitudinally moving the longitudinally movable member.

3. In a culvert mold, two main side members, a plurality of arches, two supplemental side members adapted to respectively support the main side members, upwardly extending cleats on the inner sides of the supplemental side members for engaging and holding the main side members from inward movement, means on one main side member for supporting one set of ends of the arches, movable means on the other main side member for supporting the other set of ends of the arches, and a longitudinally movable member for engaging the inner sides of the adjacent cleats and for moving said movable means from positions in which they are adapted to support the arches, the longitudinally movable member when moved to disengage the movable supporting means from the arches being disposed so as to release the adjacent cleats.

4. In a culvert mold, a main side member, a supplemental side member for supporting the main side member, cleats on the inner side of the supplemental side member for engaging and holding the main side member from inward movement, members pivotally mounted on the main side member, and a longitudinally movable member pivoted to the pivoted members and movable to and from a position in which it will engage the inner sides of said cleats.

5. In a culvert mold, a main side member, a supplemental side member for supporting the main side member, cleats on the supplemental side member for holding the main side member from inward movement, members pivoted to the main side member for supporting arches, a longitudinally movable member connecting said pivoted members and movable to and from a position in which it will engage the inner sides of said cleats, and a lever for longitudinally moving said longitudinally movable member.

1,018,397. PLOW. NORMAN I. MILLIKEN, Janesville, Wis., assignor to The Janesville Machine Co., Janesville, Wis., a Corporation of Wisconsin. Filed Apr. 15, 1911. Serial No. 621,200. (Cl. 97—18.)



1. In a plow the combination of a moldboard, a share, said moldboard having for its entire length edges and curves in a transverse vertical plane describing an arc whose chord crosses the bottom line of said plow within said share as and for the purpose specified.

2. In a plow the combination of a moldboard, a share, a share point and a landside, the shape of said moldboard in a transverse vertical plane describing an arc whose chord intersects the bottom of the furrow between said share point and said landside, substantially as specified.

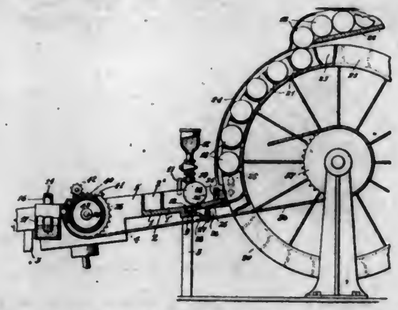
3. In a plow the combination of a moldboard, a share, said moldboard for its entire length, having curves, in a transverse vertical plane describing an arc whose chord intersects or crosses the bottom of the furrow to be turned.

4. In a plow the combination of, a share, a moldboard, said moldboard having a sweep whereby the curvature of its entire working surface on a transverse vertical plane describes single curves whose lines, if extended without reversing, would intersect the lower inner corner of the furrow to be turned, as and for the purpose specified.

5. In a plow the combination of a share, a moldboard, said share and moldboard having substantially straight lines on their entire working or turning surfaces which do not intersect each other but radiate from the inner bottom corner of the furrow to be turned, and at substantially even intervals, said lines touching the landside edge of said share and moldboard at points whose distance from one another gradually decreases, beginning at said share, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,018,398. CAN-LABELING MACHINE. TOKUTARO NISHIDA, Seattle, Wash. Filed Mar. 28, 1911. Serial No. 617,485. (Cl. 216—40.)



1. In a can labeling machine, a runway for the cans, means for supporting labels in superimposed relation, means yieldingly pressing said labels toward said runway, and label holding means operated by a can to release the innermost label and simultaneously hold the remainder.

2. In a can labeling machine, a runway for the cans, means for supporting labels in superimposed relation, means yieldingly pressing said labels toward said runway, a pivoted catch means engaging over the innermost label and provided with a gripping portion disposed at the side of the labels, and means operated by and during movement of a can for actuating said catch means to release the innermost label and move its said gripping portion to hold the remainder of the labels.

3. In a can labeling machine, in combination with a runway for the cans, means for feeding cans to said runway comprising a rotary carrier provided with can receiving pockets and supported for operation by weight of the cans, and means arranged for operation on the cans on said runway connected for actuation by said feeding means.

4. In a can labeling machine, a rotatable wheel provided in its periphery with pockets, means for delivering cans to said wheel for effecting rotation thereof, a runway at the lower portion of said wheel arranged to receive the cans discharged therefrom, means for supporting a label in said runway in the path of a can, means arranged above said label for engagement with the can to thereby press the label thereto, and means for driving said last means from said wheel.

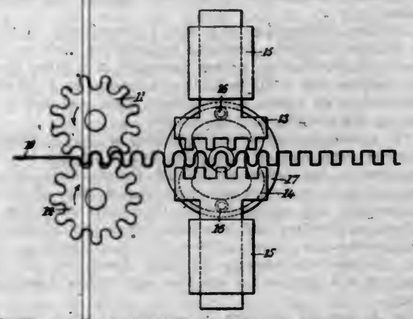
5. In a can labeling machine, a rotatable wheel provided in its periphery with pockets, a can chute above said wheel, a runway at the lower side of said wheel, said can chute being arranged to feed the cans to said wheel, whereby the latter will be rotated by the cans carried, said runway being inclined downwardly from said wheel, a yieldingly supported platform at the forward end portion of said runway in the path of the cans, and a brake for said wheel connected with said platform for operation thereby.

[Claims 6 and 7 not printed in the Gazette.]

1,018,399. METHOD OF FORMING ANGULAR CORRUGATIONS IN SHEET MATERIAL. D MCRA LIVINGSTON, New York, N. Y. Filed Apr. 29, 1907, Serial No. 370,832. Renewed Jan. 18, 1909. Serial No. 472,954. (Cl. 153—77.)

1. The method of forming rectangular corrugations in sheet material, consisting of two steps; first, forming

therein a series of preliminary corrugations having semi-cylindrical portions, and, second, converting each corrugation from curved to rectangular form by a single stamping action without stretching or compressing the material, the amount of material going to make up the corrugations of the first form being the exact equivalent of that required for the corrugations of the second form, and the number of corrugations per unit length remaining constant.



2. The method of bending sheet metal to form corrugations having oppositely disposed substantially parallel sides, consisting of first forming in said sheet a series of preliminary corrugations of curved form, and, second, straightening the sides of each corrugation to form substantially rectangular portions by a single stamping action without stretching or compressing the material the amount of material going to make up the corrugations of the first form being the exact equivalent of that required for the corrugations of the second form, and the number of corrugations per unit length of both being the same.

3. The method of forming rectangular corrugations in sheet metal, consisting of two steps: first, forming therein a series of preliminary corrugations of curved form, the series including alternately-disposed semi-cylindrical portions, and, second, converting each corrugation from curved to rectangular form, each of the rectangular corrugations having straight parallel sides, and each side formed of curved portions of adjacent semi-cylindrical portions of the preliminary corrugations.

4. The method of forming rectangular corrugations in sheet metal, consisting of two steps: first, forming therein a series of preliminary corrugations of curved form, the series including alternately-disposed, semi-cylindrical portions, and, second, converting each corrugation from curved to rectangular form, each of the rectangular corrugations having straight parallel sides, and each side formed of curved portions of adjacent semi-cylindrical portions of the preliminary corrugations, the preliminary corrugations being formed by a rolling action, and the final corrugations being formed by pressure applied in a direction at right angles to the general plane of the material.

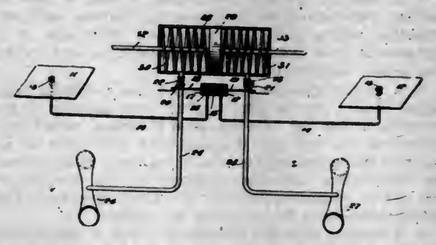
1,018,400. STABILIZING MEANS FOR AEROPLANES. THOMAS LOUGH WHITE, New York, N. Y. Filed Nov. 9, 1911. Serial No. 659,307. (Cl. 244—29.)

1. In an aeroplane having an independently movable part, a Venturi tube disposed axially in manner to create a suction force during flight, and means utilizing said force in the control of said movable part.

2. In an aeroplane, a Venturi tube disposed axially in the direction of flight, and means utilizing the suction force thereof in controlling the elevating plane.

3. In an aeroplane, an elevating plane, tensional means to normally deflect said plane downwardly, a Venturi tube disposed axially in the direction of flight, and means directing the suction force of said Venturi tube to counteract the influence of said tensional means.

4. In an aeroplane, an elevating plane, tensional means to normally deflect said plane downwardly, a cylinder having a piston connected with said plane, a Venturi tube disposed axially in the line of flight, means between said cylinder and the Venturi tube permitting the suction force from the latter to conteract the influence of the tensional means upon the plane, and means whereby the suction force may overcome said tensional means and deflect the plane upwardly.

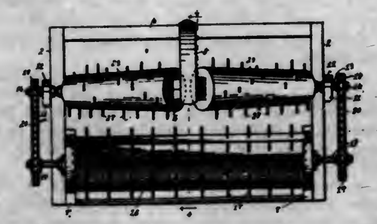


5. In an aeroplane, an elevating plane, tensional means to normally deflect said plane downwardly, a Venturi tube disposed axially in the line of flight, a cylinder, a piston therein having connection with said plane, whereby the suction force of said Venturi tube counteracts the influence of said tensional means, and a spring seat in said cylinder for said piston, in use under conditions of normal flight, increased suction at higher speed causing the piston to depress its seat and deflect the plane upwardly.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

13,369. MANURE-SPREADER. LEWIS A. FUNK, Jeromesville, Ohio, assignor to The Rude Bros. Mfg. Co., Liberty, Ind., a Corporation of Indiana. Filed Jan. 17, 1911. Serial No. 603,193. Original No. 971,436, dated Sept. 27, 1910, Serial No. 555,652. (Cl. 111—40.)



1. The combination of a bed, a frame removably secured thereon, and similar distributing rollers journaled on the frame with their axes inclined at an angle to the plane of the bed.

2. The combination of a bed, a main distributing cylinder journaled thereon, a frame removably secured on the bed, and an auxiliary distributing roller journaled on the frame above the bed with its axis inclined and at an oblique angle to the axis of the cylinder.

3. The combination of a bed, a main distributing cylinder journaled thereon, and similar auxiliary distributing rollers supported above the bed with their axes at an inclination to the plane thereof.

4. The combination of a bed, and a distributing roller journaled thereover with its axis at an angle to the length thereof and adjustable in different vertical angles.

5. The combination with a bed and a main distributing cylinder thereon, of a frame provided with a bracket and removably secured on the bed, bearings vertically adjustable on the frame, and auxiliary distributing rollers journaled in the bracket and bearings for coöperating with the cylinder.

6. A manure spreader comprising a bed, a cylinder supported thereon for distributing the lower portion of the contents of the bed in a rearward direction, and a pair of rollers constructed and arranged each with its axis at an angle to the horizontal for distributing the upper portion of the contents of the bed in respective laterally divergent directions.

7. A manure spreader comprising a bed, a pair of similar distributing rollers supported thereon, said distributing rollers being arranged with their axes in a common inclined plane and at an angle to each other, and driven connections therewith.

8. A manure spreader comprising a bed, a cylinder journaled thereon for distributing the lower portion of the contents of the bed in a rearward direction, rollers supported on the bed and arranged with their axes at an angle to the horizontal and also at an angle to each other for distributing the upper portions of the contents of the bed in respective laterally divergent directions, and driven connections for actuating the rollers.

9. A manure spreader comprising a bed, a distributing cylinder journaled transversely thereon, a distributing roller journaled with its axis at an angle to the sides of the bed, and adjustable with its axis into different vertical angles, and driven connections therewith.

10. A manure spreader comprising a bed, a main distributing cylinder journaled transversely thereon, a pair of auxiliary distributing rollers mounted to turn on axes at an angle to each other and to the sides of the bed, means for vertically adjusting one end of each of said pair of rollers, and driven connections with the cylinder and rollers.

11. In a manure spreader, the combination with the bed, and a straight distributing cylinder journaled transversely thereon, of a distributing roller supported with one end of its axis above the cylinder and extending in a forward direction at an angle to the plane of rotation thereof and driven connections with said roller and cylinder.

12. A manure spreader comprising a bed, a pair of distributing rollers journaled thereon with their axes of rotation at an angle to each other and independently adjustable in different vertical angles.

13. An attachment for manure spreaders comprising a frame and a pair of distributing rollers journaled thereon with their axes independently adjustable in different vertical angles.

14. An attachment for manure spreaders comprising a frame having a rearwardly extending bracket, bearing members vertically adjustable on the sides of the frame, and distributing rollers journaled in the bracket and the respective bearing members with their axes at an angle to each other.

15. A manure spreader comprising a body, a beater journaled transversely thereon, a pair of beaters supported in an upward and forward direction thereover and at an obtuse angle to each other, and driven connections for actuating the beaters simultaneously.

16. A manure spreader comprising a body, two similar beaters supported thereon, said beaters being arranged to turn on axes at an angle to each other and in common inclined plane, and driven connections for actuating said beaters.

17. A manure spreader comprising a body, a beater journaled thereon for distributing the lower portion of the load in a rearward direction, beaters supported on the body and arranged at an angle to each other for distributing the upper portion of the load in respective laterally divergent directions, and driven connections for actuating the beaters simultaneously.

18. A manure spreader comprising a body, a pair of beaters supported thereon and arranged to turn on rearwardly and upwardly converging axes, a beater supported thereunder on the body parallel with the line connecting the opposite ends of said pair of beaters, and driven connections for actuating said beaters simultaneously.

19. A manure spreader comprising a body, a beater journaled to turn thereon, a pair of beaters mounted to turn on rearwardly and upwardly converging axes having their opposite ends on a line parallel with the axis of the former beater, and driven connections for actuating the beaters simultaneously and in the same direction.

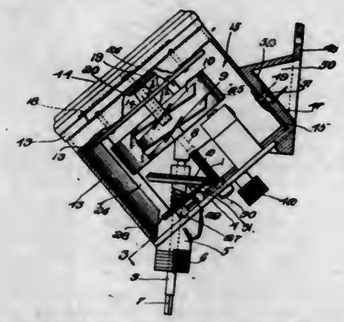
20. The combination of a bed, a distributing cylinder of uniform diameter supported transversely thereon, and distributing rollers each supported with one end above the cylinder and with their axes diverging in a forward direction at equal angles to the plane of rotation of said cylinder, and connections for driving the rollers and cylinder.

21. The combination of a bed, a distributing cylinder of uniform diameter journaled transversely thereon, and a pair of distributing rollers journaled in a plane above the cylinder and with their axes diverging in a forward direction at an obtuse angle to each other, and means for driving the cylinder and the rollers.

22. A manure spreader comprising a bed, a straight cylinder supported on the rear portion of the bed for distributing the lower portion of the contents thereof directly in a rearward direction, and a pair of rollers constructed and arranged with their axes diverging in a forward direction and in a plane above the cylinder for distributing the upper portion of the contents of the bed in respective laterally divergent directions, and connections for driving the cylinder and rollers simultaneously.

23. A manure spreader comprising a bed, a cylinder journaled thereon, and a roller supported above the bottom of the bed with its axis of rotation in an inclined plane at an oblique angle to the axis of the cylinder for coöperating with the cylinder to distribute the material fed thereto over an area wider than the bed.

13,370. SPEEDOMETER. LOUIS A. GREENLEAF, Dorchester, Mass. Filed Jan. 4, 1912. Serial No. 669,987. Original No. 1,011,051, dated Dec. 5, 1911, Serial No. 566,034. (Cl. 73—123.)



1. A speedometer, comprising an inclosure, a continuous hollow cylindrical member therein, means for holding said member in spaced apart relation to the walls thereof to leave an open annular space, air current producing means wholly within said cylindrical member, a driving connection thereto, and means also wholly within said cylindrical member responsive to an air current and having connected thereto a device to indicate the force thereof, said parts being constructed and arranged to produce a closed circulation of air in one direction through the interior of said cylindrical member, returning in the opposite direction through said unobstructed open annular space.

2. A speedometer, comprising a tight inclosure, a continuous hollow cylindrical member, means for holding said member in spaced apart relation to the walls thereof to form an unobstructed annular space, air current producing means mounted wholly within said member, a driving connection thereto, means also wholly within said member responsive to an air current and a device connected to be operated thereby to indicate the force thereof, said parts being constructed to maintain a closed circulation of air in one direction through said hollow cylindrical member and in the other direction through the unobstructed annular space between the same and the wall of said inclosure.

3. A speedometer, comprising an inclosing cylinder, a hollow cylindrical section having a mounting in said cylinder in spaced apart relation to the cylindrical wall thereof, air current producing means mounted wholly within said section and having a driving connection extending therefrom, and means also wholly within said section responsive to an air current and having connected thereto a device to indicate the force thereof, said parts being fitted to the interior of said section and constructed to cause a closed circulation of air in one direction through said cylindrical section and to permit its free return without interference through the annular space between said cylindrical section and said inclosing cylinder.

4. A speedometer, comprising a tight inclosure, a continuous and hollow cylindrical member, means for holding said member in spaced-apart relation to the walls of said inclosure to leave an unobstructed annular space therebetween, a fan fitted to rotate wholly within said member, having a mounting coaxial therewith and a driving connection, a second fan mounted opposite said first fan and fitted to rotate wholly within said member, and means connected to said second fan for indicating the force of an air current generated by said first fan, said parts being constructed to maintain a closed circulation of air in one direction through said hollow cylindrical member and in the other direction through the unobstructed annular space between the same and the wall of said inclosure.

5. A speedometer, comprising a base, indicating mechanism, an inclosure for the latter immovably secured to said base when in operative position, the securing means being externally inaccessible, a bracket for fastening the apparatus to the vehicle, means for removably securing the said apparatus to the bracket, and means for concealing the securing means within the bracket.

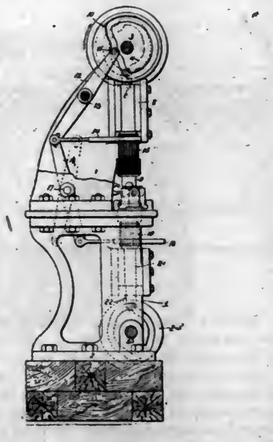
6. A speedometer, comprising a base provided at its front side adjacent one edge with overhanging radially projecting lugs, indicating mechanism, an inclosure for the latter having adjacent its lower edge an inwardly opening groove for receiving said lugs, a bracket adjacent the opposite edge from the rear of said bracket for securing said inclosure in place on said base and against the bracket.

7. A speedometer, comprising a base, indicating mechanism, an inclosure for the latter immovably secured to said base when in operative position, the securing means being externally inaccessible, a bracket for fastening the apparatus to the vehicle, said bracket containing a cavity opening toward the rear and extending forwardly into the bracket, and a screw-hole adjacent said inclosure, a screw fitting said hole and having threaded engagement with said inclosure, and a protecting coating for concealing said screw and covering the adjacent surface of the bracket within said cavity.

13,371. MACHINE FOR WELDING CHAIN-LINKS. LOUIS ROEHR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Dec. 28, 1911. Serial No. 668,301. Original No. 858,758, dated July 2, 1907, Serial No. 354,115. (Cl. 59—31.)

1. In a machine for welding, the combination with means for holding the members to be welded, of two dies located to operate against opposite sides of the members being welded, each die having a recessed section and high and low faces the latter being on opposite sides of the recessed sections; the high and low faces of one die coacting respectively with the high and low faces of the other die and means for moving the dies toward and from each other and means for partly rotating them.

2. In a machine for welding, the combination with means for holding the members to be welded, of two dies located to operate against opposite sides of said members, each die having a recess, and high and low faces, the high and low faces of each die coacting respectively with the high and low faces of the other die, means for moving the dies toward and away from each other and means for partly rotating each die.



3. In a machine for welding, the combination with means for holding the members to be welded, of two dies located to operate against opposite sides of said members, each die having a recess and high and low faces, the high face of each die being normally in line with the high face of the other die, and the low face of one die being normally in line with the low face of the other die, means for moving the dies toward and away from each other, and means for simultaneously rotating both dies half a revolution in opposite directions.

4. In a machine for welding, the combination with means for holding the members to be welded, of two welding tools each having a recess and high and low faces, whereby the fins formed by the compression of the members between the tools will be in different planes, and means for reversing the position of the high and low faces on the welding tools whereby the fins formed on the members by the first compression will be folded in or cut off by subsequent compressions.

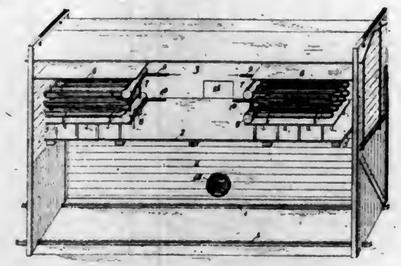
5. In a machine for welding, the combination with means for holding the members to be welded, of two welding tools each having a recess and high and low faces, the high and low faces on one tool being normally opposite the high and low face on the other, means for moving said tools toward and away from each other, and means for reversing the positions of the high and low faces, whereby the fins formed on the members by the first compression will be folded in or cut off by subsequent compression.

13,372. DRYING-KILN. LEWIS J. TRIPP, Mesick, Mich. Filed Oct. 17, 1906. Serial No. 339,586. Original No. 833,011, dated Oct. 9, 1906, Serial No. 324,687. (Cl. 34—19.)

1. A kiln comprising a drying chamber through which the material to be dried is conducted, a heating chamber, having heaters at each end, communicating with a drying chamber, a central source of air supply located in one chamber and a central source of air exhaust located in the other chamber whereby the air supply is drawn through the heating chamber from a central point of supply in opposite directions and drawn in both directions toward the center of the drying chamber.

2. A kiln divided horizontally into two chambers which communicate with each other at their outer ends, one chamber having a heater at each end, said last named chamber having a source of air supply common to both heaters and the other chamber an exhaust at the center

whereby air is caused to circulate in opposite directions in the two chambers.



3. A dry-kiln comprising a house divided horizontally into two chambers, air-passages at opposite points in the floor of the upper chamber, means located at opposite ends of the upper chamber for heating the air and inlets and outlets for the air centrally located in the upper and lower compartments whereby the cold air is heated during its passage to the air-outlets in the floor of the upper compartment whereupon it is drawn endwise in opposite directions through the lower compartment and discharged at or near the center thereof.

4. A dry-kiln comprising a house divided horizontally into two compartments in communication with each other at opposite points, one compartment having heating means therein adjacent to said communicating points, an air-inlet in the compartment for the heating apparatus located at a central point and an air-exhaust in the other compartment located at a central point whereby the cold air is heated on its way to the communicating-points and sent in opposite directions through the other chamber so that the stock is subjected to an even temperature all through the kiln.

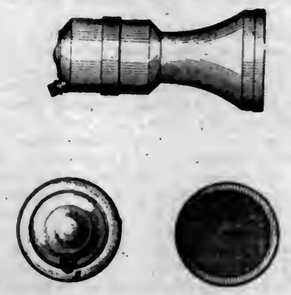
5. A dry kiln comprising a house divided horizontally in two compartments in communication with each other at opposite points, one compartment having heating coils therein adjacent to said communicating points, an air inlet in the compartment for the heating apparatus located at a central point, an exhaust in the other compartment located at a central point whereby the cold air is drawn through the heating coils and heated on its way to the communicating points and sent in opposite directions through the other chamber so that the stock is subjected to an even temperature all through the kiln.

DESIGNS.

42,182. COIN-HOLDER AND VINAIGRETTE. SIDNEY O. BIGNEY, Attleboro, Mass. Filed July 5, 1910. Serial No. 570,501. Term of patent 3½ years.

The ornamental design for a coin holder and vinaigrette, as shown.

42,183. AUTOMOBILE-HORN. SAVERIO CALAUTTI, New York, N. Y. Filed Nov. 18, 1910. Serial No. 593,128. Term of patent 7 years.

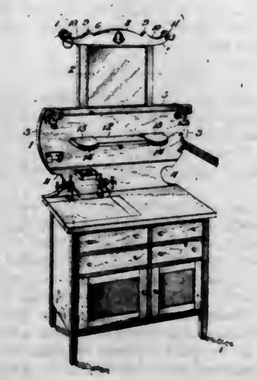


The ornamental design for an automobile horn, as herein shown and described.

42,184. SEAT. HARRY C. CANSLER, Knoxville, Tenn. Filed Nov. 14, 1911. Serial No. 660,286. Term of patent 7 years.

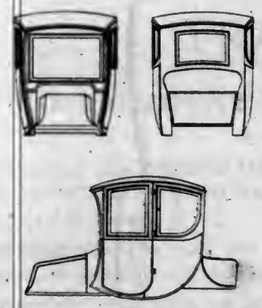
The ornamental design for a seat, as shown.

42,185. TOILET-STAND. FRANCIS GILBERT HILL, Columbus, Ind. Filed Nov. 18, 1911. Serial No. 661,176. Term of patent 14 years.



The ornamental design for a toilet stand, as herein shown and described.

42,186. VEHICLE-BODY. CHARLES E. J. LANG, Cleveland, Ohio, assignor to The Rauch & Lang Carriage Company, Cleveland, Ohio, a Corporation of Ohio. Term of patent 7 years.

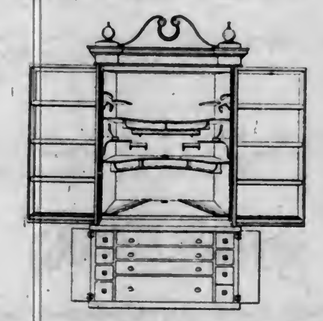


The ornamental design for a vehicle body, as shown.

42,187. DINNER-SET CABINET. ERNEST MILLER LUNT, Naperville, Ill., assignor to Towle Manufacturing Company, Newburyport, Mass., a Corporation of Massachusetts. Filed Nov. 11, 1911. Serial No. 659,834. Term of patent 7 years.

The ornamental design for a dinner set cabinet, as shown.

42,188. DINNER-SET CABINET. ERNEST MILLER LUNT, Naperville, Ill., assignor to Towle Manufacturing Company, Newburyport, Mass., a Corporation of Massachusetts. Filed Nov. 11, 1911. Serial No. 659,835. Term of patent 7 years.



The ornamental design for a dinner set cabinet, as shown.

42,189. PIANO-CASE. NELS JAMES NELSON, Chicago, Ill., assignor to F. Engelhardt & Sons, St. Johnsville, N. Y., a Firm. Filed Nov. 11, 1911. Serial No. 659,830. Term of patent 7 years.

The ornamental design for a piano case as shown.

42,190. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1911. Serial No. 663,956. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,191. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1911. Serial No. 663,957. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,192. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1911. Serial No. 663,958. Term of patent 3½ years.

The ornamental design for a rug, as shown.

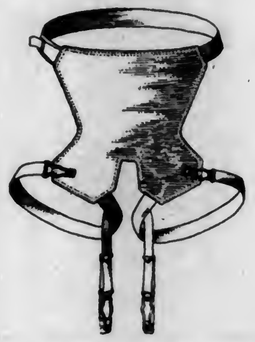
42,193. STREET-LIGHT POST. GERARD SCHUMACHER, Anniston, Ala., assignor to Union Foundry Company, Anniston, Ala., a Corporation of Alabama. Filed Nov. 20, 1911. Serial No. 661,396. Term of patent 7 years.

The ornamental design for a street light post, substantially as shown.

42,194. VEGETABLE-KNIFE. OLIVER A. SMITH, Springfield, Mass. Filed Nov. 18, 1911. Serial No. 661,178. Term of patent 7 years.

The ornamental design of a vegetable knife, as shown.

42,195. ABDOMINAL BAND. LULABELLE STREET, Tucumcari, N. Mex. Filed Sept. 20, 1911. Serial No. 650,474. Term of patent 3½ years.



The ornamental design for an abdominal band, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 20, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 42,049. (CLASS 11. INKS AND INKING MATERIALS.) DE FI MANUFACTURING COMPANY, New York, N. Y. Filed May 24, 1909.

The picture shown in the drawing being fanciful.
Particular description of goods.—Carbon-Paper and Type-Writing Ribbon.
Claims use since May 1, 1909.

Ser. No. 46,057. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCHMIDT & ADE, Chicago, Ill. Filed Dec. 22, 1909.

"THE POLYCLINIC"

Particular description of goods.—Hypodermic Syringes and Surgical Thermometers.
Claims use since Sept. 1, 1908.

Ser. No. 47,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. S. BROWN & BRO. MER. Co., Denver, Colo. Filed Feb. 14, 1910.

MOUNT CROSS

Particular description of goods.—Canned Fruit, Canned Vegetables, Canned Sauer-Kraut, Canned Pork and Beans, Canned Succotash, Canned Hominy, Canned Fish, Canned Oysters, Canned Clams, Canned Clam-Chowder, Dried Fruit, Corn-Starch, Cane and Maple Syrup, Olives, Olive-Oil, Coffee, Tea, Jam, Pickles, Relishes, and Spices.
Claims use since 1906.

Ser. No. 47,810. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. S. BROWN & BRO. MER. Co., Denver, Colo. Filed Feb. 14, 1910.

J·S·B

Particular description of goods.—Canned Fruit, Canned Vegetables, Canned Sauer-Kraut, Canned Hominy, Canned Succotash, Canned Pork and Beans, Canned Soup, Canned Fish, Canned Oysters, Canned Clams, Canned Clam-Chowder, Canned Lobsters, Canned Shrimp, Barley, Potato Meal, Tapioca, Rolled Oats, Blended Coffee, Olives, Jams, Maple-Syrup, Apple Vinegar, and Evaporated Milk.
Claims use since July, 1909.

Ser. No. 50,860. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BREWERS' SPECIAL MACHINERY COMPANY, New York, N. Y. Filed July 16, 1910.

MAMMUT

Particular description of goods.—Keg Sprinkling and Scrubbing Machines, and Filter Mass and Pulp Washing and Sterilizing Machines.
Claims use since July, 1905.

Ser. No. 51,317. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) RICHTER & HOFFMANN THE HARVARD DENTAL MANUFACTURING COMPANY GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany. Filed Aug. 8, 1910. Under ten-year proviso.

The facsimile-signature being that of Rob. Richter, D. D. S.

Particular description of goods.—Cement for Filling Teeth.

Claims use since Jan. 1, 1892.

Ser. No. 51,582. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN PIN COMPANY, Waterbury, Conn. Filed Aug. 27, 1910.

Particular description of goods.—Valve-Balls; Bath and Basin Supply-Pipes; Connected Wastes and Overflows; Traps; Valves; and Float-Balls.

Claims use since the 1st day of August, 1910.

Ser. No. 51,947. (CLASS 47. WINES.) CRUSE & FILS FRERES, Bordeaux, France. Filed Sept. 24, 1910.

Particular description of goods.—Clarets and Sauternes.

Claims use since the year 1890.

Ser. No. 52,720. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. PAUL SYRUP REFINING COMPANY, St. Paul, Minn. Filed Nov. 11, 1910.

Particular description of goods.—A Mixture of Maple-Sugar, Cane-Sugar, and Corn-Syrup.

Claims use since Aug. 14, 1910.

Ser. No. 53,009. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 29, 1910.

Particular description of goods.—Prepared Coal-Tar, Prepared Pitch and Asphalt for Roofing, Paving, and Waterproofing.

Claims use since about Jan. 1, 1889.

Ser. No. 53,045. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NEGRETTI & ZAMBRA, London, E. C., England. Filed Nov. 30, 1910. Under ten-year proviso.

PONTON

Particular description of goods.—Iron and Steel Wire.

Claims use since on or about Jan. 1, 1870.

Ser. No. 53,936. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SEABURY & JOHNSON, East Orange, N. J., and New York, N. Y. Filed Jan. 17, 1911.

This trade-mark consists of a circular seal with a serrated peripheral edge and red background. In the center of the seal is a red cross on a circular white ground or space, and surrounding said white ground or space are represented a series of overlapping medals, outside of which is shown a wreath of leaves in green, surrounded by scroll-like ornamental work in black.

Particular description of goods.—Surgical Dressings, including Surgical Cottons, Gauzes, Lints, Jutes, Oakums, Lamb's-Wool, and Paper-Wools, and Also on Surgical Neat, Bandages, and Ligatures.

Claims use since the year 1886.

Ser. No. 54,327. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VANADIUM CHEMICAL CO., Pittsburgh, Pa. Filed Feb. 6, 1911.

VANADIOSERUM

Particular description of goods.—A Nerve and Tissue Tonic.

Claims use since Mar. 27, 1909.

Ser. No. 54,328. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VANADIUM CHEMICAL CO., Pittsburgh, Pa. Filed Feb. 6, 1911.

VANADIOSEPTOL

Particular description of goods.—A Preparation for External Use as an Antiseptic.

Claims use since Mar. 27, 1909.

Ser. No. 55,215. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BYRON C. HALL, Oakland, Cal. Filed Mar. 20, 1911.

ABC

Particular description of goods.—A Liniment for Rheumatic Afflictions, Sprains, and Bruises.

Claims use since Feb. 25, 1911.

Ser. No. 55,525. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARK & HOST CO., Milwaukee, Wis. Filed Apr. 4, 1911.

MY FAVORITE

Particular description of goods.—Tea, Blended Coffee, Cocoa, and Flavoring Extracts.

Claims use since Oct. 1, 1907.

Ser. No. 55,526. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARK & HOST CO., Milwaukee, Wis. Filed Apr. 4, 1911.

Particular description of goods.—Blended Coffee, Tea, Spices, Flavoring Extracts, Cocoa, and Bird-Seed.

Claims use since about Oct. 1, 1905.

Ser. No. 56,428. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUBISCO COMPANY, St. Louis, Mo. Filed May 18, 1911.

RUBISCO

Particular description of goods.—Tooth-Powder, Liquid Rouge, Face-Cream, and Talcum Powder.

Claims use since May 1, 1911.

Ser. No. 56,724. (CLASS 17. TOBACCO PRODUCTS.) LOUIS H. ROSENBERG, Boise, Idaho. Filed June 1, 1911.

Particular description of goods.—Cigars.

Claims use since March, 1906.

Ser. No. 56,862. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) COMPAGNIE FERMIÈRE DE L'ETABLISSEMENT THERMAL DE VICHY, Paris, France. Filed June 6, 1911.

Particular description of goods.—Natural Mineral Waters.

Claims use since the 15th day of December, 1907.

Ser. No. 56,863. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) COMPAGNIE FERMIÈRE DE L'ETABLISSEMENT THERMAL DE VICHY, Paris, France. Filed June 6, 1911.

Particular description of goods.—Natural Mineral Waters.

Claims use since the 15th day of December, 1907.

Ser. No. 57,048. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 15, 1911.

The picture being fanciful.
Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.
Claims use since Feb. 8, 1911.

Ser. No. 57,199. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) NATIONAL WHALEBONE CO., New York, N. Y. Filed June 20, 1911. Under ten-year proviso.

ARISTON

Particular description of goods.—Corset-Stays.
Claims use since Mar. 27, 1894.

Ser. No. 57,351. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARION MILLAR, Winnipeg, Canada. Filed June 28, 1911.

Particular description of goods.—Hair-Restorer.
Claims use since the 18th day of May, 1911.

Ser. No. 57,600. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE OLD BUSHMILLS DISTILLERY CO., LTD., Bushmills, Ireland. Filed July 12, 1911. Under ten-year proviso.

OLD BUSHMILLS

Consists of the words "Old Bushmills."
Particular description of goods.—Irish Malt Whisky.
Claims use since Aug. 13, 1850.

Ser. No. 57,626. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) MEDERIC DROLET, Kankakee, Ill. Filed July 14, 1911.

NEW HOME

Particular description of goods.—Laundry Washing-Machines.
Claims use since Sept. 1, 1907.

Ser. No. 57,838. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARTHUR CHEMICAL COMPANY, New Haven, Conn. Filed July 26, 1911.

NADONE

Particular description of goods.—Toilet Benzoin, Toilet Water, Toilet Creams, and Perfumes.
Claims use since November, 1907.

Ser. No. 58,088. (CLASS 39. CLOTHING.) A. KUEHNERT & Co., New York. N. Y. Filed Aug. 8, 1911.

AKAYS

Particular description of goods.—Men's Underwear—Namely, Knitted and Textile Undershirts and Drawers.
Claims use since April, 1911.

Ser. No. 58,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HORACE FLETCHER CO., New York, N. Y. Filed Aug. 11, 1911.

Fletcherettes

Particular description of goods.—Crackers and Biscuits.
Claims use since May 5, 1911.

Ser. No. 58,242. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLAUDE S. WALLIN, Peoria, Ill. Filed Aug. 17, 1911.

No claim being made to the word "Bread."
Particular description of goods.—Bread.
Claims use since about the 1st day of August, 1911.

Ser. No. 58,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HORACE PROUTS GORMAN, Hazleton, Pa. Filed Aug. 28, 1911.

NICKELITE

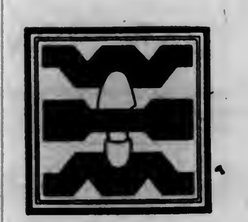
Particular description of goods.—A Preparation for Nickel-Plating Metal.
Claims use since April, 1911.

Ser. No. 58,449. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AMERICAN BELTING & TANNING CO., Boston, Mass. Filed Aug. 30, 1911.

SALAMANDER

Particular description of goods.—Leather Belting, Leather Hose, and Leather Lacing.
Claims use since Apr. 1, 1909.

Ser. No. 58,495. (CLASS 39. CLOTHING.) W. H. MCELWAIN COMPANY, Boston, Mass. Filed Sept. 1, 1911.



Particular description of goods.—Leather and Canvas Boots and Shoes.
Claims use since on or about Aug. 5, 1911.

Ser. No. 58,576. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) F. & J. MEYER, New York, N. Y. Filed Sept. 7, 1911.

LEONKA

Particular description of goods.—Kidskin, Cowskin, Calfskin, Goatskin, and Side Leathers for Boots and Shoes.
Claims use since January, 1910.

Ser. No. 58,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS BURK, Philadelphia, Pa. Filed Sept. 20, 1911.

Consisting of diagonal stripes having thereon the words "Burk's Breakfast Relish Minced Pork," which words are not claimed.
Particular description of goods.—Minced Pork.
Claims use since about Jan. 31, 1910.

Ser. No. 58,992. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARABOL M'F'G CO., New York, N. Y. Filed Oct. 4, 1911.

REFORMLEIM

Particular description of goods.—Rosin Employed as a Paper-Size.
Claims use since Sept. 22, 1911.

Ser. No. 59,052. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) J. E. RHOADS & SONS, Philadelphia, Pa. Filed Oct. 7, 1911.

GILT

EDGE

Particular description of goods.—Flat Leather Belting.
Claims use since about Mar. 13, 1895.

Ser. No. 59,128. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OBUR COMPANY, New York, N. Y. Filed Oct. 12, 1911.

OBUR

Particular description of goods.—Hair-Remover.
Claims use since Aug. 15, 1911.

Ser. No. 59,155. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SUFFERN & COMPANY, New York, N. Y. Filed Oct. 14, 1911.

No claim being made to the word "Sheeting."
Particular description of goods.—Cotton Piece Goods, Sheetings, Shirtings, and Drills.
Claims use since Sept. 1, 1911.

Ser. No. 59,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACKER, MERRALL & CONDIT COMPANY, New York, N. Y. Filed Oct. 14, 1911.

Hostess

Particular description of goods.—Canned Fruits, Canned Vegetables, Spices, Fruit Preserves, Pickles, Olives, Jelly, Jams, Marmalade, Catsups, Sauces, Flavoring Extracts, Rolled Oats, Head-Rice, Hominy, Dried Fruits, Crackers, Nuts, Nut-Meats, Rye, Wheat, and Graham Flour, Honey, Pineapple, Maple, and Orange Syrups, Molasses, Dried Vegetables, Olive-Oil, Tea, Coffee, Butter, and Eggs.
Claims use since Sept. 27, 1911.

Ser. No. 59,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLORIDA EAST COAST COMPANY, INC., Wilmington, Del.; Delespine, Fla., and Philadelphia, Pa. Filed Oct. 23, 1911.

Particular description of goods.—Oranges, Grape-Fruit, Lemons, Tangerines, and Cumquats.
Claims use since Mar. 1, 1911.

Ser. No. 59,348. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DROSTE & CO., Haarlem, Netherlands. Filed Oct. 26, 1911.

The picture is fanciful.
Particular description of goods.—Cocoa.
Claims use since January, 1911.

Ser. No. 59,419. (CLASS 12. CONSTRUCTION MATERIALS.) PARAFFINE PAINT COMPANY, San Francisco, Cal. Filed Oct. 30, 1911.

Amiwud

Particular description of goods.—Manufactured Board for Interior Finish.
Claims use since November, 1910, and prior to the 23d day thereof.

Ser. No. 59,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY L. ARTHUR, Elkton, Md. Filed Nov. 1, 1911.

PARAGON

Particular description of goods.—Canned Vegetables.
Claims use since about 1895.

Ser. No. 59,512. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JNO. B. DANIEL, Atlanta, Ga. Filed Nov. 2, 1911.

PASADYNE

Particular description of goods.—A Sedative, Antispasmodic, and Nerve Tonic.
Claims use since Sept. 1, 1910.

Ser. No. 59,519. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE BENDA, New York, N. Y. Filed Nov. 3, 1911.

Bendalin

Particular description of goods.—Gold, Aluminum, Silver, Bronze, and Copper Paints and Enamels, Bronzing Liquids, and Gold, Silver, Copper, Bronze, and Aluminum Powders.
Claims use since on or about September, 1910.

Ser. No. 59,520. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE BENDA, New York, N. Y. Filed Nov. 3, 1911.

Particular description of goods.—Gold, Aluminum, Silver, Bronze, and Copper Paints and Enamels, Bronzing Liquids, and Gold, Silver, Copper, Bronze, and Aluminum Powders.
Claims use since on or about September, 1910.

Ser. No. 59,526. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRANVILLE H. HENSON, Evona, Ky. Filed Nov. 3, 1911.

Particular description of goods.—A Remedy for Rheumatism, Sciatic Pains, Indigestion, and Malaria.
Claims use since Oct. 25, 1911.

Ser. No. 59,528. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) KENT MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 3, 1911.

Pride of The Spindle

Particular description of goods.—Lawns, Nainsooks, Batistes, Voiles, Muslins, Long-Cloth, Organdies, Cambrics, Scrims, and Silks in the Piece.
Claims use since the 1st day of October, 1911.

Ser. No. 59,539. (CLASS 39. CLOTHING.) H. WOLF & SONS, Cincinnati, Ohio. Filed Nov. 10, 1911.

Particular description of goods.—Knitted and Textile Undershirts, Drawers, and Union Suits.
Claims use since Oct. 14, 1911.

Ser. No. 59,657. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Nov. 11, 1911.

DEARFOOT

Consisting of the word "Dearfoot."
Particular description of goods.—Hosiery.
Claims use since June 10, 1910.

Ser. No. 59,659. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Nov. 11, 1911.

RECORD

Consisting of the word "Record."
Particular description of goods.—Hosiery.
Claims use since May 24, 1909.

Ser. No. 59,683. (CLASS 39. CLOTHING.) BENJAMIN & JOHNES, Newark, N. J. Filed Nov. 13, 1911.

The picture being fanciful.
Particular description of goods.—Petticoats, Nightgowns, Combination Corset-Cover and Drawers, Drawers, Chemisettes, Corset-Covers, Children's Dresses, Children's Petticoats, Brassières.
Claims use since Oct. 14, 1911.

Ser. No. 59,730. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,731. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,732. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,733. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,734. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,735. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,736. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,737. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,738. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,739. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,740. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN, New York, N. Y. Filed Nov. 15, 1911.

CUTEX

Particular description of goods.—A Cuticle-Remover in Liquid Form.
Claims use since the 10th day of November, 1911.

Ser. No. 59,742. (CLASS 37. PAPER AND STATIONERY.) PEERLESS WALL PAPER MANUFACTURING COMPANY, Hoboken, N. J. Filed Nov. 15, 1911.

PEERLESS WALL PAPER MANUFACTURING CO. 5¢ AND 10¢

No claim being made to the words "Peerless Wall Paper Manufacturing Co." and "5¢ and 10¢."
Particular description of goods.—Wall-Papers.
Claims use since Nov. 1, 1911.

Ser. No. 59,838. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMERSON J. POTTS, San Francisco, Cal. Filed Nov. 21, 1911.

Osmotine

Particular description of goods.—An Antiphlogistic Preparation.
Claims use since Aug. 1, 1905.

Ser. No. 59,849. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR LOESER, New York, N. Y. Filed Nov. 22, 1911.

LOESERIDE

Particular description of goods.—A Salve Used as a Remedy for Abscesses, Blood-Poisoning, Tumors, Inflammations, Burns, Scalds, Cuts, Caries, Carbuncles, Cancer, if External; Sprains, Bruises, Bites from Dogs, Snakes, or other Animals, Bunions, and Corns.
Claims use since July 1, 1911.

Ser. No. 59,989. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MERRELL-SOULE Co., Syracuse, N. Y. Filed Nov. 28, 1911.

KLIM

Particular description of goods.—Milk Products in Dry Form.
Claims use since Oct. 30, 1911.

Ser. No. 59,998. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMMON & PERSON, Jersey City, N. J. Filed Nov. 29, 1911.

The picture being fanciful.
Particular description of goods.—Oleomargarin.
Claims use since Nov. 13, 1911.

Ser. No. 60,006. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) KRELL FRENCH PIANO COMPANY, Newcastle, Ind. Filed Nov. 29, 1911. Under ten-year proviso.

Jesse French

Particular description of goods.—Pianos, Organs, Player-Pianos, and Separate Players.
Claims use since 1880.

Ser. No. 60,007. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN G. BURTON, Hopewell, N. J. Filed Nov. 29, 1911.

"ARTOIS"

Particular description of goods.—Bottled Natural Drinking-Water.
Claims use since Nov. 6, 1911.

Ser. No. 60,025. (CLASS 37. PAPER AND STATIONERY.) THE O. K. MANUFACTURING COMPANY, Syracuse, N. Y. Filed Dec. 1, 1911.

O. K.

Particular description of goods.—Paper-Fasteners, Rubber Ink and Pencil Erasers, Ink-Wells, and Moisteners.
Claims use since about Mar. 1, 1904.

Ser. No. 60,113. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY A. BATES, Middletown, Conn. Filed Dec. 7, 1911.

BATES PRESERVATIVE WAX SHUTTLE BRAND TRADE MARK COMPOUND FOR THREAD

No claim being made to the words "Bates Preservative Wax Compound For Thread."
Particular description of goods.—A Specially-Prepared Compound for the Preservation of Thread.
Claims use since Nov. 27, 1911.

Ser. No. 60,117. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MERRELL-SOULE Co., Syracuse, N. Y. Filed Dec. 7, 1911.

MERSO

Particular description of goods.—Soups, Butter, Preserved Vegetables, and Canned Vegetables.
Claims use since Oct. 30, 1911.

Ser. No. 60,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

NYMPHS

Particular description of goods.—Biscuit.
Claims use since February, 1902.

Ser. No. 60,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 9, 1911.

SEA NYMPH

Particular description of goods.—Biscuit.
Claims use since Oct. 16, 1911.

Ser. No. 60,174. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEABOARD FLOUR COMPANY, Boston, Mass. Filed Dec. 11, 1911.

Lochinvar

Particular description of goods.—Flour.
Claims use since Dec. 1, 1911.

Ser. No. 60,178. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH THOMPSON, Sioux City, Iowa. Filed Dec. 11, 1911.

EUREKA

Particular description of goods.—Cloth-Cleaning Pads.
Claims use since July, 1909.

Ser. No. 60,189. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE ROWE CALK COMPANY, Hartford, Conn. Filed Dec. 12, 1911.

R P

Particular description of goods.—Horseshoes.
Claims use since Apr. 1, 1911.

Ser. No. 60,201. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FINN AND MEYERS, New York, N. Y. Filed Dec. 13, 1911.

PEAURAM

Particular description of goods.—Silk Shirtings.
Claims use since Sept. 1, 1911.

Ser. No. 60,231. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SULFOSOL CO., New York, N. Y. Filed Dec. 14, 1911.

Sulfo-Lax

Particular description of goods.—A Laxative Tablet.
Claims use since November, 1910.

Ser. No. 60,253. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. HAMSTRA & Co., Grand Rapids, Mich. Filed Dec. 15, 1911.

FROU FROU

Particular description of goods.—Tea.
Claims use since Nov. 21, 1911.

Ser. No. 60,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. JOHNSON, Attica, Ind. Filed Dec. 15, 1911.

ROCOCO

Particular description of goods.—A Remedy for Diseases of the Stomach.
Claims use since May 6, 1911.

Ser. No. 60,262. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. FRITZ MÜLLER, BASLER CHEMISCH-TECHNISCHES LABORATORIUM, Basel, Switzerland. Filed Dec. 15, 1911.

DEMBAL

Particular description of goods.—A Chemical Composition or Preparation to Finish or Dress Textiles.
Claims use since about Apr. 1, 1911.

Ser. No. 60,271. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEGUIN MILLING & POWER CO., Seguin, Tex. Filed Dec. 15, 1911.

PRIORITY

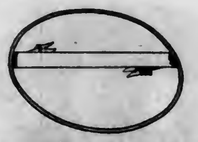
Particular description of goods.—Wheat-Flour.
Claims use since Oct. 28, 1911.

Ser. No. 60,272. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SNYDER-CHAFFEE CO., Columbus, Ohio. Filed Dec. 15, 1911.

BONANZA

Particular description of goods.—Popcorn and Foam Candy.
Claims use since 1893.

Ser. No. 60,307. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) EMIL T. PALMENBERG, New York, N. Y. Filed Dec. 18, 1911.



Particular description of goods.—Display-Figures.
Claims use since 1899.

Ser. No. 60,334. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK P. SIMPSON, Norfolk, Va. Filed Dec. 18, 1911.

M. P. S.

Particular description of goods.—Salves.
Claims use since Oct. 25, 1911.

Ser. No. 60,337. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE STUDEBAKER CORPORATION, South Bend, Ind. Filed Dec. 18, 1911.

Flanders

Particular description of goods.—Automobiles.
Claims use since Nov. 30, 1911.

Ser. No. 60,339. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MATHILDA VANDAME, Goldfield, Nev. Filed Dec. 18, 1911.

Particular description of goods.—French Hair-Tonic.
Claims use since May 1, 1911.

Ser. No. 60,361. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TAKU CANNING & COLD STORAGE CO., Seattle, Wash. Filed Dec. 19, 1911.

Wonder

Particular description of goods.—Canned Salmon.
Claims use since July, 1911.

Ser. No. 60,362. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TAKU CANNING & COLD STORAGE CO., Seattle, Wash. Filed Dec. 19, 1911.

Particular description of goods.—Canned Salmon.
Claims use since July, 1911.

Ser. No. 60,363. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TAKU CANNING & COLD STORAGE CO., Seattle, Wash. Filed Dec. 19, 1911.

AMIKAY

Particular description of goods.—Canned Salmon.
Claims use since July, 1911.

Ser. No. 60,364. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TAKU CANNING & COLD STORAGE CO., Seattle, Wash. Filed Dec. 19, 1911.

EXCURSION

Particular description of goods.—Canned Salmon.
Claims use since July, 1911.

Ser. No. 60,381. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 20, 1911.

MINERVA

Particular description of goods.—Biscuit.
Claims use since Feb. 29, 1908.

Ser. No. 60,383. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM SILVERMAN, Philadelphia, Pa. Filed Dec. 20, 1911.

SAN-Q-PAIBA

Particular description of goods.—A Remedy for Gonorrhea.
Claims use since Sept. 15, 1911.

Ser. No. 60,387. (CLASS 37. PAPER AND STATIONERY.) FRANK C. DAVIDGE, Toronto, Canada. Filed Dec. 21, 1911.

Particular description of goods.—Wall-Papers.
Claims use since the 1st day of March, 1890.

Ser. No. 60,395. (CLASS 12. CONSTRUCTION MATERIALS.) THE HYDREX FELT & ENGINEERING COMPANY, Portland, Me.; New York, N. Y., and Rahway, N. J. Filed Dec. 21, 1911.

BIKOTA

Particular description of goods.—Building, Sheathing, Roofing, Insulating, and Case-Lining Papers.
Claims use since about Oct. 14, 1911.

Ser. No. 60,396. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHNSON-LOCKE MERCANTILE CO., San Francisco, Cal. Filed Dec. 21, 1911.

AERO

Particular description of goods.—Canned Fruits.
Claims use since Nov. 23, 1911.

Ser. No. 60,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND MACARONI COMPANY, Cleveland, Ohio. Filed Dec. 23, 1911.

SOUPLETS

Particular description of goods.—Macaronic Paste Foods.
Claims use since Aug. 16, 1911.

Ser. No. 60,443. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) IDEAL AUTO COMPANY, Fort Wayne, Ind. Filed Dec. 26, 1911.

Ideal

Particular description of goods.—Automobiles and Autotrucks.
Claims use since August, 1908.

Ser. No. 60,450. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOUTH LAKE APOPKA CITRUS GROWERS ASSOCIATION, Oakland, Fla. Filed Dec. 26, 1911.

Particular description of goods.—Oranges, Lemons, Grape-Fruit, Tangerines, and Limes.
Claims use since Dec. 1, 1911.

Ser. No. 60,460. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa. Filed Dec. 26, 1911.

ROBINOL

Particular description of goods.—A Medicinal Preparation for the Treatment of Anemia, Chlorosis, Sciatica, Nervous Prostration, The Albuminuria of Convalescence, and Neurasthenia.
Claims use since the 1st day of December, 1911.

Ser. No. 60,474. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. STATTER, Sioux City, Iowa. Filed Dec. 27, 1911.

Particular description of goods.—Hams, Bacon, Lard, and Sausage.
Claims use since about Nov. 20, 1911.

Ser. No. 60,481. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y. Filed Dec. 28, 1911.

ORTIZON

Particular description of goods.—A Disinfectant.
Claims use since Dec. 2, 1911.

Ser. No. 60,506. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FRANCIS E. LESTER, Mesilla Park, N. Mex. Filed Dec. 29, 1911.

MAZTEC

Particular description of goods.—White Sapphires.
Claims use since the 16th day of December, 1911.

Ser. No. 60,513. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL PARNITZKY, New York, N. Y. Filed Dec. 29, 1911.

PARNOP

Particular description of goods.—A Remedy for Diseases of the Skin, Cancer, Eczema, Rheumatism, and Primary Syphilitic Ulcers.
Claims use since Dec. 15, 1911.

Ser. No. 60,568. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. GOETZ CHEMICAL COMPANY, Brooklyn, N. Y. Filed Jan. 2, 1912.

Rusolka

Particular description of goods.—Face-Powder.
Claims use since Oct. 1, 1911.

Ser. No. 60,613. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WHITMAN & BARNES MANUFACTURING CO., Akron, Ohio. Filed Jan. 4, 1912.

"HERCULES"

Particular description of goods.—Twist-Drills.
Claims use since February, 1909.

Ser. No. 60,709. (CLASS 2. RECEPTACLES.) ERASTUS BRAINERD, Richmond Beach, Wash. Filed Jan. 9, 1912.

THE PURON

Particular description of goods.—Paper Food-Containers.
Claims use since Oct. 1, 1911.

TRADE-MARKS

REGISTERED FEBRUARY 20, 1912.

85,398. METAL WEATHER-STRIPS. ACME METAL WEATHER STRIP COMPANY, New York, N. Y.
Filed May 15, 1909. Serial No. 42,462. PUBLISHED DECEMBER 19, 1911.

85,399. METAL REFLECTORS. HARRY ALEXANDER, New York, N. Y.
Filed March 29, 1911. Serial No. 55,402. PUBLISHED DECEMBER 12, 1911.

85,400. LEATHER BELTING, PNEUMATIC LEATHER PACKING, AND LEATHER HOSE. AMERICAN BELTING & TANNING CO., Boston, Mass.
Filed August 25, 1911. Serial No. 58,391. PUBLISHED DECEMBER 12, 1911.

85,401. CHEWING-GUM. AMERICAN GUM COMPANY, Chicago, Ill.
Filed September 27, 1911. Serial No. 58,877. PUBLISHED DECEMBER 12, 1911.

85,402. HEMP CLOTHES-LINES. THE AMERICAN MANUFACTURING COMPANY, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, a Corporation of Massachusetts.
Filed May 4, 1910. Serial No. 49,504. PUBLISHED DECEMBER 19, 1911.

85,403. HEMP CLOTHES-LINES. THE AMERICAN MANUFACTURING COMPANY, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, a Corporation of Massachusetts.
Filed May 4, 1910. Serial No. 49,505. PUBLISHED DECEMBER 19, 1911.

85,404. FURNITURE-POLISH. WILLIAM H. ANDERSON, Springfield, Ill.
Filed September 6, 1911. Serial No. 58,556. PUBLISHED DECEMBER 19, 1911.

85,405. STONE-POLISHING PREPARATION. ALPHEUS ARMOR, Pittsburgh, Pa.
Filed July 18, 1911. Serial No. 57,687. PUBLISHED DECEMBER 12, 1911.

85,406. PURE LARD. ARMSTRONG REFINING COMPANY, Dallas, Tex.
Filed August 25, 1911. Serial No. 58,390. PUBLISHED DECEMBER 12, 1911.

85,407. HYDROGEN PEROXID. THE ARTHUR CHEMICAL COMPANY, New Haven, Conn.
Filed July 26, 1911. Serial No. 57,837. PUBLISHED DECEMBER 5, 1911.

85,408. PREPARED NATURAL AND ARTIFICAL PITCH. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed August 23, 1911 Serial No. 58,345. PUBLISHED DECEMBER 19, 1911.

85,409. SOAP. THE BURCKHARDT COMPANY, Cincinnati, Ohio.
Filed February 23, 1911. Serial No. 54,699. PUBLISHED DECEMBER 12, 1911.

85,410. SHOES, BOOTS, AND SANDALS MANUFACTURED OF CERTAIN MATERIALS. THE CAHILL SHOE CO., Cincinnati, Ohio.
Filed August 11, 1911. Serial No. 58,149. PUBLISHED DECEMBER 19, 1911.

85,411. TABLE-CLOTHS, TABLE-NAPKINS, AND PATTERNS THEREFOR. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed March 22, 1910. Serial No. 48,598. PUBLISHED DECEMBER 19, 1911.

85,412. RIBBONS. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed October 13, 1910. Serial No. 52,246. PUBLISHED DECEMBER 19, 1911.

85,413. DUST-CLOTHS. CHICAGO FEATHER DUSTER CO., Chicago, Ill.
Filed April 15, 1911. Serial No. 55,773. PUBLISHED DECEMBER 12, 1911.

85,414. CERTAIN FOODS. THE CLOVERDALE COMPANY, Boston, Mass.
Filed February 16, 1909. Serial No. 40,563. PUBLISHED MAY 11, 1909.

85,415. MAGAZINE PUBLISHED QUARTERLY. COMMERCIAL TRAVELERS' CLUB, Springfield, Mass.
Filed February 17, 1910. Serial No. 47,877. PUBLISHED DECEMBER 19, 1911.

85,416. CANNED FRUITS, CANNED VEGETABLES, AND SAUER-KRAUT. S. E. COMSTOCK & CO., Newark, N. Y.
Filed October 17, 1911. Serial No. 59,193. PUBLISHED DECEMBER 19, 1911.

85,417. CERTAIN FOODS. CROCKER GROCERY COMPANY, Wilkes-Barre, Pa.
Filed April 1, 1908. Serial No. 33,782. PUBLISHED JUNE 16, 1908.

85,418. READY-MIXED PAINTS, LACQUERS, AND VARNISHES. DAMARD LACQUER COMPANY LIMITED, London, England.
Filed August 16, 1911. Serial No. 58,229. PUBLISHED DECEMBER 12, 1911.

85,419. COATS, VESTS, AND TROUSERS. ALFRED DECKER & COHN, Chicago, Ill.
Filed May 22, 1911. Serial No. 56,534. PUBLISHED OCTOBER 31, 1911.

85,420. MATTRESSES, BED BOX SPRINGS, AND PILLOWS. DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill.
Filed March 22, 1911. Serial No. 55,240. PUBLISHED MAY 30, 1911.

85,421. CIGARS. ALFRED DUVAL, Saratoga Springs, N. Y.
Filed July 17, 1911. Serial No. 57,670. PUBLISHED DECEMBER 12, 1911.

85,422. CERTAIN ELECTRIC APPARATUS. DYNETO ELECTRIC COMPANY, Elbridge, N. Y.
Filed October 28, 1911. Serial No. 59,398. PUBLISHED DECEMBER 19, 1911.

85,423. CERTAIN PHOTOGRAPHIC SUPPLIES. EASTMAN KODAK CO., Rochester, N. Y.
Filed July 19, 1911. Serial No. 57,722. PUBLISHED DECEMBER 19, 1911.

85,424. COTTON-SEED MEAL AND CAKE. THE EXCHANGE COTTON AND LINSEED MEAL COMPANY, Kansas City, Mo.
Filed October 29, 1910. Serial No. 52,515. PUBLISHED DECEMBER 12, 1911.

85,425. SILK FOULARD. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed November 1, 1911. Serial No. 59,479. PUBLISHED DECEMBER 19, 1911.

85,426. THREAD OF ALL KINDS. CHARLES FISHER, San Francisco, Cal.
Filed September 25, 1909. Serial No. 44,957. PUBLISHED DECEMBER 19, 1911.

85,427. SADDLES, SADDLERY, AND HARNESS. ROBERT FLEMMING, London, England.
Filed January 31, 1911. Serial No. 54,220. PUBLISHED DECEMBER 19, 1911.

85,428. SADDLES, SADDLERY, AND HARNESS. ROBERT FLEMMING, London, England.
Filed January 31, 1911. Serial No. 54,221. PUBLISHED DECEMBER 19, 1911.

85,429. SADDLES, SADDLERY, AND HARNESS. ROBERT FLEMMING, London, England.
Filed January 31, 1911. Serial No. 54,222. PUBLISHED DECEMBER 19, 1911.

85,430. TOILET CREAM AND POWDER. FELIX FRANKLE, Chicago, Ill.
Filed October 27, 1911. Serial No. 59,376. PUBLISHED DECEMBER 12, 1911.

85,431. BRAZING COMPOUND. JAY DELL GE BOTT, Onalaska, Tex.
Filed September 21, 1911. Serial No. 58,749. PUBLISHED DECEMBER 12, 1911.

85,432. CRACKERS AND CAKES. O. B. GILMAN, Boston, Mass.
Filed July 7, 1911. Serial No. 57,522. PUBLISHED DECEMBER 12, 1911.

85,433. CANNED VEGETABLES. GOLDBERG, BOWEN & Co., San Francisco, Cal.
Filed November 10, 1910. Serial No. 52,692. PUBLISHED DECEMBER 12, 1911.

85,434. ELASTIC VEHICLE-TIRES. THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio.
Filed March 23, 1911. Serial No. 55,259. PUBLISHED DECEMBER 19, 1911.

85,435. CERTAIN MECHANICAL RUBBER GOODS. THE GUTTA PERCHA & RUBBER MFG. CO., New York, N. Y.
Filed August 28, 1911. Serial No. 58,416. PUBLISHED DECEMBER 12, 1911.

85,436. DRIED FRUITS, CURRANTS, SULTANA RAISINS, AND CITRON. HABICHT, BRAUN & Co., New York, N. Y., and Chicago, Ill.
Filed October 23, 1911. Serial No. 59,285. PUBLISHED DECEMBER 19, 1911.

85,437. CANNED PINEAPPLES. HAIKU FRUIT & PACKING CO., LTD., Haiku, Hawaii Ter.
Filed August 15, 1911. Serial No. 58,216. PUBLISHED DECEMBER 12, 1911.

85,438. WIRE-CLOTH. HANOVER WIRE CLOTH CO., Hanover, Pa.
Filed September 7, 1911. Serial No. 58,575. PUBLISHED DECEMBER 12, 1911.

85,439. LUBRICATING-OIL. PORTER A. HAVEN, Kansas City, Mo.
Filed November 6, 1911. Serial No. 59,570. PUBLISHED DECEMBER 19, 1911.

85,440. CERTAIN ELECTRICAL APPARATUS AND SUPPLIES. HEMMING MANUFACTURING COMPANY, Wallington, N. J.
Filed October 27, 1911. Serial No. 59,374. PUBLISHED DECEMBER 19, 1911.

85,441. PRECIOUS STONES, SEMIPRECIOUS STONES, AND RHINESTONES. L. & O. HOLUB, Breslau, Germany.
Filed June 9, 1910. Serial No. 50,206. PUBLISHED DECEMBER 19, 1911.

85,442. ANTICORROSIVE, ANTIFOULING, MIXED, AND ENAMEL PAINTS, HOLZAPFELS LIMITED, Newcastle-upon-Tyne, England.
Filed April 21, 1911. Serial No. 55,901. PUBLISHED DECEMBER 12, 1911.

85,443. CANNED CORN. THE ILLINOIS CANNING COMPANY, Hoopeston, Ill.
Filed June 21, 1911. Serial No. 57,216. PUBLISHED DECEMBER 12, 1911.

85,444. [WITHDRAWN.]

85,445. REMEDY FOR RHEUMATISM. THOMAS JAMES and JOHN CAPRINALI, Colorado Springs, Colo.
Filed August 2, 1911. Serial No. 57,989. PUBLISHED NOVEMBER 21, 1911.

85,446. COFFEE. JOHNSON-ALLEN COFFEE CO., St. Louis, Mo.
Filed October 20, 1911. Serial No. 59,245. PUBLISHED DECEMBER 12, 1911.

85,447. COFFEE. JOHNSON-ALLEN COFFEE CO., St. Louis, Mo.
Filed October 20, 1911. Serial No. 59,249. PUBLISHED DECEMBER 12, 1911.

85,448. COFFEE. JOHNSON-ALLEN COFFEE CO., St. Louis, Mo.
Filed October 20, 1911. Serial No. 59,250. PUBLISHED DECEMBER 19, 1911.

85,449. METAL DOORS, METAL WINDOWS, AND METAL MOLDINGS. KAWNEER MFG. CO., Niles, Mich.
Filed March 8, 1909. Serial No. 40,990. PUBLISHED DECEMBER 19, 1911.

85,450. PREPARATION TO BE USED AS A RAT-EXTERMINATOR. H. M. KIRBY CO., Keokuk, Iowa.
Filed September 21, 1911. Serial No. 58,780. PUBLISHED DECEMBER 12, 1911.

85,451. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed June 4, 1910. Serial No. 50,131. PUBLISHED DECEMBER 19, 1911.

85,452. ENAMELED STEELWARE. KOCKUMS JERNVERKS AKTIEBOLAG, Malmö, Sweden.
Filed July 21, 1910. Serial No. 50,962. PUBLISHED DECEMBER 19, 1911.

85,453. CARVERS. LANDERS, FRARY AND CLARK, New Britain, Conn.
Filed June 29, 1911. Serial No. 57,378. PUBLISHED DECEMBER 19, 1911.

85,454. KID GLOVES AND LAMB GLOVES. FRANK WILLIAM LAROM, New York, N. Y.
Filed October 13, 1911. Serial No. 59,147. PUBLISHED DECEMBER 19, 1911.

85,455. CIGARS. B. LEGARDA, Manila, Philippine Islands.
Filed August 3, 1911. Serial No. 58,000. PUBLISHED DECEMBER 12, 1911.

85,456. CIGARS. B. LEGARDA, Manila, Philippine Islands.
Filed August 3, 1911. Serial No. 58,004. PUBLISHED DECEMBER 12, 1911.

85,457. STRAIGHT BOURBON AND STRAIGHT RYE WHISKY. JULIUS LEVIN COMPANY, San Francisco, Cal.
Filed July 25, 1911. Serial No. 57,809. PUBLISHED DECEMBER 12, 1911.

85,458. CORSETS. LOVEMAN, JOSEPH & LOEB, Birmingham, Ala.
Filed September 20, 1911. Serial No. 58,732. PUBLISHED DECEMBER 19, 1911.

85,459. LEAF-TOBACCO. LUCKETT WAKE TOBACCO CO., Louisville, Ky.
Filed March 13, 1911. Serial No. 55,022. PUBLISHED DECEMBER 19, 1911.

85,460. CERTAIN FLOUR. BARTOLO MARTINEZ, San Antonio, Tex.
Filed June 8, 1911. Serial No. 56,899. PUBLISHED DECEMBER 19, 1911.

85,461. AUTOMOBILES, MOTOR-BOATS, AND AEROPLANES. METALLURGIQUE MOTOR CO., New York, N. Y.
Filed August 1, 1911. Serial No. 57,939. PUBLISHED DECEMBER 19, 1911.

85,462. FLOUR. MICHIGAN MILLING CO., Ann Arbor, Mich.
Filed October 6, 1911. Serial No. 59,026. PUBLISHED DECEMBER 19, 1911.

85,463. PIE-FILLINGS. JOS. MIDDLEBY, JR., INC., Boston, Mass.
Filed August 7, 1911. Serial No. 58,058. PUBLISHED DECEMBER 19, 1911.

85,464. BLENDED WHISKY. MITCHELL BROTHERS, LIMITED, Glasgow, Scotland.
Filed May 7, 1910. Serial No. 49,577. PUBLISHED DECEMBER 12, 1911.

85,465. LUBRICATING-OILS. MONARCH OIL REFINING CO., San Francisco, Cal.
Filed January 21, 1911. Serial No. 54,004. PUBLISHED DECEMBER 19, 1911.

85,466. CERTAIN FOODS. MONKHOUSE AND GLASSCOCK LIMITED, Bermondsey, London, England.
Filed May 20, 1911. Serial No. 56,495. PUBLISHED DECEMBER 19, 1911.

85,467. RUBBER HOT-WATER BAGS, FOUNTAIN-SYRINGES, AND NIPPLES. MONTAG BROTHERS, Atlanta, Ga.
Filed July 6, 1911. Serial No. 57,511. PUBLISHED DECEMBER 12, 1911.

85,468. OIL-PAINTS. BENJAMIN MOORE & Co., Brooklyn, N. Y.
Filed January 8, 1910. Serial No. 47,011. PUBLISHED DECEMBER 19, 1911.

85,469. DRIED BLOOD AND ALBUMEN. JOSEPH MORNINGSTAR, New York, N. Y.
Filed March 10, 1911. Serial No. 54,981. PUBLISHED DECEMBER 19, 1911.

85,470. SIZING-STARCH, LAUNDRY STARCH, AND PERFUMERY-STARCH. JOSEPH MORNINGSTAR, New York, N. Y.
Filed October 27, 1911. Serial No. 59,384. PUBLISHED DECEMBER 12, 1911.

85,471. SEMIMONTHLY MAGAZINE. MOTOR BOAT PUBLISHING CO., New York, N. Y.
Filed August 14, 1911. Serial No. 58,192. PUBLISHED DECEMBER 19, 1911.

85,472. PACKING MATERIAL FOR STUFFING-BOXES. HEINRICH C. SOMMER NACHFOLGER, Dusseldorf, Germany.
Filed July 11, 1911. Serial No. 57,584. PUBLISHED DECEMBER 19, 1911.

85,473. TELEPHONIC APPARATUS. NATIONAL DICTOGRAPH CO., New York, N. Y.
Filed March 30, 1911. Serial No. 55,412. PUBLISHED DECEMBER 19, 1911.

85,474. GLUES, ADHESIVE GUMS, MUCILAGE, AND ADHESIVE PASTES. NATIONAL GUM & MICA CO., New York, N. Y.
Filed October 20, 1911. Serial No. 59,256. PUBLISHED DECEMBER 19, 1911.

85,475. HANDKERCHIEFS. NEWARK EMBROIDERY WORKS, Newark, N. J.
Filed September 20, 1911. Serial No. 58,725. PUBLISHED DECEMBER 19, 1911.

85,476. CERTAIN AMUSEMENT DEVICES. NOVELTY MACHINE CO., New York, N. Y.
Filed August 10, 1911. Serial No. 58,122. PUBLISHED DECEMBER 19, 1911.

85,477. FURNITURE-POLISH. NU-GLOSS SPECIALTY CO., Philadelphia, Pa.
Filed July 14, 1911. Serial No. 57,627. PUBLISHED DECEMBER 19, 1911.

85,478. STOCKINGS. O'CALLAGHAN & FEDDEN, New York, N. Y.
Filed January 2, 1909. Serial No. 39,664. PUBLISHED DECEMBER 19, 1911.

85,479. CERTAIN CONSTRUCTION MATERIAL. OLLENDORFF & CLARKSON, LTD., Glasgow, Scotland.
Filed September 9, 1911. Serial No. 58,603. PUBLISHED DECEMBER 19, 1911.

85,480. INHALATION APPARATUS. OXYMEDSOR INHALATION COMPANY, New York, N. Y.
Filed November 19, 1908. Serial No. 38,773. PUBLISHED DECEMBER 19, 1911.

85,481. WHISKY, ESPECIALLY STRAIGHT RYE WHISKY. PARK & TILFORD, New York, N. Y.
Filed July 19, 1900. Serial No. 43,636. PUBLISHED JUNE 27, 1911.

85,482. METAL-ALLOY INGOTS. THE PARSIL METAL COMPANY, Lansdale, Pa.
Filed July 29, 1908. Serial No. 36,383. PUBLISHED DECEMBER 12, 1911.

85,483. RUBBER VEHICLE-TIRES. PENNSYLVANIA RUBBER COMPANY, Jeannette, Pa.
Filed July 21, 1910. Serial No. 50,954. PUBLISHED DECEMBER 12, 1911.

85,484. WORSTED CLOTHS. PERSEVERANCE WORSTED COMPANY, Woonsocket, R. I.
Filed November 2, 1911. Serial No. 59,514. PUBLISHED DECEMBER 19, 1911.

85,485. HOSIERY. THE PITTSBURGH DRY GOODS COMPANY, Pittsburgh, Pa.
Filed October 7, 1911. Serial No. 59,050. PUBLISHED DECEMBER 19, 1911.

85,486. HOUSEHOLD UTENSILS AND CERTAIN PLUMBING SUPPLIES. PORCELAIN ENAMELING ASS'N OF AMERICA, Sheboygan, Wis.
Filed November 13, 1909. Serial No. 45,880. PUBLISHED DECEMBER 19, 1911.

85,487. CERTAIN OPTICAL SUPPLIES. GIOACHINO CARLO PRECERUTTI, Turin, Italy.
Filed September 11, 1911. Serial No. 58,621. PUBLISHED DECEMBER 12, 1911.

85,488. BOOTS AND SHOES MADE OF LEATHER. STEPHEN PUTNEY, SHOE COMPANY, Richmond, Va.
Filed October 2, 1911. Serial No. 58,972. PUBLISHED DECEMBER 19, 1911.

85,489. CHILDREN'S KNITTED UNDERWAISTS. JOHN F. QUINN, Cohoes, N. Y.
Filed June 16, 1911. Serial No. 57,103. PUBLISHED AUGUST 1, 1911.

85,490. POLISHING PREPARATIONS FOR BOOTS AND LEATHER GOODS. WILLIAM RAMSAY, Melbourne, Victoria, Australia.
Filed July 24, 1911. Serial No. 57,799. PUBLISHED DECEMBER 12, 1911.

85,491. HAIR-TONIC. LILLIE RANDAL, New York, N. Y.
Filed October 27, 1911. Serial No. 59,386. PUBLISHED DECEMBER 12, 1911.

85,492. INCUBATORS AND BROODERS. THE RAYO INCUBATOR COMPANY, Blair, Nebr.
Filed July 24, 1911. Serial No. 57,787. PUBLISHED DECEMBER 19, 1911.

85,493. CHEWING-GUM. REEDY BROTHERS GUM COMPANY, Chicago, Ill.
Filed February 24, 1911. Serial No. 54,728. PUBLISHED DECEMBER 19, 1911.

85,494. ARCH-SUPPORTS FOR THE FOOT. REGAL SHOE COMPANY, Portland, Me., and Boston, Mass.
Filed April 23, 1909. Serial No. 41,970. PUBLISHED DECEMBER 19, 1911.

85,495. DISINFECTANT. L. RICHMOND & Co., Brockton, Mass.
Filed April 29, 1911. Serial No. 56,058. PUBLISHED DECEMBER 12, 1911.

85,496. HORSESHOES. THE RING-POINT COMPANY, Hartford, Conn.
Filed November 11, 1911. Serial No. 59,661. PUBLISHED DECEMBER 19, 1911.

85,497. CERTAIN FOODS. ROW PRESERVING COMPANY, near Chambersburg, Pa.
Filed April 11, 1911. Serial No. 55,679. PUBLISHED DECEMBER 12, 1911.

85,498. PAPER DRINKING-CUPS. THE SANITARY DRINKING CUP CO., Chicago, Ill.
Filed July 24, 1911. Serial No. 57,793. PUBLISHED DECEMBER 19, 1911.

85,499. INSTEP-ARCH SUPPORTS. THE SCHOLL MANUFACTURING COMPANY, Chicago, Ill.
Filed July 31, 1911. Serial No. 57,959. PUBLISHED DECEMBER 19, 1911.

85,500. ROASTED COFFEE. JULIUS J. SCHOTTEN, St. Louis, Mo.
Filed March 17, 1911. Serial No. 55,142. PUBLISHED DECEMBER 12, 1911.

85,501. FULL-CREAM CHEESE. FRANK SCHUJAHN, Fond du Lac, Wis.
Filed July 16, 1910. Serial No. 50,866. PUBLISHED DECEMBER 12, 1911.

85,502. LEATHER AND RUBBER BOOTS AND SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed October 7, 1911. Serial No. 59,030. PUBLISHED DECEMBER 19, 1911.

85,503. ELECTRIC FUSE-BLOCKS. SIEMENS-SCHUCKERTWERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed July 29, 1911. Serial No. 57,934. PUBLISHED DECEMBER 19, 1911.

85,504. ELECTRIC FUSE-BLOCKS. SIEMENS-SCHUCKERTWERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed July 29, 1911. Serial No. 57,935. PUBLISHED DECEMBER 19, 1911.

85,505. ELECTRIC FUSE-BLOCKS. SIEMENS-SCHUCKERTWERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed July 29, 1911. Serial No. 57,936. PUBLISHED DECEMBER 19, 1911.

85,506. OFFICE FILING-CABINETS. THE SIMPLEX FILING DEVICE COMPANY, Canton, Ohio.
Filed September 15, 1910. Serial No. 51,836. PUBLISHED DECEMBER 19, 1911.

85,507. CIGARETTES. SOCIÉTÉ ANONYME LE KHÉDIVE, Brussels, Belgium.
Filed February 21, 1911. Serial No. 54,633. PUBLISHED DECEMBER 12, 1911.

85,508. CORSETS. SOCIÉTÉ DES ETABLISSEMENTS FARCY & OPPENHEIM, Paris, France.
Filed March 11, 1909. Serial No. 41,112. PUBLISHED DECEMBER 19, 1911.

85,509. TENNIS-RACKETS. A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y.
Filed October 28, 1911. Serial No. 59,409. PUBLISHED DECEMBER 19, 1911.

85,510. CANDY. SPECK CHOCOLATE COMPANY, Evansville, Ind.
Filed March 14, 1910. Serial No. 48,380. PUBLISHED DECEMBER 12, 1911.

85,511. LEATHER PRESERVING AND WATERPROOFING COMPOSITION. STANDARD OIL LEATHER DRESSING CO., New York, N. Y.
Filed January 11, 1911. Serial No. 53,814. PUBLISHED NOVEMBER 28, 1911.

85,512. LEATHER PRESERVING AND WATERPROOFING COMPOSITION. STANDARD OIL LEATHER DRESSING CO., New York, N. Y.
Filed January 11, 1911. Serial No. 53,815. PUBLISHED NOVEMBER 28, 1911.

85,513. PLOWS. STARKE'S DIXIE PLOW WORKS, INCORPORATED, Richmond, Va.
Filed May 4, 1911. Serial No. 56,148. PUBLISHED SEPTEMBER 5, 1911.

85,514. VODKA. STILLMAN BOTTLING COMPANY, Boston, Mass.
Filed August 21, 1911. Serial No. 58,301. PUBLISHED DECEMBER 19, 1911.

85,515. VODKA. STILLMAN BOTTLING COMPANY, Boston, Mass.
Filed August 21, 1911. Serial No. 58,302. PUBLISHED DECEMBER 12, 1911.

85,516. LUBRICATING OILS AND GREASES. C. F. SWEET, INC., Hartford, Conn.
Filed November 4, 1911. Serial No. 59,540. PUBLISHED DECEMBER 19, 1911.

85,517. TONIC WINE. HUMPHREY TAYLOR & CO. LIMITED, London, England.
Filed September 26, 1911. Serial No. 58,860. PUBLISHED DECEMBER 12, 1911.

85,518. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed August 31, 1911. Serial No. 58,470. PUBLISHED DECEMBER 19, 1911.

85,519. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed August 31, 1911. Serial No. 58,475. PUBLISHED DECEMBER 12, 1911.

85,520. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed August 31, 1911. Serial No. 58,480. PUBLISHED DECEMBER 19, 1911.

85,521. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed October 28, 1911. Serial No. 59,413. PUBLISHED DECEMBER 19, 1911.

85,522. RECEPTACLES OR CONTAINERS. THERMOLAC MANUFACTURING COMPANY, Boston, Mass.
Filed August 9, 1911. Serial No. 58,108. PUBLISHED DECEMBER 19, 1911.

85,523. PACKAGES OF METAL DRINKING-CUPS. THERMOLAC MANUFACTURING COMPANY, Boston, Mass.
Filed September 20, 1911. Serial No. 58,731. PUBLISHED DECEMBER 19, 1911.

85,524. ANTISEPTIC CLEANING COMPOUND. F. W. THURSTON COMPANY, Chicago, Ill.
Filed March 22, 1911. Serial No. 55,251. PUBLISHED DECEMBER 12, 1911.

85,525. FACE-CREAM. EDWARD TOBY, Waco, Tex.
Filed October 26, 1911. Serial No. 59,368. PUBLISHED DECEMBER 12, 1911.

85,526. CERTAIN HEATING, LIGHTING, AND VENTILATING APPARATUS. THE TURNER BRASS WORKS, Sycamore and Chicago, Ill.
Filed December 22, 1909. Serial No. 46,661. PUBLISHED DECEMBER 12, 1911.

85,527. LUBRICATING-OILS. UNION OIL CO. OF CALIFORNIA, San Francisco, Cal.
Filed June 8, 1911. Serial No. 56,894. PUBLISHED DECEMBER 12, 1911.

85,528. RUBBER BELTING, RUBBER HOSE, AND RUBBER PACKING. UNITED & GLOBE RUBBER M'F'G COMPANIES, Trenton, N. J.
Filed February 20, 1911. Serial No. 54,610. PUBLISHED DECEMBER 19, 1911.

85,529. RAW AND PARTIALLY-PREPARED PITCH AND PITCHLIKE MATERIALS. WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y.
Filed July 8, 1911. Serial No. 57,534. PUBLISHED DECEMBER 19, 1911.

85,530. RAW AND PARTIALLY-PREPARED PITCH AND PITCHLIKE MATERIALS. WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y.
Filed July 8, 1911. Serial No. 57,535. PUBLISHED DECEMBER 19, 1911.

85,531. BEER, ALE, PORTER, HALF-AND-HALF, AND BROWN STOUT. THE WEST END BREWING CO., Utica, N. Y.
Filed June 13, 1908. Serial No. 35,330. PUBLISHED AUGUST 22, 1911.

85,532. ILLUMINATING-OIL. WEST INDIA OIL COMPANY, Bayonne, N. J.
Filed September 1, 1911. Serial No. 58,506. PUBLISHED DECEMBER 19, 1911.

85,533. CANDIES. WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa.
Filed October 26, 1911. Serial No. 59,357. PUBLISHED DECEMBER 19, 1911.

85,534. CONTINUALLY-CHANGING SERIES OF PUBLICATIONS. M. WITMARK & SONS, New York, N. Y.
Filed April 11, 1911. Serial No. 55,676. PUBLISHED DECEMBER 19, 1911.

85,535. CONTINUALLY-CHANGING SERIES OF PUBLICATIONS. M. WITMARK & SONS, New York, N. Y.
Filed April 11, 1911. Serial No. 55,677. PUBLISHED DECEMBER 19, 1911.

85,536. LADIES' GOWNS. THE WOLF COMPANY, New York, N. Y.
Filed May 6, 1910. Serial No. 49,550. PUBLISHED DECEMBER 19, 1911.

85,537. METAL-POLISH. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed April 8, 1911. Serial No. 55,615. PUBLISHED DECEMBER 12, 1911.

85,538. PILLS FOR CERTAIN DISEASES. CHAUNCEY F. YORK, Detroit, Mich.
Filed November 1, 1911. Serial No. 59,462. PUBLISHED DECEMBER 12, 1911.

85,539. CERTAIN OPTICAL GOODS. CARL ZEISS, Jena, Germany.
Filed September 22, 1908. Serial No. 37,541. PUBLISHED DECEMBER 19, 1911.

85,540. WHITE GUM-SHELLAC. WILLIAM H. ZINSSER, New York, N. Y.
Filed April 28, 1911. Serial No. 56,027. PUBLISHED DECEMBER 19, 1911.

LABELS

REGISTERED FEBRUARY 20, 1912.

16,177.—*Title:* "WE-HO IMPROVED." (For Medicine.) JOHN BRISCO BOLLING, Beaver Dam, Ky. Filed October 28, 1911.

16,178.—*Title:* "SOCIALIST." (For Cigars.) J. E. GEASE, Provo, Utah. Filed January 2, 1912.

16,179.—*Title:* "OLD CONCERN CIGAR." (For Cigars.) JAMES O'BRIEN CIGAR COMPANY, Kansas City, Mo. Filed January 30, 1912.

16,180.—*Title:* "RED SEAL." (For Vanilla Extract.) THE NEWTON TEA & SPICE CO., Cincinnati, Ohio. Filed November 10, 1911.

16,181.—*Title:* "COLONIAL WINNER BRAND." (For Grape-Fruit.) UNITED STATES COLONIAL FRUIT COMPANY, New York, N. Y. Filed May 17, 1911.

16,182.—*Title:* "A MESSAGE OF HOPE TO SUFFERING WOMEN." (For Medicine.) UTEROTONE HOME-TREATMENT COMPANY, Battle Creek, Mich. Filed November 11, 1910.

16,183.—*Title:* "MY WIFE'S HAIRERBS." (For Hair-Tonic.) C. J. VREELAND, Ashland, Ohio. Filed December 15, 1911.

16,184.—*Title:* "SKIRTS TO ORDER, $1.00 FROM YOUR OWN MATERIAL." (For Skirts.) WRIGHT MFG. CO., Brooklyn, N. Y. Filed January 30, 1912.

PRINTS

REGISTERED FEBRUARY 20, 1912.

2,954.—*Title:* "A BOX FULL OF BEAUTY." (For Toilet Soap.) ARMOUR AND COMPANY, Chicago, Ill. Filed November 29, 1911.

2,955.—*Title:* "MONARCH CUSHIONS THE KEY TO PERFECT BILLIARD PLAYING." (For Monarch Cushions.) THE BRUNSWICK BALKE COLLENDER CO., Chicago, Ill. Filed January 17, 1912.

2,956.—*Title:* "B. V. D. QUARTER SLEEVE UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed December 11, 1911.

2,957.—*Title:* "TWO SOULS WITH BUT A SINGLE THOUGHT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed January 29, 1912.

2,958.—*Title:* "YEAST FOAM." (For Yeast-Foam.) NORTHWESTERN YEAST CO., Chicago, Ill. Filed January 27, 1912.

2,959.—*Title:* "A WARM NOURISHING MEAL." (For Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed January 15, 1912.

2,960.—*Title:* "TETLOW'S SWAN DOWN FOR THE COMPLEXION." (For Powder for the Complexion.) JOSEPH TETLOW, Philadelphia, Pa. Filed December 6, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

MCBERTY *v.* SHORE AND SHORE.

Decided June 14, 1911.

INTERFERENCE—PRIORITY—RIGHT TO MAKE CLAIMS.

Where it appeared that one of the parties to an interference had no right to make the claims in issue, *Held* that the Examiners-in-Chief properly awarded priority to the opposing party on that ground.

APPEAL from Examiners-in-Chief.

ELECTRIC CABLE.

Mr. De Witt C. Tanner for McBerty. (*Mr. Franklin T. Woodward* of counsel.)

Mr. Albert Stetson and *Mr. A. Parker-Smith* for Shore and Shore. (*Mr. George A. Hoffman* of counsel.)

MOORE, *Commissioner:*

This is an appeal by McBerty from the decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences and awarding to Shore and Shore priority of invention of the following issue:

1. A woven multiconductor composed of an insulating-woof and individual conductors forming the warp, portions of the conductors projecting above the general surface of the weave in the form of loops, and adapted to serve as terminals for branch conductors.

2. The combination with a branch circuit of a woven multiconductor having an insulating-woof, a warp formed of individual conductors and means integral with the conductors and external to the weave for connecting the branch circuit with the multiconductor.

The application of Shore and Shore filed January 2, 1907, resulted in a regularly-issued patent on June 18, 1907. The application of McBerty was not filed until February 27 of the following year. In said application McBerty copied two claims of the patent to Shore and Shore and requested the declaration of the present interference.

The Examiner of Interferences found that the general idea of the invention originated with McBerty and was disclosed by him to Albert F. Shore. In his decision he states:

While it might be that the Shores would be entitled to claims for their specific form they cannot, under these circumstances, be permitted to dominate McBerty, with whom the general idea originated.

The Examiners-in-Chief held that McBerty had no right to make claims corresponding to the counts of the issue, since said counts are not readable upon the construction of his application, and they accordingly awarded priority in favor of Shore and Shore.

McBerty states the grounds of his present appeal as follows:

1. The Board of Examiners-in-Chief erred in awarding priority to Shore and Shore and in not directing the attention of the Commissioner to the alleged lack of right on the part of McBerty to make the claims forming the issue as is required by Rule 126.

2. The Board of Examiners-in-Chief erred in not either before or in their decision directing the attention of the Commissioner to the fact that no interference existed.

3. The Board of Examiners-in-Chief erred in not recommending to the Commissioner that this interference should be dissolved.

It appears from these reasons of appeal that McBerty admits that he has no right to make the claims forming the counts of the issue; but he contends that the Examiners-in-Chief erred in not directing the attention of the Commissioner to this fact and in not recommending the dissolution of the interference instead of deciding priority upon this ground.

In support of his contention that the interference should be terminated by dissolution rather than by an award of priority McBerty calls attention to two Commissioner's decisions, rendered years ago, and to the provisions of Rule 126:

The Examiner of Interferences or the Examiners-in-Chief may, either before or in their decision on the question of priority, direct the attention of the Commissioner to any matter not relating to priority which may have come to their notice, and which, in their opinion, establishes the fact that no interference exists.

Had this case arisen prior to the decision of the Court of Appeals of the District of Columbia in *Podlesak and Podlesak* v. *McInnerney*, (120 O. G., 2127; 26 App. D. C., 399,) the contention of McBerty would not have been without force. In the above-mentioned decision, rendered January 4, 1906, the Court of Appeals of the District of Columbia held that the question of the right to make the claim of the issue is an ancillary question to be considered in determining priority of invention. In that case the court said:

The question of the right of a party to make a claim goes to the very foundation of an interference for if the party has not such right the interference falls. If it be incorrectly held that such party has a right to make the claim priority may be awarded to him and his adversary be deprived of a substantial right in that he is not given a claim where he necessarily is the prior inventor, his adversary never having made the invention. Manifestly that question should not be finally determined by the Primary Examiner who originally declared the interference. We therefore take jurisdiction to determine that question in this case as an ancillary question to be considered in awarding priority of invention.

As a result of said decision, Rule 130 of the Rules of Practice, providing for an award of priority where at the final hearing it appears that one party is not entitled to make the claims of the issue, was promulgated.

The present case falls within this rule rather than Rule 122 or Rule 126.

The above ruling of the court in *Podlesak and Podlesak* case is affirmed in its later decisions in

Wickers and Furlong v. *McKee*, (129 O. G., 869; 29 App. D. C., 4;) *United States, ex rel. The Newcomb Motor Co.*, v. *Moore*, (133 O. G., 1680; 30 App. D. C., 464;) *Townsend* v. *Thullen*, (142 O. G., 1116; 32 App. D. C., 575;) *Gold* v. *Gold*, (150 O. G., 570; 34 App. D. C., 152;) *Cosper* v. *Gold and Gold*, (151 O. G., 194; 34 App. D. C., 194.)

In the case last cited the court dismissed the appeal upon the ground that it was taken from a decision of the Commissioner dissolving the interference because Cosper had no right to make the claims of the issue. The court held that while the question of the right of a party to make the claim of the issue is ancillary to that of priority and a proper one upon which to base an award of priority no such final order had been rendered in that case and that the appellant must await a final decision of the Commissioner of Patents on the question of priority. Upon the return of the case to the Patent Office and in view of the holding of the court the Commissioner at once entered an award of priority based upon Cosper's lack of right to make the claims of the issue. From this final order Cosper took an appeal to the Court of Appeals of the District of Columbia, which appeal the court entertained, and in a decision rendered February 6, 1911, (not yet published,) held:

In the present case there was no question as to the regularity of the application, but solely as to the right of Cosper to make the claims under the specifications of that application. Under the early rule prevailing in this court, the right of the parties to make the claims of the issue was not a question in the interference that could be brought up on appeal. That rule was reversed in *Podlesak* v. *McInnerney*, (26 App. D. C., 399–405,) where it was declared that the court would "take jurisdiction of the question of the right to make the claim as an ancillary question to be considered in awarding priority of invention." As was held in the former appeal, (34 App. D. C., 194,) the decision of that question without a final award also of priority is interlocutory and, therefore, not appealable. The decision in these cases goes further and is substantially that Egbert H. Gold and Edward E. Gold, in their respective cases, are prior inventors to Cosper.

Assuming that such is the effect of the decision of the Commissioner, it is contended that he had no jurisdiction, in either case, to render any such decision. The proposition is, that nothing was before him but the motion to dissolve and he had no power to decide any other question than that. It is true that this was the sole ground of the decision of the tribunals below, but it does not follow that it was the only question finally determinable in the case. The declaration of the interference raised the issue of priority of invention, and the question of the right of Cosper to make the claims was ancillary thereto. When decided adversely to Cosper the opponent was entitled to the award of priority as a matter of course. It was the basis of the award of priority. (*Wickers* v. *McKee*, 29 App. D. C., 4–19.) As to the same effect is the decision dismissing the former appeal. (34 App. D. C., 194.)

Under the practice established by the decision in *Podlesak* v. *McInnerney* (26 App. D. C., 399) two questions arise in every interference case where the right of one party to make the claims of the issue is presented on a motion to dissolve on that ground—the right to make the claims, and the priority of invention. If the first shall be decided adversely to the claimant, the formal award of priority goes to his opponent as a matter of course.

In view of the rulings of the Court of Appeals of the District of Columbia, there is no question but that the Examiners-in-Chief were right in rendering a decision awarding priority rather than in recommending the dissolution of the interference.

This decision might rest at this point, since appellant has not seriously urged his right to make the claims, but, on the contrary, states in his brief as follows:

The conclusion of the Board of Examiners-in-Chief that the claims of the Shore and Shore patent do not cover the construction of McBerty's application is perhaps a rational one; but an award of priority of invention to Shore and Shore was not required or warranted by the practice in such cases, and is contrary to the evidence.

The decision of the Examiners-in-Chief, however, upon the question of the right of McBerty to make the claims of the issue has been carefully examined. These claims originated in the Shore and Shore application, and after the issuance of the patent thereon McBerty filed his application and copied two of the claims, with the request that an interference be declared. The meaning to be given the claims is therefore to be interpreted in the light of the disclosure in the Shore and Shore patent.

For reasons fully set forth in the decision of the Examiners-in-Chief I fail to find in the McBerty application a proper foundation for the limitation of count 1 reading:

portions of the conductors projecting above the general surface of the weave in the form of loops,

and for the portion of count 2 reading:

means integral with the conductors and external to the weave for connecting the branch circuit with the multiconductor.

Having reached the above conclusion, it is unnecessary to consider the testimony upon the question of priority filed by McBerty.

No error is found in the decision of the Examiners-in-Chief, and it is accordingly affirmed.

EX PARTE SMITH.

Decided January 11, 1912.

APPLICATION—PROSECUTION—PETITION THAT EXAMINER EXPLAIN REASONS FOR REJECTION.

A petition that the Examiner be directed to apply the references to the claims dismissed as premature where it appears that the Examiner had not been requested to give a further explanation of the rejection.

ON PETITION.

BELT.

Messrs. Wright, Brown, Quinby & May for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner be instructed that the argument presented by the applicant calls for an explanation of the Examiner's reasons for rejection and—

that the Examiner be advised that the applicant is entitled to receive some idea of what reasons will be advanced to support his rejection.

The record shows that in the first action claims 1 and 2 were rejected in view of one patent and claim 3 in view of another, and a third patent was also "made of record." In response to an argument filed by applicant the Examiner rejected all of the claims on the latter reference in view of the other two, no explanation being given of how these references were to be applied to the claims.

In his answer the Examiner states that applicant's argument showed that he thoroughly understood the construction of the references and that it was supposed that no detailed statement of reasons was necessary. The Examiner further states that if applicant did not fully understand the application of the references a request that they be applied "would have met with a cheerful compliance" on his part.

The petition is obviously premature. If the invention and the devices shown in the patents cited were not so simple that the position of the Examiner was clearly understood from the statement in his last letter, applicant should have asked the Examiner for a further explanation, and only in the event of a refusal to give such an explanation should this petition have been taken.

The petition is dismissed.

HAWKINS *v.* WARD.

Decided March 9, 1911.

1. INTERFERENCE—PRIORITY—DILIGENCE.

H. after his conception of the invention in issue entered into an investigation to determine whether it would infringe any previously-granted patent before filing his application. During this investigation W. conceived the invention and filed his application. *Held* that H. was lacking in diligence and that priority was properly awarded to W.

2. SAME—SAME—SAME.

Where it appears that a "trolley-contact" was necessary for the operation of a signaling system, but that contacts which could be used in such a system were well known, *Held* that the development of a special contact did not constitute diligence in reducing the system to practice.

APPEAL from Examiners-in-Chief.

SIGNAL SYSTEM.

Mr. Albert G. Davis for Hawkins. (*Mr. Arthur A. Buck* of counsel.)

Mr. Spencer B. Prentiss for Ward.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Hawkins from a decision of the Examiners-in-Chief reversing a decision of the Examiner of Interferences and awarding priority to Ward, the senior party.

The issue of the interference is as follows:

1. In a block-signaling system the combination of a step-by-step controller at each end of the block, one of which is operated a step forward and backward respectively in response to each car entering and leaving the block in a given direction, a danger-signal set in response to the first forward movement of said controller and cleared by its last return movement, a signal set at the entering end of the block in response to the setting of said danger-signal, danger and caution signals similarly arranged with respect to the other controller and governed thereby in response to cars entering and leaving the block in the opposite direction, two line-wires only extending along the block for controlling and operating said signals, and means including a switch for causing an indication of the movement of the operating-controller to be given each following car entering the block after the signals are set.

2. In a signaling system, the combination of step-by-step controllers, one at each end of a block, one of said controllers operated a step forward and backward respectively in response to cars entering and leaving the block in one direction, a danger-signal set when said controller assumes its first forward movement and cleared when the controller is restored, the other step-by-step controller similarly operated in response to cars entering and leaving the block in the other direction, a danger-signal similarly set by said controller, a single line-wire for controlling the setting of either of said signals, and a signal set in response to the setting of one of said danger-signals for indicating to the first car of a series the setting of said danger-signal.

3. In a block-signaling system, the combination of a step-by-step controller at each end of the block one of which is operated a step forward and backward respectively in response to each car entering and leaving the block in a given direction, a danger-signal at one end of the block set in response to its last backward movement, a signal at the entering end set in response to the setting of the danger-signal, means for causing an indication to be given each subsequent car to show the forward movement of its signal-controller, signals and circuits similarly arranged and controlled by the other step-by-step controller in response to cars entering and leaving the block in the opposite direction, and a common line-circuit for controlling the setting of the danger-signals.

4. In a block-signaling system, a signal-circuit extending along the block, signal-setting means at one end controlled through said circuit by the first car of a possible series entering the block for setting a signal at that end, a signal at the other end controlled through said circuit by the setting of the first signal, and a switch operated in advancing the controller and controlled by the entry of each succeeding car of the series for causing an indication of the controller movement to be given each of said cars without affecting said first signal.

Hawkins disclosed the invention involved herein on or about May 25, 1907, and filed his application on November 29, 1907. Ward disclosed the invention on or about June 15, 1907, and filed his application July 22, 1907. Neither party actually reduced the invention to practice. The only question in the case is, therefore, whether Hawkins, who was the first to conceive the invention, was exercising due diligence in reducing the same to practice just prior to the time Ward entered the field and subsequently thereto.

The Examiner of Interferences awarded priority to Hawkins, on the ground that he had been diligent during this time. The Examiners-in-Chief, on the other hand, held that Hawkins was not diligent, since the delay in filing his application was deliberate and due to business considerations which were not controlling.

The record shows that Hawkins is an engineer and patent attorney in the employ of the General Electric Company, the assignee of his application, and that after he conceived the invention he entered into an investigation to see whether it would infringe any previously-granted patent. This investigation, made in part by himself and in part by William M. Fairfax, who was in charge of the Washington office of the General Electric Company, continued until about the middle of August, 1907. Hawkins testifies that after his invention was submitted to the patent department of the General Electric Company it was turned over to Mr. Buck, and then to him, being received by him a few days after June 14, and he ordered a drawing prepared on July 12, 1907, which drawing was finished on July 16, 1907. With respect to the further delay in the preparation of the application he testifies as follows, (record, p. 52:)

While I had turned the case over to Mr. Glen in order to get the drawings ready for filing I though it best not to file the application until the searches which Mr. Fairfax and I were then making on the system were completed or were far enough along to give me accurate information of the bearing of the prior art on my system. In the first place I wanted to show in my application as filed precisely the circuit connections which we would use in our system when commercially developed, and until the patent investigation was completed I could not be sure but that we might have to modify some of the connections to avoid infringement of existing patents.

This statement is, in effect, an admission that if the search disclosed a dominating patent then the invention of this issue must be abandoned and reduction to practice, if any, would be effected upon the conception of another and different invention.

Hawkins testifies, further, that after he had completed his search in the prior art and found that there were no dominating patents he decided to make a certain modification in the apparatus, and that the preparation of the application was then further delayed to see whether when the mechanical details of the apparatus were laid out it might

prove advisable to modify the system, (record, p. 54.) The question of designing a trolley-contact was then taken up and was completed on or about the 1st of October. Hawkins testifies that the preparation of the application was commenced about that time, that the second sheet of drawings was finished on the 9th of October, and the application filed November 29, 1907.

It has been vigorously argued on behalf of Hawkins that he was justified in delaying his actual or constructive reduction to practice of the invention until he could determine whether there were any dominating patents—in other words, until an infringement search could be completed. This contention is, however, believed to be not well founded.

In the case of *Christie* v. *Seybold* (55 Fed. Rep., 69–76, circuit court of appeals, sixth circuit) it was said:

> • • • The man who first reduces an invention to practice is *prima facie* the first and true inventor. • • • The burden is on the second reducer to practice to show the prior conception, and to establish the connection between that conception and his reduction to practice by proof of due diligence.

It is not necessary in order to reduce an invention to practice, either actually or constructively, that the inventor know that there are in existence no dominating patents. In the case of *Atkins* v. *Fox* (45 MS. Dec., 188) it appears that Atkins, who was the first to conceive but the last to reduce to practice, had delayed such reduction to practice in view of negotiations which he had entered into with the owner of the Lamson patent, which was believed to cover the improvement which Atkins had made, and it was not until these negotiations had fallen through that he filed his application for patent. In holding that Atkins was not diligent and that priority was properly awarded to Fox Commissioner Mitchell said:

> At the same time Atkins was an extensive saw-manufacturer and possessed unusual facilities for perfecting an invention consisting of an improved saw. His failure to perfect it under the circumstances must be held to be inconsistent with the exercise of the required degree of diligence, and the fact that he was not disposed to manufacture the saw for sale, pending negotiations with Lamson, is not in law an excuse for failing to perfect the invention. He was free to perfect his invention, even though he might not have felt himself to be free to manufacture it. The fact that an improvement, if made, might be subject to a patent, has never been held to constitute an excuse for delay in perfecting such improvement.

A similar holding was made by the present Commissioner in the case of *Tower* v. *Yost*, (88 MS. Dec., 294,) which it appeared that Tower had delayed the completion of his device because it was thought to be an infringement of the McCord patent and that he attempted to design another modification and then to discover an earlier patent which would, in his opinion, invalidate the McCord patent. In holding that Tower was not diligent under the circumstances the Commissioner said:

> The efforts which Tower made to discover a patent which in his opinion would invalidate the broad claim of the McCord patent and thus remove what he regarded as a bar to the commercial development of his invention do not constitute diligence in reducing that invention to practice. In fact, they show that the delay was not for the purpose of perfecting the invention, but was solely due to business considerations.

It must be held, therefore, that Hawkins was not exercising diligence at the time Ward entered the field; but even if it could be held that this infringement search was a sufficient excuse for Hawkins's inactivity at this time the record does not show that Hawkins was diligent after it was completed. It appears that some time was taken in the development of the "trolley-contact." This contact, however, constitutes no part of the present invention. It is true that some form of contact, whether it be new or old, was required for the operation of the system; but it has not been shown that it was necessary to design a new contact for this purpose. In fact, in his application Hawkins says with respect to this contact:

> In practice any well-known construction of trolley-contact may be employed, many of which are well known in the art.

Furthermore, it appears from Hawkins's testimony that the preparation of his application was commenced about the 1st of October, and the application was not filed until the 29th of November, 1907. No sufficient explanation is given of this delay of nearly two months in the actual preparation and consequent filing of the application, especially in view of the facilities for preparing applications available to Hawkins, shown by the record.

It is held that the conclusion of the Examiners-in-Chief that Hawkins was not exercising due diligence at the time Ward entered the field and subsequently thereto is right, and their decision is affirmed.

EX PARTE THE VI-STIX PRODUCTS COMPANY.

Decided February 5, 1912.

TRADE-MARKS—OPPOSITION—MODIFICATION OF APPLICATION AFTER ADVERSE DECISION.

Where an opposition was filed to the registration of a mark on the ground that one of its features constituted the mark of the opposer and such opposition was decided adversely to the applicant, *Held* that his application could thereafter be amended by omitting this feature only if the mark was not thereby mutilated and upon the filing of an affidavit that the mark without the representation of the mark of opposer was actually used by the applicant as a trade-mark.

ON PETITION.

TRADE-MARK FOR WHEAT-BREAD.

Mr. Vernon E. Hodges for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition that the applicant be permitted to disclaim the representation of the cross-lines appearing in its mark and that the Examiner be instructed to pass the case to allowance.

It appears that an opposition was filed to the registration of this mark by Farwell and Phines on the ground that they were the owners of a registered trade-mark consisting of cross-lines and that the registration of applicant's mark would be likely to damage them. The opposition was not contested. Applicant filed a disclaimer of the right to the exclusive use of the cross-lines; but the Examiner of Interferences rendered judgment against it on the ground that it had filed neither plea, demurrer, or answer within the time set.

As pointed out by the Examiner of Trade-Marks, the relief asked for cannot be granted, since an applicant cannot disclaim an arbitrary and fanciful

feature of a mark owned and registered by another. The Examiner suggests that the applicant might be permitted to remove the feature in question from the drawing. This could be done, however, only if the mark actually used by the applicant is not thereby mutilated and upon the filing by applicant of an affidavit that the mark without the representation of the cross-sticks was actually used by it as a trade-mark. (*Ex parte Wayne Poultry Tonic Company*, 164 O. G., 251.)

Jurisdiction of the application is therefore restored to the Examiner of Trade-Marks for further prosecution and for action in accordance with this decision.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Robinson patent, No. 809,582, for a machine for peeling vegetables, construed and *Held* not infringed. *American Fruit Machinery Co.* v. *Robinson Mach. Co.*, 191 Fed. Rep., 723.

Disclaimers.

545,120.—*Franklin David Cummer*, Cleveland, Ohio. DRYING APPARATUS. Patent dated August 27, 1895. Disclaimer filed February 9, 1912, by the assignee, *The F. D. Cummer & Son Company.*

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"7. The drying cylinder open at both ends for the passage of the material and the products of combustion in opposite directions, and having inlet openings through the side of the cylinder, substantially as set forth.

"8. The combined furnace and walled chamber for the drying cylinder, and the drying cylinder therein open at both ends and arranged in the line of draft and having covered inlet openings between its ends and a device at the front of the said cylinder to stimulate or augment the natural draft through said cylinder, substantially as set forth.

"9. The apparatus described, comprising a furnace and a drying cylinder set into the line of draft from the furnace and open at its ends, and a perforated arch between the said cylinder and the line of draft from the furnace to the rear of the cylinder, substantially as set forth.

"10. The furnace and the perforated arch forming a continuation of the furnace arch, and a revolving drying cylinder above said perforated arch and open at its ends to allow draft through the same, substantially as set forth."

1,015,256.—*Charles E. Adamson*, Buffalo, N. Y. DUPLICATING MACHINE. Patent dated January 16, 1912. Disclaimer filed February 8, 1912, by the assignee, *The Writerpress Company.*

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"1. The combination of a frame having guides and a type-bed between said guides on which type are assembled in parallel rows, a carriage movable on said guides, bearing-boxes in said carriage, pressure-screws passing through said carriage and bearing on said boxes, eccentric-bushings in said boxes having actuating-arms to turn the same, stops on said frame adapted to be engaged by said arms, an impression-roller journaled in said bushings, and an inking-ribbon between the type on said type-bed and the impression-roller.

"2. The combination of a frame having guides and a type-bed between said guides on which type are assembled in parallel rows, a transversely-disposed carriage movable on said guides and having vertical openings in opposite ends, bearing-boxes in said openings, pressure-screws bearing against the tops of said bearing-boxes, springs interposed between said bearing-boxes and the bottoms of said openings, an impression-roller journaled in said boxes, and an inking-ribbon between said roller and the type on said type bed."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 12, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis, Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,086, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Deben, 85 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 10, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 366 Sonna Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,024, dated March 17, 1885, to Louis Kuhlmann & Bro., 83 Himrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 24,992, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives,

that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Week Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,796, dated November 7, 1893, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Flaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Heekin Spice Company, of Sixth, New, and Culvert streets, Cincinnati, Ohio, the registration of the Standard Import Co., Ltd., of 216–224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,536, and the registration of The Flaccus & Elliott Co., of Wheeling, W. Va., dated August 3, 1897, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Flaccus Co.," of Wheeling, W. Va., and the said The E. C. Flaccus Co. has failed to file evidence of successorship, as required by the Office.

Notice is therefore hereby given to the said The Flaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Scollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seidovia Salmon Company, of Seattle, Wash., for a trade-mark and registration No. 10,890, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 18, 1893, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "E. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Keystone Nail Co., Inc., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to Hoopes & Townsend, of Philadelphia, Pa., and trade-mark registration No. 49,864, dated February 20, 1906, to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Keystone Nail Co., Inc., was returned signed "Keystone Nail Co., Com. Tr. Co." No evidence of the right to intervene in this interference has been filed by the Keystone Nail Co., Com. Tr. Co., within the time allowed for that purpose.

Notice is therefore hereby given to the said Keystone Nail Co., Inc., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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CONTENTS.

	Page.
ISSUE OF FEBRUARY 27, 1912	849
IMPORTANT INFORMATION	849
REMITTANCES TO THE PATENT OFFICE	849
APPLICATIONS UNDER EXAMINATION	850
PATENTS GRANTED	851
REISSUES	1060
DESIGNS	1063
TRADE-MARKS—REGISTRATION APPLIED FOR	1079
TRADE-MARKS—REGISTERED	1082
LABELS AND PRINTS	1096
COMMISSIONER'S DECISIONS—	
Thomas v. Weintraub	1097
Numan v. Ashley	1098
DECISIONS OF THE U. S. COURTS—	
In re Madden	1099
O'Connor v. Bettendorf	1099
O'Connor v. Bettendorf	1100
Nash v. Bettendorf	1100
ADJUDICATED PATENTS	1101
INTERFERENCE NOTICES	1101

ISSUE OF FEBRUARY 27, 1912.

Patents	611	No. 1,018,401 to No.	1,019,011, inclusive.
Designs	55	No. 42,196 to No.	42,250, inclusive.
Trade-Marks	96	No. 85,541 to No.	85,636, inclusive.
Labels	24	No. 16,185 to No.	16,208, inclusive.
Prints	6	No. 2,961 to No.	2,966, inclusive.
Reissues	4	No. 13,373 to No.	13,376, inclusive.
Total	796		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	....	North Carolina	1	1
Arizona	3	....	North Dakota	1	....
Arkansas	5	....	Ohio	32	3
California	26	3	Oklahoma	6	1
Colorado	6	....	Oregon	6	1
Connecticut	17	2	Pennsylvania	66	8
Delaware	1	....	Rhode Island	2	2
Florida	1	....	South Carolina	1	....
Georgia	3	....	South Dakota	2	1
Idaho	....	....	Tennessee	3	2
Illinois	69	8	Texas	8	3
Indiana	19	2	Utah	2	....
Iowa	15	2	Vermont	1	....
Kansas	5	3	Virginia	6	2
Kentucky	2	....	Washington	9	....
Louisiana	6	....	West Virginia	2	....
Maine	1	1	Wisconsin	17	1
Maryland	6	4	Wyoming	1	....
Massachusetts	26	2			
Michigan	18	4	Alaska, District of	....	....
Minnesota	8	2	Canal Zone	....	....
Mississippi	....	....	District of Columbia	2	6
Missouri	14	8	Hawaii Territory	....	....
Montana	....	....	Philippine Islands	....	....
Nebraska	4	....	Porto Rico	....	....
Nevada	1	....	U. S. Army	....	....
New Hampshire	....	....	U. S. Navy	1	....
New Jersey	24	6			
New Mexico	1	....	Total to citizens of the United States	579	115
New York	128	37			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	5	1	Newfoundland	....	....
Belgium	....	1	New South Wales	1	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	....	....
Canada	11	....	Persia	....	....
Cape Colony	1	....	Queensland	....	....
Chile	....	....	Russia	....	....
China	1	....	Scotland	2	....
Costa Rica	....	....	South Australia	....	....
Cuba	2	....	Spain	1	....
Denmark	3	....	Sweden	2	2
Ecuador	....	....	Switzerland	3	....
England	16	1	Transvaal, South Africa	....	....
France	7	2	Victoria	....	....
Germany	26	4	Western Australia	....	....
India	....	....			
Ireland	....	....	Total to citizens of foreign countries	85	11
Italy	2	....			
Japan	....	....			
Mexico	1	....			

Important Information.

This Office has no printed copies of foreign patents for sale.

In ordering photographic copies of drawings of foreign patents cited as references, applicants must state the date and number thereof, and name of the patentee, the country in which each patent was granted, and the class and subclass in which the patent is classified. If the class and subclass were not given in the Office letter citing the patent, the applicant must state the serial number of the application in which it was cited, the number of the action therein, the name of the inventor, and the title of the invention.

The photoprints will be furnished more expeditiously if the number of the division is also given in which they may be found. A separate order should be made for each drawing, for which the Office will furnish blanks gratuitously upon request.

BOUND VOLUMES CANNOT BE USED FOR MAKING PRINTS.

Failure to give the fullest data whereby the mounted drawing may be found will cause unnecessary delay and correspondence.

Applicants and attorneys are strongly urged to file a set of prints, small size, 8 by 12½ inches, or order them to be made by the Office, 15 cents per sheet, at the time of filing an application. Such procedure will save delay later, if correction of the drawing is desired or required.

Remittances to the Patent Office.

Checks should be certified. Cash should be registered; if by ordinary mail at risk of sender. Postage stamps not receivable.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 24, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 2	Jan. 4	517
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 28	Jan. 10	529
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Jan. 25	Feb. 12	169
222	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Jan. 25	Jan. 25	312
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 5	Jan. 2	468
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Jan. 26	Jan. 25	293
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 13	Jan. 12	588
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 18	Jan. 23	392
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Jan. 19	Jan. 25	287
225	10. Carriages and Wagons	Dec. 18	Jan. 16	658
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 4	Dec. 26	369
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Jan. 8	Jan. 4	600
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting; Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Dec. 28	Jan. 21	459
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 29	Jan. 19	371
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 4	Jan. 8	806
109	16. Telegraphy; Telephony	Jan. 19	Jan. 19	232
303	17. Metrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 24	Jan. 24	291
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 16	Jan. 16	288
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 9	Dec. 28	503
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 23	Jan. 30	167
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 9	Jan. 24	330

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 29	Jan. 22	332
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 15	Jan. 16	370
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 17	Jan. 10	434
316	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 26	Jan 29	227
106	26. Electricity, Generation; Motive Power.	Oct. 11	Nov. 1	485
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 23	Jan. 25	352
65	28. Internal-Combustion Engines	Dec. 7	Dec. 9	848
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Dec. 16	Jan. 22	459
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 26	Feb. 1	264
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Jan. 16	Jan. 12	347
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 29	Jan. 26	285
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 4	Jan. 11	461
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 4	Jan. 15	457
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 19	Jan. 24	602
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 16	Jan. 15	591
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Dec. 6	Jan. 19	489
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 2	Dec. 26	646
321	39. Water Distribution	Dec. 2	Dec. 11	577
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 25	Feb. 5	407
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 7	Jan. 18	559
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Nov. 29	Dec. 7	570
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 18	Jan. 11	352

Oldest new case, Oct. 11; oldest amended, Nov. 1.

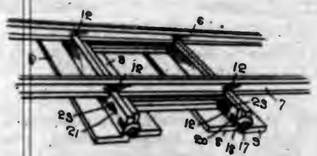
Total number of applications awaiting action 18,833

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 8	Jan. 24	1237
	Designs	Jan. 12	Jan. 17	259
	Labels and Prints	Feb. 10	Feb. 10	67

PATENTS

GRANTED FEBRUARY 27, 1912.

1,018,401. METALLIC RAILWAY-TIE. JOHN H. AKIN, Sumner, Mo. Filed Sept. 1, 1911. Serial No. 647,210. (Cl. 238—5.)



A railway tie comprising angular abutting sections, the end of one section extending beyond the adjacent end of the other section, the vertical portions of said sections being provided with alined longitudinally extending grooves, a locking bar in said grooves and extending beyond the ends of said sections, a washer on said bars, oppositely disposed laterally projecting ribs extending from said washer, one of said ribs being short and adapted to engage the vertical portion of the section of the tie that extends beyond the vertical portion of the other section of the tie, the other rib being longer and adapted to engage the vertical portion of the last mentioned section of the tie, and means for holding said washer in position.

1,018,402. PROCESS OF MAKING SULFUR TRIOXID. KURT ALBERT, Wiesbaden, Germany. Filed Aug. 2, 1911. Serial No. 641,966. (Cl. 23—1.)

1. In the manufacture of sulfuric acid the process which comprises contacting sulfur dioxid with a catalyzer comprising a combination of ferric peroxid and an oxid of an alkaline earth in the presence of an oxidizing gas at temperatures sufficient to form sulfur trioxid.

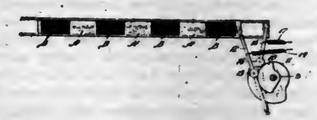
2. In the manufacture of sulfuric acid the process which comprises contacting sulfur dioxid with a catalyzer comprising a combination of ferric peroxid and an oxid of strontium in the presence of air and at temperatures sufficient to form sulfur trioxid.

3. In the manufacture of sulfuric acid the process which comprises contacting sulfur dioxid with a catalyzer comprising a combination of ferric peroxid and an oxid of an alkaline earth in the presence of air and at temperatures between 450° and 550° C. to form sulfur trioxid.

4. In the manufacture of sulfuric acid the process which comprises contacting sulfur dioxid with a catalyzer comprising a combination of ferric peroxid and an oxid of strontium in the presence of air and at temperatures between 450° and 550° C. to form sulfur trioxid.

1,018,403. DISPLAY APPARATUS. MARSELIUS T. AAH, Chicago, Ill. Filed Dec. 10, 1909. Serial No. 532,384. (Cl. 40—65.)

1. Display apparatus including two relatively movable sets of display portions disposed in the same display space, one of said sets of display portions overlying the other and having clear spaces intervening between the display portions thereof through which spaces display portions of the companion set may be seen, said portions being adapted by relative movement of the sets of display portions in one direction to reveal some of the portions of said companion set and to conceal others, and by relative movement in the reverse direction to conceal previously revealed display portions and to reveal previously concealed display portions, and an additional set of display portions having clear spaces intervening between the display portions thereof through which spaces display portions of the other two sets may be seen; said additional set of display portions being relatively movable with respect to its companion sets and adapted in one movement to reveal some display portions and to conceal others and in reverse movement to conceal previously revealed portions and to reveal previously concealed portions.



2. Display apparatus including two relatively movable sets of display portions disposed in the same display space, one of said sets of display portions overlying the other, and a display member located behind the two sets of display portions, the portions of each of said sets having clear spaces intervening between the same whereby the rear display member may be partially revealed when said clear spaces are brought into alinement and whereby the display portions of the rear one of the two sets may be revealed when brought into alinement with the clear spaces intervening between the front one of the two sets of display portions.

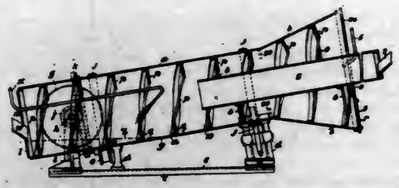
3. Display apparatus including two relatively movable sets of display portions disposed in the same display space, one of said sets of display portions overlying the other, and a display member located behind the two sets of display portions, the portions of each of said sets having clear spaces intervening between the same whereby the rear display member may be partially revealed when said clear spaces are brought into alinement and whereby the display portions of the rear one of the two sets may be revealed when brought into alinement with the clear spaces intervening between the front one of the two sets of display portions, both of said sets of display portions being movable with respect to the rear display member so as to reveal and conceal different parts of the rear display member that may be viewed through the clear spaces.

1,018,404. APPARATUS FOR WASHING STONE AND FOR MIXING MACADAM AND CONCRETE. WILLIAM HENRY BAXTER, Harrogate, England. Filed May 27, 1911. Serial No. 629,778. (Cl. 83—73.)

1. In a machine, as specified, the combination of an inclined rotatable cylinder, rollers carried in supporting frame-work for supporting the cylinders, a mixing chamber provided at one end of the cylinder, screw-propeller blades fixed to the interiors of both the said cylinder and said mixing chamber, end pieces with central openings fixed to the cylinder and the mixing chamber, said mixing chamber having a discharge opening in its end piece with a door for closing the same, and a central inner tube extending into the larger end of the mixing chamber and connected therewith.

2. In a machine, as specified, the combination of a rotating cylinder arranged at an angle and mounted upon supporting rollers carried in brackets fixed to a bed plate, a tapering mixing chamber arranged at one end and

forming a continuation of the cylinder, screw-propeller blades fixed at distances apart to the interior of both the cylinder and the mixing chamber, end pieces provided with central openings fixed to the cylinder and mixing chamber, a reduced tube arranged centrally within the cylinder and extending through and beyond the mixing chamber, and an end piece arranged at the outer end of the central tube, means for introducing water into the cylinder and the mixing chamber through their outer ends, and chutes emptying into the outer ends of the cylinder and the mixing chamber.



3. In a machine, as specified, the combination of a revolving cylinder arranged on an inclination and mounted upon rollers carried in brackets fixed to the bed plate of the machine, an enlarged mixing chamber arranged at the exit end of the cylinder, end pieces having central openings for the inlet ends of the cylinder and the mixing chamber, propeller blades fixed to the interiors of the cylinder and the mixing chamber for causing the material to travel through their respective lengths, doors carried upon the end pieces and adapted to close the openings therein, a chute for introducing the cement into the mixing chamber, and means for introducing water for washing and mixin[illegible]

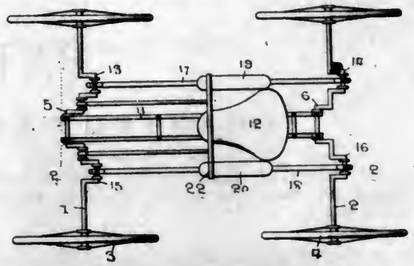
4. In a combined stone-washing and concrete mixing machine, the combination with a cylinder mounted upon a frame work at an angle and having a mixing chamber fixed thereto at one end, end pieces having central openings therein carried at the outer ends of the cylinder and the mixing chamber, propeller blades fixed to the interiors of both the cylinder and the mixing chamber, doors closing the openings in said end pieces, a central tube arranged to project through the mixing chamber and into the cylinder, means for conveying stone to the interior of the cylinder and cement into the interior of the central tube, pipes for conveying water into the cylinder and into the mixing chamber, and a division plate in ring form fixed within the cylinder, said ring having openings therethrough, and pairs of angle plates hinged to the ring at opposite sides of each opening for controlling the passage of the admixed material therethrough.

5. In a combined stone-washing and concrete mixing machine, a cylinder, an end piece upon the inlet end of the cylinder, a mixing chamber of larger capacity fixed upon the opposite end of the cylinder, a second end piece carried upon the outer end of the mixing chamber, said end pieces having central openings formed therein, a ring fixed within the cylinder, doors within the cylinder for closing the ring, hinged plates carried at the opposite sides of the ring for deflecting the material passing therethrough, and a screw-propeller fixed against the interiors of the cylinder and the mixing chamber.

[Claims 6 to 15 not printed in the Gazette.]

1,018,405. VELOCIPEDE OR FOUR-WHEELED VEHICLE. HENRY BROCK, Gillespie, Ill. Filed Feb. 17, 1911. Serial No. 609,158. (Cl. 208—30.)

The combination with a pair of axles having wheels upon their opposite ends, each having a central crank portion and auxiliary cranks at opposite sides of the central crank and directed oppositely thereto, said cranks being inwardly of the wheels, of rods extending from the auxiliary crank of one axle to the corresponding auxiliary crank of the opposite axle and loosely connected to said axles, standards loosely connected to the central cranks, bars attached to the upper ends of the standards, a seat on the bars whereby the weight of the body may be directed on the bars to lower the central cranks, tread plates on the rods whereby the weight of the body may be



directed thereon to lower the auxiliary cranks and means to shift the forward axle in its bearings.

1,018,406. MANUFACTURE OF AMMONIUM CARBONATE. JULIUS BUEB, Dessau, Germany. Filed Apr. 12, 1910. Serial No. 555,034. (Cl. 23—21.)

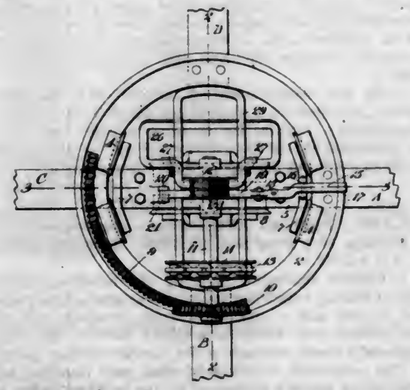
1. The herein described method of making ammonium carbonate, consisting in subjecting a mixture of gaseous ammonia, carbon dioxid, and steam to a temperature above the temperature of decomposition of ammonium carbonate, and cooling the hot mixture.

2. The herein described method of making ammonium carbonate, consisting in subjecting a mixture of gaseous ammonia, carbon dioxid and steam to a temperature above the temperature of decomposition of ammonium carbonate, regulating the quantity of steam supplied according to the percentage of ammonia desired in the salt produced, and cooling the hot mixture.

3. The herein described method of making ammonium carbonate, consisting in passing gaseous ammonia, carbon dioxid and steam through a vessel externally heated to a temperature above the temperature of decomposition of ammonium carbonate, and cooling the hot mixture.

4. The herein described method of making ammonium carbonate consisting in passing gaseous ammonia, carbon dioxid and steam through a vessel externally heated to a temperature above the temperature of decomposition of ammonium carbonate, regulating the quantity of steam supplied according to the percentage of ammonia desired in the salt produced, and cooling the hot mixture.

1,018,407. TURN-TABLE FOR TROLLEYS. EWAN CAMERON, Brooklyn, N. Y., assignor to John Robert Taylor, Brooklyn, N. Y. Filed June 26, 1908. Serial No. 440,459. (Cl. 104—180.)



1. A turn table for a trolley having common operating mechanism for turning the table and for blocking and unblocking the trolley.

2. A turn table for a trolley having a single chain for turning the table and for blocking and unblocking the trolley.

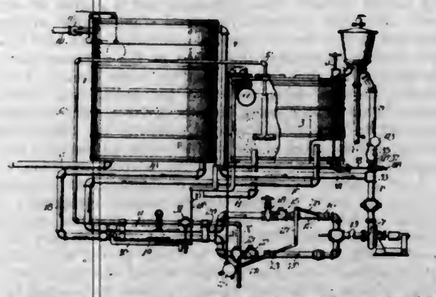
3. A turn table for a trolley having moving means, a locking means, and means for blocking the trolley upon the table, all of these said means being operated by the same mechanism.

4. A turn table for a trolley, having a single chain for moving the table, for locking and unlocking the table, and for blocking and unblocking the trolley on the table.

5. A turn table for trolleys having common operating mechanism for turning the table, locking table, and blocking the trolley on the table, which mechanism turns with the table.

[Claims 6 to 13 not printed in the Gazette.]

1,018,408. APPARATUS FOR HEATING WATER. JOHN E. CAPS, Wilmette, Ill. Filed Dec. 13, 1910. Serial No. 597,161. (Cl. 62—31.)



1. In apparatus of the kind specified, the combination with a hot water reservoir, a constantly active heater, a pump for passing water from said reservoir continuously into heat absorbing relation to said heater and back to said reservoir, a reservoir for cold water, connection between the same and the suction end of said pump for passing water therefrom into said hot water reservoir through said heater, valves controlling the connections between said respective reservoirs and said suction end of said pump, a float in said hot water reservoir actuating both said valves and adapted to open one thereof as the other closes, a pipe leading from the discharge pipe from said pump to said cold water reservoir, and means for normally resisting the delivery of water therethrough, of thermostatically controlled means interposed in said delivery pipe from said pump for deflecting flow therefrom into said cold water reservoir against the resistance of said flow.

2. In apparatus of the kind specified, a hot water and a cold water reservoir, a constantly active heater communicating at its delivery end with said hot water reservoir, a pump connected at its delivery end with said heater, a pipe establishing communication between said delivery end of said pump and said cold water reservoir, means for normally resisting flow through said pipe, normally open connection between the suction end of said pump and said hot water reservoir, normally closed connection between the suction end of said pump and said cold water reservoir, a float in said hot water reservoir controlling both said connections and adapted to open the latter as the former is closed, and a thermostatically controlled valve in the delivery pipe from said pump adapted when closed to cause a flow into said cold water reservoir against the resistance offered thereto, there being a by-pass opening in said valve through which a part of the water is delivered by the pump into said heater.

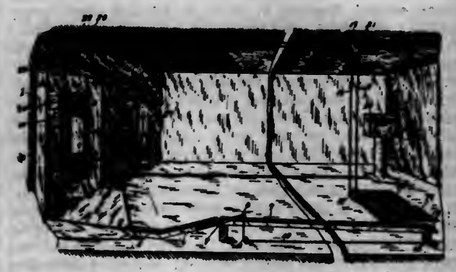
3. In apparatus of the kind specified, a hot water and a cold water reservoir, a constantly active heater communicating at its delivery end with said hot water reservoir, a pump connected at its delivery end with said heater, a pipe establishing communication between said delivery end of said pump and said cold water reservoir, means for normally resisting flow through said pipe, normally open connection between the suction end of said pump and said hot water reservoir, normally closed connection between the suction end of said pump and said cold water reservoir, a float in said hot water reservoir controlling both said connections and adapted to open the latter as the former is closed, a normally inactive heater disposed in said hot water reservoir, a valve controlling the same, a valve in the delivery pipe from said pump adapted when closed to cause a flow into said cold water tank against the resistance thereto, there being a by-pass opening in said valve through which a part of the water is delivered by the pump into said heater, and a thermostatically operated lever operatively connected with both said valves.

4. In apparatus of the kind specified, a hot water and a cold water reservoir, a constantly active heater communicating at its delivery end with said hot water reservoir, a pump connected at its delivery end with said heater, a pipe establishing communication between said delivery end of said pump and said cold water reservoir, means for normally resisting flow through said pipe, normally open connection between the suction end of said pump and said hot water reservoir, normally closed connection between the suction end of said pump and said cold water reservoir, a float in said hot water reservoir controlling both said connections and adapted to open the latter as the former is closed, a normally inactive heater disposed in said hot water reservoir, a valve controlling the same, a valve in the delivery pipe from said pump adapted when closed to cause a flow into said cold water tank against the resistance thereto, and a thermostatically operated lever operatively connected with both said valves.

5. In apparatus of the kind specified, a hot water reservoir, a normally inactive water heater, a cold water reservoir normally closed, means establishing feed connection from the same to said hot water reservoir, normally inactive means for delivering hot water into said cold water reservoir, a valve controlling said last-named means, a valve controlling the activity of said heater, a thermostatically actuated lever operatively connected with said last-named valve and adapted to open the same when the water in said hot water reservoir falls below a given temperature, and operative connection between said lever and said first-named valve for actuating the latter to cause a flow of hot water into said cold water reservoir when the temperature of the water in said hot water reservoir rises above a given temperature, and means actuated by variations in water level in said hot water reservoir for causing a flow of water from said cold water reservoir thereto.

[Claims 6 to 16 not printed in the Gazette.]

1,018,409. GAME APPARATUS. JOHN W. CULP, Bay City, Mich., assignor to Battery-Ball Mfg. Co., Jackson, Mich., a Corporation of Michigan. Filed Oct. 17, 1911. Serial No. 655,202. (Cl. 46—59.)



1. In a game apparatus, the combination of a target frame; an outer yielding target section comprising a flexible curtain with vertical slots, rollers therefor, levers connected with the rollers, and electrical contact de-

vices associated with said levers; a centrally disposed yielding target section in front of the said outer target section; electrical contact devices associated therewith; a movable bat bar disposed across the central target section, having rearwardly projecting arms disposed in the vertical slots in the outer yielding target section, a plurality of yielding devices on said bat bar, electrical contact devices associated with said yielding portions; means for manipulating the said bat bar, comprising a cable connected above and below extending to the front of the said target, with suitable guide pulleys therefor, electrical contact devices disposed in the path of movement of said bat bar, in position to be acted upon thereby; electrical conductors leading to the various contact devices and a source of current connected therewith; electric annunciator devices disposed in the electric circuits associated with said contact devices to register the action of the different parts, comprising an annunciator drop for each circuit; relay circuits disposed to be closed by the annunciator drops, signal lights on said relay circuits, relay cut-out magnets disposed in certain of the relay circuits for controlling the current to other of the said circuits; and electric switches with pointers associated to control said circuits in a predetermined manner, all coacting substantially as described and for the purpose specified.

2. In a game apparatus, the combination of a target frame; an outer yielding target section comprising a flexible curtain with vertical slots, and electrical contact devices associated with said curtain; a centrally disposed yielding target section in front of the said outer target section; electrical contact devices associated therewith; a movable bat bar disposed across the central target section, having rearwardly projecting arms disposed in vertical slots in the outer yielding target section, a plurality of yielding devices on said bat bar, electrical contact devices associated with said yielding devices; means for manipulating the said bat bar, comprising a cable connected above and below extending to the front of the said target, with suitable guide pulleys therefor, electrical contact devices disposed in the path of movement of said bat bar, in position to be acted upon thereby; electrical conductors leading to various contact devices and a source of current connected therewith; electric annunciator devices disposed in the electric circuits associated with said contact devices to register the action of the different parts, comprising an annunciator drop for each circuit; relay circuits disposed to be closed by the annunciator drops, signal lights in said relay circuits, relay cut-out magnets disposed in certain of the relay circuits for controlling the current to other of the said circuits; and electric switches with pointers associated to control said circuits in a predetermined manner, all coacting substantially as described and for the purpose specified.

3. In a game apparatus, the combination of a target frame; an outer yielding target section comprising a flexible curtain with vertical slots, and electrical contact devices associated with said curtain; a centrally yielding target section disposed in front of the said outer target section; electrical contact devices associated therewith; a movable bat bar disposed across the central target section, having rearwardly projecting arms disposed in vertical slots in the outer yielding target section, a yielding device on said bat bar, electrical contact devices associated with said yielding device; means for manipulating the said bat bar, comprising a cable connected above and below extending to the front of the said target, with suitable guide pulleys therefor, electrical contact devices disposed in the path of movement of said bat bar, in position to be acted upon thereby; electrical conductors leading to the various contact devices and a source of current connected therewith; electric annunciator devices disposed in the electric circuits associated with said contact devices to register the action of the different parts, comprising an annunciator drop for each circuit; relay circuits disposed to be closed by the annunciator drops, signal lights in said relay circuits, relay cutout magnets disposed in certain of the relay circuits for controlling the current to other of the said circuits; and electric switches with pointers associated to control said circuits in a predetermined manner, all coacting substantially as described and for the purpose specified.

4. In a game apparatus, the combination of a target frame; an outer yielding target section comprising a flexible curtain with vertical slots, and electrical contact devices associated with said curtain; a centrally disposed yielding target section in front of the said outer target section; electrical contact devices associated therewith; a movable bat bar disposed across the central target section, having rearwardly projecting arms disposed in vertical slots in the outer yielding target section, a yielding device on said bat bar, electrical contact devices associated with said yielding device; means for manipulating the said bat bar, comprising a cable connected above and below extending to the front of the said target, with suitable guide pulleys therefor, electrical contact devices disposed in the path of movement of said bat bar, in position to be acted upon thereby; electrical conductors leading to the various contact devices and a source of current connected therewith; electric annunciator devices disposed in the electric circuits associated with said contact devices to register the action of the different parts, comprising an annunciator drop for each circuit; relay circuits disposed to be closed by the annunciator drops, signal lights in said relay circuits, relay cut-out magnets disposed in certain of the relay circuits for controlling the current to other of the said circuits, all coacting substantially as described and for the purpose specified.

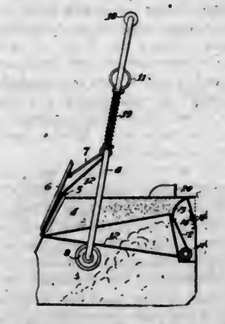
5. In a game apparatus, the combination of a target frame; an outer yielding target section comprising a flexible curtain with vertical slots, and electrical contact devices associated with said curtain; a centrally disposed yielding target section in front of the said outer target section; electrical contact devices associated therewith; a movable bat bar disposed across the central target section, having rearwardly projecting arms disposed in vertical slots in the outer yielding target section, a yielding device on said bat bar, electrical contact devices associated with said yielding device; means for manipulating the said bat bar, comprising a cable connected above and below extending to the front of the said target, with suitable guide pulleys therefor, electrical contact devices disposed in the path of movement of said bat bar, in position to be acted upon thereby; electrical conductors leading to the various contact devices and a source of current connected therewith; electric annunciator devices disposed in the electric circuits associated with said contact devices to register the action of the different parts; relay circuits disposed to be closed by the annunciator devices, signal lights in said relay circuits, and relay cut-out magnets disposed in certain of the relay circuits for controlling the current to other of the said circuits, all coacting substantially as described and for the purpose specified.

[Claims 6 to 20 not printed in the Gazette.]

1,018,410. APPARATUS FOR INSTANTANEOUS DISTRIBUTION OF SAWDUST OR DISINFECTING-POWDERS, WITH A TILTABLE DUST-BIN AND AN AUTOMATIC CLOSING DEVICE FOR THE COVER. SALVATORE DANIELLI, Milan, Italy. Filed Aug. 7, 1911. Serial No. 642,901. (Cl. 65—20.)

1. A combined container for sweeping refuse and cleaning material comprising in combination, a container including separate compartments for refuse and cleaning material, the latter compartment being provided with an opening to the exterior of the container for emission of the contents, and the former compartment being provided with an opening opposite the said opening of said cleaning material compartment, a handle pivoted to said container to normally position said container, with the said opening for emission of cleaning material lowermost, when the device is carried thereby, and a valve device for control of said cleaning material compartment opening.

2. A dust bin comprising in combination a receptacle, a partition wall dividing the said receptacle into a reservoir for dirt and a reservoir for saw dust, a spring controlled valve at the bottom of said reservoir for saw dust, a cover provided at the top part of said reservoir for dirt, a shouldered stirrup pivotally connected with opposite sides of said receptacle and projecting above the said receptacle, a handle provided at the upper part of said stirrup, rod members pivotally connecting the shouldered parts of the said stirrup with the said cover, an actuating ring slidably mounted in the upper part of said stirrup near the said handle, and a tractional member connecting the said actuating ring with the said valve of the reservoir for saw dust, and a fixed emptying handle secured to the rear side of said receptacle, substantially as and for the purpose set forth.

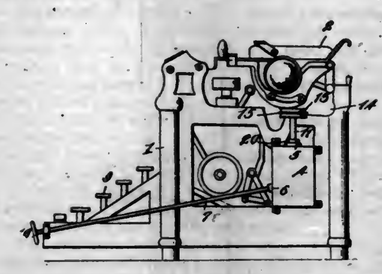


3. A combined container for sweeping refuse and cleaning material comprising in combination, a container including separate compartments for refuse and cleaning material, the latter compartment being provided with an opening to the exterior of the container for emission of the contents, and the former compartment being provided with an opening opposite to the said opening of said cleaning material compartment, a valve for control of the said opening of said cleaning material compartment, a frame operatively connected to said container and provided with a handle portion for transporting the device, and a flexible member operably connected to said valve and extending in close proximity to the said handle portion of said frame structure, whereby the said valve may be actuated at the handle portion through the agency of said flexible member.

4. A combined container for sweeping refuse and cleaning material, comprising in combination, a container including separate compartments for refuse and cleaning material, the latter compartment being provided with an opening to the exterior of the container for emission of the contents, and the former compartment being provided with an opening opposite to the said opening of said cleaning material compartment, a valve for control of the said opening of said cleaning material compartment, means for normally closing said valve, a frame structure operatively connected to said container and provided with a handle portion for transporting the device, and a flexible member operatively connected to said valve and extending in close proximity to the said handle portion of said frame structure, whereby the said valve may be actuated at the handle portion through the agency of said flexible member.

5. A combined container for sweeping refuse and cleaning material comprising in combination, a container including separate compartments for refuse and cleaning material, the latter compartment being provided with a opening to the exterior of the compartment for emission of the contents, and the former compartment being provided with an opening opposite the said opening of said cleaning material compartment, a valve for control of the said opening of said cleaning compartment, a frame structure operatively connected to said container and provided with a handle portion for transporting the device, a flexible member operatively connected to said valve and extending in close proximity to the said handle portion of said frame structure, whereby the said valve may be actuated at the handle portion through the agency of said flexible member, and means for retaining said flexible member taut.

1,018,411. TYPE-WRITER ATTACHMENT. WILLIAM A. DAVIS, Clovis, N. Mex. Filed July 22, 1911. Serial No. 639,983. (Cl. 197—65.)



1. In a typewriter attachment of the class described, the combination with a frame supporting a main bed, a movable carriage on said bed and a spacing lever; of a shaft rotatably mounted on one side of the frame, said shaft being provided on its inner end with a bevel gear, an additional shaft rotatably and vertically supported on the same side of the frame, said last mentioned shaft being provided with a bevel gear meshing with the first mentioned gear, a roller carried on the upper end of said last mentioned shaft, a flexible connection extending from said roller across the bed of the machine below said carriage and engaging said spacing lever, a coil spring having one end thereof engaged with a stationary member and the other with the second mentioned shaft, and a hand wheel on the outer or free end of said first mentioned shaft.

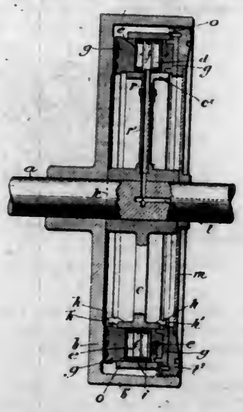
2. In a typewriter attachment of the class described, the combination with a frame supporting a main bed, a movable carriage thereon and a spacing lever, of a shaft rotatably mounted on one side of the frame opposite the side upon which said spacing lever is disposed, a bevel gear mounted on the inner end of said shaft, a stub shaft vertically supported on the same side of the frame, a bevel gear on the lower end of said stub shaft meshing with the aforesaid gear, a casing clamped to said frame covering said gears, a roller carried on the upper end of said stub shaft, a flexible connection having one end thereof engaged with said roller and extending across said bed below said carriage, an additional roller carried on said carriage over which said connection is adapted to extend, the opposite end of said connection being engaged with said spacing lever, and a hand wheel on the outer end of the first mentioned shaft.

1,018,412. FLUID-ACTUATED CLUTCH. RUDOLF DIESEL, Munich, Germany. Filed Oct. 17, 1910. Serial No. 587,514. (Cl. 192—18.)

1. Coupling mechanism for power transmitting apparatus, comprising relatively movable coupling members, and a fluid pressure device located between said coupling members for operatively connecting the same, said pressure device comprising a hollow body having a substantially rigid wall on its engaging face and extensible walls parallel with the direction of movement of the rigid wall.

2. Coupling mechanism for power transmitting apparatus, comprising relatively movable coupling members, and a fluid pressure device loosely located between said coupling members for operatively connecting the same without itself transmitting tangential strains, said pressure device comprising a hollow body having a substantially rigid wall on its engaging face and corrugated or folded walls parallel with the direction of movement of the rigid wall.

3. Coupling mechanism for power transmitting apparatus, comprising two relatively movable coupling members, and a fluid pressure device for operatively connecting said member without transmitting tangential strains, said device including a hollow sheet metal body carried by one member, said body having a substantially rigid frictional engaging face and extensible corrugated walls disposed substantially at right angles to said engaging face.

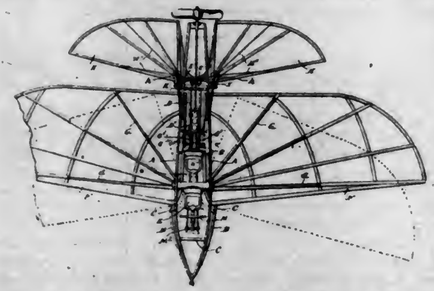


4. Coupling mechanism for power transmitting apparatus, comprising a shaft, relatively movable members mounted thereon, said members having coöperating coupling elements, and a fluid pressure device carried by one member for operatively connecting said coupling elements without itself transmitting tangential strains, said device including a hollow sheet metal body carried by one of said members and having a substantially rigid wall engaging the coupling element carried by said member and corrugated extensible walls parallel with the direction of movement of said rigid wall.

5. A coupling, comprising two adjacent relatively rotary members, a hollow annular body carried by one of said members, said body having a plain lateral wall and corrugated peripheral walls, and a movable frictional block mounted adjacent said lateral wall of said body and adapted to be forced by the expansion of said body into engagement with the coöperating coupling member.

[Claim 6 not printed in the Gazette.]

1,018,413. FLYING-MACHINE. ORRAVILL L. DUNTON, North Adams, Mass. Filed Jan. 10, 1911. Serial No. 601,908. (Cl. 244—12.)



1. In an airship of the aeroplane type, the combination with oppositely disposed main sustaining planes supported on axes at their inner ends to swing in substantially the plane of their sustaining surfaces, whereby the center of sustaining pressure may be moved toward the front or rear with respect to the center of gravity of the machine, of a pair of supplemental planes in rear of the main planes hinged on substantially horizontal axes, and connections whereby the supplemental planes are swung vertically in accordance with the front and rearward movements of the main planes.

2. In an airship of the aeroplane type, the combination with the main planes hinged on substantially vertical axes to swing substantially horizontally toward the front or rear of the machine, of supplemental or rear planes hinged on substantially horizontal axes, and connections between the front and rear planes on each side of the machine, whereby the rear planes are deflected vertically in unison with the substantially horizontal movement of the main planes..

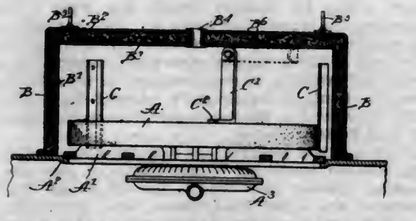
3. In an airship of the aeroplane type, the combination with the front planes pivoted on substantially vertical axes and movable toward the front or rear to shift the center of sustaining pressure to the front or rear with respect to the center of gravity of the machine, of a pair of rear planes mounted on substantially horizontal axes to swing vertically, and connections between the front and rear planes on the same side of the machine, whereby their movements are correlated.

4. In an airship of the aeroplane type, the combination with the downwardly converging sustaining planes mounted on axes at their proximate ends arranged at substantially right angles to the plane of their sustaining surfaces, and means for swinging said planes on said axes to shift the center of sustaining pressure with respect to the center of gravity of the machine, of supplemental planes on each side of the machine mounted on substantially horizontal axes, and connections intermediate said supplemental planes and main planes, whereby, as the main planes are moved forwardly, the supplemental planes are swung downwardly and vice versa.

5. In an airship of the aeroplane type, the combination with the downwardly converging main planes mounted on axes at their proximate ends located substantially at right angles to the plane of their sustaining surfaces, independent crank shafts connected with said planes for swinging the same toward the front or rear, a control lever connected with both of said crank shafts and movable to shift said planes simultaneously in the same direction or simultaneously in opposite directions, of supplemental planes pivoted on substantially horizontal axes, and connections intermediate said supplemental planes and crank shafts, whereby the supplemental planes will be deflected vertically in accord with the movements of the main planes toward the front and rear.

[Claims 6 and 7 not printed in the Gazette.]

1,018,414. RADIATOR-HEATER. MARK A. EDSON, Janesville, Wis., assignor to The Caloric Company, Janesville, Wis., a Corporation of Wisconsin. Filed Feb. 23, 1911. Serial No. 610,308. (Cl. 126—265.)



A radiator heater comprising a cylindrical casing open at the bottom and having spaced walls insulated one from the other an open thimble interposed between said walls at the center of one side vertically disposed baffle plates on the interior thereof and pivotally mounted brackets interposed between said baffle plates and adapted to support the casing on the radiator when the shape of the stove does not permit the casing to be carried upon it.

1,018,415. FEEDING-STUFF. CARLETON ELLIS, Larchmont, N. Y., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Dec. 10, 1908. Serial No. 466,782. (Cl. 99—11.)

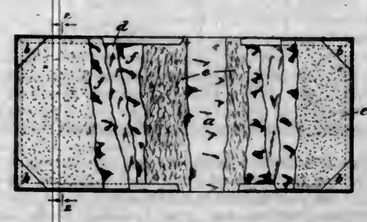
1. A bone-shaped dog biscuit comprising malted flour, meat and milk material and saccharine matter.

2. A bone-shaped dog biscuit comprising flour, bone meal, meat, corn meal, milk and malt.

3. A bone-shaped dog biscuit consisting of flour, bone meal, meat, corn meal, milk, diastatic malt and molasses.

4. As a new article of manufacture, a dog biscuit substantially in the shape of a bone comprising as ingredients the following, in substantially the following proportions: Gluten flour—forty pounds; bone meal, two pounds; comminuted meat, four pounds; corn meal, two pounds; milk, one gallon, diastatic malt, three pounds; molasses, four pounds; salt, seven ounces and incorporated water.

1,018,416. BLOTTER-HOLDER. DANIEL H. FITZGERALD, New York, N. Y. Filed Dec. 18, 1908. Serial No. 468,227. (Cl. 120—24.)



1. A blotter holder comprising a layer of soft material constituting a back which can be flexed, means to secure a blotter thereto, and a layer between the blotter and back consisting of paper board and muslin pieces pasted upon each side of the paper board.

2. A blotter holder comprising a leather back, means to secure a blotter thereto, and a strip between the blotter and back consisting of red pocketbook paper with Holland cloth pasted upon each side of the red pocketbook paper to restore the holder to normal shape after being used.

1,018,417. HAND-BAG OR THE LIKE. KELSIE B. FORD, Newark, N. J., assignor to Eastwood-Park Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 14, 1911. Serial No. 644,044. (Cl. 150—29.)

1. A bag frame comprising two sections having laterally adjacent pivotally connected portions, one of which portions is provided with a segmental suspension slot adapted freely to receive the link connection of a bag body.

2. A bag frame comprising two sections having laterally adjacent pivotally connected portions, one of which portions is larger than the other and is provided beyond the peripheral edge of the latter with a segmental suspension slot adapted freely to receive the link connection of a bag body.

3. A bag frame comprising two sections having laterally adjacent pivotally connected portions, the outer one of which is larger than the other and is provided beyond the peripheral edge of the latter with a segmental suspension slot adapted freely to receive the link connection of a bag body.

4. In a bag, a frame comprising two members having laterally adjacent pivotally connected portions, the outer one of which is larger than the inner portion and is provided beyond the peripheral edge of the latter with a segmental slot, a bag body, and a link connection between the same and said slot.

1,018,418. PROCESS OF MELTING SCRAP METAL. ALBERT E. GREENE, Chicago, Ill. Filed June 30, 1910. Serial No. 569,702. (Cl. 204—64.)

1. The process of utilizing scrap material containing valuable alloys, which consists in melting the scrap with molten pig iron with the aid of electric heat, and treating the molten bath with a gas containing a reducing agent and an oxidizing agent to decarburize the bath without substantial loss of said alloying metal.

2. The process of making steel from molten pig iron and scrap containing valuable alloying metal, which consists in melting the scrap into the iron by means of the heat in the iron supplemented by electric heat, and finally decarburizing the bath by blowing it with a gas containing reducing and oxidizing components, thereby producing steel without substantial loss of the alloying ingredients.

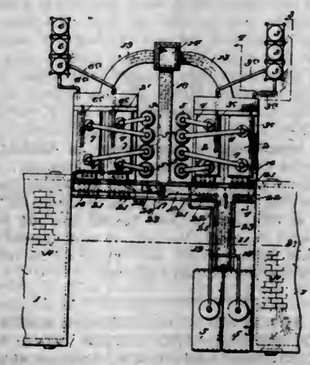
3. The process of making alloy steel, which consists in charging alloy steel scrap into pig iron in an electric furnace, melting the scrap and simultaneously blowing through the furnace a gas having reducing properties with respect to the metal, and finally decarburizing the bath by means of a gas suitable for oxidizing the carbon without substantial oxidation of the metal.

4. The process of making manganese steel from pig iron and manganese-steel scrap, which consists in charging manganese steel scrap into molten pig iron, melting the charge with the aid of electric heat, oxidizing the carbon without substantial loss of manganese by blowing the bath with a gaseous agent containing a reducing component, and finally melting into the decarburized metal enough ferro-manganese, corresponding to the weight of iron charged, to give the desired percentage of manganese in the steel.

5. The process of making steel from pig iron and scrap, which consists in charging molten pig iron into a basic electric furnace, selectively oxidizing the phosphorus in preference to carbon while maintaining the bath molten at a low temperature, then charging into the bath scrap containing the alloying metal which it is desired to retain, and finally decarburizing the bath by blowing it with a gas suitable for oxidizing the carbon but having a reducing action on oxids of the metals composing the bath.

[Claim 6 not printed in the Gazette.]

1,018,419. WOOD-DISTILLING APPARATUS. ROBERT W. HILTON, Smethport, Pa. Filed Jan. 22, 1909. Serial No. 473,684. (Cl. 203—6.)



1. In apparatus of the character described, a still provided in its lower portion with a plurality of transversely extending passages, said passages dividing the lower portion of the still into a series of depending compartments,

steam pipes entering the several compartments and extending through the same, and means for carrying heat independently of the steam pipes into the passages between said compartments.

2. In apparatus of the character described, a still provided in its lower portion with a series of transversely extending passages, said passages dividing the lower portion of the still into a series of depending compartments, steam pipes entering these compartments and coiled therein and then passing out of the compartments, a furnace, and means for conducting the products of combustion from the furnace into the passages between the compartments beneath the still.

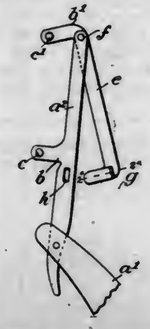
3. In apparatus of the character described, a still provided in its lower portion with a series of open-ended passages, said passages dividing the lower portion of the still into a series of compartments, a furnace, means for conducting a heating medium into the passages between the compartments, and a liquid supply pipe leading into said still, said supply pipe entering one of said passages in the bottom of the still, being coiled therein, and then being extended into the still, whereby the liquid therein may be pre-heated.

4. In apparatus of the character described, a still, a casing surrounding the still, a furnace, a stack, a flue leading from the furnace to the stack and communicating with the casing of the still, means for cutting off communication between said flue and the interior of the casing, and a flue leading from the casing to the stack.

5. In apparatus of the character described, a plurality of stills, casings inclosing the stills, a furnace, a flue extending entirely across the fronts of the still casings and communicating with the furnace, a stack with which said flue is connected, flues leading from the rear ends of the still casings to said stack, and means for diverting the products of combustion passing into the first named flue either into the still casings or into the stack.

[Claim 6 not printed in the Gazette.]

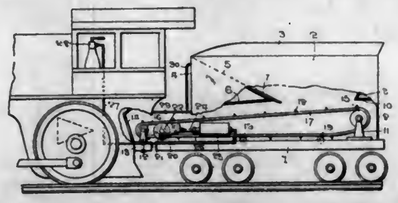
1,018,420. RAZOR. HAROLD EDWARD SHERWIN HOLT, Farnborough, England. Filed Apr. 25, 1910. Serial No. 557,526. (Cl. 30—12.)



A razor comprising in combination, a blade, holding means therefor composed of a main longitudinal member having a lateral blade holding portion projecting therefrom and also having a locking opening, an element hinged to one end of said member and having one end bent for connection with the blade, the body of said element extending along said main member and having on its other end a shoulder or lug to enter said opening.

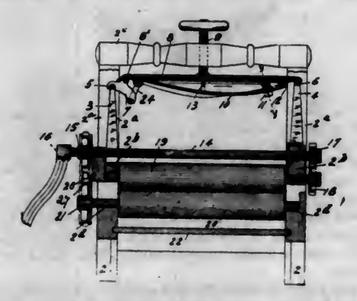
1,018,421. AUTOMATIC COAL-FEEDING MECHANISM FOR LOCOMOTIVE AND OTHER FIRE-BOXES. FRANK A. JACKSON, Garland, Ark., assignor of one-half to Inventors' Union Company. Filed Mar. 15, 1911. Serial No. 614,670. (Cl. 110—101.)

1. The combination with a coal car having a sloping bottom portion extending inwardly and downwardly from the upper edge of the front of the car, a coal leveling portion extending horizontally from the lower edge of the sloping bottom portion to the front of the car, a plurality of coal breaking teeth secured along the lower edge of the sloping bottom portion and projecting downwardly and rearwardly therefrom, and a coal guiding portion extending downwardly and slightly inwardly from the bottom of the car; of an endless belt working in the bottom of the car to receive the coal guided thereupon by the coal guide and the sloping bottom and convey the same to the fire box of a locomotive connected with the coal car, teeth on the outer surface of the endless belt for moving the coal into engagement with the teeth on the sloping bottom portion, the sloping bottom and the coal guide serving to guide coal onto the endless belt, the coal leveling bottom serving to level the coal upon the conveyer and the coal breaking teeth serving to break the large lumps of coal as they are carried by the belt to the fire box.



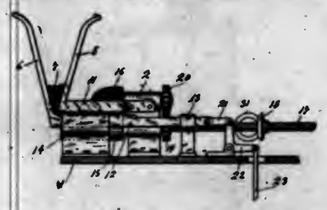
2. The combination with a coal car having sloping guide bottom portions and a coal leveling portion, the edges of one of the sloping bottom portions and of the coal leveling portion meeting and coal breaking teeth secured upon the sloping bottom portion at the junction thereof with the coal leveling portion; of an endless feeding belt working within the bottom of the coal car beneath the sloping and leveling bottom portions thereof, teeth on the outer surface of the endless belt for moving the coal into engagement with the teeth on the sloping bottom portion, means for supporting the belt to operate and carry the coal in a horizontal direction to be fed to the fire box of a locomotive connected to the coal car, the endless feeder supporting means being mounted to allow the engine and coal car to turn without affecting the operation of the endless feeder, and means for operating and controlling the endless feeder.

1,018,422. CLOTHES-WRINGER. MAXIMILLIAN P. JANISCH, Muskegon, Mich., assignor to Lovell Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed May 14, 1904. Serial No. 208,027. (Cl. 68—32.)



In a wringer the combination of the frame comprising the top bar and the frame sides; the sliding bearing frames mounted in the frame sides; a rigid cross bar, and a pressure device acting on the cross bar and tensioned to exert pressure in a lateral direction relatively to the cross bar, said spring being secured to the bar intermediate its ends and held under initial tension with the ends of the spring in engagement with the cross bar; and a lever pivoted on the cross bar having one end connected with a sliding bearing frame and the other end with the spring.

1,018,423. FEEDING MECHANISM FOR GRASS-TWINE MACHINES. THOMAS W. JERREMS, St. Paul, Minn., assignor of one-half to Emil H. Steiger, Oshkosh, Wis. Filed July 7, 1910. Serial No. 570,733. (Cl. 28—21.)



1. A grass feeding mechanism comprising coöperating approximately horizontal feeding rollers adapted to receive the grass blades delivered laterally thereto and to feed the same endwise, and means for feeding the grass blades laterally to said rollers, comprising approximately horizontal feed bars, and means for reciprocating one of said feed bars in respect to the other, said bars having serrated edges and upwardly diverging arms, which arms afford a grass-holder and serve to direct the grass blades between the said feed bars.

2. In a grass-feeding mechanism, the combination with feed bars having opposing serrated edges and provided with upwardly extended arms adapted to hold the grass blades and delivering the same between the serrated edges of said bars, means for reciprocating the lower bar, and a keeper for said lower bar having laterally spaced side flanges with serrated upper edges coöperating with the serrated edges of said bar.

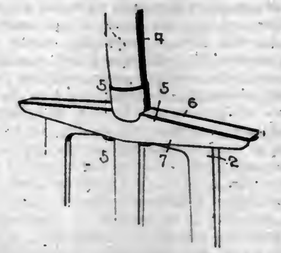
3. In a grass-feeding mechanism, the combination with approximately horizontal feed rollers adapted to receive the grass blades delivered laterally thereto and to feed the same endwise, of means for feeding said grass blades laterally to said rollers, comprising approximately horizontal serrated bars and means for reciprocating one of said bars in respect to the other, the said serrated bars being located on one side of said rollers and a supplemental serrated bar being located on the opposite side of said rollers and secured to the movable member of said first noted serrated bars.

4. In a grass-feeding mechanism, the combination with a relatively long approximately horizontal feed roller and a coöperating reversely driven endwise tapered and threaded upper roller, of means for feeding the grass blades laterally between and to said feed rollers, comprising upper and lower main feed bars having coöperating serrated edges and provided with upwardly diverging arms adapted to hold the grass blades and deliver the same between the serrated edges of said bars, means for reciprocating the lower feed bar, the said feed bars being located on one side of said feed rollers, and a supplemental feed bar being located on the opposite side of said feed rollers and secured to the lower movable main feed bar.

1,018,424. SPADE-STEP. EUGENE C. JEWETT, Eagle Grove, Iowa. Filed July 21, 1911. Serial No. 639,803. (Cl. 55—115.)

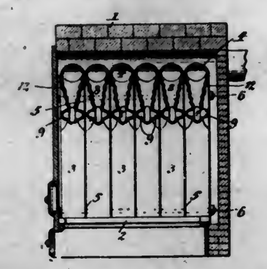
1. The combination with a blade having a head at one end and a handle attached to the head, of a step, said step comprising a horizontal portion and depending flanges at each edge thereof, said horizontal portion and one of the flanges having a slot to receive the handle and tongues carried by one of the flanges adapted to be bent under the head to hold the step in position on the spade.

2. The combination with a spade having a head at one end and a handle attached to the head, of a step, said step comprising a horizontal portion and depending flanges at each edge thereof, said horizontal portion having an opening therein to receive the handle and



tongues adapted to be bent under the head to hold the step in position on the spade.

1,018,425. STEAM-BOILER. MICHAEL KELLY, Buffalo, N. Y. Filed Mar. 31, 1911. Serial No. 618,171. (Cl. 122—305.)



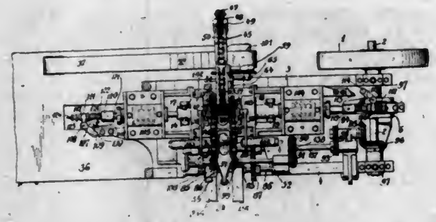
1. A steam boiler comprising a section having upright hollow columns at its opposite sides, a hollow arch connecting the upper ends of said columns, and a horizontal hollow pipe connecting said columns below the arch and provided on its opposite sides with horizontal rows of laterally projecting hollow wings which terminate short of the top and bottom of said pipe leaving a straight low temperature water supply runway or conduit in the bottom of said pipe and a straight high temperature water or steam delivery runway or conduit in the upper part of said pipe.

2. A steam boiler comprising upright hollow columns, a hollow transverse arch connecting the upper ends of said columns, a horizontal cross pipe connecting the columns below said arch and provided on its underside with a contracted longitudinal channel forming a low temperature water conduit and on its upper side with a contracted longitudinal channel forming a high temperature or steam conduit and provided on laterally opposite sides with hollow wings or corrugations, and an upright hollow column connecting the central parts of said cross pipe and arch.

1,018,426. SOAP-PRESS. JAMES A. KEYES, New York, N. Y. Filed Feb. 17, 1910. Serial No. 544,367. (Cl. 25—7.)

1. In presses for making cakes of soap or similar material, a frame, a table mounted on said frame, a plunger slide guide to slide in said frame, a crank and connector to reciprocate said plunger slide, a plunger head having a reduced neck passing through a slot in said table and a dove-tailed foot removably secured to said plunger slide, solid plunger die faces mounted on said head, a pair of die boxes mounted on said frame with which the die faces on said double plunger die alternately coöperate, rear dies slidingly mounted within said die boxes, sleeves provided with collars secured to said rear dies, adjustable spring

buffers coöperating with said collars to limit the compressing pressure of said rear dies, a stem mounted within each sleeve, a panel member forming part of the face of each rear die, a rod within said stem and screwed to said panel member to hold the same on said stem, a spring connected to said stem to normally retract said panel member, a pivoted trip coöperating with a stationary cam to project said panel member when said rear die is moved inward, connections for operating said rear dies from said plunger slide comprising cam grooves on said slide having relieved portions to permit the yielding of said rear dies during active compression and comprising a recess retracting said rear dies after they have reached their innermost discharging position, a removable feed frame comprising feed fingers feeding a series of blanks into alinement with said dies to be engaged by said double plunger die and alternately forced into engagement with said two die boxes and rear dies, detachable spring action grippers to engage the pressed articles from said rear dies and double delivery chains having fingers to engage and discharge said finished articles.



2. In presses for making cakes of soap or similar articles, a frame provided with a table, a plunger slide mounted in said frame, a crank and connector to reciprocate said plunger slide, a plunger head having a reduced neck and removably secured to said plunger slide, opposed die faces mounted on said head, a pair of die boxes mounted on said frame with which the die faces on said double plunger alternately coöperate, rear dies mounted within said die boxes, spring buffers coöperating with said rear dies to exert the compressing pressure thereof, a panel member forming part of the face of each rear die and a trip to project said panel member when said rear die is moved inward, connections comprising cam grooves on said plunger slide to operate said rear dies in unison with said plunger dies and a feeder to feed a series of blanks into alinement with said dies to be engaged by said double plunger die and alternately forced into engagement with said two die boxes and rear dies.

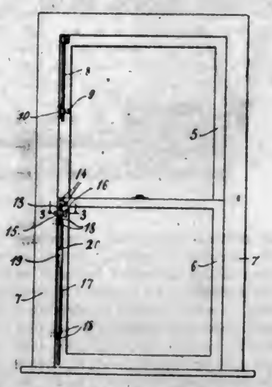
3. In presses for making cakes of soap or similar articles, a frame, a plunger slide mounted in said frame, means to reciprocate said plunger slide, opposed die faces mounted on said plunger slide, a pair of die boxes mounted on said frame with which said double plunger die alternately coöperates, rear dies mounted within said die boxes, yielding means for causing the compressing pressure of said rear dies and connections comprising cam grooves on said plunger slide to operate said rear dies in unison with said double plunger dies.

4. In presses, a frame, a plunger slide mounted in said frame, means to reciprocate said plunger slide, a die mounted on said slide, a die box coöperating with said plunger die, a rear die mounted within said die box, yielding means to cause the compressing pressure of said rear die and connections comprising cam grooves in said plunger slide to operate said rear die in unison with said plunger die and allow its yielding movement during active compression.

5. In presses, a frame, a plunger slide and connected plunger die mounted in said frame, means to reciprocate said plunger slide and die, a die box coöperating with said plunger die, a rear die mounted to coöperate with said die box and yielding means to cause the active compression pressure of said rear die and connections comprising means on said plunger slide to operate said rear die in unison with said plunger die and allow its yielding movement during active compression.

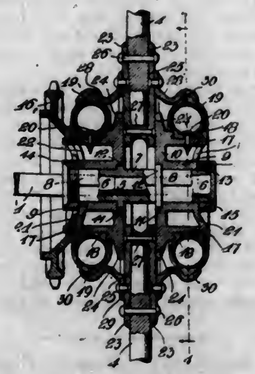
[Claims 6 to 22 not printed in the Gazette.]

1,018,427. SASH-FASTENER. LOUIS RUSSELL KILLINGSWORTH, Salt Lake City, Utah. Filed May 31, 1911. Serial No. 630,409. (Cl. 16—118.)



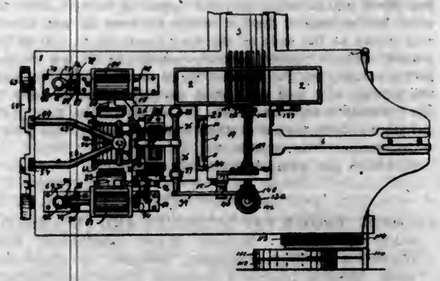
In a sash fastener, the combination of a vertical, tubular rod carried by the sash, clamping means carried by the jamb and engageable with the rod, a sheath carried by the jamb into which sheath the rod extends, said sheath and rod having perforations which are adapted to be placed in registering position, a latch carried by the sheath and adapted to be inserted through said registering perforations, said latch having a head and a shoulder, the head entering the interior of the rod, and the shoulder being engageable by the edge of the perforation in the rod.

1,018,428. PNEUMATIC WHEEL-HUB. FRED J. KOCH, East St. Louis, Ill. Filed Mar. 19, 1910. Serial No. 550,460. (Cl. 152—28.)



In a vehicle wheel, an axle, a bushing thereon, a pair of castings provided with annular bearing rims non-rotatably mounted on opposite ends of the bushings, a spoke receiving member, the inner portion thereof fitting between the castings and the outer portion projecting there-beyond, pneumatic tires mounted in the bearing rims of the castings, bearing rings attached to opposite sides of the spoke receiving member and engaging the tread portions of said tires, said rings extending entirely around the wheel and a bearing ring in the spoke receiving member for the inner ends of the spokes.

1,018,429. PACKING-MACHINE. IGNACIO LÁZAGA, Habana, Cuba, assignor to Francis D. Canfield, Yonkers, N. Y. Filed Oct. 1, 1910. Serial No. 584,846. (Cl. 93—4.)



1. In cigarette packing machines, a hopper and connected counting device comprising a pusher having disengageable sections, a support adjacent said counting device, a carrier having a channel and movably mounted in said support, gripping rolls and light springs mounting said rolls adjacent the discharge end of said channel, an ejector to eject between said rolls the cigarettes inserted by said pusher in said channel, a wrapper feeding device to feed separate wrappers into alinement adjacent said carrier, means to move said carrier and the contained cigarettes toward said alined wrappers, a pair of brackets having projecting folding rolls adjacent said alined wrappers to form end folds therein coöperating swinging end folders adjacent said brackets and means to paste and complete the folding of said wrappers around said cigarettes including an adjustable width folding box to hold a plurality of wrapped packages and a discharger laterally discharging the separate completed packages therefrom.

2. In cigarette packing machines, a hopper and connected counting device comprising a pusher having disengageable sections, a support adjacent said counting device, a carrier having a channel and movably mounted in said support, yielding gripping members mounted adjacent the discharge end of said channel, an ejector to eject from said carrier channel the cigarettes inserted by said pusher, a wrapper feeding device to feed separate wrappers into alinement adjacent said carrier, means to move said carrier and the contained cigarettes toward said alined wrappers, a pair of brackets having projecting folding rolls adjacent said alined wrappers to form end folds therein as the forming packages pass between them, coöperating swinging end folders adjacent said brackets and means to paste and complete the folding of said wrappers around said cigarettes including an adjustable width folding box to hold a plurality of wrapped packages.

3. In cigarette packing machines, a hopper and connected counting device comprising a pusher having disengageable sections, a support adjacent said counting device, a carrier having a channel and movably mounted in said support, yielding gripping members mounted adjacent the discharge end of said channel, an ejector to eject from said carrier channel the cigarettes inserted by said pusher, a wrapper feeding device to feed separate wrappers into alinement adjacent said carrier, means to move said carrier and the contained cigarettes toward said alined wrappers, a pair of brackets adjacent said alined wrappers to form end folds therein as the forming packages pass between them, coöperating swinging end folders adjacent said brackets and means to paste and complete the folding of said wrappers around said cigarettes including an adjustable width folding box to hold a plurality of wrapped packages.

4. In a cigarette packing machine, a hopper and counting device comprising a pusher having disengageable sections, a support adjacent said counting device, a carrier having a channel and movably mounted in said support, gripping members adjacent the discharge end of said channel, an ejector to eject from said carrier channel the cigarettes inserted by said pusher, a wrapper feeding device to feed separate wrappers adjacent said carrier, means to move said carrier and the contained cigarettes toward said fed wrappers, a pair of folding brackets adjacent said fed wrappers to form end folds therein as the forming packages pass between them, coöperating end folders adjacent said brackets and means to paste and complete the folding of said wrappers around said cigarettes including an adjustable width folding box.

5. In a cigarette packing machine, a hopper and connected counting device comprising a pusher, a support adjacent said counting device, a carrier having a channel provided with rolls and movably mounted in said support, an ejector to eject between said rolls the cigarettes inserted by said pusher and to force them into contact with the alined wrappers, a wrapper feeding device to feed separate wrappers into alinement adjacent said carrier, means to move said carrier and the contained cigarettes toward said alined wrappers and means to fold said wrappers around said cigarettes.

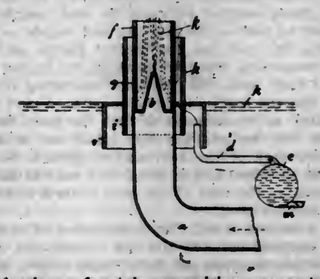
[Claims 6 to 13 not printed in the Gazette.]

1,018,430. EYEGLASS-CLEANER. JOHN LEDERER, Philadelphia, Pa. Filed Sept. 15, 1911. Serial No. 649,458. (Cl. 15—68.)

1. A wiper for eye glass cleaners comprising a spring arm one end of which is slotted and the other end of which is marginally perforated said member being marginally notched intermediate its ends, a pad or cushion stitched to the perforated end of said member, a covering of cloth or the like enveloping said pad and perforated end of said member and a tying cord for securing the free ends of said cloth said tying cord being accommodated by said notches to prevent slippage.

2. An article of the class described comprising a body portion terminating in a flat sided extension, a pair of spring arms carried by said extension each arm having a slotted and a perforated end each arm being provided intermediate its ends with marginal notches, set screws for detachably securing the slotted ends of said arms with respect to said extensions, and a wiper for each arm, adjacent faces of said wipers abutting, each wiper comprising a pad stitched to the perforated ends of the arms and having a covering enveloping the pad and perforated end of the arm, the free end of said covering being secured to place by a tying cord, said cord being accommodated by said notches to prevent slippage.

1,018,431. LUMINOUS FOUNTAIN. SIEGFRIED LEICHNER, Grunewald, near Berlin, Germany. Filed Sept. 1, 1911. Serial No. 647,298. (Cl. 137—11.)



1. A luminous fountain comprising means to form a jet of water, means to envelop the jet in a combustible gas and a combustible gas supply connected to said means.

2. A luminous fountain comprising means to form a jet of water, means surrounding the jet to supply a combustible gas mixture thereto, said mixture being entrained by and enveloping the jet.

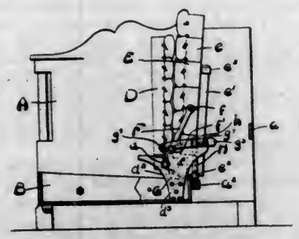
3. In a luminous fountain, the combination with an injector nozzle, concentric tubes surrounding the latter forming an annular chamber open at the top and bottom for the admission of air and combustible fuel respectively, the inner tube being provided with perforations above the fuel admission.

4. In a luminous fountain, the combination with an injector nozzle, of a liquid fuel receptacle, concentric tubes surrounding the nozzle forming an annular chamber communicating at its lower end with the fuel receptacle and open at the top for the admission of air, the inner tube having perforations through which the air and combustible fuel are sucked from the annular chamber by a water jet issuing from the nozzle.

5. In a luminous fountain, the combination with a water injector nozzle, an inner tube surrounding the nozzle having perforations in the lower portion, an outer tube surrounding the inner tube and having perforations below the perforations of the latter, said tubes forming an annular chamber open at its top, a container immersed in the water of the basin of the fountain and inclosing the outer tube above its perforations, and a combustible-fuel receptacle communicating with the container.

[Claims 6 to 8 not printed in the Gazette.]

1,018,432. DAVENPORT-BED. ANTHONY LUCIK, New Albany, Ind. Filed Aug. 21, 1911. Serial No. 645,273. (Cl. 5—47.)



1. In a davenport-bed, the combination of end boards, a box secured between the end boards, a bracket plate secured to each end of the box, a seat supported by the box, pivot pins journaling the seat upon the bracket, a folding member, and links pivoted to the folding member and to the bracket plates.

2. In a davenport-bed, the combination of end boards, a box secured between the end boards, bracket plates secured upon the ends of the box and having a series of journal slots in their upper edges, retaining bars pivoted upon the brackets, a swinging member, and pivot pins upon the swinging member and normally held in the journal slots by the retaining bar.

3. In a davenport-bed the combination of end boards, bracket plates secured between the end boards, a seat and a folding member between the end boards, a coupling connecting the seat and the bracket plates, said folding member comprising two frames which are hinged together at one of their ends, and couplings connecting the folding member and the brackets and adapted to permit the folding member to be extended so that its front frame will rest upon the seat and the rear frame will stand above and in the rear of the seat and to permit the folding member to be folded and to stand in a substantially vertical position at the rear of the seat to form a davenport-back for the seat.

4. In a davenport-bed, the combination of end boards, brackets secured between the end boards and having a series of journal slots in their upper edges, a folding member between the end boards and consisting of two frames, pivots connecting the frames, links journaled in the forward journal slots and coupled at their opposite ends to the forward frame, and links journaled in the rear journal slots and coupled at their opposite ends to the pivots connecting the frames.

5. In a davenport-bed, the combination of end boards, a box secured between the end boards, bracket plates having three journal slots in their upper edges and being secured to the ends of the box, a seat between the end boards and pivots at the ends of the seat journaled in one of the journal slots, a folding member consisting of two frames, pivots connecting the frames, links journaled in the middle journal slot and connected at their opposite ends to the forward frame, and links journaled in the rear journal slots and connected at their opposite ends to the pivots which connect the frames.

[Claim 6 not printed in the Gazette.]

1,018,433. BROWN VAT DYESTUFF AND PROCESS OF MAKING SAME. RUDOLF MAAG, Sindlingen, near Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 28, 1911. Serial No. 635,741. (Cl. 8—1.)

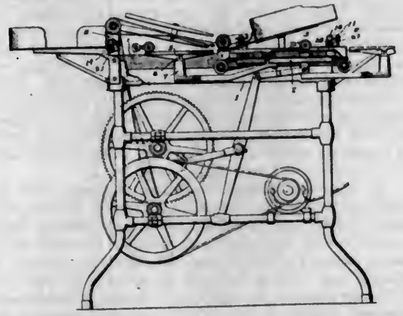
1. As new products, the benzoquinonedinaphthalids which contain halogen in the benzene nucleus, being brown powders, insoluble in water, alcohol and benzene, dissolving in concentrated sulfuric acid with a blue color, and yielding when treated with alkaline hydrosulfite yellow vats which give on wool and cotton fast brown tints.

2. As a new product, the monochlorobenzoquinone-di-β-naphthalid of the formula: $C_6HClO_2(NHC_{10}H_7)_2$, being a brown powder, insoluble in water, alcohol, benzene, soluble in concentrated sulfuric acid with a blue color, also soluble in alkaline hydrosulfite thus forming a yellow vat which yields on wool and cotton fast brown tints.

3. The process of manufacturing brown vat dyestuffs, which consists in combining naphthylamins with polyhalogenated benzoquinones.

4. The process of manufacturing a brown vat dyestuff which consists in combining β-naphthylamin with 2.6-dichlorobenzoquinone.

1,018,434. INK-FOUNTAIN. JOHN F. MAHLSTEDT, Los Angeles, Cal. Filed June 13, 1911. Serial No. 632,968. (Cl. 101—71.)



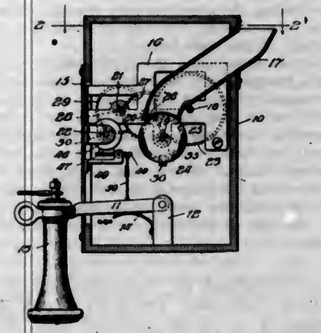
1. In a printing press, a frame, a reciprocating bed, a block with an inclined face carried by the bed, a cross bar supported by the frame, an ink reservoir secured to the cross bar, a fountain roll adjacent to the ink reservoir, a ratchet for operating the fountain roll, a shaft below the reservoir, arms on said shaft, a ductor roll, journaled in said arms, another arm on said shaft, a pawl on the latter arm engaging said ratchet, said latter arm being in the path of movement of said block.

2. In a printing press, a frame, a bed, a block with an inclined face carried by the bed, a cross bar supported by the frame, an ink reservoir secured to the cross bar, a fountain roll adjacent to the ink reservoir, a ratchet for operating the fountain roll, a shaft below the reservoir, arms on said shaft, a ductor roll journaled in said arms, another arm on said shaft, a pawl on the latter arm engaging said ratchet, said latter arm being in the path of movement of said block, one of the first mentioned arms having an extension, a thumb screw, a stop pivotally mounted on said thumb screw and adapted to be moved into or out of position between said extension and said cross bar.

3. In a printing press, a frame, a bed, a block with an inclined face carried by the bed, a cross bar, an ink reservoir on the cross bar, a fountain roll adjacent to the ink reservoir, a ratchet for operating the fountain roll, a shaft below the reservoir, arms on said shaft, a ductor roll journaled in said arms, another arm on said shaft, a pawl on the latter arm engaging said ratchet, said latter arm being in the path of movement of said block, a thumb screw on one of the first mentioned arms acting as a pivot for the ductor roll, and thumb screws securing the cross bar to said frame.

4. In a printing press, a frame, a bed, a block with an inclined face carried by the bed, a cross bar, an ink reservoir on the cross bar, a fountain roll adjacent to the ink reservoir, a ratchet for operating the fountain roll, a shaft below the reservoir, arms on said shaft, a ductor roll journaled in said arms, another arm on said shaft, a pawl on the latter arm engaging said ratchet, said latter arm being in the path of movement of said block, a thumb screw on one of the first mentioned arms acting as a pivot for the ductor roll, and thumb screws securing the cross bar to said frame, and means for throwing said ductor roll into and out of operative position.

1,018,435. TELEPHONE-METER. EDWARD H. MARTIN, Webster City, Iowa. Filed Feb. 25, 1911. Serial No. 610,803. (Cl. 179—7.)



1. A telephone system comprising a telephone line, a transmitter, a receiver, circuit connections for connecting said transmitter and receiver to said line, time measuring mechanism, a switch-hook for controlling said mechanism, and contacts actuated by said mechanism to vary said circuit connections.

2. A telephone system comprising a telephone line, a transmitter and receiver adapted to be included in talking circuit with said line, time measuring mechanism, a switch-hook operative upon the removal of the receiver to include said transmitter and receiver in talking circuit and to set said timing mechanism into operation, and contacts actuated by said mechanism to interrupt said talking circuit upon the running down of said mechanism.

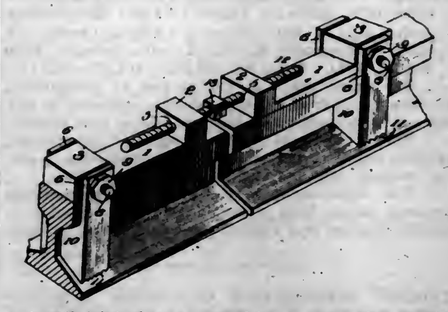
3. A telephone system comprising a telephone line, a transmitter and receiver adapted to be included in talking circuit with said line, a clock train, a meter upon a shaft of said train, a switch-hook operative upon the removal of the receiver to include said receiver and transmitter in talking circuit and to free said clock train, and contacts for interrupting said talking circuit when said train is run down.

4. A telephone system comprising a telephone line, a transmitter and receiver adapted to be included in talking circuit with said line, time measuring mechanism, a switch-hook and means for jointly controlling said mechanism, and means responsive to the operation of said time measuring mechanism to interrupt said talking circuit upon the expiration of a definite time interval.

5. A telephone system comprising a telephone line, a transmitter, a receiver, circuit connections for connecting said transmitter and receiver to said line, time measuring mechanism, means under the sole control of the user of the receiver for starting said mechanism, and contacts actuated by said mechanism to vary said circuit connections.

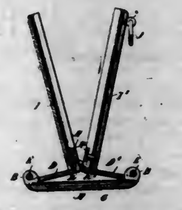
[Claims 6 to 10 not printed in the Gazette.]

1,018,436. RAIL-JOINT REGULATOR. ISAAC M. MYERS and OTTO ERWIN, Ellington, Mo. Filed June 6, 1911. Serial No. 631,563. (Cl. 104—16.)



A rail joint closure, comprising a connecting member constructed in separate longitudinally alined sections formed at their ends with heads, a longitudinal actuating screw extending between and working through the heads at the adjacent ends of the sections, transverse clamping bolts passing through the heads at the remote ends of the sections, and clamping members mounted on the bolts and depending therefrom, said clamping members being formed at their lower ends with enlargements of a size to engage the underside of the head, the side of the web and the base flange of a standard rail.

1,018,437. SAFETY-RAZOR. LOUIS NAHEMOW, New York, N. Y. Filed Jan. 20, 1911. Serial No. 603,632. (Cl. 30—12.)



1. A safety razor, comprising a clamping member, a head made in sections pivotally connected with the ends of the said clamping member, and a handled means connected with the said head sections for opening and closing the safety razor.

2. A safety razor comprising a sectional head, a handle made in sections connected with the inner ends of said head and extending at right angles therefrom, a clamping member, and hinges connecting the ends of the clamping member with the outer ends of said head sections.

3. A safety razor, comprising a clamping member, a head made in sections each pivotally connected at one

end with a corresponding end of the said clamping member, the said sections of the head each having an angular flange at the other end, a handle made in sections fixed on the angular flanges of said head sections, and means for locking the handle sections together.

4. A safety razor, comprising a clamping member, a head made in sections pivotally connected with the ends of the said clamping member, a handle for the said head, and interlocking means for locking the head members in closed position.

5. A safety razor, comprising a clamping member, a head made in sections pivotally connected with the ends of the said clamping member, a handle made in sections connected with the free ends of the said head sections, and a lug on one head member adapted to engage a recess in the other head member.

[Claims 6 to 10 not printed in the Gazette.]

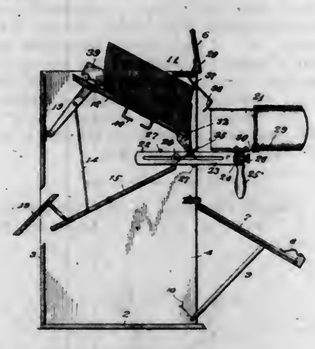
1,018,438. PROCESS FOR THE PRECIPITATION OF PRECIOUS METALS FROM CYANID SOLUTIONS. JAMES MILLAR NEIL, Toronto, Ontario, Canada, assignor to Alexander M. Hay, Toronto, Canada. Filed May 27, 1911. Serial No. 629,812. (Cl. 75—185.)

1. The improvement in the process of precipitating precious metals from a cyanid solution, consisting in adding a substance containing atomized lead to such solution.

2. The improvement in the process of precipitating precious metals from a cyanid solution, consisting in adding atomized lead and zinc dust to such solution.

3. The improvement in the process of precipitating precious metals from a cyanid solution, consisting in adding atomized lead and atomized zinc to such solution.

1,018,439. STEREOSCOPIC APPARATUS. HUGO NEWMAN, New York, N. Y. Filed May 3, 1911. Serial No. 624,865. (Cl. 88—31.)



1. A stereoscopic apparatus comprising a cabinet having a chute for the reception of cards to be viewed, and means for receiving the cards from the chute and for positioning them to be viewed.

2. A stereoscopic apparatus comprising a cabinet having a part thereof shiftable to form a wall of the cabinet or to form a card holding chute, and means for receiving the cards from the chute and for positioning them to be viewed.

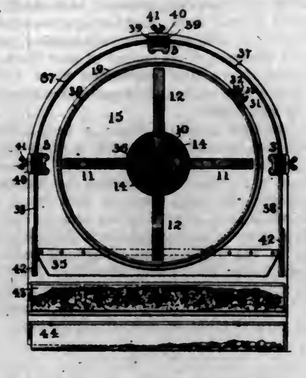
3. A stereoscopic apparatus comprising a cabinet having a part thereof shiftable to form a wall of the cabinet or to form a card holding chute, and means for receiving the cards from the chute and for positioning them to be viewed and successively directing the cards away from the chute.

4. A stereoscopic apparatus comprising a cabinet having a shiftable chute for the reception of cards to be viewed, and means for receiving the cards from the chute and for positioning them to be viewed.

5. A stereoscopic apparatus comprising a cabinet having the top thereof shiftable to form a card holding chute, and means for receiving the cards successively from the chute and for directing them away therefrom.

[Claims 6 to 30 not printed in the Gazette.]

1,018,440. DISINTEGRATOR. HENRY P. PAUL, Camden, N. J., assignor to Farr and Bailey Manufacturing Company, a Corporation of New Jersey. Filed Sept. 17, 1908. Serial No. 453,403. (Cl. 83—11.)



1. A screen drum plate for a disintegrator, consisting of a long flexible perforated plate having cross bars secured at a short distance from each end so as to leave portions of the plate beyond the cross bars, and clamping bolts connecting the cross bars for drawing them toward each other and causing the ends of the plate to overlap intermediate of the cross bars.

2. A screen drum plate for a disintegrator, consisting of a long flexible plate having cross bars secured at a short distance from each end so as to leave portions of the plate beyond the cross bars, and the body of said plate between the cross bars being uniformly perforated throughout its length and width with the exception of the surface adjacent to the side edges which is unperforated for a short distance from said edges, and clamping bolts for drawing the cross bars toward each other and causing the ends of the plate to overlap intermediate of said cross bars.

1,018,441. PROCESS OF TREATING BRAN AND A PRODUCT OBTAINED THEREBY. JOHN H. QUINE, Rochester, N. Y. Filed July 29, 1907. Serial No. 386,121. (Cl. 99—10.)

1. A concentrated extract of bran containing the constituents of bran soluble in water and dilute acid, and consisting chiefly of carbohydrates and albuminoids, and an edible salt formed from the solvent.

2. A concentrated extract of bran containing the constituents of bran soluble in dilute acid and consisting chiefly of carbohydrates and albuminoids and a salt formed from the solvent.

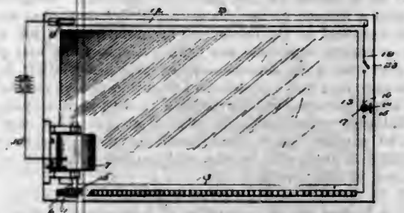
3. A concentrated extract of bran containing the constituents of bran soluble in dilute hydrochloric acid, and consisting chiefly of carbohydrates and albuminoids, and sodium chlorid formed from the solvent.

4. A concentrated extract of bran containing the constituents of bran soluble in water, dilute acid and dilute alkali, respectively, consisting chiefly of soluble carbohydrates and albuminoids and containing approximately 10 per cent of ash.

5. The process of extracting bran which consists in acting on it alternately with water, dilute acid and dilute alkali, neutralizing the reagents and concentrating the mixed extracts.

[Claims 6 to 13 not printed in the Gazette.]

1,018,442. CLOSING MEANS FOR SLIDING DOORS. RUDOLPH H. REH and YORKE BURGESS, Washington, D. C. Filed Apr. 15, 1910. Serial No. 555,636. (Cl. 39—94.)



1. In a closing mechanism of the class described, a sliding element, a rack secured to said element, an electric motor, means for conveying power from said motor to said rack for actuating the rack, and a direct circuit for the driving power of said motor including said rack.

2. In a closing mechanism of the class described, a movable element, a rack secured thereto, an electrical motor, means for conveying power from said motor to said rack, a contacting strip extending substantially the full length of said movable element, a switch and a circuit for said motor including a source of current, said rack, said contacting strip and said switch.

3. In a closing mechanism of the class described, a sliding element, an electrical prime mover, a metallic rack secured to said sliding element, means for connecting said prime mover with said rack for moving the rack and said sliding element when the electrical prime mover is energized, a contact strip extending for substantially the full length of said sliding element, a contact member engaging said strip when the sliding element is in its open position, means for electrically connecting said contact member with said prime mover, a source of electrical energy in the length of said connecting means, and means for completing the circuit between said rack and said contact strip.

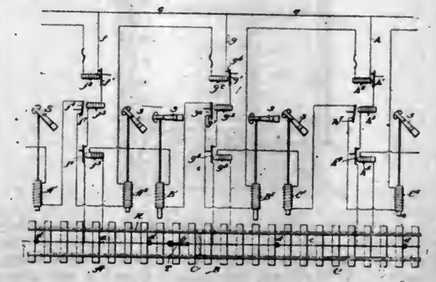
4. In a closing mechanism of the class described, a movable element, a rack extending along one edge thereof, a conductor strip secured to said movable element parallel with said rack for substantially the full length of the movable element, an electrical motor arranged with means for engaging said rack and moving the movable element when the motor is energized, means electrically connecting said conductor strip and said motor, a source of electrical energy in the length of said connecting means, means grounding said motor on said rack, means electrically connecting said contact strip and said rack at the end opposite said first-mentioned connecting means, and a manually controlled switch interposed in the last-mentioned connecting means.

5. In a closing mechanism of the class described, a movable element, a rack secured thereto, an electrical motor, a pinion carried by the shaft of said motor, means interposed between said pinion and said shaft permitting the pinion to run in a reverse direction on said shaft without moving the shaft, said means connecting the pinion to the shaft for delivering driving movement from the shaft to the pinion, a gear wheel meshing with said pinion and with said rack for moving said movable element to a closed position, and a circuit for said motor including a source of current.

[Claims 6 and 7 not printed in the Gazette.]

1,018,443. BLOCK-SIGNALING SYSTEM FOR ELECTRIC RAILWAYS. KENNE RICHARDS, Chicago, Ill. Filed Feb. 4, 1910. Serial No. 541,988. (Cl. 246—36.)

1. In a block-signal system, the combination with an electric railway having an electrically divided trolley-wire and a current supply feed-tap for each section of said trolley-wire, of a switch and an electrically actuated device included in each of said feed-taps, and an electrically actuated signal and its circuit for each block, said signal circuits each including an electrically controlled device for regulating the closure of said switch in an adjacent feed-tap, and also, said latter circuit including a switch controlled by said first mentioned electrically actuated device of another feed-tap.



2. In a block-signal system for electric railways, the combination with the trolley-wire and feed-tap of each block, of an electrically actuated signal and its circuit, a switch for opening or closing the signal circuit, electro-responsive mechanism included in the feed-tap of the block corresponding to said signal for controlling the operation of said switch, and electro-responsive mechanism, included in the signal circuit corresponding to each block, for controlling the continuity of the feed-tap of an adjacent block.

3. The combination with an electric railway having an electrically divided trolley-wire and a current supply feed-tap for each section of said trolley-wire, of electrically actuated mechanism included in each feed-tap, an electrically actuated signal and its circuit controlled by the said first mentioned mechanism of one feed-tap, an electrically actuated mechanism included in said signaling circuit for controlling the continuity of the circuit of the next succeeding feed-tap.

4. The combination with an electric railway having an electrically divided trolley-wire and a current supply feed-tap for each section of said trolley-wire, of two switches and an electrically actuated device included in each of said feed-taps, two electrically actuated signals and a circuit common to said signals, electrically controlled devices included in said signal circuit for regulating the closure of one of said switches in each of two non-adjacent feed-taps, and a switch in said signal circuit controlled by said first mentioned electrically actuated device of a feed-tap located between said two non-adjacent feed-taps.

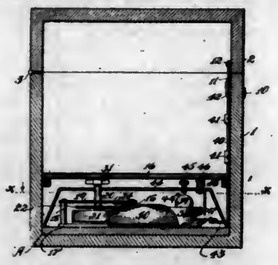
5. In a block-signal system for electric railways, the combination with the trolley-wire and feed-tap of each block, of two switches and an electrically actuated device included in each of said feed-taps, and a signaling circuit for each block, each signaling circuit including two electrically actuated signals, one guarding each end of said block, and two electrically actuated devices, each controlling a said switch in two different feed-taps, said signaling circuit also including a switch controlled by said first mentioned electrically actuated device of the corresponding feed-tap.

[Claim 6 not printed in the Gazette.]

1,018,444. SAFETY-RECEPTACLE. CHARLES F. RITCHEL, Bridgeport, Conn., assignor to The New York Safety Chest Company, a Corporation of New York. Filed Feb. 27, 1907. Serial No. 359,550. (Cl. 116—44.)

1. A receptacle having a lock and an alarm, means for operating said alarm normally in inoperative condition, means for rendering said operating means operative to sound said alarm when said receptacle is tipped in any direction from normal position, a portion of said receptacle being movable from outside said receptacle, a let-off device adapted to set off said alarm when said movable portion of said receptacle is moved, and means op-

erable by the locking of said receptacle for setting said let-off device ready for operation.



2. A portable closed box provided with a cover and a lock therefor, an alarm, means for operating said alarm, means for controlling said operating means adapted to set off said alarm when said receptacle is tipped in any direction from normal position, a let-off device arranged to set off said alarm when said cover is moved, and means operated by the locking of said receptacle for setting said let-off device in its operative position.

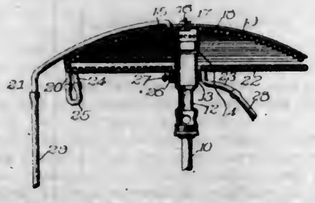
3. A device having an alarm inclosed therein, operating means therefor, controlling mechanism for said operating means comprising a gravity member moved by tipping said receptacle in any direction and adapted to then allow said operating means to operate said alarm, said controlling mechanism being incapable of stopping the action of said operating means even when said receptacle is restored to normal position, and a separate hand-controlled device for restoring the parts of said controlling mechanism to normal condition ready for a new operation.

4. A portable closed receptacle, an alarm, operating means therefor, a compartment in said receptacle containing means for controlling said operating means comprising a gravity member moved by tipping said receptacle in any direction and adapted to then allow said operating means to operate said alarm, and a hand-operated means operable from outside said compartment for restoring said controlling mechanism to a normal position ready for a new operation.

5. A portable closed receptacle, an alarm, operating means therefor, means for controlling said operating means entirely inclosed within said receptacle comprising a gravity member adapted to be moved and to render the operating means operative when the receptacle is tipped in any direction, a spring-actuated device mounted to move into the path of movement of said gravity member when moved, to prevent the return of the same to normal position when the receptacle is restored to normal position.

[Claims 6 to 24 not printed in the Gazette.]

1,018,445. HEATING DEVICE. ARVID THOMAS RONSTROM, Chicago, Ill. Filed Mar. 10, 1911. Serial No. 613,562. (Cl. 126—251.)

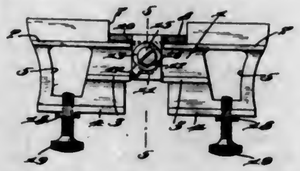


1. In a device of the character described, comprising in part a Bunsen burner consisting of a tube having separate openings at its lower end for admission of air and gas, and a readily separable cap, having a closed end and a perforate side wall for the outflow of combustible mixture, overlying and supported on the other end of said tube, a disk superposed on and secured to said cap, and a spirally coiled pipe underlying the disk and secured thereto.

2. In a device of the character described, comprising in part a Bunsen burner, consisting of a tube having separate openings at its lower end for admission of air and gas, a readily separable cap having a closed end and perforated side walls for the outflow of a combustible mixture overlying and supported on the other end of said tube, a disk superposed on and secured to said cap, a spirally coiled pipe underlying and secured to said disk, and a second spirally coiled pipe underlying the first coil, and adjustable vertically on the said burner structure with respect to the first said coil.

3. In a device of the character described, comprising in part a Bunsen burner consisting of a tube having separate openings at its lower end for admission of air and gas and outlet openings at its top for heated air and the products of combustion, a disk superposed on and secured to the upper end of said burner above said outlet openings, and a member (22) below said outlet openings inclosing a space between it and the upper disk into which said outlet openings discharge, said disk and member (22) being relatively close together adjacent their peripheries to leave a slight opening for the escape of the heated air whereby the only air entering said space is the dry heated air from said burner, said disk remaining therefore free from sweat.

1,018,446. COMBINED SAW JOINTER AND GAGE. HARRY K. SALMON, Philadelphia, Pa. Filed Oct. 10, 1910. Serial No. 586,180. (Cl. 76—46.)

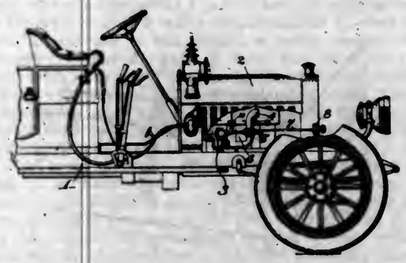


A device of the character described, comprising a body, three longitudinal flanges on one face of the body, said body and said flanges having recesses at their central portions, of a gage plate located in the central recess in the body, a tongue on said gage plate projecting through the recesses in two of said flanges, and having a longitudinal slot therein, a disk having a central opening, a screw projected through said opening in the disk, through the slot in the tongue, and screwed into the body, a stud fixed to the tongue, said disk having a notch in its face to receive said stud, and an operating arm integral with said disk, whereby the movement of said disk serves to adjust said gage plate, said disk located entirely between two of said flanges, substantially as described.

1,018,447. VALVE MECHANISM. PEIRCE D. SCHENCK, Dayton, Ohio. Filed Apr. 23, 1907. Serial No. 369,744. (Cl. 123—119.)

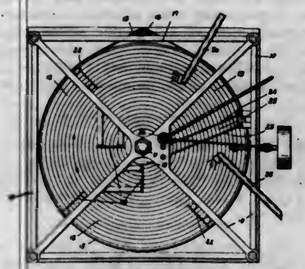
1. The combination with a carbureter, of a valve for controlling the air inlet, yielding means for holding the valve open, means for closing the valve and retaining means coöperating with such last means for holding the valve shut against the tendency of the yielding means to open such valve, and adapted to be disengaged by the vibration incident to the operation of the motor with which the carbureter is used so that the valve may open

2. The combination with a carbureter, of an air inlet for the carbureter, a valve for controlling the air inlet, yielding means for holding the valve open, means for closing the valve provided with an engaging projection on its upper side, and an engaging member for coöperating with the projection when the valve is closed, the contact between the projection and engaging member being such that the parts will be automatically disengaged by the vibration incident to the operation of the motor with which the carbureter is used to permit the yielding means to open the valve.



3. The combination with a carbureter, of an air inlet for the carbureter, a valve therefor, yielding means for holding the valve open, and a rod for closing the valve provided with a catch adapted to be disengaged by the vibration incident to the operation of the motor with which the carbureter is used for temporarily holding the valve closed.

1,018,448. AMALGAMATOR. JAMES G. SCOTT, Morgantown, Ind. Filed Apr. 23, 1910. Serial No. 557,158. (Cl. 83—67.)

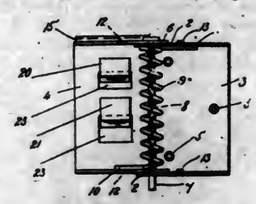


1. In an amalgamator, the combination of a rotary table, means for supplying amalgamating material thereto, means for rotating said table, a belt engaging the circumference of said table to form a wall therefor, a support over which portions of the belt will be successively carried as the table rotates, said support lying beyond the circumference of the table, a dam arranged to cooperate with said table to cause a movement of the amalgam transversely of the table, and a pump arranged above the table in position to receive the amalgam displaced by the dam.

2. In an amalgamator, the combination of a rotary table, means for supplying amalgamating material thereto, means for rotating said table, a belt engaging the circumference of said table to form a wall therefor, a support over which portions of the belt will be successively carried as the table rotates, said support lying beyond the circumference of the table, and a dam arranged to cooperate with said table to cause a movement of the amalgam transversely of the table.

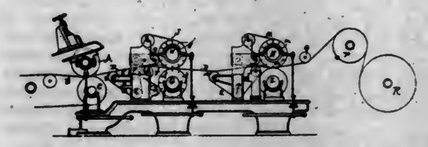
1,018,449. HINGE. FRED N. SHARP, Ossian, Ind. Filed Nov. 17, 1911. Serial No. 660,832. (Cl. 16—25.)

1. In a hinge, the combination, with two pivoted spring-pressed hinge-plates, one hinge plate being normally arranged out of line with the other hinge-plate and having holes in it and having also a rearwardly projecting flange which bears against the edge of the other hinged-plate, of a plate provided with hooks which are partially punched out from it and arranged with their points projecting in the same direction, and which engage slidably with the hinge-plate having holes in it, said plate being normally arranged in the same plane as the hinge-plate to which it is not directly connected and being slidable against the said flange on the other hinge-plate.



2. In a hinge, the combination, with a hinge-plate adapted to be secured to a door, of a spring-pressed hinge-plate pivoted to the said hinge-plate and provided with holes and a guide flange, and a plate, for attachment to the door-jamb, arranged to bear against the said flange and provided with hooks which have their points projecting in the same direction and with which engage slidably with the hinge-plate having holes in it.

1,018,450. PAPER-MAKING MACHINERY. WILLIAM E. SHEEHAN, Albany, N. Y. Filed Sept. 7, 1909. Serial No. 516,435. (Cl. 92—49.)



1. In a paper making machine, a carrier comprising a felt; rollers suitably mounted, over which said felt passes; an apron adapted to receive the paper from the carrier and conduct it between two rolls, one of which is perforated; aprons passing around portions of each of said rolls; solid rollers for supporting each of said aprons respectively; squeeze rollers mounted in connection with each of said aprons and said rolls, so arranged and connected up that the web of paper will have the water pressed from it by the rolls and the drainage delivered at the ends of said perforated roll.

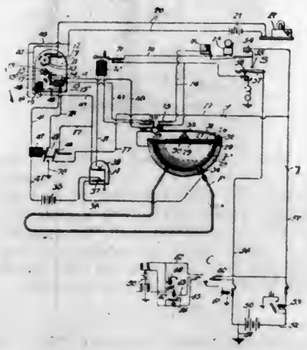
2. In a paper making machine, a carrier comprising a felt; rollers suitably mounted, over which said felt passes; an apron adapted to receive the paper from the carrier and conduct it between two perforated rolls, one above the other; aprons passing around portions of each of said perforated rolls; solid rollers for supporting each of said aprons, respectively; squeeze rollers mounted in connection with each of said aprons and said perforated rolls, so arranged and connected up that the web of paper will have the water pressed from it by the perforated rolls and the drainage delivered at the ends of said perforated rolls.

1,018,451. AUTOMATIC FIRE-PROTECTION SIGNAL SYSTEM. JOHN E. SHEPHERD, Chicago, Ill., assignor to Automatic Fire Protection Company, New York, N. Y., a Corporation of Maine. Filed Jan. 20, 1908. Serial No. 411,827. (Cl. 178—160.)

1. In a fire protection signaling system, a telegraph system comprising a signal transmitter, an auxiliary system embodying means for conditioning said transmitter for operation, and a source of current supply therefor, a normally independent source of current supply, and means for automatically connecting said independent source of current supply to control the transmitter operation upon the occurrence of certain conditions in the auxiliary system.

2. In a fire protection signaling system, a telegraph system comprising a signal transmitter, an auxiliary

system embodying means for conditioning the said transmitter for operation, and a source of current supply therefor, a telephone system comprising a source of current supply, and means for automatically connecting said telephone source of current supply to affect the transmitter operation upon the occurrence of certain conditions in the auxiliary system.



3. In a fire protection signaling system, a potentially active signal transmitter, a signaling circuit therefor, controlling means for said transmitter comprising an electromagnet adapted to restrain the transmitter from operation when energized, a normally energized local circuit therefor, an independent source of current supply, and means responsive to break of the normally energized local circuit for connecting said second source of current supply to energize the transmitter-restraining electromagnet.

4. In a fire protection signaling system, a potentially active transmitter, a slidable circuit therefor, controlling means for said transmitter, arranged normally to restrain it from operation, a telephone system comprising a source of current supply, and means for connecting said source of current supply of the telephone system to control the transmitter-controlling electroresponsive device.

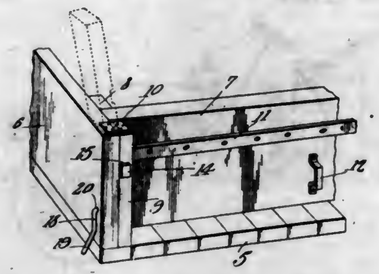
5. In a fire protection signaling system, a potentially active transmitter, a suitable signaling circuit therefor, controlling means for said transmitter, an auxiliary circuit including said controlling means, a telephone system including a source of current supply, and means operable upon rupture of the auxiliary circuit for initiating a signal in the telephone system, and connecting the telephone source of supply to control the transmitter-controlling electroresponsive device.

[Claims 6 to 15 not printed in the Gazette.]

1,018,452. EMERGENCY PACKAGE AND SPLINT. SAMUEL G. SLAUGHTER, Lynchburg, Va. Filed May 10, 1910. Serial No. 560,515. (Cl. 128—52.)

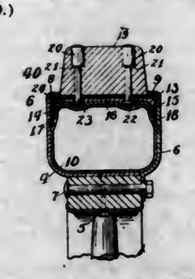
An emergency splint composed of two or more transversely curved sections slidably and separably connected one with another at their lateral extremities, and formed with longitudinal slots at various localities adapted to receive securing bandages, substantially as hereinbefore set forth.

1,018,453. END-GATE FASTENING. THOMAS T. SMITH, Lots Creek township, Ringgold county, Iowa. Filed May 19, 1910. Serial No. 562,275. (Cl. 21—21.)



A structure of the character described, including the side-boards of a wagon-body having fixed cleats therein, an end-gate engaging said cleats, a cleat hinged at its upper end to the upper edge of each side-board to adapt it to be swung vertically, a leaf of the hinge connection for said cleat having a slot therein, and means for holding the hinged cleats in effective position with respect to said end-gate, comprising a substantially U-shaped latch, one of said hinged cleats and the opposed side-board being provided with registering openings, said latch having its horizontal portion received within and adapted to pivot upon the bottom walls of said openings, the arms of said latch being adapted to subject said cleat and the wagon-body to a clamping action, and a slidable plate having a headed finger received within the slot of said cleat hinge-connection, said slidable plate being adapted to partially close the opening in the wagon body.

1,018,454. TIRE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1910. Serial No. 553,104. (Cl. 152—10.)



1. In a vehicle wheel, the combination with the wheel felly, of an annular casing of channel section fixed to said felly, each wall of which casing has a laterally extending flange; an inflatable air tube carried within said casing; a flexible armor, comprising a series of circumferentially disposed and overlapping metal plates carried by the casing within the flanges, the lateral edges of said plates being bent at right angles to form flanges to have sliding engagement with the inner walls of the casing; circumferentially-disposed blocks, one block for each of the metal plates; and shouldered studs passing through the blocks and plates to secure them together; said armor and tread adapted to have radial movement into the casing.

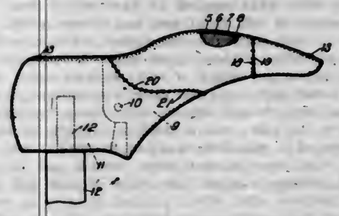
2. The combination in a pneumatic tire, of an annular U-shaped metal casing each wall of which has a laterally-extending flange; an inflatable air tube carried within said casing; a flexible metal band, comprising a series of overlapping metal plates having flanges at their lateral edges and carried by said annular casing to have radial movement therein within the flanges; blocks of less length than the plates; a retaining ring to which the plates and blocks are secured; and a sheathing interposed between the air tube and retaining ring.

3. In a vehicle wheel, the combination with the wheel felly, of a rim comprising a pair of annular sections fixed to the felly to form a casing channel-shaped in cross section; an air tube in said casing; a flexible leather band extending around the said air tube, said band being of such width as to partly lap around the air tube; a flexible armor, comprising a series of overlapping metal plates; a tread; and studs to secure the plates and tread to the leather band; said armor with the tread adapted to have radial movement in the rim.

4. In a vehicle wheel, the combination with the wheel felly, of an annular section angular in cross section secured to the periphery of the felly, and an annular section secured to one side of the felly, said sections forming an annular casing channel shaped in cross section, each section of which has a laterally projecting flange; an air tube in said casing; a flexible armor comprising a series of circumferentially disposed and overlapping metal plates carried within the rim to have radial movement therein, the lateral edges of said plates being bent to form flanges to have sliding engagement with the inner walls of the casing, with portions of the flanges cut away to permit of the overlapping of the plates; a tread comprising circumferentially disposed rectangular blocks, one block for each plate but of less width and length than said plates; a flexible retaining band interposed between the armor and the air tube, said band being of such width as to partly lap around the air tube; and studs to secure the metal plates and blocks to the retaining band.

5. In a vehicle wheel, the combination with the wheel felly, of a rim comprising a pair of annular sheet metal sections fixed to the felly to form an annular casing of channel section; an inflatable air tube in said casing; a flexible leather band extending partly around the air tube; a flexible armor comprising a series of overlapping metal plates having flanges at their lateral edges with portions of said flanges cut away to permit of the overlapping of said plates; a sectional tread comprising circumferentially disposed blocks; and studs to secure the plates and tread sections to the leather band.

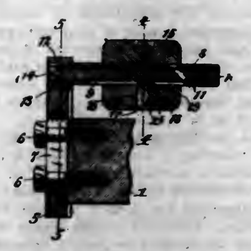
1,018,455. METHOD OF MANUFACTURING SHOES. NICOLA VECCHIO, East Boston, Mass. Filed Sept. 22, 1911. Serial No. 650,687. (Cl. 12—145.)



1. The herein described method of manufacturing shoes which consists in stretching a piece of sheet material over a last and fastening the edges of said sheet material to an inner sole on the bottom of said last, then stretching another piece of sheet material over said last and fastening the edges thereof to said inner sole, then fastening an outer sole to said inner sole and a heel to said outer sole and subsequently cutting an opening in said pieces of sheet material and removing said last through said opening.

2. The herein described method of manufacturing shoes which consists in stretching a piece of sheet material over a last and fastening the edges of said sheet material to an inner sole on the bottom of said last, then attaching a cord to said piece of sheet material disposed thereon in predetermined curves, then stretching another piece of sheet material over said last and fastening the edges thereof to said inner sole, then fastening an outer sole to said inner sole and a heel to said outer sole and subsequently cutting an opening in said pieces of sheet material and removing said last through said opening.

1,018,456. SCALE-BALANCING DEVICE. CHARLES A. VIDINGHOFF, Buffalo, N. Y. Filed Sept. 25, 1911. Serial No. 651,041. (Cl. 73—39.)



1. A scale comprising a beam, a tubular ball rod mounted on the beam and provided with a longitudinal slot, a balance ball slidable lengthwise on the exterior of said rod, a movable shifting member arranged within said rod, and means connecting said shifting member and balance ball and arranged within said slot.

2. A scale comprising a beam, a tubular ball rod mounted horizontally on the beam and provided with a longitudinal slot, a balance ball slidable lengthwise on the exterior of the rod, a screw arranged on the interior of the rod and capable of turning but held against moving lengthwise, and a key arranged in said slot and connected with said ball and provided with a screw thread which engages with the threads of said screw.

3. A scale comprising a beam, a tubular ball rod mounted horizontally on the beam and provided with a longitudinal slot, a balance ball slidable lengthwise on the exterior of the rod and provided with a laterally extending opening transversely in line with the slot of the ball rod, a screw arranged lengthwise on the interior of said rod and capable of turning but incapable of moving lengthwise therein, and a key having a wide outer part secured in the lateral opening of the balance ball and a narrow inner part which extends through the longitudinal slot of said rod and is provided with a sectional screw thread which engages with the thread of said screw.

1,018,457. ROLL. FREDERICK A. VIESER, Camden, N. J. Filed June 16, 1911. Serial No. 633,478. (Cl. 64—17.)

1. A roll having a circular recess in its end, a collar positioned in said recess, and a wedge ring of appreciably greater diameter than the collar having its inner face beveled, and forced against the roll, pressing the wood of the roll inwardly against the collar, said collar having annular grooves on its outer face and into which the material of the roll is forced by said ring, substantially as described.

2. A roll having an internal and an external groove at its end, a collar fitting within the internal groove and having its outer face rough, and a wedge ring having its inner face beveled and forced into the external groove pressing the wood between said ring and said collar, into tight engagement with said collar, substantially as described.

1,018,458. PROCESS FOR THE PREPARATION OF STONE SLABS. THEODOR VOGT, Heiligenberg, Germany. Filed Nov. 2, 1910. Serial No. 590,287. (Cl. 25—154.)

1. Process for the preparation of stone slabs, which consists in inserting a mass of sand and cement in a suitable frame and embedding a network of interwoven bars in said mass, then embedding stones in said mass in such a manner that interstices are formed between them, and then pouring cement liquid over the upper surface of the body so as to fill in said interstices.

2. Process for the preparation of stone slabs, which consists in inserting a cement mass in a suitable frame and embedding a network of interwoven bars in said mass, then embedding stones in said mass in such a manner that interstices are formed between them, then applying a greasy substance to the upper surface of the stones which is adapted to resist cement liquid, and finally filling in said interstices between the stones with cement liquid.

3. Process for the preparation of stone slabs, which consists in inserting a layer consisting of sand and cement in a suitable frame, then placing a wide-meshed network of interwoven bars upon said layer, then placing a layer of pure cement over said first named layer and said interwoven bars, then embedding stones in said layer of cement in such a manner that interstices are formed between them, and then pouring cement liquid over the upper surface of the body so as to fill in said interstices.

4. Process for the preparation of stone slabs, which consists in inserting a layer consisting of sand and cement in a suitable frame, then placing a wide-meshed network of interwoven bars upon said layer, then placing a layer of pure cement over said first named layer and said interwoven bars, then embedding stones in said layer of cement in such a manner that interstices are formed between them, then applying a greasy substance to the upper surfaces of the stones which is adapted to resist cement liquid, and finally filling in said interstices between the stones with cement liquid.

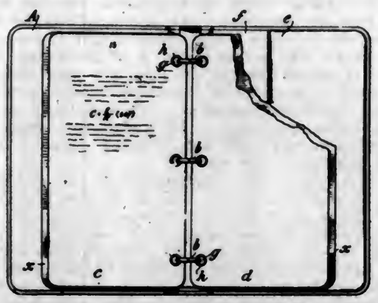
5. Process for the preparation of stone slabs, which consists in inserting a layer consisting of sand and cement in a suitable frame, then placing a wide-meshed network of interwoven bars upon said layer, then placing a layer of pure cement over said first named layer and said interwoven bars, then embedding pieces of granite in said layer of cement in such a manner that interstices are formed between them, then applying a greasy substance consisting of a solution of "lette" to the upper surfaces of the pieces of granite, and finally filling in said interstices with cement liquid.

1,018,459. BOOK AND LEAVES THEREFOR. JOHN WALKER, Jr., London, England. Filed Mar. 24, 1911. Serial No. 616,766. (Cl. 129—1.)

1. A book comprising a cover, binding-means capable of being readily fastened and unfastened, separate sheets having printed matter thereon and separate blank sheets interspersed appropriately among said printed sheets, said sheets being provided with binding perforations through which said binding means pass, said perforations having metallic eyelets therein, the bent-over portions of the eyelets being embedded in the faces of the sheets so as to lie substantially flush therewith.

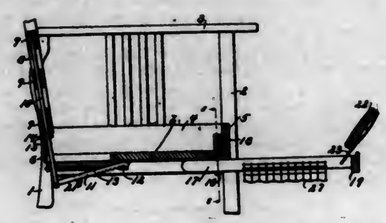
2. A sheet of paper for loose leaf binders having binding-perforations therein and metallic eyelets or linings in said perforations, the bent-over edges of said eyelets being indented in the faces of the sheets so as to lie substantially flush therewith.

3. A sheet of paper for loose leaf binders having binding-perforations therein, and metallic eyelets or linings in said perforations, the bent-over edges of said eyelets being indented in the faces of the sheets so as to lie substantially flush therewith, said eyelets being made of very thin sheet metal.



4. A book comprising a cover, binding means capable of being readily fastened and unfastened, and sheets provided with binding perforations through which said binding means pass, said perforations having metallic eyelets therein, the bent-over portions of the eyelets being embedded in the faces of the sheets so as to lie substantially flush therewith.

1,018,460. ADJUSTABLE CHAIR. JERSOLD F. WALTON, Sturgis, Mich. Filed Oct. 31, 1910. Serial No. 589,885. (Cl. 155—9.)

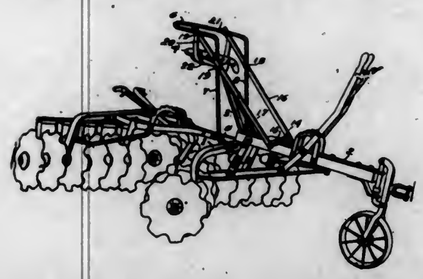


1. In an adjustable chair, the combination with the frame comprising horizontally-disposed bottom, side, front and rear frame pieces; oppositely-facing channel-shaped slide ways secured by their upper arms to the lower edges of said front and rear frame pieces; corner braces in said frame; double-angled brackets secured by the upper arms of their upper angles to said frame side pieces, the lower angles of said brackets being disposed beneath said slide ways and their intermediate parts being disposed beneath said braces; slide bars arranged in said ways; a foot-rest; and a bail-like support for said foot rest pivoted to said slide bars and disposed to rest on said front cross piece thereof when erected and to collapse onto a suitable support, the sides of said bail support being provided with offsets adapted to serve as stops for said foot rest, said foot-rest being pivotally secured to the central portion of said bail, as described.

2. In an adjustable chair, the combination with the frame comprising horizontally-disposed bottom, side, front and rear frame pieces; oppositely-facing channel-shaped slide ways secured by their upper arms to the lower edges of said front and rear frame pieces; corner braces in said frame; double-angled brackets secured by the upper arms of their upper angles to said frame side pieces, the lower angles of said brackets being disposed beneath said slide ways and their intermediate parts being disposed beneath said braces; slide bars arranged in said ways; and a foot-rest carried by said bars and pivoted to collapse between said bars, as described.

3. In an adjustable chair, the combination with the frame comprising horizontally-disposed bottom, side, front and rear frame pieces; oppositely-facing channel-shaped slide ways secured beneath said frame; slide bars arranged in said ways; a foot-rest; and a bail-like support for said foot-rest pivoted to said slide bars and disposed to rest on said front cross piece thereof when erected and to collapse onto a suitable support, the side of said bail support being provided with offsets adapted to serve as stops for said foot-rest, said foot-rest being pivotally secured to the central portion of said bail, as described.

1,018,461. SAFETY ATTACHMENT FOR AGRICULTURAL IMPLEMENTS OR THE LIKE. FREDERICK C. WARNE, Mansfield, Ohio, assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Apr. 1, 1911. Serial No. 618,486. (Cl. 56—24.)



1. A safety device for agricultural implements or the like comprising a guard provided with supporting portions adapted to be attached to the frame of the machine, a cross-bar, braces attached to each end of the cross-bar and to the guard and its supporting portions.

2. A safety device for agricultural implements or the like comprising a guard provided with supporting portions adapted to be attached to the frame of the machine, a cross-bar, braces attached to each end of the cross-bar and to the guard and its supporting portions, a looped bar suspended from said braces.

3. A safety attachment for agricultural implements or the like comprising a guard partially surrounding the driver's seat having supporting portions rigidly attached to the frame of the machine, braces secured to the guard, its supporting portions, and the frame of the machine.

4. A safety attachment for agricultural implements or the like comprising a guard partially surrounding the driver's seat having supporting portions rigidly attached to the frame of the machine, braces secured to the guard and its supporting portions, a looped support suspended from the guard beneath the bottom of the driver's seat.

5. A safety attachment for the drivers of agricultural implements or the like comprising means to protect the driver from falling from his seat, means to support said protecting means and a means to support the driver in case of any defects in the seat or its supporting mechanism.

[Claims 6 to 8 not printed in the Gazette.]

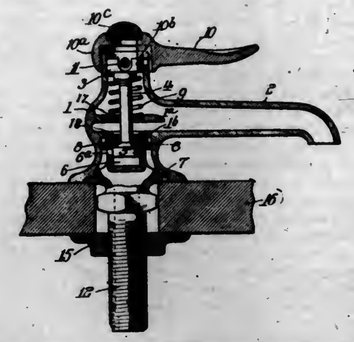
1,018,462. FOOD COMPOUND. ADAM DIXON WARNER, Los Angeles, Cal. Filed June 14, 1911. Serial No. 633,139. (Cl. 99—11.)

1. A food composition adapted for immediate eating comprising a dried mass of legumes, lentils, cereals, fruits and nuts, previously macerated, and intimately commingled, substantially as described.

2. A self preserving food composition adapted for immediate eating comprising an amalgamated dried mass of cooked legumes, lentils and cereals, uncooked fruits containing sugars, the extract of boiled citrus fruits, macerated nuts, intimately commingled and evaporated, put up in liquid form in air-tight packages, or compressed into a solid form, substantially as described.

3. A self-preserving food composition adapted for immediate eating comprising an amalgamated mass of legumes, lentils and cereals, which have been separately cooked at a boiling temperature, and thereafter commingled, uncooked fruits, the extract of boiled and strained whole citrus fruits, macerated nuts, intimately commingled and evaporated at a temperature of approximately 200° Fahr. and compressed into a compact form, substantially as described.

1,018,463. BASIN-COCK. EARL G. WATROUS, Chicago, Ill. Filed May 21, 1907. Serial No. 374,841. (Cl. 137—4.)



1. In a basin-cock, the combination, with a casing or body having a tubular upper end, a base flange and a forwardly projecting spout, of a valve controlling the water passage leading through the bottom of the valve casing to the spout, and a combined handle and cap-piece comprising a cup shaped portion fitting over and surrounding and inclosing the tubular upper end of the valve casing and pivoted thereto, and a forwardly projecting handle portion, and means intermediate said combined cap-piece and handle and the valve for causing the depression of the handle to open the valve and permit the passage of water through the valve body to the spout, substantially as described.

2. In a basin-cock, the combination, with a casing or body having a tubular upper portion, a base flange and a forwardly projecting spout, formed integral with each other and provided with a waterway leading through the bottom of the casing to the spout, of a valve controlling said waterway, a piston fitting within the tubular upper end of the valve casing and a valve stem depending from said piston and carrying the valve, a coiled spring surrounding the valve stem and exerting an upward pressure upon said piston, and a combined cap-piece and handle comprising a cup shaped portion fitting over and surrounding and inclosing the tubular upper end of the valve casing and pivoted thereto, and adapted when rocked upon its pivot to depress the piston and valve and open the latter, and a forwardly projecting handle portion for operating said parts, substantially as described.

3. In a basin-cock, the combination, with a casing or body having a tubular upper end, a base flange and a forwardly projecting spout, with a waterway leading through the bottom of the casing to the spout, of a piston fitting within the tubular upper end of the casing, a valve stem depending therefrom, a valve carried by said stem and controlling the waterway, a horizontal deflector located within the casing above the valve and having the valve stem passing through it, a coiled spring surrounding the valve stem between the deflector and piston and exerting an upward pressure upon the latter and the valve, and a combined cap-piece and handle comprising a cup shaped portion surrounding and inclosing the tubular upper end of the valve casing and pivoted thereto, and a forwardly projecting handle portion, said cap-piece and handle coöperating with the piston and valve to open

the latter when the handle is depressed, substantially as described.

4. In a basin cock and the like, the combination, with the casing or body of the cock, of a valve therein for controlling the supply of water, a piston arranged within the casing and connected with the valve, a combined handle and cap consisting of a forwardly projecting handle portion and an inner cup-shaped portion fitting over and completely encircling the upper portion of the casing and pivoted thereto, said cup-shaped portion having an inwardly directed lug arranged to depress the piston to open the valve when the handle is operated substantially as described.

5. In a basin cock, the combination, with the casing or body 1 having the tubular upper end provided with a notch or recess in its forward side, a base flange, a forwardly projecting spout 2, an internal horizontal deflector plate 1^a, all formed integral with each other, of the piston 3 fitting within the tubular end of the casing, the valve stem 4 depending from said piston, the valve 5 carried by said stem and controlling the waterway leading through the bottom of the casing to the spout 2, the coiled spring 9 surrounding the stem 4 between the piston 3 and deflector plate 1^a, and the combined cap-piece and handle comprising the cup shaped portion 10^a surrounding and inclosing the tubular upper end of the valve casing 1 and pivoted thereto by the pivot 11 and having the inwardly projecting lug 10^b passing through the notch or recess in the tubular upper end of the casing and coöperating with the piston 3, and the forwardly projecting handle 10, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

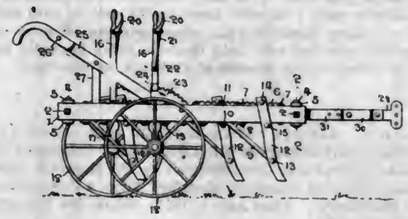
1,018,464. TEARING-UP STRIP FOR TIN-FOIL PACKAGES. WILHELM WIESE, Bayenthal, Cologne, Germany. Filed Dec. 19, 1910. Serial No. 598,176. (Cl. 206—46.)

1. The combination with a praline, of a tearing-up strip more or less encompassing said praline and having a wider end to serve as an anchor and teeth along the edges up to a point at a distance from the other end, and a tin-foil strip in which said praline is wrapped up together with said tearing-up strip the smooth end of which projects outwardly, the teeth of said tearing-up strip being adapted to take hold of the tin-foil and to tear it up on being pulled.

2. The combination with a praline, of a tearing-up paper strip more or less encompassing said praline and having a wider end to serve as an anchor and teeth along the edges up to a point at a distance from the other end, a tin-foil strip in which said praline is wrapped up together with said tearing-up paper strip the smooth end of which projects outwardly, the teeth of said tearing-up paper strip being adapted to take hold of the tin-foil and to tear it up on being pulled.

1,018,465. PLOW. HAYWOOD WILLIAMS, Altheimer, Ark. Filed July 1, 1911. Serial No. 636,397. (Cl. 97—34.)

A plow comprising parallel beams, braces having recesses in the vertical portion thereof and secured to the opposite inner ends of the outer beams, two-part adjustable brace straps having their inner ends received within said recesses, said braces having their opposite ends bent inwardly at right angles to the vertical portion, straps above and below said beams, means passing through the beams, bracing straps and straps for holding the beams in spaced relation, additional straps secured to the central beam and having a clevis pivoted to the outer ends thereof, said bracing straps having their outer ends secured to said clevis near the outer end thereof, and



standards adjustably secured to said beams in staggered relation.

1,018,466. IMPRESSION-HOLDER. WILLARD F. WILSON, West Hoboken, N. J. Filed July 29, 1911. Serial No. 641,189. (Cl. 32—6.)

1. In an impression holder, two side plates for supporting between them material in which an impression is to be made, and a bowed connector for both of said plates and arranged at one end thereof.

2. In an impression holder, two side plates for supporting between them material in which an impression is to be made, a bowed connector for both of said plates and arranged at one end thereof, and a detachable connection between said bowed connector and one of said plates.

3. In an impression holder, two side plates for supporting between them material in which an impression is to be made, a bowed connector for both of said plates and arranged at one end thereof, and a detachable connection between said bowed connector and both of said plates.

4. In an impression holder, two side plates for supporting between them material in which an impression is to be made, a connector for both of said plates and arranged at one end thereof, and a supporting shoulder extending horizontally in one of said plates for supporting a sheet of wax or the like.

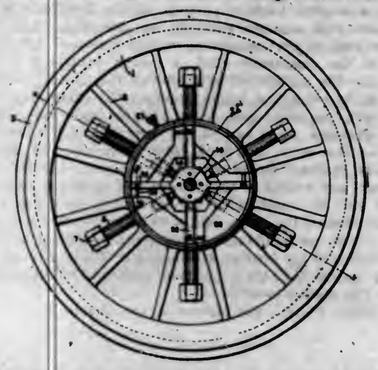
5. In an impression holder, two side plates for supporting between them material in which an impression is to be made, a connector for both of said plates and arranged at one end thereof, and a supporting shoulder extending horizontally in one of said plates for supporting a sheet of wax or the like, said supporting shoulder being formed by a slot in said plate.

[Claims 6 and 7 not printed in the Gazette.]

1,018,467. AUTOMOBILE-WHEEL. ALFRED R. WYLIE and JAMES G. WRIGHT, Big Spring, Tex. Filed Oct. 11, 1909. Serial No. 522,121. (Cl. 152—28.)

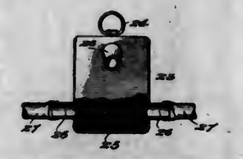
In an automobile wheel, the combination with the rim and spokes, thereof, of a hollow hub rigid with the inner extremities of the spokes, and adapted to contain compressed air, a plurality of air tight cylinders rigid with said hub and extending radially therethrough, valve openings being provided into each cylinder from the hub interior, a hollow plunger mounted in each cylinder, a spring coiled in each cylinder, actuating the plunger toward the wheel center, an axle adapted to communicate hollow plunger, a spring actuating said inner plunger toward the wheel center, an axle adapted to communicate rotation to the wheel, a collar rigidly mounted upon said

axle, against which the inner extremities of the inner plungers tend to bear, rotatable means interposed between each plunger and said collar, spiders mounted upon said shaft at each side of the hub adapted to turn with



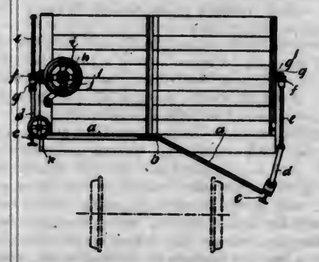
the shaft, projections upon the hub adapted to be engaged by said spiders in their rotation and rotatable means for lessening the friction between the sides of the hubs and the sides of said spiders.

1,018,468. WATER-MIXER. ROUPEN K. YACOOBIAN, Philadelphia, Pa. Filed Mar. 16, 1910. Serial No. 549,647. (Cl. 4—24.)



A water mixer adapted to be supported between hot and cold water faucets said mixer comprising a relatively large closed box-like structure, water inlets for said mixer, connections adapted for detachable application between said water inlets and the spigots of said faucets and a valveless discharge spout carried by the mixer at a point above the said water inlets but below the faucet tops the discharge point of said spout also being above the mixer inlets.

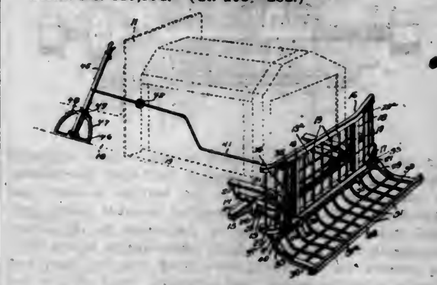
1,018,469. DUMPING-WAGON. MATASHIRO YOSHINO, Dairen, Manchuria, and CHARLES NOEL EDGE, Shanghai, China; said Edge assignor to said Yoshino. Filed July 7, 1910. Serial No. 570,849. (Cl. 105—14.)



1. In dumping wagons, the discharge apparatus comprising hinged doors in the floor connected by hinged links to threaded rods which pass through driven nuts secured in bearings on the sides of the wagon, the nuts being driven by means carried by side shafts rotatable from hand wheels or like means.

2. In dumping cars, the combination with a pivotally mounted door, of a threaded rod operatively connected to the free end of said door, a nut for said rod retained against longitudinal movement therewith, and means for actuating said nut for opening or closing the said door.

1,018,470. FENDER FOR MOTOR-VEHICLES. WILLIAM YOUNG, South Bellingham, Wash. Filed Apr. 28, 1911. Serial No. 623,994. (Cl. 105—252.)



1. A fender including a buffer frame, straps extending rearwardly from the buffer frame and adapted to be pivoted to the frame of a vehicle, braces connected to the buffer frame and adapted to be slidably connected to the frame of the vehicle, springs operating to maintain said braces and the buffer frame connected therewith yieldably in forward position, a receiving frame swingingly connected to the lower edge of the buffer frame, an arm mounted to swing upon said buffer frame, a push rod connected to said arm and to said receiving frame, and means for actuating said arm.

2. A fender comprising a buffer frame, a receiving frame hinged to the lower edge of the buffer frame, an arm pivoted at one end to the buffer frame, a link pivoted at its ends respectively to said arm and to the receiving frame rearwardly of its hinges, and operating means connected to the arm for swinging the same.

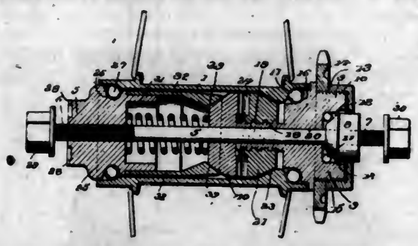
3. A fender including a buffer frame, rearwardly extending straps carried by the buffer frame for attachment to the springs of a vehicle, rearwardly extending braces carried at the lower end of said buffer frame for attachment to the axle of the vehicle, an adjustable receiving frame hinged upon the lower end of the buffer frame, and operating means located upon the vehicle adjacent to the seat of the operator and having connection with the receiving frame for adjusting the same.

4. A fender including a buffer frame, rearwardly extending straps carried by the buffer frame for attachment to the frame of a motor vehicle, depending arms carried by the buffer frame, braces hinged upon the lower ends of the arms and extending back for engagement beneath the frame of the motor vehicle, a receiving frame hinged upon the buffer frame, a connecting rod having connection with the receiving frame and extending back at one side of the motor vehicle to the operator's seat, and manually operated means attached to the connecting rod for moving the same.

1,018,471. COASTER-BRAKE. GUY ZIMMERMAN, Versailles, Ill. Filed Sept. 14, 1911. Serial No. 649,242. (Cl. 208—57.)

1. In a coaster brake, a fixed spindle, a head rotatable upon the spindle, a bearing member fixed upon the spindle, an expansible shell fitted to the bearing member and fixed with relation thereto, an expanding cone fitting into the shell and slidable upon the spindle and arranged, when slid in the direction of the shell, to expand the same, the head being provided with an exteriorly threaded sleeve extension, a clutch cone threaded thereon and having a clutch face and arranged upon its inner side to clutch with the expanding cone, and a hub surrounding

the shell and clutch and expansible cones and rotatable between the head and the bearing member and provided interiorly with a clutch surface for coöperating with the clutch face of the clutch-cone.



2. In a coaster brake, a fixed spindle, a head rotatable upon the spindle, a bearing member fixed upon the spindle, an expansible sleeve fitted to the bearing member and formed with a notch, the bearing member being provided with a lug engaging in the notch in the sleeve whereby to hold the sleeve fixed with relation to the bearing member, an expansible cone fitted into the shell and slidable upon the spindle and arranged, when slid in the direction of the shell to expand the same, the said expanding cone being provided with a lug and the expansible shell having a notch receiving the lug whereby the cone is held against rotation with relation to the shell, the head being provided with an exteriorly threaded sleeve extension, a clutch cone threaded thereon and having a clutch face and arranged, upon its inner side to clutch with the expanding cone, and a hub surrounding the shell and the clutch and expanding cones and rotatable between the head and the bearing member and provided interiorly with a clutch surface for coöperating with the clutch face of the clutch-cone.

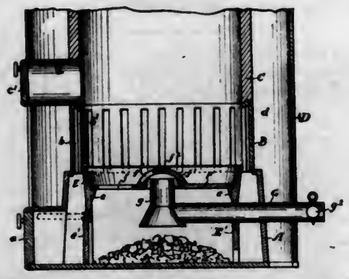
3. In a coaster brake, a fixed spindle, a head rotatable upon the spindle, a bearing member fixed upon the spindle, an expansible shell fitted to the bearing member and fixed with relation thereto, an expanding cone fitting into the shell and slidable upon the spindle, and arranged when slid in the direction of the shell, to expand the same, the head being provided wtih an exteriorly threaded sleeve extension, a clutch cone threaded thereon and having a clutch face and arranged upon its inner side to clutch with the expanding cone, the clutch cone having a serrated clutch face, and a hub surrounding the shell and the clutch and expanding cones and rotatable between the head and the bearing member and provided interiorly with a clutch surface for coöperation with the serrated clutch face of the clutch cone.

4. In a coaster brake. a fixed spindle, a head rotatable upon the spindle, a bearing member fixed upon the spindle, an expansible shell fitted to the bearing member and fixed with relation thereto, the said shell having a normal tendency to contract, an expansible cone fitting in the shell and slidable upon the spindle and arranged, when slid in the direction of the shell to expand the same, the said expansible cone having its portion fitting within the shell of the conical cone and the shell having an internal conical surface portion coöperating with the said portion of the cone, the tendency of the shell to contact serving to normally tend to force the expanding cone from the shell, the head being provided with an exteriorly threaded sleeve extension, a clutch cone threaded thereon and having a clutch face and arranged upon its inner side to clutch with the expanding cone, a spring arranged within the shell and bearing at one end against the bearing member and at its other end against the expanding cone, and a hub surrounding the shell and the clutch and expanding cones and rotatable between the head and the bearing member and provided interiorly with a clutch surface for coöperating with the clutch face of the clutch-cone.

5. In a coaster brake, a fixed spindle, a head rotatable upon the spindle, a bearing member fixed upon the spindle and having an inwardly projecting cylindrical extension, an expansible shell fitted at one end upon the said extension and exteriorly tapered in the direction of its other end and provided at its latter end exteriorly with a conical surface portion, means holding the expansible shell against rotation, an expanding cone having a conical portion fitting within the last mentioned end of the expansible shell, a spring extending at one end into the cylindrical extension of the bearing member and at its other end bearing against the expanding cone, the said expanding cone being slidable upon the spindle and arranged, when slid in the direction of the shell, to expand the same, the head being provided with an exteriorly threaded sleeve extension, a clutch cone threaded thereon and having a clutch face and arranged upon its inner side to clutch with the expanding cone and when moved toward the same, and a hub surrounding the shell and clutch and expanding cones and rotatable between the head and the bearing member, the said hub being provided interiorly with a surface portion for coöperation with the clutch member.

[Claims 6 and 7 not printed in the Gazette.]

1,018,472. HEATING APPARATUS. WILLIAM ANDREW, Cincinnati, Ohio. Filed Oct. 27, 1909. Serial No. 524,972. (Cl. 126—112.)

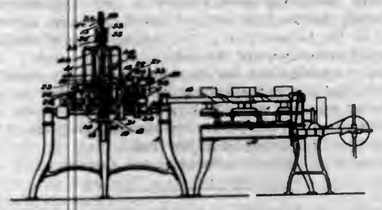


1. A hot-air furnace or stove embodying a closed base, constituting the ash pit; a fire pot surmounting the same and provided with a circumferential plurality of vertical air-feed passages; a grate; a lower extension of the fire pot below the grate, constituting an annular partition within the ash pit and spaced from the walls thereof so as to form therewith an annular chamber with which chamber the said air feed passages communicate, and said extension having openings therein; and a regulated air conduit extending through said partition from the outside of the furnace or stove casing through the base wall and its annular partition and delivering the sole air supply for combustion into the inclosed central space beneath the grate.

2. A hot-air furnace or stove embodying a closed base, constituting the ash pit; a fire pot surmounting the same and provided with a circumferential plurality of vertical air-feed passages; a grate having a raised center; a lower extension of the fire pot below the grate, constituting an annular partition within the ash pit, and spaced from the walls thereof so as to form therewith an annular chamber with which chamber the said air feed passages communicate, and said extension having regulated openings therein; and a regulated air conduit extending through said partition from the outside of the furnace or stove casing; and provided with an open ended vertical terminal section delivering the sole air-supply for combustion centrally beneath the raised center of the grate.

3. In a hot air furnace or heating stove, the combination of an ash pit base having an inner annular partition spaced from the walls thereof to form an annular space and said partition having regulated openings therein; a fire pot resting upon said base and connected with said annular partition as an upward extension thereof, provided with exterior air channels communicating with the interior through vertical slits, and said channels open below to the annular space partitioned in the base and a pipe connecting the inner inclosed space of the ash pit with the outer air for the sole supply of air for combustion directly to the grate, in the first instance, and thence, secondarily, through the openings of the annular partition to the vertical air channels of the fire pot.

1,018,473. MACHINE FOR MAKING PAPER CARTRIDGES OR SHELLS. HENRY AUCHU, Emporium, Pa. Filed July 28, 1910. Serial No. 574,406. (Cl. 93—36.)



1. In a machine for making shells, the combination of a shell holder adapted to receive a continuous tube, a severing device adapted to automatically cut off the tube to define the shell, and automatically acting means for thereafter closing the end of the shell.

2. In a machine for making shells, the combination of a movable shell holder adapted to receive a continuous tube when in a given position, a severing device adapted to cut off the tube to define the shell, and automatically acting means for closing the end of the shell after the shell holder has been moved to another position.

3. In a machine for making shells, the combination of a movable shell holder adapted to receive a continuous tube, means for automatically moving said shell holder at predetermined times, an automatically acting severing device adapted to cut off the tube at predetermined times to define the shell, and means for automatically closing the end of the shell after the shell holder has been moved to another position.

4. In a machine for making shells, the combination with a shell holder adapted to receive a continuous tube, an automatic severing device adapted to cut off the tube to define the shell, automatic means adapted to close the end of the shell, and automatic means adapted to thereafter blow the finished shell from the shell holder.

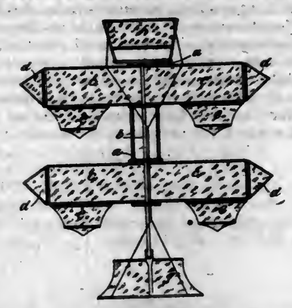
5. In a machine for making shells, the combination with a plurality of movable mandrels adapted for the reception of tubular shells, slipped thereover of means for successively moving said mandrels step by step, means for feeding tubular shells to said mandrels in succession, automatic means adapted to close the ends of the shells at predetermined times as the mandrels are successively brought into coöperative relation thereto, and means for automatically blowing the shells from the mandrels at predetermined times after the ends of the shells have been closed.

[Claims 6 to 10 not printed in the Gazette.]

1,018,474. AEROPLANE. WILLIAM JOHN HASTINGS BEACH, Wellington, New Zealand. Filed Aug. 5, 1910. Serial No. 575,769. (Cl. 244—14.)

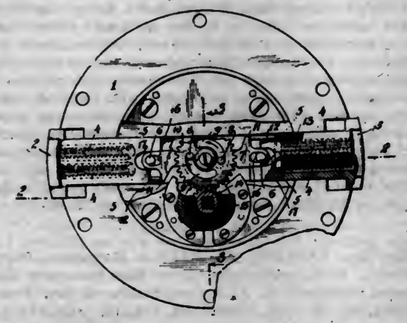
1. In aeroplanes, a frame composed of a number of triangular members arranged vertically parallel and having horizontal bottom bases and connected together by tie bars extending along their apexes and bases, two main planes secured across the upper part of such frame, one behind the other a subsidiary short plane secured across the bottom of the frame beneath each main plane, level with said bases and a separate propeller for each of said main planes, substantially as specified.

2. In aeroplanes, a frame composed of a number of triangular members arranged vertically parallel and connected together by tie bars extending along their apexes and bases, two main planes secured across the upper part of such frame one behind the other, laterally extending hinged wings or ailerons on both ends of each



main plane, a pair of rearwardly extending hinged wings on each plane, springs for normally holding such wings at a downward incline, and a separate propeller for each plane, substantially as specified.

1,018,475. LOCK. ORLANDO W. BEDELL, New York, N. Y., assignor to Ely-Norris Safe Company, Perth Amboy, N. J., a Corporation of New Jersey. Filed Nov. 30, 1910. Serial No. 594,840. (Cl. 109—4.)



1. The combination of a locking-member movable to locking and unlocking positions, an operating device for moving said member from locking to unlocking position, and means actuated by movement of said member from locking position in the direction in which it is moved to unlock the door but not into unlocking position for preventing continued movement of the member into unlocking position, substantially as set forth.

2. The combination of a locking-member movable to locking and unlocking positions, an operating device for moving said member from locking to unlocking position, and means actuated by movement of said member from locking position in the direction in which it is moved to unlock the door but not into unlocking position for preventing operation of said operating device, substantially as set forth.

3. The combination of a locking-member movable to locking and unlocking positions, a rotary operating device for moving said member from locking to unlocking position, and means actuated by movement of said member while in locking position unaccompanied by rotation of said operating device for preventing movement of the member to unlocking position, substantially as set forth.

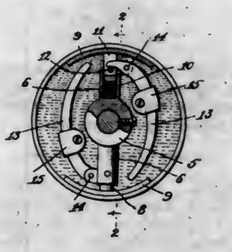
4. The combination of a locking-member movable to locking and unlocking positions, a casting, spring for moving the member to locking position, an operating device for moving the member to unlocking position, and means actuated by movement of the member from lock-

ing position against the tension of the casting spring toward but not into unlocking position by force applied to the member otherwise than through said operating device for positively preventing movement of the member to unlocking position, substantially as set forth.

5. The combination of a movable locking-member, a rotary actuating device therefor, a link connected to said device and said member and normally free to turn relatively to said member, and means for precluding turning movement of said link relatively to said member under predetermined conditions, substantially as set forth.

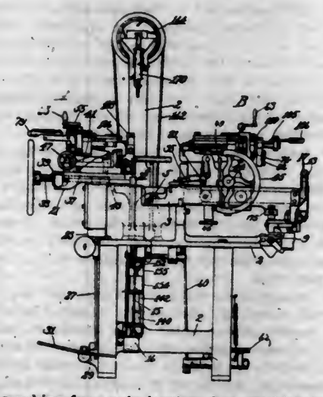
[Claims 6 and 7 not printed in the Gazette.]

1,018,476. CLUTCH FOR SPEED-REGULATORS. HERBERT L. BOSTATER, Chicago, Ill. Filed Dec. 1, 1910, Serial No. 595,063. Renewed Jan. 15, 1912. Serial No. 671,292. (Cl. 74—45.)



A clutch embodying a driving and a driven member, a closed casing mounted to rotate upon said driven member, a clutch member secured to said driven member and comprising a hub, oppositely disposed sleeves having oppositely extending ears at their outer ends secured to said hub, clutch shoes provided with slotted stems which project into said sleeves, pins extending across said slots, and springs within said sleeves for forcing said clutch shoes into engagement with said casing, and levers pivoted intermediate their length to said ears, one end of each of which is adapted to project into the slots of the clutch stems and to engage the pins therein.

1,018,477. LASTING-MACHINE. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 26, 1907. Serial No. 399,313. (Cl. 12—14.)



1. A machine for use in lasting shoes and boots comprising lasting devices for acting upon opposite ends of the last constructed and arranged for relative movement about a center approximately at the intersection of the median line of the heel part and the median line of the fore part of the last.

2. In a lasting machine, a stationary end-lasting mechanism having its median line in the median line of the machine, and an opposed end-lasting mechanism movable laterally about a center located at or near the point of intersection of the median lines of the fore part and the heel part of the shoe upon which said mechanisms are to operate.

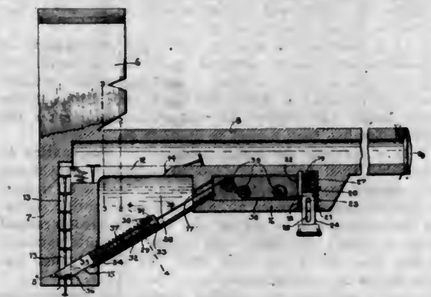
3. In a machine for use in lasting shoes the combination with means for supporting the last, of end-lasting mechanism arranged for relative lateral movement about a center approximately at the intersection of the median lines of the heel part and the fore part of the last.

4. In a machine for use in lasting shoes the combination with toe-lasting mechanism, of a heel support and a heel-lasting mechanism movable about a center approximately at the intersection of the median lines of the heel part and the fore part of the last.

5. In a machine for use in lasting shoes the combination with toe-lasting mechanism, of a support for the heel portion of the last movable laterally about a center approximately at the intersection of the median lines of the heel part and the fore part of the last.

[Claims 6 to 116 not printed in the Gazette.]

1,018,478. MAGAZINE NAILING-TOOL. ISAIAH J. BROWN, Jersey City, N. J. Filed Feb. 14, 1911. Serial No. 608,507. (Cl. 1—45.)



1. A device of the character described comprising a head having a longitudinally extending passage formed therethrough, said head being also provided with a transverse passageway communicating with said longitudinal passage, and with a seat formed in alinement with said transversely extending passage, a hollow handle extending from said head and communicating with said longitudinal passage, a housing formed between said head and handle, the bottom of said housing being in alinement with said transversely extending passageway, a plunger passing through said transversely extending passageway, and into said seat, means in said housing for normally holding said plunger within said seat, and means for drawing said plunger into said housing to form a clear passage through said head.

2. A device of the character described comprising a head having a longitudinally extending passageway and a transversely extending passageway intersecting said longitudinally extending passageway, a plunger slidably mounted in said transverse passage and extending across said longitudinal passage, a hollow handle extending from said head and communicating with said longitudinal passage, a housing formed upon said handle, a sleeve mounted in said housing at right angles to said handle, said sleeve being provided with a longitudinally extending slot and with a pin mounted in its wall and extending into its interior, a plunger mounted in said sleeve and provided with a longitudinally extending slot through which said pin passes, a spring mounted in said sleeve beneath said plunger and a cable connected with said plunger at one end and at the other end with said first-mentioned plunger, whereby said first mentioned plunger may be drawn through said transverse passage.

1,018,479. PROCESS OF RECOVERING SULFUR FROM GAS. KARL BURKHEISER, Hamburg, Germany. Filed July 26, 1910. Serial No. 573,928. (Cl. 23—10.)

1. Process of recovering sulfur from gas, which consists in heating a mass of hydrated iron oxid to a temperature sufficient only to produce the red hydrate modification thereof, and passing the gases containing sulfureted hydrogen over said modified mass at ordinary temperatures.

2. Process of recovering sulfur from gas, which consists in heating hydrated iron oxid to a temperature sufficient only to produce the red hydrate modification thereof, passing the gases containing sulfureted hydrogen over said modified mass at ordinary temperatures, passing oxygen through said mass alternately with said gases, and withdrawing the heat of reaction produced during the passage of the oxygen.

3. Process of recovering sulfur from gas, which consists in heating hydrated iron oxid to a temperature sufficient only to produce the red hydrate modification thereof, passing the gases containing sulfureted hydrogen over said modified mass at ordinary temperatures, passing oxygen through the mass alternately with said gases, withdrawing the heat of reaction produced during the passage of the oxygen through said mass, lixiviating the mass and reheating the same.

4. Process of recovering sulfur from gas, which consists in heating hydrated iron oxid to a temperature sufficient only to produce the red hydrate modification thereof, passing the gases containing sulfureted hydrogen over said modified mass, passing oxygen through said mass in an upward direction, alternately with said gases and withdrawing the heat of reaction produced during the passage of the oxygen.

5. Process of recovering sulfur from gas which consists in heating bog-iron ore by igniting the peaty matter therein with a limited air supply to produce the red hydrate modification thereof, and passing the gases containing sulfureted hydrogen over said modified mass at ordinary temperatures.

[Claim 6 not printed in the Gazette.]

1,018,480. ELECTRIC-LAMP SOCKET. WALTER G. CLARK, New York, N. Y. Filed June 27, 1910. Serial No. 569,147. (Cl. 173—349.)

1. An electric lamp socket comprising relatively movable insulating base members provided with coöperating switch contacts and normally locked with the switch contacts open, and means for automatically unlocking said base members when the lamp bulb is inserted in the socket.

2. An electric lamp socket comprising relatively revoluble insulating base members provided with coöperating switch contacts and normally locked from rotation with the switch contacts open, and means for automatically unlocking said base members when the lamp bulb is inserted in the socket.

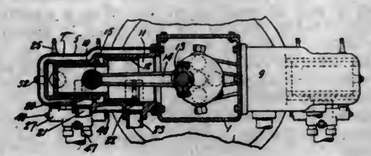
3. An electric lamp socket comprising relatively movable insulating base members provided with coöperating switch contacts and normally locked with the switch contacts open, one member having a cap for the reception of a lamp, and means controlled by the lamp bulb for automatically unlocking said base members when a lamp is secured in the cap, to permit one member to be moved relatively to the other and make contact at the switch contacts.

4. An electric lamp socket comprising relatively revoluble insulating base members provided with coöperating switch contacts and normally locked from rotation, with the switch contacts open, one member having a cap for the reception of a lamp, and means controlled by the insertion of the lamp in the cap for unlocking the base members and permitting one member to be rotated relatively to the other to make contact at the switch contacts.

5. An electric lamp socket comprising centrally pivoted relatively revoluble base members, one member having a peripheral series of sloping teeth formed with back stops, alternate teeth having contact surfaces, and the other member having a contact tongue adapted to coöperate with said teeth, means for locking said members together, and means for automatically unlocking said base members when the lamp bulb is inserted in the socket.

[Claims 6 to 10 not printed in the Gazette.]

1,018,481. GAS-ENGINE. HERBERT COOPER, Brooklyn, N. Y. Filed Dec. 2, 1910. Serial No. 595,201. (Cl. 123—92.)



1. The combination with a pair of cylinders each having a scavenging port adjacent its head, of a pair of rigidly connected valves controlling the ports, and connections between the valve mechanism and cylinders whereby pressure within one cylinder operates the valve mechanism to open the port of the other cylinder.

2. The combination with a pair of cylinders each having a scavenging port adjacent its head, of a casing, a pair of rigidly connected valves supported by the casing and controlling the ports, and connections between the casing and cylinders whereby pressure within one cylinder operates the valve mechanism to open the port of the other cylinder.

3. The combination with a pair of cylinders each having a scavenging port adjacent its head, of a casing spaced from the cylinders, a pair of rigidly connected valves supported by the casing and controlling the ports, and connections between the casing and cylinders whereby pressure within one cylinder operates the valve mechanism to open the port of the other cylinder.

4. The combination with a pair of cylinders each having a scavenging port adjacent its head, of a casing below the cylinders, a pair of rigidly connected valves supported by the casing and controlling the ports, and connections between the casing and cylinders whereby pressure within one cylinder operates the valve mechanism to open the port of the other cylinder.

5. The combination with a pair of cylinders each having a scavenging port adjacent its head, of a casing, a pair of rigidly connected valves within the casing, and connections between the casing and cylinders whereby pressure within one cylinder operates the valve mechanism to open the port of the other cylinder.

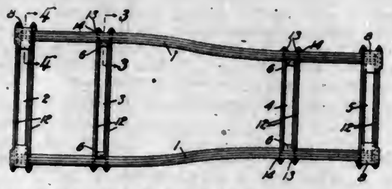
[Claims 6 to 25 not printed in the Gazette.]

1,018,482. VEHICLE-FRAME. HERBERT COOPER, Brooklyn, N. Y. Filed Dec. 30, 1910. Serial No. 600,150. (Cl. 21—90.)

1. As a new manufacture, a flexible automobile frame having a pair of longitudinal side sills, a plurality of transverse beams spacing the sills apart, a plurality of loose sockets interposed between the ends of the beams and sides of the sills, and a series of tie-rods engaging both sills to hold the ends of the beams in the sockets and the sockets against the sides of the sills but permitting a limited relative movement of the sills and beams.

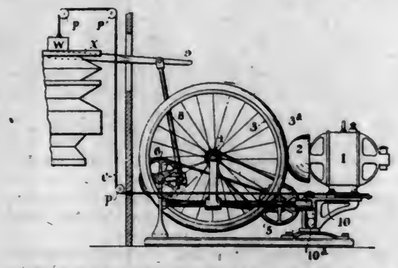
2. As a new manufacture, a flexible automobile frame having a pair of longitudinal side sills lying in the same horizontal planes, a plurality of transverse beams spacing

the sills apart and lying in the same planes as the sills, a plurality of loose sockets interposed between the ends of the beams and the sides of the sills, and a series of tie-rods engaging both sills to hold the ends of the beams in the sockets and the sockets against the sides of the sills but permitting a limited relative movement of the sills and beams.



3. As a new manufacture, a flexible automobile frame having a pair of longitudinal side sills, a plurality of transverse beams spacing the sills apart, a plurality of loose sockets interposed between the ends of the beams and the sides of the sills, a part of said sockets having lugs adapted to support springs, and a series of tie-rods engaging both sills to hold the ends of the beams in the sockets and the sockets against the sides of the sills but permitting a limited relative movement of the beams and sills.

1,018,483. APPARATUS FOR BLOWING PIPE-ORGANS, HARMONIUMS, OR LIKE MUSICAL INSTRUMENTS. LOUIS BERTRAM COUSANS, Lincoln, England. Filed Jan. 3, 1910. Serial No. 536,142. (Cl. 230—24.)



1. In apparatus for blowing pipe organs, harmoniums and like musical instruments, the combination of an electric motor rotating at constant speed and so mounted as to swivel, a frictional driving head of part spherical formation mounted on the spindle of said motor, a driven wheel provided with a resilient peripheral surface adapted to engage said driving head, a bellows and a bellows reservoir, means whereby said driven member is coupled to and operates the bellows and means whereby the rise and fall of the bellows reservoir is adapted to swivel the motor for the purpose of adjusting the position of the driving head to vary the speed of the driven member for the purpose set forth.

2. In apparatus for blowing pipe organs, harmoniums and like musical instruments, the combination of an electric motor rotating at constant speed and so mounted as to swivel, a frictional driving head of part spherical formation mounted on the spindle of said motor, a driven wheel provided with a pneumatic periphery, a bellows and a bellows reservoir, means whereby said driven member is coupled to and operates the bellows and means whereby the rise and fall of the bellows reservoir is adapted to swivel the motor for the purpose of adjusting the position of the driving head to vary the speed of the driven member for the purpose set forth.

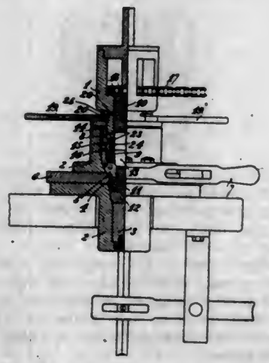
3. In apparatus for blowing pipe organs, harmoniums and like musical instruments, the combination of an electric motor rotating at constant speed and so mounted as to swivel, a frictional driving head of part spherical formation mounted on the spindle of said motor, a driven wheel provided with a convex resilient peripheral surface adapted to engage said driving head, a bellows and a bellows reservoir, means whereby said driven member is coupled to and operates the bellows and means whereby the rise and fall of the bellows reservoir is adapted to swivel the motor for the purpose of adjusting the position of the driving head to vary the speed of the driven member for the purpose set forth.

4. In an apparatus for blowing pipe organs, harmoniums and like musical instruments, the combination of a frame comprising end posts or uprights, bars between said uprights, a motor support swiveled on one of the end uprights, an electric constant speed rotary motor mounted on said support, a frictional driving head mounted on the spindle of said motor, a driven wheel adapted to engage said driving-head, provided with a resilient peripheral surface, a support for said driven-wheel adjustably mounted on the bars of the frame, a bellows and a bellows reservoir, means whereby said driven-member is coupled to and operates the bellows and means whereby the rise and fall of the bellows reservoir is adapted to rotate said swiveled motor-support, carrying with it the motor and driving-head, to vary the speed of the driven member.

5. In an apparatus for blowing pipe organs, harmoniums and like musical instruments, the combination of a rotary motor rotating at constant speed and so mounted as to swivel, a frictional driving head mounted on the spindle of said motor, a driven wheel provided with a resilient surface adapted to engage said driving head, the spindle on which said driving head is mounted being out of alinement with said driven wheel, a bellows and a bellows reservoir, means whereby said driven-member is coupled to and operates the bellows and means whereby the rise and fall of the bellows reservoir is adapted to swivel the motor for the purpose of adjusting the position of the driving head to vary the speed of the driven member.

[Claim 6 not printed in the Gazette.]

1,018,484. PROCESS AND APPARATUS FOR MAKING INSULATORS. JENS PETER DAHL-JENSEN, Copenhagen, Denmark, assignor to Aktieselskabet Bing & Gröndahls Parcellaensfabrik, Copenhagen, Denmark. Filed Feb. 24, 1911. Serial No. 610,555. (Cl. 25—3.)



1. The production of insulators having a plurality of petticoats, which comprises pressing a suitable mass between dies, releasing by rotary movement that die portion between the petticoats, then lifting said die portion from contact therewith and subsequently removing other portions of the dies.

2. A mold of the character described, comprising a matrix and a plunger, said plunger having as one of its elements a movable portion to form the opposite walls of adjacent petticoats, means to first rotate and then lift said portion, prior to removal of the other portions of the plunger.

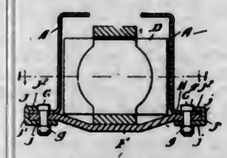
3. A mold of the character described, comprising a matrix and a plunger, said plunger having as one of its elements a movable portion to form the opposite walls of adjacent petticoats, handles for said movable portion and means to guide said handles and portion first in a rotary direction and subsequently in a spiral upward direction.

4. A mold of the character described, comprising a matrix and a plunger having a head-piece with a groove therein, one face of which is flat and the other helical, a member movable therein to form the opposite walls of adjacent petticoats, means on said member to permit the rotation of the member with respect to the head piece and to give said member a helical movement.

5. A mold of the character described, comprising a sectional matrix having one or more sections composed of a plurality of parts whose interior molding surfaces are of less diameter than the parts below them, a plunger comprising a head-piece, a central rotatable member, a wheel thereon, means to rotate the wheel member at will, an element rotatable and upwardly movable with respect to the head-piece at will, and guides to guide the element in its rotary movement and in its upward movement.

[Claim 6 not printed in the Gazette.]

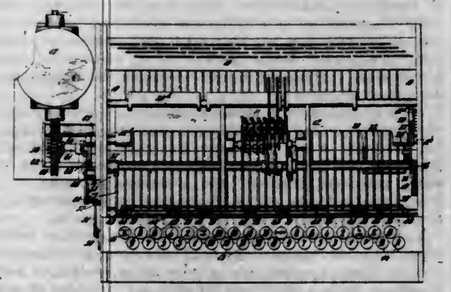
1,018,485. SAFETY-SUPPORT FOR DRAFT-RIGGING. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed June 28, 1911. Serial No. 635,772. (Cl. 213—42.)



1. In a railway car draft rigging supported from flanged sills by a bolted saddle, the combination with the saddle and sill, of a clip pierced for the passage of the bolt and extended to embrace both the saddle and the sill flange, substantially as specified.

2. In a railway car draft rigging supported from flanged sills by a bolted saddle, the combination with the saddle and sill, of a clip pierced for the passage of the bolt and extended to embrace both the saddle and the sill flange, the upper member being brought into contact with the bolt head, substantially as specified.

1,018,486. CASH-REGISTER. OSCAR F. DAVISSON, Dayton, Ohio, administrator of Thomas Carney, deceased, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Original application filed Dec. 22, 1902, Serial No. 136,165. Divided and this application filed June 16, 1908. Serial No. 438,808. (Cl. 172—239.)



1. In a machine of the class described, the combination with an operating mechanism, of an electric motor for driving same, a circuit closer for said motor, means for operating said circuit closer at will, means for destroying the control of said operating means over said circuit closer by its own operation, and devices controlled by said motor and actuated when a complete operation thereof has been given for again giving said operating means control of said circuit closer.

2. In a cash register, the combination with an operating mechanism, of an electric motor connected thereto, a circuit closer and means for operating the circuit closer constructed to automatically disengage therefrom after operating said circuit closer, and devices connected to the operating mechanism for returning the circuit closer to its normal position.

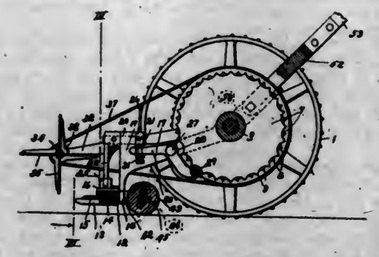
3. In a machine of the class described, the combination with an operating mechanism, of an electric motor connected to the same, a circuit closer for said motor, and means for operating said circuit closer, said means having provisions for disengaging itself from said circuit closer to allow independent movement of said circuit closer.

4. In a machine of the class described, the combination with an operating mechanism, of an electric motor for driving same, a circuit closer for said motor, means for operating said circuit closer, means connected to said motor for withdrawing said circuit closer from closing position, and means for disconnecting said circuit closer operating means for the purpose of preventing a second operation of the same during an operation of the machine.

5. In a machine of the class described, the combination with an operating mechanism, of an electric motor for driving same, a circuit closer, manipulative means for operating said circuit closer and normally engaging said closer, and means actuated by the movement of said manipulative means for breaking said engagement.

[Claims 6 to 30 not printed in the Gazette.]

1,018,487. LAWN-MOWER. CHARLES W. FELKER, Kansas City, Kans., assignor of one-half to Arthur Felker, Clarence, Mo. Filed Sept. 7, 1911. Serial No. 648,169. (Cl. 56—19.)



1. A lawn-mower comprising ground wheels, a shaft operatively mounted in the ground wheels, disks fixed to the shaft and having serrated peripheries, the serrations in the separate disks being in staggered relation, a reciprocatory sickle mounted transversely of the ground wheels, a pivoted rocking bracket, means operatively connecting the rocking bracket with the sickle, and pivoted cranks respectively actuated by said disks and respectively engaging opposite ends of the rocking bracket.

2. A lawn-mower comprising ground wheels, a shaft revolubly mounted in the ground wheels, spaced disks fixed on the shaft, an arm mounted on the shaft and projecting forwardly therefrom, a second shaft journaled in said arm and extending perpendicularly thereto, a reciprocatory sickle having a socketed fixture, a rocker bar fixed on the second shaft and having a bearing in the fixture, a bracket fixed on said second shaft and projecting laterally therefrom, and pivoted cranks having their ends engaging the disks and opposite ends of the bracket respectively.

3. A lawn-mower comprising ground wheels, a shaft revolubly mounted in the ground wheels, spaced disks

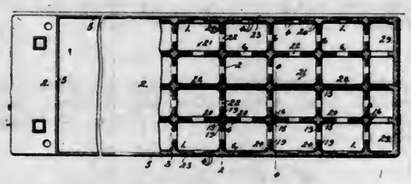
fixed on the shaft, an arm mounted on the shaft and projecting forwardly therefrom, a second shaft journaled in said arm and extending perpendicularly thereto, a reciprocatory sickle having a socketed fixture, a rocker bar fixed on the second shaft and having a bearing in the fixture, a bracket fixed on said second shaft and projecting laterally therefrom, and cranks pivotally mounted on opposite sides of the second shaft and having their ends engaging the disks and bracket respectively, and having contact members in the ends of said cranks for adjusting the cranks relative to the bracket.

4. A lawn-mower comprising running gear, bars mounted on the running gear, a cutting mechanism carried by said bars, arms adjustably mounted on the running gear, a fan carried by said arms, said bars having slotted portions, and bolts carried by said bars and projected through the slotted portions of the arms, for the purpose set forth.

5. A lawn mower having ground wheels, a shaft revolubly mounted in the ground wheels, a reciprocatory sickle, means including a rocking member for actuating the sickle, pivoted members having adjustable means for alternately engaging the rocking member to oscillate the rocking member, and means actuated by said shaft for actuating said pivoted members.

[Claims 6 to 8 not printed in the Gazette.]

1,018,488. CONCRETE SCOW. JOHN THOMAS GORSUCH, Baltimore, Md. Filed Sept. 6, 1911. Serial No. 647,867. (Cl. 114—65.)



1. A boat of the class described, comprising a mesh "hull form" embedded in concrete, a deck over the hull, a set of longitudinal bottom and deck beams, a set of transverse bottom and deck beams, the respective longitudinal and transverse beams crossing one another, vertical posts between the bottom and deck beams at their respective places of crossing, and a solid bulk head of concrete extending from bow to stern in substantially the same direction as the central vertical longitudinal plane of the scow and cross rods passing centrally through said posts in planes radial thereto and bulk head webs embedding said rods and joining said posts and beams.

2. A boat of the class described, comprising a "hull form" embedded in concrete, a deck over the hull, a set of longitudinal bottom and deck beams, a set of transverse bottom and deck beams, the respective longitudinal and transverse beams crossing one another, vertical posts between the bottom and deck beams at their respective places of crossing, and a solid bulk head of concrete extending from bow to stern and coincident with the central vertical longitudinal plane of the scow, each of said beams and posts having embedded therein a set of straight, reinforcing rods which run parallel to the longitudinal dimension of the respective beam or post and cross rods passing centrally through said posts in planes radial thereto and bulk head webs embedding said rods and joining said posts and beams.

3. A boat of the class described, comprising a mesh "hull form" embedded in concrete, a deck over the hull, a set of longitudinal bottom and deck beams, a set of transverse bottom and deck beams, the respective longitudinal and transverse beams crossing one another, vertical posts between the bottom and deck beams at their respective places of crossing, and a continuous bulk head of concrete extending from bow to stern, each of said beams and posts having embedded therein a set of straight reinforcing rods which run parallel to the longitudinal dimension of the respective beam or post, and said beams also including sets of "bent" reinforcing rods, each having a central section running in the horizontal plane of the adjacent straight rods and having other portions "bent" at an angle and terminating in bent over ends to form anchors.

4. A boat of the class described, comprising a mesh "hull form" embedded in concrete, a deck over the hull, a set of longitudinal bottom and deck beams, a set of transverse bottom and deck beams, the respective longitudinal and transverse beams crossing one another, vertical posts between the bottom and deck beams at their respective places of crossing, and a continuous bulk head of concrete extending from bow to stern, each of said beams and posts having embedded therein a set of straight reinforcing rods which run parallel to the longitudinal dimension of the respective beam or post, cross rods passing centrally through said posts in planes radially thereto, and bulk head webs of concrete embedding said cross rods and joining said posts and beams.

5. A boat of the class described, comprising a mesh "hull form" embedded in concrete, a deck over the hull, a set of longitudinal bottom and deck beams, a set of transverse bottom and deck beams, the respective longitudinal and transverse beams crossing one another, vertical posts between the bottom and deck beams at their respective places of crossing, and a continuous bulk head of concrete extending from bow to stern, each of said beams and posts having embedded therein a set of straight reinforcing rods which run parallel to the longitudinal dimension of the respective beam or post, and said beams also including sets of "bent" reinforcing rods, each having a central section running in the horizontal plane of the adjacent straight rods and having other portions "bent" at an angle and terminating in bent over ends to form anchors, cross rods passing centrally through said posts in planes radially thereto, and bulk head webs of concrete embedding said cross rods and joining said posts and beams.

[Claims 6 to 8 not printed in the Gazette.]

1,018,489. STEAM-CONDENSER. JULIUS J. GRAF, Ludlow, Ky. Filed Apr. 27, 1911. Serial No. 623,761. (Cl. 62—30.)

1. In a condenser, a condensing chamber, with a series of tubes in a plurality of rows extending through said chamber, each row provided with a separate header outside the condensing chamber with the headers for each row disconnected from the headers of each other row, whereby the cooling water may be circulated through any desired set of tubes.

2. In a condenser, a condensing chamber, with a series of tubes extending through said chamber, with headers for the tubes, a steam inlet at the upper portion of said condenser, with a vertical baffle plate near one end of said condensing chamber, and a horizontal baffle plate extending lengthwise of the condensing chamber to enforce the circulation of steam around all of the tubes.

3. In a condenser, a condensing chamber, with a series of tubes extending through said chamber, with headers for the tubes, a steam inlet at the upper portion of said condenser, with a vertical baffle plate near one end of said condensing chamber, and a horizontal baffle plate extending lengthwise of the condensing chamber to enforce the circulation of steam around all of the tubes, with said horizontal baffle plate dished to form a shallow receptacle for the condensed steam, with a space intermediate the two baffle plates to allow the collected water to overflow, and an outlet therefor from the condenser.

4. In a condenser, a condensing chamber, with a series of tubes in a plurality of rows extending through said chamber, each row provided with a separate header outside the condensing chamber, a steam inlet at the upper portion of said condenser, with a vertical baffle plate near one end of said condensing chamber, and a horizontal baffle plate extending lengthwise of the condensing chamber to enforce the circulation of steam around all of the tubes.

5. In a condenser, a condensing chamber, with a series of tubes in a plurality of rows extending through said chamber, each row provided with a separate header outside the condensing chamber, a steam inlet at the upper portion of said condenser, with a vertical baffle plate near one end of said condensing chamber, and a horizontal baffle plate extending lengthwise of the condensing chamber to enforce the circulation of steam around all of the tubes, with said horizontal baffle plate dished to form a shallow receptacle for the condensed steam, with a space intermediate the two baffle plates to allow the collected water to overflow, and an outlet therefor from the condenser.

1,018,490. HANGER-SUPPORT FOR CONCRETE FLOORS. ERIC E. HALL, Chicago, Ill. Filed July 26, 1909. Serial No. 509,516. (Cl. 74—105.)

1. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein and having one end provided with engaging means, of a set screw having a head, which head is adapted to temporarily coöperate with said engaging means so that the body portion can be rigidly secured to a scaffolding before the concrete is placed about it by merely turning the body portion with the temporarily attached screw to drive the latter into the scaffolding.

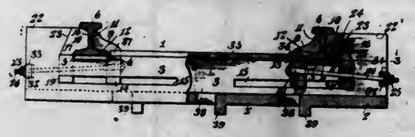
2. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein, having a flat head on one end and the other end provided with engaging means, of a screw having a head, which head is adapted to temporarily coöperate with said engaging means so that the body portion can be rigidly secured to a scaffolding before the concrete is placed about it by merely turning the body portion with the temporarily attached screw to drive the latter into the scaffolding.

3. In a device of the class described, the combination with a body portion adapted to engage the concrete and be held from movement therein and provided with engaging means, consisting of a main internally-threaded portion and an interrupted converging threaded portion, of a screw having a head adapted to enter and be secured by said converging threaded portion as the screw is turned in one direction, substantially as described.

4. In a device of the class described, the combination with a body portion having a flat head on one end and the other end provided with engaging means, consisting of a main internally-threaded portion and an interrupted converging threaded portion, of a screw having a head adapted to enter and be secured by said converging threaded portion as the screw is turned in one direction, substantially as described.

5. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein and having one end provided with engaging means, of a securing member having a head, which head is adapted to temporarily cooperate with said engaging means, and a body portion adapted to engage the inner surface only of a scaffolding and be rigidly secured thereto before the concrete is placed about it and to be subsequently detached from both the body portion and the scaffolding.

1,018,491. METALLIC RAILWAY-TIE. WILLIAM H. HAWS, Johnstown, Pa., assignor of one-eighth to Herman Wagner and one-eighth to Jonathan E. Rager, Johnstown, Pa. Filed Nov. 16, 1911. Serial No. 660,739. (Cl. 238—5.)



1. The combination of a cross tie having spaced sides and provided with fixed upwardly projecting jaws or abutments, an outer rail clamping jaw extending across the tie and held against outward movement by the fixed jaws or abutments, an inner adjustable clamping jaw cooperating with the outer clamping jaw to engage a rail, and means for adjustably connecting the inner clamping jaw with the cross tie.

2. The combination of a cross tie having spaced sides and provided with fixed upwardly projecting jaws or abutments, an outer rail clamping jaw extending across the tie and held against outward movement by the fixed jaws or abutments, an inner adjustable clamping jaw cooperating with the outer clamping jaw to engage a rail, means for adjustably connecting the inner clamping jaw with the cross tie, and adjusting means for the outer jaw consisting of a liner plate interposed between the said outer jaw and the fixed jaws or abutments.

3. The combination of a cross tie having spaced sides and provided at its ends with integral upwardly projecting terminal abutments forming fixed jaws and having inclined inner edges, an outer adjustable clamping jaw having an inclined outer face to fit the inclined faces of the fixed jaws or abutments, an inner adjustable clamping jaw coöperating with the outer jaw to clamp a rail, and adjusting means for connecting the inner adjustable jaw with the cross tie.

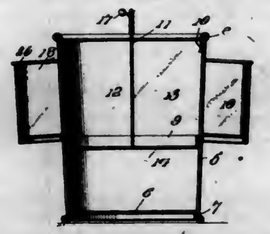
4. The combination of a cross tie having spaced sides and provided with integral upwardly projecting abutments, an outer clamping jaw having an upper rail engaging portion extending over the upper edges of the sides of the cross tie so as to be held against outward movement by the abutments, said outer clamping jaw being also provided with a lower portion extending between the sides of the cross tie, an inner clamping jaw coöperating with the outer clamping jaw to clamp a rail and having a lower portion arranged between the sides of the cross tie, and adjusting rods or bolts extending through the lower portion of the outer clamping jaw and connected with the lower portion of the inner clamping jaw and with the cross tie.

5. The combination of a cross tie having spaced sides and provided with integral upwardly projecting abutments, an outer clamping jaw having an upper rail engaging portion extending over the upper edges of the sides of the cross tie so as to be held against outward move-

ment by the abutments, said outer clamping jaw being also provided with a lower portion extending between the sides of the cross tie, an inner clamping jaw cooperating with the outer clamping jaw to clamp a rail and having a lower portion aranged between the sides of the cross tie, a transverse bar or piece extending across the tie and located beyond the lower portion of the outer clamping jaw, and adjusting rods or bolts connecting the lower portion of the inner clamping jaw with the transverse bar or piece and also extending through the lower portion of the outer clamping jaw to retain the same in place.

[Claims 6 to 8 not printed in the Gazette.]

1,018,492. COMBINED CIGAR-HOLDER, ASH-RECEPTACLE, AND MATCH-SAFE. WILLIAM W. HILTON, FRANK M. HILTON, and JOHN S. HILTON, Akron, Ohio. Filed May 16, 1911. Serial No. 627,600. (Cl. 131—51.)



1. A device of the class described comprising an ash receiving receptacle having tapered side walls, a tray suspended within the receptacle and including upper and lower rings, one of which is adapted to bear against the upper edge of the receptacle and the other adapted to frictionally engage the interior walls of said receptacle, a vertically disposed partition connecting the rings and defining independent compartments, and spaced rods extending across the bottom of the lower ring.

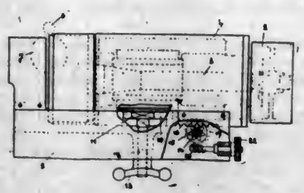
2. A device of the class described comprising an ash receiving receptacle, a tray suspended within the receptacle and including upper and lower rings, a vertical partition connecting said rings and defining independent compartments, oppositely disposed reinforcing rods secured to the upper edge of the partition and having their inner ends spaced apart, and a finger piece extending laterally from the partition between the inner ends of the reinforcing rods.

3. A device of the class described comprising an ash receiving receptacle, a tray suspended within the ash receptacle and including upper and lower rings, spring fingers depending from the upper wing for fricional engagement with the interior walls of the ash receptacle, spaced rods extending transversely across the bottom of the lower ring, a vertically disposed partition connecting said rings, and a finger piece secured to the upper end of the partition.

4. A device of the class described including an ash receiving receptacle, a tray suspended within said receptacle and provided with a perforated bottom, a vertically disposed partition extending across the tray and defining independent compartments, the upper end of the partition being projected vertically above the top of the ash receiving receptacle and tray, and a finger piece secured to the projecting end of said partition.

5. A device of the class described including an ash receiving receptacle, a tray suspended within the receptacle and comprising upper and lower rings, one of which is provided with a perforated bottom, and a vertically disposed partition extending across the tray and connected with the rings to form independent compartments, that portion of the tray on opposite sides of the partition and between the upper and lower rings, being unobstructed, the side walls of the ash receptacle constituting the side walls of the tray when the latter is positioned within said receptacle.

1,018,493. SKIVING-MACHINE. CARL ALBERT HIRTH, Cannstatt, Germany. Filed Mar. 31, 1911. Serial No 618,100. (Cl. 69—9.)



1. In skiving machines the combination of an annular rotary cutter, a holder or carrier in which said cutter is rotatably mounted, means for supporting said holder so that the axis of the cutter is parallel to the direction of movement of the work and means whereby said holder may be readily attached to or removed from the said supporting means.

2. In skiving machines the combination of an annular rotary cutter, a holder or carrier in which said cutter is rotatably mounted, means for supporting said holder so that the axis of the cutter is parallel to the direction of movement of the work, means whereby said holder may be readily attached to or removed from the said supporting means and means for adjusting said cutter to and from the work in the direction of its cutting edge.

3. In skiving machines the combination of an annular rotary cutter having a spindle, a holder or carrier, bearings in said holder or carrier; said spindle being mounted in said bearings, a pulley on said spindle, means for supporting said holder so that the axis of the cutter spindle is parallel to the direction of movement of the work, means whereby said holder may be readily attached to or removed from the said supporting means and means for adjusting said cutter to and from the work in the direction of its cutting edge.

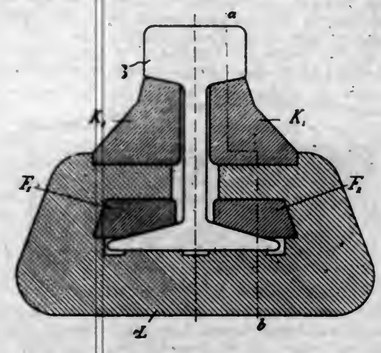
4. In skiving machines the combination of an annular rotary cutter having a spindle, a cylindrical holder or carrier, bearings in said cylindrical holder in which said spindle is mounted, means for supporting said cylindrical holder so that the axis of the cutter spindle is parallel to the direction of movement of the work, means whereby said holder may be readily attached to or removed from the said supporting means and means for adjusting said cutter to and from the work in the direction of its cutting edge.

5. In skiving machines the combination of a rotary annular cutter, a cylindrical holder in which said cutter is rotatably mounted, said cylindrical holder being substantially the same diameter as the cutter and having a longitudinal undercut groove, a support having a semi-cylindrical recess to accommodate the cylindrical holder, and a bolt and nut, said bolt having a square head adapted to enter the undercut groove in the holder whereby the holder may be clamped to the support and means for adjusting said holder relatively to the work.

[Claims 6 to 10 not printed in the Gazette.]

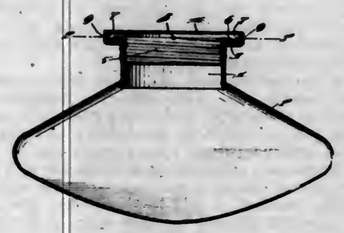
1,018,494. RAIL-JOINT. FRANZ HOCH, Frankfort-on-the-Main, Germany. Filed June 9, 1910. Serial No. 566,033. (Cl. 239—6.)

In a rail joint, the combination, with a rail, of a continuous splice-bar clasping the base thereof, a wedge at each side of the web of the rail driven between the splice-bar and the upper faces of the flange of the rail, and a wedge at each side of the web of the rail driven between the upper faces of the splice-bar and the head of the rail,



each wedge being guided in the splice-bar, substantially as shown, for the purpose specified.

1,018,495. RECEPTACLE-CLOSURE. JAMES J. HOLLAND, Philadelphia, Pa. Filed June 7, 1911. Serial No. 631,703. (Cl. 215—52.)



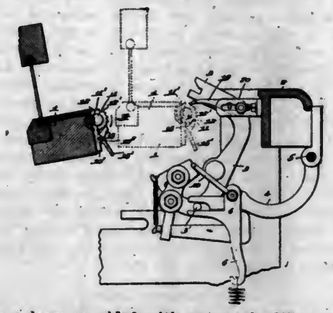
1. A closure of the character described, comprising a plug, a cap inclosing and having rotary mounting on the outer end of the plug, and a removable device adapted to lock the plug and cap together, substantially as described.

2. A closure of the character described, comprising a plug, a cap inclosing and having rotary mounting on the outer end of the plug, said plug and said cap having openings adapted to register, and a removable key adapted to be positioned in said openings to lock the cap and plug together, substantially as described.

3. A device of the character described, comprising a metal plug having an enlarged head at its outer end, a cap inclosing and having rotary mounting on said head, and key receiving openings in said head and said cap, substantially as described.

1,018,496. THREAD-CUTTING MECHANISM FOR AUTOMATIC LOOMS. DENIS MACHELL HOLLINS, Blackburn, England, assignor to Draper Company, Hopedale, Mass., a Corporation of Massachusetts. Filed Aug. 21, 1911. Serial No. 645,128. (Cl. 139—85.)

1. In a loom, a temple having a thread-cutter, an actuating device therefor comprising a member mounted on the temple, and a second member mounted on a moving part of the loom, and means to control relative movement of said members into and out of position to cooperate with each other, said means comprising a ratchet operatively connected with one of said members, a spring to rotate the ratchet and thereby position such member for coöperation with its fellow, a dog to engage intermittingly the ratchet and rotate it retractively step-by-step for a predetermined number of picks, against the spring to move the connected member out of active position, and a detent pawl to hold the ratchet against spring-induced movement, combined with means to release temporarily the ratchet from control of the detent pawl when filling replenishment is called for, whereby the spring will rotate the ratchet and the connected member of the actuating device will be actively positioned.



2. In a loom provided with automatic filling replenishing mechanism, a thread-cutter, an actuator therefor mounted on a moving part of the loom and adapted to at times coöperate with and effect the actuation of the thread-cutter, and mechanism to govern such coöperation, said mechanism comprising a ratchet, a spring to cause operative rotation thereof, and thereby effect cooperation of the thread-cutter and actuator, a detent pawl to prevent operative rotation of the ratchet, and a dog to effect step-by-step rotation of the ratchet against the spring for a predetermined number of picks following filling replenishment, to return the ratchet to normal position, and thereby throw said thread-cutter and its actuator out of action, combined with means to cause the detent pawl to release temporarily the ratchet and permit operative rotation thereof by the spring when filling replenishment is called for.

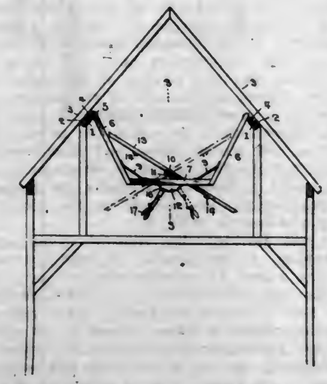
3. In a loom provided with automatic filling replenishing mechanism, a thread-cutter, including a movable blade having a heel, an actuator mounted on a moving part of the loom and adapted to at times engage and move the heel to actuate the thread cutter, and mechanism normally acting to effect coöperation of the actuator and heel, said mechanism comprising a ratchet operatively connected with one of said parts and mounted independently of the thread cutter, a spring to rotate said ratchet in one direction to bring about coöperation of the blade heel and the actuator, a detent to hold the ratchet against spring-induced movement, and a dog to intermittingly engage the ratchet when normally positioned and rotated tooth by tooth for a predetermined number of picks following filling replenishment, to thereby restore the blade heel and actuator to normal, non-coöperative relation, combined with means to release temporarily the ratchet from control of the detent when filling replenishment is called for, spring-induced movement of the ratchet thereby bringing about coöperation of the blade heel and the actuator.

4. In a loom provided with automatic filling replenishing mechanism a temple having a thread-cutter, an actuator therefor, rotatably mounted on the lay and adapted to at times coöperate with and effect the actuation of the thread-cutter, and mechanism to govern such coöperation, comprising a ratchet connected with said actuator, a spring to rotate the latter into operative position, to effect the actuation of the thread-cutter, a detent normally coöperating with the ratchet to prevent rotation of the actuator to operative position, and a dog to effect rotative movement of the ratchet and actuator against the action of the spring for a predetermined number of picks following filling replenishment, to thereby return the actuator to normal inactive position with respect to the thread-cutter, combined with means to release temporarily the ratchet from the control of the detent and thereby permit the spring to rotate the

actuator into active position when filling replenishment is called for.

5. In a loom provided with automatic filling replenishing mechanism, a temple having a thread-cutter including a movable blade having a depending heel, a rotatable actuator mounted independently of the temple, a spring to turn the actuator into operative position, a ratchet having a blank portion and fixedly connected with the actuator, a dog movable relatively to the ratchet and adapted to engage intermittingly the teeth of the blank portion thereof, a detent normally coöperating with the ratchet to prevent spring-induced movement thereof, to actively position the actuator, and means rendered operative when filling replenishment is called for to cause the detent to release the ratchet temporarily, the spring thereby moving the actuator into position to engage and operate the heel of the movable cutting blade, said dog thereafter rotating the ratchet tooth by tooth on successive forward beats of the lay to restore the actuator to inactive position after a predetermined number of picks, such rotation of the ratchet ceasing when the blank portion thereof is opposed to the dog.

1,018,497. DELIVERY APPLIANCE. CHARLES HOTH, Waukon, Iowa. Filed Aug. 17, 1911. Serial No. 644,580. (Cl. 214—2.)

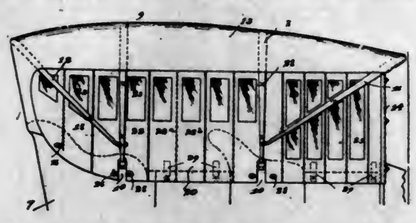


A delivery appliance for delivering hay to the sides of a structure comprising a tilting bed having a shaft secured to the under side thereof, a framework including end pieces having corner posts extending upwardly therefrom, cross strips connected to the corner posts near the upper ends thereof, means for bracing the corner post against the end pieces, the shaft having its opposite ends mounted for rotation upon the end pieces, the bed being positioned between the end pieces and adapted to be tilted to opposite sides, means for tilting the bed, means secured to said shaft and adapted to coöperate with means carried by the end pieces to lock said bed at different angles, the framework and bed being suspended within the structure and adapted for movement longitudinally thereof, and a track upon which the device may be moved within the structure.

1,018,498. CURTAIN FOR VEHICLES. FRANK H. ILSE, Chicago, Ill. Filed June 17, 1911. Serial No. 633,781. (Cl. 21—62.)

1. In combination with a frame and covering of a foldable vehicle top, flexible curtain supports extending longitudinally of the top on either side of the latter, respectively, foldable curtains slidably mounted on said supports, and means on the under side of the top covering for securing the folded curtains against the latter.

2. In combination with a frame and covering of a foldable vehicle top, flexible curtain supports extending longitudinally of the top on either side of the latter, respectively, and foldable therewith, foldable curtains slidably mounted on said supports, means on the under side of the top covering for securing the folded curtains against the latter, and means operable from within the body of the vehicle for attaching the free margins of said curtains to the top frame and body of the vehicle.



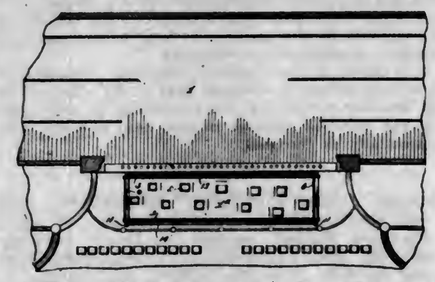
3. In combination with the frame and covering of a foldable vehicle top, cables extending longitudinally of the top on either side between the front and rear ends thereof, and curtains each comprising a plurality of sections foldably connected by vertical hinge joints, said sections being provided adjacent to their upper ends with eyes slidably engaging said cables.

4. In combination with the frame and covering of a vehicle top, cables extending longitudinally of the top on either side between the front and rear ends thereof, and curtains each comprising a plurality of sections of flexible material foldably connected by vertical hinge joints and provided with windows therein, said sections being provided adjacent to their upper ends with eyes slidably engaging said cables.

5. In combination with the frame and covering of a foldable vehicle top, cables extending longitudinally of the top on either side between the front and rear ends thereof, and curtains each comprising a plurality of sections of flexible material foldably connected by vertical hinge joints, each of said joints being formed by a stitched loop or pocket formed in the material of the curtain and a stiffener inserted in said loop or pocket, said sections being provided adjacent to their upper ends with eyes slidably engaging said cables.

[Claim 6 not printed in the Gazette.]

1,018,499. THEATER-STAGE. JACQUES A. ISNER, New York, N. Y. Filed May 11, 1911. Serial No. 626,562. (Cl. 46—70.)



1. The combination of a main stage, with a supplementary stage, means in front of the main stage movably supporting the supplementary stage, and means for operating said movable stage.

2. The combination of a main stage, with a movable stage located in front of the main stage, means below the level of and in front of the first named stage for movably supporting the second named stage, and means for operating said movable stage.

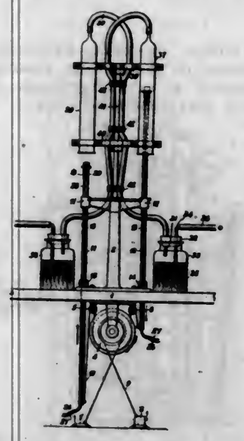
3. The combination of a main stage, a plurality of endless connections in front thereof, means movably supporting said connections, and boards carried by said connections extending outwardly relatively to the main stage.

4. The combination of a main stage, and a plurality of endless connections in front thereof, means movably supporting said connections, boards carried by said connections extending outwardly relatively to the main stage, and supports located in front of the main stage for supporting said boards substantially in line therewith.

5. The combination of a main stage, a plurality of endless connections located in front thereof, boards attached to said connections extending outwardly in front of the main stage, rotative members in front of the main stage supporting said connections, and means for operating said members.

[Claims 6 to 10 not printed in the Gazette]

1,018,500. FORMING DEVICE FOR METALLIC FILAMENTS. HENRY W. JACKSON, East Orange, N. J., assignor to Westinghouse Lamp Company, a Corporation of New York. Filed Jan. 9, 1908. Serial No. 410,042. (Cl. 176—4.)



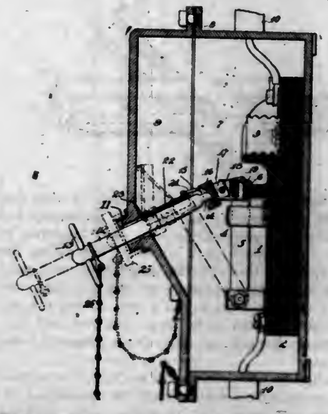
1. In apparatus of the character described, the combination with receivers open at the bottom and connected with means for supplying gas thereto, of reciprocable supports movable into and out of said receivers and having terminal devices, means for effecting simultaneous movement of said supports in opposite directions, and mechanically connected insulated filament clamps detachably engaging the said terminal devices.

2. In apparatus of the character described, the combination with receivers, of reciprocable supports movable into and out of said receivers, means for effecting simultaneous movement of said supports in opposite directions, and filament clamps detachably carried by the said supports.

3. In apparatus of the character described, the combination with reciprocable supports having terminal devices, and means for effecting simultaneous movement thereof in opposite directions, of filament clamps detachably carried by the said supports and engaging the terminal devices.

1,018,501. ELECTRIC CUT-OUT OR SWITCH. GEORGE A. JORDAN, Brooklyn, N. Y., assignor of one-third to William H. Jordan and one-third to Christopher C. Jordan, Brooklyn, N. Y. Filed Feb. 15, 1910. Serial No. 543,910. (Cl. 175—282.)

1. The combination with a switch and a box therefor, said switch having an insulated socket said box having an opening in a wall, of a key introducible through the opening to engage with the socket and control the switch and means permitting relative movement of the switch and key.



2. The combination with a switch and a box therefor, said switch having a pivoted socket with a keyhole slot therein, and said box having an opening in a wall, of a key, said key saving a cross head on one extremity, said key being introducible through the opening into engagement with the socket to control the switch.

3. The combination with a box and a pivoted switch therein, said box having an opening in a wall, of a guard within the box between the switch and the opening, and a key introducible through the opening to control the switch.

4. The combination with a box and a pivoted switch therein, said box having an opening in a wall, a guard pivoted to the wall adjacent to the opening, and connected to the switch by a bail, and a key introducible through the opening into contact with the switch.

1,018,502. INCANDESCENT BODIES FOR ELECTRIC LAMPS. ALEXANDER JUST and FRANZ HANAMAN, Budapest, Austria-Hungary, assignors, by direct and mesne assignments, to General Electric Company, a Corporation of New York. Filed July 6, 1905. Serial No. 268,523. (Cl. 176—132.)

1. A filament for incandescent lights consisting of tungsten in a coherent metallic state and homogeneous throughout.

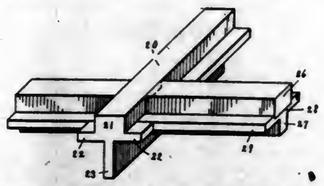
2. A filament for incandescent lights consisting throughout of substantially pure metallic tungsten of high fusing point and electrically conductive, the light emitting properties of the filament being due to the coherent, homogeneous metallic nature of the tungsten.

3. A filament for electric incandescent lights comprising dense, coherent tungsten metal, having its fusing point approximately 3200° C. and capable of incandescent efficiency at the rate of less than 1 watt per candle power and substantially free from perceptible disintegration at that efficiency.

1,018,503. WINDOW-SASH. GUSTAVE KAHN, Detroit, Mich. Filed Jan. 12, 1911. Serial No. 602,180. (Cl. 89—77.)

1. In a window sash the combination of side and end bars forming the outer frame, muntins extending between the end bars and secured thereto, said muntins having perforations, and bars in pairs extending across through the perforations in said muntins, one bar of each pair having notches to receive portions of the muntins, and the other bar of each pair being smooth and acting as a key to lock the parts in position, said notched bars and key bars both connecting at their ends to the side bars

and together forming the cross bars of the sash, said key bars, muntins, side bars and end bars all having flanges in the same plane to support panes of glass.



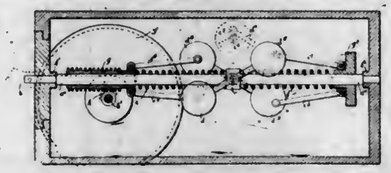
2. In a window sash the combination of side and end bars forming the outer frame, muntins extending between the end bars and secured thereto, said muntins having perforations, and cross bars in pairs extending through the perforations in the muntins, one bar of each pair having notches to receive portions of the muntins, and the other bar of each pair acting as a key to lock the parts in position, said end bars, side bars, muntins and key bars having lateral flanges in the same plane to support panes of glass.

3. In a window sash, the combination of connected side and end bars forming a frame, muntins connecting at their ends to the end bars and provided with perforations, notched bars extending through said perforations and engaging said muntins and side bars to hold the same in position, and slidable key-bars to hold the notched bars in position, said notched bars and key bars together forming the cross bars of the sash, said key bars, muntins, side bars and end bars all having flanges in the same plane to support panes of glass.

4. In a window sash, the combination of side and end bars forming a frame, muntins connecting at their ends to the end bars and provided with perforations, said muntins, side, and end bars having flanges to support panes of glass, notched bars extending through said perforations and engaging said muntins to hold the same in position, and slidable key-bars to hold the notched bars in proper position, said notched bars and key bars extending together between the side bars of the sash.

5. In a window sash, the combination of connected side and end bars forming a frame, muntins connecting at their ends to the end bars and provided with perforations, notched bars extending through said perforations and engaging said muntins and side bars to hold the same in position, and slidable key-bars to hold the notched bars in position, said key bars having flanges to support the panes of glass, said key bars, muntins, side bars and end bars all having flanges in the same plane to support panes of glass.

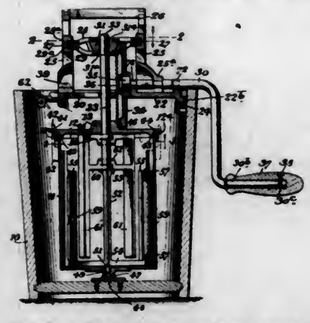
1,018,504. BALANCED SPEEDOMETER. MATHIAS J. KLEIN, New York, N. Y., assignor of sixty one-hundredths to Hugo B. Roelker, New York, N. Y. Filed Mar. 5, 1910. Serial No. 547,466. (Cl. 73—123.)



1. In a balanced speedometer arrangement for vehicles, the combination of a rotary shaft receiving its motion from one of the road-wheels of the vehicle, a cross-shaft connected with said rotary shaft, two pairs of fly-balls oscillating in planes parallel with the vertical center-plane of the rotary shaft, straight bars connecting each pair of fly-balls, and being fulcrumed to said cross-shaft, one at one side and the other at the other side of the rotary shaft, a sleeve on said rotary shaft, a main-spring on said rotary shaft interposed between the cross-shaft and said sleeve and adapted to oppose the centrifugal force of the fly-balls, a dial, an index-hand movable over said dial, and means interposed between said sleeve and the index-hand for transmitting the oscillations of the fly-balls to the index-hand for indicating the speed of the vehicle on said dial.

2. In a balanced speedometer arrangement for vehicles, the combination of a rotary shaft, receiving its motion from one of the road wheels of the vehicle, a cross-shaft connected with said rotary shaft, two pairs of fly-balls adapted to turn about said cross-shaft in opposite directions and at equal angles, straight bars connecting each pair of fly-balls, sleeves on said rotary shaft, links connecting said sleeves with the fly-balls, two main-springs on said rotary shaft resisting the centrifugal force of said fly-balls, one main-spring acting from zero up to a certain speed and the other main-spring acting with the first main spring above said speed, the center of gravity of the fly-balls, sleeves, links and main-springs remaining at all vehicle-speeds practically in the intersecting point of the rotary and cross-shafts, a dial, an index-hand movable over said dial, and means for transmitting the oscillations of the fly-balls from one of the sleeves to the index-hand for indicating the speed of the vehicle on said dial.

1,018,505. CHURN. FERDINAND KRONENBERGER, Corona, N. Y., assignor to The Aladdin Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 9, 1911. Serial No. 613,424. (Cl. 31—42.)



1. In a churn, a dasher, the posts of which are cut away or recessed, a removable scraper, said scraper being provided with hooks coöperating with the cut away portions of said posts, and a lug on said scraper, said hooks and lug operating to retain the scraper in position upon the dasher post.

2. In a churn, an outer vessel, an inner vessel, brackets on said outer vessel, a driving mechanism frame provided with outwardly extending arms adapted to fit in said brackets, and a latch adjacent to one of said brackets, and coöperating with said bracket and an arm of said frame for locking the driving mechanism in operative relation to said outer and inner vessels.

3. A driving mechanism comprising a base, upright posts detachably secured to said base, substantially parallel transverse members coöperating with said upright posts, a pinion positioned between said parallel transverse members and adapted to rotate between said members, a master gear coöperating with said pinion, a crank shaft, said master gear being detachably mounted on said crank shaft, and means for securing the upright posts to the base plate, whereby all the members of the driving mechanism are readily separable for packing or shipping the same.

4. A driving mechanism comprising a base, upright posts detachably secured to said base, two substantially parallel transverse members coöperating with said upright posts, each transverse member having a tongue at each end thereof, a groove in each upright post, the tongues at one end of both transverse members fitting into a single groove in said upright posts, a pinion rotatably mounted between said transverse members, a detachable handle supported transversely on said upright posts, a crank shaft held to the base by one of said upright posts, a master gear mounted thereon, and means for detachably securing the upright posts to the base, whereby all the members of the driving mechanism may be readily separated for the purpose of packing or shipment.

5. In a churn, a vessel, a frame adapted to be supported on said vessel, an arm extending from said frame and adapted to engage means for locking the frame to the vessel, a bracket on said vessel, said bracket being provided with an aperture, a slot and a hook, and a latch pivoted adjacent said bracket, said latch having a shoulder which coöperates with the aperture of said bracket, whereby when the arm of the frame is positioned within said bracket said frame may be securely fastened to the vessel by the coöperation of the latch and the bracket.

[Claims 6 to 11 not printed in the Gazette.]

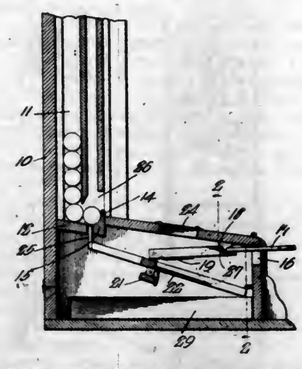
1,018,506. MARINE SIGNAL. GEORGE EDWARD LANE, Santiago de Cuba, Cuba. Filed Aug. 1, 1905. Serial No. 272,157. (Cl. 116—13.)

1. In combination, a lever, a signal device connected therewith, a second lever, a second signal device connected with said second lever, a cam, means for driving said cam, means for shifting said levers to engage said cam, and automatic means for starting said cam to rotate when the levers are shifted.

2. In combination, a lever, a signal device connected therewith, a second lever, a second signal device connected with said second lever, a cam, means for shifting said levers to engage said cam, mechanism for driving said cam, means for normally holding said mechanism idle, and automatic means for releasing said mechanism when said levers are shifted.

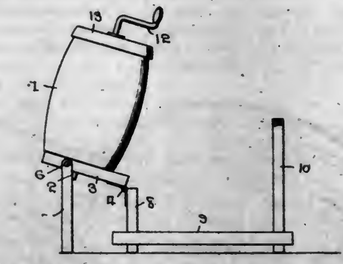
1,018,507. VENDING-MACHINE. WILLIAM H. LARAWAY, Grand Rapids, Mich. Filed Sept. 15, 1911. Serial No. 649,440. (Cl. 194—88.)

In a vending machine, a casing, a substantially rectangular bar disposed longitudinally of said casing, said bar being arranged at an angle with respect to the base of the casing, an article ejector pivotally supported by said bar, said ejector comprising a bar one end of which is bifurcated, and the other end of which is provided with an offset, a second bar disposed longitudinally of the casing, trunnions extending from said bar at a point adjacent one of its edges, said trunnions pivotally supporting said bar, said bar being slotted, the under face of the bar adjacent



said slot being beveled, and a resilient connection between said bar and the first mentioned bar.

1,018,508. CHURN. PATRICK J. LAWLER, Westside, Iowa, assignor of one-half to G. R. Richardson, Denison, Iowa. Filed June 21, 1911. Serial No. 634,430. (Cl. 31—18.)

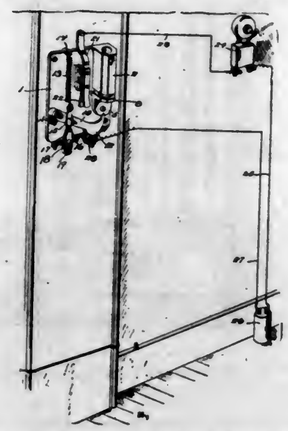


In a device of the class described, a framework composed of horizontal bars, an upwardly extending slotted end secured between parallel ends of said bars, a low board for said frame extending upwardly from the opposite end of said horizontal bars, a hinged end secured to the upper edge of said board, means for supporting said hinged end in an outward direction, a churn supported in the slotted end and having a trunnion engaged in the hinged end for rotation between said ends of the frame, said churn having circumferential channels upon its interior, means within the channels for assisting in agitating the contents of the churn when the latter is rotated, a removable head for the churn, and a handle carried by the churn head, said handle being adapted to rest within the slotted end of the frame and thus support one end of the churn for rotation between the ends of the frame.

1,018,509. AUTOMATIC FIRE-ALARM. JOSEPH B. LOUGHEAD, New York, N. Y., assignor of one-eighth to George M. Armour, New York, N. Y. Filed Jan. 4, 1911. Serial No. 600,805. (Cl. 116—11.)

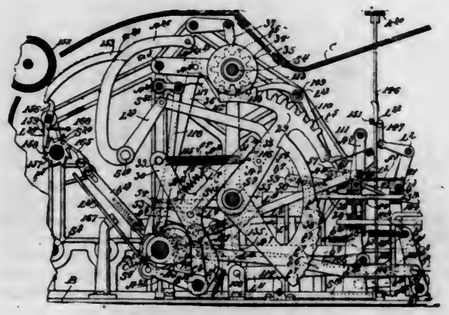
An automatic fire alarm, comprising a base plate, an actuating member pivotally connected thereto to swing thereon, a contractile spring connected to the base plate, a clip connected to the actuating member and extending transversely thereof, the clip being formed at its ends with hooks, one of which is connected to one end of the spring, and a sectional strip formed at its ends with openings, with one of which the other hook of the clip engages, the base plate being provided with a pin en-

gaging the other opening of said strip, the sections of the strip being secured together by a fusible substance, and



means secured to the base plate for holding a detonator in the path of movement of said actuating member.

1,018,510. CALCULATING-MACHINE. ALFRED S. MCCASKEY, Chicago, Ill., assignor, by mesne assignments, to McCaskey Electric Calculator Company, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1903. Serial No. 157,769. (Cl. 235—60.)



1. In a calculating machine, the combination of a series of figure-wheels; independent mechanism for each wheel including wheel-rotating means and stop-engaging means; a series of rows of normally inoperative stops which rows are adapted to be repeatedly positioned to the paths of movement of said stop-engaging means through movement in one direction only, said stops when operative being adapted to arrest and determine the extent of movement of the stop-engaging means coöperating therewith; and means for rendering operative any one stop in one or more of said rows.

2. In a calculating machine, the combination of a series of figure-wheels; independent mechanism for each wheel including wheel-rotating means and stop-engaging means; a movably supported series of rows of normally inoperative stops, said stops when operative being adapted to arrest and determine the extent of movement of the stop-engaging means coöperating therewith; means for rendering operative any one stop in one or more rows; and means for advancing said rows of stops by movement in one direction only to repeatedly present each row in the same position relative to the paths of movement of said stop-engaging means.

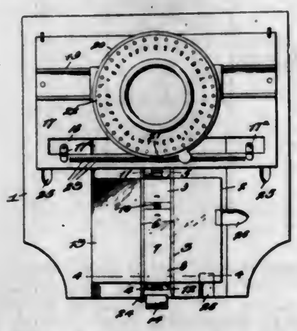
3. In a calculating machine, the combination of a series of figure-wheels; independent mechanism for each wheel including wheel-rotating means and stop-engaging means; a movably supported continuous series of rows of normally-inoperative stops, said stops when operative being adapted to arrest and determine the extent of movement of the stop-engaging means coöperating therewith; means for successively rendering operative one stop in each of a predetermined number of rows; and means for bringing said operative stops into the paths of movement of said stop-engaging means.

4. In a calculating machine, the combination of a series of figure-wheels; independent normally-checked mechanism for each wheel including wheel-rotating means and stop-engaging means; a series of rows of normally-inoperative stops adapted to be repeatedly positioned to the paths of movement of said stop-engaging means through movement in one direction only; and means for rendering operative any one stop in one or more of said rows and for releasing the mechanisms to which said operative stops are positioned.

5. In a calculating machine, the combination of a series of figure-wheels; independent normally-checked mechanism for each wheel including wheel-rotating means and stop-engaging means; a movably supported series of rows of normally-inoperative stops; means for rendering operative any one stop in one or more rows; means for repeatedly positioning said rows to the paths of movement of said stop-engaging means through movement in one direction only, and means for releasing those of said mechanisms to which operative stops are positioned.

[Claims 6 to 198 not printed in the Gazette.]

1,018,511. ATTACHMENT FOR TYPE-WRITERS. JOHN J. MCFADDEN, Renovo, Pa. Filed Mar. 18, 1911. Serial No. 615,261. (Cl. 197—3.)



1. In a device of the character described, the combination with a base and a type-carrying device movably mounted thereon; of a sectional slide mounted in said base adapted to be moved beneath said type-carrying device, said slide having the sections thereof secured together by means of a spring, and means to retain said slide in various adjusted positions.

2. In a printing device of the class described, the combination with a base member provided with a longitudinal groove and channel-ways, one of said channel-ways being provided with a pair of tracks, a slide movable on said tracks, said slide being formed in sections and the sections thereof secured together by means of a spring, and means to retain said slide in various adjusted positions; of a type-carrying device movably mounted on said base.

3. In a device of the character described, the combination with a base member having a groove and channel-ways therein, one of said channels-ways being provided with tracks, a sectional slide mounted between said tracks, the sections of which are secured together by means of a spring, and each provided with an upstanding lug, and

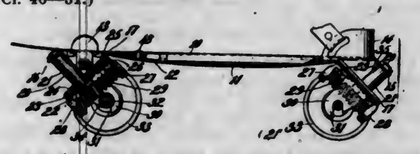
means to retain said slide in various adjusted positions on the tracks; of a type-carrying device movably mounted on said base.

4. In a device of the character described, the combination with a base member having a groove and channel-ways, therein, one of said channel-ways being provided with tracks, a slide mounted between said tracks comprising a pair of plates connected by means of a spring, said plates being each provided with an upstanding lug, and means to retain said slide in various adjusted positions; of a type-carrying device movably mounted on said base.

5. In a device of the character described, the combination with a base member having a groove and channel-ways therein, one of said channel-ways being provided with tracks, a sectional slide mounted between said tracks, a rack mounted in said groove, a spring carried by said slide adapted to engage said rack and retain said slide in various adjusted positions, and means to limit the movement of said slide; of a type-carrying device slidably mounted on said base.

[Claim 6 not printed in the Gazette.]

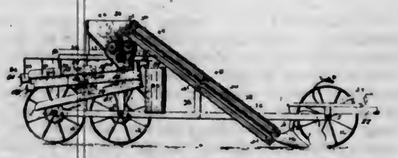
1,018,512. ROLLER-SKATE. EBERHARD F. MEES, Milwaukee, Wis. Filed May 18, 1910. Serial No. 561,950. (Cl. 46—51.)



1. A roller skate, comprising a sheet metal body plate, inclined lugs bent therefrom, bracket plates secured to the body plate and standing in planes parallel with the lugs, pivot bolts connecting the bracket plates with the lugs, spacing sleeves surrounding the pivot bolts and bearing against the bracket plates and the lugs, bearing plates pivotally mounted on the pivot bolts and bearing against the bracket plates, wheels mounted on the bearing plates, cup shaped spring seats formed on the bracket plates and the bearing plates at opposite sides of the pivot bolts, and coil springs with their ends mounted in the cup shaped spring seats for holding the bearing plates in a normal position.

2. A roller skate, comprising a body plate, lugs projecting therefrom, inclined bracket plates secured to the body plate, pivot bolts connecting the bracket plates with the lugs, spacing sleeves surrounding the pivot bolts and bearing against the bracket plates and the lugs, bearing plates pivotally mounted on the pivot bolts and bearing against the bracket plates, wheels mounted on the bearing plates, spring seats on the bracket plates and the bearing plates at opposite sides of the pivot bolts, and coil springs with their ends mounted in the spring seats for holding the bearing plates in a normal position.

1,018,513. QUAKING-GRASS DESTROYER. PETER MEYER, Calmar, Iowa. Filed Feb. 2, 1910. Serial No. 541,496. (Cl. 110—20.)



1. In a device of the class described, a tray provided with perforations of various size through the bottom of the tray for separating the fibrous and larger particles of material from the mass, in combination with means for delivering the material to the tray, means for imparting motion to the tray, and means for burning upon the tray the fibrous portion from which the other portion of the mass has been separated.

2. In a device of the class described, a tray set at an angle and provided with perforations in the bottom of the tray of larger size at the upper end of the tray and smaller size toward the lower end, in combination with means for delivering the material to the tray, means for imparting an oscillating motion to the tray, burners adapted to attack and burn the fibrous portion of the material upon the tray from which the other portions of the mass have been separated, and means for supplying fuel to the burners.

3. In a device of the class described, a tray loosely suspended on an incline, in combination with means for delivering the material to the tray, means for imparting a shaking motion to the tray, means connected with the tray adapted to separate the fibrous material from the remaining portions of the mass on the tray, and burners adapted to burn the fibrous material from which the balance of the mass has been separated on the tray while the tray is in motion.

4. In a device of the class described, an upper tray provided with openings of varying size through the bottom of the tray, in combination with means for delivering the material to the tray, a second tray beneath the first provided with openings, means for imparting motion to both of the trays, means for burning the fibrous material on the surface of the upper tray after the remaining portion of the mass has been separated therefrom, and means for subjecting the upper surface of the material on the lower tray to the action of heat.

5. In a device of the class described, an upper tray provided with perforations of different size, in combination with means for delivering the material to the tray, a second tray set beneath the first, means for destroying by flame the fibrous portion of the material upon the upper tray, and means for destroying the life in the remainder of the mass on the lower tray by the action of heat.

[Claims 6 to 10 not printed in the Gazette.]

1,018,514. FIRE-EXTINGUISHER. JOSEPH M. MILLER, Chicago, Ill. Filed Oct. 21, 1911. Serial No. 655,925. (Cl. 103—64.)

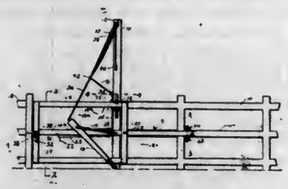
1. In a fire extinguisher, a pump having an inlet opening, a convex screen arranged over said opening to obstruct the flow of solid matter into said inlet, and a guard cage located outside of said screen and spaced away from said screen, comprising intersecting parts adapted to coact with said screen to support particles of solid matter that are too large to pass the perforations in said screen, in such manner as to prevent said solid particles from completely obstructing such perforations.

2. In a fire extinguisher, a pump having an inlet opening, a convex screen arranged over said opening to obstruct the flow of solid matter into said inlet, and a guard cage located outside of said screen and spaced away from said screen, comprising a ring surrounding said screen and intersecting parts adapted to coact with said screen to support particles of solid matter that are too large to pass the perforations in said screen, in such manner as to prevent said solid particles from completely obstructing such perforations.

3. In a fire extinguisher, the combination of a pump having an inlet, with a suction cage adjacent to said inlet and comprising a pair of perforated screens located one within the other, the outer screen being convex, and a guard cage surrounding said outer screen, and comprising a bell-shaped skeleton frame surrounding said outer screen and comprising parts located near, but spaced away from said outer screen in such manner as to have contact with and support particles of solid matter that are too large to enter the perforations of said screen and thereby serving to prevent such solid particles from lying flat against the surface of said screen and completely obstructing the perforations thereof.

4. In a fire extinguisher, the combination of a pump having an inlet, with a suction cage adjacent to said inlet and comprising a pair of perforated screens located one within the other, the outer screen being convex, and a guard cage surrounding said outer screen and comprising a bell-shaped skeleton frame surrounding said outer screen and comprising an annular ring arranged concentrically with respect to said screen and provided with projections to prevent said ring from fitting against an even surface, and spaced arms connecting said ring with the casing of said pump.

1,018,515. GATE. JAMES MILLS, Spokane, Wash. Filed Apr. 17, 1911. Serial No. 621,733. (Cl. 39—29.)



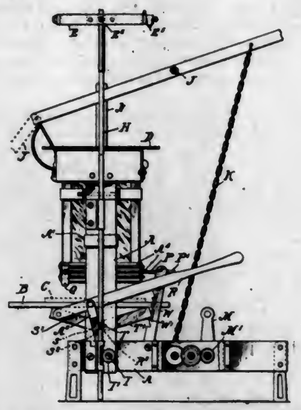
In a gate mechanism having a central post with a cross-arm at the top supporting pulleys for cables used in connection with other parts to open and close the gate, a lever fulcrumed at the base of the central post and connected at its upper end to cables extending over the pulleys along the cross-arm and terminating in handles at the ends of the cross-arm, a latch slidably adjusted in guides at the side of the central post adjacent to the gate, such latch having attached thereto one end of a cable intermediately looped to the lever cables and attached at the other end rigidly to a position on the cross-arm, a catch on the gate proper brought into locking engagement with the said latch, an arm pivoted to the gate and the lever heretofore mentioned, and a bracket carrying rollers secured to a rearward extension of the gate, the rollers adapted for engagement with a plank of the fence as a guide.

1,018,516. MACHINE FOR CUTTING BUTTER. HERMAN NEUMANN and CHARLES R. ANNETT, New York, N. Y. Filed Sept. 30, 1910. Serial No. 584,623. (Cl. 31—65.)

1. In a machine for cutting butter, the combination with a support for the butter, of means for separating portions of the butter from the mass to give the remainder a predetermined form, cutting devices to subdivide the mass into columns, and provisions for transferring the butter from the separating means to the cutting means, substantially as described.

2. In a machine for cutting butter the combination with provisions for slabbing the butter of a box or cup, cutters mounted therein for dividing the butter into columns and provisions for depressing the butter into the box whereby the central portions and the slabbed portions of the butter may be passed through the box and by the cutters substantially as described.

3. In a machine for cutting butter, the combination with a support for the butter, of means for separating portions of the butter from the mass to give the remainder a rectangular form of a predetermined size, provisions for transferring the butter from the slabbing means to the cutting means, cutting devices arranged to subdivide the butter into uniform columns, and provisions for applying the operating force to effect the several operations successively.

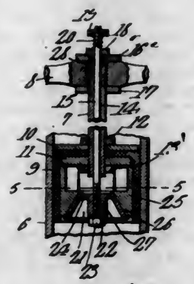


4. In a machine for cutting butter, the combination with slabbing means, and means for dividing the mass into columns, of transversely movable cutting devices arranged to divide the several columns into equal parts.

5. In a butter cutting machine the combination of means for slabbing the butter and means for holding the squared mass in position comprising a cup, a platform resting on said cup and having an aperture adapted to allow the squared mass to descend while the waste is detained, with provisions for dividing the mass vertically and horizontally substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,018,517. PLUNGER. AUGUST OHMSTEDE, Beaumont, Tex., assignor of one-half to Bradley W. Bell, Beaumont, Tex. Filed Aug. 31, 1911. Serial No. 647,097. (Cl. 103—63.)

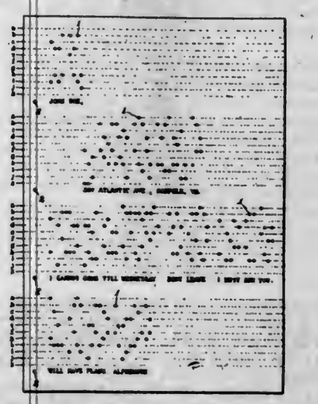


The combination of a plunger rod, a spindle passing therethrough, a cup-shaped packing mounted on one end of the plunger rod, the plunger rod having a stuffing box in the other end thereof, a handle on the latter end of the plunger rod, a split ring fitting snugly within the packing and having an inner tapered seat, a spreader having a tapered face engaging the said seat, one end of the spindle being passed through the said spreader, a nut screw-threaded upon the said end of the spindle, a gland nut for the said stuffing box, a nut screw-threaded upon the other end of the spindle, and a compression spring disposed between the latter nut and the gland nut, as and for the purpose set forth.

1,018,518. SCRAPER. LEE PETTIT, Cleburne, Tex. Filed July 22, 1911. Serial No. 639,960. (Cl. 145—47.)

The combination with a cylindrical handle, of a scraper attachment for said handle comprising an elongated concavo-convex body adapted to be engaged upon the periphery of the handle and having a lateral extension on one end provided with a concave seat to be engaged by the end of the handle, a scraping blade integrally formed upon said body and disposed out of alinement therewith, said body having a longitudinal offset extension centrally formed on its other end, a resilient clamping band integrally formed at one end with said extension and disposed in a plane at right angles to said body, said band being adapted for clamping engagement upon the periphery of the handle, the free end of said clamping band being adapted to be received between said extension and the periphery of the handle, and a set screw threaded in said offset extension of the body and adapted to engage the free end of the clamping band and rigidly secure the same in engagement with the handle to prevent relative movement of the attachment thereon.

1,018,519. PERFORATING-MACHINE. LOUIS M. l'OTTS, Baltimore, Md., assignor, by mesne assignments, to Austin McLanahan, Baltimore, Md. Original application filed July 6, 1905, Serial No. 268,494. Divided and this application filed Dec. 1, 1909. Serial No. 530,793. (Cl. 164—113.)



1. A machine for preparing page blanks for controlling automatic telegraph transmitters and the like, comprising a plurality of punches, mechanism whereby the blank being punched and the punches are relatively movable transversely of the blank, and also in a direction at right angles thereto to form successive lines of impression on said blank in which the information reads from the end of one line to the commencement of a succeeding line, and mechanism to select and operate the desired punches to form a given code impression.

2. A machine for preparing page blanks for controlling automatic telegraph transmitters and the like, comprising a plurality of punches, mechanism whereby the blank being punched and the punches are relatively movable transversely of the blank, and also in a direction at right angles to said transverse movement to form successive lines of impressions on said blank in which the information reads from the end of one line to the commencement of a succeeding line, a plurality of keys greater in number than said punches, and means controlled by said keys to select and operate the desired punches to form a given code impression.

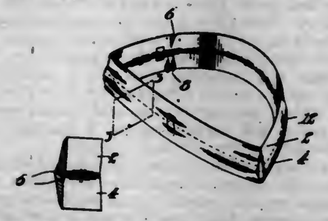
3. The combination with a typewheel, of a series of perforating pins movable relative thereto, means on said typewheel to operate a different combination of said pins for each character, on said typewheel, perforating mechanism coöperating with said pins, means to operate with said typewheel to print the characters thereon on a sheet, and means to simultaneously operate said perforating mechanism to cause the same to impress a combination of perforations on said sheet corresponding to the characters printed.

4. A perforating machine, comprising a plurality of character keys, a plurality of punches of lesser number than said keys, a plurality of type corresponding in number to said character keys, selective mechanism controlled by said character keys and adapted to simultaneously select a combination of said punches and the corresponding type, means coöperating with said selected punches to perforate a sheet of material, and printing means adapted to coöperate with said type to print the selected character on said material.

5. A perforating machine, comprising a plurality of character keys, a plurality of punches of lesser number than said character keys, means controlled by said character keys to select a given combination of said punches for the respective keys operated, and power operated means controlled by said selecting means to operate the punches selected.

[Claims 6 to 18 not printed in the Gazette.]

1,018,520. DIE FOR CUTTING SHEET MATERIAL. DANIEL N. PRIME, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 24, 1909. Serial No. 504,130. (Cl. 164—29.)



1. A double edged die for cutting blanks from upper leather, having cutting edges of different contours, said die comprising a pair of rigid open frames each having a cutting edge and a flat oppositely disposed surface, said frames being secured together by a continuous and direct union of said flat surfaces.

2. A double edged die for cutting upper leather, having opposite cutting edges of different contours, said die comprising a pair of rigid frames beveled on their outer surfaces to form a cutting edge and having straight inner surfaces and contiguous flat surfaces, the frames being rigidly connected by a continuous and direct union of said flat surfaces.

3. A double edged die comprising two frames of different sizes with cutting edges of different contours and contiguous flat surfaces held in direct engagement but offset laterally, and filling material disposed in the peripheral channel formed by the offset surface of the larger frame and the outer surface of the smaller frame.

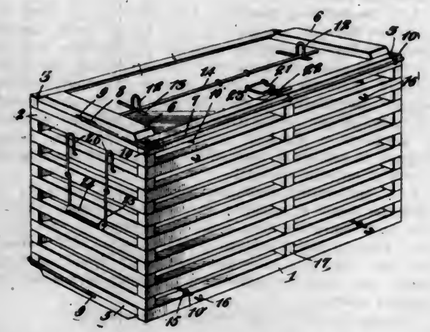
4. A double edged die, having an open center, a continuous inner surface comprising two vertical portions

offset relatively to each other and an intermediate inclined portion into which merge both of the vertical portions, one cutting edge of the die being formed at the outer edge of each vertical portion and being disposed in the respective plane of the vertical portion in which it is formed.

5. A cutting die comprising two connected portions, each having a sharpened cutting edge, a substantially unobstructed center and an opposite surface so shaped as to facilitate connecting said portions, the cutting edges of the two portions being different in contour, and said surfaces of the two portions being directly attached to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,018,521. FOLDING CRATE. ERIK O. RENSTROM, Strandquist, Minn. Filed May 25, 1911. Serial No. 629,322. (Cl. 217—14.)

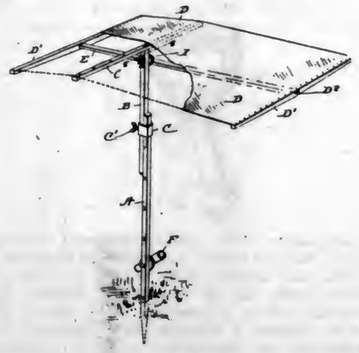


1. In a device of the character described, the combination of a body comprising sides and ends composed of bars and strips having their ends pivotally connected by means of rods or wires passing through registering openings in the ends of the bars or strips, a top and bottom, hingedly connected to the sides, keeper eyes secured to the under side of the top strips and to the top side of the bottom strips at the sides of the crate, retaining bars slidably mounted on the inside of said top and bottom having their ends normally disposed in said keeper eyes, means for holding said retaining rods in a normal position, said top and bottom being adapted to fold onto each opposite side of the crate and secured thereto when the crate is folded, and handles secured to the ends of said crate to permit the easy handling thereof.

2. In a device of the character described, the combination of a body, a top and bottom therefor, cleats secured to the inside of said top and bottom at each end thereof having transverse slots formed therein, U-shaped rods hingedly connected to the sides and having their ends bent at right angles and disposed in said slots, retaining rods slidably mounted on the inside of the top and bottom, said top and bottom having slots formed therein near the ends thereof, said retaining rods being bent at right angles and then upon themselves to form a finger-piece which is disposed through said slots, the ends of said rods being normally disposed in keeper eyes and a resilient spring bar having its ends disposed through said finger-pieces to hold said retaining rods in a normal position.

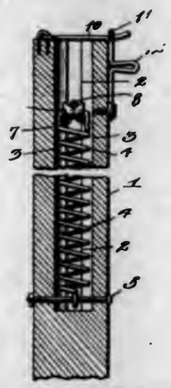
1,018,522. SUN AND RAIN PROTECTOR. GEORGE SAVAGE, Hamilton, Wash. Filed Nov. 16, 1910. Serial No. 592,673. (Cl. 135—5.)

1. A device of the kind described comprising an upright adapted to be driven into the ground, a bar carried by said upright and vertically adjustable, a cross bar carried by the said vertically adjustable bar, a fabric adapted to be stretched over said cross bar, end rods carried by the fabric, and a bar pivotally connected to the first mentioned bar and adapted to engage the end rods carried by the fabric.



2. In a device of the kind described, an upright, a vertically adjustable bar carried by said upright, a second bar pivotally connected to one side of the first mentioned bar, the point of connection being at an equal distance from an end of each bar, a shelter adapted to be carried by the second mentioned bar, and a pivoted socket carried by the upright and adapted to receive the ends of both bars.

1,018,523. CLOTHES-LINE PROP. GEORGE C. SHARP, Nicetown, Pa. Filed Oct. 3, 1911. Serial No. 652,536. (Cl. 68—12.)

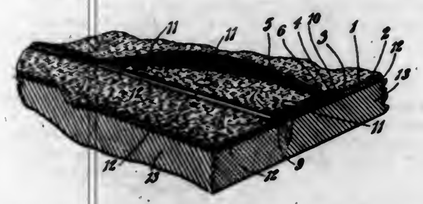


1. The combination of a prop, having a longitudinal slot formed in one end thereof, semicircular grooves formed in the side walls of said slot, means disposed within said grooves for yieldingly supporting a clothes line, and means for retaining the line within the slot.

2. The combination of a prop, having a longitudinal slot formed in one end thereof, semicircular grooves formed in the side wall of said slot, a coil spring disposed in said grooves, means carried by said spring for supporting a clothes line, and means for retaining the line within the slot.

3. The combination of a prop, having a longitudinal slot formed in one end thereof, semicircular grooves formed in the side walls of said slot, a coil spring disposed in said grooves, said spring having its lower end secured in the lower end of the slot, a bearing formed on the upper end of said spring, a pulley mounted on said bearing, having a clothes line passing thereover, and means carried by the prop for retaining the line within said slot.

1,018,524. READY-MADE ROOFING. JOHN J. SMILEY, Lockland, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed Feb. 28, 1908. Serial No. 418,194. (Cl. 108—7.)



1. In ready made roofing, comprising a cement body portion and a superimposed woven strengthening layer partially embedded therein, which diverges therefrom and is folded upon itself to form a nail and seam covering flap, and again folded to form, in conjunction with the cement body, a nailing flap, an additional under-folded layer to the part of the woven strengthening layer which is comprised in the nailing flap and extends back past the line of origin of the covering flap, whereby a folded edge is brought substantially coincident with the edge of the cement body, and whereby additional thickness and strength are provided for the nailing flap, substantially as and for the purposes specified.

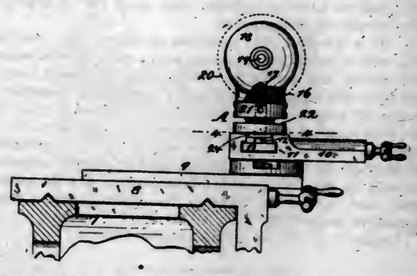
2. In ready made roofing, comprising a cement body portion and a superimposed woven strengthening layer partially embedded therein, which diverges therefrom and is folded upon itself to form a nail and seam covering flap, and again folded to form, in conjunction with the cement body, a nailing flap, an additional under-folded layer to the part of the woven strengthening layer which is comprised in the nailing flap, whereby a folded edge is brought substantially coincident with the edge of the cement body, and whereby additional thickness and strength are provided for the nailing flap, said additional under-folded layer being extended back past the line of origin of the covering flap and being attached by a seam to the main part of the woven strengthening layer in the region near its divergence from the cement body, substantially as and for the purposes specified.

3. In ready made roofing, comprising a cement body portion and a superimposed woven strengthening layer partially embedded therein, which diverges therefrom and is folded upon itself to form a nail and seam covering flap, and again folded to form in conjunction with the cement body, a nailing flap, an additional under-folded layer to the part of the woven strengthening layer which is comprised in the nailing flap, whereby a folded edge is brought substantially coincident with the edge of the cement body, and whereby additional thickness and strength are provided for the nailing flap, substantially as and for the purposes specified.

1,018,525. TOOL-HOLDING MEANS. EDWARD F. SMITH, Cincinnati, Ohio, assignor to The Smith Electric Tool Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 26, 1910. Serial No. 583,793. (Cl. 82—36.)

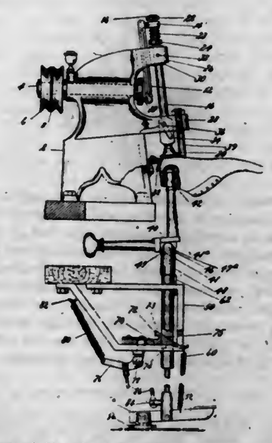
1. The combination with the usual tool-rest of a lathe having a transversely arranged T-slot, of a screw-shank seated upon this tool-rest, an anchor having at its lower end a rectangular flange fitted to occupy the T-slot mentioned and extending through the screw-shank and above the same, where, at its upper end it is screw-threaded and adapted to permit attachment of a tool-holding device and a nut seated upon the screw-shank upon which it may be adjusted to bear against the underside of said tool-holding device.

2. In means for holding the housing of an electric motor which supports and operates a tool in working position on a lathe and the housing of which motor is provided with a screw-threaded socket, the combination with the tool-rest of the lathe, of an anchor adapted to engage at one of its ends this tool-rest and being screw-threaded at its other end to engage the socket of the



motor-housing and an expansible screw-device interposed between both base and motor-housing and adapted to bear against this latter.

1,018,526. POUNDING-UP MACHINE. STEPHEN SNOW, Everett, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 9, 1904. Serial No. 215,924. (Cl. 12—51.)



1. A machine of the class described having, in combination, a pounder, an actuator to which the pounder is pivotally connected, and a guide for swinging the pounder relatively to its actuator and inwardly over the shoe bottom as it descends upon the work.

2. A machine of the class described having, in combination, the pounder 20, the actuator 10, 12 with which the pounder is pivotally connected to permit it to swing from and toward the machine, the pivoted sleeve 30 through which the pounder reciprocates and the stud 36 and inclined slot 34 for directing the path of the pounder inwardly as it strikes the shoe bottom, substantially as described.

3. A machine of the class described having, in combination, the pounder 20, the actuator 10, 12 with which the pounder is pivotally connected, the sleeve 30 through which the pounder is reciprocated, the oblique guide slot 34, the frame arms 26, 28 within which respectively the sleeve is pivoted and the guide slot has bearings and the shoe bottom abutment 39 adjustably mounted in the arm 28 in advance of the pounder, substantially as described.

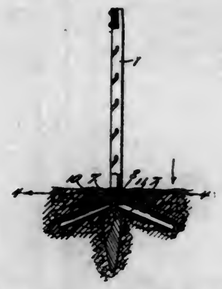
4. In a machine for pounding-up shoes, the combination with a pounding-up device, of actuating mechanism with which the device is connected for movement toward and from the shoe, said device comprising a beating head

and a stem, a shoe support, and a fixed guide operatively connected with the pounding-up device for causing said device to move in a direction at an angle to the axis of said stem to strike an oblique blow upon the bottom of a shoe carried by the support.

5. In a machine for pounding-up shoes, the combination with a pounding-up device and actuating mechanism with which said device is connected for movement toward and from the shoe, said actuating mechanism including a spring, of a shoe support, means for yieldingly actuating the shoe support to carry the shoe into the path of the pounding-up device until the spring in the actuating mechanism for the pounding-up device will be compelled to yield in the last portion of the stroke of said mechanism, and means for locking the shoe support against downward movement.

[Claims 6 to 38 not printed in the Gazette.]

1,018,527. FENCE-POST. JOHN C. SPARR and ELISON A. MARCHANT, Memphis, Tenn. Filed Aug. 10, 1911. Serial No. 643,352. (Cl. 189—29.)

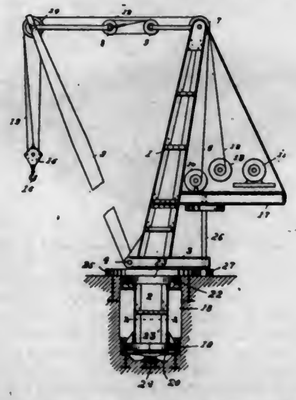


A drainage anchor structure in combination with a standard having a tapering drain gulley, the standard adapted to be extended partially into the ground, a hollow metallic member extending transversely of the standard, the end portions of which are extended outwardly and downwardly and embedded in the ground, the portion of the member which engages through the standard having oppositely arranged apertures, through which the drainage from the gulley passes, and carried off by the outwardly and downwardly extending portions.

1,018,528. WRENCH. ARCHIBALD C. SUDDARTH, Monterey, Va. Filed Nov. 25, 1911. Serial No. 662,314. (Cl. 81—111.)

In combination, a wrench stock having a head provided with deep cylindrical depressions, revoluble jaws having eccentrically arranged shanks provided with annular grooves fitted within the depression, pins threaded through the head and extended into the grooves of the shank, thereby rendering the jaws swivelly adjustable, the pins constituting means to hold the jaws adjusted, the jaws being rectangular in cross section and tapering longitudinally, thereby forming the jaws with a plurality of nut engaging faces, the jaws being revolubly adjustable, so as to dispose any two faces of the jaws in opposition so as to engage a nut.

1,018,529. DERRICK. EAIC SWENSSON, Duluth, Minn., assignor of one-half to National Iron Company, Duluth, Minn., a Corporation of Minnesota. Filed Aug. 20, 1910. Serial No. 578,160. (Cl. 212—12.)



1. A derrick comprising a leaning mast, a boom pivotally mounted upon the mast and extending in a direction opposite to the angle of the mast, and operating machinery wholly supported by the mast on the opposite side from the boom.

2. A derrick comprising a leaning mast, vertically pivoted within a suitable base, a boom pivotally mounted upon the mast and extending in a direction opposite to the angle of the mast, and operating machinery wholly supported by the mast a considerable distance above the base and operating the mast and boom.

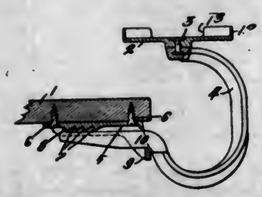
3. A derrick comprising a leaning mast vertically pivoted within a suitable foundation, a boom pivotally mounted upon the mast and extending in a direction opposite to the angle of the mast, and a horizontal platform wholly supported by the mast a distance above the foundation and extending from the opposite side to that of the boom, and operating mechanism supported by the platform and adapted to rotate the mast and raise and lower the boom.

4. A derrick comprising a leaning mast having a vertical leg at its lower end rotatably supported in a pit, a boom carried by the mast and extending in a direction opposite to that of the mast and means carried by the mast on the opposite side from the boom for operating the mast and boom.

5. A derrick comprising a leaning mast, having a vertical leg at its lower end rotatably supported in a pit, a boom carried by the mast and extending in a direction opposite to that of the mast, and means carried by the mast on the opposite side from the boom for rotating the leg in the pit and operating the boom.

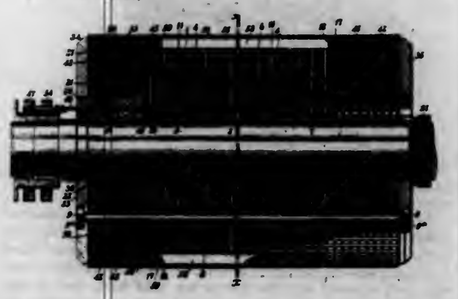
[Claims 6 to 19 not printed in the Gazette.]

1,018,530. REMOVABLE SAD-IRON HOLDER. CLINTON C. TIEDEMANN, Milwaukee, Wis. Filed Aug. 6, 1910. Serial No. 575,903. (Cl. 68—27.)



In a device of the described class, the combination of an ironing board, a stationary bracket, provided with a plurality of notches, rigidly affixed to the under side of said board, a removable bracket provided at one end with a catch adapted to engage in any one of the several notches of said stationary bracket and extending from thence horizontally past the edge of the board, thence upwardly above and at a distance from the upper surface and side of said board, and a sad iron holder pivotally attached to the upper arm of said bracket.

1,018,531. DYNAMO-ELECTRIC MACHINE. EGBERT M. TINGLEY, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 10, 1905. Serial No. 254,775. (Cl. 171—252.)



1. A structure for dynamo-electric machines comprising slotted core laminæ arranged in groups and having ventilating spaces between the middle groups, and spacing pieces between the end groups to form circumferential slots for the reception of coil ends.

2. A structure for dynamo-electric machines comprising slotted core laminæ arranged in groups and having ventilating spaces between the middle groups, and non-magnetizable spacing disks between the end groups to form circumferential slots for the reception of coil ends.

3. A structure for dynamo-electric machines comprising slotted core laminæ arranged in groups and having ventilating spaces between the middle groups and in the end groups and spacing pieces between the end groups.

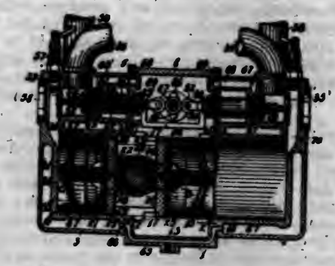
4. A structure for dynamo-electric machines comprising slotted core laminæ arranged in groups and having ventilating spaces between the middle groups, and spacing disks between the end groups to form circumferential slots for the reception of coil ends.

5. A structure for dynamo-electric machines comprising slotted core laminæ arranged in groups and having ventilating spaces between the middle groups, spacing pieces between the end groups to form circumferential slots, and conductors located in the core slots.

[Claims 6 to 54 not printed in the Gazette.]

1,018,532. INTERNAL-COMBUSTION ENGINE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Motors Company, New York, N. Y., a Corporation of New York. Original application filed Feb. 18, 1910, Serial No. 544,546. Divided and this application filed Sept. 12, 1910. Serial No. 581,632. (Cl. 123—56.)

1. In an internal combustion engine, the combination of a crank case; piston cylinders fixed to said case each having fuel and exhaust chambers in an integral part thereof with ports communicating with the cylinder; valves for said ports to control the admission of fuel to and the exhaust from said cylinders; valve stems; valve-stem carrying members screw threaded into the fuel and exhaust chambers, said members having annular recessed portions; springs to normally maintain the valves closed; and covers in the form of tubular sleeves to inclose the springs and valve stems, one end of said members slidably supported in the recessed portions of the valve-stem carrying members and having a telescoping movement into said recessed portions to expose the springs.



2. In an internal combustion engine, the combination of a crank case; piston cylinders fixed to said case each having fuel inlet and exhaust ports in an integral part thereof; a piston operating in said cylinder; valves operating in said ports to control the admission of fuel to and the exhaust from said cylinders; valve stems; removable plugs for the valve stems having annular recessed portions; keys passing transversely through said stems near the free ends thereof; springs surrounding said valve stems with one end seated in the recessed portions of the removable plugs and the other ends abutting against the said keys to maintain the valves closed; a crank shaft journaled in the crank case; a cam shaft journaled in the crank case and gear driven from the crank shaft; cams thereon; cam followers slidably mounted in the crank case, one end of the followers projecting into the said case to be engaged by the cams, and the other ends projecting out from the crank case to engage the valve-stems to unseat the valves; and tubular members to inclose the valve stems and springs and the ends of the cam followers projecting out from the crank case, one end of said members slidably supported in the recessed portions of the removable plugs and having a telescoping movement therein to expose the said springs and valve stems.

3. In an internal combustion engine, the combination with a crank case, of a piston cylinder fixed to said case having fuel inlet and exhaust chambers in an integral part thereof, said chambers having fuel inlet and exhaust ports communicating with the cylinder; valves normally seated in said ports and operable to control the admission of fuel to and exhaust from said cylinders; valve stems; bearings for the valve stems screw threaded into said chambers in which the stems of the valves are slidably mounted; keys passing transversely through the free ends of the valve stems; springs coiled about the valve stems and confined between the valve-stem bearings and said keys, whereby to normally seat the valves in the ports; a cam shaft journaled in the crank case; cams thereon; bushings screw threaded into the crank case; cam followers slidably mounted in said bushings with one end projecting into the crank case to be engaged by the cams and the other end projecting out from the crank case and arranged to engage the valve stems to open said valves; and tubular sleeve members to inclose the springs and valve stems supported at one end by the valve-stem bearings and at the other end by the cam-follower bushings, said sleeves having a telescoping movement with relation to the valve-stem bearings to expose the springs and valve stems.

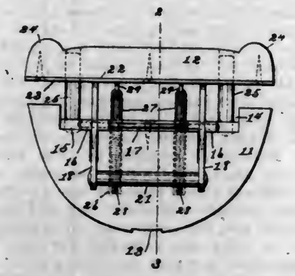
4. In an internal combustion engine, the combination with the crank case, a crank shaft journaled therein, piston cylinders fixed to said case each having fuel inlet and exhaust ports in an integral part thereof, and pistons connected to the crank shaft and operating in the cylinders, of valves for said ports to control the admission of fuel to and exhaust from said cylinders; valve stems; removable members in which the valve stems are slidably mounted, said members having annular recessed portions; keys passing transversely through the valve stems near the free ends thereof; springs coiled about

the valve stems and confined between said valve stem carrying members and keys to maintain the valves upon their seats; tubular sleeve members to inclose the valve stems and springs, one end of said members supported in the recessed portions of the valve-stem carrying members and having telescoping movement in said recessed portions whereby to expose the valve stems and springs; a cam shaft journaled in the crank case and gear driven from the crank shaft; and cams thereon to unseat the valves.

5. In an internal combustion engine, the combination with a crank case, of opposed piston cylinders fixed in alined pairs to said case, said cylinders each having separate fuel and exhaust chambers in an integral part thereof with ports communicating with the cylinder; valves for said ports operable to control the admission of fuel to and exhaust from said cylinders, the valves for one cylinder arranged out of line with the valves of its opposed cylinder; valve stems; valve stem carrying plugs screw threaded into said chambers, said plugs having elongated tubular portions to provide long bearing supports for the valve stems and annular recessed portions; keys passing transversely through the free ends of the valve stems; springs coiled about the elongated portions of the plugs, with one end seated in the recessed portions of the plugs, and the other end abutting against the valve-stem keys to maintain the valves upon their seats; a cam shaft journaled in the crank case; cams thereon; tappets slidably mounted in the crank case between the cams and valve-stems and arranged to engage with the valve-stems to unseat the valves; rollers carried by said tappets with which the cams engage; and tubular covers to inclose the valve stems and springs and the ends of the tappets projecting out from the crank case, said covers slidably supported at one end in the recessed portions of the valve-carrying plugs and having a telescoping movement into said recessed portions to expose the springs and valve stems.

[Claims 6 to 8 not printed in the Gazette.]

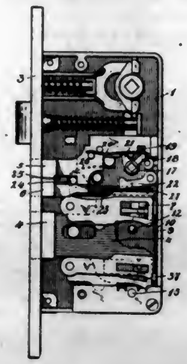
1,018,533. NECKBAND STRETCHER AND SHAPER. JAMES E. UMPLEBY, Troy, N. Y., assignor of one-half to James S. Fuller, Kingston, N. Y. Filed July 27, 1911. Serial No. 640,757. (Cl. 68—1.)



1. An independent neck-band shaper and stretcher comprising a body block; a tail block; means for automatically drawing said blocks toward each other, means for preventing the lateral movement of said blocks and manually operative means for forcing said blocks apart to a single, predetermined position and for positively locking them in such relation, whereby the peripheral measurement of the extended device is made invariable.

2. An independent neck-band shaper and stretcher comprising a body block; a tail block; a spring operative to draw said blocks together; guide pins for preventing their relative lateral movement; and a manually operated lever for forcing said blocks apart to a single, predetermined position and for positively locking them in such relation, whereby the peripheral measurement of the extended device is made invariable.

1,018,534. COMMUNICATING-DOOR LOCK. HENRY G. VOIGHT and NORMAN B. HURD, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed June 27, 1911. Serial No. 635,552. (Cl. 70—71.)



1. In a lock mechanism, the combination with a pair of independent bolts, and independent means for operating said bolts respectively from opposite sides of the door, a key controlled bolt, a plurality of keys including a pass key and a guard key for operating said bolt, and means whereby both of said pair of bolts may be retracted by the retraction of said key controlled bolt by said guard key, and may be prevented from retraction by the retraction of said key bolt by said pass key.

2. In a lock mechanism, the combination with a pair of independent bolts, independent means for actuating said bolts respectively from opposite sides of the door, key controlled means, a plurality of keys including a pass key, and a guard key, and means whereby both of said pair of bolts may be retracted by operation of said key controlled means by said guard key, and may be prevented from the retraction by operation of said key controlled means by said pass key.

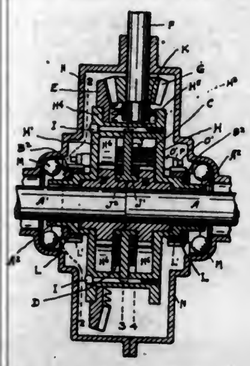
3. In a lock mechanism, the combination with a pair of independent bolts, independent means for operating said bolts respectively from opposite sides of the door, key controlled means operable from either side of the door, a plurality of keys including a pass key and a guard key, and means whereby both of said independent bolts may be retracted by operation of said key controlled means by said guard key, and whereby retraction of either of said independent bolts may be prevented by operation of said key controlled means by said pass key.

4. In a lock mechanism, the combination with independent bolts, independent means for operating said bolts respectively from opposite sides of the door, a key controlled bolt operable from either side of the door, a plurality of keys including a pass key and a guard key, connecting mechanism between said key controlled bolt and said independent bolts operable to permit retraction of said independent bolts by retraction of the key controlled bolt by said guard key and to prevent retraction of said independent bolts by retraction of said key controlled bolt by said pass key.

5. In a lock mechanism, the combination with independent bolts, independent roll-backs for operating said bolts respectively from opposite sides of the door, a key controlled bolt operable from either side of said door, a connecting member slidingly carried by the lock case, a second connecting member carried by said key controlled bolt, and means whereby said connecting members may be connected by operation of said guard key in projecting and retracting said key controlled bolt to retract said independent bolts, and may be prevented from being connected by operation of said key controlled bolt by said pass key.

[Claims 6 to 15 not printed in the Gazette.]

1,018,535. DIFFERENTIAL GEARING. HUGH L. WARNER, Muncie, Ind. Filed Sept. 25, 1909. Serial No. 519,506. (Cl. 74—34.)



1. A housing for differential gearing of the kind described, comprising half sections provided with central journal bearings and having thickened portions in the walls to alternate with each other and wherein to anchor the shafts for the pinions, the meeting faces of said half sections having recesses to register with each other, a spider having its peripheral portion to fit in said recesses, and having a central journal bearing, and which spider has openings through which may be passed the pinions, and means to hold the said spider and the half sections of said housing securely together.

2. A housing for differential gearing of the kind described, comprising a hollow drum shaped centrally divided housing, the meeting faces of the peripheral portions of the half sections being provided with annular offsets or rabbets which will register with each other, and said half sections each being provided with a central journal bearing and having thickened portions in the walls wherein to anchor the shafts for the pinions, a spider of such diameter that its peripheral edges will fit snugly in the space between the meeting offsets in the housing, said spider having transverse recesses in its peripheral face, and being provided with a central journal bearing, and bolts to bind the said half sections securely together and which bolts will engage the said recesses in the peripheral edges of the said spider.

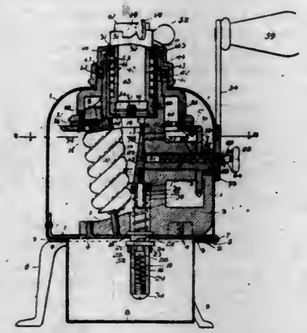
3. In a device of the kind described, a pair of shafts, gear wheels secured on the meeting ends of same and having outwardly extended hubs, a housing composed of half sections having central lateral extensions journaled on the outer portions of the hubs of the gear wheels but having no bearing on the shafts, and the walls of the half sections being provided with thickened portions in alternated positions and forming foundations for the pinion shafts substantially as described, shafts rigidly secured in said thickened portions, a spider in the bore of which is journaled the inner ends of the hubs of the gear wheels, the body portion of which spider has openings through which the pinions may be passed, and means to hold together the spider and the half sections.

4. In a device of the kind described, a pair of shafts, gear wheels secured on the meeting ends of same and having outwardly extended hubs, a housing composed of half sections having central lateral extensions journaled on the outer portions of the hubs of the gear wheels but having no bearing on the shafts, and the walls of the half sections being provided with thickened portions in alternate positions and forming foundations for the pinion shafts, substantially as described, shafts rigidly secured in said thickened portions, a spider in the bore of which is journaled the inner ends of the hubs of the gear wheels, the body portion of which spider has openings through which the pinions may be passed, and bolts to pass transversely through the peripheral portions of the half sections to secure the half sections together and which bolts engage the peripheral portion of the spider.

5. A housing for a differential gearing of the kind described, comprising a hollow drum shaped centrally divided housing, the meeting faces of the peripheral portions of the half sections being provided with annular offsets or rabbets which will register with each other, said half sections each being provided with a central journal bearing and having thickened portions in the walls wherein to anchor the shafts for the pinions, a spider of such diameter that its peripheral edges will fit snugly in the space between the meeting offsets in the housing, bolts to bind the said half sections securely together and which bolts will engage the peripheral edges of said spider, a bearing member carried by and adjustable longitudinally on each of the central journal bearings of the said housing, means carried by the housing to hold the said bearing members in different adjusted positions, and a frame having bearings in which said bearing members will work.

[Claims 6 to 10 not printed in the Gazette.]

1,018,536. PENCIL-SHARPENING MACHINE. EDGAR P. WEBSTER, Bridgeport, Conn. Filed Apr. 14, 1911. Serial No. 621,075. (Cl. 120—95.)



1. A pencil sharpening machine, comprising a casing, a frame secured therein, a rotary cutter journaled in said frame, a pencil bushing stationary as to rotation and having extending therethrough a tapered opening and cut away adjacent to said cutter, rotary pencil clamping devices freely movable vertically, and means supported and journaled within said frame for causing said devices and cutter to simultaneously and continuously travel in reverse directions at their points of contact.

2. In a machine of the character described, the combination of a casing, a frame secured therein, a rotary cutter journaled in said frame and carrying a small spur gear, a pencil bushing having extending therethrough a tapered opening and cut away adjacent said cutter, rotary pencil clamping devices adapted to hold the pencil with the lower extremity resting by gravity within said bushing, a rotary crank shaft journaled in said frame and carrying a bevel gear, a horizontal gear supported on said frame and meshing at its outer periphery with the first named gear, connections between said horizontal gear and the pencil clamping devices whereby the latter will be rotated, and a ring rigid with said horizontal gear and having spur teeth on its inner periphery which engage said spur pinion whereby the cutter and pencil clamping devices are simultaneously and continuously caused to travel in reverse directions at their points of contact.

3. In a machine of the character described, the combination of a pencil bushing having extending therethrough a tapered opening, a stationary thimble having in its bottom edge shallow and deep notches, a gage pin extending freely through said thimble and whose head is

immediately below said bushing, a spring acting to normally project said pin toward said bushing, and a collar carried by said pin and having a tooth adapted to engage said notches when the pin is rotated whereby a maximum and minimum distance may be effected between said bushing and pin.

4. In a pencil sharpening machine, the combination with a rotary cutter and a pencil receiving bushing adjacent said cutter, of a rotary pencil clamp freely movable vertically whereby when elevated a pencil clamped therein will rest by gravity within said bushing, and means for causing said pencil and cutter to simultaneously and continuously travel in reverse directions at their points of contact.

5. In a machine of the character described, the combination of the casing, the frame supported therein, a rotary cutter journaled in the frame, a vertically adjustable pencil holder bushing guided within said frame and having extending therethrough a tapering recess said bushing open at one side to admit the cutter, an adjustable gage pin immediately below said bushing, means carried by said pin and connected with said bushing for regulating the distance between said pin and bushing, pencil clamping devices supported within said frame and capable of free vertical movements whereby the pencil may be clamped with said devices attached thereto in elevated position thereby causing the lower end of said pencil to constantly bear against said bushing owing to the gravity of the pencil and said devices, and means for causing said cutter and devices to simultaneously and continuously travel in reverse directions at their points of contact.

1,018,537. WORK-SUPPORT. CHARLES STONEHALL WELLS, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 16, 1908. Serial No. 458,100. (Cl. 12—127.)

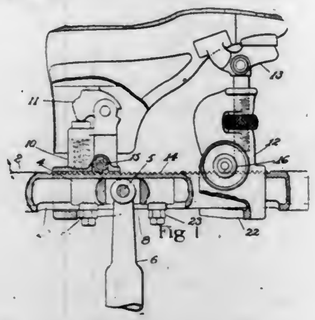


Fig 1

1. An apparatus of the class described comprising a support and a shoe jack which can be canted on the support and has also another movement on said support, combined with a device which is brought by said other movement into action to vary the extent of the canting movement of the jack.

2. An apparatus of the class described comprising a support and a shoe jack which can be canted on the support and has also another movement on said support, combined with a device which can be brought by said other movement into position to coöperate with the support for locking the jack against canting movement.

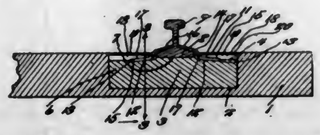
3. The combination with a jack support and a shoe machine jack that can be canted and also moved endwise upon said support of a locking device that as the jack is moved endwise locks the jack from canting during part of such movement and at another part unlocks the jack to permit it to cant.

4. An apparatus of the class described, having in combination, a jack support, a jack mounted thereon to cant and also to move endwise, means to vary the extent of the canting movement at a certain part of the endwise movement and means for changing the point in the endwise movement of the jack when the last mentioned means becomes operative.

5. An apparatus of the class described, having in combination, a jack support, a jack mounted thereon to cant and also to move endwise, said jack comprising a heel rest and a toe rest, means operatively connected with one of said rests to restrain the canting movement of the jack when it is at one end of its endwise movement, and means whereby that rest can be adjusted for shoes of different lengths.

[Claims 6 to 22 not printed in the Gazette.]

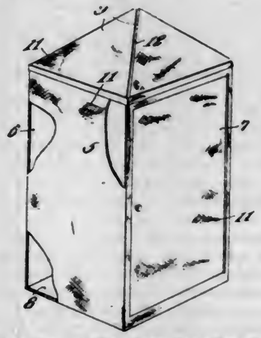
1,018,538. COMBINED TIE AND RAIL-FASTENER. WILLIAM WILDE, Urbana, Ill. Filed Sept. 11, 1911. Serial No. 648,690. (Cl. 238—5.)



1. In combination, a tie, a member embedded therein and provided with a transverse recess, a rail arranged in the recess, the member having trough like gutters, the trough like guides having recesses, one end of each recess of the guides constituting a shoulder, and rail clamping plates arranged in the guides and partly seated in the recesses thereof with the ends of the plates in contact with the shoulders.

2. In combination, a tie, a member embedded therein and provided with a transverse recess, a rail arranged in the recess, the member having trough like gutters, the trough like guides having recesses, one end of each recess of the guides constituting a shoulder, the guides having restricted upper openings, and rail clamping plates arranged in the guides, the rail clamping plates comprising body portions having restricted tongues to extend through the restricted openings to engage the upper surfaces of the base flanges of the rail, the body portions of the plates being seated in the recesses of the guides with their ends in contact with the shoulders to lock the plates in place.

1,018,539. REFRIGERATOR. GEORGE MCDONALD WILLARD, Cottonwood, Ariz. Filed Feb. 13, 1911. Serial No. 608,272. (Cl. 62—10.)



1. A refrigerator of the class described having a pyramidal top formed with channels along its inclined diagonal edges.

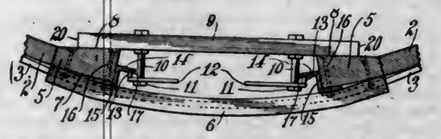
2. A refrigerator of the class described having a top wall including relatively inclined portions formed with a channel at their junction, said channels radiating from a common point.

3. A cooler of the class described having a pyramidal top formed along each side edge with a channel extending radially from the apex to the base of the top.

4. A refrigerator comprising a body having side corners and a pyramidal top having the lower end of its corners registering with the upper ends of the corners of the body and formed with channels extending therealong from the apex to the base of the top.

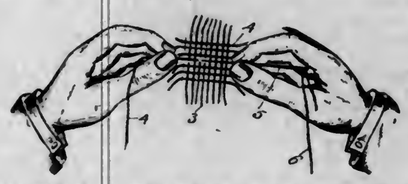
5. A refrigerator of the class described, comprising a rectangular body portion provided with a hinged door, said rectangular body portion being exteriorly covered with a liquid holding fabric, and a cover fitting upon the upper end and substantially rectangular in plan, and comprising four substantially triangular sections connected together to form a pyramidal top, the respective meeting edges of said sections being grooved to form diagonally disposed channels leading from the top or central point of the top to the corners of the body portion, and a moisture retaining fabric covering said sections of the top.

1,018,540. SILO. DAVID S. YOUNCE and ELIAS F. YOUNCE, Union, Ohio. Filed Apr. 17, 1911. Serial No. 621,450. (Cl. 20—1.4.)



The combination with a silo having uprights forming the frame of an opening extending from the base to the top thereof, and a plurality of struts extending across said opening and lying entirely outside the plane of the outer sides of said uprights, of Z-bars secured to said uprights, the outer flanges of said bars engaging the outer sides of said uprights, and the inner flanges thereof lying within the space of the door frame formed by said uprights, a plurality of door panels arranged on the inside of said door frames, across said opening, and locking members pivoted to said panels and engaging the inner flanges of the Z-bars to hold said panels in position, said locking members lying inwardly from the plane of the struts, whereby the said door panels may be raised or lowered without the locking members being obstructed by the struts, substantially as specified.

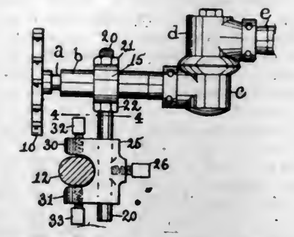
1,018,541. METHOD OF MENDING CLOTH. ALOIS ZEINZINGER, Chicago, Ill. Filed June 12, 1911. Serial No. 632,751. (Cl. 112—34.)



1. A method of mending holes in cloth, comprising arranging guide threads in the cloth about the hole in the same form as the weave of the cloth, then replacing each guide thread with a thread corresponding to a particular thread of the cloth.

2. A method of mending holes in cloth, made of different colored threads, comprising weaving guide threads across the hole in alinement with the threads of the cloth and arranged in the same pattern, said guide threads being of as many colors as but of different colors than the threads of the cloth, each color of guide thread being arranged in alinement with a different color of cloth thread, then withdrawing each guide thread and inserting in its place a thread of the same color as the corresponding thread of the cloth.

1,018,542. SUPPORTING DEVICE FOR SPEEDOMETER-DRIVING MECHANISM. ROLLIN ABELL, Boston, Mass. Filed Mar. 9, 1910. Serial No. 548,226. (Cl. 235—96.)



1. A supporting device of the character described, comprising a split clamping collar having lugs or ears, a rod having a threaded end extended through said lugs or ears, nuts on said rod for moving said lugs or ears toward each other, a supporting block provided with arms and having a hole or opening into which said rod is extended and with arms extended laterally with relation to said hole and separated from each other for the reception of a support for the device, a set screw to engage said rod and render it fixed to said block, and screws carried by said arms to secure said block in a stationary position, substantially as described.

2. A supporting device of the character described, comprising a split clamping collar having lugs or ears, a rod having a threaded end extended loosely through said lugs or ears, nuts on said rod for moving said lugs or ears toward each other, a supporting block for said rod having forked arms, extended laterally with relation to said rod, and means carried by said arms for securing said block in a fixed position, substantially as described.

3. The combination with the bearing sleeve *b* of a speedometer driving mechanism, of a clamping collar on said sleeve having lugs or ears provided with openings, a rod supporting said clamping collar and extended loosely through the openings in the said lugs or ears, means on said rod to clamp said collar in fixed relation to said sleeve, and a support for said rod capable of being attached to the arm of the movable knuckle of the front wheel of an automobile, substantially as described.

4. A supporting device for the driving mechanism of a speedometer, comprising a split collar having lugs or ears, a threaded rod loosely extended through said lugs or ears, nuts on said rod above and below said lugs or ears, a block to which said rod is attached and provided with forked arms extended laterally with relation to said rod, and screws carried by said forked arms and movable in a direction substantially parallel with said rod, the screw on one of said arms being located in a plane between a plurality of screws on the other of said arms, substantially as described.

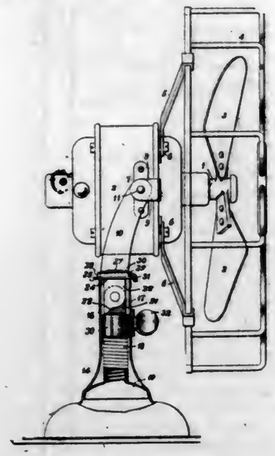
1,018,543. MOTOR-DRIVEN FAN. THEODORE ABTMEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 17, 1910. Serial No. 567,475. (Cl. 248—21.)

1. The combination with a hollow base and a fan motor supported thereon, of pivotally connected parts movable into and out of said base, a helical spring having its respective ends fastened to said base and to one of said pivotally connected parts and means for clamping said parts in either of their extreme positions.

2. The combination with a hollow base, a block located and longitudinally movable in said base, and a spring fastened at its respective ends to said base and to said movable block, a fan motor having a hinge or pivotal connection to said block, and means for clamping said block in either of its extreme positions.

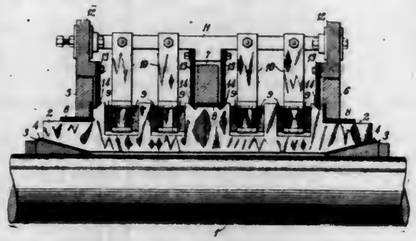
3. The combination with a hollow base, a helical spring located within and having one end anchored to said base,

and a longitudinally movable block fastened to the other end of said spring, of a fan motor having a hinge or pivotal connection to the said block which is operative only when the spring is distended, and means for clamping said block in either of its extreme positions.



4. The combination with a hollow base, a helical spring located within and having one end anchored to said base and a movable block fastened to the other end of said spring, of a fan motor, a trunnion frame for said motor, a pivotal support for said trunnion frame and means for effecting a hinge connection between said support and said movable block.

1,018,544. COMMUTATOR FOR ELECTRICAL MACHINES. SIEGFRIED VON AMMON, Bowdon, England, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1908. Serial No. 426,364. (Cl. 171—210.)



1. A commutator for dynamo-electric machines comprising segments or bars, a plurality of clamping rings surrounding said segments or bars and insulated therefrom and stationary annular plates or shields of insulating material located adjacent to the said rings, for the purpose specified.

2. A commutator for a dynamo-electric machine provided with stationary annular insulating plates or shields located between commutator brushes and disposed in planes perpendicular to the commutator cylinder axis.

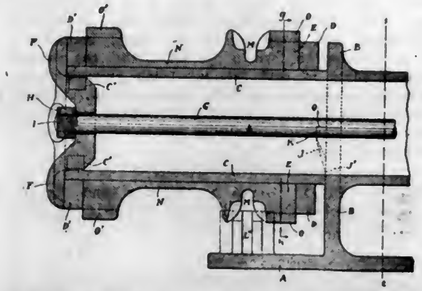
3. In a dynamo-electric machine, the combination with a commutator cylinder and brushes in engagement therewith, of stationary annular insulating barriers between the brushes.

4. In a dynamo-electric machine, the combination with a commutator cylinder and brushes in engagement therewith, of a pair of stationary annular insulating barriers between adjacent sets of brushes.

5. In a dynamo-electric machine, the combination with a commutator cylinder having a plurality of insulated segments, and brushes in engagement with the commutator cylinder surface, of annular barriers of insulating material disposed between the brushes and stationary relative to the commutator cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,018,545. DOUBLE-ACTING WINDLASS. CIPRIANO ANDRADE, Jr., New York, N. Y. Filed Sept. 27, 1911. Serial No. 651,581. (Cl. 57—85.)



1. In windlasses in combination: a web plate rigid with the vessel's deck, said web plate having wedges on its face nearest the trip ring hereinafter mentioned, and having also a cam adapted for effective engagement with the trip lug on the heaving pawl hereinafter mentioned; a sleeve perpendicular to the web plate and fixed with reference thereto; a drum rotating about said sleeve as an axis, said drum having ratchet teeth on its periphery; a molding pawl fixed with reference to the web plate, and engaging said ratchet teeth, said holding pawl having a trip lug; a trip ring disposed between the end of the drum and the face of the web plate, said trip ring being rotatable about said sleeve, said trip ring carrying on one of its faces wedges adapted for effective rotary engagement with the wedges on the face of the web plate, whereby said trip ring may be forced away from said web plate and against the end of said drum, said trip ring also carrying on itself a cam designed for effective engagement with the trip lug on the holding pawl, whereby said holding pawl may be tripped; a heaving pawl on said trip ring, said heaving pawl engaging said ratchet teeth, said heaving pawl having a trip lug, whereby said pawl may be brought into effective tripping engagement with the cam on the web plate; supplementary ratchet teeth on the drum, said supplementary ratchet teeth pointing in the same direction as said first mentioned ratchet teeth; a supplementary heaving ring rotatable concentrically with said sleeve; a supplementary heaving pawl on said supplementary heaving ring, said supplementary heaving pawl engaging said supplementary ratchet teeth; a member at the end of the sleeve farthest from the web plate, said member being fixed with reference to said sleeve, and being adapted to resist any motion of the drum away from the web plate; means for imparting a reciprocating motion of rotation to said trip ring; means for imparting a reciprocating motion of rotation to said supplementary heaving ring.

2. In windlasses in combination; a web plate rigid with the vessel's deck, said web plate having a cam adapted for effective engagement with the trip lug on the heaving pawl hereinafter mentioned; a sleeve perpendicular to the web plate and fixed with reference thereto; a drum rotating about said sleeve as an axis, said drum having ratchet teeth on the periphery; a holding pawl fixed with reference to the web plate, and engaging said ratchet teeth, said holding pawl having a trip lug; a trip ring disposed between the end of the drum and the face of the web plate, said trip ring being rotatable about said sleeve, said trip ring carrying on itself a cam designed for effective engagement with the trip lug on the holding pawl, whereby said holding pawl may be tripped; a heaving pawl on said trip ring, said heaving pawl engaging said ratchet teeth, said heaving pawl having a trip lug, whereby said pawl may be brought into effective tripping engagement with the cam on the web plate; supplementary ratchet teeth on the drum, said supplementary ratchet teeth pointing in the same direction as said first mentioned ratchet teeth; a supplementary heaving ring rotatable concentrically with said sleeve; a supplementary heaving pawl on said supplementary heaving ring, said supplementary heaving pawl engaging said supplementary ratchet teeth; a member at the end of the sleeve farthest from the web plate, said member being fixed with reference to said sleeve, and being adapted to resist any motion of the drum away from the web plate; means for imparting a reciprocating motion of rotation to said trip ring; means for imparting a reciprocating motion of rotation to said supplementary heaving ring.

3. In windlasses in combination; a web plate rigid with the vessel's deck, said web plate having wedges on its face nearest the trip ring hereinafter mentioned, and having also a cam adapted for effective engagement with the trip lug on the heaving pawl hereinafter mentioned; a sleeve perpendicular to the web plate and fixed with reference thereto; a drum rotating about said sleeve as an axis, said drum having ratchet teeth; a holding pawl fixed with reference to the web plate, and engaging said ratchet teeth, said holding pawl having a trip lug; a trip ring disposed between the end of the drum and the face of the web plate, said trip ring being rotatable about said sleeve, said trip ring carrying on one of its faces wedges adapted for effective rotary engagement with the wedges on the face of the web plate, whereby said trip ring may be forced away from said web plate and against the end of said drum, said trip ring also carrying on itself a cam designed for effective engagement with the trip lug on the holding pawl, whereby said holding pawl may be tripped; a heaving pawl on said trip ring, said heaving pawl engaging said ratchet teeth, said heaving pawl having a trip lug, whereby said pawl may be brought into effective tripping engagement with the cam on the web plate; supplementary ratchet teeth on the drum, said supplementary ratchet teeth pointing in the same direction as said first mentioned ratchet teeth; a supplementary heaving ring rotatable concentrically with said sleeve; a supplementary heaving pawl on said supplementary heaving ring, said supplementary heaving pawl engaging said supplementary ratchet teeth; a member at the end of the sleeve farthest from the web plate, said member being fixed with reference to said sleeve, and being adapted to resist any motion of the drum away from the web plate; means for imparting a reciprocating motion of rotation to said trip ring; means for imparting a reciprocating motion of rotation to said supplementary heaving ring.

4. In windlasses in combination: a web plate rigid with the vessel's deck, said web plate having a cam adapted for effective engagement with the trip lug on the heaving pawl hereinafter mentioned; a sleeve perpendicular to the web plate and fixed with reference thereto; a drum rotating about said sleeve as an axis, said drum having ratchet teeth; a holding pawl fixed with reference to the web plate, and engaging said ratchet teeth, said holding pawl having a trip lug; a trip ring disposed between the end of the drum and the face of the web plate, said trip ring being rotatable about said sleeve, said trip ring carrying on itself a cam designed for effective engagement with the trip lug on the holding pawl, whereby said holding pawl may be tripped; a heaving pawl on said trip ring, said heavy pawl engaging said ratchet teeth, said heaving pawl having a trip lug, whereby said pawl may be brought into effective tripping engagement with the cam on the web plate; supplementary ratchet teeth on the drum, said supplementary ratchet teeth pointing in the same direction as said first mentioned ratchet teeth; a supplementary heaving ring rotatable concentrically with said sleeve; a supplementary heaving pawl on said supplementary heaving ring, said supplementary heaving pawl engaging said supplementary ratchet teeth; means for imparting a reciprocating motion of rotation to said trip ring; means for imparting a reciprocating motion of rotation to said supplementary heaving ring.

5. In windlasses in combination: a web plate rigid with the vessel's deck, said web plate having a wedge on its face nearest the trip ring hereinafter mentioned, and having also a cam adapted for effective engagement with the trip lug on the heaving pawl hereinafter mentioned; a sleeve perpendicular to the web plate and fixed with reference thereto; a drum rotating about said sleeve as an axis, said drum having ratchet teeth; a holding pawl fixed with reference to the web plate, and engaging said ratchet teeth, said holding pawl having a trip lug; a trip ring disposed between the end of the drum and the face of the web plate, said trip ring being rotatable about said sleeve, said trip ring carrying on one of its faces a wedge adapted for effective rotary engagement with the wedge on the face of the web plate, whereby said trip ring may be forced away from said web plate and against the end of said drum, said trip ring also carrying on itself a cam designed for effective engagement with the trip lug on the holding pawl, whereby said holding pawl may be tripped; a heaving pawl on said trip ring, said heaving pawl engaging said ratchet teeth, said heaving pawl having a trip lug, whereby said pawl may be brought into effective tripping engagement with the cam on the web plate; supplementary ratchet teeth on the drum, said supplementary ratchet teeth pointing in the same direction as said first mentioned ratchet teeth; a supplementary heaving ring rotatable concentrically with said sleeve; a supplementary heaving pawl on said supplementary heaving ring, said supplementary heaving pawl engaging said supplementary ratchet teeth; a member at the end of the sleeve farthest from the web plate, said member being fixed with reference to said sleeve, and being adapted to resist any motion of the drum away from the web plate; means for imparting a reciprocating motion of rotation to said trip ring; means for imparting a reciprocating motion of rotation to said supplementary heaving ring.

[Claims 6 to 23 not printed in the Gazette.]

1,018,546. LID-LIFTER. PIUS BAMMER, Ashland, Oreg. Filed Sept. 23, 1911. Serial No. 650,968. (Cl. 220—6.)

1. The combination of a covered box with a lid lifter, comprising a bracket secured to said box, a double lever pivotally mounted upon said bracket, and means for normally holding one member of the lever against the side of the box and the other upon the lid thereof.

2. The combination of a covered box with a lid lifter, comprising a bracket secured to said box, a double lever pivotally mounted on said bracket, one member of which normally stands beneath the edge of the box lid while the other extends at right angles therefrom and comes to rest upon the lid, and means for yieldingly holding them against their respective members.

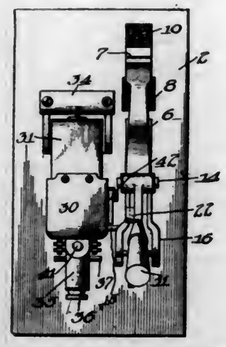
3. A box-lid lifter, comprising a bracket mounted on the box, an operating lever pivoted to said bracket, and a lifting member pivotally connected to the forward end of the said lever, the upper edge being adapted to bear against the lower edge of the box lid, whereby, by the movement of the operating lever the box lid will be raised.

4. A box-lid lifter, comprising a bracket mounted on the box, an operating lever pivoted, at an intermediate point, to said bracket, a lifting member pivoted to the forward end of said lever and adapted to stand vertically against the side of the box, and a lip projecting from the upper edge of the vertical member to stand beneath the lower edge of the box lid, whereby, by the movement of said lever the box lid will be raised.

5. In combination with a covered box, a lid lifter comprising a bracket mounted on said box, a lever pivoted at an intermediate point to said bracket the outer end of which is adapted to rest upon the box-lid, a lifting member pivoted to the inner end of said lever and adapted to

stand vertically against the side of the box, a lip projecting from the upper edge of the vertical member to stand beneath the lower edge of the box-lid, and resilient means for normally holding said vertical member and said lever in contact with the box and lid respectively.

1,018,547. CIRCUIT-BREAKER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 21, 1907. Serial No. 358,564. (Cl. 172—179.)



1. In a device of the type set forth, a switch, a low voltage device for causing the switch to open when the voltage is reduced, an electro responsive overload device for causing the switch to open when the current increases to a predetermined degree, means for preventing the switch from being closed until a predetermined voltage prevails, and means for setting the low voltage device.

2. In combination, a switch, a low voltage device, for causing the switch to open when the voltage is reduced, an overload device for causing the switch to open when the current increases to a predetermined degree, means positively actuated by the low voltage device to prevent the closing of the switch until a predetermined voltage prevails, and means for setting the low voltage device.

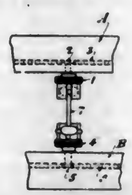
3. In combination, a switch, a low voltage device adapted to open the switch when the voltage is reduced, an overload device for causing the switch to open when the current increases to a predetermined degree, a mechanical interlock between the low voltage device and the switch for preventing the closing of the latter until a predetermined voltage prevails, means for setting said low voltage device, a latch for the switch, and a tripping lever adapted to be operated both by the low voltage and overload devices for actuating the latch to release the switch.

4. In a device of the type set forth, a switch, a low voltage device for causing the switch to open when the voltage falls, an overload device for causing the switch to open when the current increases to a predetermined degree, a mechanical interlock between the switch and the low voltage device for preventing the closing of the switch until a predetermined voltage prevails, and means for setting the low voltage device comprising a switch arm and an auxiliary contact member carried thereon adapted to close the setting circuit for the low voltage device.

5. In combination, a switch, an overload device for causing the switch to open when the current increases to a predetermined degree, a no-voltage device for causing the switch to open when the voltage is reduced, a pivotally mounted lever having a slotted portion, a pin carried on the no-voltage device engaging in a slot in the lever, a pin mounted upon the switch adapted to be engaged by one arm of said lever when a predetermined voltage prevails to prevent the closing of the switch, and means for causing the setting of the no-voltage device.

[Claims 6 to 18 not printed in the Gazette.]

1,018,548. RANGE-FINDER. ARCHIBALD BARR and WILLIAM STROUD, Glasgow, Scotland. Filed July 17, 1911. Serial No. 638,971. (Cl. 88—3.)



1. A rangefinder and a rangekeeper each having range measuring mechanism, in combination with means for simultaneously operating the two mechanisms, for the purposes set forth.

2. A rangefinder and a rangekeeper each having range measuring mechanism, and means for setting the rangekeeper, in combination with means for simultaneously operating the two mechanisms, for the purposes set forth.

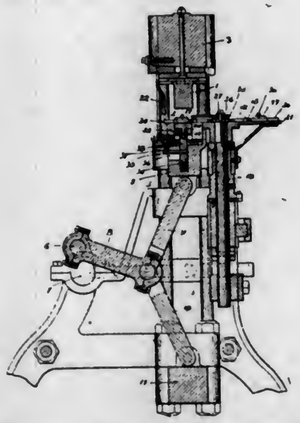
3. A rangefinder and a rangekeeper each having range measuring mechanism, the rangekeeper having refracting prisms rotatable in opposite directions for effecting settings, in combination with means for simultaneously operating the two mechanisms, for the purposes set forth.

4. A rangefinder and a rangekeeper each having range measuring mechanism, each mechanism comprising a scale indicating similar ranges, with means for simultaneously operating the two mechanisms, in combination with means for setting the rangekeeper, for the purposes set forth.

5. A rangefinder and a rangekeeper each having range measuring mechanism, the rangekeeper having refracting prisms rotatable in opposite directions for effecting the required setting and translatable for keeping the rangekeeper set upon the target, in combination with means for simultaneously operating the two mechanisms, for the purposes set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,018,549. MACHINE FOR PRESSING HEEL-LIFTS, HEELS, &c. THOMAS BOSTOCK, Brockton, Mass., assignor to Fred F. Field, Brockton, Mass. Filed Sept. 9, 1910. Serial No. 581,314. (Cl. 12—48.)



1. A machine for compressing heel-lifts, heels, etc., comprising a stationary upper die, a die carrier movable toward and from said upper die, a lower die mounted on said carrier in line with the upper die, yielding means normally projecting the lower toward the upper die, side dies on the carrier on opposite sides of the lower die, means for placing a blank on the lower die, means for causing the side dies to approach one another and to position the blank with respect to the upper and lower dies when the lower die approaches the upper die, and a stationary stop member for arresting the lower die independently of the carrier to permit positioning of the blank by the side dies prior to the application of pressure to the blank by the upper and lower dies.

2. A compressing machine comprising opposed upper and lower compressing dies, a head carrying the lower die and having a surface arranged to apply pressure thereto, being movable therewith toward and from the upper die, yielding means normally projecting the lower die from such pressure-applying surface, members carried by the movable head on opposite sides of the lower die, mechanism operated by the movement of such head during the latter part of its travel for closing said members upon a blank supported by the lower die and thereby positioning the blank, and a stop device fixed on a stationary part of the machine arranged to arrest said yielding die-projecting means while the blank-positioning members become operative, whereby the blank is loosely supported by the lower die while being positioned, the said die being thereafter engaged by the pressure-applying surface of the head and pressed forcibly toward the upper die.

3. In a compressing machine of the character described, a fixed compressing die, a head movable toward and from said die, a complemental compressing die mounted on said head opposite to the fixed die, said head having a rigid portion for applying pressure to the complemental die, a yielding die projector normally holding the complemental die in advance of the said rigid portion, and a stop fixed to a stationary part of the machine arranged to arrest said projector when the complemental die is close to the fixed die, whereby such complemental die is first arrested and then further advanced by the said rigid portion.

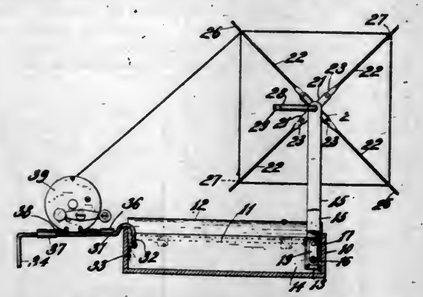
4. In a compressing machine of the character described, a fixed compressing die, a head movable toward and from said die, a complemental compressing die mounted on said head opposite to the fixed die, a rigid bottoming plate in the head adapted to apply pressure to the complemental die, a yielding die projector in the head loosely engaged with the die and normally holding it projected in advance of the bottom plate, and a stationary stop member located in such a position as to retract said projector when the dies are still separated by a distance slightly more than the thickness of an uncompressed blank, whereby the complemental die is arrested until further advanced by said bottoming plate.

5. A machine for compressing articles, comprising dies movable together and apart, a carrier upon which one of said dies is mounted, and by which it is movable toward and from the other, a lift-carrier movable with said die-carrier and having a further movement transversely to the dies and between them for placing a lift in position to be compressed, said lift-carrier having separable clamps for gripping the edges of the lift, a yielding die-projecting device holding the movable die with its upper face directly under the path of the lift-carrier, a stationary clamp opener located intermediate the clamps when the same are between the dies, and at such a height as to separate the clamps and release the lift when the dies are close together, means for withdrawing said projecting device prior to the arrival of the die-carrier at its limit of movement, whereby the movable die is arrested, a divided mold, and means for moving the parts of said mold against the edges of the lift and positioning the same between the dies during the arrest of the movable die.

[Claims 6 to 13 not printed in the Gazette.]

1,018,550. FISH-LINE DRIER. CHRISTOPHER J. C. BREAREY, Westboro, Wis. Filed May 1, 1911. Serial No. 624,356. (Cl. 242—104.)

1. A fish line drier, comprising a support, side members pivotally connected thereto, a spindle journaled in the outer end portions of the side members and provided at opposite end portions with projecting arms and at one end with a crank portion, and U-shaped line holding members pivotally connected to the projecting arms, said U-shaped members arranged to be swung to a folded position between the side members and said side members arranged to be swung downwardly to a folded position on the support.



2. A fish line drier, comprising a support, side members pivotally connected thereto, a spindle journaled in the outer end portions of the side members and provided at opposite end portions with projecting arms and at one end with a crank portion, U-shaped line holding members pivotally connected to the projecting arms, means for locking the U-shaped members in unfolded positions to the projections, and means for locking the side members in vertical position, said U-shaped members arranged to be swung to a folded position between the side members and said side members arranged to be swung downwardly to a folded position on the support.

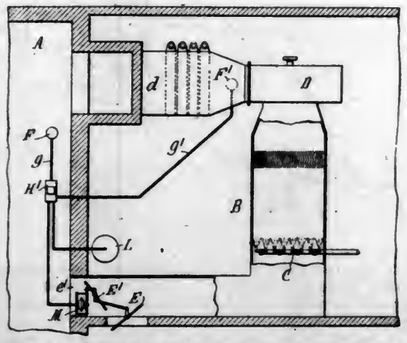
3. A fish line drier, comprising a support, side members pivotally connected thereto and provided with means for locking said members in upright positions, a spindle journaled in the outer end portions of the side members and provided at opposite end portions with projecting radial arms and at one end with a crank handle, U-shaped line holding members having flexible flattened end portions which are pivotally connected near their ends to the outer ends of the radial arms, means for locking the flexible end portions of the U-shaped members in unfolded position to the radial arms, and a reel holder connected to the support for holding a reel while unwinding line therefrom and winding it on the U-shaped holding members.

4. A fish line drier, comprising a support, side members pivotally connected thereto and provided with means for locking said members in upright positions, a spindle journaled in the outer end portions of the side members and provided at opposite end portions with projecting radial arms and at one end with a crank handle, U-shaped line holding members having flexible flattened end portions which are pivotally connected near their ends to the outer ends of the radial arms, means for locking the flexible end portions of the U-shaped members in unfolded position to the radial arms, and a reel holder pivotally connected to the support for holding a reel while unwinding line therefrom and winding it on the U-shaped holding members.

5. A fish line drier, comprising a box like support having a cover, side members extending therein and pivotally connected thereto, said side members provided with spring means for locking the members in upright position, a spindle journaled in the outer end portions of the side members and provided at opposite end portions with pairs of projecting radial arms having locking recesses formed therein, said spindle also provided at one end with a crank handle, U-shaped line holding members pivotally connected at their end portions to the opposite radial projections and having flexible end portions with tangs formed on the ends thereof which are adapted to enter the locking recesses of the arms to lock said arms in unfolded positions, a reel holder extending into the support and pivotally connected thereto and provided with a fixed reel engaging portion and a slidable reel engaging portion, said reel holder and the side members and the U-shaped arms adapted and constructed to be folded and swung into the support and the cover of the support extended thereover.

[Claim 6 not printed in the Gazette.]

1,018,551. DIFFERENTIAL THERMOSTATIC DEVICE. EDWARD W. COMFORT, Chicago, Ill., and WILLIS H. CARRIER, Buffalo, N. Y., assignors to Buffalo Forge Company, Buffalo, N. Y. Filed May 26, 1910. Serial No. 563,469. (Cl. 98—39.)



1. In a differential thermostatic apparatus, the combination of two receptacles containing expansible fluid and separately influenced by the temperatures of two mediums, and a movable device on which the pressures of the fluid in said receptacles are exerted in opposition to each other, whereby the operation of said movable device is dependent upon the relation existing between the temperatures of said mediums, substantially as set forth.

2. In a differential thermostatic apparatus, the combination of two receptacles containing expansible fluid and separately influenced by the temperature of two mediums, fluid pressure motors which are actuated by the pressures of the fluid in said receptacles, and a movable device on which said motors exert pressure in opposition to each other, whereby the operation of said movable device is dependent upon the relation existing between the temperatures of said mediums.

3. In a differential thermostatic apparatus, the combination of two receptacles containing expansible fluid and separately influenced by the temperatures of two mediums, fluid pressure motors which are actuated by the pressures of the fluid in said receptacles, and a movable device for maintaining a definite relation between the temperatures of said mediums on which said motors exert pressure in opposition to each other, whereby the operation of said movable device is dependent upon the relation existing between the temperatures of said mediums, substantially as set forth.

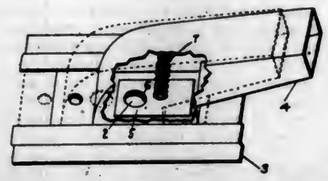
4. In a differential thermostatic apparatus, the combination of two receptacles containing expansible fluid and separately influenced by the temperatures of two mediums, and a movable device for regulating the temperature of at least one of said mediums on which device the pressures of the fluid in said receptacles are exerted in opposition to each other, whereby the regulating action of said device is dependent upon the relation between the temperatures of said mediums, substantially as set forth.

5. In a differential thermostatic apparatus, the combination of two receptacles containing expansible fluid and separately influenced by the temperature of two mediums, and a movable device for maintaining a definite relation between the temperatures of said mediums on which device the pressures of the fluid in said receptacles are exerted in opposition to each other, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

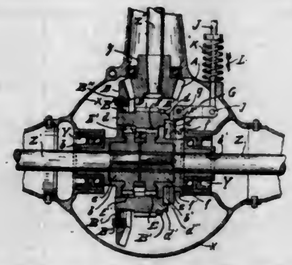
1,018,552. CAN-SPOUT. RICHARD T. COOKE, Indianapolis, Ind. Filed Oct. 4, 1911. Serial No. 652,870. (Cl. 221—21.)

The combination of a can with a sliding spout, a rectangular opening in the bottom of said spout, a flat valve mounted in said rectangular opening, an opening in said valve adapted to register with an opening in the top of the can, a spring interposed between the valve and the spout whereby the valve is held against the can top, a tail extension carried by the spout, an opening therein regis-



tering with an opening in the can top, a V-shaped vent on the under side of the can top connected with said opening and extending backward to a point near the rear wall of the can, all arranged to coöperate substantially as and for the purpose set forth.

1,018,553. DIFFERENTIAL DEVICE. OTTO CULLMAN, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 654,050. (Cl. 74—34.)



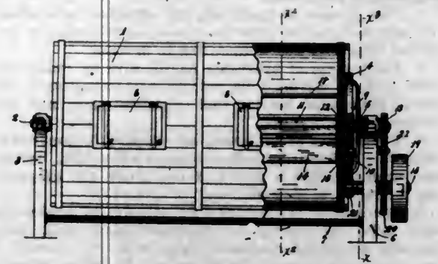
1. In a gear and pinion differential device, bearings, gear wheels and pinions rotatably mounted in the bearings, the pinions intermeshing and the gear wheels intermeshing with their respective pinions and one end of the shaft of one of said pinions projecting beyond the bearing thereof, with the part of said projected end which is on one side of a given diameter removed from said shaft, a movable disk, means to move said disk underneath the projecting end of said pinion shaft when the said diameter is substantially tangential to the periphery of said disk, and means to yieldingly hold said disk away from underneath said projecting end.

2. In a gear and pinion differential device, bearings, gear wheels and pinions rotatably mounted in the bearings, the pinions intermeshing and the gear wheels intermeshing with their respective pinions and one end of the shafts of said pinions projecting beyond the bearings thereof, with the parts of said projected ends which are one side of given diameters removed from said shafts, a movable disk and means to move said disk underneath the projecting ends of said pinion shafts when the said diameters are all substantially tangential to the periphery of said disk.

1,018,554. COMBINED CHURN AND BUTTER-WORKER. LEVI A. DISBROW, Owatonna, Minn. Filed Oct. 13, 1910. Serial No. 586,908. (Cl. 31—25.)

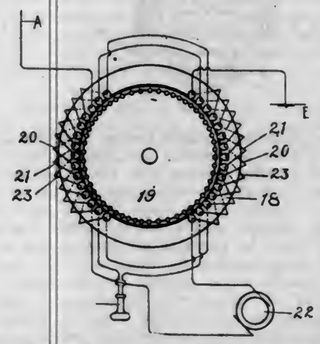
The combination with an approximately cylindrical drum mounted to rotate on an approximately horizontal longitudinal axis and having rigid heads, of a pair of co-operating horizontal working rollers located within said drum, one thereof being located with its axis co-incident with the axis of said drum and having a shaft extended axially outward from said drum, and the other roller being carried by the drum heads and having a shaft extended

at one end through one head of said drum, the space in the drum diametrically opposite to the eccentrically located roller being entirely clear or free of obstructions, a lifting flight extending inward from the shell of the drum on the same side of the drum as the eccentric roller in a plane that is approximately tangential to the working



face of said eccentric roller and which plane extends approximately between the axes of said two rollers, and means including intermeshing gears on the projecting portions of the said roller shafts, for positively rotating the said two rollers in opposite directions, substantially as described.

1,018,555. SIGNALING BY ELECTRORADIANT ENERGY. CORNELIUS D. EHRET, Ardmore, Pa. Continuation of application Serial No. 183,459, filed Dec. 2, 1903. This application filed Dec. 5, 1904. Serial No. 235,430. Renewed June 6, 1911. Serial No. 631,567. (Cl. 178—319.)



1. In a signaling system, an induction generator, means for magnetizing the same, a winding upon the stator thereof traversed by received electrical energy, and a second winding on said stator included in a circuit containing a signal translating instrument.

2. In a wireless signaling system, receiving apparatus comprising a receiving conductor or circuit, an induction generator, a winding of said generator associated with said receiving conductor or circuit, means for magnetizing said generator, and a winding on said generator including in its circuit a signal translating instrument.

3. In a wireless signaling system, receiving apparatus comprising a receiving conductor or circuit, an induction generator associated therewith, a winding of said generator associated with said receiving conductor or circuit, an independent winding on said generator including in its circuit a signal translating instrument, means for independently magnetizing the field of said generator, means for driving said generator above synchronism.

4. In a signaling system, an induction generator, means for magnetizing the same, a winding of said generator traversed by received energy, and a signal translating instrument.

5. In combination, a receiving conductor or circuit, an induction generator, means for magnetizing the same, a winding on the stator thereof traversed by high frequency currents, a second winding on said stator, and a signal translating instrument included in the circuit of said second winding.

[Claims 6 to 24 not printed in the Gazette.]

1,018,556. COUPLING DEVICE. DAVID E. ENGLE, Kiefer, Okla., assignor of one-half to A. Leschen & Sons Rope Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 6, 1911. Serial No. 606,940. (Cl. 166—10.)

1. A coupling for sucker rods comprising a pair of members secured the one to the sucker and the other to the rod, said members having coöperating overlapped meeting portions, the contiguous faces of said overlapped portions being provided with interengaging means adapted to prevent relative outward longitudinal movement of the members, but permitting relative inward longitudinal movement thereof, and further provided with means for effecting the separation of said members when force is exerted to move them relatively longitudinally inward, and resilient means on one member bearing endwise against the other for yieldingly holding said members normally against said inward movement and permitting automatic separation thereof.

2. A coupling for sucker rods, comprising a pair of coupling members connected the one to the sucker and the other to the rod, said members having interengaging portions arranged so that the same are locked against outward longitudinal movement but permitted relative inward longitudinal movement and lateral separation, and resilient means on one of said members arranged and adapted to bear against the other member for yieldingly holding said interengaging portions against said relative inward longitudinal movement and lateral separation.

3. A coupling for sucker rods, comprising a pair of counterpart coupling members having interlocked portions comprising undercut and beveled lugs and pockets, whereby said coupling members are held against outward longitudinal movement but permitted relative inward longitudinal movement and lateral separation, and resilient means on one of said members arranged and adapted to bear endwise against the other member to yieldingly hold said members against said relative inward longitudinal movement and lateral separation.

4. In an oil pump, the combination with the sucker and sucker rod, of a coupling comprising two counterpart members connected the one to the sucker and the other to the sucker rod, said members having reduced meeting portions adapted to overlap, and the contiguous coöper-

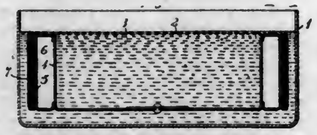
ating overlapped portion having interengaging counterpart lugs and recesses which are undercut and beveled, so that said two coupling members are held against relative outward longitudinal movement but permitted relative inward longitudinal movement and lateral separation, a transverse square shoulder on one of said coupling members, and a longitudinally disposed spring-pressed pin on the opposed portion of the other coupling member adapted to bear against said shoulder and yieldingly holding the two coupling members normally against said inward longitudinal movement and lateral separation.

1,018,557. SHOE-LACE FASTENER. AUGUST E. FRANZ, West Chester, Pa. Filed Feb. 28, 1911. Serial No. 611,348. (Cl. 24—121.)

1. A shoelace fastener of the class described comprising a body having a pair of spaced walls provided with openings to enable a shoelace to be passed therethrough, pins connecting the walls together and a pair of spring locking arms disposed in the space between and also spaced from the plates and converging in one direction and movable toward and from each other across the openings of the spaced plates, the converging ends of the said locking arms being connected to one of the pins, the other pins forming stops to limit the outward movement of said locking arms.

2. The herein described shoelace fastener comprising a body having a pair of spaced walls provided with central openings to enable a shoelace to be passed therethrough, pins connecting the walls together, a pair of locking arms disposed in the space between the walls, spaced from the said walls and also disposed between two of the said pins, said locking arms converging toward another pin and their converging ends being connected together by a spring coil which encircles the last mentioned pin.

1,018,558. ELECTRIC HEATER. WILLIAM S. HADAWAY, Jr., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1909. Serial No. 493,406. (Cl. 219—41.)



1. An electric heater adapted for insertion in a body of liquid and comprising an air chamber and an insulated resistance element secured to a submerged wall thereof.

2. An electric heater adapted for flotation in a body of liquid and comprising an air chamber and an insulated resistance element secured to a submerged wall thereof.

3. An electric heater adapted for submersion in a body of liquid and comprising an annular air chamber and an insulated resistance element secured to the outer cylindrical wall of said chamber.

4. The combination with a liquid-containing vessel, of an electric heating device therefor comprising an air-containing vessel adapted for flotation and having a contour which corresponds to that of the liquid-containing vessel and a resistance element secured to the outer surface of said air-containing vessel, the diameters of the vessels being such that a thin film of liquid is maintained between them.

1,018,559. PROCESS FOR PRODUCING ADHESIVES. RICHARD HEIM, Canastota, N. Y., assignor of one-half to Frederick Behrend, New York, N. Y. Filed June 7, 1911. Serial No. 631,796. (Cl. 87—17.)

1. A process for producing an adhesive by condensing skim milk, acidulating the condensed skim milk and evaporating to dryness.

2. The process of producing an adhesive by condensing skim milk to one third its volume, acidulating the condensed skim milk and evaporating to dryness.

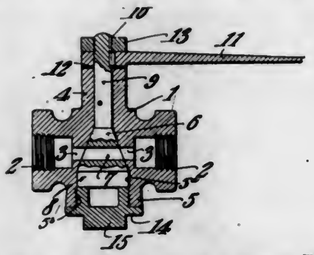
3. The process of producing an adhesive by condensing skim milk to one-third its volume, acidulating said condensed skim milk, heating said condensed skim milk and evaporating to dryness.

4. The process of producing an adhesive by condensing skim milk, acidulating said condensed skim milk, heating said skim milk for a period of two hours and evaporating the liquid to dryness.

5. The process of producing an adhesive by condensing skim milk, acidulating the condensed skim milk, heating said acidulated condensed skim milk for a period of two hours at a temperature of 100 to 120 degrees Fahrenheit and evaporating to dryness.

[Claims 6 to 10 not printed in the Gazette.]

1,018,560. STOP-VALVE. WILLIAM HEMME, Altoona, Kans. Filed Jan. 11, 1910. Serial No. 537,548. (Cl. 137—7.)



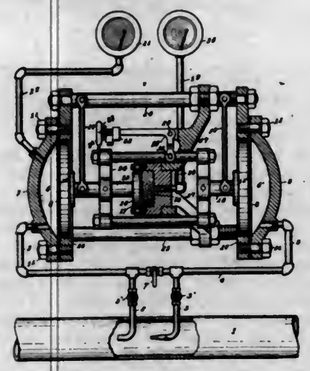
A valve including a casing having a passage therein, a conical chamber intersecting the passage, there being a cylindrical chamber opening into, and of the same diameter as the base of the conical chamber, the wall of the cylindrical chamber being screw threaded, a screw plug adjustably mounted within the cylindrical chamber and having a recess for receiving gas leaking past the valve, a conical plug mounted for rotation within the conical chamber and having an opening therein adapted to move into and out of register with the passage in the casing, said plug having a cylindrical extension fitting snugly within the cylindrical chamber and bearing upon and supported by the screw plug, and a stem extending from the apex of the valve and beyond the casing.

1,018,561. METER. EMBURY A. HITCHCOCK, Columbus, Ohio. Filed Oct. 12, 1910. Serial No. 586,702. (Cl. 73—167.)

1. A gage comprising a frame portion, a plurality of disks suspended from said frame, a chamber at each end of the frame, each of said chambers having a wall formed of a diaphragm said disks being respectively adjacent said chambers and bearing against the diaphragms thereof, a third chamber within the meter containing a non-compressible fluid, a recording device connected to said third chamber and having a tube for the non-compressible fluid, a diaphragm wall for said last mentioned chamber, a rigid element interposed between said disks and said last mentioned diaphragm wall, and a second recording device connected to one of said chambers for indicating static pressure therein.

2. A gage comprising a frame portion, a chamber at each end thereof, a diaphragm for each chamber, a plurality of members bearing against said diaphragms, a

central chamber, a diaphragm for said central chamber, a member bearing against said last mentioned diaphragm, connections between said member and the members engaging against end diaphragms, recording mechanism connected with the central chamber, a recording device connected with one of the end chambers, and means for freely supporting the members bearing against the diaphragms at the end chambers from the frame.



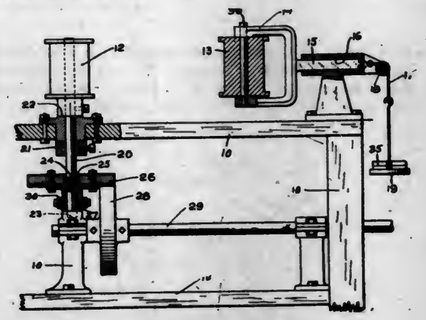
3. The combination with a frame, of a plurality of end chambers, a swinging yoke suspended from the frame, a plurality of disks connected to said yoke, a diaphragm for each end chamber against which said disks respectively bear, a central chamber, a diaphragm for said central chamber, a disk bearing against said diaphragm, connections between said disk and the disks bearing against the end diaphragms a fluid recording mechanism connected to said central chamber, the latter being filled with a non-compressible fluid, and means for recording the static and dynamic pressures connected to one of the end chambers.

4. The combination with a frame, of a plurality of end chambers, diaphragms forming one of the walls of each end chamber, means bearing against said diaphragms for transmitting the pressures in the chambers, means for freely supporting the pressure transmitting means, a central chamber of relatively less size than the end chambers, and a diaphragm for said central chamber, a member controlled by said first named means and bearing against said diaphragm, a recording gage for measuring the velocity of flow connected to said central chamber, such central chamber being filled with a non-compressible fluid, a pressure recording device connected to one of said end chambers, an indicating lever connected to the supporting means, and normally shut-off connections between the end chambers.

1,018,562. HAT-POUNCING MACHINE. HOWARD HOLMES, South Norwalk, Conn. Filed May 4, 1911. Serial No. 625,027. (Cl. 223—30.)

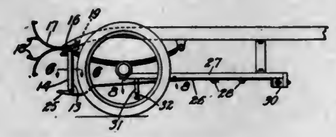
1. A pouncing machine comprising a frame, a shaft mounted to rotate therein, a roller secured to said shaft, a second roller adjustably mounted with relation to the first roller, a pouncing belt carried by said rollers, a friction disk longitudinally movable on said shaft, a driving disk engaging said friction disk, whereby said shaft is rotated, and means for moving said friction disk longitudinally of said shaft to vary the frictional pressure between said friction disk and said driving disk.

2. A pouncing machine comprising a frame, a shaft mounted to rotate therein, a roller secured to said shaft, a second roller adjustably mounted with relation to the first roller, a pouncing belt carried by said rollers, a friction disk provided with a central opening through which said shaft is passed, said opening being provided with oppositely disposed grooves, a pin in said shaft having its ends located in said grooves, a driving disk engaging said friction disk, whereby said shaft is rotated, and means for moving said friction disk longitudinally of said shaft to vary the frictional pressure between said friction disk and said driving disk.



3. A pouncing machine comprising a frame, a shaft mounted to rotate therein, a roller secured to said shaft, a second roller adjustably mounted with relation to the first roller, a pouncing belt carried by said rollers, a friction disk connected with said shaft and free to move longitudinally thereof, a driving disk engaging said friction disk, a collar loosely mounted on said shaft and supporting said friction disk, a lever engaging said collar, and means for actuating said lever to raise and lower said collar, whereby the frictional pressure between said friction disk and said driving disk is varied.

1,018,563. FENDER OR WHEEL-GUARD. FREDERICK E. HUTCHINGS, New York, N. Y., assignor to Auto Life Saving Fender Co., a Corporation of New York. Filed Jan. 18, 1911. Serial No. 603,255. (Cl. 105—255.)



1. A fender having a flexible body portion in the form of a substantially vertical curtain, means for normally supporting said curtain with the lower edge raised above the ground, means for lowering said lower edge and means for advancing said lower edge after the latter has been lowered.

2. A fender having a body in the form of a substantially vertical flexible curtain, means for normally supporting the lower edge in raised position, means for preventing the forward movement of said lower edge during the lowering of the latter, and means for advancing said lower edge after the same has been lowered.

3. A fender having a body portion free to bend along lines transversely thereof, a catch for holding a portion of said body in raised position, a transversely extending hand rail, and operative connections between said rail and said catch, whereby a raising or lowering of said hand rail operates said catch to release the body.

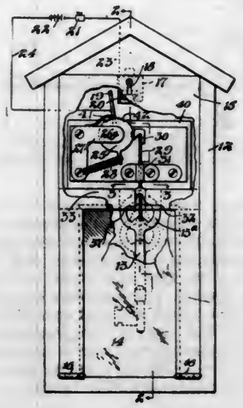
4. A fender having a body portion and catch for holding the same in inoperative position, a hand rail and operative connections between said hand rail and said catch for releasing the body portion and permitting it to move to operative position upon the movement of the hand rail to any one of a plurality of positions.

5. A fender having a body normally held in inoperative position, a forwardly extending arm, a hand rail carried by said arm and connections between said arm and said

fender body whereby a movement of the rail either upwardly or downwardly from a normal position will release said body and permit it to move to operative position.

[Claims 6 to 14 not printed in the Gazette.]

1,018,564. FALSE-ALARM DETECTOR FOR FIRE-ALARM SYSTEMS. GILBERT H. INMAN, Brockton, Mass., assignor of one-fourth to John T. Stack, Brockton, Mass. Filed Apr. 12, 1911. Serial No. 620,710. (Cl. 178—50.)



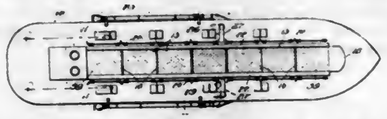
1. A fire alarm key container, circuit terminals therein, one of said terminals being a switch which is movable to close and break an electric circuit, means for automatically moving the switch to its circuit-closing position, a movable detent adapted to lock the switch in its circuit-breaking position, said detent being adapted to engage a fire alarm key, and means for normally preventing the removal of the key from the detent when the latter is in its switch-locking position, the detent being displaceable from said position by the removal of the key.

2. A fire alarm key container, circuit terminals therein, one of said terminals being a switch which is movable to close and break an electric circuit, means for automatically moving the switch to its circuit-closing position, a movable detent adapted to lock the switch in its circuit-breaking position, said detent having a key-engaging hook, and a fixed guard within the box having means for confining the key on the hook when the detent is in its switch-locking position, the hook being separable from said guard, and the detent movable from its switch-locking position, by the removal of the key.

3. A fire alarm container, circuit terminals therein, one of said terminals being a switch which is movable to close and break an electric circuit, means for automatically moving the switch to its circuit-closing position, a movable detent adapted to lock the switch in its circuit-breaking position, said detent having an inclined key-engaging hook and a fixed shelf within the container having a slot in which the detent is movable, said slot being provided with branches adapted to receive a portion of a fire alarm key and confine the key on the hook when the detent is in its switch-locking position.

4. A fire alarm key container, circuit terminals therein, one of said terminals being a switch which is movable to close and break an electric circuit, means for automatically moving the switch to its circuit-closing position, a movable detent adapted to lock the switch in its circuit-breaking position, said detent being adapted to engage a fire alarm key, means for preventing the removal of the key from the detent when the latter is in its switch-locking position, the detent being displaceable from said position by the removal of the key, and automatic means for locking the switch in its circuit-closing position.

1,018,565. SCOW FOR TRANSPORTING GRAVEL AND THE LIKE. THOMAS C. JACKSON, Chicago, Ill., assignor of one-third to Rose J. A. Shanks, Chicago, Ill. Filed Oct. 13, 1911. Serial No. 654,452. (Cl. 114—36.)



1. A scow having a compartment which is open at its top and at its bottom and a supporting and separating screen for material extending across the compartment between the top and the bottom thereof and supported on the walls of the compartment.

2. A scow having a compartment which is open at its top and at its bottom, a plurality of superposed supporting and separating screens for material extending across the compartment and supported on the side walls thereof, the mesh of the upper screen being larger than the mesh of the lower screen, substantially as described.

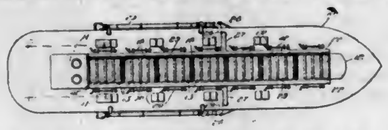
3. A scow provided with a longitudinally arranged series of compartments which are open at their tops and at their bottoms, and supporting and separating screens for material arranged across the compartments between their tops and bottoms thereof, and supported on the walls thereof.

4. A scow provided with a longitudinally arranged series of open compartments which are separated by transversely arranged bulk heads, and supporting and separating screens for material extending across said compartments, between the tops and bottoms thereof, with means on the walls of the compartments for removably supporting the screens in place.

5. A scow provided with a longitudinally arranged series of compartments which are open at their tops and at their bottoms, and separated by transverse bulk heads, each compartment being provided with superposed supporting and separating screens for material extending thereacross and removably supported in the compartments, said screens diminishing in mesh from the upper to the lower screens.

[Claims 6 to 14 not printed in the Gazette.]

1,018,566. SCOW FOR TRANSPORTING GRAVEL AND THE LIKE. THOMAS C. JACKSON, Chicago, Ill., assignor of one-third to Rose J. A. Shanks, Chicago, Ill. Filed Oct. 13, 1911. Serial No. 654,453. (Cl. 114—36.)



1. A scow havin an open compartment, and a plurality of separately removable screen boxes nested in said compartment and supported on the side walls thereof, the bottoms of said boxes being perforated to constitute a screen support.

2. A scow having an open compartment and a plurality of separately removable screen boxes nested in said compartment and supported on the side walls thereof, the bottoms of said boxes being perforated to constitute a screen support, and the side walls of said boxes being also perforated to permit the escape of the water therethrough.

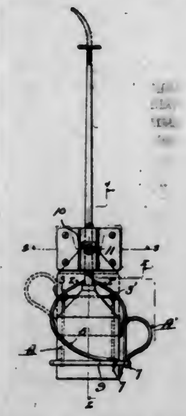
3. A scow having an open compartment, a plurality of removably supported superposed sets of screen boxes extending across the compartment, the bottoms of which are perforated to constitute superposed screen planes.

4. A scow having an open compartment, a plurality of superposed sets of screen boxes, the bottoms of which are perforated to constitute superposed screen planes, means for removably supporting said screen boxes in the compartment, and means extending across the spaces between the sides of the top set of boxes to prevent material falling between said boxes.

5. A scow having an open compartment, a plurality of superposed sets of screen boxes, the bottoms of which are perforated to constitute superposed screen planes, brackets on the side walls of the compartments, and beams supported on said brackets and extending beneath and supporting said screen boxes.

[Claims 6 and 7 not printed in the Gazette.]

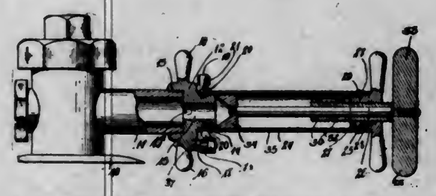
1,018,567. OIL-CAN HOLDER. ISAAC R. JOHNSON, Milwaukee, Wis. Filed Sept. 16, 1911. Serial No. 649,775. (Cl. 248—30.)



1. An oil-can holder comprising a back-brace, a can-body retaining-hoop, a cam guide-rail connecting the hoop and back-brace, a backbone extending from the back-brace, the backbone terminating with a can-nozzle retaining loop, and securing means for the holder.

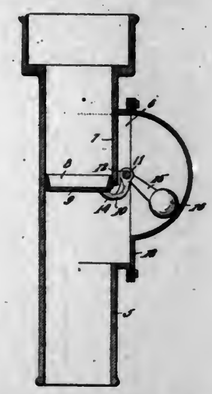
2. An oil-can holder comprising a rectangular back-brace, a hoop secured to the ends of said back-brace, a cam-guide rail extending from the back-brace to the hoop, a backbone extending from the back-brace, the backbone terminating with a can-nozzle retaining-loop, and a bracket carried by said backbone.

1,018,568. APPARATUS FOR MAKING SOLID CARBON DIOXID. HARRY P. JULIUS, St. Louis, Mo. Filed Mar. 16, 1911. Serial No. 614,950. (Cl. 62—6.)



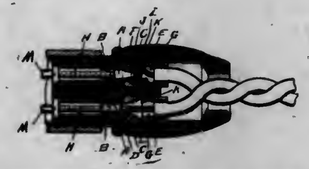
A condensing and compressing apparatus for liquid carbon dioxid, comprising a tube, a head detachably mounted in one end of said tube having means for connection to the outlet of a liquid carbon dioxid storage tank, a second head detachably mounted in the other end of said tube having a threaded opening therethrough, a threaded bushing mounted in said threaded opening, a stem non-rotatably mounted in said bushing and adapted for reciprocation longitudinally of the tube, and a reciprocating plunger mounted in said tube and secured to said stem.

1,018,569. SEWER-TRAP. CHARLES KELTY and DAVID P. JORALEMON, Elmira, N. Y. Filed Jan. 26, 1911. Serial No. 604,846. (Cl. 182—14.)



In a sewer trap, a seat disposed diametrically thereof, a pivot pin arranged exteriorly of and one side of the seat, a valve having two curved arms pivoted to said pin to swing the valve clear of the trap at the seat and for coöperating with said seat, a counter weight, a sleeve pivoted to the pin between the arms and movable independently of the valve, the counter weight being connected to said sleeve, and a curved finger of substantially the same length as the arms of the valve formed integral with the sleeve and arranged to engage with the outer face of the valve, whereby the said valve between the arms is held seated.

1,018,570. TERMINAL FOR ELECTRIC WIRES. GEORGE C. KNAUFF, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 655,048. (Cl. 173—259.)



1. In a terminal for electric wires, a socket having a tapered bore, a member having a shank at one end adapted to slip through the smaller end of the tapered bore of the socket, the said member having an eye at the end opposite the shank, into which eye the end of the wire is hooked, and means for drawing the said wire-hooking member into the tapered bore of the socket, thereby compressing the hooked end of the wire between the said member and the said socket.

2. In a fastening for electric wires, a socket member having a bore enlarged at one end, a screw-eye having a shank adapted to slip into the smaller end of the bore of the socket member, the other end of the bore of said socket being large enough to admit the eye end of the screw-eye with the end of a wire hooked into the eye of the same, in combination with a tightening member threaded to match the thread of the screw-eye, portions of the said screw-eye and said socket member being adapted to engage each other so as to limit the action of the tightening member.

3. In a contact terminal for electric wires, a contact member having a threaded shank, a screw-eye threaded to fit the said shank, a socket having a bore into which the threaded portion of the screw-eye may pass, the said bore being enlarged at one end to admit the eye of the screw-eye, the said contact member being adapted to

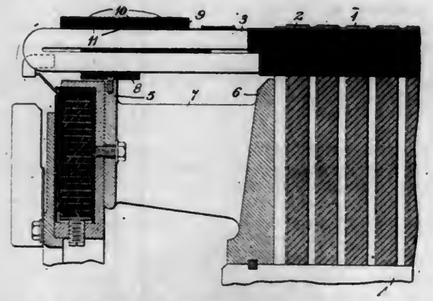
draw the screw-eye into the socket so as to compress the ends of a wire hooked into the eye of the said screw-eye.

4. In a terminal for electric wires, a socket having a tapered bore, a member having a shank at one end adapted to slip through the smaller end of the tapered bore of the socket, the said member having an eye at the end opposite the shank, into which the end of the wire is hooked, and means for drawing the said wire-hooking member into the tapered bore of the socket, thereby compressing the hooked end of the wire between the said member and the said socket, in combination with a stop for limiting the travel of the wire-hooking member into the socket.

5. In a fastening for electric wires, a socket having a bore enlarged at one end, a screw-eye having a shank adapted to slip into the smaller end of the bore of the socket member, the other end of the bore of said socket being large enough to admit the eye end of the screw-eye with the end of a wire hooked into the eye of the same, in combination with a tightening member threaded to match the thread of the screw-eye, and a stop for limiting the motion affected by said tightening member.

[Claim 6 not printed in the Gazette.]

1,018,571. DYNAMO-ELECTRIC MACHINE. BENJAMIN G. LAMME, Pittsburgh, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1908. Serial No. 426,335. (Cl. 171—206.)

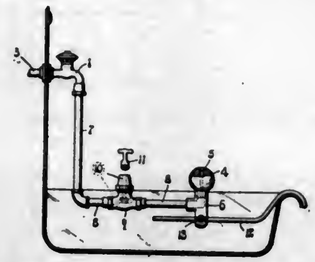


1. In a dynamo-electric machine, the combination with a rotatable slotted core member, and coils located in the core slots and having projecting ends that are angularly disposed and spaced apart, of a plurality of turns of band wire surrounding the projecting portions of the coils, and longitudinally disposed insulating blocks or strips having recesses to receive the band wires and spaced apart for improving the ventilation of the winding.

2. In a dynamo-electric machine, the combination with a rotatable slotted core member, and coils located in the core slots and having projecting ends that are angularly disposed and spaced apart to form an open-work cylinder, of an internal supporting ring for the outer end of said cylinder, circumferential bands surrounding said cylinder, and spaced longitudinally disposed insulating strips interposed between said bands and said cylinder and having recesses to receive the bands.

1,018,572. DRINKING-FOUNTAIN. LOUIS D. LAWNIN, Edwardsville, Ill., assignor of one-half to N. O. Nelson Manufacturing Company, St. Louis, Mo., a Corporation. Filed Aug. 27, 1910. Serial No. 579,198. (Cl. 137—11.)

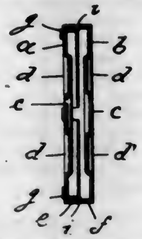
1. In a device of the character described, the combination with a sink, of a self closing faucet, a fountain nozzle provided with a holder arranged below and secured to said nozzle, said holder having a depending leg, a pipe connecting said faucet to said nozzle holder, and a rod slidably mounted in the depending leg of the nozzle holder, said rod being provided with a curved portion extending over the edge of the sink for supporting said nozzle holder therefrom.



2. In a device of the character described, the combination with a sink or basin of a faucet disposed thereabove, a fountain nozzle suspended from said faucet, and means for reinforcing said fountain nozzle from the sides of said sink or basin.

3. In a device of the character described, the combination with a self-closing faucet, of a fountain nozzle, said nozzle being in the form of a ball provided with a central opening, a nozzle holder arranged below the nozzle and secured thereto, said holder having a depending leg, a pipe for allowing water to pass from the faucet to said nozzle holder, a key-controlled adjustable valve interposed between said faucet and nozzle holder, a rod slidably mounted in the depending leg of the nozzle holder, said rod having a hook-shaped end for the purpose described, and a set screw fitted to the nozzle holder for locking said rod in position.

1,018,573. TOY WHEEL. ERNST PAUL LEHMANN, Brandenburg-on-the-Havel, Germany. Filed Aug. 16, 1910. Serial No. 577,518. (Cl. 46—45.)



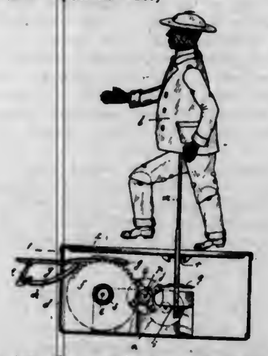
1. In a wheel, a half-wheel comprising a disk-portion provided with an annular flange extending laterally from the disk, said flange being provided with tongues extending beyond the same, in combination with a second half-wheel also comprising a disk-portion and a lateral annular flange and provided with receiving seats extending entirely within the periphery of the said second half-wheel, the tongues on the first half-wheel engaging said seats on the second half-wheel.

2. In a wheel, a half-wheel comprising a disk portion and an upturned annular flange formed on the same, said flange being provided with tongues extending beyond the same, in combination with a second opposite half-wheel also comprising a disk-portion and an upturned annular flange and provided with peripheral recesses in the flange, the tongues on the first half-wheel engaging the recesses on the second half-wheel.

3. A toy-wheel comprising two half-wheels of equal diameter, each half-wheel having a circular upturned flange co-acting with the flange of the opposite half-wheel to form the periphery of the wheel, tongues formed on the edge of the flange of at least one of the two half-wheels, recesses formed in at least one of the two half-wheels, said recesses being adapted to be engaged by the said tongues of the opposite half-wheel, and a bent end formed to the end of said engaging tongues, to hold the two half-wheels against each other, substantially as and for the purpose set forth.

4. A toy-wheel comprising two half-wheels of equal diameter, each half-wheel having an upturned flange co-acting with the flange of the other half-wheel to constitute the periphery of the wheel, recesses formed across the flange of at least one of the two half-wheels, tongues projecting from the flange of at least one of the two half-wheels, said tongues being adapted to engage and fill the said recesses in the flange of the opposite half-wheel, and a bent portion formed on the end of said tongues, to hold the two half-wheels against each other, substantially as and for the purpose set forth.

1,018,574. TOY. ERNST PAUL LEHMANN, Brandenburg-on-the-Havel, Germany. Filed Sept. 19, 1911. Serial No. 650,177. (Cl. 46—40.)



1. In a toy, the combination with driving mechanism and a rod supporting a toy-figure to which a reciprocating motion in the vertical direction is imparted by said driving mechanism, of a braking device operated by hand, adapted to temporarily stop, retard and restore the normal speed of the driving mechanism, substantially as and for the purpose set forth.

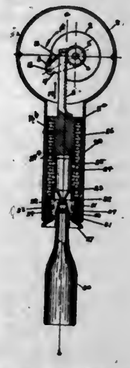
2. In a toy, the combination with driving mechanism and a rod supporting a toy-figure to which a reciprocating motion in the vertical direction is imparted by said driving mechanism, of a braking device operated by hand, adapted to temporarily stop, retard or restore the normal speed of the driving mechanism, and a locking device adapted to be operated by hand simultaneously with the braking device, substantially as and for the purpose set forth.

3. In a toy, the combination, with driving mechanism and a rod supporting a toy-figure to which a reciprocating motion in the vertical direction is imparted by said driving mechanism, of a braking lever adapted to be operated by hand, a locking lever adapted to be operated by hand, and means to simultaneously make inoperative the brake-lever and the locking-lever, substantially as and for the purpose set forth.

4. In a toy, the combination with a box, of driving mechanism located therein, a rod adjustably supporting a toy-figure to which a reciprocating motion in the vertical direction is imparted by said mechanism, a hand lever for braking the speed of the driving mechanism, a hand lever for locking the driving mechanism, and means for engaging the locking lever with the brake-lever for the purpose of making both simultaneously inoperative, substantially as and for the purpose set forth.

1,018,575. MACHINE FOR SEALING BOTTLES. WILLIAM EDWARD LINDSAY, Baltimore, Md., assignor, by mesne assignments, to The Perfect Bottle Cap Company, Baltimore Md., a Corporation of Delaware. Filed Apr. 20, 1909. Serial No. 491,157. (Cl. 113—4.)

1. In a bottle-sealing machine the combination with a series of sealing fingers, of a slotted holder therefor wherein said fingers are adapted to be independently rocked, and a vertically disposed reciprocating tapering plug, longitudinally divided into independently movable sections, said plug being adapted to enter a central recess in said slotted holder and contact with the upper ends of said sealing fingers to rock them.



2. In a bottle sealing machine the combination with a longitudinally-divided tapering plug, of a series of sealing fingers, in annular arrangement, adapted to be rocked, a slotted holder therefor, and means to cause said tapering plug to enter said holder and rock said fingers.

3. In a bottle sealing machine the combination with an annular sealing jaw longitudinally-divided into a series of independently-movable fingers, adapted to be rocked, a vertically movable holder therefor, resilient means to pivot said fingers intermediate their length in the holder, means to enter said holder and rock said fingers, and guiding means for the lower ends of said fingers.

4. In a bottle sealing machine, the combination with a series, in annular arrangement, of independently pivoted sealing fingers, a holder therefor in which said fingers are adapted to be rocked, means adapted to enter an aperture in said holder and contact with the upper ends of said fingers to rock them, means to impart a vertical reciprocating motion to said holder, and a ring having a curved interior wall with which the lower ends of said sealing fingers are guided in their rocking movement.

5. In a bottle-sealing machine the combination with a series of sealing fingers, in annular arrangement, a slotted holder therefor in which said fingers are adapted to be rocked, a tapering plug adapted to enter said holder and contact with the upper ends of said fingers to rock them, means to impart a vertical reciprocating motion to said plug, and a ring having a curved interior wall by which the lower ends of said sealing fingers are guided in their rocking movement.

[Claims 6 to 14 not printed in the Gazette.]

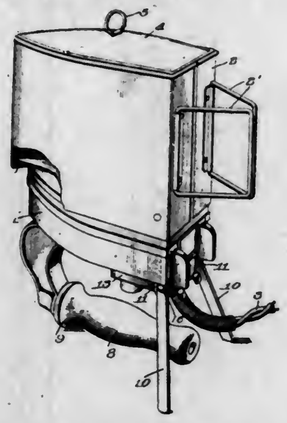
1,018,576. COMBINATION SAD-IRON AND COOKER. CHARLES P. MADSEN, Chicago, Ill., assignor to Pelouze Electric Heater Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1910. Serial No. 545,990. (Cl. 219—25.)

1. The combination with a sad-iron and foldable legs attached to and carried by said iron for supporting said iron in inverted position, of a containing vessel therefor conformed to the shape of the iron and means carried by said vessel for maintaining it in position on said iron when the iron is in its inverted position, substantially as described.

2. The combination with a vessel, of a sad-iron having a handle and legs independent thereof together supporting said sad-iron in inverted position, said vessel conformed to the shape of the iron and adapted to contain same, the side wall of said vessel extending below and surrounding the bottom wall of said vessel adapted to interlock

with the bottom of the iron when the iron is in inverted position, substantially as described.

3. The combination with a sad-iron having a handle and foldable legs forming supports for said iron in inverted position, a vessel conformed to the shape of the iron and adapted to contain same when the iron is not in use and a flange rim surrounding the edge of the bottom wall of said vessel for preventing lateral movement of said vessel on said iron when the iron is in inverted position, substantially as described.

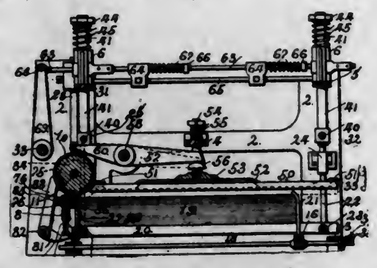


4. In a combined sad-iron and cooker, the combination of an electric sad-iron with a cooking vessel of substantially the same shape, and formed to operatively interlock therewith, said sad-iron being provided with foldable supporting means attached to and carried by the iron and normally closed thereon, but adapted to be extended to support the iron in inverted position, substantially as described.

5. In a combined sad-iron and cooker the combination of an electric sad-iron with a cooking vessel of substantially the same shape, and provided with a flange on one end adapted to interlock with the bottom of the iron, said sad-iron being provided with foldable supporting means carried by the iron and normally closed thereon, but adapted to be extended to support the iron in inverted position.

[Claims 6 to 18 not printed in the Gazette.]

1,018,577. PAPER-FEEDING DEVICE. WILLIAM MCCONNELL, Vancouver, British Columbia, Canada. Filed May 5, 1911. Serial No. 625,284. (Cl. 101—39.)



1. As a means for removing paper sheet by sheet from a pile, the combination with a suitable frame, of a feed roller rotatable within the frame, a table on which a pile of paper is carried, means for automatically maintaining the upper sheet of paper of the pile on the table at the approximate level of the under side of the feed roller and out of contact therewith, and means for periodically lifting the forward end of the table so as to bring the forward edge of the top sheet into frictional contact with the feed roller.

2. In a machine of the class described, the combination with a suitable frame within which a feed roller is rotatable, of a table frame on which the pile of paper is placed, of a fence situated at the forward end of the table frame the front face of which fence is immediately below the axis of the feed roller and the back face of which adjacent to the upper pile is in cross section curved forward to the top front edge, means for rectifying the paper and urging it into contact with this fence said means comprising a horizontally slidable frame having upwardly projecting tines to pass through the table frame the upper ends of which tines are curved approximately to the curvature of the back face of the fence and means cooperative with the rotation of the feed roller for reciprocating the rectifying tines.

3. In a machine of the class described, the combination with a suitable frame within which a rubber covered feed roller is rotatable, of a table frame on which the pile of paper is placed, of a stop frame against which the top sheet of the pile of paper is arrested at the approximate level of the under side of the feed roller, means for urging upward the table frame, means for normally holding the table frame against this lifting tendency, means cooperative with the rotation of the feed roller for releasing this holding means, means for lifting the stop frame, means coöperative with the rotation of the feed roller for moving down the stop frame against this lifting tendency and means coperative with the rotation of the feed roller for lifting the forward end of the table to bring the forward edge of the top sheet of the pile of paper into frictional contact with the feed rollers.

4. In a machine for the purpose specified, the combination with a suitable frame within which a feed roller is rotatable, a table frame on which the pile of paper is placed which table frame is suspended within the frame of the machine on springs which tend to lift the table upward, means for clutching the table suspension stems against that upward tendency of the springs, means cooperative with the rotation of the feed roller for momentarily releasing the clutching means, a stop frame slidably supported parallel to and above the table, means coöperative with the feed roller for moving this stop frame down to the level of the under side of the feed roller, means for lifting the stop frame from such position when the table frame has been secured, and means coöperative with the rotation of the feed roller for lifting the forward end of the paper carrying table to bring the forward edge of the top sheet into contact with the feed roller.

5. In a machine of the class described, the combination with a suitable frame within which a rubber covered feed roller is rotatable, of a table frame on which a pile of paper is placed, means for suspending the table frame from the frame of the machine said means comprising a suspension rod pivotally connected to each corner of the table those at the after end of the machine being slidable in bearings in the machine frame, those at the forward end slidable in bearings in a frame which is itself vertically movable in bearings in the machine frame the forward and after pair of suspension rods being connected by cross yokes from each of which upwardly projects a central stem, a spring on each stem to sustain the weight of the table and its pile of paper and having a tendency upward, means for locking the central stems against this upward tendency, means coöperative with the feed roller for releasing the clutching means, a stop frame against which the upper sheet of the paper is checked and means coöperative with the feed roller for lifting the forward end of the table.

[Claims 6 to 9 not printed in the Gazette.]

1,018,578. METHOD OF TUNNEL CONSTRUCTION. JAMES C. MEEM, Brooklyn, N. Y., assignor of one-half to Frederick L. Cranford, Brooklyn, N. Y. Filed Aug. 30, 1911. Serial No. 646,885. (Cl. 61—16.)

1. The method of constructing sub-aqueous tunnel, which consist in erecting from segmental longitudinal staves a continuous tunnel body above water and gradually sinking the same as erected.

2. The method of constructing sub-aqueous tunnel, which consists in erecting from segmental longitudinal staves a continuous tunnel body above water, said tunnel body being flexible in considerable lengths, and progressively sinking completed portions of said tunnel body by loading and immersing such portions.

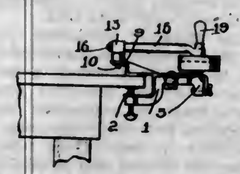
3. The method of constructing a sub-aqueous tunnel, which consists in erecting from segmental longitudinal staves a continuous tunnel body above water on a floating support, binding said staves together by hoops and progressively sinking the tunnel body by moving the support.

4. The method of constructing a sub-aqueous tunnel, which consists in erecting above water on a floating support, a continuous tunnel body of segmental longitudinal staves with breaking joints moving the support relatively to the tunnel body to sink the tunnel body, loading the tunnel body when submerged to hold it stationary, and joining the ends of such tunnel body to other sections of tunnel.

5. The method of constructing a sub-aqueous tunnel which consists in erecting a continuous tubular tunnel body of wood on a floating support, moving the support lengthwise of the tubular body to submerge one end, loading the body as submerged, joining said tubular body at each end to other sections of tunnel, and finally completing a continuous tunnel.

[Claims 6 to 14 not printed in the Gazette.]

1,018,579. KNIFE AND SCISSORS SHARPENER. GEORGE S. MILLER, Chicago, Ill. Filed Jan. 31, 1910. Serial No. 541,175. (Cl. 51—7.)



1. The combination with a suitable supporting bracket, of an inclined clamping jaw thereon, an adjustable clamping jaw adapted to engage a knife thereon, an arm pivoted on said bracket by means affording a universal joint to swing over the blade of the knife, a grinding disk on said arm adapted to operate on said blade for its entire length, and a handle engaged on said grinding disk and affording means for manually operating and rotating the same while engaged on the knife.

2. The combination with a suitable supporting bracket, of an inclined clamping jaw thereon, an adjustable spring clamping jaw adapted to engage an edge tool thereon, an arm pivoted on said bracket to swing over the blade of said tool, a grinding disk on said arm adapted to operate on said blade for its entire length, a universal joint affording a part of the connection between said arm and said bracket to permit the surface of said disk following the edge of the tool, and a handle engaged on said grinding disk affording means for manually operating and rotating the same while engaged on the knife.

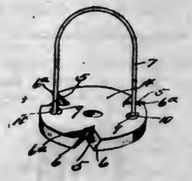
3. The combination with a suitable bracket, of a knife supporting face and clamping jaw thereon, a flat inclined face thereon adapted to be engaged by a scissors blade, an adjustable clamping jaw complemental therewith to engage the scissors blade thereto, an arm engaged to rotate and to swing on the bracket and adapted to be swung over the blade of the scissors, and a rotatable grinding element carried on the end of the arm for engagement with the scissors.

4. The combination with a suitable bracket, of a knife supporting face, a clamping jaw for securing a knife on said face, a flat inclined face adapted to receive a scissors blade thereon, an adjustable clamping jaw for securing the scissors blade thereto, an arm engaged on the bracket to rotate and to swing horizontally and also vertically, a rotatable grinding stone carried on the end of the arm for engagement with the knife or the scissors, and a handle affording means for moving said arm and stone and rotating the stone while in operation.

5. A device of the class described, embracing a bracket, a head thereon provided with an inclined face to receive a knife, a clamping jaw adapted to clamp the knife thereto in position for sharpening, said head provided with an inclined face to receive a blade of a scissors thereagainst, a clamping jaw adapted to clamp the scissors blade to the head for sharpening, an arm engaged on said bracket to rotate and to swing in either of two planes, a grinding stone on the end of said arm adapted to operate on the blades to be sharpened when swung along the edge thereof, and a handle for operating the stone.

[Claim 6 not printed in the Gazette.]

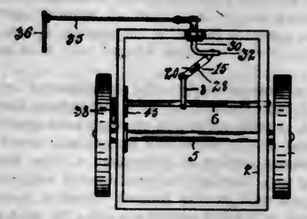
1,018,580. SEEDER AND PLANTER. JOHN CAL MOORE, Bernice, La. Filed Oct. 23, 1911. Serial No. 656,125. (Cl. 111—7.)



1. In an edge drop feeder, a feed plate adapted to rotate horizontally and having edge V-shaped openings, the openings having their walls beveled in the same direction and rearwardly and downwardly.

2. In an edge drop feeder, an annular horizontally revoluble feed disk having edge V-shaped openings, the two walls of which are beveled in the same direction, one of the walls having an extension lip.

1,018,581. DEVICE FOR OPERATING CORN-PLANTER MARKERS. JAMES MULVEHILL, Dubuque, Iowa. Filed June 17, 1911. Serial No. 633,895. (Cl. 111—24.)



1. In a device of the character described, a shaft journaled in the frame, a lever for rotating the shaft, an arm rigidly secured to said shaft, a crank journaled in the frame, a marker arm carrying a marker secured to the crank, and a rigid member adjustable in length loosely connected at one end to the crank and the other end loosely connected to the arm on the shaft.

2. In a device of the character described a shaft journaled in the frame, a lever for rotating the shaft, an arm rigidly secured to said shaft, a crank journaled in the frame, a marker arm carrying a marker rigidly secured to the crank, outside of the frame, a member formed in two parts and loosely connecting said crank with the arm on the shaft, and means for adjustably holding the two parts of the member together.

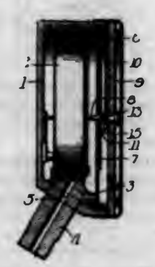
3. In a device of the character described, a shaft journaled in the frame, a lever for rotating the shaft, an arm rigidly secured to said shaft, a crank journaled in the frame, a marker arm carrying a marker rigidly secured to the crank, a rigid member loosely connected to the crank, and means provided by the arm on the shaft by which the member is loosely and adjustably connected to the arm on the shaft.

4. In a device of the character described, a shaft journaled in the frame, a lever attached to the shaft for rotating the shaft, a sector-plate secured to the frame, a dog attached to the lever and adapted to engage the sector-plate, an arm secured to said shaft and provided with openings therethrough, a crank journaled in the frame, a marker arm carrying a marker secured to said crank, a member composed of two parts each part provided with a hook, one hook attached to the crank and the other attached to one of the openings in the arm, and means for holding the parts of the member in adjusted position.

5. In a device of the character described, a shaft journaled in the frame, a lever for rotating said shaft, an arm secured to said shaft and provided with openings, a crank journaled in the frame, a marker arm rigidly attached to one end of the crank and carrying a marker, a connecting member loosely attached to the crank arm, means for loosely connecting said member to one of the openings in said arm upon the shaft, and means for adjusting the length of said member.

[Claim 6 not printed in the Gazette.]

1,018,582. PRESSURE-GAGE. THOMAS A. NELSON, Chicago, Ill. Filed May 13, 1010. Serial No. 561,140. (Cl. 73—109.)



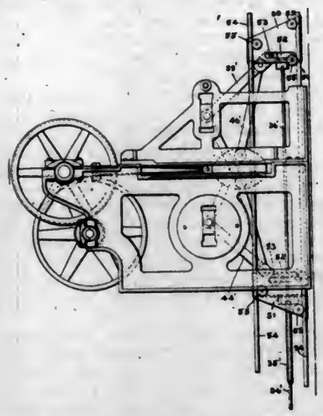
1. In a pressure gage, the combination with a dial plate and an indicating hand, of a protecting glass for said dial plate, a stud extending through said protecting glass having on its inner end an annular groove and a maximum pressure indicator comprising a wire stem having its lower end wrapped around said stud and in said groove.

2. In a pressure gage, the combination with a dial plate and indicating hand, of a protecting glass for said dial plate, a stud extending through said protecting glass and having on its inner end an annular groove, a maximum pressure indicator comprising a wire finger having the lower end thereof wrapped around said stud in said groove, said stud having formed therein a screw-threaded socket, and a headed screw engaging in said socket and having its head engaging the front of the protecting glass, for holding said stud in position and for rotating the same.

3. In a pressure gage, the combination with a casing having a flattened portion extending at an angle less than a right angle thereto, of a supporting member extending through said flattened portion of the casing and having connecting flanges connected to the flattened portion of said casing on the inner side thereof.

4. In a pressure gage, the combination with a casing of a Bourdon tube arranged in said casing said casing having a flattened portion extending at an angle less than a right angle to the rest of the casing, and a supporting member extending through said casing having connecting flanges arranged on the inner side of said casing and connected thereto, by means of screws passing through said casing and flanges, parallel with the supporting member, the Bourdon tube being mounted on said supporting member.

1,018,583. PUMP-OPERATING MECHANISM. LOWELL PRINSTON NORTON, Arden, Nev. Filed June 27, 1911. Serial No. 635,681. (Cl. 103—62.)



1. In a pump operating mechanism, two reciprocating cross heads adapted for the attachment of the pump rods, a pair of swinging arms, a shaft supporting each arm and vertically movable, a link connecting each arm with the associated cross head, a reciprocating cross head traveling at right angles to the first named cross heads, a link extending from each of said vertically movable shafts to said horizontally movable cross head, and means for reciprocating said latter cross head.

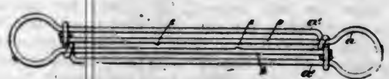
2. In a pump operating mechanism, two vertically movable cross heads adapted to operate two pump rods simultaneously in opposite directions, a pair of pivoted arms, links connecting the respective arms with the associated cross heads, a horizontally movable cross head, links extending from the latter cross head to said pivoted arms, means operated by the latter cross head for reciprocating the pivoted ends of said arms at right angles to the direction of stroke of said cross head, and means for operating said cross head.

3. In a pump operating mechanism, two vertically movable cross heads adapted to operate two pump rods simultaneously in opposite directions, a pair of pivoted arms, means connecting each arm with its associated cross head for operating the cross head from the arm, a horizontally movable cross head, links extending from the respective arms to the latter cross head, vertically movable shafts supporting said arms, links extending from said shafts to the latter cross head, and means for operating said latter cross head.

4. In a pump operating mechanism, a frame provided with two sets of vertical ways, blocks slidable in said ways, a shaft carried by each set of blocks, arms pivotally supported by said shafts, two vertically operating cross heads, means operatively connecting each cross head with its associated arm, said frame having horizontal ways, a main cross head sliding in the horizontal ways, links extending from said main cross head to the respective sliding blocks, and links extending from said cross head to said arms for imparting a swinging motion to said arms and simultaneously producing a bodily movement of the pivotal support of said arms.

5. In a pump operating mechanism, a pair of vertically operating cross heads, a pair of arms, means operatively connecting said arms with the respective cross heads for operating the latter, a horizontally movable cross head, means for reciprocating the latter cross head, and means operated by said latter cross head for simultaneously swinging said arms and bodily reciprocating the pivotal supports of said arms at right angles to the movement of said latter cross heads.

1,018,584. GARMENT-HANGER. HENRY E. RATHBUN, Providence, R. I., assignor, by mesne assignments, to Tilden-Thurber Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 19, 1906. Serial No. 296,774. (Cl. 211—13.)

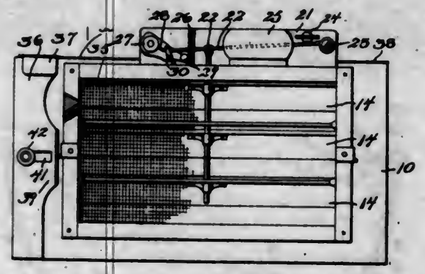


1. A garment hanger embracing in its construction a pair of coöperating telescopic members consisting of wire bent to form substantially parallel arms of unequal length, the longer arm of each member being bent to form an eye surrounding one arm of the opposing member and to form also an elongated loop surrounding the other arm of that member to form a supporting guide therefor, substantially as described.

2. A garment hanger embracing in its construction a pair of coöperating telescopic members comprising a piece of wire bent to form substantially parallel arms of unequal length, the longer arm of each member having its end portion bent to surround and closely engage its shorter free end and also the arms of the coöperating member so as to form a retaining guide therefor, substantially as described.

3. A garment hanger embracing in its construction a pair of coöperating telescopic members each consisting of a wire bent to form substantially parallel arms of unequal length, the longer arm of each member having its end portion bent to surround and closely engage both arms of the coöperating member, each member being provided with a stop formed by displacing or upsetting the metal to form a projection to engage the transverse guiding loop of the other member, substantially as described.

1,018,585. VENTILATOR. CHARLES E. REITZ, Reitz, Pa. Filed June 2, 1910. Serial No. 564,547. (Cl. 98—31.)



1. In a device of the class described, a plurality of pivotally arranged slats, a member pivoted centrally to each of said slats, a spring secured to said member, said spring being adapted to normally hold said slats in an extended position, and means adapted to engage said spring for holding the member thereby locking said slats against movement.

2. In a device of the class described, a plurality of pivotally arranged slats, a member pivoted centrally to each of said slats being centrally pivoted to a hollow member, a plate arranged above said slats, a spring member arranged longitudinally on said plate, a screw provided with a cam surface for regulating the tension of said spring, a guide plate, a member provided with a slotted portion, the end portion of said spring being adapted to pass through the slot formed in said slotted portion, and a pivotally arranged member for locking said spring.

3. In a device of the class described, a plurality of pivotally arranged slats, a member pivotally connected to the central portion of each slat, a plate arranged above said slats, a spring secured to said plate and said member, said spring being adapted to normally hold said slats in an extended position, a spring-pressed pivoted member and means including a second pivoted member for locking said spring against movement.

4. In a device of the class described, a plurality of pivotally arranged slats, a member pivoted centrally to each of said slats, a plate arranged above said slats, a spring arranged longitudinally on said plate and connected to said member, said spring having a normal tendency to hold said slats in extended position, a member pivotally arranged adjacent the end portion of said spring and an L-shaped member pivotally connected to the first mentioned pivoted member for locking said spring to said member.

5. In a device of the class described, a plurality of pivotally arranged slats, a member pivoted centrally to each of said slats, a plate arranged above said slats, a spring arranged longitudinally on said plate connected to said member, said spring having a normal tendency to hold said slat in an extended position, a member pivotally arranged adjacent to the end portion of said spring, said member being adapted to restrict the movement of said slats by contact with said spring.

1,018,586. FREIGHT-CARRIER. JESSE W. RENO, New York, N. Y. Filed Oct. 12, 1910. Serial No. 586,614. (Cl. 193—2.)

1. In a freight carrier the combination with an endless chain having engaging means secured thereto at intervals, of a track for said chain, a track for trucks, a distance beneath the path of said engaging means, a curved portion in one of said tracks to bring them into closer relation at said curved portion, and a floor or passage-way for operators below the plane of the track for trucks at said curved portion.

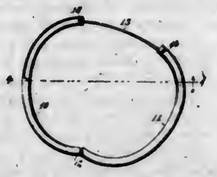
2. In a freight carrier the combination with an endless chain having engaging means secured thereto at uniform intervals, of an elevated support for said chain, and an inclined truck elevating means adapted to bring trucks into operative relation with said chain at a predetermined time with respect to the movement of the engaging means on said chain and located at a distance beneath said engaging means.

3. In a freight carrier the combination with a pair of channel bars arranged to have their webs vertical and their flanges in alinement and spaced a distance apart, of an endless carrier chain adapted to travel in one direction upon the lower flanges of said channel bars and in the return or reverse direction upon their upper flanges.

4. In a freight carrier the combination with a pair of channel bars arranged to have their webs vertical and their flanges in alinement and spaced a distance apart, of an endless carrier chain adapted to travel in one direction upon the lower flanges of said channel bars and in the return or reverse direction upon their upper flanges, and extensions or lugs secured to said chain extending between the adjacent edges of said flanges to guide said chain laterally.

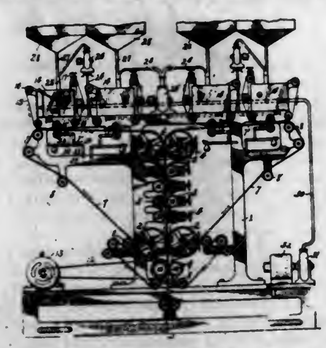
5. In a freight carrier the combination with a traveling chain and a guide therefor, of a hook pivoted to said chain having its point face in the direction opposite to the movement of the chain, a track or way for trucks arranged beneath said chain, having an elevated curved portion adapted to elevate the truck to a predetermined height in relation to said chain, and means for tilting said hook on its pivot in the direction opposite to that in which the hook points.

1,018,587. BRACELET. MEYER L. ROBBINS, New York, N. Y., assignor to Untermeyer-Robbins & Company, New York, N. Y., a Corporation of New York. Filed Dec. 5, 1911. Serial No. 664,122. (Cl. 63—7.)



A bracelet comprising two hollow hinged sections, the free ends of said sections each being provided with a plate, a spring blade bifurcated at one end to provide two outwardly extending arms, one of which is secured in the end of one of the sections, and the other of which projects through an opening formed in said section, said latter arm being provided with a notch, the other end of said blade being bifurcated to form two outwardly extending arms fitting in the other of said hollow sections, the extreme ends of said last mentioned arms impinging against the inner side or surface of the hollow section last mentioned.

1,018,588. MULTIPLE-PLY-PAPER-BOARD-MAKING MACHINE. ROBERT M. SCANLAN, Toledo, Ohio, assignor of one-half to John B. Shepler, Toledo, Ohio. Filed Nov. 7, 1910. Serial No. 591,063. (Cl. 92—39.)



1. In a machine of the class described, the combination of two endless aprons having horizontally moving portions and contiguous vertically moving portions, means guiding the movements of said aprons and serving to press the contiguous vertical portions thereof together, and means for applying pulp in layer form upon the tops of the horizontal portions of the aprons in position for such layers to pass with the aprons between the pressing portions of said guide means whereby such layers are united in a single multiple ply sheet.

2. In a machine of the class described, the combination with a movable apron, of a tank having a liquid chamber, a liquid circulating chamber and a vacuum chamber, the circulating and vacuum chambers each having a top provided with perforations opening into each of said chambers, an endless perforate belt guided for movement around said tank with a part in contact with said apron and a part extending down into the tank and passing over said top substantially in contact therewith throughout its length, means for discharging a liquid pulp upon the portion of said belt passing over said top, means for creating a circulation of liquid through the belt, one set of said perforations and the circulating chamber, and means for creating a vacuum within the other of said chambers to create a suction through the perforations leading thereto.

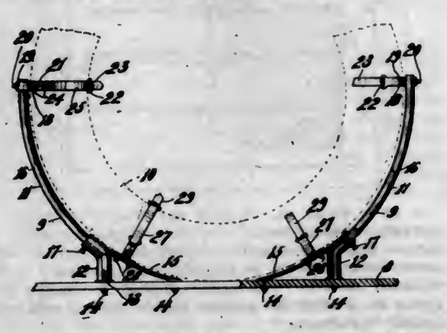
3. In a machine of the class described, the combination with a movable apron, of a tank having a water circulating chamber and an air circulating chamber therein, the tops of said chambers being inclined and standing in a common plane and each having perforations to the respective chambers, an endless perforate belt guided for movement around the tank with its outer side in contact with said belt at a point in its movement and with a portion guided for movement down into the tank and over the tops of said chambers in close proximity thereto, means for discharging matter into the tank over said belt below the said perforations, means for causing a circulation of water through the water circulating chamber and the perforations in its top, and means for creating a circulation of air through said air chamber and the perforations in its top to act to extract liquid from the belt as it passes thereover.

4. In a machine of the class described, the combination of a pair of oppositely movable endless aprons, a plurality of sets of pressure and liquid extracting rolls acting on the aprons to press portions of the same together and extract liquid therefrom, idler means for guiding the actions of said aprons, means for driving the aprons, and at least one pulp applying unit associated with each apron for applying pulp in layer form thereto in position to pass with the aprons between said pressure and liquid extracting means, said units each comprising a tank, an endless pulp applying member movable around said tank and into the same and in contact with the associated apron, and means for discharging liquid pulp within the tank and upon said member.

1,018,589. PROCESS OF EXTRACTING WAX FROM THE CANDELILLA-PLANT. BENJAMIN YOUNG SHARP, Uvalde, Tex. Filed Oct. 30, 1911. Serial No. 657,631. (Cl. 87—19.)

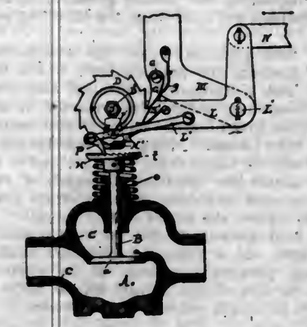
The process of extracting candelilla wax from the candelilla plant, consisting in boiling the plant in gasolene, benzin or naphtha in the presence of fullers' earth and clarifying the liquid before evaporating the volatile oil to recover the wax, substantially as herein described.

1,018,590. TIRE-HOLDER. ANDREAS M. SÖNNICHSEN, Milwaukee, Wis., assignor to Auto Parts Manufacturing Company, a Corporation of Wisconsin. Filed June 1, 1911. Serial No. 630,557. (Cl. 224—29.)



A tire holder, comprising a pair of independent tubular brackets provided with curved extensions terminating in support engaging means, said extensions projecting downwardly and in a direction toward each other, said brackets also provided with support engaging means, curved members extending into the bores of the tubular brackets and rigidly connected thereto, said brackets adapted to be adjusted toward or away from each other to accommodate tires of different diameters, and means carried by the brackets and the curved members for connecting a tire thereto.

1,018,591. VALVE. ELMER A. SPERRY, Cleveland, Ohio. Filed Feb. 21, 1895. Serial No. 539,298. (Cl. 137—4.)



1. The combination of a lifting valve and stem, a seat for the valve, means for raising the valve from its seat, a ratcheted head attached to said valve-stem, and a pawl connected to the reciprocating parts operating the valve, whereby when the said valve is unseated a partial rotation is imparted to the same, substantially as specified.

2. The combination of a lifting valve and stem, a seat for the valve, means for raising the said valve from its seat, means for partially rotating said valve during the operation of unseating, and means whereby said partial rotation comes into operation during a portion only of the seatings and unseatings of the valve, substantially as specified.

3. The combination of a lifting valve and stem, a seat for the valve, means for raising said valve from its seat, means for partially rotating said valve during the operation of unseating, means whereby said partial rotation comes into operation during a portion only of the seatings and unseatings of the valve, and mechanism whereby the last named means is intermittently operated simultaneously with the seatings and unseatings of the valve, substantially as specified.

4. The combination of a lifting valve and stem, a seating for the valve, means for raising the valve from its seat, means for partially rotating said valve while still engaging the seat, and an intermittently rotated cam, operated simultaneously with the seatings and unseatings of the valve, and coming periodically into operative communication with the said means for partially rotating the valve, substantially as specified.

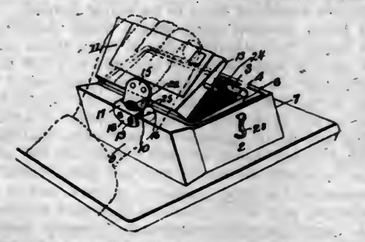
5. In combination, a valve seat, a valve held against the seat with considerable pressure when the valve is closed, means for moving the valve away from the seat to open it, and means for rotating the valve relative to the seat after the pressure between the valve and seat is diminished by the initial operation of the valve moving means, but before the valve has been moved out of engagement with its seat.

[Claims 6 to 12 not printed in the Gazette.]

1,018,592. MOISTENER AND SEALER. JAMES N. STACY, New York, N. Y. Filed Aug. 26, 1910. Serial No. 579,087. (Cl. 120—6.)

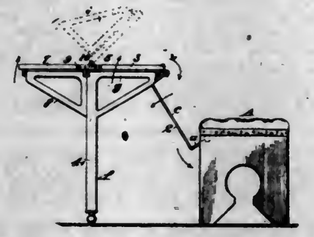
1. A moistener of the character described, comprising a base having upwardly extending side walls, a primary moistening pad contained within the hollow base and disposed below the upper edges of the side walls, a lid hinged to the upper edge of the base, a spring acting to raise the lid, a stop for limiting the upward movement of the lid, and a secondary moistening pad disposed in a cavity in the middle of the lid and spaced from the side edges of the lid, said pad projecting beyond the inside face of the lid and into contact with the primary moistening pad when the lid is closed, the side edges of the lid extending inward to form a marginal surface surrounding the secondary moistening pad.

2. A moistening device of the character described, comprising a case containing absorbent moistening material and a lid hinged to the case and adapted to close down over the same and prevent the introduction of dust into the same, said lid having an absorbent pad mounted on its inner face, the side edges of the lid extending inward



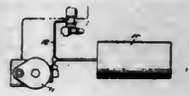
to form a marginal surface surrounding the absorbent pad and spaced from the side edges of the lid, the pad projecting beyond the face of the lid and being adapted to be brought into contact with the absorbent material in the case when the lid is closed, means for holding the lid closed, and means for holding the lid upraised in an angular position with relation to the case.

1,018,593. FOLDING TABLE AND SEAT. GEORGE A. SWANSON, Oakland, Cal. Filed Apr. 4, 1911. Serial No. 618,879. (Cl. 45—116.)



A foldable table and articulated connections whereby the table may be folded, said connections including foldable centrally disposed legs having transverse brackets at their upper portions, other brackets hingedly secured in the line of the first-named brackets, and a table top having sections hingedly connected to each other and hinged to the brackets, and foldable at right angles to the hinged movement of said brackets.

1,018,594. ELECTRIC-PUMP GOVERNOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1909. Serial No. 503,628. (Cl. 230—24.)



1. A pump governor comprising a pump controlling device, a piston for actuating same, a valve piston subject on one side to pump pressure for supplying air to said piston, a second valve piston operated upon a predetermined induction in pump pressure for controlling the release of air from said piston independently of the other valve piston, and a spring for opposing the movement of said valve pistons.

2. A pump governor comprising a pump controlling device, a piston for actuating same, a valve piston having a seated position and subject on one side to pump pres-

sure for supplying air to said piston, a second valve piston subject on one side to pump pressure for controlling the release of air from said actuating piston, a spring for opposing the pump pressure on said valve pistons, means operating upon supplying air to said actuating piston for balancing the fluid pressures on the first valve piston, and a spring for returning same to its seated position.

3. A pump governor comprising a pump controlling device, a piston for actuating same, a valve piston having a seated position and subject on one side to pump pressure for supplying air to said piston, a second valve piston subject on one side to pump pressure for controlling the release of air from said actuating piston, a spring for opposing the pump pressure on said valve pistons, said actuating piston being adapted, when air is supplied thereto, to supply air to the first mentioned valve piston for balancing the fluid pressures thereon, and a spring for returning said valve piston to its seated position.

4. A pump governor comprising a pump controlling device, a piston for actuating same, a valve piston having one area exposed in a seated position to pump pressure for supplying air to operate said actuating piston, a second valve piston having a seated position exposing a different area to pump pressure and moving independently of said other valve piston for releasing air from said actuating piston, and a spring for opposing the pump pressure on said valve pistons.

5. A pump governor comprising a pump controlling device, a piston for actuating same, a valve piston having one area exposed in a seated position to pump pressure and a larger area on the opposite side to atmospheric pressure for supplying air to operate said actuating piston, a second valve piston having a seated position exposing a larger area to pump pressure and a smaller area to atmospheric pressure than the first valve piston and movable independently of said first valve piston for releasing air from said actuating piston, and a spring for opposing the pump pressure on said valve pistons.

[Claims 6 and 7 not printed in the Gazette.]

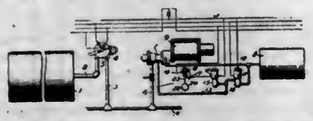
1,018,595. ARTICLE OF FOOD AND PROCESS OF MAKING THE SAME. MANUEL VILLEGAS, Mexico, Mexico. Filed Aug. 21, 1911. Serial No. 645,119. (Cl. 99—11.)

1. As a new composition of matter a food compound consisting of a ground or comminuted mixture of about 5 parts by weight of grains of maize, 1 part by weight of cobs of maize and 1 part by weight of stalks of maize.

2. In the process of producing a food compound the steps comprising triturating and sifting the cobs and stalks of maize, adding grains of maize and grinding the product.

3. The herein-described process of producing a food compound consisting in triturating and sifting the cobs and stalks of maize, adding grains of maize, boiling the product for about 20 minutes in lime water under pressure, permitting the product to remain in the lime water for about six hours, washing the product in fresh water and finally grinding the product.

1,018,596. INERTIA-GOVERNOR FOR AIR-BRAKES. HENRY H. WESTINGHOUSE, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 29, 1910. Serial No. 574,560. (Cl. 188—72.)



1. In a fluid pressure brake apparatus, the combination with a manually controlled electrically operated valve device for regulating the braking pressure, of an inertia weight mechanism operating upon a certain rate of retardation to control said electric valve device.

2. In a fluid pressure brake apparatus, the combination with a manually controlled electrically operated valve device for regulating the braking pressure, of an inertia weight mechanism for controlling the circuit of said valve device.

3. In a fluid pressure brake, the combination with means for reducing the pressure with which the brake is applied, and a manually controlled electro-magnetic device for controlling the operation thereof, of an inertia weight for also governing the action of said device.

4. In a fluid pressure brake, the combination with a valve for reducing the braking pressure, and a manually controlled magnet for operating the same, of an inertia weight mechanism operating upon a certain rate of retardation to control the circuit of said magnet.

5. In a fluid pressure brake, the combination with a brake cylinder, and a manually controlled magnet valve for releasing pressure therefrom, of an inertia weight mechanism for also controlling said magnet valve.

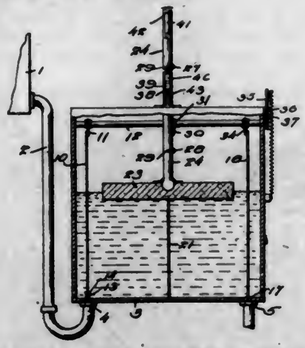
[Claims 6 to 12 not printed in the Gazette.]

1,018,597. ICE-CUTTER. JULIUS WIRKUS, Minto, N. D. Filed Nov. 17, 1911. Serial No. 660,857. (Cl. 62—8.)

1. In an ice cutter, a support consisting of runners, a frame hingedly connected to said support, a motor supported by said frame, a shaft driven by said motor, cutters mounted upon said shaft, an adjustable connection between said frame and said support, a plurality of gage bars supported by said frame, and a lever pivotally supported by said support, said lever being adapted to contact with one of said gage bars to elevate said frame.

2. In an ice cutter, a support consisting of runners, a frame hingedly connected to said support, a shaft mounted for rotation on said frame, means for driving said shaft, a rack bar extending vertically from said support, a dog carried by said frame and engaging said rack bar, a plurality of gage bars extending transversely of said frame, a marker adjustably mounted on each of said bars, and a lever pivoted to said support, said lever being adapted to contact with one of said gage bars to elevate said frame.

1,018,598. AUTOMATIC MEASURING DEVICE. CLIFFORD A. WOODS, Plankinton, S. D. Filed Mar. 18, 1911. Serial No. 615,219. (Cl. 73—28.)

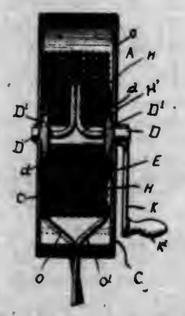


1. A measuring device, comprising a supply tank, a supplemental measuring tank, a pipe connecting said tanks, an inlet valve for controlling the admission of fluid from the supply tank, an outlet valve for controlling the discharge from the supplemental tank, a rock shaft journaled in the supplemental tank, a plurality of rock arms secured on said shaft, a valve rod pivoted to one of said arms and to the inlet valve for controlling the latter, a valve rod pivoted to another of the arms, and to the outlet valve for controlling the same, said valves operating in opposite directions, a float mounted in the supplemental tank, an arm mounted on the rock shaft and having a range of independent rotating movement thereon, continued movement of said arm in excess of said range rocking the shaft, abutments carried by the float rod for engaging said arm to rock the shaft, and a spring secured to one of the rock arms of the shaft, and to the supplemental tank to continue the rocking of the shaft initiated by the engagement of the float rod with the arm of the shaft.

2. A liquid measuring apparatus, comprising a receptacle having inlet and outlet ports, a source of supply connected with the inlet port, valves for controlling said ports, a rock shaft journaled in the receptacle, a plurality of rock arms secured on said shaft, connections between certain of the rock arms and the inlet and outlet valves for operating said valves to open the one and close the other upon the rocking of the shaft, a float mounted in the receptacle, a float rod secured to the float, connections between said rod and the rock shaft for rocking the shaft, and means for checking the movement of the float when a predetermined quantity of liquid has been measured.

3. A measuring apparatus comprising a receptacle, having inlet and outlet ports, inlet and outlet valves for controlling said ports, a rock shaft journaled in the receptacle, a plurality of rock arms secured on said shaft, connections between certain of the arms and the inlet and outlet valves to open one of the valves while closing the other, a float mounted in the receptacle, a float rod secured to the float, connections between said float rod and the rock shaft for rocking the shaft to operate the valves upon movement of the float, a wheel rotatably supported on the receptacle adjacent the float rod, said wheel having a plurality of single points and one sector shaped member, means carried by the float rod to engage the single points to rotate the wheel one step on each downward movement of the float, a pawl for preventing movement of the wheel in a reverse direction, and a locking device carried by the float rod to engage the sector shaped member and hold the float in elevated position.

1,018,599. ELECTRIC-WIRE-FEEDING APPARATUS AND REEL THEREFOR. FRANK NEWTON WOODS, Flint, Mich. Filed June 7, 1911. Serial No. 631,808. (Cl. 242—101.)

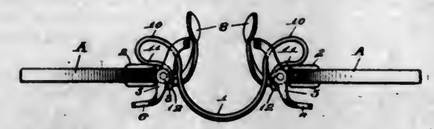


1. A reel for electric wire, a bearing for said reel and means for feeding the wire with electrical energy comprising a casing having metallic plates forming the sides of the casing and insulated from each other, said reel having metallic trunnions mounted in said bearing, electrical wires winding upon the reel and electrically connected to said trunnions, and supply wires connected one to each of said metallic plates.

2. A reel for electric wire and means for feeding the wire with electrical energy comprising a casing having metallic plates forming the sides of the casing and insulated from each other, bearing plates fastened to said reel and each having a trunnion journaled in one of said plates forming the sides of the casing, wires winding about the reel and one connected to each of said bearing plates, a feed wire connected to the side plates of the casing, and a crank fastened to one of the trunnions.

3. A reel for electric wire and means for feeding the wire with electrical energy comprising a casing having metallic plates forming the sides of the casing and insulated from each other, said reel having recesses in opposite faces, a trunnion carrying plate seated in each recess and having an integral trunnion journaled in one of said plates forming the side of the casing, wires winding upon the reel and one connected to each of the trunnion carrying plates, feed wires passing through the casing and one connected to each of the plates of the casing.

1,018,600. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Original application filed June 21, 1907, Serial No. 380,027. Divided and this application filed Nov. 3, 1909. Serial No. 526,094. (Cl. 88—50.)



1. The combination with a support for the lenses, of a nose guard carrying a pivot pin turning in the support and detachable from the latter with the guard, and a spring for positioning the guard secured to one of said parts and detachably interlocked with the other to hold the guard on the support.

2. The combination with a support for the lenses having a vertical bearing, of a nose guard embodying a lever mounted to swing on one side of the support substantially in a horizontal plane and having permanently secured thereto a vertically arranged pivot pin extending into the bearing of the support and detachable from the latter with the guard, and a spring for positioning the guard carried by the support and detachably interlocked to the guard to retain the pivot pin in the bearing of the support.

3. In an eye-glass mounting, the combination with a support for the lenses, of a guard mounted to swing on one side thereof, and a spring having an arm operating on the other side of the support and coöperating with the guard in front of the turning axis of said guard.

4. In an eye-glass mounting, the combination with a support for the lenses, and a nose guard mounted to swing on one side thereof, of a spring arranged in rear of the support secured to the latter and having a forwardly extending arm operating on the opposite side of the support and secured to the guard in front of the swinging axis of the latter.

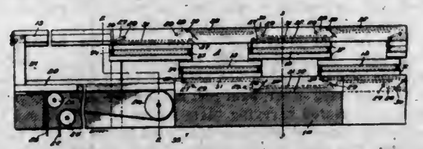
5. In an eye-glass mounting, the combination with a support for the lenses, and a nose guard mounted to swing on the upper side of the support, of a spring for positioning the guard arranged in rear of the support, secured to the latter and having a forwardly extending arm operating beneath the support and connected to the guard in front of the swinging axis of the latter.

[Claims 6 to 17 not printed in the Gazette.]

1,018,601. LOOM SHUTTLE-MOTION. HERMANN BAADER, Gelterkinden, Switzerland. Filed Oct. 30, 1911. Serial No. 657,524. (Cl. 139—49.)

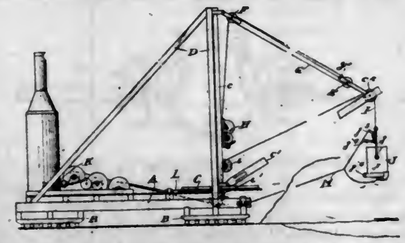
In a loom, the combination of, a frame, a plurality of shuttle races arranged side by side, shuttles adapted to move in said shuttle races, a plurality of connected shuttle carriers arranged in guides along the outer sides of the shuttle races, means for reciprocating the shuttle carriers, a plurality of pairs of bent arms pivoted to the shuttle carriers and each pair adapted to directly engage a

shuttle and having laterally projecting pins thereon, a plurality of pairs of overlapping cam tracks carried by said frame and each pair coöperating with a pair of said



arms whereby said arms are alternately moved into and out of engagement with the shuttle as the carriers are reciprocated, for the purpose described.

1,018,602. EXCAVATOR. CHARLES E. BATHRICK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Sept. 28, 1908. Serial No. 455,021. (Cl. 37—54.)



1. A drag-line bucket excavator provided with drag-line controlled locking mechanism adapted to be unlocked for dumping the bucket by a pull on the drag-line, said drag-line having connection with a movable element of said mechanism.

2. A drag-line bucket excavator provided with drag-line controlled locking mechanism adapted to be unlocked for effecting a tilting of the bucket to dumping position by a pull on the drag-line, said drag-line having connection with a movable element of said mechanism.

3. An excavator comprising a bucket, a drag-line therefor, a hoist-line, a latch for locking the bucket in carrying position when the hoist-line is raised, and means actuated by a pull on the drag-line for operating said latch and thereby releasing the bucket to dumping position.

4. An excavator comprising a bucket, a bail therefor, a hoist-line secured to said bail, a latch on said bail, a drag-line secured to said bucket, and a hitch from the drag-line to the latch.

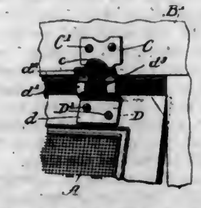
5. The combination of an excavator bucket, a drag-line, means for raising the bucket, adapted to change the position of the latter, and drag-line controlled locking mechanism adapted to be unlocked by a pull on the drag-line after the bucket is raised for dumping the load, said drag-line having connection with a movable element of said mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,018,603. WINDOW-SCREEN HANGER. LOUIS A. BITTORF, Sterling, Ill., assignor to National Manufacturing Company, Sterling, Ill., a Corporation of Illinois. Filed Apr. 27, 1909. Serial No. 492,569. (Cl. 16—48.)

1. In a device of the class described, a hanger having a hook member C having an attaching plate, a slot member D having a lip or flange extending a substantial distance beyond the slot to contact with the attaching plate for the hook member and thereby hold the slot away from the same when the screen or sash is swung outward beyond the normal to remove it from the hooks.

2. In a device of the class described, a hook member C having an attaching plate and an inclined portion c, a slotted member D having a lip or flange extending a substantial distance beyond the slot to contact with the attaching plate for the hook member and thereby hold the slot away from the same when the screen or sash is swung outward beyond the normal to remove it from the hooks.

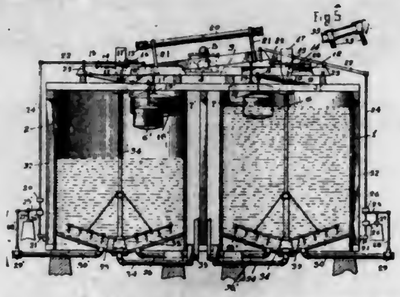


3. In a device of the class described, a member C having an inclined hook portion c, a slotted member D having a correspondingly inclined flange portion d^2 adapted to engage with the inclined portion c whereby the screen is normally pressed inwardly against the window frame.

4. In a device of the class described, a hook member C having an inclined hook portion c and a securing plate, a slotted member having a securing plate and a correspondingly inclined flange member d^2 together with an outwardly curved intermediate slotted portion d'.

5. A device of the class described comprising two engaging plates, one of which is adapted to be secured to a window frame or the like and which is provided with an upwardly and outwardly inclined hook with a substantially straight under surface, and the other of which is adapted to be secured to a screen or sash and which is provided with an upwardly and outwardly inclined portion having a slot to receive the hook and also having at its free end and beyond the slot a flange adapted to bear against and slide freely upwardly along said surface of the hook until the latter engages said slot.

1,018,604. METHOD AND APPARATUS FOR THE PRECIPITATION OF GOLD AND SILVER FROM CYANID SOLUTIONS. DANIEL BOSQUI, Gold Road, Ariz., assignor, by mesne assignments, to Merrill Metallurgical Company, San Francisco, Cal., a Corporation of California. Filed Feb. 21, 1911. Serial No. 610,008. (Cl. 75—86.)



1. A precipitating apparatus, the same comprising a plurality of receiving vessels for the solution to be treated, mechanism for alternately charging said vessels with solution, automatically actuated devices for alternately supplying pre-determined charges of zinc dust to said vessels, and means automatically thrown into action for controlling the outflow of the treated solution from within said vessels.

2. A precipitating apparatus, the same comprising a plurality of receiving vessels each provided with a valved controlled outlet, mechanism for alternately charging said vessels with solution to be treated, devices for alternately supplying automatically to said vessels pre-determined charges of zinc dust, means within each vessel for maintaining the solution therein in an agitated condition, and devices thrown into action on the filling of a vessel for automatically releasing the valved controlled outlet thereof for the escape of the treated solution.

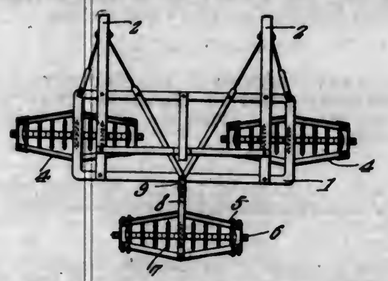
3. A precipitating apparatus, the same comprising a plurality of receiving vessels, each provided with a valved outlet, a plurality of floats within each vessel, a tilting launder for automatically delivering solution to said vessel, connection between one of the floats within the vessels for tilting the said launder as the vessel fills, an automatically operated zinc dust feeder for each vessel for delivering a predetermined charge of zinc dust to the solution charge therein, connection between said feeder and the secondary float within the tank for actuating the same on the solution reaching a given level within the tank, and means thrown into action on the shifting of the tilting launder for actuating the valved outlet of the filled vessel.

4. In an apparatus for the described purpose, the combination with a plurality of valved controlled receiving vessels, of mechanism for alternately supplying thereto charges of solution to be treated, and means thrown into action on the solution reaching a given level in each of said tanks for supplying a pre-determined charge of zinc dust thereto before its delivery to the filtering medium.

5. In an apparatus for the described purpose, the same comprising a plurality of receiving vessels, a supply feed for the solution to be treated, means for delivering a predetermined charge of zinc dust to each of the receiving vessels, and devices acted on by the solution delivered within the vessels for first alternating the flow of the solution from one vessel to the other, and secondly operating the zinc dust feed means to supply a charge of zinc to said solution.

[Claims 6 to 13 not printed in the Gazette.]

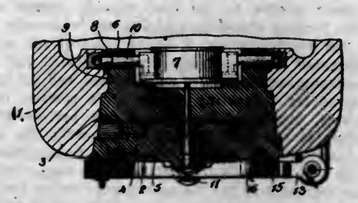
1,018,605. SUBSURFACE-PACKER. WILLIAM O. CARLEY and CLAUDE HOLLINGSWORTH, Colfax, Wash. Filed Feb. 3, 1910. Serial No. 541,746. (Cl. 55—81.)



A sub-soil packer having an open substantially rectangular frame, draft appliances connected thereto and bracing the front and rear parallel sides of the frame, two auxiliary six sided frames, two pairs of coöperatively connected lugs connected to the upper central portion of the auxiliary frames and centrally of the ends of the under side of the short sides of the main frame, the respective outer ends of each auxiliary frame projecting beyond the path of travel of the main frame and terminating an equal distance within the main frame, a shaft journaled from the under side and lengthwise of each auxiliary frame, the ends of the shaft projecting beyond the respective ends of the auxiliary frame, a series of packer disks rotatably mounted upon the shaft and within the auxiliary frame, and a single packing disk journaled upon the respective ends of the shaft beyond the ends of the auxiliary frames.

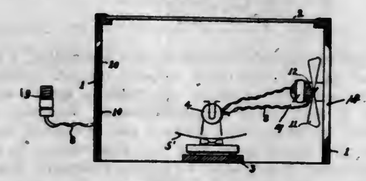
1,018,606. SAFE. JOSEPH E. CASSERLY, New York, N. Y., assignor to Ely-Norris Safe Company, Perth Amboy, N. J., a Corporation of New Jersey. Original application filed Nov. 2, 1909, Serial No. 525,855. Divided and this application filed June 27, 1911. Serial No. 635,573. (Cl. 109—4.)

1. The combination of a safe or vault having a door-opening, and a door adapted to close said opening consisting of a plurality of door-sections of unmachineable metal spaced apart but rigidly connected so as to form a unitary structure, and a filling of metal which is softer than that of said sections in the space between the sections and extending out to the periphery of the door, substantially as set forth.



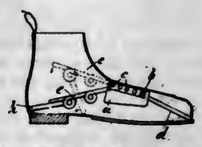
2. The combination of a safe or vault having a door-opening, and a door adapted to close said opening consisting of a plurality of door-sections of unmachineable metal spaced apart but rigidly connected so as to form a unitary structure, and a plurality of sheet-metal plates lying side by side parallel to the door-sections, extending out to the periphery of the door and filling the space between the door-sections, substantially as set forth.

1,018,607. PLATTING-BOX. EUGENE L. DEARBORN, Fairfield, Cal. Filed Mar. 14, 1911. Serial No. 614,315. (Cl. 33—15.)



In a tracing apparatus, the combination with a box having a glass top and inlet openings formed therein to direct incoming air against the underside of said glass top and having a discharge opening, a lamp in said box and an electric fan mounted in said box, said fan being adapted to direct air into the box through the inlet openings and to discharge the air through said discharge opening, substantially as described.

1,018,608. BOOT-TREE. CHRISTIAN FUNK, Heidelberg, Germany. Filed June 27, 1911. Serial No. 635,583. (Cl. 12—128.)



1. A boot tree consisting of a plate curved to approximately fit the instep of the boot or shoe said plate having a pair of inwardly extending longitudinal flanges provided with orifices inside the said plate, a toe bow and heel toggle bow of adjustable length each having the adjacent ends of their shanks bent outwardly and adapted to engage the orifices the said instep plate.

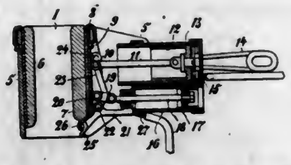
2. A boot tree consisting of a plate curved to approximately fit the instep of the boot or shoe said plate having a pair of inwardly extending longitudinal flanges provided with orifices inside the said plate, a toe bow and heel toggle bow each having the adjacent ends of their shanks bent outwardly and adapted to engage the orifices of the said instep plate, a series of eyes in one member of the toggle bow and outwardly bent shank ends on the other member to engage said eyes.

1,018,609. PROCESS FOR ROASTING ORES. CHARLES GABRIELLI, Paris, France. Filed Nov. 15, 1910. Serial No. 592,587. (Cl. 75—18.)

1. A process for roasting pyrites, ores, matte, residues and the like containing sulfur in order to separate one or more of the metals contained therein, consisting in adding green pyrites to the dead roasted pyrites at a part of the furnace where the temperature is between that required for the formation of the sulfates of the metals to be separated, and the temperature at which said sulfates decompose, substantially as described and set forth.

2. Process for separating copper from pyrites, matte and the like, consisting in adding green pyrites during the roasting to the dead roasted pyrites when the same is at a part of the furnace where the temperature is lower than that at which the sulfate of the copper decomposes but higher than the temperature at which the sulfate of iron is formed, substantially as described and set forth.

1,018,610. MILKING-MACHINE. REGNER HENRY JULIUS GJETTING, Copenhagen, Denmark. Filed Sept. 21, 1911. Serial No. 650,585. (Cl. 31—95.)

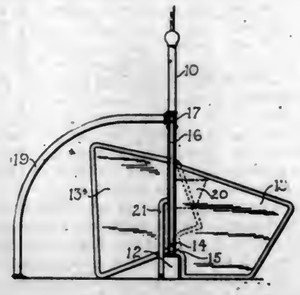


1. A milking machine comprising in combination, a flap, a second flap movable with respect thereto, yieldable means for normally retaining said flaps in spaced apart relation to each other a predetermined distance, and mechanism for imparting a forward and downward movement to said second mentioned flap, with respect to said first mentioned flap, subject to return movement thereof responsive to said yieldable means.

2. A milking machine comprising in combination, a flap, a second flap movable with respect thereto, means mounting said second mentioned flap permitting oscillation and reciprocation thereof, a cylinder adapted to confine fluid pressure, a piston within said cylinder, means operatively connecting said piston and second mentioned flap to normally draw the same away from said first mentioned flap responsive to fluid expansion within said cylinder, and mechanism for imparting a forward and downward movement to said second mentioned flap, with respect to said first mentioned flap, subject to return movement thereof responsive to action of the fluid pressure within said cylinder.

3. A milking machine comprising in combination, a stationary structure provided with a flap and a bearing surface oppositely disposed with respect thereto, a second flap provided with a gib coacting with the said bearing surface of said first mentioned flap, for oscillatably and reciprocatably mounting the same in operative relation to said first mentioned flap, a cylinder, piston within said cylinder, means operatively connecting said piston and second mentioned flap for actuating the same, a device coacting with said second mentioned flap to guide the same during a part of its stroke in a predetermined path of movement with respect to said first mentioned flap responsive to action of said piston, a second cylinder, a second piston within said second cylinder, the said second mentioned cylinder being provided with a working space substantially smaller than that of said first mentioned cylinder, means operatively connecting said second mentioned piston and second mentioned flap to draw the same away from said first mentioned flap, and means for conveying fluid pressure within said cylinders to impart a forward movement and downward movement to said second mentioned flap subject to action of said first mentioned piston responsive to fluid expansion, and return movement thereof, under the action of said second mentioned piston responsive to fluid expansion.

1,018,611. MANGER. ROBERT M. GLOR, Attica, N. Y. Original application filed Nov. 28, 1908, Serial No. 464,916. Divided and this application filed Aug. 19, 1909. Serial No. 513,569. (Cl. 119—27.)

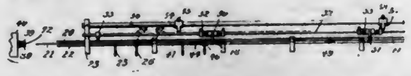


1. The combination with a stall and its framework, of a manger partition pivoted in the framework of the stall and adapted to tip forward and divide the manger, and adapted to be tipped back and form a stall partition.

2. The combination with the framework of a stall, of a plate pivoted in the said framework at a point between the manger and stall portions so as to tip forward and backward and form a partition either in front of or behind the said framework.

3. The combination with the frame work of a stall having a manger extending in front of the said framework, of a partition plate pivoted in the framework and shaped to fit snugly over the framework and against the manger floor so as to form a manger partition, the said partition plate being hung so that it can be tipped backward behind the framework and form a stall partition.

1,018,612. SECTIONAL PLATING DEVICE FOR STRAIGHT-KNITTING MACHINES. PAUL GUENTHER, Dover, N. J. Filed Dec. 14, 1910. Serial No. 597,186. (Cl. 66—12.)



1. In a machine of the character described, a main shogging bar, a pair of auxiliary shogging bars, tappet rods operatively connected to the auxiliary shogging bars with freedom of movement relatively thereto, and means for reciprocating the main shogging bar and the tappet rods.

2. In a machine of the character described, a main shogging bar, an auxiliary shogging bar, a rod arranged in parallelism with said bars, a tappet on said rod, means for connecting the tappet to the auxiliary shogging bar with freedom of movement relatively thereto, means for connecting the rod to the main shogging bar, and means for reciprocating the main shogging bar.

3. In a machine of the character described, a main shogging bar, an auxiliary shogging bar, a recessed lug on the auxiliary shogging bar, a rod, a tappet on said rod that is loosely received within the lug-recess, means for connecting the main shogging bar to the rod, and means for reciprocating said main shogging bar.

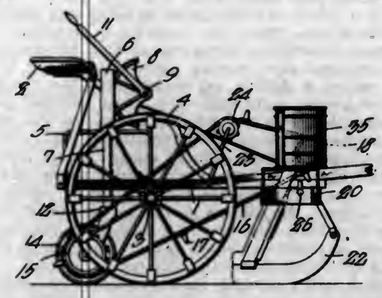
4. In a machine of the character described, a shogging bar, a recessed lug secured thereto, a rod extending in parallelism with said bar and located vertically thereabove, means for intermittently reciprocating said bar, and a tappet on said rod that is loosely received within the lug-recess, said recess being slightly larger than the tappet so that the latter has a play within the former.

5. In a machine of the character described, a shogging bar, a rod arranged in parallelism therewith, means for connecting the rod to the bar, said means permitting

freedom of movement between said rod and bar, a pair of abutments on the rod, and a pair of reciprocative members adapted to engage the abutments.

[Claims 6 to 8 not printed in the Gazette.]

1,018,613. AUTOMATIC CORN-PLANTER. CHARLES H. HALL, Frankfort, Ind., assignor of one-half to Timothy R. Foley, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,589. (Cl. 111—41.)



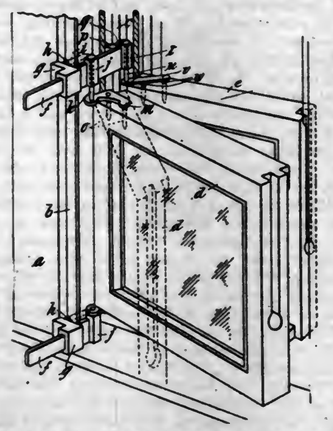
1. A device of the class described comprising a wheel-mounted frame; a bracket thereon; a rack bar mounted for vertical sliding movement in the bracket; a segment pivotally supported on the frame, and meshing into the rack bar; a lever operatively connected with the segment; a ground wheel connected with the rack bar, for raising and lowering; a pulley connected with the ground wheel, to rotate therewith; a pulley supported for rotation upon the frame; a belt trained about the pulleys and having spaced projections; a receptacle for marking material, mounted upon the frame; means for opening and closing the receptacle, said means being engageable by the projections upon the belt.

2. A device of the class described comprising a wheel-mounted frame; a hanger connected with the frame; a ground wheel journaled for rotation in the hanger; means for raising and lowering the hanger; a belt operatively connected with the ground wheel and supported upon the frame, the belt being provided with spaced projections; marking mechanism carried by the frame; means for opening and closing the marking mechanism, said means being engageable by the projections of the belt; a belt tightener upon the frame, including a rotatable element, engaged with the belt; and means for operating the rotatable element, when the ground wheel is out of engagement with the ground.

3. A device of the class described comprising a wheel-mounted frame; a receptacle for marking material, mounted upon the frame; a spout leading from the receptacle; a gate for the spout; an operating member movably connected with the spout and with the gate, to open and to close the gate; ground-engaging mechanism adapted to engage directly with the operating member to open and to close the gate; spring means for actuating the operating member, to hold the gate normally closed and to retract the operating member into the path of the ground-engaging mechanism; a gate slidable in the receptacle and adapted to open and to close the spout; and means independent of the operating member and of the ground-engaging mechanism, for operating the last mentioned gate.

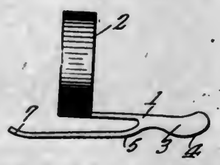
1,018,614. WINDOW ATTACHMENT OR FIXTURE. EDMOND HÉROUX, Springfield, Mass., assignor to Francis X. Lewis, Springfield, Mass. Filed May 10, 1911. Serial No. 626,270. (Cl. 20—57.)

A device for attachment to, and detachment from, a window frame to permit the upper and lower sashes to be swung inward, comprising a pair of bar members, the inner end of each member having a projecting pin adapted to be received in openings in the parting bead, a block slidably mounted on each of the bar members and having pins thereon to enter openings in the window stop, two pairs of arm members pivotally connected to the bar



members and each of the arm members having a pair of pins for entering openings in the upper and lower edges of the sashes, substantially as described.

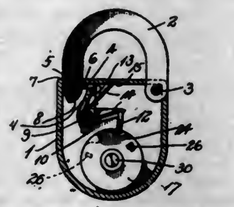
1,018,615. HAND-REST. NOBLE R. HOLCOMB, Nowata, Okla. Filed July 10, 1911. Serial No. 637,835. (Cl. 120—53.)



1. A device of the class described comprising a body; arcuate clips at one end of the body, and a tongue secured to the intermediate portion of the body, and extended forwardly, beyond the clips.

2. A device of the class described comprising a body provided at its rear end with a depending, rounded boss, and with arcuate clips at its forward end, there being a tongue projecting forwardly, from the intermediate portion of the body, below the clips, and forwardly extended beyond the same.

1,018,616. PERMUTATION-PADLOCK. SAMUEL F HOLMES, Los Angeles, Cal. Filed Mar. 7, 1911. Serial No. 612,805. (Cl. 70—112.)



1. A pad lock mechanism, comprising a pivoted shackle, a spring actuated bolt adapted to automatically lock the shackle upon its being closed, a lever pivoted adjacent to said bolt and having means engaging the bolt upon one side for rocking it out of engagement with the shackle, said bolt being free to move in the other direction irrespective of said lever, a series of disks adapted to be

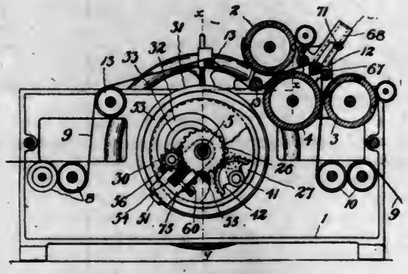
operated from the exterior of the lock for controlling the action of said lever, and spring means for normally holding the said lever against the said disk.

2. A permutation pad lock, comprising a casing carrying a pivoted shackle, locking means therefor comprising a pivoted bolt, a controlling lever pivoted coaxially therewith and having an arm engaging the bolt and capable of withdrawing the same, a spring for normally keeping the bolt against said arm, disks forming tumblers for controlling the action of the said lever, and a spring normally forcing the said lever against the said tumblers, the structure being such that the bolt may be forced inwardly to lock the shackle when the lever is held in locked position by the said tumblers, the said lever being capable of withdrawing the bolt when the tumblers permit.

3. A permutation pad lock, comprising a casing, a shackle pivoted thereon, a locking mechanism comprising two pivoted arms, one of said arms being formed with a bolt portion, and the other with a tumbler engaging portion, means carried by one arm for preventing the said arms from separating to too great an extent, a spring normally tending to separate the outer ends of said arms, a spring normally tending to force the tumbler engaging arm against tumblers, a series of tumblers having recesses formed therein, and means for bringing the recesses into alinement for permitting the tumbler engaging arm to rock so as to withdraw the bolt from the said shackle.

4. A combination padlock mechanism comprising a casing, a pivoted shackle, a bolt having a flange for locking the shackle, a pivot pin carrying said bolt, a lever mounted adjacent to the bolt and having a projection capable or rocking the bolt for withdrawing the same, the said lever also being pivoted on said pivot pin, a spring for normally holding the bolt against the projection of said lever, a series of combination disks having recesses formed therein, a spring fulcrumed in the casing and adapted to press the said lever against the edges of the disks, and a knob mounted exteriorly of the padlock and connected with one of said disks, and projections upon all of said disks coöperating for the movement of the disks by said knob, to bring their depressions in alinement beneath the lever when the bolt is to be withdrawn.

1,018,617. IMPRESSION APPARATUS. LOUIS HUFFMAN, Toronto, Ontario, Canada. Filed Aug. 22, 1910, Serial No. 578,387. Renewed June 23, 1911. Serial No. 635,022. (Cl. 101—126.)



1. In a rotary printing press provided with rotatable printing means; means for imparting a variable rotary motion to the printing means comprising a driving shaft; a normal-speed gear rotating with said shaft; a driven gear having a driving connection with the rotatable printing means; a differentiating gear; means for alternately driving the driven gear from the normal speed gear and from the differentiating gear at equal intervals of time; and means for driving the differentiating gear at a different speed to the drive shaft when the driven gear is actuated from said differentiating gear.

2. In a rotary printing press provided with rotatable printing means; means for imparting a variable rotary motion to the printing means comprising a driving shaft; a normal-speed gear rotating with said shaft; a driven gear having a driving connection with the rotatable printing means; a differentiating gear; means for alternately driving the driven gear from the normal speed gear and from the differentiating gear at equal intervals of time; and means for driving the differentiating gear at a different speed to the drive shaft when the driven gear is actuated from said differentiating gear comprising an eccentric actuated from the shaft; a rack engaging the differentiating gear, and driving connections between the eccentric and the rack.

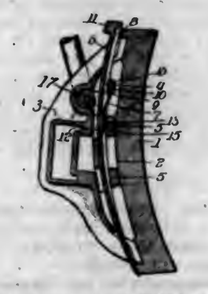
3. In a rotary printing press provided with rotatable printing means, means for imparting a variable rotary motion to the printing means comprising a driving shaft; a normal-speed gear rotating with said shaft; a driven gear having a driving connection with the rotatable printing means; a differentiating gear; shiftable means for giving the driven gear a driving connection with either the normal-speed gear or the differentiating gear; shifting means for moving said shiftable means; a cam loose on the shaft adapted to actuate said shifting means; gearing between the shaft and the cam adapted to rotate the cam to cause the shifting means to operate at equal intervals of time; and means for driving the differentiating gear at a different speed to the shaft at such times as it is in driving connection with the driven gear.

4. In a rotary printing press provided with rotatable printing means, means for imparting a variable rotary motion to the printing means comprising a driving shaft; a normal-speed gear rotating with said shaft; a driven gear having a driving connection with the rotatable printing means; a differentiating gear; shiftable means for giving the driven gear a driving connection with either the normal-speed gear or the differentiating gear; shifting means for moving said shiftable means; a cam loose on the shaft adapted to actuate said shifting means; gearing between the shaft and the cam adapted to rotate the cam to cause the shifting means to operate at equal intervals of time; and means for driving the differentiating gear at a different speed to the shaft at such time as it is in driving connection with the driven gear, comprising an eccentric rotating with the cam, a rack engaging the differentiating gear, and driving connections between the eccentric and the rack.

5. In a rotary printing press rotary printing means forming a segment of a cylinder in combination with means for driving said printing means at a uniform speed during the printing part of each rotation and at a different speed during the non-printing part of each rotation; and means for making the differentiated speed either an acceleration or a retardation of the printing speed, at the will of the operator.

[Claims 6 to 10 not printed in the Gazette.]

1,018,618. BRAKE-HEAD AND KEY. CHARLES F. HUNTOON, Chicago, Ill., assignor to Henry D. Laughlin, Chicago, Ill. Filed Jan. 21, 1911. Serial No. 603,967 (Cl. 188—28.)



1. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving fit between them for securing said shoe on said head, and a detent adapted to prevent accidental shifting of the key, said detent being adapted to yield to permit said key to be withdrawn.

2. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving fit between them for securing said shoe on said head, and a detent carried by said key and adapted to prevent accidental shifting of the key, said detent being adapted to yield to permit said key to be withdrawn.

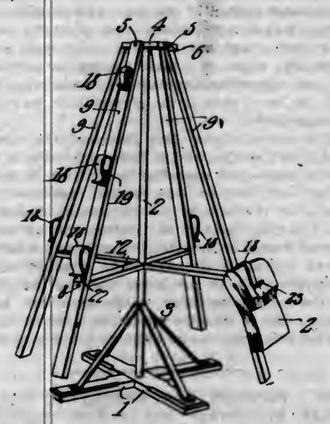
3. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving fit between them for securing said shoe on said head, a spring tongue carried by said key and having thereon a shoulder normally urged to project outward from the adjacent face of said key, and a second shoulder on one of the other of said parts adapted to coact with said shoulder on said tongue to prevent accidental release of said key.

4. A brakehead having on its face, in addition to the usual attaching lugs, a lug providing a shoulder spaced away from said attaching lugs, and a locking key provided with a spring detent located to engage said shoulder when the key is in its normal shoe retaining position.

5. A key for brakeheads, comprising a tapered shank, and a spring detent embedded in said shank and normally urged to project outward therefrom.

[Claims 6 to 11 not printed in the Gazette.]

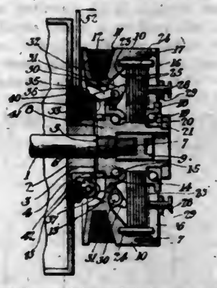
1,018,619. BAG-RACK. JOSEPH E. JAMES, Wolfe City, Tex. Filed Apr. 8, 1910. Serial No. 554,169. (Cl. 211—2.)



1. A device of the class described comprising coöperating frame members, one of which extends through the other; and an article holding clip interlocked with the first named member constituting a means for holding the members together.

2. A device of the class described comprising a block having a recess in its lower face; intersecting braces of greater length than the diameter of the block; legs applied to the block and having their inner faces beveled to fit against the periphery of the block, the upper ends of the legs terminating flush with the upper surface of the block; securing elements uniting the upper ends of the legs with the block, the legs resting against the outer ends of the braces; a base; a standard fixed to and rising from the base, the standard passing rotatably through the braces at their point of intersection, the upper end of the standard being received within the recess in the lower face of the block; and article-holding clips applied to the legs.

1,018,620. CLUTCH. FRANK S. JONES, Pasadena, Cal. Filed Dec. 29, 1910. Serial No. 599,955. (Cl. 192—10.)



1. The combination with a driving member and driven member, of means for frictional engagement therebetween, presser members carried on said driven member adapted to engage said frictional engagement means, a stationary member, a member rotatably and non-slidably mounted on said stationary member, a member slidably and non-rotatably mounted on said stationary member, means connecting said rotatable and non-rotatable members, to slide the non-rotatable member on rotation of said rotatable member and thrust means carried by said non-rotatable member, for engaging said presser members to move them into operative relation with said frictional engagement means on the sliding movement of the non-rotatable member.

2. The combination with a driving member and driven member, of means for frictional engagement therebetween, presser members adapted to engage said frictional engagement means, a stationary member, a rotatable screw member on said stationary member, a longitudinally movable nut on said screw member, means for preventing rotation of said nut, and a rotatable thrust ring on said nut adapted to engage the presser members.

3. The combination with a driving member and driven member, of means for frictional engagement therebetween, presser members carried on said driven member adapted to engage said frictional engagement means, a stationary support, a circular flange on said stationary support provided with longitudinal slots, a rotatable screw member on said flange, a longitudinally movable nut on said screw member having lugs projecting into the slots in said circular flange, and a rotatable thrust ring on said nut adapted to engage the presser members.

4. The combination of a driving member and driven member, driving disks carried by said driving member, driven disks carried by said driven member, presser members carried by the driven member adapted to hold the driving disks and driven disks in frictional engagement, a stationary member, a rotatable screw member on said stationary member, a longitudinally movable nut on said screw member, means for preventing rotation of said nut, a rotatable thrust ring on said nut adapted to engage the presser members, and means for operating said screw member.

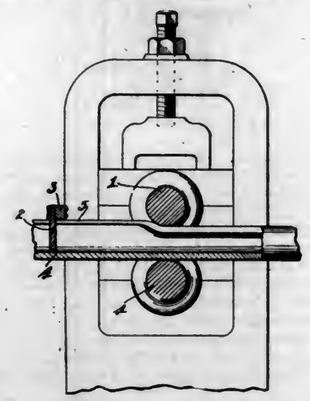
5. The combination of a driving shaft, a head carried on said shaft, friction driving disks carried on said head, a pulley freely rotatable on said head, friction driven disks carried on said pulley, a plate on the end of said pulley, screws on said plate having their inner ends abutting against the outer friction disk on said pulley, presser members carried by said pulley adapted to engage the inner friction disk on said pulley, and means independent of said driving shaft for operating said presser members to press the friction disks into frictional engagement.

[Claim 6 not printed in the Gazette.]

1,018,621. BAR-RETAINING MEANS FOR TUBE-FORMING MACHINES. PETER M. JOYCE, Cleveland, Ohio. Filed Nov. 23, 1908. Serial No. 464,047. (Cl. 78—87.)

In combination with a tube forming machine having a pair of corresponding upper and lower rollers formed with

registering grooves arranged around the periphery thereof to provide a passage between them to receive a bar U-shaped in cross section to be operated on, a transverse supporting bar mounted in a plane parallel with and in advance of the upper roller, of a flat retaining bar secured at one end to and depending from said transverse supporting bar with its wide face arranged opposite the grooves in said rollers and with the edges thereof disposed to engage the inner faces of the side walls of the U-shaped

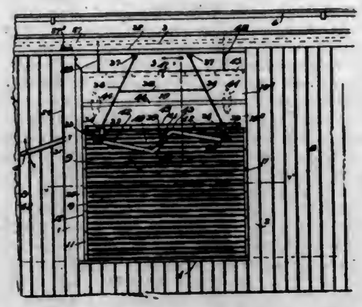


bar to be guided, the lower free end of said retaining bar being rounded and disposed in alinement with the passage between the grooved portions of the rollers with its free end spaced a sufficient distance above the plane of the grooved face of the lower roller to permit the insertion between it and said roller of the bar to be guided thereby, said retaining bar being operable to hold the U-shaped bar against lateral movement to effect the retention of said bar in upright position while passing between said rollers.

1,018,622. EMBROIDERING ATTACHMENT FOR SEWING-MACHINES. JOHN D. KARLE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 4, 1910. Serial No. 547,262. (Cl. 112—13.)

In an embroidering attachment for sewing machines, a needle-carrying bar provided with a needle set-screw, a sheet metal bracket comprising yielding portions for attaching it to said needle-carrying bar, one of said portions being provided with a notch for engagement with said needle set-screw to hold said bracket against vertical movement on said needle-bar, a guide bearing formed integrally with said bracket, a standard mounted to move vertically in said bearing and provided with a presser-foot, a stop-pin located in the opposite end of said standard, and a spring for resiliently holding said standard and presser-foot against vertical movement.

1,018,623. GRAIN-CAR DOOR. CHARLES HENRY KENNY, Winnipeg, and MALCOLM MCMILLAN, Gladstone, Manitoba, Canada. Filed Aug. 5, 1909. Serial No. 511,301. (Cl. 20—27.)



1. In a device of the class described the combination with the lower section of the door and suitable overhead supporting means, of bars pivotally secured to the section, means securing the bars to the supporting means, and means connected with the bars and controlled by a lever for raising the door and automatically locking it in the raised position, as and for the purpose specified.

2. In a device of the class described the combination with the lower section of the door and suitable overhead supporting means, of opposing bars pivotally secured to the door section and having their upper ends secured to the supporting means, a rotatable cross bar carried by the section, and oppositely directed links connecting the cross bar with the lower ends of the pivoted bars, as and for the purpose specified.

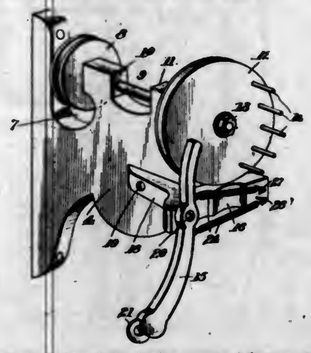
3. In a device of the class described the combination with the lower section of the door and suitable overhead supporting means, of opposing bars pivotally secured toward their lower ends to the section, chains securing the upper ends of the bars to the supporting means, a rotatable bolt passing through the section and having a cross bar secured to one of its extending ends and a lever to the other, and oppositely directed links pivotally secured at their opposite ends to the lower ends of the pivot bars and at their adjoining ends to the cross bar, said links being bent so as to lock the section in a raised position by the turning of a lever, as and for the purpose specified.

1,018,624. PROCESS OF PRESERVING POLES, &c. ANDREAS KOLOSSVÁRY and SAMUEL HALTENBERGER, Budapest, and ERNST BERDENICH, Pilispök Ladány, Austria-Hungary; said Kolossváry assignor to said Haltenberger and Berdenich. Original application filed Nov. 1, 1910, Serial No. 590,099. Divided and this application Filed Nov. 18, 1911. Serial No. 661,164. (Cl. 99—12.)

An economical process for impregnating timber, such as poles for aerial lines and the like, such process consisting in piercing small radial pricks in the wood, by merely displacing the fibers thereof, said pricks being made deeper where the wood is more exposed to decomposition, and impregnating this pricked timber with a preserving fluid, by pressure.

1,018,625. WINDOW-TAPPING DEVICE. CLARENCE M. LONG, Marion, Ohio. Filed June 12, 1911. Serial No. 632,710. (Cl. 46—46.)

1. A window tapping device comprising a bracket, a shaft journaled in the bracket, a bracket secured to the first mentioned bracket, a window tapper arm pivotally secured to the second bracket, springs connecting the second bracket and the window tapper arm, a wheel mounted on the shaft and provided with a plurality of equi-distant projections, each adapted to engage the tapper arm to move the latter on its pivot against the action of said springs, and means for rotating the shaft.



2. A window tapping device comprising a supporting means, a shaft journaled in the supporting means, a window tapper arm pivotally secured to the supporting means, means to normally maintain the tapper arm in contact with the window pane, a wheel mounted on the shaft and provided with a plurality of projections each adapted to engage the tapper arm to move the latter on its pivot, and means for rotating the shaft to operate the tapper arm.

3. A window tapping device comprising a bracket, a shaft journaled in the bracket, a window tapper arm pivoted to the bracket, springs having connection with the tapper arm, a wheel mounted on the shaft and provided with a plurality of projections each adapted to engage the tapper arm to move the latter on its pivot against the action of said springs, and means for rotating the shaft.

4. A device of the character described comprising a supporting means, a shaft journaled in the supporting means, a tapper arm pivotally secured to the supporting means, means to hold the tapper arm normally in engagement with the window pane, bulletin board or other surface, and means mounted on the shaft to successively engage the tapper arm to intermittently tap the window pane, bulletin board or other surface, and means for operating said shaft.

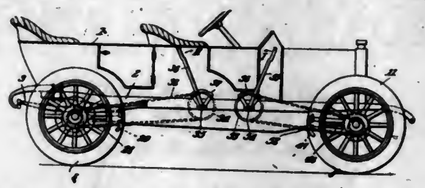
5. A device of the character described comprising a supporting means, a shaft journaled in the supporting means, a tapper arm pivotally secured to the supporting means, means for holding the tapper arm normally in engagement with the window pane, bulletin board or other surface, means for rotating said shaft, and means on the shaft to successively engage the tapper arm to provide for a differential, intermittent tapping contact on the window pane, bulletin board or other surface.

1,018,626. PROCESS OF MANUFACTURING ANTI-SLIPPING TIRES FOR MOTORS AND OTHER VEHICLES. ANDRÉ MICHELIN, Paris, France. Filed Apr. 2, 1907. Serial No. 366,060. (Cl. 154—12.)

1. The process of incorporating leather as an element in tires which consists in, first, rendering the leather anhydrous while permitting the oils and greases to remain therein, second, applying a layer of crude rubber or of hot vulcanizing solution thereto, third, associating the leather with the other elements of the tire, and finally, subjecting the whole to dry vulcanizing heat.

2. The process of incorporating leather as an element in tires which consists in, rendering the leather anhydrous, applying a layer of rubber between the leather and the tread of the tire, applying a layer of rubber between the tread and the body of the tire, and finally subjecting the tire to a dry vulcanizing heat.

1,018,627. VEHICLE-BRAKE. JOHN G. MILLER, Burlington, Iowa. Filed Jan. 16, 1911. Serial No. 603,017. (Cl. 21—8.)



1. In a device of the class described, a rotatable vehicle axle; a brake arm pivotally supported upon the axle for rotation thereon, with the axle as an approximate center; elements upon the axle and upon the arm, normally out of engagement and adapted to co-act to swing the arm about the axle as an approximate center, thereby to drive the arm positively into a depending position to engage the road-way; a traction wheel upon the axle and independent of said elements; and means for maintaining the arm uplifted to hold said elements out of engagement.

2. In a device of the class described, a rotatable vehicle axle; a pinion secured to the axle; a brake arm pivotally supported by the axle and having a curved rack, eccentric to the pinion and adapted to engage the pinion, but normally out of engagement with the pinion, the co-action between the rack and the pinion serving to lower the arm into depending position to engage the roadway; and means for maintaining the arm uplifted, to hold the rack and pinion out of engagement.

3. In a device of the class described, a driven vehicle axle; a pinion secured thereto; a brake arm pivotally supported upon the axle and inclosing the pinion, the brake arm being provided with a rigid rack adapted to engage the pinion to depress the brake arm to engage the roadway; means for maintaining the arm uplifted, to hold the rack and the pinion out of engagement; and a fixed stop supported by the vehicle axle, there being a shoulder in the brake arm adapted to engage the stop to maintain the brake arm at an angle to the roadway, when the brake arm is in engagement with the roadway.

4. In a device of the class described, a driven vehicle axle; an eccentric supported by the axle; a brake shoe pivotally mounted upon the eccentric, and housed at its free end behind the vehicle wheel when the arm is elevated, the eccentric constituting a means for projecting the free end of the arm beyond the periphery of the wheel when the arm is lowered; a pinion secured to the vehicle axle; a rack carried by the brake arm and normally out of engagement with the pinion, the rack and the pinion coacting to drive the brake arm positively into depending position; and means for raising the brake arm.

5. The combination with the front and rear axles of a vehicle, of earth-engaging brake arms pivotally carried thereby; interengaging elements upon the arms and the axles to drive the arms into earth-engaging positions; separate devices for maintaining the interengaging elements out of engagement, and for bringing the interengaging elements into engagement; and a shaft operatively connected with one axle and with both of said devices.

[Claims 6 to 11 not printed in the Gazette.]

1,018,628. CONFECTIONERY-BOX. SAMUEL E. MORTENSON, Chicago, Ill., assignor to Taylor Brothers Company, Battle Creek, Mich. Filed July 19, 1909. Serial No. 508,321. (Cl. 229—8.)

1. The combination with an inner box and cover therefor, of an outer cover adapted to fit said inner cover; a covering of felt for said outer cover having indicia cut therein, said covering being extended to the edges of said outer cover and being secured thereto; an indicia back ground of felt arranged within said covering; and ties arranged transversely and longitudinally across said outer covering, said ties being secured at their ends to the edges of said covering and having indicia thereon.

2. The combination with an inner box and cover therefor, of an outer cover adapted to fit said inner cover; a covering of felt for said outer cover having indicia cut therein, said covering being extended to the edges of said outer cover and being secured thereto; and indicia-back ground of felt arranged within said covering.

3. The combination with an inner box and cover therefor, of an outer cover adapted to fit said inner cover; a covering of felt for said outer cover, said covering being extended to the edges of said outer cover and being secured thereto; and ties arranged transversely and longitudinally across said outer covering, said ties being secured at their ends to the edges of said covering and having indicia thereon.

4. The combination with a box and its cover, of an outer cover adapted to fit the inner cover; a covering of felt for said outer cover provided with suitable indicia, said covering being extended to the edges of said outer cover and removably secured thereto; and tie bands secured at the edges of said covering and extended across the same.

5. The combination with an inner box and cover therefor, of an outer cover adapted to fit said inner cover; an inclosing covering for said outer cover, said covering being extended to the edges of said outer coyer and being removably secured thereto; and bands arranged transversely and longitudinally across said outer covering, said bands being secured at their ends to the edges of said covering to permit the removal of said inclosing covering without disengaging the bands therefrom.

[Claim 6 not printed in the Gazette.]

1,018,629. MIXER. GLENN S. NOBLE, Chicago, Ill. Filed Aug. 19, 1907. Serial No. 389,118. (Cl. 83—73.)

1. A mixing drum having an inturned portion of the side provided at the inner edge with teeth, said drum being adapted to be rotated to mix material placed therein.

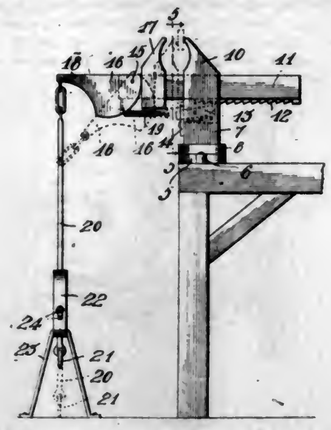
2. The combination with a mixing drum, of a toothed plate mounted in said drum, the teeth of said plate being bent to deflect the material longitudinally of said drum as it passes over said plate.

3. A mixing drum having heads and overlapping side portions forming a longitudinal opening, the inturned portion of said drum being provided with means for mixing material passing over said portion and for deflecting the material longitudinally of the drum.

4. The combination with a mixing drum, of a plate having oppositely bent teeth, and curved ends, said drum being adapted to be rotated to mix material placed therein, for the purpose herein set forth.

5. The combination with a mixing drum having overlapping side portions forming a longitudinal opening, of curved deflectors at the ends of the inturned portion for deflecting the material toward the center of the drum as it passes over said inturned portion, and teeth between said curved deflectors, serving to intermingle the material passing over said inturned portion.

1,018,630. VISE. JOHN HENRY REEDER, Caddo, Okla. Filed May 15, 1911. Serial No. 627,213. (Cl. 81—26.)



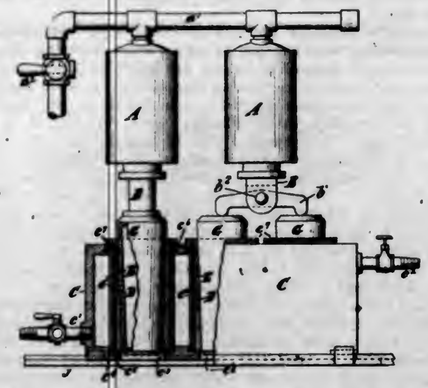
1. In a vise, the combination with an upright standard pivoted upon a base and having through it an opening which is rectangular at the upper portion and reduced in width at the lower portion, the upper end of said standard forming the fixed jaw, a beam slidable through the larger part of said opening and having teeth on its under side, a movable jaw mounted slidably upon said beam, and means for setting it thereon; of a spring-actuated pawl pivoted in the smaller portion of said opening with its tip normally engaging said teeth and its other end projecting out of such opening, and a rectangular trigger pivoted to the face of the standard at one side of the lower end of said opening and moving in a plane at right angles to that in which said pawl moves, as and for the purpose set forth.

2. In a vise, the combination with an upright standard carrying a fixed jaw and having an opening through it, a beam passing through said opening, means for adjusting its position therein, a movable jaw slidably mounted on said beam, and a cam pivoted to the outer end of the beam behind the movable jaw and having an arm; of a rod hanging from the outer end of the arm and having foot-mechanism at its lower end, a fixed loop through which the rod slides loosely, and a dog pivoted through one side of the loop and having an eye loosely engaging said rod and adapted when canted to bite the rod and prevent upward movement thereof.

3. In a vise, the combination with an upright standard carrying a fixed jaw and having an opening through it, a beam passing through said opening, means for adjusting its position therein, a movable jaw slidably mounted on said beam, and a cam pivoted to the outer end of the beam behind the movable jaw and having an arm; of a rod hanging from the outer end of said arm and having foot-mechanism at its lower end; a loop through which said rod moves freely, a bracket connecting the loop with the floor, and a dog pivoted through one side of the loop and having an eye loosely engaging said rod and adapted when canted to bite the rod and prevent upward movement thereof.

1,018,631. APPARATUS FOR FORMING IMPRESSIONS ON PHONOGRAPH-RECORD BLANKS AND LIKE ARTICLES. WALTER C. RUNGE, Camden, N. J., assignor to Royal Phone and Phonogram Company, Boston, Mass., a Corporation of Maine. Filed Apr. 21, 1909. Serial No. 491,223. (Cl. 181—16.)

1. A tubular matrix, a container therefor, a tubular expander arranged within the matrix, said matrix container forming a stop for said expander preventing longitudinal motion thereof, and a mandrel arranged within the expander, all being so combined that a record blank for a phonograph or like article may be arranged between the matrix and the expander, and that the mandrel may produce pressure for forming a record upon the record blank.



2. A tubular matrix, a container therefor, a tubular expander made of a number of longitudinal sections yieldingly connected together and arranged within the matrix, said matrix container forming a stop for said expander preventing longitudinal motion thereof, and a mandrel arranged within the expander, all being so combined that a record blank for a phonograph or like article may be arranged between the matrix and the expander, and that the mandrel may produce pressure for forming a record upon the record blank.

3. A tubular matrix, a tubular expander made of a number of longitudinal sections made of resilient material, formed so as to be normally protuberant externally intermediate of their ends, yieldingly connected together and arranged within the matrix, and a mandrel arranged within the expander, all being so combined that a record blank for a phonograph or like article may be arranged between the matrix and the expander, and that the mandrel may produce pressure for forming a record upon the record blank.

4. A tubular matrix, a container therefor, a tubular expander made of a number of longitudinal sections connected together at their adjacent edges by springs and arranged within the matrix, said matrix container forming a stop for said expander preventing longitudinal motion thereof, and a mandrel arranged within the expander, all being so combined that a record blank for a phonograph or like article may be arranged between the matrix and the expander, and that the mandrel may produce pressure for forming a record upon the record blank.

5. A tubular matrix, a container therefor, a tubular expander made of a number of longitudinal sections surrounded by an elastic sleeve and arranged within the matrix, said matrix container forming a stop for said expander preventing longitudinal motion thereof, and a mandrel arranged within the expander, all being so combined that a record blank for a phonograph or like article may be arranged between the matrix and the expander, and that the mandrel may produce pressure for forming a record upon the record blank.

[Claim 6 not printed in the Gazette.]

1,018,632. SIGNALING-CARTRIDGE. CARSTEN ALBERT SCHADE-ERLANDSEN, Eskilstuna, Sweden. Filed Dec. 4, 1909. Serial. No. 531,435. (Cl. 102—21.)

1. In combination with a cartridge shell provided with an explosive projectile charge, of a hollow casing in the form of a projectile closed at one end and open at the other end and having its open end inserted into the shell, a plug of heavy material in the open end of said casing provided with a bore opening toward the charge in said shell, the greater portion of the interior of said casing being filled with an ignitible signaling substance and the remainder of the interior and said bore being filled with an explosive for igniting said substance and adapted for ignition by the cartridge charge when the latter is exploded, substantially as and for the purpose set forth.

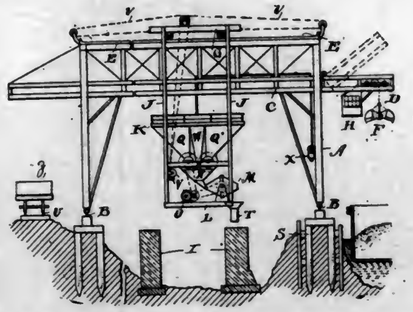
2. In combination with a cartridge shell provided with an explosive projectile charge, of a hollow casing in the form of a projectile closed at one end and open at the other end and having its open end inserted into the shell, a plug of heavy material in the open end of said casing provided with a bore opening toward the charge in said shell, a cap secured to the open end of said shell covering said plug and provided with an opening therein, the greater portion of the interior of said casing being filled with an ignitible signaling substance and the remainder of the interior and said bore being filled with an explosive for igniting said substance and adapted for ignition by the cartridge charge through said opening in the cap, substantially as and for the purpose set forth.

3. In combination with a cartridge shell provided with an explosive projectile charge, of a hollow casing in the form of a projectile closed at one end and open at the other end and having its open end inserted into the shell, a plug of heavy material in the open end of said casing provided with a bore opening toward the charge in said shell, the greater portion of the interior of said casing being filled with an ignitible signaling substance and the remainder of the interior and said bore being filled with an explosive for igniting said substance and adapted for ignition by the cartridge charge, said hollow casing being made of inflammable material.

1,018,633. COMBINED CURTAIN-POLE AND SHADE SUPPORT. JAMES S. SCHOONOVER, Indianapolis, Ind., assignor of one-half to Ida W. Schick, Chicago, Ill., and Mabel E. Smith, Brownsburg, Ind. Filed Apr. 13, 1911. Serial No. 620,952. (Cl. 156—24.)

A curtain-pole and shade-roller support formed from a single piece of wire one end of which is formed into a loop to receive a curtain-pole and the other end into a screw-point, the wire from said screw-point being extended horizontally and then bent to form a downward U-shaped notch to receive a shade-roller journal and thence bent outwardly and then downwardly and upwardly in a curve and thence extended upwardly to intersection with said horizontal member and then wrapped toward the U-shaped bend around said horizontal member and thence extended vertically and then bent outwardly into a coil and thence continued outwardly and horizontally to said curtain-pole loop.

1,018,634. APPARATUS TO BE USED IN CONSTRUCTING CONCRETE WALLS, PIERS, &c. JOHN W. SEAVER, Cleveland Heights, and JAMES E. A. MOORE, East Cleveland, Ohio; said Moore assignor to said Seaver; Mary T. P. Seaver executrix of said John W. Seaver, deceased. Filed Oct. 17, 1907. Serial No. 397,828. (Cl. 212—13.)

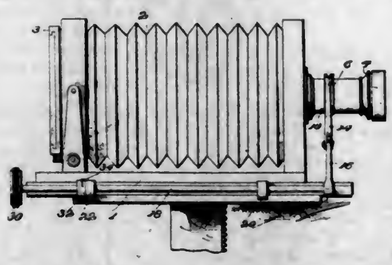


1. In an apparatus of the character specified, the combination of a supporting frame movable horizontally in two directions, concrete mixing machinery supported upon said frame, mechanism for delivering the material to be mixed to the mixing mechanism said mechanism being carried by the apparatus, and a spout secured to said frame in position to receive material discharged from said mixing mechanism.

2. In an apparatus of the character specified, the combination of a traveling crane, two sets of tracks thereon, a trolley movable upon one track, hoisting and conveying mechanism supported by said trolley, a truck on the other track, a frame suspended from said truck and extended below the first mentioned track, concrete mixing mechanism supported by said frame, and a delivery spout carried by said frame in position to receive the material discharged from said mixing mechanism.

3. In an apparatus of the character specified, the combination of a traveling crane, two sets of tracks mounted thereon, one in a plane above the other, a trolley on the lower track, hoisting mechanism carried by said trolley, a truck on the upper track, a frame having depending members secured to said truck and extending downward outside of the crane, concrete mixing mechanism supported by said frame, a motor supported by said frame, mechanism operated by said motor for traversing said truck along its track, and a delivering spout carried by said frame in position to receive the material discharged by said mixing mechanism.

1,018,635. DIAPHRAGM-OPERATING ATTACHMENT FOR CAMERAS. JOSEPH P. SHUKIS, Wilkes-Barre, Pa. Filed Oct. 26, 1911. Serial No. 656,857. (Cl. 95—64.)



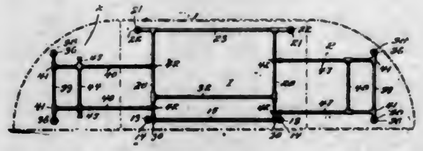
1. An attachment for cameras comprising means for clamping the diaphragm operating ring, and a rock shaft adapted to extend the length of the camera body and having a crank near one end connecting it with the diaphragm clamping means, said rock shaft having a part near the other end adapted to be grasped by the hand of the operator whereby when the operator grasps and rotates said shaft the rotation of the shaft, through its crank, adjusts the diaphragm, substantially as described.

2. An attachment for cameras comprising a clamping ring adapted to be clamped to a diaphragm operating ring, a rock shaft adapted to extend the length of the camera body, and a crank connecting one end of the rock shaft with the clamping ring, and a thumb disk at the other end of the rock shaft, whereby upon rotation of the thumb disk, the clamping disk is rotated through the rock shaft and the crank, substantially as described.

3. An attachment for cameras comprising means for clamping the diaphragm operating ring, a rock shaft adapted to extend the length of the camera body and having a crank connecting it with the diaphragm clamping means, bearings for said shaft adapted to be secured to the camera, and a gage carried by the shaft adjacent to one of said bearings, substantially as described.

4. An attachment for cameras comprising an adjustable clamping ring adapted to clamp a diaphragm operating ring, a rock shaft adapted to extend the length of the camera body, a crank and connecting means for connecting the clamp with said shaft, bearings for the shaft, a disk as 22 carried by the shaft adjacent to one of the said bearings, one of said parts, the disk or the bearing, having a pointer and the other having gage marks thereon, substantially as described.

1,018,636. ASSORTING-TABLE. HARRY H. SHULTS, Cherry Creek, N. Y. Filed Aug. 12, 1910. Serial No. 576,833. (Cl. 211—36.)



1. A mail sorting table including a main section, supporting frames movably mounted on the under side of said section and adapted for folding, a free hinge connection joining one of said frames to the table top, and a lock hinge connection joining the other of said frames to the table top, the lock hinge connected frame overlying the free hinge connected frame when the parts are folded to secure said parts in folded relation.

2. A mail sorting table including a main section, supporting frames movably mounted on the under side of said section and adapted for folding, a free hinge connection joining one of said frames to the table top, a lock hinge connection joining the other of said frames to the table top, the lock hinge connected frame overlying the free hinge connected frame when the parts are folded to secure said parts in folded relation, and means carried by the free hinge connected frame to interlock with the lock hinge connected frame when said frames are in operative position.

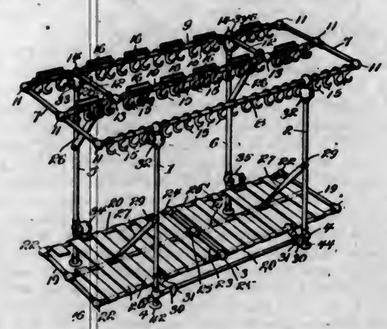
3. A mail sorting table including a main section and a plurality of quadrant sections, supporting frames for the main section, a single supporting frame for each quadrant section, and means carried by the supporting frame of each quadrant section to interlock with the supporting frames of the main section when said sections are assembled in table forming relation.

4. A mail sorting section of quadrant shape, a supporting frame movably connected to said section, and an interlocking frame carried by the supporting frame, whereby to connect said section with the coöperating section in forming a table.

5. A mail sorting table section of quadrant shape, a supporting frame movably connected thereto, and an interlocking frame carried by the supporting frame and comprising spaced parallel bars terminally provided with hooks and movably mounted on the supporting frame.

[Claims 6 to 8 not printed in the Gazette.]

1,018,637. MAIL-BAG RACK. HARRY H. SHULTS, Cherry Creek, N. Y. Filed Aug. 12, 1910. Serial No. 576,834. (Cl. 211—36.)



1. A mail bag rack comprising front and rear supports, a bag suspending frame hinged to the supports, a bar carried by the front support, a bag supporting platform hinged to the rear supports, hooks carried by the platform for engagement with said bar, lock-hooks carried by said first-named hooks for engagement with said bar, the hinged connection between the rack and platform and supports permitting the rack to be folded, and means adapted to secure the rack in either its folded or extended condition.

2. A foldable mail bag rack comprising front and rear supports, a bag suspending frame hinged to both supports, a bag supporting platform hinged to the rear support and having a detachable connection with the front support, and means adapted to secure the rack in either its folded or extended condition.

3. A foldable mail bag rack comprising front and rear supports, a bag suspending rack hinged to the supports, a bag supporting platform hinged to the rear supports and having a detachable connection with the front support, means adapted to secure the rack in either its folded or extended condition, and braces for the frame and platform when the rack is in extended condition.

4. A foldable mail bag rack comprising front supports, a bar secured to the supports, rear supports, a bag supporting platform hinged to the rear supports, means carried by the platform and engaging the bar, and a bag suspending frame hinged to the front and rear supports.

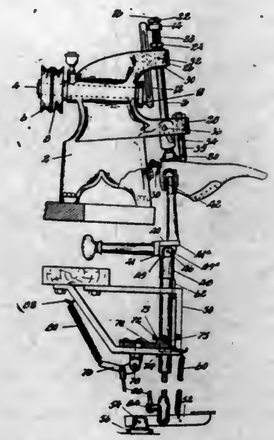
5. A foldable mail bag rack comprising front and rear supports, a bag suspending frame hinged to the supports, and a bag supporting platform hinged to one of the supports and having a detachable engagement with the other support.

[Claims 6 and 7 not printed in the Gazette.]

1,018,638. SHOE-SUPPORT FOR POUNDING-UP MACHINES. STEPHEN SNOW, Everett, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed July 9, 1904, Serial No. 215,924. Divided and this application filed Jan. 29, 1910. Serial No. 540,810. (Cl. 12—126.)

1. In a machine of the class described a shoe supporting spindle, a treadle connected to the spindle, a lock for the spindle, a connection from the lock to the treadle, and a spring arranged to uplift the spindle and automatically advance the lock.

2. In a machine of the class described, a shoe supporting spindle, a treadle connected to the spindle, a wedge arranged to engage an inclined face on the spindle, a connection from the treadle to the wedge, and means for yieldingly uplifting the treadle and causing the wedge to move proportionally for maintaining supporting relation to the spindle.



3. In a machine of the class described, a shoe supporting spindle, a treadle connected to the spindle, a wedge arranged to engage an inclined face on the spindle, a connection from the treadle to the wedge, a spring to uplift the treadle and also advance the wedge, and additional means for yieldingly pressing the wedge forwardly.

4. In a machine of the class described, a shoe supporting spindle, a treadle connected to the spindle, a spring to uplift the treadle, a locking wedge to engage the spindle, a lever, a spring acting through the lever to advance the wedge to locking position, and a connection from the treadle to said lever to withdraw the wedge when the treadle is depressed for lowering the spindle.

5. In a machine of the class described, the combination with the spindle 48, the treadle 52 therefor, the spring 60, the wedge 73, the wedge lever 76, the spring 80 to advance the wedge, and the connection 86 from the treadle to the lever arranged to operate for the purpose described.

[Claim 6 not printed in the Gazette.]

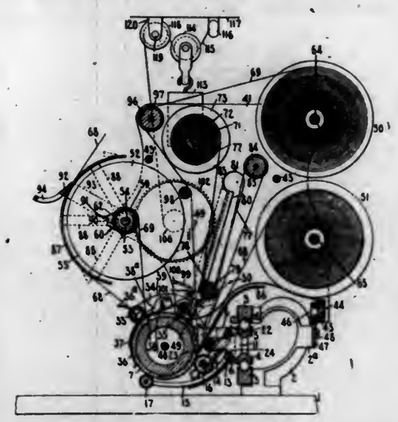
1,018,639. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 17, 1909. Serial No. 528,462. (Cl. 197—134.)

1. In a typewriting machine, the combination of a platen carriage comprising a bar arranged over the platen and lengthwise of the same, a detachable supporting frame comprising side plates bearing on said bar, and a transverse bar connecting said side plates, a wheel on said transverse bar, a fixed track for said wheel, and roll holders arranged between said side plates and supported thereon.

2. In a typewriting machine, the combination of a platen carriage comprising a bar arranged lengthwise of the platen and above the same, a detachable supporting frame comprising side plates bearing on said bar, tie rods connecting said side plates, and a transverse bar connecting said side plates at the rear, a roller on said bar, a fixed trackway for said roller, a plurality of shafts journaled on said side plates, and roll holders mounted on said shafts.

3. In a typewriting machine, the combination of a platen carriage comprising end bars, and a bar supported on said end bars and arranged above the platen, a detachable supporting frame comprising side plates having collars bearing on said bar, tie rods connecting said side plates, a cross bar carried by said side plates, a roller on

said cross bar, a fixed trackway for said roller, a pair of delivery roll holders mounted on said side plates, a carbon paper roll holder mounted on said side plates, and a receiving roll holder mounted on said side plates.

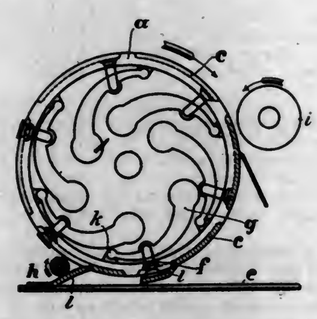


4. In a typewriting machine, the combination of a platen, a rotary device for receiving material fed from said platen, means for automatically turning said device in one direction including a gravity operated element, and hand controlled means for moving said element against the force of gravity and independently of said rotary device.

5. In a typewriting machine, the combination of a platen, a rotary device for receiving material fed from said platen, means for automatically turning said device including a gravity operated shaft, and manual means for turning said shaft in the opposite direction independently of said rotary device.

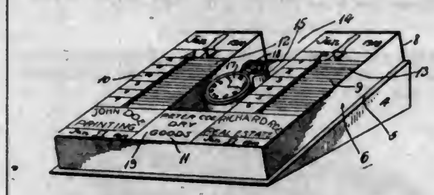
[Claims 6 to 39 not printed in the Gazette.]

1,018,640. DOUGH-MOLDING MACHINE. PETER STORME, Crefeld, Germany, assignor to The Firm of Hengler & Cronemeyer, Crefeld, Germany. Filed May 26, 1911. Serial No. 629,659. (Cl. 107—8.)



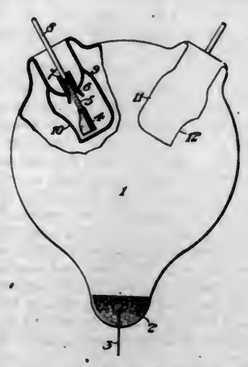
In a dough molding machine of the character described, the combination with a rotating cylinder having on its surface ornamental molds for the reception of the dough, and with a soft brush roller for stripping the dough figures off the cylinder, of a radially disposed plunger arranged at the forward end of each mold, and a pivoted lever connected to said plunger so as to act thereon by its weight as the cylinder revolves and so to press the end of the dough figure into engagement with said brush roller, substantially as set forth.

1,018,641. DAILY APPOINTMENT-CALENDAR. CHARLES W. STRAYER, Los Angeles, Cal. Filed Aug. 22, 1910. Serial No. 578,390. (Cl. 40—121.)



A calendar comprising a back, a pad mounted thereon having a plurality of detachable U shaped sheets so as to form a central space in the pad, said sheets being provided with dates indicating successively the days of the year, the right and left extensions of said U shaped sheets having appropriately designated spaces thereupon indicating the hours of the forenoon upon one side of the gap and the hours of the afternoon upon the other side of the gap, and means mounted centrally of said gap capable of holding a time piece in such a position that the hour numbers upon one side of the face thereof will correspond with the spaces on the pad indicating the hours of the forenoon and the hour numbers upon the other side of the time piece face will correspond with the spaces upon the other side of the pad designating the hours of the afternoon, the arrangement being such that the hour hand of the time piece will always point approximately to the correspondingly designated spaces upon the sides of the pad.

1,018,642. SEAL FOR VAPOR DEVICES. PERCY H. THOMAS, Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Filed June 19, 1905. Serial No. 265,889. (Cl. 176—50.)



1. A seal for vapor devices or similar vacuum apparatus comprising as one element a glass container, the said seal consisting of a platinum cup sealed into the glass and connected with the internal device by means of a screw-threaded rod, the inner surface of the cup being flared away from the material of the rod.

2. A vapor device and connections therefor comprising a container of glass, an electrode therein, a cup seated into the glass and connected to the electrode by a suitable conductor, the cup extending outside the container and being cylindrical in form at that point and being externally screw threaded and joined to an external conductor by means of the said screw thread.

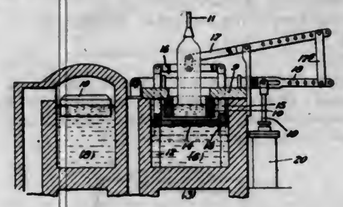
3. A vapor device and connections therefor, comprising a container of glass, an electrode therein, a cup sealed into the glass and connected to the electrode by a suitable conductor, the cup extending outside the container and being cylindrical in form at that point and being externally screw threaded and joined to an external copper conductor by means of the said screw thread coöperating with an internal screw thread on said copper conductor.

4. In a vapor electric apparatus adapted to carry heavy currents and in which the container is made of glass or similar material, a thin cup shaped connecting device, of platinum or similar metal, the same being provided with an internal and an external screw-thread, one inside the container and the other outside the same, and coupling devices adapted to be joined to the said cup by means of the said screw-threads whereby a practically direct connection is made between the external and the internal circuit of the apparatus.

5. A wall of non-conducting material, a tubular support of conducting material sealed in an opening in said wall, and circuit terminals constructed frictionally to engage with the interior and exterior of said support, the area of said support inclosed between said terminals being at a distance from said seal.

[Claims 6 to 12 not printed in the Gazette.]

1,018,643. GLASS-DRAWING APPARATUS. LINCOLN A. THORNBURG, Muncie, Ind., assignor to American Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 5, 1910. Serial No. 585,529. (Cl. 49—17.)



1. In glass drawing apparatus, the combination with a vessel containing a large body of glass, of a composite drawing pot therein consisting of a floating ring and a removable bottom for the ring.

2. In glass drawing apparatus, the combination with a vessel providing a body of molten glass, of a separable drawing pot in said body of glass and means to remove the parts of said pot from the drawing point and melt out the residue glass, substantially as described.

3. The combination with a containing vessel and a series of floating rings therein, of a vertically movable false bottom for said rings having mechanism to raise and lower it in place as the rings successively are brought over said bottom.

4. In glass drawing apparatus, a glass containing vessel provided with a series of floating rings, a drawing chamber, a movable false bottom for said rings in said chamber, and mechanism to raise and lower said false bottom.

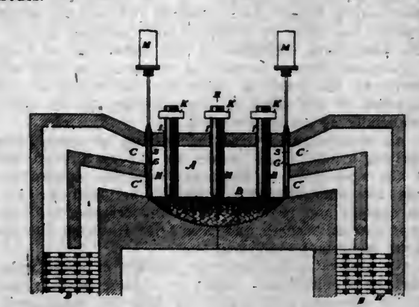
5. In glass drawing apparatus, a glass containing vessel provided with a series of floating rings, a drawing chamber, a movable false bottom for said rings in said chamber, and mechanism to raise and lower said false bottom and a topstone for said chamber simultaneously operated by the same means.

[Claims 6 and 7 not printed in the Gazette.]

1,018,644. APPARATUS FOR THE MANUFACTURE OF STEEL. WILLIAM R. WALKER and JAMES H. GRAY, New York, N. Y. Filed Sept. 19, 1908. Serial No. 453,748. (Cl. 204—64.)

1. A combined electric and gas fired open hearth furnace for the manufacture of steel, having a hearth for the molten bath, regenerators and flues leading therefrom to the bath, means for venting the gases located between the hearth and the regenerators, and electrodes.

2. A combined electric and gas fired open hearth furnace for the manufacture of steel, having a hearth for the molten bath, regenerators and flues leading therefrom to the hearth, a damper having a vent for gases, and electrodes.



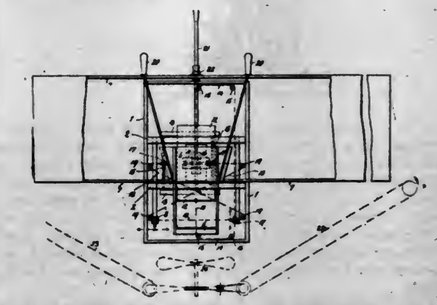
3. A combined electrical and gas-fired open-hearth furnace for the manufacture of steel, having a hearth for the molten bath, regenerators and fuel-supplying flues leading therefrom to the hearth, a damper having an intermediate vent for gases, and electrodes.

4. A combined electric and gas fired open hearth furnace, having sliding dampers between the hearth and the flues and beyond the inner ends of the port walls and partitions, and connections for moving said dampers vertically.

5. A combined electric and gas fired open hearth furnace having electrodes projecting thereinto, and sliding hollow dampers between the hearth and the regenerator flues with connections for actuating said dampers, said dampers having openings to the atmosphere to allow escape of leaking gases through the cavities therein.

[Claim 6 not printed in the Gazette.]

1,018,645. APPARATUS FOR TEACHING THE ART OF AEROPLANING, APPLICABLE ALSO FOR AMUSEMENT PURPOSES. WILLIAM HOWELL WALTERS, Broad Haven, England. Filed June 16, 1910. Serial No. 567,290. (Cl. 244—1.)



1. An apparatus for teaching the art of aeroplaning, comprising a stationary support, a seat universally connected thereto, means for rocking said seat to destroy the equilibrium thereof, and means operable from said seat to restore the equilibrium thereof.

2. An apparatus for teaching the art of aeroplaning characterized by a base, a stand thereon, a seat pillar universally mounted in said stand, means operable by the instructor to rock said pillar and with it the plane to upset the equilibrium of the pupil and means operable by the pupil to restore the equilibrium of the plane substantially as described.

3. An apparatus for teaching the art of aeroplaning comprising in combination, a base or platform, a stand thereon, a seat pillar universally mounted in said stand, means for rocking said pillar to destroy the equilibrium of the plane, said means consisting of hand levers carried

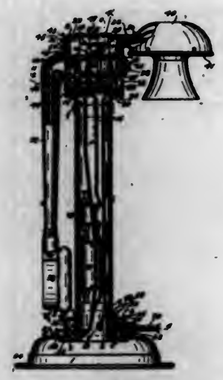
by the plane frame and connected to the lower end of the seat pillar and operable by the instructor, slides transversely arranged to one another and working within the stand and base or platform and engaging the seat pillar, and means connected to said slides and to levers or equivalent devices carried by the stand or base and operable by the pupil to effect the restoration of the equilibrium of the plane by the movement of the slides substantially as herein described.

4. An apparatus for teaching the art of aeroplaning comprising a pupil's seat, means for causing through said seat the sensations of flight and unstable equilibrium, means for simultaneously producing artificial air currents against and past the pupil, and creating the illusion of passing scenery and means for restoring the apparatus to normal condition.

5. An apparatus for teaching the art of aeroplaning comprising a pupil's seat, means for causing through said seat the sensations of flight and unstable equilibrium, endless traveling bands arranged in front of the seat to imitate passing scenery and means for restoring the apparatus to normal condition.

[Claims 6 to 8 not printed in the Gazette.]

1,018,646. AUTOMATIC TELEPHONE INSTRUMENT. JOHN WEIL, Mansfield, Ohio. Filed Apr. 10, 1911. Serial No. 619,952. (Cl. 179—147.)



1. In a telephone set, the combination with a hollow housing, of a member extending laterally therethrough, and suitably journaled therein, a hollow arm having a substantially right angle bend secured to one end of said member, a receiver secured to the outer end of said arm, and a transmitter removably secured to the other end of said member in a fixed relation to the said receiver; said arm being adapted to rotate about the horizontal axis of the said member, and carry with it the receiver and transmitter.

2. In a telephone set, the combination with a hollow housing, of a member extending laterally therethrough, and suitably journaled therein, a hollow elbow arm secured to one end of said member, a receiver secured to the outer end of said arm, and a transmitter removably secured to the other end of said member, said receiver and transmitter being adapted to rotate about the horizontal axis of said member in a fixed relation to, and at a fixed distance from each other, and means for automatically actuating a circuit switch incased within the said housing.

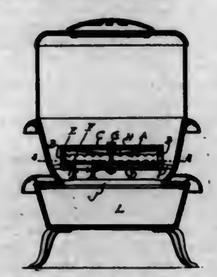
3. In a telephone set, the combination with a hollow housing and support therefor, of a transmitter rotatably engaging one side of said housing, a hollow elbow arm rotatably engaging the other side of the said housing and having a receiver secured to its outer end, means for removably securing the said transmitter to the said hollow arm in a fixed relation to the said receiver, and means for automatically actuating a circuit switch incased within the said housing, and circuit conductors passing from the switch to the receiver and to the transmitter.

4. In a telephone set, the combination with a hollow housing and support therefor, of a series of rotating contact rings and a circuit switch incased within the said housing, said rings being mounted upon an insulated shaft, the latter being suitably journaled in the said housing, and having a transmitter removably secured to one of its ends, and also having a suitable elbow extension at the other end, a receiver secured to the outer end of the extension in a suitable fixed relation to the transmitter, and circuit conductors passing from the said rings and switch to the receiver and to the transmitter.

5. In a telephone set, the combination with a hollow housing and support therefor, of a series of rotating contact rings and a circuit switch incased within the said housing, a hollow elbow arm rotatably engaging the housing and having a receiver secured to its outer end, and also having a projection extending laterally through the housing; a side plate secured to the end of said projection, and being also adapted to rotatably engage the said housing, said side plate having a tubular projection at or near its circumference to which the transmitter is secured, in a fixed relation to the said receiver; said transmitter being held normally in an inverted position, and circuit conductors passing from the said rings and switch to the receiver and to the transmitter.

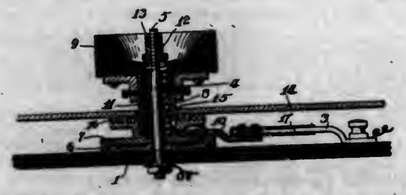
[Claims 6 to 23 not printed in the Gazette.]

1,018,647. STOVE AND FURNACE. MOSES E. ALLEY, Tacoma, Wash., assignor of two-thirds to Frederick Charles Mathews, Tacoma, Wash. Filed May 26, 1909. Serial No. 498,438. (Cl. 126—77.)



The combination with the fire-box of a stove, of a centrally disposed air-box having side-walls comprising a number of superimposed sections, some of the sections being formed with radially extending grooves and other sections formed with radial extensions fitting partially within the radial grooves of the contiguous sections thus forming openings for feeding air through the box to the fire, substantially as described.

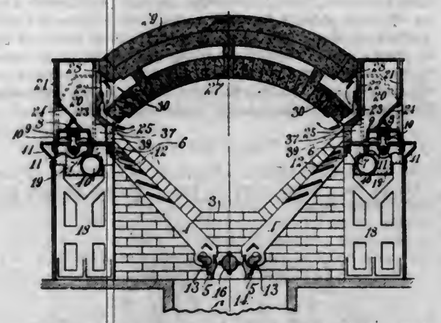
1,018,648. ELECTRIC SWITCH. RICHARD P. BROWN, Philadelphia, Pa. Filed Oct. 17, 1911. Serial No. 655,138. (Cl. 175—280.)



1. In an electrical switch, in combination, a stationary and a movable plate, a central post the upper end of which is threaded, a coil spring surrounding said post and bearing against the top of said movable plate, a nut carried by said post by means of which the tension of said spring may be regulated, a sleeve carried by said movable plate surrounding said spring, an operating piece carried by said sleeve, and a contact arm carried by said movable plate.

2. In an electric switch, in combination, a case one side of which is furnished with a perforation, a stationary contact plate and a movable contact plate and arm within said case, a sleeve connected to the movable plate and passing through the perforation in said case, an operating piece carried by the outer end of said sleeve, a post in said sleeve the lower end of which is secured to the case and the upper end of which is threaded, a nut carried by said post, and a coil spring surrounding said post one end of which bears against the top of said movable plate and the other against said nut.

1,018,649. STOKER-FURNACE. ORVILLE D. COTTON and HERBERT M. COTTON, Dayton, Ohio. Original application filed Feb. 15, 1911, Serial No. 608,832. Divided and this application filed Apr. 25, 1911. Serial No. 623,240. (Cl. 110—29.)



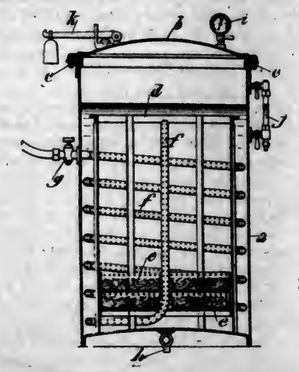
1. The combination with the arch, arch plates, magazines, and bed plates of a stoker furnace, and air-feeding ducts leading to the interior of the furnace at the base of the arch through ducts provided in the arch plates, of air flues or boxes at the rear ends of the magazines communicating with said air-feeding ducts, the sides of said air boxes exposed to the fire being provided with pockets above the bed plates and fire brick within said pockets, substantially as specified.

2. The combination with the arch, arch plates, bed plates and magazines of a stoker furnace, of air boxes or flues at the rear ends of the magazines and communicating with the interior of the furnace, pockets formed on the sides of said air boxes exposed to the fire, fire brick within said pockets resting upon the magazine feed plates, and an inner layer of fire brick supported on the feed plates adjacent to the pocketed fire brick, substantially as described.

3. The combination with the arch, arch plates, gates, magazines and bed plates of a stoker furnace, of air ducts leading to the interior of the furnace, air boxes or flues at the rear of the magazines, communicating with said air ducts, pockets formed on the inner sides of said air boxes above the adjacent ends of the feed plates, fire brick secured within said pockets and resting on said feed plates, an inner layer of fire brick interposed between the pocketed fire brick and the furnace grate, and air pipes extending from the front of the furnace to the air boxes, and lying beneath the magazines, substantially as described.

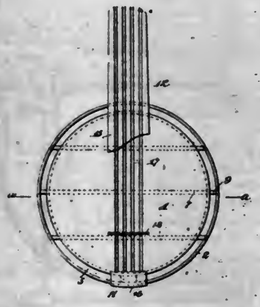
1,018,650. PROCESS FOR CONVERTING VEGETABLE FIBERS INTO THREADS OF SILKY APPEARANCE. JEAN MARIE JOSEPH DEBOURG, Lyon, France. Filed May 16, 1911. Serial No. 627,561. (Cl. 8—2.)

1. A process for converting vegetable fibers into threads of silky appearance which comprises first immersing the fibers in a heated solution of carbonate of soda in a boiler under pressure; drawing off the bath from the boiler and replacing same by a heated bath of slaked lime, bisulfite of soda, sal-ammoniac, peroxid of sodium and salts of magnesium and subsequently rinsing the fibers in water.



2. A process for converting vegetable fibers into threads of silky appearance consisting in first immersing the fibers in a heated solution of carbonate of soda in a boiler under pressure; drawing off the bath from the boiler and replacing same by a heated bath of slaked lime, bisulfite of soda, sal-ammoniac, peroxid of sodium and salts of magnesium, primarily rinsing the fibers with warm water in the boiler, removing the fibers from the boiler and immersing them in an acid bath and finally rinsing said fibers in water.

1,018,651. MANDOLIN. WILLIAM H. DE WICK, Brooklyn, N. Y. Filed May 16, 1910. Serial No. 561,562. (Cl. 84—187.)



1. A musical instrument of the class described, comprising a deck, a hoop supporting the deck, and a back secured to the hoop, said back extending beyond the hoop and carrying a barrier separated from the hoop.

2. A musical instrument of the class described, comprising a deck, a hoop supporting the deck, a sound opening in the hoop, a back carried by the hoop, and a barrier supported on the back and concealing the sound opening.

3. A musical instrument of the class described comprising a deck, a hoop supporting the same, sound openings in the hoop, a back carried by the hoop, a barrier supported on the back and separated from the hoop, and a brace by means of which the deck, the back, the hoop and the barrier are secured together.

4. A musical instrument of the class described comprising a flat, imperforate deck, a hoop carrying the same, a plurality of openings in the hoop, a back, a barrier carried by the back and separated from the hoop and conceal-

ing the openings, and a brace secured to the deck, the hoop, the back, and the barrier.

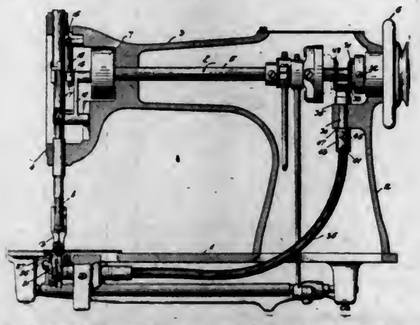
5. In a musical instrument of the class described the combination with a deck, a hoop supporting the same, openings in the hoop, a back carried by the hoop, a barrier secured to the back and a neck and finger board carried by the barrier, of a brace joining the deck, the hoop, and the back, said brace being provided with feet which extend through the openings in the hoop and are secured to the barrier.

[Claim 6 not printed in the Gazette.]

1,018,652. SHOE-RETAINER. JOHN A. DRECHSLER, Hillsdale, Mich. Filed Sept. 24, 1910. Serial No. 583,616. (Cl. 36—8.)

The combination, with a shoe of the character described, of a narrow strip of resilient material secured continuously along its upper edge to the inner face of the heel of the shoe near the upper rear edge thereof, the lower free edge of said strip normally standing away from the inner surface of the heel of the shoe whereby said lower edge of the strip is adapted to engage the inward curve at the top of the heel for the purpose specified.

1,018,653. SEWING-MACHINE. GEORGE M. EAMES, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 25, 1911. Serial No. 623,227. (Cl. 112—29.)



1. In a sewing-machine, a bracket arm, a bed-plate, a loop-taker located below the latter, a rotary main shaft mounted in said bracket arm, and connections for operatively connecting said loop-taker with said main shaft, said connections including a flexible shaft comprising right and left hand spirally wound plies of wire and having its axis of rotation in transverse planes.

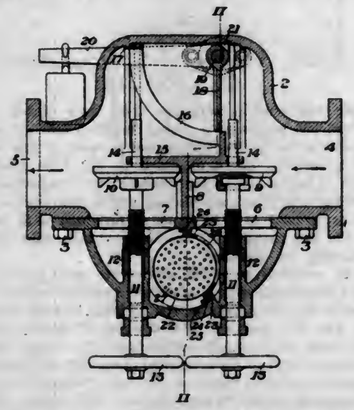
2. In a sewing machine, a bracket-arm, a bed-plate, a loop-taker mounted below the latter, a rotary main-shaft mounted in said bracket-arm and a flexible shaft comprising right and left hand spirally wound plies of wire, the opposite ends of said shaft having its plies secured together to effect rigid portions, one of which latter is operatively connected with said loop-taker, the other being operatively connected with said main-shaft to effect multiple rotations of said loop-taker to one rotation of said main-shaft.

3. In a sewing machine, a bracket-arm, a bed-plate, a main-shaft and a loop-taker mounted below said bed-plate, a flexible shaft comprising right and left hand spirally wound plies of wire, the opposite ends of said shaft having its plies secured together and to the inner walls of a receiver to effect rigid portions, one of which latter is operatively connected with said loop-taker, the other being geared to said main-shaft to effect multiple rotations of said loop-taker to one rotation of said main-shaft.

4. In a sewing machine, a bracket-arm, a bed-plate, a loop-taker mounted below the latter, a rotary main-shaft mounted in said bracket-arm, and a flexible shaft comprising right and left hand spirally wound plies of wire, the opposite ends of said shaft having its plies secured together to effect rigid portions, one of which latter is operatively connected with said loop-taker, the other being connected with said main-shaft through bevel gears of the ratio of two to one to effect two rotations of said loop-taker to one rotation of said main-shaft.

5. In a sewing machine, a bracket-arm, a bed-plate, a main-shaft and a loop-taker mounted below said bed-plate, a flexible shaft comprising right and left hand spirally wound plies of wire, the opposite ends of said shaft having its plies secured together and to the inner walls of a receiver to effect rigid portions, one of which latter is operatively connected with said loop-taker, the other being connected with said main-shaft through bevel gears of the ratio of two to one to effect two rotations of said loop-taker to one rotation of said main-shaft.

1,018,654. STRAINER. WILLIAM S. ELLIOTT, Pittsburgh, Pa. Filed June 5, 1909. Serial No. 500,432. (Cl. 210—16.)



1. Strainer apparatus comprising a casing having an inlet and an outlet connection, partition means within the casing to form two separate passages therethrough, one of said passages constituting a strainer chamber and having inlet and outlet ports, manually-controlled valves for controlling said ports, a strainer element in said chamber, a valve normally closing the other passage, but free to open by increase of fluid pressure at its inlet side, and a strainer element in the last named passage beyond the valve, substantially as described.

2. In strainer apparatus, a casing having a strainer chamber therein and valves controlling the passage through said chamber, the casing also having a by-pass passage, a valve normally closing the last named passage but free to open by increase of fluid pressure at its inlet side, and a strainer element in the by-pass passage, beyond said valve, substantially as described.

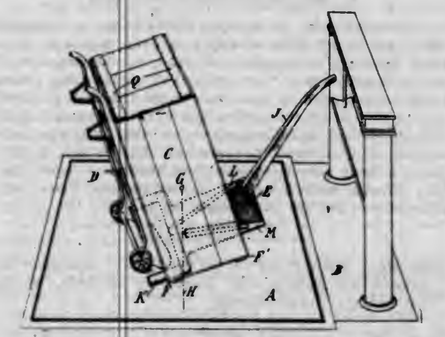
3. In strainer apparatus, a casing having an inlet and an outlet connection, a partition member within the casing to form two separate passages therethrough, one of said passages constituting a straining chamber having inlet and outlet ports, manually operated valves for controlling said ports, a strainer element in said chamber, a strainer element carried by the partition member within the other of said passages, and a counterweighted valve normally closing the entrance to the last named element, said valve being free to open by increase of pressure at its inlet side; substantially as described.

4. In strainer apparatus, a casing having an inlet and an outlet connection, a partition member within the casing to form two separate passages therethrough, one of said passages constituting a straining chamber having inlet and outlet ports, manually operated valves for controlling said ports, a strainer element in said chamber, a strainer element carried by the partition member within the other of said passages, and a counterweighted valve normally closing the entrance to the last named element, said valve being free to open by increase of pressure at its inlet side, said strainer element being in the form of a grid curved forwardly and upwardly to permit the valve to swing thereover; substantially as described.

5. Strainer apparatus comprising a casing having an inlet and outlet connection, a strainer chamber communicating therewith through inlet and outlet ports and containing a strainer, and valve stems extending through the strainer chamber on each side of the strainer and carrying valves arranged to seat against ports in the inner wall of the strainer chamber, the strainer having longitudinal flanges at different points in its circumference to direct the flow of the water through the strainer, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,655. REST AND LIFTING-LEVER. WILLIAM VIRTUS ELLIS, Huntingdon, Pa., assignor, by mesne assignments, to J. C. Blair Specialty Company, Huntingdon, Pa., a Corporation of Pennsylvania. Filed Dec. 14, 1908. Serial No. 467,482. (Cl. 57—109.)



1. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck.

2. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck, said support being provided with a handle for lifting it to tilt the case backward about its rear edge.

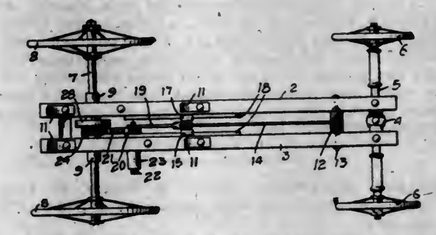
3. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck, said support being provided with a handle for lifting it to tilt the case backward about its rear edge, and means for pivotally connecting said bar with said support along a line coinciding with the nose of said support.

4. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a pair of bars K and means for attaching the same to said support, said support being provided with a handle for lifting its rear end in order to tilt a case backward about its rear edge.

5. In combination, a support E provided with a handle J at its rear, a pair of bars K, a plate M to which said bars are pivoted, and means for attaching said support E to said plate with its point in line with the hinges of said bars K.

[Claims 6 to 11 not printed in the Gazette.]

1,018,656. CHILD'S HAND-CAR. CHARLES A. ERICKSON, Minneapolis, Minn. Filed Feb. 21, 1910. Serial No. 545,056. (Cl. 208—36.)



1. The combination, with the forward and rear axles and carrying wheels, of a frame, a gear journaled therein, a driving means connecting said gear with said rear axle, parallel guides mounted in said frame, a block composed of U-shaped castings, one of said castings having a threaded stud and the other a threaded socket to receive said stud, said castings sliding on said guides, an operating lever, and links pivotally connecting said stud with said operating lever and with said gear, substantially as described.

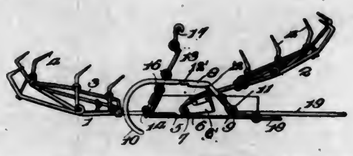
2. The combination, with the forward and rear axles and carrying wheels, of a frame, a gear journaled therein and having driving connections with the rear axle, said frame having parallel guides, a block slidable on said guides and composed of relatively adjustable sections, an operating lever, a link connecting said operating lever with said block, and a second lever connecting said block with said gear.

3. The combination with the forward and rear axles and carrying wheels, of parallel bars supported on substantially the same level on said axles and having guides on their inner faces also on substantially the same level, a slide movable between said bars and supported by said guides, a rocking, semi-circular gear having a driving connection with said rear axle, a link pivotally connecting said gear with said slide, an operating lever pivoted between the forward portions of said bars, and a second link connecting said slide with said operating lever.

4. The combination, with the forward and rear axles and carrying wheels, of a frame supported on said axles, a gear journaled in said frame and having a driving connection with said rear axle, said frame having parallel guides, a slide movable between said guides, an operating lever mounted in said frame, a link pivotally connecting said lever with said slide, a second link pivotally connecting said slide with said gear, the axis of said gear and the pivots of said second link being out of line with one another at all points in the movement of said slide, whereby dead centers will be prevented in the movement of said lever.

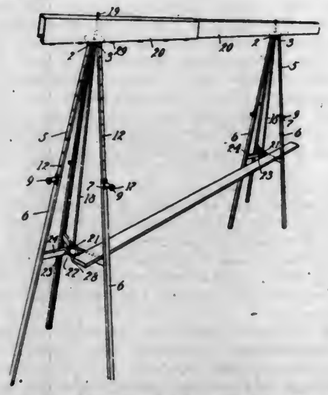
5. The combination, with the forward and rear axles and carrying wheels, of a frame supported on said axles, a gear journaled in said frame and having a driving connection with said rear axle, a slide movable lengthwise of said frame, an operating lever mounted on said frame, a link pivotally connecting said lever with said slide, a second link pivotally connecting said slide with said gear, the axis of said gear and the pivots of said second link being out of line with one another at all points in the movement of said slide, whereby dead centers will be prevented in the movement of said lever.

1,018,657. ANIMAL-TRAP. MICHAEL A. FORSLUND, Marinette, Wis. Filed Oct. 1, 1908. Serial No. 455,682. (Cl. 43—21.)



An animal trap comprising impaling jaws, whereof one is movable relatively to the other, a spring-pressed pivotal detent for holding the movable jaw in open position, a bait-holding trigger for releasing said detent, said trigger having a slot through which the detent passes and having rollers which bear against the detent, and means for positively securing the movable jaw while the trap is being baited, substantially as specified.

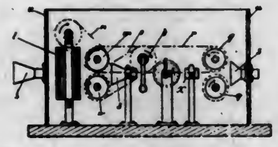
1,018,658. SCAFFOLD. HARVEY B. FULLER, St. Paul, Minn. Filed Jan. 12, 1909. Serial No. 471,868. (Cl. 20—83.)



1. In a platform support of the class described, the combination of two extensible and foldable tripod stands with central top spindles, a sheet metal beam member normally bent a rectangular shape in cross section, a slot opening in the lower surface of said beam, a plurality of sheet metal cross braces on the inside of the lower surface of said beam, one end of which is riveted to one of said flanges and the other end of which is riveted to the other flange, an orifice in the center of one of the end cross-braces, a registering orifice in the top surface of said beam, said orifices seating said beam on one of the aforementioned tripod spindles, a second metal beam member of slightly less dimensions than first mentioned beam member, normally bent rectangular in cross section, an orifice in said second beam member to seat on the spindle of the second tripod and a slot in the lower surface of said second beam member registering with the slot in said first mentioned beam member, the said second beam member adapted to snugly slide into said first mentioned beam member, substantially as described.

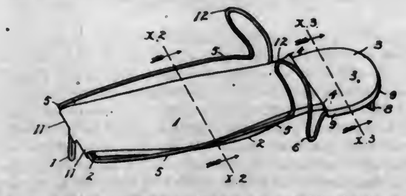
2. In a tripod platform support, the combination of a three membered folding leg brace, said leg brace having outer leg attaching members, said leg attaching members composed of an integral leg attaching plate and a cross-arm attaching member protruding from the center thereof, an inner center brace rod attaching member, said brace rod member composed of an integral sleeve portion and three protruding cross-arm attaching legs, and a cross arm sheet metal member, said cross-arm member bent into ∩-shape, and said open portion of said cross arm fitting over and pivotally connecting said aforementioned inner and outer members, substantially as described.

1,018,659. APPARATUS FOR BARKING WILLOW-TWIGS. WILHELM GESCHE, Tirschtiegel, Germany. Filed Aug. 30, 1911. Serial No. 646,911. (Cl. 144—207.)



In an apparatus for barking willow-twigs, in combination, two rotary axles arranged in axial line with each other, bearings to support said axles, two cross-joints at the adjacent ends of said axles, two plates with ribbed inner faces carried by said cross-joints and each provided with a circumferential groove, and two blade springs fixed on said bearings and designed to run with their free ends in said circumferential grooves and thus to act on said plates to keep them in such inclined position to each other that a wedge-shaped split is formed between them, substantially as and for the purpose set forth.

1,018,660. SHOE-POLISHING DEVICE. ADELBERT R. GIBSON, Los Angeles, Cal. Filed July 11, 1911. Serial No. 638,030. (Cl. 15—58.)

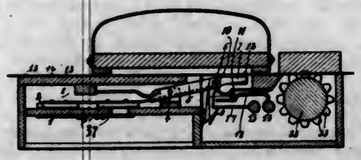


1. In a shoe polishing device, a metallic heel plate, a metallic sole plate, and a combined cloth-guiding and plate-supporting wire operatively connected with said heel plate and foot-plate, said cloth-guiding wire having therein a pair of compound bends, said compound bends being located one on each side of the device in front of the forward edge of said heel plate and forming loops extending above and below said plates, said loops guiding the cloth and forming supports for the plates.

2. In a shoe polishing device, a sheet metal foot-rest having a heel portion, supporting means to support said foot-rest, said supporting means consisting of a wire around which the edge of said heel portion of the foot-rest is curled, said wire having a down-bent loop at each side to form supporting feet, the ends of said wire being brought together at the rear of said heel portion and there bent down to form an additional supporting foot, and means to guide the polishing cloth.

3. A shoe polishing device comprising a foot rest having a sheet metal heel portion adapted to form a rest for the heel, a wire extending around said heel portion, said heel portion having a flange curled around said wire, said wire, at the points where it emerges from said heel portion being bent down to form feet in front of the heel to support the foot at the point of greatest pressure, means to support the front portion of said foot-rest, and means to guide the polishing cloth.

1,018,661. OPERATING MECHANISM FOR AUTOMATIC ACCORDIONS AND THE LIKE. REINHARDT GLIER, Klingenthal, Germany. Filed Dec. 29, 1910. Serial No. 599,941. (Cl. 84—236.)



1. The combination with a reed instrument, of a perforated tune-sheet, a roller for advancing the sheet, a ratchet-wheel connected to said roller, pawls working on said ratchet-wheel for rotating the roller, keys for actuating the pawls, and connections between said keys and the valves of the instrument for simultaneously sounding the notes as determined by the tune-sheet, substantially as set forth.

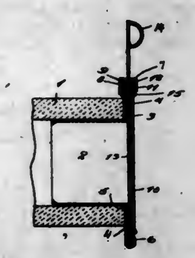
2. The combination with a reed instrument, of a perforated tune-sheet, a driving roller for advancing the same, double-armed levers connected to the valves of the instrument for sounding the notes, spring-tensioned angle levers suspended on the outer end of said afore-mentioned levers, noses on the upper arms of the angle-levers located so as to snap into the perforations of the tune-sheet, catches on the lower arms of the angle levers, rock shafts having arms adapted to engage said catches so as to open the valves and sound the notes when the noses are disposed in the perforations, keys for actuating the rock shafts, and connections between said keys and the driving roller for simultaneously advancing the tune-sheet, substantially as set forth.

3. The combination with a reed instrument of a perforated tune-sheet, double-armed levers connected to the valves of the instrument for sounding the notes, spring-tensioned angle-levers suspended on the outer ends of the double-armed levers, noses on the upper arms of the angle-levers located so as to snap into the perforations of the tune-sheet, a driving roller for advancing the tune sheet, a ratchet wheel connected to said roller, pawls working on said ratchet wheel, keys connected to said pawls so as to reciprocate the latter and impart a continuous rotation to the roller when alternately depressed, and connections between said keys and the angle levers effecting a simultaneous opening of all valves whose angle levers are in engagement with a perforation in the tune-sheet, substantially as set forth.

1,018,662. FLUME-GATE. WILSON POLK HARLAN, Holtville, Cal. Filed Dec. 26, 1911. Serial No. 667,836. (Cl. 61—46.)

1. The combination with a flume, of a plate provided with an opening and connected with said flume, said plate being provided with receiving flanges, an open frame connected with the upper end of the plate and with the receiving flanges, and a slide plate operating through the open frame and the receiving flanges.

2. The combination with a flume, of a plate having an opening formed therethrough and connected with said flume, said plate being provided with vertical receiving flanges, an open frame receiving the plate and the flanges and connected with the same, a slide plate operating through the open frame and the receiving flanges, and an inwardly extending clamping tongue formed upon the forward side of the open frame and engaging the slide plate.



3. The combination with a flume, provided at its discharge end with an outwardly extending flange, of a plate having an opening for receiving the flume and to be engaged by the outwardly extending flange, said plate being provided with spaced vertical receiving flanges and a lower horizontal receiving flange having openings formed therethrough to prevent the accumulation of mud or the like, and a slide plate for operation within said receiving flanges.

4. The combination with a flume, having at its discharge end an outwardly extending flange, of a plate provided with an opening for receiving the flume, and to be engaged by the outwardly extending flange, said plate being provided with upstanding receiving flanges, an open frame receiving the plate and flanges, said plate and flanges having flaps bent about the open frame for forming suitable connection between the same, and a slide plate operating in the receiving flanges.

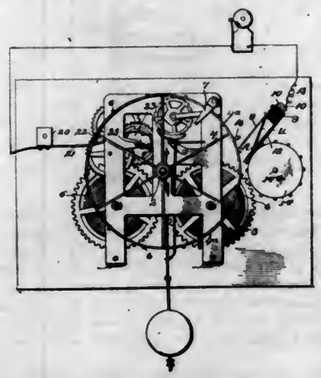
1,018,663. FINGER-RING. EDWIN GEORGE HARROP, London, England. Filed Sept. 23, 1909. Serial No. 519,156. (Cl. 63—16.)

1. An expanding flexible ring construction, comprising a series of middle links constructed with spring housings and having relatively narrow, longitudinal side slots, side links arranged on either side of the middle links, pins connected to said side links and joining them together in pairs, said pins being constructed to pass endwise through the spring housings in assembling and being rotatable in said slots to permit flexibility of the chain in the direction transverse to the plane of the links, springs located between the inner ends of said spring housings and said pins, a crown member, diametrically opposed extensions carried by said crown member of a width substantially equal to the width of the spring housings, each of said extensions having adjacent its end an arcuate slot, pins carried by the end pairs of side links working in said slots and springs in said slots bearing between said pins and the ends of the slots remote from the setting.

2. An expanding flexible ring or the like, comprising a series of hollow middle links, constructed with spring housings and narrow side slots, side links arranged on either side of the middle links, pins constructed to pass endwise through said side slots, and to rotate therein and permit transverse flexibility in assembling the parts and having their ends rigidly connected to said side links and joining them together in pairs, springs substantially fitting the spring housings, confined by the side walls thereof and located between the inner ends of said housings and the

pins, a crown member, diametrically opposed extensions carried by said crown member of a width substantially equal to the width of the spring housings, each of said extensions having adjacent its end an arcuate slot, pins carried by the end pairs of side links working in said slots and springs in said slots bearing between said pins and the ends of the slots remote from the setting.

1,018,664. AUTOMATIC ALARM-ACTUATING MECHANISM. LEVI D. IKENBERRY, North Manchester, Ind. Filed Dec. 8, 1909. Serial No. 532,108. (Cl. 161—4.)



1. The combination with an electric signal, of a rotatable main contact carrier electrically connected to the signal and having a plurality of series of shiftable contact pins projecting therefrom, a series of contact fingers corresponding to the series of contact pins, each movable into position to complete a circuit through the pins and through the signal, a cylindrical selector having a circumferential series of pins electrically engaging with one of said contact fingers, and a plurality of series of pins electrically engaging with the other contact fingers and set alternately to the first series, and means for rotating the selector one step for each complete revolution of the main contact carrier.

2. The combination with an electric signal, of a rotatable main contact carrier electrically connected to the signal and having four series of shiftable contact pins projecting therefrom, four contact fingers, each movable into position to complete a circuit through the pins and through the signal, and a rotatable selector carrying four circumferential series of adjustable pins, one series of pins electrically engaging one of said contact fingers, the other series of pins electrically engaging with the other contact fingers and set alternately to the first series of pins, and means for rotating the selector one step for each complete rotation of the main contact carrier.

3. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having a plurality of series of shiftable contact pins projecting therefrom, a plurality of contact fingers, one for each series of pins each finger movable into position to complete a circuit through the corresponding series of pins and through the signal, and a rotatable selector having a plurality of series of pins contacting with said contact fingers, one of the series of pins actuating the night signals and being set alternately with respect to the other series of pins actuating the day signals, the main contact carrier being provided with means whereby it may be rotated once in every twelve hours, means being provided whereby a complete rotation of the main contact carrier shall cause a partial rotation of the selector equal to the distance between a pin of the day series and the alternately set pin of the night series.

4. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having four series of contact pins projecting therefrom, one of said series actuating the signals for Saturday, one actuating the signals for Sunday, one actuating the signals for the remaining week days, and one actuating the night signals for all the days of the week, four contact fingers, each finger being independently movable into position to complete a circuit through the pins and through the signal, a rotatable selector electrically connected to the signal having a series of night signal pins electrically engaging with one of said contact fingers, and a plurality of series of day signal pins electrically engaging the other contact fingers and set alternately to the first set, means for giving a complete rotation to the main contact carrier every twelve hours, and means for giving a partial rotation to the selector upon each complete rotation of the main contact carrier.

5. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having four series of contact pins projecting therefrom, four contact fingers, each movable into position to complete a circuit through the contact pins and through the signal, a rotatable selector having four series of pins, one of said series having five adjustable pins therein corresponding to five successive days of the week, the next adjacent series having seven pins therein corresponding to the nights of the week, the pins for the night signals being set alternately with respect to the pins for the signals first referred to, a pin adapted to electrically engage with the third finger of the series of fingers and corresponding to the seventh day of the week, and a pin electrically engageable with the fourth contact finger of the series and corresponding to Sunday, means for giving a complete rotation to the main contact pin carrier once for every twelve hours, and means for giving a partial rotation equal to the distance between one pin and the next pin to the selector upon each complete rotation of the main contact carrier.

1,018,665. PROCESS OF MAKING FIRE-BRICK. CHARLES H. JAXTHEIMER, New Wilmington, Pa. Filed Sept. 13, 1910. Serial No. 581,806. (Cl. 106—9.)

1. The process of making fire brick, comprising mixing silica sand with a bond made of silica flour, slaked lime, and sodium carbonate, molding the mixture into bricks, and fusing the same.

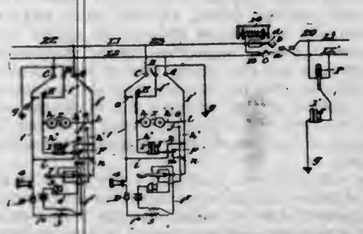
2. The process of making fire brick, comprising mixing silica sand with a bond equal in quantity to the voids in the sand, said bond made of silica flour, slaked lime and an alkaline carbonate, molding the mixture into bricks, and fusing the same.

3. The process of making fire brick, consisting of mixing silica sand with a bond composed of silica flour, slaked lime and an alkaline carbonate, which carbonate when combined with silica forms a compound which contracts under heat, molding said mixture into bricks, and fusing the same.

1,018,666. TELEPHONE SYSTEM. HENRY F. JOECKEL, Camp Point, Ill. Filed Aug. 10, 1911. Serial No. 643,444. (Cl. 179—28.)

1. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, a plurality of substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation connected to ground from one or the other side of the metallic circuit so as to give each side of the metallic circuit nearly an equal amount of ground, a magneto in a normally open branch at each substation and means at each substation to connect the magneto in circuit with the annunciator of the central station or in circuit with all of the annunciators of the substations simultaneously upon both sides of the metallic circuit.

2. The combination, in a telephone system, a line jack at the central station, a metallic circuit leading therefrom, a plurality of substation talking sets bridged into the metallic circuit said bridges being however normally interrupted at the switch hook, a ground branch at each substation containing an annunciator, connected to one or the other side of the metallic circuit so as to give each side of the metallic circuit nearly an equal amount of ground, an annunciator at the central station normally bridged across the metallic circuit at the line jack, adapted to be cut out whenever a switching plug is inserted into the line jack, a magneto in a normally open branch at each substation and means at each substation to connect the magneto in circuit with the annunciator of the central station or in circuit with the annunciators of the substations simultaneously upon both sides of the metallic circuit, a switching plug and means at the central station to signal separately upon either side of the metallic circuit.



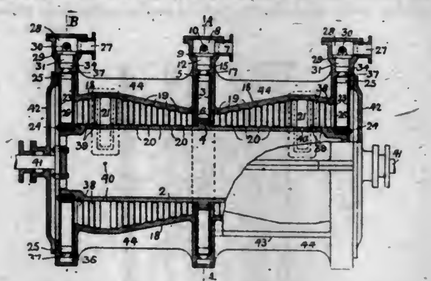
3. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation connected to ground, one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto in a normally open branch at each substation and means at each substation to selectively signal the other substation or the central station, and means at the central station to signal either substation selectively.

4. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation normally connected to ground, one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto and means at each substation to put the magneto in circuit with the annunciator of the other substation, with the annunciator of the central station or to leave the magneto out of circuit, the annunciators of said substations being adapted to be operated selectively upon their respective sides by the central station.

5. The combination, in a local battery magneto telephone, a secondary talking circuit extending from binding post A to C normally interrupted at the switch hook, an annunciator circuit normally extending from binding post A to B, a magneto and means to put the magneto in a circuit extending from binding post A to B, from binding post A to C, or from binding posts A and C to B, the magneto is however normally not in circuit.

1,018,667. ELASTIC-FLUID TURBINE. CHARLES OCEAN JOHNSON, Muizille Point, Cape Town, Cape Colony. Filed June 26, 1911. Serial No. 635,466. (Cl. 121—58.)

1. A turbine comprising in combination a cylindrical rotor, an impact wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings at each side of the impact wheel, means for supplying driving fluid to said impact wheel for rotating same in one direction, means of communication for driving fluid from the impact wheel to said impulse and reaction rings on each side thereof, an additional impact wheel secured to one end of the rotor, a series of impulse and reaction rings adjacent one side of said additional impact wheel, means for supplying driving fluid to said additional impact wheel for reversing the direction of rotation of the rotor, and means of communication for driving fluid from the reversing impact wheel to the impulse and reaction rings adjacent thereto.



2. A turbine comprising in combination a cylindrical rotor, an impact wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings, at each side of the impact wheel, means for supplying driving fluid to said impact wheel for rotating the same in one direction, means of communication for driving fluid from the impact wheel to said impulse and reaction rings on each side thereof, an additional impact wheel secured to one end of the rotor, a series of impulse and reaction rings adjacent one side of said additional impact wheel, means for supplying driving fluid to said additional impact wheel for reversing the direction of rotation of the rotor, means of communication for driving fluid from the reversing impact wheel to the impulse and reaction rings adjacent thereto, a casing inclosing each impact wheel, and provided with a plurality of channels each serving a portion of the periphery of said wheel, and means for supplying driving fluid to any or all of said channels.

3. A turbine comprising in combination a cylindrical rotor, an impact-wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings at each side of the impact-wheel, means for supplying driving fluid to said impact-wheel for rotating same in one direction, means of communication for driving fluid from the impact-wheel to said impulse and reaction rings on each side thereof, additional impact-wheels secured one at each end of the rotor, a series of impulse and reaction rings adjacent one side of each of said additional impact-wheels, means for supplying driving fluid to said additional impact-wheels for reversing the direction of rotation of the rotor and means of communication for driving fluid from the reversing impact-wheels to the impulse and reaction rings adjacent thereto.

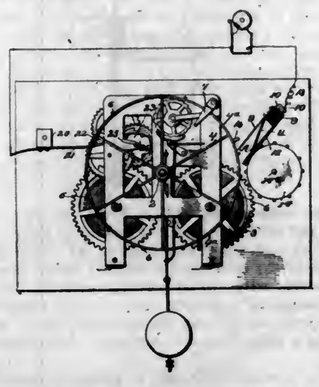
4. A turbine comprising in combination a cylindrical rotor, an impact-wheel secured to said rotor, a series of impulse and reaction rings at each side of the impact-wheel, means for supplying driving fluid to said impact-wheel and means of communication for said driving fluid from the impact-wheel to said impulse and reaction rings on each side thereof to rotate the rotor in one direction, additional impact-wheels secured one at each end of the rotor, means for supplying driving fluid to said last mentioned impact-wheels whereby the direction of rotation of the rotor is reversed, a casing inclosing each impact-wheel and providing a plurality of channels each serving a portion of the periphery of said wheel and means for supplying driving fluid to any or all of said channels.

1,018,668. MOLDING APPARATUS. FRANK X. LEUTHNER, Buffalo, N. Y., assignor of one-half to Frank Tickner, Sharpsville, Pa.; Frank J. Leuthner executor and Minnie Leuthner Taylor executrix of said Frank X. Leuthner, deceased. Filed July 6, 1910. Serial No. 570,661. (Cl. 22—173.

1. A collapsible core barrel having a central stem or column, movable plate sides, and a drag permanently secured to said core barrel; substantially as described.

pins, a crown member, diametrically opposed extensions carried by said crown member of a width substantially equal to the width of the spring housings, each of said extensions having adjacent its end an arcuate slot, pins carried by the end pairs of side links working in said slots and springs in said slots bearing between said pins and the ends of the slots remote from the setting.

1,018,664. AUTOMATIC ALARM-ACTUATING MECHANISM. LEVI D. IKENBERRY, North Manchester, Ind. Filed Dec. 8, 1909. Serial No. 532,108. (Cl. 161—4.)



1. The combination with an electric signal, of a rotatable main contact carrier electrically connected to the signal and having a plurality of series of shiftable contact pins projecting therefrom, a series of contact fingers corresponding to the series of contact pins, each movable into position to complete a circuit through the pins and through the signal, a cylindrical selector having a circumferential series of pins electrically engaging with one of said contact fingers, and a plurality of series of pins electrically engaging with the other contact fingers and set alternately to the first series, and means for rotating the selector one step for each complete revolution of the main contact carrier.

2. The combination with an electric signal, of a rotatable main contact carrier electrically connected to the signal and having four series of shiftable contact pins projecting therefrom, four contact fingers, each movable into position to complete a circuit through the pins and through the signal, and a rotatable selector carrying four circumferential series of adjustable pins, one series of pins electrically engaging one of said contact fingers, the other series of pins electrically engaging with the other contact fingers and set alternately to the first series of pins, and means for rotating the selector one step for each complete rotation of the main contact carrier.

3. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having a plurality of series of shiftable contact pins projecting therefrom, a plurality of contact fingers, one for each series of pins each finger movable into position to complete a circuit through the corresponding series of pins and through the signal, and a rotatable selector having a plurality of series of pins contacting with said contact fingers, one of the series of pins actuating the night signals and being set alternately with respect to the other series of pins actuating the day signals, the main contact carrier being provided with means whereby it may be rotated once in every twelve hours, means being provided whereby a complete rotation of the main contact carrier shall cause a partial rotation of the selector equal to the distance between a pin of the day series and the alternately set pin of the night series.

4. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having four series of contact pins projecting therefrom, one of said series actuating the signals for Saturday, one actuating the signals for Sunday, one actuating the signals for the remaining week days, and one actuating the night signals for all the days of the week, four contact fingers, each finger being independently movable into position to complete a circuit through the pins and through the signal, a rotatable selector electrically connected to the signal having a series of night signal pins electrically engaging with one of said contact fingers, and a plurality of series of day signal pins electrically engaging the other contact fingers and set alternately to the first set, means for giving a complete rotation to the main contact carrier every twelve hours, and means for giving a partial rotation to the selector upon each complete rotation of the main contact carrier.

5. The combination with an electric signal, of a rotatable main contact carrier in electrical connection with the signal and having four series of contact pins projecting therefrom, four contact fingers, each movable into position to complete a circuit through the contact pins and through the signal, a rotatable selector having four series of pins, one of said series having five adjustable pins therein corresponding to five successive days of the week, the next adjacent series having seven pins therein corresponding to the nights of the week, the pins for the night signals being set alternately with respect to the pins for the signals first referred to, a pin adapted to electrically engage with the third finger of the series of fingers and corresponding to the seventh day of the week, and a pin electrically engageable with the fourth contact finger of the series and corresponding to Sunday, means for giving a complete rotation to the main contact pin carrier once for every twelve hours, and means for giving a partial rotation equal to the distance between one pin and the next pin to the selector upon each complete rotation of the main contact carrier.

1,018,665. PROCESS OF MAKING FIRE-BRICK. CHARLES H. JAXTHEIMER, New Wilmington, Pa. Filed Sept. 13, 1910. Serial No. 581,866. (Cl. 106—9.)

1. The process of making fire brick, comprising mixing silica sand with a bond made of silica flour, slaked lime, and sodium carbonate, molding the mixture into bricks, and fusing the same.

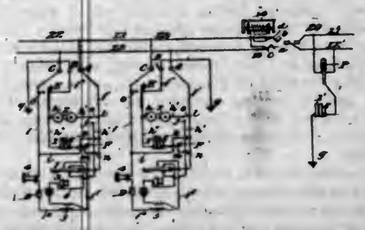
2. The process of making fire brick, comprising mixing silica sand with a bond equal in quantity to the voids in the sand, said bond made of silica flour, slaked lime and an alkaline carbonate, molding the mixture into bricks, and fusing the same.

3. The process of making fire brick, consisting of mixing silica sand with a bond composed of silica flour, slaked lime and an alkaline carbonate, which carbonate when combined with silica forms a compound which contracts under heat, molding said mixture into bricks, and fusing the same.

1,018,666. TELEPHONE SYSTEM. HENRY F. JOECKEL, Camp Point, Ill. Filed Aug. 10, 1911. Serial No. 643,444. (Cl. 179—28.)

1. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, a plurality of substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation connected to ground from one or the other side of the metallic circuit so as to give each side of the metallic circuit nearly an equal amount of ground, a magneto in a normally open branch at each substation and means at each substation to connect the magneto in circuit with the annunciator of the central station or in circuit with all of the annunciators of the substations simultaneously upon both sides of the metallic circuit.

2. The combination, in a telephone system, a line jack at the central station, a metallic circuit leading therefrom, a plurality of substation talking sets bridged into the metallic circuit said bridges being however normally interrupted at the switch hook, a ground branch at each substation containing an annunciator, connected to one or the other side of the metallic circuit so as to give each side of the metallic circuit nearly an equal amount of ground, an annunciator at the central station normally bridged across the metallic circuit at the line jack, adapted to be cut out whenever a switching plug is inserted into the line jack, a magneto in a normally open branch at each substation and means at each substation to connect the magneto in circuit with the annunciator of the central station or in circuit with the annunciators of the substations simultaneously upon both sides of the metallic circuit, a switching plug and means at the central station to signal separately upon either side of the metallic circuit.



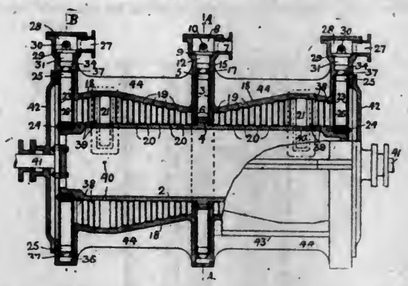
3. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation connected to ground, one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto in a normally open branch at each substation and means at each substation to selectively signal the other substation or the central station, and means at the central station to signal either substation selectively.

4. The combination, in a telephone system, a central station, a metallic circuit leading therefrom, and being normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit, said bridges being however normally interrupted at the switch hook, an annunciator at each substation normally connected to ground, one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto and means at each substation to put the magneto in circuit with the annunciator of the other substation, with the annunciator of the central station or to leave the magneto out of circuit, the annunciators of said substations being adapted to be operated selectively upon their respective sides by the central station.

5. The combination, in a local battery magneto telephone, a secondary talking circuit extending from binding post A to C normally interrupted at the switch hook, an annunciator circuit normally extending from binding post A to B, a magneto and means to put the magneto in a circuit extending from binding post A to B, from binding post A to C, or from binding posts A and C to B, the magneto is however normally not in circuit.

1,018,667. ELASTIC-FLUID TURBINE. CHARLES OCEAN JOHNSON, Mouille Point, Cape Town, Cape Colony. Filed June 26, 1911. Serial No. 635,466. (Cl. 121—58.)

1. A turbine comprising in combination a cylindrical rotor, an impact wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings at each side of the impact wheel, means for supplying driving fluid to said impact wheel for rotating same in one direction, means of communication for driving fluid from the impact wheel to said impulse and reaction rings on each side thereof, an additional impact wheel secured to one end of the rotor, a series of impulse and reaction rings adjacent one side of said additional impact wheel, means for supplying driving fluid to said additional impact wheel for reversing the direction of rotation of the rotor, and means of communication for driving fluid from the reversing impact wheel to the impulse and reaction rings adjacent thereto.



2. A turbine comprising in combination a cylindrical rotor, an impact wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings, at each side of the impact wheel, means for supplying driving fluid to said impact wheel for rotating the same in one direction, means of communication for driving fluid from the impact wheel to said impulse and reaction rings on each side thereof, an additional impact wheel secured to one end of the rotor, a series of impulse and reaction rings adjacent one side of said additional impact wheel, means for supplying driving fluid to said additional impact wheel, for reversing the direction of rotation of the rotor, means of communication for driving fluid from the reversing impact wheel to the impulse and reaction rings adjacent thereto, a casing inclosing each impact wheel, and provided with a plurality of channels each serving a portion of the periphery of said wheel, and means for supplying driving fluid to any or all of said channels.

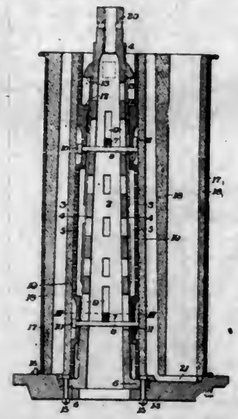
3. A turbine comprising in combination a cylindrical rotor, an impact-wheel secured to said rotor at or about the longitudinal center thereof, a series of impulse and reaction rings at each side of the impact-wheel, means for supplying driving fluid to said impact-wheel for rotating same in one direction, means of communication for driving fluid from the impact-wheel to said impulse and reaction rings on each side thereof, additional impact-wheels secured one at each end of the rotor, a series of impulse and reaction rings adjacent one side of each of said additional impact-wheels, means for supplying driving fluid to said additional impact-wheels for reversing the direction of rotation of the rotor and means of communication for driving fluid from the reversing impact-wheels to the impulse and reaction rings adjacent thereto.

4. A turbine comprising in combination a cylindrical rotor, an impact-wheel secured to said rotor, a series of impulse and reaction rings at each side of the impact-wheel, means for supplying driving fluid to said impact-wheel and means of communication for said driving fluid from the impact-wheel to said impulse and reaction rings on each side thereof to rotate the rotor in one direction, additional impact-wheels secured one at each end of the rotor, means for supplying driving fluid to said last mentioned impact-wheels whereby the direction of rotation of the rotor is reversed, a casing inclosing each impact-wheel and providing a plurality of channels each serving a portion of the periphery of said wheel and means for supplying driving fluid to any or all of said channels.

1,018,668. MOLDING APPARATUS. FRANK X. LEUTHNER, Buffalo, N. Y., assignor of one-half to Frank Tickner, Sharpsville, Pa.; Frank J. Leuthner executor and Minnie Leuthner Taylor executrix of said Frank X. Leuthner, deceased. Filed July 6, 1910. Serial No. 570,661. (Cl. 22—173.

1. A collapsible core barrel having a central stem or column, movable plate sides, and a drag permanently secured to said core barrel; substantially as described.

2. A collapsible core barrel having a central stem or column, movable plate sides, and a drag permanently secured to said core barrel, the drag having centering means for the flask; substantially as described.



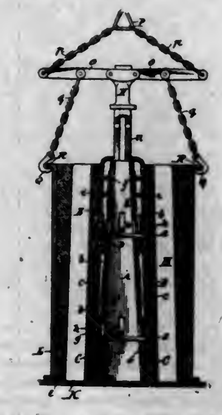
3. A core barrel comprising a central stem having a tapered portion, side plates connected to the column and arranged to be contracted or expanded thereby, and a drag permanently secured to the core barrel; substantially as described.

4. A core barrel having plate sides with an internal connection between them, a central stem arranged to expand and contract the sides, and a drag permanently secured to the core barrel; substantially as described.

5 A core barrel having a stem or column with a tapered portion, and side collapsible plates connected to the stem, said side plates being perforated for venting, and a drag permanently secured to the core barrel; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,018,669. MOLDING APPARATUS. FRANK X. LEUTHNER, Buffalo, N. Y., and FRANK TICKNER, Sharpsville, Pa.; Frank J. Leuthner executor and Minnie Leuthner Taylor executrix of said Frank X. Leuthner, deceased. Filed Mar. 2, 1910, Serial No. 546,821. Renewed Jan. 11, 1912. Serial No. 670,725. (Cl. 22—173.)



1. A collapsible core having longitudinal core members shaped to form an angular structure, said members have adjacent edges separated by longitudinally open spaces, and connections for said core members, extending within the structure and holding the members expanded, said connections being arranged to allow collapse of the members on lifting the flask and contained casting, substantially as described.

2. In a collapsible core, a column having a tapering portion, core members surrounding the column and forming a structure of angular cross section, said core members having some of their adjacent edges separated by longitudinally open spaces arranged to receive coating material, and holding connections for the core members extending within the structure and arranged to hold the members expanded, said connections being arranged to allow collapse of the members on endwise movement of the flask and casting relative to the core, substantially as described.

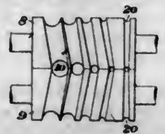
3. A collapsible core having core members shaped to form an upwardly tapering structure of angular cross-section, said members having adjacent edges separated by longitudinally open spaces arranged to receive the coating material, holding connections for said members to permit expansion and contraction thereof, said holding members being internal of the structure, and a column having a tapered portion arranged for movement relative to the members, said column operating by sliding contact to expand or contract the core members; substantially as described.

4. A collapsible core having core members with at least some of their adjacent edges separated by longitudinally open spaces to receive coating material, a central column having a tapering portion arranged to bear directly upon portions of the core members to hold them expanded, and holding connections for the core members arranged internally of the structure, said connections being arranged to allow contraction of the core members on lifting of the flask and hollow casting therefrom, substantially as described.

5. A collapsible core having core members surrounding a central column, said column being arranged to expand and hold the core members expanded and the core having longitudinally open spaces arranged to receive the coating material, and holding connections for the core members internal of the structure and arranged to allow contraction of said members on lifting of the flask and hollow casting therefrom, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

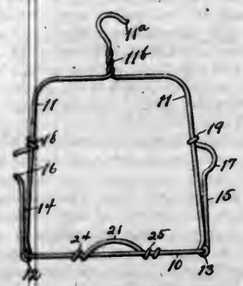
1,018,670. APPARATUS FOR THE MANUFACTURE OF TUBES. JAMES S. LEWIS, McKeesport, and WILLIAM H. POWELL, Ford City, Pa., assignors to Harry R. Gault, Kittanning, Pa. Filed June 12, 1908. Serial No. 438,078. (Cl. 153—54.)



1. In apparatus for forming tubes, a stand of rolls having continuous helical male and female bending surfaces, for bending the blank into an approximately semi-circular form said rolls engaging the inner and outer surfaces and the longitudinal edges of the blank, with its edges radially disposed, a second stand of rolls having a continuous helical pass arranged to engage the outer surface of the blank to further bend it into circular form, and means to transfer the tube from one set of rolls to the next set of rolls; substantially as described.

2. In apparatus for forming tapered tubes, a stand of rolls having a continuous helical male and female surface for bending the blank into approximately semi-circular form, said rolls engaging the inner and outer surfaces and the longitudinal edges of the blank with its edges radially disposed, a second stand of rolls having a continuous helical pass of circular form arranged to engage the outer surface of the blank to further bend it into circular form, and a third stand of rolls having a continuous helical pass of circular form arranged to engage the outer surfaces of the blank to bend it into circular form and bring its longitudinal edges into engagement with each other, and means to transfer the blank from one set of rolls to an adjacent set of rolls; substantially as described.

1,018,671. BAG-HOLDER. CLAUS H. LIGHT and CHARLES H. HUTCHINSON, Des Moines, Iowa. Filed Nov. 9, 1911. Serial No. 659,389. (Cl. 83—26.)



1. In a device of the class described, the combination of a ring, a bail fixed thereon, and gripping members adjacent to the sides of said bail, each of said gripping members comprising an upwardly extending portion of resilient metal outside of, and in a plane divergent to the side of the bail, secured at its lower end to the ring, adjacent to one end of said bail, and at its upper end to the side of said bail, the upper portion of said gripping member being spaced apart from the adjacent side of the bail to thereby permit a tucked portion of a bag to be freely placed between said gripping member and bail so that said tucked portion may be drawn downwardly a sufficient distance, to be firmly gripped between the side of the bail, and the adjacent gripping member.

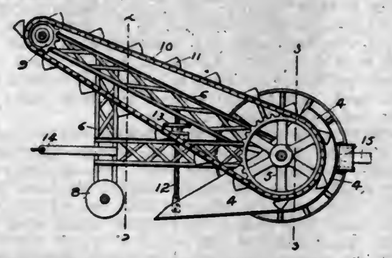
2. A bag holder, comprising a ring, a bail formed with a hook at its center, and portions of the bail coiled on said ring at diametrically opposite points, said bail having integral extensions arranged in planes divergent to the sides of the bail, each of said extensions having an offset portion at its upper end spaced a greater distance from the bail than said extension is spaced, the extremities of the integral offset portions being secured to the sides of the bail, and wings arranged on the ring intermediate of the sides of the bail, the end portions of said wings being secured to the ring.

3. A bag holder, comprising a ring, a bail carrying said ring, the central portion of the bail being twisted and formed into a hook, said bail having integral extensions on its ends arranged in converging planes relative to the sides of the bail and fixed thereto at their extremities at points above the ring, and wings mounted on said ring intermediate of the sides of the bail.

4. A bag holder, comprising a ring, a bail carrying said ring, the central portion of the bail being twisted and formed into a hook, said bail having integral extensions on its ends arranged in converging planes relative to the sides of the bail and fixed thereto at their extremities at points above the ring, and wings mounted on said ring intermediate of the sides of the bail, the wings normally standing obliquely to and extending beyond the circumference of the ring and adapted to engage marginal portions of a bag.

1,018,672. DIRT-LOADER. WILLIAM R. LITZENBERG, Portland, Oreg. Filed Mar. 17, 1911. Serial No. 615,135. (Cl. 37—32.)

1. A dirt loader of the character referred to comprising carrier wheels with a carrier axle therebetween and adapted to turn therewith when moving forwardly, a scraper with bowl-like portion supported to said axle with its scraper portion extended forwardly thereof, a carrier frame, supported rearwardly upon said axle between the sides of said scraper and wheels and forwardly upon carrier wheels, an endless conveyer mounted to travel upon said carrier frame and dipping into said scraper, means upon said axle for driving said conveyer, and means for moving said loader along behind a wagon or other vehicle to be loaded.



2. A dirt loader comprising a pair of carrier wheels with axle therebetween and turning therewith when moving forwardly, a scraper with a bowl-like portion supported to said axle with its scraper portion extended forwardly of said axle, a carrier frame, supported rearwardly upon said axle between the sides of said scraper and said wheels and forwardly upon carrier wheels, a pair of adjusting supports from said frame to the forward portion of the scraper whereby to regulate the depth of earth picked up by said scraper, an endless conveyer mounted to travel upon said frame and dipping into the bowl portion of said scraper, and means for hitching to said loader whereby to move it along after the wagon to be loaded.

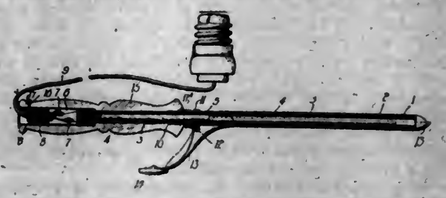
3. In a dirt loader, the combination of carrier wheels with axle therebetween and adapted to turn therewith, a scraper with bowl like portion supported to said axle with its scraper portion extended forwardly thereof, a frame, supported rearwardly upon said axle and having forward supporting legs; an endless conveyer mounted to travel upon said frame and dipping into said scraper, means upon said axle for driving said conveyer, a roller mounted between the forward supporting legs of said frame in front of said scraper, and means for hitching to said loader.

4. In combination with a dirt loader having a scraper and an elevator dipping into said scraper whereby to scrape up the dirt and elevate it, a roller mounted in front of said scraper and extending across the mouth thereof whereby to mash and level the dirt before it is picked up by said scraper.

5. In a dirt loader, the combination with the scraper, elevator dipping thereinto and driving mechanism therefor, of means for regulating and holding the forward end of said scraper to regulate the depth of dirt gathered, means for coupling said loader to the wagon to be loaded, and hitching means in the rear of said loader whereby horses hitched thereto will push it in front of them and behind the wagon being loaded.

[Claim 6 not printed in the Gazette.]

1,018,673. ELECTRIC CURLING-IRON. CHARLES P. MADSEN, Chicago, Ill., assignor to Pelouze Electric Heater Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 22, 1911. Serial No. 616,256. (Cl. 219—24.)



1. An electric curler, comprising a casing, a heating element, and in-leading electrical conductors tied to said

heating element, said heating element and conductors being rotatable in said casing.

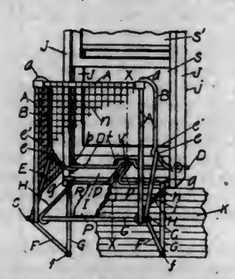
2. An electric curler, comprising a heating element flexible conductors secured to said heating element, and a casing rotatable about said heating element and conductors.

3. In an electric curler, the combination of a casing and a heating element including an insulating tube, resistance wire wound on said tube, a terminal block secured to said tube and having suitable electrical connectors, and means for tying in conductors on said terminal block, said heating element and block being rotatably mounted within said casing.

4. In an electric curler, the combination of a casing and a heating element including an asbestos paper tube, resistance wire wound on said tube, a terminal block secured to said tube and having suitable electrical connectors, and means for tying in conductors on said terminal block, said heating element and block being rotatably mounted within said casing.

5. In an electric curler, the combination of a casing, a hollow handle rigidly mounted on said casing, a heating element mounted in said casing, shoulders on said heating element coacting with said casing, said shoulders being fitted to permit relative rotation between said heating element and said casing.

1,018,674. SAFETY-PLATFORM. CALVIN D. MASON, Ashland, Ohio. Filed July 18, 1911. Serial No. 639,255. (Cl. 20—87.)



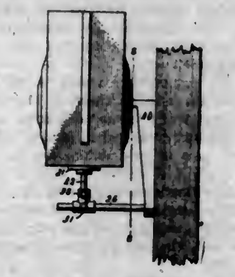
1. A safety suspension platform, comprising a pair of standards united at top and bottom by cross bars as a rectangular frame, a platform secured to the base of said frame, extending therefrom horizontally, and adapted to rest normally against the outside of a window frame or sill, a removable cross bar adapted to rest horizontally against the inner casing of said window frame above the sill thereof, a pair of suspension rods, each connected to said cross bar and to the top of an adjacent standard, a pair of brace bars, each connected with the base of said rectangular frame opposite a standard and diagonally therefrom to the adjacent suspension rod, and means for securing the inner edge of said platform in position against said window sill or frame, substantially as set forth and for the purpose specified.

2. The combination with a window frame, of a platform adapted to rest against the outside of said window frame, and to extend horizontally therefrom to the base of a rectangular frame comprising a pair of vertical standards united by cross bars at top and bottom, a removable cross bar adapted to rest against the inner casing of said window frame above the sill thereof, a pair of suspension rods connected to said cross bar and to the tops of said standards respectively, a pair of brace bars diagonally uniting the base of said rectangular frame and said suspension bars respectively at opposite ends of said platform, and means for securing the inner edge of said platform against said window frame, substantially as set forth and for the purpose specified.

3. In a safety platform, the combination with a window frame, of a rectangular frame suspended therefrom comprising a pair of vertical standards united by cross bars and having top sockets, a cross bar extending horizontally across the inner surface of said window frame above the sill thereof, a platform at the bottom of said window frame, abutting thereon, and extending horizontally to the base of said rectangular frame and hinged thereto, a suspension rod opposite each end of said platform having its outer end hooked downwardly to pivotally engage the standard adjacent thereto by its socket, and its inner end detachably secured to said cross bar, a diagonal cross bar opposite each end of said platform, its lower end hinged at the base of said rectangular frame, and its upper end adapted to engage the suspension rod adjacent thereto, and means for detachably securing the inner side of said platform against said window frame, substantially as set forth and for the purpose specified.

4. The combination with a window frame, a rectangular frame suspended therefrom, a horizontal platform abutting against said window frame, and hinged to said rectangular frame, a horizontal cross bar extending across said window frame, a suspension rod detachably secured to said cross bar at each end, and pivotally engaging the upper corners respectively of said rectangular frame, a diagonal cross bar at each end pivotally engaging the lower corners respectively of said rectangular frame, and secured intermediately to the adjacent suspension rod aforesaid, and means, including bars connected with said platform and with said cross bar, to secure said platform against said window frame, substantially as set forth.

1,018,675. METER SUPPORT OR SHELF. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill., assignors to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed July 22, 1910. Serial No. 573,323. (Cl. 248—30.)



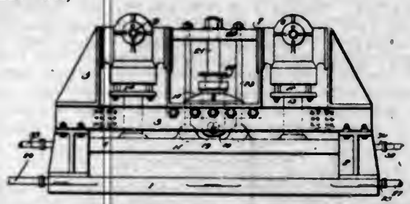
1. In a meter support, a bracket for securement against a wall and having a portion adapted to serve as an abutment for the meter to space the same from the wall, a supporting member extending outwardly from the bracket below the plane of the abutment, and a seat for the meter carried upon the supporting member and adapted for adjustment toward and from the abutment.

2. In a meter support, a bracket for securement against a wall and having an outwardly projecting portion adapted to serve as an abutment for a meter, a supporting member extending outwardly from the bracket below the plane of the abutment, a connecting member mounted upon the supporting member for adjustment toward and from the abutment, and a seat for the meter carried on the connecting member and adapted for vertical adjustment thereon.

3. In a meter support, a bracket having an opening for the passage of a securing element and carrying a penetrating point adapted to prevent a swinging movement of the bracket about the securing element and a meter supporting member projecting outwardly from said bracket and carrying means to permit adjustment of the member toward and away from the bracket, said bracket carrying an abutment against which the meter is adapted to rest.

4. In a meter support, a bracket having an opening for the passage of a securing element, and a meter supporting member extending through and projecting from opposite sides of the bracket, the inner end of the member being pointed to serve to prevent a swinging movement of the bracket about the securing element, said bracket carrying an abutment against which the meter is adapted to rest.

1,018,676. PRESS. WILLIAM J. MULVEY, Youngstown, Ohio. Filed May 23, 1911. Serial No. 629,075. (Cl. 113—56.)

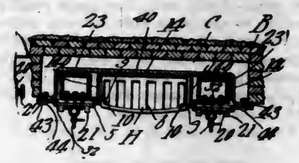


1. A press comprising a bed, a frame located thereon and consisting of standards mounted at the corners of the bed, longitudinal beams connecting the standards together, cross beams connecting the first said beams together, end standards mounted upon the end portions of the longitudinal beams and the upper ends of the first mentioned standards, a yoke mounted upon the longitudinal beams at equal distances from the end standards, cylinders supported between the side portions of the yoke and the end standards, a plate slidably mounted within the first mentioned standards, plungers slidably mounted in the cylinders and connected at their lower ends with the plate, means for admitting and for exhausting a fluid pressure element to and from the cylinders, a cross head slidably mounted in the yoke, a cylinder supported by the yoke, a plunger attached to the cross head and slidably received within the last mentioned cylinder, means for admitting and exhausting a fluid pressure element to and from the last said cylinder, and rods connected at their upper ends with the yoke and at their lower ends with the said plate.

2. A press comprising a bed, standards mounted upon the corners thereof, longitudinally disposed beams connecting said standards together, cross beams connecting the first said beams together, end standards mounted upon the end portions of the said longitudinal beams and upon the upper ends of the first-mentioned standards, a yoke supported upon the longitudinal beams midway between the end standards, cylinders supported between the side portions of the yoke and the end standards, a plate mounted for vertical movement between the first-mentioned standards, a cylinder supported by the yoke, a cross-head mounted for vertical movement in the yoke, a plunger attached to the cross-head and slidably received within the last-mentioned cylinder, and rods attached at their upper ends to the said cross head and pivotally connected at their lower ends with the said plate.

3. A press comprising a bed, standards mounted upon the corners thereof and having upon their inner faces vertically disposed ribs, longitudinal beams connecting the said standards together, cross-beams connecting the first said beams together, end standards mounted upon the end portions of the longitudinally disposed beams and the upper ends of the first-mentioned standards, a yoke supported upon the longitudinal beams midway between the end standards, a plate mounted for vertical movement between the first-mentioned standards and having in its side edges recesses which snugly receive the said ribs, cylinders supported above the plate, plungers slidably mounted in the said cylinders and attached at their lower ends to the said plate, a cylinder supported by the yoke, a cross-head slidably mounted in the yoke, a plunger attached to the cross-head and slidably received within the last-mentioned cylinder, and rods attached at their upper ends to the cross-head and at their lower ends to the said plate.

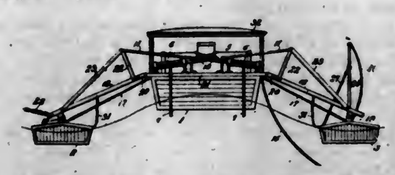
1,018,677. FIREPLACE. DURANT D. NASH, Concord, N. C. Filed Apr. 12, 1911. Serial No. 620,655. (Cl. 126—132.)



1. In a removable fire place for chimney openings, the combination with a front plate having an arch and having openings therethrough at either side of the arch opening, a grate detachably secured to the edges of the arch opening, and a lining behind the said grate having an outlet communicating with the flue, of front plates detachably secured over the said openings in the arch, a tank secured to the said plates and in rear thereof, an outlet pipe leading from each of the tanks through the corresponding plate and a spigot on the outer end of each of the said pipes.

2. In a removable fire place for chimney-openings, the combination with a front plate forming an arch and having openings in it at either side of the arch-opening, a grate within the latter, a front plate closing each of said side openings, and a tank carried by and in rear of each of said front plates; of a lining plate extending upward behind the grate and directed thence into the flue to form an outlet, its edges passing around the ends of the grate and being connected with said arch-plate between the central opening and the side openings therein, and a back plate behind all said parts, its upper end being carried forward and thence upward to support said outlet and its side edges being continued around said tanks and thence forward and connected with the outer edges of said arch-plate.

1,018,678. WAVE-MOTOR. FRANCIS MARION NELSON, Westville, Okla. Filed July 20, 1911. Serial No. 639,689. (Cl. 61—50.)



1. In a wave motor, a main float, other floats adjacent the main float and of smaller size than the main float, connecting members between the smaller floats and the main float, and flexibly joined to each, and power means on the main float joined to the connecting members between the floats for actuation thereby.

2. In a wave motor, a plurality of floats, connecting members between the floats hinged at each end to a respective float and provided with a lateral offset portion, a pump carried by one of the floats, and a connection between the pump and the lateral offset member of the respective connecting member between the floats.

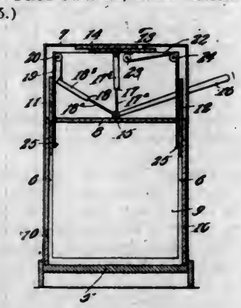
3. In a wave motor, a main float, other floats on opposite sides of the main float and spaced therefrom, connecting members between the floats hinged at the ends to the respective floats, and power means on the main float connected to and receiving motion from the respective connecting members between the floats.

4. In a wave motor, a main float provided with power generating means responsive to pressure and pressure producing means also on the main float, and auxiliary floats on opposite sides of the main float, said auxiliary floats being connected to the main float by bars hinged at the ends to the respective floats, and connections between said bars and the pressure producing means on the main float.

5. In a wave motor, a main float provided with power generating means responsive to pressure and pressure producing means also on the main float, and auxiliary floats on opposite sides of the main float, said auxiliary floats being connected to the main float by bars hinged at the ends to the respective floats and connections between said bars and the pressure producing means of the main float, the connections between the connecting bars and the auxiliary floats being at points substantially intermediate of the width of the auxiliary floats.

[Claims 6 to 11 not printed in the Gazette.]

1,018,679. DISPLAY-CASE. IRA F. OMWAKE, Fort Smith, Ark. Filed June 21, 1911. Serial No. 634,431. (Cl. 211—25.)

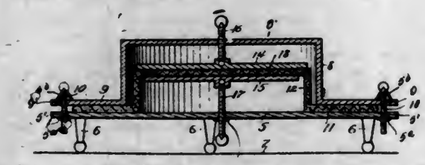


1. In a display case, the combination with a base, and end frames thereon, of a longitudinal shaft, an operating lever on said shaft, a sliding panel between the said end frames, and a telescoping arm secured to the said shaft and having its outer end pivoted to the said sliding panel.

2. In a display case, the combination with a base, and end frames thereon, of a longitudinal shaft, an operating lever on said shaft, a vertical sliding panel between the said end frames, a telescoping arm secured to the said shaft, an upper pulley wheel, and a cord passing over the said pulley and attached to the outer end of the said arm and to the said panel.

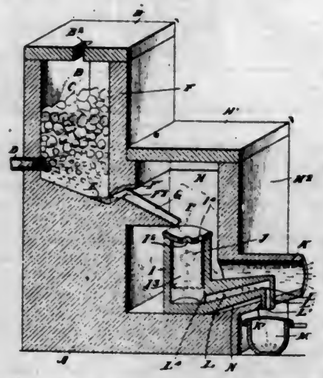
3. In a display case, the combination with a base and end frames, of a slidable top panel and a slidable vertical panel normally closing one of the upper corners of the display case, a longitudinal shaft, a vertical upstanding telescoping arm and a horizontal telescoping arm secured to the said shaft, a cord connecting the upper end of the said horizontal arm with the said vertical panel, a guide pulley for the said cord, the outer end of the said vertical arm being pivotally connected to the top panel, and an operating lever for the said shaft, whereby the said panels are simultaneously slid from the said corner to open the display case upon the said operating lever being turned.

1,018,680. HAT PRESSER AND SHAPER. CHARLES C. REITZ, Jeannette, Pa. Filed Oct. 2, 1911. Serial No. 652,359. (Cl. 223—31.)



In a hat press and shaper, a supporting base or table upon which the brim of the hat to be shaped is received, a presser member embodying a crown and a brim portion, the brim portion of said presser member coacting with the base or table to clamp the brim of the hat therebetween, clamping screws passing through the brim portion of the presser member and the supporting base or table for clamping the presser member and the base or table together, a screw threaded through the top of the crown portion of said presser member, a presser plate carried by said screw within said crown portion, a screw mounted centrally of the supporting base or table, and a presser plate carried by said screw coacting with the presser plate within the crown member for pressing the top of the hat crown.

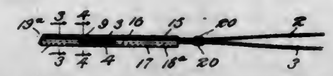
1,018,681. PROCESS OF FUSING AND PURIFYING COPPER. WALTER S. ROCKEY and HILLIARY ELDRIDGE, New York, N. Y., assignors to Metallurgical Research Company, a Corporation of Arizona. Filed Feb. 27, 1911. Serial No. 611,188. (Cl. 75—62.)



1. The process of fusing and purifying copper, consisting in first fusing the copper by the application of the direct action of the furnace gases in one chamber, then leading the copper into another chamber and heating said chamber and the copper therein to a sufficient degree to expel the greater part of the remaining gaseous impurities while the metal is protected from contact with the furnace gases used in the heating operation by a cover of inert gas, and then flowing the copper from said second chamber.

2. The process of fusing and purifying copper consisting in first fusing the copper by the heat of and in contact with combustible gases, then leading the copper from contact with said gases and beneath a cover of heated nitrogen gas and further heating the copper to gasify and drive off the remaining gaseous impurities, thereby eliminating such impurities from the copper.

1,018,682. CAR-SEAL. AUGUST CHARLES ROSENBROOK, Wall, S. D. Filed Mar. 21, 1911. Serial No. 615,836. (Cl. 70—99.)



1. A car seal comprising a housing sleeve having spaced pairs of flanges provided with laterally extending tapered wings, and a strip having slotted end portions to respectively interlock with the pairs of flanges and wings.

2. A car seal comprising a housing sleeve provided with laterally extending tapered wings at each end thereof connected by parallel flanges with said sleeve, and a strip provided with T-slotted end portions to respectively interlock with the pairs of wings and the flanges thereof.

3. A car seal comprising a housing sleeve having at each end thereof pairs of parallel flanges provided with laterally bent triangular wings, the side edges of the respective pairs of wings converging toward the adjacent end of the sleeve, and a strip provided with T-slotted end portions to respectively interlock with the pairs of wings and the flanges thereof.

4. A car seal comprising a housing sleeve having at each end thereof pairs of parallel flanges provided with laterally bent triangular wings, the side edges of the respective pairs of wings converging toward the adjacent ends of the sleeve, and a strip provided with T-slotted end portions to respectively interlock with the pairs of wings and the flanges thereof, the walls of the cross portions of each slot being deflected in opposite directions to respectively ride over and under the wings in the interlocking action.

5. A car seal comprising a housing sleeve having pairs of flanges adjacent the opposite ends thereof provided with locking wings, and a strip having T-slotted end portions to respectively interlock with the pairs of wings and the flanges thereof, one end of said strip being looped and extending through the sleeve and having the relatively free limb of its looped portion provided with an offset to space it from the locked limb thereof to form a guide for the insertion of the opposite end of the strip.

1,018,683. DUPLEX-CYLINDER PIN-TUMBLER LOCK. JOHN H. SHAW, New Haven, and FRANK I. KIMBALL, West Haven, Conn., assignors to Sargent & Co., New Haven, Conn., a Corporation. Filed Nov. 24, 1911. Serial No. 662,123. (Cl. 70—93.)

1. In a pin-tumbler cylinder lock, the combination with the cylinder and key-plug thereof, of a cylinder-extension for being fastened to the rear end of the said cylinder, a supplemental plug rotatably mounted in the said cylinder-extension, a standard bit carried by the said supplemental plug, and a coupler interposed between the supplemental plug and the key-plug.

2. In a duplex pin-tumbler cylinder lock, the combination with the cylinder, key-plug and eccentric plug thereof, of a cylinder-extension for being fastened to the rear end of the said cylinder, a supplemental plug rotatably mounted in the said cylinder-extension, a bit carried by the said supplemental plug, and a sliding coupler interposed between the said key-plug and the supplemental plug and sliding to compensate for the changes of alinement due to the rotation of the eccentric plug.

3. In a duplex pin-tumbler cylinder-lock, the combination with the cylinder thereof, of an eccentric plug mounted in the said cylinder for rotation therein, a key-plug eccentrically mounted in the said eccentric plug for rotation therein, a cylinder-extension for being fastened to the rear end of the said cylinder, a supplemental plug rotatably mounted in the said cylinder-extension, a standard bit secured to the said supplemental plug, and a sliding coupler interposed between the said key-plug and the said supplemental key-plug and sliding to compensate for their changes of alinement due to the rotation of the eccentric plug.

4. In a duplex pin-tumbler cylinder lock, the combination with the cylinder, eccentric plug and key-plug thereof, the key-plug being provided at its inner end with a transversely arranged groove, of a series of cylinder-extensions differentiated in length but alike at their ends, a supplemental-plug mounted in each of the said extensions, formed with a coupling groove and conformed in length to the length of the extension in which it is mounted, a standard bit attached to each of the said supplemental plugs, and a sliding coupler entering the said grooves of the key-plug and supplemental plug and sliding to equalize the separation or non-alinement of the centers of the key-plug and eccentric plug due to rotating the latter.

1,018,684. COFFEE-POT. ARTHUR A. SMITH, Cedar Vale, Kans. Filed June 3, 1911. Serial No. 631,150. (Cl. 53—3.)

In combination with a pot having closure sections hingedly connected at the opposite edge portions of its top, a foraminous container, means for supporting the container upon the bottom of the pot, a rod having at its lower end a foraminous head adapted to fit snugly within the container, a closure fixed to the rod and having stud and

slot connection with the container, the head and the closure being spaced to that extent that when the head is against the bottom of the container the closure fits snugly against the upper edge thereof.

1,018,685. PILLOW. SAMUEL JERMIAH SMITH, Truckee, Cal. Filed Dec. 2, 1911. Serial No. 663,569. (Cl. 5—15.)

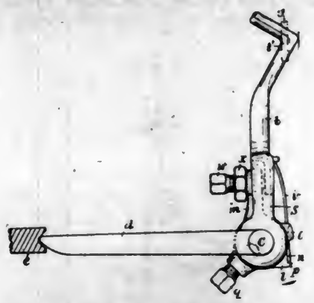
1. A device of the character described comprising a frame consisting of two similar frame members each formed from a single length of wire bent into rectangular form, a sheet metal plate extending between and connecting the ends of each of the frame members, bowed leaf springs secured to the frame members and disposed in opposed relation, the central portions of said springs engaging upon each other, and a removable fabric casing for said frame.

2. A device of the character described comprising a frame consisting of two similar frame members each formed from a length of wire bent into elongated rectangular form, a sheet metal plate centrally arranged between the ends of said frame members and connecting the same, a pair of bowed leaf springs connecting the longitudinal portions of each of the frame members, the springs of the respective frame members being disposed in opposed relation and having their central portions engaged upon each other, a connecting rod rigidly connecting the springs of one of said members to the springs of the other member, and a sectional fabric casing to removably receive said frame.

1,018,686. PROTECTING MECHANISM FOR LOOMS. HENRY TALKS, Astoria, N. Y. Filed Sept. 20, 1911. Serial No. 650,404. (Cl. 139—51.)

1. A shuttle-controlled loom-controlling mechanism consisting of a rocking member having a projection, an arm member arranged on, and rotative around the rocking axis of, said rocking member, a screw for varying the angular relation of the parts constituting the projection and arm member and tapped into one and bearing against the other of said parts, and means for maintaining the screw

in contact with that one of said parts against which it bears, substantially as described.



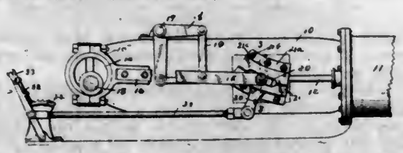
2. A shuttle-controlled loom-controlling mechanism consisting of a rocking member having a projection, an arm member arranged on, and rotative around the rocking axis of, said rocking member, a screw for varying the angular relation of the parts constituting the projection and arm member and tapped into one and bearing against the other of said parts, and a spring for maintaining the screw in contact with that one of said parts against which it bears, substantially as described.

3. In a shuttle-controlled loom-controlling mechanism, a rocking structure comprising the dagger carrying rock-shaft, a collar fixed on the shaft and having a projection, a "feeling" arm rotatively arranged on the shaft, an adjusting screw for determining the angular relation of the arm and projection and tapped into one and bearing against the other of them, and a spring tending to turn the arm relatively to the collar and carried by one and engaging the other of them, said spring holding the projection against the screw, substantially as described.

1,018,687. SEAL. NELSON H. TUNKS, Lima, Ohio. Filed Oct. 31, 1910. Serial No. 589,912. (Cl. 70—99.)

A seal formed of a single piece of sheet metal, comprising a narrow strip, an end member thereon folded over said strip, barbs formed on said end member, two opposite side members formed on said strip adjacent to said end member and folded over upon the same, the end of one of the side members being bent outwardly away from said strip and the end of the other side member being bent outwardly away from said strip and forming at its outer end a U-shaped slot for receiving the end of the other side member, the other end of said strip being provided with opposite notches, the portion of the strip beyond the notches forming a head, said head being designed to be received between said end member and said strip so that said barbs may enter said notches and engage the sides of said head.

1,018,688. VALVE-GEAR FOR ENGINES. FRANZ J. WOOD, Des Moines, Iowa. Filed July 30, 1908. Serial No. 446,093. (Cl. 121—99.)



1. In a device of the class described, an engine shaft, a connecting arm, means for imparting a rotary movement to one end of the connecting arm by said engine shaft, a slide block pivoted to the other end of the arm, a reverse block pivotally supported and provided with a segmental guideway, said guideway, being substantially horizontal when the reverse block is at the center of its movement, the central point of which guideway is in line with the pivotal center of the reverse block, means for tilting the reverse block, a valve rod, and means operated by said connecting arm for actuating the valve rod.

2. In a device of the class described, the combination of an engine shaft, an eccentric thereon, an eccentric strap on the eccentric, a connecting arm fixed to the eccentric strap, a valve stem, a reverse block pivotally supported and having a passage-way extended through it, and a guide-way formed therein, a slide-block mounted in the guide-way, a pin extended through the slide-block, said connecting arm having a forked end, said forked end being attached to said pin on opposite sides of the slide-block, said valve stem being also extended through the passage-way of the reverse block, a bell crank, a link pivoted to one end thereof and to the connecting arm, the other end of the bell crank being attached to the valve stem.

3. In a device of the class described, the combination of an engine shaft, an eccentric thereon, an eccentric strap on the eccentric, a connecting arm fixed to the eccentric strap, a stationary support, a cylindrical bearing on the stationary support, a cylindrical journal within the bearing, means for detachably securing the cylindrical journal to the cylindrical bearing, a plate carried by the cylindrical journal, a second plate bolted to it and formed with a segmental guide-way, said plates being provided with segmental slots, an arm projecting downwardly from the latter plate, a slide-block in said guide-way having the connecting arm pivoted to it, said cylindrical bearing being of a diameter at least as great as the length of stroke of the slide-block, means attached to said arm for adjusting it to various positions, a bell crank lever, a link pivoted to one end of the bell crank lever and to the connecting arm, and a valve stem connected to the other end of the lever.

4. In a device of the class described, the combination with an engine shaft and a valve stem, of an eccentric on the engine shaft, an eccentric strap on the eccentric, a connecting arm attached thereto, a pivotally supported reverse block, a slide-block mounted on the reverse block and having said connecting arm attached thereto, a link pivoted to the connecting arm, a bell-crank lever having said link pivoted to it, the other end of the bell crank lever being connected to the valve stem, and means for adjusting the upper portion of the reverse block relative to the lower portion to take up wear between the reverse block and the slide block.

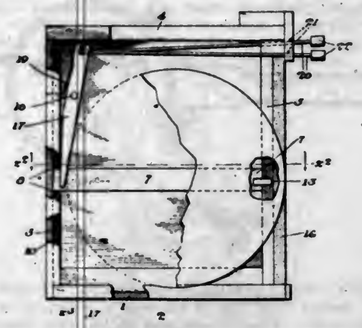
5. In a device of the class described, an engine shaft, a connecting arm, means for imparting a rotary movement to one end of said connecting arm by said engine shaft, a block pivoted to the other end of the arm, a reverse block pivotally supported and having said block on the connecting arm mounted in it, the block on the connecting arm being guided by the reverse block to move in the arc of a circle, and said reverse block being pivoted on a center in line with the center of said arc, a link connected to the connecting rod, a lever connected to the link, a valve rod connected to the lever and means for tilting the reverse block.

[Claim 6 not printed in the Gazette.]

1,018,689. CASE FOR DISK RECORDS FOR PHONOGRAPHS. FREDERICK W. WOOD, Los Angeles, Cal. Filed Nov. 6, 1911. Serial No. 658,910. (Cl. 211—16.)

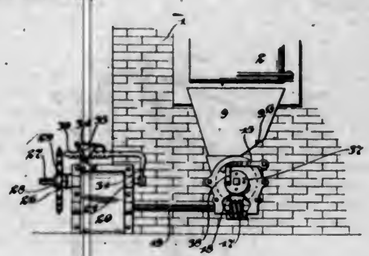
1. In a record case, the combination with vertical front bars spaced apart to form slots, of horizontal spacing bars extending in the plane of said front bars, and connected to said front bars at their forward ends, and means for supporting the rear ends of said horizontal spacing bars, each horizontal bar and the corresponding vertical bar having opposite slots and being connected by a fastener extending in said slots, said fastener being bent in U-shape to engage said bars.

2. In a record case, the combination with vertical front bars spaced apart to form slots, of horizontal spacing bars extending in the plane of said front bars, and connected to said front bars at their forward ends, and means for supporting the rear ends of said horizontal spacing



bars, each horizontal bar and the corresponding vertical bar having opposite slots and being connected by a fastener extending in said slots, said fastener being bent in U-shape to engage said bars, said fastener being embedded in said bars, so as to lie flush therewith.

1,018,690. AUTOMATIC STOKER. DAVID J. AMES, Austin, Minn. Filed Aug. 6, 1910. Serial No. 575,951. (Cl. 110—45.)

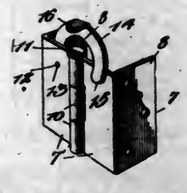


1. The combination with a furnace and a grate therein, of a feed spout leading into said furnace and opening upward through the bottom of said grate, and a feed screw rotatively mounted in said feed spout and provided at its delivery or inner end with flat contiguous and connected oblique blade sections, the adjacent oblique blade sections being reversely inclined, and the said oblique sections being arranged to work in the space through which the fuel is delivered upward from the said feed spout through said grate.

2. The combination with a furnace and a grate therein, of a feed spout leading into said furnace and opening upward through the bottom of said grate, and a feed screw rotatively mounted in said feed spout, the spiral blade of which screw throughout the main body portion thereof having a progressively increasing pitch in the direction of the feed of the material into the furnace, the working face of said blade being concave in cross section, and the said feed screw at the point of delivery of the fuel upward through said grate being provided with contiguous and connected flat blade sections, the adjacent members of which are inclined in reverse directions, and the said spiral and flat blade sections being cast integral with said feed screw and the first of said flat blade sections being integrally united with the spiral blade of said screw.

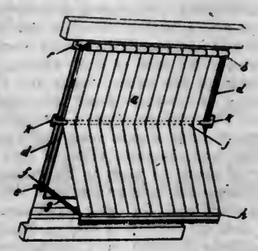
3. The combination with a furnace and a grate therein, said grate having rocking sections, of a feed spout extending into said furnace and arranged to deliver the fuel upward from the bottom of said grate, a feed screw working in said feed spout, a power driven variable speed transmission mechanism for driving said feed screw, and connections from the said variable speed mechanism for oscillating the said rocking grate sections, the said grate operating connections being adjustable to vary the extent of vibration of the rocking grate sections independently of the adjustments of the variable speed mechanism.

1,018,691. LOCK-HINGE. FRIEDERICH WM. BECKER, New Athens, Ill. Filed May 11, 1911. Serial No. 626,433. (Cl. 16—110.)



The combination with the two leaves of a hinge; of a locking device therefor, comprising a crescent shaped plate of sheet metal twisted to bring the two ends into obliquely disposed planes, means to pivotally connect one end of the plate and one of the hinge leaves, with the medial portion of the plate extending in an arch over the hinge pintle and the free end of the crescent engaging on the opposite side of the second hinge leaf, and a finger piece angularly extending from said medial portion of the plate.

1,018,692. AWNING-FIXTURE. FREDERICK O. BERG, Spokane, Wash. Filed Dec. 24, 1910. Serial No. 599,154. (Cl. 156—15.)



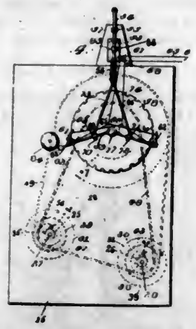
1. The combination with an awning web of means for rolling and unrolling the web, means for extending outwardly the lower portion of the web when unrolled, a rod attached transversely to the web between its ends and means for engaging the rod and holding the upper portion of the web in a vertical position when the lower portion is extended.

2. The combination with an awning web of a spring roller mounted at the upper end of the web, an outwardly extensible frame slidably mounted upon vertical rods, and means for holding the upper portion of the web in a vertical position when the lower portion is extended, consisting of a rod attached transversely to the web between its ends, and brackets engaging the ends of the rod when the awning is unrolled and the lower portion extended.

3. The combination with an awning web having means for rolling and unrolling the web, and for extending outwardly the lower portion of the web when unrolled, of a rod attached transversely to the web between its ends, slidably engaging vertical rods.

4. The combination with an awning web having means for rolling and unrolling the web, and for extending outwardly the lower portion of the web, of a rod attached transversely to the web between its ends, vertical rods engaging the ends of the transverse rod when the web is unrolled, and means to prevent disengagement of the transverse and vertical rods.

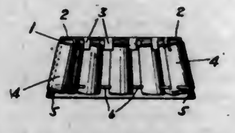
1,018,693. STREET-INDICATOR. WILLIAM C. BRIDGES, Wapello, Iowa. Filed Dec. 10, 1910. Serial No. 596,636. (Cl. 40—87.)



1. In a street and station indicator, an operating drum, winding drums, a belt having names of the streets or stations and connected to said winding drums and bearing over said operating drum, a rotatable member for each of said winding drums and frictionally engaging the same, means for rotating the rotatable member, a toothed wheel rotative with said operating drum, two pivoted arms, a pawl pivoted intermediate its ends to each of said arms and adapted to engage said wheel from opposite sides, a cord connecting one of said pawls above its pivot to the other pawl below its pivot, and another cord connecting said first mentioned pawl below its pivot with the other pawl above its pivot, and a pull member connected to each of said cords.

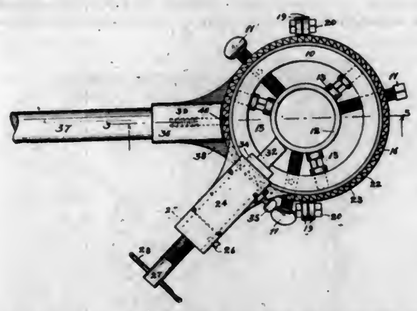
2. In a street and station indicator, an inclosing casing, an operating drum for rotation in said casing, two winding drums mounted for rotation in said casing, a belt having the names of streets or stations and connected to said winding drums and bearing over said operating drum, a rotatable member for each of said winding drums and frictionally engaging the same, means for rotating the rotatable member, a toothed wheel rotative with said operating drum, two pivoted arms, a pawl pivoted intermediate its ends to each of said arms and adapted to engage said wheel from opposite sides, a cord connecting one of said pawls above its pivot to the other pawl below its pivot, another cord connecting said first-mentioned pawl below its pivot with the other pawl above its pivot, a spring-controlled rod carried by said casing, independent connecting members between said spring-controlled rod and said arms, a pull cord connected to said spring-controlled rod, and other pull cords connected respectively to said pawl-connecting cords.

1,018,694. ROLLER-CAGE. GEORGE H. CARPENTER, Philadelphia, Pa., assignor to Standard Roller Bearing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Aug. 30, 1911. Serial No. 646,816. (Cl. 64—62.)



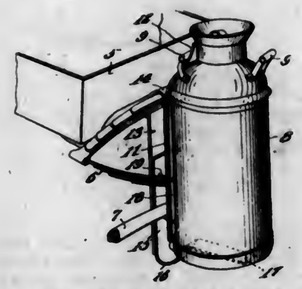
A roller cage consisting of a sheet of metal of the form of an axially slotted conic frustum having at one end a diametrically extending inward flange provided with projecting fingers capable of assuming substantial parallelism with the sheet and having at the other end an inturned fold provided with diametrically ranging headed fingers; and the walls of the slots and the side walls of the fingers constituting roller pockets, substantially as described.

1,018,695. PIPE-CUTTER. WALTER H. E. CHARPIER and EDWARD CHARPIER, Chicago, Ill. Filed Mar. 3, 1911. Serial No. 612,045. (Cl. 81—191.)



A pipe cutter including in combination a hollow pipe holder having near one of its ends a series of radially disposed screw threaded openings on its inner portion, a member having a screw-threaded socket in one of its ends and its other end screw-threaded and located in each of said openings of the pipe holder, a screw-threaded bolt located in the screw-threaded socket of each of said members, and a series of screw bolts extended radially through the holder near its other end.

1,018,696. CAN-CARRIER. CHARLES H. CRONK, Curtis, Nebr. Filed Sept. 22, 1911. Serial No. 650,810. (Cl. 224—29.)



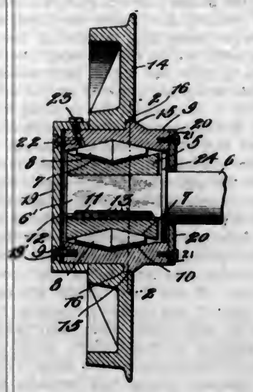
1. A can carrier comprising a pair of parallel members, the outer member being curved outward at its upper end to form a handle engaging arm, means for securing the members to the axle of a vehicle over the elliptical spring, and a resilient can supporting foot bent from the lower end of the inner member to pass below the outer member.

2. A can carrier comprising an outer upright bar, and inner upright bar, curved outward at its upper end and secured to the intermediate portion of the outer bar, the upper end of the outer bar being curved outwardly to form an upper arm, a bar lying partially on the lower end of the inner bar and curved outward below the outer bar and horizontal at its free end, and means for securing said upright bars over the axle tree and elliptical spring of a vehicle.

1,018,697. ROLLER-BEARING. CHARLES E. DAVIS, Denver, Colo. Filed June 7, 1911. Serial No. 631,751. (Cl. 64—39.)

1. The combination with an axle and a wheel mounted thereon, of a bearing for said wheel comprising a body member having a rectangular bore, the end of said axle being squared to be received in said bore, said body member being formed with a peripheral raceway having inclined faces, a case formed in two sections provided with a raceway, said case sections being adapted to be arranged upon the body

member, conical bearing rollers arranged in the raceways of the body member and case, one face of the squared portion of the axle having a longitudinal recess therein, antifriction rollers arranged in said recess to eliminate friction between the axle and the body member in the longitudinal thrust of the axle, means for rigidly securing the case sections in the hub of the vehicle wheel for rotation therewith, and additional means for uniting said case sections and preventing their relative movement.



2. The combination with an axle and a wheel mounted thereon, of a bearing for said wheel comprising a body member provided with a bore to receive the end of the axle, said axle being longitudinally movable in said member, said body member being provided with a raceway in its periphery, a case formed in two sections adapted to be arranged upon the body member, said case sections being provided upon their inner faces with a raceway opposed to the raceway of the body member, bearing rollers arranged in the raceways of the body member and case, said axle being provided with a longitudinal recess in its end, the longitudinal edges of said recesses being outwardly inclined, and a plurality of anti-friction rollers arranged in said recess and having their ends spaced from the inclined edges of the recess to reduce friction upon said rollers to a minimum.

1,018,698. FIRE-NET. CLAUDE H. DENNIS, Jackson, Mich. Filed May 18, 1911. Serial No. 627,940. (Cl. 227—6.)

1. A fire escape comprising a framework consisting of a number of posts, a circular sheet of fabric having a central opening and mounted on said posts, said sheet of fabric being inclined downward toward said central opening, brace connections connecting the edge of said fabric at said central opening with said posts, and a flexible chute secured at its upper end to the edge of said central opening and extending through the side of the apparatus.

2. A fire escape comprising a framework, a central sheet of fabric having a central opening and mounted on the top of said framework, brace connections connecting the edge of said fabric about said opening with said framework, and a flexible chute connected at its upper end to the edge of said opening and extending to the side of the apparatus and formed at its outer end with a bumper.

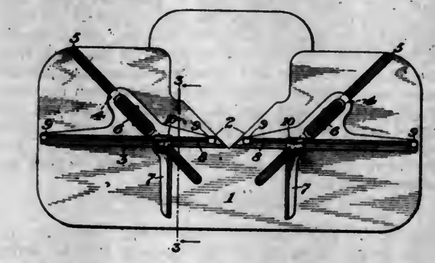
3. A fire escape comprising a circular sheet of fabric having a central opening, a number of posts supporting said circular sheet of fabric, and a curved flexible chute located beneath said sheet of fabric and connected at its upper end to the edge of said fabric at said opening and extending to the side of said apparatus and upward and secured in position to form a bumper.

4. A fire escape comprising a plurality of posts, a circular sheet of fabric having a central opening and secured to a support by said posts, said sheet of fabric inclining downward toward its central opening, a flexible chute secured at its upper end to said sheet of fabric beneath said opening and curving downward and extending laterally to and secured to a pair of posts and curved transverse slats located beneath said chute and secured at the ends thereto and spaced therefrom between the ends.

5. A fire escape comprising a plurality of posts, each having a hook at its upper end, an inwardly inclined circular sheet of fabric having a central opening, straps secured at intervals to the outer edge of said sheet of fabric, each of said straps having a ring engaging a hook on a post, a ring located beneath said fabric, and secured thereto adjacent to the edge of the central opening therein, brace bars detachably engaging at one end with said ring and at the other end with a post, guy ropes connecting said posts with said ring, and a flexible chute detachably connected at its upper end to said ring and detachably connected at its other end to a pair of posts.

[Claims 6 to 9 not printed in the Gazette.]

1,018,699. MITERING-GAGE FOR CORNER-CUTTING MACHINES. HENRY DE SMITH, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 8, 1910. Serial No. 580,989. (Cl. 164—59.)



1. A mitering gage for paper board cutting machines, comprising two gage members coöperative in positioning a sheet, one of which members has a combined sliding and pivotal connection with the other.

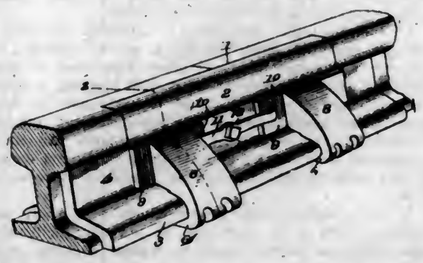
2. A mitering gage for paper board cutting machines, comprising two gage members coöperative in positioning a sheet, one of said members having an attached rod and the other member having a combined sliding and pivotal connection with said rod.

3. In a paper board cutting machine, the combination with the work table thereof, of a mitering gage adjustably mounted on said table comprising two gage members cooperative in positioning a sheet, one of said members having an attached rod and the other member having a combined sliding and pivotal connection with said rod whereby it may be adjustable in a direction parallel with the table and also in a direction upwardly from the table.

1,018,700. RAIL-JOINT. LOUIS M. DILGER, Canton, Ohio. Filed Oct. 9, 1911. Serial No. 653,648. (Cl. 238—3.)

1. The combination with the adjoining ends of rails, of angle bars applied to the opposite sides of the rails at the joint, the base flanges of the angle bars and rails

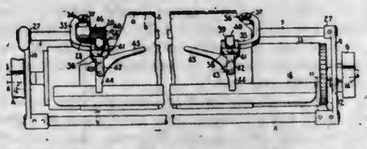
being formed with recesses, chairs extending transversely underneath the rails and formed with clamping arms extending upwardly through the said recesses on opposite sides of the webs of the angle bars, wedges interposed between one set of clamping arms and the adjoining side of the adjacent angle bar, and means engaging said wedges for preventing the accidental withdrawal thereof.



2. The combination with the adjoining ends of rails, of angle bars applied to the opposite sides of the rails at the joint, the base flanges of the angle bars and rails being formed with recesses, chairs extending underneath the rails and formed with clamping arms projecting upwardly through said recesses, one pair of arms abutting against the web portion of one of the angle bars, wedges interposed between the other set of clamping arms and the other angle bar, the wedges being formed on their outer faces with notches, a bolt passing transversely through the angle bars and the interposed portion of the rails, and a locking spring secured on said pawl and adapted to snap into the notches of the wedges.

3. The combination with the adjoining ends of rails, the same being recessed on one side, of angle bars applied to the rails at the opposite sides thereof, one of said angle bars being formed with a rounded upper edge filling the recess of the rails, the base flanges of the angle bars and rails being formed with recesses, chairs extending underneath the rails and formed with clamping arms extending up through said recesses, one set of arms engaging one angle bar, wedges interposed between the other set of clamping bars and the adjoining angle bar, the wedges being formed in their outer faces with notches and a spring secured to the last named angle bar and adapted to spring into said notches, whereby to hold the wedges in place.

1,018,701. TYPE-WRITING MACHINE. WILLIAM ALLAN DYER, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed June 1, 1909. Serial No. 499,375. (Cl. 197—139.)



1. In a typewriting machine, the combination with the platen, of a paper finger contrivance comprising a support and a paper guide partly surrounding the platen and coöperative therewith at both sides of the printing line, said paper guide being pivoted on said support and inwardly off-set from its pivot toward the middle of the platen and said paper guide being movable independently of its support outwardly away from the middle of the platen and lengthwise of the platen.

2. In a typewriting machine, the combination with the platen, of a paper finger contrivance comprising a support and a paper guide partly surrounding the platen and coöperative therewith at both sides of the printing line, said paper guide being pivoted on said support and inwardly off-set from its pivot toward the middle of the platen and being movable independently of said support outwardly away from the middle of the platen and lengthwise thereof, and means normally preventing positive outward movement of said paper finger lengthwise of the platen.

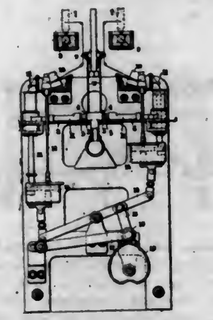
3. In a front-strike typewriting machine, the combination with the platen and a paper plate extending lengthwise of the printing line below the same, of a paper finger contrivance comprising a guiding portion which is pivotally mounted above the printing line and which extends partly around the platen and across the printing line to guide the paper after it leaves said paper plate and also after it has passed the printing line, said paper guide being swingable on its support upward above the printing line and away from the surface of the platen and also outward laterally lengthwise of the platen and so as to free the side edge of the paper, thereby enabling the paper to be pulled or drawn completely away from the platen surface to expose an underlying sheet.

4. In a front-strike typewriting machine, the combination with a platen and a paper plate arranged parallel with the printing line and below the same, of a paper finger arranged at the front of the platen and settable lengthwise thereof and which coöperates with the paper after it leaves said paper plate, said paper finger comprising a guiding portion which coöperates with the platen to guide paper around the same, said guiding portion being movable upward and laterally away from the paper plate to a position such that it stands outside a vertical plane passed through the adjacent edge of the paper, the set position of the paper finger remaining unchanged during this movement of said guiding portion of said paper finger.

5. In a typewriting machine, the combination with a platen, of a pair of pivotally mounted paper fingers comprising supports and inwardly off-set guiding fingers pivoted to said supports and which may be swung laterally away from each other.

[Claims 6 to 46 not printed in the Gazette.]

1,018,702. SPINNING, DOUBLING, AND TWISTING MACHINE. SEBASTIAN ZIANI DE FERRANTI, Grindleford Bridge, England. Filed Oct. 15, 1910. Serial No. 587,247. (Cl. 118—12.)



1. In combination in a thread-twisting machine, a rotatable twisting element; a fluid motor driving the same; a duct conveying working fluid to said motor; a valve controlling said duct and automatic means for closing said valve on failure of a thread.

2. In combination in a thread-twisting machine, a plurality of twisting units; motors driving the same individually, and automatic means including means for controlling supply of motive agent to said motors for stopping the twisting action of any particular unit alone on failure of a corresponding thread.

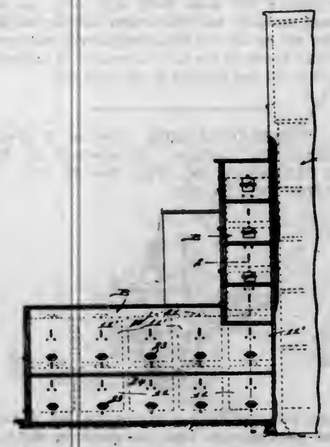
3. In combination in a thread-twisting machine, a plurality of twisting elements; motors driving the same individually; thread-transfer means driven by said twisting elements and automatic means including means for controlling supply of motive agent to said motors for stopping any particular transfer means alone on failure of a corresponding thread.

4. In combination in a thread-twisting machine, a plurality of twisting elements; fluid motors driving the same individually; a main fluid supply; branch pipes leading therefrom to said individual motors; valve means on each of said branch pipes and automatic means for closing any particular valve means on failure of a corresponding thread.

5. In combination in a thread-twisting machine, a twisting unit comprising a leading and a lagging part; turbine means driving said unit, said turbine means being the sole twisting motor agent of said unit; a duct supplying working fluid to said turbine means; a valve controlling said duct and automatic means for closing said valve on failure of a corresponding thread.

[Claims 6 and 7 not printed in the Gazette.]

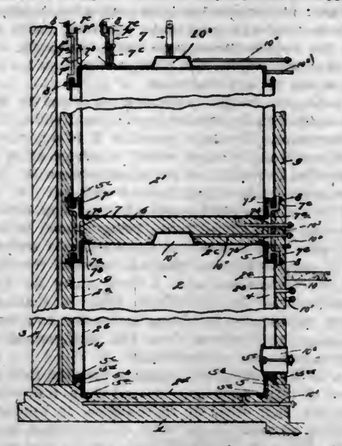
1,018,703. BUILDING FOR COOLING AND STORING BEER. WILHELM GRIESSER, Denver, Colo. Filed Apr. 12, 1911. Serial No. 620,613. (Cl. 62—11.)



A storage building comprising a series of superposed tanks each provided with continuously jacketed sides adapted to permit the circulation of a cooling medium therethrough, and a monolithic casing of cementitious material completely inclosing each tank, the side walls of the casing of each tank fitting directly against those of that tank and being continued integrally upward to form the side walls of the next higher tank, and the roof of the casing of each tank extending directly across the top of that tank and constituting the floor upon which the bottom of the said next higher tank directly rests and is supported.

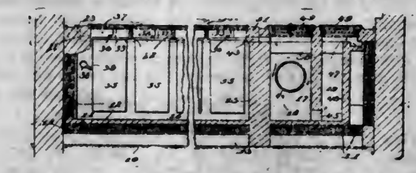
1,018,704. COOLING AND STORAGE TANKS FOR BEER. WILHELM GRIESSER, Denver, Colo. Filed Apr. 12, 1911. Serial No. 620,614. (Cl. 62—2.)

1. The combination of a pair of superposed tanks each consisting of inner and outer shells spaced apart to produce an interposed chamber surrounding the first-named shell and adapted to receive a refrigerating medium, upper and lower heads, and upper and lower rings connecting the corresponding edges of said shells and having portions thereof engaging and secured to said heads; and a series of interposed brackets disposed directly between and rigidly secured to the upper ring of the lower tank and the lower ring of the upper tank, for supporting said upper tank directly upon said upper ring.



2. The combination of a pair of superposed tanks each consisting of inner and outer shells spaced apart to produce an interposed chamber surrounding the first-named shell and adapted to receive a refrigerating medium, upper and lower heads; and upper and lower rings connecting the corresponding edges of said shells and having portions thereof engaging and secured to said heads; and a series of interposed brackets disposed directly between the mutually-adjacent upper ring of the lower tank and the lower ring of the upper tank, for supporting said upper tank directly from said upper ring, said mutually-adjacent rings being formed with flanges and the ends of said brackets with coöperating flanges arranged to interlock with the corresponding first-named flanges.

1,018,705. ICE-MAKING APPARATUS. WILHELM GRIESSER, Denver, Colo. Filed Apr. 12, 1911. Serial No. 620,615. (Cl. 62—6.)



1. In an ice making apparatus, the combination of successively-communicating freezing, cooling and discharging tanks through which a refrigerating medium is adapted to circulate; a force pump; a pipe leading from the pump into the first-named tank for supplying said medium thereto; means arranged within the second-named tank for cooling said medium when the same flows thereinto from said first-named tank; an inclined discharge member arranged within the third-named tank, into which member the cooled medium is adapted to flow from said second-named tank; and a pipe communication between the lower end of said member and said pump for returning said medium from the former to the latter for re-circulation.

2. In an ice making apparatus, a concrete structure having substantially-parallel partitions dividing the same into successively arranged separate freezing, cooling and discharging tanks through which a refrigerating medium is adapted to circulate, the partition between the first- and second-named tanks being formed adjacent its top edge

with a series of openings, and the partition between the second- and third-named tanks being formed adjacent its bottom edge with a series of openings, said series constituting a means of communication between the respective tanks; in combination with means for supplying said medium to the first-named tank; a cooling device arranged within the second-named tank; and means for discharging said medium from the third-named tank to said supplying means for re-circulation.

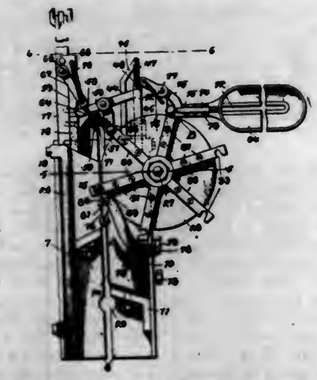
3. In an ice making apparatus, a concrete structure having substantially-parallel partitions dividing the same into successively arranged separate freezing, cooling and discharging tanks through which a refrigerating medium is adapted to circulate, the partition between the first- and second-named tanks being formed adjacent its top edge with a series of openings, and the partition between the second- and third-named tanks being formed adjacent its bottom edge with a series of openings, said series constituting a means of communication between the respective tanks; in combination with a force pump for supplying said medium to the first-named tank; a cooling device arranged within the second-named tank; and means for discharging said medium from the third-named tank to said force pump for re-circulation.

4. In an ice making apparatus, a freezing tank; a gridlike roof therefor comprising spaced main and cross-beams intersecting each other at right-angles, to produce series of rows of compartments, each compartment having its opposite side walls provided with alining bayonet slots; and a freezing receptacle located within each compartment and having its top provided with a bar whose ends are engaged and supported in the adjacent slots.

5. In an ice making apparatus, a freezing tank; a series of spaced parallel beams extending across the top thereof, each pair of beams having their opposite side faces provided with alined alternately-arranged seats and bayonet slots; a series of connecting blocks arranged at right-angles to said beams and having their ends supported in said seats, said blocks and beams coöperating to produce series of rows of compartments; and a freezing receptacle located within each compartment and having its top provided with a bar whose ends are engaged and supported in the adjacent slots.

[Claim 6 not printed in the Gazette.]

1,018,706. BOLT THREADING AND SLOTTING MECHANISM. GEORGE A. J. HAINSWORTH, Newark, Ohio. Filed Feb. 28, 1911. Serial No. 611,367. (Cl. 10—2.)



1. In a machine of the character described, threading mechanism, a rotatable bolt carrying table, means for intermittently rotating said table, means for successively feeding a plurality of bolts to said table, means automatically actuated independently of the feeding mechanism to successively slot the bolt heads, and additional means for successively removing the bolts from the table in its rotation to be acted upon by said threading mechanism.

2. In a machine of the character described, a bolt threading mechanism including stationary and movable threading dies, a bolt carrying table, means for rotating said table in the non-effective movement of said movable die, means actuated by the movable die for slotting the head of a bolt carried by the table, and additional means for directing the bolts from said table between the threading dies.

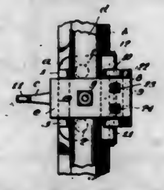
3. In a machine of the character described, a stationary die, a movable die, and means for reciprocating the same, said movable die being arranged in opposed relation to the stationary die, a rotatably mounted bolt carrying table, means for intermittently rotating said table to successively position the bolts carried thereby for engagement by said movable die, and means automatically operated by the reciprocating die in its movement in one direction to slot the head of one of the other bolts carried by the table.

4. In a machine of the character described, stationary and movable threading dies, a rotatable table, bolt receiving means arranged on said table, means for intermittently rotating said table, means automatically actuated by the movable die to slot the head of one of the bolts carried by the table, and a stationary element to engage the bolt heads and remove the same from the table in its rotation for engagement in the threading dies.

5. In a machine of the character described, stationary and movable dies, a rotatable table, bolt carrying arms arranged on said table, means automatically operated in the movement of said movable die in one direction to rotate said table, stationary means to successively engage the bolts and remove the same from said arms for engagement by said movable die, and means automatically operated by said die in its bolt threading movement to successively slot the heads of the bolts arranged in said arms.

[Claims 6 to 26 not printed in the Gazette.]

1,018,707. HORSE-DETACHER. GEORGE R. HARRISON, Philadelphia, Pa., assignor of one-half to William Nothaft, Philadelphia, Pa. Filed Dec. 26, 1911. Serial No. 667,678. (Cl. 21—75.)



1. A horse detacher having, in combination, a main clip constructed with bottom and top portions and a back portion, bolts interacting with said bottom and top portions, a whiffletree attachment constructed with front and back spring portions adapted to interlock with said main clip, and a lever pivoted to said main clip at its back and adapted to interact with said whiffletree attachment to disengage and separate the same from said main clip and thereby detach the whiffletree.

2. A horse detacher having, in combination, a main clip constructed with bottom and top portions and a back portion, said bottom portion having an undercut front edge, bolts interacting with said bottom and top portions, a whiffletree attachment constructed with front and back spring portions adapted to interlock with said main clip at its back and pivotally at said undercut edge, and a lever pivoted to said main clip at its back and adapted to interact with said whiffletree attachment to disengage and separate the same from said main clip and thereby detach the whiffletree.

3. A horse detacher having, in combination, a main clip constructed with a back portion provided with a locking projection beveled at top, a whiffletree attachment constructed with front and back spring portions, the latter provided with a catch-hole adapted to interlock with said projection, and a lever pivoted to said main clip and having a flat portion to interact with said back spring portion to disengage the same from said locking projection.

4. A horse detacher having, in combination, a main clip constructed with a back portion provided with a projection beveled at bottom carrying a locking projection beveled at top, a whiffletree attachment constructed with front and back spring portions, the latter provided with a catch-hole adapted to interlock with said projection, and a lever pivoted to said main clip and having a flat portion cut away to interact with the projection first named to resist lateral displacement, an adjoining part of said flat portion being adapted to interact with said back spring portion to disengage the same from said locking projection.

5. A horse detacher having, in combination, a main clip constructed with bottom and top portions and a back portion, bolts interacting with said bottom and top portions; a whiffletree attachment composed of an outer spring clip adapted to interlock with said main clip, and an inner piece; a vertical pivot bolt for the whiffletree extending upward through said inner piece and the top of said outer clip and constructed with a beveled head at its lower end; and a lever pivoted to said main clip and adapted to interact with said whiffletree attachment to disengage the same from said main clip and thereby detach the whiffletree; the top of said main clip being recessed to interact with said beveled head of said pivot bolt to resist draft strains, substantially as hereinbefore specified.

1,018,708. SHOE-PROTECTOR. JOHN R. HETRICK, Lompoc, Cal. Filed Dec. 14, 1910. Serial No. 597,228. (Cl. 36—62.)

1. A shoe protector including a flexible body portion, a sole-strap depending from the lower end of the body portion, spurs depending from the sole-strap, an upper strap formed upon the end of the sole-strap, a buckle carried by the body to adjustably receive the outer end of the upper strap, a heel-strap pivoted upon the outer end of the sole-strap, and a second buckle carried by the body for receiving the extremity of the heel-strap.

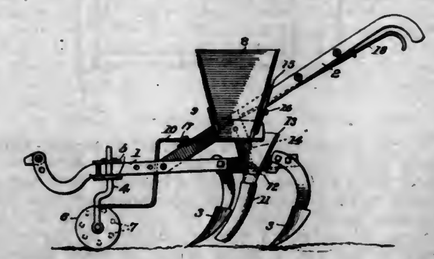
2. A shoe protector including a flexible body portion for engagement against the outer side of a shoe, said body portion being slitted to provide flexible bars, the lower end of the body portion terminating in a sole-strap which is reduced at its outer end to provide an upper strap, a pivoted tab upon the forward end of the body portion, a buckle carried by the tab to receive the free end of the upper strap, a heel-strap hinged upon the outer end of the sole-strap, a second tab hinged upon the rear end of the body portion, and a second buckle carried by the second tab and adjustably receiving the free end of the heel-strap.

3. A shoe protector including a flexible body of triangular form having spaced slits therein providing horizontal flexible bars, the lower end of the body tapering into a sole-strap which is reduced at its outer end to provide an upper strap, spurs carried in the central portion of the sole-strap, studs positioned in the outer faces of the flexible bars, a pivoted buckle carried at the forward edge of the body to receive the free end of the upper strap, a heel-strap pivoted upon the outer end of the sole-strap, and a second buckle pivoted upon the rear end of the body to adjustably receive the free extremity of the heel-strap.

4. A shoe protector comprising a sole strap merging into an upper strap for engagement around the forward end of a shoe, separate buckles hinged upon the forward and rear edges and at the inner end of the sole strap and one at the inner end of the upper strap, the forward one of the buckles adjustably receiving the free end of the upper strap, and a heel strap pivotally connected to the sole strap and adapted to extend from either side of the same to adjust the protector for right and left shoes.

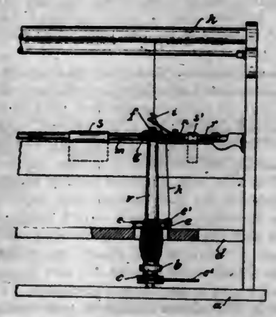
5. A shoe protector comprising a sole strap, an upper strap adapted to extend around the forward end of a shoe, and a heel strap pivotally connected to the sole strap and adapted to extend from either side thereof, whereby the protector is adapted for right and left shoes.

1,018,709. DROPPER ATTACHMENT FOR CULTIVATORS. SAMUEL H. HILL, Keener, Ala., assignor of one-half to James S. Hill, Keener, Ala. Filed Apr. 25, 1911. Serial No. 623,284. (Cl. 111—33.)



A dropper attachment for cultivators comprising a wheel supporting the forward end of the cultivator frame and carrying tappets, a hopper fixed in upright position between the handles of the cultivator at a point between the ends thereof and above the furrow opener, a chute pivoted to the hopper, an arm fixed to the chute and having a free end portion normally lying in the path of movement of the tappets, a bar located upon the forward inclined portions of the handles in front of the hopper and pivoted to one of the handles and having a free end portion lying across the other handle, with the intermediate portion lying under and in contact with said arm, and a rod pivotally connected at its forward end with the free end of the bar and extending back to the grip of one of the handles.

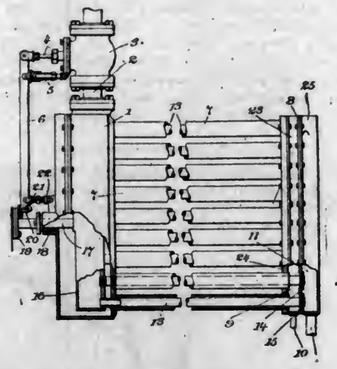
1,018,710. RING SPINNING, DOUBLING, AND TWISTING MACHINE. AUGUST JÖRGENS, Kettwig, Germany. Filed Dec. 17, 1909. Serial No. 533,720. (Cl. 118—27.)



In a ring spinning, doubling and twisting machine the combination with a spindle, a disk removably mounted

thereon, a rod extending laterally of said spindle and having a disk engaging arm thereon, a mounting for said rod, means for longitudinally moving said rod to engage said arm with said disk, and means serving upon such longitudinal movement to rotate said rod to remove the disk.

1,018,711. WATER-HEATER. WILLIAM J. KIBBY, New York, N. Y., assignor to Spaceaving Appliance Company, a Corporation of New York. Filed Mar. 24, 1911. Serial No. 616,558. (Cl. 236—5.)



1. The combination of a plurality of parallel metal steam pipes, a water pipe of lesser diameter formed of a metal having a higher coefficient of expansion when heated, located inside of each of the first mentioned pipes and fastening means holding the two sets of pipes in rigid relation at one end, a header connecting all the steam pipes at one end, a second header of lesser diameter located inside of the first header and connecting all the water pipes together, inlet and outlet connections for the steam pipes and their header and for the water pipes and their header, a valve in the steam inlet and mechanism whereby the relative motions of the two headers open and close said valve.

2. The combination of a plurality of parallel metal steam pipes, a water pipe of lesser diameter formed of a metal having a higher coefficient of expansion when heated, located inside of each of the first mentioned pipes and fastening means holding the two sets of pipes in rigid relation at one end, a header connecting all the steam pipes at one end, a second header of lesser diameter located inside of the first header and connecting all the water pipes together, inlet and outlet connections for the steam pipes and their header and for the water pipes and their header, a valve in the steam inlet and mechanism whereby the relative motions of the two headers open and close said valve, said mechanism comprising a projection from the water header extending through an opening in the steam header, and a lever pivoted on the steam header, and connected to the projection from the water header and to the valve.

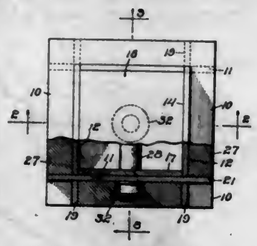
3. The combination of a plurality of parallel metal steam pipes, a water pipe of lesser diameter formed of a metal having a higher coefficient of expansion when heated, located inside of each of the first mentioned pipes and fastening means holding the two sets of pipes in rigid relation at one end, a header connecting all the steam pipes at one end, a second header of lesser diameter located inside of the first header and connecting all the water pipes together, inlet and outlet connections for the steam pipes and their header and for the water pipes and their header, a valve in the steam inlet and mechanism whereby the relative motions of the two headers open and close said valve, said mechanism comprising a stuffing box in the side of the steam header, a pipe connected to the water header serving as an outlet therefrom and extending through said stuffing box, and a lever pivoted to the steam header, and having one end connected to the said projecting pipe while its other end is connected to the stem of the valve controlling the steam inlet.

4. In a water heating apparatus the combination of a steam header, a water header inside of the steam header and free to move therein, means for conducting steam into and out of the steam header, means for conducting water into and out of the water header, means for automatically moving the water header relatively to the steam header when the temperature of the water rises, and mechanism operated by such movement to shut off the flow of steam to the steam header.

5. In a water heating apparatus the combination of a steam header, a water header inside of the steam header and free to move therein, means for conducting steam into and out of the steam header, means for conducting water into and out of the water header, means for automatically moving the water header relatively to the steam header when the flow of water through the header ceases, and mechanism operated by such movement to shut off the flow of steam to the steam header, said mechanism comprising a valve in the steam inlet, an opening in the side of the steam header, a projection from the water header extending therethrough, and connections from said projection to the valve stem.

[Claim 6 not printed in the Gazette.]

1,018,712. DENTIST'S ANVIL. LOUIS F. KOEHLER, Chicago, Ill. Filed Apr. 3, 1911. Serial No. 618,513. (Cl. 78—5.)



1. An anvil for the purpose set forth, comprising a body composed of a plurality of plates fitted together at their edges, and formed with flanged members to constitute at the several sides of the body pockets or recesses, locking means for rigidly locking said plates together in assembled relation, and bodies of relatively soft material formed in said recesses to constitute anvil faces.

2. An anvil for the purpose set forth, comprising a body composed of a plurality of plates fitted together at their edges, and formed with flanged members and extensions to constitute at the several sides of the body pockets or recesses, locking means for rigidly locking said plates together in assembled relation, and bodies of relatively soft material formed in said recesses to constitute anvil faces, said locking means extending partially into said recesses, and the anvil face forming material being formed over the parts of the locking means that extend into said recesses.

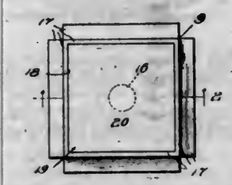
3. An anvil for the purpose set forth comprising a frame consisting of a plurality of plates fitted together at their marginal portions to constitute a multi-sided, hollow body, and formed with flanges and extensions at the several sides of the body to constitute pockets or recesses, locking means within the hollow body formed with a plurality of studs which extend through openings in said plates, and are screw-threaded at their outer ends and provided outside the plates and within said recesses with nuts and bodies of relatively soft material formed in said recesses to constitute a plurality of anvil faces.

4. An anvil for the purpose set forth comprising a multi-sided shell composed of flat plates fitted together at their marginal portions, certain of the plates being formed at their inner sides with shoulders against which

the other plates bear, locking means within the shell having screw-threaded members which extend through the plates and are provided with nuts to hold the plates engaged with the margins and shoulders of conjoined plates, certain of the plates being provided on their outer sides with flanged members and others of the plates extending beyond adjoining plates to constitute with said flanged members pockets of recesses on the several sides of the shell, and bodies of relatively soft material formed or molded in said recesses, the outer side of which constitute anvil faces.

5. An anvil for the purpose set forth comprising a six-sided shell composed of six plates, to wit, a pair of oppositely disposed rectangular plates provided on their outer sides with strips or flanges to constitute outwardly opening recesses, a second pair of oppositely disposed, oblong, rectangular plates provided on their outer sides with two flanges or strips which coöperate with the marginal portions of the first mentioned pair to constitute outwardly opening recesses and a third pair of oppositely disposed, rectangular plates fitted to the first and second pairs of plates to complete the shell, and arranged a distance inside the margins of the second and third pairs of plates, whereby the marginal portions of the first and second pair of plates constitute walls which surround recesses at said third pair of plates, means for locking the plates fixedly together and bodies of relatively soft material formed in said recesses, the outer sides of which constitute anvil faces.

1,018,713. DENTIST'S ANVIL. LOUIS F. KOEHLER, Chicago, Ill. Filed Oct. 19, 1911. Serial No. 655,631. (Cl. 78—5.)



1. An anvil for the purpose set forth, comprising a one piece cast metal body formed with a recess, with a flange which surrounds the same and a body of relatively soft material in said recess with its sides laterally supported by said flange, and with its face finished flush with the margins of the flange to constitute the anvil face.

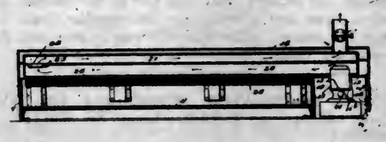
2. An anvil for the purpose set forth, comprising a single piece cast metal body provided with a plurality of recessed sides, each side being formed with a flange which surrounds the recess thereof to constitute lateral supports for a body contained in the recess, and bodies of relatively soft material filling said recesses and finished at their outer faces flush with the margins of said flanges to constitute a plurality of anvil faces.

3. An anvil for the purpose set forth, comprising a single piece cast metal body provided with a plurality of recessed sides, each side being formed with a flange which surrounds the recess thereof to constitute lateral supports for a body contained in the recess, bodies of relatively soft material filling said recesses and finished at their outer faces flush with the margins of said flanges to constitute a plurality of anvil faces, and means for holding said bodies of material in said recesses.

4. An anvil for the purpose set forth, comprising a cast metal body having a central web and provided on opposite sides with flanges which surround and constitute the walls of recesses on the opposite sides of said body said web being provided with an opening, extending from one recess to the other and bodies of relatively soft material in said recesses and finished to constitute anvil faces, and connected by a portion integral with said bodies which extends through said opening.

5. An anvil for the purpose set forth comprising a cast metal body formed on its opposite sides to provide recesses, with flanges surrounding said recesses to constitute lateral supports for bodies in the recesses of relatively soft material formed in and filling said recesses and finished at their outer sides to constitute anvil faces, and an exterior flange extending laterally from the body intermediate the anvil faces.

1,018,714. HEATING SYSTEM FOR CHICKEN-CULTURE APPARATUS. VIRGIL C. KOONS, Colorado Springs, Colo., assignor to The Continental Manufacturing Company, Colorado Springs, Colo., a Corporation of Colorado. Filed May 15, 1907. Serial No. 373,822. (Cl. 237—22.)

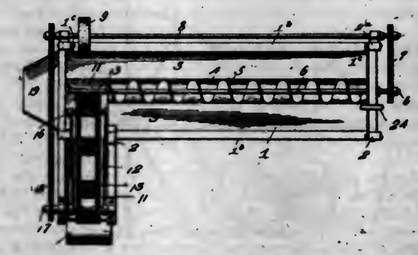


1. In chicken culture apparatus, a horizontally elongated drum provided with a horizontally elongated return flue of less cross sectional capacity than that of the drum, said drum at its inlet end adapted to receive heated fluid from a heater and at its discharge end discharging into the inlet end of said flue, said flue at its discharge end having a discharge outlet arranged closely adjacent to and subject to the heat of the inlet end of the drum, substantially as described.

2. In chicken culture apparatus, a heater consisting essentially of a heating drum elongated approximately horizontally for the passage of the heated products in one direction throughout the length thereof, means at the inlet end of the drum to discharge heated fluid thereinto and upwardly against the top wall thereof, and a return flue in cross sectional capacity less than that of said drum, said flue at its inlet end receiving the heated fluid from the discharge end of said drum and at its discharge end having a vertical discharge outlet closely adjacent to the inlet end of the drum and subject to the radiated heat therefrom to maintain circulation through and an even distribution of heat throughout the length of said drum.

3. In combination, in a heating system, a heating lamp, a vertically movable chimney for said lamp, a horizontal wall having a vertical opening receiving said chimney and in which it is vertically movable, a horizontally disposed vertically swingable chimney supporting and raising lever between its ends fulcrumed on a horizontal axis and at one end straddling and pivotally joined to said chimney, the opposite end of said lever forming a stop to limit downward movement of the end of the lever carrying said chimney for supporting the same when the lamp is removed.

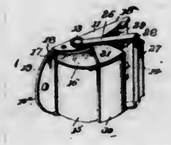
1,018,715. PEA-SEPARATING MACHINE. GUSTAV J. LANGE, Eau Claire, Wis. Filed Oct. 16, 1909. Serial No. 523,021. (Cl. 130—32.)



A fruit separating machine of the class described embodying a receiving tank, open at one end, an overflow tank into which the open end of the receiving tank dis-

charges, the said overflow tank extending across the open end and also from one side of the receiving tank at right angles thereto, the bottom of the overflow tank being lower than that of the receiving tank so that the overflow tank forms a pocket deeper than and at the discharge end of the receiving tank, said overflow tank having a discharge spout for the floating fruit in its end wall opposite the discharge end of and at a higher plane than that of the bottom of the receiving tank, means to maintain a body of separating liquid in the tank and cause a surface current to flow longitudinally through the receiving tank and across the overflow tank and to discharge, together with the floating fruit, through the spout of the overflow tank, means operating in the bottom of the receiving tank to discharge the sunken fruit into the pocket formed by the overflow tank and a carrier in the overflow tank to discharge the sunken fruit from the pocket over one side of the overflow tank.

1,018,716. DOOR-LATCH. FREDERICK J. LEE, Wichita, Kans. Filed June 1, 1911. Serial No. 630,729. (Cl. 70—119.)

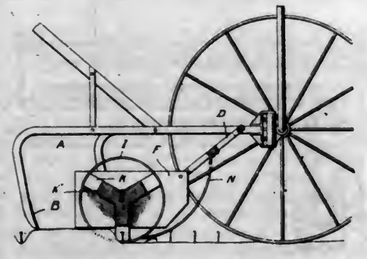


1. A door holder comprising a base plate having outstanding lateral flanges and spaced outwardly crimped stops at its outer edge, a pin carried through the flanges, a latch loosely hinged upon the pin, springs carried about the pin and having their outer arms resting against the latch to yieldingly hold the same against the base plate and having their inner arms resting on the base plate and engaging against the stops to hold the arms apart, a keeper registering with the latch and having an outstanding shoulder, and a ball fixed upon the ends of the pin for engagement over the outstanding shoulder.

2. A door holder including a base plate, a latch hinged upon the base plate, a keeper registering with the latch and having an outstanding locking shoulder inclined outwardly, and a locking ball arranged for engagement over the locking shoulder to bind thereagainst under pressure.

3. A door holder comprising a base plate, a pin upon the base plate, a latch hinged upon the pin, springs carried about the pin and having their opposite arms engaging against the latch and the base plate, a locking ball fixed upon the ends of the pin to turn therewith, and a keeper registering with the latch and having a locking shoulder for the reception of the ball, the tension of the springs upon the pin being adapted to yieldingly hold the ball in adjusted position.

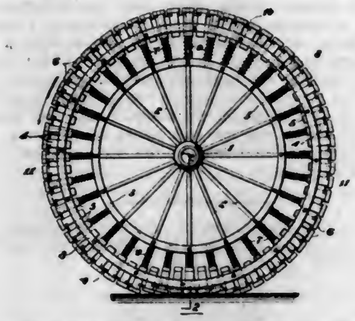
1,018,717. REVOLVING CULTIVATOR. FRANK W. LEONARD, Mountain View, Okla. Filed May 25, 1911. Serial No. 629,459. (Cl. 97—49.)



1. A cultivator and weed turner, comprising a frame with cultivator plows, bars fastened to said frame, fenders fixed to said bars, a rotatable member having spindle ends journaled in apertures in said fenders, said member provided with arms, guards projecting from said arms, and a wheel rim fixed to the guards, as set forth.

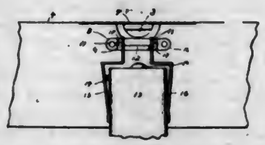
2. A cultivator and weed turner comprising a frame with cultivator plows, fenders supported by the frame and spaced apart, a rotatable member mounted between the fenders and having radial arms, guards projecting from the latter and arranged in pairs and adapted to prevent dirt from covering certain plants being cultivated, a wheel rim fastened to the outer ends of the guards, a rod bent to form a loop and fastened to the frame, said bar being bent to form a loop and bowed and positioned in advance of the rotary member.

1,018,718. VEHICLE-WHEEL. ARCHIBALD A. MACDONALD, New Glasgow, Nova Scotia, Canada. Filed July 29, 1911. Serial No. 641,331. (Cl. 152—31.)



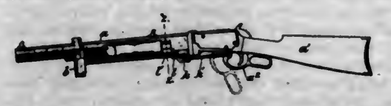
In combination with a wheel, an inner rim, outer rims, a plurality of tread blocks slidably mounted between said rims, cushioning means for supporting said blocks in their outward positions, and means connecting said blocks to permit limited sliding movement between successive blocks.

1,018,719. SPIRIT-LEVEL. ALBERT MAKOWSKI, Meriden, Conn. Filed Aug. 18, 1911. Serial No. 644,759. (Cl. 73—70.)



The combination with a level having a bubble tube, and bubble sight-opening, of a bracket arranged adjacent to the said bubble sight-opening, and an incandescent electric lamp provided with fingers detachably connected with said bracket.

1,018,720. SILENCING DEVICE FOR FIREARMS. HIRAM PERCY MAXIM, Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 28, 1908. Serial No. 423,905. (Cl. 89—31.)



1. A firearm comprising a barrel, operating mechanism, a valve moved by the direct pressure of the gases to obstruct the bore and operative connections between the valve and the operating mechanism whereby the valve is restored to normal position after operation.

2. A firearm comprising a barrel, operating mechanism, a freely moving piston valve actuated by the direct pressure of the gases to obstruct the bore, and operative connections between said valve and the operating mechanism whereby the valve is restored to normal position after operation.

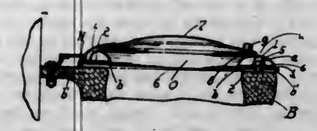
3. A firearm comprising a barrel, operating mechanism, a sliding valve moved transversely by the direct pressure of the gases to obstruct the bore, and operative connections between said valve and the operating mechanism whereby the valve is restored to normal position after operation.

4. A firearm comprising a barrel, operating mechanism, a silencing device, a rotatable shaft in operative connection with the silencing device, and means actuated by the movement of the operating mechanism to actuate said shaft and restore the silencing device to normal position after operation.

5. A firearm comprising a barrel, operating mechanism, a valve to obstruct the bore, a rotatable shaft in operative connection with said valve, and means actuated by the movement of the operating mechanism to actuate said shaft and restore the valve to normal position after operation.

[Claims 6 to 16 not printed in the Gazette.]

1,018,721. CLOSET-SEAT. RALPH MCCORD, St. Louis, Mo. Filed Sept. 2, 1911. Serial No. 647,361. (Cl. 4—18.)



1. In combination with a closet-seat, a sheet-metal lid provided with a rubber cushioning tip to engage the seat, said tip having an outer bumper head shouldered against the lid.

2. A hollow sectional closet-seat composed of an upper convex member and a plane bottom member coupled thereto and forming a hollow shell therewith, and provided with inner and outer beads at the lines of juncture, the outer bead being disposed in a plane exterior to the inner bead.

3. A hollow sectional closet-seat composed of an upper convex member and a plane bottom member coupled thereto and forming a hollow shell therewith, and provided with inner and outer beads at the lines of juncture disposed in different planes.

4. A hollow sectional closet-seat composed of an upper convex member and a plane bottom member coupled thereto and forming a hollow shell therewith, and provided with inner and outer beads at the lines of juncture, the outer bead being offset from the seat by an outer reinforcing shoulder and disposed in a plane exterior to the plane of disposition of the inner bead.

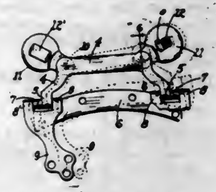
5. A hollow sectional closet-seat composed of an upper member and a bottom member forming a hollow shell therewith, a series of spacing devices inserted through the bottom member and forced into engagement with the inner surface of the upper member, and bumpers projecting from the bottom member.

[Claims 6 to 10 not printed in the Gazette.]

1,018,722. CLOSET-SEAT HINGE. RALPH MCCORD, St. Louis, Mo. Filed Sept. 2, 1911. Serial No. 647,362. (Cl. 4—18.)

1. In a closet-seat hinge, a plate, a hinged leaf carried thereby and adapted to be secured to the seat, straps hinged to the plate and secured to the lid, and swiveled anchor feet carried by the plate and adapted to be secured to the bowl.

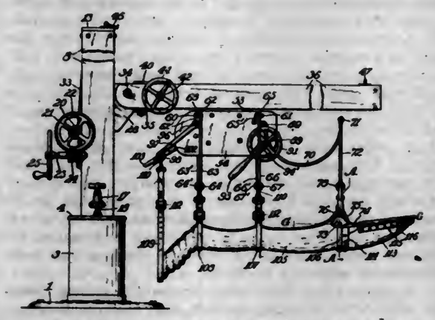
2. In combination with a closet-bowl, a seat and lid therefor, a plate terminating in arms extending toward the seat, a leaf secured to the seat and provided with terminal perforated loops engaging the outer sides of the perforated terminals of the arms of the plate, straps having inner forked perforated looped terminals adapted to aline with the loops of the leaf and the perforations of the arms of the plate, said straps being secured to the lid, anchor members swiveled at the bottom of the opposite ends of the plate at the bases of the arms, the anchors being provided with elongated slots, and securing bolts passed through said slots into the bowl, substantially as set forth.



3. In a closet-seat hinge, a plate, a hinged leaf carried thereby and adapted to be secured to the seat, straps hinged to the plate and secured to the lid, and swiveled anchor feet carried by the plate and adapted to be secured to the bowl, the anchors being provided with elongated slots, for the purpose set forth.

4. In a closet-seat hinge, a main plate carrying the hinged members or leaves, and swiveled anchor feet provided with elongated openings or slots having parallel sides for the reception of securing bolts, the latter having square formations engaging the sides of the slots for the purpose set forth.

1,018,723. APPLIANCE FOR HANDLING HELPLESS PERSONS. WILLIAM W. MILLER, Union township, and JOHN F. MILLER, Jackson township, Miami county, Ind. Filed May 11, 1911. Serial No. 626,601. (Cl. 5—44.)



1. An appliance including a supporting housing, a plurality of horizontal bars mounted in the housing and having downwardly extending arms, a plurality of arms pivotally mounted in opposite end portions of the housing, means mounted in the housing for holding or controlling movement of the pivotally mounted arms, and a hammock suspended to all the arms.

2. An appliance including a supporting housing, a shaft rotatably mounted horizontally in the housing and having two divergently extending arms fixed thereon, each arm being provided with a ring, means for controlling or fixedly holding the shaft, and a hammock mainly supported by the housing and having a supporting strap that is connected to the rings.

3. An appliance including a supported pillar, an arm guided vertically on the pillar, means mounted on the pillar for raising or lowering the arm, a carriage mounted movably on the arm and provided with a rotatable housing, a plurality of horizontal bars mounted in the housing and having downwardly extending arms thereon, and a hammock suspended to the arms.

4. An appliance including a supporting housing com-

prising two connected plates, each plate having a plurality of apertures therein, a plurality of horizontal bars arranged in pairs in the apertures, each bar being longitudinally adjustable in an aperture in each of the plates and having an angularly extending arm thereon, each arm being provided with a ring, and a hammock having straps detachably connected to the rings.

5. An appliance including an upright shaft, an arm mounted on the shaft, a carriage movably mounted on the arm and comprising a frame provided with a vertical pivot rod, a cup supported on the lower portion of the pivot rod, balls movable in the cup, a cone movable on the balls, a housing guided on the rod and seated on the cone, and a hammock supported by the housing.

[Claims 6 to 16 not printed in the Gazette.]

1,018,724. SLEEVE-FORM. LOUIS MOLLBERG, ANDREW G. STOREN, and JOHN O. STOREN, Brooklyn, N. Y. Filed Dec. 21, 1910. Serial No. 598,556. (Cl. 223—18.)

1. A sleeve-form comprising two comparatively wide members movable one toward the other, said members including a two-part section of an upper-arm and a two-part section of a fore-arm, said sections being united by a centrally located pivoted joint disposed relatively to the elbow portion of the sleeve so that the several parts of the arm are separately adjustable, means operating automatically to push the parts of one member away from the corresponding parts of the other member and means for positively holding the members in an adjusted position.

2. A sleeve-form including a two-part upper-arm, a two part fore-arm and pivoted elbow-joints respectively uniting the corresponding parts of said arms together, combined with guide rods located between said parts, and outwardly pressing springs coiled around the pivots of said elbow-joints.

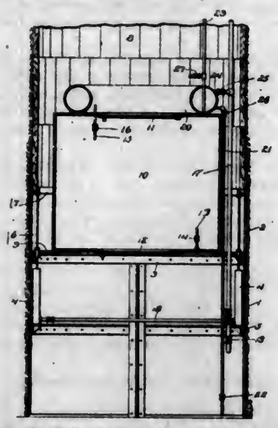
3. A sleeve-form including a two part upper-arm, a two-part fore-arm, and elbow joints therefor, combined with spring pressed guide-rods disposed on each side of the elbow joints and adjacent to the outer ends of the arms, said rods automatically operating to push the several sections of the arms apart in one plane, and means for positively holding the upper arm and the fore-arm independently in adjusting positions.

4. A sleeve-form comprising separately jointed members adjustably movable toward and from each other, guide-rods entering pockets in the opposite inner edges of said members, springs operating normally to drive the members apart, binder-rods controlling said guide-rods and working through holes or passages leading to the ends of the members from said pockets, and thumb-nuts threaded on the outer ends of said binder-rods whereby the latter can be drawn out to clamp the guide-rods within the adjusted members and check the action of said springs.

5. A sleeve-form comprising flat members suitably outlined to follow the curvature of the sleeve, each of said members consisting of an upper-arm and a fore-arm, a pivoted joint provided between the upper and the fore-arm of each member at a point corresponding to the elbow of the sleeve, guide rods entering pockets in the opposite inner edges of said members and permitting relative movement thereof, springs operating normally to spread said members apart, other springs coiled around the pivots of said joints tending to change the alinement of said members, and means for controlling the action of all of said springs, said means being operable from the ends of said members.

[Claims 6 and 7 not printed in the Gazette.]

1,018,725. APPARATUS FOR SINKING WELLS. GEORGE R. MOORE, Chicago, Ill. Filed July 31, 1911. Serial No. 641,599. (Cl. 61—3.)



1. A well sinking apparatus comprising a casing open at the top and bottom, the bottom edge of the casing being in the form of a cutting member, lagging adapted to be set up within the casing to form a lining for a well which is being sunk, a power device carried by the casing and constructed and arranged to engage with the lagging and produce a relative separating movement in the vertical direction between the lagging and the casing, a partition extending across said casing between the ends thereof, and an air lock carried by said partition.

2. A well sinking apparatus comprising a casing open at the top and bottom, the bottom edge of the casing being in the form of a cutting member, lagging adapted to be set up within the casing to form a lining for a well which is being sunk, a power device carried by the casing and constructed and arranged to engage with the lagging and produce a relative separating movement in the vertical direction between the lagging and the casing, and an air lock carried by and movable with said casing.

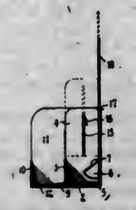
3. A well sinking apparatus comprising a casing open at the top and bottom; the bottom edge of the casing being in the form of a cutting member, lagging adapted to be set up within the casing to form a lining for a well which is being sunk, a pneumatic power device carried by the casing and constructed and arranged to engage with the lagging and produce a relative separating movement in the vertical direction between the lagging and the casing, a partition extending transversely across the casing between the ends thereof, an air lock carried by said partition, and means for supplying air under pressure into the casing beneath the partition and to said power device.

4. A well sinking apparatus comprising a casing open at the top and bottom; the bottom edge of the casing being in the form of a cutting member, lagging adapted to be set up within the casing to form a lining for a well which is being sunk, a pneumatic power device carried by the casing and constructed and arranged to engage with the lagging and produce a relative separating movement in the vertical direction between the lagging and the casing, a partition extending transversely across the casing between the ends thereof, an air lock carried by said partition, means for supplying air under pressure into the casing beneath the partition and to said power device, a water reservoir mounted above said air lock, an intake pipe extending from said reservoir to the bottom of the casing, a discharge pipe leading from the bottom of the reservoir, and means for introducing compressed air into said reservoir.

5. A well sinking apparatus comprising a casing open at the top and bottom, the bottom edge of the casing being in the form of a cutting member, lagging adapted to be set up within the casing to form a lining for a well which is being sunk, a partition extending transversely across the casing between the ends thereof, a pneumatic jack carried by the casing beneath the partition, a plunger extending from the jack through the partition and adapted to engage with the lagging and produce a relative separating movement in the vertical direction between a lagging and the casing, an air lock carried by said partition, and means for supplying air under pressure into the casing below the partition and to the jack.

[Claims 6 and 7 not printed in the Gazette.]

1,018,726. COMBINED PACKING AND DISPLAY CARTON. WILLIAM A. V. PORTER, New York, N. Y. Filed Oct. 10, 1911. Serial No. 653,873. (Cl. 206—45.)



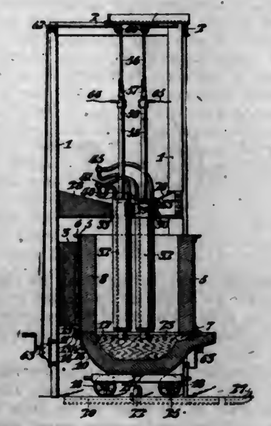
1. An article of the character described comprising a pair of receptacles, the one vertically slidable within the other with the backs of the two in engagement, one of said receptacles being deeper than the other and both being normally open at the front, the said receptacles being fitted to carry articles of merchandise and the deeper one being provided with a device for preventing the contents from falling forward, and means for holding the slidable one in its raised position within the other, whereby the contents of the slidable one may be displayed over the contents of the other.

2. An article of the character described comprising a pair of receptacles, the one vertically slidable within the other with the backs of the two in engagement, one of said receptacles being deeper than the other and both being normally open at the top and front, the said receptacles being fitted to carry articles of merchandise and the deeper one being provided with a device for preventing the contents from falling forward, means for holding the slidable one in its raised position within the other, whereby the contents of the slidable one may be displayed over the contents of the other, and one of the receptacles being provided with means for closing the top of both when the slidable one is in its lowered position.

3. An article of the character described comprising a pair of receptacles, the one vertically slidable within the other with the backs of the two in engagement, one of said receptacles being deeper than the other and both being normally open at the front, the said receptacles being fitted to carry articles of merchandise and the deeper one being provided with a device for preventing the contents from falling forward, means for holding the slidable one in its raised position within the other, whereby the contents of the slidable one may be displayed over the contents of the other, and a protective casing open at the bottom and arranged to be closed at the top, said casing being fitted to cover the top, sides and ends of the said receptacle for forming a packing and shipping assembly.

4. An article of the character described comprising a pair of receptacles stamped from a pair of blanks, one of said receptacles being of less depth than the other and being vertically slidable within the other with the backs of the two in engagement, both of said receptacles being normally open at the top and front and provided with devices for preventing the contents from falling forward, each of said receptacles being adapted to carry a row of articles of commerce, means for holding the slidable one in its raised position for displaying its articles above those in the other receptacle, and a protective casing stamped from a blank and fitted to cover the top, sides and ends of the receptacles when the slidable one is in its lowered position for forming a packing and shipping assembly.

1,018,727. ELECTRIC FURNACE. MARCUS RUTHENBURG, London, England. Filed June 2, 1909. Serial No. 499,711. (Cl. 204—64.)



1. In a furnace, the combination with three vertical columns; of means connecting said columns in rigid relation; a cylindrical casing; brackets connecting the respective columns with said casing supporting the latter with a space beneath it; a removable hearth forming a floor in said casing; means at the junction of said casing and hearth arranged to adjustably retain the latter and comprising swing bolts pivotally connected with said hearth; means arranged to raise and lower said hearth, comprising a vertical reciprocatory plunger; brackets extending from the respective columns overhanging said casing and provided with means adjustable to fit water jackets; water jackets adjustably fitted in connection with the respective overhanging brackets and including linings fitted in the respective water jackets; electrodes fitted to reciprocate through said linings and water jackets; means arranged to support said electrodes independently of said water jackets, comprising flexible connectors; means arranged to raise and lower said electrodes including rotary drums in operative relation with said connectors; and, means arranged to support said drums upon the respective columns.

2. In a furnace, the combination with a stationary casing; of a cylindrical water jacket depending within said casing; means supporting said water jacket in adjustable relation with said casing; an insulating lining fitted in said water jacket; and, an electrode arranged to reciprocate through said lining within said casing.

3. In an electric furnace, the combination with a stationary casing; of a vertical tubular water jacket depending within said casing; means arranged to support said jacket in rigid relation with said casing; an insulating lining in said water jacket; an electrode arranged to reciprocate through said lining within said casing; and, means arranged to reciprocate said electrode.

4. In an electric furnace, the combination with a stationary casing; of a water jacket; means supporting said jacket in rigid relation with said casing; a solid tubular insulating lining in said water jacket; an electrode extending through said lining in reciprocatory relation therewith; and, means whereby said electrode may be reciprocated through said lining without moving the latter.

5. In an electric furnace, the combination with a stationary casing; of a tubular water jacket, having its in-

ner wall ridged to engage an insulating lining; a tubular insulating lining engaged with the ridged wall of said jacket; and, an electrode fitted in said lining in longitudinally adjustable relation therewith.

[Claims 6 to 9 not printed in the Gazette.]

1,018,728. SHEET-METAL STRUCTURE. ALBERT L. SESSIONS, Bristol, Conn. Filed June 16, 1909. Serial No. 502,447. (Cl. 21—79.)

1. An attaching device having along its edge intended to resist a strain an outturned lip located at an angle to the plane of the plate from which the structure is formed, and a cover inclosing said lip and secured to the flat portion of said edge and plate.

2. An attaching device having along one edge intended to support a strain lips turned in opposite directions and located at an angle to the plane of the plate from which the structure is formed, and a cover passed over said edge and inclosing said lips and with the free edge of the cover secured to the face of said plate.

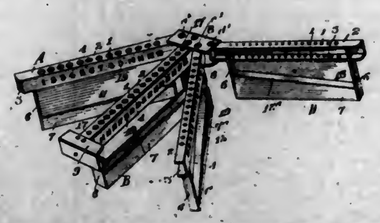
3. An attaching device having along one edge intended to resist a strain a roll integrally formed from the plate composing the structure and at the opposite edge an outturned lip, and a cover wrapped about said edge and inclosing said lip and with the free edges of the cover secured to the face of said plate.

4. An attaching device having at one edge a roll integrally formed with the metal composing the structure and at the opposite edge lips turned in opposite directions and located at an angle to the plane of said plate, and a cover wrapped about said edge and inclosing said lips and with the edge of said cover secured to the face of said plate.

5. An attaching device having at one edge intended to resist a strain a roll integrally formed from the plate of which the structure is formed, lips formed at the opposite edge of said plate, and a cover wrapped about said edge and inclosing said lips and with the free edges of the cover extending along the plane of the plate to said roll and secured to the face of said plate.

[Claims 6 to 11 not printed in the Gazette.]

1,018,729. DRILL-HOLDER. DAVID A. SINE, Rochester, N. Y., assignor to Allie M. Sine, Rochester, N. Y. Filed Aug. 3, 1910. Serial No. 575,289. (Cl. 206—17.)



1. A drill holder comprising a plurality of members each having a plurality of drill holding devices, and transverse pieces at the ends of said members, one of said pieces having the other members pivoted thereto, and the other piece carrying securing means for the free ends of the pivoted members.

2. A drill holder comprising a plurality of members having a plurality of drill holding devices and pieces secured transversely of one of said members at the ends thereof, one of said pieces having the other members pivoted thereto and the other of said pieces being of U-shape in cross section and serving to guide the free ends of the pivoted members.

3. A drill holder comprising a plurality of members each having a plurality of drill holding devices, and pieces of U-shaped cross section secured transversely of one of said members, one of said pieces having the other members pivoted thereto and the other of said pieces serving to guide the pivoted members.

4. A drill holder comprising a plurality of members, each having a plurality of drill holding devices, a device secured to and extending transversely of an intermediate one of said members and projecting beyond both sides thereof near one end, the other members being pivoted to said device, and locking means carried by the other end of said member.

5. A drill holder comprising a plurality of members each having a plurality of drill-holding devices, pivotal connection between one of said members and the others, and a grooved device carried by said member and receiving portions of the other members.

[Claims 6 to 9 not printed in the Gazette.]

1,018,730. MOUTHPIECE FOR TELEPHONE-TRANSMITTERS. CALVIN H. SWINGLE and ALFRED M. MILTENBERG, Chicago, Ill. Filed June 10, 1911. Serial No. 632,360. (Cl. 179—187.)

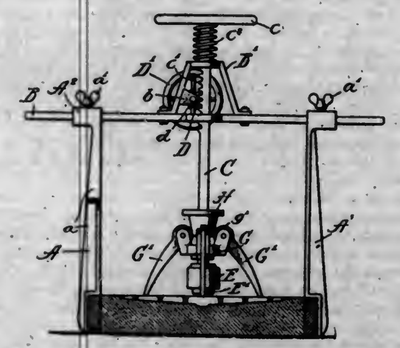
1. A mouth-piece for telephone transmitters consisting of a perforated member having means to secure it to the transmitter casing, a sound receiver mounted on the front surface of said member, a stem secured to the perforated member and extended into the sound receiver, and a concavo-convex member mounted on the free end of said stem with its open or larger end presented toward the perforated plate and at a distance from the walls of the sound receiver.

2. A mouth-piece for telephone transmitters consisting of a perforated member having on one of its surfaces a hollow extension to engage an opening in the transmitter casing and provided at its periphery with forwardly extended projections, a sound receiver flared at its outer end and having its other end in engagement with said projections on the perforated member, a stem secured to the perforated member and extended into the sound receiver, and a concavo-convex member mounted on the outer end of said stem within the sound receiver and having its open or larger end disposed toward the perforated member and spaced from the walls of the sound receiver.

1,018,731. PATTERN-DRAWING DEVICE. HENRY TSCHERNING, Freeport, Ill. Filed Mar. 19, 1910. Serial No. 550,552. (Cl. 22—47.)

1. In a pattern-drawing device, pattern-engaging means adapted to exert the necessary lifting force upon the pattern to draw the same and pattern-steadying means adjacent to the pattern-engaging means and arranged to be placed in contact with the pattern and locked in position to prevent relative movement between the pattern-engaging means and pattern.

2. The combination, in a pattern-drawing device of a guided movable member, pattern-engaging means carried thereby and pattern-steadying means also carried thereby and arranged to contact with the pattern in a plurality of points to prevent rocking of the same with reference to said guided member.



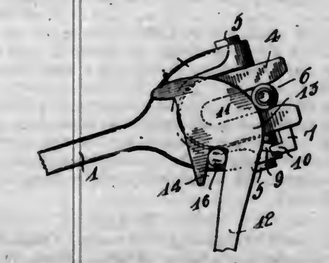
3. The combination, in a pattern-drawing device of a guided movable member, pattern-engaging means carried thereby, a plurality of pivoted fingers adapted to engage the pattern to prevent the rocking of the same, and means for locking the fingers in position in contact with the pattern.

4. In a pattern-drawing device, the combination with a guided member of a bifurcated block carried by said member, a pair of hooks pivoted between the furcations of said block and arranged to enter an opening in a pattern and when separated to engage the same and a ring movable upon the block adapted to engage the hooks upon the opposite sides of the pivots from their engaging portions to hold the same in their separated relation.

5. The combination, with a frame adapted to rest upon the edges of a drag, of a guided member adjustable upon the frame to be brought over different parts of the drag, pattern-engaging means carried by said member, means for moving the member, and pattern-steadying means carried by said member and consisting of a plurality of fingers adapted to be brought into contact with the pattern to prevent rocking of the same with reference to said guided member.

[Claims 6 to 8 not printed in the Gazette.]

1,018,732. SUCKER-ROD ELEVATOR. HENRY VIGUE, Stoneham, Pa., assignor of one-half to Henry Park, Warren, Pa. Filed June 27, 1911. Serial No. 635,676. (Cl. 166—7.)



1. A sucker rod elevator comprising a stem having on one end a forked head, a rod gripping block pivotally mounted in said head, said block having a rod engaging notch, a stop pin slidably mounted in one side of said head and adapted to be projected across said notch whereby the sucker rod is fastened therein, means on said head to project and retract said pin when said stem is raised and lowered, a wrench, and means whereby the latter is engaged with the elevator for the purpose of forcing the sucker rod out of engagement with the notch in said block.

2. A sucker rod elevator comprising a stem having in one end an eye, a forked head formed on the opposite end, said forked head having in its ends bearing apertures and in one end a cam groove, a rod engaging block having formed thereon laterally projecting trunnions adapted to pivotally engage the bearing apertures in the ends of said head, said block having formed therein a rod engaging notch, a fastening pin slidably mounted in one side of said rod and adapted to be projected across the notch therein, a lug formed on the outer end of said pin and adapted to engage the cam groove in the forked head of the stem whereby when the latter is raised and lowered said pin will be projected and retracted to open and close the notch in said block, a bearing stud formed on one side of said head, a rod ejecting wrench having on its outer end a cam head, said head having formed therein a bearing notch adapted to be engaged with said stud whereby the wrench may be turned to cause the cam head to be engaged with the sucker rod whereby the latter is forced out of the notch in said block.

3. A sucker rod elevator comprising a stem, a sucker rod engaging block pivotally mounted in one end of said stem, said block having formed therein a rod engaging notch, a locking pin adapted to be projected across said notch, a rod ejecting wrench, said wrench comprising a handle having on one end a cam head, a fulcrum lug formed on one end of said head and adapted to be engaged with the notch in said block whereby when the wrench is turned, said lug and the edge of the head will be engaged with the sucker rod and the latter thereby forced out of engagement with the notch in said block.

1,018,733. PROCESS OF MANUFACTURING ANHYDRIDS OF FATTY ACIDS. JOSEF WEBER, Essen-on-the-Ruhr, Germany. Filed June 30, 1911. Serial No. 636,137. (Cl. 23—24.)

1. A process for the production of fatty acid anhydrid, which consists in mixing a fatty acid salt with sulfur, both being in a dry state, and treating the mixture with chlorin at temperatures up to 40°–50° C. in the presence of a suitable diluent.

2. A process for the production of fatty acid anhydrid, which consists in mixing a fatty acid salt with sulfur, both being in a dry state, and treating the mixture with chlorin at temperatures up to 40°–50° C. in the presence of an anhydrid of a fatty acid.

3. A process for the production of acetic anhydrid which consists in mixing an acetate with sulfur, both being in a dry state, and treating the mixture with chlorin at temperatures up to 40°–50° C. in the presence of acetic anhydrid.

4. A process for the production of fatty acid anhydrid, which consists in mixing a plurality of salts of the same fatty acid with sulfur, all being in a dry state, and treating the mixture with chlorin at temperatures up to 40°–50° C. in the presence of a suitable diluent.

5. A process for the production of fatty acid anhydrid, which consists in mixing a plurality of salts of the same fatty acid with sulfur, all being in a dry state, and treating the mixture with chlorin at temperatures up to 40°–50° C. in the presence of an organic acid anhydrid.

[Claims 6 and 7 not printed in the Gazette.]

1,018,734. PROCESS OF TREATING TIN-BEARING MATERIAL. JOSEF WEBER, Essen-on-the-Ruhr, Germany, assignor to Th. Goldschmidt, Essen-on-the-Ruhr, Germany, a Firm. Filed Nov. 5, 1909, Serial No. 526,349. Renewed July 19, 1911. Serial No. 639,473. (Cl. 75—56.)

1. Process of treating tin-bearing material, which consists in reacting upon same with a highly heated alkaline solution containing a great amount of free alkali and a large excess of an oxidising reagent over the amount required according to the equation representing the separative reaction.

2. Process of treating tin-bearing material, which consists in preparing same by washing and then reacting upon it with a highly heated alkaline solution containing a great amount of free alkali and a large excess of an oxidizing reagent over the amount required according to the equation representing the separative reaction.

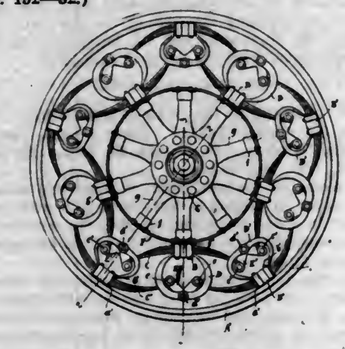
3. Process of treating tin-bearing material, which consists in reacting upon same with a highly heated solution of sodium hydroxid containing a great amount of free sodium hydroxid and a large excess of saltpeter over the amount required according to the equation representing the separative reaction.

4. Process of treating tin-bearing material, which consists in preparing same by washing and then reacting upon it with a highly heated solution of sodium hydroxid containing a great amount of free sodium hydroxid and a large excess of saltpeter over the amount required according to the equation representing the separative reaction.

5. Process of treating tin-bearing material, which consists in reacting upon same with a highly heated solution containing about 20 per cent. of sodium hydroxid and about 10 per cent. of saltpeter.

[Claims 6 to 31 not printed in the Gazette.]

1,018,735. RESILIENT TIRE. FRANK ZIMMERMANN, New York, N. Y., assignor to Francis Keil & Son, New York, N. Y. Filed May 12, 1911. Serial No. 626,746. (Cl. 152—32.)



1. In a resilient tire, a plurality of springs respectively alternately held at their central portions to the hub and tire, and disposed or positioned in staggered order, means attached to the tire to support the ends of adjacent springs which are secured to the hub, and means attached to the hub to support the ends of adjacent springs which are secured to the tire; the parts being so positioned that each spring attached to the hub is connected not only with the ends of two springs respectively attached to the hub at the sides of the same, but also with the ends of two springs attached to the tire at the sides of the same, the said ends of which lie opposite the first named spring, in order that the strain or load upon any one spring is distributed positively, but differentially, upon four other springs, primarily upon two springs located opposite the same and secondarily upon two springs respectively positioned at each side thereof.

2. In a resilient tire, a plurality of springs respectively alternately held at their central portions to the hub and tire, and disposed or positioned in staggered order, means attached to the tire to support in a rocking relation the ends of adjacent springs which are secured to the hub, and means attached to the hub to support in a rocking relation the ends of adjacent springs which are secured to the tire; the parts being so positioned that each spring attached to the hub is connected not only with the ends of two springs respectively attached to the hub at the sides of the same, but also with the ends of two springs attached to the tire at the sides of the same, the said ends of which lie opposite the first named spring.

3. In a resilient tire, a plurality of springs respectively alternately held at their central portions to the hub and tire, and disposed or positioned in staggered order, means attached to the tire to support the ends of adjacent springs which are secured to the hub and the central portions of the springs held to the tire, and means attached to the hub to support the ends of adjacent springs which are secured to the tire and the central portions of the springs held to the hub; the parts being so positioned that each spring attached to the hub is connected not only with the ends of two springs respectively attached to the hub at the sides of the same, but also with the ends of two springs attached to the tire at the sides of the same, the said ends of which lie opposite the first named spring.

4. In a resilient tire a plurality of springs, means whereby the springs at the central portions thereof are alternately attached to the hub and tire, and the adjacent ends of each pair of springs are connected and supported between the hub and tire opposite the said central attachment of the springs, the parts being so positioned that each spring attached to the hub is connected not only with the ends of two springs respectively attached to the hub at the sides of the same, but also with the ends of two springs attached to the tire at the sides of the same, and each spring attached to the tire is attached to the other springs in a similar but reversed manner.

5. In combination, a hub, a plurality of springs attached to the same, a plurality of brackets also carried by the same, a tire, a plurality of brackets attached to the latter, a plurality of springs supported exterior of the first named brackets at their central portions and supported at the ends thereof within the last named brackets, and another series of springs supported exterior of the last named brackets at their central portions, and also supported at the ends thereof within the first named brackets.

1,018,736. MANUFACTURE OF FORMALDEHYDE COMPOUNDS AND PRODUCTS. PAUL ALSLEBEN, Berlin, Germany, assignor to Johann Abraham von Wüffing, Berlin, Germany. Filed Jan. 27, 1911. Serial No. 604,997. (Cl. 23—24.)

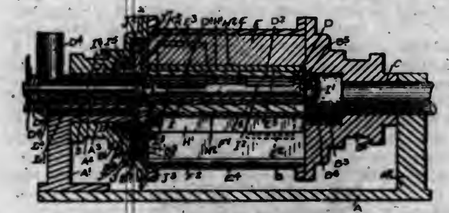
1. The process of producing a formaldehyde sugar compound, comprising heating 3 parts by weight of 40% aqueous formaldehyde solution to a temperature of about 50° C., adding 2 parts by weight of glucose, allowing the glucose to dissolve, and evaporating the mixture *in vacuo* at a temperature of about 65° C. until a suitable degree of concentration has been obtained.

2. The process of producing products containing a formaldehyde sugar compound, consisting in heating 3 parts by weight of 40% aqueous formaldehyde solution to a temperature of about 50° C., adding 2 parts by weight of glucose, allowing the glucose to dissolve, evaporating the mixture *in vacuo* at a temperature of about 65–70° C. to a density of about 40° Baumé, mixing the resulting syrup with about three times its bulk of milk-sugar, and drying the product in the air at a temperature of about 70° C.

3. A new article of commerce, comprising a formaldehyde sugar compound easily soluble in water and soluble with greater difficulty in alcohol, but insoluble in ether, containing 30% of glucose in chemical combination with 70% of formaldehyde, mixed with several times its bulk of free milk-sugar.

1,018,737. ROTARY ENGINE. WILLIAM THOMAS BENNETT, Sunderland, Ontario, Canada. Filed Jan. 21, 1911, Serial No. 603,912. Renewed Jan. 6, 1912. Serial No. 669,908. (Cl. 121—65.)

1. In a rotary engine, the combination with the cylinder provided with suitable heads rotatably mounted on suitable bearings and a driving shaft connected to one of the heads, of a shaft extending eccentrically through the cylinder, a rotor loosely mounted upon the eccentric shaft, wing pistons, slotted drum members held within the rotor and designed to receive the inner ends of the wing pistons and a hinged connection between the outer end of the winged pistons and the wall of the cylinder, as and for the purpose specified.



2. In a rotary engine, the combination with the cylindrical casing having cylindrical recesses in the periphery thereof provided with suitable heads mounted on suitable bearings, of a shaft extending eccentrically through the bearings of the cylinder, a rotor loosely mounted thereon having cylindrical recesses extending through the periphery thereof, slotted rocking members fitting within the recesses, wing pistons held within the slots of the rocking members and provided with cylindrical outer ends fitting correspondingly formed recesses in the wall of the cylinder, and means for admitting steam to and exhausting steam from the cylinder, as and for the purpose specified.

3. In a rotary engine, the combination with the cylindrical casing mounted on suitable bearings having suitable exhaust ports, of a hollow shaft extending eccentrically through the bearings and through the cylinder and having a closed inner end and steam ports extending through the periphery thereof, a cylindrical valve fitting within the hollow shaft and provided with ports designed to be brought to register with the ports of the hollow shaft, a rotor mounted upon the eccentric shaft and having steam passages extending substantially radially from the surface of the hollow shaft to the periphery of the rotor, and wing pistons connected to the rotor and to the wall of cylinder, as and for the purpose specified.

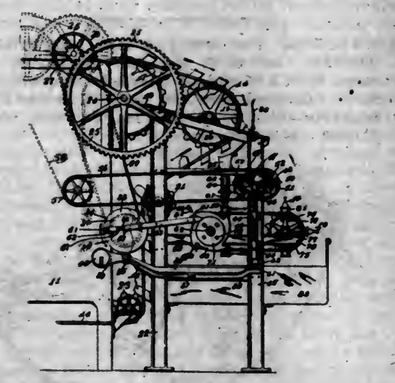
4. In a rotary engine, the combination with the cylinder mounted on suitable bearings and provided with exhaust ports, of a hollow shaft extending through the bearings and through the cylinder and provided with ports in the periphery thereof, a cylindrical valve fitting within the hollow shaft and provided with a closed inner end and ports registering with the ports of the hollow shaft, a stem extending from the cylindrical valve through the end of the hollow shaft, an operating lever therefor, a steam pipe connected to the hollow shaft, a rotor mounted on the hollow shaft and provided with substantially radial passages extending from the surfaces of the hollow shaft to the outer periphery of the rotor, as and for the purpose specified.

5. In a device of the class described, the combination with the cylinder having a recessed head, a bearing for the cylinder having an exhaust passage therein, a stationary disk member supported within the recess of the head and provided with ports communicating with the exhaust passage in the cylinder bearing and a rocking disk member co-acting with the stationary disk member to open and close the ports, as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,018,738. BOTTLE CLEANING AND BRUSHING MACHINE. AUGUST BERBLINGER, St. Louis, Mo., assignor to Esmueller Mill Furnishing Company, a Corporation of Missouri. Filed July 11, 1910. Serial No. 571,408. (Cl. 141—7.)

1. A bottle cleaning and brushing machine comprising a frame; an endless conveyer supported in said frame; rows of bottle holders supported in the conveyer and located at intervals apart; a plurality of hoppers located in the frame beneath the endless conveyer and corresponding in number with the bottle holders of each row; spouts connected to the hoppers; a corresponding number of containers supported in the frame and arranged to communicate with the bottom ends of the spouts; a ratchet mechanism for advancing the containers step by step; a revolving brush mechanism supported by the frame and arranged to be lowered and brought in contact with the projecting ends of the bottles supported in the containers; and means for operating the brush mechanism alternately with the operation of the containers, substantially as specified.



2. A bottle cleaning and brushing machine comprising a frame; an endless conveyer supported in said frame; rows of bottle holders supported in the conveyer and located at intervals apart; a plurality of hoppers located in the frame beneath the endless conveyer and corresponding in number with the bottle holders of each row; spouts connected to the hoppers; a corresponding number of containers supported in the frame and arranged to communicate with the bottom ends of the spouts; a ratchet mechanism for advancing the containers step by step; a revolving brush mechanism supported by the frame and arranged to be lowered and brought in contact with the projecting ends of the bottles supported in the containers; means for operating the brush mechanism alternately with the advancement of the containers; a pair of rocking levers communicating with the brush mechanism; and cams for operating the rocking levers to raise and lower the brush while the containers remain stationary, substantially as specified.

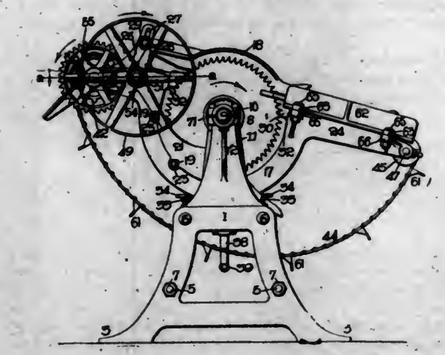
3. A bottle cleaning and brushing machine comprising an endless conveyer, holders carried by the endless conveyer, a plurality of containers to be advanced step by step, chutes intermediate the endless conveyer and containers for guiding the bottles, a pair of oppositely revolving brushes for contacting with the outer surface of the bottles projecting beyond the containers, and means for raising and lowering the brushes and operating the containers alternately, substantially as specified.

4. A bottle cleaning and brushing machine comprising a frame, an endless conveyer operating therein, holders carried by the conveyer, an endless sprocket chain revolubly mounted in said frame, a plurality of bottle holders carried by the endless chain, a plurality of spouts located intermediate the endless conveyer and endless sprocket chain, said spouts guiding the bottles from the conveyer to the bottle holders, a ratchet mechanism operating the endless chain advancing the bottle holder step by step, a pair of oppositely rotating brushes located above the bottle holders, and means for raising and lowering the brushes to contact with the projecting portion of the bottles located in the holders alternately with the movement of the bottle holders, substantially as specified.

5. A bottle cleaning and brushing machine comprising a frame, an endless conveyer operating therein, holders carried by the conveyer, an endless sprocket chain revolubly mounted in said frame, a plurality of bottle holders carried by the endless chain, a plurality of spouts located intermediate the endless conveyer and endless sprocket chain, said spouts guiding the bottles from the conveyer to the bottle holders, a ratchet mechanism operating the

endless chain advancing the bottle holder step by step, a pair of oppositely rotating brushes located above the bottle holders, means for raising and lowering the brushes to contact with the projecting portion of the bottles located in the holders alternately with the movement of the bottle holders, and means for adjusting the ratchet mechanism to regulate the step movement of the bottle holders, substantially as specified.

1,018,739. MACHINE FOR EQUALIZING BARREL-STAVES. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed May 22, 1908. Serial No. 434,227. Renewed Jan. 18, 1912. Serial No. 671,886. (Cl. 143—49.)



1. In a machine for equalizing staves, the combination with a main frame, saw frames mounted on the main frame, saws rotatably supported in said saw frames, housings inclosing said saws, and stave feeding mechanism supported from said housings.

2. In a machine for equalizing staves, the combination of a main frame, saw frames mounted on the main frame, saws rotatably supported in said saw frames, housings inclosing said saws; each of said housings consisting of a lower U shaped member supported from the saw frame, and an upper member pivoted at one end to one of the upper terminals of the U shaped member and stave feeding mechanism supported from the lower members of the housings.

3. In a machine for equalizing staves, the combination of a main frame, saw frames mounted on the main frame, saws rotatably supported in said saw frames, housings inclosing said saws; each of said housings consisting of upper and lower members and stave feeding mechanism supported from the lower members of the housings.

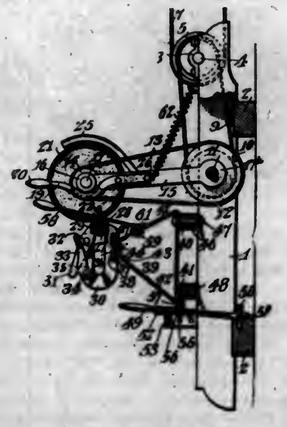
4. In a machine for equalizing staves, the combination of a main frame, saw frames mounted on the main frame, saws rotatably supported in said saw frames, chutes for the sawdust fastened to the saw frames and housings for the saws, each consisting of a lower member fastened to one of the chutes and an upper member pivoted to the lower member.

5. In a machine for equalizing staves, the combination of a main frame, saw frames mounted on the main frame, saws rotatably supported in said saw frames, chutes for the sawdust fastened to the saw frames, housings for the saws, each consisting of a lower member fastened to one of the chutes and an upper member pivoted to the lower member and stave feeding mechanism supported from the lower members of the housings.

[Claims 6 and 7 not printed in the Gazette.]

1,018,740. SAW-GUMMER. EMANUEL CHAINEY, Florence, Wis., assignor of one-half to James Akrigg, Florence, Wis. Filed Apr. 21, 1910. Serial No. 556,766. (Cl. 76—40.)

1. A machine of the class described including a grinding device, a guide, a slidable saw clamp mounted on the guide, and an operating device directly engaging the teeth of the saw for vibrating the same along the guide to prevent the saw blade from becoming heated.



2. A machine of the class described including a grinding device, a guide, a slidable saw clamp mounted on the guide, and a lever arranged to directly engage the teeth of the saw blade for vibrating the latter along the guide to prevent the saw blade from becoming heated.

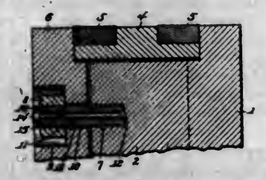
3. A machine of the class described including a grinding device, a guide, a slidable saw clamp mounted on the guide, a lever fulcrumed in rear of the saw clamp and arranged to extend across the same, whereby it is adapted to be engaged with the teeth of a saw blade for vibrating the same along the guide to prevent the saw blade from becoming heated.

4. A machine of the class described including a frame, a grinding device, a pivoted saw support arranged to swing laterally to arrange the saw blade at an inclination with respect to the grinding device, and a lever connected to the frame and with the saw support for swinging the latter.

5. A machine of the class described including an upright frame, a grinding device, a pivoted saw support mounted on the frame and arranged to swing laterally thereof, a toothed bar mounted on the frame, and a lever fulcrumed on the frame and connected with the saw support and engaging the toothed bar.

[Claims 6 to 12 not printed in the Gazette.]

1,018,741. BOLT FOR PISTON FOLLOWER-PLATES. HENRY W. DAVIS, Martins Ferry, Ohio. Filed May 16, 1911. Serial No. 627,619. (Cl. 85—1.)



1. A bolt for follower-plates, comprising a one-piece bolt-body having a longitudinal smooth bore therethrough, and a pin mounted in said bore for preventing dissociation of the opposite ends of said body when the latter is broken.

2. A bolt for follower-plates, comprising a one-piece bolt-body having a longitudinal unthreaded bore therethrough, and a tie-pin mounted in said bore and having connection with the opposite ends of the body whereby, when the latter is broken, the parts are held in substantially fixed relation.

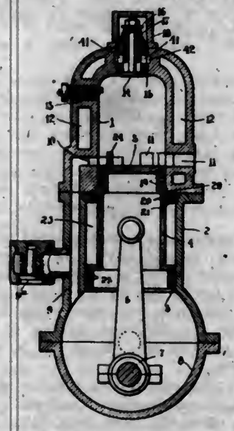
3. A bolt for follower-plates, comprising a one-piece bolt-body having a longitudinal unthreaded bore therethrough, and a tie-pin mounted in said bore in fixed relation to one end of the body, said pin having a head on its opposite end for preventing dissociation of the freed end of the body when the latter is broken.

4. A bolt for follower-plates, comprising a bolt-body of stud-bolt type composed of a single piece having a longitudinal bore therethrough, and a tie-pin of greater length than said bore mounted in the latter and having heads on its opposite ends in interlocking relation to the opposite ends of the body, whereby, when said body is broken in two, the dissociation of the parts is prevented, one of such broken parts being permitted to freely move outward against one of said heads.

5. A bolt for follower-plates, comprising a one-piece bolt-body having a longitudinal unthreaded bore therethrough, a tie-pin mounted in said bore and having heads on its opposite ends in interlocking relation to the opposite ends of the body, whereby, when said body is broken in two, the dissociation of the parts is prevented, and visible means for indicating the condition of said body.

[Claims 6 to 8 not printed in the Gazette.]

1,018,742. INTERNAL-COMBUSTION ENGINE. CLARENCE A. DAWLEY, Plainfield, N. J. Filed Sept. 3, 1908. Serial No. 451,563. (Cl. 123—33.)



1. An internal combustion engine comprising in combination an engine cylinder having an admission port at its rear end and exhaust and scavenging ports near its front end, a piston in said cylinder arranged in its motion to open and close said exhaust and scavenging ports, a compression chamber, said piston having a secondary piston head working in said compression chamber, whereby compression is effected in said chamber during rearward motion of the piston, means connecting said compression chamber and the admission port of said cylinder, a valve controlling passage of fluid from said compression chamber to said admission port, valve mechanism for said valve arranged to open same prior to material compression in said cylinder during the rearward stroke of the piston, a check valve at the orifice of said admission port having flaring edges serving to distribute the entering charge across the cylinder, whereby the entering charge displaces before it the contents of the rear of the cylinder, said check valve arranged to prevent back flow from said cylinder toward said first named valve, and arranged to be closed by decrease in difference of pressure on the two sides of said check valve during the compression period in said cylinder, and a second compression chamber in which said piston compresses during its forward motion, said second compression chamber connected to said scavenging port to supply scavenging air thereto, the valve mechanism of said first valve arranged to admit the charge prior to closure of the exhaust port, whereby the burned gases swept forward by the scavenging air are expelled by the air and charge behind.

2. An internal combustion engine comprising in combination an engine cylinder having an admission port at its rear end and an exhaust port near its front end, a piston in said cylinder arranged in its motion to open and close said exhaust port, a compression chamber, said piston having a secondary piston head working in said compression chamber, whereby compression is effected in said chamber during rearward motion of the piston, means connecting said compression chamber and the admission port of said cylinder, a valve controlling passage of fluid from said compression chamber to said admission port, valve mechanism for operating said valve arranged to open same prior to material compression in said cylinder during the rearward stroke of the piston, a check valve arranged to prevent back flow from said cylinder toward said first valve, and arranged to be closed by decrease in difference of pressure on the two sides of said check valve during the compression period in said cylinder, a relief port connected to said admission port between said valves, and valve means controlling the same.

3. An internal combustion engine comprising in combination a working cylinder having at its front end exhaust and scavenging ports and at its rear end an admission port, a piston in said cylinder arranged in its motion to open and close said exhaust and scavening ports, a compression chamber connected to said admission port, said piston having a secondary piston head working in said compression chamber, whereby compression is effected in said chamber during rearward motion of the piston, a second compression chamber connected to said scavenging port, and in which said piston compresses during its forward motion, a valve controlling the admission of air from such first compression chamber to the working cylinder through such admission port, positive valve operating means therefor holding said valve closed during substantially the entire expansion period in said cylinder, and opening said valve prior to the beginning of material compression in said cylinder, means for introducing fuel to said admission port and there mingling it with air from said first compression chamber, and a free check valve interposed between said admission port and the cylinder, and arranged to prevent back flow from said cylinder into said admission port.

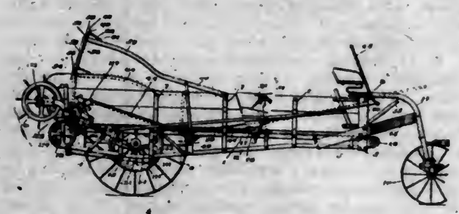
4. An internal combustion engine comprising in combination an engine cylinder having an admission port at its rear end and exhaust and scavenging ports near its front end, a piston in said cylinder arranged in its motion to open and close said exhaust and scavenging ports, a compression chamber, said piston having a secondary piston head working in said compression chamber, whereby compression is effected in said chamber during rearward motion of the piston, means including a pressure reservoir connecting said compression chamber and said admission port, valve means controlling the flow of air from said compression chamber to said reservoir, and from said reservoir to said admission port, means for introducing fuel into said admission port and there mingling it with air from said compression chamber, a free check valve interposed between said admission port and the cylinder and arranged to prevent back flow from said cylinder into said admission port, and a second compression chamber in which said piston compresses during its forward motion, said second compression chamber connected to said scavenging port to supply scavenging air thereto.

5. An internal combustion engine comprising in combination an engine cylinder having an admission port at its rear end and exhaust and scavenging ports near its front end, a piston in said cylinder arranged in its motion to open and close said exhaust and scavenging ports, a compression chamber, said piston having a secondary piston head working in said compression chamber, whereby compression is effected in said chamber during rearward motion of the piston, means connecting said compres-

sion chamber and said admission port, valve means including a positively operated valve controlling the flow of air from said compression chamber through such admission port to said engine cylinder, a liquid fuel receptacle connected to said admission port and provided with means for delivering to said port liquid fuel under pressure, and further provided with valve means preventing back flow from said receptacle, a free check valve interposed between the said admission port and cylinder and arranged to prevent back flow from said cylinder into said admission port, and a second compression chamber in which said piston compresses during its forward motion, said second compression chamber connected to said scavenging port to supply scavenging air thereto.

[Claims 6 to 13 not printed in the Gazette.]

1,018,743. MANURE-SPREADER. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Oct. 20, 1911. Serial No. 655,711. (Cl. 111—40.)



1. A manure spreader including, in combination, a receptacle having side walls, a distributing cylinder rotatably mounted at the rear end of said receptacle, an end gate adapted to close the end of said receptacle adjacent said cylinder, means for raising and lowering said end gate, said means including supporting bars having their front ends pivotally connected with the side walls of said receptacle upon opposite sides thereof, said end gate being pivotally connected with the rear ends of said bars, bracket members secured to said end gate and extending above the axis thereof, and compression springs operative between said brackets and said bars in a manner to yieldingly resist a swinging movement of said gate in one direction, means for swinging said bars about their pivotal connection in a manner to raise or lower said end gate, said bars fitting closely upon the upper edges of the side walls of said receptacle in a manner to form guards therefor when said end gate is lowered to a closing position.

2. A manure spreader including, in combination, a receptacle having side walls, a distributing cylinder rotatably mounted at the rear end of said receptacle, said side walls having raised portions adjacent said cylinder that curve downward and forward at their front ends toward the body portion of said side walls, an end gate adapted to close the end of said receptacle adjacent said cylinder, means for raising and lowering said end gate, said means including supporting bars having their front ends pivotally connected with the side walls of said receptacle upon opposite sides thereof and in front of said raised portions, said end gate being pivotally connected with the rear ends of said bars, brackets secured to said end gate and extending above the axis thereof, links having one end thereof pivotally connected with said bars and the opposite end thereof slidably received by openings in said brackets, and springs encircling said links and operative to yieldingly resist a swinging movement of said gate in one direction, means for swinging said bars about their pivotal connection in a manner to raise or lower said end gate, said bars being curved in a manner to fit closely upon the upper edges of the body and raised portions of the side walls of said receptacle in a manner to form guards therefor when said end gate is in a closed position.

3. A manure spreader including, in combination, a receptacle, a distributing cylinder rotatably mounted at the rear end of said receptacle, a movable apron forming the bottom of said receptacle, means for advancing said apron toward said cylinder, a follower secured to the front end of said apron, means for automatically suspending the action of said apron advancing means when said follower has reached a predetermined position adjacent said cylinder, an end gate adapted to close the end of said receptacle adjacent said cylinder, means for raising and lowering said end gate, said means including supporting bars having their front ends pivotally connected with the side walls of said receptacle upon opposite sides thereof, said end gate being pivotally connected with the rear ends of said bars, means operative to swing said bars about their pivotal connection in a manner to raise or lower said end gate, said means including a rock shaft journaled at the bottom of said receptacle and connected with the means for suspending the action of the apron advancing means, lever arms secured to opposite ends of said shaft, links pivotally connecting said arms with said end gate supporting bars, a rocking movement of said shaft in a direction to raise said end gate causing said arms and links to move to a self-locking position when said end gate has been raised to an open position, brackets secured to said follower, said end gate engaging with said brackets when said rock shaft is turned in an opposite direction.

1,018,744. BILLIARD-CUE TIP. FREDERICK L. DETHLOFF, Buffalo, N. Y. Filed Sept. 12, 1910. Serial No. 581,570. (Cl. 46—9.)

1. The combination of a ferrule adapted to embrace the end of a billiard cue and having an end wall provided with an outwardly projecting integral flange, a tip at the end of said ferrule having a groove into which said flange extends, said flange and groove being of non-circular shape to prevent the tip from turning on the ferrule, and means for securing said tip on the ferrule, substantially as set forth.

2. The combination of a ferrule adapted to embrace the end of a billiard cue and having an end wall provided with a hole and an outwardly projecting flange surrounding said hole, a tip at the end of said ferrule having a groove into which said flange extends, said flange and groove being shaped to prevent the tip from turning on the ferrule, and means passing through said hole for securing the tip to the ferrule, substantially as set forth.

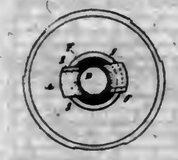
3. The combination of a ferrule adapted to embrace the end of a billiard cue and having an end wall provided with a non-circular hole and an outwardly projecting flange bounding said hole, a tip having a groove of substantially the same shape as said flange and into which said flange extends, whereby twisting strains between the tip and the ferrule are resisted by parts of said flange bearing against portions of said tip, and means which are held from turning in said hole for securing the tip to the ferrule, substantially as set forth.

4. The combination of a ferrule adapted to embrace the end of a billard cue and having an end wall provided with a hole surrounded by an outwardly bent flange, a tip having a groove into which said flange projects, and a hollow rivet which extends through said hole in the end of the ferrule and has prongs which are adapted to be driven into said tip and to bend in the tip to clench the tip to the ferrule, substantially as set forth.

5. The combination of a ferrule adapted to be attached to the end of a billiard cue and having a non-circular hole in the end thereof surrounded by an outwardly bent flange of corresponding shape, a tip having a groove into which said flange extends, and a hollow rivet of substantially the same shape as and extending through said hole and provided at its inner end with a flange for retaining it on the ferrule and at its outer end with prongs which are driven into the tip and secure the tip to the ferrule, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,018,745. LAMP-WICK TRIMMER AND WIPER. GILBERT J. DICKSON, Albany, N. Y. Filed Feb. 28, 1911. Serial No. 611,460. (Cl. 67—68.)



1. In a round lamp wick trimmer, the combination with a hub adapted to be inserted in a round wick tube, having a wiper attached thereto, of a detachable cutting blade secured therein, said blade having double cutting edges on either end thereof, beveled from reverse sides of said blade, whereby the said cutting edges rest flat against the top of the wick tubes, when either end of said hub is inserted within a round wick tube, substantially as specified.

2. A round lamp wick trimmer, comprising a hub adapted to be inserted in a round wick tube, a detachable cutting blade secured in said hub, said blade having double eccentrically formed cutting edges on either end thereof, beveled from reverse sides of said blade, whereby the said cutting edges have a shearing movement, and rest flat against the top of the wick tubes, when either end of said hub is inserted in a round wick tube, substantially as set forth.

3. A round lamp wick trimmer, comprising a hub adapted to be inserted in a round wick tube, having one of its ends of a greater diameter than the other, a detachable cutting blade secured therein, said blade having double cutting edges on either end thereof, beveled from reverse sides of said blade, whereby the said cutting edges rest flat against the top of the wick tubes, when either end of said hub is inserted within a round wick tube, substantially as shown and described.

4. In a round lamp wick trimmer, the combination with a divided hub adapted to be inserted in a round wick tube, of a detachable cutting blade having the said divided hub secured on either side thereof, and double cutting edges on either end of said blade, beveled from reverse sides of said blade whereby the said cutting edges rest flat against the top of the wick tubes, when either end of said hub is inserted in a round wick tube, substantially as specified.

1,018,746. MANUFACTURE OF PHOSPHORIC ACID. MAX DITTMAR, Wülfel, near Hanover, Germany. Filed Nov. 3, 1910. Serial No. 590,504. (Cl. 23—1.)

1. The process of making phosphoric acid which consists in reacting upon the phosphate of a metal forming compounds having alkaline properties with a halogen acid forming halogen compounds with the metal which are insoluble in the acid until the halogen compound is precipitated.

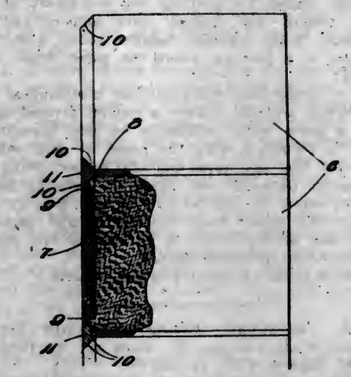
2. The process of making phosphoric acid which consists in reacting upon an alkali metal phosphate with hydrochloric acid until the chlorid of the alkali metal is precipitated.

3. The process of preparing phosphoric acid which consists in reacting upon the phosphate of a metal forming alkaline compounds with hydrochloric acid until the chlorid of the metal is precipitated, then separating the solution and evaporating the same, and again removing the precipitated chlorid and, finally, conducting hydrochloric acid into the solution until a filtered sample of the same gives no further precipitate when mixed with ether or alcohol.

4. In the art of making phosphoric acid, the process which consists in reacting upon the phosphate of a metal forming compound having alkaline properties with a concentrated halogen acid forming halogen compounds with the metal which are insoluble in the acid until the halogen compound is precipitated.

5. In the art of making phosphoric acid, the process which consists in reacting upon an alkali metal phosphate with hydrochloric acid of substantially from 24 to 40 per cent. strength.

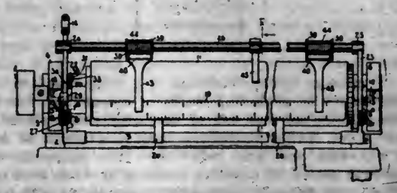
1,018,747. GLASS-FACED BRICK. JOHN T. GROAT, Detroit, Mich., assignor of one-half to George Watts, Detroit, Mich. Filed Nov. 8, 1911. Serial No. 659,184. (Cl. 72—35.)



1. A brick comprising a body of molded material and a glass facing slab, said slab being slightly less in area than the area of the front of the brick, and the body having projecting rims at the front, engaging around the edges of the slab, said rims being beveled on the outer side to the front surface edges of the slab.

2. A wall comprising bricks having bodies of molded material and glass facing slabs embedded therein, the bricks having rims at the front extending around said slabs and beveled on the outer side to the edges of said slabs, and mortar between the bricks, lapping the bevels and filling the spaces between the slabs at the exposed surface of the wall.

1,018,748. TYPE-WRITING MACHINE. WILLIAM ALLAN DYER, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed June 1, 1909. Serial No. 499,376. (Cl. 197—139.)



1. In a typewriting machine, the combination of a platen, a support having an unvarying normal relationship with said platen, and a paper guide on said support, said support and said guide being movable together bodily out-

ward and downward below and away from the printing face of the platen.

2. In a typewriting machine, the combination of a platen, a movable support extending longitudinally of the platen, a paper guide carried by said support and adapted to coöperate with the paper at opposite sides of the printing point, and means independent of said platen and of said guide for limiting the movement of said support toward the platen, said support and said guide being movable bodily away from the platen to a position where the paper guide is inoperative.

3. In a typewriting machine, the combination of a platen carrier, a platen thereon, a support, locking means normally securing said support on said platen carrier in set relationship therewith, and a paper guide on said support, said locking means being releasable to permit movement of said support and said guide bodily downward below the printing line and away from the platen.

4. In a typewriting machine, the combination of a platen, a movable support extending longitudinally of the platen, a paper finger adjustable lengthwise of said support, and means independent of said platen and of said paper finger for limiting the movement of said support toward the platen, said support and said paper finger being movable together bodily away from the platen to a position where the paper finger is inoperative.

5. In a typewriting machine, the combination of a platen carrier, a platen thereon, a support pivoted on said carrier, a paper guide adjustable on said support and adapted to coöperate with the paper at both sides of the printing line, said guide and said support being movable together outward away from the printing face of the platen about the pivotal axis of said support so as to render the paper guide inoperative and leave the printing face of the platen in advance of the printing line entirely free and unobstructed.

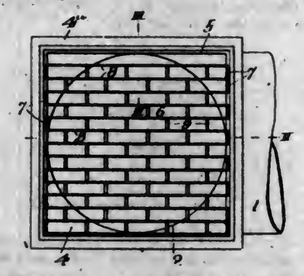
[Claims 6 to 31 not printed in the Gazette.]

1,018,749. MILEAGE TRANSPORTATION-TICKET. WILLIAM ELLIS, Chicago, Ill. Filed Apr. 11, 1910. Serial No. 554,877. (Cl. 11—15.)

1. A mileage ticket consisting of a strip provided with a longitudinally extending series of consecutive numbers running from the free end of the strip and representing single miles, and transversely extending series of numbers at every ten mile point upon the strip, the said transverse series of numbers running by tens from zero to ninety and being in arithmetical progression both transversely of the ticket and longitudinally thereof.

2. A mileage ticket consisting of a strip provided with divisional lines representing single miles, a series of consecutive numbers upon one side of the ticket for said divisional lines, a transverse series of numbers for every ten mile line, the said transverse series of numbers running by tens from zero to ninety and being in arithmetical progression both transversely and longitudinally of the ticket, and inverse unit numbering from one to ten upon the opposite side of the ticket for the single mile lines between the ten mile lines.

1,018,750. REGISTER. MILTON J. FARQUHAR, Wilmington, Ohio. Filed May 14, 1909. Serial No. 495,990. (Cl. 126—325.)



1. A register-grille composed of strip metal folded back and forth to form a plurality of spaced longitudinal strips with connecting bends, and metal plugs interposed between adjacent strips and welded thereto.

2. A register comprising a register-box, a grille set therein composed of connected metal strips on edge, the grille being shorter than one interior dimension of the box and movable therein, and a shutter-valve below the grille the slats of which are operated by strips of the grille to close and open the valve as the grille is moved in opposite directions.

3. In a register, the combination of a slidable grille, and a register-valve operated to open and close by movement of the grille.

4. In a register, the combination of a slidable grille, and a shutter-valve the slats of which are in such operative connection with the lower side of the grille as to be shut and opened by opposite movements of the grille.

5. In a register, the combination with a register-box or casing, of a shutter-valve therein comprising pivoted slats having outstanding projections, a grille supported by the box and movable to and fro across the valve, the outstanding projections of the slats being in the paths of parts of the grille, whereby the to and fro movements of the grille rocks the slats to open and close the valve.

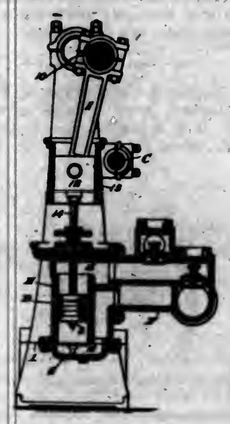
[Claim 6 not printed in the Gazette.]

1,018,751. PUMP. WILLS M. FLEMING, Holyoke, Mass., assignor to International Steam Pump Company, a Corporation of New Jersey. Filed Mar. 15, 1911. Serial No. 614,565. (Cl. 103—75.)

1. A vertical double acting pump having the cylinder parted at the lower end of the piston movement, and a removable cover forming the pulsation chamber below the cylinder, said cover being removable on the line on which the cylinder is parted whereby the removal of the cover leaves the piston accessible for removal and packing at the lower end of the cylinder.

2. In a vertical double acting power pump, the combination with the frame, crank shaft, crank rod, cross head, and piston, of a pump cylinder in line with and below the cross head, said cylinder being parted at the lower end of the piston movement, and a removable cover forming the pulsation chamber below the cylinder, said cover being removable on the line on which the cylinder is parted whereby the removal of the cover leaves the piston accessible for removal and packing at the lower end of the cylinder.

3. In a vertical double acting power pump, the combination with the frame, crank shaft and operating connections, of a plurality of pump cylinders arranged below the shaft and parted at the lower end of the piston movement, and a cover extending over the cylinders and forming the pulsation chambers, said cover being removable on



the line on which the cylinders are parted and space being provided below the cylinders for the removal of the cover and access to the pistons for packing.

1,018,752. DEVICE FOR CLEANSING CUTLERY AND THE LIKE. HERMANN FOLKES, Sr., New York, N. Y. Filed Oct. 9, 1911. Serial No. 653,509. (Cl. 51—6.)

1. A cleansing device for cutlery or the like, comprising a block, means carried by said block adapted to retain a cleansing element, means adjacent said cleansing element adapted to support the article to be cleansed, and means adapted to adjust said article supporting means relative to the cleansing element.

2. A cleansing device for cutlery or the like, comprising a block, means carried by said block adapted to retain a cleansing element, adjustable links carried by said block and means carried by said links adapted to support the article to be cleansed.

3. A cleansing device for cutlery or the like, comprising a block, means carried by said block adapted to support a cleansing element, a plurality of slotted links, means adapted to adjustably secure said links to said block, and means carried by said links adapted to support the article to be cleansed.

4. A cleansing device for cutlery or the like, comprising a support for a cleansing element, a plurality of slotted links, a bolt adapted to pass through the slots in said links, a wing-nut carried by said bolt, at one end thereof, adapted to bind said links to said support, and a table secured to the free end of said links adapted to support the article to be cleansed.

5. A cleansing device for cutlery or the like, comprising a support for a cleansing element, a plurality of slotted links, a bolt adapted to pass through the slots in said links, a wing-nut carried by said bolt, at one end thereof, adapted to bind said links to said support, and a table pivotally secured to the free end of said links adapted to support the article to be cleansed.

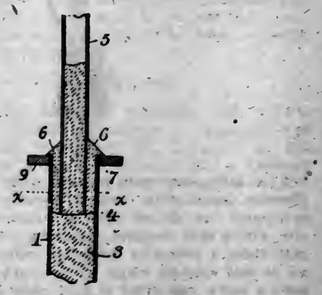
1,018,753. DEVICE FOR CLEANSING CUTLERY AND THE LIKE. HERMANN FOLKES, Sr., New York, N. Y. Filed Nov. 10, 1911. Serial No. 659,495. (Cl. 51—6.)

1. A cleansing device for cutlery or the like, comprising a block adapted to support the cleansing element, said block being provided with vertical slots in each end thereof, said block being also provided with openings longitudinally thereof, a table adapted to support the article to be cleansed, said table comprising a top and end flanges, said end flanges being provided with a slot, a rib carried by said end flanges adapted to slidably fit the vertical slot in the ends of said block, a bolt adapted to pass through the openings in said block and the slots in the end flanges of said table, and a wing-nut carried by said bolt at one end thereof.

2. A cleansing device for cutlery or the like, comprising a block, brackets carried by said block adapted to retain a cleansing element, a support for the article to be cleansed comprising an upper or table portion and depending sides provided with a slot, a bolt carried by said block adapted to pass through the slots in the sides of said support, and a wing nut carried by said bolt.

3. A cleansing device for cutlery, comprising a block, means thereon for retaining a cleansing element, and a support for the article to be cleansed consisting of an upper or table portion, having depending sides removably secured to the ends of said block, said support being adapted for adjustment vertically over and also transversely of the block.

1,018,754. POST. ARTHUR W. FORD, Quincy, Mass., assignor to Henry T. P. Bates, Quincy, Mass. Filed Nov. 5, 1910. Serial No. 590,926. (Cl. 189—27.)



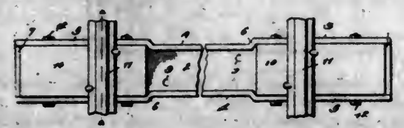
1. A built up post comprising sections of metallic tubing of different diameters, a section of smaller diameter being inserted for a limited distance within a section of larger diameter, and lapidescent material binding said sections together, said limited distance bieng sufficient to enable said united sections to effectively resist flexure and tension.

2. A built up post comprising sections of metallic tubing of different diameters, a section of smaller diameter being inserted for a limited distance within a section of larger diameter, and lapidescent material filling said sections and binding the same together, said limited distance being sufficient to enable said united sections to effectively resist flexure and tension.

3. A built up post comprising sections of metallic tubing of different diameters, a section of smaller diameter being inserted for a limited distance within a section of

larger diameter, and concrete filling said sections and the space between the smaller and larger sections, said limited distance being sufficient to enable the concrete to resist any flexure and tension which may be applied to the united sections.

1,018,755. RAILWAY-TIE. JOHN GAUL and ROBERT W. VOSBURG, Laceyville, Pa. Filed Nov. 8, 1911. Serial No. 659,124. (Cl. 238—5.)



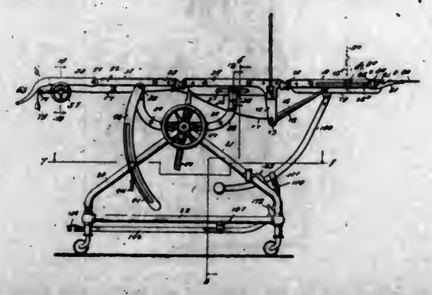
The herein described railway tie comprising integral bottom and upturned side walls, the side walls having offset portions spaced from the ends of the tie and forming a narrowed intermediate portion in the tie body, the bottom of the tie being formed with upturned stop flanges at the ends of the tie, in combination with blocks on the end portions of the bottom of the tie, between the side walls thereof, bearing at their inner ends against the offset portions of the side walls and at their outer ends against the stop flanges, and bolts extending transversely through the said blocks and the side walls of the broadened end portions of the tie and detachably securing the blocks in place.

1,018,756. LOCK. WILLIAM FRANCES E. GORDON, Seattle, Wash., assignor of one-half to N. C. Nelson and one-fourth to H. J. Shook, Seattle, Wash. Filed July 27, 1910. Serial No. 574,149. (Cl. 70—18.)

1. A lock comprising a main body having a circular chamber, longitudinal channels opening into said chamber, perforated cup shaped disks of substantially equal diameter within said chamber, relatively thin washers between said disks, a relatively thick top washer, extensions from all of said washers which fit into said longitudinal channels, a screw cap fitted to said main body and having a central opening therein adapted to aline with the openings in said disks, a bolt adapted to pass through said screw cap and said disks when the openings therethrough are in alinement, means for preventing the withdrawal of the bolt when the alinement is destroyed, means for controlling the alinement, an extension from said bolt adapted to coöperate with said relatively thick top washer whereby movement of said screw cap is prevented.

2. A lock comprising a main body having a circular chamber, longitudinal channels opening into said chamber, perforated cup shaped disks of substantially equal diameter within said chamber, relatively thin washers between said disks, a relatively thick top washer, extensions from all of said washers which fit into said longitudinal channels, a screw cap fitted to said main body and having a central opening therein adapted to aline with the openings in said disks, a bolt adapted to pass through said screw cap and said disks when the openings therethrough are in alinement, means for preventing the withdrawal of the bolt when the alinement is destroyed, means for controlling the alinement, said means including interchangeable screws, an extension from said bolt adapted to coöperate with said relatively thick top washer whereby movement of said screw cap is prevented.

1,018,757. SURGEON'S OPERATING-TABLE. WILLIAM R. GRADY, Madison, Wis., assignor to Scanlan Morris Co., Madison, Wis., a Corporation of Wisconsin. Filed June 5, 1911. Serial No. 631,367. (Cl. 45—50.)



1. In an operating table, two pivotally connected table top sections, a supporting cradle consisting of two parallel U shaped bars, located at a distance apart less than the width of said sections, one section being articulately supported on one end of the cradle and the other upon the other end of the cradle, the point of connection between the sections being between the ends of the cradle, a shaft whereon said cradle is pivotally supported, and means mounted on said shaft for bringing said sections to a concave and to a convex angle with reference to each other.

2. In an operating table, two pivotally connected table top sections, a cradle consisting of two parallel U shaped bars, said sections being articulately supported on said cradle at points on opposite sides of the point of connection between the sections, a shaft for pivotally supporting said cradle, a bar connected to said sections between the points of support thereof, means supported by said shaft for raising and lowering said bar for moving said sections to a concave and to a convex angle with respect to each other, and means for securing said cradle at different angles of inclination.

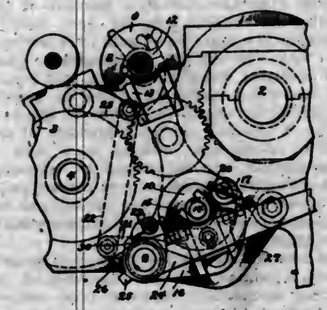
3. In an operating table the combination of a rocking cradle, a controlling shaft whereon said cradle is adapted to rock, table top sections one of which is pivotally supported upon said cradle, a slotted rack bar pivotally connected to the pivotally supported table top section, said controlling shaft passing through the slot in said rack bar, a pinion adapted to mesh with said rack bar, said pinion having a stationary axis of rotation, and a worm secured to said shaft and adapted to rotate said pinion to thereby raise and lower said rack bar.

4. In an operating table the combination of a first table top section, means comprising a main frame for supporting said section, a second table top section hinged to said first section, a retractable prop for holding said second section rigid with respect to the first section, and a releasable member connected at one end to said second section and adapted to engage said main frame for supporting said second section when said prop is retracted.

5. In an operating table the combination of a main supporting frame, a table top section pivotally supported upon said main frame, a second table top section, hinged to the first section, manually releasable holding means for holding the second section rigid with respect to the first section, and a supporting bar 100 connected at one end to said second section and adapted to be connected also to said main frame for supporting said second section when said releasable holding means is released.

[Claims 6 to 12 not printed in the Gazette.]

1,018,758. INK-ROLL-OPERATING MECHANISM FOR PRINTING-MACHINES. JOHN J. HALLIWELL, New York, N. Y., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed June 11, 1909. Serial No. 501,458. (Cl. 101—71.)



1. In an inking mechanism, the combination with a rotary form carrier, of upper and lower form rolls, a coöperating roll from which said form rolls derive their ink, an operating member, connections between the member and the form rolls whereby as the member is moved the form rolls move into contact with the form carrier or out of contact therewith and with their coöperating roll and to a position where the form rolls may be removed from the mechanism, and means for locking the member is a position intermediate these positions.

2. In an inking mechanism, the combination with a rotary form carrier, of upper and lower form rolls, a coöperating roll from which said rolls derive their ink, an operating member, connections between one of the form rolls and the operating member said roll and connections being so disposed with respect to the member that they tend to move it into position where said roll is out of contact with the form carrier and coöperating roll and may be removed from the mechanism, roll moving connections between the member and the other form roll, and means for locking the member in a position intermediate the contact position of the rolls and the roll removing position.

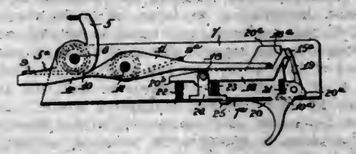
3. In an inking mechanism, the combination with a rotary form carrier, of upper and lower form rolls, an operating member, connections between the member and the rolls whereby as the member is moved the rolls move into contact with the form carrier and out of contact therewith to a position where the rolls may be removed from the mechanism, means for locking the member in a position intermediate these positions, and a roll rest for supporting the lower roll when it is in roll removing position.

4. In an inking mechanism, the combination with a rotary form carrier, of upper and lower form rolls, a shaft, connections between the shaft and the upper form roll, arms on the shaft, the lower form roll being supported in the arms, the arms being so disposed with respect to the shaft that they and the roll tend to move it from the contact position of the lower roll into a position where the roll may be removed from the mechanism, and means for locking the shaft in a position intermediate these positions.

5. In an inking mechanism, the combination with a rotary form carrier, of upper and lower form rolls, a shaft, connections between the shaft and the upper form roll, arms on the shaft, the lower form roll being supported in the arms, the arms being so disposed with respect to the shaft that they and the roll tend to move it from the contact position of the lower roll into a position where the roll may be removed from the mechanism, means for locking the shaft in a position intermediate said positions, and a roll rest for supporting the roll when the shaft is in roll removing position.

[Claims 6 to 8 not printed in the Gazette.]

1,018,759. SINGLE-TRIGGER SHOTGUN. EDWARD H. HAMMERSLY, Richmond, Va. Filed June 16, 1911. Serial No. 633,523. (Cl. 42—42.)



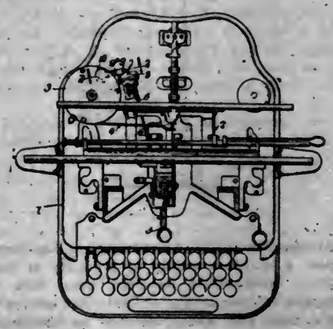
1. In a single-trigger mechanism for firearms, the combination with the hammers, of means for releasing the hammers including tripping-levers having integral catch-ends, a shiftable fulcrum for one of said levers, a trigger-blade, and a pawl on the trigger-blade for engaging the catch ends of the tripping-levers, substantially as shown and for the purpose set forth.

2. In a single-trigger mechanism for firearms, the combination with the hammers, of means for releasing the hammers including tripping-levers having integral catch-ends, a shiftable fulcrum for one of the tripping-levers, a trigger-blade located between the tripping-levers, and a spring-actuated pawl carried by the trigger-blade and extended laterally to engage the catch-ends of both tripping-levers, substantially as shown and for the purpose set forth.

3. In a single-trigger mechanism for firearms, the combination with the hammers, of means for releasing the hammers including tripping-levers having integral catch-ends, a shiftable fulcrum for one of the tripping-levers, and an operating slide connected to the shiftable fulcrum; together with a trigger-blade, and a spring-actuated pawl on the trigger-blade for engagement with the catch-ends of the tripping-levers, substantially as shown and for the purpose set forth.

4. In a single-trigger mechanism for firearms, the combination with the hammers and means for operating the same, of a tripping-lever for one of the hammers pivoted on a fixed fulcrum and having a catch-end, a second tripping-lever, for the other hammer, having a catch-end, a movable fulcrum for the second tripping-lever, and means for moving said fulcrum to dispose the catch-end of the lever in front of or behind the catch-end of the other lever; together with a trigger-blade, and a spring-actuated pawl carried by the trigger-blade to engage the catch-ends of the tripping-levers one after the other, substantially as shown and described.

1,018,760. SPRING-BARREL BRAKE FOR TYPE-WRITING MACHINES. CLAYTON C. HARTING and JAMES F. FLOOD, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1910. Serial No. 569,132. (Cl. 197—64.)



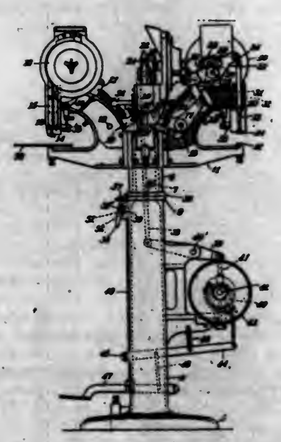
1. In a typewriter, the combination with a base-frame, a paper-carriage, a spring-barrel mounted on the base frame through the medium of which endwise movement is

given to said paper-carriage, letter-spacing mechanism for controlling the movement of the carriage, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, including a key-lever, of brake mechanism actuated by said key-lever, said brake mechanism embracing a spring arm, and a saucer shaped shoe loosely mounted at the end of said spring arm and provided with a flange adapted to be brought into engagement with the end of said barrel by the pressure of said spring arm.

2. In a typewriter, the combination with a base-frame, a paper-carriage, a spring-barrel mounted on the base frame through the medium of which endwise movement is given to said paper-carriage, letter-spacing mechanism for controlling the movement of the carriage, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, including a key-lever, of brake mechanism actuated by said key-lever, said brake-mechanism embracing a spring arm and a saucer-shaped shoe loosely riveted at the end of the spring arm and provided with a flange adapted to be brought into engagement with the under face of said barrel by the upward pressure of said spring arm.

3. In a typewriter, the combination with a base-frame, a paper-carriage, a spring barrel mounted on the base frame through the medium of which endwise movement is given to said paper-carriage, letter-spacing mechanism for controlling the movement of the carriage, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, including a key-lever, of brake mechanism actuated by said key-lever, said brake mechanism embracing a spring arm, and a saucer-shaped shoe loosely riveted at the end of said spring arm and provided with an annular flange adapted to be brought into engagement with the under face of said barrel by the upward pressure of said spring arm, said saucer-shaped shoe having a rounded base.

1,018,761. MULTIPLE RIVET-SETTING MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson Mfg. Co., a Corporation of Maine. Filed Mar. 29, 1909. Serial No. 486,314. (Cl. 218—2.)



1. A machine for setting rivets and the like having, in combination, a movable carrier, a plurality of organized rivet setting mechanisms mounted upon said carrier, means adapted to operate one of said rivet setting mechanisms at a time and means adapted to simultaneously, lock said operating means and unlock said carrier.

2. A machine for setting rivets and the like having, in combination, a movable carrier, a plurality of organized rivet setting mechanisms mounted upon said carrier means adapted to operate one of said rivet setting mechanisms at a time and locking means adapted to simultaneously, lock said carrier and unlock said operating means.

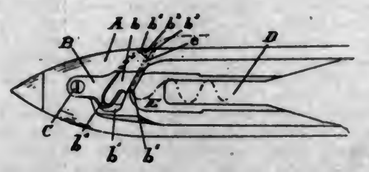
3. A machine for setting rivets and the like having, in combination, a movable carrier, a plurality of organized rivet setting mechanisms mounted upon said carrier, means adapted to operate one of said rivet setting mechanisms at a time, and locking means adapted to alternately, lock said operating means and unlock said carrier, and, lock said carrier and unlock said operating means.

4. A machine for setting rivets and the like having, in combination, a rotatable carrier, a plurality of organized rivet setting mechanisms mounted upon said carrier, means, including a treadle, adapted to operate each of said rivet setting mechanisms, one at a time, and a locking lever adapted to engage said carrier and lock the same in position for each of said rivet setting mechanisms respectively to be operated.

5. A machine for setting rivets and the like having, in combination, a rotatable carrier, a plurality of organized rivet setting mechanisms mounted upon said carrier, means including a treadle, adapted to operate one of said rivet setting mechanisms at a time, a locking lever adapted to engage said carrier and lock the same in position for each of said rivet setting mechanisms respectively to be operated, and a rod attached to said treadle and adapted to engage said locking lever and hold said treadle stationary when said locking lever is disengaged from said carrier, said rod being disengaged from said locking lever to allow said treadle to be operated when said locking lever engages said carrier and locks the same in position, as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,018,762. SHUTTLE-EYE. JOHN H. HOPKINSON, Fall River, Mass. Filed Feb. 24, 1910. Serial No. 545,759. (Cl. 139—46.)



1. A shuttle-eye consisting of a bed-piece laid back on itself to form a guide piece and crimped to form a slotted tube, the inner end of said tube being in line with the point of a shuttle spindle, and a lock-piece extending from the bed-piece over the edge of the guide-piece.

2. A shuttle-eye consisting of a bed-piece laid back on itself and forming a guidepiece extending close to and parallel with the bed-piece, an inner lock-piece extending from the bed-piece over and beyond the inner edge of the guide-piece, and an outer lock-piece extending from the bed-piece over the outer edge of the guide-piece.

3. In a shuttle-eye a bed-piece, and a guide-piece in combination with a lock-piece having the shape of an irregular curvilinear triangle with rounded point extending from the bed-piece over and beyond the inner edge of the guide-piece.

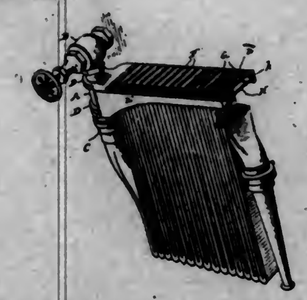
4. A shuttle-eye consisting of a bed-piece adapted to be fastened to the shuttle, a longitudinally slotted tube integral with said bed-piece, a guide-piece integral with said tube, and a lock-piece extending from the bed-piece over and beyond the inner edge of the guide-piece.

5. A shuttle-eye consisting of an angular bed-piece and a guide-piece parallel thereto connected at the lower edges by a tube slotted longitudinally between said bed-piece and said guide-piece, and a lock-piece extending from said bed-piece over and beyond the inner edge of said guide-piece.

1,018,763. APPARATUS FOR PRODUCING SPARKS. RICHARD VON HORVÁTH, Vienna, Austria-Hungary, assignor to The Firm of Hompesch & Company, Berlin, Germany. Filed Nov. 25, 1911. Serial No. 662,350. (Cl. 67—8.)

In apparatus for producing lightning sparks by mechanical friction, the combination, with a supporting brace, of a pivot-pin carried by said brace, a ratchet-wheel loosely mounted to said pivot-pin, a friction-wheel connected to said ratchet-wheel, an arm loosely mounted to said pivot-pin, a pawl carried by said arm to engage the said ratchet-wheel, a spring carried by the same pivot pin to operate the said arm, means for holding a pyrophorous matter under pressure against the said friction-wheel, and means for fitting the sparking apparatus to an igniting device, substantially as and for the purpose set forth.

1,018,764. HOSE-RACK. HENRY J. M. HOWARD, Washington, D. C. Filed June 3, 1911. Serial No. 631,083. (Cl. 137—81.)



1. A hose rack comprising a pair of horizontal parallel rack arms free at their outer ends and between which loops of hose are adapted to be suspended, a series of pairs of oppositely arranged supports, pivotally mounted on the arms to swing in the same horizontal plane and having a range of pivotal movement outwardly past the inner faces of the arms, whereby the inner faces of the arms form guiding surfaces for the loops of hose and stop surfaces on the rack arms for arresting the outward pivotal movement of the supports.

2. A hose rack comprising a pair of parallel rack arms between which loops of hose are suspended, each of said arms having its inner face recessed, and a series of pairs of oppositely arranged supports pivotally mounted on the arms in the same plane to project toward each other, said supports being movable outwardly into said recesses and past the vertical planes of the inner faces of the arms when turned to release or admit a loop of hose whereby an unobstructed hose passage is left between the arms and the inner faces of the arms form guides for the loops of hose.

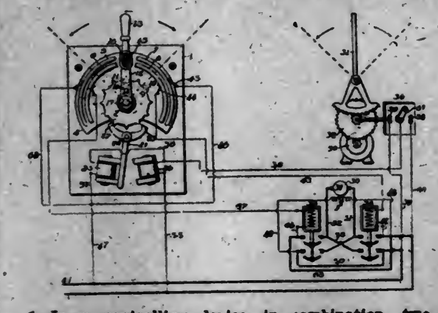
3. A hose rack comprising a pair of parallel rack arms between which loops of hose are suspended, each of said arms having its inner face provided with a series of recesses, and a series of pairs of oppositely arranged ball-like supports embracing and pivotally mounted on the arms to project toward each other and movable into and out of said recesses.

4. A hose rack comprising a pair of parallel rack arms between which loops of hose are suspended, each of said arms having its inner face provided with a series of recesses and its top and bottom faces provided with a series of bearings, and a series of pairs of ball-like supports having their ends pivotally mounted in said bearings and their intermediate portions movable into and out of said recesses, each pair of supports being adapted to project toward each other and form a support for a single loop of hose.

5. A hose rack embodying a pair of parallel rack arms of substantially T-shape in cross section and with the central web provided with a series of vertical edge recesses, and a series of pairs of oppositely arranged ball-like hose supports embracing and pivotally mounted on said central web and movable into and out of said recesses, whereby an unobstructed hose space may be left between the arms.

[Claims 6 and 7 not printed in the Gazette.]

1,018,765. MOTOR-CONTROLLER. JOHN T. JANETTE, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 10, 1909. Serial No. 506,914. (Cl. 172—239.)



1. In a controlling device, in combination, two co-operating contact members, one being movable at will and the other tending to automatically operate upon operation of the former, and means restricting the operation of said automatic member to a step by step movement, the controlling part of said means being stationarily mounted.

2. In a controlling device in combination, two coöperating contact members, one being movable at will, means for moving the other member automatically, and automatic means restricting the operation of said automatically operated member to a step by step movement, said means including stationarily mounted actuating means.

3. In a controlling device in combination, two coöperating contact members, one being movable at will, means for automatically moving the other member, speed restricting means for said automatically operated member, and stationarily mounted electro responsive means controlling said speed restricting means.

4. In a controlling device, in combination, two coöperating contact members, one being movable at will and the other tending to automatically operate upon movement of the former, and a ratchet and pawl escapement device for restricting the operation of said automatic member.

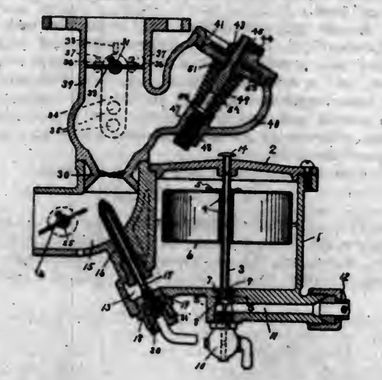
5. In a controlling device, in combination, two coöperating contact members, one being movable at will and the other tending to automatically operate upon movement of the former, coöperating parts for restricting the operation of said automatic member to a step by step movement, and stationarily mounted electro responsive means for operating one of said coöperating parts.

[Claims 6 to 17 not printed in the Gazette.]

1,018,766. CARBURETER. HARRY E. KERR, Detroit, Mich. Filed May 22, 1911. Serial No. 628,679. (Cl. 48—155.2.)

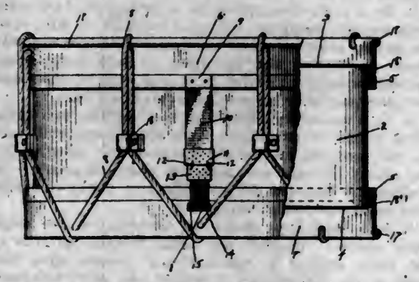
1. In a carbureter, the combination of a body having an elbow at its lower end comprising a primary air inlet pas-

sage, an outlet passage, and a secondary air inlet; a fuel nozzle connecting into the elbow at its convex portion, a deflector adjustably mounted in the elbow between the inlet opening and the fuel nozzle and adjacent the fuel nozzle, and means to lock the deflector in the desired position to control the proportion of the entering air passing the orifice of the nozzle.



2. In a carbureter, the combination of a body having an elbow at its lower end comprising a primary air inlet passage, a reduced portion intermediate its ends, an outlet passage and a secondary air inlet between the outlet and the reduced portion, a throttle valve mounted in the outlet passage, a fuel nozzle connecting into the elbow between the air inlet and the reduced portion of the body, a deflector mounted in the elbow between the air inlet and fuel nozzle to control the proportion of the entering air which passes the orifice of the nozzle, means to lock the deflector in desired position, and a valve for normally closing the secondary air inlet.

1,018,767. DRUM. GEORGE H. LOGAN, Braddock, Pa. Filed Nov. 14, 1910. Serial No. 592,248. (Cl. 84—10.)



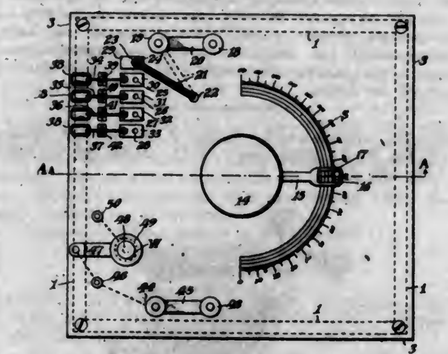
A drum having a head of two layers of fabric, one of said layers being of finely woven material and the other layer of very coarse material adapted to support said fine layer, said fine layer being treated with a filler comprising glue, rubber, turpentine, shellac, white of egg, gum arabic and linseed oil, said layers being cemented together.

1,018,768. TAILOR'S CHALK SHARPENER, RECEPTACLE, AND PAPER-WEIGHT. HENRY J. MAYER, Columbus, Ohio. Filed Feb. 13, 1911. Serial No. 608,313. (Cl. 120—89.)

A device of the class described comprising a box or receptacle having a rearwardly curved front wall with a central vertical opening, a pair of transversely alined shoulders, provided with longitudinal elongated slots, at the front of the box, a pair of chalk sharpening knives adjustably mounted on said shoulders, said knives having beveled inner portions, leaving scraping edges, between

which the chalk is drawn to form the marking edge, and screws passing through the slots and screwing into the knives for adjusting the latter.

1,018,769. WAVE-METER. FREDERICK W. MIDGLEY, Jersey City, N. J., assignor to John Firth, New York, N. Y. Filed Feb. 25, 1911. Serial No. 610,757. (Cl. 178—319.)



1. A wave meter comprising a casing, a closing wall therefor, a condenser and an inductance both supported upon said closing wall and removable therewith from said casing, said condenser comprising stationary and movable armatures, each armature comprising separated parallel plates, and a rotatable shaft carrying said movable armature for rotating the plates thereof to position between the plates of said stationary armature, said inductance comprising a coil having convolutions extending entirely around said condenser, the axis of said inductance coil convolutions and of said rotatable shaft being substantially coincident.

2. In a wave meter, a supporting member, a condenser supported upon said supporting member and comprising stationary and movable armatures, each armature comprising separated parallel plates, a rotatable shaft supporting said movable armature for rotating the plates thereof to position between the plates of said stationary armature, an inductance coil carried by said supporting member and extending entirely around said condenser, the axis of said inductance coil being substantially parallel with the axis of said condenser, said condenser and inductance coil connected in series with each other, said inductance coil divided into sections, terminals for each section upon said supporting member, and switching mechanism comprising a movable plug and switch blades for including in circuit one or more sections of said inductance coil and for isolating the other sections.

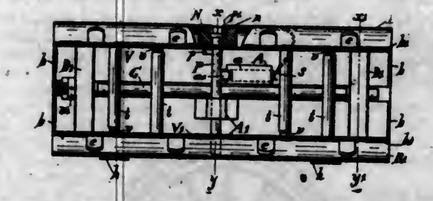
3. In a wave meter, a supporting member, a condenser supported upon said supporting member and comprising stationary and movable armatures, each armature comprising separated parallel plates, a rotatable shaft supporting said movable armature for rotating the plates thereof to position between the plates of said stationary armature, an inductance coil carried by said supporting member and extending entirely around said condenser, the axis of said inductance coil being substantially parallel with the axis of said condenser, a flexible conducting cord connected in series with said inductance coil and said condenser, a plug on said flexible cord, said inductance coil divided into sections having terminals on said supporting member, said plug adapted to engage with said terminals, and switch blades coöperating with said terminals, whereby sections of said inductance coil may be connected in circuit and the other sections isolated.

4. A wave meter comprising a condenser and inductance forming an oscillating circuit, and a self-restoring detector having unipolar connection with said oscillating circuit.

5. A wave meter comprising a condenser and inductance forming an oscillating circuit, a self-restoring detector having unipolar connection with said oscillating circuit, and a signal translating instrument having its terminals connected to the terminals of said detector device.

[Claims 6 to 10 not printed in the Gazette.]

1,018,770. LOOSE-LEAF BINDER. GAIUS C. MOORE, Rochester, N. Y., assignor to John C. Moore Corporation, Rochester, N. Y., a Corporation of New York. Filed Aug. 11, 1911. Serial No. 643,534. (Cl. 129—1.)



1. In a loose leaf binder in combination with the frame members and the operating means for moving the same relatively to and from each other, an impaling post carrying plate hinged to one of said side members and a second plate carrying impaling posts adapted to telescope with the posts carried by the first plate to hold the leaves in the binder, such second plate removable from the binder and from its coöperative position relative to the first plate and means for locking the second impaling post carrying plate in operative position in the second side member of the binder.

2. In a loose leaf binder in combination with the frame members and the operating means for moving the same relatively to and from each other, an impaling post carrying plate hinged to one of said side members and a second plate carrying impaling posts adapted to telescope with the posts carried by the first plate, such second plate removable from the binder and from its coöperative position relative to the first plate and means for locking the second impaling post carrying plate in operative position in the second side member of the binder, such locking means comprising also means for locking the side members of the binder against movement relatively from each other.

3. In a loose leaf binder in combination with the frame members and the operating means for moving the same relatively to and from each other, an impaling post carrying plate hinged to one of said side members and a second plate carrying impaling posts adapted to coöperate with the posts carried by the first plate to hold the leaves in the binder, such second plate removable from the binder and from its coöperative position relative to the first plate and means for locking the second impaling post carrying plate in operative position in the second side member of the binder.

4. In a loose leaf binder in combination with the frame members and the operating means for moving the same relatively to and from each other, an impaling post carrying plate hinged to one of said side members and a second plate carrying impaling posts adapted to coöperate with the posts carried by the first plate to hold the leaves in the binder, such second plate removable from the binder and from its coöperative position relative to the first plate and means for locking the second impaling post carrying plate in operative position in the second side member of the binder, such locking means comprising also means for locking the side members of the binder against movement relatively from each other.

1,018,771. SUPPORTING ATTACHMENT FOR FIELD-GLASSES. HUGO NEUBURGER, St. Gallen, Switzerland. Filed Nov. 11, 1911. Serial No. 659,678. (Cl. 88—36.)

1. A supporting attachment for field glasses, comprising a telescoping-support, means for attaching the same to the case of the field glasses, a holder applied to the uppermost section of the support, a clamping-joint for said holder, brace-rods applied to one of the intermediate sections of the support, and a perforated shoulder-strap for the braces.

2. The combination, with the case of a field glass, provided respectively in the bottom with interiorly-threaded screw-sockets and with a guide-socket in the cover, of a telescoping support adapted to be screwed into the bottom socket, a clamping holder at the upper end of the support, a clamping-joint connecting the holder with the uppermost section of the support, brace-rods applied to one of the intermediate sections of the telescoping support and a suspension-strap for the case provided with holes for connecting the brace-rods thereto.

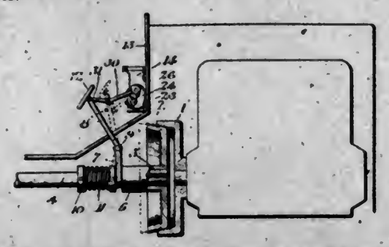
3. A supporting attachment for field glasses, comprising a case for the field glass, a suspension-strap, for the case provided with holes, fixed sockets in said case, a telescopic supporting-rod secured to said sockets, a forked holder at the upper end of said telescoping support, a clamping joint between said holder and the uppermost section of the support, and brace-rods pivoted to the support and connected by their hook-shaped ends with the perforated suspension-strap.

1,018,772. PNEUMATIC CLUTCH-CONTROLLER. WALTER D. NICKUM and MARTIN CLAUSSEN, Los Angeles, Cal. Filed May 10, 1911. Serial No. 626,355. (Cl. 192—1.)

1. In combination with a clutch lever, a pneumatic clutch controller comprising a cylinder, a piston therein, one of said members being provided with a port permitting the free entrance of air and with a port for the exhaust of air, a valve controlled by the piston for closing said inlet port while the piston is compressing, and an extensible connection from said piston to the clutch lever.

2. In combination with a clutch lever, a pneumatic clutch controller comprising a cylinder, a piston therein, ports for the inlet and exhaust of air from the cylinder,

a crank shaft in the cylinder, a connecting rod between the crank shaft and piston, a gear on the crank shaft, another shaft on the cylinder, a gear on the latter shaft meshing with the first gear, a disk on the latter shaft, an arm journaled on the latter shaft and having a loose connection with the disk, and another arm connected to the first arm and adapted to be connected to the clutch lever.



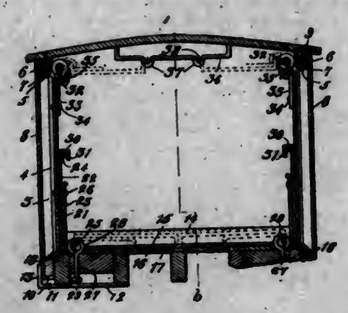
3. In combination with a clutch lever, a pneumatic clutch controller comprising a cylinder, a piston therein, the cylinder having air inlet and exhaust ports, a lever pivoted in the upper end of the cylinder, a valve on one end of the lever adapted to close the inlet port, a screw in the piston for actuating said lever, a crank shaft in the cylinder, a connecting rod between the crank shaft and piston, another shaft, a gear on the crank shaft and a gear on the latter shaft meshing with the gear on the crank shaft, a disk on the latter shaft, an arm journaled on the latter shaft, said disk having a segmental notch which receives said arm and allows a limited movemen thereof with respect to the disk, and another arm connected to the first arm and adapted to be connected to the clutch lever.

4. In combination with a clutch lever, a pneumatic clutch controller comprising a cylinder, a piston therein, the cylinder having air inlet and exhaust ports, a lever pivoted in the upper end of the cylinder, a valve on one end of the lever adapted to close the inlet port, a screw in the piston for actuating said lever, a crank shaft in the cylinder, a connecting rod between the crank shaft and piston, another shaft, a gear on the crank shaft and a gear on the latter shaft meshing with the gear on the crank shaft, a disk on the latter shaft, an arm journaled on the latter shaft, said disk having a segmental notch which receives said arm and allows a limited movement thereof with respect to the disk, a screw in said disk for adjusting said free movement of said arm, another arm connected to the first arm and adapted to be connected to the clutch lever, a transverse passage in said cylinder communicating with both of said ports and with the atmosphere, a needle valve extending into said transverse passage, said needle valve extending over the end of the exhaust port for regulating the passage of air therethrough.

1,018,773. GRAIN-DOOR FOR FREIGHT-CARS. PETER OAK, Laurel, Nebr. Filed Apr. 22, 1911. Serial No. 622,691. (Cl. 20—27.)

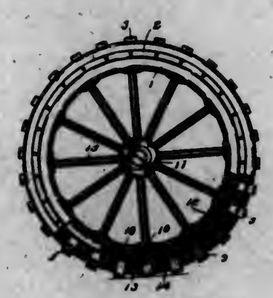
1. A structure of the class described having a grain door comprising a lower member hinged at its lower side, an upper member hinged at its upper side and provided with a downwardly directed catch to engage the upper side of the lower member when both members are in closed, vertical position, hanger yokes depending from the roof of the structure, and a locking bar carried by and laterally movable on the hanger yokes for engagement by the catch of the upper member when the latter is in elevated position.

2. A structure of the class described having a grain door comprising a lower member hinged at its lower side, an upper member hinged at its upper side and provided with a downwardly directed catch to engage the upper side of the lower member when both members are in closed, vertical position. hanger yokes depending from the roof of the structure, and a locking bar carried by and laterally movable on the hanger yokes for engagement by the catch of the upper member when the latter is in ele-



vated position, the said hanger yokes having means to secure the locking bar in adjusted position.

1,018,774. VEHICLE-WHEEL. ISRAEL PASCAL, Montreal, Quebec, Canada, assignor of six-tenths to Moses Albert, Montreal, Canada. Filed May 6, 1911. Serial No. 625,435. (Cl. 152—1.)

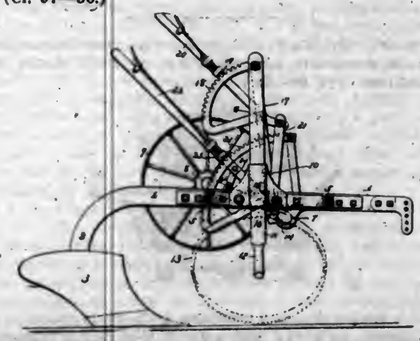


1. In a vehicle wheel, a hollow metallic tire case having transverse spaced slots in its periphery, an annular spring metal band disposed within said tire case and having spring metal loops secured transversely thereacross and projecting through said slots in the tire case, means for resiliently supporting said metal band disposed therebeneath, a hub and means for supporting said tire case from said hub.

2. In a vehicle wheel, a hub, spokes extending from said hub, a hollow rim of substantially semi-circular formation in cross section rigidly secured to said spokes, a ring of rubber substantially semi-circular in cross section forming a resilient bed in said rim, a circular spring band mounted on said rubber bed, a plurality of spring metal shoes having an arc-shaped tread portion and rigidly secured at their upper ends to said band and suitably spaced, an outer ring case semi-circular in cross section having cross slots through which said shoes project rigidly secured to said inner case, and distance blocks between said shoes.

3. In a vehicle wheel, a hub, spokes extending from said hub, a hollow ring forming the inner part of a tire case and rigidly secured to said spokes, a rubber ring forming a resilient bed in said rim, a circular spring metal band mounted on said resilient bed, a plurality of spring metal shoes having arc-shaped tread portions and rigidly secured to said metal band at suitable distances apart, rubber blocks filling in said shoes, rubber distance blocks between said shoes, and an outer ring casing substantially semi-circular in cross section having cross slots through which said shoes project rigidly secured to said rim.

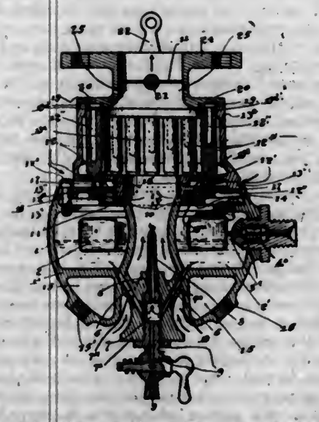
1,018,775. SULKY-PLOW. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Apr. 10, 1911. Serial No. 620,183. (Cl. 97—36.)



1. The combination with the land and furrow wheels of a sulky plow, a crank axle having one of said wheels journaled on its crank arm, and provided at its opposite end with a crank arm, and a lever and sector rack for rotating the crank axle, of a vertically adjustable standard axle having one of said wheels journaled thereon, a guide connected with said crank arm, a sliding bar pivoted at its upper end to the standard axle and its lower end arranged to slide in said guide, a sector rack connected with the sliding arm, an operating lever pivoted to the sliding arm, and a pitman pivotally connected at its upper end to the operating lever and at its lower end to said guide, substantially as set forth.

2. In a plow, the combination with a frame and a soil engaging member, of a crank-axle mounted in said frame, a wheel having the journal of said crank axle mounted in its hub, an arm at the opposite end of the crank-axle, a vertically movable standard axle provided at its lower end with a journal, a furrow wheel in which said journal is mounted, a rod or bar connected with the standard axle and having sliding connection with the arm at the adjacent end of the crank axle, a lever pivoted to said rod or bar, a segment connected with said rod or bar and adapted for coöperation with said lever, a pitman connected with said lever and with the arm at the adjacent end of the crank axle, a lever secured to the crank axle, and a toothed segment secured to the frame for coöperation with a detent carried by said last mentioned lever.

1,018,776. CARBURETER. LOUIS PLEIN, Chicago, Ill. Filed Feb. 24, 1911. Serial No. 610,509. (Cl. 48—155.2.)



1. In a carbureter, an air and gas passage-way and an annular float chamber surrounding the same, means for supplying a liquid hydrocarbon to said float chamber, means for conducting said hydrocarbon in the form of spray to said passage-way, thus carbureting air passing therethrough, a series of supplementary valves surrounding said passage-way, and means for carbureting the air drawn through said supplementary valves, substantially as described.

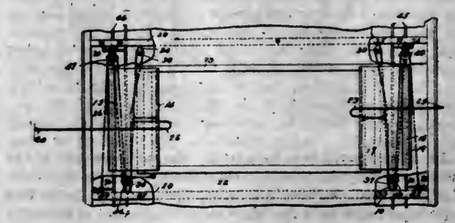
2. In a carbureter, a main air and gas passage, a nozzle therein, a series of supplemental air and gas valves surrounding said main passage, said valves being gravity operated, and means for supplying gas to the air prior to the passage thereof through said main passage and said valves, substantially as described.

3. In a carbureter, an annular float chamber, a nozzle therein, a hinged float pivoted to swing vertically in said chamber, a spring-pressed gasolene intake valve adapted to be opened by the falling of said float, an initial air and gas passage inclosed by said float chamber and in communication therewith, a series of gravity operated supplemental valves arranged in a circle concentric with said initial air and gas passage and in communication therewith, and means for supplying carbureted air to said valves, substantially as described.

4. In a carbureter, an annular float chamber, a float pivoted in said chamber and adapted to regulate the admission of a liquid hydrocarbon thereto, a cover for said float chamber, an annular holder U-shaped in cross section and secured on said cover, an absorbent filling in said holder, an annular recess in said cover, there being perforations in said holder and said cover so located that said filling is in communication with said float chamber and said recess, a series of gravity operated supplemental valves arranged in a circle concentric with said float chamber and in communication with said recess, said valves varying in weight whereby the same operate successively, and a central air and gas passage in open communication with said supplemental valves, the former being adapted to supply primary carbureted air and the latter secondary carbureted air for high engine speeds, substantially as described.

5. In a carbureter, an annular float chamber, a float pivoted in said float chamber and adapted to control the admission of a liquid hydrocarbon thereto, a cover for said float chamber, an annular holder U-shaped in cross section provided in said cover, a felt filling in said holder, an annular recess in said cover, there being perforations in said holder and said cover in communication with said float chamber and said recess respectively, a series of supplemental air passage ways arranged in a circle concentric with said float chamber and in communication with said recess, a plurality of gravity operated supplemental valves controlling said passage ways, said valves being cylindrical and provided with axial bores of varying length, and a central air and gas passage in open communication with said supplemental valves, the central passage being adapted to supply primary carbureted air and the supplemental passage ways secondary carbureted air, substantially as described.

1,018,777. SHIFTING MECHANISM FOR HATCHWAY-COVERS. EMILE J. POTVIN, Cheboygan, Mich. Filed May 26, 1911. Serial No. 629,562. (Cl. 114—202.)



1. A shifting mechanism for hatch-way covers including a pair of traveling endless operating cables, a hatch-way cover comprising two sets of shiftable sections,

cables for shifting said sections to open and closed positions, means whereby the shifting cables are coupled with said operating cables causing thereby the operation of the shifting cables, and means whereby the shifting cables are uncoupled from said operating cables.

2. A shifting mechanism for hatch-way covers including a pair of endless traveling operating cables, a sectional hatch-way cover, cables for shifting the sections of said cover to open and closed positions, pulling members connected with the shifting cables and normally mounted loosely upon the operating cables, and means whereby the pulling members are coupled with said operating cables causing thereby the operation of the shifting cables to shift the cover to open and close the hatch-way.

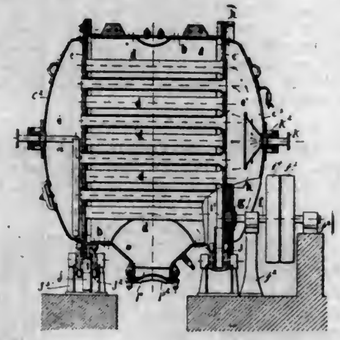
3. A shifting mechanism for hatch-way covers including a pair of endless traveling operating cables, a sectional hatch-way cover, cables for shifting the sections of said cover to open and closed positions, pulling members connected with the shifting cables and normally mounted loosely upon the operating cables, means whereby the pulling members are coupled with said operating cables causing thereby the operation of the shifting cables to shift the cover to open and close the hatch-way, and means whereby the pulling members are uncoupled from said operating cables.

4. A shifting mechanism for sectional hatch-way covers comprising the combination with a sectional hatch-way cover having the sections thereof coupled together, of cables connected with said sections for shifting them to open and closed positions, traveling operating elements for shifting said cables, and means engaged by said cables and mounted upon said elements for coupling the cables to and from said elements.

5. A shifting mechanism for sectional hatch-way covers comprising the combination with a sectional hatch-way cover having the sections thereof coupled together, of cables connected with said sections for shifting them to open and closed positions, pulling members connected with said cables, means for causing the travel of said pulling members, said pulling members mounted upon said means, and means for coupling and uncoupling said pulling members to and from the means for imparting travel to the pulling members.

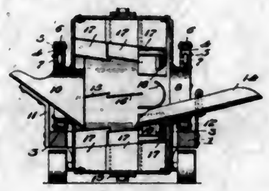
[Claims 6 to 9 not printed in the Gazette.]

1,018,778. SACCHARIFYING APPARATUS. VICTOR RAISIN, Paris, France, assignor to La Cie. Industrielle des Alcools de l'Ardèche, Paris, France. Filed Mar. 16, 1909. Serial No. 483,812. (Cl. 127—10.)



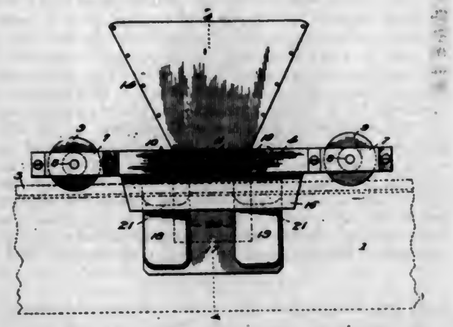
In a saccharifying apparatus, the combination of an air-tight drum comprising a sheet-metal cylinder and tube-sheets, curved end-sheets forming end-chambers with said tube-sheets and each having a central opening, a plurality of tubes passing transversely through said drum and connecting said end-chambers, steam inlet and outlet pipes passing respectively through the center openings of the end-sheets, a stuffing-box for each pipe, a manhole and manhole-cover at the circumference of the drum, a baffle-plate at the inner end of the steam inlet-pipe, and means for rotating said drum.

1,018,779. CONCRETE-MIXER. THEODORE RAUSCHENBACH, Evansville, Ind. Filed Mar. 14, 1910. Serial No. 549,136. (Cl. 83—73.)



In a mixing device, a rotatable drum having secured to its interior peripheral wall near its inlet two overlapping sets of staggered mixing blades, said blades extending in parallel planes, a third set of parallel blades at its discharge end and extending in planes at an angle to those of the two mentioned sets, and a set of laterally curved blades alternating with those of the third set and adapted to return the material being mixed to the inner one of the two sets.

1,018,780. MACHINE FOR FORMING AND FINISHING CONCRETE AND CEMENT CURBS AND GUTTERS. THEODORE RAUSCHENBACH, Evansville, Ind. Filed Mar. 14, 1910. Serial No. 549,137. (Cl. 94—6.)



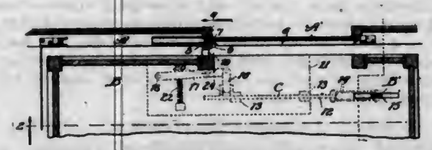
1. In a machine for smoothing and finishing curbs and gutters, the combination with a movable hopper having a discharge mouth, of a pair of twin smoothers and finishers having relatively broad, flat bottoms and corresponding in shape to the outline of the curb and gutter and disposed below the hopper on opposite sides of and adjacent to the delivery mouth thereof and movable with said hopper and supporting means for said machine adapted to maintain the bottom of the smoother or finisher above a previously formed curb and gutter.

2. In a machine for smoothing and finishing curbs and gutters, the combination with a movable hopper having a discharge mouth, of a smoother and finisher having a relatively broad, flat bottom corresponding to the outline of the curb and gutter and disposed below the hopper at one side of and adjacent to the delivery mouth thereof and attached to said hopper, supporting rollers located on opposite sides of the machine adapted to travel on opposite sides of the previously formed curb and gutter and to maintain the bottom of the smoother or finisher above a previously formed curb or gutter, and depending plates carried by opposite sides of the machine which extend down below the rollers aforesaid and are adapted to smooth or finish the inner and outer faces of the curb and gutter.

3. In a machine for smoothing and finishing curbs and gutters, the combination with a movable hopper having a discharge mouth, of a pair of twin smoothers and finishers having relatively broad, flat bottoms, corresponding in shape to the outline of the curb and gutter and disposed below the hopper on opposite sides of and adjacent to the delivery mouth thereof and attached to said hopper, supporting rollers on opposite sides of the machine adapted to travel on opposite sides of the previously formed curb and gutter and to support the finishers above a previously formed curb or gutter, and depending plates carried by opposite sides of the machine which extend down below the said rollers and are of a length as great as the space occupied by the smoothers and finishers.

4. In a machine for smoothing and finishing curbs and gutters, the combination with a frame, of one or more grooved traction wheels carried by said frame and adapted to travel on a track or other device on one of the curb and gutter boards, a traction wheel carried by the frame and adapted to travel on the other of said boards, a hopper carried by the frame which is adapted to deliver the material onto the curb and gutter, and a smoothing and finishing device corresponding to the outline of a curb and gutter and carried by the frame which has a relatively broad flat bottom, said smoother and finisher being disposed so that it will lie above a previously formed curb or gutter when the wheels are disposed as aforesaid.

1,018,781. ELEVATOR. FREDERICK G. ROEMPLER, Chicago, Ill. Filed Aug. 11, 1910. Serial No. 576,657. (Cl. 187—47.)

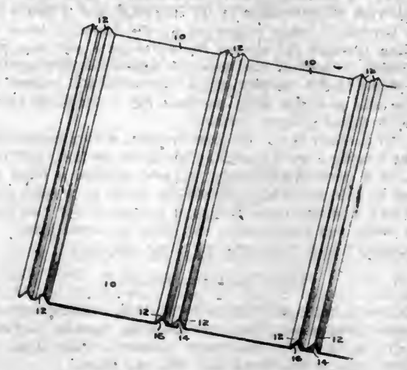


1. The combination with an elevator-shaft, its door, an elevator-cage and its controlling-mechanism, of a slidable locking-bar linked to said controlling-mechanism and provided with a socket, a bolt adapted to enter said socket when the lever of the controlling-mechanism is in the neutral position, actuating means for said bolt having a member projecting laterally from the cage toward the door-equipped wall of the elevator-shaft, a rock-member pivotally connected with the elevator-shaft and disposed beneath said door and having an arm projecting toward the door, and a horizontal cam-member carried by the door and adapted to engage said arm.

2. The combination with an elevator-shaft, its door, an elevator-cage and its controlling-mechanism, of a supporting-plate disposed beneath the elevator-cage and attached thereto, a locking-bar mounted in guides carried by said plate and linked to said controlling-mechanism, a locking-bolt and actuating-mechanism therefor mounted on said plate and having a member projecting from the cage toward the door-equipped wall of the elevator-shaft, a rock-member pivoted in the elevator-shaft, and actuating means for said rock-member carried by said door.

3. The combination with an elevator-shaft, its door, an elevator-cage and its controlling-mechanism, of an elongated cam-member extending transversely across the lower portion of said door, a rock-member pivoted in the shaft beneath said door at the rear portion of the door and projecting above the landing and having an arm turned toward the door adapted to be engaged by said cam-member, and cage-carried locking-mechanism for said controlling-mechanism comprising a plate depending from the cage, a locking-bar slidably mounted on said plate and linked to said controlling-mechanism, and a lever pivoted on said plate and equipped with a bolt coacting with said locking-bar, and equipped also with a plunger projecting at the front side of the cage and coacting with said rock-member.

1,018,782. SHEET-METAL ROOFING. KARL ROTH, Terre Haute, Ind. Filed Nov. 7, 1910. Serial No. 591,072. (Cl. 108—17.)



A sheet metal roof consisting of a plurality of metal sheets with overlapping edges, each sheet provided along one side edge with two vertically disposed ribs of the wide inverted V shape and the opposite edge of the sheet turned upwardly at a right angle to form a wall and a vertically disposed rib formed in said sheet adjacent to and parallel with said wall, the said wall being formed less in height than the ribs, so that when the adjacent metal sheet is laid over said wall an uninterrupted air space will remain on both sides and over the top of said wall and the nails driven through the ribs adjacent to the one covering said wall, to secure the said roofing sheets.

1,018,783. SAFETY-RAZOR. AUGUST W. SCHEUBER, Jersey City Heights, N. J., assignor to Simon Zinn, Brooklyn, N. Y., a Firm. Filed Sept. 15, 1909. Serial No. 517,782. (Cl. 30—12.)

1. In a safety-razor, the combination of a supporting frame having an upper portion provided with a guard-comb and blade-stops, a blade seated on said frame, a cover-plate pivoted to the supporting frame, a lever engaged by said cover-plate, when the latter is in open position and abutting against the blade, and spring-actuating means adapted to hold the cover-plate in closed or open position.

2. In a safety-razor, the combination of a supporting frame having an upper portion provided with a guard-comb and blade-stops adjacent to said comb, a blade seated on said upper portion, a cover-plate provided with an actuating extension and pivoted to the frame, a lever engaged by said cover-plate, when the latter is in open position and a spring-plate for controlling the lever and holding the cover-plate in closed or open position.

3. In a safety-razor, the combination of a supporting frame having an upper portion, provided with a guard-comb at its front-edge and blade-stops, a cover-plate provided with an extension at its rear-end and bent-over side-walls pivoted to the supporting frame, a blade supported on the upper portion of the frame, a lever engaged by said cover-plate when the latter is in open position and abutting against the blade for holding the latter in proper position against the stops, and a spring-plate attached to the supporting frame and provided with portions for holding the cover-plate in closed or open position.

4. In a safety-razor, the combination of a supporting frame having an upper portion provided with a guard-comb at its front-edge and blade-stops, a cover-plate provided with an extension at its rear-edge and a slot adjacent thereto, a blade supported on the frame, a lever extending through the slot of the cover-plate and engaging the blade for setting the latter in proper position against the stops, and a spring-plate attached to the supporting frame and provided with portions for locking the cover-plate in closed or open position.

5. In a safety-razor, the combination, with a supporting frame having a guard-comb at its upper portion, and pintles, of a cover-plate pivoted to said pintles, a lever engaged by said cover-plate, when the latter is in open position and a spring-plate having a projection for retaining said lever, and portions for engaging the cover-plate.

[Claims 6 and 7 not printed in the Gazete.]

1,018,784. BRUSH-CUTTING KNIFE. FREDERICK C. SCOTT, Vancouver, British Columbia, Canada, assignor to F. W. Trounce, Vancouver, Canada. Filed Aug. 21, 1911. Serial No. 645,242. (Cl. 30—11.)

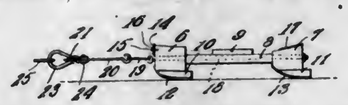
1. A brush cutting knife comprising the combination with a carrying pole having a split or divided end within which split is pivotally mounted a hook shaped knife the shank of which is produced beyond its fulcrum, a driving shaft rotatably mounted on the pole, a crank handle rotatably and bodily movably mounted on the driving shaft and having driving contact therewith by means of ratchet teeth that will drive in one direction only, a second shaft adjacent to the aforementioned driving shaft and driven therefrom at a reduced rate of speed and second shaft having a crank, a connecting rod connecting the crank to the shank of the cutting knife and provision on the crank shaft by which it may be driven direct by the crank handle.

2. A brush cutting knife, comprising the combination with a carrying pole having a split or divided end within which split is pivotally mounted a hook shaped knife, a spring normally holding the knife in the open position, mechanical devices for operating the knife, said mechanical devices including an operating crank handle and a power transmitting mechanism releasably connected with said crank handle, said power transmitting mechanism when said crank handle is released being such that said spring will open said knife irrespective of the position of the crank handle when released.

3. A brush cutting implement comprising, a pole, a cutting knife pivotally mounted thereon, a spring continuously tending to hold said knife in a primary position, a crank shaft mounted in bearings on said pole, said crank shaft including a crank, a connecting rod between said crank and said knife, said crank shaft having an extension, a clutch member fixed on said extension to turn with said crank shaft, and a handle loosely mounted on said extension, and having a clutch face to coöperate with the clutch member on said shaft, said handle having movement along said shaft to engage and disengage said clutch member.

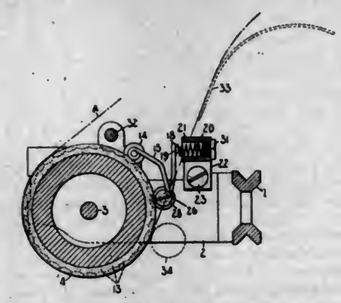
4. A brush cutting implement comprising, a pole, a cutting knife pivotally mounted thereon, a spring continuously tending to hold said knife in a primary position, a crank shaft mounted in bearings on said pole, said crank shaft including a crank, a connecting rod between said crank and said knife, said crank shaft having an extension, a clutch member fixed on said extension to turn with said crank shaft, and a handle loosely mounted on said extension, and having a clutch face to coöperate with the clutch member on said shaft, said handle having movement along said shaft to engage and disengage said clutch member, and means continuously tending to hold said handle in its "clutched" position.

1,018,785. ROAD-DRAG. DANIEL SHANK, Clayton, Ill. Filed Jan. 19, 1911. Serial No. 603,556. (Cl. 55—22.)



A drag including front and rear beams, a beam secured to the lower face of the front beam and having the rear portion of its lower face flat to constitute a smoothing surface, the lower face of said beam being convex from the front portion of the flat surface to the front end of the beam, a beam secured to the lower face of the rear beam and having its lower surface convex from front to rear, connections between the beams, and a draft element connected to the front beam.

1,018,786. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Moñarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 2, 1909. Serial No. 531,003. (Cl. 197—114.)



1. In a typewriting machine, the combination with a platen frame having end pieces, a roller platen journaled in said frame, and means for turning said platen, of a peripherally corrugated wheel on said platen, a pivot pin projecting from the end piece of the platen frame, a detent device pivoted on said pin and having an arm extending inward at an inclination, a detent on said arm engaging said corrugated wheel, a secod arm on said detent device, and a spring operating on said second arm.

2. In a typewriting machine, the combination with a platen frame having end pieces and a roller platen journaled in said frame, of a line space wheel on said platen having crown ratchet teeth and peripheral corrugations, a line spacing device including a pawl adapted to engage said crown ratchet teeth, a pivot pin on said platen frame, a detent device pivoted on said pin and comprising an arm extending at an inward inclination, a detent on said arm engaging the corrugations in said line space wheel, a second arm on said detent device, and a spring operating on said second arm.

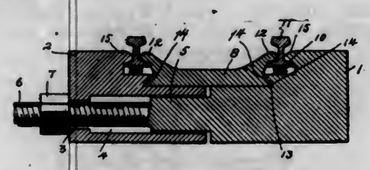
3. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a detent wheel on said platen, a pivoted spring-pressed detent engaging said wheel, a pivot pin for said detent mounted in the platen frame substantially in a horizontal plane passing through the center of the platen and terminating short of the plane of said detent wheel; said detent having a hub mounted on said pivot and said detent extending inwardly toward said detent wheel and upwardly and forwardly so as to engage said detent wheel at the upper portion thereof, whereby extra wide sheets may be fed to the platen without interference by said detent.

4. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a corrugated wheel on said platen, a pivoted detent engaging said wheel, a pivot pin for said detent passing through a hole in said platen frame, said hole being larger than the pin so as to admit of an adjustment of said pin, a shoulder and a nut on said pin for securing it in adjusted position, and a spring operating on said detent.

5. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a peripherally corrugated wheel on said platen, a pivoted detent device comprising a detent engaging said wheel, a pivot for said detent having its axis parallel to the axis of the platen but said pivot not reaching as far toward the middle of the machine as the end of said platen, an arm extending from said pivot at an inward inclination and having said detent at its free end, and a spring operating on said detent device, said arm being made of sheet metal cut with a curved shape to reach to said wheel and having a part thereof bent around said pivot.

[Claims 6 and 7 not printed in the Gazette.]

1,018,787. RAILWAY-TIE. WALTER J. STEVENTON, Nesquehoning, Pa. Filed June 7, 1911. Serial No. 631,674. (Cl. 238—6.)



1. In combination with railroad rails, a stationary support for one rail, a movable support for the opposite rail, a rigid brace overlying both supports, and means interlocking with the brace for clamping the supports against the braces, to hold the rail in rigid set position.

2. In combination in a device of the kind described oppositely arranged interlocking supports, rails resiliently seated on the said supports, movable abutments, guides mounted on the supports for movably guiding the rails, and means for actuating said interlocking supports.

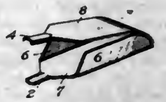
3. In combination in a device of the kind described a stationary support having a socket for one flange of a rail, an oppositely arranged movable support having a socket for one flange of the opposite rail, a brace mounted on both supports engaging the opposite flange of the rail, and means engaging and interlocking with the brace for interlocking the supports.

4. In combination in a device of the kind described a fixed and a movable abutment upon which the rails are resiliently supported at their ends, and wedge means interposed between the rails for clamping the rails against said abutment.

5. A railroad tie composed of a fixed abutment carrying a screw-threaded shank, a movable abutment engaging said shank, outwardly extending resilient supports for rails carried by each abutment and means interposed between the rails engaged by said movable abutment for rigidly clamping the rails in position.

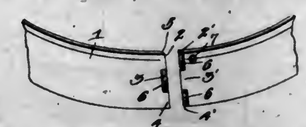
[Claims 6 to 8 not printed in the Gazette.]

1,018,788. CORN-PICK. DONALD B. STONE, Springville, Iowa. Filed Nov. 26, 1910. Serial No. 594,292. (Cl. 130—10.)



A corn tester of the class described constructed from a single blank of spring metal comprising a body portion and a shank, the side edges of the body portion being bent inwardly to form a pocket or receptacle of approximately U shaped form in cross section to receive and hold the kernels of corn and the shank being bent upon a gradual curve to form a resilient jaw working over the open side of the pocket and a pair of co-acting concave kernel pick extensions on the outer ends of the pocket and jaw.

1,018,789. CHEESE-HOOP. OSCAR W. STROOTA, Abbotsford, Wis. Filed Aug. 4, 1911. Serial No. 642,321. (Cl. 31—21.)

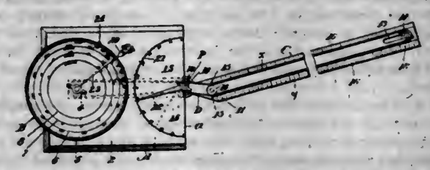


1. A device of the class described, comprising a hoop formed of a single piece of metal, the ends of which are slit a number of times and at equal distances from the edges thereof to form flaps, said flaps being adapted to interlock and having their engaging faces beveled.

2. A hoop formed of a single piece of metal, the ends of which are slit at equal distances from the edges thereof to form a plurality of flaps, the opposed flaps having the opposite faces thereof beveled coincident to one another and adapted to interlock when the ends of the hoop are brought together.

3. A split hoop formed of a single piece of metal, the ends of which are slit at equal distances from the edges thereof to form a plurality of flaps thereon, said flaps being adapted to interlock with one another when the ends of said hoop are brought together, certain of said flaps having their outer faces beveled and certain other of said flaps having their inner faces beveled.

1,018,790. RULER. FRANK SUDDOTH, Mount Vernon, Ind. Filed Feb. 1, 1911. Serial No. 606,039. (Cl. 73—40.)



1. The combination with a ruler, of a spindle suitably supported adjacent to one end of the ruler, a guide on the opposite end of the ruler, an endless band extending around said spindle and said guide, and a dial upon the spindle, said dial having scale-markings thereon for indicating distances, on the same scale, by different systems of linear measurement.

2. The combination with a base and a ruler projecting therefrom, of a spindle upon the base, a guide upon the

free end of the ruler, an endless band extending around said spindle and guide, and a dial upon the spindle, said dial having scale-markings thereon for indicating distances, on the same scale, by different systems of linear measurement.

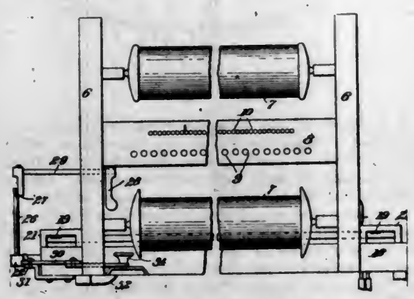
3. The combination with a base and a ruler projecting therefrom, of a spindle upon the base, a guide upon the free end of the ruler, an endless band extending around said spindle and guide, said band having indicating marks thereon, and a dial upon the spindle, said dial having scale-markings thereon for indicating distances, on the same scale, by different systems of measurement.

4. The combination with a base and a ruler projecting therefrom, of a spindle upon the base, a guide upon the free end of the ruler, an endless band extending around said spindle and guide, a dial having scale-markings thereon for indicating distances, on the same scale, by different systems of linear measurement, and means for detachably securing said dial to the spindle.

5. The combination with a base, of a ruler pivoted to the base, a spindle upon the base and a guide at the free end of the ruler, an endless band extending around said spindle and guide and a dial upon the spindle, said dial having scale-markings thereon for indicating distances, on the same scale, by different systems of linear measurement.

[Claims 6 to 9 not printed in the Gazette.]

1,018,791. TRANSFORMING AND TRANSPOSING DEVICE FOR AUTOMATIC INSTRUMENTS. BARTHOLOMEW T. TREAHY, Detroit, Mich. Filed Jan. 22, 1910. Serial No. 539,531. (Cl. 84—165.)



1. The combination of a relatively fixed set of action ducts, a relatively fixed tracker having two sets of holes, a set of flexible ducts connected to each set of holes, and a valve attached to said sets of flexible ducts and movable in one direction to register either set of flexible ducts with the action ducts, and movable in another direction to change the registration of the ducts of the selected set of flexible ducts with those of the action set.

2. The combination of a set of action ducts, a plurality of sets of tracker ducts, and a valve with sets of ducts corresponding to the sets of tracker ducts and arranged to register with the action ducts, said valve being movable in one direction to connect the action ducts with a selected set of tracker ducts, and in another direction to vary for transposition the connection between the ducts of the action set and those of the selected set of tracker ducts.

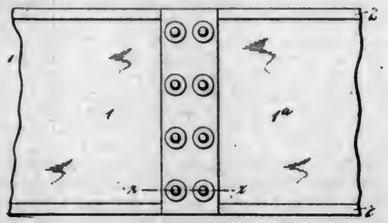
3. The combination of a set of action ducts, a plurality of sets of tracker ducts, and a valve between said sets, comprising a sliding bar with sets of ducts connected respectively to the sets of tracker ducts and arranged to be registered respectively with the action ducts, said bar being slidable in one direction to connect the action ducts with a selected set of tracker ducts, and slidable in another direction to vary for transposition the connection between the action ducts and those of the selected set of tracker ducts.

4. The combination of a plate having therein the terminals of a set of ducts, a tracker, and a valve bar resting against said plate and having therein rows of terminals of a plurality of sets of ducts leading to the tracker, the said bar being movable sidewise on the plate to register the terminals of either of said sets of ducts with the terminals in the plate, and lengthwise to vary for transposition the registration of the terminals of the selected set with the terminals in the plate.

5. The combination of a plate having duct terminals therein, a bar, a series of blocks carried by the bar and having duct terminals therein arranged to register with said terminals, and resting against the plate, springs in compression between the bar and said blocks, to press the latter against the plate, and means to shift the bar and blocks to vary the registration of the terminals.

[Claim 6 not printed in the Gazette.]

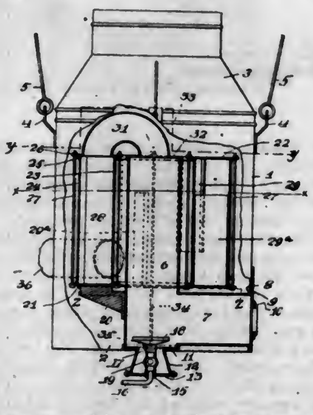
1,018,792. DRIVING-BELT. HENRY G. VOIGHT and AUGUST VOIGHT, New Britain, Conn. Original application filed Apr. 22, 1909, Serial No. 491,574. Divided and this application filed July 26, 1911. Serial No. 640,612. (Cl. 74—62.)



1. A driving belt having its main body comprising a flexible metal strip with each opposite edge thereof reinforced or thickened, each reinforcement comprising a portion of the belt folded back upon itself.

2. A driving belt having its main body comprising a flexible metal strip and having a thickened border reinforcement along each edge thereof.

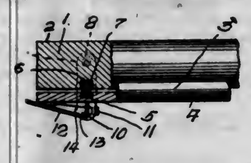
1,018,793. HEATER. JOHN S. WALKER, Pittsburgh, Pa. Filed Feb. 1, 1911. Serial No. 606,014. (Cl. 126—116.)



1. A heater comprising a vertical burner casing of the same size throughout and provided with laterally-extending supporting brackets at points removed from its lower end said casing rectangular in plan, a drum including an inner and an outer section surrounding the upper portion of the burner casing and supported by said brackets, said inner section engaging the corners of the burner casing thereby providing a plurality of compartments, a head for each end of the drum, means extending through certain of said compartments and engaging said heads for securing the inner portions of the heads in position, means for securing the outer portions of said heads in position, a plurality of vertically-extending and radially-disposed partitions secured between the sections of said drum and arranged to provide a sinuous path for the products of combustion, a plate for closing the upper end of the burner casing, means extending through the other of said compartments for securing said plate in position, a mixer located at the lower end of the burner casing and partially closing the same, a curved pipe opening at one end into the drum and at its other end into the top of the burner casing, a burner arranged within the lower end of the burner casing and above said mixer, a right-angular hollow extension projecting from the lower end of the burner casing below the drum and providing means whereby access can be had to the burner, a casing inclosing said burner casing and drum, and an exhaust pipe communicating with the drum.

2. A heater comprising a burner casing rectangular in plan, a plate for closing the upper end of said casing, a mixer connected to the lower end of said casing and communicating therewith, a burner arranged within the casing above said mixer, a drum surrounding the upper portion of said casing and having vertically-disposed means to provide a sinuous path for the products of combustion, said drum formed of an inner and outer section, means projecting from the burner casing for supporting the drum, the inner section of said drum abutting against the corners of said casing and providing a plurality of compartments and means extending through certain of the compartments for securing the inner portions of said heads in position, means for securing the outer portions of said heads in position, a curved pipe for establishing communication between the top of the drum and the top of the burner casing, means whereby access can be had to said burner, a casing inclosing the drum and burner casing, and an exhaust pipe communicating with the lower portion of the drum.

1,018,794. CURTAIN-POLE. WLADISLAW WALKIEWICZ, Detroit, Mich. Filed Dec. 4, 1911. Serial No. 663,757. (Cl. 156—19.)

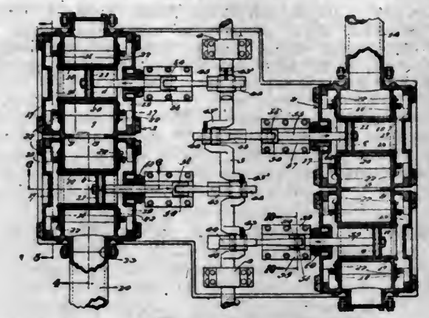


1. A curtain pole comprising a rod, a semi-cylindrical clamping member arranged at the front side of said rod and adapted to retain curtains in engagement therewith, coiled compression springs arranged between said rod and said clamping member, at the ends thereof, the locking members having lips adapted to engage the outer side of said clamping member for holding said member in a closed position, and means for pivotally supporting said locking members adjacent to the ends of said rod.

2. In a curtain pole, a rod, a clamping member adapted to hold curtain in engagement with said rod, coiled compression springs interposed between said rod and said member, at the ends thereof, parallel forwardly projecting arms carried by said rod, at the ends thereof and locking members pivotally supported by the forward ends of said arms for engaging the clamping member whereby said member will be locked with said springs under tension.

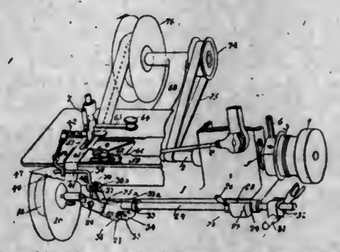
1,018,795. PISTON-PUMP FOR AUTO FIRE APPARATUS. ALBERT C. WEBB, St. Louis, Mo., assignor to The Webb Motor Fire Apparatus Company, St. Louis, Mo., a Corporation of Delaware. Filed July 10, 1911. Serial No. 637,742. (Cl. 103—78.)

In a pump of the character specified, the combination of a case provided with an apertured central partition wall arranged within its interior to divide the same into a pair of communicating supply chambers, each of which has its vertical side walls spaced from those of the case to produce a pair of intermediate chambers, the top wall of each supply chamber being formed with pairs of opposed passages extending inwardly toward each other and opening at their outer ends into the adjacent intermediate chamber; a supply pipe opening into one of said supply chambers; an outlet chamber located above said top



walls and extending the entire length of the case, the inner ends of said passages opening into said outlet chamber; an open-ended cylinder disposed within each supply chamber and opening at its ends into the adjacent intermediate chambers; a double-acting reciprocatory piston working in each cylinder; piston-controlled valve connections between each supply chamber and the adjacent intermediate chambers; a fluid-controlled connection between each passage and said outlet chamber; and a discharge pipe leading from said outlet chamber.

1,018,796. MACHINE FOR MAKING EDGINGS. JOHN P. WEIS, Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company, a Corporation of New York. Filed Apr. 1, 1903. Serial No. 150,534. (Cl. 112—24.)



1. In combination, a stitch-forming mechanism for producing a line of stitches upon the work; a stop-mechanism; and means coöperating with the work for actuating the stop-mechanism in the event of a cessation of the stitches upon the work during the passage of the latter through the machine.

2. In combination, a stitch-forming mechanism for depositing upon a foundation an ornamental rib; a stop-mechanism; and means coöperating with said foundation for actuating the stop-mechanism when the rib fails during the passage of the work through the machine.

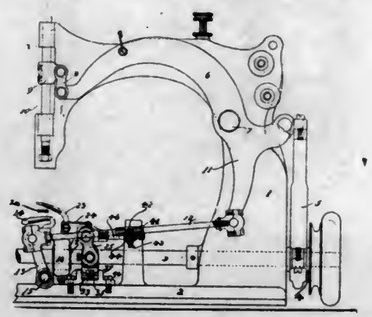
3. In combination, a stitch-forming mechanism for producing a line of stitches upon the work; a stop-mechanism; a device engaging the stitches; and means between said device and stop-mechanism for actuating the latter when said device is disengaged from the stitches.

4. In combination, a stitch-forming mechanism for producing a line of stitches upon the work; a stop-mechanism; a device engaging the stitches; means placing said device under tension and means between the said device and stop-mechanism for actuating the latter when said device is disengaged from the stitches.

5. In combination, a stitch-forming mechanism for producing a line of stitches upon the work; a stop-mechanism; a device engaging the stitches on the work during the passage of the latter through the machine; and means for actuating the stop-mechanism from the said device upon the failure of stitches.

[Claims 6 to 13 not printed in the Gazette.]

1,018,797. OVEREDGING-MACHINE. JOHN P. WEIS, Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company, a Corporation of New York. Filed June 5, 1903. Serial No. 160,209. (Cl. 112—24.)



1. An overedging machine having in combination, a reciprocating thread-carrying needle; a thread-carrying looper coöperating with the needle; a thread-carrying spreader coöperating with the needle and looper; and mechanism for actuating the needle, looper and spreader, including means for imparting a plurality of movements to the spreader whereby the latter takes a loop of needle-thread from the looper and carries it across the edge of the work and passes its own thread through said loop and around the needle-thread above the work.

2. An overedging machine having in combination, a reciprocating thread-carrying needle; a thread-carrying looper coöperating with the needle; a spreader, coöperating with the needle and looper; mechanism for actuating the needle, looper and spreader, including means for imparting a plurality of movements to the spreader to cause the same to engage a strand of the needle-thread loop and carry the latter across the edge of the work in twisted form to cover the edge thereof.

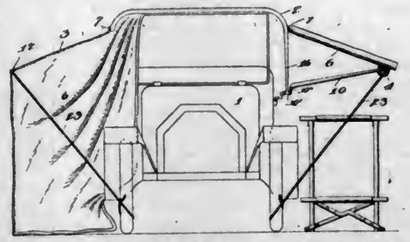
3. An overedging machine comprising a thread-carrying reciprocating needle; a thread-carrying looper confined to operate below the cloth-plate of the machine; means for actuating the needle and looper whereby the latter will take from the needle a loop of thread; a thread-carrying spreader; and means for actuating the latter whereby it has imparted to it substantially an elliptical movement the major axis of which is inclined to the path of reciprocation of the needle, so that it will engage a strand of the needle-thread loop held by the looper, carry the same across the edge of the work, and place a loop of its own thread in said needle-loop and in the path of the needle.

4. An overedging machine comprising a thread-carrying reciprocating needle, a thread-carrying looper coöperating with the needle for taking a loop therefrom, a thread-carrying spreader coöperating with the looper for taking the needle-loop therefrom and twisting the same around the looper-thread, and mechanism for actuating the several parts to secure the said functions and for causing the spreader to lay the needle-loop over the edge of the work.

5. An overedging machine comprising a vertically reciprocating needle; a thread-carrying looper coöperating with the needle, and a thread-carrying spreader coöperating with the needle and looper; means for actuating the looper to pass its thread through the needle-loop and to momentarily hold said loop and means for actuating the spreader whereby the same may have imparted thereto a movement from below the work in rear of the needle at a point on its right up and over the work to in front of the needle at a point on its left to carry the needle-thread over the edge of the work and place its own thread through the needle-loop and in position for coöperation with the needle.

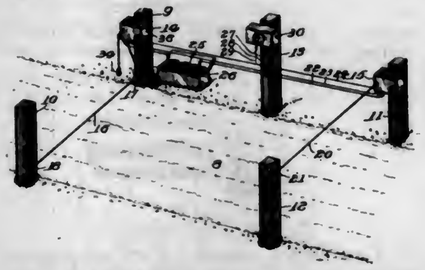
[Claims 6 to 24 not printed in the Gazette.]

1,018,798. TENT OR AWNING ATTACHMENT FOR VEHICLES. DURAND WHIPPLE and JOHN R. FORDYCE, Little Rock, Ark. Filed Aug. 2, 1910. Serial No. 575,162. (Cl. 21—7.)



The combination of a vehicle top, the frame of said top, a tent attached at its upper edge along the vehicle top, stretchers for holding the tent in extended position, and flexible means interposed between and connecting the stretchers and the frame of the vehicle top, whereby when not in use the stretchers may be positioned snugly against the frame of the vehicle top and secured in such position.

1,018,799. TIMING DEVICE. CHARLES FRED. WHITE, Philadelphia, Pa. Filed Jan. 14, 1910. Serial No. 538,000. (Cl. 161—18.)

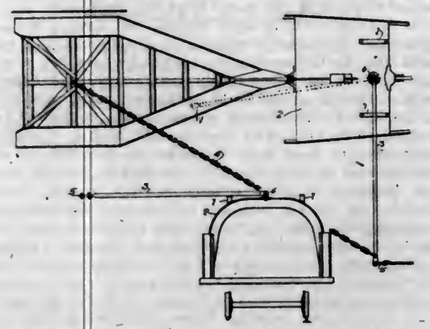


1. In a timing device, an electric circuit, a casing inclosing a stop watch, a centrally pivoted lever arranged to control said watch, a magnet arranged to shift said lever to engage said watch, an automatically resetting switch arranged to be actuated by the movement of a racer, to close said electric circuit through said magnet, and a bell mounted exterior to said casing and arranged within said circuit and to be actuated independently of said magnet.

2. In a timing device, an electric circuit, a casing inclosing a stop watch, a centrally pivoted lever arranged to control said watch, a magnet arranged to shift said lever to actuate said watch, an automatically resetting switch arranged to be actuated by the movement of a racer, to close said electric circuit through said magnet, and a signal bell mounted exterior to said casing included in said circuit and independent of said magnet, a push button, and a flexible connector between said bell and said push button, whereby said bell is actuated.

3. A device for timing races, comprising a common electric circuit, a gong, time indicator and switch at one station, a gong and time indicator at a second station, means local to each station by which a racer actuates a mechanism local to each station, and a source of energy interposed between said stations, said elements being so connected in said common circuit that the first of said gongs is actuated by the closing of said switch, both of said indicators and the gong at the second station being actuated by the operation of the first of said local means, and both of said indicators and said last named gong being actuated by the operation of the second of said local means.

1,018,800. CABLE-STRETCHER FOR BALLAST-UNLOADERS. WILLIAM H. YAWGER, Montreal, Quebec, Canada, assignor to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed July 10, 1911. Serial No. 637,088. (Cl. 214—110.)



1. The combination, with a ballast unloader, of an arm mounted thereon and adapted to be connected to one end of a cable.

2. The combination, with a ballast unloader, of a laterally extending arm movably mounted thereon and adapted to have its outer end connected to a cable.

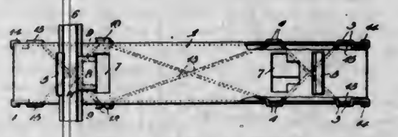
3. The combination, with a ballast unloader, of a laterally extending arm mounted thereon and projecting beyond the side thereof.

4. The combination, with a ballast unloader, of a laterally extending arm mounted thereon to move about a vertical axis and projecting beyond the side thereof.

5. The combination, with a ballast unloader, of a laterally extending arm mounted thereon to move about a vertical axis and projecting beyond the side thereof, and means to hold said arm against movement in one direction about said vertical axis.

[Claims 6 to 9 not printed in the Gazette.]

1,018,801. RAILROAD-TIE. ARTEMUS WILHELM YOCUM, Manheim, Pa. Filed Oct. 31, 1911. Serial No. 657,871. (Cl. 238—5.)



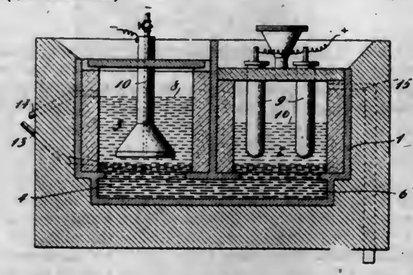
1. A tie consisting of a strip of metal formed in approximately parallelepiped configuration with its edges overlapping each other longitudinally of the tie, and strips located within the tie and connecting the side edges thereof together and extending continuously throughout the length of the tie, having their ends clenched around the ends of the tie, said strips being in cruciform relation to each other.

2. A tie of sheet metal formed approximately in parallelepiped configuration having overlapping edges extending longitudinally thereof, strips extending continuously throughout the length and across the interior of the tie in cruciform relation and passed at intervals through perforations provided at opposite sides of the edges of the tie and clenched at their ends around the end of the tie.

3. A tie made of sheet metal formed in approximately parallelepiped configuration having overlapping edges extending longitudinally thereof, said tie being provided in its sides with openings, strips passing through said openings and clenched at their ends around the ends of the tie, said strips being in cruciform relation within the tie under the rail seating portions thereof and within the intermediate portion thereof.

4. A tie of sheet metal formed in approximately parallelepiped configuration with overlapping edges and having at its under side and at a point approximately midway between its ends a downwardly disposed spur, said tie having in its vertical sides openings, metallic strips threaded through said openings and clenched at their ends about the ends of the sides of the tie, said strips being in cruciform relation under the rail bearing portions of the top of the tie and at a point approximately midway between the ends of the tie.

1,018,802. METHOD OF PRODUCING NITROGEN COMPOUNDS. CHARLES E. ACKER, Ossining, N. Y., assignor to The Nitrogen Company, a Corporation of New York. Filed Oct. 27, 1910. Serial No. 589,292. (Cl. 204—21.)



1. The process of producing cyanogen compounds, which comprises electrolytically depositing an alkali metal and effecting a direct reaction between such metal, while in the nascent state, and a gaseous nitrogenous compound associated with a carbonaceous substance, said reaction taking place at a temperature approximating a red heat.

2. The process of producing cyanogen compounds, which comprises effecting a direct reaction in a heated medium free from water and water forming constituents between an alkali metal in the nascent state and a gaseous nitrogenuous compound associated with a carbonaceous substance.

3. The process of producing cyanogen compounds which comprises effecting a direct reaction in a mass of molten cyanogen compounds, between an alkali metal in the nascent state and a nitrogenous reagent associated with a carbonaceous substance, said reagent including hydrogen as one of the constituents thereof, and the said mass being free from water and water forming constituents.

4. The process of producing an alkali-metal cyanogen compound which comprises directly reacting with trimethylamin on electrolytically-deposited, nascent alkali metal at the instant of its deposition from, and while within, a bath of fused cyanogen salt.

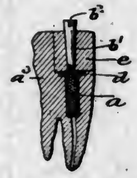
5. The process of producing cyanogen compounds which involves reacting on an electrolytically deposited metal with a hydrocarbon-nitrogen compound while said metal is still in the nascent state due to its electrolytic deposition.

[Claims 6 to 26 not printed in the Gazette.]

1,018,803. ANCHORING DEVICE FOR TEETH-FILLINGS. AXEL F. ANDERBERG, Pawtucket, R. I. Filed June 10, 1911. Serial No. 632,421. (Cl. 32—0.)

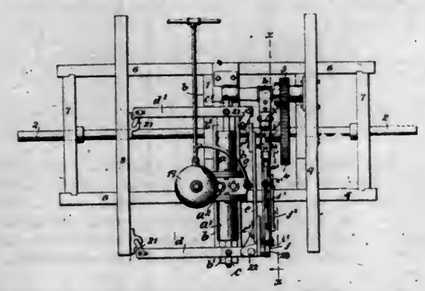
1. An anchoring device for a tooth filling including an inner tubular member adapted to be secured in the body

of the tooth below the cavity and provided with interior threads, and an outer member including a tapering shank and a threaded extension, said extension engaging with the threads of said inner member and said tapering shank extending through and engaging with the filling for maintaining the latter in the cavity of the tooth.



2. An anchoring device for a tooth filling including an inner tubular member adapted to be secured in the body of the tooth below the cavity and provided with interior threads, an outer member including a tapering shank and a threaded extension, said extension engaging with the threads of said inner member and said tapering shank extending through and engaging with the filling for maintaining the latter in the cavity of the tooth, and means mounted in a recess at the bottom of the tooth cavity to prevept rotative movement of said inner member.

1,018,804. LIQUID-SPRAYER. LEWIS AUGUSTUS ASPINWALL, Jackson, Mich., assignor to Aspinwall Manufacturing Co., Jackson, Mich., a Corporation of Michigan. Filed June 9, 1909. Serial No. 501,097. (Cl. 103—85.)



1. In a liquid spraying device, the combination with devices for supplying the power, of an air chamber and pump cylinders and pistons, series of devices connecting the pump pistons capable of variable extent of movement, devices connecting the said series of devices with the power, and manually actuated means adapted for a predetermined adjustable relation to the series of devices connecting the pump pistons so as to control the pressure in the air chamber employed to force the liquid through the sprayers.

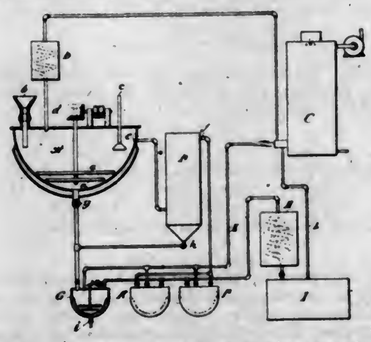
2. In a liquid spraying device, the combination with a crank-shaft, and crank, of an air-chamber, a pump having two oppositely disposed cylinders and pistons, devices connected to and connecting the pistons and for simultaneously operating the same, a cast frame pivotally connected to said devices, a member having a slidable relation in connection therewith and secured to the crank-pin of the said crank for a reciprocating and swinging movement, and means connected to the said frame and member and having an adjustable relation, whereby the pressure upon the liquid to be forced to the sprayers may be controlled as desired.

3. In a liquid spraying device, the combination with a crank shaft and crank, of an air-chamber, a pump having two oppositely disposed cylinders and pistons, devices connected to and connecting the pistons for simultaneously operating the same, a cast frame pivotally connected to said devices, a member having a slidable relation in connection therewith and secured to the crank-pin of the said crank for a reciprocating and swinging movement, an index device formed as a part of said frame, a vertically movable member connected in an adjustable relation to said frame and as set simultaneously indicating a position in regard to said index device and means connected to said frame, the slidable member and the vertically movable member adapted for tension in regard to the adjusted and set position of the vertically movable member so as to automatically control the stroke of the pistons and the consequent pressure upon the liquid to be forced to the sprayers.

4. In a liquid spraying device, the combination with a crank shaft and crank, of an air-chamber, a pump having two oppositely disposed cylinders and pistons, devices connected to and connecting the pistons for simultaneously operating the same, a casting comprising an arm pivotally mounted to said devices, an index plate and side bars; a member consisting of a yoke and yoke head connected to the crank-arm, a slide bar secured thereto and received in slide-ways in said casting and adapted with a turning of the crank to move through said slide-ways with a reciprocating action and to swing the said casting on its pivot with the aforesaid devices, toggle-bars connected at their respective ends to the arm of said casting and to the yoke-head, a vertically movable member connected in an adjustable relation to said casting and having an end adapted to occupy a predetermined position with reference to the index plate and means connected to said vertically movable and adjustable member acting upon the toggle-bars for applying irregular pressure thereto to straighten the same in proportion to the position occupied by said vertically adjustable member.

5. In a liquid spraying device, the combination with means for applying power and motion, of an air chamber a pump having oppositely disposed cylinders and pistons, bars connected to the ends of the pistons outside the cylinders in a parallel relation, links connecting the ends of said bars to members of the frame at one end, a frame connected in a pivotal relation with one of said bars, and a rocker-arm connecting the opposite end of said frame with the other of said bars and means connected with said frame and interposed between the same and the power devices for imparting movement thereto.

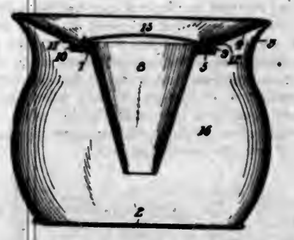
1,018,805. METHOD OF MAKING ANHYDROUS TIN CHLORID. GERVAIS BAILLIO, Niagara Falls, N. Y., assignor to Castner Electrolytic Alkali Company, a Corporation of Virginia. Filed Jan. 15, 1906. Serial No. 296,095. (Cl. 23—13.)



1. The continuous process of making anhydrous tin bichlorid, which consists in submerging metallic tin beneath the surface of liquid anhydrous stannic chlorid, and afterward applying moist chlorin gas thereto.

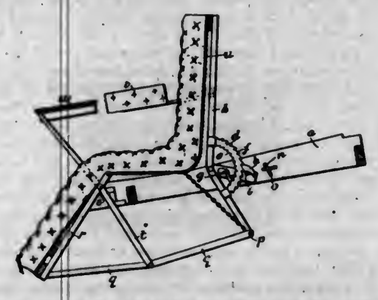
2. The continuous process of making anhydrous tin bichlorid, which consists in submerging metallic tin beneath the surface of liquid anhydrous stannic chlorid, and afterward continuously introducing moist chlorin gas beneath the surface of the liquid and simultaneously agitating the substances under treatment.

1,018,806. CUSPIDOR. BRONISLAW BARTOSIEWICZ, Glen Cove, N. Y. Filed Sept. 16, 1911. Serial No. 649,669. (Cl. 4—38.)



A cuspidor comprising a shell, an inwardly extending and downwardly inclined annular flange integral with the top of said shell, a depending angle-shaped annular extension integral with the lower face at the inner terminus of said flange, the horizontal member of said extension projecting inwardly with respect to the inner terminus of said flange, a gasket mounted upon and projecting inwardly from said horizontal member of said extension, a spout depending in said shell and snugly engaging the projecting portion of said gasket, a lateral rim carried by the upper end of the spout and mounted upon said gasket, oppositely disposed pivoted clips carried by the flange and shiftable upon the rim thereby securing the same upon the gasket and maintaining the spout in position, and a bail pivoted to the upper face of said rim.

1,018,807. ADJUSTABLE MATTRESS. ANDRÉS BORÉS, Barcelona, Spain. Filed May 20, 1911. Serial No. 628,396. (Cl. 5—43.)

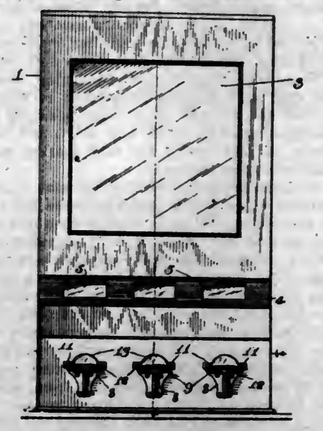


1. A device of the kind described, comprising a frame, head and foot sections pivoted to the frame, a sector carried by the head section and having a double set of teeth, pawls mounted on the frames and coacting with the sector teeth to hold the head section in adjusted position, and devices located on each side of the frame for operating the pawls to engage the teeth of the sector and lock the head section in any desired position.

2. A device of the kind described, comprising a frame, head and foot sections pivoted to the frame and provided with a flexible fabric, a sector carried by the head section and having a double set of teeth, pawls mounted on the frame and coacting with the sector teeth to hold the head section in adjusted position, and slides for operating the pawls to engage the teeth of the sector and lock the head section in any desired position.

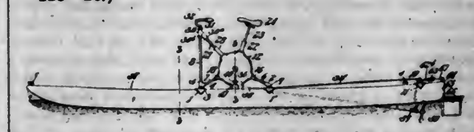
1,018,808. VENDING-MACHINE. HERMAN H. BRINKS, Grand Rapids, Mich. Filed Aug. 8, 1911. Serial No. 642,941. (Cl. 194—92.)

1. A vending machine comprising a casing, a guide plate secured therein and having a portion projecting forward therefrom, a sliding lever mounted on the guide plate, and having a projecting portion riding on the projecting portion of the plate, the inner end of said lever being provided with laterally extending lugs, an operating lever telescopically engaging the inner end of the lever and operating said lugs to shift the operating lever, whereby an ejector constructed to allow a single article at a time to be discharged from the machine.



2. A vending machine comprising a casing, a guide plate secured therein and having a portion projecting forward therefrom, a sliding lever mounted on the guide plate and having a projecting portion riding on the projection of the plate, said lever having a coin receiving aperture formed therein, a plate having a plurality of apertures of different sizes formed therein, said lever being provided with a reduced portion having formed at its ends laterally extending lugs, an actuating lever slidably mounted upon the plate, said lever consisting of a cross bar having oppositely disposed arms extending forwardly and provided with inwardly projecting portions, said lugs and reduced portion being spanned by the arms and telescopingly engaging in the operating lever, an ejector constructed to allow a single article at a time to be discharged from the machine when the lever is shifted, and a gravity locking member adapted to force coins of wrong denominations through the apertures of the lever and plate and to lock the lever against inward movement.

1,018,809. BOAT. EDWARD C. CLOSTERMEYER, St. Louis, Mo. Filed Nov. 14, 1910. Serial No. 592,219. (Cl. 115—26.)



1. The combination with a boat comprising a pair of elongated substantially tubular body-members connected together in parallel relation with a space therebetween, of propelling mechanism therefor comprising an enlarged gear-casing, a plurality of gear-casing supporting-members rigidly mounted at one end on, and extending diagonally upwardly and inwardly from, each of said body-members and rigidly secured at their other end to said gear-casing, said gear-casing being supported directly and only by said members substantially midway between said body-members, a rotatable propeller-shaft supported at one end by, and extending rearwardly between said body-members from, said gear-casing, and pedal-operated gearing in said casing adapted to rotate said shaft; substantially as described.

2. The combination with a boat comprising a pair of elongated substantially tubular body-members connected

together in parallel relation with a space therebetween, of propelling mechanism therefor comprising an enlarged gear-casing, a plurality of gear-casing supporting-members rigidly mounted at one end on, and extending diagonally upwardly and inwardly from, each of said body-members and rigidly secured at their other end to said gear-casing, said gear-casing being supported directly and only by said members substantially midway between said body members, a tubular shaft supporting-member supported by said gear-casing, a rotatable propeller shaft supported at one end by, and extending rearwardly between said body-members from, said tubular shaft-supporting member, a bearing on said body-members adapted to rotatably support the other end of said shaft, pedal-operated gearing in said casing adapted to rotate said shaft, and anti-friction bearings in said casing for said gearing and said shaft; substantially as described.

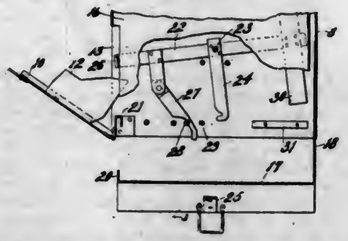
3. The combination with a boat comprising a plurality of substantially tubular body-members connected together in parallel relation with a space therebetween and steering mechanism for said body-members, of a plurality of diagonal members mounted on said body-members and extending upwardly and inwardly therefrom, a sectional gear casing provided with an enlarged downwardly-projecting portion supported only by said diagonal members substantially midway between said body-members, a tubular member supported by said downwardly-projecting portion of said casing, a rotatable propeller-shaft supported at one end by, and extending rearwardly from, said tubular member between said body-members, a bearing on said body-members adapted to rotatably support the other end of said propeller-shaft, a pedal-operated-shaft journaled in said casing, a gear-wheel fixedly mounted on said shaft within said casing, a second shaft journaled in said downwardly-projecting portion of said casing, a pinion fixedly mounted on said second shaft and meshing with said gear-wheel, meshing bevel-gears mounted on said second and propeller-shafts, and anti-friction bearings in said casing for said shafts; substantially as described.

4. A boat comprising a pair of elongated substantially tubular body-members rigidly connected together in parallel relation with a space therebetween, an enlarged sectional gear-casing, a plurality of gear-casing supporting-members rigidly mounted at one end on, and extending diagonally upwardly and inwardly from, each of said body members and rigidly secured at their other end to said gear-casing; said gear-casing being supported directly and only by said supporting-members substantially midway between said body-members, a tubular shaft-supporting member supported by said gear-casing, a rotatable propeller-shaft supported at one end by, and extending rearwardly between said body-members from, said shaft-supporting-member, a bearing on said body-members adapted to rotatably support the other end of said propeller-shaft, pedal operated gearing in said casing adapted to rotate said shaft, a saddle-post mounted directly upon, and supported only by, said gear-casing, steering-post supporting-members mounted on said gear-casing and on said body-members, a steering-post supported by said steering-post supporting-members in operative position relatively to said saddle-post, a plurality of rudders on said body-members, and operating-connections between said steering-post and each of said rudders; substantially as described.

1,018,810. MAIL-BOX. FRANK J. DAGELEN, Milwaukee, Wis. Filed June 20, 1910. Serial No. 569,443. (Cl. 232—53.)

1. A mail box, comprising a box provided with an opening for the insertion of mail therein and with a side and a bottom opening for the removal of mail therefrom, a door covering the side opening, a door covering the bottom opening, a bar pivoted to the box and having a locking bolt depending therefrom and positioned to lock the bottom door, a dog pivotally connected to the bar and positioned to lock the bar in its lowermost position while the bottom door is in open position, and a flange provided on the side door and positioned to engage the bar when the bar is in its lowermost position.

2. A mail box, comprising a box provided with an opening for the insertion of mail therein and with a side and a bottom opening for the removal of mail therefrom, a door covering the side opening, a door covering the bottom opening, a bar pivoted to the box and having a locking bolt depending therefrom and positioned to lock the bottom door, a dog pivotally connected to the bar and positioned to lock the bar in its lowermost position while the bottom door is in open position, and a flange provided on the side door and positioned to engage the bar when the bar is in its lowermost position, the said flange being also positioned to engage and lock the bar against movement when said bar is in its uppermost position.



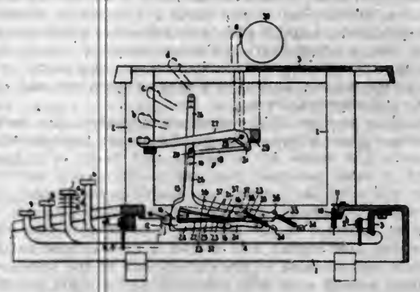
3. A mail box, comprising a box provided with an opening for the insertion of mail therein and with a side and a bottom opening for the removal of mail therefrom, a door covering the side opening and hinged to the lower portion of said box, a lining positioned within the box and spaced a distance from the side walls of said box, a flange connected to said door and extending between the lining and one of the said walls of the box and constructed to limit the outward movement of said door, a door covering the bottom opening and provided with an eyed member and with a flange extending between the lining and one of the side walls of the box and constructed to limit the downward movement of the bottom door, a bar pivoted to the box and positioned between the lining and one of the walls of the box, said bar having a locking bolt depending therefrom and positioned to engage the eyed member of the bottom door, bolts extending inwardly from one of the side walls of the box, a dog pivotally connected to the bar and positioned to engage one of the bolts when the bar has been swung downwardly to its lower position and to be disengaged from the bolt by the movement of the bottom door toward its closing position, and a flange provided on the side door and extending between the lining and one of the walls of the box and positioned to engage the bar when the bar is in its lower position to prevent the closing of the side door and to also engage the bar when the said bar is in its upper position to prevent movement of said bar when the side door is in closed position.

1,018,811. TYPE-WRITING MACHINE. JAMES D. DAUGHERTY, Kittanning, Pa., assignor to Union Typewriter Company, Ilion, N, Y., a Corporation of New York. Filed Nov. 16, 1911. Serial No. 660,558. (Cl. 197—27.)

1. In a typewriting machine, the combination of a type bar; a finger key; and intermediate actuating connections between said finger key and type bar, said connections comprising an actuating lever having two rocker arms, and a fulcrum plate intermediate said rocker arms and against which both of said rocker arms bear.

2. In a typewriting machine, the combination of a type bar; a key lever; and intermediate actuating connections between said key lever and type bar, said connections comprising a sub-lever having two rocker arms, and a fulcrum plate intermediate said rocker arms and against which both of said rocker arms bear.

3. In a typewriting machine, the combination of a type bar; a finger key; and intermediate actuating connections between said finger key and type bar, said connections comprising an actuating lever having two rocker arms, a fulcrum plate intermediate said rocker arms and against which both of said rocker arms bear, and a pull link intermediate said actuating lever and type bar.

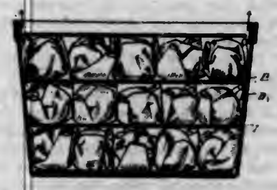


4. In a typewriting machine, the combination of a type bar; a key lever; a sub-lever operatively connected with said key lever, said sub-lever having two rocker arms; a fulcrum plate between said rocker arms and against which both of said arms bear; and a pull link between the sub-lever and type bar.

5. In a front-strike typewriting machine, the combination of an upwardly and rearwardly striking type bar; a key lever of the second order; a sub-lever pivoted directly to said key lever, said sub-lever having two rocker arms; a fulcrum plate between said arms and with which said arms cooperate; and means for connecting said sub-lever and type bar.

[Claims 6 to 25 not printed in the Gazette.]

1,018,812. ART OF PRESERVING FRUIT AND VEGETABLES. HENRI DUJARDIN, New York, N. Y. Filed Dec. 15, 1910. Serial No. 597,444. (Cl. 99—8.)



1. An improvement in the art of preserving fruit and vegetables, which consists in packing said articles in a covering arranged to permit the egress of the evolved gases, due to the decay of the article, but to prevent the ingress of moisture or external gases.

2. An improvement in the art of preserving fruit and vegetables, which consists in packing such articles in a covering so applied as to permit the egress of the evolved gases, due to the decay of the article, but prevent the ingress of external gases or the deposit of moisture upon the articles to be preserved.

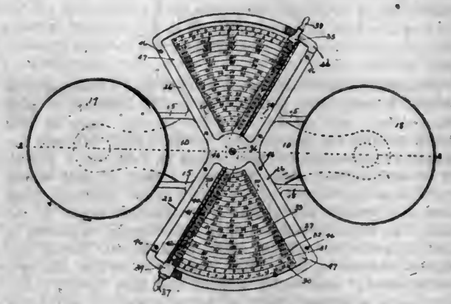
3. An improvement in the art of preserving fruit and vegetables, which consists in packing said articles in a covering of paraffined paper, so applied as to permit the egress of the evolved gases, due to the decay of the article to be preserved, but prevent the ingress of moisture or external gases.

4. An improvement in the art of preserving fruit and vegetables, which consists in packing the article to be preserved in a covering of paraffined paper placed without the article, and folding said paraffined paper over the article in such a manner as to permit the egress of the gases evolved by the article, but prevent ingress of air and moisture.

5. An improvement in the art of preserving fruit and vegetables, which evolve gases of decomposition, which consists in packing the article by placing it upon a body of paraffined paper, then folding the paper over the article to form a closed seam, and then turning up the ends of the paper to form within the folds, outlets for the gases evolved by the article.

[Claim 6 not printed in the Gazette.]

1,018,813. SCALE. FRANK P. DUNN, Anderson, Ind., assignor, by direct and mesne assignments, of thirty one-hundredths to Anderson Tool Company, Anderson, Ind., a Corporation of Indiana, and one-fourth to Orevell C. Reeves, Toledo, Ohio. Filed Dec. 30, 1909. Serial No. 535,596. (Cl. 73—104.)

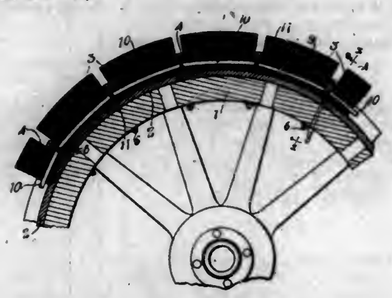


1. A weighing scale including a fulcrumed beam, indicating means consisting of a member secured on the beam and having two similar sets of chart indications on opposite sides of the fulcrum and both readable from the respective sides of the beam on which they are located, an indicator pivoted between said charts and projecting in both directions from the pivot and movable across the chart, a poise weight secured to one end of said indicator, and a handle secured to each of the extreme outer ends of said indicator, whereby the indicator may be operated and the chart read from either side of the scale.

2. A weighing scale including a beam fulcrumed between its ends, indicating means consisting of a pair of fan-shaped members united at their apex and secured to and extending transversely of the beam and each member provided with similar graduations and indications readable from the respective sides of the scale, an indicator extending entirely across the two fan-shaped members and centrally pivoted between said members and provided on each end portion thereof with graduations and indications corresponding with the graduations and indications on the fan-shaped members, a poise weight secured to one end of said indicator, an outwardly projecting handle secured to each end of said indicator, a load receiving member mounted on the beam near one side of said fan-shaped member, and a weight receiving member mounted on the beam on the opposite side thereof, whereby the scale can be operated and read from both sides and the load and weight receiving members will be close to the fulcrum of the beam.

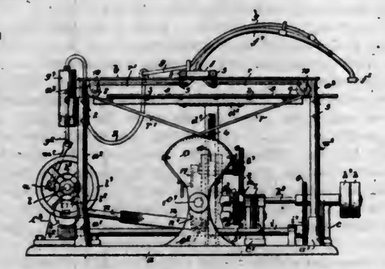
3. A weighing scale including a beam fulcrumed between its ends, a load receiving member on one end of the beam, a weight receiving member on the other end thereof, an indicating member fixed on the beam in horizontal position and between said load and weight receiving members and extending longitudinally of the beam to an equal extent on each side of the fulcrum and provided with a row of graduations and indications beginning with zero on the side of the fulcrum of the beam next to the load receiving member and extending in a direction away from the load receiving member to the side of the indicating member next to the weight receiving member, and an indicator extending transversely of said beam and pivoted so as to oscillate horizontally across said indicating member said indicating member being weighted.

1,018,814. VEHICLE-TIRE. HENRY H. DUER, Springfield, Ohio. Filed Mar. 29, 1911. Serial No. 617,748. (Cl. 152—9.)



The combination, with a wheel rim, and a channel iron secured thereto, of a plurality of blocks mounted in said channel iron and spaced one from another, each of said blocks having its end surface substantially flat and arranged at substantially right angles to said rim, a plurality of longitudinal wires mounted in each of said blocks and extending beyond the opposite ends thereof, cross bars, of a length and height approximately equal to the width and depth, respectively, of said channel, mounted in said channel between the ends of adjacent blocks and having recesses in both sides thereof to receive the projecting ends of said wires, each of said bars having a longitudinally arranged series of radial apertures extending through the same, and a plurality of bolts extending through each of said bars and through said channel iron and said rim, said bolts being less in number than said apertures and each bolt being adapted to extend through any one of said apertures.

1,018,815. SHEET-FEEDING MECHANISM FOR PRINTING-PRESSES. FRANK J. EBERLE, New York, N. Y. Filed Feb. 25, 1911. Serial No. 610,786. (Cl. 101—41.)



1. In a machine of the character described, the combination with a traveling carriage, a sucker arm mounted thereon and means for actuating said parts, of a vertically movable platform, a supporting column therefor, beneath said platform and a bearing-standard in which the column is vertically movable, rollers upon the said platform and a table for superimposed sheets supported by said platform and rollers and movable upon said rollers, a power shaft and devices operatively extending therefrom for progressively raising said column, platform and table, and other devices for manually returning the said parts to an initial position.

2. In a machine of the character described, the combination with a traveling carriage, a sucker arm mounted thereon and means for actuating said parts, of a vertically movable platform, a table mounted upon the platform and movable over the same and adapted to receive a superposed pile of sheets, a supporting column centrally beneath said platform, a bearing standard in the bed of the machine, hollow and receiving said column and slotted, a rack secured to the column and movable in the slotted part of the standard-bearing formed upon said standard, and a shaft therein, a gear and ratchet mounted upon one end of said shaft, a pawl engaging the standard, a handle on the opposite end of said shaft for manually rotating the said parts, a pinion also upon said shaft meshing with said gear, a power shaft and means operated thereby for turning the said gear with a step by step motion for progressively raising the platform supported thereby and the table and sheets thereon.

3. In a machine of the character described, the combination with a traveling carriage, a sucker arm mounted thereon and means for actuating said parts, of a platform, a table mounted upon the platform and movable over the same and adapted to receive a superposed pile of sheets, a column centrally beneath said platform, a bearing standard in the bed of the machine, hollow and receiving said column and slotted, a rack secured to the column and movable in the slotted part of the standard-bearing formed upon said standard, and a shaft therein, a gear and ratchet mounted upon one end of said shaft, a pawl engaging the standard, a handle on the opposite end of said shaft for manually rotating the said parts, a pinion also upon said shaft meshing with said gear, a power shaft, suitable bearings therefor, a pinion thereon, a short shaft, a gear thereon meshing with the power shaft pinion, and a second gear, another short shaft and a gear thereon meshing with the latter gear and a toothed wheel also on the latter short shaft so placed that the tooth thereof is adapted to engage one tooth at a time of the first aforesaid toothed wheel.

4. In a machine of the class described, the combination with a sucker arm, a reciprocating carriage, arms extending from the carriage to and for the support of the sucker arm, a table or platform supporting said carriage and upon which the same is adapted to move, of rocker arms, shafts on which the same are mounted, bearing standards for the said shafts and the said rocker arms formed with segmental upper ends, flexible straps members secured to the sides of said rocker arms and passing over the segmental ends and crossing, pulleys for said flexible members over which they pass and the free ends of said flexible members connected to said reciprocating carriage, crank arms upon the other ends of the rocker arm, shafts, a forked rod connected to said crank arms and means for actuating the same.

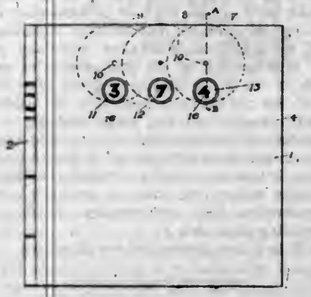
5. In a machine of the class described, the combination with a sucker arm, a reciprocating carriage, arms extending from the carriage to and for the support of the sucker arm, a table or platform supporting said carriage and upon which the same is adapted to move, of rocker arms, flexible members extending from the rocker arms to the said reciprocating carriage, supports for said rocker arms, means for swinging the same, a flexible hose extending from the sucker arm, supports therefor, and a pump or vacuum producing device to which the other end of the flexible hose is secured, a shaft and means for actuating the same, a piston for said vacuum producing device and connections therefrom to said shaft, means also extending from the said shaft to connections with the rocker arms, whereby the vacuum or suction action is produced in the sucker arm and the same is moved and timed in its movement.

[Claims 6 and 7 not printed in the Gazette.]

1,018,816. BOOK-PAGE-RECORDING DEVICE. HIO P. EILERS, New York, N. Y. Filed Mar. 11, 1911. Serial No. 613,911. (Cl. 116—49.)

1. The combination with a book cover comprising a plurality of cover members attached together face to face, of a page indicator comprising a plurality of independently movable members movably mounted between two of said cover members, each of said movable members having a plurality of numerals thereon, and being accessible from the exterior of the cover so as to be moved as required, said cover being apertured to expose one numeral on each of said movable members to permit simultaneous observation thereof, whereby they may be read as one number.

2. The combination with a book cover comprising a plurality of cover members attached together face to face, of a page indicator comprising a plurality of rotatable disks located between two of said cover members, each of said disks having a plurality of numerals thereon, and each disk overlapping another of said disks, and being also accessible from the exterior of the cover so as to be moved as required, said cover being apertured to expose one numeral on each of said movable disks to permit simultaneous observation of such numerals, whereby the numbers upon the disks, and the apertures through which they show may be relatively close together, and said numbers may be read as one number.



3. The combination with a book cover comprising a plurality of cover members, one of said members being a lining sheet attached to the other of said cover members, of a page indicator comprising a plurality of independently movable members located between said lining sheet and the other cover member, each of said movable members carrying a plurality of numerals thereon, one of said cover members being apertured to expose, and thus permit simultaneous observation of, one numeral on each of said movable members, whereby said opposed numerals may be read as one number.

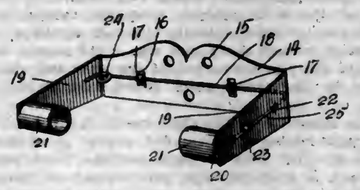
4. The combination with a book cover comprising a plurality of cover members, one of said members being a lining sheet attached to the other of said cover members, of a page indicator comprising a plurality of independently movable members located between and movably mounted upon one of said cover members, each of said movable members having a plurality of numerals thereon, one of said cover members being apertured to expose and thus permit simultaneous observation of one numeral on each of said movable members, whereby said exposed numerals may be read as one number.

5. The combination with a book cover comprising a plurality of cover members, one of said members being a lining sheet attached to the other of said cover members, of a page indicator comprising a plurality of rotatable members located between said cover members, and mounted upon one of said cover members, each of said rotatable members having a plurality of numerals thereon, one of said cover members being apertured to expose, and thus permit simultaneous observation of, one numeral on each of said rotatable members, whereby said exposed numerals may be read as one number.

[Claims 6 to 8 not printed in the Gazette.]

1,018,817. PAPER-HOLDER. ARTHUR J. FARRELL, Pittsburgh, Pa. Filed Dec. 18, 1911. Serial No. 666,421. (Cl. 211—31.)

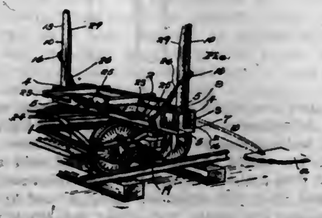
1. A roll paper holder comprising a yoke-shaped body portion capable of being secured to a support and including a pair of supporting arms each terminating at its free end in a coupling member, a cylindrical bearing integral with each of said coupling members and disposed at right angles with respect to said arms, said bearings opposing each other and arranged against the inner face of the arms, and a pair of lugs carried by each of said bearings and extending through and engaging said supporting arms to prevent said bearings from bending outwardly with respect to said coupling members.



2. A roll paper holder comprising a yoke-shaped body portion including a pair of supporting arms, a cylindrical bearing integral with the outer end of said arms, and arranged against the inner face of its respective arm, and a reinforcing wire connected to said body portion and having the ends constituting spring arms engaging said supporting arms for forcing these latter toward each other.

3. A roll paper holder comprising a yoke-shaped body portion including a pair of supporting arms, a cylindrical bearing integral with the outer end of said arms, and arranged against the inner face of its respective arms, a reinforcing wire connected to said body portion and having the ends constituting spring arms engaging said supporting arms for forcing these latter toward each other, and lugs carried by said bearings and extending through and engaging said supporting arms to prevent said bearings from bending outwardly with respect to said supporting arms.

1,018,818. STAKE AND STAKE-SEAT FOR LOGGING-CARS AND THE LIKE. EDWIN A. GASKILL, Laneville, W. Va. Filed Apr. 1, 1911. Serial No. 618,350. (Cl. 105—173.)



1. In combination a wooden bunk having a slotted end, and a stake seat comprising a one piece thin metallic strap extending across the top of and bent over the bunk sides to protect the same the central portion of said strap being bent inwardly to snugly fit within the slot of the bunk said depressed portion having its side walls pressed out to form trunnion receiving recesses.

2. In combination a wooden bunk having a slotted end, a thin metallic strap bent substantially M-shaped fashion for the bunk end the central portion of said plate forming a socket which is fitted within the slot of the bunk end the side walls of said socket being pressed out to form recesses for the reception of stake trunnions and means for securing the strap to the bunk.

3. A stake of the character described comprising a tubular construction conbisting of nested metallic members of substantially U-shaped cross-section the outer edges of which are riveted together and provided intermediate the bottom and top of said stake with outwardly extending lips, plates contained within and riveted to said stake walls, and trunnions carried by said plates said trunnions projecting laterally through the side walls of the stake.

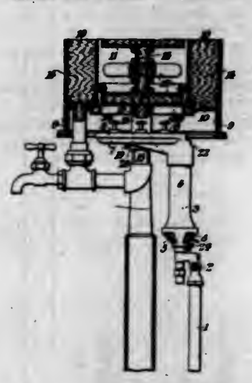
4. A stake of the character described comprising a tubular construction consisting of nested metallic mem-

bers of substantially U-shaped cross-section the outer edges of which are riveted together and which are provided with lips intermediate the top and bottom of said stake, plates contained within and riveted to the side walls of the said members, trunnions carried by said plates and extended laterally through openings in the side walls of said stake and stay rivet sleeves for the rivets at the top and bottom of the stake and stay rivet sleeves for the rivets which secure said plates to the stake.

5. In apparatus of the class described the combination of a bunk having a slotted end, a seat piece having a socket provided with recessed portions fitted over the bunk end, a stake movable with respect to the socket said stake having trunnions accommodated by the recessed portions of said socket and means for tripping the stake.

[Claim 6 not printed in the Gazette.]

1,018,819. GAS-BURNER. HARRY E. GILBERT, Conshohocken, Pa., assignor to John Wood Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 28, 1910. Serial No. 584,184. (Cl. 158—113.)



1. A gasolene vapor burner comprising a cylindrical tube; a foraminous screen formed of a corrugated strip of sheet metal coiled with a plane strip of sheet metal in said tube; a shield at the outlet end of said tube comprising a disk and a standard in concentric relation therewith; said disk and standard being a unitary piece of molded silica; and, means connecting said shield with said screen, comprising a flexible wire molded in said standard extending through said screen and engaged beneath the latter.

2. A gasolene vapor burner comprising a cylindrical tube; a foraminous screen formed of a corrugated strip of sheet metal coiled with a plane strip of sheet metal in said tube; a shield at the outlet end of said tube comprising a disk and a standard in concentric relation therewith; and, means connecting said shield with said screen, comprising a flexible wire molded in said standard extending through said screen and engaged beneath the latter.

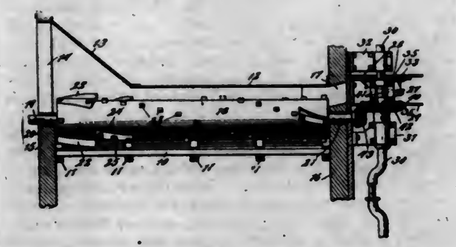
3. A gasolene vapor burner comprising a cylindrical tube; a foraminous screen in said tube; a shield at the outlet end of said tube comprising a disk and a standard in concentric relation therewith; said disk and standard being a unitary piece of molded silica; and, means connecting said shield with said screen comprising a flexible wire molded in said staudard extending through said screen and engaged beneath the latter.

4. In a gas burner, the combination with a horizontal head, bifurcated by a central opening extending to the edge thereof, and having a plurality of gas jet orifices at the same level in its top; of a foraminous screen in each of said orifices; a deflecting shield at the outlet end of each of said orifices, including a disk and a standard in concentric relation therewith, formed of refractory material; an auxiliary pilot gas jet orifice, intermediate of the bifurcations of said head, at one side of the latter and at a lower level than said plurality of gas jet orifices; said pilot jet orifice being inclined with respect to the other orifices; a tubular body depending from said head, at one side thereof, intermediate of said bifurcations and in registry with said pilot orifice, inclosing a mixing chamber having an air inlet; a valve controlling said air inlet; a gas supply pipe in connection with said mixing chamber; and, a valve controlling said pipe.

5. In a gas burner, the combination with a horizontal head, bifurcated by a central opening extending to the edge thereof, and having a plurality of gas jet orifices at the same level in its top; of a deflecting shield at the outlet end of each of said orifices, including a disk formed of refractory material; an auxiliary pilot gas jet orifice, intermediate of the bifurcations of said head, at one side of the latter and at a lower level than said plurality of gas jet orifices; said pilot jet orifices being inclined with respect to the other orifices; a tubular body depending from said head, at one side thereof, intermediate of said bifurcations and in registry with said pilot orifice, inclosing a mixing chamber having an air inlet; a valve controlling said air inlet; a gas supply pipe in connection with said mixing chamber; and, a valve controlling said pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,018,820. CORN-SHELLER. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed Mar. 24, 1910. Serial No. 551,366. (Cl. 130—6.)



1. In a corn sheller, the combination with a concave having a discharge aperture therein, of a rotating shelling member journaled therein, a disk journaled to rotate above and adjacent said discharge aperture, for the purpose described, and a coacting member opposed to said disk.

2. In a corn sheller, the combination with a concave having a discharge aperture therein, and two disks journaled to rotate, one above and the other below, and adjacent said discharge aperture, for the purpose described.

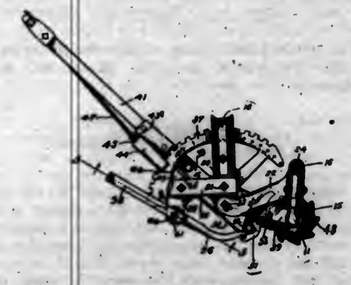
3. In a corn sheller, the combination with a concave having a discharge aperture therein, of a rotating shelling member journaled therein, a disk journaled to rotate above and adjacent said discharge aperture and having ribs on its under surface, for the purpose described, and a coacting member opposed to said disk.

4. In a corn sheller, the combination with a concave having a discharge aperture therein, of a rotating shelling member journaled therein, a disk journaled to rotate above and adjacent said discharge aperture and having pins on its under surface, for the purpose described, and a coacting member opposed to said disk.

5. In a corn sheller, the combination with a concave having a discharge aperture therein, of a rotating shelling member journaled therein, and two disks journaled to rotate one above and the other below and adjacent said discharge aperture, and having projections on their opposed faces, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,821. REVERSIBLE PLOW. WILLIAM S. GRAHAM, Canton, Ill., assignor to Parlin and Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed Mar. 15, 1911. Serial No. 614,600. (Cl. 97—55.)



1. In a sulky plow, the combination with a frame, an axle adapted to be moved forward and backward relative to said frame, a carrying-wheel mounted on said axle, and a plow-share mounted in said frame and adapted to be raised by the backward movement of said carrying-wheel in said frame, of a dog pivotally mounted relative to said carrying-wheel, a foot-lever, an arm rigidly connected with said foot-lever, and a stud projecting from said dog in the path of the stroke of said arm, said dog being adapted to be moved by a stroke of said foot-lever into engagement with said wheel whereby the wheel is held against rotation relative to said axle.

2. In a sulky plow, the combination with a frame, an axle adapted to be moved forward and backward relative to said frame, a carrying-wheel mounted on said axle, a ratchet-wheel connected with said carrying-wheel, and a plow-share mounted in said frame and adapted to be raised by the backward movement of said carrying-wheel in said frame, of a dog pivotally mounted adjacent to said ratchet-wheel and adapted to be moved backward and forward relative to said frame with said carrying-wheel, a foot-lever pivotally mounted in said frame, an arm rigidly connected with said foot-lever, and a stud projecting from said dog and adapted to be engaged by said arm whereby a stroke of said lever causes said dog to move into engagement with said ratchet-wheel to hold said carrying-wheel against rotation relative to its axle, said arm being curved to conform substantially to the path of said stud as said carrying-wheel moves backward relative to said frame.

3. In a sulky plow, the combination with a frame, an arm pivotally mounted on said frame, a carrying-wheel journaled on said arm and adapted to be swung forward and backward relative to said frame, a ratchet-wheel connected with said carrying-wheel, and a plow-share mounted in said frame and adapted to be raised by the backward movement of said carrying-wheel in said frame, of a dog pivotally mounted on said arm adjacent to said ratchet-wheel, a rack mounted on said frame, a slide-bolt carried by said arm adapted to lock the arm to said rack, connections between said dog and said slide-bolt whereby the slide-bolt is moved out of engagement with said rack as said dog is moved into engagement with said ratchet-wheel, a foot-lever mounted on said frame, and an arm carried by said foot-lever in engagement with said dog, by a stroke of which lever said dog is brought into engagement with said ratchet-wheel and said slide-bolt is disengaged from said rack, said dog and the arm on said lever being adapted to maintain sliding engagement while said carrying-wheel moves backward relative to said frame.

4. In a sulky plow, the combination of a frame, a carrying-wheel mounted thereon, a plow-share mounted in said frame, an arm pivotally mounted relative to said frame, by the movement of which arm said plow-share is adapted to be raised, a dog pivotally mounted on said arm, a foot-lever pivotally mounted in said frame, and a second arm rigidly connected with said foot-lever and adapted to engage said dog, by a stroke of which lever said dog is swung into engagement with said wheel whereby said first-named arm is swung relative to said frame as said plow advances.

5. In a sulky plow, the combination of a frame, a carrying-wheel mounted thereon, a plow-share mounted in said frame, an arm pivotally mounted relative to said frame, by the movement of which arm said plow-share is adapted to be raised, a dog pivotally mounted on said arm, a foot-lever pivotally mounted in said frame, and a second arm rigidly connected with said foot-lever and adapted to engage said dog, by a stroke of which lever said dog is swung into engagement with said wheel whereby said first-named arm is swung relative to said frame as said plow advances, said second-named arm being curved to conform substantially to the path of the dog as said first-named arm is swung to raise said plow-share.

1,018,822. FLOUR-SIFTER. CORA ELLEN GRAY, Battle Creek, Mich. Filed Oct. 12, 1911. Serial No. 654,248. (Cl. 83—60.)

1. In a flour sifter, the combination of a cylindrical receptacle having fixed end walls partially closing its ends, the said end walls being disposed to provide diagonally opposite end openings, said receptacle being provided with a central annular bead and an annular bead at each end; segmental end closures flanged to embrace the ends of the receptacle, the flanges being beaded to embrace the end beads of said body, and being extended to provide tongue-like catches, the receptacle having lug-like coacting keepers struck up therefrom; a handle disposed centrally on said receptacle so that it may be reversed; a sieve arranged with its edges in the said central bead; a shaft having a crank at each end arranged longitudinally through said receptacle and journaled in its said fixed end walls, said shaft being the pivot for the said end closures; and arms arranged on said shaft at each side of said sieve, said arms being transversely disposed relative to each other.

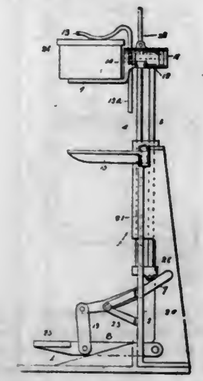
2. In a flour sifter, the combination of a cylindrical receptacle having fixed end walls partially closing its ends, the said end walls being disposed to provide diagonally opposite end openings; segmental end closures flanged to embrace the ends of the receptacle, said flanges being provided by the receptacle having lug-like coacting keepers struck up therefrom; a handle disposed centrally on said receptacle so that it may be reversed; a sieve arranged centrally within said receptacle; a shaft having a crank at each end arranged longitudinally through said receptacle and journaled in its said fixed end walls, said shaft being the pivot for the said end closures; and arms arranged on said shaft at each side of said sieve, said arms being disposed transversely of each other.

3. In a flour sifter, the combination of a receptacle having fixed end walls partially closing its ends, the said end walls being disposed to provide diagonally opposite end openings; end closures flanged to embrace the ends of the receptacle, said flanges being provided by the receptacle having lug-like coacting keepers struck up therefrom; a handle disposed centrally on said receptacle

so that it may be reversed; a sieve arranged centrally within said receptacle; a shaft having a crank at each end arranged longitudinally through said receptacle and journaled in its said fixed end walls, said shaft being the pivot for the said end closures; and arms arranged on said shaft at each side of said sieve, said arms being disposed transversely of each other.

4. In a flour sifter, the combination of a receptacle having fixed end walls partially closing its ends; end closures; a sieve arranged centrally within said receptacle; a shaft having a crank at each end arranged longitudinally through said receptacle and journaled in its said fixed end walls, said shaft being the pivot for the said end closures; and arms arranged on said shaft at each side of said sieve, said arms being disposed transversely of each other.

1,018,823. CORE-MAKING MACHINE. GEORGE L. GRIMES, Detroit, Mich. Filed Apr. 10, 1911. Serial No. 619,928. (Cl. 22—32.)



1. In a core-making machine, in combination with a table adapted to sustain the core box and a clamp adapted to hold the core box securely thereon, a pair of vertically sliding rods, a foot lever and an auxiliary lever adapted to give to the core box a greater throw than the movement of the foot lever, and a pair of swinging arms adapted to receive the core from the core box, substantially as described.

2. In a core making machine, in combination with a base frame, a plurality of rod members vertically slidable with respect thereto, a table member supported by said rod members and capable of limited movement with respect thereto, a lever member pivoted to said base frame, whereby said rod members and their supported parts may be actuated, an adjustable clamp member adapted to hold a core box in desired position with respect to said table member, and a pair of swinging arms adapted to support the core when removed from the box, substantially as described.

3. In a core making machine, in combination with a frame having a plurality of vertically slidable members, a table supported by said slidable members, means for holding a core box in position on said table, a pedally actuatable lever whereby said slidable members and their supported parts may be raised and allowed to fall, and a pivoted arm member adapted to receive the core box and to sustain the core itself when the box is removed by further actuation of said slidable members, substantially as described.

4. In a core-making machine, a frame provided with vertical guides, a plurality of sliding rods engaging in said guides, said rods being arranged to brace against oscillation, a table pivotally connected to the top of said rods, a compound lever, adapted to actuate said rods in vertical movement and a pivoted bracket arm supported by said frame, upon which the contents of a core box may be deposited upon the reversal of the supporting table, substantially as described.

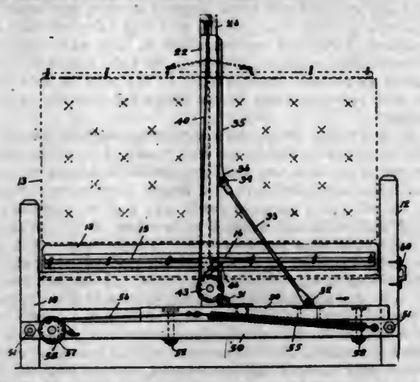
1,018,824. PAINT-PACKAGE. JOHN W. HASBURG, Chicago, Ill. Filed Nov. 13, 1911. Serial No. 660,104. (Cl. 41—4.)

1. A paint package comprising a palette, the central portion of which is adapted to receive a charge of paint, a pair of members for entirely inclosing said palette, one of said members covering one surface and the edge of the palette, and the marginal edge of one of said members being folded and secured over the marginal edges of the other member to form a hermetically sealed joint.

2. A paint package containing a palette the central portion of which is adapted to receive a charge of paint, a pair of members for entirely inclosing said palette, the upper member covering the upper surface and the edge of the palette, and the marginal edge of the other member being folded and secured over the marginal edge of the top member to form a hermetically sealed joint.

3. A paint package comprising a glass palette adapted for receiving a charge of paint on its central portion, a cover member of celluloid having an outwardly deflected dome-shaped portion for overlying said paint and having a flat surface covering and in contact with the other portions of the palette and extending downwardly and outwardly at the edges of said palette, and a bottom member having its marginal edges folded over and cemented to the edges of said top member to provide a hermetically sealed joint.

1,018,825. MATTRESS-TURNING APPARATUS. MICHAEL F. HAYES, Boston, Mass. Filed Dec. 14, 1911. Serial No. 665,763. (Cl. 5—41.)



1. In a mattress-turning apparatus, a folding crane and support therefor, and a cord passing over sheaves mounted on said crane having means at the end to engage the side of the mattress, substantially as described.

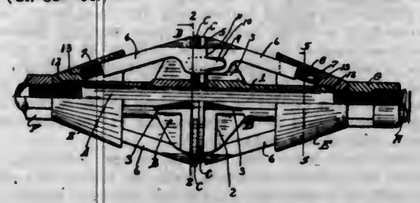
2. In a mattress-turning apparatus, a folding crane, a sliding support therefor, a base-bar upon which said support is mounted, and a cord passing over sheaves mounted on said crane, having means at the end to engage the side of the mattress, substantially as described.

3. In a mattress-turning apparatus, a folding crane, a cord passing over sheaves on said crane having means at the end to engage the side of a mattress, a sliding-support therefor, a base-bar upon which said support is mounted, spring-actuated means to move said support in one direction and means to move said support in the opposite direction and to set said spring-actuated means in condition to operate, and means to release said spring-actuated means, substantially as described.

4. In a mattress-turning apparatus, a crane comprising an overhanging arm hinged to an upright post; and an upright post hinged to a support, a support for the crane, adapted to be attached to a bed, and a cord passing over sheaves arranged on said crane having means at the end to engage the side of a mattress, substantially as described.

5. In a mattress-turning apparatus, a crane comprising an overhanging arm hinged to an upright post, and an upright post hinged to a support for the crane, a support, means to connect said support with a bed, props arranged on the upright post and on the support to sustain the overhanging arm and post in position for use, and means to engage the mattress and lift it bodily from the bed, substantially as described.

1,018,826. FLUE-CLEANER. ALFRED A. HULL, Knoxville, Tenn. Filed Jan. 20, 1911. Serial No. 603,716. (Cl. 83—64.)



1. In a flue cleaner, the combination of an axial body, scraper plates surrounding said body in planes to which the body is perpendicular, toggles extending lengthwise of said body and supporting said plates and comprising rigid arms, relatively fixed abutments opposite the outer ends of said arms, and an elastic member intervening between the outer end of each of such arm and the adjacent abutment in proper relation to yieldingly resist movement of said arm endwise toward said abutment, substantially as described.

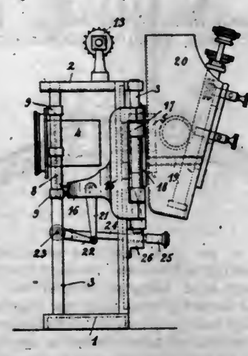
2. In a flue cleaner, the combination of an axial body, scraper plates surrounding said body in planes to which the body is perpendicular, toggles extending lengthwise of said body and comprising rigid arms extending through said plates, relatively fixed abutments opposite the outer ends of said arms, and an elastic member intervening between the outer end of each such arm and the adjacent abutment in proper relation to yieldingly resist movement of said arm endwise toward said abutment, substantially as described.

3. In a flue cleaner, the combination of a shaft, tubular guide members surrounding said shaft and abutting against each other and having radially-slotted heads near their abutting ends, scraper plates surrounding said shaft between said heads, yielding toggles extending lengthwise of said shaft and through said slotted heads and supporting said plates, and retaining members surrounding the outer ends of said toggles and bearing against the outer ends of said tubular guide members, substantially as described.

4. In a flue cleaner, the combination of a shaft, tubular guide members surrounding said shaft and abutting against each other and having radially-slotted heads near their abutting ends, scraper plates surrounding said shaft between said heads, toggles extending lengthwise of said body and supporting said plates and comprising rigid arms, retaining members surrounding the outer ends of said toggles and bearing against the outer portions of said toggles and bearing against the outer ends of said guide members, and an elastic member located between the outer ends of each toggle arm and the adjacent retaining member, substantially as described.

5. In a flue cleaner, the combination of an axial body, scraper plates surrounding said body in planes to which said body is perpendicular, and yielding toggles composed of laterally-recessed, overlapping arms extending through and supporting said plates, substantially as described.

1,018,827. REGISTERING DEVICE FOR KINEMATOGRAPHS. ERNEST ALBERT IVATTS, Paris, France, assignor to Compagnie Generale de Phonographes, Cinematographes et Appareils de Precision, Paris, France. Filed Dec. 13, 1910. Serial No. 597,064. (Cl. 88—18.)



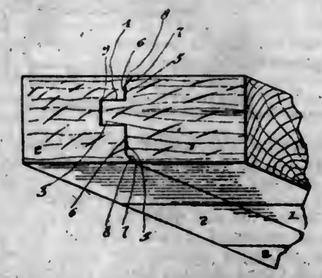
1. A kinematographic apparatus comprising a condenser, lens, an apertured screen, means for normally holding said condenser, lens and apertured screen in substantial alinement, and means for simultaneously shifting said parts laterally with respect to the film.

2. A kinematographic apparatus comprising a source of light, a condenser, lens, an apertured screen, and means for simultaneously displacing all of said parts laterally with respect to the film.

3. A kinematographic apparatus comprising a source of light, a condenser lens, an objective, an apertured screen, means for normally holding said source of light, condenser lens, objective and apertured screen in substantial alinement, and means for simultaneously shifting said parts substantially parallel to that portion of the line of travel of the film which may be intersected by light rays from said source.

4. A kinematographic apparatus comprising a source of light, a condenser lens, an objective, an apertured screen, and means for simultaneously displacing all of said parts substantially parallel to that portion of the line of travel of the film which may be intersected by light rays from said source.

1,018,828. FLUME-JOINT. NELS JOHNSON, Batavia, Ill. Filed June 5, 1911. Serial No. 631,431. (Cl. 61—5.)

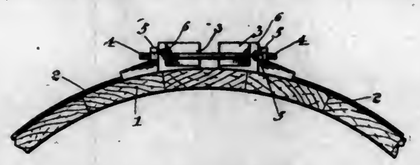


1. A joint of the character described, comprising contiguous ends of flume sections, there being a tongue on one end and a corresponding groove on the other spaced part at the bottom of the groove, the portions of said sections adjacent said tongue and groove being perpen-

dicular to said tongue and substantially tight, the outer portions of said sections being beveled to fit each other and to make a substantially water-tight joint therebetween, substantially as described.

2. A joint of the character described, having the tongue 3 on one section interfitting the groove 9 on a contiguous section of a flume, the substantially abutting surfaces 5 and 6, and the tightly fitting beveled surfaces 7 and 8, substantially as described.

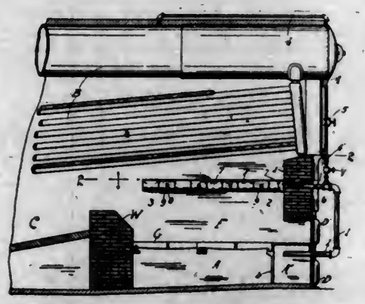
1,018,829. HOOP-LUG. NELS JOHNSON, Batavia, Ill. Filed June 12, 1911. Serial No. 632,764. (Cl. 217—95.)



1. A device of the class described comprising a securing member substantially in the form of a cross, the side members of said cross being perforated and forming securing ears for securing rods and the longitudinal member of said cross having a socket in its lower portion extending its entire length and a socket in its upper portion extending back to the central portion of said cross, substantially as described.

2. A device of the class described, comprising a securing member having a contrally disposed transverse member perforated to receive a pair of securing rods, a longitudinal member projecting forwardly and rearwardly from said transverse member, a central longitudinal socket in and through the lower portion of said longitudinal member, a longitudinal socket in the upper portion of said longitudinal section and said transverse member, reinforcing flanges between said transverse member and one end of said longitudinal member, substantially as described.

1,018,830. SMOKE-CONSUMING FURNACE. MARTIN L. KRUEGER, St. Louis, Mo. Filed May 13, 1911. Serial No. 626,999. (Cl. 110—60.)



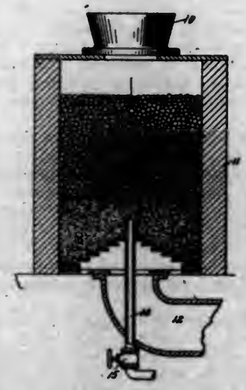
In combination with a boiler furnace having a fire-box and an ash-pit, air induction pipes leading from the ash-pit and extended along the sides of the fire-box, a heat absorbing and heat retaining ridge projecting into the fire-box beyond the side walls thereof, and traversed by the side extensions of the air induction pipes aforesaid, jet pipes projecting through the ridge aforesaid, terminating in flaring flattened nozzles discharging the mixture of superheated steam and air in vertical sheets intersecting the general line of draft of the combustion products within the fire-box, and supplemental jets projected through the front wall of the fire-box in the general line of draft, for the purpose set forth.

1,018,831. NIPPLE-COVER. CHARLES W. LADLEY, Ingram, Pa. Filed June 17, 1911. Serial No. 633,643. (Cl. 215—117.)

1. A nipple cover for nursing bottles, comprising an oblate spheroid-shaped hollow body for engagement over the neck of a bottle having a nipple mounted thereon, semi-dome-shaped cover sections carried by the upper edge of said body, a bead arranged circumferentially of said body intermediate the upper and lower edges of the body, and beads carried by the sections at the confronting edges thereof said beads terminating at the circumferential bead of said body.

2. A nipple cover for nursing bottles, comprising a hollow oblate spheroid-shaped body for engagement over the neck of a bottle having a nipple mounted thereon, a bead carried by the lower edge of the body, a bead arranged circumferentially of said body intermediate the upper and lower edges of the body, cover sections carried by the upper edge of said body, beads carried by the confronting edges of said sections and terminating at the circumferential bead of the body, and vertical beads carried by each section intermediate the vertical edges thereof.

1,018,832. PROCESS OF OPERATING GAS-PRODUCERS. NISBET LATTA, San Francisco, Cal. Filed Sept. 29, 1910. Serial No. 584,480. (Cl. 48—197.)

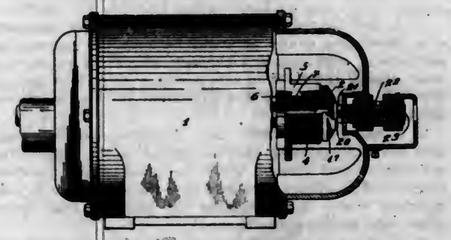


1. The process of agitating the contents of gas producers which consists in introducing a body of explosive mixture of air and gas and igniting the same in such proximity to the contents of the producer as to cause the force of explosion to lift or disturb such contents.

2. The process of agitating the contents of gas producers which consists in introducing into the producer a body of explosive mixture of air and gas and in igniting such mixture by the inherent heat of the contents of the producer and thus exploding the mixture in such proximity to such contents of the producer as to cause the force of the explosion to lift or disturb such contents.

3. The process of agitating the contents of gas producers which consists in withdrawing a portion of the gas generated in the producer, mixing such portions of the gas with air in proportions to form an explosive mixture, introducing such mixture into the producer and exploding the same therein in such proximity to the contents of the producer as to cause the force of the explosion to lift or disturb such contents.

1,018,833. CONVERTIBLE MOTOR. JOHN C. LINCOLN, East Cleveland, Ohio. Filed June 26, 1909. Serial No. 504,442. (Cl. 172—279.)



1. In a motor, the combination of a rotor shaft, a commutator, a retainer on said shaft having an annular recess or groove therein and a seat outside said groove, and a centrifugal device adapted to be seated in said groove and to move outwardly into said seat and into contact with said commutator.

2. In a motor, the combination of a rotor shaft, a commutator, a retainer on said shaft having an annular recess or groove and a space beyond or outside of said groove, and a flexible conducting ring adapted to be seated in said groove and to be carried into the space outside of the groove and into contact with the commutator by centrifugal action.

3. In a motor, the combination of a rotor shaft, a commutator, a retaining device on said shaft having an annular recess or groove and a seat beyond or outside of said groove and merging with the groove above the bottom thereof, and a conductor adapted to be seated in said groove and to be carried into the seat outside of the groove and into contact with the commutator by centrifugal action.

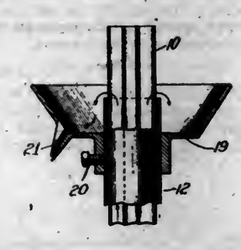
4. In a motor, the combination of a rotor shaft, a commutator thereon, and means for short-circuiting said commutator, said means comprising a retaining device slidably mounted on the shaft, a spring pressing said device toward said commutator, and a ring interposed between said device and said commutator and adapted to be carried out by centrifugal action to close the circuit between the commutator and the retaining device, there being means whereby such movement of the ring will be prevented until the speed at which the movement would otherwise occur has been materially exceeded.

5. In a motor, the combination of a rotor shaft, a commutator on said shaft, a cage on said shaft adjacent said commutator and provided with an annular groove between the shaft and the commutator, a flexible ring adapted to seat in said groove, means yieldingly pressing said cage toward said commutator, and a retaining flange located externally of said groove and adapted to retain the ring in contact with the commutator.

[Claims 6 to 16 not printed in the Gazette.]

1,018,834. ROCK-DRILL. CHARLES H. LOCHER, Glasgow, Va. Filed Nov. 15, 1909, Serial No. 528,202. Renewed Dec. 30, 1911. Serial No. 668,764. (Cl. 166—3.)

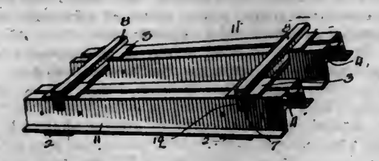
1. The combination with a drill rod, having a longitudinal channel within its sides, of a shell enveloping said drill rod, and carried thereby, and forming a conduit between said shell and rod, said conduit having a bottom opening and a valve for controlling the flow of fluid through said conduit.



2. The combination with a cruciform drill rod, and a drill point at the end thereof, of a shell enveloping said drill rod and forming therewith vertical channels, there being openings in the shell at the lower end of said channels, and gravity operated valves for closing said openings.

3. The combination with a drill providing channels in its sides, a shell enveloping said drill providing bottom openings for said channels, valves for said openings, and a pan surrounding said shell to receive material escaping from the top thereof, provided with an outlet arranged to deliver the material radially beyond the confines of the drill hole.

1,018,835. TIE AND RAIL-FASTENER. WILLIAM G. LUCAS, McKeesport, Pa. Filed Oct. 2, 1911. Serial No. 652,395. (Cl. 238—5.)



1. In a rail fastener and tie, I-beam chairs adapted to support rails, tie frames housing said chairs and resting thereon, and means for retaining said chairs in said frames.

2. In a rail fastener and tie, I-beam chairs supporting the rails, said chairs having the upper face of their bases provided with shoulders positioned inwardly of the longitudinal edges thereof, tie frames mounted upon said chairs and abutting against said shoulders, said tie frames housing said chairs, and means for connecting together said frames and maintaining the chairs between the frames.

3. In a rail fastener, tie frames, chairs of the I-beam construction arranged between said frames and adapted to support rails, channel shaped members engaging the ends of said chairs, and means connecting said frames and engaging said members for retaining said chairs between said frames.

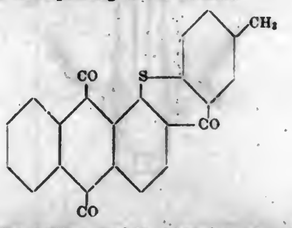
4. In a rail fastener, rails, chairs of the I-beam construction adapted to support said rails, tie frames mounted upon said chairs, channel shaped members engaging the ends of said chairs, spacer washers arranged upon said members, and means engaging said washers for connecting said frames together.

5. In a rail fastener and tie, chairs of the I-beam construction adapted to support rails, intermediate flanges carried by said chairs for holding the base flanges of said rails, frames resting upon said chairs at the sides thereof, and means connecting said frames for retaining said chairs adjacent to the ends thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,018,836. ORANGE-RED VAT DYE. ARTHUR LÜTTRINGHAUS and HEINRICH VON DIESBACH, Mannheim, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Nov. 3, 1911. Serial No. 658,386. (Cl. 8—1.)

The vat coloring matter which possesses a percentage composition corresponding to the formula

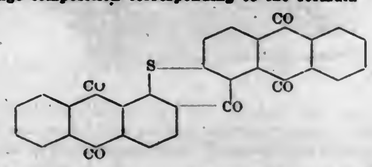


which coloring matter consists, when dry, of a red powder which yields a carmine red solution in concentrated sulfuric acid, a violet vat in alkaline hydrosulfite solution, and which dyes cotton from this vat orange-red shades of excellent fastness against the action of chlorin and light.

1,018,837. YELLOW VAT DYE. ARTHUR LÜTTRINGHAUS and HEINRICH VON DIESBACH, Mannheim, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Nov. 3, 1911. Serial No. 658,388. (Cl. 8—1.)

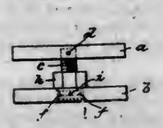
1. The new coloring matters being dianthraquinonethioxanthones, which consist, when dry of yellow to brownish yellow powders which yield red-brown solutions in concentrated sulfuric acid, green-blue to blue-black vats with alkaline hydrosulfite, and which dye cotton from these vats golden yellow shades of excellent fastness against the action of light and chlorin.

2. The new vat coloring matter which possesses a percentage composition corresponding to the formula



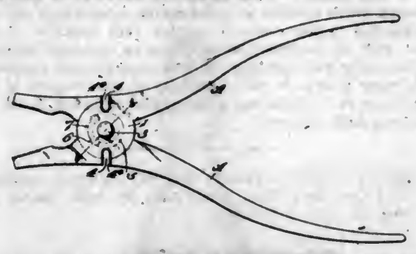
which coloring matter consists, when dry, of a brownish yellow powder which yields a red-brown solution in concentrated sulfuric acid, a dull green-blue vat in alkaline hydrosulfite solution, and which dyes cotton from this vat golden yellow shades of excellent fastness against the action of chlorin and light.

1,018,838. QUOIN. CHARLES A. LUTZ, York, Pa. Filed June 20, 1911. Serial No. 634,380. (Cl. 101—51.)



A quoin comprising two plates, a screw rigidly fastened in one of the plates in a suitable manner, the other plate provided in its adjacent side with an annular recess terminating short of the outer side of the plate and having an oil-filling hole leading into it from the upper edge of the plate, and a nut adapted to receive said screw and provided with an annular projection swivelly fastened in said recess and terminating short of its bottom, for the purposes set forth.

1,018,839. WIRE-CUTTER. MILES H. MANN, Webster Groves, Mo., assignor to Buffum Tool Company, Louisiana, Mo., a Corporation of Missouri. Filed Dec. 1, 1911. Serial No. 663,263. (Cl. 81—43.)



1. A tool provided with pivotally-connected members, a sector-shaped device arranged between the coöperating portions of said members through which the connecting pivot passes, and stops on said portions which bear against the ends of said device and thus limit the opening movement of said members.

2. A tool provided with two pivotally-connected members that have alining grooves formed in the coöperating portions thereof through which the pivot passes, a sector-shaped device arranged in said grooves, and stops on said members which strike against the ends of said device when said members are opened.

3. A wire-cutter consisting of two pivotally-connected members that are provided with coöperating wire-receiving notches, a stop on each of said members, and a device arranged between the pivotally-connected portions of said members and coöperating with said stops to bring said wire-receiving notches into registration when said members are opened.

4. A wire-cutter comprising two pivotally-connected members having disk-shaped portions which are provided with coöperating wire-receiving notches, registering grooves formed in the meeting faces of said disk-shaped portions a sector-shaped device mounted freely in said grooves, and stops on said disk-shaped portions which strike against the ends of said device when said wire-receiving notches come into alinement with each other.

5. A tool of the character described, comprising two pivotally-connected members having disk-shaped portions through which the pivot passes, coöperating wire-receiving notches in said disk-shaped portions, registering ring-shaped grooves formed in the meeting faces of said disk-shaped portions, a sector-shaped device arranged between said disk-shaped portions in said grooves, and stops arranged in the grooves in said members which are adapted to strike against the ends of said device when said wire-receiving notches register during the opening movement of said members.

[Claim 6 not printed in the Gazette.]

1,018,840. GAME APPARATUS. JERVIS A. MARIKLE, Brooklyn, N. Y. Filed July 12, 1911. Serial No. 638,060. (Cl. 46—56.)

1. A game apparatus comprising a table provided with a central opening, and an exterior, upwardly-extending flange, in combination with a wheel journaled to rotate within the said central opening, said wheel being provided with a plurality of spiral grooves in its top surface, and means whereby said wheel may be rotated, substantially as described.

2. In combination, a stationary table provided with a circular series of circular depressions, and a flange at the outer edge of said table, a wheel journaled in the center of said table and provided with a plurality of spiral grooves, the inner ends of which terminate at the hub of the wheel and the outer ends at the periphery thereof, and means whereby said wheel may be rotated relatively to said table.

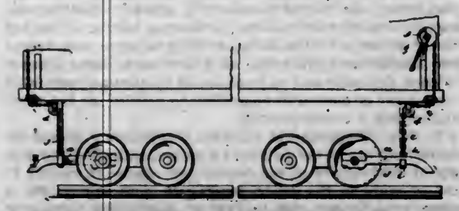
3. A game apparatus comprising a table having an upwardly-extending flange, in combination with a wheel journaled centrally of said table, said wheel being provided with a plurality of spiral walls on its top surface against which balls are adapted to run, and means whereby said wheel may be rotated, substantially as described.

4. A game apparatus comprising a table provided with an upwardly-extending flange, in combination with a wheel journaled centrally of said table, said wheel having means for momentarily retaining a plurality of balls on its upper surface, the flange of the table being provided with resilient material and a wall on the wheel provided with a resilient surface, and means whereby the wheel may be rotated, substantially as described.

1,018,841. SMOKING-PIPE. FRANK MARZAK, Flushing, N. Y. Filed Oct. 27, 1911. Serial No. 657,056. (Cl. 131—12.)

A smoking pipe comprising a bowl shell, a neck carried thereby and in communication therewith, a bowl support detachably mounted in said shell and providing a cooling chamber, a bowl arranged in said support and in communication with said cooling chamber, a sleeve detachably connected to said neck, a plug arranged in said neck and having circumferentially arranged openings formed therein, a coupling member connected to said plug within said sleeve and having circumferentially arranged openings formed therein, a stem connected to said member within said sleeve and having a spiral passage formed therein in communication with the openings of said member, and a mouth piece carried by said stem and having a port formed therein in communication with the passage of said stem.

1,018,842. STREET-CAR STOP. BENJAMIN MACDONALD and WILLIAM THOMAS, Yatesville, Pa. Filed Nov. 4, 1911. Serial No. 658,516. (Cl. 188—76.)



In combination with a railway vehicle, a stop bar pivoted to an axle thereof, said stop bar being shaped at its free end to engage into the road bed when allowed to gravitate thereto, means for raising and lowering said bar embodying two independent chains depending from the car body, one of said chains being connected direct to the bar, means for simultaneously raising and lowering said chains, a lifting lever pivoted at one side of the bar and adapted to swing up thereunder and engage the bottom of the bar, the free end of this lever being attached to the other chain, whereby both chains will operate to raise and lower the bar but one will operate directly on the bar and the other indirectly through the medium of said lever.

1,018,843. MACHINE FOR MECHANICAL TILLAGE. KONRAD VICTOR VON MEYENBURG, Zurich, Switzerland, assignor to Motorkultur A. G., Basel, Switzerland. Filed June 16, 1910. Serial No. 567,292. (Cl. 97—34.)

1. In a machine of the character described, in combination, a rotatable member, independently elastically forwardly and outwardly pressing arms supported thereon, and scraping claws secured to the outer or free ends of said arms.

2. In a machine of the character described, in combination, a rotatable member, independently elastically forwardly and outwardly pressing elastic arms of spring-steel supported thereon, and scraping claws secured to the outer or free ends of said arms.

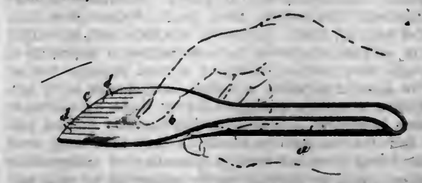
3. In a machine of the character described, in combination, a rotatable member, independently elastically forwardly and outwardly pressing arms supported thereon, and scraping claws secured to the outer or free ends of said arms, said claws being formed of yielding wire.

4. In a machine of the character described, in combination, a rotatable member, independently elastically forwardly and outwardly pressing elastic arms and scraping claws secured to the outer or free ends of said arms, said scraping claws being formed of bent self-sharpening steel wire.

5. In a machine of the character described, in combination, a rotatable member, arm supporters rotatably mounted thereon, yielding arms carried by said supporters, scraping claws carried by said arms, and resilient means holding said supporters in a normal position and permitting the same to yield backwardly.

[Claims 6 to 8 not printed in the Gazette.]

1,018,844. POT-SCRAPER. LOUIS C. MEYER, Davenport, Iowa. Filed July 28, 1911. Serial No. 641,179. (Cl. 65—12.)



1. In a tool of the class described, the combination of a handle and a scraper blade, the latter consisting of a thin flexible sheet of metal having a main scraping edge, said blade being provided with a plurality of slits running back from the scraping edge, thus forming a series of independently yieldable fingers arranged closely adjacent.

2. A scraper for pots, etc., consisting of a handle and a thin flexible metal scraping blade having a main scraping edge extending diagonally across the blade, this scraping edge being divided up into a series of independently flexible fingers by a series of slits running back from the edge at an oblique angle to said edge.

3. A scraper for pots, etc., consisting of a handle and a thin flexible metal scraping blade having a main scraping edge extending diagonally across the blade, said main

scraping edge being convexly curved, this scraping edge being divided up into a series of independently flexible fingers by a series of slits running back from the edge at an oblique angle to said edge.

1,018,845. VENDING-MACHINE. HARRY MILLER, Butler, Pa. Filed Nov. 3, 1910. Serial No. 590,428. (Cl. 211—8.)

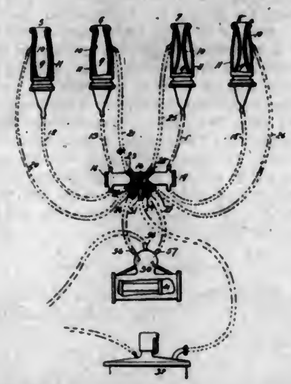
A vending machine comprising a casing, a horizontal partition arranged in said casing, said partition having a slot formed therein, a depending box-like structure carried by said partition, a reservoir mounted in said casing above said partition and adapted to contain articles, said casing and said reservoir having the forward sides thereof upturned providing alining openings adapted to provide clearance for an end of the lowermost one of the articles contained within said reservoir and the upturned portion of said reservoir contacting said casing and having a limiting slot therein, a resilient detent secured to the front side of said reservoir above said opening therein and positioned between the reservoir and casing and extending through the said slot, a gravity weight within said casing and adapted to rest above the articles therein and having a perforation therethrough, said casing and reservoir having registering openings in the contacting tops thereof, and a guide rod rigidly secured in said top openings and in vertical alinement with said slot and freely extending through said perforation and articles.

1,018,846. MILKING MACHINERY. CHARLES ROBERT MITCHELL, Chatswood, New South Wales, Australia. Filed Aug. 31, 1910. Serial No. 579,905. (Cl. 31—101.)

1. In milking machines, in combination, a plurality of teat cups, each teat cup having a central chamber and an inflator space, a pulsator, a cluster, said cluster being provided with a suction passage adapted to be connected to a source of suction, connections between said suction passage and the central chambers of said teat cups, said cluster being provided with a plurality of independent pulsation passages adapted to be connected to said pulsator, one of said pulsation passages being connected to the inflator space of one of the said teat cups and the other of said pulsation passages being connected to the inflator space of another of said teat cups.

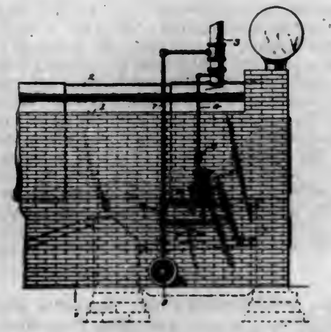
2. In milking machines, in combination, a cluster provided with a suction passage, an outlet nipple communicating therewith and adapted to be connected to a source of suction, a plurality of inlet nipples communicating with said passage and adapted to be connected with the teat cups, said cluster being further provided with a plurality of independent pulsation passages, each of said passages having an outlet nipple communicating therewith and adapted to be connected to a pulsator and each of said pulsation passages being provided with an inlet nipple adapted to be connected to the teat cups.

3. In milking machines, in combination, a cluster provided with a suction passage, an outlet nipple communicating therewith and adapted to be connected to a source of suction, four inlet nipples communicating with said passage and adapted to be connected with the teat cups,



said cluster being further provided with two independent pulsation passages, each of said passages having an outlet nipple communicating therewith and adapted to be connected to a pulsator and each of said pulsation passages being provided with two inlet nipples adapted to be connected to the teat cups.

1,018,847. BLOWER-VALVE. WILLIAM T. PECK, Lynchburg, Va., assignor to The United Cigarette Machine Company, Lt'd., Lynchburg, Va., a Corporation of Great Britain. Filed Apr. 18, 1910. Serial No. 556,033. (Cl. 110—54.)



1. The combination of a boiler; a furnace; a blower for furnishing air to the furnace; a valve controlling the supply of motive fluid to the blower; an abutment subject to the pressure in the boiler, tending to close said valve; and a counterweight acting in opposition to the abutment to open the valve and so mounted as to have an increasing component of motion in opposition to gravity, as the valve approaches a closed position.

2. The combination of a boiler; a furnace; a blower for furnishing air to the furnace; a valve controlling the supply of motive fluid to the blower; an abutment subject to the pressure in the boiler, tending to close said valve; a counterweight mounted to have an increasing component of motion in opposition to gravity as the valve approaches a closed position, said counterweight acting to open the valve; and means for varying the path of said counterweight to change its retarding effect.

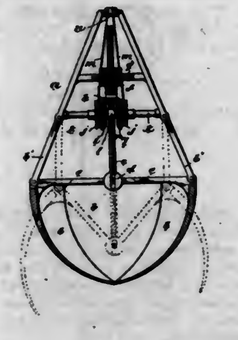
3. The combination of a boiler; a furnace; a blower for furnishing air to the furnace; a valve controlling the supply of motive fluid to the blower; an abutment subject to the pressure in the boiler, tending to close said valve; a shaft rocked by the motion of the abutment; and a counterweight mounted to turn with said shaft, to act in opposition to the abutment, and to have an increasing effective moment arm as the mechanism moves toward valve closing position.

4. The combination of a boiler; a furnace; a blower for furnishing air to the furnace; a valve controlling the supply of motive fluid to the blower; an abutment subject to the pressure in the boiler, tending to close said valve; a shaft rocked by the motion of said abutment; an arm; means for adjusting said arm in various angular relations with said shaft, and a counterweight adjustably mounted on the arm.

5. The combination of a boiler; a furnace; a blower for furnishing air to the furnace; a valve controlling the flow of motive fluid to the blower; a diaphragm subject to boiler pressure and urging said valve to its closing position; a shaft rocked by motion of the diaphragm; arms carried by said shaft; and counterweights adjustably mounted on the arms, the whole mechanism being so arranged that the weights oppose the closing of the valve and shall never rise to a point higher than the axis of the shaft in the operation of the device.

[Claims 6 to 9 not printed in the Gazette.]

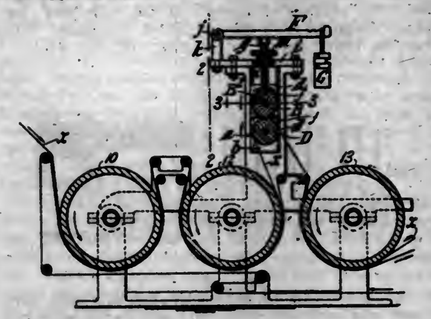
1,018,848. CLAM-SHELL DREDGER. SAMUEL CHARLES SMITH, Daisy, La. Filed May 6, 1911. Serial No. 625,546. (Cl. 37—30.)



In combination, a frame, a rotatable nut vertically mounted in the frame and provided with a beveled gear at one end and having its other end held against movement upwardly or downwardly, a vertical screw extending through said nut and having threaded engagement therewith, shafts supported in the frame at right angles to said screw, drums on said shafts each provided with a beveled gear meshing with the gear carried by the nut, oppositely wound suspending cables respectively attached to said drums, scoops pivotally attached to the lower end of said screw and means for pivotally suspending them from the frame.

1,018,849. WATERMARKING APPARATUS FOR PAPER-MAKING MACHINES. JAMES SPEED and ALEXANDER WHITTON, West Springfield, Mass. Filed Nov. 10, 1911. Serial No. 659,490. (Cl. 92—48.)

1. The combination with the drier drums of a paper machine, of upper and lower cylinders having positions adjacent and axially parallel with the drier drums and provided with journals at their ends, the upper one of said cylinders having a projection extended from the circumferential surface thereof provided with an arc shaped impression forming face, opposite uprights adjacent the ends of an intermediate one of the drier drums having a pair of oppositely located stationary boxes for the journals of the lower cylinder, and having a pair of oppositely located boxes for the journals of the upper cylinder which are vertically movable, means below the movable boxes for limiting their downward movements, and means for imparting a downward pressure against said upper boxes.



2. The combination with the drier drums of a paper machine of upper and lower cylinders having positions adjacent and axially parallel with the drier drums and provided with journals at their ends, the upper one of said cylinders having a projection extended from the circumferential surface thereof and provided with an arc shaped impression forming face, opposite uprights adjacent the ends of an intermediate one of the drier drums having a pair of oppositely located stationary boxes for the journals of the lower cylinder and having a pair of oppositely located boxes for the journals of the other cylinder which are vertically movable, and which normally rest on the tops of the lower boxes, and which have upwardly extending stems, and means for imparting a downward pressure against said stems.

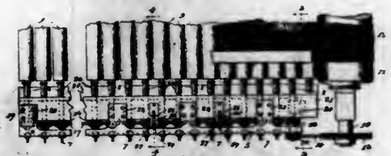
3. The combination with the drier drums of a paper machine, of a pair of cylinders having positions adjacent and axially parallel with the drier drums and provided with journals at their ends, the upper one of said cylinders having one or more projections extended from the circumferential surface thereof and provided with arc shaped impression forming faces, opposite uprights adjacent the ends of an intermediate one of the drier drums having a pair of oppositely located stationary boxes for the journals of the lower cylinder and having a pair of oppositely located boxes for the journals of the other cylinder which are vertically movable and normally rest on the tops of the lower boxes and which have upwardly extending stems, levers pivoted at the upper portions of said uprights, extending in bearing across the tops of said stems, and having weights at their free ends.

4. The combination with the drier drums of a paper machine, of a pair of cylinders having positions adjacent and axially parallel with the drier drums, and provided with journals at their ends, the upper one of said cylinders having one or more projections extending from the circumferential surface thereof provided with arc shaped impression forming faces, opposite uprights adjacent the ends of an interchangeable one of the drier drums having a pair of oppositely located stationary boxes for the journals of the lower cylinder having a pair of oppositely located boxes for the journals of the other cylinder which are vertically movable, means for imparting downward pressures to the boxes, and means for elevating and supporting, in their raised positions, the said pair of upper journal boxes.

5. The combination with the drier drums of a paper machine, of a pair of cylinders having positions adjacent and axially parallel with the drier drums and provided with journals at their ends, pairs of boxes for the journals of both cylinders, those for the upper cylinder being vertically movable, means for imparting downward pres-

sures to the upper boxes, a ring adapted to be removably engaged on the upper cylinder having a projection provided with an arc shaped impression forming face and means for detachably confining said ring on the upper cylinder.

1,018,850. PAPER-MACHINE. PETER R. THOM, Appleton, Wis., assignor of one-half to Kimberly-Clark Company, Neenah, Wis., a Corporation of Wisconsin. Filed Dec. 14, 1911. Serial No. 665,599. (Cl. 92—44.)



1. In a paper machine, the combination of a pulp carrying belt, tube rolls over which said belt travels, each tube roll having a belt pinion, a belt engaging said pinions for simultaneously driving said tube rolls, and means engaging said belt for maintaining engagement thereof with said pinions.

2. In a paper machine, the combination of a pulp carrying belt, tube rolls mounted in a row and over which said belt travels to be supported thereby, a driving pinion for each roll, a belt passing around said pinions for simultaneously rotating said pinions, means for driving said pulp carrying belt and said tube roll driving belt, and idlers disposed at intervals to maintain engagement of said tube driving belt with said pinions.

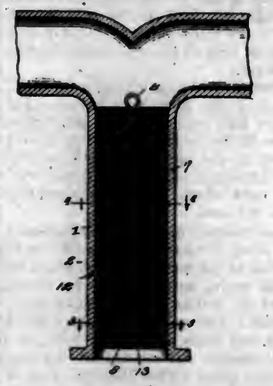
3. In a paper machine, the combination of a main roll and a plurality of tube rolls mounted in a row, a pulp carrying belt passing about said main roll and over said tube rolls, a shaft for each tube roll and a sprocket pinion thereon, a chain passing over said sprocket pinions, driving mechanism for simultaneously driving said main roll and said chain, and idlers applied at intervals to engage with the top of said chain to hold said chain in driving engagement with said sprocket pinions.

4. In a paper machine, the combination of a supporting table, a horizontal row of tube rolls each having a supporting shaft journaled at the sides of the table and each shaft carrying a driving pinion, a driving belt passing about said pinions, means for driving said belt to cause simultaneous rotation of said tube rolls, supporting frames mounted at intervals on said table, and an idler adjustably mounted in each of said frames to engage with said belt to hold said belt in driving relation with said pinions.

5. In a paper machine, the combination of a supporting table, a plurality of tube rolls mounted on shafts extending transversely of said table and pivoted between the sides thereof, a sprocket pinion on each shaft, a chain belt having one leg passing over the tops of said sprocket pinions, means for driving said chain belt to cause simultaneous rotation of said tube rolls, frames mounted at intervals on said table, an arm vertically adjustable in each frame, and an idler pivoted to each arm to engage with the top of said chain belt to maintain driving engagement of said chain belt with said sprocket pinions.

1,018,851. MIXER FOR GASEOUS FLUIDS. FREDERICK FOSTER THOMPSON, Lawton, Okla. Filed June 16, 1911. Serial No. 633,477. (Cl. 48—180.)

A device of the character specified, adapted to be inserted in the intake of an explosion engine between the carbureter and the explosion chamber, and comprising a cylinder or tube of perforate material, a rod arranged axially of the tube, and a helical wing or vane of perforate material supported by the rod within the tube, the outer edge of the wing or vane contacting with the inner

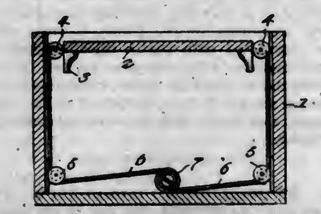


face of the tube, said rod having means at each end for the attachment of supporting means for the tube.

1,018,852. CURTAIN-POLE. GEORGE MCKELLAN TROMBLEY, Wilmore, Pa. Filed Oct. 6, 1911. Serial No. 653,256. (Cl. 156—19.)

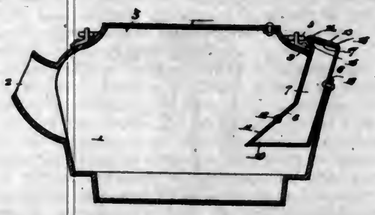
A curtain pole comprising outer semi-cylindrical sections, an inner sectional pole arranged between said outer sections and adapted to support the upper ends of curtains, flat springs arranged between the sections of said inner pole, retaining members carried by the ends of said outer sections, and caps eccentrically connected to one of said outer sections and adapted to be swung into longitudinal alinement with said pole.

1,018,853. CASKET. SIMONS S. TUCKER, Peebles, Ohio. Filed Jan. 11, 1910. Serial No. 537,499. (Cl. 27—3.)



In combination, with a casket having a bottom and side and end walls, a shaft extending centrally through the end walls and provided with transverse openings, a body supporting member having legs and disposed within the casket, flexible lifting elements having their ends secured to the body supporting member and their central portion extended through the openings in the shaft, and pulleys mounted on the side walls of said casket for guiding said flexible elements.

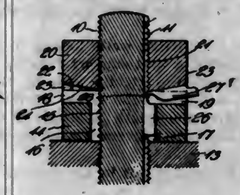
1,018,854. ATTACHMENT FOR TEA-KETTLES. IVAL R. UTTERBACK, WILLIAM COLLINS SPRINGER, Jr., and WARREN LESLIE GALBRAITH, Vancouver, Wash. Filed Aug. 9, 1911. Serial No. 643,103. (Cl. 53—9.)



1. A vessel having pouring and filling orifices therein, a filling attachment having a portion extending through the filling orifice and disposed within the vessel and provided with an opening therein, an inwardly opening valve closing the said opening, the said attachment being provided at its outer end with an opening, a stop carried by the attachment and located at the outer open end thereof, and an inwardly opening valve closing the said second opening and provided with means for normally holding the same closed against the said stop.

2. A vessel having an opening therein, a filling attachment having an inner portion disposed in the opening and extending downwardly in the direction of the bottom of the vessel, an inwardly opening valve closing the said opening, the said attachment having a vertical portion extending upwardly against one side of the vessel, the said attachment having an upper open portion, a normally closed valve closing the said upper open portion, and stops positioned above and below the said second valve and operating to limit the open and closed adjustments of the same.

1,018,855. NUT-LOCK. NEE M. VAN ORMER, Ryde, Pa. Filed Apr. 12, 1911. Serial No. 620,632. (Cl. 151—15.)



1. A nut lock comprising a bolt provided with a longitudinal groove, an inner nut provided with a radial groove in its outer face and a groove adapted to be brought into register with the groove of the bolt thereby forming a compound groove, a locking member adapted to be snugly fitted into the compound groove of the bolt and inner nut and projecting outwardly therefrom into the vertical plane of the radial groove, and an outer nut adapted to press the projection of the locking member into the radial groove and provided with means engaging the locking member to prevent the outer nut turning.

2. A lock nut comprising a bolt provided with a longitudinal groove, an inner nut provided with a radial groove in its outer face and a groove adapted to be brought into register with the groove of the bolt thereby forming a compound groove, a locking member comprising two ends resiliently connected together, one of said ends adapted to be snugly fitted in the compound groove of the bolt and inner nut and the other end to project yieldingly into the vertical plane of the radial groove, and an outer nut adapted to press the projecting end of the locking member into the radial groove and provided with means engaging the radial end of the locking member to prevent the outer nut turning.

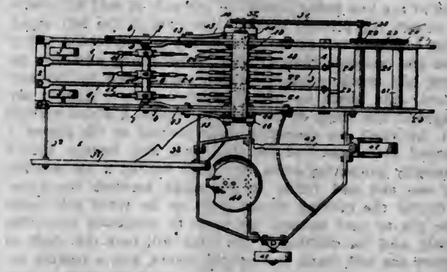
3. A nut lock comprising a bolt provided with a longitudinal groove, an outer nut, an inner nut provided with a groove adapted to be brought into register with the groove of the bolt thereby forming a compound groove, and a locking member adapted to be snugly fitted into the compound groove of the bolt and inner nut and projecting therefrom into the path of movement of the outer nut, said outer nut being provided with radial grooves on its inner face to coact with said projecting end.

4. A nut lock comprising a bolt provided with a longitudinal groove, an outer nut, an inner nut provided with a groove adapted to be brought into register with the groove of the bolt thereby forming a compound groove, and a locking member comprising two ends resiliently connected together, one of said ends adapted to be snugly fitted in the compound groove of the bolt and inner nut and the other end to project yieldingly into the path of the outer nut, said outer nut being provided with radial grooves on its inner face to co-act with said yieldingly projected end.

5. A nut lock comprising a bolt having a longitudinal groove, an outer nut having a radial groove in its inner face, an inner nut provided with a radial groove in its outer face and a longitudinal groove adapted to be brought into register with the groove of the bolt forming a compound groove, and a locking member comprising two rectangular ends joined by a thin resilient neck, one end being adapted to fit snugly in the compound groove and the other end lying at an obtuse angle thereto and adapted to project into the radial grooves of the outer and inner nuts.

[Claims 6 and 7 not printed in the Gazette.]

1,018,856. COMBINED PLOW AND HARROW. BELDEN H. G. WILBUR, Colorado Springs, Colo., assignor of one-third to George S. Elston, Colorado Springs, Colo. Filed Aug. 28, 1911. Serial No. 646,401. (Cl. 97—44.)



1. In a combined plow and harrow, a harrow frame comprising a series of longitudinal bars, harrow teeth arranged in said bars, a front rotary harrow adjustably mounted above the front portion of said harrow frame, a rear rotary harrow adjustably mounted above said harrow frame and in rear of said front harrow, said harrows being adapted to coöperate with the bars of the harrow frame, and means to secure said harrow frame to the plow in position to receive the soil turned up thereby.

2. In a combined plow and harrow, a harrow frame comprising a series of parallel longitudinally disposed harrow bars, supporting wheels revolubly mounted in the forward ends of said bars, a series of harrow teeth arranged on the rear ends of the bars, means to attach said harrow frame to the plow in position to receive the soil turned thereby, side frames secured to said bars, a front rotary harrow adjustably mounted in said frames, harrow supporting standards secured to said harrow bars and side frames, a rear rotary harrow adjustably supported by said standards, said rotary harrows comprising shafts, hubs fixed on said shafts, a plurality of radial harrow arms secured to said hubs and adapted to co-act with said harrow bars to pulverise the soil thrown thereon.

3. In a combined plow and harrow, a frame comprising a series of longitudinally disposed harrow bars, harrow teeth arranged on said bars, rotary harrow supporting frames secured to said bars, hangers adjustably secured

to the front portion of said frames, a front rotary harrow revolubly mounted in said hangers, harrow supporting standards secured to the rear ends of said frames and harrow bars, a rear rotary harrow revolubly mounted in said standards, said rotary harrows comprising shafts, and hubs fixedly mounted on said shafts, a series of radially projecting arms secured to said hubs and adapted to coact with said harrow bars to pulverise the soil thrown thereon.

4. In a combined plow and harrow, a harrow frame comprising a series of bars, harrow teeth arranged in said bars, a rotary harrow adjustably mounted in said harrow frame, said harrow being adapted to coöperate with the bars of the harrow frame, and means to secure said harrow frame to the plow, in position to receive the soil turned up thereby.

1,018,857. SWITCH-STAND. CLEM L. WILLIAMS, Attica, Ind. Filed July 12, 1911. Serial No. 638,147. (Cl. 104—25.)

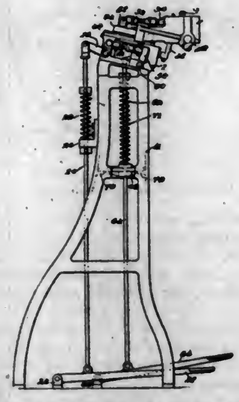
1. A railway switch mechanism, comprising a pair of switch points, a rod for shifting said switch points in unison, a bell crank mounted adjacent the track and having the switch point rod pivoted to one arm thereof, a connecting link pivoted to the other arm of the bell crank, a second bell crank pivotally secured adjacent the track, the end of the link being pivoted to one arm of said bell crank, a switch rod pivoted to the other arm of the bell crank, frog engaging rail extensions secured to said second switch rod and movable therewith, supports rising adjacent the first bell crank, a shaft rotatably supported by the supports, said shaft having a squared portion slidably engaged in the angle of the first bell crank, a sleeve pivoted on the shaft, an operating lever pivoted to the sleeve, a second sleeve secured on the shaft and having spaced laterally projecting arms, the lever having a pin secured in one end and riding in the space between the arms, whereby the rocking of the lever on its pivot will cause the pin to bear against the arms to vertically move the shaft, and the shifting of the lever will rock the shaft to throw the bell crank and switch points, and a locking device operated by the vertical movement of the shaft to lock the switch points against movement when the lever is in depressed position.

2. The combination with a base, of a bell crank lever mounted thereon, connections between the lever and the switch for operating the switch, a shaft slidably engaging the bell crank, means for rotating the shaft to shift the bell crank and thus the switch, and means for slidably moving the shaft, and a switch locking device controlled by the sliding movement of the shaft.

3. The combination with a base plate, of a lever pivoted thereto, a second lever rotatably mounted thereon, a shaft supported by the base plate for both vertical and rotative movement, a lever for rotating and vertically moving the shaft, connections between the pivoted lever and switch locking means and connections between the rotatably mounted lever and switch operating means, whereby the vertical movement of the shaft shifts the pivoted lever to control the locking of the switch and the rotative movement of the shaft shifts the other lever to operate the switch.

1,018,858. WELT-BUTTING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed June 8, 1908. Serial No. 437,281. (Cl. 12—67.)

1. A machine for butting welts having in combination, a welt butting cutter above the welt, a cutter plate beneath the welt to support it in position to be beveled by the stroke of the cutter, and an abutment or shoulder constructed and arranged to rigidly support the welt end against the thrust of the cutter as the cut is being completed.



2. A machine for butting welts comprising a cutter plate adapted to be thrust beneath the welt and support it in position to facilitate the production of a beveled butting cut, said plate having an abutment or shoulder to rigidly support the welt end against the thrust of the cutting stroke when said end is severed.

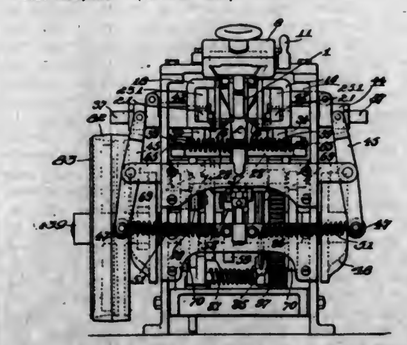
3. A machine for butting welts having in combination, a welt butting cutter above the welt, a shear blade beneath the welt upon which its extremity is supported, and means for guiding the cutter in a direction to pass beneath the shear blade when butting the welt.

4. A machine for butting welts having in combination, a welt butting cutter, a welt support adapted to be thrust beneath the welt end and sustain it at an angle to the plane of the stroke of the cutter and means to cause said cutter to travel in a plane below the upper surface of said support.

5. A machine for butting welts having in combination, a welt butting cutter, a welt support forming an undercut abutment or shoulder to rigidly support the extremity of the welt at the end of the stroke of the cutter, and means for adjusting the length of stroke of the cutter to prevent dulling the cutter by contact of its edge with the abutment.

[Claims 6 to 62 not printed in the Gazette.]

1,018,859. WELT-BUTTING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed June 15, 1908. Serial No. 438,493. (Cl. 12—67.)



1. A welt butting machine, having in combination, a welt butting cutter, a cutting plate for engaging beneath

the welt, and mechanism to cause the cutting plate to advance toward the welt and automatically find the welt crease.

2. A welt butting machine, having in combination, welt butting means including a welt support and mechanism operating automatically to cause said support to find and engage the under side of the welt and to enter the crease between the welt and the upper.

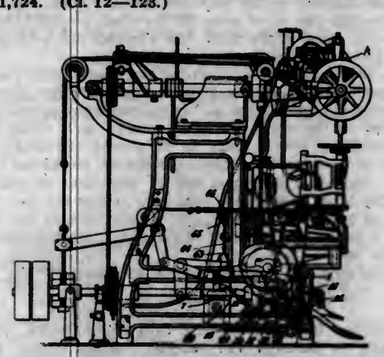
3. A welt butting machine, having in combination, welt butting means comprising a cutting plate and a cutter, mechanism operating automatically to cause the cutting plate to find and engage the under side of the welt and enter the crease between the welt and upper, and means for actuating the cutter to sever the welt while so supported.

4. A welt butting machine, having in combination, welt butting means comprising a cutting plate and a cutter, and mechanism operating to cause the cutting plate to find and engage the under side of the welt while in an inclined position and then swing into a substantially horizontal position and enter the crease between the welt and the upper, and means for actuating the cutter to sever the welt while so supported.

5. A welt butting machine, having in combination, welt butting means including a welt support at each side of the shoe, and mechanism operating to move said supports against the opposite sides of the shoe below the welt, and then raise them into contact with the under side of the welt and insert them in the crease between the welt and the upper.

[Claims 6 to 25 not printed in the Gazette.]

1,018,860. AUTOMATIC SHOE-MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed July 3, 1908. Serial No. 441,724. (Cl. 12—123.)



1. An automatic shoe machine, having, in combination, means for operating on a shoe, a jack, mechanism for correcting the relative position of the operating means and jack, a driving mechanism therefor, a timing mechanism actuated independently of the driving mechanism for controlling the movements imparted to the correcting mechanism by the driving mechanism, and controlling mechanism acting to intermittently throw the timing mechanism into operation, substantially as described.

2. An automatic shoe machine, having, in combination, means for operating upon a shoe, a jack, mechanism for correcting the relative position of the operating means and jack, a driving mechanism therefor, timing mechanism actuated independently of the driving mechanism for controlling the movements imparted to the correcting mechanism, and controlling mechanism acting to intermittently throw the driving mechanism and the timing mechanism into operation, substantially as described.

3. An automatic shoe machine, having, in combination, means for operating upon a shoe, a jack, mechanism for correcting the relative position of the operating means and jack, a driving mechanism therefor, a timing mechanism actuated independently of the driving mechanism for controlling the movements imparted to the correcting mechanism by the driving mechanism including a clutch, controlling means acting to throw the clutch into action at intervals as the point of operation of the operating means is transferred around the shoe, and means acting automatically to re-set the controlling means and to throw the clutch out of action, substantially as described.

4. An automatic shoe machine, having, in combination, means for operating on a shoe, a jack, mechanism for correcting the relative position of the operating means and jack, a driving clutch for operating the correcting mechanism, and a timing mechanism actuated independently of the driving clutch for controlling the movements imparted to the correcting mechanism through the driving clutch, and controlling mechanism acting to throw the timing mechanism into and out of action at intervals as the point of operation of the operating means is transferred around the shoe, substantially as described.

5. An automatic shoe machine, having, in combination, means for operating on a shoe, a jack, mechanism for correcting the relative position of the operating means and jack, a driving clutch connected to operate the correcting mechanism, a timing mechanism for controlling the movements imparted to the correcting mechanism through the driving clutch including a clutch, and controlling mechanism acting to throw the timing clutch into action at intervals as the point of operation of the operating means is transferred around the shoe, and means acting automatically to re-set the controlling means and throw the timing clutch out of action, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,018,861. BRUSHING MEANS FOR DISK RECORDS FOR PHONOGRAPHS. FREDERICK W. WOOD, Los Angeles, Cal. Filed Nov. 6, 1911. Serial No. 658,909. (Cl. 129—43.)

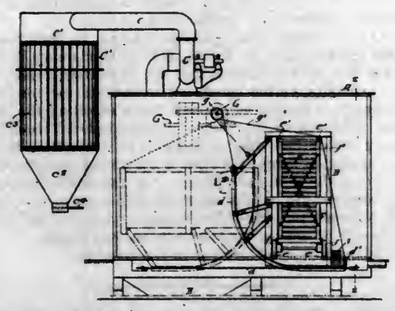
1. In a case for disk records for phonographs, the combination with the spacing bars at the front of the case, of brushing devices consisting of strips of elastic material supported at their front portions on said bars and said strips being provided with brushing faces and extending obliquely outward and rearward from said bars to provide a resilient brushing face.

2. In a case for disk records for phonographs, the combination with the spacing bars at the front of the case, of brushing devices consisting of strips of elastic material supported at their front portions on said bars and said strips being provided with brushing faces and extending outward and rearward from said bars to provide a resilient brushing face.

3. In a case for disk records for phonographs, the combination with spacing bars at the front of the case of elastic brushing means on each bar, consisting of a strip of resilient material bent in V-shaped and having an outer face of brushing material, the front edge of the spacing bar extending into and secured to the said strip at the vertex thereof, and said strips extending at each side of said bar, obliquely outward and rearward from said bar so as to approach one another, forming a resilient brushing surface for engaging the record at each side thereof.

4. A brushing device for disk records for phonographs, consisting of supporting means, a resilient strip having a face of brushing material, said strip being attached to said supporting means and extending obliquely outward from said supporting means forming a freely movable elastic brushing flap and means for supporting the disk record against the brushing surface while being moved to brush the same.

1,018,862. TRUCK-UNLOADING DEVICE. ELWOOD B. AYRES, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 20, 1911. Serial No. 661,289. (Cl. 214—1.)



1. The combination of a closed casing; an exhaust apparatus connected to said casing, a discharge device mounted in the casing; and a truck carrying the material, adapted to be mounted on the discharge device and to be turned therewith to discharge the material, the dust arising from the material being carried away by the exhaust apparatus.

2. The combination of a casing; an exhaust apparatus connected to the casing; a discharge device consisting of a frame having tracks and guides; rockers on which the frame is mounted; and a truck carrying the material to be discharged adapted to the rails and held thereto by the guides when the discharge device is turned.

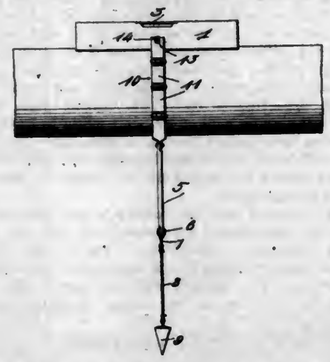
3. The combination of a casing; an exhaust fan communicating with the upper portion of the casing; a dust separator attached to the exhaust fan; a discharge device consisting of a frame having rockers; rails on the bottom of the casing for receiving the rockers; a hopper in the bottom of the casing; a truck having rails to receive trays on which the material is carried; and stops for retaining the trays on the rails when the discharge device is tilted; with means for tilting the discharge device with the truck and for returning it to its normal upright position.

1,018,863. SHAFT-LEVEL. SYLVESTER A. BARRICKMAN and JAMES C. HOLT, Richwood, W. Va.; said Barrickman assignor of one-third to A. L. Craig and V. H. Odell, Richwood, W. Va. Filed Feb. 27, 1911. Serial No. 610,983. (Cl. 73—149.)

1. In a device of the character described, a level having a transverse horizontal spirit glass adapted to rest longitudinally on a shaft, a chain pivotally attached at one end to one side of the level, means for attaching the other end of the chain removably to the other side of the level, and a plumb line centrally depending from the chain.

2. In a device of the character described a level adapted to rest longitudinally on a shaft and provided with a transverse horizontal spirit glass, two chains formed of curved links adapted to hug the shaft, one chain loosely connected to one side of the level near the bottom thereof and the other adapted to be detachably connected to the level at a corresponding point on its opposite side, and a plumb line attached to lower ends of the two chains.

3. In a device of the character described a level adapted to rest longitudinally on a shaft, and provided with a transverse horizontal spirit glass, two chains formed of curved links adapted to hug the shaft, one chain loosely connected to one side of the level near the bottom thereof and the other adapted to be detachably connected to the level at a corresponding point on its opposite side, each link having, seated in its concave side, a bearing ball adapted to contact with the shaft, and a plumb line attached to the lower ends of the two chains.

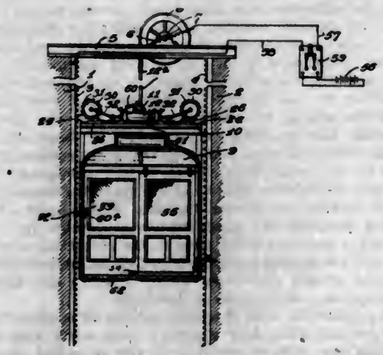


4. In a device of the character described, a level adapted to rest longitudinally on a shaft, a pair of arms pivotally attached to each other at their lower ends, a chain attached to the outer end of each arm, means for connecting the outer ends of the chains respectively to opposite sides of the level, and a plumb line attached to the pivotally connected ends of the arms.

5. In a device of the character described, a level adapted to rest longitudinally on a shaft, a pair of arms pivotally attached to each other at their lower ends, a chain attached to the outer end of each arm, each chain being composed of curved links to fit around the shaft, said links being pivotally connected together, means for pivotally connecting the outer end of one chain to one side of the level, means for removably attaching the outer end of the other chain to the opposite side of the level, and a plumb line attached to the pivotally connected ends of the arms.

[Claims 6 and 7 not printed in the Gazette.]

1,018,864. SAFETY DEVICE FOR ELEVATORS. CLARENCE E. BAUMER and BERTHA BAUMER, Troy, Ohio. Filed Feb. 12, 1910. Serial No. 543,459. (Cl. 187—78.)



1. A device of the character described comprising a car, rotatable well grippers slidably mounted on said car, magnetic means for rendering said grippers inactive,

means for sliding said grippers to an operative position when released from said magnetic means, and pneumatic means for opposing the rotation of said grippers when in an operative position.

2. A device of the character described comprising a car, rotatable grippers slidably mounted thereon, magnetic means for holding said grippers in an inoperative position, means for sliding said grippers to an operative position when released by said magnetic means, and means opposing the rotation of said grippers when in an operative position.

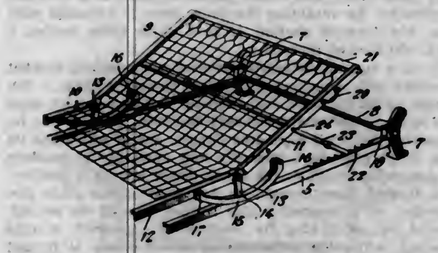
3. A device of the character described comprising an elevator car, well grippers mounted thereon, magnetic means for normally retaining said grippers in an inoperative position, means for automatically causing said grippers to assume an operative position when released from said magnetic means, and pneumatic means for causing said grippers to permit a slow descent of the car when said grippers are in an operative position.

4. In a safety device for elevator cars, the combination with the well and the car, of magnetically restrained rotatable well grippers carried by the car, means for causing said grippers to engage the well when released from said magnetic restraint, and cushioning means for causing said well grippers to permit a slow descent of the car when said gripers are engaged with the well.

5. In a safety device for elevator cars, the combination with the well racks and the car, of rotatable gear wheels slidably mounted on said car, magnetic means for normally holding said gears disengaged from said racks, means for automatically sliding said gears to engagement with said racks when released from said magnetic means, and pneumatic means opposing the rotation of said gears when engaged with said racks.

[Claims 6 to 14 not printed in the Gazette.]

1,018,865. BED-SPRING. GEORGE BENEDETTI, Dunlevy, Pa. Filed June 21, 1911. Serial No. 634,401. (Cl. 5—43.)



1. A bed spring, comprising a main frame, pivotally connected head and foot frames superposed above the main frame, legs formed on the main frame, pivots connecting the foot with a pair of said legs, downwardly arched members connected with the pivotal connections of the head and foot sections and engageable with the same at opposite sides of their pivotal connection and normally resting upon the main frame, means locking the downwardly bowed members to the head section to prevent movement thereof independently of the foot section, and a prop pivoted to the head section and engageable with the main frame for holding either the latter or both the head and foot sections in adjusted position.

2. A bed spring, comprising a main frame, pivotally connected head and foot frames superposed above the main frame, legs formed on the main frame, pivots connecting the foot section with a pair of said legs, downwardly arched members connected with the pivotal connections of the head and foot sections and engageable with the same at opposite sides of their pivotal connection and normally resting upon the main frame, means locking the downwardly bowed members to the head section to prevent movement thereof independently of the foot section, a prop pivoted to the head section and engageable with the main frame for holding either the latter or both the head and foot sections in adjusted position, and bearings formed on the remaining legs and normally engaged by the head section when in lowered position.

1,018,866. BASE-BALL BAT. GEORGE J. BLAHOS, U. S. Navy. Filed Sept. 12, 1911. Serial No. 648,955. (Cl. 46—4.)

1. The combination with a bat having a slot in the striking portion thereof, of a non-resilient element located therein, for the purpose set forth.

2. The combination with a bat having a slot in the striking portion thereof, of a strip of non-resilient material located therein, for the purpose set forth.

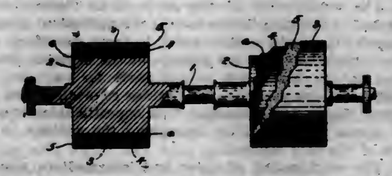
3. The combination with a bat having a slot in the striking portion thereof, of a strip of non-resilieint material located therein and disposed transversely and lengthwise thereof, for the purpose set forth.

4. The combination with a bat having a slot, of a strip of non-resilient material located therein, said strip embodied in the striking portion of the bat and co-extensive in width and lengthwise thereof, for the purpose set forth.

5. The combination with a bat having a plurality of slots in the striking portion thereof, of strips of non-resilient material located therein and disposed transversely and lengthwise thereof, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,018,867. DRAWING-ROLL. WILLIAM H. BOLDUC, Clifton Heights, Pa. Filed Aug. 2, 1910. Serial No. 575,099. (Cl. 118—23.)



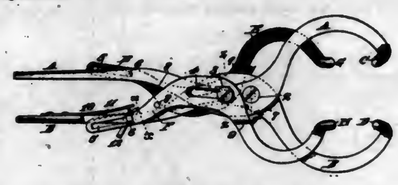
1. A drawing roll provided with an outer covering comprising a single layer of parchment paper and a foundation composed of rubber, interposed between a layer of thick soft pliable feltlike material and a layer of canvas the various elements being united to each other and to the roll.

2. A drawing roll provided with an outer covering comprising a single layer of parchment paper and a foundation composed of soft pliable rubber interposed between a layer of fabric fulled into a thick soft pliable material and a layer of woven cloth the elements being united to each other and to the roll.

1,018,868. SPECULUM AND RETRACTOR. JOSEPH T. BRENNEMAN, Martinez, Cal. Filed Feb. 15, 1911. Serial No. 608,682. (Cl. 128—24.)

1. In a device of the character described, the combination of a pair of pivotally connected handles having curved jaws formed thereon, a pivot pin on the outer face of each handle, jaws having slots through which said pins extend, a slotted extension on each of said jaws, and a

pin on said handles engaging said slotted extensions to give said jaws an oscillating movement when said handles are operated.



2. In a device of the character described, the combination of a pair of pivotally connected handles having curved jaws formed thereon, a pivot pin on the outer face of each handle, jaws having slots through which said pins extend, a slotted extension on each of said jaws, and a pin on said handles engaging said slotted extensions to give said jaws an oscillating movement, a cam face on each of said handles, and projections on said jaws engaged by said cam faces to give the jaws a reciprocal movement when said handles are operated.

3. In a device of the character described, the combination of a pair of pivotally connected handles having curved jaws formed thereon, a pivot pin on the outer face of each handle, jaws having slots through which said pins extend, a slotted extension on each of said jaws, and a pin on said handles engaging said slotted extensions to give said jaws an oscillating movement, a cam face on each of said handles, and projections on said jaws engaged by said cam faces to give the jaws a reciprocal movement when said handles are operated, and means for limiting the movement of said jaws to one direction.

1,018,869. SAG-PREVENTING DEVICE FOR TROLLEY-WIRES. CHARLES BRIZZOLARA, Richmond, Va. Filed Aug. 31, 1910. Serial No. 579,809. (Cl. 191—1.)

1. The combination of two parts of an element to be stretched, a bridging device having a longitudinal channel enlarged at an intermediate point to form shoulders, said parts being slidable in the passage of the bridging device, means on the inner ends of the parts for engaging the shoulders in the said channel, springs connected with the bridging device and extending from opposite sides thereof, and means for adjustably connecting the springs to the parts of the said element.

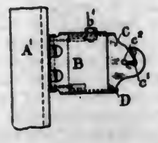
2. The combination of outer and intermediate sections having alining channels, trolley wire ends extending wholly through the channels of the outer sections and partially through and slidable in the channel of the intermediate section, fastenings on the outer sections for clamping the said ends adjustably in the latter, a plurality of springs between each outer section and the intermediate section for drawing the outer sections inwardly, and means for preventing the trolley wire ends from pulling out of the intermediate section upon breakage of the springs.

3. A trolley wire stretcher comprising relatively movable sections having alining channels, the channels of one of the sections being formed with a recess, a trolley wire extending longitudinally of the channels and having means on its end for engaging the wall of the said recess in one section, means for clamping the other section to the wire, and a contractile device extending from one section to the other and connected with both, the said means on the end of the wire serving to prevent separation of the sections and dropping of the wire upon breakage of the said device.

4. A device of the class described comprising a pair of parts to be stretched a bridging element having a longitudinal passage into which the ends of the parts to be stretched extend, an element clamped to one of the said parts, and a contractile spring extending from one element to the other and operatively connected therewith for drawing the elements toward each other.

5. A trolley wire stretcher comprising a pair of sections clamped to the trolley wire, an intermediate section having a channel to slidably receive the trolley wire, and a recess dividing the channel, means interconnecting the outside and intermediate sections for adjusting the relative position of said sections, and means carried by the trolley wire within said recess for preventing the trolley wire from dropping to the ground should said adjusting means break.

1,018,870. THREAD-GUIDE OR LAPPET FOR SPINNING AND DOUBLING FRAMES. NORMAN SEDDON BROWN and JAMES HARDACRE, Wigan, England; said Hardacre assignor to said Brown. Filed Jan. 14, 1911. Serial No. 602,720. (Cl. 118—16.)



1. In a lappet, the combination of a movably mounted flap provided at its opposite sides with depending flanges, one of which has its free lower edge bent inwardly and upwardly to produce a supporting channel, the other flange having a perforation formed therethrough, an adjustable guide plate also provided with depending side flanges, one of the second-named flanges having its lower edge supported in said channel, while the other second-named flange is formed with a longitudinal slot registering with said perforation, and a bolt passed through said slot and perforation for retaining the guide plate in adjusted position, the forward portion of said guide plate having a guide slit formed therein.

2. In a lappet, the combination of a supporting bracket provided with a pair of forwardly projecting arms, a flap hinged to said bracket and adapted to rest normally upon the terminals of said arms, said flap being provided at its opposite sides with depending flanges, one of which has its free lower edge bent inwardly and upwardly to produce a supporting channel, the other flange having a perforation formed therethrough, an adjustable guide plate also provided with depending side flanges, one of the second-named flanges having its lower edge supported in said channel, while the other second-named flange is formed with a longitudinal slot registering with said perforation, and a bolt passed through said slot and perforation for retaining the guide plate in adjusted position, the forward portion of said guide plate having a guide slit formed therein and the rear portion of said guide plate being formed with longitudinal slots through which the forward ends of said arms project.

3. In a lappet, the combination of a movable mounted flap provided at its opposite sides with depending flanges, one of which has its free lower edge bent inwardly and upwardly to produce a supporting channel, the other flange having a perforation formed therethrough, an adjustable guide plate also provided with depending side flanges, one of the second-named flanges having its lower edge supported in said channel, while the other second-named flange is formed with a longitudinal slot registering with said perforation, and a bolt passed through said slot and perforation for retaining the guide plate in adjusted position, the forward portion of said guide plate having an angular guide slit formed therein, the outer branch of which extends inwardly and forwardly from one of the lateral edges of said guide plate, while the inner branch extends rearwardly and in a direction longitudinally of said guide plate.

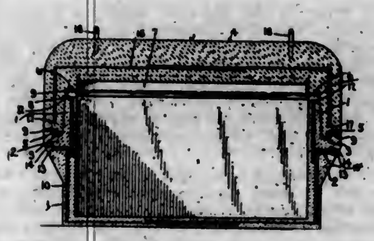
1,018,871. DOOR-STOP. JOHN WILLIAM BUOY, Eugene, Oreg., assignor of one-third to M. Vernon Parsons. Filed Dec. 17, 1910. Serial No. 597,906. (Cl. 16—77.)

1. In a door stop, a casing having the outer extremities of its ends bent inwardly to form stops, the bottom of the casing being slitted to form two end parts which are bent inwardly to form pockets in conjunction with the adjacent ends of the casing, a coil spring in each of said pockets, a plunger having a frame of U-shape in cross section, a rubber cushion in said frame, the ends of the base of said plunger frame being bent outwardly to form guides which slidingly engage the inner faces of the casing ends, said stops engaging the ends of the base of said frame to restrict the outward movement thereof, and a cover plate for the casing.

2. In a door stop, a casing having the outer extremities of its ends bent inwardly to form stops, a plunger having a frame of U-shape in cross section, a rubber cushion in said frame, the ends of the base of the frame being bent outwardly and forming guides which slidingly engage the ends of the casing, and spring means on the casing interior engaging said plunger frame.

3. In a door stop, a casing having portions of its bottom slitted and the slitted parts bent upwardly to form pockets in conjunction with the adjacent ends of the casing, a coil spring in each pocket, and a plunger slidingly engaged in the casing and being engaged by said springs.

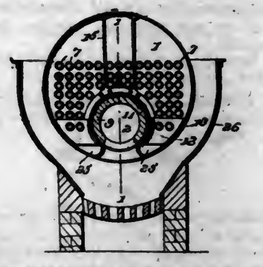
1,018,872. REINFORCED-CONCRETE BURIAL-VAULT. WILLIAM B. BUSSARD, Huntington, Ind. Filed Apr. 3, 1911. Serial No. 618,554. (Cl. 72—7.)



1. A concrete burial vault comprising a body portion having formed on its outer sides, a cover supporting flange, said flange having therein a continuous sealing groove, an extended cover receiving extension formed above said flange, a cover adapted to be engaged with said extension, said cover having on its lower edge a continuous sealing tongue adapted to enter the groove in said flange, an offset formed on the inner side of the cover, a metallic strip arranged around and projecting below said offset and having its lower edge bent inwardly at an inclination, thereby forming a continuous sealing groove or channel adapted to receive the upper edge of the extended upper portion of the body of the vault whereby said cover is doubly sealed.

2. A reinforced concrete burial vault comprising a body provided with a cover supporting flange, a main metal reinforcing frame composed of overlapping sections embedded in the body and slidable upon each other whereby the frame is adjustable, and a separate frame piece having a horizontally projecting flange extending from the frame into the cover-supporting flange and adjustable to different heights on the main frame.

1,018,873. STEAM-BOILER. JOHN M. CAMERON, Johnson City, Tenn. Filed Apr. 19, 1911. Serial No. 622,150. (Cl. 122—8.)



1. A boiler crescent shaped in cross section and having a reëntrant bottom forming an inverted U-shaped flue, and tie plates between the reëntrant bottom and the outer shell of the boiler.

2. A boiler crescent shaped in cross section to form opposed longitudinally extending water legs and having a reëntrant bottom forming an inverted U-shaped flue, and tie plates extending perpendicularly to the axis of the boiler and disposed in the water legs, the lower edges of said tie plates being above the lower ends of the water legs, said tie plates being attached at their outer ends to the exterior shell of the boiler and at their inner ends to the bottom of the boiler forming the flue.

3. A boiler crescent shaped in cross section to form opposed longitudinally extending water legs and having a reëntrant bottom forming an inverted U-shaped flue, tie plates extending perpendicularly to the axis of the boiler and attached at one end to the reëntrant bottom and at the other end to the exterior boiler shell, and diagonal braces extending between said tie plates.

4. A boiler crescent shaped in cross section to form opposed longitudinally extending water legs, said boiler having a reëntrant bottom forming an inverted U-shaped flue, a tie bar located at one end of the boiler and connecting the extremities of the water legs, and a plurality of tie bars attached to the bottom of the boiler and extending upward and attached to the top or crown of the boiler.

5. A boiler crescent shaped in cross section to form opposed longitudinally extending water legs, said boiler having a reëntrant bottom forming an inverted U-shaped flue, tie plates disposed in the water legs and extending between the reëntrant bottom and the exterior boiler shell, tie bars depending from the crown of the boiler shell and connected to the reëntrant bottom, and a transversely extending tie bar disposed at one end of the boiler and extending between the water legs thereof for holding said water legs from spreading.

[Claims 6 to 8 not printed in the Gazette.]

1,018,874. MEANS FOR THE PROTECTION OF ELECTRICAL INSTALLATIONS FROM EXCESS VOLTAGES. GINO CAMPOS, Milan, Italy. Filed Aug. 12, 1910. Serial No. 576,862. (Cl. 175—30.)

1. In means for protecting electric installations from excess voltages, the combination with conductors, of artificial means for increasing the dampings of the excess voltages at the corresponding frequencies without appreciably altering the values of the inductance and the capacity for the currents which correspond to the normal working of the installation.

2. In means for protecting electric installations from excess voltages, the combination with conducting devices

and a condenser, of damping means embodying ohmic resistances, and coils connected thereto and operating to absorb the energy of the oscillatory excess voltages and arranged successively along the conductors to dissipate the energy of the high frequency currents, as and for the purpose specified.

1,018,875. FINGER-RING CONSTRUCTION. FRANCOIS EDOUARD CARDON, New York, N. Y. Filed Feb. 13, 1911. Serial No. 608,415. (Cl. 63—15.)

1. A finger ring comprising a plurality of finger encircling bands attached to a plurality of abutting jewel supporting members.

2. A finger ring comprising a plurality of finger encircling bands attached to a jewel support composed of a plurality of elongated sections, said sections projecting transversely on each side of said bands and the adjacent ends of said projections being hingedly connected together.

3. A finger ring comprising a plurality of finger encircling bands attached to a jewel support composed of a plurality of sections, and connecting means for said sections permitting relative angular tilting movement of said sections but preventing relative longitudinal movement thereof.

4. A finger ring having a plurality of finger encircling bands, a jewel support composed of a plurality of abutting sections attached to said bands, certain of said sections being connected together by a single hinge connection and certain others of said sections being connected by a double hinge connection.

5. A finger ring having a plurality of finger encircling bands, a jewel support composed of a plurality of sections attached to and projecting between said bands, a single hinged connection between certain of said sections, and a double hinge connection between two adjacent sections of said support having their axes at an angle to a horizontal plane to conform approximately to the circle of said bands.

[Claims 6 to 8 not printed in the Gazette.]

1,018,876. SIGHT FOR FIREARMS. FRANCIS C. CHADWICK, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed Nov. 10, 1911. Serial No. 659,560. (Cl. 42—82.)

1. In combination, with the fire-arm, a sight secured thereon and consisting of an elastic strip having one end-portion fixed to the arm and the other end-portion bent back over the first end-portion and provided with a sight-notch, and means for adjusting the second end-portion up and down, substantially as described.

2. In combination, with the fire-arm, a sight secured thereon and consisting of an elastic strip having one end-portion fixed to the arm and the other end-portion bent back over the first end-portion and provided with a sight-notch, and a vertical adjusting screw tapped into the second end-portion, substantially as described.

3. In combination, with the fire-arm, a sight secured thereon and consisting of an elastic strip having one end-portion fixed to the arm and its other end-portion bent back over the first end-portion and having its extremity bent up and formed with a sight-notch and means for adjusting the second end-portion up and down, substantially as described.

4. In combination, with the fire-arm, a sight secured thereon and consisting of an elastic strip having one end-portion fixed to the arm and its other end-portion adjustable vertically and having a sight-notch, and means for adjusting said other end-portion, the first end-portion and the arm having the one a lug and the other a recess fitting each other, substantially as described.

5. In combination, with the fire-arm, a sight secured thereon and consisting of an elastic strip having one end-portion transversely arched and fitting over and fixed to the arm and its other end-portion bent over the first end-portion and provided with a sight-notch, and means for adjusting the second end-portion up and down, substantially as described.

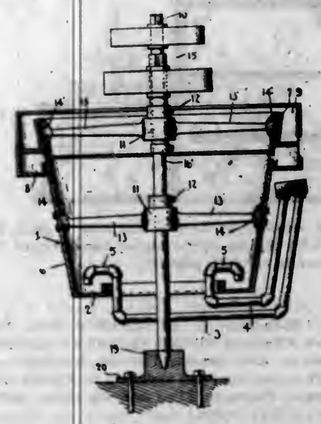
1,018,877. LADDER-HOOK. FRANK W. CHICKERING, Hardwick, Vt. Filed Nov. 20, 1911. Serial No. 661,815. (Cl. 228—20.)

1. A device of the character described comprising a pair of hooks operatively connected together, rung engaging lugs formed on the shanks of the hooks and adapted to be engaged with the rung of a ladder, and a clamping member having an adjustable connection with said hook member and adapted to be engaged with the next rung below that with which the lugs on the hooks are engaged whereby said hook member is securely fastened to the ladder.

2. In a detachable ladder hook, a hook member comprising a pair of hooks, rung engaging lugs formed on the shanks of said hooks, a cross bar to connect said hooks together and to space the same apart, a clip arranged on said cross bar, a sleeve connected with said clip, a set screw arranged in said sleeve, a connecting bar having an adjustable engagement with said sleeve and clip and a clamping member formed on the lower end of said bar and adapted to be engaged with the next rung of the ladder below that with which the lugs of the hooks are engaged and to be held in engagement with said rung by the set screw in said sleeve whereby the hook member is securely fastened to the ladder.

3. In a device of the character described, a hook member comprising a pair of hooks operatively secured together, rung engaging lugs formed on the ends of said hooks, a clamping member comprising a cross bar having thereon rung engaging lugs adapted to be engaged with the next rung below that with which the lugs of the hooks are engaged, a connecting bar secured to the cross bar of said clamping member and having an adjustable connection with the hook member, and a clamping lug having an adjustable engagement with said connecting bar and adapted to be engaged with the rung of the ladder with which the lugs of the clamping member are engaged and to coact with said lugs whereby said connecting bar is securely fastened to said rung in position to hold the hook member in operative engagement with a ladder.

1,018,878. CENTRIFUGAL ORE AND SLIME CONCENTRATOR. CHRISTOFFER A. CHRISTENSEN, Portland, Oreg. Filed June 29, 1911. Serial No. 635,934. (Cl. 83—87.)

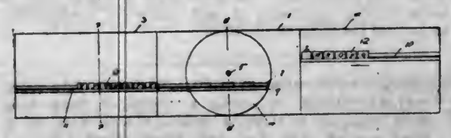


1. An ore separator comprising an inverted frusto-conical tubular member composed of longitudinally alined sections spaced slightly apart, means for supplying pulp to the lower end of said member, and means for revolving said sections at different speeds.

2. A centrifugal ore separator comprising an inverted frusto-conical tubular vessel composed of longitudinally alined sections having their adjacent ends beveled and spaced slightly apart to provide an upwardly opening discharge aperture for the inner particles of ore, means for supplying pulp to the lower end of said vessel, and means for revolving said sections at different speeds.

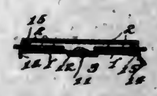
3. A centrifugal ore separator comprising an inverted frusto-conical tubular vessel composed of longitudinally alined sections having their adjacent ends beveled and spaced slightly apart to provide a discharge aperture for the finer particles of ore, a suitably supported centrally disposed shaft, means for connecting one of said sections with said shaft, a hollow shaft revolubly mounted on said first mentioned shaft, means for connecting said hollow shaft with another section of said vessel, and means for connecting said shafts with independent driving means.

1,018,879. PUZZLE POSTAL CARD. CHARLES M. CONLEY, Parkers Landing, Pa. Filed July 27, 1909. Serial No. 509,866. (Cl. 46—41.)



A puzzle comprising a strip of material including an intermediate portion and a pair of foldable outer portions, a circular disk pivotally connected to said intermediate portion, a pair of rails secured to each of said end portions and to said disk, the rails of each pair spaced from each other, guard rails mounted upon the rails of each pair and overlapping the opposing edges of the rails of each pair and providing in connection with their respective rails an inverted T-shaped track, the tracks upon said outer portions extending on opposite sides of an imaginary line passing longitudinally through the pivot of the disk, the track upon said disk being positioned at one side of the pivot whereby said track can aline when the disk is shifted with the tracks upon the end portions, and a set of shiftable pieces carried by the tracks of each of said outer portions and capable of being shifted upon the track of said disk, each of said pieces provided with means to prevent the withdrawal thereof vertically from said tracks.

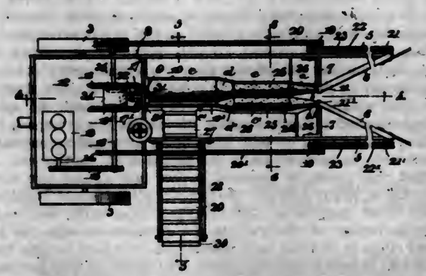
1,018,880. BUCKLE. MATTHEW A. COOPER, St. Louis, Mo. Filed Nov. 19, 1910. Serial No. 593,171. (Cl. 24—166.)



1. A belt buckle comprising a pair of substantially cross sectional U-shaped members, one slidable upon the other, the outer member adapted to completely cover the face of the inner member, said inner member being formed with cloth engaging teeth arranged adjacent to one of its longitudinal edges, the transverse edges of the inner member having stops, a tongue upon the outer member, said tongue adapted to contact with the stops of the inner member to limit the sliding movement of the outer member and to provide an automatic interlocking connection between the tongue and the inner member, and the inner member having headed pins to engage with the openings of the belt.

2. In a buckle of the class set forth, a pair of substantially cross-sectional U-shaped members, one having its off-set portions straddling the off-set portions of the second member, the first named member having one of its off-set portions provided with a resilient tongue which is adapted to contact the rear face of the inner member, said tongue being formed with a stud, the rear face of the inner member having a central pocket adapted to receive the stud, the edges of the inner member being provided with V-shaped projections adapted to limit the sliding movement of the outer member upon the said inner member, and the inner face of the inner member being provided adjacent its transverse edges with headed pins, and said pins adapted to engage the openings of the belt.

1,018,881. CORN-HUSKING MACHINE. WILLIAM C. CULBERTSON, Rushville, Ind. Filed June 16, 1911. Serial No. 633,456. (Cl. 56—113.)



1. In a corn husking machine, a pair of rolls supported for rotation with their axes in approximately parallel relation, said rolls being provided with parallel cylindrical portions of equal diameter, with parallel cylindrical portions of unequal diameter and with intermediate tapered portions.

2. In a corn husking machine, a pair of rolls supported for rotation with their axes in approximately parallel relation, said rolls being provided with parallel cylindrical portions of equal diameter, with parallel cylindrical portions of unequal diameter, with intermediate tapered portions, the opposed portions of the faces of which are in parallel relation, and with conical tapered points extending forwardly from the cylindrical portions of equal diameter.

3. In a corn husking machine, a frame, rotary supporting means for said frame, a pair of driven rolls supported

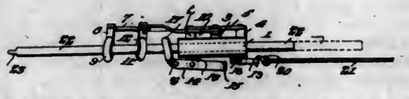
for rotation upon the frame with their axes in approximately parallel relation, said rolls being provided with conical tapered points at their front ends, with parallel cylindrical portions of equal diameter in rear of and adjacent to said conical points, with rear portions of unequal diameter and with intermediate oppositely tapered portions connecting the portions of unequal diameter with the cylindrical portions of equal diameter and means whereby said rolls are simultaneously driven in opposite directions.

4. In a corn husking machine, a pair of rolls supported for rotation with their axes in approximately parallel relation, said rolls being provided with cylindrical portions of equal diameter, with cylindrical portions of unequal diameter, with oppositely tapered portions connecting the portions of unequal diameter with the portions of equal diameter, and with conical tapered portions extending forwardly from the cylindrical portions of equal diameter, said rolls being provided with pins spirally disposed upon the cylindrical portions of equal diameter, upon the conical points and upon the intermediate tapered portions, said pins being arranged in right and left spirals upon the two rolls.

5. In a corn husking machine, a frame, supporting wheels for said frame, a pair of combined stripping and husking rolls supported for rotation upon the frame, said rolls having cylindrical portions of equal diameter, conical points extending forwardly therefrom, rear cylindrical portions of unequal diameter and intermediate oppositely tapered portions, stalk engaging means to guide the stalks to the rolls, an elevator extending beneath the rear ends of the rolls which are of unequal diameter to receive the husked ears as they are tilted over the cylindrical roller portion of relatively small diameter, means for driving the rolls, and means for actuating the elevator.

[Claim 6 not printed in the Gazette.]

1,018,882. WIRE-STRETCHING DEVICE. LOWELL MORRIS DAVIDSON, Eldorado, Ill. Filed July 27, 1911. Serial No. 640,841. (Cl. 39—51.)

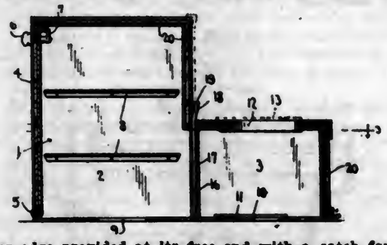


In a wire stretching device, a sleeve, a lever pivotally mounted on the exterior of said sleeve, a rod arranged to slide through the sleeve, an arm pivotally connected to the lever on one side of said sleeve, a second arm pivotally connected to the lever on the opposite side of said sleeve, a ring pivotally connected to each arm, each of said rings having a slight angular movement with respect to its arm, and both of said rings being arranged to encircle said rod, an arm pivotally connected with said sleeve, a third ring pivotally mounted on the last named arm and having a slight angular movement with respect thereto, said third ring being also arranged to encircle said rod, the movement of the lever in one direction causing one of said rings to slide on said rod and another ring to grip the rod and to pull it into the sleeve, and the third ring serving to hold the rod during the movements of the other two rings.

1,018,883. BAKING-OVEN. LESTER ROGERS DAVIS, Riverside, Cal. Filed May 25, 1911. Serial No. 629,333. (Cl. 126—275.)

1. A portable oven comprising two compartments each having a burner opening in the bottom thereof, one of them having pot openings in its top, a vertically movable partition arranged between said compartments and provided with an upwardly extending arm having a hook at its free end for engagement with the other compartment to hold said partition in elevated position.

2. A portable oven comprising two compartments, one of which is higher than the other and each provided with a burner opening in the bottom thereof, the lower compartment having pot holes in its top and the higher compartment provided with a suitable closure at its front, a vertically movable partition arranged between said compartments and having an arm extending upwardly from its



upper edge provided at its free end with a catch for engagement with the top of the higher compartment to hold said partition in elevated position.

1,018,884. ELECTRICAL APPARATUS FOR TRANSMITTING AND RECEIVING SIGNALS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Nov. 26, 1906. Serial No. 345,231. (Cl. 177—324.)

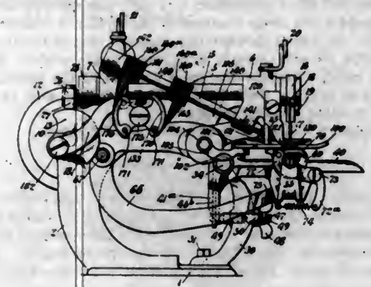
1. In electric signaling apparatus, the combination with the transmitting and receiving instruments, of electric motors each having the cores of its field magnets separately wound and secured to a soft iron base forming the yoke piece of the field magnet, means for detachably connecting said base to the casing of the apparatus, counting devices geared with said motors, and means for detachably connecting the said counting devices directly to the pole pieces of the field magnets of said motors substantially as described.

2. In electric signaling apparatus, the combination with the receiving instrument and its electric motor, of a pivoted magnet lying contiguous to the field windings of said motor, an indicator rigid with said pivoted magnet, and iron pieces attached to one of the pole pieces of said motor and partaking of the polarity of said pole piece to assist in the movement of said indicator, substantially as and for the purpose specified.

1,018,885. STITCH-FORMING MECHANISM FOR SEWING-MACHINES. CHARLES A. DEARBORN, New York, N. Y., assignor to David J. Newland, New York, N. Y. Filed Aug. 12, 1910. Serial No. 576,793. (Cl. 112—24.)

1. In a sewing machine, the combination of suitable work supporting and feeding devices, and suitable stitch forming mechanism, with a stationary thread and needle guide formed with a needle guiding groove and a thread engaging pin.

2. In a sewing machine, the combination of suitable work supporting devices, and work feeding devices, with a needle operating transversely of the line of feed, a looper mounted upon an axis inclined to the plane of feed and oscillating in a plane inclined to the plane of movement of the needle, and a thread engaging pin mounted transversely of and adjacent to the paths of the needle and looper, whereby the looper will take the loop from the needle at one side of the line of stitches and carry it to the other side of the line of stitches into engagement with said thread engaging pin to spread the loop for the entrance of the needle.



3. In a sewing machine, the combination of suitable work supporting devices, and work feeding devices, with a needle operating transversely of the line of feed, a looper oscillating in a plane inclined to the plane of movement of the needle, and a thread engaging pin mounted transversely of and adjacent to the paths of the needle and looper, said looper being formed with a slot extending concentric with the axis of movement of the looper and adapted to receive said thread engaging pin, whereby the looper will take the loop from the needle at one side of the line of stitches and carry it to the other side of the line of stitches into engagement with said thread engaging pin to spread the loop for the entrance of the needle.

4. In a sewing machine, the combination of suitable work supporting devices, suitable feeding devices, and a needle operating transversely of the line of feed, with a looper mounted to oscillate in a plane transverse to the line of stitches upon an axis inclined to the plane of feed and the plane of movement of the needle, said looper including an arm extending eccentrically with relation to its axis of movement and having a loop-engaging foot extending approximately at right angles to said arm and formed with a slot concentric with the axis of movement, and a loop spreading pin mounted transversely of and adjacent to the paths of the needle and looper and adapted to enter the slot of said looper foot.

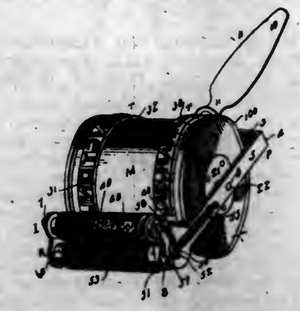
5. In a sewing machine, the combination of suitable feed mechanism, and a needle and operating mechanism, with a looper, an oscillating looper rod carrying the looper, a rocking frame mounted upon an axis extending transversely of the axis of the looper rod, and flexible connections attached to the looper rod and rocking frame, said flexible connections extending from opposite sides of the axis of the rocking frame and winding oppositely upon the looper rod.

[Claims 6 to 10 not printed in the Gazette.]

1,018,886. PRINTING-WHEEL AND INK-FOUNTAINS. EDWARD W. DODGE, Augusta, Ga., assignor of one-half to Louis L. Carrington, Savannah, Ga. Filed Sept. 5, 1911. Serial No. 647,652. (Cl. 101—62.)

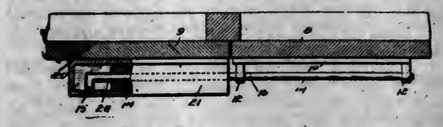
1. In a rotary hand stamp, the combination with a frame having forks in the front ends of its side members, a stop within the frame, a spring-actuated type-carrying roller journaled in the frame, and a stop on the roller adapted to contact with that on the frame; of an inking roller having a hollow body with a row of perforations along one side, trunnions on its body journaled in the uppermost pair of forks so that the surface of this roller is out of contact with the type on the main roller, a finger on this roller contacting with the frame when said perforations are uppermost, a transfer roller having its trunnions journaled in the other pair of forks with its surface in contact with the inking and main rollers, and means for holding all trunnions in place.

2. In a rotary hand stamp, the combination with a frame having forks in the front ends of its side members, a stop within the frame, a spring-actuated type-carrying roller journaled in the frame, and a stop on the roller adapted to contact with that on the frame; of an inking roller having a tubular body provided with a row of perforations along one side and threads around its open end, its other end being closed and having a trunnion, a screw cap removably engaging said threads and having another trunnion, a finger on this cap adapted to rest against said framework when the perforations stand uppermost, a transfer roller standing below the inking roller and itself having trunnions, means for holding them in the lowermost pair of forks and the trunnions of the inking roller in the uppermost pair, a soft surface surrounding the inking roller, and a soft surface surrounding the transfer roller and in contact with that on the inking roller and with the type on the main roller.



3. In a rotary hand stamp, the combination with a frame having forks in the front ends of its side members, a stop within the frame, a spring-actuated type-carrying roller journaled in the frame, and a stop on the roller adapted to contact with that on the frame; of an inking roller having a tubular body provided with a row of perforations along one side and threads around its open end, its other end being closed and having a trunnion, a screw cap removably engaging said threads and having another trunnion, a finger on this cap adapted to rest against said framework when the perforations stand uppermost, a perforated sleeve surrounding the body of the inking roller, a soft surface surrounding the sleeve, a transfer roller having trunnions at its extremities, means for holding them in the lowermost pair of forks, so that the surface of this roller contacts with the type and with the soft surface on the inking roller, and means for holding the trunnions of the latter roller in the uppermost pair of forks.

1,018,887. BOLT. JULIUS A. DUMBIER, Nanticoke, Pa. Filed Jan. 8, 1912. Serial No. 670,043. (Cl. 16—65.)



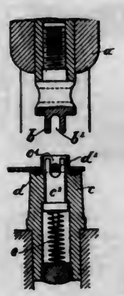
1. In a device of the class described, the combination of a bolt having a projection thereon, a keeper having a longitudinal passageway in which the body of the bolt may be moved, and an irregular passageway surrounding the longitudinal passageway adapted to receive the projection of the bolt, means for concealing said projection and passage-ways from view when in the operative relation, and means coöperating with the projection to lock the bolt in the keeper.

2. In a device of the class described, the combination of a keeper comprising coöperating members, one of said members having a longitudinal passageway provided with recesses in the walls thereof, another member fitting

against the first named member and provided with recesses to coöperate with the recesses in the first mentioned member to form a tortuous passageway surrounding said longitudinal passageway, a bolt provided with a tongue and adapted to be projected into the keeper, said tongue adapted to engage the walls of the recesses to lock the bolt in the keeper.

3. In a device of the class described, a door casing and a door, a bolt provided with a tongue adapted to slide laterally on the door, a keeper on the casing to receive the bolt, said keeper having a longitudinal passageway and a tortuous passageway, the passageways communicating one with the other, means for concealing said passageways from view, the body of the bolt adapted to reciprocate in the longitudinal passageway and the tongue on said bolt movable in said tortuous passageway and means coöperating with the tongue to lock the bolt in the keeper.

1,018,888. MACHINE-TOOL FOR CLENCHING EYELETS. MARIE ANTONINE AGLAÉ EDMOND-SIMONNET, La Garenne, Seine, France. Filed Dec. 19, 1910. Serial No. 598,012. (Cl. 218—14.)



1. A machine tool for clenching an eyelet provided with an inner roller, comprising a frame *a*, and a punch *b* having in cross section the size and shape of an ordinary eyelet and presenting at its extremity a transverse recess b^1, in combination with a matrix die *c* of the same size and shape, and a plunger c^2 presenting at its extremity a transverse recess c^1 corresponding to the transverse recess b^1 in the end of the punch *b*, to permit the passage of the roller d^1 of the eyelet *d* to be clenched, substantially as set forth.

2. A machine tool for clenching an eyelet provided with an inner roller, comprising a frame *a*, and a punch *b* having in cross section the size and shape of an ordinary eyelet and presenting at its extremity a transverse recess b^1, in combination with a matrix die *c* of the same size and shape, and a plunger c^2 presenting at its extremity a transverse recess c^1 corresponding to the transverse recess b^1 in the end of the punch *b*, the depth of the recesses b^1, c^1 being such that the roller d^1 is always cleared, substantially as set forth.

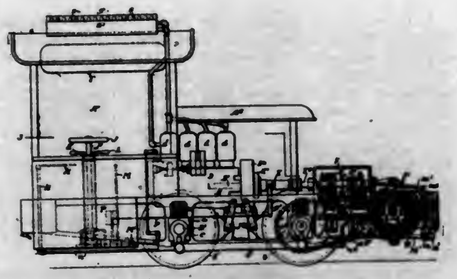
3. A machine tool for clenching an eyelet provided with an inner roller, comprising a frame with a fixed punch having in cross section the size and shape of an ordinary eyelet and presenting at its extremity a transverse recess, in combination with a matrix having in cross section the size and shape of an ordinary eyelet, and a spring supported plunger longitudinally guided in said matrix and presenting at its extremity a transverse recess to receive the eyelet roller.

4. A machine tool for clenching an eyelet provided with an inner roller, comprising a frame with a fixed punch having in cross section the size and shape of an ordinary eyelet and presenting at its extremity a transverse recess, in combination with a matrix having in cross section the size and shape of an ordinary eyelet, and a spring supported plunger longitudinally guided in said matrix and presenting at its extremity a transverse recess to receive the eyelet roller, the depth of the recesses in the punch and plunger being such that the eyelet roller is always cleared.

5. An eyeleting machine for clenching an eyelet with a cross member, comprising a punch transversely slotted to straddle the cross member of the eyelet, a coöperating matrix, an eyelet positioning plunger longitudinally displaceable in said matrix and transversely slotted at its upper end to straddle the cross member of the eyelet, and means to prevent the rotary displacement of said plunger with relation to the matrix.

[Claims 6 and 7 not printed in the Gazette.]

1,018,889. INTERNAL-COMBUSTION LOCOMOTIVE. ARCHIBALD HYDE EHLE, Philadelphia, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 14, 1910. Serial No. 597,250. (Cl. 105—223.)

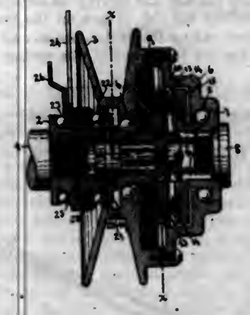


1. The combination in an internal combustion locomotive, of a main frame; two axles mounted on said frame; wheels on the axles; cranks on the axles, rods connecting the cranks; an internal combustion engine mounted on the frame over the rear axle; a primary driving shaft extending from the crank axle of the engine over the forward axle of the locomotive; an intermediate shaft located in advance of the forward axle and below the main driving shaft; change gearing mounted between the two shafts; a bevel pinion on the end of the intermediate shaft; a transverse shaft; a bevel gear wheel thereon with which the pinion meshes; a chain wheel on the forward axle of te locomotive; a chain wheel on the transverse shaft; and a chain passing around the chain wheels.

2. The combination in an internal combustion locomotive, of a main frame; two axles mounted thereon; wheels on the axles; cranks also on the axles; connecting rods extending from one crank to the other on each side of the locomotive; an internal combustion engine mounted on the frame above the rear axle; a main shaft coupled to the crank shaft of the engine and extending over the front axle; an intermediate shaft located in advance of the front axle and located below the main shaft; change gearing coupling the two shafts; a bevel pinion on the end of the intermediate shaft; a transverse shaft at the forward end of the locomotive; two bevel gear wheels loose on said shaft meshing with the pinion; a clutch arranged to slide on but turn with the shaft and having teeth arranged to engage with either one of the bevel gears; a chain wheel on one end of the transverse shaft; a chain wheel on the forward axle; and a chain connecting the two wheels.

1,018,890. CLUTCH. FREDERICK S. ELLETT, Elmira, N. Y. Filed Feb. 16, 1911. Serial No. 609,015. (Cl. 192—10.)

1. The combination with a rotary member, of a concentric wheel mounted for free rotation on said rotary member, a friction disk carried by said wheel on the interior thereof, a plurality of friction disks carried by said rotary member and engaging said first mentioned disk, a plurality of springs for normally holding said disks in gripping engagement, and means independent of the rotations of said wheel and said rotary member for actuating the springs to release the clutch members and comprising a fixed cam member, a revoluble cam member and a thrust bearing.



2. A clutch comprising a rotary member, a wheel rotatably mounted on said member and provided with an interior web having a concentric opening at its center, a bearing between the inner edge of said web and said rotary member, an axially extending concentric flange on said wheel and forming a chamber therein, an annular friction disk within said chamber and carried by said flange, friction disks carried by said rotary member and adapted to engage said annular friction disk, an axially movable member connected with one of said friction disks, a plurality of springs co-acting with said rotary member and said web for normally holding said friction disks in engagement, and means for releasing said disks and including a fixed threaded ring, a revoluble ring having threads engaging the threads on said fixed ring, and a thrust bearing between said revoluble ring and said axially movable member.

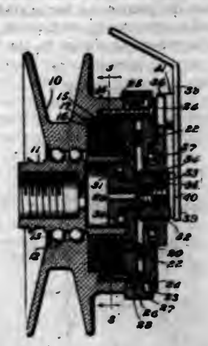
3. The combination with a rotary shaft having a hub at one end thereof, of a concentric wheel mounted for free rotation on the hub, clutch members between the wheel and hub, a fixed cam member mounted with a thrust bearing on the inward end of the hub, a revoluble cam member in engagement with said fixed member and adapted to move one of said cam members longitudinally relative to the other, and means whereby the relative longitudinal movement of said cam members will be imparted to the clutch members.

4. The combination with a rotary shaft having a hollow hub at one end thereof, of a concentric wheel mounted for free rotation on the hub, clutch members between the wheel and hub, a fixed cam member mounted with a thrust bearing on the inward end of the hub, a revoluble cam member in engagement with said fixed member and adapted to move one of said cam members longitudinally relative to the other, and means acting through the bore of the hub whereby the relative longitudinal movement of said cam members will be imparted to the clutch members.

5. The combination with a rotary shaft having a hollow hub at one end thereof, of a concentric wheel mounted for free rotation on the hub, clutch members between the wheel and hub, a fixed cam member mounted with a thrust bearing on the inward end of the hub, a revoluble cam member in engagement with said fixed member, a push rod in the bore of the hub, means for imparting longitudinal movement in one direction, to said rod from one of the cam members, a clutch member having a central portion connected to it through longitudinal slots in the hub and attached to the push rod, and one or more springs carried by the hub to impart motion in the opposite direction to said clutch member to place it in gripping engagement with the other clutch member or members.

[Claims 6 to 15 not printed in the Gazette.]

1,018,891. CLUTCH. FREDERICK S. ELLETT, Elmira, N. Y. Filed May 25, 1911. Serial No. 629,450. (Cl. 192—10.)



1. A clutch comprising a rotatable sleeve, a wheel mounted on said sleeve and adapted to be rotated relative thereto, clutch members between said wheel and said sleeve, a member carried by said wheel and bearing against one of said clutch members, an end plate for said wheel, a spring connected with said member and said end plate and adapted to normally hold the clutch members in engagement, and means engaging said end plate and said member for retracting said member from said clutch members.

2. A clutch comprising a rotatable sleeve, a wheel mounted on said sleeve and adapted to be rotated relative thereto, clutch members between said wheel and said sleeve, a member carried by said wheel and bearing against one of said clutch members, an end plate for said wheel, a plurality of springs between said member and said end plate and adapted to normally hold the clutch members in engagement, and adjustable means for connecting said end plate and said wheel whereby the tension of all of said springs may be adjusted simultaneously.

3. A clutch comprising a rotatable sleeve, a wheel mounted on said sleeve and adapted to be rotated relative thereto, clutch members between the wheel and the sleeve, spring-pressed means for normally holding the clutch members in engagement and adapted to rotate with said wheel, a stationary cam engaging said spring-pressed means, and a movable cam member engaging said stationary cam member and held against bodily displacement whereby said spring pressed means is withdrawn from said clutch members.

4. A clutch comprising a rotatable sleeve, a wheel mounted on said sleeve and adapted to be rotated relative thereto, clutch members between the wheel and the sleeve, an axially movable member adapted to rotate with said wheel and engaging said clutch members, an end plate connected with said wheel and rotatable therewith, a spring between said axially movable member and said plate and adapted to normally press said member against said clutch members, a stationary cam member engaging said axially movable member, and a movable cam member engaging said stationary cam member and adapted to retract said axially movable member and said spring.

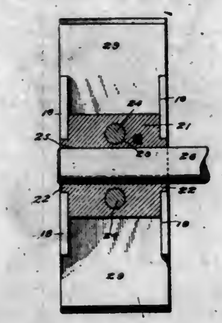
5. A clutch comprising a rotatable sleeve, a wheel mounted on said sleeve and adapted to be rotated relative thereto, clutch members between the wheel and the sleeve, means including a spring for normally holding the clutch members in engagement, an end plate connected with said wheel and engaging said spring, and means for adjusting the end plate so as to adjust the tension of said spring.

[Claims 6 to 9 not printed in the Gazette.]

1,018,892. BUSH-HAMMER. WILLIAM JOHN ERTLE, Rocklin, Cal. Filed Sept. 15, 1911. Serial No. 649,471. (Cl. 125—19.)

1. In a bush hammer, a head comprising a pair of clamping plates having registering bolt holes therein, edge flanges on the inner sides of the plates projecting

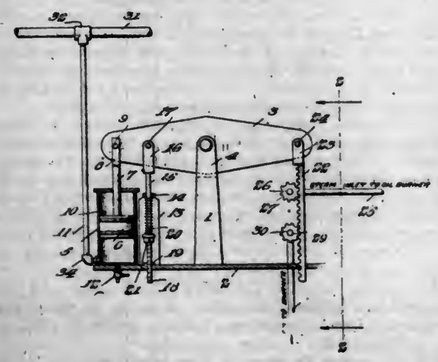
inwardly therefrom, a handle block between said plates having bolt holes therein, lugs projecting from the block engaging between the flanges on the plates, clamping bolts in the bolt holes in the plates, and block, and a series of blades clamped between the plates by the bolts.



2. In a bush hammer, a head comprising a pair of clamping plates having registering bolt holes therein, edge flanges on the inner sides of the plates projecting inwardly therefrom, a handle block between said plates having bolt holes therein, lugs projecting from the block engaging between the flanges on the plates, said block and lugs being provided with a transverse handle opening, a handle secured in said opening, clamping bolts in the bolt holes in the plates and block, and two series of blades between and projecting beyond the ends of the plates with their inner ends abutting against the handle block.

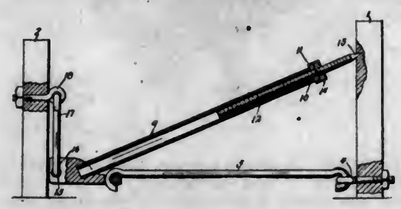
3. In a bush hammer, a head comprising a pair of clamping plates having registering bolt holes therein, edge flanges on the inner sides of the plates projecting inwardly therefrom, a handle block between said plates having bolt holes therein, lugs projecting from the block engaging between the flanges on the plates, said block and lugs being provided with a transverse handle opening, a handle secured in said opening, clamping bolts in the bolt holes in the plates and block, and two series of blades between and projecting beyond the ends of the plates with their inner ends abutting against the handle block, the parts of the blades between the plates fitting between opposite edge flanges, and the parts projecting beyond the ends of the plates being equal in width to the plates and provided with shoulders abutting on the outer ends of the flanges.

1,018,893. OIL-BURNER. WALTER EMULE FISHER, New Iberia, La. Filed Aug. 14, 1911. Serial No. 643,862. (Cl. 236—6.)



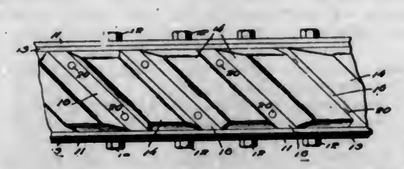
In combination with the oil and the steam feeding pipes, and the steam line, of a cylinder connected at its lower end with the said line, a piston in the cylinder, a lever pivoted intermediate its ends, a rod connecting one end of the lever with the piston, valves for controlling the oil and the steam feed pipes, a pinion connected to each valve for operating said valves, a rack bar pivoted to the opposite end of the lever and meshing with both pinions, a bracket adjacent to the cylinder, a rod slidable vertically in the bracket and having its lower end threaded, a spring encircling the rod, a stop on the bracket against which the upper end of the spring bears, and a nut on the rod for engaging the other end of the spring.

1,018,894. END AND CORNER POST ADJUSTING SUPPORT. WILLIAM A. FOURNIE, Belleville, Ill. Filed Nov. 4, 1910. Serial No. 590,729. (Cl. 39—131.)



The combination with two adjacent fence posts, of bracing means between said posts, said means consisting of an eye-bolt passed through the upper end of one of said posts, a link hanging downwardly from said eye-bolt to a point adjacent the base of the post, a socketed casting pivotally secured to the lower end of said link, a second eye-bolt passed through the lower portion of the other post, a link swingingly connected to said second eye-bolt and with its free end connected to said casting, and an expansible strut having one end seated in the socket of said casting and its other end engaging against the upper end of the last mentioned post.

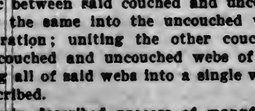
1,018,895. TIRE. EDWIN H. FREAS, Philadelphia, Pa. Filed Aug. 4, 1910. Serial No. 575,444. (Cl. 152—1.)



The combination with a wheel felly, of a pair of plates detachably secured thereto, said plates having inwardly directed and inclined marginal flanges, a plurality of resilient blocks diagonally disposed upon said felly, and having flaring side and end basal portions, bars secured diagonally on the felly, said bars having inwardly beveled side faces and outwardly beveled end faces whereby when said bars are arranged between blocks the beveled side faces thereof engage the flaring side portions of the blocks, and the inwardly directed flanges of the plates engage the beveled end faces of the bars.

1,018,896. METALLIC STRUCTURE, SUCH AS DOORS AND THE LIKE. JOHN E. FREY, New York, N. Y., assignor to Grinden Art Metal Company, a Corporation of New York. Filed Aug. 3, 1910. Serial No. 575,249. (Cl. 189—53.)

1. A metallic structure of the character described, having interconnected members, one of said members being formed with two substantially parallel slots, another of said members being provided with a flange which extends into one of said slots, and a stay member provided with a flange which extends into the other of said slots.



2. A metallic structure of the character described, comprising members having oppositely disposed walls bent adjacent to their edges to form two substantially parallel slots, members each connected with said slotted members by means of a flange projecting into one of said slots, and a stay member between the walls of the slotted members provided with flanges which enter the other slots.

3. A metallic structure of the character described, comprising a frame having side and end members with oppositely disposed walls having their interior edges bent to form two substantially parallel slots, stay members between the walls of the frame members having flanges projecting into the slots in the frame members, and a panel member connected with the frame members by flanges projecting into the other slots.

4. In a meal door, metal stiles, stiffening members therefor, panels, molding for said panels, and rails, said stiles, rails and stiffening members having interlocking flanges.

5. In a metal door, metal stiles and metal rails forming sheet metal boxes, one of said boxes being open at one edge, and a strip covering this otherwise open edge, one of said boxes being formed with tow pairs of slots, the other box having flanges entering one pair of the slots and the strip having flanges to enter the other pair of slots.

[Claims 6 and 7 not printed in the Gazette.]

1,018,897. PROCESS OF MANUFACTURING VERY EXTENSIBLE PAPER. ADALBERT GEISALER, Niederau, near Düren, Germany, assignor to The Firm of J. W. Erkens, Niederau, near Düren, Germany. Filed Mar. 26, 1910. Serial No. 551,710. (Cl. 92—39.)

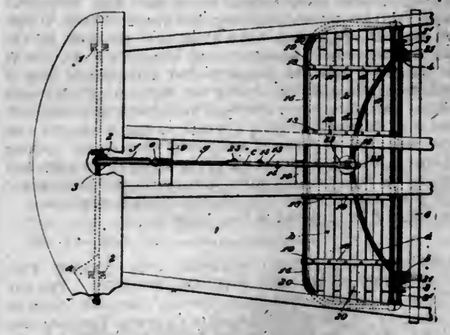
1. The herein described process of manufacturing extensible paper which consists in first couching two webs of paper; uniting one of said couched webs to an uncouched web of paper by a pressing operation; uniting the other couched web to said united couched and uncouched webs of paper; and then couching all of said webs into a single web, substantially as described.

2. The herein described process of manufacturing extensible paper which consists in first couching two webs of paper; uniting one of said couched webs to an uncouched web of paper by a pressing operation; inserting a wire fabric between said couched and uncouched webs during said pressing operation; uniting the other couched web to said united couched and uncouched webs of paper; and then couching all of said webs into a single web, substantially as described.

3. The herein described process of manufacturing extensible paper which consists in first couching two webs of paper; uniting one of said couched webs to an uncouched web of paper by a pressing operation; inserting a wire fabric between said couched and uncouched webs and pressing the same into the uncouched web by said pressing operation; uniting the other couched web to said united couched and uncouched webs of paper; and then couching all of said webs into a single web, substantially as described.

4. The herein described process of manufacturing extensible paper which consists in couching two webs of paper; uniting one of said couched webs to an uncouched web of paper by a pressing operation; inserting a wire fabric between said couched and uncouched webs and pressing the same into the uncouched web by said pressing operation; applying the other of said couched webs to said united webs and fabric and uniting the whole by a couching operation; uniting said united webs to an uncouched web of paper by a pressing operation; inserting a second wire fabric between said couched and uncouched webs and pressing the same into the uncouched web by said pressing operation; then applying another couched web to said couched and uncouched webs; and finally couching the whole into a unitary fabric, substantially as described.

1,018,898. AUTOMATIC WHEEL-GUARD. CHARLES H. GRINDING, Newark, N. J., assignor to Sterling-Meaker Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 6, 1909. Serial No. 476,475. (Cl. 105—130.)



1. A springless trip-and-drop-scoop wheel guard for street cars having, in combination, a tripping gate hinged at its upper edge to the bottom of the car platform and provided with a rigid tappet, a drop scoop hinged at its rear edge to a pilot board carried by the car truck and provided with a pair of upwardly projecting lever arms near the sides of the truck, a longitudinally movable and gravitating locking bar extending rearward from above said gate arranged to interact with said tappet, and provided with a locking shoulder on its bottom near its front end and with a wheel at its rear end having a vertical axis, a bracket attached to the sills of the car and interacting with said shoulder, and a curved bar engaged by said wheel and attached at its ends to the upper ends of said lever arms by hinges having a horizontal axis.

2. The combination, in a wheel guard for street cars, of a tripping gate hinged at its upper edge to the bottom of the car platform, a drop scoop hinged at its rear edge to a pilot board carried by the car truck and provided with a pair of upwardly projecting lever arms near the sides of the truck, a curved bar attached at its ends to the upper ends of said lever arms by hinges having a horizontal axis, and a longitudinally movable locking bar tripped by said gate and provided at its rear end with a wheel having a vertical axis and arranged to interact with said curved bar.

3. The combination, in a wheel guard for street cars, of a tripping gate hinged at its upper edge to the bottom of the car platform, a drop scoop hinged at its rear edge to a pilot board carried by the car truck and provided with a pair of upwardly projecting lever arms near the sides of the truck, a curved bar attached at its ends to the upper ends of said lever arms by hinges having a horizontal axis, and a longitudinally movable locking bar tripped by said gate and provided at its rear end with a wheel having a vertical axis and arranged to interact with said curved bar and further provided with means whereby said scoop is adjusted as to height in its normal position by lengthening or shortening said bar.

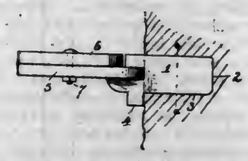
4. The combination, in a wheel guard for street cars, of a tripping gate hinged at its upper edge to the bottom

of the car platform, a drop scoop hinged at its rear edge to a pilot board carried by the car truck and provided with a pair of upwardly projecting lever arms near the sides of the truck, a curved bar attached at its ends to the upper ends of said lever arms by hinges having a horizontal axis, and a longitudinally movable locking bar tripped by said gate and provided at its rear end with a wheel having a vertical axis and arranged to interact with said curved bar and further provided at midlength with a lap joint, screws by which said joint is normally tightened and longitudinal slots through which said screws extend to provide for lengthening or shortening said bar and thereby adjusting said scoop as to height in its normal position.

5. The combination, in a wheel guard for street cars, of a tripping gate hinged at its upper edge to the bottom of the car platform and provided with a centrally located tappet, a drop scoop hinged at its rear edge to a pilot board carried by the car truck and provided with a pair of upwardly projecting lever arms near the sides of the truck, a curved bar attached at its ends to the upper ends of said lever arms by hinges having a horizontal axis, a longitudinally movable locking bar interacting with said tappet extending rearward from above said gate and provided at its rear end with a wheel having a vertical axis and arranged to interact with said curved bar, locking means carried by said locking bar and by the car sills, and means for restoring the parts to normal position from the car platform, substantially as hereinbefore specified.

[Claim 6 not printed in the Gazette.]

1,018,899. COMBINED WEDGE AND CLAMP FOR HOLDING LOGGERS' FALLING-BOARDS. THOMAS EDWARD GOING, Chemainus, British Columbia, Canada, assignor of one-half to James O. Cameron, Victoria, Canada. Filed Apr. 29, 1911. Serial No. 624,007. (Cl. 20—84.)



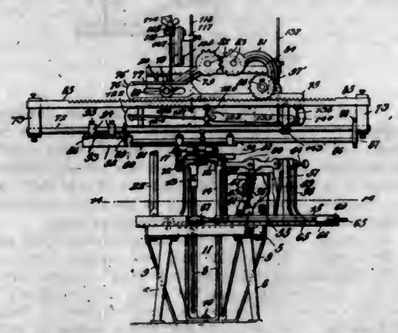
1. A device of the class described comprising a wedge having a downwardly extending arm at its lower side near its outer end and further provided at its outer end with a supporting arm disposed between the upper and lower sides of and lying in a plane at right angles to that of the wedge.

2. A device of the class described comprising a wedge having a downwardly extending arm, at its lower side near its outer end, and further provided at its outer end with a supporting arm, the said supporting arm lying in a plane at right angles to that of the wedge.

1,018,900. SAW-FILING MACHINE. SAMUEL HALTOM, Texarkana, Tex., assignor to The Samuel Haltom Company, Texarkana, Tex., a Corporation. Filed Feb. 21, 1911. Serial No. 609,961. (Cl. 76—35.)

1. In a saw filing machine, a longitudinally movable carrier, operating means for reversely moving said carrier, a vertically movable support for said carrier, means normally acting to maintain said carrier and its support in an elevated position, and an automatically actuated stop device to positively limit the longitudinal movement of said carrier in each direction.

2. In a saw filing machine, a vertically movable support, a file carrier longitudinally movable on the support, a pivotally mounted counterweighted beam connected at one end to the support and normally maintaining the same and the carrier in an elevated position, means for moving said file carrier longitudinally in reverse directions, an automatically operated positive stop device to positively limit the movement of the carrier in each direction, and means actuated by said carrier moving means to move the counterweighted beam and lower the file carrier and its support to maintain the file in engagement with the teeth of the saw in the movement of the carrier in one direction.



3. In a saw filing machine, a vertically movable support, a file carrier longitudinally movable on the support, a yieldingly supported pivotally mounted counterweighted beam connected to said support at one of its ends and normally acting to maintain the support and carrier in an elevated position, means for moving said carrier longitudinally on the support in reverse directions, means actuated by said last named means co-acting with means arranged on the beam to move said beam and lower the file carrier for engagement with the teeth of the saw in the movement of the carrier in one direction, and additional means movable independently of the carrier and co-acting with a stationary element fixed to the beam to permit the file carrier to be forced downwardly and engage the file with the saw teeth.

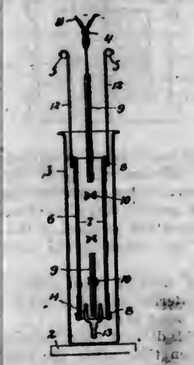
4. In a machine of the character described, a frame, a support movable on the frame, a file carrier longitudinally movable on the support, means for moving said carrier, a pivotally mounted beam connected at one end to the support and normally holding the support and carrier in an elevated position, means actuated by said carrier moving means to oscillate the beam upon its pivot and lower the support and carrier to engage the files with the teeth of the saw, and additional means mounted upon said frame and co-acting with a relatively stationary element carried by the beam to permit the carrier and support to be forced downwardly and frictionally engage the file with the saw teeth.

5. In a machine of the character described, a frame, a support mounted on the frame for vertical movement, a file carrier longitudinally movable on the support, an oscillatory beam mounted on the frame and connected at one end to the support to normally maintain the support and carrier in an elevated position, means for moving said carrier longitudinally, means actuated by said carrier moving means to move said beam and lower the file carrier and support to engage the file in the teeth of the saw, a plate slidably mounted on the frame, means for moving said plate in the same direction as the file carrier, and a stationary element engaged by said plate in its longitudinal movement to permit the carrier and support to be forced downwardly and frictionally engage the file with the saw teeth.

[Claims 6 to 43 not printed in the Gazette.]

1,018,901. ELECTROLYTIC APPARATUS. HERBERT K. T. HAULTAIN, Toronto, Ontario, Canada. Filed July 20, 1910, Serial No. 574,544. Renewed July 24, 1911. Serial No. 640,359. (Cl. 204—5.)

1. In electrolytic apparatus the combination of a containing vessel; a tube open at both ends supported within the containing vessel with its lower end above the bottom of the vessel and its upper end below the top of the vessel; electrodes supported by said tube; an electrode of opposite polarity between the aforesaid electrodes; and a support for said electrode independent of the tube.



2. In electrolytic apparatus the combination of a containing vessel; a tube open at both ends supported within the containing vessel with its lower end above the bottom of the vessel and its upper end below the top of the vessel; a pair of electrodes of similar polarity carried by said tube at opposite sides thereof; a central electrode of opposite polarity; and guiding means within the tube defining the position of said central electrode relative to the other.

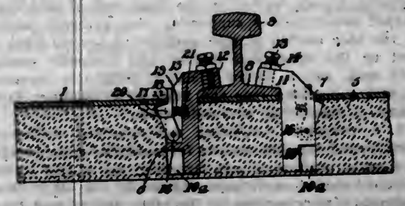
3. In an electrolytic apparatus the combination of an electrode supporting and positioning tube open at both ends; a pair of electrodes of similar polarity carried by said tube at opposite sides thereof; a central electrode of opposite polarity; and guiding means within the tube defining the position of said central electrode relative to the others.

4. In electrolytic apparatus the combination of a containing vessel; a tube open at both ends supported within the containing vessel with its lower end above the bottom of the vessel and its upper end below the top of the vessel; electrodes supported by said tube; means for introducing a gas into the lower end of the tube; an electrode of opposite polarity between the aforesaid electrodes; and a support for said electrode independent of the tube.

5. In electrolytic apparatus the combination of a pair of suitably supported terminals; an electrode supporting and positioning tube open at both ends; a pair of electrodes of similar polarity carried by said tube; electrical conductors connected with the electrodes and terminals and adapted to form a flexible support for the tube; a third terminal; and a central electrode of opposite polarity connected with said third terminal.

[Claim 6 not printed in the Gazette.]

1,018,902. TIE AND RAIL-FASTENER. HARRY L. HEACOX, Derry, Pa. Filed Dec. 18, 1911. Serial No. 666,606. (Cl. 238—3.)



1. In a tie and rail fastener, the combination with a rail, of an oblong metallic box structure having the flat top thereof supporting said rail and provided with openings at the sides of said rail, concrete arranged in said structure and provided with recesses registering with the openings of said structure, said recesses having the outer walls thereof cut away, fasteners arranged in said recesses and having the upper ends thereof provided with flanges extending on to the base flanges of said rail, spring pressed pivoted locking members arranged in said fasteners and adapted to engage in the cut away portions of the concrete to lock said fasteners within the recess thereof, and means carried by the flanges of said fasteners for engaging and holding the base flanges of said rail.

2. In a tie and rail fastener, a rail, a metallic structure adapted to support said rail and having the top thereof provided with openings, concrete arranged in said structure and provided with recesses registering with said openings, fasteners arranged in said recesses and having the upper ends thereof provided with flanges adapted to engage the flanges of said rail, means carried by the flanges of said fasteners for engaging and locking the base flanges of said rails upon said structure, and means pivotally arranged within said fasteners and adapted to engage in the outer walls of the recesses of said concrete for locking said fasteners within said recess.

1,018,903. PAPER-MAKING MACHINE. FRANK A. HEADSON, Milwaukee, Wis., assignor to H. W. Johns-Manville Company, Milwaukee, Wis., a Corporation of New York. Filed June 27, 1910. Serial No. 569,117. (Cl. 34—48.)

1. In a machine of the class described, the combination of a series of parallel hollow metallic rolls rotatably mounted and provided with spaces therebetween for receiving a web of paper to be dried, steam pipes communicating with the interior of the rolls respectively, means for connecting the steam pipes with the exhaust port of an engine, air pipes on the outside of the rolls, provided with discharge openings on the side toward the rolls, means for drying a supply of air for said pipes, and means for forcing dry air through the air pipes and into contact with the paper.

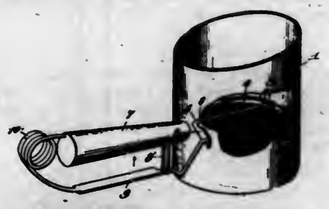
2. In a machine of the class described, the combination of a series of parallel hollow metallic rolls rotatably mounted and operatively connected, and provided with spaces therebetween for receiving a web of paper to be dried, steam pipes communicating with the interior of the rolls respectively, means for connecting the steam pipes with the exhaust port of an engine, air pipes on the outside of and in parallel relation to the rolls and provided with discharge openings on the side toward the rolls, a steam coil, means for connecting the steam coil with the exhaust port of an engine, a casing in which the steam coil is mounted, and a fan or blower having its inlet connected with the casing in which the steam coil is located, and its discharge opening communicating with the air pipes.

3. In a machine of the class described, the combination of a series of parallel hollow metallic rolls rotatably mounted and provided with spaces therebetween for receiving a web of paper to be dried, steam pipes communicating with the interior of said rolls and with a source of steam supply, rolls mounted above and parallel with the series of hollow rolls and on the inside of a lap of the web of paper to be dried, and an air pipe located on the inside of the lap of the web of paper above the hollow rolls

and connected with a source of air supply, and provided with lateral openings.

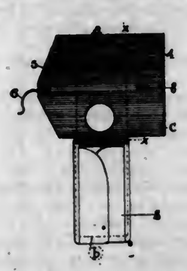
4. In a machine of the class described, the combination of a series of parallel hollow metallic rolls rotatably mounted and provided with spaces therebetween, for receiving a web of paper to be dried, steam pipes communicating with the interior of said hollow rolls respectively and connected with a source of steam supply, air pipes below and in parallel relation to the hollow rolls and provided with discharge openings on the side toward the hollow rolls, paper supporting rolls mounted above and parallel with the hollow rolls and on the inside of a lap of the web of paper to be dried, on air pipe located on the inside of said lap of the web of paper above the hollow rolls and provided with discharge openings adjacent to the web of paper, and means for forcing dry air through said air pipes.

1,018,904. SIFTER. LOUIS J. HERBOLDSMAN and GEORGE L. EPPIHIMER, Malden, Mo., assignors to M. A. Stokes and Company, Malden, Mo. Filed Apr. 8, 1911. Serial No. 619,790. (Cl. 83—60.)



In a flour sifter having a cylindrical handle, of a wire having an end portion fastened to the outer end of the handle and bent into a coil spring form, said spring being adjacent to said handle and having its free end brought down under the same and secured to one end of a flattened member, disposed under said handle, and a wire member attached to the other end of the last mentioned member and connected to the beater so as to actuate the same, a guiding means secured to said handle adapted for guiding said wire member, substantially as described.

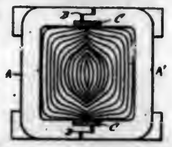
1,018,905. LAUNDRY WRAPPER OR PACKAGE FOR MEN'S SHIRTS. LUDWIG HERMAN, Cleveland, Ohio. Filed Aug. 24, 1911. Serial No. 645,796. (Cl. 229—87.)



A wrapper for men's shirts consisting of a sheet of suitable paper having a body portion substantially the size of a shirt bosom and sides adapted to be folded over the same, and a board substantially the size of said body portion secured to one end thereof and adapted to have the said wrapper folded thereon, the said wrapper having a hole in one end to receive the neck band of the shirt.

1,018,906. INGOT-MOLD. HENRY D. HIBBARD, Plainfield, N. J. Filed June 2, 1906. Serial No. 319,851. (Cl. 22—145.)

1. A collapsible ingot mold comprising a plurality of parts, the joints between the parts being covered on the inside with a relatively weak material, which will yield under compressive force great enough to compress the ingot while cooling.



2. A collapsible ingot mold, comprising a plurality of parts, the joints between the parts being lined on the inside with non-conducting refractory material.

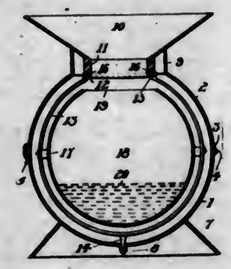
3. A collapsible metallic ingot mold having means only at the joints between the sections of the mold and at the top of the mold for retarding the cooling of the ingot at those joints.

4. A collapsible metallic ingot mold, having strips of non-conducting material on its interior surface running lengthwise of the ingot cavity.

5. An ingot mold, divided longitudinally into two parts with spaces between them when the mold is ready to be filled with metal, said spaces allowing the parts of the mold to approach each other and being covered on the inside with crushable refractory material.

[Claims 6 to 18 not printed in the Gazette.]

1,018,907. CUSPIDOR. WILLIAM L. HILTY and WILLIAM HOPES, Monongahela, Pa. Filed Nov. 6, 1911. Serial No. 658,699. (Cl. 4—38.)



1. A cuspidor comprising a sectional outer shell, a base carried by one of the sections of said shell, a funnel-shaped mouthpiece carried by the other section of said shell, a neck carried by the inner end of said funnel-shaped mouthpiece and having the inner end thereof reduced to provide an annular shoulder, a supporting ring provided with a pivot at the bottom thereof extending into the bottom section of said shell, a band carried by the upper end of said ring and normally engaging the annular shoulder of said neck, and a receptacle trunnioned in said supporting ring and having the opening thereof normally registering with the opening of said neck.

2. A cuspidor comprising semispherical hollow sections hinged together, a base carried by one of said sections, a funnel-shaped mouthpiece carried by the other of said sections, a neck carried by the inner end of said funnel-shaped mouthpiece, a supporting ring pivotally mounted in the base section of said cuspidor, a beveled band carried by the upper end thereof and normally engaging said neck, and a hollow spherical receptacle trunnioned in said supporting ring and having the openings thereof normally registering with said neck.

3. A cuspidor comprising semi-spherical hollow sections hinged together, a clasp for maintaining said sections in a closed position, a base carried by one of said sections, a funnel-shaped mouthpiece carried by the other of said sections, a neck carried by the other end of said funnel-shaped mouthpiece, a supporting ring arranged within said sections, a pivot carried by said ring and extending into the base section of said cuspidor, a beveled band carried by the top of said ring normally engaging the neck of said funnel-shaped mouthpiece, and a hollow spherical receptacle trunnioned within said ring and having the opening thereof normally registering with the opening of said neck.

1,018,908. SHOEMAKER'S KNIFE. ORVILLE T. HUTCHISON, De Land, Fla., assignor of one-half to Paul Bleck, De Land, Fla. Filed June 14, 1911. Serial No. 633,030. (Cl. 12—103.)

1. A shoemaker's knife comprising in combination a handle, and a blade integrally formed with said handle, having its upper portion relatively thick and its lower portion provided with a knife edge curved, and having a hump on the middle portion of the said upper edge.

2. A shoemaker's knife comprising in combination a handle, and a knife blade integrally formed with said handle having its upper portion humped for strengthening purposes and for receiving the blows of the hammers, said knife edge being formed by beveling one side toward the lower edge.

3. A shoemaker's knife comprising a handle, and a knife blade integrally formed with said handle having its upper portion relatively thick and humped and its lower portion beveled on one side to give a sharp edge to the blade, said blade being horizontally and vertically offset and having its end portion curved.

1,018,909. PROCESS OF PRESERVING MUSHROOMS. EDWARD H. JACOB, West Chester, Pa. Filed Sept. 15, 1911. Serial No. 649,494. (Cl. 99—11.)

1. A process for preserving mushrooms which comprises evaporating them for such time and at such temperature as will drive off a substantial bulk of water therefrom without expelling the natural juices and treating the product so as to effect sterilization thereof.

2. A process for preserving mushrooms which comprises evaporating water therefrom, treating them with oil and heating them.

3. A process for preserving mushrooms which comprises evaporating water therefrom without driving off the juices, coating the evaporated product with vegetable oil, and heating the coated product so as to effect sterilization thereof.

4. A process for preserving mushrooms which comprises evaporating the water therefrom at a temperature below 150 degrees F., dipping the evaporated product in oil, and heating the oil coated product at such temperature and for such time as may be required to effect sterilization.

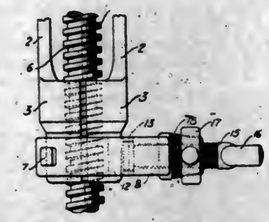
5. A process of treating mushrooms which comprises subjecting them to an evaporating operation until about 50 per cent of their weight in water has been driven off, washing the product in cold water, treating the washed product with an oil, and heating the oil coated product at such temperature and for such time as may be required to effect sterilization.

[Claim 6 not printed in the Gazette.]

1,018,910. TEMPER-SCREW. JAMES C. KAHLE, Oil City, Pa. Filed Apr. 20, 1911. Serial No. 622,271. (Cl. 166—9.)

1. In a temper screw, a screw having the under sides of the threads thereof beveled, jaws adapted to engage said screw, a yoke carried by one of said jaws, and a spring pressed block arranged in said yoke and adapted to engage the other of said jaws.

2. In a temper screw, a screw having the under sides of the threads thereof beveled, jaws adapted to engage said screw, a yoke carried by one of said jaws, a spring pressed block arranged in said yoke and adapted to engage the other of said jaws, and means including a screw carried by said yoke and adapted to regulate the tension of said spring pressed block.

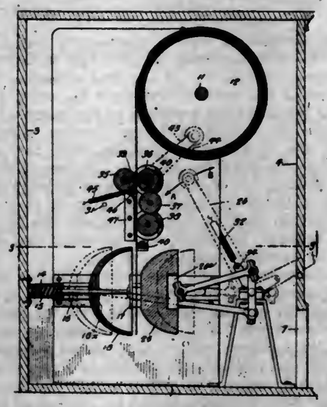


3. In a temper screw, a screw having the threads thereof beveled, jaws correspondingly beveled and adapted to engage said screw, a yoke carried by one of said jaws, and adjustable means carried by the other of said jaws and guided by said yoke and including a screw for regulating the engagement of the jaws with said screw to control the feed of the latter.

4. In a temper screw, jaws, a screw adapted to feed by gravity through said jaws, a yoke carried by one of said jaws, and an adjustable cushion means extending in one of said jaws and guided by the arms of the yoke for regulating the feeding of said screw.

5. In a temper screw, a threaded feeding element, a pair of jaws for feeding said element by gravity, means engaging one of said jaws for regulating the feed of said screw and including a block, a spring engaging said block, and adjusting means adapted to be locked in engagement with said spring, and a yoke supporting the other of said jaws and guiding said regulating means and further supporting said adjusting element.

1,018,911. MACHINE FOR MAKING SANITARY DRINKING-CUPS. GEORGE HAYDEN KAISER, Portland, Oreg. Filed July 22, 1911. Serial No. 639,978. (Cl. 113—38.)



1. In a sanitary cup making machine, a reel for holding a tape or ribbon, a pair of mold members, means for feeding a portion of the tape between said mold members, and means for causing the tape to be pressed between the mold members.

2. In a sanitary cup making machine, a reel for holding a tape or ribbon, a pair of movable mold members, means for feeding a portion of the tape between said mold members, and means for causing a simultaneous movement of said mold members to engage said tape.

3. In a sanitary cup making machine, a reel for holding a tape or ribbon, a pair of movable mold members, means for feeding a portion of the tape between said mold members, means for causing a simultaneous movement of said mold members to engage said tape, and a cutter for cutting off the portion of the tape between said mold members.

4. In a sanitary cup making machine, a reel for holding a tape or ribbon, a pair of movable mold members, means for feeding a portion of the tape between said mold members, means for causing a simultaneous movement of said mold members to engage said tape, a cutter for cutting off the portion of the tape between said mold members, and means for causing the separation of the mold members.

5. In a sanitary cup making machine, a reel for holding a tape or ribbon, a pair of movable mold members, means for feeding a portion of the tape between said mold members, means for causing a simultaneous movement of said mold members to engage said tape, a cutter for cutting off the portion of the tape between said mold members, means for causing the separation of the mold members, and means for ejecting a cup.

[Claims 6 to 8 not printed in the Gazette.]

1,018,912. GARMENT-POCKET. FREDERICK KASCHEWSKI, Oskaloosa, Iowa. Filed Oct. 14, 1911. Serial No. 654,638. (Cl. 2—15.)

1. In combination with a garment, a patch secured thereto by stitching along its side and bottom edges, a substantially vertical line of stitching extending from top to bottom of the patch intermediate the sides, a line of stitching extending for a portion of the length of the top edge from the vertical stitching, another substantially vertical line of stitching extending from the last-mentioned stitching down the patch for a portion of its length, and an oblique line of stitching extending upwardly from the end of the last-mentioned stitching to the first-mentioned vertical line of stitching, whereby two pockets are formed between the patch and garment, one of which pockets is partially closed at the top.

2. In combination with a garment having an elongated opening therein, a patch sewed to the outside of the garment over the opening and forming with the garment an inner pocket accessible through the opening from the inside of the garment, and an outer patch secured to the first-mentioned patch on the outside by lines of stitching along the side and bottom edges, a substantially vertical line of stitching extending from top to bottom of the outer patch, a line of stitching extending for a portion of the length of the top edge of the outer patch from the vertical stitching, another substantially vertical line of stitching extending from the last-mentioned stitching down the outer patch for a portion of its length, and an oblique line of stitching extending upwardly from the lower end of the last-mentioned stitching to the first-mentioned vertical line of stitching, whereby two pockets are formed between the two patches, one of which pockets is partially closed at the top.

1,018,913. HOLDER OR MAIL-BOX. CHARLES O. KRAGT and JAMES R. CARMER, Wilmington, Del. Filed Apr. 17, 1911. Serial No. 621,614. (Cl. 45—64.)

1. In a holder or mail box, the combination of a support consisting of a flat device having side flanges projecting forwardly therefrom, a gravitating front or holder of greater width than the support and provided with inwardly projecting side flanges to fold against and inclose the side flanges of the support, links movably attached to the flanges of the support and gravitating front and also inclosable by the latter when folded, and a bottom section pivotally connected to the lower terminals of the flanges of the support and the front and movable uniformly with the latter either into an outwardly projecting position or inwardly in line with the support.

2. In a holder or mail box, an upright support, a gravitating front or holding members having links movably attached thereto and also movably connected to opposite sides of the support, and a bottom section pivotally connected at its opposite ends respectively to the lower ends of the support and front or holding member and movable uniformly with the movement of said member either into an outwardly projecting position or inwardly into longitudinal alinement with the support, the said bottom section assuming varying angles with relation to the support and holding member in accordance with the amount of mail matter interposed between the said support and member.

3. In a holder or mail box, the combination of an upright support, a gravitating front or holding member having a perforated body, links movably connected to the opposite sides of the support and front or holding member, and a bottom section movably attached at its opposite ends to the lower ends of the support and front or holding member and movable uniformly with the said member and disposable into longitudinal alinement with the support when the parts of the box are collapsed or folded, the lower end of the box being fully open when the parts thereof are folded.

1,018,914. AUTOMATIC FIREARM. KARL KANKA, Hirtenberg, Austria-Hungary. Filed July 12, 1909. Serial No. 507,157. (Cl. 42—3.)

1. In a firearm having a breech casing, the combination of a breech bolt sleeve mounted within said casing and having a rotary locking connection therewith; a breech bolt; means for guiding the breech bolt rectilinearly within said breech casing; a rotary locking connection between the breech bolt sleeve and breech bolt; a breech bolt plug mounted within the breech bolt sleeve and having limited movement therein, said breech bolt plug having a portion in contact with the breech bolt and having a shoulder normally spaced forward from the end of the breech bolt sleeve; said contacting portion operable to impart movement to the breech bolt to effect initial unlocking movement of the breech bolt sleeve, and said breech bolt plug coöperative with the breech bolt to completely unlock and open the breech bolt sleeve through gas pressure; and an accumulator for automatically closing and locking the breech bolt sleeve, substantially as described.

2. In a firearm having a breech casing, the combination of a breech bolt sleeve mounted within said casing and having a rotary locking connection therewith; a breech bolt mounted within and carried by the breech bolt sleeve; means for guiding the breech bolt rectilinearly in the breech casing; a rotary locking connection between the breech bolt sleeve and breech bolt operable to lock and unlock the breech bolt sleeve; a firing pin rectilinearly movable within the breech bolt; a breech bolt plug mounted within the breech bolt sleeve and providing a base for the cartridge, said breech bolt plug movable axially independently of the breech bolt sleeve and operable to impart the initial unlocking movement thereto; a cartridge shell extractor carried by said breech bolt plug; said plug operable to effect the complete unlocking and opening of the breech bolt sleeve through gas pressure; and an inertia body and accumulator for automatically closing and locking the breech bolt sleeve, substantially as described.

3. In a firearm having a breech casing, the combination of a breech bolt sleeve having rotary locking connection with said casing; a breech bolt operable to unlock and open said breech bolt sleeve through gas pressure; an accumulator spring for automatically closing and locking said breech bolt sleeve; and a telescoping casing inclosing and connected with said accumulator spring, and connected with the breech bolt; said casing disposed externally of the breech casing and adapted to be actuated manually to open the breech bolt sleeve, substantially as described.

1,018,915. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 4, 1910. Serial No. 585,185. (Cl. 197—112.)

1. In a typewriting machine, the combination with a key operated type, a part vibrated at each type stroke, and a traveling carriage, of an arm rocked by the carriage, a rock shaft having a cam, a link connecting the arm and shaft, a bell, a clapper, a trip for the clapper moved by the link, and a stop interposed by the cam in the path of the vibratory part.

2. In a typewriting machine, the combination with a key operated type, a part vibrated at each type stroke, and a traveling carriage, of a cam adjustable along the path of the carriage, an arm rocked by the engagement of the carriage and cam, a rock shaft having a finger, a link connecting the arm and shaft, a bell, a clapper, a trip for the clapper moved by the link, and a stop interposed by the finger in the path of the vibratory part.

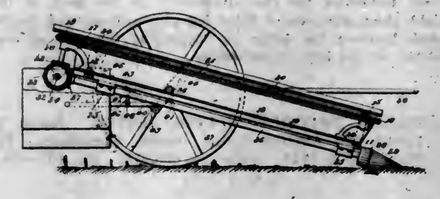
3. In a typewriting machine, the combination with a key-operated type, a part vibrated at each type stroke, and a traveling carriage, of a combined bell-ringing and line-locking cam in the path of the carriage, an arm rocked by the engagement of the carriage and cam, a rock shaft having a finger, a link connecting the arm and shaft, a stop interposed by the finger in the path of the vibratory part, a bell, a hammer having a cam, and a trip on the link to rock the hammer.

4. In a typewriting machine, the combination with a key operated type, a part vibrated at each type stroke, and a traveling carriage, of an arm rocked by the carriage, a rock shaft having a finger, a link connected with the shaft and having a recess communicating with a slot, a pin on the arm normally seated in the recess, to hold the link against movement independently of the arm, a stop thrust by the finger into the path of the vibratory part, and a button to shift the link on the pin to enter the latter in the slot and effect the return of the stop to idle position.

5. In a typewriting machine, the combination with a key-operated type, a part vibrated at each type stroke, and a traveling carriage, of an arm rocked by the carriage, a rock shaft having a finger, a link connecting the arm and shaft and a stop mounted in the frame of the machine and controlled by the finger to arrest the vibratory part.

[Claims 6 to 11 not printed in the Gazette.]

1,018,916. BEAN-PULLING DEVICE. CHARLES H. LAWTON, Warsaw, N. Y. Filed Nov. 23, 1910. Serial No. 593,893. (Cl. 56—1.)



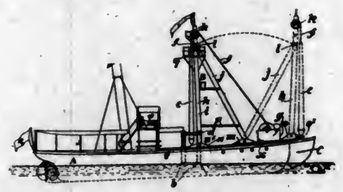
A bean harvester including a frame, a transverse axle journaled across the frame adjacent to its rear end, rearwardly extending arms hingedly carried upon the axle, hangers depending from the frame and adjustably engaging with the arms between their ends, a gatherer hinged between the rear ends of the arms, and tilting means carried upon the frame and having connection with the gatherer.

1,018,917. NAVIGABLE ROCK-CUTTER. FRED LOBNITZ, Crookston, Scotland. Filed July 17, 1911. Serial No. 638,835. (Cl. 37—50.)

1. A navigable rock cutter comprising, in combination, a vessel having a well at the bow and a well amidships, a rock cutter, a structure located between said wells and having a pivotal member upon which it can be moved from the one well to the other in order to carry the cutter either at the bow or amidships, and means for operating the cutter.

2. A navigable rock cutter comprising, in combination, a vessel having a well at the bow and a well amidships, a rock cutter, a tripod structure located between said wells and having a pivotal member upon which it can be

moved from the one well to the other in order to carry the cutter either at the bow or amidships and means for operating the cutter.



3. A navigable rock cutter comprising, in combination, a vessel having a well at the bow and a well amidships, a rock cutter, means for operating the cutter, a movable tripod structure comprising two side members and an intermediate third member jointed at its upper end thereto and also jointed to the deck of the vessel, the side members being adapted to swing on the intermediate member into position either at the bow or amidships.

4. A navigable rock cutter comprising, in combination, a vessel having a well at the bow and a well amidships, a rock cutter, a movable tripod structure comprising two side members and an intermediate third member jointed at its upper end thereto, a set of shoes for securing the side members amidships, a second set of shoes for securing the side members at the bow and an intermediate shoe to which the third member is pivoted the structure being adapted to carry the cutter either at the bow or amidships, and means for operating the cutter.

5. A navigable rock cutter comprising, in combination, a vessel having a well at the bow and a well amidships, a rock cutter, a pair of sheer legs having means for carrying the cutter, means on the deck and adjacent to the well at the bow for the attachment to the deck of the said sheer legs, means on the deck and adjacent to the well amidships for the attachment to the deck of the said sheer legs, and a third leg pivotally secured to the deck between the wells for supporting the pair of legs either at the bow or amidships.

1,018,918. SWITCH-THROWING DEVICE. JAMES B. LOGAN and ARTHUR LOGAN, South Greensburg, Pa. Filed July 3, 1911. Serial No. 636,575. (Cl. 104—24.)

1. In a track having a main line and a switch, a switch point normally closing the switch, said point having an extension projecting forwardly therefrom in substantial parallelism with the main line and having its forward end curved to provide a mouth between it and the main line track, said extension being of a length sufficient to permit its operation from a point in rear of the rear wheel of a car in advance of the reaching of the switch point by the forward wheel of the car, whereby a movement of the forward end of the extension away from the rail will throw the switch point.

2. In a track having a main line and a switch, a switch point normally closing the switch, said point having an extension projecting forwardly therefrom in substantial parallelism with the main line and having its forward end curved to provide a mouth between it and the main line track, whereby a movement of the forward end of the extension away from the rail will throw the switch point, said extension being yieldingly supported.

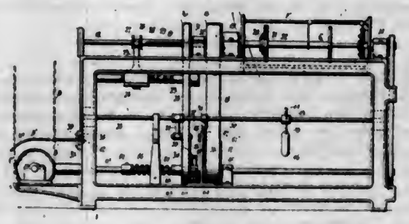
3. In a track having a main line and a switch, a switch point normally closing the switch and having an extension projecting forwardly and depressed below the path of travel of a car wheel flange, said extension having its forward end curved inwardly to provide a mouth between the extension and the main line rail, and means for yieldingly supporting said extension.

4. In a track having a main line and a switch, a switch point normally closing the switch and having an extension projecting forwardly and depressed below the path of travel of a car wheel flange, said extension having its forward end curved inwardly to provide a mouth between the extension and the main line rail, and means for yieldingly supporting said extension, said extension being of a length sufficient to permit its operation from a point in rear of the rear wheel of a car in advance of the reaching of the switch point by the forward wheel of the car.

5. In a track having a main line and a switch, a switch point normally closing the switch and having an extension projecting forwardly and depressed below the path of travel of a car wheel flange said extension having its forward end curved inwardly to provide a mouth between the extension and the main line rail, and means for yieldingly supporting said extension, said extension being of a length sufficient to permit its operation from a point in rear of the rear wheel of a car in advance of the reaching of the switch point by the forward end of the car, and means carried by each end of the car for moving said extension.

[Claim 6 not printed in the Gazette.]

1,018,919. STOP-MOTION FOR SPINNING-MACHINES. SIMON K. MARSHALL and MINARD H. MCKINNEY, Xenia, Ohio. Filed Feb. 14, 1911. Serial No. 608,521. (Cl. 118—8.)



1. In a stop motion for spinning machines the combination with a bobbin and flier, driving means therefor and a belt shipper actuating mechanism, of driving connections between the driving means and flier and bobbin respectively, the driving connection between the driving means and bobbin including a pair of rotating elements adapted to normally rotate in unison, means for rotating one of said elements relatively to the other upon a predetermined reduction in the tension of the yarn between the bobbin and flier, and means actuated by the relative rotation of said elements for tripping the belt shipper actuating mechanism.

2. In a stop motion for spinning machines, the combination with a bobbin and flier, driving means therefor and a belt shipper actuating mechanism, of driving connections between the driving means and flier and bobbin respectively, the driving connections between the driving means and bobbin including a pair of rotating elements adapted to normally rotate in unison, friction controlled means for rotating one of said elements relatively to the other upon a predetermined reduction in the tension of the yarn between the bobbin and flier and means actuated by the relative rotation of said elements for tripping the belt shipper actuating mechanism.

3. In a stop motion for spinning machines, the combination with a bobbin and flier and driving means therefor, connections between the driving means and flier and bobbin respectively, the connections between the driving means and bobbin including a pair of rotatable elements adapted to normally rotate in unison, a belt shipper and a belt shipper actuating mechanism constantly tending to ship the belt when the latter is disposed upon the fixed pulley, a trip lever for holding the belt shipper actuating mechanism against the influence of said tendency, means for rotating one of the elements in the connections between the driving means and the bobbin relatively to the other of said elements upon a predetermined reduction in the tension of the yarn between the bobbin and flier, and a tripping dog movable under the influence of relative rotation of said elements into engagement with the tripping lever to disengage the latter from the belt shipper actuating mechanism.

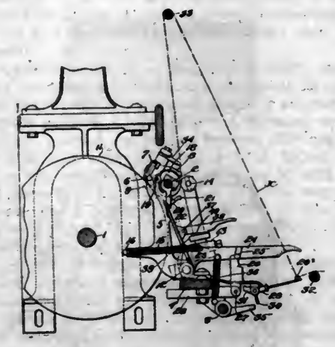
4. In a stop motion for spinning machines, the combination with a bobbin and flier, a driving shaft, a belt shipper and a belt shipper actuating mechanism constantly tending to ship the belt when the latter is disposed upon the fixed pulley; of a trip lever for holding the belt shipper actuating means against the influence of said tendency, connections between the driving shaft and bobbin including a disk fixed on said shaft having a slot therein, a second disk loosely mounted on said shaft having a slot therein, a laterally projecting pin carried by the first named disk and projecting through the slot of the second named disk whereby the rotation of the former is transmitted to the latter and said disks are adapted for limited relative movement, a friction connection between said second named disk and the bobbin whereby said second named disk will move relatively to the first named disk upon a predetermined reduction in the tension of the yarn between the flier and bobbin, a tripping dog pivoted to the second named disk and having a laterally extending free end projecting through the slot in the first named disk for movement toward the outer end of said slot to engage the trip lever and release same from engagement with the belt shipper actuating means upon a relative movement of the second named disk with respect to the first named disk.

5. In a stop motion for spinning machines, the combination with a bobbin a flier, a belt shipper and a belt shipper actuating mechanism, driving means, driving connections between the driving means and the flier, driving connections between the driving means and the bobbin; of elements in the driving connections between the driving means and the bobbin adapted to move relatively to each other upon a predetermined reduction in the tension of the yarn between the flier and bobbin, means actuated by the relative movement of said elements to strip the belt shipper actuating mechanism, a belt pulley also included in the connections between the driving means and the bobbin, and a friction shoe engaging the periphery of said belt pulley for accelerating the relative movement of said elements.

1,018,920. WINDING-MACHINE. JOHN O. MCKEAN, Westfield, Mass., assignor to Foster Machine Company, Westfield, Mass., a Corporation of Maine. Filed Nov. 7, 1910. Serial No. 590,977. (Cl. 242—38.)

1. In a winding machine, in combination, a cop-driving roll; a pivotally supported cop-holder which adjusts itself to the growth of the cop, and a spring for yieldingly holding the cop against the cop-driving roll, said spring being connected with the cop-holder at a point which is shifted by the movement of the cop-holder resulting from the growth of the cop so as to compensate in leverage for the increasing force of the spring.

2. In a winding machine, in combination, a movably supported cop holder; a cop driving roll; a shifter and brake swinging upward to engage the cop; a bell-crank lever, one end engaging the shifter and the other supported by a prop carrying thread supported drop-wires,



and positively actuated means to remove the prop upon the breakage or failure of a thread, so as to cause the bell-crank lever to throw the shifter and brake.

1,018,921. [WITHDRAWN.]

1,018,922. [WITHDRAWN.]

1,018,923. BOTTLE-CLOSURE. PAUL PANHORST and CHARLES G. PANHORST, New York, N. Y. Filed July 9, 1909. Serial No. 506,752. (Cl. 215—10.)

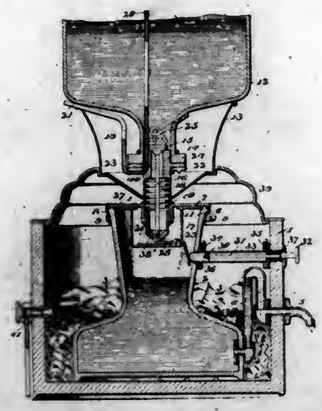
1. A metallic cap closure comprising a lateral sealing flange and a split tongue integral therewith, comprising overlying corrugated sections.

2. A metallic cap closure comprising a lateral sealing flange with securing indentations and a split tongue integral therewith, comprising overlying sections provided with corrugations forming ribs extending from a point below said flange to a point about said indentations.

3. A metallic cap closure comprising a lateral sealing flange and a tongue integral therewith comprising overlying sections serving as tangential opening levers, substantially as described.

4. A metallic cap closure comprising a lateral sealing flange and a tongue integral therewith, said tongue being slit longitudinally and the sides thereof folded across each other whereby upon the lifting of said tongue the sides thereof act upon the sealing flange as tangential levers to pry it open, substantially as described.

1,018,924. LIQUID-COOLER. WILLIAM E. PATNAUDE, Merrimac, Mass., assignor to Atwood L. Boggs, Dorchester, Mass. Filed June 9, 1910. Serial No. 566,015. (Cl. 62—13.)



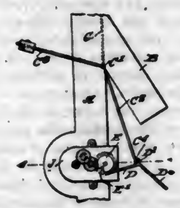
1. In a cooler of the type described, the combination of an inclosing vessel, a cooling receptacle therein, the cooling receptacle having an open valveless outlet, said outlet extending through the inclosing vessel at a plane above the bottom of the receptacle, an inverted container having its outlet communicating with the top of said cooling receptacle, a valve carried by and located directly within the container outlet, a valve actuating lever connected with the upper end of the cooling receptacle, and a push rod extending from the lever through the cooling receptacle and the inclosing vessel to the outside thereof, the parts operating as described.

2. A cooler of the type described, comprising an inclosing vessel a cooling receptacle within the vessel, an inverted container having its outlet communicating with said receptacle, a valve carried by and located directly within the container outlet, a yoke supported by the upper end of said receptacle, a valve actuating lever supported by the yoke and a lever actuating push rod passing through the receptacle and inclosing vessel, the parts operating as described.

3. A cooler of the type described, comprising an inclosing vessel, a cooling receptacle therein, a cover for said receptacle, an inverted container having an outlet passing through said cover, the cover and container outlet having an air-tight engagement, the receptacle having an outlet extending through the inclosing vessel at a plane above the bottom of said receptacle, a valve for the container outlet, means for actuating the valve from outside the inclosing vessel, and a vent pipe passing into the container and its inner end extending adjacent its upper portion and its outer end communicating outside of the container, substantially as and for the purpose described.

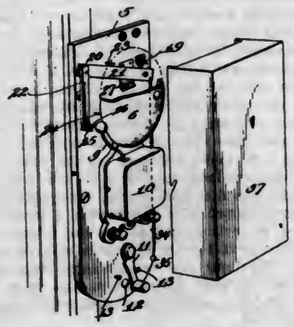
1,018,925. CUT-OFF. JOHN B. PRUDEN, Quanah, Tex. Filed June 1, 1911. Serial No. 630,550. (Cl. 137—9.)

The improvement herein described comprising a pipe having a branch, a valve pivoted at the juncture of the pipe and branch and adapted to shut off the branch or to be adjusted across the pipe to deflect water out through the branch, a weight for operating the valve in one direction, a lever projecting from the valve, a pivoted catch having an outwardly projecting arm provided with a seat for engagement with the valve lever to secure the valve in one position, said arm having a handle extension, and the catch having a ball-shaped portion, a water wheel operating in the water pipe, a train operated by said water wheel and a mutilated wheel having a ratchet connection with the train and provided with a notch, the ball-



shaped portion being provided with an arm which may project into said notch to release the catch, all substantially as and for the purposes set forth.

1,018,926. BURGLAR-ALARM. FREDERICK C. RIES, Macon, Ga. Filed Jan. 13, 1910. Serial No. 537,897. (Cl. 177—314.)



1. In a burglar alarm, the combination with an electro-magnetic signal including a battery in circuit therewith, the electro-magnetic signal embodying a bell striker and bell, the bell striker having a projection extending therefrom, of a drop lever pivoted at one end and electrically connected to the signal and having a free extremity with a depending trigger pivoted thereto, a stop device on which the lower end of the trigger has bearing when the alarm is set and holding the said trigger in raised position adjacent to the bell striker projection, a yielding brush contact adjacent to the pivotal point of the drop lever and over which the latter has movement to set up a frictional engagement of the lever with the contact when the trigger is released, the said brush contact being electrically connected to the signal battery, the trigger being released from its set position by the projection on the bell striker when the latter vibrates to insure continuous operation of the signal, and a circuit closer having movable contacts respectively connected to the said brush contact and drop lever.

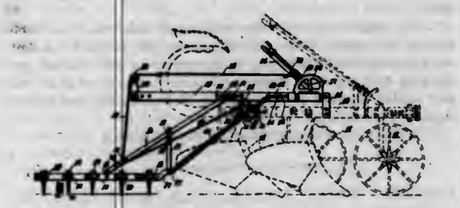
2. In a burglar alarm, the combination of an electric bell having a striker provided with a release projection at its free end, a rest projection adjacent to the striker, an electro-magnet and battery for controlling the operation of the striker, an automatic drop consisting of a lever pivoted at one end and having a depending trigger pivoted and freely movable on the opposite end, the depending trigger having its lower end disposed on the rest projection when the alarm is set and released by the projection of

the bell striker when the latter vibrates, a brush contact disposed for frictional engagement by an intermediate portion of the said drop lever, a carrier arranged adjacent to a part to be guarded and having contact devices, and circuit wires connecting the said contact devices and the lever and brush contact, the contact devices of the carrier when in engagement closing the circuit to release the drop to set up a continuous ringing of the bell.

1,018,927. TOOTH-BRUSH. JULES J. SARRAZIN, New Orleans, La. Filed July 14, 1911. Serial No. 638,547. (Cl. 15—39.)

A tooth brush having a short head which is tapered toward its forward end, and bristle tufts on said head arranged to form an elevated point at the forward end of the head, and said head also having bristle tufts arranged in longitudinal and transverse rows, the longitudinal rows converging in the direction of the forward end of the head, and the number of tufts in the transverse rows at the forward end of the brush being less than that in the transverse rows to the rear thereof, and said tufts being arranged to form a central, longitudinal groove which commences at the rear end of the head and terminates at a point spaced from the elevated point, and said groove decreasing in depth and width toward the forward end of the head.

1,018,928. HARROW. WILLIAM E. ROSS, Duquoin, Ill. Filed Nov. 28, 1910. Serial No. 594,609. (Cl. 97—44.)



1. The combination with a harrow having a draft beam, of attaching means including an elongated attaching iron, a lifting rod pivotally secured to said attaching iron and to said draft beam, a helical spring secured to said attaching iron and to said beam in advance of said lifting rod, a stand link secured to said draft beam and to said lifting rod and spanning the space between said rod and said spring, and a flexible lifting means attached to said lifting rod.

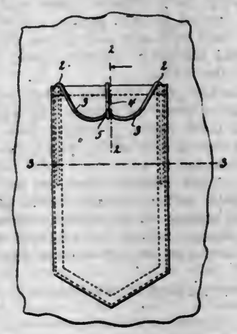
2. The combination with a harrow having a draft beam, of an attaching means including an attaching iron, a lifting rod pivotally connected to said attaching iron and to said draft beam, a helical spring secured to said attaching iron and to the leading end of said draft beam, a stand link secured to the leading end of said draft beam and to said lifting link, means for rocking said lifting rod on its pivot, and combined shifting and bracing means carried by said lifting link including a link loosely connected at one end to sad lifting link, and means at the opposite end of said link for adjustably securing the link to a rigid support.

3. The combination with a harrow of attaching means including an attaching iron, a lifting rod pivotally secured to said attaching iron and depending therefrom, and pivotally secured at its free end to said draft beam, a helical spring terminally secured to said attachment iron and to the leading end of said draft beam, a spacing link carried by the free end of said draft beam and secured to said lifting rod, and combined bracing and shifting means carried by said lifting rod including a link loosely connected at one end to said lifting rod, a swing member adapted to be secured to a rigid support and having a tubular bearing, and an adjusting element loosely connected at one end to the last named link and adjustably held within said bearing.

4. A harrow including a longitudinal draft beam, an attaching iron disposed above and substantially parallel with said draft beam, a lifting rod pivotally secured to the intermediate portion of said beam and inclining upwardly therefrom, a pivotal connection between the upper end of said link and said attaching iron, a helical spring secured to said attaching iron in advance of said lifting rod and secured at its lower end to the free end of said draft beam, and a spacing link connected at one end to the free end of said draft beam and adjustably connected at its opposite end to said lifting rod.

5. A harrow having a draft beam, an attaching iron above and arranged approximately parallel with said draft beam, a lifting rod pivotally connected at one end to the intermediate portion of said attaching iron and pivotally connected at its opposite end to the intermediate portion of said draft beam, a helical spring connected at one end to the forward end of said draft beam and adjustably connected at its opposite end to said attaching iron in advance of said lifting rod, a spacing rod connected at one end to the forward end of said draft beam and adjustably connected at its opposite end to the intermediate portion of said lifting rod, an operating lever on said attaching iron, a sheave on said attaching iron, and a flexible cable trained oer said sheave and connected at its opposite ends to said lifting rod and to said lever.

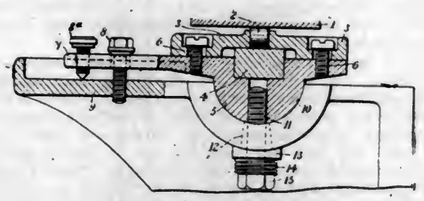
1,018,929. POCKET ATTACHMENT. RAYMOND ROURKE, Rock Glen, N. Y. Filed Mar. 16, 1911. Serial No. 614,918. (Cl. 24—3.)



1. A guard attachment for pockets comprising a transverse bar and means for securing said bar to overlie the outer wall of a pocket, and a guide member mounted on said transverse bar and engaging the upper edge of said wall, said guide member being adapted to aid in inserting an article into the pocket when the article is made to contact with the pocket-edge of said guide.

2. An attachment for pockets comprising a downwardly bent guard provided with a central crimped portion, a pair of parallel arms formed on said guard and adapted to be inserted within a pocket, and a guide member pivotally secured to said guard at said crimped portion, the free terminal of said guide member being bent to form a hook adapted to engage the edge of the pocket, said guide being adapted to aid in opening the pocket when an article is inserted and made to contact with said free terminal, as herein specified.

1,018,930. MACHINE FOR GRINDING ROLLERS. OTTO ALWIN SCHMIDT, Chelmsford, England, assignor to The Hoffmann Manufacturing Company, Limited, Chelmsford, England. Filed Nov. 18, 1911. Serial No. 661,067. (Cl. 51—4.)



1. A machine for grinding rollers comprising in combination, a grinding member, an adjustable holder adapted to present the rollers to the face of the grinding member, an extended part for such holder, and means for moving same, whereby a ready and fine adjustment may be obtained.

2. A machine for grinding rollers, comprising in combination, a grinding member, an adjustable holder adapted to present the rollers to the face of the grinding member and having a curved rocking face working in a curved rocking seat an extended part for such holder, and means for moving same whereby a ready and fine adjustment may be obtained.

3. A machine for grinding rollers comprising in combination, a grinding member, an adjustable holder rocking about a point below said rollers adapted to present the rollers to the face of the grinding member, an extended part to such holder and means for moving same whereby a ready and fine adjustment may be obtained.

4. A machine for grinding rollers comprising in combination, a frame, a grinding member, an adjustable holder adapted to present the rollers to the face of the grinding member rocking about a point below said rollers an extension arm carried by said holder, a setting screw passing through said arm and bearing on the frame, and a screw engaging the holder portion proper and adapted to lock same to the frame.

5. In a machine for grinding rollers and in combination, a frame, a grinding member, an adjustable holder comprising a block having a curved base, adapted to be received in a curved seat in the frame, side plates carried by the base adapted to aline the rollers and present them to the face of the grinding member, an extension arm carried by said holder, setting screws passing through said arm, and bearing on the machine frame, and a securing screw passing through an enlarged opening in the curved seat of the frame and entering the curved base of the holder.

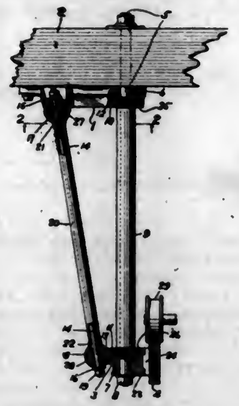
[Claim 6 not printed in the Gazette.]

1,018,931. TRACK-SUSPENDER. ROBERT F. SCOTT and ARTHUR M. HARRINGTON, Philadelphia, Pa., assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 23, 1911. Serial No. 662,034. (Cl. 104—181.)

1. In mechanism of the character described, a shoe having apertures extending therethrough, in combination with tie rods passing through said apertures, one of said apertures having oppositely expanding sections.

2. In mechanism of the character described, a shoe having apertures extending therethrough, in combination with angularly disposed tie rods passing through said apertures, one of said apertures having sections expanding outwardly in opposite directions whereby the angular position of the rod passing therethrough can be varied with relation to the other of said rods.

3. In mechanism of the character described, a shoe having angularly disposed apertures extending therethrough and a socket adjacent to one of said apertures, angularly disposed tie rods extending through said apertures, tubular struts sleeved on said rods, one of said struts being seated in said socket, and a fillet in said socket for engaging said tubular strut seated therein.

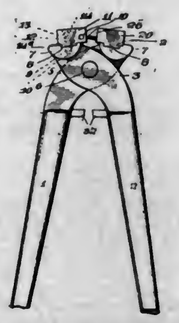


4. In mechanism of the character described, a shoe having an aperture extending therethrough and substantially spherical bearings adjacent to the ends of said aperture, said aperture having sections expanding outwardly in opposite directions, a tie rod extending through said aperture, a bearing member through which said tie rod acts upon said shoe, a strut sleeved on said tie rod, and a bearing member whereby said strut acts on said shoe.

5. In mechanism of the character described, a shoe having an aperture therethrough and an undercut socket surrounding said aperture, in combination with a rod extending through said aperture, a tube sleeved on said rod and seated in said socket, and a fillet in said socket for engaging said tube.

[Claims 6 to 8 not printed in the Gazette.]

1,018,932. TOOL. JOHN R. SHAW, Rural Valley, Pa. Filed Apr. 5, 1911. Serial No. 619,043. (Cl. 164—81.)



1. A tool of the type described comprising pivoted handles, heads carried by the outer ends of said handles, jaws detachably connected to said heads, one of said jaws having a groove formed therein and openings adapted to receive a piece of wire transversely of said groove, and an extension carried to the other jaw and adapted to enter said groove and cut a piece of wire held by said jaw to provide the same with shoulders whereby two cut pieces of wire can be interlocked.

2. A tool of the type described comprising pivoted handles, heads carried by the outer ends of said handles, jaws detachably connected to said heads, one of said jaws having a transverse groove formed therein, ribs carried by the bottom of said groove, said jaws having openings formed therein to receive the end of a piece of wire, and an extension carried by the other of said jaw and adapted to enter said groove and cut the piece of wire held by said jaw and provide the same with shoulders, substantially as described.

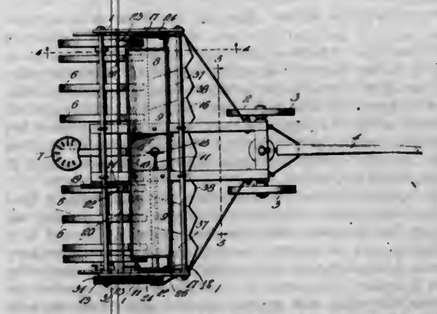
3. In a tool of the type described comprising pivoted handles, jaws detachably connected to the outer ends of said handles, one of said jaws having a transverse groove formed therein and openings adapted to receive a piece of wire, and an extension carried by the other jaw and adapted to enter said groove and provide the wire held by the other jaw with shoulders whereby two wires can be interlocked.

4. A tool of the type described comprising handles, having the outer ends thereof pivotally connected together, heads carried by the pivoted ends of said handles, a male jaw detachably connected to one of said heads, a female jaw detachably connected to the other said head, said female jaw having a transverse groove formed therein, longitudinal ribs upon the bottom of said groove, said female jaw having openings formed therein whereby a piece of wire can be arranged transversely of said groove, an extension carried by said male jaw and adapted to enter the groove of said female jaw, a depending rib carried by said extension and adapted to cut the end of the wire mounted in said female jaw, said extension having the bottom thereof shaped to coöperate with the ribs of said female jaw in providing the piece of wire with shoulders, whereby two wires similarly cut can be interlocked, substantially as described.

5. A wire cutting tool comprising two pivotally-connected handles, jaws carried by the outer ends of said handles, one of said jaws being a male and the other a female jaw, the female jaw having a transverse groove and provided with wire-receiving means, the wire being received in the jaw longitudinally of the latter, a cutting rib carried by the bottom of said transverse groove, and a cutter carried by the male jaw, said cutter being received when the jaws are closed in the transverse groove of the female jaw and coöperating with the rib of the female jaw to provide the wire with a transverse groove.

[Claims 6 and 7 not printed in the Gazette.]

1,018,933. SEED-DRILL. FRANK M. SHELDEN, Newcastle, Wyo. Filed May 1, 1911. Serial No. 624,424. (Cl. 111—18.)



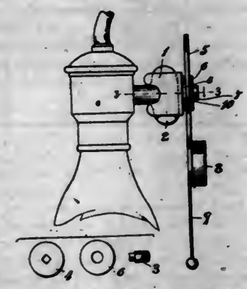
1. In a seed drill, a casing having a seed opening at a point intermediate the ends thereof and provided with a series of seed outlet openings, a seed distributing means located in the casing, a seed selecting and dropping device journaled for rotation in the casing in advance of the distributing means and having peripheral recesses adapted to register at times with the seed outlet openings of the casing, and furrow openers attached directly to the casing, and projecting beyond the forward side thereof.

2. In a seed drill, a casing having a seed inlet opening and a seed outlet opening, means for distributing the seed along the casing, a seed selecting and dropping means located in the casing, and a furrow opener attached to the casing and adapted to lift the furrow slice over the casing and deposit the same in the furrow behind the casing.

3. In a seed drill, a casing having seed outlet openings and provided at its ends with shoes, means for delivering seed to the casing at a point between the end portions, a seed distributing drum located within the casing, means for operating said drum which is housed within a shoe at one end of the casing, a seed conveying drum also located within the casing and arranged to convey seed from the distributing drum to the outlet openings of the casing, means for operating the second mentioned drum from the first mentioned drum and housed within the other shoe, and means carried by the casing for opening furrows in the soil in advance of the said outlet openings.

4. A seed drill, comprising a frame supported upon a journaled member, a hopper carried by the frame, said frame having guides, a furrow opener located below the frame, means for conveying seed from the hopper to the furrow opener, arcuate arms attached to the furrow opener and trained through the guides, a lever mechanism mounted upon the frame and operatively connected with the guides to raise and lower the same and the furrow opener.

1,018,934. ELECTRIC-LIGHT SWITCH. CLAUDE P. SMITH, Oak Park, Ill. Filed May 19, 1911. Serial No. 628,186. (Cl. 240—123.)



1. An extension switch for electric snap buttons comprising a resilient button-engaging clip, a shaft fixed to the clip, a lever mounted for limited revolution on said shaft and means carried by the lever to bind the lever to the shaft in the movement of the former in one direction.

2. An extension switch for electric snap buttons comprising a resilient button-engaging clip, a shaft fixed to the clip, a lever mounted for limited revolution on the shaft and provided with a cam slot, a locking roller carried by the slot and adapted in movement of the lever in one direction to bind the latter to the shaft and to release the shaft and lever from binding engagement in the movement of the lever in the opposite direction.

3. An extension switch for electric snap buttons comprising a resilient button-engaging clip, a shaft fixed to the clip, a lever carried by the shaft, and connected to a cord and a weight adapted respectively to move said lever in opposite directions, and means carried by the lever and adapted to bind the shaft to the lever in the cord-influenced movement of the lever and to release the shaft and lever from binding engagement in the weight-influenced movement of the latter.

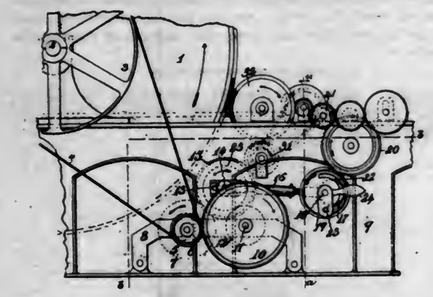
4. An extension switch for electric snap buttons comprising a resilient button-engaging clip, a shaft fixed to the clip, a lever mounted for limited revolution on said shaft and provided with a cam slot, a cord connected to the lever and adapted to move the same in one direction, a weight carried by the lever and adapted to move the

latter in an opposite direction, and a locking roller carried by the slot and adapted to bind the lever to the shaft in the cord-influenced movement of the lever and to release the shaft and lever from binding engagement in the weight-influenced movement of the lever.

5. An extension switch for electric snap buttons comprising a resilient button-engaging clip, a shaft integral with said clip, a lever mounted for limited revolution on said shaft, a ball clutch intermediate said lever and shaft, a cord connected to one end of said lever and adapted to move the same in one direction, a weight carried by the opposite end of said lever and adapted to move the latter in an opposite direction upon the release of the cord, said ball clutch adapted to operatively connect the lever to the shaft in the movement of the former under the influence of the cord and to disconnect said lever and shaft upon the release of the cord under the influence of the weight.

[Claim 6 not printed in the Gazette.]

1,018,935. STRIPPER FOR CARDING-MACHINES. ROBERT H. SMITH, Spartanburg, S. C., assignor of one-eighth to John A. Law, Spartanburg, S. C., and eighteen one-hundredths to Thomas L. Camp and eighteen one-hundredths to Edward M. Durant, Atlanta, Ga. Filed Jan. 20, 1911. Serial No. 603,780. (Cl. 19—15.)



1. In combination with a carding machine having a main cylinder and a licker-in, of a stripping-roll for the main cylinder that is mounted and associated with means for moving said stripping-roll in and out of engagement with the main cylinder, a scavenger-roll mounted to be in constant engagement with the licker-in and to be engaged by the stripping-roll when said roll is moved out of engagement with the main cylinder.

2. In a carding machine, a main cylinder and a licker-in, a stripping-roll mounted to be moved into engagement with the clothing of the main cylinder for a short periodic engagement therewith, means for rotating the stripping-roll so that its surface will travel faster than the surface of the main cylinder, means for moving the stripping-roll away from the main cylinder and means for changing the direction of rotation thereof subsequent to its removal from the main cylinder and means for taking the strippings from the stripping-roll and placing them in the path of the clothing of the licker-in.

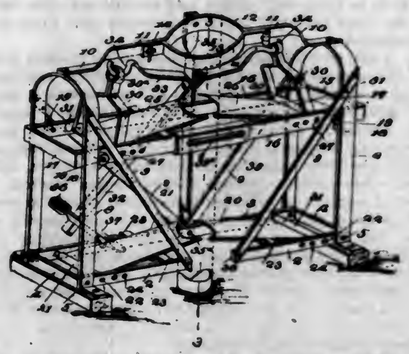
3. The combination in a carding machine, a device for cleaning the clothing of the main cylinder thereof comprising a stripping-roll mounted and associated with means for moving the stripping-roll in and out of engagement with the clothing of the main cylinder and to have the direction of its rotation reversed at the end of each movement, a scavenger-roll for engagement with the stripping roll at the limit of its movement away from the main cylinder and a licker-in that is in constant engagement with the scavenger-roll.

4. In a carding machine, a main cylinder, a rotative stripping-roll, carriers therefor, means for periodically reciprocating the carriers of the stripping-roll so that the stripping-roll will engage a part of the main cylinder of the carding machine, driving means organized to reverse the direction of rotation of the stripping-roll at the end of each reciprocation and means for taking fiber from the stripping-roll and placing the same upon the main cylinder.

5. In a carding machine, a main cylinder and its licker-in, a stripping-roll for the main cylinder, means for supporting and means for reciprocating the stripping-roll to effect periodic engagements of the stripping-roll with the main cylinder, a scavenger-roll with which the stripping-roll engages when moved out of engagement with the main cylinder and means for reversing the direction of rotation and changing the speed of the stripping-roll.

[Claims 6 to 18 not printed in the Gazette.]

1,018,936. PIPE LIFTING AND LOWERING JACK. THOMAS MONSON SMITH, Mullin, Tex. Filed May 19, 1910. Serial No. 562,292. (Cl. 166—7.)



1. A pipe lifting device of the character described including a base frame, supports on the ends of the base frame, a transverse cross-bar on said supports having means for guiding the pipe, a movable frame guided by said supports, a lever for raising the movable frame relative to the base frame, and dogs on the base frame and movable frame for engaging a pipe.

2. A pipe lifting mechanism of the character described comprising a base frame, oppositely disposed dogs mounted in said frame adapted to engage a pipe, supporting yokes at the ends of the base frame, a pipe guiding bar mounted on the upper ends of the supporting yokes, a movable frame having sliding engagement with the yokes and mounted in alinement with the fixed frame, pipe engaging dogs mounted on the movable frame and oppositely disposed to each other, a lever operatively mounted upon the base, and a link engaging the lever with the movable frame.

3. In a device of the character described, a base frame composed of parallel side-bars, dogs pivotally supported between said side-bars, means for supporting the dogs in an upwardly inclined direction, oppositely disposed yokes on the ends of the frame, a longitudinally extending guide-bar mounted on said yoke, links attached to the movable frame, means for engaging the links to raise or lower the movable frame, and oppositely disposed dogs pivoted on the movable frame and extending toward each other at an upward inclination.

4. A device of the character described comprising a fixed frame composed of parallel side-bars, dogs pivoted between the side-bars and extending upwardly toward each other, means for raising the free end of one of said dogs, yokes on the opposite ends of the base frame, a connecting bar between said yokes, a movable frame supported between the yokes and guided thereon, said frame comprising parallel spaced side-bars, oppositely disposed dogs pivoted in said movable frame, means for supporting the dogs at an inclination to the movable frame, links pivoted between the side-bars of the movable frame, and means mounted upon the frame of the machine and engaging said links for raising and lowering the movable frame.

5. A pipe lifting device of the character described, including a base frame having parallel side bars, the side bar on one side of the frame being formed in two sections spaced from each other to permit the insertion of a pipe, supports on the ends of the base frame, a transverse cross bar on said supports deflected at its middle to partially surround the pipe, a bowed member detachably mounted upon the cross bar opposite said deflected portion to partially inclose said pipe, a movable frame guided by said supports and comprising spaced side bars, one of said side bars being formed in two sections to permit the insertion of a pipe, a sleeve detachably connecting said sections of the side bar, dogs on the base frame and on the movable frame for engaging a pipe, and means mounted on the supporting frame for raising and lowering the movable frame.

[Claims 6 and 7 not printed in the Gazette.]

1,018,937. FLOAT-VALVE. WILLIAM E. SNAMAN, Pittsburgh, Pa. Filed Sept. 23, 1910. Serial No. 583,862. (Cl. 4—5.)

1. A float valve comprising a hollow substantially spherical rigid body-portion formed of two flanged sections, with the flange of one section overlapping the flange of the other section thereby connecting the sections together, the overlapping portions of said flanges extending around and spaced from the lower section of the body-portion thereby providing a recess, a semi-spherical resilient seating member arranged against the lower section of said body and extending in said recess and having its upper portion maintained in position by the overlapping portions of said flanges, a valve stem for said body-portion, and means for securing the lower part of said seating member against said lower section.

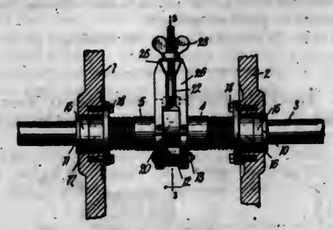
2. A float valve comprising a hollow substantially spherical rigid body-portion formed of two flanged sections, with the flange of one section overlapping the flange of the other section thereby connecting the sections together, the overlapping portions of said flanges extending around and spaced from the lower section of the body-portion thereby providing a recess, a semi-spherical resilient seating member arranged against the lower section of said body and extending in said recess and having its upper portion maintained in position by the overlapping portions of said flanges, a valve stem extending through said body-portion, means carried by the valve stem for arresting movement of the body-portion in one direction, and means carried by the valve stem for maintaining the lower portion of said seating member against said lower section.

3. A float valve comprising a hollow substantially spherical rigid body-portion formed of two flanged sections, with the flange of one section overlapping the flange of the other section thereby connecting the sections together, the overlapping portions of said flanges extending around and spaced from the lower section by the body-portion thereby providing a recess, a semi-spherical resilient seating member arranged against the lower section of said body and extending in said recess and having its upper portion maintained in position by the overlapping portions of said flanges, a valve stem extending through said body-portion, means carried by the valve stem for arresting movement of the body-portion in one direction, means carried by the valve stem for maintaining the lower portion of said seating member against said lower section, and means to provide a vent opening for said body-portion.

4. A float valve comprising a hollow substantially spherical rigid body-portion formed of an upper and a lower flanged section, the flange of the upper section overlapping the flange of the lower section whereby said sections are connected together, the overlapping portions of said flanges extending around and spaced from said lower section to provide a recess, a removable semispherical resilient seating member arranged against the lower section and extending in said recess and having its upper portion maintained in position by said flanges, a valve stem extending through said body-portion and provided with means for arresting movement in one direction of said body-portion, and removable means carried by the lower end of the valve stem for maintaining the lower portion of the seating member against said lower section.

5. A float valve comprising a hollow substantially spherical rigid body-portion formed of an upper and a lower flanged section, the flange of the upper section overlapping the flange of the lower section whereby said sections are connected together, the overlapping portions of said flanges extending around and spaced from said lower section to provide a recess, a removable semi-spherical resilient seating member arranged against the lower section and extending in said recess and having its upper portion maintained in position by said flanges, a valve stem extending through said body-portion and provided with means for arresting movement in one direction of said body-portion, removable means carried by the lower end of the valve stem for maintaining the lower portion of the seating member against said lower section, and means to provide a vent opening for said body-portion.

1,018,938. PACKING-BOX. WILLIAM T. SNELL, Bisbee, Ariz. Filed July 26, 1911. Serial No. 640,646. (Cl. 121—109.)



1. A packing box comprising a cylindrical member having a flanged outer end adapted to be positioned on a piston rod, suitable packing material surrounding the piston rod adjacent the said flanged end of the member, means for holding the packing material adjacent the said end, together with other means for engagement with the packing material whereby the pressure thereon may be varied in order to hold it in close engagement with the piston rod.

2. A packing box comprising a cylindrical member adapted to surround a piston rod, the outer end of the member being provided with a flange, packing material adjacent the flange and surrounding the piston rod, other means adjacent the packing material and extending around the rod for holding the material in position, together with movable means embodying a spring in engagement with the packing material whereby the pressure on the same may be varied, thereby preventing leakage.

3. A packing box comprising a cylindrical member adapted to be positioned on a piston rod, packing material at one end of the said member, the said end being adapt-

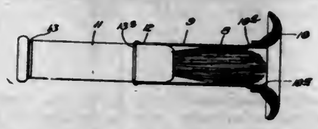
ed to be positioned within the opening in the cylinder head through which the rod passes, there being means on the member for engagement with the packing material in order to hold it secured in position, a flange at the opposite end of the said member, packing material adjacent the flange and surrounding the piston rod, another member also surrounding the piston rod and adjacent the packing material in order to hold the same in position on the rod, together with means embodying a spring surrounding the packing material, and a bolt in engagement with the spring whereby tightening of the spring may increase the pressure on the packing material on the rod in order to prevent leakage.

4. A packing box comprising a cylindrical member adapted to be positioned on a piston rod, the opposite end portions of the member meing provided with peripheral flanges, one flange being adapted to be positioned within the opening in the cylinder head through which the said rod passes, packing material on the member adjacent the flange, together with other means carried by the member and adapted for engagement with the cylinder head in order to securely position the packing material therein, a quantity of packing material adjacent the other flanged end of the said member and surrounding the said piston rod, means adjacent the packing material and in engagement with the piston rod for engagement with the packing material in order to secure it in position, together with means embodying a spring member in engagement with the packing material for applying pressure thereto in order to secure it on the piston rod, thereby preventing leakage.

5. A packing box comprising a cylindrical member adapted to be positioned on a piston rod, the opposite ends of the member being provided with flanges, one of the flanges being adapted to enter the opening in the cylinder head through which the rod passes, a suitable quantity of packing material contained adjacent the said flange and within the said opening, together with a gland positioned on the said member adapted to engage the cylinder head to hold the material secured in position, a quantity of suitable packing material on the piston rod and adjacent the other flanged end of the said member, a member encircling the piston rod adjacent the packing material and opposite the said flange, together with means for securing the flange and the said member with the packing material between them, and other means embodying a spring in engagement with the packing means whereby pressure thereon may be varied in order to prevent leakage.

[Claims 6 to 13 not printed in the Gazette.]

1,018,939. SHAVING-BRUSH. HARRISON D. STERRICK, Pittsburgh, Pa. Filed Apr. 30, 1910. Serial No. 558,688. (Cl. 15—38.)

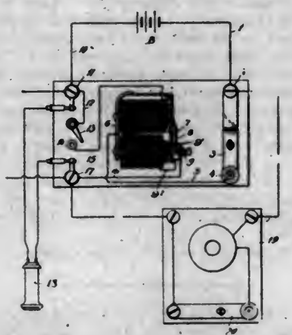


1. The combination of a tube, an annular massage device attached to one end of the tube, a brush slidably mounted in the tube and in said massage device, whereby the brush and the massage devices may be alternately used, and without reversing the handle.

2. A shaving brush comprising a tubular telescoping handle containing the bristles and brush head, said tubular handle being provided with a massage device located at the end of the tube through which the bristles protrude, substantially as described.

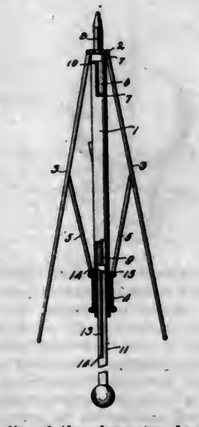
1,018,940. ELECTRICAL COMMUNCATING APPARATUS. THOMAS M. ST. JOHN, New York, N. Y. Filed Dec. 4, 1909. Serial No. 531,305. (Cl. 178—45.)

An apparatus for transmission of telegraphic signals comprising a transmitter, a source of electrical energy, an electro-magnetic buzzer, a circuit connection including the winding of the buzzer, the transmitter and said



source, and a derived circuit including the circuit breaking contacts of the buzzer.

1,018,941. COLLAPSIBLE UMBRELLA. CARL STORM, Ann Arbor, Mich. Filed June 15, 1911. Serial No. 633,312. (Cl. 135—46.)

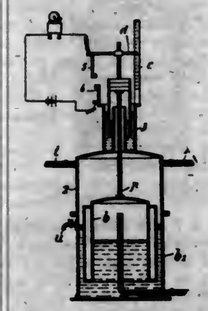


In an umbrella of the character described a rod comprising a main tubular section having therein a locking slot, a tip slidably mounted in the outer end of said tubular section, a locking pin arranged in said tip and adapted to be engaged with the locking slot in said tubular section whereby said tip is locked in a protjected or retracted position, a longitudinally extending stem formed on said tip and projecting through said tubular section, a handle member slidably mounted in the inner end of said tubular section, said member having formed in its inner end a longitudinal socket and a locking slot, said socket being adapted to receive the end of the extension on said tip, and a locking pin arranged in said stem and adapted to engage said slot whereby the handle is locked in projected or retracted positions.

1,018,942. MEANS FOR INDICATING THE PRODUCTION OF GAS. HUGO STRACHE, Vienna, Austria-Hungary. Filed Mar. 11, 1908. Serial No. 420,332. (Cl. 73—1.)

In apparatus of the character described, the combination, with a gas supply main or pipe having a throttling device constricting the passage therethrough, of a branch pipe opening into said main on the supply side of said throttling device, a closed chamber, a liquid seal of the

bell type in said closed chamber for sealing said branch pipe, the bell of said liquid seal having double walls inclosing an empty chamber, means for establishing communication between said closed chamber with the dis-



charge side of said throttling device, a rod attached to said bell and passing through said closed chamber, a liquid seal of the bell type for sealing said rod, and a scale arranged in operative relation with respect to said rod.

1,018,943. SEAL FOR PACKING-CASES. SIGMUND STROH, London, England. Filed May 16, 1910. Serial No. 561,582. (Cl. 70—100.)

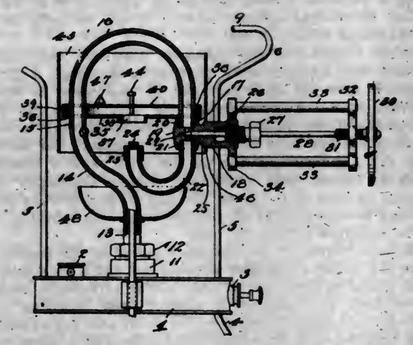
1. A seal comprising a body part of approximately circular form, a plurality of pairs of individual projections from and approximately in the plane of said body part and pointed arms extending at right angles to said body part and having holes therein, the width of the seal across said projections being greater than the width across that part of the seal intermediate of said pairs of projections.

2. A seal comprising a body part of approximately circular form, a plurality of pairs of individual projections from said body part and approximately in the same plane therewith, pointed arms extending at right angles to said body part and having holes therein and pointed arms extending at right angles to said projections, the width of the seal across said projections being greater than the width across that part of the seal intermediate of said pairs of projections.

3. A seal comprising an embossed body part of approximately circular form, a plurality of pairs of individual projections from said body part and approximately in the same plane therewith, pointed arms extending at right angles to said body part and oppositely disposed on each side thereof and having holes therein, pointed arms extending at right angles to said projections and disposed in planes parallel to said first-named pointed arms, the arms on one side of said body part being curved in cross section, and a pin adapted to be driven through the said holes and having barbs adapted to engage said arms, the width of the seal across said projections being greater than the width across that part of the seal intermediate of said pairs of projections, substantially as set forth.

4. A seal comprising an embossed body part of approximately circular form, a plurality of pairs of individual projections from said body part extending in approximately the same plane with the body part, pointed arms extending at right angles to said body part and oppositely disposed on each side thereof, and having holes therein, pointed arms extending at right angles to said projections and disposed in planes parallel to said first-named pointed arms, said arms being curved in cross section, and the width of the seal across said projections being greater than the width across that part of the seal intermediate of said projections.

1,018,944. HYDROCARBON-VAPOR BURNER. CHARLES H. SWANSON, Aurora, Ill. Filed Sept. 1, 1910. Serial No. 580,071. (Cl. 158—65.)



1. The combination in a hydrocarbon burner, of a fuel feed tube elongated and formed with a semi-circular generating channel, an extension of said tube provided with an open nozzle, a head connecting said tubes and formed with a passage therein, a valve to regulate said passage, a cup with an open center located directly above said nozzle, and a plurality of sectional plates forming the cover of said cup and provided with a foraminous area.

2. The combination in a hydrocarbon burner, of a fuel feed tube elongated and fashioned with a semi-circular generating channel, an extension of said tube provided with a nozzle, a head connecting said tubes and formed with a passage therein, a valve to regulate said passage, a cup forming a mixing chamber secured to said feed tube and having an opening directly above said nozzle, a cover to said chamber composed of sectional plates, each having a perforated area, and a shield inclosing said generating channel, burner and mixing chamber, said shield having tongues resting on the walls of the mixing chamber and also supported on said head.

1,018,945. COMBINED SPOOL AND CUTTER. JUSTIN KAY TOLES, Berkeley, Cal. Filed Dec. 8, 1910. Serial No. 596,233. (Cl. 206—59.)

1. In a device of the character described, the combination of a spool, a rolled strip upon the spool, a slotted guide mounted upon one end of the spool so as to be adjustable radially thereon, and a blade carried by the slotted guide and bearing against the periphery of the rolled strip so as to be engaged by the unwound portion thereof for severing the same.

2. In a device of the character described, the combination of a spool, a rolled strip upon the spool, a slotted guide adjustably mounted upon one end of the spool so as to be movable radially thereon, a plate projecting laterally from the slotted guide and bearing against the periphery of the roll so as to be readily engaged by the

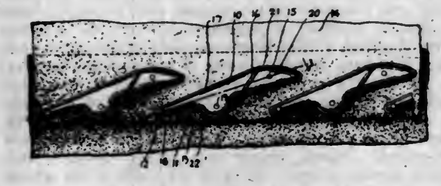
unwound portion of the strip for severing the same, and a slitting member mounted upon the plate and projecting therefrom so as to slit the strip longitudinally as it is unwound from the roll.

3. In a device of the character described, the combination of a spool, a rolled strip mounted upon the spool, a guide member mounted upon one end of the spool, a plate carried by the guide member and bearing against the periphery of the roll, one side of the plate being formed with a cutting edge while the opposite side of the plate is formed with a finger piece, and a slitting member formed with a returned portion detachably engaging said finger piece, the slitting member serving to slit the strip as it is unwound from the roll.

4. In a device of the character described, the combination of a spool, a rolled strip upon the spool, a guide member mounted upon one end of the spool, a blade carried by the guide member and bearing against the periphery of the spool, one side of the blade being formed with a cutting edge adapted to be employed for severing the unwound portions of the strip, and a slitting member formed with a returned portion adjustably engaging an edge of the plate, the said slitting member projecting inwardly so as to slit the strip longitudinally as it is withdrawn from the roll.

5. In a device of the character described the combination of a cylinder provided adjacent one end with a collar, side plates applied to the ends of the cylinder, a rolled strip upon the cylinder, a slotted guide receiving the cylinder and mounted between the collar and the adjacent side plate so as to be radially adjustable, and a blade carried by the slotted guide and bearing against the periphery of the rolled strip.

1,018,946. CLEAT FOR SECURING ROOFING. HENRIETTA WOOD TOPPING, Chicago, Ill. Filed Jan. 31, 1911. Serial No. 605,782. (Cl. 108—7.)



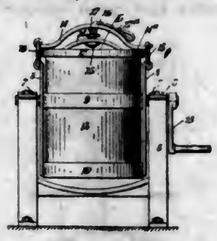
1. A cleat having an angular edge extending from one terminal of the cleat to the other, so that a plurality of cleats may be disposed with their said edges at one side of the apexes of the angles in alinement and with their said edges at the other side of the apexes overlapping neighboring cleats respectively.

2. A cleat arched transversely and having two terminals spaced from each other, the cleat having an angular edge extending from one terminal to the other so that a plurality of cleats may be disposed with their said edges at one side of the apexes of the angles in alinement, and with their said edges at the other side of the said apexes overlapping neighboring cleats respectively.

3. A cleat having two bearing points spaced apart so that a plurality of cleats may be disposed with their said bearing points in alinement, the cleat having a terminal disposed obliquely relatively to the line of the bearing points, so that the said terminals of the plurality of cleats will overlap neighboring cleats respectively.

1,018,947. CHURN. CHARLES LOUIS WALL, Strasburger, Nebr. Filed June 10, 1911. Serial No. 632,317. (Cl. 31—18.)

1. In a churn a frame having bearings, a cage having trunnions journaled in the bearings, a churn body normally disposed in the cage, a lid for the churn body, an arm pivotally mounted to swing upwardly relatively to the cage and normally disposed over the lid, and a link pivoted to the cage and spaced from the pivoted end of the arm for engaging the free terminal of the arm.



2. In a churn a frame having bearings, a cage having trunnions journaled in the bearings, a churn body normally disposed in the cage, a lid for the churn body and provided with an orifice, a member adjustable in the orifice, an arm pivotally mounted on the cage and normally disposed over the lid, and a clasp on the cage and normally spaced from the pivoted end of the arm for engaging the free terminal of the arm.

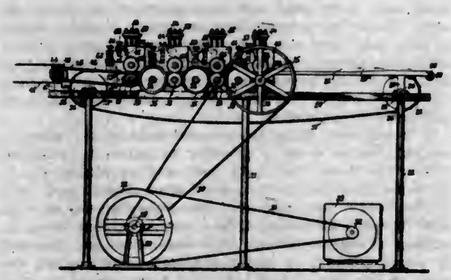
3. In a churn a frame having bearings, a cage having trunnions journaled in the bearings, a churn body normally disposed in the cage, a lid for the churn body, a link pivoted to the cage, an arm pivoted to the link and adapted to engage the lid, and locking means for the arm mounted on the cage.

4. In a churn a frame having bearings, a cage having trunnions journaled in the bearings, a churn body normally disposed in the cage, a lid having an orifice for the churn body, a member adjustable in the orifice, a link pivoted to the cage, an arm pivoted to the link, and adapted to engage the adjustable member, and locking means for the arm mounted on the cage.

5. In a churn a frame having bearings, a cage having trunnions journaled in the bearings, a churn body normally disposed in the cage, a lid for the churn body, arms secured to and depending from the lid, a draining cup secured to the arms, an arm pivotally mounted on the cage and normally disposed over the lid, and a locking means for the arm mounted on the cage.

[Claims 6 to 11 not printed in the Gazette.]

1,018,948. EMBROIDERY-PRINTING MACHINE. ROBERT WALSER, New York, N. Y. Filed Nov. 21, 1910. Serial No. 593,406. (Cl. 101—90.)



1. A machine of the class described comprising a frame, a plurality of successive printing devices carried thereby in predetermined relationship to each other, a movable carrier for advancing embroidery into operative relation successively, with said printing devices, fabric-engaging means upon said carrier, having a definite relation with respect to the pattern of the embroidery, whereby the design applied by the printing devices bears a definite relation to the pattern of the embroidery, and means for simultaneously operating said printing devices and said carrier.

2. A machine of the class described comprising a frame, printing means carried thereby, feed mechanism for advancing embroidered fabric into operative relation with said printing means, said feed mechanism including fabric-engaging means having a definite predetermined relation with respect to the pattern of the embroidered fabric, whereby the design applied to the fabric by the printing means bears a definite relation to the embroidered pattern of the fabric, and means for simultaneously operating said printing means and said feed mechanism.

3. In a machine of the class described, in combination, printing means, feed mechanism for carrying embroidered fabric into operative relation with said printing means, and means associated with said feed mechanism, for engaging the fabric, said last mentioned means having a definite, predetermined relation with respect to the pattern of the embroidered fabric, whereby the design applied by the printing means bears a definite, predetermined relation to the pattern of the embroidered fabric, so that the embroidered pattern and the printed pattern are caused to register.

4. In a machine of the class described, a printing device and an endless carrier having a run arranged to travel under said device and to carry embroidered fabric into operative relation with said device, said carrier having fabic-engaging means for holding multiple needle embroidery repeats thereon, said fabric-engaging means having a definite, predetermined relation with respect to the pattern of the embroidered fabric, whereby the design applied by the printing design bears a definite relation to the pattern of the embroidered fabric.

5. In a machine of the class described, a printing device including a printing roll, a table mounted under said roll, an endless carrier having a run arranged to travel along said table under said roll and guided marginally by said table, and means for holding multiple needle embroidery repeats upon said run of said carrier in predetermined relationship with said printing roll.

[Claims 6 to 10 not printed in the Gazette.]

1,018,949. SHAVING-STICK HOLDER. PHILIP K. WILLIAMS, Glastonbury, Conn., assignor to J. B. Williams Company, Glastonbury, Conn., a Corporation of Connecticut. Original application filed Dec. 27, 1910, Serial No. 599,585. Divided and this application filed Sept. 25, 1911. Serial No. 651,086. (Cl. 206—56.)

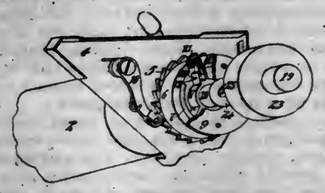
1. In a device of the character described, a stick of soap, a holder arranged to receive one end of said soap stick, a contracted entrance at one end of the holder arranged to snugly receive the stick, a step within the holder also arranged to snugly receive the stick, said contraction and said step constituting two bearings, said bearings being spaced apart, a recess in the side of the soap stick, said recess being located adjacent the space between said bearings, and an anchor of plastic material located within the space between said bearings and extending into the recess in the side of the stick adjacent thereto.

2. In a device of the character described, a stick of soap, a holder arranged to receive one end of said soap stick, a contracted entrance at one end of the holder arranged to snugly receive the stick, a step within the holder also arranged to snugly receive the stick, said contraction and said step constituting two bearings, said bearings being spaced apart, a recess in the side of the soap stick, said recess being located adjacent the space between said bearings, and an anchor of plastic material located within the space between said bearings and extending into the recess in the side of the stick adjacent thereto, in combination with a protecting case coacting with the holder, said case being open at one end only, the contracted end of said holder being arranged to snugly fit the open end of the case to make a stopper fit, said case being of sufficient internal dimensions to receive the soap stick entirely within the same.

4. In a device of the character described, a soap stick, a holder at one end of said stick, the outer end of said holder being constracted to snugly fit around the stick near one end, a step rigidly and immovably mounted in the holder being contracted to snugly fit around the stick near from said contracted part, said step being arranged to snugly fit upon and receive the extreme end of said soap stick, and means in the space between said step and said contracted part to anchor said soad stick securely within the holder to prevent endwise movement of the stick in said holder.

5. In a device of the character described, a soap stick having a recess in its side wall above the lower end, a holder for one end of said stick, the outer end of said holder being contracted to snugly fit around the stick near one end, a step mounted in the holder below the contracted part thereof and spaced apart therefrom, said step being arranged to snugly fit upon and receive the extreme end of said stick, and means directly above said step to anchor the soap stick securely within the holder to prevent endwise movement thereof, said anchoring means comprising a plastic material located within the holder and projecting into the aforesaid recess in the side wall of the soap stick at a point above the step.

1,018,950. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 19, 1910. Serial No. 587,854. (Cl. 197—123.)



1. In a typewriting machine, the combination with a line-space wheel and a platen, said wheel having a V-shaped groove, of a slotted barrel fast with the platen and on which the wheel is loosely mounted, and a clutch head within the barrel and having dogs projecting through slots in the barrel to wedge between the walls of said V-shaped groove.

2. In a typewriting machine, the combination with a line-space wheel and a platen, said wheel having a V-shaped groove, of a slotted barrel fast with the platen and on which the wheel is loosely mounted, a clutch head within the barrel and having dogs projecting through slots in the barrel to wedge between the walls of said V-

shaped groove, and a finger piece to control the head and dogs.

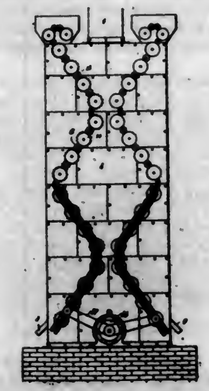
3. In a typewriting machine, the combination with a line-space wheel, and a platen and axle rotatable relatively thereto, of a slotted barrel fast on the axle, a line-space wheel having a drum loosely mounted on the barrel, an axially slidable head, clutch dogs pivoted on the head and extending through the slots in the barrel, said drum having a groove, the walls of which are engaged by the dogs, and a finger piece controlling the head.

4. In a typewriting machine, the combination with a line-space wheel having a V-shaped groove, and a platen and axle rotatable relatively thereto, of an axially slidable head turning with the axle, and having radially extending ears, and dogs hinged between the ears and wedging into said V-shaped groove.

5. In a typewriting machine, the combination with a line-space wheel, and a platen and axle adapted to turn relatively thereto, of an axially movable head having a slotted plunger supported on the axle, a turning knob through which the plunger extends, a pin passing through the slot in the plunger to secure the knob to the axle and to spline the plunger to the axle, and a dog on the head to bite the line-space wheel.

[Claims 6 to 13 not printed in the Gazette.]

1,018,951. SAND-DRYING FURNACE. FREDERICK W. ADLOF, New Kensington, Pa. Filed Jan. 12, 1911. Serial No. 602,148. (Cl. 34—34.)



1. In a sand-drying furnace, a casing having an aperture therein, a collar mounted in said aperture and having a series of longitudinally-extending slots therein, a cylinder shaft journaled in said collar and extending within said casing, a cylinder concentric with and surrounding said shaft, and radially disposed members supporting said cylinder in position, said members having their inner ends in sliding engagement with said slot, whereby expansion may take place between the several parts.

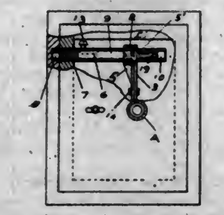
2. In a sand-drying furnace, a casing, two sets of rollers mounted in said casing, said rollers arranged in a zigzag form, whereby a relatively large number of rollers may be inserted within the casing, and a pair of feed rollers positioned above the topmost roller of each set.

3. In a sand-drying furnace, a casing, a series of cylinders arranged in sets and mounted in said casing, gears rigidly mounted upon said cylinders, and pinions mounted upon said casing and meshing with the adjacent gears of each set, whereby the cylinders of each set are rotated in the same direction.

4. In a sand-drying furnace, a casing having a series of cylinders therein, shafts carrying said cylinders and projecting through said casing, a guideway mounted upon the outside of said casing, and sliding journal boxes mounted in said guideway and carrying said shafts.

5. In a sand-drying furnace, a series of parallel rollers mounted in a vertical zigzag position within said casing, and buffer plates disposed at the point of each change of direction of said rollers, whereby material in its course down the different rollers will be deflected from said buffer plates on to the next series of rollers.

1,018,952. AUXILIARY LOCKING DEVICE FOR SAFE AND VAULT DOORS. ARTHUR E. ANAKIN, Salt Lake City, Utah. Filed Aug. 25, 1911. Serial No. 645,964. (Cl. 109—3.)



1. In combination, a safe or vault comprising a door, main locking means therefor including a spindle, auxiliary locking means consisting of a bolt, spring means normally tending to project the bolt into engagement with a wall of the safe, a locking member pivoted between its ends upon the door and having one end engaging the bolt to hold the same retracted and inactive, the other end of the locking member engaging the spindle so as to be operated by abnormal movement of the latter.

2. In combination, a safe or vault comprising a door, main locking mechanism therefor, auxiliary locking means comprising a tubular supporting member, a bolt mounted therein, a spring to project the said bolt, an arm supported by said supporting member, a locking member engaging the bolt to hold the same inactive and adjustable on the arm and operable by abnormal movement of the main locking mechanism.

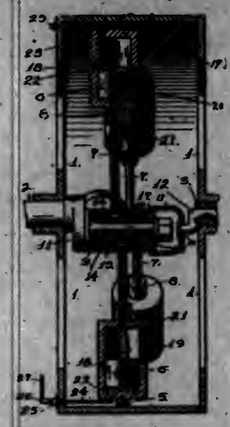
3. An auxiliary locking means for safes comprising a tubular supporting member, a spring actuated bolt mounted therein, an arm movably mounted on said tubular supporting member, a lever adjustably pivoted to said arm, the tubular member having a slot and the bolt having a notch corresponding to said slot and normally engaged by the locking lever to hold the bolt retracted, a door supporting the locking lever, and main locking mechanism on the door comprising a spindle arranged to engage the locking lever to actuate the same and release the bolt on abnormal movement of the main locking mechanism.

4. In combination, a safe or vault, a door therefor, main locking mechanism for the door, auxiliary locking means on the door, a wall of the safe having a recess to cooperate with the auxiliary mechanism, and a frangible cover for said recess.

1,018,953. INTERNAL-COMBUSTION ROTARY ENGINE. WILLIAM BARNES, San Francisco, Cal. Filed June 15, 1909. Serial No. 502,340. (Cl. 123—43.)

1. In a valveless rotary explosive engine, a frame rotatably mounted on fixed shafts, a plurality of cylinders mounted thereon with oscillatory movements, each of said cylinders provided with a piston, a stationary crank, a tubular piston rod connected to each of said pistons and revolubly mounted on said stationary crank, means common to all the piston rods for admitting explosive fluid thereto, and means controlled by the movement of the cylinders for admitting explosive fluid from said tubular piston rods to said cylinders, substantially as described.

2. In a valveless rotary explosive engine, a frame rotatably mounted on fixed shafts, a plurality of cylinders mounted thereon with oscillatory movements, each of said cylinders provided with a piston, a stationary crank, a tubular piston rod connected to each of said pistons and revolubly mounted on said stationary crank, each piston rod having an inlet passage for explosive fluid, ports in said rods for the passage of explosive fluid from said tubular piston rods to said cylinders, and said ports being controlled by the movements of said cylinders, substantially as described.



3. In a valveless rotary explosive engine, a frame rotatably mounted on fixed shafts, a plurality of cylinders mounted thereon with oscillatory movements, each of said cylinders provided with a piston, a stationary crank, a tubular piston rod connected to each of said pistons and revolubly mounted on said stationary crank, each piston rod having an inlet passage for explosive fluid, ports in said rods for the passage of explosive fluid from said tubular piston rods to said cylinders, said ports being controlled by the movements of said cylinders, exhaust ports in the cylinders, and said exhaust ports being controlled by the relative movements of said cylinders and pistons, substantially as described.

4. In a valveless rotary explosive engine, a frame rotatably mounted on fixed shafts, a plurality of cylinders mounted thereon with oscillatory movements, each of said cylinders provided with a piston, a stationary crank, a tubular piston rod connected to each of said pistons and revolubly journaled on said crank, chambers provided in said journals, openings from said chambers to said tubular piston rods, means for admitting explosive fluid to said chambers, and means controlled by the movement of the cylinders for admitting the fluid from the tubular rods to the cylinders, substantially as described.

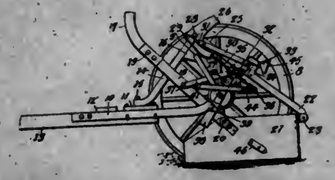
5. In a valveless rotary explosive engine, a frame, fixed shafts rotatably supporting the same, a crank connected with the shafts, a cylinder mounted on said frame with oscillatory movement, a piston in said cylinder, a tubular piston rod connected to said piston and to the crank, a sleeve on said cylinder slidable on said tubular piston rod, a port in said tubular piston rod, said port opening into said cylinder when said cylinder is in one part of its movement, and said port closed in said sleeve when said cylinder is in another part of its movement, and means for introducing the motive fluid into said piston rod, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,954. WHEELED SCRAPER. JOHN BARON, El Centro, Cal. Filed Apr. 4, 1911. Serial No. 618,782. (Cl. 37—33.)

1. A device of the character described, comprising a frame to be moved forwardly upon the ground by aid of draft animals or the like, a shovel connected with said frame and drawn upon the ground, said shovel being mounted to tilt, mechanism connected with said frame and said shovel for preventing said shovel from tilting prematurely, a swinging yoke for controlling said mechanism, and means controllable at will for actuating said swinging yoke.

2. The combination of a frame adapted to be drawn upon the ground by draft animals or the like, a shovel carried by said frame and adapted to tilt, toggle mechanism connected with said frame and with said shovel for preventing premature tilting of said shovel, a swinging yoke supported by said frame for the purpose of actuating said toggle mechanism, an eye carried by said toggle mechanism, a hand lever carried by said frame and provided with a slot, and a flexible connection extending from said yoke through said eye and engaging said hand lever, said flexible connection being movable relatively to said hand lever by aid of said slot, said flexible connection being controllable by movements of said hand lever for the purpose of swinging said yoke in order to actuate said toggle mechanism.



3. In a wheeled scraper, the combination of a movable frame adapted to be drawn upon the ground by draft animals or the like, a shovel carried by said frame and adapted to be tilted, a toggle joint connected with said frame and with said shovel for the purpose of preventing said shovel from tilting prematurely, mechanism for locking said toggle joint, and means controllable by the operator for unlocking said toggle joint abruptly in order to enable said shovel to tilt.

4. A device of the character described, comprising a frame mounted upon vehicular wheels and adapted to be drawn upon the ground by draft animals or the like, a shovel supported in part by said frame and pivotally mounted so as to turn, a pair of toggle links connected together and forming a toggle joint, the ends of which are connected respectively with said frame and said shovel for the purpose of preventing said shovel from tilting prematurely, and mechanism controllable by hand and including a movable member for striking said toggle joint abruptly in order to cause said shovel to bite into the ground and turn by aid of the forward motion of said frame.

5. A device of the character described, comprising a frame adapted to be dragged along the ground by draft animals or the like, a shovel carried by said frame and adapted to be tilted, mechanism connected with said frame and said shovel for preventing said shovel from tilting prematurely, and means controllable at the will of the operator for throwing said mechanism into and out of action, the said means comprising a swinging member, a hand lever, and a flexible connection between the hand lever and the swinging member, the said connection engaging said mechanism.

1,018,955. LEACHING SOLUTION FOR EXTRACTING METALS FROM ORES. JOSÉ BAXERES DE ALZUGARAY, New York, N. Y., assignor to International Metallurgical Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 21, 1907, Serial No. 393,976. Renewed Jan. 26, 1912. Serial No. 673,958. (Cl. 75—185.)

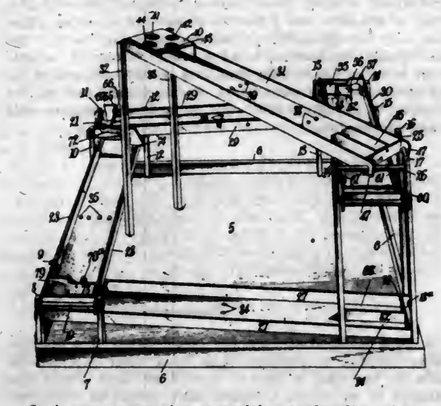
1. The leaching solution for gold and silver sulfids comprising cyanid of potassium, ferrocyanid, calcium bromate, and sodium chlorid.

2. The leaching solution for gold and silver comprising cyanid of potassium, ferrocyanid, a bromin compound and sodium chlorid.

1,018,956. GAME APPARATUS. DANIEL J. BEBON, New York, N. Y. Filed Aug. 16, 1911. Serial No. 644,319. (Cl. 46—62.)

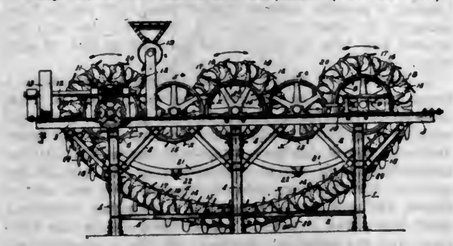
1. A game apparatus comprising a trough provided with a hole, a pair of arms pivotally mounted within said

trough, a guide supported by said arms and movable relatively to said hole, said guide being so positioned as to partially eclipse said hole when said arms occupy a predetermined normal position, and chance controlled mechanism for tilting said arms so as to release a rolling body lodged partially within said hole and disposed partially upon said guide.



2. A game apparatus comprising a plurality of troughs each trough being provided with a plurality of holes through which a game piece may be dropped, a guide partially eclipsing one of said holes, mechanism controllable by the weight of a rolling body for dislodging said guide in order to allow a game piece to drop through the hole associated with said guide, and chance-controlled mechanism for disposing of said game piece after the same drops through said last-mentioned hole.

1,018,957. PRESS. JOHN J. BERRIGAN, Orange, N. J., assignor to Katie S. Berrigan, Orange, N. J. Filed May 25, 1911. Serial No. 629,433. (Cl. 100—37.)



1. In a press, a plurality of wheel members, an endless beltlike linked carrier member looped therearound to give alternating concave and convex bends and a plurality of pairs of transverse presser members secured to said carrier member, one member of each such pair being imperforate, of a shape approximating a segment of a cylinder and swingably secured to the carrier member and the other being perforate, crescent shaped in section and rigidly attached to said carrier member.

2. As a press element, a pair of coöperating presser bars adapted to form a press chamber therebetween, one of said bars being perforated and of crescent shape and the other being relatively heavier and of imperforate material, said other bar having a curved presser face of shape adapted for coöperation with the crescent bar and being provided with end means allowing a pivotal mounting.

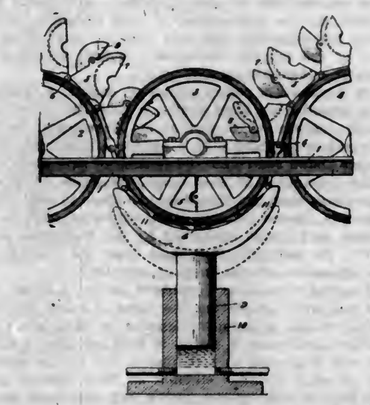
3. As a press element, a pair of substantially triangular carrier members adapted for linking together with similar elements to form beltlike assemblages and a pair of transverse presser bars uniting said carrier elements, one of said bars being perforated, of generally arcuate section and rigidly secured to said carrier members and the other having a curved presser face adapted for coöperation with an arcuate bar, being relatively heavy and imperforate and being pivotally mounted at its ends in said carrier members.

4. As a press element, a plurality of pairs of substantially triangular carrier members linked together at their bases to form a pair of beltlike elements, and a pair of transverse presser bars linking each such pair of carrier elements, one of said bars being perforated, of generally arcuate section and rigidly secured to said carrier members and the other having a curved presser face adapted for coöperation with an arcuate bar, being relatively heavy and imperforate and being pivotally mounted at its ends in said carrier members.

5. As a press element, a plurality of pairs of substantially triangular carrier members linked together at their bases to form a pair of beltlike elements, a pair of transverse presser bars linking each such pair of carrier elements, one of said bars being perforated, of generally arcuate section and rigidly secured to said carrier members and the other having a curved presser face adapted for coöperation with an arcuate bar, being relatively heavy and imperforate and being pivotally mounted at its ends in said carrier members, and means for giving the whole assemblage a concave bend to approximate the arcuate bars and the curved faces of the corresponding pivotally mounted bars and produce compression therebetween.

[Claims 6 to 22 not printed in the Gazette.]

1,018,958. APPARATUS FOR EXPRESSING LIQUIDS FROM SOLIDS. JOHN J. BERRIGAN, Orange, N. J., assignor to Katie S. Berrigan, Orange, N. J. Filed May 25, 1911. Serial No. 629,434. (Cl. 100—37.)



1. In a press, a flexible beltlike member, press chambers having relatively movable walls positioned thereon means for concaving said flexible member to approximate the walls of said press chambers, and means for applying extraneous pressure to the flexible member so concaved.

2. In a press, a flexible beltlike member, press chambers having relatively movable walls positioned thereon, means for concaving said flexible member to approximate the walls of said press chambers, and means for holding said beltlike member against said concaving means.

3. In a press, a flexible beltlike member, press chambers having relatively movable walls positioned thereon, means for concaving said flexible member to approximate the walls of said press chambers, and a shaped member conforming to said concaving means and adapted to hold said beltlike member thereagainst.

4. In a press, a flexible beltlike member, press chambers having relatively movable walls positioned thereon, means for concaving said flexible member to approximate the walls of said press chambers, and hydraulic pressure means for forcing said beltlike member against said concaving means.

5. In a bar press, a flexible beltlike member provided with transverse press chambers, means for bending said member in a concave curve to produce lateral pressure in said chambers and supplemental means for altering the shape of said curve.

[Claims 6 to 8 not printed in the Gazette.]

1,018,959. SECTIONAL LAST FOR MAKING SHOES. ELMER J. BLISS, Edgartown, and EDWARD F. WHITE, Quincy, Mass., assignors to Regal Shoe Company, a Corporation of Maine. Filed Feb. 3, 1909. Serial No. 475,773. (Cl. 12—133.)

1. A sectional last block comprising two sections namely, an integral heel and toe section and an instep section divided from each other by a divisional cut which intersects the top surface of the last on one side of the instep and which on the other side of the instep intersects the sole of the last through the ball portion thereof, substantially as described.

2. A sectional last embracing in its construction a main section, an instep section detachable therefrom, said instep section being divided from said main section by a longitudinal cut which is transversely inclined to the plane of the sole and which intersects the sole at its widest part, substantially as described.

3. A sectional last block divided into two solid separable sections comprising a main heel and toe section and an instep section which includes a part of the entire thickness of the ball, the divisional cut or plane of separation being so extended as to give the cross section of the ball portion of the main member a triangular form, substantially as described.

4. A sectional last block for making shoes, embracing in its construction a main section embracing the heel and toe portions of the last, and an instep section separated therefrom by a transversely oblique cut extending through the ball and the instep portions of the last so as to intersect the bottom of the last, substantially as described.

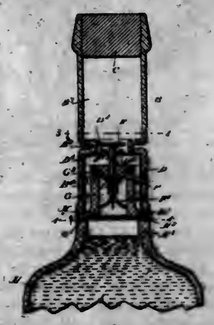
5. In a sectional last an instep block formed to be detachably secured to the main portion of the last and embracing the middle portion of the instep and a portion of the sole of the ball of the last, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,018,960. NON-REFILLABLE BOTTLE. JOHN S. BROMHEAD, New York, N. Y. Filed Mar. 1, 1911. Serial No. 611,550. (Cl. 215—103.)

1. A non-refillable bottle having a neck provided with a contracted portion intermediate the ends, a shell fitting into the lower portion of the neck and having a top plate extending across the under side of the said contracted neck portion, the said top plate having upwardly-extending pouring spouts, a valve seat held in the lower portion of the said neck and spaced from the said shell top, a valve adapted to be seated on the said valve seat, and a protecting disk in the contracted portion of the neck over the spouts a distance from the tops thereof, the said protecting disk having a shank attached to the said top plate and depending therefrom to form a guide for the said valve.

2. A non-refillable bottle having a neck provided with a contracted portion intermediate the ends, a shell fitting into the lower portion of the neck and having a top plate extending across the under side of the said contracted neck portion, the said top plate having upwardly-extending pouring spouts, a valve seat held in the lower portion of the said neck and spaced from the said shell top, a sliding and spring pressed valve adapted to be seated on the said valve seat and having a central opening, a protecting disk in the contracted portion of the neck over the spouts a distance from the tops thereof, the said protecting disk having a shank attached to the said top plate and extending into the opening of the said valve, and a spring arranged in the opening of the said valve below the said shank to normally hold the valve to its seat.

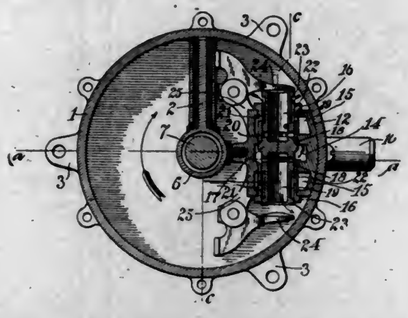


3. A non-refillable bottle, comprising a bottle having a stub neck provided with an interior annular rabbet, a main neck fitting into and fastened to the said rabbet, the said main neck having a contracted portion between its ends, a shell fitting into the lower portion of the said main neck and having a top plate provided with upwardly-extending spouts, a cylindrical valve seat within the said shell and of less diameter than the shell and having its upper end terminating a distance from the said top plate, the said valve seat having a base resting on the said rabbet, and a valve adapted to be seated on the said valve seat and provided with guide arms slidingly engaging the said valve seat.

4. A non-refillable bottle, comprising a bottle having a stub neck provided with an interior annular rabbet, a main neck fitting into and fashioned to the said rabbet, the said main neck having a contracted portion between its ends, a shell fitting into the lower portion of the said main neck and having a top plate provided with upwardly-extending spouts, a cylindrical valve seat with in the said shell and of less diameter than the shell and having its upper end terminating a distance from the said top plate, the said valve seat having a base resting on the said rabbet, a valve adapted to be seated on the said valve seat and provided with guide arms slidingly engaging the said valve seat, a disk extending over the said spouts and having a depending shank attached to the said top plate, the said valve slidingly engaging the said shank, and a spring interposed between the said valve and the said shank.

5. A non-refillable bottle, comprising a bottle having an internal shoulder in its neck, a shell fitting in the lower portion of the neck and having an apertured top plate fitting against the shoulder of the neck, a tubular valve seat in the shell with its upper end terminating short of the top plate of the shell, the main portion of the valve seat being of less diameter than the shell, a valve on the valve seat and having an opening therein and provided with guide arms engaging the inner wall of the valve seat, a disk above the top plate of the shell in the contracted portion of the neck formed by the shoulder and having a shank secured to and projecting through the top plate of the shell into the opening of the valve, and a spring in the opening of the valve.

1,018,961. HYDRAULIC MOTOR. PETER T. COFFIELD, Dayton, Ohio, assignor to The Coffield Motor Washer Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 19, 1910. Serial No. 598,068. (Cl. 138—1.)



1. In a hydraulic motor, the combination with a cylinder, of a member having inlet and exhaust chambers, an inlet valve having tubular extensions, the ends of which are adapted to seal the inlet to the exhaust chamber, said tubular extensions having their outer diameters reduced between the inlet portion of the valve and the ends of said tubular extensions to provide exhaust passages around said cylindrical portions, and abutments engaging said tubular extensions to initially move said valve.

2. In a hydraulic motor, the combination with a cylinder, of a member having inlet and exhaust chambers, a single movable valve member a portion of which controls the inlet chamber, said valve having tubular extensions which form passages which conduct the motive fluid to the cylinder, the ends of said tubular extensions being constructed and arranged to form piston valves to control the exhaust from the cylinder, the outer surfaces of said tubular extensions being recessed circumferentially to provide passages forming outlets to the exhaust chamber, and abutments adapted to engage the ends of said tubular extensions to seal the ends thereof and to initially move said valve.

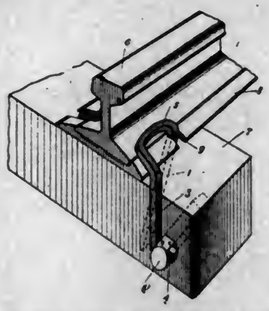
3. In a hydraulic motor, the combination with a cylinder, of a member having inlet and exhaust chambers, a valve member the central portion of which consists of a double-seating puppet valve controlling the flow from the inlet chamber to the cylinder, and the ends of which consist of piston valves which control the outlet from the cylinder to the exhaust chamber, and abutments adapted to alternately seal the said ends and to initially move said valve to a point where the motive fluid acts to complete the movement of said valve.

4. In a hydraulic motor, the combination with a motor cylinder, a piston movable therein, and a member having inlet and exhaust chambers, of a valve having seating portions and ports which form the inlet portion, and other portions which form exhaust portions of said valve, the portions of said valve between the inlet and exhaust portions forming the exhaust passages, and a valve casing providing seats for the inlet portion of the valve and having ports communicating with said exhaust passages and the exhaust chamber, the ends of said casing coöperating with the exhaust portions of said valve to seal the inlet from the exhaust, and abutments to initially move the valve.

5. In a water motor, a motor chamber with a movable piston therein, means for supplying water to both sides of the piston, inlet valves to control the supply, with hollow stems for the inlet valves projecting into the motor chamber on each side of the piston, with openings beyond the valve seats into said hollow stems for the passage of the water to said chamber, with means for initially shifting said valves to permit the accumulation of pressure therein to fully actuate the same, and exhaust valves movable with the inlet valves to govern the exhaust.

[Claims 6 to 10 not printed in the Gazette.]

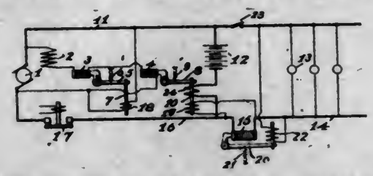
1,018,962. RAIL-FASTENER. WILLIAM JOHN COOPER, Rodeo, Cal. Filed May 26, 1911. Serial No. 629,606. (Cl. 85—28.)



1. A rail fastener made up of a single piece of material and bent at a plurality of points whereby the end portions of the fastener are brought adjacent each other, one end portion being pointed and the other end being hooked, the pointed end being adapted to be driven into a suitable tie and the hooked end being adapted to extend alongside of the tie and be secured in position by a member driven transversely of the tie.

2. A rail fastener made up of a single piece of material and bent at a plurality of points, the end portions thereof being brought adjacent each other, the intermediate portion of the fastener being offset with relation to the end portions, one end portion being pointed, the other end being hooked whereby when the pointed end is driven into a tie the intermediate portion is brought into engagement with a rail, the other end portion of the fastener extending alongside of the tie and secured thereto by any suitable means.

1,018,963. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed June 21, 1911. Serial No. 634,489. (Cl. 171—313.)



1. The combination with a generator, a translation circuit and means for regulating the translation circuit, of means for regulating the generator responsive to voltage fluctuations, means for regulating the generator responsive to current fluctuations and means for affecting the current regulating means affected by the operation of the translation circuit regulator.

2. The combination with a generator, a translation circuit and means for regulating the translation circuit, of means for preventing the generator voltage exceeding a predetermined value, means for preventing current supplied by the generator from exceeding a predetermined value and means for adjusting the value of said current depending upon the operation of the translation circuit regulator.

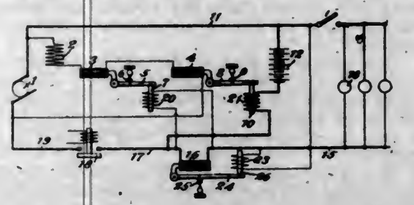
3. The combination with a generator, a translation circuit and means for regulating the translation circuit, of means for preventing the generator voltage exceeding a predetermined value, means for preventing current supplied by the generator from exceeding a predetermined value and means for adjusting the value of said current depending upon potential differences caused by the translation circuit regulator.

4. The combination with a generator, a storage battery, a translation circuit, and a regulator for the translation circuit, of means for regulating the generator to charge the battery upon a constant current circuit, means for regulating the generator to charge the battery upon a constant potential circuit and means for adjusting the current regulating means affected by the operation of the translation circuit regulator.

5. The combination with a generator, a translation circuit and translation circuit regulator, of a variable resistance affecting the generator, voltage responsive means for controlling said resistance, a resistance for affecting the generator, current responsive means for affecting said resistance and means for affecting the operation of the current operated means affected by the translation circuit regulator.

[Claims 6 to 10 not printed in the Gazette.]

1,018,964. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed June 21, 1911. Serial No. 634,493. (Cl. 171—313.)



1. The combination with a generator, a translation circuit and a regulator for the translation circuit, of means for regulating the generator responsive to current fluctuations and means for regulating the generator operated by the drop in potential across the translation circuit regulator.

2. The combination with a generator, a translation circuit and a regulator for the translation circuit, of means for regulating the generator current and means for regulating the generator voltage, said voltage regulating means being operated in response to an effect produced by the translation circuit regulating means.

3. The combination with a generator, a translation circuit and a regulator for the translation circuit, of current responsive means for regulating the generator and means for regulating the generator voltage, said voltage regulating means being electrically operated by the translation circuit regulator.

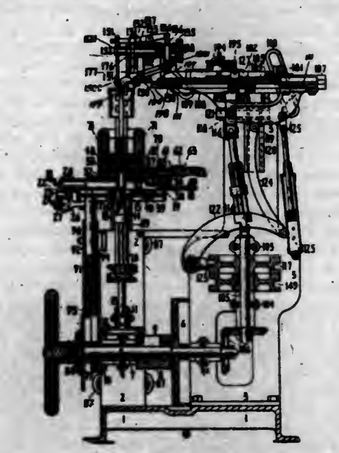
4. The combination with a generator, and a translation circuit, of means for regulating the generator responsive to current fluctuations, a voltage operated regulator for regulating the translation circuit, a voltage regulator for the generator and means whereby the effect of the translation circuit regulator operates the generator voltage regulator.

5. The combination with a generator, and a translation circuit, of means for regulating the generator responsive to current fluctuations, regulating means for the generator, automatic regulating means for the translation circuit and electric means whereby the translation circuit regulating means operates the last named generator regulating means.

[Claims 6 to 16 not printed in the Gazette.]

1,018,965. LASTING-MACHINE. JOSEPH E. CRISP, Somerville, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 8, 1899, Serial No. 704,978. Renewed Aug. 24, 1910. Serial No. 578,679. (Cl. 12—6.)

1. A machine of the class described comprising a clamping-jack to hold and present a last, jack-feeding mechanism, automatic folding-down and securing mechanisms, and means to automatically stop and start the action of the folding-down and securing mechanisms at predetermined points to allow the jack-feeding mechanism to make one or more active movements between each active movement of the folding-down and securing mechanisms.



2. A machine of the class described comprising a clamping-jack to hold and present a last, jack-feeding mechanism, auxiliary last-presenting mechanism, automatic folding-down and securing mechanisms, and means to automatically stop and start the action of the auxiliary last-presenting, folding-down and securing mechanisms at predetermined points to allow the jack-feeding mechanism to make one or more active movements between each active movement of the presenting, folding-down and securing mechanisms.

3. A machine of the class described comprising intermittent vertically reciprocating last-presenting and last-feeding mechanisms, automatic folding-down and securing mechanisms which vertically oscillate with reference to a fixed point of action and means to control the rise and fall of the presenting and feeding mechanisms with reference to said point of action for each active movement of the folding-down and securing mechanisms.

4. A machine of the class described comprising vertically reciprocating last-feeding mechanism, mechanism to raise the last, automatic folding-down and securing mechanisms which vertically oscillate with reference to their point of action, a gage to govern the rise of the last operating in conjunction therewith and means to vertically reciprocate said gage for each active movement of the folding-down and securing mechanisms.

5. A machine of the class described comprising intermittent vertically reciprocating last-feeding mechanism, mechanism to raise the last, automatic folding-down and securing mechanisms which vertically oscillate with reference to their point of action, a gage to govern the rise of the last with reference to said point of action, means to vertically reciprocate said gage and other means to lock said gage in operative position.

[Claims 6 to 45 not printed in the Gazette.]

1,018,966. URINAL. JOHN A. DAVIDSON, Chicago, Ill., assignor to James B. Clow & Sons, Chicago, Ill., a Corporation. Filed Jan. 10, 1910. Serial No. 537,231. (Cl. 4—12.)

1. A urinal having a stall, the back and sides of which are integral, right-and-left terminal slabs lying against and covering the sides of the stall, said slabs having flanges overhanging the top and front of said sides, and a coping strip supported at its ends by the slabs and at its front side by the stall.

2. A urinal having a stall, the back and sides of which are integral, right-and-left terminal slabs lying against and covering the sides of the stall, said slabs being of greater

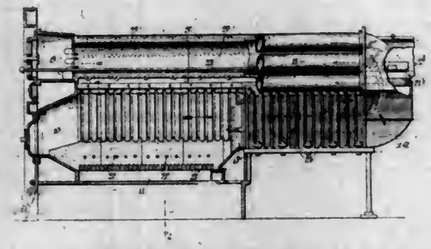
depth than said sides, and said slabs having flanges overhanging the top and front of said sides and coping strips supported at their ends by the slabs and at their front side by the stall.

3. A urinal having a plurality of stalls arranged side by side, the back and sides of each stall being integral, right-and-left terminal slabs lying against and covering the outer sides of the terminal stalls of the range, said slabs having flanges overhanging the tops and fronts of said outer sides of the terminal stalls, intermediate slabs arranged between the adjacent sides of adjacent stalls, said intermediate slabs having flanges projecting in opposite directions and overhanging the top and fronts of said adjacent sides of adjacent stalls and coping strips supported at their ends by the slabs and at their front sides by the stalls.

4. A urinal having a stall, the base or receptor, back and sides of which are integral, slabs lying against the sides of the stall, said slabs having flanges overhanging the top and front of said sides, and a coping strip supported at its ends by the slabs, and at its front side by the stall.

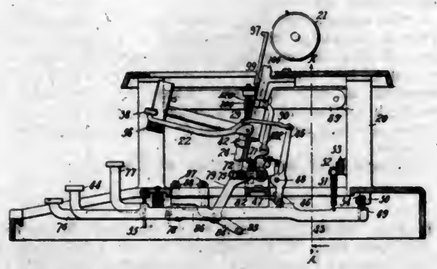
5. A urinal having a stall the base, or receptor, back and sides of which are integral, slabs lying against the sides of the stall, said slabs being of greater depth than said sides, and said slabs having flanges overhanging the top and front of said sides, and a coping strip supported at its ends by the slabs and at its front side by the stall.

1,018,967. FURNACE. NATHANIEL FROST, Bloomington, Ill. Filed Nov. 10, 1910. Serial No. 591,566. (Cl. 126—108.)



A furnace having a firebox and having its rear portion divided to form passages, a one-piece hollow back breeching communicating at its lower portion with said passages and bifurcated to form upwardly-extending spaced branches and a portion between the lower ends of the branches, constituting a saddle and having an opening communicating with the interior of the breeching, a hollow front breeching, conduits extending from said branches of said back breeching to the side portions of the front breeching, a smoke pipe normally open to the front breeching and extending rearwardly therefrom between the said branches of the back breeching, said smoke pipe having an opening coinciding with the said saddle opening, and a damper controlling direct communication of the back breeching and said smoke pipe.

1,018,968. TYPE-WRITING MACHINE. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith and Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 27, 1904. Serial No. 205,208. (Cl. 197—74.)



1. The combination with the frame, of an upwardly shifting and laterally adjustable segment and laterally adjustable guides for guiding the segment in its shifting movements.

2. In a typewriting machine, the combination with the frame, of an upwardly shifting and laterally adjustable segment, brackets connected to the frame, and guides supported by the brackets for guiding the segment in its up and down movements, said guides being horizontally adjustable.

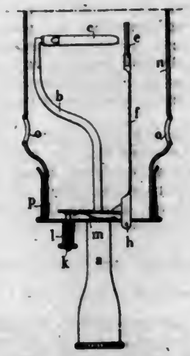
3. In a typewriting machine, the combination with the frame, of an up and down shifting segment, and angularly adjustable guides for said segment.

4. In a typewriting machine, the combination with the frame and an up and down shifting segment, of pairs of ball-races forming guides for said segment, and balls in said races, one race of each pair being angularly adjustable.

5. In a typewriting machine, the combination with an upwardly movable segment, a rock shaft having an arm connected to said segment, a spring arm connected to the rock shaft, means for operating said spring arm to move the segment and means coöperating with the spring arm to lock the segment in its upper position.

[Claims 6 to 19 not printed in the Gazette.]

1,018,969. INCANDESCENT GAS AND LIKE BURNER. JULIEN GALILÉ, Nancy, France. Filed Nov. 30, 1907. Serial No. 404,487. (Cl. 67—88.)



1. An incandescent gas-light apparatus comprising a small atmospheric burner, a disk of gauze impregnated with rare oxids, a device for regulating the distance between this disk and the end of the atmospheric burner; an incandescent burner, and a device supplying independently the gas to the atmospheric burner and to the incandescent burner.

2. An incandescent gas light apparatus comprising an incandescent burner, a disk of gauze impregnated with rare oxids, arranged above the mantle of this burner, a disk-carrier, a small atmospheric burner in front of the disk, a device for adjusting the position of the disk-carrier with reference to the end of the atmospheric burner, a conduit branched on the body of the incandescent burner movable on the latter and carrying the atmospheric burner, and a device for controlling the shifting of this conduit to release the atmospheric burner from the chimney of the incandescent burner.

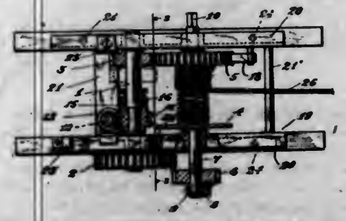
3. An incandescent gas light apparatus, comprising an incandescent burner, a disk of gauze impregnated with rare oxids and arranged in a vertical plane above the mantle of the incandescent burner, and a small atmospheric burner mounted horizontally and having its end arranged in front of the center of the said disk.

4. An incandescent gas night-light apparatus, comprising a base for connection with a gas supply, a disk of gauze impregnated with rare oxids, a disk carrier on which the disk is mounted in a vertical plane, a small atmospheric burner extending horizontally in front of said disk, means for adjusting the position of the disk carrier with reference to the end of said burner, a tube branched at its lower portion and connected with the base of the apparatus to turn thereon, the said tube carrying the atmospheric burner at its upper end, means for controlling the admission of gas to the tube from said base, and means for controlling the movement of said tube.

5. An incandescent gas light apparatus, comprising a base for connection with a gas supply, a gallery for supporting the chimney, a small atmospheric burner extending horizontally and connected by a tube with said base, a disk of gauze impregnated with rare oxids, a support on which the disk is mounted in a vertical plane, the said support being mounted to move to carry the disk toward and from the end of the burner, and means for adjusting said support, the said means including a screw rod in engagement with the support and projecting at its lower end through the bottom of the gallery, a spring pressing on said support, and a nut screwing on the projecting end of said screw rod.

[Claim 6 not printed in the Gazette.]

1,018,970. STUMP-PULLING APPARATUS. LOU M. GARDINER, Seattle, Wash., assignor to American Machine Works, Seattle, Wash., a Corporation of Washington. Filed Nov. 13, 1911. Serial No. 660,154. (Cl. 57—105.)

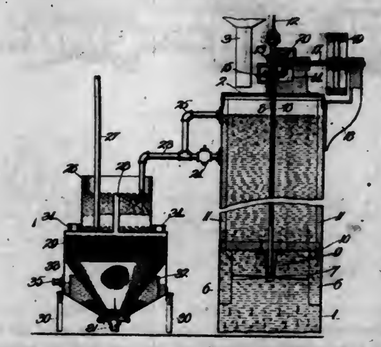


1. An apparatus of the character described comprising a supporting frame, a drum journaled on said frame, a gear wheel fixed for rotation with said drum, a second gear wheel on the shaft of said drum, said gear wheels being of different diameters, a drive shaft journaled on said frame, gears of relatively different diameters on said drive shaft, the smaller gear of one pair being arranged to mesh with the larger gear of the other pair, one gear of each pair being splined to its shaft, a vertical shaft, a sweep secured to said last named shaft, a worm on said vertical shaft, a loose worm wheel on said drive shaft in mesh with said worm, and provided with a clutch part, and a clutch part splined on said drive shaft for adjustment into and out of engagement with the clutch part of said worm wheel.

2. An apparatus of the character described comprising a supporting frame, a drum having shaft extensions journaled on said frame and projecting therefrom, one of said shaft extensions having its free end portions squared for reception of a crank, a gear on the other shaft extension of said drum, a gear fixed for rotation with said drum, a drive shaft journaled on said frame, gears on said drive shaft arranged to mesh with said first named gears, one of said last named gears and said first named gear being splined on their shafts whereby they can both be shifted out of mesh with their opposing related gears to thereby disconnect said drum from said drive shaft, a vertical shaft provided with a sweep, and power transmission gearing between said sweep and said drive shaft.

3. In an apparatus of the character described comprising skids, a supporting frame comprising side members having flanges at their upper and lower edge portions, the lower of said flanges being formed with apertures, securing means passing through the apertures of said flanges into said skids, a drum having shaft extensions journaled in said frame side members, an intermediate member connecting the said frame side members, a vertical shaft having its lower end portion stepped in said intermediate member, a stand in which the upper end portion of said shaft is journaled, said stand having rigid depending legs bearing on and fixed to the upper flanges of said frame side members, a sweep secured to the upper end portion of said shaft, and means for transmitting motion from said shaft to said drum.

1,018,971. METHOD OR PROCESS OF PURIFYING HYDROCARBON LIQUIDS. THOMAS S. HAMILTON, Kansas City, Mo., assignor to The Purified Petroleum Products Company, a Corporation of South Dakota. Filed Apr. 22, 1911. Serial No. 622,802. (Cl. 196—26.)



1. The method of purifying hydrocarbon liquids, consisting in introducing a hydrocarbon liquid into a tank containing a solution which will combine with such liquid to form an emulsion, in agitating the mixture to produce such emulsion, in effecting the removal of the emulsion from the tank and the solution therein, and in treating the removed emulsion to separate the impurities from the pure oil therein.

2. The method of purifying hydrocarbon liquids, consisting in introducing a hydrocarbon liquid into a tank containing a solution which will combine with such liquid to form an emulsion, in agitating the mixture to produce such emulsion, in effecting the removal of the emulsion from the tank and the solution therein, and in subjecting the removed emulsion to shock to separate the impurities from the pure oil therein.

3. The method of purifying hydrocarbon liquids, consisting in discharging a stream of hydrocarbon liquid in a finely divided state under pressure into a tank containing a solution which will combine with such liquid to form an emulsion, in agitating the mixture to produce such emulsion, in conducting such emulsion in a con-

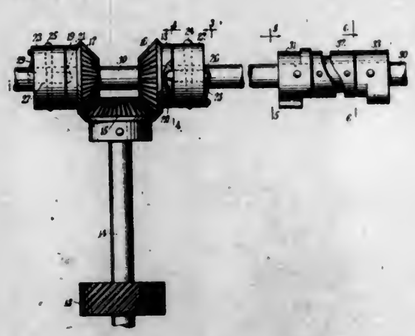
tinuous stream from the tank and the solution therein, and in subjecting the emulsion after it passes from the tank, to shock or jar to "break" it to separate the heavy or impure oil or residue from the light or pure oil.

4. The method of purifying hydrocarbon liquids, consisting in discharging a stream of hydrocarbon liquid in a finely divided state under pressure into a tank containing a solution which will combine with such liquid to form an emulsion, in agitating the mixture to produce an emulsion, in conducting such emulsion in a continuous stream from the tank and the solution therein, in subjecting the emulsion after it passes from the tank, to shock or jar to "break" it to separate the heavy or impure oil or residue from the light or pure oil, and in filtering the light or purified oil.

5. The method of purifying hydrocarbon liquids, consisting in discharging a stream of hydrocarbon liquid in a finely divided state under pressure into a tank containing a solution which will combine with such liquid to form an emulsion, in agitating the mixture to produce such emulsion, in conducting such emulsion in a continuous stream from the tank and the solution therein, in subjecting the emulsion after it passes from the tank, to shock or jar to "break" it to separate the heavy or impure oil or residue from the light or pure oil, and in mixing the said light or pure oil with air and forcing the mixture under pressure, through a tank containing casing salt.

[Claims 6 to 11 not printed in the Gazette.]

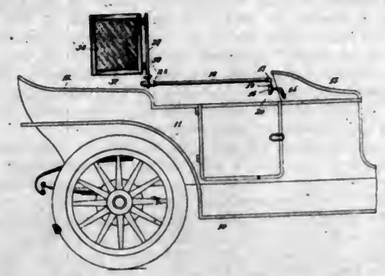
1,018,972. REVERSING-GEARING. ALBERT L. HERMAN, Prosper, Oreg. Filed Oct. 26, 1910. Serial No. 589,152. (Cl. 74—7.)



1. In a reversing gearing, the combination of a driving shaft, a gear member mounted rigidly thereupon, a driven shaft, a pair of gear members mounted loosely upon said driven shaft and each provided with a surface to be engaged by a pawl, said last mentioned gear members being operatively engaged by said first mentioned gear member, a pair of pawls supported by said driven shaft and disposed upon opposite sides thereof, said pawls being so positioned relatively to said surfaces to be engaged by them that at a particular moment one pawl only can engage a corresponding surface.

2. In a reversing gear, the combination of a driving shaft, a bevel gear carried thereby and rigid relatively thereto, a driven shaft, a pair of bevel gears mounted loosely upon the latter and free to turn in opposite directions, said last-mentioned bevel gears meshing with said first-mentioned bevel gear, clutch members carried by said bevel gears upon said driven shaft and provided with pawl pockets, other clutch members mounted rigidly upon said driven shaft and provided with pawls for fitting into said pockets, said pawls and said pawl pockets being so positioned relatively to each other that at a particular moment only one pawl can enter a corresponding pawl pocket, the other pawl being idle.

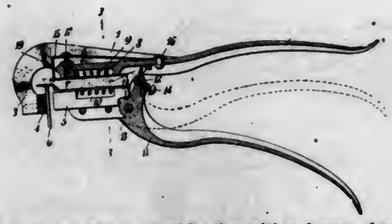
1,018,973. WIND-SHIELD. JOHN O. HOFBAUER, New York, N. Y. Filed Feb. 10, 1911. Serial No. 607,766. (Cl. 21—81.)



1. In combination, a pair of relatively movable rods, a fixed, pivotal support for each of said rods, sleeves slidably mounted upon said rods and movable longitudinally thereof, a wind shield, and means for pivotally and adjustably mounting said wind shield upon said sleeves, the distance between said fixed supports exceeding the length of said wind shield.

2. In combination, a pair of independently and relatively movable rods, a fixed pivot support for each of said rods, whereby the same can swing in a hrizontal plane, a sleeve slidably mounted upon each of said rods, and movable longitudinally thereof, each of said rods having at the free end a stop to limit the movement of its sleeve, each of said sleeves having a vertical pivot, an arm adjustably carried by each of said vertical pivots, a wind shield secured between said arms, and an auxiliary wind shield mounted adjacent to each end of said first wind shield and foldable against the same, the distance between said fixed, pivot supports exceeding the normal distance between said sleeves.

1,018,974. SAW-SET. JOHN HENRY JENNINGS, Merrill, Wis. Filed Feb. 7, 1911. Serial No. 607,055. (Cl. 76—69.)



1. In a saw set, the combination with a frame, of a pair of goosenecks extending from said frame in spaced relation, an anvil secured to said goosenecks, a saw engaging punch slidingly mounted in opposition to said anvil, a setting punch slidingly mounted in parallel relation with said saw engaging punch, and a single lever for operating both said punch and said plunger, pivotally connected to said frame at a point located at unequal distances from the rear ends of said punch and plunger, and having a portion at one side of said pivot bearing directly against the punch and plunger.

2. In a saw set, the combination with a frame, of a pair of punches mounted in said frame and movable in the same longitudinal direction side by side, one of said punches being a setting punch and the other of said punches being a saw engaging punch, and a bell crank lever pivotally mounted on said frame and having one arm thereof operatively engageable with the back ends of both of said punches, said punches being located at different distances from the pivotal point of said bell crank lever, said saw engaging punch being adapted to engage the saw to be set, and, by the limiting of its movement when in engagement with said saw, obstruct the further movement of said arm of said bell crank lever so that said arm will be prevented from further actuating said setting punch, whereby the extent of movement of said setting punch will be controlled by said saw engaging punch.

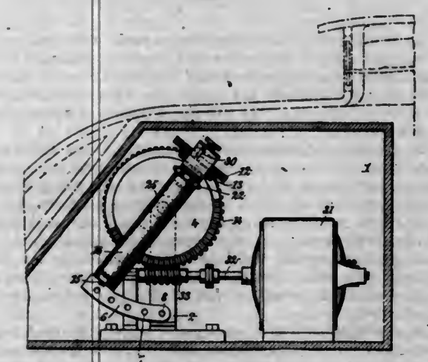
3. In a saw set, the combination with a frame, of a pair of punches mounted in said frame and movable in the same longitudinal direction side by side, one of said punches being a setting punch and the other of said punches being a saw engaging punch, a bell crank lever pivotally mounted on said frame and having one arm thereof operatively engageable with the back ends of both of said punches, said punches being located at different distances from the pivotal point of said bell crank lever, said saw engaging punch being adapted to engage the saw to be set, and by the limiting of its movement when in engagement with said saw, obstruct the further movement of said arm of said bell crank lever so that said arm will be prevented from further actuating said setting punch, whereby the extent of movement of said setting punch will be controlled by said saw engaging punch, and a set screw of said arm projecting beyond the face thereof which contacts with said saw engaging punch, said set screw being adjustable so as to vary the point at which said saw engaging punch stops the movement of said setting punch.

4. In a saw set, the combination with a frame, of an anvil on said frame, a setting punch movably mounted in said frame, a saw engaging punch movably mounted in juxtaposition to said setting punch, said saw engaging punch being adapted to coöperate with said anvil to clamp a saw therebetween, a lever for manipulating said punches, one of said punches being provided with a recess, and a single spring encircling one of said punches and engaging in the recess of the other of said punches, whereby it is adapted to return said punches after actuation by said lever.

5. In a saw set, the combination with a frame, of a pair of goosenecks extending from one end of said frame in spaced relation from each other so as to form a slot, and having their ends in spaced relation from the body of the frame, an anvil secured to their ends in spaced relation from said frame, a setting and saw engaging punch slidingly mounted in said frame and adapted to project into said slot between said goosenecks, and a guide for one of said punches, comprising an angular spring-metal member secured at one end to said frame and having its free end bifurcated to form a slot into which said last-mentioned punch is adapted to extend.

[Claim 6 not printed in the Gazette.]

1,018,975. MOVING SIGN. ARCHIE N. JOHNSON, Kansas City, Mo. Filed Mar. 30, 1909. Serial No. 486,712. (Cl. 40—32.)



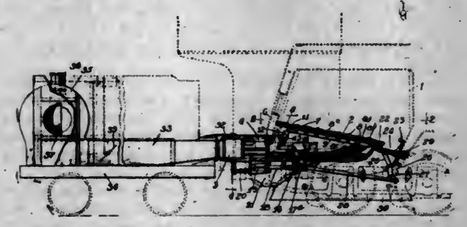
1. In a device of the class described, in combination, a bracket having a pivot pin, an adjusting bracket pivotally mounted on said pivot pin, a roller mounted in said adjusting bracket, an endless web passing around said roller, means for securing said adjusting bracket in a plurality of positions, a wheel mounted on said pivot pin, means for driving said wheel, and means for driving said roller from said wheel.

2. In a device of the class described, in combination, a bracket having a pivot pin, an adjusting bracket mounted on said pivot pin, a roller mounted in said adjusting bracket, an endless web passing around said roller, a wheel rotatably mounted on said pivot pin and having a gear segment formed thereupon, and gear wheels connecting said segment with said roller for driving said roller intermittently from said first wheel.

3. In a device of the class described, in combination, a bracket having a pivot pin, an adjusting bracket mounted on said pivot pin and having outwardly projecting arms, means for securing said adjusting bracket in a plurality of positions, a roller mounted between said arms, an endless web passing around said roller, a wheel rotatably mounted on said pin, a gear segment formed on the side of said wheel, a gear wheel meshing with said segment, and gears connecting said last gear wheel with said roller for actuating the same.

4. In a device of the class described, in combination, a bracket, a wheel rotatably mounted thereupon, an adjusting bracket rotatably mounted on said first bracket on the same axis with said wheel, said adjusting bracket having a quadrant formed thereupon, means for locking said quadrant to said first bracket in a plurality of positions, a roller carried by said adjusting bracket, a gear segment formed on said wheel, means for driving said roller from said segment, and means for driving said wheel.

1,018,976. AUTOMATIC STOKER. WILLIAM J. KENNEY and HENRY P. GROHN, Chicago, Ill., assignors to The Underfeed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 12, 1908. Serial No. 457,199. (Cl. 110—47.)



1. In combination in a stoker, a retort for receiving the fuel to be consumed, reciprocable plates arranged longitudinally of the retort at the sides thereof for receiving clinkers and ashes, means for reciprocating said plates in the longitudinal direction to move the clinkers and ashes toward one end of the retort, and means operating during the backward motion of the reciprocable plates to remove the clinkers and ashes at said end of the retort.

2. In combination in an automatic stoker, a retort for receiving the fuel to be consumed, reciprocable plates extending longitudinally of the retort at the sides thereof for receiving clinkers and ashes, a shearing device at one end of the retort for removing clinkers and ashes projecting beyond that end of the retort, and means for reciprocating said plates so as to move the clinkers and ashes toward said device.

3. In combination in a stoker, a retort for receiving the fuel to be consumed, plates extending longitudinally of the retort along the sides thereof to receive clinkers and ashes, means for reciprocating said plates in the longitudinal direction, vertically movable members carried by said plates, and means for raising and lowering said members during the reciprocation of said plates.

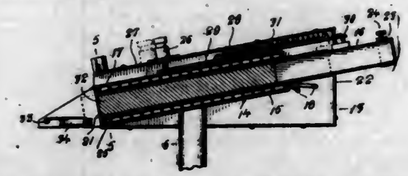
4. In combination in a stoker, a retort for receiving the fuel to be consumed, a plate extending longitudinally

along the side of the retort, members movably mounted on said plate, and means for simultaneously reciprocating said plate in the longitudinal direction and raising and lowering said members.

5. In combination in a stoker, a retort for receiving fuel to be consumed, a plate lying beside and extending longitudinally of said retort, movable lifting members mounted on said plate, and means for moving said plate longitudinally in one direction and simultaneously raising said lifting members and for moving said plate in the opposite direction and simultaneously lowering said members.

[Claims 6 to 16 not printed in the Gazette.]

1,018,977. ELECTRIC SEALING-WAX MACHINE. ARTHUR W. LOCKARD, Baltimore, Md. Filed Sept. 12, 1911. Serial No. 648,885. (Cl. 219—21.)



1. In a device of the class described, the combination with a support for the object to be sealed, a heating chamber, a movable wax container adapted for feeding the heated wax onto the article, and slidingly fitted in the heating chamber, and a seal connected to the heating chamber and positioned above the support.

2. In a device of the class described, the combination with an adjustable support for the object to be sealed, a heating chamber, and a movable wax container adapted for feeding the heated wax onto the article and arranged in the heating chamber.

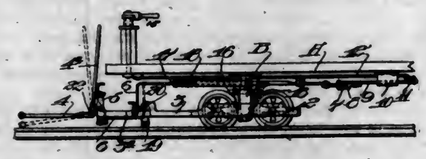
3. In a sealing apparatus, the combination with a support for the article to be sealed, and a heating chamber; of a wax container adapted for feeding the heated wax onto the article and slidingly fitted in the heating chamber and inclined from the horizontal for the purpose described.

4. In a sealing apparatus, the combination with a support for the article to be sealed; of a heating chamber located above the support, a wax container slidingly fitted in the heating chamber and adapted for feeding the heated wax onto the article, and means for operating the container.

5. In a sealing apparatus, the combination of a hollow walled chamber, an electric heating coil arranged in the said hollow wall, and a wax container slidingly fitted in the heating chamber and having a discharge opening adapted when the container is in one position to be sealed by the wall of the heating chamber.

[Claim 6 not printed in the Gazette.]

1,018,978. CO-ACTING CAR BRAKE AND FENDER. ISAAC MACOWSKY and MARC HOLLZER, San Francisco, Cal. Filed June 26, 1911. Serial No. 635,396. (Cl. 105—250.)



1. The combination with a car and swivel wheel trucks upon which it is carried, of side rods extending forwardly from the truck frame, a fender carried from the front end of said side rods, other side rods by which said fender may be tilted up or down upon its mounting, a draw bar, connections between said draw bar and a manually controlled hand lever, and automatically adjustable connections between said draw bar and the side rods of the fender.

2. The combination with a car and swivel wheel trucks upon which it is carried, of side rods extending forwardly from the truck frame, a fender, carried from the front end of said side rods, other side rods by which said fender may be tilted up or down upon its mounting, a draw bar, connections between said draw bar and a manually controlled hand lever, automatically adjustable connections between said draw bar and the side rods of the fender, a brake mechanism, and connections between said mechanism and the actuating bars of the fender.

3. The combination with a car and swivel wheel trucks upon which it is carried, of side bars extending forwardly from the truck frame, levers fulcrumed to said side bars, a fender frame pivotally connected with one end of said levers, rods connected with the opposite ends and extending beneath the car platform, brake actuating levers connecting with said bars, a draw bar, connections between said draw bar and a manually operated lever, and a segment with which the ends of the side bars are connected, said segment being slidably guided in the end of the draw bar.

4. The combination with a car and swiveling wheel trucks upon which it is carried, of a hinged two part fender, side bars fixed to the truck frame upon which said fender is swivelly mounted, co-acting, manually controlled mechanism whereby the fender may be depressed toward the track and the brakes simultaneously applied, and supplemental wheels by which the fender frame is supported with relation to the track.

5. The combination with a car body and swivel trucks upon which it is carried, of a fender composed of foldable screens, side bars fixed to the truck frames upon which the fender frame is turnably carried, means by which said fender may be depressed or raised, said fender members being foldable together, and means to lock the parts in folded position.

[Claim 6 not printed in the Gazette.]

1,018,979. POINT FOR CONCRETE PILES. ADOLF MAST, Tempelhof, near Berlin, Germany. Filed Feb. 3, 1910. Serial No. 541,669. (Cl. 37—10.)

1. A pile point which comprises a metal tube and flaps formed by cuts in the bottom end of said tube and folded together so that the parts of said flaps bordering the metal tube form the sides of the points, the outer parts of said flaps being bent up at the sides of the point, substantially as set forth.

2. A pile point which comprises a metal tube and flaps formed by cuts in the bottom end of said tube, said flaps having rectangular and trapezoidal parts and being folded together to form the point, substantially as set forth.

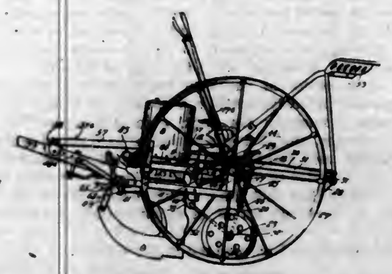
3. A pile point which comprises a metal tube and flaps having rectangular and trapezoidal parts formed by cuts at the bottom end of said tube and so folded to form the bottom of the point that the rectangular parts are at right angles to the longitudinal axis of the pile, substantially as set forth.

4. A pile point which comprises a metal tube, and flaps formed by cuts in the bottom end of said tube and each consisting of a rectangular and trapezoidal part, which parts are so folded that the rectangular part of each flap lies at right angles to the longitudinal axis of the pile, while the trapezoidal parts are bent up at the sides of said point, substantially as set forth.

5. A pile point, which comprises in combination a metal tube, flaps formed by cuts in the bottom end of said tube, and triangular flaps formed in the bottom of said tube by cuts between said first flaps and parallel to the longitudinal axis of said tube, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,018,980. CORN-PLANTER. FRANK P. MURPHEY, Decatur, Ill. Filed Oct. 22, 1910. Serial No. 588,442. (Cl. 111—5.)



1. In a corn planter, the combination of a framework, traction wheels carried by the framework, planting mechanism including furrow openers, which are located inside of and closely adjacent to the side of the traction wheels near the point of ground contact, the traction wheels being beveled toward the inside and serving as outer covering and carrying wheels, inner covering wheels of smaller diameter and beveled toward the outside, and located inside of and to the rear of the furrow openers, and having a separate axial bearing from the axis of the carrying wheels, and means for adjusting the inner covering wheels transversely and longitudinally of the furrow, substantially as described.

2. In a corn planter, the combination of a framework, traction wheels carried by the framework, planting mechanism including furrow openers, which are located inside of and closely adjacent to the side of the traction wheels near the point of ground contact, the traction wheels being beveled toward the inside and serving as outer covering and carrying wheels, inner covering wheels of smaller diameter and beveled toward the outside, and located inside of and to the rear of the furrow openers, and have a separate axial bearing from the carrying wheels and means for adjusting the inner covering wheels to vary the distance between said covering wheels and the traction wheels, substantially as described.

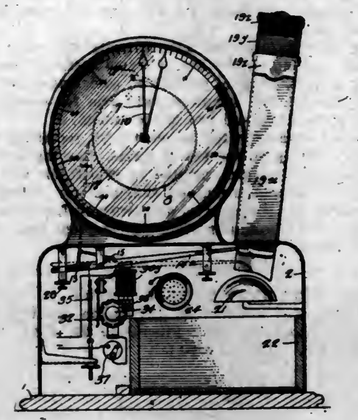
3. In a corn planter, the combination of a framework, traction wheels carried by the framework covering wheels independently adjustable toward and from the center of the machine, and seed boxes laterally adjacent to and inside of the rims of the traction wheels and independently adjustable toward and from the center of the machine, substantially as described.

4. In a corn planter, the combination of a framework, traction wheels carried by the framework and adjustable toward and from the center of the machine, seed boxes laterally adjacent to and inside of the rims of the traction wheels and adjustable toward and from the center of the machine, each seed box being provided with a discharge opening located on its outer side, and a furrow opener for each seed box, located immediately beneath said discharge opening and in close proximity to and inside of the adjacent traction wheel, and intermediate the traction wheel and seed box and serving to open the ground at a point immediately in front of and close to the point of ground contact of said traction wheel, substantially as described.

5. In a corn planter, the combination of a frame, traction wheels carried thereby and adjustable toward and from the center of the frame, seed boxes located inside of the rims of said wheels and laterally adjacent thereto, and adapted to be adjusted toward and from the center of the machine, and a telescoping-operating shaft for each of said seed boxes, adapted to permit of the adjustment thereof, substantially as described.

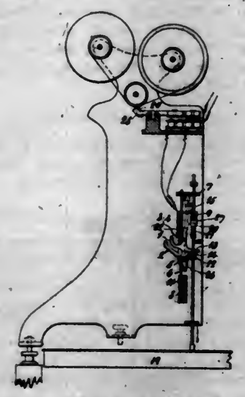
[Claims 6 to 22 not printed in the Gazette.]

1,018,981. REGISTERING DEVICE FOR TELEPHONE SYSTEMS. ELIJAH M. NORTHUM, Stephens, Ark. Filed July 18, 1911. Serial No. 639,121. (Cl. 235—91.)



In a registering device for telephone systems, a casing, a dial upon said casing, a pair of hands carried by said dial, an individual ratchet wheel for each of said hands, a lever and pawl for each ratchet wheel, a pair of chutes, each of said chutes terminating above the end of its respective lever, a receptacle having a partition disposed between the lower ends of said chutes, and a common signal disposed below the chutes and arranged to be engaged by the falling disks and to deflect the disks into the receptacle.

1,018,982. APPARATUS FOR AUTOMATICALLY RECORDING MUSIC. CARL WILHELM NYSTRÖM, Karlstad, Sweden. Filed Oct. 2, 1911. Serial No. 652,279. (Cl. 164—113.)



1. In an apparatus for automatically recording music a multitude of cutting tools for each key, actuated by electromagnets, pairs of electric contacts, successively entering into action during the downward motion of the key, and means for breaking the contacts of a preceding

pair of contacts, when a subsequent pair of contacts is closed.

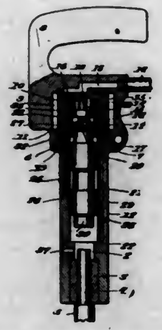
2. In an apparatus for automatically recording music a spindle, resting on the key, a frame, carrying pairs of electric contacts, an arm, pivoted on said frame and actuated by the spindle, and means for breaking the contacts of a preceding pair of contacts, when a subsequent pair of contacts is closed.

3. In an apparatus for automatically recording music, a spindle, resting on the key, a frame carrying pairs of electric contacts means for automatically adjusting the frame in a vertical direction according to the position of the spindle, and means for securing the frame in said adjusted position.

4. In an apparatus for automatically recording music a spindle, resting on the key, a frame carrying insulated contact springs, an arm, pivoted on said frame and actuated by the spindle, means on said arm for closing said contact springs two and two in succession.

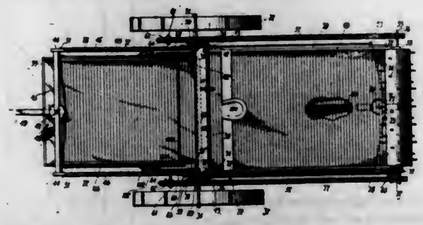
5. In an apparatus for automatically recording music a spindle, resting on the key, a frame, carrying insulated contact springs, an arm, pivoted on said frame and actuated by the spindle, means on said arm for closing contact between the springs two and two and for breaking a preceding pair of contacts when a subsequent pair of contacts is closed.

1,018,983. PNEUMATIC TOOL. JOHN J. PADBURY, Rockland, Me., assignor to Livingston Manufacturing Company, Rockland, Me. Filed June 26, 1911. Serial No. 635,378. (Cl. 121—20.)



A pneumatic tool having a cover at one end provided with chambers in its inner and outer faces, a piston mounted in said cylinder having a reduced portion co-acting with one of said chambers, and a valve having a reduced portion co-acting with the chamber upon the opposite faces of said cover.

1,018,984. COMBINED LOADER AND SPREADER. AUSTIN J. PARCELS, Wetmore, Kans. Filed Jan. 22, 1910. Serial No. 539,487. (Cl. 214—1.)



1. In a device of the kind described, a wheel supported body, means to raise and lower one end thereof, a loader at the movable end, and a drive mechanism for said loader including a pair of members arranged to engage when the body is lowered and disengaged when the body is raised.

2. In a device of the kind described, a wheel supported body, means to raise and lower one end thereof, a loader at the front end of said body, a conveyer supported on said loader, and a drive mechanism for said conveyer including a pair of members arranged to engage when the body is lowered and disengaged when the body is raised.

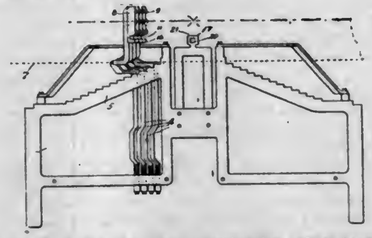
3. In a device of the kind described, a wheel supported body, means to raise and lower one end thereof, a loader at the movable end of said body, a conveyer drum on the outer end of said loader, a second conveyer drum on the inner end of said loader, driving gears operatively connected to one of the wheels, driven gears operatively connected to the second drum, and elements on said driving and driven gears arranged to engage when the body is lowered and disengage when the body is raised.

4. In a device of the kind described, a body, wheels supporting the body, means to raise and lower said body, a conveyer carried by the body, actuating mechanism for said conveyer, and elements on one of said wheels adapted to contact with and operate the actuating mechanism.

5. In a device of the kind described, a conveyer actuating mechanism including a reciprocable reach rod, and means to vary the extent of reciprocation of said reach rod.

[Claims 6 to 14 not printed in the Gazette.]

1,018,985. TYPE. MAX PFAU, Woodstock, Ill., assignor to Emerson Typewriter Co., Woodstock, Ill., a Corporation of Illinois. Filed Feb. 28, 1911. Serial No. 611,440. (Cl. 197—43.)

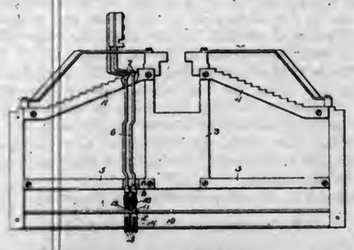


1. In a typewriter, the combination of a type member, comprising a block-like body portion provided with a character-bearing surface and an extension portion, the extension portion having a notch cut therein, which produces a flat faced centering member thereon, a fixed centering member adjacent the platen of the machine, provided with an opening adapted to receive the centering member on the type, said fixed centering member being provided with flat inner side faces adapted to engage the flat outer side faces of the body portion of the type, substantially as described.

2. In a typewriter, the combination of a type member, comprising a block-like body portion, provided with a character-bearing surface and an extension portion, the extension portion having a rectangular notch cut therein, which produces a flat faced finger-like centering member at the lower end of the body portion, a fixed centering member adjacent the platen of the typewriter, provided with an opening therein to receive the centering member on the type, and provided with a webbed portion adapted to receive the notch in the type, said fixed centering member being provided with flat inner side faces adapted to engage the flat outer side faces of the body portion of the type, substantially as described.

1,018,986. TYPE-BAR MOUNTING. MAX PFAU, Woodstock, Ill., assignor to The Emerson Typewriter Co., Woodstock, Ill., a Corporation of Illinois. Filed Apr. 14, 1911. Serial No. 621,107. (Cl. 197—33.)

1. In combination with a vertically extending swinging type bar, a mounting for said bar, an adjustable member spaced away from the lower end of the bar and extending approximately parallel therewith, and a tension member having one end attached to the lower end of the type bar and its other end attached to the adjustable member, substantially as described.



2. In combination with a swinging type bar, a mounting for said bar, an adjustable member held by friction against rotative movement with the bar, a tension member having one end attached to the lower end of the type bar and its other end attached to the adjustable member, and a rail in which the adjustable member is mounted, substantially as described.

3. In combination with a swinging type bar, a mounting for said bar, a frictionally-held pin-like member spaced away from the lower end of the bar and held by friction against rotative movement with the bar, and a tension member having one end attached to the lower end of the type bar and its other end attached to the pin-like member, substantially as described.

4. In combination with a swinging type bar, a mounting for said bar, a frictionally-held rotatable pin-like member spaced away from the lower end of the bar and held by friction against rotative movement with the bar, a tension member having one end attached to the lower end of the type bar and its other end attached to the pin-like member, and a bar of channel formation in which the pin-like member is mounted, substantially as described.

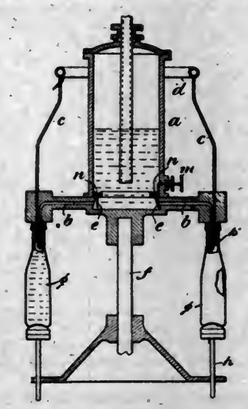
5. In combination with a swinging type bar, a mounting for said bar, a pin having a split body portion lying below said bar, a rail in which said pin is mounted, the split formation of said pin tending to hold it within said rail by frictional engagement, said pin having a notched end, and a tension member having one end attached to the type bar and its other end attached to the notched end of the split pin, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,018,987. FLOOR. WILLIAM H. PHILPOT and RUDOLPH VERTISKA, Humboldt, Nebr. Filed Apr. 2, 1909. Serial No. 487,448. (Cl. 20—6.)

As a new article of manufacture, a cross-shape strengthening spline for mill floors, said spline being constructed to have a comparatively thin longitudinal vertical web the top and bottom edges of which are adapted to extend flush with the upper and lower faces of the floor planks and central oppositely disposed horizontal longitudinal side tongues adapted to enter central longitudinal grooves in the edges of the floor planks of a mill floor.

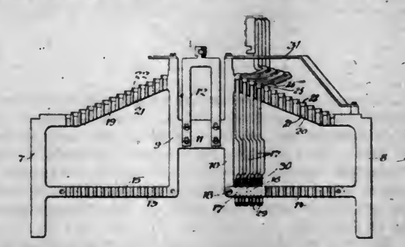
1,018,988. BOTTLING-MACHINE. ANDERS ANDERSEN PINDSTOFTE, Copenhagen, Denmark. Filed Oct. 31, 1910. Serial No. 590,088. (Cl. 226—15.)



1. In a bottling machine, the combination of a liquid-reservoir, bottling pipes leading from said reservoir, an air-reservoir, and air-pipes leading to said air reservoir, with clack valves or the like closing automatically said bottling pipes as soon as the outflow exceeds the normal, said valves being mounted upon a common support, and means for moving said support so much that the valves can be moved out from their operative position, when the machine shall be cleaned.

2. In a bottling machine, the combination of a liquid reservoir, bottling pipes leading from said reservoir, an air reservoir and air pipes leading to said air reservoir, with weighted or counter balanced clack valves or the like closing automatically said bottling pipes as soon as the outflow exceeds the normal and arranged in front of each of the inner orifices of said bottling pipes, said valves being mounted upon a common support, and means for moving said support so much that the valves can be removed from the orifice of the bottling pipes, when the machine shall be cleaned.

1,018,989. TYPE-BAR-SUPPORTING FRAME. JOSEPH RABER, Woodstock, Ill., assignor to Emerson Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Jan. 24, 1911. Serial No. 604,344. (Cl. 197—22.)



1. In a typewriter, the combination of a supporting frame for type bars comprising upper and lower rails, means for pivotally mounting the lower ends of the type bars within the lower rail, and seats for the bars in the upper rail consisting of a series of open grooves of a greater depth than the radius of the bars, whereby the bars lie in unlocked condition within said upper rail, substantially as described.

2. In a typewriter, the combination of a supporting frame for type bars comprising upper and lower rails, means for pivotally mounting the lower ends of the type bars within the lower rail, the upper rail being provided

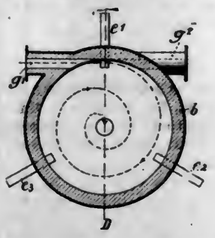
with open tapered grooves, each type bar having a tapered portion thereon adapted to seat within the tapered groove, said groove being of a greater depth than the radius of the bars, whereby the bars lie in unlocked condition within said upper rail, substantially as described.

3. In a typewriter, the combination of a supporting frame for type bars comprising upper and lower rails, means for pivotally mounting the lower ends of the type bars within the lower rail, the upper rail being provided with a series of open grooves of a greater depth than the radius of the bars, whereby said bars lie in unlocked condition within said upper rail, each groove terminating in an enlarged tapered portion, each type bar having a tapered portion adapted to seat within the tapered portion of the groove, substantially as described.

4. In a typewriter, the combination of a supporting frame for type bars comprising upper and lower rails, means for pivotally mounting the lower ends of the bars within the lower rail, seats for the bars in the upper rail consisting of a series of open grooves of a greater depth than the radius of the bars, whereby said bars lie in unlocked condition within said upper rail, the upper termini of the grooves being in stepped relation from the center toward the outer ends of the frame, substantially as described.

5. In a typewriter, the combination of a supporting frame for type bars comprising upper and lower rails, means for pivotally mounting the lower ends of the type bars within the lower rail, the upper rail being provided with tapered grooves of greater depth than the radius of said bars, each bar having a tapered portion thereon adapted to seat within the tapered portion of the groove, the upper termini of the grooves being in stepped relation from the center toward the outer ends of the frame, said bars lying within said upper rail in unlocked condition, substantially as described.

1,018,990. METHOD OF AND APPARATUS FOR PRODUCING AND UTILIZING DISK-LIKE ELECTRIC ARCS FOR EFFECTING GAS REACTIONS. FRITZ ROTHE, Dessau, Germany, assignor to Electrochemische Werke, G. M. B. H., Berlin, Germany. Filed July 18, 1911. Serial No. 638,371. (Cl. 204—31.)



1. The method of producing an electric arc and utilizing the same for the production of gas reactions, which consists in causing the gases to move in substantially parallel planes in proximity to the arc on opposite sides thereof, and spreading the arc out by the movement of the gases into a sheet discharge intermediate the planes of movement of the gases and distinct therefrom; substantially as described.

2. The method of producing an electric arc and utilizing the same for the production of gas reactions, which consists in causing the gases to move in opposite directions on opposite sides of the arc and in proximity thereto, and spreading the arc out into an intermediate sheet discharge by the movement of the gases; substantially as described.

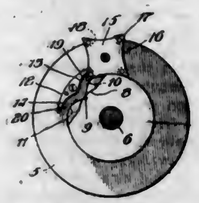
3. The method of producing an electric arc and utilizing the same for the production of gas reactions, which consists in causing the gases to move in proximity to the arc on opposite sides thereof, and spreading the arc out into an intermediate sheet discharge by the movement of the gases and without substantial renewal of such of the gases as collects within the disk zone; substantially as described.

4. The method of producing an electric arc and utilising the same for the production of gas reactions, which consists in causing the gases to move in opposite directions on opposite sides of the arc and in proximity thereto, and spreading the arc out into an intermediate sheet discharge by the movement of the gases and without substantial renewal of such of the gases as collects within the disk zone; substantially as described.

5. The method of producing a disk-like electric arc and utilizing the same for the production of gas reactions, which consists in causing the gases to move in a spiral path in a plane substantially parallel with and adjacent to but distinct from the plane of the arc, and drawing the arc out into disk form by the movement of the gases; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,018,991. MECHANICAL MOVEMENT. ANDREW SCHUSTEK, Chicago, Ill. Filed June 26, 1911. Serial No. 635,342. (Cl. 74—41.)



1. In a device of the class described, the combination of a continuously rotating driving member having a socket therein, an intermittently rotated driven member having a series of teeth adapted to successively enter said socket, protruding members on the driven member, said driving member having grooves adjacent the socket adapted to receive said protruding members, said grooves and protruding members serving to guide the driven member during its movements to bring said teeth into and out of said socket, substantially as described.

2. In a device of the class described, the combination of a continuously rotating driving member provided with a hub portion having a socket therein, an intermittently rotated driven member having a series of teeth adapted to successively enter said socket, protruding members on the driven member, a separable plate on the driving member positioned above the hub portion and adjacent the socket, and coöperating with said hub portion to form grooves adapted to receive said protruding portions, said grooves and protruding portions serving to guide the driven member in its movements to bring the teeth into and out of the socket, substantially as described.

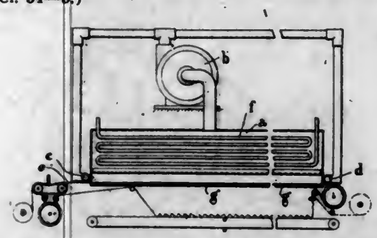
3. In a device of the class described, the combination of a continuously rotating driving member embodying a hub having a peripheral socket, an intermittently rotated driven member having a series of teeth adapted to successively enter said socket, and means for guiding the driven member to bring the teeth into and out of the socket, substantially as described.

4. In a device of the class described, the combination of a continuously rotating driving member embodying a hub portion having a peripheral depression, the central portion of the depression constituting a socket, an intermittently rotated driven member having a series of teeth adapted to successively enter said socket, a separable plate located above the depressed portion of the hub, said plate and hub coöperating to provide grooves lying upon opposite sides of said socket, and protruding members on the driven member adapted to enter said grooves to guide the driven member in its movements to bring the teeth into and out of the socket, substantially as described.

5. In a device of the class described, the combination of a continuously rotating driving member having a socket therein, an intermittently rotated driven member having a series of peripheral teeth adapted to successively enter said socket, said driving member being provided with curved grooves leading to and from the socket, and rollers on the driven member adapted to travel in said grooves, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,018,992. APPARATUS FOR DRYING PROOFED AND LIKE FABRICS OR MATERIALS. JOHN SPENLÉ, Salford, England. Filed Feb. 6, 1911. Serial No. 606,049. (Cl. 34—3.)

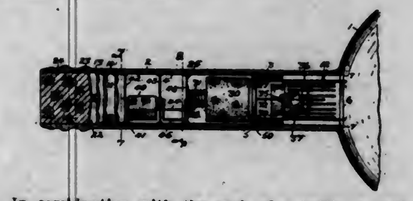


1. In apparatus for drying proofed and like fabrics or materials, in combination, a chamber having an inlet and outlet for the fabric, heating means for drying the fabric in its passage through said chamber, means for passing the fabric adjacent to said heating means, means for drawing off the fluid content of said chamber and for delivering same at the fabric inlet and outlet, as set forth.

2. In apparatus for drying proofed and like fabrics or materials, in combination, a chamber having an inlet and outlet for the fabric, heating means for drying the fabric in its passage through said chamber, means for passing the fabric adjacent to said heating means, means for condensing the vaporized solvents within said chamber, means for drawing off the gaseous content of said chamber and for delivering same at the fabric inlet and outlet, as set forth.

3. In apparatus for drying proofed and like fabrics or materials, in combination, a chamber having an inlet and outlet for the fabric, heating means for drying the fabric in its passage through said chamber, means for passing the fabric through the chamber over said heating means, means for condensing the solvents vaporized by said heating means and means withdrawing the gaseous content of said chamber and delivering it in jet form at the fabric inlet and outlet, as set forth.

1,018,993. NON-REFILLABLE BOTTLE. JOHN P. STENDERACH, Fruitvale, Cal. Filed Dec. 2, 1908, Serial No. 465,667. Renewed Sept. 20, 1911. Serial No. 650,456. (Cl. 215—64.)



1. In combination with the neck of a bottle, a casing having a seat, a valve adapted to engage said seat, a float secured to said valve, said valve having a stem, and a locking float mounted on said stem with the upper portion of the float freely movable transversely on said stem, a lower portion being immovable transversely thereto, substantially as described.

2. In combination with the neck of a bottle, a casing having a seat, a valve adapted to engage said seat, a float secured to said valve, said valve having a stem, a locking ring surrounding said stem, and spaced from said seat, and a locking float movably carried by said stem and arranged to engage said ring when not floated and to pass through said ring when floated, substantially as described.

3. In combination with the neck of a bottle, a casing having a seat, a valve adapted to engage said seat, a float secured to said valve, said valve having a stem, means for preventing movement of said stem, and a second float above the first float in the upright position of the bottle, and adapted, when floated, to move said means into its operative position, substantially as described.

4. In combination with the neck of a bottle, a casing having a seat, a valve adapted to engage said seat, a float secured to said valve, said valve having a stem, a double crank rod, a float carried thereby, a U-shaped piece moved by said crank rod as the float is lifted, said U-shaped piece having a part adapted to prevent movement of said stem, when so moved by the lifting of the float, but arranged to be out of the path of the stem when the float drops to its lowest position, substantially as described.

5. In combination with the neck of a bottle, a casing having a seat, a valve adapted to engage said seat, a float secured to said valve, said valve having a stem, a tiltable float wholly carried by said stem, and means secured to the casing for engaging said float when tilted, the casing having, adjacent to the float, slots to permit liquid to pass freely therethrough from the bottle, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,994. PROCESS OF PREPARING SUGAR-CANE AND MAIZE JUICES. FRANCIS L. STEWART, Murrysville, Pa., assignor to Maize Sugar & Cellulose Company, Pittsburgh, Pa., a Corporation of South Dakota. Filed May 6, 1909. Serial No. 494,408. (Cl. 127—7.)

1. The method of treating and purifying the juice of immature maize or immature sugar cane, consisting in treating the juice with an alkaline reagent until it gives an alkaline reaction, and then treating the juice with sulfurous oxid (dioxid of sulfur) until it shows an acidulous condition; substantially as described.

2. The method of treating the juice of immature maize or immature sugar cane, consisting in adding an alkaline reagent such as magnesia or lime, until the juice shows an alkaline reaction, then removing some of the impurities, then treating the liquid with sulfurous oxid until the juice shows an acid reaction, then heating the juice, filtering and evaporating the juice; substantially as described.

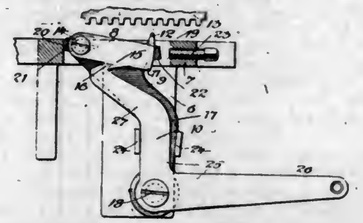
3. The method of treating the juice of immature maize and immature sugar cane, preparatory to evaporation, consisting in treating the juice with an alkaline reagent until it shows an alkaline reaction, then treating the juice with sulfurous oxid until it shows a strong acid reaction, heating the juice to the boiling point, removing the scum and filtering the juice; substantially as described.

4. The method of treating the juice of immature maize and immature sugar cane, preparatory to evaporation, consisting in treating the juice with an alkaline reagent until it shows an alkaline reaction, then treating the juice with sulfurous oxid until it shows a strong acid reaction, heating the juice to the boiling point, removing the scum and sediment, filtering and evaporating the juice while maintaining an acidulous condition during the early stage of evaporation; substantially as described.

1,018,995. BACK-FEED MECHANISM FOR TYPEWRITERS. AUGUST STIEG, Woodstock, Ill., assignor to The Emerson Typewriter Co., Woodstock, Ill., a Corporation of Illinois. Filed Mar. 17, 1911. Serial No. 615,100. (Cl. 197—91.)

1. In a back feed mechanism for typewriters, the combination of two levers superimposed upon one another, one of said levers having an operative connection to a key lever, a dog pivotally mounted on the other lever, a

cam surface on the dog, the upper end of the connected lever engaging said cam to elevate the dog into engagement with a rack bar, and means for moving said levers in unison after the initial movement of the connected levers, whereby said dog is moved to effect the back spacing operation, substantially as described.



2. In a back feed mechanism for typewriters, the combination of two levers superimposed upon one another and having a common pivotal center, one of said levers having an operative connection to a key lever, a dog pivotally mounted on the other lever, a cam surface on the dog, the upper end of the connected lever engaging said cam to elevate the dog into engagement with a rack bar, and means for moving said levers in unison after the initial movement of the connected levers, whereby said dog is moved to effect the back spacing operation, substantially as described.

3. In a back feed mechanism for typewriters, the combination of two levers superimposed upon one another, one of said levers having an operative connection to a key lever, a dog pivotally mounted on the other lever, a cam surface on the dog, the upper end of the connected lever engaging said cam to elevate the dog into engagement with the rack bar, lugs on the dog carrying lever adapted to be engaged by the connected lever after the initial movement thereof, whereby said levers are moved in unison after such engagement to actuate the dog and effect the back spacing operation, substantially as described.

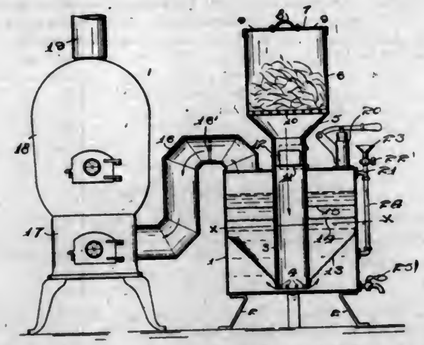
4. In a back feed mechanism for typewriters, the combination of two levers superimposed upon one another and having a common pivotal center, one of said levers having an operative connection to a key lever, a dog pivotally mounted on the other lever, a cam surface on the dog, the upper end of the connected lever engaging said cam to elevate the dog into engagement with the rack bar, lugs on the dog carrying lever adapted to be engaged by the connected lever after the initial movement thereof, whereby said levers are moved in unison after such engagement to actuate the dog and effect the back spacing operation, substantially as described.

5. In a back feed mechanism for typewriters, the combination of two levers superimposed upon one another, one of said levers having an operative connection to a key lever, a dog pivotally mounted on the other lever, a cam surface on the dog, the upper end of the connected lever engaging said cam to elevate the dog into engagement with a rack bar, means for moving said levers in unison after the initial movement of the connected levers, whereby said dog is moved to effect the back spacing operation, the frame of the typewriter having a slot in which said dog lies, the dog carrying lever extending beyond the dog, and an adjustable stem projecting into the slot and engaging the end of said lever to limit the movement of the mechanism, substantially as described.

[Claim 6 not printed in the Gazette.]

1,018,996. TOBACCO-SMOKE-ABSORPTION APPARATUS. WILLIAM HENRY SWETT, Berkeley, Cal., assignor to W. H. Stenger, Berkeley, Cal. Filed June 5, 1911. Serial No. 631,234. (Cl. 167—4.)

1. In a tobacco-smoke absorption apparatus, a receptacle for containing liquid, a vertical pipe projecting through the top of said receptacle and having its lower open end terminating adjacent to the bottom of said receptacle, a combustion chamber having an open lower end, and a grating above the same, said combustion chamber being mounted on the upper end of said vertical pipe, and means for causing a downward draft from said combustion chamber and up through the liquid containing receptacle and above the same.



2. In a tobacco-smoke absorption apparatus, a liquid containing receptacle, a vertical pipe projecting through the top of said receptacle and having its lower open end adjacent to the bottom of said receptacle, a combustion chamber with a grating, and an open lower end mounted on the upper end of said vertical pipe, screens located in said liquid containing receptacle between said pipe and the sides of said receptacle, and means for causing a draft downward from said combustion chamber through said vertical pipe and upward in said liquid containing chamber and out of the same.

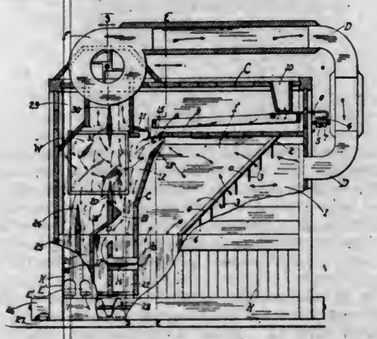
3. In a tobacco-smoke absorption apparatus, a liquid containing receptacle, a vertical pipe projecting through the top of said receptacle, and open at both ends with its lower end adjacent to the bottom of said receptacle and having perforations in the side of said end, a cone shaped screen above said holes between said pipe and the sides of the receptacle, and horizontal screens located in said receptacle above said cone shaped screen, a combustion chamber having a lower open end with a grating mounted on the upper end of said vertical pipe, and means for causing a draft downward from said combustion chamber through said vertical pipe, and upward through said liquid containing chamber and out of the same.

4. In a tobacco-smoke absorption apparatus, a liquid containing receptacle, a vertical pipe projecting through the top of said receptacle, and open at both ends, with its lower open end adjacent to the bottom of said receptacle, screens located in said receptacle, a reticulated diaphragm adjacent to the upper end of said pipe, a door adjacent to said diaphragm in said pipe, a combustion chamber having a lower open end, and a grating mounted above the top of the upper end of said pipe, a stove, and a pipe connecting the ash pit of said stove with the top of said liquid containing receptacle.

5. A tobacco-smoke absorption apparatus comprising a liquid containing receptacle, a vertical pipe open at each end projecting through the top of said receptacle and having its lower end adjacent to the bottom of said receptacle, screens located in said receptacle, a combustion chamber with a lower open end and a grating mounted on the top of said vertical pipe, a filling pipe, and a cock connected with the upper end of said receptacle, and an air pump on the top of said receptacle.

1,018,997. GRAIN-SEPARATOR. CARL G. THOMPSON, Louisville, Ky. Filed Aug. 21, 1911. Serial No. 645,206. (Cl. 130—17.)

1. A grain separator provided with an air chamber containing air under pressure, said chamber having at one end at the top thereof a valve-controlled opening for discharging a horizontal sheet of air, a ledge projecting beyond said opening and serving as a deflector for the air sheet, and for discharging the grain, a pipe leading from a point above the bottom of the chamber, and an air compartment into which said pipe discharges spaced from the chamber aforesaid, an upper extension leading from said compartment and provided with a constriction at a point above the pipe, the space below the constriction serving as a receiving compartment for the cleansed grain, the air from the air compartment aforesaid rising upwardly through the constriction against the falling grain, a common chamber for receiving the combined air discharges, a blower, a valve for controlling the drafting of the air from said last named chamber into the blower casing, and means for returning the air into the first mentioned chamber.

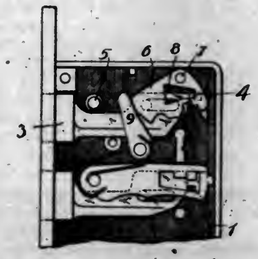


2. A grain separator provided with a chamber containing air under pressure and in a state of quiescence, said chamber having at the rear upper corner an opening for the discharge of a horizontal sheet of air, an oscillating valve for controlling the discharge of the air through said opening, a ledge projecting beyond the valve when the latter has been swung to closed position, means for precipitating the grain over said ledge across the path of the horizontal air sheet, a conduit leading from a point above the bottom of the air chamber, a vertical valve-controlled passage into which said conduit discharges, a constriction in said passage being formed at a point above the valve and below the ledge aforesaid, a grain compartment communicating with said constriction, said conduit spanning said compartment, a skimmer above the constriction aforesaid for separating the impurities from the stock, a common chamber into which the combined vertical and horizontal air currents discharge, a blower, a valve for controlling the flow of the cleansed air into the casing of the blower, and a conduit for returning the air to the first mentioned air chamber, substantially as set forth.

1,018,998. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed June 1, 1911. Serial No. 630,584. (Cl. 70—71.)

1. In a lock, a reciprocating bolt, a pivoted swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device and a shoulder on the sweep of said blocking device arranged to be shifted to a position between the key bit and the pivot of said blocking device to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key.

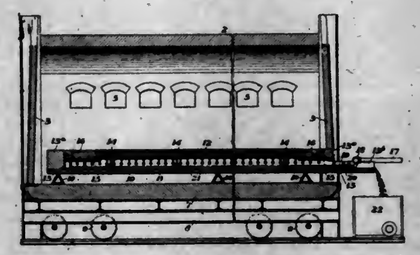
2. In a lock, a reciprocating bolt, a pivoted swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to be shifted to a position between the key bit and the pivot of said blocking device to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key, means to hold said blocking device in blocking and unblocking position and means to swing said blocking device rearwardly into its blocking position when said bolt is retracted by said second mentioned key.



3. In a lock, a reciprocating bolt, a swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key, and means to swing said blocking device rearwardly into its blocking position when said bolt is retracted by said second mentioned key, said means comprising a shoulder on the bolt and a coöperating shoulder on the blocking device.

4. In a lock, a reciprocating bolt, a swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key, means to swing said blocking device rearwardly into its blocking position when said bolt is retracted by said second mentioned key, said means comprising a shoulder on the bolt and a co-operating shoulder on the blocking device, the shoulder on the bolt being the usual fence thereon.

1,018,999. HEATING-FURNACE. SAMUEL S. WALES, Munhall, Pa. Filed Dec. 24, 1907. Serial No. 407,884. (Cl. 75—40.)

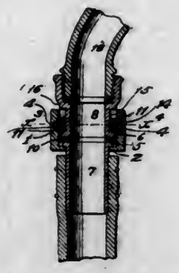


1. In a heating furnace having a bottom laterally movable into and out of position in said furnace, a removable superstructure mounted on the furnace bottom and arranged to support plates placed thereon out of contact with said bottom, and a system of spray pipes above the furnace bottom arranged to spray a cooling fluid on the lower face of plates on said superstructure within the furnace.

2. In a heating furnace having a bottom laterally movable into and out of position in said furnace, a removable superstructure mounted on the furnace bottom and arranged to support plates placed thereon out of contact with said bottom, and a system of spray pipes between the furnace bottom and plates carried thereon by the superstructure arranged to force a series of jets of cooling fluid against the lower face of plates carried on said superstructure while applying heat to the upper face of said plate within the furnace.

3. In a heating furnace having a bottom laterally movable into and out of position in said furnace, a removable superstructure mounted on the furnace bottom and arranged to support plates placed thereon out of contact with said bottom, a system of spray pipes above the furnace bottom arranged to spray a cooling fluid on the lower face of plates on said superstructure within the furnace, and an overflow outlet arranged to carry the overflow of cooling fluid to the exterior of the furnace.

1,019,000. HOSE-COUPLING. SAMUEL SHERMAN WATSON, Colegrove, Cal., assignor, by direct and mesne assignments, to Charles F. Schwickert, Los Angeles, Cal. Filed Aug. 22, 1910. Serial No. 578,434. (Cl. 137—28.)



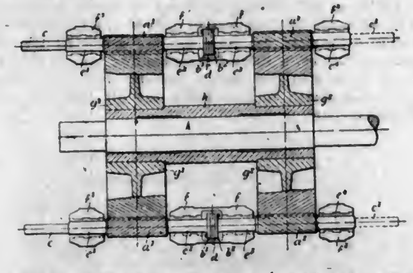
1. A hose coupling comprising a sleeve having an inwardly projecting retainer and transverse ways, flanged coupling members in the sleeve and a forked wedge in the ways to force the flanges toward the retainer; the limbs of said wedge having outwardly projecting tips which are turned laterally from the respective edges of the key and said sleeve having slots to accommodate said tips and also having stops at the ends of the slots to retain said tips.

2. A hose coupling comprising a sleeve having an inwardly projecting retainer and transverse ways, flanged coupling members in the sleeve and a resilient forked wedge in the ways to force the flanges toward the retainer; the limbs of said wedge having outwardly projecting tips which are turned laterally from the respective edges of the key and said sleeve having slots to accommodate said tips and also having stops at the ends of the slots to retain said tips.

3. A hose coupling comprising a sleeve having an inwardly projecting retainer and transverse ways, flanged coupling members in the sleeve and a forked wedge in the ways to force the flanges toward the retainer; the limbs of said wedge having outwardly projecting tips which are turned laterally from the respective edges of the key and said sleeve having slots to accommodate said tips and also having stops at the ends of the slots to retain said tips; one of said flanged coupling members being provided with a neck to accommodate the limbs of the wedge.

4. A hose coupling comprising a sleeve having an inwardly projecting retainer and transverse ways, flanged coupling members in the sleeve and a forked wedge in the ways to force the flanges toward the retainer; the limbs of said wedge having outwardly projecting tips and said sleeve having slots to accommodate said tips and also having stops at the ends of the slots to retain said tips; one of said flanged coupling members being provided with a neck to accommodate the limbs of the wedge, and with a shoulder to form a stop for the purpose set forth.

1,019,001. TOOTHED GEARING. BERNHARD WIESENGRUND and WILLIAM FREDERICK ROBERTS, West Drayton, England. Filed July 20, 1911. Serial No. 639,551. (Cl. 74—7.)



1. In toothed gearing, rigidly supported pairs of gear wheels which are not relatively movable except in lines parallel to their axis, one or more power shafts receiving power from a point or points outside the gear wheels but in direct line therewith and transmitting such power to a point intermediate of the gear wheels and means for transmitting such power from said point to the gear wheels.

2. In toothed gearing, rigidly supported pairs of gear wheels which are not relatively movable except in lines parallel to their axis, means for transmitting power from said gear wheels to a point between them, and means for transmitting the power from said point to a point or points outside said gear wheels but in direct lines therewith.

3. In a toothed gearing, rigidly supported pairs of gear wheels which are not relatively movable except in lines parallel to their axis, one or more power shafts receiving power from a point or points outside the gear wheels but in direct lines therewith and transmitting such power to a point or points between the gear wheels and means for transmitting such power from said point to the gear wheels and a single shaft driven therefrom.

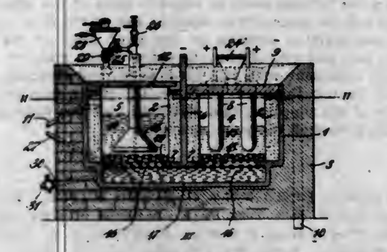
4. In toothed gearing, rigidly supported pairs of gear wheels which are not relatively movable except in lines parallel to their axis, a single driving shaft, means for transmitting power to said gears and means for transmitting said power from the gear wheels to a point or points between said gear wheels and from said point or points to a point or points outside the gear wheels but in direct line therewith.

1,019,002. PROCESS OF PRODUCING CYANOGEN COMPOUNDS. CHARLES E. ACKER, Ossining, N. Y., assignor to The Nitrogen Company, a Corporation of New York. Original application filed Aug. 30, 1910, Serial No. 579,763. Divided and this application filed Dec. 12, 1910. Serial No. 596,752. (Cl. 23—13.)

1. The process of producing cyanogen compounds and the like, which includes effecting within a mass of molten non-aqueous salt, a reaction in which nitrogen, carbon and a metal capable of being alloyed with a molten metal and belonging to that class of metals which are capable when heated of directly combining with free nitrogen to form a stable nitrid, participate, to form a compound of the said first mentioned metal, and then reacting on the said compound with another metal capable of forming the base of a stable cyanid, substantially as described.

2. The process of producing cyanogen compounds and the like, which includes effecting within a mass of non-aqueous salt and at a temperature above 500° C. a reaction between a plurality of substances, one of which includes nitrogen as a constituent thereof, one of which

comprises carbon as a constituent thereof, and one of which comprises a metal capable of being alloyed with a molten metal and belonging to that class of metals which are capable when heated of directly combining with free nitrogen to form a stable nitrid, and then effecting a second reaction between a product of the first reaction and another metal capable of forming the base of a stable cyanid.



3. The process of producing cyanogen compounds and the like, which includes effecting within a mass of molten cyanogen compound alternate reactions in one of which nitrogen and a metal capable of being alloyed with a molten metal and belonging to that group of metals which are capable when heated of directly combining with free nitrogen to form stable nitrids, participate, and in another of which reactions carbon and another metal capable of forming the base of a stable cyanid participate.

4. The process of producing cyanogen compounds and the like which includes effecting within a mass of molten alkali cyanogen compound and at a temperature above 500° C. alternate reactions in one of which nitrogen and a metal capable of being alloyed with a molten metal and belonging to that group of metals which are capable when heated of directly combining with free nitrogen to form a stable nitrid, participate, and in another of which reactions carbon and an alkali metal participate.

5. The process of producing cyanogen compounds and the like which includes bringing a mass of molten cyanogen compound into contact with nitrogen, carbon, a metal capable of being alloyed with a molten metal and belonging to that class of metals which are capable when heated of directly combining with free nitrogen to form a stable nitrid, and another metal capable of forming the base of a stable cyanid, and effecting reactions between said substances, one of said reactions forming a nitrid of the first mentioned metal.

[Claims 6 to 12 not printed in the Gazette.]

1,019,003. ABSORPTION APPARATUS. GUSTAV AMINOFF, Baltimore, Md. Filed Jan. 13, 1911. Serial No. 602,487. (Cl. 48—130.)

1. An absorption apparatus comprising an inclined closed chute consisting of a series of contiguous boxes in its upper part, and a bottom completing the liquid passage underneath said passage communicating with the boxes, means for introducing to the chute a stream of liquid at the upper end of the chute, and discharging it from the lower end, and means for introducing gas at the lower and discharging the same at the upper end.

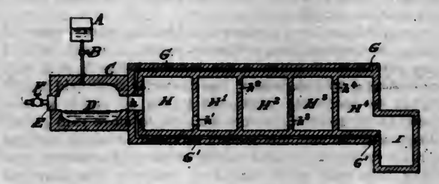
2. In an absorber, an inclined closed chute consisting of a series of upper open boxes, a bottom completing the liquid passage, an open feed box or reservoir, a liquid supply therefor, seals to prevent the escape of gas, a discharge for liquid at the lower end of the chute, and means for passing the gas in a direction opposite to the flow of the liquid.

3. The described absorber comprising an inclined closed chute having a series of boxes, means for feeding the liquid and discharging the gas at the upper end of said chute, a gas inlet pipe set near the lower end of the series of boxes of said absorber, and a liquid overflow pipe set in the lower end of said chute and below the gas inlet pipe, whereby a body of liquid is led between the gas inlet and the liquid discharge, and a gas seal formed.

4. In the described absorber, the open feed box 8 connected to the chute by a detachable joint 20, said chute having an inclined bottom and a series of boxes, a gas discharge pipe 16, set between the chute and the feed box, and a partition 9 extending near to the said bottom and forming a seal.

5. In the described absorber, an inclined chute having a series of boxes, and means for introducing and discharging reverse currents of liquid and gas, the chute varying in width along the course of the same to accommodate a changing volume of gas.

1,019,004. PROCESS OF MAKING METAL OXIDS. HANS FOERSTERLING, New York, N. Y. Filed July 25, 1907. Serial No. 385,481. (Cl. 23—13.)



1. A process of making metal oxids consisting in heating the metal to be oxidized in the absence of an excess of a gaseous oxidizing agent to a temperature which is above its melting point and near but below its boiling point, bringing the escaping vapors of the metal into contact with a current of an excess of a gaseous oxidizing agent and raising the temperature of the vapors by the heat of reaction to the boiling point of the metal.

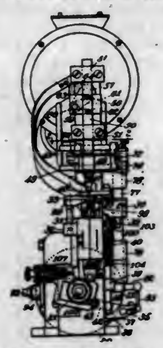
2. A process of making metal oxids consisting in heating the metal to be oxidized in the absence of an excess of gaseous oxidizing agent to a temperature which is above its melting point and near but below its boiling point, bringing the escaping vapors of the metal into contact with a current of an excess of a heated gaseous oxidizing agent and raising the temperature of the vapors by the heat of said oxidizing agent and the heat of reaction to the boiling point of the metal.

3. A process of making tin oxid consisting in heating the tin in absence of an excess of air to a temperature which is above its melting point and near but below its boiling point, bringing the escaping vapors of the tin into contact with a current of an excess of air and raising the temperature of the vapors by the heat of reaction to the boiling point of tin.

1,019,005. MACHINE FOR PUNCHING AND FEEDING SHEET MATERIAL. ARTHUR R. HAVENER, Waltham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Original application filed Feb. 28, 1910, Serial No. 546,373. Divided and this application filed Nov. 1, 1910. Serial No. 590,125. (Cl. 164—88.)

1. A machine for punching sheet material having, in combination, a punch and a die having a hole therein of

less diameter than said punch and adapted to coöperate with said punch to punch a hole in said sheet material.



2. A machine for punching sheet material having, in combination, a punch, a die having a hole therein of less diameter than said punch and adapted to coöperate with said punch to punch a hole in said sheet material, and mechanism adapted to move said die laterally relatively to said punch.

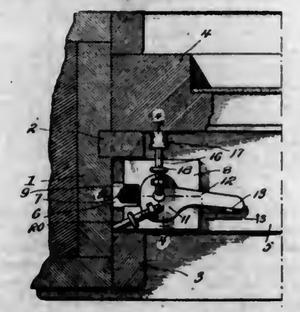
3. A machine for punching sheet material having, in combination, a punch and a die having a hole therein of less diameter than said punch and adapted to coöperate with said punch to punch a hole in said sheet material, and mechanism adapted to move said die laterally relatively to said punch in one direction, and mechanism adapted to subsequently move said punch laterally thereof in another direction.

4. A machine for punching and feeding sheet material having, in combination, a work-support, a punch located above said work-support, a die located beneath said support having a hole therein of less diameter than said punch adapted to coöperate with said punch to punch a hole in said sheet material, means adapted to move said punch toward said die and mechanism adapted to move said die laterally relatively to said punch while said punch is projecting into said sheet material, whereby the material forced by said punch into said hole may be severed from said sheet material.

5. A machine for punching and feeding sheet material having, in combination, a slide, mechanism adapted to impart a vertical reciprocatory motion thereto, a punch, a die having a hole therein of less diameter than said punch, a holder for said punch, said holder adapted to move horizontally on said slide and mechanism adapted to move said holder on said slide.

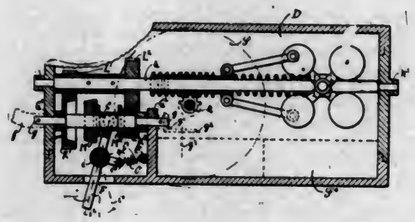
[Claims 6 to 12 not printed in the Gazette.]

1,019,006. PORTABLE SASH-FASTENER. JOHN EDWARD HORSTMYER, Schenectady, N. Y. Filed Dec. 6, 1910. Serial No. 595,869. (Cl. 16—52.)



A sash fastener comprising an oblong rectangular bracket plate adapted to rest upon the top rail of the lower sash and having side edges to engage the inner guide strip and parting strip of a jamb, a tongue integral with and depending centrally from the front portion of the bracket plate and adapted to engage the side edge of the sash, a lever having a cam head pivoted at the center of said bracket plate, supports having internally threaded eyes, said supports being journaled upon the cam head on opposite sides of its pivot, guide members journaled upon the bracket plate on opposite sides of the lever head and located respectively adjacent one of the front corners of the plate in advance of the pivot point of the lever and adjacent one of the side edges of the plate in transverse alinement with said pivot point, and clamping members having threaded portions adjustably engaging the eyes of the supports, said clamping members slidably projecting through the guide members.

1,019,007. DISTANCE AND SPEED METER. MATHIAS J. KLEIN, New York, N. Y., assignor of sixty one-hundredths to Hugo B. Roelker, New York, N. Y. Filed Oct. 29, 1910. Serial No. 589,723. (Cl. 73—123.)



1. A speedometer of the centrifugal type, comprising a rotary shaft, a dial, an index-hand, means between said shaft and index-hand for moving the latter over said dial as the speed of rotation of the rotary shaft changes, mechanism for transmitting rotary motion to the rotary shaft, and a shiftable device coöperating with said mechanism for driving the rotary shaft at different speeds for a given speed of the road-wheels.

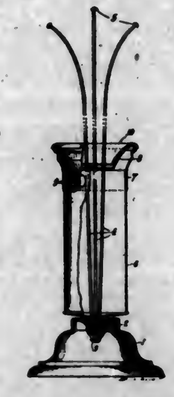
2. A speedometer of the centrifugal type, comprising a rotary shaft, a dial having two scales, an index-hand means whereby the index-hand is adapted to be moved over said scales on changes of speed of said shaft, clutch gear-wheels operatively connected to said shaft, means for connecting the clutch gear-wheels operatively with the shaft, a shiftable clutch, and a hand-lever for shifting the clutch into or out of engagement with said gear-wheels.

3. A speedometer of the centrifugal type, comprising a rotary shaft, a dial with two scales, an index-hand adapted to be moved over said dial, means for transmitting motion from the rotary shaft to the index-hand as the speed of rotation of the rotary shaft changes, two gear-wheels of different diameters on said shaft, a clutch-shaft, loose gear-wheels on said clutch-shaft meshing with the gear-wheels on its rotary shaft, and provided with cone-surfaces, a shiftable clutch between said clutch gear-wheels provided with coöperating cone-surfaces, and a hand-lever for shifting the clutch into engagement with one or the other of said clutch gear-wheels for imparting two different speeds to the rotary shaft for the same speed of the vehicle and indicating the two different speeds on the scales of the dial.

1,019,008. FLY-CATCHER. EMIL KUNZ and OTIS E. HODGE, Ruston, La. Filed Mar. 18, 1911. Serial No. 615,434. (Cl. 43—22.)

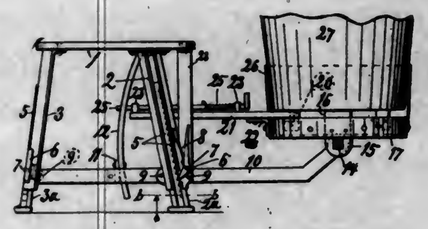
A fly catcher comprising a base, a plurality of slightly divergent upwardly extending wires mounted on said base and a receptacle for sticky material slidably mounted on

said wires, and having said wires extending through said receptacle from end to end, said receptacle having a top fitted over the upper end of the receptacle and capable of



being turned on the receptacle, the receptacle and the top being provided with openings which can be brought into registration for the purpose of filling the receptacle.

1,019,009. MILK-STOOL. JORGEN C. H. LYNDGAARD, Lake Benton, Minn. Filed Sept. 1, 1911. Serial No. 647,262. (Cl. 31—13.)

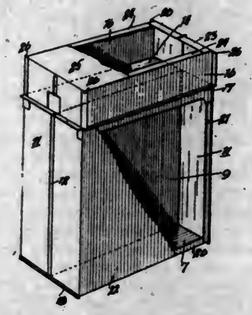


1. A milk stool comprising a seat and three legs supporting the same, each leg composed of an upper section fixed to the seat and a lower section slidable on the upper section, and means for holding the sections extended to different lengths.

2. A milk stool comprising a seat and three legs supporting the same, each leg composed of an upper section fixed to the seat and a lower section slidable on the upper section, and means for holding the sections extended to different lengths, a horizontal frame secured to the upper sections of the legs and extending forward beyond the seat, a pail support mounted on said forward extension and having a guard arranged to encircle the lower portion of the pail, for the purpose set forth.

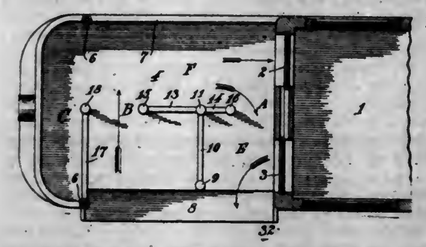
3. A milk stool comprising a seat and three legs supporting the same, each leg composed of an upper section fixed to the seat and a lower section slidable on the upper section, and means for holding the sections extended to different lengths, a horizontal frame secured to the upper sections of the legs and extending forward beyond the seat, a pail support mounted on said forward extension and having a guard arranged to encircle the lower portion of the pail, for the purpose set forth, a segmental perforated bar below the seat, an arm on the pail support, spring-pressed means carried by the arm and arranged for engagement with either of the perforations in the segmental bar, said pail support being pivotally mounted on the frame to tilt to and from the seat.

1,019,010. THREE-COMPARTMENT RECEPTACLE. CHARLES B. MCDONALD and CHARLES D. MCDONALD, Chicago, Ill. Filed Oct. 16, 1909. Serial No. 522,997. (Cl. 73—1.)



A three compartment gas meter casing comprising a longitudinally extending partition plate, a transversely extending partition plate, said plates dividing the interior of the casing into two elongated vertically extending chambers and one transversely extending chamber, a base plate, said base and transverse partition plates being provided with grooves to receive the upper and lower edges of said longitudinally extending partition plate, end plates having grooves adapted to receive the side edges of said longitudinal partition plate, and having grooves adapted to receive the side edges of the transverse partition plate, front and rear plates having grooves adapted to receive the front and rear edges of the transversely extending partition plate, said front and rear plates terminating slightly below the transverse partition, and front and rear closure plates, said front, rear, end and base plates being provided with flanges forming a frame work to which said closure plates are secured, and the edges of said partition plates being dipped in solder prior to their assemblage, substantially as described.

1,019,011. PAY-AS-YOU-ENTER CAR. JOHN F. OHMER, Dayton, Ohio. Filed June 18, 1910. Serial No. 567,538. (Cl. 105—205.)



1. The combination with a passenger car provided with a platform, of a bar dividing said platform longitudinally, a bar dividing one portion of the platform into ingress and egress sub-platforms, said longitudinal bar being of a length to provide passageways between the sub-platforms, and a bar lying approximately parallel with said second named bar and providing a sub-platform at the extreme rear end of the platform.

2. The combination with a passenger car having a platform, and doors forming communications between the interior of the car and the platform, of a barrier extending lengthwise of the platform and terminating at its end suitable distances from the ends of the platform to provide passage-ways, a barrier extending from said longitudinal barrier at right angles and providing ingress and egress spaces on one side of said longitudinal barrier, the

ingress space communicating with the platform of the car through the passage-way at the outer end of the longitudinal barrier, a transverse barrier forming the end inclosure of the ingress space and the passageway leading therefrom, said transverse barrier also inclosing a space at the extreme rear end of the platform for the conductor and the egress space communicating with the interior of the car through one of the doors and with the platform in the car through the passage-way at the inner end of the longitudinal barrier, substantially as shown and described.

3. The combination with a passenger car provided with a platform and oppositely arranged doors between the interior of the car and the platform, of a barrier arranged lengthwise of the platform between the doors and dividing said platform into inner and outer sections, said lengthwise barrier terminating at its ends suitable distances from the inner and outer ends of the platform to provide spaces or passage-ways through which communication may be had between the opposite sections of the platform, a laterally extending barrier dividing the section on one side of the lengthwise barrier into ingress and egress spaces, a laterally extending barrier separating the ingress space from the space at the rear end of the platform, said space at the rear end of the platform being provided for the conductor and from which position he is adapted to collect the fares of the passengers as they pass from the ingress space to the space on the platform behind the lengthwise barrier, substantially as specified.

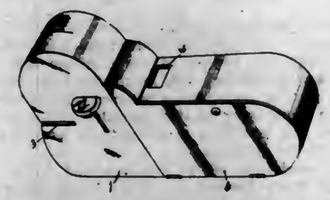
4. The combination with a passenger car provided with a platform and oppositely disposed doors providing entrances to and from the interior of the car and the platform, of a system of barriers dividing the platform into a passenger section F, an ingress section D and an egress section E and a conductor section C, one of said barriers extending lengthwise of the platform and terminating at suitable points to provide a passage B between the ingress section D and the passenger section F, and a passageway A between the passenger sections F and the egress section E, said egress section also communicating with the interior of the car through one of the doors, substantially as specified.

5. The combination with a passenger car provided with a platform, of a barrier of shorter length than the platform mounted on said platform and dividing it longitudinally, said barrier providing passage-ways at each end thereof, a turnstile controlling one of said passage-ways, a gate controlling the other passage-way, and mechanism extending from the gate and operated by the conductor for opening and closing the gate.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

13,378. CONDUCTOR'S CASH-FARE REGISTER. WILLIAM W. KAY, St. Louis, Mo., assignor to National Recorder Company, St. Louis, Mo. Filed May 1, 1911. Serial No. 624,477. Original No. 976,467, dated Nov. 22, 1910, Serial No. 479,397. (Cl. 101—187.)



1. In an apparatus of the character described, the combination with a casing having an opening through which inscriptions may be manually made on a check, check-issuing mechanism, means for canceling a ticket and for recording identification marks on the check before it is issued, said issuing mechanism feeding said check forwardly beyond the point where the inscription has been made thereon.

2. In an apparatus of the character described, the combination with a casing having an opening through which inscriptions may be manually made on a check, check-issuing mechanism, ticket-canceling mechanism operable simultaneously therewith, means for recording identification marks on the check, and means for winding a permanent record strip on which is recorded the manual inscription only, said record strip being wound simultaneously with the issuance of said check.

3. In an apparatus of the character described, the combination with a casing having an opening, means for canceling a ticket and for feeding a check past said opening through which the station of destination is manually inscribed on said check, and means for recording serial numbers on said checks.

4. In an apparatus of the character described, the combination with means for feeding a check past an opening where the station of destination may be inscribed thereon, means for recording the train number and date upon said check, and at the same time canceling a ticket, or the like, with said numbers, and means for making a permanent record of the station of destination only.

5. In an apparatus of the character described, the combination with a casing having a ticket-receiving aperture, and an opening through which the station of destination may be manually written on a check to be issued, ticket-canceling devices in the form of puncturing devices arranged to represent numbers indicative of the train number, date and serial number, means for feeding a check to be punctured with said numbers at the time said ticket is canceled, means for effecting said puncturing operation before said check is issued, said means finally issuing said check, and means for retaining a permanent record of the station of destination written on said issued check.

6. In an apparatus of the character described, mechanism for feeding a strip of paper a predetermined distance cooperating with mechanism for feeding another strip of paper from an independent source of supply a relative shorter distance, a rewinding device for the last-mentioned strip of paper, and yielding means tending to drive said re-winding device at an excessive speed.

7. In an apparatus of the character described, mechanism for feeding a strip of paper a predetermined distance coöperating with mechanism for feeding another strip of paper from an independent source of supply a relatively shorter distance, a rewinding device for the last-mentioned strip of paper, and yielding means tending to drive said re-winding device at an excessive speed, said driving means being actuated by the first-mentioned paper-feeding mechanism.

8. In an apparatus of the character described, a roll for feeding a strip of paper a predetermined distance, means for actuating said roll, mechanism for feeding another strip of paper from an independent source of supply a relatively shorter distance, a re-winding spool for the last-mentioned strip of paper, and means for yieldingly forcing said re-winding spool into engagement with said feeding roll.

9. In an apparatus of the character described, the combination with check-feeding mechanism, of means for perforating or indenting the check, means for moving the check into engagement with said indenting means, and means for holding the check out of engagement therewith while the check-feeding mechanism is operating, said holding means coöperating with the check being issued.

10. In an apparatus of the character described, the combination with check-feeding mechanism, of means for perforating or indenting said check, a platen adapted to move the check into engagement with said indenting devices, and yielding means for holding the check out of engagement therewith while the check-feeding mechanism is operating, said holding means coöperating with the check being issued.

11. In an apparatus of the character described, a manually operable actuating device, a rock shaft actuated thereby, a spring for restoring said rock shaft to normal position, means for actuating paper feeding and issuing mechanism operated by said rock shaft, a frictionally driven winding spool coöperating with said paper feeding mechanism, wheels having raised characters on their periphery, a platen, means operated by said rock shaft for moving said platen so as to force the paper into engagement with said wheels, and means for holding the platen away from said wheels while the feeding mechanism is operating.

12. In an apparatus of the character described, the combination with a numbering wheel for canceling tickets by recording consecutive numbers thereon, means for simultaneously placing the train number and date on said tickets, means for issuing a check, means for feeding a record strip on which the station number of destination is recorded, a spool on which said strip is wound, and means operated by the check-issuing mechanism for operating the spool at a higher rate of speed than said record strip is fed.

13. In an apparatus of the character described, the combination with a casing having an opening through which the point of destination of the ticket being canceled may be manually inscribed on a check, numbering wheels for canceling tickets by recording consecutive numbers thereon, means for simultaneously placing the train number and date on said tickets, means for recording upon said check the said consecutive number, train number and date impressed upon said ticket and issuing said check at the time said ticket is canceled, and means for feeding a record strip on which the points of destination only are recorded.

14. In an apparatus of the character described, the combination with a casing having an opening through which the point of destination of the ticket being canceled may be manually inscribed on a check, numbering wheels for consecutively numbering tickets to be canceled, means for recording the train number and date upon said tickets as they are canceled, means for issuing said check at the time of canceling its complementary ticket, said check also bearing the consecutive cancellation number, train number and date of cancellation borne by the ticket, and means for making a permanent record of the several points of destination inscribed upon said checks as they are issued.

15. In an apparatus of the character described, the combination with a casing having an opening through which the point of destination of the ticket being canceled may be manually inscribed on a check, means for canceling tickets by recording consecutive numbers thereon, and means for issuing checks bearing said consecutive numbers as said tickets are canceled, said checks containing the manual inscription of the station of destination of their respective complementary tickets.

16. In an apparatus of the character described, the combination with a casing having an opening through which the point of destination of the ticket being canceled may be manually inscribed on a check, means for canceling tickets by recording consecutive numbers thereon, means for issuing checks bearing said consecutive numbers as said tickets are canceled, said checks containing the station of destination of their respective complementary tickets, and means for keeping a separate record of said destination of said tickets.

17. An apparatus of the character described, comprising a ticket-canceling means, means for issuing checks that serve as receipts for the canceled tickets, means for enabling manual inscriptions to be written on said checks prior to the issuance of same to the passengers, and means for showing the order in which said checks were issued.

18. An apparatus of the character described, comprising a ticket-canceling means, means for issuing checks that serve as receipts for the canceled tickets, means for enabling manual inscriptions to be inscribed on said checks prior to the issuance of same, and means for recording the manual inscriptions placed on said checks.

19. An apparatus of the character described, comprising a casing that is adapted to receive a plurality of checks, a ticket-canceling means, means for issuing said checks to serve as receipts for the canceled tickets, means in said casing for permitting a manual inscription to be written on each check prior to the issuance of same to show the relation which the check bears to the canceled ticket for which it was issued, and means for consecutively recording the manual inscriptions placed on said checks.

20. An apparatus of the character described, comprising a casing that is adapted to receive a plurality of checks, means for canceling a ticket, means for issuing checks consecutively to serve as receipts for the tickets that are canceled, and means for permitting the conductor or operator to write an inscription on each check, prior to its delivery from the casing so as to indicate the relation between the ticket and the check.

21. A conductor's cash fare register, consisting of a casing that is adapted to hold checks, means for issuing checks from said casing, means for canceling a ticket and placing an identification mark on a check, and means for enabling the conductor to write an inscription on a check prior to issuing same.

22. A conductor's cash fare register consisting of a casing that is adapted to hold checks, means for issuing checks from said casing, means for canceling a ticket and placing an identification mark on a check, means for enabling the conductor to write an inscription on a check manually prior to issuing same, and means for recording the manual inscription that the conductor places on the check.

23. An apparatus of the character described, comprising a casing that is adapted to receive a check strip and having an opening therein which permits inscriptions to be written on said check strip, mechanism for canceling a ticket and placing an identification mark on each portion of said check strip which contains a manual inscription, and means for feeding said check strip into such a position that a portion thereof can be severed to form a receipt for the canceled ticket.

24. An apparatus of the character described, comprising a casing that is adapted to receive a plurality of checks, means for issuing the checks from said casing, means for canceling a ticket and placing an identification mark on the check which relates to said canceled ticket prior to the delivery of the check from the casing, and means for permitting the conductor or operator to write an inscription on each check prior to its delivery from the casing so as to indicate the station of destination on the ticket to which the check relates.

25. An apparatus of the character described, comprising a casing that is adapted to receive a plurality of checks, means for issuing the checks from said casing, means for canceling a ticket and placing an identification mark on the check which relates to said canceled ticket prior to the delivery of the check from the casing, means for permitting the conductor or operator to write an inscription on each check prior to its delivery from the casing so as to indicate the station of destination on the ticket to which the check relates, and means arranged inside of said casing for recording the manual inscriptions which the conductor places on said checks.

26. An apparatus of the character described, comprising a casing for inclosing a check strip and a permanent record and provided with an opening that enables inscriptions to be inscribed on said check strip and record, means for canceling a ticket and placing an identification mark on the check strip, and means for issuing that portion of the check strip which contains said identification mark and manual inscription.

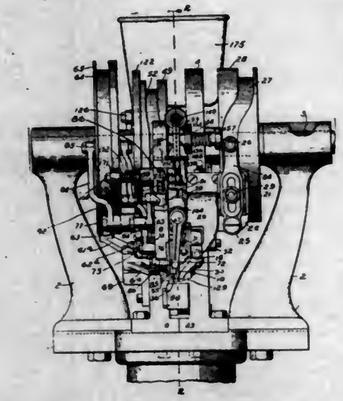
27. An apparatus of the character described, comprising a marking mechanism which is adapted to operate on a ticket and on a check that relates to the ticket, a casing for inclosing said check, means for permitting the conductor or operator to write an inscription on the check while it is still in the casing, means for recording said manual inscription, and means for delivering the check from the casing.

28. An apparatus of the character described, comprising a casing for inclosing a record strip and a check strip arranged in superimposed relation, the check strip being adapted to be separated into sections each of which con-

stitutes a check, means for permitting an inscription to be made manually on the top strip, feeding-mechanism for said strips which feeds the check strip a greater distance than the record strip, and a ticket-canceling means.

29. An apparatus of the character described, comprising a casing for inclosing a record strip and a check strip arranged in superimposed relation, the check strip being adapted to be separated into sections each of which constitutes a check, means in said casing for permitting an inscription to be made manually on the top strip, feeding mechanism for said strips which feeds the check strip a greater distance than the record strip, and means for canceling a ticket and placing an identification mark on the check which relates to said canceled ticket.

13,374. SEWING-MACHINE. THOMAS G. PLANT, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 6, 1911. Serial No. 601,220. Original No. 947,401, dated Jan. 25, 1910, Serial No. 529,297. (Cl. 112—20.)



1. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of a work protector around which the needle-thread is laid on one side of the work, said work protector being yieldingly mounted so as to be free to be moved with the work as the latter is fed, and means for operating said work protector to cause it to engage the work, at intervals, so as to be moved thereby in the direction of the seam being formed, as the work is fed, and means for causing said protector to be disengaged from the work and to be returned to its first position.

2. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of a work-protector around which the needle-thread is laid on one side of the work, a loosely mounted upright shaft having a horizontally extending socket at its lower end, a shank yieldingly mounted in said socket and by which shank said protector is carried, and means for operating said shaft.

3. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of a work-protector around which the needle thread is laid on one side of the work, an upright shaft which is yieldingly mounted torsionally, and which is provided with a socket at its lower end, a horizontal shank by which said work protector is carried and which shank is yieldingly mounted so as to be adapted to slide in such socket, and means for operating said shaft.

4. In a sewing machine, the combination with stitch-forming and feeding mechanisms, comprising a needle, of a work-protector means for moving said work-protector toward and from the work to engage and be disengaged therefrom, said needle being so timed in its operation as to furnish a support for the work in opposition to the thrust of said work-protector.

5. In a sewing machine, the combination with stitch-forming devices, of a work-protector around which the needle thread is laid and which is so mounted as to slide along and rotate about the same axis, said work-protector being also mounted so as to be movable transverse to said axis.

6. In a sewing machine, the combination with stitch-forming mechanism, of a work-protector mounted to slide along and rotate about the same axis, and having also a spring-controlled movement transverse to said axis.

7. In a sewing machine, the combination with stitch-forming mechanism, of a work-protector mounted to slide and rotate about the same axis, and yielding means for controlling the rotary movement of said work-protector about said axis.

8. In a sewing machine, the combination with stitch-forming mechanism, of a work-protector having a laterally movable, spring-controlled shank, a socket in which said shank may slide, a shaft by which said socket is carried, a bearing in which said shaft may rotate and slide, a spring controlling the rotary movement of said shaft, and means, operable from the main shaft of the machine, for reciprocating said shaft and protector.

9. A chain stitch sewing machine, comprising stitch-forming mechanism, including clamping means to seize both limbs of the last formed needle thread loop and carry said loop to one side substantially in the line of feed.

10. A chain-stitch sewing machine, comprising stitch-forming mechanism, including clamping means to seize both limbs of the last formed needle loop between the needle and the work and carry said loop to one side substantially in the line of feed.

11. A chain-stitch sewing machine, comprising stitch-forming mechanism, including clamping means to seize both limbs of the last formed needle loop between the next preceding loop and the needle and carry said loop to one side substantially in the line of feed.

12. A sewing machine, comprising stitch-forming mechanism, including clamping means to seize both limbs of a loop and shift the position of the loop end of the last preceding loop in the direction of the feed, to furnish opportunity to draw it in an opposite direction, and means to draw it in such opposite direction.

13. A chain stitch sewing machine, comprising in combination, a curved needle, a curved awl of the same radius as the needle, a feeding channel guide, means to move the same in the line of feed, and means to give to the needle a channel guide clearing movement to disengage the work from said guide and permit return movement of the latter.

14. A sewing machine containing in combination the following instrumentalities; means, including a needle, to form a series of enchained loops, a clamping means for seizing the needle-thread on the double thread side of the work, and means at the single thread side of the work operating in a formed stitch, to shorten a loop at the opposite or double thread side of the work.

15. A sewing machine containing in combination the following instrumentalities; means, including a needle, for producing a series of enchained loops, clamping means for seizing the needle thread on the double thread side of the work, and means at the single thread side of the work, operating in the last formed stitch, to shorten, at the opposite or double thread side of the work, the loop next preceding the needle loop.

16. A sewing machine containing in combination the following instrumentalities; stitch-forming mechanism for forming a series of enchained loops and comprising means for shortening the loop next preceding the needle loop to a length less than the final stitch length, and clamping means, at the loop-side of the work, to seize both limbs of the needle loop and draw said shortened loop along in a direction opposite the feed to tighten the stitches.

17. A sewing machine containing in combination the following instrumentalities; stitch-forming mechanism for forming a series of enchained loops and comprising means for shortening the loop next preceding the needle loop to a length less than the final stitch length, work protecting means at the single thread side of the work, and clamping means at the loop side of the work to act on a doubled thread and carry along the shortened loop to tighten the stitches.

18. A sewing machine containing in combination the following instrumentalities; stitch-forming mechanism to form a series of enchained loops, means to shorten the loop next preceding the needle thread loop, means for drawing the slack thread resulting from said preceding loop, means thereafter to move said shortened loop to tighten the stitches, and means, at the single thread side of the work and standing between the single thread of the last formed stitch and the work, to receive the stitch tightening pull thereat.

19. A sewing machine comprising stitch-forming mechanism, combined with loop deflecting and loop seizing means at the needle side of the work, and slack-removing means at the opposite side of the work.

20. A chain stitch sewing machine containing stitch-forming mechanism, combined with stitch tightening nippers to engage both strands of the last formed needle loop, one of the members of which serves also as a loop deflector, and means to operate said nippers.

21. A chain stitch sewing machine comprising stitch forming mechanism, combined with loop deflecting and stitch tightening means to engage both strands of the last formed needle loop, and means to impart positive loop deflecting movement and yielding stitch tightening movement thereto.

22. A sewing machine comprising stitch-forming mechanism, combined with nippers one member of which has a movement from one to the opposite side, the line of the needle loop extending from the work to the needle, when the latter is retracted, and the other member of which stands always at one side of the line of the needle loop, and means to move both said nippers first in one and then in an opposite direction.

23. A sewing machine comprising stitch-forming mechanism, combined with nippers one member of which has a movement from one to the opposite side of the line of the needle loop extending from the work to the needle, when the latter is retracted, and the other member of which stands always at one side said needle loop, and means to move both members of said nippers first in one and then in an opposite direction.

24. A sewing machine comprising stitch-forming mechanism, combined with stitch tightening nipper members one of which is pivotally supported and the other spring supported, and means to move the latter by the former, said nippers being arranged to operate on the needle loops between the needle and the work.

25. In a sewing machine, the combination with stitch-forming mechanism comprising a needle, of a looper, an arm by which said looper is carried, a sleeve to which said arm is rigidly secured, a bearing in the machine frame in which said sleeve is mounted so as to reciprocate endwise and oscillate, a rod passing through said sleeve, a forked head in which said rod is screwed, an operating lever to which said head is pivoted, a second arm attached to said sleeve and by which the latter is oscillated, and positive means for operating said second arm and said lever for the purpose of imparting positive oscillating and endwise reciprocating movements in both directions to said sleeve.

26. In a sewing machine, the combination with a needle, of a looper cooperating therewith, a sleeve having a plurality of arms rigidly attached thereto and by one of which said looper is carried, means for positively operating said arms in opposite directions, a rod extending through said sleeve and about which the latter is oscillated and on which said sleeve is mounted so as to be restrained from endwise movement relative thereto, a head into which said rod is screwed, an operating lever to which said head is pivoted or jointed, and means for vibrating said lever to impart endwise movement to the said rod and sleeve.

27. A sewing machine containing stitch-forming mechanism comprising a curved needle and a curved awl, combined with a feed-slide, means to operate it, means connecting said feed-slide with said awl to impart lateral or feeding movements thereto, a feeding channel guide connected with and having the movements of said feed-slide in the line of the feed only, and means to cause the needle to disengage the work from the channel guide after each feeding movement.

28. A sewing machine containing stitch-forming mechanism comprising in combination a curved needle, a curved awl, a feeding channel guide, means to move the same in the line of feed only, and means to give to said needle a channel guide clearing movement, to disengage the work from said guide, to permit the return movements of the latter clear of the work.

29. A sewing machine containing stitch-forming mechanism comprising a needle, means to give it a plural step, retractive movement, an awl, means to move the same in the direction of feed, and a feeding channel guide having a movement in the line of feed only, one step of the plural step retractive movement of the needle serving to clear the work from said channel guide after a feeding movement.

30. A sewing machine containing stitch-forming mechanism including a curved needle, combined with a rearwardly movable back gage, a back-gage slide, and an oscillatory welt guide yieldingly connected with said slide so that the latter may continue to move forward after the forward movement of the welt guide has been arrested.

31. A sewing machine containing stitch-forming mechanism including a curved needle, combined with a back gage slide, and an oscillatory welt guide yieldingly connected with said slide and rocked thereby, said connection permitting forward movement of said slide independently of said oscillatory welt guide.

32. A sewing machine containing stitch-forming mechanism including a curved needle, combined with an oscillatory welt guide, a pivotal support therefor, and means to adjust said pivotal support toward and from the work to vary the position of the welt guide relative to the work.

33. A sewing machine containing stitch-forming mechanism including a curved needle, combined with an oscillatory welt guide and adjustable eccentric means supporting the same at its axis of rotation.

34. A sewing machine containing stitch-forming mechanism including a curved needle, its awl and looper, combined with a rearwardly movable back gage, a rearwardly movable slide rest, and an oscillatory welt guide swinging on a pivot and connected with one of said rearwardly movable members to be moved by the latter.

35. A sewing machine containing stitch-forming mechanism including a curved needle, its awl and looper, combined with a rearwardly movable slide rest, a rearwardly movable back gage, and an oscillatory welt guide swinging on a pivot and connected with said back gage to be moved by the latter.

36. A sewing machine containing stitch-forming mechanism including a curved needle, its awl and looper, combined with a rearwardly movable slide rest, a rearwardly movable back gage, a pivotally mounted oscillatory welt guide connected with said back gage to be moved by the latter, and locking means for said back gage and slide rest.

37. A sewing machine containing stitch-forming mechanism including a curved needle, its awl and looper, combined with a rearwardly movable slide rest, a rearwardly movable back gage, a pivotally mounted oscillatory welt guide connected with said back gage to be moved by the latter, locking means for said back gage and slide rest, the connection between said back gage and oscillatory welt guide being yielding to permit of variable position of the welt guide relative to any locked position of said back gage.

38. A sewing machine containing stitch-forming mechanism including a curved needle, combined with a pivotally mounted oscillatory welt guide, a back gage, means to move it toward and from the work, and connections between the back gage and oscillatory welt guide to oscillate the latter by movement of the former.

39. A sewing machine containing stitch-forming mechanism, including a curved needle, combined with a welt feeding pivotally mounted oscillatory welt guide, a rear-

wardly movable back gage connected with and to oscillate said welt guide, a rearwardly movable slide rest, and locking means for said back gage and slide rest.

40. A sewing machine containing stitch-forming mechanism including a curved needle and means to give it a plural step retractive movement, combined with a feed slide, the awl connected therewith, and a channel feed guide mounted thereon, an oscillatory welt guide also movable with said feed slide, a back gage connected with and serving to oscillate said welt guide, and a slide rest.

41. A sewing machine containing in combination a needle and awl, operating means therefor, a pivotally mounted welt guide, a back gage and its slide, a lever 130 pivotally connected to the back gage slide, and yielding connections between the lever 130 and the welt guide to oscillate said welt guide.

42. A wax thread sewing machine containing stitch-forming mechanism, thread waxing means, a waxed thread tension device, a cup below the same and covering operative parts of a stitch-forming mechanism, and common means for supporting said tension device and said cup.

43. A sewing machine containing stitch-forming mechanism comprising an oscillatory needle and its actuator, an oscillatory awl having a common axis with said needle, awl-actuating means, and a feed slide carrying said awl, combined with an oscillatory welt guide, a back gage, and means connecting the back gage and oscillatory welt guide for oscillating the latter from the back gage.

44. A sewing machine containing stitch-forming mechanism comprising an oscillatory needle and its actuator, an oscillatory awl having a common axis with said needle, awl actuating means, a feed slide carrying said awl, combined with an oscillatory welt guide having also a common axis of oscillation with said awl and needle, a back gage, and means disposed between the back gage and welt guide for oscillating the latter by movement of the former.

45. A sewing machine containing stitch-forming mechanism comprising an oscillatory needle, a feed slide, an oscillatory awl carried thereby, a back gage and its operating means, an oscillating welt feeding guide, said welt guide, awl and needle having a common axis of oscillation and means to oscillate the welt guide from the back gage.

46. A sewing machine containing stitch-forming mechanism comprising an oscillatory needle, combined with a feed slide, an oscillatory awl carried thereby and having a common axis of oscillation with said needle, and a non-oscillatory feeding channel guide mounted on and movable with said feed slide.

47. A sewing machine containing a curved oscillatory needle and actuating means therefor, combined with a curved oscillatory awl, its carrier, a feeding member carrying said awl carrier, an awl actuator so connected with said awl carrier as to permit the latter to oscillate and to move with said feeding member, a feeding channel guide also carried by said feeding member, said awl actuator engaging said awl carrier between the awl and the said feeding channel guide.

48. A sewing machine containing stitch-forming mechanism including a needle, and feed mechanism, combined with a back gage having movement toward and from the work, and means for moving the back gage forward into substantial contact with the work in advance of the needle to approximately position the work and completing its forward movement after the needle has penetrated the work.

49. A sewing machine containing stitch-forming mechanism including a needle, and feed mechanism, combined with a back gage having movement toward and from the work, means for moving the back gage forward into substantial contact with the work in advance of the needle to approximately position the work and completing its forward movement after the needle has penetrated the work, and means to lock said back gage in its final forward position.

50. A sewing machine containing stitch-forming mechanism and feed mechanism, combined with a back gage having a movement toward and from the work, means to produce said forward movement in plural steps, and a welt guide movable toward and from the work and having also a plural step advance movement.

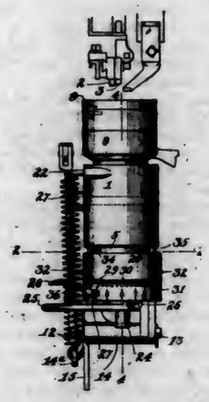
51. A sewing machine containing stitch-forming mechanism and feed mechanism, combined with a back gage having a movement toward and from the work, means to produce said forward movement in plural steps, means to lock said back gage in its final forward position, and a welt guide also movable toward and from the work and connected with said back gage to receive plural step movement therefrom.

52. A sewing machine comprising a bed support and a plurality of independent heads mounted thereon and carrying, respectively, working parts of the machine, said heads being removable to afford convenient access to said parts, and means to secure said heads to said support and to each other.

53. A curved needle sewing machine comprising a needle, its carrier, a support for said carrier, and means for actuating said carrier, combined with an awl, its carrier, an independent support therefor, and means for actuating said awl and awl-carrier, said supports being removable to afford convenient access to the parts mounted thereon.

54. A curved needle sewing machine comprising a needle, its carrier, a support for said carrier, and means for actuating said carrier, combined with an awl, its carrier, an independent support therefor, means for actuating said awl and awl-carrier, said supports being removable to afford convenient access to the parts mounted thereon, and feeding means mounted on said awl-carrier support.

13,375. ADJUSTABLE WORK SUPPORT AND GAGE FOR CHANNELING-MACHINES. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 17, 1911. Serial No. 644,712. Original No. 965,656, dated July 26, 1910, Serial No. 559,310. (Cl. 12—123.)



1. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore and provided with a threaded recess at its lower end, a worm disposed in said recess, an abutment member adjustably secured to said frame and adapted to be engaged by said worm, a handle for turning said worm, a gage member, and a latch member pivotally mounted on said handle and adapted to engage said gage for locking said handle in position.

2. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore and provided with a threaded recess at its lower end, a worm disposed in said recess, a collar disposed on said spindle, a bridge carried by said collar and adapted to be engaged by said worm, means for suspending said collar from said frame, a handle for turning said worm, a gage member, and a latch member pivotally mounted on said handle and adapted to engage said gage for locking said handle in position.

3. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore and provided with a threaded recess at its lower end, a worm disposed in said recess, a handle for turning said worm, a gage member, and a latch member pivotally mounted on said handle and adapted to engage said gage for locking said handle in position.

4. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore and provided with a threaded recess at its lower end, a worm disposed in said recess, a handle for turning said worm, a gage member, and a latch member pivotally mounted on said handle and adapted to engage said gage for locking said handle in position.

5. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore, and provided with a threaded recess at its lower end, a worm disposed in said recess, a collar movable with respect to said spindle and adapted to be engaged by said worm, a handle for moving said worm, an arc-shaped gage member provided with recesses secured to said collar, and a pivoted latch member having a tooth adapted to enter said recesses on said gage member for locking the handle in position.

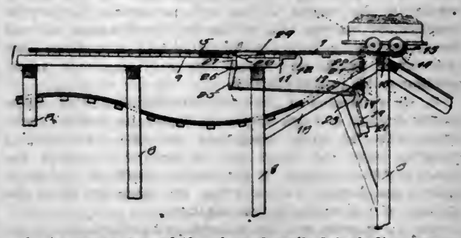
6. In a work supporting table for channeling machines, a frame provided with a vertical bore, a table having a spindle arranged to slide in said bore and provided with a threaded recess at its lower end, a worm disposed in said recess, a collar disposed on said spindle and movable with respect thereto, a bridge carried by said collar and adapted to engage the lower end of said worm, a handle secured to the worm shaft, an arc-shaped gage member secured to said collar and provided with indicating characters and registering recesses, a latch member pivotally mounted on said handle and having a tooth arranged to engage in said recesses, a swinging arm pivotally secured to said frame, a bell-crank lever carried by said arm, and pivotally connected with said collar, a spring for retaining said bell-crank lever in an upper position, and a foot lever for moving said bell-crank lever.

7. A work support for shoe machines, having, in combination, a frame provided with a suitable bore, a work supporting table having a spindle vertically movable in said bore, a collar loosely surrounding said spindle, a bridge on said collar extending across the bottom of the spindle, adjustable means connecting the bridge and spindle to move the table up or down within said collar, said collar being held against movement relative to the spindle during the operation of the adjusting means, and means for effecting a relative separating movement between the table and machine head to permit entering and withdrawal of the work, without disturbing the adjusted position of the table, substantially as described.

8. A work support for shoe machines, having, in combination, a frame provided with a vertical bore, a work supporting table having a spindle arranged to slide in said bore, said spindle having a threaded recess at its lower end, a worm disposed in said recess, means for holding said worm against vertical movement, means connected to said worm for rotating it in either direction to adjust the table up or down, and means connected to said worm holding means for raising and lowering the table, the worm and the worm rotating means simultaneously relatively to the machine head to permit entering and withdrawal of the work, substantially as described.

9. A work support for shoe machines, having, in combination, a frame provided with a suitable bore, a work supporting table having a spindle vertically movable in said bore, a collar loosely surrounding said spindle, a bridge on said collar extending across the bottom of the spindle, and adjustable means connecting the bridge and spindle to move the table up or down within said collar, said collar being held against movement relative to the spindle during the operation of the adjusting means, substantially as described.

13,376. CAR-HANDLING APPARATUS. LAVALETTE L. LOGAN, deceased, Robertsdale, Pa.; Juna M. Logan and W. P. Townsend, administrators, assignors to Juna M. Logan, Falls township, Wyoming county, Pa. Filed June 21, 1911. Serial No. 634,651. Original No. 753,719, dated Mar. 1, 1904, Serial No. 157,278. (Cl. 214—8.)



1. An apparatus of the class described including superposed tracks, a track section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, and mechanism operative with the said track-section for moving the latch into its ineffective position.

2. An apparatus of the class described including superposed tracks, a track-section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, mechanism operative with the said track-section for moving the latch into its ineffective position, and independent means for moving the latch into its operative position.

3. An apparatus of the class described including superposed tracks, a track-section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, mechanism operative with the said track-section for moving the latch into its ineffective position, and car-operated means for moving said latch into its effective position.

4. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a latch for holding the track-section in its normal position, and automatic mechanism for throwing the said latch into its ineffective position, and for subsequently moving the track-section into working relation with the lower track.

5. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, its inner branch being longer than its outer one and the latter having a car-stop, a latch for holding the track-section in its normal position, and automatic mechanism for releasing said latch and subsequently moving the said track-section into working relation with the lower track.

6. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, means for holding the track-section in its normal position, mechanism for moving the track-section into working relation with the lower track, and independent means for subsequently returning said track-section to its normal position.

7. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, an automatically-operative mechanism for moving the track-section out of its normal position and into working relation with the lower track and for subsequently returning said track-section to its normal position.

8. An apparatus of the class described including superposed tracks, a track-section normally in working relation with upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, the latter having a stop for a car whereby when the car strikes said stop said inner branch can be elevated by the weight in the car, automatically-operative mechanism thrown into action by the elevation of said inner branch for lowering the latter into coincidence with the lower track, and means for returning said track-section to its initial position.

9. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track and shiftable into working relation with the lower one, a latch for holding the track-section normally in its working position, and automatic mechanism for operating the latch to effect the release of the shiftable track-section.

10. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, and an operating device for moving the shiftable track-section into working relation with the lower track, connected to said track-section by means involving a loose joint.

11. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, a weighted lever constituting a device for shifting the track-section into working relation with the lower track, and a longitudinally-slotted link connecting the track-section and weighted lever.

12. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track supported for oscillation between its ends and its inper branch being longer than its outer one, a weighted lever operatively connected with the said longer branch by means involving a loose joint, and a latch for holding the track-section in its normal position, operatively connected with said weighted lever said lever serving to throw the latch into its ineffective position.

13. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a weighted lever operatively connected with the said longer branch by means involving a loose joint, and a latch for holding the track-section in its normal position operatively connected with said weighted lever, said lever serving to throw the latch into its ineffective position, and means in position to be operated by a car upon the upper track for moving the latch into its effective position.

14. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a latch for holding the track-section in its normal position, a weighted lever, a longitudinally-slotted link connected with the longer branch of the track-section and also with the weighted lever, a rocker operatively connected with the latch, and a longitudinally-slotted rod also connected with the rocker and operatively connected with said lever.

15. An apparatus of the class described including superposed tracks, the lower one of which has first a downward and then an upward inclination, and an oscillatory track-section shiftable into working relation with the respective tracks.

16. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, and independent means acting against the branches for moving said track-section in opposite directions.

17. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a weight carried by the outer branch, and a counterweighted lever connected with the inner branch by means including a loose joint.

18. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, and its inner branch being longer than its outer one, a bracket supported below the free end of the upper track, having notches for the passage of the rails at the inner end of said track-section, and a latch supported by said bracket and adapted to normally engage under the inner free end of said track-section.

19. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a counter-weighted lever, a longitudinally-slotted link connecting the lever and inner branch of the track-section, a rocker the upper arm of which has a branch disposed in proximity to the upper track, a rod connected with the lower branch of the rocker and operatively connected by means including a loose joint with said weighted lever, a latch normally engaging under the inner branch of the track-section, and a connection between the upper branch of said rocker and the latch.

20. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for oscillatory movement about a horizontal axis and adapted and arranged to register successively with the said superposed tracks, to receive a car from one of them and discharge it onto the other, and means for receiving material from a car in an inclined position on the oscillatory track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

21. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for oscillatory movement about a horizontal axis and adapted and arranged to register successively with the said superposed tracks to receive a car from one of them and to discharge it onto the other, and means for receiving material from a car on the oscillatory track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

22. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for pivotal movement about a horizontal axis and automatically operative mechanism for moving the section to register successively with the said superposed tracks to receive a car from one of them and to discharge it onto the other, and subsequently to register with the first track to receive a second car therefrom, and means for receiving material from a car in an inclined position on the pivotally mounted track-section.

23. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for pivotal movement about a horizontal axis, automatically operative means for moving the pivoted track-section to register successively with the said superposed tracks to receive a plurality of cars, one at a time from one of the tracks and discharge them, one at a time onto the other track, and means for receiving material discharged from the cars when they are on the pivoted track-section.

24. In a car dumping apparatus, the combination of a track-section; pivotally mounted for movement about a horizontal axis, two superposed tracks, with one of which the pivoted section is adapted to register to receive the car and with the other of which it is adapted to register to discharge a car, the second of the said superposed tracks being inclined downward away from the pivoted track-section, means for supporting the pivoted section in register with the first said track, automatically operative mechanism for causing the pivoted track-section to be disengaged from the supporting means and to be moved into register with the second said track, and means for receiving material from a car when it is in an inclined position on the pivoted track-section.

25. In a car dumping apparatus, the combination of a track-section, mounted for oscillatory movement about a horizontal axis, two superposed tracks, with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the second of the said superposed tracks being inclined downwardly away from the pivoted track-section, and means for receiving material from a car when it is in an inclined position on the pivoted track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

26. In a car dumping apparatus, the combination of a track-section, two superposed tracks, with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the two superposed tracks converging at the ends adjacent the pivoted section, means for supporting the pivoted section in register with the first said track, automatically operative mechanism for causing the pivoted-track-section to be disengaged from the said supporting means and to be moved into register with the second said track, and means for receiving material from a car when in an inclined position on the pivoted track-section.

27. In a car dumping apparatus, the combination of a pivoted track section, two superposed tracks with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the said superposed tracks converging at the ends adjacent the pivoted section and lying parallel to each other at a point remote from the pivoted section, means for supporting the pivoted section in register with the first said track while a car is being received, automatic means for causing the pivoted section to be disengaged from the supporting means and to be moved into register with the second said track, means for supporting the section in register with the second track while the car is being discharged thereonto, and automatic means for causing the disengagement of the section from the last said supporting means and for causing the return movement of the section into register with the first track.

28. In a car dumping apparatus, the combination of an oscillatory track-section, and two superposed tracks with one of which the oscillatory section is adapted to register to receive a car, and with the other of which it is adapted to register to discharge a car, the said superposed tracks converging at the ends adjacent the oscillatory section and diverging from each other at a point remote from the oscillatory section.

29. In a car dumping apparatus, the combination of two tracks, extending in the same general direction in proximity to each other, a shiftable track-section for transferring a car from one of the said tracks to the other of the said tracks, the said section serving to incline the car into dumping position, automatically-operative mechanism for causing the operation of the shiftable track-section, the said automatically operative mechanism being additional to the car and additional to the track-section itself, and means for receiving material from the car when in the said inclined dumping position.

30. In a car dumping mechanism, the combination of a track system comprising a track for the supporting and guiding of cars moving in one direction, a track in the same vertical plane with the first track for the supporting and guiding of cars moving in the opposite direction, and an oscillatory track section for transferring cars from the first track to the second, a part of the said track system being adapted for supporting a car in an inclined dumping position, and means for receiving material from a car when in the said inclined dumping position.

31. The combination with a car handling mechanism comprising two superposed tracks and an oscillatory track-section adapted to register successively with the two tracks to transfer a car from one of them to the other, of means for receiving material from the car when in an inclined position on the said car handling mechanism and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

32. The combination with a car handling mechanism, comprising two superposed tracks, a pivoted track-section adapted to register successively with the two tracks to transfer a car from one of them to the other, and automatically-operative mechanism for causing the operation of the pivoted track-section, the said automatically operative mechanism being additional to the car and additional to the track-section itself, of means for receiving material from the car when in an inclined position on the said car handling mechanism.

33. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section mounted for movement to register first with the upper track to receive a car and subsequently to register with the lower track to discharge the car, the said track section being adapted and arranged to first support the car in a position in alinement with the upper track and then in a position inclined downward in the direction of its movement onto the section, and means for receiving material from the car when in the said inclined position.

34. In a car handling apparatus, the combination of two superposed tracks, a pivoted track-section mounted for movement to register first with the upper track to receive a car and subsequently to register with the lower track to discharge the car, the said track-section being arranged and adapted to first support the car in a position in alinement with the upper track, and then in a position inclined downward in the direction of its movement onto the section, automatically-operative means for moving the track-section, and means for receiving material from the car when in the said inclined position.

35. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivoted to oscillate with its center in the vertical plane passing through the centers of the two superposed tracks into register with one of them to receive a car and into register with the other to discharge a car, and a chute located with its center line also in the said vertical plane and positioned to receive material from a car in an inclined position on the pivoted section.

36. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivotally mounted to oscillate with its center in the vertical plane passing through the centers of the two superposed tracks into register with one to receive a car and into register with the other to discharge a car, a chute for receiving material from a car in an inclined position on the said pivoted section the chute having its center line in the same vertical plane, and means for temporarily retaining the car on the pivoted section in dumping position and for then permitting it to pass to the second of the superposed tracks.

37. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivotally mounted to oscillate into successive register with the said tracks, a releasable latch adapted for holding the section in register with the upper track during the passage of a car, and means for receiving material from a car when in inclined position on the pivotal section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

38. In a car dumping apparatus, the combination of two superposed tracks, a pivotally mounted track-section adapted to oscillate into successive register with the said tracks, a latch for holding the track-section in register with the upper track, means for receiving material from a car in an inclined position on the track-section, automatic means for causing the movement of the track-section from register with the lower of the superposed tracks to register with the upper of the superposed tracks, and

automatic means for causing the latch to engage the track-section.

39. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to receive a car from one of the superposed tracks and to deliver it to the other of the superposed tracks, means for holding the oscillatory section in alinement with the superposed track from which the car is received, means for moving the section into alinement with the superposed track to which the car is discharged, and a chute for receiving material from the car when it is in an inclined position on the track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

40. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track section adapted to register with one of the superposed tracks to receive a car therefrom and adapted to register with the other of the superposed tracks to discharge a car thereunto, automatically operative devices for successively supporting the track-section in register with the respective superposed tracks, means for causing the movement of the track-section from register with the first track to register with the second track, means for receiving material from a car when in an inclined position on the oscillatory track-section, and automatic gravity controlled means for causing the oscillatory track section to return from register with the second of the superposed tracks, to register with the first of the superposed tracks.

41. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to register with one of the superposed tracks to receive a car and with the other of the superposed tracks to discharge a car, a latch for holding the oscillatory track section in alinement with one of the superposed tracks, and means controlled by the movement of the car along the said superposed tracks to move the latch.

42. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to register with one of the tracks to receive a car and with the other of the tracks to discharge a car, a latch for holding the track section in alinement with the upper of the superposed tracks, and means depending upon the movement of the car along the last said upper of the track for moving the latch.

43. In car-dumping mechanism, the combination with two superposed tracks, of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof.

44. In car-dumping mechanism, the combination with two superposed tracks; of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof; and means normally retaining said track-section in register with such upper track.

45. In car-dumping mechanism, the combination with two superposed tracks; of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof; and means normally retaining said track-section in register with such upper track, the weight of a car on said track-section being sufficient to depress the same into register with such lower track.

46. In car-dumping mechanism, the combination with a downwardly inclined track and an upwardly inclined track therebelow, of an oscillatory track-section adapted in different positions about its axis to register with said tracks, respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof, whereby a car received on said track-section from such upper track is dumped and transferred onto said lower track.

DESIGNS.

42,196. GIRDLE FOR WAIST FOUNDATIONS. SARAH L. BRUNDIDGE, Savannah, Ga. Filed Nov. 26, 1910. Serial No. 594,413. Term of patent 14 years.

The ornamental design for a girdle for waist foundations, as shown.

42,197. HOLDER-BRACKET. JOHN P. EUSTIS, Newton, Mass. Filed Nov. 11, 1911. Serial No. 659,831. Term of patent 7 years.

The ornamental design for a holder bracket as shown.

42,198. HOLDER-BRACKET. JOHN P. EUSTIS, Newton, Mass. Filed Nov. 11, 1911. Serial No. 659,832. Term of patent 7 years.

The ornamental design for a holder bracket as shown.

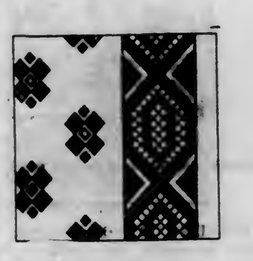
42,199. TUMBLER-HOLDER. EDWARD A. FARE, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Aug. 24, 1911. Serial No. 645,848. Term of patent 7 years.

The ornamental design for a tumbler holder, as shown.

42,200. DISH. EDWARD A. FARE, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Aug. 24, 1911. Serial No. 645,850. Term of patent 7 years.

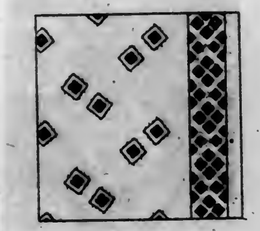
The ornamental design for a dish, as shown.

42,201. TEXTILE FABRIC OR WALL-PAPER. GUSTAVE FORESTIER, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,811. Term of patent 3½ years.



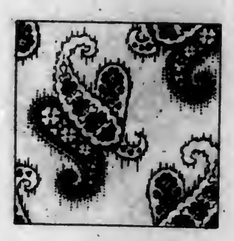
The ornamental design for a textile fabric or wall paper as shown.

42,202. TEXTILE FABRIC OR WALL-PAPER. GUSTAVE FORESTIER, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,812. Term of patent 3½ years.



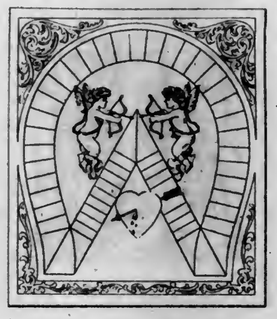
The ornamental design for a textile fabric or wall paper as shown.

42,203. TEXTILE FABRIC OR WALL-PAPER. GUSTAVE FORESTIER, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,813. Term of patent 3½ years.



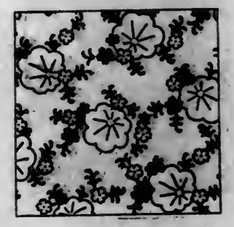
The ornamental design for a textile fabric or wall paper as shown.

42,204. GAME-BOARD. WALTER H. FREEMANTLE, Oswego, N. Y. Filed Dec. 8, 1911. Serial No. 664,667. Term of patent 7 years.



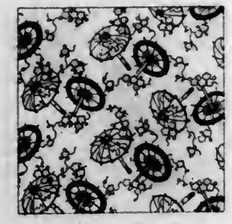
The ornamental design for a game board, as shown.

42,205. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,847. Term of patent 3½ years.



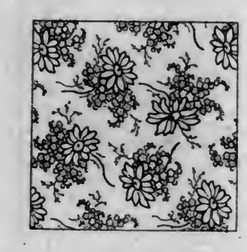
The ornamental design for a textile fabric or wall paper as shown.

42,206. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,848. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,207. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,849. Term of patent 3½ years.

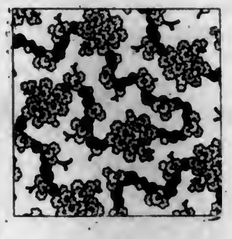


The ornamental design for a textile fabric or wall paper as shown.

42,208. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,850. Term of patent 3½ years.

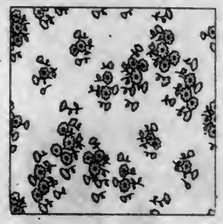
The ornamental design for a textile fabric or wall paper as shown.

42,209. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,851. Term of patent 3½ years.



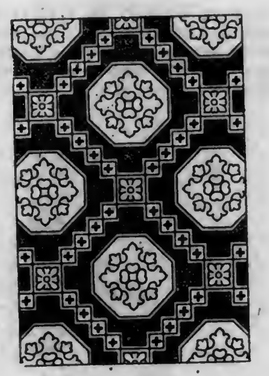
The ornamental design for a textile fabric or wall paper as shown.

42,210. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,852. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,211. LINOLEUM OR OIL-CLOTH. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 3, 1911. Serial No. 658,448. Term of patent 7 years.



The ornamental design for linoleum or oil cloth as shown.

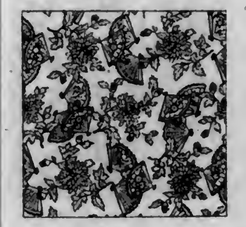
42,212. SHOE-PROTECTOR. KÁLMÁN NEMES, Bridgeport, Conn. Filed June 17, 1911. Serial No. 633,905. Term of patent 14 years.

The ornamental design for a shoe protector, as shown.

42,213. TEXTILE FABRIC OR WALL-PAPER. ERNEST KIRCHHOFF, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,810. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,214. TEXTILE FABRIC OR WALL-PAPER. WILLIAM C. KORZINEK, Weehawken Heights, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,814. Term of patent 3½ years.

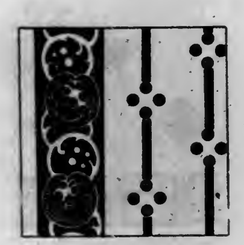


The ornamental design for a textile fabric or wall paper as shown.

42,215. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,824. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,216. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,825. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,217. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,826. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,218. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,827. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,219. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,828. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,220. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,829. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

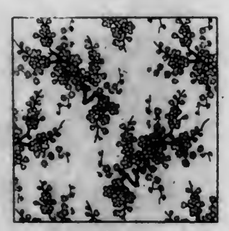
42,221. TEXTILE FABRIC OR WALL-PAPER. EMILE MADELEINE, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,830. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,222. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,841. Term of patent 3½ years.

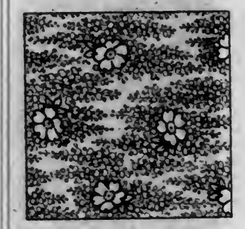
The ornamental design for a textile fabric or wall paper as shown.

42,223. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,842. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,224. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,843. Term of patent 3½ years.

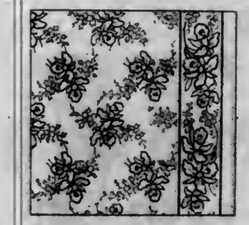


The ornamental design for a textile fabric or wall paper as shown.

42,225. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,844. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

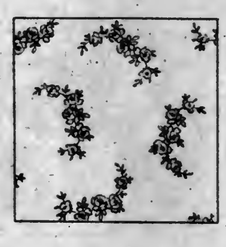
42,226. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,845. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

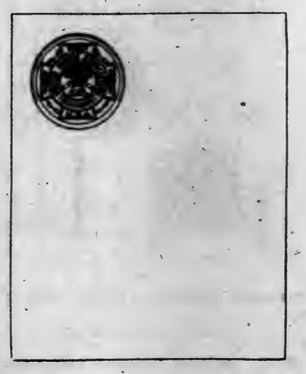
175 O. G.—69

42,227. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,846. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,228. LETTER-HEAD OR SIMILAR ARTICLE. ROLAND ONFFROY, New York, N. Y., assignor to United Stores Association, New York, N. Y., a Corporation of New York. Filed Oct. 26, 1911. Serial No. 656,990. Term of patent 14 years.



The ornamental design for a letter head or similar article, as shown.

42,229. TEXTILE FABRIC OR WALL-PAPER. LEON F. ORCUTT, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,821. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,230. TEXTILE FABRIC OR WALL-PAPER. LEON F. ORCUTT, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,822. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,231. TEXTILE FABRIC OR WALL-PAPER. LEON F. ORCUTT, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,823. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,232. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 13, 1911. Serial No. 665,564. Term of patent 3½ years.

The ornamental design for a rug, as shown.

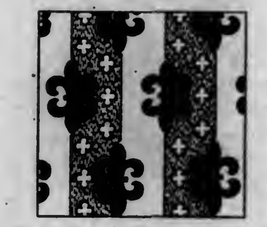
42,233. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 13, 1911. Serial No. 665,565. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,234. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 13, 1911. Serial No. 665,566. Term of patent 3½ years.

The ornamental design for a rug, as shown.

42,235. TEXTILE FABRIC OR WALL-PAPER. MAX ROTHSCHILD, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,817. Term of patent 3½ years.

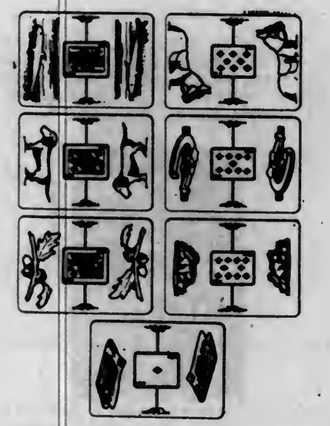


The ornamental design for a textile fabric or wall paper as shown.

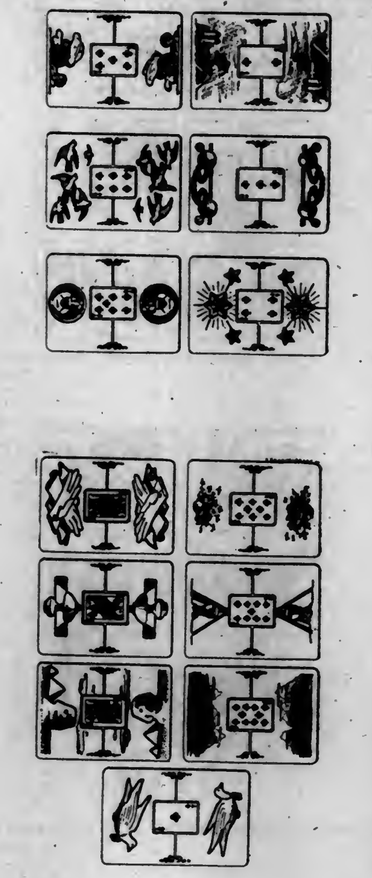
42,236. TEXTILE FABRIC OR WALL-PAPER. MAX ROTHSCHILD, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,818. Term of patent 3½ years.

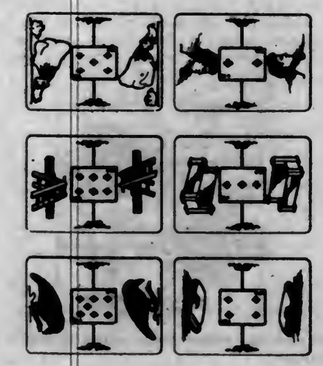
The ornamental design for a textile fabric or wall paper as shown.

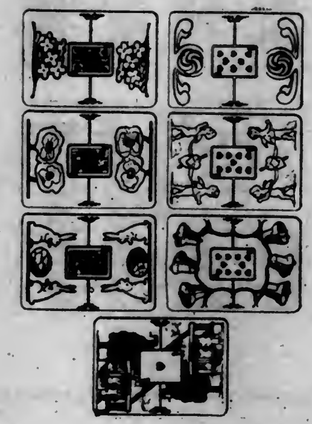
42,237. PACK OF PLAYING-CARDS. SYLVANY M. ROUSE, New Orleans, La. Filed Nov. 18, 1911. Serial No. 661,172. Term of patent 7 years.



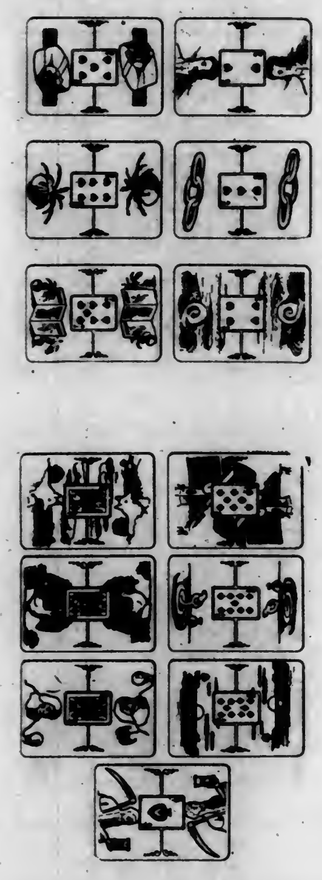
42,237.





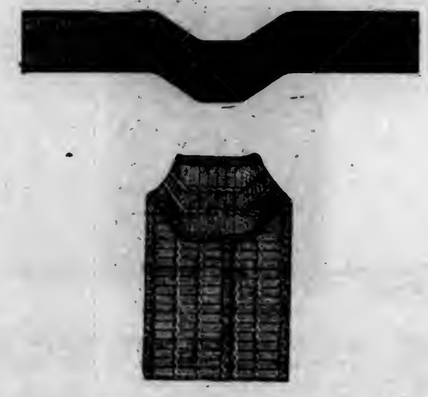


42,237.



The ornamental design for a pack of playing cards as shown.

42,238. FLAT-KNIT NECKSCARF OR MUFFLER. SAMUEL S. SAMPLINER, Cleveland, Ohio, assignor to N. J. Rich & Company, a Partnership composed of Nathan J. Rich, Henry J. Rich, and Samuel S. Sampliner, Cleveland, Ohio. Filed Oct. 28, 1910. Serial No. 589,617. Term of patent 7 years.

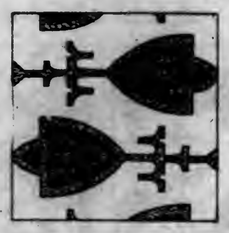


The ornamental design for a flat-knit neck scarf, or muffler, as shown and described.

42,239. CARPET OR RUG. WILLIAM EDWARD SAYERS, Thompsonville, Conn., assignor to The Hartford Carpet Corporation, Thompsonville, Conn., a Corporation of Connecticut. Filed Nov. 14, 1911. Serial No. 660,287. Term of patent 3½ years.

The ornamental design for a carpet as shown.

42,240. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,831. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,241. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,832. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

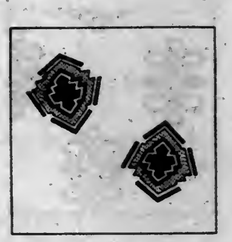
42,242. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,833. Term of patent 3½ years.

The ornamental design for a textile fabric or wall paper as shown.

42,243. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,834. Term of patent 3½ years.

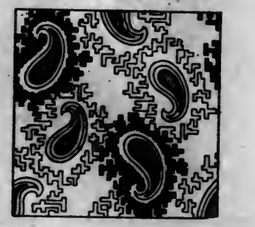
The ornamental design for a textile fabric or wall apper as shown.

42,244. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,835. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,245. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,836. Term of patent 3½ years.

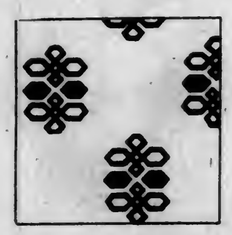


The ornamental design for a textile fabric or wall paper as shown.

42,246. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,837. Term of patent 3½ years.

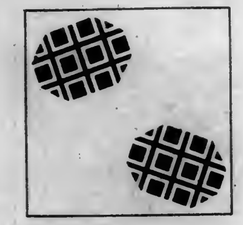
The ornamental design for a textile fabric or wall paper as shown.

42,247. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,838. Term of patent 3½ years.



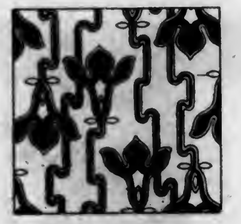
The ornamental design for a textile fabric or wall paper paper as shown.

42,248. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,839. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,249. TEXTILE FABRIC OR WALL-PAPER. FRANCOIS J. SCHAETZEL, Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,840. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,250. BREASTPIN. LOUIS SPIRUP, Audubon, Iowa. Filed Sept. 5, 1911. Serial No. 647,782. Term of patent 7 years.

The ornamental design for a breastpin, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 27, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 32,913. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. TROMMSDORFF, Erfurt and Aix-la-Chapelle, Germany. Filed Feb. 21, 1908.

Bissulin.

Particular description of goods.—Salves, Medicinal Plasters, Tablets for Contagious Vaginal Catarrh, Suppositories, Pills, Oily Emulsions, and Solutions, All Containing Antiseptics for Human and Veterinary Use.
Claims use since Oct. 1, 1906.

Ser. No. 34,528. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MATHERS BROTHERS, Greenville, Pa. Filed May 1, 1908.

GILT EDGE

Particular description of goods.—Wheat-Flour.
Claims use since May 1, 1878.

Ser. No. 36,933. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) MARECHAL, RUCHON & CO., LTD., London, England, and Paris, France. Filed Aug. 25, 1908. Under ten-year proviso.

GBD

Particular description of goods.—Tobacco-Pipes, Cigar and Cigarette Holders.
Claims use since Jan. 1, 1853.

Ser. No. 38,991. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.), THE LEWIS BEAR DRUG COMPANY, Pensacola. Fla. Filed Nov. 30, 1908.

BEAR BRAND

Particular description of goods.—Epsom Salts; Sulfur; Borax; Remedies for Headache, Gonorrhea, and Diseases of Blood, Kidneys, and Females; Eye Water and Salve; Nerve and Bone Liniment; Chill-Tonic; Liver-Pills; Calomel and Soda Triturates; Quinin; Castor-Oil; Paregoric; Tincture of Iron; Tincture of Arnica; Blue-Mass; Mercurial Ointment; Petroleum Jelly; Corn Remedy; Bowel Remedy; and Talcum Powders.
Claims use since Oct. 1, 1908.

Ser. No. 44,005. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE W. SHERMAN, Akron, Ohio. Filed Aug. 6, 1909.

G

Particular description of goods.—Substances for Use as Substitutes for Vegetable Gums for Use in the Manufacture of Chewing-Gum.
Claims use since Sept. 1, 1906.

Ser. No. 47,657. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RHENANIA GLÜHLICHT COMP. G. M. B. H., Cologne, Germany. Filed Feb. 8, 1910.

Particular description of goods.—Incandescent Mantles.
Claims use since about Jan. 1, 1910.

Ser. No. 48,164. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Mar. 3, 1910. Under ten-year proviso.

LAKESIDE

Particular description of goods.—Oleomargarin.
Claims use since Jan. 1, 1890.

Ser. No. 49,121. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSCH & Co., Badalona, near Barcelona, Spain. Filed Apr. 15, 1910. Under ten-year proviso.

ANIS DEL MONO

Particular description of goods.—Anisettes.
Claims use since 1878.

Ser. No. 49,468. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HEATHER COMPANY, New York, N. Y. Filed May 2, 1910.

Particular description of goods.—Toilet Preparations Comprising Cream, Lotion, and Sachet for Cleaning the Skin, Cream for Use in the Treatment of the Face, Paste for Forming a Face-Mask, Cream for Treating the Scalp, Astringent Lotion for the Skin, Bath-Crystals, and Toilet Rouge.
Claims use since Jan. 1, 1910.

Ser. No. 50,573. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYDIA TRATTLES COATES, Kalamazoo, Mich. Filed June 25, 1910.

Consisting of the picture of R. Pengelly, now deceased, and his facsimile signature.
Particular description of goods.—Remedies in Liquid and Tablet Form for Diseases of Women, Digestive Tablets, Anticonstipation Pills, Pile Remedies, Remedies for La Grippe and Colds, Remedies for the Treatment of Diseases of the Genital Organs, for Diseases of the Nerves and Blood, Remedies for the Treatment of Neuralgia, Rheumatism, Skin Diseases, Liver, Kidneys, and Bladder, Stomach and Bowels, Remedies for the Treatment of Asthma, Hay-Fever, Bronchitis, and Diseases of the Throat and Lungs, Catarrh Remedies, Medicinal Tonics, Ointments for the Treatment of Cuts, Burns, Bruises, Cold-Sores, Chilblains, Eruptions, and Scalp Diseases.
Claims use since 1901.

Ser. No. 52,941. (CLASS 31. FILTERS AND REFRIGERATORS.) ST. PAUL SHOW CASE MANUFACTURING CO., St, Paul, Minn. Filed Nov. 25, 1910.

"SANIFRIDG"

Particular description of goods.—Refrigerators.
Claims use since Sept. 1, 1910.

Ser. No. 54,483. (CLASS 39. CLOTHING.) EFROYMSON & WOLF, Indianapolis, Ind. Filed Feb. 13, 1911.

Particular description of goods.—Dress-Shirts, Negligée Shirts, Work-Shirts, Flannel Shirts, Hosiery, Gloves, Undershirts, Drawers, Union or Combination Suits, Vests, Pants, Tights, and Infants' Wrappers.
Claims use since prior to Jan. 1, 1908.

Ser. No. 54,568. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) COLONIAL LEATHER COMPANY, Chicago, Ill. Filed Feb. 16, 1911.

Particular description of goods.—Belting Made of Chrome Leather.
Claims use since July, 1910.

Ser. No. 55,347. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRESNO HOME PACKING COMPANY, Fresno, Cal. Filed Mar. 27, 1911.

Particular description of goods.—Dried Fruits and Raisins.
Claims use since Aug. 1, 1895.

Ser. No. 55,440. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ED PLANTÉ, SUCESORES FRANCISCO SABIO Y CIA., Habana, Cuba.
Filed Mar. 31, 1911.

Particular description of goods.—Toilet Powders.
Claims use since Oct. 5, 1901.

Ser. No. 55,734. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ISAIAH MILLER, Prattville, Ala. Filed Apr. 18, 1911.

Particular description of goods.—A Tonic Beverage and Syrup for the Manufacture of Said Beverage.
Claims use since the 2d day of February, 1911.

Ser. No. 55,906. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KNICKERBOCKER MILLS COMPANY, New York, N. Y. Filed Apr. 22, 1911.

NECTAR

Particular description of goods.—Coffee.
Claims use since Nov. 18, 1870.

Ser. No. 56,431. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK G. THOMAS, Mankato, Minn. Filed May 18, 1911.

Pedro

Particular description of goods.—Medicated Plasters.
Claims use since Mar. 1, 1911.

Ser. No. 56,915. (CLASS 39. CLOTHING.) HENRY A. DIX & SONS COMPANY, New York, N. Y. Filed June 9, 1911. Under ten-year proviso.

Particular description of goods.—Ladies' Tub-Dresses.
Claims use since Mar. 1, 1894.

Ser. No. 57,158. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMMA LOUISE LEIPCHILD, Los Angeles, Cal. Filed June 19, 1911.

CIRALA

Particular description of goods.—Face-Cream, Face-Powder, Shampooing Preparations, Hair-Tonic, and Brilliantine.
Claims use since May 6, 1911.

Ser. No. 57,283. (CLASS 48. MALT EXTRACTS AND LIQUORS.) BIRK BROS. BREWING CO., Chicago, Ill. Filed June 24, 1911. Under ten-year proviso.

Particular description of goods.—Beer.
Claims use since Dec. 1, 1891.

Ser. No. 57,359. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NEWTON LINE COMPANY, Homer, N. Y. Filed June 28, 1911.

Particular description of goods.—Fish-Lines, Fishing-Tackle, Fishing-Reels, Fish-Hooks, Gaff-Hooks, and Split-Shot Sinkers.
Claims use since about the 1st day of May, 1911.

Ser. No. 57,595. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) PHOENIX-AMERICAN PIPE WORKS, Washington, Mo. Filed July 12, 1911.

No claim being made to the representation of a pipe.
Particular description of goods.—Tobacco-Pipes.
Claims use since June 1, 1911.

Ser. No. 57,767. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARGREAVES MERC. CO., Lincoln, Nebr. Filed July 21, 1911.

Particular description of goods.—Canned Hawaiian Pineapple; Sockeye Salmon; Peas; Oysters; Tomatoes; Corn; Salmon Steak; Sauer-Kraut; Spinach; Beets; Succotash; Beans; Pork and Beans; Chilli Sauce; Catsup; Pumpkin; Bartlett Pears; Peaches; Apricots; Muscat-Grapes; Cherries; Green-Gage Plums; Egg-Plums; Gooseberries; Preserved Strawberries; Preserved Red Raspberries; Preserved Black Raspberries; Preserved Blackberries, and Canned Blueberries.
Claims use since Mar. 15, 1911.

Ser. No. 58,002. (CLASS 17. TOBACCO PRODUCTS.) B. LEGARDA, Manila, Philippine Islands. Filed Aug. 3, 1911.

The words "Flor de Legarda" being disclaimed.
Particular description of goods.—Cigars.
Claims use since January, 1910.

Ser. No. 58,162. (CLASS 37. PAPER AND STATIONERY.) KIGGINS & TOOKER CO., New York, N. Y. Filed Aug. 11, 1911.

DAYLOGUE

Particular description of goods.—Memorandum Blank Books.
Claims use since Feb. 1, 1910.

Ser. No. 58,305. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EXCELLO FEED MILLING COMPANY, St. Joseph, Mo. Filed Aug. 21, 1911.

EXCELLO

Particular description of goods.—Stock Food.
Claims use since on or about the 1st day of August, 1910.

Ser. No. 58,339. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOS. H. LYNCH, near Fresno, Cal. Filed Aug. 23, 1911.

The facsimile-signature being that of Thos. H. Lynch.
Particular description of goods.—Fresh Grapes.
Claims use since the 29th day of July, 1911.

Ser. No. 58,341. (CLASS 37. PAPER AND STATIONERY.) KATAHDIN PULP AND PAPER COMPANY, Lincoln, Me. Filed Aug. 23, 1911. Under ten-year proviso.

KATAHDIN

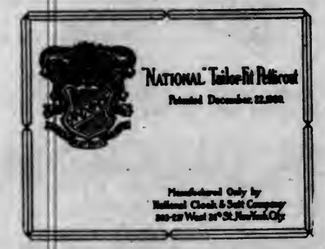
Particular description of goods.—Lining, Wrapping, Printing, and Writing Papers.
Claims use since on or about May 1, 1894.

Ser. No. 58,344. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Aug. 23, 1911.

Tarvia

Particular description of goods.—Raw and Partially-Prepared Pitch.
Claims use since June 1, 1903.

Ser. No. 58,614. (CLASS 39. CLOTHING.) NATIONAL CLOAK & SUIT CO., New York, N. Y. Filed Sept. 9, 1911.



No claim being made to the printed matter shown in the drawing, except the initials "N. C. S. Co."
Particular description of goods.—Petticoats.
Claims use since Aug. 1, 1911.

Ser. No. 58,615. (CLASS 39. CLOTHING.) NATIONAL CLOAK & SUIT CO., New York, N. Y. Filed Sept. 9, 1911.

No claim being made to the phrase "Chose qui plait est a demi vendue."
Particular description of goods.—Dresses, Outer Skirts, Underskirts, Ladies' Textile Underwear, Dress-Waists, Shirt-Waists, and Underwaists, Cloaks, Ladies' Coats, Children's Suits, Dresses, and Coats, Corsets, Dress-Shirts, Negligées, Work and Under Shirts, Furs Made into Garments, Gloves, Hosiery, and Rain-Coats.
Claims use since Aug. 1, 1911.

Ser. No. 58,620. (CLASS 39. CLOTHING.) HILKER WIECHERS MANF. CO., Racine, Wis. Filed Sept. 11, 1911.

Particular description of goods.—Work-Shirts, Coats, and Overalls.
Claims use since 1905.

Ser. No. 58,646. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) J. M. GROSVENOR & CO., Boston, Mass. Filed Sept. 12, 1911. Under ten-year proviso.

Particular description of goods.—Soap.
Claims use since on or about Apr. 11, 1881.

Ser. No. 58,692. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) EDGAR ALLEN AMERICAN MANGANESE STEEL COMPANY, Augusta, Me., and Chicago, Ill. Filed Sept. 15, 1911.

STAG

Particular description of goods.—Manganese-Steel Castings.
Claims use since the year 1873.

Ser. No. 58,757. (CLASS 32. FURNITURE AND UPHOLSTERY.) M. W. CARR & CO., Somerville, Mass. Filed Sept. 21, 1911.

CELVORO

Particular description of goods.—Photograph-Frames.
Claims use since Sept. 12, 1911.

Ser. No. 58,783. (CLASS 39. CLOTHING.) FLORETTE, New York, N. Y. Filed Sept. 21, 1911.

Florette

Particular description of goods.—Women's Hats, Women's Hat-Frames, Muffs, and Wraps.
Claims use since Feb. 3, 1902.

Ser. No. 58,819. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES W. CAMPBELL, Lancaster, Pa. Filed Sept. 22, 1911.

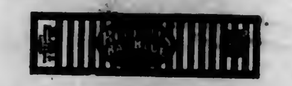
Comprising a fanciful head.
Particular description of goods.—Root-Beer, Vanilla, Lemon, Birch, Sarsaparilla, Ginger, and Cherry Extracts, Both in Liquid and Tablet Form, Used in the Making of Non-Alcoholic Beverages.
Claims use since about July, 1893.

Ser. No. 58,830. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EDITH ELSPA DUNN, Woodfield, Uppingham, England. Filed Sept. 23, 1911.

NORENE

Particular description of goods.—Hat-Pins Made of Base Metal.
Claims use since the 16th day of September, 1911.

Ser. No. 58,872. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RECKITT & SONS, LTD., Hull, England. Filed Sept. 27, 1911. Under ten-year proviso.



Particular description of goods.—Bluing for Laundry Purposes.
Claims use since January, 1895.

Ser. No. 58,960½. (CLASS 2. RECEPTACLES.) STEWART & HOLMES DRUG COMPANY, Seattle, Wash. Filed Oct. 2, 1911.

No claim being made for the words "Optimus," "Iceless," and "Stewart & Holmes Drug Co. Seattle."
Particular description of goods.—Tanks for Chemical Fluids.
Claims use since Sept. 1, 1911.

Ser. No. 59,065. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed Oct. 9, 1911.

MILLPRIDE

Particular description of goods.—Flour.
Claims use since Sept. 22, 1911.

Ser. No. 59,067. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed Oct. 9, 1911.

TE-CE-CO

Particular description of goods.—Flour.
Claims use since Sept. 22, 1911.

Ser. No. 59,066. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed Oct. 9, 1911.

The picture being fanciful.
Particular description of goods.—Flour.
Claims use since Sept. 22, 1911.

Ser. No. 59,069. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed Oct. 9, 1911.

Winaway

Particular description of goods.—Flour.
Claims use since Sept. 22, 1911.

Ser. No. 59,158. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL RIEGER & Co., San Francisco, Cal. Filed Oct. 14, 1911.

MON-AMOUR

Consisting of the words "Mon-Amour."
Particular description of goods.—Perfumes, Toilet Water, Face-Cream, Tooth-Paste, and Tooth-Powder.
Claims use since the 15th day of August, 1911.

Ser. No. 59,282. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AARON BURDWISE, Baltimore, Md. Filed Oct. 21, 1911.

Particular description of goods.—A Medicinal Preparation for Stomach Troubles.
Claims use since July 10, 1911.

Ser. No. 59,352. (CLASS 39. CLOTHING.) CHARLES LEVY'S SONS, New York, N. Y. Filed Oct. 26, 1911.

Particular description of goods.—Straw Hats.
Claims use since the 29th day of July, 1911.

Ser. No. 59,353. (CLASS 37. PAPER AND STATIONERY.) EBERHARD FABER, West New Brighton, N. Y. Filed Oct. 26, 1911.

F

Particular description of goods.—Pencils, Penholders, and Rubber Erasers.
Claims use since May, 1911.

Ser. No. 59,417. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHERRY-CHEER COMPANY, INC., Sidney, Ohio. Filed Oct. 28, 1911.

Zolakone

Particular description of goods.—Non-Alcoholic Beverage Consisting of Cola and other Non-Alcoholic Ingredients.
Claims use since Oct. 1, 1911.

Ser. No. 59,459. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) C. M. MCCLUNG & Co., Knoxville, Tenn. Filed Nov. 1, 1911.

Particular description of goods.—Pistols, Revolvers, Shotguns, and Rifles.
Claims use since about the year 1893.

Ser. No. 59,460. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) C. M. MCCLUNG & Co., Knoxville, Tenn. Filed Nov. 1, 1911.

Particular description of goods.—Pistols, Revolvers, Shotguns, and Rifles.
Claims use since about the year 1882.

Ser. No. 59,461. (CLASS 12. CONSTRUCTION MATERIALS.) C. M. MCCLUNG & Co., Knoxville, Tenn. Filed Nov. 1, 1911.

Particular description of goods.—Asphalt and Composition Roofing.
Claims use since about the year 1882.

Ser. No. 59,498. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RICE BROS. PACKING CO., Apalachicola, Fla. Filed Nov. 2, 1911.

APALACHEE

Particular description of goods.—Canned Oysters.
Claims use since 1903.

Ser. No. 59,584. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER M. WILLETT, San Francisco, Cal. Filed Nov. 6, 1911. Under ten-year proviso.

CAMELLINE

Particular description of goods.—A Preparation for Softening the Skin and Relieving Unpleasant Eruptions, Sallowness, and Sunburn, Tooth-Powders, and Remedies for Poison-Oak Poisoning.
Claims use since 1884.

Ser. No. 59,592. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WALTER H. HILDICK CO., New York, N. Y. Filed Nov. 7, 1911.

Particular description of goods.—Apple Cider.
Claims use since the year 1908.

Ser. No. 59,612. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) LEVI HERZ, St. Paul, Minn. Filed Nov. 8, 1911.

Heel-Mate.

Particular description of goods.—Self-Heating Sad-Irons.
Claims use since Apr. 22, 1911.

Ser. No. 59,621. (CLASS 39. CLOTHING.) ARCHITECT SHOE COMPANY, Schenectady, N. Y. Filed Nov. 9, 1911.

Particular description of goods.—Leather Boots and Shoes.
Claims use since June 29, 1911.

Ser. No. 59,630. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL WAREHOUSE AND STORAGE COMPANY, East St. Louis, Ill. Filed Nov. 9, 1911.

DIXIE

Particular description of goods.—Horse Feed.
Claims use since on or about Sept. 1, 1911.

Ser. No. 59,645. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOHN DAVID, New York, N. Y. Filed Nov. 10, 1911.

JAY DEE

Particular description of goods.—Belts for Personal Wear, Cravats, Garters, Golf-Collar Stocks, and Suspenders.
Claims use since Mar. 25, 1911.

Ser. No. 59,653. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID PAUL WALDMAN, New York, N. Y. Filed Nov. 11, 1911.

PROPHYLINE

Particular description of goods.—Antiseptics.
Claims use since on or about Oct. 1, 1910.

Ser. No. 59,684. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & COMPANY, Jacksonville, Fla. Filed Nov. 13, 1911.

No claim being made to the words "Gold Medal Jamestown 1907 Chase & Company."
Particular description of goods.—Oranges and Grape-Fruit.
Claims use since Oct. 16, 1911.

Ser. No. 59,692. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER D. BAKER, Indianapolis, Ind. Filed Nov. 13, 1911.

WALDCRAFT

Particular description of goods.—Dyes.
Claims use since Oct. 1, 1911.

Ser. No. 59,774. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) INTERNATIONAL MFG. CO., Phillips, Me. Filed Nov. 17, 1911.

No claim being made to the words "International Mfg. Co."
Particular description of goods.—Toothpicks.
Claims use since March, 1911.

Ser. No. 59,800. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GARDNER BROOM COMPANY, Amsterdam, N. Y. Filed Nov. 18, 1911.

Particular description of goods.—Brooms.
Claims use since January, 1911.

Ser. No. 59,806. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN W. THOMAS, Habana, Cuba. Filed Nov. 20, 1911.

DR. THOMAS'

The portrait shown being that of myself.
Particular description of goods.—Antiseptic Soap.
Claims use since October, 1910.

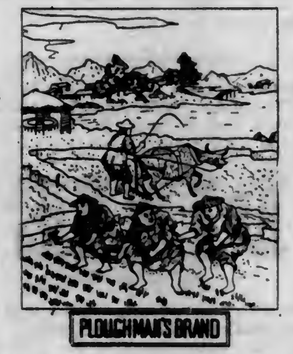
Ser. No. 59,896. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MUSTARD & COMPANY, New York, N. Y., and Shanghai, China. Filed Nov. 24, 1911.

Particular description of goods.—Cotton Piece Goods.
Claims use since Mar. 5, 1910.

Ser. No. 59,903. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MUSTARD & COMPANY, New York, N. Y., and Shanghai, China. Filed Nov. 24, 1911.

Particular description of goods.—Cotton Piece Goods.
Claims use since Apr. 15, 1911.

Ser. No. 59,944. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MUSTARD & COMPANY, New York, N. Y., and Shanghai, China. Filed Nov. 27, 1911.



Particular description of goods.—Cotton Piece Goods.
Claims use since the 5th day of September, 1911.

Ser. No. 59,959. (CLASS 17. TOBACCO PRODUCTS.) LUTGARDA GENER Y SEYCHER, Habana, Cuba. Filed Nov. 27, 1911.

LA ESCEPCION

Particular description of goods.—Cigars, Cigarettes, and Manufactured Tobacco.
Claims use since 1865.

Ser. No. 59,960. (CLASS 17. TOBACCO PRODUCTS.) LUTGARDA GENER Y SEYCHER, Habana, Cuba. Filed Nov. 27, 1911.

HOYO DE MONTERREY

Particular description of goods.—Cigars, Cigarettes, and Manufactured Tobacco.
Claims use since 1865.

Ser. No. 60,043. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS LAMB, New York, N. Y. Filed Dec. 1, 1911.

LAM-ACIN

Particular description of goods.—A Tonic and Antipyretic in Malarial Affections.
Claims use since Nov. 1, 1911.

Ser. No. 60,095. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES E. DUCK, Baltimore, Md. Filed Dec. 6, 1911.

INNOVATION

Particular description of goods.—A Preparation for Cleaning and Softening the Skin.
Claims use since November, 1909.

Ser. No. 60,151. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) STANDARD TYPEWRITER COMPANY, Groton, N. Y. Filed Dec. 9, 1911.

CORONA

Particular description of goods.—Type-Writing Machines and Parts Thereof.
Claims use since Nov. 27, 1911.

Ser. No. 60,192. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. P. TUTTLE COMPANY, Chadwicks, N. Y. Filed Dec. 12, 1911.

P. R.

Particular description of goods.—Cambrics, Linens, and Muslins in the Piece.
Claims use since Nov. 27, 1905.

Ser. No. 60,193. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. P. TUTTLE COMPANY, Chadwicks, N. Y. Filed Dec. 12, 1911.

H. N.

Particular description of goods.—Cambrics, Linens, and Muslins in the Piece.
Claims use since Nov. 27, 1905.

Ser. No. 60,238. (CLASS 27. HOROLOGICAL INSTRUMENTS.) BACH & COMPANY, Chicago, Ill. Filed Dec. 15, 1911.

WELLINGTON
PEERLESS

No claim being made to the word "Peerless."
Particular description of goods.—Watches and Watch-cases.
Claims use since Nov. 1, 1909.

Ser. No. 60,251. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FALL RIVER BLEACHERY, Fall River, Mass. Filed Dec. 15, 1911.

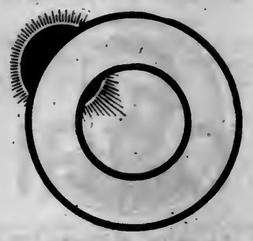
Particular description of goods.—Cotton Piece Goods.
Claims use since about Nov. 21, 1876.

Ser. No. 60,259. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ALBERT E. LENZ, Perth Amboy, N. J. Filed Dec. 15, 1911.

HomeRun

Particular description of goods.—Games.
Claims use since Dec. 1, 1911.

Ser. No. 60,278. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHEELING GUM COMPANY, Wheeling, W. Va. Filed Dec. 15, 1911.



Particular description of goods.—Chewing-Gum.
Claims use since Dec. 9, 1911.

Ser. No. 60,288. (CLASS 12. CONSTRUCTION MATERIALS.) HAMMER LUMBER COMPANY, Philadelphia, Pa., and Newbern, N. C. Filed Dec. 16, 1911.

HAMMER

Particular description of goods.—Wooden Shingles, Wooden Flooring, and Wooden Siding-Boards.
Claims use since September, 1910.

Ser. No. 60,302. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CONSUMERS COMPANY, Chicago, Ill. Filed Dec. 18, 1911.

Hydrox

Particular description of goods.—Birch-Beer, Caddie, Ginger-Ale, Lemon-Soda, Kissingen, Root-Beer, Sarsaparilla, Selters, and Vichy.
Claims use since about Jan. 1, 1898.

Ser. No. 60,350. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MICHELIN TIRE COMPANY, Milltown, N. J. Filed Dec. 19, 1911.

Particular description of goods.—Pneumatic Tires for Automobiles.
Claims use since 1907.

Ser. No. 60,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBINO RESIDORI, Carbon Hill, Ill. Filed Dec. 19, 1911.

Consisting of a portrait of my own bust, shown in the accompanying drawing.
Particular description of goods.—A Hair-Tonic.
Claims use since about the month of April, 1911.

Ser. No. 60,355. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL J. ROTH, New York, N. Y. Filed Dec. 19, 1911.

ROLAX

Particular description of goods.—Laxative Preparations.
Claims use since Dec. 8, 1911.

Ser. No. 60,389. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINCENT P. DOLE, Chicago, Ill. Filed Dec. 21, 1911.

Particular description of goods.—Olives and Olive-Oil.
Claims use since September, 1906.

Ser. No. 60,444. (CLASS 39. CLOTHING.) MOE H. LEVINSON & BRO., New York, N. Y. Filed Dec. 26, 1911.

B.V.C.

Particular description of goods.—Men's and Boys' Overcoats, Outer Suits, and Trousers.
Claims use since about Dec. 11, 1911.

Ser. No. 60,569. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y. Filed Jan. 2, 1912.

La Ricuba

Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.
Claims use since Dec. 22, 1911.

Ser. No. 60,585. (CLASS 37. PAPER AND STATIONERY.) BYRON WESTON COMPANY, Dalton, Mass. Filed Jan. 3, 1912.

FLEXO

Particular description of goods.—Writing-Paper.
Claims use since on or about the 1st day of December, 1911.

Ser. No. 60,678. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CHARLES H. DUNCAN, New York, N. Y. Filed Jan. 8, 1912.

TEDDY

Particular description of goods.—Fans for Personal Use.
Claims use since Dec. 28, 1911.

Ser. No. 60,715. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) ALOYSIUS POZZI, Trenton, N. J. Filed Jan. 10, 1912.

A.P.

Particular description of goods.—Cane, Parasol, and Umbrella Tip Protector.
Claims use since Nov. 7, 1911.

Ser. No. 60,723. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PACIFIC SPECIALTY COMPANY, Portland, Oreg. Filed Jan. 10, 1912.

Particular description of goods.—Washing, Cleaning, and Scouring Preparations.
Claims use since September, 1910.

Ser. No. 60,733. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JAMES WATSON & COMPANY, LIMITED, Dundee, Scotland. Filed Jan. 11, 1912. Under ten-year proviso.

WATSON'S WHISKY

No claim being made to the word "Whisky."
Particular description of goods.—Scotch Whisky.
Claims use since the year 1870.

Ser. No. 60,759. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ANSCO COMPANY, Binghamton, N. Y. Filed Jan. 12, 1912.

NOKO

Particular description of goods.—Photographic Developing-Paper.
Claims use since Dec. 11, 1911.

Ser. No. 60,823. (CLASS 32. FURNITURE AND UPHOLSTERY.) G. W. SAMMET & SON CO., Boston, Mass. Filed Jan. 15, 1912. Under ten-year proviso.

Gilt Edge

Particular description of goods.—Mattresses and Feather Pillows.
Claims use since January, 1895.

Ser. No. 60,830. (CLASS 16. PAINTS ANR PAINTERS' MATERIALS.) RED STAR OIL COMPANY, Philadelphia, Pa. Filed Jan. 15, 1912.

LINSOL

Particular description of goods.—Substitutes for Linseed-Oil.
Claims use since prior to Mar. 4, 1911.

Ser. No. 60,898. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) A. P. WITTEMAN COMPANY, Philadelphia, Pa. Filed Jan. 18, 1912.

Particular description of goods.—Steel Forgings, Steel Castings, and Steel Bars.
Claims use since Dec. 23, 1910.

Ser. No. 60,912. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE WESTERN CLOCK MANUFACTURING CO., Peru, Ill. Filed Jan. 19, 1912.

THE LOOKOUT

Particular description of goods.—Clocks and Watches.
Claims use since Sept. 5, 1911.

Ser. No. 60,926. (CLASS 37. PAPER AND STATIONERY.) AMERICAN SALES BOOK COMPANY, LIMITED, Toronto, Canada, and Niagara Falls, Elmira, and Glendale, N. Y. Filed Jan. 19, 1912.

EOSO

Particular description of goods.—Sales-Books.
Claims use since Jan. 5, 1912.

Ser. No. 60,950. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) INGERSOLL-RAND CO., Phillipsburg, N. J., and New York, N. Y. Filed Jan. 20, 1912.

IRCO

Particular description of goods.—Metal Used in Castings for Fluid-Operated Tools.
Claims use since Sept. 1, 1911.

TRADE-MARKS

REGISTERED FEBRUARY 27, 1912.

85,541. PETROLEUM COOKING-STOVES, SOLDERING-LAMPS, AND PARTS THEREOF AND ACCESSORIES. AKTIEBOLAGET B. A. HJORTH & Co., Stockholm, Sweden.
Filed August 9, 1911. Serial No. 58,110. PUBLISHED DECEMBER 26, 1911.

85,542. SALVES AND LOTIONS. THE AMERICAN SALVE COMPANY, Grand Rapids, Mich.
Filed September 25, 1911. Serial No. 58,847. PUBLISHED DECEMBER 19, 1911.

85,543. SPOOL-COTTON, SEWING-COTTON, THREAD, AND COTTON YARN. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed November 18, 1911. Serial No. 59,797. PUBLISHED DECEMBER 26, 1911.

85,544. CERTAIN FANCY GOODS. ANCHOR WEBBING COMPANY, Woonsocket, R. I.
Filed June 2, 1911. Serial No. 56,795. PUBLISHED DECEMBER 26, 1911.

85,545. COTTON PIECE GOODS. ATLANTIC COTTON MILLS, Lawrence and Boston, Mass.
Filed October 3, 1911. Serial No. 58,985. PUBLISHED DECEMBER 26, 1911.

85,546. PREPARED TAR, PITCH, AND ASPHALT FOR MACADAM-ROAD CONSTRUCTION. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed December 7, 1910. Serial No. 53,159. PUBLISHED DECEMBER 26, 1911.

85,547. LIVER MEDICINE FOR LIVE STOCK. BEE DEE STOCK MEDICINE CO., Chattanooga, Tenn.
Filed November 9, 1911. Serial No. 59,635. PUBLISHED DECEMBER 26, 1911.

85,548. FINISHING-PASTE FOR SHOES. S. M. BIXBY & Co., Brooklyn, N. Y.
Filed July 1, 1911. Serial No. 57,447. PUBLISHED DECEMBER 26, 1911.

85,549. DERIVATIVES OF SALICYLIC ACID. C. F. BOEHRINGER & SOEHNE, Mannheim-Waldhof, Germany.
Filed July 8, 1911. Serial No. 57,538. PUBLISHED DECEMBER 19, 1911.

85,550. HAIR, TOOTH, AND NAIL BRUSHES HAVING CELLULOID HANDLES OR BACKS. GEO. BORGFELDT & Co., New York, N. Y.
Filed March 13, 1911. Serial No. 55,042. PUBLISHED DECEMBER 26, 1911.

85,551. HAIR, TOOTH, AND NAIL BRUSHES HAVING CELLULOID HANDLES OR BACKS. GEO. BORGFELDT & Co., New York, N. Y.
Filed March 13, 1911. Serial No. 55,043. PUBLISHED DECEMBER 26, 1911.

85,552. CERTAIN GAME. BOUNCE M'F'G COMPANY, Philadelphia, Pa.
Filed October 29, 1908. Serial No. 38,830. PUBLISHED DECEMBER 19, 1911.

85,553. HOSIERY. THOS. E. BROWN & SONS, Philadelphia, Pa.
Filed October 14, 1911. Serial No. 59,159. PUBLISHED DECEMBER 26, 1911.

85,554. SCOURING-POWDER. THE BURCKHARDT COMPANY, Cincinnati, Ohio.
Filed August 25, 1911. Serial No. 58,379. PUBLISHED DECEMBER 26, 1911.

85,555. SLEEPING-GARMENTS. THE BURNHAM-MUNGER MFG. CO., Kansas City, Mo.
Filed September 8, 1908. Serial No. 37,252. PUBLISHED DECEMBER 26, 1911.

85,556. CRIB-SHEETS AND SHEETING OF WATERPROOF FABRIC. THE CANFIELD RUBBER COMPANY, Bridgeport, Conn.
Filed January 18, 1906. Serial No. 16,288. PUBLISHED DECEMBER 26, 1911.

85,557. COAL. CITY FUEL COMPANY, Chicago, Ill.
Filed February 17, 1909. Serial No. 40,622. PUBLISHED AUGUST 8, 1911.

85,558. REMEDY FOR CERTAIN DISEASES. R. M. CLINKSCALES & SON, Dallas, Tex.
Filed November 11, 1909. Serial No. 45,828. PUBLISHED DECEMBER 26, 1911.

85,559. SALVE FOR THE TREATMENT OF RHEUMATISM. SAMUEL COHEN, Baltimore, Md.
Filed January 27, 1911. Serial No. 54,148. PUBLISHED MAY 23, 1911.

85,560. TIMBER AND TIMBER CUT OR SAWED LENGTHWISE OR CROSSWISE. COMPAGNIE D'EXPLOITATION DES BOIS DE LA TORTUE (SOCIÉTÉ ANONYME), Brussels, Belgium, and Lavellée, Haiti.
Filed December 17, 1910. Serial No. 53,336. PUBLISHED DECEMBER 26, 1911.

85,561. REMEDY FOR THE RELIEF OF HEADACHE AND NEURALGIA. THE DALTON MEDICINE CO., Fayetteville, Tenn.
Filed February 26, 1909. Serial No. 40,805. PUBLISHED DECEMBER 19, 1911.

85,562. PILE REMEDY. WILLIAM J. DAVIDSON, St. Paul, Minn.
Filed May 31, 1910. Serial No. 50,020. PUBLISHED DECEMBER 26, 1911.

85,563. COLORED FLANNEL PIECE GOODS. DENZER & NATHAN, New York, N. Y.
Filed October 25, 1911. Serial No. 59,341. PUBLISHED DECEMBER 26, 1911.

85,564. SILK, COTTON, AND LINEN EMBROIDERY, MENDING AND SEWING THREAD. DIECKERHOFF, RAFFLOER & Co., New York, N. Y.
Filed October 9, 1911. Serial No. 59,078. PUBLISHED DECEMBER 26, 1911.

85,565. RIBBONS AND HAIR-NETS. DIECKERHOFF, RAFFLOER & Co., New York, N. Y.
Filed October 9, 1911. Serial No. 59,079. PUBLISHED DECEMBER 26, 1911.

85,566. CIGARS. M. W. DIFFLEY, INC., Chicago, Ill.
Filed May 23, 1905. Serial No. 6,404. PUBLISHED DECEMBER 26, 1911.

85,567. CERTAIN ARTICLES ELECTRICALLY TREATED WITH PRECIOUS METAL. ELECTROLYTIC ART METAL COMPANY, Trenton, N. J.
Filed July 28, 1911. Serial No. 57,897. PUBLISHED DECEMBER 5, 1911.

85,568. COTTON RUBBER-LINED HOSE. EMPIRE RUBBER MANUFACTURING COMPANY, Trenton, N. J.; Chicago, Ill.; New York, N. Y., and Boston, Mass.
Filed June 24, 1911. Serial No. 57,291. PUBLISHED SEPTEMBER 12, 1911.

85,569. MAGAZINE PUBLISHED MONTHLY, EXCEPT MONTHS OF JULY AND AUGUST. ENTERTAINMENT PUBLISHING CO., New York, N. Y.
Filed October 19, 1910. Serial No. 52,323. PUBLISHED DECEMBER 26, 1911.

85,570. PERFUMERY. ERSTE KARLSRUHER PARFÜMERIE- & TOILETTESEIFEN-FABRIK F. WOLFF & SOHN, Baden and Karlsruhe, Germany.
Filed June 9, 1911. Serial No. 56,936. PUBLISHED DECEMBER 19, 1911.

85,571. SCOURING COMPOUND. THE N. K. FAIRBANK COMPANY, Chicago, Ill.
Filed November 4, 1910. Serial No. 52,601. PUBLISHED DECEMBER 26, 1911.

85,572. HAIR-NETS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed November 8, 1910. Serial No. 52,660. PUBLISHED DECEMBER 26, 1911.

85,573. LINSEED-OIL. FREDONIA LINSEED OIL WORKS, Fredonia, Kans.
Filed August 4, 1910. Serial No. 51,266. PUBLISHED JANUARY 17, 1911.

85,574. REMEDY FOR CANCER. JEAN GAUBE DIT DU GERS, Paris, France.
Filed August 26, 1910. Serial No. 51,556. PUBLISHED DECEMBER 19, 1911.

85,575. CORN AND BUNION SHIELDS. J. J. GEORGES & SON, Washington, D. C.
Filed May 20, 1909. Serial No. 42,550. PUBLISHED DECEMBER 26, 1911.

85,576. TOOTH-POWDERS AND TOOTH-PASTES. THE GIFFORD CHEMICAL COMPANY, Beverly, N. J.
Filed August 15, 1911. Serial No. 58,210. PUBLISHED DECEMBER 19, 1911.

85,577. LACING-TIPS. GLENCAIRN MANUFACTURING COMPANY, Pawtucket, R. I.
Filed October 9, 1911. Serial No. 59,085. PUBLISHED DECEMBER 26, 1911.

85,578. SANDALS AND ROMPERS. WILLIAM GREILICH, New York, N. Y.
Filed April 10, 1911. Serial No. 55,686. PUBLISHED DECEMBER 26, 1911.

85,579. MEN'S OUTER SHIRTS. JULIUS L. GUTMAN, New York, N. Y.
Filed March 11, 1911. Serial No. 55,020. PUBLISHED APRIL 25, 1911.

85,580. MEDICINE FOR THE RELIEF OF RHEUMATISM. AUGUST HERRMANN, Senior, Berlin, Germany.
Filed September 27, 1911. Serial No. 58,875. PUBLISHED DECEMBER 26, 1911.

85,581. MERCERIZED EMBROIDERY-COTTON. WILH. HEBEBRAND, G. M. B. H., Elberfeld, Germany.
Filed June 29, 1911. Serial No. 57,361. PUBLISHED DECEMBER 26, 1911.

85,582. REMEDY FOR RHEUMATISM. THE HIBERN COMPANY, Chicago, Ill.
Filed July 13, 1911. Serial No. 57,603. PUBLISHED DECEMBER 19, 1911.

85,583. REMEDY FOR HEADACHE. WILLIAM HILL HORNE, Greenville, N. C.
Filed November 2, 1909. Serial No. 45,672. PUBLISHED DECEMBER 19, 1911.

85,584. SAD-IRONS. HOUSEHOLD GAS IRON COMPANY, New York, N. Y.
Filed September 25, 1911. Serial No. 58,834. PUBLISHED DECEMBER 26, 1911.

85,585. LIQUID SHAVING-SOAP. HYLIN & CO. FABRIKS AKTIEBOLAG, Stockholm, Sweden.
Filed September 22, 1911. Serial No. 58,815. PUBLISHED DECEMBER 26, 1911.

85,586. WHITE SWEET WINE. ITALIAN-SWISS COLONY, San Francisco, Cal.
Filed June 18, 1910. Serial No. 50,428. PUBLISHED DECEMBER 26, 1911.

85,587. HANDLES FOR POT-LIDS. OTTO KAMPFE MFG. CO., Newark, N. J.
Filed November 1, 1911. Serial No. 59,478. PUBLISHED DECEMBER 26, 1911.

85,588. DRESS-SHIELDS. S. KANN SONS & CO., Washington, D. C.
Filed November 9, 1911. Serial No. 59,625. PUBLISHED DECEMBER 26, 1911.

85,589. DRESS-SHIELDS. S. KANN SONS & CO., Washington, D. C.
Filed November 9, 1911. Serial No. 59,626. PUBLISHED DECEMBER 26, 1911.

85,590. DRESS-SHIELDS. S. KANN SONS & CO., Washington, D. C.
Filed November 9, 1911. Serial No. 59,628. PUBLISHED DECEMBER 26, 1911.

85,591. MEN'S AND BOYS' STIFF, SOFT, AND STRAW HATS AND CAPS. KARP & LONDON, Philadelphia, Pa.
Filed September 14, 1911. Serial No. 58,665. PUBLISHED DECEMBER 26, 1911.

85,592. BELT-DRESSINGS. KATO PRODUCTS CO., New York, N. Y.
Filed November 10, 1910. Serial No. 52,701. PUBLISHED AUGUST 8, 1911.

85,593. RUBBER ROOFING. KEYSTONE ROOFING MFG. CO., York, Pa.
Filed September 30, 1911. Serial No. 58,946. PUBLISHED DECEMBER 26, 1911.

85,594. EYEGLASS-MOUNTINGS. JULIUS KING OPTICAL CO., New York, N. Y.
Filed October 28, 1911. Serial No. 59,401. PUBLISHED DECEMBER 26, 1911.

85,595. HAIR-TONIC. GEORGE A. KOCH, Woodmere, N. Y.
Filed June 27, 1911. Serial No. 57,340. PUBLISHED DECEMBER 19, 1911.

85,596. PERFUMED LOTION. ALFRED J. KRANK, St. Paul, Minn.
Filed July 17, 1909. Serial No. 43,583. PUBLISHED DECEMBER 19, 1911.

85,597. DRESS-WAISTS. ISAAC LEFKOWITZ, New York, N. Y.
Filed October 23, 1911. Serial No. 59,297. PUBLISHED DECEMBER 26, 1911.

85,598. GUM JAR-RINGS. FRANCIS H. LEGGETT & CO., New York, N. Y.
Filed September 28, 1911. Serial No. 58,912. PUBLISHED DECEMBER 26, 1911.

85,599. RIBBONS. ULRIK R. T. LUND, North Catasauqua, Pa.
Filed June 30, 1911. Serial No. 57,424. PUBLISHED DECEMBER 26, 1911.

85,600. DRESS-SHIELDS. S. KANN SONS & CO., Washington, D. C.
Filed November 9, 1911. Serial No. 59,627. PUBLISHED DECEMBER 26, 1911.

85,601. PERFUMES. FREDERIC S. MASON, New York, N. Y.
Filed October 17, 1911. Serial No. 59,202. PUBLISHED DECEMBER 26, 1911.

85,602. MEDICINE FOR CERTAIN DISEASES. BENJAMIN C. MATHES, Rochester, N. Y.
Filed September 6, 1911. Serial No. 58,542. PUBLISHED DECEMBER 19, 1911.

85,603. MEDICINE FOR CERTAIN DISEASES. BENJAMIN C. MATHES, Rochester, N. Y.
Filed September 6, 1911. Serial No. 58,543. PUBLISHED DECEMBER 19, 1911.

85,604. INTERNAL REMEDY FOR GONORRHEA. J. C. MCFARLAND, Dallas, Tex.
Filed September 8, 1911. Serial No. 58,593. PUBLISHED DECEMBER 19, 1911.

85,605. CERTAIN CHEMICALS, MEDICINES, AND TOILET PREPARATIONS. MCNEIL & HIGGINS COMPANY, Chicago, Ill.
Filed February 23, 1910. Serial No. 47,969. PUBLISHED FEBRUARY 14, 1911.

85,606. METAL-POLISH. A D MILLER'S SONS CO., Pittsburgh, Pa.
Filed June 7, 1911. Serial No. 56,870. PUBLISHED DECEMBER 26, 1911.

85,607. HAIR-STAINS. HOWARD E. NICHOLS, St. Louis, Mo.
Filed November 20, 1907. Serial No. 31,266. PUBLISHED DECEMBER 19, 1911.

85,608. REFRIGERATORS AND COOLING-ROOMS. NORTHEY MANUFACTURING COMPANY, Waterloo, Iowa.
Filed June 2, 1911. Serial No. 56,737. PUBLISHED DECEMBER 26, 1911.

85,609. WORK, FLANNEL, DRESS, AND NEGLIGÉE SHIRTS. THE OHIO GARMENT COMPANY, Springfield, Ohio.
Filed November 4, 1911. Serial No. 59,537. PUBLISHED DECEMBER 26, 1911.

85,610. BITTERS. THE OLD VETERAN BITTERS CO., Chicago, Ill.
Filed August 10, 1909. Serial No. 44,059. PUBLISHED DECEMBER 19, 1911.

85,611. COUGH MIXTURE. OSBON AND OSBON CHEMICAL CO., Baltimore, Md.
Filed July 27, 1911. Serial No. 57,849. PUBLISHED DECEMBER 19, 1911.

85,612. CERTAIN TOILET ARTICLES. L. T. PIVER & CIE., Paris, France.
Filed September 27, 1911. Serial No. 58,876. PUBLISHED DECEMBER 26, 1911.

85,613. CERTAIN METAL CASTINGS AND FORGINGS. POLDIHÜTTE TIEGELGUSSSTAHLFABRIK, Vienna and Kladno, Austria-Hungary.
Filed October 12, 1910. Serial No. 52,240. PUBLISHED DECEMBER 26, 1911.

85,614. BEE-ESCAPES. MARY E. PORTER, Lewistown, Ill.
Filed October 16, 1911. Serial No. 59,182. PUBLISHED DECEMBER 26, 1911.

85,615. COCOA. JOHN O. POWERS, Nutley, N. J., and New York, N. Y.
Filed February 8, 1911. Serial No. 54,388. PUBLISHED DECEMBER 12, 1911.

85,616. DECARBONIZING COMPOUNDS. ALVA L. REA, Zanesville, Ohio.
Filed November 15, 1910. Serial No. 52,789. PUBLISHED JANUARY 24, 1911.

85,617. HOSIERY. RICHMOND HOSIERY MILLS, Chattanooga, Tenn., and Rossville, Ga.
Filed March 13, 1911. Serial No. 55,052. PUBLISHED DECEMBER 26, 1911.

85,618. CIGARETTES AND CIGARS. ALBERT L. ROWELL, Marblehead, Mass.
Filed August 12, 1909. Serial No. 44,007. PUBLISHED DECEMBER 26, 1911.

85,619. REMEDY FOR ALL POULTRY DISEASES. DAVID F. RUNION, Broadway, Va.
Filed August 8, 1911. Serial No. 58,093. PUBLISHED DECEMBER 19, 1911.

85,620. PNEUMATIC TIRES FOR VEHICLES. THE SEAMLESS RUBBER COMPANY, New Haven, Conn.
Filed March 7, 1910. Serial No. 48,249. PUBLISHED DECEMBER 19, 1911.

85,621. HAIR TONIC AND POMADE. SEEBY DRUG COMPANY, New York, N. Y.
Filed June 28, 1911. Serial No. 57,348. PUBLISHED DECEMBER 26, 1911.

85,622. AUTOMOBILES. JOHN STANLEY SMALL, Detroit, Mich.
Filed October 17, 1911. Serial No. 59,195. PUBLISHED DECEMBER 26, 1911.

85,623. CIGARETTES. TEOFANI & CO., LIMITED, London, England.
Filed February 12, 1910. Serial No. 47,782. PUBLISHED DECEMBER 26, 1911.

85,624. CERTAIN METALS CAST IN INGOTS. UNION SMELTING & REFINING COMPANY, New York, N. Y.
Filed May 11, 1908. Serial No. 34,679. PUBLISHED JANUARY 26, 1909.

85,625. LAXATIVE PREPARATIONS. THE UPJOHN COMPANY, Kalamazoo, Mich.
Filed June 29, 1910. Serial No. 50,628. PUBLISHED AUGUST 29, 1911.

85,626. VARNISHES. VALENTINE & COMPANY, New York, N. Y.
Filed June 15, 1911. Serial No. 57,080. PUBLISHED SEPTEMBER 12, 1911.

85,627. HAIR OR SCALP TONIC. ROCCO R. VECCHIOLLI, Washington, D. C.
Filed June 15, 1911. Serial No. 57,079. PUBLISHED DECEMBER 19, 1911.

85,628. REMEDY FOR POISON-OAK POISONING. MARX VINCENT CO., Eugene, Oreg.
Filed August 28, 1911. Serial No. 58,410. PUBLISHED DECEMBER 26, 1911.

85,629. STIFFENING CORDS, BLADES, AND TAPES. THE WARREN FEATHERBONE COMPANY, Three Oaks, Mich.
Filed November 18, 1911. Serial No. 59,795. PUBLISHED DECEMBER 26, 1911.

85,630. HAIR-TONIC. WHITE & HOY, Gary, Ind.
Filed September 13, 1911. Serial No. 58,656. PUBLISHED DECEMBER 19, 1911.

85,631. SMALL PORTABLE OPEN-TOP FURNACES OF EARTHENWARE. ROBERT L. WILLIAMS, McDade, Tex.
Filed July 5, 1911. Serial No. 57,485. PUBLISHED OCTOBER 31, 1911.

85,632. PREPARED MEDICINAL COLD-CREAM. NATHANIEL WOLFE, Philadelphia, Pa.
Filed February 23, 1911. Serial No. 54,712. PUBLISHED AUGUST 22, 1911.

85,633. WOVEN WOOLEN FABRIC KNOWN AS PIECE GOODS. WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me.
Filed June 26, 1911. Serial No. 57,304. PUBLISHED DECEMBER 5, 1911.

85,634. NERVE AND BLOOD REMEDY. YOUNG REMEDY COMPANY, St. Louis, Mo.
Filed January 12, 1909. Serial No. 39,835. PUBLISHED DECEMBER 19, 1911.

85,635. RAZOR-STROP DRESSING. THE Z-ONLY CO., Norwich, N. Y.
Filed September 1, 1910. Serial No. 51,648. PUBLISHED DECEMBER 19, 1911.

85,636. FOUNTAIN-MOPS. BURTON HOMER PUGH, Topeka, Kans.
Filed August 28, 1911. Serial No. 58,428. PUBLISHED DECEMBER 26, 1911.

LABELS

REGISTERED FEBRUARY 27, 1912.

16,185.—*Title:* "HARRISON'S PEPSIN CHEWING GUM." (For Chewing-Gum.) ROBERT McK. ACKERMAN, Binghamton, N. Y. Filed November 16, 1911.

16,186.—*Title:* "HOGARTH." (For Cigars.) C. B. HENSCHEL MFG. Co., Milwaukee, Wis. Filed February 5, 1912.

16,187.—*Title:* "DARBELLE CHOCOLATES." (For Chocolates.) THE DARBY CANDY COMPANY, Baltimore, Md. Filed January 18, 1912.

16,188.—*Title:* "MONEYBACK." (For Flour.) H. C. DAVISON, Hutchinson, Kans. Filed January 5, 1912.

16,189.—*Title:* "CASTELL." (For Rubber Bands.) A. W. FABER, Stein, near Nuremberg, Germany, and Newark, N. J. Filed January 10, 1912.

16,190.—*Title:* "BRIAR HILL WHISKEY." (For Whisky.) THE HEWITT MERCANTILE COMPANY, St. Louis, Mo. Filed September 11, 1911.

16,191.—*Title:* "HICKORY RIDGE STRAIGHT WHISKEY." (For Whisky.) THE HEWITT MERCANTILE COMPANY, St. Louis, Mo. Filed September 11, 1911.

16,192.—*Title:* "OREGON WHISKEY." (For Whisky.) THE HEWITT MERCANTILE COMPANY, St. Louis, Mo. Filed September 11, 1911.

16,193.—*Title:* "GRIZZLY BEAR WHISKEY." (For Whisky.) THE HEWITT MERCANTILE COMPANY, St. Louis, Mo. Filed September 11, 1911.

16,194.—*Title:* "R-BST." (For Tomatoes.) J. F. PYLE & SON, San Jose, Cal. Filed January 4, 1912.

16,195.—*Title:* "MICTURITONE." (For Diuretic.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed December 20, 1911.

16,196.—*Title:* "HONEY SUCKLE BRAND." (For Honey.) HARRY LEE MEHARRY, San Francisco, Cal. Filed July 3, 1911.

16,197.—*Title:* "LA JOYA DE CUBA." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,198.—*Title:* "DOUBLE HEADER." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,199.—*Title:* "SOME SMOKE." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,200.—*Title:* "PLANTER'S SMILE." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,201.—*Title:* "NEW PANETELA." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,202.—*Title:* "CLUB STANDARD." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,203.—*Title:* "DOCTOR'S SPECIAL." (For Cigars.) THE MOEHLE LITHOGRAPHIC Co., New York, N. Y. Filed February 1, 1912.

16,204.—*Title:* "TRI-STATE CAPITOLS." (For Cigars.) N. F. NELSON, Milbank, S. D. Filed December 29, 1911.

16,205.—*Title:* "JAMESTOWN GINGER ALE." (For Ginger-Ale.) THE N. Y. S. & S. MFG. Co., Norfolk, Va. Filed February 5, 1912.

16,206.—*Title:* "TWOTONE LINEN." (For Paper.) OSBORN PAPER COMPANY, Marion, Ind. Filed December 16, 1911.

16,207.—*Title:* "MISS BROWN." (For Chocolates.) PALMER & Co., Sioux City, Iowa. Filed January 19, 1912.

16,208.—*Title:* "SUITS TO ORDER, $6.50 FROM YOUR OWN MATERIAL." (For Suits.) WRIGHT MFG. Co., Brooklyn, N. Y. Filed October 30, 1911.

PRINTS

REGISTERED FEBRUARY 27, 1912.

2,961.—*Title:* "B. V. D. 1912 UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed January 9, 1912.

2,962.—*Title:* "B. V. D. 1912 TWO PIECE SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed January 9, 1912.

2,963.—*Title:* "H. H. HARRISON'S RAPIDOGRAPH DUPLICATING MACHINE." (For Rapidograph Duplicating-Machine.) HENRY H. HARRISON, deceased, New York, N. Y., by Belle S. Harrison, administratrix. Filed November 13, 1911.

2,964.—*Title:* "THE BARKING DOG'S HOLIDAY OUTFIT." (For Smoking-Tobacco and Pipe-Smoker's Outfit.) GODFREY S. MAHN, New York, N. Y. Filed December 2, 1911.

2,965.—*Title:* "NU-FLAKE." (For Flaked Cereal Food.) E. W. VAN SLYKE, Oklahoma, Okla. Filed July 10, 1911.

2,966.—*Title:* "JIM DANDY." (For Shirts.) VINDEX SHIRT COMPANY, Baltimore, Md. Filed February 7, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

THOMAS *v.* WEINTRAUB.

Decided June 29, 1911.

1. INTERFERENCE—PRIORITY—ERRORS ALLEGED BUT NOT URGED.

Where it was alleged in the reasons for appeal that the Examiners-in-Chief erred in not holding that the invention in issue was disclosed in certain prior applications of T. and also in failing to find that certain oral testimony offered on behalf of T. discloses "a means of excitation of the rectifier which is independent of the source of supply," but neither in the brief on the appeal nor in the brief before the Examiners-in-Chief was it pointed out wherein the testimony supported the allegations of T.'s preliminary statement, *Held* that only the first allegation of error would be considered.

2. SAME—SAME—INVENTION BY THIRD PARTY.

In an interference between T. and W. the question whether the invention in issue was made by S., who is not a party to the interference, is immaterial.

3. SAME—SAME.

Priority *Held* properly awarded to W., since certain prior applications relied upon by T. do not disclose the invention, even if T. could be permitted to amend his preliminary statement so as to allege dates of invention as early as the filing dates of these applications.

ELECTRICAL DISTRIBUTION SYSTEM.

Mr. Charles A. Terry for Thomas. (*Mr. George H. Stockbridge* of counsel.)

Mr. Albert G. Davis for Weintraub. (*Mr. Alexander D. Lunt* of counsel.)

MOORE, *Commissioner:*

This is an appeal from a decision of the Examiner of Interferences awarding priority of invention to Weintraub.

The counts of the issue are as follows:

1. The combination of a source of single-phase alternating current, an exhausted receptacle, electrodes therefor one at least of which is of vaporizable material, connections between some of said electrodes and the terminals of said source a connection between another of said electrodes and a point of intermediate potential on said source, and means independent of said source for generating ionized vapor from the substance of the last-mentioned electrode.

2. The combination of a source of alternating current, an envelop or receptacle, electrodes for said envelop, and continuously-operating means independent of said source for rendering the interior of said envelop conductive for current-waves of both polarities from said source.

3. The combination of a winding, means for generating in said winding an alternating electromotive force, an exhausted envelop, electrodes therefor one at least of which is of vaporizable material, a connection from a vaporizable electrode to an intermediate point in said winding, a connection from other points in said winding to other electrodes in said envelop, and means independent of said winding for generating ionized vapor in said envelop.

4. The combination of an exhausted envelop provided with electrodes, a source of single-phase alternating current, means independent of said source for rendering the interior of said envelop conducting for currents of a given direction and means for causing energy derived from both polarity-waves of the alternating current to flow through said envelop.

The invention covered by these counts and its relation to the invention involved in interferences No. 23,768 and No. 23,772 is correctly set forth as follows by the Examiner of Interferences:

In apparatus of this character it is well understood that the initial resistance is high, while the running resistance is low; but if current, when once started, ceases to flow for any period, however short, the initial high resistance of the apparatus is restored. So long as current flows from any source, there is no high initial resistance, but only the low running resistance, to the passage of current from every other source that makes the cathode of the existing current a cathode for current from such other source. Therefore, continuity of excitation of the cathode is essential. With polyphase currents the several impulses are so disposed relatively to each other, that, when once started, continuity of operation is maintained by the overlapped impulses themselves. But with single-phase currents some supplementary means for maintaining excitation must be provided; for, otherwise, the initial high resistance of the apparatus would be restored with each fall to zero of the current-waves.

Two practical means for maintaining excitation for single-phase rectifiers have been produced; in one, current from an independent source is used; in the other, an inductance is inserted in the circuit of the current which passes through the rectifier, which serves to delay the current-impulses and so cause them to overlap. The first arrangement was involved, broadly, in interference No. 23,768; while the inductance-species formed, generally speaking, the subject-matter of interference No. 23,772. But while the separately-excited rectifier formed the basis of interference No. 23,768, the applications involved therein only disclosed means for rectifying one of the two waves; the other was suppressed; therefore, only broad counts for this subject-matter were present therein. In the present case both waves are rectified, and the exciting means derives its energy from a source entirely independent of the source of current to be rectified. This source is not the same in both cases. Weintraub uses a direct current-supply, while Thomas shows an independent transformer.

As further limitations, all of the counts include a receptacle for the electrodes, and certain of the counts also specify that there shall be a connection between one of the electrodes and a point of intermediate potential on the source of current to be rectified.

It was stipulated by and between the parties to this interference that the testimony taken on behalf of Weintraub in interferences Nos. 23,768 and 23,772 might be considered as of the same force and effect as if taken herein. Both the lower tribunals, however, found it unnecessary to consider this testimony in connection with this interference, for the reason that they found that Thomas had not established a date of conception of the invention prior to Weintraub's filing date of March 23, 1903.

Thomas originally alleged conception of the invention and making of drawings on February 14, 1903, and disclosure and reduction to practice thereof on February 26, 1903. He moved to amend his preliminary statement by alleging January 21, 1903, for each and all of these acts. This motion was

denied by the Examiner of Interferences in connection with his decision on priority, and one of the errors alleged on this appeal is the failure of the Examiners-in-Chief to give Thomas the benefit of this date. The purpose of this proposed amendment was to secure the benefit of the filing date of certain applications filed by Thomas on January 21, 1903. As will hereinafter appear, these applications do not disclose the invention, and it cannot be held that Thomas is entitled to the benefit thereof. It is therefore unnecessary to consider whether the Examiner of Interferences was in error in refusing the motion to amend the preliminary statement.

Error is also alleged in the failure of the Examiners-in-Chief to find that certain oral testimony offered on behalf of Thomas discloses—

a means of excitation of the rectifier which is independent of the source of supply.

Nowhere in the brief offered on behalf of Thomas is it pointed out wherein the testimony supports the allegation of his preliminary statement, and the Examiners-in-Chief state in their decision that in the brief filed before them Thomas confined his attention to the disclosure of the applications above referred to. Only these applications therefore need to be considered.

In the brief filed on this appeal reference is made to two applications filed on January 21, 1903—namely, Nos. 139,875 and 139,957—and to an application, No. 155,922, filed May 6, 1903, as a division of application No. 139,957. The first of these applications matured into Patent No. 901,306, and the divisional application into Patent No. 979,396. It is virtually admitted by Thomas that none of the claims will read on these applications. It is contended, however, that in view of certain statements made therein it would not require any invention to so reconstruct the devices thereof as to embody the issue of this interference. I agree with the holding of the Examiner of Interferences on this point, which was as follows:

Moreover, an inspection of the applications of which Thomas seeks the benefit, makes it apparent that they do not in fact disclose the issue. As heretofore stated, each and all of the counts specify as an element, means independent of the main source for maintaining activity of the rectifier, and each also calls for an envelop or receptacle within which the electrodes are placed. Counts 1 and 3 in addition specify that one of the electrodes is connected to the source at a point where its potential is intermediate the extremes. While Thomas in the applications referred to does disclose current from an independent source for maintaining the rectifiers active, and in Figure 4 of his application, original No. 139,875, shows an envelop within which are arranged a plurality of anodes, and also shows in Fig. 1 of his application No. 139,957, an arrangement which provides the connection to a point of intermediate potential, in none of the figures of either of the two applications does he disclose an arrangement upon which the issue reads. This is admitted by Thomas, but he contends that there would be no invention in bringing the several parts together so that the issue would read thereon. However, it must be held that while he does disclose means for utilizing both waves from a single-phase source, and while certain of the systems which he discloses may be capable of performing the functions of the rectifiers found in the applications involved herein, still, in every instance a plurality of envelops or receptacles are provided for the various electrodes; therefore none of the counts read thereon. While in Fig. 4 of his application, original No. 139,875, he does show a rectifier having a plurality of anodes, this is not shown alone in an operative system, but is combined with other rectifiers which coact therewith to carry out the design of the inventor.

It is not seen that the disclosures of Thomas in the applications referred to, either separately or together, present the invention here in issue. Not only is the invention itself not disclosed, but it is not believed that the equivalent is found therein, for it is not apparent that Thomas, at the time he executed these applications, appreciated the possibility of constructing therefrom the subject-matter in issue.

Thomas also contends that the claims are clearly not patentable to Weintraub in view of the two patents cited; but for the reasons above quoted from the decision of the Examiner of Interferences it is far from obvious that the claims of the issue are not patentable over these patents. It is also stated in the brief that the record shows that the invention was not original with Weintraub, but that he derived his knowledge thereof from Steinmetz, one of the engineers of the General Electric Company, the assignee of the Weintraub application. This question, however, is absolutely immaterial to the question of priority between Thomas and Weintraub. (*Foster* v. *Antisdel*, 88 O. G., 1527; 14 App. D. C., 552; *Prindle* v. *Brown*, 112 O. G., 957; 24 App. D. C., 114.)

The brief on behalf of Thomas closes with the following statement:

For reasons herein advanced it is respectfully submitted that either the interference should be decided in favor of Thomas, or else the proper steps taken to reform the several related interferences in this group in such manner that the same invention shall not under guise of different language form the subject of different interferences.

This interference is one of a series which was declared in 1904, the real parties in interest being the same in all of them. If there was any necessity for the re-formation of the issues of these interferences, motion or motions to that effect should have been brought in the early stages thereof before testimony had been taken.

The decision of the Examiners-in-Chief awarding priority of invention to Weintraub is affirmed.

NUMAN *v.* ASHLEY.

Decided January 4, 1912.

1. INTERFERENCE — MOTION TO DISSOLVE — NO APPEAL FROM A FAVORABLE DECISION.

   It is well settled that no appeal lies from the decision of the Primary Examiner denying a motion to dissolve an interference upon the ground that the claim is not patentable to one of the parties or that he has no right to make said claim.

2. SAME — SAME — SUPERVISORY AUTHORITY EXERCISED ONLY IN CLEAR CASE.

   It is also well settled that the supervisory authority of the Commissioner will be exercised on petition to review a favorable decision on a motion to dissolve an interference only in case of manifest error.

ON PETITION.

INKSTAND.

Mr. Charles C. Gill and *Mr. William G. Henderson* for Numan.

Mr. Frank M. Ashley pro se.

TENNANT, *Assistant Commissioner:*

This is a petition by Numan asking, first, for a review of the decision of the Primary Examiner refusing to dissolve the interference and, second, requesting a stay of proceedings in the interference until final determination of this petition.

Numan brought a motion to dissolve the interference upon the ground that the claim of the issue is not patentable to Ashley and that Ashley has no right to make such claim. It is contended by Numan that claim 7 of Ashley's patent, No. 993,813, granted May 30, 1911, upon a copending application covers the construction shown in Ashley's application involved in this interference as well as the construction shown in said patent and that it would be double patenting to grant Ashley a patent upon the application involved in this interference containing the claim of the issue which is also generic to both constructions.

It is well settled that no appeal lies from the decision of the Primary Examiner denying a motion to dissolve the interference upon the ground that the claim is not patentable to one of the parties or that he has no right to make said claim. (Rule 124; *Zimmerman* v. *Zamboni*, 121 O. G., 2327; *Weintraub* v. *Hewitt*, 124 O. G., 2534; *Sobey* v. *Holsclaw*, 126 O. G., 3041; 28 App. D. C., 65; *Daggett* v. *Kaufmann*, 127 O. G., 3641; *Hawkins* v. *Coleman* v. *Thullen*, 133 O. G., 1187; *Langslow* v. *Malocsay*, 155 O. G., 1043.) It is also well settled that the supervisory authority of the Commissioner will be exercised on petition to review such a decision only in case of manifest error. (*Sobey* v. *Holsclaw*, 119 O. G., 1922; *Locke* v. *Crebbin*, 124 O. G., 317; *Daggett* v. *Kaufmann*, 127 O. G., 3641; *Dixon and Marsh* v. *Graves and Whittemore*, 130 O. G., 2374; *Hess* v. *Joerrissen* v. *Felbel*, 131 O. G., 1419; *Frost* v. *Chase*, 151 O. G., 741.)

No such manifest error is found in the Examiner's decision. On the contrary, it may be stated that petitioner's contention that claim 7 of the Ashley patent will read upon the structure shown in the Ashley application involved in this interference is clearly erroneous. In attempting to read said claim upon the structure of the Ashley application it is necessary to consider both the inwardly-projecting portions A^4 and A^5 as embraced in the portion of the claim calling for—

guiding means extending upwardly from the bottom thereof to guide the cover.

It is also necessary to again include one of these projecting portions in order to satisfy that portion of the claim calling for—

said body portion having an inwardly-extending wall located near said inwardly-extending portion and serving to form a dipping-chamber between them.

As to the second ground of the petition, it is unnecessary to grant a stay of proceedings, inasmuch as petitioner's time for taking testimony does not expire until January 18, 1912.

The petition is dismissed as to the first ground and is denied as to the second.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE MADDEN.

Decided January 2, 1912.

PATENTABILITY—DESIGN.

A design for a water-closet *Held* unpatentable in view of prior art.

Mr. L. M. Hopkins for the appellant.

Mr. W. S. Ruckman for the Commissioner of Patents.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents (174 O. G., 833) rejecting an application of Patrick J. Madden for a patent for a new and ornamental design for the bowl of a water-closet. Upon reference to several existing patents in the same field, it was held that there was no invention involved in the described design.

It is unnecessary to review the several references. In view of these, and another patent issued to the applicant, we fully concur in the decision of the Commissioner that there is no novelty disclosed.

The decision is affirmed.

Court of Appeals of the District of Columbia.

O'CONNOR *v.* BETTENDORF.

Decided January 2, 1912.

INTERFERENCE—PRIORITY.

Held that the record established that B. was the prior inventor.

Mr. H. N. Low for the appellant.

Mr. F. D. Thomason for the appellee.

ROBB, *J.:*

This is an appeal by O'Connor from a decision of the Commissioner of Patents (175 O. G., 266) in which priority of invention was awarded Bettendorf.

The invention has to do with draft-rigging for railroad-cars and the issue is expressed in the following counts:

1. A draft and buffing gear comprising a single draft-beam, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.
2. A draft and buffing gear comprising a single flanged metallic beam, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.
3. A draft and buffing gear comprising an I-beam with part of its web removed, cheek-plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and means connecting the draw-bar with the rear follower.

O'Connor is the senior party, having filed his application May 16, 1908, nine or ten days after conceiving the invention, while Bettendorf did not file until May 23, 1908. Each of the tribunals of the Patent Office has reviewed the evidence in detail and each has reached the conclusion that Bettendorf was the prior inventor. The earliest date of conception awarded O'Connor was March 7, 1908. He relies upon the filing of his application to establish reduction to practice. Each of the Patent Office tribunals found a conception of the invention by Bettendorf in 1906, when a sample-car known as the "Wabash" car and, according to those tribunals, embodying every element of the invention was made at the factory of the Bettendorf Axle Company. Each of those tribunals has further found that in January, 1908, a date prior to the entry of O'Connor into the field, negotiations were under way with the Chicago, Milwaukee & St. Paul Railway looking to the manufacture for that company, by the Bettendorf Company, of cars embodying the invention in issue, and that another sample-

car known as the "Milwaukee" car and embodying the invention was thereupon constructed and, on March 6, 1908, inspected by certain named officials of said railway company. At this inspection two officials of the Chicago, Burlington & Quincy Railway were present. We shall not consume time with a useless review of the evidence which we think not only warranted but compelled the conclusions reached by the Patent Office.

O'Connor insists, however, that even assuming the correctness of the decision of the Patent Office on the question of priority, the patent should nevertheless be issued to him. This contention grows out of an incident which occurred just prior to O'Connor's conception of the invention. At that time O'Connor was employed by the W. H. Miner Company of Chicago, to whom he assigned his invention. That company was engaged in the manufacture of draft-rigging of various kinds and had done some business with the Bettendorf Company. Understanding that the Miner friction draft-gear was to be used by the Bettendorf Company in carrying out its contract with the Chicago, Milwaukee & St. Paul Railway Company the Miner Company sought from the Bettendorf Company drawings of the car-underframe. Of course the Miner friction draft-gear did not contain the invention in issue. On March 7, 1908, the following communication was sent the Miner Company by the Bettendorf people:

> Confirming our phone conversation of this afternoon, we are sorry to advise you that our design of the draft-gear end of the center sill on the Milwaukee stock-car underframe is in such a stage that we cannot send you a sketch or print of the same. The fact is that as yet, no complete drawings have been made.

O'Connor contends that the sending of this communication, under the circumstances disclosed, estopped Bettendorf from making claim to the invention. This communication, he contends, led him to believe that the field was open and he thereupon, in good faith, proceeded to devise an underframe embodying the invention. Assuming that the relations of the parties were such as to permit O'Connor to take advantage of any lack of good faith on the part of Bettendorf, we agree with the Patent Office that the above communication is not reasonably susceptible of the construction placed upon it by O'Connor. It was perfectly well known by the Miner Company that this "Milwaukee" sample-car was being very hastily constructed and that under the custom obtaining among manufacturers complete or final drawings were not made until after tentative drawings had been submitted to the railway company for approval. Upon the completion of this sample-car slight modifications or changes might have been required by the railway company. These facts must be kept in mind while reading the letter under consideration. In that letter the Miner Company were simply told that a sketch or print of the sample-car underframe could not then be sent; that no complete drawings had then been made. It was an entirely unwarranted inference on the part of the Miner Company that this sample-car underframe did not contain novel and patentable features, or that Bettendorf was not then engaged in devising such features. Certain it is that this letter cannot be construed as a disclaimer of the invention.

The decision of the Commissioner is affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

O'CONNOR *v.* BETTENDORF.

Decided January 2, 1912.

INTERFERENCE—PRIORITY.

Priority *Held* properly awarded to B.

Mr. H. N. Low for the appellant.

Mr. F. D. Thomason for the appellee.

ROBB, *J.*:

This case involves the same parties and applications as were involved in the preceding case. The record presented by each party is also the same as in that case.

The counts in this case are nine in number, of which the following are representative:

> 1. The combination with a draft-rigging, of suitable end sills and a single I-beam center sill the ends of which are bifurcated and secured to said end sills, and which is provided with a longitudinally-elongated opening in alinement with the space between said bifurcations from which it is separated by a portion of the web.
>
> 8. In a car the combination with end sills, and a single rolled metal beam center sill the ends of which are connected to said end sills and bifurcated longitudinally, and provided with a longitudinal opening alining with and separated from said bifurcations by a vertically-disposed integral part of the web of said center sill, longitudinally-disposed springs and reciprocal means for retaining the same, of a draw-bar movable in the space between said bifurcations, and a buffer-block interposed between said springs and draw-bar and divided longitudinally for a portion of its length so as to pass on either side of the vertically-disposed web portion, and having longitudinally-disposed forward extensions projecting from its forward end and passing forward on each side of said draw-bar, and links connecting the spring-retaining means and said draw-bar.
>
> 9. The combination with a draft-rigging, of an end sill, a frame secured to the outer side thereof and surrounding an opening through which the draw-bar extends, and a single I-beam center sill the end of which is bifurcated to receive said draw-bar and the lower bifurcation of which is secured to said frame below said draw-bar.

For the reasons assigned in the preceding case the decision of the Commissioner is affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

NASH *v.* BETTENDORF.

Decided January 2, 1912.

INTERFERENCE—PRIORITY.

Priority *Held* properly awarded to B.

Mr. H. N. Low for the appellant.

Mr. F. D. Thomason for the appellee.

ROBB, *J.*:

This case involves the same application of Bettendorf that we have considered in the two preceding cases. Nash, the other party to the interference and the appellant here, was connected with the W. H. Miner Company and assigned his application to that company. As the date of conception claimed by Nash is March 7, 1908, we must, for the reasons assigned in appeal No. 735, affirm the decision of the Commissioner awarding priority of invention to Bettendorf.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Mygatt design patent, No. 37,983, for a design for a prismatic reflector for lamps, *Held* void for lack of invention. *Mygatt* v. *M. Schauffer-Flaum Co.*, 191 Fed. Rep., 836.

(U. S. C. C.) The Edison patents, Nos. 672,616 and 672,617, for a method and apparatus for breaking rock, *Held* valid and infringed. *Edison* v. *Allis-Chalmers Co.*, 191 Fed. Rep., 857.

(U. S. C. C.) The Bliss patent, No. 707,754, for brush mechanism for dynamos, *Held* valid, but not infringed. *United States Light & Heating Co.* v. *Safety Car Heating & Lighting Co.*, 191 Fed. Rep., 846.

(U. S. C. C.) The Bliss patent, No. 525,836, for a self-adjusting brush for dynamo-electric machines, *Held* valid and infringed. *United States Light & Heating Co.* v. *Safety Car Heating & Lighting Co.*, 191 Fed. Rep., 850.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 35,053, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Brauns, of Quedlinburg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Sommer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. E. Egerton & Co., of Baltimore, Md., and registration No. 18,346, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 12, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis, Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,086, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Deben, 85 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 10, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 366 Sonna Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,024, dated March 17, 1885, to Louis Kuhlmann & Bro., 83 Himrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 24,992, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,796, dated November 7, 1893, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Flaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Heekin Spice Company, of Sixth, New, and Culvert streets, Cincinnati, Ohio, the registration of the Standard Import Co., Ltd., of 216–224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,536, and the registration of The Flaccus & Elliott Co., of Wheeling, W. Va., dated August 3, 1897, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Flaccus Co.," of Wheeling, W. Va., and the said The E. C. Flaccus Co. has failed to file evidence of successorship, as required by the Office.

Notice is therefore hereby given to the said The Flaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Scollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seldovia Salmon Company, of Seattle, Wash., for a trade-mark and registration No. 10,890, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 18, 1893, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "E. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 17, 1912.

Shepherd Spencer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The C. L. Sheppard Sanitorium and Remedy Co., Main street, Findlay, Ohio, for a trade-mark and trade-mark registration No. 10,932, dated February 12, 1884, to Shepherd Spencer, of Knoxville, Tenn., and the notice of such declaration sent by registered mail to the said Shepherd Spencer at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Shepherd Spencer, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Hoopes & Townsend, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and trade-mark registration No. 8,435, dated July 5, 1881, to Hoopes & Townsend, of Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Hoopes & Townsend was returned signed "Hoopes & Townsend Co." No evidence of the right to intervene in this interference has been filed by Hoopes & Townsend Co. within the time allowed for that purpose.

Notice is therefore hereby given to the said Hoopes & Townsend, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 15, 1912.

Keystone Nail Co., Inc., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Hoopes & Townsend Co., 1330 Buttonwood street, Philadelphia, Pa., for a trade-mark, a trade-mark registered to Hoopes & Townsend, of Philadelphia, Pa., and trade-mark registration No. 49,864, dated February 20, 1906, to the Keystone Nail Co., Inc., 1619–1624 Washington avenue, Philadelphia, Pa., and the registry return receipt for the notice of such declaration sent to the said Keystone Nail Co., Inc., was returned signed "Keystone Nail Co., Com. Tr. Co." No evidence of the right to intervene in this interference has been filed by the Keystone Nail Co., Com. Tr. Co., within the time allowed for that purpose.

Notice is therefore hereby given to the said Keystone Nail Co., Inc., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

FEBRUARY, 1912.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

TABLE OF CASES.

	Page.
Bettendorf *v.* O'Connor	266
Hawkins *v.* Ward	845
*Johnson Educator Food Company *v.* Sylvanus Smith & Co., Inc.	268
*Madden. *In re*	1099
McBerty *v.* Shore and Shore	843
*Midgley *v.* Ward	269
*Nash *v.* Bettendorf	1100
Naylor. *Ex parte*	266
Numan *v.* Ashley	1098
*O'Connor *v.* Bettendorf	1099, 1100
Poulson. *Ex parte*	265
Smith. *Ex parte*	844
Thomas *v.* Weintraub	1097
Vi-Stix Products Company, The. *Ex parte*	846

SUBJECT-MATTER INDEX.

	Page.
Commissioner of Patents, supervisory authority of, *ex parte* Naylor	266
*Design, not patentable in view of prior art, *in re* Madden	1099
Interference, amendment of preliminary statement to allege earlier dates, Thomas *v.* Weintraub	1097
Appeal from Examiners-in-Chief, errors alleged but not urged, Thomas *v.* Weintraub	1097
Failure to introduce cumulative evidence, Bettendorf *v.* O'Connor	266
First to conceive invention lacking in diligence, priority properly awarded to later but more diligent inventor, Hawkins *v.* Ward	845
Invention by third party not in, Thomas *v.* Weintraub	1097
Prior applications relied on, invention not disclosed therein, Thomas *v.* Weintraub	1097
*Priority of invention, Nash *v.* Bettendorf	1100
*O'Connor *v.* Bettendorf	1099, 1100
Motion to dissolve interference, no appeal from favorable decision, Numan *v.* Ashley	1098
Petition to review favorable decision, supervisory authority of Commissioner exercised in clear case only, Numan *v.* Ashley	1098
Priority of invention, evidence of proper award, Bettendorf *v.* O'Connor	266
*Midgley *v.* Ward	269
One party not having right to make claims, properly awarded to opposing party, McBerty *v.* Shore and Shore	843
Prosecution of application, action by the applicant within statutory period not responsive, application becomes abandoned, *ex parte* Poulson	265
Claims finally rejected, *ex parte* Poulson	265
Examiner not having been requested to apply references petition that he be required to do so premature, *ex parte* Smith	844
Time within which action may be taken, *ex parte* Poulson	265
Rehearing, power inherent in judicial tribunal, *ex parte* Naylor	266
*Testimony, leading questions, Midgley *v.* Ward	269
*Trade-marks, goods of same descriptive properties, test to determine, Johnson Educator Food Company *v.* Sylvanus Smith & Co., Inc.	268
Opposition, modification of application after adverse decision, *ex parte* The Vi-Stix Products Company.	846

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

FEBRUARY, 1912.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

ABANDONMENT OF APPLICATIONS.
See Prosecution of Applications, 2, 3.

ACTION BY THE EXAMINER.
See Motion to Dissolve Interference, 1; Prosecution of Applications.

AFFIDAVITS.
See Trade-Marks, 3.

ALLEGATIONS.
See Interference, 1; Priority of Invention, 6.

AMENDMENT TO PRELIMINARY STATEMENT.
See Priority of Invention, 6.

AMENDMENTS.
See Trade-Marks, 3.

APPEAL.
See Interference, 1; Prosecution of Applications, 2; Rehearing.

APPEAL FROM FAVORABLE DECISION.
See Motion to Dissolve Interference.

BRIEF.
See Interference, 1.

CLAIMS.
See Construction of Claims; Prosecution of Applications.

COMMISSIONER OF PATENTS.
See Motion to Dissolve Interference, 2; Rehearing.

CONCEPTION OF INVENTION.
See Priority of Invention, 1, 3, 5.

CONSTRUCTION OF CLAIMS.

PATENTABILITY—DESIGN.
A design for a water-closet *Held* unpatentable in view of prior art. [*In re* Madden, 1099.

CONSTRUCTION OF TRADE-MARK STATUTES.
See Trade-Marks, 1.

DATE OF FILING APPLICATION.
See Priority of Invention, 6.

DELAY IN FILING APPLICATIONS.
See Priority of Invention, 5.

DESIGNS.
See Construction of Claims.

DILIGENCE.
See Priority of Invention, 1, 2, 5; Reduction to Practice.

DISCLOSURE OF INVENTION.
See Interference, 1; Priority of Invention, 6.

EVIDENCE.
See Priority of Invention, 1, 3.

EXAMINERS-IN-CHIEF.
See Interference, 1; Priority of Invention, 4.

FINAL REJECTION OF CLAIMS.
See Prosecution of Applications, 1, 2, 3.

GOODS OF SAME DESCRIPTIVE PROPERTIES.
See Trade-Marks, 1, 2.

INFRINGEMENT.
See Priority of Invention, 5.

INTERFERENCE.
See Motion to Dissolve Interference; Priority of Invention; Reduction to Practice; Rehearing.

1. PRIORITY—ERRORS ALLEGED BUT NOT URGED.
Where it was alleged in the reasons for appeal that the Examiners-in-Chief erred in not holding that the invention in issue was disclosed in certain prior applications of T. and also in failing to find that certain oral testimony offered on behalf of T. discloses "a means of excitation of the rectifier which is independent of the source of supply," but neither in the brief on the appeal nor in the brief before the Examiners-in-Chief was it pointed out wherein the testimony supported the allegations of T.'s preliminary statement, *Held* that only the first allegation of error would be considered. [Thomas *v.* Weintraub, 1097.

2. SAME—INVENTION BY THIRD PARTY.
In an interference between T. and W. the question whether the invention in issue was made by S., who is not a party to the interference, is immaterial. [Id.

INVENTION BY THIRD PARTY.
See Interference, 2.

LEADING QUESTIONS.
See Testimony.

LIMIT OF TIME.
See Prosecution of Applications, 3.

MOTION TO DISSOLVE INTERFERENCE.

1. APPEAL FROM FAVORABLE DECISION.
It is well settled that no appeal lies from the decision of the Primary Examiner denying a motion to dissolve an interference upon the ground that the claim is not patentable to one of the parties or that he has no right to make said claim.
[Numan *v.* Ashley, 1098.

2. SUPERVISORY AUTHORITY EXERCISED ONLY IN CLEAR CASE.
It is also well settled that the supervisory authority of the Commissioner will be exercised on petition to review a favorable decision on a motion to dissolve an interference only in case of manifest error. [Id.

OPPOSITION TO REGISTRATION.

See Trade-Marks, 3.

ORAL TESTIMONY.

See Interference, 1.

PATENTABILITY.

See Construction of Claims; Motion to Dissolve Interference, 1.

PRELIMINARY STATEMENTS.

See Interference, 1; Priority of Invention, 6.

PRESUMPTION.

See Priority of Invention, 2.

PRIOR APPLICATIONS.

See Interference, 1; Priority of Invention, 6.

PRIORITY OF INVENTION.

See Interference, 1; Reduction to Practice.

1. DILIGENCE.
Evidence considered and *Held* to establish that B. was the first to conceive the invention and was exercising due diligence in reducing the same to practice at the time that O'C. entered the field and subsequently thereto. [Bettendorf *v.* O'Connor, 266.

2. TESTIMONY—FAILURE TO INTRODUCE CUMULATIVE EVIDENCE.
Where B. had clearly established that he was the first to conceive the invention, *Held* that no unfavorable presumption could be drawn from the fact that he did not introduce the testimony of other witnesses to describe the invention in detail. [Id.

3. DILIGENCE.
Evidence reviewed and *Held* to establish that W. was the first to conceive the invention and was diligent at and after the time M. entered the field and that priority was properly awarded him. [*Midgley *v.* Ward, 269.

4. RIGHT TO MAKE CLAIMS.
Where it appeared that one of the parties to an interference had no right to make the claims in issue, *Held* that the Examiners-in-Chief properly awarded priority to the opposing party on that ground. [McBerty *v.* Shore and Shore, 843.

5. INTERFERENCE—DILIGENCE.
H. after his conception of the invention in issue entered into an investigation to determine whether it would infringe any previously-granted patent before filing his application. During this investigation W. conceived the invention and filed his application. *Held* that H. was lacking in diligence and that priority was properly awarded to W. [Hawkins *v.* Ward, 845.

6. SAME—DISCLOSURE OF INVENTION.
Priority *Held* properly awarded to W., since certain prior applications relied upon by T. do not disclose the invention, even if T. could be permitted to amend his preliminary statement so as to allege dates of invention as early as the filing dates of these applications. [Thomas *v.* Weintraub, 1097.

7. SAME.
Held that the record established that B. was the prior inventor. [*O'Connor *v.* Bettendorf, 1099.

8. SAME.
Priority *Held* properly awarded to B. [*O'Connor *v.* Bettendorf, 1100.

9. SAME.
Priority *Held* properly awarded to B. [*Nash *v.* Bettendorf, 1100.

PROSECUTION OF APPLICATIONS.

1. FINAL REJECTION.
Where ample opportunity had been afforded the applicant to present such claims as he desired to adhere to and an issue had been reached between himself and the Examiner, *Held* that a final rejection was properly entered. [*Ex parte* Poulson, 265.

2. ACTION NOT RESPONSIVE—ABANDONMENT.
Where within the year following a final rejection which had been properly entered an applicant neither cancels the rejected claims nor appeals, but merely seeks to have the final rejection set aside as premature, *Held* that the application is abandoned. [Id.

3. TIME WITHIN WHICH ACTION MAY BE TAKEN.
Where claims were rejected on June 1, 1909, the statutory year for action expired June 1, 1910. [Id.

4. APPLICATION—PETITION THAT EXAMINER EXPLAIN REASONS FOR REJECTION.
A petition that the Examiner be directed to apply the references to the claims dismissed as premature where it appears that the Examiner had not been requested to give a further explanation of the rejection. [*Ex parte* Smith, 844.

RECORD OF THE CASE.

See Priority of Invention, 7.

REDUCTION TO PRACTICE.

See Priority of Invention, 1.

INTERFERENCE—PRIORITY.
Where it appears that a "trolley-contact" was necessary for the operation of a signaling system, but that contacts which could be used in such a system were well known, *Held* that the development of a special contact did not constitute diligence in reducing the system to practice. [Hawkins *v.* Ward, 845.

REFERENCES.

See Prosecution of Applications, 4.

REHEARING.

See Motion to Dissolve Interference, 2.

APPEAL—RECONSIDERATION OF.
The power to rehear or reconsider its cases is inherent in any judicial tribunal and as applied to the Commissioner himself certainly has no relation to his supervisory authority over the Patent Office. [*Ex parte* Naylor, 266.

REJECTION OF CLAIMS.

See Prosecution of Applications, 3, 4.

RESPONSIVE ACTION BY THE APPLICANT.

See Prosecution of Applications, 2.

RIGHT TO MAKE CLAIMS.

See Motion to Dissolve Interference, 1; Priority of Invention, 4.

STATE OF THE ART.

See Construction of Claims.

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

See Motion to Dissolve Interference, 2; Rehearing.

TESTIMONY.

See Interference, 1; Priority of Invention, 2.

LEADING QUESTION.
Certain questions considered and *Held* not leading. [*Midgley *v.* Ward, 269.

TESTS.

See Trade-Marks, 1.

TRADE-MARKS.

1. GOODS OF THE SAME DESCRIPTIVE PROPERTIES.
"We think two trade-marks may be said to be appropriated to merchandise of the same descriptive properties in the sense meant by the statute when the general and essential characteristics of the goods are the same. * * * The test is whether there is such a sameness in the distinguishing characteristics of the goods as to be likely to mislead the general public."
[*Johnson Educator Food Company *v.* Sylvanus Smith & Co., Inc., 268.

2. SAME—SALTED, SMOKED, PACKED, AND CANNED FISH NOT OF SAME DESCRIPTIVE PROPERTIES AS CRACKERS, BISCUITS, AND BREAKFAST CEREALS.
An opposition by the owner of a mark applied to crackers, biscuits, bread, and breakfast cereals to the registration by another of the same mark as applied to salted, smoked, pickled, and canned fish *Held* properly dismissed, since "it requires altogether too great a stretch of the imagination to conclude that any one calling for breakfast food would accept salted codfish without knowing the difference." [*Id.

3. OPPOSITION—MODIFICATION OF APPLICATION AFTER ADVERSE DECISION.
Where an opposition was filed to the registration of a mark on the ground that one of its features constituted the mark of the opposer and such opposition was decided adversely to the applicant, *Held* that his application could thereafter be amended by omitting this feature only if the mark was not thereby mutilated and upon the filing of an affidavit that the mark without the representation of the mark of opposer was actually used by the applicant as a trade-mark. [*Ex parte* The Vi-Stix Products Company, 846.

WITNESSES.

See Priority of Invention, 2.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1912.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Gaz."=Official Gazette.]

A. Leschen & Sons Rope Company. (See Engle, David E., assignor.)
A. Perlman Iron Works. (See Perlman, Abraham, assignor.)
A. J. Phillips Company, The. (See McCollom, Burton R., assignor.)
Aachener Stahlwaarenfabrik Fafnir-Werke Aktiengesellschaft. (See Uren, Gustav H. W., assignor.)
Abbott, George E., Hartford, Conn. Ball-rolling machine. No. 1,017,125; Feb. 13; Sp. p. 1996; Gaz. vol. 175; p. 343.
Abell, Rollin, Boston, Mass. Supporting device for speedometer-driving mechanism. No. 1,018,542; Feb. 27; Sp. p. 5160; Gaz. vol. 175; p. 890.
Abercrombie, William R., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine cloth-presser. No. 1,016,597; Feb. 6; Sp. p. 840; Gaz. vol. 175; p. 126.
Abrams, John A., Wadsworth, Ohio. Gas-furnace. No. 1,017,480; Feb. 13; Sp. p. 2786; Gaz. vol. 175; p. 470.
Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-driven fan. No. 1,018,543; Feb. 27; Sp. p. 5170; Gaz. vol. 175; p. 899.
Acker, Charles E., Ossining, N. Y., assignor to The Nitrogen Company. Producing nitrogen compounds. No. 1,018,802; Feb. 27; Sp. p. 5717; Gaz. vol. 175; p. 987.
Acker, Charles E., Ossining, N. Y., assignor to The Nitrogen Company. Producing cyanogen compounds. No. 1,019,002; Feb. 27; Sp. p. 6145; Gaz. vol. 176; p. 1050.
Ackerman, Frederick W., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Filing-cabinet. No. 1,017,239; Feb. 13; Sp. p. 2251; Gaz. vol. 175; p. 383.
Ackermann, Heinrich, Berlin, Germany. Bedstead. No. 1,016,868; Feb. 6; Sp. p. 1404; Gaz. vol. 175; p. 217.
Actien Gesellschaft für Anilin Fabrikation. (See Schott, Heinrich, assignor.)
Adam, Matthew A., London, England. Aeration of dough. No. 1,017,361; Feb. 13; Sp. p. 2502; Gaz. vol. 175; p. 424.
Adams, Charles, New York, N. Y. Sanitary protector for telephone-transmitters. No. 1,017,362; Feb. 13; Sp. p. 2504; Gaz. vol. 175; p. 425.
Adams, Daniel W., Glendale Springs, N. C. Position-locating instrument. No. 1,018,150; Feb. 20; Sp. p. 4274; Gaz. vol. 175; p. 734.
Adams, Daniel W., Glendale Springs, N. C. Engineering instrument. No. 1,018,289; Feb. 20; Sp. p. 4549; Gaz. vol. 175; p. 780.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone repeating apparatus and circuits. No. 1,017,616; Feb. 13; Sp. p. 3015; Gaz. vol. 175; p. 510.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Apparatus for increasing the efficiency of telephone-lines. No. 1,017,617; Feb. 13; Sp. p. 3017; Gaz. vol. 175; p. 510.
Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone repeating system and apparatus. No. 1,018,226; Feb. 20; Sp. p. 4422; Gaz. vol. 175; p. 760.
Adams, Robert C., Wilton, Conn. Whistle-valve attachment for internal-combustion engines. No. 1,016,725; Feb. 6; Sp. p. 1113; Gaz. vol. 175; p. 171.
Adams & Westlake Company, The. (See Hamm, William S., assignor.)
Adamsen, James J., Brooklyn, N. Y. Wheel. No. 1,017,363; Feb. 13; Sp. p. 2505; Gaz. vol. 175; p. 425.
Adlof, Frederick W., New Kensington, Pa. Sand-drying furnace. No. 1,018,951; Feb. 27; Sp. p. 6017; Gaz. vol. 175; p. 1038.
Adt, Leo F., Albany, N. Y. Mounting for spectacles. No. 1,017,642; Feb. 20; Sp. p. 3081; Gaz. vol. 175; p. 557.
Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,018,600; Feb. 27; Sp. p. 5204; Gaz. vol. 175; p. 910.
Akin, John H., Sumner, Mo. Metallic railway-tie. No. 1,018,401; Feb. 27; Sp. p. 4799; Gaz. vol. 175; p. 851.
Akin, Robert M., Ossining, N. Y. Casting-machine. No. 1,017,943; Feb. 20; Sp. p. 3808; Gaz. vol. 175; p. 661.
Akrigg, James. (See Chainey, Emanuel, assignor.)
Aktieselskabet Bing & Gröndahls Porcellaensfabrik. (See Dahl-Jensen, Jens P., assignor.)
Aladdin Manufacturing Company, The. (See Kronenberger, Ferdinand, assignor.)
Alandar, Joseph H., and R. McGregor, Chicago, Ill. Safety signal apparatus. No. 1,018,026; Feb. 20; Sp. p. 3985; Gaz. vol. 175; p. 680.
Albert, Floyd W., assignor of one-fourth to J. F. Truman and one-fourth to B. Milner, Butler, Pa. Folding chair. No. 1,017,364; Feb. 13; Sp. p. 2507; Gaz. vol. 175; p. 425.
Albert, Kurt, Wiesbaden, Germany. Making sulfur trioxid. No. 1,018,402; Feb. 27; Sp. p. 4800; Gaz. vol. 175; p. 851.
Albert, Moses. (See Pascal, Israel, assignor.)
Albrecht, Christian A. (See Muehleisen and Albrecht.)
Alderfer, Harry M., Lower Providence, Pa. Knockdown box and crate. No. 1,017,194; Feb. 13; Sp. p. 2148; Gaz. vol. 175; p. 367.
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,017,195; Feb. 13; Sp. p. 2149; Gaz. vol. 175; p. 367.
Alexander, George, *et al.* (See O'Neill, Frank, Jr., assignor.)
Alexander, Lewis W., and J. W. Hall, Auckland, New Zealand. Non-refillable bottle. No. 1,017,490; Feb. 13; Sp. p. 2786; Gaz. vol. 175; p. 470.
Alexander, Morris, New York, N. Y. Barrel-head fastener. No. 1,017,365; Feb. 13; Sp. p. 2508; Gaz. vol. 175; p. 425.
Algard, James H., and A. Bramer, Watertown, S. D. Gang-plow-lifting device. No. 1,017,944; Feb. 20; Sp. p. 3810; Gaz. vol. 175; p. 661.
Allen, Harry, Bagdad, Ky. Gate. No. 1,016,598; Feb. 6; Sp. p. 842; Gaz. vol. 175; p. 126.
Allen, Thomas S., Milwaukee, Wis., assignor to Allis-Chalmers Company. Commutator construction for dynamo-electric machines. No. 1,017,945; Feb. 20; Sp. p. 3811; Gaz. vol. 175; p. 661.
Allen, Walter P., Ardmore, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,016,384; Feb. 6; Sp. p. 323; Gaz. vol. 175; p. 51.
Allen, Walter P., Ardmore, Pa., and J. P. Coleman, New York, N. Y., assignors to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,016,385; Feb. 6; Sp. p. 327; Gaz. vol. 175; p. 52.
Allerdice, Joseph. (See Trescott, Charles B., assignor.)
Alley, Frederick L. (See Winkley and Alley.)
Alley, Moses E., assignor of two-thirds to F. C. Mathews, Tacoma, Wash. Stove and furnace. No. 1,018,647; Feb. 27; Sp. p. 5396; Gaz. vol. 175; p. 934.
Allingham, James, Chicago, Ill. Adjustable support and seat-bracket. No. 1,017,724; Feb. 20; Sp. p. 3248; Gaz. vol. 175; p. 583.
Allis-Chalmers Company. (See Allen, Thomas S., assignor.)
Allis-Chalmers Company. (See Calderwood, John B., assignor.)
Allis-Chalmers Company *et al.* (See Frankenfield, Budd, assignor.)
Allis-Chalmers Company. (See Holthoff, Henry C., assignor.)
Allis-Chalmers Company *et al.* (See McHugh, Anthony L., assignor.)
Allis-Chalmers Company. (See Mortensen, Sören H., assignor.)
Allis-Chalmers Company. (See Patitz, Johann F. M., assignor.)
Allis-Chalmers Company *et al.* (See Ralston, Howard H., assignor.)
Allis-Chalmers Company. (See Steen, Halfdan A., assignor.)
Allis-Chalmers Company. (See Stull, Emmett W., assignor.)
Allis-Chalmers Company. (See Tappan, Charles O., assignor.)

Allis-Chalmers Company. (See Wilkinson, Nathan, assignor.)

Allis-Chalmers Company. (See Williamson, Robert B., assignor.)

Alloy Steel Forging Company. (See Potter, Winfield S., assignor.)

Alpp, Peter H., New York, N. Y. Razor-strop. No. 1,016,599; Feb. 6; Sp. p. 844; Gaz. vol. 175; p. 126.

Aisleben, Paul, assignor to J. A. von Wüfing, Berlin, Germany. Manufacture of formaldehyde compounds and products. No. 1,018,736; Feb. 27; Sp. p. 5572; Gaz. vol. 175; p. 964.

Althen, Frederick C., Anamosa, Iowa. Bias-band maker. No. 1,018,227; Feb. 20; Sp. p. 4427; Gaz. vol. 175; p. 760.

Alvey-Ferguson Company, The. (See Wright, Benjamin H., assignor.)

American Automatic Machinery Company. (See Heybach, Frederick J., assignor.)

American Bank Protection Company, The. (See Cook, Walter K., assignor.)

American Can Company. (See Sharp, Lee C., assignor.)

American Car & Foundry Company. (See Mulvihill, Daniel C., assignor.)

American Conduit Manufacturing Company, The. (See Rahm, Robert C., assignor.)

American Dehydrating Co. (See Hutchins, Edgar B., Jr., assignor.)

American Hardware Corporation, The. (See Arens and Teich, assignors.)

American Hardware Corporation, The. (See Voight, Henry G., assignor.)

American Lacing Hook Co. (See Havener, Arthur R., assignor.)

American Machine Works. (See Gardiner, Lou M., assignor.)

American Metal Screen and Weatherstrip Company. (See Swart, Robert B., assignor.)

American Paper Bottle Company, The. (See Heyl, Henry P., assignor.)

American Pin Company. (See Willetts, William R., assignor.)

American Pulley Company, The. (See Bowen and Walker, assignors.)

American Pulley Company, The. (See Brinley, Charles A., assignor.)

American Pulley Company, The. (See Johnson, Burdette H., assignor.)

American Seeding Machine Company, The. (See Packham, Frank R., assignor.)

American Steel & Wire Company of New Jersey, The. (See Broden and Mustin, assignors.)

American Warp Drawing Machine Company. (See Lea, Charles, assignor.)

American Window Glass Machine Company. (See Thornburg, Lincoln A., assignor.)

Ames, David J., Austin, Minn. Automatic stoker. No. 1,018,690; Feb. 27; Sp. p. 5471; Gaz. vol. 175; p. 940.

Amet, Edward H., Redondo Beach, Cal. Therapeutic vibrator. No. 1,017,840; Feb. 20; Sp. p. 3558; Gaz. vol. 175; p. 624.

Amigues, Henri. (See Lavedan and Amigues.)

Aminoff, Gustav, Baltimore, Md. Absorption apparatus. No. 1,019,003; Feb. 27; Sp. p. 6154; Gaz. vol. 175; p. 1057.

Ammon, Siegfried von, Bowdon, England, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Commutator for electrical machines. No. 1,018,544; Feb. 27; Sp. p. 5172; Gaz. vol. 175; p. 900.

Amphion Piano Player Company, The. (See Doman, Lewis B., assignor.)

Anakin, Arthur E., Salt Lake City, Utah. Auxiliary locking device for safe and vault doors. No. 1,018,952; Feb. 27; Sp. p. 6018; Gaz. vol. 175; p. 1038.

Anderberg, Axel F., Pawtucket, R. I. Anchoring device for teeth-fillings. No. 1,018,803; Feb. 27; Sp. p. 5723; Gaz. vol. 175; p. 987.

Anderson, Charles E. (See Predock and Anderson.)

Anderson, Cyrus N., trustee. (See Selah, Howard A., assignor.)

Anderson, Gustaf M., Waterloo, Iowa. Adjustable cream-exit for centrifugal cream-separators. No. 1,016,536; Feb. 6; Sp. p. 705; Gaz. vol. 175; p. 105.

Anderson Tool Company, The. (See Dunn, Frank P., assignor.)

Andrade, Cipriano, Jr., New York, N. Y. Pawl-and-ratchet mechanism. No. 1,016,537; Feb. 6; Sp. p. 707; Gaz. vol. 175; p. 106.

Andrade, Cipriano, Jr., New York, N. Y. Double-acting windlass. No. 1,018,545; Feb. 27; Sp. p. 5173; Gaz. vol. 175; p. 900.

Andrew, Clarence A. (See Wake, Charles E., assignor.)

Andrew, William, Cincinnati, Ohio. Heating apparatus. No. 1,018,472; Feb. 27; Sp. p. 4946; Gaz. vol. 175; p. 874.

Andrews, Daniel A., assignor to The Standard Manufacturing Company, Cedar Keys, Fla. Whisk-broom. No. 1,017,869; Feb. 13; Sp. p. 1866; Gaz. vol. 175; p. 323.

Andrews, Launcelot W., Davenport, Iowa. Producing oxnates. No. 1,018,092; Feb. 20; Sp. p. 4140; Gaz. vol. 175; p. 713.

Andri, Alfred, Liège, assignor to Fabrique Nationale D'Armes de Guerre Societe Anonyme, Herstal, Belgium. Bearing. No. 1,017,070; Feb. 13; Sp. p. 1967; Gaz. vol. 175; p. 324.

Andzik, Joseph, Dayton, Ohio. Lamp-adjusting mechanism. No. 1,016,726; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.

Annett, Charles R. (See Neumann and Annett.)

Ansley, George W., Spokane, Wash. Hammer attachment. No. 1,017,491; Feb. 13; Sp. p. 2789; Gaz. vol. 175; p. 470.

Anthony, David E., *et al.* (See Braddock, Isaac A., assignor.)

Appleby, Frank, and E. A. Hubbart, Watts Flats, N. Y. Bag-holder. No. 1,018,228; Feb. 20; Sp. p. 4428; Gaz. vol. 175; p. 760.

Applegate, Eugene W., Hoboken, N. J., assignor to Applegate Sanitary Vacuum Sweeper Co. Vacuum-cleaner. No. 1,016,600; Feb. 6; Sp. p. 846; Gaz. vol. 175; p. 127.

Applegate Sanitary Vacuum Sweeper Co. (See Applegate, Eugene W., assignor.)

Appleton, Albert I., assignor to Chicago Fuse Manufacturing Company, Chicago, Ill. Outlet-box. No. 1,016,925; Feb. 13; Sp. p. 1533; Gaz. vol. 175; p. 273.

Arend, Francis J., *et al.* (See Berrigan, John J., assignor.)

Arens, August, and E. L. Teich, assignors to The American Hardware Corporation, New Britain, Conn. Hotel-lock-cylinder control. No. 1,017,725; Feb. 20; Sp. p. 3252; Gaz. vol. 175; p. 583.

Armour, George M. (See Longhead, Joseph B., assignor.)

Armspear Manufacturing Company. (See Spear, Furman D., assignor.)

Armstrong, John, North Bay, Ontario, Canada. Automatic running-board for cars. No. 1,016,926; Feb. 13; Sp. p. 1534; Gaz. vol. 175; p. 273.

Arnold, George A., assignor to Telepost Company, New York, N. Y. Keyboard telegraphic-tape perforator. No. 1,016,313; Feb. 6; Sp. p. 172; Gaz. vol. 175; p. 26.

Arnold, Oliver H., Wilmington, N. C. Hair-fastener. No. 1,016,466; Feb. 6; Sp. p. 527; Gaz. vol. 175; p. 81.

Arthur, Winfield S., assignor of one-half to S. C. Keith, Woodstown, N. J. Compression-bib. No. 1,017,492; Feb. 13; Sp. p. 2790; Gaz. vol. 175; p. 471.

Artista Piano Player Company. (See Turney, Eugene T., assignor.)

Asch, George. (See Rogers, Marshall C., assignor.)

Ash, Marsellus T., Chicago, Ill. Display apparatus. No. 1,018,403; Feb. 27; Sp. p. 4801; Gaz. vol. 175; p. 851.

Ashcraft, William, Grandin, Mo. Trolley-retriever. No. 1,016,467; Feb. 6; Sp. p. 528; Gaz. vol. 175; p. 81.

Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping machine. No. 1,017,726; Feb. 20; Sp. p. 3255; Gaz. vol. 175; p. 583.

Ashworth, Fred N., Somerville, Mass. Garment. No. 1,016,538; Feb. 6; Sp. p. 715; Gaz. vol. 175; p. 106.

Askew Saddlery Company. (See Smith, Dearcy A., assignor.)

Asmussen, Samuel J. O., Ilford, England. Rotary printing-machine. No. 1,018,151; Feb. 20; Sp. p. 4276; Gaz. vol. 175; p. 734.

Aspinwall, Lewis A., assignor to Aspinwall Manufacturing Co., Jackson, Mich. Liquid-sprayer. No. 1,018,804; Feb. 27; Sp. p. 5724; Gaz. vol. 175; p. 988.

Aspinwall Manufacturing Co. (See Aspinwall, Lewis A., assignor.)

Athay, David, *et al.* (See Farnes, John L., assignor.)

Atkinson, Cyril J., Watertown, Wis. Vaporizer for gas-producers. No. 1,018,152; Feb. 20; Sp. p. 4277; Gaz. vol. 175; p. 734.

Atkinson, Robert E. (See Taylor, Atkinson, and Nesbit.)

Atlanta Metal Bed Company. (See Plante, Alfred H., assignor.)

Attaway, Elisha, Morrow, La. Mathematical computer and register. No. 1,016,245; Feb. 6; Sp. p. 1; Gaz. vol. 175; p. 3.

Atwood, Charles H., *et al.* (See Beebe, Frank, assignor.)

Auburn Wagon Company, The. (See Phelps, Homer L., assignor.)

Auchu, Henry, Emporium, Pa. Machine for making paper cartridges or shells. No. 1,018,473; Feb. 27; Sp. p. 4948; Gaz. vol. 175; p. 875.

Ault, Harry, and C. Switalski, Portsmouth, Ohio. Automatic weighing-scoop. No. 1,016,246; Feb. 6; Sp. p. 3; Gaz. vol. 175; p. 3.

Aurora Automatic Machinery Company, The. (See Ottaway, William, assignor.)

Austin, Frederick C. (See Bathrick, Charles E., assignor.)

Austin, Septimeous L., and H. Coles, Blissville, Ark. Bale-tie buckle. No. 1,017,366; Feb. 13; Sp. p. 2509; Gaz. vol. 175; p. 425.

Auto Air Cushion Wheel Company. (See Langton and Kellerman, assignors.)

Auto Life Saving Fender Co. (See Hutchings, Frederick E., assignor.)

Auto Parts Manufacturing Company. (See Sönnichsen, Andreas M., assignor.)

Auto Pneumatic Action Co. (See Danquard, Thomas, assignor.)

Auto Sectional Leather Tire Company. (See Biener, Herman L., assignor.)

Auto-Spring Wheel Company, The. (See Swing, Alfred J., assignor.)

Automatic Brush Machinery Company. (See Mumford, Joseph F., assignor.)

Automatic Fire Protection Company. (See Shepherd, John E., assignor.)

Axford, Harry W., and J. E. Clearwater, San Francisco, Cal. Oil-burner. No. 1,017,493; Feb. 13; Sp. p. 2792; Gaz. vol. 175; p. 471.

Ayes, Matt M., Chicago, Ill. Hat-frame machine. No. 1,017,841; Feb. 20; Sp. p. 3560; Gaz. vol. 175; p. 624.

Aylsworth, Jonas W., East Orange, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Composition for duplicate sound-records. No. 1,017,032; Feb. 13; Sp. p. 1779; Gaz. vol. 175; p. 310.

Ayres, Elwood B., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Truck-unloading device. No. 1,018,862; Feb. 27; Sp. p. 5841; Gaz. vol. 175; p. 1008.

B. F. Sturtevant Company. (See Beyer, Otto S., assignor.)

Baader, Hermann, Gelterkinden, Switzerland. Loom shuttle-motion. No. 1,018,601; Feb. 27; Sp. p. 5296; Gaz. vol. 175; p. 919.

Bache-Wiig, Jens, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Armature for dynamo-electric machines. No. 1,017,071; Feb. 13; Sp. p. 1869; Gaz. vol. 175; p. 324.

Backus, Carl, *et al.* (See Woodman, John J., assignor.)

Badische Anilin & Soda Fabrik. (See Bally, Oscar, assignor.)

Badische Anilin & Soda Fabrik. (See Lüttringhaus and Diesbach, assignors.)

Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Varnish. No. 1,018,385; Feb. 20; Sp. p. 4753; Gaz. vol. 175; p. 813.

Bagdigian, Henry M., Worcester, Mass. Resilient tire for wheels of motor-vehicles, &c. No. 1,018,027; Feb. 20; Sp. p. 3988; Gaz. vol. 175; p. 690.

Bailey, Betton L., Portland, Oreg. Chain saw. No. 1,016,604; Feb. 6; Sp. p. 990; Gaz. vol. 175; p. 150.

Bailey, Edward L., assignor to Brown & Bailey Company, Philadelphia, Pa. Pail-tray. No. 1,016,468; Feb. 6; Sp. p. 531; Gaz. vol. 175; p. 82.

Bailey, George T., Colorado Springs, Colo. Attachment for cooling and vending machines. No. 1,016,601; Feb. 6; Sp. p. 849; Gaz. vol. 175; p. 127.

Baillio, Gervais, Niagara Falls, N. Y., assignor to Castner Electrolytic Alkali Company. Making anhydrous tin chlorid. No. 1,018,805; Feb. 27; Sp. p. 5727; Gaz. vol. 175; p. 988.

Baird, George A., *et al.* (See Makarhof, John A., assignor.)

Baker, Charles A., Salem, Ill. Ironing-board. No. 1,017,842; Feb. 20; Sp. p. 3562; Gaz. vol. 175; p. 625.

Baker, Charles W., Montclair, N. J. Locomotive or self-propelled vehicle for use upon railways. No. 1,016,602; Feb. 6; Sp. p. 852; Gaz. vol. 175; p. 128.

Baker, Charles W., Montclair, N. J. Combined internal-combustion engine and compressed-air engine. No. 1,016,603; Feb. 6; Sp. p. 857; Gaz. vol. 175; p. 128.

Baker, David, Philadelphia, Pa. Apparatus for charging furnaces. No. 1,016,539; Feb. 6; Sp. p. 716; Gaz. vol. 175; p. 106.

Baker, Erle K., Chicago, Ill. Starting device for internal-combustion engines. No. 1,016,314; Feb. 6; Sp. p. 177; Gaz. vol. 175; p. 27.

Baker, Joseph, Selly Oak, England. Holder for billiard-chalk and such like. No. 1,018,229; Feb. 20; Sp. p. 4429; Gaz. vol. 175; p. 761.

Baker, Lewis T., Pensacola, Fla. Turpentine-cup. No. 1,016,811; Feb. 6; Sp. p. 1290; Gaz. vol. 175; p. 198.

Balazs, John, assignor of one-fourth to U. Mihalj, one-fourth to G. Hekkel, and one-fourth to M. Balint, Michel, British Columbia, Canada. Folding box. No. 1,017,367; Feb. 13; Sp. p. 2510; Gaz. vol. 175; p. 426.

Baldwin, Emerson F., Philadelphia, Pa. Sole-protector for boots and shoes. No. 1,017,727; Feb. 20; Sp. p. 3258; Gaz. vol. 175; p. 584.

Baldwin Locomotive Works, The. (See Ehle, Archibald H., assignor.)

Balezos, Nick. (See Psareas and Balezos.)

Balint, Mandl, *et al.* (See Balazs, John, assignor.)

Ball, William, Wilkes-Barre, Pa. Cable-releasing device. No. 1,016,386; Feb. 6; Sp. p. 331; Gaz. vol. 175; p. 53.

Ballou, Eugene, Toledo, Ohio. Rotary valve. No. 1,018,386; Feb. 20; Sp. p. 4755; Gaz. vol. 175; p. 814.

Bally, Oscar, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Anthracene dye and making same. No. 1,016,604; Feb. 6; Sp. p. 862; Gaz. vol. 175; p. 129.

Baloian, Nazareth, New York, N. Y. Pane-fastener. No. 1,017,196; Feb. 13; Sp. p. 2150; Gaz. vol. 175; p. 368.

Bammer, Pius, Ashland, Oreg. Lid-lifter. No. 1,018,546; Feb. 27; Sp. p. 5182; Gaz. vol. 175; p. 901.

Bank, Adolf, Essen-Ruhr-West, Germany. Boring and drilling machine. No. 1,018,153; Feb. 20; Sp. p. 4279; Gaz. vol. 175; p. 735.

Banner, John E., Mount Airy, N. C. Stage-dagger. No. 1,016,727; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.

Barbaliez, Laurancz, Cleveland, Ohio. Hat-pin-point protector. No. 1,018,200; Feb. 20; Sp. p. 4552; Gaz. vol. 175; p. 781.

Barber, Harry C., assignor to The New Haven Electrical Mfg. Co., North Haven, Conn. Electrical fitting. No. 1,016,728; Feb. 6; Sp. p. 1115; Gaz. vol. 175; p. 171.

Barber, John C., assignor to Standard Car Truck Company, Chicago, Ill. Roller-bearing. No. 1,016,469; Feb. 6; Sp. p. 532; Gaz. vol. 175; p. 82.

Bard, Mervin C. (See Headley and Bard.)

Barenz, Henry O., Jackson, Wis. Speed-governor. No. 1,017,126; Feb. 13; Sp. p. 1999; Gaz. vol. 175; p. 344.

Barker, Donald, executor. (See Mytton, Richard G. V.)

Barmore, E. H. (See Dale, Albert C., assignor.)

Barna, Joseph W., Chicago, Ill., assignor of one-half to Boston Machine Works Company, Lynn, Mass. Cementing and snipping machine. No. 1,016,387; Feb. 6; Sp. p. 355; Gaz. vol. 175; p. 53.

Barnes, John R., Oskaloosa, Iowa. Holder for lighted cigars. No. 1,017,197; Feb. 13; Sp. p. 2153; Gaz. vol. 175; p. 368.

Barnes, Joseph L., Des Moines, Iowa. Tire-protector. No. 1,016,812; Feb. 6; Sp. p. 1291; Gaz. vol. 175; p. 198.

Barnes, William, San Francisco, Cal. Internal-combustion rotary engine. No. 1,018,953; Feb. 27; Sp. p. 6020; Gaz. vol. 175; p. 1038.

Barnes, Willis A., and R. W. Jamieson, New York, N. Y. Ball-caster. No. 1,016,813; Feb. 6; Sp. p. 1293; Gaz. vol. 175; p. 198.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,016,470; Feb. 6; Sp. p. 534; Gaz. vol. 175; p. 82.

Barnum, Thomas E., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Circuit-breaker. No. 1,018,547; Feb. 27; Sp. p. 5184; Gaz. vol. 175; p. 902.

Baron, John, El Centro, Cal. Wheeled scraper. No. 1,018,954; Feb. 27; Sp. p. 6023; Gaz. vol. 175; p. 1039.

Barr, Archibald, and W. Stroud, Glasgow, Scotland. Range-finder. No. 1,018,548; Feb. 27; Sp. p. 5187; Gaz. vol. 175; p. 902.

Barr, John H., Syracuse, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,540; Feb. 6; Sp. p. 723; Gaz. vol. 175; p. 106.

Barr, John H., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,927; Feb. 13; Sp. p. 1536; Gaz. vol. 175; p. 273.

Barrett Adding Machine Company. (See Barrett, Glenn J., assignor.)

Barrett, Glenn J., assignor to Barrett Adding Machine Company, Grand Rapids, Mich. Transfer mechanism for calculating-machines. No. 1,017,843; Feb. 20; Sp. p. 3564; Gaz. vol. 175; p. 625.

Barrett, Timothy R., Bordentown, N. J. Apparatus for athletic and theatrical purposes. No. 1,016,729; Feb. 6; Sp. p. 1116; Gaz. vol. 175; p. 171.

Barrickman, Sylvester A., and J. C. Holt; said Barrickman assignor of one-third to A. L. Craig and V. H. Odell, Richwood, W. Va. Shaft-level. No. 1,018,863; Feb. 27; Sp. p. 5842; Gaz. vol. 175; p. 1008.

Barron, Walter J., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,017,844; Feb. 20; Sp. p. 3567; Gaz. vol. 175; p. 626.

Bartlett, Kent W., Chicago, Ill. Liquid-treating apparatus. No. 1,017,729; Feb. 20; Sp. p. 3263; Gaz. vol. 175; p. 584.

Bartlett, Kent W., Chicago, Ill., assignor to Northern Water Softener Company. Apparatus for treating liquids. No. 1,017,728; Feb. 20; Sp. p. 3259; Gaz. vol. 175; p. 584.

Bartley, Charles B., Pittsburgh, assignor of one-half to G. F. Eylands, Charlerol, Pa. Lamp-bracket. No. 1,016,730; Feb. 6; Sp. p. 1119; Gaz. vol. 175; p. 172.

Bartley, John T., Jersey City, N. J. Coupling for electric fixtures. No. 1,017,368; Feb. 13; Sp. p. 2512; Gaz. vol. 175; p. 426.

Bartmann, Samuel. St. Louis, Mo. Barrel-head fastener. No. 1,017,127; Feb. 13; Sp. p. 2,000; Gaz. vol. 175; p. 344.

Barton, John H., London, England. Prismatic telescope, theater and field glass. No. 1,016,315; Feb. 6; Sp. p. 179; Gaz. vol. 175; p. 27.

Barton, Merle B., Peoria, Ill. Automobile curtain-support. No. 1,017,643; Feb. 20; Sp. p. 3082; Gaz. vol. 175; p. 557.

Bartosiewicz, Bronislaw, Glen Cove, N. Y. Cuspidor. No. 1,018,806; Feb. 27; Sp. p. 5729; Gaz. vol. 175; p. 989.

Bashaw, Jule S., Gainesville, Fla. Placket-fastener. No. 1,016,909; Feb. 6; Sp. p. 1496; Gaz. vol. 175; p. 231.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Cleveland, Ohio. Bagging-machine. No. 1,017,369; Feb. 13; Sp. p. 2513; Gaz. vol. 175; p. 426.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-beating machine. No. 1,016,316; Feb. 6; Sp. p. 182; Gaz. vol. 175; p. 27.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-beating machine. No. 1,016,388; Feb. 6; Sp. p. 339; Gaz. vol. 175; p. 54.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,017,370; Feb. 13; Sp. p. 2516; Gaz. vol. 175; p. 427.

Bates, Henry T. P. (See Ford, Arthur W., assignor.)

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Bathrick, Charles E., assignor to F. C. Austin, Chicago, Ill. Excavator. No. 1,018,002; Feb. 27; Sp. p. 5298; Gaz. vol. 175; p. 920.

Battan, Percy H., Chicago, Ill., assignor to E. H. Fallows, New York, N. Y. Expanded-metal chaplet. No. 1,016,380; Feb. 6; Sp. p. 341; Gaz. vol. 175; p. 54.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1912.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Gaz."=Official Gazette.]

A. Leschen & Sons Rope Company. (See Engle, David F., assignor.)

A. Perlman Iron Works. (See Perlman, Abraham, assignor.)

A. J. Phillips Company, The. (See McCollom, Burton R., assignor.)

Aachener Stahlwaarenfabrik Friede-Werke Aktiengesellschaft. (See Dyes, [illegible] W., assignor.)

Abbott, George R., [illegible]. Rail-rolling machine. No. 1,017,126; Feb. 13; Sp. p. 1996; Gaz. vol. 175; p. 343.

Abell, Rollin, Boston, Mass. Supporting device for speed-meter-driving mechanism. No. 1,018,542; Feb. 27; Sp. p. 5160; Gaz. vol. 175; p. [illegible].

Abercrombie, William R., [illegible]port, Conn., assignor to The Singer Manufacturing [illegible]pany. Sewing-machine cloth-presser. No. 1,016,[illegible]; Feb. [illegible]; Sp. p. 540; Gaz. vol. 175; p. 298.

Abrams, John A., [illegible]. Gas-furnace. No. 1,017,469; Feb. [illegible]; Gaz. vol. 175; p. 470.

Abtmeyer, Theodore, [illegible], Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-driven fan. No. 1,[illegible]; [illegible] 27; Sp. p. 5170; Gaz. vol. 175; p. 390.

Acker, Charles H., Ossining, N. Y., assignor to The Nitrogen Company. Producing [illegible] compounds. No. 1,018,803; Feb. 27; Sp. p. [illegible]17; Gaz. vol. 175; p. 637.

Acker, Charles H., Ossining, N. Y., assignor to The Nitrogen Company. Producing cyanogen compounds. No. 1,019,002; Feb. 27; Sp. p. 6145; Gaz. vol. 175; p. 1056.

Ackerman, Frederick W., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Filing-cabinet. No. 1,017,[illegible]; Feb. 13; Sp. p. 2251; Gaz. vol. 175; p. 268.

Ackermann, Heinrich, Berlin, Germany. Refitted. No. 1,016,866; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 217.

Actien Gesellschaft für Anilin Fabrikation. (See Schott, Heinrich, assignor.)

Adam, Matthew A., Lowther, England. Aeration of dough. No. 1,017,961; Feb. 13; Sp. p. 2602; Gaz. vol. 175; p. 424.

Adams, Charles, New York, N. Y. Sanitary protector for telephone-transmitters. No. 1,017,262; Feb. 13; Sp. p. 2304; Gaz. vol. 175; p. 425.

Adams, Daniel W., Glendale Springs, N. C. Position-locating instrument. No. 1,018,[illegible]; Feb. 20; Sp. p. 4274; Gaz. vol. 175; p. 784.

Adams, Daniel W., Glendale Springs, N. C. Engineering instrument. No. 1,018,389; Feb. 20; Sp. p. 4549; Gaz. vol. 175; p. 786.

Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone repeating apparatus and circuits. No. 1,017,616; Feb. 13; Sp. p. 2515; Gaz. vol. 175; p. 519.

Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Apparatus for increasing the efficiency of telephone-lines. No. 1,017,617; Feb. 13; Sp. p. 3017; Gaz. vol. 175; p. 519.

Adams-Randall, Charles, New York, N. Y., assignor to Randall Telephone Manufacturing Company, Augusta, Me. Telephone repeating system and apparatus. No. 1,018,226; Feb. 20; Sp. p. 4422; Gaz. vol. 175; p. 760.

Adams, Robert C., Wilton, Conn. Whistle-valve attachment for internal-construction engines. No. 1,016,725; Feb. 6; Sp. p. 1113; Gaz. vol. 175; p. 171.

Adams & Westlake Company, The. (See Hamm, William R., assignor.)

Adamson, James J., Brooklyn, N. Y. Wheel. No. 1,017,363; Feb. 13; Sp. p. 2505; Gaz. vol. 175; p. 425.

Adsit, Frederick W., New Kensington, Pa. Sand-drying furnace. No. 1,018,961; Feb. 27; Sp. p. 6017; Gaz. vol. 175; p. 1026.

Adt, Leo F., Albany, N. Y. Mounting for spectacles. No. 1,017,842; Feb. 20; Sp. p. 3661; Gaz. vol. 175; p. 557.

Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,018,600; Feb. 27; Sp. p. [illegible]; Gaz. vol. 175; p. 910.

Ahm, John H., Seymour, Mo. Metallic railway-tie. No. 1,018,401; Feb. 27; Sp. p. [illegible]; Gaz. vol. 175; p. 851.

Akin, Robert M., Ossining, N. Y. Casting-machine. No. 1,017,943; Feb. 20; Sp. p. 3808; Gaz. vol. 175; p. 661.

Akrigg, James. (See Chainey, Emanuel, assignor.)

Aktiesselskabet Bing & Grøndahls Porcellainsfabrik. (See Dahl-Jensen, Jens P., assignor.)

Aladdin Manufacturing Company, The. (See Kronenberger, Ferdinand, assignor.)

Alandar, Joseph H., and R. McGregor, Chicago, Ill. Safety signal apparatus. No. 1,018,026; Feb. 20; Sp. p. 3985; Gaz. vol. 175; p. 689.

Albert, Floyd W., assignor of one-fourth to J. F. Truman and one-fourth to B. Milner, Butler, Pa. Folding chair. No. 1,017,944; Feb. 13; Sp. p. 2607; Gaz. vol. 175; p. 425.

Albert, Kurt, Wiesbaden, Germany. Making sulfur trioxid. No. 1,018,402; Feb. 27; Sp. p. 4900; Gaz. vol. 175; p. 851.

Albert, Moses. (See Pascal, Israel, assignor.)

Albrecht, Christian A. (See Mashlaison and Albrecht.)

Alderfer, Harry M., Lower Providence, Pa. Knockdown box and crate. No. 1,017,194; Feb. 13; Sp. p. 2148; Gaz. vol. 175; p. 367.

Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sliding-machine. No. 1,017,166; Feb. 13; Sp. p. 2149; Gaz. vol. 175; p. 367.

Alexander, George, et al. (See O'Neill, Frank, Jr., assignor.)

Alexander, Lewis W., and J. W. Hall, Auckland, New Zealand. Non-refillable bottle. No. 1,017,490; Feb. 13; Sp. p. 2788; Gaz. vol. 175; p. 470.

Alexander, Morris, New York, N. Y. Barrel-head fastener. No. 1,017,965; Feb. 13; Sp. p. 2508; Gaz. vol. 175; p. 425.

Algard, James H., and A. Bramer, Watertown, S. D. Camp-plow-lifting device. No. 1,017,944; Feb. 20; Sp. p. 3810; Gaz. vol. 175; p. 661.

Allen, Harry, Bagdad, Ky. Gate. No. 1,016,598; Feb. 6; Sp. p. 342; Gaz. vol. 175; p. 126.

Allen, Thomas S., Milwaukee, Wis., assignor to Allis-Chalmers Company. Commutator construction for dynamo-electric machines. No. 1,017,945; Feb. 20; Sp. p. 3811; Gaz. vol. 175; p. 661.

Allen, Walter P., Ardmore, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,016,384; Feb. 6; Sp. p. 325; Gaz. vol. 175; p. 51.

Allen, Walter P., Ardmore, Pa., and J. P. Coleman, New York, N. Y., assignors to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,016,385; Feb. 6; Sp. p. 327; Gaz. vol. 175; p. 52.

Allerdice, Joseph. (See Truscott, Charles B., assignor.)

Alley, Frederick L. (See Winkley and Alley.)

Alley, Moses E., assignor of two-thirds to F. C. Mathews, Tacoma, Wash. Stove and furnace. No. 1,018,047; Feb. 27; Sp. p. 5396; Gaz. vol. 175; p. 984.

Allingham, James, Chicago, Ill. Adjustable support and seat-bracket. No. 1,017,724; Feb. 20; Sp. p. 3248; Gaz. vol. 175; p. 558.

Allis-Chalmers Company. (See Allen, Thomas S., assignor.)

Allis-Chalmers Company. (See Calderwood, John B., assignor.)

Allis-Chalmers Company et al. (See Frankenfeld, Budd, assignor.)

Allis-Chalmers Company. (See Holthoff, Henry C., assignor.)

Allis-Chalmers Company et al. (See McHugh, Anthony L., assignor.)

Allis-Chalmers Company. (See Mortensen, Sören H., assignor.)

Allis-Chalmers Company. (See Patitz, Johann F. M., assignor.)

Allis-Chalmers Company et al. (See Ralston, Howard H., assignor.)

Allis-Chalmers Company. (See Stoen, Halfdan A., assignor.)

Allis-Chalmers Company. (See Stull, Emmett W., assignor.)

Allis-Chalmers Company. (See Tuppen, Charles O., assignor.)

Allis-Chalmers Company. (See Wilkinson, Nathan, assignor.)

Allis-Chalmers Company. (See Williamson, Robert B., assignor.)

Alloy Steel Forging Company. (See Potter, Winfield S., assignor.)

Alpp, Peter H., New York, N. Y. Razor-strop. No. 1,016,599; Feb. 6; Sp. p. 844; Gaz. vol. 175; p. 126.

Alsleben, Paul, assignor to J. A. von Welling, Berlin, Germany. Manufacture of formaldehyde compounds and products. No. 1,018,736; Feb. 27; Sp. p. 5872; Gaz. vol. 175; p. 964.

Althen, Frederick C., Anamosa, Iowa. Bias-band maker. No. 1,018,227; Feb. 20; Sp. p. 4427; Gaz. vol. 175; p. 760.

Alvey-Ferguson Company, The. (See Wright, Benjamin H., assignor.)

American Automatic Machinery Company. (See Heybach, Frederick J., assignor.)

American Bank Protection Company, The. (See Cook, Walter K., assignor.)

American Can Company. (See Sharp, Lee C., assignor.)

American Car & Foundry Company. (See Mulvihill, Daniel C., assignor.)

American Conduit Manufacturing Company, The. (See Rahm, Robert C., assignor.)

American Dehydrating Co. (See Hutchins, Edgar B., Jr., assignor.)

American Hardware Corporation, The. (See Arens and Teich, assignors.)

American Hardware Corporation, The. (See Voight, Henry G., assignor.)

American Lacing Hook Co. (See Havener, Arthur R., assignor.)

American Machine Works. (See Gardiner, Lou M., assignor.)

American Metal Screen and Weatherstrip Company. (See Swart, Robert B., assignor.)

American Paper Bottle Company, The. (See Heyl, Henry P., assignor.)

American Pin Company. (See Willetts, William E., assignor.)

American Pulley Company, The. (See Bowen and Walker, assignors.)

American Pulley Company, The. (See Brinley, Charles A., assignor.)

American Pulley Company, The. (See Johnson, Burdette H., assignor.)

American Seeding Machine Company, The. (See Peckham, Frank E., assignor.)

American Steel & Wire Company of New Jersey, The. (See Bredon and Martin, assignors.)

American Ward Drawing Machine Company. (See Lea, Charles, assignor.)

American Window Glass Machine Company. (See Thornburg, Lincoln A., assignor.)

Ames, David J., Austin, Minn. Automatic stoker. No. 1,018,660; Feb. 27; Sp. p. 5471; Gaz. vol. 175; p. 949.

Amet, Edward H., Redondo Beach, Cal. Therapeutic vibrator. No. 1,017,840; Feb. 20; Sp. p. 3858; Gaz. vol. 175; p. 624.

Amigues, Henri. (See Lavedan and Amigues.)

Aminoff, Gustav, Baltimore, Md. Absorption apparatus. No. 1,018,006; Feb. 27; Sp. p. 6154; Gaz. vol. 175; p. 1067.

Ammon, Siegfried von, Bowdon, England, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Commutator for electrical machines. No. 1,018,544; Feb. 27; Sp. p. 5172; Gaz. vol. 175; p. 900.

Amphion Piano Player Company, The. (See Doman, Lewis B., assignor.)

Anakin, Arthur E., Salt Lake City, Utah. Auxiliary locking device for safe and vault doors. No. 1,018,952; Feb. 27; Sp. p. 6026; Gaz. vol. 175; p. 1092.

Anderberg, Axel F., Pawtucket, R. I. Anchoring device for teeth-fillings. No. 1,018,803; Feb. 27; Sp. p. 5723; Gaz. vol. 175; p. 987.

Anderson, Charles E. (See Predock and Anderson.)

Anderson, Cyrus N., trustee. (See Selah, Howard A., assignor.)

Anderson, Gustaf M., Waterloo, Iowa. Adjustable cream-exit for centrifugal cream-separators. No. 1,016,536; Feb. 6; Sp. p. 705; Gaz. vol. 175; p. 105.

Anderson Tool Company, The. (See Dunn, Frank P., assignor.)

Andrade, Cipriano, Jr., New York, N. Y. Pawl-and-ratchet mechanism. No. 1,016,587; Feb. 6; Sp. p. 707; Gaz. vol. 175; p. 106.

Andrade, Cipriano, Jr., New York, N. Y. Double-acting windlass. No. 1,018,545; Feb. 27; Sp. p. 5173; Gaz. vol. 175; p. 900.

Andrew, Clarence A. (See Wake, Charles H., assignor.)

Andrew, William, Cincinnati, Ohio. Heating apparatus. No. 1,018,472; Feb. 27; Sp. p. 4946; Gaz. vol. 175; p. 974.

Andrews, Daniel A., assignor to The Standard Manufacturing Company, Cedar Keys, Fla. Whisk-broom. No. 1,017,060; Feb. 18; Sp. p. 1966; Gaz. vol. 175; p. 332.

Andrews, Launcelot W., Davenport, Iowa. Producing emulsion. No. 1,018,002; Feb. 20; Sp. p. 4149; Gaz. vol. 175; p. 713.

Andri, Alfred, Liège, assignor to Fabrique Nationale D'Armes de Guerre Société Anonyme, Herstal, Belgium. Gearing. No. 1,017,070; Feb. 18; Sp. p. 1967; Gaz. vol. 175; p. 334.

Andrik, Joseph, Dayton, Ohio. Lamp-adjusting mechanism. No. 1,016,726; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.

Annett, Charles E. (See Neumann and Annett.)

Ansley, George W., Spokane, Wash. Hammer attachment. No. 1,017,491; Feb. 18; Sp. p. 2789; Gaz. vol. 175; p. 470.

Anthony, David H., et al. (See Braddock, Isaac A., assignor.)

Appleby, Frank, and H. A. Hubbart, Watts Flats, N. Y. Bag-holder. No. 1,018,228; Feb. 20; Sp. p. 4428; Gaz. vol. 175; p. 760.

Applegate, Eugene W., Hoboken, N. J., assignor to Applegate Sanitary Vacuum Sweeper Co. Vacuum-cleaner. No. 1,016,660; Feb. 6; Sp. p. 846; Gaz. vol. 175; p. 127.

Applegate Sanitary Vacuum Sweeper Co. (See Applegate, Eugene W., assignor.)

Appleton, Albert J., assignor to Chicago Fuse Manufacturing Company, Chicago, Ill. Outlet-box. No. 1,016,925; Feb. 13; Sp. p. 1535; Gaz. vol. 175; p. 272.

Arend, Francis J., et al. (See Berrigan, John J., assignor.)

Arens, August, and H. L. Teich, assignors to The American Hardware Corporation, New Britain, Conn. Hotel-lock-cylinder control. No. 1,017,725; Feb. 20; Sp. p. 3252; Gaz. vol. 175; p. 582.

Armour, George M. (See Lougheed, Joseph B., assignor.)

Armspear Manufacturing Company. (See Spear, Furman D., assignor.)

Armstrong, John, North Bay, Ontario, Canada. Automatic running-board for cars. No. 1,016,929; Feb. 13; Sp. p. 1534; Gaz. vol. 175; p. 272.

Arnold, George A., assignor to Teleposet Company, New York, N. Y. Keyboard telegraphic-tape perforator. No. 1,016,513; Feb. 6; Sp. p. 172; Gaz. vol. 175; p. 26.

Arnold, Oliver H., Wilmington, N. C. Hair-fastener. No. 1,016,466; Feb. 6; Sp. p. 537; Gaz. vol. 175; p. 81.

Arthur, Winfield S., assignor of one-half to S. C. Keith, Woodstown, N. J. Compression-bib. No. 1,017,492; Feb. 18; Sp. p. 2790; Gaz. vol. 175; p. 471.

Artists Piano Player Company. (See Turney, Eugene T., assignor.)

Ash, George. (See Rogers, Marshall C., assignor.)

Ash, Marcellus T., Chicago, Ill. Display apparatus. No. 1,018,408; Feb. 27; Sp. p. 4901; Gaz. vol. 175; p. 951.

Ashcraft, William, Grandin, Mo. Trolley-retriever. No. 1,016,467; Feb. 6; Sp. p. 528; Gaz. vol. 175; p. 81.

Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping machine. No. 1,017,790; Feb. 20; Sp. p. 3255; Gaz. vol. 175; p. 583.

Ashworth, Fred N., Somerville, Mass. Garment. No. 1,016,533; Feb. 6; Sp. p. 715; Gaz. vol. 175; p. 106.

Askew Saddlery Company. (See Smith, Dearcy A., assignor.)

Asmussen, Samuel J. O., Ilford, England. Rotary printing-machine. No. 1,018,161; Feb. 20; Sp. p. 4276; Gaz. vol. 175; p. 734.

Aspinwall, Lewis A., assignor to Aspinwall Manufacturing Co., Jackson, Mich. Liquid-sprayer. No. 1,018,904; Feb. 27; Sp. p. 5734; Gaz. vol. 175; p. 988.

Aspinwall Manufacturing Co. (See Aspinwall, Lewis A., assignor.)

Athay, David, et al. (See Farmer, John L., assignor.)

Atkinson, Cyril J., Watertown, Wis. Vaporizer for gas-producers. No. 1,018,152; Feb. 20; Sp. p. 4277; Gaz. vol. 175; p. 734.

Atkinson, Robert B. (See Taylor, Atkinson, and Nesbit.)

Atlanta Metal Bed Company. (See Pisanta, Alfred H., assignor.)

Attaway, Elisha, Murrow, La. Mathematical computer and register. No. 1,016,245; Feb. 6; Sp. p. 1; Gaz. vol. 175; p. 3.

Atwood, Charles H., et al. (See Beebe, Frank, assignor.)

Auburn Wagon Company, The. (See Phelps, Homer L., assignor.)

Auchu, Henry, Bidgertown, Pa. Machine for making paper cartridges or shells. No. 1,018,473; Feb. 27; Sp. p. 4949; Gaz. vol. 175; p. 975.

Ault, Harry, and C. Switalski, Portsmouth, Ohio. Automatic weighing-scoop. No. 1,018,246; Feb. 6; Sp. p. 8; Gaz. vol. 175; p. 3.

Aurora Automatic Machinery Company, The. (See Ottaway, William, assignor.)

Austin, Frederick C. (See Bathrick, Charles E., assignor.)

Austin, Septimecus L., and H. Coles, Ellisville, Ark. Bale-tie buckle. No. 1,017,966; Feb. 18; Sp. p. 2660; Gaz. vol. 175; p. 425.

Auto Air Cushion Wheel Company. (See Langton and Kellerman, assignors.)

Auto Life Saving Fender Co. (See Hutchings, Frederick E., assignor.)

Auto Parts Manufacturing Company. (See Stanichess, Andreas M., assignor.)

Auto Pneumatic Action Co. (See Daugaard, Thomas, assignor.)

Auto Sectional Leather Tire Company. (See Bieser, Herman L., assignor.)

Auto-Spring Wheel Company, The. (See Swing, Alfred J., assignor.)

Automatic Brush Machinery Company. (See Mumford, Joseph F., assignor.)

Automatic Fire Protection Company. (See Shepherd, John E., assignor.)

Axford, Henry W., and J. E. Clearwater, San Francisco, Cal. Oil-burner. No. 1,017,469; Feb. 18; Sp. p. 2762; Gaz. vol. 175; p. 471.

Ayer, Matt M., Chicago, Ill. [illegible] machine. No. 1,017,841; Feb. 20; Sp. p. [illegible]; Gaz. vol. 175; p. 624.

Aylsworth, Jonas W., East Orange, N. J., assignor, by mesne assignments, to Thomas A. [illegible], Incorporated, West Orange, N. J. Composition for duplicate sound-records. No. 1,017,062; Feb. 18; Sp. p. 1779; Gaz. vol. 175; p. 310.

Ayres, Elwood R., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Truck-unloading device. No. 1,018,662; Feb. 27; Sp. p. 5841; Gaz. vol. 175; p. 1002.

B. F. Sturtevant Company. (See Beyer, Otto S., assignor.)

Baader, Hermann, Gelterkinden, Switzerland. Loom shuttle-motion. No. 1,018,[illegible]; Feb. 27; Sp. p. 5296; Gaz. vol. 175; p. 918.

Bache-Wiig, Jens, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, Armature for dynamo-electric machines. No. 1,017,071; Feb. 18; Sp. p. 1969; Gaz. vol. 175; p. 324.

Backus, Carl, et al. (See Wortman, John J., assignor.)

Badische Anilin & Soda Fabrik. (See Daily, Oscar, assignor.)

Badische Anilin & Soda Fabrik. (See Léttringhaus and Diesbach, assignors.)

Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Varnish. No. 1,018,388; Feb. 20; Sp. p. 4763; Gaz. vol. 175; p. 813.

Bagdigian, Henry M., Worcester, Mass. Resilient tire for wheels of motor-vehicles, &c. No. 1,018,037; Feb. 20; Sp. p. 3969; Gaz. vol. 175; p. 690.

Bailey, Bertram L., Portland, Oreg. Chain saw. No. 1,018,664; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 150.

Bailey, Edward L., assignor to Brown & Bailey Company, Philadelphia, Pa. Pail-truck. No. 1,016,468; Feb. 6; Sp. p. 531; Gaz. vol. 175; p. 81.

Bailey, George T., Colorado Springs, Colo. Attachment for cooling and vending machines. No. 1,016,601; Feb. 6; Sp. p. 840; Gaz. vol. 175; p. 127.

Baillio, Gervais, Niagara Falls, N. Y., assignor to Castner Electrolytic Alkali Company. Making anhydrous tin chlorid. No. 1,018,886; Feb. 27; Sp. p. 5737; Gaz. vol. 175; p. 989.

Baird, George A., et al. (See Weinhardt, John A., assignor.)

Baker, Charles A., Salem, [illegible]. Ironing-board. No. 1,017,843; Feb. 20; Sp. p. [illegible]; Gaz. vol. 175; p. 625.

Baker, Charles W., Montclair, N. J. Locomotive or self-propelled vehicle for use on railways. No. 1,016,602; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 128.

Baker, Charles W., Montclair, N. J. Combined internal-combustion engine and compressed-air engine. No. 1,016,603; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 128.

Baker, David, Philadelphia, Pa. Apparatus for charging furnaces. No. 1,016,589; Feb. 6; Sp. p. 716; Gaz. vol. 175; p. 108.

Baker, Eric K., Chicago, Ill. Starting device for internal-combustion engines. No. 1,016,314; Feb. 6; Sp. p. 177; Gaz. vol. 175; p. 27.

Baker, Joseph, Selly Oak, England. Holder for billiard-chalk and such like. No. 1,018,220; Feb. 20; Sp. p. 4429; Gaz. vol. 175; p. 761.

Baker, Lewis T., Pensacola, Fla. Turpentine-cup. No. 1,016,511; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 126.

Balasa, John, assignor of one-fourth to U. Mihali, one-fourth to G. Bobbal, and one-fourth to M. Balint, Michel, British Columbia, Canada. Folding box. No. 1,017,967; Feb. 18; Sp. p. 2610; Gaz. vol. 175; p. 426.

Baldwin, Emerson F., Philadelphia, Pa. Sole-protector for boots and shoes. No. 1,018,737; Feb. 20; Sp. p. 3253; Gaz. vol. 175; p. 964.

Baldwin Locomotive Works, The. (See Hale, Archibald H., assignor.)

Balesen, Nick. (See Petersen and Balesen.)

Ballat, Maudi, et al. (See [illegible], John, assignor.)

Ball, William, Wilkes-Barre, Pa. Cable-releasing device. No. 1,016,[illegible]; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. 53.

Ballou, Seymour, Toledo, Ohio. Rotary valve. No. 1,018,286; Feb. 20; Sp. p. [illegible]; Gaz. vol. 175; p. 814.

Bally, Oscar, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Anthracene dye and making same. No. 1,018,604; Feb. 6; Sp. p. 968; Gaz. vol. 175; p. 120.

Baloian, Nazareth, New York, N. Y. Pane-fastener. No. 1,017,186; Feb. 13; Sp. p. 2150; Gaz. vol. 175; p. 366.

Bammer, Pius, Ashland, Oreg. Log-lifter. No. 1,018,546; Feb. 27; Sp. p. [illegible]; Gaz. vol. 175; p. 901.

Bank, Adolf, [illegible], Germany. Boring and drilling machine. No. 1,018,183; Feb. 20; Sp. p. 4279; Gaz. vol. 175; p. [illegible].

Banner, John H., Mount Airy, N. C. Stage-dagger. No. 1,016,727; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.

Barbalics, Lazarus, Cleveland, Ohio. Hat-pin-point protector. No. 1,018,[illegible]; Feb. 20; Sp. p. 4382; Gaz. vol. 175; p. 761.

Barber, Harry C., assignor to The New Haven Electrical Mfg. Co., North Haven, Conn. Electrical fitting. No. 1,016,[illegible]; Feb. 6; Sp. p. 1115; Gaz. vol. 175; p. 171.

Barber, John G., assignor to Standard Car Truck Company, Chicago, [illegible]. No. 1,016,469; Feb. 6; Sp. p. [illegible]; Gaz. vol. 175; p. [illegible].

Bard, Mervin C. (See [illegible] and Bard.)

Barenz, Henry, [illegible]. Speed-governor. No. 1,017,126; Feb. 14; Sp. p. [illegible]; Gaz. vol. 175; p. 344

Barker, Donald, executor. (See Mytton, Richard G. V.)

Barmore, E. H. (See Dale, Albert C., assignor.)

Barna, Joseph W., Chicago, Ill., assignor of one-half to Boston Machine Works Company, Lynn, Mass. Cementing and snipping machine. No. 1,016,187; Feb. 6; Sp. p. 355; Gaz. vol. 175; p. 53.

Barnes, John R., Oskaloosa, Iowa. Holder for lighted cigars. No. 1,017,197; Feb. 18; Sp. p. 2153; Gaz. vol. 175; p. 368.

Barnes, Joseph L., Des Moines, Iowa. Tire-protector. No. 1,016,812; Feb. 6; Sp. p. 1291; Gaz. vol. 175; p. 198.

Barnes, William, San Francisco, Cal. Internal-combustion rotary engine. No. 1,018,963; Feb. 27; Sp. p. 6020; Gaz. vol. 175; p. 1088.

Barnes, Willis A., and R. W. Jamieson, New York, N. Y. Ball-caster. No. 1,016,813; Feb. 6; Sp. p. 1293; Gaz. vol. 175; p. 198.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,016,470; Feb. 6; Sp. p. 534; Gaz. vol. 175; p. 82.

Barnum, Thomas E., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Circuit-breaker. No. 1,018,547; Feb. 27; Sp. p. 5184; Gaz. vol. 175; p. 902.

Baron, John, El Centro, Cal. Wheeled scraper. No. 1,018,954; Feb. 27; Sp. p. 6023; Gaz. vol. 175; p. 1089.

Barr, Archibald, and W. Stroud, Glasgow, Scotland. Range-finder. No. 1,018,548; Feb. 27; Sp. p. 5187; Gaz. vol. 175; p. 902.

Barr, John H., Syracuse, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,540; Feb. 6; Sp. p. 728; Gaz. vol. 175; p. 106.

Barr, John H., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,927; Feb. 13; Sp. p. 1536; Gaz. vol. 175; p. 273.

Barrett Adding Machine Company. (See Barrett, Glenn J., assignor.)

Barrett, Glenn J., assignor to Barrett Adding Machine Company, Grand Rapids, Mich. Transfer mechanism for calculating-machines. No. 1,017,843; Feb. 20; Sp. p. 3564; Gaz. vol. 175; p. 625.

Barrett, Timothy R., Bordentown, N. J. Apparatus for athletic and theatrical purposes. No. 1,016,720; Feb. 6; Sp. p. 1116; Gaz. vol. 175; p. 171.

Barrickman, Sylvester A., and J. C. Holt; said Barrickman assignor of one-third to A. L. Craig and V. H. Odell, Richwood, W. Va. Shaft-level. No. 1,018,863; Feb. 27; Sp. p. 5842; Gaz. vol. 175; p. 1006.

Barron, Walter J., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,017,844; Feb. 20; Sp. p. 3567; Gaz. vol. 175; p. 626.

Bartlett, Kent W., Chicago, Ill. Liquid-treating apparatus. No. 1,017,729; Feb. 20; Sp. p. 3263; Gaz. vol. 175; p. 584.

Bartlett, Kent W., Chicago, Ill., assignor to Northern Water Softener Company. Apparatus for treating liquids. No. 1,017,728; Feb. 20; Sp. p. 3259; Gaz. vol. 175; p. 584.

Bartley, Charles E., Pittsburgh, assignor of one-half to G. P. Rylands, Charleroi, Pa. Lamp-bracket. No. 1,016,730; Feb. 6; Sp. p. 1119; Gaz. vol. 175; p. 172.

Bartley, John T., Jersey City, N. J. Coupling for electric fixtures. No. 1,017,868; Feb. 18; Sp. p. 2512; Gaz. vol. 175; p. 426.

Bartmann, Samuel, St. Louis, Mo. Barrel-head fastener. No. 1,017,127; Feb. 13; Sp. p. 2,000; Gaz. vol. 175; p. 344.

Barton, John H., London, England. Prismatic telescope, theater and field glass. No. 1,016,315; Feb. 6; Sp. p. 179; Gaz. vol. 175; p. 27.

Barton, Merle B., Peoria, Ill. Automobile curtain-support. No. 1,017,643; Feb. 20; Sp. p. 3082; Gaz. vol. 175; p. 557.

Bartoniewicz, Bronislaw, Glen Cove, N. Y. Cuspidor. No. 1,018,906; Feb. 27; Sp. p. 5729; Gaz. vol. 175; p. 989.

Basham, Jule S., Gainesville, Fla. Placket-fastener. No. 1,016,900; Feb. 6; Sp. p. 1496; Gaz. vol. 175; p. 231.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Cleveland, Ohio. Bagging-machine. No. 1,017,369; Feb. 18; Sp. p. 2513; Gaz. vol. 175; p. 426.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-beating machine. No. 1,016,316; Feb. 6; Sp. p. 182; Gaz. vol. 175; p. 27.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-beating machine. No. 1,016,368; Feb. 6; Sp. p. 339; Gaz. vol. 175; p. 54.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,017,370; Feb. 18; Sp. p. 2516; Gaz. vol. 175; p. 427.

Bates, Henry T. P. (See Ford, Arthur W., assignor.)

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Bathrick, Charles E., assignor to F. C. Austin, Chicago, Ill. Excavator. No. 1,018,602; Feb. 27; Sp. p. 5208; Gaz. vol. 175; p. 920.

Batten, Percy H., Chicago, Ill., assignor to E. H. Pollows, New York, N. Y. Expanded-metal chaplet. No. 1,016,389; Feb. 6; Sp. p. 341; Gaz. vol. 175; p. 54.

Bell, William A. (See Bell, Andrew W. and W. A.)
Bellamy, Raymond, Meeron Hill, Ind. Gas-generator. No. 1,017,466; Feb. 18; Sp. p. 2166; Gaz. vol. 175; p. 472.
Belt, Fred R., et al. (See Mahrhad, John A., assignor.)
Bender, Simeon W., Los Angeles, Cal. Controlling device for electric-motor vehicles. No. 1,016,980; Feb. 13; Sp. p. 1571; Gaz. vol. 175; p. 286.
Bender, Simeon W., Los Angeles, Cal. Electric-motor vehicle. No. 1,017,180; Feb. 13; Sp. p. 2154; Gaz. vol. 175; p. 368.
Bendix, Max, Cologne, Germany. Protector for incandescent mantles. No. 1,016,981; Feb. 6; Sp. p. 844; Gaz. vol. 175; p. 85.
Benefield, George, Dunlary, Pa. Bed-spring. No. 1,018,865; Feb. 27; Sp. p. 5843; Gaz. vol. 175; p. 1060.
Benoist, Richard, assignor to Limited Company Herm. Lilienert, Aktiengesellschaft, Bromberg, Germany. Compound ball-mill. No. 1,017,946; Feb. 20; Sp. p. 3814; Gaz. vol. 175; p. 662.
Benzenah, James, assignor to The Carter-Crume Co., Limited, Niagara Falls, N. Y. Web-perforating mechanism. No. 1,018,155; Feb. 20; Sp. p. 4282; Gaz. vol. 175; p. 736.
Benjamin Eastwood Company. (See Warburton, John, assignor.)
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin, Reuben B., Chicago, Ill. Screw-driver. No. 1,017,066; Feb. 13; Sp. p. 1735; Gaz. vol. 175; p. 311.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Electrolier. No. 1,016,211; Feb. 6; Sp. p. 184; Gaz. vol. 175; p. 28.
Benjaminowitsch, Wolf, Berlin, Germany, assignor of one-half to G. L. Tillmanns, Moscow, Russia. Machine for making cigarette-mouthpieces. No. 1,017,270; Feb. 13; Sp. p. 2122; Gaz. vol. 175; p. 297.
Bennett, William T., Sunderland, Ontario, Canada. Rotary engine. No. 1,018,787; Feb. 27; Sp. p. 5574; Gaz. vol. 175; p. 964.
Bennis, Stephen, and J. G. Kappel, New York, N. Y. Tumbler-stamp. No. 1,016,781; Feb. 6; Sp. p. 1121; Gaz. vol. 175; p. 172.
Bentley, Fred W., Schenectady, N. Y., assignor to General Electric Company. High-speed emergency-governor. No. 1,017,666; Feb. 13; Sp. p. 2197; Gaz. vol. 175; p. 472.
Benz, Frederick, Jr., Haledon, N. J., assignor to J. Frank, New York, N. Y. Button structure for narrow-ware looms. No. 1,017,976; Feb. 13; Sp. p. 1896; Gaz. vol. 175; p. 327.
Berardi, Feminato, Naples, Italy. Device for the distillation of water in water-closets and the like. No. 1,016,281; Feb. 20; Sp. p. 4423; Gaz. vol. 175; p. 761.
Berblinger, August, St. Louis, Mo., assignor to Enameller Mill Furnishing Company. Bottle cleaning and brushing machine. No. 1,018,738; Feb. 27; Sp. p. 5577; Gaz. vol. 175; p. 965.
Berdenich, Ernst. (See Kolesovitzy, Haltenberger, and Berdenich.)
Berg, Frederick O., Spokane, Wash. Awning-fixture. No. 1,018,682; Feb. 27; Sp. p. 5475; Gaz. vol. 175; p. 949.
Berger, Christian L., Boston, Mass. Engineer's telescope. No. 1,016,906; Feb. 6; Sp. p. 886; Gaz. vol. 175; p. 126.
Berger, Christian L., Boston, Mass. Magnetic needle. No. 1,016,732; Feb. 6; Sp. p. 1123; Gaz. vol. 175; p. 173.
Berlin Machine Works, The. (See Mitchell, Harrison J., assignor.)
Bernstrom, John, et al. (See Berrigan, John J., assignor.)
Berrigan, John J., Orange, N. J., assignor to F. J. Arend, New York, N. Y., and J. Bernstrom, Stockholm, Sweden. Separating solids and liquids. No. 1,016,570; Feb. 6; Sp. p. 1563; Gaz. vol. 175; p. 218.
Berrigan, John J., assignor to K. A. Berrigan, Orange, N. J. Press. No. 1,018,957; Feb. 27; Sp. p. 6030; Gaz. vol. 175; p. 1040.
Berrigan, John J., assignor to K. A. Berrigan, Orange, N. J. Apparatus for expressing liquids from solids. No. 1,018,958; Feb. 27; Sp. p. 6035; Gaz. vol. 175; p. 1040.
Berrigan, Katie S. (See Berrigan, John J., assignor.)
Berry, Edward R., Lynn, Mass., assignor to General Electric Company. Arc-light electrode. No. 1,017,497; Feb. 13; Sp. p. 2201; Gaz. vol. 175; p. 472.
Berry, James H. (See Elkin, John R., assignor.)
Berry, Seneca L., Sunnyvale, Cal. Tangential-impulse water-wheel. No. 1,017,018; Feb. 13; Sp. p. 2016; Gaz. vol. 175; p. 310.
Berry, William M., et al. (See Vial, William, assignor.)
Berthelm, Alfred. (See Studich and Berthelm.)
Berthier, Amand, Paris, France. Cooling device for fire-arms. No. 1,017,873; Feb. 13; Sp. p. 2536; Gaz. vol. 175; p. 428.
Bessler, Frank R., Akron, Ohio. Movable stairway. No. 1,018,228; Feb. 20; Sp. p. 4426; Gaz. vol. 175; p. 762.
Bethlehem Steel Company. (See Midge and Stout, assignors.)
Betts, Charles L., assignor to R. H. Dietz Company, New York, N. Y. Vehicle-lamp. No. 1,018,080; Feb. 20; Sp. p. 3906; Gaz. vol. 175; p. 691.
Betz, Charles F., St. Louis, Mo. Dough-cutting machine. No. 1,017,276; Feb. 13; Sp. p. 2037; Gaz. vol. 175; p. 428.

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Machine for equalizing barrel-staves. No. 1,018,789; Feb. 27; Sp. p. 5580; Gaz. vol. 175; p. 966.
Beyer, Otto S., Hyde Park, assignor to B. F. Sturtevant Company, Boston, Mass. Making sheet-metal radiators. No. 1,018,150; Feb. 20; Sp. p. 4268; Gaz. vol. 175; p. 735.
Bickers, Henry C., Batesville, Ark. Cotton chopper and cultivator. No. 1,016,733; Feb. 6; Sp. p. 1124; Gaz. vol. 175; p. 173.
Bigelow, E. B., et al. (See Cunningham, Edward R., assignor.)
Bisner, Herman L., assignor to Auto Sectional Leather Tire Company, New York, N. Y. Wheel-tire. No. 1,018,292; Feb. 20; Sp. p. 4265; Gaz. vol. 175; p. 782.
Bisselow, George W., New Haven, Conn. Damper-regulator. No. 1,017,751; Feb. 20; Sp. p. 3206; Gaz. vol. 175; p. 585.
Billows, Arthur J., Melbourne, Victoria, Australia. Aeration of liquids. No. 1,017,240; Feb. 13; Sp. p. 2253; Gaz. vol. 175; p. 333.
Bing, Ida, New York, N. Y. Brush. No. 1,016,784; Feb. 6; Sp. p. 1126; Gaz. vol. 175; p. 173.
Bishop, Howard E., New York, N. Y. Cleansing fabrics. No. 1,016,928; Feb. 13; Sp. p. 1540; Gaz. vol. 175; p. 274.
Bittner, John, Newcastle, Ind. Piston for explosive-engines. No. 1,017,498; Feb. 13; Sp. p. 2301; Gaz. vol. 175; p. 473.
Bittorf, Louis A., assignor to National Manufacturing Company, Sterling, Ill. Window-screen hanger. No. 1,018,603; Feb. 27; Sp. p. 5500; Gaz. vol. 175; p. 920.
Black, Arthur L., Jacksonville, Ill. Acetylene-gas generator. No. 1,016,665; Feb. 6; Sp. p. 903; Gaz. vol. 175; p. 150.
Black, Charles A., Jr., Hightstown, N. J. Plant protector and support. No. 1,018,157; Feb. 20; Sp. p. 4287; Gaz. vol. 175; p. 736.
Black, David, Edwardsville, Ill. Aeroplane. No. 1,016,929; Feb. 13; Sp. p. 1541; Gaz. vol. 175; p. 274.
Blahos, George J., U. S. Navy. Base-ball bat. No. 1,018,866; Feb. 27; Sp. p. 5849; Gaz. vol. 175; p. 1099.
Blair, Oliver C., Cleveland, Ohio. Internal-combustion engine. No. 1,018,666; Feb. 20; Sp. p. 4150; Gaz. vol. 175; p. 714.
Blaisdell, Frederick E., Philadelphia, Pa. Tire. No. 1,017,722; Feb. 20; Sp. p. 3200; Gaz. vol. 175; p. 586.
Blake, Charles C., Brookline, Mass. Wiring-tack. No. 1,017,036; Feb. 13; Sp. p. 1787; Gaz. vol. 175; p. 311.
Bleck, Paul. (See Hutchison, Orville T., assignor.)
Bliesath, Ernst C. F. W., Seattle, Wash. Aeroplane. No. 1,017,788; Feb. 20; Sp. p. 3260; Gaz. vol. 175; p. 586.
Bliss, Elmer J., Edgartown, and E. F. White, Quincy, Mass., assignors to Boyal Shoe Company. Sectional last for making shoes. No. 6038; Gaz. vol. 175; p. 1041.
Blodgett, Frederick E., assignor to Young Manufacturing Company, Newark, N. J. Safety-razor. No. 1,017,199; Feb. 13; Sp. p. 2160; Gaz. vol. 175; p. 360.
Blom, John H. (See McRae and Blom.)
Blume, Max E., Leipsig-Connewitz, Germany. Typographic stamping apparatus. No. 1,018,239; Feb. 20; Sp. p. 4438; Gaz. vol. 175; p. 762.
Bly, Edwin, Kenyon, Minn. Gate. No. 1,017,499; Feb. 13; Sp. p. 2202; Gaz. vol. 175; p. 473.
Boberg, Amos, Cambridge, Ill. Wagon-jack. No. 1,017,500; Feb. 13; Sp. p. 2204; Gaz. vol. 175; p. 473.
Boccia, Carmine, New York, N. Y. Combined comb and brush. No. 1,017,501; Feb. 13; Sp. p. 2205; Gaz. vol. 175; p. 474.
Boe, Hans M., Hampden, N. D. Threshing-machine. No. 1,017,120; Feb. 13; Sp. p. 2000; Gaz. vol. 175; p. 344.
Bogard, James T., Timpson, Tex. Ball-joint. No. 1,018,234; Feb. 20; Sp. p. 4441; Gaz. vol. 175; p. 762.
Boggs, Atwood L. (See Patnaude, William E., assignor.)
Bohairud, Christopher, McIntosh, S. D. Milking-machine. No. 1,017,502; Feb. 13; Sp. p. 2206; Gaz. vol. 175; p. 474.
Bolander, Aaron, assignor to J. H. Todd, Barberton, Ohio. Wagon-stake. No. 1,017,853; Feb. 18; Sp. p. 2806; Gaz. vol. 175; p. 476.
Bolduc, William H., Clifton Heights, Pa. Drawing-roll. No. 1,018,887; Feb. 27; Sp. p. 5880; Gaz. vol. 175; p. 1009.
Bollick, David D., Topeka, Kans., assignor of one-half to T. H. Hassey, Brooklyn, N. Y. Fly-trap. No. 1,017,644; Feb. 20; Sp. p. 3064; Gaz. vol. 175; p. 557.
Bollée, Léon, Le Mans, France. Press for testing or other purposes. No. 1,018,168; Feb. 20; Sp. p. 4283; Gaz. vol. 175; p. 736.
Bolton, Werner von, Charlottenburg, Germany, assignor to General Electric Company. Increasing the ductility of metallic tungsten. No. 1,017,289; Feb. 13; Sp. p. 2334; Gaz. vol. 175; p. 397.
Bond, Charles J., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,318; Feb. 6; Sp. p. 1[illegible]; Gaz. vol. 175; p. 28.
Booman, Johan E., Brooklyn, N. Y. Actuating-holder for small tools. No. 1,016,607; Feb. 6; Sp. p. 868; Gaz. vol. 175; p. 136.
Boone, Wallis R., and C. A. Watson, assignors of one-third to L. P. Gandy, Crews, Tex. Locking device. No. 1,016,541; Feb. 6; Sp. p. 1[illegible]; Gaz. vol. 175; p. 107.
Booth, Jacob, Reynoldsville, Pa. Railway-tie. No. 1,017,947; Feb. 20; Sp. p. 3815; Gaz. vol. 175; p. 662.
Booth, James A., Everett, assignor of one-half to R. Wyllys and one-half to E. L. Gay, Boston, Mass. Can-soldering machine. No. 1,018,159; Feb. 20; Sp. p. 4269; Gaz. vol. 175; p. 787.
Booth, Quentin W. (See Flynt, Louis W. G., assignor.)
Borden, Bradford, Toronto, Ontario, Canada, assignor to The Borden Company, Warren, Ohio. Pipe-cutting tool. No. 1,017,037; Feb. 13; Sp. p. 1788; Gaz. vol. 175; p. 311.
Borden Company, The. (See Borden, Bradford, assignor.)
Borden, William H., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for making and driving staples. No. 1,016,930; Feb. 13; Sp. p. 1544; Gaz. vol. 175; p. 274.
Bordley, John T. (See Redfield and Bordley.)
Borés, Andrés, Barcelona, Spain. Adjustable mattress. No. 1,018,807; Feb. 27; Sp. p. 5730; Gaz. vol. 175; p. 989.
Borries, Ehrmann F. von, East Shore Park, Minn. Rotatable bin. No. 1,016,911; Feb. 6; Sp. p. 1498; Gaz. vol. 175; p. 282.
Beech, Firm of Robert. (See Honold and Zähringer, assignors.)
Bosqui, Daniel, Gold Road, Ariz., assignor, by mesne assignments, to Merrill Metallurgical Company, San Francisco, Cal. Method and apparatus for the precipitation of gold and silver from cyanid solutions. No. 1,018,604; Feb. 27; Sp. p. 5301; Gaz. vol. 175; p. 920.
Boss, William, St. Paul, Minn. Clothes-line reel. No. 1,017,734; Feb. 20; Sp. p. 3271; Gaz. vol. 175; p. 586.
Bostater, Herbert L., Chicago, Ill. Clutch for speed-regulators. No. 1,018,476; Feb. 27; Sp. p. 4956; Gaz. vol. 175; p. 876.
Bostock, Thomas, assignor to F. F. Field, Brockton, Mass. Machine for pressing heel-lifts, heels, &c. No. 1,018,549; Feb. 27; Sp. p. 5191; Gaz. vol. 175; p. 902.
Boston Machine Works Company. (See Barns, Joseph W., assignor.)
Boudrot, Reamie S., Newton, Mass. Drawer-knob. No. 1,016,392; Feb. 6; Sp. p. 345; Gaz. vol. 175; p. 55.
Boubaz, Cornelius L., Cameron, Mo. Nut-lock. No. 1,016,542; Feb. 6; Sp. p. 729; Gaz. vol. 175; p. 107.
Bourgeois, Casper H., Chicago, Ill. Candle-holder. No. 1,017,375; Feb. 13; Sp. p. 2529; Gaz. vol. 175; p. 428.
Bourne, John A., et al. (See Hall, Frank M., assignor.)
Bowen, Russell H., Palmyra, N. J., and A. Walker, assignors to The American Pulley Company, Philadelphia, Pa. Pulley. No. 1,016,666; Feb. 6; Sp. p. 997; Gaz. vol. 175; p. 150.
Bower, Joseph. (See Shaw, Bower, and Wilson.)
Bowers, Lewis C., Boise, Idaho. Nozzle. (Reissue.) No. 13,366; Feb. 6; Sp. p. 1530; Gaz. vol. 175; p. 237.
Bowles, George B., Forest Gate, London, England. Brake apparatus particularly applicable to railway-wagon brakes. No. 1,017,504; Feb. 13; Sp. p. 2310; Gaz. vol. 175; p. 474.
Boyd, John E., Dawson, N. Mex. Magazine-pipe. No. 1,018,293; Feb. 20; Sp. p. 4556; Gaz. vol. 175; p. 782.
Boynton, George H., assignor to Pittsfield Spark Coil Company, Dalton, Mass. Switch for ignition systems. No. 1,017,948; Feb. 20; Sp. p. 3817; Gaz. vol. 175; p. 662.
Bozile, Charles, Manawa, Wis. Corn-sheller. No. 1,016,471; Feb. 6; Sp. p. 538; Gaz. vol. 175; p. 82.
Brackett, Frederick, Washington, D. C. Captive lookout for use on board ships. No. 1,017,200; Feb. 13; Sp. p. 2161; Gaz. vol. 175; p. 360.
Bradburn, Curtis E. (See Meek and Bradburn.)
Braddock, Isaac A., Haddonfield, N. J., assignor of one-sixth to W. C. Codd, Baltimore, Md., one-sixth to N. A. Kestler, and one-sixth to D. E. Anthony, Washington, D. C. Metal-concrete container. No. 1,016,912; Feb. 6; Sp. p. 1500; Gaz. vol. 175; p. 232.
Bradford, Chester, and G. L. Chatfield, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Grain elevator and weigher. No. 1,017,735; Feb. 20; Sp. p. 3273; Gaz. vol. 175; p. 587.
Bradley, Richard, et al. (See Foss, Walter O., assignor.)
Bradley, Samuel M., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Welt-insole. No. 1,017,077; Feb. 13; Sp. p. 1897; Gaz. vol. 175; p. 327.
Bramer, Albert. (See Algard and Bramer.)
Brandon, William W., et al. (See Hall, Frank M., assignor.)
Brandstätter, Michael, Vienna, Austria-Hungary. Igniter. No. 1,017,505; Feb. 13; Sp. p. 2312; Gaz. vol. 175; p. 475.
Brandt, Julius E., Lindsborg, Kans. Ball and catcher toy. No. 1,017,376; Feb. 13; Sp. p. 2530; Gaz. vol. 175; p. 428.
Braswell, Radford O., et al. (See Randle, Millard F., assignor.)
Brattain, John N., Davidson, N. C. Drilling-machine. No. 1,016,735; Feb. 6; Sp. p. 1120; Gaz. vol. 175; p. 173.
Brearey, Christopher J. C., Westboro, Wis. Fish-line drier. No. 1,017,550; Feb. 27; Sp. p. 5196; Gaz. vol. 175; p. 906.
Breneman, Joseph T., Martinez, Cal. Speculum and retractor. No. 1,018,668; Feb. 27; Sp. p. 5851; Gaz. vol. 175; p. 1009.
Brent, Irvin H. (See Overhagh and Brent.)

Breslauer, Max, Charlottenburg, Germany, assignor to Minimax Consolidated Limited, London, England. Extinguishing fires. No. 1,017,949; Feb. 20; Sp. p. 3820; Gaz. vol. 175; p. 663.

Brewer, Alfred, *et al.* (See Beebe, Frank, assignor.)

Brewer, Richard F., *et al.* (See Kent, Victor E., assignor.)

Bridgeport Foundry and Machine Company, The. (See Thompson, Charles E. A., assignor.)

Bridges, John F., Alameda, Cal. Governor for gas or other engines. No. 1,016,543; Feb. 6; Sp. p. 731; Gaz. vol. 175; p. 107.

Bridges, William C., Wapello, Iowa. Street-indicator. No. 1,018,693; Feb. 27; Sp. p. 5476; Gaz. vol. 175; p. 950.

Brightman, Latham H., Lakewood, Ohio. Straightening-machine. No. 1,017,045; Feb. 20; Sp. p. 3085; Gaz. vol. 175; p. 558.

Brinks, Herman H., Grand Rapids, Mich. Vending-machine. No. 1,018,808; Feb. 27; Sp. p. 5731; Gaz. vol. 175; p. 989.

Brinley, Charles A., assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 1,016,667; Feb. 6; Sp. p. 998; Gaz. vol. 175; p. 151.

Brinley, Charles A., assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 1,016,668; Feb. 6; Sp. p. 999; Gaz. vol. 175; p. 151.

Brinser, Clinton. (See Welty and Brinser.)

Brittain, George E., assignor to I. L. Keith, Haverhill, Mass. Holder for cementing soles. No. 1,016,544; Feb. 6; Sp. p. 732; Gaz. vol. 175; p. 108.

Brizzolara, Charles, Richmond, Va. Sag-preventing device for trolley-wires. No. 1,018,869; Feb. 27; Sp. p. 6853; Gaz. vol. 175; p. 1010.

Broadaway, Fred V., Hubbard, Tex. Valve mechanism for steam-engines. No. 1,016,393; Feb. 6; Sp. p. 346; Gaz. vol. 175; p. 55.

Broadmore, Grant, Brighton, Mich. Spirit-level. No. 1,017,646; Feb. 20; Sp. p. 3068; Gaz. vol. 175; p. 558.

Brock, Clayton A. (See Lewis, William M., assignor.)

Brock, Henry, Gillespie, Ill. Velocipede or four-wheeled vehicle. No. 1,018,405; Feb. 27; Sp. p. 4800; Gaz. vol. 175; p. 852.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,018,477; Feb. 27; Sp. p. 4957; Gaz. vol. 175; p. 876.

Broden, Edwin H., Edgewood Park, and J. G. Mustin, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Collapsible reel. No. 1,017,130; Feb. 13; Sp. p. 2006; Gaz. vol. 175; p. 345.

Bromhead, John S., New York, N. Y. Non-refillable bottle. No. 1,018,960; Feb. 27; Sp. p. 6040; Gaz. vol. 175; p. 1041.

Bromley, John M., New York, N. Y. Shoe-measure. No. 1,017,201; Feb. 13; Sp. p. 2163; Gaz. vol. 175; p. 360.

Brooke, Isaac, Pottstown, Pa. Stove. No. 1,017,241; Feb. 13; Sp. p. 2258; Gaz. vol. 175; p. 384.

Brooks, Edward J., East Orange, N. J. Snap-seal. No. 1,017,950; Feb. 20; Sp. p. 3821; Gaz. vol. 175; p. 663.

Brooks, Howard W., and S. F. Krupp, Memphis, Tenn. Resilient wheel. No. 1,016,871; Feb. 6; Sp. p. 1410; Gaz. vol. 175; p. 218.

Brooks, James M., Moleno, Ga. Excavator. No. 1,018,160; Feb. 20; Sp. p. 4292; Gaz. vol. 175; p. 737.

Brooks, Jeptha, *et al.* (See Hall, Frank M., assignor.)

Brothers, Eli, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Pulling-over machine. No. 1,017,736; Feb. 20; Sp. p. 3277; Gaz. vol. 175; p. 587.

Brown, Aaron A., Roland Park, Md. Nut-lock. No. 1,017,845; Feb. 20; Sp. p. 3571; Gaz. vol. 175; p. 626.

Brown & Bailey Company. (See Bailey, Edward L., assignor.)

Brown, Bartley, Fort Worth, Tex. Plow-frame. No. 1,018,094; Feb. 20; Sp. p. 4154; Gaz. vol. 175; p. 714.

Brown, Clarence D., Owensboro, Ky. Tobacco-drying apparatus. No. 1,017,951; Feb. 20; Sp. p. 3822; Gaz. vol. 175; p. 663.

Brown, Elmer H. (See Williams and Brown.)

Brown, Frank, Atlantic City, N. J. Wave-motor. No. 1,018,161; Feb. 20; Sp. p. 4294; Gaz. vol. 175; p. 737.

Brown, Henry L., assignor to Brown Spin-Wright Company, New York, N. Y. Textile apparatus. No. 1,016,394; Feb. 6; Sp. p. 351; Gaz. vol. 175; p. 56.

Brown, Isaiah J., Jersey City, N. J. Magazine nailing-tool. No. 1,018,478; Feb. 27; Sp. p. 4974; Gaz. vol. 175; p. 876.

Brown, Lyman H., Hartford, Conn. Safety-clutch for power-presses, paper-cutters, &c. No. 1,016,395; Feb. 6; Sp. p. 350; Gaz. vol. 175; p. 56.

Brown, Nimrod W. L., Marietta, Ga. Tramper for cotton-presses. No. 1,016,396; Feb. 6; Sp. p. 361; Gaz. vol. 175; p. 57.

Brown, Norman S., and J. Hardacre, Wigan, England; said Hardacre assignor to said Brown. Thread-guide or lappet for spinning and doubling frames. No. 1,018,870; Feb. 27; Sp. p. 5855; Gaz. vol. 175; p. 1010.

Brown, Richard P., Philadelphia, Pa. Electric switch. No. 1,018,648; Feb. 27; Sp. p. 5398; Gaz. vol. 175; p. 934.

Brown Spin-Wright Company. (See Brown, Henry L., assignor.)

Brown, Stewart, Alexandria, Va. Electric bell. No. 1,018,162; Feb. 20; Sp. p. 4296; Gaz. vol. 175; p. 738.

Brown, Washington I., Savannah, Mo. Aseptic clinical-thermometer holder. No. 1,017,377; Feb. 13; Sp. p. 2531; Gaz. vol. 175; p. 429.

Brown, William A., St. Joseph, Mo. Hay-gate for mangers. No. 1,018,095; Feb. 20; Sp. p. 4156; Gaz. vol. 175; p. 714.

Browne, Arthur R., Branford, Conn. Combined breast-drill and valve-grinder. No. 1,017,242; Feb. 13; Sp. p. 2259; Gaz. vol. 175; p. 384.

Browning, William H., New York, N. Y. Congestion-problem puzzle. No. 1,017,378; Feb. 13; Sp. p. 2532; Gaz. vol. 175; p. 429.

Browning, William H., New York, N. Y. Humidor. No. 1,017,379; Feb. 13; Sp. p. 2535; Gaz. vol. 175; p. 430.

Brush, George E., assignor to E. A. Mallory and Sons, Incorporated, Danbury, Conn. Nap-raising machine for felt hats. No. 1,017,962; Feb. 20; Sp. p. 3830; Gaz. vol. 175; p. 664.

Bryan, Oscar M., Chanute, Kans. Baling-machine. No. 1,017,202; Feb. 13; Sp. p. 2165; Gaz. vol. 175; p. 370.

Bryant Electric Company, The. (See Forstrom, Edward E., assignor.)

Buchanan, William R., Carrsville, Ky. Vise. No. 1,017,131; Feb. 13; Sp. p. 2006; Gaz. vol. 175; p. 345.

Buchler, Isidor, New York, N. Y. Razor-stropping machine. No. 1,016,961; Feb. 13; Sp. p. 1548; Gaz. vol. 175; p. 275.

Buck, Elijah, Marshall, Mich. Sanitary cuspidor. No. 1,017,203; Feb. 13; Sp. p. 2177; Gaz. vol. 175; p. 370.

Buckbalt, Charlie E., Enterprise, Ala. Gate. No. 1,016,397; Feb. 6; Sp. p. 364; Gaz. vol. 175; p. 57.

Buckham, George T. (See Dawson and Buckham.)

Buckwalter, Tracy V., Altoona, Pa. Tire. No. 1,016,472; Feb. 6; Sp. p. 540; Gaz. vol. 175; p. 83.

Bucyrus Company, The. (See Ferris, Walter, assignor.)

Budd, Edward G., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa. Car construction. No. 1,017,243; Feb. 13; Sp. p. 2261; Gaz. vol. 175; p. 384.

Budlong, Wilbur F., Berea, Ohio. Vise or chuck or like machine. No. 1,017,846; Feb. 20; Sp. p. 3572; Gaz. vol. 175; p. 626.

Busch, Julius, Dessau, Germany. Manufacture of ammonium carbonate. No. 1,018,406; Feb. 27; Sp. p. 4810; Gaz. vol. 175; p. 852.

Buel, Albert W. (See Ferguson and Buel.)

Buffalo Forge Company. (See Comfort and Carrier, assignors.)

Buffehr, John, Robinson, Colo. Snow-plow. No. 1,016,669; Feb. 6; Sp. p. 1001; Gaz. vol. 175; p. 151.

Buffum Tool Company. (See Mann, Miles H., assignor.)

Bullock Electric Manufacturing Company, The, *et al.* (See Frankenfield, Budd, assignor.)

Bullock Electric Manufacturing Company *et al.* (See McHugh, Anthony L., assignor.)

Bullock Electric Manufacturing Company, The, *et al.* (See Ralston, Howard H., assignor.)

Bultman, Cyrus C., Cleveland, Ohio. Mechanical movement. No. 1,016,545; Feb. 6; Sp. p. 734; Gaz. vol. 175; p. 108.

Bunnell, Charles E., *et al.* (See Foss, Walter O., assignor.)

Buoy, John W., Eugene, Oreg., assignor of one-third to M. V. Parsons. Door-stop. No. 1,018,871; Feb. 27; Sp. p. 5856; Gaz. vol. 175; p. 1011.

Burch, Jacob M., assignor of one-fourth to J. Lafora, Wallace, Idaho. Black-sand-separating machine. No. 1,017,506; Feb. 13; Sp. p. 2815; Gaz. vol. 175; p. 475.

Burgener, Christian. (See Burgener, Ernest and C.)

Burgener, Ernest, Wellesley, and C. Burgener, Linwood, Ontario, Canada. Listening-detector for telephone-lines. No. 1,016,670; Feb. 6; Sp. p. 1003; Gaz. vol. 175; p. 151.

Burgess, Ira W., assignor of one-half to J. Howard, Minden, W. Va. Brake-shoe head. No. 1,016,294; Feb. 20; Sp. p. 4857; Gaz vol. 175; p. 782.

Burgess, Robert W., and A. Clark, Govan, Scotland. Apparatus for cleaning wire. No. 1,016,473; Feb. 6; Sp. p. 540; Gaz. vol. 175; p. 83.

Burgess, Yorke. (See Esh and Burgess.)

Burk, William H., assignor to Corrugated Bar Company, St. Louis, Mo. Spacing device for reinforcing-rods in concrete structures. No. 1,016,319; Feb. 6; Sp. p. 190; Gaz. vol. 175; p. 29.

Burke Electric Company. (See Burke, James, assignor.)

Burke, James, Erie, Pa., assignor to Burke Electric Company. Self-oiling bearing. No. 1,017,132; Feb. 13; Sp. p. 2010; Gaz. vol. 175; p. 346.

Burkett, John W., Kansas City, Kans., assignor to The Kansas City Hay Press Company. Baling-press. No. 1,017,133; Feb. 13; Sp. p. 2012; Gaz. vol. 175; p. 346.

Burkheiser, Karl, Hamburg, Germany. Recovering sulfur from gas. No. 1,018,479; Feb. 27; Sp. p. 4976; Gaz. vol. 175; p. 877.

Burnett, Charles E., assignor of one-half to C. M. Clapp, North Rose, N. Y. Scale attachment for supporting wagon-beds. No. 1,017,244; Feb. 13; Sp. p. 2263; Gaz. vol. 175; p. 385.

Burnett, Richard W., Montreal, Quebec, Canada. Dump-car door. No. 1,017,281; Feb. 13; Sp. p. 2334; Gaz. vol. 175; p. 397.

Burnham, George A., Cliftondale, assignor to S. B. Cendit, Jr., Brookline, Mass. Series transformer. No. 1,017,737; Feb. 20; Sp. p. 3282; Gaz. vol. 175; p. 588.

Burns, Charles E., Monmouth, Ill. Oil-conveyer. No. 1,016,736; Feb. 6; Sp. p. 1183; Gaz. vol. 175; p. 174.

Burns, Robert J., Avon, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Cementing-machine. No. 1,017,807; Feb. 13; Sp. p. 2816; Gaz. vol. 175; p. 476.

Burnside, George B., Renfrew, Scotland. Hermetically sealing electrical conductors through or into hard vitreous substances. No. 1,016,120; Feb. 6; Sp. p. 192; Gaz. vol. 175; p. 29.

Burr, Jennie, Matteawan, N. Y. Ironing-board. No. 1,018,295; Feb. 20; Sp. p. 4888; Gaz. vol. 175; p. 782.

Burroughs Adding Machine Company. (See Horton, Allen A., assignor.)

Burroughs Adding Machine Company. (See Kilpatrick, William J., assignor.)

Burroughs Adding Machine Company. (See Putnam, George B., assignor.)

Burroughs Adding Machine Company. (See Walker, Charles H., assignor.)

Burroughs Adding Machine Company. (See White, Nelson, assignor.)

Burroughs, David, Oakland, Cal. Combination boiler and burner. No. 1,016,398; Feb. 6; Sp. p. 366; Gaz. vol. 175; p. 58.

Burstall, Frederic W., Birmingham, England. Apparatus for extracting or separating suspended matter from gases. No. 1,018,235; Feb. 20; Sp. p. 4442; Gaz. vol. 175; p. 763.

Burtman, William C. (See Olsen, Bennet, assignor.)

Burton, Andrew, Perkins, Ohio. Fumigator for fruit products. No. 1,017,647; Feb. 20; Sp. p. 3060; Gaz. vol. 175; p. 558.

Burton, Isaac F., Philadelphia, Pa., assignor to Victor Talking Machine Company. Filing-cabinet. No. 1,016,247; Feb. 6; Sp. p. 6; Gaz. vol. 175; p. 4.

Buss, Wendell R., Grand Rapids, and N. Yonkman, Holland, Mich.; said Yonkman assignor to said Buss. Journal-box. No. 1,017,245; Feb. 13; Sp. p. 2267; Gaz. vol. 175; p. 385.

Bussard, William R., Huntington, Ind. Reinforced-concrete burial-vault. No. 1,018,372; Feb. 27; Sp. p. 5857; Gaz. vol. 175; p. 1011.

Bussek, Walter. (See Schickowski and Bussek.)

Bussek, Walter, and T. Schickowski, St. Louis, Mo. Watch. No. 1,016,221; Feb. 6; Sp. p. 193; Gaz. vol. 175; p. 29.

Buth, Henry F., assignor, by mesne assignments, to Kimbo Co., Chicago, Ill. Automobile glass-screen cleaner. No. 1,017,076; Feb. 13; Sp. p. 1999; Gaz. vol. 175; p. 337.

Butler, Edward F., Cavendish, Vt. Automatic shearing attachment. No. 1,018,296; Feb. 20; Sp. p. 4560; Gaz. vol. 175; p. 783.

Butler, Harry T., Butler, Pa. Animal-trap. No. 1,016,671; Feb. 6; Sp. p. 1002; Gaz. vol. 175; p. 152.

Butler, William M., David City, Nebr. Telephone ringing apparatus. No. 1,016,546; Feb. 6; Sp. p. 737; Gaz. vol. 175; p. 109.

Buttman, Alonzo C., and F. P. Gable, Grandview, Iowa. Recoil-neutralizer. No. 1,017,953; Feb. 20; Sp. p. 3813; Gaz. vol. 175; p. 664.

Buxton, Anthony. (See Turner and Buxton.)

C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)

Cady, Carson J., Rochester, N. Y., and J. H. Thayer, West Bridgewater, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Welt-channelling attachment for sole-sewing machines. No. 1,017,380; Feb. 13; Sp. p. 2536; Gaz. vol. 175; p. 430.

Cahill, Michael F., Boston, Mass. Machine for stamping and forming sheet-metal articles. No. 1,016,547; Feb. 6; Sp. p. 740; Gaz. vol. 175; p. 109.

Cahill, Michael F., Boston, Mass. Machine for punching or shaping metallic blanks. No. 1,016,932; Feb. 13; Sp. p. 1550; Gaz. vol. 175; p. 275.

Cake, Horace M., Washington, D. C. Transmission-gearing. No. 1,017,964; Feb. 20; Sp. p. 3836; Gaz. vol. 175; p. 665.

Calderwood, John R., Milwaukee, Wis., assignor to Allis-Chalmers Company. Automatic starter for electric motors. No. 1,017,246; Feb. 13; Sp. p. 2268; Gaz. vol. 175; p. 386.

Calef, Edwin M., Hillsboro, Oreg. Non-refillable bottle. No. 1,017,204; Feb. 13; Sp. p. 2178; Gaz. vol. 175; p. 370.

California Corrugated Culvert Company. (See Thorsby, Karl J., assignor.)

Call, Arthur L., and W. A. Smith, Springfield, Mass. Cigar-band. No. 1,017,282; Feb. 13; Sp. p. 2335; Gaz. vol. 175; p. 393.

Callahan, Jacob D., Jersey Shore, Pa. Train-line hanger. No. 1,017,508; Feb. 13; Sp. p. 2822; Gaz. vol. 175; p. 476.

Callan, John G., Lynn, Mass., assignor to General Electric Company, Governing mechanism for centrifugal apparatus. No. 1,017,809; Feb. 13; Sp. p. 2823; Gaz. vol. 175; p. 476.

Callan, John G., Nahant, Mass., assignor to General Electric Company. Combined emergency and throttle valve. No. 1,017,619; Feb. 13; Sp. p. 3021; Gaz. vol. 175; p. 511.

Callicott, Thomas P., Prescott, Ark. Churn. No. 1,016,474; Feb. 6; Sp. p. 542; Gaz. vol. 175; p. 83.

Callmander, Gustave M. (See Patterson, Erik W., assignor.)

Caloric Company, The. (See Edson, Mark A., assignor.)

Cameron, Donald. (See Sim, George, assignor.)

Cameron, Ewan, assignor to J. R. Taylor, Brooklyn, N. Y. Turn-table for trolleys. No. 1,018,407; Feb. 27; Sp. p. 4812; Gaz. vol. 175; p. 852.

Cameron, James O. (See Going, Thomas E., assignor.)

Cameron, John M., Johnson City, Tenn. Steam-boiler. No. 1,018,873; Feb. 27; Sp. p. 5858; Gaz. vol. 175; p. 1011.

Camp, Thomas L., *et al.* (See Smith, Robert H., assignor.)

Campbell, Charles H., New York, N. Y., and P. T. Campbell, Hackensack, N. J. Milk product and process. No. 1,016,548; Feb. 6; Sp. p. 745; Gaz. vol. 175; p. 109.

Campbell, Pearl T. (See Campbell, Charles H. and P. T.)

Campbell, Robert D., Pittsburgh, Pa. Denitrogenizing practically pure iron. No. 1,017,620; Feb. 13; Sp. p. 3024; Gaz. vol. 175; p. 511.

Campos, Gino, Milan, Italy. Means for protecting electrical installations from excess voltages. No. 1,017,634; Feb. 13; Sp. p. 3056; Gaz. vol. 175; p. 516.

Campos, Gino, Milan, Italy. Means for the protection of electrical installations from excess voltages. No. 1,018,874; Feb. 27; Sp. p. 5863; Gaz. vol. 175; p. 1011.

Canfield, Francis D. (See Lazaga, Ignacio, assignor.)

Canton Culvert Company, The. (See Schlafly, Julius H., assignor.)

Cape, John E., Wilmette, Ill. Apparatus for heating water. No. 1,018,408; Feb. 27; Sp. p. 4815; Gaz. vol. 175; p. 853.

Carbone, Tito L., Charlottenburg, Germany. Arc-lamp. No. 1,017,641; Feb. 13; Sp. p. 3071; Gaz. vol. 175; p. 517.

Cardon, Francois E., New York, N. Y. Finger-ring construction. No. 1,018,875; Feb. 27; Sp. p. 5865; Gaz. vol. 175; p. 1012.

Caretti, Peter, Connellsville, Pa. Shoemaker's tool. No. 1,016,006; Feb. 6; Sp. p. 374; Gaz. vol. 175; p. 130.

Carl, Irving, Bakersfield, Cal. Oil-well pump. No. 1,017,647; Feb. 20; Sp. p. 3575; Gaz. vol. 175; p. 627.

Carley, William O., and C. Hollingsworth, Colfax, Wash. Subsurface-packer. No. 1,018,605; Feb. 27; Sp. p. 5305; Gaz. vol. 175; p. 921.

Carmer, James R. (See Keagy and Carmer.)

Carmichael, Ray, assignor to Indianapolis Gas Engine Company, Indianapolis, Ind. Internal-combustion engine. No. 1,016,981; Feb. 13; Sp. p. 1674; Gaz. vol. 175; p. 293.

Carney, George A., assignor of one-half to G. H. Littlefield, Boston, Mass. Handcuff. No. 1,017,955; Feb. 20; Sp. p. 3838; Gaz. vol. 175; p. 665.

Carney, Thomas, deceased; O. F. Davisson, administrator, assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,018,486; Feb. 27; Sp. p. 4965; Gaz. vol. 175; p. 879.

Carpenter, Columbus C., assignor of one-half to J. P. Moe, Milwaukee, Wis. Scaffolding attachment for roofs of buildings. No. 1,018,031; Feb. 20; Sp. p. 3997; Gaz. vol. 175; p. 692.

Carpenter, Edward F., Millersport, Ohio. Wall-supported incubator. No. 1,016,982; Feb. 13; Sp. p. 1679; Gaz. vol. 175; p. 293.

Carpenter, Floyd S. (See Carpenter, Frank C. and F. S.)

Carpenter, Frank C. and F. S., Louisville, Ky. Aeroplane. No. 1,016,609; Feb. 6; Sp. p. 875; Gaz. vol. 175; p. 130.

Carpenter, George H., assignor to Standard Roller Bearing Company, Philadelphia, Pa. Roller-cage. No. 1,018,694; Feb. 27; Sp. p. 5479; Gaz. vol. 175; p. 950.

Carr & Company. (See Carr, William T., assignor.) (Reissue.)

Carr, Joseph, assignor of one-half to A. G. Pollard, Lamont, Okla. Egg-tester. No. 1,016,610; Feb. 6; Sp. p. 877; Gaz. vol. 175; p. 131.

Carr, William T., assignor of one-half to Carr & Company, Limited, Carlisle, England. Machine for the manufacture of filled biscuits and the like. (Reissue.) No. 13,357; Feb. 13; Sp. p. 3073; Gaz. vol. 175; p. 518.

Carrier, Willis H. (See Comfort and Carrier.)

Carrington, Louis L. (See Dodge, Edward W., assignor.)

Carroll, John N. (See Smothers and Carroll.)

Carroll, Thomas, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,017,079; Feb. 13; Sp. p. 1902; Gaz. vol. 175; p. 328.

Carson, Angus, Tionesta, Pa. Sewing-machine needle. No. 1,017,247; Feb. 13; Sp. p. 2271; Gaz. vol. 175; p. 386.

Carson, William H., *et al.* (See Woodhull, Frederick W., assignor.)

Carstarphen, William P., Jr., Denver, Colo. Switch and cut-out box. No. 1,018,297; Feb. 20; Sp. p. 4563; Gaz. vol. 175; p. 783.

Carter, Charles C. (See De Witt, Charles, assignor.)

Carter-Crume Co., The. (See Bengough, James, assignor.)

Carter, Elliott C. (See Hart, Henry A., assignor.)

Carter, Henry F., assignor of one-half to C. N. Pate, Fort Smith, Ark. Brace for cotton-scraper standards. No. 1,016,814; Feb. 6; Sp. p. 1294; Gaz. vol. 175; p. 198.

Carter, James F., Wadley, Ala. Tire-setting tool. No. 1,017,956; Feb. 20; Sp. p. 3839; Gaz. vol. 175; p. 665.

Carter, Miles J. D., London, England. Envelop-feeding device for type-writers. No. 1,017,154; Feb. 13; Sp. p. 2018; Gaz. vol. 175; p. 246.

Casagrande, Annibal, Rochester, N. Y. Stand for tabling-machines. No. 1,017,843; Feb. 20; Sp. p. 3578; Gaz. vol. 175; p. 627.

Casgrain, Louis A., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Press. No. 1,016,983; Feb. 13; Sp. p. 1690; Gaz. vol. 175; p. 294.

Casgrain, Louis A., Winchester, Mass., assignor, by mesne assignments, to The United Shoe Machinery Company. Nailing-machine. No. 1,017,381; Feb. 13; Sp. p. 2538; Gaz. vol. 175; p. 430.

Casserly, Joseph E., New York, N. Y., assignor to Mly-Norris Safe Company, Perth Amboy, N. J. Safe. No. 1,018,606; Feb. 27; Sp. p. 5307; Gaz. vol. 175; p. 921.

Casterline, Floyd W., Tipton, Iowa. Electric motor. No. 1,017,510; Feb. 13; Sp. p. 2825; Gaz. vol. 175; p. 477.

Castner Electrolytic Alkali Company. (See Bailey, Gervais, assignor.)

Catucci, Pliny, Newark, N. J. Fishing-reel. No. 1,016,913; Feb. 6; Sp. p. 1503; Gaz. vol. 175; p. 232.

Cavanagh, James F., Philadelphia, Pa. Trousers-leg holder. No. 1,017,511; Feb. 13; Sp. p. 2832; Gaz. vol. 175; p. 477.

Cavanagh, John F., assignor of three-fourths to Lindsley and Allen Electric Company, Providence, R. I. Ignition device. No. 1,016,399; Feb. 6; Sp. p. 367; Gaz. vol. 175; p. 58.

Cavill, James C., and G. F. Lehberger, New Castle, Pa. Roll-polishing device. No. 1,018,163; Feb. 20; Sp. p. 4207; Gaz. vol. 175; p. 738.

Celfor Tool Company. (See Clark, Eugene B., assignor.)

Centala, Watson, Metz, Mich. Brake for self-waiting tables. No. 1,017,849; Feb. 20; Sp. p. 3577; Gaz. vol. 175; p. 627.

Century Sanitary Manufacturing Company. (See Unckless, Leslie, assignor.)

Cesario, John F., Bogalusa, La. Rotary motor. No. 1,017,850; Feb. 20; Sp. p. 3579; Gaz. vol. 175; p. 628.

Chadbourne, Edward J. (See Walker, George S., assignor.)

Chadwick, Francis C., assignor to Savage Arms Company, Utica, N. Y. Sight for firearms. No. 1,018,876; Feb. 27; Sp. p. 5866; Gaz. vol. 175; p. 1012.

Chaffee, Frank W., Albany, N. Y. Hasp-fastener for doors. No. 1,017,135; Feb. 13; Sp. p. 2021; Gaz. vol. 175; p. 347.

Chaffee, Frank W., Albany, N. Y. Hasp-fastener for doors. No. 1,017,136; Feb. 13; Sp. p. 2023; Gaz. vol. 175; p. 347.

Chainey, Emanuel, assignor of one-half to J. Akrigg, Florence, Wis. Saw-gummer. No. 1,016,740; Feb. 27; Sp. p. 5583; Gaz. vol. 175; p. 966.

Chalmers, James. (See Hood and Chalmers.)

Chalmers Motor Company. (See Morgan, Mathew B., assignor.)

Chamberlain, Elliot H., trustee. (See Rensencourt, Eugène G., assignor.)

Chambers, James A., Allegheny, Pa. Apparatus for handling glass. No. 1,016,933; Feb. 13; Sp. p. 1555; Gaz. vol. 175; p. 276.

Chambers Motors Limited. (See Patton, Alexander M., assignor.)

Champ, Joseph H., Cleveland, Ohio. Bottle-holder for bottle-filling machines. No. 1,017,088; Feb. 13; Sp. p. 1790; Gaz. vol. 175; p. 312.

Chandler, Charles S., *et al.* (See Cummins, Herbert L., assignor.)

Chapin, Francis A., Indianapolis, and W. Y. Chapin, Muncie, assignors to The Chapin Manufacturing Company, Indianapolis, Ind. Carbureter. No. 1,018,144; Feb. 20; Sp. p. 4299; Gaz. vol. 175; p. 738.

Chapin Manufacturing Company, The. (See Chapin, Francis A. and W. Y., assignors.)

Chapin, William Y. (See Chapin, Francis A. and W. Y.)

Chapman, Alexander E., Seattle, Wash. Garment-hook. No. 1,017,739; Feb. 20; Sp. p. 3295; Gaz. vol. 175; p. 588.

Chapman, Frank S., assignor to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,017,640; Feb. 20; Sp. p. 3022; Gaz. vol. 175; p. 559.

Chapman, Frank S., and J. T. Greene, assignors to The National Electric Specialty Company, Toledo, Ohio. Vacuum lightning-arrester. No. 1,017,646; Feb. 20; Sp. p. 3091; Gaz. vol. 175; p. 559.

Chappell, Frederick D., Oakland, Cal. Wave and tide motor. No. 1,016,460; Feb. 6; Sp. p. 369; Gaz. vol. 175; p. 58.

Charles W. Shoak Company. (See Shoak, Charles W., assignor.)

Charlton, Thomas, Chicago, Ill. Fluid-meter. No. 1,016,984; Feb. 13; Sp. p. 1636; Gaz. vol. 175; p. 276.

Charpier, Edward. (See Charpier, Walter H. R. and E.)

Charpier, Walter H. R. and E., Chicago, Ill. Pipe-cutter. No. 1,018,698; Feb. 27; Sp. p. 5450; Gaz. vol. 175; p. 950.

Chatfield, George L. (See Bradford and Chatfield.)

Chatillon, Ralph F., New York, N. Y. Balance. No. 1,017,187; Feb. 13; Sp. p. 2035; Gaz. vol. 175; p. 346.

Chaumeret, Georges, Gennevilliers, France. Switch-operating mechanism. No. 1,017,861; Feb. 20; Sp. p. 3582; Gaz. vol. 175; p. 628.

Cheatham, William P., Machville, Ky. Cultivator-fender. No. 1,018,296; Feb. 20; Sp. p. 4044; Gaz. vol. 175; p. 783.

Chemische Fabrik Griesheim Electron. (See Lenke, August L., assignor.)

Chenoweth, Allen S., Stilesville, Ind. Whiffletree-hook. No. 1,016,245; Feb. 6; Sp. p. 6; Gaz. vol. 175; p. 4.

Chernack Manufacturing Company. (See Smith, Charles S., assignor.)

Chestnut, Daniel, Philadelphia, Pa. Apparatus for treating skins. No. 1,017,852; Feb. 20; Sp. p. 3588; Gaz. vol. 175; p. 628.

Chicago Flexo Manufacturing Company. (See Appleton, Albert L., assignor.)

Chicago Railway Equipment Company. (See Harrison, Philip B., assignor.)

Chickering, Frank W., Hardwick, Vt. Ladder-hook. No. 1,018,577; Feb. 27; Sp. p. 5265; Gaz. vol. 175; p. 1012.

Child's Welfare Company, The. (See Robbins, Alice G., assignor.)

Chilton, Henry J., Chicago, Ill. Bottle filling and capping machine. No. 1,016,611; Feb. 6; Sp. p. 879; Gaz. vol. 175; p. 181.

Chmidling, August C., and J. W. Tischer, Lowemont, Kans. Wheeled ladder. No. 1,017,382; Feb. 13; Sp. p. 2545; Gaz. vol. 175; p. 431.

Christensen, Carl, Bradley, assignor, by mesne assignments, to Sears, Roebuck & Company, Chicago, Ill. Agricultural implement. No. 1,016,351; Feb. 20; Sp. p. 4657; Gaz. vol. 175; p. 800.

Christensen, Christoffer A., Portland, Oreg. Centrifugal ore and slime concentrator. No. 1,018,578; Feb. 27; Sp. p. 5309; Gaz. vol. 175; p. 1013.

Christiana, Elmer V., Kingston, N. Y. Vise for holding vehicle-lamps. No. 1,016,014; Feb. 6; Sp. p. 1506; Gaz. vol. 175; p. 232.

Christiansen, Hans, Boston, assignor to Bedford Safety Razor Company, Bedford, Mass. Safety-razor. No. 1,017,138; Feb. 13; Sp. p. 2025; Gaz. vol. 175; p. 348.

Christianson, Oscar, Sugar Grove, Ill. Adjustable pulverizer. No. 1,017,383; Feb. 13; Sp. p. 2547; Gaz. vol. 175; p. 431.

Cincinnati Milling Machine Company, The. (See De Leeuw, Adolph L., assignor.)

Cincinnati Planer Company, The. (See Reaton, Henry P., assignor.)

Clamer, Guilliam H., Philadelphia, Pa. Iron-nickel-copper alloy. No. 1,016,549; Feb. 6; Sp. p. 747; Gaz. vol. 175; p. 110.

Clapp, Cassius M. (See Barnett, Charles E., assignor.)

Clare, James P., Stratham, N. H. Secondary or storage battery. No. 1,017,080; Feb. 13; Sp. p. 1914; Gaz. vol. 175; p. 328.

Clark, Alexander. (See Burgess and Clark.)

Clark Car Company. (See Clark, Charles H., assignor.)

Clark, Charles E., Wellsville, N. Y. Pumping-power. No. 1,017,730; Feb. 20; Sp. p. 3286; Gaz. vol. 175; p. 588.

Clark, Charles H., Crafton, assignor to Clark Car Company, Pittsburgh, Pa. Dump-car. No. 1,018,165; Feb. 20; Sp. p. 4301; Gaz. vol. 175; p. 739.

Clark, Cornelius, Lodi, Cal. Portable shingle-rack. No. 1,016,935; Feb. 13; Sp. p. 1561; Gaz. vol. 175; p. 276.

Clark, Cyrus E., *et al.* (See Savignac and Myers, assignors.)

Clark, Eugene B., assignor to Celfor Tool Company, Chicago, Ill. Drilling apparatus. No. 1,018,096; Feb. 20; Sp. p. 4157; Gaz. vol. 175; p. 715.

Clark, Frederick B., Philadelphia, Pa., assignor to S. A. Weston, Arden, N. C. Ice-cutting apparatus. No. 1,016,550; Feb. 6; Sp. p. 748; Gaz. vol. 175; p. 110.

Clark, George L. (See Hayhurst, Colbert G., assignor.)

Clark, James L., South Kensington, London, England. Pipe or launder. No. 1,016,815; Feb. 6; Sp. p. 1295; Gaz. vol. 175; p. 199.

Clark, Le Vert, Detroit, Mich. Implement for holding and spreading viscous material. No. 1,017,957; Feb. 20; Sp. p. 3840; Gaz. vol. 175; p. 666.

Clark, Walter G., New York, N. Y. Electric-lamp socket. No. 1,018,480; Feb. 27; Sp. p. 4975; Gaz. vol. 175; p. 877.

Clarke, Marcus S., Houston, Tex. Hydrocarbon-burner. No. 1,017,631; Feb. 13; Sp. p. 3023; Gaz. vol. 175; p. 511.

Claus, Christian. (See Visger and Claus.)

Clausen, Hermann, Brooklyn, N. Y. Hanger. No. 1,018,007; Feb. 20; Sp. p. 4136; Gaz. vol. 175; p. 715.

Clausson, Martin. (See Nickum and Clausson.)

Clay, Joseph B., Cedar Falls, Iowa. Gate. No. 1,017,248; Feb. 13; Sp. p. 2272; Gaz. vol. 175; p. 396.

Clay, Samuel E. Sterling, Colo. Postal-card reels. No. 1,016,918; Feb. 6; Sp. p. 1506; Gaz. vol. 175; p. 232.

Clearwater, John E. (See Axford and Clearwater.)

Cleaveland, Merrill E. (See McWilliams and Cleaveland.)

Clewell, Eva M., Canton, Ohio. Waist and skirt holder. No. 1,016,612; Feb. 6; Sp. p. 883; Gaz. vol. 175; p. 182.

Clifford, Marion A., Jersey City, N. J. Torch. No. 1,018,613; Feb. 6; Sp. p. 824; Gaz. vol. 175; p. 182.

Cloetermeyer, Edward C., St. Louis, Mo. Boat. No. 1,018,488; Feb. 27; Sp. p. 5023; Gaz. vol. 175; p. 880.

Clyde Iron Works. (See McKinney, John B., assignor.)

Coates, Harry B., Sacramento, Cal. Shearing device. No. 1,017,324; Feb. 13; Sp. p. 2531; Gaz. vol. 175; p. 431.

Cochran, Clarence S., assignor to The Cochran Die and Tool Company, Denver, Colo. Piece-measuring tool. No. 1,017,328; Feb. 20; Sp. p. 3096; Gaz. vol. 175; p. 589.

Codd, William C., *et al.* (See Braddock, Isaac A., assignor.)

Coffield Motor Washer Company, The. (See Coffield, Peter T., assignor.)

Coffield, Peter T., assignor to The Coffield Motor Washer Company, Dayton, Ohio. Hydraulic motor. No. 1,018,961; Feb. 27; Sp. p. 4949; Gaz. vol. 175; p. 1042.

Cogswell, James A., Boston, Mass. Wood paving-block. No. 1,017,650; Feb. 20; Sp. p. 3094; Gaz. vol. 175; p. 589.

Colburn, Leslie H., Franklin, Pa. Automatic tripping device for the feed mechanism of machine-tools. No. 1,017,635; Feb. 13; Sp. p. 2832; Gaz. vol. 175; p. 516.

Coldwell, William H., Newburgh, N. Y. Clutch mechanism. No. 1,018,008; Feb. 20; Sp. p. 4150; Gaz. vol. 175; p. 715.

Cole, Frederick W., Newton, Mass., assignor to The Gamewell Fire-Alarm Telegraph Company, New York, N. Y. Auxiliarized fire-alarm box. No. 1,016,401; Feb. 6; Sp. p. 370; Gaz. vol. 175; p. 58.

Cole, Warren W., assignor to The E. T. Burrowes Company, Portland, Me. Metal fly-screen. No. 1,017,958; Feb. 20; Sp. p. 3842; Gaz. vol. 175; p. 666.

Coleman, John P. (See Allen and Coleman.)

Coles, Howard. (See Austin and Coles.)

Collier, Frank A., Galveston, Tex. Combination coat and pants hanger. No. 1,018,290; Feb. 20; Sp. p. 4565; Gaz. vol. 175; p. 784.

Collins, Edward E., Detroit, Mich. Window-cleaner and glass-polisher. No. 1,017,681; Feb. 13; Sp. p. 1915; Gaz. vol. 175; p. 328.

Collins, William A., Chicago, Ill. Deformed reinforcing-bar for concrete. No. 1,016,944; Feb. 13; Sp. p. 1636; Gaz. vol. 175; p. 294.

Colonial Trust Company, The, trustee. (See Hodgkinson, Francis, assignor.)

Colorado-Yule Marble Co. (See Eggers, Ernest, assignor.)

Columbia Chemical Company. (See Galt, Hugh A., assignor.)

Comer, John J., New York, N. Y. Lock for gas-cocks. No. 1,016,872; Feb. 6; Sp. p. 1413; Gaz. vol. 175; p. 218.

Comfort, Edward W., Chicago, Ill., and W. H. Carrier, assignors to Buffalo Forge Company, Buffalo, N. Y. Differential thermostatic device. No. 1,018,551; Feb. 27; Sp. p. 5198; Gaz. vol. 175; p. 994.

Compagnie Generale de Phonographes Cinematographes et Appareils de Precision. (See Ivatts, Ernest A., assignor.)

Compton, Melvin D., New York, N. Y. Electric stock-quotation board. No. 1,017,740; Feb. 20; Sp. p. 3289; Gaz. vol. 175; p. 588.

Comstock, John M., Rochester, N. Y. Device for removing dust from ashes. No. 1,017,651; Feb. 20; Sp. p. 3095; Gaz. vol. 175; p. 559.

Comstock, Thomas W., New Haven, Conn. Ash-sifter. No. 1,017,206; Feb. 13; Sp. p. 2179; Gaz. vol. 175; p. 371.

Comtois, Alfred L., Worcester, Mass., assignor to Woods-Sherwood Company, Strainer. No. 1,016,249; Feb. 6; Sp. p. 7; Gaz. vol. 175; p. 4.

Conderman, George, Hornell, N. Y. Vehicle-spring. No. 1,017,512; Feb. 13; Sp. p. 2833; Gaz. vol. 175; p. 477.

Condit, Sears B., Jr. (See Burnham, George A., assignor.)

Conley, Charles M., Parkers Landing, Pa. Puzzle postal card. No. 1,018,270; Feb. 27; Sp. p. 5571; Gaz. vol. 175; p. 1013.

Conrad, Edwin S. (See Shepherd and Conrad.)

Conrad, Frank, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Prepayment-meter. No. 1,017,062; Feb. 13; Sp. p. 1910; Gaz. vol. 175; p. 329.

Continental Can Company. (See Lowerre, Edgar R., assignor.)

Continental Can Company. (See Norton and Larkin, assignors.)

Continental Manufacturing Company, The. (See Koons, Virgil C., assignor.)

Coo, Thomas J., Toronto, Ontario, Canada, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,250; Feb. 6; Sp. p. 8; Gaz. vol. 175; p. 4.

Cook, Albert M. (See Haas and Cook.)

Cook, Walter K., assignor to The American Bank Protection Company, Minneapolis, Minn. Electrical burglar-alarm. No. 1,018,089; Feb. 13; Sp. p. 1562; Gaz. vol. 175; p. 277.

Cooke, Richard T., Indianapolis, Ind. Can-spout. No. 1,018,552; Feb. 27; Sp. p. 5201; Gaz. vol. 175; p. 994.

Coomba, Frank H., Natick, Mass. Straining device. No. 1,016,196; Feb. 20; Sp. p. 4306; Gaz. vol. 175; p. 739.

Cooper, Edwin H., Los Angeles, Cal. Spring-clip. No. 1,017,249; Feb. 13; Sp. p. 2273; Gaz. vol. 175; p. 396.

Cooper, Fred E., E. W. Tunnicliff, and G. K. Page, Peoria, Ill. Billiard-cue. No. 1,018,052; Feb. 20; Sp. p. 3993; Gaz. vol. 175; p. 692.

Cooper, Herbert, Brooklyn, N. Y. Gas-engine. No. 1,018,481; Feb. 27; Sp. p. 4961; Gaz. vol. 175; p. 877.

Cooper, Herbert, Brooklyn, N. Y. Vehicle-frame. No. 1,018,482; Feb. 27; Sp. p. 4967; Gaz. vol. 175; p. 877.

Cooper Hewitt Electric Company. (See Thomas, Percy H., assignor.)

Cooper, John J., Providence, R. I. Implement for automobile-engines. No. 1,018,236; Feb. 20; Sp. p. 4444; Gaz. vol. 175; p. 761.

Cooper, Matthew A., St. Louis, Mo. Buckle. No. 1,018,330; Feb. 27; Sp. p. 5073; Gaz. vol. 175; p. 1015.

Cooper, Russell P. (See Felts, Samuel E., assignor.)

Cooper, William J., Rodeo, Cal. Rail-fastener. No. 1,018,942; Feb. 27; Sp. p. 5045; Gaz. vol. 175; p. 1042.

Copper Oil Products Company. (See Ellis, Carleton, assignor.)

Corbett, James H., Jr., Syracuse, N. Y., assignor, by mesne assignments, to E. M. Worden, Salem, Va. Electric-alarm mail-box. No. 1,017,512; Feb. 13; Sp. p. 2834; Gaz. vol. 175; p. 478.

Corbin Cabinet Lock Company, The. (See Stone, Elmer R., assignor.)

Corbin, Charles B., Grand Rapids, Mich. Garment-hanger. No. 1,017,854; Feb. 20; Sp. p. 3590; Gaz. vol. 175; p. 629.

Cordley & Hayes. (See Sherwood, William L., assignor.)

Cormine, Marshall, New York, N. Y. Testing-machine. No. 1,016,822; Feb. 6; Sp. p. 197; Gaz. vol. 175; p. 30.

Corroyer, Joseph, Oakland, Cal. Acetylene-gas generator. No. 1,016,475; Feb. 6; Sp. p. 543; Gaz. vol. 175; p. 84.

Corrugated Bar Company. (See Burk, William H., assignor.)

Corry Caster Company. (See Thompson, Frank E., assignor.)

Corser, George E. (See Roberts and Corser.)

Coscia, Louis. (See Prince and Coscia.)

Cotton, Herbert M. (See Cotton, Orville D. and H. M.)

Cotton, Orville D. and H. M., Dayton, Ohio. Stoker-furnace. No. 1,018,649; Feb. 27; Sp. p. 5399; Gaz. vol. 175; p. 935.

Cottrell, Frederick G., Berkeley, assignor to International Precipitation Company, San Francisco, Cal. Purification of gases. No. 1,016,476; Feb. 6; Sp. p. 545; Gaz. vol. 175; p. 84.

Coulston, Harry, assignor to Philadelphia Textile Machinery Company, Philadelphia, Pa. Feed-rolls for veneer-driers. No. 1,016,737; Feb. 6; Sp. p. 1123; Gaz. vol. 175; p. 174.

Coulter, Charles J., Hammond, Ind. Combined rail drill and clamp. No. 1,016,477; Feb. 6; Sp. p. 548; Gaz. vol. 175; p. 84.

Courts, Benjamin D., Cincinnati, Ohio. Spring-bed. No. 1,016,402; Feb. 6; Sp. p. 374; Gaz. vol. 175; p. 59.

Courville, Joseph, Detroit, Mich. Mechanical piano-player. No. 1,018,167; Feb. 20; Sp. p. 4306; Gaz. vol. 175; p. 739.

Cousans, Louis B., Lincoln, England. Apparatus for blowing pipe-organs, harmoniums, or like musical instruments. No. 1,018,483; Feb. 27; Sp. p. 4988; Gaz. vol. 175; p. 878.

Cover, Samuel E., *et al.* (See Ellis, William J., assignor.)

Cover, Thomas, Jr., *et al.* (See Ellis, William J., assignor.)

Cowles, John T., Chicago, Ill. Pocket guard and alarm. No. 1,016,672; Feb. 6; Sp. p. 1007; Gaz. vol. 175; p. 152.

Coy, Ervin S., Tacoma, Wash. Eyeglass-case. No. 1,017,514; Feb. 13; Sp. p. 2836; Gaz. vol. 175; p. 478.

Coyle, James W., Carterville, assignor of one-half to W. A. Cristy, Joplin, Mo. Drill-sharpening machine. No. 1,016,551; Feb. 6; Sp. p. 749; Gaz. vol. 175; p. 110.

Coyne, Frederick E., and J. W. Eskholme, Chicago, Ill., assignors to Sebree Mail Exchanging Device Co., Carrollton, Ky. Railway mail catching and delivering apparatus. No. 1,016,478; Feb. 6; Sp. p. 550; Gaz. vol. 175; p. 85.

Coyne, Frederick E., S. G. Taylor, Jr., and J. W. Eskholme, Chicago, Ill., assignors to Sebree Mail Exchanging Device Co., Carrollton, Ky. Railway mail catching and delivering apparatus. No. 1,016,479; Feb. 6; Sp. p. 554; Gaz. vol. 175; p. 85.

Craig, A. L., *et al.* (See Barrickman and Holt, assignors.)

Crain, Rudolf E., Oberursel, assignor to Maschinenfabrik Mecenus A. G., Frankfort-on-the-Main, Germany. Pulling-over machine for use in the manufacture of boots and shoes. No. 1,016,480; Feb. 6; Sp. p. 557; Gaz. vol. 175; p. 85.

Crammond, William A., New York, N. Y. Steam-pipe for gas-holders. No. 1,018,032; Feb. 20; Sp. p. 4000; Gaz. vol. 175; p. 692.

Cranford, Frederick L. (See Meem, James C., assignor.)

Crawford, Edward M., Corozal, Canal Zone. Type-writing machine. No. 1,017,959; Feb. 20; Sp. p. 3844; Gaz. vol. 175; p. 666.

Creasey, Samuel E., Sanford, Me. Mayonnaise-oil dropper. No. 1,016,481; Feb. 6; Sp. p. 558; Gaz. vol. 175; p. 86.

Crevelling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,018,963; Feb. 27; Sp. p. 6046; Gaz. vol. 175; p. 1042.

Crevelling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,018,964; Feb. 27; Sp. p. 6048; Gaz. vol. 175; p. 1043.

Crisp, Joseph E., Somerville, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,018,965; Feb. 27; Sp. p. 6051; Gaz. vol. 175; p. 1043.

Cristy, W. A. (See Coyle, James W., assignor.)

Critchlil, Francis H., Braintree, England. Jointing metal sash-bars. No. 1,016,916; Feb. 6; Sp. p. 1506; Gaz. vol. 175; p. 232.

Crompton Company. (See Morton, Arthur, assignor.)

Crompton & Knowles Loom Works. (See Crompton and Lunney, assignors.)

Crompton & Knowles Loom Works. (See Thayer, Edward D., assignor.)

Crompton, Randolph, and W. Lunney, Worcester, Mass., assignors, by mesne assignments, to Crompton & Knowles Loom Works. Bobbin-hopper for filling-changing looms. No. 1,018,168; Feb. 20; Sp. p. 4309; Gaz. vol. 175; p. 740.
Cronin, C. H. (See Lyons, Peter F., assignor.)
Cronin, John P., Paterson, N. J. Creel. No. 1,016,408; Feb. 6; Sp. p. 376; Gaz. vol. 175; p. 59.
Crosby, Charles H., Curtis, Nebr. Can-carrier. No. 1,018,696; Feb. 27; Sp. p. 5482; Gaz. vol. 175; p. 950.
Crowell, John H., Vineyard Haven, Mass. Combined cap and socket wrench used on and in connection with valves of pneumatic tires for wheels. No. 1,017,537; Feb. 13; Sp. p. 2878; Gaz. vol. 175; p. 485.
Crowley, Christopher O., and H. A. Lamb, London, England. Direction-indicator for vehicles. No. 1,016,404; Feb. 6; Sp. p. 377; Gaz. vol. 175; p. 60.
Culbertson, William C., Rushville, Ind. Corn-husking machine. No. 1,018,881; Feb. 27; Sp. p. 5874; Gaz. vol. 175; p. 1013.
Cullman, Otto, Chicago, Ill. Differential device. No. 1,018,553; Feb. 27; Sp. p. 5202; Gaz. vol. 175; p. 904.
Culp, John W., Bay City, assignor to Battery-Ball Mfg. Co., Jackson, Mich. Game apparatus. No. 1,018,400; Feb. 27; Sp. p. 4821; Gaz. vol. 175; p. 853.
Cummins, Herbert L., assignor of five-twelfths to H. M. Fulmer, East Ely, Nev., one-twelfth to B. L. Quayle, and one-twelfth to C. S. Chandler. Rotary engine. No 1,017,139; Feb. 13; Sp. p. 2029; Gaz. vol. 175; p. 348.
Cumnock, Arthur J., New York, N. Y. Making shirts. No. 1,016,552; Feb. 6; Sp. p. 752; Gaz. vol. 175; p. 111.
Cunningham, Edward R., assignor of one-third to E. R. Biegler and one-third to F. C. Tate, Des Moines, Iowa. Combined relay, target-setting, and return-call-circuit-closing device. No. 1,016,482; Feb. 6; Sp. p. 559; Gaz. vol. 175; p. 86.
Cunningham, William J., Philadelphia, Pa. Vehicle-wheel. No. 1,016,673; Feb. 6; Sp. p. 1009; Gaz. vol. 175; p. 152.
Cuppel, Charles M., Milwaukee, Wis. Milk-strainer. No. 1,017,083; Feb. 13; Sp. p. 1917; Gaz. vol. 175; p. 320.
Curry, Claud D., Brooklyn, N. Y. Chuck for paper-roll shafts. No. 1,016,738; Feb. 6; Sp. p. 1124; Gaz. vol. 175; p. 174.
Cusick, John, Sharon, Pa. Rail-joint. No. 1,016,674; Feb. 6; Sp. p. 1010; Gaz. vol. 175; p. 153.
Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Janette, John T., assignor.)
Cutter, Charles H. (See Roby and Cutter.)
D. Saunders' Sons. (See Linehan, John F., assignor.)
Dagelen, Frank J., Milwaukee, Wis. Mail-box. No. 1,018,810; Feb. 27; Sp. p. 5787; Gaz. vol. 175; p. 990.
Dahl-Jensen, Jens P., assignor to Aktieselskabet Bing & Grøndahls Porcellainsfabrik, Copenhagen, Denmark. Process and apparatus for making insulators. No. 1,018,484; Feb. 27; Sp. p. 4992; Gaz. vol. 175; p. 878.
Daimler Motoren Gesellschaft. (See Daimler, Paul, assignor.)
Daimler, Paul, Cannstatt, assignor to Daimler Motoren Gesellschaft, Unterturkheim, Germany. Explosion-motor. No. 1,016,675; Feb. 6; Sp. p. 1011; Gaz. vol. 175; p. 153.
Dale, Albert C., Longbeach, assignor of one-half to E. H. Barmore, Los Angeles, Cal. Primer for sewer-seals. No. 1,016,676; Feb. 6; Sp. p. 1013; Gaz. vol. 175; p. 154.
Dallet, Casper O. (See Wallace, William S., assignor.)
Dana, William H., assignor to L. Rauh, Dayton, Ohio. Voting-machine. No. 1,016,553; Feb. 6; Sp. p. 754; Gaz. vol. 175; p. 111.
Danat, Wilmer E., Buffalo, N. Y. Closure for containers. No. 1,016,759; Feb. 6; Sp. p. 1137; Gaz. vol. 175; p. 176.
Daniel, Charles, Los Angeles, Cal. Fishing-tool. No. 1,016,816; Feb. 6; Sp. p. 1297; Gaz. vol. 175; p. 190.
Daniel, Charles A. (See Neff, Frank E., assignor.)
Daniell, Salvatore, Milan, Italy. Apparatus for instantaneous distribution of sawdust or disinfecting-powders, with a tiltable dust-bin and an automatic closing device for the cover. No. 1,018,410; Feb. 27; Sp. p. 4828; Gaz. vol. 175; p. 854.
Dannbeiser, Joseph M., New York, N. Y. Display device. No. 1,016,677; Feb. 6; Sp. p. 1014; Gaz. vol. 175; p. 154.
Danon, Jean, Le Rainey, France. Apparatus for opening oysters. No. 1,018,109; Feb. 20; Sp. p. 4311; Gaz. vol. 175; p. 740.
Danquard, Thomas, New York, N. Y., assignor to Auto Pneumatic Action Co. Pumping device. No. 1,017,084; Feb. 13; Sp. p. 1919; Gaz. vol. 175; p. 329.
Darrah, Mary H. G., assignor to Le Papillon Corset Co., New York, N. Y. Combined hip-reducer and hose-supporter. No. 1,016,614; Feb. 6; Sp. p. 887; Gaz. vol. 175; p. 132.
Dath, Charles E., assignor to W. H. Miner, Chicago, Ill. Safety-support for draft-rigging. No. 1,018,485; Feb. 27; Sp. p. 4964; Gaz. vol. 175; p. 879.
Daugherty, James D., Kittanning, Pa., assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,018,811; Feb. 27; Sp. p. 5739; Gaz. vol. 175; p. 990.
Daus, Louis A., Evansville, Ind. Awning-bracket. No. 1,017,515; Feb. 13; Sp. p. 2837; Gaz. vol. 175; p. 478.
Davenport, Elmer E., assignor of one-half to M. R. Davenport, Baraboo, Wis. Belt-lock. No. 1,016,534; Feb. 6; Sp. p. 750; Gaz. vol. 175; p. 111.
Davenport, Merwin R. (See Davenport, Elmer E., assignor.)
Davidson, John, Pendleton, England. Condensing steam-engine. No. 1,018,300; Feb. 20; Sp. p. 4566; Gaz. vol. 175; p. 784.
Davidson, John A., assignor to James B. Clow & Sons, Chicago, Ill. Urinal. No. 1,018,966; Feb. 27; Sp. p. 6064; Gaz. vol. 175; p. 1042.
Davidson, Lowell M., Eldorado, Ill. Wire-stretching device. No. 1,018,882; Feb. 27; Sp. p. 5877; Gaz. vol. 175; p. 1014.
Davis, Charles E., Denver, Colo. Roller-bearing. No. 1,018,697; Feb. 27; Sp. p. 5483; Gaz. vol. 175; p. 950.
Davis, Don D., Saginaw, Mich. Car-seal. No. 1,016,985; Feb. 13; Sp. p. 1687; Gaz. vol. 175; p. 294.
Davis, Ewing C., Greensboro, Pa. Valve. No. 1,017,385; Feb. 13; Sp. p. 2553; Gaz. vol. 175; p. 432.
Davis, Fred M., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,017,085; Feb. 13; Sp. p. 1921; Gaz. vol. 175; p. 330.
Davis, George E., Visalia, Cal. Harrow. No. 1,018,301; Feb. 20; Sp. p. 4563; Gaz. vol. 175; p. 784.
Davis, George H., assignor to The E. T. Burrowes Company, Portland, Me. Screen. No. 1,018,099; Feb. 20; Sp. p. 4162; Gaz. vol. 175; p. 716.
Davis, Henry J., Niles, Ohio. Rolling-mill guide. No. 1,017,283; Feb. 13; Sp. p. 2336; Gaz. vol. 175; p. 398.
Davis, Henry W., Martins Ferry, Ohio. Bolt for piston follower-plates. No. 1,018,741; Feb. 27; Sp. p. 5586; Gaz. vol. 175; p. 966.
Davis, John B., and H. W. Smith, Abingdon, Ill. Collapsible coop. No. 1,017,140; Feb. 13; Sp. p. 2030; Gaz. vol. 175; p. 348.
Davis, Joseph W., Concordia, Kans. Snatch-block. No. 1,017,652; Feb. 20; Sp. p. 3096; Gaz. vol. 175; p. 560.
Davis, Lester E., Riverside, Cal. Baking-oven. No. 1,018,583; Feb. 27; Sp. p. 5878; Gaz. vol. 175; p. 1014.
Davis, Lewis K., New York, N. Y. Building construction. No. 1,017,336; Feb. 13; Sp. p. 2556; Gaz. vol. 175; p. 432.
Davis Locomotive Wheel Company. (See Westlake, Charles T., assignor.)
Davis, Loyd, Nauvoo, Ill. Tooth. No. 1,016,555; Feb. 6; Sp. p. 760; Gaz. vol. 175; p. 112.
Davis, William A., Clovis, N. Mex. Type-writer attachment. No. 1,018,411; Feb. 27; Sp. p. 4830; Gaz. vol. 175; p. 855.
Davisson, Oscar F., administrator. (See Carney, Thomas.)
Davock, Harlow N., Detroit, Mich. Window-sash operator. No. 1,018,034; Feb. 20; Sp. p. 4002; Gaz. vol. 175; p. 693.
Dawley, Clarence A., Plainfield, N. J. Internal-combustion engine. No. 1,018,742; Feb. 27; Sp. p. 5587; Gaz. vol. 175; p. 967.
Dawson, Arthur T., and G. T. Buckham, London, assignors to Vickers Limited, Westminster, England. Electrical apparatus for transmitting and receiving signals. No. 1,018,884; Feb. 27; Sp. p. 5879; Gaz. vol. 175; p. 1014.
Dayton, James M., assignor to Excelsior Needle Company, Torrington, Conn. Carburetor. No. 1,016,251; Feb. 6; Sp. p. 17; Gaz. vol. 175; p. 5.
Dayton, James M., assignor to Excelsior Needle Company, Torrington, Conn. Carburetor. No. 1,016,252; Feb. 6; Sp. p. 19; Gaz. vol. 175; p. 5.
Dayton Telephone Lockout Mfg. Co., The. (See Kneisly, Daniel W., assignor.)
De Angeli, Carlo F. (See Verity, Joseph, assignor.)
De Camp, George. (See Vernon and De Camp.)
De Grey, Gerald, Philadelphia, Pa. Safety connection for gas-fixtures. No. 1,017,654; Feb. 20; Sp. p. 3098; Gaz. vol. 175; p. 560.
De Laval Steam Turbine Company. (See Wallen, Carl E., assignor.)
De Leeuw, Adolph L., Hamilton, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio. Vise. No. 1,018,035; Feb. 20; Sp. p. 4004; Gaz. vol. 175; p. 693.
De Smith, Henry, assignor to M. D. Knowlton Company, Rochester, N. Y. Mitering-gage for corner-cutting machines. No. 1,018,660; Feb. 27; Sp. p. 5488; Gaz. vol. 175; p. 951.
De Wick, William H., Brooklyn, N. Y. Mandolin. No. 1,018,651; Feb. 27; Sp. p. 5402; Gaz. vol. 175; p. 935.
De Witt, Charles, assignor to C. C. Carter, Baltimore, Md. Bottle-closure. No. 1,018,387; Feb. 20; Sp. p. 4756; Gaz. vol. 175; p. 814.
Dean Electric Company. (See Manson, Ray H., assignor.)
Dearborn, Charles A., assignor to D. J. Newland, New York, N. Y. Stitch-forming mechanism for sewing-machines. No. 1,018,885; Feb. 27; Sp. p. 5881; Gaz. vol. 175; p. 1014.
Dearborn, Eugene L., Fairfield, Cal. Platting-box. No. 1,018,607; Feb. 27; Sp. p. 5906; Gaz. vol. 175; p. 921.
Debourg, Jean M. J., Lyon, France. Converting vegetable fibers into threads of silky appearance. No. 1,018,650; Feb. 27; Sp. p. 5401; Gaz. vol. 175; p. 935.
Deckebach, Henry E., Cincinnati, Ohio. Removing alcohol from and purifying beer. No. 1,017,066; Feb. 13; Sp. p. 1925; Gaz. vol. 175; p. 330.

Dee, Daniel, assignor of one-half to E. C. Stratford, Pocatello, Idaho. Grate-bar. No. 1,017,653; Feb. 20; Sp. p. 3097; Gaz. vol. 175; p. 560.
Deegans, William R., et al. (See Devlese, John T., assignor.)
Deere & Company. (See Payton, Richard, assignor.)
Deere & Mansur Company. (See White, Charles E., assignor.)
Degener, Heinrich, Berlin, Germany, assignor to Mergenthaler Linotype Company. Linotype-machine. No. 1,017,387; Feb. 13; Sp. p. 2560; Gaz. vol. 175; p. 432.
Delmel, Fritz, Berlin, Germany; J. Simson, attorney in fact, assignor to said J. Simson, individually. Frictional pocket-agitator. No. 1,018,100; Feb. 20; Sp. p. 4164; Gaz. vol. 175; p. 716.
Delanoy, Frederick W., Alameda, Cal. Core-making machine. No. 1,017,039; Feb. 13; Sp. p. 1792; Gaz. vol. 175; p. 312.
Denegar, Norton M., Hudson, N. Y. Shaper-machine. No. 1,016,253; Feb. 6; Sp. p. 20; Gaz. vol. 175; p. 6.
Denneen, Francis S., Mansfield, Ohio. Suspension device for trolley-wires and the like. No. 1,017,741; Feb. 20; Sp. p. 3201; Gaz. vol. 175; p. 589.
Dennis, Claude H., Jackson, Mich. Fire-net. No. 1,018,698; Feb. 27; Sp. p. 5485; Gaz. vol. 175; p. 951.
Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Fore truck for vehicles. No. 1,017,516; Feb. 13; Sp. p. 2839; Gaz. vol. 175; p. 479.
Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Manure-spreader. No. 1,018,743; Feb. 27; Sp. p. 5585; Gaz. vol. 175; p. 968.
Designers Rule Co. (See Gran and Karlson, assignors.)
Dethloff, Frederick L., Buffalo, N. Y. Billiard-cue tip. No. 1,018,744; Feb. 27; Sp. p. 5583; Gaz. vol. 175; p. 968.
Detrick, David F. (See Detrick, Harrison M., assignor.)
Detrick, Harrison M., assignor to D. F. Detrick, Dayton, Ohio. Dry-heat vulcanizer. No. 1,017,284; Feb. 13; Sp. p. 2334; Gaz. vol. 175; p. 396.
Deutscher, William, New York, N. Y. Propeller. No. 1,018,237; Feb. 20; Sp. p. 4446; Gaz. vol. 175; p. 763.
Devlese, John T., Hilltop, assignor of one-half to W. E. Deegans, Glen Jean, W. Va., one-fourth to L. P. Johnson, Lafollette, Tenn., and one-fourth to W. S. Johnson, Mount Hope, W. Va. Rail-bond. No. 1,017,285; Feb. 13; Sp. p. 2341; Gaz. vol. 175; p. 396.
Dexter Folder Company. (See Hoidt, George H., assignor.)
Diamond Match Company, The. (See Nolan, John R., assignor.)
Diamond Match Company, The. (See Palmer and Parlon, assignors.)
Diamond Match Company, The. (See Wright, Jacob P., assignor.)
Diamond Power Specialty Co. (See Higgins, Harry A., assignor.)
Dibble, Bert J., Denver, Colo. Vaporizing and air-heating attachment for bath-cabinets. No. 1,016,873; Feb. 6; Sp. p. 1412; Gaz. vol. 175; p. 218.
Dirkens, A. A. (See Lain and Jennings, assignors.)
Dickinson, Frank A., Philadelphia, Pa. Packing-ring or gasket. No. 1,017,355; Feb. 20; Sp. p. 3591; Gaz. vol. 175; p. 629.
Dickson, Gilbert J., Albany, N. Y. Lamp-wick trimmer and wiper. No. 1,018,745; Feb. 27; Sp. p. 5601; Gaz. vol. 175; p. 969.
Dickson, Jeremiah J., Indianapolis, Ind. Pneumatic rubbing-machine. No. 1,017,389; Feb. 13; Sp. p. 2561; Gaz. vol. 175; p. 433.
Dickson, Jeremiah J., Indianapolis, Ind. Rubbing-machine engine. No. 1,017,390; Feb. 13; Sp. p. 2564; Gaz. vol. 175; p. 434.
Diesbach, Heinrich von. (See Lüttringhaus and Diesbach.)
Diesel, Rudolf, Munich, Germany. Fluid-actuated clutch. No. 1,018,412; Feb. 27; Sp. p. 4831; Gaz. vol. 175; p. 855.
Dietz, Gustav, Yonkers, N. Y. Moving-picture-projecting apparatus. No. 1,017,250; Feb. 13; Sp. p. 2275; Gaz. vol. 175; p. 387.
Diffenderfer, Francis A., assignor, by mesne assignments, to M. E. Diffenderfer, Brooklyn, N. Y. Roller for cotton-gins. No. 1,016,817; Feb. 6; Sp. p. 1299; Gaz. vol. 175; p. 190.
Diffenderfer, Francis A., assignor, by mesne assignments, to M. E. Diffenderfer, Brooklyn, N. Y. Roller cotton-gin. No. 1,018,902; Feb. 20; Sp. p. 4569; Gaz. vol. 175; p. 784.
Diffenderfer, Mary E. (See Diffenderfer, Francis A., assignor.)
Diiger, Louis M., Canton, Ohio. Rail-joint. No. 1,018,700; Feb. 27; Sp. p. 5489; Gaz. vol. 175; p. 951.
Dillon, George F., McKees Rocks, Pa. Hat-pin-point protector. No. 1,016,670; Feb. 6; Sp. p. 1016; Gaz. vol. 175; p. 154.
Dillon, Joseph A., New Haven, Conn. Transom-lift. No. 1,017,067; Feb. 13; Sp. p. 1926; Gaz. vol. 175; p. 330.
Disbrow, Levi A., Owatonna, Minn. Combined churn and butter-worker. No. 1,018,594; Feb. 27; Sp. p. 5203; Gaz. vol. 175; p. 904.
Disbrow, Reuben E., Owatonna, Minn. Combined churn and butter-worker. No. 1,018,036; Feb. 20; Sp. p. 4006; Gaz. vol. 175; p. 693.
Dittmar, Max, Wülfel, near Hanover, Germany. Manufacture of phosphoric acid. No. 1,018,746; Feb. 27; Sp. p. 5602; Gaz. vol. 175; p. 968.
Dittrich, Ferdinand J., Philadelphia, Pa. Roofing-tool. No. 1,017,390; Feb. 13; Sp. p. 2567; Gaz. vol. 175; p. 434.
Dixon, Elliott, Bacup, England. Bottle-holder. No. 1,016,823; Feb. 6; Sp. p. 200; Gaz. vol. 175; p. 30.
Dixon, Henry L., Knoxville, assignor to H. L. Dixon Company, Pittsburgh, Pa. Glass-pot furnace. No. 1,017,391; Feb. 13; Sp. p. 2568; Gaz. vol. 175; p. 434.
Dobbin, George B. (See Harling and Dobbin.)
Dobes, Joseph J., Chicago, Ill. Dispensing device. No. 1,017,856; Feb. 20; Sp. p. 3591; Gaz. vol. 175; p. 630.
Dodd, James A., Muskogee, Okla. Roller-truck. No. 1,017,517; Feb. 13; Sp. p. 2840; Gaz. vol. 175; p. 479.
Dodds, Frank W., Fort Morgan, Colo. Level. No. 1,016,254; Feb. 6; Sp. p. 21; Gaz. vol. 175; p. 6.
Dodge, Clarence W., Taft, Cal. Well-boring rotary bit. No. 1,017,206; Feb. 13; Sp. p. 2181; Gaz. vol. 175; p. 371.
Dodge, Edward W., Augusta, assignor of one-half to L. L. Carrington, Savannah, Ga. Printing-wheel and ink-fountains. No. 1,018,886; Feb. 27; Sp. p. 5883; Gaz. vol. 175; p. 1015.
Doll, Herman F., Wichita, Kans. Changeable front door. No. 1,018,101; Feb. 20; Sp. p. 4165; Gaz. vol. 175; p. 716.
Doman, Lewis B., assignor to The Amphion Piano Player Company, Syracuse, N. Y. Valve for pneumatic actions. No. 1,017,857; Feb. 20; Sp. p. 3593; Gaz. vol. 175; p. 630.
Dombroski, Joe, Chelsea, Mass. Feed-bag. No. 1,018,170; Feb. 20; Sp. p. 4312; Gaz. vol. 175; p. 741.
Donahoe, Hedley J., assignor of one-half to T. C. Tiedebohl, Chicago, Ill. Metallic vehicle-wheel. No. 1,018,303; Feb. 20; Sp. p. 4575; Gaz. vol. 175; p. 785.
Donaldson, James A., et al. (See Neil, James A., assignor.)
Donnelly, John F., and H. Lyon, Brockton, Mass.; said Lyon assignor to said Donnelly. Leather-scarfing machine. No. 1,018,171; Feb. 20; Sp. p. 4313; Gaz. vol. 175; p. 741.
Doolittle, Perry E., Ontario, Canada, assignor, by mesne assignments, to Doolittle Rim Co. Ltd. Detachable rim for pneumatic tires. No. 1,018,238; Feb. 20; Sp. p. 4447; Gaz. vol. 175; p. 763.
Doolittle Rim Co. Ltd. (See Doolittle, Perry E., assignor.)
Döring, Hermann, Berlin, Germany. Street-refuse collector. No. 1,016,556; Feb. 6; Sp. p. 761; Gaz. vol. 175; p. 112.
Dormandy, Garry J., assignor of one-half to United Shirt & Collar Company, Troy, N. Y. Sewing-machine. No. 1,016,937; Feb. 13; Sp. p. 1567; Gaz. vol. 175; p. 277.
Dormandy, Garry J., Troy, N. Y., assignor to The United Shirt and Collar Company. Machine for folding blanks for cuffs, &c. No. 1,017,040; Feb. 13; Sp. p. 1794; Gaz. vol. 175; p. 313.
Dorsey, Herbert G., Ithaca, N. Y. Device for graphically reproducing sound-waves. No. 1,017,392; Feb. 13; Sp. p. 2570; Gaz. vol. 175; p. 435.
Doty, Orlo, Pueblo, Colo. Baggage-truck. No. 1,017,858; Feb. 20; Sp. p. 3594; Gaz. vol. 175; p. 630.
Double Body Bolster Company. (See Howard and Pfaeger, assignors.)
Douglas, Roy C., Oakland, Cal. Fog-signal light. No. 1,018,304; Feb. 20; Sp. p. 4576; Gaz. vol. 175; p. 785.
Douglass, John A., Austin, Tex. Display-cabinet. No. 1,016,818; Feb. 6; Sp. p. 1302; Gaz. vol. 175; p. 200.
Douglass, Leon F., San Rafael, Cal., assignor to Victor Talking Machine Company. Sound-box. No. 1,017,041; Feb. 13; Sp. p. 1805; Gaz. vol. 175; p. 313.
Dow, George B. N., and R. E. Walsh, Manchester, N. H. Sharpening implement. No. 1,016,615; Feb. 6; Sp. p. 888; Gaz. vol. 175; p. 132.
Downs, Fred L., Gillum, Ill. Combined tie and track-fastening. No. 1,018,305; Feb. 20; Sp. p. 4578; Gaz. vol. 175; p. 786.
Downs, Samuel T., Irvington, Ind., assignor to H. Mueller Manufacturing Company, Decatur, Ill. Service-box key. No. 1,018,172; Feb. 20; Sp. p. 4316; Gaz. vol. 175; p. 741.
Drake, Herbert L., Medford, assignor of forty-five one-hundredths to G. E. Foster, Mellen, Wis. Bark-removing machine. No. 1,017,655; Feb. 20; Sp. p. 3100; Gaz. vol. 175; p. 560.
Draper Company. (See Hollins, Denis M., assignor.)
Draper Company. (See McCaslin, William, assignor.)
Draper Company. (See Stimpson, Edward S., assignor.)
Draper Company. (See Tolman, Andrew L., assignor.)
Draper, Francis W., assignor to Starr Piano Company, Richmond, Ind. Pneumatic player mechanism. No. 1,016,917; Feb. 6; Sp. p. 1509; Gaz. vol. 175; p. 234.
Drechsler, John A., Hillsdale, Mich. Shoe-retainer. No. 1,018,652; Feb. 27; Sp. p. 5403; Gaz. vol. 175; p. 936.
Dremel, Albert J., Milwaukee, Wis. Artificial fish-bait. No. 1,017,088; Feb. 13; Sp. p. 1927; Gaz. vol. 175; p. 331.
Dresse, Henry, Cincinnati, Ohio. Stop mechanism for turret-lathes. No. 1,017,859; Feb. 20; Sp. p. 3596; Gaz. vol. 175; p. 630.
Drew, Herbert H., Waterloo, Wis. Elevated-carrier stop. No. 1,017,393; Feb. 13; Sp. p. 2572; Gaz. vol. 175; p. 435.

Du Pont, Francis I., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del. Apparatus for treating explosive powder. No. 1,017,236; Feb. 18; Sp. p. 2242; Gaz. vol. 175; p. 328.
Duff Manufacturing Company, The. (See Freed, George F., assignor.)
Dufjardin, Henri, New York, N. Y. Preserving fruit and vegetables. No. 1,018,812; Feb. 27; Sp. p. 5744; Gaz. vol. 175; p. 961.
Dumbler, Julius A., Nanticoke, Pa. Bolt. No. 1,018,997; Feb. 27; Sp. p. 5801; Gaz. vol. 175; p. 1015.
Dunbar, Willis C. (See Fischer, Louis R., assignor.)
Duncan, Joseph F. (See Larkin and Duncan.)
Duncan, William W. and M. E. Tousley, Watertown, assignors to Hood Rubber Co., Boston, Mass. Apparatus for producing rubber-coated blanks. No. 1,016,468; Feb. 6; Sp. p. 562; Gaz. vol. 175; p. 87.
Duncan, William W., Watertown, and A. N. Hood, Newton, assignors to Hood Rubber Company, Boston, Mass. Making pneumatic tires. No. 1,016,918; Feb. 6; Sp. p. 1514; Gaz. vol. 175; p. 234.
Dungan, Isaac H., Humboldt, Tenn. Water-meter. No. 1,017,860; Feb. 20; Sp. p. 3606; Gaz. vol. 175; p. 631.
Dunham, Frank, New York, N. Y. Clothes-drier. No. 1,018,037; Feb. 20; Sp. p. 4006; Gaz. vol. 175; p. 694.
Dunn, Edward A., Newton, Mass. Index system. No. 1,017,089; Feb. 13; Sp. p. 1923; Gaz. vol. 175; p. 331.
Dunn, Frank P., assignor to The Anderson Tool Company, Anderson, Ind. Scale. No. 1,017,656; Feb. 20; Sp. p. 3105; Gaz. vol. 175; p. 561.
Dunn, Frank P., assignor to The Anderson Tool Company, Anderson, Ind. Scale. No. 1,018,173; Feb. 20; Sp. p. 4319; Gaz. vol. 175; p. 741.
Dunn, Frank P., assignor of thirty one-hundredths to Anderson Tool Company, Anderson, Ind., and one-fourth to O. C. Reeves, Toledo, Ohio. Scale. No. 1,018,513; Feb. 27; Sp. p. 5745; Gaz. vol. 175; p. 901.
Dunn, Fred J., et al. (See Hall, Frank M., assignor.)
Dunn, Patrick T., Cedar Rapids, Iowa. Adjustable ball-caster. No. 1,016,524; Feb. 6; Sp. p. 201; Gaz. vol. 175; p. 31.
Dunn, Russell L., and L. M. Hall, San Francisco, Cal. Subaqueous tunneling and excavating. No. 1,017,622; Feb. 13; Sp. p. 3028; Gaz. vol. 175; p. 512.
Dunton, Orravill L., North Adams, Mass. Flying-machine. No. 1,018,413; Feb. 27; Sp. p. 4833; Gaz. vol. 175; p. 856.
Dunwody, Robson, Kirkwood, Ga. Signaling apparatus for turpentine-stills. No. 1,018,036; Feb. 20; Sp. p. 4009; Gaz. vol. 175; p. 694.
Dunwody, Robson, Atlanta, Ga. Thermometer. No. 1,018,906; Feb. 20; Sp. p. 4579; Gaz. vol. 175; p. 786.
Duplex Printing Press Company. (See Bechman, Henry F., assignor.)
Dupray, E. E., et al. (See Lindsay, Charles E., assignor.)
Durant, Edward M., et al. (See Smith, Robert H., assignor.)
Durr, Henry H., Springfield, Ohio. Vehicle-tire. No. 1,018,814; Feb. 27; Sp. p. 5748; Gaz. vol. 175; p. 992.
Dvorak, Joseph, Pittsburgh, Pa. Smoke-separator. No. 1,017,394; Feb. 13; Sp. p. 2573; Gaz. vol. 175; p. 436.
Dyer, William A., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,018,701; Feb. 27; Sp. p. 5490; Gaz. vol. 175; p. 952.
Dyer, William A., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,018,748; Feb. 27; Sp. p. 5604; Gaz. vol. 175; p. 969.
E. Goldman & Co. (See Paul, John T. H., assignor.)
E. Goldman & Co. (See Wakefield, George M., assignor.)
E. Goldman & Co. (See Werner, Henry E., assignor.)
E. Kirstein Sons Co. (See Kirstein, Henry E., assignor.)
E. A. Mallory and Sons. (See Brush, George E., assignor.)
E. A. Mallory and Sons. (See Starr, John H., assignor.)
E. & B. Holmes Machinery Company. (See Bougler, Edwin F., assignor.)
E. G. Staude Manufacturing Co. (See Staude, Edwin G., assignor.)
E. I. du Pont de Nemours Powder Company, The. (See Du Pont, Francis I., assignor.)
E. T. Burrowes Company, The. (See Cole, Warren W., assignor.)
E. T. Burrowes Company, The. (See Davis, George H., assignor.)
Eagle Lock Co. (See Weed, David W., assignor.)
Eames, George M., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,018,263; Feb. 27; Sp. p. 5494; Gaz. vol. 175; p. 936.
Eastlack, Walter H., Merchantville, N. J. Non-refillable bottle. No. 1,016,679; Feb. 6; Sp. p. 1016; Gaz. vol. 175; p. 166.
Eastwood-Park Company. (See Ford, Kahle R., assignor.)
Eaton, Clarence L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Seam-trimming and welt-beating machine. No. 1,018,690; Feb. 20; Sp. p. 4011; Gaz. vol. 175; p. 694.
Eberle, Frank J., New York, N. Y. Sheet-feeding mechanism for printing-presses. No. 1,018,618; Feb. 27; Sp. p. 5750; Gaz. vol. 175; p. 962.
Edens, John, assignor to H. F. Brammer Manufacturing Company, Davenport, Iowa. Gearing. No. 1,017,261; Feb. 18; Sp. p. 2279; Gaz. vol. 175; p. 387.
Edgar, Clarence W., Los Angeles, Cal. Dry concentrator. No. 1,016,689; Feb. 6; Sp. p. 1018; Gaz. vol. 175; p. 155.
Edge, Charles N. (See Yeshino and Edge.)
Edgerton, Charles, Philadelphia, Pa. Apparatus for extracting grease and oils. No. 1,017,818; Feb. 13; Sp. p. 2841; Gaz. vol. 175; p. 479.
Edison Storage Battery Company. (See Edison, Thomas A., assignor.)
Edison, Thomas A. (See Aylesworth, Jonas W., assignor.)
Edison, Thomas A. (See Schiff, Charles, assignor.)
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Electroplating apparatus. No. 1,016,875; Feb. 6; Sp. p. 1415; Gaz. vol. 175; p. 219.
Edison, Thomas A., Llewellyn Park, assignor to Edison Storage Battery Company, West Orange, N. J. Means and method for preventing depletion of electrolyte. No. 1,016,874; Feb. 6; Sp. p. 1413; Gaz. vol. 175; p. 219.
Edman, Nels G., Chicago, Ill. Newspaper-box. No. 1,018,174; Feb. 20; Sp. p. 4322; Gaz. vol. 175; p. 742.
Edmond-Simonnet, Marie A. A., La Garenne, Seine, France. Machine-tool for clenching eyelets. No. 1,018,888; Feb. 27; Sp. p. 5892; Gaz. vol. 175; p. 1016.
Edmonds, John H., Athol, Kans. Hay-rack. No. 1,018,175; Feb. 20; Sp. p. 4322; Gaz. vol. 175; p. 742.
Edson, Mark A., assignor to The Caloric Company, Janesville, Wis. Radiator-heater. No. 1,018,414; Feb. 27; Sp. p. 4836; Gaz. vol. 175; p. 856.
Edwards, William F., Ashland, Ohio. Condenser. No. 1,017,519; Feb. 13; Sp. p. 2847; Gaz. vol. 175; p. 480.
Edwin Harrington, Son & Co. (See Scott and Harrington, assignors.)
Eggs, Frederick, assignor to The Smith & Egge Mfg. Co., Bridgeport, Conn. Sash-pulley. No. 1,017,252; Feb. 13; Sp. p. 2263; Gaz. vol. 175; p. 388.
Eggers, Ernest, assignor to Colorado-Yule Marble Co., New York, N. Y. Stone-sawing machine. No. 1,017,207; Feb. 13; Sp. p. 2183; Gaz. vol. 175; p. 371.
Eggleston, John E., assignor to Standard Oil Company, Bayonne, N. J. Utilizing sulfur-containing petroleum. No. 1,018,040; Feb. 20; Sp. p. 4013; Gaz. vol. 175; p. 695.
Ehle, Archibald H., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Internal-combustion locomotive. No. 1,018,889; Feb. 27; Sp. p. 5893; Gaz. vol. 175; p. 1016.
Ehret, Cornelius D., Ardmore, Pa. Signaling by electro-radiant energy. No. 1,018,555; Feb. 27; Sp. p. 5205; Gaz. vol. 175; p. 906.
Ehrlich, Paul, and A. Bertheim, Frankfort-on-the-Main, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Arsenobenzene derivatives and make same. No. 1,017,657; Feb. 20; Sp. p. 3108; Gaz. vol. 175; p. 561.
Eichberg, Friedrich. (See Winter and Eichberg.)
Eilers, Hio P., New York, N. Y. Book-page-recording device. No. 1,018,816; Feb. 27; Sp. p. 5754; Gaz. vol. 175; p. 992.
Eisel, Frank, F. Hagen, and A. Schroeder, Breese, Ill. Railway-tie. No. 1,017,042; Feb. 13; Sp. p. 1807; Gaz. vol. 175; p. 314.
Eisele, Louis F., assignor to W. H. Watts & Co., Philadelphia, Pa. Means for balancing frames for fireplace screens, blowers, and window-sashes. No. 1,016,876; Feb. 6; Sp. p. 1413; Gaz. vol. 175; p. 220.
Eldridge, Hilliary. (See Rockey and Eldridge.)
Electric Goods Manufacturing Company. (See Lincoln, Edwin S., assignor.)
Electric Goods Manufacturing Company. (See Thomson, Henry C., assignor.)
Electrochemische Werke G. m. b. H. (See Rothe, Fritz, assignor.)
Electromagnetic Tool Company, The. (See Rowe, George H., assignor.)
Elfborg, Henry G., Chicago, Ill. Railway-rail. No. 1,018,102; Feb. 20; Sp. p. 4167; Gaz. vol. 175; p. 717.
Elkin, John B., assignor of one-half to J. H. Berry, Columbia, S. C. Automatic fuse-resetter. No. 1,018,229; Feb. 20; Sp. p. 4450; Gaz. vol. 175; p. 764.
Ellett, Frederick S., Elmira, N. Y. Clutch. No. 1,018,890; Feb. 27; Sp. p. 5895; Gaz. vol. 175; p. 1016.
Ellett, Frederick S., Elmira, N. Y. Clutch. No. 1,018,891; Feb. 27; Sp. p. 5896; Gaz. vol. 175; p. 1017.
Elliott, George H., Johnstown, Pa. Spike-protecting device. No. 1,017,988; Feb. 18; Sp. p. 2575; Gaz. vol. 175; p. 436.
Elliott, James A. R., New York, N. Y. Ear-protector. No. 1,016,877; Feb. 6; Sp. p. 1419; Gaz. vol. 175; p. 220.
Elliott, Marion. (See Elliott, Thaddeus V., assignor.)
Elliott, S. K. (See Frey, Sigmund, assignor.)
Elliott, Thaddeus V., New York, assignor to M. Elliott, Flatbush, N. Y. Grate. No. 1,018,382; Feb. 20; Sp. p. 4050; Gaz. vol. 175; p. 701.
Elliott, William S., Pittsburgh, Pa. Strainer. No. 1,018,654; Feb. 27; Sp. p. 5405; Gaz. vol. 175; p. 936.
Ellis, Carleton, Larchmont, N. Y. Paint and varnish vehicle. No. 1,017,143; Feb. 13; Sp. p. 2662; Gaz. vol. 175; p. 349.
Ellis, Carleton, Montclair, N. J., assignor to Copper Oil Products Company. Preserving wood. No. 1,017,636; Feb. 13; Sp. p. 3004; Gaz. vol. 175; p. 510.

Ellis, Carleton, Larchmont, N. Y., assignor to Ellis-Foster Company. Producing ethyl [illegible]. No. 1,016,415; Feb. 27; Sp. p. 4837; Gaz. vol. 175; p. 857.
Ellis-Foster Company. (See Ellis, Carleton, assignor.)
Ellis, Malcolm, West Orange, N. J. Ribbon winding and reversing mechanism. No. 1,018,178; Feb. 20; Sp. p. 4324; Gaz. vol. 175; p. 742.
Ellis, William, Chicago, Ill. Mileage transportation-ticket. No. 1,018,748; Feb. 27; Sp. p. 5619; Gaz. vol. 175; p. 970.
Ellis, William J., Anderson, N. C., assignor of one-third to T. Cover, Jr., Philadelphia, Pa., and one-third to R. E. Cover, Andrews, N. C. Rubber. No. 1,016,494; Feb. 6; Sp. p. 562; Gaz. vol. 175; p. 87.
Ellis, William V., Huntingdon, assignor, by mesne assignments, to J. C. Blair Specialty Company, Huntingdon, Pa. Rest and lifting-lever. No. 1,018,085; Feb. 27; Sp. p. 5460; Gaz. vol. 175; p. 957.
Ellison, Henry R., Girard, assignor of one-half to R. M. Ellison, Rockbridge, Ill. Hay rake and loader. No. 1,016,740; Feb. 6; Sp. p. 1558; Gaz. vol. 175; p. 176.
Ellison, Rees M. (See Ellison, Henry R., assignor.)
Elsmere, John, Battle Creek, Mich. Form for concrete constructions. No. 1,016,468; Feb. 6; Sp. p. 997; Gaz. vol. 175; p. 87.
Elston, George H. (See Wilson, Reuben H. G., assignor.)
Ely-Norris Safe Company. (See Bedell, Orlando, assignor.)
Ely-Norris Safe Company. (See Casserly, Joseph, assignor.)
Emerson, Jerome E., Lockport, N. Y. Indicator-gage. No. 1,016,616; Feb. 6; Sp. p. 849; Gaz. vol. 175; p. 152.
Emerson Typewriter Co. (See Pfau, Max, assignor.)
Emerson Typewriter Co., The. (See Sling, August, assignor.)
Emerson Typewriter Company. (See Raber, Joseph, assignor.)
Emery, Arthur L. (See Roberts and Emery.)
Engle, David B., Kleber, Ohio, assignor of one-half to A. Landon & Sons Rope Company, St. Louis, Mo. Coupling device. No. 1,018,350; Feb. 27; Sp. p. 5209; Gaz. vol. 175; p. 906.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,018,255; Feb. 6; Sp. p. 28; Gaz. vol. 175; p. 6.
Enright, John W., New Orleans, La. Resilient wheel. No. 1,018,307; Feb. 20; Sp. p. 4541; Gaz. vol. 175; p. 786.
Eppenstein, Otto, assignor to the Firm of C. Heine, Sons, Germany. Tobacco-pipe. No. 1,018,335; Feb. 6; Sp. p. 294; Gaz. vol. 175; p. 81.
Epplhimer, George L. (See Hechelsman and Epplhimer.)
Erben, John, Cleveland, Ohio. Cooking stove or range. No. 1,017,043; Feb. 13; Sp. p. 1933; Gaz. vol. 175; p. 314.
Erber, Josef. (See Wagner and Erber.)
Erdmann, Charles F. (See Wiesmann and Erdmann.)
Erickson, Charles A., Minneapolis, Minn. Child's hand-car. No. 1,018,656; Feb. 27; Sp. p. 5412; Gaz. vol. 175; p. 937.
Erkens, Firm of J. W. (See Geissler, Adalbert, assignor.)
Ertle, William J., Rochita, Col. Rush-hammer. No. 1,018,592; Feb. 27; Sp. p. 5260; Gaz. vol. 175; p. 1017.
Erwin, Otto. (See Myers and Erwin.)
Eskholme, John W. (See Corse and Eskholme.)
Eskholme, John W. (See Corse, Taylor, and Eskholme.)
Esser, Peter, Paterson, N. J. Sharpening device. No. 1,018,177; Feb. 20; Sp. p. 4323; Gaz. vol. 175; p. 743.
Essmueller Mill Furnishing Company. (See Denninger, August, assignor.)
Eason, James. (See Rodway and Eason.)
Etienne, Albert, St.-Benoit-sur-Loire, assignor to E. Lory, Paris, France. Apparatus for making wigs and false fringes. No. 1,017,268; Feb. 13; Sp. p. 2264; Gaz. vol. 175; p. 388.
Evans, Benjamin, Bluefield, W. Va. Mail catcher and deliverer. No. 1,018,819; Feb. 6; Sp. p. 1204; Gaz. vol. 175; p. 200.
Evans, Mark G., and G. W. Logan, Denver, Colo. Clothes-washer. No. 1,016,520; Feb. 6; Sp. p. 1207; Gaz. vol. 175; p. 201.
Evensen, Anton, Chicago, Ill. Non-heat-conducting receptacle. No. 1,018,041; Feb. 20; Sp. p. 4017; Gaz. vol. 175; p. 695.
Evensen, William, assignor to Goss Printing Press Company, Chicago, Ill. Roller-socket for printing-press rollers. No. 1,016,489; Feb. 6; Sp. p. 570; Gaz. vol. 175; p. 88.
Ewell, Frank E., East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making boots and shoes. No. 1,017,742; Feb. 20; Sp. p. 3294; Gaz. vol. 175; p. 532.
Excelsior Needle Company. (See Dayton, James M., assignor.)
Exline, Marcus P., Dallas, Tex. Mailing-cabinet. No. 1,016,821; Feb. 6; Sp. p. 1908; Gaz. vol. 175; p. 201.
Fabrique Nationale D'Armes de Guerre Societe Anonyme. (See Aedrl, Alfred, assignor.)
Fageol, Rollie R., Oakland, Cal. Securing attachment for tool-heads. No. 1,018,383; Feb. 20; Sp. p. 4061; Gaz. vol. 175; p. 701.
Fairchild, William, assignor to W. C. and C. R. Martineau, Albany, N. Y. Loose-leaf binder. No. 1,016,557; Feb. 6; Sp. p. 762; Gaz. vol. 175; p. 112.
Fairfield, Alfred R., assignor of one-third to E. S. Harter and one-third to T. H. Hitt, Indianapolis, Ind. Pipe-joint. No. 1,018,354; Feb. 20; Sp. p. 4342; Gaz. vol. 175; p. 801.
Fallot, Louis, Paris, France. Acetylene-generator. No. 1,016,681; Feb. 6; Sp. p. 1020; Gaz. vol. 175; p. 155.
Fallows, Edward H. (See Batten, Percy H., assignor.)
Fallows, Edward H. (See Jones, Harry, assignor.)
Fallows, Edward H., trustee. (See Gallagher, Joseph D., assignor.)
Fanslow, Benjamin O., assignor, by mesne assignments, to J. F. Middstedt, Los Angeles, Cal. Rotary printing-machine. No. 1,016,662; Feb. 6; Sp. p. 1021; Gaz. vol. 175; p. 155.
Fanslow, Benjamin O., Williamsport, Pa., assignor to Polygraph Duplicating Typewriter Company, New York, N. Y. Type-case. No. 1,017,520; Feb. 13; Sp. p. 2840; Gaz. vol. 175; p. 480.
Fanslow, Benjamin O., Williamsport, Pa., assignor to Polygraph Duplicating Typewriter Company, New York, N. Y. Ribbon-feeding mechanism for reproducing-machines. No. 1,017,655; Feb. 20; Sp. p. 3100; Gaz. vol. 175; p. 561.
Farbwerke vorm. Meister Lucius & Brüning. (See Haag, Rudolf, assignor.)
Farbwerke vorm. Meister Lucius & Brüning. (See Stein, Friedrich, assignor.)
Farbwerke vorm. Meister Lucius & Brüning. (See Wagner and Erber, assignors.)
Farnes, John L., Rexburg, Idaho, assignor of one-fourth to D. Athey and L. J. Findley, Salt Lake City, and one-fourth to M. H. Farnes, Logan, Utah. Nut-lock. No. 1,017,521; Feb. 13; Sp. p. 2851; Gaz. vol. 175; p. 481.
Farnes, Matthew H., et al. (See Farnes, John L., assignor.)
Farquhar, Milton J., Wilmington, Ohio. Register. No. 1,018,750; Feb. 27; Sp. p. 5613; Gaz. vol. 175; p. 970.
Farr and Bailey Manufacturing Company. (See Paul, Henry P., assignor.)
Farrell, Arthur J., Pittsburgh, Pa. Paper-holder. No. 1,018,237; Feb. 27; Sp. p. 5756; Gaz. vol. 175; p. 963.
Faulds, John, Oak Park, assignor of one-half to J. I. Marshall, Chicago, Ill. Bake-oven. No. 1,018,178; Feb. 20; Sp. p. 4320; Gaz. vol. 175; p. 742.
Faust, Casper, Oshkosh, Wis. Safety-gate for bridges. No. 1,017,060; Feb. 13; Sp. p. 1950; Gaz. vol. 175; p. 332.
Fechner, Albert H. and W., Goliad, Tex. Window-shade adjuster. No. 1,016,256; Feb. 6; Sp. p. 27; Gaz. vol. 175; p. 6.
Fechner, William. (See Fechner, Albert H. and W.)
Fedders, John M., assignor to T. C. Fedders, Buffalo, N. Y. Radiator. No. 1,017,396; Feb. 18; Sp. p. 2575; Gaz. vol. 175; p. 436.
Fedders, Theodore C. (See Fedders, John M., assignor.)
Federal Electric Company. (See Geebet, John H., assignor.)
Fees, Arthur W., Blair, Nebr. Hot-blast liquid and gaseous fuel burner. No. 1,016,257; Feb. 6; Sp. p. 28; Gaz. vol. 175; p. 7.
Farbwerke vorm. Meister Lucius & Brüning. (See Ehrlich and Bertheim, assignors.)
Felbel, Jacob, New York, assignor to Union Typewriter Company, Hoe, N. Y. Type-writing machine. No. 1,017,861; Feb. 20; Sp. p. 3602; Gaz. vol. 175; p. 631.
Felker, Albert G., Marshfield, Wis. Means for joining culvert-sections. No. 1,016,873; Feb. 6; Sp. p. 1420; Gaz. vol. 175; p. 220.
Felker, Arthur. (See Felker, Charles W., assignor.)
Felker, Charles W., Kansas City, Kans., assignor of one-half to A. Felker, Clarence, Mo. Lawn-mower. No. 1,018,487; Feb. 27; Sp. p. 5001; Gaz. vol. 175; p. 879.
Felt, Louis W. (See Roche, John L., assignor.)
Felts, Samuel E., assignor to E. P. Cooper, Keokee, Va. Churn. No. 1,017,522; Feb. 13; Sp. p. 2851; Gaz. vol. 175; p. 481.
Fenner, George P., New London, Conn. Printing-press. No. 1,017,523; Feb. 13; Sp. p. 2853; Gaz. vol. 175; p. 481.
Fergerson, Edward D., Hill City, Tenn. Harrow. No. 1,018,103; Feb. 20; Sp. p. 4170; Gaz. vol. 175; p. 717.
Ferguson, John, New York, N. Y. Gas-burner attachment for vehicle-lamps and the like. No. 1,018,104; Feb. 20; Sp. p. 4171; Gaz. vol. 175; p. 717.
Ferguson, Julius F., assignor of one-half to M. S. Hall, Ypsilanti, Mich. Trap. No. 1,016,405; Feb. 6; Sp. p. 878; Gaz. vol. 175; p. 80.
Ferguson, Ole Porter, Minn. Stamp. No. 1,018,808; Feb. 20; Sp. p. 4583; Gaz. vol. 175; p. 786.
Ferguson, Robert G., Lakewood, N. J. Flush-tank. No. 1,017,524; Feb. 13; Sp. p. 2854; Gaz. vol. 175; p. 481.
Ferguson, Walter, Jr., Stamford, Conn., and A. W. Buel, New York, N. Y. Railway-track. No. 1,017,525; Feb. 13; Sp. p. 2855; Gaz. vol. 175; p. 482.
Ferranti, Sebastian Z. de, Grindleford Bridge, England. Spinning, doubling, and twisting machine. No. 1,018,702; Feb. 27; Sp. p. 5499; Gaz. vol. 175; p. 952.
Ferrara, Francesco, Boston, Mass. Adjustable window-shade-roll holders. No. 1,017,659; Feb. 20; Sp. p. 3113; Gaz. vol. 175; p. 562.
Ferris, Harry H., Anaheim, Cal. Railway-rail anticreeper. No. 1,017,023; Feb. 13; Sp. p. 3029; Gaz. vol. 175; p. 512.

Ferris, Walter, assignor to The Bucyrus Company, South Milwaukee, Wis. Locomotive for self-propelled pile-drivers and the like. No. 1,017,624; Feb. 18; Sp. p. 3030; Gaz. vol. 175; p. 512.
Field, Fred F. (See Bostock, Thomas, assignor.)
Findlay, Leon J., *et al.* (See Farmer, John L., assignor.)
Firth, John. (See Midgley, Frederick W., assignor.)
Fischer, Anna M., Onaga, Kans. Nest. No. 1,017,960; Feb. 20; Sp. p. 3850; Gaz. vol. 175; p. 667.
Fischer, Louis E., Danville, Ill., assignor to W. C. Dunbar, Philadelphia, Pa. Passenger-car. No. 1,016,683; Feb. 6; Sp. p. 1025; Gaz. vol. 175; p. 156.
Fishback, Yates, White Hall, Ill. Amusement apparatus. No. 1,017,526; Feb. 18; Sp. p. 2858; Gaz. vol. 175; p. 482.
Fisher, Frank, Reardan, Wash. Electric-line switch. No. 1,017,527; Feb. 18; Sp. p. 2860; Gaz. vol. 175; p. 483.
Fisher, Fred J., Detroit, Mich. Bending wood. No. 1,016,694; Feb. 6; Sp. p. 1029; Gaz. vol. 175; p. 156.
Fisher, George A., and J. A. Morrison, assignors to Fisher Paper Box Company, Minneapolis, Minn. Egg-case. No. 1,017,254; Feb. 18; Sp. p. 2285; Gaz. vol. 175; p. 388.
Fisher Paper Box Company. (See Fisher and Morrison, assignors.)
Fisher, Walter E., New Iberia, La. Oil-burner. No. 1,018,893; Feb. 27; Sp. p. 5903; Gaz. vol. 175; p. 1018.
Fisk, Horace A., deceased, Clinton, Mich.; J. C. Fisk, administrator. Antiskidding device. No. 1,017,961; Feb. 20; Sp. p. 3851; Gaz. vol. 175; p. 667.
Fisk, Jefferson C., administrator. (See Fisk, Horace A.)
Fitz, Amos G., assignor to Fitz-Empire Double Pivot Last Company, Auburn, Me. Last. No. 1,016,986; Feb. 13; Sp. p. 1689; Gaz. vol. 175; p. 295.
Fitz-Empire Double Pivot Last Company. (See Fitz, Amos G., assignor.)
Fitz-Jerrell, Harry B. (See Lewis, Lyman S., assignor.)
Fitzgerald, Daniel H., New York, N. Y. Blotter-holder. No. 1,018,416; Feb. 27; Sp. p. 4839; Gaz. vol. 175; p. 857.
Fitzgerald, Larry, Whittier, Cal. Underreamer. No. 1,017,743; Feb. 20; Sp. p. 3295; Gaz. vol. 175; p. 590.
Flaccus, Ludwig C., assignor to Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier, Stettin, Germany. Hoisting device for oven-doors. No. 1,017,142; Feb. 13; Sp. p. 2034; Gaz. vol. 175; p. 349.
Fleming, Willis M., Holyoke, Mass., assignor to International Steam Pump Company. Pump. No. 1,018,751; Feb. 27; Sp. p. 5615; Gaz. vol. 175; p. 970.
Fletcher, Henry. Spring Hill, Brisbane, Queensland, Australia. Combined smoothing and glazing sad-iron. No. 1,016,879; Feb. 6; Sp. p. 1421; Gaz. vol. 175; p. 220.
Fletcher, Ira E., and W. J. MacLean, Brockton, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,017,397; Feb. 13; Sp. p. 2578; Gaz. vol. 175; p. 437.
Fliedner, Albert O. (See Fliedner, Benjamin F., A. O., and L.)
Fliedner, Benjamin F., A. O., and L., Cleveland, Ohio. Box. No. 1,017,962; Feb. 20; Sp. p. 3852; Gaz. vol. 175; p. 667.
Fliedner, Louis. (See Fliedner, Benjamin F., A. O., and L.)
Flood, James F. (See Harting and Flood.)
Flower, Homer. (See Gunn, Selim W., assignor.)
Flowers, Clifford, Camden, Ohio. Quick-repair shoe for corn-planters. No. 1,018,105; Feb. 20; Sp. p. 4173; Gaz. vol. 175; p. 718.
Flynt, Edward E., New York, assignor of one-fourth to W. T. Noble, Brooklyn, N. Y., and one-fourth to D. Macwatty, Hasbrouck Heights, N. J. Twin waste for soapstone washtubs. No. 1,016,880; Feb. 6; Sp. p. 1422; Gaz. vol. 175; p. 221.
Flynt, Louis W. G., assignor to Q. W. Booth, Rochester, N. Y. Skiving-machine. No. 1,017,963; Feb. 20; Sp. p. 3854; Gaz. vol. 175; p. 668.
Foerstelin, Hans, New York, N. Y. Making metal oxids. No. 1,019,004; Feb. 27; Sp. p. 6156; Gaz. vol. 175; p. 1057.
Foley, Timothy R. (See Hall, Charles H., assignor.)
Folkes, Hermann, Sr., New York, N. Y. Device for cleaning cutlery and the like. No. 1,018,752; Feb. 27; Sp. p. 5616; Gaz. vol. 175; p. 971.
Folkes, Hermann, Sr., New York, N. Y. Device for cleaning cutlery and the like. No. 1,018,753; Feb. 27; Sp. p. 5618; Gaz. vol. 175; p. 971.
Folsom, John R., St. Louis, Mo. Telegraph-key. No. 1,017,398; Feb. 18; Sp. p. 2581; Gaz. vol. 175; p. 437.
Ford, Arthur W., assignor to H. T. P. Bates, Quincy, Mass. Post. No. 1,018,754; Feb. 27; Sp. p. 5619; Gaz. vol. 175; p. 971.
Ford, Harry J., San Quentin, Cal., assignor of one-half to W. J. Hill. Electromagnetic engine. No. 1,018,809; Feb. 20; Sp. p. 4584; Gaz. vol. 175; p. 787.
Ford, Kelsie B., assignor to Eastwood-Park Company, Newark, N. J. Hand-bag or the like. No. 1,018,417; Feb. 27; Sp. p. 4840; Gaz. vol. 175; p. 857.
Fordyce, John R. (See Whipple and Fordyce.)
Forstner, Richard von, assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y. Greaseless peroxid paste. No. 1,018,240; Feb. 20; Sp. p. 4453; Gaz. vol. 175; p. 764.
Forslund, Michael A., Marinette, Wis. Animal-trap. No. 1,018,657; Feb. 27; Sp. p. 5413; Gaz. vol. 175; p. 933.
Forstrom, Edward E., assignor to The Bryant Electric Company, Bridgeport, Conn. Shade-holder. No. 1,018,241; Feb. 20; Sp. p. 4454; Gaz. vol. 175; p. 765.
Forsyth, William D., Youngstown, Ohio, assignor of one-half to A. M. Neeper, Pittsburgh, Pa. Expanded metal. No. 1,017,256; Feb. 18; Sp. p. 2296; Gaz. vol. 175; p. 389.
Foss, Walter O., Newington, assignor to C. E. Bunnell and R. Bradley, Branford, Conn. Driving mechanism. No. 1,016,987; Feb. 13; Sp. p. 1690; Gaz. vol. 175; p. 295.
Foster, Claud H., Cleveland, Ohio. Shock-absorbing device. No. 1,017,660; Feb. 20; Sp. p. 3115; Gaz. vol. 175; p. 562.
Foster, Claud H., Cleveland, Ohio. Cleaning device. No. 1,017,661; Feb. 20; Sp. p. 3117; Gaz. vol. 175; p. 563.
Foster Engineering Company Limited. (See Rogers, Ernest E., assignor.)
Foster, George E. (See Drake, Herbert L., assignor.)
Foster Machine Company. (See McKean, John O., assignor.)
Fournie, William A., Belleville, Ill. End and corner post adjusting support. No. 1,018,894; Feb. 27; Sp. p. 5904; Gaz. vol. 175; p. 1018.
Fouts, James A., Ottawa, Kans. Mail-box. No. 1,017,862; Feb. 20; Sp. p. 3605; Gaz. vol. 175; p. 632.
Fox, Frank A., Brooklyn, N. Y. Link for cross-chains of antiskid devices. No. 1,018,179; Feb. 20; Sp. p. 4333; Gaz. vol. 175; p. 744.
Fox, Guy E., Evanston, Ill. Plastering-machine. No. 1,017,250; Feb. 18; Sp. p. 2288; Gaz. vol. 175; p. 389.
Fox, Simon J., assignor of one-half to D. E. Lain, Bellingham, Wash. Gill-net. No. 1,016,881; Feb. 6; Sp. p. 1424; Gaz. vol. 175; p. 221.
Fox, William H., Minneapolis, Minn. Base-ball glove or mitt. No. 1,017,964; Feb. 20; Sp. p. 3858; Gaz. vol. 175; p. 668.
Francis, Charles E., Cincinnati, Ohio. Veneer-press for manufacturers of woodworking material. No. 1,016,258; Feb. 6; Sp. p. 32; Gaz. vol. 175; p. 7.
Francis Keil & Son. (See Zimmermann, Frank, assignor.)
Franck, Rene, Schlettstadt, Germany. Endless wire fabric. No. 1,017,662; Feb. 20; Sp. p. 3119; Gaz. vol. 175; p. 563.
Frank, Edward H., assignor of one-half to L. C. Koelling, Centralia, and G. Kuns, Clinton, Ill. Metallic railway-tie. No. 1,017,965; Feb. 20; Sp. p. 3859; Gaz. vol. 175; p. 668.
Frank, Joseph. (See Benz, Frederick, Jr., assignor.)
Frank, Vincent, Chicago, Ill. Blacking-box opener and holder. No. 1,018,106; Feb. 20; Sp. p. 4173; Gaz. vol. 175; p. 718.
Frankenfield, Budd, Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. System of motor control. No. 1,017,257; Feb. 18; Sp. p. 2292; Gaz. vol. 175; p. 389.
Franz, August E., West Chester, Pa. Shoe-lace fastener. No. 1,018,557; Feb. 27; Sp. p. 5212; Gaz. vol. 175; p. 906.
Fraser, Norman M., Norwalk, Ohio. Attachment for oil-wells. No. 1,017,663; Feb. 20; Sp. p. 3121; Gaz. vol. 175; p. 563.
Fraser, William A., Georgetown, Ontario, Canada. Water-closet. No. 1,017,044; Feb. 13; Sp. p. 1809; Gaz. vol. 175; p. 314.
Freas, Edwin H., Philadelphia, Pa. Tire. No. 1,018,895; Feb. 27; Sp. p. 5905; Gaz. vol. 175; p. 1018.
Freszka, Bela W., Amsterdam, Ohio. Wrench. No. 1,017,143; Feb. 13; Sp. p. 2035; Gaz. vol. 175; p. 349.
Fred B. Higgins Co. (See Higgins, Fred B., assignor.)
Frederick, Herman J., Pittsburgh, Pa. Wringer. No. 1,018,685; Feb. 6; Sp. p. 1029; Gaz. vol. 175; p. 157.
Frederickson, Oscar, Chicago, Ill. System of indicating the contents of liquid-containers. No. 1,017,091; Feb. 13; Sp. p. 1933; Gaz. vol. 175; p. 332.
Freeble, Thomas M., Rochester, assignor of one-half to R. M. Kaufmann, Pittsburgh, Pa. Railway signaling system. No. 1,016,882; Feb. 6; Sp. p. 1426; Gaz. vol. 175; p. 221.
Freed, George F., assignor to The Duff Manufacturing Company, Pittsburgh, Pa. Rocket-lever for lifting-jacks. No. 1,017,390; Feb. 18; Sp. p. 2585; Gaz. vol. 175; p. 437.
Freer, James S., Rutherford, N. J. Etching apparatus. No. 1,016,487; Feb. 6; Sp. p. 572; Gaz. vol. 175; p. 88.
French, Andrew J., Purcell, S. A. McKelvy, McCloud, and J. W. Screpan, Kingfisher, Okla. Musical chart. No. 1,017,045; Feb. 13; Sp. p. 1810; Gaz. vol. 175; p. 314.
Freund, Carl. (See Throw, Sprüngarts, and Freund.)
Frey, Clarence N., Cincinnati, Ohio. Metallic shipping-case. No. 1,016,259; Feb. 6; Sp. p. 35; Gaz. vol. 175; p. 8.
Frey, Clarence N., assignor to The J. M. Robinson Manufacturing Company, Cincinnati, Ohio. Rotary corrugating-machine. No. 1,017,400; Feb. 18; Sp. p. 2587; Gaz. vol. 175; p. 438.
Frey, John E., New York, N. Y., assignor to Grinden Art Metal Company. Metallic structure, such as doors and the like. No. 1,018,896; Feb. 27; Sp. p. 5905; Gaz. vol. 175; p. 1018.
Frey, Sigmund, assignor of one-half to S. K. Elliott, Los Angeles, Cal. Hose-nozzle. No. 1,018,310; Feb. 20; Sp. p. 4585; Gaz. vol. 175; p. 787.
Fricke, William A., assignor to Monarch Telephone Manufacturing Company, Chicago, Ill. Synchronizing system. No. 1,016,618; Feb. 6; Sp. p. 890; Gaz. vol. 175; p. 134.

Friedlein, Heinrich, Deutz, near Cologne, Germany. Transportable ticket-printing and fare-recording apparatus. No. 1,017,046; Feb. 13; Sp. p. 1814; Gaz. vol. 175; p. 315.
Friedman, Samuel, New York, N. Y. Bottle-seals. No. 1,018,107; Feb. 20; Sp. p. 4174; Gaz. vol. 175; p. 718.
Fritz, August J., Farmington, N. Mex. Mixing device. No. 1,016,741; Feb. 6; Sp. p. 1140; Gaz. vol. 175; p. 175.
Frocr, Louis V. W., Lorient, France. Towing apparatus. No. 1,016,619; Feb. 6; Sp. p. 889; Gaz. vol. 175; p. 134.
Fromm, William, *et al.* (See Mohr, William, assignor.)
Frost, Nathaniel, Bloomington, Ill. Furnace. No. 1,018,967; Feb. 27; Sp. p. 6063; Gaz. vol. 175; p. 1044.
Fry, William H., Tuscola, Ill. Lock-washer. No. 1,017,528; Feb. 18; Sp. p. 2863; Gaz. vol. 175; p. 483.
Fuchs, Marie W., Buffalo, N. Y. Garment. No. 1,016,988; Feb. 13; Sp. p. 1694; Gaz. vol. 175; p. 295.
Fuchs, Paul, Baltimore, Md. Hook for signal devices. No. 1,016,200; Feb. 6; Sp. p. 30; Gaz. vol. 175; p. 8.
Fuller, Harvey B., St. Paul, Minn. Scaffold. No. 1,018,658; Feb. 27; Sp. p. 5414; Gaz. vol. 175; p. 933.
Fuller, James S. (See Umpleby, James E., assignor.)
Fulmer, Henry M., *et al.* (See Cummins, Herbert L., assignor.)
Fulton, James B., Marne, Iowa. Double sickle for mowers and harvesters. No. 1,017,363; Feb. 20; Sp. p. 3607; Gaz. vol. 175; p. 632.
Funck, Philipp, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-cutting machine. No. 1,017,744; Feb. 20; Sp. p. 3298; Gaz. vol. 175; p. 590.
Fundis, Frederick M., New Kensington, Pa. Nut-locking device. No. 1,017,401; Feb. 18; Sp. p. 2590; Gaz. vol. 175; p. 438.
Funk, Christian, Heidelberg, Germany. Boot-tree. No. 1,018,608; Feb. 27; Sp. p. 5309; Gaz. vol. 175; p. 921.
Funk, Lewis A., Jeromesville, Ohio, assignor to The Rude Bros. Mfg. Co., Liberty, Ind. Manure-spreader. (Reissue.) No. 13,349; Feb. 20; Sp. p. 4788; Gaz. vol. 175; p. 819.
Fuqua, Thomas W., *et al.* (See Savignac and Myers, assignors.)
Fuss, Max, Berlin, Germany. Cleaning apparatus. No. 1,017,258; Feb. 18; Sp. p. 2294; Gaz. vol. 175; p. 390.
Fyfe, Alexander C., Weehawken, and W. E. Gladstone, West New York, N. J. Automatic buffing-machine. No. 1,017,364; Feb. 20; Sp. p. 3608; Gaz. vol. 175; p. 632.
Gable, Franklin P. (See Battman and Gable.)
Gabrielli, Charles, Paris, France. Roasting oven. No. 1,018,609; Feb. 27; Sp. p. 5310; Gaz. vol. 175; p. 922.
Gabrielsen, Joachim, Grasttinger, Iowa. Cattle-guard. No. 1,017,529; Feb. 18; Sp. p. 2864; Gaz. vol. 175; p. 483.
Gabrielson, Carl, assignor to L. C. Smith and Bros. Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,018,968; Feb. 27; Sp. p. 6063; Gaz. vol. 175; p. 1044.
Gagnon, Edmond, assignor of one-third to J. L. Perron and one-third to T. Rinfret, Montreal, Canada. Ventilator. No. 1,017,402; Feb. 18; Sp. p. 2591; Gaz. vol. 175; p. 438.
Gaines, Bert, Dayton, Ohio. Toy. No. 1,018,311; Feb. 20; Sp. p. 4586; Gaz. vol. 175; p. 788.
Galbraith, Warren L. (See Uttenback, Springer, and Galbraith.)
Galbreath, Robert H., Denver, Colo. Battery for cleaning tarnished metals. No. 1,018,555; Feb. 20; Sp. p. 4663; Gaz. vol. 175; p. 902.
Gale, John E., *et al.* (See Neil, James A., assignor.)
Gallié, Julien, Nancy, France. Incandescent gas and like burner. No. 1,018,969; Feb. 27; Sp. p. 6070; Gaz. vol. 175; p. 1044.
Gallagher, Emma G. (See Gallagher, George S., assignor.)
Gallagher, George S., assignor to E. G. Gallagher, New York, N. Y. Refrigerator. No. 1,018,180; Feb. 20; Sp. p. 4335; Gaz. vol. 175; p. 744.
Gallagher, John C., and H. P. Garvey, Philadelphia, Pa. Combined cooking and heating stove or range. No. 1,016,261; Feb. 6; Sp. p. 37; Gaz. vol. 175; p. 8.
Gallagher, Joseph D., Glen Ridge, N. J., assignor to E. H. Fallows, trustee, New York, N. Y. Brake-shoe. No. 1,016,262; Feb. 6; Sp. p. 39; Gaz. vol. 175; p. 9.
Gallagher, Richard D., Jr., assignor to Standard Coupler Company, New York, N. Y. Draft-gear for railway-cars. No. 1,017,047; Feb. 13; Sp. p. 1817; Gaz. vol. 175; p. 315.
Gallagher, Richard D., Jr., assignor to Standard Coupler Company, New York, N. Y. Buffing mechanism for railway-cars. No. 1,018,042; Feb. 20; Sp. p. 4020; Gaz. vol. 175; p. 666.
Galt, Hugh A., assignor to Columbia Chemical Company, Barberton, Ohio. Utilizing lime-mud in the manufacture of fertilizers. No. 1,016,969; Feb. 13; Sp. p. 1695; Gaz. vol. 175; p. 294.
Gamewell Fire-Alarm Telegraph Company, The. (See Cole, Frederick W., assignor.)
Gandy, Lee P. (See Beame and Watson, assignors.)
Gapp, John, Scranton, Pa. Pipe-coupling. No. 1,016,620; Feb. 6; Sp. p. 905; Gaz. vol. 175; p. 135.
Garbarino, David G., and C. W. Roessle, New York, N. Y. Bethreading-tool. No. 1,017,403; Feb. 18; Sp. p. 2593; Gaz. vol. 175; p. 439.
Garchey, Louis A., Paris, France. Elastic wheel. No. 1,017,259; Feb. 18; Sp. p. 2295; Gaz. vol. 175; p. 390.
Gardiner, Lou M., assignor to American Machine Works, Seattle, Wash. Stump-pulling apparatus. No. 1,018,970; Feb. 27; Sp. p. 6073; Gaz. vol. 175; p. 1045.
Gardner, Albert M., Indianapolis, Ind. Electric track-sweeper. No. 1,017,208; Feb. 18; Sp. p. 2186; Gaz. vol. 175; p. 372.
Gardner, Arthur, Wellington, New Zealand. Means for use in cleaning tramway-tracks. No. 1,017,092; Feb. 13; Sp. p. 1936; Gaz. vol. 175; p. 332.
Garland, Nathaniel C., Chase City, Va. Hook. No. 1,017,530; Feb. 18; Sp. p. 2865; Gaz. vol. 175; p. 483.
Garlick, Harry U. (See Garlick, Jew, assignor.)
Garlick, Jew, assignor of one-half to H. U. Garlick, Paterson, N. J. Resilient cushion for rear axles. No. 1,016,326; Feb. 6; Sp. p. 206; Gaz. vol. 175; p. 31.
Garner, James C., Dallas, assignor of one-half to C. S. Reynolds, Houston, Tex. Gin-saw. No. 1,017,637; Feb. 13; Sp. p. 3066; Gaz. vol. 175; p. 516.
Garrison, Herman, Chicago, Ill. Pneumatic attachment for vehicle-wheels. No. 1,016,558; Feb. 6; Sp. p. 764; Gaz. vol. 175; p. 112.
Garsden, John H., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,016,686; Feb. 6; Sp. p. 1031; Gaz. vol. 175; p. 157.
Garvey, Hugh P. (See Gallagher and Garvey.)
Gaskill, Edwin A., Laneville, W. Va. Stake and stake-seat for logging-cars and the like. No. 1,018,818; Feb. 27; Sp. p. 5757; Gaz. vol. 175; p. 993.
Gates, Arthur G., Chicago, Ill. Cuff-fastener. No. 1,017,865; Feb. 20; Sp. p. 3615; Gaz. vol. 175; p. 633.
Gaul, John, and R. W. Vosburg, Laceyville, Pa. Railway-tie. No. 1,018,755; Feb. 27; Sp. p. 5620; Gaz. vol. 175; p. 972.
Gault, Harry R. (See Lewis and Powell, assignors.)
Gaw, William C., Cleveland, Ohio. Scaffold. No. 1,018,043; Feb. 20; Sp. p. 4022; Gaz. vol. 175; p. 666.
Gay, Ernest L., *et al.* (See Booth, James A., assignor.)
Gebhart, Henry, Dayton, Ohio. Indicator for street-cars. No. 1,017,404; Feb. 18; Sp. p. 2595; Gaz. vol. 175; p. 439.
Geissler, Adalbert, assignor to Firm of J. W. Erkens, Niederau, near Düren, Germany. Manufacturing very extensible paper. No. 1,018,897; Feb. 27; Sp. p. 5907; Gaz. vol. 175; p. 1019.
Gelin, John, Chicago, Ill. Safety-razor. No. 1,017,866; Feb. 20; Sp. p. 3616; Gaz. vol. 175; p. 633.
General Bakelite Company. (See Baekeland, Leo H., assignor.)
General Dehydrator Company. (See Harris and Pollard, assignors.)
General Electric Company. (See Bentley, Fred W., assignor.)
General Electric Company. (See Berry, Edward R., assignor.)
General Electric Company. (See Bolton, Werner von, assignor.)
General Electric Company. (See Callan, John G., assignor.)
General Electric Company. (See Howell, John W., assignor.)
General Electric Company. (See Junggren and Gray, assignors.)
General Electric Company (See Just and Hanaman, assignors.)
General Electric Company. (See Kieser, Walter, assignor.)
General Electric Company. (See Lasche, Oscar, assignor.)
General Electric Company. (See Loewenstein, Louis C., assignor.)
General Electric Company. (See Pratt, Alphonso C., assignor.)
General Electric Company. (See Rice, Walter F., assignor.)
General Electric Company. (See Rice and Larkin, assignors.)
General Electric Company. (See Van Brunt, Charles, assignor.)
General Electric Company. (See Winter and Eichberg, assignors.)
Gerdes, Charles W., Mound Valley, Kans. Riding attachment for cultivators. No. 1,017,209; Feb. 18; Sp. p. 2188; Gaz. vol. 175; p. 372.
German, Arthur A., Duluth, Minn. Gun-sight. No. 1,016,883; Feb. 6; Sp. p. 1428; Gaz. vol. 175; p. 222.
German, William S., *et al.* (See Nill, John B., assignor.)
Gero, John F., Newark, Ohio. Fine turning and beading tool. No. 1,016,559; Feb. 6; Sp. p. 767; Gaz. vol. 175; p. 113.
Gesche, Wilhelm, Tirschtiegel, Germany. Apparatus for barking willow-twigs. No. 1,018,659; Feb. 27; Sp. p. 5416; Gaz. vol. 175; p. 933.
Gherassimoff, Nicolas, St. Petersburg, Russia. Gyroscopic rocket and the firing apparatus therefor. No. 1,018,812; Feb. 20; Sp. p. 4589; Gaz. vol. 175; p. 788.
Gibbons, Mary A., Walnut, Iowa. Corn-harvester and husk-heler. No. 1,017,625; Feb. 18; Sp. p. 2935; Gaz. vol. 175; p. 512.

Gibson, Adelbert R., Los Angeles, Cal. Shoe-polishing device. No. 1,016,669; Feb. 27; Sp. p. 5417; Gaz. vol. 175; p. 938.

Gibson, Mark S., Girard, Pa. Public signal. No. 1,017,561; Feb. 13; Sp. p. 2866; Gaz. vol. 175; p. 483.

Gierding, Charles E., assignor to Sterling-Meaker Company, Newark, N. J. Automatic wheel-guard. No. 1,016,808; Feb. 27; Sp. p. 5966; Gaz. vol. 175; p. 1019.

Gilbert, Harry E., Conshohocken, Pa., assignor to John Wood Manufacturing Company. Gas-burner. No. 1,016,819; Feb. 27; Sp. p. 5759; Gaz. vol. 175; p. 994.

Gilbertson, John H. (See Sheehan and Gilbertson.)

Gilkerson, Chester A., Joliet, Ill. Siphon-chimney. No. 1,016,938; Feb. 13; Sp. p. 1571; Gaz. vol. 175; p. 278.

Gillmor, Horatio G., Bath, Me. Means of forming joints in rails. No. 1,016,621; Feb. 6; Sp. p. 907; Gaz. vol. 175; p. 136.

Gilman, John H., assignor to King & Hamilton Company, Ottawa, Ill. Corn-sheller. No. 1,016,820; Feb. 27; Sp. p. 5762; Gaz. vol. 175; p. 994.

Gilmer, George W., Jr., Philadelphia, Pa. Combination-tool. No. 1,017,066; Feb. 13; Sp. p. 1933; Gaz. vol. 175; p. 338.

Gilmer, John T., Florala, Ala. Muffler. No. 1,016,944; Feb. 20; Sp. p. 4026; Gaz. vol. 175; p. 696.

Giolitti, Federico, Rome, assignor to Societa Anonima Italiana Gio Ansaldo Armstrong & Co., Genoa, Italy. Armor-plate and other steel article. No. 1,016,560; Feb. 6; Sp. p. 709; Gaz. vol. 175; p. 118.

Gironcoli, Siegfried, Zollfeld, Austria-Hungary. Preserving of raw victuals of animal origin. No. 1,017,144 Feb. 13; Sp. p. 2026; Gaz. vol. 175; p. 360.

Gjetting, Regner H. J., Copenhagen, Denmark. Pulsator for milking-machines. No. 1,017,486; Feb. 13; Sp. p. 2596; Gaz. vol. 175; p. 446.

Gjetting, Regner H. J., Copenhagen, Denmark. Milking-machine. No. 1,016,610; Feb. 27; Sp. p. 5813; Gaz. vol. 175; p. 922.

Gladstone, William E. (See Fyfe and Gladstone.)

Glasfabriken und Raffinerien Josef Inwald A. G. (See Jung, Karl, assignor.)

Glatt, August, Eureka, Cal. Cultivator. No. 1,017,048; Feb. 18; Sp. p. 1819; Gaz. vol. 175; p. 316.

Gleim, Ralph W., Fruitvale, Cal. Hose-reel. No. 1,017,532; Feb. 13; Sp. p. 2870; Gaz. Vol. 175; p. 484.

Glerum, Ingebrigt J., Devils Lake, N. D. Life-line projectile. No. 1,017,745; Feb. 20; Sp. p. 3301; Gaz. vol. 175; p. 501.

Glerum, Ingebrigt J., Devils Lake, N. D. Pneumatic gun for throwing life-lines. No. 1,017,746; Feb. 20; Sp. p. 3302; Gaz. vol. 175; p. 501.

Glidden, John E., insane, deceased, Beverly, Mass.; S. B. Glidden, guardian and administratrix, assignor to United Shoe Machinery Company, Paterson, N. J. Heel-compressor. No. 1,017,440; Feb. 18; Sp. p. 2600; Gaz. vol. 175; p. 441.

Glidden, Sadie E., guardian and administratrix. (See Glidden, John E.)

Glier, Reinhardt, Klingenthal, Germany. Operating mechanism for automatic accordions and the like. No. 1,016,661; Feb. 27; Sp. p. 5418; Gaz. vol. 175; p. 939.

Globe Ear-Phone Company. (See Hastings, Kenneth R., assignor.)

Globe Printing Telegraph Company. (See Kinsley, Carl, assignor.)

Glor, Robert M., Attica, N. Y. Manger. No. 1,016,611; Feb. 27; Sp. p. 5318; Gaz. vol. 175; p. 922.

Gluckman, Michael, New York, N. Y. Box for folding papers. No. 1,016,884; Feb. 6; Sp. p. 1430; Gaz. vol. 175; p. 222.

Goddu, George, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shank-trimming machine. No. 1,018,045; Feb. 20; Sp. p. 4028; Gaz. vol. 175; p. 697.

Goehst, John H., assignor to Federal Electric Company, Chicago, Ill. Electric-lamp socket. No. 1,017,240; Feb. 13; Sp. p. 2296; Gaz. vol. 175; p. 390.

Goetz, George, assignor to Streeter-Amet Weighing & Recording Company, Chicago, Ill. Automatic weighing and recording mining-car scale. No. 1,017,747; Feb. 20; Sp. p. 3306; Gaz. vol. 175; p. 502.

Goetz, Henry F., assignor to Waterbury Mfg. Co., Waterbury, Conn. Hose-nozzle. No. 1,017,966; Feb. 20; Sp. p. 3861; Gaz. vol. 175; p. 668.

Going, Thomas E., Chemainus, British Columbia, assignor of one-half to J. O. Cameron, Victoria, Canada. Combined wedge and clamp for holding loggers' falling-boards. No. 1,018,899; Feb. 27; Sp. p. 5911; Gaz. vol. 175; p. 1020.

Golden, John W., Johnstown, Pa. Flower-holder. No. 1,016,822; Feb. 6; Sp. p. 1309; Gaz. vol. 175; p. 201.

Golden, Willis R., Atlanta, Ga. Metallic skeleton space-block for gin-saws. No. 1,016,742; Feb. 6; Sp. p. 1141; Gaz. vol. 175; p. 176.

Goldman, Sigmund L., Chicago, Ill. Filter. No. 1,017,267; Feb. 20; Sp. p. 3619; Gaz. vol. 175; p. 632.

Goldman, Sigmund L., Chicago, Ill. Cleaning bottles. No. 1,018,046; Feb. 20; Sp. p. 4030; Gaz. vol. 175; p. 697.

Goldschmidt, Th. (See Weber, Josef, assignor.)

Golsan, William R. (See Perkins, James T., assignor.)

Goodlett, Joseph E. J., Memphis, Tenn. Atomizing-nozzle. No. 1,017,533; Feb. 13; Sp. p. 2871; Gaz. vol. 175; p. 484.

Goodman, Ward C., assignor of one-half to F. M. Short, Walla Walla, Wash. Express-receipt-billing machine. No. 1,016,823; Feb. 6; Sp. p. 1310; Gaz. vol. 175; p. 201.

Goodrich, Edward W., assignor to Oshkosh Excelsior Mfg. Co., Oshkosh, Wis. Apparatus for manufacturing packing-pads. No. 1,018,181; Feb. 20; Sp. p. 4337; Gaz. vol. 175; p. 745.

Goolsby, William F., Livingston, Texas. Fence-wire stretcher. No. 1,018,813; Feb. 20; Sp. p. 4591; Gaz. vol. 175; p. 786.

Gordon, F. M. (See Tessmer, Karl, assignor.)

Gordon, William F. E., assignor of one-half to N. C. Nelson and one-fourth to H. J. Shook, Seattle, Wash. Lock. No. 1,018,756; Feb. 27; Sp. p. 5621; Gaz. vol. 175; p. 972.

Gornto, Albert S., Norfolk, Va. Shade-fixture. No. 1,018,108; Feb. 20; Sp. p. 4175; Gaz. vol. 175; p. 712.

Gorsuch, John T., Baltimore, Md. Concrete scow. No. 1,018,488; Feb. 27; Sp. p. 5003; Gaz. vol. 175; p. 808.

Gossett, Allen D., Burleson, Tex. Wheelwright-machine. No. 1,017,534; Feb. 13; Sp. p. 2873; Gaz. vol. 175; p. 484.

Gosz Printing Press Company. (See Evensen, William, assignor.)

Gosz Printing Press Company, The. (See Walser, Joseph J., assignor.)

Gottschalk, Felix, New York, N. Y. Telephone-transmitter. No. 1,018,182; Feb. 20; Sp. p. 4344; Gaz. vol. 175; p. 745.

Grabler, Peter, Cleveland, Ohio. Plunger and cylinder packing. No. 1,016,561; Feb. 6; Sp. p. 771; Gaz. vol. 175; p. 113.

Grabowsky, Max H., Detroit, Mich. Transmission mechanism for automobiles. No. 1,017,407; Feb. 13; Sp. p. 2602; Gaz. vol. 175; p. 441.

Grady, William E., assignor to Scanlan Morris Co., Madison, Wis. Surgeon's operating-table. No. 1,018,757; Feb. 27; Sp. p. 5623; Gaz. vol. 175; p. 972.

Graetz, William, Sumner, Minn., assignor of one-third to H. Miller, Beaver Dam, Wis., and one-third to F. L. Hodgson, Stewartville, Minn. Manure-loader. No. 1,017,004; Feb. 13; Sp. p. 1939; Gaz. vol. 175; p. 333.

Graf, Julius J., Ludlow, Ky. Steam-condenser. No. 1,018,489; Feb. 27; Sp. p. 5006; Gaz. vol. 175; p. 808.

Gräf, Maximilian, and O. Peschel, Tenel, near Berlin, Germany. Case-hardening metals and alloys. No. 1,017,746; Feb. 20; Sp. p. 3311; Gaz. vol. 175; p. 502.

Graham, Edward M., assignor to Vaughan & Bushnell Manufacturing Company, Chicago, Ill. Jaws for chucks. No. 1,017,460; Feb. 18; Sp. p. 2604; Gaz. vol. 175; p. 441.

Graham, Robert W., York, Pa. Convertible waistband. No. 1,017,535; Feb. 18; Sp. p. 2874; Gaz. vol. 175; p. 485.

Graham, William S., assignor to Parlin & Orendorff Company, Canton, Ill. Cotton-seed-dropping mechanism. No. 1,017,664; Feb. 20; Sp. p. 3122; Gaz. vol. 175; p. 564.

Graham, William S., assignor to Parlin and Orendorff Company, Canton, Ill. Reversible plow. No. 1,018,621; Feb. 27; Sp. p. 5763; Gaz. vol. 175; p. 995.

Gran, Albert, and J. H. Karlson, Chicago, Ill., assignors to Designers Rule Co. Ellipsograph. No. 1,017,287; Feb. 13; Sp. p. 2246; Gaz. vol. 175; p. 390.

Granger, Frank E., Aberdeen, S. D. Telephone-selecting device. No. 1,017,967; Feb. 20; Sp. p. 3862; Gaz. vol. 175; p. 669.

Granger, Herman H., assignor to The Granger Under-Current Water Motor Company, Davenport, Wash. Undercurrent water-motor. No. 1,017,409; Feb. 13; Sp. p. 2605; Gaz. vol. 175; p. 442.

Granger Under-Current Water Motor Company, The. (See Granger, Herman H., assignor.)

Grant, Albert H. (See Worthington, Edwin H., assignor.)

Graves, Charles W., Logansport, Ind. Piano-shield. No. 1,017,288; Feb. 13; Sp. p. 2248; Gaz. vol. 175; p. 400.

Gravity Coal Bin Company. (See Snead, John M., assignor.)

Gray, Alexander T. (See Junggren and Gray.)

Gray, Charles F., Sierra Madre, Cal., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,017,145; Feb. 13; Sp. p. 2037; Gaz. vol. 175; p. 360.

Gray, Cora E., Battle Creek, Mich. Flour-sifter. No. 1,016,823; Feb. 27; Sp. p. 5766; Gaz. vol. 175; p. 995.

Gray, James H. (See Walker and Gray.)

Gray, John W., Wooldridge, Mo. Track-liner. No. 1,018,182; Feb. 20; Sp. p. 4343; Gaz. vol. 175; p. 746.

Gray, William E. (See Turquand and Gray.)

Graydon, Mark F., Trenton, Ontario, Canada. Silencer for internal-combustion engines. No. 1,017,536; Feb. 13; Sp. p. 2870; Gaz. vol. 175; p. 485.

Great Lakes Engineering Works. (See Mattsson, Alfred G., assignor.)

Green, John H., Springfield, Ill. Vacuum-cleaner. No. 1,016,963; Feb. 6; Sp. p. 40; Gaz. vol. 175; p. 9.

Green, John H., Hinden, Ohio. Gate. No. 1,016,824; Feb. 6; Sp. p. 1311; Gaz. vol. 175; p. 202.

Greene, Albert R., Chicago, Ill. Melting scrap metal. No. 1,018,415; Feb. 27; Sp. p. 4841; Gaz. vol. 175; p. 857.

Greene, Frank C., Cleveland, and C. G. Palmer, East Cleveland, Ohio; said Palmer assignor to said Greene. Mechanism for handling cars. No. 1,017,368; Feb. 20; Sp. p. 3621; Gaz. vol. 175; p. 634.

Greene, John T. (See Chapman and Greene.)

Greenfield, Edwin T., Kinmundy, assignor to Greenfield Paper Bottle Company, New York, N. Y. Manufacturing paper bottles or containing vessels. No. 1,016,827; Feb. 6; Sp. p. 207; Gaz. vol. 175; p. 52.

Greenfield Paper Bottle Company. (See Greenfield, Edwin T., assignor.)

Greenleaf, George E., Plainfield, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Former for lathes. No. 1,018,184; Feb. 20; Sp. p. 4349; Gaz. vol. 175; p. 746.

Greenleaf, George E., Plainfield, N. J., and D. H. Tess, New Haven, Conn., assignors to Niles-Bement-Pond Company, Jersey City, N. J. Centering-chuck. No. 1,017,968; Feb. 20; Sp. p. 3869; Gaz. vol. 175; p. 669.

Greenleaf, Louis A., Dorchester, Mass. Speedometer. (Reissue.) No. 13,570; Feb. 20; Sp. p. 4701; Gaz. vol. 175; p. 820.

Greenwood, Cyrus S., Detroit, Mich. Cap. No. 1,017,040; Feb. 13; Sp. p. 1820; Gaz. vol. 175; p. 316.

Gregg, Norris E., St. Louis, Mo. Painting. No. 1,017,410; Feb. 13; Sp. p. 2607; Gaz. vol. 175; p. 442.

Gregory, Marshal J., assignor of one-half to J. W. Turnbow, Bear Lake, Tex. Fire and burglar alarm. No. 1,017,095; Feb. 13; Sp. p. 1941; Gaz. vol. 175; p. 333.

Grieb, Alfred, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Overseaming sewing-machine. No. 1,016,488; Feb. 6; Sp. p. 573; Gaz. vol. 175; p. 89.

Griep, Anthony B., Aurora, Mo. Ribbon-holder. No. 1,016,489; Feb. 6; Sp. p. 576; Gaz. vol. 175; p. 89.

Griesser, Wilhelm, Denver, Colo. Building for cooling and storing beer. No. 1,018,703; Feb. 27; Sp. p. 5501; Gaz. vol. 175; p. 953.

Griesser, Wilhelm, Denver, Colo. Cooling and storage tanks for beer. No. 1,018,704; Feb. 27; Sp. p. 5502; Gaz. vol. 175; p. 953.

Griesser, Wilhelm, Denver, Colo. Ice-making apparatus. No. 1,018,705; Feb. 27; Sp. p. 5504; Gaz. vol. 175; p. 953.

Griffin, Edwin F., assignor to International Text Book Company, Scranton, Pa. Type-writing machine. No. 1,017,050; Feb. 13; Sp. p. 1921; Gaz. vol. 175; p. 316.

Griffith, Graves, San Francisco, Cal. Prismatic telescope. No. 1,016,562; Feb. 6; Sp. p. 772; Gaz. vol. 175; p. 113.

Griffith, Robert W., et al. (See White, Frank L., assignor.)

Grigg, Charles M., Joplin, Mo. Truck. No. 1,016,490; Feb. 6; Sp. p. 578; Gaz. vol. 175; p. 90.

Grimes, George L., Detroit, Mich. Core-making machine. No. 1,018,622; Feb. 27; Sp. p. 5765; Gaz. vol. 175; p. 995.

Grimes, Josiah, Whittier, assignor of one-half to B. F. Lyttle, Los Angeles, Cal. Delivery device for sugar, &c. No. 1,017,210; Feb. 13; Sp. p. 2189; Gaz. vol. 175; p. 373.

Grimm, Lewis, Pittsburgh, Pa. Tire-case for automobiles. No. 1,018,185; Feb. 20; Sp. p. 4350; Gaz. vol. 175; p. 746.

Grinden Art Metal Company. (See Frey, John E., assignor.)

Gripp, Friedrich O., Bremen, Germany. Manufacture of briquets. No. 1,016,939; Feb. 13; Sp. p. 1572; Gaz. vol. 175; p. 278.

Grist, Thomas A., Knox, Ind. Crossing-signal. No. 1,016,919; Feb. 6; Sp. p. 1515; Gaz. vol. 175; p. 224.

Groat, John T., assignor of one-half to G. Watts, Detroit, Mich. Glass-faced brick. No. 1,018,747; Feb. 27; Sp. p. 5603; Gaz. vol. 175; p. 969.

Grob, Hugo, Zurich, Switzerland. Apparatus for producing a constant voltage with variable speed. No. 1,016,825; Feb. 6; Sp. p. 1312; Gaz. vol. 175; p. 202.

Grohn, Henry P. (See Kenney and Grohn.)

Gronquist, Conrad, Bigelow, Kans. Rotary disk plow. No. 1,017,146; Feb. 13; Sp. p. 2039; Gaz. vol. 175; p. 351.

Grosshans, Christian C. (See Sanders, Samuel P., assignor.)

Grosvold, Fred E., Eau Claire, Wis. Water-gage. No. 1,016,585; Feb. 6; Sp. p. 1431; Gaz. vol. 175; p. 222.

Grub, Albert, assignor of one-fourth to F. Grub, Chicago, Ill. Ice-motor. No. 1,016,687; Feb. 6; Sp. p. 1033; Gaz. vol. 175; p. 168.

Grub, Frederick. (See Grub, Albert, assignor.)

Grzybowski, Julian T., Grand Rapids, Mich. Door-lock. No. 1,017,289; Feb. 13; Sp. p. 2250; Gaz. vol. 175; p. 400.

Gubrud, Adolph P., Hudson, S. D. Corn-harvester. No. 1,016,622; Feb. 6; Sp. p. 909; Gaz. vol. 175; p. 136.

Guenther, Paul, Dover, N. J. Sectional plating device for straight-knitting machines. No. 1,018,612; Feb. 27; Sp. p. 5214; Gaz. vol. 175; p. 922.

Gulberson, Samuel A., Jr., Saratoga, Cal. Sucker-rod elevator. No. 1,017,389; Feb. 20; Sp. p. 3631; Gaz. vol. 175; p. 634.

Guild, George H., assignor of one-half to O. Ratcliff, Chicago, Ill. Smoke and spark destroyer. No. 1,016,491; Feb. 6; Sp. p. 579; Gaz. vol. 175; p. 90.

Gunn, Selim W., assignor of one-half to H. Flower, Feeding Hills, Mass. Cigar-case. No. 1,016,492; Feb. 6; Sp. p. 580; Gaz. vol. 175; p. 90.

Gunther, Frank E., Minneapolis, Minn. Machine for transferring loads of material. No. 1,017,749; Feb. 20; Sp. p. 3312; Gaz. vol. 175; p. 502.

Gutknecht, Karl A., Hamburg, Germany. Sending and delivery station for pneumatic-despatch-tube apparatus. No. 1,016,264; Feb. 6; Sp. p. 44; Gaz. vol. 175; p. 9.

H. Mueller Manufacturing Company. (See Downs, Samuel T., assignor.)

H. Mueller Manufacturing Company. (See Mueller and Schuermann, assignors.)

H. Mueller Manufacturing Company, The. (See Schuermann, Anton C., assignor.)

H. F. Brammer Manufacturing Company. (See Edens, John, assignor.)

H. K. Mulford Company, The. (See Turner, Joseph L., assignor.)

H. L. Dizon Company. (See Dizon, Henry L., assignor.)

H. O. Peck Automobile Wheel Company. (See Reichenbach and Peck, assignors.)

H. W. Johns-Manville Company. (See Headson, Frank A., assignor.)

H. W. Johns-Manville Company. (See Wardell, Henry R., assignor.)

Habeck, Paul, Rankin, Okla. Mechanical movement. No. 1,016,743; Feb. 6; Sp. p. 1143; Gaz. vol. 175; p. 176.

Hackett, Alfred, Toronto, Ontario, Canada. Combined throttle and reversing valve. No. 1,018,047; Feb. 20; Sp. p. 4033; Gaz. vol. 175; p. 697.

Hackney, Leslie S., St. Paul, Minn. Clothes-line reel. No. 1,016,493; Feb. 6; Sp. p. 582; Gaz. vol. 175; p. 90.

Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-pulling machine. No. 1,016,828; Feb. 6; Sp. p. 211; Gaz. vol. 175; p. 32.

Hadaway, William S., Jr., East Orange, N. J., assignor to Westinghouse Electric and Manufacturing Company. Electric heater. No. 1,018,556; Feb. 27; Sp. p. 5213; Gaz. vol. 175; p. 906.

Hadsel, Alvah D., Dorranceton, Pa. Concrete-mixer. No. 1,016,920; Feb. 6; Sp. p. 1617; Gaz. vol. 175; p. 235.

Haff, Max M., assignor to T. L. Willson, Ottawa, Ontario, Canada. Obtaining alkali-metal compounds from minerals containing alkalis. No. 1,018,186; Feb. 20; Sp. p. 4352; Gaz. vol. 175; p. 747.

Hagen, Frank. (See Eisel, Hagen, and Schroeder.)

Hague, George, et al. (See Lindsey, Charles E., assignor.)

Halnsworth, George A. J., Newark, Ohio. Bolt threading and slotting mechanism. No. 1,018,706; Feb. 27; Sp. p. 5506; Gaz. vol. 175; p. 954.

Haibleib, Edward A., assignor to Northeast Electric Company, Rochester, N. Y. Engine-starting apparatus. No. 1,017,538; Feb. 13; Sp. p. 2879; Gaz. vol. 175; p. 486.

Hale and Kilburn Company. (See Budd, Edward G., assignor.)

Hale and Kilburn Company. (See Thomas, Harold M., assignor.)

Haley, Clay, et al. (See Wyatt, John H., assignor.)

Haley, Walker, et al. (See Wyatt, John H., assignor.)

Hall, Charles H., Frankfort, Ind., assignor of one-half to T. R. Foley, Chicago, Ill. Automatic corn-planter. No. 1,018,613; Feb. 27; Sp. p. 5317; Gaz. vol. 175; p. 923.

Hall, Eric E., Chicago, Ill. Hanger-support for concrete floors. No. 1,018,490; Feb. 27; Sp. p. 5008; Gaz. vol. 175; p. 881.

Hall, Frank M., assignor of one-ninth to J. A. Bourne, one-ninth to J. Baxter, one-ninth to W. J. Rose, one-ninth to J. Brooks, one-ninth to F. A. Poe, one-ninth to W. W. Brandon, one-ninth to F. J. Dunn, and one-ninth to R. N. Jenkins, Bellflower, Ill. Railway-switch. No. 1,018,314; Feb. 20; Sp. p. 4592; Gaz. vol. 175; p. 789.

Hall, James M., Sulphur Springs, Tex. Lamp-socket. No. 1,017,051; Feb. 13; Sp. p. 1822; Gaz. vol. 175; p. 316.

Hall, Johann G., Gardar township, Pembina county, N. D. Wire-stretcher. No. 1,017,147; Feb. 13; Sp. p. 2041; Gaz. vol. 175; p. 351.

Hall, John W. (See Alexander and Hall.)

Hall, Leon M. (See Dunn and Hall.)

Hall, Morris S. (See Ferguson, Julius F., assignor.)

Hall, William A., Sr., Pardeeville, Wis. Potato-planter. No. 1,016,265; Feb. 6; Sp. p. 46; Gaz. vol. 175; p. 10.

Halladay, Horace K. (See Laeufer, Jacob, assignor.)

Hallaron, George E., Chicago, Ill. Shipping-crate. No. 1,017,530; Feb. 13; Sp. p. 2882; Gaz. vol. 175; p. 486.

Haller, Harry, Jr., Ilion, N. Y. Photographic-printing device. No. 1,016,628; Feb. 6; Sp. p. 912; Gaz. vol. 175; p. 136.

Halliwell, John J., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y. Ink-roll-operating mechanism for printing-machines. No. 1,018,758; Feb. 27; Sp. p. 5629; Gaz. vol. 175; p. 973.

Haltenberger, Samuel. (See Kolosvàry, Haltenberger, and Berdenich.)

Haltom, Samuel, assignor to The Samuel Haltom Company, Texarkana, Tex. Saw-filing machine. No. 1,018,900; Feb. 27; Sp. p. 5911; Gaz. vol. 175; p. 1020.

Ham, William E., and A. M. Cook, Mebane, N. C. Loading and unloading device. No. 1,017,290; Feb. 13; Sp. p. 2351; Gaz. vol. 175; p. 400.

Hamersly, Edward H., Richmond, Va. Single-trigger shotgun. No. 1,018,759; Feb. 27; Sp. p. 5631; Gaz. vol. 175; p. 973.

Hamilton, James L., Grand Junction, Colo., assignor to The Hamilton Orchard Heater Company. Orchard-heater. No. 1,018,048; Feb. 20; Sp. p. 4038; Gaz. vol. 175; p. 698.

Hamilton, Joseph B., San Antonio, Tex. Collar-shaping machine. No. 1,017,291; Feb. 13; Sp. p. 2353; Gaz. vol. 175; p. 400.

Hamilton Orchard Heater Company, The. (See Hamilton, James L., assignor.)

Hamilton, Thomas S., Kansas City, Mo., assignor to The Purified Petroleum Products Company. Purifying hydrocarbon liquids. No. 1,018,971; Feb. 27; Sp. p. 6075; Gaz. vol. 175; p. 1045.

Hamm, William S., Hubbard Woods, Ill., assignor to The Adams & Westlake Company. Lamp. No. 1,018,137; Feb. 20; Sp. p. 4353; Gaz. vol. 175; p. 747.

Hammetter, August H. (See Pfefferkorn, Schloerb, and Hammetter.)

Hammond, Robert A., Sandwich, and S. B. Taft, South Framingham, Mass.; said Taft assignor to Massachusetts Belting Company. Tension and take-up mechanism for filling-carriers of looms. No. 1,016,494; Feb. 6; Sp. p. 582; Gaz. vol. 175; p. 90.

Hanaman, Franz. (See Just and Hanaman.)

Hanchett, George T., Hackensack, N. J. Mixer for gaseous fuel. No. 1,017,750; Feb. 20; Sp. p. 3314; Gaz. vol. 175; p. 593.

Handian, Alexander H., Jr., St. Louis, Mo. Signal-lamp. No. 1,016,624; Feb. 6; Sp. p. 914; Gaz. vol. 175; p. 186.

Hanford, Melancthon, and D. L. Taylor, Malden, Mass.; said Hanford assignor to said Taylor. Resilient tire. No. 1,018,049; Feb. 20; Sp. p. 4039; Gaz. vol. 175; p. 698.

Hannaford, Alfred, Chicago, Ill. Carcass-dehairing mechanism. No. 1,016,495; Feb. 6; Sp. p. 584; Gaz. vol. 175; p. 91.

Hansen, Otto E., Perth Amboy, N. J. Gas-log. No. 1,017,751; Feb. 20; Sp. p. 3315; Gaz. vol. 175; p. 593.

Harbison-Walker Refractories Co. (See McKnight and Youngman, assignors.)

Hardacre, James. (See Brown and Hardacre.)

Hardin, J. B., *et al.* (See Parker, William A., assignor.)

Hardinge Brothers. (See Hardinge, Franklin, assignor.)

Hardinge, Franklin, assignor to Hardinge Brothers, Chicago, Ill. Watchman's clock. No. 1,016,638; Feb. 6; Sp. p. 1034; Gaz. vol. 175; p. 158.

Hardman, Peck & Company. (See Lundberg, Madfred, assignor.)

Hardman, Peter, Willimantic, Conn. Carding-machine. No. 1,017,666; Feb. 20; Sp. p. 3125; Gaz. vol. 175; p. 564.

Hardy, Lewis W., assignor to O. K. Novelty Company, Chicago, Ill. Puzzle. No. 1,017,752; Feb. 20; Sp. p. 3316; Gaz. vol. 175; p. 593.

Harlan, Wilson P., Holtville, Cal. Flume-gate. No. 1,018,662; Feb. 27; Sp. p. 5419; Gaz. vol. 175; p. 930.

Harling, Alfred E., and G. B. Dobbin, Detroit, Mich. Loose-leaf binder. No. 1,016,496; Feb. 6; Sp. p. 588; Gaz. vol. 175; p. 91.

Harling, Walter, Bryn Mawr, Wash. Mechanical amusement apparatus. No. 1,016,315; Feb. 20; Sp. p. 4594; Gaz. vol. 175; p. 789.

Harner, Daniel W. (See Mathers, Mara A., assignor.)

Harper, Thomas S., Kings Park, N. Y. Combined undershirt and suspensory. No. 1,016,625; Feb. 6; Sp. p. 916; Gaz. vol. 175; p. 187.

Harrington, Arthur M. (See Scott and Harrington.)

Harris, Abraham W., Warwick, R. I. Oil-display rack. No. 1,017,540; Feb. 13; Sp. p. 2883; Gaz. vol. 175; p. 486.

Harris, Delvin B., Minturn, Cal. Rodent-exterminator. No. 1,018,109; Feb. 20; Sp. p. 4176; Gaz. vol. 175; p. 719.

Harris, Ford W., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. System of electric-circuit control. No. 1,017,052; Feb. 13; Sp. p. 1825; Gaz. vol. 175; p. 317.

Harris, Fradelsbon, and R. Sternberg, St. Louis, Mo. Shoe-cleaner. No. 1,017,096; Feb. 13; Sp. p. 1943; Gaz. vol. 175; p. 334.

Harris, Gordon D., Bay Shore, and J. S. Pollard, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company. Food product and preparing it. No. 1,017,411; Feb. 13; Sp. p. 2609; Gaz. vol. 175; p. 442.

Harris, Gordon D., Bay Shore, and J. S. Pollard, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company. Apparatus for dehydrating foods. No. 1,017,412; Feb. 13; Sp. p. 2612; Gaz. vol. 175; p. 442.

Harris, Gordon D., Bay Shore, and J. S. Pollard, Mamaroneck, N. Y., assignors, by mesne assignments, to General Dehydrator Company. Apparatus for dehydrating foods. No. 1,018,388; Feb. 20; Sp. p. 4758; Gaz. vol. 175; p. 814.

Harris, John J., Calumet, Mich. Clothes-pin holder. No. 1,017,097; Feb. 13; Sp. p. 1944; Gaz. vol. 175; p. 334.

Harris, Mary M., Haslehurst, Miss. Combination bias, binding, and hem folder. No. 1,016,626; Feb. 6; Sp. p. 917; Gaz. vol. 175; p. 187.

Harris, Reese T., Buffalo, N. Y. Casting metal. No. 1,017,969; Feb. 20; Sp. p. 3370; Gaz. vol. 175; p. 669.

Harris, Reese T., Buffalo, N. Y. Mold for casting metal. No. 1,017,970; Feb. 20; Sp. p. 3373; Gaz. vol. 175; p. 670.

Harrison, Albert V., West Orange, N. J. Scraping device for cans and the like. No. 1,017,753; Feb. 20; Sp. p. 3318; Gaz. vol. 175; p. 594.

Harrison Bros. & Co. (See Schanche, Herman G., assignor.)

Harrison Bros. & Co. (See Schanche and Havens, assignors.)

Harrison, George R., assignor of one-half to W. Nothaft, Philadelphia, Pa. Horse-detacher. No. 1,018,707; Feb. 27; Sp. p. 5514; Gaz. vol. 175; p. 954.

Harrison, Julius M., Cora, Fla. Sap-gatherer. No. 1,016,406; Feb. 6; Sp. p. 379; Gaz. vol. 175; p. 60.

Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-head for railway-cars. No. 1,017,063; Feb. 13; Sp. p. 1828; Gaz. vol. 175; p. 317.

Harrop, Edwin G., London, England. Finger-ring. No. 1,018,663; Feb. 27; Sp. p. 5420; Gaz. vol. 175; p. 939.

Harry Vissering and Company. (See Vissering, Harry, assignor.)

Harsey, Haskell, Andalusia, Ala. Turpentine-cup. No. 1,017,541; Feb. 13; Sp. p. 2885; Gaz. vol. 175; p. 487.

Hart, Harry S., assignor to Rodger Ballast Car Company, Chicago, Ill. Dump-car. No. 1,018,389; Feb. 20; Sp. p. 4760; Gaz. vol. 175; p. 815.

Hart, Henry A., Flushing, assignor of one-half to E. C. Carter, New York, N. Y. Curtain-beading tape. No. 1,017,754; Feb. 20; Sp. p. 3320; Gaz. vol. 175; p. 594.

Hart, Louis F., assignor to The Hart Manufacturing Company, Cleveland, Ohio. Device for cutting screw-threads. No. 1,017,148; Feb. 13; Sp. p. 2043; Gaz. vol. 175; p. 351.

Hart, Manufacturing Company, The. (See Hart, Louis F., assignor.)

Harter, Edwin S., *et al.* (See Fairfield, Alfred R., assignor.)

Hartford Machine Screw Company, The. (See Seward, Ernest R., assignor.)

Harting, Clayton C., and J. F. Flood, Woodstock, assignors to The Oliver Typewriter Company, Chicago, Ill. Spring-barrel brake for type-writing machines. No. 1,018,760; Feb. 27; Sp. p. 5633; Gaz. vol. 175; p. 973.

Hartmann, Karl, Berlin, Germany. Hardening and waterproofing animal skins. No. 1,016,407; Feb. 6; Sp. p. 380; Gaz. vol. 175; p. 60.

Hartung, Oscar W., Detroit, Mich. Stop mechanism for phonographs. No. 1,016,563; Feb. 6; Sp. p. 773; Gaz. vol. 175; p. 114.

Harward, John J., Friendship, Tenn. Open harness-tug. No. 1,017,666; Feb. 20; Sp. p. 3126; Gaz. vol. 175; p. 565.

Hasburg, John W., Chicago, Ill. Paint-package. No. 1,018,624; Feb. 27; Sp. p. 5769; Gaz. vol. 175; p. 996.

Hasl-Coe Construction Company. (See Hassell, Alexander W., assignor.)

Hassell, Alexander W., Jersey City, N. J., assignor, by mesne assignments, of one-half to Hasl-Coe Construction Company. Subaqueous rock-breaker. No. 1,018,050; Feb. 20; Sp. p. 4040; Gaz. vol. 175; p. 699.

Hassey, T. H. (See Bolick, David D., assignor.)

Hastings, Kenneth B., assignor to Globe Ear-Phone Company, Boston, Mass. Audiphone rheostat and switch. No. 1,018,356; Feb. 20; Sp. p. 4665; Gaz. vol. 175; p. 802.

Hathaway, Charles O., and F. W. Huffaker, Big Timber, Mont. Sickle-sharpener. No. 1,018,051; Feb. 20; Sp. p. 4042; Gaz. vol. 175; p. 699.

Hathaway, Horace K. (See Tabor and Hathaway.)

Haultain, Herbert E. T., Toronto, Ontario, Canada. Electrolytic apparatus. No. 1,018,901; Feb. 27; Sp. p. 5923; Gaz. vol. 175; p. 1020.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson Mfg Co. Machine for setting rivets. No. 1,016,940; Feb. 13; Sp. p. 1574; Gaz. vol. 175; p. 278.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson Mfg. Co. Multiple rivet-setting machine. No. 1,018,761; Feb. 27; Sp. p. 5634; Gaz. vol. 175; p. 974.

Havener, Arthur R., Waltham, Mass., assignor to American Lacing Hook Co. Machine for punching and feeding sheet material. No. 1,019,005; Feb. 27; Sp. p. 6167; Gaz. vol. 175; p. 1057.

Havens, Franke S. (See Schanche and Havens.)

Hawley, Eugene W., Philadelphia, Pa. Wardrobe-trunk. No. 1,017,755; Feb. 20; Sp. p. 3321; Gaz. vol. 175; p. 594.

Haworth, Charles M., Maricopa, Cal. Window-screen insect-escape. No. 1,018,188; Feb. 20; Sp. p. 4354; Gaz. vol. 175; p. 747.

Hawe, William H., assignor of one-eighth to H. Wagner and one-eighth to J. E. Rager, Johnstown, Pa. Metallic railway-tie. No. 1,018,491; Feb. 27; Sp. p. 5010; Gaz. vol. 175; p. 881.

Hay, Alexander M. (See Neil, James M., assignor.)

Hayes, John P., Pittsburgh, Pa. Electric controller. No. 1,017,413; Feb. 13; Sp. p. 2614; Gaz. vol. 175; p. 443.

Hayes, Michael F., Boston, Mass. Mattress-turning apparatus. No. 1,018,325; Feb. 27; Sp. p. 5770; Gaz. vol. 175; p. 996.

Hayes, Stephen Q. (See Moss and Hayes.)

Hayhurst, Colbert G., Brooklyn, assignor of one-third to G. L. Clark, Hudson, N. Y. Feed-bag holder. No. 1,017,542; Feb. 13; Sp. p. 2886; Gaz. vol. 175; p. 487.

Haymaker, James G., Minerva, Ohio. Hose-coupling. No. 1,016,744; Feb. 6; Sp. p. 1144; Gaz. vol. 175; p. 176.

Heacox, Harry L., Derry, Pa. Tie and rail-fastener. No. 1,018,902; Feb. 27; Sp. p. 5925; Gaz. vol. 175; p. 1021.

Head, Robert, assignor to Pine Hill Crystal Spring Water Co., New York, N. Y. Combined closure and faucet. No. 1,017,756; Feb. 20; Sp. p. 3322; Gaz. vol. 175; p. 595.

Headley, Benjamin T., and M. C. Bard, assignors to Millville Machine Company, Millville, N. J. Glass-working machine. No. 1,017,870; Feb. 20; Sp. p. 3432; Gaz. vol. 175; p. 634.

Headson, Frank A., assignor to H. W. Johns-Manville Company, Milwaukee, Wis. Paper-making machine. No. 1,018,903; Feb. 27; Sp. p. 5926; Gaz. vol. 175; p. 1021.

Heath, Samuel, Philadelphia, Pa. Vapor-burner. No. 1,016,497; Feb. 6; Sp. p. 591; Gaz. vol. 175; p. 92.

Heaton-Peninsular Button Fastener Company. (See Perkins, George W., assignor.)

Heckel, Otto A., assignor of one-half to R. H. Spellmeyer, Jr., St. Louis, Mo. Dispensing-tank for liquids. No. 1,016,990; Feb. 13; Sp. p. 1607; Gaz. vol. 175; p. 296.

Hecker, Thomas, Carrington, N. D. Shock-loader. No. 1,016,820; Feb. 6; Sp. p. 1315; Gaz. vol. 175; p. 202.

Heenan, Hammersley, Manchester, England. Building cooling or warming drums. No. 1,018,242; Feb. 20; Sp. p. 4456; Gaz. vol. 175; p. 765.

Heenan, Hammersley, Manchester, England. Apparatus for cooling or warming water, air, or gas. No. 1,018,243; Feb. 20; Sp. p. 4457; Gaz. vol. 175; p. 765.

Heger, Anton, New York, N. Y. Keyboard-machine for setting and distributing type for facsimile type-writing. No. 1,017,667; Feb. 20; Sp. p. 3127; Gaz. vol. 175; p. 565.

Hegerhorst, John, Chicago, Ill. Piano-stool. No. 1,016,886; Feb. 6; Sp. p. 1432; Gaz. vol. 175; p. 223.

Heichelbech, Andrew C., West Baden, Ind. Collar and tie. No. 1,017,414; Feb. 13; Sp. p. 2632; Gaz. vol. 175; p. 443.

Heim, Richard, Canastota, assignor of one-half to F. Behrend, New York, N. Y. Producing adhesives. No. 1,018,559; Feb. 27; Sp. p. 5214; Gaz. vol. 175; p. 906.

Heine, Heinrich. (See Mill, Anton and A., Jr., assignors.)

Heitmann, Johannes M. W., Hamburg, Germany. Fender. No. 1,018,816; Feb. 20; Sp. p. 4396; Gaz. vol. 175; p. 789.

Hejnal, Frank, Baltimore, Md. Inkstand. No. 1,018,189; Feb. 20; Sp. p. 4355; Gaz. vol. 175; p. 747.

Hekkel, G., *et al.* (See Balasz, John, assignor.)

Helbling, William, Philadelphia, Pa. Car-fender. No. 1,017,668; Feb. 20; Sp. p. 3128; Gaz. vol. 175; p. 565.

Heidt, Edwardt, Merrill, Wis. Rotary engine. No. 1,017,971; Feb. 20; Sp. p. 3370; Gaz. vol. 175; p. 670.

Heller, Julius, assignor to Schraubens- und Schmiedewarenfabriks Aktiengesellschaft, Brevillier & Co. und A. Urban & Söhne, Vienna, Austria-Hungary. Rolling screw-bolts. No. 1,017,543; Feb. 13; Sp. p. 2887; Gaz. vol. 175; p. 487.

Heller, Julius, assignor to Schraubens- und Schmiedewarenfabriks Aktiengesellschaft Brevillier & Co. und A. Urban & Söhne, Vienna, Austria-Hungary. Machine for rolling screw-bolts. No. 1,018,317; Feb. 20; Sp. p. 4597; Gaz. vol. 175; p. 780.

Helsing, Olof, Sandbeam, Sweden. Aeroplane. No. 1,018,190; Feb. 20; Sp. p. 4356; Gaz. vol. 175; p. 747.

Helwig, Nicholas, Middletown, Ohio. Driving mechanism. No. 1,016,941; Feb. 13; Sp. p. 1575; Gaz. vol. 175; p. 279.

Hemenway, Charles L., and F. W. Updegraff, Covelo, Cal. Motor-vehicle. No. 1,018,043; Feb. 20; Sp. p. 4045; Gaz. vol. 175; p. 699.

Hemme, William, Altoona, Kans. Stop-valve. No. 1,018,560; Feb. 27; Sp. p. 5215; Gaz. vol. 175; p. 906.

Hempel, Albert, Leipsig-Oetzsch, Germany. Producing formates. No. 1,017,361; Feb. 13; Sp. p. 2296; Gaz. vol. 175; p. 391.

Henderson, William M. (See Ritzschi and Henderson.)

Hengerer, Louis, trustee. (See Ryan, Walter S., assignor.)

Hengler & Cronemeyer. (See Storme, Peter, assignor.)

Henrich, Peter, Hequiam, Wash. Berry-box. No. 1,018,318; Feb. 20; Sp. p. 4590; Gaz. vol. 175; p. 780.

Henriksen, Edwin C., Tioga, N. D. Table-caster. No. 1,016,745; Feb. 6; Sp. p. 1145; Gaz. vol. 175; p. 177.

Hensler, Adolph F., *et al.* (See Beers, Charles F., assignor.)

Hensler, Adolph F., *et al.* (See Koerner, Ferdinand H., assignor.)

Hensler, John, *et al.* (See Beers, Charles F., assignor.)

Hentschel, Arthur W. (See Kester and Hentschel.)

Herboldsman, Louis J., and G. L. Eppihimer, assignors to M. A. Stokes and Company, Malden, Mo. Sifter. No. 1,018,904; Feb. 27; Sp. p. 5930; Gaz. vol. 175; p. 1022.

Herman, Albert L., Prosper, Oreg. Reversing-gearing. No. 1,018,972; Feb. 27; Sp. p. 6079; Gaz. vol. 175; p. 1046.

Herman, Ludwig, Cleveland, Ohio. Laundry wrapper or package for men's shirts. No. 1,018,905; Feb. 27; Sp. p. 5931; Gaz. vol. 175; p. 1022.

Hermann, Auhum & Co. (See Leathem, James, assignor.)

Herndon, Paul H., Tampa, Fla. Egg-turning device. No. 1,018,191; Feb. 20; Sp. p. 4357; Gaz. vol. 175; p. 748.

Herndon, Paul H., Tampa, Fla. Incubator. No. 1,018,192; Feb. 20; Sp. p. 4358; Gaz. vol. 175; p. 748.

Herndon, Paul H., Tampa, Fla. Incubator. No. 1,018,357; Feb. 20; Sp. p. 4668; Gaz. vol. 175; p. 803.

Herold, Carl, Brünn, Austria-Hungary. Elastic tire. No. 1,016,991; Feb. 13; Sp. p. 1626; Gaz. vol. 175; p. 296.

Héroux, Edmond, assignor to F. X. Lewis, Springfield, Mass. Window attachment or fixture. No. 1,018,614; Feb. 27; Sp. p. 5319; Gaz. vol. 175; p. 928.

Herrick, Bert L., Oakland, Cal. Listing and marking table. No. 1,018,053; Feb. 20; Sp. p. 4046; Gaz. vol. 175; p. 700.

Herzog, Joseph J., Baltimore, Md. Nut-lock. No. 1,016,746; Feb. 6; Sp. p. 1146; Gaz. vol. 175; p. 177.

Hess, Franklin P., Lynn, Mass. Flat-work ironer. No. 1,016,992; Feb. 13; Sp. p. 1609; Gaz. vol. 175; p. 296.

Hesse, Albert, Wilmersdorf, Germany. Solution of perfumes and making the same. No. 1,017,669; Feb. 20; Sp. p. 3140; Gaz. vol. 175; p. 566.

Hetrick, John E., Lompoc, Cal. Shoe-protector. No. 1,018,708; Feb. 27; Sp. p. 5516; Gaz. vol. 175; p. 955.

Heuyard, Joshua, Terre Hill, Pa. Repairing and stretching last. No. 1,016,827; Feb. 6; Sp. p. 1318; Gaz. vol. 175; p. 203.

Heybach, Frederick J., Baltimore, Md., assignor to American Automatic Machinery Company, Savannah, Ga. Packing-machine. No. 1,016,498; Feb. 6; Sp. p. 593; Gaz. vol. 175; p. 92.

Heyl, Henry R., assignor to The American Paper Bottle Company, Philadelphia, Pa. Machine for making paper bottles and like objects. No. 1,018,319; Feb. 20; Sp. p. 4600; Gaz. vol. 175; p. 790.

Heyl & Patterson. (See Mulholland, Vergil, assignor.)

Hibbard, Henry D., Plainfield, N. J. Ingot-mold. No. 1,018,906; Feb. 27; Sp. p. 5932; Gaz. vol. 175; p. 1022.

Hibshman, Louis R., and H. S. Hollar, Harrisburg, Pa. Railway-joint. No. 1,018,054; Feb. 20; Sp. p. 4048; Gaz. vol. 175; p. 700.

Hickok, Robert D., Atlanta, Ga. Electric-clock system. No. 1,016,499; Feb. 6; Sp. p. 601; Gaz. vol. 175; p. 93.

Hicks, Alfred, St. John's Wood, England. Piano-action. No. 1,016,408; Feb. 6; Sp. p. 381; Gaz. vol. 175; p. 60.

Higgins, Daniel P., New Haven, Conn. Coin-controlled device. No. 1,018,055; Feb. 20; Sp. p. 4050; Gaz. vol. 175; p. 700.

Higgins, Fred B., assignor to Fred B. Higgins Co., Boothbay Harbor, Me. Shipping-package for lobsters. No. 1,016,627; Feb. 6; Sp. p. 919; Gaz. vol. 175; p. 187.

Higgins, Harry A., assignor to Diamond Power Specialty Co., Detroit, Mich. Blower for boilers. No. 1,016,993; Feb. 13; Sp. p. 1703; Gaz. vol. 175; p. 297.

Higgins, Harry A., assignor to Diamond Power Specialty Co., Detroit, Mich. Blower for boilers. No. 1,016,994; Feb. 13; Sp. p. 1704; Gaz. vol. 175; p. 297.

High Frequency Ignition Coil Company. (See Seeley, James E., assignor.)

Hill, Climie E. (See Hill, Stirling B., C. E., and W. R.)

Hill, Fred E., Stoneham, Mass. Mop-head. No. 1,017,149; Feb. 13; Sp. p. 2062; Gaz. vol. 175; p. 352.

Hill, James S. (See Hill, Samuel H., assignor.)

Hill, Samuel H., assignor of one-half to J. S. Hill, Keener, Ala. Dropper attachment for cultivators. No. 1,018,709; Feb. 27; Sp. p. 5517; Gaz. vol. 175; p. 955.

Hill, Stirling B., C. E., and W. R., Seattle, Wash. Hydraulic ram. No. 1,016,400; Feb. 6; Sp. p. 383; Gaz. vol. 175; p. 61.

Hill, William B., Kansas City, Mo. Making cement. No. 1,017,211; Feb. 13; Sp. p. 2191; Gaz. vol. 175; p. 373.

Hill, William J. (See Ford, Harry J., assignor.)

Hill, William R. (See Hill, Stirling B., C. E., and W. R.)

Hilscher, John F., St. Paul, Minn. Dish-washing machine. No. 1,016,995; Feb. 13; Sp. p. 1705; Gaz. vol. 175; p. 298.

Hilton, Frank M. (See Hilton, William W., F. M., and J. S.)

Hilton, John S. (See Hilton, William W., F. M., and J. S.)

Hilton, Robert W., Smethport, Pa. Wood-distilling apparatus. No. 1,018,419; Feb. 27; Sp. p. 4842; Gaz. vol. 175; p. 857.

Hilton, William W., F. M., and J. S., Akron, Ohio. Combined cigar-holder, ash-receptacle, and match-safe. No. 1,018,492; Feb. 27; Sp. p. 5013; Gaz. vol. 175; p. 882.

Hilty, William L., and W. Hopes, Monongahela, Pa. Cuspidor. No. 1,018,907; Feb. 27; Sp. p. 5934; Gaz. vol. 175; p. 1022.

Himioben, Ludwig H., Hamilton, Ohio. Resonator. No. 1,017,871; Feb. 20; Sp. p. 3639; Gaz. vol. 175; p. 635.

Hinchberger, Edward P., assignor of one-third to S. Hinchberger, Pittsburgh, Pa. Trolley. No. 1,016,747; Feb. 6; Sp. p. 1147; Gaz. vol. 175; p. 177.

Hinchberger, Sarah. (See Hinchberger, Edward P., assignor.)

Hincher, Lee D., Shoals, Ind. Garment-hanger. No. 1,018,056; Feb. 20; Sp. p. 4054; Gaz. vol. 175; p. 701.

Hincher, Lee D., Shoals, Ind. Garment-hanger. No. 1,018,057; Feb. 20; Sp. p. 4055; Gaz. vol. 175; p. 701.

Hinkle, Ferdinand W., Los Angeles, Cal. Atomizer. No. 1,018,193; Feb. 20; Sp. p. 4361; Gaz. vol. 175; p. 748.

Hinz, Wilhelm, Antwerp, Belgium. Artificial horizon for ships or the like. No. 1,016,500; Feb. 6; Sp. p. 604; Gaz. vol. 175; p. 93.

Hirth, Carl A., Cannstatt, Germany. Skiving-machine. No. 1,018,493; Feb. 27; Sp. p. 5015; Gaz. vol. 175; p. 882.

Hitchcock, Embury A., Columbus, Ohio. Meter. No. 1,018,561; Feb. 27; Sp. p. 5216; Gaz. vol. 175; p. 906.

Hitt, Thomas S., *et al.* (See Fairfield, Alfred R., assignor.)

Hobart Electric Manufacturing Company, The. (See Johnston, Herbert L., assignor.)

Hoch, Franz, Frankfort-on-the-Main, Germany. Rail-joint. No. 1,016,494; Feb. 27; Sp. p. 5016; Gaz. vol. 175; p. 862.

Hodge, Otis E. (See Kunz and Hodge.)

Hodgkinson, Francis, Edgewood Park, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Blade-locking. No. 1,016,942; Feb. 13; Sp. p. 1580; Gaz. vol. 175; p. 279.

Hodgson, Frank L., et al. (See Graetz, William, assignor.)

Hofbauer, John O., New York, N. Y. Wind-shield. No. 1,018,978; Feb. 27; Sp. p. 6981; Gaz. vol. 175; p. 1046.

Hoffman, Abram, Montreal, Quebec, Canada. Trousers. No. 1,017,544; Feb. 18; Sp. p. 2880; Gaz. vol. 175; p. 488.

Hoffman Heater Company. (See Oehlke, Frederick H., assignor.)

Hoffman, Peter L., Aurora, Ill., assignor, by mesne assignments, to Richards-Wilcox Manufacturing Company. Door-hanger. No. 1,017,757; Feb. 20; Sp. p. 3820; Gaz. vol. 175; p. 595.

Hoffmann Manufacturing Company, The. (See Schmidt, Otto A., assignor.)

Hogan, John L., Jr., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa. Break-key. No. 1,016,564; Feb. 6; Sp. p. 775; Gaz. vol. 175; p. 114.

Hoge, Hampden, and J. Schade, Jr., New York, N. Y.; said Schade assignor to said Hoge. Rug-fastener. No. 1,018,194; Feb. 20; Sp. p. 4262; Gaz. vol. 175; p. 749.

Högfeldt, Richard, Dusseldorf, Germany. Machine for making paper boxes. No. 1,016,266; Feb. 6; Sp. p. 48; Gaz. vol. 175; p. 10.

Hogle, Joseph B., Chicago, Ill. Window-shade fixture. No. 1,018,110; Feb. 20; Sp. p. 4173; Gaz. vol. 175; p. 719.

Holcomb, Noble E., Newata, Okla. Hand-rest. No. 1,018,615; Feb. 27; Sp. p. 5320; Gaz. vol. 175; p. 923.

Holdt, George H., assignor to Dexter Folder Company, Pearl River, N. Y. Back gage for paper-cutting machines. No. 1,016,111; Feb. 20; Sp. p. 4180; Gaz. vol. 175; p. 719.

Hollar, Harry S. (See Hibsteman and Hollar.)

Holland, James J., Philadelphia, Pa. Receptacle-closure. No. 1,018,495; Feb. 27; Sp. p. 5018; Gaz. vol. 175; p. 882.

Holliday, John S. (See Lewis and Holliday.)

Hollingsworth, Claude. (See Carley and Hollingsworth.)

Hollins, Denis M., Blackburn, England, assignor to Draper Company, Hopedale, Mass. Thread-cutting mechanism for automatic looms. No. 1,018,466; Feb. 27; Sp. p. 5019; Gaz. vol. 175; p. 882.

Hollizer, Marc. (See Macowsky and Hollizer.)

Holman, Robert C., and G. I. Theile, assignors to The Hooven, Owens, Rentschler Company, Hamilton, Ohio. Steam-engine lubricator. No. 1,018,112; Feb. 20; Sp. p. 4182; Gaz. vol. 175; p. 720.

Holme, Edward M., Stockport, England. Controller for electric cranes. No. 1,017,150; Feb. 13; Sp. p. 2063; Gaz. vol. 175; p. 352.

Holmes, Howard, South Norwalk, Conn. Hat-pouncing machine. No. 1,016,562; Feb. 27; Sp. p. 6218; Gaz. vol. 175; p. 207.

Holmes, Philander J. (See Mason, Charles, assignor.)

Holmes, Samuel F., Los Angeles, Cal. Permutation-padlock. No. 1,018,616; Feb. 27; Sp. p. 5321; Gaz. vol. 175; p. 923.

Holt, Harold E. S., Farnborough, England. Razor. No. 1,016,267; Feb. 6; Sp. p. 51; Gaz. vol. 175; p. 11.

Holt, Harold E. S., Farnborough, England. Razor. No. 1,018,429; Feb. 27; Sp. p. 4845; Gaz. vol. 175; p. 858.

Holt, James C. (See Barrickman and Holt.)

Holt, Pliny E., Stockton, Cal. Two-wheeled dump-wagon. No. 1,017,672; Feb. 20; Sp. p. 3879; Gaz. vol. 175; p. 671.

Holthoff, Henry C., Mexico, Mexico, assignor to Allis-Chalmers Company, Milwaukee, Wis. Feed and discharge end-liner for tube-mills. No. 1,018,320; Feb. 20; Sp. p. 4607; Gaz. vol. 175; p. 791.

Holtzer-Cabot Electric Company, The. (See Kennedy, Carlton L., assignor.)

Homan, James, Grandview, Manitoba, Canada. Grain-shocking machine. No. 1,016,628; Feb. 6; Sp. p. 920; Gaz. vol. 175; p. 137.

Hompesch & Company. (See Horváth, Richard von, assignor.)

Honold, Gottlob, and A. Zähringer, assignors to Firm of R. Bosch, Stuttgart, Germany. Igniting mechanism in internal-combustion engines. No. 1,017,212; Feb. 13; Sp. p. 2193; Gaz. vol. 175; p. 372.

Hood, Arthur N. (See Duncan and Hood.)

Hood, Charles Y., Wilkinsburg, and J. Chalmers, Homewood, Pa. Automatic choke-valve. No. 1,017,615; Feb. 13; Sp. p. 2624; Gaz. vol. 175; p. 443.

Hood Rubber Co. (See Duncan and Tousley, assignors.)

Hood Rubber Company. (See Duncan and Hood, assignors.)

Hoops, Charles E., Portland, Oreg. Hat-pin protector. No. 1,016,943; Feb. 13; Sp. p. 1581; Gaz. vol. 175; p. 279.

Hooven, Owens, Rentschler Company, The. (See Holman and Theile, assignors.)

Hopes, William. (See Hilty and Hopes.)

Hopkins & Allen Arms Company, The. (See Wright, Arthur C., assignor.)

Hopkins, Annis, Lewistown, Mont. Scissors. No. 1,017,545; Feb. 18; Sp. p. 2890; Gaz. vol. 175; p. 488.

Hopkinson, John H., Fall River, Mass. Shuttle-eye. No. 1,018,762; Feb. 27; Sp. p. 5686; Gaz. vol. 175; p. 974.

Horst, Albert. (See Leonard and Smith, assignors.)

Horst, William H., Hyde Park, N. Y. Match-box. No. 1,016,906; Feb. 13; Sp. p. 1706; Gaz. vol. 175; p. 298.

Horner, Edgar C., Clapham Park, London, England. Wheel for road-vehicles. No. 1,017,973; Feb. 20; Sp. p. 3990; Gaz. vol. 175; p. 671.

Horstmyer, John E., Schenectady, N. Y. Portable cash-fastener. No. 1,019,006; Feb. 27; Sp. p. 6162; Gaz. vol. 175; p. 1058.

Hortas, Allen A., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,016,561; Feb. 6; Sp. p. 605; Gaz. vol. 175; p. 93.

Horton, James, Minnehall, and T. W. Keen, Swissvale, Pa. Annular metallic packing. No. 1,016,669; Feb. 6; Sp. p. 1036; Gaz. vol. 175; p. 153.

Horváth, Richard von, Vienna, Austria-Hungary, assignor to Hompesch & Company, Berlin, Germany. Apparatus for producing sparks. No. 1,018,763; Feb. 27; Sp. p. 5689; Gaz. vol. 175; p. 975.

Hoskins Manufacturing Company. (See Wingaard, Oscar, assignor.)

Hoth, Charles, Wenhon, Iowa. Delivery appliance. No. 1,018,497; Feb. 27; Sp. p. 5023; Gaz. vol. 175; p. 884.

Hottmann, Charles W., assignor to R. T. Randall, Philadelphia, Pa. Meat-cutter. No. 1,017,218; Feb. 13; Sp. p. 2195; Gaz. vol. 175; p. 374.

Houseberg, John W., Pittsburgh, Pa. Lathe tool-holder. No. 1,017,974; Feb. 20; Sp. p. 3885; Gaz. vol. 175; p. 672.

Howard, Clarence H., and H. M. Pflager, assignors to Double Body Bolster Company, St. Louis, Mo. Car-truck. No. 1,016,629; Feb. 6; Sp. p. 926; Gaz. vol. 175; p. 138.

Howard, Clarence H., and H. M. Pflager, assignors to Double Body Bolster Company, St. Louis, Mo. Car-truck. No. 1,016,630; Feb. 6; Sp. p. 928; Gaz. vol. 175; p. 139.

Howard, Frederick A., Chester, Pa. Attachment for automobiles. No. 1,016,631; Feb. 6; Sp. p. 929; Gaz. vol. 175; p. 139.

Howard, Henry J. M., Washington, D. C. Hose-rack. No. 1,018,784; Feb. 27; Sp. p. 5641; Gaz. vol. 175; p. 976.

Howard, James. (See Bergren, Ira W., assignor.)

Howell, John W., Newark, N. J., assignor to General Electric Company. Filament-support. No. 1,017,546; Feb. 18; Sp. p. 2891; Gaz. vol. 175; p. 488.

Howell, William R., Troy, N. Y. Feeding device. No. 1,017,758; Feb. 20; Sp. p. 3827; Gaz. vol. 175; p. 595.

Howland, Benjamin F., Des Moines, Iowa. Conveyer-shaft coupling. No. 1,016,748; Feb. 6; Sp. p. 1148; Gaz. vol. 175; p. 177.

Hoyaux, Emile, McDonald, Pa. Belt-operator. No. 1,016,502; Feb. 6; Sp. p. 614; Gaz. vol. 175; p. 94.

Hoyt, Ezra S., Los Angeles, Cal. Oil-gas generator. No. 1,017,214; Feb. 13; Sp. p. 2200; Gaz. vol. 175; p. 374.

Hubbart, Edwin A. (See Appleby and Hubbart.)

Huenefeld Company, The. (See Huenefeld, Walter E., assignor.)

Huenefeld, Walter E., assignor to The Huenefeld Company, Cincinnati, Ohio. Knockdown oven. No. 1,016,565; Feb. 6; Sp. p. 776; Gaz. vol. 175; p. 115.

Huenefeld, Walter E., assignor to The Huenefeld Company, Cincinnati, Ohio. Oven-door. No. 1,016,566; Feb. 6; Sp. p. 778; Gaz. vol. 175; p. 115.

Huffaker, Francis W. (See Hathaway and Huffaker.)

Huffman, Louis, Toronto, Ontario, Canada. Impression apparatus. No. 1,018,617; Feb. 27; Sp. p. 5323; Gaz. vol. 175; p. 924.

Hughes, Jacob F. (See McKay and Hughes.)

Hughes, William B., Newark, N. J. Circuit-controlling device. No. 1,016,268; Feb. 6; Sp. p. 52; Gaz. vol. 175; p. 11.

Hulit, John A., assignor to The Hulit Transmitter Company, Topeka, Kans. Telegraph sending-machine. No. 1,017,084; Feb. 13; Sp. p. 1829; Gaz. vol. 175; p. 318.

Hulit Transmitter Company, The. (See Hulit, John A., assignor.)

Hull, Alfred A., Knoxville, Tenn. Flue-cleaner. No. 1,018,826; Feb. 27; Sp. p. 5772; Gaz. vol. 175; p. 997.

Hulsizer, Clyde L., Des Moines, Iowa. Device for winding artificial vines. No. 1,017,626; Feb. 13; Sp. p. 2038; Gaz. vol. 175; p. 313.

Hume, William L., Rome, Ga. Wood-gaining machine. No. 1,016,828; Feb. 6; Sp. p. 1319; Gaz. vol. 175; p. 203.

Humphreys, Walter L. (See Wobus and Humphreys.)

Hungerford, Oliver T., Belleville, N. J. Electric conduit. No. 1,017,759; Feb. 20; Sp. p. 3829; Gaz. vol. 175; p. 595.

Hunt, Wilson P., assignor to Reynolds Pattern and Machine Company, Moline, Ill. Adjustable table for automatic screw-driving machines. No. 1,017,098; Feb. 13; Sp. p. 1945; Gaz. vol. 175; p. 324.

Hunter, George H., Redlands, Cal. Sprinkler for spraying areas of definite shape. No. 1,016,632; Feb. 6; Sp. p. 931; Gaz. vol. 175; p. 139.

Huntoon, Charles F., assignor to H. D. Laughlin, Chicago, Ill. Brake-head and key. No. 1,018,618; Feb. 27; Sp. p. 5323; Gaz. vol. 175; p. 924.

Hurd, Norman B. (See Voight and Hurd.)

Hurst, Henry F., Seattle, Wash. Combined shoemaker's stand and last. No. 1,017,372; Feb. 20; Sp. p. 3660; Gaz. vol. 175; p. 635.

Hurwitz, Abraham, New York, N. Y. Device for cutting pellet-jewels. No. 1,016,539; Feb. 6; Sp. p. 1321; Gaz. vol. 175; p. 203.

Hutchings, Frederick E., New York, N. Y., assignor to Auto Lite Sawing Fender Co. Fender or wheel-guard. No. 1,018,949; Feb. 27; Sp. p. 5219; Gaz. vol. 175; p. 907.

Hutchins, Edgar G., Jr., assignor to American Dehydrating Co., Waukesha, Wis. Producing raw dehydrated Irish potatoes. No. 1,016,503; Feb. 6; Sp. p. 626; Gaz. vol. 175; p. 94.

Hutchinson, Charles H. (See Light and Hutchinson.)

Hutchison, Orville T., assignor of one-half to P. Block, De Land, Fla. Shoemaker's knife. No. 1,018,906; Feb. 27; Sp. p. 5930; Gaz. vol. 175; p. 1022.

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hyde, John, Pittsburgh, Pa. Steam-valve. No. 1,017,292; Feb. 13; Sp. p. 2064; Gaz. vol. 175; p. 361.

Hydro-Kinetic Transmission Co., The. (See Rich, Charles C., assignor.)

Hyle, Jacob A., assignor of one-half to J. A. Pement, Chicago, Ill. Railway-tie and fastening means therefor. No. 1,016,660; Feb. 6; Sp. p. 1040; Gaz. vol. 175; p. 153.

Hyle, William A., Buffalo, N. Y., assignor to P. H. Macdonald, Toronto, Canada. Pipe-wrench. No. 1,016,997; Feb. 13; Sp. p. 1705; Gaz. vol. 175; p. 299.

I. E. Palmer Co. (See Palmer, Isaac E., assignor.)

Ihlder, John D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Rope-drive elevator. No. 1,016,691; Feb. 6; Sp. p. 1062; Gaz. vol. 175; p. 159.

Ikenberry, Levi D., North Manchester, Ind. Automatic alarm-actuating mechanism. No. 1,018,664; Feb. 27; Sp. p. 5421; Gaz. vol. 175; p. 940.

Ilg, Robert A., Chicago, Ill. Centrifugal fan or pump. No. 1,017,215; Feb. 13; Sp. p. 2206; Gaz. vol. 175; p. 375.

Ilse, Frank H., Chicago, Ill. Curtain for vehicles. No. 1,018,496; Feb. 27; Sp. p. 5022; Gaz. vol. 175; p. 884.

Imam, Orla H., assignor, by mesne assignments, to F. Voigtmann, Chicago, Ill., and S. H. Pomeroy, New Rochelle, N. Y. Fireproof window with detachable munion-bars. No. 1,017,760; Feb. 20; Sp. p. 3829; Gaz. vol. 175; p. 596.

Indianapolis Gas Engine Company. (See Carmichael, Ray, assignor.)

Inman, Gilbert H., assignor of one-fourth to J. T. Stack, Brockton, Mass. False-alarm detector for fire-alarm systems. No. 1,018,564; Feb. 27; Sp. p. 5223; Gaz. vol. 175; p. 908.

International Conformer Company. (See McKinlay, James R., assignor.)

International Harvester Company. (See Dennis, Samuel K., assignor.)

International Harvester Company. (See Merwin, George M., assignor.)

International Metallurgical Company. (See Barreres de Aluguery, José, assignor.)

International Postal Supply Company of New York, The. (See Jahn, Frederick G., assignor.)

International Precipitation Company. (See Cottrell, Frederick G., assignor.)

International Steam Pump Company. (See Fleming, Wills M., assignor.)

International Text Book Company. (See Griffin, Edwin F., assignor.)

Inventors' Union Company. (See Jackson, Frank A., assignor.)

Irey, William S., Mexico, Philippine Islands. Cigarette-machine. No. 1,016,410; Feb. 6; Sp. p. 387; Gaz. vol. 175; p. 61.

Irving-Pitt Manufacturing Company. (See Pitt, William P., assignor.)

Isaacs, Louis, Louisville, Ky. Track-cleaner. No. 1,016,411; Feb. 6; Sp. p. 393; Gaz. vol. 175; p. 62.

Ismer, Jacques A., New York, N. Y. Theater-stage. No. 1,018,490; Feb. 27; Sp. p. 5020; Gaz. vol. 175; p. 884.

Israel, Israel Z., assignor to S. M. Israel, New York, N. Y. Machine for baking wafers and the like. No. 1,016,740; Feb. 6; Sp. p. 1140; Gaz. vol. 175; p. 173.

Israel, Sidney M. (See Israel, Israel Z., assignor.)

Ivatt, Henry A., Doncaster, England. Crank-shaft for steam-engines. No. 1,016,504; Feb. 6; Sp. p. 617; Gaz. vol. 175; p. 94.

Ivatts, Ernest A., assignor to Compagnie Generale de Phonographes, Cinematographes et Appareils de Precision, Paris, France. Registering device for kinematographs. No. 1,018,827; Feb. 27; Sp. p. 5775; Gaz. vol. 175; p. 997.

Ives Manufacturing Corporation, The. (See Viall, William G., assignor.)

Iveson, Edward H., Cohoes, N. Y. Wrench. No. 1,018,221; Feb. 20; Sp. p. 4008; Gaz. vol. 175; p. 791.

J. A. Fay & Egan Company. (See Solem, Peter A., assignor.)

J. A. Fay & Egan Company. (See Williams, William S., assignor.)

J. B. Williams Company. (See Williams, Philip K., assignor.)

J. C. Blair Specialty Company. (See Ellis, William V., assignor.)

J. G. Brill Company. (See Pearson, Henry, assignor.)

J. L. Ready Iron Works Co. (See Kleinmaier, Henry, assignor.)

J. M. Robinson Manufacturing Company, The. (See Frey, Clarence N., assignor.)

Jack, Alexander M., Sheffield, England. Portable air-withdrawing or vacuum-producing apparatus. No. 1,016,830; Feb. 6; Sp. p. 1324; Gaz. vol. 175; p. 204.

Jackson, Frank A., Garland, Ark., assignor of one-half to Inventors' Union Company. Automatic coal-feeding mechanism for locomotive and other fire-boxes. No. 1,018,421; Feb. 27; Sp. p. 4846; Gaz. vol. 175; p. 858.

Jackson, Henry W., East Orange, N. J., assignor to Westinghouse Lamp Company. Forming device for metallic filaments. No. 1,018,500; Feb. 27; Sp. p. 5027; Gaz. vol. 175; p. 885.

Jackson, John, Clinton, Iowa. Insect-killer. No. 1,018,244; Feb. 20; Sp. p. 4456; Gaz. vol. 175; p. 765.

Jackson, Ray P., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Voltage-regulator. No. 1,017,670; Feb. 20; Sp. p. 3141; Gaz. vol. 175; p. 503.

Jackson, Ray P., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Voltage-regulating system. No. 1,018,322; Feb. 20; Sp. p. 4609; Gaz. vol. 175; p. 791.

Jackson, Simeon S., assignor to The Stafford Company, Readville, Mass. Weft-feeler device for looms. No. 1,017,855; Feb. 13; Sp. p. 1894; Gaz. vol. 175; p. 318.

Jackson, Thomas C., assignor of one-third to R. J. A. Shanks, Chicago, Ill. Scow for transporting gravel and the like. No. 1,018,565; Feb. 27; Sp. p. 5224; Gaz. vol. 175; p. 908.

Jackson, Thomas C., assignor of one-third to R. J. A. Shanks, Chicago, Ill. Scow for transporting gravel and the like. No. 1,018,566; Feb. 27; Sp. p. 5227; Gaz. vol. 175; p. 908.

Jacob, Edward H., West Chester, Pa. Preserving mushrooms. No. 1,018,960; Feb. 27; Sp. p. 5637; Gaz. vol. 175; p. 1023.

Jagenberg, Emil, Dusseldorf, Germany. Machine for making pasteboard boxes. No. 1,016,269; Feb. 6; Sp. p. 50; Gaz. vol. 175; p. 12.

Jahn, Frederick G., New York, N. Y. Feeding mechanism. No. 1,018,058; Feb. 20; Sp. p. 4056; Gaz. vol. 175; p. 701.

Jahn, Frederick G., assignor to The International Postal Supply Company of New York, New York, N. Y. Gripper for printing and other mechanism. No. 1,018,059; Feb. 20; Sp. p. 4059; Gaz. vol. 175; p. 702.

Jahn, Frederick G., assignor to The International Postal Supply Company of New York, New York, N. Y. Printing mechanism. No. 1,018,060; Feb. 20; Sp. p. 4064; Gaz. vol. 175; p. 702.

James B. Clow & Sons. (See Davidson, John A., assignor.)

James B. Clow & Sons. (See Pleins, Leo H., assignor.)

James, Joseph B., Wolfe City, Tex. Bag-rack. No. 1,018,610; Feb. 27; Sp. p. 5330; Gaz. vol. 175; p. 925.

James Leckie & Son Company. (See Walters, Frank, assignor.)

Jamieson, James A., Montreal, Quebec, Canada. Raising the nap of cloth. No. 1,017,151; Feb. 13; Sp. p. 2056; Gaz. vol. 175; p. 352.

Jamieson, Robert W. (See Barnes and Jamieson.)

Janesville Machine Co., The. (See Milliken, Norman I., assignor.)

Janette, John T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,018,765; Feb. 27; Sp. p. 5643; Gaz. vol. 175; p. 975.

Janisch, Maximillian P., Muskegon, Mich., assignor to Lovell Manufacturing Company, Erie, Pa. Clothes-wringer. No. 1,018,422; Feb. 27; Sp. p. 4848; Gaz. vol. 175; p. 858.

Jarvis, Frederick C., Oakland, Cal. Match-box. No. 1,016,412; Feb. 6; Sp. p. 395; Gaz. vol. 175; p. 62.

Jaumandreu, Francisco, Barcelona, Spain. Apparatus for the treatment of textiles in the form of threads, cords, hanks, and fabrics. No. 1,017,547; Feb. 13; Sp. p. 2893; Gaz. vol. 175; p. 488.

Javins, Harry A., Oakland, assignor to Javins Manufacturing Company, San Francisco, Cal. Folding bed. No. 1,017,548; Feb. 13; Sp. p. 2894; Gaz. vol. 175; p. 489.

Javins Manufacturing Company. (See Javins, Harry A., assignor.)

Jaxtheimer, Charles H., New Wilmington, Pa. Making fire-brick. No. 1,018,665; Feb. 27; Sp. p. 5425; Gaz. vol. 175; p. 940.

Jefferson, Lee, Bigfork, Mont. Bed-spring. No. 1,016,663; Feb. 6; Sp. p. 932; Gaz. vol. 175; p. 139.

Jenkins, Charles F., Washington, D. C. Tapering metal bodies. No. 1,017,671; Feb. 20; Sp. p. 3143; Gaz. vol. 175; p. 566.

Jenkins, Charles F., Washington, D. C. Motion-picture apparatus. No. 1,017,672; Feb. 20; Sp. p. 3144; Gaz. vol. 175; p. 566.

Jenkins, Charles F., Washington, D. C., assignor to Simplex Service Package Corporation of America, New York, N. Y. Closure-making machine. No. 1,017,549; Feb. 13; Sp. p. 2896; Gaz. vol. 175; p. 489.

Jenkins, Charles K., South Butte, Mont. Roller window-screen. No. 1,016,413; Feb. 6; Sp. p. 396; Gaz. vol. 175; p. 62.

Jenkins, Robert N., et al. (See Hall, Frank M., assignor.)

Jenney, Robert T., De Pere, Wis. Earth-auger. No. 1,017,416; Feb. 13; Sp. p. 2626; Gaz. vol. 175; p. 441.

Jennings, Augustus H., Cokesbury, S. C. Subsoil attachment for plows. No. 1,018,061; Feb. 20; Sp. p. 4072; Gaz. vol. 175; p. 702.

Jennings, Edward W. (See Lain and Jennings.)

Jennings, John H., Merrill, Wis. Saw-set. No. 1,018,974; Feb. 27; Sp. p. 6082; Gaz. vol. 175; p. 1046.

Jerome, John, Seattle, Wash. Draft-rigging for railway-cars. No. 1,018,323; Feb. 20; Sp. p. 4612; Gaz. vol. 175; p. 792.

Jerrems, Thomas W., St. Paul, Minn., assignor of one-half to E. H. Steiger, Oshkosh, Wis. Feeding mechanism for grass-twine machines. No. 1,016,428; Feb. 27; Sp. p. 4849; Gaz. vol. 175; p. 859.

Jewett, Eugene C., Eagle Grove, Iowa. Spade-step. No. 1,018,424; Feb. 27; Sp. p. 4851; Gaz. vol. 175; p. 859.

Joeckel, Henry F., Camp Point, Ill. Telephone system. No. 1,018,666; Feb. 27; Sp. p. 5426; Gaz. vol. 175; p. 940.

Johanning, Friedrick, and L. Richnow, Cortez, Colo. Ditching-machine. No. 1,016,998; Feb. 13; Sp. p. 1710; Gaz. vol. 175; p. 298.

John C. Moore Corporation. (See Moore, Gaius C., assignor.)

John Wood Manufacturing Company. (See Gilbert, Harry E., assignor.)

Johnson, Albert W., Cleveland, Ohio. Paper-holder. No. 1,016,270; Feb. 6; Sp. p. 60; Gaz. vol. 175; p. 12.

Johnson, Alex B. and C. L., Baker, Oreg. Document-file. No. 1,016,634; Feb. 6; Sp. p. 933; Gaz. vol. 175; p. 139.

Johnson, Alex B. and C. L., Baker, Oreg. Book-holder. No. 1,016,635; Feb. 6; Sp. p. 934; Gaz. vol. 175; p. 140.

Johnson, Archie N., Kansas City, Mo. Moving sign. No. 1,018,975; Feb. 27; Sp. p. 6085; Gaz. vol. 175; p. 1047.

Johnson, Arthur H., Epsom, England, and L. W. Williams, Glasgow, Scotland. Gage-bar. No. 1,018,245; Feb. 20; Sp. p. 4460; Gaz. vol. 175; p. 766.

Johnson, Burdette H., Moores, assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 1,017,152; Feb. 13; Sp. p. 2056; Gaz. vol. 175; p. 353.

Johnson, Charles L. (See Johnson, Alex B. and C. L.)

Johnson, Charles L., Kangley, Wash. Saw-setting machine. No. 1,017,761; Feb. 20; Sp. p. 3333; Gaz. vol. 175; p. 596.

Johnson, Charles O., Mouille Point, Cape Town, Cape Colony. Elastic-fluid turbine. No. 1,018,667; Feb. 27; Sp. p. 5428; Gaz. vol. 175; p. 941.

Johnson Combined Pressing & Refinishing Iron Company. (See Johnson, Fritz, assignor.)

Johnson, Edward H., St. Paul, Minn. Railograph. No. 1,016,999; Feb. 13; Sp. p. 1711; Gaz. vol. 175; p. 299.

Johnson, Eldridge E., Merion, Pa., assignor to Victor Talking Machine Company. Record for talking-machines. No. 1,016,271; Feb. 6; Sp. p. 62; Gaz. vol. 175; p. 13.

Johnson, Eric, Seattle, Wash. Excavating-scraper. No. 1,017,293; Feb. 13; Sp. p. 2355; Gaz. vol. 175; p. 401.

Johnson, Ernest C., Hill City, S. D. Grinding-mill. No. 1,016,272; Feb. 6; Sp. p. 63; Gaz. vol. 175; p. 13.

Johnson, Fritz, assignor to Johnson Combined Pressing & Refinishing Iron Company, Racine, Wis. Flat-iron. No. 1,017,099; Feb. 13; Sp. p. 1947; Gaz. vol. 175; p. 335.

Johnson, Gustave T., Chicago, Ill. Fluid-clutch. No. 1,017,216; Feb. 13; Sp. p. 2206; Gaz. vol. 175; p. 375.

Johnson, Isaac R., Milwaukee, Wis. Oil-can holder. No. 1,018,567; Feb. 27; Sp. p. 5229; Gaz. vol. 175; p. 909.

Johnson, Lewis P., et al. (See Devlese, John T., assignor.)

Johnson, Milton A., Denison, Iowa. Wrench. No. 1,017,550; Feb. 13; Sp. p. 2898; Gaz. vol. 175; p. 490.

Johnson, Nels, Batavia, Ill. Flume-joint. No. 1,018,828; Feb. 27; Sp. p. 5776; Gaz. vol. 175; p. 997.

Johnson, Nels, Batavia, Ill. Hoop-lug. No. 1,018,829; Feb. 27; Sp. p. 5777; Gaz. vol. 175; p. 998.

Johnson, Oscar W. (See Payment, Francois X., assignor.)

Johnson, Simon C., De Kalb, Ill. Skate. No. 1,017,551; Feb. 13; Sp. p. 2900; Gaz. vol. 175; p. 490.

Johnson, William E., assignor to Rock Island Plow Company, Rock Island, Ill. Fore carriage for agricultural implements. No. 1,018,390; Feb. 20; Sp. p. 4762; Gaz. vol. 175; p. 815.

Johnson, William N. (See Knopf and Johnson.)

Johnson, William S., et al. (See Devlese, John T., assignor.)

Johnston, Herbert L., assignor to The Hobart Electric Manufacturing Company, Troy, Ohio. Refining-machine for coffee. No. 1,017,050; Feb. 13; Sp. p. 1687; Gaz. vol. 175; p. 319.

Johnston, Horace G., Corsicana, Tex. Pipe-tongs. No. 1,017,552; Feb. 13; Sp. p. 2903; Gaz. vol. 175; p. 490.

Johnston, James A., Vancouver, British Columbia, Canada. Rupture-truss. No. 1,018,118; Feb. 20; Sp. p. 4185; Gaz. vol. 175; p. 720.

Joncas, Joseph A., Minneapolis, Minn. Vehicle-lamp. No. 1,017,000; Feb. 13; Sp. p. 1715; Gaz. vol. 175; p. 299.

Jones, Charles K., New York, N. Y. Multiple-circuit controller. No. 1,016,329; Feb. 6; Sp. p. 213; Gaz. vol. 175; p. 32.

Jones, Edward C., Plymouth, Pa. Wheel. No. 1,017,553; Feb. 13; Sp. p. 2904; Gaz. vol. 175; p. 490.

Jones, Frank H., assignor to Warner Gear Company, Muncie, Ind. Clutch. No. 1,017,762; Feb. 20; Sp. p. 3336; Gaz. vol. 175; p. 597.

Jones, Frank S., Pasadena, Cal. Clutch. No. 1,018,620; Feb. 27; Sp. p. 5331; Gaz. vol. 175; p. 925.

Jones, George B., Chicago, Ill. Refrigerating device. No. 1,017,217; Feb. 13; Sp. p. 2210; Gaz. vol. 175; p. 375.

Jones, Grandville F., Exeter, Nebr. Paper-holder. No. 1,017,673; Feb. 20; Sp. p. 3145; Gaz. vol. 175; p. 567.

Jones, Harry, Suffern, assignor to E. H. Fallows, New York, N. Y. Means for holding inserts in place in molds. No. 1,016,273; Feb. 6; Sp. p. 63; Gaz. vol. 175; p. 13.

Jones, Harry R., Davenport, Iowa. Vending-machine. No. 1,017,573; Feb. 20; Sp. p. 3041; Gaz. vol. 175; p. 535.

Jones, Henry S., Augusta, Ga. Cot or bed. No. 1,017,763; Feb. 20; Sp. p. 3339; Gaz. vol. 175; p. 598.

Jones, John F., Jeanerette, La. Budding-tool. No. 1,016,331; Feb. 6; Sp. p. 1320; Gaz. vol. 175; p. 204.

Jones, Joseph R., Youngstown, Ohio. Oil-filter. No. 1,017,100; Feb. 13; Sp. p. 1949; Gaz. vol. 175; p. 335.

Jones, Robert J., Barneston, Nebr. Portable-platform wagon-jack. No. 1,016,505; Feb. 6; Sp. p. 617; Gaz. vol. 175; p. 94.

Jones, William R., Hudson, Colo. Railway-tie. No. 1,016,414; Feb. 6; Sp. p. 397; Gaz. vol. 175; p. 62.

Jones, William N., Acton, Ala. Churn. No. 1,017,554; Feb. 13; Sp. p. 2905; Gaz. vol. 175; p. 491.

Joralemon, David P. (See Kelty and Joralemon.)

Jordan, Christopher C., et al. (See Jordan, George A., assignor.)

Jordan, George A., assignor of one-third to W. H. Jordan and one-third to C. C. Jordan, Brooklyn, N. Y. Electric cut-out or switch. No. 1,018,501; Feb. 27; Sp. p. 5029; Gaz. vol. 175; p. 886.

Jordan, William H., et al. (See Jordan, George A., assignor.)

Jürgens, August, Kettwig, Germany. Ring spinning, doubling, and twisting machine. No. 1,018,710; Feb. 27; Sp. p. 5519; Gaz. vol. 175; p. 955.

Jorn, Albert, Jr., Waukegan, Ill. Sand-blast device. No. 1,016,415; Feb. 6; Sp. p. 396; Gaz. vol. 175; p. 63.

Joy, William H., M. H. Smith, and F. Korf, assignors to Korf Manufacturing Company, Lansing, Mich. Detachable runner for folding go-carts. No. 1,017,417; Feb. 13; Sp. p. 2627; Gaz. vol. 175; p. 441.

Joyce, Frank I., Dayton, Ohio. Hydraulic jack. No. 1,016,692; Feb. 6; Sp. p. 1045; Gaz. vol. 175; p. 159.

Joyce, Peter M., Cleveland, Ohio. Bar-retaining means for tube-forming machines. No. 1,018,621; Feb. 27; Sp. p. 5333; Gaz. vol. 175; p. 925.

Judson L. Thomson Mfg. Co. (See Havemeyer, Arthur R., assignor.)

Julien, Harry P., St. Louis, Mo. Apparatus for making solid carbon dioxid. No. 1,018,566; Feb. 27; Sp. p. 5231; Gaz. vol. 175; p. 900.

Jung, Karl, Grossmerisere-an-the-Elbe, assignor to Glasfabriken und Raffinerien Josef Inwald A. G., Vienna, Austria-Hungary. Forming hollow glass articles. No. 1,016,832; Feb. 6; Sp. p. 1327; Gaz. vol. 175; p. 204.

Junggren, Oscar, and A. T. Gray, Schenectady, N. Y., assignors to General Electric Company. Governing mechanism for mixed-pressure turbines. No. 1,017,555; Feb. 13; Sp. p. 2907; Gaz. vol. 175; p. 491.

Just, Alexander, and F. Hanaman, Budapest, Austria-Hungary, assignors to General Electric Company. Incandescent bodies for electric lamps. No. 1,018,502; Feb. 27; Sp. p. 5031; Gaz. vol. 175; p. 885.

Just, Thomas, Hartford, Conn. Music-clip. No. 1,016,274; Feb. 6; Sp. p. 71; Gaz. vol. 175; p. 14.

Kahle, James C., Oil City, Pa. Temper-screw. No. 1,018,910; Feb. 27; Sp. p. 5938; Gaz. vol. 175; p. 1023.

Kahn, Gustave, Detroit, Mich. Window-sash. No. 1,018,503; Feb. 27; Sp. p. 5032; Gaz. vol. 175; p. 885.

Kaiser, Alfred F., Detroit, Mich. Automatic bell-switch. No. 1,017,101; Feb. 13; Sp. p. 1952; Gaz. vol. 175; p. 335.

Kaiser, George H., Portland, Oreg. Machine for making sanitary drinking-cups. No. 1,018,911; Feb. 27; Sp. p. 5940; Gaz. vol. 175; p. 1023.

Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Spring-armature relay. No. 1,016,567; Feb. 6; Sp. p. 779; Gaz. vol. 175; p. 115.

Kampe, John F., Brooklyn, N. Y. Bed-protector. No. 1,017,153; Feb. 13; Sp. p. 2058; Gaz. vol. 175; p. 353.

Kane, Patrick H., Buffalo, N. Y. Turbine-blower. No. 1,017,001; Feb. 13; Sp. p. 1716; Gaz. vol. 175; p. 299.

Kansas City Hay Press Company, The. (See Burkett, John W., assignor.)

Karle, John D., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Embroidering attachment for sewing-machines. No. 1,018,622; Feb. 27; Sp. p. 5334; Gaz. vol. 175; p. 926.

Karlson, Julius H. (See Gran and Karlson.)

Kaschewski, Frederick, Oskaloosa, Iowa. Garment-pocket. No. 1,018,913; Feb. 27; Sp. p. 5942; Gaz. vol. 175; p. 1024.

Kashian, Minas H., Amesbury, Mass. Machine for forming seat-bodies. No. 1,016,416; Feb. 6; Sp. p. 400; Gaz. vol. 175; p. 62.

Katzenberger, Oscar, Chicago, Ill. Aligning-plate for door-hinges. No. 1,018,391; Feb. 20; Sp. p. 4765; Gaz. vol. 175; p. 815.

Kaufman, Adam, assignor to Rex Manufacturing Company, Milwaukee, Wis. Rack for vessels. No. 1,017,102; Feb. 13; Sp. p. 1953; Gaz. vol. 175; p. 336.

Kaufmann, Raymond M. (See Freebie, Thomas M., assignor.)

Kaulynskas, Joseph J. V., Philadelphia, Pa. Aerocraft. No. 1,017,218; Feb. 13; Sp. p. 2211; Gaz. vol. 175; p. 376.

Kavle, Oscar C., assignor to H. A. Moyer, Syracuse, N. Y. Type-writing machine. No. 1,018,062; Feb. 20; Sp. p. 4074; Gaz. vol. 175; p. 702.

Kay, William W., assignor to National Recorder Company, St. Louis, Mo. Conductor's cash-fare register. (Reissue.) No. 12,373; Feb. 27; Sp. p. 6173; Gaz. vol. 175; p. 1060.

Keagy, Charles O., and J. R. Carmer, Wilmington, Del. Holder or mail-box. No. 1,018,013; Feb. 27; Sp. p. 5943; Gaz. vol. 175; p. 1024.

Kearns Manufacturing Company. (See Rae, John, assignor.)

Keator, Warren B., Findlay, Ohio. Automatic clutch-release. No. 1,017,319; Feb. 13; Sp. p. 2213; Gaz. vol. 175; p. 376.

Keen, Thomas W. (See Horton and Keen.)

Keighley Company, The. (See Keighley, William B., assignor.)

Keighley, William B., assignor to The Keighley Company, Vineland, N. J. Sole-tempering machine. No. 1,017,556; Feb. 13; Sp. p. 2909; Gaz. vol. 175; p. 491.

Keith, Irving L. (See Brittain, George E., assignor.)

Keith, Sipron C. (See Arthur, Winfield S., assignor.)

Keller, Henry C., Bondville, Ill. Spring-wheel. No. 1,016,693; Feb. 6; Sp. p. 1047; Gaz. vol. 175; p. 160.

Kellerman, James M. (See Langton and Kellerman.)

Kellogg Switchboard and Supply Company. (See Davis, Fred M., assignor.)

Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)

Kelly, John E., Philadelphia, Pa. Sectional interlocking bracket. No. 1,016,694; Feb. 6; Sp. p. 1049; Gaz. vol. 175; p. 160.

Kelly, Michael, Buffalo, N. Y. Steam-boiler. No. 1,018,425; Feb. 27; Sp. p. 4853; Gaz. vol. 175; p. 859.

Kelly, Richard D., The Dalles, Oreg. Water-wheel. No. 1,017,002; Feb. 13; Sp. p. 1718; Gaz. vol. 175; p. 300.

Kelsey, Byron J. (See Parviance, Benjamin F., assignor.)

Kelso, Leslie R. A., Provo, Utah. Electric heater. No. 1,017,874; Feb. 20; Sp. p. 3643; Gaz. vol. 175; p. 636.

Kelty, Charles, and D. P. Joralemon, Elmira, N. Y. Sewer-trap. No. 1,018,569; Feb. 27; Sp. p. 5233; Gaz. vol. 175; p. 900.

Kemmler, John A., assignor of one-half to O. Klopfer, Philadelphia, Pa. Bedstead. No. 1,018,195; Feb. 20; Sp. p. 4362; Gaz. vol. 175; p. 749.

Kempster, Daniel R., Boston, Mass. Antifriction-bearing. No. 1,018,324; Feb. 20; Sp. p. 4614; Gaz. vol. 175; p. 792.

Kemter, Paul M., and A. W. Hentschel, West New York, N. J. Wheel-tire. No. 1,017,764; Feb. 20; Sp. p. 3340; Gaz. vol. 175; p. 598.

Kennedy, Carlton L., South Braintree, assignor to The Holtzer-Cabot Electric Company, Brookline, Mass. Automatic switch. No. 1,018,196; Feb. 20; Sp. p. 4365; Gaz. vol. 175; p. 749.

Kenney, Charles H., New London, Conn. Silencer for firearms. No. 1,017,003; Feb. 13; Sp. p. 1720; Gaz. vol. 175; p. 300.

Kenney, William J., and H. P. Grohn, assignors to The Underfeed Stoker Company of America, Chicago, Ill. Automatic stoker. No. 1,018,976; Feb. 27; Sp. p. 6086; Gaz. vol. 175; p. 1047.

Kennicott, Cass L., Chicago Heights, assignor to The Kennicott Company, Chicago, Ill. Water-softening apparatus. No. 1,017,294; Feb. 13; Sp. p. 2357; Gaz. vol. 175; p. 401.

Kennicott Company, The. (See Kennicott, Cass L., assignor.)

Kenny, Charles H., Winnipeg, and M. McMillan, Gladstone, Manitoba, Canada. Grain-car door. No. 1,018,023; Feb. 27; Sp. p. 5336; Gaz. vol. 175; p. 926.

Kent, George P., Southend-on-Sea, England. Advertising apparatus. No. 1,016,944; Feb. 13; Sp. p. 1582; Gaz. vol. 175; p. 279.

Kent, Victor E., assignor of one-third to R. F. Brewer and one-third to J. A. Martin, Johnson City, Tenn. Cattle-guard. No. 1,016,636; Feb. 6; Sp. p. 936; Gaz. vol. 175; p. 140.

Kenway, Percy N., assignor to C. E. Riley, Newton, Mass. Pipe-hanger. No. 1,017,975; Feb. 20; Sp. p. 3886; Gaz. vol. 175; p. 672.

Kenyon, Harrie B., Bedford, Ohio. Portable search-light. No. 1,016,887; Feb. 6; Sp. p. 1434; Gaz. vol. 175; p. 223.

Kenyon, William J. C. (See Stolp, Samuel S., assignor.)

Keppel, John G. (See Bennis and Keppel.)

Kern, Edward J., Brooklyn, N. Y. Machine for making tubes. No. 1,018,114; Feb. 20; Sp. p. 4186; Gaz. vol. 175; p. 720.

Kerr, Harry E., Detroit, Mich. Carburetor. No. 1,018,766; Feb. 27; Sp. p. 5647; Gaz. vol. 175; p. 975.

Kerst, Henry, Springfield, Ill. Acetylene-lamp. No. 1,016,275; Feb. 6; Sp. p. 72; Gaz. vol. 175; p. 14.

Keutler, Nicholas A., et al. (See Braddock, Isaac A., assignor.)

Keyes, James A., New York, N. Y. Soap-press. No. 1,018,426; Feb. 27; Sp. p. 4853; Gaz. vol. 175; p. 859.

Kibby, William J., New York, N. Y., assignor to Space-saving Appliance Company. Water-heater. No. 1,018,711; Feb. 27; Sp. p. 5519; Gaz. vol. 175; p. 956.

Kiefer, Henry, Philadelphia, Pa. Curtain-fixture. No. 1,017,765; Feb. 20; Sp. p. 3341; Gaz. vol. 175; p. 598.

Kiefer, Karl, Cincinnati, Ohio. Rotary machine. No. 1,017,418; Feb. 13; Sp. p. 2629; Gaz. vol. 175; p. 445.

Kies, Orville D., New York, N. Y. Hand sewing-machine. No. 1,017,262; Feb. 13; Sp. p. 2299; Gaz. vol. 175; p. 391.

Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Oil-circulating system for lubricating and regulating. No. 1,017,557; Feb. 13; Sp. p. 2912; Gaz. vol. 175; p. 492.

Kilbourn, Edward E., New Brunswick, N. J., assignor to The Kilbourn Knitting Machine Company. Circular-knitting machine. No. 1,018,063; Feb. 20; Sp. p. 4077; Gaz. vol. 175; p. 703.

Kilbourn Knitting Machine Company, The. (See Kilbourn, Edward E., assignor.)

Kilgore, Charles T., assignor of one-third to J. P. Smith, Hot Springs, Ark. Standard metal railway cross-tie. No. 1,017,558; Feb. 13; Sp. p. 2918; Gaz. vol. 175; p. 492.

Kill, Herman, Liberty, Ill. Planter attachment. No. 1,017,559; Feb. 13; Sp. p. 2914; Gaz. vol. 175; p. 493.

Killen, Edward B., London, England. Vehicle-wheel. No. 1,016,830; Feb. 6; Sp. p. 215; Gaz. vol. 175; p. 33.

Killingsworth, Louis R., Salt Lake City, Utah. Sash-fastener. No. 1,018,427; Feb. 27; Sp. p. 4853; Gaz. vol. 175; p. 860.

Kilpatrick, John A., Fort Dodge, Iowa. Mail-carrier's box. No. 1,018,325; Feb. 20; Sp. p. 4617; Gaz. vol. 175; p. 792.

Kilpatrick, William J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,016,276; Feb. 6; Sp. p. 74; Gaz. vol. 175; p. 14.

Kimball, Frank I. (See Shaw and Kimball.)

Kimberly-Clark Company. (See Thom, Peter R., assignor.)

Kimbo Co. (See Buth, Henry F., assignor.)

Kimmel, John S., Saco, Mont. Pistol-stock. No. 1,016,695; Feb. 6; Sp. p. 1050; Gaz. vol. 175; p. 160.

King, C. C. (See Olson, Andrew N., assignor.)

King, Charles B., assignor of one-half to O. J. Mulford, Detroit, Mich. Throttle mechanism for automobiles. No. 1,016,750; Feb. 6; Sp. p. 1152; Gaz. vol. 175; p. 178.

King, Charles W. G., assignor to The United States Metallic Packing Company, Philadelphia, Pa. Metallic rod-packing. No. 1,017,674; Feb. 20; Sp. p. 3146; Gaz. vol. 175; p. 567.

King, Frederick W., Cleveland, Ohio. Spectacles. No. 1,017,766; Feb. 20; Sp. p. 3343; Gaz. vol. 175; p. 598.

King & Hamilton Company. (See Gilman, John H., assignor.)

King, James H., Pacific Grove, Cal. Sanitary closet. No. 1,017,675; Feb. 20; Sp. p. 3148; Gaz. vol. 175; p. 567.

King, Robert O., Buffalo, N. Y. Submarine boat. No. 1,017,103; Feb. 13; Sp. p. 1954; Gaz. vol. 175; p. 336.

Kingsland, James O., Sr., Brooklyn, N. Y. Combination-lock. No. 1,016,331; Feb. 6; Sp. p. 215; Gaz. vol. 175; p. 33.

Kinsley, Carl, Chicago, Ill., assignor to Globe Printing Telegraph Company. Telegraphic system and apparatus. No. 1,018,115; Feb. 20; Sp. p. 4188; Gaz. vol. 175; p. 721.

Kintner, Charles J. (See Rennerfelt, Gustaf, assignor.)

Kirstein, Henry E., assignor to E. Kirstein Sons Co., Rochester, N. Y. Eyeglasses. No. 1,017,004; Feb. 13; Sp. p. 1722; Gaz. vol. 175; p. 300.

Kitsee, Isidor, Philadelphia, Pa. Electric illumination. No. 1,017,263; Feb. 13; Sp. p. 2301; Gaz. vol. 175; p. 391.

Klasing, Augustus F., San Antonio, Tex. Car-brake. No. 1,016,332; Feb. 6; Sp. p. 220; Gaz. vol. 175; p. 33.

Klaus, William F., Louisville, Ky. Safety-crane. No. 1,016,417; Feb. 6; Sp. p. 404; Gaz. vol. 175; p. 63.

Kleeberg, Philip. (See Smith and Kleeberg.)

Klein, Alexander, Berlin, Germany. Producing derivatives of cantharidic acid containing iodin and mercury. No. 1,017,560; Feb. 13; Sp. p. 2915; Gaz. vol. 175; p. 492.

Klein, John J., Scranton, Pa. Crape-holder. No. 1,018,326; Feb. 20; Sp. p. 4618; Gaz. vol. 175; p. 793.

Klein, Mathias J., assignor of sixty one-hundredths to H. B. Roelker, New York, N. Y. Balanced speedometer. No. 1,018,504; Feb. 27; Sp. p. 5034; Gaz. vol. 175; p. 886.

Klein, Mathias J., assignor of sixty one-hundredths to H. B. Roelker, New York, N. Y. Distance and speed meter. No. 1,019,007; Feb. 27; Sp. p. 6164; Gaz. vol. 175; p. 1058.

Kleinmark, Henry, assignor to J. L. Bondy Iron Works Co., Chicago, Ill. Counterbalanced stair. No. 1,018,197; Feb. 20; Sp. p. 4369; Gaz. vol. 175; p. 750.

Klemovics, Janos, assignor of one-fourth to J. Pentek, one-fourth to B. Kun, and one-fourth to B. Kojsza, Homestead, Pa. Electric trap. No. 1,017,875; Feb. 20; Sp. p. 3643; Gaz. vol. 175; p. 636.

Kline, Wallace C., Buffalo, N. Y., assignor to C. S. Marsh, Winchester, Mass. Platform weighing-scale. No. 1,017,154; Feb. 13; Sp. p. 2060; Gaz. vol. 175; p. 364.

Klopfer, Otto. (See Kemmler, John A., assignor.)

Kloesner, Charles and J. P., Westernville, N. Y. Baking utensil. No. 1,017,561; Feb. 18; Sp. p. 2816; Gaz. vol. 175; p. 493.

Kloesner, John P. (See Kloesner, Charles and J. P.)

Knapp, Juline, and J. Ligart, Passaic, N. J. Sputum-receptacle. No. 1,017,419; Feb. 13; Sp. p. 2682; Gaz. vol. 175; p. 445.

Knapp, William B., Paterson, N. J. Animal-trap. No. 1,016,833; Feb. 6; Sp. p. 222; Gaz. vol. 175; p. 34.

Knauff, George C., Chicago, Ill. Terminal for electric wires. No. 1,018,570; Feb. 27; Sp. p. 5284; Gaz. vol. 175; p. 909.

Kneen, William, London, England. Pneumatic suspension for vehicles. No. 1,016,418; Feb. 6; Sp. p. 406; Gaz. vol. 175; p. 64.

Kneisly, Daniel W., assignor to The Dayton Telephone Lockout Mfg. Co., Dayton, Ohio. Lock-out device for party-telephones. No. 1,016,277; Feb. 6; Sp. p. 91; Gaz. vol. 175; p. 15.

Knight, Walter V., Westbrook, Me. Window-screen. No. 1,016,888; Feb. 6; Sp. p. 1435; Gaz. vol. 175; p. 222.

Knipp, Franz, Darmstadt, Germany. Detachable sole for slippers and the like. No. 1,017,670; Feb. 20; Sp. p. 3149; Gaz. vol. 175; p. 568.

Knopf, Charles, and W. N. Johnson, Richmond, Ind. Automatic piston-rod oiler. No. 1,017,057; Feb. 13; Sp. p. 1840; Gaz. vol. 175; p. 319.

Knott, Levi, Altoona, Pa. Weather-strip. No. 1,016,419; Feb. 6; Sp. p. 407; Gaz. vol. 175; p. 64.

Koch, Fred J., East St. Louis, Ill. Pneumatic wheel-hub. No. 1,018,428; Feb. 27; Sp. p. 4859; Gaz. vol. 175; p. 960.

Koch, Friedrich, Parsons, Kans. Baker's oven. No. 1,017,264; Feb. 13; Sp. p. 2302; Gaz. vol. 175; p. 392.

Koch, Henry, assignor to The Regina Company, Rahway, N. J. Suction cleaning device. No. 1,018,921; Feb. 6; Sp. p. 1519; Gaz. vol. 175; p. 235.

Koch, Rudolph, Temple, Tex. Automatic mail-bag catcher and deliverer. No. 1,017,976; Feb. 20; Sp. p. 3530; Gaz. vol. 175; p. 672.

Koch, William E., York, Pa. Ironing-board. No. 1,017,155; Feb. 13; Sp. p. 2063; Gaz. vol. 175; p. 354.

Koehler, Louis F., Chicago, Ill. Dentist's anvil. No. 1,018,712; Feb. 27; Sp. p. 5522; Gaz. vol. 175; p. 956.

Koehler, Louis F., Chicago, Ill. Dentist's anvil. No. 1,018,713; Feb. 27; Sp. p. 5524; Gaz. vol. 175; p. 957.

Koelling, Louis C., *et al.* (See Frank, Edward H., assignor.)

Koerner, Ferdinand H., Irvington, assignor of one-third to A. F. Hensler, one-sixth to C. F. Beers, and one-sixth to J. Hensler, Newark, N. J. Journal-box. No. 1,017,295; Feb. 13; Sp. p. 2358; Gaz. vol. 175; p. 402.

Koike, Kihei, Seattle, Wash. Watchcase. No. 1,017,420; Feb. 13; Sp. p. 2682; Gaz. vol. 175; p. 445.

Kojasa, Bartalan, *et al.* (See Klemovics, Janos, assignor.)

Kolossváry, Andreas, S. Haltenberger, Budapest, and E. Berdenich, Püspök Ladány, Austria-Hungary; said Kolossváry assignor to said Haltenberger and Berdenich. Preserving poles, &c. No. 1,018,624; Feb. 27; Sp. p. 5337; Gaz. vol. 175; p. 926.

Koons, Virgil C., assignor to The Continental Manufacturing Company, Colorado Springs, Colo. Heating system for chicken-culture apparatus. No. 1,018,714; Feb. 27; Sp. p. 5526; Gaz. vol. 175; p. 957.

Korff, Francis. (See Joy, Smith, and Korff.)

Korff Manufacturing Company. (See Joy, Smith, and Korff, assignors.)

Korndoerfer, Otto, New York, N. Y. Hat-pin. No. 1,016,420; Feb. 6; Sp. p. 408; Gaz. vol. 175; p. 64.

Korytowski, Gustav, Berlin, Germany. Electrically-operated door. No. 1,018,246; Feb. 20; Sp. p. 4461; Gaz. vol. 175; p. 766.

Kowalski, Julian, Chicago, Ill. Cooking utensil. No. 1,018,116; Feb. 20; Sp. p. 4198; Gaz. vol. 175; p. 721.

Kraft, August W. (See York and Tinker, assignors.)

Kraftsik, Albin F., Mount Pleasant, Pa. Balloon attachment. No. 1,017,767; Feb. 20; Sp. p. 3344; Gaz. vol. 175; p. 599.

Kramer, Ferdinand, Green Timber, Idaho. Valve-operating mechanism. No. 1,017,977; Feb. 20; Sp. p. 3891; Gaz. vol. 175; p. 673.

Kramer, Nick, Charleston, Kans. Pump-rod lifter. No. 1,016,334; Feb. 6; Sp. p. 224; Gaz. vol. 175; p. 34.

Kraxberger, William A., and H. J. Laker, Dalton, Mo. Automatic poultry-feeder. No. 1,016,637; Feb. 6; Sp. p. 938; Gaz. vol. 175; p. 140.

Krech, Frederick W., *et al.* (See Beebe, Frank, assignor.)

Krentler Arnold Hinge Last Company. (See Krentler, Edwin O., assignor.)

Krentler, Edwin O., assignor to Krentler Arnold Hinge Last Company, Detroit, Mich. Last-lock. No. 1,017,055; Feb. 18; Sp. p. 1841; Gaz. vol. 175; p. 319.

Kressin, John, Milwaukee, Wis. Overcheck-guide. No. 1,018,117; Feb. 20; Sp. p. 4200; Gaz. vol. 175; p. 722.

Kretchmer, Edward, Council Bluffs, Iowa. Silo. No. 1,016,506; Feb. 6; Sp. p. 620; Gaz. vol. 175; p. 94.

Krick, George F. (See Wright and Krick.)

Krnka, Karl, Hirtenberg, Austria-Hungary. Automatic firearm. No. 1,018,914; Feb. 27; Sp. p. 5945; Gaz. vol. 175; p. 1024.

Kronenberger, Ferdinand, Corona, assignor to The Aladdin Manufacturing Company, Brooklyn, N. Y. Churn. No. 1,018,505; Feb. 27; Sp. p. 5036; Gaz. vol. 175; p. 896.

Krotz, Alvaro S., Chicago, Ill. Internal-combustion engine. No. 1,016,335; Feb. 6; Sp. p. 225; Gaz. vol. 175; p. 35.

Krueger, Martin L., St. Louis, Mo. Smoke-consuming furnace. No. 1,018,880; Feb. 27; Sp. p. 5778; Gaz. vol. 175; p. 998.

Krumming, Reinhold, Milwaukee, Wis. Temporary binder or loose-sheet holder. No. 1,017,220; Feb. 13; Sp. p. 2216; Gaz. vol. 175; p. 376.

Krupp, Smith F. (See Brooks and Krupp.)

Krupp, Smith F., Memphis, Tenn. Cotton-gin brush. No. 1,018,327; Feb. 20; Sp. p. 4620; Gaz. vol. 175; p. 793.

Krusi, Emma. (See Krusi, John, assignor.)

Krusi, John, New York, N. Y., assignor, by mesne assignments, to Multiplex Shuttle Embroidering Machine Company. Multiplex-shuttle embroidering-machine. No. 1,017,421; Feb. 18; Sp. p. 2635; Gaz. vol. 175; p. 446.

Krusi, John, assignor to E. Krusi, New York, N. Y. Shuttle embroidering-machine. No. 1,017,422; Feb. 18; Sp. p. 2638; Gaz. vol. 175; p. 446.

Kubik, Andrew, McKees Rocks, Pa. Splice-bar. No. 1,017,156; Feb. 13; Sp. p. 2064; Gaz. vol. 175; p. 355.

Kuehner, Hermann H., Camden, N. J. Lever for flush-tanks. No. 1,017,423; Feb. 18; Sp. p. 2641; Gaz. vol. 175; p. 447.

Kuhns, Bensyill A., Wilmington, Del. Refrigerator. No. 1,016,396; Feb. 6; Sp. p. 239; Gaz. vol. 175; p. 35.

Kulawik, Louis. (See Nalepka, Walenty, assignor.)

Kun, Bertalan, *et al.* (See Klemovics, Janos, assignor.)

Kung, George, *et al.* (See Frank, Edward H., assignor.)

Kunkski, Henry F., and M. Swiecicki, Philadelphia, Pa. Trolley. No. 1,018,198; Feb. 20; Sp. p. 4370; Gaz. vol. 175; p. 750.

Kuntz, John L., Omaha, Nebr. Corner-piece for frames. No. 1,016,275; Feb. 6; Sp. p. 101; Gaz. vol. 175; p. 15.

Kunz, Emil, and O. E. Hodge, Easton, La. Fly-catcher. No. 1,019,008; Feb. 27; Sp. p. 6166; Gaz. vol. 175; p. 1055.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,018,915; Feb. 27; Sp. p. 5948; Gaz. vol. 175; p. 1025.

Kurtzon, Morris, Chicago, Ill. Lock for show-cases. No. 1,017,978; Feb. 20; Sp. p. 3892; Gaz. vol. 175; p. 673.

Kwiatkosky, Wlesky, Elizabeth, Pa. Nutcracker. No. 1,017,424; Feb. 18; Sp. p. 2643; Gaz. vol. 175; p. 447.

L. C. Smith and Bros. Typewriter Company. (See Gabrielson, Carl, assignor.)

L'Engle, William J., New Orleans, La. Turpentine-cup. No. 1,017,297; Feb. 13; Sp. p. 2364; Gaz. vol. 175; p. 403.

L'Engle, William J., New Orleans, La. Turpentine-cup. No. 1,017,679; Feb. 20; Sp. p. 3151; Gaz. vol. 175; p. 568.

La Cie. Industrielle des Alcools de l'Ardèche. (See Raisin, Victor, assignor.)

La. Société Ribayron & Victor. (See Victor, Alexandre, assignor.)

Lachtrop, George C., Cincinnati, Ohio. Ironing-board attachment. No. 1,016,337; Feb. 6; Sp. p. 231; Gaz. vol. 175; p. 35.

Ladley, Charles W., Ingram, Pa. Nipple-cover. No. 1,018,831; Feb. 27; Sp. p. 5760; Gaz. vol. 175; p. 998.

Ladoff, Isador, Cleveland, Ohio, assignor of thirty one-hundredths to P. C. Peck, New York, N. Y. Electrode or pencil for the arc-light. No. 1,017,005; Feb. 13; Sp. p. 1724; Gaz. vol. 175; p. 301.

Lasufer, Jacob, Lima, assignor to H. K. Halladay, Findlay, Ohio. Rail-chair. No. 1,018,247; Feb. 20; Sp. p. 4466; Gaz. vol. 175; p. 767.

Lafora, John. (See Burch, Jacob M., assignor.)

Lagerström, Ernst H., Stockholm, Sweden. Pneumatic hammer. No. 1,017,562; Feb. 18; Sp. p. 2918; Gaz. vol. 175; p. 493.

Lain, Charles A., and E. W. Jennings, assignors of one-third to A. A. Dickens, High Point, N. C. Displaying device for advertisements. No. 1,017,563; Feb. 13; Sp. p. 2919; Gaz. vol. 175; p. 494.

Lain, David E. (See Fox, Simon J., assignor.)

Lake, Christopher J., Bridgeport, Conn. Propelling apparatus for aerial and other machines. No. 1,017,564; Feb. 18; Sp. p. 2920; Gaz. vol. 175; p. 494.

Laker, Henry J. (See Kraxberger and Laker.)

Lally, George W., Boston, Mass. Dumping motor-vehicle. No. 1,018,118; Feb. 20; Sp. p. 4201; Gaz. vol. 175; p. 722.

Lally, George W., Boston, Mass. Auto garbage-truck. No. 1,018,119; Feb. 20; Sp. p. 4203; Gaz. vol. 175; p. 722.

Lamb, Henry A. (See Crowley and Lamb.)

Lamkin, Perry T., Whittaker, Mich. Post-puller. No. 1,017,425; Feb. 18; Sp. p. 2644; Gaz. vol. 175; p. 447.

Lamme, Benjamin G., Pittsburgh, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Dynamo-electric machine. No. 1,018,571; Feb. 27; Sp. p. 5290; Gaz. vol. 175; p. 910.

Lancey, Roswell A., Townsend, Mass., assignor, by mesne assignments, to J. Spaulding & Sons Company, Rochester, N. H. Leather-board machine. No. 1,018,945; Feb. 13; Sp. p. 1535; Gaz. vol. 175; p. 280.

Landau, Frederick, Troy, N. Y. Detachable handle for bottles. No. 1,016,421; Feb. 6; Sp. p. 410; Gaz. vol. 175; p. 65.

Landers, Frary & Clark. (See Warner, Alonso A., assignor.)

Landes, William, Canton, Kans. Drier. No. 1,016,508; Feb. 6; Sp. p. 781; Gaz. vol. 175; p. 116.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,016,761; Feb. 6; Sp. p. 1193; Gaz. vol. 175; p. 179.

Landis, Abraham B., Waynesboro, Pa. Change-speed gearing. No. 1,017,277; Feb. 20; Sp. p. 3652; Gaz. vol. 175; p. 637.

Landis, Abraham B., Waynesboro, Pa. Bolt-threading machine. No. 1,017,278; Feb. 20; Sp. p. 3656; Gaz. vol. 175; p. 637.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,017,279; Feb. 20; Sp. p. 3659; Gaz. vol. 175; p. 638.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,017,280; Feb. 20; Sp. p. 3662; Gaz. vol. 175; p. 638.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,017,281; Feb. 20; Sp. p. 3665; Gaz. vol. 175; p. 638.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,282; Feb. 20; Sp. p. 3668; Gaz. vol. 175; p. 639.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,283; Feb. 20; Sp. p. 3671; Gaz. vol. 175; p. 639.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,284; Feb. 20; Sp. p. 3674; Gaz. vol. 175; p. 640.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,285; Feb. 20; Sp. p. 3677; Gaz. vol. 175; p. 640.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,286; Feb. 20; Sp. p. 3680; Gaz. vol. 175; p. 641.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,287; Feb. 20; Sp. p. 3683; Gaz. vol. 175; p. 641.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,288; Feb. 20; Sp. p. 3686; Gaz. vol. 175; p. 642.

Landis, Abraham B., Waynesboro, Pa. Thread-cutting machine. No. 1,017,289; Feb. 20; Sp. p. 3689; Gaz. vol. 175; p. 642.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,290; Feb. 20; Sp. p. 3692; Gaz. vol. 175; p. 642.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,291; Feb. 20; Sp. p. 3695; Gaz. vol. 175; p. 643.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,017,292; Feb. 20; Sp. p. 3702; Gaz. vol. 175; p. 644.

Landis, Abraham B., Waynesboro, Pa. Change-speed gearing. No. 1,017,293; Feb. 20; Sp. p. 3705; Gaz. vol. 175; p. 644.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,018,392; Feb. 20; Sp. p. 4767; Gaz. vol. 175; p. 816.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,018,393; Feb. 20; Sp. p. 4770; Gaz. vol. 175; p. 816.

Landis, Abraham B., Waynesboro, Pa. Cutter-head. No. 1,018,394; Feb. 20; Sp. p. 4774; Gaz. vol. 175; p. 817.

Landis, Abraham B., Waynesboro, Pa. Grinding-machine. No. 1,018,395; Feb. 20; Sp. p. 4776; Gaz. vol. 175; p. 817.

Landis, Frank F., Waynesboro, Pa. Machine for molding concrete. No. 1,017,276; Feb. 20; Sp. p. 3645; Gaz. vol. 175; p. 636.

Landon, Charles A., Columbus, Ohio. Road grader and roller. No. 1,017,894; Feb. 20; Sp. p. 3707; Gaz. vol. 175; p. 645.

Lane, George R., Santiago de Cuba, Cuba. Marine signal. No. 1,018,506; Feb. 27; Sp. p. 5040; Gaz. vol. 175; p. 897.

Laney, John H., Minneapolis, assignor of one-eighth to R. L. Laney, Holloway, Minn. Railway-switch. No. 1,017,768; Feb. 20; Sp. p. 3346; Gaz. vol. 175; p. 599.

Laney, Ronald L. (See Laney, John H., assignor.)

Lang, George H., Boston, Mass. Printing-machine. No. 1,017,979; Feb. 20; Sp. p. 3894; Gaz. vol. 175; p. 674.

Lange, Gustav J., Eau Claire, Wis. Pea-separating machine. No. 1,018,715; Feb. 27; Sp. p. 5528; Gaz. vol. 175; p. 957.

Langton, George H., and J. M. Kellerman, assignors to Auto Air Cushion Wheel Company, Los Angeles, Cal. Spring-wheel. No. 1,017,895; Feb. 20; Sp. p. 3711; Gaz. vol. 175; p. 646.

Lannoye, Joseph G., Detroit, Mich. Scarifying device for fruits and vegetables. No. 1,016,238; Feb. 6; Sp. p. 233; Gaz. vol. 175; p. 36.

Laraway, William H., Grand Rapids, Mich. Vending-machine. No. 1,018,507; Feb. 27; Sp. p. 5046; Gaz. vol. 175; p. 897.

Lard, Allan E., Washington, D. C. Grip or handle. No. 1,017,565; Feb. 18; Sp. p. 2923; Gaz. vol. 175; p. 494.

Larkin, Bernard H. (See Norton and Larkin.)

Larkin, Edward C., and J. F. Duncan, Dayton, Ohio. Compound and method of increasing combustion of coal, &c. No. 1,017,677; Feb. 20; Sp. p. 3149; Gaz. vol. 175; p. 568.

Larkin, Fred A. (See Rice and Larkin.)

Larson, Bengt, Chicago, Ill. Convertible cot or cradle. No. 1,017,769; Feb. 20; Sp. p. 3346; Gaz. vol. 175; p. 599.

Larson, David. (See Lindquist and Larson.)

Larson, David, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Electric-switch-contact holder. No. 1,016,833; Feb. 6; Sp. p. 1823; Gaz. vol. 175; p. 205.

Larson, David, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Controlling mechanism. No. 1,016,834; Feb. 6; Sp. p. 1329; Gaz. vol. 175; p. 205.

Larson, Hans. (See Sabin and Larson.)

Larson, Ida, Brooklyn, N. Y. Cooking utensil. No. 1,016,339; Feb. 6; Sp. p. 235; Gaz. vol. 175; p. 36.

Lasche, Oscar, Charlottenburg, Germany, assignor to General Electric Company. Diaphragm for turbines. No. 1,017,566; Feb. 18; Sp. p. 2925; Gaz. vol. 175; p. 494.

Lauba, August L., Offenbach-on-the-Main, assignor to Chemische Fabrik Griesheim Elektron, Frankfort-on-the-Main, Germany. Vat dye and making same. No. 1,016,635; Feb. 6; Sp. p. 940; Gaz. vol. 175; p. 141.

Latshaw, John A., Vanport, Pa. Nut-lock. No. 1,017,770; Feb. 20; Sp. p. 3349; Gaz. vol. 175; p. 600.

Latta, Nisbet, San Francisco, Cal. Operating gas-producers. No. 1,018,882; Feb. 27; Sp. p. 5781; Gaz. vol. 175; p. 998.

Lauda, William H., Monticello, Iowa. Sod-cutter. No. 1,018,064; Feb. 20; Sp. p. 4069; Gaz. vol. 175; p. 703.

Laughlin, Henry D. (See Huntoon, Charles F., assignor.)

Lauritsen, Bertran, Twin Brooks, S. D. Latch for sliding doors. No. 1,016,422; Feb. 6; Sp. p. 411; Gaz. vol. 175; p. 65.

Lauterbach, Eduard and J., Berlin, Germany. Vapor lamp and burner. No. 1,016,639; Feb. 6; Sp. p. 941; Gaz. vol. 175; p. 141.

Lauterbach, Josef. (See Lauterbach, Eduard and J.)

Lavedan, Lucius, and H. Amigues, New Orleans, La. Decorticating-machine. No. 1,017,104; Feb. 13; Sp. p. 1936; Gaz. vol. 175; p. 336.

Lavigne, Joseph P., Detroit, Mich. Lubricator. No. 1,016,960; Feb. 6; Sp. p. 782; Gaz. vol. 175; p. 116.

Law, John A., *et al.* (See Smith, Robert H., assignor.)

Lawler, Patrick J., Westside, assignor of one-half to G. R. Richardson, Denison, Iowa. Churn. No. 1,018,508; Feb. 27; Sp. p. 5047; Gaz. vol. 175; p. 897.

Lawmin, Louis D., Edwardsville, Ill., assignor of one-half to N. O. Nelson Manufacturing Company, St. Louis, Mo. Drinking-fountain. No. 1,018,372; Feb. 27; Sp. p. 5237; Gaz. vol. 175; p. 910.

Lawrence, Emil, Baltimore, Md., assignor, by mesne assignments, to Mergenthaler Linotype Company, New York, N. Y. Typographic machine. No. 1,017,771; Feb. 20; Sp. p. 3350; Gaz. vol. 175; p. 600.

Lawrence, Emil, assignor to Ott. Mergenthaler Company, Baltimore, Md. Typographic machine. No. 1,017,772; Feb. 20; Sp. p. 3376; Gaz. vol. 175; p. 600.

Lawton, Charles H., Warsaw, N. Y. Bean-pulling device. No. 1,018,916; Feb. 27; Sp. p. 5950; Gaz. vol. 175; p. 1025.

Lawton, Charles L., Hancock, Mich. Dump-car. No. 1,016,570; Feb. 6; Sp. p. 785; Gaz. vol. 175; p. 117.

Lazaga, Ignacio, Habana, Cuba, assignor to F. D. Canfield, Yonkers, N. Y. Packing-machine. No. 1,018,429; Feb. 27; Sp. p. 4869; Gaz. vol. 175; p. 861.

Lazarus, Joseph, Boston, Mass. Elastic tire. No. 1,017,960; Feb. 20; Sp. p. 3897; Gaz. vol. 175; p. 674.

Lazzaro, Carmelo, Mendoza, Argentina. Clock compensating pendulum. No. 1,017,678; Feb. 20; Sp. p. 3150; Gaz. vol. 175; p. 568.

Le Breton, Edward, Cleveland, Ohio. Hose-coupling. No. 1,017,775; Feb. 20; Sp. p. 3412; Gaz. vol. 175; p. 601.

Le Papillon Corset Co. (See Darrah, Mary E. G., assignor.)

Lea, Charles, Boston, Mass., assignor to American Warp Drawing Machine Company. Warp-drawing machine. No. 1,017,296; Feb. 13; Sp. p. 2362; Gaz. vol. 175; p. 402.

Leach, Shirley N., Sweet Water, Tex. Aseptic fountain syringe or irrigator. No. 1,017,773; Feb. 20; Sp. p. 3409; Gaz. vol. 175; p. 601.

Leahy, Thomas W. (See O'Meara and Leahy.)

Leatham, James, assignor to Hermann, Aukam & Co., New York, N. Y. Sewing-machine. No. 1,017,426; Feb. 13; Sp. p. 2645; Gaz. vol. 175; p. 448.

Leatham, James, assignor to Hermann, Aukam & Co., New York, N. Y. Sewing-machine. No. 1,017,567; Feb. 13; Sp. p. 2927; Gaz. vol. 175; p. 495.

Leatham, James, assignor to Hermann, Aukam & Co., New York, N. Y. Sewing-machine. No. 1,017,568; Feb. 13; Sp. p. 2930; Gaz. vol. 175; p. 495.

Leathers, Frank H., Winn, Me. Cattle-tie. No. 1,016,423; Feb. 6; Sp. p. 412; Gaz. vol. 175; p. 65.

Leavitt, Byron C. (See Watson, Alexander, assignor.)

Leavitt, John L., Copperton, N. Mex. Woodworking-tool. No. 1,017,774; Feb. 20; Sp. p. 3410; Gaz. vol. 175; p. 601.

Lederer, John, Philadelphia, Pa. Eyeglass-cleaner. No. 1,018,430; Feb. 27; Sp. p. 4865; Gaz. vol. 175; p. 861.

Ledington, Oley L., and J. Sandell, Marquette, Kans. Culvert-mold. No. 1,018,396; Feb. 20; Sp. p. 4778; Gaz. vol. 175; p. 817.

Lee, Frederick J., Wichita, Kans. Door-latch. No. 1,018,716; Feb. 27; Sp. p. 5530; Gaz. vol. 175; p. 958.

Lee, Henry W., and G. H. Weedman, Mount Morgan, Queensland, Australia. Mine-alarm instrument. No. 1,018,328; Feb. 20; Sp. p. 4621; Gaz. vol. 175; p. 794.

Lee, Ulysses G., Brooklyn, assignor to Montague Mailing Machinery Company, New York, N. Y. Inking-ribbon mechanism for addressing-machines. No. 1,017,221; Feb. 13; Sp. p. 2219; Gaz. vol. 175; p. 377.

Lee, William H., Chicago, Ill. Pocket-book. No. 1,017,006; Feb. 13; Sp. p. 1725; Gaz. vol. 175; p. 301.

Lefebvre, Isidore, Aubervilliers, France. Sheet-metal cask. No. 1,017,427; Feb. 13; Sp. p. 2653; Gaz. vol. 175; p. 448.

Lefevre, George, Lawrence, Mass. Clothes-line support. No. 1,017,428; Feb. 13; Sp. p. 2655; Gaz. vol. 175; p. 448.

Lehberger, George F. (See Cavill and Lehberger.)

Lehmann, Ernst P., Brandenburg-on-the-Havel, Germany. Toy wheel. No. 1,018,573; Feb. 27; Sp. p. 5238; Gaz. vol. 175; p. 910.

Lehmann, Ernst P., Brandenburg-on-the-Havel, Germany. Toy. No. 1,018,574; Feb. 27; Sp. p. 5239; Gaz. vol. 175; p. 911.

Leichner, Siegfried, Grunewald, near Berlin, Germany. Luminous fountain. No. 1,018,431; Feb. 27; Sp. p. 4867; Gaz. vol. 175; p. 861.

Leighton, Robert E., Kingston, N. Y. Stone crushing or pulverising machine. No. 1,016,840; Feb. 6; Sp. p. 236; Gaz. vol. 175; p. 36.

Leith, George E., San Deigo, Cal. Punch. No. 1,016,752; Feb. 6; Sp. p. 1155; Gaz. vol. 175; p. 179.

Lemêtre, Auguste A., Paris, France. Electroplating with zinc. No. 1,017,981; Feb. 20; Sp. p. 3899; Gaz. vol. 175; p. 674.

Leonard, Frank W., Mountain View, Okla. Revolving cultivator. No. 1,018,717; Feb. 27; Sp. p. 5532; Gaz. vol. 175; p. 958.

Leonard, James, and N. J. Smith, assignors of one-third to A. Horat, Waterloo, Iowa. Music-leaf turner. No. 1,017,157; Feb. 13; Sp. p. 2065; Gaz. vol. 175; p. 355.

Leschbrandt, Einar, Philadelphia, Pa. Player-piano or similar instrument. No. 1,017,158; Feb. 13; Sp. p. 2067; Gaz. vol. 175; p. 355.

Leumann, Richard, Monthey, Switzerland. Permeability-measuring apparatus. No. 1,016,753; Feb. 6; Sp. p. 1157; Gaz. vol. 175; p. 179.

Leuthner, Frank J., *et al.*, executors. (See Leuthner, Frank X.)

Leuthner, Frank J., *et al.*, executors. (See Leuthner and Tickner.)

Leuthner, Frank X., deceased, (F. J. Leuthner and M. L. Taylor, executors,) Buffalo, N. Y., assignor of one-half to F. Tickner, Sharpsville, Pa. Molding apparatus. No. 1,018,668; Feb. 27; Sp. p. 5430; Gaz. vol. 175; p. 941.

Leuthner, Frank X., deceased, (F. J. Leuthner and M. L. Taylor, executors,) Buffalo, N. Y., and F. Tickner, Sharpsville, Pa. Molding apparatus. No. 1,018,669; Feb. 27; Sp. p. 5432; Gaz. vol. 175; p. 942.

Levy, Howard S., Philadelphia, Pa. Producing electrotypes. No. 1,017,776; Feb. 20; Sp. p. 3414; Gaz. vol. 175; p. 601.

Levy-Maurice, Jules, and R. F. A. Poyart, Paris, France. Stretcher. No. 1,016,835; Feb. 6; Sp. p. 1832; Gaz. vol. 175; p. 205.

Lewis, Cyrus, Sr., Lorain, Ohio. Riffling-machine. No. 1,017,569; Feb. 13; Sp. p. 2985; Gaz. vol. 175; p. 496.

Lewis, Edward Z., Chicago, Ill. Multiform billing-sheet. No. 1,017,298; Feb. 13; Sp. p. 2365; Gaz. vol. 175; p. 403.

Lewis, Edward Z., Chicago, Ill. Attachment for typewriting machines. No. 1,017,299; Feb. 13; Sp. p. 2367; Gaz. vol. 175; p. 403.

Lewis, Francis X. (See Héroux, Edmond, assignor.)

Lewis, James S., McKeesport, and W. H. Powell, Ford City, assignors to H. R. Gault, Kittanning, Pa. Apparatus for the manufacture of tubes. No. 1,018,676; Feb. 27; Sp. p. 5435; Gaz. vol. 175; p. 942.

Lewis, John F., Philadelphia, Pa. Shaping hollow metal articles. No. 1,016,507; Feb. 6; Sp. p. 622; Gaz. vol. 175; p. 95.

Lewis, Lloyd V., Edgewood, and J. S. Holliday, Wilkinsburg, assignors to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling system. No. 1,016,922; Feb. 6; Sp. p. 1522; Gaz. vol. 175; p. 236.

Lewis, Lyman S., assignor of one-half to H. B. Fitz-Jerrell, Elkport, Iowa. Plow. No. 1,018,120; Feb. 20; Sp. p. 4205; Gaz. vol. 175; p. 723.

Lewis, Saunders, Jr., Philadelphia, Pa. Farriery implement. No. 1,016,571; Feb. 6; Sp. p. 788; Gaz. vol. 175; p. 117.

Lewis, William M., Richmond, assignor of one-half to C. A. Brock, Pinners Point, Va. Car-door lock. No. 1,016,836; Feb. 6; Sp. p. 1333; Gaz. vol. 175; p. 206.

Libert, Arthur. (See Roberts and Libert.)

Liesenfeld, John, Park Rapids, Minn. Device for use in curing hay in the fields. No. 1,017,429; Feb. 13; Sp. p. 2656; Gaz. vol. 175; p. 449.

Ligart, Julius. (See Knapp and Ligart.)

Light, Claus H., and C. H. Hutchinson, Des Moines, Iowa. Bag-holder. No. 1,018,671; Feb. 27; Sp. p. 5437; Gaz. vol. 175; p. 943.

Lilienfeld, Leon, Vienna, Austria-Hungary. Producing sulfur derivatives derived from glycerin. No. 1,018,329; Feb. 20; Sp. p. 4622; Gaz. vol. 175; p. 794.

Lillieberg, Charles L., Chicago, Ill. Land-rolling machine. No. 1,017,430; Feb. 13; Sp. p. 2658; Gaz. vol. 175; p. 449.

Lillich, Frederick, Philadelphia, Pa. Car-fender. No. 1,017,431; Feb. 13; Sp. p. 2659; Gaz. vol. 175; p. 449.

Lillston, Thomas M., Suffolk, Va. Peanut-picker. No. 1,017,570; Feb. 13; Sp. p. 2936; Gaz. vol. 175; p. 496.

Limited Company Herm. Lohnert, Aktiengesellschaft. (See Beneke, Richard, assignor.)

Lincoln, Edwin S., Brookline, Mass., assignor to Electric Goods Manufacturing Company. Single-spark ignition system. No. 1,017,300; Feb. 13; Sp. p. 2370; Gaz. vol. 175; p. 404.

Lincoln, John C., East Cleveland, Ohio. Convertible motor. No. 1,018,333; Feb. 27; Sp. p. 5782; Gaz. vol. 175; p. 999.

Lind, Elmer F., St. Paul, Minn. Combined cart and sled. No. 1,016,640; Feb. 6; Sp. p. 943; Gaz. vol. 175; p. 141.

Lindahl, Erick P., assignor to Sanitary Bottling Device Company, Minneapolis, Minn. Bottle-carrier. No. 1,017,432; Feb. 13; Sp. p. 2661; Gaz. vol. 175; p. 450.

Lindquist, David L., and D. Larson, Yonkers, N. Y., assignors to Otis Elevator Company, Jersey City, N. J. Electric-switch-contact holder. No. 1,016,837; Feb. 6; Sp. p. 1335; Gaz. vol. 175; p. 206.

Lindsay, William R., assignor, by mesne assignments, to The Perfect Bottle Cap Company, Baltimore, Md. Machine for sealing bottles. No. 1,018,575; Feb. 27; Sp. p. 5241; Gaz. vol. 175; p. 911.

Lindsey, Charles E., assignor of one-eighth to E. E. Dupray, one-fourth to L. Schulheofer, one-sixteenth to G. Hague, and one-sixteenth to J. Lindsey, Birmingham, Ala. Nut-lock. No. 1,018,199; Feb. 20; Sp. p. 4371; Gaz. vol. 175; p. 750.

Lindsey, James, *et al.* (See Lindsey, Charles E., assignor.)

Lindsley and Allen Electric Company. (See Cavanagh, John F., assignor.)

Linegar, Thomas F. (See Tool, Linegar, and Williams.)

Linehan, John F., assignor to D. Saunders' Sons, Yonkers, N. Y. Reaming-tool holder for pipe-machines. No. 1,016,889; Feb. 6; Sp. p. 1437; Gaz. vol. 175; p. 224.

Lingo, Louis J., Jr., assignor of one-half to R. W. Smith, Wilmington, Del. System of motor control. No. 1,016,754; Feb. 6; Sp. p. 1159; Gaz. vol. 175; p. 179.

Lipmann, Ernest D., Paris, France. Luminous dial. No. 1,017,806; Feb. 20; Sp. p. 3714; Gaz. vol. 175; p. 646.

Lippe, Louis P., assignor of one-half to himself, trustee, one-fourth to W. L. Westcott, and one-fourth to G. C. Wing, Cleveland, Ohio. Arranging tickets for street-cars. No. 1,017,007; Feb. 13; Sp. p. 1726; Gaz. vol. 175; p. 301.

Litsey, Robert L., Seattle, Wash. Combined policeman's club and light. No. 1,018,356; Feb. 20; Sp. p. 4671; Gaz. vol. 175; p. 803.

Littauer, Lucius N. (See Weis, John P., assignor.)

Littlefield, George H. (See Carney, George A., assignor.)

Litzenberg, William R., Portland, Oreg. Dirt-loader. No. 1,018,672; Feb. 27; Sp. p. 5438; Gaz. vol. 175; p. 943.

Livingston, D McRa, New York, N. Y. Forming angular corrugations in sheet material. No. 1,018,390; Feb. 20; Sp. p. 4783; Gaz. vol. 175; p. 818.

Livingston, John B., New Haven, Conn. Percolator. No. 1,017,222; Feb. 13; Sp. p. 2223; Gaz. vol. 175; p. 377.

Livingston Manufacturing Company. (See Padbury, John J., assignor.)

Lobnitz, Fred, Crookston, Scotland. Navigable rock-cutter. No. 1,018,917; Feb. 27; Sp. p. 5952; Gaz. vol. 175; p. 1025.

Locher, Charles H., Glasgow, Va. Rock-drill. No. 1,018,834; Feb. 27; Sp. p. 5785; Gaz. vol. 175; p. 999.

Lockard, Arthur W., Baltimore, Md. Electric sealing-wax machine. No. 1,018,977; Feb. 27; Sp. p. 6091; Gaz. vol. 175; p. 1048.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Spring-lock for adjustable casings of roller-bearings. No. 1,018,121; Feb. 20; Sp. p. 4206; Gaz. vol. 175; p. 723.

Lockwood, Marquis H., assignor to Underwood Typewriter Company, New York, N. Y. Type-writer tabulating mechanism. No. 1,017,301; Feb. 13; Sp. p. 2374; Gaz. vol. 175; p. 404.

Loew, Charles H., Lakewood, and A. Ruetschi, assignors to The Loew Manufacturing Company, Cleveland, Ohio. Pasteurizer. No. 1,017,777; Feb. 20; Sp. p. 3415; Gaz. vol. 175; p. 602.

Loew Manufacturing Company, The. (See Loew and Ruetschi, assignors.)

Loewenstein, Louis C., Lynn, Mass., assignor to General Electric Company. Governor. No. 1,017,571; Feb. 13; Sp. p. 2937; Gaz. vol. 175; p. 496.

Logan, Arthur. (See Logan, James R. and A.)

Logan, George H., Braddock, Pa. Drum. No. 1,018,767; Feb. 27; Sp. p. 5649; Gaz. vol. 175; p. 976.

Logan, George W. (See Evans and Logan.)

Logan, James R. and A., South Greensburg, Pa. Switch-throwing device. No. 1,018,918; Feb. 27; Sp. p. 5953; Gaz. vol. 175; p. 1026.

Logan, Juna M., *et al.* administrators. (See Logan, Lavalette L.) (Reissue.)

Logan, Lavalette L., deceased, Robertsdale; J. M. Logan and W. P. Townsend, administrators, assignors to J. M. Logan, Falls township, Wyoming county, Pa. Car-handling apparatus. (Reissue.) No. 13,376; Feb. 27; Sp. p. 6194; Gaz. vol. 175; p. 1065.

Lohr, Ludwig, Philadelphia, Pa. Protector for window-cleaners. No. 1,017,982; Feb. 20; Sp. p. 3900; Gaz. vol. 175; p. 675.

Long, Albert E., Brooklyn, N. Y. Vehicle. No. 1,017,983; Feb. 20; Sp. p. 3901; Gaz. vol. 175; p. 675.

Long, Clarence M., Marion, Ohio. Window-tapping device. No. 1,018,825; Feb. 27; Sp. p. 5338; Gaz. vol. 175; p. 926.

Long, Nim R., Troy, Mo. Calculating-machine. No. 1,016,572; Feb. 6; Sp. p. 793; Gaz. vol. 175; p. 118.

Longenecker, Charles, Pittsburgh, Pa. Valve mechanism for furnaces. No. 1,017,180; Feb. 13; Sp. p. 2060; Gaz. vol. 175; p. 354.

Lorbeer, T. L. (See Walker, Napoleon E., assignor.)

Lory, Raoul. (See Etienne, Albert, assignor.)

Losee, Joe S., *et al.* (See Ogle, Harley A., assignor.)

Lougee, Charles A., Newark, N. J. Cylinder for leather-shaving machines. No. 1,016,279; Feb. 6; Sp. p. 102; Gaz. vol. 175; p. 16.

Loughead, Joseph B., assignor of one-eighth to G. M. Armour, New York, N. Y. Automatic fire-alarm. No. 1,018,509; Feb. 27; Sp. p. 5049; Gaz. vol. 175; p. 887.

Loveland, Edward M., Lignite, N. D. Grain-cleaner. No. 1,016,424; Feb. 6; Sp. p. 413; Gaz. vol. 175; p. 66.

Lovell Manufacturing Company. (See Janisch, Maximilian P., assignor.)

Lovell, Paul R., and H. H. Michael, Logan, Iowa. Attachment for hay-tedders. No. 1,017,433; Feb. 13; Sp. p. 2662; Gaz. vol. 175; p. 450.

Lowden, Andrew S., Concord, Mass. Applying hinges. No. 1,016,341; Feb. 6; Sp. p. 280; Gaz. vol. 175; p. 37.

Lowe, Ellsworth A., South Lee, N. H. Valve. No. 1,017,434; Feb. 13; Sp. p. 2664; Gaz. vol. 175; p. 451.

Lowerre, Edgar R., assignor to Continental Can Company, Baltimore, Md. Receptacle. No. 1,016,755; Feb. 6; Sp. p. 1163; Gaz. vol. 175; p. 180.

Lowrey, Fred L., Moulton, Mo. Hame attachment. No. 1,016,280; Feb. 6; Sp. p. 104; Gaz. vol. 175; p. 16.

Lubrecht, Ferdinand A., Pine City, Minn. Whiffletree. No. 1,016,425; Feb. 6; Sp. p. 414; Gaz. vol. 175; p. 66.

Lucas, William G., McKeesport, Pa. Tie and rail-fastener. No. 1,018,835; Feb. 27; Sp. p. 5786; Gaz. vol. 175; p. 999.

Luce, Don C., Boston, Mass. Steering mechanism for motor-vehicles. No. 1,016,838; Feb. 6; Sp. p. 1337; Gaz. vol. 175; p. 206.

Lucik, Anthony, New Albany, Ind. Davenport-bed. No. 1,018,432; Feb. 27; Sp. p. 4869; Gaz. vol. 175; p. 862.

Luckock, Luke, East Pittsburgh, Pa. Hat-pin fastener. No. 1,018,200; Feb. 20; Sp. p. 4372; Gaz. vol. 175; p. 750.

Lund, James R., Chicago, Ill. Attachment for carburetors. No. 1,017,572; Feb. 13; Sp. p. 2939; Gaz. vol. 175; p. 497.

Lund, Thomas, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for attaching heels. No. 1,017,778; Feb. 20; Sp. p. 3421; Gaz. vol. 175; p. 602.

Lundberg, Endfred, Westfield, N. J., assignor to Hardman, Peck & Company, New York, N. Y. Tempo-regulator. No. 1,016,839; Feb. 6; Sp. p. 1339; Gaz. vol. 175; p. 207.

Lundquist, Carl J., assignor of one-half to H. O. Wistrand, Minneapolis, Minn. Adjustable hose-nozzle holder. No. 1,016,281; Feb. 6; Sp. p. 105; Gaz. vol. 175; p. 16.

Lunney, William. (See Crompton and Lunney.)

Luppino Davenport Company. (See Luppino, Joseph, assignor.)

Luppino, Joseph, Ridgewood, N. J., assignor to Luppino Davenport Company, Brooklyn, N. Y. Davenport. No. 1,018,122; Feb. 20; Sp. p. 4208; Gaz. vol. 175; p. 723.

Lupton, James S., Chattanooga, Tenn. Plow. No. 1,017,105; Feb. 13; Sp. p. 1999; Gaz. vol. 175; p. 296.

Lüttringhaus, Arthur, and H. von Diesbach, Mannheim, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Orange-red vat dye. No. 1,018,836; Feb. 27; Sp. p. 5788; Gaz. vol. 175; p. 1000.

Lüttringhaus, Arthur, and H. von Diesbach, Mannheim, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Yellow vat dye. No. 1,018,837; Feb. 27; Sp. p. 5789; Gaz. vol. 175; p. 1000.

Lutz, Charles A., York, Pa. Cooler. No. 1,018,538; Feb. 27; Sp. p. 5790; Gaz. vol. 175; p. 1000.

Luxembourger, Henry, Jr., Los Angeles, Cal. Shock-absorber. No. 1,017,435; Feb. 13; Sp. p. 2665; Gaz. vol. 175; p. 451.

Lyman Gun Sight Corporation, The. (See Windridge, James, assignor.)

Lynch, Charles, Chicago, Ill. Dumping-wagon. No. 1,017,302; Feb. 13; Sp. p. 2381; Gaz. vol. 175; p. 405.

Lyndgaard, Jorgen C. H., Lake Benton, Minn. Milk-stool. No. 1,019,009; Feb. 27; Sp. p. 6167; Gaz. vol. 175; p. 1059.

Lyon, Harry. (See Donnelly and Lyon.)

Lyons, Clerewood L., Willows, Cal. Combination pipe-wrench and pipe-cutter. No. 1,016,946; Feb. 13; Sp. p. 1590; Gaz. vol. 175; p. 290.

Lyons, John J., assignor of one-fourth to G. W. Onias and one-fourth to C. Wheaton, Dayton, Ohio. Brake mechanism. No. 1,017,223; Feb. 13; Sp. p. 2223; Gaz. vol. 175; p. 378.

Lyons, Peter F., assignor of one-half to C. H. Cronin, Boston, Mass. Bath-trap. No. 1,016,342; Feb. 6; Sp. p. 242; Gaz. vol. 175; p. 37.

Lyons, Robert L., Waltham, Mass., assignor to himself, and C. J. Sibbald, Troy, N. Y. Sewing-machine. No. 1,018,201; Feb. 20; Sp. p. 4373; Gaz. vol. 175; p. 751.

Lyons, Thomas, assignor to L. F. Meyer, Cleveland, Ohio. Pneumatic carpet-sweeper. No. 1,017,779; Feb. 20; Sp. p. 3427; Gaz. vol. 175; p. 603.

Lyttle, Bird F. (See Grimes, Josiah, assignor.)

M. A. Stokes and Company. (See Herboldsman and Epphimer, assignors.)

M. D. Knowlton Company. (See De Smith, Henry, assignor.)

Maag, Rudolf, Sindlingen, near Höchst-on-the-Main, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Brown vat dyestuff and making same. No. 1,018,433; Feb. 27; Sp. p. 4870; Gaz. vol. 175; p. 862.

MacDonald, Angus E., Detroit, Mich. Combined table and bench. No. 1,016,841; Feb. 6; Sp. p. 1343; Gaz. vol. 175; p. 207.

MacDonald, Archibald A., New Glasgow, Nova Scotia, Canada. Vehicle-wheel. No. 1,018,718; Feb. 27; Sp. p. 5532; Gaz. vol. 175; p. 958.

MacDonald, Benjamin, and W. Thomas, Yatesville, Pa. Street-car stop. No. 1,018,842; Feb. 27; Sp. p. 5795; Gaz. vol. 175; p. 1001.

MacKenzie, Fred L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,016,947; Feb. 13; Sp. p. 1592; Gaz. vol. 175; p. 281.

MacLean, William J. (See Fletcher and MacLean.)

Macallen Company, The. (See McLain, William R., assignor.)

Macaulay, Thomas I., Birkenhead, England. Holding and disengaging gear for the boats of ships and the like. No. 1,016,840; Feb. 6; Sp. p. 1341; Gaz. vol. 175; p. 207.

Macbeth, Edgar R., Brasil, Ind. Feed-indicator for valves. No. 1,017,224; Feb. 13; Sp. p. 2226; Gaz. vol. 175; p. 378.

Macdonald, Peter E. (See Hyle, William A., assignor.)

Mack, James T., Buffalo, N. Y. Scraper for forks. No. 1,016,696; Feb. 6; Sp. p. 1052; Gaz. vol. 175; p. 161.

Mackintosh, John, Halifax, England. Jar, bottle, canister, or like vessel for holding sweetmeats and stopper therefor. No. 1,016,508; Feb. 6; Sp. p. 623; Gaz. vol. 175; p. 95.

Macomber, William I., Providence, R. I. Lady's hat-pin. No. 1,016,697; Feb. 6; Sp. p. 1053; Gaz. vol. 175; p. 161.

Macowsky, Isaac, and M. Hollner, San Francisco, Cal. Co-acting car brake and fender. No. 1,018,978; Feb. 27; Sp. p. 6093; Gaz. vol. 175; p. 1048.

Macwatty, Duncan, *et al.* (See Flynt, Edward E., assignor.)

Maddox, William F., Linton, Ind. Automatic valve for mine-pumps. No. 1,016,573; Feb. 6; Sp. p. 797; Gaz. vol. 175; p. 118.

Madsen, Charles P., assignor to Pelouse Electric Heater Co., Chicago, Ill. Combination sad-iron and cooker. No. 1,018,576; Feb. 27; Sp. p. 5247; Gaz. vol. 175; p. 911.

Madsen, Charles P., assignor to Pelouse Electric Heater Co., Chicago, Ill. Electric curling-iron. No. 1,018,675; Feb. 27; Sp. p. 5440; Gaz. vol. 175; p. 943.

Maguire, John R., Philadelphia, Pa. Car-fender. No. 1,018,123; Feb. 20; Sp. p. 4212; Gaz. vol. 175; p. 724.

Mahlstedt, John F. (See Fanslow, Benjamin O., assignor.)

Mahlstedt, John F., Los Angeles, Cal. Printing-press. No. 1,016,756; Feb. 6; Sp. p. 1167; Gaz. vol. 175; p. 180.

Mahlstedt, John F., Los Angeles, Cal. Ink-fountain. No. 1,018,434; Feb. 27; Sp. p. 4870; Gaz. vol. 175; p. 862.

Maine Sugar & Cellulose Company. (See Stewart, Francis L., assignor.)

Makarhof, John A., assignor of forty-nine one-hundredths to F. R. Belt and fifty-one one-hundredths to G. A. Baird, Chicago, Ill. Safety-trimmer for corns and calli. No. 1,016,343; Feb. 6; Sp. p. 244; Gaz. vol. 175; p. 38.

Makarhof, John A., assignor of forty-nine one-hundredths to F. R. Belt and fifty-one one-hundredths to G. A. Baird, Chicago, Ill. Safety-razor. No. 1,016,344; Feb. 6; Sp. p. 247; Gaz. vol. 175; p. 38.

Makowski, Albert, Meriden, Conn. Spirit-level. No. 1,018,719; Feb. 27; Sp. p. 5533; Gaz. vol. 175; p. 958.

Makranvey, Mihalj, *et al.* (See Vitoszki, Mike, assignor.)

Malchow, William, Natoma, Kans. Folding crate. No. 1,017,573; Feb. 13; Sp. p. 2942; Gaz. vol. 175; p. 497.

Malinowsky, Andrew, Toledo, Ohio, assignor of one-fourth to J. H. Taylor and three-fourths to The Sanitary Brick Company, Schenectady, N. Y. Brick, tile, or analogous article and making same. No. 1,016,345; Feb. 6; Sp. p. 248; Gaz. vol. 175; p. 39.

Mallory, Ogden, Oakland, Cal. Riveting-machine attachment. No. 1,017,436; Feb. 13; Sp. p. 2666; Gaz. vol. 175; p. 451.

Malloy, Edward T., Hamilton, Ohio. Smoke-house. No. 1,016,698; Feb. 6; Sp. p. 1054; Gaz. vol. 175; p. 162.

Malmstrom, Peter E., assignor of one-half to A. M. Sloss, New York, N. Y. Siphon-bottle. No. 1,018,124; Feb. 20; Sp. p. 4213; Gaz. vol. 175; p. 724.

Mann, Ira A., Pittsburgh, Pa. Water-closet. No. 1,017,437; Feb. 13; Sp. p. 2668; Gaz. vol. 175; p. 451.

Mann, Miles H., Webster Groves, assignor to Buffum Tool Company, Louisiana, Mo. Wire-cutter. No. 1,018,839; Feb. 27; Sp. p. 5791; Gaz. vol. 175; p. 1000.

Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Signaling device. No. 1,016,699; Feb. 6; Sp. p. 1056; Gaz. vol. 175; p. 162.

Marble, Webster L., Gladstone, Mich. Gaff-tongs. No. 1,018,065; Feb. 20; Sp. p. 4090; Gaz. vol. 175; p. 704.

Marchant, Elison A. (See Sparr and Marchant.)

Marcuse, Moses M., Far Rockaway, assignor to West Disinfecting Co., New York, N. Y. Sanitary mouthpiece for telephones. No. 1,017,680; Feb. 20; Sp. p. 3162; Gaz. vol. 175; p. 568.

Marikle, Jervis A., Brooklyn, N. Y. Game apparatus. No. 1,018,840; Feb. 27; Sp. p. 5792; Gaz. vol. 175; p. 1000.

Marion Steam Shovel Company, The. (See Yawger, William H., assignor.)

Marion, Royal T., Philadelphia, Pa. Heat-conserving apparatus. No. 1,016,840; Feb. 6; Sp. p. 261; Gaz. vol. 175; p. 39.

Marquis, William P., Central City, Nebr. Curtain-fixture. No. 1,017,574; Feb. 13; Sp. p. 2943; Gaz. vol. 175; p. 497.

Marsella, James W., Hattiesburg, Miss. Thill-tug. No. 1,017,303; Feb. 13; Sp. p. 2383; Gaz. vol. 175; p. 405.

Marsh, Charles S. (See Kline, Wallace C., assignor.)

Marsh, Owen F. (See Segel and Marsh.)

Marshall, Edward L. (See Smith and Marshall.)

Marshall, Hugh K., Sydney, New South Wales, Australia. Marine sounding apparatus. No. 1,016,923; Feb. 6; Sp. p. 1526; Gaz. vol. 175; p. 298.

Marshall, John I. (See Fraulo, John, assignor.)

Marshall, Simon K., and M. H. McKinney, Xenia, Ohio. Stop-motion for spinning-machines. No. 1,018,919; Feb. 27; Sp. p. 5955; Gaz. vol. 175; p. 1026.

Martin, Aubry H., Short Hills, assignor to Recording Speedometer Company, Newark, N. J. Tape-feeding mechanism for recording instruments. No. 1,017,964; Feb. 20; Sp. p. 3005; Gaz. vol. 175; p. 676.

Martin, Aubry H., Short Hills, assignor to Recording Speedometer Company, Newark, N. J. Speed-recorder. No. 1,018,960; Feb. 20; Sp. p. 4624; Gaz. vol. 175; p. 794.

Martin, Charles H., Worcester, Mass. Vehicle. No. 1,018,248; Feb. 20; Sp. p. 4468; Gaz. vol. 175; p. 767.

Martin, Edward H., Webster City, Iowa. Telephone-meter. No. 1,018,435; Feb. 27; Sp. p. 4872; Gaz. vol. 175; p. 832.

Martin, Hugh, et al. (See White, William R., assignor.)

Martin, James, Manchester, England. Picker-spindle for looms. No. 1,017,225; Feb. 13; Sp. p. 2228; Gaz. vol. 175; p. 379.

Martin, James A., et al. (See Kent, Victor E., assignor.)

Martin, James A., et al. (See White, William R., assignor.)

Martineau, Clarence S., et al. (See Fairchild, William, assignor.)

Martineau, William C., et al. (See Fairchild, William, assignor.)

Matthesen, Julius. (See Myrholm, Peder, assignor.)

Mazrak, Frank, Flushing, N. Y. Smoking-pipe. No. 1,018,841; Feb. 27; Sp. p. 5794; Gaz. vol. 175; p. 1001.

Maschinenfabrik Meesmus A. G. (See Crain, Rudolf E., assignor.)

Mason, Calvin D., Ashland, Ohio. Safety-platform. No. 1,018,674; Feb. 27; Sp. p. 5442; Gaz. vol. 175; p. 944.

Mason, Charles, Boston, assignor of one-half to P. J. Holmes, Carver, Mass. Adjustable shade-roller bracket. No. 1,016,641; Feb. 6; Sp. p. 245; Gaz. vol. 175; p. 142.

Mason, Charles T., Sumter, S. C. Interrupter for ignition-dynamos. No. 1,017,364; Feb. 13; Sp. p. 2454; Gaz. vol. 175; p. 406.

Mason, Luther A., Ellensburg, Wash. Faucet-filter. No. 1,016,767; Feb. 6; Sp. p. 1174; Gaz. vol. 175; p. 181.

Massachusetts Belting Company. (See Hammond and Taft, assignors.)

Mast, Adolf, Tempelhof, near Berlin, Germany. Point for concrete piles. No. 1,018,979; Feb. 27; Sp. p. 6008; Gaz. vol. 175; p. 1046.

Mastin, Charles I. E., Midland Park, N. J. Packing for piston-rods, &c. No. 1,018,292; Feb. 20; Sp. p. 4375; Gaz. vol. 175; p. 751.

Mathers, Ezra A., assignor of one-half to D. W. Harner, Philadelphia, Pa. Ore-crusher. No. 1,017,780; Feb. 20; Sp. p. 3428; Gaz. vol. 175; p. 602.

Matheisius, Walther, Charlottenburg, Germany. Hot-blast stove. No. 1,018,331; Feb. 20; Sp. 4625; Gaz. vol. 175; p. 794.

Matthews, Frederick C. (See Alley, Moses B., assignor.)

Matthews, Frank T., Baltimore, Md. Coat. No. 1,017,751; Feb. 20; Sp. p. 3459; Gaz. vol. 175; p. 606.

Matthews, George S., Kansas City, Mo. Device for indicating the intended movements of vehicles. No. 1,017,226; Feb. 13; Sp. p. 2229; Gaz. vol. 175; p. 379.

Matthews, William H., Jr., Philadelphia, Pa. Sand-feeding device. No. 1,016,509; Feb. 6; Sp. p. 625; Gaz. vol. 175; p. 96.

Mattsson, Alfred G., assignor to Great Lakes Engineering Works, Detroit, Mich. Pump. No. 1,017,106; Feb. 13; Sp. p. 1960; Gaz. vol. 175; p. 287.

Matych, Frederick J., Middletown, Conn. Stereotype-plate cutter. No. 1,016,347; Feb. 6; Sp. p. 254; Gaz. vol. 175; p. 39.

Maxim, Hiram P., Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y. Silencing device for firearms. No. 1,018,720; Feb. 27; Sp. p. 5534; Gaz. vol. 175; p. 958.

Maxim Silent Firearms Company. (See Maxim, Hiram P., assignor.)

Mayer, Clarence, and S. Yaffe, assignors to Nature's Rival Company, Chicago, Ill. Form-pad. No. 1,018,966; Feb. 20; Sp. p. 4091; Gaz. vol. 175; p. 794.

Mayer, Heinrich, assignor to The Firm of A. Saurer, Arbon, Switzerland. Motor-car frame. No. 1,016,282; Feb. 6; Sp. p. 106; Gaz. vol. 175; p. 16.

Mayer, Henry J., Columbus, Ohio. Tailor's chalk sharpener, receptacle, and paper-weight. No. 1,018,766; Feb. 27; Sp. p. 5650; Gaz. vol. 175; p. 976.

Maynard, John F., et al. (See Sanford, Leverett A., assignor.)

McAlister, John. (See McBurney and McAlister.)

McAtee, James C., Hiwanna, Ark. Animal-trap. No. 1,017,227; Feb. 13; Sp. p. 2230; Gaz. vol. 175; p. 379.

McAuley, Thomas, Reno, Nev. Compound high-pressure turbine-wheel. No. 1,017,430; Feb. 13; Sp. p. 2670; Gaz. vol. 175; p. 462.

McBride, Albert E., Independence, Kans. Extracting appliance for use in oil or gas wells. No. 1,017,305; Feb. 13; Sp. p. 2387; Gaz. vol. 175; p. 400.

McBurney, Thomas J., Fort Bayard, and J. McAlister, Central, N. Mex. Screen for windows or doors. No. 1,016,842; Feb. 6; Sp. p. 1344; Gaz. vol. 175; p. 208.

McCann, Benjamin, Mountsville, W. Va. Rail-fastening. No. 1,017,975; Feb. 13; Sp. p. 2944; Gaz. vol. 175; p. 497.

McCaskey, Alfred S., assignor, by mesne assignments, to McCaskey Electric Calculator Company, Chicago, Ill. Calculating-machine. No. 1,018,510; Feb. 27; Sp. p. 5050; Gaz. vol. 175; p. 888.

McCaskey Electric Calculator Company. (See McCaskey, Alfred S., assignor.)

McCaslin, William, assignor to Draper Company, Hopedale, Mass. Loom-shuttle. No. 1,017,782; Feb. 20; Sp. p. 3481; Gaz. vol. 175; p. 604.

McClendon, Fred H. (See McClendon, James T. and F. H.)

McClendon, James T. and F. H., Lufkin, Tex. Hitching device. No. 1,016,848; Feb. 6; Sp. p. 256; Gaz. vol. 175; p. 40.

McClure, William C., et al. (See Mein, William, assignor.)

McCollum, Burton E., assignor to The A. J. Phillips Company, Fenton, Mich. Window-screen. No. 1,016,574; Feb. 6; Sp. p. 799; Gaz. vol. 175; p. 128.

McConnell, William, Vancouver, British Columbia, Canada. Paper-feeding device. No. 1,018,577; Feb. 27; Sp. p. 5251; Gaz. vol. 175; p. 912.

McCoole, Gabriel W., Hot Springs, Ark. Hose-nozzle. No. 1,017,628; Feb. 13; Sp. p. 3035; Gaz. vol. 175; p. 517.

McCord, Ralph, St. Louis, Mo. Closet-seat. No. 1,018,721; Feb. 27; Sp. p. 5539; Gaz. vol. 175; p. 959.

McCord, Ralph, St. Louis, Mo. Closet-seat hinge. No. 1,018,722; Feb. 27; Sp. p. 5541; Gaz. vol. 175; p. 959.

McDaniel, Robert L., Camden, Miss. Boring-machine. No. 1,016,283; Feb. 6; Sp. p. 107; Gaz. vol. 175; p. 17.

McDonald, Charles B. and C. D., Chicago, Ill. Three-compartment receptacle. No. 1,018,016; Feb. 27; Sp. p. 6168; Gaz. vol. 175; p. 1060.

McDonald, Charles D. (See McDonald, Charles B. and C. D.)

McDonald, Duncan A. L., Montreal, Quebec, Canada, assignor to The Pay-As-You-Enter-Car Corporation, New York, N. Y. Turnstile mechanism. No. 1,016,948; Feb. 13; Sp. p. 1886; Gaz. vol. 175; p. 261.

McDonald, Duncan A. L., Montreal, Quebec, Canada, assignor to The Pay-As-You-Enter-Car Corporation, New York, N. Y. Pay-as-you-enter car. No. 1,016,949; Feb. 13; Sp. p. 1598; Gaz. vol. 175; p. 292.

McElhone, Francis J., Jersey City, N. J. Electroplating. No. 1,018,332; Feb. 20; Sp. p. 4626; Gaz. vol. 175; p. 795.

McFaddan, John J., Renovo, Pa. Attachment for typewriters. No. 1,018,521; Feb. 27; Sp. p. 5096; Gaz. vol. 175; p. 888.

McGifford, John R., assignor to Clyde Iron Works, Duluth, Minn. Log-loading machine. No. 1,017,806; Feb. 18; Sp. p. 2389; Gaz. vol. 175; p. 607.

McGregor, Raymond. (See Alander and McGregor.)

McHugh, Anthony L., Cincinnati, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Coil-forming machine. No. 1,016,700; Feb. 6; Sp. p. 1089; Gaz. vol. 175; p. 162.

McIlvaine, Joe F., Lebanon, Mo. Stovepipe-fastener. No. 1,016,426; Feb. 6; Sp. p. 415; Gaz. vol. 175; p. 66.

McIlvanie, Samuel, Edverne, British Columbia, Canada. Pencil-sharpener. No. 1,018,240; Feb. 20; Sp. p. 4470; Gaz. vol. 175; p. 768.

McIntyre, Michael M., assignor to The Perfection Spring Company, Cleveland, Ohio. Vehicle-spring. No. 1,018,239; Feb. 20; Sp. p. 4471; Gaz. vol. 175; p. 768.

McKay, Thomas H., and J. F. Hughes, Guthrie, Okla. Ball-joint support. No. 1,017,870; Feb. 13; Sp. p. 2945; Gaz. vol. 175; p. 497.

McKean, John O., assignor to Foster Machine Company, Westfield, Mass. Winding-machine. No. 1,018,920; Feb. 27; Sp. p. 5959; Gaz. vol. 175; p. 1027.

McKee, Clarence W., Phoenix, Ariz. Irrigation system. No. 1,018,251; Feb. 20; Sp. p. 4473; Gaz. vol. 175; p. 768.

McKee, Clarke W., San Diego, Cal. Patch for pneumatic tires. No. 1,016,949; Feb. 6; Sp. p. 257; Gaz. vol. 175; p. 40.

McKeen Motor Car Company. (See McKeen, William R., Jr., assignor.)

McKeen, Thomas L., Easton, Pa. Car buffer and end sill. No. 1,016,701; Feb. 6; Sp. p. 1062; Gaz. vol. 175; p. 163.

McKeen, Thomas L., Easton, Pa. Car buffing device. No. 1,016,702; Feb. 6; Sp. p. 1064; Gaz. vol. 175; p. 163.

McKeen, Thomas L., Easton, Pa. Friction-buffer for railway-cars. No. 1,016,706; Feb. 6; Sp. p. 1067; Gaz. vol. 175; p. 164.

McKeen, William R., Jr., assignor to McKeen Motor Car Company, Omaha, Nebr. Motor. No. 1,017,808; Feb. 18; Sp. p. 2287; Gaz. vol. 175; p. 391.

McKelvey, James K., Warsaw, Ohio. Clutch. No. 1,017,577; Feb. 18; Sp. p. 2945; Gaz. vol. 175; p. 496.

McKelvy, Samuel A. (See French, McKelvy, and Scroggs.)

McKenna, Matthew T., San Francisco, Cal. Pile-driving-follower attachment. No. 1,017,480; Feb. 13; Sp. p. 2673; Gaz. vol. 175; p. 462.

McKinless, James R., Oakland, Cal., assignor, by mesne assignments, to International Conformer Company. Hat-conformator. No. 1,017,040; Feb. 13; Sp. p. 1781; Gaz. vol. 175; p. 302.

McKinney, Minard H. (See Marshall and McKinney.)

McKivens, Frank G., and L. W. Naylor, Denver, Colo.; said Naylor assignor to said McKivens. Starter for internal-combustion engines. No. 1,017,831; Feb. 20; Sp. p. 3154; Gaz. vol. 175; p. 559.

McKnight, George M. (See Wheeler, Thomas J., assignor.)

McKnight, William N., and R. H. Youngman, assignors to Harbison-Walker Refractories Co., Pittsburgh, Pa. Brick for metallurgic furnaces. No. 1,016,550; Feb. 6; Sp. p. 259; Gaz. vol. 175; p. 40.

McLain, William R., Philadelphia, Pa., assignor to The Macallen Company, Boston, Mass. Hitching. No. 1,017,945; Feb. 20; Sp. p. 3506; Gaz. vol. 175; p. 676.

McLanahan, Austin. (See Potts, Louis M., assignor.)

McLaren, Henry, Leeds, England. Plow operated by steam or other motive power. No. 1,018,352; Feb. 20; Sp. p. 4477; Gaz. vol. 175; p. 796.

McLendon, Andrew J., Edith, Tex. Gearing. No. 1,017,107; Feb. 13; Sp. p. 1962; Gaz. vol. 175; p. 287.

McMillan, Malcolm. (See Kenny and McMillan.)

McMillan, William P., Tampa, Fla. Irrigating apparatus. No. 1,017,576; Feb. 13; Sp. p. 2947; Gaz. vol. 175; p. 498.

McMullen, Alexander J., Milwaukee, Wis. Automatic stoker for locomotives. No. 1,017,692; Feb. 20; Sp. p. 3156; Gaz. vol. 175; p. 559.

McNabb, Rhesmus, Prairie Oaks, Windmill. No. 1,018,203; Feb. 20; Sp. p. 4377; Gaz. vol. 175; p. 751.

McNair, Robert H. and W. A., Peoria, Ill. Clothes-line reel. No. 1,017,010; Feb. 13; Sp. p. 1782; Gaz. vol. 175; p. 302.

McNair, William A. (See McNair, Robert H. and W. A.)

McPherrese, James R., Canton, and H. B. Orr, Weymouth, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Welt-guide for sewing water-tight insoles. No. 1,017,049; Feb. 13; Sp. p. 1943; Gaz. vol. 175; p. 320.

McRae-Blom Company. (See McRae and Blom, assignors.)

McRae, Samuel, and J. H. Blom, assignors to McRae-Blom Company, Everett, Wash. Hose-patch. No. 1,017,265; Feb. 13; Sp. p. 2304; Gaz. vol. 175; p. 392.

McWilliams, John, East McKeesport, and M. H. Cleeland, West Homestead, Pa. Mechanism actuated by a hot bearing. No. 1,018,253; Feb. 20; Sp. p. 4481; Gaz. vol. 175; p. 769.

Mead, Cyrus B., assignor to The Mead Engine Company, Dayton, Ohio. Explosive-engine. (Reissue.) No. 13,568; Feb. 13; Sp. p. 2076; Gaz. vol. 175; p. 513.

Mead Engine Company, The. (See Mead, Cyrus B., assignor.) (Reissue.)

Mead, William E., Marshall, Tex. Air-brake. No. 1,017,011; Feb. 13; Sp. p. 1784; Gaz. vol. 175; p. 302.

Meech, Frank B., New York, N. Y. Diaphragm. No. 1,016,704; Feb. 6; Sp. p. 1089; Gaz. vol. 175; p. 164.

Meek, Herreman O., Garden City, Kans. Concrete-mold. No. 1,016,285; Feb. 6; Sp. p. 111; Gaz. vol. 175; p. 17.

Meek, Herreman O., and C. H. Bradburn, Garden City, Kans. Collapsible form. No. 1,016,284; Feb. 6; Sp. p. 109; Gaz. vol. 175; p. 17.

Meem, James C., assignor of one-half to F. L. Cranford, Brooklyn, N. Y. Tunnel construction. No. 1,018,578; Feb. 27; Sp. p. 5250; Gaz. vol. 175; p. 912.

Mees, Eberhard F., Milwaukee, Wis. Roller-skate. No. 1,018,512; Feb. 27; Sp. p. 5068; Gaz. vol. 175; p. 889.

Mehner, Hermann, Berlin, Germany. Producing alkali metal from oxygen compounds of alkali. No. 1,018,758; Feb. 6; Sp. p. 1176; Gaz. vol. 175; p. 181.

Meier, Albert J., Glendale, Mo. Bearer for corroding-pots. No. 1,017,837; Feb. 18; Sp. p. 3043; Gaz. vol. 175; p. 513.

Meigs, John F., and R. P. Stout, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Ammunition-loading apparatus. No. 1,018,647; Feb. 20; Sp. p. 4092; Gaz. vol. 175; p. 704.

Meinhardt, Hans A., assignor of one-half to T. J. Uroll, Pittsfield, Mass. Slide for motion-picture machines. No. 1,016,575; Feb. 6; Sp. p. 800; Gaz. vol. 175; p. 118.

Meis, William, Mount Oliver borough, assignor to W. C. McClure, Carrick borough, and W. Freeman, St. Clair borough, Pa. Dynamiting cap. No. 1,017,683; Feb. 20; Sp. p. 3188; Gaz. vol. 175; p. 560.

Melbye, Oskar, Cypress Island, Wash. Winch. No. 1,017,307; Feb. 13; Sp. p. 2392; Gaz. vol. 175; p. 407.

Meleney, George B., Chicago, Ill. Drawer and file-holder. No. 1,016,580; Feb. 6; Sp. p. 1433; Gaz. vol. 175; p. 224.

Mendenhall, Elbert V., assignor to M. F. Mendenhall, Los Angeles, Cal. Piano-bench. No. 1,018,204; Feb. 20; Sp. p. 4378; Gaz. vol. 175; p. 752.

Mendenhall, Mary F. (See Mendenhall, Elbert V., assignor.)

Mergenthaler Linotype Company. (See Degener, Heinrich, assignor.)

Mergenthaler Linotype Company. (See Lawrens, Emil, assignor.)

Mergenthaler Linotype Company. (See Muehleisen and Albrecht, assignors.)

Meriwether, Charles N., Clarksville, Tenn. Phosphate and sinking same. No. 1,016,352; Feb. 6; Sp. p. 261; Gaz. vol. 175; p. 41.

Merrick, Herbert L., Passaic, N. J. Automatic weigher. No. 1,018,068; Feb. 20; Sp. p. 4094; Gaz. vol. 175; p. 795.

Merrill Metallurgical Company. (See Bosqui, Daniel, assignor.)

Merritt, Mortimer G., assignor to Rome Metallic Bedstead Company, Rome, N. Y. Truck. No. 1,017,160; Feb. 13; Sp. p. 2070; Gaz. vol. 175; p. 356.

Mershon, Edward C., Saginaw, assignor to Wm. B. Mershon & Co., Carrollton, Mich. Gage for straight-edges. No. 1,017,639; Feb. 13; Sp. p. 3069; Gaz. vol. 175; p. 517.

Merwin, George M., Berwyn, Ill., assignor to International Harvester Company. Corn husker and shredder. No. 1,017,783; Feb. 20; Sp. p. 3433; Gaz. vol. 175; p. 604.

Metallurgical Research Company. (See Rockey and Eldridge, assignors.)

Metropolitan Sewing Machine Company. (See Weis, John P., assignor.)

Meyenburg, Konrad V. von, Zurich, assignor to Moteruiter A. G., Basel, Switzerland. Machine for mechanical tillage. No. 1,018,843; Feb. 27; Sp. p. 5796; Gaz. vol. 175; p. 1001.

Meyer, Gerhard, Shreveport, La. Packing-shoe. No. 1,018,333; Feb. 20; Sp. p. 4627; Gaz. vol. 175; p. 795.

Meyer, Julius A., St. Louis, Mo. Foot-operated bass-drum and cymbal beater. No. 1,016,510; Feb. 6; Sp. p. 626; Gaz. vol. 175; p. 96.

Meyer, Louis C., Davenport, Iowa. Pot-scraper. No. 1,018,844; Feb. 27; Sp. p. 5799; Gaz. vol. 175; p. 1001.

Meyer, Ludwig F. (See Lyons, Thomas, assignor.)

Meyer, Peter, Calmar, Iowa. Quaking-grass destroyer. No. 1,018,518; Feb. 27; Sp. p. 5100; Gaz. vol. 175; p. 889.

Meyer, William C., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-sewing machine. No. 1,017,440; Feb. 13; Sp. p. 2674; Gaz. vol. 175; p. 463.

Meyers, Willard F., Long Island City, N. Y. Stone-sawing machine. No. 1,017,784; Feb. 20; Sp. p. 3435; Gaz. vol. 175; p. 604.

Mez, Gustav, Berlin, Germany. Type-writing machine. No. 1,016,351; Feb. 6; Sp. p. 259; Gaz. vol. 175; p. 40.

Michael, Ernest H. (See Lovell and Michael.)

Michau, Felix, Paris, France. Flying-machine. No. 1,018,295; Feb. 20; Sp. p. 4381; Gaz. vol. 175; p. 752.

Michel, Paul, Fils, Troyes, France. Sawmill set-works. No. 1,016,759; Feb. 6; Sp. p. 1176; Gaz. vol. 175; p. 181.

Michelin, André, Paris, France. Manufacturing anti-slipping tires for motors and other vehicles. No. 1,018,636; Feb. 27; Sp. p. 5240; Gaz. vol. 175; p. 927.

Midgley, Frederick W., Jersey City, N. J., assignor to J. Firth, New York, N. Y. Wave-meter. No. 1,018,769; Feb. 27; Sp. p. 5650; Gaz. vol. 175; p. 976.

Miesen, Clarence F., Carrollton, Ky. Folding crate. No. 1,018,254; Feb. 20; Sp. p. 4483; Gaz. vol. 175; p. 769.

Mihalj, Unoka, et al. (See Balasa, John, assignor.)

Mihok, Emery W., West Hammond, Ill. Flour bolter or dresser. No. 1,016,705; Feb. 6; Sp. p. 1070; Gaz. vol. 175; p. 164.

Mikkelson, Ole J., Ferryville, Wis. Tire chain and guard. No. 1,018,206; Feb. 20; Sp. p. 4384; Gaz. vol. 175; p. 753.

Mill, Anton, Sr., and A. Mill, Jr., Cincinnati, Ohio, assignors to H. Heine, Chicago, Ill. Machine for grinding drills. No. 1,016,891; Feb. 6; Sp. p. 1441; Gaz. vol. 175; p. 224.

Miller, Charles L., South Norwood, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J. Sole-laying machine. No. 1,018,069; Feb. 20; Sp. p. 4098; Gaz. vol. 175; p. 795.

Miller, Edward C. (See Otto, Albert A., assignor.)

Miller, Frank P., Meadville, Pa. Automatic speed-change and tap-reversing attachment for drill-presses. No. 1,017,785; Feb. 20; Sp. p. 3439; Gaz. vol. 175; p. 605.

Miller, George E., Madison, Me. Sulfur-burner. No. 1,018,255; Feb. 20; Sp. p. 4484; Gaz. vol. 175; p. 769.

Miller, George S., Chicago, Ill. Knife and scissors sharpener. No. 1,018,579; Feb. 27; Sp. p. 5258; Gaz. vol. 175; p. 912.

Miller, Harry, Butler, Pa. Vending-machine. No. 1,018,845; Feb. 27; Sp. p. 5800; Gaz. vol. 175; p. 1002.

Miller, Henry, et al. (See Graetz, William, assignor.)

Miller, Henry S., San Diego, Cal. Miter-box. No. 1,017,640; Feb. 13; Sp. p. 3070; Gaz. vol. 175; p. 517.

Miller, John R., Chicago, Ill. Hot-water heater. No. 1,018,256; Feb. 20; Sp. p. 4485; Gaz. vol. 175; p. 770.

Miller, John F. (See Miller, William W. and J. F.)

Miller, John G., Burlington, Iowa. Vehicle-brake. No. 1,018,637; Feb. 27; Sp. p. 5242; Gaz. vol. 175; p. 927.

Miller, Joseph M., Chicago, Ill. Fire-extinguisher. No. 1,018,514; Feb. 27; Sp. p. 5102; Gaz. vol. 175; p. 889.

Miller, Rudolph C., Beaumont, Tex. Grain-door for cars. No. 1,017,786; Feb. 20; Sp. p. 3443; Gaz. vol. 175; p. 605.

Miller, Solomon M., Peoria, Ill. Safety appliance for elevators. No. 1,017,634; Feb. 20; Sp. p. 3160; Gaz. vol. 175; p. 570.

Miller, William B., Pine Bluff, Ark. Window-screen. No. 1,017,266; Feb. 18; Sp. p. 2306; Gaz. vol. 175; p. 392.

Miller, William W., Union township, and J. F. Miller, Jackson township, Miami county, Ind. Appliance for handling helpless persons. No. 1,018,723; Feb. 27; Sp. p. 5542; Gaz. vol. 175; p. 959.

Milliken, Norman I., assignor to The Janesville Machine Co., Janesville, Wis. Plow. No. 1,018,397; Feb. 20; Sp. p. 4779; Gaz. vol. 175; p. 818.

Mills, James, Spokane, Wash. Gate. No. 1,018,515; Feb. 27; Sp. p. 5104; Gaz. vol. 175; p. 890.

Millspaugh, Edward J., *et al.* (See Sanford, Leverett A., assignor.)

Millville Machine Company. (See Headley and Bard, assignors.)

Milne, Robert, assignor to Rockford Drilling Machine Company, Rockford, Ill. Gearing. No. 1,017,441; Feb. 13; Sp. p. 2676; Gaz. vol. 175; p. 453.

Milner, Barons, *et al.* (See Albert, Floyd W., assignor.)

Miltenberg, Alfred M. (See Swingle and Miltenberg.)

Miner, James H., Lumberton, Miss. Acetylene-gas generator. No. 1,016,843; Feb. 6; Sp. p. 1346; Gaz. vol. 175; p. 208.

Miner, William H. (See Dath, Charles E., assignor.)

Miner, William H. (See O'Connor, John F., assignor.)

Mingay, Matthew, Detroit, Mich. Reinforced concrete structure. No. 1,016,760; Feb. 6; Sp. p. 1180; Gaz. vol. 175; p. 181.

Minimax Consolidated Limited. (See Breslauer, Max, assignor.)

Minnier, Blythe J., Watertown, N. Y., assignor to New York Air Brake Company. Air-brake apparatus. No. 1,017,787; Feb. 20; Sp. p. 3444; Gaz. vol. 175; p. 606.

Minster, Nicholas L. (See Smith Albert D., assignor.)

Mishawaka Woolen Manufacturing Co. (See Timming, August C., assignor.)

Mitchell, Charles R., Chatswood, New South Wales, Australia. Milking machinery. No. 1,018,846; Feb. 27; Sp. p. 5802; Gaz. vol. 175; p. 1002.

Mitchell, Harrison J., assignor to The Berlin Machine Works, Beloit, Wis. Sandpaper-drum. No. 1,016,511; Feb. 6; Sp. p. 628; Gaz. vol. 175; p. 90.

Mitchell, Isaac L., Cedar Rapids, Iowa. Oil-burner attachment for stoves. No. 1,018,257; Feb. 20; Sp. p. 4487; Gaz. vol. 175; p. 770.

Mitchell, Melvin G., South Bend, Ind., assignor to National Cable & Mfg. Co., Niles, Mich. Lightning-conductor. No. 1,017,308; Feb. 18; Sp. p. 2393; Gaz. vol. 175; p. 407.

Mitchell, Robert J., Marion, Ohio. Automatic air-brake coupling. No. 1,017,442; Feb. 18; Sp. p. 2679; Gaz. vol. 175; p. 453.

Modern Compressed Air Cleaning Company. (See Overholt, Edwin E., assignor.)

Moe, John P. (See Carpenter, Columbus C., assignor.)

Mollberg, Louis, A. G. Storen, and J. O. Storén, Brooklyn, N. Y. Sleeve-form. No. 1,018,724; Feb. 27; Sp. p. 5547; Gaz. vol. 175; p. 960.

Monarch Telephone Manufacturing Company. (See Fricke, William A., assignor.)

Monarch Typewriter Company, The. (See Bond, Charles J., assignor.)

Monarch Typewriter Company, The. (See Coo, Thomas J., assignor.)

Monarch Typewriter Company, The. (See Seidelinger, Robie, assignor.)

Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)

Monitor Drill Company, The. (See Rieske, Otto G., assignor.)

Monroe, Levi G. (See Wessels, Martin J., assignor.)

Montague Mailing Machinery Company. (See Lee, Ulysses G., assignor.)

Montgomery, Hiram W., Santa Monica, Cal. Suspensory. No. 1,017,897; Feb. 20; Sp. p. 3715; Gaz. vol. 175; p. 646.

Montsabré, Philippe, Fresno, Cal. Endless tracks mounted on wheeled carriers. No. 1,017,443; Feb. 18; Sp. p. 2681; Gaz. vol. 175; p. 454.

Moon, Rupert A. (See Pack and Moon.)

Moomelis, Adolph, New York, N. Y. Artificial tobacco and making same. No. 1,016,844; Feb. 6; Sp. p. 1347; Gaz. vol. 175; p. 208.

Mooney, Lawrence C., Montgomery, Ala. Cross-tie. No. 1,018,848; Feb. 6; Sp. p. 1350; Gaz. vol. 175; p. 208.

Moore, Charles C., Lexington, Ky. Producing starch and glucose. No. 1,016,761; Feb. 6; Sp. p. 1181; Gaz. vol. 175; p. 182.

Moore, Charles C., Washington, D. C. Treating cassava and products thereof. No. 1,016,762; Feb. 6; Sp. p. 1184; Gaz. vol. 175; p. 182.

Moore, Gaius C., assignor to John C. Moore Corporation, Rochester, N. Y. Loose-leaf binder. No. 1,018,770; Feb. 27; Sp. p. 5653; Gaz. vol. 175; p. 977.

Moore, George R., Chicago, Ill. Apparatus for sinking wells. No. 1,018,725; Feb. 27; Sp. p. 5549; Gaz. vol. 175; p. 960.

Moore, James R. A. (See Seaver and Moore.)

Moore, John C., Bernice, La. Seeder and planter. No. 1,018,580; Feb. 27; Sp. p. 5260; Gaz. vol. 175; p. 913.

Morehead, Hugh F., New Britain, Conn. Board-clamp. No. 1,016,070; Feb. 20; Sp. p. 4100; Gaz. vol. 175; p. 706.

Morehouse, Leonard M., Newark, N. J. Loose-leaf binder. No. 1,018,125; Feb. 20; Sp. p. 4214; Gaz. vol. 175; p. 725.

Morén, Hugo. (See Sohlman, Nordenfelt, and Morén.)

Morgan, Mathew B., assignor to Chalmers Motor Company, Detroit, Mich. Holder. No. 1,016,353; Feb. 6; Sp. p. 262; Gaz. vol. 175; p. 41.

Morgan, William H. (See Taylor, Clarance L., assignor.)

Morres, Joseph V., Brookville, Pa. Rail-joint. No. 1,017,966; Feb. 20; Sp. p. 3907; Gaz. vol. 175; p. 676.

Morris, Edward L., Boston, Mass. Token, charm, or pocket-piece. No. 1,016,706; Feb. 6; Sp. p. 1072; Gaz. vol. 175; p. 166.

Morris, Francis S., Moon township, Beaver county, Pa. Tool-support. No. 1,018,258; Feb. 20; Sp. p. 4488; Gaz. vol. 175; p. 770.

Morris, William A. (See Shank, Leroy S., assignor.)

Morris, William H., Carroll, Nebr. Butt-removing attachment for corn-harvesters. No. 1,017,967; Feb. 20; Sp. p. 3908; Gaz. vol. 175; p. 676.

Morrison, John A. (See Fisher and Morrison.)

Morse, Alfred E., South Easton, Mass. Clutch for automobiles and the like. No. 1,016,427; Feb. 6; Sp. p. 416; Gaz. vol. 175; p. 69.

Mortenson, Sören H., Milwaukee, Wis., assignor to Allis-Chalmers Company. Brush-holder. No. 1,017,909; Feb. 13; Sp. p. 2295; Gaz. vol. 175; p. 407.

Mortenson, Samuel E., Chicago, Ill., assignor to Taylor Brothers Company, Battle Creek, Mich. Confectionery-box. No. 1,018,623; Feb. 27; Sp. p. 5349; Gaz. vol. 175; p. 927.

Morton, Arthur, Warwick, assignor to Crompton Company, Providence, R. I. Pile-cutting machine. No. 1,016,512; Feb. 6; Sp. p. 632; Gaz. vol. 175; p. 97.

Moss, Charles M., and S. Q. Hayes, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company. System of electric-current distribution. No. 1,017,060; Feb. 18; Sp. p. 1945; Gaz. vol. 175; p. 320.

Motorkultur A. G. (See Meyenburg, Konrad V. von, assignor.)

Moulton, Cleveland F., St. Louis, Mo. Envelop. No. 1,016,950; Feb. 13; Sp. p. 1600; Gaz. vol. 175; p. 282.

Mowry, Charles, Kimball, Ohio. Potato-harvester. No. 1,016,071; Feb. 20; Sp. p. 4101; Gaz. vol. 175; p. 706.

Moyer, Harvey A. (See Kavle, Oscar C., assignor.)

Muehlstein, Carl, and C. A. Albrecht, Berlin, Germany, assignors to Mergenthaler Linotype Company, New York, N. Y. Means for leveling multiple-face matrices in line-casting machines. No. 1,017,444; Feb. 18; Sp. p. 2694; Gaz. vol. 175; p. 454.

Mueller, Philip, and A. C. Schuermann, assignors to H. Mueller Manufacturing Company, Decatur, Ill. Apparatus for attaching coupling-nuts to pipe-fittings. No. 1,018,207; Feb. 20; Sp. p. 4386; Gaz. vol. 175; p. 753.

Mueller, Philip, and A. C. Schuermann, assignors to The H. Mueller Manufacturing Company, Decatur, Ill. Meter support or shelf. No. 1,018,676; Feb. 27; Sp. p. 5444; Gaz. vol. 175; p. 944.

Mulder, Alje, Grand Rapids, Mich. Milk-bottle. No. 1,017,161; Feb. 13; Sp. p. 2072; Gaz. vol. 175; p. 356.

Mulford, Ora J. (See King, Charles E., assignor.)

Mulholland, Vergil, Edgewood, assignor to Hayl & Patterson, Inc., Pittsburgh, Pa. Apparatus for handling glassware. No. 1,016,428; Feb. 6; Sp. p. 420; Gaz. vol. 175; p. 67.

Müller, Victor, Berlin, Germany. Apparatus for cutting threads on tubes and for cutting off tubes. No. 1,017,898; Feb. 20; Sp. p. 3717; Gaz. vol. 175; p. 647.

Multiplex Shuttle Embroidering Machine Company. (See Kraut, John, assignor.)

Mulvehill, James, Dubuque, Iowa. Device for operating corn-planter markers. No. 1,018,581; Feb. 27; Sp. p. 5261; Gaz. vol. 175; p. 913.

Mulvey, William J., Youngstown, Ohio. Press. No. 1,018,676; Feb. 27; Sp. p. 5446; Gaz. vol. 175; p. 945.

Mulvihill, Daniel C., assignor to American Car & Foundry Company, Chicago, Ill. Ventilator for refrigerator-cars. No. 1,017,445; Feb. 13; Sp. p. 2697; Gaz. vol. 175; p. 453.

Mumford, Edgar H., Philadelphia, Pa. Jolt-ramming apparatus. No. 1,017,635; Feb. 20; Sp. p. 3167; Gaz. vol. 175; p. 570.

Mumford, Joseph F., Philadelphia, Pa., assignor to Automatic Brush Machinery Company, Wilmington, Del. Machine for manufacturing brushes. No. 1,016,951; Feb. 13; Sp. p. 1601; Gaz. vol. 175; p. 282.

Munday, Daniel G., McAdoo, Pa. Shade and curtain hanger. No. 1,016,420; Feb. 6; Sp. p. 423; Gaz. vol. 175; p. 67.

Munich, Florian E., Philadelphia, Pa. Stocking. No. 1,016,354; Feb. 6; Sp. p. 263; Gaz. vol. 175; p. 41.

Munk, Heinrich, Berlin, Germany. Vehicle-wheel with elastic spokes. No. 1,017,908; Feb. 20; Sp. p. 3911; Gaz. vol. 175; p. 676.

Munn, David J., Dublin, Ga. Adjustable scaffold. No. 1,017,686; Feb. 20; Sp. p. 3168; Gaz. vol. 175; p. 570.

Murnin, Leslie G., New York, N. Y. Apparatus for vending individual drinks. No. 1,017,734; Feb. 20; Sp. p. 3448; Gaz. vol. 175; p. 606.

Murphey, Frank P., Decatur, Ill. Corn-planter. No. 1,018,980; Feb. 27; Sp. p. 5607; Gaz. vol. 175; p. 1040.

Murphy, Frank H., Lincoln, Ill. Trolley-harp. No. 1,016,430; Feb. 6; Sp. p. 426; Gaz. vol. 175; p. 67.

Murphy, John F., Bridgeport, Conn. Combined hot and cold water valve. No. 1,017,789; Feb. 20; Sp. p. 3450; Gaz. vol. 175; p. 607.

Murphy, Patrick J., *et al.* (See Mill, John B., assignor.)

Murray, Charles R., Chicago, Ill. Iron furniture. No. 1,016,355; Feb. 6; Sp. p. 264; Gaz. vol. 175; p. 41.

Murray, Stephen D., Dallas, Tex. Cotton-feeder. No. 1,017,446; Feb. 13; Sp. p. 2699; Gaz. vol. 175; p. 455.

Murray, Thomas E., New York, N. Y. Spring contact-plates. No. 1,018,334; Feb. 20; Sp. p. 4629; Gaz. vol. 175; p. 796.

Murray, Thomas E., and P. Torchio, New York, N. Y. Resistance-coil. No. 1,017,248; Feb. 18; Sp. p. 2473; Gaz. vol. 175; p. 430.

Murray, William T., Baldwin, Kans. Spring-wheel. No. 1,018,259; Feb. 20; Sp. p. 4489; Gaz. vol. 175; p. 770.

Mustin, James G. (See Broden and Mustin.)

Muth, John, Britton, S. D. Hen's nest. No. 1,017,790; Feb. 20; Sp. p. 3462; Gaz. vol. 175; p. 607.

Myers, Charles E. (See Savignac and Myers.)

Myers, Charles H., Franklin, Pa. Antiskidding attachment for wheels. No. 1,018,346; Feb. 6; Sp. p. 1363; Gaz. vol. 175; p. 209.

Myers, Isaac M., and O. Erwin, Billington, Mo. Rail-joint regulator. No. 1,018,436; Feb. 27; Sp. p. 4875; Gaz. vol. 175; p. 863.

Myers, Reuben F. (See Pruden, Henry E., assignor.)

Myrholm, Peder, assignor of one-half to J. Martinson, Volga, S. D. Barrel-truck. No. 1,018,280; Feb. 20; Sp. p. 4491; Gaz. vol. 175; p. 771.

Mytton, Richard G. V., deceased; D. Barber, executor, Los Angeles, Cal. Flying-machine. No. 1,017,969; Feb. 20; Sp. p. 3911; Gaz. vol. 175; p. 677.

N. O. Nelson Manufacturing Company. (See Lawnin, Louis D., assignor.)

Nageborn, William E., Detroit, Mich. Carburetor. No. 1,018,126; Feb. 20; Sp. p. 4216; Gaz. vol. 175; p. 725.

Nagel, Simeon J., Glen Ullin, N. D. Oil-can attachment. No. 1,017,809; Feb. 20; Sp. p. 3719; Gaz. vol. 175; p. 647.

Nahemow, Louis, New York, N. Y. Safety-razor. No. 1,018,437; Feb. 27; Sp. p. 4877; Gaz. vol. 175; p. 863.

Nalepka, Walenty, assignor of one-half to L. Kulawik, South Omaha, Nebr. Pit-car brake. No. 1,018,261; Feb. 20; Sp. p. 4486; Gaz. vol. 175; p. 772.

Nash, Durant D., Concord, N. C. Fireplace. No. 1,018,677; Feb. 27; Sp. p. 5443; Gaz. vol. 175; p. 945.

Nash, Fredrick W., Minneapolis, Minn. Hat. No. 1,016,892; Feb. 6; Sp. p. 1447; Gaz. vol. 175; p. 225.

Nash, John. (See Wemple and Nash.)

National Cable & Mfg. Co. (See Mitchell, Melvin G., assignor.)

National Calculator Company. (See Smith and Kleeberg, assignors.)

National Carbon Company. (See Smith and Marshall, assignors.)

National Cash Register Company, The. (See Carney, Thomas, assignor.)

National Cash Register Company, The. (See Carroll, Thomas, assignor.)

National Electric Signaling Company. (See Hogan, John L., Jr., assignor.)

National Electric Specialty Company, The. (See Chapman, Frank S., assignor.)

National Electric Specialty Company, The. (See Chapman and Greene, assignors.)

National Fire Proof Sash and Door Company. (See Swartz, Max, assignor.)

National Iron Company. (See Swenson, Eric, assignor.)

National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)

National Manufacturing Company. (See Bittorf, Louis A., assignor.)

National Recorder Company. (See Kay, William W., assignor.) (Reissue.)

Nature's Rival Company. (See Mayer and Yaffe, assignors.)

Naumann, Alfred, New York, N. Y. Touring-skate. No. 1,017,162; Feb. 13; Sp. p. 2073; Gaz. vol. 175; p. 356.

Nay, Frederick L., Vacaville, Cal. Automatic change-making machine. No. 1,017,447; Feb. 13; Sp. p. 2702; Gaz. vol. 175; p. 456.

Naylor, Leslie W. (See McKlveen and Naylor.)

Neal, Henry A., Richmond, England. Carburetor for internal-combustion engines. No. 1,018,262; Feb. 20; Sp. p. 4495; Gaz. vol. 175; p. 772.

Neeley, John T., Chesterton, Ind. Post-mold. No. 1,018,072; Feb. 20; Sp. p. 4198; Gaz. vol. 175; p. 706.

Neeper, Alexander M. (See Forsyth, William D., assignor.)

Neff, Douglas M., East Cleveland, Ohio. Folding chair. No. 1,017,781; Feb. 20; Sp. p. 3453; Gaz. vol. 175; p. 607.

Nell, James A., assignor of one-half to J. E. Gale and one-eighth to J. A. Donaldson, Washington, D. C. Horseshoe. No. 1,017,228; Feb. 13; Sp. p. 2233; Gaz. vol. 175; p. 380.

Nell, James M., assignor to A. M. Hay, Toronto, Ontario, Canada. Precipitation of precious metals from cyanid solutions. No. 1,018,488; Feb. 27; Sp. p. 4879; Gaz. vol. 175; p. 864.

Nelson, Francis M., Westville, Okla. Wave-motor. No. 1,018,678; Feb. 27; Sp. p. 5450; Gaz. vol. 175; p. 945.

Nelson, Frank E., Jamestown, N. Y. Lawn-trimmer. No. 1,018,073; Feb. 20; Sp. p. 4106; Gaz. vol. 175; p. 707.

Nelson, Fred O., Estherville, Iowa. Target-clamp. No. 1,017,229; Feb. 13; Sp. p. 2234; Gaz. vol. 175; p. 380.

Nelson, George E., Bedford, Iowa. Hood for pneumatic stackers. No. 1,016,431; Feb. 6; Sp. p. 423; Gaz. vol. 175; p. 68.

Nelson, Gustav, New York, N. Y. Terminal plate for telephone desk-stands. No. 1,016,847; Feb. 6; Sp. p. 1355; Gaz. vol. 175; p. 209.

Nelson, Harvey E., Petaluma, Cal. Automatic feeding device for linotype-machines. No. 1,016,356; Feb. 6; Sp. p. 265; Gaz. vol. 175; p. 41.

Nelson, N. C., *et al.* (See Gordon, William F. E., assignor.)

Nelson, Thomas A., Chicago, Ill. Pressure-gage. No. 1,018,582; Feb. 27; Sp. p. 5263; Gaz. vol. 175; p. 914.

Nelson, William H. S., Capon Springs, W. Va. Finger-support for stringed instruments. No. 1,017,448; Feb. 13; Sp. p. 2712; Gaz. vol. 175; p. 456.

Nesbit, David M. (See Taylor, Atkinson, and Nesbit.)

Neth, William C., Connellsville, Pa. Metallic tie and rail-fastener. No. 1,017,449; Feb. 13; Sp. p. 2715; Gaz. vol. 175; p. 456.

Neuburger, Hugo, St. Gallen, Switzerland. Supporting attachment for field-glasses. No. 1,018,771; Feb. 27; Sp. p. 5656; Gaz. vol. 175; p. 977.

Neumann, Herman, and C. R. Annett, New York, N. Y. Machine for cutting butter. No. 1,018,516; Feb. 27; Sp. p. 5105; Gaz. vol. 175; p. 890.

Neumann, Richard. (See Perges and Neumann.)

Nevergold, George, Jeannette, assignor to Window Glass Machine Company, Pittsburgh, Pa. Blowpipe-carrier. No. 1,017,450; Feb. 18; Sp. p. 2716; Gaz. vol. 175; p. 457.

New Haven Electrical Mfg. Co., The. (See Barber, Harry C., assignor.)

New York Air Brake Company. (See Minnier, Blythe J., assignor.)

New York Attachable Player Action Co. (See Scott, Ray W., assignor.)

New York Safety Chest Company, The. (See Ritchel, Charles F., assignor.)

Newcomb, Michael P., Sandpoint, Idaho. Can-opener. No. 1,016,513; Feb. 6; Sp. p. 647; Gaz. vol. 175; p. 97.

Newland, David J. (See Dearborn, Charles A., assignor.)

Newman, Arthur W., Philadelphia, Pa. Blowpipe-carrier. No. 1,017,310; Feb. 13; Sp. p. 2397; Gaz. vol. 175; p. 408.

Newman, Hugo, New York, N. Y. Stereoscopic apparatus. No. 1,018,439; Feb. 27; Sp. p. 4880; Gaz. vol. 175; p. 864.

Nickum, Walter D., and M. Claussen, Los Angeles, Cal. Pneumatic clutch-controller. No. 1,018,772; Feb. 27; Sp. p. 5657; Gaz. vol. 175; p. 977.

Nicol, John L., Sydney, New South Wales, Australia. Spring-frame for pince-nez. No. 1,017,579; Feb. 13; Sp. p. 2249; Gaz. vol. 175; p. 408.

Nielsen, Frederik, Boston, Mass. Shock-absorber. No. 1,016,514; Feb. 6; Sp. p. 649; Gaz. vol. 175; p. 97.

Nielsen, Jens, Copenhagen, Denmark. Milking-machine. No. 1,017,580; Feb. 13; Sp. p. 2951; Gaz. vol. 175; p. 498.

Nightingale, John, and J. Sackett, Charlton, England. Screw-stopper for bottles and other receptacles. No. 1,016,286; Feb. 6; Sp. p. 113; Gaz. vol. 175; p. 18.

Nightingall, Victor C. J., Melbourne, Victoria, Australia. Radio-active composition of matter. No. 1,017,581; Feb. 13; Sp. p. 2952; Gaz. vol. 175; p. 499.

Niles-Bement-Pond Company. (See Greenleaf and Teal, assignors.)

Nill, John B., Warren, Ohio, assignor of one-sixth to P. J. Murphy and one-sixth to W. S. German, McKeesport, Pa. Stool. No. 1,016,763; Feb. 6; Sp. p. 1188; Gaz. vol. 175; p. 182.

Nishida, Tokutaro, Seattle, Wash. Can-labeling machine. No. 1,018,398; Feb. 20; Sp. p. 4781; Gaz. vol. 175; p. 818.

Nitrogen Company, The. (See Acker, Charles E., assignor.)

Noall, Richard. (See Webster and Noall.)

Noble, Donald, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,017,164; Feb. 13; Sp. p. 2075; Gaz. vol. 175; p. 357.

Noble, Glenn S., Chicago, Ill. Mixer. No. 1,018,629; Feb. 27; Sp. p. 5350; Gaz. vol. 175; p. 928.

Noble, Walter T., *et al.* (See Flynt, Edward E., assignor.)

Nolan, John E., New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Machine for packing matches. No. 1,016,432; Feb. 6; Sp. p. 423; Gaz. vol. 175; p. 68.

Nolte, Willis C., assignor to Spring Gate Hinge Company. Dacey, N. D. Spring-hinge. No. 1,016,515; Feb. 6; Sp. p. 653; Gaz. vol. 175; p. 98.

Nordenfelt, Henrik. (See Sohlman, Nordenfelt, and Morén.)

Nordin, Robert, Brookside, Minn. Convertible chair and couch. No. 1,018,074; Feb. 20; Sp. p. 4107; Gaz. vol. 175; p. 707.

Norris, William P., Sistersville, W. Va. Automatic cut-off for tanks. No. 1,016,516; Feb. 6; Sp. p. 654; Gaz. vol. 175; p. 98.

North, Hannah M., Oscoda, Mich. Attachment for ironing-boards. No. 1,016,548; Feb. 6; Sp. p. 1257; Gaz. vol. 175; p. 209.

Northeast Electric Company. (See Halbleib, Edward A., assignor.)

Northern Engineering Works. (See True, George A., assignor.)

Northern Water Softener Company. (See Bartlett, Kent W., assignor.)

Northum, Elijah M., Stephens, Ark. Registering device for telephone systems. No. 1,018,981; Feb. 27; Sp. p. 6103; Gaz. vol. 175; p. 1049.

Norton, Edwin, Paget, Bermuda, and B. H. Larkin, Chicago, Ill., assignors to Continental Can Company, Baltimore, Md. Can-nozzle. No. 1,017,451; Feb. 18; Sp. p. 2717; Gaz. vol. 175; p. 437.

Norton, Lowell P., Arden, Nev. Pump-operating mechanism. No. 1,018,583; Feb. 27; Sp. p. 5264; Gaz. vol. 175; p. 914.

Nothaft, William. (See Harrison, George R., assignor.)

Novitski, John J., Oshkosh, Wis. Split pulley. No. 1,018,263; Feb. 20; Sp. p. 4497; Gaz. vol. 175; p. 772.

Noyes, Hazlehurst R., Savannah, Ga. Rotary gas-engine. No. 1,016,764; Feb. 6; Sp. p. 1189; Gaz. vol. 175; p. 183.

Nuernberger, Philip G., and G. Rettig, Jr., assignors to Universal Type Making Machine Company, Chicago, Ill. Matrix-holder. No. 1,016,433; Feb. 6; Sp. p. 437; Gaz. vol. 175; p. 69.

Nyström, Carl W., Karlstad, Sweden. Apparatus for automatically recording music. No. 1,018,982; Feb. 27; Sp. p. 6105; Gaz. vol. 175; p. 1049.

O. K. Novelty Company. (See Hardy, Lewis W., assignor.)

O'Brien, Thomas, Philadelphia, Pa. Insulated joint for railway-rails. No. 1,017,311; Feb. 18; Sp. p. 2298; Gaz. vol. 175; p. 408.

O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Friction draft-gear. No. 1,017,230; Feb. 13; Sp. p. 2235; Gaz. vol. 175; p. 380.

O'Hanlon, Christopher C., Logan, Utah. Combination-tool. No. 1,016,765; Feb. 6; Sp. p. 1192; Gaz. vol. 175; p. 183.

O'Leary, Frank J., assignor to Peaberthy Injector Company, Detroit, Mich. Ejector. No. 1,017,792; Feb. 20; Sp. p. 3455; Gaz. vol. 175; p. 607.

O'Leary, John J., Healdsburg, Cal. Gas-engine starter. No. 1,017,453; Feb. 13; Sp. p. 2719; Gaz. vol. 175; p. 437.

O'Meara, Matthew M., and T. W. Leahy, Superior, Wis. Combined box-lid and label holder. No. 1,016,434; Feb. 6; Sp. p. 428; Gaz. vol. 175; p. 69.

O'Neill, Frank, Jr., assignor of one-sixth to F. O'Neill, Sr., and three-sixths to G. Alexander, Paris, Ky. Hemp-brake. No. 1,017,582; Feb. 13; Sp. p. 2963; Gaz. vol. 175; p. 490.

O'Neill, Frank, Sr., *et al.* (See O'Neill, Frank, Jr., assignor.)

Oak, Peter, Laurel, Nebr. Grain-door for freight-cars. No. 1,018,773; Feb. 27; Sp. p. 5660; Gaz. vol. 175; p. 978.

Octagon Die and Tool Company, The. (See Cochran, Clarence S., assignor.)

Odell, V. H., *et al.* (See Barrickman and Holt, assignors.)

Oehlke, Frederick H., assignor to Hoffman Heater Company, Lorain, Ohio. Water-heater. No. 1,017,012; Feb. 13; Sp. p. 1735; Gaz. vol. 175; p. 303.

Ogle, Harley A., Chicago, Ill., assignor of one-third to E. O. Rowe and one-third to J. S. Losee, Hebron, Ill. Drilling-machine. No. 1,017,990; Feb. 20; Sp. p. 3917; Gaz. vol. 175; p. 677.

Oglesby, Harry, Chester, Pa. Window-shade adjuster. No. 1,017,452; Feb. 13; Sp. p. 2718; Gaz. vol. 175; p. 457.

Ohly, Charles H., Summit, N. J. Necktie-holder. No. 1,016,357; Feb. 6; Sp. p. 267; Gaz. vol. 175; p. 42.

Ohmer, John F., Dayton, Ohio. Pay-as-you-enter car. No. 1,019,011; Feb. 27; Sp. p. 6169; Gaz. vol. 175; p. 1059.

Ohmstede, August, assignor of one-half to B. W. Bell, Beaumont, Tex. Plunger. No. 1,018,517; Feb. 27; Sp. p. 5108; Gaz. vol. 175; p. 890.

Oldham, Frederick C., Brooklyn, N. Y. Insertible saw-tooth. No. 1,017,013; Feb. 13; Sp. p. 1738; Gaz. vol. 175; p. 303.

Olesen, Frank L. (See Battershall and Olesen.)

Oliver Chilled Plow Works. (See Paul, William L., assignor.)

Oliver, Frank S., Popham Beach, Me. Lubricator. No. 1,016,642; Feb. 6; Sp. p. 947; Gaz. vol. 175; p. 142.

Oliver Typewriter Company, The. (See Harting and Flood, assignors.)

Olson, Andrew N., Idaho Springs, assignor of one-tenth to C. C. King, Denver, Colo. Sight-illuminating attachment for guns. No. 1,017,991; Feb. 20; Sp. p. 3920; Gaz. vol. 175; p. 676.

Olson, Bennet, Glencoe, assignor of one-half to W. C. Burtman, Wascca, Minn. Pump mechanism. No. 1,017,992; Feb. 20; Sp. p. 3923; Gaz. vol. 175; p. 676.

Olson, John, Chicago, Ill. Lifting-jack. No. 1,018,127; Feb. 20; Sp. p. 4218; Gaz. vol. 175; p. 725.

Omwake, Ira F., Fort Smith, Ark. Display-case. No. 1,018,979; Feb. 27; Sp. p. 6453; Gaz. vol. 175; p. 948.

Opalla, Arthur, assignor, by mesne assignments, to R. R. Wilson, Chicago, Ill. Loose-leaf binder. No. 1,017,165; Feb. 13; Sp. p. 2075; Gaz. vol. 175; p. 357.

Oppenheimer, Fred, and W. G. Spiegel; said Spiegel assignor to said Oppenheimer. New York, N. Y. Ticket holding and serving device. No. 1,016,893; Feb. 6; Sp. p. 1449; Gaz. vol. 175; p. 225.

Orenstein, Charles, Sedalia, Mo. Rail-clamp. No. 1,016,949; Feb. 6; Sp. p. 1357; Gaz. vol. 175; p. 210.

Orr, Edward H. (See McPherson and Orr.)

Osborn, Francis C., Detroit, Mich., assignor to Single Service Package Corporation of America, New York, N. Y. Glue-applying machine for use in making spirally-wound tubes. No. 1,018,335; Feb. 20; Sp. p. 4630; Gaz. vol. 175; p. 795.

Oshkosh Excelsior Mfg. Co. (See Goodrick, Edward W., assignor.)

Oswald, Paul H., Los Angeles, Cal., assignor to Western Electric Company, Chicago, Ill. Coin-collector. No. 1,017,454; Feb. 13; Sp. p. 2723; Gaz. vol. 175; p. 438.

Otey, Robert J., Birmingham, Ala. Cattle-guard. No. 1,017,014; Feb. 13; Sp. p. 1740; Gaz. vol. 175; p. 304.

Otis Elevator Company. (See Ihlder, John D., assignor.)

Otis Elevator Company. (See Larson, David, assignor.)

Otis Elevator Company. (See Lindquist and Larson, assignors.)

Otis Elevator Company. (See Smith, Rudolph C., assignor.)

Otis Elevator Company. (See Sundh, August, assignor.)

Ott, Morgenthaler Company. (See Lawrenz, Emil, assignor.)

Ottaway, William, assignor to The Aurora Automatic Machinery Company, Aurora, Ill. Explosive-engine. No. 1,017,993; Feb. 20; Sp. p. 3924; Gaz. vol. 175; p. 678.

Otte, Herman, Terre Haute, Ind. Hold-on safety-tap. No. 1,018,336; Feb. 20; Sp. p. 4631; Gaz. vol. 175; p. 796.

Otto, Albert A., assignor of one-half to E. C. Miller, Pittsburgh, Pa. Drip-pan. No. 1,017,455; Feb. 13; Sp. p. 2724; Gaz. vol. 175; p. 458.

Overbagh and Ayres Manufacturing Company. (See Overbagh and Breat, assignors.)

Overbagh, Franklin. (See Overbagh and Breat.)

Overbagh, William F. and F., and I. H. Breat, assignors to Overbagh and Ayres Manufacturing Company, Chicago, Ill. Electric-light fixture. No. 1,017,267; Feb. 13; Sp. p. 2307; Gaz. vol. 175; p. 393.

Overholt, Edwin H., assignor to Modern Compressed Air Cleaning Company, Washington, D. C. Renovating and disinfecting device. No. 1,018,435; Feb. 6; Sp. p. 439; Gaz. vol. 175; p. 69.

Owen, Alfred D., Fresno, Cal. Gage. No. 1,017,994; Feb. 20; Sp. p. 3926; Gaz. vol. 175; p. 679.

Owen, Alfred D., Fresno, Cal. Compass. No. 1,017,995; Feb. 20; Sp. p. 3927; Gaz. vol. 175; p. 679.

Owles, George W., *et al.* (See Lyons, John J., assignor.)

P. C. Murphy Trunk Company. (See Schmelzer, Paul H., assignor.)

Pack, Marie A., and R. A. Moon, Weiser, Idaho. Lock bolt and nut. No. 1,017,583; Feb. 13; Sp. p. 2958; Gaz. vol. 175; p. 490.

Packham, Frank R., assignor to The American Seeding Machine Company, Springfield, Ohio. Corn-planter. No. 1,016,766; Feb. 6; Sp. p. 1196; Gaz. vol. 175; p. 183.

Padbury, John J., assignor to Livingston Manufacturing Company, Rockland, Me. Pneumatic tool. No. 1,018,983; Feb. 27; Sp. p. 6107; Gaz. vol. 175; p. 1050.

Paddington, John P., New York, N. Y. Safety-razor. No. 1,017,166; Feb. 13; Sp. p. 2060; Gaz. vol. 175; p. 358.

Paden, William D., *et al.* (See Parker, William A., assignor.)

Page, George K. (See Cooper, Taneyhill, and Page.)

Pagliuchi, Frank D., Mantua, Cuba. Hydrostatic pump. No. 1,016,767; Feb. 6; Sp. p. 1195; Gaz. vol. 175; p. 184.

Pagliuchi, Frank D., New York, N. Y. Hydrostatic pump. No. 1,016,768; Feb. 6; Sp. p. 1202; Gaz. vol. 175; p. 184.

Palmer, Charles G. (See Greene and Palmer.)

Palmer, Charles H., Akron, and M. Paridon, Barberton, Ohio, assignors to The Diamond Match Company, Chicago, Ill. Machine for packing matches. No. 1,016,436; Feb. 6; Sp. p. 445; Gaz. vol. 175; p. 70.

Palmer, David L., Worthington, Pa. Hand-car. No. 1,018,264; Feb. 20; Sp. p. 4466; Gaz. vol. 175; p. 773.

Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Couch-hammock. No. 1,016,694; Feb. 6; Sp. p. 1453; Gaz. vol. 175; p. 225.

Panhorst, Charles G. (See Panhorst, Paul and C. G.)

Panhorst, Paul and C. G., New York, N. Y. Bottle-closure. No. 1,018,928; Feb. 27; Sp. p. 5965; Gaz. vol. 175; p. 1027.

Parcels, Austin J., Wetmore, Kans. Combined loader and spreader. No. 1,018,964; Feb. 27; Sp. p. 6109; Gaz. vol. 175; p. 1050.

Paridon, Michael. (See Palmer and Paridon.)

Park, Henry. (See Vigor, Henry, assignor.)

Parker, Louis C., Vale Summit, Md., assignor of one-half to W. A. Parker, Pittsburgh, Pa. Railway-tie. No. 1,016,517; Feb. 6; Sp. p. 653; Gaz. vol. 175; p. 98.

Parker, William A. (See Parker, Louis C., assignor.)

Parker, William A., Atlanta, Ga. Handle-mount. No. 1,016,576; Feb. 6; Sp. p. 801; Gaz. vol. 175; p. 119.

Parker, William A., assignor of one-half to J. B. Hardin and one-fourth to W. D. Foster, Atlanta, Ga. Flow-stock. No. 1,016,643; Feb. 6; Sp. p. 948; Gaz. vol. 175; p. 142.

Parkhurst Company, The. (See Parkhurst, Layton M., assignor.)

Parkhurst, Frederic H., Bangor, Me. Coat-hanger for wardrobe-trunks. No. 1,016,707; Feb. 6; Sp. p. 1074; Gaz. vol. 175; p. 185.

Parkhurst, Layton M., assignor to The Parkhurst Company, Indianapolis, Ind. Vending-machine. No. 1,017,231; Feb. 18; Sp. p. 2267; Gaz. vol. 175; p. 361.

Parlin & Orendorff Company. (See Graham, William S., assignor.)

Parrish, Pearl V., Mowata, Okla. Clothes-wringer clamp. No. 1,017,564; Feb. 13; Sp. p. 2960; Gaz. vol. 175; p. 490.

Parsons, M. Vernon. (See Bray, John W., assignor.)

Parsons, Winslow S., Chicago, Ill. Smoothing and polishing metal articles and parts. No. 1,017,263; Feb. 13; Sp. p. 2269; Gaz. vol. 175; p. 393.

Party, Joseph, Paris, France. Lasting-machine. No. 1,016,769; Feb. 6; Sp. p. 1206; Gaz. vol. 175; p. 185.

Pascal, Israel, assignor of six-tenths to M. Albert, Montreal, Quebec, Canada. Vehicle-wheel. No. 1,018,774; Feb. 27; Sp. p. 5661; Gaz. vol. 175; p. 978.

Pate, Cordy N. (See Carter, Henry W., assignor.)

Pattin, Johann F. M., assignor to Allis-Chalmers Company, Milwaukee, Wis. Bending-machine. No. 1,016,577; Feb. 6; Sp. p. 803; Gaz. vol. 175; p. 119.

Patnaude, William H., Merrimac, assignor to A. L. Bogue, Dorchester, Mass. Liquid-cooler. No. 1,018,924; Feb. 27; Sp. p. 5966; Gaz. vol. 175; p. 1022.

Patos, Robert, Cynwyd, Pa. Calk attachment for horse-shoes. No. 1,016,706; Feb. 6; Sp. p. 1070; Gaz. vol. 175; p. 185.

Patric, Charles H., Springfield, Ohio. Line-marker. No. 1,017,061; Feb. 13; Sp. p. 1947; Gaz. vol. 175; p. 320.

Pattin, Richard, Brookline, Mass. Fire-extinguishing nozzle. No. 1,017,585; Feb. 13; Sp. p. 2961; Gaz. vol. 175; p. 500.

Patton, Alexander M., assignor to Chambers Motors Limited, Belfast, Ireland. High-tension magneto ignition apparatus for internal-combustion engines. No. 1,018,936; Feb. 6; Sp. p. 1456; Gaz. vol. 175; p. 226.

Patton, John J., New York, N. Y. Tire. No. 1,016,709; Feb. 6; Sp. p. 1077; Gaz. vol. 175; p. 186.

Paul, Henry P., Camden, N. J., assignor to Farr and Bailey Manufacturing Company. Disintegrator. No. 1,018,440; Feb. 27; Sp. p. 4564; Gaz. vol. 175; p. 864.

Paul, John T. H., assignor to E. Goldman & Co., Inc., Chicago, Ill. Bottle-carrier. No. 1,017,996; Feb. 20; Sp. p. 3927; Gaz. vol. 175; p. 679.

Paul, William L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Sulky-plow. No. 1,018,775; Feb. 27; Sp. p. 5663; Gaz. vol. 175; p. 979.

Paulsen, Fred, Geneva, Ill. Bottle-locking device. No. 1,017,997; Feb. 20; Sp. p. 3929; Gaz. vol. 175; p. 679.

Pavlik, William, Bayport, New York. Tire. No. 1,017,456; Feb. 13; Sp. p. 2725; Gaz. vol. 175; p. 459.

Pay-as-You-Enter-Car Corporation, The. (See McDonald, Duncan A. L., assignor.)

Payment, Francois X., assignor of one-half to O. W. Johnson, Chicago, Ill. Window. No. 1,018,128; Feb. 20; Sp. p. 4220; Gaz. vol. 175; p. 726.

Payton, Richard, assignor to Deere & Company, Moline, Ill. Plow. No. 1,018,675; Feb. 20; Sp. p. 4109; Gaz. vol. 175; p. 707.

Payton, Richard, assignor to Deere & Company, Moline, Ill. Plow. No. 1,018,676; Feb. 20; Sp. p. 4110; Gaz. vol. 175; p. 708.

Pearson, Henry, Springfield, Mass., assignor to J. G. Brill Company, Philadelphia, Pa. Six-wheel car-truck. No. 1,017,312; Feb. 13; Sp. p. 2290; Gaz. vol. 175; p. 408.

Peck, Hartwig O. (See Reichenbach and Peck.)

Peck, Philip C. (See Ladell, Isador, assignor.)

Peet, William T., assignor to The United Cigarette Machine Company, Lt'd., Lynchburg, Va. Blower-valve. No. 1,018,847; Feb. 27; Sp. p. 5804; Gaz. vol. 175; p. 1002.

Peiniken, Franz, Dinslaken, Germany. Pug-mill. No. 1,016,644; Feb. 6; Sp. p. 949; Gaz. vol. 175; p. 143.

Pedersen, Johannes T., Woodside, assignor to Pedersen Manufacturing Co., New York, N. Y. Pump. No. 1,018,129; Feb. 20; Sp. p. 4221; Gaz. vol. 175; p. 726.

Pedersen Manufacturing Co. (See Pedersen, Johannes T., assignor.)

Peet, James A., assignor of one-half to G. Stumpp, North Manchester, Ind. Desk. No. 1,018,962; Feb. 13; Sp. p. 1607; Gaz. vol. 175; p. 303.

Pelegrin, Louis, Southbridge, Mass. Chalk-holder. No. 1,018,953; Feb. 18; Sp. p. 1606; Gaz. vol. 175; p. 303.

Peloubet Electric Heater Co. (See Madsen, Charles P., assignor.)

Penant, Joseph A. (See Hyla, Jacob A., assignor.)

Penberthy Injector Company. (See O'Leary, Frank J., assignor.)

Pentek, Jozsef, *et al.* (See Klemovics, James, assignor.)

Pepsodent Bottle Cap Company, The. (See Lindsay, William E., assignor.)

Perfection Spring Company, The. (See McIntyre, Michael M., assignor.)

Perkins, George W., Chelsea, assignor to Heaton-Peninsular Button Fastener Company, Boston, Mass. Wire-feed mechanism. No. 1,017,628; Feb. 18; Sp. p. 3044; Gaz. vol. 175; p. 513.

Perkins, James F., assignor to A. Y. Beely, Blaine, Wash. Weighing-machine. No. 1,016,860; Feb. 6; Sp. p. 1259; Gaz. vol. 175; p. 210.

Perkins, James T., assignor of one-half to W. R. Golsan, Cedartown, Ga. Brake-shoe. No. 1,017,015; Feb. 13; Sp. p. 1741; Gaz. vol. 175; p. 304.

Perkins, Nathan W., Jr., East Orange, N. J. Handle mechanism. No. 1,016,287; Feb. 6; Sp. p. 114; Gaz. vol. 175; p. 18.

Perlik, Joseph F., Pittsburgh, Pa. Level. No. 1,017,457; Feb. 13; Sp. p. 2726; Gaz. vol. 175; p. 459.

Perlman, Abraham, assignor to A. Perlman Iron Works, New York, N. Y. Fire-escape. No. 1,016,437; Feb. 6; Sp. p. 429; Gaz. vol. 175; p. 70.

Perlman, Abraham, assignor to Star Ball Bearing Door Hanger Company, New York, N. Y. Door-hanger. No. 1,016,438; Feb. 6; Sp. p. 461; Gaz. vol. 175; p. 70.

Perron, Joseph L., *et al.* (See Gagnon, Edmond, assignor.)

Persons, James O., Norfolk, Va. Apparatus for lining pipes. No. 1,016,770; Feb. 6; Sp. p. 1210; Gaz. vol. 175; p. 186.

Peschel, Otto. (See Grif and Peschel.)

Petchuck, William H., Mahanoy City, Pa. Vegetable slicer and grater. No. 1,017,586; Feb. 13; Sp. p. 2962; Gaz. vol. 175; p. 500.

Peter Smith Heater Company. (See Smith, Elmer J., assignor.)

Peters, Frank M., Chicago, Ill. Wafer-cutting machine. No. 1,016,439; Feb. 6; Sp. p. 464; Gaz. vol. 175; p. 71.

Peterson, Charles E., New York, N. Y. Wrench. No. 1,016,578; Feb. 6; Sp. p. 804; Gaz. vol. 175; p. 119.

Peterson, Malcolm, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Valve for door-checks. No. 1,018,265; Feb. 20; Sp. p. 4499; Gaz. vol. 175; p. 773.

Petry, Rudolph, New Orleans, La. Drip-coffee pot. No. 1,018,287; Feb. 20; Sp. p. 4633; Gaz. vol. 175; p. 796.

Petsche, Gustav B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Corliss valve-gear. No. 1,017,687; Feb. 20; Sp. p. 3170; Gaz. vol. 175; p. 571.

Pettersen, August, St. Cloud, Minn. Door-lock. No. 1,018,077; Feb. 20; Sp. p. 4111; Gaz. vol. 175; p. 706.

Pettersson, Erik W., assignor of one-half to G. E. Carlmander, Brooklyn, N. Y. Bedstead. No. 1,017,763; Feb. 20; Sp. p. 3456; Gaz. vol. 175; p. 608.

Pettit, Lee, Cleburne, Tex. Scraper. No. 1,018,518; Feb. 27; Sp. p. 5109; Gaz. vol. 175; p. 891.

Pfanstiehl, Carl A., Highland Park, Ill. Circuit-breaker for magneto-electric machines. No. 1,017,794; Feb. 20; Sp. p. 3457; Gaz. vol. 175; p. 608.

Pfau, Max, assignor to Emerson Typewriter Co., Woodstock, Ill. Type. No. 1,018,985; Feb. 27; Sp. p. 6113; Gaz. vol. 175; p. 1050.

Pfau, Max, assignor to The Emerson Typewriter Co., Woodstock, Ill. Type-bar mounting. No. 1,018,986; Feb. 27; Sp. p. 6115; Gaz. vol. 175; p. 1050.

Pfefferkorn, William L., A. P. Schloerb, and A. H. Hammetter, Milwaukee, Wis. Pedestal extension-table. No. 1,017,002; Feb. 18; Sp. p. 1848; Gaz. vol. 175; p. 320.

Pfnorr, Harry M. (See Howard and Pfnorr.)

Pfund, Ernst F., Leipsig-Entritzsch, Germany. Ironing-board. No. 1,016,288; Feb. 6; Sp. p. 115; Gaz. vol. 175; p. 19.

Phelps, Homer L., assignor to The Auburn Wagon Company, Martinsburg, W. Va. Dumping-wagon. No. 1,017,016; Feb. 18; Sp. p. 1742; Gaz. vol. 175; p. 304.

Philadelphia Pipe Bending Company, The. (See Schneider, Leopold C., assignor.)

Philadelphia Textile Machinery Company, The. (See Ayres, Elwood B., assignor.)

Philip Carey Manufacturing Company, The. (See Smiley, John J., assignor.)

Phillips, Charles H., Poughkeepsie, N. Y. Apparatus for deodorizing the exhaust-gases of motors. No. 1,017,900; Feb. 20; Sp. p. 3720; Gaz. vol. 175; p. 647.

Philpot, William H., and R. Vertiska, Humboldt, Nebr. Floor. No. 1,018,987; Feb. 27; Sp. p. 6117; Gaz. vol. 175; p. 1051.

Pickard, Orson L., Columbus, Ohio. Attachment for aeroplanes. No. 1,017,998; Feb. 20; Sp. p. 3930; Gaz. vol. 175; p. 680.

Pierce, James M., Des Moines, Iowa. Delivering attachment for printing-presses. No. 1,017,999; Feb. 20; Sp. p. 3933; Gaz. vol. 175; p. 680.

Pilling, Charles J., Philadelphia, Pa. Accumeter. No. 1,017,795; Feb. 20; Sp. p. 3459; Gaz. vol. 175; p. 609.

Pindstofte, Anders A., Copenhagen, Denmark. Bottling-machine. No. 1,018,988; Feb. 27; Sp. p. 6118; Gaz. vol. 175; p. 1051.

Pine Hill Crystal Spring Water Co. (See Head, Robert, assignor.)

Pines, Harry, New York, N. Y. Fire apparatus. No. 1,018,338; Feb. 20; Sp. p. 4634; Gaz. vol. 175; p. 796.

Pinkney, William T., Scarbro, W. Va. Miner's lamp. No. 1,016,645; Feb. 6; Sp. p. 950; Gaz. vol. 175; p. 143.

Piper, Sheridan S., Smalding, Idaho. Link-guard. No. 1,017,458; Feb. 13; Sp. p. 2727; Gaz. vol. 175; p. 459.

Pitt, William P., Independence, assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo. Book-cover attachment. No. 1,017,796; Feb. 20; Sp. p. 3463; Gaz. vol. 175; p. 609.

Pitt, William P., Independence, assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo. Loose-leaf binder. No. 1,017,797; Feb. 20; Sp. p. 3464; Gaz. vol. 175; p. 610.

Pittsfield Spark Coil Company. (See Boynton, George H., assignor.)

Plack, Ferdenand T., Harrisburg, Pa. Ring-gage. No. 1,016,358; Feb. 6; Sp. p. 269; Gaz. vol. 175; p. 42.

Planiawerke Aktiengesellschaft für Kohlenfabrikation. (See Redlich, Berthold, assignor.)

Plant, Thomas G., assignor to United Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,018,130; Feb. 20; Sp. p. 4224; Gaz. vol. 175; p. 726.

Plant, Thomas G., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. (Reissue.) No. 13,374; Feb. 27; Sp. p. 6177; Gaz. vol. 175; p. 1062.

Plante, Alfred H., assignor to Atlanta Metal Bed Company, Atlanta, Ga. Metal-tube-bending machine. No. 1,016,771; Feb. 6; Sp. p. 1214; Gaz. vol. 175; p. 186.

Plein, Louis, Chicago, Ill. Carbureter. No. 1,018,776; Feb. 27; Sp. p. 5664; Gaz. vol. 175; p. 979.

Pleins, Leo H., assignor to James B. Clow & Sons, Chicago, Ill. Receptor for shower-baths. No. 1,017,167; Feb. 13; Sp. p. 2062; Gaz. vol. 175; p. 356.

Plowman, Alva J., Ocean Park, Cal. Rotary pulveriser. No. 1,017,901; Feb. 20; Sp. p. 3722; Gaz. vol. 175; p. 648.

Podesva, Leopold, Charlottenburg, Germany. Electric spark-plug for combustion-engines. No. 1,017,450; Feb. 13; Sp. p. 2728; Gaz. vol. 175; p. 459.

Poe, Floyd A., *et al.* (See Hall, Frank M., assignor.)

Polakovich, Joseph A., New Brighton, Pa. Can-opener. No. 1,018,266; Feb. 20; Sp. p. 4500; Gaz. vol. 175; p. 773.

Pollard, Amos G. (See Carr, Joseph, assignor.)

Pollard, Edson T., Rutland, Vt. Stone-sawing machine. No. 1,016,440; Feb. 6; Sp. p. 466; Gaz. vol. 175; p. 71.

Pollard, James S. (See Harris and Pollard.)

Polverino, Giuseppe, New York, N. Y. Album book-stand. No. 1,017,460; Feb. 13; Sp. p. 2729; Gaz. vol. 175; p. 460.

Polygraph Duplicating Typewriter Company. (See Fanslow, Benjamin O., assignor.)

Pomeroy, Silas H., *et al.* (See Iman, Orla H., assignor.)

Popp, Richard G., assignor to The Société Générale Des Compteurs De Voitures (Taximètres), Paris, France. Taximeter. No. 1,016,518; Feb. 6; Sp. p. 658; Gaz. vol. 175; p. 99.

Porges, Philipp, Vienna, and R. Neumann, Brünn, Austria-Hungary. Apparatus for cooling paraffin or the like. No. 1,017,587; Feb. 13; Sp. p. 2963; Gaz. vol. 175; p. 500.

Porter, James R., London, England. Airship. No. 1,016,859; Feb. 6; Sp. p. 270; Gaz. vol. 175; p. 42.

Porter, Richard L., Vicksburg, Miss. Mail-crane. No. 1,017,902; Feb. 20; Sp. p. 3724; Gaz. vol. 175; p. 648.

Porter, William A. V., New York, N. Y. Combined packing and display carton. No. 1,018,726; Feb. 27; Sp. p. 5552; Gaz. vol. 175; p. 961.

Porter, William F., Hartford, Conn. Blacking-dauber. No. 1,018,339; Feb. 20; Sp. p. 4636; Gaz. vol. 175; p. 797.

Posson, Edward, Chicago, Ill. End door-framing for cars. No. 1,016,954; Feb. 13; Sp. p. 1609; Gaz. vol. 175; p. 283.

Poston, Burton C., Chillicothe, Ohio. Baling-press. No. 1,017,168; Feb. 13; Sp. p. 2063; Gaz. vol. 175; p. 356.

Pottel, Carl, Halle-on-the-Saale, Germany. Injector. No. 1,016,772; Feb. 6; Sp. p. 1216; Gaz. vol. 175; p. 187.

Potter, Frank O., Torrington, Conn. Mechanic's apron. No. 1,018,078; Feb. 20; Sp. p. 4112; Gaz. vol. 175; p. 706.

Potter, Joseph L., Indianapolis, Ind. Excavating and conveying apparatus. No. 1,018,359; Feb. 20; Sp. p. 4672; Gaz. vol. 175; p. 803.

Potter, Joseph L., Indianapolis, Ind. Aerial-cable holster and conveyer. No. 1,018,360; Feb. 20; Sp. p. 4675; Gaz. vol. 175; p. 804.

Potter, Winfield S., New York, N. Y. Manufacture of sheets and plates of manganese steel. No. 1,017,903; Feb. 20; Sp. p. 3726; Gaz. vol. 175; p. 649.

Potter, Winfield S., New York, N. Y. Producing rolled shapes of manganese steel. No. 1,017,904; Feb. 20; Sp. p. 3727; Gaz. vol. 175; p. 649.

Potter, Winfield S., New York, N. Y. Production of sheets and plates of manganese steel. No. 1,017,905; Feb. 20; Sp. p. 3730; Gaz. vol. 175; p. 649.

Potter, Winfield S., New York, N. Y. Producing wrought shapes of manganese steel. No. 1,017,906; Feb. 20; Sp. p. 3732; Gaz. vol. 175; p. 650.

Potter, Winfield S., New York, N. Y. Heat treatment of manganese steel. No. 1,017,907; Feb. 20; Sp. p. 3736; Gaz. vol. 175; p. 650.

Potter, Winfield S., New York, N. Y. Manufacture of sheets or plates of manganese steel. No. 1,017,908; Feb. 20; Sp. p. 3738; Gaz. vol. 175; p. 650.

Potter, Winfield S., New York, N. Y. Heat treatment and rolling of manganese steel. No. 1,018,000; Feb. 20; Sp. p. 3965; Gaz. vol. 175; p. 680.

Potter, Winfield S., New York, N. Y. Manufacture of sheets or plates of manganese steel. No. 1,018,002; Feb. 20; Sp. p. 3968; Gaz. vol. 175; p. 681.

Potter, Winfield S., New York, N. Y. Making wrought manganese-steel car-wheels. No. 1,018,364; Feb. 20; Sp. p. 4668; Gaz. vol. 175; p. 805.

Potter, Winfield S., New York, N. Y. Making carbon-steel car-wheels. No. 1,018,365; Feb. 20; Sp. p. 4669; Gaz. vol. 175; p. 805.

Potter, Winfield S., New York, N. Y. Production of wrought shapes of manganese steel. No. 1,018,367; Feb. 20; Sp. p. 4697; Gaz. vol. 175; p. 806.

Potter, Winfield S., New York, N. Y. Heat treatment of large manganese-steel shapes. No. 1,018,368; Feb. 20; Sp. p. 4700; Gaz. vol. 175; p. 807.

Potter, Winfield S., New York, N. Y. Manufacture of manganese-steel wire. No. 1,018,369; Feb. 20; Sp. p. 4702; Gaz. vol. 175; p. 807.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Machining manganese steel. No. 1,016,001; Feb. 20; Sp. p. 3937; Gaz. vol. 175; p. 681.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Manufacture of pins, links, and the like from manganese steel. No. 1,018,361; Feb. 20; Sp. p. 4662; Gaz. vol. 175; p. 804.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Production of manganese-steel forgings. No. 1,018,362; Feb. 20; Sp. p. 4684; Gaz. vol. 175; p. 805.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Manufacture of chains. No. 1,018,363; Feb. 20; Sp. p. 4686; Gaz. vol. 175; p. 805.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Production of machined shapes of manganese steel. No. 1,018,366; Feb. 20; Sp. p. 4696; Gaz. vol. 175; p. 806.

Potter, Winfield S., New York, N. Y., assignor to Alloy Steel Forging Company, Wilmington, Del. Manufacture of perforated plates of manganese steel. No. 1,018,370; Feb. 20; Sp. p. 4705; Gaz. vol. 175; p. 807.

Potts, Louis M., assignor, by mesne assignments, to A. McLanahan, Baltimore, Md. Method of and apparatus for transmitting signals over telegraphic circuits. No. 1,017,169; Feb. 13; Sp. p. 2066; Gaz. vol. 175; p. 359.

Potts, Louis M., assignor, by mesne assignments, to A. McLanahan, Baltimore, Md. Perforating-machine. No. 1,018,519; Feb. 27; Sp. p. 5111; Gaz. vol. 175; p. 891.

Potvin, Emile J., Cheboygan, Mich. Shifting mechanism for hatchway-covers. No. 1,018,777; Feb. 27; Sp. p. 5666; Gaz. vol. 175; p. 979.

Poulnot, Walter A., New York, N. Y. Fabric-tightener for bed-bottoms and the like. No. 1,016,579; Feb. 6; Sp. p. 805; Gaz. vol. 175; p. 120.

Pourtauborde, Ernest L., assignor to Société des Onyx du Sidi-Hamma et des Pyrénées, Paris, France. Cutting-out and molding machine. No. 1,017,461; Feb. 13; Sp. p. 2735; Gaz. vol. 175; p. 460.

Powell, Andrew, Uniontown, Pa. Machine for operating coal-punches. No. 1,017,017; Feb. 13; Sp. p. 1744; Gaz. vol. 175; p. 304.

Powell, Andrew, Uniontown, Pa. Mine-car loader. No. 1,017,018; Feb. 13; Sp. p. 1745; Gaz. vol. 175; p. 304.

Powell, William H. (See Lewis and Powell.)

Poyart, René F. A. (See Levy-Maurice and Poyart.)

Prahar, Robert L., Massapequa, N. Y. Pin-guard. No. 1,018,151; Feb. 20; Sp. p. 4227; Gaz. vol. 175; p. 727.

Pratt, Alphonso C., Newark, N. J., assignor to General Electric Company, Bearing for turbines. No. 1,017,586; Feb. 13; Sp. p. 2966; Gaz. vol. 175; p. 501.

Preble, George L., Lynn, Mass. Insole. No. 1,018,182; Feb. 20; Sp. p. 4223; Gaz. vol. 175; p. 727.

Prodock, George E., and C. E. Anderson, St. Louis, Mo. Pressure-regulating device. No. 1,016,510; Feb. 6; Sp. p. 661; Gaz. vol. 175; p. 99.

Premioshis, John M., Forbes Road, Pa. Frog for trolleys. No. 1,017,462; Feb. 13; Sp. p. 2735; Gaz. vol. 175; p. 461.

Prendergast, Alois P., and J. J. Tatum, Baltimore, Md. Draft-rigging for cars. No. 1,017,106; Feb. 13; Sp. p. 1963; Gaz. vol. 175; p. 337.

Prentice, George E., assignor to Traut and Hine Manufacturing Company, New Britain, Conn. Cast-off. No. 1,018,079; Feb. 20; Sp. p. 4113; Gaz. vol. 175; p. 709.

Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Adjustable work-support and gage for channeling-machines. (Reissue.) No. 13,375; Feb. 27; Sp. p. 6191; Gaz. vol. 175; p. 1064.

Prescott, Jerry A., Steele, N. D. Dental disk-holder. No. 1,018,340; Feb. 20; Sp. p. 4637; Gaz. vol. 175; p. 797.

Price, George T. (See Zollers and Price.)

Prime, Daniel N., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Die for cutting sheet material. No. 1,018,520; Feb. 27; Sp. p. 5116; Gaz. vol. 175; p. 891.

Prince, Adonis M., Wilmington, N. C., and L. Coscia, Memphis, Tenn. Pump-piston. No. 1,018,208; Feb. 20; Sp. p. 4367; Gaz. vol. 175; p. 753.

Prindle, Edwin J., Washington, D. C., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Last-lathe. No. 1,017,766; Feb. 20; Sp. p. 3466; Gaz. vol. 175; p. 610.

Print, Thomas J. and W. H., Johnstown, Pa. Arc-lamp. No. 1,016,773; Feb. 6; Sp. p. 1218; Gaz. vol. 175; p. 187.

Print, William H. (See Print, Thomas J. and W. H.)

Probstel, Julius C., Portland, Oreg. Harness-snap. No. 1,016,360; Feb. 6; Sp. p. 271; Gaz. vol. 175; p. 42.

Pruden, Henry B., assignor, by mesne assignments, to E. V. Myers, trustee, Dayton, Ohio. Sewing-machine. No. 1,017,463; Feb. 13; Sp. p. 2736; Gaz. vol. 175; p. 461.

Pruden, John B., Quanah, Tex. Cut-off. No. 1,018,925; Feb. 27; Sp. p. 5907; Gaz. vol. 175; p. 1023.

Pryor, Edward, Baltimore, Md. Fifth-wheel for vehicles. No. 1,016,580; Feb. 6; Sp. p. 805; Gaz. vol. 175; p. 120.

Pugsley, George, and N. Bateson, Holyoke, Mass. Steam-engine. No. 1,016,955; Feb. 13; Sp. p. 1612; Gaz. vol. 175; p. 284.

Purified Petroleum Products Company, The. (See Hamilton, Thomas S., assignor.)

Purviance, Benjamin F., assignor of one-half to B. J. Kelley, Brookpark, Minn. Nut-lock. No. 1,016,710; Feb. 6; Sp. p. 1078; Gaz. vol. 175; p. 160.

Putnam, George B., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,018,271; Feb. 20; Sp. p. 4707; Gaz. vol. 175; p. 807.

Quabbarse, Ellsworth H., Denver, Colo. Permutation-lock. No. 1,017,318; Feb. 13; Sp. p. 2401; Gaz. vol. 175; p. 400.

Quayle, Bert L., *et al.* (See Cummins, Herbert L., assignor.)

Quinn, John H., Rochester, N. Y. Treating bran and a product obtained thereby. No. 1,018,441; Feb. 27; Sp. p. 4886; Gaz. vol. 175; p. 864.

R. Hoe and Co. (See Halliwell, John J., assignor.)

R. H. Dietz Company. (See Betts, Charles L., assignor.)

Rabel, Ernest R., Washington, D. C. Play-ring. No. 1,016,830; Feb. 6; Sp. p. 663; Gaz. vol. 175; p. 100.

Baker, Joseph, assignor to Emerson Typewriter Company, Woodstock, Ill. Type-bar-supporting frame. No. 1,018,989; Feb. 27; Sp. p. 6119; Gaz. vol. 175; p. 1051.

Baldwyn, Max, Baltimore, Md. Combined chair and window-cleaner's support. No. 1,018,241; Feb. 20; Sp. p. 4688; Gaz. vol. 175; p. 797.

Ball, Carl, Stapleton, N. Y. Rotary press. No. 1,018,397; Feb. 20; Sp. p. 4501; Gaz. vol. 175; p. 773.

Ball, John, assignor to Kearns Manufacturing Company, Philadelphia, Pa. Caster. No. 1,017,464; Feb. 13; Sp. p. 2743; Gaz. vol. 175; p. 461.

Bangs, Jonathan R., *et al.* (See Hawn, William H., assignor.)

Barber, Robert C., Wyomissing, assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa. Mechanism for manufacturing electrical conduits. No. 1,017,232; Feb. 13; Sp. p. 2740; Gaz. vol. 175; p. 381.

Barber, George C., Haileybury, Ontario, Canada. Beehive-entrance guard. No. 1,017,283; Feb. 13; Sp. p. 2241; Gaz. vol. 175; p. 381.

Barbier, Victor, assignor to La Cie. Industrielle des Alcools de l'Ardèche, Paris, France. Saccharifying apparatus. No. 1,018,778; Feb. 27; Sp. p. 5671; Gaz. vol. 175; p. 980.

Barr, George B., Minneapolis, Minn. Mechanical stoker. No. 1,017,170; Feb. 13; Sp. p. 2064; Gaz. vol. 175; p. 359.

Barstow, Howard H., Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Collecting device for dynamo-electric machines. No. 1,016,774; Feb. 6; Sp. p. 1220; Gaz. vol. 175; p. 187.

Baldwin Steel Car Company, The. (See Tesseyman, John E., assignor.)

Bamsey, John J., Carnesville, Ga. Cultivator. No. 1,017,465; Feb. 13; Sp. p. 2744; Gaz. vol. 175; p. 462.

Barney, Joseph D., Dorchester, Mass. Valve for drinking-fountains. No. 1,016,956; Feb. 13; Sp. p. 1615; Gaz. vol. 175; p. 284.

Barnhill, Harvey E., *et al.* (See Williamson, John, assignor.)

Barnhill, Richard T. (See Hottmann, Charles W., assignor.)

Barnhill Telephone Manufacturing Company. (See Adams-Barnhill, Charles, assignor.)

Barnhill, Julia E., *et al.* (See Barnhill, Millard F., assignor.)

Barnhill, Millard F., Mobile, Ala., assignor of one-fourth to H. A. V. Roberts, one-fourth to L. Roberts, Mineral Wells, five one-hundredths to R. O. Braswell and forty-five one-hundredths to J. E. Randle, Fort Worth, Tex. Device for hanging wall-paper. No. 1,017,019; Feb. 13; Sp. p. 1747; Gaz. vol. 175; p. 305.

Barnum, John T., Fort Kent, Me. Road-rutter. No. 1,018,775; Feb. 6; Sp. p. 1221; Gaz. vol. 175; p. 188.

Barrows, Willard G., Davenport, Iowa. Variable-lead mechanism. No. 1,016,930; Feb. 6; Sp. p. 117; Gaz. vol. 175; p. 19.

Barr, William E., Catawissa, Pa. Coat-hanger. No. 1,017,688; Feb. 20; Sp. p. 3174; Gaz. vol. 175; p. 571.

Bartell, Oscar. (See Gould, George H., assignor.)

Bartlett, Henry E., assignee, by mesne assignments, to Tilton-Thurber Company, Providence, R. I. Garment-hanger. No. 1,018,554; Feb. 27; Sp. p. 5266; Gaz. vol. 175; p. 915.

Bash, Leopold. (See Dunn, William H., assignor.)

Rauschenbach, Theodore, Evansville, Ind. Concrete-mixer. No. 1,018,779; Feb. 27; Sp. p. 5672; Gaz. vol. 175; p. 980.

Rauschenbach, Theodore, Evansville, Ind. Machine for forming and finishing concrete and cement curbs and gutters. No. 1,018,780; Feb. 27; Sp. p. 5673; Gaz. vol. 175; p. 980.

Read, Daniel, Cottage Grove, Oreg. Detachable caster. No. 1,017,799; Feb. 20; Sp. p. 3471; Gaz. vol. 175; p. 610.

Read, Guy C., Davenport, Toronto, Ontario, Canada. Railway-train air-pipe-coupling system. No. 1,018,342; Feb. 20; Sp. p. 4640; Gaz. vol. 175; p. 798.

Recording Speedometer Company. (See Martin, Aubry H., assignor.)

Redeker, George W., Wheeling, W. Va. Flushing apparatus for water-pipes. No. 1,016,521; Feb. 6; Sp. p. 664; Gaz. vol. 175; p. 100.

Redfield, John V., Grosse Pointe Farms, and J. T. Bordley, Detroit, Mich. Liquid-meter. No. 1,016,361; Feb. 6; Sp. p. 273; Gaz. vol. 175; p. 43.

Redlich, Berthold, assignor to Planiawerke Aktiengesellschaft für Kohlenfabrikation, Ratibor, Germany. Carbon electrode for electrical purposes. No. 1,018,003; Feb. 20; Sp. p. 3940; Gaz. vol. 175; p. 681.

Reed, Adam, St. Joseph, Mo., and D. A. Reed, Bozeman, Mont.; said Adam Reed assignor of one-fourth to said D. A. Reed. Cushion-sole. No. 1,017,314; Feb. 13; Sp. p. 2406; Gaz. vol. 175; p. 409.

Reed, David A. (See Reed, Adam and D. A.)

Reeder, John H., Caddo, Okla. Vise. No. 1,018,630; Feb. 27; Sp. p. 5352; Gaz. vol. 175; p. 928.

Reeves, Oravell C., *et al.* (See Dunn, Frank P., assignor.)

Regal, August, Vienna, Austria-Hungary. Electric jacquard apparatus. No. 1,017,063; Feb. 13; Sp. p. 1850; Gaz. vol. 175; p. 321.

Regal Shoe Company. (See Bliss and White, assignors.)

Regan, Joseph C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Valve mechanism for door-checks. No. 1,018,268; Feb. 20; Sp. p. 4503; Gaz. vol. 175; p. 773.

Regina Company, The. (See Koch, Henry, assignor.)

Reh, Rudolph H., and Y. Burgess, Washington, D. C. Closing means for sliding doors. No. 1,018,442; Feb. 27; Sp. p. 4888; Gaz. vol. 175; p. 865.

Reiber, John, Huntington, Oreg. Wrench. No. 1,016,776; Feb. 6; Sp. p. 1223; Gaz. vol. 175; p. 188.

Reibstein, August, New York, N. Y. Game apparatus. No. 1,018,343; Feb. 20; Sp. p. 4642; Gaz. vol. 175; p. 798.

Reichelt, Carl, Klingenthal, Germany. Keyboard musical instrument with chart. No. 1,017,589; Feb. 13; Sp. p. 2900; Gaz. vol. 175; p. 501.

Reichenbach, George T., and H. O. Peck, assignors to H. O. Peck Automobile Wheel Company, Incorporated, Portland, Oreg. Vehicle wheel-rim. No. 1,017,466; Feb. 13; Sp. p. 2745; Gaz. vol. 175; p. 462.

Reid, Andrew H., Toronto, Ontario, Canada. Brake-shoe. No. 1,018,209; Feb. 20; Sp. p. 4388; Gaz. vol. 175; p. 754.

Reid, James W., New York, N. Y. Traction and non-skid device. No. 1,017,909; Feb. 20; Sp. p. 3739; Gaz. vol. 175; p. 650.

Reinoehl, Charles W., deceased, (H. B. Reinoehl, executrix,) and W. M. Henderson, Steelton, Pa. Railway structure. No. 1,017,315; Feb. 13; Sp. p. 2407; Gaz. vol. 175; p. 410.

Reinoehl, Helen B., executrix. (See Reinoehl and Henderson.)

Reitz, Charles C., Jeannette, Pa. Hat presser and shaper. No. 1,018,680; Feb. 27; Sp. p. 5455; Gaz. vol. 175; p. 946.

Reitz, Charles E., Reitz, Pa. Ventilator. No. 1,018,585; Feb. 27; Sp. p. 5267; Gaz. vol. 175; p. 915.

Remington Typewriter Company. (See Barr, John H., assignor.)

Remington Typewriter Company. (See Barron, Walter J., assignor.)

Renner, John, Kansas City, Mo. Awning. No. 1,018,004; Feb. 20; Sp. p. 3941; Gaz. vol. 175; p. 681.

Rennerfelt, Gustaf, New York, N. Y. Friction-gearing. No. 1,017,910; Feb. 20; Sp. p. 3741; Gaz. vol. 175; p. 651.

Rennerfelt, Gustaf, assignor of one-half to C. J. Kintner, New York, N. Y. Friction-gearing. No. 1,017,911; Feb. 20; Sp. p. 3743; Gaz. vol. 175; p. 651.

Renzo, Jesse W., New York, N. Y. Freight-carrier. No. 1,018,586; Feb. 27; Sp. p. 5269; Gaz. vol. 175; p. 915.

Renschak, William, New York, N. Y. Button-making machine. No. 1,016,441; Feb. 6; Sp. p. 468; Gaz. vol. 175; p. 72.

Renstrom, Erik O., Strandquist, Minn. Folding crate. No. 1,018,521; Feb. 27; Sp. p. 5118; Gaz. vol. 175; p. 892.

Res Manufacturing Company. (See Kaufman, Adam, assignor.)

Ressencourt, Eugène G., assignor to E. H. Chamberlain, trustee, St. Louis, Mo. Apparatus for making fruit extracts. No. 1,017,800; Feb. 20; Sp. p. 3473; Gaz. vol. 175; p. 611.

Reston, Henry P., assignor to The Cincinnati Planer Company, Oakley, Ohio. Safety ratchet-lever. No. 1,018,080; Feb. 20; Sp. p. 4114; Gaz. vol. 175; p. 709.

Reston, Henry P., assignor to The Cincinnati Planer Company, Oakley, Ohio. Gearing. No. 1,018,081; Feb. 20; Sp. p. 4116; Gaz. vol. 175; p. 709.

Rettig, George, Jr. (See Nuernberger and Rettig.)

Rettmann, Charles H., Chicago, Ill. Electrowhistle-alarm. No. 1,017,689; Feb. 20; Sp. p. 3175; Gaz. vol. 175; p. 572.

Reynolds, Charles S. (See Garner, James C., assignor.)

Reynolds, Ernest C., Sanford, Colo. Beet-blocker. No. 1,017,316; Feb. 13; Sp. p. 2411; Gaz. vol. 175; p. 410.

Reynolds, Frank, Syracuse, N. Y. Starting device for explosive-engines. No. 1,016,522; Feb. 6; Sp. p. 966; Gaz. vol. 175; p. 100.

Reynolds Pattern and Machine Company. (See Hunt, Wilson P., assignor.)

Rhodin, John G. A., London, England. Manufacture of slag cement. No. 1,017,912; Feb. 20; Sp. p. 3747; Gaz. vol. 175; p. 651.

Rhodin, John G. A., assignor to G. Rosenbusch, London, England. White hydraulic cement and making the same. No. 1,017,913; Feb. 20; Sp. p. 3749; Gaz. vol. 175; p. 652.

Rice, Irvin, Jasper, Mo. Wheel jack and disher. No. 1,017,801; Feb. 20; Sp. p. 3474; Gaz. vol. 175; p. 611.

Rice, Richard H., Lynn, Mass., and F. A. Larkin, New York, N. Y., assignors to General Electric Company. Steam-accumulator. No. 1,017,590; Feb. 13; Sp. p. 2970; Gaz. vol. 175; p. 502.

Rice, Walter F., Quincy, Mass., assignor to General Electric Company. Binder for turbine-buckets. No. 1,017,467; Feb. 13; Sp. p. 2746; Gaz. vol. 175; p. 462.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Co., Mount Vernon, N. Y. Clutch. No. 1,017,842; Feb. 20; Sp. p. 3475; Gaz. vol. 175; p. 611.

Richards, Keene, Chicago, Ill. Block-signaling system for electric railways. No. 1,018,443; Feb. 27; Sp. p. 4301; Gaz. vol. 175; p. 865.

Richards, Lutelius, Atwater, Ohio. Tobacco-pipe. No. 1,017,803; Feb. 20; Sp. p. 3480; Gaz. vol. 175; p. 612.

Richards, Peter R., Hazleton, Pa. Safety appliance for gas-fixtures. No. 1,017,468; Feb. 13; Sp. p. 2748; Gaz. vol. 175; p. 462.

Richards-Wilcox Manufacturing Company. (See Hoffman, Peter L., assignor.)

Richardson, G. R. (See Lawler, Patrick J., assignor.)

Richardson, George C., Leavenworth, Kans. Orchard oil-burner. No. 1,017,317; Feb. 13; Sp. p. 2413; Gaz. vol. 175; p. 410.

Richardson, Harold A., London, England. Cement steel plate. No. 1,017,914; Feb. 20; Sp. p. 3751; Gaz. vol. 175; p. 652.

Richnow, Leo. (See Johanning and Richnow.)

Richter, Julius, Ford City, Pa. Center-punch. No. 1,017,469; Feb. 13; Sp. p. 2749; Gaz. vol. 175; p. 463.

Ricker, Ira V., Chicago, Ill. Churn. No. 1,017,690; Feb. 20; Sp. p. 3177; Gaz. vol. 175; p. 572.

Ricker, William H., Cambridge, Mass. Building construction and block therefor. No. 1,018,067; Feb. 13; Sp. p. 1619; Gaz. vol. 175; p. 284.

Ries, Frederick C., Macon, Ga. Burglar-alarm. No. 1,018,828; Feb. 27; Sp. p. 5063; Gaz. vol. 175; p. 1028.

Rieske, Otto G., St. Louis Park, Minn., assignor to The Monitor Drill Company. Disk furrow-opener. No. 1,017,109; Feb. 13; Sp. p. 1965; Gaz. vol. 175; p. 357.

Rieske, Otto G., Minneapolis, Minn., assignor to The Monitor Drill Company. Grain-drill. No. 1,017,315; Feb. 13; Sp. p. 2414; Gaz. vol. 175; p. 411.

Rieske, Otto G., St. Louis Park, Minn., assignor to The Monitor Drill Company. Grain-drill. No. 1,017,319; Feb. 13; Sp. p. 2418; Gaz. vol. 175; p. 411.

Rigby, Thomas, Dumfries, Scotland. Governing internal-combustion engines. No. 1,017,591; Feb. 13; Sp. p. 2972; Gaz. vol. 175; p. 502.

Rigby, Thomas, Dumfries, Scotland. Working and governing internal-combustion engines. No. 1,017,592; Feb. 13; Sp. p. 2974; Gaz. vol. 175; p. 502.

Rigby, Thomas, Dumfries, Scotland. Internal-combustion engine of the tandem type. No. 1,018,372; Feb. 20; Sp. p. 4720; Gaz. vol. 175; p. 806.

Riley, Charles E. (See Kenway and Riley.)

Rinfret, Thibodeau, et al. (See Gagnon, Edmond, assignor.)

Ringer, Roy R., Pittsburgh, Pa. Dispensing-box. No. 1,018,269; Feb. 20; Sp. p. 4504; Gaz. vol. 175; p. 774.

Rinman, Erik L., Harnäs, Sweden. Treating waste liquors from soda-pulp mills. No. 1,017,320; Feb. 13; Sp. p. 2422; Gaz. vol. 175; p. 411.

Rinner, Michael, Fairfield, Conn. Folding crate. No. 1,016,528; Feb. 6; Sp. p. 675; Gaz. vol. 175; p. 101.

Ritchel, Charles F., Bridgeport, Conn., assignor to The New York Safety Chest Company. Safety-receptacle. No. 1,018,444; Feb. 27; Sp. p. 4894; Gaz. vol. 175; p. 865.

Rivers, Charles A., Denver, Colo. System for inflating pneumatic tires. No. 1,016,896; Feb. 6; Sp. p. 1467; Gaz. vol. 175; p. 226.

Rivers, Philip J., New Rochelle, N. Y. Automobile-wheel. No. 1,017,171; Feb. 13; Sp. p. 2067; Gaz. vol. 175; p. 360.

Rives, George H., New York, N. Y. Device for facilitating counting of money, dealing cards, turning leaves, &c. No. 1,016,362; Feb. 6; Sp. p. 276; Gaz. vol. 175; p. 43.

Robbins, Alice G., assignor to The Child's Welfare Company, Indianapolis, Ind. Kindergarten-table. No. 1,018,373; Feb. 20; Sp. p. 4721; Gaz. vol. 175; p. 806.

Robbins, John F., Hamlin, Tex. Harrow. No. 1,018,344; Feb. 20; Sp. p. 4645; Gaz. vol. 175; p. 798.

Robbins, Meyer L., assignor to Untermeyer-Robbins & Company, New York, N. Y. Bracelet. No. 1,018,897; Feb. 27; Sp. p. 5371; Gaz. vol. 175; p. 916.

Roberts, Alexander, and A. Libert, Green Bay, Wis. Log peeling and trimming machine. No. 1,016,442; Feb. 6; Sp. p. 472; Gaz. vol. 175; p. 72.

Roberts, Alfred E., Sausalito, and A. L. Emery, Palo Alto, Cal. Transporting oil long distances. No. 1,018,366; Feb. 12; Sp. p. 1632; Gaz. vol. 175; p. 285.

Roberts, Lily, et al. (See Randle, Millard F., assignor.)

Roberts, Margaret A. V., et al. (See Randle, Millard F., assignor.)

Roberts, Wayne C., and G. E. Corner, Holyoke, Mass. Apparatus for removing old paper from walls. No. 1,018,345; Feb. 20; Sp. p. 4645; Gaz. vol. 175; p. 798.

Roberts, William F. (See Wiesengrund and Roberts.)

Robinson, Clarence L., West New Brighton, N. Y., assignor to Standard Oil Company, Bayonne, N. J. Utilizing sulfur containing petroleums. No. 1,018,374; Feb. 20; Sp. p. 4722; Gaz. vol. 175; p. 809.

Robinson, Lawrence E., Coffeyville, Kans. Alarm and sash-lock. No. 1,017,804; Feb. 20; Sp. p. 3481; Gaz. vol. 175; p. 612.

Robinson, Patrick H., assignor to Scovill Manufacturing Company, Waterbury, Conn. Shade-holder attachment for electric-light sockets. No. 1,018,270; Feb. 20; Sp. p. 4505; Gaz. vol. 175; p. 774.

Robinson, Richard, Pittsburgh, Pa. Gas-purifier. No. 1,016,290; Feb. 6; Sp. p. 121; Gaz. vol. 175; p. 18.

Robison, Clinton S., Chicago, Ill. Treating brewers' slops. No. 1,016,291; Feb. 6; Sp. p. 123; Gaz. vol. 175; p. 18.

Roby, Austin H., Malden, and C. H. Cutter, Somerville, Mass. Paster-holder. No. 1,017,805; Feb. 20; Sp. p. 3483; Gaz. vol. 175; p. 612.

Roche, John L., assignor of one-fourth to L. W. Felt, Chicago, Ill. Means for maintaining equilibrium of airships and the like. No. 1,016,363; Feb. 6; Sp. p. 277; Gaz. vol. 175; p. 44.

Rock Island Plow Company. (See Johnson, William S., assignor.)

Rockey, Walter S., and H. Eldridge, New York, N. Y., assignors to Metallurgical Research Company. Manufacturing and refining copper alloys. No. 1,017,629; Feb. 13; Sp. p. 3040; Gaz. vol. 175; p. 514.

Rockey, Walter S., and H. Eldridge, New York, N. Y., assignors to Metallurgical Research Company. Fusing and purifying copper. No. 1,018,681; Feb. 27; Sp. p. 5456; Gaz. vol. 175; p. 946.

Rockford Drilling Machine Company. (See Milne, Robert, assignor.)

Rockstroh, Max, Klein-Sedlitz, near Pirna, Germany. Safety device for platen printing-presses. No. 1,018,806; Feb. 20; Sp. p. 4948; Gaz. vol. 175; p. 882.

Roden, Herman N., Oshkosh, Wis. Drinking-fountain. No. 1,016,851; Feb. 6; Sp. p. 1304; Gaz. vol. 175; p. 210.

Roderick Lean Manufacturing Company. (See Warne, Frederick C., assignor.)

Rodger Ballast Car Company. (See Hart, Harry S., assignor.)

Rodgers, Ellsworth P., Hightstown, N. J. Indicator. No. 1,017,806; Feb. 20; Sp. p. 3484; Gaz. vol. 175; p. 613.

Rodway, John I., and J. Eason, Johannesburg, Transvaal. Means for automatically inflating tires of vehicle-wheels while in motion. No. 1,016,284; Feb. 6; Sp. p. 275; Gaz. vol. 175; p. 44.

Roehr, Louis, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Machine for welding chain-links. (Reissue.) No. 13,871; Feb. 20; Sp. p. 4766; Gaz. vol. 175; p. 821.

Roelker, Hugo E. (See Klein, Mathias J., assignor.)

Roempler, Frederick G., Chicago, Ill. Elevator. No. 1,018,781; Feb. 27; Sp. p. 5074; Gaz. vol. 175; p. 961.

Roessle, Charles W. (See Garbarino and Roessle.)

Roessler & Hasslacher Chemical Company, The. (See Foerstner, Richard von, assignor.)

Rogers, Burt T., assignor to Victor Sporting Goods Company, Springfield, Mass. Base-ball mitt or glove. No. 1,018,211; Feb. 20; Sp. p. 4506; Gaz. vol. 175; p. 774.

Rogers, Charles E., Waverly, N. Y. Telephone-transmitter. No. 1,018,052; Feb. 20; Sp. p. 4117; Gaz. vol. 175; p. 710.

Rogers, Ernest E., assignor to Foster Engineering Company Limited, London, England. Lock for electric plugs. No. 1,017,110; Feb. 13; Sp. p. 1967; Gaz. vol. 175; p. 336.

Rogers, Marshall C., Williams, Cal. Resilient tire. No. 1,018,006; Feb. 20; Sp. p. 3945; Gaz. vol. 175; p. 682.

Rogers, Marshall C., assignor of one-half to G. Ash, Williams, Cal. Collapsible, portable, vermin-proof poultry-house. No. 1,018,007; Feb. 20; Sp. p. 3947; Gaz. vol. 175; p. 683.

Rogers, Robert W., Worcester, Mass. Water-heater. No. 1,017,231; Feb. 13; Sp. p. 2423; Gaz. vol. 175; p. 411.

Rohan, Joseph P., Hartford, Conn. Electric-fixture connection. No. 1,016,177; Feb. 6; Sp. p. 1234; Gaz. vol. 175; p. 186.

Roller, David H., Muncie, Ind. Scooping device. No. 1,016,711; Feb. 6; Sp. p. 1079; Gaz. vol. 175; p. 166.

Rollin, Charles, Newcastle-upon-Tyne, England. Making amorphous anhydrous barium hydroxid. No. 1,017,508; Feb. 13; Sp. p. 2077; Gaz. vol. 175; p. 362.

Rome Metallic Bedstead Company. (See Merritt, Mortimer G., assignor.)

Ronell, August L., Fort Dodge, Iowa. Electric program-clock. No. 1,016,888; Feb. 6; Sp. p. 1396; Gaz. vol. 175; p. 211.

Rosey, John H., Allegheny, Pa. Apparatus for making pipe-couplings. No. 1,017,322; Feb. 13; Sp. p. 2425; Gaz. vol. 175; p. 412.

Rosstrom, Arvid F., Chicago, Ill. Heating device. No. 1,018,445; Feb. 27; Sp. p. 4896; Gaz. vol. 175; p. 866.

Rovers, Alfred W., Brooklyn, N. Y. Die-press. No. 1,016,292; Feb. 6; Sp. p. 125; Gaz. vol. 175; p. 20.

Roppenecker, George L., and A. L. Scott, Franklin, Pa. Porch sewer-bracket. No. 1,017,894; Feb. 13; Sp. p. 3079; Gaz. vol. 175; p. 502.

Ross, Bennett F., Henderson, N. C. Displaying apparatus for show-windows and cases. No. 1,017,470; Feb. 13; Sp. p. 2750; Gaz. vol. 175; p. 463.

Ross, Gaston, Paris, France. Heating apparatus. No. 1,016,775; Feb. 6; Sp. p. 1295; Gaz. vol. 175; p. 189.

Ross, William J., et al. (See Hall, Frank M., assignor.)

Rosenbrook, August C., Wall, S. D. Car-seal. No. 1,018,682; Feb. 27; Sp. p. 5458; Gaz. vol. 175; p. 946.

Rosenbusch, Gilbert. (See Rhodin, John G. A., assignor.)

Rosenfeld, Irvin, New York, N. Y. Inkstand. No. 1,016,965; Feb. 6; Sp. p. 230; Gaz. vol. 175; p. 44.

Rosenthal, Charles W., Los Angeles, Cal. Savings-bank ledger-card. No. 1,017,915; Feb. 20; Sp. p. 3752; Gaz. vol. 175; p. 652.

Rosewater, Nathan, Cleveland, Ohio. Decaffeinated coffee. No. 1,016,293; Feb. 6; Sp. p. 126; Gaz. vol. 175; p. 20.

Rosewater, Nathan, Cleveland, Ohio. Decaffeinated coffee. No. 1,016,294; Feb. 6; Sp. p. 128; Gaz. vol. 175; p. 20.

Ross, Alice L., Derry, Pa. Curtain-fixture. No. 1,018,272; Feb. 20; Sp. p. 4506; Gaz. vol. 175; p. 774.

Ross, William H., Duquoin, Ill. Harrow. No. 1,018,928; Feb. 27; Sp. p. 5971; Gaz. vol. 175; p. 1029.

Rossi, Augusto J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing steel metals. No. 1,017,807; Feb. 20; Sp. p. 3485; Gaz. vol. 175; p. 613.

Roth, Karl, Terre Haute, Ind. Sheet-metal roofing. No. 1,018,782; Feb. 27; Sp. p. 5075; Gaz. vol. 175; p. 961.

Rothe, Fritz, Dessau, Germany, assignor to Electrochemische Werke G. m. b. H., Berlin, Germany. Method of and apparatus for producing and utilizing disk-like electric arcs for effecting gas reactions. No. 1,018,900; Feb. 27; Sp. p. 5122; Gaz. vol. 175; p. 1052.

Rourke, Raymond, Rock Glen, N. Y. Pocket attachment. No. 1,018,929; Feb. 27; Sp. p. 5974; Gaz. vol. 175; p. 1029.

Routhier, Joseph A., Montreal, Quebec, Canada. Paint-vehicle and furniture-polish. No. 1,017,323; Feb. 13; Sp. p. 2426; Gaz. vol. 175; p. 412.

Rowe, Edwin G., et al. (See Gale, Harley A., assignor.)

Rowe, George H., Berwyn, assignor to The Electromagnetic Tool Company, Chicago, Ill. Power-hammer. No. 1,017,916; Feb. 20; Sp. p. 3754; Gaz. vol. 175; p. 652.

Royal Phone and Phonogram Company. (See Runge, Walter C., assignor.)

Royston, William H., Scranton, Pa. Producing toilet cream. No. 1,017,566; Feb. 13; Sp. p. 2981; Gaz. vol. 175; p. 506.

Rozier, Edward A., Sr., assignor to E. L. Rozier, Sparta, Ga. Gin attachment. No. 1,018,273; Feb. 20; Sp. p. 4509; Gaz. vol. 175; p. 775.

Rozier, Ella L. (See Rozier, Edward A., Sr., assignor.)

Rubber Patents Limited, The. (See Turner and Buxton, assignors.)

Rude Bros. Mfg. Co., The. (See Funk, Lewis A., assignor.) (Reissue.)

Rudolph Wurlitzer Manufacturing Company, The. (See Wauters, Joseph, assignor.)

Rudy, Lawrence M., Shreveport, La. Plumb-rule. No. 1,017,111; Feb. 13; Sp. p. 1963; Gaz. vol. 175; p. 336.

Rueteschi, Arnold. (See Loew and Rueteschi.)

Ruf, William, New York, N. Y. Horseshoe. No. 1,016,853; Feb. 6; Sp. p. 1272; Gaz. vol. 175; p. 211.

Ruph, Harry O., assignor to Sandwich Electric Company, Sandwich, Ill. Signaling system. No. 1,018,375; Feb. 20; Sp. p. 4727; Gaz. vol. 175; p. 809.

Ruph, Harry O., assignor to Sandwich Electric Company, Sandwich, Ill. Signaling system. No. 1,018,376; Feb. 20; Sp. p. 4729; Gaz. vol. 175; p. 810.

Runge, Walter C., Camden, N. J., assignor to Regal Phone and Phonogram Company, Boston, Mass. Apparatus for forming impressions on phonograph-record blanks and like articles. No. 1,018,021; Feb. 27; Sp. p. 5353; Gaz. vol. 175; p. 928.

Runner, Joseph B., Dugger, Ind. Combination block and tile machine. No. 1,017,917; Feb. 20; Sp. p. 3755; Gaz. vol. 175; p. 652.

Ruppel, Friedrich, Strassburg, Germany. Apparatus for distributing fat bodies. No. 1,016,779; Feb. 6; Sp. p. 1227; Gaz. vol. 175; p. 189.

Rush, Albert, Columbus, Ohio. Flexible fire-resisting shutter. No. 1,017,360; Feb. 20; Sp. p. 3486; Gaz. vol. 175; p. 613.

Rusnak, Andrew D., Philadelphia, Pa. Potato-digger. No. 1,017,918; Feb. 20; Sp. p. 3757; Gaz. vol. 175; p. 652.

Russ, John D., Spencer, W. Va. Gun-sight. No. 1,017,234; Feb. 13; Sp. p. 2243; Gaz. vol. 175; p. 381.

Russell Anti-Friction Drill Chuck Company. (See Russell, Ross M., assignor.)

Russell & Erwin Manufacturing Company. (See Veight, Henry G., assignor.)

Russell & Erwin Manufacturing Company. (See Veight and Hurd, assignors.)

Russell, Ross M., Binghamton, assignor to Russell Anti-Friction Drill Chuck Company, Elmira, N. Y. Drill-chuck. No. 1,018,006; Feb. 20; Sp. p. 3949; Gaz. vol. 175; p. 683.

Russell, William H., Arcadia, Ind. Corn picking and husking machine. No. 1,018,346; Feb. 20; Sp. p. 4648; Gaz. vol. 175; p. 799.

Rutheuberg, Marcus, London, England. Electric furnace. No. 1,018,727; Feb. 27; Sp. p. 5354; Gaz. vol. 175; p. 961.

Rutsky, Paul, Crefeld, Germany. Insulator. No. 1,016,790; Feb. 6; Sp. p. 1228; Gaz. vol. 175; p. 189.

Ryan, Catherine, St. Paul, Minn. Nut-lock. No. 1,016,807; Feb. 6; Sp. p. 1450; Gaz. vol. 175; p. 226.

Ryan, Lawrence F., New York, N. Y. Retaining means for receptacle-covers. No. 1,017,324; Feb. 13; Sp. p. 2429; Gaz. vol. 175; p. 412.

Ryan, Walter S., assignor to L. Hengerer, trustee, New York, N. Y. Electric advertising and signaling device. No. 1,017,172; Feb. 13; Sp. p. 2090; Gaz. vol. 175; p. 360.

Ryan, Walter S., assignor to L. Hengerer, trustee, New York, N. Y. Electric-light attachment. No. 1,017,173; Feb. 13; Sp. p. 2101; Gaz. vol. 175; p. 360.

Ryden, Axel, and C. H. Stahl, Chicago, Ill. Lock-nut. No. 1,017,471; Feb. 13; Sp. p. 2752; Gaz. vol. 175; p. 463.

Rylands, George F. (See Bartley, Charles B., assignor.)

Sabin, Walter H., and H. Larson, Crookston, Minn. Scale. No. 1,017,596; Feb. 13; Sp. p. 2982; Gaz. vol. 175; p. 504.

Sachs, Caroline N., assignor to The Sachs Company, Hartford, Conn. Jacket for safety-fuses. No. 1,016,443; Feb. 6; Sp. p. 476; Gaz. vol. 175; p. 73.

Sachs, Caroline N., assignor to The Sachs Company, Hartford, Conn. Electric safety-fuse. No. 1,016,524; Feb. 6; Sp. p. 676; Gaz. vol. 175; p. 101.

Sachs Company, The. (See Sachs, Caroline N., assignor.)

Sachs, Ernst, Schweinfurt, Germany. Free-wheel and back-pedaling brake mechanism. No. 1,017,472; Feb. 13; Sp. p. 2754; Gaz. vol. 175; p. 464.

Sackett, John. (See Nightingale and Sackett.)

Sadtler, John P. B., Baltimore, Md. Domestic water-circulating system. No. 1,016,950; Feb. 13; Sp. p. 1625; Gaz. vol. 175; p. 285.

Safety Car Heating and Lighting Company. (See Crevelling, John L., assignor.)

Sahm, Louis N., New York, N. Y. Dye or stain. No. 1,016,296; Feb. 6; Sp. p. 131; Gaz. vol. 175; p. 20.

Salmon, Harry E., Philadelphia, Pa. Combined saw jointer and gage. No. 1,018,446; Feb. 27; Sp. p. 4899; Gaz. vol. 175; p. 866.

Salsich, Neil B., Harrisburg, Pa. Railway structure. No. 1,016,525; Feb. 6; Sp. p. 679; Gaz. vol. 175; p. 101.

Sampson, Robert, Montreal, Quebec, Canada. Puncture-closure for pneumatic tires and the like. No. 1,017,809; Feb. 20; Sp. p. 3489; Gaz. vol. 175; p. 613.

Samuel Haltom Company, The. (See Haltom, Samuel, assignor.)

Sandell, Julius. (See Ledington and Sandell.)

Sander, Valentine, and P. W. Seller, Rochester, N. Y. Bracket and support therefor. No. 1,017,174; Feb. 13; Sp. p. 2103; Gaz. vol. 175; p. 361.

Sanders, Samuel P., assignor of one-half to C. C. Grosshans, Aurora, Nebr. Spring-wheel. No. 1,017,919; Feb. 20; Sp. p. 3709; Gaz. vol. 175; p. 653.

Sandwich Electric Company. (See Rugh, Harry O., assignor.)

Sanford Clarifying and Separating Company. (See Sanford, George E., assignor.)

Sanford, George E., Chicago, Ill., assignor, by mesne assignments, to Sanford Clarifying and Separating Company. Liquid-separator. No. 1,016,366; Feb. 6; Sp. p. 281; Gaz. vol. 175; p. 45.

Sanford, Leverett A., Bristol, Conn., assignor to E. J. Sanford, Leverett A. Maynard and J. F. Maynard, Utica, N. Y. Lubricating device. No. 1,017,020; Feb. 13; Sp. p. 1743; Gaz. vol. 175; p. 305.

Sanitary Bottling Device Company. (See Lindahl, Erick P., assignor.)

Sanitary Brick Company, The, et al. (See Malisovsky, Andrew, assignor.)

Sapper, Charles H., Newburgh, N. Y. Top. No. 1,016,960; Feb. 13; Sp. p. 1626; Gaz. vol. 175; p. 285.

Sargent & Co. (See Shaw and Kimball, assignors.)

Sargent, Frederick G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Self-lubricating loose pulley or wheel. No. 1,017,810; Feb. 20; Sp. p. 3489; Gaz. vol. 175; p. 613.

Sarrazin, Jules J., New Orleans, La. Tooth-brush. No. 1,018,027; Feb. 27; Sp. p. 5979; Gaz. vol. 175; p. 1029.

Satin, Jacob, Brooklyn, N. Y. Garment-form. No. 1,018,377; Feb. 20; Sp. p. 4731; Gaz. vol. 175; p. 810.

Saunders, Fred E., Orange, Mass. Vacuum-creator. No. 1,017,691; Feb. 20; Sp. p. 3178; Gaz. vol. 175; p. 572.

Saurer, Firm of Adolph. (See Mayer, Heinrich, assignor.)

Savage Arms Company. (See Chadwick, Francis C., assignor.)

Savage, George Hamilton, Wash. Sun and rain protector. No. 1,018,522; Feb. 27; Sp. p. 5120; Gaz. vol. 175; p. 892.

Savignac, George S., and C. E. Myers, assignors to W. G. Battle, C. E. Clark, and T. W. Fuqua, St. Louis, Mo. Sewing-machine. No. 1,016,898; Feb. 6; Sp. p. 1460; Gaz. vol. 175; p. 226.

Savignac, George S., and C. E. Myers, assignors to W. G. Battle, C. E. Clark, and T. W. Fuqua, St. Louis, Mo. Loop-lock-stitch-forming mechanism. No. 1,016,899; Feb 6; Sp. p. 1469; Gaz. vol. 175; p. 227.

Savignac, George S., and C. E. Myers, assignors to W. G. Battle, C. E. Clark, and T. W. Fuqua, St. Louis, Mo. Take-up and thread-measurer for sewing-machines. No. 1,016,900; Feb. 6; Sp. p. 1474; Gaz. vol. 175; p. 228.

Savignac, George S., and C. E. Myers, assignors to W. G. Battle, C. E. Clark, and T. W. Fuqua, St. Louis, Mo. Thread-treating device for sewing-machines. No. 1,016,901; Feb. 6; Sp. p. 1479; Gaz. vol. 175; p. 228.

Savignac, George S., and C. E. Myers, assignors to W. G. Battle, C. E. Clark, and T. W. Fuqua, St. Louis, Mo. Presser-foot for sewing-machines. No. 1,016,902; Feb. 6; Sp. p. 1482; Gaz. vol. 175; p. 229.

Saxton, Lionel D., New York, N. Y. Safety-razor-stropping device. No. 1,017,325; Feb. 13; Sp. p. 2430; Gaz. vol. 175; p. 412.

Scanlan Morris Co. (See Grady, William R., assignor.)

Scanlan, Robert M., assignor of one-half to J. B. Shepler, Toledo, Ohio. Multiple-ply-paper-board-making machine. No. 1,018,588; Feb. 27; Sp. p. 5272; Gaz. vol. 175; p. 916.

Scarlett, William S., Fall River, Mass. Safety device for ships. No. 1,016,781; Feb. 6; Sp. p. 1229; Gaz. vol. 175; p. 189.

Sceiza, Frank, Harrison, N. Y. Door-jamb setter. No. 1,017,811; Feb. 20; Sp. p. 3491; Gaz. vol. 175; p. 614.

Schacht, Charles, Highland, Ill. Grain hulling and scouring machine. No. 1,017,326; Feb. 13; Sp. p. 2433; Gaz. vol. 175; p. 413.

Schade-Erlandsen, Carsten A., Eskilstuna, Sweden. Signaling-cartridge. No. 1,018,632; Feb. 27; Sp. p. 5350; Gaz. vol. 175; p. 929.

Schade, John, Jr. (See Hoge and Schade.)

Schaefer, John J., Elgin, Ill. Keyless combination door-lock. No. 1,017,327; Feb. 13; Sp. p. 2434; Gaz. vol. 175; p. 413.

Schanche, Herman G., assignor to Harrison Bros. & Co., Inc., Philadelphia, Pa. Manufacture of resin soap. No. 1,017,693; Feb. 20; Sp. p. 3182; Gaz. vol. 175; p. 573.

Schanche, Herman G., Philadelphia, Pa., and F. S. Havens, Hartford, Conn., assignors to Harrison Bros. & Co., Inc., Philadelphia, Pa. Manufacture of resin soap. No. 1,017,692; Feb. 20; Sp. p. 3180; Gaz. vol. 175; p. 573.

Schär, Ferdinand, Lucerne, Switzerland. Floor or like structure. No. 1,017,175; Feb. 13; Sp. p. 2105; Gaz. vol. 175; p. 361.

Schenck, Peirce D., Dayton, Ohio. Valve mechanism. No. 1,018,447; Feb. 27; Sp. p. 4901; Gaz. vol. 175; p. 866.

Schenber, August W., Jersey City Heights, N. J., assignor to S. Zinn, Brooklyn, N. Y. Safety-razor. No. 1,018,783; Feb. 27; Sp. p. 5677; Gaz. vol. 175; p. 961.

Schick, Ida W., *et al.* (See Schoonover, James S., assignor.)

Schiff, Charles, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Phonograph-horn support. No. 1,017,328; Feb. 13; Sp. p. 2436; Gaz. vol. 175; p. 414.

Schilling, George W., Philadelphia, Pa. Swing. No. 1,016,712; Feb. 6; Sp. p. 1082; Gaz. vol. 175; p. 166.

Schimek, Richard, New York, N. Y. Window-ventilating appliance. No. 1,016,713; Feb. 6; Sp. p. 1086; Gaz. vol. 175; p. 167.

Schlafly, Julius H., assignor to The Canton Culvert Company, Canton, Ohio. Culvert. No. 1,016,581; Feb. 6; Sp. p. 809; Gaz. vol. 175; p. 120.

Schlehr, Joseph A., Chicago, Ill. Bolt-holder. No. 1,016,206; Feb. 6; Sp. p. 131; Gaz. vol. 175; p. 21.

Schleier, Charles W., Wellston, Mo. Folding lunch-box. No. 1,018,378; Feb. 20; Sp. p. 4732; Gaz. vol. 175; p. 810.

Schloerb, Albert P. (See Pfefferkorn, Schloerb, and Hammetter.)

Schmeiser, Paul H., assignor to P. C. Murphy Trunk Company, St. Louis, Mo. Trunk-tray. No. 1,017,812; Feb. 20; Sp. p. 3492; Gaz. vol. 175; p. 614.

Schmidt, Emil C. R., Rochester, N. Y. Chest-protector. No. 1,016,444; Feb. 6; Sp. p. 477; Gaz. vol. 175; p. 73.

Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Coupling mechanism for locomotives. No. 1,016,782; Feb. 6; Sp. p. 1230; Gaz. vol. 175; p. 190.

Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Uncoupling mechanism for car-couplings. No. 1,016,854; Feb. 6; Sp. p. 1374; Gaz. vol. 175; p. 212.

Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Coupling. No. 1,017,630; Feb. 13; Sp. p. 3052; Gaz. vol. 175; p. 514.

Schmidt, Otto A., assignor to The Hoffmann Manufacturing Company, Limited, Chelmsford, England. Machine for grinding rollers. No. 1,018,030; Feb. 27; Sp. p. 5978; Gaz. vol. 175; p. 1030.

Schmidt, Paul C., Detroit, Mich. Nut-lock. No. 1,016,367; Feb. 6; Sp. p. 286; Gaz. vol. 175; p. 45.

Schmitt, Henry G., Elmira, N. Y. Heel-clamp. No. 1,016,961; Feb. 13; Sp. p. 1629; Gaz. vol. 175; p. 294.

Schmucker, Edwin B., Norfolk, Va. Fish-line holder. No. 1,016,783; Feb. 6; Sp. p. 1231; Gaz. vol. 175; p. 190.

Schneider, Eugène, Le Creusot, France. Percussion-fuse for explosive projectiles. No. 1,016,368; Feb. 6; Sp. p. 287; Gaz. vol. 175; p. 45.

Schneider, Frederick W. A., Toronto, Ontario, Canada. Electric cartridge-fuse. No. 1,016,646; Feb. 6; Sp. p. 951; Gaz. vol. 175; p. 143.

Schneider, Hans, Nuremberg, Germany. Hair-clipping machine. No. 1,016,855; Feb. 6; Sp. p. 1376; Gaz. vol. 175; p. 212.

Schneider, Herman, St. Louis, Mo. Cross-cutting tool. No. 1,017,320; Feb. 13; Sp. p. 2437; Gaz. vol. 175; p. 414.

Schneider, Leopold C., Philadelphia, Pa., assignor to The Philadelphia Pipe Bending Company. Double-pipe condenser. No. 1,016,582; Feb. 6; Sp. p. 810; Gaz. vol. 175; p. 121.

Schoonover, James S., Indianapolis, Ind., assignor of one-half to I. W. Schick, Chicago, Ill., and M. E. Smith, Brownsburg, Ind. Combined curtain-pole and shade support. No. 1,018,633; Feb. 27; Sp. p. 5367; Gaz. vol. 175; p. 929.

Schott, Heinrich, Charlottenburg, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Organic mercury compound. No. 1,016,784; Feb. 6; Sp. p. 1233; Gaz. vol. 175; p. 190.

Schraubon- und Schmiedewarenfabriks Aktiengesellschaft, Brevillier & Co. und A. Urban & Söhne. (See Heller, Julius, assignor.)

Schreckenbach, Richard, Salzgitter, Germany. Treating raw and worked textile fibers, such as jute, hemp, flax, and the like. No. 1,017,176; Feb. 13; Sp. p. 2106; Gaz. vol. 175; p. 361.

Schremp, Adolph P., Utica, N. Y. Fastening device for undergarments. No. 1,018,000; Feb. 20; Sp. p. 3961; Gaz. vol. 175; p. 684.

Schroeder, Arthur. (See Eisel, Hagen, and Schroeder.)

Schroeder, Charles, Bridgeport, Conn. Skylight-bar. No. 1,016,850; Feb. 6; Sp. p. 1377; Gaz. vol. 175; p. 212.

Schroeder, Christian M. E., New York, N. Y. Paint and varnish remover. No. 1,016,445; Feb. 6; Sp. p. 479; Gaz. vol. 175; p. 73.

Schroeder, Henry L., Chicago, Ill. Baker's peel. No. 1,017,177; Feb. 13; Sp. p. 2107; Gaz. vol. 175; p. 361.

Schuermann, Anton C. (See Mueller and Schuermann.)

Schuermann, Anton C., assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Supply-pipe for lavatory-fittings. No. 1,017,813; Feb. 20; Sp. p. 3494; Gaz. vol. 175; p. 614.

Schulhoefer, Louis, *et al.* (See Lindsay, Charles E., assignor.)

Schulte, William H., Trenton, N. J. Flushing-valve-operating mechanism. No. 1,016,714; Feb. 6; Sp. p. 1088; Gaz. vol. 175; p. 167.

Schurtz, James O., Grand Rapids, Mich. Automatic window-lock. No. 1,016,962; Feb. 13; Sp. p. 1630; Gaz. vol. 175; p. 286.

Schustek, Andrew, Chicago, Ill. Mechanical movement. No. 1,018,991; Feb. 27; Sp. p. 6124; Gaz. vol. 175; p. 1052.

Schuyler, Wilton S., Savannah, Mo. Adjustable pulley-hanger. No. 1,018,010; Feb. 20; Sp. p. 3952; Gaz. vol. 175; p. 684.

Schwarz, Rudolph, Paynesville, Minn. Wrench. No. 1,018,347; Feb. 20; Sp. p. 4651; Gaz. vol. 175; p. 799.

Schwarz, Walter, Dortmund, Germany. Heat-accumulator. No. 1,018,083; Feb. 20; Sp. p. 1113; Gaz. vol. 175; p. 710.

Schwickert, Charles F. (See Watson, Samuel S., assignor.)

Scott, Albert L. (See Roppeneker and Scott.)

Scott, Arthur P., Brackenridge, Pa. Producing practically pure iron. No. 1,017,473; Feb. 13; Sp. p. 2757; Gaz. vol. 175; p. 464.

Scott, Edmund W., Simpsonville, Md. Wire-stretcher. No. 1,016,785; Feb. 6; Sp. p. 1235; Gaz. vol. 175; p. 190.

Scott, Edward D. (See Scott, George R. and E. D.)

Scott, Frederick C., assignor to F. W. Trounce, Vancouver, British Columbia, Canada. Brush-cutting knife. No. 1,018,784; Feb. 27; Sp. p. 5679; Gaz. vol. 175; p. 982.

Scott, George E. and E. D., assignors to Timewell Sack Filling & Sewing Machine Company, Chicago, Ill. Filled-sack-sewing machine. No. 1,018,133; Feb. 20; Sp. p. 4229; Gaz. vol. 175; p. 727.

Scott, James G., Morgantown, Ind. Amalgamator. No. 1,018,448; Feb. 27; Sp. p. 4902; Gaz. vol. 175; p. 867.

Scott, Kay W., New York, N. Y., assignor to New York Attachable Player Action Co. Piano-player attachment. No. 1,018,084; Feb. 20; Sp. p. 4121; Gaz. vol. 175; p. 710.

Scott, Robert F., and A. M. Harrington, assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa. Track-suspender. No. 1,018,981; Feb. 27; Sp. p. 5977; Gaz. vol. 175; p. 1030.

Scott, Robert W., Leeds Point, assignor to Scott & Williams, Incorporated, Camden, N. J. Knitted fabric and hosiery made therefrom. No. 1,016,134; Feb. 20; Sp. p. 4233; Gaz. vol. 175; p. 727.

Scott, Semple S., Chicago, Ill. Resilient tire. No. 1,017,814; Feb. 20; Sp. p. 3496; Gaz. vol. 175; p. 615.

Scott, Walker A., Evansville, Ind. Floor-dressing tool. No. 1,016,446; Feb. 6; Sp. p. 480; Gaz. vol. 175; p. 73.

Scott & Williams. (See Scott, Robert W., assignor.)

Scovill Manufacturing Company. (See Robinson, Patrick H., assignor.)

Scroggs, Joseph W. (See French, McKelvy, and Scroggs.)

Scudder, Mary L. E., Wayne township, Marion county, Ind. Carpet. No. 1,016,135; Feb. 20; Sp. p. 4236; Gaz. vol. 175; p. 728.

Seago, Albert. (See Seago, Louise and A.)

Seago, Louise and A., New York, N. Y. Hair-dye. No. 1,017,269; Feb. 13; Sp. p. 2311; Gaz. vol. 175; p. 393.

Sears, Roebuck & Company. (See Christensen, Carl, assignor.)

Seaver, John W., deceased, (M. T. P. Seaver, executrix,) Cleveland Heights, and J. E. A. Moore, East Cleveland, Ohio; said Moore assignor to said Seaver. Apparatus to be used in constructing concrete walls, piers, &c. No. 1,018,634; Feb. 27; Sp. p. 5358; Gaz. vol. 175; p. 930.

Seaver, Mary T. P., executrix. (See Seaver and Moore.)

Sebree Mail Exchanging Device Co. (See Coyne and Eskholme, assignors.)

Sebree Mail Exchanging Device Co. (See Coyne, Taylor, and Eskholme, assignors.)

Sechrist, Albert, Denver, Colo. Chandelier. No. 1,017,694; Feb. 20; Sp. p. 3183; Gaz. vol. 175; p. 573.

Sedberry, James B., Thompsons Station, Tenn. Dental swage. No. 1,016,786; Feb. 6; Sp. p. 1237; Gaz. vol. 175; p. 190.

Seeley, James E., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal. Magneto. No. 1,017,507; Feb. 13; Sp. p. 2983; Gaz. vol. 175; p. 504.

Seelig, Arthur, Wilmersdorf, Berlin, Germany. Tire. No. 1,017,596; Feb. 13; Sp. p. 2994; Gaz. vol. 175; p. 504.

Seely, Arthur Y. (See Perrine, James F., assignor.)

Segel, Bertram F., deceased, Bethlehem, (H. E. G. Segel, South Bethlehem, Pa., administrator,) and O. F. Marsh, Bethlehem, Pa. Tool. No. 1,018,210; Feb. 20; Sp. p. 4389; Gaz. vol. 175; p. 754.

Segel, Herman E. G., administrator. (See Segel and Marsh.)

Seibert, Christopher A., Sandyville, Ohio. Saw-clamp. No. 1,016,963; Feb. 13; Sp. p. 1631; Gaz. vol. 175; p. 286.

Seidelinger, Roble, Wilmington, Del., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,297; Feb. 6; Sp. p. 133; Gaz. vol. 175; p. 21.

Seiler, Peter W. (See Sander and Seiler.)

Seitz, Charles, Albany, N. Y. Clutch mechanism. No. 1,016,647; Feb. 6; Sp. p. 953; Gaz. vol. 175; p. 143.

Seitz, Frederick, Rensselaer, N. Y. Tool-holder. No. 1,017,112; Feb. 13; Sp. p. 1979; Gaz. vol. 175; p. 338.

Selak, Howard A., assignor to C. N. Anderson, trustee, Philadelphia, Pa. Magnetic rotary meter. No. 1,016,964; Feb. 13; Sp. p. 1633; Gaz. vol. 175; p. 287.

Selin, Charles, Brooklyn, N. Y. Automatic drainage-governor. No. 1,017,178; Feb. 13; Sp. p. 2110; Gaz. vol. 175; p. 362.

Sellers, Wilfred, and H. C. Beck, Elwood, Ind. Guarded caster. No. 1,018,211; Feb. 20; Sp. p. 4302; Gaz. vol. 175; p. 755.

Semmes, Raphael T., Savannah, Ga. Sheet-metal piping. No. 1,017,020; Feb. 20; Sp. p. 3760; Gaz. vol. 175; p. 654.

Sennebrenner, Carl, Duesseldorf-Oberkassel, Germany. Combined condensing and evaporating apparatus for ice-making machines. No. 1,017,695; Feb. 20; Sp. p. 3186; Gaz. vol. 175; p. 573.

Seppala, Oscar A., Chicago, Ill. Automobile-fender. No. 1,018,085; Feb. 20; Sp. p. 4122; Gaz. vol. 175; p. 711.

Serpek, Ottokar, Zurich, Switzerland. Removing impurities from impure aluminous material and producing nitrogen compounds therefrom. No. 1,016,526; Feb. 6; Sp. p. 682; Gaz. vol. 175; p. 102.

Sessions, Albert L., Bristol, Conn. Sheet-metal structure. No. 1,018,728; Feb. 27; Sp. p. 5556; Gaz. vol. 175; p. 962.

Sewall, Daniel D. (See Sewall, James H., assignor.)

Sewall, James H., Keene, N. H., assignor of one-half to D. D. Sewall, Augusta, Me. Belt-tightener. No. 1,016,787; Feb. 6; Sp. p. 1238; Gaz. vol. 175; p. 191.

Seward, Ernest R., assignor to The Hartford Machine Screw Company, Hartford, Conn. Pump. No. 1,018,879; Feb. 20; Sp. p. 4734; Gaz. vol. 175; p. 811.

Shank, Daniel, Clayton, Ill. Road-drag. No. 1,018,785; Feb. 27; Sp. p. 5681; Gaz. vol. 175; p. 982.

Shank, Leroy S., assignor of one-half to W. A. Morris, Findlay, Ohio. Towel-cabinet. No. 1,018,011; Feb. 20; Sp. p. 3954; Gaz. vol. 175; p. 684.

Shanks, Rose J. A. (See Jackson, Thomas C., assignor.)

Shapiro, David H., Montreal, Quebec, Canada. Skirt. No. 1,018,012; Feb. 20; Sp. p. 3955; Gaz. vol. 175; p. 684.

Sharp, Benjamin Y., Uvalde, Tex. Extracting wax from the candelilla-plant. No. 1,018,380; Feb. 27; Sp. p. 5270; Gaz. vol. 175; p. 916.

Sharp, Charles E., Pittsburgh, Pa. Attachment for paint-ers' stages. No. 1,017,860; Feb. 13; Sp. p. 2965; Gaz. vol. 175; p. 504.

Sharp, Fred N., Ossian, Ind. Hinge. No. 1,018,449; Feb. 27; Sp. p. 4903; Gaz. vol. 175; p. 867.

Sharp, George C., Nicetown, Pa. Clothes-line prop. No. 1,018,523; Feb. 27; Sp. p. 5121; Gaz. vol. 175; p. 892.

Sharp, Lee C., Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y. Can-body forming and seaming machine. No. 1,017,815; Feb. 20; Sp. p. 3498; Gaz. vol. 175; p. 615.

Shatzer, Norman C., Zullinger, Pa. Game. No. 1,016,583; Feb. 6; Sp. p. 814; Gaz. vol. 175; p. 121.

Shaw, John, deceased, Kirby Moorside, North Riding; J. R. Shaw, Elmsall Lodge, Pontefract, England, administrator. Gear for the prevention of overwinding. No. 1,017,600; Feb. 13; Sp. p. 2988; Gaz. vol. 175; p. 506.

Shaw, John H., New Haven, and F. I. Kimball, West Haven, assignors to Sargent & Co., New Haven, Conn. Duplex-cylinder pin-tumbler lock. No. 1,018,683; Feb. 27; Sp. p. 5460; Gaz. vol. 175; p. 947.

Shaw, John R., administrator. (See Shaw, John.)

Shaw, John R., Rural Valley, Pa. Tool. No. 1,018,932; Feb. 27; Sp. p. 5978; Gaz. vol. 175; p. 1030.

Shaw, William, J. Bower, and F. Wilson, Bradford, England. Bur-crushing or like apparatus for use in connection with carding-engines. No. 1,017,179; Feb. 13; Sp. p. 2112; Gaz. vol. 175; p. 362.

Shea, John F., Tampa, Fla. Universal sheave. No. 1,016,965; Feb. 13; Sp. p. 1635; Gaz. vol. 175; p. 287.

Shea, John J., Beverly, Mass. Aseptic cup. No. 1,018,013; Feb. 20; Sp. p. 3957; Gaz. vol. 175; p. 685.

Sheahan, James H., Freeport, Ill. Roller-skate. No. 1,016,447; Feb. 6; Sp. p. 483; Gaz. vol. 175; p. 73.

Shearman, Orlo F., and C. F. Erdmann, Otto, N. Y. Hydrocarbon-burner. No. 1,017,180; Feb. 13; Sp. p. 2113; Gaz. vol. 175; p. 362.

Sheckler, John F., Oklahoma, Okla. Machine for making brick. No. 1,017,921; Feb. 20; Sp. p. 3761; Gaz. vol. 175; p. 654.

Sheehan, Walter J., and J. H. Gilbertson, Coalinga, Cal.; said Gilbertson assignor to said Sheehan. Cable and wire cutter. No. 1,018,274; Feb. 20; Sp. p. 4513; Gaz. vol. 175; p. 776.

Sheehan, William E., Albany, N. Y. Paper-making machinery. No. 1,018,450; Feb. 27; Sp. p. 4904; Gaz. vol. 175; p. 867.

Sheen, Davis Rudd, Tex. Windmill and engine coupling. No. 1,017,021; Feb. 13; Sp. p. 1751; Gaz. vol. 175; p. 306.

Shelden, Frank M., Newcastle, Wyo. Seed-drill. No. 1,018,933; Feb. 27; Sp. p. 5980; Gaz. vol. 175; p. 1031.

Sheldon, Harry E., Pittsburgh, Pa. Treating metal sheets or plates. No. 1,016,715; Feb. 6; Sp. p. 1089; Gaz. vol. 175; p. 168.

Shelton, James D., Nortonville, Ky. Automatic car-coupling. No. 1,016,788; Feb. 6; Sp. p. 1242; Gaz. vol. 175; p. 191.

Shepherd, Charles P., and E. S. Conrad, Grand Rapids, Mich. Sheet-metal work. No. 1,016,584; Feb. 6; Sp. p. 815; Gaz. vol. 175; p. 121.

Shepherd, John E., Chicago, Ill., assignor to Automatic Fire Protection Company, New York, N. Y. Automatic fire-protection signal system. No. 1,018,451; Feb. 27; Sp. p. 4906; Gaz. vol. 175; p. 867.

Shepherd, Sydney H., Cricklewood, England. Steam-generating system. No. 1,016,857; Feb. 6; Sp. p. 1379; Gaz. vol. 175; p. 213.

Shepler, John B. (See Scanlan, Robert M., assignor.)

Sheron, James L., Marion, Ind. Tile-cutting machine. No. 1,017,922; Feb. 20; Sp. p. 3760; Gaz. vol. 175; p. 655.

Sherwood, William I., Montclair, N. J., assignor to Cordley & Hayes. Water-cooler stand. No. 1,018,212; Feb. 20; Sp. p. 4393; Gaz. vol. 175; p. 755.

Shnable, Emile R., assignor to Shnable & Quinn, Chicago, Ill. Excavator-bucket. No. 1,018,275; Feb. 20; Sp. p. 4514; Gaz. vol. 175; p. 776.

Shnable & Quinn. (See Shnable, Emile R., assignor.)

Shonk, Charles W., assignor to Charles W. Shonk Company, Maywood, Ill. Collapsible sheet-metal sign and can-holder. No. 1,017,606; Feb. 20; Sp. p. 3187; Gaz. vol. 175; p. 574.

Shook, H. J., *et al.* (See Gordon, William F. E., assignor.)

Shore, Frank M. (See Goodman, Ward C., assignor.)

Shukis, Joseph P., Wilkes-Barre, Pa. Diaphragm-operating attachment for cameras. No. 1,018,635; Feb. 27; Sp. p. 5360; Gaz. vol. 175; p. 930.

Shults, Harry H., Cherry Creek, N. Y. Assorting-table. No. 1,018,636; Feb. 27; Sp. p. 5361; Gaz. vol. 175; p. 930.

Shults, Harry H., Cherry Creek, N. Y. Mail-bag rack. No. 1,018,637; Feb. 27; Sp. p. 5364; Gaz. vol. 175; p. 931.

Shuman, Frank G., Chicago, Ill. Tape holder and moistener. No. 1,016,966; Feb. 13; Sp. p. 1637; Gaz. vol. 175; p. 287.

Shupp, George. (See Peek, James A., assignor.)

Sibbald, Charles J. (See Lyons, Robert L., assignor.)

Siedentopf, Henry, assignor to The Firm of C. Zeiss, Jena, Germany. Collective system. No. 1,016,369; Feb. 6; Sp. p. 290; Gaz. vol. 175; p. 46.

Siemens, Friedrich, Berlin, Germany. Furnace. No. 1,017,181; Feb. 13; Sp. p. 2115; Gaz. vol. 175; p. 363.

Sievers, Louis P., Larchwood, Iowa. Spring-wheel. No. 1,016,298; Feb. 6; Sp. p. 134; Gaz. vol. 175; p. 21.

Sim, George, assignor to D. Cameron, Chicago, Ill. Actuating mechanism. No. 1,018,014; Feb. 20; Sp. p. 3958; Gaz. vol. 175; p. 685.

Simms, Frederick R., Kilburn, London, England, assignor to The Simms Magneto Company. High-tension magneto-electric apparatus. No. 1,017,474; Feb. 18; Sp. p. 2759; Gaz. vol. 175; p. 464.

Simms Magneto Company, The. (See Simms, Frederick R., assignor.)

Simon, Steve, Youngstown, Ohio. Fly-trap. No. 1,018,213; Feb. 20; Sp. p. 4396; Gaz. vol. 175; p. 755.

Simpson, Clarence D. (See Watres, Lewis S., assignor.)

Simpson, John, Chicago, Ill. Saw-set. No. 1,017,475; Feb. 18; Sp. p. 2760; Gaz. vol. 175; p. 466.

Sims, Henry W., Dallas, Tex. Revolver supporting and operating apparatus. No. 1,018,015; Feb. 20; Sp. p. 3960; Gaz. vol. 175; p. 685.

Simson, Joseph. (See Deimel, Fritz, assignor.)

Sinclair, George, Greenwich, Ohio. Apparatus for heating and cooling liquids. No. 1,017,816; Feb. 20; Sp. p. 3505; Gaz. vol. 175; p. 616.

Sine, Allie M. (See Sine, David A., assignor.)

Sine, David A., assignor to A. M. Sine, Rochester, N. Y. Drill-holder. No. 1,018,729; Feb. 27; Sp. p. 5558; Gaz. vol. 175; p. 962.

Singer, Charles H., Parral, Mexico. Filter. No. 1,017,476; Feb. 18; Sp. p. 2763; Gaz. vol. 175; p. 466.

Singer Manufacturing Company, The. (See Abercrombie, William R., assignor.)

Singer Manufacturing Company, The. (See Eames, George M., assignor.)

Singer Manufacturing Company, The. (See Gray, Charles F., assignor.)

Singer Manufacturing Company, The. (See Grieb, Alfred, assignor.)

Singer Manufacturing Company, The. (See Karle, John D., assignor.)

Singer Manufacturing Company, The. (See Noble, Donald, assignor.)

Singh, Narain, Dhalleke, India. Perpetual calendar. No. 1,016,370; Feb. 6; Sp. p. 291; Gaz. vol. 175; p. 46.

Single Service Package Corporation of America. (See Beadle, George W., assignor.)

Single Service Package Corporation of America. (See Jenkins, Charles F., assignor.)

Single Service Package Corporation of America. (See Osborn, Francis C., assignor.)

Sinsheimer, Sidney W., Swink, Colo. Pressure-valve. No. 1,016,967; Feb. 13; Sp. p. 1638; Gaz. vol. 175; p. 288.

Sivertson, Tannes, Tacoma, Wash. Railway-track. No. 1,017,601; Feb. 18; Sp. p. 2990; Gaz. vol. 175; p. 505.

Slack, George M., Altoona, Pa. Journal-box pedestal. No. 1,017,113; Feb. 13; Sp. p. 1971; Gaz. vol. 175; p. 330.

Slater, George W., Oakland, Cal. Driving mechanism. No. 1,017,923; Feb. 20; Sp. p. 3770; Gaz. vol. 175; p. 655.

Slaughter, Samuel G., Lynchburg, Va. Emergency package and splint. No. 1,018,462; Feb. 27; Sp. p. 4913; Gaz. vol. 175; p. 868.

Sleeper, Joseph J., Moores, Pa., assignor to Utility Advertising Company, Camden, N. J. Advertising apparatus. No. 1,016,371; Feb. 6; Sp. p. 294; Gaz. vol. 175; p. 46.

Slevin, James J., New York, N. Y. Vacuum cleaning device for cleaning animals. No. 1,018,136; Feb. 20; Sp. p. 4237; Gaz. vol. 175; p. 728.

Sloss, Aaron M. (See Malmstrom, Peter E., assignor.)

Smart, Leonard W., Chicago, Ill. Sash-cord fastener. No. 1,018,214; Feb. 20; Sp. p. 4395; Gaz. vol. 175; p. 755.

Smiley, John J., assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Ready-made roofing. No. 1,018,524; Feb. 27; Sp. p. 5122; Gaz. vol. 175; p. 893.

Smith, Albert D., assignor of one-half to N. L. Minster, Ogden, Utah. Horseshoer's foot-vise. No. 1,018,380; Feb. 20; Sp. p. 4736; Gaz. vol. 175; p. 811.

Smith, Arthur A., Cedar Vale, Kans. Coffee-pot. No. 1,018,684; Feb. 27; Sp. p. 5462; Gaz. vol. 175; p. 947.

Smith, Arthur W., New York, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,016,968; Feb. 13; Sp. p. 1640; Gaz. vol. 175; p. 288.

Smith, Charles E., New York, assignor to Union Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,017,022; Feb. 13; Sp. p. 1754; Gaz. vol. 175; p. 306.

Smith, Charles S., Providence, assignor to Chernack Manufacturing Company, Pawtucket, R. I. Tubular fabric. No. 1,016,527; Feb. 6; Sp. p. 683; Gaz. vol. 175; p. 102.

Smith, Chauncey, Atlanta, Ga. Letter-filing device. No. 1,016,789; Feb. 6; Sp. p. 1244; Gaz. vol. 175; p. 192.

Smith, Chester J., Jamestown, and P. Kleeberg, assignors to National Calculator Company, New York, N. Y. Calculator. No. 1,017,182; Feb. 18; Sp. p. 2116; Gaz. vol. 175; p. 363.

Smith, Claude P., Oak Park, Ill. Electric-light switch. No. 1,018,934; Feb. 27; Sp. p. 5982; Gaz. vol. 175; p. 1031.

Smith, David C., Fort Worth, Tex. Controller attachment for levers. No. 1,016,448; Feb. 6; Sp. p. 434; Gaz. vol. 175; p. 74.

Smith, Dearcy A., assignor to Acme Saddlery Company, Kansas City, Mo. Horse-collar. No. 1,017,477; Feb. 18; Sp. p. 2765; Gaz. vol. 175; p. 466.

Smith, Edward C., and E. L. Marshall, Fremont, assignors to National Carbon Company, Cleveland, Ohio. Galvanic battery. No. 1,017,064; Feb. 13; Sp. p. 1963; Gaz. vol. 175; p. 321.

Smith, Edward F., assignor to The Smith Electric Tool Co., Cincinnati, Ohio, Tool-holding means. No. 1,018,526; Feb. 27; Sp. p. 5123; Gaz. vol. 175; p. 893.

Smith, Edward M., Fall River, Mass. Fuel-injector. No. 1,018,276; Feb. 20; Sp. p. 4617; Gaz. vol. 175; p. 778.

Smith & Egge Mfg. Co., The. (See Egge, Frederick, assignor.)

Smith Electric Tool Co., The. (See Smith, Edward F., assignor.)

Smith, Elmer J., assignor to Peter Smith Heater Company, Detroit, Mich. Heating apparatus. No. 1,016,665; Feb. 13; Sp. p. 1643; Gaz. vol. 175; p. 289.

Smith, Frank, Roseville, Ga. Spring-wheel. No. 1,017,289; Feb. 13; Sp. p. 2439; Gaz. vol. 175; p. 414.

Smith, Frank F., Newark, N. J. Sash-pulley. No. 1,017,114; Feb. 13; Sp. p. 1972; Gaz. vol. 175; p. 330.

Smith, Franklin S., Philadelphia, Pa. Electrical apparatus for destroying insects. No. 1,016,449; Feb. 6; Sp. p. 485; Gaz. vol. 175; p. 74.

Smith, Franklin S., Philadelphia, Pa. Apparatus for destroying insects by means of electricity. No. 1,016,450; Feb. 6; Sp. p. 491; Gaz. vol. 175; p. 75.

Smith, Franklin S., Philadelphia, Pa. Electrical apparatus for destroying insects. No. 1,016,451; Feb. 6; Sp. p. 494; Gaz. vol. 175; p. 75.

Smith, Franklin S., Philadelphia, Pa. Electrical apparatus for destroying insects. No. 1,016,452; Feb. 6; Sp. p. 497; Gaz. vol. 175; p. 75.

Smith, Franklin S., Philadelphia, Pa. Electrical apparatus for destroying insects. No. 1,016,453; Feb. 6; Sp. p. 499; Gaz. vol. 175; p. 76.

Smith, Franklin S., Philadelphia, Pa. Electrical apparatus for destroying insects. No. 1,016,716; Feb. 6; Sp. p. 1090; Gaz. vol. 175; p. 166.

Smith, Franklin S., Philadelphia, Pa. Destroying insects. No. 1,016,790; Feb. 6; Sp. p. 1245; Gaz. vol. 175; p. 192.

Smith, Frederick H., Pittsburg, Kans. Bearing. No. 1,017,115; Feb. 13; Sp. p. 1974; Gaz. vol. 175; p. 340.

Smith, Grant, Toronto, Ontario, Canada. Pressure-governor for heating systems. No. 1,016,872; Feb. 6; Sp. p. 298; Gaz. vol. 175; p. 47.

Smith, Harry W. (See Davis and Smith.)

Smith, James M., assignor of one-half to W. D. C. Wright, Philadelphia, Pa. Double or twin interrupter for ignition systems. No. 1,018,187; Feb. 20; Sp. p. 4239; Gaz. vol. 175; p. 728.

Smith, James M., assignor of one-half to W. D. C. Wright, Philadelphia, Pa. Electrical-circuit switch. No. 1,018,381; Feb. 20; Sp. p. 4738; Gaz. vol. 175; p. 811.

Smith, Jessie, Selma, Ala. Food-warming cabinet. No. 1,016,791; Feb. 6; Sp. p. 1249; Gaz. vol. 175; p. 192.

Smith, John C. (See Winkley and Smith.)

Smith, John P. (See Kilgore, Charles T., assignor.)

Smith, Mabel E., *et al.* (See Schoonover, James S., assignor.)

Smith, Mark H. (See Joy, Smith, and Kerr.)

Smith, Norman J. (See Leonard and Smith.)

Smith and Post Company. (See Symons, Edgar B., assignor.)

Smith Premier Typewriter Company, The. (See Dyer, William A., assignor.)

Smith Premier Typewriter Company. (See Zellers and Price, assignors.)

Smith, Robert B., Quincy, Mass., assignor to United Shoe Machinery Company. Punching mechanism for eyeting-machines, &c. No. 1,016,717; Feb. 6; Sp. p. 1094; Gaz. vol. 175; p. 166.

Smith, Robert B., Stoughton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting machine. No. 1,017,602; Feb. 18; Sp. p. 2992; Gaz. vol. 175; p. 506.

Smith, Robert H., Boston, Mass. Book-holder. No. 1,016,970; Feb. 13; Sp. p. 1649; Gaz. vol. 175; p. 289.

Smith, Robert H., assignor of one-eighth to J. A. Law Spartanburg, S. C., eighteen one-hundredths to T. L. Camp, and eighteen one-hundredths to E. M. Durant Atlanta, Ga. Stripper for carding-machines. No. 1,018,935; Feb. 27; Sp. p. 5984; Gaz. vol. 175; p. 1032.

Smith, Robert W. (See Linge, Louis J., Jr., assignor.)

Smith, Rudolph C., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Elevator safety device. No. 1,018,903; Feb. 6; Sp. p. 1464; Gaz. vol. 175; p. 220.

Smith, Samuel C., Daisy, La. Clam-shell dredger. No. 1,018,848; Feb. 27; Sp. p. 5806; Gaz. vol. 175; p. 1003.

Smith, Samuel J., Truckee, Cal. Pillow. No. 1,018,635; Feb. 27; Sp. p. 5463; Gaz. vol. 175; p. 947.

Smith & Son Company, Leo S. (See Vernon and De Camp, assignors.)

Smith, Thomas M., Mullin, Tex. Pipe lifting and lowering jack. No. 1,018,936; Feb. 27; Sp. p. 5987; Gaz. vol. 175; p. 1032.

Smith, Thomas T., Lots Creek township, Ringgold county, Iowa. Mud-gate fastening. No. 1,018,453; Feb. 27; Sp. p. 4914; Gaz. vol. 175; p. 868.

Smith, William S. (See Call and Smith.)

Smothers, John N., and J. N. Carroll, Mortons Gap, Ky. Pick-sharpener. No. 1,017,697; Feb. 20; Sp. p. 3188; Gaz. vol. 175; p. 574.

Seaman, William R., Pittsburgh, Pa. Float-valve. No. 1,018,937; Feb. 27; Sp. p. 5991; Gaz. vol. 175; p. 1033.

Snead, John M., Chicago, Ill., assignor to Gravity Coal Bin Company. Sorting and storing device. No. 1,016,971; Feb. 13; Sp. p. 1646; Gaz. vol. 175; p. 289.

Snell, George D., Denver, Colo. Disinfectant or insecticide container. No. 1,016,[illegible]; Feb. 6; Sp. p. 963; Gaz. vol. 175; p. 144.

Snell, William T., Bisbee, Ariz. Trading-box. No. 1,018,938; Feb. 27; Sp. p. [illegible]; Gaz. vol. 175; p. 1033.

Snow, Stephen, Everett, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Pounding-up machine. No. 1,018,[illegible]; Feb. 27; Sp. p. 5125; Gaz. vol. 175; p. 893.

Snow, Stephen, Everett, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-support for pounding-up machines. No. 1,018,[illegible]; Feb. 27; Sp. p. [illegible]; Gaz. vol. 175; p. 861.

Snyder, Emery, Portsmouth, Ohio. Fire-escape. No. 1,016,[illegible]; Feb. 6; Sp. p. 127; Gaz. vol. 175; p. 21.

Snyder, Owen T., Columbus, Ohio. Indicator for elevator-guides. No. 1,017,[illegible]; Feb. 18; Sp. p. 2440; Gaz. vol. 175; p. 415.

Società Anonima Italiana Gio Ansaldo Armstrong & Co. (See Giolitti, Federico, assignor.)

Società dei Onyx du Mont-Blanc et des Pyrénées. (See Feertambordo, Ernest L., assignor.)

Société Générale des Conserves De Voitures (Taximetres), The. (See Popp, Richard G., assignor.)

Spilman, Ragnar, H. Northcroft, and H. Morda, Bofors, Sweden. Fuse for high-explosive shells. No. 1,016,[illegible]; Feb. 6; Sp. p. 300; Gaz. vol. 175; p. 47.

Sobolewski, Theophile. (See Bunnik and Sobolewski.)

Sobolewski, Theophile, and W. Bunnik, St. Louis, Mo. Hatpin guard. No. 1,017,[illegible]; Feb. 20; Sp. p. 3803; Gaz. vol. 175; p. 616.

Solem, Peter A., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Grinding-machine. No. 1,016,[illegible]; Feb. 6; Sp. p. 315; Gaz. vol. 175; p. 122.

Stanichesen, Andreas M., Milwaukee, Wis., assignor to Auto Parts Manufacturing Company. Tire-holder. No. 1,018,[illegible]; Feb. 27; Sp. p. 5277; Gaz. vol. 175; p. 916.

Stark, Frank J., Sedgwick, Kans. Tag-holder. No. 1,017,[illegible]; Feb. 13; Sp. p. 2005; Gaz. vol. 175; p. 506.

Steel, Edward L., San Francisco, Cal. Metal-bending machine. No. 1,018,[illegible]; Feb. 20; Sp. p. 4124; Gaz. vol. 175; p. 711.

Steel, Leonard R., Cleveland, Ohio. Milk-can. No. 1,016,[illegible]; Feb. 6; Sp. p. 303; Gaz. vol. 175; p. 48.

Steel, Leonard R., Cleveland, Ohio. Milk-can. No. 1,016,[illegible]; Feb. 13; Sp. p. 1651; Gaz. vol. 175; p. 290.

Steel, Leonard R., Cleveland, Ohio. Ice-cream-storage can. No. 1,016,[illegible]; Feb. 13; Sp. p. 1653; Gaz. vol. 175; p. 290.

Steele, Edwin G. (See Sutton and Steele.)

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,018,639; Feb. 27; Sp. p. 5871; Gaz. vol. 175; p. 931.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,018,736; Feb. 27; Sp. p. 5883; Gaz. vol. 175; p. 932.

Steele, Walter L. (See Sutton and Steele.)

Steen, Halfdan A., Milwaukee, Wis., assignor to Allis-Steen, Chalmers Company. Rheostat. No. 1,016,793; Feb. 6; Sp. p. 1252; Gaz. vol. 175; p. 193.

Steiger, Emil H. (See Jerrems, Thomas W., assignor.)

Stein, George W., Chicago, Ill. Window-screen. No. 1,018,215; Feb. 20; Sp. p. 4396; Gaz. vol. 175; p. 756.

Steinbrenner, Andrew G., Cleveland, Ohio. Bracket-support for vehicle-tops. No. 1,016,653; Feb. 6; Sp. p. 561; Gaz. vol. 175; p. 145.

Stendebach, John P., Fruitvale, Cal. Non-refillable bottle. No. 1,018,993; Feb. 27; Sp. p. 6128; Gaz. vol. 175; p. 1053.

Stenger, W. H. (See Swett, William H., assignor.)

Stephens, George, Jr., Danvers, Ill. Hog-suspending device. No. 1,017,185; Feb. 18; Sp. p. 2128; Gaz. vol. 175; p. 364.

Sterling-Meaker Company. (See Gierding, Charles E., assignor.)

Sternberg, Romalind. (See Harris and Sternberg.)

Sterrick, Harrison D., Pittsburgh, Pa. Shaving-brush. No. 1,018,939; Feb. 27; Sp. p. 5996; Gaz. vol. 175; p. 1034.

Stetson, Lucy H., *et al.* (See Woodbull, Frederick W., assignor.)

Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier. (See Flaccus, Ludwig C., assignor.)

St. John, Thomas M., New York, N. Y. Electrical communicating apparatus. No. 1,018,940; Feb. 27; Sp. p. 5997; Gaz. vol. 175; p. 1034.

Staats, William H., Colonie, N. Y. Pneumatic spring. No. 1,016,651; Feb. 6; Sp. p. 960; Gaz. vol. 175; p. 145.

Stack, George B., Sacramento, Cal. Public drinking-fountain. No. 1,016,652; Feb. 6; Sp. p. 960; Gaz. vol. 175; p. 145.

Stack, John T. (See Inman, Gilbert H., assignor.)

Stacy, James N., New York, N. Y. Moistener and sealer. No. 1,018,592; Feb. 27; Sp. p. 5280; Gaz. vol. 175; p. 917.

Stafford Company, The. (See Jackson, Simeon S., assignor.)

Stahl, Carl, Nuremberg, Germany. Brush. No. 1,017,334; Feb. 18; Sp. p. 2445; Gaz. vol. 175; p. 415.

Stahl, Carl H. (See Ryden and Stahl.)

Standard Car Truck Company. (See Barber, John C., assignor.)

Standard Coupler Company. (See Gallagher, Richard D., Jr., assignor.)

Standard Manufacturing Company, The. (See Andrews, Daniel A., assignor.)

Standard Oil Company. (See Eggleston, John E., assignor.)

Standard Oil Company. (See Robinson, Clarence L., assignor.)

Standard Roller Bearing Co. (See Carpenter, George H., assignor.)

Stanley, Nathan M., Dayton, Ohio. Making metallic letters. No. 1,018,138; Feb. 20; Sp. p. 4245; Gaz. vol. 175; p. 729.

Stanley, Theodore D., Detroit, Mich. Lock for steering-wheels. No. 1,017,335; Feb. 13; Sp. p. 2446; Gaz. vol. 175; p. 416.

Star Ball Bearing Door Hanger Company. (See Periman, Abraham, assignor.)

Star Ball Retainer Company, The. (See Straub, Jackson L., assignor.)

Stark, Charles H., Strasburg, Va. Extensible step. No. 1,017,116; Feb. 13; Sp. p. 1976; Gaz. vol. 175; p. 340.

Stark, Michael J., Jr. (See Beals and Stark.)

Starr, Ferdinand W., Springfield, Ohio. Furniture-caster. No. 1,016,300; Feb. 6; Sp. p. 140; Gaz. vol. 175; p. 22.

Starr, John H., assignor to E. A. Mallory and Sons, Incorporated, Danbury, Conn. Nap-raising machine for felt hats. No. 1,017,924; Feb. 20; Sp. p. 3771; Gaz. vol. 175; p. 655.

Starr Piano Company. (See Draper, Francis W., assignor.)

Stäubli, Gebr. (See Stäubli, Hermann, assignor.)

Stäubli, Hermann, assignor to Gebr. Stäubli, Horgen, Switzerland. Dobby of the Hattersley type. No. 1,017,134; Feb. 13; Sp. p. 2126; Gaz. vol. 175; p. 363.

Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Blank packing and counting mechanism. No. 1,018,087; Feb. 20; Sp. p. 4125; Gaz. vol. 175; p. 711.

Stauf, Philip, Muncie, Ind. Cooler. No. 1,017,478; Feb. 13; Sp. p. 2766; Gaz. vol. 175; p. 466.

Stevens, Enoch P., Morgan Park, Ill. Fire-brick arch for locomotive fire-boxes. No. 1,016,454; Feb. 6; Sp. p. 501; Gaz. vol. 175; p. 77.

Stevenson, Mark D., Akron, Ohio. Transparent book-support. No. 1,017,698; Feb. 20; Sp. p. 3189; Gaz. vol. 175; p. 574.

Steventon, Walter J., Nesquehoning, Pa. Railway-tie. No. 1,018,787; Feb. 27; Sp. p. 5685; Gaz. vol. 175; p. 983.

Stewart, Albert P., *et al.* (See Williamson, John, assignor.)

Stewart, Alfred C., Los Angeles, Cal. Carbureting device for heavy fuels. No. 1,017,186; Feb. 13; Sp. p. 2129; Gaz. vol. 175; p. 364.

Stewart, Annie. (See Stewart, James S., assignor.)

Stewart, Francis L., Murrysville, assignor to Maize Sugar & Cellulose Company, Pittsburgh, Pa. Manufacture of cellulose. No. 1,017,023; Feb. 13; Sp. p. 1750; Gaz. vol. 175; p. 307.

Stewart, Francis L., Murrysville, assignor to Maize Sugar & Cellulose Company, Pittsburgh, Pa. Preparing sugar-cane and maize juices. No. 1,018,994; Feb. 27; Sp. p. 6130; Gaz. vol. 175; p. 1053.

Stewart, James S., assignor to A. Stewart, New York, N. Y. Lamp-receptacle. No. 1,016,718; Feb. 6; Sp. p. 1096; Gaz. vol. 175; p. 168.

Stewart, Walter J., Reno, Nev. Animal-trap. No. 1,017,479; Feb. 13; Sp. p. 2769; Gaz. vol. 175; p. 467.

Stieg, August, assignor to The Emerson Typewriter Co., Woodstock, Ill. Back-feed mechanism for type-writers. No. 1,018,995; Feb. 27; Sp. p. 6132; Gaz. vol. 175; p. 1053.

Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Automatically-threading shuttle. No. 1,017,065; Feb. 13; Sp. p. 1854; Gaz. vol. 175; p. 322.

Stinson, William A., Greenwood, Miss. Swingletree and trace connection. No. 1,017,024; Feb. 13; Sp. p. 1760; Gaz. vol. 175; p. 307.

Stockmann, Theodor, Wilmersdorf, near Berlin, Germany. Fire-pot for engines. No. 1,017,386; Feb. 13; Sp. p. 2450; Gaz. vol. 175; p. 416.

Stolp, Samuel S., assignor of one-half to W. J. C. Kenyon, Chicago, Ill. Block-signal system for electric railways. No. 1,016,975; Feb. 13; Sp. p. 1654; Gaz. vol. 175; p. 291.

Stoltz, Martin, South Dayton, N. Y. Vegetable-harvester. No. 1,016,976; Feb. 13; Sp. p. 1658; Gaz. vol. 175; p. 291.

Stolz, Friedrich, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. 1-p-dimethylaminophenyl-3.4.4-trimethyl-5-pyrazolone and making same. No. 1,017,699; Feb. 20; Sp. p. 3191; Gaz. vol. 175; p. 574.

Stone, Donald B., Springville, Iowa. Corn-pick. No. 1,018,788; Feb. 27; Sp. p. 5687; Gaz. vol. 175; p. 983.

Stone, Elmer B., assignor to The Corbin Cabinet Lock Company, New Britain, Conn. Lock. No. 1,016,455; Feb. 6; Sp. p. 503; Gaz. vol. 175; p. 77.

Stone, Elmer B., assignor to The Corbin Cabinet Lock Company, New Britain, Conn. Lock. No. 1,018,216; Feb. 20; Sp. p. 4397; Gaz. vol. 175; p. 756.

Stone, Fenn O., Cincinnati, Ohio. Means of wrapping and packing cakes. No. 1,017,337; Feb. 13; Sp. p. 2452; Gaz. vol. 175; p. 417.

Storen, Andrew G. (See Mollberg and Storen.)

Storen, John O. (See Mollberg and Storen.)

Storm, Carl, Ann Arbor, Mich. Collapsible umbrella. No. 1,018,941; Feb. 27; Sp. p. 5998; Gaz. vol. 175; p. 1034.

Storme, Peter, assignor to Hengler & Cronemeyer, Crefeld, Germany. Dough-molding machine. No. 1,018,640; Feb. 27; Sp. p. 5380; Gaz. vol. 175; p. 932.

Stout, Robert P. (See Meigs and Stout.)

Strache, Hugo, Vienna, Austria-Hungary. Means for indicating the production of gas. No. 1,018,942; Feb. 27; Sp. p. 5999; Gaz. vol. 175; p. 1034.

Stransky, Stephen, West Philadelphia, Pa. Hat-pin. No. 1,016,719; Feb. 6; Sp. p. 1099; Gaz. vol. 175; p. 169.

Stratford, Egbert C. (See Dee, Daniel, assignor.)

Straub, Harman, Ensley, Ala. Draft-rigging for rolling-stock. No. 1,016,858; Feb. 6; Sp. p. 1880; Gaz. vol. 175; p. 213.

Straub, Jackson L., assignor to The Star Ball Retainer Company, Lancaster, Pa. Ball-retainer. No. 1,017,480; Feb. 13; Sp. p. 2770; Gaz. vol. 175; p. 467.

Straus, Joseph H., Jr., assignor of one-half to R. H. Williams, Baltimore, Md. Clip used in concrete construction. No. 1,018,018; Feb. 20; Sp. p. 3965; Gaz. vol. 175; p. 687.

Strayer, Charles W., Los Angeles, Cal. Daily appointment-calendar. No. 1,018,641; Feb. 27; Sp. p. 5381; Gaz. vol. 175; p. 932.

Streeter-Amet Weighing & Recording Company. (See Goetz, George, assignor.)

Strickler, William H., Chicago, Ill. Transporting and elevating device. No. 1,017,117; Feb. 13; Sp. p. 1979; Gaz. vol. 175; p. 340.

Strock, Joseph G., Trindle Spring, Pa. Bath-seat. No. 1,017,700; Feb. 20; Sp. p. 3192; Gaz. vol. 175; p. 574.

Stroh, Sigmund, London, England. Seal for packing-cases. No. 1,018,943; Feb. 27; Sp. p. 6000; Gaz. vol. 175; p. 1035.

Strohn, Emil W., Buffalo, N. Y. Condensing apparatus. No. 1,017,336; Feb. 13; Sp. p. 2453; Gaz. vol. 175; p. 417.

Stroots, Oscar W., Abbotsford, Wis. Cheese-hoop. No. 1,018,789; Feb. 27; Sp. p. 5688; Gaz. vol. 175; p. 983.

Strother, Martin L., assignor of one-half to W. Vorlaufer, Tonopah, Nev. Car-replacer. No. 1,016,376; Feb. 6; Sp. p. 305; Gaz. vol. 175; p. 48.

Stroud, William. (See Barr and Stroud.)

Stuart, Richard, Crows Landing, Cal. Gun-sight. No. 1,017,339; Feb. 13; Sp. p. 2454; Gaz. vol. 175; p. 417.

Stull, Emmett W., Milwaukee, Wis., assignor to Allis-Chalmers Company. System of motor control. No. 1,016,794; Feb. 6; Sp. p. 1255; Gaz. vol. 175; p. 193.

Stull, Emmett W., Milwaukee, Wis., assignor to Allis-Chalmers Company. Motor-control system. No. 1,017,270; Feb. 13; Sp. p. 2312; Gaz. vol. 175; p. 393.

Stull, Emmett W., Milwaukee, Wis., assignor to Allis-Chalmers Company. Controller. No. 1,018,019; Feb. 20; Sp. p. 3966; Gaz. vol. 175; p. 687.

Subera, Lawrence A., Cleveland, Ohio. Laminated cohesive interwound fabric band. No. 1,017,271; Feb. 13; Sp. p. 2314; Gaz. vol. 175; p. 394.

Suddarth, Archibald C., Monterey, Va. Wrench. No. 1,018,528; Feb. 27; Sp. p. 5133; Gaz. vol. 175; p. 894.

Suddoth, Frank, Mount Vernon, Ind. Ruler. No. 1,018,790; Feb. 27; Sp. p. 5689; Gaz. vol. 175; p. 983.

Suhre, Henry N., Sparrows Point, Md. Roach-trap. No. 1,018,277; Feb. 20; Sp. p. 4519; Gaz. vol. 175; p. 777.

Sulliger, Jean, Geneva, Switzerland. Mowing-machine. No. 1,016,586; Feb. 6; Sp. p. 819; Gaz. vol. 175; p. 122.

Sundelin, Gustaf T., Robertsfors, Sweden. Measuring apparatus for liquids. No. 1,016,377; Feb. 6; Sp. p. 306; Gaz. vol. 175; p. 48.

Sundh, August, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Gearing. No. 1,017,819; Feb. 20; Sp. p. 3509; Gaz. vol. 175; p. 616.

Sullivan, Birdwell E., Keokuk, Iowa. Umbrella. No. 1,016,301; Feb. 6; Sp. p. 141; Gaz. vol. 175; p. 22.

Sutton, Henry M., W. L. and E. G. Steele, Dallas, Tex. Electrostatic separator. No. 1,017,701; Feb. 20; Sp. p. 3193; Gaz. vol. 175; p. 575.

Sutton, Robert B., *et al.* (See White, Frank L., assignor.)

Svebilius, Henry M., Chicago, Ill. Propeller. No. 1,017,820; Feb. 20; Sp. p. 3512; Gaz. vol. 175; p. 617.

Swain, Edward L., New York, N. Y. Clock winding mechanism. No. 1,017,187; Feb. 13; Sp. p. 2131; Gaz. vol. 175; p. 365.

Swain, John T., Prentice, Ill. Target-trap. No. 1,017,272; Feb. 13; Sp. p. 2316; Gaz. vol. 175; p. 394.

Swanson, Charles H., Aurora, Ill. Hydrocarbon-vapor burner. No. 1,018,944; Feb. 27; Sp. p. 6002; Gaz. vol. 175; p. 1035.

Swanson, George A., Oakland, Cal. Folding table and seat. No. 1,018,593; Feb. 27; Sp. p. 5283; Gaz. vol. 175; p. 917.

Swart, Robert B., assignor to American Metal Screen and Weatherstrip Company, Detroit, Mich. Weather-strip. No. 1,017,340; Feb. 13; Sp. p. 2455; Gaz. vol. 175; p. 417.

Swartwout, Willis B., Milwaukee, Wis. Temple for spectacles. No. 1,017,702; Feb. 20; Sp. p. 3201; Gaz. vol. 175; p. 575.

Swartz, Max, New York, assignor to National Fire Proof Sash and Door Company, Brooklyn, N. Y. Sheet-metal window sash and frame. No. 1,017,241; Feb. 13; Sp. p. 2456; Gaz. vol. 175; p. 418.

Swartslander, James W., Coalinga, Cal. Mandrel. No. 1,016,587; Feb. 6; Sp. p. 820; Gaz. vol. 175; p. 122.

Swenson, Eric, assignor of one-half to National Iron Company, Duluth, Minn. Derrick. No. 1,018,529; Feb. 27; Sp. p. 5134; Gaz. vol. 175; p. 894.

Swett, William H., assignor to W. H. Stenger, Berkeley, Cal. Tobacco-smoke-absorption apparatus. No. 1,018,996; Feb. 27; Sp. p. 6135; Gaz. vol. 175; p. 1054.

Swickard, Dan B., Galva, Ill. Clamp. No. 1,017,821; Feb. 20; Sp. p. 3513; Gaz. vol. 175; p. 617.

Swiecicki, Michael. (See Kuniecki and Swiecicki.)

Swift, William H., New York, N. Y. Adjustable hanging lamp. No. 1,016,588; Feb. 6; Sp. p. 822; Gaz. vol. 175; p. 123.

Swing, Alfred J., assignor to The Auto-Spring Wheel Company, Cincinnati, Ohio. Wheel. No. 1,018,088; Feb. 20; Sp. p. 4132; Gaz. vol. 175; p. 712.

Swingle, Calvin H., and A. M. Miltenberg, Chicago, Ill. Mouthpiece for telephone-transmitters. No. 1,018,730; Feb. 27; Sp. p. 5560; Gaz. vol. 175; p. 962.

Switalski, Clemens. (See Ault and Switalski.)

Switzer, Maurice, New York, N. Y. Convertible article of furniture. No. 1,017,342; Feb. 13; Sp. p. 2458; Gaz. vol. 175; p. 418.

Swoverland, Leonard P., Bourbon, Ind. Silo. No. 1,016,526; Feb. 6; Sp. p. 685; Gaz. vol. 175; p. 102.

Symons, Edgar B., assignor to Smith and Post Company, Milwaukee, Wis. Stone-crusher. No. 1,016,904; Feb. 6; Sp. p. 1487; Gaz. vol. 175; p. 280.

Szathmáry, Paul, Clarence, N. Y. Conveyer for molten metal. No. 1,018,117; Feb. 20; Sp. p. 4399; Gaz. vol. 175; p. 756.

Szumlinski, John, Amsterdam, N. Y. Puzzle-box. No. 1,017,343; Feb. 13; Sp. p. 2460; Gaz. vol. 175; p. 418.

Tabor, L[illegible], and H. K. Hathaway, assignors, by mesne assignments, to The Tabor Manufacturing Company, Philadelphia, Pa. Lathe-tool-setting apparatus. No. 1,017,703; Feb. 20; Sp. p. 3202; Gaz. vol. 175; p. 575.

Tabor Manufacturing Company, The. (See Tabor and Hathaway, assignors.)

Taft, Sydney E. (See Hammond and Taft.)

Talks, Henry, Astoria, N. Y. Protecting mechanism for looms. No. 1,018,666; Feb. 27; Sp. p. 5466; Gaz. vol. 175; p. 947.

Talman, George C., Syracuse, N. Y. Testing apparatus for hollow castings. No. 1,017,704; Feb. 20; Sp. p. 3203; Gaz. vol. 175; p. 576.

Tancyhill, Harry W. (See Cooper, Tancyhill, and Page.)

Tasker, Frank W., Fairbanks, Tex. Hay-press. No. 1,017,822; Feb. 20; Sp. p. 3514; Gaz. vol. 175; p. 617.

Tappan, Charles O., assignor to Allis-Chalmers Company, Milwaukee, Wis. Hydraulic-power plant. No. 1,018,278; Feb. 20; Sp. p. 4520; Gaz. vol. 175; p. 777.

Tardieu, Victorien, Arles, France. Circuit-closer. No. 1,017,604; Feb. 13; Sp. p. 2967; Gaz. vol. 175; p. 506.

Tate, Frank C., *et al.* (See Cunningham, Edward R., assignor.)

Tatum, John J. (See Prendergast and Tatum.)

Taylor Brothers Company. (See Mortenson, Samuel E., assignor.)

Taylor-Burt Company. (See Waite and Walker, assignors.)

Taylor, Clarence L., assignor to W. H. Morgan, Alliance, Ohio. Means for securing rails to metal ties. No. 1,017,925; Feb. 20; Sp. p. 3774; Gaz. vol. 175; p. 656.

Taylor, Daniel L. (See Hanford and Taylor.)

Taylor, Edwin, Farmingdale, assignor to Union Clay Products Company, New York, N. Y. Vulcanization. No. 1,017,926; Feb. 20; Sp. p. 3775; Gaz. vol. 175; p. 656.

Taylor, John H., *et al.* (See Malinovsky, Andrew, assignor.)

Taylor, John R. (See Cameron, Ewan, assignor.)

Taylor, Minnie L., *et al.*, executors. (See Leuthner, Frank X.)

Taylor, Minnie L., *et al.*, executors. (See Leuthner and Tickner.)

Taylor, Samuel G., Jr. (See Coyne, Taylor, and Eskholme.)

Taylor, William, Leicester, England. Workman's time-recorder. No. 1,017,344; Feb. 13; Sp. p. 2461; Gaz. vol. 175; p. 418.

Taylor, William, Leicester, R. R. Atkinson, Knighton, and D. M. Nesbit, Leicester, England. Apparatus for controlling temperature and humidity. No. 1,017,345; Feb. 13; Sp. p. 2466; Gaz. vol. 175; p. 419.

Teas, Daniel H. (See Greenleaf and Teas.)

Teeters, Charles E., Canal Dover, Ohio. Thermostatic regulator. No. 1,016,795; Feb. 6; Sp. p. 1259; Gaz. vol. 175; p. 194.

Teets, Annie A., Brooklyn, N. Y. Automatic hanger. No. 1,018,270; Feb. 20; Sp. p. 4521; Gaz. vol. 175; p. 777.

Teets, Earl A., and H. V. Varner, Clarksburg, W. Va. Antiseptic instrument-case. No. 1,016,529; Feb. 6; Sp. p. 686; Gaz. vol. 175; p. 102.

Teich, Ernest L. (See Arens and Teich.)

Telepost Company. (See Arnold, George A., assignor.)

Terrell, Jasper C., Magnolia, Ark. Plow. No. 1,016,796; Feb. 6; Sp. p. 1261; Gaz. vol. 175; p. 194.

Tenryman, John E., assignor to The Ralston Steel Car Company, Columbus, Ohio. Beam. No. 1,017,927; Feb. 20; Sp. p. 3778; Gaz. vol. 175; p. 656.

Tessmer, Earl, Seattle, Wash., assignor, by mesne assignments, to F. M. Gordon, Detroit, Mich. Razor-sharpener. No. 1,018,382; Feb. 20; Sp. p. 4742; Gaz. vol. 175; p. 812.

Textile Machinery Company. (See Coulston, Harry, assignor.)

Thayer, Edward D., Worcester, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works. Filling-detector for looms. No. 1,018,218; Feb. 20; Sp. p. 4400; Gaz. vol. 175; p. 756.

Thayer, Joseph E. (See Cady and Thayer.)

Thelle, George I. (See Holman and Thelle.)

Thiell, John S., St. Louis, Mo. Vehicle-spring. No. 1,016,905; Feb. 6; Sp. p. 1492; Gaz. vol. 175; p. 280.

Thom, Peter R., Appleton, assignor of one-half to Kimberly-Clark Company, Neenah, Wis. Paper-machine. No. 1,018,850; Feb. 27; Sp. p. 5810; Gaz. vol. 175; p. 1004.

Thomas, Avila, assignor to Thomas Steel Reinforcement Co., Detroit, Mich. Reinforcement for concrete roadways. No. 1,017,118; Feb. 13; Sp. p. 1981; Gaz. vol. 175; p. 341.

Thomas, Avila, assignor to Thomas Steel Reinforcement Co., Detroit, Mich. Expansion-joint for concrete roadways. No. 1,017,346; Feb. 13; Sp. p. 2471; Gaz. vol. 175; p. 419.

Thomas, Harold M., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa. Window. No. 1,017,235; Feb. 13; Sp. p. 2246; Gaz. vol. 175; p. 362.

Thomas, Percy H., Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Seal for vapor devices. No. 1,018,642; Feb. 27; Sp. p. 5382; Gaz. vol. 175; p. 932.

Thomas Steel Reinforcement Co. (See Thomas, Avila, assignor.)

Thomas, William. (See MacDonald and Thomas.)

Thompson, Carl G., Louisville, Ky. Grain-separator. No. 1,018,907; Feb. 27; Sp. p. 6130; Gaz. vol. 175; p. 1054.

Thompson, Charles E. A., assignor to The Bridgeport Foundry and Machine Company, Bridgeport, Conn. Power molding-machine. No. 1,016,530; Feb. 6; Sp. p. 688; Gaz. vol. 175; p. 103.

Thompson, Frank E., assignor to Corry Castor Company, Corry, Pa. Caster. No. 1,016,654; Feb. 6; Sp. p. 962; Gaz. vol. 175; p. 145.

Thompson, Frederick F., Lawton, Okla. Mixer for gaseous fluids. No. 1,018,851; Feb. 27; Sp. p. 5811; Gaz. vol. 175; p. 1004.

Thompson, Lauris L., Austin, Minn. Belt guiding and shifting device. No. 1,016,302; Feb. 6; Sp. p. 143; Gaz. vol. 175; p. 22.

Thomson, Henry C., Boston, Mass., assignor to Electric Goods Manufacturing Company. Push-button. No. 1,016,589; Feb. 6; Sp. p. 823; Gaz. vol. 175; p. 123.

Thomson, Samuel G. (See Thomson, William P. and S. G.)

Thomson-Thomson Company. (See Thomson, William P. and S. G., assignors.)

Thomson, William P. and S. G., assignors to Thomson-Thomson Company, Philadelphia, Pa. Rail-joint. No. 1,016,797; Feb. 6; Sp. p. 1262; Gaz. vol. 175; p. 194.

Thomson, William P. and S. G., assignors to Thomson-Thomson Company, Philadelphia, Pa. Nut-locking washer. No. 1,016,798; Feb. 6; Sp. p. 1265; Gaz. vol. 175; p. 194.

Thomson, William P. and S. G., Philadelphia, Pa. Railway-tie. No. 1,018,139; Feb. 20; Sp. p. 4246; Gaz. vol. 175; p. 729.

Thordarson, Chester H., Chicago, Ill. Electric measuring instrument. No. 1,016,303; Feb. 6; Sp. p. 145; Gaz. vol. 175; p. 23.

Thornburg, Lincoln A., Muncie, Ind., assignor to American Window Glass Machine Company, Pittsburgh, Pa. Glass-drawing apparatus. No. 1,018,643; Feb. 27; Sp. p. 5384; Gaz. vol. 175; p. 933.

Thorsby, Karl J., assignor to California Corrugated Culvert Company, Oakland, Cal. Metallic culvert. No. 1,017,347; Feb. 13; Sp. p. 2472; Gaz. vol. 175; p. 420.

Thos. H. Dallett Co. (See Van Sickel, Wilber H., assignor.)

Thron, Heinrich, Frankfort-on-the-Main, E. Sprengerts, Biebrich, and C. Freund, assignors to Vereinigte Chininfabriken Zimmer & Co., G. m. b. H., Frankfort-on-the-Main, Germany. Manufacture of carbamates of tertiary alcohols. No. 1,016,977; Feb. 13; Sp. p. 1660; Gaz. vol. 175; p. 292.

Tickner, Frank. (See Leuthner and Tickner.)

Tiedebohl, Theodore C. (See Donahoe, Hedley J., assignor.)

Tiedemann, Clinton C., Milwaukee, Wis. Removable sad-iron holder. No. 1,018,580; Feb. 27; Sp. p. 5136; Gaz. vol. 175; p. 894.

Tilden-Thurber Company. (See Rathbun, Henry E., assignor.)

Tilford, George H., assignor to Tilford Manufacturing Company, Providence, R. I. Bracelet. No. 1,016,304; Feb. 6; Sp. p. 149; Gaz. vol. 175; p. 23.

Tilford Manufacturing Company. (See Tilford, George H., assignor.)

Tilley, William H., Willowranch, Cal. Animal-trap. No. 1,017,605; Feb. 13; Sp. p. 2998; Gaz. vol. 175; p. 506.

Tillmanns, Gottfried L. (See Benjaminowitsch, Wolf, assignor.)

Timewell Sack Filling & Sewing Machine Company. (See Scott, George E. and E. D., assignors.)

Timming, August C., South Bend, assignor to Mishawaka Woolen Manufacturing Co., Mishawaka, Ind. Knitting-machine. No. 1,017,705; Feb. 20; Sp. p. 3206; Gaz. vol. 175; p. 576.

Tincher, John W. (See Chmidling and Tincher.)

Tingley, Egbert M., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 1,018,531; Feb. 27; Sp. p. 5137; Gaz. vol. 175; p. 895.

Tinker, Justus A. (See York and Tinker.)

Tinker, Wilkie, Anamoose, N. D. Tank-heater. No. 1,017,481; Feb. 13; Sp. p. 2772; Gaz. vol. 175; p. 468.

Tinsman, Samuel H., St. Joseph, Mo. Plow. No. 1,016,378; Feb. 6; Sp. p. 308; Gaz. vol. 175; p. 49.

Tisch, Charles L., Beach Haven, Pa. Tedder attachment for mowing-machines. No. 1,016,655; Feb. 6; Sp. p. 963; Gaz. vol. 175; p. 146.

Titanium Alloy Manufacturing Company, The. (See Rossi, Auguste J., assignor.)

Tix, Paul J., Colorado Springs, Colo. Adjustable hame-ring holder. No. 1,017,188; Feb. 13; Sp. p. 2132; Gaz. vol. 175; p. 365.

Toborg, George, Chicago, Ill. Automatic firearm. No. 1,017,119; Feb. 13; Sp. p. 1983; Gaz. vol. 175; p. 341.

Tocilk, Georgi, Ployeschi, Roumania. Projectile for fire-arms. No. 1,017,928; Feb. 20; Sp. p. 3779; Gaz. vol. 175; p. 656.

Todd, George W., Omaha, Nebr. Artificial tooth. No. 1,016,456; Feb. 6; Sp. p. 505; Gaz. vol. 175; p. 77.

Todd, John H. (See Bolander, Aaron, assignor.)

Toles, Justin K., Berkeley, Cal. Combined spool and cutter. No. 1,018,945; Feb. 27; Sp. p. 6004; Gaz. vol. 175; p. 1035.

Tolman, Andrew L., Thorndike, assignor to Draper Company, Hopedale, Mass. Cloth-stop for looms. No. 1,017,273; Feb. 13; Sp. p. 2317; Gaz. vol. 175; p. 394.

Tomaszowski, Janos, *et al.* (See Vitonski, Mike, assignor.)

Tool, John W., T. F. Linegar, and J. C. Williams, Seattle, Wash. Washing device. No. 1,017,606; Feb. 13; Sp. p. 2999; Gaz. vol. 175; p. 506.

Topping, Henrietta W., Chicago, Ill. Cleat for securing roofing. No. 1,018,946; Feb. 27; Sp. p. 6006; Gaz. vol. 175; p. 1036.

Torchia, Philip. (See Murray and Torchia.)

Totten, Robert C., Pittsburgh, Pa. Treating car-wheels. No. 1,016,457; Feb. 6; Sp. p. 506; Gaz. vol. 175; p. 78.

Townley, Nelson H. (See Duncan and Townley.)

Townsend, W. P., *et al.*, administrators. (See Logan, Lavalette L.) (Reissue.)

Toyoda, Sakichi, Nagoya, Japan. Shuttle-changing loom. No. 1,018,069; Feb. 20; Sp. p. 4123; Gaz. vol. 175; p. 712.

Tracy, Edward A., Boston, Mass. Paving-block. No. 1,017,706; Feb. 20; Sp. p. 3210; Gaz. vol. 175; p. 577.

Tracy, Frank W., Chicago, Ill. Casting apparatus. No. 1,017,707; Feb. 20; Sp. p. 3211; Gaz. vol. 175; p. 577.

Tracy, William H. H., Troy, N. Y. Drying and ironing machine. No. 1,017,349; Feb. 13; Sp. p. 2476; Gaz. vol. 175; p. 420.

Traut and Hine Manufacturing Company. (See Prentice, George E., assignor.)

Treahy, Bartholomew T., Detroit, Mich. Transforming and transposing device for automatic instruments. No. 1,018,791; Feb. 27; Sp. p. 5692; Gaz. vol. 175; p. 984.

Treat, Francis H., Cleveland, Ohio. Gas-producer mechanism. No. 1,017,025; Feb. 13; Sp. p. 1761; Gaz. vol. 175; p. 307.

Trescott, Charles B., assignor of one-half to J. Allerdice, Indianapolis, Ind. Curing meat. No. 1,016,656; Feb. 6; Sp. p. 966; Gaz. vol. 175; p. 146.

Tripp, Lewis J., Mesick, Mich. Drying-kiln. (Reissue.) No. 13,372; Feb. 20; Sp. p. 4795; Gaz. vol. 175; p. 821.

Trombley, George M., Wilmore, Pa. Curtain-pole. No. 1,018,552; Feb. 27; Sp. p. 5812; Gaz. vol. 175; p. 1004.

Trounce, F. W. (See Scott, Frederick C., assignor.)

Troutman, Hal P., Kewanna, Ind. Corn-harvester. No. 1,017,823; Feb. 20; Sp. p. 3515; Gaz. vol. 175; p. 617.

True, George A., assignor of one-half to Northern Engineering Works, Detroit, Mich. Crane. No. 1,017,824; Feb. 20; Sp. p. 3516; Gaz. vol. 175; p. 618.

Trumann, Joseph F., *et al.* (See Albert, Floyd W., assignor.)

Tscherning, Henry, Freeport, Ill. Pattern-drawing device. No. 1,018,731; Feb. 27; Sp. p. 5562; Gaz. vol. 175; p. 962.

Tucker, Simons S., Peebles, Ohio. Casket. No. 1,018,853; Feb. 27; Sp. p. 5813; Gaz. vol. 175; p. 1004.

Tunks, Nelson H., Lima, Ohio. Seal. No. 1,018,687; Feb. 27; Sp. p. 5466; Gaz. vol. 175; p. 948.

Turk, Hugo, Iserlohn, Germany. Tilting bottle. No. 1,017,607; Feb. 13; Sp. p. 3001; Gaz. vol. 175; p. 507.

Turnage, Benjiman H., Society Hill, S. C. Lubricating system for engines. No. 1,017,189; Feb. 13; Sp. p. 2134; Gaz. vol. 175; p. 365.

Turnbow, John W. (See Gregory, Marshal J., assignor.)

Turner, John, and A. Buxton, Uxbridge, assignors to The Rubber Patents Limited, Cowley, England. Manufacturing lawn-tennis and like balls. No. 1,017,432; Feb. 13; Sp. p. 2778; Gaz. vol. 175; p. 463.

Turner, Joseph L., assignor to The H. K. Mulford Company, Philadelphia, Pa. Preparing organic iodin compounds. No. 1,016,790; Feb. 6; Sp. p. 1267; Gaz. vol. 175; p. 195.

Turner, Luther T., Artesia, N. Mex. Brake-clutch. No. 1,018,280; Feb. 20; Sp. p. 4523; Gaz. vol. 175; p. 778.

Turner Tanning Machinery Company, The. (See Turner, William B., assignor.)

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Electric-pump governor. No. 1,018,594; Feb. 27; Sp. p. 5284; Gaz. vol. 175; p. 917.

Turner, William B., Melrose, assignor to The Turner Tanning Machinery Company, Peabody, Mass. Staking or perching machine. No. 1,016,657; Feb. 6; Sp. p. 967; Gaz. vol. 175; p. 147.

Turner, William R., Wallace, Idaho. Piano-protector. No. 1,017,608; Feb. 13; Sp. p. 3008; Gaz. vol. 175; p. 507.

Turney, Eugene T., Rock Island, assignor to Artists Piano Player Company, Milan, Ill. Controller for pneumatic motors. No. 1,016,658; Feb. 6; Sp. p. 972; Gaz. vol. 175; p. 147.

Turquand, Frederick J., and W. E. Gray, London, England. Apparatus for the detection of dangerous gases. No. 1,016,505; Feb. 6; Sp. p. 150; Gaz. vol. 175; p. 23.

Tuttle, Marie E., Butte, Mont. Match-safe. No. 1,017,708; Feb. 20; Sp. p. 3213; Gaz. vol. 175; p. 577.

Tvinde, Ivar L., Watertown, S. D. Vehicle-wheel. No. 1,017,286; Feb. 13; Sp. p. 2248; Gaz. vol. 175; p. 392.

Twombly Motors Company. (See Twombly, Willard I., assignor.)

Twombly, Willard I., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y. Mechanical movement. No. 1,016,978; Feb. 13; Sp. p. 1661; Gaz. vol. 175; p. 282.

Twombly, Willard I., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y. Variable-speed power-transmission mechanism. No. 1,018,219; Feb. 20; Sp. p. 4401; Gaz. vol. 175; p. 767.

Twombly, Willard I., assignor, by mesne assignments, to Twombly Motors Company, New York, N. Y. Tire. No. 1,018,454; Feb. 27; Sp. p. 4916; Gaz. vol. 175; p. 868.

Twombly, Willard I., assignor to Twombly Motors Company, New York, N. Y. Internal-combustion engine. No. 1,018,883; Feb. 27; Sp. p. 5143; Gaz. vol. 175; p. 896.

Typograph G. m. b. H. (See Uhthoff, Edward, assignor.)

Uhl, Edgar G., Encinal, Tex. Extensible car-step. No. 1,016,500; Feb. 6; Sp. p. 1266; Gaz. vol. 175; p. 188.

Uhthoff, Edward, Berlin-Charlottenburg, assignor to Typograph G. m. b. H., Berlin, Germany. Typograph composing-machine. No. 1,017,920; Feb. 20; Sp. p. 3781; Gaz. vol. 175; p. 667.

Ullmann, Jacob K., New Haven, Conn. Brake for vehicle-wheels. No. 1,017,960; Feb. 20; Sp. p. 3785; Gaz. vol. 175; p. 667.

Umpleby, James E., Troy, assignor of one-half to J. S. Fuller, Kingston, N. Y. Neckband stretcher and shaper. No. 1,018,533; Feb. 27; Sp. p. 5147; Gaz. vol. 175; p. 896.

Unckless, Leslie, assignor to Century Sanitary Manufacturing Company, Eastwood, N. Y. Ball-cock. No. 1,016,455; Feb. 6; Sp. p. 506; Gaz. vol. 175; p. 78.

Underfeed Stoker Company of America, The. (See Kenney and Grohn, assignors.)

Underwood Typewriter Company. (See Garsden, John H., assignor.)

Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)

Underwood Typewriter Company. (See Lockwood, Marquis H., assignor.)

Underwood Typewriter Company. (See Young, Frank A., assignor.)

Union Clay Products Company. (See Taylor, Edwin, assignor.)

Union Switch & Signal Company, The. (See Allen, Walter P., assignor.)

Union Switch & Signal Company, The. (See Allen and Coleman, assignors.)

Union Switch & Signal Company, The. (See Lewis and Holliday, assignors.)

Union Switch & Signal Company, The. (See Utne, Per, assignor.)

Union Typewriter Company. (See Barr, John H., assignor.)

Union Typewriter Company. (See Daugherty, James D., assignor.)

Union Typewriter Company. (See Feibel, Jacob, assignor.)

Union Typewriter Company. (See Smith, Arthur W., assignor.)

Union Typewriter Company. (See Smith, Charles E., assignor.)

United Cigarette Machine Company, The. (See Peck, William T., assignor.)

United Shirt and Collar Company, The. (See Dormandy, Garry J., assignor.)

United Shoe Machinery Company. (See Alexander, Alexander M., assignor.)

United Shoe Machinery Company. (See Ashton, Orrell, assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Borden, William H., assignor.)

United Shoe Machinery Company. (See Bradley, Samuel M., assignor.)

United Shoe Machinery Company. (See Brock, Matthias, assignor.)

United Shoe Machinery Company. (See Brothers, Ell, assignor.)

United Shoe Machinery Company. (See Burns, Robert J., assignor.)

United Shoe Machinery Company. (See Cady and Thayer, assignors.)

United Shoe Machinery Company. (See Casgrain, Louis A., assignor.)

United Shoe Machinery Company. (See Crisp, Joseph E., assignor.)

United Shoe Machinery Company. (See Eaton, Clarence L., assignor.)

United Shoe Machinery Company. (See Ewell, Frank E., assignor.)

United Shoe Machinery Company. (See Fletcher and MacLean, assignors.)

United Shoe Machinery Company. (See Funck, Philipp, assignor.)

United Shoe Machinery Company. (See Gliddon, John E., assignor.)

United Shoe Machinery Company. (See Goddu, George, assignor.)

United Shoe Machinery Company. (See Hadaway, John B., assignor.)

United Shoe Machinery Company. (See Lund, Thomas, assignor.)

United Shoe Machinery Company. (See Mackenzie, Fred L., assignor.)

United Shoe Machinery Company. (See McPherson and Orr, assignors.)

United Shoe Machinery Company. (See Meyer, William C., assignor.)

United Shoe Machinery Company. (See Miller, Charles L., assignor.)

United Shoe Machinery Company. (See Plant, Thomas G., assignor.)

United Shoe Machinery Company. (See Plant, Thomas G., assignor.) (Reissue.)

United Shoe Machinery Company. (See Pennell, Adam H., assignor.) (Reissue.)

United Shoe Machinery Company. (See Prime, Daniel N., assignor.)

United Shoe Machinery Company. (See Prindle, Edwin J., assignor.)

United Shoe Machinery Company. (See Smith, Robert B., assignor.)

United Shoe Machinery Company. (See Snow, Stephen, assignor.)

United Shoe Machinery Company. (See Wells, Charles S., assignor.)

United Shoe Machinery Company. (See Winkley and Alley, assignors.)

United States Metallic Packing Company, The. (See Kling, Charles W. G., assignor.)

Universal Type Making Machine Company. (See Nuernberger and Rettig, assignors.)

Untch, George, Cleveland, Ohio. Hasp-fastener. No. 1,017,700; Feb. 20; Sp. p. 3214; Gaz. vol. 175; p. 577.

Untermeyer-Robbins & Company. (See Robbins, Meyer L., assignor.)

Updegraff, Frank W. (See Hemenway and Updegraff.)

Upham, Burt F., Evanston, Ill. Printing-press. No. 1,016,659; Feb. 6; Sp. p. 970; Gaz. vol. 175; p. 148.

Upham, Sherman D., Chicago, Ill. Combined ventilating and station-announciating means. No. 1,017,710; Feb. 20; Sp. p. 3215; Gaz. vol. 175; p. 578.

Ureil, Thomas J. (See Meinhardt, Hans A., assignor.)

Urse, Gustav H. W., assignor to Aachener Stahlwarenfabrik Fafnir-Werke Aktiengesellschaft, Aachen, Germany. Reversing device for multicylinder internal-combustion engines. No. 1,017,880; Feb. 13; Sp. p. 2478; Gaz. vol. 175; p. 420.

Utility Advertising Company. (See Kleeger, Joseph J., assignor.)

Utne, Per, Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Clutch-controlling device. No. 1,017,825; Feb. 20; Sp. p. 3517; Gaz. vol. 175; p. 618.

Uttenback, Ival R., W. C. Springer, Jr., and W. L. Galbraith, Vancouver, Wash. Attachment for tea-bottles. No. 1,018,554; Feb. 27; Sp. p. 5314; Gaz. vol. 175; p. 1005.

Van Bastel, Johannes C., Zurich, Switzerland. Mentcising for meat-slicing machines. No. 1,017,274; Feb. 13; Sp. p. 2332; Gaz. vol. 175; p. 392.

Van Brunt, Charles, Schenectady, N. Y., assignor to General Electric Company, Making insulated conductors. No. 1,017,463; Feb. 13; Sp. p. 2778; Gaz. vol. 175; p. 466.

Van Brunt, Willard A., Horicon, Wis. Grain-drill. No. 1,018,220; Feb. 20; Sp. p. 4464; Gaz. vol. 175; p. 757.

Van Cleave, William P., and A. T. Woodall, Dallas, Tex. Device for holding trolley-poles on wires. No. 1,017,711; Feb. 20; Sp. p. 3216; Gaz. vol. 175; p. 578.

Van Hook, Franklin P., Caldwell, Idaho. Post-mold. No. 1,017,026; Feb. 13; Sp. p. 1764; Gaz. vol. 175; p. 307.

Van Gunner, Ner M., Hyde, Pa. Buttstock. No. 1,018,285; Feb. 27; Sp. p. 5316; Gaz. vol. 175; p. 1006.

Van Sickel, Wilmer H., Philadelphia, Pa., assignor to Thos. H. Dallett Co. Polisher or shredder. No. 1,017,287; Feb. 13; Sp. p. 2240; Gaz. vol. 175; p. 392.

Van Westrum, Leonard S., Brantford, Ontario, Canada. Making a viscous liquid material. No. 1,016,801; Feb. 6; Sp. p. 1269; Gaz. vol. 175; p. 195.

Vanecko, Otto, Schoolcraft, Mich. Furniture construction. No. 1,017,712; Feb. 20; Sp. p. 3218; Gaz. vol. 175; p. 578.

Vanar, Harvey V. (See Teets and Vanar.)

Vaughn & Bushnell Manufacturing Company. (See Graham, Edward M., assignor.)

Vaughan, Henry H., Montreal, Quebec, Canada. Dump-car. No. 1,018,140; Feb. 20; Sp. p. 4240; Gaz. vol. 175; p. 760.

Vaughan, James M., Owensboro, Ky. Tobacco-treating machinery. No. 1,017,713; Feb. 20; Sp. p. 3219; Gaz. vol. 175; p. 579.

Vaughn, Thomas E., Chicago, Ill. Insulated cushion steel tie. No. 1,017,696; Feb. 20; Sp. p. 3520; Gaz. vol. 175; p. 619.

Vecchio, Nicola, East Boston, Mass. Manufacturing shoes. No. 1,018,655; Feb. 27; Sp. p. 4919; Gaz. vol. 175; p. 869.

Veeder, Curtis H., assignor to The Veeder Manufacturing Company, Hartford, Conn. Tachometer. No. 1,016,906; Feb. 6; Sp. p. 1490; Gaz. vol. 175; p. 290.

Veeder Manufacturing Company, The. (See Veeder, Curtis H., assignor.)

Vensel, Charles F., Jr., Chicora, Pa. Trolley. No. 1,016,802; Feb. 6; Sp. p. 1270; Gaz. vol. 175; p. 195.

Vereinigte Chininfabriken Zimmer & Co. G. m. b. H. (See Thun, Sprongerts and Freund, assignors.)

Verity, Joseph, Stretford, England, assignor to C. F. De Ansell, Milan, Italy. Manufacture of dextrin. No. 1,018,803; Feb. 6; Sp. p. 1271; Gaz. vol. 175; p. 196.

Vernet, Arthur, Dijon, France. Portable screw-punch and the like. No. 1,017,000; Feb. 13; Sp. p. 2004; Gaz. vol. 175; p. 508.

Vertrees, James B., and G. De Camp, St. Louis, Mo., assignors to L. S. Smith & Son Company, Pittsburgh, Pa. Compressor. No. 1,018,221; Feb. 20; Sp. p. 4410; Gaz. vol. 175; p. 758.

Vertrees, Rudolph. (See Philpot and Vertrees.)

Vial, John, *et al.* (See Vial, William, assignor.)

Vial, William, Swissvale, assignor of one-third to W. D. Berry, New Brighton, and one-third to J. Vial, Braddock, Pa. Globe-valve. No. 1,016,306; Feb. 6; Sp. p. 155; Gaz. vol. 175; p. 24.

Vial, William G., assignor to The Ives Manufacturing Corporation, Bridgeport, Conn. Commutator. No. 1,018,141; Feb. 20; Sp. p. 4252; Gaz. vol. 175; p. 730.

Vickers Limited. (See Dawson and Buckham, assignors.)

Victor, Alexandre, assignor to La Société Ribeyrea & Victor, Lyon, France. Woodworking-machine. No. 1,016,879; Feb. 6; Sp. p. 309; Gaz. vol. 175; p. 49.

Victor Sporting Goods Company. (See Rogers, Burt T., assignor.)

Victor Talking Machine Company. (See Burton, Isaac F., assignor.)

Victor Talking Machine Company. (See Douglass, Leon F., assignor.)

Victor Talking Machine Company. (See English, John C., assignor.)

Victor Talking Machine Company. (See Johnson, Eldridge R., assignor.)

Viddinghoff, Charles A., Buffalo, N. Y. Scale-balancing device. No. 1,018,456; Feb. 27; Sp. p. 4920; Gaz. vol. 175; p. 869.

Viener, Frederick A., Camden, N. J. Roll. No. 1,018,457; Feb. 27; Sp. p. 4922; Gaz. vol. 175; p. 869.

Vieper, Henry, Stoneham, assignor of one-half to H. Park, Warren, Pa. Sucker-rod elevator. No. 1,018,782; Feb. 27; Sp. p. 5564; Gaz. vol. 175; p. 983.

Vilkie, Joseph E., Titusville, Pa. Antifriction-eccentric. No. 1,018,142; Feb. 20; Sp. p. 4253; Gaz. vol. 175; p. 731.

Villegas, Manuel, Mexico, Mexico. Article of food and making the same. No. 1,016,585; Feb. 27; Sp. p. 5287; Gaz. vol. 175; p. 918.

Visger, Joseph S., and C. Claus, Brooklyn, N. Y. Bed-lifter. No. 1,017,434; Feb. 13; Sp. p. 2777; Gaz. vol. 175; p. 463.

Vissering, Harry, assignor to Harry Vissering and Company, Chicago, Ill. Sand-pipe for sander devices. No. 1,016,143; Feb. 20; Sp. p. 4255; Gaz. vol. 175; p. 731.

Vitoski, Mike, assignor of one-fourth to J. Tomassowski and one-fourth to M. Mahranvey, Johnstown, Pa. Trunk. No. 1,017,851; Feb. 13; Sp. p. 2480; Gaz. vol. 175; p. 421.

Vogt, Theodor, Hettigenberg, Germany. Preparation of stone slabs. No. 1,018,458; Feb. 27; Sp. p. 4923; Gaz. vol. 175; p. 870.

Voight, August. (See Voight, Henry G. and A.)

Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Door-closer. No. 1,017,714; Feb. 20; Sp. p. 3223; Gaz. vol. 175; p. 579.

Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock. No. 1,018,998; Feb. 27; Sp. p. 6139; Gaz. vol. 175; p. 1055.

Voight, Henry G. and A., New Britain, Conn. Driving-belt. No. 1,018,792; Feb. 27; Sp. p. 5694; Gaz. vol. 175; p. 984.

Voight, Henry G., and N. E. Hurd, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Communicating-door lock. No. 1,018,554; Feb. 27; Sp. p. 5149; Gaz. vol. 175; p. 896.

Voigtmann, Frank, *et al.* (See Iman, Orla H., assignor.)

Voigtmann, Frank, Chicago, Ill. Fusible link. No. 1,017,715; Feb. 20; Sp. p. 3224; Gaz. vol. 175; p. 580.

Vold, Lars H., Westville, assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Multiple punch. No. 1,016,459; Feb. 6; Sp. p. 509; Gaz. vol. 175; p. 78.

Volkmer, Edward, New York, N. Y. Truss for ruptures. No. 1,016,531; Feb. 6; Sp. p. 693; Gaz. vol. 175; p. 103.

Vonasech, Arnold, Owen Sound, Ontario, Canada. Gate-case with balanced gates for water-turbines. No. 1,017,716; Feb. 20; Sp. p. 3226; Gaz. vol. 175; p. 580.

Voodrecek, Frank J., Cedar Rapids, Iowa. Floor-scraper. No. 1,016,720; Feb. 6; Sp. p. 1009; Gaz. vol. 175; p. 169.

Voorhees, John R., Cedar Falls, and V. V. Speer, Waterloo township, Blackhawk county, Iowa. Shifting and locking device for clash-gearing. No. 1,017,827; Feb. 20; Sp. p. 3521; Gaz. vol. 175; p. 619.

Vorlaufer, William. (See Strother, Martin L., assignor.)

Vosburg, Robert W. (See Gaul and Vosburg.)

Wagner, Frederick A., Norwood, Ohio. Combined drill, center-reamer, and countersink-tool. No. 1,017,352; Feb. 13; Sp. p. 2481; Gaz. vol. 175; p. 421.

Wagner, Herman, *et al.* (See Haws, William H., assignor.)

Wagner, Hermann, and J. Erber, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Monoazo dyestuff and making same. No. 1,016,207; Feb. 6; Sp. p. 157; Gaz. vol. 175; p. 24.

Waisering, Harry, assignor to Harry Vissering and Company, Chicago, Ill. Sand-pipe for sander devices. No. 1,016,143; Feb. 20; Sp. p. 4255; Gaz. vol. 175; p. 731.

Walker, Coleman H., and G. Walker, assignors to Taylor-Walker, Coleman H., and G. Walker, assignors to Taylor-Wilson Company, Holyoke, Mass. Producing mottled or Bart Company, Holyoke, Mass. Producing mottled or variegated paper. No. 1,017,981; Feb. 20; Sp. p. 3786; Gaz. vol. 175; p. 657.

Wake, Charles E., assignor of one-half to C. A. Andrew, Walla Walla, Wash. Adjustable piston-ring clamp. No. 1,017,828; Feb. 20; Sp. p. 3525; Gaz. vol. 175; p. 620.

Wakefield, George M., assignor to E. Goldman & Co., Inc., Chicago, Ill. Bottle-holder for bottle-cleansing machines. No. 1,017,829; Feb. 20; Sp. p. 3527; Gaz. vol. 175; p. 620.

Waldspurger, Ernest A., Philadelphia, Pa. Nose-bag for horses. No. 1,017,610; Feb. 13; Sp. p. 3005; Gaz. vol. 175; p. 508.

Wales, Samuel S., Munhall, Pa. Heating-furnace. No. 1,018,999; Feb. 27; Sp. p. 6141; Gaz. vol. 175; p. 1065.

Walke, Sanford E., Amesbury, Mass. Wood-bending device. No. 1,016,721; Feb. 6; Sp. p. 1101; Gaz. vol. 175; p. 169.

Walker, Allan. (See Bowen and Walker.)

Walker, Charles H., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,016,308; Feb. 6; Sp. p. 157; Gaz. vol. 175; p. 25.

Walker, Charles W., Stratford, Conn., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 1,017,717; Feb. 20; Sp. p. 3226; Gaz. vol. 175; p. 580.

Walker, Frank L., *et al.* (See Woodman, John J., assignor.)

Walker, George. (See Waite and Walker.)

Walker, George S., Boston, assignor of one-half to E. J. Chadbourne, Wakefield, Mass. Sparking plug. No. 1,018,383; Feb. 20; Sp. p. 4744; Gaz. vol. 175; p. 818.

Walker, James J., London, England. Apparatus for automatically playing pianofortes, carillons, and other musical instruments. No. 1,017,032; Feb. 20; Sp. p. 3787; Gaz. vol. 175; p. 657.

Walker, John, Jr., London, England. Book and leaves therefor. No. 1,018,459; Feb. 27; Sp. p. 4924; Gaz. vol. 175; p. 870.

Walker, John B., Ensley, Ala. Apparatus for casting furnace-doors. No. 1,018,090; Feb. 20; Sp. p. 4138; Gaz. vol. 175; p. 712.

Walker, John G., Sewaren, N. J. Suction-cleaner. No. 1,017,275; Feb. 13; Sp. p. 2323; Gaz. vol. 175; p. 395.

Walker, John S., Pittsburgh, Pa. Heater. No. 1,018,793; Feb. 27; Sp. p. 5694; Gaz. vol. 175; p. 984.

Walker, Napolean E., Ontario, assignor of one-fourth to T. L. Lorbeer, Hemet, Cal. Laundry-iron. No. 1,017,933; Feb. 20; Sp. p. 3790; Gaz. vol. 175; p. 658.

Walker, William R., and J. H. Gray, New York, N. Y. Apparatus for the manufacture of steel. No. 1,018,644; Feb. 27; Sp. p. 5385; Gaz. vol. 175; p. 933.

Walker, Willis F., Alburtis, Pa. Metallic tie. No. 1,016,309; Feb. 6; Sp. p. 165; Gaz. vol. 175; p. 25.

Walklewicz, Wladislaw, Detroit, Mich. Curtain-pole. No. 1,018,794; Feb. 27; Sp. p. 5696; Gaz. vol. 175; p. 985.

Wall, Charles L., Lawrence, Kans. Blade-harrow. No. 1,018,281; Feb. 20; Sp. p. 4524; Gaz. vol. 175; p. 778.

Wall, Charles L., Strasburger, Nebr. Churn. No. 1,018,947; Feb. 27; Sp. p. 6007; Gaz. vol. 175; p. 1036.

Wallace, Robert H., New Brighton, Pa. Dirigible lamp for automobiles. No. 1,016,722; Feb. 6; Sp. p. 1103; Gaz. vol. 175; p. 170.

Wallace, William S., San Antonio, assignor of one-half to C. O. Dallet, Austin, Tex. Fly-trap. No. 1,017,027; Feb. 13; Sp. p. 1766; Gaz. vol. 175; p. 308.

Waller, Carl R., Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y. Elastic-fluid turbine. No. 1,016,532; Feb. 6; Sp. p. 695; Gaz. vol. 175; p. 103.

Waller, Carl R., Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y. Elastic-fluid turbine. No. 1,016,660; Feb. 6; Sp. p. 961; Gaz. vol. 175; p. 148.

Wallick, Ben S., Springfield, Ill. Card-vending machine. No. 1,017,830; Feb. 20; Sp. p. 3529; Gaz. vol. 175; p. 620.

Walls, Alexander G., assignor to Walter McGee & Son, Limited, Paisley, Scotland. Automatic spooling-machine. No. 1,017,718; Feb. 20; Sp. p. 3239; Gaz. vol. 175; p. 581.

Walser, Joseph J., assignor to The Goss Printing Press Company, Chicago, Ill. Starting mechanism for electric motors. No. 1,016,460; Feb. 6; Sp. p. 512; Gaz. vol. 175; p. 79.

Walser, Robert, New York, N. Y. Embroidery-printing machine. No. 1,018,948; Feb. 27; Sp. p. 6009; Gaz. vol. 175; p. 1036.

Walsh, Richard E. (See Dow and Walsh.)

Walsh, William J., Hamilton, Ontario, Canada. Open-book rest. No. 1,017,120; Feb. 13; Sp. p. 1986; Gaz. vol. 175; p. 341.

Walsh, William J., Hamilton, Ontario, Canada. Open-book rest. No. 1,017,121; Feb. 13; Sp. p. 1988; Gaz. vol. 175; p. 342.

Walter McGee & Son. (See Walls, Alexander G., assignor.)

Walters, Frank, Philadelphia, Pa., assignor, by mesne assignments, to James Leckie & Son Company, Camden, N. J. Knitting-machine. No. 1,018,144; Feb. 20; Sp. p. 4257; Gaz. vol. 175; p. 731.

Walters, Herman J., Hamilton, Mont. Fire-escape. No. 1,016,859; Feb. 6; Sp. p. 1283; Gaz. vol. 175; p. 214.

Walters, William H., Broad Haven, England. Apparatus for teaching the art of aeroplaning, applicable also for amusement purposes. No. 1,018,645; Feb. 27; Sp. p. 5388; Gaz. vol. 175; p. 933.

Walton, Jerrold F., Sturgis, Mich. Adjustable chair. No. 1,018,460; Feb. 27; Sp. p. 4925; Gaz. vol. 175; p. 870.

Wanner, Edwin P., New York, N. Y. Manufacturing chair-seats. No. 1,017,190; Feb. 13; Sp. p. 2126; Gaz. vol. 175; p. 366.

Warburton, John, assignor to Benjamin Eastwood Company, Paterson, N. J. Beaming-machine. No. 1,017,191; Feb. 13; Sp. p. 2137; Gaz. vol. 175; p. 366.

Ward, Abraham D., Palisade, Colo. Orchard-heater. No. 1,016,907; Feb. 6; Sp. p. 1494; Gaz. vol. 175; p. 231.

Ward, John H., Paterson, N. J. Shade. No. 1,017,894; Feb. 20; Sp. p. 3791; Gaz. vol. 175; p. 658.

Wardell, Henry E., New York, N. Y., assignor to H. W. Johns-Manville Company. Roofing-cleat. No. 1,017,611; Feb. 13; Sp. p. 3006; Gaz. vol. 175; p. 508.

Warne, Frederick C., assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio. Cultivator. No. 1,017,353; Feb. 13; Sp. p. 2433; Gaz. vol. 175; p. 421.

Warne, Frederick C., assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio. Safety attachment for agricultural implements or the like. No. 1,018,461; Feb. 27; Sp. p. 4927; Gaz. vol. 175; p. 871.

Warner, Adam D., Los Angeles, Cal. Food compound. No. 1,018,462; Feb. 27; Sp. p. 4928; Gaz. vol. 175; p. 871.

Warner, Alonzo A., assignor to Landers, Frary & Clark, New Britain, Conn. Bracket. No. 1,016,908; Feb. 6; Sp. p. 1495; Gaz. vol. 175; p. 231.

Warner Gear Company. (See Jones, Frank H., assignor.)

Warner, Hugh L., Muncie, Ind. Differential gearing. No. 1,018,535; Feb. 27; Sp. p. 5153; Gaz. vol. 175; p. 897.

Warner, Jacob C., Stockton, Cal. Door-jack. No. 1,018,282; Feb. 20; Sp. p. 4525; Gaz. vol. 175; p. 778.

Warner, John H., Mount Pocono, Pa. Broken-spring repairer. No. 1,017,485; Feb. 18; Sp. p. 2778; Gaz. vol. 175; p. 469.

Washington Iron Works Co. (See Watt, Sern P., assignor.)

Wasson, Robert B., Cranford, N. J. Machine for making packing-rings. No. 1,016,880; Feb. 6; Sp. p. 311; Gaz. vol. 175; p. 50.

Waterbury Mfg. Co. (See Goetz, Henry F., assignor.)

Waterman, Glenn R. (See Whitehead, Richard A., assignor.)

Watres, Lewis S., assignor of fifty-one one-hundredths to C. D. Simpson, Scranton, Pa. Lubricating apparatus. No. 1,017,935; Feb. 20; Sp. p. 3792; Gaz. vol. 175; p. 658.

Watrous, Earl G., Chicago, Ill. Basin-cock. No. 1,018,463; Feb. 27; Sp. p. 4930; Gaz. vol. 175; p. 871.

Watson, Alexander, Beachmont, assignor to B. C. Leavitt, trustee, Duxbury, Mass. Gate-valve. No. 1,016,461; Feb. 6; Sp. p. 514; Gaz. vol. 175; p. 79.

Watson, Chester A. (See Boone and Watson.)

Watson, John A., Peru, Ind. Luggage-carrier. No. 1,016,281; Feb. 6; Sp. p. 317; Gaz. vol. 175; p. 50.

Watson, Samuel S., Colegrove, assignor to C. F. Eckwickert, Los Angeles, Cal. Hose-coupling. No. 1,019,090; Feb. 27; Sp. p. 6142; Gaz. vol. 175; p. 1056.

Watt, Sern P., assignor to Washington Iron Works Co., Seattle, Wash. Cable-tramway. No. 1,017,861; Feb. 20; Sp. p. 3533; Gaz. vol. 175; p. 621.

Watts & Co., Wm. H. (See Bissig, Louis F., assignor.)

Watts, George. (See Groat, John T., assignor.)

Watts, Herbert E., Brooklands, England. Circular slide-rule. No. 1,017,719; Feb. 20; Sp. p. 3242; Gaz. vol. 175; p. 581.

Wauters, Joseph, Binghamton, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Self-playing violin. No. 1,018,384; Feb. 20; Sp. p. 4746; Gaz. vol. 175; p. 818.

Weaver, Robert B., Detroit, Mich. Gear-grinding device. No. 1,017,612; Feb. 13; Sp. p. 3007; Gaz. vol. 175; p. 508.

Weaver, Robert B., Detroit, Mich. Grinding gears. No. 1,017,613; Feb. 13; Sp. p. 3009; Gaz. vol. 175; p. 509.

Webb, Albert C., assignor to The Webb Motor Fire Apparatus Company, St. Louis, Mo. Piston-pump for auto fire apparatus. No. 1,018,795; Feb. 27; Sp. p. 5697; Gaz. vol. 175; p. 985.

Webb Motor Fire Apparatus Company, The. (See Webb, Albert C., assignor.)

Weber, Christoph H., Berlin, Germany. Manufacture of metallic filaments for incandescence lighting. No. 1,016,904; Feb. 6; Sp. p. 1271; Gaz. vol. 175; p. 195.

Weber, Josef, Essen-on-the-Ruhr, Germany. Manufacturing anhydrids of fatty acids. No. 1,018,733; Feb. 27; Sp. p. 5565; Gaz. vol. 175; p. 963.

Weber, Josef, assignor to T. Goldschmidt, Essen-on-the-Ruhr, Germany. Treating tin-bearing material. No. 1,018,734; Feb. 27; Sp. p. 5567; Gaz. vol. 175; p. 963.

Webster, Edgar P., Bridgeport, Conn. Pencil-sharpening machine. No. 1,018,636; Feb. 27; Sp. p. 5157; Gaz. vol. 175; p. 897.

Webster, John E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric locomotive. No. 1,017,122; Feb. 13; Sp. p. 1980; Gaz. vol. 175; p. 342.

Webster, William J., and E. Noall, Bisbee, Ariz. Spring-trap. No. 1,017,123; Feb. 13; Sp. p. 1991; Gaz. vol. 175; p. 342.

Weed, David W., assignor to Eagle Lock Co., Terryville, Conn. Night-latch. No. 1,017,238; Feb. 13; Sp. p. 2250; Gaz. vol. 175; p. 383.

Weeden, Arthur W., Somerville, Mass. Valve for intermingling and controlling fluids. No. 1,016,882; Feb. 6; Sp. p. 319; Gaz. vol. 175; p. 50.

Weedman, George H. (See Lee and Weedman.)

Weeks, William C., Vancouver, British Columbia, Canada. Drag-bucket. No. 1,016,880; Feb. 6; Sp. p. 1284; Gaz. vol. 175; p. 214.

Wees, Peter M., Marietta, Ohio. Walled sheet-metal structure. No. 1,017,254; Feb. 13; Sp. p. 2426; Gaz. vol. 175; p. 422.

Weigel, Adolf, Nuremberg, Germany. Moving toy. No. 1,017,066; Feb. 18; Sp. p. 1856; Gaz. vol. 175; p. 322.

Weil, John, Mansfield, Ohio. Automatic telephone instrument. No. 1,018,646; Feb. 27; Sp. p. 5390; Gaz. vol. 175; p. 934.

Weir, Bertha M., Coalinga, Cal. Elbow. No. 1,018,145; Feb. 20; Sp. p. 4264; Gaz. vol. 175; p. 732.

Weis, John P., Nyack, N. Y. Presser-foot for sewing-machines. No. 1,016,463; Feb. 6; Sp. p. 516; Gaz. vol. 175; p. 80.

Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Trimming mechanism for sewing-machines. No. 1,016,590; Feb. 6; Sp. p. 825; Gaz. vol. 175; p. 128.

Weis, John P., Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company. Machine for making edgings. No. 1,018,796; Feb. 27; Sp. p. 5700; Gaz. vol. 175; p. 985.

Weis, John P., Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company. Overedging-machine. No. 1,018,797; Feb. 27; Sp. p. 5705; Gaz. vol. 175; p. 986.

Wellman, William T., Lawrence, Kans. Combined floor-set, nail-set, and nail-shield. No. 1,016,888; Feb. 6; Sp. p. 322; Gaz. vol. 175; p. 51.

Wells, Charles S., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,018,537; Feb. 27; Sp. p. 5161; Gaz. vol. 175; p. 898.

Wells, Henry W., Clements, Cal. Trace-hanger. No. 1,016,591; Feb. 6; Sp. p. 826; Gaz. vol. 175; p. 124.

Welty, George M. (See Welty and Brenner.)

Welty, John and G. M., and C. Brenner, Seattle, Wash. Line-wire reel. No. 1,017,936; Feb. 20; Sp. p. 3794; Gaz. vol. 175; p. 659.

Wendte, Clifford E., and J. Nash, North Yakima, Wash. Machine for applying cartons to bottles. No. 1,016,805; Feb. 6; Sp. p. 1275; Gaz. vol. 175; p. 196.

Wentz, Paul P., Sharon, Pa. Engraver's tool. No. 1,018,846; Feb. 20; Sp. p. 4662; Gaz. vol. 175; p. 799.

Werner, Henry E., assignor to H. Goldman & Co., Inc., Chicago, Ill. Jet-pipe-cleaning attachment. No. 1,018,020; Feb. 20; Sp. p. 3967; Gaz. vol. 175; p. 687.

Wessel, Frank B., Jr., Mount Lookout, Ohio. Sofa-bed. No. 1,017,937; Feb. 20; Sp. p. 3796; Gaz. vol. 175; p. 659.

Wessels, Martin J., assignor of one-half to L. G. Monroe, Spokane, Wash. Display apparatus. No. 1,017,832; Feb. 20; Sp. p. 3525; Gaz. vol. 175; p. 621.

West Disinfecting Co. (See Marcuse, Moses M., assignor.)

West, William R., Philadelphia, Pa. Automobile tag-holder. No. 1,016,728; Feb. 6; Sp. p. 1104; Gaz. vol. 175; p. 170.

Westcott, Willis L., *et al.* (See Lippe, Louis P., assignor.)

Western Electric Company. (See Oswald, Paul E., assignor.)

Westgate, Frank J., Superior, Wis. Educational apparatus. No. 1,018,146; Feb. 20; Sp. p. 4266; Gaz. vol. 175; p. 732.

Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)

Westinghouse Air Brake Company, The. (See Westinghouse, Henry H., assignor.)

Westinghouse Electric and Manufacturing Company. (See Altmeyer, Theodore, assignor.)

Westinghouse Electric and Manufacturing Company. (See Aumen, Siegfried von, assignor.)

Westinghouse Electric and Manufacturing Company. (See Bache-Wiig, Jens, assignor.)

Westinghouse Electric & Manufacturing Company. (See Conrad, Frank, assignor.)

Westinghouse Electric and Manufacturing Company. (See Hadaway, William S., Jr., assignor.)

Westinghouse Electric & Manufacturing Company. (See Harris, Ford W., assignor.)

Westinghouse Electric & Manufacturing Company. (See Jackson, Ray P., assignor.)

Westinghouse Electric and Manufacturing Company. (See Lamme, Benjamin G., assignor.)

Westinghouse Electric and Manufacturing Company. (See Mees and Hayes, assignors.)

Westinghouse Electric and Manufacturing Company. (See Tinsley, Egbert M., assignor.)

Westinghouse Electric and Manufacturing Company. (See Webster, John E., assignor.)

Westinghouse, Henry H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Inertia-governor for air-brakes. No. 1,018,596; Feb. 27; Sp. p. 5288; Gaz. vol. 175; p. 918.

Westinghouse Lamp Company. (See Beadle, George W., assignor.)

Westinghouse Lamp Company. (See Jackson, Henry W., assignor.)

Westlake, Charles T., St. Louis, Mo., assignor to Davis Locomotive Wheel Company. Buffer-beam. No. 1,016,592; Feb. 6; Sp. p. 829; Gaz. vol. 175; p. 124.

Westlake, Charles T., St. Louis, Mo., assignor to Davis Locomotive Wheel Company. Buffer-beam. No. 1,016,593; Feb. 6; Sp. p. 830; Gaz. vol. 175; p. 124.

Weston, Sarah A. (See Clark, Frederick B., assignor.)

Whaley, Christopher, Cliftheroe, England. Circular loom. No. 1,017,192; Feb. 13; Sp. p. 2139; Gaz. vol. 175; p. 366.

Whallon, Fitz M., Mayville, N. Y. Depository and accounting device. No. 1,018,283; Feb. 20; Sp. p. 4527; Gaz. vol. 175; p. 778.

Wheelen, Charles, *et al.* (See Lyons, John J., assignor.)

Wheaton, Victor B., Ionia, Mich. Railway-tie. No. 1,016,806; Feb. 6; Sp. p. 1276; Gaz. vol. 175; p. 196.

Wheeler, Thomas J., assignor of one-half to G. M. McKnight, Lewisville, Ark. Machine for gathering insects. No. 1,016,861; Feb. 6; Sp. p. 1886; Gaz. vol. 175; p. 214.

Whipple, Durand, and J. R. Fordyce, Little Rock, Ark. Tent or awning attachment for vehicles. No. 1,018,798; Feb. 27; Sp. p. 5710; Gaz. vol. 175; p. 986.

Whitcomb, Alonzo W., assignor to Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass. Tail-stock-clamping mechanism. No. 1,018,222; Feb. 20; Sp. p. 4413; Gaz. vol. 175; p. 758.

Whitcomb-Blaisdell Machine Tool Co. (See Whitcomb, Alonzo W., assignor.)

Whitcomb, Harris M., Albany, Wis. Concrete-mixing machine. No. 1,017,720; Feb. 20; Sp. p. 3244; Gaz. vol. 175; p. 582.

White, Arthur, Sheboygan Falls, Wis. Building-slab. No. 1,017,067; Feb. 13; Sp. p. 1857; Gaz. vol. 175; p. 322.

White, Charles E., assignor to Deere & Mansur Company, Moline, Ill. Harrow. No. 1,016,807; Feb. 6; Sp. p. 1277; Gaz. vol. 175; p. 196.

White, Charles F., Philadelphia, Pa. Timing device. No. 1,018,799; Feb. 27; Sp. p. 5712; Gaz. vol. 175; p. 986.

White, Edward F. (See Bliss and White.)

White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Apparatus for producing perforated note-sheets. No. 1,016,862; Feb. 6; Sp. p. 1388; Gaz. vol. 175; p. 215.

White, Frank L., assignor of three-tenths to R. W. Griffith, Little Rock, Ark., and three-tenths to R. B. Sutton, Winona, Miss. Baling-press. No. 1,018,284; Feb. 20; Sp. p. 4530; Gaz. vol. 175; p. 779.

White, George H., Enid, Okla. Fence-post. No. 1,017,333; Feb. 20; Sp. p. 3537; Gaz. vol. 175; p. 622.

White, Herbert E., Youngstown, Ohio. Power-transmission apparatus. No. 1,017,355; Feb. 13; Sp. p. 2467; Gaz. vol. 175; p. 422.

White, Nelson, assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,018,285; Feb. 20; Sp. p. 4532; Gaz. vol. 175; p. 779.

White, Thomas L., New York, N. Y. Stabilising means for aeroplanes. No. 1,018,400; Feb. 20; Sp. p. 4785; Gaz. vol. 175; p. 819.

White, William R., assignor of one-half to H. and J. A. Martin, Birmingham, Ala. Treating nuts. No. 1,016,863; Feb. 6; Sp. p. 1391; Gaz. vol. 175; p. 215.

Whitehead, Richard A., assignor of one-half to G. R. Waterman, Los Angeles, Cal. Sound-producing apparatus. No. 1,017,834; Feb. 20; Sp. p. 3538; Gaz. vol. 175; p. 622.

Whiting, Horatio, New York, N. Y. Exercising device. No. 1,017,356; Feb. 13; Sp. p. 2493; Gaz. vol. 175; p. 423.

Whiton, Lucius E., New London, Conn. Centering-machine. No. 1,017,193; Feb. 13; Sp. p. 2145; Gaz. vol. 175; p. 367.

Whitton, Alexander. (See Speed and Whitton.)

Wible, Thomas H., Grand Junction, Colo. Box-covering machine. No. 1,017,276; Feb. 13; Sp. p. 2325; Gaz. vol. 175; p. 395.

Wieland, Charles G., New York, N. Y. Propelling means for aerial vessels. No. 1,018,223; Feb. 20; Sp. p. 4416; Gaz. vol. 175; p. 759.

Wiese, Wilhelm, Bayenthal, Cologne, Germany. Tearing-up strip for tin-foil packages. No. 1,018,464; Feb. 27; Sp. p. 4933; Gaz. vol. 175; p. 872.

Wiesengrund, Bernhard, and W. F. Roberts, West Drayton, England. Toothed gearing. No. 1,019,001; Feb. 27; Sp. p. 6142; Gaz. vol. 175; p. 1056.

Wilbur, Belden H. G., assignor of one-third to G. S. Elston, Colorado Springs, Colo. Combined plow and harrow. No. 1,018,856; Feb. 27; Sp. p. 5817; Gaz. vol. 175; p. 1005.

Wilbuschewitsch, Mose, Nischninovgorod, Kanavino, Russia. Apparatus for producing catalysts. No. 1,016,864; Feb. 6; Sp. p. 1392; Gaz. vol. 175; p. 215.

Wilcox, Horace C., Hazleton, Pa. Photographic developing apparatus. No. 1,016,924; Feb. 6; Sp. p. 1527; Gaz. vol. 175; p. 237.

Wilcox, John, Nisbet, N. D. Toy pistol. No. 1,016,310; Feb. 6; Sp. p. 167; Gaz. vol. 175; p. 25.

Wilcox & White Company, The. (See White, Frank C., assignor.)

Wild, Heinrich, assignor to Firm of C. Zeiss, Jena, Germany. Tachometric telescope. No. 1,016,311; Feb. 6; Sp. p. 160; Gaz. vol. 175; p. 26.

Wilde, William, Urbana, Ill. Combined tie and rail-fastener. No. 1,018,538; Feb. 27; Sp. p. 5165; Gaz. vol. 175; p. 898.

Wilhelmi, Otto, Feldmeilen, near Zurich, Switzerland, assignor to R. Wolle, Leipsig, Germany. Beton or concrete sleeper with resilient rail-supports. No. 1,017,028; Feb. 13; Sp. p. 1769; Gaz. vol. 175; p. 308.

Wilkins, Jacob R., Yonkers, N. Y. Embroidery-work holder. No. 1,016,463; Feb. 6; Sp. p. 518; Gaz. vol. 175; p. 80.

Williamson, Melville C., Paloverde Valley, Cal. Apparatus for compressing and distributing air under pressure. No. 1,017,335; Feb. 20; Sp. p. 3540; Gaz. vol. 175; p. 652.

Williamson, Nathan, Milwaukee, Wis., assignor to Allis-Chalmers Company. Circuit-controlling apparatus. No. 1,016,661; Feb. 6; Sp. p. 603; Gaz. vol. 175; p. 140.

Willard, George M., Cottonwood, Ariz. Refrigerator. No. 1,018,530; Feb. 27; Sp. p. 5100; Gaz. vol. 175; p. 898.

Willet, Peter L., Shiloh, Ohio. Seed-cleaning machine. No. 1,017,831; Feb. 13; Sp. p. 2054; Gaz. vol. 175; p. 516.

Willetts, William R., assignor to American Pin Company, Waterbury, Conn. Waste-fixture. No. 1,018,021; Feb. 20; Sp. p. 3969; Gaz. vol. 175; p. 696.

William Sellers & Company. (See Veld, Lars H., assignor.)

Williams, Clem L., Attica, Ind. Switch-stand. No. 1,018,357; Feb. 27; Sp. p. 5819; Gaz. vol. 175; p. 1006.

Williams, Edward G., and E. H. Brown, Washington, D. C. Form for tunnel-work. No. 1,017,629; Feb. 13; Sp. p. 1771; Gaz. vol. 175; p. 309.

Williams, Edwin A., Riverside, Cal. Fruit-picker's bag. No. 1,017,721; Feb. 20; Sp. p. 3245; Gaz. vol. 175; p. 562.

Williams, Frank P., Burlington, Kans. Lead-ring. No. 1,017,660; Feb. 13; Sp. p. 1775; Gaz. vol. 175; p. 309.

Williams, Franklin S., Bridgewater, Mass. Balancing device for shoe racks or conveyers. No. 1,018,236; Feb. 20; Sp. p. 4545; Gaz. vol. 175; p. 780.

Williams, Haywood, Altheimer, Ark. Plow. No. 1,018,465; Feb. 27; Sp. p. 4934; Gaz. vol. 175; p. 872.

Williams, John G. (See Tool, Lingar, and Williams.)

Williams, Lacey Y., Toledo, Ohio. Dust-guard for car journal-boxes. No. 1,017,217; Feb. 13; Sp. p. 2827; Gaz. vol. 175; p. 396.

Williams, Llewellyn W. (See Johnson and Williams.)

Williams, Milton F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Slicing-hammer. No. 1,016,979; Feb. 13; Sp. p. 1670; Gaz. vol. 175; p. 292.

Williams Patent Crusher & Pulverizer Company. (See Williams, Milton F., assignor.)

Williams, Philip K., assignor to J. B. Williams Company, Glastonbury, Conn. Shaving-stick holder. No. 1,018,949; Feb. 27; Sp. p. 6013; Gaz. vol. 175; p. 1037.

Williams, Raymond W. (See Straus, Joseph H., Jr., assignor.)

Williams, William S., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Saw-table gage. No. 1,017,632; Feb. 13; Sp. p. 3056; Gaz. vol. 175; p. 515.

Williamson, Alva, Atlantic, Iowa. Sounding-horn. No. 1,017,625; Feb. 20; Sp. p. 3797; Gaz. vol. 175; p. 650.

Williamson, Charles, Norfolk, Va. Submarine pleasure apparatus. No. 1,016,908; Feb. 6; Sp. p. 1262; Gaz. vol. 175; p. 197.

Williamson, Charles, Norfolk, Va. Submarine mining apparatus. No. 1,017,486; Feb. 13; Sp. p. 2779; Gaz. vol. 175; p. 469.

Williamson, Edwin, Talladega, Ala. Adding and listing machine. No. 1,017,068; Feb. 13; Sp. p. 1859; Gaz. vol. 175; p. 322.

Williamson, Frank R., Glasco, Kans. Stock-watering device. No. 1,016,809; Feb. 6; Sp. p. 1286; Gaz. vol. 175; p. 197.

Williamson, John, assignor of one-third to H. B. Randall and one-third to A. P. Stewart, Brooklyn, N. Y. Pneumatic suspension device for vehicles. No. 1,016,810; Feb. 6; Sp. p. 1287; Gaz. vol. 175; p. 197.

Williamson, Robert B., Milwaukee, Wis., assignor to Allis-Chalmers Company. Unloading device for motors. No. 1,017,989; Feb. 20; Sp. p. 3799; Gaz. vol. 175; p. 650.

Williamson, Samuel S., and B. Wilson, Philadelphia, Pa.; said Williamson assignor to said Wilson. Traveling contact for elevators. No. 1,017,614; Feb. 13; Sp. p. 2011; Gaz. vol. 175; p. 309.

Willis, Charles H., Tifton, Ga. Locomotive ash-pan. No. 1,018,464; Feb. 6; Sp. p. 519; Gaz. vol. 175; p. 80.

Willis, Frank E., *et al.* (See Benbee, Frank, assignor.)

Wilson, Samuel K., Dwight, Mass. Ejecting-penholder. No. 1,016,538; Feb. 6; Sp. p. 603; Gaz. vol. 175; p. 104.

Wilson, Thomas L. (See Haff, Max M., assignor.)

Wilson, Bainbridge. (See Williamson and Wilson.)

Wilson, Charles W., Edgewood, Ill. Toy. No. 1,016,662; Feb. 6; Sp. p. 968; Gaz. vol. 175; p. 140.

Wilson, Fred. (See Shaw, Bower, and Wilson.)

Wilson, Harry C., New York, N. Y. Work-holder. No. 1,017,615; Feb. 13; Sp. p. 3014; Gaz. vol. 175; p. 509.

Wilson, Ralph B. (See Opalla, Arthur, assignor.)

Wilson, Willard F., West Hoboken, N. J. Impression-holder. No. 1,018,466; Feb. 27; Sp. p. 4936; Gaz. vol. 175; p. 872.

Winchel, James B., Cleveland, Ohio. Combined desk and register. No. 1,017,857; Feb. 13; Sp. p. 2495; Gaz. vol. 175; p. 423.

Window Glass Machine Company. (See Nevergold, George, assignor.)

Windridge, James, assignor to the Lyman Gun Sight Corporation, Middlefield, Conn. Sight for fire-arms. No. 1,018,224; Feb. 20; Sp. p. 4418; Gaz. vol. 175; p. 759.

Wing, George C., *et al.* (See Lippa, Louis P., assignor.)

Wingaard, Oscar, Chicago, Ill., assignor, by mesne assignments, to Hoskins Manufacturing Company, Detroit, Mich. Making magnetic pole-pieces. No. 1,017,661; Feb. 13; Sp. p. 1776; Gaz. vol. 175; p. 309.

Winkley, Erastus E., Lynn, Mass. Lasting-machine. No. 1,018,023; Feb. 20; Sp. p. 3978; Gaz. vol. 175; p. 696.

Winkley, Erastus E., Lynn, Mass. Lasting-machine pincers. No. 1,018,024; Feb. 20; Sp. p. 3979; Gaz. vol. 175; p. 696.

Winkley, Erastus E., Lynn, Mass. Welt-butting machine. No. 1,018,858; Feb. 27; Sp. p. 5821; Gaz. vol. 175; p. 1006.

Winkley, Erastus E., Lynn, Mass. Welt-butting machine. No. 1,018,859; Feb. 27; Sp. p. 5830; Gaz. vol. 175; p. 1006.

Winkley, Erastus E., Lynn, Mass. Automatic shoe-machine. No. 1,018,860; Feb. 27; Sp. p. 5836; Gaz. vol. 175; p. 1007.

Winkley, Erastus E., and J. C. Smith, Lynn, Mass. Lasting-machine. No. 1,018,022; Feb. 20; Sp. p. 3970; Gaz. vol. 175; p. 696.

Winkley, Erastus E., and F. L. Alley, Lynn, Mass.; said Alley assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,017,124; Feb. 13; Sp. p. 1962; Gaz. vol. 175; p. 342.

Winkley, Erastus E., and F. L. Alley, Lynn, Mass.; said Alley assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,018,025; Feb. 20; Sp. p. 3981; Gaz. vol. 175; p. 696.

Winter, Gabriel, Vienna, Austria-Hungary, and F. Eichberg, Berlin, Germany, assignors to General Electric Company. Alternating-current dynamo-electric machine. No. 1,016,965; Feb. 6; Sp. p. 1293; Gaz. vol. 175; p. 216.

Winter, Gabriel, and F. Eichberg, Vienna, Austria-Hungary, assignors to General Electric Company. Alternating-current dynamo-electric apparatus. No. 1,016,966; Feb. 6; Sp. p. 1296; Gaz. vol. 175; p. 216.

Wintz, James P., Ripley, W. Va. Gas-pump for oil-wells. No. 1,017,722; Feb. 20; Sp. p. 3248; Gaz. vol. 175; p. 562.

Wirebaugh, Harmon H., Canton, Ohio. Spring-wheel. No. 1,016,534; Feb. 6; Sp. p. 600; Gaz. vol. 175; p. 104.

Wirkus, Julius, Minn., N. D. Ice-cutter. No. 1,018,597; Feb. 27; Sp. p. 5290; Gaz. vol. 175; p. 918.

Whitsted, Erick O. (See Lundquist, Carl J., assignor.)

Wm. R. Merchon & Co. (See Merchon, Edward C., assignor.)

Wobst, Adolph G., and W. L. Humphreys, St. Louis, Mo. Paper-box-forming machine. No. 1,017,856; Feb. 20; Sp. p. 3546; Gaz. vol. 175; p. 622.

Wold, Olaus C., Chicago, Ill. Air-brush. No. 1,017,353; Feb. 13; Sp. p. 2496; Gaz. vol. 175; p. 423.

Wolfe, Louis C., Altoona, Pa. Controlling means for explosive-engines. No. 1,017,350; Feb. 13; Sp. p. 2500; Gaz. vol. 175; p. 424.

Wolle, Rudolf. (See Wilhelmi, Otto, assignor.)

Wood, Frank J., Des Moines, Iowa. Valve-gear for engines. No. 1,018,688; Feb. 27; Sp. p. 5467; Gaz. vol. 175; p. 948.

Wood, Frederick W., Los Angeles, Cal. Case for disk records for phonographs. No. 1,018,689; Feb. 27; Sp. p. 5470; Gaz. vol. 175; p. 948.

Wood, Frederick W., Los Angeles, Cal. Brushing means for disk records for phonographs. No. 1,018,861; Feb. 27; Sp. p. 5840; Gaz. vol. 175; p. 1007.

Wood, Tingley S., Leadville, Colo. Protective seal. No. 1,017,837; Feb. 20; Sp. p. 3548; Gaz. vol. 175; p. 622.

Woodall, Anderson T. (See Van Cleave and Woodall.)

Woodbridge, Samuel M., San Bernardino, Cal. Precooling apparatus for fruit. No. 1,017,723; Feb. 20; Sp. p. 3249; Gaz. vol. 175; p. 562.

Woodhull, Frederick W., assignor of one-third to L. H. Stetson, Philadelphia, Pa., and one-third to W. H. Carson, Mount Ephraim, N. J. Window-cleaning device. No. 1,018,147; Feb. 20; Sp. p. 4267; Gaz. vol. 175; p. 732.

Woodhull, Frederick W., assignor of one-third to L. H. Stetson, Philadelphia, Pa., and one-third to W. H. Carson, Mount Ephraim, N. J. Window-cleaning device. No. 1,018,148; Feb. 20; Sp. p. 4270; Gaz. vol. 175; p. 732.

Woodland, Frank O., Worcester, Mass. Cigar-banding machine. No. 1,018,091; Feb. 20; Sp. p. 4140; Gaz. vol. 175; p. 718.

Woodman, John J., assignor of one-half to C. Backus, Springfield, and one-half to F. L. Walker, Dayton, Ohio. Clamp and gage. No. 1,016,264; Feb. 6; Sp. p. 831; Gaz. vol. 175; p. 124.

Woods, Clifford A., Plankinton, S. D. Automatic measuring device. No. 1,018,593; Feb. 27; Sp. p. 5291; Gaz. vol. 175; p. 918.

Woods, Edwin S., Chicago, Ill. Center-bearing for railway-cars. No. 1,016,565; Feb. 6; Sp. p. 824; Gaz. vol. 175; p. 125.

Woods, Edwin S., Chicago, Ill. Antifriction-bearing. No. 1,018,590; Feb. 6; Sp. p. 830; Gaz. vol. 175; p. 125.

Woods, Frank N., Flint, Mich. Electric-wire-feeding apparatus and reel therefor. No. 1,018,592; Feb. 27; Sp. p. 5293; Gaz. vol. 175; p. 918.

Woods-Sherwood Company. (See Comtois, Alfred L., assignor.)

Woodward, Edward M., Worcester, Mass. Device for transmitting power. No. 1,016,535; Feb. 6; Sp. p. 703; Gaz. vol. 175; p. 105.

Woolsey, James E., Shreveport, La. Automatic railway-switch. No. 1,016,697; Feb. 6; Sp. p. 1401; Gaz. vol. 175; p. 217.

Worden, Edward H. (See Corbett, James H., assignor.)

Work, Samuel M., Indiana, Pa. Fruit-picker. No. 1,018,287; Feb. 20; Sp. p. 4546; Gaz. vol. 175; p. 780.

Worthington, Benjamin, Mozart, Pa. Sanitary appliance. No. 1,017,940; Feb. 20; Sp. p. 3901; Gaz. vol. 175; p. 660.

Worthington, Edwin H., assignor to A. B. Grant, Troy, N. Y. Fold-collar-shaping machine. No. 1,016,812; Feb. 6; Sp. p. 170; Gaz. vol. 175; p. 26.

Wright, Arthur C., assignor to The Hopkins & Allen Arms Company, Norwich, Conn. Barrel-lock. No. 1,017,487; Feb. 13; Sp. p. 2783; Gaz. vol. 175; p. 469.

Wright, Benjamin H., London, England, assignor to The Alvey-Ferguson Company, Louisville, Ky. Conveyer. No. 1,017,941; Feb. 20; Sp. p. 3902; Gaz. vol. 175; p. 660.

Wright, Jacob P., Akron, Ohio, assignor to The Diamond Match Company, New York, N. Y. Machine for forming box-shucks. No. 1,016,465; Feb. 6; Sp. p. 521; Gaz. vol. 175; p. 80.

Wright, James G. (See Wylie and Wright.)

Wright, James H., Columbus, La. Plow. No. 1,017,942; Feb. 20; Sp. p. 3903; Gaz. vol. 175; p. 661.

Wright, Joseph, and G. F. Krick, Pittsburgh, Pa.; said Wright assignor to said Krick. Feed-bag support. No. 1,018,225; Feb. 20; Sp. p. 4421; Gaz. vol. 175; p. 759.

Wright, William J., Franklin, Pa. Making metallic packing. No. 1,018,149; Feb. 20; Sp. p. 4273; Gaz. vol. 175; p. 733.

Wright, William J., Franklin, Pa. Metallic packing. No. 1,018,349; Feb. 20; Sp. p. 4653; Gaz. vol. 175; p. 800.

Wright, Wilson D. C. (See Smith, James M., assignor.)

Wüfing, Johann A. von. (See Alaleben, Paul, assignor.)

Wyatt, John H., assignor of one-fourth to W. Haley and one-fourth to C. Haley, Rocky Ford, Colo. Fruit-picker. No. 1,016,663; Feb. 6; Sp. p. 969; Gaz. vol. 175; p. 149.

Wyckoff, Seamans & Benedict. (See Walker, Charles W., assignor.)

Wylie, Alfred R., and J. G. Wright, Big Spring, Tex. Automobile-wheel. No. 1,018,467; Feb. 27; Sp. p. 4937; Gaz. vol. 175; p. 872.

Wyllys, Roselle, *et al.* (See Booth, James A., assignor.)

Wynne, Robert S., Waxahachie, Tex. Harrow attachment for cultivators. No. 1,017,838; Feb. 20; Sp. p. 3552; Gaz. vol. 175; p. 624.

Yacoobian, Roupen K., Philadelphia, Pa. Water-mixer. No. 1,018,468; Feb. 27; Sp. p. 4938; Gaz. vol. 175; p. 873.

Yaffe, Samuel. (See Mayer and Yaffe.)

Yale & Towne Manufacturing Company, The. (See Peterson, Malcolm, assignor.)

Yale & Towne Manufacturing Company, The. (See Regan, Joseph C., assignor.)

Yale & Towne Manufacturing Company, The. (See Roehr, Louis, assignor.) (Reissue.)

Yawger, William H., Montreal, Quebec, Canada, assignor to The Marion Steam Shovel Company, Marion, Ohio. Cable-stretcher for ballast-unloaders. No. 1,018,800; Feb. 27; Sp. p. 5714; Gaz. vol. 175; p. 987.

Yawman & Erbe Manufacturing Company. (See Ackerman, Frederick W., assignor.)

Yelf, Henry H., Portsmouth, England. Holder for erasers. No. 1,018,288; Feb. 20; Sp. p. 4548; Gaz. vol. 175; p. 780.

Yocum, Artemus W., Manheim, Pa. Railway-tie. No. 1,018,801; Feb. 27; Sp. p. 5715; Gaz. vol. 175; p. 987.

Yonkman, Nicholas. (See Buss and Yonkman.)

York, David A., North Grove, Ind., and J. A. Tinker, Cleveland, assignors of one-third to A. W. Kraft, Painesville, Ohio. Enameling steel and the like. No. 1,017,360; Feb. 13; Sp. p. 2501; Gaz. vol. 175; p. 424.

Yoshino, Matashiro, Dairen, Manchuria, and C. N. Edge, Shanghai, China; said Edge assignor to said Yoshino. Dumping-wagon. No. 1,018,469; Feb. 27; Sp. p. 4939; Gaz. vol. 175; p. 873.

Younce, David S. and E. F., Union, Ohio. Silo. No. 1,018,540; Feb. 27; Sp. p. 5167; Gaz. vol. 175; p. 899.

Younce, Elias F. (See Younce, David S. and E. F.)

Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,018,950; Feb. 27; Sp. p. 6015; Gaz. vol. 175; p. 1037.

Young Manufacturing Company. (See Blodgett, Frederick E., assignor.)

Young, William, South Bellingham, Wash. Fender for motor-vehicles. No. 1,018,470; Feb. 27; Sp. p. 4941; Gaz. vol. 175; p. 873.

Youngman, Robert H. (See McKnight and Youngman.)

Zähringer, Arnold. (See Honold and Zähringer.)

Zeinsinger, Alois, Chicago, Ill. Mending cloth. No. 1,018,541; Feb. 27; Sp. p. 5168; Gaz. vol. 175; p. 899.

Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)

Zeiss, Firm of Carl. (See Siedentopf, Henry, assignor.)

Zeiss, Firm of Carl. (See Wild, Heinrich, assignor.)

Zellers, John A., New York, N. Y., and G. T. Price, West Orange, N. J., assignors to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,016,724; Feb. 6; Sp. p. 1105; Gaz. vol. 175; p. 170.

Zellweger, John, St. Louis, Mo. Recuperative roasting-kiln. No. 1,017,839; Feb. 20; Sp. p. 3552; Gaz. vol. 175; p. 624.

Zimdars, John B., San Francisco, Cal. Automobile-seat. No. 1,017,488; Feb. 13; Sp. p. 2784; Gaz. vol. 175; p. 470.

Zimmerman, Guy, Versailles, Ill. Coaster-brake. No. 1,018,471; Feb. 27; Sp. p. 4943; Gaz. vol. 175; p. 873.

Zimmermann, Frank, assignor to Francis Kell & Son, New York, N. Y. Resilient tire. No. 1,018,735; Feb. 27; Sp. p. 5571; Gaz. vol. 175; p. 964.

Zinn, Simon. (See Scheuber, August W., assignor.)

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. G. Spalding & Bros. (See Breakspear, Frederick C., assignor.)

A. H. & F. H. Lippincott. (See Lippincott, Fisher H., assignor.)

Alball Manufacturing Company. (See Millard, William, assignor.)

American Stove Company. (See Roy, Joseph, assignor.)

Armstrong Cork Company. (See Humphreys, Charles F., assignor.)

Bennett, Charles A., Taunton, Mass. Tray or similar article. No. 42,161; Feb. 18; Gaz. vol. 175; p. 519.

Bigelow Carpet Company. (See Elliot, William A., assignor.)

Bigelow Carpet Company. (See Merry, John, assignor.)

Bigelow Carpet Company. (See Moffat, John B., assignor.)

Bigelow Carpet Company. (See Smith, William G., assignor.)

Bigelow Carpet Company. (See Riddell, Robert F., assignor.)

Bigelow Carpet Company. (See Sauer, Emil G., assignor.)

Bigelow Carpet Company. (See Spring, John, assignor.)

Bigelow Carpet Company. (See Trik, Ernest W., assignor.)

Bigelow Carpet Company. (See Wishart, Joseph, assignor.)

Bigney, Sidney O., Attleboro, Mass. Coin-holder and vinaigrette. No. 42,182; Feb. 20; Gaz. vol. 175; p. 822.

Boeckel, Robert C., York, Pa. Bar of candy. No. 42,162; Feb. 18; Gaz. vol. 175; p. 519.

Bottome, Edgar M., assignor to Fostoria Glass Company, Moundsville, W. Va. Glass vessel. No. 42,163; Feb. 13; Gaz. vol. 175; p. 519.

Breakspear, Frederick C., Chicopee, Mass., assignor to A. G. Spalding & Bros., Jersey City, N. J. Golf-ball. No. 42,164; Feb. 13; Gaz. vol. 175; p. 519.

Bromley & Sons, John. (See Petersen, Adolph, assignor.)

Brundige, Sarah L., Savannah, Ga. Girdle for waist foundations. No. 42,190; Feb. 27; Gaz. vol. 175; p. 1068.

Buermann, Henry, Newark, N. J. Holder for whisk-brooms and similar articles. No. 42,122; Feb. 6; Gaz. vol. 175; p. 238.

Burns, Benjamin A., Shelton, Conn. Handle for spoons or similar articles. No. 42,123; Feb. 6; Gaz. vol. 175; p. 238.

Cairns, William, assignor to Parish & Bingham Company, Cleveland, Ohio. Running-board for automobiles. No. 42,124; Feb. 6; Gaz. vol. 175; p. 238.

Calautti, Saverio, New York, N. Y. Automobile-horn. No. 42,183; Feb. 20; Gaz. vol. 175; p. 822.

Cansler, Harry C., Knoxville, Tenn. Seat. No. 42,184; Feb. 20; Gaz. vol. 175; p. 822.

Clemens, John H., Pampa, Wash. Cover for tobacco-pipes. No. 42,165; Feb. 13; Gaz. vol. 175; p. 520.

Cordley, Henry G., Glen Ridge, N. J. Liquid cooler and dispenser. No. 42,166; Feb. 13; Gaz. vol. 175; p. 520.

Eastwood-Park Company. (See Ford, Kelsie B., assignor.)

Elliot, William A., Yonkers, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,125; Feb. 6; Gaz. vol. 175; p. 238.

Elliot, William A., Yonkers, N. Y., assignor to Bigelow Carpet Company. Rug-border. No. 42,126; Feb. 6; Gaz. vol. 175; p. 238.

Engelhardt & Sons, F. (See Nelson, Nels J., assignor.)

Estep, Edwin B., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Lamp-casing. No. 42,127; Feb. 6; Gaz. vol. 175; p. 239.

Eustis, John P., Newton, Mass. Holder-bracket. Nos. 42,197–8; Feb. 27; Gaz. vol. 175; p. 1068.

Flanner, Rudolf, Vienna, Austria-Hungary. Lucky-figure amulet or talisman. No. 42,167; Feb. 13; Gaz. vol. 175; p. 520.

Farr, Edward A., assignor to Manning, Bowman & Company, Meriden, Conn. Tumbler-holder. No. 42,199; Feb. 27; Gaz. vol. 175; p. 1068.

Farr, Edward A., assignor to Manning, Bowman & Company, Meriden, Conn. Dish. No. 42,200; Feb. 27; Gaz. vol. 175; p. 1069.

Ferris, William D., Sterling, Ill. Hinge-leaf. No. 42,168; Feb. 13; Gaz. vol. 175; p. 520.

Ford, Kelsie B., assignor to Eastwood-Park Company, Newark, N. J. Hanger for hand-bags or similar articles. No. 42,169; Feb. 13; Gaz. vol. 175; p. 520.

Forestier, Gustave, New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,201–3; Feb. 27; Gaz. vol. 175; p. 1069.

Fostoria Glass Company. (See Bottome, Edgar M., assignor.)

Francis, Graham I., Coventry, England. Cycle pedal-frame. No. 42,170; Feb. 13; Gaz. vol. 175; p. 520.

Freemantle, Walter H., Oswego, N. Y. Game-board. No. 42,204; Feb. 27; Gaz. vol. 175; p. 1069.

Goldman & Co., M. (See Hacker, Emanuel M., assignor.)

Goodwin, John B., Baltimore, Md., assignor to The Sovereign Grand Lodge of The Independent Order of Odd Fellows. Official certificate. No. 42,128; Feb. 6; Gaz. vol. 175; p. 239.

Griffin, Robert B., New York, N. Y. Wall-covering. Nos. 42,129–37; Feb. 6; Gaz. vol. 175; pp. 239–40.

Hacker, Emanuel M., assignor of one-half to M. Goldman & Co., New York, N. Y. Textile fabric. No. 42,138; Feb. 6; Gaz. vol. 175; p. 240.

Hartford Carpet Corporation, The. (See Sayers, William E., assignor.)

Hill, Francis G., Columbus, Ind. Toilet-stand. No. 42,185; Feb. 20; Gaz. vol. 175; p. 822.

Hoch, Ernest, New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,206–10; Feb. 27; Gaz. vol. 175; pp. 1069–70.

Humphreys, Charles F., Lancaster, assignor to Armstrong Cork Company, Pittsburgh, Pa. Linoleum or oil-cloth. No. 42,211; Feb. 27; Gaz. vol. 175; p. 1070.

Jameson, Joseph. (See Yesbera and Jameson.)

Jefferson Glass Company. (See Schnelbach, Harry A., assignor.)

Jennings, Roger A., Greensboro, N. C. Wardrobe-dresser. No. 42,171; Feb. 18; Gaz. vol. 175; p. 520.

Joy, Henry B., assignor to Packard Motor Car Company, Detroit, Mich. Automobile radiator-filler cap. No. 42,139; Feb. 6; Gaz. vol. 175; p. 241.

Judd, Frederick W., Cleveland, Ohio, assignor to The Wrought Iron Range Company, St. Louis, Mo. Reservoir-top. No. 42,140; Feb. 6; Gaz. vol. 175; p. 241.

Kálmán, Nemes, Bridgeport, Conn. Shoe-protector. No. 42,212; Feb. 27; Gaz. vol. 175; p. 1071.

Kennedy, Harold H., assignor to The Waverly Company, Indianapolis, Ind. Vehicle-body. No. 42,172; Feb. 13; Gaz. vol. 175; p. 521.

Kirchhoff, Ernest, New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. No. 42,213; Feb. 27; Gaz. vol. 175; p. 1071.

Korzinek, William C., Weehawken Heights, N. J., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. No. 42,214; Feb. 27; Gaz. vol. 175; p. 1071.

Kretzer, Sidney D., assignor to St. Louis Lightning Rod Company, St. Louis, Mo. Lightning-rod terminal. No. 42,173; Feb. 13; Gaz. vol. 175; p. 521.

Lang, Charles E. J., assignor to The Rauch & Lang Carriage Company, Cleveland, Ohio. Vehicle-body. No. 42,186; Feb. 20; Gaz. vol. 175; p. 823.

Lippincott, Fisher H., assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa. Faucet. No. 42,174; Feb. 13; Gaz. vol. 175; p. 521.

Lunt, Ernest M., Naperville, Ill., assignor to Towle Manufacturing Company, Newburyport, Mass. Dinner-set cabinet. Nos. 42,187–8; Feb. 20; Gaz. vol. 175; p. 823.

Madeleine, Emile, Flatbush, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,215–21; Feb. 27; Gaz. vol. 175; pp. 1071–2.

Manning, Bowman & Company. (See Farr, Edward A., assignor.)

Merry, John, New York, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,141; Feb. 6; Gaz. vol. 175; p. 241.

Millard, William, New York, assignor to Alball Manufacturing Company, Brooklyn, N. Y. Vending-machine casing. No. 42,175; Feb. 18; Gaz. vol. 175; p. 521.

Miller-Lock Company. (See Soley, Frank, assignor.)

Moffat, John B., Bronxville, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,142; Feb. 6; Gaz. vol. 175; p. 241.

Mordt, Anders L., Guymon, Okla. Nutcracker. Nos. 42,143–4; Feb. 6; Gaz. vol. 175; p. 241.

Morse, George W., assignor to Parish & Bingham Company, Cleveland, Ohio. Running-board for automobiles. No. 42,145; Feb. 6; Gaz. vol. 175; p. 242.

Munier, Emile, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,222–7; Feb. 27; Gaz. vol. 175; pp. 1072–3.

Nelson, Nels J., Chicago, Ill., assignor to F. Engelhardt & Sons, St. Johnsville, N. Y. Plane-case. No. 42,189; Feb. 20; Gaz. vol. 175; p. 823.

O'Brien, John H., Cleveland, Ohio. Stove. No. 42,176; Feb. 13; Gaz. vol. 175; p. 522.

Onfroy, Roland, assignor to United Stores Association, New York, N. Y. Letter-head or similar article. No. 42,228; Feb. 27; Gaz. vol. 175; p. 1073.

Orcutt, Leon F., New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,229–31; Feb. 27; Gaz. vol. 175; pp. 1073–4.

Osborne, Charles, New York, N. Y. Handle for spoons, forks, or similar articles. No. 42,146; Feb. 6; Gaz. vol. 175; p. 242.
Pacific Mills. (See Forestier, Gustave, assignor.)
Pacific Mills. (See Hoch, Ernest, assignor.)
Pacific Mills. (See Kirchhoff, Ernest, assignor.)
Pacific Mills. (See Korsinek, William C., assignor.)
Pacific Mills. See Madeleine, Emile, assignor.)
Pacific Mills. (See Munier, Emile, assignor.)
Pacific Mills. (See Orcutt, Leon F., assignor.)
Pacific Mills. (See Rothschild, Max, assignor.)
Pacific Mills. (See Schaetzel, Francois J., assignor.)
Packard Motor Car Company. (See Estep, Edwin R., assignor.)
Packard Motor Car Company. (See Joy, Henry B., assignor.)
Parish & Bingham Company. (See Cairns, William, assignor.)
Parish & Bingham Company. (See Morse, George W., assignor.)
Petsold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Nos. 42,190–2; Feb. 20; Gaz. vol. 175; pp. 822–4.
Petsold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Rug. Nos. 42,232–4; Feb. 27; Gaz. vol. 175; p. 1074.
Rauch & Lang Carriage Company, The. (See Lang, Charles E. J., assignor.)
Reininger, Augustus, San Francisco, Cal. Scarf-pin. No. 42,177; Feb. 13; Gaz. vol. 175; p. 522.
Reith, William G., New York, N. Y., assignor to Bigelow Carpet Company. Rug. No. 42,147; Feb. 6; Gaz. vol. 175; p. 242.
Rich & Company, N. J. (See Sampliner, Samuel S., assignor.)
Riddell, Robert F., Flushing, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,148; Feb. 6; Gaz. vol. 175; p. 242.
Rothschild, Max, New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,235–6; Feb. 27; Gaz. vol. 175; pp. 1074–5.
Rouse, Sylvany M., New Orleans, La. Pack of playing-cards. No. 42,237; Feb. 27; Gaz. vol. 175; p. 1075.
Roy, Joseph, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-heater. No. 42,178; Feb. 13; Gaz. vol. 175; p. 522.
Sager, James H., Rochester, N. Y. Automobile-bumper. No. 42,149; Feb. 6; Gaz. vol. 175; p. 242.
Sampliner, Samuel S., assignor to N. J. Rich & Company, Cleveland, Ohio. Flat-knit neckscarf or muffler. No. 42,238; Feb. 27; Gaz. vol. 175; p. 1076.
Sauer, Emil G., Richmond Hill, N. Y., assignor to Bigelow Carpet Company. Rug. No. 42,150; Feb. 6; Gaz. vol. 175; p. 242.
Sayers, William E., assignor to The Hartford Carpet Corporation, Thompsonville, Conn. Carpet or rug. No. 42,239; Feb. 27; Gaz. vol. 175; p. 1076.
Schaetzel, Francois J., Stapleton, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. Nos. 42,240–9; Feb. 27; Gaz. vol. 175; pp. 1076–8.
Schmidt, Max, Cincinnati, Ohio. Operating-table top. No. 42,179; Feb. 13; Gaz. vol. 175; p. 522.
Schnelbach, Harry A., Steubenville, Ohio, assignor to Jefferson Glass Company, Follansbee, W. Va. Lamp-shade. No. 42,151; Feb. 6; Gaz. vol. 175; p. 243.
Schumacher, Gerard, assignor to Union Foundry Company, Anniston, Ala. Street-light post. No. 42,193; Feb. 20; Gaz. vol. 175; p. 824.
Smith, Oliver A., Springfield, Mass. Vegetable-knife. No. 42,194; Feb. 20; Gaz. vol. 175; p. 824.
Soley, Frank, Philadelphia, assignor to Miller-Lock Company, Frankford, Philadelphia, Pa. Key. No. 42,152; Feb. 6; Gaz. vol. 175; p. 243.
Sovereign Grand Lodge of The Independent Order of Odd Fellows, The. (See Goodwin, John E., assignor.)
Spirup, Louis, Audubon, Iowa. Breastpin. No. 42,230; Feb. 27; Gaz. vol. 175; p. 1078.
Spring, John, New York, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,153; Feb. 6; Gaz. vol. 175; p. 243.
Spring, John, New York, N. Y., assignor to Bigelow Carpet Company. Rug. Nos. 42,154–7; Feb. 6; Gaz. vol. 175; pp. 243–4.
St. Louis Lightning Rod Company. (See Kretzer, Sidney D., assignor.)
Street, Luiabelle, Tucumcari, N. Mex. Abdominal band. No. 42,195; Feb. 20; Gaz. vol. 175; p. 824.
Towle Manufacturing Company. (See Lunt, Ernest M., assignor.)
Trik, Ernest W., Brooklyn, N. Y., assignor to Bigelow Carpet Company. Rug. No. 42,158; Feb. 6; Gaz. vol. 175; p. 244.
Union Foundry Company. (See Schumacher, Gerard, assignor.)
United Stores Association. (See Onffroy, Roland, assignor.)
Waverly Company, The. (See Kennedy, Harold H., assignor.)
Wishart, Joseph, Brooklyn, N. Y., assignor to Bigelow Carpet Company. Carpet. Nos. 42,159–60; Feb. 6; Gaz. vol. 175; p. 244.
Wrought Iron Range Company, The. (See Judd, Frederick W., assignor.)
Yesbera, Frank, and J. Jameson, Toledo, Ohio. Display-stand for merchandise. No. 42,180; Feb. 13; Gaz. vol. 175; p. 523.
Zakrzewski, Theodora, Philadelphia, Pa. Symbol. No. 42,181; Feb. 13; Gaz. vol. 175; p. 523.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. G. Spalding & Bros., Jersey City, N. J., and New York, N. Y. Tennis-rackets. No. 85,406; Feb. 20; Gaz. vol. 175; p. 840.
Acme Metal Weather Strip Company, New York, N. Y. Metal weather-strips. No. 85,536; Feb. 20; Gaz. vol. 175; p. 837.
Aktiebolaget B. A. Hjorth & Co., Stockholm, Sweden. Stoves, soldering-lamps, and parts thereof and accessories. No. 85,541; Feb. 27; Gaz. vol. 175; p. 1093.
Alexander, Harry, New York, N. Y. Metal reflectors. No. 85,399; Feb. 20; Gaz. vol. 175; p. 837.
Allan, William, New York, N. Y., and San Juan, Porto Rico. Oranges, grape-fruits, lemons, &c. No. 85,218; Feb. 6; Gaz. vol. 175; p. 259.
American Belting & Tanning Co., Boston, Mass. Leather belting, packing, and hose. No. 85,400; Feb. 20; Gaz. vol. 175; p. 837.
American Gum Company, Chicago, Ill. Chewing-gum. No. 85,401; Feb. 20; Gaz. vol. 175; p. 837.
American Manufacturing Company, The, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company, Boston, Mass. Bagging for baling cotton. Nos. 85,214–16; Feb. 6; Gaz. vol. 175; p. 259.
American Manufacturing Company, Charleston, W. Va., and New York, N. Y., assignor to American Manufacturing Company. Hemp clothes-lines. Nos. 85,402–3; Feb. 20; Gaz. vol. 175; p. 837.
American Salve Company, Grand Rapids, Mich. Salves and lotions. No. 85,542; Feb. 27; Gaz. vol. 175; p. 1093.
American Thread Company, Jersey City, N. J. Spool sewing cotton, thread, and cotton yarns. Nos. 85,217–19; Feb. 6; Gaz. vol. 175; p. 259.
American Thread Company, Jersey City, N. J. Spool and sewing cotton, thread, and cotton yarn. No. 85,543; Feb. 27; Gaz. vol. 175; p. 1093.
American Trading Company, New York, N. Y. Evaporated apples. No. 85,220; Feb. 6; Gaz. vol. 175; p. 259.
American Well & Prospecting Co., Corsicana, Tex. Well-drilling machines. No. 85,221; Feb. 6; Gaz. vol. 175; p. 259.
American Writing Paper Company, Holyoke, Mass. Writing-paper. No. 85,222; Feb. 6; Gaz. vol. 175; p. 260.
American Writing Paper Company, Holyoke, Mass. Writing-paper. No. 85,411; Feb. 13; Gaz. vol. 175; p. 537.
Anchor Webbing Company, Woonsocket, R. I. Certain fancy goods. No. 85,544; Feb. 27; Gaz. vol. 175; p. 1093.
Anderson, William H., Springfield, Ill. Furniture-polish. No. 85,404; Feb. 20; Gaz. vol. 175; p. 837.
Ansonia Clock Company, New York, N. Y. Watches. No. 85,312; Feb. 13; Gaz. vol. 175; p. 537.
Armor, Alpheus, Pittsburgh, Pa. Stone-polishing preparation. No. 85,405; Feb. 20; Gaz. vol. 175; p. 837.
Armstrong Redning Company, Dallas, Tex. Lard. No. 85,406; Feb. 20; Gaz. vol. 175; p. 837.
Arthur Chemical Company, New Haven, Conn. Hydrogen peroxid. No. 85,407; Feb. 20; Gaz. vol. 175; p. 837.
Aschenbach & Miller, Incorporated, Philadelphia, Pa. Germicidal, deodorizing, and disinfecting liquid. No. 85,313; Feb. 13; Gaz. vol. 175; p. 537.
Atlantic Cotton Mills, Lawrence and Boston, Mass. Cotton piece goods. No. 85,314; Feb. 13; Gaz. vol. 175; p. 537.
Atlantic Cotton Mills, Lawrence and Boston, Mass. Cotton piece goods. No. 85,545; Feb. 27; Gaz. vol. 175; p. 1093.
Aubry Sisters, New York, N. Y. Certain toilet preparations. Nos. 85,315–16; Feb. 13; Gaz. vol. 175; p. 537.
B & F Manufacturing Co., Greeley, Colo. Certain parts of harness. No. 85,317; Feb. 13; Gaz. vol. 175; p. 537.
Ballard, Sarah E., New York, N. Y. Veil-holders. No. 85,223; Feb. 6; Gaz. vol. 175; p. 260.
Barrett Manufacturing Company, New York, N. Y. Pitch. No. 85,408; Feb. 20; Gaz. vol. 175; p. 837.
Barrett Manufacturing Company, New York, N. Y. Tar, pitch, asphalt, &c. No. 85,546; Feb. 27; Gaz. vol. 175; p. 1093.
Bee Dee Stock Medicine Co., Chattanooga, Tenn. Liver medicine for live stock. No. 85,547; Feb. 27; Gaz. vol. 175; p. 1093.
Benjamin Moore & Co., Brooklyn, N. Y. Oil-paints. No. 85,468; Feb. 20; Gaz. vol. 175; p. 839.
Berlin Chemical Company, The, Jersey City, N. J. Medicaments. No. 85,318; Feb. 13; Gaz. vol. 175; p. 537.
Biedermann Bros., Chicago, Ill. Coffee. No. 85,224; Feb. 6; Gaz. vol. 175; p. 260.
Bliss Cook Oak Company, Blissville, Ark. Wooden flooring. No. 85,319; Feb. 13; Gaz. vol. 175; p. 537.
Boehringer & Soehne, C. F., Mannheim-Waldhof, Germany. Derivatives of salicylic acid. No. 85,549; Feb. 27; Gaz. vol. 175; p. 1093.
Boston Gore and Web Manufacturing Company, Boston, Mass. Elastic webbing. No. 85,225; Feb. 6; Gaz. vol. 175; p. 259.
Bounce M'f'g Company, Philadelphia, Pa. Certain game. No. 85,552; Feb. 27; Gaz. vol. 175; p. 1093.
Bowen, Charles E., Alameda, Cal. Fly-traps. No. 85,320; Feb. 13; Gaz. vol. 175; p. 537.
Brown & Sons, Thos. H., Philadelphia, Pa. Hosiery. No. 85,553; Feb. 27; Gaz. vol. 175; p. 1093.
Burckhardt Company, Cincinnati, Ohio. Soap. No. 85,409; Feb. 20; Gaz. vol. 175; p. 837.
Burckhardt Company, The, Cincinnati, Ohio. Scouring-powder. No. 85,554; Feb. 27; Gaz. vol. 175; p. 1093.
Burnham-Munger Mfg. Co., The, Kansas City, Mo. Sleeping-garments. No. 85,555; Feb. 27; Gaz. vol. 175; p. 1093.
C. Conradty (Inhaber Pauline & Eugen Conradty) Fabrik elektrischer u. galvanischer Kohlen, Nuremberg, Germany. Certain electrical apparatus. No. 85,228; Feb. 6; Gaz. vol. 175; p. 259.
C. A. Edgarton Mfg. Co., Shirley, Mass. Suspenders and garters. No. 85,534; Feb. 13; Gaz. vol. 175; p. 537.
C. A. Spencer & Son Company, Boston, Mass. Tanning and dyeing extracts. No. 85,383; Feb. 13; Gaz. vol. 175; p. 539.
C. F. Sweet, Inc., Hartford, Conn. Lubricating oils and greases. No. 85,516; Feb. 20; Gaz. vol. 175; p. 840.
Cahill Shoe Co., The, Cincinnati, Ohio. Shoes, boots, and sandals. No. 85,410; Feb. 20; Gaz. vol. 175; p. 837.
Cameo Manufacturing Company, Worcester, Mass. Almond, complexion, and deodorizing cream and foot-powder. No. 85,322; Feb. 13; Gaz. vol. 175; p. 537.
Canfield Rubber Company, The, Bridgeport, Conn. Waterproof sheets and sheeting. No. 85,556; Feb. 27; Gaz. vol. 175; p. 1093.
Carson, Pirie, Scott & Co., Chicago, Ill. Table-cloths, napkins, &c. No. 85,411; Feb. 20; Gaz. vol. 175; p. 837.
Carson, Pirie, Scott & Co., Chicago, Ill. Ribbons. No. 85,412; Feb. 20; Gaz. vol. 175; p. 837.
Central Commercial Co., Chicago, Ill. Asphalt. No. 85,324; Feb. 13; Gaz. vol. 175; p. 537.
Chattanooga Medicine Co., Chattanooga, Tenn. Liver medicine. No. 85,325; Feb. 13; Gaz. vol. 175; p. 537.
Chicago Feather Duster Co., Chicago, Ill. Dust-cloths. No. 85,413; Feb. 20; Gaz. vol. 175; p. 837.
Chouquette, Michael D., Denison, Tex. Remedy for tuberculosis. No. 85,326; Feb. 13; Gaz. vol. 175; p. 537.
City Fuel Company, Chicago, Ill. Coal. No. 85,557; Feb. 27; Gaz. vol. 175; p. 1093.
Clancy, John R., Syracuse, N. Y. Hose-clamps. No. 85,226; Feb. 6; Gaz. vol. 175; p. 259.
Clinkscales & Son, R. M., Dallas, Tex. Remedy for certain diseases. No. 85,558; Feb. 27; Gaz. vol. 175; p. 1093.
Cloverdale Company, The, Boston, Mass. Certain foods. No. 85,414; Feb. 20; Gaz. vol. 175; p. 837.
Cohen Bros. Company, Milwaukee, Wis. Shirts and underwear. No. 85,327; Feb. 13; Gaz. vol. 175; p. 537.
Cohen, Samuel, Baltimore, Md. Salve for the treatment of rheumatism. No. 85,559; Feb. 27; Gaz. vol. 175; p. 1093.
Columbia Typewriter Manufacturing Company, The, New York, N. Y. Type-writers and parts. No. 85,227; Feb. 6; Gaz. vol. 175; p. 259.
Commercial Travelers' Club, Springfield, Mass. Quarterly magazine. No. 85,415; Feb. 20; Gaz. vol. 175; p. 837.
Compagnie d'Exploitation des Bois de la Tortue (Société Anonyme), Brussels, Belgium, and Lavellée, Haiti. Timber. No. 85,560; Feb. 27; Gaz. vol. 175; p. 1093.
Comstock & Co., S. E., Newark, N. Y. Canned fruits, vegetables, and sauer-kraut. No. 85,416; Feb. 20; Gaz. vol. 175; p. 837.
Corday & Co., New York, N. Y. Coats, vests, trousers, and overcoats. No. 85,229; Feb. 6; Gaz. vol. 175; p. 259.
Craker, Robert J., Oakland, Cal. Letters for signs. No. 85,328; Feb. 13; Gaz. vol. 175; p. 537.
Crescent Machine Company, Leetonia, Ohio. Jointers, planers, shapers, &c. No. 85,230; Feb. 6; Gaz. vol. 175; p. 259.
Crocker Grocery Company, Wilkes-Barre, Pa. Certain foods. No. 85,417; Feb. 20; Gaz. vol. 175; p. 837.
Dalton Medicine Co., Fayetteville, Tenn. Remedy for headache and neuralgia. No. 85,561; Feb. 27; Gaz. vol. 175; p. 1093.

Damard Lacquer Company Limited, London, England. Paints, lacquers, and varnishes. No. 85,418; Feb. 20; Gaz. vol. 175; p. 837.
Davidson, William J., St. Paul, Minn. Pile remedy. No. 85,562; Feb. 27; Gaz. vol. 175; p. 1093.
Decker & Cohn, Alfred, Chicago, Ill. Coats, vests, and trousers. No. 85,419; Feb. 20; Gaz. vol. 175; p. 837.
Deforest Sheet & Tinplate Co., The, Niles, Ohio. Sheet-steel. No. 85,231; Feb. 6; Gaz. vol. 175; p. 259.
Dempsey & Co., P., Boston, Mass. Wine. No. 85,329; Feb. 13; Gaz. vol. 175; p. 537.
Denzer & Nathan, New York, N. Y. Flannel piece goods. No. 85,563; Feb. 27; Gaz. vol. 175; p. 1093.
Dieckerhoff, Raffloer & Co., New York, N. Y. Thread. No. 85,564; Feb. 27; Gaz. vol. 175; p. 1093.
Dieckerhoff, Raffloer & Co., New York, N. Y. Ribbons and hair-nets. No. 85,565; Feb. 27; Gaz. vol. 175; p. 1093.
Dixie Cotton Felt Mattress Company, Chicago, Ill. Mattresses, bed box springs, and pillows. No. 85,420; Feb. 20; Gaz. vol. 175; p. 837.
Dónovan & Spang, St. Paul, Minn. Laxative remedies. No. 85,330; Feb. 13; Gaz. vol. 175; p. 537.
Dresdner Reiseutensilien- & Lederwarenfabrik G. L. Lippold, Dresden, Germany. Traveling-bags and trunks. No. 85,331; Feb. 13; Gaz. vol. 175; p. 537.
Duval, Alfred, Saratoga Springs, N. Y. Cigars. No. 85,421; Feb. 20; Gaz. vol. 175; p. 837.
Dyneto Electric Company, Elbridge, N. Y. Certain electric apparatus. No. 85,422; Feb. 20; Gaz. vol. 175; p. 837.
Earp-Thomas Farmogerm Company, Jersey City and Bloomfield, N. J. Cultures of soil-bacteria. No. 85,332; Feb. 13; Gaz. vol. 175; p. 537.
Eastern Drug Co., Bakersfield, Cal. Remedy for gonorrhea. No. 85,333; Feb. 13; Gaz. vol. 175; p. 537.
Eastman Kodak Co., Rochester, N. Y. Certain photographic supplies. No. 85,423; Feb. 20; Gaz. vol. 175; p. 837.
Eckhardt, George, Chicago, Ill. Pudding-powders. No. 85,232; Feb. 6; Gaz. vol. 175; p. 259.
Edwin E. Kraushar Co., New York, N. Y. Candy whistles. No. 85,259; Feb. 6; Gaz. vol. 175; p. 260.
Electric Respirone Company, The, Cleveland, Ohio. Electric therapeutic appliance. No. 85,335; Feb. 13; Gaz. vol. 175; p. 537.
Electrolytic Art Metal Company, Trenton, N. J. Certain articles electrically treated with precious metal. No. 85,567; Feb. 27; Gaz. vol. 175; p. 1093.
Empire Notion Co., New York, N. Y. Certain fancy goods. No. 85,233; Feb. 6; Gaz. vol. 175; p. 259.
Empire Rubber Manufacturing Company, Trenton, N. J.; Chicago, Ill.; New York, N. Y., and Boston, Mass. Cotton rubber-lined hose. No. 85,568; Feb. 27; Gaz. vol. 175; p. 1093.
Enterprise Broom Company, Chicago, Ill. Brooms. No. 85,336; Feb. 13; Gaz. vol. 175; p. 537.
Entertainment Publishing Co., New York, N. Y. Monthly magazine. No. 85,569; Feb. 27; Gaz. vol. 175; p. 1094.
Erste Karlsruher Parfümerie- & Toilettenseifen-Fabrik F. Wolff & Sohn, Baden and Karlsruhe, Germany. Perfumery. No. 85,570; Feb. 27; Gaz. vol. 175; p. 1094.
Euclid Optical Company, The, Cleveland, Ohio. Certain optical and measuring instruments. No. 85,234; Feb. 6; Gaz. vol. 175; p. 259.
Exchange Cotton and Linseed Meal Company, Kansas City, Mo. Cotton-seed meal and cake. No. 85,424; Feb. 20; Gaz. vol. 175; p. 837.
F. W. Klinger & Langbein Company, Philadelphia, Pa. Artificial-fly books for carrying fishing-flies. No. 85,350; Feb. 13; Gaz. vol. 175; p. 538.
F. W. Thurston Company, Chicago, Ill. Antiseptic cleaning compound. No. 85,524; Feb. 20; Gaz. vol. 175; p. 840.
Farmers' Cotton Oil & Fertilizer Co., Huntsville, Ala. Fertilizer. No. 85,337; Feb. 13; Gaz. vol. 175; p. 537.
Farnsworth, Eva O., New York, N. Y. Certain combination undergarment. No. 85,338; Feb. 13; Gaz. vol. 175; p. 537.
Féret, Louis, Paris, France. Emollient. No. 85,339; Feb. 13; Gaz. vol. 175; p. 537.
Fisher, Charles, San Francisco, Cal. Thread of all kinds. No. 85,426; Feb. 20; Gaz. vol. 175; p. 837.
Flemming, Robert, London, England. Saddles, saddlery, and harness. Nos. 85,427–9; Feb. 20; Gaz. vol. 175; p. 838.
Foery & Bauer, Brooklyn, N. Y. Shears, knives, and razors. No. 85,237; Feb. 6; Gaz. vol. 175; p. 260.
Fowler, D'Roy F., Melrose Park, Pa. Linings and padding for automobiles, carriages, cushions, &c. No. 85,340; Feb. 13; Gaz. vol. 175; p. 538.
França, Eduardo F., Rio de Janeiro, Brazil. Liquid antiseptic and remedy for certain diseases. No. 85,341; Feb. 13; Gaz. vol. 175; p. 538.
Francis H. Leggett & Co., New York, N. Y. Gum jarrings. No. 85,598; Feb. 27; Gaz. vol. 175; p. 1094.
Frankle, Felix, Chicago, Ill. Toilet cream and powder. No. 85,430; Feb. 20; Gaz. vol. 175; p. 838.
Franklin MacVeagh & Company, Chicago, Ill. Grape-juice and boiled cider. No. 85,263; Feb. 6; Gaz. vol. 175; p. 260.
Fredonia Linseed Oil Works, Fredonia, Kans. Linseed-oil. No. 85,573; Feb. 27; Gaz. vol. 175; p. 1094.
Freshour, Henry C., Bridgeport, Conn. Rubber buckets for chain-pumps. No. 85,238; Feb. 6; Gaz. vol. 175; p. 260.
Gabriel & Co., Birmingham, England. Copper and aluminum alloys. No. 85,239; Feb. 6; Gaz. vol. 175; p. 260.
Gaube dit du Gers, Jean, Paris, France. Remedy for cancer. No. 85,574; Feb. 27; Gaz. vol. 175; p. 1094.
Ge Bott, Jay D., Omaksta, Tex. Brazing compound. No. 85,431; Feb. 20; Gaz. vol. 175; p. 838.
Geo. Borgfeldt & Co., New York, N. Y. Brushes. Nos. 85,550–1; Feb. 27; Gaz. vol. 175; p. 1093.
Georges & Son, J. J., Washington, D. C. Corn and bunion shields. No. 85,575; Feb. 27; Gaz. vol. 175; p. 1094.
Gifford Chemical Company, The, Beverly, N. J. Tooth powders and pastes. No. 85,576; Feb. 27; Gaz. vol. 175; p. 1094.
Gilman, O. B., Boston, Mass. Crackers and cakes. No. 85,432; Feb. 20; Gaz. vol. 175; p. 838.
Glencairn Manufacturing Company, Pawtucket, R. I. Lacing-tips. No. 85,577; Feb. 27; Gaz. vol. 175; p. 1094.
Goldberg, Bowen & Co., San Francisco, Cal. Canned vegetables. No. 85,433; Feb. 20; Gaz. vol. 175; p. 838.
Goodyear Tire and Rubber Company, The, Akron, Ohio. Elastic vehicle-tires. No. 85,434; Feb. 20; Gaz. vol. 175; p. 838.
Gottmann & Kretchmer, Chicago, Ill. Chocolates and marshmallows. No. 85,242; Feb. 6; Gaz. vol. 175; p. 260.
Great Western Oil Co., The, Cleveland, Ohio. Lubricating and illuminating oils and greases made from petroleum products. No. 85,243; Feb. 6; Gaz. vol. 175; p. 260.
Green, David V., Bridgeport, Conn. Curtains, pillow-shams, and lace coverlets. No. 85,244; Feb. 6; Gaz. vol. 175; p. 260.
Gregg Glove Co., Crawfordsville, Ind. Gloves. No. 85,243; Feb. 13; Gaz. vol. 175; p. 538.
Greif Bros. Co., The, Cleveland, Ohio. Casks and barrels. No. 85,344; Feb. 13; Gaz. vol. 175; p. 538.
Grellich, William, New York, N. Y. Sandals and rompers. No. 85,578; Feb. 27; Gaz. vol. 175; p. 1094.
Gulfport Grocery Co., Gulfport, Miss. Wheat-flour. No. 85,245; Feb. 6; Gaz. vol. 175; p. 260.
Gutman, Julius L., New York, N. Y. Shirts. No. 85,579; Feb. 27; Gaz. vol. 175; p. 1094.
Gutta Percha & Rubber Mfg. Co., The, New York, N. Y. Certain mechanical rubber goods. No. 85,435; Feb. 20; Gaz. vol. 175; p. 838.
H. Mueller Manufacturing Company, Decatur, Ill. Certain plumbing and steam-fitting supplies. No. 85,269; Feb. 6; Gaz. vol. 175; p. 260.
H. G. Prince & Company, Fruitvale, Cal. Canned fruits. Nos. 85,286–7; Feb. 6; Gaz. vol. 175; p. 261.
Habicht, Braun & Co., New York, N. Y., and Chicago, Ill. Dried fruits, currants, sultana raisins, and citron. No. 85,436; Feb. 20; Gaz. vol. 175; p. 838.
Haiku Fruit & Packing Co., Ltd., Haiku, Hawaii. Canned pineapples. No. 85,437; Feb. 20; Gaz. vol. 175; p. 838.
Hale, Arthur, New York, N. Y., and Chicago, Ill. Certain kinds of boots, shoes, slippers, and stockings. No. 85,345; Feb. 13; Gaz. vol. 175; p. 538.
Hammer, Howell I., Baltimore, Md. Stomach and nerve tonic. No. 85,346; Feb. 13; Gaz. vol. 175; p. 538.
Hanover Wire Cloth Co., Hanover, Pa. Wire-cloth. No. 85,438; Feb. 20; Gaz. vol. 175; p. 838.
Harrison & Co., New York, N. Y. Apple vinegar. No. 85,347; Feb. 13; Gaz. vol. 175; p. 538.
Haven, Porter A., Kansas City, Mo. Lubricating-oil. No. 85,439; Feb. 20; Gaz. vol. 175; p. 838.
Hemming Manufacturing Company, Wallington, N. J. Certain electrical apparatus and supplies. No. 85,440; Feb. 20; Gaz. vol. 175; p. 838.
Herrmann, August, Sr., Berlin, Germany. Medicine for the relief of rheumatism. No. 85,580; Feb. 27; Gaz. vol. 175; p. 1094.
Hilbern Company, The, Chicago, Ill. Remedy for rheumatism. No. 85,582; Feb. 27; Gaz. vol. 175; p. 1094.
Hills, Lewis A., Salt Lake City, Utah. Chicken coops and houses, nests, feed-boxes, &c. No. 85,348; Feb. 13; Gaz. vol. 175; p. 538.
Himrod Man'f'g Co., New York, N. Y. Certain remedy. No. 85,349; Feb. 13; Gaz. vol. 175; p. 538.
Hirschberg, Hermann M., New York, N. Y. Carbons and carbon electrodes. No. 85,246; Feb. 6; Gaz. vol. 175; p. 260.
Hochschild Kohn & Co., Baltimore, Md. Overcoats, coats, vests, trousers, &c. No. 85,350; Feb. 13; Gaz. vol. 175; p. 538.
Hofeb, L. & O., Breslau, Germany. Precious, semi-precious, and rhine stones. No. 85,441; Feb. 20; Gaz. vol. 175; p. 838.
Holmpatch Limited, Newcastle-upon-Tyne, England. Paints. No. 85,442; Feb. 20; Gaz. vol. 175; p. 838.
Horne, William H., Greenville, N. C. Remedy for headaches. No. 85,583; Feb. 27; Gaz. vol. 175; p. 1094.
Household Gas Iron Company, New York, N. Y. Sad-irons. No. 85,584; Feb. 27; Gaz. vol. 175; p. 1094.
Howland and Wheaton Company, Warren, R. I. Display-cabinets. No. 85,352; Feb. 13; Gaz. vol. 175; p. 538.
Humphrey Taylor & Co. Limited, London, England. Tonic wine. No. 85,517; Feb. 20; Gaz. vol. 175; p. 840.
Hupp Motor Car Co., Detroit, Mich. Automobiles. No. 85,247; Feb. 6; Gaz. vol. 175; p. 260.

Hylin & Co. Fabriks Aktiebolag, Stockholm, Sweden. Shaving-soap. No. 85,585; Feb. 27; Gaz. vol. 175; p. 1094.
I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. No. 85,451; Feb. 20; Gaz. vol. 175; p. 838.
Illinois Canning Company, Hoopeston, Ill. Canned corn. Nos. 85,248–51; Feb. 6; Gaz. vol. 175; p. 260.
Illinois Canning Company, Hoopeston, Ill. Canned corn. No. 85,443; Feb. 20; Gaz. vol. 175; p. 838.
Illinois Iron & Bolt Co., Carpentersville, Ill. Jack-screws, tire benders and shrinkers. No. 85,252; Feb. 6; Gaz. vol. 175; p. 260.
Independent Powder Company of Missouri, Joplin, Mo. Dynamite and powder. No. 85,353; Feb. 13; Gaz. vol. 175; p. 538.
Indoor Rugby Company, New York, N. Y. Indoor games. No. 85,351; Feb. 13; Gaz. vol. 175; p. 538.
International Mfg. Co., Ann Arbor, Mich. Certain household furniture. No. 85,253; Feb. 6; Gaz. vol. 175; p. 260.
Italian-Swiss Colony, San Francisco, Cal. Wine. No. 85,586; Feb. 27; Gaz. vol. 175; p. 1094.
J. A. Fay & Egan Company, Cincinnati, Ohio. Flooring, surfacing, tenoning, &c., machines. No. 85,236; Feb. 6; Gaz. vol. 175; p. 259.
J. W. Brant Company Limited, Albion, Mich. Remedies for nervous diseases. No. 85,521; Feb. 13; Gaz. vol. 175; p. 537.
James, Thomas, and J. Caprinali, Colorado Springs, Colo. Remedy for rheumatism. No. 85,445; Feb. 20; Gaz. vol. 175; p. 838.
Japanese Tissue Mills, Holyoke, Mass. Paper towels and napkins. No. 85,354; Feb. 13; Gaz. vol. 175; p. 538.
Jenaison-Wright Co., The, Toledo, Ohio. Paving materials. No. 85,355; Feb. 13; Gaz. vol. 175; p. 538.
John M. Given, Inc., Pittsburgh, Pa.; New York, N. Y., and Chicago, Ill. Hosiery. Nos. 85,240–1; Feb. 6; Gaz. vol. 175; p. 260.
Johnson-Allen Coffee Co., St. Louis, Mo. Coffee. Nos. 85,446–8; Feb. 20; Gaz. vol. 175; p. 838.
Jos. Middleby, Jr., Inc., Boston, Mass. Pie-fillings. No. 85,463; Feb. 20; Gaz. vol. 176; p. 839.
Judd & Leland M'f'g Co., Clifton Springs, N. Y. Hand air-pumps. No. 85,254; Feb. 6; Gaz. vol. 175; p. 260.
Julius King Optical Co., New York, N. Y. Eyeglass-mountings. No. 85,594; Feb. 27; Gaz. vol. 175; p. 1094.
Julius Levin Company, San Francisco, Cal. Whisky. No. 85,457; Feb. 20; Gaz. vol. 175; p. 838.
K & C Manufacturing Company, Henniker, N. H. Wheel-rims. No. 85,356; Feb. 13; Gaz. vol. 175; p. 538.
Kaehler, George, Fresno, Cal. Oranges. No. 85,255; Feb. 6; Gaz. vol. 175; p. 260.
Kalastris, Fabrik für byg. Unterkleidung, G. m. b. H., Bonn-on-the-Rhine, Germany. Women's costumes, blouses, and shirts-waists, night-dresses, &c. No. 85,256; Feb. 6; Gaz. vol. 175; p. 260.
Kallis, Isidore S., New York, N. Y. No. 85,357; Feb. 13; Gaz. vol. 175; p. 538.
Kann Sons & Co., S., Washington, D. C. Dress-shields. Nos. 85,588–90; Feb. 27; Gaz. vol. 175; p. 1094.
Kann Sons & Co., S., Washington, D. C. Dress-shields. No. 85,600; Feb. 27; Gaz. vol. 175; p. 1094.
Karp & London, Philadelphia, Pa. Hats and caps. No. 85,591; Feb. 27; Gaz. vol. 175; p. 1094.
Kato Products Co., New York, N. Y. Belt-dressings. No. 85,592; Feb. 27; Gaz. vol. 175; p. 1094.
Kawneer Mfg. Co., Niles, Mich. Metal doors, windows, and moldings. No. 85,449; Feb. 20; Gaz. vol. 175; p. 838.
Kelley-How-Thomson Co., Duluth, Minn. Harness and horse-collars. No. 85,358; Feb. 13; Gaz. vol. 175; p. 538.
Keystone Roofing Mfg. Co., York, Pa. Rubber roofing. No. 85,593; Feb. 27; Gaz. vol. 175; p. 1094.
Kirby Co., H. M., Keokuk, Iowa. Rat-exterminator. No. 85,450; Feb. 20; Gaz. vol. 175; p. 838.
Koch, George A., Woodmere, N. Y. Hair-tonic. No. 85,595; Feb. 27; Gaz. vol. 175; p. 1094.
Kockums Jernverks Aktiebolag, Malmö, Sweden. Enameled steelware. No. 85,452; Feb. 20; Gaz. vol. 175; p. 838.
Korting & Mathiesen A.-G., Leutzsch-Leipzig, Germany. Electric meters. No. 85,257; Feb. 6; Gaz. vol. 175; p. 260.
Kramer & Co., New York, N. Y. Coats, overcoats, vests, and trousers. No. 85,258; Feb. 6; Gaz. vol. 175; p. 260.
Krank, Alfred J., St. Paul, Minn. Perfumed lotion. No. 85,596; Feb. 27; Gaz. vol. 175; p. 1094.
Krauth & Benninghofen, Butler, Ohio. Autograph-registers. No. 85,260; Feb. 6; Gaz. vol. 175; p. 260.
Kuh, Nathan & Fischer Company, Chicago, Ill. Men's and boys' outer clothing. No. 85,360; Feb. 13; Gaz. vol. 175; p. 538.
L. F. Castle Company, New York, N. Y. Ladies' and misses' hats. No. 85,523; Feb. 18; Gaz. vol. 175; p. 537.
Landers, Frary and Clark, New Britain, Conn. Sad-irons. No. 85,361; Feb. 13; Gaz. vol. 175; p. 538.
Landers, Frary and Clark, New Britain, Conn. Carvers. No. 85,453; Feb. 20; Gaz. vol. 175; p. 838.
Larom, Frank W., New York, N. Y. Kid and lamb gloves. No. 85,454; Feb. 20; Gaz. vol. 175; p. 838.
Lasmer Company, The, New York, N. Y. Artificial pearls. No. 85,362; Feb. 13; Gaz. vol. 175; p. 538.
Lefkowitz, Isaac, New York, N. Y. Dress-waists. No. 85,597; Feb. 27; Gaz. vol. 175; p. 1094.
Legarda, B., Manila, Philippine Islands. Cigars. Nos. 85,455–6; Feb. 20; Gaz. vol. 175; p. 838.
Levy & Markowitz, New York, N. Y. Coats, vests, trousers, overcoats, and rain-coats. No. 85,262; Feb. 6; Gaz. vol. 175; p. 260.
Loveman, Joseph & Loeb, Birmingham, Ala. Corsets. No. 85,458; Feb. 20; Gaz. vol. 175; p. 838.
Luckett Wake Tobacco Co., Louisville, Ky. Leaf-tobacco. No. 85,459; Feb. 20; Gaz. vol. 175; p. 838.
Lund, Ulrik R. T., Catasauqua, Pa. Ribbons. No. 85,599; Feb. 27; Gaz. vol. 175; p. 1094.
Luxo Company, The, Wichita, Kans. Hair-invigorator. No. 85,363; Feb. 13; Gaz. vol. 175; p. 538.
M. Witmark & Sons, New York, N. Y. Continually-changing series of publications. Nos. 85,534–5; Feb. 20; Gaz. vol. 175; p. 841.
M. W. Dilley, Inc., Chicago, Ill. Cigars. No. 85,506; Feb. 27; Gaz. vol. 175; p. 1093.
Macdonald, Robert B., Attleboro, Mass. Jewelry. No. 85,364; Feb. 13; Gaz. vol. 175; p. 538.
Mallach, Louis, New York, N. Y. Weights for garments. No. 85,264; Feb. 6; Gaz. vol. 175; p. 260.
Manganese Bronze & Brass Company, The, Limited, London, England. Bronze alloys. No. 85,265; Feb. 6; Gaz. vol. 175; p. 260.
Marshall Field & Company, Chicago, Ill. Silk foulard. No. 85,425; Feb. 20; Gaz. vol. 175; p. 837.
Marshall Field & Company, Chicago, Ill. Hair-nets. No. 85,572; Feb. 27; Gaz. vol. 175; p. 1094.
Martinez, Bartolo, San Antonio, Tex. Certain flour. No. 85,460; Feb. 20; Gaz. vol. 175; p. 838.
Marvel Solder Co., New York, N. Y. Solder. No. 85,266; Feb. 6; Gaz. vol. 175; p. 260.
Mason, Frederic S., New York, N. Y. Perfumes. No. 85,601; Feb. 27; Gaz. vol. 175; p. 1094.
Mathes, Benjamin C., Rochester, N. Y. Medicine for certain diseases. Nos. 85,602–3; Feb. 27; Gaz. vol. 175; p. 1094.
McFarland, J. C., Dallas, Tex. Remedy for gonorrhea. No. 85,604; Feb. 27; Gaz. vol. 175; p. 1094.
McNeil & Higgins Company, Chicago, Ill. Certain chemicals, medicines, and toilet preparations. No. 85,605; Feb. 27; Gaz. vol. 175; p. 1095.
Mercer, Albert B., Gary, Ind. Liniments. No. 85,365; Feb. 13; Gaz. vol. 175; p. 538.
Metallurgique Motor Co., New York, N. Y. Automobiles, motor-boats, and aeroplanes. No. 85,461; Feb. 20; Gaz. vol. 175; p. 838.
Meyrowitz, E. B., New York, N. Y. Eyeglasses and spectacles. No. 85,267; Feb. 6; Gaz. vol. 175; p. 260.
Michigan Milling Co., Ann Arbor, Mich. Flour. No. 85,462; Feb. 20; Gaz. vol. 175; p. 838.
Middlesex Company, Lowell, Mass. Hosiery. No. 85,366; Feb. 13; Gaz. vol. 175; p. 538.
Mill & Mine Supply Co., Seattle, Wash. Pulley-blocks. No. 85,268; Feb. 6; Gaz. vol. 175; p. 260.
Miller's Sons Co., A. D., Pittsburgh, Pa. Metal-polish. No. 85,606; Feb. 27; Gaz. vol. 175; p. 1095.
Mills & Gibb, East Orange, N. J., and New York, N. Y. Gloves. No. 85,367; Feb. 13; Gaz. vol. 175; p. 538.
Mitchell Brothers, Limited, Glasgow, Scotland. Whisky. No. 85,464; Feb. 20; Gaz. vol. 175; p. 839.
Monarch Oil Refining Co., San Francisco, Cal. Lubricating-oils. No. 85,465; Feb. 20; Gaz. vol. 175; p. 839.
Monkhouse and Glasscock Limited, Bermondsey, London, England. Certain foods. No. 85,466; Feb. 20; Gaz. vol. 175; p. 839.
Montag Brothers, Atlanta, Ga. Rubber hot-water bags, fountain-syringes, and nipples. No. 85,467; Feb. 20; Gaz. vol. 175; p. 839.
Morningstar & Co., Chas., assignor to J. Morningstar, New York, N. Y. Corn-starch and food-starch. No. 85,368; Feb. 13; Gaz. vol. 175; p. 538.
Morningstar, Joseph. (See Morningstar & Co., Chas., assignor.)
Morningstar, Joseph, New York, N. Y. Dried blood and albumen. No. 85,469; Feb. 20; Gaz. vol. 175; p. 839.
Morningstar, Joseph, New York, N. Y. Starch. No. 85,470; Feb. 20; Gaz. vol. 175; p. 839.
Motor Boat Publishing Co., New York, N. Y. Semi-monthly magazine. No. 85,471; Feb. 20; Gaz. vol. 175; p. 839.
Mutual Electric & Machine Company, Wheeling, W. Va. Certain electrical appliances. No. 85,270; Feb. 6; Gaz. vol. 175; p. 260.
N. K. Fairbank Company, The, Chicago, Ill. Cooking compound containing cotton-seed oil and oleo-stearin. No. 85,235; Feb. 6; Gaz. vol. 175; p. 259.
N. K. Fairbank Company, The, Chicago, Ill. Scouring compound. No. 85,571; Feb. 27; Gaz. vol. 175; p. 1094.
National Dictograph Co., New York, N. Y. Telephonic apparatus. No. 85,473; Feb. 20; Gaz. vol. 175; p. 839.
National Fire Proofing Company, Pittsburgh, Pa. Waterproofing compositions for use in fireproof construction. No. 85,369; Feb. 13; Gaz. vol. 175; p. 538.
National Gum & Mica Co., New York, N. Y. Glues, gums, mucilage, and pastes. No. 85,474; Feb. 20; Gaz. vol. 175; p. 839.
Newark Embroidery Works, Newark, N. J. Handkerchiefs. No. 85,475; Feb. 20; Gaz. vol. 175; p. 839.
Nichols, Howard E., St. Louis, Mo. Hair-stains. No. 85,607; Feb. 27; Gaz. vol. 175; p. 1095.

Nonotuck Silk Company, The, Northampton, Mass. Embroidery-floss. No. 85,271; Feb. 6; Gaz. vol. 175; p. 260.

Northey Manufacturing Company, Waterloo, Iowa. Refrigerators and cooling-rooms. No. 85,608; Feb. 27; Gaz. vol. 175; p. 1095.

Northwestern Expanded Metal Co., Chicago, Ill. Expanded-metal lath. No. 85,370; Feb. 13; Gaz. vol. 175; p. 538.

Novelty Machine Co., New York, N. Y. Certain amusement devices. No. 85,476; Feb. 20; Gaz. vol. 175; p. 839.

Nu-Gloss Specialty Co., Philadelphia, Pa. Furniture-polish. No. 85,477; Feb. 20; Gaz. vol. 175; p. 839.

Nürnberger Metall- und Lackierwarenfabrik vormals Gebrüder Bing, Aktiengesellschaft, Nuremberg, Germany. Certain games and toys. No. 85,272; Feb. 6; Gaz. vol. 175; p. 260.

O'Callaghan & Fedden, New York, N. Y. Stockings. No. 85,478; Feb. 20; Gaz. vol. 175; p. 839.

Oakville Company, Waterbury, Conn. Safety-pins. No. 85,273; Feb. 6; Gaz. vol. 175; p. 261.

Oakville Company, Waterbury, Conn. Toilet-pins. No. 85,274; Feb. 6; Gaz. vol. 175; p. 261.

Oakville Company, Waterbury, Conn. Safety-pins. No. 85,275; Feb. 6; Gaz. vol. 175; p. 261.

Oakville Company, Waterbury, Conn. Toilet-pins. No. 85,276; Feb. 6; Gaz. vol. 175; p. 261.

Oakville Company, Waterbury, Conn. Safety-pins. Nos. 85,277–81; Feb. 6; Gaz. vol. 175; p. 261.

Ohio Garment Company, The, Springfield, Ohio. Shirts. No. 85,609; Feb. 27; Gaz. vol. 175; p. 1095.

Old Veteran Bitters Co., The, Chicago, Ill. Bitters. No. 85,610; Feb. 27; Gaz. vol. 175; p. 1095.

Old Woolen Mills, Mayfield, Ky. Coats, vests, and trousers. No. 85,282; Feb. 6; Gaz. vol. 175; p. 261.

Ollendorff & Clarkson, Ltd., Glasgow, Scotland. Certain construction material. No. 85,479; Feb. 20; Gaz. vol. 175; p. 839.

Oneida Community, Limited, Oneida, N. Y. Animal-traps. No. 85,371; Feb. 13; Gaz. vol. 175; p. 538.

Oppenheimer & Levy, S., New York, N. Y. Lace, veilings, hair-nets, and net piece goods. No. 85,372; Feb. 13; Gaz. vol. 175; p. 538.

Osbon and Osbon Chemical Co., Baltimore, Md. Cough mixture. No. 85,611; Feb. 27; Gaz. vol. 175; p. 1095.

Otto Kampfe Mfg. Co., Newark, N. J. Pot-lid handles. No. 85,587; Feb. 27; Gaz. vol. 175; p. 1094.

Oxymedeor Inhalation Company, New York, N. Y. Inhalation apparatus. No. 85,480; Feb. 20; Gaz. vol. 175; p. 839.

Parnell Metal Company, The, Lansdale, Pa. Metal-alloy ingots. No. 85,482; Feb. 20; Gaz. vol. 175; p. 839.

Parejo, M. G., Seville, Spain. Olive-oil. No. 85,283; Feb. 6; Gaz. vol. 175; p. 261.

Park & Tilford, New York, N. Y. Whisky. No. 85,481; Feb. 20; Gaz. vol. 175; p. 839.

Parker Brothers, Portland, Me., and Salem, Mass. Card games. No. 85,373; Feb. 13; Gaz. vol. 175; p. 538.

Parker, John H., Boston, Mass. Conduits for electric wiring. No. 85,284; Feb. 6; Gaz. vol. 175; p. 261.

Pennsylvania Rubber Company, Jeannette, Pa. Rubber vehicle-tires. No. 85,483; Feb. 20; Gaz. vol. 175; p. 839.

Perseverance Worsted Company, Woonsocket, R. I. Worsted cloths. No. 85,484; Feb. 20; Gaz. vol. 175; p. 839.

Pinay, Jeune, Les Fils, St.-Symphorien-sur-Coise, France. Hats. No. 85,261; Feb. 6; Gaz. vol. 175; p. 260.

Pioneer Tractor Manufacturing Company, Winona, Minn. Traction-engines. No. 85,285; Feb. 6; Gaz. vol. 175; p. 261.

Pittsburgh Dry Goods Company, Pittsburgh, Pa. Hosiery. No. 85,485; Feb. 20; Gaz. vol. 175; p. 839.

Piver & Cie., L. T., Paris, France. Certain toilet articles. No. 85,612; Feb. 27; Gaz. vol. 175; p. 1095.

Plymouth Creamery Company, Boston, Mass. Milk and cream cans. No. 85,374; Feb. 13; Gaz. vol. 175; p. 538.

Poldihütte Tiegelgusstahlfabrik, Vienna and Kladno, Austria-Hungary. Certain metal castings and forgings. No. 85,613; Feb. 27; Gaz. vol. 175; p. 1095.

Porcelain Enameling Ass'n of America, Sheboygan, Wis. Household utensils and certain plumbing supplies. No. 85,486; Feb. 20; Gaz. vol. 175; p. 839.

Porter, Mary E., Lewistown, Ill. Bee-escapes. No. 85,614; Feb. 27; Gaz. vol. 175; p. 1095.

Porter, Ross, Neodesha, Kans. Remedy for certain ailments. No. 85,375; Feb. 13; Gaz. vol. 175; p. 539.

Powers, John O., Nutley, N. J., and New York, N. Y. Cocoa. No. 85,615; Feb. 27; Gaz. vol. 175; p. 1095.

Procerutti, Gioachimo C., Turin, Italy. Certain optical supplies. No. 85,487; Feb. 20; Gaz. vol. 175; p. 839.

Protse, Charles R., West Brookville, N. Y. Dressed furs. No. 85,376; Feb. 13; Gaz. vol. 175; p. 539.

Pugh, Burton H., Topeka, Kans. Fountain-mops. No. 85,616; Feb. 27; Gaz. vol. 175; p. 1095.

Quinn, John F., Cohoes, N. Y. Children's knitted underwaists. No. 85,489; Feb. 20; Gaz. vol. 175; p. 839.

Ramsay, William, Melbourne, Australia. Polishing preparation for boots and leather goods. No. 85,490; Feb. 20; Gaz. vol. 175; p. 839.

Randal, Lillie, New York, N. Y. Hair-tonic. No. 85,491; Feb. 20; Gaz. vol. 175; p. 839.

Rayo Incubator Company, Blair, Nebr. Incubators and brooders. No. 85,492; Feb. 20; Gaz. vol. 175; p. 839.

Rea, Alva L., Zanesville, Ohio. Decarbonizing compounds. No. 85,616; Feb. 27; Gaz. vol. 175; p. 1095.

Red Star Oil Company, Philadelphia, Pa. Oil for mixing paints. No. 85,288; Feb. 6; Gaz. vol. 175; p. 261.

Reedy Brothers Gum Company, Chicago, Ill. Chewing-gum. No. 85,493; Feb. 20; Gaz. vol. 175; p. 839.

Regal Piano & Player Co., The, New York, N. Y. Pianos. No. 85,377; Feb. 13; Gaz. vol. 175; p. 539.

Regal Shoe Company, Whitman and Boston, Mass. Leather boots and shoes. No. 85,378; Feb. 13; Gaz. vol. 175; p. 539.

Regal Shoe Company, Portland, Me., and Boston, Mass. Arch-supports for the foot. No. 85,494; Feb. 20; Gaz. vol. 175; p. 839.

Revere Rubber Company, Chelsea, Mass. Rubber heels and soles of boots and shoes. No. 85,289; Feb. 6; Gaz. vol. 175; p. 261.

Richmond & Co., L., Brockton, Mass. Disinfectants. No. 85,495; Feb. 20; Gaz. vol. 175; p. 839.

Richmond Hosiery Mills, Chattanooga, Tenn., and Rossville, Ga. Hosiery. No. 85,617; Feb. 27; Gaz. vol. 175; p. 1095.

Ring-Point Company, The, Hartford, Conn. Horseshoes. No. 85,496; Feb. 20; Gaz. vol. 175; p. 839.

Row Preserving Company, near Chambersburg, Pa. Certain foods. No. 85,497; Feb. 20; Gaz. vol. 175; p. 839.

Rowell, Albert L., Marblehead, Mass. Cigarettes and cigars. No. 85,618; Feb. 27; Gaz. vol. 175; p. 1095.

Rudolph Wurlitzer Co., Cincinnati, Ohio. Metal-polish. No. 85,587; Feb. 20; Gaz. vol. 175; p. 841.

Runion, David F., Broadway, Va. Remedy for all poultry diseases. No. 85,619; Feb. 27; Gaz. vol. 175; p. 1095.

S. M. Bixby & Co., Brooklyn, N. Y. Shoe finishing-paste. No. 85,548; Feb. 27; Gaz. vol. 175; p. 1093.

Samuels, Daniel B., San Francisco, Cal. Vending-machines. No. 85,290; Feb. 6; Gaz. vol. 175; p. 261.

Sanitary Drinking Cup Co., The, Chicago, Ill. Paper drinking-cups. No. 85,498; Feb. 20; Gaz. vol. 175; p. 839.

Schade Valve Manufacturing Co., Philadelphia, Pa. Brass and iron valves. No. 85,291; Feb. 6; Gaz. vol. 175; p. 201.

Schaffner, Theophilus C., Chicago, Ill. Men's outer suits. No. 85,379; Feb. 13; Gaz. vol. 175; p. 539.

Schlagall, Theodore, New York, N. Y. Clocks. No. 85,380; Feb. 13; Gaz. vol. 175; p. 539.

Scholl Manufacturing Company, The, Chicago, Ill. Instep-arch supports. No. 85,499; Feb. 20; Gaz. vol. 175; p. 840.

Schotten, Julius J., St. Louis, Mo. Roasted coffee. No. 85,500; Feb. 20; Gaz. vol. 175; p. 840.

Schujahn, Frank, Fond du Lac, Wis. Cheese. No. 85,501; Feb. 20; Gaz. vol. 175; p. 840.

Seamless Rubber Company, The, New Haven, Conn. Vehicle-tires. No. 85,620; Feb. 27; Gaz. vol. 175; p. 1095.

Sears, Roebuck and Co., Chicago, Ill. Boots and shoes. No. 85,502; Feb. 20; Gaz. vol. 175; p. 840.

Seeby Drug Company, New York, N. Y. Hair tonic and pomade. No. 85,621; Feb. 27; Gaz. vol. 175; p. 1095.

Siemens-Schuckertwerke Gesellschaft mit beschränkter Haftung, Berlin, Germany. Electric fuse-blocks. Nos. 85,503–5; Feb. 20; Gaz. vol. 175; p. 840.

Simplex Filing Device Company, Canton, Ohio. Office filing-cabinets. No. 85,506; Feb. 20; Gaz. vol. 175; p. 840.

Small, John A., Detroit, Mich. Automobiles. No. 85,622; Feb. 27; Gaz. vol. 175; p. 1095.

Société Anonyme Le Khédive, Brussels, Belgium, and Paris, France. Cigarettes. No. 85,507; Feb. 20; Gaz. vol. 175; p. 840.

Société des Établissements Farcy & Oppenheim, Paris, France. Corsets. No. 85,508; Feb. 20; Gaz. vol. 175; p. 840.

Société des Moteurs Gnome, Paris, France. Flying-machines and parts thereof. No. 85,381; Feb. 13; Gaz. vol. 175; p. 539.

Sohmer & Company, New York, N. Y. Pianos. No. 85,382; Feb. 13; Gaz. vol. 175; p. 539.

Sommer, Heinrich C., Nachfolger, Düsseldorf, Germany. Packing for stuffing-boxes. No. 85,472; Feb. 20; Gaz. vol. 175; p. 839.

Sonneborn & Co., Henry, Baltimore, Md. Certain garments worn by boys, men, and children. No. 85,292; Feb. 6; Gaz. vol. 175; p. 261.

Speck Chocolate Company, Evansville, Ind. Candy. No. 85,510; Feb. 20; Gaz. vol. 175; p. 840.

Spirella Company, The, Meadville, Pa. Certain fancy goods. No. 85,384; Feb. 13; Gaz. vol. 175; p. 539.

Standard Oil Leather Dressing Co., New York, N. Y. Leather preserving and water proofing composition. Nos. 85,511–12; Feb. 20; Gaz. vol. 175; p. 840.

Starke's Dixie Plow Works, Incorporated, Richmond, Va. Plows. No. 85,513; Feb. 20; Gaz. vol. 175; p. 840.

Stephen Putney Shoe Company, Richmond, Va. Leather boots and shoes. No. 85,488; Feb. 20; Gaz. vol. 175; p. 839.

Stern Bros. & Company, New York, N. Y. Collar-buttons of precious metal. No. 85,385; Feb. 13; Gaz. vol. 175; p. 539.

Stetson-Barret Co., Los Angeles, Cal. Canned vegetables and coffee. No. 85,293; Feb. 6; Gaz. vol. 175; p. 261.

Stevens & Company, Incorporated, Providence, R. I. Eyeglasses and spectacles and parts of same. No. 85,294; Feb. 6; Gaz. vol. 175; p. 261.

Stillman Bottling Company, Boston, Mass. Vodka. Nos. 85,514–15; Feb. 20; Gaz. vol. 175; p. 840.

Stone Printing & Mfg. Co., Roanoke, Va. Calendars. No. 85,386; Feb. 13; Gaz. vol. 175; p. 539.

Strause, Louis J., Philadelphia, Pa. Sad-irons. No. 85,387; Feb. 13; Gaz. vol. 175; p. 539.

Strohmeyer & Arpe Company, New York, N. Y. Preparation of peat. No. 85,388; Feb. 13; Gaz. vol. 175; p. 539.

Teofani & Co., Limited, London, England. Cigarettes. No. 85,623; Feb. 27; Gaz. vol. 175; p. 1095.

Texas Company, The, Houston and Port Arthur, Tex., and New York, N. Y. Lubricating-oils. Nos. 85,518–21; Feb. 20; Gaz. vol. 175; p. 840.

Theo. H. Gary Co., New York, N. Y. Window-shades and Venetian blinds. No. 85,342; Feb. 13; Gaz. vol. 175; p. 538.

Thermolac Manufacturing Company, Boston, Mass. Receptacles or containers. No. 85,522; Feb. 20; Gaz. vol. 175; p. 840.

Thermolac Manufacturing Company, Boston, Mass. Metal drinking-cups. No. 85,523; Feb. 20; Gaz. vol. 175; p. 840.

Thomas Wood Co., Boston, Mass. Coffee. No. 85,305; Feb. 6; Gaz. vol. 175; p. 261.

Tigges & Co., Hespe, Germany. Magnets for technical purposes. No. 85,295; Feb. 6; Gaz. vol. 175; p. 261.

Toby, Edward, Waco, Tex. Face-cream. No. 85,525; Feb. 20; Gaz. vol. 175; p. 840.

Tucker, James W., Chicago, Ill. Glass-cutters. No. 85,296; Feb. 6; Gaz. vol. 175; p. 261.

Turner Brass Works, The, Sycamore and Chicago, Ill. Certain heating, lighting, and ventilating apparatus. No. 85,526; Feb. 20; Gaz. vol. 175; p. 840.

Twin-Grip Wrench Company, New York, N. Y. Wrenches. Nos. 85,297–8; Feb. 6; Gaz. vol. 175; p. 261.

Union Oil Co. of California, San Francisco, Cal. Lubricating-oils. No. 85,527; Feb. 20; Gaz. vol. 175; p. 840.

Union Paper & Twine Co., The, Detroit, Mich. Wrapping-paper. No. 85,389; Feb. 13; Gaz. vol. 175; p. 539.

Union Smelting & Refining Company, New York, N. Y. Certain metals cast in ingots. No. 85,624; Feb. 27; Gaz. vol. 175; p. 1095.

United & Globe Rubber M'f'g Companies, Trenton, N. J. Rubber belting, hose, and packing. No. 85,528; Feb. 20; Gaz. vol. 175; p. 840.

United Grocery Co., Jacksonville, Fla. Remedy for syphilis and blood-poison. No. 85,390; Feb. 13; Gaz. vol. 175; p. 539.

United States Cartridge Company, Lowell, Mass. Cartridge-shells. No. 85,391; Feb. 13; Gaz. vol. 175; p. 539.

Upjohn Company, The, Kalamazoo, Mich. Laxative preparations. No. 85,625; Feb. 27; Gaz. vol. 175; p. 1095.

Valentine & Company, New York, N. Y. Varnishes. No. 85,626; Feb. 27; Gaz. vol. 175; p. 1095.

Van Vleet-Mansfield Drug Co., Memphis, Tenn. Tonic-bitters. No. 85,392; Feb. 13; Gaz. vol. 175; p. 539.

Vecchiolli, Rocco R., Washington, D. C. Hair or scalp tonic. No. 85,627; Feb. 27; Gaz. vol. 175; p. 1095.

Vincent Co., Marx, Eugene, Oreg. Remedy for poison-oak poisoning. No. 85,628; Feb. 27; Gaz. vol. 175; p. 1095.

Ward & Ward, Chicago, Ill. Cleanser, polisher, and finisher for wood. No. 85,299; Feb. 6; Gaz. vol. 175; p. 261.

Warren Chemical & Manufacturing Company, New York, N. Y. Pitch. Nos. 85,529–30; Feb. 20; Gaz. vol. 175; p. 840.

Warren Featherbone Company, The, Three Oaks, Mich. Stiffening cords, blades, and tapes. No. 85,629; Feb. 27; Gaz. vol. 175; p. 1095.

Wear, Charles, Boston, Mass. Friction-clutches. No. 85,300; Feb. 6; Gaz. vol. 175; p. 261.

Weingarten Bros. Inc., New York, N. Y. Corsets. No. 85,301; Feb. 6; Gaz. vol. 175; p. 261.

Weissenborn, Oscar A., Jersey City, N. J. Lead-pencils. Nos. 85,393–4; Feb. 13; Gaz. vol. 175; p. 539.

West End Brewing Co., The, Utica, N. Y. Beer, ale, porter, half-and-half, and brown stout. No. 85,531; Feb. 20; Gaz. vol. 175; p. 840.

West India Oil Company, Bayonne, N. J. Illuminating-oil. No. 85,532; Feb. 20; Gaz. vol. 175; p. 840.

Wester Bros., New York, N. Y. Razors, scissors, and pocket-knives. No. 85,302; Feb. 6; Gaz. vol. 175; p. 261.

Wheeler, Alonso M., Chicago, Ill. Food remedies to build natural resistance of the body. No. 85,395; Feb. 13; Gaz. vol. 175; p. 539.

White & Hoy, Gary, Ind. Hair-tonic. No. 85,630; Feb. 27; Gaz. vol. 175; p. 1095.

Whittemore, Horace A., Boston, Mass. Fishing-rods, swivels, and sinkers. No. 85,396; Feb. 13; Gaz. vol. 175; p. 539.

Widiar & Co., F., Cleveland, Ohio. Roasted coffee. No. 85,303; Feb. 6; Gaz. vol. 175; p. 261.

Wilcox Comb Company, Inc., Keene, N. H. Combs, barrettes, and hair-retainers. No. 85,304; Feb. 6; Gaz. vol. 175; p. 261.

Wilh. Hebebrand, G. m. b. H., Elberfeld, Germany. Mercerised embroidery-cotton. No. 85,581; Feb. 27; Gaz. vol. 175; p. 1094.

Williams, Robert L., McDade, Tex. Portable furnaces. No. 85,631; Feb. 27; Gaz. vol. 175; p. 1095.

Wilson, George C., Tyrone, Pa. Talcum powder. No. 85,397; Feb. 13; Gaz. vol. 175; p. 539.

Windsor Chocolate Company, Philadelphia, Pa. Candies. No. 85,533; Feb. 20; Gaz. vol. 175; p. 841.

Wolf Company, The, New York, N. Y. Ladies' gowns. No. 85,536; Feb. 20; Gaz. vol. 175; p. 841.

Wolfe, Nathaniel, Philadelphia, Pa. Cold-cream. No. 85,632; Feb. 27; Gaz. vol. 175; p. 1095.

Worumbo Manufacturing Company, Lisbon Falls, Me. Woven woolen fabric. No. 85,633; Feb. 27; Gaz. vol. 175; p. 1095.

Young Remedy Company, St. Louis, Mo. Nerve and blood remedy. No. 85,634; Feb. 27; Gaz. vol. 175; p. 1095.

York, Chauncey F., Detroit, Mich. Pills for certain diseases. No. 85,538; Feb. 20; Gaz. vol. 175; p. 841.

Z-Only Co., Norwich, N. Y. Razor-strop dressing. No. 85,635; Feb. 27; Gaz. vol. 175; p. 1095.

Zeiss, Carl, Jena, Germany. Objective-lens systems. Nos. 85,306–8; Feb. 6; Gaz. vol. 175; p. 261.

Zeiss, Carl, Jena, Germany. Field-glasses. Nos. 85,309–10; Feb. 6; Gaz. vol. 175; p. 262.

Zeiss, Carl, Jena, Germany. Certain optical goods. No. 85,539; Feb. 20; Gaz. vol. 175; p. 841.

Zinsser, William H., New York, N. Y. White gum-shellac. No. 85,540; Feb. 20; Gaz. vol. 175; p. 841.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Ackerman, Robert M., Binghamton, N. Y. "Harrison's Pepsin Chewing Gum." (For Chewing-Gum.) No. 16,185; Feb. 27; Gaz. vol. 175; p. 1096.

Ballard, James F., St. Louis, Mo. "Remick's Eczema Remedy." (For Remedy.) No. 16,150; Feb. 6; Gaz. vol. 175; p. 263.

Ballard, James F., St. Louis, Mo. "McGee's Baby Elixir." (For a Medicinal Preparation.) No. 16,151; Feb. 6; Gaz. vol. 175; p. 263.

Bolling, John B., Beaver Dam, Ky. "We-Ho Improved." (For Medicine.) No. 16,177; Feb. 20; Gaz. vol. 175; p. 842.

Burckhardt, F., San Francisco, Cal. "Burckhardt's Royal Farina." (For Farina.) No. 16,152; Feb. 6; Gaz. vol. 175; p. 263.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "Justiva." (For Cigars.) No. 16,153; Feb. 6; Gaz. vol. 175; p. 263.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "El Magno." (For Cigars.) No. 16,154; Feb. 6; Gaz. vol. 175; p. 263.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "Tempus." (For Cigars.) No. 16,155; Feb. 6; Gaz. vol. 175; p. 263.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "Hogarth." (For Cigars.) No. 16,156; Feb. 27; Gaz. vol. 175; p. 1096.

Christie-Collar Mfg. Co., Muskegon, Mich. "Musgo." (For Baking-Powder.) No. 16,156; Feb. 6; Gaz. vol. 175; p. 263.

Corona Chemical Company, Chicago, Ill. "Dermax." (For an Internal Remedy.) No. 16,157; Feb. 6; Gaz. vol. 175; p. 263.

Darby Candy Company, The, Baltimore, Md. "Darbelle Chocolates." (For Chocolates.) No. 16,157; Feb. 27; Gaz. vol. 175; p. 1096.

Davison, H. C., Hutchinson, Kans. "Moneyback." (For Flour.) No. 16,158; Feb. 27; Gaz. vol. 175; p. 1096.

Faber, Firm of A. W., Stein, near Nuremberg, Germany, and Newark, N. J. "Castell." (For Rubber Bands.) No. 16,159; Feb. 27; Gaz. vol. 175; p. 1096.

Gaube, Ernest W., Cleveland, Ohio. "Pin-acua." (For Lotion or Salve.) No. 16,158; Feb. 6; Gaz. vol. 175; p. 263.

Gease, J. E., Provo, Utah. "Socialist." (For Cigars.) No. 16,178; Feb. 20; Gaz. vol. 175; p. 842.

Griffin & Hoxie, Utica, N. Y. "Golden Wedding." (For Coffee.) No. 16,159; Feb. 6; Gaz. vol. 175; p. 263.

Hannemann Baking Co., J., Atlanta, Ga. "Old Fashion Pound Cake." (For Pound-Cake.) No. 16,160; Feb. 6; Gaz. vol. 175; p. 263.

Hewitt Mercantile Company, The, St. Louis, Mo. "Briar Hill Whiskey." (For Whisky.) No. 16,190; Feb. 27; Gaz. vol. 175; p. 1096.

Hewitt Mercantile Company, The, St. Louis, Mo. "Hickory Ridge Straight Whiskey." (For Whisky.) No. 16,191; Feb. 27; Gaz. vol. 175; p. 1096.

Hewitt Mercantile Company, The, St. Louis, Mo. "Oregon Whiskey." (For Whisky.) No. 16,192; Feb. 27; Gaz. vol. 175; p. 1096.

Hewitt Mercantile Company, The, St. Louis, Mo. "Grizzly Bear Whiskey." (For Whisky.) No. 16,193; Feb. 27; Gaz. vol. 175; p. 1096.

J. F. Pyle & Son, San Jose, Cal. "R-bat." (For Tomatoes.) No. 16,194; Feb. 27; Gaz. vol. 175; p. 1096.

Johnston Fruit Co. (Inc.), Santa Barbara, Cal. "Panama." (For Oranges and Lemons.) No. 16,161; Feb. 6; Gaz. vol. 175; p. 263.

Jones, Ada C., Cincinnati, Ohio. "Cleaner-Polish." (For Cleaner-Polish.) No. 16,175; Feb. 13; Gaz. vol. 175; p. 540.

Jung Brewing Company, Milwaukee, Wis. "Golden Spray." (For Beer.) No. 16,162; Feb. 6; Gaz. vol. 175; p. 263.

Keyes Manufacturing Company, The, Denver, Colo. "Bob White Maple and Cane Syrup." (For Maple and Cane Syrup.) No. 16,163; Feb. 6; Gaz. vol. 175; p. 263.

Lehigh Portland Cement Company, Chicago, Ill. "Lee-Hi." (For Cement.) No. 16,164; Feb. 6; Gaz. vol. 175; p. 263.

Lemon Seidlitz Co., The, Baltimore, Md. "Lemon Seidlitz." (For Lemon Seidlitz-Powders.) No. 16,165; Feb. 6; Gaz. vol. 175; p. 263.

Lipton, Thomas J., New York, N. Y., and Chicago, Ill. "Lipton's Tea." (For Tea.) Nos. 16,166–7; Feb. 6; Gaz. vol. 175; p. 263.

Maldehyde Chemical Company, St. Louis, Mo. "Micturitone." (For Diuretic.) No. 16,195; Feb. 27; Gaz. vol. 175; p. 1096.

Meharry, Harry D., San Francisco, Cal. "Honey Suckle Brand." (For Honey.) No. 16,196; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "La Joya de Cuba." (For Cigars.) No. 16,197; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "Double Header." (For Cigars.) No. 16,198; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "Some Smoke." (For Cigars.) No. 16,199; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "Planter's Smile." (For Cigars.) No. 16,200; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "New Panetela." (For Cigars.) No. 16,201; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "Club Standards" (For Cigars.) No. 16,202; Feb. 27; Gaz. vol. 175; p. 1096.

Moehle Lithographic Co., The, New York, N. Y. "Doctor's Special." (For Cigars.) No. 16,203; Feb. 27; Gaz. vol. 175; p. 1096.

N. Y. S. & S. Mfg. Co., The, Norfolk, Va. "Jamestown Ginger Ale." (For Ginger-Ale.) No. 16,205; Feb. 27; Gaz. vol. 175; p. 1096.

Nelson, N. F., Milbank, S. D. "Tri-State Capitola." (For Cigars.) No. 16,204; Feb. 27; Gaz. vol. 175; p. 1096.

Newton Tea & Spice Co., The, Cincinnati, Ohio. "Red Seal." (For Vanilla Extract.) No. 16,180; Feb. 20; Gaz. 175; p. 842.

O'Brien Cigar Company, James, Kansas City, Mo. "Old Concern Cigar." (For Cigars.) No. 16,179; Feb. 20; Gaz. vol. 175; p. 842.

Osborn Paper Company, Marion, Ind. "Flaxlawn." (For Paper.) No. 16,168; Feb. 6; Gaz. vol. 175; p. 263.

Osborn Paper Company, Marion, Ind. "Twotone Linen." (For Paper.) No. 16,206; Feb. 27; Gaz. vol. 175; p. 1096.

Palmer & Co., Sioux City, Iowa. "Miss Brown." (For Chocolates.) No. 16,207; Feb. 27; Gaz. vol. 175; p. 1096.

Rein, Oscar, New York, N. Y. "Tip-Top Flour." (For Wheat-Flour.) No. 16,169; Feb. 6; Gaz. vol. 175; p. 263.

Rotholz, G., Birmingham, Ala. "Custom Clothing Makers Union of America." (For Clothing and Wearing-Apparel.) No. 16,176; Feb. 13; Gaz. vol. 175; p. 540.

Short, Tollie F. G., Vancouver, Wash. "Spirited Hair Tonic." (For Hair-Tonic.) No. 16,170; Feb. 6; Gaz. vol. 175; p. 263.

Smalley, Kivlan & Onthank, Boston, Mass. "Fits-Em-All." (For Fruit-Jar Rings.) No. 16,171; Feb. 6; Gaz. vol. 175; p. 263.

United States Colonial Fruit Company, New York, N. Y. "Colonial Winner Brand." (For Grape-Fruit.) No. 16,181; Feb. 20; Gaz. vol. 175; p. 842.

Upham & Leavitt, Portland, Me. "Eleven in One." (For Polish for Metals and Glass.) No. 16,172; Feb. 6; Gaz. vol. 175; p. 263.

Uterotone Home Treatment Company, Battle Creek, Mich. "A Message of Hope to Suffering Women." (For Medicine.) No. 16,182; Feb. 20; Gaz. vol. 175; p. 842.

Vreeland, C. J., Ashland, Ohio. "My Wife's Hairerbe." (For Hair-Tonics.) No. 16,183; Feb. 20; Gaz. vol. 175; p. 842.

Walters, Warren E., Los Angeles, Cal. "Naturaline." (For a Mineralized Compound.) No. 16,173; Feb. 6; Gaz. vol. 175; p. 263.

Woodelixir Manufacturing Company, St. Paul, Minn. "Woodelixir." (For Wood and Metal Polish or Cleaner.) No. 16,174; Feb. 6; Gaz. vol. 175; p. 263.

Wright Mfg. Co., Brooklyn, N. Y. "Skirts to Order, $1.00 From Your Own Material." (For Skirts.) No. 16,184; Feb. 20; Gaz. vol. 175; p. 842.

Wright Mfg. Co., Brooklyn, N. Y. "Suits to Order, $6.50 From your own Material." (For Suits.) No. 16,208; Feb. 27; Gaz. vol. 175; p. 1096.

PRINTS.

Appelbaum, Isaac, Philadelphia, Pa. "Appelbaum My Tailor." (For Clothing and Wearing-Apparel.) No. 2,942; Feb. 6; Gaz. vol. 175; p. 263.

Armour and Company, Chicago, Ill. "A Box Full of Beauty." (For Toilet Soap.) No. 2,954; Feb. 20; Gaz. vol. 175; p. 842.

B. V. D. Company, The, New York, N. Y. "B. V. D. Quarter Sleeve Union Suit." (For Athletic Underwear.) No. 2,956; Feb. 20; Gaz. vol. 175; p. 842.

B. V. D. Company, The, New York, N. Y. "B. V. D. 1912 Union Suit." (For Athletic Underwear.) No. 2,961; Feb. 27; Gaz. vol. 175; p. 1096.

B. V. D. Company, The, New York, N. Y. "B. V. D. 1912 Two Piece Suit." (For Athletic Underwear.) No. 2,962; Feb. 27; Gaz. vol. 175; p. 1096.

Brunswick Balke Collender Co., The, Chicago, Ill. "Monarch Cushions The Key to Perfect Billiard Playing." (For Monarch Cushions.) No. 2,955; Feb. 20; Gaz. vol. 175; p. 842.

Corn Products Refining Company, Jersey City, N. J. "Spread for Bread." (For Karo Corn-syrup.) No. 2,943; Feb. 6; Gaz. vol. 175; p. 263.

Cream of Wheat Co., Minneapolis, Minn. "Two Souls With But a Single Thought." (For Wheat Breakfast Food.) No. 2,957; Feb. 20; Gaz. vol. 175; p. 842.

De Laval Separator Company, The, New York, N. Y. "De Laval Cream Separators." (For Cream-Separators.) No. 2,944; Feb. 6; Gaz. vol. 175; p. 263.

Gaube, Ernest W., Cleveland, Ohio. "Pin-Acus." (For a Balm.) No. 2,945; Feb. 6; Gaz. vol. 175; p. 263.

Harrison, Belle S., administratrix. (See Harrison, Henry H.)

Harrison, Henry H., deceased, New York, N. Y.; Belle S. Harrison, administratrix. "H. H. Harrison's Rapidograph Duplicating Machine." (For Rapidograph Duplicating-Machine.) No. 2,963; Feb. 27; Gaz. vol. 175; p. 1096.

Interwoven Stocking Company, New Brunswick, N. J. "Interwoven Toe and Heel." (For Hosiery.) Nos. 2,946–7; Feb. 6; Gaz. vol. 175; p. 263.

Krischer, Nathan A., New York, N. Y. "Krischer's Hy-Lo." (For Collar-Supporters.) No. 2,948; Feb. 6; Gaz. vol. 175; p. 263.

Mahn, Godfrey S., New York, N. Y. "The Barking Dog's Holiday Outfit." (For Smoking-Tobacco and Pipe-Smoker's Outfit.) No. 2,964; Feb. 27; Gaz. vol. 175; p. 1096.

Mennillo & Lignante, New York, N. Y. "Elena." (For Cordials.) No. 2,949; Feb. 6; Gaz. vol. 175; p. 263.

North Western Yeast Co., Chicago, Ill. "Yeast Foam." (For Yeast-Foam.) No. 2,958; Feb. 20; Gaz. vol. 175; p. 842.

Plex Preparations, Inc., New York, N. Y. "Plexo Cleansing Cream." (For Greaseless Cleansing-Cream.) No. 2,950; Feb. 6; Gaz. vol. 175; p. 263.

Sealy Mattress Company, Sugar Land, Tex. "The Sealy Salesman." (For Mattresses.) No. 2,951; Feb. 6; Gaz. vol. 175; p. 263.

Shaw, Lida M., Helena, Mont. "Won't You Come To My Party?" (For Shaw's Best Pancake-Flour.) No. 2,952; Feb. 6; Gaz. vol. 175; p. 263.

Shredded Wheat Company, The, Niagara Falls, N. Y. "A Warm Nourishing Meal." (For Shredded Wheat.) No. 2,959; Feb. 20; Gaz. vol. 175; p. 842.

Tetlow, Joseph, Philadelphia, Pa. "Tetlow's Swan Down for the Complexion." (For Powder for the Complexion.) No. 2,960; Feb. 20; Gaz. vol. 175; p. 842.

Van Slyke, E. W., Oklahoma, Okla. "Nu-Flake." (For Flaked Cereal Food.) No. 2,965; Feb. 27; Gaz. vol. 175; p. 1096.

Vindex Shirt Company, Baltimore, Md. "Jim Dandy." (For Shirts.) No. 2,966; Feb. 27; Gaz. vol. 175; p. 1096.

W. S. Quinby Company, Boston, Mass. "La Touraine, The Perfect Coffee." (For Coffee.) No. 2,953; Feb. 13; Gaz. vol. 175; p. 540.

DISCLAIMERS.

Adamson, Charles E., Buffalo, N. Y.; disclaimer filed by assignee, The Writerpress Company. Duplicating-machine. No. 1,015,256; disclaimer filed Feb. 8, 1912; Gaz. vol. 175; p. 847.

Cummer, Franklin D., Cleveland, Ohio; disclaimer filed by assignee, The F. D. Cummer & Son Company. Drying apparatus. No. 545,120; disclaimer filed Feb. 9, 1912; Gaz. vol. 175; p. 847.

Rosenberger, Andrew F., Chicago, Ill.; disclaimer filed by trustee, Charles J. Schmidt. Lightning-protector. No. 970,556; disclaimer filed Feb. 5, 1912; Gaz. vol. 175; p. 271.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1911.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Gaz."=Official Gazette.]

Absorption apparatus. G. Amtsdorf. No. 1,019,003; Feb. 27; Sp. p. 6154; Gaz. vol. 175; p. 1057.

Accordions and the like, Operating mechanism for automatic. E. Glier. No. 1,018,661; Feb. 27; Sp. p. 5418; Gaz. vol. 175; p. 939.

Acetylene-generator. L. Fuillet. No. 1,016,681; Feb. 6; Sp. p. 1020; Gaz. vol. 175; p. 155.

Acid containing iodin and mercury, Producing derivatives of cantharidic. A. Klein. No. 1,017,560; Feb. 13; Sp. p. 2915; Gaz. vol. 175; p. 493.

Acid, Manufacture of phosphoric. M. Dittmar. No. 1,018,746; Feb. 27; Sp. p. 5602; Gaz. vol. 175; p. 969.

Acids, Manufacturing anhydrids of fatty. J. Weber. No. 1,018,733; Feb. 27; Sp. p. 5565; Gaz. vol. 175; p. 963.

Acoumeter. C. J. Pilling. No. 1,017,795; Feb. 20; Sp. p. 3459; Gaz. vol. 175; p. 609.

Actuating mechanism. G. Sim. No. 1,018,014; Feb. 20; Sp. p. 3958; Gaz. vol. 175; p. 686.

Adding and listing machine. W. J. Kilpatrick. No. 1,016,276; Feb. 6; Sp. p. 74; Gaz. vol. 175; p. 14.

Adding and listing machine. C. H. Walker. No. 1,016,808; Feb. 6; Sp. p. 157; Gaz. vol. 175; p. 25.

Adding and listing machine. E. Williamson. No. 1,017,063; Feb. 13; Sp. p. 1850; Gaz. vol. 175; p. 323.

Adding and listing machine. N. White. No. 1,018,285; Feb. 20; Sp. p. 4532; Gaz. vol. 175; p. 779.

Adding-machine. A. A. Horton. No. 1,016,501; Feb. 6; Sp. p. 605; Gaz. vol. 175; p. 93.

Adding-machine. G. B. Putnam. No. 1,018,371; Feb. 20; Sp. p. 4707; Gaz. vol. 175; p. 807.

Addressing-machines, Inking-ribbon mechanism for. U. G. Lee. No. 1,017,221; Feb. 13; Sp. p. 2219; Gaz. vol. 175; p. 377.

Adhesives, Producing. R. Heim. No. 1,018,559; Feb. 27; Sp. p. 5214; Gaz. vol. 175; p. 909.

Adjustable chair. J. F. Walton. No. 1,018,460; Feb. 27; Sp. p. 4925; Gaz. vol. 175; p. 870.

Advertising and signaling device, Electric. W. S. Ryan. No. 1,017,172; Feb. 13; Sp. p. 2090; Gaz. vol. 175; p. 360.

Advertising apparatus. J. J. Sleeper. No. 1,016,371; Feb. 6; Sp. p. 294; Gaz. vol. 175; p. 48.

Advertising apparatus. G. P. Kent. No. 1,016,944; Feb. 13; Sp. p. 1682; Gaz. vol. 175; p. 279.

Aeration of liquids. A. J. Billows. No. 1,017,240; Feb. 13; Sp. p. 2253; Gaz. vol. 175; p. 383.

Aerial and other machines, Propelling apparatus for. C. J. Lake. No. 1,017,564; Feb. 13; Sp. p. 2920; Gaz. vol. 175; p. 494.

Aerial-cable holster and conveyer. J. L. Potter. No. 1,018,360; Feb. 20; Sp. p. 4078; Gaz. vol. 175; p. 804.

Aerial-vessel-propelling means. C. C. Wieland. No. 1,018,223; Feb. 20; Sp. p. 4416; Gaz. vol. 175; p. 759.

Aerocraft. J. J. V. Kaulvastna. No. 1,017,218; Feb. 13; Sp. p. 2211; Gaz. vol. 175; p. 376.

Aeroplane. F. C. and F. E. Carpenter. No. 1,016,609; Feb. 6; Sp. p. 875; Gaz. vol. 175; p. 130.

Aeroplane. D. Black. No. 1,016,929; Feb. 13; Sp. p. 1541; Gaz. vol. 175; p. 274.

Aeroplane. R. C. F. W. Blomath. No. 1,017,733; Feb. 20; Sp. p. 3269; Gaz. vol. 175; p. 586.

Aeroplane. O. Heising. No. 1,018,190; Feb. 20; Sp. p. 4356; Gaz. vol. 175; p. 747.

Aeroplane. W. J. H. Reath. No. 1,018,474; Feb. 27; Sp. p. 4952; Gaz. vol. 175; p. 875.

Aeroplane attachment. O. L. Pickard. No. 1,017,998; Feb. 20; Sp. p. 3630; Gaz. vol. 175; p. 680.

Aeroplanes, Stabilizing means for. T. L. White. No. 1,018,400; Feb. 20; Sp. p. 4735; Gaz. vol. 175; p. 819.

Agricultural implement. C. Christensen. No. 1,018,351; Feb. 20; Sp. p. 4037; Gaz. vol. 175; p. 800.

Agricultural implements, Pole carriage for. W. E. Johnson. No. 1,018,390; Feb. 20; Sp. p. 4762; Gaz. vol. 175; p. 818.

Agricultural implements or the like, Safety attachment for. F. C. Warne. No. 1,018,461; Feb. 27; Sp. p. 4927; Gaz. vol. 175; p. 871.

Air-brake. W. H. Mead. No. 1,017,011; Feb. 13; Sp. p. 1734; Gaz. vol. 175; p. 332.

Air-brake apparatus. B. J. Mauler. No. 1,017,787; Feb. 20; Sp. p. 3444; Gaz. vol. 175; p. 608.

Air-brake coupling, Automatic. R. J. Mitchell. No. 1,017,442; Feb. 13; Sp. p. 2679; Gaz. vol. 175; p. 455.

Air-brakes, Inertia-governor for. H. H. Westinghouse. No. 1,018,596; Feb. 27; Sp. p. 5288; Gaz. vol. 175; p. 918.

Air under pressure, Apparatus for compressing and distributing. M. C. Wilkinson. No. 1,017,835; Feb. 20; Sp. p. 3540; Gaz. vol. 175; p. 622.

Air-withdrawing or vacuum-producing apparatus, Portable. A. M. Jack. No. 1,016,830; Feb. 6; Sp. p. 1324; Gaz. vol. 175; p. 204.

Airship. J. R. Porter. No. 1,016,359; Feb. 6; Sp. p. 270; Gaz. vol. 175; p. 42.

Airships and the like, Means for maintaining equilibrium of. J. L. Roche. No. 1,016,363; Feb. 6; Sp. p. 277; Gaz. vol. 175; p. 44.

Alarm: See Burglar-alarm; Electrowhistle-alarm; Fire-alarm; Fire and burglar alarm.

Alarm-actuating mechanism, Automatic. L. D. Ikenberry. No. 1,018,064; Feb. 27; Sp. p. 5421; Gaz. vol. 175; p. 940.

Alarm and sash-lock. L. E. Robinson. No. 1,017,804; Feb. 20; Sp. p. 3481; Gaz. vol. 175; p. 612.

Alcohols, Manufacture of carbamates of tertiary. H. Thron, E. Sprongerts, and C. Freund. No. 1,016,977; Feb. 13; Sp. p. 1660; Gaz. vol. 175; p. 292.

Alkali-metal compounds from mineralz, Obtaining. M. M. Haff. No. 1,018,186; Feb. 20; Sp. p. 4352; Gaz. vol. 175; p. 747.

Alkali metal from oxygen compounds of alkali, Producing. H. Mehner. No. 1,016,758; Feb. 6; Sp. p. 1176; Gaz. vol. 175; p. 181.

Alloy, Iron-nickel-copper. G. H. Clamer. No. 1,016,549; Feb. 6; Sp. p. 747; Gaz. vol. 175; p. 110.

Alloys, Manufacturing and refining copper. W. S. Rockey and H. Eldridge. No. 1,017,629; Feb. 13; Sp. p. 3049; Gaz. vol. 175; p. 514.

Aluminous material and producing nitrogen compounds therefrom, Removing impurities from. O. Serpek. No. 1,016,526; Feb. 6; Sp. p. 982; Gaz. vol. 175; p. 102.

Amalgamator. J. G. Scott. No. 1,018,448; Feb. 27; Sp. p. 4902; Gaz. vol. 175; p. 867.

Ammonium carbonate, Manufacture of. J. Bueb. No. 1,018,406; Feb. 27; Sp. p. 4810; Gaz. vol. 175; p. 852.

Ammunition-loading apparatus. J. F. Meigs and R. P. Stout. No. 1,018,067; Feb. 20; Sp. p. 4092; Gaz. vol. 175; p. 704.

Amorphous anhydrous barium hydroxid, Making. C. Rollin. No. 1,017,593; Feb. 13; Sp. p. 2977; Gaz. vol. 175; p. 503.

Amusement apparatus. Y. Fishback. No. 1,017,526; Feb. 13; Sp. p. 2858; Gaz. vol. 175; p. 482.

Amusement apparatus, Mechanical. W. Harling. No. 1,018,315; Feb. 20; Sp. p. 4594; Gaz. vol. 175; p. 789.

Animal-trap. W. B. Knapp. No. 1,016,333; Feb. 6; Sp. p. 222; Gaz. vol. 175; p. 34.

Animal-trap. H. T. Butler. No. 1,016,671; Feb. 6; Sp. p. 1006; Gaz. vol. 175; p. 152.

Animal-trap. J. C. McAtee. No. 1,017,227; Feb. 13; Sp. p. 2230; Gaz. vol. 175; p. 379.

Animal-trap. W. J. Stewart. No. 1,017,479; Feb. 13; Sp. p. 2769; Gaz. vol. 175; p. 467.

Animal-trap. W. H. Tilley. No. 1,017,605; Feb. 13; Sp. p. 2998; Gaz. vol. 175; p. 506.

Animal-trap. M. A. Forslund. No. 1,018,657; Feb. 27; Sp. p. 5413; Gaz. vol. 175; p. 938.

Antiskid devices, Link for cross-chains of. F. A. Fox. No. 1,018,179; Feb. 20; Sp. p. 4333; Gaz. vol. 175; p. 744.

Antiskidding attachment for wheels. C. H. Myers. No. 1,016,846; Feb. 6; Sp. p. 1353; Gaz. vol. 175; p. 209.

Antiskidding device. H. A. Fisk. No. 1,017,961; Feb. 20; Sp. p. 3851; Gaz. vol. 175; p. 667.

Apron, Mechanic's. F. O. Potter. No. 1,018,078; Feb. 20; Sp. p. 4112; Gaz. vol. 175; p. 706.

Armature for dynamo-electric machines. J. Bache-Wiig. No. 1,017,071; Feb. 13; Sp. p. 1869; Gaz. vol. 175; p. 324.

Armor-plate and other steel article. F. Giolitti. No. 1,016,560; Feb. 6; Sp. p. 769; Gaz. vol. 175; p. 113.

Arsenobensene derivatives and making same. P. Ehrlich and A. Bertheim. No. 1,017,657; Feb. 20; Sp. p. 3108; Gaz. vol. 175; p. 561.
Aseptic cup. J. J. Shea. No. 1,018,013; Feb. 20; Sp. p. 3957; Gaz. vol. 175; p. 685.
Ashes, Device for removing dust from. J. M. Comstock. No. 1,017,651; Feb. 20; Sp. p. 3095; Gaz. vol. 175; p. 559.
Assorting-table. H. H. Shults. No. 1,018,636; Feb. 27; Sp. p. 5361; Gaz. vol. 175; p. 930.
Athletic and theatrical purposes, Apparatus for. T. R. Barrett. No. 1,016,729; Feb. 6; Sp. p. 1116; Gaz. vol. 175; p. 171.
Atomiser. F. W. Hinkle. No. 1,018,193; Feb. 20; Sp. p. 4361; Gaz. vol. 175; p. 748.
Auger, Earth-. R. T. Jenney. No. 1,017,416; Feb. 13; Sp. p. 2626; Gaz. vol. 175; p. 444.
Automatic hanger. A. A. Teets. No. 1,018,279; Feb. 20; Sp. p. 4521; Gaz. vol. 175; p. 777.
Automatic switch. C. L. Kennedy. No. 1,018,196; Feb. 20; Sp. p. 4365; Gaz. vol. 175; p. 749.
Automobile attachment. F. A. Howard. No. 1,016,631; Feb. 6; Sp. p. 929; Gaz. vol. 175; p. 139.
Automobile curtain-support. M. B. Barton. No. 1,017,643; Feb. 20; Sp. p. 3082; Gaz. vol. 175; p. 557.
Automobile-fender. O. A. Beppala. No. 1,018,085; Feb. 20; Sp. p. 4122; Gaz. vol. 175; p. 711.
Automobile glass-screen cleaner. H. F. Buth. No. 1,017,078; Feb. 13; Sp. p. 1890; Gaz. vol. 175; p. 327.
Automobile-lights, Apparatus for controlling. J. L. Beck. No. 1,018,154; Feb. 20; Sp. p. 4280; Gaz. vol. 175; p. 735.
Automobile-seat. J. B. Zimdars. No. 1,017,488; Feb. 13; Sp. p. 2784; Gaz. vol. 175; p. 470.
Automobile throttle mechanism. C. B. King. No. 1,016,750; Feb. 6; Sp. p. 1152; Gaz. vol. 175; p. 178.
Automobile transmission mechanism. M. H. Grabowsky. No. 1,017,407; Feb. 13; Sp. p. 2602; Gaz. vol. 175; p. 441.
Automobile-wheel. P. J. Rivera. No. 1,017,171; Feb. 13; Sp. p. 2097; Gaz. vol. 175; p. 360.
Automobile-wheel. A. R. Wylie and J. G. Wright. No. 1,018,467; Feb. 27; Sp. p. 4937; Gaz. vol. 175; p. 872.
Awning. J. Renner. No. 1,018,004; Feb. 20; Sp. p. 3941; Gaz. vol. 175; p. 681.
Awning-bracket. L. A. Daus. No. 1,017,515; Feb. 13; Sp. p. 2837; Gaz. vol. 175; p. 478.
Awning-fixture. F. O. Berg. No. 1,018,692; Feb. 27; Sp. p. 5475; Gaz. vol. 175; p. 940.
Axle drive, Front-. R. R. Bell. No. 1,017,128; Feb. 13; Sp. p. 2001; Gaz. vol. 175; p. 344.
Axles, Resilient cushion for rear. J. Garlick. No. 1,016,326; Feb. 6; Sp. p. 206; Gaz. vol. 175; p. 31.
Bag: *See* Feed-bag; Fruit-picker's bag; Hand-bag; Nose-bag.
Bag-holder. F. Appleby and H. A. Hubbart. No. 1,018,228; Feb. 20; Sp. p. 4428; Gaz. vol. 175; p. 760.
Bag-holder. C. H. Light and O. H. Hutchinson. No. 1,018,671; Feb. 27; Sp. p. 5487; Gaz. vol. 175; p. 943.
Bag-rack. J. E. James. No. 1,018,619; Feb. 27; Sp. p. 5330; Gaz. vol. 175; p. 925.
Bagging-machine. A. M. Bates. No. 1,017,369; Feb. 13; Sp. p. 2518; Gaz. vol. 175; p. 426.
Baker's peel. H. L. Schroeder. No. 1,017,177; Feb. 13; Sp. p. 2107; Gaz. vol. 175; p. 361.
Baking utensil. C. and J. P. Klossner. No. 1,017,561; Feb. 13; Sp. p. 2916; Gaz. vol. 175; p. 493.
Baking wafers and the like, Machine for. I. Z. Israel. No. 1,016,749; Feb. 6; Sp. p. 1149; Gaz. vol. 175; p. 178.
Balance. R. F. Chatillon. No. 1,017,137; Feb. 13; Sp. p. 2025; Gaz. vol. 175; p. 348.
Baling-machine. O. M. Bryan. No. 1,017,202; Feb. 13; Sp. p. 2155; Gaz. vol. 175; p. 370.
Baling-press. J. W. Burkett. No. 1,017,133; Feb. 13; Sp. p. 2012; Gaz. vol. 175; p. 346.
Baling-press. B. C. Poston. No. 1,017,168; Feb. 13; Sp. p. 2083; Gaz. vol. 175; p. 358.
Baling-press. F. L. White. No. 1,018,284; Feb. 20; Sp. p. 4530; Gaz. vol. 175; p. 779.
Ball-mill, Compound. R. Beneke. No. 1,017,946; Feb. 20; Sp. p. 3814; Gaz. vol. 175; p. 662.
Ball-retainer. J. L. Straub. No. 1,017,480; Feb. 13; Sp. p. 2770; Gaz. vol. 175; p. 467.
Balls, Manufacturing lawn-tennis and like. J. Turner and A. Burton. No. 1,017,482; Feb. 13; Sp. p. 2773; Gaz. vol. 175; p. 468.
Balloon attachment. A. F. Kraftsik. No. 1,017,767; Feb. 20; Sp. p. 3344; Gaz. vol. 175; p. 599.
Band maker, Bias-. F. C. Althen. No. 1,018,227; Feb. 20; Sp. p. 4427; Gaz. vol. 175; p. 760.
Bar: *See* Gage-bar; Grate-bar; Sash-bar; Skylight-bar; Splice-bar.
Bark-removing machine. H. L. Drake. No. 1,017,655; Feb. 20; Sp. p. 3100; Gaz. vol. 175; p. 560.
Barking willow-twigs, Apparatus for. W. Gesche. No. 1,016,659; Feb. 27; Sp. p. 5416; Gaz. vol. 175; p. 938.
Barrel-head fastener. S. Hartmann. No. 1,017,127; Feb. 13; Sp. p. 2000; Gaz. vol. 175; p. 344.
Barrel-head fastener. M. Alexander. No. 1,017,365; Feb. 13; Sp. p. 2508; Gaz. vol. 175; p. 425.
Barrel-lock. A. C. Wright. No. 1,017,487; Feb. 13; Sp. p. 2783; Gaz. vol. 175; p. 469.
Bat, Base-ball. G. J. Bishop. No. 1,018,866; Feb. 27; Sp. p. 5849; Gaz. vol. 175; p. 1009.
Bath-cabinets, Vaporizing and air-heating attachment for. B. J. Dibble. No. 1,016,873; Feb. 6; Sp. p. 1412; Gaz. vol. 175; p. 218.
Bath-mat, Portable. J. F. Spence. No. 1,016,374; Feb. 6; Sp. p. 302; Gaz. vol. 175; p. 48.
Bath-seat. J. G. Strock. No. 1,017,700; Feb. 20; Sp. p. 3192; Gaz. vol. 175; p. 574.
Bath-trap. P. F. Lyons. No. 1,016,342; Feb. 6; Sp. p. 242; Gaz. vol. 175; p. 37.
Baths, Receptor for shower-. L. H. Pleins. No. 1,017,167; Feb. 13; Sp. p. 2082; Gaz. vol. 175; p. 358.
Battery: *See* Galvanic battery; Secondary or storage battery.
Battery for cleaning tarnished metals. R. H. Galbreath. No. 1,018,355; Feb. 20; Sp. p. 4663; Gaz. vol. 175; p. 802.
Beam. J. E. Tesseyman. No. 1,017,927; Feb. 20; Sp. p. 3778; Gaz. vol. 175; p. 656.
Beaming-machine. J. Warburton. No. 1,017,191; Feb. 13; Sp. p. 2137; Gaz. vol. 175; p. 366.
Bean-pulling device. C. H. Lawton. No. 1,018,916; Feb. 27; Sp. p. 5950; Gaz. vol. 175; p. 1025.
Bearing. F. H. Smith. No. 1,017,115; Feb. 13; Sp. p. 1974; Gaz. vol. 175; p. 340.
Bearing, Antifriction-. E. S. Woods. No. 1,016,596; Feb. 6; Sp. p. 838; Gaz. vol. 175; p. 125.
Bearing, Antifriction-. D. E. Kempster. No. 1,018,324; Feb. 20; Sp. p. 4614; Gaz. vol. 175; p. 792.
Bearing, Roller-. J. C. Barber. No. 1,016,469; Feb. 6; Sp. p. 532; Gaz. vol. 175; p. 82.
Bearing, Roller-. C. E. Davis. No. 1,018,697; Feb. 27; Sp. p. 5483; Gaz. vol. 175; p. 950.
Bearing, Self-oiling. J. Burke. No. 1,017,132; Feb. 13; Sp. p. 2010; Gaz. vol. 175; p. 346.
Bed-bottoms and the like, Fabric-tightener for. W. A. Poulnot. No. 1,016,579; Feb. 6; Sp. p. 805; Gaz. vol. 175; p. 120.
Bed, Davenport-. A. Lucik. No. 1,018,432; Feb. 27; Sp. p. 4868; Gaz. vol. 175; p. 862.
Bed, Folding. H. A. Javins. No. 1,017,548; Feb. 13; Sp. p. 2894; Gaz. vol. 175; p. 489.
Bed-lifter. J. S. Visger and C. Claus. No. 1,017,484; Feb. 13; Sp. p. 2777; Gaz. vol. 175; p. 468.
Bed-protector. J. F. Kampe. No. 1,017,153; Feb. 13; Sp. p. 2053; Gaz. vol. 175; p. 353.
Bed, Sofa-. F. B. Wersel, Jr. No. 1,017,937; Feb. 20; Sp. p. 3796; Gaz. vol. 175; p. 659.
Bed, Spring-. B. D. Courts. No. 1,016,402; Feb. 6; Sp. p. 374; Gaz. vol. 175; p. 59.
Bed-spring. L. Jefferson. No. 1,016,633; Feb. 6; Sp. p. 932; Gaz. vol. 175; p. 150.
Bed-spring. G. Benedetti. No. 1,018,865; Feb. 27; Sp. p. 5848; Gaz. vol. 175; p. 1009.
Bedstead. H. Ackermann. No. 1,016,868; Feb. 6; Sp. p. 1404; Gaz. vol. 175; p. 217.
Bedstead. E. W. Pettersson. No. 1,017,793; Feb. 20; Sp. p. 3456; Gaz. vol. 175; p. 606.
Bedstead. J. A. Kemmler. No. 1,018,195; Feb. 20; Sp. p. 4363; Gaz. vol. 175; p. 749.
Beehive-entrance guard. G. C. Rahn. No. 1,017,283; Feb. 13; Sp. p. 2241; Gaz. vol. 175; p. 381.
Beer cooling and storage tank. W. Griesser. No. 1,018,704; Feb. 27; Sp. p. 5502; Gaz. vol. 175; p. 963.
Beer cooling and storing building. W. Griesser. No. 1,018,703; Feb. 27; Sp. p. 5501; Gaz. vol. 175; p. 963.
Beer, Removing alcohol from and purifying. H. H. Dechebach. No. 1,017,086; Feb. 13; Sp. p. 1925; Gaz. vol. 175; p. 330.
Beet-blocker. R. C. Reynolds. No. 1,017,816; Feb. 13; Sp. p. 2411; Gaz. vol. 175; p. 410.
Bell, Electric. S. Brown. No. 1,018,162; Feb. 20; Sp. p. 4296; Gaz. vol. 175; p. 738.
Bell-switch, Automatic. A. F. Kaiser. No. 1,017,101; Feb. 13; Sp. p. 1963; Gaz. vol. 175; p. 335.
Belt, Driving-. H. G. and A. Voight. No. 1,016,792; Feb. 27; Sp. p. 5004; Gaz. vol. 175; p. 864.
Belt guiding and shifting device. L. L. Thompson. No. 1,016,202; Feb. 6; Sp. p. 143; Gaz. vol. 175; p. 22.
Belt-tightener. J. H. Sewall. No. 1,016,787; Feb. 6; Sp. p. 1238; Gaz. vol. 175; p. 191.
Bench: *See* Piano-bench.
Berry-box. P. Henrich. No. 1,018,318; Feb. 20; Sp. p. 4599; Gaz. vol. 175; p. 790.
Beton or concrete sleeper with resilient rail-supports. O. Wilhelmi. No. 1,017,026; Feb. 13; Sp. p. 1769; Gaz. vol. 175; p. 308.
Bib, Compression-. W. S. Arthur. No. 1,017,492; Feb. 13; Sp. p. 2790; Gaz. vol. 175; p. 471.
Billiard-chalk, &c., Holder for. J. Baker. No. 1,018,229; Feb. 20; Sp. p. 4429; Gaz. vol. 175; p. 761.
Billiard-cue. F. E. Cooper, H. W. Taneyhill, and G. K. Page. No. 1,018,682; Feb. 20; Sp. p. 3998; Gaz. vol. 175; p. 692.
Billiard-cue tip. F. L. Dethloff. No. 1,018,744; Feb. 27; Sp. p. 5598; Gaz. vol. 176; p. 968.
Billing-sheet, Multiform. E. Z. Lewis. No. 1,017,298; Feb. 13; Sp. p. 2365; Gaz. vol. 175; p. 403.
Bin: *See* Rotatable bin.
Binder, Loose-leaf. A. E. Harling and G. E. Dobbin. No. 1,016,496; Feb. 6; Sp. p. 588; Gaz. vol. 175; p. 91.
Binder, Loose-leaf. W. Fairchild. No. 1,016,557; Feb. 6; Sp. p. 762; Gaz. vol. 175; p. 112.
Binder, Loose-leaf. A. Opalla. No. 1,017,165; Feb. 13; Sp. p. 2076; Gaz. vol. 175; p. 357.

Binder, Loose-leaf. W. P. Pitt. No. 1,017,797; Feb. 20; Sp. p. 3464; Gaz. vol. 175; p. 610.
Binder, Loose-leaf. L. M. [illegible]. No. 1,018,125; Feb. 20; Sp. p. 4214; Gaz. vol. 175; p. 735.
Binder, Loose-leaf. G. C. Moore. No. 1,018,770; Feb. 27; Sp. p. 5653; Gaz. vol. 175; p. 977.
Binder or loose-sheet holder, Temporary. P. Krumming. No. 1,017,220; Feb. 13; Sp. p. [illegible]; Gaz. vol. 175; p. 376.
Biscuits and the like, Machine for the manufacture of filled. W. T. Carr. (Reissue.) No. 12,367; Feb. 13; Sp. p. 3078; Gaz. vol. 175; p. 516.
Bit: *See* Rotary bit.
Blacking-box opener and holder. V. Frank. No. 1,018,106; Feb. 20; Sp. p. 4173; Gaz. vol. 175; p. 718.
Blacking-dauber. W. F. Porter. No. 1,018,389; Feb. 20; Sp. p. 4636; Gaz. vol. 175; p. 797.
Blade-lashing. F. Hodgkinson. No. 1,016,942; Feb. 13; Sp. p. 1580; Gaz. vol. 175; p. 279.
Blank packing and counting mechanism. E. G. Staude. No. 1,018,087; Feb. 20; Sp. p. 4125; Gaz. vol. 175; p. 711.
Block: *See* Paving-block; Snatch-block.
Block and tile machine, Combination. J. B. Runner. No. 1,017,917; Feb. 20; Sp. p. 3755; Gaz. vol. 175; p. 653.
Blotter-holder. D. H. Fitzgerald. No. 1,018,416; Feb. 27; Sp. p. 4839; Gaz. vol. 175; p. 857.
Blower for boilers. H. A. Higgins. No. 1,016,993; Feb. 13; Sp. p. 1703; Gaz. vol. 175; p. 297.
Blower for boilers. H. A. Higgins. No. 1,016,994; Feb. 13; Sp. p. 1704; Gaz. vol. 175; p. 297.
Blower, Turbine-. P. H. Kane. No. 1,017,001; Feb. 13; Sp. p. 1716; Gaz. vol. 175; p. 299.
Blowing-engine. J. F. M. Pattin. No. 1,016,577; Feb. 6; Sp. p. 803; Gaz. vol. 175; p. 119.
Blowpipe-carrier. G. Neverpaid. No. 1,017,450; Feb. 13; Sp. p. 2716; Gaz. vol. 175; p. 457.
Board: *See* Car running-board; Ironing-board; Paper-board; Stock-quotation board.
Board-clamp. H. F. Morehead. No. 1,018,070; Feb. 20; Sp. p. 4100; Gaz. vol. 175; p. 705.
Boat. E. C. Clostermeyer. No. 1,018,809; Feb. 27; Sp. p. 5733; Gaz. vol. 175; p. 989.
Boat, Submarine. R. O. King. No. 1,017,103; Feb. 13; Sp. p. 1954; Gaz. vol. 175; p. 336.
Boats of ships and the like, Holding and disengaging gear for the. T. I. Macaulay. No. 1,016,340; Feb. 6; Sp. p. 1541; Gaz. vol. 175; p. 207.
Boiler: *See* Steam-boiler.
Boiler. W. J. Ellis. No. 1,016,484; Feb. 6; Sp. p. 563; Gaz. vol. 175; p. 87.
Boiler and burner, Combination. D. Burroughs. No. 1,016,398; Feb. 6; Sp. p. 366; Gaz. vol. 175; p. 58.
Bolt: *See* Lock-bolt.
Bolt. J. A. Dumbier. No. 1,018,887; Feb. 27; Sp. p. 5891; Gaz. vol. 175; p. 1015.
Bolt for piston follower-plates. H. W. Davis. No. 1,018,741; Feb. 27; Sp. p. 5599; Gaz. vol. 175; p. 966.
Bolt-holder. J. A. Schlaar. No. 1,016,296; Feb. 6; Sp. p. 131; Gaz. vol. 175; p. 21.
Bolt-lock. E. E. Davenport. No. 1,018,554; Feb. 6; Sp. p. 750; Gaz. vol. 175; p. 111.
Bolt-operator. E. Hoysux. No. 1,018,502; Feb. 6; Sp. p. 614; Gaz. vol. 175; p. 94.
Bolt threading and slotting mechanism. G. A. J. Hainsworth. No. 1,018,706; Feb. 27; Sp. p. 5506; Gaz. vol. 175; p. 964.
Bolt-threading machine. A. B. Landis. No. 1,017,878; Feb. 20; Sp. p. 3656; Gaz. vol. 175; p. 637.
Book and leaves therefor. J. Walker, Jr. No. 1,018,459; Feb. 27; Sp. p. 4924; Gaz. vol. 175; p. 870.
Book-cover attachment. W. P. Pitt. No. 1,017,796; Feb. 20; Sp. p. 3463; Gaz. vol. 175; p. 609.
Book-holder. A. B. and C. L. Johnson. No. 1,016,635; Feb. 6; Sp. p. 934; Gaz. vol. 175; p. 140.
Book-holder. E. H. Smith. No. 1,016,970; Feb. 13; Sp. p. 1645; Gaz. vol. 175; p. 289.
Book-page-recording device. H. P. Ellers. No. 1,018,816; Feb. 27; Sp. p. 5754; Gaz. vol. 175; p. 992.
Book rest, Open-. W. J. Walsh. No. 1,017,120; Feb. 13; Sp. p. 1986; Gaz. vol. 175; p. 341.
Book rest, Open-. W. J. Walsh. No. 1,017,121; Feb. 13; Sp. p. 1988; Gaz. vol. 175; p. 342.
Book-stand, Album. G. Polverino. No. 1,017,460; Feb. 13; Sp. p. 2729; Gaz. vol. 175; p. 460.
Book-support, Transparent. M. D. Stevenson. No. 1,017,698; Feb. 20; Sp. p. 3189; Gaz. vol. 175; p. 574.
Boot-tree. C. Frank. No. 1,018,668; Feb. 27; Sp. p. 5309; Gaz. vol. 175; p. 921.
Boots and shoes, Machine for use in the manufacture of. A. Bates. No. 1,017,370; Feb. 13; Sp. p. 2516; Gaz. vol. 175; p. 427.
Boots and shoes, Making. F. E. Ewell. No. 1,017,742; Feb. 20; Sp. p. 3294; Gaz. vol. 175; p. 589.
Boots and shoes, Pulling-over machine for use in the manufacture of. E. E. Crain. No. 1,016,480; Feb. 6; Sp. p. 557; Gaz. vol. 175; p. 86.
Boring and drilling machine. A. Bank. No. 1,018,153; Feb. 20; Sp. p. 4279; Gaz. vol. 175; p. 735.
Boring-machine. R. L. McDaniel. No. 1,016,283; Feb. 6; Sp. p. 107; Gaz. vol. 175; p. 17.
Bottle-carrier. E. P. Landahl. No. 1,017,432; Feb. 13; Sp. p. 2661; Gaz. vol. 175; p. 450.
Bottle-carrier. J. T. H. Paul. No. 1,017,996; Feb. 20; Sp. p. 3927; Gaz. vol. 175; p. 679.
Bottle cleaning and brushing-machine. A. Berblinger. No. 1,018,788; Feb. 27; Sp. p. 5577; Gaz. vol. 175; p. 965.
Bottle-closure. C. De Witt. No. 1,018,387; Feb. 20; Sp. p. 4756; Gaz. vol. 175; p. 814.
Bottle-closure. P. and C. G. Panhorst. No. 1,018,923; Feb. 27; Sp. p. 5965; Gaz. vol. 175; p. 1027.
Bottle filling and capping machine. H. J. Chilton. No. 1,016,611; Feb. 6; Sp. p. 879; Gaz. vol. 175; p. 131.
Bottle-handle, Detachable. F. Landau. No. 1,016,421; Feb. 6; Sp. p. 410; Gaz. vol. 175; p. 65.
Bottle-holder. E. Dixon. No. 1,016,323; Feb. 6; Sp. p. 200; Gaz. vol. 175; p. 30.
Bottle-holder for bottle-cleansing machines. G. M. Wakefield. No. 1,017,829; Feb. 20; Sp. p. 3527; Gaz. vol. 175; p. 620.
Bottle-holder for bottle-filling machines. J. H. Champ. No. 1,017,038; Feb. 13; Sp. p. 1790; Gaz. vol. 175; p. 312.
Bottle-locking device. F. Paulson. No. 1,017,997; Feb. 20; Sp. p. 3929; Gaz. vol. 175; p. 679.
Bottle, Milk-. A. Mulder. No. 1,017,161; Feb. 13; Sp. p. 2072; Gaz. vol. 175; p. 356.
Bottle, Non-refillable. W. H. Eastlack. No. 1,016,679; Feb. 6; Sp. p. 1016; Gaz. vol. 175; p. 155.
Bottle, Non-refillable. E. M. Calef. No. 1,017,204; Feb. 13; Sp. p. 2178; Gaz. vol. 175; p. 370.
Bottle, Non-refillable. L. W. Alexander and J. W. Hall. No. 1,017,490; Feb. 13; Sp. p. 2788; Gaz. vol. 175; p. 470.
Bottle, Non-refillable. J. S. Bromhead. No. 1,018,960; Feb. 27; Sp. p. 6040; Gaz. vol. 175; p. 1041.
Bottle, Non-refillable. J. P. Stendebach. No. 1,018,993; Feb. 27; Sp. p. 6128; Gaz. vol. 175; p. 1053.
Bottle, Siphon-. P. E. Malmstrom. No. 1,018,124; Feb. 20; Sp. p. 4213; Gaz. vol. 175; p. 724.
Bottle, Tilting. H. Turk. No. 1,017,607; Feb. 13; Sp. p. 3001; Gaz. vol. 175; p. 507.
Bottles, Cleaning. E. L. Goldman. No. 1,018,046; Feb. 20; Sp. p. 4030; Gaz. vol. 175; p. 697.
Bottles, Machine for applying cartons to. C. E. Wendte and J. Nash. No. 1,016,608; Feb. 6; Sp. p. 1273; Gaz. vol. 175; p. 196.
Bottling-machine. A. A. Pindstofte. No. 1,018,988; Feb. 27; Sp. p. 6118; Gaz. vol. 175; p. 1051.
Box: *See* Berry-box; Confectionery-box; Dispensing-box; Fire-alarm box; Folding box; Knockdown box; Lunch-box; Mail-box; Mail-carrier's box; Match-box; Miter-box; Newspaper-box; Outlet-box; Packing-box; Paper-folding box; Platting-box; Puzzle-box; Sound-box; Switch and cut-out box.
Box, B. F., A. O., and L. Fliedner. No. 1,017,962; Feb. 20; Sp. p. 3852; Gaz. vol. 175; p. 667.
Box-covering machine. T. H. Wible. No. 1,017,276; Feb. 13; Sp. p. 2225; Gaz. vol. 175; p. 395.
Box-lid and label holder, Combined. M. M. O'Meara and T. W. Leahy. No. 1,016,434; Feb. 6; Sp. p. 488; Gaz. vol. 175; p. 69.
Box-making machine, Pasteboard-. E. Jagenberg. No. 1,016,269; Feb. 6; Sp. p. 59; Gaz. vol. 175; p. 12.
Box-shucks, Machine for forming. J. P. Wright. No. 1,016,466; Feb. 6; Sp. p. 521; Gaz. vol. 175; p. 80.
Bracelet. G. H. Tilford. No. 1,016,304; Feb. 6; Sp. p. 149; Gaz. vol. 175; p. 23.
Bracelet. M. L. Robbins. No. 1,018,587; Feb. 27; Sp. p. 5271; Gaz. vol. 175; p. 916.
Bracket: *See* Awning-bracket; Interlocking bracket; Lamp-bracket; Porch flower-bracket.
Bracket. A. A. Warner. No. 1,016,908; Feb. 6; Sp. p. 1495; Gaz. vol. 175; p. 281.
Bracket and support therefor. V. Sander and P. W. Seiler. No. 1,017,174; Feb. 13; Sp. p. 2103; Gaz. vol. 175; p. 361.
Brake: *See* Air-brake; Car-brake; Coaster-brake; Hemp-brake; Vehicle-brake; Wheel-brake.
Brake apparatus particularly applicable to railway-wagon brakes. G. B. Bowles. No. 1,017,504; Feb. 13; Sp. p. 2810; Gaz. vol. 175; p. 474.
Brake-clutch. L. T. Turner. No. 1,018,280; Feb. 20; Sp. p. 4523; Gaz. vol. 175; p. 778.
Brake-head and key. C. F. Huntoon. No. 1,018,618; Feb. 27; Sp. p. 5328; Gaz. vol. 175; p. 924.
Brake mechanism. J. J. Lyons. No. 1,017,223; Feb. 13; Sp. p. 2223; Gaz. vol. 175; p. 378.
Brake mechanism, Free-wheel and back-pedaling. E. Sachs. No. 1,017,472; Feb. 13; Sp. p. 2754; Gaz. vol. 175; p. 464.
Brake mechanism, Variable-load. W. G. Ransom. No. 1,016,289; Feb. 6; Sp. p. 117; Gaz. vol. 175; p. 19.
Brake-shoe. J. D. Gallagher. No. 1,016,262; Feb. 6; Sp. p. 39; Gaz. vol. 175; p. 9.
Brake-shoe. J. T. Perkins. No. 1,017,015; Feb. 13; Sp. p. 1741; Gaz. vol. 175; p. 304.
Brake-shoe. A. H. Reid. No. 1,018,209; Feb. 20; Sp. p. 4388; Gaz. vol. 175; p. 754.
Brake-shoe head. I. W. Burgess. No. 1,018,294; Feb. 20; Sp. p. 4557; Gaz. vol. 175; p. 782.
Bran and a product obtained thereby, Treating. J. H. Quine. No. 1,018,441; Feb. 27; Sp. p. 4880; Gaz. vol. 175; p. 864.
Break-key. J. L. Hogan, Jr. No. 1,016,564; Feb. 6; Sp. p. 775; Gaz. vol. 175; p. 114.

Breast-drill and valve-grinder, Combined. A. B. Browne. No. 1,017,242; Feb. 13; Sp. p. 2259; Gaz. vol. 175; p. 384.
Brewers' slope, Treating. C. S. Robison. No. 1,016,291; Feb. 6; Sp. p. 123; Gaz. vol. 175; p. 19.
Brick, Glaze-faced. J. T. Groat. No. 1,018,747; Feb. 27; Sp. p. 5603; Gaz. vol. 175; p. 969.
Brick, Making fire-. C. H. Jaxtheimer. No. 1,018,665; Feb. 27; Sp. p. 5425; Gaz. vol. 175; p. 940.
Brick, tile, or analogous article and making same. A. Malinovsky. No. 1,016,345; Feb. 6; Sp. p. 248; Gaz. vol. 175; p. 39.
Brickmaking-machine. J. F. Sheckler. No. 1,017,921; Feb. 20; Sp. p. 3761; Gaz. vol. 175; p. 654.
Bridge-gate, Safety. C. Faust. No. 1,017,090; Feb. 13; Sp. p. 1930; Gaz. vol. 175; p. 332.
Briquets, Manufacture of. F. O. Gripp. No. 1,016,939; Feb. 13; Sp. p. 1572; Gaz. vol. 175; p. 278.
Brush. I. Bing. No. 1,016,734; Feb. 6; Sp. p. 1126; Gaz. vol. 175; p. 173.
Brush. C. Stahl. No. 1,017,334; Feb. 13; Sp. p. 2445; Gaz. vol. 175; p. 415.
Brush, Air-. O. C. Woid. No. 1,017,858; Feb. 13; Sp. p. 2498; Gaz. vol. 175; p. 423.
Brush-cutting knife. F. C. Scott. No. 1,018,784; Feb. 27; Sp. p. 5679; Gaz. vol. 175; p. 982.
Brush-holder. S. H. Mortensen. No. 1,017,309; Feb. 13; Sp. p. 2395; Gaz. vol. 175; p. 407.
Brush-manufacturing machine. J. F. Mumford. No. 1,016,951; Feb. 13; Sp. p. 1601; Gaz. vol. 175; p. 282.
Brush, Shaving-. H. D. Sterrick. No. 1,018,939; Feb. 27; Sp. p. 5996; Gaz. vol. 175; p. 1034.
Brush, Tooth-. J. J. Sarrasin. No. 1,018,927; Feb. 27; Sp. p. 5970; Gaz. vol. 175; p. 1029.
Bucket, Drag-. W. C. Weeks. No. 1,016,860; Feb. 6; Sp. p. 1384; Gaz. vol. 175; p. 214.
Buckle. M. A. Cooper. No. 1,018,880; Feb. 27; Sp. p. 5873; Gaz. vol. 175; p. 1013.
Buckle, Bale-tie. S. L. Austin and H. Coles. No. 1,017,366; Feb. 13; Sp. p. 2509; Gaz. vol. 175; p. 425.
Budding-tool. J. F. Jones. No. 1,016,831; Feb. 6; Sp. p. 1326; Gaz. vol. 175; p. 204.
Buffer-beam. C. T. Westlake. No. 1,016,592; Feb. 6; Sp. p. 820; Gaz. vol. 175; p. 124.
Buffer-beam. C. T. Westlake. No. 1,016,593; Feb. 6; Sp. p. 830; Gaz. vol. 175; p. 124.
Buffing-machine, Automatic. A. C. Fyfe and W. E. Gladstone. No. 1,017,864; Feb. 20; Sp. p. 3608; Gaz. vol. 175; p. 632.
Building construction. L. K. Davis. No. 1,017,386; Feb. 13; Sp. p. 2556; Gaz. vol. 175; p. 432.
Building construction and block therefor. W. H. Ricker. No. 1,016,957; Feb. 13; Sp. p. 1619; Gaz. vol. 175; p. 284.
Building-slab. A. White. No. 1,017,067; Feb. 13; Sp. p. 1857; Gaz. vol. 175; p. 322.
Burglar-alarm. F. C. Ries. No. 1,018,926; Feb. 27; Sp. p. 5968; Gaz. vol. 175; p. 1028.
Burglar-alarm. Electrical. W. K. Cook. No. 1,016,936; Feb. 13; Sp. p. 1562; Gaz. vol. 175; p. 277.
Burner: *See* Gas-burner; Gas and like burner; Hydrocarbon-burner; Liquid and gaseous fuel burner; Oil-burner; Sulfur-burner; Vapor-burner.
Butter-cutting machine. H. Neumann and C. R. Annett. No. 1,018,516; Feb. 27; Sp. p. 5106; Gaz. vol. 175; p. 890.
Button-making machine. W. Ronschak. No. 1,016,441; Feb. 6; Sp. p. 468; Gaz. vol. 175; p. 72.
Cabinet, Food-warming. J. Smith. No. 1,016,701; Feb. 6; Sp. p. 1249; Gaz. vol. 175; p. 192.
Cabinet, Towel-. L. E. Shank. No. 1,018,011; Feb. 20; Sp. p. 3954; Gaz. vol. 175; p. 684.
Cable and wire cutter. W. J. Sheehan and J. H. Gilbertson. No. 1,018,274; Feb. 20; Sp. p. 4513; Gaz. vol. 175; p. 776.
Cable-releasing device. W. Ball. No. 1,016,336; Feb. 6; Sp. p. 331; Gaz. vol. 175; p. 58.
Cable-stretcher for ballast-unloaders. W. H. Yawger. No. 1,018,800; Feb. 27; Sp. p. 5714; Gaz. vol. 175; p. 987.
Cage, Roller-. G. H. Carpenter. No. 1,018,694; Feb. 27; Sp. p. 5479; Gaz. vol. 175; p. 950.
Cakes, Means of wrapping and packing. F. O. Stone. No. 1,017,337; Feb. 13; Sp. p. 2452; Gaz. vol. 175; p. 417.
Calculating-machine. N. R. Long. No. 1,016,572; Feb. 6; Sp. p. 793; Gaz. vol. 175; p. 118.
Calculating-machine. A. S. McCaskey. No. 1,018,510; Feb. 27; Sp. p. 5050; Gaz. vol. 175; p. 888.
Calculating-machines, Transfer mechaniam for. G. J. Barrett. No. 1,017,843; Feb. 20; Sp. p. 3564; Gaz. vol. 175; p. 625.
Calculator. C. J. Smith and P. Kleeberg. No. 1,017,182; Feb. 13; Sp. p. 2118; Gaz. vol. 175; p. 363.
Calculator, Paymaster's. H. A. Beals and M. J. Stark, Jr. No. 1,018,028; Feb. 20; Sp. p. 3990; Gaz. vol. 175; p. 690.
Calendar, Daily appointment-. C. W. Strayer. No. 1,018,641; Feb. 27; Sp. p. 5381; Gaz. vol. 175; p. 932.
Calendar, Perpetual. N. Singh. No. 1,016,370; Feb. 6; Sp. p. 291; Gaz. vol. 175; p. 46.
Cameras, Diaphragm-operating attachment for. J. P. Shukis. No. 1,018,635; Feb. 27; Sp. p. 5360; Gaz. vol. 175; p. 930.
Can: *See* Ice-cream-storage can; Milk-can.
Can attachment, Oil-. S. J. Nagel. No. 1,017,899; Feb. 20; Sp. p. 3719; Gaz. vol. 175; p. 647.
Can-body forming and seaming machine. L. C. Sharp. No. 1,017,815; Feb. 20; Sp. p. 3498; Gaz. vol. 175; p. 615.
Can-carrier. C. H. Cronk. No. 1,018,696; Feb. 27; Sp. p. 5482; Gaz. vol. 175; p. 950.
Can holder, Oil-. I. R. Johnson. No. 1,018,567; Feb. 27; Sp. p. 5229; Gaz. vol. 175; p. 909.
Can-nozzle. E. Norton and B. H. Larkin. No. 1,017,451; Feb. 13; Sp. p. 2737; Gaz. vol. 175; p. 457.
Can-opener. M. P. Newcomb. No. 1,016,513; Feb. 6; Sp. p. 647; Gaz. vol. 175; p. 97.
Can-opener. J. A. Polakovich. No. 1,018,266; Feb. 20; Sp. p. 4500; Gaz. vol. 175; p. 773.
Can-spout. R. T. Cooke. No. 1,018,552; Feb. 27; Sp. p. 5201; Gaz. vol. 175; p. 904.
Candle-holder. C. H. Bourgeois. No. 1,017,375; Feb. 13; Sp. p. 2529; Gaz. vol. 175; p. 428.
Cane and maize juices, Preparing sugar-. F. L. Stewart. No. 1,018,994; Feb. 27; Sp. p. 6130; Gaz. vol. 175; p. 1053.
Cap. C. S. Greenwood. No. 1,017,049; Feb. 13; Sp. p. 1820; Gaz. vol. 175; p. 316.
Cap and socket wrench used on and in connection with valves of pneumatic tires for wheels, Combined. J. H. Crowell. No. 1,017,537; Feb. 13; Sp. p. 2878; Gaz. vol. 175; p. 485.
Car-brake. A. F. Klasing. No. 1,016,332; Feb. 6; Sp. p. 220; Gaz. vol. 175; p. 33.
Car brake and fender, Co-acting. I. Macowsky and M. Hollaer. No. 1,018,978; Feb. 27; Sp. p. 6093; Gaz. vol. 175; p. 1048.
Car brake-head, Railway-. P. B. Harrison. No. 1,017,063; Feb. 13; Sp. p. 1823; Gaz. vol. 175; p. 317.
Car brake, Pit-. W. Nalepka. No. 1,018,261; Feb. 20; Sp. p. 4493; Gaz. vol. 175; p. 772.
Car buffer and end sill. T. L. McKeen. No. 1,016,701; Feb. 6; Sp. p. 1062; Gaz. vol. 175; p. 163.
Car-buffing device. T. L. McKeen. No. 1,016,702; Feb. 6; Sp. p. 1064; Gaz. vol. 175; p. 163.
Car-buffing mechanism, Railway-. R. D. Gallagher, Jr. No. 1,018,042; Feb. 20; Sp. p. 4020; Gaz. vol. 175; p. 695.
Car center-bearing, Railway-. E. S. Woods. No. 1,016,595; Feb. 6; Sp. p. 824; Gaz. vol. 175; p. 125.
Car, Child's hand-. C. A. Erickson. No. 1,018,656; Feb. 27; Sp. p. 5412; Gaz. vol. 175; p. 937.
Car construction. B. G. Budd. No. 1,017,243; Feb. 13; Sp. p. 2261; Gaz. vol. 175; p. 384.
Car-coupling, Automatic. J. D. Shelton. No. 1,016,788; Feb. 6; Sp. p. 1242; Gaz. vol. 175; p. 191.
Car-coupling uncoupling mechanism. E. H. Schmidt. No. 1,016,854; Feb. 6; Sp. p. 1374; Gaz. vol. 175; p. 212.
Car door, Dump-. R. W. Burnett. No. 1,017,281; Feb. 13; Sp. p. 2324; Gaz. vol. 175; p. 397.
Car door, Grain-. C. H. Kenny and M. McMillan. No. 1,018,623; Feb. 27; Sp. p. 5335; Gaz. vol. 175; p. 926.
Car-door lock. W. M. Lewis. No. 1,016,836; Feb. 6; Sp. p. 1333; Gaz. vol. 175; p. 206.
Car draft-gear, Railway-. E. D. Gallagher, Jr. No. 1,017,047; Feb. 13; Sp. p. 1817; Gaz. vol. 175; p. 315.
Car draft-rigging. A. P. Prendergast and J. J. Tatum. No. 1,017,106; Feb. 13; Sp. p. 1963; Gaz. vol. 175; p. 337.
Car draft-rigging, Railway-. J. Jerome. No. 1,018,328; Feb. 20; Sp. p. 4612; Gaz. vol. 175; p. 792.
Car, Dump-. C. L. Lawton. No. 1,016,570; Feb. 6; Sp. p. 785; Gaz. vol. 175; p. 117.
Car, Dump-. H. H. Vaughan. No. 1,018,140; Feb. 20; Sp. p. 4249; Gaz. vol. 175; p. 730.
Car, Dump-. C. H. Clark. No. 1,018,155; Feb. 20; Sp. p. 4301; Gaz. vol. 175; p. 739.
Car, Dump-. H. S. Hart. No. 1,018,289; Feb. 20; Sp. p. 4760; Gaz. vol. 175; p. 815.
Car end door-framing. E. Possen. No. 1,016,954; Feb. 13; Sp. p. 1609; Gaz. vol. 175; p. 283.
Car-fender. F. Lillich. No. 1,017,431; Feb. 13; Sp. p. 2659; Gaz. vol. 175; p. 449.
Car-fender. W. Helbling. No. 1,017,668; Feb. 20; Sp. p. 3138; Gaz. vol. 175; p. 545.
Car-fender. J. R. Maguire. No. 1,018,123; Feb. 20; Sp. p. 4212; Gaz. vol. 175; p. 724.
Car frame, Motor-. H. Mayer. No. 1,016,282; Feb. 6; Sp. p. 106; Gaz. vol. 175; p. 16.
Car friction-buffer, Railway-. T. L. McKeen. No. 1,016,703; Feb. 6; Sp. p. 1067; Gaz. vol. 175; p. 164.
Car grain-door. R. C. Miller. No. 1,017,786; Feb. 20; Sp. p. 3443; Gaz. vol. 175; p. 605.
Car grain-door, Freight-. P. Oak. No. 1,018,773; Feb. 27; Sp. p. 5660; Gaz. vol. 175; p. 978.
Car, Hand-. D. L. Palmer. No. 1,018,264; Feb. 20; Sp. p. 4498; Gaz. vol. 175; p. 773.
Car-handling apparatus. L. L. Logan. (Reissue.) No. 13,876; Feb. 27; Sp. p. 6194; Gaz. vol. 175; p. 1065.
Car-handling mechanism. F. C. Greene and C. G. Palmer. No. 1,017,968; Feb. 20; Sp. p. 3621; Gaz. vol. 175; p. 634.
Car indicator, Street-. H. Gebhart. No. 1,017,404; Feb. 13; Sp. p. 2595; Gaz. vol. 175; p. 439.
Car-journal-box dust-guard. L. Y. Williams. No. 1,017,377; Feb. 13; Sp. p. 2437; Gaz. vol. 175; p. 396.
Car loader, Mine-. A. Powell. No. 1,017,018; Feb. 13; Sp. p. 1745; Gaz. vol. 175; p. 304.

Car, Passenger-. L. E. Fischer. No. 1,016,683; Feb. 6; Sp. p. 1025; Gaz. vol. 175; p. 153.
Car, Pay-as-you-enter. D. A. L. MacDonald. No. 1,016,949; Feb. 13; Sp. p. 1598; Gaz. vol. 175; p. 282.
Car, Pay-as-you-enter. J. F. Ohmer. No. 1,019,011; Feb. 27; Sp. p. 6189; Gaz. vol. 175; p. 1059.
Car-replacer. M. L. Strother. No. 1,016,876; Feb. 6; Sp. p. 305; Gaz. vol. 175; p. 48.
Car running-board, Automatic. J. Armstrong. No. 1,016,926; Feb. 13; Sp. p. 1534; Gaz. vol. 175; p. 273.
Car-step, Extensible. H. G. Uhl. No. 1,016,800; Feb. 6; Sp. p. 1268; Gaz. vol. 175; p. 195.
Car step, Street-. B. MacDonald and W. Thomas. No. 1,018,842; Feb. 27; Sp. p. 5795; Gaz. vol. 175; p. 1001.
Car-wheels, Making carbon-steel. W. S. Potter. No. 1,018,365; Feb. 20; Sp. p. 4602; Gaz. vol. 175; p. 805.
Car-wheels, Making wrought manganese-steel. W. S. Potter. No. 1,018,364; Feb. 20; Sp. p. 4686; Gaz. vol. 175; p. 805.
Car-wheels, Treating. R. C. Totten. No. 1,016,457; Feb. 6; Sp. p. 506; Gaz. vol. 175; p. 78.
Carbon dioxid, Apparatus for making solid. H. P. Julius. No. 1,018,566; Feb. 27; Sp. p. 5231; Gaz. vol. 175; p. 909.
Carbureter. J. M. Dayton. No. 1,016,251; Feb. 6; Sp. p. 17; Gaz. vol. 175; p. 5.
Carbureter. J. M. Dayton. No. 1,016,252; Feb. 6; Sp. p. 19; Gaz. vol. 175; p. 5.
Carbureter. W. R. Nageborn. No. 1,018,126; Feb. 20; Sp. p. 4216; Gaz. vol. 175; p. 725.
Carbureter. F. A. and W. Y. Chapin. No. 1,018,164; Feb. 20; Sp. p. 4299; Gaz. vol. 175; p. 738.
Carbureter. H. B. Kerr. No. 1,018,766; Feb. 27; Sp. p. 5647; Gaz. vol. 175; p. 975.
Carbureter. L. Plein. No. 1,018,770; Feb. 27; Sp. p. 5664; Gaz. vol. 175; p. 979.
Carbureter attachment. J. B. Lund. No. 1,017,572; Feb. 13; Sp. p. 2939; Gaz. vol. 175; p. 497.
Carbureter for internal-combustion engines. H. A. Neal. No. 1,018,262; Feb. 20; Sp. p. 4495; Gaz. vol. 175; p. 772.
Carbureting device for heavy fuels. A. C. Stewart. No. 1,017,186; Feb. 13; Sp. p. 2129; Gaz. vol. 175; p. 364.
Carding-engines, Bur-crushing or like apparatus for use in connection with. W. Shaw, J. Bower, and F. Wilson. No. 1,017,170; Feb. 13; Sp. p. 2112; Gaz. vol. 175; p. 362.
Carding-machine. P. Hardman. No. 1,017,665; Feb. 20; Sp. p. 3125; Gaz. vol. 175; p. 564.
Carding-machine stripper. R. H. Smith. No. 1,018,935; Feb. 27; Sp. p. 5964; Gaz. vol. 175; p. 1032.
Carrier: *See* Blowpipe-carrier; Bottle-carrier; Can-carrier; Freight-carrier; Luggage-carrier.
Carrier stop, Elevated-. H. H. Drew. No. 1,017,393; Feb. 13; Sp. p. 2572; Gaz. vol. 175; p. 435.
Cart and sled, Combined. E. F. Land. No. 1,016,640; Feb. 6; Sp. p. 943; Gaz. vol. 175; p. 141.
Carton, Combined packing and display. W. A. V. Porter. No. 1,018,726; Feb. 27; Sp. p. 5552; Gaz. vol. 175; p. 961.
Cartridge, Signaling-. C. A. Schade-Eriandsen. No. 1,018,632; Feb. 27; Sp. p. 5355; Gaz. vol. 175; p. 929.
Cartridges or shells, Machine for making paper. H. Auchu. No. 1,018,478; Feb. 27; Sp. p. 4948; Gaz. vol. 175; p. 875.
Case: *See* Cigar-case; Display-case; Egg-case; Eyeglass-case; Instrument-case; Shipping-case; Tire-case; Type-case.
Cash-register. T. Carroll. No. 1,017,079; Feb. 13; Sp. p. 1902; Gaz. vol. 175; p. 328.
Cash-register. T. Carney. No. 1,018,486; Feb. 27; Sp. p. 4995; Gaz. vol. 175; p. 879.
Cask, Sheet-metal. I. Lefebvre. No. 1,017,427; Feb. 13; Sp. p. 2653; Gaz. vol. 175; p. 448.
Casket. S. S. Tucker. No. 1,018,883; Feb. 27; Sp. p. 5813; Gaz. vol. 175; p. 1004.
Cassava and products thereof, Treating. C. C. Moore. No. 1,016,762; Feb. 6; Sp. p. 1184; Gaz. vol. 175; p. 182.
Cast-off. G. E. Prentice. No. 1,018,079; Feb. 20; Sp. p. 4113; Gaz. vol. 175; p. 700.
Caster. F. H. Thompson. No. 1,016,654; Feb. 6; Sp. p. 962; Gaz. vol. 175; p. 145.
Caster, J. Ras. No. 1,017,404; Feb. 13; Sp. p. 2743; Gaz. vol. 175; p. 461.
Caster, Adjustable bolt-. P. T. Dunn. No. 1,016,324; Feb. 6; Sp. p. 201; Gaz. vol. 175; p. 31.
Caster, Ball-. W. A. Barnes and R. W. Jamieson. No. 1,016,818; Feb. 6; Sp. p. 1293; Gaz. vol. 175; p. 198.
Caster, Detachable. D. Read. No. 1,017,799; Feb. 20; Sp. p. 3471; Gaz. vol. 175; p. 610.
Caster, Furniture-. F. W. Starr. No. 1,016,300; Feb. 6; Sp. p. 140; Gaz. vol. 175; p. 22.
Caster, Guarded. W. Sellers and H. C. Beck. No. 1,018,211; Feb. 20; Sp. p. 4362; Gaz. vol. 175; p. 755.
Caster, Table-. E. C. Hearkson. No. 1,016,745; Feb. 6; Sp. p. 1145; Gaz. vol. 175; p. 177.
Casting apparatus. F. W. Tracy. No. 1,017,707; Feb. 20; Sp. p. 3211; Gaz. vol. 175; p. 577.
Casting furnace-doors, Apparatus for. J. B. Walker. No. 1,018,090; Feb. 20; Sp. p. 4138; Gaz. vol. 175; p. 712.
Casting-machine. R. M. Aldis. No. 1,017,948; Feb. 20; Sp. p. 3808; Gaz. vol. 175; p. 661.
Casting metal. R. T. Harris. No. 1,017,069; Feb. 20; Sp. p. 3870; Gaz. vol. 175; p. 669.
Casting mold, Metal-. R. T. Harris. No. 1,017,970; Feb. 20; Sp. p. 3873; Gaz. vol. 175; p. 670.
Castings, Testing apparatus for hollow. G. C. Tallman. No. 1,017,704; Feb. 20; Sp. p. 3203; Gaz. vol. 175; p. 576.
Catalysis, Apparatus for producing. M. Wilbuschewitsch. No. 1,016,864; Feb. 6; Sp. p. 1392; Gaz. vol. 175; p. 215.
Cattle-guard. V. E. Kent. No. 1,016,636; Feb. 6; Sp. p. 936; Gaz. vol. 175; p. 140.
Cattle-guard. R. J. Otey. No. 1,017,014; Feb. 13; Sp. p. 1740; Gaz. vol. 175; p. 304.
Cattle-guard. J. Gabrielsen. No. 1,017,529; Feb. 13; Sp. p. 2864; Gaz. vol. 175; p. 483.
Cattle-tie. F. H. Leathers. No. 1,016,423; Feb. 6; Sp. p. 412; Gaz. vol. 175; p. 65.
Cellulose, Manufacture of. F. L. Stewart. No. 1,017,023; Feb. 13; Sp. p. 1759; Gaz. vol. 175; p. 307.
Cement and making the same, White hydraulic. J. G. A. Rhodin. No. 1,017,913; Feb. 20; Sp. p. 3749; Gaz. vol. 175; p. 652.
Cement, Making. W. B. Hill. No. 1,017,211; Feb. 13; Sp. p. 2191; Gaz. vol. 175; p. 373.
Cement, Manufacture of slag. J. G. A. Rhodin. No. 1,017,912; Feb. 20; Sp. p. 3747; Gaz. vol. 175; p. 651.
Cement steel plate. H. A. Richardson. No. 1,017,914; Feb. 20; Sp. p. 3751; Gaz. vol. 175; p. 652.
Cementing and snipping machine. J. W. Barna. No. 1,016,357; Feb. 6; Sp. p. 335; Gaz. vol. 175; p. 53.
Cementing-machine. H. J. Burns. No. 1,017,507; Feb. 18; Sp. p. 2818; Gaz. vol. 175; p. 476.
Centering-machine. L. E. Whiton. No. 1,017,193; Feb. 13; Sp. p. 2145; Gaz. vol. 175; p. 367.
Centrifugal apparatus, Governing mechanism for. J. G. Callan. No. 1,017,509; Feb. 13; Sp. p. 2823; Gaz. vol. 175; p. 476.
Chains, Manufacture of. W. S. Potter. No. 1,018,363; Feb. 20; Sp. p. 4686; Gaz. vol. 175; p. 805.
Chair: *See* Adjustable chair; Folding chair; Rail-chair.
Chair and couch, Convertible. R. Nordin. No. 1,018,074; Feb. 20; Sp. p. 4107; Gaz. vol. 175; p. 707.
Chair and window-cleaner's support, Combined. M. Rabinowitz. No. 1,018,341; Feb. 20; Sp. p. 4638; Gaz. vol. 175; p. 797.
Chair-seats, Manufacturing. E. P. Wanner. No. 1,017,190; Feb. 13; Sp. p. 2136; Gaz. vol. 175; p. 366.
Chalk-holder. L. Peloquin. No. 1,016,953; Feb. 13; Sp. p. 1608; Gaz. vol. 175; p. 283.
Chalk sharpener, receptacle, and paper-weight, Tailor's. H. J. Mayer. No. 1,018,768; Feb. 27; Sp. p. 5650; Gaz. vol. 175; p. 976.
Chandelier. A. Sechrist. No. 1,017,694; Feb. 20; Sp. p. 3183; Gaz. vol. 175; p. 573.
Change-making machine, Automatic. F. L. Nay. No. 1,017,447; Feb. 13; Sp. p. 2702; Gaz. vol. 175; p. 466.
Channeling-machines, Adjustable work support and gage for. A. H. Prenzel. (Reissue.) No. 13,875; Feb. 27; Sp. p. 6191; Gaz. vol. 175; p. 1064.
Chaplet, Expanded-metal. P. H. Batten. No. 1,016,886; Feb. 6; Sp. p. 341; Gaz. vol. 175; p. 54.
Cheese-hoop. O. W. Stroota. No. 1,018,789; Feb. 27; Sp. p. 5688; Gaz. vol. 175; p. 983.
Chest-protector. E. C. R. Schmidt. No. 1,016,444; Feb. 6; Sp. p. 477; Gaz. vol. 175; p. 73.
Chopper: *See* Cotton-chopper.
Chuck, Centering-. G. E. Greenleaf and D. H. Teas. No. 1,017,988; Feb. 20; Sp. p. 3869; Gaz. vol. 175; p. 669.
Chuck, Drill-. R. M. Russell. No. 1,018,008; Feb. 20; Sp. p. 3949; Gaz. vol. 175; p. 683.
Chuck-jaw. R. M. Graham. No. 1,017,408; Feb. 13; Sp. p. 2604; Gaz. vol. 175; p. 441.
Churn. T. P. Callicott. No. 1,016,474; Feb. 6; Sp. p. 542; Gaz. vol. 175; p. 83.
Churn. S. E. Felts. No. 1,017,522; Feb. 13; Sp. p. 2851; Gaz. vol. 175; p. 481.
Churn. W. N. Jones. No. 1,017,554; Feb. 13; Sp. p. 2905; Gaz. vol. 175; p. 491.
Churn. I. V. Ricker. No. 1,017,690; Feb. 20; Sp. p. 3177; Gaz. vol. 175; p. 572.
Churn. F. Kronenberger. No. 1,018,505; Feb. 27; Sp. p. 5036; Gaz. vol. 175; p. 886.
Churn. P. J. Lawler. No. 1,018,508; Feb. 27; Sp. p. 5047; Gaz. vol. 175; p. 887.
Churn. C. L. Wall. No. 1,018,947; Feb. 27; Sp. p. 6007; Gaz. vol. 175; p. 1036.
Churn and butter-worker, Combined. R. B. Disbrow. No. 1,018,036; Feb. 20; Sp. p. 4006; Gaz. vol. 175; p. 693.
Churn and butter-worker, Combined. L. A. Disbrow. No. 1,018,554; Feb. 27; Sp. p. 5203; Gaz. vol. 175; p. 904.
Cigar-band. A. A. Call and W. S. Smith. No. 1,017,282; Feb. 13; Sp. p. 2335; Gaz. vol. 175; p. 398.
Cigar-banding machine. F. O. Woodland. No. 1,018,091; Feb. 20; Sp. p. 4140; Gaz. vol. 175; p. 713.
Cigar-case. S. W. Gunn. No. 1,016,492; Feb. 6; Sp. p. 580; Gaz. vol. 175; p. 90.
Cigar-holder, ash-receptacle, and match-safe, Combined. W. W., F. M., and J. S. Hilton. No. 1,018,492; Feb. 27; Sp. p. 5013; Gaz. vol. 175; p. 882.
Cigar holder, Lighted-. J. H. Barnes. No. 1,017,197; Feb. 13; Sp. p. 2153; Gaz. vol. 175; p. 368.
Cigarette-machine. W. S. Irey. No. 1,016,410; Feb. 6; Sp. p. 387; Gaz. vol. 175; p. 61.

Cigarette-mouthpieces, Machine for making. W. Benjaminowitsch. No. 1,017,279; Feb. 13; Sp. p. 2332; Gaz. vol. 175; p. 397.
Circuit-breaker. T. E. Barnum. No. 1,018,547; Feb. 27; Sp. p. 5184; Gaz. vol. 175; p. 902.
Circuit-closer. V. Tardieu. No. 1,017,604; Feb. 13; Sp. p. 2997; Gaz. vol. 175; p. 506.
Circuit controller, Multiple-. C. K. Jones. No. 1,016,829; Feb. 6; Sp. p. 213; Gaz. vol. 175; p. 32.
Circuit-controlling apparatus. N. Wilkinson. No. 1,016,661; Feb. 6; Sp. p. 983; Gaz. vol. 175; p. 149.
Circuit-controlling device. W. B. Hughes. No. 1,016,268; Feb. 6; Sp. p. 52; Gaz. vol. 175; p. 11.
Clamp: *See* Board-clamp; Clothes-wringer clamp; Heel-clamp; Piston-ring clamp; Rail-clamp; Saw-clamp; Target-clamp.
Clamp. D. B. Swickard. No. 1,017,821; Feb. 20; Sp. p. 3513; Gaz. vol. 175; p. 617.
Clamp and gage. J. J. Woodman. No. 1,016,594; Feb. 6; Sp. p. 831; Gaz. vol. 175; p. 124.
Cleaner: *See* Automobile glass-screen cleaner; Eyeglass-cleaner; Flue-cleaner; Grain-cleaner; Shoe-cleaner; Suction-cleaner; Track-cleaner; Vacuum-cleaner; Window-cleaner.
Cleaning device. C. H. Foster. No. 1,017,661; Feb. 20; Sp. p. 3117; Gaz. vol. 175; p. 563.
Cleaning device, Suction. H. Koch. No. 1,016,921; Feb. 6; Sp. p. 1510; Gaz. vol. 175; p. 235.
Cleaning-tool. I. H. Spencer. No. 1,016,649; Feb. 6; Sp. p. 956; Gaz. vol. 175; p. 144.
Clip: *See* Concrete-construction clip; Music-clip; Spring-clip.
Clock compensating pendulum. C. Lazzaro. No. 1,017,678; Feb. 20; Sp. p. 3150; Gaz. vol. 175; p. 568.
Clock, Electric program-. A. L. Ronell. No. 1,016,852; Feb. 6; Sp. p. 1366; Gaz. vol. 175; p. 211.
Clock system, Electric-. R. D. Hickok. No. 1,016,490; Feb. 6; Sp. p. 601; Gaz. vol. 175; p. 93.
Clock, Watchman's. F. Hardinge. No. 1,016,688; Feb. 6; Sp. p. 1034; Gaz. vol. 175; p. 158.
Clock winding mechanism. E. L. Swain. No. 1,017,187; Feb. 13; Sp. p. 2131; Gaz. vol. 175; p. 365.
Closet: *See* Sanitary closet; Water-closet.
Closet-seat. R. McCord. No. 1,018,721; Feb. 27; Sp. p. 5539; Gaz. vol. 175; p. 959.
Closure and faucet, Combined. R. Head. No. 1,017,756; Feb. 20; Sp. p. 3323; Gaz. vol. 175; p. 595.
Closure for containers. W. E. Danat. No. 1,016,739; Feb. 6; Sp. p. 1137; Gaz. vol. 175; p. 175.
Closure-making machine. C. F. Jenkins. No. 1,017,549; Feb. 13; Sp. p. 2896; Gaz. vol. 175; p. 489.
Cloth, Mending. A. Zeinsinger. No. 1,018,541; Feb. 27; Sp. p. 5168; Gaz. vol. 175; p. 899.
Cloth, Raising the nap of. J. A. Jamieson. No. 1,017,151; Feb. 13; Sp. p. 2056; Gaz. vol. 175; p. 353.
Clothes-drier. F. Dunham. No. 1,018,037; Feb. 20; Sp. p. 4008; Gaz. vol. 175; p. 694.
Clothes-line prop. G. C. Sharp. No. 1,018,523; Feb. 27; Sp. p. 5121; Gaz. vol. 175; p. 892.
Clothes-line reel. L. S. Hackney. No. 1,016,493; Feb. 6; Sp. p. 582; Gaz. vol. 175; p. 90.
Clothes-line reel. R. H. and W. A. McNair. No. 1,017,010; Feb. 13; Sp. p. 1732; Gaz. vol. 175; p. 302.
Clothes-line reel. W. Boss. No. 1,017,734; Feb. 20; Sp. p. 3271; Gaz. vol. 175; p. 586.
Clothes-line support. G. Lefevre. No. 1,017,428; Feb. 13; Sp. p. 2655; Gaz. vol. 175; p. 448.
Clothes-pin holder. J. J. Harris. No. 1,017,097; Feb. 13; Sp. p. 1944; Gaz. vol. 175; p. 334.
Clothes-washer. M. G. Evans and G. W. Logan. No. 1,016,820; Feb. 6; Sp. p. 1307; Gaz. vol. 175; p. 201.
Clothes-wringer. M. P. Janisch. No. 1,018,422; Feb. 27; Sp. p. 4848; Gaz. vol. 175; p. 858.
Clothes-wringer clamp. P. V. Parrish. No. 1,017,584; Feb. 13; Sp. p. 2959; Gaz. vol. 175; p. 499.
Clutch. J. K. McKelvey. No. 1,017,577; Feb. 13; Sp. p. 2946; Gaz. vol. 175; p. 498.
Clutch. F. H. Jones. No. 1,017,762; Feb. 20; Sp. p. 3336; Gaz. vol. 175; p. 597.
Clutch. C. C. Rich. No. 1,017,802; Feb. 20; Sp. p. 3475; Gaz. vol. 175; p. 611.
Clutch. F. S. Jones. No. 1,018,620; Feb. 27; Sp. p. 5331; Gaz. vol. 175; p. 925.
Clutch. F. S. Ellett. No. 1,018,890; Feb. 27; Sp. p. 5895; Gaz. vol. 175; p. 1016.
Clutch. F. S. Ellett. No. 1,018,891; Feb. 27; Sp. p. 5898; Gaz. vol. 175; p. 1017.
Clutch-controller, Pneumatic. W. D. Nickum and M. Clausseu. No. 1,018,772; Feb. 27; Sp. p. 5657; Gaz. vol. 175; p. 977.
Clutch-controlling device. P. Utne. No. 1,017,825; Feb. 20; Sp. p. 3517; Gaz. vol. 175; p. 618.
Clutch, Fluid-. G. T. Johnson. No. 1,017,216; Feb. 13; Sp. p. 2208; Gaz. vol. 175; p. 375.
Clutch, Fluid-actuated. R. Diesel. No. 1,018,412; Feb. 27; Sp. p. 4831; Gaz. vol. 175; p. 855.
Clutch for automobiles and the like. A. B. Morse. No. 1,016,427; Feb. 6; Sp. p. 416; Gaz. vol. 175; p. 66.
Clutch for power-presses, paper-cutters, &c., Safety-. L. H. Brown. No. 1,016,395; Feb. 6; Sp. p. 389; Gaz. vol. 175; p. 56.
Clutch mechanism. C. Seitz. No. 1,016,647; Feb. 6; Sp. p. 953; Gaz. vol. 175; p. 143.
Clutch mechanism. W. H. Coldwell. No. 1,018,096; Feb. 20; Sp. p. 4159; Gaz. vol. 175; p. 715.
Clutch-release, Automatic. W. B. Keator. No. 1,017,219; Feb. 13; Sp. p. 2218; Gaz. vol. 175; p. 376.
Clutch, Speed-regulator. H. L. Bestater. No. 1,018,479; Feb. 27; Sp. p. 4956; Gaz. vol. 175; p. 876.
Coal-punches, Machine for operating. A. Powell. No. 1,017,017; Feb. 13; Sp. p. 1744; Gaz. vol. 175; p. 304.
Coaster-brake. G. Zimmerman. No. 1,018,471; Feb. 27; Sp. p. 4943; Gaz. vol. 175; p. 872.
Coat. F. T. Matthews. No. 1,017,781; Feb. 20; Sp. p. 3430; Gaz. vol. 175; p. 603.
Coat and pants hanger, Combination. F. A. Collier. No. 1,018,299; Feb. 20; Sp. p. 4566; Gaz. vol. 175; p. 794.
Coat-hanger. W. R. Rape. No. 1,017,688; Feb. 20; Sp. p. 3174; Gaz. vol. 175; p. 571.
Coat-hanger for wardrobe-trunks. P. H. Parkhurst. No. 1,016,707; Feb. 6; Sp. p. 1074; Gaz. vol. 175; p. 183.
Cock, Ball-. L. Unckless. No. 1,016,458; Feb. 6; Sp. p. 508; Gaz. vol. 175; p. 78.
Cock, Basin-. E. G. Watrous. No. 1,018,463; Feb. 27; Sp. p. 4930; Gaz. vol. 175; p. 871.
Cock, Gas-. L. Bédard. No. 1,016,350; Feb. 20; Sp. p. 4656; Gaz. vol. 175; p. 800.
Cock lock, Gas-. J. J. Comer. No. 1,016,872; Feb. 6; Sp. p. 1411; Gaz. vol. 175; p. 218.
Coffee, Decaffeinated. N. Rosewater. No. 1,016,293; Feb. 6; Sp. p. 126; Gaz. vol. 175; p. 20.
Coffee, Decaffeinated. N. Rosewater. No. 1,016,294; Feb. 6; Sp. p. 129; Gaz. vol. 175; p. 20.
Coffee-pot. A. A. Smith. No. 1,018,684; Feb. 27; Sp. p. 5462; Gaz. vol. 175; p. 947.
Coffee pot, Drip-. R. Petry. No. 1,018,337; Feb. 20; Sp. p. 4633; Gaz. vol. 175; p. 796.
Coffee-refining machine. H. L. Johnston. No. 1,017,609; Feb. 13; Sp. p. 1837; Gaz. vol. 175; p. 319.
Coil-forming machine. A. L. McHugh. No. 1,016,790; Feb. 6; Sp. p. 1059; Gaz. vol. 175; p. 162.
Coin-collector. P. E. Oswald. No. 1,017,454; Feb. 13; Sp. p. 2723; Gaz. vol. 175; p. 458.
Coin-controlled device. D. P. Higgins. No. 1,018,665; Feb. 20; Sp. p. 4060; Gaz. vol. 175; p. 700.
Collapsible reel. H. H. Broden and J. G. Mustin. No. 1,017,130; Feb. 13; Sp. p. 2006; Gaz. vol. 175; p. 344.
Collar and tie. A. C. Heichelbech. No. 1,017,414; Feb. 13; Sp. p. 2622; Gaz. vol. 175; p. 443.
Collar, Horse-. D. A. Smith. No. 1,017,477; Feb. 13; Sp. p. 2765; Gaz. vol. 175; p. 466.
Collar-shaping machine. J. B. Hamilton. No. 1,017,291; Feb. 13; Sp. p. 2353; Gaz. vol. 175; p. 400.
Collar-shaping machine, Fold-. H. H. Worthington. No. 1,016,812; Feb. 6; Sp. p. 170; Gaz. vol. 175; p. 26.
Collective system. H. Biedentopf. No. 1,016,389; Feb. 6; Sp. p. 290; Gaz. vol. 175; p. 46.
Comb and brush, Combined. C. Boccia. No. 1,017,301; Feb. 13; Sp. p. 2365; Gaz. vol. 175; p. 474.
Combing-machine evener and stop-motion, Combined. A. W. and W. A. Bell. No. 1,016,029; Feb. 20; Sp. p. 3992; Gaz. vol. 175; p. 691.
Combination-lock. J. O. Kingsland, Sr. No. 1,016,331; Feb. 6; Sp. p. 215; Gaz. vol. 175; p. 33.
Combustion of coal, &c., Compound and method of increasing. E. C. Larkin and J. F. Duncan. No. 1,017,677; Feb. 20; Sp. p. 3149; Gaz. vol. 175; p. 568.
Commutator. W. G. Vial. No. 1,018,141; Feb. 20; Sp. p. 4252; Gaz. vol. 175; p. 730.
Commutator construction for dynamo-electric machines. T. S. Allen. No. 1,017,945; Feb. 20; Sp. p. 3311; Gaz. vol. 175; p. 581.
Commutator for electrical machines. S. von Ammon. No. 1,018,544; Feb. 27; Sp. p. 5173; Gaz. vol. 175; p. 900.
Compass. A. D. Owen. No. 1,017,906; Feb. 20; Sp. p. 3627; Gaz. vol. 175; p. 679.
Composing-machine, Typograph. E. Ubthoff. No. 1,017,929; Feb. 20; Sp. p. 3781; Gaz. vol. 175; p. 657.
Composition of matter, Radio-active. V. C. J. Nightingall. No. 1,017,581; Feb. 13; Sp. p. 2952; Gaz. vol. 175; p. 499.
Compressor. J. B. Vernon and G. De Camp. No. 1,018,221; Feb. 20; Sp. p. 4410; Gaz. vol. 175; p. 758.
Computer and register, Mathematical. H. Attaway. No. 1,016,245; Feb. 6; Sp. p. 1; Gaz. vol. 175; p. 2.
Concentrator, Dry. C. W. Edgar. No. 1,016,680; Feb. 6; Sp. p. 1015; Gaz. vol. 175; p. 156.
Concrete and cement curbs and gutters, Machine for forming and finishing. T. Ramschenbach. No. 1,018,780; Feb. 27; Sp. p. 5673; Gaz. vol. 175; p. 980.
Concrete burial-vault, Reinforced-. W. B. Bussard. No. 1,018,672; Feb. 27; Sp. p. 5357; Gaz. vol. 175; p. 1011.
Concrete-construction clip. J. H. Straus, Jr. No. 1,018,018; Feb. 20; Sp. p. 3965; Gaz. vol. 175; p. 687.
Concrete-construction form. J. Elsmore. No. 1,016,485; Feb. 6; Sp. p. 567; Gaz. vol. 175; p. 87.
Concrete-container, Metal. I. A. Braddock. No. 1,016,912; Feb. 6; Sp. p. 1500; Gaz. vol. 175; p. 232.
Concrete, Deformed reinforcing-bar for. W. A. Collins. No. 1,016,984; Feb. 13; Sp. p. 1686; Gaz. vol. 175; p. 294.
Concrete-floor hanger-support. E. B. Hall. No. 1,018,490; Feb. 27; Sp. p. 5008; Gaz. vol. 175; p. 881.
Concrete-mixer. A. D. Hadsel. No. 1,016,920; Feb. 6; Sp. p. 1517; Gaz. vol. 175; p. 235.
Concrete-mixer. T. Ramschenbach. No. 1,018,779; Feb. 27; Sp. p. 5672; Gaz. vol. 175; p. 980.
Concrete-mixing machine. H. M. Whitcomb. No. 1,017,720; Feb. 20; Sp. p. 3244; Gaz. vol. 175; p. 582.

Concrete-mold. H. O. Meek. No. 1,016,285; Feb. 6; Sp. p. 111; Gaz. vol. 175; p. 17.
Concrete-molding machine. F. F. Landis. No. 1,017,876; Feb. 20; Sp. p. 3645; Gaz. vol. 175; p. 636.
Concrete-pile point. A. Mast. No. 1,018,979; Feb. 27; Sp. p. 5095; Gaz. vol. 175; p. 1048.
Concrete roadways, Expansion-joint for. A. Thomas. No. 1,017,346; Feb. 13; Sp. p. 2471; Gaz. vol. 175; p. 419.
Concrete roadways, Reinforcement for. A. Thomas. No. 1,017,118; Feb. 13; Sp. p. 1981; Gaz. vol. 175; p. 341.
Concrete scow. J. T. Gerweck. No. 1,018,488; Feb. 27; Sp. p. 5003; Gaz. vol. 175; p. 880.
Concrete structure, Reinforced. M. Mingay. No. 1,016,760; Feb. 6; Sp. p. 1130; Gaz. vol. 175; p. 181.
Concrete structures, Spacing device for reinforcing-rods in. W. H. Burk. No. 1,016,319; Feb. 6; Sp. p. 190; Gaz. vol. 175; p. 29.
Concrete walls, piers, &c., Apparatus to be used in constructing. J. W. Seaver and J. E. A. Moore. No. 1,018,634; Feb. 27; Sp. p. 5358; Gaz. vol. 175; p. 930.
Condenser. W. F. Edwards. No. 1,017,519; Feb. 13; Sp. p. 2847; Gaz. vol. 175; p. 480.
Condenser, Double-pipe. L. C. Schneider. No. 1,016,582; Feb. 6; Sp. p. 810; Gaz. vol. 175; p. 121.
Condenser, Steam-. J. J. Graf. No. 1,018,489; Feb. 27; Sp. p. 5006; Gaz. vol. 175; p. 880.
Condensing apparatus. H. W. Strohn. No. 1,017,338; Feb. 13; Sp. p. 2453; Gaz. vol. 175; p. 417.
Conductors, Making molded. C. Van Brunt. No. 1,017,483; Feb. 13; Sp. p. 2776; Gaz. vol. 175; p. 468.
Confectionery-box. S. E. Mortenson. No. 1,018,628; Feb. 27; Sp. p. 5349; Gaz. vol. 175; p. 927.
Contact-plates, Spring. T. E. Murray. No. 1,018,334; Feb. 20; Sp. p. 4629; Gaz. vol. 175; p. 795.
Controller. E. W. Stull. No. 1,018,019; Feb. 20; Sp. p. 3966; Gaz. vol. 175; p. 687.
Controlling mechanism. D. Larson. No. 1,016,834; Feb. 6; Sp. p. 1329; Gaz. vol. 175; p. 205.
Convertible motor. J. C. Lincoln. No. 1,018,833; Feb. 27; Sp. p. 5782; Gaz. vol. 175; p. 999.
Conveyer. B. H. Wright. No. 1,017,941; Feb. 20; Sp. p. 3802; Gaz. vol. 175; p. 660.
Cooking utensil. I. Larson. No. 1,016,339; Feb. 6; Sp. p. 235; Gaz. vol. 175; p. 36.
Cooking utensil. J. Kowalski. No. 1,018,116; Feb. 20; Sp. p. 4198; Gaz. vol. 175; p. 731.
Cooking-utensil lid. C. Spencer. No. 1,017,183; Feb. 13; Sp. p. 2129; Gaz. vol. 175; p. 363.
Cooler: *See* Liquid-cooler.
Cooler. P. Stanf. No. 1,017,478; Feb. 13; Sp. p. 2766; Gaz. vol. 175; p. 466.
Cooling and vending machine attachment. G. T. Bailey. No. 1,016,601; Feb. 6; Sp. p. 849; Gaz. vol. 175; p. 127.
Coop, Collapsible. J. E. Davis and H. W. Smith. No. 1,017,140; Feb. 13; Sp. p. 2030; Gaz. vol. 175; p. 348.
Copper. Fusing and purifying. W. S. Rockey and H. Eldridge. No. 1,018,661; Feb. 27; Sp. p. 5486; Gaz. vol. 175; p. 946.
Core-making machine. G. L. Grimes. No. 1,018,823; Feb. 27; Sp. p. 5768; Gaz. vol. 175; p. 996.
Cork-making machine. F. W. Dolaney. No. 1,017,089; Feb. 13; Sp. p. 1792; Gaz. vol. 175; p. 312.
Corn husker and shredder. G. M. Merwin. No. 1,017,783; Feb. 20; Sp. p. 3432; Gaz. vol. 175; p. 604.
Corn-husking machine. W. C. Culbertson. No. 1,018,881; Feb. 27; Sp. p. 5874; Gaz. vol. 175; p. 1013.
Corn-pick. D. B. Stone. No. 1,018,788; Feb. 27; Sp. p. 5687; Gaz. vol. 175; p. 982.
Corn picking and husking machine. W. H. Russell. No. 1,018,348; Feb. 20; Sp. p. 4643; Gaz. vol. 175; p. 799.
Corn-sheller. C. Roelle. No. 1,016,471; Feb. 6; Sp. p. 538; Gaz. vol. 175; p. 82.
Corn-sheller. J. H. Gilman. No. 1,018,820; Feb. 27; Sp. p. 5762; Gaz. vol. 175; p. 994.
Corns and calli, Safety-trimmer for. J. A. Mekarhof. No. 1,016,343; Feb. 6; Sp. p. 244; Gaz. vol. 175; p. 38.
Corroding-pots, Bearer for. A. J. Meier. No. 1,017,627; Feb. 13; Sp. p. 2048; Gaz. vol. 175; p. 513.
Corrugating-machine, Rotary. C. N. Frey. No. 1,017,400; Feb. 13; Sp. p. 2567; Gaz. vol. 175; p. 433.
Corrugations in sheet material, Forming angular. D. M. Livingston. No. 1,018,399; Feb. 20; Sp. p. 4783; Gaz. vol. 175; p. 813.
Corset. M. L. H. Scudder. No. 1,018,135; Feb. 20; Sp. p. 4236; Gaz. vol. 175; p. 723.
Cot or bed. H. S. Jones. No. 1,017,763; Feb. 20; Sp. p. 3339; Gaz. vol. 175; p. 596.
Cot or cradle, Convertible. B. Larson. No. 1,017,760; Feb. 20; Sp. p. 3346; Gaz. vol. 175; p. 599.
Cotton chopper and cultivator. H. C. Rickers. No. 1,016,733; Feb. 6; Sp. p. 1124; Gaz. vol. 175; p. 178.
Cotton-feeder. S. D. Murray. No. 1,017,446; Feb. 13; Sp. p. 2699; Gaz. vol. 175; p. 455.
Cotton-gin brush. S. F. Krupp. No. 1,018,327; Feb. 20; Sp. p. 4620; Gaz. vol. 175; p. 793.
Cotton-gin roller. F. A. Diffenderfer. No. 1,016,817; Feb. 6; Sp. p. 1299; Gaz. vol. 175; p. 199.
Cotton-gin, Roller. F. A. Diffenderfer. No. 1,018,802; Feb. 20; Sp. p. 4589; Gaz. vol. 175; p. 784.
Cotton-press tramper. N. W. L. Brown. No. 1,016,896; Feb. 6; Sp. p. 361; Gaz. vol. 175; p. 57.
Cotton-scraper-standard brace. H. F. Carter. No. 1,016,814; Feb. 6; Sp. p. 1294; Gaz. vol. 175; p. 198.
Counter-stiffener and arch-support, Combined. F. Beebe. No. 1,017,730; Feb. 20; Sp. p. 3265; Gaz. vol. 175; p. 585.
Counting of money, dealing cards, turning leaves, &c., Device for facilitating. G. H. Rives. No. 1,016,362; Feb. 6; Sp. p. 276; Gaz. vol. 175; p. 43.
Coupling: *See* Air-brake coupling; Car-coupling; Electric-fixture coupling; Hose-coupling; Pipe-coupling; Shaft-coupling; Windmill and engine coupling.
Coupling. E. H. Schmidt. No. 1,017,630; Feb. 13; Sp. p. 3062; Gaz. vol. 175; p. 514.
Coupling device. D. B. Engle. No. 1,018,556; Feb. 27; Sp. p. 5209; Gaz. vol. 175; p. 905.
Cover-retaining means, Receptacle-. L. F. Ryan. No. 1,017,324; Feb. 13; Sp. p. 2420; Gaz. vol. 175; p. 412.
Crane. G. A. True. No. 1,017,824; Feb. 20; Sp. p. 3516; Gaz. vol. 175; p. 618.
Crane controller, Electric-. E. M. Holme. No. 1,017,150; Feb. 13; Sp. p. 2053; Gaz. vol. 175; p. 352.
Crane, Safety-. W. F. Klaus. No. 1,016,417; Feb. 6; Sp. p. 404; Gaz. vol. 175; p. 63.
Crape-holder. J. J. Klein. No. 1,018,326; Feb. 20; Sp. p. 4618; Gaz. vol. 175; p. 793.
Crate, Folding. M. Binner. No. 1,016,523; Feb. 6; Sp. p. 675; Gaz. vol. 175; p. 101.
Crate, Folding. W. Malchow. No. 1,017,573; Feb. 13; Sp. p. 2942; Gaz. vol. 175; p. 497.
Crate, Folding. C. F. Miesen. No. 1,018,254; Feb. 20; Sp. p. 4483; Gaz. vol. 175; p. 769.
Crate, Folding. E. O. Renstrom. No. 1,018,521; Feb. 27; Sp. p. 5118; Gaz. vol. 175; p. 892.
Crate, Shipping-. G. E. Hallaron. No. 1,017,539; Feb. 13; Sp. p. 2882; Gaz. vol. 175; p. 486.
Cream, Producing toilet. W. H. Roystone. No. 1,017,595; Feb. 13; Sp. p. 2981; Gaz. vol. 175; p. 503.
Cream-separators, Adjustable cream-grit for centrifugal. G. M. Anderson. No. 1,016,536; Feb. 6; Sp. p. 705; Gaz. vol. 175; p. 105.
Creel. J. P. Cronin. No. 1,016,403; Feb. 6; Sp. p. 376; Gaz. vol. 175; p. 59.
Cross-tie. L. C. Mooney. No. 1,016,845; Feb. 6; Sp. p. 1350; Gaz. vol. 175; p. 208.
Crossing-signal. T. A. Grist. No. 1,016,919; Feb. 6; Sp. p. 1515; Gaz. vol. 175; p. 234.
Cross-cutting tool. H. Schneider. No. 1,017,329; Feb. 13; Sp. p. 2437; Gaz. vol. 175; p. 414.
Crusher: *See* Ore-crusher; Stone-crusher.
Cuff-fastener. A. G. Gates. No. 1,017,865; Feb. 20; Sp. p. 3615; Gaz. vol. 175; p. 633.
Cuffs, &c., Machine for folding blanks for. G. J. Dormandy. No. 1,017,040; Feb. 13; Sp. p. 1794; Gaz. vol. 175; p. 313.
Cultivator. A. Glatt. No. 1,017,048; Feb. 13; Sp. p. 1819; Gaz. vol. 175; p. 316.
Cultivator. F. C. Warne. No. 1,017,853; Feb. 13; Sp. p. 2455; Gaz. vol. 175; p. 421.
Cultivator. J. J. Rampley. No. 1,017,465; Feb. 13; Sp. p. 2744; Gaz. vol. 175; p. 462.
Cultivator dropper attachment. S. H. Hill. No. 1,018,709; Feb. 27; Sp. p. 5517; Gaz. vol. 175; p. 955.
Cultivator-feeder. W. P. Cheatham. No. 1,018,298; Feb. 20; Sp. p. 4564; Gaz. vol. 175; p. 783.
Cultivator harrow attachment. E. S. Wynne. No. 1,017,838; Feb. 20; Sp. p. 3552; Gaz. vol. 175; p. 624.
Cultivator, Revolving. F. W. Leonard. No. 1,018,717; Feb. 27; Sp. p. 5532; Gaz. vol. 175; p. 958.
Cultivator riding attachment. C. W. Gerdes. No. 1,017,209; Feb. 13; Sp. p. 2188; Gaz. vol. 175; p. 372.
Culvert. J. H. Schlafly. No. 1,016,581; Feb. 6; Sp. p. 800; Gaz. vol. 175; p. 120.
Culvert, Metallic. K. J. Thornby. No. 1,017,347; Feb. 13; Sp. p. 2472; Gaz. vol. 175; p. 420.
Culvert-mold. O. L. Ledington and J. Sandell. No. 1,018,396; Feb. 20; Sp. p. 4778; Gaz. vol. 175; p. 817.
Culvert-sections, Means for joining. A. G. Falker. No. 1,016,878; Feb. 6; Sp. p. 1420; Gaz. vol. 175; p. 220.
Cup: *See* Aseptic cup; Turpentine-cup.
Curling-iron, Electric. C. P. Madsen. No. 1,018,673; Feb. 27; Sp. p. 5440; Gaz. vol. 175; p. 943.
Curtain-fixture. W. P. Marquis. No. 1,017,574; Feb. 13; Sp. p. 2943; Gaz. vol. 175; p. 497.
Curtain-fixture. H. Kiefer. No. 1,017,765; Feb. 20; Sp. p. 3341; Gaz. vol. 175; p. 598.
Curtain-fixture. A. I. Ross. No. 1,018,272; Feb. 20; Sp. p. 4508; Gaz. vol. 175; p. 774.
Curtain-heading tape. H. A. Hart. No. 1,017,754; Feb. 20; Sp. p. 3320; Gaz. vol. 175; p. 594.
Curtain-pole. W. Walkiewicz. No. 1,018,794; Feb. 27; Sp. p. 5696; Gaz. vol. 175; p. 985.
Curtain-pole. G. M. Trombley. No. 1,018,852; Feb. 27; Sp. p. 5812; Gaz. vol. 175; p. 1004.
Curtain-pole and shade support, Combined. J. S. Schoonover. No. 1,018,633; Feb. 27; Sp. p. 5357; Gaz. vol. 175; p. 929.
Cuspidor. B. Bartosiewicz. No. 1,018,806; Feb. 27; Sp. p. 5729; Gaz. vol. 175; p. 989.
Cuspidor. W. L. Hilty and W. Hopes. No. 1,018,907; Feb. 27; Sp. p. 5934; Gaz. vol. 175; p. 1022.
Cuspidor, Sanitary. R. Buck. No. 1,017,203; Feb. 13; Sp. p. 2177; Gaz. vol. 175; p. 370.
Cut-off. J. B. Pruden. No. 1,018,925; Feb. 27; Sp. p. 5967; Gaz. vol. 175; p. 1028.
Cutlery, &c., Device for cleansing. H. Folkes, Sr. No. 1,018,752; Feb. 27; Sp. p. 5616; Gaz. vol. 175; p. 971.

Cutlery, &c., Device for cleansing. H. Felkes, Sr. No. 1,018,753; Feb. 27; Sp. p. 5618; Gaz. vol. 175; p. 971.
Cutter: *See* Butter-cutter; Cable and wire cutter; Ice-cutter; Meat-cutter; Pipe-cutter; Reck-cutter; Sod-cutter; Stereotype-plate cutter; Wire-cutter.
Cutter-head. A. B. Landis. No. 1,017,882; Feb. 20; Sp. p. 3668; Gaz. vol. 175; p. 639.
Cutter-head. A. B. Landis. No. 1,017,883; Feb. 20; Sp. p. 3671; Gaz. vol. 175; p. 639.
Cutter-head. A. B. Landis. No. 1,017,884; Feb. 20; Sp. p. 3675; Gaz. vol. 175; p. 640.
Cutter-head. A. B. Landis. No. 1,017,885; Feb. 20; Sp. p. 3677; Gaz. vol. 175; p. 640.
Cutter-head. A. B. Landis. No. 1,017,886; Feb. 20; Sp. p. 3679; Gaz. vol. 175; p. 641.
Cutter-head. A. B. Landis. No. 1,017,887; Feb. 20; Sp. p. 3681; Gaz. vol. 175; p. 641.
Cutter-head. A. B. Landis. No. 1,017,888; Feb. 20; Sp. p. 3683; Gaz. vol. 175; p. 642.
Cutter-head. A. B. Landis. No. 1,017,890; Feb. 20; Sp. p. 3692; Gaz. vol. 175; p. 643.
Cutter-head. A. B. Landis. No. 1,017,891; Feb. 20; Sp. p. 3696; Gaz. vol. 175; p. 643.
Cutter-head. A. B. Landis. No. 1,017,892; Feb. 20; Sp. p. 3700; Gaz. vol. 175; p. 644.
Cutter-head. A. B. Landis. No. 1,018,293; Feb. 20; Sp. p. 4770; Gaz. vol. 175; p. 816.
Cutter-head. A. B. Landis. No. 1,018,294; Feb. 20; Sp. p. 4774; Gaz. vol. 175; p. 817.
Cutting out and molding machine. H. L. Pourtauborde. No. 1,017,461; Feb. 13; Sp. p. 2733; Gaz. vol. 175; p. 460.
Cyanogen compounds, Producing. C. E. Acker. No. 1,019,002; Feb. 27; Sp. p. 6145; Gaz. vol. 175; p. 1056.
Dagger, Stage-. J. E. Banner. No. 1,016,727; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.
Damper-regulator. G. W. Bigelow. No. 1,017,731; Feb. 20; Sp. p. 3266; Gaz. vol. 175; p. 585.
Davenport. J. Luppino. No. 1,018,122; Feb. 20; Sp. p. 4209; Gaz. vol. 175; p. 723.
Decorticating-machine. L. Lavedan and H. Amigues. No. 1,017,104; Feb. 13; Sp. p. 1956; Gaz. vol. 175; p. 336.
Dehairing mechanism, Carcass-. A. Hannaford. No. 1,016,405; Feb. 6; Sp. p. 584; Gaz. vol. 175; p. 91.
Delivery appliance. C. Hoth. No. 1,018,497; Feb. 27; Sp. p. 5022; Gaz. vol. 175; p. 884.
Dental disk-holder. J. A. Prescott. No. 1,018,340; Feb. 20; Sp. p. 4687; Gaz. vol. 175; p. 797.
Dental swage. J. B. Sedberry. No. 1,016,736; Feb. 6; Sp. p. 1237; Gaz. vol. 175; p. 190.
Dentist's anvil. L. F. Koehler. No. 1,018,712; Feb. 27; Sp. p. 5522; Gaz. vol. 175; p. 956.
Dentist's anvil. L. F. Koehler. No. 1,018,713; Feb. 27; Sp. p. 5524; Gaz. vol. 175; p. 957.
Depository and accounting device. F. Whallom. No. 1,018,283; Feb. 20; Sp. p. 4527; Gaz. vol. 175; p. 778.
Derrick. E. Swensson. No. 1,018,529; Feb. 27; Sp. p. 5154; Gaz. vol. 175; p. 894.
Desk. J. A. Peek. No. 1,016,952; Feb. 13; Sp. p. 1607; Gaz. vol. 175; p. 282.
Desk and register, Combined. J. E. Winchel. No. 1,017,357; Feb. 13; Sp. p. 2495; Gaz. vol. 175; p. 423.
Dextrin, Manufacture of. J. Verity. No. 1,016,808; Feb. 6; Sp. p. 1271; Gaz. vol. 175; p. 195.
Dial, Luminous. E. D. Lipmann. No. 1,017,896; Feb. 20; Sp. p. 3714; Gaz. vol. 175; p. 646.
Diaphragm. F. B. Meech. No. 1,016,704; Feb. 6; Sp. p. 1069; Gaz. vol. 175; p. 164.
Die: *See* Sheet-metal-cutting die.
Die-press. A. W. Roovers. No. 1,016,292; Feb. 6; Sp. p. 125; Gaz. vol. 175; p. 20.
Differential device. O. Cullman. No. 1,018,553; Feb. 27; Sp. p. 5202; Gaz. vol. 175; p. 904.
Digger: *See* Potato-digger.
Dirt-loader. W. R. Litzenberg. No. 1,018,672; Feb. 27; Sp. p. 5438; Gaz. vol. 175; p. 943.
Dish-washing machine. J. F. Hilscher. No. 1,016,995; Feb. 13; Sp. p. 1705; Gaz. vol. 175; p. 296.
Disinfectant or insecticide container. G. D. Snell. No. 1,016,648; Feb. 6; Sp. p. 955; Gaz. vol. 175; p. 144.
Disintegrator. H. P. Paul. No. 1,018,440; Feb. 27; Sp. p. 4884; Gaz. vol. 175; p. 864.
Dispensing-box. R. R. Ringer. No. 1,018,269; Feb. 20; Sp. p. 4564; Gaz. vol. 175; p. 774.
Dispensing device. J. J. Dobes. No. 1,017,850; Feb. 20; Sp. p. 3591; Gaz. vol. 175; p. 630.
Display apparatus. M. J. Wessels. No. 1,017,832; Feb. 20; Sp. p. 3535; Gaz. vol. 175; p. 621.
Display apparatus. M. T. Ash. No. 1,018,403; Feb. 27; Sp. p. 4801; Gaz. vol. 175; p. 851.
Display-cabinet. J. A. Douglass. No. 1,016,818; Feb. 6; Sp. p. 1302; Gaz. vol. 175; p. 200.
Display-case. I. F. Omwake. No. 1,018,679; Feb. 27; Sp. p. 5463; Gaz. vol. 175; p. 946.
Display device. J. M. Dannheiser. No. 1,016,677; Feb. 6; Sp. p. 1014; Gaz. vol. 175; p. 154.
Display rack. Oil-. A. W. Harris. No. 1,017,540; Feb. 13; Sp. p. 2883; Gaz. vol. 175; p. 486.
Displaying apparatus for show-windows and cases. B. F. Ross. No. 1,017,470; Feb. 13; Sp. p. 2750; Gaz. vol. 175; p. 463.
Displaying device for advertisements. C. A. Lain and E. W. Jennings. No. 1,017,563; Feb. 13; Sp. p. 2919; Gaz. vol. 175; p. 494.
Distance and speed meter. M. J. Klein. No. 1,018,666; Feb. 27; Sp. p. 6164; Gaz. vol. 175; p. 1068.
Distilling apparatus, Wood-. R. W. Hilton. No. 1,018,419; Feb. 27; Sp. p. 4842; Gaz. vol. 175; p. 857.
Distributing flat bodies, Apparatus for. F. Ruppel. No. 1,016,779; Feb. 6; Sp. p. 1237; Gaz. vol. 175; p. 190.
Ditching-machine. F. Johanning and L. Richnow. No. 1,016,908; Feb. 13; Sp. p. 1710; Gaz. vol. 175; p. 302.
Dobby of the Hattersley type. H. Stimmell. No. 1,017,184; Feb. 13; Sp. p. 2126; Gaz. vol. 175; p. 363.
Door, Changeable front. H. F. Dell. No. 1,018,101; Feb. 20; Sp. p. 4165; Gaz. vol. 175; p. 716.
Door-closer. H. G. Voight. No. 1,017,714; Feb. 20; Sp. p. 3223; Gaz. vol. 175; p. 579.
Door-closing means, Sliding-. R. H. Reh and I. Burgess. No. 1,018,442; Feb. 27; Sp. p. 4888; Gaz. vol. 175; p. 865.
Door, Electrically-operated. G. Korytowski. No. 1,018,246; Feb. 20; Sp. p. 4461; Gaz. vol. 175; p. 766.
Door-hanger. A. Perlman. No. 1,016,438; Feb. 6; Sp. p. 461; Gaz. vol. 175; p. 70.
Door-hanger. P. L. Hoffman. No. 1,017,757; Feb. 20; Sp. p. 3826; Gaz. vol. 175; p. 504.
Door-jack. J. C. Warner. No. 1,018,282; Feb. 20; Sp. p. 4523; Gaz. vol. 175; p. 773.
Door-jamb setter. F. Seelm. No. 1,017,811; Feb. 20; Sp. p. 3491; Gaz. vol. 175; p. 614.
Door-lock. J. T. Graybowski. No. 1,017,289; Feb. 13; Sp. p. 2980; Gaz. vol. 175; p. 400.
Door-lock. A. Patterson. No. 1,018,077; Feb. 20; Sp. p. 4111; Gaz. vol. 175; p. 706.
Door lock, Communicating-. H. G. Voight and N. B. Hurd. No. 1,018,584; Feb. 27; Sp. p. 5140; Gaz. vol. 175; p. 893.
Door-lock, Keyless combination. J. J. Schaefer. No. 1,017,327; Feb. 13; Sp. p. 2434; Gaz. vol. 175; p. 418.
Door-stop. J. W. Buoy. No. 1,018,671; Feb. 27; Sp. p. 5856; Gaz. vol. 175; p. 1011.
Dough, Aeration of. M. A. Adam. No. 1,017,361; Feb. 13; Sp. p. 2502; Gaz. vol. 175; p. 424.
Dough-cutting machine. C. F. Beck. No. 1,017,374; Feb. 13; Sp. p. 2527; Gaz. vol. 175; p. 426.
Dough-molding machine. P. Sterner. No. 1,018,640; Feb. 27; Sp. p. 5380; Gaz. vol. 175; p. 982.
Draft-gear, Friction. J. F. O'Connor. No. 1,017,299; Feb. 13; Sp. p. 2235; Gaz. vol. 175; p. 380.
Draft-rigging for rolling-stock. H. Straub. No. 1,016,858; Feb. 6; Sp. p. 1360; Gaz. vol. 175; p. 218.
Draft-rigging safety-support. C. E. Deth. No. 1,018,488; Feb. 27; Sp. p. 4904; Gaz. vol. 175; p. 879.
Drag, Road-. D. Shank. No. 1,018,785; Feb. 27; Sp. p. 5681; Gaz. vol. 175; p. 982.
Drainage-governor, Automatic. C. Stiln. No. 1,017,176; Feb. 13; Sp. p. 2110; Gaz. vol. 175; p. 362.
Drawer and file-holder. G. B. Meleney. No. 1,016,899; Feb. 6; Sp. p. 1478; Gaz. vol. 175; p. 234.
Drawing-roll. W. H. Boldue. No. 1,018,367; Feb. 27; Sp. p. 5880; Gaz. vol. 175; p. 1009.
Dredger, Clam-shell. S. C. Smith. No. 1,018,848; Feb. 27; Sp. p. 5800; Gaz. vol. 175; p. 1003.
Drier: *See* Clothes-drier; Fish-line drier.
Drier. W. Landes. No. 1,016,568; Feb. 6; Sp. p. 781; Gaz. vol. 175; p. 116.
Drying and ironing machine. W. H. H. Tracy. No. 1,017,249; Feb. 13; Sp. p. 2470; Gaz. vol. 175; p. 428.
Drying-kiln. L. J. Tripp. (Reissue.) No. 13,312; Feb. 20; Sp. p. 4795; Gaz. vol. 175; p. 821.
Drying proofed and like fabrics or materials, Apparatus for. J. Spendl. No. 1,018,902; Feb. 27; Sp. p. 6127; Gaz. vol. 175; p. 1053.
Drill: *See* Breast-drill; Grain-drill; Ball-drill; Rock-drill; Seed-drill.
Drill, center-reamer, and countersink-tool, Combined. F. A. Wagner. No. 1,017,352; Feb. 13; Sp. p. 2481; Gaz. vol. 175; p. 421.
Drill-holder. D. A. Sine. No. 1,018,729; Feb. 27; Sp. p. 5558; Gaz. vol. 175; p. 962.
Drill-presses, Automatic speed-change and tap-reversing attachment for. F. P. Miller. No. 1,017,765; Feb. 20; Sp. p. 3489; Gaz. vol. 175; p. 605.
Drilling apparatus. E. E. Clark. No. 1,018,006; Feb. 20; Sp. p. 4157; Gaz. vol. 175; p. 715.
Drilling-machine. J. N. Brattain. No. 1,016,785; Feb. 6; Sp. p. 1126; Gaz. vol. 175; p. 172.
Drilling-machine. H. A. Ogle. No. 1,017,990; Feb. 20; Sp. p. 3917; Gaz. vol. 175; p. 677.
Drinking-cups. Machine for making sanitary. G. H. Kaiser. No. 1,018,911; Feb. 27; Sp. p. 5940; Gaz. vol. 175; p. 1023.
Drinking-fountain. H. N. Roden. No. 1,016,851; Feb. 6; Sp. p. 1364; Gaz. vol. 175; p. 210.
Drinking-fountain. L. D. Lawmin. No. 1,018,572; Feb. 27; Sp. p. 5237; Gaz. vol. 175; p. 910.
Drinking-fountain, Public. G. B. Stack. No. 1,016,653; Feb. 6; Sp. p. 960; Gaz. vol. 175; p. 145.
Drip-pan. A. A. Otto. No. 1,017,455; Feb. 13; Sp. p. 2724; Gaz. vol. 175; p. 458.
Driving mechanism. N. Helwig. No. 1,016,941; Feb. 13; Sp. p. 1578; Gaz. vol. 175; p. 279.
Driving mechanism. W. O. Foss. No. 1,018,987; Feb. 13; Sp. p. 1690; Gaz. vol. 175; p. 295.
Driving mechanism. G. W. Slater. No. 1,017,023; Feb. 20; Sp. p. 3779; Gaz. vol. 175; p. 655.
Dropper: *See* Oil-dropper.

Drum. G. H. Logan. No. 1,018,767; Feb. 27; Sp. p. 5649; Gaz. vol. 175; p. 976.
Drum and cymbal beater, Foot-operated bass-. J. A. Meyer. No. 1,016,510; Feb. 6; Sp. p. 626; Gaz. vol. 175; p. 96.
Drums, Building cooling or warming. H. Heenan. No. 1,018,242; Feb. 20; Sp. p. 4454; Gaz. vol. 175; p. 765.
Dye and making same, Anthracene. O. Bally. No. 1,016,604; Feb. 6; Sp. p. 862; Gaz. vol. 175; p. 129.
Dye and making same, Vat. A. L. Lanka. No. 1,016,638; Feb. 6; Sp. p. 940; Gaz. vol. 175; p. 141.
Dye or stain. L. N. Sahm. No. 1,016,295; Feb. 6; Sp. p. 131; Gaz. vol. 175; p. 20.
Dye, Orange-red vat. A. Lüttringhaus and H. von Diesbach. No. 1,018,636; Feb. 27; Sp. p. 5733; Gaz. vol. 175; p. 1000.
Dye, Yellow vat. A. Lüttringhaus and H. von Diesbach. No. 1,018,637; Feb. 27; Sp. p. 5739; Gaz. vol. 175; p. 1000.
Dyestuff and making same, Brown vat. R. Maag. No. 1,018,433; Feb. 27; Sp. p. 4870; Gaz. vol. 175; p. 862.
Dyestuff and making same, Monazo. H. Wagner and J. Erber. No. 1,016,907; Feb. 6; Sp. p. 157; Gaz. vol. 175; p. 24.
Dynamos, Interrupter for ignition-. C. T. Mason. No. 1,017,304; Feb. 13; Sp. p. 2384; Gaz. vol. 175; p. 406.
Ear-protector. J. A. R. Elliott. No. 1,016,877; Feb. 6; Sp. p. 1419; Gaz. vol. 175; p. 220.
Eccentric, Antifriction-. J. E. Vilkie. No. 1,018,142; Feb. 20; Sp. p. 4253; Gaz. vol. 175; p. 731.
Edge-gage, Straight-. R. C. Mershon. No. 1,017,439; Feb. 13; Sp. p. 3089; Gaz. vol. 175; p. 517.
Edgings, Machine for making. J. P. Weis. No. 1,018,796; Feb. 27; Sp. p. 5700; Gaz. vol. 175; p. 985.
Educational apparatus. F. J. Westgate. No. 1,018,146; Feb. 20; Sp. p. 4266; Gaz. vol. 175; p. 732.
Egg-case. G. A. Fisher and J. A. Morrison. No. 1,017,254; Feb. 13; Sp. p. 2386; Gaz. vol. 175; p. 388.
Egg-tester. J. Carr. No. 1,016,910; Feb. 6; Sp. p. 877; Gaz. vol. 175; p. 131.
Egg-turning device. P. H. Herndon. No. 1,018,181; Feb. 20; Sp. p. 4357; Gaz. vol. 175; p. 748.
Ejector. F. J. O'Leary. No. 1,017,702; Feb. 20; Sp. p. 3455; Gaz. vol. 175; p. 607.
Elastic wheel. L. A. Garchey. No. 1,017,259; Feb. 13; Sp. p. 2295; Gaz. vol. 175; p. 390.
Electric apparatus, Alternating-current dynamo-. G. Winter and F. Eichberg. No. 1,016,866; Feb. 6; Sp. p. 1398; Gaz. vol. 175; p. 216.
Electric apparatus, High-tension magneto-. F. R. Simms. No. 1,017,474; Feb. 13; Sp. p. 2750; Gaz. vol. 175; p. 464.
Electric arcs for effecting gas reactions, Method of and apparatus for producing and utilizing disk-like. F. Rothe. No. 1,018,900; Feb. 27; Sp. p. 6122; Gaz. vol. 175; p. 1052.
Electric-circuit-control system. F. W. Harris. No. 1,017,052; Feb. 13; Sp. p. 1826; Gaz. vol. 175; p. 317.
Electric conduit. O. T. Hungerford. No. 1,017,759; Feb. 20; Sp. p. 3829; Gaz. vol. 175; p. 596.
Electric controller. J. P. Hayes. No. 1,017,412; Feb. 13; Sp. p. 2614; Gaz. vol. 175; p. 443.
Electric-current-distribution system. C. M. Moss and S. Q. Hayes. No. 1,017,000; Feb. 13; Sp. p. 1845; Gaz. vol. 175; p. 320.
Electric cut-out or switch. G. A. Jordan. No. 1,018,501; Feb. 27; Sp. p. 5089; Gaz. vol. 175; p. 885.
Electric-fixture connection. J. P. Rohan. No. 1,016,777; Feb. 6; Sp. p. 1224; Gaz. vol. 175; p. 188.
Electric-fixture coupling. J. T. Hartley. No. 1,017,368; Feb. 13; Sp. p. 2513; Gaz. vol. 175; p. 426.
Electric furnace. M. Ruthenburg. No. 1,018,727; Feb. 27; Sp. p. 5554; Gaz. vol. 175; p. 961.
Electric heater. L. E. A. Kelso. No. 1,017,374; Feb. 20; Sp. p. 3643; Gaz. vol. 175; p. 634.
Electric heater. W. S. Hadaway, Jr. No. 1,018,558; Feb. 27; Sp. p. 5215; Gaz. vol. 175; p. 906.
Electric illumination. I. Kitsee. No. 1,017,263; Feb. 13; Sp. p. 2301; Gaz. vol. 175; p. 391.
Electric jacquard apparatus. A. Regal. No. 1,017,083; Feb. 13; Sp. p. 1950; Gaz. vol. 175; p. 321.
Electric-light attachment. W. S. Ryan. No. 1,017,173; Feb. 13; Sp. p. 2101; Gaz. vol. 175; p. 360.
Electric-light fixture. W. F. and P. Overbagh and I. H. Brent. No. 1,017,267; Feb. 13; Sp. p. 2307; Gaz. vol. 175; p. 393.
Electric-light sockets, Shade-holder attachment for. P. H. Robinson. No. 1,018,270; Feb. 20; Sp. p. 4565; Gaz. vol. 175; p. 774.
Electric-light switch. C. P. Smith. No. 1,018,954; Feb. 27; Sp. p. 5982; Gaz. vol. 175; p. 1031.
Electric-line switch. F. Tinker. No. 1,017,527; Feb. 13; Sp. p. 2860; Gaz. vol. 175; p. 483.
Electric machine, Alternating-current dynamo-. G. Winter and F. Eichberg. No. 1,016,865; Feb. 6; Sp. p. 1393; Gaz. vol. 175; p. 216.
Electric machine, Dynamo-. E. M. Tingley. No. 1,018,531; Feb. 27; Sp. p. 5127; Gaz. vol. 175; p. 893.
Electric machine, Dynamo-. B. G. Lamme. No. 1,018,871; Feb. 27; Sp. p. 5826; Gaz. vol. 175; p. 990.
Electric machines, Circuit-breaker for magneto-. C. A. Pfanstiehl. No. 1,017,704; Feb. 20; Sp. p. 3457; Gaz. vol. 175; p. 603.
Electric machines, Collecting device for dynamo-. H. E. Ralston. No. 1,016,774; Feb. 6; Sp. p. 1220; Gaz. vol. 175; p. 187.
Electric motor. F. W. Casterline. No. 1,017,510; Feb. 13; Sp. p. 2825; Gaz. vol. 175; p. 477.
Electric-plug lock. R. E. Rogers. No. 1,017,110; Feb. 13; Sp. p. 1967; Gaz. vol. 175; p. 338.
Electric regulation. J. L. Creveling. No. 1,018,963; Feb. 27; Sp. p. 6046; Gaz. vol. 175; p. 1042.
Electric regulation. J. L. Creveling. No. 1,018,964; Feb. 27; Sp. p. 6048; Gaz. vol. 175; p. 1043.
Electric switch. R. P. Brown. No. 1,018,648; Feb. 27; Sp. p. 5308; Gaz. vol. 175; p. 934.
Electric-switch-contact holder. D. Larson. No. 1,016,833; Feb. 6; Sp. p. 1328; Gaz. vol. 175; p. 205.
Electric-switch-contact holder. D. L. Lindquist and D. Larson. No. 1,016,837; Feb. 6; Sp. p. 1335; Gaz. vol. 175; p. 206.
Electric trap. J. Klemovics. No. 1,017,875; Feb. 20; Sp. p. 3643; Gaz. vol. 175; p. 636.
Electric-wire-feeding apparatus and reel therefor. F. N. Woods. No. 1,018,599; Feb. 27; Sp. p. 5293; Gaz. vol. 175; p. 919.
Electric-wire terminal. G. C. Kneuff. No. 1,018,670; Feb. 27; Sp. p. 5234; Gaz. vol. 175; p. 909.
Electrical-circuit switch. J. M. Smith. No. 1,018,381; Feb. 20; Sp. p. 4738; Gaz. vol. 175; p. 811.
Electrical communicating apparatus. T. M. St. John. No. 1,018,940; Feb. 27; Sp. p. 5997; Gaz. vol. 175; p. 1034.
Electrical conduits, Mechanism for manufacturing. R. C. Rahm. No. 1,017,232; Feb. 13; Sp. p. 2240; Gaz. vol. 175; p. 381.
Electrical fitting. H. C. Barber. No. 1,016,728; Feb. 6; Sp. p. 1115; Gaz. vol. 175; p. 171.
Electrical installations from excess voltages, Means for protecting. G. Campos. No. 1,017,634; Feb. 13; Sp. p. 3058; Gaz. vol. 175; p. 516.
Electrical installations from excess voltages, Means for the protection of. G. Campos. No. 1,018,874; Feb. 27; Sp. p. 5863; Gaz. vol. 175; p. 1011.
Electrode, Arc-light. E. R. Berry. No. 1,017,497; Feb. 13; Sp. p. 2801; Gaz. vol. 175; p. 472.
Electrode for electrical purposes, Carbon. B. Redlich. No. 1,018,603; Feb. 20; Sp. p. 3940; Gaz. vol. 175; p. 681.
Electrode or pencil for the arc-light. I. Ladoff. No. 1,017,005; Feb. 13; Sp. p. 1724; Gaz. vol. 175; p. 301.
Electroller. R. B. Benjamin. No. 1,016,817; Feb. 6; Sp. p. 184; Gaz. vol. 175; p. 28.
Electrolyte, Means and method for preventing depletion of. T. A. Edison. No. 1,016,874; Feb. 6; Sp. p. 1413; Gaz. vol. 175; p. 219.
Electrolytic apparatus. H. E. T. Haultain. No. 1,018,901; Feb. 27; Sp. p. 5923; Gaz. vol. 175; p. 1020.
Electromagnetic engine. H. J. Ford. No. 1,018,309; Feb. 20; Sp. p. 4584; Gaz. vol. 175; p. 787.
Electroplating. F. J. McElhone. No. 1,018,332; Feb. 20; Sp. p. 4626; Gaz. vol. 175; p. 795.
Electroplating apparatus. T. A. Edison. No. 1,016,875; Feb. 6; Sp. p. 1415; Gaz. vol. 175; p. 219.
Electroplating with zinc. A. A. Lemoëne. No. 1,017,981; Feb. 20; Sp. p. 3899; Gaz. vol. 175; p. 674.
Electrostatic separator. H. Sutton, W. L. and E. G. Steele. No. 1,017,701; Feb. 20; Sp. p. 3193; Gaz. vol. 175; p. 575.
Electrotypes, Producing. H. S. Levy. No. 1,017,776; Feb. 20; Sp. p. 3414; Gaz. vol. 175; p. 601.
Electrowhistle-alarm. C. H. Rettmann. No. 1,017,689; Feb. 20; Sp. p. 3175; Gaz. vol. 175; p. 572.
Elevator: *See* Grain-elevator; Rope-drive elevator; Sucker-rod elevator.
Elevator. F. G. Roempler. No. 1,018,781; Feb. 27; Sp. p. 5674; Gaz. vol. 175; p. 981.
Elevator-guide lubricator. O. T. Snyder. No. 1,017,331; Feb. 13; Sp. p. 2440; Gaz. vol. 175; p. 415.
Elevator safety appliance. S. M. Miller. No. 1,017,684; Feb. 20; Sp. p. 3160; Gaz. vol. 175; p. 570.
Elevator safety device. R. C. Smith. No. 1,016,903; Feb. 6; Sp. p. 1484; Gaz. vol. 175; p. 229.
Elevator safety device. F. Sowinski. No. 1,017,332; Feb. 13; Sp. p. 2441; Gaz. vol. 175; p. 415.
Elevator safety device. C. E. and B. Banmer. No. 1,018,864; Feb. 27; Sp. p. 5844; Gaz. vol. 175; p. 1008.
Elevators, Traveling contact for. S. S. Williamson and B. Wilson. No. 1,017,614; Feb. 13; Sp. p. 3011; Gaz. vol. 175; p. 509.
Ellipsograph. A. Gran and J. H. Karlson. No. 1,017,287; Feb. 13; Sp. p. 2346; Gaz. vol. 175; p. 399.
Embroidering-machine, Multiplex-shuttle. J. Krusi. No. 1,017,421; Feb. 13; Sp. p. 2635; Gaz. vol. 175; p. 446.
Embroidering-machine, Shuttle. J. Krusi. No. 1,017,422; Feb. 13; Sp. p. 2638; Gaz. vol. 175; p. 446.
Embroidery-work holder. J. R. Wilkins. No. 1,016,463; Feb. 6; Sp. p. 518; Gaz. vol. 175; p. 80.
Enameling steel and the like. D. A. York and J. A. Tinker. No. 1,017,360; Feb. 13; Sp. p. 2501; Gaz. vol. 175; p. 424.
End-gate fastening. T. T. Smith. No. 1,018,453; Feb. 27; Sp. p. 4914; Gaz. vol. 175; p. 866.
Engine: *See* Blowing-engine; Electromagnetic engine; Explosive-engine; Gas-engine; Internal-combustion engine; Internal-combustion rotary engine; Rotary engine; Rotary gas-engine; Rubbing-machine engine; Steam-engine.

Engine. W. R. McKeen, Jr. No. 1,017,008; Feb. 13; Sp. p. 1727; Gaz. vol. 175; p. 301.
Engine-controlling means, Explosive-. L. C. Wolfe. No. 1,017,359; Feb. 13; Sp. p. 2500; Gaz. vol. 175; p. 424.
Engine crank-shaft, Steam-. H. A. Ivatt. No. 1,016,504; Feb. 6; Sp. p. 617; Gaz. vol. 175; p. 94.
Engine fire-pot. T. Stockmann. No. 1,017,336; Feb. 13; Sp. p. 2450; Gaz. vol. 175; p. 416.
Engine lubricator, Steam-. R. C. Holman and G. I. Theile. No. 1,018,112; Feb. 20; Sp. p. 4182; Gaz. vol. 175; p. 720.
Engine-reversing device, Multicylinder-internal-combustion-. G. H. W. Uren. No. 1,017,350; Feb. 13; Sp. p. 2478; Gaz. vol. 175; p. 420.
Engine silencer, Internal-combustion-. M. F. Graydon. No. 1,017,536; Feb. 13; Sp. p. 2876; Gaz. vol. 175; p. 485.
Engine starter, Gas-. J. J. O'Leary. No. 1,017,453; Feb. 13; Sp. p. 2719; Gaz. vol. 175; p. 457.
Engine starter, Internal-combustion-. F. G. McKlveen and L. W. Naylor. No. 1,017,681; Feb. 20; Sp. p. 3154; Gaz. vol. 175; p. 569.
Engine-starting apparatus. E. A. Haibleib. No. 1,017,538; Feb. 13; Sp. p. 2879; Gaz. vol. 175; p. 486.
Engine-starting device, Explosive-. F. Reynolds. No. 1,016,522; Feb. 6; Sp. p. 606; Gaz. vol. 175; p. 100.
Engine-starting device, Internal-combustion-. E. K. Baker. No. 1,016,314; Feb. 6; Sp. p. 177; Gaz. vol. 175; p. 27.
Engines, Electric spark-plug for combustion-. L. Podesus. No. 1,017,459; Feb. 13; Sp. p. 2728; Gaz. vol. 175; p. 459.
Engines, High-tension magneto ignition apparatus for internal-combustion. A. M. Patton. No. 1,016,895; Feb. 6; Sp. p. 1456; Gaz. vol. 175; p. 226.
Engines, Igniting mechanism for internal-combustion. G. Honold and A. Zähringer. No. 1,017,212; Feb. 13; Sp. p. 2193; Gaz. vol. 175; p. 373.
Engines, Implement for automobile-. J. J. Cooper. No. 1,018,236; Feb. 20; Sp. p. 4444; Gaz. vol. 175; p. 763.
Engines, Working and governing internal-combustion. T. Rigby. No. 1,017,592; Feb. 13; Sp. p. 2974; Gaz. vol. 175; p. 502.
Engineering instrument. D. W. Adams. No. 1,018,289; Feb. 20; Sp. p. 4549; Gaz. vol. 175; p. 780.
Engraver's tool. P. P. Wentz. No. 1,018,348; Feb. 20; Sp. p. 4652; Gaz. vol. 175; p. 799.
Envelop. C. F. Moulton. No. 1,016,950; Feb. 13; Sp. p. 1600; Gaz. vol. 175; p. 282.
Eraser-holder. H. H. Yelf. No. 1,018,288; Feb. 20; Sp. p. 4548; Gaz. vol. 175; p. 780.
Etching apparatus. J. S. Freer. No. 1,016,487; Feb. 6; Sp. p. 572; Gaz. vol. 175; p. 88.
Excavating and conveying apparatus. J. L. Potter. No. 1,018,359; Feb. 20; Sp. p. 4672; Gaz. vol. 175; p. 803.
Excavating-scraper. E. Johnson. No. 1,017,293; Feb. 13; Sp. p. 2365; Gaz. vol. 175; p. 401.
Excavator. J. M. Brooks. No. 1,018,160; Feb. 20; Sp. p. 4292; Gaz. vol. 175; p. 737.
Excavator. C. E. Bathrick. No. 1,018,602; Feb. 27; Sp. p. 5298; Gaz. vol. 175; p. 920.
Excavator-bucket. E. R. Shnable. No. 1,018,275; Feb. 20; Sp. p. 4514; Gaz. vol. 175; p. 776.
Exercising device. H. Whiting. No. 1,017,356; Feb. 13; Sp. p. 2493; Gaz. vol. 175; p. 423.
Explosion-motor. P. Daimler. No. 1,016,675; Feb. 6; Sp. p. 1011; Gaz. vol. 175; p. 153.
Explosive-engine. C. E. Mead. (Reissue.) No. 13,368; Feb. 13; Sp. p. 3076; Gaz. vol. 175; p. 518.
Explosive-engine. W. Ottaway. No. 1,017,993; Feb. 20; Sp. p. 3924; Gaz. vol. 175; p. 678.
Extension-table, Pedestal. W. L. Pfefferkorn, A. P. Schloerb, and A. H. Hammetter. No. 1,017,062; Feb. 13; Sp. p. 1848; Gaz. vol. 175; p. 320.
Eyeglass-case. E. S. Coy. No. 1,017,514; Feb. 13; Sp. p. 2836; Gaz. vol. 175; p. 478.
Eyeglass-cleaner. J. Lederer. No. 1,018,430; Feb. 27; Sp. p. 4865; Gaz. vol. 175; p. 861.
Eyeglass-mounting. L. F. Adt. No. 1,018,600; Feb. 27; Sp. p. 5294; Gaz. vol. 175; p. 919.
Eyeglasses. H. E. Kirstein. No. 1,017,004; Feb. 13; Sp. p. 1722; Gaz. vol. 175; p. 300.
Eyeleting-machine. R. B. Smith. No. 1,017,602; Feb. 13; Sp. p. 2992; Gaz. vol. 175; p. 505.
Eyeleting-machines, &c., Punching mechanism for. R. B. Smith. No. 1,016,717; Feb. 6; Sp. p. 1094; Gaz. vol. 175; p. 168.
Eyelets, Machine-tool for clenching. M. A. A. Edmond-Simonnet. No. 1,018,888; Feb. 27; Sp. p. 5892; Gaz. vol. 175; p. 1016.
Fabric: *See* Knitted fabric; Tubular fabric; Wire fabric.
Fabric band, Laminated cohesive interwound. L. A. Subera. No. 1,017,271; Feb. 13; Sp. p. 2314; Gaz. vol. 175; p. 394.
Fabrics, Cleansing. H. B. Bishop. No. 1,016,928; Feb. 13; Sp. p. 1540; Gaz. vol. 175; p. 274.
Fan, Motor-driven. T. Abtmeyer. No. 1,018,543; Feb. 27; Sp. p. 5170; Gaz. vol. 175; p. 899.
Fan or pump, Centrifugal. R. A. Ilg. No. 1,017,215; Feb. 13; Sp. p. 2206; Gaz. vol. 175; p. 375.
Fare register, Conductor's cash-. W. W. Kay. (Reissue.) No. 13,373; Feb. 27; Sp. p. 6173; Gaz. vol. 175; p. 1060.
Farriery implement. S. Lewis, Jr. No. 1,016,571; Feb. 6; Sp. p. 788; Gaz. vol. 175; p. 117.
Fastening device, Undergarment-. A. P. Schramp. No. 1,018,009; Feb. 20; Sp. p. 3951; Gaz. vol. 175; p. 694.
Fastening-inserting machine. F. L. MacKenzie. No. 1,016,947; Feb. 13; Sp. p. 1592; Gaz. vol. 175; p. 281.
Feed-bag. J. Dombrooki. No. 1,018,170; Feb. 20; Sp. p. 4312; Gaz. vol. 175; p. 741.
Feed-bag holder. C. G. Hayhurst. No. 1,017,543; Feb. 13; Sp. p. 2886; Gaz. vol. 175; p. 487.
Feed-bag support. J. Wright and G. F. Krick. No. 1,018,225; Feb. 20; Sp. p. 4421; Gaz. vol. 175; p. 752.
Feeder, Automatic poultry-. W. A. Kraxberger and H. J. Laker. No. 1,018,637; Feb. 6; Sp. p. 938; Gaz. vol. 175; p. 140.
Feeding device. W. S. Howell. No. 1,017,758; Feb. 20; Sp. p. 3327; Gaz. vol. 175; p. 595.
Feeding mechanism. F. G. Jahn. No. 1,018,058; Feb. 20; Sp. p. 4056; Gaz. vol. 175; p. 701.
Feeding-stuff. C. Ellis. No. 1,018,415; Feb. 27; Sp. p. 4837; Gaz. vol. 175; p. 857.
Fence-post. G. H. White. No. 1,017,833; Feb. 20; Sp. p. 3537; Gaz. vol. 175; p. 622.
Fence-post. J. C. Sparr and E. A. Marchant. No. 1,018,527; Feb. 27; Sp. p. 5182; Gaz. vol. 175; p. 904.
Fence-wire stretcher. W. F. Goolsby. No. 1,018,311; Feb. 20; Sp. p. 4591; Gaz. vol. 175; p. 788.
Fender: *See* Automobile-fender; Car-fender; Cultivator-fender; Vehicle-fender.
Fender. J. M. W. Heitmann. No. 1,018,816; Feb. 20; Sp. p. 4596; Gaz. vol. 175; p. 780.
Fender or wheel-guard. F. E. Hutchings. No. 1,018,868; Feb. 27; Sp. p. 5210; Gaz. vol. 175; p. 907.
Fertilizers, Utilizing lime-mud in the manufacture of. H. A. Galt. No. 1,016,989; Feb. 13; Sp. p. 1696; Gaz. vol. 175; p. 296.
Fibers into threads of silky appearance, Converting vegetable. J. M. J. Debourg. No. 1,018,650; Feb. 27; Sp. p. 5401; Gaz. vol. 175; p. 935.
Field-glass-supporting attachment. H. Neuburger. No. 1,018,771; Feb. 27; Sp. p. 5656; Gaz. vol. 175; p. 977.
Fifth-wheel, Vehicle-. E. Pryor. No. 1,016,580; Feb. 6; Sp. p. 808; Gaz. vol. 175; p. 120.
Filament-support. J. W. Howell. No. 1,017,546; Feb. 13; Sp. p. 2891; Gaz. vol. 175; p. 488.
Filaments for incandescence lighting, Manufacture of metallic. C. H. Weber. No. 1,016,804; Feb. 6; Sp. p. 1271; Gaz. vol. 175; p. 195.
Filaments, Forming device for metallic. H. W. Jackson. No. 1,018,500; Feb. 27; Sp. p. 5027; Gaz. vol. 175; p. 885.
File, Document-. A. B. and C. L. Johnson. No. 1,016,634; Feb. 6; Sp. p. 933; Gaz. vol. 175; p. 139.
Filing-cabinet. I. F. Burton. No. 1,016,247; Feb. 6; Sp. p. 5; Gaz. vol. 175; p. 4.
Filing-cabinet. F. W. Ackerman. No. 1,017,239; Feb. 13; Sp. p. 2251; Gaz. vol. 175; p. 383.
Filing device, Letter-. C. Smith. No. 1,016,789; Feb. 6; Sp. p. 1244; Gaz. vol. 175; p. 192.
Filter. C. B. Singer. No. 1,017,476; Feb. 13; Sp. p. 2763; Gaz. vol. 175; p. 466.
Filter. S. L. Goldman. No. 1,017,867; Feb. 20; Sp. p. 3619; Gaz. vol. 175; p. 633.
Filter, Faucet-. L. A. Mason. No. 1,016,757; Feb. 6; Sp. p. 1174; Gaz. vol. 175; p. 181.
Filter, Oil-. J. E. Jones. No. 1,017,100; Feb. 13; Sp. p. 1949; Gaz. vol. 175; p. 335.
Finger-ring. E. G. Harrop. No. 1,018,663; Feb. 27; Sp. p. 5420; Gaz. vol. 175; p. 939.
Fire-alarm, Automatic. J. B. Loughead. No. 1,018,509; Feb. 27; Sp. p. 5049; Gaz. vol. 175; p. 867.
Fire-alarm box, Auxiliarized. F. W. Cole. No. 1,016,401; Feb. 6; Sp. p. 370; Gaz. vol. 175; p. 58.
Fire-alarm systems, False-alarm detector for. G. H. Inman. No. 1,018,564; Feb. 27; Sp. p. 5222; Gaz. vol. 175; p. 908.
Fire and burglar alarm. M. J. Gregory. No. 1,017,095; Feb. 13; Sp. p. 1941; Gaz. vol. 175; p. 333.
Fire apparatus. H. Pines. No. 1,018,888; Feb. 20; Sp. p. 4634; Gaz. vol. 175; p. 796.
Fire apparatus, Piston-pump for auto. A. C. Webb. No. 1,018,795; Feb. 27; Sp. p. 5697; Gaz. vol. 175; p. 985.
Fire-escape. E. Snyder. No. 1,016,299; Feb. 6; Sp. p. 137; Gaz. vol. 175; p. 21.
Fire-escape. A. Perlman. No. 1,016,437; Feb. 6; Sp. p. 459; Gaz. vol. 175; p. 70.
Fire-escape. H. J. Walters. No. 1,016,859; Feb. 6; Sp. p. 1355; Gaz. vol. 175; p. 214.
Fire-extinguisher. J. M. Miller. No. 1,018,514; Feb. 27; Sp. p. 5102; Gaz. vol. 175; p. 889.
Fire-extinguishing nozzle. R. Pattin. No. 1,017,585; Feb. 13; Sp. p. 2961; Gaz. vol. 175; p. 500.
Fire-net. C. H. Dennis. No. 1,016,699; Feb. 27; Sp. p. 5455; Gaz. vol. 175; p. 951.
Fire-protection signal system, Automatic. J. E. Shepherd. No. 1,018,451; Feb. 27; Sp. p. 4906; Gaz. vol. 175; p. 867.
Fire-resisting shutter, Flexible. A. Rush. No. 1,017,866; Feb. 20; Sp. p. 3488; Gaz. vol. 175; p. 613.
Fires, Extinguishing. M. Breslauer. No. 1,017,949; Feb. 20; Sp. p. 3820; Gaz. vol. 175; p. 662.
Firearm, Automatic. G. Teborg. No. 1,017,119; Feb. 13; Sp. p. 1983; Gaz. vol. 175; p. 341.
Firearm, Automatic. K. Krnka. No. 1,018,914; Feb. 27; Sp. p. 5949; Gaz. vol. 175; p. 1024.
Firearm-cooling device. A. Berthier. No. 1,017,373; Feb. 13; Sp. p. 2526; Gaz. vol. 175; p. 428.

Firearm-projectile. G. Tocik. No. 1,017,928; Feb. 20; Sp. p. 3779; Gaz. vol. 175; p. 658.
Firearm-sight. J. Windridge. No. 1,018,224; Feb. 20; Sp. p. 4418; Gaz. vol. 175; p. 752.
Firearm-sight. F. C. Chadwick. No. 1,018,876; Feb. 27; Sp. p. 5866; Gaz. vol. 175; p. 1012.
Firearm-silencer. C. H. Kenney. No. 1,017,003; Feb. 13; Sp. p. 1720; Gaz. vol. 175; p. 300.
Firearm-silencing device. H. P. Maxim. No. 1,018,720; Feb. 27; Sp. p. 5534; Gaz. vol. 175; p. 958.
Fireplace. D. D. Nash. No. 1,018,677; Feb. 27; Sp. p. 5448; Gaz. vol. 175; p. 945.
Fireplace screens, blowers, and window-washer, Means for balancing framed. L. F. Ziesle. No. 1,016,876; Feb. 6; Sp. p. 1418; Gaz. vol. 175; p. 220.
Fireproof window with detachable mullion-bars. O. H. Iman. No. 1,017,760; Feb. 20; Sp. p. 3330; Gaz. vol. 175; p. 596.
Fish-bait, Artificial. A. J. Dremel. No. 1,017,088; Feb. 13; Sp. p. 1927; Gaz. vol. 175; p. 331.
Fish-line drier. C. J. C. Brearey. No. 1,018,550; Feb. 27; Sp. p. 5196; Gaz. vol. 175; p. 903.
Fish-line holder. E. B. Schmucker. No. 1,016,783; Feb. 6; Sp. p. 1231; Gaz. vol. 175; p. 190.
Fishing-reel. P. Catucci. No. 1,016,913; Feb. 6; Sp. p. 1503; Gaz. vol. 175; p. 252.
Fishing-tool. C. Daniel. No. 1,018,816; Feb. 6; Sp. p. 1297; Gaz. vol. 175; p. 199.
Flat-iron. F. Johnson. No. 1,017,099; Feb. 13; Sp. p. 1947; Gaz. vol. 175; p. 335.
Floor. W. H. Philpot and R. Vertiska. No. 1,018,987; Feb. 27; Sp. p. 6117; Gaz. vol. 175; p. 1051.
Floor-dressing tool. W. A. Scott. No. 1,016,446; Feb. 6; Sp. p. 480; Gaz. vol. 175; p. 73.
Floor or like structure. F. Schär. No. 1,017,175; Feb. 13; Sp. p. 2105; Gaz. vol. 175; p. 361.
Floor-scraper. F. J. Vondracek. No. 1,016,720; Feb. 6; Sp. p. 1099; Gaz. vol. 175; p. 169.
Floor-set, nail-set, and nail-shield, Combined. W. T. Wellman. No. 1,016,383; Feb. 6; Sp. p. 322; Gaz. vol. 175; p. 51.
Flour bolter or dresser. E. W. Mihok. No. 1,016,705; Feb. 6; Sp. p. 1070; Gaz. vol. 175; p. 164.
Flower-holder. J. W. Golden. No. 1,016,822; Feb. 6; Sp. p. 1309; Gaz. vol. 175; p. 201.
Flue-cleaner. A. A. Hull. No. 1,018,626; Feb. 27; Sp. p. 5772; Gaz. vol. 175; p. 997.
Flue turning and beading tool. J. F. Gero. No. 1,016,559; Feb. 6; Sp. p. 767; Gaz. vol. 175; p. 113.
Fluid-meter. T. Charitos. No. 1,016,934; Feb. 13; Sp. p. 1558; Gaz. vol. 175; p. 276.
Fluid mixer, Gaseous-. F. F. Thompson. No. 1,018,351; Feb. 27; Sp. p. 5311; Gaz. vol. 175; p. 1004.
Flume-gate. W. P. Harlan. No. 1,018,662; Feb. 27; Sp. p. 5419; Gaz. vol. 175; p. 939.
Flume-joint. N. Johnson. No. 1,018,628; Feb. 27; Sp. p. 5776; Gaz. vol. 175; p. 997.
Flush-tank. R. G. Ferguson. No. 1,017,524; Feb. 13; Sp. p. 2854; Gaz. vol. 175; p. 481.
Flushing apparatus for water-pipes. G. W. Redeker. No. 1,016,521; Feb. 6; Sp. p. 664; Gaz. vol. 175; p. 100.
Fly-catcher. E. Kunz and O. E. Hodge. No. 1,019,006; Feb. 27; Sp. p. 6166; Gaz. vol. 175; p. 1058.
Fly-screen, Metal. W. W. Cole. No. 1,017,958; Feb. 20; Sp. p. 3842; Gaz. vol. 175; p. 666.
Fly-trap. W. S. Wallace. No. 1,017,027; Feb. 13; Sp. p. 1766; Gaz. vol. 175; p. 306.
Fly-trap. D. D. Bolick. No. 1,017,644; Feb. 20; Sp. p. 3084; Gaz. vol. 175; p. 557.
Fly-trap. S. Simon. No. 1,018,213; Feb. 20; Sp. p. 4395; Gaz. vol. 175; p. 755.
Flying-machine. R. G. V. Mytton. No. 1,017,969; Feb. 20; Sp. p. 3911; Gaz. vol. 175; p. 677.
Flying-machine. F. Michau. No. 1,018,205; Feb. 20; Sp. p. 4381; Gaz. vol. 175; p. 752.
Flying-machine. O. L. Dunton. No. 1,018,418; Feb. 27; Sp. p. 4833; Gaz. vol. 175; p. 856.
Folder, Combination bias, binding, and hem. M. M. Harris. No. 1,016,626; Feb. 6; Sp. p. 917; Gaz. vol. 175; p. 137.
Folding box. J. Balasa. No. 1,017,367; Feb. 13; Sp. p. 2510; Gaz. vol. 175; p. 420.
Folding chair. F. W. Albert. No. 1,017,384; Feb. 13; Sp. p. 2507; Gaz. vol. 175; p. 425.
Folding chair. D. M. Neff. No. 1,017,791; Feb. 20; Sp. p. 3453; Gaz. vol. 175; p. 607.
Folding table and seat. G. A. Swanson. No. 1,018,593; Feb. 27; Sp. p. 5263; Gaz. vol. 175; p. 917.
Food and making the same, Article of. M. Villegas. No. 1,018,595; Feb. 27; Sp. p. 5287; Gaz. vol. 175; p. 918.
Food compound. A. D. Warner. No. 1,018,462; Feb. 27; Sp. p. 4928; Gaz. vol. 175; p. 871.
Food-dehydrating apparatus. G. D. Harris and J. S. Pollard. No. 1,017,412; Feb. 13; Sp. p. 2612; Gaz. vol. 175; p. 442.
Food-dehydrating apparatus. G. D. Harris and J. S. Pollard. No. 1,018,388; Feb. 20; Sp. p. 4758; Gaz. vol. 175; p. 814.
Food product and preparing it. G. D. Harris and J. S. Pollard. No. 1,017,411; Feb. 13; Sp. p. 2609; Gaz. vol. 175; p. 442.
Fork-scraper. J. T. Mack. No. 1,016,696; Feb. 6; Sp. p. 1052; Gaz. vol. 175; p. 161.
Form, Collapsible. H. O. Meek and C. E. Bradburn. No. 1,016,284; Feb. 6; Sp. p. 100; Gaz. vol. 175; p. 17.
Form, Garment-. J. Satin. No. 1,018,377; Feb. 20; Sp. p. 4731; Gaz. vol. 175; p. 810.
Form-pad. C. Mayer and S. Yaffe. No. 1,018,066; Feb. 20; Sp. p. 4091; Gaz. vol. 175; p. 704.
Form, Sleeve-. L. Mollberg, A. G. and J. O. Storen. No. 1,018,724; Feb. 27; Sp. p. 5547; Gaz. vol. 175; p. 960.
Formaldehyde compounds and products, Manufacture of. P. Alubben. No. 1,018,736; Feb. 27; Sp. p. 5572; Gaz. vol. 175; p. 964.
Formates, Producing. A. Hempel. No. 1,017,261; Feb. 13; Sp. p. 2296; Gaz. vol. 175; p. 391.
Fountain: *See* Drinking-fountain; Ink-fountain; Luminous fountain.
Fountains, Valve for drinking-. J. D. Ramsey. No. 1,016,956; Feb. 13; Sp. p. 1615; Gaz. vol. 175; p. 284.
Frame: *See* Car-frame; Pince-nez spring-frame; Plow-frame; Type-bar-supporting frame; Vehicle-frame.
Frame corner-piece. J. L. Kuntz. No. 1,016,278; Feb. 6; Sp. p. 101; Gaz. vol. 175; p. 15.
Freight-carrier. J. W. Reno. No. 1,018,586; Feb. 27; Sp. p. 5269; Gaz. vol. 175; p. 915.
Fruit and vegetable scarifying device. J. G. Lannoye. No. 1,016,388; Feb. 6; Sp. p. 233; Gaz. vol. 175; p. 36.
Fruit extracts, Apparatus for making. E. G. Rensencourt. No. 1,017,800; Feb. 20; Sp. p. 3473; Gaz. vol. 175; p. 611.
Fruit-picker. J. H. Wyatt. No. 1,016,063; Feb. 6; Sp. p. 930; Gaz. vol. 175; p. 149.
Fruit-picker. S. M. Work. No. 1,018,287; Feb. 20; Sp. p. 4546; Gaz. vol. 175; p. 780.
Fruit-picker's bag. E. A. Williams. No. 1,017,721; Feb. 20; Sp. p. 3245; Gaz. vol. 175; p. 582.
Fruit-precooling apparatus. S. M. Woodbridge. No. 1,017,723; Feb. 20; Sp. p. 3248; Gaz. vol. 175; p. 582.
Fruit products, Fumigator for. A. Burton. No. 1,017,647; Feb. 20; Sp. p. 3090; Gaz. vol. 175; p. 558.
Fuel-injector. E. M. Smith. No. 1,018,276; Feb. 20; Sp. p. 4517; Gaz. vol. 175; p. 776.
Furnace: *See* Electric furnace; Gas-furnace; Glass-pot furnace; Heating-furnace; Sand-drying furnace; Smoke-consuming furnace; Stoker-furnace.
Furnace. F. Siemens. No. 1,017,181; Feb. 13; Sp. p. 2115; Gaz. vol. 175; p. 363.
Furnace. N. Frost. No. 1,018,967; Feb. 27; Sp. p. 6066; Gaz. vol. 175; p. 1044.
Furnace-charging apparatus. D. Baker. No. 1,016,539; Feb. 6; Sp. p. 716; Gaz. vol. 175; p. 106.
Furnaces, Brick for metallurgic. W. N. McKnight and R. H. Youngman. No. 1,016,350; Feb. 6; Sp. p. 268; Gaz. vol. 175; p. 40.
Furniture construction. O. Vanselow. No. 1,017,712; Feb. 20; Sp. p. 3212; Gaz. vol. 175; p. 579.
Furniture, Convertible article of. M. Switzer. No. 1,017,342; Feb. 13; Sp. p. 2458; Gaz. vol. 175; p. 418.
Fursiture, Iron. C. E. Murray. No. 1,016,355; Feb. 6; Sp. p. 264; Gaz. vol. 175; p. 41.
Furrow-opener, Disk-. O. G. Rieske. No. 1,017,109; Feb. 13; Sp. p. 1965; Gaz. vol. 175; p. 337.
Fuse, Electric cartridge-. F. W. A. Schneider. No. 1,016,646; Feb. 6; Sp. p. 951; Gaz. vol. 175; p. 143.
Fuse, Electric safety-. C. N. Sachs. No. 1,016,524; Feb. 6; Sp. p. 676; Gaz. vol. 175; p. 101.
Fuse for explosive projectiles, Percussion-. E. Schneider. No. 1,016,368; Feb. 6; Sp. p. 287; Gaz. vol. 175; p. 45.
Fuse for high-explosive shells. R. Sohlman, H. Nordenfelt, and H. Morén. No. 1,016,373; Feb. 6; Sp. p. 300; Gaz. vol. 175; p. 47.
Fuse-resetter, Automatic. J. B. Elkin. No. 1,018,239; Feb. 20; Sp. p. 4450; Gaz. vol. 175; p. 764.
Fuses, Jacket for safety-. C. N. Sachs. No. 1,016,443; Feb. 6; Sp. p. 476; Gaz. vol. 175; p. 73.
Gage: *See* Edge-gage; Indicator-gage; Mitering-gage; Pressure-gage; Ring-gage; Saw-table gage; Water-gage.
Gage. A. D. Owen. No. 1,017,994; Feb. 20; Sp. p. 3926; Gaz. vol. 175; p. 679.
Gage-bar. A. H. Johnson and L. W. Williams. No. 1,018,245; Feb. 20; Sp. p. 4460; Gaz. vol. 175; p. 766.
Galvanic battery. E. C. Smith and E. L. Marshall. No. 1,017,064; Feb. 13; Sp. p. 1853; Gaz. vol. 175; p. 321.
Game. N. C. Shatzer. No. 1,016,583; Feb. 6; Sp. p. 814; Gaz. vol. 175; p. 121.
Game apparatus. A. Reibstein. No. 1,018,343; Feb. 20; Sp. p. 4642; Gaz. vol. 175; p. 798.
Game apparatus. J. W. Culp. No. 1,018,409; Feb. 27; Sp. p. 4821; Gaz. vol. 175; p. 853.
Game apparatus. J. A. Markle. No. 1,018,840; Feb. 27; Sp. p. 5792; Gaz. vol. 175; p. 1000.
Game apparatus. D. J. Bebon. No. 1,018,956; Feb. 27; Sp. p. 6027; Gaz. vol. 175; p. 1039.
Garment. F. N. Ashworth. No. 1,016,538; Feb. 6; Sp. p. 715; Gaz. vol. 175; p. 106.
Garment. M. W. Fuchs. No. 1,016,988; Feb. 13; Sp. p. 1604; Gaz. vol. 175; p. 295.
Garment-hanger. C. B. Corbin. No. 1,017,854; Feb. 20; Sp. p. 3590; Gaz. vol. 175; p. 629.
Garment-hanger. L. D. Hincher. No. 1,018,056; Feb. 20; Sp. p. 4064; Gaz. vol. 175; p. 701.
Garment-hanger. L. D. Hincher. No. 1,018,057; Feb. 20; Sp. p. 4065; Gaz. vol. 175; p. 701.
Garment-hanger. H. E. Rathbun. No. 1,018,584; Feb. 27; Sp. p. 5266; Gaz. vol. 175; p. 915.
Garment-hook. A. K. Chapman. No. 1,017,788; Feb. 20; Sp. p. 3285; Gaz. vol. 175; p. 588.
Gas and like burner, Incandescent. J. Gallié. No. 1,018,969; Feb. 27; Sp. p. 6070; Gaz. vol. 175; p. 1044.

Gas-burner. H. E. Gilbert. No. 1,018,819; Feb. 27; Sp. p. 5759; Gaz. vol. 175; p. 994.
Gas-burner attachment for vehicle-lamps and the like. J. Ferguson. No. 1,018,104; Feb. 20; Sp. p. 4171; Gaz. vol. 175; p. 717.
Gas burner, Fuel-. J. C. Beckfield. No. 1,016,869; Feb. 6; Sp. p. 1407; Gaz. vol. 175; p. 217.
Gas-engine. H. Cooper. No. 1,018,481; Feb. 27; Sp. p. 4981; Gaz. vol. 175; p. 877.
Gas-fixture safety appliance. P. R. Richards. No. 1,017,468; Feb. 13; Sp. p. 2748; Gaz. vol. 175; p. 462.
Gas-fixtures, Safety connection for. G. De Grey. No. 1,017,654; Feb. 20; Sp. p. 3098; Gaz. vol. 175; p. 560.
Gas-furnace. J. A. Abrams. No. 1,017,489; Feb. 13; Sp. p. 2786; Gaz. vol. 175; p. 470.
Gas-generator. R. Bellamy. No. 1,017,495; Feb. 13; Sp. p. 2796; Gaz. vol. 175; p. 472.
Gas generator, Acetylene-. J. Corroyer. No. 1,016,475; Feb. 6; Sp. p. 543; Gaz. vol. 175; p. 84.
Gas generator, Acetylene-. A. L. Black. No. 1,016,665; Feb. 6; Sp. p. 993; Gaz. vol. 175; p. 150.
Gas generator, Acetylene-. J. H. Miner. No. 1,016,843; Feb. 6; Sp. p. 1346; Gaz. vol. 175; p. 208.
Gas generator, Oil-. E. S. Hoyt. No. 1,017,214; Feb. 13; Sp. p. 2200; Gaz. vol. 175; p. 374.
Gas-holders, Steam-pipe for. W. A. Crammond. No. 1,018,033; Feb. 20; Sp. p. 4000; Gaz. vol. 175; p. 692.
Gas-log. O. E. Hansen. No. 1,017,751; Feb. 20; Sp. p. 3315; Gaz. vol. 175; p. 593.
Gas, Means for indicating the production of. H. Strache. No. 1,018,942; Feb. 27; Sp. p. 5999; Gaz. vol. 175; p. 1034.
Gas-producer mechanism. F. H. Treat. No. 1,017,025; Feb. 13; Sp. p. 1761; Gaz. vol. 175; p. 307.
Gas-producer vaporizer. C. J. Atkinson. No. 1,018,152; Feb. 20; Sp. p. 4277; Gaz. vol. 175; p. 734.
Gas-producers, Operating. N. Latta. No. 1,018,832; Feb. 27; Sp. p. 5781; Gaz. vol. 175; p. 998.
Gas-purifier. R. Robinson. No. 1,016,290; Feb. 6; Sp. p. 127; Gaz. vol. 175; p. 19.
Gases, Apparatus for extracting or separating suspended matter from. F. W. Burstall. No. 1,018,235; Feb. 20; Sp. p. 4442; Gaz. vol. 175; p. 763.
Gases, Apparatus for the detection of dangerous. F. J. Turquand and W. E. Gray. No. 1,016,305; Feb. 6; Sp. p. 150; Gaz. vol. 175; p. 23.
Gases of motors, Apparatus for deodorizing the exhaust-. C. H. Phillips. No. 1,017,900; Feb. 20; Sp. p. 3720; Gaz. vol. 175; p. 647.
Gases, Purification of. F. G. Cottrell. No. 1,016,476; Feb. 6; Sp. p. 545; Gaz. vol. 175; p. 84.
Gaseous-fuel mixer. G. T. Hanchett. No. 1,017,750; Feb. 20; Sp. p. 3314; Gaz. vol. 175; p. 593.
Gate: *See* Bridge-gate; Flume-gate.
Gate. C. E. Buckhalt. No. 1,016,397; Feb. 6; Sp. p. 364; Gaz. vol. 175; p. 57.
Gate. H. Allen. No. 1,016,598; Feb. 6; Sp. p. 842; Gaz. vol. 175; p. 126.
Gate. J. H. Green. No. 1,016,824; Feb. 6; Sp. p. 1311; Gaz. vol. 175; p. 202.
Gate. J. B. Clay. No. 1,017,248; Feb. 13; Sp. p. 2272; Gaz. vol. 175; p. 386.
Gate. E. Bly. No. 1,017,490; Feb. 13; Sp. p. 2802; Gaz. vol. 175; p. 473.
Gate. J. Mills. No. 1,018,515; Feb. 27; Sp. p. 5104; Gaz. vol. 175; p. 893.
Gear for the prevention of overwinding. J. Shaw. No. 1,017,600; Feb. 13; Sp. p. 2988; Gaz. vol. 175; p. 505.
Gearing. A. Andri. No. 1,017,070; Feb. 13; Sp. p. 1867; Gaz. vol. 175; p. 324.
Gearing. A. J. McLendon. No. 1,017,107; Feb. 13; Sp. p. 1961; Gaz. vol. 175; p. 337.
Gearing. J. Edens. No. 1,017,251; Feb. 13; Sp. p. 2279; Gaz. vol. 175; p. 387.
Gearing. R. Milne. No. 1,017,441; Feb. 13; Sp. p. 2676; Gaz. vol. 175; p. 455.
Gearing. A. Sundh. No. 1,017,819; Feb. 20; Sp. p. 3509; Gaz. vol. 175; p. 616.
Gearing. H. P. Reston. No. 1,018,081; Feb. 20; Sp. p. 4116; Gaz. vol. 175; p. 709.
Gearing, Change-speed. A. B. Landis. No. 1,017,877; Feb. 20; Sp. p. 3652; Gaz. vol. 175; p. 637.
Gearing, Change-speed. A. B. Landis. No. 1,017,893; Feb. 20; Sp. p. 3703; Gaz. vol. 175; p. 644.
Gearing, Differential. H. L. Warner. No. 1,018,535; Feb. 27; Sp. p. 5153; Gaz. vol. 175; p. 897.
Gearing, Friction-. G. Rennerfelt. No. 1,017,910; Feb. 20; Sp. p. 3741; Gaz. vol. 175; p. 651.
Gearing, Friction-. G. Rennerfelt. No. 1,017,911; Feb. 20; Sp. p. 3743; Gaz. vol. 175; p. 651.
Gearing, Reversing-. A. L. Herman. No. 1,018,972; Feb. 27; Sp. p. 6079; Gaz. vol. 175; p. 1046.
Gearing, Shifting and locking device for clash-. J. R. Voorhees and V. V. Speer. No. 1,017,827; Feb. 20; Sp. p. 3521; Gaz. vol. 175; p. 619.
Gearing, Toothed. B. Wiesengrund and W. F. Roberts. No. 1,019,001; Feb. 27; Sp. p. 6143; Gaz. vol. 175; p. 1056.
Gearing, Transmission-. H. M. Cake. No. 1,017,954; Feb. 20; Sp. p. 3836; Gaz. vol. 175; p. 666.
Generator: *See* Acetylene-generator; Gas-generator.
Gin attachment. E. A. Bozier, Sr. No. 1,018,273; Feb. 20; Sp. p. 4509; Gaz. vol. 175; p. 775.
Gin-saw. J. C. Garner. No. 1,017,637; Feb. 13; Sp. p. 3068; Gaz. vol. 175; p. 516.
Gin-saws, Metallic skeleton space-block for. W. R. Gaddis. No. 1,016,742; Feb. 6; Sp. p. 1141; Gaz. vol. 175; p. 176.
Glass articles, Forming hollow. K. Jung. No. 1,016,882; Feb. 6; Sp. p. 1327; Gaz. vol. 175; p. 204.
Glass-drawing apparatus. L. A. Thornburg. No. 1,018,641; Feb. 27; Sp. p. 5384; Gaz. vol. 175; p. 933.
Glass-handling apparatus. J. A. Chambers. No. 1,016,933; Feb. 13; Sp. p. 1555; Gaz. vol. 175; p. 276.
Glass-pot furnace. H. L. Dixon. No. 1,017,391; Feb. 13; Sp. p. 2568; Gaz. vol. 175; p. 434.
Glass-working machine. B. T. Headley and M. C. Bird. No. 1,017,570; Feb. 20; Sp. p. 3632; Gaz. vol. 175; p. 634.
Glassware-handling apparatus. V. Mulholland. No. 1,016,428; Feb. 6; Sp. p. 420; Gaz. vol. 175; p. 67.
Glove or mitt, Base-ball. W. H. Fox. No. 1,017,964; Feb. 20; Sp. p. 3858; Gaz. vol. 175; p. 668.
Glue-applying machine for use in making spirally-wound tubes. F. C. Osborn. No. 1,018,335; Feb. 20; Sp. p. 4630; Gaz. vol. 175; p. 796.
Go-carts, Detachable runner for folding. W. H. Jey, M. H. Smith, and F. Korz. No. 1,017,417; Feb. 13; Sp. p. 2627; Gaz. vol. 175; p. 444.
Gold and silver from cyanid solutions, Method of and apparatus for the precipitation of. D. Bosqui. No. 1,018,604; Feb. 27; Sp. p. 5301; Gaz. vol. 175; p. 923.
Governing internal-combustion engines. T. Rigby. No. 1,017,501; Feb. 13; Sp. p. 2972; Gaz. vol. 175; p. 502.
Governor. L. C. Loewenstein. No. 1,017,571; Feb. 13; Sp. p. 2937; Gaz. vol. 175; p. 496.
Governor for gas or other engines. J. F. Bridges. No. 1,016,543; Feb. 6; Sp. p. 731; Gaz. vol. 175; p. 107.
Governor, High-speed emergency-. F. W. Bentley. No. 1,017,496; Feb. 13; Sp. p. 2797; Gaz. vol. 175; p. 472.
Grader and roller, Road. C. A. Landon. No. 1,017,894; Feb. 20; Sp. p. 3707; Gaz. vol. 175; p. 645.
Grain-cleaner. E. M. Loveland. No. 1,016,424; Feb. 6; Sp. p. 413; Gaz. vol. 175; p. 65.
Grain-drill. O. G. Rieske. No. 1,017,318; Feb. 13; Sp. p. 2414; Gaz. vol. 175; p. 411.
Grain-drill. O. G. Rieske. No. 1,017,319; Feb. 13; Sp. p. 2418; Gaz. vol. 175; p. 411.
Grain-drill. W. A. Van Brunt. No. 1,018,220; Feb. 20; Sp. p. 4408; Gaz. vol. 175; p. 757.
Grain elevator and weigher. C. Bradford and G. L. Chatfield. No. 1,017,735; Feb. 20; Sp. p. 3273; Gaz. vol. 175; p. 587.
Grain hulling and scouring machine. C. Schacht. No. 1,017,326; Feb. 13; Sp. p. 2433; Gaz. vol. 175; p. 413.
Grain-separator. C. G. Thompson. No. 1,018,997; Feb. 27; Sp. p. 6136; Gaz. vol. 175; p. 1054.
Grain-shocking machine. J. Homan. No. 1,016,623; Feb. 6; Sp. p. 920; Gaz. vol. 175; p. 137.
Grass destroyer, Quaking-. P. Meyer. No. 1,018,513; Feb. 27; Sp. p. 5100; Gaz. vol. 175; p. 889.
Grate. T. V. Elliott. No. 1,016,352; Feb. 20; Sp. p. 4650; Gaz. vol. 175; p. 801.
Grate-bar. D. Dee. No. 1,017,653; Feb. 20; Sp. p. 3097; Gaz. vol. 175; p. 560.
Grease and oil extracting apparatus. C. Edgerton. No. 1,017,518; Feb. 13; Sp. p. 2841; Gaz. vol. 175; p. 479.
Grinding device, Gear-. R. B. Weaver. No. 1,017,612; Feb. 13; Sp. p. 3007; Gaz. vol. 175; p. 508.
Grinding gears. R. B. Weaver. No. 1,017,613; Feb. 13; Sp. p. 3009; Gaz. vol. 175; p. 509.
Grinding-machine. P. A. Solem. No. 1,016,585; Feb. 6; Sp. p. 815; Gaz. vol. 175; p. 122.
Grinding-machine. A. B. Landis. No. 1,016,751; Feb. 6; Sp. p. 1153; Gaz. vol. 175; p. 179.
Grinding-machine. A. B. Landis. No. 1,017,879; Feb. 20; Sp. p. 3659; Gaz. vol. 175; p. 638.
Grinding-machine. A. B. Landis. No. 1,017,880; Feb. 20; Sp. p. 3662; Gaz. vol. 175; p. 638.
Grinding-machine. A. B. Landis. No. 1,017,881; Feb. 20; Sp. p. 3665; Gaz. vol. 175; p. 638.
Grinding-machine. A. B. Landis. No. 1,018,392; Feb. 20; Sp. p. 4767; Gaz. vol. 175; p. 816.
Grinding-machine. A. B. Landis. No. 1,018,395; Feb. 20; Sp. p. 4776; Gaz. vol. 175; p. 817.
Grinding machine, Drill-. A. Mill, Sr. and Jr. No. 1,016,891; Feb. 6; Sp. p. 1441; Gaz. vol. 175; p. 224.
Grinding machine, Roller-. O. A. Schmidt. No. 1,018,930; Feb. 27; Sp. p. 5975; Gaz. vol. 175; p. 1030.
Grinding-mill. E. C. Johnson. No. 1,016,272; Feb. 6; Sp. p. 63; Gaz. vol. 175; p. 13.
Grip or handle. A. E. Lard. No. 1,017,565; Feb. 13; Sp. p. 2923; Gaz. vol. 175; p. 494.
Gun-sight. A. A. German. No. 1,016,883; Feb. 6; Sp. p. 1428; Gaz. vol. 175; p. 222.
Gun-sight. J. D. Russ. No. 1,017,234; Feb. 13; Sp. p. 2243; Gaz. vol. 175; p. 381.
Gun-sight. R. Stuart. No. 1,017,339; Feb. 13; Sp. p. 2454; Gaz. vol. 175; p. 417.
Gun-sight-illuminating attachment. A. N. Olson. No. 1,017,991; Feb. 20; Sp. p. 3920; Gaz. vol. 175; p. 673.
Gyroscopic rocket and the firing apparatus therefor. N. Gherassimoff. No. 1,018,312; Feb. 20; Sp. p. 4589; Gaz. vol. 175; p. 788.
Hair-clipping machine. H. Schmeikler. No. 1,016,855; Feb. 6; Sp. p. 1376; Gaz. vol. 175; p. 212.
Hair-dye. L. and A. Seago. No. 1,017,269; Feb. 13; Sp. p. 2311; Gaz. vol. 175; p. 393.
Hair-fastener. O. H. Arnold. No. 1,016,466; Feb. 6; Sp. p. 527; Gaz. vol. 175; p. 81.

Hame attachment. F. L. Lowrey. No. 1,016,280; Feb. 6; Sp. p. 104; Gaz. vol. 175; p. 19.
Hame-ring holder, Adjustable. P. J. Tix. No. 1,017,188; Feb. 13; Sp. p. 2132; Gaz. vol. 175; p. 367.
Hammer attachment. G. W. Ansley. No. 1,017,491; Feb. 13; Sp. p. 2789; Gaz. vol. 175; p. 470.
Hammer, Bush-. W. J. Ertle. No. 1,018,892; Feb. 27; Sp. p. 5900; Gaz. vol. 175; p. 1017.
Hammer, Pneumatic. E. H. Lagerström. No. 1,017,562; Feb. 13; Sp. p. 2918; Gaz. vol. 175; p. 493.
Hammer, Power-. G. H. Bowe. No. 1,017,916; Feb. 20; Sp. p. 3754; Gaz. vol. 175; p. 652.
Hammer, Silicing-. M. F. Williams. No. 1,016,979; Feb. 13; Sp. p. 1670; Gaz. vol. 175; p. 292.
Hammock, Couch-. I. E. Palmer. No. 1,016,894; Feb. 6; Sp. p. 1453; Gaz. vol. 175; p. 225.
Hand-bag or the like. K. E. Ford. No. 1,018,417; Feb. 27; Sp. p. 4840; Gaz. vol. 175; p. 857.
Hand-rest. N. R. Holcomb. No. 1,018,615; Feb. 27; Sp. p. 5320; Gaz. vol. 175; p. 923.
Handcuff. G. A. Carney. No. 1,017,965; Feb. 20; Sp. p. 3838; Gaz. vol. 175; p. 666.
Handle: *See* Bottle-handle.
Handle mechanism. N. W. Perkins, Jr. No. 1,016,287; Feb. 6; Sp. p. 114; Gaz. vol. 175; p. 18.
Handle-mount. W. A. Parker. No. 1,016,576; Feb. 6; Sp. p. 801; Gaz. vol. 175; p. 119.
Handling helpless persons, Appliance for. W. W. and J. F. Miller. No. 1,018,723; Feb. 27; Sp. p. 5542; Gaz. vol. 175; p. 959.
Hanger: *See* Automatic hanger; Coat-hanger; Coat and pants hanger; Door-hanger; Garment-hanger; Pipe-hanger; Pulley-hanger; Shade and curtain hanger; Trace-hanger; Train-line hanger; Window-screen hanger.
Hanger. H. Claussen. No. 1,016,097; Feb. 20; Sp. p. 4158; Gaz. vol. 175; p. 715.
Harness-snap. J. C. Proebstel. No. 1,016,360; Feb. 6; Sp. p. 271; Gaz. vol. 175; p. 42.
Harrow. C. E. White. No. 1,016,807; Feb. 6; Sp. p. 1277; Gaz. vol. 175; p. 196.
Harrow. E. D. Fergerson. No. 1,018,103; Feb. 20; Sp. p. 4170; Gaz. vol. 175; p. 717.
Harrow. G. E. Davis. No. 1,018,301; Feb. 20; Sp. p. 4568; Gaz. vol. 175; p. 764.
Harrow. J. F. Robbins. No. 1,018,344; Feb. 20; Sp. p. 4643; Gaz. vol. 175; p. 798.
Harrow. W. E. Ross. No. 1,018,928; Feb. 27; Sp. p. 5971; Gaz. vol. 175; p. 1029.
Harrow, Blade-. C. L. Wall. No. 1,018,281; Feb. 20; Sp. p. 4524; Gaz. vol. 175; p. 778.
Harvester and husk-baler, Corn-. M. A. Gibbons. No. 1,017,025; Feb. 13; Sp. p. 2035; Gaz. vol. 175; p. 512.
Harvester, Corn-. A. P. Gubrud. No. 1,016,623; Feb. 6; Sp. p. 909; Gaz. vol. 175; p. 136.
Harvester, Corn-. H. P. Troutman. No. 1,017,628; Feb. 20; Sp. p. 3515; Gaz. vol. 175; p. 617.
Harvester, Potato-. C. Mowry. No. 1,018,071; Feb. 20; Sp. p. 4101; Gaz. vol. 175; p. 706.
Harvester, Vegetable-. M. Stoltz. No. 1,016,976; Feb. 13; Sp. p. 1658; Gaz. vol. 175; p. 291.
Harvesters, Butt-removing attachment for corn-. W. H. Morris. No. 1,017,987; Feb. 20; Sp. p. 3900; Gaz. vol. 175; p. 676.
Hasp-fastener. G. Unteh. No. 1,017,709; Feb. 20; Sp. p. 3214; Gaz. vol. 175; p. 577.
Hasp-fastener for doors. F. W. Chaffee. No. 1,017,135; Feb. 13; Sp. p. 2021; Gaz. vol. 175; p. 347.
Hasp-fastener for doors. F. W. Chaffee. No. 1,017,136; Feb. 13; Sp. p. 2023; Gaz. vol. 175; p. 347.
Hat. F. W. Nash. No. 1,016,892; Feb. 6; Sp. p. 1447; Gaz. vol. 175; p. 225.
Hat-conformator. J. E. McKinless. No. 1,017,009; Feb. 13; Sp. p. 1731; Gaz. vol. 175; p. 302.
Hat-fastener, Lady's. J. Belasco. No. 1,017,372; Feb. 13; Sp. p. 2525; Gaz. vol. 175; p. 427.
Hat-frame machine. M. M. Ayres. No. 1,017,841; Feb. 20; Sp. p. 3560; Gaz. vol. 175; p. 624.
Hat-pin. O. Korndoerfer. No. 1,018,420; Feb. 6; Sp. p. 408; Gaz. vol. 175; p. 64.
Hat-pin. S. Stransky. No. 1,018,719; Feb. 6; Sp. p. 1099; Gaz. vol. 175; p. 169.
Hat-pin fastener. L. Lockrey. No. 1,018,200; Feb. 20; Sp. p. 4372; Gaz. vol. 175; p. 750.
Hat-pin guard. T. Sokolowski and W. Bussek. No. 1,017,817; Feb. 20; Sp. p. 3506; Gaz. vol. 175; p. 616.
Hat-pin, Lady's. W. L. Macomber. No. 1,016,697; Feb. 6; Sp. p. 1059; Gaz. vol. 175; p. 161.
Hat-pin-point protector. G. P. Dillon. No. 1,016,678; Feb. 6; Sp. p. 1015; Gaz. vol. 175; p. 154.
Hat-pin-point protector. L. Barbalics. No. 1,018,290; Feb. 20; Sp. p. 4552; Gaz. vol. 175; p. 781.
Hat-pin protector. C. H. Heops. No. 1,018,943; Feb. 13; Sp. p. 1581; Gaz. vol. 175; p. 279.
Hat-pouncing machine. E. Holmes. No. 1,018,562; Feb. 27; Sp. p. 5213; Gaz. vol. 175; p. 907.
Hat presser and shaper. C. C. Keith. No. 1,016,680; Feb. 27; Sp. p. 5455; Gaz. vol. 175; p. 946.
Hats, Nap-raising machine for felt. J. H. Starr. No. 1,017,924; Feb. 20; Sp. p. 3771; Gaz. vol. 175; p. 655.
Hats, Nap-raising machine for felt. G. H. Brush. No. 1,017,952; Feb. 20; Sp. p. 3830; Gaz. vol. 175; p. 664.
Hatchway-cover-shifting mechanism. E. J. Potvin. No. 1,018,777; Feb. 27; Sp. p. 5666; Gaz. vol. 175; p. 979.
Hay in the fields, Device for curing. J. Liesenfeld. No. 1,017,429; Feb. 13; Sp. p. 2656; Gaz. vol. 175; p. 449.
Hay-loader attachment. P. R. Lovell and E. H. Michael. No. 1,017,433; Feb. 13; Sp. p. 2662; Gaz. vol. 175; p. 450.
Hay-press. F. W. Tanner. No. 1,017,822; Feb. 20; Sp. p. 3514; Gaz. vol. 175; p. 617.
Hay-rack. J. E. Edmonds. No. 1,018,175; Feb. 20; Sp. p. 4323; Gaz. vol. 175; p. 742.
Hay rake and loader. H. E. Ellison. No. 1,016,740; Feb. 6; Sp. p. 1138; Gaz. vol. 175; p. 175.
Heat-accumulator. W. Schwarz. No. 1,018,083; Feb. 20; Sp. p. 4116; Gaz. vol. 175; p. 710.
Heat-conserving apparatus. H. T. Markee. No. 1,016,346; Feb. 6; Sp. p. 251; Gaz. vol. 175; p. 39.
Heater: *See* Electric heater; Hot-water heater; Orchard-heater; Radiator-heater; Tank-heater; Water-heater.
Heater. J. S. Walker. No. 1,018,793; Feb. 27; Sp. p. 5604; Gaz. vol. 175; p. 984.
Heating apparatus. G. Rose. No. 1,016,778; Feb. 6; Sp. p. 1225; Gaz. vol. 175; p. 189.
Heating apparatus. E. J. Smith. No. 1,016,969; Feb. 13; Sp. p. 1643; Gaz. vol. 175; p. 289.
Heating apparatus. W. Andrew. No. 1,018,472; Feb. 27; Sp. p. 4946; Gaz. vol. 175; p. 874.
Heating apparatus, Manufacture of. H. Beck. No. 1,016,910; Feb. 6; Sp. p. 1497; Gaz. vol. 175; p. 231.
Heating device. A. T. Ronstrom. No. 1,018,445; Feb. 27; Sp. p. 4893; Gaz. vol. 175; p. 866.
Heating-furnace. S. S. Wales. No. 1,018,999; Feb. 27; Sp. p. 6141; Gaz. vol. 175; p. 1055.
Heating system for chicken-culture apparatus. V. C. Koons. No. 1,018,714; Feb. 27; Sp. p. 5526; Gaz. vol. 175; p. 957.
Heating systems, Pressure-governor for. G. Smith. No. 1,016,372; Feb. 6; Sp. p. 298; Gaz. vol. 175; p. 47.
Heel-attaching machine. T. Lund. No. 1,017,778; Feb. 20; Sp. p. 3421; Gaz. vol. 175; p. 602.
Heel-clamp. H. G. Schmitt. No. 1,016,961; Feb. 13; Sp. p. 1629; Gaz. vol. 175; p. 286.
Heel-compressor. J. E. Glidden. No. 1,017,406; Feb. 13; Sp. p. 2599; Gaz. vol. 175; p. 441.
Heel-lifts, heels, &c., Machine for pressing. T. Bostock. No. 1,018,549; Feb. 27; Sp. p. 5191; Gaz. vol. 175; p. 902.
Hemp-brake. F. O'Neill, Jr. No. 1,017,582; Feb. 13; Sp. p. 2953; Gaz. vol. 175; p. 499.
Hickey. W. R. McLain. No. 1,017,985; Feb. 20; Sp. p. 3906; Gaz. vol. 175; p. 676.
Hinge. F. N. Sharp. No. 1,018,449; Feb. 27; Sp. p. 4903; Gaz. vol. 175; p. 867.
Hinge, Closet-seat. R. McCord. No. 1,018,722; Feb. 27; Sp. p. 5541; Gaz. vol. 175; p. 959.
Hinge, Lock-. F. W. Becker. No. 1,018,691; Feb. 27; Sp. p. 5474; Gaz. vol. 175; p. 949.
Hinge, Spring-. W. C. Nolte. No. 1,016,515; Feb. 6; Sp. p. 853; Gaz. vol. 175; p. 98.
Hinges, Aligning-plate for door-. O. Katzenberger. No. 1,018,391; Feb. 20; Sp. p. 4765; Gaz. vol. 175; p. 815.
Hinges, Applying. A. S. Lowden. No. 1,016,341; Feb. 6; Sp. p. 239; Gaz. vol. 175; p. 37.
Hip-reducer and hose-supporter, Combined. M. E. G. Darrah. No. 1,016,614; Feb. 6; Sp. p. 887; Gaz. vol. 175; p. 132.
Hitching device. J. T. and F. H. McClendon. No. 1,016,348; Feb. 6; Sp. p. 256; Gaz. vol. 175; p. 40.
Hog-suspending device. G. Stephens, Jr. No. 1,017,185; Feb. 13; Sp. p. 2128; Gaz. vol. 175; p. 364.
Holder. M. B. Morgan. No. 1,016,853; Feb. 6; Sp. p. 262; Gaz. vol. 175; p. 41.
Holder or mail-box. C. O. Keary and J. R. Carmer. No. 1,018,913; Feb. 27; Sp. p. 5943; Gaz. vol. 175; p. 1024.
Hook: *See* Garment-hook; Ladder-hook; Signal-device hook; Whiffletree-hook.
Hook. N. C. Garland. No. 1,017,530; Feb. 13; Sp. p. 2865; Gaz. vol. 175; p. 483.
Hoop: *See* Cheese-hoop.
Hoop-lug. N. Johnson. No. 1,018,329; Feb. 27; Sp. p. 5777; Gaz. vol. 175; p. 998.
Horison for ships, &c., Artificial. W. Hins. No. 1,016,500; Feb. 6; Sp. p. 604; Gaz. vol. 175; p. 93.
Horns, Sounding-. A. Williamson. No. 1,017,933; Feb. 20; Sp. p. 3797; Gaz. vol. 175; p. 659.
Horse-detacher. G. R. Harrison. No. 1,018,707; Feb. 27; Sp. p. 5514; Gaz. vol. 175; p. 954.
Horseshoe. W. Ruff. No. 1,016,853; Feb. 6; Sp. p. 1372; Gaz. vol. 175; p. 211.
Horseshoe. J. A. Neil. No. 1,017,228; Feb. 13; Sp. p. 2233; Gaz. vol. 175; p. 380.
Horseshoe-calk attachment. R. Paton. No. 1,016,708; Feb. 6; Sp. p. 1076; Gaz. vol. 175; p. 165.
Hose-coupling. J. G. Haymaker. No. 1,016,744; Feb. 6; Sp. p. 1144; Gaz. vol. 175; p. 176.
Hose-coupling. E. Le Breton. No. 1,017,775; Feb. 20; Sp. p. 3412; Gaz. vol. 175; p. 601.
Hose-coupling. S. S. Watson. No. 1,019,000; Feb. 27; Sp. p. 6142; Gaz. vol. 175; p. 1056.
Hose-nozzle. G. W. McCoole. No. 1,017,638; Feb. 13; Sp. p. 3068; Gaz. vol. 175; p. 517.
Hose-nozzle. H. F. Goetz. No. 1,017,966; Feb. 20; Sp. p. 3861; Gaz. vol. 175; p. 668.
Hose-nozzle. S. Frey. No. 1,018,310; Feb. 20; Sp. p. 4585; Gaz. vol. 175; p. 787.

Hose-nozzle holder, Adjustable. C. J. Lundquist. No. 1,016,281; Feb. 6; Sp. p. 105; Gaz. vol. 175; p. 16.
Hose-patch. S. McRae and J. H. Blom. No. 1,017,265; Feb. 13; Sp. p. 2304; Gaz. vol. 175; p. 392.
Hose-rack. H. J. M. Howard. No. 1,018,764; Feb. 27; Sp. p. 5641; Gaz. vol. 175; p. 975.
Hose-reel. R. W. Glenn. No. 1,017,532; Feb. 13; Sp. p. 2870; Gaz. vol. 175; p. 484.
Hosiery. A. W. Newman. No. 1,017,310; Feb. 13; Sp. p. 2397; Gaz. vol. 175; p. 408.
Hot-water heater. J. B. Miller. No. 1,018,256; Feb. 20; Sp. p. 4485; Gaz. vol. 175; p. 770.
House: *See* Poultry-house; Smoke-house.
Hub, Pneumatic wheel-. F. J. Koch. No. 1,018,428; Feb. 27; Sp. p. 4859; Gaz. vol. 175; p. 860.
Humidor. W. H. Browning. No. 1,017,379; Feb. 13; Sp. p. 2535; Gaz. vol. 175; p. 430.
Hydraulic jack. F. I. Joyce. No. 1,016,692; Feb. 6; Sp. p. 1045; Gaz. vol. 175; p. 159.
Hydraulic motor. P. T. Coffield. No. 1,018,961; Feb. 27; Sp. p. 6042; Gaz. vol. 175; p. 1042.
Hydraulic-power plant. C. O. Tappan. No. 1,018,278; Feb. 20; Sp. p. 4520; Gaz. vol. 175; p. 777.
Hydrocarbon-burner. O. F. Shearman and C. F. Erdmann. No. 1,017,180; Feb. 13; Sp. p. 2113; Gaz. vol. 175; p. 362.
Hydrocarbon-burner. M. S. Clarke. No. 1,017,621; Feb. 13; Sp. p. 3025; Gaz. vol. 175; p. 511.
Hydrocarbon liquids, Purifying. T. S. Hamilton. No. 1,018,971; Feb. 27; Sp. p. 6075; Gaz. vol. 175; p. 1045.
Ice-box or refrigerator lining. W. von Baumbach. No. 1,017,633; Feb. 13; Sp. p. 3057; Gaz. vol. 175; p. 515.
Ice-cream freezer. J. N. Beekman. No. 1,017,494; Feb. 13; Sp. p. 2793; Gaz. vol. 175; p. 471.
Ice-cream-storage can. L. R. Steel. No. 1,016,974; Feb. 13; Sp. p. 1653; Gaz. vol. 175; p. 290.
Ice-cutter. J. Wirkus. No. 1,018,597; Feb. 27; Sp. p. 5200; Gaz. vol. 175; p. 918.
Ice-cutting apparatus. F. B. Clark. No. 1,016,550; Feb. 6; Sp. p. 748; Gaz. vol. 175; p. 110.
Ice-making apparatus. W. Griesser. No. 1,018,705; Feb. 27; Sp. p. 5504; Gaz. vol. 175; p. 953.
Ice-making machines, Combined condensing and evaporating apparatus for. C. Senssenbrenner. No. 1,017,695; Feb. 20; Sp. p. 3186; Gaz. vol. 175; p. 573.
Ice-motor. A. Grub. No. 1,016,687; Feb. 6; Sp. p. 1033; Gaz. vol. 175; p. 158.
Igniter. M. Brandstätter. No. 1,017,505; Feb. 13; Sp. p. 2812; Gaz. vol. 175; p. 475.
Igniter, Frictional pocket-. F. Delmel. No. 1,018,100; Feb. 20; Sp. p. 4164; Gaz. vol. 175; p. 716.
Ignition device. J. F. Cavanagh. No. 1,016,399; Feb. 6; Sp. p. 367; Gaz. vol. 175; p. 58.
Ignition system, Single-spark. E. S. Lincoln. No. 1,017,300; Feb. 13; Sp. p. 2370; Gaz. vol. 175; p. 404.
Ignition-system switch. G. H. Boynton. No. 1,017,948; Feb. 20; Sp. p. 3817; Gaz. vol. 175; p. 662.
Ignition systems, Double or twin interrupter for. J. M. Smith. No. 1,018,137; Feb. 20; Sp. p. 4239; Gaz. vol. 175; p. 728.
Impression apparatus. L. Huffman. No. 1,018,617; Feb. 27; Sp. p. 5323; Gaz. vol. 175; p. 924.
Impression-holder. W. F. Wilson. No. 1,018,466; Feb. 27; Sp. p. 4936; Gaz. vol. 175; p. 872.
Incandescent-mantle protector. M. Bendix. No. 1,016,391; Feb. 6; Sp. p. 344; Gaz. vol. 175; p. 55.
Incubator. P. H. Herndon. No. 1,018,192; Feb. 20; Sp. p. 4358; Gaz. vol. 175; p. 748.
Incubator. P. H. Herndon. No. 1,018,357; Feb. 20; Sp. p. 4668; Gaz. vol. 175; p. 803.
Incubator, Wall-supported. E. F. Carpenter. No. 1,016,982; Feb. 13; Sp. p. 1679; Gaz. vol. 175; p. 293.
Index system. E. A. Dunn. No. 1,017,089; Feb. 13; Sp. p. 1928; Gaz. vol. 175; p. 331.
Indicator: *See* Car-indicator; Street-indicator; Vehicle direction-indicator.
Indicator. E. P. Rodgers. No. 1,017,806; Feb. 20; Sp. p. 3484; Gaz. vol. 175; p. 613.
Indicator-gage. J. E. Emerson. No. 1,016,616; Feb. 6; Sp. p. 589; Gaz. vol. 175; p. 133.
Ingot-mold. H. D. Hibbard. No. 1,018,906; Feb. 27; Sp. p. 5932; Gaz. vol. 175; p. 1022.
Injector. C. Pottel. No. 1,016,772; Feb. 6; Sp. p. 1216; Gaz. vol. 175; p. 187.
Ink-fountain. J. F. Mahlstedt. No. 1,018,434; Feb. 27; Sp. p. 4870; Gaz. vol. 175; p. 862.
Inkstand. I. Rosenfeld. No. 1,016,365; Feb. 6; Sp. p. 280; Gaz. vol. 175; p. 44.
Inkstand. F. Hejnal. No. 1,018,189; Feb. 20; Sp. p. 4355; Gaz. vol. 175; p. 747.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,449; Feb. 6; Sp. p. 485; Gaz. vol. 175; p. 74.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,450; Feb. 6; Sp. p. 491; Gaz. vol. 175; p. 75.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,451; Feb. 6; Sp. p. 494; Gaz. vol. 175; p. 75.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,452; Feb. 6; Sp. p. 497; Gaz. vol. 175; p. 75.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,453; Feb. 6; Sp. p. 499; Gaz. vol. 175; p. 76.
Insect-destroying apparatus, Electrical. F. S. Smith. No. 1,016,716; Feb. 6; Sp. p. 1090; Gaz. vol. 175; p. 168.
Insect-gathering machine. T. J. Wheeler. No. 1,016,961; Feb. 6; Sp. p. 1386; Gaz. vol. 175; p. 214.
Insect-killer. J. Jackson. No. 1,018,244; Feb. 20; Sp. p. 4458; Gaz. vol. 175; p. 765.
Insects, Destroying. F. S. Smith. No. 1,016,790; Feb. 6; Sp. p. 1245; Gaz. vol. 175; p. 192.
Insole. G. L. Preble. No. 1,018,132; Feb. 20; Sp. p. 4228; Gaz. vol. 175; p. 727.
Insole, Welt-. S. M. Bradley. No. 1,017,077; Feb. 13; Sp. p. 1897; Gaz. vol. 175; p. 327.
Instrument-case, Antiseptic. E. A. Teets and H. V. Varner. No. 1,016,529; Feb. 6; Sp. p. 686; Gaz. vol. 175; p. 108.
Insulator. P. Rutzky. No. 1,016,780; Feb. 6; Sp. p. 1228; Gaz. vol. 175; p. 189.
Insulators, Process and apparatus for making. J. P. Dahl-Jensen. No. 1,018,494; Feb. 27; Sp. p. 4982; Gaz. vol. 175; p. 878.
Interlocking bracket, Sectional. J. E. Kelly. No. 1,016,694; Feb. 6; Sp. p. 1049; Gaz. vol. 175; p. 160.
Internal-combustion engine. A. S. Krotz. No. 1,016,335; Feb. 6; Sp. p. 225; Gaz. vol. 175; p. 35.
Internal-combustion engine. R. Carmichael. No. 1,016,981; Feb. 13; Sp. p. 1674; Gaz. vol. 175; p. 293.
Internal-combustion engine. E. H. Belden. No. 1,017,073; Feb. 13; Sp. p. 1873; Gaz. vol. 175; p. 325.
Internal-combustion engine. E. H. Belden. No. 1,017,074; Feb. 13; Sp. p. 1884; Gaz. vol. 175; p. 325.
Internal-combustion engine. E. H. Belden. No. 1,017,075; Feb. 13; Sp. p. 1890; Gaz. vol. 175; p. 326.
Internal-combustion engine. O. C. Blair. No. 1,018,986; Feb. 20; Sp. p. 4150; Gaz. vol. 175; p. 714.
Internal-combustion engine. W. I. Twombly. No. 1,018,532; Feb. 27; Sp. p. 5143; Gaz. vol. 175; p. 886.
Internal-combustion engine. C. A. Dawley. No. 1,018,742; Feb. 27; Sp. p. 5587; Gaz. vol. 175; p. 967.
Internal-combustion engine and compressed-air engine, Combined. C. W. Baker. No. 1,016,603; Feb. 6; Sp. p. 857; Gaz. vol. 175; p. 128.
Internal-combustion engine of the tandem type. T. Rigby. No. 1,018,372; Feb. 20; Sp. p. 4720; Gaz. vol. 175; p. 808.
Internal-combustion rotary engine. W. Barnes. No. 1,018,953; Feb. 27; Sp. p. 6020; Gaz. vol. 175; p. 1038.
Iodin compounds, Preparing organic. J. L. Turner. No. 1,016,799; Feb. 6; Sp. p. 1267; Gaz. vol. 175; p. 196.
Iron: *See* Curling-iron; Flat-iron; Laundry-iron; Sad-iron.
Iron, Denitrogenizing practically pure. R. D. Campbell. No. 1,017,620; Feb. 13; Sp. p. 3024; Gaz. vol. 175; p. 511.
Iron, Producing practically pure. A. P. Scott. No. 1,017,473; Feb. 13; Sp. p. 2757; Gaz. vol. 175; p. 464.
Ironer, Flat-work. F. P. Hess. No. 1,016,992; Feb. 13; Sp. p. 1699; Gaz. vol. 175; p. 296.
Ironing-board. E. F. Pfund. No. 1,016,288; Feb. 6; Sp. p. 116; Gaz. vol. 175; p. 19.
Ironing-board. W. E. Koch. No. 1,017,155; Feb. 13; Sp. p. 2063; Gaz. vol. 175; p. 354.
Ironing-board. C. A. Baker. No. 1,017,842; Feb. 20; Sp. p. 3562; Gaz. vol. 175; p. 625.
Ironing-board. J. Burr. No. 1,018,295; Feb. 20; Sp. p. 4559; Gaz. vol. 175; p. 782.
Ironing-board attachment. G. C. Lechtrop. No. 1,016,337; Feb. 6; Sp. p. 231; Gaz. vol. 175; p. 35.
Ironing-board attachment. H. M. North. No. 1,016,848; Feb. 6; Sp. p. 1357; Gaz. vol. 175; p. 209.
Irrigating apparatus. W. P. McMillan. No. 1,017,578; Feb. 13; Sp. p. 2947; Gaz. vol. 175; p. 493.
Irrigation system. C. W. McKee. No. 1,018,251; Feb. 20; Sp. p. 4473; Gaz. vol. 175; p. 768.
Jack: *See* Door-jack; Hydraulic jack; Lifting-jack; Pipe-lifting and lowering jack; Wagon-jack; Wheel-jack.
Jar, bottle, canister, &c., for holding sweetmeats and stopper therefor. J. Mackintosh. No. 1,016,508; Feb. 6; Sp. p. 623; Gaz. vol. 175; p. 95.
Jewels, Device for setting pallet-. A. Hurwitz. No. 1,016,829; Feb. 6; Sp. p. 1321; Gaz. vol. 175; p. 203.
Joint: *See* Flume-joint; Pipe-joint; Rail-joint; Railway-joint; Railway-rail joint.
Jolt-ramming apparatus. E. H. Mumford. No. 1,017,665; Feb. 20; Sp. p. 3167; Gaz. vol. 175; p. 570.
Journal-box. W. R. Buss and N. Yonkman. No. 1,017,245; Feb. 13; Sp. p. 2267; Gaz. vol. 175; p. 385.
Journal-box. C. F. Beers. No. 1,017,278; Feb. 13; Sp. p. 2329; Gaz. vol. 175; p. 396.
Journal-box. F. H. Koerber. No. 1,017,295; Feb. 13; Sp. p. 2358; Gaz. vol. 175; p. 402.
Journal-box pedestal. G. M. Slack. No. 1,017,113; Feb. 13; Sp. p. 1971; Gaz. vol. 175; p. 339.
Key: *See* Break-key; Service-box key; Telegraph-key.
Kiln: *See* Drying-kiln; Roasting-kiln.
Kindergarten-table. A. G. Robbins. No. 1,018,373; Feb. 20; Sp. p. 4721; Gaz. vol. 175; p. 808.
Kinematographs, Registering device for. E. A. Ivatts. No. 1,018,827; Feb. 27; Sp. p. 5775; Gaz. vol. 175; p. 997.
Knife: *See* Brush-cutting knife; Shoemaker's knife.
Knitted fabric and hosiery made therefrom. R. W. Scott. No. 1,018,184; Feb. 20; Sp. p. 4233; Gaz. vol. 175; p. 727.
Knitting-machine. A. C. Timming. No. 1,017,705; Feb. 20; Sp. p. 3206; Gaz. vol. 175; p. 576.
Knitting-machine. F. Walters. No. 1,018,144; Feb. 20; Sp. p. 4257; Gaz. vol. 175; p. 731.
Knitting machine, Circular-. E. B. Kilbourn. No. 1,018,063; Feb. 20; Sp. p. 4077; Gaz. vol. 175; p. 702.

Knitting machines, Sectional plating device for straight-. P. Guenther. No. 1,018,612; Feb. 27; Sp. p. 5314; Gaz. vol. 175; p. 922.
Knob, Drawer-. E. S. Boudrot. No. 1,016,392; Feb. 6; Sp. p. 345; Gaz. vol. 175; p. 56.
Knockdown box and crate. H. M. Alderfer. No. 1,017,194; Feb. 13; Sp. p. 2148; Gaz. vol. 175; p. 367.
Labeling machine, Can-. T. Nimble. No. 1,018,398; Feb. 20; Sp. p. 4781; Gaz. vol. 175; p. 818.
Lace fastener, Shoe-. A. E. Franz. No. 1,018,557; Feb. 27; Sp. p. 5212; Gaz. vol. 175; p. 906.
Ladder-hook. F. W. Chickering. No. 1,018,877; Feb. 27; Sp. p. 5868; Gaz. vol. 175; p. 1012.
Ladder, Wheeled. A. C. Chamberlain and J. W. Tincher. No. 1,017,382; Feb. 13; Sp. p. 2545; Gaz. vol. 175; p. 431.
Lamp. W. S. Hamm. No. 1,018,187; Feb. 20; Sp. p. 4353; Gaz. vol. 175; p. 747.
Lamp, Acetylene-. H. Kerst. No. 1,016,275; Feb. 6; Sp. p. 72; Gaz. vol. 175; p. 14.
Lamp, Adjustable hanging. W. H. Swift. No. 1,016,588; Feb. 6; Sp. p. 522; Gaz. vol. 175; p. 123.
Lamp-adjusting mechanism. J. Andelik. No. 1,016,726; Feb. 6; Sp. p. 1114; Gaz. vol. 175; p. 171.
Lamp and burner, Vapor. E. and J. Lauterbach. No. 1,016,630; Feb. 6; Sp. p. 641; Gaz. vol. 175; p. 141.
Lamp, Arc-. T. J. and W. H. Prinz. No. 1,016,773; Feb. 6; Sp. p. 1218; Gaz. vol. 175; p. 187.
Lamp, Arc-. T. L. Carbone. No. 1,017,641; Feb. 13; Sp. p. 3071; Gaz. vol. 175; p. 517.
Lamp-bracket. C. B. Bartley. No. 1,016,730; Feb. 6; Sp. p. 1119; Gaz. vol. 175; p. 172.
Lamp, Convertible. F. D. Spear. No. 1,018,017; Feb. 20; Sp. p. 3963; Gaz. vol. 175; p. 686.
Lamp for automobiles, Dirigible. E. H. Wallace. No. 1,016,722; Feb. 6; Sp. p. 1106; Gaz. vol. 175; p. 170.
Lamp, Miner's. W. E. Pinkney. No. 1,016,645; Feb. 6; Sp. p. 950; Gaz. vol. 175; p. 143.
Lamp-receptacle. J. S. Stewart. No. 1,016,718; Feb. 6; Sp. p. 1096; Gaz. vol. 175; p. 168.
Lamp, Signal-. A. H. Handlan, Jr. No. 1,016,624; Feb. 6; Sp. p. 914; Gaz. vol. 175; p. 136.
Lamp, Signal-. F. D. Spear. No. 1,018,016; Feb. 20; Sp. p. 3961; Gaz. vol. 175; p. 686.
Lamp-socket. J. M. Hall. No. 1,017,051; Feb. 13; Sp. p. 1822; Gaz. vol. 175; p. 316.
Lamp socket, Electric-. J. H. Goebel. No. 1,017,260; Feb. 13; Sp. p. 2296; Gaz. vol. 175; p. 390.
Lamp socket, Electric-. W. G. Clark. No. 1,018,480; Feb. 27; Sp. p. 4978; Gaz. vol. 175; p. 877.
Lamp, Vehicle-. J. A. Joncas. No. 1,017,000; Feb. 13; Sp. p. 1715; Gaz. vol. 175; p. 299.
Lamp, Vehicle-. C. L. Betts. No. 1,018,030; Feb. 20; Sp. p. 3995; Gaz. vol. 175; p. 691.
Lamps, Incandescent bodies for electric. A. Just and F. Hanaman. No. 1,018,502; Feb. 27; Sp. p. 5031; Gaz. vol. 175; p. 885.
Lamps, Machine for manufacturing parts of incandescent. G. W. Beadle. No. 1,017,072; Feb. 13; Sp. p. 1871; Gaz. vol. 175; p. 324.
Lamps, Vise for holding vehicle-. B. V. Christiana. No. 1,018,914; Feb. 6; Sp. p. 1503; Gaz. vol. 175; p. 233.
Land-rolling machine. C. L. Lilleberg. No. 1,017,430; Feb. 13; Sp. p. 2659; Gaz. vol. 175; p. 449.
Last. A. G. Pitz. No. 1,016,896; Feb. 13; Sp. p. 1669; Gaz. vol. 175; p. 293.
Last for making shoes, Sectional. E. J. Bliss and E. F. White. No. 1,018,959; Feb. 27; Sp. p. 6033; Gaz. vol. 175; p. 1041.
Last-lathe. E. J. Prindle. No. 1,017,798; Feb. 20; Sp. p. 3468; Gaz. vol. 175; p. 610.
Last-lock. E. O. Krentler. No. 1,017,058; Feb. 13; Sp. p. 1841; Gaz. vol. 175; p. 319.
Last, Repairing and stretching. J. Heuyard. No. 1,016,827; Feb. 6; Sp. p. 1213; Gaz. vol. 175; p. 203.
Lasting-machine. J. Party. No. 1,016,769; Feb. 6; Sp. p. 1206; Gaz. vol. 175; p. 185.
Lasting-machine. H. B. Winkley and F. L. Alley. No. 1,017,124; Feb. 13; Sp. p. 1992; Gaz. vol. 175; p. 342.
Lasting-machine. H. B. Winkley and J. C. Smith. No. 1,018,022; Feb. 20; Sp. p. 3970; Gaz. vol. 175; p. 688.
Lasting-machine. H. B. Winkley. No. 1,018,023; Feb. 20; Sp. p. 3978; Gaz. vol. 175; p. 688.
Lasting-machine. H. B. Winkley and F. L. Alley. No. 1,018,025; Feb. 20; Sp. p. 3981; Gaz. vol. 175; p. 689.
Lasting-machine. M. Brock. No. 1,018,477; Feb. 27; Sp. p. 4957; Gaz. vol. 175; p. 876.
Lasting-machine. J. B. Crisp. No. 1,018,965; Feb. 27; Sp. p. 6051; Gaz. vol. 175; p. 1043.
Lasting-machine pincers. H. B. Winkley. No. 1,018,024; Feb. 20; Sp. p. 3979; Gaz. vol. 175; p. 689.
Latch, Door-. F. J. Lee. No. 1,018,716; Feb. 27; Sp. p. 5530; Gaz. vol. 175; p. 986.
Latch, Night-. D. W. Weed. No. 1,017,238; Feb. 13; Sp. p. 2250; Gaz. vol. 175; p. 383.
Latch, Sliding-door. B. Lauritsen. No. 1,016,422; Feb. 6; Sp. p. 411; Gaz. vol. 175; p. 65.
Lathe-former. G. B. Gusmer. No. 1,018,184; Feb. 20; Sp. p. 4249; Gaz. vol. 175; p. 746.
Lathe stop mechanism, Turret-. H. Dreese. No. 1,017,859; Feb. 20; Sp. p. 3599; Gaz. vol. 175; p. 630.
Lathe tool-holder. J. W. Housebergs. No. 1,017,974; Feb. 20; Sp. p. 3885; Gaz. vol. 175; p. 672.
Lathe-tool-setting apparatus. L. Tabor and H. K. Hathaway. No. 1,017,703; Feb. 20; Sp. p. 3202; Gaz. vol. 175; p. 575.
Laundry-iron. N. E. Walker. No. 1,017,933; Feb. 20; Sp. p. 3790; Gaz. vol. 175; p. 658.
Laundry wrapper or package for men's shirts. L. Herman. No. 1,018,906; Feb. 27; Sp. p. 5931; Gaz. vol. 175; p. 1022.
Lavatory-fittings, Supply-pipe for. A. C. Schuermann. No. 1,017,813; Feb. 20; Sp. p. 3494; Gaz. vol. 175; p. 614.
Lawn-trimmer. F. E. Nelson. No. 1,018,073; Feb. 20; Sp. p. 4106; Gaz. vol. 175; p. 707.
Lead-ring. F. P. Williams. No. 1,017,030; Feb. 13; Sp. p. 1775; Gaz. vol. 175; p. 309.
Leather-board machine. R. A. Lancey. No. 1,016,945; Feb. 13; Sp. p. 1585; Gaz. vol. 175; p. 280.
Leather-scarfing machine. J. F. Donnelly and H. Lyon. No. 1,018,171; Feb. 20; Sp. p. 4313; Gaz. vol. 175; p. 741.
Leather-shaving-machine cylinder. C. A. Lougee. No. 1,016,279; Feb. 6; Sp. p. 102; Gaz. vol. 175; p. 16.
Ledger-card, Savings-bank. C. W. Rosenthal. No. 1,017,915; Feb. 20; Sp. p. 3752; Gaz. vol. 175; p. 652.
Letters, Making metallic. N. M. Stanley. No. 1,018,138; Feb. 20; Sp. p. 4245; Gaz. vol. 175; p. 729.
Level. F. W. Dodds. No. 1,016,254; Feb. 6; Sp. p. 21; Gaz vol. 175; p. 6.
Level. J. F. Perlik. No. 1,017,457; Feb. 13; Sp. p. 2726; Gaz. vol. 175; p. 459.
Level, Shaft-. S. A. Barrickman and J. C. Holt. No. 1,018,863; Feb. 27; Sp. p. 5842; Gaz. vol. 175; p. 1008.
Level, Spirit-. G. Broadmore. No. 1,017,646; Feb. 20; Sp. p. 3088; Gaz. vol. 175; p. 558.
Level, Spirit-. A. Makowski. No. 1,018,719; Feb. 27; Sp. p. 5533; Gaz. vol. 175; p. 958.
Lever controller attachment. D. C. Smith. No. 1,016,448; Feb. 6; Sp. p. 484; Gaz. vol. 175; p. 74.
Lever, Safety ratchet-. H. P. Reston. No. 1,018,080; Feb. 20; Sp. p. 4114; Gaz. vol. 175; p. 709.
Lid-lifter. P. Bammer. No. 1,018,546; Feb. 27; Sp. p. 5182; Gaz. vol. 175; p. 901.
Life-line projectile. I. J. Glerum. No. 1,017,745; Feb. 20; Sp. p. 3801; Gaz. vol. 175; p. 691.
Life-lines, Pneumatic gun for throwing. I. J. Glerum. No. 1,017,746; Feb. 20; Sp. p. 3802; Gaz. vol. 175; p. 691.
Lifter: *See* Bed-lifter; Lid-lifter; Pump-rod lifter.
Lifting-jack. J. Olson. No. 1,018,127; Feb. 20; Sp. p. 4218; Gaz. vol. 175; p. 725.
Lifting-jacks, Socket-lever for. G. F. Freed. No. 1,017,899; Feb. 13; Sp. p. 2585; Gaz. vol. 175; p. 437.
Light: *See* Search-light; Signal-light.
Lightning-arrester. F. S. Chapman. No. 1,017,649; Feb. 20; Sp. p. 3092; Gaz. vol. 175; p. 559.
Lightning-arrester, Vacuum. F. S. Chapman and J. T. Greene. No. 1,017,648; Feb. 20; Sp. p. 3091; Gaz. vol. 175; p. 559.
Lightning-conductor. M. G. Mitchell. No. 1,017,308; Feb. 13; Sp. p. 2393; Gaz. vol. 175; p. 407.
Line-casting machines, Means for leveling multiple-face matrices in. C. Muehleisen and C. A. Albrecht. No. 1,017,444; Feb. 13; Sp. p. 2604; Gaz. vol. 175; p. 454.
Line-marker. C. E. Patric. No. 1,017,061; Feb. 13; Sp. p. 1847; Gaz. vol. 175; p. 320.
Link, Fusible. F. Voigtmann. No. 1,017,715; Feb. 20; Sp. p. 3224; Gaz. vol. 175; p. 580.
Link-guard. S. S. Piper. No. 1,017,458; Feb. 13; Sp. p. 2727; Gaz. vol. 175; p. 459.
Linotype-machine. H. Degener. No. 1,017,387; Feb. 13; Sp. p. 2559; Gaz. vol. 175; p. 433.
Linotype-machines, Automatic feeding device for. H. B. Nelson. No. 1,016,356; Feb. 6; Sp. p. 265; Gaz. vol. 175; p. 41.
Liquid and gaseous fuel burner, Hot-blast. A. W. Fess. No. 1,016,257; Feb. 6; Sp. p. 28; Gaz. vol. 175; p. 7.
Liquid-containers, System of indicating the contents of. O. Frederickson. No. 1,017,091; Feb. 13; Sp. p. 1933; Gaz. vol. 175; p. 332.
Liquid-cooler. W. E. Patnaude. No. 1,018,924; Feb. 27; Sp. p. 5966; Gaz. vol. 175; p. 1028.
Liquid-dispensing tank. O. A. Heckel. No. 1,016,990; Feb. 13; Sp. p. 1697; Gaz. vol. 175; p. 296.
Liquid heating and cooling apparatus. G. Sinclair. No. 1,017,816; Feb. 20; Sp. p. 3505; Gaz. vol. 175; p. 616.
Liquid-meter. J. V. Redfield and J. T. Bordley. No. 1,016,361; Feb. 6; Sp. p. 273; Gaz. vol. 175; p. 43.
Liquid-separator. G. E. Sanford. No. 1,016,366; Feb. 6; Sp. p. 281; Gaz. vol. 175; p. 45.
Liquid-treating apparatus. K. W. Bartlett. No. 1,017,728; Feb. 20; Sp. p. 3259; Gaz. vol. 175; p. 584.
Liquid-treating apparatus. K. W. Bartlett. No. 1,017,729; Feb. 20; Sp. p. 3263; Gaz. vol. 175; p. 584.
Liquids from solids, Apparatus for expressing. J. J. Berrigan. No. 1,018,958; Feb. 27; Sp. p. 6035; Gaz. vol. 175; p. 1040.
Listing and marking table. B. L. Herrick. No. 1,018,063; Feb. 20; Sp. p. 4046; Gaz. vol. 175; p. 700.
Loader and spreader, Combined. A. J. Parcels. No. 1,018,984; Feb. 27; Sp. p. 6109; Gaz. vol. 175; p. 1050.
Loading and unloading device. W. E. Ham and A. M. Cook. No. 1,017,290; Feb. 13; Sp. p. 2351; Gaz. vol. 175; p. 400.

Leads of material, Machine for transferring. F. R. Gunther. No. 1,017,740; Feb. 20; Sp. p. 3312; Gaz. vol. 175; p. 592.
Lock: See Barrel-lock; Bolt-lock; Car-door lock; Cock-lock; Combination-lock; Door-lock; Electric-plug lock; Last-lock; Nut-lock; Permutation-lock; Pocket-lock; Show-case lock; Spring-lock; Tumbler-lock; Wheel-lock; Window-lock.
Lock. E. B. Stone. No. 1,016,455; Feb. 6; Sp. p. 503; Gaz. vol. 175; p. 77.
Lock. E. B. Stone. No. 1,018,216; Feb. 20; Sp. p. 4307; Gaz. vol. 175; p. 756.
Lock. O. W. Bedell. No. 1,018,475; Feb. 27; Sp. p. 4963; Gaz. vol. 175; p. 875.
Lock. W. F. E. Gordon. No. 1,018,756; Feb. 27; Sp. p. 5021; Gaz. vol. 175; p. 972.
Lock. H. G. Voight. No. 1,018,998; Feb. 27; Sp. p. 6139; Gaz. vol. 175; p. 1055.
Lock bolt and nut. E. A. Pack and R. A. Moon. No. 1,017,583; Feb. 13; Sp. p. 2958; Gaz. vol. 175; p. 499.
Lock-cylinder control, Hotel-. A. Arena and E. L. Teich. No. 1,017,725; Feb. 20; Sp. p. 3252; Gaz. vol. 175; p. 583.
Lock-washer. W. H. Fry. No. 1,017,528; Feb. 13; Sp. p. 2863; Gaz. vol. 175; p. 483.
Locking device. W. R. Boone and C. A. Watson. No. 1,016,541; Feb. 6; Sp. p. 728; Gaz. vol. 175; p. 107.
Locking device for safe and vault doors, Auxiliary. A. E. Anakin. No. 1,018,952; Feb. 27; Sp. p. 6018; Gaz. vol. 175; p. 1038.
Locomotive and other fire-boxes, Automatic coal-feeding mechanism for. F. A. Jackson. No. 1,018,421; Feb. 27; Sp. p. 4846; Gaz. vol. 175; p. 858.
Locomotive ash-pan. C. H. Willis. No. 1,016,464; Feb. 6; Sp. p. 519; Gaz. vol. 175; p. 80.
Locomotive coupling mechanism. E. H. Schmidt. No. 1,016,782; Feb. 6; Sp. p. 1230; Gaz. vol. 175; p. 190.
Locomotive, Electric. J. E. Webster. No. 1,017,122; Feb. 13; Sp. p. 1980; Gaz. vol. 175; p. 342.
Locomotive fire-boxes, Fire-brick arch for. E. P. Stevens. No. 1,016,454; Feb. 6; Sp. p. 501; Gaz. vol. 175; p. 77.
Locomotive for self-propelled pile-drivers, &c. W. Ferris. No. 1,017,624; Feb. 13; Sp. p. 3030; Gaz. vol. 175; p. 512.
Locomotive, Internal-combustion. A. H. Eble. No. 1,018,889; Feb. 27; Sp. p. 5803; Gaz. vol. 175; p. 1016.
Locomotive or self-propelled vehicle for use upon railways. C. W. Baker. No. 1,016,602; Feb. 6; Sp. p. 552; Gaz. vol. 175; p. 128.
Log-loading machine. J. R. McGiffert. No. 1,017,306; Feb. 13; Sp. p. 2389; Gaz. vol. 175; p. 407.
Log peeling and trimming machine. A. Roberts and A. Libert. No. 1,016,442; Feb. 6; Sp. p. 472; Gaz. vol. 175; p. 72.
Logging-cars and the like, Stake and stake-seat for. E. A. Gastill. No. 1,018,818; Feb. 27; Sp. p. 5757; Gaz. vol. 175; p. 993.
Loom, Circular. C. Whalley. No. 1,017,192; Feb. 13; Sp. p. 2139; Gaz. vol. 175; p. 366.
Loom filling-barriers, Tension and take-up mechanism for. R. A. Hammond and S. E. Taft. No. 1,016,494; Feb. 6; Sp. p. 582; Gaz. vol. 175; p. 90.
Loom filling-detector. E. D. Thayer. No. 1,018,218; Feb. 20; Sp. p. 4400; Gaz. vol. 175; p. 756.
Loom picker-spindle. J. Martin. No. 1,017,225; Feb. 13; Sp. p. 2228; Gaz. vol. 175; p. 379.
Loom protecting mechanism. H. Talks. No. 1,018,686; Feb. 27; Sp. p. 5465; Gaz. vol. 175; p. 947.
Loom-shuttle. W. McCaslin. No. 1,017,782; Feb. 20; Sp. p. 3431; Gaz. vol. 175; p. 604.
Loom, Shuttle-changing. S. Toyoda. No. 1,018,089; Feb. 20; Sp. p. 4132; Gaz. vol. 175; p. 712.
Loom shuttle-motion. H. Baader. No. 1,018,601; Feb. 27; Sp. p. 5296; Gaz. vol. 175; p. 919.
Loom weft-feeler device. S. S. Jackson. No. 1,017,055; Feb. 13; Sp. p. 1834; Gaz. vol. 175; p. 318.
Looms, Batten structure for narrow-ware. F. Bens, Jr. No. 1,017,076; Feb. 13; Sp. p. 1896; Gaz. vol. 175; p. 327.
Looms, Bobbin-hopper for filling-changing. R. Crompton and W. Lunney. No. 1,018,168; Feb. 20; Sp. p. 4309; Gaz. vol. 175; p. 740.
Looms, Cloth-stop for. A. L. Tolman. No. 1,017,273; Feb. 13; Sp. p. 2317; Gaz. vol. 175; p. 394.
Looms, Thread-cutting mechanism for automatic. D. M. Hollins. No. 1,018,496; Feb. 27; Sp. p. 5019; Gaz. vol. 175; p. 883.
Lubricating apparatus. L. S. Watres. No. 1,017,935; Feb. 20; Sp. p. 3792; Gaz. vol. 175; p. 658.
Lubricating device. L. A. Sanford. No. 1,017,020; Feb. 13; Sp. p. 1748; Gaz. vol. 175; p. 305.
Lubricating system for engines. B. H. Turnage. No. 1,017,189; Feb. 13; Sp. p. 2134; Gaz. vol. 175; p. 365.
Lubricator: See Elevator-guide lubricator; Engine-lubricator.
Lubricator. J. P. Lavigne. No. 1,016,569; Feb. 6; Sp. p. 733; Gaz. vol. 175; p. 116.
Lubricator. F. S. Oliver. No. 1,016,642; Feb. 6; Sp. p. 947; Gaz. vol. 175; p. 142.
Luggage-carrier. J. A. Watson. No. 1,016,381; Feb. 6; Sp. p. 317; Gaz. vol. 175; p. 50.
Luminous fountain. S. Leichner. No. 1,018,431; Feb. 27; Sp. p. 4867; Gaz. vol. 175; p. 861.
Lunch-box, Folding. C. W. Schleier. No. 1,018,378; Feb. 20; Sp. p. 4732; Gaz. vol. 175; p. 810.
Machine-tools, Automatic tripping device for the feed mechanism of. L. H. Colburn. No. 1,017,635; Feb. 13; Sp. p. 3061; Gaz. vol. 175; p. 516.
Magazine-pipe. J. E. Boyd. No. 1,018,293; Feb. 20; Sp. p. 4556; Gaz. vol. 175; p. 782.
Magnetic needle. C. L. Seager. No. 1,016,732; Feb. 6; Sp. p. 1123; Gaz. vol. 175; p. 172.
Magnetic pole-pieces, Making. O. Wingaard. No. 1,017,681; Feb. 13; Sp. p. 1776; Gaz. vol. 175; p. 309.
Magneto. J. R. Seeley. No. 1,017,597; Feb. 13; Sp. p. 2963; Gaz. vol. 175; p. 504.
Mail-bag catcher and deliverer, Automatic. R. Koch. No. 1,017,976; Feb. 20; Sp. p. 3589; Gaz. vol. 175; p. 673.
Mail-bag rack. H. H. Brooks. No. 1,016,637; Feb. 27; Sp. p. 5364; Gaz. vol. 175; p. 931.
Mail-box. J. A. Fouts. No. 1,017,862; Feb. 20; Sp. p. 3605; Gaz. vol. 175; p. 632.
Mail-box. F. J. Dageles. No. 1,018,810; Feb. 27; Sp. p. 5737; Gaz. vol. 175; p. 990.
Mail-box, Electric-alarm. J. H. Corbett, Jr. No. 1,017,518; Feb. 13; Sp. p. 2884; Gaz. vol. 175; p. 478.
Mail-carrier's box. J. A. Kilpatrick. No. 1,018,325; Feb. 20; Sp. p. 4617; Gaz. vol. 175; p. 792.
Mail catcher and deliverer. B. Evans. No. 1,016,819; Feb. 6; Sp. p. 1204; Gaz. vol. 175; p. 200.
Mail-catching and delivering apparatus, Railway. F. R. Coyne and J. W. Eskholme. No. 1,016,478; Feb. 6; Sp. p. 550; Gaz. vol. 175; p. 85.
Mail catching and delivering apparatus, Railway. F. R. Coyne, S. G. Taylor, Jr., and J. W. Eskholme. No. 1,016,479; Feb. 6; Sp. p. 554; Gaz. vol. 175; p. 85.
Mail-crane. R. L. Porter. No. 1,017,902; Feb. 20; Sp. p. 3724; Gaz. vol. 175; p. 648.
Malting-cabinet. M. P. Exline. No. 1,016,821; Feb. 6; Sp. p. 1208; Gaz. vol. 175; p. 201.
Mandolin. W. H. De Wick. No. 1,018,651; Feb. 27; Sp. p. 5402; Gaz. vol. 175; p. 935.
Mandrel. J. W. Swartslander. No. 1,016,587; Feb. 6; Sp. p. 320; Gaz. vol. 175; p. 122.
Manger. R. M. Glor. No. 1,018,611; Feb. 27; Sp. p. 5313; Gaz. vol. 175; p. 922.
Mangers, Hay-gate for. W. A. Brown. No. 1,018,095; Feb. 20; Sp. p. 4156; Gaz. vol. 175; p. 714.
Manure-loader. W. Graetz. No. 1,017,094; Feb. 13; Sp. p. 1930; Gaz. vol. 175; p. 333.
Manure-spreader. L. A. Funk. (Reissue.) No. 13,309; Feb. 20; Sp. p. 4783; Gaz. vol. 175; p. 819.
Manure-spreader. S. K. Dennis. No. 1,018,743; Feb. 27; Sp. p. 5595; Gaz. vol. 175; p. 963.
Marine signal. G. E. Lane. No. 1,018,506; Feb. 27; Sp. p. 5040; Gaz. vol. 175; p. 887.
Mat: See Bath-mat.
Match-box. F. C. Jarvis. No. 1,016,412; Feb. 6; Sp. p. 395; Gaz. vol. 175; p. 62.
Match-box. W. H. Horn. No. 1,016,966; Feb. 13; Sp. p. 1707; Gaz. vol. 175; p. 298.
Match-packing machine. J. R. Nolan. No. 1,016,432; Feb. 6; Sp. p. 433; Gaz. vol. 175; p. 58.
Match-packing machine. C. H. Palmer and M. Paridon. No. 1,016,436; Feb. 6; Sp. p. 445; Gaz. vol. 175; p. 70.
Match-safe. M. E. Tuttle. No. 1,017,708; Feb. 20; Sp. p. 3213; Gaz. vol. 175; p. 577.
Matrix-holder. P. G. Muenzberger and G. Rettig, Jr. No. 1,016,433; Feb. 6; Sp. p. 437; Gaz. vol. 175; p. 69.
Mattress, Adjustable. A. Bords. No. 1,018,807; Feb. 27; Sp. p. 5730; Gaz. vol. 175; p. 989.
Mattress-turning apparatus. M. F. Hayes. No. 1,018,825; Feb. 27; Sp. p. 5770; Gaz. vol. 175; p. 996.
Measure, Shoe-. J. M. Bromley. No. 1,017,201; Feb. 13; Sp. p. 2163; Gaz. vol. 175; p. 360.
Measuring apparatus for liquids. G. T. Sundelin. No. 1,016,377; Feb. 6; Sp. p. 306; Gaz. vol. 175; p. 48.
Measuring apparatus, Permeability-. R. Leumann. No. 1,016,753; Feb. 6; Sp. p. 1157; Gaz. vol. 175; p. 179.
Measuring device, Automatic. C. A. Woods. No. 1,018,598; Feb. 27; Sp. p. 5291; Gaz. vol. 175; p. 918.
Measuring instrument, Electric. C. H. Thordarson. No. 1,016,803; Feb. 6; Sp. p. 148; Gaz. vol. 175; p. 23.
Meat, Curing. C. H. Truscott. No. 1,016,656; Feb. 6; Sp. p. 966; Gaz. vol. 175; p. 146.
Meat-cutter. C. W. Hottmann. No. 1,017,213; Feb. 13; Sp. p. 2195; Gaz. vol. 175; p. 374.
Mechanical movement. C. C. Bultman. No. 1,016,545; Feb. 6; Sp. p. 734; Gaz. vol. 175; p. 108.
Mechanical movement. P. Haback. No. 1,016,743; Feb. 6; Sp. p. 1143; Gaz. vol. 175; p. 176.
Mechanical movement. W. I. Twombly. No. 1,016,978; Feb. 13; Sp. p. 1661; Gaz. vol. 175; p. 292.
Mechanical movement. A. Schmutz. No. 1,018,991; Feb. 27; Sp. p. 6124; Gaz. vol. 175; p. 1062.
Mechanism actuated by a hot bearing. J. McWilliams and M. E. Cleeland. No. 1,018,283; Feb. 20; Sp. p. 4481; Gaz. vol. 175; p. 769.
Mercury compound, Organic. H. Schott. No. 1,016,784; Feb. 6; Sp. p. 1233; Gaz. vol. 175; p. 190.
Metal articles and parts, Smoothing and polishing. W. E. Parsons. No. 1,017,368; Feb. 13; Sp. p. 2360; Gaz. vol. 175; p. 393.
Metal articles, Shaping hollow. J. F. Lewis. No. 1,016,507; Feb. 6; Sp. p. 632; Gaz. vol. 175; p. 95.
Metal-bending machine. H. L. Soule. No. 1,016,660; Feb. 20; Sp. p. 4124; Gaz. vol. 175; p. 711.
Metal bottles, Tapering. C. F. Jenkins. No. 1,017,671; Feb. 20; Sp. p. 3145; Gaz. vol. 175; p. 566.

Metal conveyer, Molten-. P. Southmayd. No. 1,018,217; Feb. 20; Sp. p. 4329; Gaz. vol. 175; p. 754.
Metal, Expanded. W. D. Forsyth. No. 1,017,265; Feb. 13; Sp. p. 2286; Gaz. vol. 175; p. 329.
Metal, Melting-range. A. E. Greene. No. 1,016,418; Feb. 27; Sp. p. 4841; Gaz. vol. 175; p. 835.
Metal oxids, Making. H. Feerstellin. No. 1,019,004; Feb. 27; Sp. p. 6166; Gaz. vol. 175; p. 1057.
Metal sheets or plates, Treating. H. E. Sheldon. No. 1,016,715; Feb. 6; Sp. p. 1000; Gaz. vol. 175; p. 168.
Metals and alloys, Case-hardening. M. Gelf and O. Paschel. No. 1,017,748; Feb. 20; Sp. p. 3311; Gaz. vol. 175; p. 592.
Metals from ores, Leaching solution for extracting. J. Bazeres de Alzuaraz. No. 1,018,055; Feb. 27; Sp. p. 6027; Gaz. vol. 175; p. 1030.
Metallic structure, such as doors and the like. J. E. Frey. No. 1,018,206; Feb. 27; Sp. p. 5905; Gaz. vol. 175; p. 1018.
Metallic tie. W. F. Walker. No. 1,016,809; Feb. 6; Sp. p. 165; Gaz. vol. 175; p. 26.
Metallic tie and rail-fastener. W. C. Neth. No. 1,017,449; Feb. 13; Sp. p. 2715; Gaz. vol. 175; p. 456.
Meter: See Distance and speed meter; Fluid-meter; Liquid-meter; Prepayment-meter; Rotary meter; Telephone-meter; Wave-meter.
Meter. E. A. Hitchcock. No. 1,016,561; Feb. 27; Sp. p. 5216; Gaz. vol. 175; p. 900.
Meter support or shelf. P. Mueller and A. C. Schuermann. No. 1,018,675; Feb. 27; Sp. p. 5444; Gaz. vol. 175; p. 944.
Milk-can. L. R. Steel. No. 1,016,875; Feb. 6; Sp. p. 903; Gaz. vol. 175; p. 48.
Milk-can. L. R. Steel. No. 1,016,973; Feb. 13; Sp. p. 1651; Gaz. vol. 175; p. 290.
Milk product and process. C. H. and P. T. Campbell. No. 1,016,548; Feb. 6; Sp. p. 745; Gaz. vol. 175; p. 109.
Milking-machine. C. Bakalrud. No. 1,017,502; Feb. 13; Sp. p. 2806; Gaz. vol. 175; p. 476.
Milking-machine. J. Nielsen. No. 1,017,580; Feb. 13; Sp. p. 2951; Gaz. vol. 175; p. 498.
Milking-machine. R. H. J. Gjetting. No. 1,018,610; Feb. 27; Sp. p. 5312; Gaz. vol. 175; p. 922.
Milking-machine pulsator. R. H. J. Gjetting. No. 1,017,405; Feb. 13; Sp. p. 2596; Gaz. vol. 175; p. 440.
Milking machinery. C. E. Mitchell. No. 1,018,846; Feb. 27; Sp. p. 5802; Gaz. vol. 175; p. 1002.
Mill: See Ball-mill; Grinding-mill; Pug-mill; Windmill.
Mine-alarm instrument. H. W. Lee and G. H. Weedman. No. 1,018,228; Feb. 20; Sp. p. 4621; Gaz. vol. 175; p. 794.
Mining apparatus, Submarine. C. Williamson. No. 1,017,486; Feb. 13; Sp. p. 2778; Gaz. vol. 175; p. 469.
Miter-box. H. R. Miller. No. 1,017,540; Feb. 13; Sp. p. 3070; Gaz. vol. 175; p. 517.
Mitering-gage for corner-cutting machines. H. De Smith. No. 1,018,669; Feb. 27; Sp. p. 5426; Gaz. vol. 175; p. 951.
Mitt or glove, Base-ball. B. T. Rogers. No. 1,018,271; Feb. 20; Sp. p. 4500; Gaz. vol. 175; p. 774.
Mixer: See Concrete-mixer; Fluid-mixer; Gaseous-fuel mixer; Water-mixer.
Mixer. G. S. Noble. No. 1,018,629; Feb. 27; Sp. p. 5350; Gaz. vol. 175; p. 923.
Mixing device. A. J. Fritz. No. 1,016,741; Feb. 6; Sp. p. 1140; Gaz. vol. 175; p. 175.
Moistener and sealer. J. N. Stacy. No. 1,018,502; Feb. 27; Sp. p. 5280; Gaz. vol. 175; p. 917.
Mold: See Casting-mold; Concrete-mold; Culvert-mold; Ingot-mold; Post-mold.
Molds, Means for holding inserts in place in. H. Jones. No. 1,016,273; Feb. 6; Sp. p. 68; Gaz. vol. 175; p. 13.
Molding apparatus. F. X. Louthner. No. 1,018,668; Feb. 27; Sp. p. 5430; Gaz. vol. 175; p. 941.
Molding apparatus. F. X. Louthner and F. Tickner. No. 1,018,669; Feb. 27; Sp. p. 5432; Gaz. vol. 175; p. 942.
Mop-head. F. B. Hill. No. 1,017,140; Feb. 13; Sp. p. 2052; Gaz. vol. 175; p. 352.
Motor: See Convertible motor; Electric motor; Explosion-motor; Hydraulic motor; Ice-motor; Rotary motor; Water-motor; Wave-motor; Wave and tide motor.
Motor-control system. L. J. Lloyd, Jr. No. 1,016,754; Feb. 6; Sp. p. 1180; Gaz. vol. 175; p. 179.
Motor-control system. E. W. Stull. No. 1,016,794; Feb. 6; Sp. p. 1258; Gaz. vol. 175; p. 193.
Motor-control system. B. Frankenfeld. No. 1,017,257; Feb. 13; Sp. p. 2252; Gaz. vol. 175; p. 389.
Motor-control system. E. W. Stull. No. 1,017,270; Feb. 13; Sp. p. 2312; Gaz. vol. 175; p. 393.
Motor-controller. T. E. Barnum. No. 1,016,470; Feb. 6; Sp. p. 534; Gaz. vol. 175; p. 82.
Motor-controller. J. T. Janette. No. 1,016,765; Feb. 27; Sp. p. 5648; Gaz. vol. 175; p. 975.
Motor-controller, Pneumatic. E. T. Turney. No. 1,016,658; Feb. 6; Sp. p. 972; Gaz. vol. 175; p. 147.
Motor-starting mechanism, Electric. J. J. Welser. No. 1,016,440; Feb. 6; Sp. p. 512; Gaz. vol. 175; p. 79.
Motor-unloading device. E. B. Williamson. No. 1,017,939; Feb. 20; Sp. p. 3700; Gaz. vol. 175; p. 660.
Motors, Automatic starter for electric. J. B. Calderwood. No. 1,017,246; Feb. 13; Sp. p. 2268; Gaz. vol. 175; p. 386.
Mower, Lawn-. C. W. Felton. No. 1,018,487; Feb. 27; Sp. p. 5001; Gaz. vol. 175; p. 879.
Mowing-machine. J. Sulliger. No. 1,016,586; Feb. 6; Sp. p. 319; Gaz. vol. 175; p. 122.
Mowing-machine tedder attachment. C. L. Tisch. No. 1,016,655; Feb. 6; Sp. p. 963; Gaz. vol. 175; p. 146.
Muffler. J. T. Gilmer. No. 1,018,044; Feb. 20; Sp. p. 4029; Gaz. vol. 175; p. 696.
Music, Apparatus for automatically recording. C. W. Nystrom. No. 1,018,682; Feb. 27; Sp. p. 6105; Gaz. vol. 175; p. 1049.
Music-clip. T. Jost. No. 1,016,274; Feb. 6; Sp. p. 71; Gaz. vol. 175; p. 14.
Music-leaf turner. J. Leonard and N. J. Smith. No. 1,017,157; Feb. 13; Sp. p. 2065; Gaz. vol. 175; p. 355.
Musical chart. A. J. French, S. A. McKelvy, and J. W. Scrogum. No. 1,017,045; Feb. 13; Sp. p. 1810; Gaz. vol. 175; p. 314.
Musical instrument with chart, Keyboard. C. Reichelt. No. 1,017,589; Feb. 13; Sp. p. 2960; Gaz. vol. 175; p. 501.
Nailing-machine. L. A. Caugrain. No. 1,017,381; Feb. 13; Sp. p. 2538; Gaz. vol. 175; p. 430.
Nailing-machine. I. J. Brown. No. 1,018,473; Feb. 27; Sp. p. 4974; Gaz. vol. 175; p. 876.
Nailing-tool, Magazine. I. J. Brown. No. 1,018,533; Feb. 27; Sp. p. 5147; Gaz. vol. 175; p. 904.
Necktie-holder. C. H. Osly. No. 1,016,557; Feb. 6; Sp. p. 267; Gaz. vol. 175; p. 42.
Nest. A. M. Fischer. No. 1,017,960; Feb. 20; Sp. p. 3850; Gaz. vol. 175; p. 667.
Nest, Hen's. J. Muth. No. 1,017,790; Feb. 20; Sp. p. 3452; Gaz. vol. 175; p. 607.
Net, Gill-. E. J. Fox. No. 1,016,861; Feb. 6; Sp. p. 1424; Gaz. vol. 175; p. 221.
Newspaper-box. N. G. Edman. No. 1,018,174; Feb. 20; Sp. p. 4222; Gaz. vol. 175; p. 742.
Nipple-cover. C. W. Ladley. No. 1,018,831; Feb. 27; Sp. p. 5789; Gaz. vol. 175; p. 998.
Nitrogen compounds, Producing. C. H. Acker. No. 1,018,802; Feb. 27; Sp. p. 5717; Gaz. vol. 175; p. 987.
Non-heat-conducting receptacle. A. Evenson. No. 1,018,041; Feb. 20; Sp. p. 4017; Gaz. vol. 175; p. 695.
Nose-bag for horses. E. A. Waldmeyer. No. 1,017,610; Feb. 13; Sp. p. 3005; Gaz. vol. 175; p. 503.
Note-sheets, Apparatus for producing perforated. F. C. White. No. 1,016,862; Feb. 6; Sp. p. 1333; Gaz. vol. 175; p. 215.
Nozzle. L. C. Bowers. (Reissue.) No. 13,306; Feb. 6; Sp. p. 1530; Gaz. vol. 175; p. 237.
Nozzle, Atomizing. J. E. J. Goodlett. No. 1,017,538; Feb. 13; Sp. p. 2871; Gaz. vol. 175; p. 484.
Nut-lock. F. C. Schmidt. No. 1,016,867; Feb. 6; Sp. p. 286; Gaz. vol. 175; p. 45.
Nut-lock. C. L. Bouhan. No. 1,016,542; Feb. 6; Sp. p. 729; Gaz. vol. 175; p. 107.
Nut-lock. E. F. Purviance. No. 1,016,710; Feb. 6; Sp. p. 1076; Gaz. vol. 175; p. 160.
Nut-lock. J. J. Herzog. No. 1,016,746; Feb. 6; Sp. p. 1146; Gaz. vol. 175; p. 177.
Nut-lock. C. Ryan. No. 1,016,897; Feb. 6; Sp. p. 1459; Gaz. vol. 175; p. 220.
Nut-lock. J. L. Furnas. No. 1,017,321; Feb. 13; Sp. p. 2851; Gaz. vol. 175; p. 481.
Nut-lock. J. A. Latshaw. No. 1,017,770; Feb. 20; Sp. p. 3249; Gaz. vol. 175; p. 600.
Nut-lock. A. A. Brown. No. 1,017,845; Feb. 20; Sp. p. 3571; Gaz. vol. 175; p. 620.
Nut-lock. C. E. Lindsey. No. 1,018,199; Feb. 20; Sp. p. 4371; Gaz. vol. 175; p. 750.
Nut-lock. N. M. Van Orman. No. 1,018,355; Feb. 27; Sp. p. 5315; Gaz. vol. 175; p. 1000.
Nut Lock. L. Beck. No. 1,017,371; Feb. 13; Sp. p. 2524; Gaz. vol. 175; p. 427.
Nut Lock. A. Ryden and C. H. Stahl. No. 1,017,471; Feb. 13; Sp. p. 2752; Gaz. vol. 175; p. 463.
Nut-locking device. F. M. Fundis. No. 1,017,401; Feb. 13; Sp. p. 2590; Gaz. vol. 175; p. 438.
Nut-locking washer. W. P. and S. G. Thomson. No. 1,016,794; Feb. 6; Sp. p. 1265; Gaz. vol. 175; p. 194.
Nuts, Treating. W. E. White. No. 1,016,868; Feb. 6; Sp. p. 1391; Gaz. vol. 175; p. 215.
Nutcracker. W. Kwiatkosky. No. 1,017,424; Feb. 13; Sp. p. 2642; Gaz. vol. 175; p. 447.
Oil-burner. H. W. Axford and J. R. Clearwater. No. 1,017,493; Feb. 13; Sp. p. 2792; Gaz. vol. 175; p. 471.
Oil-burner. W. E. Fisher. No. 1,018,393; Feb. 27; Sp. p. 5903; Gaz. vol. 175; p. 1019.
Oil-burner, Orchard. G. C. Richardson. No. 1,017,317; Feb. 13; Sp. p. 2413; Gaz. vol. 175; p. 410.
Oil-circulating system for lubricating and regulating. W. Kleser. No. 1,017,557; Feb. 13; Sp. p. 2912; Gaz. vol. 175; p. 492.
Oil-conveyer. E. C. Burns. No. 1,016,736; Feb. 6; Sp. p. 1132; Gaz. vol. 175; p. 174.
Oil dropper, Mayonnaise-. S. E. Creasey. No. 1,016,481; Feb. 6; Sp. p. 558; Gaz. vol. 175; p. 86.
Oil-long distance, Transporting. A. E. Roberts and A. L. Emery. No. 1,016,958; Feb. 13; Sp. p. 1622; Gaz. vol. 175; p. 285.
Oiler, Automatic piston-rod. C. Knopf and W. N. Johnson. No. 1,017,057; Feb. 13; Sp. p. 1840; Gaz. vol. 175; p. 319.
1-p-dimethylaminophenyl-3,4,4-trimethyl-5-pyrrazolone and making same. F. Stein. No. 1,017,030; Feb. 20; Sp. p. 3101; Gaz. vol. 175; p. 574.

Orchard-heater. A. D. Ward. No. 1,016,907; Feb. 6; Sp. p. 1494; Gaz. vol. 175; p. 231.
Orchard-heater. J. L. Hamilton. No. 1,018,048; Feb. 20; Sp. p. 4038; Gaz. vol. 175; p. 698.
Ore and slime concentrator, Centrifugal. C. A. Christensen. No. 1,018,878; Feb. 27; Sp. p. 5869; Gaz. vol. 175; p. 1013.
Ore-crusher. E. A. Mathers. No. 1,017,780; Feb. 20; Sp. p. 3428; Gaz. vol. 175; p. 603.
Ores, Roasting. C. Gabrielli. No. 1,018,609; Feb. 27; Sp. p. 5310; Gaz. vol. 175; p. 922.
Organs, harmoniums, &c., Apparatus for blowing pipe-. L. B. Cousans. No. 1,018,483; Feb. 27; Sp. p. 4988; Gaz. vol. 175; p. 878.
Outlet-box. A. I. Appleton. No. 1,016,925; Feb. 13; Sp. p. 1533; Gaz. vol. 175; p. 273.
Oven, Bake-. J. Faulds. No. 1,018,178; Feb. 20; Sp. p. 4330; Gaz. vol. 175; p. 743.
Oven, Baker's. F. Koch. No. 1,017,264; Feb. 13; Sp. p. 2302; Gaz. vol. 175; p. 392.
Oven, Baking-. L. R. Davis. No. 1,018,883; Feb. 27; Sp. p. 5878; Gaz. vol. 175; p. 1014.
Oven-door. W. E. Huenefeld. No. 1,016,566; Feb. 6; Sp. p. 778; Gaz. vol. 175; p. 115.
Oven-door-hoisting device. L. C. Flaccus. No. 1,017,142; Feb. 13; Sp. p. 2034; Gaz. vol. 175; p. 349.
Oven, Knockdown. W. E. Huenefeld. No. 1,016,565; Feb. 6; Sp. p. 776; Gaz. vol. 175; p. 115.
Overcheck-guide. J. Kressin. No. 1,018,117; Feb. 20; Sp. p. 4200; Gaz. vol. 175; p. 722.
Overedging-machine. J. P. Weis. No. 1,018,797; Feb. 27; Sp. p. 5705; Gaz. vol. 175; p. 986.
Oxalates, Producing. L. W. Andrews. No. 1,018,092; Feb. 20; Sp. p. 4149; Gaz. vol. 175; p. 718.
Oyster-opening apparatus. J. Danon. No. 1,018,169; Feb. 20; Sp. p. 4311; Gaz. vol. 175; p. 740.
Ozonizing apparatus. M. Fuss. No. 1,017,258; Feb. 13; Sp. p. 2294; Gaz. vol. 175; p. 390.
Package and splint, Emergency. S. G. Slaughter. No. 1,018,452; Feb. 27; Sp. p. 4913; Gaz. vol. 175; p. 868.
Package for lobsters. Shipping. F. B. Higgins. No. 1,016,627; Feb. 6; Sp. p. 919; Gaz. vol. 175; p. 137.
Packer, Subsurface-. W. O. Carley and C. Hollingsworth. No. 1,018,605; Feb. 27; Sp. p. 5305; Gaz. vol. 175; p. 921.
Packing, Annular metallic. J. Horton and T. W. Keen. No. 1,016,689; Feb. 6; Sp. p. 1038; Gaz. vol. 175; p. 158.
Packing-box. W. T. Snell. No. 1,018,938; Feb. 27; Sp. p. 5993; Gaz. vol. 175; p. 1033.
Packing for piston-rods, &c. C. I. E. Mastin. No. 1,018,202; Feb. 20; Sp. p. 4375; Gaz. vol. 175; p. 751.
Packing-machine. F. J. Heybach. No. 1,016,498; Feb. 6; Sp. p. 593; Gaz. vol. 175; p. 92.
Packing-machine. I. Lässga. No. 1,018,429; Feb. 27; Sp. p. 4860; Gaz. vol. 175; p. 861.
Packing, Making metallic. W. J. Wright. No. 1,018,149; Feb. 20; Sp. p. 4272; Gaz. vol. 175; p. 733.
Packing, Metallic. W. J. Wright. No. 1,018,349; Feb. 20; Sp. p. 4653; Gaz. vol. 175; p. 800.
Packing, Metallic rod-. C. W. G. King. No. 1,017,674; Feb. 20; Sp. p. 3146; Gaz. vol. 175; p. 567.
Packing-pads, Apparatus for manufacturing. E. W. Goodrich. No. 1,018,181; Feb. 20; Sp. p. 4337; Gaz. vol. 175; p. 745.
Packing, Plunger and cylinder. P. Grabler. No. 1,016,561; Feb. 6; Sp. p. 771; Gaz. vol. 175; p. 113.
Packing-ring or gasket. F. A. Dickinson. No. 1,017,855; Feb. 20; Sp. p. 3591; Gaz. vol. 175; p. 629.
Packing-rings, Machine for making. R. B. Wasson. No. 1,016,380; Feb. 6; Sp. p. 311; Gaz. vol. 175; p. 50.
Pad: *See* Form-pad.
Padlock, Permutation-. S. F. Holmes. No. 1,018,616; Feb. 27; Sp. p. 5321; Gaz. vol. 175; p. 923.
Paint and varnish remover. C. M. E. Schroeder. No. 1,016,445; Feb. 6; Sp. p. 479; Gaz. vol. 175; p. 73.
Paint and varnish vehicle. C. Ellis. No. 1,017,141; Feb. 13; Sp. p. 2033; Gaz. vol. 175; p. 349.
Paint-package. J. W. Hasburg. No. 1,018,824; Feb. 27; Sp. p. 5769; Gaz. vol. 175; p. 996.
Paint-vehicle and furniture-polish. J. A. Routhier. No. 1,017,323; Feb. 13; Sp. p. 2428; Gaz. vol. 175; p. 412.
Painters' stages, Attachment for. C. E. Sharp. No. 1,017,599; Feb. 13; Sp. p. 2985; Gaz. vol. 175; p. 504.
Painting. N. B. Greer. No. 1,017,410; Feb. 13; Sp. p. 2007; Gaz. vol. 175; p. 442.
Pan: *See* Drip-pan; Locomotive ash-pan.
Pane-fastener. N. Baloian. No. 1,017,196; Feb. 13; Sp. p. 2150; Gaz. vol. 175; p. 368.
Paper-board-making machine, Multiple-ply-. R. M. Scanlan. No. 1,018,588; Feb. 27; Sp. p. 5272; Gaz. vol. 175; p. 916.
Paper bottles and like objects, Machine for making. H. R. Heyl. No. 1,018,319; Feb. 20; Sp. p. 4600; Gaz. vol. 175; p. 790.
Paper bottles or containing vessels, Manufacturing. E. T. Greenfield. No. 1,016,327; Feb. 6; Sp. p. 207; Gaz. vol. 175; p. 32.
Paper-box-forming machine. A. G. Wobus and W. L. Humphreys. No. 1,017,836; Feb. 20; Sp. p. 3546; Gaz. vol. 175; p. 623.
Paper-box-making machine. E. Högfeldt. No. 1,016,266; Feb. 6; Sp. p. 46; Gaz. vol. 175; p. 10.
Paper-cutting machines, Back gage for. G. H. Holdt. No. 1,018,111; Feb. 20; Sp. p. 4180; Gaz. vol. 175; p. 719.
Paper-feeding device. W. McConnell. No. 1,018,577; Feb. 27; Sp. p. 5251; Gaz. vol. 175; p. 912.
Paper-folding box. M. Glieckman. No. 1,016,884; Feb. 6; Sp. p. 1490; Gaz. vol. 175; p. 222.
Paper from walls, Apparatus for removing old. W. C. Roberts and G. E. Corner. No. 1,018,345; Feb. 20; Sp. p. 4845; Gaz. vol. 175; p. 798.
Paper-hanging device, Wall-. M. P. Randle. No. 1,017,019; Feb. 13; Sp. p. 1747; Gaz. vol. 175; p. 305.
Paper-holder. A. W. Johnson. No. 1,016,270; Feb. 6; Sp. p. 60; Gaz. vol. 175; p. 12.
Paper-holder. G. F. Jones. No. 1,017,673; Feb. 20; Sp. p. 3145; Gaz. vol. 175; p. 567.
Paper-holder. A. J. Farrell. No. 1,018,817; Feb. 27; Sp. p. 5756; Gaz. vol. 175; p. 992.
Paper-machine. P. R. Thom. No. 1,018,850; Feb. 27; Sp. p. 5810; Gaz. vol. 175; p. 1004.
Paper-making machine. F. A. Headson. No. 1,016,903; Feb. 27; Sp. p. 5926; Gaz. vol. 175; p. 1021.
Paper-making-machine watermarking apparatus. J. Speed and A. Whitton. No. 1,018,349; Feb. 27; Sp. p. 5807; Gaz. vol. 175; p. 1003.
Paper-making machinery. W. E. Sheehan. No. 1,018,450; Feb. 27; Sp. p. 4904; Gaz. vol. 175; p. 867.
Paper, Manufacturing very extensible. A. Geissler. No. 1,018,897; Feb. 27; Sp. p. 5907; Gaz. vol. 175; p. 1019.
Paper, Producing mottled or variegated. C. H. Waite and G. Walker. No. 1,017,931; Feb. 20; Sp. p. 3786; Gaz. vol. 175; p. 657.
Paper-roll shafts, Chuck for. C. D. Curry. No. 1,016,738; Feb. 6; Sp. p. 1184; Gaz. vol. 175; p. 174.
Paraffin or the like, Apparatus for cooling. P. Perga and R. Neumann. No. 1,017,587; Feb. 13; Sp. p. 2963; Gaz. vol. 175; p. 500.
Pasteuriser. C. H. Loew and A. Ruetschi. No. 1,017,777; Feb. 20; Sp. p. 3415; Gaz. vol. 175; p. 602.
Pattern-drawing device. H. Tucherning. No. 1,018,731; Feb. 27; Sp. p. 5562; Gaz. vol. 175; p. 962.
Paving-block. E. A. Tracy. No. 1,017,706; Feb. 20; Sp. p. 3210; Gaz. vol. 175; p. 577.
Paving-block, Wood. J. A. Cogswell. No. 1,017,650; Feb. 20; Sp. p. 3094; Gaz. vol. 175; p. 559.
Pawl-and-ratchet mechanism. C. Andrade, Jr. No. 1,016,537; Feb. 6; Sp. p. 707; Gaz. vol. 175; p. 106.
Pea-separating machine. G. J. Lange. No. 1,018,715; Feb. 27; Sp. p. 5523; Gaz. vol. 175; p. 957.
Peanut-picker. T. M. Lillistoe. No. 1,017,570; Feb. 13; Sp. p. 2936; Gaz. vol. 175; p. 496.
Pencil-sharpener. S. McIlvanie. No. 1,018,249; Feb. 20; Sp. p. 4470; Gaz. vol. 175; p. 763.
Pencil-sharpening machine. E. P. Webster. No. 1,018,536; Feb. 27; Sp. p. 5157; Gaz. vol. 175; p. 897.
Penholder, Ejecting-. A. K. Willson. No. 1,016,533; Feb. 6; Sp. p. 696; Gaz. vol. 175; p. 104.
Percolator. J. R. Livingston. No. 1,017,222; Feb. 13; Sp. p. 2222; Gaz. vol. 175; p. 377.
Perforating-machine. L. M. Potts. No. 1,018,519; Feb. 27; Sp. p. 5111; Gaz. vol. 175; p. 891.
Perfumes and making the same, Solution of. A. Hesse. No. 1,017,669; Feb. 20; Sp. p. 3140; Gaz. vol. 175; p. 566.
Permutation-lock. E. H. Quaintance. No. 1,017,313; Feb. 13; Sp. p. 2401; Gaz. vol. 175; p. 409.
Peroxid paste, Greaseless. E. von Foregger. No. 1,018,240; Feb. 20; Sp. p. 4453; Gaz. vol. 175; p. 764.
Petroleum, Utilising sulfur-containing. J. B. Eggleston. No. 1,018,040; Feb. 20; Sp. p. 4018; Gaz. vol. 175; p. 695.
Petroleum, Utilising sulfur-containing. C. I. Robinson. No. 1,018,374; Feb. 20; Sp. p. 4723; Gaz. vol. 175; p. 800.
Phonograph disk records, Brushing means for. F. W. Wood. No. 1,018,861; Feb. 27; Sp. p. 5840; Gaz. vol. 175; p. 1007.
Phonograph-horn support. C. Schill. No. 1,017,328; Feb. 13; Sp. p. 2456; Gaz. vol. 175; p. 414.
Phonograph-record blanks and like articles, Apparatus for forming impressions on. W. C. Runge. No. 1,018,631; Feb. 27; Sp. p. 5353; Gaz. vol. 175; p. 928.
Phonograph stop mechanism. O. W. Hartung. No. 1,016,563; Feb. 6; Sp. p. 778; Gaz. vol. 175; p. 114.
Phonographs, Case for disk records for. F. W. Wood. No. 1,018,689; Feb. 27; Sp. p. 5470; Gaz. vol. 175; p. 948.
Phosphate and making same. C. M. Meriwether. No. 1,016,852; Feb. 6; Sp. p. 261; Gaz. vol. 175; p. 41.
Photographic developing apparatus. H. C. Wilcox. No. 1,016,924; Feb. 6; Sp. p. 1527; Gaz. vol. 175; p. 237.
Photographic-printing device. H. Haller, Jr. No. 1,016,623; Feb. 6; Sp. p. 912; Gaz. vol. 175; p. 136.
Piano-action. A. Hicks. No. 1,016,406; Feb. 6; Sp. p. 381; Gaz. vol. 175; p. 60.
Piano-bench. E. V. Meendenhall. No. 1,018,304; Feb. 20; Sp. p. 4378; Gaz. vol. 175; p. 752.
Piano or similar instrument, Player-. E. Leschbrandt. No. 1,017,158; Feb. 13; Sp. p. 2067; Gaz. vol. 175; p. 353.
Piano-player attachment. R. W. Scott. No. 1,018,084; Feb. 20; Sp. p. 4121; Gaz. vol. 175; p. 716.
Piano-player, Mechanical. J. Courville. No. 1,018,167; Feb. 20; Sp. p. 4306; Gaz. vol. 175; p. 730.
Piano-protector. W. R. Turner. No. 1,017,606; Feb. 13; Sp. p. 3008; Gaz. vol. 175; p. 507.

Piano-shield. C. W. Graves. No. 1,017,288; Feb. 13; Sp. p. 2348; Gaz. vol. 175; p. 490.
Pianofortes, carillons, and other musical instruments, Apparatus for automatically playing. J. J. Walker. No. 1,017,932; Feb. 20; Sp. p. 3787; Gaz. vol. 175; p. 657.
Picker: *See* Fruit-picker; Peanut-picker.
Picture apparatus, Motion-. C. F. Jenkins. No. 1,017,672; Feb. 20; Sp. p. 3144; Gaz. vol. 175; p. 566.
Picture machines, Slide for motion-. H. A. Meinhardt. No. 1,016,575; Feb. 6; Sp. p. 800; Gaz. vol. 175; p. 118.
Picture-projecting apparatus, Moving-. G. Dietz. No. 1,017,250; Feb. 13; Sp. p. 2275; Gaz. vol. 175; p. 387.
Pile-cutting machine. A. Morton. No. 1,016,512; Feb. 6; Sp. p. 632; Gaz. vol. 175; p. 97.
Pile-driving-follower attachment. M. T. McKenna. No. 1,017,489; Feb. 13; Sp. p. 2673; Gaz. vol. 175; p. 452.
Pillow. S. J. Smith. No. 1,018,885; Feb. 27; Sp. p. 5463; Gaz. vol. 175; p. 947.
Pin: *See* Hat-pin.
Pin-guard. R. L. Prahar. No. 1,018,131; Feb. 20; Sp. p. 4227; Gaz. vol. 175; p. 727.
Pins, links, and the like from manganese steel, Manufacture of. W. S. Potter. No. 1,018,861; Feb. 20; Sp. p. 4682; Gaz. vol. 175; p. 804.
Pince-nez spring-frame. J. L. Nicol. No. 1,017,579; Feb. 13; Sp. p. 2949; Gaz. vol. 175; p. 498.
Pipe: *See* Magazine-pipe; Sand-pipe; Smoking-pipe; Tobacco-pipe.
Pipe-cleaning attachment, Jet-. H. E. Werner. No. 1,018,020; Feb. 20; Sp. p. 3967; Gaz. vol. 175; p. 687.
Pipe-coupling. J. Gapp. No. 1,018,620; Feb. 6; Sp. p. 905; Gaz. vol. 175; p. 135.
Pipe coupling-nuts, Apparatus for attaching. P. Mueller and A. C. Schuermann. No. 1,018,207; Feb. 20; Sp. p. 4385; Gaz. vol. 175; p. 753.
Pipe-coupling system, Railway-train air-. G. C. Read. No. 1,018,342; Feb. 20; Sp. p. 4640; Gaz. vol. 175; p. 798.
Pipe-couplings, Apparatus for making. J. H. Roney. No. 1,017,322; Feb. 13; Sp. p. 2425; Gaz. vol. 175; p. 412.
Pipe-cover. A. S. Spofford. No. 1,016,792; Feb. 6; Sp. p. 1251; Gaz. vol. 175; p. 193.
Pipe-cutter. W. H. E. and E. Charpier. No. 1,018,695; Feb. 27; Sp. p. 5480; Gaz. vol. 175; p. 950.
Pipe-cutting tool. B. Borden. No. 1,017,037; Feb. 13; Sp. p. 1788; Gaz. vol. 175; p. 311.
Pipe-hanger. P. N. Kenway. No. 1,017,975; Feb. 20; Sp. p. 3886; Gaz. vol. 175; p. 672.
Pipe-joint. A. E. Fairfield. No. 1,018,354; Feb. 20; Sp. p. 4662; Gaz. vol. 175; p. 801.
Pipe lifting and lowering jack. T. M. Smith. No. 1,018,936; Feb. 27; Sp. p. 5967; Gaz. vol. 175; p. 1032.
Pipe-lining apparatus. J. O. Parsons. No. 1,016,770; Feb. 6; Sp. p. 1210; Gaz. vol. 175; p. 186.
Pipe-machines, Reaming-tool holder for. J. F. Linehan. No. 1,016,889; Feb. 6; Sp. p. 1437; Gaz. vol. 175; p. 224.
Pipe or launder. J. L. Clark. No. 1,016,815; Feb. 6; Sp. p. 1295; Gaz. vol. 175; p. 199.
Pipe-threading tool. C. B. Cochran. No. 1,017,853; Feb. 20; Sp. p. 3589; Gaz. vol. 175; p. 629.
Pipe-wrench. W. A. Hyle. No. 1,016,907; Feb. 13; Sp. p. 1708; Gaz. vol. 175; p. 262.
Pipe-wrench and pipe-cutter, Combination. C. L. Lyons. No. 1,018,946; Feb. 13; Sp. p. 1590; Gaz. vol. 175; p. 280.
Piping, Sheet-metal. R. T. Semmes. No. 1,017,920; Feb. 20; Sp. p. 3760; Gaz. vol. 175; p. 654.
Pistol-stock. J. S. Kimmel. No. 1,018,695; Feb. 6; Sp. p. 1050; Gaz. vol. 175; p. 169.
Piston for explosive-engines. J. Bittner. No. 1,017,498; Feb. 13; Sp. p. 2301; Gaz. vol. 175; p. 473.
Piston-ring clamp, Adjustable. C. E. Wake. No. 1,017,823; Feb. 20; Sp. p. 3525; Gaz. vol. 175; p. 620.
Placket-fastener. J. S. Beshaw. No. 1,016,909; Feb. 6; Sp. p. 1499; Gaz. vol. 175; p. 231.
Plant protector and support. C. A. Black, Jr. No. 1,018,157; Feb. 20; Sp. p. 4287; Gaz. vol. 175; p. 736.
Planter attachment. H. Kill. No. 1,017,559; Feb. 13; Sp. p. 2914; Gaz. vol. 175; p. 492.
Planter, Automatic corn-. C. H. Hall. No. 1,018,613; Feb. 27; Sp. p. 5317; Gaz. vol. 175; p. 923.
Planter, Corn-. F. R. Packham. No. 1,016,766; Feb. 6; Sp. p. 1193; Gaz. vol. 175; p. 183.
Planter, Corn-. F. P. Murphey. No. 1,018,980; Feb. 27; Sp. p. 6007; Gaz. vol. 175; p. 1049.
Planter markers, Device for operating corn-. J. Mulvehill. No. 1,018,581; Feb. 27; Sp. p. 5261; Gaz. vol. 175; p. 913.
Planter, Potato-. W. A. Hall, Sr. No. 1,016,265; Feb. 6; Sp. p. 46; Gaz. vol. 175; p. 10.
Planters, Quick-repair shoe for corn-. C. Flowers. No. 1,018,106; Feb. 20; Sp. p. 4173; Gaz. vol. 175; p. 718.
Plastering-machine. G. E. Fox. No. 1,017,256; Feb. 13; Sp. p. 2268; Gaz. vol. 175; p. 389.
Platform, Safety-. C. D. Mason. No. 1,018,674; Feb. 27; Sp. p. 5442; Gaz. vol. 175; p. 944.
Platting-box. E. L. Dearborn. No. 1,018,607; Feb. 27; Sp. p. 5308; Gaz. vol. 175; p. 921.
Play-ring. E. R. Ratel. No. 1,016,520; Feb. 6; Sp. p. 663; Gaz. vol. 175; p. 100.
Pleasure apparatus, Submarine. C. Williamson. No. 1,016,808; Feb. 6; Sp. p. 1283; Gaz. vol. 175; p. 197.
Plow. S. H. Thasman. No. 1,016,873; Feb. 6; Sp. p. 306; Gaz. vol. 175; p. 49.
Plow. J. C. Terrell. No. 1,016,796; Feb. 6; Sp. p. 1261; Gaz. vol. 175; p. 194.
Plow. J. S. Lupton. No. 1,017,105; Feb. 13; Sp. p. 1950; Gaz. vol. 175; p. 336.
Plow. J. H. Wright. No. 1,017,942; Feb. 20; Sp. p. 3806; Gaz. vol. 175; p. 661.
Plow. R. Payton. No. 1,018,075; Feb. 20; Sp. p. 4108; Gaz. vol. 175; p. 707.
Plow. R. Payton. No. 1,018,076; Feb. 20; Sp. p. 4110; Gaz. vol. 175; p. 708.
Plow. L. B. Lewis. No. 1,018,120; Feb. 20; Sp. p. 4205; Gaz. vol. 175; p. 723.
Plow. N. I. Milliken. No. 1,018,397; Feb. 20; Sp. p. 4779; Gaz. vol. 175; p. 818.
Plow. H. Williams. No. 1,018,465; Feb. 27; Sp. p. 4934; Gaz. vol. 175; p. 872.
Plow and harrow, Combined. B. H. G. Wilbur. No. 1,018,856; Feb. 27; Sp. p. 5817; Gaz. vol. 175; p. 1005.
Plow-frame. B. Brown. No. 1,018,004; Feb. 20; Sp. p. 4154; Gaz. vol. 175; p. 714.
Plow-lifting device, Gang-. J. H. Algard and A. Bramer. No. 1,017,944; Feb. 20; Sp. p. 3810; Gaz. vol. 175; p. 661.
Plow operated by steam or other motive power. H. McLaren. No. 1,018,252; Feb. 20; Sp. p. 4477; Gaz. vol. 175; p. 768.
Plow, Reversible. W. S. Graham. No. 1,018,821; Feb. 27; Sp. p. 5763; Gaz. vol. 175; p. 995.
Plow, Rotary disk. C. Gronquist. No. 1,017,146; Feb. 13; Sp. p. 2039; Gaz. vol. 175; p. 351.
Plow-stock. W. A. Parker. No. 1,016,643; Feb. 6; Sp. p. 948; Gaz. vol. 175; p. 142.
Plow subsoil attachment. A. H. Jennings. No. 1,018,061; Feb. 20; Sp. p. 4072; Gaz. vol. 175; p. 702.
Plow, Sulky-. W. L. Paul. No. 1,018,775; Feb. 27; Sp. p. 5663; Gaz. vol. 175; p. 979.
Plunger. A. Ohmstede. No. 1,018,517; Feb. 27; Sp. p. 5108; Gaz. vol. 175; p. 890.
Pneumatic carpet-sweeper. T. Lyons. No. 1,017,779; Feb. 20; Sp. p. 3427; Gaz. vol. 175; p. 603.
Pneumatic-despatch-tube apparatus, Sending and delivery station for. K. A. Gutknecht. No. 1,016,264; Feb. 6; Sp. p. 44; Gaz. vol. 175; p. 9.
Pneumatic player mechanism. F. W. Draper. No. 1,016,917; Feb. 6; Sp. p. 1509; Gaz. vol. 175; p. 224.
Pneumatic spring. W. H. Staats. No. 1,016,651; Feb. 6; Sp. p. 959; Gaz. vol. 175; p. 145.
Pocket attachment. R. Rourke. No. 1,018,929; Feb. 27; Sp. p. 5974; Gaz. vol. 175; p. 1029.
Pocket-book. W. H. Lee. No. 1,017,006; Feb. 13; Sp. p. 1725; Gaz. vol. 175; p. 301.
Pocket, Garment-. F. Kaschewski. No. 1,018,912; Feb. 27; Sp. p. 5942; Gaz. vol. 175; p. 1024.
Pocket guard and alarm. J. T. Cowles. No. 1,016,672; Feb. 6; Sp. p. 1007; Gaz. vol. 175; p. 162.
Pocket lock, Garment-. E. M. Squire. No. 1,016,659; Feb. 6; Sp. p. 957; Gaz. vol. 175; p. 144.
Polea, &c., Preserving. A. Kolossváry, E. Haltenberger, and E. Berdenich. No. 1,018,624; Feb. 27; Sp. p. 5337; Gaz. vol. 175; p. 926.
Policeman's club and light, Combined. E. L. Litsey. No. 1,018,358; Feb. 20; Sp. p. 4671; Gaz. vol. 175; p. 803.
Polisher or abrader. W. H. Van Bichel. No. 1,017,237; Feb. 13; Sp. p. 2249; Gaz. vol. 175; p. 382.
Porch flower-bracket. G. L. Roppenecker and A. L. Scott. No. 1,017,594; Feb. 13; Sp. p. 2979; Gaz. vol. 175; p. 503.
Position-locating instrument. D. W. Adams. No. 1,018,150; Feb. 20; Sp. p. 4274; Gaz. vol. 175; p. 734.
Post: *See* Fence-post.
Post. A. W. Ford. No. 1,018,754; Feb. 27; Sp. p. 5619; Gaz. vol. 175; p. 971.
Post adjusting support, End and corner. W. A. Fournie. No. 1,018,894; Feb. 27; Sp. p. 5904; Gaz. vol. 175; p. 1018.
Post-mold. F. P. Van Hook. No. 1,017,026; Feb. 13; Sp. p. 1764; Gaz. vol. 175; p. 307.
Post-mold. J. T. Neeley. No. 1,018,072; Feb. 20; Sp. p. 4103; Gaz. vol. 175; p. 706.
Post-puller. P. T. Lamkin. No. 1,017,425; Feb. 13; Sp. p. 2344; Gaz. vol. 175; p. 447.
Postal card, Puzzle. C. M. Conley. No. 1,018,879; Feb. 27; Sp. p. 5871; Gaz. vol. 175; p. 1013.
Postal-card rack. S. B. Clay. No. 1,016,915; Feb. 6; Sp. p. 1506; Gaz. vol. 175; p. 233.
Poster-holder. A. H. Roby and C. H. Cutter. No. 1,017,905; Feb. 20; Sp. p. 3483; Gaz. vol. 175; p. 612.
Pot: *See* Coffee-pot; Engine fire-pot.
Potato-digger. A. D. Russak. No. 1,017,918; Feb. 20; Sp. p. 3757; Gaz. vol. 175; p. 653.
Potatoes, Producing raw dehydrated Irish. E. R. Hutchins, Jr. No. 1,016,503; Feb. 6; Sp. p. 616; Gaz. vol. 175; p. 94.
Poultry-house, Collapsible, portable, vermin-proof. M. C. Rogers. No. 1,018,007; Feb. 20; Sp. p. 3947; Gaz. vol. 175; p. 683.
Pounding-up machine. S. Snow. No. 1,018,526; Feb. 27; Sp. p. 5125; Gaz. vol. 175; p. 893.
Powder, Apparatus for treating explosive. F. I. Du Pont. No. 1,017,286; Feb. 13; Sp. p. 2342; Gaz. vol. 175; p. 399.
Power molding-machine. C. E. A. Thompson. No. 1,016,530; Feb. 6; Sp. p. 686; Gaz. vol. 175; p. 103.

Power-transmission apparatus. H. E. White. No. 1,017,355; Feb. 13; Sp. p. 2487; Gaz. vol. 175; p. 422.
Power-transmission mechanism, Variable-speed. W. I. Twombly. No. 1,018,219; Feb. 20; Sp. p. 4401; Gaz. vol. 175; p. 757.
Power-transmitting device. E. M. Woodward. No. 1,016,535; Feb. 6; Sp. p. 703; Gaz. vol. 175; p. 105.
Precious metals from cyanid solutions, Precipitation of. J. M. Neil. No. 1,018,438; Feb. 27; Sp. p. 4879; Gaz. vol. 175; p. 864.
Prepayment-meter. F. Conrad. No. 1,017,082; Feb. 13; Sp. p. 1916; Gaz. vol. 175; p. 329.
Preserving fruit and vegetables. H. Dujardin. No. 1,018,312; Feb. 27; Sp. p. 5744; Gaz. vol. 175; p. 991.
Preserving mushrooms. E. H. Jacob. No. 1,018,909; Feb. 27; Sp. p. 5937; Gaz. vol. 175; p. 1023.
Preserving of raw victuals of animal origin. S. Gironcoli. No. 1,017,144; Feb. 13; Sp. p. 2036; Gaz. vol. 175; p. 350.
Press: *See* Baling-press; Die-press; Hay-press; Printing-press; Rotary press; Soap-press; Veneer-press.
Press. L. A. Casgrain. No. 1,016,983; Feb. 13; Sp. p. 1680; Gaz. vol. 175; p. 294.
Press. W. J. Mulvey. No. 1,018,676; Feb. 27; Sp. p. 5446; Gaz. vol. 175; p. 945.
Press. J. J. Berrigan. No. 1,018,957; Feb. 27; Sp. p. 6030; Gaz. vol. 175; p. 1040.
Press for testing, &c. L. Bollée. No. 1,018,158; Feb. 20; Sp. p. 4288; Gaz. vol. 175; p. 736.
Pressure-gage. T. A. Nelson. No. 1,018,582; Feb. 27; Sp. p. 5263; Gaz. vol. 175; p. 914.
Pressure-regulating device. G. E. Predock and C. E. Anderson. No. 1,016,519; Feb. 6; Sp. p. 661; Gaz. vol. 175; p. 99.
Printing and fare-recording apparatus, Transportable ticket-. H. Friedlein. No. 1,017,046; Feb. 13; Sp. p. 1814; Gaz. vol. 175; p. 315.
Printing and other mechanism, Gripper for. F. G. Jahn. No. 1,018,059; Feb. 20; Sp. p. 4059; Gaz. vol. 175; p. 702.
Printing-machine. G. H. Lang. No. 1,017,979; Feb. 20; Sp. p. 3894; Gaz. vol. 175; p. 674.
Printing machine, Embroidery-. R. Waiser. No. 1,018,948; Feb. 27; Sp. p. 6009; Gaz. vol. 175; p. 1036.
Printing-machine ink-roll-operating mechanism. J. J. Halliwell. No. 1,018,758; Feb. 27; Sp. p. 5629; Gaz. vol. 175; p. 973.
Printing-machine, Rotary. B. O. Fanslow. No. 1,016,682; Feb. 6; Sp. p. 1021; Gaz. vol. 175; p. 155.
Printing-machine, Rotary. S. J. O. Asmussen. No. 1,018,151; Feb. 20; Sp. p. 4276; Gaz. vol. 175; p. 734.
Printing mechanism. F. G. Jahn. No. 1,018,060; Feb. 20; Sp. p. 4064; Gaz. vol. 175; p. 702.
Printing-press. B. F. Upham. No. 1,016,659; Feb. 6; Sp. p. 976; Gaz. vol. 175; p. 148.
Printing-press. J. F. Mahlstedt. No. 1,016,756; Feb. 6; Sp. p. 1167; Gaz. vol. 175; p. 180.
Printing-press. G. P. Fenner. No. 1,017,523; Feb. 13; Sp. p. 2853; Gaz. vol. 175; p. 481.
Printing-press-delivering attachment. J. M. Pierce. No. 1,017,999; Feb. 20; Sp. p. 3933; Gaz. vol. 175; p. 680.
Printing-press roller-socket. W. Evensen. No. 1,016,496; Feb. 6; Sp. p. 570; Gaz. vol. 175; p. 88.
Printing-press safety device, Platen-. M. Rockstroh. No. 1,018,005; Feb. 20; Sp. p. 3943; Gaz. vol. 175; p. 682.
Printing-press sheet-feeding mechanism. F. J. Eberle. No. 1,018,815; Feb. 27; Sp. p. 5750; Gaz. vol. 175; p. 992.
Printing-wheel and ink-fountains. E. W. Dodge. No. 1,018,886; Feb. 27; Sp. p. 5888; Gaz. vol. 175; p. 1015.
Propeller. H. M. Svebilius. No. 1,017,320; Feb. 20; Sp. p. 3512; Gaz. vol. 175; p. 617.
Propeller. W. Deutscher. No. 1,018,237; Feb. 20; Sp. p. 4446; Gaz. vol. 175; p. 763.
Public signal. M. S. Gibson. No. 1,017,531; Feb. 13; Sp. p. 2866; Gaz. vol. 175; p. 483.
Pug-mill. F. Peckelsen. No. 1,016,644; Feb. 6; Sp. p. 949; Gaz. vol. 175; p. 143.
Puller: *See* Post-puller.
Pulley. R. H. Bowen and A. Walker. No. 1,016,666; Feb. 6; Sp. p. 997; Gaz. vol. 175; p. 150.
Pulley. C. A. Brinley. No. 1,016,667; Feb. 6; Sp. p. 998; Gaz. vol. 175; p. 151.
Pulley. C. A. Brinley. No. 1,016,668; Feb. 6; Sp. p. 999; Gaz. vol. 175; p. 151.
Pulley. R. H. Johnson. No. 1,017,152; Feb. 13; Sp. p. 2056; Gaz. vol. 175; p. 353.
Pulley-hanger, Adjustable. W. S. Schuyler. No. 1,018,010; Feb. 20; Sp. p. 3952; Gaz. vol. 175; p. 684.
Pulley or wheel, Self-lubricating loose. F. G. Sargent. No. 1,017,810; Feb. 20; Sp. p. 3489; Gaz. vol. 175; p. 613.
Pulley, Sash-. F. F. Smith. No. 1,017,114; Feb. 13; Sp. p. 1972; Gaz. vol. 175; p. 339.
Pulley, Sash-. F. Egge. No. 1,017,252; Feb. 13; Sp. p. 2283; Gaz. vol. 175; p. 388.
Pulley, Split. J. J. Novitski. No. 1,018,263; Feb. 20; Sp. p. 4497; Gaz. vol. 175; p. 772.
Pulling-over machine. E. Brothers. No. 1,017,786; Feb. 20; Sp. p. 3277; Gaz. vol. 175; p. 587.
Pulp mills, Treating waste liquors from soda-. E. L. Rinman. No. 1,017,320; Feb. 18; Sp. p. 2422; Gaz. vol. 175; p. 411.
Pulverizer, Adjustable. O. Christianson. No. 1,017,383; Feb 13; Sp. p. 2547; Gaz. vol. 175; p. 431.
Pulverizer, Rotary. A. J. Plowman. No. 1,017,891; Feb. 20; Sp. p. 3722; Gaz. vol. 175; p. 648.
Pump. A. G. Mattsson. No. 1,017,106; Feb. 13; Sp. p. 1960; Gaz. vol. 175; p. 337.
Pump. J. T. Pedersen. No. 1,018,129; Feb. 20; Sp. p. 4221; Gaz. vol. 175; p. 726.
Pump. E. R. Seward. No. 1,018,379; Feb. 20; Sp. p. 4734; Gaz. vol. 175; p. 811.
Pump. W. M. Fleming. No. 1,018,751; Feb. 27; Sp. p. 5615; Gaz. vol. 175; p. 970.
Pump for oil-wells, Gas-. J. P. Wintz. No. 1,017,722; Feb. 20; Sp. p. 3246; Gaz. vol. 175; p. 582.
Pump governor, Electric-. W. V. Turner. No. 1,018,594; Feb. 27; Sp. p. 5284; Gaz. vol. 175; p. 917.
Pump, Hydrostatic. F. D. Pagliuchi. No. 1,016,767; Feb. 6; Sp. p. 1195; Gaz. vol. 175; p. 184.
Pump, Hydrostatic. F. D. Pagliuchi. No. 1,016,768; Feb. 6; Sp. p. 1202; Gaz. vol. 175; p. 184.
Pump mechanism. B. Olson. No. 1,017,992; Feb. 20; Sp. p. 3923; Gaz. vol. 175; p. 678.
Pump, Oil-well. I. Carl. No. 1,017,847; Feb. 20; Sp. p. 3575; Gaz. vol. 175; p. 627.
Pump-operating mechanism. L. P. Norton. No. 1,018,533; Feb. 27; Sp. p. 5264; Gaz. vol. 175; p. 914.
Pump-piston. A. M. Prince and L. Coecia. No. 1,018,208; Feb. 20; Sp. p. 4387; Gaz. vol. 175; p. 753.
Pump-rod lifter. N. Kramer. No. 1,016,334; Feb. 6; Sp. p. 224; Gaz. vol. 175; p. 34.
Pumps, Automatic valve for mine-. W. F. Maddox. No. 1,016,573; Feb. 6; Sp. p. 797; Gaz. vol. 175; p. 118.
Pumping device. T. Danquard. No. 1,017,084; Feb. 13; Sp. p. 1919; Gaz. vol. 175; p. 329.
Pumping-power. C. E. Clark. No. 1,017,739; Feb. 20; Sp. p. 3286; Gaz. vol. 175; p. 588.
Punch. G. E. Leith. No. 1,016,752; Feb. 6; Sp. p. 1155; Gaz. vol. 175; p. 179.
Punch and the like, Portable screw-. A. Vernet. No. 1,017,609; Feb. 13; Sp. p. 3004; Gaz. vol. 175; p. 508.
Punch, Center-. J. Richter. No. 1,017,469; Feb. 13; Sp. p. 2749; Gaz. vol. 175; p. 463.
Punch, Multiple. L. H. Void. No. 1,016,459; Feb. 6; Sp. p. 509; Gaz. vol. 175; p. 78.
Punching and feeding sheet material, Machine for. A. R. Havener. No. 1,019,008; Feb. 27; Sp. p. 6157; Gaz. vol. 175; p. 1057.
Punching or shaping metallic blanks, Machine for. M. F. Cahill. No. 1,016,932; Feb. 13; Sp. p. 1550; Gaz. vol. 175; p. 275.
Push-button. H. C. Thomson. No. 1,016,589; Feb. 6; Sp. p. 823; Gaz. vol. 175; p. 123.
Puzzle. L. W. Hardy. No. 1,017,752; Feb. 20; Sp. p. 3316; Gaz. vol. 175; p. 593.
Puzzle-box. J. Szumlinski. No. 1,017,343; Feb. 13; Sp. p. 2460; Gaz. vol. 175; p. 413.
Puzzle, Congestion-problem. W. H. Browning. No. 1,017,378; Feb. 13; Sp. p. 2532; Gaz. vol. 175; p. 429.
Quoin. C. A. Lutz. No. 1,018,838; Feb. 27; Sp. p. 5790; Gaz. vol. 175; p. 1000.
Rack: *See* Bag-rack; Display-rack; Hay-rack; Hose-rack; Mail-bag rack; Postal-card rack; Shingle-rack; Vessel-rack.
Radiator. J. M. Fedders. No. 1,017,896; Feb. 13; Sp. p. 2575; Gaz. vol. 175; p. 486.
Radiator-heater. M. A. Edson. No. 1,018,414; Feb. 27; Sp. p. 4836; Gaz. vol. 175; p. 856.
Radiators, Making sheet-metal. O. S. Beyer. No. 1,018,156; Feb. 20; Sp. p. 4283; Gaz. vol. 175; p. 735.
Rail-bond. J. T. Devlese. No. 1,017,285; Feb. 13; Sp. p. 2841; Gaz. vol. 175; p. 398.
Rail-chair. J. Laeufer. No. 1,018,247; Feb. 20; Sp. p. 4466; Gaz. vol. 175; p. 767.
Rail-clamp. C. Oreastein. No. 1,016,849; Feb. 6; Sp. p. 1357; Gaz. vol. 175; p. 210.
Rail drill and clamp, Combined. C. J. Coulter. No. 1,016,477; Feb. 6; Sp. p. 548; Gaz. vol. 175; p. 84.
Rail-fastener. W. J. Cooper. No. 1,016,962; Feb. 27; Sp. p. 6045; Gaz. vol. 175; p. 1042.
Rail-fastening. B. McCann. No. 1,017,576; Feb. 13; Sp. p. 2944; Gaz. vol. 175; p. 497.
Rail-joint. J. Cusick. No. 1,016,974; Feb. 6; Sp. p. 1010; Gaz. vol. 175; p. 158.
Rail-joint. W. P. and S. G. Thomson. No. 1,016,797; Feb. 6; Sp. p. 1262; Gaz. vol. 175; p. 194.
Rail-joint. J. V. Morres. No. 1,017,956; Feb. 20; Sp. p. 3907; Gaz. vol. 175; p. 676.
Rail-joint. J. T. Bogard. No. 1,018,234; Feb. 20; Sp. p. 4441; Gaz. vol. 175; p. 762.
Rail-joint. F. Hech. No. 1,018,494; Feb. 27; Sp. p. 5016; Gaz. vol. 175; p. 882.
Rail-joint. L. M. Dilger. No. 1,018,700; Feb. 27; Sp. p. 5489; Gaz. vol. 175; p. 951.
Rail-joint regulator. I. M. Myers and O. Erwin. No. 1,018,486; Feb. 27; Sp. p. 4875; Gaz. vol. 175; p. 863.
Rail-joint support. T. H. McKay and J. F. Hughes. No. 1,017,576; Feb. 13; Sp. p. 2945; Gaz. vol. 175; p. 497.
Rail-joints, Means for forming. H. G. Gillmor. No. 1,016,621; Feb. 6; Sp. p. 901; Gaz. vol. 175; p. 135.
Rails to metal ties, Means for securing metal. C. L. Taylor. No. 1,017,925; Feb. 20; Sp. p. 3774; Gaz. vol. 175; p. 656.
Railograph. E. E. Johnson. No. 1,016,990; Feb. 13; Sp. p. 1711; Gaz. vol. 175; p. 290.
Railway block-signal system, Electric-. S. S. Stolp. No. 1,016,975; Feb. 13; Sp. p. 1654; Gaz. vol. 175; p. 291.

Railway block-signaling system, Electric-. K. Richards. No. 1,018,443; Feb. 27; Sp. p. 4894; Gaz. vol. 175; p. 865.
Railway cross-tie, Standard metal. C. T. Kilgore. No. 1,017,558; Feb. 13; Sp. p. 2918; Gaz. vol. 175; p. 492.
Railway-joint. L. R. Hinshman and H. S. Hollar. No. 1,018,054; Feb. 20; Sp. p. 4048; Gaz. vol. 175; p. 709.
Railway-rail. H. G. Ekberg. No. 1,018,102; Feb. 20; Sp. p. 4167; Gaz. vol. 175; p. 717.
Railway-rail anticreeper. H. H. Ferris. No. 1,017,623; Feb. 13; Sp. p. 3029; Gaz. vol. 175; p. 512.
Railway-rail joint, Insulated. T. O'Brien. No. 1,017,211; Feb. 13; Sp. p. 2396; Gaz. vol. 175; p. 408.
Railway-signal. W. P. Allen. No. 1,016,384; Feb. 6; Sp. p. 323; Gaz. vol. 175; p. 51.
Railway-signal. W. P. Allen and J. P. Coleman. No. 1,016,385; Feb. 6; Sp. p. 327; Gaz. vol. 175; p. 52.
Railway signaling system. T. M. Breeble. No. 1,016,832; Feb. 6; Sp. p. 1426; Gaz. vol. 175; p. 221.
Railway signaling system. L. V. Lewis and J. S. Holliday. No. 1,016,922; Feb. 6; Sp. p. 1522; Gaz. vol. 175; p. 236.
Railway structure. N. E. Salsich. No. 1,016,525; Feb. 6; Sp. p. 679; Gaz. vol. 175; p. 101.
Railway structure. C. W. Reinoehl and W. M. Henderson. No. 1,017,315; Feb. 13; Sp. p. 2407; Gaz. vol. 175; p. 410.
Railway-switch. J. H. Laney. No. 1,017,768; Feb. 20; Sp. p. 3346; Gaz. vol. 175; p. 599.
Railway-switch. F. M. Hall. No. 1,018,314; Feb. 20; Sp. p. 4592; Gaz. vol. 175; p. 780.
Railway-switch, Automatic. J. L. Wooley. No. 1,016,967; Feb. 6; Sp. p. 1401; Gaz. vol. 175; p. 217.
Railway-tie. W. H. Jones. No. 1,016,414; Feb. 6; Sp. p. 397; Gaz. vol. 175; p. 62.
Railway-tie. L. C. Parker. No. 1,016,517; Feb. 6; Sp. p. 656; Gaz. vol. 175; p. 98.
Railway-tie. V. B. Wheaton. No. 1,016,806; Feb. 6; Sp. p. 1276; Gaz. vol. 175; p. 196.
Railway-tie. P. Eisel, F. Hagen, and A. Schroeder. No. 1,017,042; Feb. 13; Sp. p. 1907; Gaz. vol. 175; p. 314.
Railway-tie. J. Booth. No. 1,017,947; Feb. 20; Sp. p. 3815; Gaz. vol. 175; p. 662.
Railway-tie. W. P. and S. G. Thomson. No. 1,018,130; Feb. 20; Sp. p. 4246; Gaz. vol. 175; p. 722.
Railway-tie. J. Saul and R. W. Vosburg. No. 1,018,785; Feb. 27; Sp. p. 5620; Gaz. vol. 175; p. 972.
Railway-tie. W. J. Steventon. No. 1,018,787; Feb. 27; Sp. p. 5625; Gaz. vol. 175; p. 973.
Railway-tie. A. W. Yocum. No. 1,018,901; Feb. 27; Sp. p. 5715; Gaz. vol. 175; p. 987.
Railway-tie and fastening means therefor. J. A. Hyle. No. 1,016,690; Feb. 6; Sp. p. 1040; Gaz. vol. 175; p. 158.
Railway-tie, Metallic. E. H. Frank. No. 1,017,965; Feb. 20; Sp. p. 3859; Gaz. vol. 175; p. 668.
Railway-tie, Metallic. J. H. Akin. No. 1,018,401; Feb. 27; Sp. p. 4799; Gaz. vol. 175; p. 851.
Railway-tie, Metallic. W. H. Hawn. No. 1,018,491; Feb. 27; Sp. p. 5010; Gaz. vol. 175; p. 881.
Railway-track. W. Ferguson, Jr., and A. W. Buel. No. 1,017,525; Feb. 13; Sp. p. 2859; Gaz. vol. 175; p. 482.
Railway-track. T. Sivertsen. No. 1,017,601; Feb. 13; Sp. p. 2990; Gaz. vol. 175; p. 505.
Rake: *See* Hay-rake.
Ram, Hydraulic. S. R., C. R., and W. R. Hill. No. 1,016,409; Feb. 6; Sp. p. 383; Gaz. vol. 175; p. 61.
Range-finder. A. Barr and W. Stroud. No. 1,018,548; Feb. 27; Sp. p. 5151; Gaz. vol. 175; p. 902.
Razor. H. E. S. Holt. No. 1,016,267; Feb. 6; Sp. p. 51; Gaz. vol. 175; p. 11.
Razor. H. E. S. Holt. No. 1,018,429; Feb. 27; Sp. p. 4845; Gaz. vol. 175; p. 858.
Razor, Safety-. J. A. Makarhed. No. 1,016,844; Feb. 6; Sp. p. 247; Gaz. vol. 175; p. 35.
Razor, Safety-. H. Christiansen. No. 1,017,133; Feb. 13; Sp. p. 2025; Gaz. vol. 175; p. 348.
Razor, Safety-. J. P. Paddington. No. 1,017,166; Feb. 13; Sp. p. 2080; Gaz. vol. 175; p. 353.
Razor, Safety-. F. H. Blodgett. No. 1,017,199; Feb. 13; Sp. p. 2160; Gaz. vol. 175; p. 360.
Razor, Safety-. J. Gelin. No. 1,017,866; Feb. 20; Sp. p. 3616; Gaz. vol. 175; p. 633.
Razor, Safety-. L. Nalesnow. No. 1,018,437; Feb. 27; Sp. p. 4877; Gaz. vol. 175; p. 863.
Razor, Safety-. A. W. Schaenker. No. 1,018,788; Feb. 27; Sp. p. 5677; Gaz. vol. 175; p. 961.
Razor-strop. P. H. Alpp. No. 1,016,899; Feb. 6; Sp. p. 844; Gaz. vol. 175; p. 126.
Razor-stropping device, Safety-. L. D. Saxton. No. 1,017,325; Feb. 13; Sp. p. 2430; Gaz. vol. 175; p. 412.
Razor-stropping machine. I. Bachler. No. 1,016,231; Feb. 13; Sp. p. 1548; Gaz. vol. 175; p. 275.
Reactance-coil. T. H. Murray and P. Torchio. No. 1,017,348; Feb. 13; Sp. p. 2473; Gaz. vol. 175; p. 420.
Receipt-billing machine, Express-. W. C. Goodman. No. 1,016,823; Feb. 6; Sp. p. 1219; Gaz. vol. 175; p. 201.
Receptacle. E. H. Lowenz. No. 1,016,755; Feb. 6; Sp. p. 1165; Gaz. vol. 175; p. 180.
Receptacle-closure. J. L. Holland. No. 1,018,490; Feb. 27; Sp. p. 5016; Gaz. vol. 175; p. 883.
Receptacle, Safety-. C. F. Bitzhel. No. 1,018,444; Feb. 27; Sp. p. 4884; Gaz. vol. 175; p. 865.
Receptacle, Three-compartment. C. B. and C. D. McDonald. No. 1,019,010; Feb. 27; Sp. p. 6163; Gaz. vol. 175; p. 1059.
Recoil-neutralizer. A. C. Bettingen and F. P. Gable. No. 1,017,953; Feb. 20; Sp. p. 3833; Gaz. vol. 175; p. 664.
Recorder: *See* Speed-recorder; Time-recorder.
Recording instruments, Tape-feeding mechanism for. A. H. Martin. No. 1,017,964; Feb. 20; Sp. p. 3905; Gaz. vol. 175; p. 675.
Reel: *See* Clothes-line reel; Collapsible reel; Fishing-reel; Hose-reel; Wire-reel.
Refrigerating device. G. E. Jones. No. 1,017,217; Feb. 18; Sp. p. 2210; Gaz. vol. 175; p. 375.
Refrigerator. B. A. Kuhns. No. 1,016,336; Feb. 6; Sp. p. 229; Gaz. vol. 175; p. 35.
Refrigerator. G. S. Gallagher. No. 1,018,180; Feb. 20; Sp. p. 4335; Gaz. vol. 175; p. 744.
Refrigerator. G. M. Willard. No. 1,018,539; Feb. 27; Sp. p. 5166; Gaz. vol. 175; p. 898.
Refrigerator-car ventilator. D. C. Mulvihill. No. 1,017,445; Feb. 13; Sp. p. 2497; Gaz. vol. 175; p. 455.
Refuse collector, Street-. H. Döring. No. 1,016,556; Feb. 6; Sp. p. 761; Gaz. vol. 175; p. 112.
Register: *See* Cash-register; Fare-register.
Register. W. J. Farquhar. No. 1,018,750; Feb. 27; Sp. p. 5623; Gaz. vol. 175; p. 970.
Regulator: *See* Damper-regulator; Rail-joint regulator; Speed-regulator; Tempo-regulator; Thermostatic regulator; Voltage-regulator.
Relay, Spring-armature. W. Kaisling. No. 1,016,567; Feb. 6; Sp. p. 779; Gaz. vol. 175; p. 115.
Relay, target-setting, and return-call-circuit-closing device. E. R. Cunningham. No. 1,016,482; Feb. 6; Sp. p. 559; Gaz. vol. 175; p. 86.
Renovating and disinfecting device. E. E. Overholt. No. 1,016,435; Feb. 6; Sp. p. 499; Gaz. vol. 175; p. 69.
Resilient wheel. H. W. Brooks and S. F. Krupp. No. 1,016,871; Feb. 6; Sp. p. 1410; Gaz. vol. 175; p. 218.
Resilient wheel. J. W. Enright. No. 1,018,307; Feb. 20; Sp. p. 4581; Gaz. vol. 175; p. 788.
Resonator. L. H. Himiobes. No. 1,017,871; Feb. 20; Sp. p. 3639; Gaz. vol. 175; p. 635.
Rest and lifting lever. W. V. Ellis. No. 1,018,655; Feb. 27; Sp. p. 5409; Gaz. vol. 175; p. 937.
Rethreading-tool. D. G. Garbarino and C. W. Roessle. No. 1,017,403; Feb. 13; Sp. p. 2593; Gaz. vol. 175; p. 439.
Revolver supporting and operating apparatus. H. W. Sims. No. 1,018,015; Feb. 20; Sp. p. 3960; Gaz. vol. 175; p. 685.
Rheostat. H. A. Steen. No. 1,016,798; Feb. 6; Sp. p. 1252; Gaz. vol. 175; p. 193.
Rheostat and switch, Auxiphone. K. B. Hastings. No. 1,018,856; Feb. 20; Sp. p. 4665; Gaz. vol. 175; p. 802.
Ribbon-feeding mechanism for reproducing-machines. B. O. Fanslow. No. 1,017,658; Feb. 20; Sp. p. 3100; Gaz. vol. 175; p. 561.
Ribbon-holder. A. B. Griep. No. 1,016,489; Feb. 6; Sp. p. 576; Gaz. vol. 175; p. 89.
Ribbon winding and reversing mechanism. H. Ellis. No. 1,018,176; Feb. 20; Sp. p. 4324; Gaz. vol. 175; p. 743.
Riffling-machine. C. Lewis, Sr. No. 1,017,869; Feb. 13; Sp. p. 2925; Gaz. vol. 175; p. 498.
Ring: *See* Finger-ring; Lead-ring; Packing-ring; Play-ring.
Ring construction, Finger-. F. R. Cardon. No. 1,018,875; Feb. 27; Sp. p. 5865; Gaz. vol. 175; p. 1012.
Ring-gage. F. T. Plack. No. 1,016,358; Feb. 6; Sp. p. 269; Gaz. vol. 175; p. 42.
Rivet-setting machine. A. R. Havener. No. 1,016,940; Feb. 13; Sp. p. 1574; Gaz. vol. 175; p. 278.
Rivet-setting machine, Multiple. A. R. Havener. No. 1,016,761; Feb. 27; Sp. p. 5634; Gaz. vol. 175; p. 974.
Riveting-machine attachment. O. Mallory. No. 1,017,436; Feb. 13; Sp. p. 2606; Gaz. vol. 175; p. 451.
Roach-trap. H. N. Subre. No. 1,018,277; Feb. 20; Sp. p. 4519; Gaz. vol. 175; p. 777.
Road-cutter. J. T. Hanney. No. 1,016,775; Feb. 6; Sp. p. 1221; Gaz. vol. 175; p. 188.
Roasting-kiln, Recuperative. J. Zellweger. No. 1,017,830; Feb. 20; Sp. p. 3552; Gaz. vol. 175; p. 624.
Rock-breaker, Subaqueous. A. W. Hassell. No. 1,018,050; Feb. 20; Sp. p. 4040; Gaz. vol. 175; p. 699.
Rock-cutter, Navigable. F. Lobaltz. No. 1,018,917; Feb. 27; Sp. p. 6052; Gaz. vol. 175; p. 1025.
Rock-drill. C. H. Locher. No. 1,018,834; Feb. 27; Sp. p. 5785; Gaz. vol. 175; p. 999.
Rodent-exterminator. D. B. Harris. No. 1,018,109; Feb. 20; Sp. p. 4176; Gaz. vol. 175; p. 719.
Roll. F. A. Vieser. No. 1,018,457; Feb. 27; Sp. p. 4922; Gaz. vol. 175; p. 869.
Roll-polishing device. J. C. Cavill and G. F. Lehberger. No. 1,018,163; Feb. 20; Sp. p. 4307; Gaz. vol. 175; p. 738.
Roller: *See* Cotton-gin roller.
Rolling machine, Ball-. G. E. Abbott. No. 1,017,125; Feb. 13; Sp. p. 1996; Gaz. vol. 175; p. 343.
Rolling-mill guide. H. J. Davis. No. 1,017,283; Feb. 13; Sp. p. 2328; Gaz. vol. 175; p. 396.
Rolling screw-bolts. J. Reiter. No. 1,017,543; Feb. 13; Sp. p. 2867; Gaz. vol. 175; p. 487.
Rolling screw-bolts, Machine for. J. Reiter. No. 1,018,317; Feb. 20; Sp. p. 4597; Gaz. vol. 175; p. 790.

Roofing-cleat. H. R. Wardell. No. 1,017,611; Feb. 13; Sp. p. 3009; Gaz. vol. 175; p. 598.
Roofing Cleat for securing. H. W. Topping. No. 1,018,946; Feb. 27; Sp. p. 6006; Gaz. vol. 175; p. 1036.
Roofing, Ready-made. J. J. Smiley. No. 1,018,524; Feb. 27; Sp. p. 5122; Gaz. vol. 175; p. 893.
Roofing, Sheet-metal. K. Roth. No. 1,018,782; Feb. 27; Sp. p. 5676; Gaz. vol. 175; p. 981.
Roofing-tool. F. J. Dittrich. No. 1,017,390; Feb. 18; Sp. p. 2567; Gaz. vol. 175; p. 434.
Roofs of buildings, Scaffolding attachment for. C. C. Carpenter. No. 1,018,031; Feb. 20; Sp. p. 3997; Gaz. vol. 175; p. 692.
Rope-drive elevator. J. D. Ihlder. No. 1,016,691; Feb. 6; Sp. p. 1042; Gaz. vol. 175; p. 159.
Rotary bit, Well-boring. C. W. Dodge. No. 1,017,206; Feb. 13; Sp. p. 2131; Gaz. vol. 175; p. 371.
Rotary engine. H. L. Cummins. No. 1,017,139; Feb. 13; Sp. p. 2029; Gaz. vol. 175; p. 348.
Rotary engine. E. Heidt. No. 1,017,971; Feb. 20; Sp. p. 3876; Gaz. vol. 175; p. 670.
Rotary engine. W. T. Bennett. No. 1,018,737; Feb. 27; Sp. p. 5574; Gaz. vol. 175; p. 964.
Rotary gas-engine. H. R. Noyes. No. 1,016,764; Feb. 6; Sp. p. 1189; Gaz. vol. 175; p. 183.
Rotary machine. K. Kiefer. No. 1,017,418; Feb. 13; Sp. p. 2629; Gaz. vol. 175; p. 445.
Rotary meter, Magnetic. H. A. Selah. No. 1,016,964; Feb. 13; Sp. p. 1633; Gaz. vol. 175; p. 287.
Rotary motor. J. F. Cesario. No. 1,017,850; Feb. 20; Sp. p. 3579; Gaz. vol. 175; p. 628.
Rotary press. C. Rach. 1,018,267; Feb. 20; Sp. p. 4501; Gaz. vol. 175; p. 773.
Rotatable bin. E. F. von Borries. No. 1,016,911; Feb. 6; Sp. p. 1498; Gaz. vol. 175; p. 232.
Rubber-coated blanks, Apparatus for producing. W. W. Duncan and N. E. Tousley. No. 1,016,483; Feb. 6; Sp. p. 562; Gaz. vol. 175; p. 87.
Rubbing-machine engine. J. J. Dickson. No. 1,017,389; Feb. 13; Sp. p. 2564; Gaz. vol. 175; p. 434.
Rubbing-machine, Pneumatic. J. J. Dickson. No. 1,017,388; Feb. 13; Sp. p. 2561; Gaz. vol. 175; p. 433.
Rug-fastener. H. Hoge and J. Schade, Jr. No. 1,018,194; Feb. 20; Sp. p. 4362; Gaz. vol. 175; p. 749.
Rule, Circular slide-. H. R. Watts. No. 1,017,719; Feb. 20; Sp. p. 3242; Gaz. vol. 175; p. 581.
Rule, Plumb-. L. M. Rudy. No. 1,017,111; Feb. 13; Sp. p. 1968; Gaz. vol. 175; p. 338.
Ruler. F. Suddoth. No. 1,018,790; Feb. 27; Sp. p. 5689; Gaz. vol. 175; p. 983.
Saccharifying apparatus. V. Raisin. No. 1,018,778; Feb. 27; Sp. p. 5671; Gaz. vol. 175; p. 980.
Sad-iron and cooker, Combination. C. P. Madsen. No. 1,018,576; Feb. 27; Sp. p. 5247; Gaz. vol. 175; p. 911.
Sad-iron holder, Removable. C. C. Tiedemann. No. 1,018,580; Feb. 27; Sp. p. 5136; Gaz. vol. 175; 894.
Safe. J. E. Caseerly. No. 1,018,606; Feb. 27; Sp. p. 5307; Gaz. vol. 175; p. 921.
Sand-blast device. A. Jorn, Jr. No. 1,016,415; Feb. 6; Sp. p. 398; Gaz. vol. 175; p. 63.
Sand-drying furnace. F. W. Adlof. No. 1,018,951; Feb. 27; Sp. p. 6017; Gaz. vol. 175; p. 1038.
Sand-feeding device. W. E. Matthews, Jr. No. 1,016,509; Feb. 6; Sp. p. 625; Gaz. vol. 175; p. 96.
Sand-pipe for sander devices. H. Vissering. No. 1,018,143; Feb. 20; Sp. p. 4255; Gaz. vol. 175; p. 731.
Sand-separating machine, Black-. J. M. Burch. No. 1,017,506; Feb. 13; Sp. p. 2813; Gaz. vol. 175; p. 475.
Sandpaper-drum. H. J. Mitchell. No. 1,016,511; Feb. 6; Sp. p. 628; Gaz. vol. 175; p. 96.
Sanitary appliance. B. Worthington. No. 1,017,940; Feb. 20; Sp. p. 3801; Gaz. vol. 175; p. 660.
Sanitary closet. J. H. King. No. 1,017,675; Feb. 20; Sp. p. 3148; Gaz. vol. 175; p. 567.
Sap-gatherer. J. M. Harrison. No. 1,016,406; Feb. 6; Sp. p. 370; Gaz. vol. 175; p. 60.
Sash and frame, Sheet-metal window. M. Swartz. No. 1,017,841; Feb. 13; Sp. p. 2456; Gaz. vol. 175; p. 418.
Sash-bars, Jointing metal. F. H. Crittall. No. 1,016,916; Feb. 6; Sp. p. 1508; Gaz. vol. 175; p. 233.
Sash-cord fastener. L. W. Smart. No. 1,018,214; Feb. 20; Sp. p. 4395; Gaz. vol. 175; p. 755.
Sash-fastener. L. R. Killingsworth. No. 1,018,427; Feb. 27; Sp. p. 4858; Gaz. vol. 175; p. 860.
Sash-fastener, Portable. J. E. Horstmyer. No. 1,019,006; Feb. 27; Sp. p. 6162; Gaz. vol. 175; p. 1058.
Sash operator, Window-. H. N. Davock. No. 1,018,034; Feb. 20; Sp. p. 4002; Gaz. vol. 175; p. 693.
Sash, Window-. J. Kahn. No. 1,016,503; Feb. 27; Sp. p. 5032; Gaz. vol. 175; p. 885.
Saw, Chain. B. L. Bailey. No. 1,016,664; Feb. 6; Sp. p. 990; Gaz. vol. 175; p. 150.
Saw-clamp. C. A. Seibert. No. 1,016,963; Feb. 13; Sp. p. 1631; Gaz. vol. 175; p. 286.
Saw-filing machine. S. Haltom. No. 1,018,900; Feb. 27; Sp. p. 5911; Gaz. vol. 175; p. 1020.
Saw-gummer. E. Chainey. No. 1,018,740; Feb. 27; Sp. p. 5583; Gaz. vol. 175; p. 966.
Saw jointer and gage, Combined. H. K. Salmon. No. 1,018,446; Feb. 27; Sp. p. 4899; Gaz. vol. 175; p. 866.
Saw-set. J. Simpson. No. 1,017,475; Feb. 13; Sp. p. 2760; Gaz. vol. 175; p. 465.
Saw-set. J. H. Jennings. No. 1,018,974; Feb. 27; Sp. p. 6082; Gaz. vol. 175; p. 1046.
Saw-setting machine. C. L. Johnson. No. 1,017,761; Feb. 20; Sp. p. 3333; Gaz. vol. 175; p. 596.
Saw-table gage. W. S. Williams. No. 1,017,632; Feb. 13; Sp. p. 3056; Gaz. vol. 175; p. 515.
Saw-tooth, Insertible. F. C. Oldham. No. 1,017,013; Feb. 13; Sp. p. 1738; Gaz. vol. 175; p. 303.
Sawdust or disinfecting-powders, with a tiltable dust-bin and an automatic closing device for the cover, Apparatus for instantaneous distribution of. S. Danielli. No. 1,018,410; Feb. 27; Sp. p. 4528; Gaz. vol. 175; p. 854.
Sawmill set-works. P. Michel, Fils. No. 1,016,759; Feb. 6; Sp. p. 1176; Gaz. vol. 175; p. 181.
Scaffold. W. C. Gaw. No. 1,018,043; Feb. 20; Sp. p. 4022; Gaz. vol. 175; p. 696.
Scaffold. H. B. Fuller. No. 1,018,658; Feb. 27; Sp. p. 5414; Gaz. vol. 175; p. 933.
Scaffold, Adjustable. D. J. Muns. No. 1,017,686; Feb. 20; Sp. p. 3168; Gaz. vol. 175; p. 570.
Scale. W. H. Sabin and H. Larson. No. 1,017,596; Feb. 13; Sp. p. 2982; Gaz. vol. 175; p. 504.
Scale. F. P. Dunn. No. 1,017,656; Feb. 20; Sp. p. 3105; Gaz. vol. 175; p. 561.
Scale. F. P. Dunn. No. 1,018,178; Feb. 20; Sp. p. 4319; Gaz. vol. 175; p. 741.
Scale. F. P. Dunn. No. 1,018,813; Feb. 27; Sp. p. 5745; Gaz. vol. 175; p. 991.
Scale attachment for supporting wagon-beds. C. E. Barnett. No. 1,017,244; Feb. 13; Sp. p. 2263; Gaz. vol. 175; p. 385.
Scale, Automatic weighing and recording mining-car. G. Goetz. No. 1,017,747; Feb. 20; Sp. p. 3306; Gaz. vol. 175; p. 592.
Scale-balancing device. C. A Vidinghoff. No. 1,018,456; Feb. 27; Sp. p. 4920; Gaz. vol. 175; p. 869.
Scale, Platform weighing-. W. C. Kline. No. 1,017,154; Feb. 13; Sp. p. 2060; Gaz. vol. 175; p. 354.
Scissors. A. Hopkins. No. 1,017,545; Feb. 13; Sp. p. 2890; Gaz. vol. 175; p. 488.
Scoop, Automatic weighing-. H. Ault and C. Switalski. No. 1,016,246; Feb. 6; Sp. p. 3; Gaz. vol. 175; p. 3.
Scoop, Tender-. S. Bennis and J. G. Keppel. No. 1,016,781; Feb. 6; Sp. p. 1121; Gaz. vol. 175; p. 172.
Scooping device. D. H. Roller. No. 1,016,711; Feb. 6; Sp. p. 1079; Gaz. vol. 175; p. 166.
Scow for transporting gravel, &c. T. C. Jackson. No. 1,018,565; Feb. 27; Sp. p. 5234; Gaz. vol. 175; p. 906.
Scow for transporting gravel, &c. T. C. Jackson. No. 1,018,566; Feb. 27; Sp. p. 5227; Gaz. vol. 175; p. 906.
Scraper. L. Pettit. No. 1,018,516; Feb. 27; Sp. p. 5109; Gaz. vol. 175; p. 891.
Scraper, Pot-. L. C. Meyer. No. 1,018,844; Feb. 27; Sp. p. 5799; Gaz. vol. 175; p. 1001.
Scraper, Wheeled. J. Baron. No. 1,018,954; Feb. 27; Sp. p. 6023; Gaz. vol. 175; p. 1039.
Scraping device for cans and the like. A. V. Harrison. No. 1,017,753; Feb. 20; Sp. p. 3318; Gaz. vol. 175; p. 594.
Screen: *See* Fly-screen; Window-screen; Window or door screen.
Screen. G. H. Davis. No. 1,018,009; Feb. 20; Sp. p. 4162; Gaz. vol. 175; p. 716.
Screw-driver. R. B. Benjamin. No. 1,017,035; Feb. 13; Sp. p. 1785; Gaz. vol. 175; p. 311.
Screw-driving machines, Adjustable table for automatic. W. P. Hunt. No. 1,017,098; Feb. 13; Sp. p. 1945; Gaz. vol. 175; p. 334.
Screw-stopper for bottles and other receptacles. J. Nightingale and J. Sackett. No. 1,016,286; Feb. 6; Sp. p. 113; Gaz. vol. 175; p. 18.
Screw, Temper-. J. C. Kahle. No. 1,018,910; Feb. 27; Sp. p. 5938; Gaz. vol. 175; p. 1022.
Screw-thread-cutting device. L. F. Hart. No. 1,017,148; Feb. 13; Sp. p. 2043; Gaz. vol. 175; p. 351.
Seal. N. H. Tunks. No. 1,018,687; Feb. 27; Sp. p. 5466; Gaz. vol. 175; p. 948.
Seal, Bottle-. S. Friedman. No. 1,018,107; Feb. 20; Sp. p. 4175; Gaz. vol. 175; p. 718.
Seal, Car-. D. D. Davis. No. 1,016,985; Feb. 13; Sp. p. 1687; Gaz. vol. 175; p. 294.
Seal, Car-. A. C. Rosenbrook. No. 1,018,682; Feb. 27; Sp. p. 5458; Gaz. vol. 175; p. 946.
Seal for packing-cases. S. Stroh. No. 1,018,943; Feb. 27; Sp. p. 6000; Gaz. vol. 175; p. 1035.
Seal for vapor devices. P. H. Thomas. No. 1,018,642; Feb. 27; Sp. p. 5362; Gaz. vol. 175; p. 943.
Seal primer, Sewer-. A. C. Dale. No. 1,016,676; Feb. 6; Sp. p. 1013; Gaz. vol. 175; p. 154.
Seal, Protective. T. S. Wood. No. 1,017,337; Feb. 20; Sp. p. 3548; Gaz. vol. 175; p. 623.
Seal, Snap-. E. J. Brooks. No. 1,017,950; Feb. 20; Sp. p. 3321; Gaz. vol. 175; p. 663.
Sealing electrical conductors through or into hard vitreous substances, Hermetically. G. B. Burnside. No. 1,016,320; Feb. 6; Sp. p. 192; Gaz. vol. 175; p. 29.
Sealing machine, Bottle-. W. E. Lindsay. No. 1,018,575; Feb. 27; Sp. p. 5241; Gaz. vol. 175; p. 911.
Sealing-wax machine, Electric. A. W. Lockard. No. 1,018,977; Feb. 27; Sp. p. 6091; Gaz. vol. 175; p. 1043.
Seam-trimming and welt-beating machine. C. L. Eaton. No. 1,018,089; Feb. 20; Sp. p. 4011; Gaz. vol. 175; p. 694.
Search-light, Portable. H. B. Kenyon. No. 1,016,887; Feb. 6; Sp. p. 1434; Gaz. vol. 175; p. 223.

Seat: *See* Automobile-seat; Bath-seat; Closet-seat.
Seat-body-forming machine. M. H. Kashian. No. 1,016,416; Feb. 6; Sp. p. 400; Gaz. vol. 175; p. 63.
Secondary or storage battery. J. F. Clare. No. 1,017,060; Feb. 13; Sp. p. 1914; Gaz. vol. 175; p. 328.
Seed-cleaning machine. P. L. Willet. No. 1,017,631; Feb. 13; Sp. p. 3064; Gaz. vol. 175; p. 516.
Seed-drill. F. M. Sheldon. No. 1,018,383; Feb. 27; Sp. p. 5080; Gaz. vol. 175; p. 1031.
Seed-dropping mechanism, Cotton-. W. S. Graham. No. 1,017,664; Feb. 20; Sp. p. 3122; Gaz. vol. 175; p. 564.
Seeder and planter. J. C. Moore. No. 1,018,560; Feb. 27; Sp. p. 5260; Gaz. vol. 175; p. 913.
Separator: *See* Electrostatic separator; Grain-separator; Liquid-separator.
Separator. I. H. Spencer. No. 1,016,972; Feb. 13; Sp. p. 1649; Gaz. vol. 175; p. 290.
Service-box key. S. T. Downs. No. 1,018,172; Feb. 20; Sp. p. 4316; Gaz. vol. 175; p. 741.
Sewer-trap. C. Kelly and D. P. Joralemon. No. 1,018,569; Feb. 27; Sp. p. 5223; Gaz. vol. 175; p. 909.
Sewing-machine. G. B. Savignac and C. E. Myers. No. 1,016,898; Feb. 6; Sp. p. 1460; Gaz. vol. 175; p. 226.
Sewing-machine. G. J. Dormandy. No. 1,016,937; Feb. 13; Sp. p. 1567; Gaz. vol. 175; p. 277.
Sewing-machine. D. Noble. No. 1,017,164; Feb. 13; Sp. p. 2075; Gaz. vol. 175; p. 357.
Sewing-machine. I. E. Fletcher and W. J. MacLean. No. 1,017,397; Feb. 13; Sp. p. 2578; Gaz. vol. 175; p. 437.
Sewing-machine. J. Leathem. No. 1,017,426; Feb. 13; Sp. p. 2645; Gaz. vol. 175; p. 448.
Sewing-machine. H. B. Pruden. No. 1,017,463; Feb. 13; Sp. p. 2738; Gaz. vol. 175; p. 461.
Sewing-machine. J. Leathem. No. 1,017,567; Feb. 13; Sp. p. 2927; Gaz. vol. 175; p. 495.
Sewing-machine. J. Leathem. No. 1,017,568; Feb. 13; Sp. p. 2930; Gaz. vol. 175; p. 495.
Sewing-machine. T. G. Plant. No. 1,018,130; Feb. 20; Sp. p. 4224; Gaz. vol. 175; p. 726.
Sewing-machine. R. L. Lyons. No. 1,018,201; Feb. 20; Sp. p. 4373; Gaz. vol. 175; p. 751.
Sewing-machine. G. M. Eames. No. 1,018,653; Feb. 27; Sp. p. 5404; Gaz. vol. 175; p. 936.
Sewing-machine. T. G. Plant. (Reissue.) No. 13,374; Feb. 27; Sp. p. 6177; Gaz. vol. 175; p. 1062.
Sewing-machine cloth-presser. W. R. Abercrombie. No. 1,016,597; Feb. 6; Sp. p. 940; Gaz. vol. 175; p. 126.
Sewing-machine embroidering attachment. J. D. Karle. No. 1,018,622; Feb. 27; Sp. p. 5334; Gaz. vol. 175; p. 926.
Sewing-machine feeding mechanism. C. F. Gray. No. 1,017,145; Feb. 13; Sp. p. 2037; Gaz. vol. 175; p. 350.
Sewing machine, Filled-sack-. G. B. and H. D. Scott. No. 1,018,133; Feb. 20; Sp. p. 4229; Gaz. vol. 175; p. 727.
Sewing-machine, Hand-. O. D. Klee. No. 1,017,263; Feb. 13; Sp. p. 2299; Gaz. vol. 175; p. 391.
Sewing-machine needle. A. Carson. No. 1,017,247; Feb. 13; Sp. p. 2271; Gaz. vol. 175; p. 386.
Sewing-machine, Overseaming. A. Grieb. No. 1,016,488; Feb. 6; Sp. p. 573; Gaz. vol. 175; p. 89.
Sewing-machine presser-foot. J. P. Weis. No. 1,016,462; Feb. 6; Sp. p. 516; Gaz. vol. 175; p. 80.
Sewing-machine presser-foot. G. B. Savignac and C. E. Myers. No. 1,016,902; Feb. 6; Sp. p. 1482; Gaz. vol. 175; p. 229.
Sewing machine, Shoe-. W. C. Meyer. No. 1,017,440; Feb. 13; Sp. p. 2674; Gaz. vol. 175; p. 455.
Sewing-machine stitch-forming mechanism. C. A. Dearborn. No. 1,018,886; Feb. 27; Sp. p. 5881; Gaz. vol. 175; p. 1014.
Sewing-machine take-up and thread-measurer. G. B. Savignac and C. E. Myers. No. 1,016,900; Feb. 6; Sp. p. 1474; Gaz. vol. 175; p. 228.
Sewing-machine thread-treating device. G. B. Savignac and C. E. Myers. No. 1,016,901; Feb. 6; Sp. p. 1479; Gaz. vol. 175; p. 228.
Sewing-machine trimming mechanism. J. P. Weis. No. 1,016,590; Feb. 6; Sp. p. 825; Gaz. vol. 175; p. 123.
Sewing machines, Welt-channeling attachment for sole-. C. J. Cady and J. E. Thayer. No. 1,017,380; Feb. 13; Sp. p. 2536; Gaz. vol. 175; p. 430.
Sewing water-tight inseams, Welt-guide for. J. E. McPherson and E. E. Orr. No. 1,017,059; Feb. 13; Sp. p. 1843; Gaz. vol. 175; p. 320.
Shade. J. H. Ward. No. 1,017,934; Feb. 20; Sp. p. 3791; Gaz. vol. 175; p. 658.
Shade adjuster, Window-. A. H. and W. Fechner. No. 1,016,256; Feb. 6; Sp. p. 27; Gaz. vol. 175; p. 6.
Shade adjuster, Window-. H. Oglesby. No. 1,017,452; Feb. 13; Sp. p. 2718; Gaz. vol. 175; p. 457.
Shade and curtain hanger. D. G. Munday. No. 1,016,429; Feb. 6; Sp. p. 422; Gaz. vol. 175; p. 67.
Shade-fixture. A. S. Gornto. No. 1,018,106; Feb. 20; Sp. p. 4175; Gaz. vol. 175; p. 718.
Shade fixture, Window-. J. B. Hogle. No. 1,018,110; Feb. 20; Sp. p. 4178; Gaz. vol. 175; p. 719.
Shade-holder. H. H. Forstrom. No. 1,018,241; Feb. 20; Sp. p. 4454; Gaz. vol. 175; p. 763.
Shade-roll holders, Adjustable window-. F. Ferrara. No. 1,017,650; Feb. 20; Sp. p. 3113; Gaz. vol. 175; p. 562.
Shade-roller bracket, Adjustable. C. Mason. No. 1,016,641; Feb. 6; Sp. p. 945; Gaz. vol. 175; p. 142.
Shaft coupling, Conveyer-. B. F. Howland. No. 1,016,748; Feb. 6; Sp. p. 1148; Gaz. vol. 175; p. 177.
Shank-trimming machine. G. Goddu. No. 1,018,045; Feb. 20; Sp. p. 4028; Gaz. vol. 175; p. 697.
Shaper-machine. N. M. Denegar. No. 1,016,253; Feb. 6; Sp. p. 20; Gaz. vol. 175; p. 6.
Sharpener, Knife and scissors. G. S. Miller. No. 1,018,579; Feb. 27; Sp. p. 5258; Gaz. vol. 175; p. 913.
Sharpener, Pick-. J. N. Smothers and J. N. Carroll. No. 1,017,607; Feb. 20; Sp. p. 3166; Gaz. vol. 175; p. 574.
Sharpener, Razor-. E. Tessmer. No. 1,018,382; Feb. 20; Sp. p. 4742; Gaz. vol. 175; p. 812.
Sharpener, Sickle-. C. O. Hathaway and F. W. Hufaker. No. 1,018,061; Feb. 20; Sp. p. 4043; Gaz. vol. 175; p. 699.
Sharpening device. P. Esser. No. 1,018,177; Feb. 20; Sp. p. 4329; Gaz. vol. 175; p. 743.
Sharpening implement. G. B. N. Dow and R. H. Walsh. No. 1,018,615; Feb. 6; Sp. p. 888; Gaz. vol. 175; p. 182.
Sharpening machine, Drill-. J. W. Coyle. No. 1,018,551; Feb. 6; Sp. p. 749; Gaz. vol. 175; p. 110.
Shaving-stick holder. P. K. Williams. No. 1,018,949; Feb. 27; Sp. p. 6013; Gaz. vol. 175; p. 1037.
Shearing attachment, Automatic. E. F. Butler. No. 1,018,396; Feb. 20; Sp. p. 4560; Gaz. vol. 175; p. 783.
Sheave, Universal. J. F. Shea. No. 1,016,965; Feb. 13; Sp. p. 1635; Gaz. vol. 175; p. 287.
Sheet-material-cutting die. D. N. Prime. No. 1,018,820; Feb. 27; Sp. p. 5116; Gaz. vol. 175; p. 891.
Sheet-metal articles, Machine for stamping and forming. M. F. Cahill. No. 1,016,547; Feb. 6; Sp. p. 740; Gaz. vol. 175; p. 109.
Sheet-metal structure. A. L. Sessions. No. 1,018,728; Feb. 27; Sp. p. 5556; Gaz. vol. 175; p. 962.
Sheet-metal structure, Welled. P. M. Wege. No. 1,017,354; Feb. 13; Sp. p. 2486; Gaz. vol. 175; p. 422.
Sheet-metal work. C. P. Shepherd and H. S. Conrad. No. 1,016,584; Feb. 6; Sp. p. 815; Gaz. vol. 175; p. 121.
Sheller: *See* Corn-sheller.
Shingle-rack, Portable. C. Clark. No. 1,016,935; Feb. 13; Sp. p. 1561; Gaz. vol. 175; p. 276.
Ship safety device. W. S. Scarlett. No. 1,016,731; Feb. 6; Sp. p. 1229; Gaz. vol. 175; p. 189.
Shipe, Captive lookout on board. F. Brackett. No. 1,017,200; Feb. 13; Sp. p. 2161; Gaz. vol. 175; p. 369.
Shipping-case, Metallic. C. N. Frey. No. 1,016,269; Feb. 6; Sp. p. 25; Gaz. vol. 175; p. 3.
Shirts, Making. A. J. Cumnock. No. 1,016,552; Feb. 6; Sp. p. 752; Gaz. vol. 175; p. 111.
Shock-absorber. F. Nielsen. No. 1,016,514; Feb. 6; Sp. p. 649; Gaz. vol. 175; p. 97.
Shock-absorber. H. Luxembourger, Jr. No. 1,017,435; Feb. 13; Sp. p. 2665; Gaz. vol. 175; p. 451.
Shock-absorbing device. C. H. Foster. No. 1,017,060; Feb. 20; Sp. p. 3114; Gaz. vol. 175; p. 562.
Shock-loader. T. Hecher. No. 1,016,626; Feb. 6; Sp. p. 1315; Gaz. vol. 175; p. 202.
Shoe. B. M. Weir. No. 1,018,145; Feb. 20; Sp. p. 4264; Gaz. vol. 175; p. 732.
Shoe-beating machine. A. Bates. No. 1,016,316; Feb. 6; Sp. p. 182; Gaz. vol. 175; p. 27.
Shoe-beating machine. A. Bates. No. 1,016,338; Feb. 6; Sp. p. 339; Gaz. vol. 175; p. 54.
Shoe-cleaner. F. Harris and R. Sternberg. No. 1,017,096; Feb. 13; Sp. p. 1943; Gaz. vol. 175; p. 334.
Shoe-machine, Automatic. E. E. Winkley. No. 1,018,360; Feb. 27; Sp. p. 5836; Gaz. vol. 175; p. 1007.
Shoe, Packing-. G. Meyer. No. 1,018,333; Feb. 20; Sp. p. 4627; Gaz. vol. 175; p. 795.
Shoe-polishing device. A. E. Gibson. No. 1,018,660; Feb. 27; Sp. p. 5417; Gaz. vol. 175; p. 938.
Shoe-protector. J. R. Hetrick. No. 1,018,708; Feb. 27; Sp. p. 5516; Gaz. vol. 175; p. 955.
Shoe racks or conveyors, Releasing device for. F. S. Williams. No. 1,018,286; Feb. 20; Sp. p. 4545; Gaz. vol. 175; p. 780.
Shoe-retainer. J. A. Drechsler. No. 1,018,652; Feb. 27; Sp. p. 5403; Gaz. vol. 175; p. 936.
Shoe-shaping machine. O. Ashton. No. 1,017,726; Feb. 20; Sp. p. 3255; Gaz. vol. 175; p. 583.
Shoe-support for pounding-up machines. S. Snow. No. 1,018,636; Feb. 27; Sp. p. 5367; Gaz. vol. 175; p. 931.
Shoes, Manufacturing. N. Vecchio. No. 1,018,455; Feb. 27; Sp. p. 4919; Gaz. vol. 175; p. 869.
Shoemaker's knife. O. T. Hutchison. No. 1,018,906; Feb. 27; Sp. p. 5936; Gaz. vol. 175; p. 1023.
Shoemaker's stand and last, Combined. H. F. Hurst. No. 1,017,372; Feb. 20; Sp. p. 3640; Gaz. vol. 175; p. 635.
Shoemaker's tool. P. Carotti. No. 1,016,608; Feb. 6; Sp. p. 874; Gaz. vol. 175; p. 130.
Shotgun, Single-trigger. E. H. Hamersly. No. 1,018,750; Feb. 27; Sp. p. 5631; Gaz. vol. 175; p. 973.
Show-case lock. M. Kurtzon. No. 1,017,978; Feb. 20; Sp. p. 3892; Gaz. vol. 175; p. 673.
Shuttle, Automatically-threading. E. S. Stimpson. No. 1,017,065; Feb. 13; Sp. p. 1854; Gaz. vol. 175; p. 322.
Shuttle-eye. J. H. Hopkinson. No. 1,018,762; Feb. 27; Sp. p. 5638; Gaz. vol. 175; p. 974.
Sickle for mowers and harvesters, Double. J. B. Fulton. No. 1,017,863; Feb. 20; Sp. p. 3607; Gaz. vol. 175; p. 632.
Sifter. L. J. Herboldsman and G. L. Applebaum. No. 1,018,904; Feb. 27; Sp. p. 5930; Gaz. vol. 175; p. 1022.
Sifter, Ash-. T. W. Comstock. No. 1,017,206; Feb. 13; Sp. p. 2179; Gaz. vol. 175; p. 371.
Sifter, Flour-. C. E. Gray. No. 1,018,822; Feb. 27; Sp. p. 5766; Gaz. vol. 175; p. 995.

Sign and can-holder, Collapsible sheet-metal. C. W. Shonk. No. 1,017,696; Feb. 20; Sp. p. 3187; Gaz. vol. 175; p. 574.
Signi, Moving. A. N. Johnson. No. 1,018,975; Feb. 27; Sp. p. 6085; Gaz. vol. 175; p. 1047.
Signal: *See* Crossing-signal; Marine signal; Public signal; Railway-signal.
Signal apparatus, Safety. J. H. Alander and R. McGregor. No. 1,018,026; Feb. 20; Sp. p. 3965; Gaz. vol. 175; p. 689.
Signal-device hook. P. Fuchs. No. 1,016,260; Feb. 6; Sp. p. 26; Gaz. vol. 175; p. 8.
Signal light, Fog-. R. C. Douglas. No. 1,018,304; Feb. 20; Sp. p. 4570; Gaz. vol. 175; p. 795.
Signal transmitting and receiving apparatus, Electrical. A. T. Dawson and G. T. Buckham. No. 1,018,264; Feb. 27; Sp. p. 5879; Gaz. vol. 175; p. 1014.
Signaling by electroradiant energy. C. D. Ehret. No. 1,018,555; Feb. 27; Sp. p. 5266; Gaz. vol. 175; p. 905.
Signaling device. R. H. Manson. No. 1,016,699; Feb. 6; Sp. p. 1050; Gaz. vol. 175; p. 162.
Signaling system. H. O. Rugh. No. 1,018,375; Feb. 20; Sp. p. 4727; Gaz. vol. 175; p. 809.
Signaling system. H. O. Rugh. No. 1,018,376; Feb. 20; Sp. p. 4729; Gaz. vol. 175; p. 810.
Silo. E. Kretchmer. No. 1,016,506; Feb. 6; Sp. p. 620; Gaz. vol. 175; p. 94.
Silo. L. P. Swoverland. No. 1,016,528; Feb. 6; Sp. p. 685; Gaz. vol. 175; p. 108.
Silo. D. S. and E. F. Younce. No. 1,018,540; Feb. 27; Sp. p. 5167; Gaz. vol. 175; p. 899.
Skate. S. C. Johnson. No. 1,017,551; Feb. 13; Sp. p. 2900; Gaz. vol. 175; p. 490.
Skate, Roller-. J. H. Sheahan. No. 1,016,447; Feb. 6; Sp. p. 483; Gaz. vol. 175; p. 73.
Skate, Roller-. E. F. Mees. No. 1,018,512; Feb. 27; Sp. p. 6098; Gaz. vol. 175; p. 889.
Skate, Touring-. A. Naumann. No. 1,017,162; Feb. 13; Sp. p. 2073; Gaz. vol. 175; p. 356.
Skimmer, Siphon-. C. A. Gilkerson. No. 1,016,938; Feb. 13; Sp. p. 1571; Gaz. vol. 175; p. 278.
Skin-treating apparatus. D. Chestnut. No. 1,017,852; Feb. 20; Sp. p. 3583; Gaz. vol. 175; p. 628.
Skins, Hardening and waterproofing animal. K. Harttmann. No. 1,016,407; Feb. 6; Sp. p. 380; Gaz. vol. 175; p. 60.
Skirt. D. H. Shapiro. No. 1,018,012; Feb. 20; Sp. p. 3965; Gaz. vol. 175; p. 684.
Skiving-machine. A. M. Alexander. No. 1,017,193; Feb. 13; Sp. p. 2149; Gaz. vol. 175; p. 367.
Skiving-machine. L. W. G. Flynt. No. 1,017,963; Feb. 20; Sp. p. 3854; Gaz. vol. 175; p. 668.
Skiving-machine. C. A. Hirth. No. 1,018,493; Feb. 27; Sp. p. 5015; Gaz. vol. 175; p. 852.
Skylight-bar. C. Schroeder. No. 1,016,856; Feb. 6; Sp. p. 1377; Gaz. vol. 175; p. 212.
Slicer and grater, Vegetable. W. H. Petchuck. No. 1,017,586; Feb. 13; Sp. p. 2962; Gaz. vol. 175; p. 500.
Slicing machines, Meat-clamp for meat-. J. C. Van Bertal. No. 1,017,274; Feb. 13; Sp. p. 2322; Gaz. vol. 175; p. 395.
Smoke and spark destroyer. G. H. Guild. No. 1,016,491; Feb. 6; Sp. p. 570; Gaz. vol. 175; p. 90.
Smoke-consuming furnace. M. L. Krueger. No. 1,018,530; Feb. 27; Sp. p. 5773; Gaz. vol. 175; p. 988.
Smoke-house. E. T. Malloy. No. 1,016,668; Feb. 6; Sp. p. 1054; Gaz. vol. 175; p. 162.
Smoke-separator. J. Dvorak. No. 1,017,384; Feb. 13; Sp. p. 2523; Gaz. vol. 175; p. 436.
Smoking device. H. E. Contes. No. 1,017,334; Feb. 13; Sp. p. 2551; Gaz. vol. 175; p. 431.
Smoking-pipe. F. Marnak. No. 1,018,841; Feb. 27; Sp. p. 5754; Gaz. vol. 175; p. 1001.
Smoothing and glazing sad-iron, Combined. H. Fletcher. No. 1,016,579; Feb. 6; Sp. p. 1421; Gaz. vol. 175; p. 220.
Snatch-block. J. W. Davis. No. 1,017,652; Feb. 20; Sp. p. 3096; Gaz. vol. 175; p. 560.
Snow-plow. J. Buffalir. No. 1,016,669; Feb. 6; Sp. p. 1001; Gaz. vol. 175; p. 151.
Soap, Manufacture of resin. H. G. Schanche and F. S. Havens. No. 1,017,692; Feb. 20; Sp. p. 3180; Gaz. vol. 175; p. 573.
Soap, Manufacture of resin. H. G. Schanche. No. 1,017,693; Feb. 20; Sp. p. 3182; Gaz. vol. 175; p. 573.
Soap-press. J. A. Keyes. No. 1,018,426; Feb. 27; Sp. p. 4853; Gaz. vol. 175; p. 859.
Sod-cutter. W. H. Lasde. No. 1,018,064; Feb. 20; Sp. p. 4089; Gaz. vol. 175; p. 703.
Soldering chain-links. E. Speidel. No. 1,017,818; Feb. 20; Sp. p. 3508; Gaz. vol. 175; p. 616.
Soldering machine, Can-. J. A. Booth. No. 1,018,159; Feb. 20; Sp. p. 4239; Gaz. vol. 175; p. 737.
Sole, Cushion-. A. and D. A. Reed. No. 1,017,814; Feb. 13; Sp. p. 2406; Gaz. vol. 175; p. 409.
Sole-cutting machine. P. Funck. No. 1,017,744; Feb. 20; Sp. p. 3298; Gaz. vol. 175; p. 590.
Sole for slippers and the like, Detachable. F. Knipp. No. 1,017,476; Feb. 20; Sp. p. 3149; Gaz. vol. 175; p. 568.
Sole-laying machine. C. L. Miller. No. 1,018,069; Feb. 20; Sp. p. 4098; Gaz. vol. 175; p. 705.
Sole-protector for boots and shoes. E. F. Baldwin. No. 1,017,727; Feb. 20; Sp. p. 3258; Gaz. vol. 175; p. 584.
Sole-tempering machine. W. B. Keighley. No. 1,017,364; Feb. 13; Sp. p. 2900; Gaz. vol. 175; p. 491.
Solen Holder for connecting. G. E. Brittain. No. 1,016,544; Feb. 6; Sp. p. 782; Gaz. vol. 175; p. 186.
Solids and liquids, Separating. J. J. Berrigan. No. 1,016,870; Feb. 6; Sp. p. 1466; Gaz. vol. 175; p. 248.
Sorting and storing device. J. M. Semad. No. 1,016,971; Feb. 13; Sp. p. 1646; Gaz. vol. 175; p. 289.
Sound-box. L. F. Douglass. No. 1,017,041; Feb. 13; Sp. p. 1805; Gaz. vol. 175; p. 312.
Sound-producing apparatus. E. A. Whitehead. No. 1,017,354; Feb. 20; Sp. p. 3558; Gaz. vol. 175; p. 631.
Sound-records, Composition for duplicate. J. W. Aylsworth. No. 1,017,032; Feb. 13; Sp. p. 1779; Gaz. vol. 175; p. 310.
Sound-waves, Device for graphically reproducing. H. G. Dorsey. No. 1,017,392; Feb. 13; Sp. p. 2570; Gaz. vol. 175; p. 435.
Sounding apparatus, Marine. H. K. Marshall. No. 1,016,923; Feb. 6; Sp. p. 1525; Gaz. vol. 175; p. 238.
Spade-step. E. C. Jewett. No. 1,018,424; Feb. 27; Sp. p. 4851; Gaz. vol. 175; p. 859.
Spark-producing apparatus. R. von Horváth. No. 1,018,763; Feb. 27; Sp. p. 5639; Gaz. vol. 175; p. 978.
Sparking plug. G. S. Walker. No. 1,018,383; Feb. 20; Sp. p. 4744; Gaz. vol. 175; p. 813.
Spectacle-mounting. L. F. Adt. No. 1,017,642; Feb. 20; Sp. p. 3081; Gaz. vol. 175; p. 557.
Spectacles. F. W. King. No. 1,017,766; Feb. 20; Sp. p. 3343; Gaz. vol. 175; p. 598.
Spectacles, Temple for. W. B. Swartwout. No. 1,017,702; Feb. 20; Sp. p. 3201; Gaz. vol. 175; p. 575.
Speculum and retractor. J. T. Breneman. No. 1,018,988; Feb. 27; Sp. p. 5851; Gaz. vol. 175; p. 1009.
Speed-governor. H. O. Barens. No. 1,017,128; Feb. 13; Sp. p. 1999; Gaz. vol. 175; p. 344.
Speed-recorder. A. H. Martin. No. 1,018,330; Feb. 20; Sp. p. 4624; Gaz. vol. 175; p. 794.
Speedometer. L. A. Greenleaf. (Reissue.) No. 13,370; Feb. 20; Sp. p. 4791; Gaz. vol. 175; p. 820.
Speedometer, Balanced. M. J. Klein. No. 1,018,504; Feb. 27; Sp. p. 5034; Gaz. vol. 175; p. 866.
Speedometer-driving mechanism, Supporting device for. R. Abell. No. 1,018,542; Feb. 27; Sp. p. 5169; Gaz. vol. 175; p. 890.
Spike-protecting device. G. H. Elliott. No. 1,017,385; Feb. 13; Sp. p. 2575; Gaz. vol. 175; p. 436.
Spindle: *See* Loom picker-spindle.
Spinning and doubling frames, Thread-guide or lappet for. N. S. Brown and J. Hardacre. No. 1,018,170; Feb. 27; Sp. p. 5855; Gaz. vol. 175; p. 1010.
Spinning, doubling, and twisting machine. S. Z. de Ferranti. No. 1,018,702; Feb. 27; Sp. p. 5490; Gaz. vol. 175; p. 952.
Spinning, doubling, and twisting machine. King. A. Jörgens. No. 1,018,710; Feb. 27; Sp. p. 5519; Gaz. vol. 175; p. 955.
Spinning-machine stop-motion. S. K. Marshall and M. H. McKinney. No. 1,018,919; Feb. 27; Sp. p. 5955; Gaz. vol. 175; p. 1022.
Splice-bar. A. Kuhk. No. 1,017,156; Feb. 13; Sp. p. 2064; Gaz. vol. 175; p. 355.
Spool and cutter, Combined. J. M. Toles. No. 1,018,945; Feb. 27; Sp. p. 6004; Gaz. vol. 175; p. 1005.
Spooling-machine, Automatic. A. G. Wells. No. 1,017,718; Feb. 20; Sp. p. 3239; Gaz. vol. 175; p. 581.
Sprayer, Liquid-. L. A. Applewalt. No. 1,018,804; Feb 27; Sp. p. 5724; Gaz. vol. 175; p. 968.
Spraying-sprinkler for areas of definite shape. G. H. Hunter. No. 1,016,632; Feb. 6; Sp. p. 931; Gaz. vol. 175; p. 139.
Spring: *See* Bed-spring; Pneumatic spring; Vehicle-spring.
Spring-clip. E. H. Cooper. No. 1,017,249; Feb. 13; Sp. p. 2273; Gaz. vol. 175; p. 396.
Spring-lock for adjustable casings of roller-bearings. C. S. Lockwood. No. 1,018,121; Feb. 20; Sp. p. 4206; Gaz. vol. 175; p. 732.
Spring repairer, Broken-. J. H. Warner. No. 1,017,485; Feb. 13; Sp. p. 2178; Gaz. vol. 175; p. 462.
Spring-trap. W. J. Webster and R. Noall. No. 1,017,123; Feb. 13; Sp. p. 1991; Gaz. vol. 175; p. 342.
Spring-wheel. L. P. Sievers. No. 1,016,298; Feb. 6; Sp. p. 136; Gaz. vol. 175; p. 21.
Spring-wheel. H. E. Wirebaugh. No. 1,016,534; Feb. 6; Sp. p. 690; Gaz. vol. 175; p. 104.
Spring-wheel. H. C. Keller. No. 1,016,993; Feb. 6; Sp. p. 1047; Gaz. vol. 175; p. 160.
Spring-wheel. F. Smith. No. 1,017,380; Feb. 13; Sp. p. 2430; Gaz. vol. 175; p. 414.
Spring-wheel. G. H. Langton and J. M. Kellerman. No. 1,017,395; Feb. 20; Sp. p. 3711; Gaz. vol. 175; p. 644.
Spring-wheel. S. P. Sanders. No. 1,017,919; Feb. 20; Sp. p. 3788; Gaz. vol. 175; p. 659.
Spring-wheel. W. T. Murray. No. 1,018,269; Feb. 20; Sp. p. 4480; Gaz. vol. 175; p. 770.
Sprinkler: *See* Spraying-sprinkler.
Sputum-receptacle. J. Knapp and J. Liegart. No. 1,017,419; Feb. 13; Sp. p. 2532; Gaz. vol. 175; p. 445.
Stacker head, Pneumatic. G. B. Nelson. No. 1,016,431; Feb. 6; Sp. p. 423; Gaz. vol. 175; p. 66.
Stage, Theater-. J. A. Isaac. No. 1,018,489; Feb. 27; Sp. p. 5026; Gaz. vol. 175; p. 864.
Stair, Counterbalanced. H. Klehmark. No. 1,018,197; Feb. 20; Sp. p. 4369; Gaz. vol. 175; p. 750.

Stairway, Movable. S. B. Rambo. No. 1,018,223; Feb. 20; Sp. p. 4436; Gaz. vol. 175; p. 783.
Staking or punching machine. W. B. Turner. No. 1,016,657; Feb. 6; Sp. p. 967; Gaz. vol. 175; p. 187.
Stamp. O. Ferguson. No. 1,018,209; Feb. 20; Sp. p. 4583; Gaz. vol. 175; p. 782.
Stamping apparatus, Typographic. M. S. Shaw. No. 1,018,233; Feb. 20; Sp. p. 4184; Gaz. vol. 175; p. 762.
Stand: *See* Book-stand; Hammock-stand; Hammock-stand and machine stand; Water-cooler stand.
Staple making and driving machine. W. H. Bowden. No. 1,016,930; Feb. 13; Sp. p. 1564; Gaz. vol. 175; p. 274.
Starch and glucose, Producing. C. C. Moore. No. 1,016,761; Feb. 6; Sp. p. 1166; Gaz. vol. 175; p. 182.
Stave-sawing machine, Barrel-. R. F. Beagle. No. 1,018,780; Feb. 27; Sp. p. 5586; Gaz. vol. 175; p. 966.
Steam-accumulator. E. H. Rice and F. A. Lasher. No. 1,017,590; Feb. 13; Sp. p. 2970; Gaz. vol. 175; p. 502.
Steam-boiler. M. Kelly. No. 1,018,425; Feb. 27; Sp. p. 4852; Gaz. vol. 175; p. 859.
Steam-boiler. J. M. Catmeron. No. 1,018,673; Feb. 27; Sp. p. 5858; Gaz. vol. 175; p. 1011.
Steam-engine. G. Prasse and C. Balcose. No. 1,016,565; Feb. 13; Sp. p. 1862; Gaz. vol. 175; p. 234.
Steam-engine, Condensing. J. Davidson. No. 1,018,360; Feb. 20; Sp. p. 4596; Gaz. vol. 175; p. 764.
Steam-generating system. E. H. Shepherd. No. 1,016,857; Feb. 6; Sp. p. 1379; Gaz. vol. 175; p. 212.
Steel, Apparatus for the manufacture of. W. R. Walker and J. H. Gray. No. 1,018,344; Feb. 27; Sp. p. 5385; Gaz. vol. 175; p. 935.
Steel forgings, Production of manganese. W. S. Potter. No. 1,018,362; Feb. 20; Sp. p. 4684; Gaz. vol. 175; p. 805.
Steel, Heat treatment and rolling of manganese. W. S. Potter. No. 1,018,000; Feb. 20; Sp. p. 3085; Gaz. vol. 175; p. 680.
Steel, Heat treatment of manganese. W. S. Potter. No. 1,017,907; Feb. 20; Sp. p. 3793; Gaz. vol. 175; p. 650.
Steel, Machining manganese. W. S. Potter. No. 1,018,001; Feb. 20; Sp. p. 3087; Gaz. vol. 175; p. 681.
Steel, Manufacture of perforated plates of manganese. W. S. Potter. No. 1,018,370; Feb. 20; Sp. p. 4705; Gaz. vol. 175; p. 807.
Steel, Manufacture of sheets and plates of manganese. W. S. Potter. No. 1,017,903; Feb. 20; Sp. p. 3726; Gaz. vol. 175; p. 649.
Steel, Manufacture of sheets or plates of manganese. W. S. Potter. No. 1,017,906; Feb. 20; Sp. p. 3735; Gaz. vol. 175; p. 650.
Steel, Manufacture of sheets or plates of manganese. W. S. Potter. No. 1,018,002; Feb. 20; Sp. p. 3088; Gaz. vol. 175; p. 681.
Steel metals, Producing. A. J. Semad. No. 1,017,807; Feb. 20; Sp. p. 3485; Gaz. vol. 175; p. 615.
Steel, Producing rolled shapes of manganese. W. S. Potter. No. 1,017,904; Feb. 20; Sp. p. 3727; Gaz. vol. 175; p. 649.
Steel, Producing wrought shapes of manganese. W. S. Potter. No. 1,017,905; Feb. 20; Sp. p. 3732; Gaz. vol. 175; p. 650.
Steel, Production of machined shapes of manganese. W. S. Potter. No. 1,018,006; Feb. 20; Sp. p. 3096; Gaz. vol. 175; p. 606.
Steel, Production of sheets and plates of manganese. W. S. Potter. No. 1,017,905; Feb. 20; Sp. p. 3730; Gaz. vol. 175; p. 649.
Steel, Production of wrought shapes of manganese. W. S. Potter. No. 1,018,367; Feb. 20; Sp. p. 4697; Gaz. vol. 175; p. 806.
Steel shapes, Heat treatment of large manganese. W. S. Potter. No. 1,018,368; Feb. 20; Sp. p. 4700; Gaz. vol. 175; p. 807.
Steel tie, Insulated rail-. T. H. Vaughn. No. 1,017,826; Feb. 20; Sp. p. 3490; Gaz. vol. 175; p. 619.
Steel wire, Manufacture of manganese. W. S. Potter. No. 1,018,369; Feb. 20; Sp. p. 4702; Gaz. vol. 175; p. 807.
Step, Extensible. C. H. Sisco. No. 1,017,116; Feb. 13; Sp. p. 1976; Gaz. vol. 175; p. 340.
Stereopticon announcement-slide. C. E. Butterfield and F. L. Oleson. No. 1,018,230; Feb. 20; Sp. p. 4431; Gaz. vol. 175; p. 761.
Stereoscopic apparatus. H. Newman. No. 1,018,439; Feb. 27; Sp. p. 4880; Gaz. vol. 175; p. 864.
Stereotype-plate cutter. F. J. Matych. No. 1,016,347; Feb. 6; Sp. p. 254; Gaz. vol. 175; p. 39.
Stitch-forming mechanism, Loop-lock-. G. S. Savignac and C. E. Myers. No. 1,016,599; Feb. 6; Sp. p. 1459; Gaz. vol. 175; p. 227.
Stock-quotation board, Electric. M. D. Compton. No. 1,017,740; Feb. 20; Sp. p. 3289; Gaz. vol. 175; p. 588.
Stocking. F. E. Munich. No. 1,016,254; Feb. 6; Sp. p. 263; Gaz. vol. 175; p. 41.
Stoker, Automatic. D. J. Amos. No. 1,018,060; Feb. 27; Sp. p. 5471; Gaz. vol. 175; p. 949.
Stoker, Automatic. W. J. Kenney and H. P. Grohn. No. 1,018,976; Feb. 27; Sp. p. 6066; Gaz. vol. 175; p. 1047.
Stoker for locomotives, Automatic. A. J. McMullen. No. 1,017,682; Feb. 20; Sp. p. 3196; Gaz. vol. 175; p. 580.
Stoker-furnace. O. D. and E. M. Cotton. No. 1,018,649; Feb. 27; Sp. p. 5389; Gaz. vol. 175; p. 935.
Stoker, Mechanical. G. B. Hoyt. No. 1,017,170; Feb. 13; Sp. p. 2094; Gaz. vol. 175; p. 350.
Stone-crusher. H. B. Symons. No. 1,016,904; Feb. 6; Sp. p. 1467; Gaz. vol. 175; p. 229.
Stone crushing or pulverizing machine. S. E. Leighton. No. 1,018,240; Feb. 6; Sp. p. 226; Gaz. vol. 175; p. 36.
Stone-dressing machine. F. T. Packard. No. 1,016,440; Feb. 6; Sp. p. 426; Gaz. vol. 175; p. 71.
Stone-sawing machine. E. Eggers. No. 1,017,207; Feb. 13; Sp. p. 2183; Gaz. vol. 175; p. 371.
Stone-sawing machine. W. F. Magers. No. 1,017,794; Feb. 20; Sp. p. 3425; Gaz. vol. 175; p. 604.
Stone chips, Preparation of. T. Vogt. No. 1,018,498; Feb. 27; Sp. p. 4823; Gaz. vol. 175; p. 870.
Stone-washing and macadam and concrete mixing apparatus. W. H. Baxter. No. 1,018,606; Feb. 27; Sp. p. 6304; Gaz. vol. 175; p. 951.
Stool. J. B. Will. No. 1,016,768; Feb. 6; Sp. p. 1188; Gaz. vol. 175; p. 182.
Stool, Milk-. J. C. H. Lyndgaard. No. 1,018,000; Feb. 27; Sp. p. 6107; Gaz. vol. 175; p. 1059.
Stool, Piano-. J. Hegerhorst. No. 1,016,886; Feb. 6; Sp. p. 1452; Gaz. vol. 175; p. 228.
Stopper: *See* Screw-stopper.
Stove. L. Brooks. No. 1,017,241; Feb. 13; Sp. p. 2253; Gaz. vol. 175; p. 384.
Stove and furnace. M. E. Alley. No. 1,018,847; Feb. 27; Sp. p. 5806; Gaz. vol. 175; p. 994.
Stove, Hot-blast. W. Matheson. No. 1,016,231; Feb. 20; Sp. p. 4625; Gaz. vol. 175; p. 794.
Stove or range, Combined cooking and heating. J. C. Gallagher and H. P. Garvey. No. 1,016,761; Feb. 6; Sp. p. 37; Gaz. vol. 175; p. 5.
Stove or range, Cooking. J. Erben. No. 1,017,043; Feb. 13; Sp. p. 1808; Gaz. vol. 175; p. 314.
Stoves, Oil-burner attachment for. I. L. Mitchell. No. 1,018,257; Feb. 20; Sp. p. 4687; Gaz. vol. 175; p. 770.
Stovepipe-fastener. J. F. McIlvaine. No. 1,016,426; Feb. 6; Sp. p. 415; Gaz. vol. 175; p. 66.
Straightening-machine. L. H. Brightman. No. 1,017,845; Feb. 20; Sp. p. 3085; Gaz. vol. 175; p. 558.
Strainer. A. L. Comtois. No. 1,016,249; Feb. 6; Sp. p. 7; Gaz. vol. 175; p. 4.
Strainer. W. B. Elliott. No. 1,018,654; Feb. 27; Sp. p. 5406; Gaz. vol. 175; p. 936.
Strainer, Milk-. C. M. Cuppel. No. 1,017,052; Feb. 13; Sp. p. 1917; Gaz. vol. 175; p. 329.
Straining-device. F. E. Coombs. No. 1,018,108; Feb. 20; Sp. p. 4306; Gaz. vol. 175; p. 739.
Street-indicator. W. C. Bridges. No. 1,018,698; Feb. 27; Sp. p. 5476; Gaz. vol. 175; p. 950.
Stretcher. J. Levy-Maurice and R. F. A. Poyart. No. 1,018,335; Feb. 6; Sp. p. 1332; Gaz. vol. 175; p. 205.
Stringed instruments, Finger-support for. W. H. S. Nelson. No. 1,017,448; Feb. 13; Sp. p. 2713; Gaz. vol. 175; p. 450.
Stump-pulling apparatus. L. M. Gardiner. No. 1,018,970; Feb. 27; Sp. p. 6073; Gaz. vol. 175; p. 1045.
Sucker-rod elevator. S. A. Gulberson, Jr. No. 1,017,360; Feb. 20; Sp. p. 3631; Gaz. vol. 175; p. 634.
Sucker-rod elevator. H. Vigor. No. 1,018,732; Feb. 27; Sp. p. 5904; Gaz. vol. 175; p. 982.
Suction-cleaner. J. G. Walker. No. 1,017,275; Feb. 13; Sp. p. 2323; Gaz. vol. 175; p. 385.
Sugar, &c., Delivery device for. J. Grimes. No. 1,017,210; Feb. 13; Sp. p. 2189; Gaz. vol. 175; p. 373.
Sulfur-burner. G. E. Miller. No. 1,018,235; Feb. 20; Sp. p. 4484; Gaz. vol. 175; p. 769.
Sulfur derivatives derived from glycerin, Producing. L. Lilienfeld. No. 1,018,329; Feb. 20; Sp. p. 4622; Gaz. vol. 175; p. 794.
Sulfur from Gas, Recovering. K. Barkheiser. No. 1,018,479; Feb. 27; Sp. p. 4976; Gaz. vol. 175; p. 877.
Sulfur iriexid, Making. K. Albert. No. 1,018,402; Feb. 27; Sp. p. 4800; Gaz. vol. 175; p. 851.
Sun and rain protector. G. Savage. No. 1,018,522; Feb. 27; Sp. p. 5130; Gaz. vol. 175; p. 892.
Support and seat-bracket, Adjustable. J. Allingham. No. 1,017,724; Feb. 20; Sp. p. 3243; Gaz. vol. 175; p. 583.
Surgeon's operating-table. W. R. Grady. No. 1,018,737; Feb. 27; Sp. p. 5623; Gaz. vol. 175; p. 972.
Suspensory. H. W. Montgomery. No. 1,017,897; Feb. 20; Sp. p. 3715; Gaz. vol. 175; p. 646.
Swing. G. W. Schilling. No. 1,016,712; Feb. 6; Sp. p. 1082; Gaz. vol. 175; p. 166.
Swingletree and trace connection. W. A. Stinson. No. 1,017,024; Feb. 13; Sp. p. 1760; Gaz. vol. 175; p. 307.
Switch: *See* Automatic switch; Bell-switch; Electric switch; Electric-light switch; Electric-line switch; Electrical-circuit switch; Equitian-system switch; Railway-switch.
Switch and cut-out box. W. P. Carstarphen, Jr. No. 1,018,397; Feb. 20; Sp. p. 4563; Gaz. vol. 175; p. 783.
Switch-operating mechanism. G. Chasmerel. No. 1,017,851; Feb. 20; Sp. p. 3582; Gaz. vol. 175; p. 628.
Switch-stand. C. L. Williams. No. 1,018,967; Feb. 27; Sp. p. 5819; Gaz. vol. 175; p. 1006.
Switch-throwing device. J. E. and A. Logan. No. 1,018,918; Feb. 27; Sp. p. 5953; Gaz. vol. 175; p. 1026.
Synchronizing system. W. A. Fricke. No. 1,016,618; Feb. 6; Sp. p. 806; Gaz. vol. 175; p. 134.
Syringe or irrigator, Aseptic fountain. E. M. Leach. No. 1,017,773; Feb. 20; Sp. p. 3400; Gaz. vol. 175; p. 601.
Table: *See* Assorting-table; Extension-table; Folding table; Kindergarten-table; Lasting and marking table; Surgeon's operating-table; Trolley turn-table; Turntable.

Table and bench, Combined. A. E. MacDonald. No. 1,016,841; Feb. 6; Sp. p. 1343; Gaz. vol. 175; p. 207.
Tables, Brake for self-waiting. W. Centala. No. 1,017,849; Feb. 20; Sp. p. 3577; Gaz. vol. 175; p. 627.
Tachometer. C. H. Veeder. No. 1,016,906; Feb. 6; Sp. p. 1490; Gaz. vol. 175; p. 230.
Tack-pulling machine. J. B. Hadaway. No. 1,016,328; Feb. 6; Sp. p. 211; Gaz. vol. 175; p. 82.
Tack, Wiring-. C. C. Blake. No. 1,017,036; Feb. 13; Sp. p. 1785; Gaz. vol. 175; p. 311.
Tag-holder. F. J. Soth. No. 1,017,603; Feb. 13; Sp. p. 2995; Gaz. vol. 175; p. 506.
Tag-holder, Automobile. W. B. West. No. 1,016,723; Feb. 6; Sp. p. 1104; Gaz. vol. 175; p. 170.
Tail-stock-clamping mechanism. A. W. Whitcomb. No. 1,018,222; Feb. 20; Sp. p. 4413; Gaz. vol. 175; p. 758.
Talking-machine. J. C. English. No. 1,016,255; Feb. 6; Sp. p. 23; Gaz. vol. 175; p. 6.
Talking-machine record. E. R. Johnson. No. 1,016,271; Feb. 6; Sp. p. 62; Gaz. vol. 175; p. 13.
Talking-machine stand. A. Casagrande. No. 1,017,848; Feb. 20; Sp. p. 3576; Gaz. vol. 175; p. 627.
Tank: *See* Beer cooling and storage tank; Flush-tank; Liquid-dispensing tank.
Tank-heater. W. Tinker. No. 1,017,481; Feb. 13; Sp. p. 2772; Gaz. vol. 175; p. 468.
Tank lever, Flush-. H. R. Kuehner. No. 1,017,423; Feb. 13; Sp. p. 2641; Gaz. vol. 175; p. 447.
Tanks, Automatic cut-off for. W. P. Norris. No. 1,016,516; Feb. 6; Sp. p. 654; Gaz. vol. 175; p. 98.
Tap, Hold-on safety-. H. Otte. No. 1,018,336; Feb. 20; Sp. p. 4631; Gaz. vol. 175; p. 796.
Tape holder and moistener. F. G. Shuman. No. 1,016,966; Feb. 13; Sp. p. 1637; Gaz. vol. 175; p. 287.
Target-clamp. F. O. Nelson. No. 1,017,229; Feb. 13; Sp. p. 2234; Gaz. vol. 175; p. 390.
Target-trap. J. T. Swain. No. 1,017,272; Feb. 13; Sp. p. 2316; Gaz. vol. 175; p. 394.
Taximeter. R. G. Popp. No. 1,016,518; Feb. 6; Sp. p. 658; Gaz. vol. 175; p. 99.
Tea-kettle attachment. I. R. Utterback, W. C. Springer, Jr., and W. L. Galbraith. No. 1,018,854; Feb. 27; Sp. p. 5814; Gaz. vol. 175; p. 1005.
Teaching the art of aeroplaning, applicable also for amusement purposes, Apparatus for. W. H. Walters. No. 1,018,645; Feb. 27; Sp. p. 5388; Gaz. vol. 175; p. 933.
Teeth-fillings, Anchoring device for. A. F. Anderberg. No. 1,018,803; Feb. 27; Sp. p. 5723; Gaz. vol. 175; p. 987.
Telegraph-key. J. E. Folsom. No. 1,017,398; Feb. 13; Sp. p. 2581; Gaz. vol. 175; p. 437.
Telegraph sending-machine. J. A. Hulit. No. 1,017,054; Feb. 13; Sp. p. 1829; Gaz. vol. 175; p. 318.
Telegraphic circuits, Method of and apparatus for transmitting signals over. L. M. Potts. No. 1,017,169; Feb. 13; Sp. p. 2086; Gaz. vol. 175; p. 359.
Telegraphic system and apparatus. C. Kinsley. No. 1,018,115; Feb. 20; Sp. p. 4188; Gaz. vol. 175; p. 721.
Telegraphic-tape perforator, Keyboard. G. A. Arnold. No. 1,016,313; Feb. 6; Sp. p. 172; Gaz. vol. 175; p. 26.
Telemeter. O. Eppenstein. No. 1,016,325; Feb. 6; Sp. p. 204; Gaz. vol. 175; p. 31.
Telephone desk-stands, Terminal plate for. G. Nelson. No. 1,016,847; Feb. 6; Sp. p. 1355; Gaz. vol. 175; p. 209.
Telephone instrument, Automatic. J. Well. No. 1,018,646; Feb. 27; Sp. p. 5390; Gaz. vol. 175; p. 934.
Telephone-line listening-detector. E. and C. Burgener. No. 1,016,670; Feb. 6; Sp. p. 1003; Gaz. vol. 175; p. 151.
Telephone-lines, Apparatus for increasing the efficiency of. C. Adams-Randall. No. 1,017,617; Feb. 13; Sp. p. 3017; Gaz. vol. 175; p. 510.
Telephone-meter. E. H. Martin. No. 1,018,435; Feb. 27; Sp. p. 4872; Gaz. vol. 175; p. 863.
Telephone repeating apparatus and circuits. C. Adams-Randall. No. 1,017,616; Feb. 13; Sp. p. 3015; Gaz. vol. 175; p. 510.
Telephone repeating system and apparatus. C. Adams-Randall. No. 1,018,226; Feb. 20; Sp. p. 4422; Gaz. vol. 175; p. 760.
Telephone ringing apparatus. W. E. Butler. No. 1,016,546; Feb. 6; Sp. p. 737; Gaz. vol. 175; p. 109.
Telephone selecting device. F. E. Granger. No. 1,017,967; Feb. 20; Sp. p. 3862; Gaz. vol. 175; p. 669.
Telephone system. W. A. Fricke. No. 1,016,617; Feb. 6; Sp. p. 892; Gaz. vol. 175; p. 133.
Telephone system. F. M. Davis. No. 1,017,085; Feb. 13; Sp. p. 1921; Gaz. vol. 175; p. 330.
Telephone system. H. F. Joeckel. No. 1,018,666; Feb. 27; Sp. p. 5426; Gaz. vol. 175; p. 940.
Telephone systems, Registering device for. E. M. Northum. No. 1,018,981; Feb. 27; Sp. p. 6103; Gaz. vol. 175; p. 1049.
Telephone-transmitter. C. R. Rogers. No. 1,018,082; Feb. 20; Sp. p. 4117; Gaz. vol. 175; p. 710.
Telephone-transmitter. F. Gottschalk. No. 1,018,182; Feb. 20; Sp. p. 4344; Gaz. vol. 175; p. 745.
Telephone-transmitter mouthpiece. C. H. Swingle and A. M. Miltenberg. No. 1,018,730; Feb. 27; Sp. p. 5560; Gaz. vol. 175; p. 962.
Telephone-transmitters, Sanitary protector for. C. Adams. No. 1,017,362; Feb. 13; Sp. p. 2504; Gaz. vol. 175; p. 425.
Telephones, Lock-out device for party-. D. W. Kneisly. No. 1,016,277; Feb. 6; Sp. p. 91; Gaz. vol. 175; p. 13.
Telephones, Sanitary mouthpiece for. M. M. Marcuse. No. 1,017,680; Feb. 20; Sp. p. 3152; Gaz. vol. 175; p. 548.
Telescope, Engineer's. C. L. Berger. No. 1,016,606; Feb. 6; Sp. p. 866; Gaz. vol. 175; p. 129.
Telescope, Prismatic. G. Griffith. No. 1,016,562; Feb. 6; Sp. p. 772; Gaz. vol. 175; p. 115.
Telescope, Tachometric. H. Wild. No. 1,016,311; Feb. 6; Sp. p. 169; Gaz. vol. 175; p. 26.
Telescope, theater and field glass, Prismatic. J. H. Barton. No. 1,016,315; Feb. 6; Sp. p. 179; Gaz. vol. 175; p. 27.
Temperature and humidity, Apparatus for controlling. W. Taylor, R. E. Atkinson, and D. M. Nesbit. No. 1,017,345; Feb. 13; Sp. p. 2466; Gaz. vol. 175; p. 419.
Tempo-regulator. E. Lundberg. No. 1,016,339; Feb. 6; Sp. p. 1339; Gaz. vol. 175; p. 207.
Testing-machine. M. Cornine. No. 1,016,322; Feb. 6; Sp. p. 197; Gaz. vol. 175; p. 30.
Textile apparatus. H. L. Brown. No. 1,016,394; Feb. 6; Sp. p. 351; Gaz. vol. 175; p. 56.
Textile fibers, such as jute, hemp, flax, and the like, Treating raw and worked. R. Schreckenbach. No. 1,017,176; Feb. 13; Sp. p. 2105; Gaz. vol. 175; p. 361.
Textiles in the form of threads, cords, hanks, and fabrics, Apparatus for the treatment of. F. Jaumandreu. No. 1,017,547; Feb. 13; Sp. p. 2893; Gaz. vol. 175; p. 483.
Thermometer. R. Dunwody. No. 1,018,306; Feb. 20; Sp. p. 4579; Gaz. vol. 175; p. 786.
Thermometer holder, Aseptic clinical-. W. I. Brown. No. 1,017,377; Feb. 13; Sp. p. 2531; Gaz. vol. 175; p. 429.
Thermostatic device, Differential. E. W. Comfort and W. H. Carrier. No. 1,018,551; Feb. 27; Sp. p. 5196; Gaz. vol. 175; p. 904.
Thermostatic regulator. C. E. Teeters. No. 1,016,796; Feb. 6; Sp. p. 1259; Gaz. vol. 175; p. 194.
Thread-cutting machine. A. B. Landis. No. 1,017,389; Feb. 20; Sp. p. 3689; Gaz. vol. 175; p. 642.
Threshing-machine. H. M. Boe. No. 1,017,129; Feb. 13; Sp. p. 2003; Gaz. vol. 175; p. 344.
Ticket holding and serving device. F. Oppenheimer and W. G. Spiegel. No. 1,016,893; Feb. 6; Sp. p. 1449; Gaz. vol. 175; p. 225.
Ticket, Mileage transportation-. W. Ellis. No. 1,018,749; Feb. 27; Sp. p. 5610; Gaz. vol. 175; p. 970.
Tickets for street-cars, Arranging. L. P. Lippe. No. 1,017,007; Feb. 13; Sp. p. 1726; Gaz. vol. 175; p. 301.
Tie: *See* Cattle-tie; Cross-tie; Metallic tie; Railway-tie; Steel tie.
Tie and rail-fastener. W. G. Lucas. No. 1,018,835; Feb. 27; Sp. p. 5786; Gaz. vol. 175; p. 999.
Tie and rail-fastener. H. L. Heacox. No. 1,018,902; Feb. 27; Sp. p. 5925; Gaz. vol. 175; p. 1021.
Tie and rail-fastener, Combined. W. Wilde. No. 1,018,538; Feb. 27; Sp. p. 5165; Gaz. vol. 175; p. 896.
Tie and track-fastening, Combined. F. L. Downs. No. 1,018,305; Feb. 20; Sp. p. 4578; Gaz. vol. 175; p. 786.
Tile-cutting machine. J. L. Sheron. No. 1,017,022; Feb. 20; Sp. p. 3766; Gaz. vol. 175; p. 655.
Tillage, Machine for mechanical. K. V. von Meyenburg. No. 1,018,843; Feb. 27; Sp. p. 5796; Gaz. vol. 175; p. 1001.
Time-recorder, Workman's. W. Taylor. No. 1,017,344; Feb. 13; Sp. p. 2461; Gaz. vol. 175; p. 418.
Timing device. C. F. White. No. 1,018,799; Feb. 27; Sp. p. 5712; Gaz. vol. 175; p. 986.
Tin-bearing material, Treating. J. Weber. No. 1,018,734; Feb. 27; Sp. p. 5567; Gaz. vol. 175; p. 963.
Tin chlorid, Making anhydrous. G. Baillio. No. 1,018,805; Feb. 27; Sp. p. 5727; Gaz. vol. 175; p. 988.
Tin-foil packages, Tearing-up strip for. W. Wiese. No. 1,018,464; Feb. 27; Sp. p. 4933; Gaz. vol. 175; p. 872.
Tire. T. V. Buckwalter. No. 1,016,472; Feb. 6; Sp. p. 540; Gaz. vol. 175; p. 83.
Tire. J. J. Patton. No. 1,016,709; Feb. 6; Sp. p. 1077; Gaz. vol. 175; p. 166.
Tire. W. Pavlik. No. 1,017,456; Feb. 13; Sp. p. 2725; Gaz. vol. 175; p. 459.
Tire. A. Seelig. No. 1,017,598; Feb. 13; Sp. p. 2984; Gaz. vol. 175; p. 504.
Tire. F. E. Blaisdell. No. 1,017,732; Feb. 20; Sp. p. 3268; Gaz. vol. 175; p. 536.
Tire. W. I. Twombly. No. 1,018,454; Feb. 27; Sp. p. 4916; Gaz. vol. 175; p. 868.
Tire. E. H. Freas. No. 1,018,895; Feb. 27; Sp. p. 5905; Gaz. vol. 175; p. 1018.
Tire-case, Automobile. L. Grimm. No. 1,018,185; Feb. 20; Sp. p. 4350; Gaz. vol. 175; p. 746.
Tire chain and guard. O. J. Mikkelson. No. 1,018,206; Feb. 20; Sp. p. 4384; Gaz. vol. 175; p. 753.
Tire, Elastic. C. Herold. No. 1,016,991; Feb. 13; Sp. p. 1698; Gaz. vol. 175; p. 296.
Tire, Elastic. J. Lazarus. No. 1,017,960; Feb. 20; Sp. p. 3897; Gaz. vol. 175; p. 674.
Tire for wheels of motor-vehicles, &c., Resilient. H. M. Bagdigian. No. 1,018,027; Feb. 20; Sp. p. 3988; Gaz. vol. 175; p. 690.
Tire-holder. A. M. Sönnichsen. No. 1,018,590; Feb. 27; Sp. p. 5277; Gaz. vol. 175; p. 916.
Tire-inflating system, Pneumatic-. C. A. Rivers. No. 1,016,896; Feb. 6; Sp. p. 1457; Gaz. vol. 175; p. 226.

Tire patch, Pneumatic-. C. W. McKee. No. 1,016,349; Feb. 6; Sp. p. 257; Gaz. vol. 175; p. 40.
Tire-protector. J. L. Barnes. No. 1,016,812; Feb. 6; Sp. p. 1291; Gaz. vol. 175; p. 198.
Tire, Resilient. S. S. Scott. No. 1,017,314; Feb. 20; Sp. p. 3496; Gaz. vol. 175; p. 615.
Tire, Resilient. M. C. Rogers. No. 1,018,006; Feb. 20; Sp. p. 3945; Gaz. vol. 175; p. 682.
Tire, Resilient. M. Hanford and D. L. Taylor. No. 1,018,049; Feb. 20; Sp. p. 4039; Gaz. vol. 175; p. 698.
Tire, Resilient. F. Zimmermann. No. 1,018,735; Feb. 27; Sp. p. 5571; Gaz. vol. 175; p. 964.
Tire-setting tool. J. F. Carter. No. 1,017,956; Feb. 20; Sp. p. 3839; Gaz. vol. 175; p. 645.
Tire, Vehicle-. H. H. Durr. No. 1,018,814; Feb. 27; Sp. p. 5748; Gaz. vol. 175; p. 992.
Tire, Wheel-. P. M. Kemter and A. W. Hentschel. No. 1,017,704; Feb. 20; Sp. p. 3340; Gaz. vol. 175; p. 598.
Tire, Wheel-. H. L. Bleser. No. 1,018,292; Feb. 20; Sp. p. 4555; Gaz. vol. 175; p. 782.
Tires and the like, Puncture-closure for pneumatic. R. Sampson. No. 1,017,800; Feb. 20; Sp. p. 3489; Gaz. vol. 175; p. 613.
Tires, Detachable rim for pneumatic. P. E. Doolittle. No. 1,018,238; Feb. 20; Sp. p. 4447; Gaz. vol. 175; p. 763.
Tires for motors and other vehicles, Manufacturing anti-slipping. A. Michelin. No. 1,018,626; Feb. 27; Sp. p. 5340; Gaz. vol. 175; p. 927.
Tires, Making pneumatic. W. W. Duncan and A. N. Hood. No. 1,016,918; Feb. 6; Sp. p. 1514; Gaz. vol. 175; p. 234.
Tires of vehicle-wheels while in motion, Means for automatically inflating. J. I. Rodway and J. Esson. No. 1,016,364; Feb. 6; Sp. p. 278; Gaz. vol. 175; p. 44.
Tobacco and making same, Artificial. A. Moccasin. No. 1,018,844; Feb. 6; Sp. p. 1347; Gaz. vol. 175; p. 208.
Tobacco-drying apparatus. C. D. Brown. No. 1,017,951; Feb. 20; Sp. p. 3822; Gaz. vol. 175; p. 663.
Tobacco-pipe. L. Richards. No. 1,017,803; Feb. 20; Sp. p. 3480; Gaz. vol. 175; p. 612.
Tobacco-smoke-absorption apparatus. W. H. Swett. No. 1,018,996; Feb. 27; Sp. p. 6135; Gaz. vol. 175; p. 1054.
Tobacco-treating machinery. J. M. Vaughan. No. 1,017,713; Feb. 20; Sp. p. 3219; Gaz. vol. 175; p. 579.
Token, charm, or pocket-piece. E. L. Morris. No. 1,016,706; Feb. 6; Sp. p. 1072; Gaz. vol. 175; p. 165.
Tongs, Gas-. W. L. Marble. No. 1,018,065; Feb. 20; Sp. p. 4060; Gaz. vol. 175; p. 704.
Tongs, Pipe-. H. G. Johnston. No. 1,017,552; Feb. 13; Sp. p. 2903; Gaz. vol. 175; p. 490.
Tool. B. F. Segel and O. F. March. No. 1,018,210; Feb. 20; Sp. p. 4359; Gaz. vol. 175; p. 754.
Tool. J. E. Shaw. No. 1,018,982; Feb. 27; Sp. p. 5978; Gaz. vol. 175; p. 1050.
Tool, Combination-. C. C. O'Hanlon. No. 1,016,765; Feb. 6; Sp. p. 1192; Gaz. vol. 175; p. 183.
Tool, Combination-. G. W. Gilmer, Jr. No. 1,017,093; Feb. 13; Sp. p. 1938; Gaz. vol. 175; p. 333.
Tool-head-securing attachment. R. B. Fageol. No. 1,018,353; Feb. 20; Sp. p. 4661; Gaz. vol. 175; p. 801.
Tool-holder. F. Seitz. No. 1,017,112; Feb. 13; Sp. p. 1970; Gaz. vol. 175; p. 338.
Tool-holding means. E. F. Smith. No. 1,018,525; Feb. 27; Sp. p. 5123; Gaz. vol. 175; p. 893.
Tool, Pneumatic. J. J. Padbury. No. 1,018,983; Feb. 27; Sp. p. 6107; Gaz. vol. 175; p. 1050.
Tool-support. F. S. Morris. No. 1,018,258; Feb. 20; Sp. p. 4488; Gaz. vol. 175; p. 770.
Tools, Actuating-holder for small. J. E. Booman. No. 1,016,607; Feb. 6; Sp. p. 868; Gaz. vol. 175; p. 130.
Tooth. L. Davis. No. 1,016,555; Feb. 6; Sp. p. 760; Gaz. vol. 175; p. 112.
Tooth, Artificial. G. W. Todd. No. 1,016,456; Feb. 6; Sp. p. 505; Gaz. vol. 175; p. 77.
Top. C. H. Sapper. No. 1,016,360; Feb. 18; Sp. p. 1626; Gaz. vol. 175; p. 285.
Torch. H. A. Clifford. No. 1,016,613; Feb. 6; Sp. p. 884; Gaz. vol. 175; p. 132.
Towing apparatus. L. V. W. Froger. No. 1,016,619; Feb. 6; Sp. p. 899; Gaz. vol. 175; p. 134.
Toy. C. W. Wilson. No. 1,016,662; Feb. 6; Sp. p. 988; Gaz. vol. 175; p. 149.
Toy. B. Gaines. No. 1,018,311; Feb. 20; Sp. p. 4588; Gaz. vol. 175; p. 788.
Toy. E. P. Lehmann. No. 1,018,574; Feb. 27; Sp. p. 5239; Gaz. vol. 175; p. 911.
Toy, Ball and catcher. J. E. Brandt. No. 1,017,376; Feb. 13; Sp. p. 2530; Gaz. vol. 175; p. 429.
Toy, Detonating. W. Meis. No. 1,017,683; Feb. 20; Sp. p. 3158; Gaz. vol. 175; p. 569.
Toy, Moving. A. Weigel. No. 1,017,066; Feb. 13; Sp. p. 1856; Gaz. vol. 175; p. 322.
Toy pistol. J. Wilcox. No. 1,016,810; Feb. 6; Sp. p. 167; Gaz. vol. 175; p. 25.
Toy wheel. E. P. Lehmann. No. 1,018,573; Feb. 27; Sp. p. 5238; Gaz. vol. 175; p. 910.
Trace-hanger. H. W. Wells. No. 1,016,591; Feb. 6; Sp. p. 828; Gaz. vol. 175; p. 124.
Track-cleaner. L. Isaacs. No. 1,016,411; Feb. 6; Sp. p. 393; Gaz. vol. 175; p. 62.
Track-liner. J. W. Gray. No. 1,018,188; Feb. 20; Sp. p. 4348; Gaz. vol. 175; p. 748.
Track-suspender. E. F. Scott and A. M. Harrington. No. 1,018,931; Feb. 27; Sp. p. 6077; Gaz. vol. 175; p. 1030.
Track-sweeper, Electric. A. M. Gardner. No. 1,017,208; Feb. 18; Sp. p. 2186; Gaz. vol. 175; p. 372.
Tracks, Means for use in cleaning tramway-. A. Gardner. No. 1,017,092; Feb. 13; Sp. p. 1936; Gaz. vol. 175; p. 332.
Tracks mounted on wheeled carriers, Endless. J. Montsabré. No. 1,017,443; Feb. 13; Sp. p. 2681; Gaz. vol. 175; p. 454.
Traction and non-skid device. J. W. Reid. No. 1,017,909; Feb. 20; Sp. p. 3739; Gaz. vol. 175; p. 650.
Train-line hanger. J. D. Callahan. No. 1,017,508; Feb. 13; Sp. p. 2822; Gaz. vol. 175; p. 476.
Tramway, Cable. S. P. Watt. No. 1,017,831; Feb. 20; Sp. p. 3533; Gaz. vol. 175; p. 621.
Transformer, Series. G. A. Burnham. No. 1,017,737; Feb. 20; Sp. p. 3282; Gaz. vol. 175; p. 588.
Transforming and transposing device for automatic instruments. B. T. Treaby. No. 1,018,791; Feb. 27; Sp. p. 5692; Gaz. vol. 175; p. 984.
Transom-lift. J. A. Dillon. No. 1,017,087; Feb. 13; Sp. p. 1926; Gaz. vol. 175; p. 330.
Transporting and elevating device. W. H. Strickler. No. 1,017,117; Feb. 13; Sp. p. 1979; Gaz. vol. 175; p. 340.
Trap: *See* Animal-trap; Bath-trap; Electric trap; Fly-trap; Roach-trap; Sewer-trap; Spring-trap; Target-trap.
Trap. J. F. Ferguson. No. 1,016,405; Feb. 6; Sp. p. 378; Gaz. vol. 175; p. 60.
Tray, Pail-. E. L. Bailey. No. 1,016,468; Feb. 6; Sp. p. 531; Gaz. vol. 175; p. 82.
Tree: *See* Boot-tree.
Trimmer: *See* Lawn-trimmer; Wick-trimmer.
Trolley. E. P. Hinchberger. No. 1,016,747; Feb. 6; Sp. p. 1147; Gaz. vol. 175; p. 177.
Trolley. C. F. Vensel, Jr. No. 1,016,802; Feb. 6; Sp. p. 1270; Gaz. vol. 175; p. 195.
Trolley. H. F. Kuniecki and M. Swiecicki. No. 1,018,198; Feb. 20; Sp. p. 4370; Gaz. vol. 175; p. 750.
Trolley-frog. J. M. Premoshis. No. 1,017,462; Feb. 13; Sp. p. 2735; Gaz. vol. 175; p. 461.
Trolley-harp. F. B. Murphy. No. 1,016,430; Feb. 6; Sp. p. 426; Gaz. vol. 175; p. 67.
Trolley-harp. T. Bednarowicz. No. 1,017,034; Feb. 13; Sp. p. 1783; Gaz. vol. 175; p. 310.
Trolley-poles on wires, Device for holding. W. F. Van Cleave and A. T. Woodall. No. 1,017,711; Feb. 20; Sp. p. 3216; Gaz. vol. 175; p. 578.
Trolley-retriever. W. Ashcraft. No. 1,016,467; Feb. 6; Sp. p. 528; Gaz. vol. 175; p. 81.
Trolley turn-table. E. Cameron. No. 1,018,407; Feb. 27; Sp. p. 4812; Gaz. vol. 175; p. 852.
Trolley-wires and the like, Suspension device for. F. S. Denneen. No. 1,017,741; Feb. 20; Sp. p. 3291; Gaz. vol. 175; p. 589.
Trolley-wires, Sag-preventing device for. C. Brissolara. No. 1,018,869; Feb. 27; Sp. p. 5853; Gaz. vol. 175; p. 1010.
Trousers. A. Hoffman. No. 1,017,544; Feb. 13; Sp. p. 2889; Gaz. vol. 175; p. 488.
Trousers-leg holder. J. F. Cavanagh. No. 1,017,511; Feb. 13; Sp. p. 2832; Gaz. vol. 175; p. 477.
Truck. C. M. Grigg. No. 1,016,490; Feb. 6; Sp. p. 578; Gaz. vol. 175; p. 89.
Truck. M. G. Merritt. No. 1,017,160; Feb. 13; Sp. p. 2070; Gaz. vol. 175; p. 356.
Truck, Auto garbage-. G. W. Lally. No. 1,018,119; Feb. 20; Sp. p. 4203; Gaz. vol. 175; p. 722.
Truck, Baggage-. O. Doty. No. 1,017,858; Feb. 20; Sp. p. 3594; Gaz. vol. 175; p. 630.
Truck, Barrel-. P. Myrholm. No. 1,018,260; Feb. 20; Sp. p. 4491; Gaz. vol. 175; p. 771.
Truck, Car-. C. H. Howard and H. M. Pfager. No. 1,016,629; Feb. 6; Sp. p. 926; Gaz. vol. 175; p. 138.
Truck, Car-. C. H. Howard and H. M. Pfager. No. 1,016,630; Feb. 6; Sp. p. 928; Gaz. vol. 175; p. 139.
Truck for vehicles, Fore. S. K. Dennis. No. 1,017,516; Feb. 13; Sp. p. 2839; Gaz. vol. 175; p. 479.
Truck, Roller-. J. A. Dodd. No. 1,017,517; Feb. 13; Sp. p. 2840; Gaz. vol. 175; p. 479.
Truck, Six-wheel car-. H. Pearson. No. 1,017,312; Feb. 13; Sp. p. 2399; Gaz. vol. 175; p. 408.
Truck-unloading device. E. B. Ayres. No. 1,018,862; Feb. 27; Sp. p. 5841; Gaz. vol. 175; p. 1008.
Trunk. M. Vitoszki. No. 1,017,351; Feb. 13; Sp. p. 2480; Gaz. vol. 175; p. 421.
Trunk-tray. P. H. Schmelzer. No. 1,017,812; Feb. 20; Sp. p. 3492; Gaz. vol. 175; p. 614.
Trunk, Wardrobe-. E. W. Hawley. No. 1,017,755; Feb. 20; Sp. p. 3321; Gaz. vol. 175; p. 594.
Truss for ruptures. E. Volkmer. No. 1,016,581; Feb. 6; Sp. p. 693; Gaz. vol. 175; p. 103.
Truss, Rupture-. J. A. Johnston. No. 1,018,113; Feb. 20; Sp. p. 4185; Gaz. vol. 175; p. 720.
Tube-bending machine, Metal-. A. H. Plante. No. 1,016,771; Feb. 6; Sp. p. 1214; Gaz. vol. 175; p. 186.
Tube-forming machines, Bar-retaining means for. P. M. Joyce. No. 1,018,621; Feb. 27; Sp. p. 5333; Gaz. vol. 175; p. 925.
Tube-making machine. E. J. Kern. No. 1,018,114; Feb. 20; Sp. p. 4186; Gaz. vol. 175; p. 720.
Tube-making machine, Metal-. G. W. Beadle. No. 1,018,291; Feb. 20; Sp. p. 4553; Gaz. vol. 175; p. 781.
Tube-mills, Feed and discharge end-liner for. H. C. Holthoff. No. 1,018,820; Feb. 20; Sp. p. 4607; Gaz. vol. 175; p. 791.

Tubes and for cutting of tubes, Apparatus for cutting threads on. V. Müller. No. 1,017,536; Feb. 20; Sp. p. 3717; Gaz. vol. 175; p. 647.
Tubes, Apparatus for the manufacture of. J. G. Lewis and W. H. Powell. No. 1,018,670; Feb. 27; Sp. p. 5425; Gaz. vol. 175; p. 942.
Tubular fabric. C. S. Smith. No. 1,016,527; Feb. 6; Sp. p. 583; Gaz. vol. 175; p. 102.
Tug, Open harness. J. J. Harward. No. 1,017,666; Feb. 20; Sp. p. 3126; Gaz. vol. 175; p. 555.
Tup, Trunk. J. W. Maranda. No. 1,017,908; Feb. 13; Sp. p. 2383; Gaz. vol. 175; p. 406.
Tumbler lock, Duplex-cylinder pin-. J. H. Shaw and F. I. Kimball. No. 1,018,653; Feb. 27; Sp. p. 5460; Gaz. vol. 175; p. 947.
Tungsten, Increasing the tenacity of metallic. W. von Bolton. No. 1,017,280; Feb. 13; Sp. p. 2304; Gaz. vol. 175; p. 397.
Tunnel construction. J. C. Mann. No. 1,018,578; Feb. 27; Sp. p. 5256; Gaz. vol. 175; p. 912.
Tunnel-work form. E. G. Williams and H. H. Brown. No. 1,017,929; Feb. 13; Sp. p. 1771; Gaz. vol. 175; p. 309.
Tunneling and excavating Subaqueous. R. L. Dunn and L. M. Hall. No. 1,017,822; Feb. 13; Sp. p. 3028; Gaz. vol. 175; p. 512.
Turbine-bucket binder. W. F. Rice. No. 1,017,467; Feb. 13; Sp. p. 2746; Gaz. vol. 175; p. 462.
Turbine-diaphragm. O. Lasche. No. 1,017,563; Feb. 13; Sp. p. 2925; Gaz. vol. 175; p. 494.
Turbine, Elastic-fluid. C. R. Waller. No. 1,018,552; Feb. 6; Sp. p. 695; Gaz. vol. 175; p. 102.
Turbine, Elastic-fluid. C. R. Waller. No. 1,018,660; Feb. 6; Sp. p. 961; Gaz. vol. 175; p. 142.
Turbine, Elastic-fluid. C. O. Johnson. No. 1,018,667; Feb. 27; Sp. p. 5428; Gaz. vol. 175; p. 941.
Turbine-governing mechanism, Mixed-pressure. O. Jungren and A. T. Gray. No. 1,017,555; Feb. 13; Sp. p. 2967; Gaz. vol. 175; p. 491.
Turbine-wheel, Compound high-pressure. T. McAuley. No. 1,017,423; Feb. 13; Sp. p. 2670; Gaz. vol. 175; p. 452.
Turbines, Bearing for. A. C. Peatt. No. 1,017,588; Feb. 13; Sp. p. 2966; Gaz. vol. 175; p. 501.
Turbines, Gate-case with balanced gates for water-. A. Vonnoech. No. 1,017,716; Feb. 20; Sp. p. 3226; Gaz. vol. 175; p. 580.
Tura-table. T. C. Beach. No. 1,017,033; Feb. 13; Sp. p. 1781; Gaz. vol. 175; p. 310.
Turnstile mechanism. D. A. L. McDonald. No. 1,016,948; Feb. 13; Sp. p. 1596; Gaz. vol. 175; p. 281.
Turpentine-cup. L. T. Baker. No. 1,016,811; Feb. 6; Sp. p. 1290; Gaz. vol. 175; p. 198.
Turpentine-cup. W. J. L'Engle. No. 1,017,297; Feb. 13; Sp. p. 2364; Gaz. vol. 175; p. 403.
Turpentine-cup. H. Harvey. No. 1,017,541; Feb. 13; Sp. p. 2885; Gaz. vol. 175; p. 487.
Turpentine-cup. W. J. L'Engle. No. 1,017,619; Feb. 20; Sp. p. 3151; Gaz. vol. 175; p. 568.
Turpentine-stills, Signalling apparatus for. R. Dunwoody. No. 1,018,038; Feb. 20; Sp. p. 4060; Gaz. vol. 175; p. 694.
Twine machines, Feeding mechanism for grass-. T. W. Jerrems. No. 1,018,423; Feb. 27; Sp. p. 4849; Gaz. vol. 175; p. 850.
Type. M. Pfau. No. 1,016,985; Feb. 27; Sp. p. 6113; Gaz. vol. 175; p. 1060.
Type-bar mounting. M. Pfau. No. 1,018,986; Feb. 27; Sp. p. 6115; Gaz. vol. 175; p. 1060.
Type-bar-supporting frame. J. Raber. No. 1,018,969; Feb. 27; Sp. p. 6119; Gaz. vol. 175; p. 1051.
Type-case. H. O. Fandlow. No. 1,017,520; Feb. 13; Sp. p. 2840; Gaz. vol. 175; p. 480.
Type, Chase for holding composed forms of. H. F. Beckman. No. 1,016,605; Feb. 6; Sp. p. 864; Gaz. vol. 175; p. 129.
Type-writer attachment. W. A. Davis. No. 1,018,411; Feb. 27; Sp. p. 4830; Gaz. vol. 175; p. 885.
Type-writer attachment. J. J. McFadden. No. 1,018,511; Feb. 27; Sp. p. 5096; Gaz. vol. 175; p. 888.
Type-writer tabulating mechanism. M. H. Lockwood. No. 1,017,301; Feb. 13; Sp. p. 2374; Gaz. vol. 175; p. 404.
Type-writers, Back-feed mechanism for. A. Stieg. No. 1,016,995; Feb. 27; Sp. p. 6132; Gaz. vol. 175; p. 1053.
Type-writers, Envelop-feeding device for. M. J. D. Carter. No. 1,017,134; Feb. 13; Sp. p. 2018; Gaz. vol. 175; p. 349.
Type-writing device. J. A. Zellers and G. T. Price. No. 1,016,724; Feb. 6; Sp. p. 1105; Gaz. vol. 175; p. 170.
Type-writing, Keyboard-machine for setting and distributing type for facsimile. A. Heger. No. 1,017,667; Feb. 20; Sp. p. 3127; Gaz. vol. 175; p. 555.
Type-writing machine. T. J. Coo. No. 1,016,250; Feb. 6; Sp. p. 3; Gaz. vol. 175; p. 4.
Type-writing machine. R. Seidelinger. No. 1,016,297; Feb. 6; Sp. p. 133; Gaz. vol. 175; p. 21.
Type-writing machine. C. J. Bond. No. 1,016,318; Feb. 6; Sp. p. 186; Gaz. vol. 175; p. 28.
Type-writing machine. G. Mex. No. 1,016,351; Feb. 6; Sp. p. 256; Gaz. vol. 175; p. 40.
Type-writing machine. J. H. Barr. No. 1,016,540; Feb. 6; Sp. p. 723; Gaz. vol. 175; p. 106.
Type-writing machine. J. H. Garsden. No. 1,016,686; Feb. 6; Sp. p. 1031; Gaz. vol. 175; p. 157.
Type-writing machine. J. H. Barr. No. 1,016,927; Feb. 13; Sp. p. 1586; Gaz. vol. 175; p. 273.
Type-writing machine. A. W. Smith. No. 1,016,968; Feb. 13; Sp. p. 1640; Gaz. vol. 175; p. 283.
Type-writing machine. C. B. Smith. No. 1,017,022; Feb. 13; Sp. p. 1754; Gaz. vol. 175; p. 308.
Type-writing machine. R. F. Griffin. No. 1,017,699; Feb. 13; Sp. p. 1231; Gaz. vol. 175; p. 316.
Type-writing machine. C. W. Walker. No. 1,017,717; Feb. 20; Sp. p. 3236; Gaz. vol. 175; p. 580.
Type-writing machine. W. J. Barron. No. 1,017,854; Feb. 20; Sp. p. 2567; Gaz. vol. 175; p. 626.
Type-writing machine. J. Pollok. No. 1,017,861; Feb. 20; Sp. p. 2602; Gaz. vol. 175; p. 631.
Type-writing machine. R. M. Crawford. No. 1,017,909; Feb. 20; Sp. p. 2844; Gaz. vol. 175; p. 696.
Type-writing machine. O. C. Keefe. No. 1,018,062; Feb. 20; Sp. p. 4074; Gaz. vol. 175; p. 702.
Type-writing machine. H. H. Steele. No. 1,018,630; Feb. 27; Sp. p. 5371; Gaz. vol. 175; p. 931.
Type-writing machine. W. A. Dyer. No. 1,018,701; Feb. 27; Sp. p. 5480; Gaz. vol. 175; p. 952.
Type-writing machine. W. A. Dyer. No. 1,018,748; Feb. 27; Sp. p. 5604; Gaz. vol. 175; p. 969.
Type-writing machine. H. H. Steele. No. 1,018,786; Feb. 27; Sp. p. 5683; Gaz. vol. 175; p. 982.
Type-writing machine. J. D. Dougherty. No. 1,018,811; Feb. 27; Sp. p. 5750; Gaz. vol. 175; p. 990.
Type-writing machine. A. G. F. Kurowski. No. 1,018,915; Feb. 27; Sp. p. 5948; Gaz. vol. 175; p. 1025.
Type-writing machine. F. A. Young. No. 1,018,950; Feb. 27; Sp. p. 6015; Gaz. vol. 175; p. 1037.
Type-writing machine. C. Gabrielsson. No. 1,018,968; Feb. 27; Sp. p. 6068; Gaz. vol. 175; p. 1044.
Type-writing-machine attachment. H. E. Lewis. No. 1,017,320; Feb. 13; Sp. p. 2367; Gaz. vol. 175; p. 402.
Type-writing machines, Spring-barrel brake for. C. C. Hertig and J. F. Flood. No. 1,018,700; Feb. 27; Sp. p. 5633; Gaz. vol. 175; p. 978.
Typographic machine. H. Lawrence. No. 1,017,771; Feb. 20; Sp. p. 3350; Gaz. vol. 175; p. 600.
Typographic machine. H. Lawrence. No. 1,017,772; Feb. 20; Sp. p. 3575; Gaz. vol. 175; p. 600.
Umbrella. E. E. Sutlive. No. 1,018,304; Feb. 6; Sp. p. 141; Gaz. vol. 175; p. 22.
Umbrella, Collapsible. C. Storm. No. 1,018,941; Feb. 27; Sp. p. 6008; Gaz. vol. 175; p. 1034.
Underreamer. G. E. Squire. No. 1,017,533; Feb. 13; Sp. p. 2448; Gaz. vol. 175; p. 415.
Underreamer. L. L. Fitzgerald. No. 1,017,743; Feb. 20; Sp. p. 3295; Gaz. vol. 175; p. 590.
Undershirt and suspensory, Combined. T. S. Harper. No. 1,016,625; Feb. 6; Sp. p. 916; Gaz. vol. 175; p. 157.
Urinal. J. A. Davidson. No. 1,018,966; Feb. 27; Sp. p. 6064; Gaz. vol. 175; p. 1043.
Vacuum-cleaner. J. H. Green. No. 1,016,263; Feb. 6; Sp. p. 40; Gaz. vol. 175; p. 9.
Vacuum-cleaner. E. W. Applegate. No. 1,016,800; Feb. 6; Sp. p. 846; Gaz. vol. 175; p. 127.
Vacuum cleaning device for cleaning animals. J. J. Slevin. No. 1,018,136; Feb. 20; Sp. p. 4237; Gaz. vol. 175; p. 726.
Vacuum-creator. F. E. Saunders. No. 1,017,991; Feb. 20; Sp. p. 3178; Gaz. vol. 175; p. 572.
Valve. E. O. Davis. No. 1,017,285; Feb. 13; Sp. p. 2553; Gaz. vol. 175; p. 432.
Valve. E. A. Lowe. No. 1,017,494; Feb. 13; Sp. p. 2664; Gaz. vol. 175; p. 451.
Valve. E. A. Sperry. No. 1,018,591; Feb. 27; Sp. p. 5278; Gaz. vol. 175; p. 917.
Valve attachment for internal-combustion engines, Whistle-. R. C. Adams. No. 1,016,725; Feb. 6; Sp. p. 1113; Gaz. vol. 175; p. 171.
Valve, Automatic choke-. C. Y. Hood and J. Chalmers. No. 1,017,415; Feb. 13; Sp. p. 2624; Gaz. vol. 175; p. 443.
Valve, Blower-. W. T. Peck. No. 1,018,847; Feb. 27; Sp. p. 5804; Gaz. vol. 175; p. 1002.
Valve, Combined emergency and throttle. J. G. Callan. No. 1,017,619; Feb. 13; Sp. p. 3021; Gaz. vol. 175; p. 511.
Valve, Combined hot and cold water. J. F. Murphy. No. 1,017,780; Feb. 20; Sp. p. 3450; Gaz. vol. 175; p. 607.
Valve, Combined throttle and reversing. A. Hackett. No. 1,018,047; Feb. 20; Sp. p. 4083; Gaz. vol. 175; p. 607.
Valve, Float-. W. E. Snaman. No. 1,018,987; Feb. 27; Sp. p. 5991; Gaz. vol. 175; p. 1033.
Valve for door-checks. M. Peterson. No. 1,018,955; Feb. 20; Sp. p. 4600; Gaz. vol. 175; p. 773.
Valve for intermingling and controlling fluids. A. W. Weeden. No. 1,016,362; Feb. 6; Sp. p. 319; Gaz. vol. 175; p. 60.
Valve for pneumatic actions. L. B. Downs. No. 1,017,857; Feb. 20; Sp. p. 3596; Gaz. vol. 175; p. 630.
Valve, Gate-. A. Watson. No. 1,016,462; Feb. 6; Sp. p. 514; Gaz. vol. 175; p. 79.
Valve-gear, Corliss. G. H. Fetzebe. No. 1,017,697; Feb. 20; Sp. p. 3170; Gaz. vol. 175; p. 571.
Valve-gear for engines. F. J. Weed. No. 1,018,698; Feb. 27; Sp. p. 5467; Gaz. vol. 175; p. 948.
Valve, Globe-. W. Vial. No. 1,018,308; Feb. 6; Sp. p. 155; Gaz. vol. 175; p. 24.
Valve mechanism. F. D. Schenck. No. 1,018,447; Feb. 27; Sp. p. 4901; Gaz. vol. 175; p. 866.

Valve mechanism for four-cycle. J. C. Rogers. No. 1,018,268; Feb. 20; Sp. p. 4260; Gaz. vol. 175; p. 772.
Valve mechanism for turbines. C. Longenecker. No. 1,017,159; Feb. 13; Sp. p. 2606; Gaz. vol. 175; p. 456.
Valve mechanism, Steam-engine. F. V. Brandaway. No. 1,016,398; Feb. 6; Sp. p. 398; Gaz. vol. 175; p. 53.
Valve-operating mechanism. F. Kramer. No. 1,017,277; Feb. 20; Sp. p. 3322; Gaz. vol. 175; p. 572.
Valve-operating mechanism, Steam-. W. H. Schulte. No. 1,016,714; Feb. 6; Sp. p. 1093; Gaz. vol. 175; p. 167.
Valve, Pressure-. S. W. Hutchinson. No. 1,018,987; Feb. 13; Sp. p. 1838; Gaz. vol. 175; p. 322.
Valve, Rotary. E. Ballou. No. 1,018,368; Feb. 20; Sp. p. 4755; Gaz. vol. 175; p. 916.
Valve, Steam-. J. Hyde. No. 1,017,292; Feb. 13; Sp. p. 2354; Gaz. vol. 175; p. 401.
Valve, Stop-. W. Hopper. No. 1,018,560; Feb. 27; Sp. p. 5215; Gaz. vol. 175; p. 906.
Valves, Feed-indicator for. E. E. Hatfield. No. 1,017,224; Feb. 13; Sp. p. 2220; Gaz. vol. 175; p. 378.
Vapor-burner. E. Heath. No. 1,018,497; Feb. 6; Sp. p. 691; Gaz. vol. 175; p. 92.
Vapor burner, Hydrocarbon-. C. H. Swanson. No. 1,018,944; Feb. 27; Sp. p. 6010; Gaz. vol. 175; p. 1035.
Varnish. L. H. Baekeland. No. 1,018,555; Feb. 20; Sp. p. 4753; Gaz. vol. 175; p. 812.
Vehicle. A. E. Long. No. 1,017,963; Feb. 20; Sp. p. 3901; Gaz. vol. 175; p. 675.
Vehicle. C. H. Martin. No. 1,018,246; Feb. 20; Sp. p. 4468; Gaz. vol. 175; p. 767.
Vehicle-brake. J. S. Miller. No. 1,018,627; Feb. 27; Sp. p. 5342; Gaz. vol. 175; p. 927.
Vehicle controlling device, Electric-motor-. E. W. Bender. No. 1,016,990; Feb. 13; Sp. p. 1671; Gaz. vol. 175; p. 293.
Vehicle-curtain. F. H. Tist. No. 1,018,896; Feb. 27; Sp. p. 5928; Gaz. vol. 175; p. 884.
Vehicle direction-indicator. C. O. Crowley and H. A. Lamb. No. 1,018,404; Feb. 6; Sp. p. 377; Gaz. vol. 175; p. 60.
Vehicle, Dumping motor-. G. W. Lally. No. 1,018,118; Feb. 20; Sp. p. 4201; Gaz. vol. 175; p. 722.
Vehicle, Electric motor-. E. W. Bender. No. 1,017,198; Feb. 13; Sp. p. 2154; Gaz. vol. 175; p. 382.
Vehicle fender, Motor-. W. Young. No. 1,018,450; Feb. 27; Sp. p. 4941; Gaz. vol. 175; p. 872.
Vehicle-frame. H. Cooper. No. 1,018,282; Feb. 27; Sp. p. 4987; Gaz. vol. 175; p. 877.
Vehicle, Motor-. C. L. Hemenway and F. W. Updegraff. No. 1,018,052; Feb. 20; Sp. p. 4045; Gaz. vol. 175; p. 699.
Vehicle pneumatic suspension. W. Kaess. No. 1,016,418; Feb. 6; Sp. p. 406; Gaz. vol. 175; p. 54.
Vehicle-spring. J. B. Thiell. No. 1,018,905; Feb. 6; Sp. p. 1429; Gaz. vol. 175; p. 230.
Vehicle-spring. G. Cruderman. No. 1,017,512; Feb. 13; Sp. p. 2888; Gaz. vol. 175; p. 477.
Vehicle-spring. M. M. McIntyre. No. 1,018,250; Feb. 20; Sp. p. 4471; Gaz. vol. 175; p. 768.
Vehicle steering mechanism, Motor-. D. C. Luce. No. 1,016,838; Feb. 6; Sp. p. 1237; Gaz. vol. 175; p. 206.
Vehicle tent or awning attachment. D. Whipple and J. R. Fuelpos. No. 1,018,798; Feb. 27; Sp. p. 5710; Gaz. vol. 175; p. 966.
Vehicle-top bracket-support. A. G. Steinbrenner. No. 1,016,658; Feb. 6; Sp. p. 961; Gaz. vol. 175; p. 145.
Vehicle-wheel. E. E. Killen. No. 1,016,830; Feb. 6; Sp. p. 215; Gaz. vol. 175; p. 33.
Vehicle-wheel. W. J. Cunningham. No. 1,018,673; Feb. 6; Sp. p. 1009; Gaz. vol. 175; p. 152.
Vehicle-wheel. I. L. Tvrdek. No. 1,017,236; Feb. 13; Sp. p. 2346; Gaz. vol. 175; p. 382.
Vehicle-wheel. A. A. MacDonald. No. 1,018,716; Feb. 27; Sp. p. 5532; Gaz. vol. 175; p. 958.
Vehicle-wheel. I. Pascal. No. 1,018,774; Feb. 27; Sp. p. 5661; Gaz. vol. 175; p. 978.
Vehicle-wheel, Metallic. M. J. Donahoe. No. 1,018,803; Feb. 20; Sp. p. 4575; Gaz. vol. 175; p. 785.
Vehicle wheel, Road-. H. C. Horner. No. 1,017,973; Feb. 20; Sp. p. 3890; Gaz. vol. 175; p. 671.
Vehicle-wheel with elastic spokes. H. Munk. No. 1,017,986; Feb. 20; Sp. p. 3911; Gaz. vol. 175; p. 676.
Vehicles, Device for indicating the intended movements of. G. S. Matthews. No. 1,017,226; Feb. 13; Sp. p. 2229; Gaz. vol. 175; p. 379.
Vehicles, Pneumatic suspension device for. J. Williamson. No. 1,016,810; Feb. 6; Sp. p. 1267; Gaz. vol. 175; p. 197.
Velocipede or four-wheeled vehicle. H. Brock. No. 1,018,405; Feb. 27; Sp. p. 4809; Gaz. vol. 175; p. 862.
Vending individual drinks, Apparatus for. L. G. Marsala. No. 1,017,788; Feb. 20; Sp. p. 3448; Gaz. vol. 175; p. 606.
Vending-machine. L. M. Pankhurst. No. 1,017,231; Feb. 13; Sp. p. 2227; Gaz. vol. 175; p. 381.
Vending-machine. H. F. Lowe. No. 1,017,873; Feb. 20; Sp. p. 3641; Gaz. vol. 175; p. 635.
Vending-machine. W. H. Laraway. No. 1,018,507; Feb. 27; Sp. p. 5046; Gaz. vol. 175; p. 887.
Vending-machine. H. H. Brinks. No. 1,018,808; Feb. 27; Sp. p. 5731; Gaz. vol. 175; p. 989.
Vending-machine. H. Miller. No. 1,018,845; Feb. 27; Sp. p. 5800; Gaz. vol. 175; p. 1002.
Vending machine, Card-. R. S. Wallick. No. 1,017,330; Feb. 20; Sp. p. 3529; Gaz. vol. 175; p. 609.
Veneer-drier, Feed-rolls for. H. Cranston. No. 1,018,787; Feb. 6; Sp. p. 1133; Gaz. vol. 175; p. 199.
Veneer-press for manufacturers of veneer-cutting material. C. E. Francis. No. 1,016,269; Feb. 6; Sp. p. 52; Gaz. vol. 175; p. 7.
Ventilating and plaster-compounding means, Combined. S. D. Upham. No. 1,017,710; Feb. 20; Sp. p. 3215; Gaz. vol. 175; p. 578.
Ventilator: See Refrigerator-car ventilator.
Ventilator. H. Gagnon. No. 1,017,462; Feb. 13; Sp. p. 2591; Gaz. vol. 175; p. 453.
Ventilator. C. E. Hahn. No. 1,018,335; Feb. 27; Sp. p. 5267; Gaz. vol. 175; p. 915.
Vessel and closures, Making removable. G. W. Rendle. No. 1,016,360; Feb. 6; Sp. p. 343; Gaz. vol. 175; p. 54.
Vessel-rack. A. Kaufman. No. 1,017,162; Feb. 13; Sp. p. 1953; Gaz. vol. 175; p. 350.
Vibrator, Therapeutic. H. M. Ament. No. 1,017,340; Feb. 20; Sp. p. 3553; Gaz. vol. 175; p. 624.
Vibrator for whirling artificial. C. L. Webster. No. 1,017,626; Feb. 13; Sp. p. 2695; Gaz. vol. 175; p. 513.
Violin, Self-playing. J. Swanson. No. 1,018,364; Feb. 20; Sp. p. 4746; Gaz. vol. 175; p. 813.
Viscous liquid material, Making a. L. S. Van Westrum. No. 1,016,901; Feb. 6; Sp. p. 1249; Gaz. vol. 175; p. 195.
Viscous material, Implement for holding and spreading. L. Clark. No. 1,017,957; Feb. 20; Sp. p. 3849; Gaz. vol. 175; p. 666.
Vise. W. S. Buchanan. No. 1,017,151; Feb. 13; Sp. p. 2603; Gaz. vol. 175; p. 345.
Vise. A. L. De Leeuw. No. 1,018,035; Feb. 20; Sp. p. 4004; Gaz. vol. 175; p. 694.
Vise. J. H. Reeder. No. 1,016,630; Feb. 27; Sp. p. 5352; Gaz. vol. 175; p. 928.
Vise, Horseshoer's foot-. A. D. Smith. No. 1,018,260; Feb. 20; Sp. p. 4736; Gaz. vol. 175; p. 811.
Vise or chuck or like machine. W. P. Spalding. No. 1,017,966; Feb. 20; Sp. p. 3872; Gaz. vol. 175; p. 668.
Voltage-regulating system. E. F. Jackson. No. 1,018,332; Feb. 20; Sp. p. 4609; Gaz. vol. 175; p. 791.
Voltage-regulator. E. F. Jackson. No. 1,017,679; Feb. 20; Sp. p. 3141; Gaz. vol. 175; p. 566.
Voltage with variable speed, Apparatus for producing a constant. H. Greb. No. 1,016,936; Feb. 6; Sp. p. 1313; Gaz. vol. 175; p. 202.
Voting-machine. W. H. Dana. No. 1,016,583; Feb. 6; Sp. p. 754; Gaz. vol. 175; p. 111.
Vulcanization. E. Taylor. No. 1,017,026; Feb. 20; Sp. p. 3775; Gaz. vol. 175; p. 656.
Vulcanizer, Dry-heat. H. M. Detrick. No. 1,017,264; Feb. 13; Sp. p. 2338; Gaz. vol. 175; p. 398.
Wafer-cutting machine. F. M. Peters. No. 1,016,489; Feb. 6; Sp. p. 464; Gaz. vol. 175; p. 71.
Wagon, Dumping-. S. L. Phelps. No. 1,017,016; Feb. 13; Sp. p. 1742; Gaz. vol. 175; p. 304.
Wagon, Dumping-. C. Lynch. No. 1,017,302; Feb. 13; Sp. p. 2381; Gaz. vol. 175; p. 405.
Wagon, Dumping-. M. Yeamins and C. M. Edge. No. 1,018,499; Feb. 27; Sp. p. 4939; Gaz. vol. 175; p. 873.
Wagon-jack. A. Boberg. No. 1,017,300; Feb. 13; Sp. p. 2804; Gaz. vol. 175; p. 473.
Wagon-jack, Portable-platform. R. J. Jones. No. 1,016,505; Feb. 6; Sp. p. 617; Gaz. vol. 175; p. 94.
Wagon-stake. A. Bolsaeer. No. 1,017,503; Feb. 13; Sp. p. 2808; Gaz. vol. 175; p. 474.
Wagon, Two-wheeled dump-. F. M. Holt. No. 1,017,972; Feb. 20; Sp. p. 3879; Gaz. vol. 175; p. 671.
Waist and shirt holder. M. M. Clewell. No. 1,018,612; Feb. 6; Sp. p. 988; Gaz. vol. 175; p. 182.
Waistband, Convertible. R. W. Graham. No. 1,017,535; Feb. 13; Sp. p. 2874; Gaz. vol. 175; p. 485.
Warp-drawing machine. C. Lea. No. 1,017,396; Feb. 13; Sp. p. 2362; Gaz. vol. 175; p. 402.
Washer: See Clothes-washer; Lock-washer; Nut-locking washer.
Washing device. J. W. Tool, T. F. Lingner, and J. G. Williams. No. 1,017,806; Feb. 13; Sp. p. 2999; Gaz. vol. 175; p. 506.
Washtubs, Twin waste for wooden-. E. E. Flynt. No. 1,016,980; Feb. 6; Sp. p. 1422; Gaz. vol. 175; p. 221.
Waste-fixture. W. R. Willetts. No. 1,018,021; Feb. 20; Sp. p. 3969; Gaz. vol. 175; p. 688.
Watch. W. Suszek and T. Sokolowski. No. 1,016,321; Feb. 6; Sp. p. 193; Gaz. vol. 175; p. 29.
Watchcase. K. Kolka. No. 1,017,420; Feb. 13; Sp. p. 2633; Gaz. vol. 175; p. 446.
Water, air, or gas, Apparatus for cooling or warming. H. Heenan. No. 1,018,243; Feb. 20; Sp. p. 4457; Gaz. vol. 175; p. 765.
Water-circulating system, Domestic. J. P. B. Sadtler. No. 1,016,959; Feb. 13; Sp. p. 1625; Gaz. vol. 175; p. 285.
Water-closet. W. A. Fraser. No. 1,017,044; Feb. 13; Sp. p. 1809; Gaz. vol. 175; p. 314.
Water-closet. I. A. Mann. No. 1,017,437; Feb. 13; Sp. p. 2668; Gaz. vol. 175; p. 451.
Water-cooler stand. W. I. Sherwood. No. 1,018,212; Feb. 20; Sp. p. 4393; Gaz. vol. 175; p. 755.
Water-gage. F. E. Grosvold. No. 1,016,885; Feb. 6; Sp. p. 1431; Gaz. vol. 175; p. 222.
Water-heater. F. H. Oehlke. No. 1,017,012; Feb. 13; Sp. p. 1735; Gaz. vol. 175; p. 303.

Water-heater. R. W. Rogers. No. 1,017,321; Feb. 13; Sp. p. 2423; Gaz. vol. 175; p. 411.
Water-heater. W. J. Kibby. No. 1,018,711; Feb. 27; Sp. p. 5519; Gaz. vol. 175; p. 956.
Water-heating apparatus. J. E. Capa. No. 1,018,406; Feb. 27; Sp. p. 4815; Gaz. vol. 175; p. 853.
Water in water-closets and the like, Device for the distribution of. F. Berardi. No. 1,018,231; Feb. 20; Sp. p. 4433; Gaz. vol. 175; p. 761.
Water-mixer. R. K. Yacoobian. No. 1,018,468; Feb. 27; Sp. p. 4938; Gaz. vol. 175; p. 873.
Water-motor. I. H. Dungan. No. 1,017,860; Feb. 20; Sp. p. 3600; Gaz. vol. 175; p. 631.
Water-motor, Undercurrent. H. H. Granger. No. 1,017,409; Feb. 13; Sp. p. 2605; Gaz. vol. 175; p. 442.
Water-softening apparatus. C. L. Kennicott. No. 1,017,294; Feb. 13; Sp. p. 2357; Gaz. vol. 175; p. 401.
Water-wheel. R. D. Kelly. No. 1,017,002; Feb. 13; Sp. p. 1719; Gaz. vol. 175; p. 300.
Water-wheel, Tangential-impulse. S. L. Berry. No. 1,017,618; Feb. 13; Sp. p. 3018; Gaz. vol. 175; p. 510.
Watering device, Stock-. F. E. Williamson. No. 1,016,809; Feb. 6; Sp. p. 1286; Gaz. vol. 175; p. 197.
Wave and tide motor. F. D. Chappell. No. 1,016,400; Feb. 6; Sp. p. 369; Gaz. vol. 175; p. 58.
Wave-meter. F. W. Midgley. No. 1,018,769; Feb. 27; Sp. p. 5650; Gaz. vol. 175; p. 976.
Wave-motor. F. Brown. No. 1,018,161; Feb. 20; Sp. p. 4294; Gaz. vol. 175; p. 737.
Wave-motor. F. M. Nelson. No. 1,018,678; Feb. 27; Sp. p. 5450; Gaz. vol. 175; p. 945.
Wax from the candelilla-plant, Extracting. B. Y. Sharp. No. 1,018,589; Feb. 27; Sp. p. 5276; Gaz. vol. 175; p. 916.
Weather-strip. L. Knott. No. 1,016,419; Feb. 6; Sp. p. 407; Gaz. vol. 175; p. 64.
Weather-strip. R. B. Swart. No. 1,017,340; Feb. 13; Sp. p. 2455; Gaz. vol. 175; p. 417.
Web-perforating mechanism. J. Bengough. No. 1,018,155; Feb. 20; Sp. p. 4282; Gaz. vol. 175; p. 735.
Wedge and clamp for holding loggers' falling-boards, Combined. T. E. Going. No. 1,018,899; Feb. 27; Sp. p. 5911; Gaz. vol. 175; p. 1020.
Weigher, Automatic. H. L. Merrick. No. 1,016,068; Feb. 20; Sp. p. 4094; Gaz. vol. 175; p. 705.
Weighing-machine. J. F. Perkins. No. 1,016,850; Feb. 6; Sp. p. 1359; Gaz. vol. 175; p. 210.
Welding chain-links, Machine for. L. Roehr. (Reissue.) No. 13,371; Feb. 20; Sp. p. 4793; Gaz. vol. 175; p. 821.
Well attachment, Oil-. N. M. Fraser. No. 1,017,663; Feb. 20; Sp. p. 3121; Gaz. vol. 175; p. 563.
Well-sinking apparatus. G. R. Moore. No. 1,018,725; Feb. 27; Sp. p. 5549; Gaz. vol. 175; p. 960.
Wells, Extracting appliance for use in oil or gas. A. P. McBride. No. 1,017,305; Feb. 13; Sp. p. 2387; Gaz. vol. 175; p. 406.
Welt-butting machine. E. E. Winkley. No. 1,018,858; Feb. 27; Sp. p. 5821; Gaz. vol. 175; p. 1006.
Welt-butting machine. E. E. Winkley. No. 1,018,859; Feb. 27; Sp. p. 5830; Gaz. vol. 175; p. 1006.
Wheel: *See* Automobile-wheel; Elastic wheel; Fifth-wheel; Printing-wheel; Resilient wheel; Spring-wheel; Toy wheel; Turbine-wheel; Vehicle-wheel; Water-wheel.
Wheel. J. J. Adamsen. No. 1,017,363; Feb. 13; Sp. p. 2505; Gaz. vol. 175; p. 425.
Wheel. E. C. Jones. No. 1,017,553; Feb. 13; Sp. p. 2904; Gaz. vol. 175; p. 490.
Wheel. A. J. Swing. No. 1,018,068; Feb. 20; Sp. p. 4132; Gaz. vol. 175; p. 712.
Wheel-brake, Vehicle. J. K. Ullmann. No. 1,017,930; Feb. 20; Sp. p. 3785; Gaz. vol. 175; p. 657.
Wheel-guard, Automatic. C. E. Glerding. No. 1,018,898; Feb. 27; Sp. p. 5908; Gaz. vol. 175; p. 1019.
Wheel jack and disher. L. Rice. No. 1,017,801; Feb. 20; Sp. p. 3474; Gaz. vol. 175; p. 611.
Wheel lock, Steering-. T. D. Stanley. No. 1,017,335; Feb. 13; Sp. p. 2446; Gaz. vol. 175; p. 416.
Wheel rim, Vehicle-. G. T. Reichenbach and H. O. Peck. No. 1,017,466; Feb. 13; Sp. p. 2745; Gaz. vol. 175; p. 462.
Wheels, Pneumatic attachment for vehicle-. H. Garrison. No. 1,016,558; Feb. 6; Sp. p. 764; Gaz. vol. 175; p. 112.
Wheelwright-machine. A. D. Gosett. No. 1,017,534; Feb. 13; Sp. p. 2873; Gaz. vol. 175; p. 484.
Whiffletree. F. A. Lubrecht. No. 1,016,425; Feb. 6; Sp. p. 414; Gaz. vol. 175; p. 66.
Whiffletree-hook. A. S. Chenoweth. No. 1,016,248; Feb. 6; Sp. p. 6; Gaz. vol. 175; p. 4.
Whisk-broom. D. A. Andrews. No. 1,017,069; Feb. 13; Sp. p. 1866; Gaz. vol. 175; p. 323.
Wick trimmer and wiper, Lamp-. G. J. Dickson. No. 1,018,745; Feb. 27; Sp. p. 5601; Gaz. vol. 175; p. 969.
Wigs and false fringes, Apparatus for making. A. Etienne. No. 1,017,253; Feb. 13; Sp. p. 2284; Gaz. vol. 175; p. 388.
Winch. O. Melbye. No. 1,017,307; Feb. 13; Sp. p. 2392; Gaz. vol. 175; p. 407.
Wind-shield. J. O. Hofbauer. No. 1,018,973; Feb. 27; Sp. p. 6061; Gaz. vol. 175; p. 1046.
Windmill. S. McNabb. No. 1,018,203; Feb. 20; Sp. p. 4377; Gaz. vol. 175; p. 751.
Windmill and engine coupling. D. Sheen. No. 1,017,021; Feb. 13; Sp. p. 1751; Gaz. vol. 175; p. 306.
Winding-machine. J. O. McKean. No. 1,018,920; Feb. 27; Sp. p. 5969; Gaz. vol. 175; p. 1027.
Windlass, Double-acting. C. Andrade, Jr. No. 1,018,545; Feb. 27; Sp. p. 5173; Gaz. vol. 175; p. 900.
Window. H. M. Thomas. No. 1,017,235; Feb. 13; Sp. p. 2246; Gaz. vol. 175; p. 382.
Window. F. K. Payment. No. 1,018,128; Feb. 20; Sp. p. 4220; Gaz. vol. 175; p. 726.
Window attachment or fixture. E. Héroux. No. 1,018,614; Feb. 27; Sp. p. 5319; Gaz. vol. 175; p. 923.
Window-cleaner and glass-polisher. E. E. Collins. No. 1,017,061; Feb. 13; Sp. p. 1915; Gaz. vol. 175; p. 328.
Window-cleaners, Protector for. L. Lohr. No. 1,017,962; Feb. 20; Sp. p. 3800; Gaz. vol. 175; p. 675.
Window-cleaning device. F. W. Woodhull. No. 1,018,147; Feb. 20; Sp. p. 4267; Gaz. vol. 175; p. 732.
Window-cleaning device. F. W. Woodhull. No. 1,018,148; Feb. 20; Sp. p. 4270; Gaz. vol. 175; p. 733.
Window-lock, Automatic. J. O. Schurtz. No. 1,016,962; Feb. 13; Sp. p. 1630; Gaz. vol. 175; p. 286.
Window or door screen. T. J. McBurney and J. McAlister. No. 1,016,842; Feb. 6; Sp. p. 1344; Gaz. vol. 175; p. 208.
Window-screen. B. R. McCollom. No. 1,016,574; Feb. 6; Sp. p. 799; Gaz. vol. 175; p. 118.
Window-screen. W. V. Knight. No. 1,016,888; Feb. 6; Sp. p. 1435; Gaz. vol. 175; p. 223.
Window-screen. W. R. Miller. No. 1,017,266; Feb. 13; Sp. p. 2306; Gaz. vol. 175; p. 392.
Window-screen. G. W. Stein. No. 1,018,215; Feb. 20; Sp. p. 4396; Gaz. vol. 175; p. 756.
Window-screen hanger. L. A. Bittorf. No. 1,018,603; Feb. 27; Sp. p. 5300; Gaz. vol. 175; p. 920.
Window-screen insect-escape. C. M. Haworth. No. 1,018,188; Feb. 20; Sp. p. 4354; Gaz. vol. 175; p. 747.
Window-screen, Roller. C. K. Jenkins. No. 1,016,413; Feb. 6; Sp. p. 396; Gaz. vol. 175; p. 62.
Window-tapping device. C. M. Long. No. 1,018,625; Feb. 27; Sp. p. 5333; Gaz. vol. 175; p. 926.
Window-ventilating appliance. R. Schimek. No. 1,016,713; Feb. 6; Sp. p. 1086; Gaz. vol. 175; p. 167.
Wire-cleaning apparatus. R. W. Burgess and A. Clark. No. 1,016,473; Feb. 6; Sp. p. 540; Gaz. vol. 175; p. 83.
Wire-cutter. M. H. Mann. No. 1,018,839; Feb. 27; Sp. p. 5791; Gaz. vol. 175; p. 1000.
Wire fabric, Endless. E. Franck. No. 1,017,662; Feb. 20; Sp. p. 3119; Gaz. vol. 175; p. 563.
Wire-feed mechanism. G. W. Perkins. No. 1,017,628; Feb. 13; Sp. p. 3044; Gaz. vol. 175; p. 513.
Wire reel, Line-. J. and G. M. Welty and C. Brinser. No. 1,017,936; Feb. 20; Sp. p. 3794; Gaz. vol. 175; p. 659.
Wire-stretcher. E. W. Scott. No. 1,016,785; Feb. 6; Sp. p. 1235; Gaz. vol. 175; p. 190.
Wire-stretcher. J. G. Hall. No. 1,017,147; Feb. 13; Sp. p. 2041; Gaz. vol. 175; p. 351.
Wire-stretching device. L. M. Davidson. No. 1,018,882; Feb. 27; Sp. p. 5877; Gaz. vol. 175; p. 1014.
Wood, Bending. F. J. Fisher. No. 1,016,684; Feb. 6; Sp. p. 1029; Gaz. vol. 175; p. 156.
Wood-bending device. S. E. Walke. No. 1,016,721; Feb. 6; Sp. p. 1101; Gaz. vol. 175; p. 169.
Wood-gaining machine. W. L. Hume. No. 1,016,828; Feb. 6; Sp. p. 1319; Gaz. vol. 175; p. 203.
Wood, Preserving. C. Ellis. No. 1,017,636; Feb. 13; Sp. p. 3064; Gaz. vol. 175; p. 516.
Woodworking-machine. A. Victor. No. 1,016,379; Feb. 6; Sp. p. 309; Gaz. vol. 175; p. 49.
Woodworking-tool. J. L. Leavitt. No. 1,017,774; Feb. 20; Sp. p. 3410; Gaz. vol. 175; p. 601.
Work-holder. H. C. Wilson. No. 1,017,615; Feb. 13; Sp. p. 3014; Gaz. vol. 175; p. 509.
Work-support. C. S. Wells. No. 1,018,537; Feb. 27; Sp. p. 5161; Gaz. vol. 175; p. 898.
Wrench: *See* Pipe-wrench.
Wrench. C. E. Peterson. No. 1,016,578; Feb. 6; Sp. p. 804; Gaz. vol. 175; p. 119.
Wrench. J. Reiber. No. 1,016,776; Feb. 6; Sp. p. 1223; Gaz. vol. 175; p. 188.
Wrench. B. W. Freeska. No. 1,017,148; Feb. 13; Sp. p. 2035; Gaz. vol. 175; p. 349.
Wrench. M. A. Johnson. No. 1,017,550; Feb. 13; Sp. p. 2898; Gaz. vol. 175; p. 490.
Wrench. E. H. Iveson. No. 1,018,321; Feb. 20; Sp. p. 4606; Gaz. vol. 175; p. 791.
Wrench. R. Schwarz. No. 1,018,347; Feb. 20; Sp. p. 4651; Gaz. vol. 175; p. 799.
Wrench. A. C. Suddarth. No. 1,018,528; Feb. 27; Sp. p. 5133; Gaz. vol. 175; p. 894.
Wringer: *See* Clothes-wringer.
Wringer. H. J. Frederick. No. 1,016,685; Feb. 6; Sp. p. 1029; Gaz. vol. 175; p. 157.

ALPHABETICAL LIST OF DESIGNS.

Abdominal band. L. Street. No. 42,195; Feb. 20; Gaz. vol. 175; p. 824.
Automobile-bumper. J. H. Sager. No. 42,149; Feb. 6; Gaz. vol. 175; p. 242.
Automobile-horn. S. Calautti. No. 42,188; Feb. 20; Gaz. vol. 175; p. 822.
Automobile running-board. W. Cairns. No. 42,124; Feb. 6; Gaz. vol. 175; p. 238.
Automobile running-board. G. W. Morse. No. 42,145; Feb. 6; Gaz. vol. 175; p. 242.
Bracket, Holder-. J. P. Eustis. Nos. 42,197–8; Feb. 27; Gaz. vol. 175; p. 1068.
Breastpin. L. Spirup. No. 42,250; Feb. 27; Gaz. vol. 175; p. 1078.
Cabinet, Dinner-set. E. M. Lunt. Nos. 42,187–8; Feb. 20; Gaz. vol. 175; p. 823.
Candy bar. R. C. Boeckel. No. 42,162; Feb. 13; Gaz. vol. 175; p. 519.
Cards, Pack of playing-. S. M. Rouse. No. 42,237; Feb. 27; Gaz. vol. 175; p. 1075.
Carpet. W. A. Elliot. No. 42,125; Feb. 6; Gaz. vol. 175; p. 238.
Carpet. J. Merry. No. 42,141; Feb. 6; Gaz. vol. 175; p. 241.
Carpet. J. B. Moffat. No. 42,142; Feb. 6; Gaz. vol. 175; p. 241.
Carpet. R. F. Riddell. No. 42,148; Feb. 6; Gaz. vol. 175; p. 242.
Carpet. J. Spring. No. 42,153; Feb. 6; Gaz. vol. 175; p. 243.
Carpet. J. Wishart. Nos. 42,159–60; Feb. 6; Gaz. vol. 175; p. 244.
Carpet or rug. W. E. Sayers. No. 42,239; Feb. 27; Gaz. vol. 175; p. 1076.
Certificate, Official. J. B. Goodwin. No. 42,128; Feb. 6; Gaz. vol. 175; p. 239.
Coin-holder and visaigrette. S. O. Bigney. No. 42,182; Feb. 20; Gaz. vol. 175; p. 822.
Cycle pedal-frame. G. I. Francis. No. 42,170; Feb. 13; Gaz. vol. 175; p. 520.
Dish. E. A. Farr. No. 42,200; Feb. 27; Gaz. vol. 175; p. 1069.
Display-stand for merchandise. P. Yesbera and J. Jameson. No. 42,180; Feb. 13; Gaz. vol. 175; p. 523.
Fabric or wall-paper, Textile. G. Forestier. Nos. 42,201–3; Feb. 27; Gaz. vol. 175; p. 1069.
Fabric or wall-paper, Textile. E. Hoch. Nos. 42,205–10; Feb. 27; Gaz. vol. 175; pp. 1069–70.
Fabric or wall-paper, Textile. E. Kirchhoff. No. 42,213; Feb. 27; Gaz. vol. 175; p. 1071.
Fabric or wall-paper, Textile. W. C. Korsinek. No. 42,214; Feb. 27; Gaz. vol. 175; p. 1071.
Fabric or wall-paper, Textile. E. Madeleine. Nos. 42,215–21; Feb. 27; Gaz. vol. 175; pp. 1071–2.
Fabric or wall-paper, Textile. E. Munier. Nos. 42,222–7; Feb. 27; Gaz. vol. 175; pp. 1072–3.
Fabric or wall-paper, Textile. L. F. Orcutt. Nos. 42,229–31; Feb. 27; Gaz. vol. 175; pp. 1073–4.
Fabric or wall-paper, Textile. M. Rothschild. Nos. 42,235–6; Feb. 27; Gaz. vol. 175; pp. 1074–5.
Fabric or wall-paper, Textile. F. J. Schaetzel. Nos. 42,240–9; Feb. 27; Gaz. vol. 175; pp. 1076–8.
Fabric, Textile. E. M. Hacker. No. 42,138; Feb. 6; Gaz. vol. 175; p. 240.
Faucet. F. H. Lippincott. No. 42,174; Feb. 13; Gaz. vol. 175; p. 521.
Game-board. W. H. Freemantle. No. 42,204; Feb. 27; Gaz. vol. 175; p. 1069.
Gas-heater. J. Roy. No. 42,178; Feb. 13; Gaz. vol. 175; p. 522.
Girdle for waist foundations. S. L. Brundidge. No. 42,196; Feb. 27; Gaz. vol. 175; p. 1068.
Glass vessel. E. M. Bottome. No. 42,163; Feb. 13; Gaz. vol. 175; p. 519.
Golf-ball. F. C. Breakspear. No. 42,164; Feb. 13; Gaz. vol. 175; p. 519.
Hanger for hand-bags or similar articles. K. B. Ford. No. 42,169; Feb. 13; Gaz. vol. 175; p. 520.
Hinge-leaf. W. D. Ferris. No. 42,168; Feb. 13; Gaz. vol. 175; p. 520.
Key. F. Soley. No. 42,152; Feb. 6; Gaz. vol. 175; p. 243.
Knife, Vegetable-. O. A. Smith. No. 42,194; Feb. 20; Gaz. vol. 175; p. 824.
Knit neckscarf or muffler, Flat-. S. S. Samplimer. No. 42,238; Feb. 27; Gaz. vol. 175; p. 1078.
Lamp-casing. E. R. Estep. No. 42,127; Feb. 6; Gaz. vol. 175; p. 239.
Lamp-shade. H. A. Schnelbach. No. 42,151; Feb. 6; Gaz. vol. 175; p. 243.
Letter-head or similar article. R. Onffroy. No. 42,228; Feb. 27; Gaz. vol. 175; p. 1078.
Lightning-rod terminal. S. D. Kretzer. No. 42,173; Feb. 13; Gaz. vol. 175; p. 521.
Linoleum or oil-cloth. C. F. Humphreys. No. 42,211; Feb. 27; Gaz. vol. 175; p. 1070.
Liquid cooler and dispenser. H. G. Cordley. No. 42,166; Feb. 13; Gaz. vol. 175; p. 520.
Lucky figure, amulet, or talisman. R. Fanner. No. 42,167; Feb. 13; Gaz. vol. 175; p. 520.
Nutcracker. A. L. Mordt. Nos. 42,142–4; Feb. 6; Gaz. vol. 175; p. 241.
Piano-case. N. J. Nelson. No. 42,189; Feb. 20; Gaz. vol. 175; p. 823.
Pipe cover, Tobacco-. J. E. Clemens. No. 42,165; Feb. 13; Gaz. vol. 175; p. 520.
Radiator-filler cap, Automobile. H. B. Joy. No. 42,139; Feb. 6; Gaz. vol. 175; p. 241.
Reservoir-top. F. W. Judd. No. 42,140; Feb. 6; Gaz. vol. 175; p. 241.
Rug. W. G. Reith. No. 42,147; Feb. 6; Gaz. vol. 175; p. 242.
Rug. E. G. Sauer. No. 42,150; Feb. 6; Gaz. vol. 175; p. 242.
Rug. J. Spring. Nos. 42,154–7; Feb. 6; Gaz. vol. 175; pp. 243–4.
Rug. E. W. Trik. No. 42,158; Feb. 6; Gaz. vol. 175; p. 244.
Rug. A. Petsold. Nos. 42,190–2; Feb. 20; Gaz. vol. 175; pp. 822–4.
Rug. A. Petsold. Nos. 42,232–4; Feb. 27; Gaz. vol. 175; p. 1074.
Rug-border. W. A. Elliot. No. 42,126; Feb. 6; Gaz. vol. 175; p. 238.
Scarf-pin. A. Reininger. No. 42,177; Feb. 13; Gaz. vol. 175; p. 522.
Seat. H. C. Cansler. No. 42,184; Feb. 20; Gaz. vol. 175; p. 822.
Shoe-protector. K. Nemes. No. 42,212; Feb. 27; Gaz. vol. 175; p. 1071.
Spoons, forks or similar articles, Handle for. C. Osborne. No. 42,146; Feb. 6; Gaz. vol. 175; p. 242.
Spoons or similar articles, Handle for. B. A. Burns. No. 42,123; Feb. 6; Gaz. vol. 175; p. 238.
Stove. J. H. O'Brien. No. 42,176; Feb. 13; Gaz. vol. 175; p. 522.
Street-light post. G. Schumacher. No. 42,193; Feb. 20; Gaz. vol. 175; p. 824.
Symbol. T. Zakrzewski. No. 42,181; Feb. 13; Gaz. vol. 175; p. 523.
Table top, Operating-. M. Schmidt. No. 42,179; Feb. 13; Gaz. vol. 175; p. 522.
Toilet-stand. F. G. Hill. No. 42,185; Feb. 20; Gaz. vol. 175; p. 822.
Tray or similar article. C. A. Bennett. No. 42,161; Feb. 13; Gaz. vol. 175; p. 519.
Tumbler-holder. E. A. Farr. No. 42,199; Feb. 27; Gaz. vol. 175; p. 1068.
Vehicle-body. H. E. Kennedy. No. 42,172; Feb. 13; Gaz. vol. 175; p. 521.
Vehicle-body. C. E. J. Lang. No. 42,186; Feb. 20; Gaz. vol. 175; p. 823.
Vending-machine casing. W. Millard. No. 42,175; Feb. 13; Gaz. vol. 175; p. 521.
Wall-covering. R. B. Griffin. Nos. 42,129–37; Feb. 6; Gaz. vol. 175; pp. 239–40.
Wardrobe-dresser. R. A. Jennings. No. 42,171; Feb. 13; Gaz. vol. 175; p. 520.
Whisk-brooms and similar articles, Holder for. H. Buermann. No. 42,122; Feb. 6; Gaz. vol. 175; p. 238.

ALPHABETICAL LIST OF TRADE-MARKS.

Acid, Derivatives of salicylic. C. F. Boehringer & Soehne. No. 85,549; Feb. 27; Gaz. vol. 175; p. 1095.

Alloys, Bronze. The Manganese Bronze & Brass Company. No. 85,265; Feb. 6; Gaz. vol. 175; p. 260.

Alloys, Copper and aluminum. Gabriel & Co. No. 85,269; Feb. 6; Gaz. vol. 175; p. 260.

Amusement devices. Novelty Machine Co. No. 85,476; Feb. 20; Gaz. vol. 175; p. 839.

Animal-traps. Oneida Community. No. 85,271; Feb. 13; Gaz. vol. 175; p. 538.

Antiseptic and remedy for certain diseases. Liquid H. F. France. No. 85,241; Feb. 13; Gaz. vol. 175; p. 536.

Antiseptic cleaning compound. F. W. Thurston Company. No. 85,534; Feb. 20; Gaz. vol. 175; p. 840.

Apples, Evaporated. American Trading Company. No. 85,220; Feb. 6; Gaz. vol. 175; p. 259.

Arch supports, Foot-. Regal Shoe Company. No. 85,494; Feb. 20; Gaz. vol. 175; p. 839.

Arch supports, Instep-. Bell Manufacturing Company. No. 85,499; Feb. 20; Gaz. vol. 175; p. 840.

Asphalt. Central Commercial Co. No. 85,324; Feb. 13; Gaz. vol. 175; p. 537.

Automobiles. Hupp Motor Car Co. No. 85,247; Feb. 6; Gaz. vol. 175; p. 260.

Automobiles. J. E. Small. No. 85,622; Feb. 27; Gaz. vol. 175; p. 1095.

Automobiles, motor-boats, and aeroplanes. Metallurgique Motor Co. No. 85,461; Feb. 20; Gaz. vol. 175; p. 838.

Bagging for baling cotton. American Manufacturing Company. Nos. 85,214–16; Feb. 6; Gaz. vol. 175; p. 259.

Bags and trunks, Traveling-. Dreissiger Reisartikelfabr. & Lederwarenfabrik G. L. Lippold. No. 85,531; Feb. 13; Gaz. vol. 175; p. 537.

Bee-escapes. M. H. Porter. No. 85,614; Feb. 27; Gaz. vol. 175; p. 1095.

Beer, ale, porter, &c. The West End Brewing Co. No. 85,531; Feb. 20; Gaz. vol. 175; p. 840.

Belt-dressings. Kato Products Co. No. 85,592; Feb. 27; Gaz. vol. 175; p. 1094.

Belting, packing, and hose, Leather. American Belting & Tanning Co. No. 85,408; Feb. 20; Gaz. vol. 175; p. 837.

Bitters. The O'Neil Veteran Bitters Co. No. 85,610; Feb. 27; Gaz. vol. 175; p. 1095.

Boots and leather spats. Polishing preparations for. W. Ramsay. No. 85,490; Feb. 20; Gaz. vol. 175; p. 839.

Boots and shoes. Sears, Roebuck and Co. No. 85,502; Feb. 20; Gaz. vol. 175; p. 840.

Boots and shoes, Leather. Regal Shoe Company. No. 85,278; Feb. 13; Gaz. vol. 175; p. 538.

Boots and shoes, Leather. Stephen Putney Shoe Company. No. 85,488; Feb. 20; Gaz. vol. 175; p. 839.

Boots, shoes, and sandals. The Cahill Shoe Co. No. 85,410; Feb. 20; Gaz. vol. 175; p. 837.

Boots, shoes, slippers, and stockings. A. Hale. No. 85,345; Feb. 13; Gaz. vol. 175; p. 538.

Brazing compound. J. D. Ge Bott. No. 85,431; Feb. 20; Gaz. vol. 175; p. 838.

Brooms. Enterprise Broom Company. No. 85,326; Feb. 13; Gaz. vol. 175; p. 537.

Brushes. Geo. Borgfeldt & Co. Nos. 85,556–1; Feb. 27; Gaz. vol. 175; p. 1093.

Buttons of precious metal, Collar-. Stern Bros. & Company. No. 85,285; Feb. 13; Gaz. vol. 175; p. 539.

Calendars. Stone Printing & Mfg. Co. No. 85,286; Feb. 13; Gaz. vol. 175; p. 539.

Candies. Whitmer Chocolate Company. No. 85,538; Feb. 20; Gaz. vol. 175; p. 841.

Candy. Spaak Chocolate Company. No. 85,540; Feb. 20; Gaz. vol. 175; p. 840.

Candy whistles. Edwin H. Krumbar Co. No. 85,269; Feb. 6; Gaz. vol. 175; p. 260.

Canned corn. The Illinois Canning Company. Nos. 85,240–42; Feb. 6; Gaz. vol. 175; p. 260.

Canned corn. The Illinois Canning Company. No. 85,443; Feb. 20; Gaz. vol. 175; p. 838.

Canned fruits. H. G. Prince & Company. Nos. 85,266–7; Feb. 6; Gaz. vol. 175; p. 261.

Canned fruits, vegetables, and meats, Roast-beef. S. H. Comstock & Co. No. 85,416; Feb. 20; Gaz. vol. 175; p. 837.

Canned pineapples. Haiku Fruit & Packing Co. No. 85,487; Feb. 20; Gaz. vol. 175; p. 839.

Canned vegetables. Goldberg, Bowen & Co. No. 85,483; Feb. 20; Gaz. vol. 175; p. 839.

Canned vegetables and meats. Gutzon-Borret Co. No. 85,268; Feb. 6; Gaz. vol. 175; p. 260.

Cans, Milk and cream. Plymouth Creamery Company. No. 85,516; Feb. 13; Gaz. vol. 175; p. 538.

Cartons and carbon electrodes. H. C. Hirschberg. No. 85,249; Feb. 6; Gaz. vol. 175; p. 260.

Cartridge-shells. United States Cartridge Company. No. 85,291; Feb. 13; Gaz. vol. 175; p. 539.

Carvers, Landers, Frary and Clark. No. 85,453; Feb. 20; Gaz. vol. 175; p. 838.

Casks and barrels. The Greif Bros. Co. No. 85,544; Feb. 13; Gaz. vol. 175; p. 538.

Cheese, Cream-. F. Schujahn. No. 85,501; Feb. 20; Gaz. vol. 175; p. 840.

Chemicals, medicines, and toilet preparations, Certain. McNeil & Higgins Company. No. 85,605; Feb. 27; Gaz. vol. 175; p. 1095.

Chocolates and marshmallows. Guttmann & Kretchmer. No. 85,242; Feb. 6; Gaz. vol. 175; p. 260.

Cigarettes. Société Anonyme Le Khédive. No. 85,597; Feb. 20; Gaz. vol. 175; p. 840.

Cigarettes. Teofani & Co. No. 85,628; Feb. 27; Gaz. vol. 175; p. 1095.

Cigarettes and cigars. A. L. Rowell. No. 85,618; Feb. 27; Gaz. vol. 175; p. 1095.

Cigars. A. Duval. No. 85,421; Feb. 20; Gaz. vol. 175; p. 837.

Cigars. B. Lagarde. Nos. 85,456–6; Feb. 20; Gaz. vol. 175; p. 838.

Cigars. M. W. Dilley, Inc. No. 85,566; Feb. 27; Gaz. vol. 175; p. 1093.

Clocks. T. Schlegall. No. 85,380; Feb. 13; Gaz. vol. 175; p. 539.

Clothes-lines, Hemp. The American Manufacturing Company. Nos. 85,402–3; Feb. 20; Gaz. vol. 175; p. 837.

Clothing. Hochschild Kohn & Co. No. 85,260; Feb. 13; Gaz. vol. 175; p. 538.

Clothing, Men's and boys' outer. Kuh, Nathan & Fischer Company. No. 85,260; Feb. 13; Gaz. vol. 175; p. 538.

Clothing, Women's, men's, and boys'. Kaiserin Fabrik für hyg. Unterkleidung, G. m. b. H. No. 85,256; Feb. 6; Gaz. vol. 175; p. 260.

Clutches, Friction-. C. Wenz. No. 85,599; Feb. 6; Gaz. vol. 175; p. 261.

Coal. City Fuel Company. No. 85,557; Feb. 27; Gaz. vol. 175; p. 1093.

Coats, overcoats, vests, and trousers. Kramer & Co. No. 85,258; Feb. 6; Gaz. vol. 175; p. 260.

Coats, vests, and trousers. Old Woolen Mills. No. 85,282; Feb. 6; Gaz. vol. 175; p. 261.

Coats, vests, and trousers. A. Decker & Cohn. No. 85,419; Feb. 20; Gaz. vol. 175; p. 304.

Coats, vests, trousers, and overcoats. J. Cooney & Co. No. 85,228; Feb. 6; Gaz. vol. 175; p. 259.

Coats, vests, trousers, overcoats, and rain-coats. Levy & Markowitz. No. 85,262; Feb. 6; Gaz. vol. 175; p. 260.

Cocoa. J. O. Powers. No. 85,615; Feb. 27; Gaz. vol. 175; p. 1095.

Coffee. Bladenmann Bros. No. 85,224; Feb. 6; Gaz. vol. 175; p. 259.

Coffee. Thomas Wood Co. No. 85,305; Feb. 6; Gaz. vol. 175; p. 261.

Coffee. Johnson-Allen Coffee Co. Nos. 85,446–8; Feb. 20; Gaz. vol. 175; p. 838.

Coffee, Roasted. F. Wilder & Co. No. 85,263; Feb. 6; Gaz. vol. 175; p. 261.

Coffee, Roasted. J. J. Schotten. No. 85,500; Feb. 20; Gaz. vol. 175; p. 840.

Combs, barrettes, and hair-retainers. Wilcox Comb Company. No. 85,304; Feb. 6; Gaz. vol. 175; p. 261.

Conduits for electric wiring. J. H. Parker. No. 85,284; Feb. 6; Gaz. vol. 175; p. 261.

Construction material, Certain. Ollendorff & Clarkson. No. 85,479; Feb. 20; Gaz. vol. 175; p. 839.

Coops and houses, nests, feed-boxes, &c., Chicken. L. A. Hills. No. 85,246; Feb. 13; Gaz. vol. 175; p. 536.

Corn and bunion shields. J. J. Georges & Son. No. 85,573; Feb. 27; Gaz. vol. 175; p. 1094.

Corn-starch and food-starch. C. Morningstar & Co. No. 85,268; Feb. 13; Gaz. vol. 175; p. 538.

Corsets. Weingarten Bros. No. 85,301; Feb. 6; Gaz. vol. 175; p. 261.

Corsets. Leveaman, Joseph & Loeb. No. 85,468; Feb. 20; Gaz. vol. 175; p. 838.

Corsets. Société des Établissements Farny & Oppenheim. No. 85,508; Feb. 20; Gaz. vol. 175; p. 840.

Cotton piece goods. Atlantic Cotton Mills. No. 85,214; Feb. 13; Gaz. vol. 175; p. 537.

Cotton piece goods. Atlantic Cotton Mills. No. 85,545; Feb. 27; Gaz. vol. 175; p. 1093.

Cotton-seed meal and cake. The Exchange Cotton and Linseed Meal Company. No. 85,424; Feb. 20; Gaz. vol. 175; p. 837.

Cough mixture. Osbon and Osbon Chemical Co. No. 85,611; Feb. 27; Gaz. vol. 175; p. 1095.

Crackers and cakes. O. E. Gilman. No. 85,489; Feb. 20; Gaz. vol. 175; p. 839.

ALPHABETICAL LIST OF TRADE-MARKS.

Acid, Derivatives of salicylic. C. F. Boehringer & Soehne. No. 85,549; Feb. 27; Gaz. vol. 175; p. 1095.

Alloys, Bronze. The Manganese Bronze & Brass Company. No. 85,265; Feb. 6; Gaz. vol. 175; p. 260.

Alloys, Copper and aluminum. Gabriel & Co. No. 85,269; Feb. 6; Gaz. vol. 175; p. 260.

Amusement devices. Novelty Machine Co. No. 85,476; Feb. 20; Gaz. vol. 175; p. 839.

Animal-traps. Oneida Community. No. 85,371; Feb. 13; Gaz. vol. 175; p. 539.

Antiseptic and remedy for certain diseases, Liquid. B. F. Franca. No. 85,341; Feb. 13; Gaz. vol. 175; p. 536.

Antiseptic cleaning compound. F. W. Thurston Company. No. 85,534; Feb. 20; Gaz. vol. 175; p. 840.

Apples, Evaporated. American Trading Company. No. 85,220; Feb. 6; Gaz. vol. 175; p. 259.

Arch supports, Foot-. Regal Shoe Company. No. 85,494; Feb. 20; Gaz. vol. 175; p. 839.

Arch supports, Instep. Scholl Manufacturing Company. No. 85,499; Feb. 20; Gaz. vol. 175; p. 840.

Asphalt. Central Commercial Co. No. 85,324; Feb. 13; Gaz. vol. 175; p. 537.

Automobiles. Hupp Motor Car Co. No. 85,247; Feb. 6; Gaz. vol. 175; p. 260.

Automobiles. J. S. Small. No. 85,622; Feb. 27; Gaz. vol. 175; p. 1095.

Automobiles, motor-boats, and aeroplanes. Metallurgique Motor Co. No. 85,461; Feb. 20; Gaz. vol. 175; p. 838.

Bagging for Baling cotton. American Manufacturing Company. Nos. 85,214–16; Feb. 6; Gaz. vol. 175; p. 259.

Bags and trunks, Traveling-. Dresdener Reisekoffer- & Lederwarenfabrik G. L. Lippold. No. 85,231; Feb. 13; Gaz. vol. 175; p. 537.

Bee-escapes. M. E. Porter. No. 85,614; Feb. 27; Gaz. vol. 175; p. 1095.

Beer, ale, porter, &c. The West End Brewing Co. No. 85,531; Feb. 20; Gaz. vol. 175; p. 840.

Belt-dressings. Kato Products Co. No. 85,592; Feb. 27; Gaz. vol. 175; p. 1094.

Belting, packing, and hose, Leather. American Belting & Tanning Co. No. 85,406; Feb. 20; Gaz. vol. 175; p. 837.

Bitters. The Old Veteran Bitters Co. No. 85,610; Feb. 27; Gaz. vol. 175; p. 1096.

Boots and leather goods, Polishing preparations for. W. Ramsay. No. 85,490; Feb. 20; Gaz. vol. 175; p. 839.

Boots and shoes. Sears, Roebuck and Co. No. 85,502; Feb. 20; Gaz. vol. 175; p. 840.

Boots and shoes, Leather. Regal Shoe Company. No. 85,376; Feb. 13; Gaz. vol. 175; p. 538.

Boots and shoes, Leather. Stephen Putney Shoe Company. No. 85,488; Feb. 20; Gaz. vol. 175; p. 839.

Boots, shoes, and sandals. The Cahill Shoe Co. No. 85,410; Feb. 20; Gaz. vol. 175; p. 837.

Boots, shoes, slippers, and stockings. A. Hale. No. 85,345; Feb. 13; Gaz. vol. 175; p. 536.

Brazing compound. J. D. Ge Bolt. No. 85,431; Feb. 20; Gaz. vol. 175; p. 838.

Brooms. Enterprise Broom Company. No. 85,326; Feb. 13; Gaz. vol. 175; p. 537.

Brushes. Geo. Borgfeldt & Co. Nos. 85,559–1; Feb. 27; Gaz. vol. 175; p. 1093.

Buttons of precious metal, Collar-. Stern Bros. & Company. No. 85,285; Feb. 13; Gaz. vol. 175; p. 539.

Calenders. Stone Printing & Mfg. Co. No. 85,286; Feb. 13; Gaz. vol. 175; p. 539.

Candies. Whitmer Chocolate Company. No. 85,539; Feb. 20; Gaz. vol. 175; p. 841.

Candy. Spunt Chocolate Company. No. 85,540; Feb. 20; Gaz. vol. 175; p. 840.

Candy whistles. Edwin H. Krauskopf Co. No. 85,266; Feb. 6; Gaz. vol. 175; p. 260.

Canned corn. The Illinois Canning Company. Nos. 85,240–42; Feb. 6; Gaz. vol. 175; p. 259.

Canned corn. The Illinois Canning Company. No. 85,443; Feb. 20; Gaz. vol. 175; p. 838.

Canned fruits. H. G. Prince & Company. Nos. 85,206–7; Feb. 6; Gaz. vol. 175; p. 261.

Canned fruits, vegetables, and sauer-kraut. S. H. Comstock & Co. No. 85,416; Feb. 20; Gaz. vol. 175; p. 837.

Canned pineapples. Hailua Fruit & Packing Co. No. 85,487; Feb. 20; Gaz. vol. 175; p. 839.

Canned vegetables. Goldberg, Bowen & Co. No. 85,483; Feb. 20; Gaz. vol. 175; p. 839.

Canned vegetables and soups. Stephen-Barrett Co. No. 85,293; Feb. 6; Gaz. vol. 175; p. 262.

Cans, Milk and cream. Plymouth Creamery Company. No. 85,374; Feb. 13; Gaz. vol. 175; p. 538.

Carbons and carbon electrodes. W. M. Hirschberg. No. 85,240; Feb. 6; Gaz. vol. 175; p. 260.

Cartridge-shells. United States Cartridge Company. No. 85,291; Feb. 13; Gaz. vol. 175; p. 539.

Carvers. Landers, Frary and Clark. No. 85,453; Feb. 20; Gaz. vol. 175; p. 838.

Casks and barrels. The Greif Bros. Co. No. 85,344; Feb. 13; Gaz. vol. 175; p. 536.

Cheese, Cream-. F. Schaufuss. No. 85,501; Feb. 20; Gaz. vol. 175; p. 840.

Chemicals, medicines, and toilet preparations, Certain. McNeil & Higgins Company. No. 85,495; Feb. 27; Gaz. vol. 175; p. 1095.

Chocolates and marshmallows. Gottmann & Kretchmer. No. 85,242; Feb. 6; Gaz. vol. 175; p. 260.

Cigarettes. Société Anonyme Le Khédive. No. 85,597; Feb. 20; Gaz. vol. 175; p. 840.

Cigarettes. Teofani & Co. No. 85,623; Feb. 27; Gaz. vol. 175; p. 1095.

Cigarettes and cigars. A. L. Rowell. No. 85,618; Feb. 27; Gaz. vol. 175; p. 1096.

Cigars. A. Duval. No. 85,421; Feb. 20; Gaz. vol. 175; p. 837.

Cigars. B. Legardo. Nos. 85,456–8; Feb. 20; Gaz. vol. 175; p. 838.

Cigars. M. W. Dilley, Inc. No. 85,566; Feb. 27; Gaz. vol. 175; p. 1096.

Clocks. T. Schlegall. No. 85,380; Feb. 13; Gaz. vol. 175; p. 539.

Clothes-lines, Hemp. The American Manufacturing Company. Nos. 85,492–3; Feb. 20; Gaz. vol. 175; p. 837.

Clothing. Hochschild Kohn & Co. No. 85,350; Feb. 13; Gaz. vol. 175; p. 538.

Clothing, Men's and boys' outer. Kuh, Nathan & Fischer Company. No. 85,260; Feb. 13; Gaz. vol. 175; p. 538.

Clothing, Women's, men's, and boys'. Kabenirie Fabrik für hyg. Unterkleidung, G. m. b. H. No. 85,256; Feb. 6; Gaz. vol. 175; p. 260.

Clutches, Friction-. C. Wear. No. 85,399; Feb. 6; Gaz. vol. 175; p. 261.

Coal. City Fuel Company. No. 85,557; Feb. 27; Gaz. vol. 175; p. 1093.

Coats, overcoats, vests, and trousers. Kramer & Co. No. 85,268; Feb. 6; Gaz. vol. 175; p. 260.

Coats, vests, and trousers. Old Woolen Mills. No. 85,282; Feb. 6; Gaz. vol. 175; p. 261.

Coats, vests, and trousers. A. Decker & Cohn. No. 85,419; Feb. 20; Gaz. vol. 175; p. 804.

Coats, vests, trousers, and overcoats. J. Corday & Co. No. 85,223; Feb. 6; Gaz. vol. 175; p. 259.

Coats, vests, trousers, overcoats, and rain-coats. Levy & Markowitz. No. 85,262; Feb. 6; Gaz. vol. 175; p. 260.

Cases. J. O. Persons. No. 85,615; Feb. 27; Gaz. vol. 175; p. 1095.

Cotton. Biedermann Bros. No. 85,224; Feb. 6; Gaz. vol. 175; p. 259.

Cotton. Thomas Wood Co. No. 85,305; Feb. 6; Gaz. vol. 175; p. 261.

Coffee. Johnson-Allen Coffee Co. Nos. 85,446–8; Feb. 20; Gaz. vol. 175; p. 838.

Coffee, Roasted. F. Wilder & Co. No. 85,293; Feb. 6; Gaz. vol. 175; p. 261.

Coffee, Roasted. J. I. Schotten. No. 85,500; Feb. 20; Gaz. vol. 175; p. 840.

Combs, barrettes, and hair-retainers. Wilcox Comb Company. No. 85,304; Feb. 6; Gaz. vol. 175; p. 261.

Conduits for electric wiring. J. H. Parker. No. 85,264; Feb. 6; Gaz. vol. 175; p. 261.

Construction material. Certain. Ollendorff & Clarkson. No. 85,479; Feb. 20; Gaz. vol. 175; p. 839.

Coops and houses, nests, feed-boxes, &c., Chicken. L. A. Hills. No. 85,348; Feb. 13; Gaz. vol. 175; p. 536.

Corn and bunion shields. J. J. Georgen & Son. No. 85,575; Feb. 27; Gaz. vol. 175; p. 1094.

Corn-starch and food-starch. C. Mennington & Co. No. 85,268; Feb. 13; Gaz. vol. 175; p. 538.

Corsets. Weingarten Bros. No. 85,301; Feb. 6; Gaz. vol. 175; p. 261.

Corsets. Lowenson, Joseph & Loeb. No. 85,488; Feb. 20; Gaz. vol. 175; p. 838.

Corsets. Société des Etablissements Farcy & Oppenheim. No. 85,506; Feb. 20; Gaz. vol. 175; p. 840.

Cotton piece goods. Atlantic Cotton Mills. No. 85,314; Feb. 13; Gaz. vol. 175; p. 537.

Cotton piece goods. Atlantic Cotton Mills. No. 85,545; Feb. 27; Gaz. vol. 175; p. 1093.

Cotton-seed meal and cake. The Exchange Cotton and Linseed Meal Company. No. 85,424; Feb. 20; Gaz. vol. 175; p. 837.

Cough mixture. Cohen and Cohen Chemical Co. No. 85,611; Feb. 27; Gaz. vol. 175; p. 1095.

Crushers and cutters. C. E. Gilman. No. 85,469; Feb. 20; Gaz. vol. 175; p. 838.

Cream and foot-powder, Almond, complexion, and deodorizing. Cameo Manufacturing Company. No. 85,322; Feb. 13; Gaz. vol. 175; p. 537.
Cream and powder, Toilet. F. Frankle. No. 85,430; Feb. 20; Gaz. vol. 175; p. 838.
Cream, Face-. E. Toby. No. 85,525; Feb. 20; Gaz. vol. 175; p. 840.
Curtains, pillow-shams, and lace coverlets. D. V. Green. No. 85,244; Feb. 6; Gaz. vol. 175; p. 260.
Decarbonizing compounds. A. L. Rea. No. 85,616; Feb. 27; Gaz. vol. 175; p. 1095.
Disinfectant. L. Richmond & Co. No. 85,495; Feb. 20; Gaz. vol. 175; p. 839.
Display-cabinets. Howland and Wheaton Company. No. 85,352; Feb. 13; Gaz. vol. 175; p. 538.
Doors, windows, and moldings, Metal. Kawneer Mfg. Co. No. 85,449; Feb. 20; Gaz. vol. 175; p. 838.
Dress-shields. I. B. Kleinert Rubber Company. No. 85,451; Feb. 20; Gaz. vol. 175; p. 838.
Dress-shields. S. Kann Sons & Co. Nos. 85,588–90; Feb. 27; Gaz. vol. 175; p. 1094.
Dress-shields. S. Kann Sons & Co. No. 85,600; Feb. 27; Gaz. vol. 175; p. 1094.
Dried blood and albumen. J. Morningstar. No. 85,469; Feb. 20; Gaz. vol. 175; p. 839.
Drinking-cups. Thermolac Manufacturing Company. No. 85,523; Feb. 20; Gaz. vol. 175; p. 840.
Dust-cloths. Chicago Feather Duster Co. No. 85,413; Feb. 20; Gaz. vol. 175; p. 837.
Dynamite and powder. Independent Powder Company of Missouri. No. 85,353; Feb. 13; Gaz. vol. 175; p. 538.
Elastic webbing. Boston Gore and Web Manufacturing Company. No. 85,225; Feb. 6; Gaz. vol. 175; p. 259.
Electric apparatus, Certain. Dyneto Electric Company. No. 85,422; Feb. 20; Gaz. vol. 175; p. 837.
Electric fuse-blocks. Siemens-Schuckertwerke Gesellschaft mit beschränkter Haftung. Nos. 85,503–5; Feb. 20; Gaz. vol. 175; p. 840.
Electric meters. Korting & Mathiesen A.-G. No. 85,257; Feb. 6; Gaz. vol. 175; p. 260.
Electrical apparatus and supplies, Certain. Hemming Manufacturing Company. No. 85,440; Feb. 20; Gaz. vol. 175; p. 838.
Electrical apparatus, Certain. C. Conradty (Inhaber Pauline & Eugen Conradty) Fabrik elektrischer u. galvanischer Kohlen. No. 85,228; Feb. 6; Gaz. vol. 175; p. 259.
Electrical appliances, Certain. Mutual Electric & Machine Company. No. 85,270; Feb. 6; Gaz. vol. 175; p. 260.
Embroidery-cotton, Mercerized. Wilh. Hebebrand, G. m. b. H. No. 85,581; Feb. 27; Gaz. vol. 175; p. 1094.
Embroidery-floss, &c. The Nonotuck Silk Company. No. 85,271; Feb. 6; Gaz. vol. 175; p. 260.
Emollient preparation. L. Féret. No. 85,339; Feb. 13; Gaz. vol. 175; p. 537.
Enameled steelware. Kockums Jernverks Aktiebolag. No. 85,452; Feb. 20; Gaz. vol. 175; p. 838.
Engines, Traction-. Pioneer Tractor Manufacturing Company. No. 85,285; Feb. 6; Gaz. vol. 175; p. 261.
Eyeglass-mountings. Julius King Optical Co. No. 85,594; Feb. 27; Gaz. vol. 175; p. 1094.
Eyeglasses and spectacles. E. B. Meyrowitz. No. 85,267; Feb. 6; Gaz. vol. 175; p. 260.
Eyeglasses and spectacles and parts of same. Stevens & Company. No. 85,294; Feb. 6; Gaz. vol. 175; p. 261.
Fancy goods, Certain. Empire Notion Co. No. 85,235; Feb. 6; Gaz. vol. 175; p. 259.
Fancy goods, Certain. The Spirella Company. No. 85,384; Feb. 13; Gaz. vol. 175; p. 539.
Fancy goods, Certain. Anchor Webbing Company. No. 85,544; Feb. 27; Gaz. vol. 175; p. 1093.
Fertiliser. Farmers' Cotton Oil & Fertiliser Co. No. 85,337; Feb. 13; Gaz. vol. 175; p. 537.
Field-glasses. C. Zeiss. Nos. 85,309–10; Feb. 6; Gaz. vol. 175; p. 262.
Filing-cabinets, Office. The Simplex Filing Device Company. No. 85,506; Feb. 20; Gaz. vol. 175; p. 840.
Fireproof construction, Waterproofing compositions to be used in. National Fire Proofing Company. No. 85,360; Feb. 13; Gaz. vol. 175; p. 538.
Fishing-fly book. F. W. Klinger & Langbein Company. No. 85,350; Feb. 13; Gaz. vol. 175; p. 538.
Fishing-rods, swivels, and sinkers. H. A. Whittemore. No. 85,396; Feb. 13; Gaz. vol. 175; p. 539.
Flannel piece goods. Denzer & Nathan. No. 85,563; Feb. 27; Gaz. vol. 175; p. 1093.
Flooring, surfacing, tenoning, &c., machines. J. A. Fay & Egan Company. No. 85,236; Feb. 6; Gaz. vol. 175; p. 259.
Flooring, Wooden. Bliss Cook Oak Company. No. 85,319; Feb. 13; Gaz. vol. 175; p. 537.
Flour. Michigan Milling Co. No. 85,462; Feb. 20; Gaz. vol. 175; p. 838.
Flour, Certain. B. Martinez. No. 85,460; Feb. 20; Gaz. vol. 175; p. 838.
Flour, Wheat-. Gulfport Grocery Co. No. 85,245; Feb. 6; Gaz. vol. 175; p. 260.
Fly-traps. C. E. Bowen. No. 85,320; Feb. 13; Gaz. vol. 175; p. 537.
Flying-machines and parts thereof. Société des Moteurs Gnome. No. 85,331; Feb. 13; Gaz. vol. 175; p. 539.
Foods, Certain. The Cloverdale Company. No. 85,414; Feb. 20; Gaz. vol. 175; p. 837.
Foods, Certain. Crocker Grocery Company. No. 85,417; Feb. 20; Gaz. vol. 175; p. 837.
Foods, Certain. Monkhouse and Glasscock. No. 85,468; Feb. 20; Gaz. vol. 175; p. 839.
Foods, Certain. Row Preserving Company. No. 85,497; Feb. 20; Gaz. vol. 175; p. 839.
Fruits, currants, sultana raisins, &c., Dried. Hahlet, Braun & Co. No. 85,496; Feb. 20; Gaz. vol. 175; p. 838.
Furnaces, Portable. R. L. Williams. No. 85,631; Feb. 27; Gaz. vol. 175; p. 1095.
Furniture, Certain household. International Mfg. Co. No. 85,253; Feb. 6; Gaz. vol. 175; p. 260.
Furniture-polish. W. H. Anderson. No. 85,404; Feb. 20; Gaz. vol. 175; p. 837.
Furniture-polish. Nu-Gloss Specialty Co. No. 85,477; Feb. 20; Gaz. vol. 175; p. 839.
Furs, Dressed. C. R. Protse. No. 85,376; Feb. 13; Gaz. vol. 175; p. 539.
Game, Certain. Bounce M'f'g Company. No. 85,552; Feb. 27; Gaz. vol. 175; p. 1093.
Games and toys, Certain. Nürnberger Metall- und Lackierwarenfabrik vormals Gebruder Bing, Aktiengesellschaft. No. 85,272; Feb. 6; Gaz. vol. 175; p. 260.
Games, Card. Parker Brothers. No. 85,378; Feb. 13; Gaz. vol. 175; p. 538.
Games, Indoor. Indoor Rugby Company. No. 85,351; Feb. 13; Gaz. vol. 175; p. 538.
Garment-weights. L. Mallach. No. 85,264; Feb. 6; Gaz. vol. 175; p. 260.
Garments, Sleeping-. The Burnham-Munger Mfg. Co. No. 85,556; Feb. 27; Gaz. vol. 175; p. 1093.
Garments worn by men and boys, Certain. H. Sonnebern & Co. No. 85,292; Feb. 6; Gaz. vol. 175; p. 261.
Germicidal, deodorizing, and disinfecting liquid. Aschenbach & Miller. No. 85,313; Feb. 13; Gaz. vol. 175; p. 537.
Glass-cutters. J. W. Tucker. No. 85,296; Feb. 6; Gaz. vol. 175; p. 261.
Gloves. Gregg Glove Co. No. 85,343; Feb. 13; Gaz. vol. 175; p. 538.
Gloves. Mills & Gibb. No. 85,367; Feb. 13; Gaz. vol. 175; p. 538.
Gloves, Kid and lamb. F. W. Larom. No. 85,454; Feb. 20; Gaz. vol. 175; p. 838.
Glues, adhesive gums and pastes, and mucilage. National Gum & Mica Co. No. 85,474; Feb. 20; Gaz. vol. 175; p. 839.
Gowns, Ladies'. The Wolf Company. No. 85,536; Feb. 20; Gaz. vol. 175; p. 841.
Grape-juice and boiled cider. Franklin MacVeagh & Company. No. 85,263; Feb. 6; Gaz. vol. 175; p. 260.
Gum, Chewing-. Reedy Brothers Gum Company. No. 85,401; Feb. 20; Gaz. vol. 175; p. 837.
Gum, Chewing-. Reedy Brothers Gum Company. No. 85,493; Feb. 20; Gaz. vol. 175; p. 839.
Hair-invigorator. The Luxo Company. No. 85,363; Feb. 13; Gaz. vol. 175; p. 538.
Hair-nets. Marshall Field & Company. No. 85,572; Feb. 27; Gaz. vol. 175; p. 1094.
Hair or scalp tonic. R. R. Vecchiolli. No. 85,627; Feb. 27; Gaz. vol. 175; p. 1095.
Hair-stains. H. E. Nichols. No. 85,607; Feb. 27; Gaz. vol. 175; p. 1095.
Hair-tonic. L. Randal. No. 85,491; Feb. 20; Gaz. vol. 175; p. 839.
Hair-tonic. G. A. Koch. No. 85,595; Feb. 27; Gaz. vol. 175; p. 1094.
Hair-tonic. White & Hoy. No. 85,630; Feb. 27; Gaz. vol. 175; p. 1095.
Hair tonic and pomade. Seeby Drug Company. No. 85,621; Feb. 27; Gaz. vol. 175; p. 1095.
Handkerchiefs. Newark Embroidery Works. No. 85,475; Feb. 20; Gaz. vol. 175; p. 839.
Harness and horse-collars. Kelley-How-Thomson Co. No. 85,358; Feb. 13; Gaz. vol. 175; p. 538.
Harness, Certain parts of. B & F Manufacturing Co. No. 85,317; Feb. 13; Gaz. vol. 175; p. 537.
Hats. Les Fils Pinay Jeune. No. 85,261; Feb. 6; Gaz. vol. 175; p. 260.
Hats and caps. Karp & Londeu. No. 85,591; Feb. 27; Gaz. vol. 175; p. 1094.
Hats, Ladies' and misses'. L. F. Castle Company. No. 85,323; Feb. 13; Gaz. vol. 175; p. 537.
Heating, lighting, and ventilating apparatus, Certain. The Turner Brass Works. No. 85,526; Feb. 20; Gaz. vol. 175; p. 840.
Horseshoes. The Ring-Point Company. No. 85,496; Feb. 20; Gaz. vol. 175; p. 839.
Hose-clamps. J. R. Clancy. No. 85,226; Feb. 6; Gaz. vol. 175; p. 259.
Hose, Cotton rubber-lined. Empire Rubber Manufacturing Company. No. 85,562; Feb. 27; Gaz. vol. 175; p. 1093.
Hosiery. John M. Given, Inc. Nos. 85,240–1; Feb. 6; Gaz. vol. 175; p. 260.
Hosiery. Middlesex Company. No. 85,366; Feb. 13; Gaz. vol. 175; p. 538.
Hosiery. The Pittsburgh Dry Goods Company. No. 85,455; Feb. 20; Gaz. vol. 175; p. 838.
Hosiery. T. E. Brown & Sons. No. 85,553; Feb. 27; Gaz. vol. 175; p. 1093.
Hosiery. Richmond Hosiery Mills. No. 85,617; Feb. 27; Gaz. vol. 175; p. 1095.
Household utensils and certain plumbing supplies. Porcelain Enameling Ass'n of America. No. 85,490; Feb. 20; Gaz. vol. 175; p. 839.

Hydrogen peroxid. The Arthur Chemical Company. No. 85,407; Feb. 20; Gaz. vol. 175; p. 837.
Incubators and brooders. The Rayo Incubator Company. No. 85,492; Feb. 20; Gaz. vol. 175; p. 839.
Inhalation apparatus. Oxymedecor Inhalation Company. No. 85,480; Feb. 20; Gaz. vol. 175; p. 839.
Jack-screws, tire benders and shrinkers. Illinois Iron & Bolt Co. No. 85,252; Feb. 6; Gaz. vol. 175; p. 260.
Jar-rings, Gum. Francis H. Leggett & Co. No. 85,506; Feb. 27; Gaz. vol. 175; p. 1094.
Jewelry. R. B. Macdonald. No. 85,264; Feb. 13; Gaz. vol. 175; p. 538.
Jointers, shapers, planers, &c. The Crescent Machine Company. No. 85,280; Feb. 6; Gaz. vol. 175; p. 260.
Knitted underwaists, Children's. J. F. Quinn. No. 85,469; Feb. 20; Gaz. vol. 175; p. 839.
Lace, veilings, nets, and net piece goods. S. Oppenheimer & Levy. No. 85,372; Feb. 13; Gaz. vol. 175; p. 538.
Lacing-tips. Glencairn Manufacturing Company. No. 85,577; Feb. 27; Gaz. vol. 175; p. 1094.
Lard, Pure. Armstrong Rendring Company. No. 85,406; Feb. 20; Gaz. vol. 175; p. 837.
Lath, Expanded-metal. Northwestern Expanded Metal Co. No. 85,370; Feb. 13; Gaz. vol. 175; p. 538.
Laxative preparations. The Upjohn Company. No. 85,625; Feb. 27; Gaz. vol. 175; p. 1095.
Leather preserving and waterproofing composition. Standard Oil Leather Dressing Co. Nos. 85,511–12; Feb. 20; Gaz. vol. 175; p. 840.
Letters for signs. R. J. Craker. No. 85,328; Feb. 13; Gaz. vol. 175; p. 537.
Liniments. A. E. Mercer. No. 85,365; Feb. 13; Gaz. vol. 175; p. 538.
Linings and padding for certain purposes. D. F. Fowler. No. 85,340; Feb. 13; Gaz. vol. 175; p. 538.
Lotion, Perfumed. A. J. Krank. No. 85,596; Feb. 27; Gaz. vol. 175; p. 1094.
Magazine, Monthly. Entertainment Publishing Co. No. 85,560; Feb. 27; Gaz. vol. 175; p. 1094.
Magazine, Quarterly. Commercial Travelers' Club. No. 85,415; Feb. 20; Gaz. vol. 175; p. 837.
Magazine, Semimonthly. Motor Boat Publishing Co. No. 85,471; Feb. 20; Gaz. vol. 175; p. 839.
Magnets for technical purposes. Tigges & Co. No. 85,295; Feb. 6; Gaz. vol. 175; p. 261.
Mattresses, bed box springs, and pillows. Dixie Cotton Felt Mattress Company. No. 85,420; Feb. 20; Gaz. vol. 175; p. 837.
Medicaments. The Berlin Chemical Company. No. 85,316; Feb. 13; Gaz. vol. 175; p. 537.
Medicinal cold-cream, Prepared. N. Wolfe. No. 85,632; Feb. 27; Gaz. vol. 175; p. 1095.
Medicine for certain diseases. B. C. Mathes. Nos. 85,602–3; Feb. 27; Gaz. vol. 175; p. 1094.
Medicine for live stock, Liver. Bee Dee Stock Medicine Co. No. 85,547; Feb. 27; Gaz. vol. 175; p. 1093.
Medicine for the relief of rheumatism. A. Herrmann, Sr. No. 85,580; Feb. 27; Gaz. vol. 175; p. 1094.
Medicine, Liver. Chattanooga Medicine Co. No. 85,325; Feb. 13; Gaz. vol. 175; p. 537.
Metal-alloy ingots. The Par-Bil Metal Company. No. 85,482; Feb. 20; Gaz. vol. 175; p. 839.
Metal castings and forgings, Certain. Foldihütte, Tiegelgusstahlfabrik. No. 85,613; Feb. 27; Gaz. vol. 175; p. 1095.
Metal-polish. The Rudolph Wurlitzer Co. No. 85,537; Feb. 20; Gaz. vol. 175; p. 841.
Metal-polish. A. D. Miller's Sons Co. No. 85,606; Feb. 27; Gaz. vol. 175; p. 1095.
Metals cast in ingots, Certain. Union Smelting & Refining Company. No. 85,624; Feb. 27; Gaz. vol. 175; p. 1095.
Mops, Fountain-. B. H. Pugh. No. 85,638; Feb. 27; Gaz. vol. 175; p. 1095.
Objective-lens systems. C. Zeiss. Nos. 85,306–8; Feb. 6; Gaz. vol. 175; p. 261.
Oil and oleo-stearin, Cooking compound containing cotton-seed. The N. K. Fairbank Company. No. 85,285; Feb. 6; Gaz. vol. 175; p. 260.
Oil, Illuminating-. West India Oil Company. No. 85,532; Feb. 20; Gaz. vol. 175; p. 840.
Oil, Linseed-. Fredonia Linseed Oil Works. No. 85,573; Feb. 27; Gaz. vol. 175; p. 1094.
Oil, Lubricating-. P. A. Haven. No. 85,439; Feb. 20; Gaz. vol. 175; p. 838.
Oil, Olive-. M. G. Parejo. No. 85,283; Feb. 6; Gaz. vol. 175; p. 261.
Oils and greases, Lubricating. C. F. Sweet, Inc. No. 85,516; Feb. 20; Gaz. vol. 175; p. 840.
Oils and greases made from petroleum products, Lubricating and illuminating. The Great Western Oil Co. No. 85,243; Feb. 6; Gaz. vol. 175; p. 260.
Oils for mixing paints. Red Star Oil Company. No. 85,288; Feb. 6; Gaz. vol. 175; p. 261.
Oils, Lubricating-. Monarch Oil Refining Co. No. 85,465; Feb. 20; Gaz. vol. 175; p. 839.
Oils, Lubricating-. The Texas Company. Nos. 85,518–21; Feb. 20; Gaz. vol. 175; p. 840.
Oils, Lubricating-. Union Oil Co. of California. No. 85,527; Feb. 20; Gaz. vol. 175; p. 840.
Optical and measuring instruments, Certain. The Euclid Optical Company. No. 85,234; Feb. 6; Gaz. vol. 175; p. 259.
Optical goods, Certain. C. Zeiss. No. 85,539; Feb. 20; Gaz. vol. 175; p. 841.
Optical supplies, Certain. G. C. Precerutti. No. 85,487; Feb. 20; Gaz. vol. 175; p. 839.
Oranges. G. Kaehler. No. 85,255; Feb. 6; Gaz. vol. 175; p. 260.
Oranges, lemons, grape-fruit, limes, and citron. W. Allan. No. 85,213; Feb. 6; Gaz. vol. 175; p. 259.
Packing for stuffing-boxes. H. C. Sommer Nachfolger. No. 85,472; Feb. 20; Gaz. vol. 175; p. 839.
Paints. Holmptein Limited. No. 85,442; Feb. 20; Gaz. vol. 175; p. 838.
Paints, lacquers, and varnishes. Demard Lacquer Company. No. 85,418; Feb. 20; Gaz. vol. 175; p. 837.
Paints, Oil-. Benjamin Moore & Co. No. 85,468; Feb. 20; Gaz. vol. 175; p. 839.
Paper drinking-cups. Sanitary Drinking Cup Co. No. 85,498; Feb. 20; Gaz. vol. 175; p. 839.
Paper towels and napkins. Japanese Tissue Mills. No. 85,354; Feb. 13; Gaz. vol. 175; p. 538.
Paper, Wrapping-. The Union Paper & Twine Co. No. 85,389; Feb. 13; Gaz. vol. 175; p. 539.
Paper, Writing-. American Writing Paper Company. No. 85,222; Feb. 6; Gaz. vol. 175; p. 259.
Paper, Writing-. American Writing Paper Company. No. 85,311; Feb. 13; Gaz. vol. 175; p. 537.
Paving materials. The Jennison-Wright Co. No. 85,255; Feb. 13; Gaz. vol. 175; p. 538.
Pearls, Artificial. The Lassner Company. No. 85,382; Feb. 13; Gaz. vol. 175; p. 538.
Peat preparation. Strohmeyer & Arpe Company. No. 85,558; Feb. 13; Gaz. vol. 175; p. 539.
Pencils, Lead-. O. A. Weissenborn. Nos. 85,393–4; Feb. 13; Gaz. vol. 175; p. 539.
Perfumery. Erste Kärlsruher Parfümerie & Toilettescifen-Fabrik H. Wolff & Sohn. No. 85,570; Feb. 27; Gaz. vol. 175; p. 1094.
Perfumes. F. S. Mason. No. 85,601; Feb. 27; Gaz. vol. 175; p. 1094.
Photographic supplies. Eastman Kodak Co. No. 85,423; Feb. 20; Gaz. vol. 175; p. 837.
Pianos. Sohmer & Company. No. 85,382; Feb. 13; Gaz. vol. 175; p. 539.
Pianos and player-pianos. The Regal Piano & Player Co. No. 85,377; Feb. 13; Gaz. vol. 175; p. 539.
Pie-fillings. Jos. Middleby, Jr., Inc. No. 85,463; Feb. 20; Gaz. vol. 175; p. 839.
Pills. C. F. York. No. 85,538; Feb. 20; Gaz. vol. 175; p. 841.
Pins, Safety-. Oakville Company. No. 85,273; Feb. 6; Gaz. vol. 175; p. 261.
Pins, Safety-. Oakville Company. No. 85,275; Feb. 6; Gaz. vol. 175; p. 261.
Pins, Safety-. Oakville Company. Nos. 85,277–81; Feb. 6; Gaz. vol. 175; p. 261.
Pins, Toilet-. Oakville Company. No. 85,274; Feb. 6; Gaz. vol. 175; p. 261.
Pins, Toilet-. Oakville Company. No. 85,276; Feb. 6; Gaz. vol. 175; p. 261.
Pitch. Barrett Manufacturing Company. No. 85,408; Feb. 20; Gaz. vol. 175; p. 837.
Pitch. Warren Chemical & Manufacturing Company. Nos. 85,529–30; Feb. 20; Gaz. vol. 175; p. 840.
Plows. Starks's Dixie Plow Works. No. 85,513; Feb. 20; Gaz. vol. 175; p. 840.
Plumbing and steam-fitting supplies, Certain. H. Mueller Manufacturing Company. No. 85,269; Feb. 6; Gaz. vol. 175; p. 260.
Pot-lid handles. Otto Kampfe Mfg. Co. No. 85,587; Feb. 27; Gaz. vol. 175; p. 1094.
Powder, Talcum. G. C. Wilson. No. 85,397; Feb. 13; Gaz. vol. 175; p. 539.
Powders and pastes, Tooth. The Gifford Chemical Company. No. 85,576; Feb. 27; Gaz. vol. 175; p. 1094.
Precious metal, Certain articles electrically treated with. Electrolytic Art Metal Company. No. 85,567; Feb. 27; Gaz. vol. 175; p. 1093.
Precious, semiprecious, and rhine stones. L. & O. Holub. No. 85,441; Feb. 20; Gaz. vol. 175; p. 838.
Publications, Continually-changing series of. M. Witmark & Sons. Nos. 85,534–5; Feb. 20; Gaz. vol. 175; p. 841.
Pudding-powders. G. Eckhardt. No. 85,252; Feb. 6; Gaz. vol. 175; p. 259.
Pulley-blocks. Mill & Mine Supply Co. No. 85,268; Feb. 6; Gaz. vol. 175; p. 260.
Pump buckets, Chain-. H. C. Fresbour. No. 85,238; Feb. 6; Gaz. vol. 175; p. 259.
Pumps, Hand air-. Judd & Leland M'f'g. Co. No. 85,254; Feb. 6; Gaz. vol. 175; p. 260.
Rat-exterminator. H. M. Kirby Co. No. 85,450; Feb. 20; Gaz. vol. 175; p. 838.
Razor-strop dressing. The Z-Only Co. No. 85,635; Feb. 27; Gaz. vol. 175; p. 1095.
Razors, scissors, and pocket-knives. Wester Bros. No. 85,302; Feb. 6; Gaz. vol. 175; p. 261.
Receptacles or containers. Thermolac Manufacturing Company. No. 85,522; Feb. 20; Gaz. vol. 175; p. 840.
Reflectors, Metal. H. Alexander. No. 85,590; Feb. 20; Gaz. vol. 175; p. 837.
Refrigerators and cooling-rooms. Northey Manufacturing Company. No. 85,608; Feb. 27; Gaz. vol. 175; p. 1095.
Registers, Autograph-. Krauth & Benninghofen. No. 85,260; Feb. 6; Gaz. vol. 175; p. 260.
Remedies for nervous diseases. The J. W. Brant Company. No. 85,321; Feb. 13; Gaz. vol. 175; p. 537.
Remedies, Laxative. Donovan & Spang. No. 85,330; Feb. 13; Gaz. vol. 175; p. 537.
Remedies to build the natural resistance of the body, Food. A. M. Wheeler. No. 85,396; Feb. 13; Gaz. vol. 175; p. 539.

Remedy, Certain. Himrod Man'f'g Co. No. 85,349; Feb. 13; Gaz. vol. 175; p. 538.
Remedy for all poultry diseases. D. F. Runion. No. 85,619; Feb. 27; Gaz. vol. 175; p. 1095.
Remedy for cancer. J. Gaube dit du Gers. No. 85,574; Feb. 27; Gaz. vol. 175; p. 1094.
Remedy for certain ailments. B. Porter. No. 85,375; Feb. 13; Gaz. vol. 175; p. 539.
Remedy for certain diseases. E. M. Clinkscales & Son. No. 85,558; Feb. 27; Gaz. vol. 175; p. 1096.
Remedy for gonorrhœa. Eastern Drug Co. No. 85,319; Feb. 13; Gaz. vol. 175; p. 537.
Remedy for gonorrhœa. J. C. McFarland. No. 85,604; Feb. 27; Gaz. vol. 175; p. 1094.
Remedy for headache. W. H. Horne. No. 85,583; Feb. 27; Gaz. vol. 175; p. 1094.
Remedy for headache and neuralgia. The Dalton Medicine Co. No. 85,561; Feb. 27; Gaz. vol. 175; p. 1093.
Remedy for poison-oak poisoning. M. Vincent Co. No. 85,628; Feb. 27; Gaz. vol. 175; p. 1095.
Remedy for rheumatism. T. James and J. Caprinell. No. 85,445; Feb. 20; Gaz. vol. 175; p. 838.
Remedy for rheumatism. The Hibern Company. No. 85,582; Feb. 27; Gaz. vol. 175; p. 1094.
Remedy for syphilis and blood-poison. United Grocery Co. No. 85,300; Feb. 13; Gaz. vol. 175; p. 539.
Remedy for tuberculosis. M. D. Chouquette. No. 85,326; Feb. 13; Gaz. vol. 175; p. 537.
Remedy, Nerve and blood. Yeung Remedy Company. No. 85,634; Feb. 27; Gaz. vol. 175; p. 1095.
Remedy, Pile. W. J. Davidson. No. 85,562; Feb. 27; Gaz. vol. 175; p. 1093.
Ribbons. Carson, Pirie, Scott & Co. No. 85,412; Feb. 20; Gaz. vol. 175; p. 837.
Ribbons. U. R. T. Lund. No. 85,599; Feb. 27; Gaz. vol. 175; p. 1094.
Ribbons and hair-nets. Diecherhoff, Raffeer & Co. No. 85,565; Feb. 27; Gaz. vol. 175; p. 1093.
Rubber belting, hose, and packing. United & Globe Rubber Mf'g Companies. No. 85,528; Feb. 20; Gaz. vol. 175; p. 840.
Rubber goods, Certain mechanical. The Gutta Percha & Rubber Mfg. Co. No. 85,435; Feb. 20; Gaz. vol. 175; p. 838.
Rubber heels and soles of boots and shoes. Revere Rubber Company. No. 85,289; Feb. 6; Gaz. vol. 175; p. 261.
Rubber hot-water bags, fountain-syringes, and nipples. Mensing Brothers. No. 85,467; Feb. 20; Gaz. vol. 175; p. 839.
Rubber roofing. Keystone Roofing Mfg. Co. No. 85,593; Feb. 27; Gaz. vol. 175; p. 1094.
Sad-irons. Landers, Frary and Clark. No. 85,361; Feb. 13; Gaz. vol. 175; p. 538.
Sad-irons. L. J. Strauss. No. 85,387; Feb. 13; Gaz. vol. 175; p. 539.
Sad-irons. Household Gas Iron Company. No. 85,564; Feb. 27; Gaz. vol. 175; p. 1094.
Saddles, saddlery, and harness. R. Flemming. Nos. 85,427–9; Feb. 20; Gaz. vol. 175; p. 838.
Salve for the treatment of rheumatism. S. Cohen. No. 85,559; Feb. 27; Gaz. vol. 175; p. 1093.
Salves and lotions. The American Salve Company. No. 85,542; Feb. 27; Gaz. vol. 175; p. 1093.
Sandals and rompers. W. Greilich. No. 85,578; Feb. 27; Gaz. vol. 175; p. 1094.
Scouring compound. The N. K. Fairbank Company. No. 85,571; Feb. 27; Gaz. vol. 175; p. 1094.
Scouring-powder. The Burckhardt Company. No. 85,554; Feb. 27; Gaz. vol. 175; p. 1093.
Shears, knives, and razors. Feery & Bauer. No. 85,287; Feb. 6; Gaz. vol. 175; p. 260.
Sheets and sheeting, Waterproof. The Candee Rubber Company. No. 85,556; Feb. 27; Gaz. vol. 175; p. 1093.
Shellac, White gum. W. H. Messer. No. 85,540; Feb. 20; Gaz. vol. 175; p. 841.
Shirts. The Ohio Garment Company. No. 85,609; Feb. 27; Gaz. vol. 175; p. 1095.
Shirts and underwear. Cohen Bros. Company. No. 85,327; Feb. 13; Gaz. vol. 175; p. 537.
Shirts, Men's outer. J. L. Gutman. No. 85,579; Feb. 27; Gaz. vol. 175; p. 1094.
Shoe-finishing paste. S. M. Bixby & Co. No. 85,548; Feb. 27; Gaz. vol. 175; p. 1093.
Silk foulard. Marshall Field & Company. No. 85,425; Feb. 20; Gaz. vol. 175; p. 837.
Soap. The Burckhardt Company. No. 85,400; Feb. 20; Gaz. vol. 175; p. 837.
Soap, Shaving. Hylin & Co. Fabriks Aktiebolag. No. 85,585; Feb. 27; Gaz. vol. 175; p. 1094.
Soil-bacteria, Cultures of. Earp-Thomas Farmogerm Company. No. 85,332; Feb. 13; Gaz. vol. 175; p. 537.
Solder. Marvel Solder Co. No. 85,286; Feb. 6; Gaz. vol. 175; p. 260.
Spool and sewing cotton, thread, and cotton yarn. The American Thread Company. Nos. 85,217–19; Feb. 6; Gaz. vol. 175; p. 259.
Spool and sewing cotton, thread, and cotton yarn. The American Thread Company. No. 85,543; Feb. 27; Gaz. vol. 175; p. 1093.
Starch. J. Morningstar. No. 85,470; Feb. 20; Gaz. vol. 175; p. 839.
Steel, Sheet. Duforest Sheet & Tinplate Co. No. 85,231; Feb. 6; Gaz. vol. 175; p. 259.
Stiffening cards, blades, and tapes. The Warren Featherbone Company. No. 85,629; Feb. 27; Gaz. vol. 175; p. 1095.
Stockings. O'Callaghan & Feldon. No. 85,478; Feb. 20; Gaz. vol. 175; p. 839.
Stone-polishing preparation. A. Arnaer. No. 85,405; Feb. 20; Gaz. vol. 175; p. 837.
Stoves, soldering-lamps, and parts thereof and accessories. Aktiebolaget B. A. Hjerth & Co. No. 85,541; Feb. 27; Gaz. vol. 175; p. 1093.
Suits, Men's outer. T. C. Schaffner. No. 85,379; Feb. 13; Gaz. vol. 175; p. 539.
Suspenders and garters. The C. A. Edgarton Mfg. Co. No. 85,284; Feb. 13; Gaz. vol. 175; p. 537.
Table cloths and napkins, &c. Carson, Pirie, Scott & Co. No. 85,411; Feb. 20; Gaz. vol. 175; p. 837.
Tanning and dyeing extracts. C. A. Spencer & Son Company. No. 85,265; Feb. 13; Gaz. vol. 175; p. 535.
Tar, pitch, asphalt, &c. Barrett Manufacturing Company. No. 85,646; Feb. 27; Gaz. vol. 175; p. 1096.
Telephonic apparatus. National Dictograph Co. No. 85,473; Feb. 20; Gaz. vol. 175; p. 839.
Tennis-rackets. A. G. Spalding & Bros. No. 85,559; Feb. 20; Gaz. vol. 175; p. 840.
Therapeutic appliance, Electrical. The Electric Respirone Company. No. 85,285; Feb. 13; Gaz. vol. 175; p. 537.
Thread. Diecherhoff, Raffeer & Co. No. 85,564; Feb. 27; Gaz. vol. 175; p. 1093.
Thread of all kinds. C. Fisher. No. 85,426; Feb. 20; Gaz. vol. 175; p. 837.
Timber. Compagnie d'Exploitation des Bois de la Turne (Société Anonyme). No. 85,560; Feb. 27; Gaz. vol. 175; p. 1093.
Tires, Elastic vehicle. The Goodyear Tire and Rubber Company. No. 85,434; Feb. 20; Gaz. vol. 175; p. 838.
Tires for vehicles, Pneumatic. The Seamless Rubber Company. No. 85,630; Feb. 27; Gaz. vol. 175; p. 1095.
Tires, Rubber vehicle. Pennsylvania Rubber Company. No. 85,483; Feb. 20; Gaz. vol. 175; p. 839.
Tobacco, Leaf. Luckett Walsh Tobacco Co. No. 85,459; Feb. 20; Gaz. vol. 175; p. 838.
Toilet articles, Certain. L. T. Piver & Cie. No. 85,612; Feb. 27; Gaz. vol. 175; p. 1095.
Toilet preparations, Certain. Aubry Sisters. Nos. 85,215–16; Feb. 13; Gaz. vol. 175; p. 537.
Tonic bitters. Van Vleet-Mansfield Drug Co. No. 85,302; Feb. 13; Gaz. vol. 175; p. 539.
Tonic, Stomach and nerve. H. J. Hammer. No. 85,346; Feb. 13; Gaz. vol. 175; p. 538.
Trunks, Automobile. I. & Kellis. No. 85,267; Feb. 13; Gaz. vol. 175; p. 539.
Type-writers and parts. The Columbia Typewriter Manufacturing Company. No. 85,227; Feb. 6; Gaz. vol. 175; p. 259.
Undergarment, Certain combination. E. G. Farnsworth. Nos. 85,233; Feb. 13; Gaz. vol. 175; p. 537.
Valves, Brass and iron. Schade Valve Manufacturing Co. No. 85,291; Feb. 6; Gaz. vol. 175; p. 261.
Varnishes. Valentine & Company. No. 85,636; Feb. 27; Gaz. vol. 175; p. 1095.
Veil-holders. S. E. Ballard. No. 85,223; Feb. 6; Gaz. vol. 175; p. 259.
Vending-machines. D. B. Samuels. No. 85,290; Feb. 6; Gaz. vol. 175; p. 261.
Vinegar, Apple. Harrison & Co. No. 85,347; Feb. 13; Gaz. vol. 175; p. 538.
Vodka. Stillman Bottling Company. Nos. 85,514–15; Feb. 20; Gaz. vol. 175; p. 840.
Waists, Dress. I. Lefkowitz. No. 85,597; Feb. 27; Gaz. vol. 175; p. 1094.
Watches. The Ansonia Clock Company. No. 85,212; Feb. 13; Gaz. vol. 175; p. 537.
Weather-strips, Metal. Acme Metal Weather Strip Company. No. 85,398; Feb. 20; Gaz. vol. 175; p. 837.
Well-drilling machines. American Well & Prospecting Co. No. 85,221; Feb. 6; Gaz. vol. 175; p. 259.
Wheel-rims. K & C Manufacturing Company. No. 85,336; Feb. 13; Gaz. vol. 175; p. 538.
Whisky. Julius Levin Company. No. 85,457; Feb. 20; Gaz. vol. 175; p. 838.
Whisky. Mitchell Brothers. No. 85,464; Feb. 20; Gaz. vol. 175; p. 839.
Whisky. Park & Tilford. No. 85,461; Feb. 20; Gaz. vol. 175; p. 839.
Window-shades and Venetian blinds. Theo. H. Gary Co. No. 85,342; Feb. 13; Gaz. vol. 175; p. 538.
Wine. P. D[illegible]y & Co. No. 85,339; Feb. 13; Gaz. vol. 175; p. [illegible]
Wine. Ita[illegible] Swiss Colony. No. 85,582; Feb. 27; Gaz. vol. 175; p. 1094.
Wine, Tonic. Humphrey Taylor & Co. No. 85,517; Feb. 20; Gaz. vol. 175; p. 840.
Wire-cloth. Hanover Wire Cloth Co. No. 85,488; Feb. 20; Gaz. vol. 175; p. 839.
Wood cleanser, polisher, and finisher. Ward & Ward. No. 85,290; Feb. 6; Gaz. vol. 175; p. 261.
Woolen piece goods. Wetumka Manufacturing Company. No. 85,633; Feb. 27; Gaz. vol. 175; p. 1095.
Worsted cloths. Passaconaway Worsted Company. No. 85,484; Feb. 20; Gaz. vol. 175; p. 839.
Wrenches. Twin-Grip Wrench Company. Nos. 85,297–8; Feb. 6; Gaz. vol. 175; p. 261.

ALPHABETICAL LIST OF LABELS.

"A Message of Hope to Suffering Women." (For Medicine.) Uterotone Home Treatment Company. No. 16,182; Feb. 20; Gaz. vol. 175; p. 842.
"Bob White Maple and Cane Syrup." (For Maple and Cane Syrup.) The Keyes Manufacturing Company. No. 16,163; Feb. 6; Gaz. vol. 175; p. 263.
"Briar Hill Whiskey." (For Whisky.) The Hewitt Mercantile Company. No. 16,190; Feb. 27; Gaz. vol. 175; p. 1096.
"Burckhardt's Royal Farina." (For Farina.) F. Burckhardt. No. 16,152; Feb. 6; Gaz. vol. 175; p. 263.
"Castell." (For Rubber Bands.) A. W. Faber. No. 16,189; Feb. 27; Gaz. vol. 175; p. 1096.
"Cleaner-Polish." (For a Cleaner-Polish.) A. C. Jones. No. 16,175; Feb. 13; Gaz. vol. 175; p. 540.
"Club Standard." (For Cigars.) The Moehle Lithographic Co. No. 16,202; Feb. 27; Gaz. vol. 175; p. 1096.
"Colonial Winner Brand." (For Grape-Fruit.) United States Colonial Fruit Company. No. 16,181; Feb. 20; Gaz. vol. 175; p. 842.
"Custom Clothing Makers Union of America." (For Clothing and Wearing-Apparel.) G. Rothois. No. 16,176; Feb. 13; Gaz. vol. 175; p. 540.
"Darbelle Chocolates." (For Chocolates.) The Darby Candy Company. No. 16,187; Feb. 27; Gaz. vol. 175; p. 1096.
"Dermax." (For an Internal Remedy.) Corono Chemical Company. No. 16,157; Feb. 6; Gaz. vol. 175; p. 263.
"Doctor's Special." (For Cigars.) The Moehle Lithographic Co. No. 16,203; Feb. 27; Gaz. vol. 175; p. 1096.
"Double Header." (For Cigars.) The Moehle Lithographic Co. No. 16,195; Feb. 27; Gaz. vol. 175; p. 1096.
"El Magno." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,154; Feb. 6; Gaz. vol. 175; p. 263.
"Eleven in One." (For Polish for Metals and Glass.) Upham & Leavitt. No. 16,172; Feb. 6; Gaz. vol. 175; p. 263.
"Fit-Em-All." (For Fruit-Jar Rings.) Smalley, Kivlan & Outhank. No. 16,171; Feb. 6; Gaz. vol. 175; p. 263.
"Flaxlawn." (For Paper.) Osborn Paper Company. No. 16,168; Feb. 6; Gaz. vol. 175; p. 263.
"Golden Spray." (For Beer.) Jung Brewing Company. No. 16,162; Feb. 6; Gaz. vol. 175; p. 263.
"Golden Wedding." (For Coffee.) Griffin & Hoxie. No. 16,159; Feb. 6; Gaz. vol. 175; p. 263.
"Grizzly Bear Whiskey." (For Whisky.) The Hewitt Mercantile Company. No. 16,193; Feb. 27; Gaz. vol. 175; p. 1096.
"Harrison's Pepsin Chewing Gum." (For Chewing-Gum.) E. M. Ackerman. No. 16,185; Feb. 27; Gaz. vol. 175; p. 1096.
"Hickory Ridge Straight Whiskey." (For Whisky.) The Hewitt Mercantile Company. No. 16,191; Feb. 27; Gaz. vol. 175; p. 1096.
"Hogarth." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,186; Feb. 27; Gaz. vol. 175; p. 1096.
"Honey Suckle Brand." (For Honey.) H. L. Meharry. No. 16,196; Feb. 27; Gaz. vol. 175; p. 1096.
"Jamestown Ginger Ale." (For Ginger-Ale.) The N. Y. S. & S. Mfg. Co. No. 16,205; Feb. 27; Gaz. vol. 175; p. 1096.
"Justiva." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,153; Feb. 6; Gaz. vol. 175; p. 263.
"La Joya de Cuba." (For Cigars.) The Moehle Lithographic Co. No. 16,197; Feb. 27; Gaz. vol. 175; p. 1096.
"Lee-Hi." (For Cement.) Lehigh Portland Cement Company. No. 16,164; Feb. 6; Gaz. vol. 175; p. 263.
"Lemon Seidlitz." (For Lemon Seidlitz-Powders.) The Lemon Seidlitz Co. No. 16,165; Feb. 6; Gaz. vol. 175; p. 263.
"Lipton's Tea." (For Tea.) T. J. Lipton. Nos. 16,166–7; Feb. 6; Gaz. vol. 175; p. 263.
"McGee's Baby Elixir." (For a Medicinal Preparation.) J. F. Ballard. No. 16,151; Feb. 6; Gaz. vol. 175; p. 263.
"Micturitone." (For Diuretic.) Maldehyde Chemical Company. No. 16,195; Feb. 27; Gaz. vol. 175; p. 1096.
"Miss Brown." (For Chocolates.) Palmer & Co. No. 16,207; Feb. 27; Gaz. vol. 175; p. 1096.
"Moneyback." (For Flour.) H. C. Davison. No. 16,188; Feb. 27; Gaz. vol. 175; p. 1096.
"Musgo." (For Baking-Powder.) Christie-Collar Mfg. Co. No. 16,156; Feb. 6; Gaz. vol. 175; p. 263.
"My Wife's Hairetta." (For Hair-Tonic.) C. J. Vreeland. No. 16,183; Feb. 20; Gaz. vol. 175; p. 842.
"Naturaline." (For a Mineralized Compound.) W. E. Walters. No. 16,173; Feb. 6; Gaz. vol. 175; p. 263.
"New Panetela." (For Cigars.) The Moehle Lithographic Co. No. 16,201; Feb. 27; Gaz. vol. 175; p. 1096.
"Old Concern Cigar." (For Cigars.) J. O'Brien Cigar Company. No. 16,179; Feb. 20; Gaz. vol. 175; p. 842.
"Old Fashion Pound Cake." (For Pound-Cake.) J. Hannemann Baking Co. No. 16,160; Feb. 6; Gaz. vol. 175; p. 263.
"Oregon Whiskey." (For Whisky.) The Hewitt Mercantile Company. No. 16,192; Feb. 27; Gaz. vol. 175; p. 1096.
"Panama." (For Oranges and Lemons.) Johnston Fruit Co. No. 16,161; Feb. 6; Gaz. vol. 175; p. 263.
"Pin-acus." (For Lotion or Salve.) E. W. Gaube. No. 16,158; Feb. 6; Gaz. vol. 175; p. 263.
"Planter's Smile." (For Cigars.) The Moehle Lithographic Co. No. 16,200; Feb. 27; Gaz. vol. 175; p. 1096.
"R-bet." (For Tomatoes.) J. F. Pyle & Son. No. 16,194; Feb. 27; Gaz. vol. 175; p. 1096.
"Red Seal." (For Vanilla Extract.) The Newton Tea & Spice Co. No. 16,180; Feb. 20; Gaz. vol. 175; p. 842.
"Remick's Eczema Remedy." (For Remedy.) J. F. Ballard. No. 16,150; Feb. 6; Gaz. vol. 175; p. 263.
"Skirts to Order $1.00 From Your Own Material." (For Skirts.) Wright Mfg. Co. No. 16,184; Feb. 20; Gaz. vol. 175; p. 842.
"Socialist. (For Cigars.) J. B. Gease. No. 16,178; Feb. 20; Gaz. vol. 175; p. 842.
"Some Smoke." (For Cigars.) The Moehle Lithographic Co. No. 16,199; Feb. 27; Gaz. vol. 175; p. 1096.
"Spirited Hair Tonic." (For Hair-Tonic.) L. F. G. Short. No. 16,170; Feb. 6; Gaz. vol. 175; p. 263.
"Suits to Order $6.50 From your own Material." (For Suits.) Wright Mfg. Co. No. 16,208; Feb. 27; Gaz. vol. 175; p. 1096.
"Tempus." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,155; Feb. 6; Gaz. vol. 175; p. 263.
"Tip-Top Flour." (For Wheat-Flour.) O. Rein. No. 16,169; Feb. 6; Gaz. vol. 175; p. 263.
"Tri-State Capitols." (For Cigars.) N. F. Nelson. No. 16,204; Feb. 27; Gaz. vol. 175; p. 1096.
"Twotone Linen." (For Paper.) Osborn Paper Company. No. 16,206; Feb. 27; Gaz. vol. 175; p. 1096.
"We-Ho Improved." (For Medicine.) J. B. Bolling. No. 16,177; Feb. 20; Gaz. vol. 175; p. 842.
"Woodelixir." (For Wood and Metal Polish or Cleaner.) Woodelixir Manufacturing Company. No. 16,174; Feb. 6; Gaz. vol. 175; p. 263.

PRINTS.

"A Box Full of Beauty." (For Toilet Soap.) Armour and Company. No. 2,954; Feb. 20; Gaz. vol. 175; p. 842.

"A Warm Nourishing Meal." (For Shredded Wheat.) The Shredded Wheat Company. No. 2,959; Feb. 20; Gaz. vol. 175; p. 842.

"Appelbaum My Tailor." (For Clothing and Wearing-Apparel.) I. Appelbaum. No. 2,942; Feb. 6; Gaz. vol. 175; p. 263.

"B. V. D. 1912 Two Piece Suit." (For Athletic Underwear.) The B. V. D. Company. No. 2,962; Feb. 27; Gaz. vol. 175; p. 1096.

"B. V. D. 1912 Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 2,961; Feb. 27; Gaz. vol. 175; p. 1096.

"B. V. D. Quarter Sleeve Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 2,956; Feb. 20; Gaz. vol. 175; p. 842.

"De Laval Cream Separators." (For Cream-Separators.) The De Laval Separator Company. No. 2,944; Feb. 6; Gaz. vol. 175; p. 263.

"Elena." (For Cordials.) Mennillo & Lignante. No. 2,949; Feb. 6; Gaz. vol. 175; p. 263.

"H. H. Harrison's Rapidograph Duplicating Machine." (For Rapidograph Duplicating-Machine.) H. H. Harrison. No. 2,963; Feb. 27; Gaz. vol. 175; p. 1096.

"Interwoven Toe and Heel." (For Hosiery.) Interwoven Stocking Company. Nos. 2,946–7; Feb. 6; Gaz. vol. 175; p. 263.

"Jim Dandy." (For Shirts.) Vindex Shirt Company. No. 2,966; Feb. 27; Gaz. vol. 175; p. 1096.

"Krischer's Hy-Lo." (For Collar-Supporters.) N. A. Krischer. No. 2,948; Feb. 6; Gaz. vol. 175; p. 263.

"La Touraine, The Perfect Coffee." (For Coffee.) W. S. Quinby Company. No. 2,953; Feb. 13; Gaz. vol. 175; p. 540.

"Monarch Cushions The Key to Perfect Billiard Playing" (For Monarch Cushions.) The Brunswick Balke Collender Co. No. 2,955; Feb. 20; Gaz. vol. 175; p. 842.

"Nu-Flake." (For Flaked Cereal Food.) E. W. Van Slyke. No. 2,965; Feb. 27; Gaz. vol. 175; p. 1096.

"Pin-Acua." (For a Balm.) E. W. Gaube. No. 2,945; Feb. 6; Gaz. vol. 175; p. 263.

"Plexo Cleansing Cream." (For Greaseless Cleansing-Cream.) Plexo Preparations. No. 2,950; Feb. 6; Gaz. vol. 175; p. 263.

"Spread for Bread." (For Karo Corn-Syrup.) Corn Products Refining Company. No. 2,943; Feb. 6; Gaz. vol. 175; p. 263.

"Tetlow's Swan Down for the Complexion. (For Powder for the Complexion.) J. Tetlow. No. 2,960; Feb. 20; Gaz. vol. 175; p. 842.

"The Barking Dog's Holiday Outfit." (For Smoking-Tobacco and Pipe-Smoker's Outfit.) G. S. Mahn. No. 2,964; Feb. 27; Gaz. vol. 175; p. 1096.

"The Sealy Salesman." (For Mattresses.) The Sealy Mattress Company. No. 2,951; Feb. 6; Gaz. vol. 175; p. 263.

"Two Souls With But a Single Thought." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,957; Feb. 20; Gaz. vol. 175; p. 842.

"Won't You Come To My Party?" (For Shaw's Best Pancake-Flour.) L. M. Shaw. No. 2,952; Feb. 6; Gaz. vol. 175; p. 263.

"Yeast Foam." (For Yeast-Foam.) North Western Yeast Co. No. 2,958; Feb. 20; Gaz. vol. 175; p. 842.

DISCLAIMERS.

Drying apparatus. F. D. Cummer. No. 545,120; date of patent Aug. 27, 1895; disclaimer filed Feb. 9, 1912; Gaz. vol. 175; p. 847.

Duplicating-machine. C. E. Adamson. No. 1,015,256; date of patent Jan. 16, 1912; disclaimer filed Feb. 8, 1912; Gaz. vol. 175; p. 847.

Lightning-protector. A. F. Rosenberger. No. 970,556; date of patent Sept. 20, 1910; disclaimer filed Feb. 5, 1912; Gaz. vol. 175; p. 271.

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